

OTIA III State Bridge Delivery Program Training

OREGON DEPARTMENT OF TRANSPORTATION
90 Years Connecting Communities and Business

OTIA III Overview

OTIA III and CS³



"Community values shaping a new generation of bridges"



OTIA III: \$2.46 Billion Over 10 Years

- 2003 Legislature designates \$1.3 billion to address Oregon's aging state bridges
- \$300 million to repair or replace 141 local bridges
- \$361 million for maintenance and preservation of county roads and city streets
- \$500 million for modernization




Historical Context of OTIA

- More vehicle miles traveled but no increase in gas tax since 1993
- Gap between preservation, modernization needs, and funding
- Oregon's aging transportation system threatens economic recovery




OTIA III State Bridge Delivery Program Goals



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



Context Sensitive and Sustainable Solutions are...

- transportation solutions for the OTIA III State Bridge Delivery Program that reflect social values (community values; cultural, aesthetic, and historic resources; and diversity), maintain safety and mobility, support economic prosperity, achieve responsible stewardship of the natural environment, and facilitate cost-effective solutions.



CSS + Sustainability = CS³

- ODOT integrates sustainability with Context Sensitive Solutions philosophy
 - Context Sensitive Solutions
 - Federal Highway Administration
 - State Departments of Transportation
 - Sustainable Solutions
 - Longer history in vertical construction
 - Area of opportunity for other state DOTs




Context Sensitive Solutions (CSS)

- 1998 FHWA conference
- One of FHWA's *Vital Few Goals* 
- An interdisciplinary approach involving partnership with all stakeholders
- Collaborations lead to transportation solutions that
 - Fit the physical setting
 - Preserve scenic, aesthetic, historic, and environmental resources
 - Maintain safety and mobility
- Considers entire situation within which a transportation improvement project exists



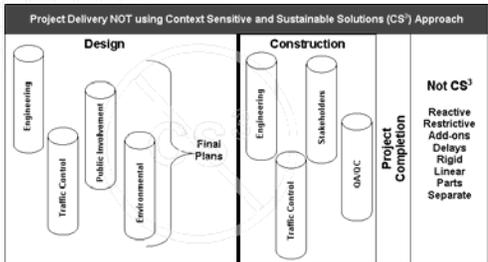
Sustainability

- 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.
 - *Development of a State Strategy Promoting Sustainability in Internal State Government Operations (Executive Order EO-00-07)*



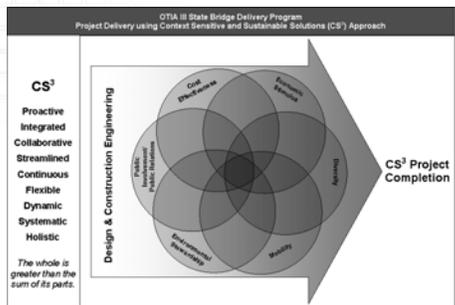

What CS³ is NOT

Project Delivery NOT using Context Sensitive and Sustainable Solutions (CS³) Approach




OTIA III State Bridge Delivery Program

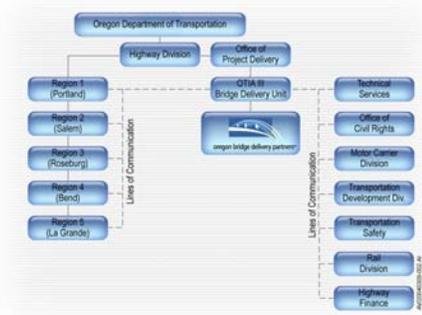
Project Delivery using Context Sensitive and Sustainable Solutions (CS³) Approach



Key areas create a lens through which Design and Construction Engineering is conducted



Organization of Program Management



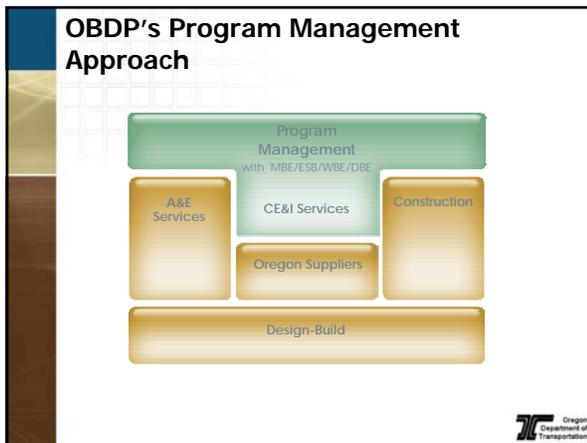

ODOT Role

- **Office of Project Delivery**
 - Primary purpose of the Office of Project Delivery is to improve on-time and on-budget performance
 - *Statewide Transportation Improvement Program (STIP)* and *Oregon Transportation Investment Act (OTIA)* project delivery statewide
 - Alternative Delivery Unit (ADU)
 - Bridge Delivery Unit (BDU)
 - Project delivery Unit (PDU)
- **OTIA III Bridge Delivery Unit**
 - Under the Office of Project Delivery
 - provides management and support for OTIA III funded programs



Who is OBDP?

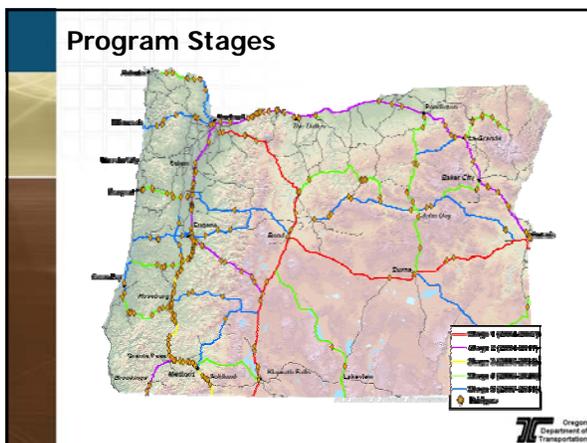
- Oregon Bridge Delivery Partners
- Joint venture of HDR and Fluor
- Under contract to ODOT and its Highway Division
- Responsible for acceleration the completion and managing the quality of projects in the OTIA III State Bridge Delivery Program

Bundling Projects for Delivery

- 40 to 50 project bundles
- Coordinated with ODOT regions and stakeholders
- Multidisciplinary approach
- Design-Bid-Build and Design-Build
- Five point bundling strategy
 - Location & context
 - Type of work
 - Maintain mobility & minimize traffic impacts
 - Contract size appropriate for Oregon firms
 - Critical issues (potential impact on scope, schedule, or budget)

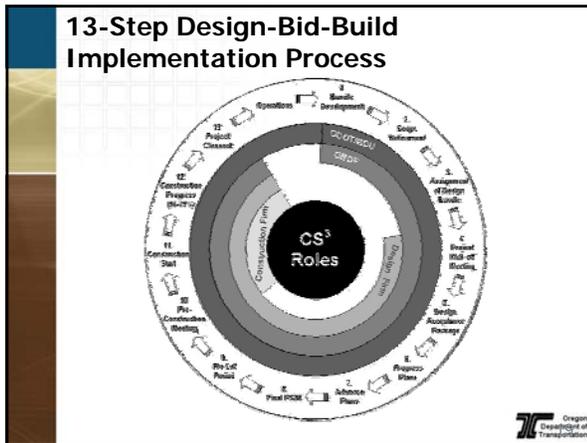




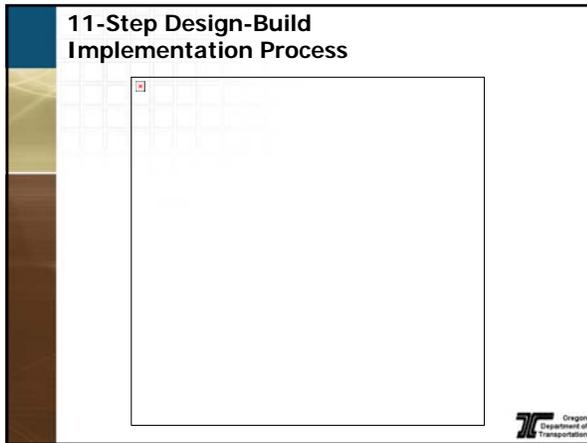
13-Step Design-Bid-Build Project Delivery Process

1. Bundle Development
2. Scope Refinement with Region
3. Assignment of design bundle
4. Project kick-off meeting at project site
5. Design Acceptance
6. Progress Plans
7. Advanced Plans
8. Final Plans, Specifications, and Estimate (PS&E)
9. Pre-let period
10. Pre-construction meeting
11. Construction start
12. Construction progress
13. Project closeout





- ### 11-Step Design-Build Project Delivery Process
1. Bundle Development
 2. Data Collection/Scope Refinement with Region
 3. Request for Qualifications
 4. Request for Proposals
 5. Proposal Preparation and Evaluation
 6. Selection of Design-Build Firm
 7. Contract Award
 8. Project Kick-off Meeting
 9. Construction Progress (0 to 50%)
 10. Construction Progress (50 to 100%)
 11. Project closeout



ODOT Wins National Environmental Excellence Award

- AASHTO's Center for Environmental Excellence Best Program Award in the Context Sensitive Solutions competition
- Recognized for CS³ implementation

The slide features the AASHTO logo on the left, which includes the text 'AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION ENGINEERS' and '1914'. To the right is a photograph of a multi-lane highway bridge crossing a river with green vegetation on the banks.

- ### Websites
- OTIA III
<http://egov.oregon.gov/ODOT/HWY/OTIA>
 - Jobs for Oregon
<http://www.jobs4oregon.com>
 - Oregon Bridge Delivery Partners
<http://www.obdp.org>
 - Updated website available – Go to "Partner Central"
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- An illustration of a desktop computer system including a monitor, keyboard, and mouse is positioned to the right of the website list.

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Survey – Mapping & Right of Way Engineering

Program Opportunities for Specialty Contractors

- Two opportunities to provide professional surveying services
 - Surveys required by A&E contracts for bundles
 - Programmatic surveys:
 - Federal land transfers
 - Federal permit surveys
 - Railroad crossing order and encroachment surveys
 - Hydrographic surveys
 - Photogrammetric mapping and Lidar surveys
 - Global Positioning System (GPS) surveys
 - High Definition Survey (HDS) scanning
 - Base and Digital Terrain Model (DTM) mapping
 - Construction QA/QC surveys




Design Process

- Phases of the project that concern survey
 - Start-up tasks following Notice to Proceed (NTP)
 - Preparation of survey portion of Project Work Plan
 - NTP to Design Acceptance Package (DAP)
 - Base map & DTM, roadside inventory
 - Identify ROW acquisition requirements, preliminary sketch
 - DAP to Progress Plans
 - DAP plus 30 days – Deliver ROWE descriptions and maps
 - Progress to Final Plans, Specifications, and Estimate (PS&E)
 - Addition utility surveys, stake ROW parcels
 - Final Plans, Specifications, and Estimate (PS&E)
 - Final survey documentation
 - Construction Engineering and Inspection (CEI)
 - Freshen control network prior to construction
 - QA/QC construction surveys
 - Asbuilt & Post-Construction surveys




Scoping

- Standard scope for repair bridges
 - No survey is required
- Standard scope for replacement bridges and repair with widening
 - The bridge
 - 100 feet each side **OR** to the Right of Way line
 - 250 feet before and after the bridge



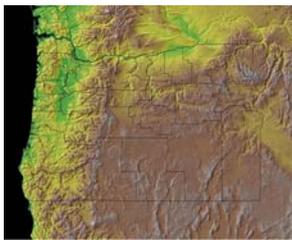

Scoping (cont.)

- Conditions that can modify the standard scope:
 - Traffic Control Plan – Traffic diversion and detour routes for the bridge and adjacent streets
 - Local conditions such as streams, cuts and embankments, substandard crossing clearances
 - Relocation of utilities, federal land transfers, railroad crossings
 - Right of Way acquisition




OTIA III Surveying Effort to Date

- 26 Bundles comprised of 98 bridges with survey
 - Region 1 – 3 Bundles
 - Region 2 – 9 Bundles
 - Region 3 – 7 Bundles
 - Region 4 – 3 Bundles
 - Region 5 – 4 Bundles
- 3 Mitigation Sites



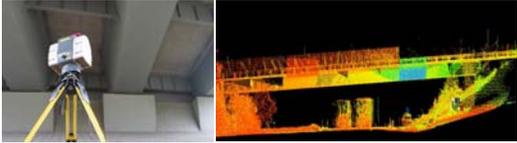
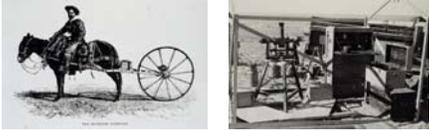

OTIA III Surveying Effort, cont.

- 15 Prime Consultants
 - 5 have in-house survey capability
- 15 Specialty Consultants
 - 10 Survey Consultants
 - 4 Photogrammetrists
 - 1 Lidar Contractor




Technology & Knowledge Transfer

- Innovative methods, best practices, and lessons learned



Survey & Right of Way Engineering Contacts

- Mike Cooney, PLS - Survey Coordinator
 - Phone: 503-587-3612
 - Cell: 503-269-4998
 - E-mail: mike.cooney@obdp.org
- Dan Adsit, PLS
 - Phone: 503-587-3672
 - Email: daniel.adsit@obdp.org
 - Web site: <http://www.obdp.org>



Questions ????

