

### **Department of Transportation**

Office of the Director 355 Capitol St. NE Rm 135 Salem, Oregon 97301-3871

July 29, 2005

FILE CODE:

The Honorable Bill Bradbury Secretary of State Chair, Oregon Sustainability Board 900 Court Street NE, Room 136 Salem, OR 97301

Dear Mr. Bradbury:

I am pleased to forward you the mid-year Sustainability Statement of Progress for the Oregon Department of Transportation. This report has been prepared in response to Governor Kulongoski's Executive Order 03-03, which required ODOT and other agencies to develop a sustainability plan and report regularly on progress.

The attached report outlines ODOT's progress towards the three actions identified in our March 2004 Sustainability Plan. It also details future plans for our sustainability activities, and summarizes some of the many other sustainability efforts that ODOT staff carry out every day in their work.

ODOT is committed to incorporating sustainability into our work of providing a safe, efficient transportation system that supports economic opportunity and livable communities for Oregonians. To this end, the department recently hired a full time Sustainability Coordinator to consolidate our efforts and help shape our sustainability vision. ODOT's Sustainability Coordinator will work hard to integrate sustainability objectives into both our internal practices and the transportation system for which we are responsible.

We are excited to continue our work with the legislature, the Governor's office, and our sister agencies on this important issue.

Respectfully,

Bruce A. Warner

Director

Oregon Department of Transportation

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### **Report Summary**

### **Report Outline**

This Statement of Progress gives an update on ODOT's sustainability activities since the department's sustainability plan was approved by the Oregon Sustainability Board in June 2004. The report primarily discusses progress towards the three actions outlined in the original plan. These actions are:

- Action Item 1: Implement OTIA III Bridge Replacement Program construction projects in a sustainable manner.
- Action Item 2: Develop an ODOT Maintenance Environmental Management System (EMS).
- Action Item 3: Renew the vision of a balanced, multimodal transportation system that includes sustainability considerations in the update of the Oregon Transportation Plan (OTP).

#### **Summary of Actions**

The OTIA III Bridge Replacement Program is weaving sustainability into the delivery of bridge repair and replacement projects. This innovative program is using the principles of Context Sensitive and Sustainable Solutions (CS³) as an overriding philosophy. The program is on track to meet its primary goals, which include sensitivity to the landscape and to communities, as well as economic stimulation. Examples of innovative practices include: a proactive stance in dealing with environmental concerns, including context mapping of environmental data and performance-based assessment; preservation of Oregon's scenic, aesthetic, historical, environmental, economic, and other community values; partnering with internal and external stakeholders; use of an environmental management system; and contractor selection criteria to promote a range of firm sizes including disadvantaged-, minority-, women-, and emerging small businesses.

An environmental management system (EMS) for ODOT's maintenance yards has been developed and is being implemented throughout the state. This EMS will help ODOT better manage the storage, use and handling, and disposal of materials located at our maintenance yards. The EMS has been well received by maintenance staff, and as implementation continues it will be periodically reviewed so that success can be tracked.

The update of the Oregon Transportation Plan is currently in progress, with the new plan scheduled to be adopted by the Oregon Transportation Commission in the summer of 2006. Sustainability has been a key discussion topic as goals, policies and actions are developed. It is recognized that issues associated with sustainability are critical to the future of the transportation system and should be reflected in this high-level policy document.

### **Other Activities**

ODOT hired a full time sustainability coordinator in May 2005. This position is responsible for integrating the concepts of sustainability contained in the Oregon Sustainability Act and Executive Order 03-03 throughout the department, and to direct, monitor and report their implementation in all facets of the department's operations. The position is housed in the Director's Office and is a direct report to the Chief of Staff. The sustainability coordinator will integrate all the divergent activities that contribute to ODOT's sustainability efforts, and help to develop and implement a vision of sustainability in the department.

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In addition to the three main actions described in the sustainability plan, many other activities that contribute to sustainability continue to be developed and implemented in the department. These are described at the end of ODOT's sustainability plan under the section "Other Sustainability Action Goals". Most of these actions have not changed significantly since the plan was published, although some are moving ahead more quickly than others. Highlights include:

- ➤ The Collaborative Environmental and Transportation Agreement for Streamlining (CETAS) continues to function well and allow for proactive environmental stewardship in transportation projects.
- ➤ Applicable ODOT staff are familiar with the Oregon Strategy for Greenhouse Gas Reductions, and will consider the recommended actions in the next update of the sustainability plan.
- ➤ ODOT fleet supports the use of alternative fuels as appropriate, and will work with the Department of Administrative Services to increase alternative fuel use.
- The truck weigh-in-motion ("Green Light") program continues to have success and be well supported by the trucking industry. The program uses technology to weigh trucks in motion (i.e. no slowing down required) rather than requiring them to stop at static scales. Results include reduced diesel emissions, monetary savings for truck operators in terms of time and money, and improved safety.

#### **Future Plans**

With a full time sustainability coordinator on board, ODOT will be able to build a comprehensive sustainability program over the next biennium. The goal is to greatly expand the current sustainability plan into a holistic framework that gives structure to ongoing initiatives while at the same time describes future goals for the program. This framework will allow proposed actions to be implemented against a backdrop of relevant policies and procedures. It will include a vision of a sustainable ODOT and a sustainable transportation system, and backcast how to get there. It will have strong buy-in from the Director and executive-level support. Tools such as suggestions schemes, resource libraries, a dedicated website and annual reporting will be included. It is hoped that this structured approach will help to institutionalize sustainability within ODOT and make it part of "business as usual."

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### **Sustainability Action Items**

**Action Item 1:** Implement OTIA III Bridge Replacement Program construction projects in a sustainable manner.

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New		Canceled	X	Existing

The Oregon Department of Transportation's OTIA III Bridge Delivery Unit (BDU) is tasked with implementing the \$1.3 billion OTIA III State Bridge Delivery Program. Fundamentally, this involves replacing or repairing hundreds of deteriorating bridges on major highway corridors throughout Oregon. However, given the sheer size and scope of the program, ODOT realized its potential to do more by establishing new ways to manage transportation construction projects. Through the program, ODOT is actively seeking solutions that better reflect and account for the needs, values, and concerns of Oregon citizens. The core philosophy for such solutions is called Context Sensitive and Sustainable Solutions (CS<sup>3</sup>).

CS<sup>3</sup> provides a unique perspective to the traditional transportation engineering approach. It incorporates activities that foster workforce growth and development; reflects the community's cultural, aesthetic, and historic interests; maintains mobility and safety; ensures sound stewardship of the natural environment; and promotes cost-effective decision-making. The inspiration for CS<sup>3</sup> is derived by combining two innovative concepts emerging within the transportation industry: Context Sensitive Solutions (CSS) and Sustainability.

Context Sensitive Solutions (CSS), also known as Context Sensitive Design, is a term defined by the Federal Highway Administration (FHWA). CSS is a collaborative, interdisciplinary approach that involves all stakeholders working together to develop a transportation facility that fits the physical setting; preserves scenic, aesthetic, historic, and environmental resources; and maintains safety and mobility. CSS considers the entire situation within which a transportation improvement project exists.

Sustainability is defined for this purpose as using, developing, and protecting resources at a rate and in a manner that enables people to meet their current needs and also ensures that future generations can meet their own needs (per Executive Order EO-00-07). ODOT merges the concepts of CSS and Sustainability, thereby creating CS<sup>3</sup>.

The CS<sup>3</sup> approach is apparent in the five primary bridge program goals:

- 1) Stimulate the economy
- 2) Employ efficient and cost-effective delivery practices
- 3) Maintain freight mobility and keep traffic moving
- 4) Build projects sensitive to their communities and landscape
- 5) Capitalize on funding opportunities

The desired result of the bridge program is an improved state transportation infrastructure that reduces limitations on trade and economic progress while supporting a socially and environmentally responsible culture of sustainability.

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#### **Performance Measure Criteria**

The mechanism for measuring the overall program's performance is the CS<sup>3</sup> framework. The CS<sup>3</sup> framework defines the objectives, evaluation criteria, process and outcome measures, tools and resources for achieving the bridge program's overall goals. It also summarizes the criteria used to evaluate program-wide and project-level success or the need for adaptive management strategies.

Program progress is fully measured and documented in monthly reports. An abridged version of the May 2005 report is included in an appendix to this document. Full copies of the report can be provided upon request.

The following snapshot of results illustrate some successes of the CS<sup>3</sup> framework. Through May 2005, implementation of the OTIA III State Bridge Delivery Program has led to approximately:

- > 1,900 jobs
- > \$770,000 in tax revenues
- ➤ \$10 million in payments to Oregon firms and vendors (93 percent of all expenditures)
- ➤ 19 percent of more than \$100 million in construction, design, and program management contract payments to disadvantaged-, minority-, women-, and emerging small business (DMWESB) firms
- More than 200,000 tons of construction demolition waste recycled or reused

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### **Progress Update**

Overall Status of Action: In-progress & on target

### **Partnering**

Status: On target

Internal/external partnerships: Early in the bridge program, ODOT engaged an external Policy/Technical Stakeholder Committee and an internal ODOT Bridge Oversight Committee to develop goals and objectives and to identify innovative strategies. This group continues to monitor the month-to-month progress toward achieving the bridge program goals and advises ODOT in critical areas of implementation. Numerous oversight steering committees and ad hoc committees meet regularly in the spirit of partnering to focus on program/project issues.

ODOT Workforce Development Plan: Oregon will soon reach record levels of construction, yet workforce projections indicate a shortage of skilled workers is looming. This presents a unique opportunity to revitalize the state's economy by creating new jobs for Oregon's workers and increase the diversity of Oregon's workforce to provide a labor pool of qualified, skilled workers and increase the use of the apprenticeship and on-the-job training (OJT) programs. In cooperation with government and private-sector partners, ODOT launched the Workforce Development Plan to meet these challenges. ODOT is increasing its apprenticeship requirements, contract specifications, and participation aspirational goals for women and minorities. During the initial implementation of the Workforce Development Plan, the new workforce utilization aspirational goals will apply only to OTIA III projects statewide and all ODOT construction projects in Multnomah, Clackamas, and Washington counties.

Encouraging the use of biodiesel fuel: In March 2005, the Lane County Regional Air Pollution Authority (LRAPA) received an Environmental Protection Agency grant to reduce air pollution on bridge projects throughout Oregon. The grant will fund outreach efforts and provide participating construction contractors a subsidy for the use of biodiesel fuel. ODOT supports LRAPA's initiative. ODOT is actively seeking ways to promote the use of alternative fuels in the bridge program.

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### Context Sensitive and Sustainable Solutions (CS<sup>3</sup>) Approach

Status: On target

The following is a summary of the CS<sup>3</sup> development process to date:

- > Framework goals, objectives, and elements being measured by task leads have been identified.
- Framework organization has been completed.
- ➤ Identification of the processes, technologies, and design and construction solutions that would assist in meeting program goals is ongoing.
- ➤ Development of the implementation and recording strategy and tools for the CS<sup>3</sup> framework is ongoing.
- Initial metrics/measures of success have been developed and evaluation is in progress.
- ➤ Identification of current program/project activities that demonstrate "CS³ in action" is ongoing.
- > Framework implementation has begun.
- An update plan for the CS<sup>3</sup> framework is being developed.
- > Transferability of CS<sup>3</sup> to other ODOT programs is being explored.

### **Context Mapping**

Status: Completed

In February 2003, ODOT launched a Statewide Bridge Assessment in anticipation of the bridge program. One purpose of this assessment was to collect environmental and engineering baseline data at each bridge site that was identified in the 2003 Bridge Options Report. Context mapping resulted in the creation of Environmental and Engineering Baseline Reports from the initial data collected in the Statewide Bridge Assessment. These environmental and engineering baseline reports were made available in 2004 and allow program efficiencies by providing contractors insight to the potential conditions that will be experienced on the project. Contractors are required to verify data before beginning the design process, which may result in reduced project risk and potential cost benefits to ODOT. The data are continually being updated and improved.

In 2005, project participants received access to the Geographic Information Systems (GIS) information collected for the environmental and engineering baseline reports. Through the OTIA III Bridges TransGIS Internet site, users can view and download a wide variety of GIS data, tabular data, and imagery. Available data include bridge locations, bridge study areas, historic architectural resources, wetlands, botanical resources, 4(f) features, aquatic resources, floodplain boundaries, statewide aerial photography, USGS maps, and site photos.

### **Environmental Management System for Bridge Design and Replacement**

Status: On target

The bridge program's Environmental Management System (EMS) is being designed to manage environmental activities, reduce environmental impacts, increase operating efficiency, and promote sustainable transportation solutions. CS<sup>3</sup> provides the framework for integrating the environmental stewardship approach of the EMS with other aspects of the bridge program. The development of the EMS is currently in the program definition and requirements phase.

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### **Contracts that Promote Sustainability**

Status: On target

Contractor selection: To maximize and diversify the economic opportunities available to industry, design and construction services will be outsourced rather than self-performed. ODOT developed a qualifications-based selection process to begin procurement of services in the fall of 2004. This process emphasized the importance of Oregon-based business development. To expedite delivery and minimize disruption to motorists, the bridge work was apportioned to five overlapping stages. In each stage, bridge projects were bundled by size and complexity. Through this bundling process, ODOT provided for a range of contractor abilities and resources. This ensured that opportunities were available to smaller firms, especially disadvantaged-, minority-, women-, and emerging small business (DMWESB) firms.

*CS*<sup>3</sup> *Plan*: Design contractors are required to submit a CS<sup>3</sup> plan that outlines how they will achieve the program goals through the key CS<sup>3</sup> areas. The plan includes the following elements:

- Economic development plan
- ➤ Detail of DMWESB and diversity efforts
- Overview of cost-effective strategies
- ➤ Mobility strategy assessment
- > Public involvement assessment
- > Environmental justice assessment
- > Environmental studies assessment
- ➤ Identification of sustainability strategies (according to CS³ objectives in this area)

CS<sup>3</sup> Specifications: ODOT is in the process of developing CS<sup>3</sup> specifications for construction contractors. These specifications will include economic stimulus, diversity, and construction waste management specifications along with other technologies or products not currently in the standard ODOT specifications. Although not identified as CS<sup>3</sup> specifications, several key CS<sup>3</sup> areas, such as mobility and environmental studies, will require specifications in their technical areas of the contract.

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### **Performance-Based Environmental Permitting**

Status: Completed

ODOT worked with multiple federal, state, and local agencies to develop permitting strategies for repairing and replacing the bridges. The aim was to facilitate the timely completion of the environmental regulatory permitting process, while protecting and enhancing Oregon's natural and built environment. This collaborative work resulted in the development of a program-wide, "one process" permit, based on a series of programmatic Environmental Performance Standards. As the core of ODOT's environmental stewardship approach, the Environmental Performance Standards are goal-oriented and define the acceptable level of effect that a project activity may have upon the environment.

This programmatic permitting approach helped ODOT earn a prestigious Environmental Excellence Award for Environmental Streamlining from the Federal Highway Administration. The award was presented to ODOT in April 2005 at a ceremony in Washington, D.C. Other elements of the bridge program that contributed to the award were the integrated wetland mitigation banking program and the significant improvements in data collection and context mapping.

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### **Wetlands Mitigation Banking Agreement**

Status: On target

ODOT's new wetlands mitigation banking strategy is premised on the belief that actual improvement or recovery of species, ecosystem conditions, and functions (biotic and abiotic) is an achievable impact compensation goal. The strategy enables ODOT to focus the agency's mitigation efforts on resources and in locations that maximize regional environmental benefit and likelihood of success.

The scientific foundation for the Wetlands Mitigation Banking Program was developed by the Mitigation/Conservation Banking Review Team (MCBRT). The team has met regularly to develop a statewide mitigation/conservation banking agreement. The agreement includes the following exhibits that define how the banking program will be implemented:

- Ecoprovince Priorities An analysis of ecological trends is provided for each of Oregon's major watershed areas, so that mitigation and conservation efforts can be focused toward regional needs.
- ➤ Bank Site Selection A Site Selection Tool has been developed that allows the MCBRT to assess prospective bank sites for their mitigation/conservation potential.
- Analysis Level of Effort (ALE) The ALE tool provides a method to determine the appropriate analysis for establishing impact-related debits.
- ➤ Debit/Credit Accounting This new approach to mitigation bank accounting uses a common language for debit and credit accounting for multiple habitats, addresses temporal and indirect losses, provides regulatory tracking backstops, and includes site-specific and program-wide ledger accounting.

Currently, three wetlands mitigation bank sites are in development:

- Mirror Lake This site is a portion of Rooster Rock State Park in the Columbia River Gorge. ODOT partnered with Oregon Parks and Recreation Department to establish a bank on the south side of Interstate 84. This bank will offer wetland credits and, potentially, listed species credits. In addition, the site provides significant opportunities to address the Fish and Wildlife Coordination Act, ecoprovince priorities, etc.
- ➤ East Fork Minnow Creek/Highway 58 Chub Site This site, owned by ODOT, is home to an existing population of Oregon chub. In addition to listed species credits, this site provides potential wetland mitigation credit.
- Santiam River Chub Site This site provides Oregon chub habitat and is being developed as a listed species bank and as a wetland bank.

It is anticipated that credits from the bank sites will be available in the next year.

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### **Challenges, Potential Risks, Mitigating Actions**

The foundations of CS<sup>3</sup>, Context Sensitive Solutions and Sustainability, are innovative concepts with few examples applied to transportation infrastructure. While some of the intentions of CS<sup>3</sup> are not new to ODOT, the methodology and evaluation process are unique. Challenges to achieving targeted goals include the following:

- > CS<sup>3</sup> requires a shift from traditional project development and implementation to a model that gives weight to goals such as mobility, economic stimulus, and sustainability.
- Institutionalizing a paradigm shift to the point that it becomes standard practice will require time, commitment, and effective communications.
- ➤ CS³ encompasses the overall approach and philosophy of an entirely new way of doing business. It may be perceived that the implementation process is moving more slowly than desired. Successful implementation of CS³ will require adaptive management. Conversely, phasing in and adjusting of CS³ to be flexible may be perceived as moving to implementation too soon.
- CS<sup>3</sup> may require weighing sometimes competing interests in different areas of the program.
- In general, there is a natural tendency to want to conduct business as usual.

### Mitigating Actions:

- The primary approach to mitigating program risks will be ongoing, effective communication with all stakeholders that includes collaborative thinking, decision-making, training, and outreach.
- > CS<sup>3</sup> will provide new tools (such as specifications) and processes (such as recording) that will assist in the implementation.
- $\triangleright$  CS<sup>3</sup> is a central program focus.
- ➤ CS³ progress/success stories are reported in the bridge program's Monthly Progress Report.

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### Action Item 2: Develop an ODOT Maintenance Environmental Management System (EMS).

New	Canceled	X	Existing
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The goal of this action is to develop and implement an Environmental Management System (EMS) for the highway maintenance yards, using elements of the ISO-14001 standards as appropriate. The EMS contains procedures to translate regulatory requirements and agency expectations into best management practices and guidance for the storage, use and handling, and disposal of materials typically located at ODOT maintenance yards. The procedures represent a broad spectrum of materials used in the operation and maintenance of the state highway system. Materials associated with equipment operation and maintenance and yard and building maintenance are also included.

The procedure for each material contains:

- ➤ Purpose a description of what the procedure covers and its intent.
- ➤ Regulating agencies a list of agencies that regulate the storage, use and handling, or disposal of the material.
- Alternatives and pollution prevention suggestions on ways to avoid or prevent a disposal issue associated with the material. "Reduce, reuse, recycle" strategies are encouraged.
- ➤ Best management practices discussion on the storage, use and handling, and disposal of the material. BMP's that reflect a legal requirement, or reflect an ODOT directive, are presented as a "must." Practices that reflect good land stewardship and which are recommended are presented as a "should."
- ➤ Documentation identification of the documentation requirements associated with the material, such as pesticide use reporting laws, logs for winter maintenance use, and EMS waste logs and manifests.

ODOT Maintenance will implement the EMS for three years to allow for the program to become part of standard operating procedures. At the end of this time the program will be thoroughly reviewed, and opportunities to expand the program into the entire maintenance section will be assessed.

ODOT's sustainability plan identified two other items as part of this action – addressing underground injection control systems and spill prevention at maintenance yards. However, these items are regulatory requirements that ODOT must address. They are not proactive "beyond compliance" items and as such do not move the agency forward in its sustainability agenda. It is recommended that they are removed from the sustainability plan.

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### **Performance Measure Criteria**

Performance measures for this action are qualitative rather than quantitative. The measures track managerial and behavioral process changes that lead to environmental improvements or compliance, rather than the improvements themselves. Examples include:

- > Ensuring all paperwork is being completed.
- Ensuring monthly field audits (inspections of the yard by the yard supervisor) are being carried out and resulting actions are appropriately addressed.
- Following up monthly field audits with regional audits (inspections by the District Manager and Regional Safety Manager).
- Ensuring accuracy of reports and documentation.
- > Sharing information between maintenance districts.
- > Tracking any inappropriate management of materials.
- > Tracking implementation of best management practices that must be implemented.
- > Tracking implementation of best management practices that should be implemented.

### **Progress Update**

Overall Status of Action: Completed

Item	Status	Target Date
1. Development of the ODOT Maintenance Yard EMS Policy and Procedures Manual.	Completed	n/a
2. Development of the <i>Materials Management Employee Handbook</i> (a quick reference pocket book).	Completed	n/a
3. Development of a training and informational video.	Completed	n/a
4. Development of an in-depth training module for managers and coordinators.	Completed	n/a
5. Development of an overview training for maintenance crews.	Completed	n/a
6. Provision of quick funding for immediate implementation needs	Completed	n/a
7. Statewide rollout to all appropriate staff.	Completed	n/a
8. Ongoing implementation and review.	Ongoing	n/a (there will be a major review in Jan 2008)

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### **Challenges, Potential Risks, Mitigating Actions**

Most of the work rolling out this program has been done. So far, feedback from maintenance crews and supervisors has been very positive. Remaining barriers and/or challenges affect only the implementation phase. These could include:

- Consistency ensuring that issues are resolved consistently in different districts.
- ➤ Funding if structural/institutional changes are needed to meet the intent of the EMS, these could have financial impact. If funding is not available, it will be difficult to meet the intent of the EMS in a timely manner.
- ➤ Keeping momentum when the "hot" items have been taken care of, there is a risk of losing the momentum of the program.
- Managing the program manpower must be available to keep track of updating and revising the procedures, creating addenda, tracking staff changes, monitoring training needs etc.
- ➤ Quantifying results to track the success of the initiative, it will be important to quantify results (for example number of unlabelled drums now labeled, reduction of hazardous waste on site etc).

However, the development of the EMS was extremely thorough and involved all stakeholders. The EMS is very structured and has a clear implementation plan with necessary review processes to ensure success. The barriers/challenges listed above are unlikely to cause major problems, but are worth recognizing and mitigating where possible.

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**Action Item 3:** Renew the vision of a balanced, multimodal transportation system that includes sustainability considerations in the update of the Oregon Transportation Plan (OTP).

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New	Canceled	ĺ	X	Existing	1

ODOT and transportation stakeholders are in the process of updating the Oregon Transportation Plan (OTP), the statewide plan originally adopted in 1992. The Oregon Transportation Plan is the state's long-range multimodal transportation plan. It is the overarching policy document that focuses on the state, local, and public aspects of Oregon's transportation system. The OTP sets the investment priorities and strategies for the state transportation system. The plan is adopted by the Oregon Transportation Commission and plan implementation occurs primarily through state modal and facility plans as well as regional and local transportation system plans. A 15-member Steering Committee chaired by Commissioner Achterman is guiding the process. Currently, the Steering Committee, which meets monthly, is analyzing policies, discussing funding sources, and refining policies.

### **Performance Measure Criteria**

Performance measure criteria are currently under development to propose to the OTP Steering Committee.

#### **Progress Update**

Overall Status of Action: In-progress & on target

Item	Status	Target Date
1. Examination of Major Trends and Issues  Numerous background papers were prepared to brief those involved with the OTP update on latest trends and issues. Papers covered such topics as: Transportation Trends and Challenges, Transportation and the Economy, The Future Role of Alternative Fuels, Sustainable Transportation, Transportation and the Aging Population, Commuter Rail in Oregon, Potential for Paradigm Shift in Public Transportation, Statewide Congestion Overview, Freight	Completed - Spring 2004	n/a

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2. Formation of Subcommittees	Completed –	n/a
Three policy subcommittees were formed to develop draft policies in specific areas. The areas addressed were:	Summer 2004	
<ul> <li>Mobility and Economic Vitality</li> <li>Sustainability and Transportation Choices</li> <li>Safety and Security</li> </ul>		
Membership of these subcommittees represented various internal and external stakeholders, including ODOT staff, other state agencies, federal agencies, local government (cities, regional governments, and counties), ports, higher education, business, freight groups, aviation groups, rail groups, transit groups, non-profits, etc.		
3. Development of Draft Policies	Completed –	n/a
Draft policies were developed by the subcommittees and organized under seven broad goals as follows:	Sep 2004	
<ul> <li>Goal 1: Mobility and Accessibility</li> <li>Goal 2: Management of the System</li> <li>Goal 3: Economic Vitality</li> <li>Goal 4: Sustainability</li> <li>Goal 5: Safety and Security</li> <li>Goal 6: Funding the Transportation System</li> <li>Goal 7: Coordination, Communication and Cooperation</li> </ul>		
Goal 4 is most directly related to sustainability. It includes policies addressing environmental responsibility and creation of integrated, healthy communities. However, other goals also relate to sustainability. Goal 3 relates to the economic aspect of sustainability, and how the transportation system can support economic vitality. Goal 2 addresses effective use of financial resources by improving operations and system management.		
4. Revision of Draft Policies	Completed –	n/a
The draft policies were sent out to various interest groups for review, including Metropolitan Planning Organizations (MPO's), Area Commissions on Transportation (ACT's), cities, counties, other local officials, freight advisory etc. After the interest groups had reviewed the draft policies, they were revised to reflect the comments.	May 2005	

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5. Multimodal Needs Analysis  A key piece of work developed this year was the OTP Transportation Needs Analysis 2005-2030 (July 14, 2005). This report summarizes the current spending, forecasted mode growth, and forecasted budget for each transportation mode. The current annual budget shortfall is approximately \$400 million. By 2030 the annual shortfall will decrease further due to inflation to a 40 percent decline in spending power.	Completed – July 2005	n/a
6. Policy Analysis  The purpose of the policy analysis is to explore alternatives and gain information about their impacts on Oregon's transportation system, land use and economy. The basic analysis approach is to identify performance criteria, identify a reference scenario and alternatives, analyze how well each alternative satisfies the performance criteria, and judge the total effectiveness of each alternative. Alternatives include flat funding, operations focus, and major improvement scenarios. Sensitivity scenarios looked at high fuel prices and relaxed land use. The Steering Committee can then use the information to refine policies and define investment and implementation strategies.  One of the performance criteria used was "sustainability" – in this case with a land use focus, measured in terms of change in urbanized land. Other performance criteria included "Accessibility", "Economic Vitality", "Efficiency" (maximizing investments over	Completed – June 2005	n/a
time), "Equity", "Public Support", "Reliability/Responsiveness" (dependable levels of service), and "Safety".		
7. Draft OTP Preparation  The Steering Committee is currently preparing draft plan recommendations for the Oregon Transportation Commission. This work includes a review of the policy analysis to help determine investment priorities and strategies. Development of implementation strategies and an examination of funding sources will also be addressed.	In-progress	Summer 2005
8. Transportation Commission Draft OTP Review	TBD	Late Fall, 2005
The Steering Committee will present the draft plan to the three policy subcommittees and then give recommendations to the Oregon Transportation Commission. The Transportation Commission will then approve the draft plan for public review.		

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9. Public Review of Draft OTP	TBD	Spring 2006
A public review will take place from the end of 2005 through spring 2006. After the public review, the Steering Committee will revise the OTP and present the final plan to the Transportation Commission for adoption.		
10. Transportation Commission Adoption	TBD	June 2006
The Oregon Transportation Commission is scheduled to formally adopt the new Oregon Transportation Plan in the summer of 2006.		

### **Challenges, Potential Risks, Mitigating Actions**

# Some of the challenges of developing and implementing the OTP update, and their related mitigating actions, include:

The development of the OTP update may take longer than planned, due to the complex and involved nature of the process.

- A structured process has been set up with strong leadership from the Steering Committee.
- ➤ ODOT has a dedicated Transportation Plan Manager supported by a cadre of planning staff.

The level of accomplishment of actions outlined in the OTP is dependent on future funding.

- ➤ This challenge is largely controlled by the legislative budget process.
- The policy analysis included a flat funding scenario.

There is potential for a declining revenue climate due to (1) funding not keeping up with inflation and (2) a reduction in gas tax revenue due to increasing vehicle fuel efficiencies.

- ➤ The first challenge is largely controlled by legislative budget process, as noted above. However, innovative funding arrangements, including public/private partnerships, tolls, and the user-pays concept are being investigated.
- ➤ The second challenge is being addressed by the Road User Fee Task Force. Options including a vehicle miles traveled (VMT) charge are being considered.

Actions outlined in the OTP may not be followed up due to competing priorities, maintenance of the status quo, and/or aversion to change.

A strong implementation plan must be developed to ensure that actions are carried out and managed appropriately.

Uncertainty exists in the market about future fuel price, availability and type.

- The policy analysis included a high fuel price scenario.
- Fuel uncertainty is being discussed by the Steering Committee in the plan development.

Appendix

**Appendix:** 

OTIA III State Bridge Delivery Program Monthly Progress Report No. 9 – May 2005 Pages 10 - 33

### **EXECUTIVE SUMMARY**

In May, the OTIA III State Bridge Delivery Program team advanced the program's goals in significant and innovative ways.

To stimulate the economy, we trained prime and specialty contractors in best practices for creating economic stimulus and diversity plans.

To promote diversity, we staffed booths to showcase opportunities and answer questions for attendees of the Women in Trades Fair, the Oregon Association of Minority Entrepreneurs Annual Conference and Trade Show, and the Metals Industry Expo. As we near the \$100 million mark for program spending, we are pleased to report that we have placed a special emphasis on providing employment and contracts to disadvantaged, women-owned, minority-owned and emerging small businesses.

We also instituted a program that will result in more cost-effective and efficient construction projects. The Quality Audit Program identifies design deficiencies and provides design consultants with opportunities for improvement. The first three audits identified more than 40 instances in which consultants can improve their design process. The audit process includes a feedback loop that requires a response from the consultant and facilitates the transfer of knowledge.

Another efficiency measure will help keep freight and traffic moving. Rather than assigning traffic analyses to numerous individual design consultants, we have centralized this task under the program management consultant, Oregon Bridge Delivery Partners (OBDP). Consolidating this task can save money and time and keep the analyses consistent. It also allows ODOT to better coordinate with regions.

Recycling construction materials is a sustainable solution that is sensitive to communities and the landscape. We are designing a system to record how much waste material is reused and recycled. To date, the contractors on Bundle 101 have reused or recycled a total of 800 tons of rebar and more than 3.5 tons of concrete.

And finally, in May we shared our experience in applying for federal funds for innovative bridge design and materials. In a training attended by close to 100 consultant bridge designers and other ODOT engineers, we discussed rules for the federal program and steps required to apply from Oregon. This knowledge will be expanded on and reinforced in future trainings for Context Sensitive and Sustainable Solutions (CS³) certification and will be of use to the agency even after the bridge program is complete.

### **GOAL 1: STIMULATE OREGON'S ECONOMY**

This section tracks the number of jobs that bridge program spending has sustained, the impact of those jobs on income and tax revenues, how funds were dispensed in and outside Oregon, and efforts to build and sustain diversity in the pool of people working on the bridge program.

### **Assisting Engineering Firms in Meeting the Program Goals**

In May, ODOT continued to educate engineering firms about the bridge program in a training at Portland State University. Sessions in three subject areas provided the firms with technical assistance in developing economic development and diversity plans, and in meeting the bridge program goals of stimulating the economy and providing cost-effective and efficient delivery practices. In addition, specialty subcontractors attended a workshop on how to successfully market their services to obtain work from the prime contractors.

ODOT also updated the firms on the status of the program and answered questions about the workshops. In all, more than 90 people attended the event. Feedback indicates the session was helpful in answering many of their questions.

#### **Job Creation**

As of May, the bridge program had sustained nearly 1,900 jobs (based on the IMPLAN economic model, a software system for estimating the impacts of economic changes). Construction jobs held steady in April, reflecting continued financial investment in building bridges. The program resulted in 814 direct jobs and 1,061 indirect and induced jobs (supply and support positions not directly tied to actual construction, and jobs created when workers spend their paychecks). Figure 1 shows the total jobs created by category. (The most recent economic data available is through April 2005.)

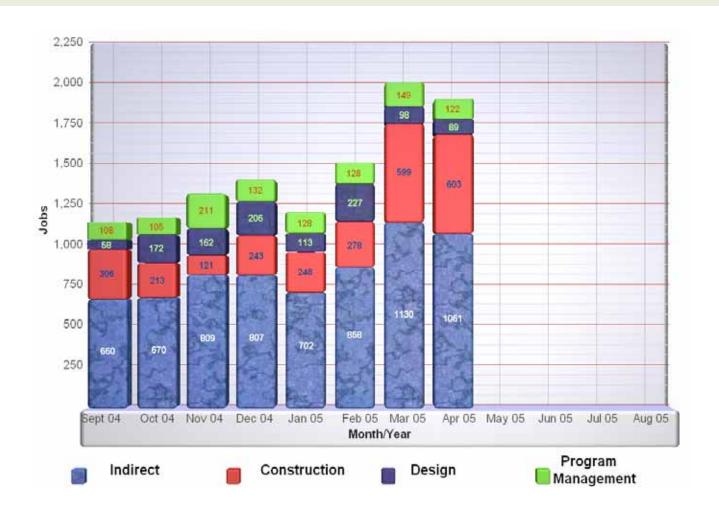


Figure 1: OTIA III State Bridge Delivery Program Jobs by Category

Figure 2 shows forecasted bridge program jobs in accordance with the approved Bridge Oversight Committee budget and the cost-loaded schedule for delivery of the bridge projects. Based on the schedule, jobs associated with the program will exceed 5,000 in 2007 and grow to a peak of more than 5,600 in 2009. After 2009, jobs will taper off as the program winds down. We estimate that the eight-year bridge program will sustain an average of 3,100 jobs annually.

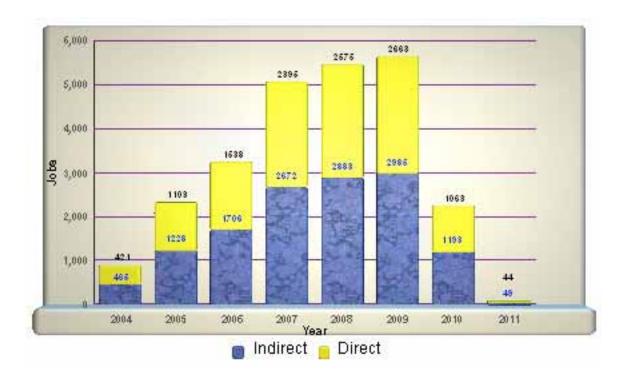


Figure 2: OTIA III State Bridge Delivery Program Projected Jobs

### **Estimating the Impact of the OTIA III State Bridge Delivery Program**

In April 2005, the bridge program generated income of nearly \$7.4 million. As a result, nearly \$770,000 returned to the state in the form of tax revenues. (Jobs and income data are from the ODOT TEAMS Report, which has a one-month delay.)

Figure 3 shows income and taxes paid in April for the bridge program; Figure 4 shows income and taxes paid to date.

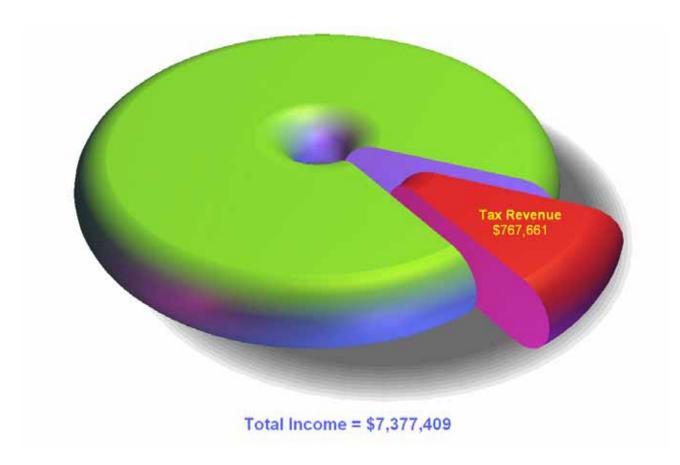


Figure 3: April 2005 Income vs. Tax Revenue for the OTIA III State Bridge Delivery Program

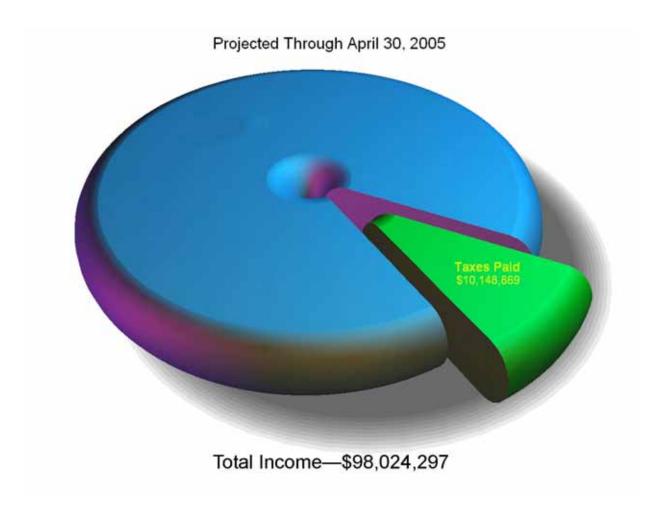


Figure 4: Total Income and Taxes Paid to Date for the OTIA III State Bridge Delivery Program

# **Investing in Oregon**

In May, ODOT's program management consultant, OBDP, paid more than \$4.2 million to businesses for bridge program work. Of that, OBDP spent nearly 97 percent on goods and services provided by Oregon firms and just 3 percent on goods and services from outside Oregon. Figure 5 shows expenditures on vendors thus far in 2005.

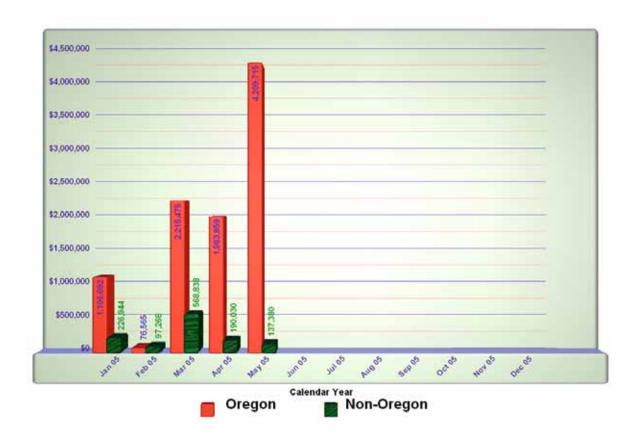


Figure 5: Vendor Expenditures for Oregon vs. Non-Oregon Firms

So far, OBDP has directed more than 93 percent of all its expenditures on the program to Oregon firms and vendors.

### **Working to Create a Diverse Workforce**

ODOT continued to roll out diversity goals outlined in the Workforce Development Plan by establishing a working committee with the Bureau of Labor and Industries, Community College Workforce Development, and Employment Division to coordinate services. ODOT conducted outreach to the minority offices at Oregon State University and Portland State University and to minority student organizations requesting resumes of civil engineering and construction management students. The resumes will be provided to bridge program design firms seeking interns. ODOT will continue to recruit a diverse pool of students throughout the year for internships.

The jobs4oregon.com web site is nearly complete and will provide one-stop information about employment opportunities with the bridge program. The site will then be incorporated in the www.obdp.org web site; a tentative date of July 2005 has been set for the rollout.

### **Helping DMWESB Firms**

Figure 6 shows the percentage of bridge program payments to disadvantaged, minority-owned, womenowned, and emerging small businesses (DMWESBs). The total value of verified payments on all bridge program contracts to date is \$99,997,158. The total value of verified payments to DMWESB companies to date is \$19,272,448.

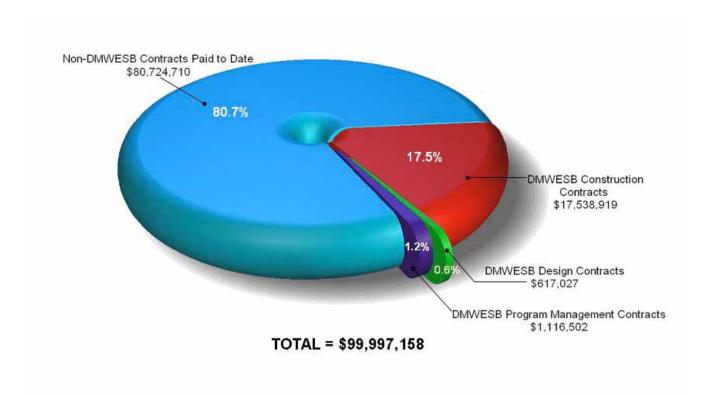


Figure 6: Payments to DMWESBs vs. non-DMWESBs

#### Notes:

- 1) Payments are through April 2005.
- 2) Payments are for all OTIA III bridge program projects completed or with signed contracts.

### **GOAL 2: EMPLOY EFFICIENT AND COST-EFFECTIVE DELIVERY PRACTICES**

To avoid time-consuming and costly mistakes, carpenters say, "Measure twice and cut once." ODOT has extended that thrifty advice to the bridge program by creating a quality assurance process that helps contractors prevent problems before they occur.

Formerly, ODOT's quality assurance process focused on inspection and laboratory testing, both of which assess quality after the fact. With the advent of the bridge program, ODOT established a Quality Audit Program to evaluate consultants and contractors as they develop projects. Using templates that establish minimum requirements for quality, ODOT verifies that consultants are implementing their quality plans during formal work-product reviews and on-site quality audits (see Figure 7). These audits extend the overview process to both the design and construction stages, and they review not just work products but also processes.

During a scheduled audit, the quality auditors review records and hold interviews with designers and builders. The auditors use their experience on other projects to explore the processes behind the design and construction work. They can then suggest alternatives if they identify potential problems.

For example, during one recent quality audit, ODOT discovered that a consultant had a good method for checking design calculations but had completely ignored the possibility that the reviewer might require changes and would then need to double-check that those changes had been accomplished correctly. Upon our recommendation, the consultant revised his procedure to include this process.

In another audit, ODOT discovered that the consultant's method for verifying whether ODOT review comments had been incorporated and resolved lacked consistency. The team recommended that the consultant develop a workflow process and tracking system.

ODOT's Quality Audit Program benefits all parties: ODOT and Oregonians get better built bridges, and contractors develop cost-effective delivery tools and procedures that help them avoid the delays and rework which cut into their profit margins.



**Figure 7:** OTIA III State Bridge Delivery Program Health and Safety Manager Randy Peck and Quality Manager Jim Tew look over one of the Rock Creek Bridge beams being set as part of the Mt. Hood to Chemult project.

# GOAL 3: MAINTAIN FREIGHT MOBILITY/KEEP TRAFFIC MOVING

For the past eight months, ODOT has brought together resources from across the agency to keep traffic moving while bridges are being replaced or repaired. We have coordinated our efforts with all mobility partners to develop new information systems, procedures, and communications.

#### **Effective Coordination**

Achieving the mobility goal requires effective coordination at and across three levels:

- Statewide: At the highest level, the Statewide Mobility Committee, led by the ODOT Statewide
  Traffic Mobility Manager, provides input from a representative variety of mobility stakeholders who
  develop and evaluate practices that will be used across the state to keep traffic moving.
- Regional: Mobility committees at the region level ensure that details of the mobility practices are further developed and implemented on all projects in the region.
- Corridor: Drivers along the key corridors are unable to tell the difference between one region and the next, but they do expect ODOT to coordinate corridor activities. This coordination is accomplished through regular corridor meetings with regional mobility staff, the Statewide Traffic Mobility Manager, and other mobility partners.

#### **New Procedures**

ODOT has worked with OBDP to develop and perform traffic analyses to estimate the delays expected in work zones. Originally, the subcontracted design firms were to perform these calculations, but after evaluating the benefits, OBDP has decided to perform them. Centralizing this task is efficient and cost-effective for the following reasons:

- It saves time, because ODOT and OBDP will not need to train design firms on a newly developed method.
- It reduces cost, because OBDP has the experience to perform these analyses more quickly.
- The analyses are consistent with one another, because one firm performs them all.
- OBDP can coordinate with ODOT regions on mobility concerns earlier in the planning process because they already meet regularly.
- Produces a consistent analysis that ODOT's Traffic Planning and Analysis Unit can use on other statewide projects.

#### **Effective Communications**

After everything possible has been done to minimize delays and restrictions, the public still needs to be kept informed about construction activities taking place as they travel. One example of mobility outreach is a newspaper advertisement produced for the Sutherlin to Roseburg design-build project, which shows project locations and provides key information about the construction schedule and types of activities taking place in work zones (see Figure 8).

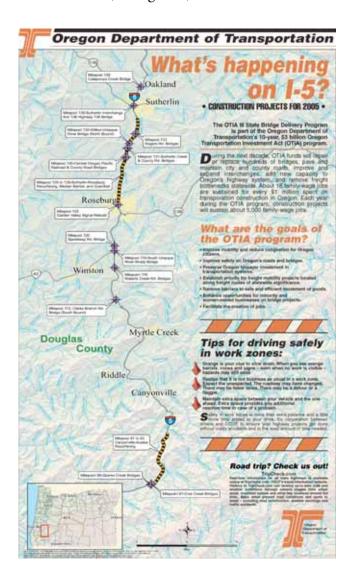


Figure 8: Advertisement About the Sutherlin to Roseburg Design-Build Project

### **Unrestricted Mobility Measures**

Figure 9 illustrates the percentage of bridge program projects under construction that do not have height, width, or weight restrictions. It includes information for region-managed OTIA III State Bridge Delivery Program projects.

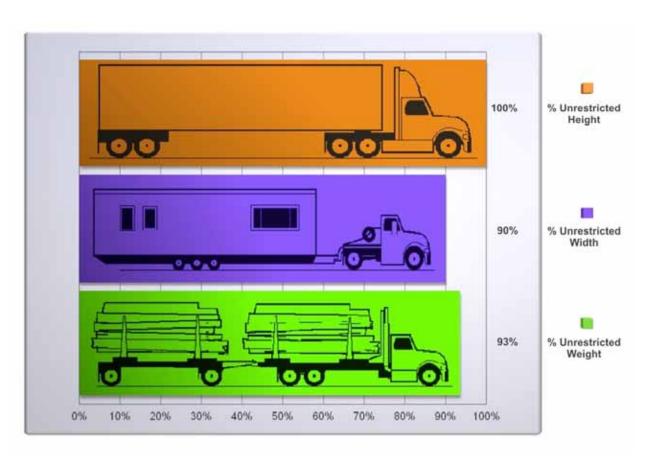


Figure 9: The Percentage of Projects Under Construction That Do Not Have Height, Width, or Weight Restrictions

In May, there were only five bridges with restrictions in the active work zones. None of the bridges had height restrictions, three of the bridges had width restrictions, and two of the bridges had weight restrictions, as shown in Figure 10.

#### Width restrictions:

Bridge #08346 – U.S. 97, Klamath Falls, California Avenue, at milepost 274.73 – width restriction with detours on Oregon routes and local roads

Bridge #03506A – U.S. 20, Miller Creek, at milepost 105.62 – restricted to loads no wider than 16 feet (Motor Carrier Transportation Division discussed this restriction with the trucking industry.)

Bridge #01961A – U.S. 20, Stinkingwater Creek, at milepost 167.64 – restricted to loads no wider than 14 feet (Motor Carrier Transportation Division discussed this restriction with the trucking industry.) By the end of May, this bridge was open to unrestricted traffic.

### Weight restrictions:

Bridge #07713A – I-5, South Umpqua, at milepost 120.57 – weight restriction on I-5 with a detour route on the county road network

Bridge #09692 – U.S. 97, Klamath Falls, Green Springs, at milepost 275.75 – weight restriction with detours on Oregon routes and local roads

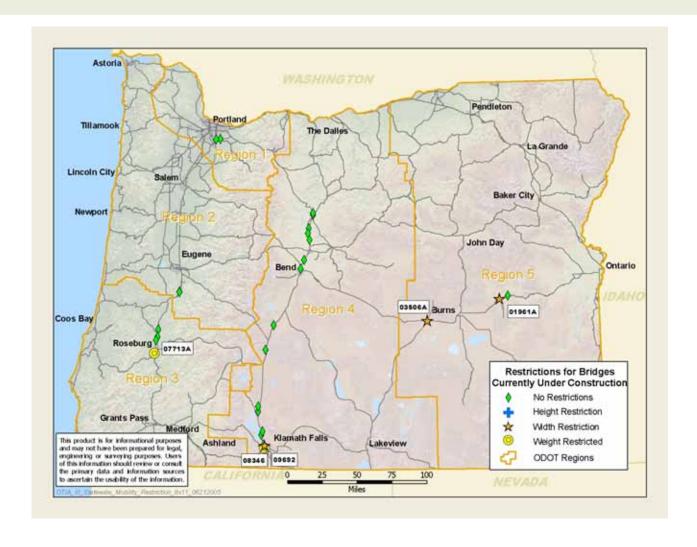


Figure 10: Location of Bridges Under Construction With Width and Weight Restrictions

Figure 11 shows the annual forecast of when bridges in the program will be open to unrestricted traffic.

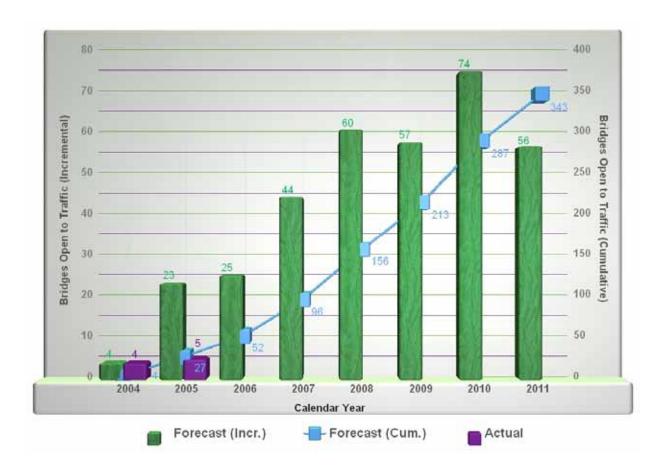


Figure 11: When OTIA III State Bridge Delivery Program Projects Will Be Open to Unrestricted Traffic

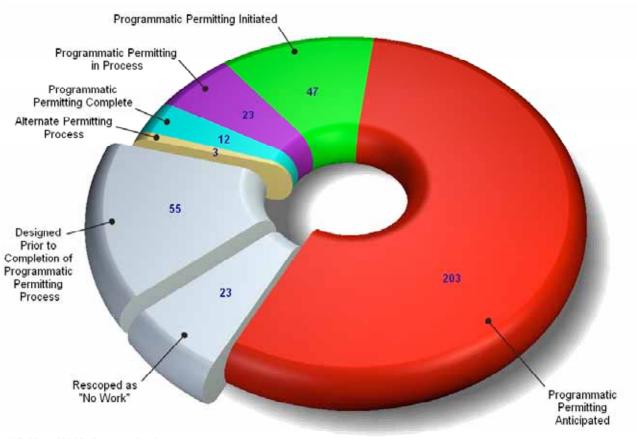
Twenty-three bridges were classified as "No Work" bridges and therefore are not included in Figure 11.

### GOAL 4: BUILD PROJECTS SENSITIVE TO THEIR COMMUNITIES AND LANDSCAPE

### **Environmental Programmatic Permitting**

We continue to take advantage of streamlined environmental permitting to design projects that are sensitive to their environment, save money, and speed the completion of work. Of the bridges that are potentially eligible to effectively apply for the programmatic permit, 12 bridge projects have successfully completed the process, 23 are currently submitting documentation (up from 14 in April), 47 have initiated the process, and an additional 203 bridges are anticipated to apply. Only three bridge projects out of the 366 eligible for the programmatic permitting process have chosen an alternate permitting strategy.

In April we reported that, of the bridges within the bridge program not anticipated to use the programmatic permitting process, 62 began design prior to finalization of the programmatic permitting process. Contracting efficiencies and increased project coordination led to an additional seven bridges initiating the process. Only 55 bridges were ineligible; they were designed before the programmatic permitting process was finalized. Through May 2005, 23 bridges were classified as "No Work" and therefore will not need environmental permits (see Figure 12).



<sup>\*</sup> Bridges Within Program by Category

Figure 12: Summary of Programmatic Permitting for the OTIA III State Bridge Delivery Program

### **Sustainability**

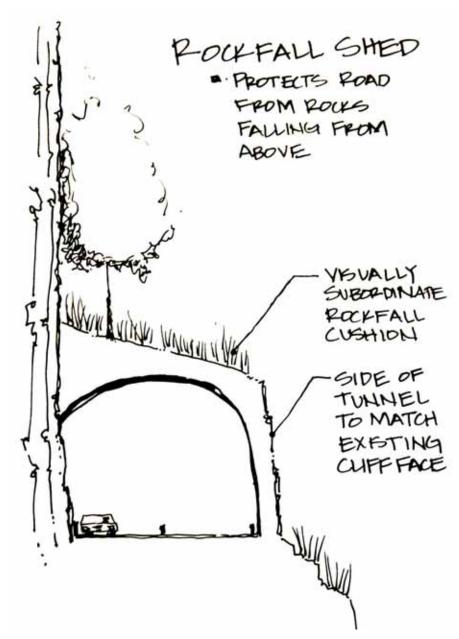
The OTIA III State Bridge Delivery Program uses the Context Sensitive and Sustainable Solutions (CS³) approach to building bridges. One important aspect of this approach is environmental stewardship. ODOT promotes environmental stewardship in the course of bridge demolition by encouraging the reuse or recycling of waste materials. Scrap metal, concrete debris, asphalt pavement, excavated soil, and wood debris are examples of waste generated during demolition that can be reused on site or on nearby construction projects. Old materials that may previously have been thrown away in municipal landfills become valuable resources again. Recycling also reduces the need to generate new materials from natural resources.

In a recent survey of bridge projects under construction, the contractors on Bundle 101 reported reusing or recycling a total of 800 tons of rebar and more than 3.5 tons of concrete. ODOT is in the process of designing a system for recording the reuse and recycling of waste material.

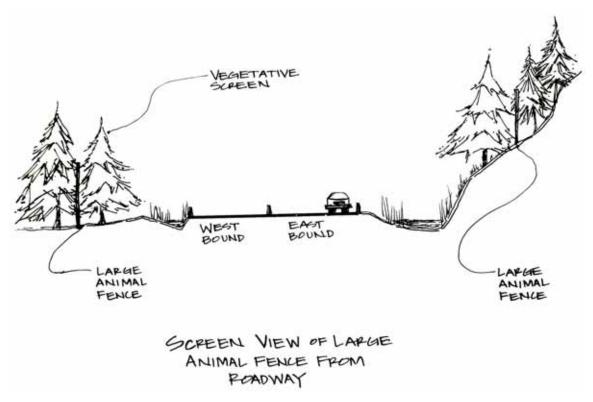
#### **Public Involvement**

ODOT and other federal and state agencies sponsored a second series of public workshops in communities in the Columbia River Gorge as part of the Interstate 84 Corridor Strategy. The purpose of the strategy is to develop a long-term vision and design guidelines for projects in the National Scenic Area, including 25 in the bridge program. The guidelines will shape design, construction, and management activities in the corridor.

ODOT hosted public meetings in Troutdale, Cascade Locks, Hood River, and The Dalles. The public workshops provided Gorge-area residents with an opportunity to review and respond to the draft vision statement, goals, and objectives, which were developed based on input received in the first series of workshops held in January. A separate, daylong design charette—where architects and engineers turn design ideas into actual preliminary sketches—allowed participants, working with bridge program personnel, to see the fruits of their labor (see Figures 13 and 14).



**Figure 13.** Gorge-area residents and stakeholders developed sketches of design elements for the Interstate 84 corridor in a daylong design charette.



**Figure 14.** The input and ideas gathered in the May workshops will shape the design guidelines for corridor features in the Gorge, including 25 bridge program projects.

The input and ideas gathered in the May workshop series will shape the first draft of design guidelines for corridor features—the next stage of the I-84 Corridor Strategy project. Nearly 200 Gorge-area residents and stakeholders attended the May meetings and design charette.

The I-84 Corridor Strategy is a joint effort led by ODOT with the Columbia River Gorge Commission, USDA Forest Service, Federal Highway Administration, and counties in the Columbia River Gorge National Scenic Area. We expect to hold a third series of public meetings in July to present the final draft of the bridge design guidelines. These meetings will allow stakeholders to comment on the version that will be finalized by the end of 2005.

ODOT is dedicated to preserving and protecting the important natural and scenic environment of the Gorge as part of its CS<sup>3</sup> approach to bridge building. The I-84 Corridor Strategy project is one way we are making the CS<sup>3</sup> philosophy a reality.

# **GOAL 5: CAPITALIZE ON FUNDING OPPORTUNITIES**

In May, ODOT sponsored a grant application training for consultant bridge designers at the annual bridge training seminar. The session, on Design Innovation, included a section on the process and requirements for obtaining additional funding for transportation projects from the federal government.

The Innovative Bridge Research and Construction Program (IBRC) promotes innovation and advancement of new materials and construction methods in transportation. This Federal Highway Administration program provides additional money for the design and construction of projects that use specialized materials, such as high-performance concrete, fiber-reinforced polymers, and high-performance steel (see Figure 15).

In the past, ODOT has not applied for many grants for bridge projects. The May training was developed to inform the bridge community about opportunities to garner added funds and how to apply for them. Nearly 100 engineers from ODOT and the design community attended to learn about the steps required to get grants approved in Oregon. Additional training will be available through the bridge program's CS<sup>3</sup> Certification and Project Leader training in the regions. After the bridge program is complete, ODOT will continue to use the federal avenues available to supplement its transportation programs.

ODOT will apply for four IBRC grants: to utilize high-performance steel, to install preconstructed bridges, to make fiber-reinforced polymer repairs, and to use precast substructures. Though ODOT is unlikely to receive more than one IBRC grant, the applications raise the visibility of Oregon's bridge program at the Federal Highway Administration.

Obtaining federal funding for these new materials and methods will save the bridge program money. The new approaches to construction also serve the larger CS<sup>3</sup> goal of working cost-effectively and efficiently: Precast structures, for example, speed construction because they are built in the shop and allow better quality control.



**Figure 15:** The Sylvan Road Bridge over U.S. 26 east of Portland utilized high-performance steel, one of the materials included in the IBRC funding program.