ODOT Project Delivery Guide

APPENDIX E: PROJECT DELIVERY TOOLS, RESOURCES AND SYSTEMS

To report problems or update information, please e-mail the PDG Webmaster

This appendix is divided into the following sections:

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

PDLT-18: Guidance for transitions from Planning to Project Development
PDLT-19: Guidance for project scheduling and resourcing

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

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 DES 20-01: Ornamental Landscaping-11/05/01-Directive DES 20-01 (.PDF)
Directive ENV 01-01: Migratory Bird Treaty Act (16 U.S.C. 703-712)-01/17/06-Directive ENV 01-01 (.PDF)
Directive ORG 01-02: Formation and Operation of the Area Commissions on Transportation (ACTs)-10/01/03-Directive ORG 01-02 (.PDF)

Transportation Operations Directives
Directive ORG 01-01: Written Communication -04/20/00-Directive ORG 01-01 (.PDF)
Directive PER 11-01: Highway Division Position Management-01/01/03-Directive PER 11-01 (.PDF)

PROJECT DELIVERY GUIDEBOOKS AND MANUALS

[Context Sensitive and Sustainable Solutions (CS^3) Guidebook]

[Decision-Making Expectations and Guidebook]

[Environmental Procedures Manual, Volume 1]

[Highway Design Manual]

[Highway Mobility Operations Manual]

Practical Design Strategy and Guidance

Project Scoping Best practices Guidebook
(This is an internal ODOT resource)

TECHNICAL GUIDANCE DOCUMENTS

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:
http://www.oregon.gov/ODOT/HWY/BRIDGE/standards_manuals.shtml

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:
http://egov.oregon.gov/ODOT/HWY/CONSTRUCTION/publications2.shtml

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:
http://www.oregon.gov/ODOT/HWY/GEOENVIRONMENTAL/manual_procedures_practices.shtml

Geometronics: http://www.oregon.gov/ODOT/HWY/GEOMETRONICS/

FACS-STIP Tool (Web Map and Data-to-Go):
http://transnet.oregon.gov/ODOTINTRA/HWY/OPL/document_reviews.shtml

FHWA Planning and Environmental Linkages:
http://www.environment.fhwa.dot.gov/integ/index.asp

Local Government Section's LAG Manual:
http://www.oregon.gov/ODOT/HWY/LGS/Certification.shtml#LAG_Manual
Local Government Section's Quick Reference Guide:
http://www.oregon.gov/ODOT/HWY/LGS/docs/Oregon_LA_Quick_Reference_Guide.pdf

Maps/GIS: http://www.oregon.gov/ODOT/TD/
and for NON-ODOT computers: http://keiko.odot.state.or.us

ODOT Transportation Development Planning Section:
http://www.oregon.gov/ODOT/TD/TP/index.shtml

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

Oregon Highway Plan: http://www.oregon.gov/ODOT/TD/TP/orhwyplan.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:
http://www.oregon.gov/ODOT/HWY/ENGSERVICES/hwy_manuals.shtml

Specifications and Standards:
http://www.oregon.gov/ODOT/HWY/SPECS/index.shtml

Standard Drawings:
http://www.oregon.gov/ODOT/HWY/ENGSERVICES/standard_drawings_home.shtml

Standard Specifications:
http://www.oregon.gov/ODOT/HWY/SPECS/standard_specifications.shtml

STIP: http://www.oregon.gov/ODOT/HWY/STIP/index.shtml

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:
http://www.oregon.gov/ODOT/CS/CIVILRIGHTS/titlevi/docs/ODOT_Title_VI_Plan_2002.pdf

Traffic Roadway Section: http://www.oregon.gov/ODOT/HWY/TRAFFIC-ROADWAY/traffic_engineering.shtml

Transportation Data: http://www.oregon.gov/ODOT/TD/TDATA/
http://www.oregon.gov/ODOT/TD/TDATA/otms/OTMS_system_descriptions.shtml
and for NON-ODOT computers: https://keiko.odot.state.or.us

Video Log: http://www.oregon.gov/ODOT/TD/TDATA/rics/VideoLog.shtml

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/ (NOTE: This is an internal ODOT resource.)

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:
http://www.oregon.gov/ODOT/HWY/ACCESSMGT/docs/CHAMPS_User_Guide_2006.pdf

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 Contract 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/attch/CPS%20users%20guide%20ver%201-0.doc