MEETING AGENDA

- Introductions
- Project Update
- Database Overview
- Screening & Prioritization Process
- Next Steps
(3) $250,000 of the motor vehicle account—state appropriation, from the cities' statewide fuel tax distributions under RCW 46.68.110(2), is for a study to be conducted in 2016 to identify prominent road-rail conflicts, recommend a corridor-based prioritization process for addressing the impacts of projected increases in rail traffic, and identify areas of state public policy interest, such as the critical role of freight movement to the Washington economy and the state's competitiveness in world trade.
PROJECT OBJECTIVES

- Understand Current and Future Mobility, Community Impacts, and Safety Problems
- Understand and Apply State, Local, and Private Policy Interests
- Develop a Criteria-Based Prioritization Process
## WHO IS INVOLVED?

### ADVISORY PANEL
1. Paul Roberts, City of Everett, AWC
2. Sean Guard, City of Washougal, AWC
3. Lisa Janicki, Skagit County, WSAC
4. Al French, Spokane County, WSAC
5. Kevin Murphy, Skagit COG
6. Ashley Probart, FMSIB
7. Dave Danner, UTC
8. James Thompson, WPPA
9. Ron Pate, WSDOT
10. Johan Hellman, BNSF
11. Sheri Call, Washington Trucking Association

### STAFF WORK GROUP
1. Beth Redfield, JTC, Project Manager
2. Mary Fleckenstein, JTC
3. Dave Catterson, AWC
4. Gary Rowe, WSAC
5. Jason Lewis, UTC
6. Lauren McCloy, UTC
7. Sean Ardussi, PSRC
8. Elizabeth Robbins, WSDOT Planning
9. David Biering, WSDOT
10. Kyle McKeon, WSDOT
11. Faris Al-Memar, WSDOT Planning
12. Chris Herman, WPPA
13. Steven Ogle, Ecology
14. Hayley Gamble, STC
15. Paul Ingiosi, HTC
16. Kathy Cody, OFM
17. Jackson Maynard, SRC
18. Sharon Swanson, SDC
19. Debbie Driver, HDC
20. Dana Quam, HRC
## SCHEDULE

<table>
<thead>
<tr>
<th>Prioritization of Prominent Road-Rail Conflicts in Washington State Project Schedule</th>
<th>Month</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Task 1: Database Development</strong></td>
<td></td>
</tr>
<tr>
<td>Assemble and Screen Available Data</td>
<td></td>
</tr>
<tr>
<td>Establish Prioritization Criteria</td>
<td></td>
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<tr>
<td>Online Database Tool</td>
<td></td>
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<tr>
<td><strong>Task 2: Prioritization Process</strong></td>
<td></td>
</tr>
<tr>
<td>Context / Impact of Road-Rail Conflicts</td>
<td></td>
</tr>
<tr>
<td>Define Potential Prioritization Options</td>
<td></td>
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<tr>
<td>Test and Present Options</td>
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<tr>
<td><strong>Task 3: Organizational Structure</strong></td>
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<tr>
<td>Potential Structures</td>
<td></td>
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<tr>
<td>Trade-Offs and Evaluation</td>
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<tr>
<td><strong>Task 4: Advisory Panel and Staff Work Groups</strong></td>
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<tr>
<td>Advisory Panel Interviews</td>
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<tr>
<td>Advisory Panel Meetings</td>
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<tr>
<td>Staff Workgroup Facilitation</td>
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<tr>
<td><strong>Task 5: Draft and Final Reports</strong></td>
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<tr>
<td>Draft Report</td>
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<tr>
<td>Final Report</td>
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<tr>
<td><strong>Task 6: Presentations</strong></td>
<td></td>
</tr>
<tr>
<td>Presentations</td>
<td></td>
</tr>
</tbody>
</table>

- **Advisory Panel Meeting**
- **Staff Workgroup**
- **Presentation**
- **Presentation During 2017 Legislative Session**

**WE ARE HERE**
WORK PROGRAM APPROACH

Collect and Review Data

Identify Data Gaps/Inconsistencies

Analyze Information & Test Prioritization Options

Develop Prioritization Framework
DATABASE OVERVIEW

- Data Overview
- Data Gaps and How They Were Addressed
DATA OVERVIEW

- **ACTIVE CROSSINGS**: 2,863
- **OTHER CROSSINGS**: 1,308

**TOTAL CROSSINGS 4,171**

- **76%** AT-GRADE
  
  (2,197)

- **14%** OVERCROSSING
  
  (396)

- **10%** UNDERCROSSING
  
  (270)
DATA OVERVIEW

PROJECT CROSSINGS: 2,197
Sites were chosen that met the following characteristics:

- *Active* rail line
- *Publicly* accessible
- *At-grade* crossing

**TOP 5 COUNTIES**
(by number of crossings)
- 11% KING
- 10% SPOKANE
- 8% PIERCE
- 8% YAKIMA
- 6% WHITMAN

**TOP 5 LEGISLATIVE DISTRICTS**
(by number of crossings)
- 10% DISTRICT #9
- 9% DISTRICT #16
- 9% DISTRICT #13
- 6% DISTRICT #7
- 6% DISTRICT #15

**TOP 5 RTPOs**
(by number of crossings)
- 23% PSRC
- 12% QUAD-COUNTY
- 10% SPOKANE
- 9% SW WASHINGTON
- 8% YAKIMA VALLEY

**TOP 5 MPOs**
(by number of crossings)
- 43% NO AFFILIATION
- 23% PSRC
- 10% SPOKANE
- 4% WHATCOM
- 4% BENTON-FRANKLIN

**URBAN vs RURAL**
(by number of crossings)
- 54% URBAN
- 46% RURAL

PROJECT CROSSINGS: 2,197
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(by number of crossings)
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DATA GAPS – HOW THEY WERE ADDRESSED

Freight Train Counts

ISSUE
- The Washington State Rail Plan only had data for some at-grade crossings
- The FRA database has inconsistent or outdated data

SOLUTION
- The Rail Plan was used to populate train data where available
- Where unavailable, the FRA database was used
- Results in best possible data that is currently available
DATA GAPS – HOW THEY WERE ADDRESSED

Vehicle Counts

ISSUE
• Existing data is inconsistent
• Future data is nonexistent

SOLUTION
• Grow existing vehicle counts to common year (2015)
• Assume 2015 where data on year of count was not available
• Use regional historic trends (2005-2015) to grow data to future year (2035)
SCREENING & PRIORITIZATION PROCESS

概述过程
OVERVIEW OF THE PRIORITIZATION PROCESS

- 4,171 Active Rail Line Crossings
- 2,197 Publicly Accessible At-Grade Crossings
- ~300 Prioritized List of Crossings

Step 1: Filtering
Step 2: Sorting
A Two-Step Process is being used to filter and sort crossings

**STEP 1 (Filtering)**
- All inclusive
- Less detailed assessment
- Intent is to not miss any important crossings
- Collect a candidate list of prominent crossings for further detailed evaluation

**STEP 2 (Sorting)**
- More detailed evaluation
- Collect and compile more specific data
- Compare and contrast
- Prioritize the most prominent crossings
Crossings are evaluated using three common criteria:

- Common criteria that represent shared values in transportation. They are the Top Criteria for:
  - Freight Mobility Strategic Investment Board
  - Transportation Improvement Board
  - California Public Utilities Commission for Rail Crossings Prioritization
  - FHWA Railroad-Highway Grade Crossing Handbook
  - USDOT TIGER Program

- Embody many sub-criteria, using quantifiable metrics
- Discrete topics and little overlap of sub-criteria
- Able to weight criteria based on community or agency priorities and needs
- Able to summarize impacts or needs by criteria
QUESTIONS ON STEP I METHODOLOGY

• What do we need to make sure we capture when identifying the most prominent crossings for prioritizing in Step 2?

• What is the most important problem for your region or in your area of expertise?

• We are suggesting that the most prominent crossings can be identified by reviewing easily available data that indicates a likelihood of having mobility, community, and safety problems – Does this approach make sense?
What data do we use to filter the crossings?

- Alternate grade separated crossings
- # of mainline tracks
- Previously identified project by RTPO/MPO
- Road functional classification
- Rail classification
- Vehicle volumes (2015 & 2035)
- Freight train count (2015 & 2035)
- Passenger train count (2015 & 2035)
- Presence of unit trains
### How Crossings Were Filtered for the Safety, Mobility, and Community Categories

<table>
<thead>
<tr>
<th>Step 1 Criteria</th>
<th>Range</th>
<th>Scoring</th>
<th>Proposed Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SAFETY CRITERIA</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presence of Alternate Grade</td>
<td>Yes, No</td>
<td>Yes=1; No=2</td>
<td>1.5</td>
</tr>
<tr>
<td>Separated Crossing within ½ mile</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># of Mainline Tracks</td>
<td>1 or less; 2 or more</td>
<td>Less than=1, More than=2</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>MOBILITY CRITERIA</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Railroad Classification</td>
<td>Class I; Class III</td>
<td>Class I=2; Class III=1</td>
<td>1</td>
</tr>
<tr>
<td>Vehicle Volumes (2015)</td>
<td>Less than/equal to 8,000; 8,001+</td>
<td>Less than=1, More than=2</td>
<td>1.5</td>
</tr>
<tr>
<td>Vehicle Volumes (2035)</td>
<td>Less than/equal to 8,000, 8,001+</td>
<td>Less than=1, More than=2</td>
<td>1.5</td>
</tr>
<tr>
<td>Freight Train Count (2015)</td>
<td>Less than 10, 10 or more</td>
<td>Less than=1, More than=2</td>
<td>1.5</td>
</tr>
<tr>
<td>Freight Train Count (2035)</td>
<td>Less than 15, 15 or more</td>
<td>Less than=1, More than=2</td>
<td>1.5</td>
</tr>
<tr>
<td>Passenger Train Count (2015)</td>
<td>Less than 10, 10 or more</td>
<td>Less than=1, More than=2</td>
<td>1</td>
</tr>
<tr>
<td>Passenger Train Count (2035)</td>
<td>Less than 10, 10 or more</td>
<td>Less than=1, More than=2</td>
<td>1</td>
</tr>
<tr>
<td>Presence of Unit Trains</td>
<td>Yes, No</td>
<td>Yes=2; No=1</td>
<td>1</td>
</tr>
<tr>
<td><strong>COMMUNITY CRITERIA</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roadway Classification</td>
<td>Major Collector and above; Minor Collector and below</td>
<td>Major Collector and above=2; Minor Collector and below=1</td>
<td>1</td>
</tr>
<tr>
<td>Previously Identified Project by RTPO/MPO</td>
<td>Yes, No</td>
<td>Yes=2; No=1</td>
<td>1</td>
</tr>
</tbody>
</table>

Does the weighting scheme make sense?
STEP 1 METHODOLOGY

How crossings were selected for mobility, safety, community, and higher aggregate categories

1. SELECT CATEGORIES
The top ~50 highest scoring crossings in each category are selected. Crossings that were selected in a previous category are removed from consideration for the others.

#1 MOBILITY

#2 SAFETY

#3 COMMUNITY

2. SELECT REMAINING
Select additional ~150 crossings with remaining higher aggregate score. Crossings that were previously selected in any of the categories are removed from consideration.

MOBILITY SCORE

COMMUNITY SCORE

SAFETY SCORE

AGGREGATE SCORE
STEP 1 RESULTS

PROJECT CROSSINGS: 2,197

300 selected crossings indicated in color moving to Step 2

Note: Crossings that move to Step 2 under a particular category could also be higher scoring under other categories (i.e. a crossing with mobility concerns could also have safety concerns). This is because crossings that were selected for Step 2 in a previous category were removed from consideration in other categories to avoid duplication.
STEP 1 RESULTS - SAFETY CRITERIA

Presence of Alternate Grade-Separated Crossing within a Half Mile
Identifies potential impacts to emergency vehicle access if a crossing is closed due to train activity

Takeaway:
• Similar make-up of Step 2 crossings compared to all Step 1 crossings

<table>
<thead>
<tr>
<th>Presence of Alternate Grade Separated Crossing</th>
<th>% of All Crossings (Total=2,197)</th>
<th>Selected for Step 2 Total number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>1,684 (77%)</td>
<td>237 (79%)</td>
</tr>
<tr>
<td>1 or more</td>
<td>513 (23%)</td>
<td>63 (21%)</td>
</tr>
</tbody>
</table>

MAP DEPICTS ALL 2,197 CROSSINGS
### Number of Mainline Tracks

More tracks could lead to more potential conflicts

**Takeaway:**
- Much higher proportion of Step 2 crossings that have 2 or more mainline tracks compared to Step 1 crossings

#### Map

**MAP DEPICTS ALL 2,197 CROSSINGS**

#### Table

<table>
<thead>
<tr>
<th>Number of Mainline Tracks</th>
<th>% of All Crossings (Total=2,197)</th>
<th>Selected for Step 2 (Total number) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 or less</td>
<td>2,082 (95%)</td>
<td>194 (65%)</td>
</tr>
<tr>
<td>2 or more</td>
<td>115 (5%)</td>
<td>106 (35%)</td>
</tr>
</tbody>
</table>
Rail Classification

Class I rail lines typically carry higher volumes of trains than Class III rail lines.

Takeaway:
- Much higher proportion of Step 2 crossings that are on Class I rail lines compared to Step 1 crossings.

<table>
<thead>
<tr>
<th>Rail Classification</th>
<th>% of All Crossings (Total=2,197)</th>
<th>Selected for Step 2 Total number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class I</td>
<td>1,046 (48%)</td>
<td>275 (75%)</td>
</tr>
<tr>
<td>Class III</td>
<td>1,151 (52%)</td>
<td>25 (25%)</td>
</tr>
</tbody>
</table>
**STEP 1 RESULTS - MOBILITY CRITERIA**

**Vehicle Counts**
Average daily traffic count in 2015 and 2035

**Takeaways:**
- Higher traffic counts are more concentrated in higher population areas.
- Much higher proportion of Step 2 crossings with higher traffic counts compared to Step 1 crossings

<table>
<thead>
<tr>
<th>CURRENT (avg. daily vehicles)</th>
<th></th>
<th>FUTURE (avg. daily vehicles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicles</td>
<td>% of All Crossings (Total=2,197)</td>
<td>Selected for Step 2 Total number (%)</td>
</tr>
<tr>
<td>≤ 8,000 vehicles</td>
<td>2,005 (91%)</td>
<td>201 (67%)</td>
</tr>
<tr>
<td>&gt; 8,000 vehicles</td>
<td>192 (9%)</td>
<td>99 (33%)</td>
</tr>
</tbody>
</table>
**STEP 1 RESULTS - MOBILITY CRITERIA**

**Freight Train Count**

Average daily freight train count in 2015 and 2035

**Takeaway:**
- Much higher proportion of Step 2 crossings with higher freight train counts compared to Step 1 crossings

<table>
<thead>
<tr>
<th>CURRENT (avg. daily trains)</th>
<th>FUTURE (avg. daily trains)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trains</strong></td>
<td><strong>Trains</strong></td>
</tr>
<tr>
<td>&lt; 10 trains</td>
<td>&lt; 15 trains</td>
</tr>
<tr>
<td>1,681 (77%)</td>
<td>1,688 (77%)</td>
</tr>
<tr>
<td>49 (16%)</td>
<td>61 (20%)</td>
</tr>
<tr>
<td>≥ 10 trains</td>
<td>≥ 15 trains</td>
</tr>
<tr>
<td>516 (23%)</td>
<td>509 (23%)</td>
</tr>
<tr>
<td>251 (84%)</td>
<td>239 (80%)</td>
</tr>
</tbody>
</table>
Passenger Train Counts

Average daily passenger train count in 2015 and 2035

Takeaways:
- Passenger trains are shorter and move faster than freight trains
- Much higher proportion of Step 2 crossings with higher passenger train counts compared to Step 1 crossings

<table>
<thead>
<tr>
<th>CURRENT (avg. daily trains)</th>
<th>FUTURE (avg. daily trains)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trains</strong></td>
<td><strong>% of All Crossings (Total=2,197)</strong></td>
</tr>
<tr>
<td>&lt; 10 trains</td>
<td>2,095 (95%)</td>
</tr>
<tr>
<td>≥ 10 trains</td>
<td>102 (5%)</td>
</tr>
</tbody>
</table>
STEP 1 RESULTS - MOBILITY CRITERIA

Presence of Unit Trains
Unit train data reflects that these longer and slower-moving trains block vehicle traffic for longer periods of time.

Takeaways:
- Not all crossings with the presence of unit trains moved to Step 2.
- Much higher proportion of Step 2 crossings with presence of unit trains compared to Step 1 crossings.

<table>
<thead>
<tr>
<th>Trains</th>
<th>% of All Crossings (Total=2,197)</th>
<th>Selected for Step 2 (Total number) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present</td>
<td>629 (29%)</td>
<td>230 (77%)</td>
</tr>
<tr>
<td>Absent</td>
<td>1,568 (71%)</td>
<td>70 (23%)</td>
</tr>
</tbody>
</table>
Previously Identified Projects

Measures the locations that have been identified as problematic by MPO’s and RTPO’s

Takeaways:
- Not all previously identified projects moved to Step 2
- Much higher proportion of Step 2 crossings were previously identified compared to Step 1 crossings

<table>
<thead>
<tr>
<th>Identified</th>
<th>% of All Crossings (Total=2,197)</th>
<th>Selected for Step 2 Total number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>146 (7%)</td>
<td>123 (41%)</td>
</tr>
<tr>
<td>No</td>
<td>2,051 (93%)</td>
<td>177 (59%)</td>
</tr>
</tbody>
</table>
STEP 1 RESULTS - COMMUNITY CRITERIA

Roadway Classification

Measures the potential impacts to community access by assessing the function of the roadway

Takeaway:
• Much higher proportion of Step 2 crossings that are on Major Collectors and above compared to Step 1 crossings

<table>
<thead>
<tr>
<th>Roadway Classification</th>
<th>% of All Crossings (Total=2,197)</th>
<th>Selected for Step 2 Total number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minor Collector and Below</td>
<td>1,496 (68%)</td>
<td>87 (29%)</td>
</tr>
<tr>
<td>Major Collector and Above</td>
<td>701 (32%)</td>
<td>213 (71%)</td>
</tr>
</tbody>
</table>
STEP 2 METHODOLOGY

STEP 2
- More detailed evaluation
- Collect and compile more specific data
- Compare and contrast
- Prioritize the most prominent crossings
# STEP 2 METHODOLOGY

<table>
<thead>
<tr>
<th>Category</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SAFETY</strong></td>
<td></td>
</tr>
<tr>
<td>Increase Risks</td>
<td>40pts</td>
</tr>
<tr>
<td>Safety Record</td>
<td>30pts</td>
</tr>
<tr>
<td>Infrastructure Status</td>
<td>30pts</td>
</tr>
<tr>
<td><strong>MOBILITY</strong></td>
<td></td>
</tr>
<tr>
<td>Freight Demand</td>
<td>10pts</td>
</tr>
<tr>
<td>People Demand</td>
<td>30pts</td>
</tr>
<tr>
<td>Mobility Barrier</td>
<td>60pts</td>
</tr>
<tr>
<td><strong>COMMUNITY</strong></td>
<td></td>
</tr>
<tr>
<td>Economic</td>
<td>50pts</td>
</tr>
<tr>
<td>Activity Area</td>
<td>20pts</td>
</tr>
<tr>
<td>Environment</td>
<td>15pts</td>
</tr>
<tr>
<td>Social Equity</td>
<td>15pts</td>
</tr>
</tbody>
</table>

- 1. Presence of Alternate Grade-Separated Crossings
- 2. Number of Mainline Tracks
- 3. Proximity to Emergency Services
- 4. Collision History
- 5. Level of Protection
- 6. Roadway Freight Classification
- 7. Vehicle Counts
- 8. Gate Down Time
- 9. Employment Density
- 10. Proximity to Ports/Intermodal Facilities
- 11. Population Density
- 12. Environmental Risk
- 13. Percent Minority
- 14. Percent Low-Income
## STEP 2 METHODOLOGY - SAFETY CRITERIA

<table>
<thead>
<tr>
<th>Metric</th>
<th>How does crossing impact public safety?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Increase Risks</strong></td>
<td></td>
</tr>
<tr>
<td>1. Presence of Alternate Grade-Separated Crossings</td>
<td>Emergency responders delayed if no alternate exists. Also, risky driver behavior may rise if better options are not available</td>
</tr>
<tr>
<td>2. Number of Mainline Tracks</td>
<td>Risky driver behavior is more problematic with multiple mainline tracks</td>
</tr>
<tr>
<td>3. Proximity to Emergency Services</td>
<td>Emergency responders may be delayed</td>
</tr>
<tr>
<td><strong>Safety Record</strong></td>
<td>4. Collision History</td>
</tr>
<tr>
<td></td>
<td>Provides status of current safety history at crossing</td>
</tr>
<tr>
<td><strong>Infrastructure Status</strong></td>
<td>5. Level of Protection</td>
</tr>
<tr>
<td></td>
<td>Provides level of current safety infrastructure at crossing</td>
</tr>
</tbody>
</table>
## STEP 2 METHODOLOGY - MOBILITY CRITERIA

<table>
<thead>
<tr>
<th>Metric</th>
<th>How does crossing impact mobility of people and goods/services?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freight Demand</td>
<td>Shows freight roadway demand by tonnage</td>
</tr>
<tr>
<td>People Demand</td>
<td>Shows vehicle demand</td>
</tr>
<tr>
<td>Mobility Barrier</td>
<td>Down time shows traffic delay for non-rail traffic. Down time is based on the train type (unit, freight, passenger) and number of trains.</td>
</tr>
</tbody>
</table>
### STEP 2 METHODOLOGY - COMMUNITY CRITERIA

<table>
<thead>
<tr>
<th>Metric</th>
<th>How does crossing impact community and economy?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Economic</strong></td>
<td></td>
</tr>
<tr>
<td>09. Employment Density</td>
<td>Higher density shows higher economic activity</td>
</tr>
<tr>
<td>10. Proximity to Ports/Intermodal Facilities</td>
<td>Economic importance if crossing impacts port/intermodal facilities</td>
</tr>
<tr>
<td><strong>Activity Area</strong></td>
<td></td>
</tr>
<tr>
<td>11. Population Density</td>
<td>Higher density shows higher urban activity</td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td></td>
</tr>
<tr>
<td>12. Environmental Risk</td>
<td>(To be determined)</td>
</tr>
<tr>
<td><strong>Social Equity</strong></td>
<td></td>
</tr>
<tr>
<td>13. Percent Minority</td>
<td>Higher impact if close to minority populations</td>
</tr>
<tr>
<td>14. Percent Low Income</td>
<td>Higher impact if close to low-income populations</td>
</tr>
</tbody>
</table>
### How Crossings Will Be Scored
*(example for discussion purposes, not a particular crossing)*

<table>
<thead>
<tr>
<th>Description</th>
<th>Criteria</th>
<th>Score (0-100)</th>
<th>Proposed Weight (%)</th>
<th>Final Score (0-100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crossing impacts public safety</td>
<td>Safety</td>
<td>75</td>
<td>33%</td>
<td></td>
</tr>
<tr>
<td>Crossing impacts the mobility of people and goods/services</td>
<td>Mobility</td>
<td>85</td>
<td>33%</td>
<td>82</td>
</tr>
<tr>
<td>Crossing impacts the community and economy</td>
<td>Community</td>
<td>89</td>
<td>33%</td>
<td></td>
</tr>
</tbody>
</table>

How should the criteria be weighted?
UPCOMING ADVISORY PANEL MEETINGS

September 28th (10:00am to 4:00pm)
Location: Seatac, Conference Center at Sea-Tac Airport, Beijing Room
TOPIC: Review Draft Prioritized List of Crossings, Discuss Tool Sustainability

November 2nd (10:00am to 3:00pm)
Location: Olympia, John A. Cherberg Building Room ABC
TOPIC: Review Draft Final Report
MORE INFO

http://leg.wa.gov/JTC/Pages/Road-Rail-Study.aspx

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STEP 1 METHODOLOGY

SCORING AND FILTERING EXAMPLE

**VEHICLE VOLUMES**

*Average Cars / Day*

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>5,000</td>
<td>9,000</td>
</tr>
</tbody>
</table>

1. **CALCULATE VALUES**

2. **APPLY SCORE**

   1 = < 8,000 cars/day
   2 = > 8,000 cars/day

3. **SCORE GROUP**

   - **VEHICLES**
     - *EXISTING SCORE* x 1.5
     - *FUTURE SCORE* x 1.5
   - **FREIGHT TRAINS**
     - *EXISTING SCORE* x 1.5
     - *FUTURE SCORE* x 1.5
   - **PASSENGER TRAINS**
     - *EXISTING SCORE* x 1
     - *FUTURE SCORE* x 1
   - **UNIT TRAINS**
     - *SCORE* x 1
   - **RAIL CLASS**
     - *SCORE* x 1

   = **MOBILITY SCORE**
MOBILITY SCREENING EXAMPLE

1. REVIEW DISTRIBUTION

2. SELECT HIGHEST TIERS
   (based on logical break points)
   CROSSINGS
   MOVE TO STEP II

3. SCREEN ADDITIONAL CROSSINGS
   SCREEN REMAINING
   • FUTURE VEHICLE VOLUMES
   • FUTURE FREIGHT VOLUMES
Why is it Necessary to Prioritize in Steps?

- Objective of this effort is to identify the most “prominent road-rail conflicts” in the state.
- Steps allow us to allocate resources effectively.
- As number of crossings are reduced, we are able to apply more refined data to compare and contrast.
- Future implementation step may take into account other specific intangibles such as timing, partnerships, costs, etc.

*Not part of this study effort*
OVERVIEW OF THE PRIORITIZATION PROCESS

Crossings are screened and evaluated using three common criteria:

**Safety**
Crossing impacts public safety

**Mobility**
Crossing impacts the mobility of people and goods/services

**Community**
Crossing impacts the community and economy

Crossings are screened and evaluated using three common criteria:

**STEP 1** Screening Criteria

- Alternate Crossings
- # of Mainline Tracks
- Rail Classification
- Vehicle Volumes*
- Freight Volumes*
- Passenger Volumes*
- Presence of Unit Trains *(2015 & 2035)*
- Previously Identified by RTPO/MPO
- Road Functional Classification

**STEP 2** Evaluation Criteria

- Presence of Alt Crossings
- # of Mainline Tracks
- Emergency Vehicle Route
- Collision History
- Level of Protection
- Roadway Freight Classification
- Vehicle Volumes
- Presence/Num. of Unit Trains
- Gate Down Time
- Freight Train Volumes
- Passenger Train Volumes
- Employment Density
- Proximity to Ports/Intermodal Facilities
- Population Density
- Environmental Impact
- Social Equity