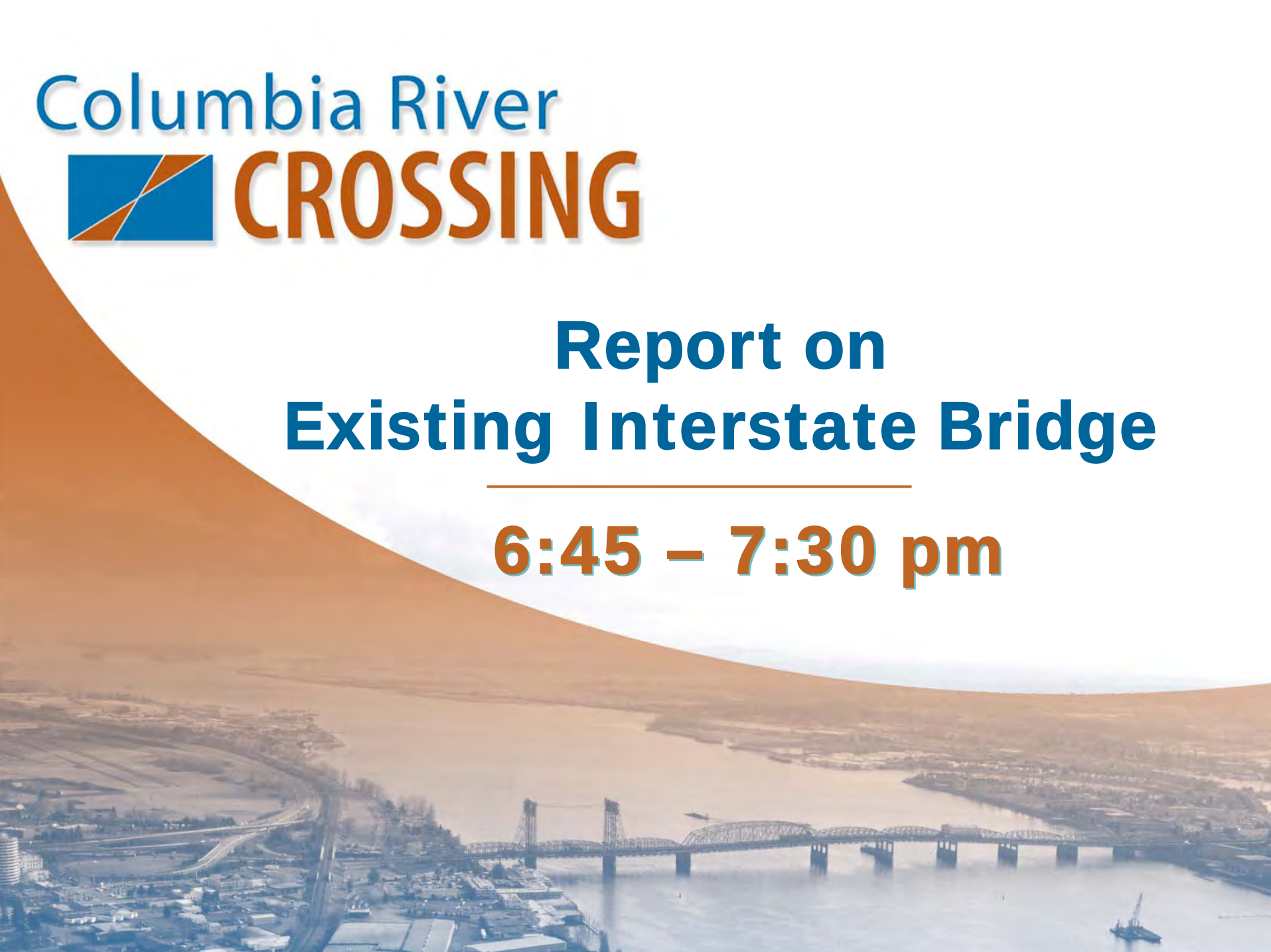
Columbia River CROSSING

Report on Existing Interstate Bridge

6:45 – 7:30 pm



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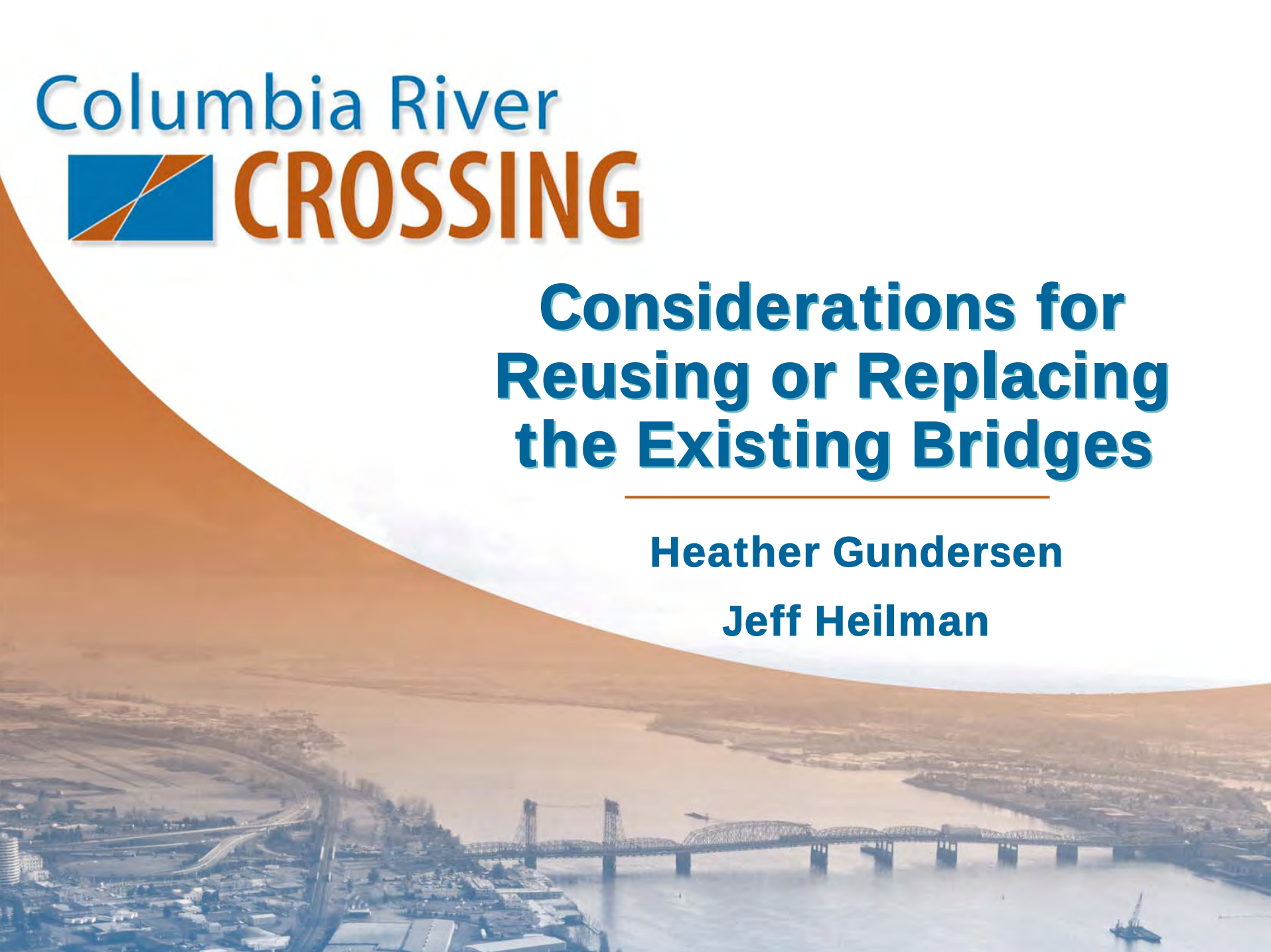
Considerations for Reusing or Replacing the Existing Bridges

Heather Gundersen

Jeff Heilman



What is the purpose of the memo?

1. Inform the upcoming decisions about future uses of the existing bridges in the DEIS.
2. Ensure compliance with federal regulations protecting the existing northbound bridge.

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What regulation protects the bridge?

- Section 4(f) of the Department of Transportation Act protects the northbound bridge (built in 1917) because it is on the National Register of Historic Places and the CRC project is federally-funded

What protection does 4(f) provide?

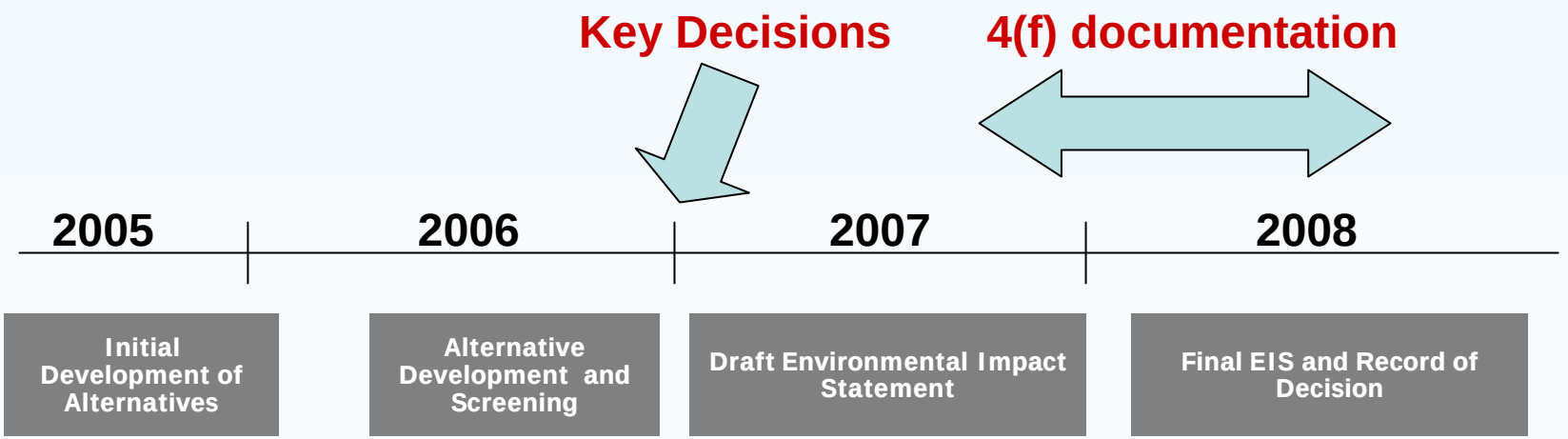
- 4(f) protected resources
  - Publicly owned parks (Delta Park)
  - Recreation area (Delta Park)
  - Wildlife or waterfowl refuge (Oaks Bottom Wildlife Refuge)
  - Significant historic site (Fort Vancouver, northbound bridge)
- Federal transportation agencies cannot approve the change (or 'use') of a 4(f) resource unless:
  - There is no *feasible* or *prudent* alternative; and
  - The project includes all possible planning to minimize harm

What is feasible and prudent?

- Alternatives are *feasible* if they are possible to engineer, design and build.
- Alternatives are not *prudent* if they exhibit unique problems of an extraordinary magnitude, including:
  - Does not meet the project Purpose and Need
  - Operational or safety problems
  - Social, economic, or environmental impacts
  - Community disruption
  - Additional cost
  - Or, an accumulation of these factors that collectively have adverse impacts of an extraordinary magnitude

Objective of Memo

- To make a preliminary determination about which alternatives, if any, are prudent



Avoidance Alternatives

- Reusing them for transportation
  - Interstate traffic
  - Arterial traffic
  - Light rail transit
  - Bus rapid transit
  - Bicycles and pedestrians
- Preserving them but not using them for transportation

What factors are we considering to determine "prudence"?

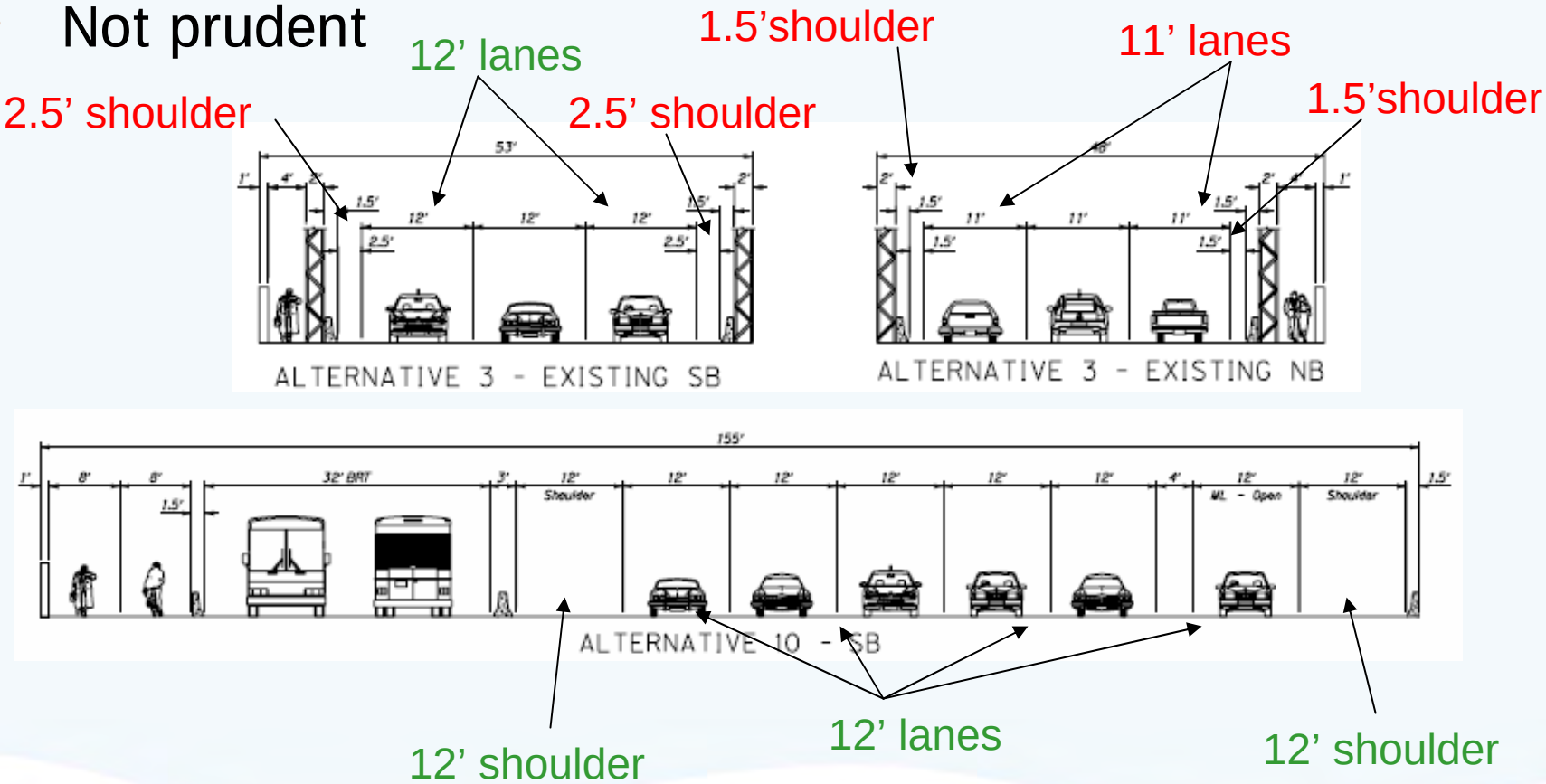
- How would they affect:
  - Traffic performance?
  - Transit performance?
  - Navigation safety and operations?
  - Community and the economy?
  - Natural resources?
- How much do they cost?
- What other considerations? (ownership)
- Prudence is based on performance and impacts relative to the non-avoidance alternatives

Findings

- All Supplemental Alternatives would have:
  - Slightly greater long-term natural resource impacts
  - Larger total footprints
  - Greater impacts to navigation
  - Added costs from seismic upgrades and other retrofits
- For reuse options that do not include Interstate traffic on existing bridges:
  - Ownership would be a challenge
  - US Coast Guard would likely remove bridge lift restrictions
    - More frequent lifts
    - Lifts during peak traffic periods

Findings – Interstate reuse

- Would not adequately meet one of the key needs for the project: to improve I-5 traffic safety.
- Not prudent



Findings – Arterial reuse

- Frequent bridge lifts impact travel time and reliability
- Seismic retrofits and other upgrades add cost
- Cut-through traffic on local streets in downtown Vancouver and Hayden Island
- Next steps to determine prudence:
  - Cost estimates
  - Traffic analysis to better understand impacts on local streets

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Findings – Light Rail reuse

- Bridge lifts disrupt service system-wide, and decrease reliability and ridership
- Major design upgrades and seismic retrofits add cost
- Next steps to determine prudence:
  - Quantify impact of bridge lifts on travel time, ridership, reliability and operations
  - Cost estimates
  - Cost effectiveness

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Findings – BRT reuse

- Bridge lifts cause service interruption and decrease reliability and ridership
- Design upgrades and seismic retrofits add cost
- Next steps to determine prudence:
  - Quantify impact of bridge lifts to travel time, ridership, reliability and operations
  - Cost estimates
  - Cost effectiveness

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Findings – Bicycle/pedestrian reuse

- Design upgrades and seismic retrofits would add cost
- Bridge lifts would increase travel times and reliability
- Bridge lifts may deter commuter use
- Separation reduces noise levels
- Next steps to determine prudence:
  - Cost analysis of retrofitting existing bridge compared to including capacity on new bridge

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Findings – Preservation Option

- What is this option?
  - Preserve the bridge(s) but do not use for transportation
- The US Coast Guard would require that the bridges be removed if they are not used for transportation.
- Not prudent

Next Steps

- Estimate costs:
  - Construction, operations, maintenance and lifecycle costs
  - Cost-effectiveness
- Analyze local traffic impacts of reusing bridges for arterial traffic
- Analyze how bridge lifts would affect LRT and BRT operations
  - Travel-time
  - Reliability
  - System disruption, and
  - Ridership

Next Steps

- Compare Reuse options to Replacement options to determine prudence
  - Any single significant disadvantage that makes it imprudent?
  - Accumulation of disadvantages that make it imprudent?
- Investigate ownership possibilities for Reuse options that appear prudent
- Finalize Existing Bridges Memo
  - By November
  - Some considerations may take longer (cost-effectiveness, ownership, if necessary)

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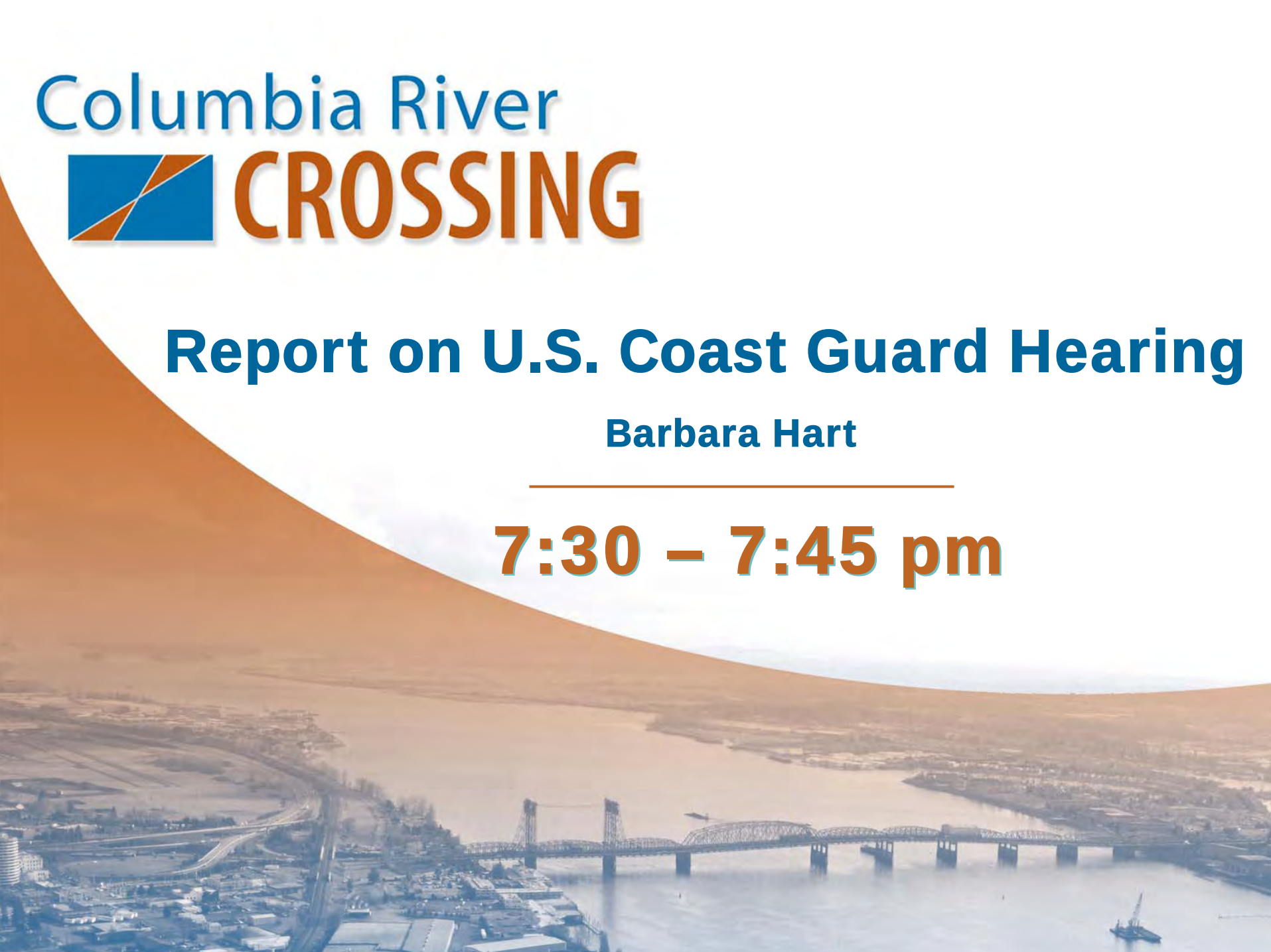
Report on U.S. Coast Guard Hearing

Barbara Hart

7:30 – 7:45 pm



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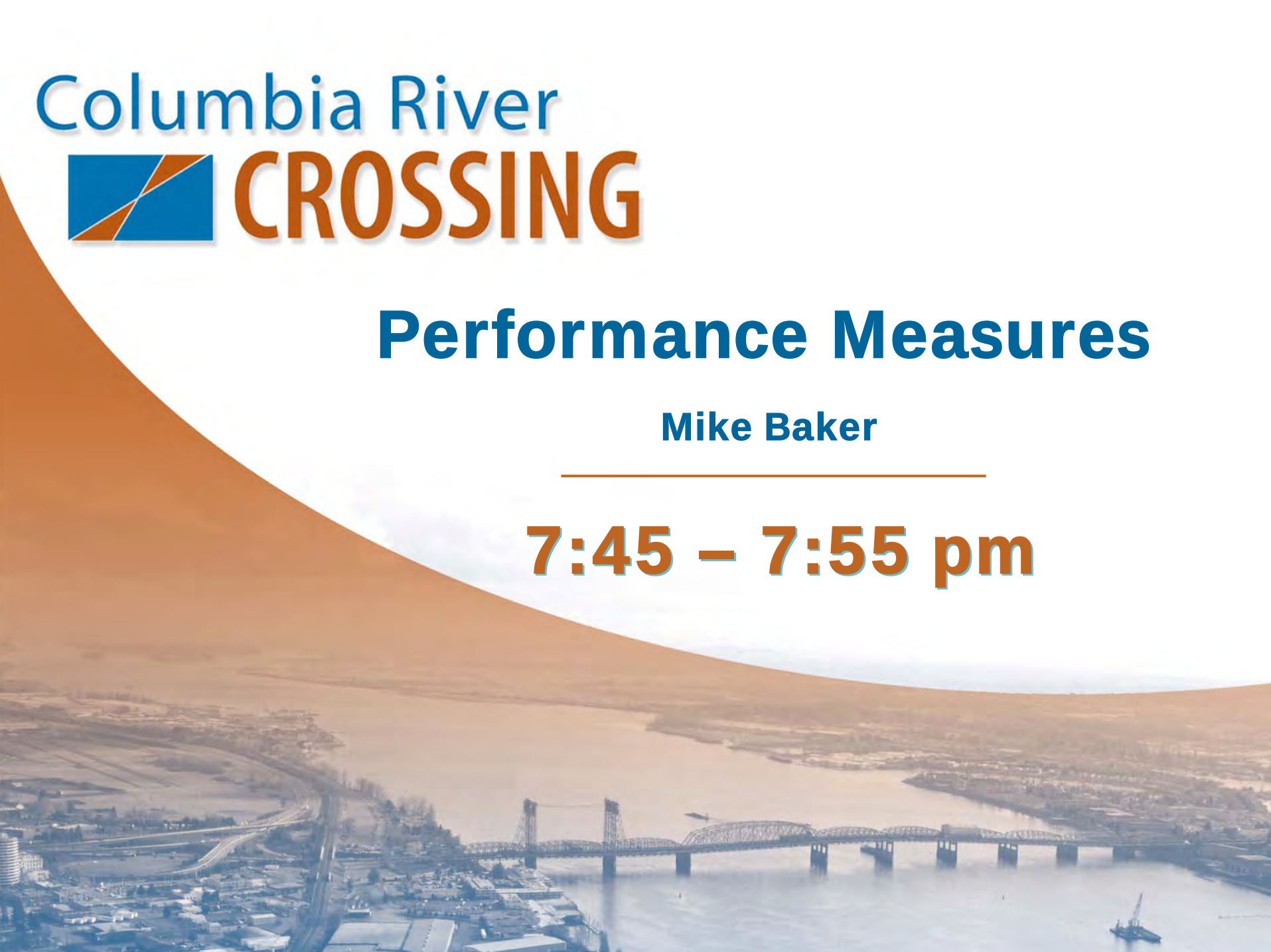
Performance Measures

Mike Baker

7:45 – 7:55 pm



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Wrap Up and Next Steps

7:55 – 8:00 pm