REGION STRUCTURE

ODOT’s five regions implement programs and projects initiated through the Statewide Transportation Improvement Program (STIP). They are responsible for three distinct work functions: regional planning, project delivery, and maintenance. Project Delivery is implemented through regions’ areas and technical centers.
Areas

Areas are geographically aligned to be consistent with county governments. Each region includes at least two areas and there are twelve areas statewide.

Each area has primary responsibility for project development and construction of multi-million dollar transportation related projects within the area. Areas manage the project management aspects of project delivery:

**Scope Management**
- Project work, objective and issue identification
- Context setting and project baselining
- Scope planning
- Scoping team establishment and coordination
- Project scope definition, verification, and documentation
- Scope management/change control

**Schedule Management**
Schedule development, activity/task definition, sequencing and duration estimating
Schedule control
Critical path management
Resource recommendations
On time project delivery assurance

Cost Management
- Project completion within the approved budget parameters
- Cost estimating, budgeting and control
- Project budget development and reporting

Quality Management
- Project satisfaction and acceptance
- Quality planning, assurance and control processes
- Change management
- Performance reporting

Procurement Management
- Outsourcing service acquisition
- Procurement planning
- Contract development, solicitation, selection and negotiation
- Contract administration and closeout

Risk Management
- Risk identification, analysis/evaluation and response planning
- Risk monitoring and control

Integration Management/Project Team Leadership
- Project team development and coordination
- Multi-disciplinary, cross functional
- Project charter, work plan, responsibility assignment matrix, team meeting agendas and records, issues and decision logs, etc
- Project documentation

Public Involvement/Communications Management
- Timely and appropriate generation, dissemination, storage and disposition of project information
- Public involvement and communications planning
- External engagement and coordination with local stakeholder groups, neighborhood associations, Area Commissions on Transportation (ACTs), regional Economic Revitalization Teams (ERTs), Metropolitan Planning Organizations (MPOs), federal/state/county/city agencies, consultants, contractors, media representatives, etc.
Technical Centers

Region technical centers support the delivery of all region programs and projects and are responsible for the following:

- Technical expertise
- Project designs for roadways and bridges
- Right of way acquisition and certification
- Environmental permit acquisition
- Maintenance and operations, Local Program, Planning, and outsourced project technical support
- Design exception and State Traffic Engineer approval liaison with Technical Services

The region technical centers include the following disciplines, though each region has a slightly different configuration for the technical components. Refer to each region’s website for more information on their specific configuration.

**Bridge** - Error! Bookmark not defined. main functions:

- Bridge plan development
- Bridge design
- Construction help and problem resolution

**Environmental** - Error! Bookmark not defined. main functions:

- Environmental documentation
- Environmental project coordination
- Environmental issue response
- Environmental impacts and resource assessment
- Avoidance and mitigation measure development
- Contamination prevention
- Permit and project clearances acquisition

**Geology and Hydraulics** - Error! Bookmark not defined. - main functions:

- Subsurface exploration
- Environmental investigation and documentation
- Hazardous material remediation
- Other remediation and mitigation plans
- Permit acquisition
- Material source development plans and specifications
- Geotechnical and hydraulic engineering and construction inspection
- Constructability reviews

**Right of Way** - Error! Bookmark not defined. - main functions:

- Right of way location records and legal descriptions
- Right of way acquisition management
- Property research
- Appraisal, negotiation, relocation, liaison and property management services
- Assumes possession of acquired property

**Roadway**
- Roadway designs and plans
- Airport clearance studies
- Construction contract preparation and coordination
- Quality control milestone approvals
- Design change request approvals
- Cost estimate preparation and pricing guidance

**Survey**
- Survey activity coordination
- Right of way monuments setting or recovery, and recording
- Detail maps and terrain data

**Traffic**
- Sign design
- Illumination design
- Traffic signal design
- Access management
- Work Zone Traffic Control Plans (TCP)
The Technical Services Branch is responsible for long-term strategic management of Oregon’s highway system. Technical Services provides technical and project management support for ODOT’s project delivery, construction, maintenance, and planning programs. They provide professional technical standards and systems related to project delivery and operations.

Technical Services’ core functions include:

- Technical advice and consultation
- Statewide program and systems management to facilitate project identification, prioritization, selection, and management
- Quality assurance/quality control processes and audits
- Technical and professional skills training and expertise
- Manuals, guidance and tools related to technical disciplines and professional project management processes
- Continuous improvement strategy development
- Transportation asset management and other related technical services
- Standards, policies and processes to effectively and efficiently develop and manage projects
Branch Operations Unit
- Leads, develops, provides guidance for, integrates and coordinates technical programs and initiatives, including those with state-wide, multi-discipline impact.
- Provides strategic and business/fiscal/resource management for Technical Services
- Establishes goals and tracks performance for Technical Services

Project Delivery Unit
- Strategic project and program management leadership and support tailored to:
  - ensure alignment with ODOT’s overall project delivery goals
  - improve delivery and business management processes
  - provide resources with the systems, tools, and skills needed for successful project delivery
- Business/project management systems development and administration
- Process improvement initiatives
- Project delivery guidance, consultation and training

Access Management Unit
- Statewide access management oversight
- Development and administration of Highway Division’s access management program statutes, rules, and policies.
- Best practices and techniques that balance efficient, safe and timely through-travel with access to individual destinations
- Consultation to regions and other areas of the organization
- Appeals and collaborative discussions
- Asset management
  - Approach road database administration, including data standards
  - Strategies and planning
  - Statewide approach road inventory methods and tools

Bridge Engineering Section
- All state highway structures, including 2,670 highway bridges, providing:
  - Bridge construction support
  - Bridge condition assessments
  - Bridge maintenance engineering
  - Bridge design standards, oversight and guidance
- Railroad undercrossings
- Other highway structures
- Structural design and inspection for cites and counties as requested

Construction Section
• Construction services in planning, design and construction phases of project delivery
• Project development support for the STIP, the Interstate Pavement Preservation and Pavement Management Programs
• Project construction contract oversight, change orders and claim negotiations
• Overall construction quality assurance
• Testing and inspection materials and products used in construction, with special emphasis on bridges and other structures
• Oversight of highway pavement during construction and maintenance to ensure long-term pavement quality

**Right of Way (ROW) Section**
• Expertise advice and counsel to regions and other areas of ODOT
• Appraisal and relocation reviews
• Acquisition reviews and approvals
• Title examination and closing services
• Condemnation
• Alternative dispute resolution
• Research
• Management of property acquired for public projects
• Outdoor advertising sign program/control

**Geo-Environmental Section**
• Statewide practices, standards, training, expertise, and asset management for a variety of engineering and environmental disciplines within ODOT
• Technical assistance during planning, scoping, design, construction and maintenance activities
• Technical advice, mentoring and training
• Oversight of standards and policies
• Development of environmental regulatory compliance protocols and procedural manuals
• Asset Management, including:
  • Inventories of assets
  • Condition assessments
  • Administration of programs and management systems
  • Continuous improvement of services and tools, including:
    • Quality Assurance
    • Development of performance measures
    • Research and “state-of-the-art” practices

**Traffic/Roadway Section (TRS):**
• Specifications and standards for traffic devices and related facilities
• Design expertise, preliminary design materials, operations, and construction support services
- Field investigation reviews and recommendations on matters of authority by statute, rule or by delegation from the OTC
- Transportation safety-related programs (e.g., the Hazard Elimination Program)
- Roadway engineering standards and practices in the Highway Design Manual
- Roadway design exception approvals
- Quality control and quality assurance program for design
- Organization and leadership for special programs
- Survey operations, practices, and procedures
- Cost estimating, including details on the type and price of materials
- Construction procurement preparation and project letting
- Expertise and standards for drafting and specifications
- Standard drawings and specifications, supplemental specifications, and special provisions development and maintenance
- Serves as the federal liaison for standards and NHS system design

**MAJOR PROJECTS BRANCH**

The primary purpose of the Major Projects Branch is to expand the project delivery capacity of the Highway Division by facilitating, supporting, and/or delivering transportation programs and projects that are beyond the regions’ capacity to deliver. Examples include the Oregon Transportation Investment Act (OTIA) III Bridge Delivery Program and the Columbia River Crossing Project.
Programs and projects are assigned to the Major Projects Branch by the Highway Leadership Team. Assigned programs and projects are typically temporary in nature, though may span over a significant period of time. Major Projects Branch is responsible to closely coordinate with regions, Technical Services and other headquarter functions to ensure smooth delivery of active programs and projects and to integrate successful processes, systems, data, programs, etc. into mainstream functions.

Major Project Branch’s main programs include:
- Oregon Transportation Investment Act (OTIA) I and II oversight and reporting
- OTIA III State Bridge Delivery Program delivery, management, oversight and reporting
  - Program systems development and transfer
  - Economic Development
  - Economic Stimulus Reporting
- OTIA III Modernization oversight and reporting
- Context Sensitive and Sustainable Solutions (CS3) Program
- Large Project Contracting
- Design-Build Contracting
- Construction Manager/General Contractor (CM/GC) Program
- Columbia River Crossing Program
- Willamette River Bridge Program
HIGHWAY PROGRAMS OFFICE

The Highway Programs Office manages the Highway Division’s financial related programs and the development of the Statewide Transportation Improvement Program.

- Cash flow forecasting
- Work plan budgeting
- Position management
- Performance management
- Federal transportation funding
- Federal aid project programming coordination
- Local Government Program management
- Federal and state revenue source tracking
- Federal and state requirement compliance
The ODOT Highway Division values collaborative issue management, process improvement and problem-solving. The following information describes the Division’s leadership team structure, established to address topics such as budget and finance, human resources, major information technology investments, resource and position management, and organizational structure.
HIGHWAY LEADERSHIP TEAM (HLT)

The Highway Leadership Team (HLT) provides strategic planning, decision-making, oversight, implementation and overall operational guidance for the Highway Division. Key objectives include:

- Provide leadership for the division across all business lines.
- Remove roadblocks that impede work within and between division business lines and across the department.
- Address the various priorities that come from the Governor, the Legislature, the Oregon Transportation Commission (OTC), the Oregon Department of Transportation (ODOT) Director, the ODOT Executive team, and key constituents.
- Implement organization improvements for the purpose of fulfilling the department mission and carrying the values.
- Provide support and direction for the Business Line Teams, including the Maintenance Leadership Team (MLT), the Project Delivery Leadership Team (PDLT), and the Planning Business Line Team (PBLT).

For more information, follow this link to HLT Charter & Membership

PLANNING BUSINESS LINE TEAM (PBLT)

The Planning Business Line Team (PBLT) ensures that the Department fulfills its commitments by delivering strategic planning products, projects and policies that meet the needs of our customers and stakeholders and by balancing within available resources. Key objectives include:

- Develop and implement quality plans
- Improve integration of Planning and Project Development in support of further improving the Statewide Transportation Improvement Program (STIP) development process
- Provide direction and consistency in the management of the state’s transportation system
- Improve planning tools and technology
- Improve and maintain coordination of planning activities
- Provide direction to planning activities based on the Transportation Program Development (TPD) Limitation and utilizing the TPD Financial Reporting System

For more information, follow this link to PBLT Charter & Membership
**PROJECT DELIVERY LEADERSHIP TEAM (PDLT)**

The Project Delivery Leadership Team (PDLT) provides executive level strategic planning, decision-making, oversight, and overall operational guidance for project development and construction. Established under the authority of the Highway Division Executive Management Team, the PDLT has decision authority for the development and implementation of project delivery related strategies, programs, policies, processes, and issue resolutions to accomplish the agency’s goals.

Key objectives include:

- To develop and execute strategic directions and decisions to improve project delivery practices, ensure effective program delivery, and maximize efficiency.
- To promote statewide consistency through relevant, clear policy, practice and procedures that support sound decision-making at all levels.
- To ensure a high level of coordination, integration and communication between key project delivery business lines and partners.

More information on the PDLT structure is provided in the next pages.

**MAINTENANCE LEADERSHIP TEAM (MLT)**

The Maintenance and Operations Leadership Team (MLT) provides strategic planning, decision-making, budget management, oversight, and overall operational guidance for the Highway Maintenance and Operations business lines. The MLT’s key goals are:

- To develop and execute strategic directions and decisions to improve maintenance and operations program practices and business functions, to ensure effective program delivery, and maximize efficiency.
- To promote statewide consistency through relevant, clear policy, practice and procedures that support sound decision-making at all levels.
- To ensure a high level of coordination, integration and communication between key business lines, partners and internal and external regulators.
- Manage fleet, maintenance facilities and radio communication systems and business practices strategically and efficiently.
**PROJECT DELIVERY LEADERSHIP STRUCTURE**

The PDLT serves as the primary decision point for statewide project delivery issues to be raised and resolved or elevated. It also serves as a primary link to the Highway Division Leadership Team for project delivery issues and information. The PDLT issues Project Delivery Operational Notices, which can be drafted from the standing sub-teams or directly from PDLT, and other project delivery guidance/direction as needed.

The PDLT works through its standing and ad-hoc leadership sub-teams and their sub-teams to ensure the proper management, leadership, guidance, staff, skills, tools, training and support are in place to effectively deliver projects. Each leadership team has an approved charter and work plan. A PDLT member sponsors and/or chairs each standing leadership team. The leadership teams address issues and draft policy for the business line in the following areas:

- Project/Program Management
- Technical
- Construction
- Local Program
**Standing Leadership Sub-Teams of PDLT**

**Local Program Leadership Team (LPLT)**

The Local Program Leadership Team (LPLT) provides strategic level planning, decisionmaking, and guidance for key aspects of the Local Government Program. The LPLT is chaired by the Manager of the Local Government Section and membership includes representatives from each region, the Construction Section, and Technical Services functions.

**Area Manager Team (AMT)**

The AMT provides agency-wide leadership for the project/program management aspects of project delivery: designing and building projects within scope, schedule and budget. This includes responsibility for development and delivery of the STIP, beginning with the involvement of Area Commissions on Transportation (ACTs) in scoping and development, and ending with construction close-out. In addition, the AMT ensures successful implementation of improvements and changes within the business line and provides ongoing management, leadership and oversight linkages between Major Projects Branch, Planning, ACTs, Project Leaders, and Project Managers, for successful project delivery. AMT is chaired by an Area Manager and membership includes all Area Managers and Region Project Delivery Managers. AMT serves as the focal point for project management/leadership issues to be raised and resolved from project delivery staff. The AMT oversees two key business line leadership sub-teams. These teams address issues and make decisions within their area of authority, and provide, recommend, and/or evaluate statewide policies, standards, processes and procedures in support of project delivery requirements.

- **Project Leader Steering Team (PLST)** - representing all project leaders
  The purpose of the Project Leader Team is to provide a venue for: vetting, evaluating and helping to resolve issues which impact project delivery by communicating between leadership teams, making recommendations for process improvements, and fostering continuous learning and peer support.

- **Project Manager Steering Team (PMST)** - representing all project managers
  The purpose of the Project Manager Team (PMT) is to provide a venue for: vetting, evaluating and resolving issues which impact project delivery through consultant and construction contract management, communicating between leadership teams and crews, and fostering continuous learning and peer support.
Construction Leadership Team (CLT)

The Construction Leadership Team (CLT) operates as a standing sub-team of the Project Delivery Leadership Team (PDLT) and has decision authority for the establishment of Department policies and procedures related to the implementation of the ODOT Construction Program. The CLT serves as the overall policy body for the Department's construction business line, which encompasses all activities necessary to take a project from contract award to final acceptance and payment for the project. It also routinely assesses the effectiveness of the construction phase of projects and identifies and prioritizes areas for improvement.

Technical Leadership Team (TLT)

The Technical Leadership Team (TLT) acts as a primary forum for technical issue identification and resolution, decision-making, policy guidance, and process improvements for the project delivery business line. It provides ongoing management and technical oversight linkages between Technical Services, Tech Center managers, other functions and discipline leadership teams as they collaborate in ensuring the success of ODOT’s project delivery efforts. The Technical Services Manager/Chief Engineer chairs TLT and through the Chief Engineer’s delegated authority, has full decision-making authority for actions consistent with its function - technical leadership for the project delivery business line.

Discipline Leadership Teams (DLTs)

The Discipline Leadership Teams meet regularly to ensure that the technical components of each discipline are practiced consistently and optimally across the project delivery business lines. Each Technical Services section manager leads one or more discipline teams for his/her discipline. Members are managers or designees from Technical Services and regions and may include representatives from other business lines.
Additional PDLT Team Connections

In addition to the Standing Leadership Teams under the PDLT, the PDLT connects and coordinates with a variety of other organizational and external leadership teams. This list reflects the most common interactions.

- Planning Business Line Team (PBLT)
- ACEC Steering & Liaison Committees
- Oregon Local Program Committee (OLPC)
- AGC/Construction Industry
- Contract Management Leadership Team (CMLT)
- Bridge Oversight Committee (BOC)
- Maintenance Leadership Team (MLT)
A number of region and headquarter staff members, managers and leadership teams are involved in project delivery at the policy, process, procedure and project level.

These key roles are established and outlined in Project Delivery Operational Notice PD-01

REGIONS

Region Manager (RM)

- Responsible and directly accountable to the executive director of highways for all planning, project development, construction and maintenance operations within the region
- In Regions 1 and 2 the RM provides direct supervision and leadership to the Project Delivery Manager, Region Maintenance Manager, Region Safety Manager and Region Planning Manager. Provides indirect supervision and leadership to the remaining midlevel managers, front line managers, and employees within the region
- Provides direct supervision and leadership to the Region 3, 4 and 5 Area Managers, Tech Center Manager, District Managers, Safety Managers and Planning Managers. Provides indirect supervision and leadership to the other regions’ remaining front line managers and employees
- Represents the agency to elected and appointed officials at the local, regional, state, and federal level, including the state Legislature, as well as the public; ensures their understanding of and support for region programs
- Functions as a relatively independent arm of ODOT as a spokesperson for department policy within the Region
- Leads the geographical region in working with officials and technical staffs of affected jurisdictions in the development of short and long-term transportation plans
- Coordinates and builds consensus among various local and regional governments, business and industry, and special interest groups on transportation policies and projects within Region. Conducts and participates in public meetings and hearings
Region Project Delivery Manager (RPDM - Regions 1 & 2 only)

- The RPDM is directly responsible and accountable for project delivery within the region, including all project development and construction functions.
- Provides direct supervision and leadership to Area Managers and the Technical Center Manager.
- Provides indirect supervision and leadership to Project Leaders, first line managers and employees within the Region’s Project Delivery Program.
- Ensures that appropriate communication and collaboration are maintained (internally and externally) throughout the selection, development and construction of projects within the region.
- As the person with overall accountability in the Region for ensuring that Project Delivery program expectations are met, the RPDM is the Region’s final point of escalation for technical and/or operational problem resolution in project delivery.
- Represents the overall interests of ODOT and/or the specific interests of the Project Delivery Business Team to region external stakeholder groups as needed by the area manager, the RPDM participates, leads, facilitates discussion, and promotes regional and/or local decision-making within external stakeholder groups. This work is done in consultation with the Region Planning Manager and is the basis for the transition between the Planning Business Line and the Project Delivery Business Line.

Area Manager (AM)

- Manages and leads all aspects of the Region’s development and construction program within an assigned area.
- Central figure in managing and leading the complete project life cycle (cradle to grave ownership). This includes providing statewide leadership in the area of project management.
- Supervises and mentors Project Managers and Project Leaders (and Local Agency Liaisons in some regions).
- Establishes and supports the business line strategic direction by serving as a core member of the statewide Project Delivery Leadership Team (PDLT) when called upon.
- Directs the preparation and administration of biennial and annual budget requests for the agency within the respective area. Serves as a member of the Area Commission and the Economic Revitalization Team in the respective areas. The Area Manager is the primary point of contact for external stakeholders in the area.
- Responsible for delivering STIP projects in his/her area and promoting achievement of the region’s construction program.
purpose. Manages the lifecycle of all STIP project within his or her area from design through construction

- Ensures delivery of area construction contracts, quality contract management decisions and proper contract documentation.
- Recommends final acceptance of projects

**Technical Center Manager (TCM)**

- Directly responsible and accountable for delivering all Technical Center projects within approved scope, schedule and budget
- Ensures all technical aspects of projects are consistent with the Agency’s quality standards
- Provides engineering and professional technical support to maintenance, planning, operations, construction, local programs, project delivery (both outsourced and in-house programs).
- Ensures professional competency of staff through leadership, development and performance management
- Oversees the work of staff in the use of statewide project planning, scheduling, and management systems; ensures proper use of performance measures and takes corrective action as needed to ensure program delivery
- Administers contracts for consultant services
- Responsible for the development and implementation of a quality control program within the Technical Center. Monitors quality assurance performance

**Technical Center Unit Manager (TC Unit Mgr)**

- Manages a unit of discipline specific engineers and staff specialists
- Administers contracts for discipline specific consultant work
- Develops and maintains a quality control program for the unit
- Directly responsible and accountable to deliver technical products on time and within budget.
- Ensures standards, practices and procedures are followed or appropriate exceptions are obtained from Technical Services.
- Solves technical problems in a manner that meets the needs of the customer and the agency
Project Manager (PM)

- Represents ODOT in the delivery of multi-million dollar in-house transportation construction projects
- Responsible for leading and overseeing all activities necessary in the development and administration of outsourced consultant contracts for project development and/or construction
- Primary region point of contact for the development and implementation of Design-Build solicitations and contract administration
- Responsible for the contract administration of construction contracts. Represents the Engineer on the project and has the authority to enforce the provisions of the contract
- Manages a staff of engineers, technicians, surveyors, and clerical personnel who assist in the PM's role as contract administrator of ODOT construction contracts, as well as the construction management experts for the agency
- Plans, prepares, analyzes, documents, and manages the fiscal budgets and cash flow for construction workforce, facilities, vehicles, equipment, training, travel, and other resources necessary to deliver the assigned program of construction projects
- Represents the Highway Division deputy director and the chief engineer, as well as the region manager as an ODOT expert in outsourcing highway construction projects to the engineering consulting and contracting communities and local communities
- Directly responsible for reviewing, approving and accepting work products from the agency's suppliers

Project Leader (PL)

- Provides project management leadership for in-house projects during the project development phase
- Responsible for all activities necessary to ensure that assigned projects are moved successfully through the project development process
- Directly responsible for coordinating and leading all project management processes of all assigned projects: risk, quality, public involvement, scope, schedule, and budget management
- Leads multiple cross-disciplinary teams working on routine-to-complex projects in various stages of development
- Provides overall direction to project team members and coordinates the successful completion of the development phase of each assigned project
- Prepares and manages project work plans for all assigned projects.
- Leads scoping teams
Local Agency Liaisons (LAL)

- Responsible for all activities necessary to ensure that assigned local agency projects proceed from solicitation and selection through the project development and construction phases.
- Ensures federally reimbursable process and regulations are met.
- Provides guidance to local agency representatives on project scopes, schedules, and budgets during project development.
- Responsible for coordinating FHWA review and approval of local federal aid projects.
- Prepares and manages project work plans for all assigned projects.

TECHNICAL SERVICES

Technical Services Manager/Chief Engineer

- Responsible for the overall quality of engineering products delivered for the agency.
- Approves all engineering standards, practices and procedures in compliance with Federal and State statutes, rules and regulations.
- Approves and executes the award of construction contracts (by delegated authority from the Director).
- Establishes and maintains management systems that monitor and predict system needs and performance in the areas of bridge, traffic, pavements, slides, rockfalls and safety. Makes this information available to all system users that would include, but not be limited to, maintenance, operations, planning, and project delivery business lines.
- Ensures training, technical advice and consultation services are available for the agency.
- Resolves major design issues, resulting from conflicting standards, needs, public desires, and technical limitations; and, approves major exceptions to design standards and guidelines.
- Establishes and maintains a quality assurance program for all technical disciplines within technical services. Evaluates performance and provides feedback to regions, consultants, and local governments as a result.
- Oversees the agency’s construction program and authorizes and approves expenditures thereof.
- Directly responsible for managing the agency’s stewardship role with FHWA and serves as the primary point of contact to FHWA for the agency.
Section/Unit Manager

- Provides leadership for the Section/Unit and each program area
- Provides statewide oversight of each program area to monitor consistency in application
- Sets policies and direction of the Section/Unit and each program area by defining how the Section and each program meets the customer’s and ODOT’s needs and then working with the employees to define the policies and standard operating procedures
- Updates and maintains standards, policies, procedures and practices within the discipline and approves any exceptions thereof.
- Determines priorities, develops and implements strategies to deliver Technical Service’s work program
- Provides technical training, advice, and consultation for the associated discipline
- Establishes and maintains management systems that monitor and predict system needs and performance in the associated discipline.
- Responsible for information system investments
- Establishes and maintains “best practices” within the associated discipline.
- Establishes and maintains a quality assurance program for the agency in the associated discipline. Evaluates and reports in-house, outsourced, and local government technical performance as a result.
- Initiates process improvements for the associated discipline.
**MAJOR PROJECTS BRANCH**

**Major Projects Branch Manager**

- Manages all aspects of the Major Projects Branch.
- Directly responsible for the successful delivery of the OTIA III State Bridge Delivery Program and any other major projects assigned to the branch.
- Provides contract administration oversight for the program management outsourcing contract with Oregon Bridge Delivery Partners (OBPD).
- Establishes necessary guidance documents to ensure consistent program management decisions.
- Responsible for knowledge transfer from programs and projects to mainstream ODOT functions.
- Develops and executes all contracting documents in support of the OTIA III State Bridge Delivery program, the Design-Build program, and any other assigned programs or projects (by delegated authority from the director).

**HIGHWAY PROGRAMS OFFICE**

**Highway Programs Office Manager**

- Plans and directs the financial operations of the Highway Program Office of the Highway Division of ODOT.
- Ensures that the financial activities provide relevant, accurate and timely information to enable the Highway Division to effectively carry out its mission.
- Develops and monitors division budgets (limitations adopted biennially by the Legislature), monitoring expenditure levels on a regular basis against approved budgetary limitations, delivering quarterly operational reviews to the Oregon Transportation Commission, providing economic decision analysis for the division, and testifying before Legislative Committees and the Emergency Board concerning the status of ODOT construction projects.
- Directs and coordinates the preparation, approval and programming (allocation) of all ODOT Federal Aid program monies, including the allocation of federal funds to city and county programs throughout Oregon.
- Manages and develops the Statewide Transportation Improvement Program (STIP).
- Develops and manages performance measures and produces internal and external reports such as the OTIA Monthly Report (G-Y-R), the Highway Construction Plan (HCP), and Quarterly Status Report (QSR)

**Local Government Section Manager**

- Manages the Local Government Section and oversees the Local Program. This office focuses on coordination and policy development with local agency groups and process improvements for local agency project development and delivery
- Directly responsible and accountable to the deputy director of highways for statewide local program coordination, policy development and training
- Acts as the interface between the Local Program and the other major business lines. Ensures coordination occurs between these functions by initiating process improvements to ensure federal stewardship responsibilities are met and to minimize inefficiencies and unnecessary overlaps

For delegation of director’s authority, see:

http://intranet.odot.state.or.us/ssb/bss/p&b/ORG_05_Policies.pdf
http://intranet.odot.state.or.us/ssb/BSS/del/d_sub-02.pdf
http://intranet.odot.state.or.us/ssb/BSS/del/d_sub-05.pdf
http://intranet.odot.state.or.us/ssb/BSS/del/d_sub-17.pdf
ODOT Project Delivery
PUBLIC INVOLVEMENT RESOURCE GUIDE

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INTRODUCTION

PREFACE

Successful delivery of Oregon Department of Transportation projects depends on our ability to work effectively with the public. We demonstrate accountability to those we serve by developing and using fair and effective decision-making processes and communication strategies.

The better we understand and address the needs and ideas of those who could be affected by project decisions, the better we can contribute to the ODOT Mission: To provide a safe, efficient transportation system that supports economic opportunity and livable communities for Oregonians.

ODOT is committed to involving the public—individuals, governments, and other organizations—in project work and decisions that directly and indirectly affect them. This is demonstrated through:

- **Our Values:** We work with the appropriate customers, stakeholders, and partners to find efficient, effective, and innovative solutions
- **Our Goals:** Improve Oregon’s livability and economic prosperity
- **Our Strategies:** Engage the public, other state agencies, local governments, businesses and community leaders in solving transportation problems

The interests surrounding transportation projects are often widely varied, complex—even opposing—and consensus can be very difficult to achieve. This guide provides some general resources for anyone who has a role in ODOT project delivery and whose work requires involving stakeholders in decision-making in both project development and construction, and allows flexibility to tailor involvement to meet specific project and community needs.

The process of informing and educating the public as well as soliciting input, listening and responding to what citizens and customers have to say about our project decisions can be a complicated, challenging, and often intimidating process for all involved. And at other times the process can be relatively straightforward, requiring only basic common sense. In any case when done well, it can also be a rewarding and meaningful experience that leads to better decisions and greater mutual trust.

While no specific public involvement formula can be used to support the development and construction of every project, there are some basic principles and practices that you can apply to most that can address these challenges, help create confidence and trust for all, and improve the chances of a successful outcome. Read on....
PURPOSE

As the demands on Oregon’s transportation system continue to change and grow, so do the implications for project decision-making, stakeholder and community interests, and environmental impacts. These dynamics result in ever-changing expectations on how to effectively and appropriately involve both internal and external stakeholders, and reinforce the need for effective public involvement planning on every project.

This guide is intended to help project development and construction teams organize and implement public involvement strategies that will lead to balanced, and context-sensitive and sustainable transportation decisions. Keep in mind this resource guide is a starting point. Quality projects require strong commitment and action from all individuals involved, whether they are ODOT staff, construction contractors or consultants, local jurisdictions, elected officials, citizens or tribal members.

This guide addresses public involvement and its basic principles as it is applied to project development and construction of STIP projects. This guidance does not necessarily apply to planning or maintenance projects, although the principles and approaches described here can be used in many situations. As used in the guide, "delivery" signifies the entire lifecycle of ODOT projects, a process that stretches from inception to realization—from “cradle to grave”—and isn't limited to the construction phase of a project.

This guide covers the “what,” “why,” “when” and “how” to successfully plan and implement public involvement activities that will add overall value to your project. It also provides guidance and a template for developing a public involvement plan, along with helpful resources to make the most of the activities we undertake. These materials are arranged in three sections:

Section 1: What is Public Involvement?
Section 2: Why is Public Involvement Important?
Section 3: How do you conduct Public Involvement?
Appendix A: Tools and Resources
Appendix B: Federal and State Public Involvement Policies and Regulations

This guide, combined with the advice, guidance and support of public affairs professionals and the leadership of area managers should provide the necessary tools and resources for a successful public involvement process.

Project Delivery Operational Notice 12 spells out the responsibilities of each member of a project team (applying to both project development and construction). Details about federal and state regulations, requirements and policies are provided in Appendix B.
WHAT IS PUBLIC INVOLVEMENT IN PROJECT DELIVERY?

Public involvement for ODOT project delivery includes any interactions we have with those who may be interested in or affected by a project decision. This includes any activity in which we strive to inform, educate, reach out to, gather input from, engage, and/or collaborate with individuals and organizations regarding project decisions.

The public includes all members of the Oregon community as a whole, including individual stakeholders, travelers, property and business owners, local/state/federal governments, and tribal nations.

Stakeholders include any individual or organization with direct interest, involvement, or investment in ODOT project decision-making. Stakeholders are both internal ODOT (employee) and external to ODOT (not an employee). For example, a district maintenance employee may be an internal stakeholder to a project, and thus a stakeholder we want to involve in the project.

Successful public involvement for an ODOT project means we create a common understanding with the public that:

1. There is a need or opportunity - one that must be addressed
2. We have the right team and it is our responsibility to address the need or opportunity
3. Our approach in addressing the need or opportunity is reasonable, sensible, and responsible
4. We do listen and we do care

Further, effective public involvement during project development and construction:

- Actively engages stakeholders in the project decision-making process at the appropriate times, where diverse opinions are expected and welcomed
- Builds trust and credibility
- Accounts for the political climate and potential public issues and impacts
• Promotes the goals and expectations shared by the public and decision-makers about the project and project decisions
• Can be conducted using a variety of techniques and tools
• Meets the process-needs of all participants: they have a say in how they participate
• Provides all affected individuals a voice in decisions about actions that may affect their lives
• Communicates to participants if and how their input affected decisions
• Provides essential information to reach the best solutions for project decisions
• Effectively communicates and clearly illustrates the reasons for recommended courses of action in a way that stakeholders can understand
• Can happen as readily and with the same importance during the construction phase as it does in the project development phase

Any project that does not address—or is perceived not to address—a serious need or opportunity is at risk. Public involvement efforts should support a message that demonstrates how a particular problem that the project is intended to address can significantly impact someone’s quality of life.

Consensus is often difficult, at times even impossible, to achieve on certain project decisions. In such cases, it is our responsibility to make sure we are doing our best by:

• Using a good decision-making process to reach appropriate and effective proposals
• Listening effectively and being responsive to input and potential impacts
• Effectively communicating our proposed actions in an understandable way to those affected

ODOT PUBLIC INVOLVEMENT ROLES AND RESPONSIBILITIES:

Projects may or may not warrant a highly structured public involvement process - as you will learn in this guide, it really depends on the project scope, complexity, sponsorship, required approvals, range of stakeholders, and other factors. Project Delivery Operational Notice #12 (PD-12) spells out the responsibilities and expectations for those involved on a project.

Those leading or managing project development or construction retain responsibility for the success of the project, including the public involvement plan and effort. However, there are many resources available to assist with this aspect; Appendix A provides tools and resources in greater detail, including a section on what to do when plans and communications go awry.
WHY IS PUBLIC INVOLVEMENT IMPORTANT?

Oregon Department of Transportation wants to develop and construct projects which provide a safe, efficient transportation system that supports economic opportunity and livable communities for Oregonians. The people who travel on, live and work near, or are affected one way or another by the part of the system we need to work on, often have valuable problem-solving insights or critical interests that we need to understand and address. They can even be invaluable in helping us make informed decisions and communicate to others important messages about the project purpose, needs, priorities, and solutions. The public also wants us to spend their tax dollars wisely, and it is important for us to communicate that we are doing so, and how.

In the face of diverse views and interests it can be difficult and even unrealistic to achieve consensus, but timely engagement with the public offers considerable benefits for everyone. It leads to better project delivery as a result of our taking into account a wide range of views, thereby increasing the legitimacy, integrity and quality of decisions.

A big part of our job at ODOT, as a large and visible state agency, is to establish trust and credibility with the public. Every project requires a careful balancing of confidence and ownership in our work with listening to all our stakeholders, remaining open to ideas, being flexible, understanding, caring, and being accountable to the public we serve.

Project leaders and managers want to complete projects on time and within budget. Experience shows us that getting critical information and establishing best solutions in a timely way contribute best to achieving these goals. We can make better decisions by doing public involvement planning, integrating public involvement activities into the project development and construction processes, and documenting these activities.

So, the bottom line: We cannot afford to leave the public out of our project decision-making; it is essential to success.
Benefits of public involvement

A well-planned and well-implemented public involvement effort can yield substantial benefits, such as:

- Improving the legitimacy of project development and construction decisions in the eyes of those affected by them, making it more likely that the decisions can be implemented effectively (now and in the future).

- Enhancing mutual trust and understanding, thus paving the way for smoother interactions on the next project.

- By involving diverse stakeholders in the assessment of needs, and identifying troublesome issues early, public involvement can promote broader “ownership.” Although many projects have some negative effects, stakeholders are often more accepting when they recognize a need being addressed, participate in developing/understanding the solution, and understand the constraints and trade-offs.

- Making context-sensitive decisions that better reflect community values, which is part of our mission.

- Decision makers who understand the concerns of the public can be more sensitive to those concerns in the decision making process, leading to more efficient implementation.

- Enhancing agency credibility and engagement. Transportation stakeholders develop a better understanding of agency operations, and agency officials have a better understanding of public thinking.

- We do not have a monopoly on good ideas. Effective public involvement will generate new ideas and perspectives, benefiting current and future projects.

- Reducing the risk of litigation, and avoid revisiting decisions which can significantly reduce costs.

Achieving these results depends on proper planning and employing practices that address the specific issues and context of each project. The remaining sections of this guide will help provide some valuable resources.
HOW DO YOU CONDUCT PUBLIC INVOLVEMENT?

You start by developing a Public Involvement Plan (samples are provided in Appendix A). A plan must be prepared for each ODOT project to establish the appropriate level and sequence of public involvement activities. Plans are developed at the start of project development and maintained through completion of construction. They evolve and are tailored to the appropriate level of effort needed, based on the context of the project (e.g. scope, complexity, potential impacts and risks, level of interest, etc.) Each plan includes:

- A summary of any related public involvement prior to the start of project development (or of previous project phases).
- A listing of stakeholders and their key issues/concerns, previous commitments made to them, and a method for ongoing updates to the listing.
- Specific strategies for assessing priorities and addressing individual issues, concerns, commitments, and/or policies etc.
- Description of how public involvement activities will be coordinated with other project management efforts and processes (e.g., Transportation Management Plans, project schedules, etc.).
- Planned activities and tasks with corresponding team member roles, responsibilities, and timeframes (e.g., information gathering, outreach, information sharing/education, coordination, assessments, collaboration/engagement, documentation, post project evaluation of plan/lessons learned, etc.).

The plan may only be a page long, or it may be many pages, depending on the nature, location, complexity, and needs of the project.

Operational Notice PD-12 outlines basic expectations concerning roles and responsibilities for project delivery public involvement. Whoever has been assigned to oversee a project—this could be a Project Leader, Project Manager, Local Agency Liaison, or Environmental Project Manager—is ultimately responsible for initiating the
public involvement plan, documenting public involvement activities and maintaining the documents in the project file.

Begin developing, writing and implementing the plan with stakeholder interests and the desired project outcomes in mind. Articulate what the goals and objectives of the plan are for the given project, and how success will be measured. Your plans and decisions should focus on establishing and maintaining an understanding with the public that:

1. There is a need or opportunity - one that must be addressed.
2. ODOT has assembled the right team, and it is our responsibility to address the need or opportunity.
3. Our approach in addressing the need or opportunity is reasonable, sensible, and responsible.
4. We do listen and we do care.

Include in your planning how these points will be sustained and measured. For example, it’s important to track progress with the plan, such as when specific commitments are made (e.g., who made it, to whom it was made, why, as well as the information the decision was based upon) and transitions occur between project development and construction. That way, if a decision needs to be revisited, it will be easier to know who to talk to and what has changed.

Although assignments can vary from project to project, it is typical for leaders and managers to collaborate with the public involvement or public affairs staff or consultants, the area manager (or other project sponsors), and key project team members when drafting and implementing public involvement plans.

For your Public Involvement Plan to be effective, it must be coordinated with the project’s various technical and decision-making milestones in and across project development and construction.

Early attention to stakeholder needs provides the information necessary to develop an appropriate and effective Public Involvement Plan and schedule. The earlier you start, the better. For example, involving key stakeholders during scope development helps the project leader or manager gather information that is critical to a project’s success. Certainly there may be some guess work and lack of specifics in the beginning, but understand that the plan can be refined as the project development process evolves. Early public involvement efforts during scoping may also help determine who will be most desirable to have supporting the project, or help with criteria on consultant selection for public involvement services, for good timing with project start-up. (See Scoping Questions in Appendix A)

Remember that a Public Involvement Plan is a living and evolving document, and will change over time as discovery is made, or as issues and concerns change. For a long
process, built-in formal reviews and updates to the plan are a good idea. Bear in mind that the review may or may not result in revisions, and that the timing of the review may need to be based on achievement of a milestone rather than a specific date.

Specific Tips as the Plan is Developed

There is no single formula that can be universally applied to achieve the “right” process and techniques for the plan. There is, however, some advice to remember:

*Personal interaction is often the most effective form of involvement.* For example, a series of one-on-one interviews with key stakeholders can be effective in identifying concerns, issues, needs, level of interest, potential impacts, follow-up expectations, ideas and other forms of assistance toward the project, even including what involvement and decision-making techniques to use.

*Go to where people are, rather than asking them to come to you.* People meet and gather in everyday community ways, such as community associations, libraries, school-based and parent advisory groups, and coffee shops. It is often easier to reach people in their habitual settings than trying to attract them to ODOT sponsored public events.

*Engage a variety of senses: develop pictures, maps, models.* If people can feel, sense, touch, see and hear (experience) what you are working on, they can better understand, and respond with meaningful input.

*The more conflict, the greater the need for interactive techniques.* For example, if two different stakeholders are directly opposed on an approach or solution, they can be encouraged to set aside positions and personalities and focus on clarification of facts surrounding the problem, issues and desired outcomes.

*Public involvement processes should be oriented toward common ground.* Between people’s worst fears and greatest hopes, there is some common agreement; even among the most diverse and conflicting views.

*Public involvement processes should be safe for the participants.* Particularly when the issues are controversial and when there is considerable conflict, people need opportunities to become involved where they feel *safe* to express their views and opinions.

*People need good information to be effective participants.* This means full disclosure of understandable information on the issues, ideas and perspectives of the project and asking participants what information they think they need. Also, it’s our job to explain things in common terms and language and avoid using ODOT jargon or including hidden assumptions about ODOT values and issues that others don’t understand.
Use techniques specific to the needs of the project. The techniques used should fit the type, size, and complexity of the project, as well the diversity, complexity and polarity of interests. The techniques chosen should fit the available resources, support better solutions, lower total costs and timely completion. Using too many or the wrong techniques on a project may increase risk.

Public involvement should remain flexible. As public involvement processes unfold, there will inevitably be changes in who wants or needs to participate, the information that becomes available, and the perspectives on the issues. Keeping the process flexible allows responsiveness to these changes.

Look for opportunities to include stakeholder ideas in the project. It sends a clear message that we are listening and care about their concerns.

Public involvement processes need to reflect ODOT responsibility and ownership of the project. That is, the public involvement process should not surrender our charge for making project decisions. The effort should be about improving the quality of decisions made, not deferring ownership.

Mistakes That Can Put a Project at Risk

Using the “Decide-Announce-Defend” Decision-Making Process
Choosing, or appearing to have chosen, a project alternative before completing the supporting studies and/or consulting stakeholders significantly increases the chances that one or more of those stakeholders will not agree with your project solutions.

Succumbing to the technical fallacy
Projects are rarely stopped because of technical deficiencies. Some form of public opposition is usually the reason. Often, both public agencies and private proponents assume that technical soundness is enough to assure good decisions and timely project implementation.

Underestimating Stakeholder Veto Power
There is always the possibility that a small minority of stakeholders (even just one person) may find a way to stop or seriously delay a project. However, the risk can be managed if we recognize this potential, take it seriously and address it in an appropriate way, such as avoiding the above two mistakes.
SIX STEPS TO AN EFFECTIVE PUBLIC INVOLVEMENT PLAN

The following section describes how to best plan and execute public involvement for ODOT projects. Simply put, these steps are:

1. Identify stakeholders and their key issues/concerns
2. Establish objectives
3. Determine level of public involvement
4. Select the public involvement activities
5. Implement
6. Evaluate and incorporate

1. IDENTIFY STAKEHOLDERS AND THEIR KEY ISSUES/CONCERNS

Identifying those who would likely be affected by a project, and what their interests are, is the first step in determining the range of public involvement activities needed. This early stakeholder “scoping” helps:

- Gauge levels of interest from various stakeholders (both internal and external)
- Identify potential focus areas for goals and objectives (e.g., controversies)
- Identify social, economic, cultural and other environmental concerns
- Identify those individuals needed and available to support the effort

It’s also important to research and summarize any related public involvement activities which might have taken place prior to the start of the project. What is ODOT’s history in this area? What other public involvement efforts coincide or overlap with those of this project? What commitments have been made to this community? Within ODOT?

While stakeholders can include owners of property adjacent to the project, they also include many other interests, such as users of the system, representatives from ODOT or other jurisdictions, business owners, public and private transportation service providers, other government agencies, and special interest groups.

The suggested template for an ODOT Public Involvement Plan in Appendix A includes a helpful list of potential stakeholders for consideration. Keep in mind that every project is unique: You may identify only a few potential stakeholders from the list or find there are stakeholders not listed who should be engaged. Potential stakeholders may include:

- Adjacent property owners (residential, commercial, industrial, institutional—educational, religious, government, non-profit)
- Adjacent property renters (residential, commercial, industrial, institutional)
• Transportation facility users (commuters, truckers, business customers, tourists, major regional employers)
• Local elected and appointed officials (city council, county commissions, planning commissions)
• Natural resource and/or regulatory agency staff, such as the Oregon Department of Fish & Wildlife or the Army Corp of Engineers.
• Local jurisdiction professionals, such as city managers, county finance managers, public works directors, traffic engineers, planning directors
• Regional professionals, such as Metropolitan Planning Organization transportation staff
• ODOT professionals, such as district maintenance managers and staff, traffic operations staff, headquarters environmental staff, transportation planners, construction staff (during project development) and project development staff (during construction), etc.
• Federal transportation staff (Federal Highway Administration, Federal Transit Administration)
• Transportation service providers (transit, airports, railways, marine ports)
• Neighborhood organizations
• *Underserved* groups who may be impacted, such as minorities, low-income, or those with *limited English proficiency* (LEP).
• Business organizations (local and regional Chambers of Commerce, economic development agencies, industry associations)
• Special interest groups (bicycle, pedestrian, recreation, health & wellness, environmental, historic preservation, scenic conservation, aeronautics, land use)
• Tribal Nations
• The news media

In all cases, aim to be inclusive: Ensure that everyone who may have an interest in or may be affected by the outcome has an opportunity to be involved. In many cases it’s important that specific stakeholders—such as those who might be opposed or who have special knowledge—actually be sought out for inclusion.

Also consider those with specialized needs or disadvantages, such as people with low income, older adults, people with disabilities, and those with special language or communication needs. These types of potential stakeholders may be dispersed and/or feel helpless in their ability to influence public decisions, thus the appropriate outreach must be tailored to the circumstances at hand. (See [ODOT’s Title VI Program](#).)
Identifying stakeholders can be a challenge. Knowledge of local customs and influences can be critical. Community leaders are not always the elected or appointed officials, so it’s important to research previous related public involvement. ODOT staff familiar with the project area can relate its history and current transportation needs and help you identify potential issues, the groups likely to be affected, and key contacts. Those same staff members may also be internal project stakeholders.

Keep in mind that no matter how thorough you are in stakeholder identification at the beginning of a project, the list will evolve. As more detailed information becomes available, previously uninterested parties may become stakeholders.

Go beyond simply listing likely stakeholders and delve into what their issues might be, what they might be able to contribute, and how they might best be involved. Go beyond individual stakeholders and into understanding community attitudes about the nature of transportation problems or issues associated with a project, such as those concerning safety, mobility, land use, land development and environmental values. Some concerns or issues might seem irrelevant or trivial at first; strive to maintain an open mind and listen carefully to what is being said. At any time, a concern or issue may escalate from trivial to critical.

This first step in Public Involvement planning will contribute to your understanding of the project’s constraints and opportunities, and will inform the subsequent steps. Public involvement planning will help you avoid creating unreasonable expectations with a community and boost your understanding of organizational support, statutory requirements (like public hearings,) or other expectations within ODOT.

Some concerns may already be known by the project team; others are revealed once stakeholders are contacted. As relationships develop and the project advances, new issues may come to light. Timely discovery of stakeholder concerns and beliefs is important; early is usually better, but gaining a complete understanding may take much time and effort, even as the project transitions from development to construction.

Essential to completing this step is estimating how much work is required to develop the Public Involvement Plan, over and above the actual public involvement activities. Each project will be different, and it will be an iterative and evolving process.

2. ESTABLISH OBJECTIVES

The next step is to use the knowledge you’ve gained to establish public involvement objectives. The Public Involvement Plan’s objectives should not be confused with nor should they duplicate the project objectives. Rather, they must specify how they will support the desired project outcomes.
As mentioned early in this section, the Public Involvement Plan’s objectives should be oriented around creating and maintaining a common understanding with the public that:

1. There is a need or opportunity – one that must be addressed.

2. We have the right team and it is our responsibility to address the need or opportunity.

3. Our approach in addressing the need or opportunity is reasonable, sensible, and responsible.

4. We do listen; we do care.

Communicating and maintaining these points throughout the life of the project will substantially increase your chances of project success.

A project’s public involvement objectives and the techniques used can change as the work progresses and as more information is gathered. The Public Involvement Plan must be revisited and revised as necessary at key milestones, most notably in the transition between project development and construction.

3. DETERMINE THE LEVEL OF PUBLIC INVOLVEMENT

As you gather the information in previous steps and understand the project area better and better, you are developing an understanding of your project’s context, to which your Public Involvement Plan must be tailored.

The project’s context is a reflection of community and stakeholder values, needs and interests and fosters an awareness of the social, cultural, political, economic, physical, timing, technical and historic attributes of the project area. You must also consider not only the corridor perspective, but that of the state and even the national system. Identifying project context also sets the stage for establishing environmental analysis of the project.

To help you deal with all the possibilities and variables you face, ODOT has developed a Tier Assessment Tool. The tool outlines a matrix of contextual possibilities, ranging from the simplest situation with few concerns or impacts to the most visible and complex projects, and suggests appropriate levels of effort. It can guide you in determining the activities and resources needed for most situations. It is up to those planning the public involvement effort to determine into which tier a project falls.
Tier 1 Project Characteristics

**Technical:**
- Typical uncomplicated repair or maintenance project (e.g., 1R)
- No detours or major closures (Traffic Management Plan)

**Contextual:**
- Project influence area unpopulated
- Programmatic permit - No environmental, ROW, access impacts
- No Environment Justice issues
- No historic elements or facilities

**Local:**
- No distinguishing project-specific issues identified

Tier 2 Project Characteristics

**Technical:**
- Complex repair, preservation, replacement or modernization scope of work
- Minor detour or closures; interchange or access impacts (Traffic Management Plan)

**Contextual:**
- Project influence area - rural or sparsely populated community with some residences, businesses, schools, etc.
- Programmatic permit - No significant environmental, ROW, access impacts
- No Environment Justice issues
- No historic elements or facilities

**Local:**
- Project-specific issues identified that require some targeted or special outreach and input activities

Tier 3 Project Characteristics

**Technical:**
- Highly complex repair, safety, replacement or modernization scope of work
- Major detour and/or closures, interchange/ access impacts, safety issue (Traffic Management Plan)

**Contextual:**
- Project influence area within a highly populated or urban setting
- Non-programmatic permit - Substantial environmental, ROW, access impacts
- Environment Justice issues exist
- Historic elements or facilities

**Local:**
- Significant project-specific issues identified that require a comprehensive public involvement plan with targeted or special outreach and input activities.
Tier 2 and Tier 1 public involvement efforts typically require a simpler scope; complex Tier 3 projects involve a more comprehensive scope and effort.

This assessment provides basic guidance in determining specific public involvement outreach needs and target internal and external audiences for the assessed project. A complete listing of the tasks recommended for each tier level is outlined on the Tier Assessment Tool in Appendix A.

4. SELECT PUBLIC INVOLVEMENT ACTIVITIES

The next step is to decide which public involvement activities you will use. These are simply tools that fit the assessment you completed above; there are a variety to choose from and you can select the combination most appropriate for your project and objectives. As outlined in previous steps, your understanding of the stakeholders, their issues and interests, the plan objectives, the project’s context and constraints, and the level of complexity and potential impact, will all guide your selection of public involvement activities.

Consult Appendix A for the public involvement strategies and techniques that fit your project best. Remember to revisit your Public Involvement Plan at each stage, including transitions from project development to construction, to update it and adjust activities to the current needs. Consider your timing (who to involve and when); early involvement creates a sense of partnership and ownership of the issues, problems and outcomes. Typically, the earlier issues are identified, the more flexibility there is to address them. As a project progresses and decisions are made, flexibility is reduced.

Questions to consider when choosing public involvement activities and techniques:
- How does the activity tie to the tier assessment and the Public Involvement Plan objectives?
- When should the activity be done (one-time or repeating)?
- Where will public involvement activity take place?
- Who will run the activity?
- What publicity is needed?
- What information should be given to stakeholders?
- How will the activity be coordinated with other project management efforts and process (e.g., Transportation Management Plans, project schedules, Design Acceptance)
- How will success be measured for each activity?

Ask for help: Each ODOT region has knowledgeable public and community affairs staff skilled at assessing communications and outreach needs and techniques. You can find contact information at: http://www.oregon.gov/ODOT/involvement.shtml
5. IMPLEMENT

Once you’ve chosen your public involvement activities and techniques, you need to decide how they’ll be carried out. This is a dynamic step, during which you will be responding to changes as they happen; in this step we demonstrate our commitment to the public involvement process and objectives.

With good planning, you can be prepared for even unforeseen issues and address them appropriately. Flexibility and ongoing modifications to the plan carry you successfully through this step. As transitions occur between project development and construction, ensure there is good information flow, stakeholder relationships are maintained, commitments are kept, and staff is budgeted.

A good way to aid implementation of your Public Involvement Plan is to develop a table or schedule (using Microsoft Project or Excel), which lists the planned activities and tasks with corresponding team member roles, responsibilities, and timeframes. It should be set so that it can be posted and updated to team members as progress is made.

As the public involvement activities take place, be sure to provide stakeholders with ongoing feedback opportunities. This reassures them that their views and concerns are being heard and considered. It’s also important to provide timely and accurate follow-up after a decision has been made on an issue. The level of trust and cooperation between the organization and the community is likely to increase through these interactions.

Also let stakeholders know what the next steps are, for example, when and how they will learn the outcomes from any activity or event. If the information or outcomes are delayed, keep participants informed about progress. The task schedule is an effective way to ensure timely follow-up, and to meet expectations and keep involvement commitments.

Your task schedule should address when and how feedback and follow-up will be made (including FHWA expectations and NEPA requirements as applicable). Depending on the nature of the activities, feedback might be offered at regular intervals, or within a pre-determined period after each engagement.

A range of feedback and follow-up techniques should be considered, because some methods will work better for some participants and situations, others may even overlap. Some techniques, to consider are:

- Establish and maintain an interactive Web page, providing surveys/polling, and two-way communication.
- Send e-mail or letter updates and/or establish a ListServe for interested parties.
- Provide summary reports of meetings/workshops.
- Acknowledge written submissions (written and/or verbal).
• Provide telephone hotlines
• Provide for post-meeting or activities critiques (written and/or verbal)
• Hold meetings to relay findings following surveys/polls
• Offer discussion/issues papers
• Publish newsletters
• Use a dedicated community involvement project email group
• Use informal communications
• Use existing technology, like Tripcheck, as well as new and evolving interactive Web communication tools such as Twitter, particularly when providing “real-time” information is important.

Consider the needs of the participants. For example, should information be available in different languages or different forms of media (paper or electronic)? Aim to provide information, interaction and feedback in various ways to maximize accessibility.

6. EVALUATE AND INCORPORATE

Evaluation is an integral part of the Public Involvement Plan. Too often, evaluation is ignored or begun too late to help improve the process. Here’s how to “work smarter”:

• Involve stakeholders in designing and conducting the evaluation, not only in gaining their input, but also as a further way of partnering with them and creating a transparent process.

• Monitor and evaluate the outcomes of the public involvement activities throughout the life of the project, and make revisions as needed.

• Keep the effort simple, as evaluation should be about finding out if the public involvement effort was a useful thing to do, what it achieved, how it could have been done better and what might be done next.

• Schedule time in project meetings—especially during post-project and post-milestone evaluations—to discuss how the public involvement process worked, what lessons were learned. Capture commitments made and how to best track them.

And finally, if there are any significant tools, techniques or strategies that can be “globalized” for the agency to use, use this step to plan how they can be shared, tracked and evaluated.
APPENDIX A

TEMPLATES AND TOOLS
- Project Tier Assessment Tool
- Public Involvement Plan (under development)
- Assessing Public Interest and Concern Tool
- Public Involvement Spectrum, Techniques and Activities
- Project Info Paper/Sheet Template 1
- Project Info Paper/Sheet Template 2
- Fact Sheet Template
- News Release Template
- Newsletter Template

SAMPLES AND EXAMPLES
- Scoping Document
- Public Involvement/Communications Plan - Simple Project (Tier 1)
- Public Involvement/Communications Plan - Complex Project (Tier 3)
- Property Owner Access Change Notification Letter

Press Releases
- OR 99E/Pacific Hwy
- Van Buren Bridge

Brochures
- Millport Slough
- US26: Volmer Creek And Johnson Creek Bridges
- Newton-99W

Public Information Sheet
- Hwy 99E
- Van Buren Bridge
- I-5 Santiam Over Crossing

Open House Information Sheet:
- Van Buren Bridge
- Open House Notice: Lincoln City

Notice of FHWA Record of Decision: Spencer Creek
Typical PE and CE Budgets for Public Involvement
RESOURCES

SAFETEA-LU Website
Title VI Overview
Communications Division Contacts
FHWA’s How to Engage Low-Literacy and Limited English-Proficiency Populations
Other states’ Public Involvement guides:
  - Colorado NEPA 2008
  - Idaho Guidebook
  - OH Public involvement handbook
  - TN Chapter 7 Public Involvement
  - WY Public Involvement handbook
  - Michigan DOT Guide for Stakeholder Engagement
APPENDIX B

PUBLIC INVOLVEMENT POLICIES AND REGULATIONS

The work performed by ODOT staff must be consistent with the concerns of the people we serve. Providing effective means for citizen input and participation is the way we make sure that we understand those concerns and ensure they are reflected in the agencies policies and practices.

A statewide perspective

Governor Kulongoski has identified six key principles as priorities for state government. One of the principles is government efficiency and accountability. The Governor states that “State government must be a responsible steward of the public’s money. This means we must work in a cooperative and coordinated manner with our partners in the private sector and with local government - counties, cities, and special districts.” Governor Kulongoski’s goal is to rebuild the trust of Oregonians in their state government and to ensure state agencies uphold their commitment to use taxpayer dollars to enhance the quality of life for all Oregonians. This means a commitment to continuous review and improvement, and it means making government communications and actions transparent, understandable and accessible.

Oregon’s planning law applies not only to local governments and special districts but also to state agencies. The law strongly emphasizes coordination and citizen participation. Goal 1 of the Oregon Statewide Planning law is citizen participation. The goal emphasizes participation of citizens in all phases of the planning process. The components of the goal are:

- Provide for widespread citizen participation;
- Assure effective two-way communication with citizens;
- Provide the opportunity for citizens to be involved in all phases of the planning process;
- Assure that technical information is available in an understandable form;
- Assure that citizens will receive a response from policy-makers; and
- Ensure funding for the citizen participation program.
From a statewide perspective public involvement is a key element of implementing statewide initiatives.

ODOT’s perspective

ODOT is committed to involving the public—individuals, governments, and other organizations—in planning and decision-making efforts that may affect them. This commitment is an outgrowth both of ODOT’s responsibility as a public agency to be accountable to those we serve and the recognition that better communication can lead to better decisions. Understanding and addressing the needs and ideas of those affected, enhance our ability to achieve our mission.

The following are summaries of specific policies and regulations which affect public involvement practices for ODOT project delivery.

THE OREGON TRANSPORTATION PLAN

The Oregon Transportation Plan (OTP) is the statewide, long-range multimodal plan that guides development and investment in Oregon’s transportation system for the next 25 years. The OTP recognizes that in order to preserve our standard of living and to continue to improve our economy, we need to change the way we make decisions about managing and funding transportation. The OTP’s policies and implementation strategies respond to the challenges facing Oregon’s transportation system.

Underlying the strategies are five fundamental principles:

- Accessibility and mobility,
- Economic development,
- Equity,
- Safety, and
- Sustainability.

There are seven goals of the OTP that support the five fundamental principles. The seventh goal is to pursue coordination, communication and cooperation between transportation users, providers and those most affected by transportation activities to align interests, remove barriers and bring innovative solutions so the transportation system functions as one system:

Policy 7.3 (Public Involvement and Consultation) It is the policy of the State of Oregon to involve Oregonians to the fullest practical extent in transportation planning and implementation in order to deliver a transportation system that meets the diverse needs of the state.
Strategy 7.3.1 In all phases of decision-making, provide affected Oregonians early, open, continuous, and meaningful opportunity to influence decisions about proposed transportation activities.

Strategy 7.3.4 Coordinate public outreach activities among local, regional and state agencies as appropriate.

Strategy 7.4.1 Provide equal access to public information and decision-making about transportation planning, financing, construction, operations and maintenance activities.

CONTEXT SENSITIVE & SUSTAINABLE SOLUTIONS (CS3)

In order to achieve the seven OTP goals ODOT is adopting the context sensitive and sustainable solutions (CS3) approach into the project delivery system. CS3 provides a unique perspective to transportation engineering in Oregon. The inspiration for CS3 is derived by combining two innovative concepts emerging within the transportation industry: Context Sensitive Solutions (CSS) and Sustainability. It fosters workforce development; reflects communities' cultural and aesthetic interests; maintains mobility and safety; ensures sound stewardship of the natural environment; and promotes cost-effectiveness. Early, effective and continuous public involvement is the cornerstone of successful CS3.

The CS3 approach has six goals:
1. Maintain or improve traffic mobility and safety; keep traffic moving.
2. Employ innovative, efficient, and cost effective delivery practices that result in quality projects.
3. Stimulate Oregon’s economy and develop its workforce.
4. Build projects that are environmentally responsible and encourage the conservation and protection of natural resources.
5. Develop transportation solutions that are sensitive to community and social values.
6. Capitalize on innovative funding opportunities that support a viable transportation system today and for future generations.

The desired result of the CS3 is an improved state transportation infrastructure that reduces transit-based limitations on trade and economic progress while instilling a socially and environmentally responsible culture of sustainability.

Based on this over arching initiatives, ODOT believes that by engaging the public through public involvement we will:
• Improve the quality of ODOT decisions and promote informed consent;
• Increase the ease of constructing a project, helping to minimize the cost and delay of implementing a project or program;
• Help ODOT maintain credibility and legitimacy;
• Improve our ability to anticipate stakeholder concerns and attitudes; and
• Provide ODOT with better educated stakeholders who not only understand transportation issues, but also know how ODOT makes decisions and why.

Public involvement is most effective when our programs are:
• **Accessible** - broad based, visible, and providing stakeholders with the information they need in order to participate effectively.
• **Continuous** - early and throughout decision making to implementation.
• **Responsive** - genuinely considering public concerns and ideas and communicating how that information affected the decisions.
• **Responsible** - communicating parameters, such as budgetary constraints and what can be influenced, and documenting the public involvement process.

Further details about federal, state and Oregon Transportation Commission policies are provided below.

**FEDERAL LAWS**

**Title VI of the Civil Rights Act Of 1964**
“No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” (See also ODOT’s Title VI Program.)

**Federal Aid Highway Act of 1973** added sex as a prohibited basis of discrimination.

**Civil Rights Restoration Act of 1987** expanded coverage of Title VI to include all of an agency’s programs and activities, regardless of funding source. Executive Order 12898 on Environmental Justice (February 11, 1994) added low-income populations to prohibited basis of discrimination.

**FEDERAL REGULATIONS & POLICIES**

**National Environmental Policy Act (NEPA) Coordination**

The National Environmental Policy Act (NEPA) is our basic national charter for protection of the environment. NEPA establishes policy, sets goals, and provides means for carrying out the policy and contains “action-forcing” provisions to ensure that federal agencies act according to the letter and spirit of the Act. The NEPA regulations inform federal agencies what they must do to comply with NEPA procedures and achieve the goals of the Act.
ODOT’s NEPA Process page and NEPA Do’s and Don’ts document includes guidance on public involvement coordination.

OREGON TRANSPORTATION COMMISSION PUBLIC INVOLVEMENT POLICY:

The Oregon Transportation Commission and the Oregon Department of Transportation have established policy that ensures meaningfully involvement of the public in important decisions by providing early, open, continuous, and effective public participation in and access to key planning and project decision-making processes.

Many sections and units within ODOT such as Project Delivery...conduct public involvement and/or public outreach using processes unique to their needs. Those sections and units will continue to refine specific procedures building on these core requirements.

ODOT OFFICE OF CIVIL RIGHTS

The ODOT Office of Civil Rights oversees compliance with a number of regulations and programs, such as the Title VI, Disadvantaged Business Enterprise, Emerging Small Business, Workforce Development and Labor Compliance programs. Public involvement efforts must be aligned with the agency’s goals and commitments in each of these arenas. Visit www.oregon.gov/ODOT/CS/CIVILRIGHTS for information and contacts.

ODOT OPERATIONAL NOTICE 12 (PD-12)

Project Delivery Operational Notice 12 establishes expectations for public involvement in both project development and construction.
# ODOT
## PROJECT DELIVERY GUIDE

### PHASE 1: PROGRAM DEVELOPMENT

#### TABLE OF CONTENTS

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At the Oregon Department of Transportation, we view the Project Delivery Lifecycle as a complete business process that begins with planning and analysis of potential projects and ends when a project is constructed. The process has four stages:

- Program Development
- Project Development
- Award Construction Contract
- Construction Management

Each stage has components that include activities and products.
PHASE 1: PROGRAM DEVELOPMENT

Program development is where projects are created, beginning with transportation planning to identify needs at the state and local levels. As these needs are revealed and explored, projects are born.

Program development ends when the Oregon Transportation Commission and FHWA approve the biennial Statewide Transportation Improvement Program (STIP). Identifying and planning for transportation needs is an ongoing process with periodic reviews; the STIP is updated on a two-year cycle.

Program development has five major milestones, each with several processes and deliverables. (Note that some planning issues can extend into the next stage—project development—such as the possible need to address land use planning issues, including plan amendments and exceptions.)
1. TRANSPORTATION PLANNING

Transportation planning includes development of the Oregon Transportation Plan (OTP) and modal plans that provide policies and guidelines for developing other transportation plans. It also includes:
- Refinement plans, such as
  - Interchange Area Management Plans
  - Highway Segment Management Plans
  - Access Management Plans
  - Local Transportation System Plans (TSPs)

These plans describe existing conditions and identify roadway classification and transportation needs, balancing those needs against multiple factors and ranking future projects for consideration for the STIP.

Deliverables for this milestone are:
- ODOT Corridor Plans
- Regional and Local Transportation System Plans
- Refinement Plans

The Transportation Planning Section is responsible for managing this process; project leaders (PLs) do not have direct responsibility for any of the deliverables.

For more information about the ODOT STIP, visit the STIP Web site, or Appendix G of this guidebook. For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.
2. **MANAGEMENT SYSTEMS ANALYSIS**

Management Systems Analysis includes developing and maintaining several tools that ODOT managers can use to determine transportation needs and project ideas.

Deliverables for this milestone are:

List of Needs:
- Bridge
- Pavement
- Traffic - (includes safety, operational, rock falls, culverts, fish passage projects, etc.)
- Intermodal
- Modernization
- Transportation Data and Maps

PLs do not manage this process, but they may participate in information gathering for their regions.

For more information about the ODOT STIP, visit the STIP Web site, or Appendix G of this guide.

3. **IDENTIFY POTENTIAL PROJECTS**

This process identifies the emerging transportation needs and ranks them for consideration for inclusion in the next STIP.

Many sources help identify potential projects. Projects can be put forward by area commissions on transportation, local and regional jurisdictions, elected officials, federal and state agencies, tribes, ports and the general public.

The deliverables for this milestone is a list of potential projects, including the following types:

- Bridge
- Pavement preservation
- Pedestrian/bicycle
- Rail crossing safety
- Safety
- Transit
- Enhancement programs
- ITS (Intelligent Transportation System) projects
- Unstable slopes (landslides and rock falls)
- Culverts and fish passage

PLs do not manage this process, but they may participate in information gathering for their regions.
4. **DRAFT STIP**

This lifecycle milestone moves selected projects from the future projects lists and schedules them into the STIP. Project scoping involves visiting the proposed project site to conduct the initial reconnaissance, and developing the project scope of work and prospectus to advance the project for inclusion in the STIP. A PL is assigned to lead the project scoping team in these early efforts.

The purpose of the scoping stage is to:
- Establish the problem statement and solutions
- Develop cost estimates
- Develop a draft schedule
- Identify impacts to Right of Way (ROW), environmental, Access Management, utilities, etc.
- Identify options for different solutions
- Identify stakeholders and develop a **public involvement** plan

At this point in the program development stage, regions will determine the appropriate environmental class and the project delivery method.

Once projects are selected to be scoped and are assigned to appropriate resources, the following tasks are required to meet the deliverables in Operational Notice PD-02:
- Develop scoping and environmental report
- Develop Prospectus Part 1, 2, and 3
- Develop draft stakeholder participation and communication plan
- Develop draft resource recommendation
- Develop draft project schedule
- Develop draft preliminary engineering and construction estimate
- Complete Access Management deliverables

Each region may use a slightly different process in order to meet the required deliverables. The following section provides guidance on best practices for meeting the required deliverables.

Follow the [Draft STIP](#) link to learn more about the tasks involved with this project delivery milestone. For information about project lifecycle Title VI and Environmental Justice considerations, visit the [Title VI Plan](#) at Oregon.gov/ODOT/CS/Civil Rights.
5. PROJECT SELECTION - FINAL STIP

By the time the STIP is finalized, a lot of groups and authorities have provided input and guidance.

The Oregon Transportation Commission establishes funding targets for all programs and the criteria for identifying priorities.

The regions, area commissions on transportation (ACTs), metropolitan planning organizations (MPOs) and program managers:
- May have ongoing needs lists to begin identifying priorities
- Apply the criteria to the established and emerging needs
- Match priorities to the funding targets
- Develop a list of projects for inclusion in the draft STIP.
- Document the use of the criteria and any public process used to develop the list of projects for the draft STIP

The Draft STIP has a formal public review period before going to the Commission for final approval.

After OTC approval, the region STIP coordinators enter project information into the Project Control System (PCS) by following the STIP Development Manual, and assign funding to each project. The Statewide STIP coordinator:
- Prepares the STIP for final approval
- Coordinate general funding targets for balanced funding by:
  - Verifying the correct funding has been used
  - Ensuring that proposed project costs match funds available
  - Verifies that statewide program goals are met

The Oregon Transportation Commission (OTC), the Federal Highway Administration (FHWA) and the Federal Transit Authority (FTA) approve the final STIP.

For more information about the ODOT STIP, visit the STIP Web site, or Appendix G of this guidebook. For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.
LIFECYCLE MILESTONE 1: DRAFT STIP

TASK 1 - ASSEMBLE THE SCOPING TEAM

The PL will assemble the scoping team based on the resources assigned by the region. A broad based inter-disciplinary scoping team is needed so that the product of scoping truly considers all needs—from concept through maintenance, identifies critical issues and develops solutions.

Depending on the needs of the project, a typical project scoping team may include:

- Project leader (PL) or designee
- Roadway engineering representative
- Right of Way representative
- Environmental representative
- Region Access Management engineer
- Utility specialist
- Project manager (PM) for construction
- District Maintenance representative
- Traffic representative
- Geo/Hydro representative
- Bridge representative
- Survey representative
- Pavement Services representative
- Transportation planning representative
- Rail Crossing Safety representative
- Region Local Program liaison
- Local representatives (city, county)
- Public affairs specialist

TASK 2 - ASSEMBLE THE SCOPING PACKETS

The PL is responsible for assembling and distributing the scoping packets. A scoping packet provides basic information about the project. The packet will provide background information to the scoping team so the team can become familiar with the project and area.

Some elements that could be included in the packet:

- Initial project identification and vicinity map.
Purpose and need statement - what is the problem we are trying to correct?
Design standards to be used - does the current alignment meet these standards?
Existing pavement condition and preliminary ideas for surfacing treatments
Current and future (build year and design year) traffic volumes.
Five year accident history, accident rate and collision diagrams for major intersections (or information from SPIS site file) and analysis of accident “hot spots”
Bridge inspection report and recommended action(s).
Mile point log, straight-line chart, ROW maps, “as-constructed” drawings, USGS quad maps, etc.
Features Inventory from ITS or District Maintenance.

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.

TASK 3 - COORDINATE THE SCOPING TRIPS

The PL is responsible for coordinating the scoping trip(s). The scoping trip is a chance for the team to visit the project site and gather information that might not be available elsewhere. Each scoping team member is expected to attend the trip and to take notes of important discussions, decisions and recommendations that are made. Typical items that are covered during the scoping trips include (but are not limited to):

Safety concerns and possible solutions
Special pavement conditions and surfacing design alternatives
Stage construction concerns
Determine preliminary ROW needs or impacts
Access impacts or issues
Utilities that may be impacted or need to be relocated
Environmental impacts (e.g. wetlands, hazmat, archaeological, or historic)
Pedestrian and bicycle travel
ADA needs (e.g. ramps, sidewalks and driveway approaches)
Level of effort required for survey

The PL will have the scoping notes consolidated for each project and copies distributed to scoping team members and appropriate ODOT staff. Any revisions to consolidated notes will then be completed. These scoping notes will then become documents that will be included into the project files.
For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.

**TASK 4 - RIGHT OF WAY AND UTILITIES**

The amount of ROW participation will vary with the project type, complexity, time schedule and the level of impacts. Based on the preliminary project “footprint,” the assessment of the ROW impacts results in a cost estimate of land and damages to improvements. In addition, relocation and demolition costs, anticipated time to acquire, personnel costs, legal costs, and contingencies must be calculated.

Scoping preparation for the ROW project team member should consist of several research steps. This planning and preparation will be the basis for all further project investigation and cost development. Using State Highway Line Maps and preliminary project location sketches, old ROW maps covering the proposed project should be identified and copied. If there is sufficient time prior to the scoping trip, tax lot maps for the proposed project locations should be obtained.

After the scoping review, the ROW project team member should obtain county property tax assessment records, which contain property information on: land size, type and age of improvements, site address, ownership, and assessed values. Zoning information should be obtained from the Planning Division. Properties controlled by state or federal agencies should also be identified. The real estate market in the project area should be investigated for land and improvement estimates to assist in developing a project cost estimate.

The ROW project team member also makes an estimate of the number of displacements that might occur. A brief summary of the area and its residential and business replacement availability is prepared. If it appears there might be a problem with the quality or quantity of replacement housing, the ROW project team member should advise the project team and propose remedies.

After the cost estimate is developed and submitted, any documents and specific data used to develop the information must be kept in the project folder for generating other cost refinements, ROW programming estimates and reference. Each time an estimate is produced a copy must be inserted in the project folder and kept until the project is finalized.
ROW is required to submit a preliminary cost estimate in the project prospectus. The form requires input on the numbers of: files, acreages, relocations, acquisitions and easements. The estimates include costs for: land and improvements, damages, demolition, costs to cure, relocations, legal and contingencies costs, and personnel costs. The number of acquisitions as well as the type and number of business and residential relocations must also be identified. Until the final alignment is selected, the number and level of impact is subject to change.

During scoping the lead designer/chief surveyor will identify existing and proposed utilities within the limits of the project. The lead designer/chief surveyor will develop a preliminary utility report and will transmit it to the Region Utility Specialist (RUS). The lead designer/chief surveyor may invite the utilities to participate in a scoping trip. The lead designer/chief surveyor will begin field surveys and critical utility designations. The lead designer, in coordination with the PL, will incorporate all information that impacts the proposed project into the project scope and schedule.

If a ROW utilities’ representative is not included on the scoping trip, the ROW project team member should record any project goals which would significantly impact railroads or utilities.

Regional utility personnel should be informed promptly because construction coordination and scheduling may significantly influence the time frame for the project.

On federally-funded projects, ROW acquisition may not begin until FHWA approves the environmental document and the ROW acquisition phase is authorized.

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.

/task 5 - environmental

During the Draft STIP phase the Region Environmental Coordinator (REC) will participate in project scoping to provide a preliminary identification of possible environmental impacts from ROW acquisition, impacts on land use, traffic patterns and flow, and areas of critical concern and controversy. They will also identify impacts to: wetlands, streams and water quality, threatened and endangered species, archeological and historical sites,
parks, air, noise, energy, hazmat sites, and visual resources. ODOT’s Salmon Restoration Plan and watershed issues will have a large impact on selection and development. Based upon a summary of the impacts listed above, an environmental classification is determined. The REC will document this information in the draft Project Prospectus Part 3.

At this point, the REC will determine if an Environmental Baseline Report (EBR) will need to be developed, based upon the following conditions:
- Actions requiring acquisition of new ROW
- Potential to displace any residential or commercial properties
- Potential to affect historic resources, public recreation lands, parks, wildlife refuges, wetlands, and/or archeological site
- Potential to require environmental and/or land use permits and clearances
- Work encroaches on a regulatory floodway or work affecting the base floodplain (100 year flood) elevations of a water course or lake
- Activities where environmental timing restrictions or work windows apply
- Construction in, across, or adjacent to a river designated as a component of the State or National Systems of Wild and Scenic Rivers.
- Potential to affect known hazardous material sites
- Projects located in an area designated by the EPA as non-attainment of maintenance for air quality and if the project involves new traffic signals, modification of existing signals due to channelization of lane additions, or the project is “regionally significant” as defined in the Transportation Conformity Rule
- Project involves regulated activities under the Oregon Coastal Management Plan
- Potential to increase noise impacts to surrounding residential properties due to any of the following elements: significant shift of vertical/horizontal alignments, increase number of through traffic lanes, new alignment, or existing noise issue
- Project has potential to affect a designated State or Federal Scenic Highway (some exclusions apply, such as simple striping and paving projects).
- Project involves the Oregon Forest Practices Act
- Potential to affect a water quality limited stream or water body
- Projects entailing potential significant ground disturbance
- Activities involving multiple land use and natural resource agencies
- Potential to affect threatened or endangered species (state or federal)

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.
TASK 6 - ACCESS MANAGEMENT

Access management is a comprehensive approach to the management and regulation of driveways, medians, median openings, traffic signals, and freeway interchanges. The goal of access management is to limit and separate traffic conflict points. By reducing conflict, we can increase safety and traffic operations.

With fewer new arterial roadways being built, the need for effective systems management strategies is greater than ever before. Access management is particularly attractive as it offers a variety of benefits to a broad range of stakeholders. By managing roadway access, ODOT can increase public safety, extend the life of major roadways, reduce traffic congestion, support alternative transportation modes, and even improve the appearance and quality of the built environment.

Without access management, the function and character of major roadway corridors can deteriorate rapidly. Failure to manage access is associated with the following adverse social, economic, and environmental impacts:
- An increase in vehicular crashes
- More collisions involving pedestrians and cyclists
- Accelerated reduction in roadway efficiency
- Unsightly commercial strip development
- Degradation of scenic landscapes
- More cut-through traffic in residential areas due to overburdened arterials
- Homes and businesses adversely impacted by a continuous cycle of widening roads
- Increased commute times, fuel consumption, and vehicular emissions as numerous driveways and traffic signals intensify congestion and delays along major roads

Not only is this costly for ODOT and the public, but it also adversely affects corridor businesses. After access problems have been created, they are difficult to solve. Reconstructing an arterial roadway is costly and disruptive to the public and abutting homes and businesses. The shallow property depth, multiple owners, and ROW limitations common to older corridors generally preclude effective redesign of access and site circulation. In some cases, a new arterial or bypass must be built to replace the functionally obsolescent roadway, and the process begins again in a new location. Access management programs can help stop this cycle of functional obsolescence, thereby protecting both the public and private investment in major roadway corridors.
During the Draft STIP phase a preliminary identification of possible access management impacts must be documented in order to complete the required deliverables. Completion of the required deliverables are intended to ensure that the scope, schedule, and budget of projects programmed in the STIP provide for access management work tasks consistent with rules, policies, and the requirements and guidelines of PD-03.

Each region must determine who is responsible for the required deliverables. PD-03 identifies the manager who is accountable for the deliverables, but does not specify who will complete each one.

Access Management Deliverables:
- **Access Control Report:** documents and summarizes the research on the location of access control lines performed by the Right of Way Section of the Technical Services Branch. Information in the report is used to develop the Scoping Report and the Existing and Permitted Approaches Status Report.
- **Existing Approaches Status Report:** confirms the status of all existing approaches under the provisions of OAR 734-051 prior to any project work. This report may be a stand-alone report or combined with other reports or documentation.
- **Access Management Worksheet:** documents consideration of a broad range of access management issues relevant to project scoping and cost. This worksheet is located in PDWP.
- **Right of Way Cost Estimate:** cost estimate for purchasing access rights, offers to remedy closure of approaches and other property acquisitions as needed.
- **Access Management Scoping Report:** identifies and describes all access management issues that have potential scope, schedule and budget consequences. The report could be a stand-alone document, or a component of a comprehensive project scoping report.
- **PE Cost Estimate:** cost estimate for personnel, services and supplies that will be charged to the project expenditure account. The cost estimate is expected to document assumptions and rationale underlying the estimate and to address all the major work requirements and recommendations in the scoping report. Developing the cost estimate may require compiling information from several sources involved in the project, including maintenance, planning, consultants, right of way, and other ODOT staff and consultants.
- **Public Involvement Plan:** explain how communication regarding access management issues on the project will be managed. The plan may be a stand alone document or a component of the overall communication plan required by PD-12.
- **Schedule of Work:** Schedule of access management tasks and deliverables entered in the project schedule based on what is known
about needs and requirements of the project at the Draft STIP milestone.

AMP, AMPI, and IAMP: OAR 734-051 establishes whether AMP, AMPI, or IAMP must be developed for certain categories of projects. See PD-03 to determine if one is required.

These deliverables are required except when the region project delivery manager or area manager documents why the deliverable is not appropriate to the project or why it is best performed in another phase of the project.

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.

### TASK 7 - MOBILITY

Mobility is best defined as the ease with which people and goods move throughout their community, state, and world. Mobility is valuable because it provides access to jobs, services, and markets. Without question, transportation’s most essential function is to provide mobility for people and goods.

Traditionally, the concept of mobility has included all modes of travel, encompassing the entire door-to-door trip including transfers between modes (surface, rail, air, pipeline, and marine services). The context of ODOT’s focus is primarily on freight mobility where the primary users are freight traffic on the Oregon highway system. Even though the focus is on freight traffic, the principles will provide for greater mobility for buses, passenger cars, recreational vehicles, and other forms of transportation.

The ease with which people and goods move on Oregon’s highways is being increasingly challenged by traffic congestion. Congestion on the nation’s highways has increased over the past few years. Recent trends suggest that periods of recurring congestion are getting longer, particularly in urban metropolitan areas. In addition, congestion is no longer restricted to peak commuting periods and weekday travel.

Demand for freight transportation is a major contributing factor to congestion. The expected growth in truck travel is being driven by economic and population growth. The most striking growth is expected to be on rural Interstate highways, indicating the potential for congestion to spread outside of metropolitan areas. Since 1992, traffic has grown substantially on rural highways and at a faster pace than on metropolitan highways.
Construction work zones represent another obstruction to mobility. Nationally, work zones account for about 10% of all delays. FHWA research shows that the traveling public is demanding increased mobility, while showing less tolerance for delays, increased travel times, and inconveniences resulting from construction-related congestion.

During project scoping the project team needs to consider the impacts on mobility and if a Transportation Management Plan needs to be developed for the project. The Highway Mobility Operations Manual is a guide to how Oregon will tackle an unprecedented amount of construction activity and still keep traffic and freight moving. It’s a comprehensive outline of the approach that ODOT and its construction partners will take when planning and executing all road and bridge projects. It sets project standards and minimum requirements regarding communication and coordination, vertical and horizontal clearance, bridge weight restrictions, delays, detours, staging, and design. The ODOT Policy Size and Weight Restrictions on State Highways - PMT 06-01 outlines the roles and responsibilities for notification of any mobility restrictions.

TASK 8 - DEVELOP SCOPING AND ENVIRONMENTAL REPORT

After completing the scoping trips and compiling the information the PL will need to complete a summary report. Regions may differ in the form used; this sample STIP Scoping Summary Report is broken down into six parts:

A - Project Scope of Work: This part includes the project purpose, need statement, description, and rational of proposed range of alternatives.

B - Project Cost Estimate: This part includes summary information for the project costs.

C - Project Schedule: This part includes summary information for the project schedule.

D - Project Approval

E - STIP Supporting Documentation: This part includes summary information based on the observations from the scoping trips (e.g. environmental impacts, ADA needs, utilities, ROW, etc.).

F - STIP Scoping Team: This part identifies who the members were.

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.
TASK 9 - DEVELOP THE PROJECT PROSPECTUS

The project prospectus begins the process of prioritizing projects for the STIP. The prospectus consists of three parts (further explained under “Draft STIP” deliverables, here):

Part 1: gives the project location, provides an overview of the project, summarizes the problem, the proposed solution, and provides the estimated preliminary engineering, right of way, utility, and construction costs at a high level.

Part 2: defines who is responsible for completing different categories of the project’s design (State, Consultant, or Applicant). Part 2 also includes information on base design requirements, structures that are to be developed or modified, and a diagram showing “before and after” lane widths.

Part 3: details the environmental impact of the project which is created from the environmental discipline information that is included in the worksheets.

The PL is responsible for creating the prospectus, and must:

- Complete the prospectus with help from team members using data from the STIP Scoping Report
- Send part 1 and 2 of the prospectus to the REC and request that part 3 of the prospectus and location map be completed
- Send a copy of the final prospectus parts 1 and 2 to the region STIP Coordinator.

Region management approval of the prospectus is necessary.

For more information about project lifecycle Title VI and Environmental Justice and Emerging Small Business (ESB) considerations, visit Oregon.gov/ODOT/CS/Civil Rights.

TASK 10 - DRAFT PUBLIC INVOLVEMENT PLAN

As stewards of the public trust, it is critical that ODOT meaningfully engage and involve the public regarding issues that impact them directly and follow the letter and intent of laws requiring public input on project plans.

The more we engage and involve our stakeholders in project decisions that affect them, the stronger our relationships become, and the more trust is built. It is in our best interest as an agency and in the interest of public stewardship that we provide accurate, up-to-date information to our
stakeholders. Additionally, keeping freight moving efficiently on Oregon’s transportation system is good for the economy.

The PL is responsible for developing the project’s Public Involvement Plan. ODOT’s *Project Delivery Public Involvement Resource Guide* and *Operational Notice* #12 provide additional guidance.

Elements a PI plan should include are:
- General information about the project
- The objectives of the stakeholder participation and communication plan. Clear objectives are essential to an effective stakeholder participation process. They will shape the process, influence public expectations, and form the basis for its outputs and outcomes as well as later evaluation.
- An articulation of the constraints and opportunities this project presents. Consider the project context, political landscape and organizational support, and potential concerns and issues.
- A stakeholder analysis to determine who should be engaged; include both internal as well as external stakeholders.
- A determination of what level of effort the project requires, what techniques should be used to engage stakeholders, and what resources are needed to implement the PI plan (i.e. staff, money, etc.).

To implement the PI plan effectively, the plan must be aligned with the timing of the decision processes and project milestones.

If the objectives include stakeholder input, involvement or collaboration, the PL needs to gather and disseminate the stakeholders’ input to decision makers and back to the public at large. This “feedback loop” is a necessary component of stakeholder participation planning to demonstrate to the stakeholders that their time and effort has been well invested and their comments and concerns have been understood and accurately communicated to decision makers.

Evaluation is an ongoing tool to assess and improve the stakeholder participation process as it moves forward, both for individual events and activities and for the entire process once a project is completed. Evaluation should be incorporated into the project schedule and engagement activities.

For information about project lifecycle Title VI and Environmental Justice considerations, visit the *Title VI Plan* at Oregon.gov/ODOT/CS/Civil Rights.
TASK 11 - DRAFT RESOURCE RECOMMENDATIONS

The responsibility for selecting a delivery method for a specific project resides with the region manager (the RM may delegate this authority to an individual or a team) in the region in which the project is geographically located. There are two exceptions:

- The manager of the Major Projects Branch (MPB) is responsible for the project delivery method selection decisions for OTIA III bridge projects and any other projects assigned to MPB.
- For local agency STIP projects, the local agency—in coordination with ODOT Local Agency Program staff—determines the project delivery method.

In addition, in the event additional funding authorization must be requested for an individual project, the appropriate RM or MPB manager represents the department before the OTC.

RMs and the MPB manager begin the delivery method selection for proposed projects during the normal STIP update process every two years. Selection of the delivery method is incorporated into the preliminary scoping process.

When a need for a decision is identified, the RM or MPB manager consults with affected stakeholders prior to making the final project delivery method selection. This communication has three objectives:

- To inform those affected that a decision is pending
- To achieve a thorough understanding of the consequences of the delivery method selection decision
- To build consensus among the stakeholders for the delivery method selected for each affected project

Affected stakeholders should include, but are not limited to, the appropriate program manager, the appropriate region technical center manager, and technical services manager. Additional stakeholders may include the deputy director of the Highway Division, the Highway Finance Office, Motor Carrier Division, Rail Division, Office of Maintenance, Local Government Section, or stakeholders external to ODOT such as local agencies, legislative, or tribal representatives.

When determining delivery methods, the following areas should be addressed in the decision making process:

- Determine resource availability of in-house staff (through construction);
- Determine budget;
- Determine the type of project being designed;
- Determine geographic proximity for bundling and/or efficient use of consultant staff.
Determine schedule (bundling of projects to be constructed in the same year is helpful)
Determine contract type needed (project specific, multi-phase full service or on-call flexible service contract)
Assure that appropriate decision authority is documented for determination of outsourced projects

Additional areas that may need to be addressed include the applicability of existing agreements (i.e., TERO Memo of Understanding), the contracting timeline and the local political climate.

The RM or MPB manager will document the decision and inform the appropriate parties. Documentation should be retained with the project development work-papers and should include:
  A summary of the issues and concerns addressed during the decision making process
  A list of the stakeholders contacted
  A statement of the final decision

The manager for the program under which the specific project is funded will ensure the necessary financial/funding adjustments are made to implement the delivery method selected; including the addition, deletion or scoping adjustments to any projects funded under the overall program.

The program manager will follow the normal business process for making program changes, including conferring with stakeholders, documentation, implementation and communication to affected parties. If OTC action is required, the program manager will work directly with the appropriate region or MPB manager and reach consensus with them on the OTC action.

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.

**TASK 12 - DRAFT PROJECT SCHEDULE**

Project schedules must be initiated, developed and published to the Resource Management System at the initial scoping of the project. The PL must develop a draft project schedule. It is understandable that limited information will be available to develop a project schedule. However, it is expected that the PL will identify the appropriate schedule template and adjust it to reflect what is realistic for their project and their region and to build in any specific time-related constraints necessary for the project.
For more information, read Operational Notice #19, which sets expectations for project scheduling and resourcing during the project development/design phase of project delivery, and identify key roles and responsibilities.

**TASK 13 - PRELIMINARY ENGINEERING AND CONSTRUCTION ESTIMATE**

Revenues come to ODOT from two primary sources - Federal Allocation and State Gas Taxes. ODOT uses the money for planning, engineering, construction, maintenance, and facility operations.

Each project will need cost estimates developed for:

- **Preliminary Engineering (PE):** includes all work necessary to prepare a project for contract bidding. Initial work may include environmental research and analysis, surveying of physical features, geotechnical exploration, pavement analysis and traffic analysis. This work includes obtaining necessary permits followed by preparation of contract specifications. Regional and Salem-based Technical Services staff is involved with aspects of preliminary engineering as well as private-sector engineering and environmental consultants.

- **Construction:** includes all work necessary to construct or build the project to its designed specifications, using appropriate construction methods and practices, while providing a safe environment for both the traveling public and workers throughout the project. The Construction phase includes costs ODOT pays directly during project construction. This includes construction engineering (CE) activities such as project management, inspection, materials testing, surveying, construction design calculations, technical support and office support.

The use of different tools for project estimating is influenced by the project phase and project type, the level of scope definition, and project size and complexity. The time and resources available to prepare an estimate may also influence the tools used and their application. An estimate that is prepared during the Draft - STIP stage is the baseline estimate which becomes the budget when approved.

Below is guidance for developing the estimates for preliminary engineering and construction:
Determine Estimate Basis: During the scoping trip the project team should be capturing unique project characteristics and conditions that will help in providing an estimate. The PL will need to gather scope related information and data concerning the project. The PL should be organizing documents that describe the scope and other project attributes required to estimate project costs.

Prepare Estimate: After the scoping trips the PL should request that each project team member or discipline expert compile an estimate for their area of expertise and submit it to the PL. Estimate information (quantities, standard items, etc) is developed and documented. The estimate basis and assumptions are documented. Costs are estimated using the appropriate technique and project information. The cost estimate is summarized to include all costs for each cost element (e.g. PE, ROW, and CE). The estimate considers factors such as: cost history, project difficulty and locale, expected level of competition, current market pricing trends, magnitude of the project, uniqueness of work type, etc.

Review Estimate: Each cost element should be reviewed to cover the estimate basis and assumptions, verify completeness of the project scope and the appropriate use of estimate information and data.

Summarize the Estimate: Once the PL has collected an estimate from all the individual responsible work units the PL will need to prepare a budget that summarizes the total expected costs required to complete the project. Then the PL will need to enter the cost estimates into PDWP.

Task 14 - Intergovernmental Agreements

ODOT should enter into an agreement as soon as possible with the party (or parties) to outline responsibilities for the various phases of project development to be performed. The type of agreement or agreements will depend upon the work to be covered and the identity of the other party.

Agreements should be prepared early in the project development process; ideally, an agreement is in place before starting preliminary engineering or ROW work, and must be signed prior to contract advertising. Supplemental agreements can also be prepared later to cover items that may have been missed in an earlier agreement.

During this stage the PL and the project team won’t have enough information to enter into any agreements, but they should identify who ODOT may have to enter into agreements with. This can be in conjunction
with developing the draft stakeholder participation and communication plan in task 10.

Draft STIP Deliverables

At the completion of this milestone the PL needs to ensure the completion of all deliverables, including
- Draft prospectus parts 1, 2, 3 entered into the Project Delivery Work Planning System (PDWP)
- Scoping report
- Environmental baseline reports (as required)
- Draft public/stakeholder plan
- Draft resource recommendation
- Draft resource recommendation
- Access management
- Draft STIP deliverables
- Draft schedule

Operational Notice #02 provides a list of deliverables along with resource/references
# ODOT

## PROJECT DELIVERY GUIDE

### PHASE 2: PROJECT DEVELOPMENT

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LIFECYCLE MILESTONE 7: PROJECT DEVELOPMENT CLOSEOUT

Task 1 - Project Transition
Task 2 - Project Archives
Task 3 - Lessons Learned
PHASE TWO: PROJECT DEVELOPMENT

Project development begins with the assignment of a project in the approved STIP. The project development phase ends when the project is ready to be let for bidding.

This stage can take as little as one to two years for simple projects (e.g. pavement overlay) or last as much as eight or more years for more complex projects (e.g. a modernization project requiring an Environmental Impact Statement).

Project Development starts after a specific project has been identified and assigned to a project leader, project manager, or regional local agency liaison. It includes the milestones shown in the figure below and described in the following pages.

NOTE: Complete information on all the activities, and information on scheduling a project, can be found in the Resource Management System Users Guide, at: http://www.oregon.gov/ODOT/HWY/PDU/resources_management_system.shtml
**PROJECT INITIATION**

This component is the beginning of Project Development in which the region assigns the project to either a project leader (PL) for in-source projects or to a project manager (PM) for out-sourced projects. The project team is assembled, assignments are made, consultant contracts are in progress or in place, and the project development work plan is established.

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<td>3  Review and confirm project scope (includes scoping trip)</td>
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<td>6  Intergovernmental agreements (IGAs)</td>
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<td>7  <a href="#">Public involvement</a> plan</td>
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<td>8  Create SharePoint</td>
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<td>9  Project team Work Plan</td>
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<td>20 Refined Public Involvement plan</td>
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Click [here](#) to jump to Project Initiation milestone tasks.

For additional general information on project initiation of a project see: [http://www.oregon.gov/ODOT/HWY/PDU/resources_management_system.shtml](http://www.oregon.gov/ODOT/HWY/PDU/resources_management_system.shtml)

For more information about project lifecycle Emerging Small Business (ESB) and Disadvantaged Business Enterprise (DBE) considerations, visit Oregon.gov/ODOT/CS/Civil Rights.
**DESIGN ACCEPTANCE MILESTONE**

The Design Acceptance milestone is a critical decision point that establishes the geometric boundaries of the project footprint and allows for the construction contract document activities to move forward. Design acceptance also considers environmental and land use requirements and how they affect permitting and the development of construction contract documents. It occurs at the end of the initial design phase and requires that all project disciplines have reviewed the design for balance of context with standards and policies. The time leading up to this milestone is also the primary opportunity for both technical and non-technical stakeholders (internal and external) to review and comment on design elements from their perspective. Design Acceptance Phase activities and deliverables include:

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<th>Design Acceptance Milestone Tasks</th>
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*Note: The activities and products in this table are for Phase 2 projects (Class 2 Environmental Category)*
Click [here](#) to jump to Design Acceptance milestone tasks.

For information about project lifecycle Title VI and Environmental Justice considerations, visit the [Title VI Plan](#) at Oregon.gov/ODOT/CS/Civil Rights.

**DEVELOPING ADVANCED PLANS**

The next steps in the Project Development Phase include acquiring right of way, coordinating permits and clearances, reviewing preliminary plans and developing them into advanced plans.

**Right of Way Acquisition**

When obtaining right of way permits, the project team ensures that:
- Potential right of way needs are identified
- Right of way issues are resolved through the following:
  - Property and easement acquisition
  - Occupant relocation
  - Owner compensation
- Required local and statewide permits are applied for and obtained

Right of Way activities and products include:

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**NOTE:** Property and permit acquisition can sometimes continue up to bid opening. General information can be found at: [http://www.oregon.gov/ODOT/HWY/ROW/](http://www.oregon.gov/ODOT/HWY/ROW/)

For more information about project lifecycle Disadvantaged Business Enterprise (DBE) considerations, visit Oregon.gov/ODOT/CS/Civil Rights.
Permits and Clearances

Below is a list of possible permits and clearances that may need to be obtained:

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  http://www.oregon.gov/ODOT/HWY/ACCESSMT/                        |
| 20 ODOT Rail Division Orders                                    |
  http://www.oregon.gov/ODOT/RAIL/                               |

Reviewing Preliminary Plans for Construction

The main purpose of this step is an additional technical and construction review between Design Acceptance and Advanced Plans. This is not a required milestone from PD-02; it is optional.

For this component, the project team coordinates the drafting of preliminary plans that help to build the bid documents for the project. Preliminary Plans for the Approved Design are approximately 70% complete at this point in the project development.
Preliminary plans and calculations reflect:
- Bridge and roadway design
- Drainage
- Erosion
- Traffic control elements

Preliminary Plans for Construction activities and products includes:

<table>
<thead>
<tr>
<th>Preliminary Plans for Construction Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Update Public Involvement Plan</td>
</tr>
<tr>
<td>2. Noise Mitigation Final Design</td>
</tr>
<tr>
<td>3. Access Modification and Closure Letters</td>
</tr>
<tr>
<td>4. Utility Test-Hole Excavation</td>
</tr>
<tr>
<td>5. Preliminary Plans</td>
</tr>
<tr>
<td>6. Revise Construction Cost Estimate</td>
</tr>
<tr>
<td>7. Revise Construction Schedule</td>
</tr>
<tr>
<td>9. Preliminary Plan Review and Completion</td>
</tr>
</tbody>
</table>

Advance Plans and Special Provisions

This is a key interim step of the contract document phase, and requires all project disciplines to review draft contract documents for completeness and accuracy. It is the primary opportunity for technical staff to provide quality control review of the project plans, specifications, and estimate as a package.

Advance Plans, which include the revisions resulting from the Preliminary Plan review, are in accordance with the approved project schedule. They are accompanied by the project’s special provisions. The project team completes the PS&E checklist as a status point to evaluate how the project is progressing towards PS&E.

Advance Plans and Special Provisions for Construction activities and products include:
Advance Plans and Special Provisions for Construction Tasks

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Update Public Involvement Plan</td>
</tr>
<tr>
<td>2</td>
<td>Review and Approve Utility Relocation Plans</td>
</tr>
<tr>
<td>3</td>
<td>Advanced Plans</td>
</tr>
<tr>
<td>4</td>
<td>Insurance Risk Assessment</td>
</tr>
<tr>
<td>5</td>
<td>Revise Construction Cost Estimate</td>
</tr>
<tr>
<td>6</td>
<td>Revise Construction Schedule</td>
</tr>
<tr>
<td>7</td>
<td>Compile Advance Special Provisions</td>
</tr>
<tr>
<td>8</td>
<td>Draft PS&amp;E Submittal Checklist</td>
</tr>
<tr>
<td>9</td>
<td>Advance Plan Review and Completion</td>
</tr>
</tbody>
</table>

Documents Required for Plans, Specifications and Estimates (PS&E) Submittal
Draft Construction Schedule
Plans-In-Hand Meeting
Draft PS&E Submittal Checklist
Insurance Risk Assessment

Click [here](#) to jump to Advanced Plans milestone and tasks.

For more information about project lifecycle Emerging Small Business (ESB) and Disadvantaged Business Enterprise (DBE) considerations, visit Oregon.gov/ODOT/CS/Civil Rights.

![ עצמם](https://example.com)

**FINAL PLANS**

This step occurs in follow-up to the Plans-In-Hand meeting review and comment on the advances plans and specifications. It is the last opportunity for contract documents to be reviewed by technical staff for quality control and document completeness, before the project is ready to move forward for FHWA review (when needed) and PS&E submittal. In some smaller projects, teams may not issue the Final Plans for additional review. This step is recommended, when the schedule allows, to review the package in its entirety with the corrections from the Advanced Plans phase.

Activities and Products-Final Plan activities and products include:

<table>
<thead>
<tr>
<th>Final Plan Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Update Public Involvement Plan</td>
</tr>
<tr>
<td>2 Access Management</td>
</tr>
<tr>
<td>3 Final Plans; Special Provisions and Cost Estimate</td>
</tr>
<tr>
<td>4 Final Construction Cost Estimate</td>
</tr>
<tr>
<td>5 Final Construction Schedule</td>
</tr>
</tbody>
</table>
6 Compile Final Special Provisions
7 Revise PS&E Submittal Checklist
8 Final Plan Review and Completion
9 Final Documents Required for PS&E Submittal
10 Updated Construction Schedule
11 Revised PS&E Submittal Checklist

Click here to jump to Final Plans milestone and tasks.
For more information about project lifecycle Emerging Small Business (ESB) and Disadvantaged Business Enterprise (DBE) considerations, visit Oregon.gov/ODOT/CS/Civil Rights.

PS&E SUBMITTAL
This point of decision-making provides certainty of the completeness of a project for bid advertisement through Commission Services. Decision-making with any desired interim milestone between Design Acceptance and PS&E Submittal (e.g., Preliminary, Advanced, Final Plans) is addressed through individual quality Control Plans and Project Development Change Requests as needed.

PS&E Submittal activities and products include:

<table>
<thead>
<tr>
<th>PS&amp;E Submittal Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Managing the Exception Letter</td>
</tr>
<tr>
<td>2 PS&amp;E Submittal Deliverables</td>
</tr>
</tbody>
</table>

PS&E Documents
Construction Schedule
Project Completeness Memo/Checklist (signed by accountable manager/authority)
Quality Control Certification from technical resource provider(s)

Click here to jump to PS&E Submittal milestone and tasks.
For more information about project lifecycle Emerging Small Business (ESB) and Disadvantaged Business Enterprise (DBE) considerations, visit Oregon.gov/ODOT/CS/Civil Rights.

PROJECT DEVELOPMENT CLOSEOUT
The major focus of the project development closeout is administrative closure and logistics.

<table>
<thead>
<tr>
<th>Project Development Closeout Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Project Transition</td>
</tr>
<tr>
<td>2 Project Archives</td>
</tr>
</tbody>
</table>
3 | Lessons Learned

Click [here](#) to jump to Project Closeout milestone and tasks.

For information about project lifecycle Title VI and Environmental Justice considerations, visit the [Title VI Plan](#) at Oregon.gov/ODOT/CS/Civil Rights.
LIFECYCLE MILESTONE 2: PROJECT INITIATION

TASK 1 - EXPENDITURE ACCOUNT (EA)

A PE EA is needed prior to the start of any PE work on a project. If not done already, the PL should request the PE EA. Once a project is adopted in the STIP, HPO and the region STIP Coordinator assign the EA. The PL needs to contact HPO or their region STIP Coordinator to get the EA number. No PE work can begin until an account is prepared.

Once this step is complete the project is officially ready to start and the PL should begin establishing the project team. (This equates to Activity ID 008)*

*Note: Activity IDs are the unique task identifiers used for our project schedules in MS Project Server. For more information and details go to: Activity Descriptions.

TASK 2 - PROJECT TEAM

A major task in project initiation is establishing the project team and conducting the first team meeting (often known as the project team kick off meeting). The purpose of the initial project team meeting is to review the proposed scope, schedule, and budget of the project; introduce team members to one another; review the project prospectus; and request project work plans from each resource unit. Any and all pertinent disciplines should be represented—including maintenance staff—to discover and resolve issues early in the process, which will save both time and money.

In some instances, especially on a large, complex project where the project team will be working together for a long time, it would be helpful to have a teambuilding session to discuss how the project team will operate (e.g. the decision-making process, authorities, team agreements, etc.) before starting work on the project development process.

On all projects, forming sub-teams (with project team members as sub-team leaders) to work on important project development tasks, can help to provide team members with more opportunity for meaningful involvement in the project, and ensure that tasks move forward in between project team meetings. This can
also reduce the day-to-day leadership workload of the PL, and provide a forum for detailed task-specific technical discussions outside of project team meetings.

Each region will determine who will participate on the project team based on available resources. The PL should work with their AM and Technical Services Manager to determine who will be assigned to their team. (This equates to Activity ID 018)

**TASK 3 - REVIEW AND CONFIRM PROJECT SCOPE**

This task is one of the first activities on all projects, and includes assembling the project team for a scoping trip to the project site. The project team will need to review the existing project prospectus and other existing background materials that may exist to validate the purpose of the project, the proposed solution, and the preliminary engineering work that will be required to develop the project. (This equates to Activity ID 009)

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.

**TASK 4 - ROADWAY CONCEPTUAL DESIGN**

This task is intended to help confirm the general proposed scope of the project design, as well as develop a map to show the Area of Potential Effect, for subsequent field survey, base mapping, and environmental baseline/reconnaissance report activities. The roadway designer will use available base maps, which may include as-constructed plans, aerial photos, topographic quad maps or other existing mapping, to prepare a very conceptual layout of the proposed project, with the goal of generating a map showing the general anticipated limits of the proposed construction, to guide the surveyors and environmental specialists in field survey and environmental research work. This task will also help to confirm and validate the overall scope of the project as stated in the project prospectus, as part of the work-planning process. (This equates to Activity ID 011)
**TASK 5 - CONTRACTS**

Some projects will require contracting with the consultant community in order to design the project. If it is determined that outside help is needed, the project team’s appropriate Technical Center Representative for the needed discipline will be responsible for the negotiation and execution of any consultant contracts associated with their discipline and the project. The PL, AM, and Technical Center Manager will coordinate these tasks. (This equates to Activity ID 010)

**TASK 6 - INTERGOVERNMENTAL AGREEMENT (IGA)**

The PL, in consultation with the project team and region management, identifies issues that may require a formal written agreement with city, county, metropolitan, state, federal, and other public agencies. Such issues may include, but are not limited to, cost sharing for project engineering or construction, maintenance responsibilities, local road and street closures, and impacts to publicly-owned utilities. The PL is the person assigned to coordinate and monitor all phases of a project, but does not have the authority to negotiate the terms of an agreement. The PL must provide a complete package of information to the designated agreement specialist, include the necessary agreement(s) in the project schedule, track agreement status, and ensure the agreement is signed and executed before advertising the project or beginning any work outlined in the agreement.

If an IGA is needed, you should contact the Agreement Coordinators within the regional office or the ODOT Procurement Office (OPO) Agreements Team for assistance. (This equates to Activity ID 210)

**TASK 7 - PUBLIC INVOLVEMENT PLAN**

During Phase 1 (Program Development), a draft Public Involvement Plan should have been developed. During Phase 2, the PL and project team continue to work on the PI plan, following the steps below to update and implement it as more information is revealed and new issues arise:

Planning:
- Confirm that the PI plan objectives are viable and aligned with the project
- Continued identification and validation of any potential problems, issues and concerns about the project
- Identify and assign available resources to implement the plan
• Develop a budget
• Conduct/update stakeholder analysis
• Select/update engagement techniques
• Develop a high-level timeline
• Identify evaluation techniques to measure the success of the overall process and each engagement
• Determine when feedback and follow-up will occur for each engagement

Preparation and Organization
• Determine where the events will be held
• Determine what publicity will be needed
• Determine what information will be distributed to stakeholders
• Determine who will be responsible for planning and organizing each engagement
• Develop a detailed schedule

Implementation
• Implement and monitor the plan
• Develop a Project Information Paper
• Confirm arrangements for each engagement
• Identify strategies for dealing with difficulties
• Implement each engagement
• Compile feedback from each engagement
• Provide follow-up information for each engagement
• Implement evaluation technique
• Modify plan as needed

(This equates to Activity ID 002)

ODOT’s Project Delivery Public Involvement Resource Guide and Operational Notice #12 provide additional guidance.

For information about project lifecycle Title VI and Environmental Justice and Emerging Small Business (ESB) considerations, visit Oregon.gov/ODOT/CS/Civil Rights.

TASK 8 – CREATING A PROJECT SHAREPOINT SITE

Once a schedule is created in the RMS a project SharePoint is automatically created. A project SharePoint provides a project repository where the project team can communicate, share documents, and work together on the project. Using SharePoint as a project repository allows the PL to create a central point of reference for all project materials to be used by anyone involved in the project. Once the project comes to an official close, the repository provides an audit trail documenting the history and evolution of the project.
The project team can add information to the SharePoint site, such as events, names and phone numbers of people with whom the project team communicates, and to-do items. When a project SharePoint site is first created, it comes with the following built-in features:

**Lists:** The project team can fill the following built-in lists with information and customize the lists if desired.
- Announcements: The announcements list is a place to post information for the project team
- Contacts: The contacts list stores information such as name, telephone number, e-mail address, and street address
- Events: The events list is a place to post important dates (i.e. meetings, bid let date, etc.)
- Links: The links list displays hyperlinks to Web pages of interest to project team members
- Tasks: The tasks list provides a to-do list for project team members

**Libraries:** Document, picture, and form libraries are collections of files that are shared with project team members. A library appears on a page that lists each file and its properties, as well as a hyperlink to the file. The PL can set up a template for a document library so that all files created in the library share common features.

**Discussion Boards:** Provide a forum for conversing about topics that interest your team. Project team members can post comments and reply to others' comments, reducing the need for widely distributed e-mail threads.

**Surveys:** Provide a way of polling project team members (No Activity ID for this task)

### TASK 9 - PROJECT TEAM WORK PLAN

The project team work plan is used to guide execution and control of the project. It forms the basis for all management efforts associated with the project. The work plan can also be used to communicate with project stakeholders and gain support and understanding of the project. Time spent developing the appropriate structure for organizing and managing project activities improves performance in the executing and controlling of the project. The work plan is a compilation of the project prospectus, the schedule, the budget, and the control plans. The PL will use these documents as tools for managing the scope, schedule, and budget.

During the Draft STIP milestone the project scoping team will complete the core planning processes which will result in the following documents that will become a part of the work plan:
- Project prospectus
- Project resource recommendations
• Project schedule
• Project budget

At Project Initiation the PL and the project team should develop project control plans that outline the procedures that will be used to control the execution of the project. Because of the complexity of highway construction projects control plans should be developed for how risk, change, quality, and issues will be managed and how information about the project will be communicated. The PL and the project team should consider developing and implementing the following documents to become a part of the work plan:

• Risk management
• Communications
• Change management
• Quality control
• Issue management

These documents control the project management processes (i.e. initiating, planning, executing, controlling, and closing) not the product-oriented processes (e.g. NEPA, ROW acquisition, PS&E submittal, stakeholder participation, etc.). ODOT has project management processes for change management and quality management. The PL should ensure that those processes are integrated into the projects change and quality management plans. ODOT also has product-oriented processes for insurance risk management and stakeholder participation and communications.

This section focuses on the project management processes that the PL will use in order to control the execution of the Project Development stage. (This equates to Activity ID 030)

Subtask 9.1 - Risk Management

The approach outlined in the following process provides a consistent method for identifying, measuring, and controlling risks during the course of the project. The benefits of effective risk management include maximizing the probability and consequences of positive events and minimizing the probability and consequences of adverse events to project objectives. It is more effective to avoid a potential risk than to fix a realized one. A project with good risk management is more predictable and controllable.

A risk management plan is fundamental to the successful delivery of the project. A risk management plan ensures that each risk identified within the project environment is documented, prioritized and mitigated wherever possible.

The PL should implement the following six key processes:

• A process for conducting an initial risk assessment
• A process for the identification of project risks
• A process for the logging and prioritization of project risks
• A process for the determination of risk mitigating actions
• A process for the monitoring and control of assigned risk mitigating actions
• A process for the closure of project risks

The PL should develop a draft project team risk management plan before the project team kickoff meeting. The project team should finalize the risk management plan based on what the PL developed. The PL and the project team will be responsible for updating the plan in each subsequent lifecycle component and continue to monitor and control risks throughout the life of the project development stage.

See the Risk Management Template for best practices on conducting a risk assessment and developing a risk management plan. (No Activity ID for this task)

**Subtask 9.2 - Change Management**

Change will be encountered during the life of a project. The project scope, schedule, budget, and resources will all be areas of potential change.

The acknowledgement that change may be encountered, along with a commitment to on-time, on-budget delivery of the agreed upon project scope emphasizes the importance of active project and change management for attaining project success. Managing change will require planning, discipline, and effective communication among the entire project team (including specialty groups, consultants, and contractors), management, and stakeholders. As a change management plan is executed, the following should occur: improved relationship with customers, improved financial performance, reduced project delays, better project teamwork, improved management of project quality, and ultimately on-time delivery.

Change control requires the following:

- All project work plan items are baselined when the project work plan is approved. Once the project work plan items are baselined, changes to the baseline are managed through a formal change process.
- Changes are coordinated among all knowledge areas of the project. For example, a proposed schedule change may also impact the cost, risk, quality, and staffing of the project.

ODOT has formal processes for managing changes. The PL and the project team should integrate the statewide and regions processes into their Change Management Plan.
The PL should develop a draft change management plan before the project team kickoff meeting. The plan should describe the project’s process for managing requested project changes and should include the following elements:

- Initiating a change request
- Logging and tracking change requests
- Assigning change requests for analysis and recommendation
- Implementing change request resolution actions (acceptance, delayed acceptance or rejection of change request)
- How accepted changes will be integrated into the project
- Roles and responsibilities in the change management process

The project team should finalize the change management plan. Once the change management plan is finalized the process should be communicated to all project team members and stakeholders. The PL and the project team will be responsible for updating the plan in each subsequent lifecycle component and continue to monitor and control changes throughout the life of the project development stage.

See the Project Change Management Template for best practices on how to develop a project change management plan. (No Activity ID for this task)

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.

**Subtask 9.3 - Quality Control**

Quality doesn't happen by accident. It must be planned so there is agreement about how quality is measured, when quality checks occur and how corrective actions are determined and implemented. The Quality Control (QC) plan is a tool that can help the project deliver the highest possible quality result within committed resources, schedule, and budget.

ODOT has formal processes for managing quality. Every region has a QC plan that ensures that the project’s deliverables are of acceptable quality. The PL must ensure that the region QC plan for project deliverables is implemented for each project. To implement a QC plan, a PL:

- Selects and assigns qualified professionals to perform the project tasks
- Assigns qualified specialists to oversee all elements of the work and carry out a consistent, deliberate program of QC
- Instills a sense of ownership and personal concern felt by every person on the design team towards quality and continually improving the quality process
- Makes certain that all personnel involved in performing the work have a clear understanding of the scope and intent of the overall project, and the appropriate design criteria and environmental concerns, in order to ensure that the work product meets or exceeds ODOT expectations
• Makes certain that all personnel involved in performing the work are aware of the project schedule, and understand the importance of meeting intermediate deadlines as well as final completion dates
• Makes certain that designers and reviewers have a clear understanding of the work requirements and of their responsibilities
• Arranges for peer reviews to be conducted by qualified personnel outside of the design team
• Documents the QC process properly, to the degree appropriate to each project

See each region’s Quality Control Plans. (No Activity ID for this task)

**Subtask 9.4 - Issue Management**

Issues tracking can be an integral part of project management. Issues are best used to capture work items that are not easily identified in assignments or tasks within projects. The purpose of issue management is to provide a method to identify and resolve the issues that impact the scope, schedule, budget, or quality of the project. Issue management identifies realistic project constraints and allows project team members to maintain a realistic workload.

Project team members can use the Issues page in Project Web Access and PLs can use Project Web Access or the Issues option in the Collaborate menu in Project Professional to submit issues about project details. PLs, resource managers, and team leads can then determine whether the issues will have an effect on the project and identify strategies to manage the issues before they become larger problems.

The issues tracking feature enables you to do the following:
• Customize the forms that are used to track issues for a project
• Link issues to multiple tasks in a project, and link issues to documents, risks, and other issues
• View issue histories
• Search issues
• Receive alerts about issues status
• View graphical reports on issues
• Edit issues
• Associate graphical indicators for issues with tasks, projects, and resource assignments (No Activity ID for this task)

For information about project lifecycle Title VI and Environmental Justice considerations, visit the [Title VI Plan](http://Oregon.gov/ODOT/CS/Civil_Rights) at Oregon.gov/ODOT/CS/Civil Rights.
**TASK 10 - PRELIMINARY SURVEY AND BASE MAPPING**

Location surveys are performed to provide the designer with information about the project site. The products generated by the location survey depend upon the type and scope of the project. These products may include: Geodetic Control Monuments, Horizontal Control Network, Vertical Control Network, Planimetric Map, Digital Terrain Model, Property Monument Recovery Map, Existing Right of Way Centerline and Boundary Resolution Map, and a variety of other specific purpose maps, such as Utility, Airport Permit, Railroad Encroachment, etc.

Base Maps are the beginning of almost all ODOT design work. A Base Map is an electronic, three dimensional, topographic map of the project area as it is before construction. Base Maps can be developed by ODOT or Consultant Survey Crews. Survey Crews are dispatched to the project site to locate all features in a Northing, Easting and Elevation coordinate format.

Generally, the information included on, and the limits of each Base Map are a result of the project scope as defined by the originating project manager. Survey Crews are then sent into the field to obtain the necessary information to the accuracies required. These accuracies vary from project to project and can range from hundredths of a foot in critical areas, to feet in the rugged mountains of Oregon. It is necessary to be familiar with the accuracies of each project. Each Base Map should include enough information to design the project to the limits as set forth in the project prospectus.

**Subtask 10.1 - Survey Work Request**

The PL must submit a Survey Work Request in order to have the preliminary survey and base mapping work started. The PL should consult with the Region Surveyor and the project team during preparation of the project work plan to determine the required survey and mapping needs for the project. A written work request is prepared, which should include a map with an outline of the area for which field surveying and mapping is needed.

The work request must include details on each element of the work required, including but not necessarily limited to the following:

- Geodetic Survey Control
- Monument Survey and Survey Filing Map
- ROW Alignment Resolution
- Base Mapping
- Digital Terrain Model
- Hydraulic Survey
- Mapping of Environmental Features (This equates to Activity ID 040)
Subtask 10.2 - Survey Field Packet
The surveyor will need to assemble a packet of information for the survey crew to use during the field survey. Typically, for most projects, this includes research at the County Surveyor’s office to get copies of filed county surveys, tax lot maps, and other survey data. The packet may contain copies of as-constructed plans that show the locations of features that the designer will need tied, such as culverts and storm sewer pipes. A monument recovery notebook is prepared that lists the recorded monuments that are anticipated to be within the project area, including Public Land Survey System survey control points and benchmarks that may be used for horizontal and vertical survey control. A drawing showing the limits of the survey work that is to be done, as well as a written description of the survey work that is required, is included. (This equates to Activity ID 041)

Subtask 10.3 - Geodetic Survey Control
At this subtask the surveyor is setting survey control points, photogrammetry premarks, and establishing coordinates for use in controlling photogrammetric mapping and field surveying. The surveyor prepares and files a control survey map with the local County Surveyor’s Office, as required by law. Geodetic survey control points are required on ever project where additional ROW may be required, as well as for projects that will use photogrammetry for mapping. If survey control points with reliable known coordinates are already available in the project area, then this subtask may not be needed. (This equates to Activity ID 055)

Subtask 10.4 - Photogrammetry Mapping
Aerial photographs can be ordered through Geometronics and obtained for the preparation of controlled CADD base maps, orthophotos, and digital terrain models. It is important to determine the intended use of aerial photography up front - low altitude photos work best for use in preparing accurate CADD digital terrain models. Forested areas may not be practical. It is common to have a project flown at a low altitude (1000' for fixed-wing) and a higher flight covering more area for a mosaic and extended mapping that may be needed for drainage or environmental study. Helicopter photos taken 300 feet above the ground can provide accuracy comparable to a ground survey, with a corresponding higher cost. Early and accurate planning would be documented in a Geometronics Project Agreement.

Geometronics has a wide range of data and equipment available, including a laser scanner, LIDAR data, maps and orthophotos for the entire state. Photogrammetrists can now see 3D views of Microstation files, with vector data superimposed on imagery.
It is best to contact the Geometrics Unit very early to request photogrammetric products, immediately after STIP approval, if possible. (This equates to Activity ID 065)

**Subtask 10.5 - Base Map and Terrain Model**

This subtask consists of all activities required to complete detailed base maps and digital terrain models that are required for a project. The deliverables for this subtask include CAD base map file and a digital terrain model file for the existing ground surface, as well as a Confidence Point Report on the digital terrain model. (This equates to Activity ID 254)

**Subtask 10.6 - Field Survey for Design Acceptance Phase**

This subtask consists of all field survey tasks required to complete detailed base maps, digital terrain models, roadside inventories, and monument recovery surveys that may be required for the project. Typically, for most projects, this includes establishing horizontal and vertical survey control, monument search and ties, topographic survey, utility locates and ties and possibly subsurface utility exploration and hydraulic surveys, as required.

This subtask can take anywhere from 20 to 40 weeks to complete depending on the environmental classification. (This equates to Activity ID 070 for Class 1 & 3 Env projects, Activity ID 255 for Class 2 Env projects)

**Subtask 10.7 - LRW Recovery Survey, Retracement Map, ROW Base Map**

This subtask is needed for all projects that will involve acquisition of additional ROW and/or on projects where there is a chance that existing survey monuments could be destroyed or disturbed. This subtask consists of preparation of an existing ROW centerline resolution, a monument recovery survey filing map, and preparation of a ROW base map. (This equates to Activity ID 258)

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**TASK 11 - HAZARDOUS MATERIALS CORRIDOR STUDY**

The HazMat Corridor Study involves a review of the proposed project to determine if there is potential for hazardous material sites to be present within the area of potential impacts of the project, that should either be avoided if possible during preliminary project design or that may require a more detailed study later in the project if impacts cannot be avoided. The HazMat Corridor Study is provided to the REC or Environmental Project Manager, who will incorporate it into the EBR or Environmental Reconnaissance Report, which is then provided to the PL. This is
done very early in the project development process, during the time that the field survey and base map are being prepared. The hazardous materials specialist will obtain a copy of the project prospectus and discuss the proposed scope of the project with the PL. The hazardous materials specialist will make a site visit to the project to become familiar with the site and with the locations of potentially contaminated properties and their proximity to any proposed highway widening or realignment that could result in impacts to known or potentially contaminated sites. The hazardous materials specialist will obtain a copy of the project base map and note the locations of known or potentially contaminated sites on the base map and prepare a brief report on the potential for hazardous materials within the area of potential impact and a recommendation on any further hazardous material investigations that should be conducted.

The research for the HazMat Corridor Study should be initiated as soon as the designer can provide an outline of the maximum project limits on a map. In most cases a full Corridor Study report is required, but certain circumstances can limit this work, as set out in the table below.

<table>
<thead>
<tr>
<th>Project Elements</th>
<th>Yes (Or Unknown)</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Could there be any land acquisition?</td>
<td>Go to 3</td>
<td>Go to 2</td>
</tr>
<tr>
<td>Could there be excavation below road base?</td>
<td>Go to 3</td>
<td>See A</td>
</tr>
<tr>
<td>Is the area completely undeveloped? (i.e. no buildings, parking or storage areas, agriculture (other than grazing), etc.)</td>
<td>See B</td>
<td>See C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Report Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - No HazMat Corridor Study Required</td>
</tr>
<tr>
<td>B - Corridor Study limited to aerial photo and OSFM spill database review - use Corridor Study Memo</td>
</tr>
<tr>
<td>C - Full HazMat Corridor Study required - use full Corridor Study Report</td>
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In all cases, Region HazMat must also determine whether there are other waste management issues associated with the project (e.g. asbestos, lead-based paint, PCBs, etc.) and ensure that the appropriate special provisions are included in the final plans.

The full HazMat Corridor Study report includes:

- A description of the corridor (proposed project components, physical setting, and adjacent land use involving hazardous materials)
- A review of historic records going back 50 years, if possible
- An environmental records review
- A conclusion regarding potential sources of contamination and recommendations
In agricultural areas where no other contamination is expected, surface soil samples may be collected and analyzed for herbicides and/or pesticides.

The limited HazMat Corridor Study Memo includes:

- A description of the corridor (proposed project components and current land use)
- A review of historic aerial photos to ensure that the area has remained undeveloped and the road has always been paved
- A review of the Oregon State Fire Marshal spill database

Note: if a major spill has occurred or the road was historically unpaved and could have been oiled for dust suppression, the limited HazMat Corridor Study Memo should recommend sampling. (This equates to Activity ID 154)

**TASK 12 - ENVIRONMENTAL BASELINE REPORT**

If it was determined that an Environmental Baseline Report (EBR) is needed it will need to be developed at this point. The EBR will generally be written prior to the first project kick-off meeting, or early enough in the project development process to fully realize the potential for avoidance.

The purpose of the EBR is to provide existing environmental resource information for selected CE projects prior to the beginning of project design, and to identify those environmental resources which may be affected by a project. The EBR will be provided to designers and project teams to assist them in developing project alternatives that avoid or minimize impacts to environmental resources.

If it is determined that an EBR is need the REC uses a completed Prospectus Part 3 and checklist to aid in preparing the EBR. Occasionally an EBR can be developed prior to the development of the Prospectus Part 3.

The following outlines ODOT’s procedures for preparing an EBR:

- The REC will coordinate with the project team to identify the study area of potential project impact. The Area of Potential Impact (API) should be broad enough to encompass all potential design alternatives including right of way, access roads, staging areas, easements, agency supplied material sources, and temporary structures. RECs will be responsible for coordinating the final EBR document. Note: An Environmental Consultant may prepare the EBR under contract, but the REC will serve as the project team representative.
- The PL will provide a project description including engineering-related purpose and an aerial map, or other scale-appropriate mapping of the
project area with the area of project impact delineated on it to the REC. The REC will provide this information to the EC, if the EBR preparation is contracted out.

- The REC will conduct a search of the project file to determine if any baseline work has been conducted in the study area in the past, and will provide any background information to the appropriate technical staff member (i.e., wetlands, noise, air, etc.)
- The REC will coordinate with the appropriate regional technical center staff and consultant staff to determine what environmental issues need to be included in the EBR.
- The REC will provide the region technical center and/or consultant staffs with a project description, purpose and need, all appropriate existing engineering data and project aerial mapping.
- The ODOT or consultant technical staffs then prepare the appropriate technical memos, summaries, or reports. If the technical information is prepared by consulting forces, the information will be reviewed by an appropriate ODOT staff person.
- The regional ODOT technical center staff will provide draft reports or technical memos to their REC for peer review. If consultants are responsible for preparing technical reports, the appropriate ODOT technical staff member will review their draft reports.
- The ODOT or consultant technical staff will incorporate any necessary changes and provide the REC or EC with final technical reports and/or memos.
- The REC or EC will prepare a draft EBR, which summarizes the information in the technical reports. The REC will distribute the final document to the project team, including the PL, Project Designer(s), and technical staff (if requested).

The project team and project designer will use the information and recommendations included in the EBR to develop design alternatives which avoid or minimize effects to environmental resources to meet the project’s purpose and need. (This equates to Activity ID 100)

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.

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**TASK 13 - WORK ZONE TRAFFIC ISSUES**

The initial work zone traffic issues identification task is to identify potential restrictions on lane closures and detouring of traffic that could affect the design of the project. This is done prior to the formal Work Zone Analysis and Restriction
Report, and is based on the best traffic data that is available at the Project Initiation Phase. (This equates to Activity ID 329)

TASK 14 - PAVEMENT DESIGN

The Pavement Design Report provides recommended pavement and base types and depths for the proposed project design. The report should include analyses based on an evaluation of all the properties of the pavement and base materials involved, calculation of anticipated truck traffic loadings, related cost analysis, development of material type and depth recommendations using current pavement design procedures. This task also includes any field investigation that may be required to prepare the final pavement design. A pavement design is needed for projects that involve construction of new roadways and for rehabilitation of existing pavements as well. The completed Pavement Design Report is provided to the PL and to the Roadway Designer.

The pavement design for each project will be determined by the Pavement Design Group. Because the depth of surfacing is a major factor in the project design and cost, the pavement design is needed early in the project development process. If the Pavement Design Group is to complete their design work on time, keeping them informed of any changes in the project scope and schedule is very important.

The primary function of the Pavement Design Group is to provide the most practical and cost effective pavement/base/subgrade design for the conditions and criteria for a specific project. Development of the design is accomplished through a combination of field investigation, data analysis, and application of appropriate design procedures. Pavement design procedures and ODOT Policies are outlined in the ODOT Pavement Design Guide. The surfacing type selection will be the responsibility of the Pavement Design Group and will not be left to the competitive bidding process.

Once the project scope is established, the pavement designer can begin the field investigation. Because of the limited availability of the Pavement Design Field Crew and other factors, scheduling fieldwork several months prior to the date when a complete design is necessary is important. Any changes in the project scope could require additional field work and should be brought to the attention of the pavement designer as soon as possible.

Field work for most projects will involve deflection testing of the existing road surface. This work cannot be performed when the existing pavement or subgrade is frozen. For this reason field work for projects in frost susceptible areas needs to be completed during the summer prior to the time a design is required. This may
in some instances (particularly for Regions 4 and 5 and projects at the higher elevations in the Cascades) require the scope and project schedule to be finalized eight to nine months in advance of the time a pavement design is required. Typically, if a pavement design for a project in the above areas is needed prior to July of a given year a work request needs to be provided by August of the previous year. (This equates to Activity ID 245)

TASK 15 - TRAFFIC COUNTS AND PRELIMINARY TRAFFIC ANALYSIS

When traffic volume counts are required, the time of year for taking counts is often critical to obtain relevant seasonal traffic data, and may therefore require a lot of lead time before actually taking the counts.

This task may include the following activities:

- Taking automated “hose” traffic volume counts and/or manual turning movement and vehicle classification counts
- Preparation of future traffic volume estimates or projections
- Review and analysis of 3 or 5 year crash history, Safety Priority Index System site files and other crash information, and make recommendations on improvements to eliminate or reduce future crashes
- Perform traffic analysis to determine if a roadway or intersection meets the Manual on Uniform Traffic Control Devices (MUTCD) and/or ODOT minimum warrants for potential installation of left or right turn lanes, signals and/or illumination systems
- Prepare all information necessary to apply for and obtain approval from the State Traffic Engineer for installation of a new traffic signal or other traffic control device(s)

Project Initiation Deliverables

At the completion of this milestone the PL needs to ensure that the following deliverables are completed at a minimum:

- Project team kick-off meeting
- Project team work plan
- Project team resource roster
- Refined stakeholder participation and communication plan

(This equates to Activity ID 045)
LIFECYCLE MILESTONE 3: DESIGN ACCEPTANCE

The Design Acceptance milestone is a critical point of decision-making that establishes the geometric boundaries of the project footprint, and allows for the concurrent ROW, permitting, and construction contract document activities to move forward. Design acceptance also provides for environmental and land use requirements, and subsequently how they affect permitting and the development of construction contract documents.

Design acceptance occurs at the end of the initial design phase and requires that all project disciplines have reviewed the design for balance of context with standards and policies. The time leading up to this milestone is the primary opportunity for both technical and non-technical stakeholders (internal and external) to review and weigh in on design elements according to their specific interests.

Significant scope, schedule, and budget changes may occur between project initiation and design acceptance. This is the time, through stakeholder input, to ensure we are developing the right project, for the right price, at the right time. Any significant changes after design acceptance must go through the formal change management process, so it’s best to gather input and make needed adjustments before design acceptance. This milestone happens typically prior to the schedule “lock in” date.

Significant changes can be defined as changes to the footprint that will affect right-of-way, or permit timelines that would move the bid let date, require additional funds, or delay the project schedule.

During the design acceptance phase, the project team:

- Studies outstanding issues related to project location and design
- Develops conceptual designs for design elements
- Identifies impacts of the design elements
- Selects and obtains approval of a design for advancement

TASK 1 - UPDATE PUBLIC INVOLVEMENT PLAN

At the start of each major phase of work on a project, the PL in collaboration with the PIO, should review and as necessary update or review the plan. This task may occur at several points during a project, depending on the size and complexity of the project, the amount of stakeholder interest and/or controversy involved in the
project, and the amount of change in the scope and/or design of the project during the previous phase of work.

The PL should also ensure that all tasks associated with stakeholder participation and communications are implemented during the Project Development stage. (This equates to Activity ID 005)

For information about project lifecycle Title VI and Environmental Justice and Emerging Small Business (ESB) considerations, visit Oregon.gov/ODOT/CS/Civil Rights.

**TASK 2 - MOBILITY STRATEGY AND TRAFFIC MANAGEMENT PLAN**

In September 2004, FHWA published updates to the work zone regulations at 23 CFR 630 Subpart J. The updated Rule is referred to as the Work Zone Safety and Mobility Rule and applies to all state and local governments that receive Federal-aid highway funding. Transportation agencies are required to comply with the provisions of the Rule by October 12, 2007. The changes made to the regulations broaden the former Rule to better address the work zone issues of today and the future.

Growing congestion on many roads, and an increasing need to perform rehabilitation and reconstruction work on existing roads already carrying traffic, are some of the issues that have lead to additional, more complex challenges to maintaining work zone safety and mobility. To help address these issues, the Rule provides a decision-making framework that facilitates comprehensive consideration of the broader safety and mobility impacts of work zones across project development stages, and the adoption of additional strategies that help manage these impacts during project implementation.

At the heart of the Rule is a requirement for agencies to develop an agency-level work zone safety and mobility policy. The policy is intended to support systematic consideration and management of work zone impacts across all stages of project development. Based on the policy, agencies will develop standard processes and procedures to support implementation of the policy. These processes and procedures shall include the use of work zone safety and operational data, work zone training, and work zone process reviews.

Agencies are also encouraged to develop procedures for work zone impacts assessment. The third primary element of the Rule calls for the development of project-level procedures to address the work zone impacts of individual projects. These project-level procedures include identifying projects that an agency expects will cause a relatively high level of disruption (referred to in the Rule as significant
projects) and developing and implementing Transportation Management Plans (TMPs) for all projects.

A TMP lays out a set of coordinated transportation management strategies and describes how they will be used to manage the work zone impacts of a road project. Transportation management strategies for a work zone include temporary traffic control measures and devices; public information and outreach; and operational strategies such as travel demand management, signal retiming, and traffic incident management. The scope, content, and level of detail of a TMP may vary based on the anticipated work zone impacts of the project.

A TMP is a plan comprised of three main components - the Traffic Control Plan (TCP), a compilation of traffic operation strategies and a public information campaign or action plan. At a minimum, the TMP will always include a TCP. The criteria below will help the project team determine which components will be necessary for the project TMP:
A TMP consisting of all three components listed above will be required on any project receiving Federal Aid and deemed a “significant” project by meeting any of the following criteria:
- On an Interstate freeway within a designated Transportation Management Area (TMA)
- Project budget greater than $5 million
- A TMP consisting of only the TCP will be required for all other projects.

However, it is recommended for projects not meeting the criteria listed above yet having a complex scope, long duration, involving a detour or other such impacts to traffic, that the project team consider incorporating some level of traffic operation and public information strategies into the TMP.

For information regarding the development of a TMP go to the guidance document for TMP Development on either of the following websites:
http://www.oregon.gov/ODOT/HWY/TRAFFIC-ROADWAY/traffic_control.shtml
www.obdp.org

For more information about TMPs and the Rule go to FHWA’s website at
http://www.ops.fhwa.dot.gov/wz/resources/publications/trans_mgmt_plans/index.htm (This equates to Activity ID 331)

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.

TASK 3 -ROADWAY DESIGN

During the roadway design, the designer will develop the following deliverables:
During the design process, the designer will continuously be working with the different project team members in obtaining and distributing project design information. This process will vary depending on the type of project and the project schedule established by the project team. After the project design alternatives have been developed through the environmental and public involvement process, a recommended project alternative is selected. As with the project design alternative process the designer continues to work with the different project team members in the refinement of the selected project alternative design. The final product from a designer’s perspective is a complete set of contract plans and specifications.

Subtask 3.1 - Interchange Layouts
The Preliminary Design Unit is available to provide assistance in exploring alternative geometric design concepts for interchanges. This subtask may involve providing advice to designers in other units and review of designs prepared by others, and can also include complete design and drafting services to produce interchange layouts and display maps for use in public meetings or hearings. Typically, the Transportation Planning and Analysis Unit (TPAU) will perform traffic analysis for each alternative design and the Preliminary Design Unit may make additional geometric design refinements on the basis of the results of the traffic analysis and input on decisions made by the project team, in an interactive and iterative engineering design process. The process starts with brainstorming preliminary alternative concepts, evaluate those alternative concepts and carry the best ones through to the completion of final project design. This subtask may also include the preparation and approval of a final interchange layout sheet, when rebuilding or otherwise modifying an existing interchange. (This equates to Activity ID 095)

Subtask 3.2 -Roadway Design
This subtask, which starts after completion of the field survey for design acceptance and base mapping activities, and continues through most of this milestone, consists of the preliminary design of horizontal and vertical roadway alignments, typical sections, super-elevation, cut and fill slopes, preliminary roadway drainage, preliminary stage construction design, preliminary erosion control measures quantity calculations and preliminary bid item summaries, preliminary cost estimates, completion of the roadside inventory, design exception and design concurrence requests, design narratives, design maps, profiles, cross sections and other deliverables necessary to prepare the preliminary roadway design “footprint” of the project, so that other technical disciplines can perform
other elements of the design that are needed to obtain design acceptance. (This equates to Activity ID 275)

Subtask 3.3 -Traffic Control Design
The Traffic Control Design subtask is development of the preliminary design of the traffic control plan (TCP) for a project. This is done in close collaboration with development of the preliminary stage construction plans for the project. The deliverable is a set of preliminary or concept-level plans for inclusion in the design acceptance package for the project, a brief narrative describing the proposed TCP, and a quantity summary/cost estimates for major bid items that are anticipated to be required to implement the proposed TCP. (This equates to Activity ID 337)

Subtask 3.4 -Design Narrative
The Design Narrative, sometimes referenced as the location design narrative provides a summarized description of what the planned work entails and the current state of the infrastructure—both of which add important information about why the project is being undertaken. This is an important consideration: Why is this project being built? The answers help design personnel, including consultants, become more aware of added expectations that may need to be incorporated into the project design. It is also a way to manage to the intended scope and keep the project team focused on the desired solution. Some of the information may include:

- Alternatives analysis; this provides a summary of what other options were considered prior to developing a recommended course of action, along with justification as to why those alternatives were not feasible.
- Project Design, Team and Management Members; who has been involved in the project from all levels.
- Project Schedule
- Access Management Summary
(No Activity ID for this task)
TASK 4 – ACCESS MANAGEMENT

Completion of the required access management deliverables are intended to ensure that the critical decisions are made in a timely manner and incorporated into subsequent project design, ROW acquisition, communication plans, budget, and schedule.

Each region must determine who is responsible for the required deliverables. PD-03 identifies the manager who is accountable for the deliverables, but does not specify who will complete each one. For more information, visit Resources for Access Management Planning.

Access Management Deliverables:

- **Access Management Strategy (AMStrat):** is required for any project or section of a project that involves mitigation, modification, or removal of legal approaches. The AMStrat may be a standalone document or an element of an Access Management Plan (AMP) or Interchange Area Management Plan (IAMP).

- **Official Project Access List (OPAL):** documents approval of all accesses to be provided within the project limits upon completion of the project. Documented approval of this list by the RAME and the Technical Center Manager is required.

- **Access Deficiency List:** this list is a subset of the OPAL. It lists all accesses that will remain open upon completion of the project but are considered priorities for future mitigation, modification or removal. The accesses are added to the list because the issue of concern cannot be addressed within the scope and budget of the project. The legal status of the approach is irrelevant for purposes of listing; approaches may be listed no matter what their legal status (permitted, un-permitted, grandfathered, illegal, etc.) This list is prioritized by the region and submitted to the Statewide Access Management Program Office. The statewide office will develop criteria for the region to use in prioritizing this list. The purpose of the Access Deficiency List is to develop a statewide inventory that helps to assess funding needs and priorities for improvements. It is recommended that the list also be sent to the district office where these accesses can be flagged for action if future change of use or other actions allow.

- **Access Management Element of Design Acceptance Memorandum:** narrative that describes the principal design features to address access management that will be incorporated into the project, i.e. medians, driveway consolidation, revising local street connections, access control, turning movement restrictions, etc. This is often included in the overall project Design Narrative.

- **Access Modification and Closure Letters Delivered to Property Owners:** Letters notifying property owners of changes that will be made to their access as part of the project and their appeal rights under OAR 734-051.
Copies of all closure letters are to be reviewed by the Statewide Access Management Program Office prior to mailing to the landowner. Some decisions regarding access may not be known at this milestone. The Project Communication Plan should establish expectations and provide guidance for communicating with property owners who may be affected by decisions at a future point in the project.

- **IGA Provisions to Address Local Government Access Issues (if applicable):** These provisions address work that the local government needs to authorize to occur as part of the project because it affects facilities or land under local jurisdiction. For example, closing or changing the alignment of local streets, or moving an access from the state highway to a local road. It is important to identify the need for such actions as early as possible and to work with local governments to develop IGA provisions. Depending on the nature of the local actions and the local code, amendments to the local Transportation System Plan (TSP) or Comprehensive Plan may be required. These amendments can involve lengthy public hearing processes which could impact the project schedule and budget. A TSP amendment is a land use decision and must occur before the final environmental document is issued for a Class 1 or Class 3 project or before construction of a Class 2 project.

- **Updated Schedule and Budget:** The schedule and budget should be updated to complete the access management work. Updates should be incorporated into the overall schedule for completing project work.

- **OTC Decision Package (if applicable):** In some cases, an AMP, AMPI, or IAMP may constitute a Facility Plan that requires approval by the OTC. In such cases, the project needs to be scheduled on the OTC agenda and the necessary information and reports assembled for timely submittal. (This equates to Activity ID 102 & 104)

For a complete list of required AM documents, please refer to Operational Notice #03, or contact ODOT Access Management.

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**TASK 5 - ENVIRONMENTAL STUDIES**

The full spectrum of environmental impacts is evaluated for Class 1 and 3 projects and documented in a DEIS/FEIS (Class 1) or EA/REA (Class 3). Projects that become Class 2 projects (Categorical Exclusions) are evaluated to determine that there are minimal impacts, if any, and documented in the Part 3 of the Prospectus. Class 2 projects may also be documented in staff reports or documents focused on one environmental subject area. The level of detail required is driven by the nature of the impacts, not necessarily the class of the project.
Environmental studies may include the following depending on the project classification:

- Roadside Development Concept
- Historic (Section 106) Determination of Eligibility (DOE)
- Regulatory Review/Approval of Historic (Section 106) Determination of Eligibility (DOE)
- Wetland Functional Impact Assessment
- Wetland Mitigation Concept Strategy
- Noise Report and Preliminary Mitigation Design
- Archeological Ground Surveys
- Water Quality Report/Water Resources Impact Assessment
- Air Quality Report
- Slopes IV Programmatic Permitting

For full detail and guidance, visit the ODOT Environmental Section’s guidance Website

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.

Subtask 5.1 - Roadside Development Concept

This subtask consists of developing concepts and cost estimates for projects where roadside development is appropriate or required. This may include developing visual objectives for the protection or enhancement of views of natural or cultural features, for screening unsightly objects and for modifying views of the highway from adjacent property. The PL must coordinate the involvement of local stakeholders to solicit their input and feedback on roadside development alternatives. Maintenance personnel need to be consulted to discuss and reach agreement on available staff and budget for roadside development maintenance and for input on specific issues (such as plant species, irrigation systems etc.). “Hardscaping” and other visual enhancement features may also be explored during this subtask. (This equates to Activity ID 125)

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.

Subtask 5.2 - Historic Determination of Eligibility

Historic resources are properties that are listed in or eligible for the National Register of Historic Places. This can include historic districts, buildings structures, objects and sites, and is not limited to resources that have already been identified in surveys, the National Register, or Statewide Goal 5 resources. A cultural resources professional should evaluate all historic resources that are 50 years old or older to determine if further investigation is needed. Determinations of Eligibility (DOE) for the National Register must be prepared for the historic resources that are potentially affected by projects. The DOE is a brief report with
Subtask 5.3 - Wetland Functional Impact Assessment
A Wetland Functional Impact Assessment is required for projects that would permanently affect wetlands. A functional assessment must be completed in accordance with the Oregon Division of State Lands (DSL) requirements and submitted with the Section 404/Removal-Fill Application. An assessment must be completed for the affected wetlands, and wetland mitigation and reference sites. (This equates to Activity ID 369)

Subtask 5.4 - Wetland Mitigation Concept Strategy
The Wetland Mitigation Concept Strategy is intended for inclusion in permit submittals for 404 and DSL permits, and is used by Landscape Architecture Group to develop the Wetland Mitigation Plans and by ROW for property acquisition, if necessary. This report includes: description of functions and values of project area wetlands, quantification of area of impacts from the preferred/selected alternative, evaluation of impacts on wetland functions and values, evaluation of cumulative impacts on wetlands documentation of avoidance and minimization of impacts and presentation of conceptual mitigation plan. This report is based on: wetland delineation report, functional assessment based on Hydrogeomorphic or WET2 methods, coordination with regulatory agencies.

On a Class 1 or 3 project, the Wetland Mitigation Concept Strategy is prepared prior to completion of the DEIS or EA. It follows completion of the Wetland Functional Impact Assessment, and precedes preparation of the Wetland Report. On a Class 2 project, the Wetland Mitigation Concept Strategy is prepared during the DAP (following completion of the Wetland Functional Impact Assessment). (This equates to Activity ID 370)

Subtask 5.5 - Noise Report and Preliminary Mitigation Design
A Noise Report is usually needed when:
- There will be added traffic lanes on the proposed project; and/or
- There will be a significant alignment shift in the proposed roadway.

Although most Noise Reports are prepared for Class 1 or 3 projects, some Class 2 projects may also require one. The Noise Report must contain sufficient information to satisfy the requirements of NEPA and the FHWA Noise Standard. The report includes measuring existing traffic noise levels and calculating
predicted future traffic noise levels that may result from construction of the proposed project and predicted future traffic noise levels that may occur without the project. Recommendations will be included on noise abatement measures, such as noise walls and berms. The purpose of the Noise Report is to ensure that the project will not create new noise violations, worsen existing violations or create a nuisance to surrounding property owners.

The report is delivered to the Environmental Project Manager for inclusion in the Draft Environmental Document (for Class 1 or 3 projects) and to the PL. (This equates to Activity ID 170)

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.

Subtask 5.6 - Archeological Ground Surveys

There are three levels of effort involved in identifying archaeological sites on any transportation project and assessing impacts to archaeological sites:

Phase I:
Projects that have a potential to affect archaeological resources initiate Phase I, which can consist of one or more of the following:

- a search of archaeological site records and historic documents
- a field survey
- exploratory subsurface probing if appropriate.

If no impacts will occur, or no sites are present in the area, a short report documenting findings is submitted to the State Historic Preservation Office (SHPO) and the process ends.

Phase II:
If sites are identified through Phase I evaluation and will be impacted by the project, sub-surface testing is conducted to determine boundaries, content, integrity and significance under National Historic Preservation Act (NHPA) criteria.

If sites are determined ‘not significant’, no further investigations are needed.

If a site is determined to be significant, a Determination of Eligibility (DOE) is submitted to the National Register of Historic Places and is reviewed by the appropriate Indian Tribe, the State Historic Preservation Office (SHPO), and the Federal Advisory Council on Historic Preservation (ACHP). In addition, a Finding of Effect is submitted, which evaluates the project’s impact on the affected resource. If a project is determined to have an effect upon the resource, then mitigation strategies must be identified.

Phase III:
If an archaeological site is determined significant, and avoidance is not a feasible option, data recovery (excavation) is conducted to record and preserve the information from the site. When data recovery is necessary, a data recovery plan is submitted to outline:

- current archaeological research relating to the site proposed for recovery
- how the site in question will contribute to current research
- the level of recovery that is appropriate to address the questions identified.

Oversight of this process rests most heavily on the ODOT, which must determine if the proposed research design is appropriate, and if the level of research effort is sufficient to comply with federal law and Memoranda of Agreement (MOA) with the Tribes. In addition, the SHPO and ACHP also provide final review.

Phase 3 is costly and a very slow process. It may take between 6-9 months to negotiate terms of the MOA with the SHPO and tribes. Data Recovery excavations and analysis may take up to 3 years or more to complete. (This equates to Activity ID 126)

**Subtask 5.7 - Water Resources Report**

The Water Resources Report identifies existing water quality and water quantity conditions in the project area, the potential impacts of the project on water quality or water flow conditions within or affected by the project area, both during and after construction, and mitigation measures to minimize impacts to water quality and quantity. The purpose of this work is to determine the amount of mitigation necessary to avoid violation of water quality regulations or to mitigate increases in water flow that might affect floodplain levels, remain in ESA compliance, and to otherwise avoid harming designated beneficial uses of the receiving water.

The completed report is delivered to the Environmental Project Manager for inclusion in the Draft NEPA Environmental Document and is forwarded to the water resources/stormwater designer(s) to assist in guiding water quality and quantity design work. (This equates to Activity ID 185)

**Subtask 5.8 - Air Quality Reports**

Air Quality (AQ) Reports are prepared to meet three distinct sets of regulatory requirements and processes:

1. **NEPA Requirements (Statewide)**

   AQ Reports for Class 1 projects must contain sufficient information to satisfy NEPA and Transportation Conformity Rule requirements. Information documented in the AQ Report is incorporated into the project Draft EIS.
AQ Reports for Class 3 projects and Class 2 projects may be as rigorous as a Class 1 project or may not be required at all. Projects located in air quality “non-attainment” or “maintenance” areas that add capacity or significantly alter operational characteristics (signalization, channelization, etc.) must meet Transportation Conformity Rule requirements. For Class 3 projects, FHWA will not issue a Finding of No Significant Impact (FONSI) without a determination of conformity in the REA. As with Class 1 projects, the AQ Report is typically prepared for inclusion in the EA.

Class 2 or 3 projects in areas designated, as in “attainment” of air quality standards typically do not require analysis of air pollutant emission levels or concentrations unless there is specific concern for potential impacts. Therefore, AQ Reports are not frequently prepared for projects in attainment areas. If documentation is desired, for inclusion in the EA or the project file, a memo outlining the scope of the project and a discussion of the projects potential impact on air quality is prepared.

Class 2 projects are somewhat different in that there may not be state or federal approvals prior to PS&E. In this case, the AQ Report should be prepared sufficiently in advance that a conformity determination can be made prior to PS&E, but far enough along in the process that no changes in project scope or design are anticipated. Distribution of the report should go to Project File, PL, Region, DEQ, FHWA (if projects requires federal money or approval) and interested parties.

2. Transportation Conformity Rule Requirements

Conformity requirements are applicable to transportation actions in designated air quality “non-attainment” or “maintenance” areas. Regional Transportation Plans (RTP); Metropolitan Transportation Improvement Programs (MTIP) and projects must meet criteria established in the State Transportation Conformity Rule in four metropolitan areas; METRO/Portland, Salem/Keizer, Eugene/Springfield and Medford. In addition, STIP projects must meet conformity criteria in the following rural areas: Grants Pass, Klamath Falls, La Grande, Lakeview, and Medford/Ashland (outside Medford UGB).

The STIP conformity rule uses the term “rural” to define non-metropolitan areas that are designated “non-attainment” or “maintenance.” In Oregon, there are five “rural” areas where STIP conformity determinations are required. Technical analyses to facilitate STIP conformity determinations are prepared by ODOT or regional governments. Areas and agency responsible for STIP conformity are as follows: Grants Pass - RVCOG; Klamath Falls - ODOT; La Grande - ODOT; Lakeview - ODOT; and Oakridge - ODOT. STIP conformity determinations are submitted to the ODOT STIP coordinator, region and local governments.
A project level conformity determination must be made for all transportation projects in air quality non-attainment and maintenance areas, if, the project involves the addition of capacity or any other feature which could be considered regionally significant or involves the modification or addition of features that affect facility operational characteristics, such as intersection channelization or signalization. In areas designated as non-attainment or maintenance areas for the pollutant carbon monoxide (CO), the local effects of these projects on CO concentrations must be considered to determine if a "hot-spot" analysis is warranted prior to making a project level conformity determination. Areas where CO hot-spot analysis must be considered are as follows: METRO/Portland; Salem/Keizer; Eugene/Springfield; Medford; Grants Pass; and Klamath Falls.

In all cases, the project-level conformity determination is the responsibility of the project sponsor. To meet project-level conformity requirements, a project must be identified in a conforming RTP, conforming MTIP or STIP and must not create any new or exacerbate any existing CO hot spots.

3. Indirect Source Construction Permit (Lane County)

An Indirect Source Construction Permit is required for all transportation projects in Lane County that meet the following criteria: any highway proposed for construction with an anticipated annual Average Daily Traffic volume of 20,000 or more vehicles per day within ten years of completion, or being modified so that the annual ADT will be increased to 20,000 or more or will be increased by 10,000 or more vehicles within ten years of completion. Lane Regional Air Pollution Authority (LRAPA) is the agency responsible for review, comment and permit approval. An AQ Report is prepared to document all information requirements. The project sponsor is responsible for obtaining the permit prior to beginning construction. (This equates to Activity ID 140)

Subtask 5.9 SLOPES IV Programmatic Permitting

The Standard Local Operating Procedures for Endangered Species (SLOPES IV) contains a programmatic biological opinion and incidental-take statement. It is an agreement between the U.S. Army Corps of Engineers (Corps) and National Marine Fisheries Service (NMFS) that if used appropriately allows projects to be permitted without going through individual Endangered Species Act Section 7 consultation.

SLOPES provides a focus for discussion between NMFS, the Corps, and applicants regarding ways to reduce or remove the adverse effects of regulated actions on ESA-listed fish species and on designated critical habitat. There are four types of actions addressed in SLOPES

- Major Hazard Response
- Streambank and Channel Stabilization
- Maintenance, Rehabilitation and Replacement
- Utility line stream crossings
In general, if a project is determined to be appropriate for a programmatic permit, the project will have a shorter permitting timeline. But to determine if the project is a good candidate requires significantly more up-front evaluation of biological and hydraulic considerations, and may lead to increased construction costs. This is described in detail in the SLOPES IV handbook. For more information, view the Slopes IV Guidebook at: ftp://ftp.odot.state.or.us/SLOPES_IV/SlopesIVHandbook(V1.3)Final102508.doc (No Activity ID for this task)

Subtask 5.10 - Conceptual Noise Mitigation Design
This subtask, which follows completion of the Noise Report and Preliminary Mitigation Design, is used only on Class 1 or 3 projects, where additional development of the proposed noise mitigation measure(s) may be needed to complete the draft NEPA Environmental Document. Design may include further design development and/or analysis of concepts for sound walls, sound berms, or other noise mitigation concepts. This subtask is complete when the information required to complete the draft EIS or EA has been developed. (This equates to Activity ID 170)

TASK 6 - TRAFFIC DESIGN

Subtask 6.1 - Traffic Analysis (Includes Air, Noise, and Energy)
The Traffic Analysis is usually done in support of alternatives analysis and is a requirement for all Class 1 and 3 projects that require either an EIS or EA. A traffic analysis consists of analyzing the traffic related effects of the proposed design alternative(s) on study area intersections and roadway segments. A report is produced which includes volume-to-capacity analysis for each alternative design and for the “no build” alternative and may include recommendations on mitigation measures for problem locations (i.e. new turn lanes or new traffic signals). The report also provides traffic data needed to do energy, noise, and air quality analysis on each alternative.

A traffic analysis may also be required on some Class 2 projects or for some projects where the NEPA Environmental Document was completed years earlier, for many of the same purposes stated above.

The traffic report is provided to the PL and Environmental Project Manager. (This equates to Activity ID 090)
Subtask 6.2 - Work Zone Analysis, Restrictions and Detours
The PL requests a Work Zone Analysis and Restrictions Report as soon as the general scope of the project has been established. The report consists of traffic analysis to determine the potential for excessive delays to the traveling public created by lane closures or detours during construction. Report results may be used during stage construction design to ensure that the project can be built with minimal traffic interruption. The report examines hourly projections of capacity for the project and details how many lanes will be required to maintain a table level of flow. Other types of analysis that may be requested include recommendations on lane rental charges a benefit/cost analysis for detours, minimum storage length calculations for intersections, as well as any other anticipated traffic engineering needs for work zones.

The report is delivered to the PL who should forward a copy to the roadway designer. (This equates to Activity ID 330)

Subtask 6.3 - Sign Design
This subtask is to develop the preliminary design for permanent signing. One of the key outcomes of this subtask is to determine if additional ROW and/or easements may be necessary to install signs, and if so, how much additional ROW or easements, so that the draft ROW map can show what is needed for signs. This subtask involves developing the signing design to the level of detail necessary to ensure that the project feasibility, cost and overall footprint have been established, so that the project can proceed through the design acceptance milestone. (This equates to Activity ID 504)

Subtask 6.4 - Signal Design
This subtask is to develop the preliminary design for traffic signals, for new or replacement traffic signals, flashing beacons, ramp meters, signal interconnect systems, emergency vehicle preemption systems, and other signal-related features. One of the key outcomes of this subtask is to determine if additional ROW and/or easements may be necessary to install traffic signals, and if so, how much additional ROW or easements, so that the draft ROW map can show what is needed for signals. Another key outcome is to ensure that Traffic Control Device Approval (which is required for a new signal) has been obtained from the State Traffic Engineer.

This subtask involves developing the signal design to the level of detail necessary to ensure that the project feasibility, cost and overall footprint have been established, so that the project can proceed. (This equates to Activity ID 529)
Subtask 6.5 - Illumination Design
This subtask is to develop the preliminary design for roadway illumination systems. One of the key outcomes of this subtask is to determine if additional ROW and/or easements may be necessary to install an illumination system, and if so, how much additional ROW or easements, so that the draft ROW map can show what is needed for illumination. This subtask involves developing the illumination design to the level of detail necessary to ensure that the project feasibility, cost and overall footprints have been established, so that the project can proceed through the design acceptance milestone. (This equates to Activity ID 489)

TASK 7 - STRUCTURE DESIGN

Subtask 7.1 - Start TS&L Bridge Design
The purpose of the TS&L Design is to develop the general type, size, and location of all project bridges to a level of detail necessary to prepare the Bridge Hydraulics Report and to perform the Geotechnical Exploration and prepare the Preliminary Geotechnical Report. At the end of this stage of bridge design, the locations of bridge bents, pilings, footings, and superstructure type are sufficiently developed so the Bridge Hydraulics Report can be prepared, and so that the locations of geotechnical boreholes that are needed for the bridge foundation design are known. When the Bridge Hydraulics Report and the Preliminary Geotechnical Report are completed, the Finalize TS&L Bridge Design can start. (This equates to Activity ID 310)

Subtask 7.2 - Finalize TS&L Bridge Design
The purpose of the finalize TS&L Design is to complete the general type, size, and location of all project bridges to a level of detail necessary to prepare the final type, size, and location Bridge Design Report. When the Bridge Hydraulics Report and the Preliminary Geotechnical Report are completed the Finalize TS&L Bridge Design can be performed. This subtask includes design and drafting needed to prepare preliminary plan sheets showing the preliminary plan view and elevation for each structure, a preliminary engineers cost estimate, and a narrative report describing each structure and its alternatives. (This equates to Activity ID 311)

Subtask 7.3 - Retaining/Sound Wall Design
The purpose of this subtask is to provide for the time needed for evaluation of alternative retaining wall types for a project, at design acceptance, and to prepare a simple plan/evaluation drawings showing the overall length, height, and
anticipated type of wall that is likely to be feasible and cost effective for each wall and an evaluation of the potential ROW needed to construct each wall. The deliverables for this subtask include conceptual plan/evaluation drawings for each retaining wall, a preliminary cost estimate for each wall, and a brief narrative describing the alternatives that were considered and the reasons why a specific wall type is proposed. (This equates to Activity ID 316)

Subtask 7.4 - Traffic Structures Design
The purpose of this subtask is develop the preliminary design for traffic structures such as sign bridges cantilevered sign supports or tower poles for very large directional signs, for VMS or for other ITS features that might be incorporated into a modernization, bridge, or preservation project.

This subtask involves developing the traffic structure design to the level of detail necessary to ensure that the project feasibility, cost and overall footprint have been established, so that the project can proceed through the design acceptance milestone. This may, in some cases, require geotechnical foundation exploration and analysis, in the case of any traffic structures where there are questions about the feasibility of installing the proposed structure in a particular location. The final deliverables (drawings, cost estimate, narrative, etc.) would be more or less similar to that produced during the TS&L Bridge Design task. (This equates to Activity ID 481)

TASK 8 - GEO/HYDRO DESIGN AND STUDIES

Subtask 8.1 - HazMat Site Assessment
Project activities that may disturb hazardous materials include excavation, utility trenching, and building demolition. The purchase of contaminated ROW can also create future fiscal liabilities for the department. Project teams are responsible for ensuring that hazardous materials are adequately investigated during project development and the hazardous materials studies and findings are properly documented. All reasonable efforts will be made to identify hazardous material sites potentially affecting transportation projects. The identification of hazardous material sites will start as early as practical and will continue as the project is developed until all sites have been investigated and addressed.

A Hazardous Materials specialist should conduct hazardous material investigations. The level of investigation is different for each project. Projects in commercial or industrial areas warrant more thorough investigations than those in rural or residential areas. A minimum level of investigation would involve reviewing DEQ records and an on-site visit or reconnaissance. Additional investigations may involve historic aerial photos, PUC records, State Fire Marshal records, fire insurance maps, interviews with the local residents or businesses, interviews with
ODOT maintenance personnel, deed searches, business registries, tests of building materials, and soil or groundwater testing.

The Level 2 Preliminary Site Investigation (PSI) documents the findings of environmental sampling conducted to determine the presence and/or extent of contamination related to potential sources identified in the HazMat Corridor Study. Results of the Level 2 PSI should be discussed with the recipients, to ensure that they understand the impacts and the required mitigation measures. (This equates to Activity ID 155)

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.

Subtask 8.2 - Material Source/Disposal Site Concepts

ODOT currently owns approximately 700 material sources located around the state. These sources collectively form a network of hard rock, borrow, disposal and maintenance material sources. They are used to various degrees to meet the needs for construction, maintenance and safety of the state transportation system. A unique parcel or combination of parcels of land which are ODOT owned or controlled specifically identified as the location from which material can be removed for utilization in the construction of a project and the continued maintenance of the project. Material can either be in place naturally occurring earthen material or earthen material which has been transported to this location from another site or sites and stockpiled for future use. Material from this source may or may not require secondary processing prior to incorporation into the project.

A preliminary determination will need to be made as to whether or not a material source site or sites may need to be developed as part of the project work. At the time of project scoping, certain project assumptions will be required to assist in making this decision.

If the initial determination is to pursue development of a public resource site or sites, but further along in the process based on more refined design it is determined no source is needed or no source can be made available, the work can be dropped. The problems occur when source need is not identified until late in the process, when inadequate time and/or resources are available to complete the necessary work.

If the determination is that a public site(s) should be pursued for potential use on the project, the person(s) responsible for pursuing the sites should use the ODOT Material Source Checklist to help guide the development process.

A geologist will need to review existing sources within the project vicinity and determine which site or sites (if any) will be offered to meet the anticipated
project needs. They will let the PL and project team know that a prospective source(s) will be offered for the project and verify that the proper schedule elements are included. (This assumes that use of a state owned or controlled source was identified in the original scope of the project or has been agreed upon with the PL or appropriate person(s)). (This equates to Activity ID 387)

**Subtask 8.3 - Bridge Hydraulics Report**

The Bridge Hydraulics Report is prepared following the completion of subtask 7.1 - Start TS&L Bridge Design, once the overall geometry of the proposed bridge or large culvert is fixed. The Bridge Hydraulics Report is prepared to provide the bridge designer with essential information for the Finalize TS&L Bridge Design subtask.

The hydraulic engineer will perform a hydrologic analysis of the drainage basin of the stream to determine peak design stream water flow rates. The hydraulic engineer will then prepare a hydraulic analysis using the calculated stream design flow rates and surveyed stream profiles, stream cross sections and the proposed roadway profile to determine the minimum hydraulic opening for the proposed bridge or box culvert, as required, to avoid raising the elevation of floodwaters above the established 100 year floodway or floodplain elevation.

For any culvert 48 inches or larger in diameter, similar hydrologic and hydraulic analysis would be performed. In the case of a project where a drainage channel may need to be relocated as part of the project, the hydraulic engineer may be asked to provide a preliminary recommendation on the new channel typical cross section and profile. Also, in the case of projects where flooding is a problem, the hydraulic engineer may be asked to assist in developing designs for stormwater detention facilities.

The results of this data will be used by the bridge and roadway designers to refine the preliminary bridge and roadway design, prior to completion of the draft DAP. (This equates to Activity ID 261)

**Subtask 8.4 - Geotechnical Exploration**

Most geotechnical work is specific to a site where some type of civil work will be constructed and includes at least three parts. The first part is an investigation of subsurface conditions that always includes characterization of the subsurface. This is usually the most costly of the three parts and the one that takes the longest time. Subsurface characterization usually on around drilling, excavating or other means to sample and identify the nature and extent of soil and rock materials that will either be used to support facilities or will themselves be used as construction materials. Industry practice, judgment and experience are all considered in defining the scope of the field investigation. Often, significant pressure is exerted to do less field investigation than may be necessary to provide quality information
because of the cost and time required. Less than adequate investigation almost always results in construction problems, delays, change orders and claims.

The second part starts with a review of the samples and other field information and then centers around laboratory testing to determine soil properties. Depending on the project and the subsurface, the scope of this part may vary dramatically.

In the last part, the previously obtained information is used to develop design information. The issues that can be addressed in this step have already been summarized in the first section. Normally, design information is presented in a written report that also usually includes documentation of the entire process. Reports present the design information to the roadway designer, project manager, inspectors, contractors and others who may have an interest. (This equates to Activity ID 280)

**Subtask 8.5 - Preliminary Geotechnical Report**

The Preliminary Geotechnical Report is prepared following completion of the Geotechnical Exploration and is intended for use in completing the Finalize TS&L Bridge Design subtask and in completing the roadway design at design acceptance.

The Preliminary Geotechnical Report is prepared for any project that includes a new bridge, retaining walls, large cuts or fills, or other features that may require design of foundations or remediation of geological instability, such as landslide stabilization. The report will include preliminary recommendations on bridge and retaining wall foundation design, earthwork slopes, earthwork shrink and swell factors, and options for how to mitigate geological instability. It may also include slope stability analysis for potentially unstable cut or fill slopes or for existing landslides, as well as the results of laboratory tests on soil parameters. (This equates to Activity ID 295)

For information about project lifecycle Title VI and Environmental Justice considerations, visit the [Title VI Plan](http://Oregon.gov/ODOT/CS/CivilRights).

**Subtask 8.6 - Water Quality/Quantity Needs Identified**

The water quality engineer/designer will identify the stormwater treatment and detention requirements. The engineer/designer will use PD-05 in determining the need for stormwater quality mitigation for runoff from ODOT projects and the level of mitigation that could be necessary.

Drainage requirements, including pavement and roadway drainage, storm sewers, small culverts and ditches, overside drains, etc., as well as water quality and quantity needs are identified in the Preliminary Stormwater Report, developed at
design acceptance. The final Stormwater Report is developed at the final design milestone. These documents may be produced by either a roadway designer, or hydraulics engineer. (This equates to Activity ID 263)

TASK 9 - DESIGN ACCEPTANCE SURVEY - PHASE 2 (FINAL SURVEY)

The DAP Survey task is to provide for additional or supplemental field survey and mapping work that may be needed during design acceptance. It is normal that during this phase of work questions may come up that require additional field survey and mapping work beyond that which is done during the initial field survey and base map tasks. There may be a need to collect additional original ground terrain data in some areas, if the proposed limits of the roadway excavation or embankments go beyond the area previously surveyed. Additional drainage or utility surveying may be deemed necessary by the roadway, bridge, and traffic or geotechnical designer(s). (This equates to Activity ID 256)

TASK 10 - UTILITY IMPACTS REPORT (“DESIGN ACCEPTANCE UTILITY CONFLICT LIST“)

At a point where the design is fairly well-developed, the Region Utility Specialist, with assistance from the roadway designer in the Region Technical Center, will prepare a preliminary list of anticipated utility conflicts with the proposed construction. The purpose of developing a utility impacts report during design acceptance is to identify utility conflicts that could affect the overall footprint of the project, including the construction cost, ROW cost, environmental impacts, and/or that could affect the schedule for the project. It is especially important at design acceptance to identify utility conflicts that may result in excavation, such as traffic signals, storm drainage etc.

The report includes both non-reimbursable and reimbursable utility relocations. As the Utility Impacts Report is preliminary, typically it would not be used to develop the Utility Conflict Letters, but would be used in evaluating the need for Utility Test-Hole Excavation to further refine the list of utility conflicts. (This equates to Activity ID 256)
**TASK 11 - DRAFT RAILROAD MAPS**

This task involves preparation of draft proposed ROW and/or easement lines and dimensions for permanent fee ROW, permanent easements or temporary easements that are needed from railroad ROW for a project. This task takes place when the preliminary design of a project is substantially complete and the project construction footprint has been established, and must be completed prior to completion of the design acceptance milestone. The draft railroad map(s) are provided to the roadway designer to incorporate into the preliminary conceptual plan sheets that will be circulated for review during the DAP review. When design acceptance is complete, the final railroad map(s) activity can be prepared, which includes preparation of the final railroad encroachment maps and legal descriptions of any property that must be acquired from a railroad.

Railroad Orders should also be drafted at the time of design acceptance. A Railroad Order regulates the crossing by defining the responsibilities of both the road authority and the railroad in terms of the various rail crossing components. The need for railroad crossing orders should be identified during the scoping process, and the completed orders should be ready by design acceptance. (This equates to Activity ID 349)

**TASK 12 - DRAFT RIGHT OF WAY MAP**

This task starts after the proposed construction footprint has been developed as part of design acceptance. This task involves drafting the proposed ROW and easement lines and dimensions, but does not include preparing ROW descriptions. The draft ROW map is prepared prior to completion of the design acceptance milestone, which is distributed for review prior to completion and approval of this phase of the project, to ensure that the proposed ROW is sufficient to build the project. The final ROW map and description is prepared after design acceptance has been obtained. (This equates to Activity ID 454)

For information about project lifecycle Title VI and Environmental Justice considerations, visit the [Title VI Plan](http://Oregon.gov/ODOT/CS/Civil Rights) at Oregon.gov/ODOT/CS/Civil Rights.

**TASK 13 - DESIGN ACCEPTANCE VALUE ENGINEERING STUDY**

Value Engineering (VE) is the systematic application of recognized techniques by multi-disciplined teams which identifies the function of a product or service, establishes a worth for that function, generates alternatives through the use of creative thinking, and provides the needed functions at the lowest overall cost.
The following projects require a VE study:
- Federal-aid funded National Highway System projects with an estimated total cost of $20 million or more
- Design-Build projects with an estimated total cost of $20 million or more

All other highway projects in the STIP will need to be screened to see if they must have a formal VE study completed. Projects that make good VE study candidates have one or more of the following attributes:
- Projects that have a high cost
- Projects that have substantially exceeded preliminary cost estimates
- Projects with alternative solutions to documented problems
- Major structures
- Complex projects
- Projects using critical or high cost materials and procedures
- Projects with multiple phases
- Projects with complex traffic staging

If a VE study is required a study team is assembled. The team is composed of a small number of multi-disciplinary senior technical staff who have not been involved in the project to date. The VE Team reviews proposed design alternative(s) to date, identifies essential functions of the project elements and generates alternatives through creative thinking. The VE study report is presented to the project team for final decision. (This equates to Activity ID 108)

**TASK 14 - DESIGN ACCEPTANCE CONSTRUCTION COST ESTIMATE**

This task consists of assembling a preliminary bid item/quantity summary/cost estimate for a project, near the end of design acceptance. The work consists of assembling the project estimate from lists of bid items, unit costs and quantities that should be provided by various technical disciplines that have been working on the project. The purpose of preparing a construction cost estimate at design acceptance is to verify that the estimated cost of construction is consistent with the available programmed funding for the project. (This equates to Activity ID 424)
**TASK 15 - DESIGN ACCEPTANCE CONSTRUCTION SCHEDULE**

Near the point where the design acceptance milestone is complete, a preliminary construction schedule is prepared, to help determine the approximate timeframe that might be needed to build the project. The purpose of developing a construction schedule at this point in the project is primarily to identify the overall timeframe that may be required for construction, as well as to identify construction activities and sequencing that could potentially make the project more difficult to build, or that might extend the construction timeframe beyond what may have been expected when the project was programmed in the STIP. The level of detail in the Construction Schedule should be sufficient to clearly identify the major work elements that make up the critical path for construction, as well as identifying work that must be done at specific times of the year. (This equates to Activity ID 402)

**TASK 16 - SMALL CONTRACTING OPPORTUNITIES**

Small Contracting Opportunities

At the point of achieving design acceptance, alternative contracting decisions should be finalized in order to provide adequate advanced notice to interested contractors such as those identified as part of ODOT’s Small Contracting Program (SCP). The SCP provides Oregon small, disadvantaged, minority and women-owned businesses the opportunity to compete for and receive ODOT work typically completed by larger firms.

Oregon’s small business community is the backbone of Oregon’s economy, and ODOT has committed to doing a better job at engaging them in ODOT work. The project team should proactively seek small contracting opportunities within the larger project and identify work that could stand alone as separate, smaller contracts at the conclusion of design acceptance. (No Activity ID for this task)

**TASK 17 - DESIGN ACCEPTANCE REVIEW AND COMPLETION**

The Design Acceptance Package, or DAP is the tangible culmination of all activities that are needed to begin the drafting of contract plans for construction. It consists of a complete set of Plans for Approved Design. Plans for design acceptance are supported by a design narrative and consists of all substantial features of a project that allows the project team to proceed with the preparation of contract plans. Plans for design acceptance are at the stage where the project team has a high degree of confidence that the scope of the project will not change and that ROW and environmental permits can be acquired in time to meet the scheduled project letting date. Design acceptance plans will generally require a title sheet, typical section, detail sheets, and layout sheets.
The PL needs to facilitate the design acceptance review and completion stage. The following table illustrates who is responsible for providing each deliverable and who is the approving authority (Note: in some cases the approving authority can delegate the approval responsibilities to someone else.).

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Responsible to Provide</th>
<th>Approving Authority</th>
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<tbody>
<tr>
<td>Design Acceptance Memo</td>
<td>PL</td>
<td>Area Manager and Technical Center Manager</td>
</tr>
<tr>
<td>Design Acceptance checklist</td>
<td>PL</td>
<td>Area Manager and Technical Center Manager</td>
</tr>
<tr>
<td>Environmental Documentation</td>
<td>Technical Provider</td>
<td>Lead NEPA Agency</td>
</tr>
<tr>
<td>Design Acceptance Plans</td>
<td>Technical Provider</td>
<td>Area Manager and Technical Center Manager</td>
</tr>
<tr>
<td>Design Narrative and/or Bridge TS&amp;L Report</td>
<td>Technical Provider</td>
<td>Area Manager and Technical Center Manager</td>
</tr>
<tr>
<td>Design Exception Request(s)</td>
<td>Technical Provider</td>
<td>State Roadway Engineer</td>
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<tr>
<td>Access Management Design Documentation and Proposed Deviation(s)</td>
<td>Technical Provider</td>
<td>Area Manager / Technical Center Manager</td>
</tr>
<tr>
<td>Updated schedule and estimates</td>
<td>PL</td>
<td>Area Manager and Technical Center Manager</td>
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</table>

**Subtask 17.1 - Compile Draft Design Acceptance Package (DAP) and Distribute for Review**

This task consists of assembling the Draft DAP, making copies, and distributing them for review. The package should include a design narrative describing the project, a preliminary bid item summary/quantity estimate/cost estimate, a preliminary construction schedule, preliminary utility conflict list, and a set of preliminary plans, as a minimum.

Depending on the size and complexity of the project, the DAP may also include copies or summaries of various reports that may have been prepared during design acceptance, such as the TS&L Bridge Design Report, Bridge Hydraulics Report, Pavement Design Report, Hazardous Materials Report, Preliminary Geotechnical Report, and possibly various environmental reports. The DAP plan set should include preliminary versions of plans for as many elements of the project as possible.

The desired outcome of preparing many of the plans is to establish the overall project footprint, including the preliminary ROW and easement lines, so that design acceptance provides the reviewers with an opportunity to determine if the proposed ROW will accommodate the project as proposed.

The DAP is distributed for review to the members of the project team and other Region Technical Center staff. (This equates to Activity ID 305)
Subtask 17.2 - Design Acceptance Review
This task consists of reviewing the Draft DAP and providing comments to the PL. The PL and/or the lead designer receives and compiles review comments and prepares responses to each review comment. Review comments that are more difficult to address, or that may require further discussion to resolve, should be brought up at the Design Acceptance Workshop (DAW). (This equates to Activity ID 306)

Subtask 17.3 - Design Acceptance Constructability Review
A Constructability Review is a review of the preliminary design of a project to help identify potential problems that may be encountered in constructing the project as designed, so that appropriate changes can be made to the design before a final design footprint has been established. The Constructability Review should take place at a point where the project design has substantially taken shape and design drawings are available for review.

The PL will arrange for a small team of construction specialists. The team will review all the design drawings, including preliminary conceptual stage construction drawings, and confer with each other on any problems they may see, as well as potential opportunities to improve the design to make it easier and possibly less expensive to build. The team’s findings and recommendations are presented to the project team for consideration. (This equates to Activity ID 328)

Subtask 17.4 - Design Acceptance Workshop
The DAW is typically held shortly after the design acceptance package review, and is usually a half- or full-day meeting with the project team and Region Technical Center staff who have reviewed the draft package.

The workshop provides an opportunity for the project team and other stakeholders to discuss the design acceptance review comments that may require changes to the project design. Prior to the DAW, the PL and/or the lead designer prepares a list of review comments and responses/actions taken for each comment, and highlights those review comments that require discussion and resolution at the DAW. (This equates to Activity ID 307)

Subtask 17.5 - Obtain Design Acceptance Approval
This subtask consists of the PL and members of the design team completing a review of the comments submitted on the Draft Design Acceptance Package, and to make appropriate revisions to prepare the Final DAP, and finally and most importantly, to obtain the necessary signatures of the Certification of Approved Design, or Design Acceptance Memorandum which documents design acceptance.
The Design Acceptance Memorandum, also known as the Certification of Approved Design Memo, is the final deliverable documenting design acceptance. The Design Acceptance milestone is achieved when the Design Acceptance Certification Memo is signed by the PD-02-defined accountable manager or delegated authority, typically the Area Manager and Technical Center Manager. The Memo should summarize the findings of work leading up to the milestone, and resultant highlights of project decision-making, such as known risks or certainties, status of design exceptions, permits, intergovernmental agreements, etc. At a minimum, the Design Acceptance Memorandum should answer the following key questions:

- Have we effectively completed public involvement for this project for the decisions necessary to address all footprint-related impacts? If not, and we are choosing to move forward and accept the design, have we carefully researched, evaluated and documented the risks and trade-offs?

- Do we know enough about this project (the relatively certainties, pros, cons, risks, permit expectations, etc) to proceed with buying right of way, or to complete the project within the existing right-of-way? Or are we deciding that in order for the project to be successful, the project will need to be completed within the existing right-of-way?

- Do we know enough about this project to successfully obtain environmental permits (particularly without negatively affecting the right-of-way footprint decision)?

- Have we done enough work on the types, sizes and locations of the primary project features to know we have a solid scope, schedule, and budget to move on to construction? Or, weighing risks and trade-offs, are we making a defensible decision to move forward without the amount of work we would like to have at this point?

- Have we addressed and weighed any other known project risks, trade-offs, and design assumptions that have been made to date?

Design Acceptance Phase Deliverables

At the completion of this milestone the PL needs to ensure that the following deliverables are completed:

- Design Acceptance checklist
- Environmental documentation
- Design Acceptance Plans
- Design narrative and/or Bridge TS&L Report
- Design Exception Request(s) (if necessary)
- Access Management Design documentation and proposed deviation(s) (see PD-03)
- Updated schedule and estimates/budget
- Design Acceptance Memo signed by accountable manager or delegated authority

Other deliverables are likely needed to be completed during this milestone depending on the region and/or project specific requirements. (This equates to Activity ID 308)

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.
LIFECYCLE MILESTONE 4: ADVANCED PLANS
(DESIGN ACCEPTANCE TO FINAL PS&E)

The next milestone in the Project Delivery Lifecycle is Advanced Plans, which takes the project from design acceptance through Final PS&E. Once design acceptance has established concurrence amongst project stakeholders and confirmed readiness to develop construction contract documents, this milestone further refines the project footprint in order to acquire right of way and continue with environmental permitting, if needed.

TASK 1 - ROW MAP AND DESCRIPTIONS

This task involves preparing the final ROW map and all property descriptions required by the project. Activities include reviewing and revising proposed new ROW and easement lines that were originally prepared as part of the Draft ROW Map task during design acceptance and writing legal property descriptions based on the revised ROW design. (This equates to Activity ID 455)

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.

TASK 2 - PROPOSED ROW STAKING

This task is to provide for staking the limits of proposed ROW or easements, for the purpose of facilitating ROW appraisal and acquisition, and to provide property owners with a better idea of how much property is needed for the project.

This task starts at approximately the same time as ROW acquisition, after design acceptance and then the ROW map and description have both been completed. The Senior ROW Agent for the project will provide the PL with a list of the ROW files that must be staked in the field, and the PL will coordinate with the Region Survey Manager, who will oversee the actual survey work. (This equates to Activity ID 257)
**TASK 3 - RIGHT OF WAY ACQUISITION**

Using the completed ROW map and descriptions the Senior ROW Agent prepares a programming estimate of the cost of acquisition of necessary ROW, easements, and relocations and submits the estimate to the ROW Headquarters for authorization to proceed. When authorization has been granted, appraisals for each ROW file are then prepared, either using ODOT staff appraisers or private appraisers. The appraisals are reviewed and written offers prepared and submitted to each property owner.

Oregon law includes a variety of provisions that give property owners certain timeframes to review and respond to offers and an owner can either accept an offer or reject it. Condemnation is available as a “last resort,” after the required minimum timeframes have passed, to allow ODOT to gain possession of needed property and proceed with construction. Improvements on the ROW purchased must be sold, moved or demolished.

After selling what can be sold, the region ROW staff will contract with demolition experts to complete demolition. ROW acquisition is complete when the ROW Certification document has been completed by the region ROW supervisor or agent.

This task also involves managing the removal of hazardous materials in state-owned ROW, or in properties that have been or are about to be purchased for a project. When a hazardous material site is identified, ODOT will work with the property owner and DEQ to determine the best process for decontamination. If the property owner is unwilling or unable to clean up the site, and the property is needed immediately for a roadway project, then ODOT will have to decontaminate the site. This task is complete when DEQ provides ODOT with a “No Further Action Required” letter, confirming that the hazardous material contamination has been remedied to the satisfaction of DEQ. This portion of the activity is complete when the ROW is cleared for construction. (This equates to Activity ID 406)

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.

**TASK 4 - RAILROAD MAPS**

Where a roadway project involves any work, permanent or temporary, within ROW owned by a railroad, an encroachment map is required for temporary or permanent easements and/or possibly fee ROW. This task consists of all activities required to prepare maps showing ROW requirements with respect to railroads. This task is done following completion of design acceptance and is complete when
the maps are delivered to the Railroad and Utilities Engineer. (This equates to Activity ID 350)

TASK 5 - RAILROAD ROW PURCHASE AND AGREEMENTS

The ODOT Railroad Engineer will take the lead role in preparing applications for permits and construction/maintenance agreements and in negotiations with railroads where ROW may be needed. Where Railroad ROW or an associated agreement is required, this task includes preparing purchase agreements, crossing permits, other operating permits and/or easement agreements, negotiating with the railroad(s), receiving approval from the railroad(s) and making payment to the railroad, when needed. (This equates to Activity ID 355)

TASK 6 - ROW CERTIFICATION

At the conclusion of the ROW Acquisition and no later than assembling and submitting the Final PS&E tasks, the project Senior ROW agent will prepare the ROW Certification, which certifies that any ROW, permanent and/or temporary easements and construction right of entry permits that are required to build the project have been acquired. If ROW holdouts exist at the time when the project is scheduled to go to the Office of Pre-Letting for the PS&E Pre-Letting review, the ROW Certification must list the holdouts. The ROW Certification must also list any restrictions or conditions imposed by ROW settlements. The ROW Certification is provided to the PL for inclusion in the Final PS&E submittal.

Note: ROW certifications are required on every project - even ones with no ROW acquisition needed. (This equates to Activity ID 461)

TASK 7 - PERMITS AND CLEARANCES

During the design of an alternative, particular permit requirements are identified in order to meet regulations. Some of these permits involve wetlands, material sources, fish passage, airport clearance, railroad, utilities, waterways, and local ordinances. It is critical to obtain the permit prior to PS&E submission. As with ROW, permits and clearances are secured as the final project alternative is designed. There are a number of permits and clearances required from various sources prior to construction of a project. Permits and clearances should be obtained with enough time to make any changes to the project plans prior to PS&E, as may be dictated by the conditions of the permit.
Below is a list of possible permits and clearances that may need to be obtained, who is responsible for obtaining them, and the approximate duration of time needed to obtain them. Note that if the project is a class 1 or 3, the environmental program manager is responsible for many of these permits and clearances.

<table>
<thead>
<tr>
<th>Permit/Clearance</th>
<th>Responsible Person</th>
<th>Duration</th>
<th>Activity ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intergovernmental Agreements</td>
<td>PL</td>
<td>20 weeks</td>
<td>210</td>
</tr>
<tr>
<td>OTC Decision/Approval Action</td>
<td>PL</td>
<td>18 weeks</td>
<td>226</td>
</tr>
<tr>
<td>Threatened and Endangered Species Act (ESA) Clearance</td>
<td>REC</td>
<td>31 weeks</td>
<td>146</td>
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<tr>
<td>State ESA Plant and Wildlife Species Assessment</td>
<td>REC</td>
<td>14 weeks</td>
<td>383</td>
</tr>
<tr>
<td>Stormwater Management Plan</td>
<td>REC</td>
<td>25 weeks</td>
<td>264</td>
</tr>
<tr>
<td>404/DSL Fill/Removal Permit</td>
<td>REC</td>
<td>25 weeks</td>
<td>379</td>
</tr>
<tr>
<td>Section 4(f) Documentation</td>
<td>REC</td>
<td>16 weeks</td>
<td>156</td>
</tr>
<tr>
<td>Section 6(f) conversion approval by NPS</td>
<td>REC/EPM</td>
<td>18 months</td>
<td></td>
</tr>
<tr>
<td>Archaeology Clearance/Recovery</td>
<td>REC</td>
<td>12 weeks</td>
<td>136</td>
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<tr>
<td>Archaeology Finding of Effect (FOE)</td>
<td>REC</td>
<td>12 weeks</td>
<td>138</td>
</tr>
<tr>
<td>Historic (Section 106) Finding of Effect (FOE)</td>
<td>REC</td>
<td>13 weeks</td>
<td>164</td>
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<tr>
<td>Historic (Section 106) 4(f) Documentation</td>
<td>REC</td>
<td>8 weeks</td>
<td>172</td>
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<td>Coast Guard Permit</td>
<td>Permits Specialist</td>
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<td>320</td>
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<tr>
<td>DOGAMI (Material Source) Permit</td>
<td>REC</td>
<td>24 weeks</td>
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<td>Local Permits</td>
<td>PL</td>
<td>33 weeks</td>
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<td>Land Use Actions</td>
<td>Area Planner</td>
<td>60 weeks</td>
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<tr>
<td>Transportation System Plan (TSP) Amendments</td>
<td>Area Planner</td>
<td>26 weeks</td>
<td>222</td>
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<tr>
<td>Railroad Orders</td>
<td>Crossing Safety</td>
<td>64 weeks</td>
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TASK 7.1 CATEGORICAL EXCLUSION CLOSEOUT

TASK 7.1.1 - CATEGORICAL EXCLUSION Closeout Documents
This is a new task that is required on all Categorical Exclusion projects that receive Federal Highway Administration (FHWA) funding or needs some kind of FHWA approval (e.g., interstate access).

In order for FHWA to meet its legal requirements for classification of CE projects, FHWA has determined that specific parts of the environmental process must be completed and documented prior to subsequent FHWA approvals, such as Right-of-Way and Construction authorizations. All environmental permits, clearances, and approvals as specified in the “Completion Guidance for the Categorical Exclusion (CE) Closeout Document” must be completed (including appropriate attachments) in order for FHWA to classify a project as a Categorical Exclusion.

FHWA requires completion of specific environmental clearances and permits prior to final classification of a proposed project as a CE and prior to the authorization of Right-of-Way or Construction funds.

Depending upon the type of Categorical Exclusion process, there may be one of three types of closeout documents needed:

1. CE Closeout Document (requires FHWA Oregon Division approval)
2. Programmatic CE Closeout Document
3. Memorandum to FHWA Oregon Division

For more detail about the Categorical Exclusion Closeout process refer to the following Technical Bulletin GE09-05(B): “Categorical Exclusion (CE) Closeout Process, Guidance, and Documentation” found at http://www.oregon.gov/ODOT/HWY/GEOENVIRONMENTAL/policy_memos.shtml (This equates to Activity ID 538)

TASK 7.1.2 - FHWA Review of CATEGORICAL EXCLUSION Closeout Documents
This task account for time allowed for FHWA to review and approve the Categorical Exclusion Closeout Documents and authorize Federal Aid funding for Right-of-Way acquisition or Construction. (This equates to Activity ID 539)
PRELIMINARY PLANS

The main purpose of this step is an additional technical and construction review between DAP and Advanced Plans. This is not a required milestone from PD-02; it is optional. (This equates to Activity ID 461)

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.

TASK 1 - UPDATE STAKEHOLDER PARTICIPATION AND COMMUNICATION PLAN

At the start of each major phase of work on a project, the PL in collaboration with the PIO, should review and as necessary update or review the plan. This task may occur at several points during a project, depending on the size and complexity of the project, the amount of stakeholder interest and/or controversy involved in the project, and the amount of change in the scope and/or design of the project during the previous phase of work.

The PL should also ensure that all tasks associated with stakeholder participation and communications are implemented during the Project Development stage. (This equates to Activity ID 012)

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.

TASK 2 - NOISE MITIGATION FINAL DESIGN

This task consists of all activities required to determine the required dimensions (final location, length, height, etc.) of any noise mitigation measures (i.e. noise walls or berms) that will be incorporated into the project. This task occurs after DAP is complete, and is done when the required information is ready for preparation of the Preliminary Soundwall PS&E. (This equates to Activity ID 360)
**TASK 3 – ACCESS MODIFICATION AND CLOSURE LETTERS**

Where the adopted Access Management Strategy for a project includes modifications and/or closures of existing access points onto a state highway, it is necessary to prepare and send letters to the owners of each property whose access will be affected, to formally notify the owners of the proposed change in access. (This equates to Activity ID 101)

**TASK 4 – UTILITY TEST-HOLE EXCAVATION**

In some cases, utility test-hole excavation can reduce overall project costs, by providing more precise horizontal and vertical locations for underground utilities, which may allow the designer to avoid or minimize impacts to utilities. Following development of the initial Utility Conflict List, the RUS, in collaboration with the project designer and/or geo-hydro, bridge or other relevant specialists, would prepare a list of locations where verified vertical and horizontal location data might be useful or is required. The RUS will then prepare and submit request(s) for this data to the owner(s) of the specific utility(s) for which the data is requested.

Typically, the utility owners are responsible for the cost of utility test-hole excavation. There is a possibility of reducing utility relocations as a result of getting better data on the locations of underground utilities. If a utility is reimbursable, ODOT will hire a potholing contractor or reimburse the utility for the cost of the potholing contractor. The test-hole excavation contractors provide the depth and horizontal location of the utility at each point requested. To allow the test-hole excavation contractor to establish precise horizontal locations at each point, it is usually necessary to either set survey control points near each test-hole location, or if possible to have a survey crew tie each utility test-hole location.

Following receipt of the test-hole data, the roadway designer would input the verified vertical and horizontal data into the project base mapping, in some cases using the data to create 3-dimensional linework for an underground utility line, so that the utility line can be displayed as a surface on cross sections to better identify potential conflicts with the proposed construction. (This equates to Activity ID 116)
TASK 5 - PRELIMINARY PLANS

After drafting of the various Preliminary Plans has been completed, the design team supervisor/Technical Services roadway discipline manager will review them before printing. The roadway designer will distribute the Preliminary Plans according to the Plan Distribution Procedures. A prompt and thorough review by all interested parties at this stage is crucial for timely and responsive Advanced Plans.

The following is a list of Preliminary Plans that should be assembled and reviewed (if applicable to the project):

- Preliminary Roadway Plans; Specs and Estimate (This equates to Activity ID 400)
- Preliminary Bridge Plans; Specs and Estimate (This equates to Activity ID 313)
- Preliminary Traffic Structures Plans; Specs and Estimate (This equates to Activity ID 482)
- Preliminary Retaining Wall Plans; Specs and Estimate (This equates to Activity ID 317)
- Preliminary Soundwall Plans; Specs and Estimate (This equates to Activity ID 361)
- Preliminary Geotechnical Plans; Specs; Estimate and Final Geotech Report (This equates to Activity ID 406)
- Preliminary Hazardous Materials Plans; Specs; Estimate and Report (Phase 2) (This equates to Activity ID 467)
- Preliminary Material Source and Disposal Site Plans; Specs and Estimate (This equates to Activity ID 388)
- Preliminary Roadside Development Plans; Specs and Estimate (This equates to Activity ID 385)
- Preliminary Wetland Mitigation Plans; Specs and Estimate (This equates to Activity ID 375)
- Preliminary Erosion Control Plans; Specs and Estimate (This equates to Activity ID 413)
- Preliminary Hydraulics/Utilities Plans; Specs and Estimate (This equates to Activity ID 416)
- Preliminary Water Quality and Detention Plans; Specs and Estimate (This equates to Activity ID 266)
- Preliminary Traffic Control Plans; Specs and Estimate (This equates to Activity ID 338)
- Preliminary Sign Plans; Specs and Estimate (This equates to Activity ID 505)
- Preliminary Striping Plans; Specs and Estimate (This equates to Activity ID 541)
- Preliminary Signal Plans; Specs and Estimate (This equates to Activity ID 530)
• Preliminary Illumination Plans; Specs and Estimate (This equates to Activity ID 490)

**TASK 6 - REVISE CONSTRUCTION COST ESTIMATE**

Near the point where the Preliminary Plans are complete, the preliminary bid item/quantity summary/construction cost estimate is reviewed and revised, as needed. The individual technical disciplines provide updates to their portion of the construction cost estimate as part of developing the Preliminary and Advance Plans. The intent is to flesh out more details in the construction cost estimate as the project design progresses at each phase of design. The purpose of updating the construction cost estimate at the Preliminary and Advance phases is to verify that the current estimated cost of construction is consistent with the available programmed funding for the project. (This equates to Activity ID 425)

**TASK 7 - REVISE CONSTRUCTION SCHEDULE**

Near the point where the Preliminary Plans are complete, the preliminary construction schedule developed during design acceptance is reviewed and revised, as needed. The intent is to flesh out more details in the construction schedule as the project design progresses at each phase of design. The construction schedule will be used to help determine the contract completion date that will be listed in the contract special provisions. (This equates to Activity ID 360)

**TASK 8 - COMPILE PRELIMINARY SPECIAL PROVISIONS**

The specification writer will prepare and compile the preliminary special provisions prepared by each technical discipline, using current standard specifications, supplementing them with necessary additions and revisions to fit the project. This includes collecting and combining special provisions for all roadway, bridge, traffic control, erosion control, roadside development, wetland mitigation, material source sign, signal, illumination, and striping bid items. This also includes preparing special provisions to account for utility relocation issues, potential ROW file holdouts and special city, county, state or federal permit requirements. (This equates to Activity ID 547)
**TASK 9 - PRELIMINARY PLAN REVIEW AND COMPLETION**

**Subtask 9.1 - Assemble, Copy and Distribute**

The Preliminary Plans for all disciplines are assembled together with the special provisions and printed to be distributed for the review. The distribution of Preliminary Plans and Special Provisions is handled by the specifications writer, the roadway designer, or other regional designee. (This equates to Activity ID 428)

**Subtask 9.2 - Utility Conflict List and Letters**

When the Preliminary Plans have been completed, including walls, grade changes, drainage, or any other features that may conflict with utilities, the Utility Conflict List—prepared during design acceptance—documents conflicts between existing utilities and the proposed project design. The list is prepared by the RUS, in collaboration with the project designer and project manager’s office.

Prior to preparation of the Utility Conflict List, it is important that the locations of existing utilities have been verified, which typically involves submitting the project base mapping to the utility owners with a request that they review the base mapping and indicate any missing or incorrect utility features. If utility test-hole excavation is done, it should be done prior to completion of the Utility Conflict List and the preparation of the Utility Conflict Letters.

The Utility Conflict Letters are the official required notification to each utility owner that relocation or adjustment of their utility facilities will be required prior to or during construction of the project. The Utility Conflict Letter will be sent to the utility owner with a copy of the Utility Conflict List and project design mapping showing the locations of anticipated utility conflicts. The Utility Conflict Letter includes a request for the utility owner to prepare and submit a Utility Relocation Plan and Schedule for relocating or adjusting their facilities, and also to submit a Utility Reimbursement Request, if the cost of relocation of utilities is reimbursable. If the utility relocation is reimbursable, the utility will be given the option of adding the relocation work to the ODOT contract. The Utility Conflict List will also include a target date for utility relocation work, in cases where the work will be done prior to construction. (This equates to Activity ID 117)

**Subtask 9.3 - Preliminary Plan Review**

This task is to allow a wide review of the preliminary plans. This review is very important since it is the first opportunity for the project team and others to look at a complete set of detailed plans that have construction notes and design details as well as a set of preliminary special provisions.

When all of the preliminary plans and special provisions have been completed, full sets are copied and distributed to the project team members, various ODOT staff,
and city, county, state agency staff for review, as appropriate, with a brief project narrative and a cover letter explaining the review comment deadline date, contact person and address to send comments. The normal period allowed for review after receipt of the plans is 2 weeks.

The PL and/or roadway designer will collect review comments and should discuss any major suggested changes with the project team before revisions are made. (This equates to Activity ID 429)

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.

**Subtask 9.4 - Preliminary Plans Constructability Review**

A Constructability Review is a review of the preliminary design of a project to help identify potential problems that may be encountered in constructing the project as designed, so that appropriate changes can be made to the design well before the Approved Design milestone. The Constructability Review should take place at a point where the project design has substantially taken shape and design drawings are available for review.

The PL will arrange for a small team of construction specialists. The team will review all the design drawings, including preliminary conceptual stage construction drawings, and confer with each other on any problems they may see, as well as potential opportunities to improve the design to make it easier and possibly less expensive to build. The team’s findings and recommendations are presented to the project team for consideration. (This equates to Activity ID 332)

**Subtask 9.5 - Value Engineering Study**

The following projects require a VE study:

Federal-aid funded National Highway System projects with an estimated total cost of $20 million or more
Design-Build projects with an estimated total cost of $20 million or more

All other highway projects in the STIP will need to be screened to see if they must have a formal VE study completed. Projects that make good VE study candidates have one or more of the following attributes:

- Projects that have a high cost
- Projects that have substantially exceeded preliminary cost estimates
- Projects with alternative solutions to documented problems
- Major structure
- Complex projects
- Projects using critical or high cost materials and procedures
- Projects with multiple phases
- Projects with complex traffic staging (This equates to Activity ID 109)
ADVANCED PLANS

This is a key interim step of the contract document phase, and requires all project disciplines to review draft contract documents for completeness and accuracy. It is the primary opportunity for technical staff to provide quality control review of the project plans, specifications, and estimate as a package.

Advance Plans, which include the revisions resulting from the Preliminary Plan review, are in accordance with the approved project schedule. They are accompanied by the project’s special provisions. The project team should fill out the PS&E checklist as a status point to evaluate how the project is progressing towards PS&E.

TASK 1 – UPDATE STAKEHOLDER PARTICIPATION AND COMMUNICATION PLAN

At the start of each major phase of work on a project, the PL in collaboration with the PIO, should review and as necessary update or review the plan. This task may occur at several points during a project, depending on the size and complexity of the project, the amount of stakeholder interest and/or controversy involved in the project, and the amount of change in the scope and/or design of the project during the previous phase of work.

The PL should also ensure that all tasks associated with stakeholder participation and communications are implemented during the Project Development stage. (This equates to Activity ID 013)

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.

TASK 2 - REVIEW AND APPROVE UTILITY RELOCATION PLANS

Utility owners have 30 calendar days following receipt of a Utility Conflict Letter to prepare and submit Utility Relocation Plans to ODOT for review and approval. The RUS, in collaboration with the project designer and the PL, will review utility relocation plans and schedules to ensure that all identified utility conflicts are addressed in the Relocation Plans, and that the proposed schedule for relocation will not impact the schedule for the project, or that if relocation must occur during construction of the project, that the proposed relocation can be accommodated without excessive delay for the construction contractor.
If the proposed Utility Relocation Plan is acceptable, the RUS will direct the utility to proceed with relocation work, pending approval of permits to work within the highway ROW.

If the proposed utility relocation plan or schedule is not acceptable, then further consultation with the utility will be needed to come up with a plan and/or schedule that are acceptable. (This equates to Activity ID 119)

**TASK 3 - ADVANCED PLANS**

The following is a list of Advanced Plans that are typically developed (if applicable to the project):

- Advance Roadway Plans; Specs and Estimate (This equates to Activity ID 420)
- Advance Bridge Plans; Specs and Estimate (This equates to Activity ID 314)
- Advance Traffic Structures Plans; Specs and Estimate (This equates to Activity ID 483)
- Advance Retaining Wall Plans; Specs and Estimate (This equates to Activity ID 318)
- Advance Soundwall Plans; Specs and Estimate (This equates to Activity ID 362)
- Advance Geotechnical Plans; Specs and Estimate (This equates to Activity ID 407)
- Advance Hazardous Materials Plans; Specs and Estimate (This equates to Activity ID 468)
- Advance Material Source and Disposal Site Plans; Specs and Estimate (This equates to Activity ID 389)
- Advance Roadside Development Plans; Specs and Estimate (This equates to Activity ID 434)
- Advance Wetland Mitigation Plans; Specs and Estimate (This equates to Activity ID 439)
- Advance Erosion Control Plans; Specs and Estimate (This equates to Activity ID 414)
- Advance Hydraulics/Utilities Plans; Specs and Estimate (This equates to Activity ID 417)
- Advance Water Quality and Detention Plans; Specs and Estimate (This equates to Activity ID 267)
- Advance Traffic Control Plans; Specs and Estimate (This equates to Activity ID 339)
- Advance Sign Plans; Specs and Estimate (This equates to Activity ID 515)
- Advance Striping Plans; Specs and Estimate (This equates to Activity ID 542)
• Advance Signal Plans; Specs and Estimate (This equates to Activity ID 535)
• Advance Illumination Plans; Specs and Estimate (This equates to Activity ID 495)

**TASK 4 - INSURANCE RISK ASSESSMENT**

The first step in the insurance risk assessment process is the completion of the risk assessment portion of PDWP. The PL must facilitate this process with the project team. It will require in-depth knowledge of the project including location, environmental, safety, rail, hazardous materials and all other project elements identified during project scoping and design.

The identified risk exposures will be mitigated through project management, insurance, and bonding. The PL will provide the specification writer the information needed to complete the special provisions for insurance. The specification writer is responsible for completing the special provisions for insurance in the contract documents for the project based on the insurance risk assessment provided by the PL.

The insurance risk assessment tool is available at [http://highway.intranet.odot.state.or.us/cf/pdwp/risk/index.cfm](http://highway.intranet.odot.state.or.us/cf/pdwp/risk/index.cfm) (This equates to Activity ID 546)

**TASK 5 - REVISE CONSTRUCTION COST ESTIMATE**

Near the point where the Advance Plans are complete, the preliminary bid item/quantity summary/construction cost estimate is reviewed and revised, as needed. The individual technical disciplines provide updates to their portion of the construction cost estimate as part of developing the Advance Plans. The intent is to flesh out more details in the construction cost estimate as the project design progresses at each phase of design. The purpose of updating the construction cost estimate at the Preliminary and Advance phases is to verify that the current estimated cost of construction is consistent with the available programmed funding for the project. This equates to Activity ID 422)
**TASK 6 - REVISE CONSTRUCTION SCHEDULE**

Near the point where the Advance Plans are complete, the preliminary construction schedule developed during DAP is reviewed and revised, as needed. The intent is to flesh out more details in the construction schedule as the project design progresses at each phase of design. The construction schedule will be used to help determine the contract completion date that will be listed in the contract special provisions. This equates to Activity ID 397)

**TASK 7 - UTILITY STATUS REPORT**

After the Region Utility Specialist and lead designer have reviewed and approved the Utility Relocation Plans submitted by the utilities (see Activity ID 119, TASK 2 - REVIEW AND APPROVE UTILITY RELOCATION PLANS), the Region Utility Specialist prepares the Utility Status Report that lists the utility conflicts and anticipated timing of utility relocations that are required to build the project. The Region Utility Specialist also prepares Utility Specifications for the project special provisions, listing each utility that may have facilities within the project, and those that may be working on relocations during construction of the project, with names and phone numbers for contacts at each utility. The Draft Utility Specifications are then incorporated into the Advance Special Provisions for distribution for the Advance Plan Review.

The Region Utility Specialist will also review the Utility Specifications prior to completion of the Final PS&E, to ensure that any required revisions have been made prior to completion of the contract bid documents. In some cases, the final disposition of the timing of some utility relocations may not be known until very late in the Final Plans phase of a project. (This equates to Activity ID 405)

**TASK 8 - COMPILE ADVANCE SPECIAL PROVISIONS**

The specification writer will prepare and compile the final special provisions prepared by each technical discipline, using current standard specifications, supplementing them with necessary additions and revisions to fit the project. This includes collecting and combining special provisions for all roadway, bridge, traffic control, erosion control, roadside development, wetland mitigation, material source sign, signal, illumination, and striping bid items. This also includes preparing special provisions to account for utility relocation issues, potential ROW file holdouts and special city, county, state or federal permit requirements.

As the final plan review is the last time that the special provisions will be reviewed, the final special provisions must be complete prior to sending them out for review during the final plan review. All permit and clearance activities and ROW acquisition should be complete prior to completion of this task, so that any
special provisions that are included in the permit requirements or ROW holdouts can be incorporated into the final special provisions so they can be reviewed during the final plans review. (This equates to Activity ID 548)

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**TASK 9 - DRAFT PS&E SUBMITTAL CHECKLIST**

After the Advance Plans and special provisions have been completed, but prior to the Advance Plans Review, the PL fills out a draft version of the PS&E submittal checklist. This is a first draft version of the PS&E submittal checklist, which is prepared to document the completeness of the Advance PS&E submittal, and to identify any items that must be complete prior to completion of Final PS&E, such as ROW acquisition, permits and clearances, etc. Prior to the Final Plans Review, the PL will revise/finalize the draft PS&E submittal checklist. (This equates to Activity ID 473)

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**TASK 10 - ADVANCE PLAN REVIEW AND COMPLETION**

**Subtask 10.1 - Assemble, Copy and Distribute**

The Advance Plans for all disciplines are assembled together with the special provisions and printed to be distributed for the review. The distribution of Advance Plans and special provisions is handled by the specifications writer. (This equates to Activity ID 433)

**Subtask 10.2 - Advance Plan Review**

When all of the Advance Plans and special provisions have been completed, full sets are copied and distributed to the project team members, various ODOT staff, and city, county, state agency staff for review, as appropriate, with a cover letter explaining the deadline date and location to send comments. The normal period allowed for review after receipt of the plans is 2 weeks. The PL, roadway designer, or the specifications writer should be designated in the cover memo as the point person to receive and collect the review comments.

Following the 2 week review period, a Plans-in-Hands meeting is usually held, when the project team will meet to discuss and resolve any significant issues identified during the review, before preparation of final plans and special provisions. The PL, roadway designer, or the specifications writer should all prepare for the Plans-in-Hands meeting by collecting and studying review comments and deciding which issues should be brought before the entire project team for discussion at the meeting. (This equates to Activity ID 430)
Subtask 10.3 - Advance Plans Constructability Review

A Constructability Review is a review of the preliminary design of a project to help identify potential problems that may be encountered in constructing the project as designed, so that appropriate changes can be made to the design well before the Approved Design milestone. The Constructability Review should take place at a point where the project design has substantially taken shape and design drawings are available for review.

The PL will arrange for a small team of construction specialists. The team will review all the design drawings, including preliminary conceptual stage construction drawings, and confer with each other on any problems they may see, as well as potential opportunities to improve the design to make it easier and possible less expensive to build. The team’s findings and recommendations are presented to the project team for consideration. (This equates to Activity ID 333)

Subtask 10.4 - Plans-in-Hand Meeting

In accordance with the approved project schedule, a Plans-In-Hand review is held in the field, if the project is complex enough to require it. This review includes all appropriate department personnel and any outside agency people who may be involved. An on-site review of the project is often made, as this is the last opportunity to discuss and resolve anticipated problems or issues relating to the plans or specifications before the contract is let. It is critical to have Advance Plan comments submitted to the designer prior to scheduling this meeting as the primary focus of the meeting is to resolve issues where disagreement remains, not to discuss each and every comment. (This equates to Activity ID 471)

Advance Plan Deliverables

At the completion of this milestone the PL needs to ensure that the following deliverables are completed:

- Documents required for plans specifications and estimates (PS&E) submittal
- Draft Construction Schedule
- Plans-In-Hand Meeting
- Draft PS&E submittal checklist
- Insurance Risk Assessment
LIFECYCLE MILESTONE 5: FINAL PLANS

This step occurs in follow-up to the Plans-In-Hand meeting review and comment on the advanced plans and specifications. It is the last opportunity for contract documents to be reviewed by technical staff for quality control and document completeness, before the project is ready to move forward for FHWA review (when needed) and PS&E submittal. In some smaller projects, teams may not issue the Final Plans for additional review. When the schedule allows, this step enables review of the package in its entirety with the corrections from the Advanced Plans phase.

TASK 1 - UPDATE PUBLIC INVOLVEMENT PLAN

At the start of each major phase of work on a project, the PL in collaboration with the PIO, should review and as necessary update or review the plan. This task may occur at several points during a project, depending on the size and complexity of the project, the amount of stakeholder interest and/or controversy involved in the project, and the amount of change in the scope and/or design of the project during the previous phase of work.

The PL should also ensure that all tasks associated with stakeholder participation and communications are implemented during the Project Development stage. (This equates to Activity ID 014)

For information about project lifecycle Title VI and Environmental Justice, Emerging Small Business (ESB), and Labor Compliance considerations, visit Oregon.gov/ODOT/CS/Civil Rights.

TASK 2 - ACCESS MANAGEMENT

Completion of the deliverables listed for this task will ensure that permit records are updated, required administrative actions are completed, and that deliverables and requirements have been met.

Each region must determine who is responsible for the required deliverables. PD-03 identifies the manager who is accountable for the deliverables, but does not specify who will complete each one.
Access Management Deliverables:

- **Confirmation of CHAMPS Records**: This deliverable confirms that information in the CHAMPS has been reviewed and revised to accurately reflect the status for all approaches after the project’s completion. This may result in issuing new permits or revising existing permit records. The confirmation required by this deliverable may be noted on the Official Project Access List or by separate memo to the project file. A copy of the confirmation must be submitted to the Statewide Access Management Program Office.

- **Local TSP or Comprehensive Plan Amendments (if applicable)**: Completion of local government actions needed to authorize project work affecting facilities or land under local jurisdiction. This requirement applies only to Class 2 environmental projects at this milestone. (For Class 1 and Class 3 projects, these actions must occur before the final environmental document is issued.)

- **OTC Decision/Approval Action (if applicable)**: Project file documentation of approval action by OTC may consist of a memo-to-file, OTC minutes (or excerpt), or other documentation of official action. Note: this should be completed much earlier - just documented here at the latest.

- **Access Management Checklist**: The Checklist is completed by the Technical Services Branch, Office of Pre-Letting. Projects will not be released for bid advertising until all requirements listed are documented or can be otherwise verified. Exceptions to this requirement may be granted by the Roadway Section Manager in accordance with the Office of Pre-Letting procedures. (This equates to Activity ID 462)

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**TASK 3 - FINAL PLANS**

After revisions, Mylar’s are produced which are signed by the Engineer of Record and the Technical Services Managing Engineer. After federal approval, the Final Plans are printed between five and six weeks before the project’s bid let date.

The following is a list of Final Plans that are typically developed (if applicable to the project):

- **Final Roadway Plans - Specs & Estimate** (This equates to Activity ID 484)
- **Final Bridge Plans - Specs & Estimate** (This equates to Activity ID 315)
- **Final Traffic Structures Plans - Specs & Estimate** (This equates to Activity ID 482)
- **Final Retaining Wall Plans - Specs & Estimate** (This equates to Activity ID 319)
- **Final Soundwall Plans - Specs & Estimate** (This equates to Activity ID 363)
- **Final Geotechnical Plans - Specs & Estimate** (This equates to Activity ID 408)
• Final Hazardous Materials Plans - Specs & Estimate (This equates to Activity ID 469)
• Final Material Source and Disposal Site Plans - Specs & Estimate (This equates to Activity ID 390)
• Final Roadside Development Plans - Specs & Estimate (This equates to Activity ID 435)
• Final Wetland Mitigation Plans - Specs & Estimate (This equates to Activity ID 440)
• Final Erosion Control Plans - Specs & Estimate (This equates to Activity ID 415)
• Final Hydraulic Plans - Specs & Estimate (This equates to Activity ID 418)
• Final Water Quality and Detention Plans - Specs & Estimate (This equates to Activity ID 268)
• Final Traffic Control Plans - Specs & Estimate (This equates to Activity ID 340)
• Final Sign Plans - Specs & Estimate (This equates to Activity ID 520)
• Final Striping Plans - Specs & Estimate (This equates to Activity ID 543)
• Final Signal Plans - Specs & Estimate (This equates to Activity ID 540)
• Final Illumination Plans - Specs & Estimate (This equates to Activity ID 500)

Final Plans include:
• Submittal of completed - signature ready - Mylar’s
• Completed Specifications
• Approved Design Exceptions
• Signed Intergovernmental Agreements
• Final Engineer’s Estimate including Anticipated Items and Construction Schedule
• Environmental Clearances
• Federal, state and local permits
• ROW Certification (cleared by award)
• Funding identified and finalized
• OTC approval for scope changes
• FHWA approval for STIP changes

Projects missing any of the above items will not be advertised. Exceptions to this require the approval of the Executive Deputy Director with consultation from the Region Manager and the Technical Services Manager.

The Final PS&E need to be submitted to the Office of Pre-Letting.
**TASK 4 - FINAL CONSTRUCTION COST ESTIMATE**

This task, which is often referred to as the “Engineers Estimate”, is performed when the Final Plans and special provisions have been completed, and all of the technical disciplines that are working on the plans have submitted their final bid item/quantity summaries. The final construction cost estimate will eventually be used to analyze the bids received from the construction contractors.

This task represents a more formal refinement of preliminary cost estimates from earlier phases of project design, and includes the following steps:

- Verify validity of all bid items
- Update cost estimate based on revised quantities
- Verify and/or update unit costs using historical cost data from the Estimator Database
- Review and identify quantities, checking for consistency and reasonableness
- Assure lump sum, miscellaneous, and anticipated bid items are appropriate and have necessary backup information provided

The Construction Cost Estimate is a confidential document, and is not to be shared with any potential bidders on a project. Typically the final estimate is provided to only a select few ODOT staff who have a “need to know” the final estimates, and is kept confidential until after bids have been opened and the bids have been compared with the final estimate. (This equates to Activity ID 426)

For more information about project lifecycle Emerging Small Business (ESB), Equal Employment Opportunity (EEO), On-the-Job Training (OJT) and Workforce Development Program (WDP) considerations, visit Oregon.gov/ODOT/CS/Civil Rights.

**TASK 5 - FINAL CONSTRUCTION SCHEDULE**

At this point where the Final Plans are complete, the construction schedule that was originally developed during the DAP and updated during the Preliminary and Advance Plans phases is reviewed and revised, as needed. The intent is to flesh out more details in the construction schedule based on the Final Plans, and ensure that the construction schedule accurately captures the critical path for construction and that the schedule reflects a realistic overall timeframe for construction. (This equates to Activity ID 404)
**TASK 6 - COMPILE FINAL SPECIAL PROVISIONS**

The specifications writer will prepare and compile the final special provisions prepared by each technical discipline.

The final special provisions must be complete prior to sending them out for review during the Final Plan Review. All permit and clearance activities and ROW acquisition should be complete prior to completion of this task, so that any special provisions that included in permit requirements or ROW holdouts can be incorporated into the final special provisions so they can be reviewed during the Final Plan Review. (This equates to Activity ID 549)

**TASK 7 - REVISE PS&E SUBMITTAL CHECKLIST**

After the Final Plans and special provisions have been completed, but prior to the Final Plan Review, the PL revises the Draft PS&E Submittal Checklist that was prepared during the Advance Plan Phase. The revised, final PS&E Submittal Checklist is intended to document the readiness of the project for advertising, and to identify any items that may not yet be complete and might therefore require exceptions to allow the project to proceed to advertising on the established advertisement date. This task can take approximately 1 week to complete. (This equates to Activity ID 474)

**TASK 8 - FINAL PLAN REVIEW AND COMPLETION**

**Subtask 8.1 - Assemble, Copy and Distribute**

The Final Plans for all disciplines are assembled together with the special provisions and printed to be distributed for the Final Plan Review. The distribution of Final Plans and Special Provisions is handled by the specifications writer. (This equates to Activity ID 476)

**Subtask 8.2 - Final Plan Review**

When all of the final plans and special provisions have been completed, full sets are copied and distributed for a final internal review by key ODOT staff in the Region Technical Center, and by the Construction Project Manager’s office and other key staff, as determined by the project team and/or PL.
The purpose of this final review is to identify and correct any remaining significant errors or omissions in the plans, special provisions and bid item/quantity summary. It is essential at this stage that a final bid-ability review is performed by one or more experienced staff, to ensure that all required bid items are accounted for appropriately in the plans, special provisions, and bid item/quantity summary. During this final review, review comments are typically shared with the designers for each technical discipline, and revisions made to the PS&E as needed to prepare the PS&E for printing mylars and for submittal of the PS&E to the Office of Pre-Letting for the PS&E Pre-Letting review. (This equates to Activity ID 477)

**Subtask 8.3 - Print and Assemble Mylars**

After the Final Plan Review is complete, and any final revisions have been made to the Final Plans, mylar plan sheets are plotted, reviewed and signed by the Engineer of Record. (This equates to Activity ID 478)

**Subtask 8.4 - Assemble and Submit Final PS&E to Office of Pre-Letting**

After subtask 8.3 is complete, and all revisions to the Final Special Provisions, Final Construction Cost Estimate, Final Construction Schedule, and PS&E Submittal Checklist have been completed, the final PS&E are assembled and submitted to the Office of Pre-Letting for the PS&E Pre-Letting Review. At the conclusion of this subtask, the work of the Region Technical Center should be complete.

Final Plan Deliverables: At the completion of this milestone the PL needs to ensure that the following deliverables are completed:

- Final documents required for PS&E submittal
- Updated Construction schedule
- Revised PS&E submittal checklist

(This equates to Activity ID 479)
LIFECYCLE MILESTONE 6: PS&E SUBMITTAL

This point of decision-making provides certainty of the completeness of a project for bid advertisement through Commission Services. Decision-making with any desired interim milestones between Design Acceptance and PS&E Submittal (e.g., Preliminary, Advanced, Final Plans) should be addressed through individual Quality Control Plans and Project Development Change Requests as needed.

TASK 1 - MANAGING THE EXCEPTION LETTER

PD-02 exception letters provide a mechanism to request authorization allowing a project to proceed to bid advertisement given some incomplete PS&E submittal requirement(s). The exception letter must list all outstanding items and include for each item:
- a resolution plan
- the expected resolution date
- the responsible person for each outstanding item

By default, approved PD-02 exceptions letters are assumed to authorize projects to proceed to advertisement only. Projects will not be allowed to proceed to bid opening, project award, or issuance of a Notice to Proceed unless explicitly requested in the exception letter and approved by the Deputy Director. Unless PD-02 letters explicitly request authorization to advertise and award, contracts will not be issued until confirmation from the PL that the outstanding issues have been satisfactorily resolved.

In all cases, the Office of Pre-Letting (OPL) QA staff has been tasked to track identified outstanding PD-02 issues by periodically querying the PL regarding the status of the resolution plan(s). The project PL carries the responsibility to confirm to the OPL QA staff that all the listed issues have been resolved. The ODOT Procurement Office Construction Contracting Unit must also be so advised so they can proceed with contract award. This notification needs to be in writing (e-mail preferred) and can be directed to the project QA engineer, to OPO Construction Contracting directly, or both.

To see an example of a PD-02 Exception letter go to “A User’s Guide to PS&E Delivery.”

PS&E Submittal Deliverables: At the completion of this milestone the PL needs to ensure that the required deliverables are completed. Deliverables include all
items identified on the PS&E Checklist (criteria and requirements as determined by the State Roadway Engineer), typically including:

- PS&E documents
- Construction Schedule
- Project Completeness Memo/Checklist signed by the accountable manager or delegated authority
- Quality Control Certification from technical resource provider(s)

Projects missing any of the applicable items in the PS&E deliverables may not be advertised and may be removed from the contract letting schedule. The Roadway Section’s Office of Pre-Letting will communicate this immediately to those who submitted the PS&E package. Mitigation will be the responsibility of those responsible for delivering the work (e.g., Region Manager), and if necessary the project will be rescheduled for bid advertisement. Exceptions to this require the approval of the Highway Division Deputy Director in consultation with the affected Region Manager and the Chief Engineer.

The following is a list of Tasks that are typically included in the PS&E Submittal Phase (if applicable to the project):

- PS&E Acceptance (This equates to Activity ID 551)
- FHWA Review (This equates to Activity ID 553)
- PS&E Pre-Letting Review (This equates to Activity ID 550)
- Advertising (This equates to Activity ID 555)

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.
LIFECYCLE MILESTONE 7: PROJECT DEVELOPMENT CLOSEOUT

The Project Development Closeout milestone begins after PS&E Submittal deliverables are accepted. The major focus of the closeout is administrative closure and logistics. Project Development closeout includes the following key elements:

1. Transition of the project to the CPM/PM for implementation of Stage 3.
2. Completing, collecting, and archiving project records.
3. Documenting the successes and the lessons learned of the project.

TASK 1 - PROJECT TRANSITION

Once the PL completes the Project Development stage, the PM will take over the Construction Management stage. The elements of this process include transferring the completed work and remaining project responsibilities to others; demobilizing the appropriate project team members and facilities; and closing out the administrative and financial processes associated with the stage.

The purpose of a complete transit package is to assure that the Construction office has all needed documentation and design data to construct the project. The table below lists the possible items that a project may include and details all items that were created by someone other than the roadway designer. It will be a negotiation between the contacts, the PM, and the roadway designer on what items need to be obtained and who will obtain them. Often the PM will already have a copy and will not require another.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>CONTACT</th>
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<td>Contact List of personnel and PDT members involved in the project</td>
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<td>List of the Engineer of Record for each discipline</td>
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<td>PL</td>
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<tr>
<td>Permits associated with the project</td>
<td>PL</td>
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<tr>
<td>Inter-Governmental Agreements (IGA)</td>
<td>PL</td>
</tr>
<tr>
<td>Environmental documentation (Historical, BA, BO, wetlands, etc.)</td>
<td>Environmental Specialist</td>
</tr>
<tr>
<td>ROW Obligations</td>
<td>ROW Representative</td>
</tr>
</tbody>
</table>
ROW Certifications | ROW Representative
---|---
Access Management Plan | Access Sub-team
Technical Reports | Technical Representative
Utility Agreements, work performed, status of completion, and schedule of work | Utility Coordinator
Original Ground Confidence Report | Project Surveyor
ODOT survey maps | Project Surveyor
Bridge Location data | Bridge Designer
Final Pavement Design | Pavement Designer

The roadway designer will be responsible for compiling all applicable items listed below:
- Designer Narrative
- Exception/Concurrence Letters
- Preliminary Plan Review Comments/Changes (explanation of what comments were or were not incorporated for at least the major design issues)
- Advance Plan Review Comments/Changes (explanation of why comments were or were not incorporated for at least the major design issues)
- Reports/Spread sheets (include electronic and/or hardcopy)
- Alignment reports
- Grade reports (discuss/negotiate level of detail necessary with the project manager's office)
- Pipe Locations (enough information may be on the plan sheets if station, offset, and elevation are shown)
- Bid item quantity calculations and summary
- Microstation/Inroads file list with location of files (use standard naming conventions)
- Project photographs and Video (if available)
- Utility Conflict map and list
- Any pertinent correspondence

The items can be in either electronic or hard copy format. Either way there needs to be a transmittal letter detailing all applicable items from the list and where they can be located (either a directory location or in a project notebook).

The PL will set up a handoff meeting with the relevant lead staff to handoff the project and discuss major items. The Roadway Designer will arrange a day and time to discuss the technical items contained in the in detail, with the construction support person, project inspector, and/or the PM. The PL may attend the Pre-Construction meeting when the contract is awarded.
**TASK 2 - PROJECT ARCHIVES**

Throughout the course of the project, the PL/PM should have maintained a project repository. As the project progressed, the purpose of the repository was to create a central point of reference for all project materials to be used by anyone involved in the project. Once the project comes to an official close, the repository provides an audit trail documenting the history and evolution of the project.

During Project Closeout for each stage, the PL/PM should examine the repository to ensure that all relevant project-related material, documents produced, decisions made, issues raised and correspondence exchanged have been captured.

When the project is officially closed, the project repository should include the materials as specified in the retention schedules. There are 2 types of records retention schedules:
- General Records Retention Schedules are published as OAR 166. The OAR provides state and local agencies with the lawful authority to destroy or otherwise dispose of commonly occurring public records.
- Special Records Retention Schedules are specific to the records of a particular agency, and are published in the Oregon Blue Book.

ODOT - Highway Division has a signed agreement prepared by the Records Management Unit and approved by the Secretary of State, Archives Division, which lists and describes the division’s records and specifies the length of time the records must be kept.

The Records Retention Document lists the Special Records Retention for project delivery that need to be retained and which division is responsible. This list does not cover everything. You must refer to the General and Special Records Retention Schedules for a complete listing.

**TASK 3 - LESSONS LEARNED**

Throughout each project life cycle, lessons are learned and opportunities for improvement are discovered. As part of a continuous improvement process, documenting lessons learned helps the project team discover the root causes of problems that occurred and avoid those problems in later project stages or future projects.

When documenting the lessons learned, you will want to answer these questions:
- What worked well—or didn’t work—for this project or for the project team?
- What needs to be done over or differently?
- What surprises did the team have to deal with?
- What project circumstances were not anticipated?
- Were the project goals attained? If not, what changes need to be made to meet goals in the future?
# ODOT Project Delivery Guide

**PHASE 3: AWARD CONSTRUCTION CONTRACT**

## Table of Contents

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PHASE 3: AWARD CONSTRUCTION CONTRACT

Awarding a Construction Contract runs from PS&E submittal to award of the contract. It includes the following milestones:

1. PS&E Submittal to Bid Opening
2. Bid Opening to Award Contract

The period of construction contract award continues from the start of advertising and ends with the award of the contract.

Note: Unsuccessful bid opening may result in a project moving back into the project development phase. Refer to Operational Notices PD-07 and PD-08 for more information.

Complete information describing or referencing practices needed to administer contracts under the Oregon Standard Specifications (2001 or newer edition) can be found in the Construction Manual. The manual is online at: http://www.oregon.gov/ODOT/HWY/CONSTRUCTION/CM.shtml

Additional information on contract administration is available at the following web site:
http://www.oregon.gov/ODOT/HWY/CONSTRUCTION/CAIndex.shtml
LIFECYCLE MILESTONE 8: **PS&E SUBMITTAL TO BID OPENING**

**TASK 1 - REVIEW OF PS&E PACKAGE (QUALITY REVIEW)**

OPL is responsible for conducting a pre-letting quality overview for each project within 10 calendar days of receipt from the PS&E provider. In addition to reviewing projects, it is their role to assist the PL in successfully delivering the project to bid.

The overview will focus on the plans, specifications, and bid items and identify issues that must be corrected before the project proceeds to bid. When the quality review is complete, all issues are resolved, and the documents are in order, the Quality Engineer will write the advertisement for the project. Advertisements are sent via email to the OPO - Construction, Contractor Plans.

**TASK 2 - ANTICIPATED ITEMS**

Anticipated Items are used to provide a funding mechanism for non-biddable elements of work that may be needed to complete a project, including work by other agencies and utilities. Anticipated items are normally identified prior to completion of PS&E.

When an anticipated item has been created after PS&E, it must be approved in writing by the AM, the State Roadway Engineer (all projects), and FHWA on full oversight projects. OPL and OPO-Construction need to be notified and copied on that anticipated item, including its approval.

**TASK 3 - ENGINEER’S ESTIMATE**

Once the PS&E package is submitted to OPL, a review of the final estimate and completion time schedule will be performed. The review of the schedule is to ensure that no fatal flaws or defects exist. The review of the final estimate is to focus primarily on the unit prices for bid items. The reviewer will make adjustments to unit costs where appropriate or contact and work with the PS&E provider to resolve the problem.
The completed Engineer’s Estimate, is sent to the PL/LAL and the PM (PM only on projects with CE done by ODOT) which includes the biddable items, contingencies, construction engineering, anticipated items and total price.

In all cases, it is the policy of ODOT that the Engineer’s Estimate is to be kept confidential and is not to be disclosed to any potential bidder in whole or part.

_**TASK 4 - DUPLICATION OF PLANS AND SPECIAL PROVISIONS**_

OPL will deliver to OPO - Construction, Contractor Plans a set of print-ready Mylar plans, signed by the ODOT Chief Engineer, and a copy of the special provisions for the project.

OPO - Construction, Contractor Plans is responsible for coordinating the reproduction of these documents with the ODOT Reprographics Unit and the DAS Printing Center prior to advertisement.

_**TASK 5 - PROJECT ADVERTISEMENT**_

OPL transmits an electronic copy of the project advertisement to OPO - Construction, Contractor Plans. OPO - Construction, Contractor Plans is responsible for combining the project ads for a given bid opening into a single document. OPO - Construction coordinates the advertising process and projects may be advertised between three and six weeks depending on their complexity.

_**TASK 6 - MANDATORY PRE-BID MEETING**_

It is important that pre-bid meetings are used appropriately and effectively. PD - 07 requires the justification to clearly indicate the features or issues of a project that would call for a meeting, the proposed agenda, and a list of the expected outcomes.

The PM is responsible for conducting the mandatory pre-bid and for providing a copy of the pre-bid meeting summary to OPL. OPL will have a copy of the meeting summary posted on the OPO - Construction, Contractor Plans webpage.

Further details of this procedure are presented in the "A User's Guide to PS&E Delivery,” page 4.
To avoid conflicting meetings all proposed scheduling of these meetings will be cleared through the State Roadway Engineer to promote improved contractor completion on projects. The scheduling will be accomplished through OPL. For more information about project lifecycle Emerging Small Business (ESB) and Disadvantaged Business Enterprise (DBE) considerations, visit Oregon.gov/ODOT/CS/Civil Rights.

\[ ![Image](image_url) \]

**TASK 7 - DISTRIBUTION OF PLANS AND SPECIFICATIONS**

OPO - Construction, Contractor Plans is responsible for the distribution of plans and special provisions for projects to ODOT, and local agencies. In addition, they are responsible for filling orders and distribution to contractors, material suppliers and others who want to purchase plans, special provisions and bid documents.

\[ ![Image](image_url) \]

**TASK 8 - COMMUNICATION WITH PROSPECTIVE BIDDERS**

The PM is the single point of contact for all questions or inquiries related to a project during the project advertisement period. It is critical that the PM document all conversations with or visits from prospective bidders, information that was examined or provided, and discussions or comments between the prospective bidders.

Situations may arise where the PM may choose to issue a Letter of Clarification in response to a question or issue of significance that was raised by one or more prospective bidders. Letters of Clarification are intended to be informational in nature, and are appropriate for situations in which there are no changes being made to the plans, specifications, quantities or bid items. The PM is responsible for providing a signed copy of the Letter of Clarification to the Office of Pre-Letting. The Office of Pre-Letting will post the letter on the OPO - Construction, Contractor Plans webpage for distribution to all interested parties.

\[ ![Image](image_url) \]

**TASK 9 - ADDENDA**

Questions or inquiries that could result in an addendum letter should be directed to the PL, LAL, or PM as appropriate. The PS&E provider will be responsible for preparing all addenda and referenced attachments and submitting them to the Office of Pre-Letting for review. Addenda for projects subject to full federal oversight require FHWA approval. OPL will coordinate the review and approval process for addenda with FHWA.
For more information about project lifecycle Equal Employment Opportunity (EEO), On-the-Job Training (OJT), Workforce Development Program (WDP), and Labor Compliance considerations, visit Oregon.gov/ODOT/CS/Civil Rights.
LIFECYCLE MILESTONE 9: BID OPENING TO CONTRACT AWARD

TASK 1 - BID OPENING

OPO - Construction oversees the bid opening and public reading of the bids. All interested parties are invited to attend the bid opening.

TASK 2 - OPO REVIEW

Within a few hours after bid opening, OPO - Construction posts the Preliminary Bid Results on the website. They review the bid to ensure they are responsive and have met all of the requirements specified in the solicitation documents. This is completed 1-2 working days after the bid opening. OPO - Construction will then notify OPL of the apparent low responsive bidder at which time OPL will analyze the bid items.

TASK 3 - BID ANALYSIS

After OPO - Construction has completed its bid review for bid responsiveness; OPL will perform a “fair value” analysis of the bid items received for each project, using the Engineer’s Estimate, and prepare the bid evaluation and recommendation.

Another aspect of the bid analysis is to identify and document possible mathematical or material unbalancing of bid items.

The results of this analysis are summarized in a document called the Bid Evaluation and Recommendation. This recommendation indicates whether or not the low bidder’s total bid price is consistent with the fair market value of the work, and whether or not awarding the project to the low bidder would be in the best interest of the ODOT.

The Bid Evaluation and Recommendation is normally completed within a few weeks working-days of the bid opening and is forwarded to OPO - Construction for use in proceeding with award or rejection of all bids.

For more information about project lifecycle Emerging Small Business (ESB) and Disadvantaged Business Enterprise (DBE) considerations, visit Oregon.gov/ODOT/CS/Civil Rights.
**TASK 4 - NOTICE OF INTENT TO AWARD**

When both the bid review performed by OPO - Construction, and the bid analysis performed by OPL are completed and the low responsive bidder is confirmed, the Notice of Intent to Award and Bid Tabulations are posted on the OPO - Construction webpage. OPO - Construction then requests CE Budget from AM/PM/LAL/CPM.

OAR 731-005-0690 provides a 3-day period after posting of Notice of Intent to Award, during which time an aggrieved offer or may file a protest of award. OPO - Construction must resolve the protest before proceeding with award.

**TASK 5 - CONSTRUCTION ENGINEERING BUDGET**

After the Notice of Intent to Award is posted, OPO - Construction will request the final Construction Engineering (CE) Budget from AM/PM/CPM, or LAL. The CE Budget will be developed following the processes described in PD-08. It will include inspection services, testing and monitoring services, consultant services, preparation of as-constructed drawings, ROW monumentation, public involvement, contract administration functions, surveying, etc. Additionally, each type of project as funded will have a maximum allowable percentage CE. CE performed by consultants normally is in the range of 7.5% to 10%.

- The responsibility for establishing and submitting the CE Budget resides with the ODOT PM, LAL working with the Local Agency PM. The PM or LAL will compile all budget requests and needs into the final CE budget.
- If the proposed CE budget percentage exceeds the Construction Leadership Team Guidelines, the PM/LAL will review the budget request, make any needed modifications, and write a justification for the additional budget amount.
- The PM/LAL submits the proposed budget to the AM for review and approval. The AM then submits the final CE budget to OPO - Construction.

OPO - Construction will include the amount of the CE budget in the Project Authorization and attach a copy of the CE budget as supporting documentation in the award packet that goes to the Chief Engineer/Deputy Director/OTC/FHWA for review and final approval of award.
TASK 6 - PROCESS FOR PROCEEDING WITH AWARD OR REJECTION OF ALL BIDS

Subtask 6.1 ODOT Projects

If the Low Responsive Bid is less than 110% of the Engineer’s Estimate:

- The OTC has authorized the Deputy Director of Highways to award projects, with concurrence from FHWA for full-oversight projects, when the low responsive bid is less than 110% of the Engineer’s Estimate.
- When OPO - Construction and OPL have completed the bid review and bid analysis and it is determined the low bidder’s proposal is responsive, OPO-Construction will proceed with award of the contract.
- OPO - Construction will forward the bid tabulations, anticipated items, Engineer’s Estimate and Final Bid Evaluation to the AM, PM/CPM, or MPB/OBDU as appropriate. This transmittal is for informational purposes to aid in preparation of the CE Budget and must be kept confidential.
- Upon receipt of this information, the AM/PM/CPM or authorized party will submit to OPO - Construction the approved CE budget within 3 working days.

If the Low Responsive Bid is greater than 110% of the Engineer’s Estimate:

- Upon OPO - Construction and OPL completion of the bid review and bid analysis, OPO - Construction will forward the bid tabulations, anticipated items, Engineer’s Estimate and Final Bid Evaluation to the AM/PM/CPM MPB/BDU as appropriate. This transmittal is for informational purposes to aid in preparing the CE Budget and shall be kept confidential.
- If Final Bid Evaluation recommends award and the Region/CPM/BDU concurs:
  - The AM or other authorized representative will provide within 1 working day of receiving the Final Bid Evaluation, written notice to OPO - Construction indicating whether there are funds available for the additional project cost.
  - PM/CPM will submit the final CE Budget to OPO - Construction within 3 working days after receiving the Final Bid Evaluation report.
- If Final Bid Evaluation is to reject all bids and Region/CPM/BDU concurs:
  - AM or other authorized representative will provide within 1 working day of receiving the Final Bid Evaluation, written notice to OPO - Construction indicating concurrence to reject all bids.
  - OPO - Construction will prepare a Public Interest Finding supporting rejection of all bids and send recommendation to Chief Engineer, Deputy Director, OTC, and FHWA if a full-oversight project.
- If Final Bid Evaluation is to reject all bids but Region/CPM/BDU does not concur:
  - Region/CPM/BDU will prepare a written justification of why all bids should not be rejected. This justification should be sent to OPO - Construction within 3 days of receiving Final Bid Evaluation.
Subtask 6.2 Local Agency Projects (delivered by ODOT)

1. If the Low Responsive Bid is less than 110% of the Engineer’s Estimate:
   - OPO - Construction will notify the Specifications and OPL of the low responsive bidder.
   - OPL will review the low bid in comparison to the Engineer’s Estimate and determine whether the low bid reflects a fair market value to the agency. The bid is also checked for errors and mathematical and/or material unbalancing. OPL will prepare the Bid Evaluation and Recommendation and forward to OPO - Construction within 8 working days of bid opening.
   - If OPO - Construction determines the low bidder’s proposal is responsive, OPO - Construction will proceed with award of the contract.
   - OPO - Construction will forward the Final Bid Evaluation, anticipated items, bid tabulations, and Engineer’s Estimate to the ODOT AM and LAL (who will forward to the Local Agency PM). This transmittal is for informational purposes only and must be kept confidential.
   - Upon receipt of this information, the authorized LAL (in consultation with the Local Agency), will submit to the OPO - Construction the approved CE budget within 3 working days.

2. If the Low Responsive Bid is greater than 110% of the Engineer’s Estimate:
   - OPO - Construction will notify OPL of the low responsive bidder. OPL will review the low bid in comparison to the Engineer’s Estimate and determine whether the low bid reflects a fair market value to the agency. The bid is also checked for errors and mathematical and/or material unbalancing.
   - OPO - Construction will forward the Final Bid evaluation, anticipated items, Engineer’s Estimate and Bid tabulations to the LGS Manager, ODOT Area Manager, and LAL. This transmittal is for informational purposes only and shall be kept confidential.
   - If the Final Bid Evaluation recommends award of project and the local agency concurs:
The LAL, on behalf of the local agency will submit to OPO - Construction, written confirmation of additional funding within 3 days of receipt of Final Bid Evaluation.

The LAL, on behalf of the local agency will submit to OPO Construction the CE Budget within 5 working days of receiving the Final Bid Evaluation.

OPO - Construction will not proceed with award of the contract until concurrence to award and confirmation of funding availability is received from the local agency liaison on behalf of the local agency. If the notice from the local agency cannot be obtained within 5 working days, OPO - Construction, LGS, LAL and local agency will discuss and agree on how to proceed.

3. If the Final Bid Evaluation recommends rejection of all bids and local agency concurs:

   - LAL, on behalf of local agency, will provide within 1 working day of receiving the Final Bid Evaluation, written notice to OPO - Construction indicating concurrence to reject all bids.
   - OPO - Construction will prepare a Public Interest Finding supporting Rejection of All Bids and send recommendation to Chief Engineer, Deputy Director, OTC, and FHWA if a full-oversight project.
   - If the Final Bid Evaluation recommends rejection of all bids and the local agency does not concur:
     - The LAL, on behalf of the local agency, will notify OPO - Construction within 3 days of receiving the Final Bid Evaluation if the local agency does not concur with ODOT’s recommendation to reject all bids. This notification will include a written justification supporting award of project.
     - OPO Construction will forward the justification letter along with other background materials to the State Roadway Engineer. The Roadway Engineer will consult with LAL, local agency, the Office of Pre-Letting, and other involved parties and will prepare a final recommendation on behalf of Technical Services. This final recommendation will be sent to OPO - Construction within three (3) days of receiving justification materials.
     - ODOT Support Services Chief Procurement Officer will review materials and based upon best business practices for the department will forward a final recommendation to award or reject all bids to Chief Engineer, Deputy Director, and OTC (to FHWA if a full-oversight project).
TASK 7 - CONSTRUCTION PROJECT AUTHORIZATION

OPO - Construction is responsible for preparing the Construction Project Authorization for each project. The purpose of this document is to provide a summary or overview of the costs that will be incurred during the construction of a project. Some of the information shown in the project summary includes:

- Informational Items:
  - The Engineer’s Estimate
  - The name of the low responsive bidder
  - Funding deposits received from local governments or others

- Budget Items:
  - The amount of the low bid (biddable work) - the lowest responsive bid
  - Bid Item Modifiers - Project fund set aside to provide for escalation/de-escalation and bonus specifications.
  - CE Budget
  - Contingencies - This amount is 3.5% of the low bid plus anticipated items and allows funding to cover normal fluctuation of project quantities as well as changes that are normally implemented on a project. There are rare occurrences where the construction work is of unusual risk that the percentage used warrants change. Documented cause for changing this percentage must be submitted to the State Roadway Engineer for review and approval.
  - Anticipated Items
  - Credits for salvaged materials

When this document is completed by the OPO - Construction, it is sent to the Chief Engineer for review and concurrence and on to the Deputy Director of Highways/OTC for approval and to FHWA for concurrence on full-oversight projects. Copies of the CE Budget, Anticipated Item Requests, and Final Bid Evaluation are attached to the Project Authorization as supporting documentation.

If the Deputy Director of Highways or the OTC elects to award/reject and FHWA concurs on full-oversight projects, the award/rejection letter included with this packet is signed and the contract award/rejection becomes official at that point.

A version of the Construction Project Authorization without the Engineer’s Estimate is transmitted to Region/LAL/BDU, Technical Services, Financial Services, and FHWA personnel after a project is awarded/rejected.
**TASK 8 - REVIEW AND EXECUTION OF THE CONTRACT**

The OPO - Construction is responsible for reviewing the contract booklets returned from the successful bidder for accuracy and completeness. If the submittals are complete, the OPO Manager, will execute the contract within 7 calendar days of receiving the contract booklets from the successful bidder.

For more information about project lifecycle Title VI and Environmental Justice, Emerging Small Business (ESB), and Disadvantaged Business Enterprise (DBE) considerations, visit Oregon.gov/ODOT/CS/Civil Rights.

**TASK 9 - NOTICE TO PROCEED**

The OPO - Construction will issue a Notice to Proceed to the contractor normally within 5 calendar days of executing the contract.
PHASE 4: CONSTRUCTION MANAGEMENT

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PHASE 4: CONSTRUCTION MANAGEMENT

The Construction Management stage is from project bid to final acceptance. It includes the following lifecycle milestones:

**Before On-Site Work Begins**

**On-Site Work Begins**

**On-Site Work Completed**

**Project close out and Final Acceptance**

This section covers construction management from before on-site work begins to a completed construction project.

Complete information describing or referencing practices needed to administer contracts under the Oregon Standard Specifications (2001 or newer edition) can be found in the Construction Manual. The manual is on line at: [http://www.oregon.gov/ODOT/HWY/CONSTRUCTION/CM.shtml](http://www.oregon.gov/ODOT/HWY/CONSTRUCTION/CM.shtml)

For information on Quality Assurance see the Construction Section in the chapter on Technical Services Branch. Also see: [http://www.oregon.gov/ODOT/HWY/CONSTRUCTION/QAIndex.shtml](http://www.oregon.gov/ODOT/HWY/CONSTRUCTION/QAIndex.shtml)
LIFECYCLE MILESTONE 10: BEFORE ON-SITE WORK BEGINS

ODOT sets the stage for the working relationship with the construction contractor. ODOT ensures all requirements are clear to the contractor before work begins.

Before on-site project work can begin, the contractor must have:
- Met with the project manager at a pre-construction conference
- An approved project work schedule
- An approved traffic control plan
- An approved erosion and sediment control plan
- An approved pollution control plan

The contractor may not start work on the project, unless otherwise directed, until the Notice to Proceed is issued and the contract has been executed. The notice is issued once:
- The contractor has furnished proper bonds and insurance
- The Disadvantaged Business Enterprise commitment is met
- Subcontractor compliance is met
- The contract has been executed

Each of those topics is briefly discussed below.

**TASK 1 - PRE-AWARD**

Very early during project development, the project team establishes the project objectives and identifies any special concerns.

Before a project is advertised for bids, the PM will meet with the project team to assure that the project is constructible and will achieve its objectives.

**TASK 2 - PRE-CONSTRUCTION MEETING**

The Contractor must meet with the PM, following Notice to Proceed (NTP), for a pre-construction conference (precon) prior to commencing onsite work. The Pre-Construction Conference:
• Sets the stage for the working relationship on a project
• Can be either one meeting or a series of smaller meetings
• May also be needed before the start of a critical phase of construction (e.g., paving or bridge deck work)

There are several objectives to be accomplished and topics to be discussed during a precon, such as identifying the lines of communication and reviewing the project schedule, project safety, potential utility conflicts, the Traffic Control Plan, Subcontracting, Labor Compliance and materials.

Persons who should attend a precon include key personnel from the contractor and its subcontractors, affected utilities, the PM and crew, LAL if a local government project and other appropriate personnel, such as designers, the FHWA and maintenance, who will be involved with the project.

The contractor and PM should schedule a regular time to meet and discuss the progress of the project. This would include past progress, upcoming work, newly identified problems and/or delays to the project, and unresolved issues.

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**TASK 3 - PROJECT SCHEDULE**

The Contract requires the contractor to prepare, submit, and update the project schedule. The type of schedule and subsequent updates required are based on the size and complexity of the project.

The PM must review the project schedule to assure that the schedule shows all work will be accomplished within the contract time requirements, that it does not violate any contract restrictions, and that it depicts realistic performance of the work. Also look for errors or oversights in the logic for the work. The PM must address any concerns with the contractor and accept the schedule if it meets all of the contract requirements.

The contractor needs to submit, with each update, a short narrative describing changes to the schedule, any problems or issues that may affect the schedule, and the reasons why scheduled work is not being accomplished. The schedule should also portray impacts from delays, which information is very useful in analyzing requests for adjustment of contract time and in analyzing claims for delay damages.

The PM needs to review schedule updates to be aware of changes to the schedule, delays, and upcoming project work or needs in order to initiate appropriate action.
Remember that a project schedule is very important in helping the PM to, among other things:
- Plan the work of the project office
- Assure that the contractor understands the limitations on its work
- Assure that work is proceeding on schedule
- Be able to inform the local residents, businesses, motorists and media of the planned schedule and project completion
- Be able to analyze and mitigate delays to the project work and to possibly mitigate delays

For more information about project lifecycle Emerging Small Business (ESB), Disadvantaged Business Enterprise (DBE), Equal Employment Opportunity (EEO), On-the-Job Training (OJT), and Workforce Development Program (WDP) considerations, visit Oregon.gov/ODOT/CS/Civil Rights.

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**TASK 4 - TRAFFIC CONTROL PLAN**

Five days prior to the pre-con meeting, the contractor must submit a written acceptance of the contract proposed TCP or provide changes to the TCP with supporting details. Throughout the duration of the project, the contractor must submit the details of each TCP. The PM must approve each before the contactor may commence work.

If the TCP is not providing the desired results, the contractor is responsible to make needed changes to the TCP to adequately handle traffic. The PM must consent to any proposed changes from the TCP included in the contract.

If the contract requires a Traffic Control Supervisor, that person must complete and submit a TP&DT Daily Report, form 734-2474, for each approved TCS day. Submit those reports with the final project documentation.

The contractor must also submit an acceptable plan to maintain all Travel Information Council signs so each sign properly provides information to travelers. If the contractor does not maintain each sign, the PM must assess liquidated damages as specified by the contract and notify the Travel Information Council.

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**TASK 5 - EROSION AND SEDIMENT CONTROL PLAN**

No less than 10 calendar days prior to the pre-construction conference, the Contractor must submit an ESCP, or proposed modifications to the ESCP shown in the plans, for review by the PM. The PM must approve the ESCP before the Contractor may commence work.
If the ESCP is not providing the desired results, the Contractor is responsible to make needed changes to the ESCP to adequately control erosion and sedimentation.

**TASK 6 - POLLUTION CONTROL PLAN**

The Contractor must prepare and submit a pollution control plan (PCP) 10 days prior to the pre-con meeting. The PM must review and approve the PCP before the contractor may commence work. If the PCP is not achieving the desired results, or it no longer relates to actual or planned situations at the project site, the contractor must modify its PCP to adequately protect the actual or planned situations.

**LIFECYCLE MILESTONE 11: ON-SITE WORK BEGINS**

Following the pre-con meeting(s) and approval of the various submittals required under Sections 1.1 - 1.6 above, the PM will issue First Notification when the contractor commences on-site work.

First Notification is documentation of the date when the contractor or subcontractor begins one or more of the following:
- Setting up a materials plant
- Developing aggregate sources
- Performing construction work

The contractor is responsible to furnish materials and to perform the required work according to the construction contract plans and specifications.

When construction of the project is 50-75% complete, and the project has taken pretty good shape and its final configuration is apparent, the PM should perform an onsite review with the project team (including the designer, maintenance and local agency). This is ensures that the intent of the project is being fulfilled and special concerns are being adequately addressed.

When the project is nearly complete (before the contractor has left the project), the PM will review the project to assure that the project will function properly and
that no improper materials or construction are evident. This review must include the designer(s), maintenance and local agency. For non-exempt federal-aid projects, FHWA should also be invited to participate.

For more information about project lifecycle Emerging Small Business (ESB), Disadvantaged Business Enterprise (DBE), Equal Employment Opportunity (EEO), On-the-Job Training (OJT), Workforce Development Program (WDP), and Labor Compliance considerations, visit Oregon.gov/ODOT/CS/Civil Rights.

LIFECYCLE MILESTONE 12: ON-SITE WORK COMPLETED

Construction work is completed or a portion of the project is satisfactorily finished by the contractor. Upon completion of the contract work, including contract change orders and extra work orders; the PM issues Second Notification. This excludes minor corrective work, cleanup, demobilization and final project documentation. All of the exclusions will be listed in the Second Notification and the contractor must complete these in an expeditious manner within a timeframe acceptable to the engineer.

Second Notification documents the date when either:
- All required construction work, including change order work and Extra Work, has been satisfactorily completed.
- Contract time charges stop for one or all of the completion times.

NOTE: More than one Second Notification may occur if the contract includes multiple completion dates.

The PM works with the contractor to develop punch lists or other means to assure that all cleanup and repair work is accomplished. If the contractor notifies the PM that the project is complete, the PM must perform the Final Inspection and notify the contractor of known remaining work within 15 days.

Clean-up work is completed when:
- Clean-up and removal of equipment and materials from project site is done.
- Final project documentation is submitted.

NOTE: Some corrective or “clean-up” work can occur after the Second Notification providing no additional payment is required other than release of retainage.

When the contractor has completed all on-site work, the PM and AM must recommend acceptance of the project by completing a Recommendation of Project Acceptance, with signature and date.
Remember that the authority to “accept” the project is vested with the OTC, which has delegated that authority to the Construction Section. For projects with local agency or other funding, the PM should also include a letter from the local agency or other funding source stating that it accepts the project as being complete. When the Construction Section receives the recommendation of acceptance and has received all other required documentation, it will make final payment and notify the contractor of project acceptance.

LIFECYCLE MILESTONE 13: PROJECT CLOSE-OUT AND FINAL ACCEPTANCE

The PM will issue Third Notification when all minor corrective work and cleanup is completed, equipment is removed and all project documents (certifications, warranties, etc.) are received from the contractor.

The date of Third Notification is very important because ODOT must pay interest, at the rate specified by statute, starting 30 days after the date of Third Notification, on any monies still owed the contractor. Any such interest will not be eligible for federal-aid participation.

If, after issuing Third Notification, it is found that the contractor still has unfinished work or corrective work or still needs to furnish additional documentation, the PM must rescind Third Notification until the needed items are completed. The PM must promptly notify the contractor about rescinding Third Notification and the items yet to be completed or submitted. Re-issue Third Notification when the needed items are completed.

The PM coordinates a quality and quantity review (Q&Q) with the Region Assurance Specialist on a quarterly basis, throughout the duration of the project. The final review, called the semi-final, is completed by the Construction Section in Salem to assure that all contract requirements have been met. The PM must assure that all comments and concerns about constructability, problems, solutions, and design changes are included in the project narrative that will be distributed to the appropriate Project Development units and others. The PM will also need to convene a post-project critique, with affected and interested individuals, to identify needed improvements to processes or products that were involved in the project.

The PM must assure that all state force orders are completed and that ROW monumentation is scheduled for completion provided ROW was purchased.
For more information about project lifecycle Emerging Small Business (ESB), Disadvantaged Business Enterprise (DBE), Equal Employment Opportunity (EEO), On-the-Job Training (OJT), Workforce Development Program (WDP), and Labor Compliance considerations, visit Oregon.gov/ODOT/CS/Civil Rights.
TRANSITION TO MAINTENANCE

A smooth transition from project management to maintenance is essential for the success, longevity and functionality of our transportation investments. Therefore, the PM should work closely with the district manager throughout the duration to assure the intent of the project is being fulfilled and that the final product is maintainable.

While the DM or appropriate district maintenance staff should be part of the project team, or at least invited to meetings to share their perspective, raise and resolve concerns during design, they will not be intensively involved in all four phases of the project lifecycle.

Thus, the project team needs to convey all appropriate information and special considerations—including any commitments made—about each completed project to the district maintenance office to ensure its ongoing success as part of Oregon’s infrastructure.

CONSTRUCTION TO DESIGN FEEDBACK PROCESS

ODOT designs are typically completed in Region Technical Centers or by consultants, and consistently include those who will be providing the construction engineering and administration (typically a Project Manager or members of their crew). The completed plans and specifications become the construction contract documents a project manager (along with staff and/or consultants) uses to deliver the project with a contractor.

It is anticipated that adjustments to the plans and specifications will occur during construction to complete a project successfully. During construction, contractors and construction engineering staff often identify issues with the plans and specifications. Typically, identifying and resolving these issues during project development helps make the project easier to construct.

Many project teams ensure earlier and continuous involvement and communication across design and construction engineering throughout the project life-cycle. For example, most projects assign design engineering staff to provided construction support. Feedback is also provided through a variety of documentation sources, such as Contract Change Orders (CCOs), the Project Manager’s Narrative report (final review documentation) or the Contractor’s Project Evaluation. These documents all become part of the construction project final record.

Construction feedback to designers is valuable and important for continuous improvement. The following information documents and clarifies the construction-
to-design feedback process, where design-construction feedback can be located, and how the information can be shared more effectively, within and across regions, and with Technical Services.

1. Contract Change Orders:

All Contract Change Orders will be posted by the Construction Section to the change order database at the following website:
http://intranet.odot.state.or.us/tsconstruction/resources.htm
From this website, select the CCO Database link.

Each Technical Center Manager (TCM) and the Bridge Delivery Manager (BDM) will review their projects’ data on a regular basis to identify any critical issues. The TCM will share any specific issues with the appropriate design staff at both the region and statewide level as appropriate, including consultants who may have been involved in the design.

2. Contractor Project Evaluations:

At the completion of each construction project, the contractor will be asked to complete a project evaluation form #734-2469A which is available at:
http://www.oregon.gov/ODOT/HWY/CONSTRUCTION/HwyConstForms1.shtml

Once the evaluation is submitted to ODOT, it will be posted at the following website:
http://intranet.odot.state.or.us/tsconstruction/resources.htm (select the “ODOT Evaluations by Prime Contractor” link).

Each region TCM and the BDM will review information for their projects and identify any feedback to improve their projects. The TCM/BDM will share any lessons learned with appropriate design staff (including consultants) at both the region and statewide level as appropriate.

3. Construction Project Narrative:

At the completion of each construction project, the construction project manager will complete a construction project narrative using form # 734-2756, which is available on the Construction Section website at:
http://www.oregon.gov/ODOT/HWY/CONSTRUCTION/HwyConstForms1.shtml

This narrative will include information on all contract change orders on the project, as well as any issues that caused difficulties in constructing the projects.

Copies of the construction narrative will be distributed electronically to the following:

- Construction Section
- Appropriate Region Tech Center Manager/BDM
- Appropriate Area Manager
- Applicable Technical Services Section Manager

It is expected that each of the above managers will review the project narratives they receive and distribute feedback to the appropriate technical staff who were involved in the project.

4. Post Construction Review:

The construction PM will schedule a post-construction review for projects with any significant design complexity. This review could be simply an office review or could involve a site visit, if deemed appropriate. The PM will work directly with the project leader for the project to assure appropriate members of the project development team (PDT) are invited to participate in the review.

The reviews will use the current construction narrative report as the basis for discussion. The project manager will lead this meeting, highlighting the lessons learned and addressing any questions the designers might have. If there are items that need to be brought to the attention of a widespread audience for resolution, the review team can identify them and the PM will take the issue to the region TCM/BDM for wider distribution.

5. Technical Center Manager Annual Report:

At the end of each year, each of the Technical Center Managers and the Bridge Delivery Manager will prepare a summary of lessons learned from the Project Managers Narrative Report (including all CCOs), the Contractor Evaluation and the Post Construction Reviews. These summaries will focus on trends and areas of improvement that could benefit all regions. The end of year reports are presented to all the Technical Center Managers the Bridge Delivery Manager, the Technical Services Section Managers and the Design Quality Assurance Manager at the spring Technical Leadership Team (TLT). As appropriate, issues will be added to the TLT annual work plan for resolution including how to provide feedback to staff (including Consultant Engineers).
Most projects can be separated into two types:

- Preservation projects that protect the state’s investment in the transportation infrastructure by systematically preserving all elements of the existing system
- Modernization projects that primarily add new capacity to the system

These two broad types can be further split into project categories:

- Modernization
- Preservation
- Operations
- Bridge
- Safety
- Special programs

All the project categories complete the same project delivery stages (e.g. program development, project development, award construction contract and construction management), but not all projects include the same components and activities of project development.

NOTE: Please refer to the Resource Management System for detailed information on all the specific activities and schedule for each project type at:
http://www.oregon.gov/ODOT/HWY/PDU/resources_management_system.shtml

Descriptions of each type of project and their associated programs are also available in the STIP Users’ Guide at: http://www.oregon.gov/ODOT/HWY/STIP/index.shtml
MODERNIZATION PROJECTS

Modernization projects improve transportation safety and operations by adding capacity to the highway system to ease traffic congestion or to accommodate projected traffic growth. Modernization projects are divided into three classes based on the level of environmental work needed.

Class 1: Requires preparation of an Environmental Impact Statement (EIS).
Class 2: Categorically excluded from preparation of an EIS or EA, but still requires environmental analysis and approvals.
Class 3: Requires preparation of an Environmental Assessment (EA).

Modernization projects include:
- New alignments, facilities, bypasses
- New safety rest areas
- Adding lanes, including:
- Passing and climbing lanes
- Turn lanes
- Acceleration and deceleration lanes
- High-occupancy vehicle lanes
- Widening bridges to add lanes
- Grade separations
- Intersection improvements

Potential modernization projects are identified primarily through statewide, regional and local transportation system plans.
- Metropolitan Regional Transportation Plans (RTPs) primarily develop potential projects in metropolitan areas.
- City and County TSPs develop projects in urban and rural areas.
- Statewide, corridor, refinement, and local Transportation System Plans are (the STIP lists already developed projects) primarily used to develop potential projects in rural areas.
Modernization projects are selected and added to the draft STIP based on input from:

- Area Commissions on Transportation
- County Commissions or Coordinating Committees
- Elected officials
- Metropolitan Planning Organizations
- Other state agencies
- The general public

Project selection is based on criteria set forth by the OTC, which may consider issues such as:

- Congestion
- Accessibility
- Safety
- Public Support
- Land Use
- Freight Mobility
- Environmental issues

ODOT Region Managers select project for consideration by the OTC. The draft STIP is presented to the Oregon Transportation Commission (OTC) for consideration. The OTC approves the Final STIP projects.

Project Development for in-house projects begins with the assignment of a project in the STIP to a Project Leader and ends when the project is let for bid and a construction contractor is chosen.

Project Development for out-sourced modernization projects begins when a project in the STIP is assigned to the Advanced Contracting Unit. The project development and the construction are completed through Design-Build or Design-Bid-Build contracting.

NOTE: Appendix B: Project Delivery Method has more information on Design-Build and Design-Bid-Build contracting.
The duration of project development for a modernization project can vary. However, a time estimate can be derived from the Resource Management System templates:

- Class 1 - 10.5 years
- Class 2 - 4.7 years
- Class 3 - 10.0 years

(Note: The Resource Management System templates reflect project schedules that include all possible work needed to complete a project. Typically, a project will not require all activities that are included in the template to complete a project. All possible activities are included so that:
  1. No potentially vital but infrequently used tasks needed to complete a project are overlooked.
  2. It is easier and less prone to error to delete tasks from a schedule than it is to add them.

Additionally, the activity durations in the templates are based upon the "worst-case" or "maximum" timeframes that are expected for each activity. Although many activities take substantially less time than indicated in the templates, that determination is best made once the project team has been assembled and expert judgment can be applied to the specific project. Further, the maxim that it is better to “under-promise and over-deliver” is implied and preferable to the alternative. As an example in the Class 2 Modernization template the default duration for the "RIGHT-OF-WAY MAP and DESCRIPTIONS" task is 80 days whereas the average duration for projects currently in the system is 45 days).

Construction begins after the construction contractor is chosen and ends with a completed modernization project. Construction adds another one to three years to the business process.
PRESERVATION PROJECTS

Preservation projects protect the state’s investment in the highway system. By maintaining elements of the existing system, preservation work extends the service life of existing pavements beyond what can be done through routine maintenance. Preservation funding may not be used to increase capacity.

Preservation projects include:
- Pavement overlays (including minor safety and bridge improvements)
- Interstate Maintenance Program (pavement preservation projects on the interstate system)
- Reconstruction to re-establish an existing roadway
- Resurfacing projects

Preservation projects are identified by a statewide committee using the Pavement Management System, with input from regions.

Criteria used to choose preservation projects include:
- Pavement condition
- Maintenance costs
- Traffic volumes
- Highway classification
- Efficiency opportunities
- Emergency response

The Draft STIP is refined during the public review period. The OTC approves the Final STIP projects.

Project Development for in-house preservation projects begins with the assignment of a project in the STIP to a Project Leader and ends when the project is let for bid and a construction contractor is chosen.

Project Development for out-sourced preservation projects begins when a project in the STIP is assigned to the Advanced Contracting Unit. The project development and construction are completed through Design-Build or Design-Bid-Build contracting.

NOTE: See Appendix B: Project Delivery Methods for more information on Design-Build and Design-Bid-Build contracting.

Note that the pavement design for ALL preservation projects is managed through the Construction Section, Pavement Service Unit, regardless of the delivery method for the rest of the project.
See PD-13 - Resourcing Pavement Designs for Preservation Projects

The duration of project development for a preservation project can vary. However, a time estimate can be derived from the Resource Management System templates:
- Class 2 Preservation - 3.5 years
- Class 2 Overlay - 2 years
- Class 2 Overlay (pavement only) - 1.7 years

Construction begins after the construction contractor is chosen and ends with a completed preservation project. Construction adds another one to three years to the business process.

🎉
BRIDGE PROJECTS

Bridge projects improve the safety and condition of the state’s bridges, overpasses, tunnels and culverts (over 6 feet in length) beyond the scope of routine maintenance. These projects vary from complete replacements to rehabilitation or repair.

Bridge projects are divided into three classes based on required environmental work.

Class 1 - Requires preparation of an Environmental Impact Statement (EIS)
Class 2 - Categorically excluded from preparation of an EIS or EA, but still requires environmental analysis and approvals
Class 3 - Requires preparation of an Environmental Assessment (EA)

Bridge projects include:
- Bridge replacement
- Overpass screening
- Bridge rail end treatments
- Seismic retrofitting
- Painting
- Sound walls and earth retaining walls
- Improved railings
- Sign, signal and illumination supports

Bridge projects are identified by using the Bridge Management System and other technical databases to identify bridges that meet 12 separate deficiency parameters. The Bridge Engineering Section and the regions cooperatively agree on priorities based on bridge deficiencies and the need to maintain effective corridors for movement of vehicles and freight. The Bridge Engineering Section and region recommend which bridges should be repaired or replaced based on priorities and estimated costs.

Using a cost-to-recover method, the bridges are ranked in a single statewide list from most to least urgent to repair or replace. These are compared against projects scheduled in the current STIP, to identify projects that should be added to, deleted from or continued in the STIP. The Bridge Engineering Section makes a formal recommendation to the region manager and then to the OTC for approval.

In order to address entire routes that need several bridges repaired, ODOT switched to a corridor-based approach for the OTIA III bridge projects. Under this approach, OTIA III bridges are repaired in groups to ensure a comprehensive solution for the entire highway system and to maintain effective corridors for vehicle and freight movement.
Project development for in-house bridge projects begins with the assignment of a project in the STIP to a Project Leader and ends when the preservation project is let for bid and a contractor is selected.

Project development for outsourced bridge projects begins when a project in the STIP is assigned to the Advanced Contracting Unit. The bridge project development and the bridge construction are completed through Design-Build and Design-Bid-Build contracting.

NOTE: See Appendix B: Project Delivery Methods for additional information on Design-Build and Design-Bid-Build contracting.

Project development for OTIA III bridge projects begins when a project in the STIP is assigned to the OTIA III Bridge Delivery Unit. BDU uses a private sector program-management company to perform the contract administration and management. The bridge project development and the bridge construction are completed through Design-Build, Design-Bid-Build and CMGC contracting.

NOTE: See Appendix B: Project Delivery Methods for additional information on Design-Build, Design-Bid-Build and CMGC contracting.

The duration of project development for a bridge project can vary. However, a time estimate of the duration can be derived from the Resource Management System templates.

- Class 1 - 10 years
- Class 2 - 4 years
- Class 3 - 9.5 years

Construction begins after the construction contractor is chosen and ends with a completed bridge project. Construction adds another one to three years to the business process.

💡
**OPERATIONS PROJECTS**

Operations projects increase the efficiency of the highway system, leading to safer traffic operations and greater system reliability. There are currently four sub-programs under Operations:

- Signs, signals, and illumination (interconnected traffic signals, new traffic signals)
- Intelligent Transportation Systems (ramp meters, incident management, emergency response, variable message signs and traffic management operations centers)
- Transportation demand management (RideShare, van pool, park-n-ride programs)
- Slides and rockfalls (repairs)

Operations projects also observe the environmental work classifications. The duration of project development for an operations project can vary; a time estimate can be derived from the Resource Management System templates.

- **Class 2** - Categorically excluded from preparation of an EIS or EA, but still requires environmental analysis and approvals - 3.8 years
- **Class 3** - Requires preparation of an Environmental Assessment (EA) - (Currently, there is no template for Class 3 Operations Projects)

Operations projects are identified and chosen by the regions based on system conditions. For Intelligent Transportation System projects, the regions coordinate project selection with the Traffic Engineering and Operations Section. Recommended projects are approved by the State Traffic Engineer or Region Managers based on delegated authority, and then by the OTC.

Operations project development begins with the assignment of a project in the STIP to a Project Leader and ends when the project is let for bid and a construction contractor is chosen.

Construction begins after the construction contractor is chosen and ends with a completed operations project. Construction adds another one to three years to the business process.
SAFETY PROJECTS

Most of projects in the STIP yield a safety benefit, but there are some projects that fit into a separate safety category. There are four safety programs in this STIP category:

- Highway Safety Program
- Rail Crossing Improvement Program
- Safe Routes to School
- High Risk Rural Roads

These programs are designed to improve hazardous highway locations and corridors. They aim to reduce the number of fatal and serious injury crashes.

Safety projects are divided into two classes based on needed environmental work.

- Class 2 - Categorically excluded from preparation of an EIS or EA, but still requires environmental analysis and approvals.
- Class 3 - Requires preparation of an Environmental Assessment (EA).

Safety projects may include:
- Access management
- Roadway illumination, striping and signing
- Channeling traffic at intersections
- Roundabouts or traffic signals
- Continuous shoulder rumble strips
- Railroad crossing improvements

Each safety program has a unique process for including projects in the STIP. Highway Safety Program projects are chosen based on a benefit-cost ranking using the following criteria:

- Crash data
- Roadway files and traffic volumes
- Safety Priority Index System sites
- Safety Investment Program segments
- Rail Crossing Safety Improvement Program - the Rail Division works from a prioritized list to program STIP projects

Projects are recommended to region managers and the Rail Division manager and then move to the OTC for approval.

Safety Project Development begins with the assignment of a project in the STIP to a Project Leader and ends when the project is let for bid and a construction contractor is chosen.
The duration of project development for a safety project can vary. However, a time estimate of the duration can be derived from the Resource Management System templates:

- Class 2 - 3.8 years
- Class 3 - (Currently there is no template for Class 3 Safety Projects)

Safety Project Construction begins after the construction contractor is chosen and ends with a completed safety project. Construction adds another one to three years to the business process.
SPECIAL PROGRAMS

There are some programs included in the STIP that meet special needs or mandates. These special programs have funding that is more restrictive and specific, as directed by state or federal law. Projects funded by these programs may need as much as three years to develop and prepare for construction.

The Bicycle and Pedestrian Program provides state funds to cities and counties for walkways and bikeways on local streets and state highways. The Bicycle and Pedestrian staff in the Roadway Engineering Unit manages this program.

The Congestion Mitigation and Air Quality Program provides federal transportation funds for air quality improvement projects. The Geoenvironmental Section leads this program.

The Culvert Replacement and Fish Recovery Program provides ODOT’s required assistance, through the repair and replacement of culverts, to the Oregon Plan for Salmon and Watersheds. The Oregon Plan is the state’s action plan to improve water quality, restore fish runs and protect fish habitat. The Oregon Plan is coordinated by the Oregon Watershed Enhancement Board. The Geoenvironmental Section leads ODOT’s contributions to this program. Other participants include Roadway Engineering and Bridge Engineering.

The Emergency Relief Program provides federal emergency funding to state and local highway agencies for repairing unusually heavy damage to federal-aid highways by natural disasters or catastrophes. Regulatory and resource agencies lead this program with ODOT management.

The Environmental Program addresses specific environmental concerns, such as wetlands or species threatened by proposed transportation-related development. The Geoenvironmental Section manages this program.

The Immediate Opportunity Fund Program provides quick response to economic development opportunities, where an immediate commitment of funds is required to influence the location, relocation or retention of a major business in Oregon. The program also includes the option of building alternate mode projects that help reduce driving, and for new technologies that help improve commerce or safety. Financial Services manages this program with help from ODOT managers.

The Intelligent Transportation System Program is a collection of electronic real-time technologies used for:

Incident management
En-route driver information
Traffic control
Route guidance
Automatic truck weigh station clearance
Pre-trip travel information
Public transportation management

The Intelligent Transportation System Unit leads this program

The **Maintenance Program** maintains the highway system in good operating condition through projects such as:
- Paving repairs
- Bridge deck repairs
- Drainage work
- Stream channel maintenance and improvements
- Minor bridge, overpass and culvert repairs
- Roadside maintenance
- Sign, signal and lane striping repairs
- Slide and flood damage repairs
- Snow and ice removal

ODOT Maintenance manages this program

The **National Scenic Byways Program** provides federal funds to preserve and enhance designated scenic transportation corridors as tourist attractions. The Scenic Byway staff manages this program.

The **Public Lands Highways Discretionary Program** provides federal funds for projects that improve access to and through federal lands. The Federal Highway Administration administers the program and takes project applications once a year through ODOT. Any public agency can apply. Projects are selected by an advisory committee representing ODOT and other agencies. ODOT and federal officials manage this program.

The **Rail and Highway Crossing Program** provides safety improvements at public railroad crossings. All crossing projects are based on diagnostic team reviews or by an application for an Order from the Rail Division. ODOT Rail Division manages this program with help from federal officials and the Project Administration Unit of Right of Way.

The **Special City Allotment Program** provides state funding for road improvements to cities with populations of 5,000 or less. ODOT managers and Financial Services lead this program. This program uses a special formula to provide extra state and federal funds to counties with the lowest funding per road mile. ODOT managers and Financial Services manage this program.
The **Transportation Enhancement Program** provides federal funds for projects that enhance federal transportation, cultural, aesthetic or environmental aspects of the surface transportation system such as:

- Pedestrian and Bicycle Facilities
- Historic preservation
- Preservation of abandoned railway corridors
- Mitigation of water pollution from:
  - Highway runoff
  - Landscaping
  - Other scenic beautification

The Transportation Enhancement Program staff in the Local Government Section manages this program.

The **Transportation Growth Management Program** provides grants to promote growth management objectives through:

- Comprehensive plan amendments
- New or amended local ordinances
- Implementation strategies for plans or ordinances
- Plans with detailed lists of projects

The grants are provided to cities, counties, councils of government, special districts, and metropolitan planning organizations. ODOT managers and Transportation Planning Section lead this program in partnership with the Department of Land Conservation and Development.

The Public Transit Division (PTD) assists communities with the development of alternative transportation methods, including rideshare programs, park and ride lots, telecommuting programs, and information and incentive programs to encourage the use of alternatives to driving alone. By reducing the number of vehicles on the road, PTD helps us manage traffic volumes.

There are seven cities/regions in Oregon with such programs known as Transportation Options, or “TO” (formerly known as Transportation Demand Management or TDM). ODOT provides funding to the agencies that conduct these programs, including transit agencies, city governments, councils of governments and private non-profit agencies.

The **Transportation Safety Grant Program** provides federal funds to support state and local safety projects that reduce transportation-related crashes, injuries and deaths. The Transportation Safety Division manages the program.

NOTE: Further descriptions of many of these programs is available in the STIP Users’ Guide at:
ODOT’s project delivery system uses two primary project delivery methods and three primary project delivery processes to maximize the use of ODOT, local agency and industry resources in order to deliver the STIP and other legislatively approved projects.

**OUTSOURCE METHOD:**

Outsourcing integrates private sector resources into ODOT’s project delivery system, which increases the agency’s capacity to deliver more projects. Outsourcing is used in the Design-Build and Program Management delivery processes, and may be used in the traditional Design-Bid-Build process.

Management of outsourcing is coordinated through:
- ODOT project managers for fully outsourced projects; or
- Advanced Contracting Unit (ACU) and OTIA III Bridge Delivery Unit (BDU) staff for specific outsourced projects and programs; or
- Region Technical Centers for discipline specific outsourced portions of projects; and/or
- ODOT Project Managers for construction.

NOTE: All construction is outsourced either to a consultant or directly to a contractor.

**IN-HOUSE METHOD:**

The in-house method uses primarily ODOT resources to deliver the Project Development phase and provide construction management using the traditional design-bid-build process.

Management of in-house project development delivery is coordinated through ODOT Project Leaders (PLs). Region Technical Center staff delivers the design functions or oversee consultants delivering specific technical disciplines. Construction is overseen by an ODOT Project Manager.
**PROCESSES**

NOTE: For more information on construction contracting see: [http://www.odot.state.or.us/ffp/hwy/opd/contracting_odot.html](http://www.odot.state.or.us/ffp/hwy/opd/contracting_odot.html)

In the Design-Bid-Build process:

- ODOT’s project development phase uses in-house resources or may outsource the entire project design, major functions such as Preliminary Engineering, or specific technical disciplines to a consulting firm.
- Projects considered to be in-house are led by an ODOT Project Leader (PL) and may include consultants, managed by the Region Technical Center, on the project team when specific technical disciplines are contracted to a consulting firm.
- Projects considered to be fully outsourced are led by an ODOT project manager (PM).
- Construction management (engineering and construction contract administration) is either provided internally by an ODOT Project Manager or is outsourced, typically to the same consulting firm that provides the design work.
- Construction is bid and contracted separately.

In the Design-Build process:

- ODOT contracts with a firm or team of firms for engineering design and construction.
- The firm or team of firms works together to deliver the project, including design and construction.
- ODOT retains oversight of the Design-Build contract.

In the Program Management process:

- A related series of projects are integrated into a single program.
- The management of all the tasks for the related series of projects includes:
  - Organization
  - Implementation
  - Operational management
- The integration into a single program is designed to achieve well-defined strategic goals and objectives
- ODOT contracts with a firm that performs the contract administration and management of the program.

NOTE: An example of how ODOT is using The Program Management delivery method is the OTIA III Bridge Delivery Program.

During the program development stage of project delivery, before the STIP is approved, regions analyze the projected program volume and resource capacity to determine which projects will be fully out-sourced. Upon STIP approval, regions again analyze the projects identified for in-house delivery to determine if specific technical disciplines need to be outsourced.


**OTIA III BRIDGE PROJECTS**

In 2003, the Oregon Legislature passed House Bill 2041 which provided $1.3 billion for the replacement and repair of bridges on state highways over an eight to ten year period.

The projects in the OTIA III State Bridge Delivery Program were selected based on recommendations in the Economic and Bridge Options report and approved by the OTC.

Oversight of OTIA III State Bridge Delivery Program is provided by the OTIA III Bridge Delivery Unit (BDU) in ODOT’s Major Projects Branch. The program:

- Provides statewide management and delivery of accelerated bridge repair and replacement projects
- Partners with the private sector to develop and implement:
  - Program management
  - Execution of the program
  - Procedure plans and strategies
- Provides statewide highway corridor management through the integration of bridge repair and replacement projects with the STIP, ensuring that Oregon’s highways remain open and passable during construction

BDU contracts with a program management firm to perform the contract administration and management for the OTIA III bridge projects. The project development, as well as the bridge construction is completed through Design-Build and Design-Bid-Build contracting. The program management firm, Oregon Bridge Delivery Partners (OBDP) provides:

- Program management services
- Design management services
- Construction management services
In addition to being delivered by the program management firm, portions of the OTIA III State Bridge Program are delivered by the regions. The bridge projects are delivered through a variety of contracting methods, including:

- Design-Build
- Design-Bid-Build
- Construction Management/General Contractor

NOTE: Additional information on the OTIA III State Bridge Program is available at: http://egov.oregon.gov/ODOT/HWY/OTIA/bridge_delivery.shtml

**DElIVERY OF LOCAL AGENCY PROJECTS**

Locally sponsored projects are included in the STIP and can be funded by either state or federal funds.

ODOT must oversee the expenditure of these funds based on state and federal laws

ODOT’s Agreement with Association of Oregon Counties (AOC) and the League of Oregon Cities (LOC)

ODOT/FHWA Stewardship Agreement

NOTE: For more specific guidance on how local projects are delivered, see the Local Government Section’s LAG Manual.

Oversight of local agency projects can take several forms depending on how projects are funded.

**For state-funded projects:**

- The local agency is the contracting agency for both consultant and construction contracts
- ODOT’s level of involvement varies from full oversight to the minimal involvement of an audit, depending on project specifics

**For federally-funded projects,** oversight can be by:

- ODOT staff
- Certified local agencies
- Consultants

On federally funded projects, ODOT staff is involved in the scoping and programming of all:

- ODOT-delivered projects
- Consultant-delivered local agency projects
- Local-agency-delivered projects

Depending on the agreement or by request, ODOT staff may be involved in the scoping and programming of certified agency projects
Note: For federal funded construction projects, ODOT is always the contracting agency unless the project sponsor is a certified agency.

For **consultant-delivered projects**, a consultant is retained by:
- ODOT on behalf of the local agency through the state two-tier price agreements
- A certified local agency using its own approved processes

ODOT staff provides:
- Liaison services for the projects
- Project completeness review of the bid documents
- Bid and award services
- Contract administration
- Quality control/quality assurance functions when under construction

Local agency staff provides review and acceptance of consultant work products.

For **certified-agency-delivered projects**, local agencies sign an agreement with ODOT laying out the responsibilities of both parties for project development. Certified agencies:
- Develop the projects
- Bid, let and award the projects
- Oversee the construction of the projects
- ODOT audits the projects to ensure that they meet the qualification agreements.

For **ODOT-delivered projects**, ODOT staff, for a complete project or a portion of a project:
- Provide project development
- Let project bids
- Provide construction engineering

NOTE: This model is used infrequently. FHWA expects that ODOT provide oversight, not that ODOT does the work for the local agencies.

Additional information regarding local agency certification or consultant selection may be found on the Local Government Section web site, click on “Certification Program” at: [http://www.oregon.gov/ODOT/HWY/LGS/](http://www.oregon.gov/ODOT/HWY/LGS/)
"Procurement" means the act of purchasing, leasing, renting, or otherwise acquiring goods or services. "Procurement" includes each function and procedure undertaken or required to be undertaken by a contracting agency to enter into a public contract, administer a public contract and obtain the performance of a public contract under the Public Contracting Code. Reference ORS279A.010 (u).

Methods of contract administration vary, depending on the types of projects and depending on what phase the project is in. The only type of ODOT project that doesn’t involve administration of a contract is an “In-House” project. “In House” projects are projects that are designed and constructed entirely by internal ODOT staff.

**TYPES OF PROCUREMENT CONTRACTS FOR PROJECT DESIGN PHASE**

**Full Service**
"Full Service" Personal Service contracts are used when a project is totally outsourced to a consultant to provide design and construction oversight.

**Discipline Specific**
"Discipline Specific" contracts are used when hiring a consultant to provide services in specific discipline areas such as Environmental, Roadway Design, Geotechnical, etc.

**Project Specific**
"Project Specific" contracts are used when the Full Service and Discipline Specific contracts do not meet the needs of the project. A Request for Proposal (RFP) is prepared for solicitation of the project. This type of contract starts with the solicitation process, goes to evaluation and is then awarded to the best qualified consultant.
TYPES OF PROCUREMENT CONTRACTS FOR PROJECT CONSTRUCTION PHASE

Design-Build
Design-Build is a procurement method wherein ODOT contracts with a single entity with needed design and construction capability to perform the project, including all design, construction, and contract administration. The agency retains oversight of the Design-Build contract. This type of contracting can be advantageous in a number of instances, with one of its main strengths being its ability to effectively implement schedule critical projects.

The agency invites contracting entities to submit proposals for the design and construction of the project. The agency will perform approximately 15-30% of the initial design, and may provide some conceptual plans in order to accurately relay the intent of the contract. The design-build proposers then submit proposals for design, construction, time, and cost to perform all aspects of the project. The proposals are evaluated based on quality and price, and the Best Value proposer is awarded the contract. The agency then provides oversight during design and construction.

ODOT uses a two-step procurement process for design-build contracts.

**Step 1:** Request for Qualification (RFQ). ODOT submits an invitation for any interested construction/design entities to submit their Statements of Qualification through the release of the Request for Qualification (RFQ). Qualification is based on items such as past performance, legal, financial, experience, and backlog/capacity.

After all Statements of Qualification (SOQ’s) are evaluated by the agency, the number of proposers is narrowed down to the three highest scoring. This is termed the “Short-List.” The proposers on the short-list are invited to submit proposals for the project.

**Step 2:** Request for Proposal (RFP). The Request for Proposal (RFP) is issued to all entities on the short-list. The RFP contains the general provisions applicable to design-build, as well as the project-specific special provisions. The Instructions to preparers will direct the proposers on how to prepare and submit their proposals, and provides guidelines to how the proposals will be evaluated and scored.

All proposals contain three separate parts: The Quality Proposal, the Price Proposal, and the Diversity Plan.
Once the quality proposals have been evaluated and scored, the agency will hold a public price opening. All price proposals are opened, read, and the Apparent Best Value proposal is determined utilizing a weighted value formula which is identified in the RFP. Typical weighted values are 60% for the Quality Proposal and 40% for the Price Proposal.

The agency will then begin negotiations with the Apparent Best Value proposer. If successful, the agency then enters into a contract for the design and construction of the project. Contract Award and Notice-to-Proceed is issued and the project moves from the procurement phase into the active construction phase.

**Best Value Contracting**

Best Value Contracting (BVC) (also known as source selection) is a procurement method that presents an alternative to the traditional low-bid method of contracting. BVC awards projects to the contractor offering the best combination of price and other factors, instead of solely to the contractor with the lowest bid. When properly designed and administered, BVC rewards high-performance contractors who have trained, skilled workers and other essential qualifications for performing high quality projects in a safe, timely and cost-efficient manner.

BVC is typically used in acquisitions for high risk projects. Public safety, minimal disruption, unusual technical complexity coupled with a need for specialized construction/expertise and highly coordinated work scheduling are issues that may justify the need for a best value contracting approach.

Under the BVC process, bidding is open to all qualified contractors who submit detailed information on their technical qualifications and any other factors required, through a Request for Proposal (RFP) process. A team of skilled procurement personnel then review submittals provided by contractor/subcontractor teams and score the submitted projects, personnel and other required information in accordance with the scoring system contained in the project specifications.

When using BVC, the factors, crucial to the success of the project, need to be identified (e.g., A=Cost, B=Time, C=Qualifications, D=Approach, E=Sustainability, and so on). These factors can be anything that impact the success of the project and may include, but are not limited to: cost; project approach; time; relevant project experience; project management; personnel and subcontractors; disadvantaged business participation; safety initiative; law compliance; and, other criteria unique to the specific project.

FHWA and ODOT have entered into an agreement, Special Experimental Project No.14 ([SEP-14](#)), that allows the use of BVC on some projects under very specific
circumstances. In order to let any project using BVC, ODOT must demonstrate that the project has:

- unique technical requirements (for example, a project which requires specialized knowledge, skills and abilities from the contractor, like the St. John’s Bridge repair)
- substantial cost savings using the BVC approach
- an exemption from Oregon law requiring low-bid contracting (ORS 279C.335)

The BVC procurement method is very complex and requires additional staff time. Early in project development, a minimum of eight months and an additional $20,000 should be budgeted to account for the necessary extra staff work.

Ideally, BVC should begin at concept design or Type, Size and Location determination (TS&L); the scoring system, specifications, preliminary advertisement should be developed prior Advanced Plans; exemption and FHWA SEP-14 approval should be obtained by PS&E; and the scoring committee should be identified by advertisement.

When BVC is chosen for a project, direct consultation with FHWA and Office of Project Letting is required. The ODOT Director, Oregon Department of Justice, and FHWA must review and approve BVC for any project.

**Design-Build-Finance-Operate (DBFO) Transaction**

The most common type of Public-Private Partnership is called a Design-Build-Finance-Operate (DBFO) transaction, where the government grants a private sector firm the right to develop a new piece of public infrastructure. The private partner takes on full responsibility and risk for delivery and operation of the public project against pre-determined standards of performance established by ODOT. The private-sector partner is paid through the revenue stream generated by the project, which could take the form of a user charge (such as highway toll) or, in some cases, an annual government payment for performance (often called a “shadow toll” or “availability charge”). Any increases in the use charge or payment for performance are typically established in advance and regulated by a binding contract.

There are two phases to a Design-Build-Finance-Operate (DBFO) transaction:

**Part 1 - Pre-Development Phase:** The Pre-Development Phase of DBFO includes preparation of a pre-development plan, pre-development community outreach plan, financing plan, Implementation Plan and contribution towards ODOT activities related to CETAS, environmental approvals and public information, and related preliminary engineering. The Pre-development phase is governed by a “Pre-Development Agreement.” The Pre-Development Agreement also governs any compensation to the Developer during the Pre-Development Phase.
Part 2 - Implementation Phase: The Implementation Phase of DBFO may include the management and performance of remaining Project Development, acquisition, financing, design, construction, operations and maintenance. The Developer under the Implementation Phase may be the same entity as under the Pre-Development Phase, or may be an affiliated entity acceptable to ODOT. The Implementation Phase is governed by an “Implementation Agreement.”

The contract agreement for a DBFO transaction is often referred to as a concession contract or franchise contract, in which the government typically owns the infrastructure while the private-sector has a lease or a right (for a period of years) to use the infrastructure. The lease expires at the end of the contract agreement.

Benefits of Public-Private Partnerships:

Projects can be delivered years ahead of time, on time and within budget, thus shielding taxpayers from cost overruns and delays.

The private partner brings the efficiencies and innovations of the private sector to the job because funding is available up front, major infrastructure projects do not have to be phased in as funds become available, thus greatly reducing overall cost and time. Additionally, the design meets the performance standards at the lowest possible construction cost, and this can result in significant cost savings compared to traditional methods.

The Private Partner takes the responsibility and risk for interest rates and repayments, lifting that burden from taxpayers. The private partner is also responsible for all maintenance and operations in accordance with standards set by the government.

Users, rather than taxpayers, pay for what they use. Thus, those who benefit most from the project pay for it with tolls, thereby freeing up tax dollars for other projects and needs.

Incentives/Disincentives Contracting

Incentive/Disincentive (I/D) contracting is an industry standard practice typically used to maintain construction completion dates, encourage innovation in work sequencing and accelerate project delivery. The decision to accelerate a project involves the consideration of many factors, such as: political pressure; legal constraints, legislative priorities; community interests; project goals; context sensitivities; funding availability; staffing capacity; mobility issues; project complexity; social and physical environment; and, any other factors impacting scope, schedule and budget.
Some benefits to implementing I/D on projects are: reduced mobility impacts; ensured context sensitivity; improved public relations; reduced overall project costs; and, increased overall project delivery.

While the decision to use I/D provisions may be introduced at later stages, it is at the Project Initiation stage that the recommendation to use I/D/ will be most effective. I/D should be included when analyzing mobility considerations (see PD-16, Mobility Management).
ODOT Project Delivery Guide

APPENDIX D:

MANAGING THE PROJECT DEVELOPMENT PROCESS

To report problems or update information, please e-mail the PDG Webmaster

This appendix is organized into the following sections:

- PMI Project Management
- Participation and Partnering
- Quality Program for Design
- Change Management
- Risk Management
- Business Functions

**PMI PROJECT MANAGEMENT**

The Project Management Institute’s “A Guide to the Project Management Body of Knowledge” (PMBOK® Guide) defines a project as “a temporary endeavor undertaken to produce a unique outcome.” An ODOT capital project produces a unique physical improvement to the transportation system in Oregon. “Project” refers to the work that is performed. Projects produce products. A project is temporary because it has a definite beginning and a definite end. The outcome is unique because it differs in some distinguishing way from all similar products or services. For example, ODOT may be engaged in many highway maintenance projects, but each project is unique because it involves a unique location and work elements on a specific section of highway.

ODOT divides each project into “stages,” each of which produces a major product required by law. Collectively, these stages constitute the “project lifecycle.”

Because available resources are limited - compared to transportation needs - efficient use of tax dollars is essential. Project management helps us maintain efficiency by making sure that the right people complete the right tasks at the right time.
The PMBOK® Guide defines project management as “…the application of knowledge, skills, tools, and techniques to project activities in order to meet or exceed sponsors’ needs and expectations from a project.” Project management balances competing demands (scope, schedule, budget, quality, requirements, etc.) throughout the project lifecycle and involves the interaction of three elements:

- **People** — People perform the work and determine the success or failure of a project.
- **Processes** — Processes specify activities, products or deliverables required for the project and identify who will perform the work and when.
- **Tools** — predefined tools and techniques people use to manage the project.

For projects to be successful, the project team must understand and apply generally accepted project management techniques such as work breakdown structures, critical path analysis, and earned value. While they are necessary, these techniques alone are not sufficient for effective project management. Effective management of Oregon state highway projects requires that the project team understand and use five knowledge and skill sets:

- **Project management knowledge and practices** — these consist of the project lifecycle definition, five project management process groups, and nine project management knowledge areas.
- **State highway project standards and procedures** — the Project Delivery Guidebook and the Project Delivery Academy are the primary sources of these procedures.
- **Understanding of the project context** — the project team must understand the project in its social, biological, and physical environment. The team must understand how the project affects people and how people affect the project. This requires an understanding of the political, economic, demographic, educational, ethical, ethnic, religious, and other characteristics of the people who will be affected by the project or who have an interest in the project. Some team members must be familiar with applicable federal, state, and local laws and with the relevant portions of the budgets of the entities that are funding the project. Other team members must be knowledgeable about the flora, fauna, geology, and physical geography of the region around the project.
- **General management knowledge and practices** — these are needed for the management of any enterprise. They include strategic planning, health and safety practices, marketing, financial management and accounting, and personnel administration.
- **Human relations skills** — these are often called “soft skills,” including the management of relationships with others and the management of oneself. Soft skills include communication, teamwork, leadership, conflict management, negotiation, problem solving, motivation, delegation, personal time management, and stress management. Every person can improve his/her soft skills through training and practice.
It is not necessary for every team member to possess all these knowledge and skill sets. In fact, it is unlikely that any one person will have all of the knowledge and skill necessary for project success. Some knowledge and skill sets might not be needed on a particular project, but they should be available “on call” within ODOT or through consultants.

Each component involves a series of processes from five “process groups.” The PMBOK® Guide defines a process as “a series of actions bringing about a result.” Project processes fall into one of two categories:

- **Project management processes** — describe and organize the work of a project. The project management processes are associated by having an integrated purpose. The purpose is to initiate, plan, execute, monitor and control, and close a project.
- **Product-oriented processes** — specify and create the product. Product-oriented processes are defined by the project lifecycle (Program Development, Project Development, Award Construction Contract, and Construction Management).

### PARTICIPATION AND PARTNERING

All transportation projects with any possible impacts to the local community require a balanced and sensitive approach to planning, design, and construction. Projects must be supported by sound engineering and at the same time incorporate the needs of the jurisdictions involved. This is borne out again and again in a world where competing interests must reach consensus on how to address multiple social needs.

As might be expected, solutions to complex issues are rarely easy to achieve. There is no computer program that can accomplish the aims of public involvement, no formula for the “right” answer. The process of soliciting, listening, and responding to what citizens and customers have to say about a public agency’s plans for action can be a complicated, challenging, and often intimidating process for all involved. However, when it is done well and thoroughly, it is also a rewarding and meaningful experience that leads to better decisions.

Public involvement describes any two-way communication that seeks to involve, inform or gather input from the public and stakeholders. It’s the umbrella term to describe all levels of public information, education, relations, outreach, input, involvement and collaboration and it is at the core of Context Sensitive and Sustainable Solutions (CS3). Depending on the project, stakeholder participation efforts may involve various levels of public information.

Public involvement is:
Actively engaging a broad cross-section of stakeholders early in the decision-making process for planning, programs and/or projects
Accommodating the political climate and level of public impact
Building trust and credibility among all parties
Promoting the shared obligations of the decision-makers and public to define policy, goals, and objectives
Conducted using a variety of techniques, including public information materials, surveys, soliciting comments, consensus-building activities, meetings, workshops, advisory groups, etc.
Including elements suggested by the public when possible, and when not, thoroughly explaining why suggestions could not be incorporated in the final plans or designs

Public involvement is not:
Public information (alone)
Public relations (selling, persuading)
Public hearings
Political abandonment of decision-making responsibility
An end in itself

Core values of public involvement:
People should have a say in decisions about actions that may affect their lives
The public's contribution will influence our decisions
The process communicates the interests and serves the needs of all participants
The process seeks out and facilitates the involvement of those potentially affected.
The process involves participants in defining how they participate
The process provides participants with the information they need to participate in a meaningful way
The process communicates to participants how their input affected the decision

Why public and stakeholder participation is important.
There is general agreement that a well-conceived and well-implemented stakeholder participation plan can bring major benefits to the transportation planning process and lead to better decision outcomes. Benefits include the following:
Stakeholder ownership: By involving stakeholders in the assessment of needs and solutions and identifying troublesome issues early, stakeholder participation can promote citizen “ownership.” While most transportation projects have some negative effects, stakeholders are more willing to accept these when they accept the need for the policy or project, participate in developing the alternatives, and understand the technical and regulatory constraints. To the extent that stakeholders are involved in the decision, their support will be sustained over time.
Decisions that reflect community values: The stakeholder participation process involves consultation with many segments of the community. Because this is a collaborative process, decisions reflect community values.

Efficient implementation of transportation decisions: Decision makers understand the concerns of the public and can be more sensitive to those concerns in the implementation process. Incorporating stakeholder participation into transportation projects can reduce risk of litigation and avoid revisiting decisions, thus significantly reducing costs.

Enhanced agency credibility: The process of stakeholder participation often transforms agency culture by requiring agency decision makers to interact with their constituents. As a result, stakeholders develop a better understanding of agency operations, and agency officials have a better understanding of public thinking. This mutual education leads to better decisions and improved relations.

ODOT is committed to involving the public -- individuals, governments, and other organizations -- in planning and decision-making efforts that may affect them. This commitment is an outgrowth both of ODOT’s responsibility as a public agency to be accountable to those we serve and the recognition that better communication can lead to better decisions. The more we understand and address the needs and ideas of those affected, the better able we are to achieve our mission.

ODOT believes that by engaging the public through stakeholder participation we will:
- Improve the quality of ODOT decisions and relationships with stakeholders
- Increase the ease of constructing a project, helping to minimize costs and delays
- Help ODOT maintain credibility and legitimacy
- Improve our ability to anticipate stakeholder concerns and attitudes
- Promote informed consent, as better educated stakeholders not only understand transportation issues, but also know how and why ODOT makes its decisions

For every project a Public Involvement Plan is developed and modified throughout the lifecycle of the project. The Project Delivery Public Involvement Guidebook provides information on how to develop and implement a plan and also provides templates.

More detailed information can be found in Operational Notice 12 and in ODOT’s Public Involvement Resource Guide.

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.
QUALITY PROGRAM FOR DESIGN

BACKGROUND

ODOT initially implemented the Quality Program because increased construction caused the agency to re-examine its approach to design production: With a goal of limited agency staffing, ODOT moved toward greater use of consultants and witnessed a progression from partial design outsourcing to full project design outsourcing. At the same time, internal production design resources migrated from a central to a de-centralized structure. This combination of changes resulted in significant increases of the design volume delivered by non-central providers, with only about 20 to 30 percent delivered by ODOT employees at decentralized offices.

Responding to this rapid change in design sources, ODOT developed the Quality Program for Design to better document and manage the organization’s processes, offer useful quality tools, perform quality assurance reviews, and provide consistent guidance for continual improvement to ODOT’s design process.

DEFINITIONS

The following definitions were compiled in March 2009 through coordination with ODOT’s Quality Assurance Steering Team (QAST):

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
<th>Attributes and Examples</th>
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</thead>
</table>
| Quality                           | “Any character or characteristic which may make an object good or bad, commendable or reprehensible; the degree of excellence which a thing possesses.”  
  *Webster’s New World Dictionary 1987* | • Performance  
  • Conformance  
  • Reliability  
  • Durability  
  • Safety  
  *FTA Quality Assurance and Quality Control Guidelines, February 2002* |
| Quality Assurance (Quality Program) | All those planned and systematic actions necessary to provide adequate confidence that a structure system or component will perform satisfactorily in service.  
  *ODOT Quality Assurance Steering Team (2009)* | • Continued improvement  
  • Initiates efficiencies  
  • Tightens controls for accurately replicated products  
  • Implements corrective actions  
  • Involves: verification, training, end product testing etc...  
  *ODOT Quality Assurance Steering Team (2009)* |
| Quality Control                   | Routine operational activities designed to consistently produce a predictable result.  
  *ODOT Quality Assurance Steering Team (2009)* | • Ensures the work is completed accurately the first time  
  • Occurs concurrently with creation of the product |
| Quality Management | “That aspect of the overall management function that determines and implements the quality policy.”  
FTA Quality Assurance and Quality Control Guidelines, February 2002 | • Involves immediate review of completed activities for accuracy and completeness  
• Quality control findings (positive or negative) are documented  
Project Development Quality Program for Provider’s Guidebook, ODOT 2004 |
|-------------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Quality Management System | “The organization structure, responsibilities, procedures, processes, and resources for implementing quality management.”  
FTA Quality Assurance and Quality Control Guidelines, February 2002 | • Assures acceptable quality while executing on-time and on-budget  
FTA Quality Assurance and Quality Control Guidelines, February 2002 |
| Quality Manual(s) | “The typical form of the main document used in drawing up and implementing a quality management system. The quality manual should contain the quality policy and written procedures.”  
FTA Quality Assurance and Quality Control Guidelines, February 2002 | • Emphasizes effective management practices  
• Leadership - adopting a quality policy  
• Strategic Quality Plan - have vision for the future  
• Focus on customer satisfaction  
• Continuous improvement  
• Teamwork, employee participation  
• Training and development |
| Quality Oversight | ‘A dictionary definition of oversight is “watchful care; general supervision.”  
Quality oversight is conducted by an organization that is ultimately responsible for project quality where other organizations have been assigned QA and QC. Quality oversight can range from an informal process of keeping in touch with the QA organization to a second layer of QA activities, depending upon the circumstances.’  
FTA Quality Assurance and Quality Control Guidelines, February 2002 | • Contains the quality policy and written procedures  
• “In larger properties, there can be more than one quality manual. For example, there should be a corporate quality manual, divisional quality manuals, and specialized quality manuals for design, procurement, and construction activities, prepared by those responsible for the work.”  
FTA Quality Assurance and Quality Control Guidelines, February 2002 |

**Quality Management**
- Involves immediate review of completed activities for accuracy and completeness
- Quality control findings (positive or negative) are documented
  - *Project Development Quality Program for Provider's Guidebook, ODOT 2004*

**Quality Management System**
- Assures acceptable quality while executing on-time and on-budget
  - *FTA Quality Assurance and Quality Control Guidelines, February 2002*

**Quality Manual(s)**
- Emphasizes effective management practices
- Leadership - adopting a quality policy
- Strategic Quality Plan - have vision for the future
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- Contains the quality policy and written procedures
- “In larger properties, there can be more than one quality manual. For example, there should be a corporate quality manual, divisional quality manuals, and specialized quality manuals for design, procurement, and construction activities, prepared by those responsible for the work.”
  - *FTA Quality Assurance and Quality Control Guidelines, February 2002*
### WHAT IS QUALITY?

Quality is the result of several ongoing planned and deliberate processes. It requires many individuals performing appropriate activities at the correct time during design development. Quality does not just consist of a review after a work product is completed. It requires continuously performing all activities in conformance with ODOT requirements and expectations. Quality processes should ensure that the work is done correctly the first time.

Quality is achieved by:
- preventing problems or errors rather than reacting to them
- qualified individuals performing appropriate work functions
- providing proper training of personnel
- ensuring that all personnel remain current on the knowledge and skills needed for their position

Quality is controlled by:
- adequate planning, coordination, supervision, and technical direction

| Quality Plans | “A written description of intended actions to control and assure quality. The Quality Plan defines applicable quality policy for the project and applicable quality procedures. For new projects Quality Plans should be developed consistent with all other requirement of a grantee’s quality management system.” |
| Quality Policy | “The overall quality intentions and direction of an organization as regards quality, as formally expressed by top management.” |
| Total Quality Management (TQM) | “An organization-wide effort that involves everyone in the effort to improve performance. It makes quality a primary strategic objective. TQM is achieved through an integrated effort among personnel at all levels to increase customer satisfaction by continuously improving performance.” |

FTA Quality Assurance and Quality Control Guidelines, February 2002

- Established by Director of agency
- Justifies and supports the Quality Program
  ODOT Quality Assurance Steering Team

- Strong support at management level
- proper definition and a clear understanding of job requirements and procedures
- the use of appropriate, skilled personnel

Quality is verified through checking, reviewing, and monitoring work activities, with documentation by experienced, qualified individuals who are not directly responsible for performing the work.

A quality process must adhere to three basic principles:
1. Prevent errors from being introduced. At least as much effort should be dedicated to preventing errors as in finding the errors later.
2. Ensure that errors are detected and corrected as early as possible. Therefore, quality controls, which include checking and back-checking procedures, must be implemented during all phases of the work.
3. Eliminate the causes of the errors as well as the errors themselves. By removing the cause, the quality process has been improved.

**ODOT’S QUALITY PROGRAM FOR DESIGN**
ODOT’s Quality Program for Design ensures continuous high standard results. It provides tools and to manage provider performance for the benefit of all concerned, but especially the citizens of Oregon. The program seeks to meet Federal Highway Administration requirements as well as those of the Oregon Department of Justice.

Timely reviews are one method used to manage quality. ODOT’s Quality Program provides an objective review to ensure consistent quality and standards for all ODOT projects and to provide feedback to all design providers. It does not delay nor prevent project schedules from being met. It is a tool for providers (regions and consultants), and Quality staff to work together for ODOT’s success in delivering all transportation projects.

While quality control is performed for every project, quality assurance reviews occur only for a representative sampling of projects. While quality control is ongoing through the development of a project, a quality assurance review usually occurs after project development has been completed and is under construction. Occasionally, projects are reviewed even after construction has been completed. Conversely, a few projects receive a quality assurance review while still in the project development phase. This occurs only for those projects considered to be “high profile” or “high risk.” This type of project is yet to be defined.

ODOT’s Quality Program for Design uses defined methods of project selection to conduct reviews. These methods also ensure that all providers are scheduled for reviews on a consistent and fair basis. Reviews are performed based on objective and defined standards. These standards are documented both for reviewers and providers. Design providers are managed according to standard application of expectations and how reliably these are met.
QUALITY CONTROL PLANS
Every ODOT region has a quality control plan that needs to be used for in-house projects. All providers of engineering documents for ODOT must have a documented Quality Control plan in place. Sub-providers must either agree to comply with the provider’s quality control plan or have their own documented quality control plan in place.

To implement a quality control plan, the person assigned to oversee project quality:
- selects and assigns qualified professionals to perform the project tasks
- assigns qualified specialists to oversee all elements of the work and carry out a consistent, deliberate program of quality control
- instills a sense of ownership and personal concern felt by every person on the design team towards quality and continually improving the quality process
- makes certain that all personnel involved in performing the work have a clear understanding of the scope and intent of the overall project, and the appropriate design criteria and environmental concerns, in order to ensure that the work product meets or exceeds ODOT expectations
- makes certain that all personnel involved in performing the work are aware of the project schedule, and understand the importance of meeting intermediate deadlines as well as final completion dates
- makes certain that designers and reviewers have a clear understanding of the work requirements and of their responsibilities
- arranges for peer reviews to be conducted by qualified personnel outside of the design team
- documents the quality control process properly, to the degree appropriate to each project

QUALITY PROGRAM FOR DESIGN WEBSITE

CHANGE MANAGEMENT
Project change management encompasses many processes and approval thresholds throughout the Project Delivery Business Line. To effectively manage projects, the changes that occur with respect to scope, schedule and budget, must themselves be managed. The PL should work with the project team to develop a plan for identifying, quantifying, approving, and reporting changes.
Formalized change management needs to occur early in the project lifecycle; beginning at the Draft STIP milestone through construction completion. The Project Delivery process as per the Project Delivery Guidebook and Operational Notice PD-02 specifically, focus on change management processes that occur from STIP inclusion through PS&E submittal.

Once a project has been programmed into the STIP, communication for decisions resulting in substantial* changes to project scope, schedule and budget must be supported and communicated by a Project Development Change Request, and approved through the documented approval processes. A change request is required for any of the following:
- Scope modification
- Major schedule adjustment
- Budget adjustments
- New project request
- Cancellation of project

Change Requests can also be used to support submittal of STIP Amendments (or for other approval authorities as needed), for performance measurement and benchmarking and for communicating project delivery information with stakeholders, etc.

It is also important to note that a change request can involve a variety of approval requirements, beginning with any processes within the respective regions as well as those at the statewide level. For more information, see PD-02.

*Substantial change is defined in existing and established change management protocols as established by OTIA program(s) requirements, STIP amendment requirements, and additional region-specific requirements.

WHEN TO SUBMIT A CHANGE REQUEST (STATE PROJECTS)
Requirements on when to submit a change request depend on the applicable approval processes (i.e., OTIA I, II or STIP Amendment). In most cases, change management does not become effective until a project is approved in the final STIP. Once a project is approved in the final STIP, project changes should be tightly managed and documented to ensure compliance with STIP funding and delivery expectations as well as OTIA and other program requirements.

It should be recognized that changing the project may affect the project’s NEPA classification. Check with the REC before making the change.

WHEN TO SUBMIT A CHANGE REQUEST (LOCAL PROJECTS)
Following the STIP approval milestone, communication for decisions resulting in substantial changes to project scope, schedule and budget must be approved by
the program manager, MPO, or through the local authorization process, depending on the original process and the defined program procedures. Additional approval processes may be required, such as in cases where federal or OTIA funds are involved.

Requests for changes must be communicated by the local agency to the ODOT Local Agency Liaison, and must include all support material for submittal of STIP Amendments and additional program requests.

CHANGE REQUESTS & STAKEHOLDER PARTICIPATION

When important project decisions or changes are needed, the region manager, State Project Delivery Manager, or their delegated authorities will consult with affected stakeholders (including those who will receive or review the deliverables) prior to making the final Scope, Schedule and/or Budget decision or change. The communication should target these three objectives

- To inform those affected that a decision is pending
- To achieve a thorough understanding of the consequences of the decision
- To build consensus among the stakeholders on key decisions for each project

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.

AMENDMENTS TO THE STIP

The following chart provides guidelines on when amendments are required at the Highway Program Office (HPO) level, the Oregon Transportation Commission (OTC) level and the federal agency level. These requirements include approvals necessary for change requests for projects that are not yet in the STIP as well as projects that are in the STIP.
AMENDMENTS TO THE STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM

NOTE: If more than one type of change applies, use most restrictive approval process (i.e., if #6 also applies, change must go before OTC and Full Amendment must be done).

<table>
<thead>
<tr>
<th>Type of Change</th>
<th>OTC Approval</th>
<th>Region Manager/Statewide Program Manager Approval</th>
<th>Federal Action</th>
<th>Full Amendment</th>
<th>Administrative Amendment</th>
<th>Financial Plan/PCS Change Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>If it is NOT in the STIP:</td>
<td></td>
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</tr>
<tr>
<td>1. Adding a state or federally funded (FHWA or FTA) project, or a project that requires an action by FHWA or FTA (any funding source), to the STIP</td>
<td>☑️</td>
<td>Approval if in first 3 years</td>
<td>☑️</td>
<td></td>
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</tr>
<tr>
<td>2. Adding a regionally significant project to the STIP (any funding source)</td>
<td>☑️</td>
<td>Approval if in first 3 years</td>
<td>☑️</td>
<td></td>
<td></td>
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<tr>
<td>3. Adding a federally funded project that is funded with discretionary funds</td>
<td>☑️</td>
<td>Notification</td>
<td>☑️</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4. Adding a non-federally funded project that doesn't impact air quality conformity or require FHWA or FTA action to the STIP</td>
<td>☑️</td>
<td>Notification</td>
<td>☑️</td>
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</tbody>
</table>

If it is already in the STIP:

<table>
<thead>
<tr>
<th>Type of Change</th>
<th>OTC Approval</th>
<th>Region Manager/Statewide Program Manager Approval</th>
<th>Federal Action</th>
<th>Full Amendment</th>
<th>Administrative Amendment</th>
<th>Financial Plan/PCS Change Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Cancelling a state or federally funded project, or a project that requires an action by FHWA or FTA (any funding source)**</td>
<td>☑️</td>
<td>Approval if in first 3 years</td>
<td>☑️</td>
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<tr>
<td>6. Moving an approved project to a NEEDS status, releasing funding from the project</td>
<td>☑️</td>
<td>Approval if in first 3 years</td>
<td>☑️</td>
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<tr>
<td>7. Major change in scope of a project with state or federal funds, or a project with CMAQ funds that requires a new CMAQ eligibility finding, or a project that requires a new regional air quality conformity finding</td>
<td>☑️</td>
<td>Approval if in first 3 years</td>
<td>☑️</td>
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<tr>
<td>8. Changing Project Eligibility Criteria conditions on a project for which the OTC has applied conditions of approval</td>
<td>☑️</td>
<td>☑️</td>
<td>See NOTE about</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>9. Advancing a project or phase of a project from the fourth year to the first three years of the STIP***</td>
<td>☑️</td>
<td>Approval</td>
<td>☑️</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>10. Advancing an approved project or phase of a project from two or three into the current year of the STIP</td>
<td>☑️</td>
<td>Approval</td>
<td>☑️</td>
<td></td>
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</tr>
<tr>
<td>11. Skipping an approved project or phase of a project from the current year of the STIP to a later year</td>
<td>☑️</td>
<td>Notification</td>
<td>☑️</td>
<td></td>
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</tr>
<tr>
<td>12. Adding or deleting PE, ROW, or UR phase of an approved project in the first three years of the STIP</td>
<td>☑️</td>
<td>Notification</td>
<td>☑️</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>13. Combining two or more approved projects into one project</td>
<td>☑️</td>
<td>Notification</td>
<td>☑️</td>
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<tr>
<td>14. Splitting one approved project into two or more projects, or splitting part of an approved project into a new project</td>
<td>☑️</td>
<td>Notification</td>
<td>☑️</td>
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<tr>
<td>15. Breaking a new project out of an approved program-specific pool of funds (but not for future projects: see #14 above for new projects utilizing reserve funds), or adding funds to an existing project from any bucket or reserve</td>
<td>☑️</td>
<td>Notification</td>
<td>☑️</td>
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<tr>
<td>16. Minor technical corrections to make the printed STIP consistent with prior approvals (such as typographical errors or missing data)</td>
<td>☑️</td>
<td>Notification</td>
<td>☑️</td>
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<tr>
<td>17. Changing name of project (valid reasons are combining or splitting project, changing scope, or to comply with ODOT naming convention)</td>
<td>☑️</td>
<td>Notification</td>
<td>☑️</td>
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<tr>
<td>18. Adding FHWA funds to an approved FTA-funded project</td>
<td>☑️</td>
<td>Notification</td>
<td>☑️</td>
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<tr>
<td>19. Increasing or decreasing the federal funds of an FTA-funded project, without affecting fiscal constraint of the STIP</td>
<td>☑️</td>
<td>Notification</td>
<td>☑️</td>
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<td></td>
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<tr>
<td>20. Increasing or decreasing the federal funds of an FHWA-funded or state-funded project, without affecting fiscal constraint of the STIP</td>
<td>☑️</td>
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</tbody>
</table>

*Funds from 49 USC Chapter 53 or 23 USC, excluding State Planning & Research funds, Metropolitan Planning funds, and most Emergency Relief funds.

**If a program has been deleted at certain authority levels, OTC approval may not be required.

***The federally approved STIP contains plans one to three; year four is informational only.

Revised 11/18/2005
**Highway Program Office Change Form**

For STIP amendment change requests involving projects with federal funding or projects that require OTC approval, the [STIP Amendment Request Form](#) is completed.

**Financial Plan (FP) Changes**

All financial plan change requests are made directly by e-mail or phone to HPO. The Financial Plan is used to track the regional and statewide funding allocations for each fiscal year. As regional personnel realize the need for additional or changed funding, requests are submitted to the regional STIP Coordinator who then finalizes the requests and submits them to HPO. HPO is tasked with ensuring each region stays within its overall funding targets as well as ensuring that, statewide, all programs and targets balance to available revenue.

HPO will communicate the change requests to all affected parties, in cases where a change request is submitted as a STIP Amendment that also impacts the Financial Plan or other approval processes.

**Submitting a Change Request for OTIA I/II/III Modernization Projects**

If a change to the project name, scope, schedule, budget, or other aspect of an OTIA project is needed, an [OTIA project change request form](#) will be submitted by the region. This includes all projects regardless of delivery method or source (e.g., local, outsourced, etc.).

All change requests require the approval of the appropriate region manager prior to submission to the OTIA program manager. At that point, the OTIA Program Manager will determine if the request can be administratively approved, or if it must go to the OTIA Steering group (OSG).

If the change is significant and requires OSG action, the OTIA Administrative Manager will coordinate development of a formal OSG change request memo with the requesting region. The Region Manager, or designee, will submit all pertinent documentation to the OTIA Program Manager, including the following:

- Project key number and name
- Project limits/scope
- Type of change request: scope, schedule, budget, other
- Summary of change request
- Why is the change needed?
- If additional funds are requested, what is the region’s priority for additional funds from the OTIA funds balance?
- What alternatives exist if the request is not approved?
- What will be the consequences if the request is not approved?
If the change involves a scope change, a detailed map should be provided that clearly identifies the scope change.

**IMPORTANT:** If the request is for a project change in scope, to start a new project, or to cancel a current project, the request must receive final approval from the OTC.

The following change requests can be approved by the Statewide Project Delivery Manager:
- Name changes that do not adjust the approved scope
- Schedule changes that do not significantly change the construction season or the year the project will be completed
- The transfer of funds within the overall project budget

Approval by the OSG is required for all other project changes including any scope change, significant schedule delays, or requests for additional funds beyond that identified in Operational Notice #2 on Fund Management or in Operation Notice #3. Any such change request will be scheduled for review at a meeting of the OSG or the OTIA Core Team.

The following flowchart helps illustrate the Highway Project Change Management Process for the primary approval mechanisms including OTIA program management, STIP amendment and financial plan management.

More info is available at:
http://www.oregon.gov/ODOT/HWY/PDU/change_management.shtml
RISK MANAGEMENT

PURPOSE
A risk is any factor that may potentially interfere with successful completion of the project. Risk management is the implementation of control systems and facilities that minimize an organization’s exposure to loss through the careful management of those risks. The purpose of risk management is to provide a systematic, disciplined approach to identifying, measuring, and controlling events within a project to minimize loss.

Risk is a fundamental ingredient of opportunity and is inherent in every project. It is the possibility, not the certainty, of bearing a loss. The loss could be anything from diminished quality of an end product to increased cost, missed deadlines, or project failure. Risk is not something to fear, but something to manage. Successful project teams deal with risk by recognizing and minimizing uncertainty and by proactively addressing each identified risk.

Every project a team undertakes involves risk. Therefore, managing risk successfully is crucial to the success of the project.

PRINCIPLES OF SUCCESSFUL RISK MANAGEMENT
Risk management should be a part of every project. Risk involves not only technology, but also people and processes. Successful risk management includes:

- Assessing risks continuously throughout the project life cycle. Successful risk management is more than just identifying risk factors at the start of the project; it requires the constant assessment of risk throughout the life of the project. New risks are revealed during the life of a project, and previously identified risks change by becoming either more or less probable or severe. Ongoing risk management of a project introduces resilience to change.
- Using risk-based decision making. Successful risk management requires that all decisions be made within the context of their risk - the highest risk items are dealt with first.
- Establishing some level of formality. Successful risk management requires a process that is understood and used by the team. A reasonable amount of discipline and consistency is required. If the process of managing risk is too difficult, risk management will not occur. If the process is not structured, it will not be useful.
- Covering all key people and processes. Successful risk management requires the project team to look for risk everywhere in the project. The project team must ensure that the key persons and processes are covered, or it is likely that significant risk will be missed.
Treating risk identification as a positive. For risk management to be effective, project team members must be willing to identify risk without fear of punishment or criticism. The identification of a risk means that there is one less surprise waiting for an unsuspecting project team. When risk is identified, the project team can then prepare for the risk and perhaps prevent it from occurring altogether.

**BUSINESS FUNCTIONS**

The business functions are an ongoing series of related tasks for a project. The following outlines the purpose, major steps and importance of business functions, including intergovernmental agreements and reviews.

**Project Delivery Procurement: Project Agreements**

Project agreements, such as intergovernmental agreements, interstate agreements, and tribal agreements, help determine and settle project obligations, including but not limited to:

- Addressing funding and cost responsibilities for planning, project development, right of way acquisition, construction and maintenance
- Determining long-term maintenance responsibility of a facility, such as a traffic signal or landscaping
- Providing guidance on federally-funded non-highway projects for local governments
- Granting permission to work on or across right of way belonging to other agencies providing for temporary or permanent street closures (redundant
- Obtaining approval from cities for required grade changes
- Transferring jurisdiction from one agency to another or abandoning a section of roadway
- Providing additional support for permits
- Establishing specific criteria for local land use and access management decisions affecting a transportation facility

**Identifying Issues**

The Project Leader works with the project team and region management to identify issues that may require a formal written agreement with another agency, such as:

- City
- County
- Metropolitan Planning Organization
Other state agencies
Federal agencies
Utility Districts
Tribes
Special districts and other governmental agencies

**Timing for an Agreement**
The project agreement process must begin early in the program development stage and will continue through the project delivery stage, until all issues are resolved. Project agreements must be signed before beginning any work outlined in the agreement. Ideally project agreements are in place before starting preliminary engineering or right of way acquisitions.

**Processing Project Agreements**
The Project Leader:
- Provides a complete package of information to the designated region agreement specialist
- Includes the necessary agreements in the project schedule
- Tracks the agreement status
- Ensures that the agreement is signed before beginning any work outlined in the agreement
PERFORMANCE MANAGEMENT SYSTEM

In October 2003, ODOT’s Highway Division underwent a fundamental change from an organization that produced engineering products to one that manages engineering resources and projects. This change shifted the focus from short-term project delivery to assuming long-term management responsibilities.

As part of the realignment, the Highway Division was directed to implement a Performance Management System. The HPO Performance, Resource, and Data Management Unit was created to develop a comprehensive performance management, position management, and resource leveling program.

The performance management system measures the major goals of the Highway Division such as: timeliness, cost control, safety, mobility and customer satisfaction, and in turn assists the Highway Division to become more efficient in reaching short-term and long-term goals.

The system provides a clear indication of progress towards strategic objectives, as well as feedback that helps Highway Division managers and staff identify needed management actions or course corrections. Though portions of the performance management system are useful for providing external accountability, the system is primarily intended as a guidance tool used by Highway Division managers and staff.

A simple high-level model for the performance management system was developed. This model recognizes the need to address two distinct types of questions:

- Is the division “doing the right things”?
- Is the division “doing things right”?

Doing the right things means allocating resources in the best possible way, and doing the mix of work that strikes the right balance of addressing the needs for preservation, safety, mobility, and other factors. Understanding whether the division is doing the right things means measuring whether desired end results are being achieved and adjusting plans, programs, and budgets accordingly.

Doing things right means being efficient and effective - having the right people deployed in the best way, providing training and support, and having solid and efficient processes in place. Understanding whether the division is “doing things right” involves measuring production (output); efficiency (ratio of inputs to outputs) quality; pinpointing causal factors and addressing staffing, management, process, CS3 considerations, IT support and other dimensions of organizational capacity.

Here is a model for development of the Highway Division performance management system. It shows the relationships between organizational capacity, functions performed and end results.
The desired end-results of Highway Division activities are shown at the bottom of this model, reflecting the Highway Division’s role in achieving ODOT’s mission of “providing a safe, efficient transportation system that supports economic opportunity and livable communities for Oregonians.”

The middle box indicates that in order to achieve these desired outcomes, the Highway Division must undertake its core functions - planning, delivering, maintaining and operating the highway system. The Division has to demonstrate accountability for choices that are made (plans, programs and activity-based budgets), and then deliver on the promises that have been made in a high-quality and efficient manner.

The top box indicates that the Highway Division must have the organizational capacity to develop good plans and deliver on them. This entails the capacity to: attract and retain talented staff; provide managers and staff with the information they need to make good choices; understand future needs and set priorities; and ensure prudent and best use of financial resources.

Performance measures need to reflect three key levels: results being achieved; output, efficiency and quality of work; and capacity to produce quality work in an efficient manner. Such measurements allow the division to better understand what actions are required to better achieve its mission.

The Highway Division supports the ODOT mission by planning, developing, implementing, maintaining and operating a safe and efficient highway system in context with the built and natural environment that provides economic opportunities for Oregonians.
The table below provides a set of goals and desired outcomes for the Highway Division that is in alignment with Highway Division’s mission, and highlight the Highway Division’s function and role in achieving ODOT’s mission.

<table>
<thead>
<tr>
<th>Goal</th>
<th>Desired Outcomes</th>
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| I. Safety. Enhance the Safety of the Highway System | 1. Reduced incidence of crashes, fatalities and injuries related to roadway design, condition or operations.  
2. Reduced work-zone related injuries to motorists and highway workers                                                                                       |
| II. Preservation. Preserve and Maintain the Highway System | 1. Highway system condition that allows for safe and efficient movement of people and goods  
2. Asset condition maintained at sustainable levels  
3. Maintenance and operations activities on-budget and at targeted levels of service  
4. Reduction of delay related to construction, incidents, events and weather to the maximum extent possible  
5. Protection of the functional integrity of the highway system while providing for access consistent with established system designations |
| III. Livability. Enhance Oregon’s Livability Through Highway System Improvements | 1. Maintained or reduced travel times and delays between communities in key freight corridors  
2. Efficient highway system operation from the user perspective, considering linkages with other transportation system components and services  
3. Enhanced scenic qualities of byways and tourist routes.  
4. Environmental requirements and commitments met  
5. Near-term construction-related benefits to the Oregon economy  
6. Long-term benefits to the Oregon economy from highway system investments                                                                                   |
| IV. Customer Satisfaction. Meet or Exceed Customer Expectations | 1. Positive customer and stakeholder perceptions of ODOT planning, delivery, maintenance and operations                                                                 |
| V. Efficiency. Employ Innovative, Efficient and Cost-Effective Practices | 1. Projects on-time, on-budget, on-scope  
2. High quality work delivered efficiently  
3. Diverse, talented, well trained, guided and motivated workforce  
4. Timely and accurate information provided to support management decisions                                                                                   |
Achievement of Highway Division goals contributes to ODOT’s overall success. Goal success is determined by the extent to which the desired outcomes have been accomplished.

Leading and Lagging performance measures were created to track each outcome. Leading measures were created to provide information that helps managers take corrective action. Lagging measures reflect the desired outcomes, and are used to assess whether efforts to improve performance have been successful.

To assess whether or not the performance management system is successful, the Highway Division has implemented a Quarterly Business Review (QBR). The QBR is a forum for Highway Division staff to share and discuss performance oriented information that will help the division achieve its mission, goals, and outcomes.

The QBR is directly connected to and supported by the Highway Division’s Performance Management System. The QBR, in itself, is a Feedback Loop. The feedback loop is crucial in the management of performance because it ties changes made to business practices and processes directly to performance.

With a feedback loop in place, change management is based on performance management. Vice versa, any changes made to the Highway Division’s business practices and processes will ultimately change components of the performance management system. This can include but is not limited to: measures added and deleted; measures redefined; and further analysis of data and data sources. With the close of the feedback loop, business practices and processes will continue moving in a cyclical motion.

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.
This appendix is divided into the following sections:

- **Operational Notices and Directives**
- **Project Delivery Guidebooks and Manuals**
- **Technical Guidance and Manuals**
- **Additional Resources**
- **Project Delivery Systems**

**OPERATIONAL NOTICES AND DIRECTIVES**

**Operational Notices**

Operational Notices from ODOT's Project Delivery Leadership Team provide guidance for project delivery. They include:

- PDLT-01: Project Delivery Business Line Leadership and Decision-making Structure
- PDLT-02: Project Development Decision Structure
- PDLT-03: Access Management in the Project Development/Delivery Process
- PDLT-03 (A): Access Management on Pavement Preservation Projects
- PDLT-04: Environmental Guidance
- PDLT-05: Water Quality Mitigation
- PDLT-06: Fundamentals of Engineering (FE) and Professional Engineering (PE) Support Guidelines
- PDLT-07: Operational Policy between PS&E Submittal and Bid Opening
- PDLT-08: Operational Policy between Bid Opening and Contract Award
- PDLT-10: Disposal of Excess Excavation Materials
- PDLT-12: Project Communication Plans
- PDLT-13: Resourcing Pavement Designs for Preservation Projects
- PDLT-14: Guidelines for Determining Project Delivery Method.
- PDLT-15: Project Risk Assessment Insurance
- PDLT-16: Highway Mobility
- PDLT-17: Contracting Incentives/Disincentives
NOTE: Other Operational Notices will be added as appropriate. To see all of the Operational Notices visit:  [http://www.oregon.gov/ODOT/HWY/PDU/operational_notices.shtml](http://www.oregon.gov/ODOT/HWY/PDU/operational_notices.shtml)

Highway Division Directives and Transportation Operation Directives  
Highway Division Directives and Transportation Operation Directives are to be used as operation guidance and carry the weight of policy for Highway Division staff. Their purpose is to establish a system of written communication for Highway Division. The Highway Division Deputy Director approves all directives and notices. The Project Delivery Unit retains and publishes copies to the Website.

A directive is a written statement indicating how the division will respond to a significant issue. Directives pertain to all areas of the division and may provide additional restrictions on current department policies but may not be less restrictive.

A written statement used to communicate a clarification or change to an existing division manual or guidebook or direction specific to a program area. Notices used to clarify or change a manual or guidebook are temporary in nature until the manual or guidebook is updated and reprinted either in whole or in part.

The division will use a collaborative approach to developing and reviewing directives and notices. The collaborative process will include appropriate staff from throughout the division coordinated by the division manager initiating the directive or notice.

See Directive ORG 01-01: Written Communication for additional information

Highway Division Directives 
Directive ORG 01-02: Formation and Operation of the Area Commissions on Transportation (ACTs)-10/01/03-[Directive ORG 01-02](#)

Transportation Operations Directives  
Directive ORG 01-01: Written Communication -04/20/00-[Directive ORG 01-01](#)  
Directive PER 11-01: Highway Division Position Management-01/01/03-[Directive PER 11-01](#)
PROJECT DELIVERY GUIDEBOOKS AND MANUALS

Context Sensitive and Sustainable Solutions (CS³) Guidebook

Decision-Making Expectations and Guidebook

Environmental Procedures Manual, Volume 1

Highway Design Manual

Highway Mobility Operations Manual
Technical Guidance Documents provide technical guidance direction and/or advice on the proper and accepted policies, processes and procedures to be followed when conducting engineering and other technical business on behalf of ODOT. Technical Guidance produced through Technical Services carries the authority of the TS Manager/Chief Engineer or the authority of a specific TS section manager.

The three types of guidance are technical directives, bulletins or advisories. Directives and bulletins are mandatory. Advisories provide advice on accepted practices and procedures. For more information on TS technical guidance practices, see the directive “TSB06-01(D) Technical Guidance Practices” on the web site listed below:

For a comprehensive list of current and approved technical guidance, see: http://www.oregon.gov/ODOT/HWY/TECHSERV/technicalguidance.shtml
ADDITIONAL PROJECT DELIVERY RESOURCES

Access Management:  http://www.oregon.gov/ODOT/HWY/ACCESSMGT/

Access Management Manual:  Chapter 3 is Project Delivery - Access Management Subteams, at:
http://www.oregon.gov/ODOT/HWY/ACCESSMGT/accessmanagementmanual.shtml#Volume_1

Alphabetical Web site listing:
http://www.oregon.gov/ODOT/subject_index.shtml#top

Bridge Standards and Manuals:

Civil Rights:  http://www.oregon.gov/ODOT/CS/CIVILRIGHTS/
  • Title VI and Environmental Justice
  • Labor Compliance
  • Emerging Small Business (ESB)
  • Disadvantaged Business Enterprise (DBE)
  • Equal Employment Opportunity (EEO)
  • On-the-Job Training (OJT)
  • Workforce Development Program (WDP)

Construction Section Manuals and Guidelines:

Consultant Portal: http://www.odot.state.or.us/ffp/hwy/opd/consultant.html

Decision Making Expectations and Guidebook:
http://intranet.odot.state.or.us/techserv/index.htm
(NOTE:  This is an internal ODOT resource.)

Geo-Environmental e-Guide:
http://www.oregon.gov/ODOT/HWY/GEOENVIRONMENTAL/e_guide.shtml

Geo-Environmental Manuals, Procedures and Practices:

Geometronics:  http://www.oregon.gov/ODOT/HWY/GEOMETRONICS/

FACS-STIP Tool (Web Map and Data-to-Go):
FHWA Planning and Environmental Linkages:  

Local Government Section’s LAG Manual:  
Local Government Section’s Quick Reference Guide:  

Maps/GIS:  http://www.oregon.gov/ODOT/TD/  
and for NON-ODOT computers: http://keiko.odot.state.or.us

ODOT Transportation Development Planning Section:  

Office of Pre-letting manuals, guides and forms:  
http://www.oregon.gov/ODOT/HWY/OPL/manuals_forms_etc.shtml#top

Office of Project Letting manuals and forms:  
http://www.oregon.gov/ODOT/HWY/OPL/manuals_forms_etc.shtml


Planning Tools:  
http://intranet.odot.state.or.us/tp/tools.htm

Practical Design guidance:  
http://transnet.oregon.gov/ODOTINTRA/HWY/TECHSERV/practical_design.shtml

Project Development Change Management:  
http://www.oregon.gov/ODOT/HWY/PDU/change_management.shtml

Project Leader Resources:  
http://www.oregon.gov/ODOT/HWY/PDU/project_leaders.shtml

Project Scoping:  http://www.oregon.gov/ODOT/HWY/PDU/project_scoping.shtml

Procurement, Purchasing and Contract Management:  
http://www.oregon.gov/ODOT/CS/OPO/

Rail Division:  http://www.oregon.gov/ODOT/RAIL/

ODOT Right of Way Manual:  
http://www.oregon.gov/ODOT/HWY/ROW/rowmanual.shtml
Roadway Engineering - Designer Tools:

Specifications and Standards:

Standard Drawings:

Standard Specifications:


Technical Services Guidance Documents (Directives, Bulletins, and Advisories):
http://www.oregon.gov/ODOT/HWY/TECHSERV/technicalguidance.shtml

Technical Services Manuals (Comprehensive list with links):
http://www.oregon.gov/ODOT/HWY/TECHSERV/alphamanuals.shtml

Title VI and Environmental Justice:


Transportation Data:  http://www.oregon.gov/ODOT/TD/TDATA/
and for NON-ODOT computers:  https://keiko.odot.state.or.us

PROJECT DELIVERY SYSTEMS

ODOT maintains a variety of integrated information and project delivery systems that contain the appropriate tools and information necessary for successful project management and delivery, including:

- Project Delivery Work Planning (PDWP)
- Project Control System (PCS)
- Resource Management System (RMS)
- Project Tracking Tool (PTT)
- Trns*port Estimator
- TransGIS
- Oregon Transportation Management System (OTMS)
- Bridge Management System (BMS)
- Congestion Management System (CMS)
- Freight and Intermodal Management System (FIMS)
- Pavement Management System (PMS)
- Public Transportation Management System (PTMS)
- Safety Management System
- Traffic Monitoring System for Highways (TMS-H)
- Central Highway Approach/Maintenance Permits System (CHAMPS)
- Agreements Database
- Mobility Tracking System
- Contractor Payment System

Project Delivery Work Planning (PDWP)

Project Delivery Work Planning (PDWP) is used to assist ODOT staff in defining the scope of ODOT transportation projects. It allows project team members to capture information related to the scope of transportation projects and save it in a centralized database, where it can be easily accessed by anyone within ODOT who is authorized to access PDWP.

PDWP is used to create the “electronic prospectus” (Prospectus Parts 1, 2, and 3), which allows project teams to document the scope of a project and communicate with each other real time. Projects in the database can be searched by region, district, county, area, highway, or project leader.

Access to or training on PDWP can be obtained by contacting the PDWP System Administrator at 503-986-3893.

A copy of the PDWP User’s Guide and directions on how to use may be found on the following site:

http://www.oregon.gov/ODOT/HWY/PDU/work_planning.shtml
**Project Control System (PCS)**

Project Control System (PCS) is a mainframe database used for project identification, STIP development and overall project tracking. It provides information on project location, scheduling (limited), cost estimates and funding.

The system is a communication tool used among work units involved in project development and construction. It is also used by ODOT regions, managers and staff to communicate with the Oregon Transportation Commission, FHWA, legislators and the public about upcoming projects. The system interacts with Microsoft Project, Contractor Payments System, Trns*port, Cash Project / Cash Flow and the Legislative Reporting system.

Access is limited to ODOT employees. Consultants and local agencies may obtain the information via their ODOT counterparts (i.e., LALs and CPMs). To maintain quality and consistency of data, only a few trained employees have direct updating authority. Most users have “Read Only” authority and PCS information is accessed via the PCS Weekly/Monthly Reports and other external reporting tools.

If you need access to or training on PCS, contact the PCS System Administrator at 503-986-3296.

**Resource Management System (RMS)**

Resource Management System (RMS) is built on the foundation of MS Project Professional 2003 and MS Project Server 2003. This application is used by Project Leaders, Project Managers, and Local Agency Liaisons in the development and maintenance of schedules for STIP projects in the Design phase. In addition, the system is used by region tech centers and ODOT headquarters management staff to resource project schedule activities for their disciplines.

Project Leaders, project managers, and local agency liaisons are responsible for day-to-day project management tasks such as creating and maintaining project schedule, and coordinating with resource managers and team members. These staff uses Microsoft Project Professional and Microsoft Project Web Access to do the following:
- Customize a template to fit a particular project at Draft STIP
- Publish the schedule to MS Project Server
- Update the project via MS Project Professional and republish the updated version to MS Project Server

**Resource managers** are responsible for managing resources and the skills and capabilities that are associated with those resources. Resource managers work closely with project leaders to ensure that projects are staffed with the right set of resources and that those resources have the skills required for the successful completion of tasks.
Resource managers include technical center managers, technical center unit managers and leads, as well as various non-regional managers and leads at headquarters (i.e., Technical Services, Rail, and the Transportation Planning and Analysis (TPAU)). Resource managers use Microsoft Project Professional and Microsoft Project Web Access to do the following:

- Identify the right resources for a project team
- Build project teams by using resources that belong to the Enterprise Resource Pool
- Track resource allocation and resource usage to minimize over and under-use
- Perform in-depth reporting and analysis against completed projects, in-progress projects, and resource availability

**Team members** are responsible for the tasks scheduled in one or more projects to which they are assigned. As a result, team members need to report actual work against project tasks, maintain and reply to status reports and status report requests from project leaders and team leads, and participate in the project development process. Team members use Microsoft Project Web Access to do the following:

- Review and update task assignments
- Respond to a project leader’s request for status
- Send task updates at regular intervals
- Collaborate on projects by using the Documents, Issues, and Risks features in “Project Workspaces”

Internal ODOT employees who need access to RMS should contact the RMS System Administrator at 503-986-3533.

**Project Tracking Tool**
The Project Tracking Tool (PTT) pulls the most frequently used data from PCS, Microsoft Project, TEAMS, CPS, and PDWP and ties it all together in one easy to use tool.

Some of the current users (and uses) of this tool:

- Region managers and project delivery managers may access a general overview of late and on-time projects for their region. They can obtain project schedule and budget details.
- Technical center managers may run custom reports to manage project budgets, let dates, and other scheduling information. They may find out what projects are upcoming and when.
- Area managers can view all projects currently assigned to them. They can view the status of projects by project leader and project manager. Custom reports provide information on the design phase and the construction phase. Area Managers can view project comments entered by their staff.
- Project leaders, project managers, and everyone can find the scope, schedule and budget details for active projects. Identify errors in the corporate data,
and work with the STIP coordinator or other responsible party to correct them.

Reality Check:
This tool only reports on active projects.
This tool pulls directly from corporate data sources, with little filtering or validation. For this reason the tool will provide a good yardstick for gauging project performance, but without a detailed knowledge of the region or project you won’t have a complete picture.
The tool is updated weekly. Currently Regions 2 and 5 use custom reports.
This tool does not allow direct data entry into corporate systems. Users must continue to update the primary source data systems in order to provide more accurate information for the PTT and other reporting systems.

TRNS*PORT Estimator
Trns*port Estimator was developed for transportation agencies and their design consultants. Estimator is an interactive, stand-alone, Windows-based cost estimation system for highway construction. It features a modern and intuitive graphical user interface that simplifies and streamlines the preparation of detailed estimates.

Estimator interfaces with various computer-aided design (CAD) systems to obtain item quantity information for deriving unit prices and therefore offering a complete solution for the design and estimation teams. It stores master data for producing estimates in one or more catalog files. The catalog files include standard construction items, wages, production rates, historical item price estimation data, and equipment and material costs.

All Trns*port Estimator users that have access to ODOT computers much have permission to use Trns*port Estimator. In addition, consultants and local agencies must have ODOT user IDs.

Consultants and local agencies that do not want to purchase the Trns*port Estimator software can use ODOT's facilities to prepare project bid schedules and estimates. For use of ODOT’s facilities, consultants and local agencies must contact the appropriate region’s local government liaison.

Users of Trns*port Estimator must have received training before permissions are granted to use the Trns*port Estimator software. For more information about Trns*port estimator and training access the web site at http://www.oregon.gov/ODOT/HWY/ESTIMATING/estimator.shtml
**TransGIS**

TransGIS is a powerful Global Information System (GIS) tool designed for users of every skill level, presenting many levels of complex data in an interactive map format and offering multi-level views of Oregon’s transportation system needs and accomplishments.

TransGIS provides accessible detailed information including statewide transportation management system’s data, Statewide Transportation Improvement Program (STIP) projects and environmental data for analysis, planning and research needs. By offering this quick and integrated access to the many data resources available, TransGIS enhances ODOT’s ability to address agency needs and goals.

Data resources include GIS data for identifying: Bridge resources; congestion resources; Department of Motor Vehicle (DMV) resources; freight and intermodal system resources; commonly requested resources; pavement maintenance resources; planning activity resources; resources related to rail projects; safety activity resources using specialized reporting features; ODOT Highway System resources and conditions; Resources related to STIP projects; Traffic congestion assessment resources; GIS data and resources for increasing the effectiveness of project management activities from a spatial data context; and integration of web-based GIS technology into ODOT’s Geo-Environmental Section for use in accessing, analyzing, summarizing, collecting, organizing and recalling spatial information in direct support of the environmental baseline process.

More information regarding TransGIS may be found at the following web site: [http://intranet.odot.state.or.us/gis/](http://intranet.odot.state.or.us/gis/) (NOTE: This is an internal ODOT resource.)

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**Oregon Transportation Management System (OTMS)**

The Oregon Transportation Management System (OTMS) is a program designed to manage highway pavement, bridges, highway safety, traffic congestion, public transportation facilities and equipment, intermodal transportation facilities and systems, and traffic monitoring for highways. The management systems provide information to assist state and local decision makers in selecting cost-effective policies, programs, and projects to preserve and improve the transportation infrastructure.

The seven transportation management systems that comprise OTMS are:

Bridge Management System (BMS) is for bridges on and off federal-aid highways supplies analyses and summaries of data, uses mathematical models to make forecasts and recommendations, and provides the means by which alternative policies and programs may be efficiently considered.
Congestion Management System (CMS) uses ODOT inventories of the state highway system, traffic volume data, and Highway Performance Monitoring System data to report congestion trends on the state highway system and to identify the severity of congestion on parts of the highway system. This information helps ODOT develop policies for managing congestion to plan projects for alleviating congestion.

Freight and Intermodal Management System (FIMS) provides information about freight and passenger intermodal facilities and connections. The focus is on intermodal in general and freight more specifically. Also included is information about non-intermodal freight movements, including those on highways, main rail lines and marine waterways.

Pavement Management System (PMS) is a set of tools or methods that can assist decision makers in finding cost effective strategies for providing, evaluating, and maintaining pavements in a serviceable condition. It provides the information necessary to make these decisions. The PMS consists of two basic components: A comprehensive database, which contains current and historical information on pavement condition, pavement structure, and traffic. The second component is a set of tools that allows us to determine existing and future pavement conditions, predict financial needs, and identify and prioritize pavement preservation projects.

Public Transportation Management System (PTMS) for public transportation operations, facilities, equipment, and rolling stock is a systematic process that collects and analyzes information. The information gathered includes the condition and cost of transit assets and the cost of transit operations on a continual basis. PTMS identifies needs, and enables decision makers to select cost-effective strategies for providing operating funds and maintaining transit assets in serviceable condition.

Safety Management System (SMS) is comprised of two major parts: The Information Safety Management System (ISMS) and the Project Safety Management System (PSMS). The ISMS includes a number of sources of data essential for the PSMS as well as the overall monitoring and administration of ODOT’s Roadway Safety Program. The PSMS relates directly to processes, procedures, and tools needed to address critical safety issues for project scoping, design, and construction.

Traffic Monitoring System for Highways (TMS-H) is a systematic process for the collection, analysis, summary, and retention of highway and transit related person and vehicular traffic data.

For information and access go to the web site at http://intranet.odot.state.or.us/otms/ (NOTE: This is an internal ODOT resource.)
Central Highway Approach/Maintenance Permit System (CHAMPS)
The purpose of the Central Highway Approach/Maintenance Permit System (CHAMPS) is to consistently manage the application/permit records and processes used by ODOT permit specialists located across the state.

ODOT issues permits for approach roads that connect with state highways. Approach roads connecting to the State Highway System may be constructed as part of a private development or ODOT construction project. In addition, some approach roads existed prior to the implementation of the permitting process. In every case, each approach road is tracked and managed by CHAMPS.

Individuals or entities that want to build access to a state highway submit an application for State Highway Approach to an ODOT District Office.

See the CHAMPS guide at:

For information on the rules governing the issuance of construction permits and use permits for approaches onto state highways, see OAR Chapter 734, Division 51.

Agreements Database
The Agreements Database is designed to provide the status of intergovernmental agreements (IGAs) that have been sent by ODOT’s agreement writers to the Construction Contracts Section (CCS) for review or final execution and distribution.

For information go to the Web site at http://www.oregon.gov/ODOT/CS/OPO/IGA/iga.shtml

Copies of fully executed agreements can be obtained by calling General Files at (503) 986-3286.

Mobility Tracking System
The Mobility Tracking System tracks the mobility restrictions for a project during construction.

For information and access go to the web site at http://intranet.odot.state.or.us/home/mobility.htm (NOTE: This is an internal ODOT resource.)
**Contractor Payment System (CPS)**

The Contractor Payment System (CPS) consists of a Web-based front-end application used by ODOT, consultant and local agency Project Managers, and the ODOT Contract Administration Unit (CAU) in to regulate and track payments made to construction contractors for services provided and materials used for ODOT highway, bridge, and other construction projects.

To initiate a project record within CPS, the ODOT CPS mainframe application downloads construction contract data. As a Contractor performs work and this is captured within CPS, CPS uploads the data to the ODOT CPS mainframe application to generate payment vouchers and update contract records. The Contract Administration Unit approves the payment vouchers and submits them to ODOT Financial Services to generate payments to Contractors.

Before using CPS, an individual should have a basic understanding of construction contract administration and be familiar with the ODOT Construction Manual, The Standards Specifications for Highway Construction and project-specific plans and specifications.

Internal ODOT employees who need access to CPS should contact the ODOT Contract Administration Unit at 503-986-3000. External individuals who need access to CPS should contact the ODOT Contract Administration Unit at 503-986-3000.

The Contract Payment System (CPS) User Guide is at:
[http://highway.intranet.odot.state.or.us/cf/cps/attach/CPS%20users%20guide%20ver%201-0.doc](http://highway.intranet.odot.state.or.us/cf/cps/attach/CPS%20users%20guide%20ver%201-0.doc)
For the most complete and current details about ODOT’s Geo-Environmental Section, including resources and guidance, please visit: http://www.oregon.gov/ODOT/HWY/GEOENVIRONMENTAL/ where you will find this very useful e-guide:
http://www.oregon.gov/ODOT/HWY/GEOENVIRONMENTAL/e_guide.shtml
The e-guide is designed help you navigate through the various environmental and permitting procedures required by the National Environmental Policy Act (NEPA) as well as other federal and state laws and regulations that govern constructing a highway project in Oregon.

Good stewardship of Oregon’s environment is a responsibility of every ODOT employee and it is reflected in our decisions and actions. ODOT’s mission is in alignment with sound environmental stewardship and best management practices. As public servants, we strive to meet the spirit and intent of environmental laws. Our agency complies with regulations, and enhances the environment, balancing such enhancement with the scope and purpose of our mission.

Many state and federal laws govern environmental work and determine the process for securing permits or “permission” to affect a protected resource. Impact-avoidance is a major aspect of all work at ODOT. In fact, with the escalating cost of environmental compliance over the last few years, there is more pressure and growing scrutiny placed upon avoiding environmental impacts.

Environmental compliance adheres to the concept of “sequencing,” in which the normal course or “sequence” of work follows a prioritized progression in order of occurrence:

- **Avoidance** - Avoidance of the resource is the best choice. The best stewardship of the resource is to avoid harm in the first place.
- **Minimization** - If affecting the resource cannot be avoided, then minimize harm to the resource to the maximum extent possible and practicable.
- **Mitigation** - Where impacts to the resource cannot be avoided, and where minimization harms the resource, mitigate or offset the harm. Usual mitigation is in-place and in-kind, but more creative, productive, and cost-effective mitigations, such as mitigation banking, are increasingly used. Some regulatory agencies, however, are very restrictive in their response to much variability.
As a last resort, compensation may be approved where resource mitigation is impossible, cost prohibitive, impractical, and ill advised.

**PROMINENT ENVIRONMENTAL LEGISLATION**

ODOT has over 65 state and federal environmental laws and regulations to obey. Some of the most prominent legal drivers that affect project development are:
- National Environmental Policy Act, 1969
- Endangered Species Act, 1973
- Clean Water Act, 1972
- Clean Air Act, 1963
- Department of Transportation Act of 1966
- Federal Aid Highway Act of 1970
- National Historic Preservation Act, 1966
- Resource Conservation and Recovery Act, 1976
- Oregon Statewide Planning Goals, 1973
- Federal Migratory Bird Treaty Act, 1918

With the exception of the Federal Migratory Bird Treaty Act each of these laws has specific regulations and guidance for implementation.

**NATIONAL ENVIRONMENTAL POLICY ACT**

The National Environmental Policy Act (NEPA) was enacted in 1969. The purpose of NEPA is “To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the nation; and to establish a Council on Environmental Quality."

NEPA is a far-reaching federal law that plays a fundamental role in ODOT project development. NEPA is our basic national charter for protection of the environment. It establishes policy, sets goals, and provides means for carrying out the policy. NEPA contains “action-forcing” provisions to make sure that federal agencies act according to the letter and spirit of the Act. Their purpose is to tell federal agencies what they must do to comply with the procedures and achieve the goals of the Act. The President, the federal agencies, and the courts share responsibility for enforcing the Act.

NEPA requires that any activity or project receiving federal funding or other federal approvals (including transportation projects) undergo an analysis of
potential impacts. Under NEPA, FHWA and FTA work closely with other federal agencies and state, local, and tribal governments; public and private organizations; and the public to understand a project's impact. This process involves striking a delicate balance among many different factors such as mobility needs, economic prosperity, health and environmental protection, community and neighborhood preservation, and quality of life for present and future generations. To get through this detailed process, ODOT uses the NEPA process to evaluate all social, economic, and environmental concerns with each individual project.

40 CFR 1500.2 states that NEPA requirements must be integrated with other planning and environmental requirements so that such procedures can run concurrently rather than consecutively. Also known as “umbrella provisions,” NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken.

The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment. These regulations provide the direction to achieve this purpose.

NEPA and other federal regulations apply to ODOT projects when there’s a federal “nexus” - such as where federal funding or approvals are required for the project. ODOT’s policy is to treat most projects as if they were a federal nexus.

Environmental Classification

All transportation-related projects are divided into three classes based on what level of environmental work is needed. Project classification is a combination of applying both law and judgment. Since each project is individual, the law applying to classification cannot realistically describe every situation. Projects that fall clearly within a classification are easy to decide. It's the projects that fall on the borders between one classification and another that are difficult to call. In these situations, ODOT, through its regions, uses the criterion of what best serves the project and the environment to determine the classification. On federally funded projects, FHWA must concur with ODOT’s classification. In projects using state-only monies, ODOT takes the lead in signing the Part 3. However, the classification system still applies.

Below are the descriptions of the three types of environmental classifications:
A Class 1 action has significant impacts to the natural or social environment that cannot be fully mitigated or reversed. Class 1 actions require the preparation of a Draft and Final Environmental Impact Statement (DEIS/FEIS) and the issuance of a Record of Decision (ROD). These projects typically are very large (e.g., new controlled access freeways, projects of four or more lanes on a new location), but may also be projects which completely eliminate a resource (such as, demolition of a historic bridge or filling in a unique wetland). Approximately 1% of all projects are Class 1.

A Class 2 action applies to projects that have very little individual or cumulative impact on the environment; in essence, the natural and social environments will be the same as before the project was undertaken. A Categorical Exclusion does NOT mean exemption from other requirements. This action may require environmental studies or clearances/permits (e.g., biological assessment, 106 documentation), but does not require an EA or EIS. Approximately 96% of all projects are Class 2.

A Class 3 action is required for projects where the significance of the impact on the environment is not clearly established (it is unclear whether the action is a Class 1 or Class 2). The original intent of the classification has changed somewhat, and its current customary use is as a class unto itself, though its findings could result in changing project classification. These projects may have impacts that do not substantially change the character of an area, but can be mitigated to some degree. These actions require the preparation of an Environmental Assessment (EA) and a Revised Environmental Assessment (REA) to document project impacts and mitigation. If the EA/REA finds that the project impacts are not “significant,” the REA includes a Finding of No Significant Impact (FONSI), which constitutes design approval. If the EA finds that the impacts are “significant,” then the Class 3 project is upgraded to a Class 1 and an EIS is prepared. Sometimes prior to the completion of an EA, it is determined that an EIS is needed; in that case, adjustments are made to the EA to change it to an EIS. Some of the key elements of this change are discussed below. Design, scope, or funding changes may result in changing the classification of the project during the development phase. If the project changes significantly in scope of impact, or in funding from state to federal funding, a new prospectus and new Part 3 must be processed and the classification reviewed and confirmed. Changes to federal funding should occur before any right of way acquisition occurs. Approximately 3% of all projects are Class 3.
NEPA Documentation

Documentation (along with dissemination) is an essential component of the NEPA project development process, which supports and complements public involvement and interagency coordination. NEPA requires ODOT to disclose the results of its analysis and the effects of project implementation on the environment and to solicit comments on the proposals from interested and affected parties. NEPA process stipulates complete disclosure to the public; allows others an opportunity to provide input and comment on proposals, alternatives, and environmental impacts; and provides the appropriate information for the decision-maker to make a reasoned choice among alternatives.

Transportation projects vary in type, size and complexity, and potential to affect the environment. The effects can vary from very minor to significant impacts on the human environment. To account for the variability of project impacts, three basic "classes of action" are allowed and determine how compliance with NEPA is carried out and documented:

- Environmental Impact Statement
- Categorical Exclusions
- Environmental Assessment

Environmental Impact Statement

An Environmental Impact Statement (EIS) is prepared for projects where it is known that the action will have a significant or irreversible effect on the environment. An EIS is a full disclosure document that details the process through which a transportation project was developed, includes consideration of a range of reasonable alternatives, analyzes the potential impacts resulting from the alternatives, and demonstrates compliance with other applicable environmental laws and executive orders. The EIS process is completed in the following ordered steps: Notice of Intent (NOI), draft EIS, final EIS, and ROD.

An EIS can take anywhere from 3 years (at a minimum) to 5 years (and longer) to complete. The cost to complete an EIS ranges from $750K to over $1 million. Examples of projects that have an EIS are: The Willamette River Bridge in Eugene, the Columbia River Crossing, Newberg-Dundee, Highway 62 Corridor, West Eugene Parkway, and Spencer Creek Bridge.

Categorical Exclusions

Categorical Exclusions (CE) are issued for actions that do not individually or cumulatively have a significant effect on the environment. A CE is a category of actions which do not individually or cumulatively have a significant effect on the human environment. They are actions which: do
not induce significant impacts to planned growth or land use for the area, do not require the relocation of significant numbers of people; do not have a significant impact on any natural, cultural, recreational, historic or other resource; do not involve significant air, noise, or water quality impacts; do not have significant impacts on travel patterns; and do not otherwise, either individually or cumulatively, have any significant environmental impacts.

Environmental Assessment

An Environmental Assessment (EA) is prepared for actions in which the significance of the environmental impact is not clearly established. Should environmental analysis and interagency review during the EA process find a project to have no significant impacts on the quality of the environment, a Finding of No Significant Impact (FONSI) is issued.

An EA is a concise public document that serves to:
- Briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.
- Aid an agency's compliance with NEPA when no environmental impact statement is necessary.
- Facilitate preparation of a statement when one is necessary.

FHWA must approve an EA before it is made available to the public. After public comments are received and considered, a determination of the significance of the impacts is made:
- If at any point in the process of preparing an EA it is discovered that the project would result in significant impacts an EIS must be prepared.
- If, after completing the EA, it is evident that there are no significant impacts associated with the project, a finding of no significant impact (FONSI) may be prepared.
- The Environmental Project Manager (EPM) or the consultant prepares a “Decision Statement” which summarizes the process and the findings of the EA. This is unique to ODOT.

If it is determined that there will be no significant impacts a FONSI will be prepared to conclude the process and document the decision. A FONSI is issued when environmental analysis and interagency review during the EA process find a project to have no significant impacts on the quality of the environment. The FONSI document is the EA modified to reflect all applicable comments and responses. If it was not done in the EA, the FONSI must include the project sponsor's recommendation or selected alternative.

An EA can take anywhere from 1 to 3 years to complete. The cost to complete an EA ranges from $100K to $700K. Examples of projects that might have an EA are: realignment of / adding capacity to a highway,
actions on federal lands (BLM, USFS), or changing intersection to interchange.

For information about project lifecycle Title VI and Environmental Justice considerations, visit the Title VI Plan at Oregon.gov/ODOT/CS/Civil Rights.
HOW ENVIRONMENTAL CLASSIFICATIONS AFFECT THE PROJECT

Class 1 Action

- Must have citizen involvement during alternative selection and development
- Must have logical termini, and cannot be segmented for the purpose of avoidance of design development on parts which will be built in the future
- Must consider the No-Build and all reasonable build alternatives, including a Transportation Systems Management (TSM) alternative where applicable at the same level of analysis
- Must be able to demonstrate purpose and need based on transportation demand, safety, legislative directive, economic development and planned growth, modal interrelationships, system linkage, condition of existing facility or inclusion in transportation plan
- Must not make a decision to select an alternative based on using right of way already in ODOT’s possession
- Must honor certain procedural timelines related to the approval and circulation of the environmental document and ROD
- The signature on the ROD constitutes FHWA Design Approval. Right of way acquisition cannot proceed until after the ROD

Class 2 Action

- Citizen involvement is not required, but is encouraged, and is at the discretion of the project team.
- After concurrence of classification, other environmental documentation may be required. The project team should work with the REC to determine if additional documentation is needed.
- ODOT’s Design Approval is not connected to environmental documentation however certain designs may need approval by a jurisdictional authority before the project can be built. ODOT’s development approval maybe moot if the local agency permits are not obtained and the structure or design cannot be constructed.

Class 3 Action

This action affects the project team in substantially the same way as a Class 1, with the following exceptions:
- May limit alternatives to a Build and No-Build scenario-more, if desirable
- Signature on the REA constitutes Design Approval
- Procedural timelines must be honored, but are shorter
DEPARTMENT OF TRANSPORTATION ACT OF 1966 - SECTION 4(f)

Since the mid-1960s, federal transportation policy has reflected an effort to preserve the beauty and integrity of publicly owned public parks and recreation areas, waterfowl and wildlife refuges, and historic sites considered to have national, state or local significance. The Department of Transportation Act (DOT Act) of 1966 included a special provision to carry out this effort—Section 4(f).

Since 1966, Section 4(f) has undergone three changes. The first of these changes was a 1968 amendment to Section 4(f)'s wording—an effort by lawmakers to reconcile the language with a similar piece of legislation. The second change was a result of the 1983 recodification of the DOT Act, in which Section 4(f) became 49 U.S.C. Section 303. Technically speaking, the statute is no longer Section 4(f); however, because of its widespread familiarity among state and federal employees, it continues to be officially recognized by its original name. The third change to 4(f) with the recently passed SAFETEA-LU. It eliminates the need for alternatives analysis when there is a minor impact to any resource protected under 4(f) - it's referred to as de minimis, and was included in Section 6009 of the act.

Section 4(f) of the DOT Act stipulated that FHWA and other DOT agencies cannot approve the use of land in a significant publicly owned public park, recreation area, wildlife or waterfowl refuge, or any significant historic site unless the following conditions apply:

- There is no feasible and prudent alternative to the use of land
- The action includes all possible planning to minimize harm to the property resulting from use

Section 4(f) protects three basic types of resources: publicly owned parks and recreation areas, publicly owned wildlife and waterfowl refuges, and historic sites.

1. To qualify as a park or recreation area under the statute, a resource must meet the following criteria:
   - It must be publicly owned
   - It must be open to the public
   - Its major purpose must be for park or recreation activities
   - It must be significant as a park or recreation area

2. To qualify as a refuge under the statute, a resource must meet the following criteria:
   - It must be publicly owned
Its major purpose must be that of a refuge
It must be significant as a refuge

3. To qualify for protection under Section 4(f), a historic site must meet the following criteria:
   It must be of national, state or local significance.
   If it is not on or eligible for listing on the National Register of Historic Places (NRHP), its protection must be considered appropriate by FHWA.
   Unlike the other two basic Section 4(f) resource categories—parks and recreation areas, and refuges—historic sites do not require public ownership in order to qualify for protection under Section 4(f).

FHWA includes an evaluation of the use of land protected under Section 4(f) when assessing the environmental effects of an action through the NEPA process. ODOT typically prepares Determinations of Eligibility for historic properties not listed on or determined eligible for the National Register during the project development process; FHWA does not end up deciding if the protection of a resource is appropriate. Section 4(f) requires the consideration of alternatives that avoid or minimize impacts to these protected resources. The environmental regulations for applying Section 4(f) to transportation project development can be found at 23 CFR 771.135.

**LAND AND WATER CONSERVATION ACT - SECTION 6(F)**

Recreation property is frequently prevented from conversion to other than recreational use by a reversion clause in the deed, or by the type of funding that was used to purchase or develop the property.

The Land and Water Conservation program was established by the LWCF Act of 1965. It was enacted “… to assist in preserving, developing and assuring accessibility to all citizens of the United States of present and future generations... such quality and quantity of outdoor recreation resources as may be available and are necessary and desirable for individual active participation.” The purpose of Section 6(f) is to prevent property from being converted from outdoor recreation to any other use. Section 6(f) of the Land and Water Conservation Act requires that the conversion of lands or facilities acquired with Land and Water Conservation Act funds be coordinated with the Department of Interior.

Regardless of the project’s funding source or type, if a highway project uses property encumbered by Section 6(f), the property has to be replaced. Even if the Land and Water Conservation funds were used for development of only a part of a parcel, the entire parcel is considered encumbered. Replacement property must be of “reasonably equivalent or usefulness and
location as that being converted.” Replace property has to be of at least equal fair market value.


STREAMLINING OF ENVIRONMENTAL PERMITTING

In the simplest terms, environmental permit streamlining consists of completing environmental reviews and permitting in a timely way, while ensuring environmentally sound projects.

This entails establishing realistic project development timeframes among appropriate and environmental agencies, and then working cooperatively to adhere to those timeframes.

The coordination of multiple and overlapping environmental reviews, analyses, and permitting actions is essential to meeting the environmental streamlining mandate for highway and transit projects under TEA-21. Most states and some local jurisdictions have their own environmental statutes and requirements that must be addressed.

The complexity of the processes, multiple actions, and requirements do not easily lead to clear-cut solutions for establishing national timeframes. Instead, federal agencies, as stated in the National Streamlining Memorandum of Understanding (MOU), agreed to pursue timeframes and other solutions with the project sponsor at the regional, state, local, or project level where their specific processes come into play and where the most effective solutions lie.

NEPA/Section 404 Permit Merger

The NEPA/404 merger is designed to improve the efficiency of the FHWA NEPA process, using early and active interagency coordination to focus efforts on reaching an environmentally sound project. For projects involving fill in waters of the United States, the COE is responsible for issuing a permit which assesses whether the action is appropriate. The requirements for that permitting process are under Section 404 of the Clean Water Act. Often in securing a 404 permit there can be many federal agencies involved such as the COE, USFWS, EPA, and National Marine Fishery Service (NMFS).

The NEPA/404 merger process was initiated to streamline project decision making on federal-aid Highway Projects. The reason for merging the FHWA NEPA and Section 404 permit processes is to provide the opportunity to expedite project decision making by executing one overall federal public
interest decision, at one point in time, for a federal-aid project. Both processes involve evaluation of alternatives and assessment of effect to resources against the need for a project, and officials of all agencies involved recognize the opportunity to avoid duplication and inefficiencies within them.

**Collaborative Environmental and Transportation Agreement for Streamlining**

The Collaborative Environmental and Transportation Agreement for Streamlining (CETAS) program was formed by ODOT in June of 2000 in response to several issues:

- An increasing sense of urgency about environmental stresses
- The response to TEA-21 streamlining
- The complexity of environmental regulation and planning requirements
- The need to update and fully implement the existing NEPA/404 Accord

The shared vision of the CETAS members is to balance environmental and transportation values with the ultimate goal of the improved outcome for each agency’s mission.

The CETAS group is composed of one representative, and one alternate from each of the following agencies:

- Oregon Department of Transportation
- Federal Highway Administration
- Oregon Division of State Lands
- Oregon Department of Environmental Quality
- Oregon Department of Fish and Wildlife
- Department of Land Conservation and Development
- Environmental Protection Agency
- US Fish and Wildlife Service
- US Army Corps of Engineers
- National Marine Fisheries Service
- Oregon State Historic Preservation Office

On April 1, 2001, the Accord, now the Agreement for Environmental Streamlining of Major Transportation Projects was amended to more fully address Endangered Species Act issues, to reflect ODOT’s shift towards earlier NEPA analysis within its own planning process, and to ensure full implementation of the Agreement.

The agreement applies to projects that are or may be included in the STIP, are processed with an EIS or EA, and impact cultural or natural resources.

Under this agreement, ODOT and FHWA provide an opportunity for signatory agencies to review all major transportation projects in ODOT’s program
with potential impacts to cultural or natural resources through distribution of prospectuses and environmental classification requests.

The purpose of the review is to provide project development status information and to receive input, preliminary consensus, and recommendations regarding projects in the program. Project updates are also presented at regular CETAS meetings. The CETAS group focuses on four major concurrence points:
- Purpose and need
- Alternatives
- Alternative evaluation criteria and measures
- Preferred alternative

**FEDERAL ENDANGERED SPECIES ACT**

The Endangered Species Act (ESA) was originally passed in 1973. It provides for the designation and protection of invertebrates, wildlife, fish, and plant species that are in danger of becoming extinct and conserves the ecosystems upon which such species depend.

The ESA is administered by the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS). NMFS is generally responsible for marine species, anadromous fish, and sea turtles when they are in the water. USFWS is responsible for plants, birds, terrestrial and freshwater species, sea otters, and sea turtles when they are on land.

Under the ESA, an endangered species is any species in danger of becoming extinct throughout all or a significant portion of its range. The ESA excludes recognized insect pests from this definition. A threatened species is one that is likely to become endangered in the foreseeable future. The ESA makes it illegal for any individual to kill, collect, remove, harass, import, or export an endangered or threatened species without a permit from the Secretary of the Department of the Interior for USFWS administered species or the Secretary of the U.S. Department of Commerce for species administered by NMFS. To be protected, a species must be listed by either department as endangered or threatened.

The ESA directs the departments to establish programs to conserve animals and plants, including endangered and threatened species. All federal agencies must use their authorities to carry out programs for the conservation of endangered and threatened species.
**Determination of Endangered Species and Threatened Species**

Species are listed on the basis of “the best scientific and commercial data available.” Listings are made solely on the species' biological status and threats to the species' existence. In some instances, a species that closely resembles an endangered or threatened species is listed due to similarity of appearance. The services (NMFS and USFWS) also maintain a list of “candidate” species. These are species that have documentation to warrant proposing them for listing as endangered or threatened, but for which development of a listing proposal is precluded by higher priority activities. The services work with state and private partners to carry out conservation actions for candidate species to prevent their further decline and possibly eliminate the need to list them as endangered or threatened. Proposed species are species currently proposed for listing as either threatened or endangered.

**Recovery and Critical Habitat**

The ultimate goal of the ESA is to “recover” species so they no longer need protection under the ESA. The law requires that recovery plans be developed for listed species describing the steps needed to restore species to health. Appropriate public and private agencies and institutions and other qualified persons assist in the development and implementation of “recovery plans.” Involvement of the public and interested stakeholders is also encouraged during this process.

The ESA also provides for designation of “critical habitat” for listed species when judged to be “prudent and determinable.” Critical habitat includes geographic areas that contain physical or biological features essential to the conservation of the species, and which may require special management considerations or protection. Critical habitat may include areas not occupied by the species at the time of listing but that are essential to the conservation of the species.

**STATE ENDANGERED SPECIES ACT**

Oregon enacted its own ESA in 1987 (Oregon Revised Statute [ORS] 496.172), and amended it in 1995. There are a total of 92 wildlife and plant species listed in the Oregon ESA. The Oregon Fish and Wildlife Commission (Commission) is responsible for reviewing the status of fish and wildlife species, while the Oregon Department of Agriculture (ODA) is responsible for plants. The state’s listing criteria are similar to those of the federal ESA, but the focus is at the state level. The Oregon ESA requires the Commission and ODA to review each listed species at least once every five years to
determine if it should be reclassified or removed from the threatened or endangered list.

The state ESA protects 35 species of fish and wildlife in Oregon. For wildlife, the Commission’s policy is to obtain recovery through voluntary incentives and encouragement of appropriate species management, coordinated planning, and habitat protection and restoration.

**BIOLOGICAL ASSESSMENTS**

According to Section 7 of the ESA, federal agencies are required to consult with NMFS or USFWS, or both, if a federal action may affect species protected under the ESA. This consultation process, referred to as Section 7 consultation, typically requires the preparation of a Biological Assessment (BA). Because the majority of ODOT projects have a federal nexus (i.e., funding, permits, or occur on federal property) and ESA listed species are often affected by the project, the timely preparation of quality BAs is critical to meeting the regulatory intent, project schedule, and project budget.

BAs must address specific effects of activities to listed species and their habitat; describe particular actions to avoid, minimize, and mitigate adverse effects; and provide documentation to justify conclusions drawn. To maximize efficiency in the consultation process, project teams must demonstrate natural resource avoidance and minimization. If impacts are unavoidable, mitigation measures may be necessary for the project to be approved by the Services.

**WETLANDS AND WATERWAYS**

Generally, wetlands are lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. Wetlands vary widely because of regional and local differences in soils, topography, climate, hydrology, water chemistry, vegetation, and other factors, including human disturbance.

For regulatory purposes under the Clean Water Act (CWA), the term wetlands means “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.”
Wetlands fall into four general categories—marshes, swamps, bogs, and fens. Marshes are wetlands dominated by soft-stemmed vegetation, while swamps have mostly woody plants. Bogs are freshwater wetlands, often formed in old glacial lakes, characterized by spongy peat deposits, evergreen trees and shrubs, and a floor covered by a thick carpet of sphagnum moss. Fens are freshwater peat-forming wetlands covered mostly by grasses, sedges, reeds, and wildflowers.

Although wetlands are often wet, a wetland might not be wet year-round. In fact, some of the most important wetlands are only seasonally wet. Wetlands are the link between the land and the water. They are transition zones where the flow of water, the cycling of nutrients, and the energy of the sun meet to produce a unique ecosystem characterized by hydrology, soils, and vegetation—making these areas very important features of a watershed. Using a watershed-based approach to wetland protection ensures that the whole system, including land, air, and water resources, is protected.

### Regulation

Activities in wetlands and waterways may be regulated by:
- The Oregon Department of State Lands (DSL) under the state Removal-Fill Law
- The Army Corps of Engineers (Corps) under the federal Clean Water Act and Rivers and Harbors Act
- The Oregon Department of Forestry under the Forest Practices Act
- The U.S. Natural Resources Conservation Service under the federal Farm Bill
- The Oregon Department of Agriculture, Natural Resources Division
- Some city and county land use ordinances

What areas are regulated?
- “Waters of the State” or “Waters of the U.S.” including:
  - Rivers, streams, most creeks, and some ditches
  - Bays, estuaries, and tidal marshes
  - Lakes and some ponds
  - Permanent and seasonal wetlands
- The regulations apply to all lands, public or private, except tribal lands.
- A wetland does not have to be mapped by the state or otherwise “designated” to fall under the regulations.

What activities in waters of the state/nation are regulated?
- Placement of fill material
- Alteration of stream banks or stream course
- Ditching and draining
- Excavation or dredging of material
Bank stabilization (e.g., riprap or retaining walls)  
In-water construction such as piers (may also require a lease from DSL)  
Stump removal (large land-clearing projects)

Although most commonly associated with activities that involve filling of wetlands, Section 404 of the CWA actually deals with one broad type of pollution -- placement of dredged or fill material into “waters of the United States.” Wetlands are one component of “waters of the United States”; however, there are numerous other types -- intermittent streams, small perennial streams, rivers, lakes, bays, estuaries, and portions of the oceans. Activities in waters of the United States regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports) and mining projects. Section 404 requires a permit before dredged or fill material may be discharged into waters of the United States.

One of the controversial aspects of Section 404 is exactly what is and isn’t a wetland. For an area to be declared a wetland, it should exhibit all three of the key features -- hydrology, wetland-dependent vegetation, and soil types associated with water-saturated conditions. However, some kinds of wetlands, such as bottomland hardwood swamps, are dry during some periods. The absence of water or saturated soil at any given moment does not render a plot “not a wetland,” if the vegetation and soils indicate that wet conditions often do occur and hydrological data support this conclusion.

The basic premise of the program is that no discharge of dredged or fill material may be permitted if: (1) a practicable alternative exists that is less damaging to the aquatic environment or (2) the nation’s waters would be significantly degraded. In other words, when you apply for a permit, you must show that you have, to the extent practicable:

- Taken steps to avoid wetland impacts;  
- Minimized potential impacts on wetlands; and  
- Provided compensation for any remaining unavoidable impacts

Proposed activities are regulated through a permit review process. An individual permit is required for potentially significant impacts. Individual permits are reviewed by the U.S. Army Corps of Engineers, which evaluates applications under a public interest review, as well as the environmental criteria in Section 404. However, for most discharges that will have only minimal adverse effects, a general permit may be suitable. General permits are issued on a nationwide, regional, or State basis for particular categories of activities. The general permit process eliminates individual review and allows certain activities to proceed with little or no delay, provided that the general or specific conditions for the general permit are met.
Section 401(a) of the CWA requires that before issuing a license or permit that may result in any discharge to waters of the United States, a federal agency must obtain from the state in which the proposed project is located, a certification that the discharge is consistent with the CWA, including attainment of applicable state ambient water quality standards.

A permit application must include the project design, a plan to minimize impacts to the resource, and the fee. A wetland delineation may also be required. ODOT must design the project to avoid and minimize impacts to the waters to the extent practicable. In most cases, unavoidable wetland impacts must be compensated for through wetland restoration, enhancement, or creation, or by buying credits from a mitigation bank (compensatory mitigation plan). The permit application goes through a public review process. The project must also be consistent with the city or county land use plan and must comply with Oregon’s water quality standards.

**STORMWATER**

**Operational Notice** PD-05 provides guidance in determining the need for stormwater quality mitigation for runoff from ODOT projects and the level of mitigation that could be necessary. ODOT is required to manage stormwater and protect the waters of the state that may be harmed by the construction or operation of ODOT facilities. Regulations and policies that govern how ODOT manages and protects these waters include the Clean Water Act, the Safe Drinking Water Act, the Endangered Species Act, the Magnuson-Stevens Act, Oregon Administrative Rule 340 Division 41, and the Oregon Plan for Salmon and Watersheds.

In effect, PD-05 means that just about any project that increases impervious surface area, realigns the roadway, or otherwise changes the drainage system of a road will require some level of stormwater treatment. The amount of treatment depends on several factors, but should be commensurate with the size of the impact and the magnitude of the project. That being the case, project teams should anticipate planning and budgeting for water quality treatment from the beginning, including staff time to analyze impacts, design treatment, and potentially acquire right-of-way. The project team should involve the environmental staff and stormwater engineer early to determine what these requirements will be.

To meet these laws and evolving regulations, ODOT is required to provide mitigation for the adverse impacts that ODOT projects may have on water quality. PD-05 presents ODOT’s basic water quality goals, outlines how ODOT will assess projects to determine when stormwater quality mitigation is required and the general objectives for mitigation.
ODOT projects must comply with federal, state and local laws and ordinances regarding water quality, and will protect the beneficial uses of waters affected by the projects. Scoping for all ODOT projects must include identifying opportunities to improve the quality of highway runoff.

The basic goals for ODOT projects are:
- Stormwater runoff from a project must not cause violations of water quality standards in the receiving water.
- Stormwater runoff from a project must not cause a net increase in the pollutant load discharged to receiving waters, unless the amount of treatment required is determined to be not practicable by the region environmental manager.
- Reduce the pollutant load in stormwater runoff from a project where it can be done within the financial and physical constraints of the project, as determined by the project team.

Any project requiring either a CWA Section 404 permit or a DSL Removal/Fill permit will have to develop a stormwater management plan for submittal to DEQ as part of the permit application process. ODOT and DEQ are currently working to develop definitive guidance on what a stormwater management plan submittal needs to include, and the water quality goals for the plan.

Any project discharging stormwater to streams or lakes with listed T&E species will need to include the measures taken to treat the stormwater in the biological assessment. In urban areas and for high traffic volume roads, the treatment requirements to satisfy NMFS or USFWS may be fairly stringent.

PD-05 does not address the issue of the hydrologic impacts of highway projects. Local regulations may require detention basins to prevent changes in flood size or frequency. NMFS and USFWS will want to see mitigation for hydrologic impacts if they would adversely affect their fish, and DEQ could require the same if the changes would disrupt beneficial uses in a stream. Water quality treatment and hydrologic mitigation can sometimes, but not always, be combined into the same facilities. Project teams should anticipate this expense from the beginning.

**CULTURAL RESOURCES**

Cultural resources documentation at ODOT ensures regulatory compliance with both state and federal legislation. The Cultural Resources Program has been developed to balance the needs of the state's transportation system with the protection and documentation of significant historic resources.
ODOT’s cultural resources specialists work with project teams, consultants and other interested stakeholders to develop projects. Their primary role is to identify and evaluate historic resources within a project’s Area of Potential Effect (APE). Cultural resources include buildings, districts, objects, sites, and structures. These resources are evaluated to determine if they meet the National Register of Historic Places criteria.

Regulatory compliance for transportation projects is the primary focus of the ODOT Cultural Resources Program. The primary regulations ODOT typically encounters are the National Historic Preservation Act Section 106, Section 4(f) of the Department of Transportation Act, NEPA, and Oregon Revised Statute 358.

ODOT has developed a Cultural Resources Program to satisfy these regulations. The process includes a variety of work products to inform both regulatory agencies and ODOT project teams of Cultural Resources within a project area. These work products vary from initial scoping reports to detailed analysis of project alternatives. ODOT has the responsibility of ensuring compliance with all applicable regulations for ODOT construction projects.

**ARCHAEOLOGY**

Archaeology is the study of human cultures through the analysis of material remains such as discarded tools, and the traces of constructions such as houses, hearths, storage pits. Some traces of human activity are obvious, such as chipped stone butchering tools, while some are subtle or microscopic, such as an organic soil stain where an animal was butchered, or microscopic pollen grains left on a milling stone.

Within Oregon, archaeological sites span the past 13,000 years, and represent traces of the cultural history and life ways of Oregon’s first inhabitants. These native Oregonians have a long and colorful history, but—except for the last two hundred years—it is not a written history. The record of this cultural past is an archaeological record.

Archaeological sites are finite and fragile resources. A limited number were created over time, and these have been continuously subjected to degradation and destruction from natural and human factors. Experts tell us that Oregon’s population will double in the next 50 years, and each new development, each infrastructure improvement, will take its small toll on this diminishing cultural record. If the archaeological record is like a chronicle of human history, and each site represents a “snap shot” of a specific time for a particular cultural group, the loss of a site is like an unread page torn from Oregon’s cultural saga. Since only the last 200 years
of a 13,000-year history is written, the archaeological record is our link to 99% of Oregon’s cultural history.

Seven federal laws and three Oregon State Laws regulate the protection of archaeological resources. Of these laws, the three Oregon statutes and the National Historic Preservation Act (NHPA), NEPA, and the Department of Transportation Act Section 4(f) are the primary legal mandates, and detail specific regulatory requirements which ODOT must satisfy. The responsibility for ensuring that significant archaeological sites are considered during transportation project development rests with the archaeological staff of ODOT’s Environmental Services Section. In most cases, the regulations primarily consider a site’s research potential—that is, a site’s potential to inform us about the past. However, there are nine federally recognized Native American Tribes in Oregon; in many cases, Oregon’s archaeological sites possess a cultural significance for the Tribes that transcends the information value they contain. ODOT bears a responsibility as a steward of these sites.

There are three levels of effort involved in assessing impacts to archaeological and cultural sites:

- **Phase I:** Projects that have a potential to affect archaeological resources initiate Phase I, which can consist of one or more of the following: a search of archaeological site records and historic documents; a field survey; and exploratory subsurface probing if appropriate. If no impacts will occur, or no sites are present in the area, a short report documenting findings is submitted and the process ends. Phase I takes approximately one month to complete, and is of minimal financial cost (approximately $4,000).

- **Phase II:** If sites will be impacted, sub-surface testing is conducted to determine boundaries, content, integrity and significance under NHPA criteria. If sites are determined ‘not significant’, no further investigations are needed. If a site is determined to be significant, a Determination of Eligibility (DOE) is submitted to the National Register of Historic Places and is reviewed by the appropriate Indian Tribe, the State Historic Preservation Office (SHPO), and the Federal Advisory Council on Historic Preservation (ACHP). In addition, a Finding of Effect is submitted, which evaluates the project’s impact on the resource. If a project is determined to have an effect upon the resource, then mitigation strategies must be identified. Phase II, from site identification to the completion of a final report, generally takes from 3 to 6 months to complete and costs an average of $30,000 per site. However, this figure is significantly lower in situations where numerous sites are to be evaluated within a single project, due to reduced start-up and mobilization costs.

- **Phase III:** If the site is determined significant, and avoidance is not a feasible option, data recovery (excavation) is conducted to record
and preserve the information from the site. When data recovery is necessary, a data recovery plan is submitted to outline: 1) current archaeological research relating to the site proposed for recovery, 2) how the site in question will contribute to current research, and 3) the level of recovery that is appropriate to address the questions identified. Oversight of this process rests most heavily on the SHPO, which must determine if the proposed research design is appropriate, and if the level of research effort is sufficient to comply with federal law and Memoranda of Agreement (MOA) with the Tribes. In addition, the ACHP also provides final oversight, reviews the appropriateness of the SHPO determinations, and must also concur on the sufficiency of the data recovery proposal. The ACHP also ensures that proper consultation with the affected Tribes has taken place, and that the Tribes are supportive of the proposed data recovery design. Phase III can be time-consuming and costly; the generation of a data recovery plan can take months to prepare, and the review process can similarly take up to six months. Additionally, fieldwork and analysis is labor and time intensive. Data recovery is rarely less than $100,000, and depending on the number of sites impacted, can exceed $1 million.

Preservation (i.e., avoidance) is always a primary goal, and one that is generally most satisfying for interested Tribes and cultural historians, and frequently most desirable in terms of cost. However, preservation must always be weighed with traffic efficiency and safety, and is not always possible. If an archaeological site is threatened by a highway project, the department is obliged to ensure that any information the site contains is recorded and preserved, even if it is not possible to save the site itself.

**ROADSIDE DEVELOPMENT**

The roadside is the area outside the traveled way. This applies to all lands managed by ODOT and may extend to elements outside the right-of-way boundaries. Examples include unpaved median strips and auxiliary facilities such as rest areas, roadside parks, viewpoints, heritage markers, pedestrian and bicycle facilities, wetlands and their associated buffer areas, stormwater treatment facilities, park and ride lots, and quarries and pit sites.

Roadside development encompasses context sensitive and sustainable design and installation of landscape and hardscape elements in the right-of-way to integrate the transportation facility into the surrounding environment.
Visual resource management includes assessing, protecting, and mitigating impacts of highway projects to both cultural and natural resources.

Visual resources are:
- Landforms such as mountains, hills, plateaus, valleys, beaches
- Water resources such as rivers, lakes, ocean, marshes, wetlands
- Vegetation such as forest, grassland, parks, croplands
- Human development such as highways, structures, lighting, fencing, guardrails

These elements are the stimuli upon which actual visual experience is based. Visual resources are not limited to elements or features that are of outstanding visual quality. A location or element in the visual environment can have visual values attributed to it by its viewers regardless of its quality. Viewer sensitivity or local values can confer visual significance on landscape features and areas that would otherwise appear unexceptional.

It is unlikely that a highway project could be constructed without having any visual effect on an area. Usually, the result is either beneficial or adverse with varying degrees of significance.

Types of projects that can trigger requirements for roadside development:
- Any project may have roadside development that impacts visual resources, but the rule of thumb is that the greater the disturbance to the natural or built landscape, the greater the need.
- A NEPA Section 4(f) Class 1 or 3, requiring an EA or EIS
- If it is funded through the Transportation Enhancement or Scenic Byway Program, consideration of visual impacts will likely be part of the project.
- If the project is on a designated state or federal Scenic Highway or Tour Route, there may be requirements for a visual impact assessment and related landscaping requirements.
- If the project affects river segments or lakes designated as Oregon Scenic Waterways, consideration of visual impacts and landscaping will be necessary.
- If the project affects any waterway designated as National Wild and Scenic River, visual impacts will be considered. If it affects a section designated as “recreation,” Section 4(f) will apply.
- If the project is within or adjacent to federal, state or local parks and recreation or conservation lands (includes National Historic and Scenic Trails, Wildlife sanctuaries, refuges and preserves, ’beach land’), coordination with those agencies will be necessary.
- If right of way acquisition is planned that will impact any historic resources (National Register eligible properties, WPA/CCC constructed rockwork or structures, a bridge over 50 years old),
application of the Secretary of Interior’s Standards for Rehabilitation may indicate coordination with visual resource management.
If the project includes a new or relocated roadway alignment or a new interchange, major cuts and/or fills, or any new major structures, such as bridges, noise walls, retaining walls, etc., proposed, visual resource assessment and landscaping will be considered.
Local government requirements may trigger roadside development.

HAZARDOUS MATERIALS

Federal and State laws require the proper disposal or cleanup of soil or groundwater contaminated by hazardous materials. Project costs increase and project schedules are delayed when unknown soil or groundwater contamination is discovered. The investigation and cleanup of contaminated soil or groundwater is the responsibility of the property owner. Public funds should not be used to clean up contaminated soil and/or groundwater that are the responsibility of others. However, the cleanup of contaminated soil or groundwater may be done as a part of the project where the responsible parties can not be found, are not financially able to clean up the contamination, or are unwilling to clean up the contamination in a timely manner.

Hazardous materials such as asbestos or lead paint have been used in buildings and on bridges. These materials may remain in place for the life of the structure. Demolition waste from buildings containing asbestos or lead paint must be disposed of properly. The investigation and disposal of these materials should be done and budgeted for as a part of the project as the materials become regulated only after demolition.

Standard

All reasonable efforts should be made to investigate the potential to encounter hazardous materials prior to beginning project construction. The consistent and statewide application of the guidelines herein is meant to ensure that:

Hazardous material sites are avoided where feasible and cost-effective.
The use of public funds to investigate or clean up hazardous material sites will be reduced or eliminated.
The costs and delays during project construction resulting from unknown hazardous material sites are avoided or minimized.
The responsible party or property owner has sufficient time to investigate and clean up contaminated soil or groundwater prior to right-of-way acquisition.
That in the absence of a responsible party or property owner, or when they are unable or unwilling to comply in a timely fashion, ODOT has
sufficient time to investigate and clean up contaminated soil or groundwater prior to project construction. Cleanup and disposal costs will be recovered from responsible parties where possible. FHWA will support the use of federal funds to investigate and clean up hazardous material sites when warranted. The health and safety of ODOT employees, contractors and the public is not compromised.

Guidelines
Project activities that may disturb hazardous materials include excavation, utility trenching, and building demolition. The purchase of contaminated right-of-way can also create future fiscal liabilities for the department. Project teams are responsible for ensuring that hazardous materials are adequately investigated during project development and the hazardous materials studies and findings are properly documented. The identification of hazardous material sites will start as early as practical and will continue as the project is developed until all sites have been investigated and addressed.

Personnel with a high level of technical expertise and who are knowledgeable in hazardous materials laws should conduct hazardous material investigations. The level of investigation is different for each project; projects in commercial or industrial areas warrant more thorough investigations than those in rural or residential areas. A minimum level of investigation would involve reviewing DEQ records and an on-site visit or reconnaissance. Additional investigations may involve historic aerial photos, PUC records, State Fire Marshal records, fire insurance maps, interviews with the local residents or businesses, interviews with ODOT maintenance personnel, deed searches, business registries, tests of building materials, and soil or groundwater testing. The investigation of hazardous material sites will be done at all of the following project phases:

- Corridor study
- Reconnaissance study
- Project prospectus
- Location survey
- Environmental document
- Design
- Right-of-Way acquisition

The level of inquiry is different for each project phase. In general, the detail and depth of the investigation increases as the project design is developed.
Noise, defined as unwanted or excessive sound, is an undesirable by-product of our modern way of life. It can be annoying, can interfere with sleep, work, or recreation, and in extremes may cause physical and psychological damage. While noise emanates from many different sources, transportation noise is perhaps the most pervasive and difficult source to avoid in society today. Highway traffic noise is a major contributor to overall transportation noise. A broad-based effort is needed to control transportation noise. This effort must achieve the goals of personal privacy and environmental quality while continuing the flow of needed transportation services for a quality society.

The Federal AID Program Guide is the Federal Highway Administration Noise Standard. All federal-aid highway projects are to be developed in conformance with this directive. State-funded ODOT projects are also generally developed in conformance with this directive. The FHWA Noise Standard lists the steps that must be taken in the preparation of traffic noise studies for highway construction projects. The guide defines when noise impacts occur and when noise abatement must be considered. The guide also requires that information be given to local officials for use in land use planning. The guide identifies two types of projects:

Type 1 Projects: are federal or federal-aid highway projects which construct new highways or reconstruct existing highways by significantly changing either the horizontal or vertical alignment or increasing the number of through traffic lanes. A significant change in the horizontal or vertical alignment occurs when the change is likely to result in increased noise levels to a development. Noise studies are also required for the addition of passing lanes, truck climbing lanes, interchanges, ramps, and auxiliary lanes on existing highways.

Type 2 Projects: A federal or federal-aid highway project for noise abatement along an existing highway. This type of project is often referred to as a retrofit project, because noise mitigation is not in conjunction with a highway construction or reconstruction project.

The ODOT Noise Mitigation policy states that ODOT will undertake actions and support policies and programs which minimize or avoid the adverse impact of noise caused by traffic on state highways. It recognizes that an effective noise mitigation policy requires a three-part approach consisting of source emission reduction, land use control, and highway design.

Source Emission Reduction is the most effective, far-reaching, long-range solution to the problem of traffic noise. Source emission reduction is primarily the responsibility of the Federal Environmental Protection Agency (EPA) and the State Department of Environmental
Quality (DEQ). ODOT supports reasonable legislation and effective enforcement of noise source emission regulations.

**Land Use Controls** can minimize or eliminate future noise impacts. ODOT will inform local governments of potential noise impacts that can be averted by local land use controls. Local governments should exercise control, through appropriate zoning or development approvals, to restrict the development of noise sensitive land, if such development has the potential to be noise impacted.

**Highway Design** ODOT will incorporate feasible and reasonable noise mitigation measures in conjunction with federal-aid highway construction and re-construction projects, as required by the FHWA noise standards. The department will generally not undertake noise mitigation projects on completed highways, due to the magnitude of the costs involved and competing uses for these funds. The only exceptions are situations where a substantial percentage of the mitigation cost is paid for by benefiting property owners and when warranted local government.

**AIR QUALITY**

The National Environmental Policy Act (NEPA) of 1969 and the 1970 Federal Aid Highway Act required state transportation agencies to consider the social, economic, and environmental impacts of federal projects.

In 1970, the Clean Air Act (CAA) was amended and established National Ambient Air Quality Standards (NAAQS). States are now required to submit a State Implementation Plan (SIP) to demonstrate how any area which exceeded any air pollutant standards will attain and maintain the National Ambient Air Quality Standards (NAAQS) established by the amendment. More stringent emission standards for new vehicles were also established. A non-attainment area is an area that exceeds the National Ambient Air Quality Standards (NAAQS) for a criteria pollutant. Maintenance areas are those that were in non-attainment, but now are required to maintain the standards for a period of time before being re-designated as in attainment. Control strategies are required during this maintenance time period to ensure the standards are maintained prior to going to attainment.

The CAA was most recently amended in 1990. This amendment established air quality analysis requirements for transportation plans, as well as programs and projects to demonstrate conformity with the purpose of the SIP, in order to attain air quality standards. It also required Transportation Implementation Programs (TIP[s]) to be fiscally constrained. Transportation Conformity is a way to ensure that federal funding and approval are given to those transportation activities that are consistent with air quality goals. It ensures that transportation activities do not worsen air quality or interfere
with the purpose of the SIP. Transportation conformity applies to nonattainment and maintenance areas.

Air quality analysis can be considered in two general categories in the environmental evaluation process for highway projects—those projects that are in a designated air quality attainment area and those that are in designated non-attainment or maintenance areas. However, for an air quality analysis of highway projects, the analysis requirements are essentially the same for both non-attainment and maintenance designations.

An air quality study is required for all Environmental Class 1 and Class 3 projects regardless of its location. For class 2 projects in attainment areas, an air quality study is typically not needed. However, for class 2 projects in nonattainment or maintenance areas, a study may be required if the project involves adding signals or capacity, and some other criteria. The criteria are rather detailed, and thus projects should be discussed with the air quality specialist for air quality analysis applicability. The appropriate level of air quality analysis is dependent on the type of project, its environmental category and whether the project is located in an area designated as in attainment, nonattainment, or maintenance of the NAAQS.

A carbon monoxide (CO) or a particulate matter (PM-10) hot spot analysis may be required if the project is located in a nonattainment or maintenance area. For some Class 1 and 3 projects, a Pollutant burden analysis (area wide analysis) may be conducted. Mobile source air toxins (MSATs) are also addressed for Class 1 and 3 projects. Depending on the requirement, an air quality analysis may be conducted quantitatively or qualitatively.

Currently, all air quality studies are done by consultants and reviewed by the air quality specialist located in the Central Geo-Environmental Section in Salem.

**LAND USE PLANNING**

Since 1973, Oregon has maintained a strong statewide program for land use planning. Oregon’s standards for land use planning are set forth in 19 statements formally called the Statewide Planning Goals.

These goals establish broad policies that must be addressed through local comprehensive land use planning. All of Oregon’s cities and counties must adopt comprehensive plans, zoning and land-division ordinances consistent with the Statewide Planning Goals.
Under Oregon’s planning laws, all of the cities and counties must have their land use plans and ordinances reviewed and approved by the Land Conservation and Development Commission (LCDC). With acknowledgment, a local plan becomes the controlling document for land use decisions in the area. All 276 city and county plans in Oregon have been reviewed and acknowledged by LCDC. The result is a mosaic of state-approved local comprehensive plans that governs land use of privately owned land throughout Oregon.

Every project must comply with statewide planning goals - especially goals for protecting farm and forest lands. A concerted effort to make sure the proposed action is consistent with the Comprehensive Plan, zoning ordinances, and Transportation System Plan. Goal exceptions (proposed action is inconsistent with not allowed by Comprehensive Plan) can be lengthy, and usually occur during the project development phase.

**SOCIO-ECONOMICS**

This category is not necessarily intuitive under “Environmental,” but is becoming an increasingly important subject area. We can have a variety of social and economic impacts with our projects - even Class 2 types. Some of these impacts are minor and temporary, but others more far-reaching.

Some of the most common and important issues we need to understand and look out for include:

- Community cohesion - a reality that most don’t consider - related to CS³
- Environmental justice - low income and minority populations
- Economics - effects to businesses and the local economy
- Tax base - reduction of property tax base
- Construction effect - disruption

For EAs and EISs, a Socio-Economic Technical Report must be prepared. When we have negative socio-economic effects, mitigation could be required. The OTIA III State Bridge Delivery Program developed a process for determining low income and minority populations. It is available at the [Oregon Bridge Delivery Partners’ Web site](#).

For information about project lifecycle Title VI and Environmental Justice considerations, visit the [Title VI Plan](#) at Oregon.gov/ODOT/CS/Civil Rights.
EROSION AND SEDIMENT CONTROL

Erosion is a natural process by which soil and rock material is loosened and transported. Erosion by the action of water, wind, and ice has produced some of the most spectacular landscapes. Natural erosion occurs primarily on a geologic time scale, but when human activities alter the landscape, the process of erosion can be greatly accelerated. Construction site erosion causes serious and costly problems, both on-site and off-site. The soil erosion process begins by water falling as raindrops and flowing over the soil surface.

When land is disturbed at a construction site, the erosion rate accelerates dramatically. Since ground cover on an undisturbed site protects the surface, the removal of that cover increases the site’s susceptibility to erosion. Disturbed land may have an erosion rate 1,000 times greater than the pre-construction rate. The erosion we’re most concerned about is the displacement and movement of soil particles. Even though the process of construction requires that land be left bare for periods of time, proper planning and use of erosion control measures can reduce the impact of man-induced accelerated erosion.

Air and water pollution can result from the release of chemicals, waste materials, and soils into air or water. Soil that erodes from construction sites and is discharged into water is pollution. The term pollution control refers to methods and procedures used to prevent pollution of air and surface waters.

Water pollution in the United States is regulated under the Federal Water Pollution Control Act of 1972, now known as the Clean Water Act (CWA). The CWA originally emphasized control of point source pollution. Point source pollution is discharged through discrete conveyance, typically through a pipe from an industrial or municipal facility. In 1987 Congress amended the CWA to include non-point sources of pollution. Non-point pollution occurs when runoff from land carries pollutants to receiving waters. Section 402 of the CWA provides the legal basis for the National Pollutant Discharge Elimination System (NPDES) permit program, which regulates point and non-point discharges.

The EPA has delegated the implementation of the NPDES program to the state of Oregon. The Oregon Department of Environmental Quality administers the NPDES program through Oregon Revised Statute 468B. The Statute prohibits the discharge or placement of wastes into waters of the state, prohibits the discharge of waste that causes violations of water quality standards, and prohibits violations permit conditions.
ODOT holds several NPDES permits, including the 1200-CA general construction permit, which requires a site specific erosion control plan for construction activities which disturb a total of 1 acre or more. The general construction permit also requires control of construction site pollutants other than sediment, such as oil, gasoline and solvents. In addition to federal requirements, many local jurisdictions have developed storm water management programs that include erosion and sediment control requirements.

In order to prevent pollution associated with erosion from its construction projects and meet local, state and federal requirements, ODOT requires an Erosion and Sediment Control Plan (ESCP) for each project. ODOT usually prepares the ESCP, which is implemented by the contractor during construction. For projects having minimal soil disturbance, ODOT may specify that the contractor develops the ESCP.

The ESCP is intended to provide adequate measures to minimize erosion, and to control sediment resulting from construction activities within the project boundaries.

Erosion control begins in project planning and continues until soil has permanent protection. Even though most ODOT contract documents appear to be well done, erosion problems are still common. Problems can originate from many project areas, so we need to pay attention to the whole project. On projects, requirements are usually spelled out in permits and environmental documents. Environmental specialists and erosion control designers are responsible for ensuring that projects meet all applicable requirements.

**FLOODPLAINS**

Executive Order 11988 requires federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities" for the following actions

- Acquiring, managing, and disposing of federal lands and facilities
- Providing federally-undertaken, financed, or assisted construction and improvements
- Conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities
The following guidelines address an eight-step process that agencies should carry out as part of their decision-making on projects that have potential impacts to or within the floodplain.

1. Determine if a proposed action is in the base floodplain (that area which has a one percent or greater chance of flooding in any given year)
2. Conduct early public review, including public notice
3. Identify and evaluate practicable alternatives to locating in the base floodplain, including alternative sites outside of the floodplain.
4. Identify impacts of the proposed action
5. If impacts cannot be avoided, develop measures to minimize the impacts and restore and preserve the floodplain, as appropriate
6. Reevaluate alternatives
7. Present the findings and a public explanation
8. Implement the action

Some locations require a “No-Rise” be demonstrated due to local ordinances.

A violation on a single project can affect ODOT’s ability to deliver permits which are region-wide.

You can gain access to a limited number of floodplain maps through the region or Geo-Environmental Services. You should get the most recent copies of maps and studies from FEMA or local floodplain management agencies (cities and counties).

**CLOSING**

None of the geo-environmental requirements that have been covered should result in decreased safety or poor engineering. But, at the same time we’re solving safety and operational problems, we should also be actively thinking about an environmental approach of AVOID (first), MINIMIZE, then MITIGATE.

In accordance with ODOT’s commitment to environmental excellence and CS3, we should be looking for opportunities to improve environmental conditions - whether or not there is a hard requirement to do so. In a manner of speaking, this can translate to “leaving the project area better than you found it.” This applies not only to natural resource issues, but also aesthetics and the built environment.

You may perceive that changes to project design are too minor to warrant new attention from Geo-Environmental, but you really should check this out with your regional Environmental Coordinator (REC), Environmental Project
Manager (EPM), or the Geo-Environmental Manager. Scope creep can definitely lead to project delays and increased costs.

If critical issues are missed or ignored, delays in project development will probably occur. It pays to address geo-environmental problems early in the process and to be thorough during project scoping.

Missing critical issues can mean delays, but also unanticipated financial costs for mitigation. Mitigation may be much more costly than you’d imagine, so it pays to have made the right choices along the way during project development.

For project development associated with EAs and EISs, you must always use an objective and interdisciplinary approach for narrowing alternatives. There is a great deal of case law showing that if reasonable alternatives are unreasonably dismissed, you will probably end up starting over from scratch.

Your first line of defense for Geo-Environmental issues should be your Technical Center staff. The HQ Geo-Environmental Section is also available to assist you for particularly nasty or complex situations.
The Statewide Transportation Improvement Program (STIP) is Oregon’s investment program for major state and regional transportation systems, including interstate, state, and local highways and bridges, public transportation systems, and federal and tribal roads. The STIP includes all major transportation projects and programs in Oregon that are funded with federal dollars. It also includes state-funded projects that relate to the state highway system, and “regionally significant,” locally-funded projects in metropolitan areas that affect the state transportation system.

The STIP does not identify routine maintenance projects, but does identify major pavement repairs and overlays, especially those on interstate and regional highways. Most projects in the STIP involve improvements to existing facilities, such as repaving a highway, replacing a traffic signal, or protecting a road from a rock slide.

The Modernization Program is the program that funds projects that add capacity to the state’s highway system. The STIP also includes project development work, such as engineering and environmental studies for future projects, and “earmarked” projects that are specifically designated in federal legislation. It covers all major transportation projects for which funding is approved and that are expected to be built or carried out during a certain time frame.

Federal law requires that ODOT adopt a new STIP every four years. Oregon’s STIP is updated every two years and covers a four-year period. The cycle begins in even numbered years (e.g. the 2006-2009 STIP). The STIP is a project scheduling and funding document. It is not a plan but may include planning and environmental studies that relate to potential construction projects. It lists transportation projects that are approved for construction as well as transit programs and other projects that are funded during the next four years.

Because the STIP is updated every two years, much of the focus is on the third and fourth years of the cycle, as that is when projects usually first appear in the STIP. Most of the projects that are programmed in the first two years of a STIP cycle have simply moved up from years three and four of the previous STIP cycle.
While Oregon’s STIP is adopted by the OTC, many groups are involved in the process. Some of the agencies and interest groups involved with the STIP process are:

- Area Commissions on Transportation (ACTs)
- Cities and counties
- Federal agencies
- Freight Advisory Committee (FAC)
- Indian tribal governments
- Metropolitan Planning Organizations (MPOs)
- ODOT program advisory groups
- Transit districts, port districts

**WHERE STIP PROJECTS COME FROM**

Almost all of the projects listed in the STIP come from long-range transportation plans, or from state management systems and asset databases, or from program applications. Modernization projects—all projects that add capacity to the state highway system—began as ideas or concepts in plans that were approved before the STIP process started, such as an ODOT facility plan, a transit district long-range plan, a Regional Transportation Plan (RTP), or a local Transportation System Plan (TSP).

Most of the other projects listed in the STIP emerge from management systems and data bases that monitor specific system needs, such as pavement conditions, rock slide hazard areas or bridge conditions. These projects are frequently chosen on the basis of a cost-to-benefit analysis.

Finally, some projects in the STIP are selected through a competitive process that uses an application and project-scoring system administered by ODOT or a federal agency. Examples include the ODOT Transportation Enhancement program and the federal Scenic Byways program.

A project evolves from a transportation problem or need identified through a variety of sources including:

- Metropolitan Planning Organizations’ (MPOs)
- Area Commission on Transportation (ACTs)
- Corridor Planning
- Local municipalities Transportation System Plans
- Oregon Transportation Management System

ODOT’s multiple plans and programs help identify transportation needs, and determine which transportation projects will be developed and constructed. From all these sources, the region planners and management teams develop and prioritize the project needs list.
Metropolitan Planning Organizations (MPOs) are federally mandated forums required in all metropolitan areas with a population greater than 50,000. Metropolitan areas with a population of 200,000 or greater are designated as Transportation Management Areas (TMAs).

MPOs work cooperatively with the area’s locally elected officials, involved public agencies, major transportation providers and the general public to provide a coordinated, efficient, and appropriate investment in transportation. Transportation providers are primarily the state and local transportation departments and transit operators. ODOT is an active member in each of the MPOs. There are seven active MPOs in Oregon - Metro, Salem-Keizer Area, Corvallis Area, Central Lane, Bend, Rogue Valley, and Kelso-Longview-Rainier.

In rural and small urban, non-metropolitan areas of the state there is no official body designated to do transportation planning as MPOs do in urban areas. Transportation legislation requires states to consult with and consider concerns of the public and non-metropolitan officials when making transportation decisions. In non-metropolitan areas of the state, ODOT works with Area Commissions on Transportation (ACTs) and County transportation departments to plan transportation projects and cooperatively works to develop lists of specific projects to be advanced. The Area Managers and region Planning Units consult with rural and small urban area constituents to solicit project proposals. The ACTs are formed from local government and community participants to serve in an advisory role to the OTC. Their primary purpose is to identify and prioritize transportation needs and recommend transportation solutions within a specific geographic area.

A corridor plan is made up of a series of activity-based corridors. A corridor is a transportation pathway that provides for the flow of people and/or goods within and between activity centers. It includes one or more primary transportation facilities and the abutting land uses and supporting street network. The practice of corridor planning can generally be defined as the application of multiple strategies to achieve specific land use and transportation objectives along a transportation pathway. Corridor planning combines capital improvements and management strategies into a unified plan of action for a transportation corridor.

Corridor planning studies identify and analyze long and short term needs of a corridor, develop objectives for projects along the corridor, and identify feasible alternatives for the projects that meet the stated objectives. Stakeholder participation in corridor planning is an integral and ongoing part of the planning process. The studies begin the process of identifying the social, economic, and environmental consequences of alternatives within the study area.
Cities, counties, and MPOs are required to have a Transportation System Plan (TSP). The TSP establishes a coordinated network of transportation facilities and services that are adequate to meet the local and regional transportation needs. TSPs serve as the transportation element of local comprehensive plans. Local TSPs must coordinate and be consistent with regional plans and regional TSPs must be consistent with the State Transportation Plan. TSPs integrate transportation and land use, provide for long range direction for transportation of all modes, and provide a link to the STIP process.

The Oregon Transportation Management System (OTMS) is a program designed to manage highway pavement, bridges, highway safety, traffic congestion, public transportation facilities and equipment, intermodal transportation facilities and systems, and traffic monitoring for highways. The management systems provide information to assist state and local decision-makers in selecting cost-effective policies, programs and projects to preserve and improve the transportation infrastructure.

The function of the OTMS is to inventory roadway and other transportation features; collect, analyze, and summarize data; identify and track performance measures; identify needs and help determine strategies and actions to address those needs; and monitor and evaluate the effectiveness of strategies and actions that are implemented. The seven management systems are:

- **Integrated Transportation Information System (ITIS):** ITIS contains descriptive information about Oregon's transportation infrastructure, and is the official source of mile point information.
- **Bridge Management System:** Is for bridges on and off federal-aid highways. It supplies analyses and summaries of data, uses mathematical models to make forecasts and recommendations, and provides the means by which alternative policies and programs may be efficiently considered.
- **Congestion Management System:** Uses ODOT inventories of the state highway system, traffic volume data, and Highway Performance Monitoring System data to report congestion trends on the state highway system and to identify the severity of congestion on parts of the highway system. This information helps ODOT develop policies for managing congestion to plan projects for alleviating congestion.
- **Intermodal Management System:** Provides information about freight and passenger intermodal facilities and connections. The focus is on intermodal in general and freight more specifically. Also included is information about non-intermodal freight movements, including those on highways, main rail lines and marine waterways.
- **Pavement Management System:** is a set of tools or methods that can assist decision makers in finding cost effective strategies for...
providing, evaluating, and maintaining pavements in a serviceable condition.

Safety Management System: Is comprised of two major parts: The Information Safety Management System (ISMS) and the Project Safety Management System (PSMS). The ISMS includes a number of sources of data essential for the PSMS as well as the overall monitoring and administration of ODOT’s Roadway Safety Program. The PSMS relates directly to processes, procedures and tools needed to address critical safety issues for project scoping, design and construction.

Traffic Systems Monitoring for Highways: a systematic process for the collection, analysis, summary and retention of highway and transit related person and vehicular traffic data

**STIP FUNDING**

This section presents the project delivery process as it applies generally to the Statewide Transportation Improvement Program (STIP), including Oregon Transportation Investment Act (OTIA) Projects.

Federal Law Requirements-The STIP must be developed in accordance with all applicable requirements as described in 23 CFR 450.220. Specifically, federal law requires Oregon to produce a STIP that is updated at least once every two years. The STIP must include:

- All federally funded transportation projects
- All regionally significant transportation projects regardless of the funding source, including those that result in:
  - Increased capacity
  - Changes in traffic flow patterns
  - Air quality impacts
  - Projects of special public interest
  - Fiscally constrained projects (those for which funding has been identified) for the first three years of the STIP

All these types of projects in Metropolitan Planning Organization (MPO) Transportation Improvement Programs (TIPs)

When projects are in MPO areas, it is important to remember that MPOs, TIPs and the STIP must always match. If adding or changing a project of any of these types in the STIP, and the project is within an MPO boundary, then the change must also be reflected in the MPO’s TIP and such changes to the TIP must be reflected in the STIP. If you understood this, welcome to ODOT.

For more information on see the STIP Users’ Guide at:
http://www.oregon.gov/ODOT/HWY/STIP/
In Oregon, projects in the STIP are developed to align with the Oregon Transportation Plan (OTP), the Oregon Highway Plan (OHP) and other mode and topic plans. The STIP:
  * Includes several types of transportation-related projects
  * Covers a four-year period
  * Is updated every two years
  * The third and fourth years of the current STIP typically become the first and second years of the next STIP

The Oregon Transportation Plan, together with the topical and modal plans (including the Oregon Highway Plan), state facility plans including corridor and local and regional plans, provide the foundation for the STIP.

The OTP is available at:
The OHP is available at:
Local plans and facility plans are available on TransGIS at
The STIP identifies the program that provides funding for each project. Some programs are state funded, some are federally funded and occasionally a locally funded project is listed in the STIP. The programs set requirements on how funds can be spent; money from most programs, like a bridge program, cannot be spent for other purposes. However, many projects have different components, like a sidewalk and safety improvement combined with a preservation project. In such case, the various project elements may be eligible for different kinds of funding. ODOT refers to different sources of funds as “colors of money.”

**FINANCIAL PLAN**

The Highway Program Office (HPO) uses the project’s financial plan to:
- Balance the Highway Division—and to a lesser degree, other divisions’—programs to available revenues
- Ensure that financial obligations are met
- Avoid allowing federal funds to lapse
- Assist regions and programs in balancing their funding targets with their actual obligations

The Financial Plan information is derived from the most recently approved STIP. Financial Services prepares:
- Estimates of anticipated state and federal transportation revenue
- Updated financial information, as revenue receipts are finalized

For more information on Financial Services, see: [http://www.oregon.gov/ODOT/CS/FS/](http://www.oregon.gov/ODOT/CS/FS/)

The project Financial Plan also tracks the funding source - whether a project is federally or state funded. ODOT typically follows the federal guidelines and completes the federally required activities for all projects. When ODOT develops projects, the delivery process is the same regardless of whether state or federal funds are used. The reason for this is so ODOT can interchange funding as necessary without project delay.

Federally funded local agency projects are contracted through ODOT (except with certified agencies) and incorporated into the financial plan. State-funded projects typically are not tracked in the Financial Plan.

The Highway Program Office (HPO) keeps managers informed of changes in the source and status of project funds. For more information on the Highway Program Office, see: [http://intranet.odot.state.or.us/highwaybudget/](http://intranet.odot.state.or.us/highwaybudget/)
HOW A PROJECT GETS INTO THE STIP

Step 1 - Citizen input and ideas for new projects
Federal regulations and state policies guide public and local government involvement in the STIP process. By law, ODOT must engage citizens and communities and provide continued opportunities for them to participate in project selection. ODOT must also make a special effort to reach out to those who may not be adequately served by the current transportation system.

ODOT publicizes local meetings to discuss transportation needs and priorities in specific areas and highway corridors. Citizens who wish to become involved with project selection, to speak for or against a project, or who are interested in helping to prioritize projects should contact members of the city or county planning organization as well as the closest ODOT Area Manager’s office and attend the local and regional planning sessions. Early opportunities are the best opportunities.

Most Oregon communities have an Area Commission on Transportation (ACT), described below in Step 3. These commissions help get local project suggestions and needs elevated to ODOT and to the OTC. Where there is no ACT, citizens can still participate in Highway Corridor Planning, Transportation System Planning (part of local comprehensive planning), and/or the Metropolitan Planning Organization regional planning processes.

Following these processes does not guarantee that a project will be built. Projects recommended by ACTs and regional advisory groups must satisfy all project criteria adopted by the OTC, have technical merit, compete for scarce funding, meet environmental and air quality standards, and be consistent with a community’s priorities. But there is a greater chance of success when citizens and stakeholders begin with local governments and ACTs.

Note that the level of public involvement is not the same for every project; the level of effort varies with the complexity and profile of each project. Some may require more objective data that must be supplied by engineering and research.

Step 2 - The transportation planning process
Oregon has many different transportation plans. Some of these are long-term plans that go as far as 20 years into the future. Others are for much shorter periods and target specific areas of the state.
The Oregon Transportation Plan is the long-range plan that sets goals, policies, and actions for state transportation. Corridor plans consider projects along a specific stretch of state highway and its surrounding road and street system. A corridor plan is not limited to highways. It may also include transportation facilities for pedestrians and bicycles, rail, transit, water, and air travel. Transportation system plans consider projects in communities. Region transportation plans each cover one of six metropolitan areas within Oregon: Bend, Corvallis, Eugene/Springfield, Medford, Portland, and Salem/Keizer;

All of the various planning processes include opportunities for citizens and local governments to make their wishes and needs known. ODOT encourages active citizen participation and ownership in transportation planning.

**Step 3 - Commissions on Transportation and OTC**

In 1996, the OTC decided to expand the opportunities for local government and citizen involvement in ODOT’s decision making. The commission authorized regionally-based transportation advisory commissions known as Area Commissions on Transportation (ACTs). ACTs cover all aspects of transportation (surface, marine, air, and transportation safety) with primary focus on the state transportation system. An ACT also considers regional and local transportation issues if they affect the state system. ACTs help prioritize transportation problems and solutions and recommend projects in their areas to be included in the STIP. The advisory groups also interact with other local organizations dealing with transportation related issues.

**Step 4 - OTC sets funding levels for different types of projects**

At the beginning of each STIP update (every two years) the OTC holds discussions to determine the level of funding that will go to different types of STIP projects:
- Safety
- Modernization
- Preservation of pavement
- Bridge replacement and repair
- Operations (projects that improve system efficiency)
- Public transit
- Transportation enhancement program
- Congestion mitigation and air quality
- Bicycle and pedestrian
- Railroad crossing safety improvements
- Fish passage / culvert improvements
Actual federal funds coming to the state may vary from year to year. According to federal regulation and state policy, safety and the preservation and management of existing transportation facilities and services get top priority.

**Step 5 - Prioritize projects and match to available funding levels**

After the initial funding discussion and the discussion about individual projects with ACTs, regional advisory groups, and other stakeholders, projects are prioritized and matched to available funding. Most new projects are added to the STIP’s third and fourth years. The first and second years are taken up with projects from the previous STIP. (Remember that the STIP is a four-year program with an update every two years.)

**Step 6 - The Draft STIP**

ODOT staff members compile the program and project information into a “Draft STIP” document. ODOT provides at least a 45-day public review of the Draft STIP, and a 45-day public review of any major revision of the approved STIP. ODOT also provides statewide opportunities for public comment on the Draft STIP by scheduling at least two public meetings in each of ODOT’s five regions. ODOT considers all public comments about the Draft STIP before the OTC adopts a final version.

All projects in the STIP must meet the goals of the federal Clean Air Act Amendments (CAAA) and the related State Implementation Plan for Air Quality. All projects that may impact air quality must conform to the goals of the CAAA in order to be approved for funding.

**Step 7 - OTC and USDOT approval**

Once the Draft STIP and all review material have been compiled into a final document, the OTC approves it. Once the OTC has approved the STIP, it goes to the Federal Highway Administration and the Federal Transit Administration for final approval.

Both agencies review the STIP for consistency with planning, financial constraint, appropriate grouping of smaller projects, and compliance with state plans for air quality.

At the time of federal approval, all the projects in the STIP are approved for development and/or construction. Sometimes a project may be unavoidably delayed. This may be because actual revenue may not meet the expected revenue, or because certain projects may take longer to develop than expected. For this reason, projects in the STIP can be moved from one year to another within the first three years of the program.
The STIP is published at the end of the year in odd-numbered years. Any corrections, additions, or revisions to the approved STIP document must be made through a federally-approved amendment process.
This appendix is divided into a **GLOSSARY** and an **ACRONYM** section. Click on the appropriate section, and then the arrow icon to return here.

Another handy resource is ODOT’s alphabetical subject index: [http://www.oregon.gov/odot/subject_index.shtml](http://www.oregon.gov/odot/subject_index.shtml)

### GLOSSARY


#### A

**Access Control**

The limitation of the right and use of access either by law or agreement. The control can be a complete restriction of access or a limitation of access to a specific location.

**OAR 734-051-0040(1)** defines Access Control as “. . . no right of access exists between a property abutting the highway and the highway. The right of access may have been acquired by the department or eliminated by law.”

Access rights may be eliminated by acquisition, including:

- Purchase;
- Donation;
- Condemnation; or
- Law.

**Access Management**

Improves the safety and efficiency of traffic operations while enhancing accessibility to and mobility of the transportation system. Access management measures include managing:

- The location, spacing and type of physical connections to streets, roads and highways from public roads and private driveways.
- Grade-separated interchange areas for safe and efficient operation.
The type and placement of medians and the location of median openings.

See: http://www.oregon.gov/ODOT/HWY/ACCESSMGT/

**Acquisition**
Elimination of the right of access. (See Access Control.)

**American Association of State Highway and Transportation Officials (AASHTO)**
The American Association of State Highway and Transportation Officials advocates transportation-related policies and provides technical services to support states in their efforts to efficiently and safely move people and goods. This national organization serves transportation groups, state departments of transportation, and Congress by:
- Promoting transportation agendas.
- Testifying and advocating on behalf of highway and transportation agencies.
- Establishing transportation standards.

See: http://www.transportation.org/

**American Public Works Association (APWA)**
The American Public Works Association is an international educational and professional association of public agencies, private sector companies, and individuals dedicated to providing high quality public works goods and services. This organization supports utility companies and local governments that operate utilities.

See: http://www.apwa.net/

**Americans with Disabilities Act (ADA) of 1990**
The Americans with Disabilities Act (ADA) is a federal civil rights law that prohibits discrimination against people with disabilities in everyday activities, such as buying an item at the store, going to the movies, enjoying a meal at a local restaurant, exercising at the health club, or having the car serviced at a local garage.

To meet the goals of the ADA, the law established requirements for businesses of all sizes. These requirements went into effect on January 26, 1992. Businesses that serve the public must modify policies and practices that discriminate against people with disabilities; comply with accessible design standards when constructing or altering facilities; remove barriers in existing facilities where readily achievable; and provide auxiliary aids and services when needed to ensure effective communication with people who have hearing, vision, or speech
impairments. All businesses, even those that do not serve the public, must comply with accessible design standards when constructing or altering facilities.

See ADA’s website at: www.ada.gov and ODOT Civil Rights Section at: http://www.oregon.gov/ODOT/CS/CIVILRIGHTS/

**Approach (or approach road)**

A public or private roadway, or driveway connection:
- Between the outside edge of the shoulder or curb line and the right of way line of the highway.
- Intended to provide vehicular access to and from said highway and the adjoining property.

**Area**

Part of an ODOT region, with each region consisting of two or more areas. Area borders are county lines to be consistent with county governments. There are 12 areas.

**Area Commission on Transportation (ACT)**

Area Commissions on Transportation (ACT) are advisory bodies charted by the Oregon Transportation Commission (OTC). ACTs address all aspects of transportation (surface, marine, air, and transportation safety) with primary focus on the state transportation system. ACTs consider regional and local transportation issues if they affect the state system. They work with other local organizations dealing with transportation-related issues.

ACTs play a key advisory role in the development of the Statewide Transportation Improvement Program, which schedules funded transportation projects. ACTs establish a public process for area project selection priorities for the STIP. Through that process and following adopted project eligibility criteria, they prioritize transportation problems and solutions and recommend projects in their area to be included in the STIP.

See: http://www.oregon.gov/ODOT/COMM/act_main.shtml

**Arterial**

A class of roads serving major traffic movements (high-speed, high volume) for travel between major points.

See definition for Functional Classification.
At-grade
Used to express that a feature and a roadway meet at the same elevation (i.e., where two roads are at the same level, or a road and something else, such as rail tracks, are at the same level).

Average daily traffic (ADT)
The average number of vehicles passing a certain point each day on a highway, road or street.

Base map
A map on which information may be placed for the purpose of comparison or geographical correlation. The base map may include outline and topographic maps.

Bicycle and Pedestrian Program
The objective of the Bicycle and Pedestrian Program is to provide safe, accessible and convenient bicycling and walking facilities and to support and encourage increased levels of bicycling and walking. It is a competitive grant program that provides approximately $5 million dollars every two years to Oregon cities, counties and ODOT regional and district offices for design and construction of pedestrian and bicycle facilities. Proposed facilities must be within the public right of way. Grants are awarded by the Oregon Bicycle and Pedestrian Advisory Committee. The process is generally very competitive; about one out of five projects typically get funded.

See the Oregon Bicycle and Pedestrian Program:
Http://www.oregon.gov/ODOT/HWY/BIKEPED

Bridge
A structure spanning and providing passage over a river, chasm road or the like. A structure including supports erected over a depression or an obstruction, such as water, highway, or railway, and having a track or passageway for carrying traffic or other moving loads, and having an opening measured along the center of the roadway of 6 feet or more between undercopings of abutments or spring lines of arches, or extreme ends of openings for multiple boxes; it may also include multiple pipes, where the clear distance between openings is less than
half of the smaller contiguous opening.

See:  http://www.oregon.gov/ODOT/HWY/BRIDGE/

C

Capacity
Maximum volume of traffic that the roadway section is able to carry on a sustained basis.

Cathodic
Having to do with the emission or use of electrons and electrolytes, such as in testing the viability of metallic materials in transportation structures.

Certification Program
The ODOT Certification Program is a local program administered by ODOT’s Local Government Section that enables local agencies (e.g. cities and counties) to retain more approval authority and control at the local level when developing FHWA funded, non-National Highway System (NHS) transportation projects.

See http://www.oregon.gov/ODOT/HWY/LGS/Certification.shtml

Certification of ROW
The right of way certification procedure identifies the acquisition status of needed rights-of-way for the purpose of advancing a project to construction. It is a prerequisite to advertising the physical construction of a project for contractor bids on a typical Design-Bid-Build project, advertising or releasing the Request for Proposals document on a Design-Build project, or proceeding with force account construction. Right of way Certification is a requirement on all highway construction projects within the STIP, regardless of funding source. Right of Way Certification is also necessary on all local public agency STIP projects.

The purpose of a right of way certification is:

■ 1) To identify and affirm that no additional right of way and relocation assistance is required for construction of the project; or
2) To provide ODOT’s assurance that the acquisition of additional right of way and relocation assistance for displaced persons and/or businesses has been completed and in compliance with the federal requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act, current federal regulations, and Oregon state law; and

3) To insure that clearance of the acquired right of way is so coordinated with the physical construction that no unnecessary delays or costs for physical construction will occur; and

4) To identify the existence and status of any hazardous waste issues within the right of way.

See ROW manual at:

Civil Rights
See ODOT Civil Rights Section at:
http://www.oregon.gov/ODOT/CS/CIVILRIGHTS/

Citizens Advisory Committee (CAC)
An ODOT-sponsored coalition of Oregon citizens that advises and provides input on specified transportation issues and concerns.

For ODOT CACs, see:

Classifications of Highways
The Department’s designation of state highways into four categories:
- Interstate.
- Statewide.
- Regional.
- District.

See “Functional Classifications.”

See: Oregon Highway Plan at

Community Solutions Team (CST)
The Community Solutions Team is now the Governor’s Economic Revitalization Team. Please see Governor’s Economic Revitalization Team in the definitions.

See: http://www.gert.oregon.gov
Computer aided Design and Drafting (CADD)
Software programs that facilitate the design of transportation projects and drafting of plans.

Condemnation
A legal process in which private property is acquired by a governmental or quasi-governmental agency for public purposes through exercise of the power of eminent domain, wherein the property owner is paid just compensation for the property.

Congestion Mitigation and Air Quality Program (CMAQ)
The CMAQ program was reauthorized in 2005 under the Safe, Accountable, Flexible, Efficient Transportation Act - A Legacy for Users (SAFETEA-LU) to fund transportation projects or programs that contribute to attainment or maintenance of National Ambient Air Quality Standards (NAAQS). Projects funded under the CMAQ program must be expected to result in tangible reductions of carbon monoxide (CO), ozone precursors, or particulate matter (PM) pollution.

See ODOT Local Government Section, federal-aid funding: http://www.oregon.gov/ODOT/HWY/LGS/funding.shtml#Federal_Aid_Programs

Construction Engineering
Inspection, testing and reporting activities performed by ODOT or the project sponsor (or its consultant) during the construction phase activities after a contractor has been selected to build a project, and are not part of the project development process.

Context Sensitive Design (CSD)
A decision-making process that seeks flexibility in the application of design standards in order to incorporate or respond to surrounding natural or built site conditions without compromising safety.

Context Sensitive Solutions (CSS)
A collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic and environmental resources, while maintaining safety and mobility. CSS is an approach that considers the total context within which a transportation improvement project will exist.
**Context Sensitive and Sustainable Solutions (CS3)**

The concept of merging the principles of context sensitive design, context sensitive solutions and sustainability to create a framework for decision-making and problem-solving throughout the lifecycle of a project.

**Contract**

A written agreement between ODOT and a contractor describing the work to be done and defining the obligations of ODOT and the contractor.

**Contract Plans (also known as Construction Plans)**

Detailed drawings and diagrams, usually made to scale, showing the structure or arrangement, worked out beforehand, to accomplish the construction of a project or object.

**Corridor**

A designated length of highway and the towns and features in its vicinity.

**Crossings (railroad)**

Intersections between railroad tracks and a road, which can be:
- At-grade (at the same level).
- Grade-separated, where the road uses either a tunnel or a bridge to avoid crossing the railroad tracks.

**Crossing Order**

A legally enforceable, permanent compliance document regarding the construction, alteration or closure of a public crossing(s).


**Cultural Features**

Features constructed by man - under, on or above ground - that include:
- Roads.
- Trails.
- Buildings.
- Water systems.
- Boundaries.
- Artifacts.

**Culvert**

A drainage structure that passes through a roadway embankment or past some other type of flow obstruction. In some cases these are also used
as grade separated cattle passes. (Culverts can be from 12” to greater than 20 feet in span.)


D

**Department of Geology and Mineral Industries (DOGAMI)**
A state agency that establishes standards for extracting earth materials for roadwork and other applications.


**Design Acceptance**
This milestone is a critical point of decision-making that establishes the geometric boundaries of the project footprint, and allows for the concurrent right-of-way (ROW), permitting, and construction contract document activities to move forward. Design Acceptance also provides for environmental and land use requirements, and subsequently how they affect permitting and the development of construction contract documents. It occurs at the end of the initial design phase and requires all project disciplines to review the design for balance of context with standards and policies. It is the primary opportunity for both technical and non-technical stakeholders to review design elements according to their specific interests.

**Design Exception**
An approved change or modification in a project design that is contrary to stated design standards or regulations.


**Digital Terrain Model**
A computer-generated image, typically in three dimensions, of a specific area of the earth’s surface based on acquired geographic data.

**District**
Part of an ODOT region designated for maintenance purposes; however, not all district boundaries correlate to region boundaries. There are 14 districts.

**Elected Official**
Any person voted into office for a term-limited position by the general public in a certain geographic region; such as:
- Mayor.
- Council member.
- County commissioner.
- Legislator.
- Governor.

**Embankment**
A raised structure constructed of natural soil from excavation or borrowed sources, used to hold back water or carry a roadway.

**Engineer’s Estimate**
The official construction price (estimated construction cost of a project).
- Determined by an ODOT engineer.
- Used for bid comparison of projects.


**Environmental Assessment (EA)**
A report documenting the potential environmental effects of a proposed project. A Finding of No Significant Impact (FONSI) is issued after a Revised EA.

**Environmental Impact Statement (EIS)**
A report documenting specific environmental impacts of a proposed project. A Record of Decision is issued after a Final Environmental Impact Statement.
**Facility Plan**
A facility plan may address issues for one transportation mode, such as pipeline, aviation, rail, or bike/ped; or it may address issues for multiple modes, such as, a highway corridor plan, a downtown plan, or Special Transportation Area (STA) management plan that include components for access management, public transit, traffic safety, and/or bike/ped improvements. Facility plans consider specific geographic issues and affect the application of specific Statewide Planning Goals and, therefore, contain land use decisions. The State Agency Coordination Rule (OAR 731-015-0015) defines “facility plan” in a similar light, “a plan for a transportation facility such as a highway corridor or airport master plan.”

**Federal Highway Administration (FHWA)**
The federal agency that provides oversight to state departments of transportation and approves statewide transportation improvement programs (STIPs).


**Finding of No Significant Impact (FONSI)**
A statement certifying that a proposed project has no substantial impact on the natural or social environment.

**Functional Classification**
Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide. Basic to this process is the recognition that individual roads and streets do not serve travel independently in any major way. Rather, most travel involves movement through a network of roads. It becomes necessary then to determine how this travel can be channelized within the network in a logical and efficient manner. Functional classification defines the nature of this channelization process by defining the part that any particular road or street should play in serving the flow of trips through a highway network.
Geometrics
Information relating or according to the principles of geometry, which deals with the measurement and properties of angles, lines, points, shapes and surfaces.

Geometronics
The science of surveying and mapping by means of fieldwork and aerial photography.

See:  http://www.oregon.gov/ODOT/HWY/GEOMETRONICS/

Global Positioning System (GPS)
A computer and satellite system that locates the latitude and longitude of a permanent or portable beacon unit.

Governor’s Economic Revitalization Teams (GERT)
Regional teams consisting of representatives from five state agencies that are designated by the Governor to resolve issues using combined resources and skills.

See:  http://www.gert.oregon.gov

Grade-separated
Where a tunnel or bridge is used to separate two roadways, or a road and something else, such as railroad tracks.

Hazard Elimination Program

Highway Safety Improvement Program (HSIP)
A federal program that develops safety improvement projects to reduce the risk, number and severity of crashes on public roads and transportation facilities.

See:  http://www.oregon.gov/ODOT/HWY/TRAFFICROADWAY/highway_safety_program.shtml and the guide at
**Hazardous Material**
A substance or material that may pose an unreasonable risk to health, safety or property, and must be properly removed from a project site.

**High-Occupancy Vehicle Lanes (HOV-Lanes)**
Exclusive road or traffic lane limited to buses, vanpools, carpools, and emergency vehicles. (American Public Transit Association Transit Fact Book APTA1)

**Highway**
Is any road, street, parkway, or freeway/expressway that includes rights-of-way, bridges, railroad-highway crossings, tunnels, drainage structures, signs, guardrail, and protective structures in connection with highways. The highway further includes that portion of any interstate or international bridge or tunnel and the approaches thereto (23 U.S.C. 101a). (FHWA2)

**Highway Bridge Replacement and Rehabilitation Program (HBRRP)**
Established under 23 U.S.C., Section 144, to enable the several states to replace and rehabilitate highway bridges when it is determined that the bridge is unsafe because of structural deficiencies, physical deterioration, or functional obsolescence.

See: ODOT - Bridge Engineering/ Local Agency Bridge Projects
Http://www.oregon.gov/ODOT/HWY/BRIDGE/local_agency.shtml

**Highway Designations**
Subcategories that are policy specific and have importance for certain areas and users; such as:
- Special Transportation Areas.
- Urban Business Areas.

See: The Oregon Highway Plan at

**Highway Mobility Standards Policy**
Establishes standards for mobility that are reasonable and consistent with the directions of other Highway Plan policies, which:
- Establish higher mobility standards for interstate highways, freight routes and other state highways than for regional or district highways.
Establish lower mobility standards for Special Transportation Areas (STAs) and more highly developed urban areas than less developed areas and rural areas.

Establish the lowest mobility standards for regional and district highways in STAs where traffic congestion will be allowed to reach levels where peak hour traffic flow is highly unstable and traffic queues form on a regular basis.


**Horizontal Control Point**

An established point on the ground with known horizontal positioning, which is normally used:

- As a reference for gathering other measurements.
- For placing survey or construction stakes.
Illumination
Any kind of lighting that enhances visibility for transportation facilities.

Incident Management
- The detection and verification of incidents, such as:
  - Crashes.
  - Stalled vehicles.
  - Other situations blocking traffic.
- The implementation of appropriate actions to clear the highway.

In-Source Projects
The traditional design/bid/build method of delivering projects. Typically these projects have been delivered by ODOT staff.

Intelligent Transportation Systems (ITS)
ITS uses technology to improve the movement of people and goods, with the objective of improving safety and reducing congestion and delays over the existing transportation infrastructure. The five components of ITS are:
- Advanced Public Transportation Systems.
- Advanced Transportation Management Systems.
- Advanced Traveler Information Systems.
- Advanced Vehicle Control Systems.
- Commercial Vehicle Operations.


Interchange
A system of interconnecting roadways and structures in conjunction with one or more grade separations that provides for the movement of traffic between two or more roadways on different levels.

Inter-governmental Agreement (IGA)
An agreement between two or more governments designating financial and labor obligations for a project.

Intermodal
A facility, system or plan that connects two or more modes of transportation.
**Intermodal Facilities**
Facilities that allow passenger and/or freight connections between modes of transportation. Examples include:
- Airports.
- Bus stations.
- Ports.
- Rail stations.
- Intermodal yards.

**Intermodal Surface Transportation Efficiency Act (ISTEA)**
A transportation funding law passed by Congress in 1991, which was in effect until the passage of TEA-21. It directed the establishment of a national intelligent transportation system (ITS) program.

See: [http://www.fhwa.dot.gov/reauthorization](http://www.fhwa.dot.gov/reauthorization) for information on SAFETEA.

**Intersection**
The area where two or more roadways join or cross at the same elevation.

**Lane miles**
The product of distance (in miles) times the number of lanes for motorized vehicles.

**Let (for bidding)**
To:
- Release and advertise a project for bidding by contractors.
- Receive bids.
- Select a successful bidder.
- Award the contract.
**Management Systems**

Computer programs that organize and prioritize information about transportation facilities such as roads, bridges and intersections so that staff may objectively know which facilities are in the greatest need of repair, including:
- Maintenance Management System.
- Bridge Management System.
- Pavement Management System.
- Congestion Management System.


**Material**

Any natural or manmade substance or item specified for use in the construction of a project.

**Material Source**

Where materials for transportation projects come from, such as crushed rock sub-base from a quarry.

**Median**

A physical separation between lanes of highway traffic, excluding the shoulders:
- A traversable median, by design, does not physically discourage or prevent vehicles from entering upon or crossing it. Traversable medians include:
  - Painted medians.
  - Continuous two-way left-turn lanes.
- A non-traversable median, by design, physically discourages or prevents vehicles from entering upon or crossing it except at designated openings which are designed for turning movements. Landscaping often is used for delineation. Non-traversable medians include:
  - Grass.
  - Flush grass.
  - Raised medians.

**Metric Program**
An ODOT program that assists units and sections in accurately converting measurements and numbers between the metric and standard (English) systems.

**Metropolitan planning organization (MPO)**
A planning body in an urbanized area of over 50,000 that has responsibility for developing transportation plans for that area. Designated in the 1991 ISTEA, MPOs include:
- Corvallis Area.
- Bend.
- Eugene/Springfield.
- Longview-Kelso-Rainier.
- Portland Metro.
- Rogue Valley (Medford Area).
- Salem/Keizer.

**Mitigate**
To incorporate planned features that compensate for impacts created by road construction, such as:
- The creation of new wetlands.
- Enhancement of existing wetlands to compensate for destruction of the existing wetlands.
- Mitigation also can relate to safety and efficiency of the highway, such as:
  - Making a driveway or road connection safer while simultaneously keeping through traffic moving by using right-turn lanes to remove turning traffic from the traffic stream.
  - Using medians to limit left-turn movements.

**Mobility Standards**
Maximum volume to capacity ratios for two-hour, peak-hour operating conditions through a 20-year horizon for state highway sections.


**Mode**
A type of transportation such as vehicle, train, or plane.

**Modernization Project**
Projects that make improvements to accommodate existing traffic or projected growth, with the primary goal of adding capacity. These projects typically involve the construction of new transportation facilities.
National Environmental Policy Act (NEPA)

An act passed in 1969 that established national environmental policy and goals for the protection, maintenance and enhancement of the environment.

NEPA requires federal and state agencies:
- To examine the environmental consequences of major proposed actions, such as building a new transportation facility.
- To conduct a decision-making process that incorporates public input.


National Highway System (NHS)

The National Highway System is the network of nationally significant roads approved by Congress as required by the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. It includes the Interstate system, the Strategic Highway Network (STRAHNET), and over 100,000 miles of arterial and other roads. Designation of the original system was completed on November 28, 1995, when President Clinton signed the National Highway System Designation Act of 1995 (Public Law 104-59).

Intermodal Connectors were added to the system in 1998 when Congress approved the Transportation Equity Act for the 21st Century (TEA-21).
- A federally designated system of statewide and interstate highways meeting certain criteria and eligible for federal-aid funding, as designated by Congress in the National Highway System Designation Act of 1995.
- The system includes approximately 45,000 miles of interstate and 115,000 miles of major state highways nationally.

National Highway Traffic Safety Administration (NHTSA)

An agency under the U.S. Department of Transportation that was established by the Highway Safety Act of 1970 to:
- Carry out safety programs under:
Reduce deaths, injuries and economic losses resulting from motor vehicle crashes.

See:  http://www.nhtsa.dot.gov/

**New Road**
A public road or road segment on new alignment, not a realignment of an existing road or road segment.

**Noise Barrier**
A mound or wall of earth, concrete wall or other barrier used to deflect traffic noise.

See:  http://www.oregon.gov/ODOT/HWY/GEOENVIRONMENTAL/air_noise.shtml
**Major Projects Branch (MPB)**
Formerly the Office of Project Delivery (OPB), MPB expands the project delivery capacity of the Highway Division by facilitating, supporting, and/or delivering transportation programs and projects that are beyond the regions’ capacity to deliver. Examples include the Oregon Transportation Investment Act (OTIA) III Bridge Delivery Program and the Columbia River Crossing Project.


**Operational Notice**
Operational notices are ODOT’s project delivery policy guidelines, intended to ensure consistency in project delivery practices throughout ODOT. The audience for these notices is all staff, internal to ODOT and contractors doing business on behalf of ODOT using ODOT’s practices and policies.

**Operations Projects**
Projects that increase the efficiency and safety of the highway system, such as:
- Traffic signals.
- Permanent signs.
- Variable message signs.
- Slow-moving vehicle turnouts.

**Oregon Administrative Rules (OARs)**
Rules written by Oregon government agencies to clarify or augment adopted Oregon Revised Statutes. OARs are laws secondary to statute.

See: [http://arcweb.sos.state.or.us/banners/rules.htm](http://arcweb.sos.state.or.us/banners/rules.htm) -or- [http://www.oregon.gov/ODOT/CS/RULES/](http://www.oregon.gov/ODOT/CS/RULES/)

**Oregon Department of Transportation (ODOT)**
Oregon’s state transportation department. ODOT includes several divisions, including:
- Highway.
- Public Transit.
- Rail.
- Transportation Development.

**Oregon Highway Plan (OHP)**
The policy document for state highways, adopted by the Oregon Transportation Commission, which:
- Sets long-range policies and investment strategies.
- Identifies highway system needs.
- Establishes goals for mobility standards.


**Oregon Revised Statutes (ORS)**
The laws passed by the Legislature that govern the State of Oregon.

See: [http://www.leg.state.or.us/](http://www.leg.state.or.us/)

**Oregon Transportation Commission (OTC)**
ODOT’s governing body, with five members appointed by the Governor.


**Oregon Transportation Investment Act (OTIA)**
Transportation funding acts passed by the 2001 and 2003 Legislatures. OTIA I and II represent $500 million in bonded revenue. OTIA III represents an additional $2.5 billion in bonded revenue.


**Oregon Transportation Plan (OTP)**
The policy document covering all transportation modes, adopted by the Oregon Transportation Commission, which:
- Describes policies.
- Presents multimodal system needs.
- Establishes goals for minimum levels of service.
- Presents actions to achieve the established goals.

The plan is for a 20-year period, with six-year updates.


**Overlay**
An asphalt surface or cover placed over an existing surface.
P

Pavement
Asphalt or Portland cement concrete placed for vehicular use on highway, road and street traveled ways, shoulders, auxiliary lanes and parking areas.

Pavement Markings
Painted or applied lines of legends placed on a roadway surface for regulating, guiding or warning traffic.

Pavement Management System (PMS)
A set of tools that can assist decision-makers in finding cost-effective strategies for providing, evaluating and maintaining pavements in a serviceable condition at the lowest lifecycle cost.


Peak Hour
- For urban areas, “peak hour” usually means the highest one-hour volume observed on the roadway during a typical or average week.
- In rural areas, generally “peak hour” refers to the 30th highest hourly traffic volume typically observed over the course of a year.

Photographic Mosaic (aerial)
An assembly of aerial photographs whose edges usually have been torn or cut selectively and matched to the imagery on adjoining photographs to form a continuous representation of the earth's surface.

Photogrammetry
The science of obtaining reliable measurements or information from photographs or other sensing systems.

Planimetric Map
A map that presents only the horizontal positions for features represented.
It is distinguished from a topographic map by the omission of relief in measurable form.
Planimetric maps usually include rivers, lakes, seas, mountains, valleys, plains, forests, prairies, cities, farms, transportation routes, public utilities, and political and private boundaries.

**Planning Business Line Team**
ODOT planning leadership team, including key planning managers from throughout the agency.

See: [http://intranet.odot.state.or.us/tp/pblt.htm](http://intranet.odot.state.or.us/tp/pblt.htm)

**Plans**
Drawings that show the location, type, dimensions and details of the work to be done under a construction contract.

**Plans, Specifications and Estimates (PS&E)**
Documents containing construction project information used for bid letting.


**Policy**
A direction for ODOT officially adopted by the Oregon Transportation Commission.

**Preliminary Engineering (PE)**
Includes all project activities before a construction contractor has been selected to build a transportation project.

**Preservation Projects**
Projects that add useful life to the road without increasing capacity such as rebuilding, rehabilitating or extending the service life of existing facilities, primarily by paving.

(NOTE: For more information see the Chapter on *Project Types*.)

**Project Authorization**
The estimated cost of the project and consists of the Contractor’s original bid amount, anticipated items, contingencies and construction engineering.

**Project Delivery Business Process**
The planning, design and construction of transportation projects.

**Project Delivery Leadership Team (PDLT)**
Key managers assigned to oversee the project delivery business line, led by the State Project Delivery Manager.

See:  http://www.oregon.gov/ODOT/HWY/PDU/leadership_team.shtml

**Project Team**
A group of ODOT representatives assigned to oversee project development and design.

*(NOTE: For more information see the Chapter on Key Players in the Business Process.)*

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**R**

**Ramp**
A section of roadway that connects a mainline roadway to a crossroad, typically where the mainline and crossroad are grade separated. The ramp is generally measured to the ramp intersection, or to the end of a free-flow ramp terminal merge lane taper.

**Ramp Meter**
A traffic signal positioned at a highway on-ramp that:
- Stops incoming traffic.
- Indicates when one or two vehicles may enter the roadway.
A ramp meter is typically used to prevent congestion from merging vehicles during peak traffic times.

**Realignment**
Rebuilding an existing roadway on a new alignment where:
- The new centerline shifts outside the existing right of way.
- The existing road surface is either:
  - Removed.
  - Maintained as an access road.
  - Maintained as a connection between the realigned roadway and a road that intersects the original alignment.

**Record of Decision**
In a Class 1 project, which requires an Environmental Impact Statement, the record of decision is the final approval step which states the findings of the environmental investigations.
**Region**
A geographic management area of ODOT; there are five regions.

See:  [http://www.oregon.gov/ODOT/](http://www.oregon.gov/ODOT/) Click on “Highway Regions” or on any of the five regions listed.

**Region Technical Center**
Region Technical Centers support the delivery of all region programs and projects. They:
- Provide technical expertise in:
  - Bridge.
  - Environmental.
  - Geology.
  - Hydraulics.
  - Right of Way.
  - Roadway.
  - Survey.
  - Traffic.
- Deliver project designs for roadways and bridges.
- Negotiate and acquire the right-or-way for projects.

**Regulatory Agency**
A federal or state agency with the authority to ensure compliance with laws in a specific topic, such as wildlife, waterways or railroads.

**Rehabilitate**
To repair a transportation facility:
- To its original condition.
- So that the facility can be safely used.

**Resource Management System (RMS)**
Project management software package used to do all the scheduling for highway construction projects.

See:  [http://www.oregon.gov/ODOT/HWY/PDU/resources_management_system.shtml](http://www.oregon.gov/ODOT/HWY/PDU/resources_management_system.shtml)

**Revised Environmental Assessment (REA)**
The REA documents the selected alternative and that there will be no significant impact on the environment. It contains:
- Final mitigation measures to appear in the project specifications.
- Additions or changes made to the project design after the EA.
- Testimony given at the public hearing (if there was one).
Comments from the general public or regulatory agencies and any project changes resulting from the comments.

The contents of the REA are binding once the document is approved. A Finding of No Significant Impact is issued after a Revised Environmental Assessment.

**Right of Way**

The highway property and property rights owned or controlled by ODOT, which may include:

- The paved roadway surface.
- Shoulder area.
- Ditches and other drainage facilities.
- Sidewalks in the border area between the ditches or curbs.


**Riprap**

A foundation or sustaining wall of stones or chunks of concrete thrown together without order.
A layer of similar material on an embankment slope used to prevent erosion.

**Roadside**

- The area between the outside edges of the shoulders and the right of way boundaries.
- Unpaved median areas between the inside shoulders.
- Divided highways and infield areas of interchanges.

**Roadway**

The portion of a highway improved, designed or ordinarily used for vehicular travel, exclusive of the berm or shoulder. A highway may include two or more roadways.

**Roundabout**

A form of intersection design and control which:

- Accommodates traffic flow in one direction around a central island.
- Operates with yield control at the entry points.
- Gives priority to vehicles within the roundabout (circulating flow).

Safe, Accountable, Flexible, and Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU)
Transportation funding law passed by Congress in August 2005 that supersedes TEA-21.
See: http://www.fhwa.dot.gov/safetealu/index.htm

Safety Investment Program
A program that assists designers:
- In identifying segments of state highways where the highest number of people are being killed or seriously injured in vehicle crashes.
- By proposing cost-effective repairs and countermeasures to those specific segments.

Safety Priority Index System (SPIS)
A system that identifies locations with a high crash history. Based on crash data, region traffic managers evaluate the top 10% of SPIS sites and propose solutions to safety problems.

Safety Projects
Projects that address dangerous highway locations and corridors by using actions including:
- Passing lanes.
- Wider shoulders.
- Illumination.
- Rumble strips.
- Striping.
- Access management actions.
- Highway-rail grade crossing improvements or closures.

(Note: For more information see the Chapter on Project Types.)

Scenic Byway
A designation given to a roadway by the state or federal government due to special cultural or geographic features.

Scoping
A process that identifies the work that must be done in order to:
- Deliver a product with specified features and functions.
Ensure that the project includes all the necessary work, and only the necessary work.
Produce a schedule of activities and cost estimates.

Section 4(f) of the U.S. Department of Transportation Act

A special provision of the U.S. DOT Act of 1966 that stipulates the Federal Highway Administration will not approve any program or project which requires the use of any publicly-owned:
- Public park
- Recreation area
- Wildlife or waterfowl refuge
- Land from an historic site of national, state or local significance

Exceptions are considered only when:
- There is no feasible and prudent alternative to the use.
- All possible planning to minimize harm resulting from such use is included.

Seismic Retrofitting

Enhancing, improving or repairing a structure or facility, such as a bridge, to:
- Withstand the effects of an earthquake.
- Sustain only minimal damage from an earthquake.

Shoulder

The portion of a roadway, whether paved or unpaved, contiguous to the traveled way or roadway, that is for use by pedestrians and bicyclists for the accommodations of stopped vehicles, for emergency use and for lateral support of base and surface courses.
Part of a roadbed contiguous to the traveled way or roadway, which may be paved or unpaved, for:
- Accommodating stopped vehicles.
- Emergency use.
- Lateral support of base and surface material.

SnoPark

A designated area to park with a permit for those participating in snow sports on government lands.

Special Provisions

The special directions, provisions and requirements peculiar to a project that augment the standard and supplemental specifications.

Stakeholder
A person or organization with an interest in transportation.

**Standard Drawing**

Detailed drawings for work or methods of construction that normally do not change.


**State Highway System**

Public roads owned and operated by the State of Oregon through the Oregon Department of Transportation.

**NOTE:** The state highway system does not include state-owned roads managed by state parks, state forests, Oregon Department of Fish and Wildlife, college campuses or other state institutions.

**Statewide Transportation Improvement Program (STIP)**

A federally required and regularly updated state program of transportation projects.
In Oregon the STIP covers four years and is updated every two years.

**Technical Leadership Team (TLT)**

**Technical Services**

**Technical Advisory Committee (TAC)**

The Technical Services Manager/Chief Engineer leads this group.
Membership includes the Tech Center Managers from the five regions and the Major Projects Branch and the Technical Services Managers. The Technical Leadership Team acts as a primary forum for technical issue identification and resolution, decision-making, policy guidance, and process improvements for the project delivery business line.

Responsible for the overall management of the state’s transportation system, including technical support for ODOT’s project delivery, construction, maintenance, and planning programs. Delivers professional technical standards related to project delivery and operations.


A group of people (from various state agencies, organizations and the general public) that provide technical input and perspective to ODOT on a certain project.

**Traffic Control Device**
- Includes signs, signals or other fixtures (permanent or temporary).
- Are placed on or adjacent to a traveled way (by authority of a public body having jurisdiction).
- Regulate, warn or guide traffic.

**Transportation Demand Management (TDM)**
- The operation and coordination of various transportation programs to provide the most efficient and effective use of existing transportation services and facilities. TDM is one category of traffic system management actions.

**Transportation Equity Act for the 21st Century (TEA-21)**
- A transportation funding law passed by Congress in June 1998 that superseded ISTEA. ISTEA was set to expire 9/30/03. (A five-month extension was passed by the House on 9/24/03).


**Transportation System Plan (TSP)**
- A plan outlining transportation strategies and future projects for a specific geographic region (primarily a city or a county). As defined by State Land Use Planning Goal 12, implemented through the transportation planning rule.
See:  http://www.oregon.gov/ODOT/TD/TP/TSP.shtml

Urban Growth Boundary (UGB) Error! Bookmark not defined.
The area surrounding an incorporated city or metropolitan area [see: MPO (Metropolitan Planning Organization)] into which the city may legally expand its city limits.

Utility Error! Bookmark not defined.
A line, facility or system for producing, transmitting or distributing commodities which directly or indirectly serves the public, such as:
- Communications.
- Electricity.
- Gas.
- Oil.
- Water.
- Waste.
- Storm Water (not connected with highway drainage).

“Utility” also refers to utility companies, districts or cooperatives.

Value Engineering Error! Bookmark not defined.
An organized effort to obtain optimum value by providing the necessary function at the lowest life cycle cost. During value engineering, review may be conducted to see where cost saving measures can be implemented.

Variable Message Sign Error! Bookmark not defined.
An electronic sign, usually posted adjacent to or above a roadway that can be programmed with a message to alert drivers of upcoming traffic or highway conditions. (Also know as dynamic message signs.)
**Vehicle Miles Traveled (VMT)**

Miles traveled per vehicle multiplied by the total number of vehicles.

**Vertical Control Point**

An established point on the ground with known vertical positioning, normally used:
- As a reference for gathering other measurements.
- For placing survey or construction stakes.

**Visual Resources**

Roadside features of aesthetic, geographic or cultural value.

**Volume to Capacity Ratio (V/C)**

The peak hour traffic volume (vehicles/hour) on a highway section divided by the maximum volume that highway section can handle.


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**W**

**Wetlands**

The CE (Federal Register 1982) and the EPA (Federal Register 1980) jointly define wetlands as: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.
### ODOT ACRONYMS

#### A

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>A&amp;E</td>
<td>Architectural and Engineering</td>
</tr>
<tr>
<td>AASHTO</td>
<td>American Association of State Highway and Transportation Officials</td>
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<tr>
<td>ABN</td>
<td>Assumed Business Name</td>
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<tr>
<td>ACEC</td>
<td>American Council of Engineering Companies of Oregon</td>
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<td>ACHP</td>
<td>Advisory Council on Historic Preservation</td>
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<td>ACI</td>
<td>American Concrete Institute</td>
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<tr>
<td>ACT</td>
<td>Area Commission on Transportation</td>
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<tr>
<td>ADA</td>
<td>American with Disabilities Act</td>
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<td>ADT</td>
<td>Average Daily Traffic</td>
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<td>Association of Engineering Employees</td>
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<td>Associated General Contractors</td>
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<td>AICP</td>
<td>American Institute of Certified Planners</td>
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<td>AMM</td>
<td>Area Maintenance Manager</td>
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<td>ANSI</td>
<td>American National Standards Institute</td>
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<tr>
<td>AOC</td>
<td>Association of Oregon Counties</td>
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<tr>
<td>APWA</td>
<td>American Public Works Association</td>
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<tr>
<td>ASCE</td>
<td>American Society of Civil Engineers</td>
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<tr>
<td>AST</td>
<td>Above Ground Storage Tank</td>
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<tr>
<td>ATA</td>
<td>Agreement to Agree</td>
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<tr>
<td>ATD</td>
<td>Automated Testing Device</td>
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<tr>
<td>ATMS</td>
<td>Advanced Transportation Management System</td>
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<tr>
<td>ATR</td>
<td>Automatic Traffic Recorder</td>
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#### B

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<thead>
<tr>
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<td>BAMS</td>
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<td>Building and Construction Trades Council</td>
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<td>BDU</td>
<td>Bridge Delivery Unit</td>
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<tr>
<td>BLM</td>
<td>Bureau of Land Management</td>
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<td>BMP</td>
<td>Best Management Practice</td>
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<tr>
<td>BOLI</td>
<td>Oregon Bureau of Labor and Industries</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>CAC</td>
<td>Community Action Committee or Citizen Advisory Committee</td>
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<tr>
<td>CADD</td>
<td>Computer Aided Drafting and Design</td>
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<tr>
<td>CCIS</td>
<td>Construction Contracts Information System</td>
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<tr>
<td>CDL</td>
<td>Commercial Driver License</td>
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<tr>
<td>CE</td>
<td>Categorical Exclusion</td>
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<td>CETAS</td>
<td>Collaborative Environmental and Transportation Agreement for Streamlining</td>
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<td>Chief Financial Officer</td>
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<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>CIO</td>
<td>Chief Information Officer</td>
</tr>
<tr>
<td>CMV</td>
<td>Commercial Motor Vehicle</td>
</tr>
<tr>
<td>CPM</td>
<td>Consultant Project Manager (now called Project Manager)</td>
</tr>
<tr>
<td>CS³</td>
<td>Context Sensitive and Sustainable Solutions</td>
</tr>
<tr>
<td>CVISN</td>
<td>Commercial Vehicle Information Systems and Networks</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>DAS</td>
<td>Department of Administrative Services</td>
</tr>
<tr>
<td>DB</td>
<td>Design Build</td>
</tr>
<tr>
<td>DBA</td>
<td>Doing Business As (also dba)</td>
</tr>
<tr>
<td>DBE</td>
<td>Disadvantaged Business Enterprise</td>
</tr>
<tr>
<td>DEQ</td>
<td>Department of Environmental Quality</td>
</tr>
<tr>
<td>DHS</td>
<td>Department of Human Services</td>
</tr>
<tr>
<td>DLCD</td>
<td>Department of Land Conservation and Development</td>
</tr>
<tr>
<td>DMV</td>
<td>Driver and Motor Vehicle services</td>
</tr>
<tr>
<td>DP</td>
<td>Data Processing</td>
</tr>
<tr>
<td>DOGAMI</td>
<td>Department of Geology and Mineral Industries</td>
</tr>
<tr>
<td>DOJ</td>
<td>Department of Justice</td>
</tr>
<tr>
<td>DSL</td>
<td>Department of State Lands</td>
</tr>
<tr>
<td>DUII</td>
<td>Driving Under the Influence of Intoxicants</td>
</tr>
<tr>
<td>DVMT</td>
<td>Daily Vehicle Miles Traveled</td>
</tr>
</tbody>
</table>
E

EA Economic Area
Expenditure Account
Environmental Assessment
Environmental Advisor
EAP Employee Assistance Program
EBoard Emergency Board
EEO Equal Employment Opportunity Act
EIS Environmental Impact Statement
EMS Environmental Management System or Emergency Medical Service
EO Executive Order
EPA Environmental Protection Agency
EPM Environmental Project Manager
ESA Endangered Species Act or Environmental Site Assessment
ESB Emerging Small Business

F

FAQ Frequently Asked Questions
FARS Fatal Analysis Reporting System
FEMA Federal Emergency Management Administration
FERC Federal Energy Regulatory Commission
FHWA Federal Highway Administration
FMLA Family and Medical Leave Act
FSB Financial Services Branch
FTA Federal Transit Association
FTE Full Time equivalent (employee count measurement)
FTP File Transfer Protocol
FY Fiscal Year
FYI For Your Information

G

GAC Governor’s Advisory Committee
GERT Governor’s Economic Revitalization Team
GIS  Geographic Information Systems
GPS  Global Positioning System

H

HCM  Highway Capacity Manual
HERS  Highway Economic Requirements System
HPO  Highway Program Office
HOV  High Occupancy Vehicle
HPMS  Highway Performance Monitoring System
HR  Human Resources
HRA  Human Resource Analyst
HRD  Human Resource Development
HRDS  Human Resource Development System
HRG  Human Resource Generalist

I

IAMP  Interchange Area Management Plan
IFTA  International Fuel Tax Agreement
IGA  Intergovernmental Agreement
IRM  Information Resource Management
IRP  International Registration Plan (for motor carriers)
IS  Information Systems
ISB  Information Systems Branch
ISTEA  Intermodal Surface Transportation Efficiency Act
IT  Information Technology
ITB  Invitation to Bid
ITS  Intelligent Transportation Systems

J

JATC  Joint Apprenticeship Training Council
LOAC  Local Official Advisory Committee
LOC  League of Oregon Cities
LPA  Local Public Agency
LRS  Linear Referencing System
LUBA  Land Use Board of Appeals

MBE  Minority Business Enterprise
MCEO  Motor Carrier Enforcement Officer
MCSAP  Motor Carrier Safety Assistance Program
MCTD  Motor Carrier Transportation Division
MMS  Maintenance Management System
MOA  Memorandum of Agreement
MOU  Memorandum of Understanding
MPO  Metropolitan Planning Organization
MPT  Milepoint
MQ  Minimum Qualifications
MSDS  Material Data Safety Sheet
MUTCD  Manual on Uniform Traffic Control Devices

NBI  National Bridge Inventory
NCADD  National Commission Against Drunk Driving
NEPA  National Environmental Policy Act of 1969
NHS  National Highway System Funds
NHTSA  National Highway Traffic Safety Administration
NIST  National Institute of Standards and Technology
NPDES  National Pollution Discharge Elimination System
<table>
<thead>
<tr>
<th>OAR</th>
<th>Oregon Administrative Rule</th>
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<tr>
<td>OBDP</td>
<td>Oregon Bridge Delivery Partners</td>
</tr>
<tr>
<td>ODL</td>
<td>Oregon Driver’s License</td>
</tr>
<tr>
<td>ODOT</td>
<td>Oregon Department of Transportation</td>
</tr>
<tr>
<td>OERS</td>
<td>Oregon Emergency Response System</td>
</tr>
<tr>
<td>OFLA</td>
<td>Oregon Family Leave Act</td>
</tr>
<tr>
<td>OHP</td>
<td>Oregon Highway Plan</td>
</tr>
<tr>
<td>OIPP</td>
<td>Oregon Innovative Partnerships Program</td>
</tr>
<tr>
<td>OJT</td>
<td>On the job training</td>
</tr>
<tr>
<td>OMB</td>
<td>Federal Office of Management and Budget</td>
</tr>
<tr>
<td>OMWESB</td>
<td>Office of Minority, Women and Emerging Small Business</td>
</tr>
<tr>
<td>MPB</td>
<td>Major Projects Branch</td>
</tr>
<tr>
<td>OPEU</td>
<td>Oregon Public Employees Union</td>
</tr>
<tr>
<td>OPO</td>
<td>ODOT Procurement Office</td>
</tr>
<tr>
<td>OR OSHA</td>
<td>Oregon Occupational Safety and Health Division</td>
</tr>
<tr>
<td>ORS</td>
<td>Oregon Revised Statutes</td>
</tr>
<tr>
<td>OTC</td>
<td>Oregon Transportation Commission</td>
</tr>
<tr>
<td>OTIA</td>
<td>Oregon Transportation Investment Act</td>
</tr>
<tr>
<td>OTMS</td>
<td>Oregon Transportation Management System</td>
</tr>
<tr>
<td>OTP</td>
<td>Oregon Transportation Plan</td>
</tr>
<tr>
<td>OWCC</td>
<td>Oregon Women’s Correctional Center</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>P</th>
<th>Price Agreement or Personnel Action or Performance Appraisal</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA</td>
<td>Planning Business Line Team</td>
</tr>
<tr>
<td>PBLT</td>
<td>Public Employees Benefit Board</td>
</tr>
<tr>
<td>PERS</td>
<td>Public Employees Retirement System</td>
</tr>
<tr>
<td>PMS</td>
<td>Pavement Management System</td>
</tr>
<tr>
<td>PO</td>
<td>Purchase Order</td>
</tr>
<tr>
<td>POR</td>
<td>Professional of Record</td>
</tr>
<tr>
<td>PRI</td>
<td>Public Road Inventory</td>
</tr>
<tr>
<td>PSK</td>
<td>Personal Service Contract</td>
</tr>
<tr>
<td>PUC</td>
<td>Public Utility Commission</td>
</tr>
</tbody>
</table>

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Oregon DOT Project Delivery Guide 2010
Q

QA  Quality Assurance
QC  Quality Control
QCCS  Quality Control Compliance Specialist
QPL  Qualified Products List

R

RFQ  Request for Qualifications
RFP  Request For Proposal
3R  Resurfacing, Restoration and Rehabilitation
4R  Resurfacing, Restoration, Rehabilitation and Reconstruction
R/W or  Right of Way
ROW

S

SAC  State Agency Coordination Program
SAR  Search and Rescue
SEIU  Service Employees International Union
SHPO  State Historical Preservation Office
SOQ  Statement of Qualifications
SPCC  Spill Prevention Control and Countermeasure (plan)
SPOTS  Small Purchase Order Transaction System (card)
SPR  State Planning and Research
STA  Special Transportation Area
STF  State Transportation Fund
STP  Surface Transportation Program
STRAHNET  Strategic Highway Corridor Network
STIP  Statewide Transportation Improvement Plan
T

TAD  Transportation Applications Development
TDD  Transportation Development Division or Telecommunications Display Device
TDM  Transportation Demand Management
TDP  Transit Development Plan
TGM  Transportation Growth Management
TEAMS  Transportation Environmental Accounting Management System
TMA  Transportation Management Area
TMM  Transportation Maintenance Manager
TMOC  Transportation Management Operations Center
TMS  Transportation Maintenance Specialist
TOPAS  Transportation Online Personnel Action System
TPAU  Transportation Planning Analysis Unit
TPR  Transportation Planning Rule
TRB  Transportation Research Board
TSD  Transportation Safety Division
TSP  Transportation System Plan
TSR  Transportation Services Representative

U

UBA  Urban Business Area
UGB  Urban Growth Boundary
UIC  Underground Injections Control System (dry well)
USFS  US Forest Service
UST  Underground Storage Tank

V

VIN  Vehicle Identification Number
VMT  Vehicle Miles Traveled
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>WASHTO</td>
<td>Western Association of State Highway and Transportation Officials</td>
</tr>
<tr>
<td>WBE</td>
<td>Women's Business Enterprise</td>
</tr>
<tr>
<td>WOC</td>
<td>Work Order Contract</td>
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</table>