

# Highway Maintenance and Preservation Needs

## WSDOT Can Provide Reliable Long-Term Pavement Estimates, but Accuracy of Bridge Estimates Is Uncertain

### Presentation to Joint Transportation Committee

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Staff to the Joint Legislative Audit & Review Committee

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# Expert consultants reviewed programs and provided groundwork for improvements

- Assigned in 2013-15 Transportation Budget, funded to contract with engineering consultants
- Contracted with experts in pavement and bridge management
  - ◆ Bridges: Co-author of AASHTO Guide for Transportation Asset Management
  - ◆ Pavement: Federal Highway Administration and AASHTO pavement guides

# Two recommendations to strengthen long-term cost estimates

**1** WSDOT should use best practices to make its long-term (10-year) bridge cost estimates as reliable as pavement estimates

**2** WSDOT and OFM should develop a process to improve stakeholders' confidence in its highway estimates

*WSDOT and OFM concur with both recommendations*

# Consultants reviewed cost estimating best practices

		Pavement	Bridges
<b>1</b>	Expected asset deterioration	Yes	Partial
<b>2</b>	Expected effectiveness of maintenance and preservation work	Yes	Partial
<b>3</b>	Investment options and predicted conditions for different funding scenarios	Yes	No
<b>4</b>	Investment recommendations based on life cycle cost analysis	Yes	No
<b>5</b>	Risk	Yes	Partial

# Bottom line: Consultants could not verify bridge cost estimates' accuracy

WSDOT can provide reliable pavement preservation cost estimates

- Estimate resulting pavement conditions
- Viewed as national leader

Bridge preservation cost estimates not developed using best practices

WSDOT's estimate may be:

- low, because they do not estimate most future deterioration
- high, because estimates not based on life cycle cost analysis

# Use best practices for bridge cost estimates

**Recommendation 1: WSDOT should use best practices to make its bridge estimates as reliable as pavement estimates**

## Start with a multi-year plan

Effective bridge management systems require several years of incremental changes

- Develop implementation plan by June 30, 2015
- Identify near-term and longer-term actions

WSDOT and OFM: Concur

# Improving confidence in WSDOT's long-term cost estimates: Involve other parties

## Documented estimates

Phase I found process for long-term estimates not well documented

## Clear, routine communication

Communicate assumptions, uncertainties, and estimate changes

## Internal and external review

Examples such as project reviews and Caseload Forecasting Council

## Organizational buffers

Ensure integrity in the processes of developing and identifying needs during estimate development

# Improve stakeholder confidence

**Recommendation 2: WSDOT and OFM should develop a process to improve stakeholders' confidence in its highway estimates**

## **Apply best practices**

- Identify an approach that incorporates best practices
- Report plans by June 30, 2015

WSDOT and OFM: Concur

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