

Highway Maintenance and Preservation Needs

Total Highway Maintenance and Preservation Estimates Are Available

Briefing Report

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Joint Legislative Audit & Review Committee

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Study Mandated by 2013-15 Transportation Appropriation Bill (ESHB 5024)

- Focus on highway maintenance and preservation needs

Phase 1: Overview

How are needs identified and documented?

Phase 2: Evaluation

Are procedures consistent with industry and other practices?

- Provides funding for expert engineering or cost estimating consultants
 - Will use in Phase 2

Washington State Highways Are a Complex System

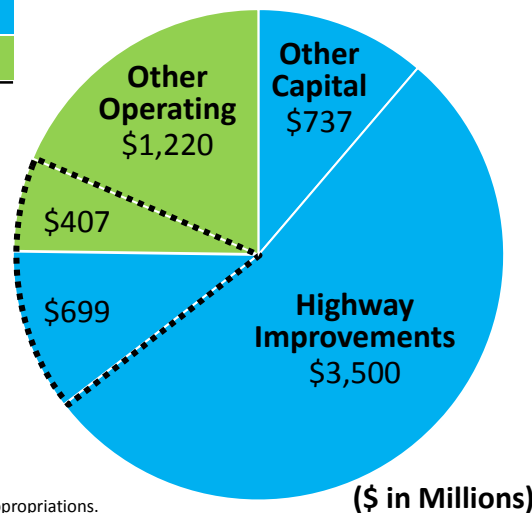
- 20,679 highway lane miles
- 3,794 bridges and ramps
- 1,100 traffic signal systems
- 48 safety rest areas
- 10 mountain passes kept open year-round
- Other assets include:
 - ◆ Weigh stations
 - ◆ Guardrails
 - ◆ Drainage ditches
 - ◆ Stormwater facilities



Maintenance & Preservation Are 17% of WSDOT Total Budget for 2013-15 Biennium

| | |
|-------------------------|----------------|
| Capital Budget | \$4,936 |
| Operating Budget | \$1,627 |
| Total Budget | \$6,563 |

17% {
 Highway Maintenance
 Highway Preservation



Source: JLARC staff analysis of 2013-15 WSDOT appropriations.

Maintenance & Preservation Are Closely Related



Maintenance is routine

- Ongoing activity to keep highway system operational
- Most activities are performed at least annually; some are done more frequently



Preservation is periodic

- Restores asset service life
- Depending on asset, preservation cycle may be decade or more

Maintenance and Preservation Activities



Seal cracks and repair damage
Clean culverts and drainage
Control snow and ice
Perform minor bridge repairs

Ongoing, routine maintenance maximizes asset service life



Repave highways
Paint bridges
Replace bridges
Stabilize slopes

Timely preservation can prevent higher cost of reconstruction



JLARC Staff Reviewed Needs Assessment in Two Ways

| Biennial Budget Process | Estimates of Total Needs |
|---|--|
| Funds routine maintenance and priority preservation projects for biennium | Prepared on request |
| Revenue constrained | Not revenue constrained |
| Estimates of total needs not required | May provide basis for increased funding requests |

Budget Requests for Maintenance Needs Are Based on Expected Available Funding



- Incremental budgeting process
 - ♦ Current biennium budget based on last biennium budget adjusted for inflation/changes
 - ♦ Intent is to fund same level of service from year to year
- Maintenance budget limited by available revenue
 - ♦ Establishes priorities for use of available funds
 - ♦ Unfunded priorities may be addressed through decision packages

Maintenance Priorities Established by Policy Objectives



- Examples of policy objectives
 - ♦ Ensuring public safety
 - ♦ Maintaining the infrastructure
- WSDOT uses Level of Service (LOS) targets to help achieve policy objectives
 - ♦ Measurable outcomes for highway assets
 - ♦ Guide managers in determining tasks to be performed for each maintenance activity

WSDOT Has Estimates of Total Maintenance Needs



- Estimated maintenance backlog in response to 2008 SAO finding
 - ♦ Backlog is maintenance activities that are not done because of resource limitations
 - ♦ 2008 estimate was \$85 million
- Updated estimate to include additions to highway system through 2011
 - ♦ Highway additions require maintenance
 - ♦ Estimate was \$12.9 million

WSDOT's Process to Develop Maintenance Estimates Is Systematic



- Estimating process was systematic and rigorous
- Most documentation for estimates was readily available
- As WSDOT adds new projects, new maintenance needs are created
 - ♦ According to WSDOT, on average, maintenance costs for system additions are 0.5% of construction costs

Budget Requests for Preservation Are Based on Expected Available Funding



- Biennial budget requests establish priorities for use of **available** preservation funds
 - ♦ Multi-stage process using information systems, physical inspection, engineering judgment, and cost-estimating
 - ♦ Well-established, well-documented
- Budget Process does not require WSDOT to identify total preservation needs
 - ♦ Focus is on effectively using available funds for projects in coming biennium

WSDOT Has Information and Procedures for Estimating Total Preservation Needs



- Not a routine process; estimates prepared periodically
 - ♦ 2010 pavement preservation estimate requested by Legislature
 - ♦ 2013 estimate: the Orange List
- Orange List estimated \$2.5 billion in unfunded preservation needs over next 10 years
 - ♦ Used formula rather than project estimates
 - ♦ Procedures and results consistent with 2010 pavement estimate

Procedures for Estimating Total Preservation Needs Appear Logical



- Based on actual service life of highway assets and historical costs
 - ♦ Extensive service life history and historical cost information for bridges and asphalt pavement
 - ♦ Developing information systems for other assets
- Unlike the budget process, estimating total preservation needs is not a formal process
 - ♦ Procedures are not as well documented as biennial budget process

In Summary: Maintenance & Preservation Needs Assessment

- Biennial budget process is well-documented but does not require estimates of total maintenance and preservation needs
- WSDOT has information and systematic procedures for estimating total maintenance and preservation needs
 - ◆ But documentation for these procedures is more limited than for biennial budget process

Next Steps and Contacts

Phase 2 Preliminary Report December 2014

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