

# Preliminary Evaluation Results

December 7, 2010



# Outline of Presentation

1. Review definition of short-listed corridors
2. Review definition of short-listed modes
3. Review preliminary evaluation results
4. Discuss next steps for adopting an LPA



# Overview of Short Listed Corridors

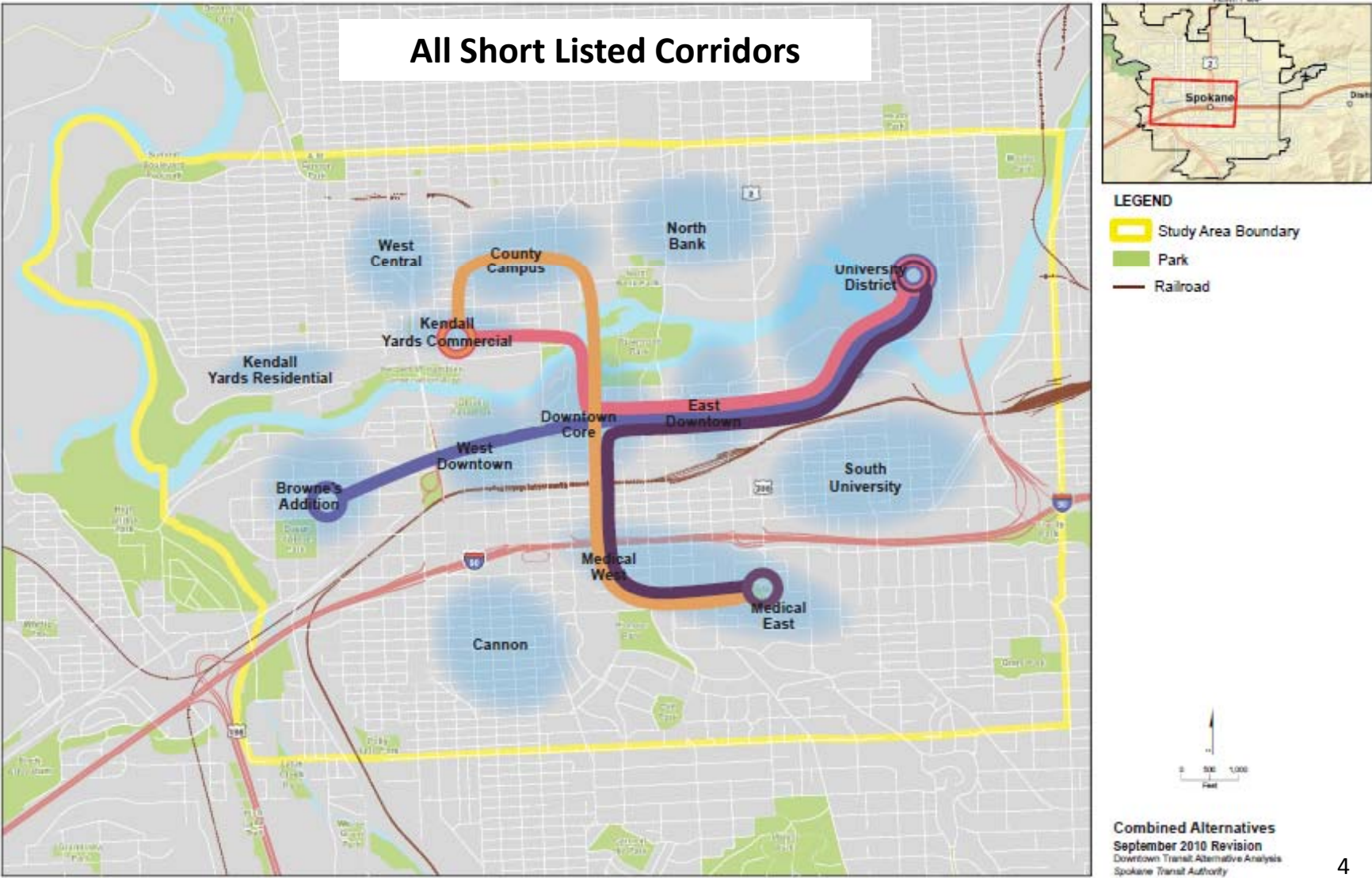
- **Blue:** Browne's Addition to University District
- **Orange:** County Campus to Medical District
- **Pink:** County Campus to University District
- **Plum:** University District to Medical District

*Note: Downtown served by all short listed corridors*

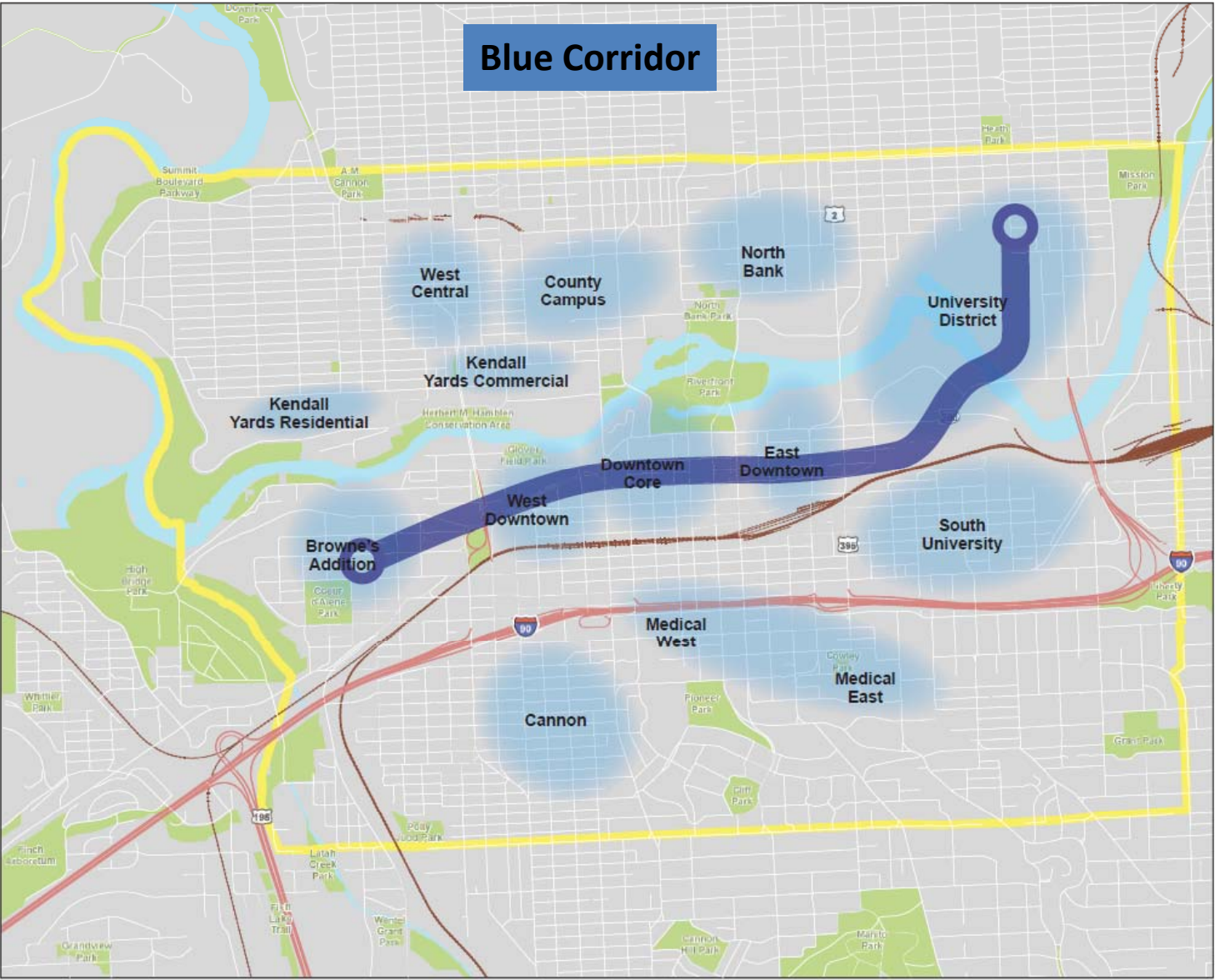


# Spokane Central City Transit Alternatives Analysis

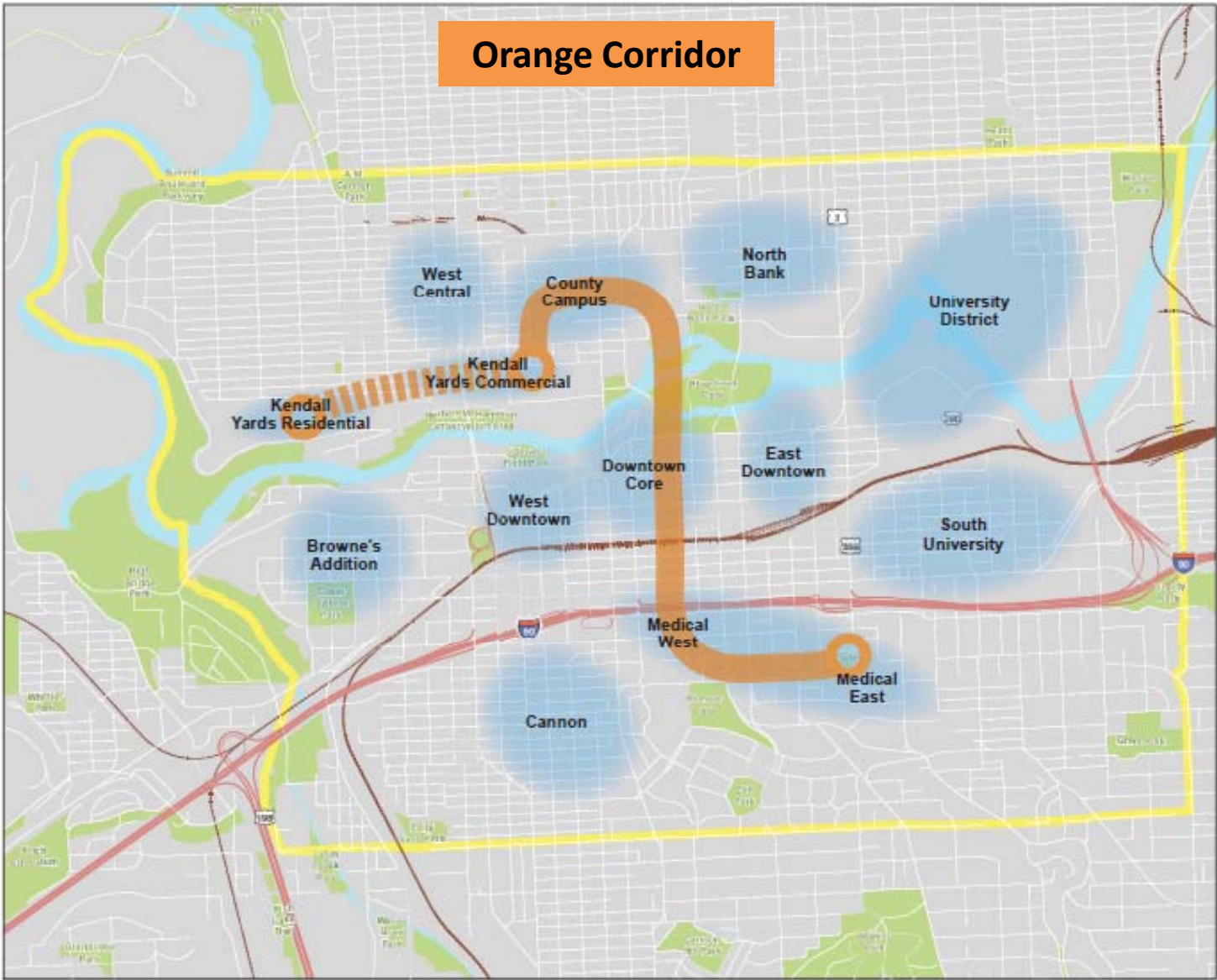
## All Short Listed Corridors



# Spokane Central City Transit Alternatives Analysis



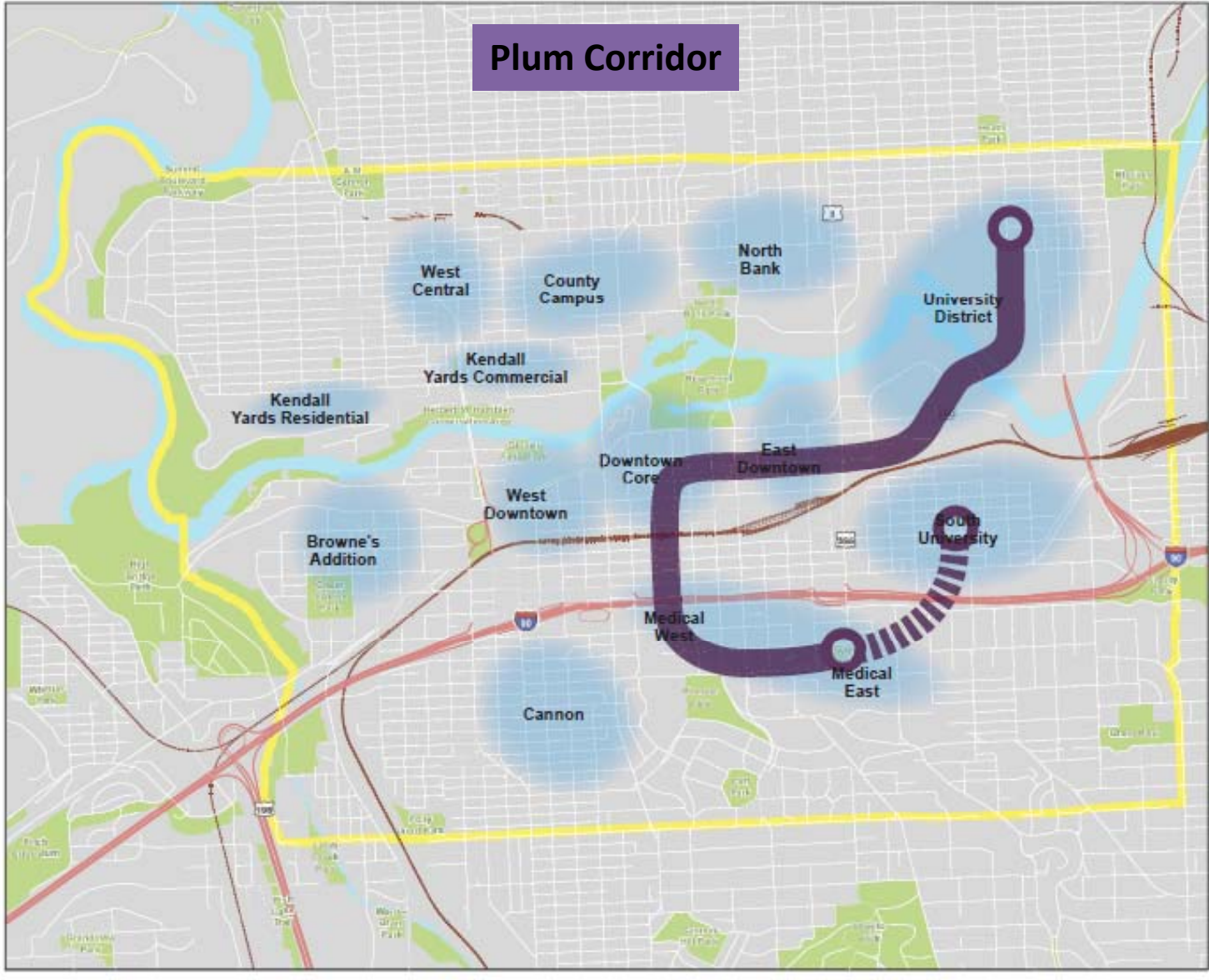
# Spokane Central City Transit Alternatives Analysis



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# Spokane Central City Transit Alternatives Analysis



# Overview of Short Listed Modes

- Enhanced bus
- Electric trolleybus
  - Streetcar



# Spokane Central City Transit Alternatives Analysis

## Enhanced Bus

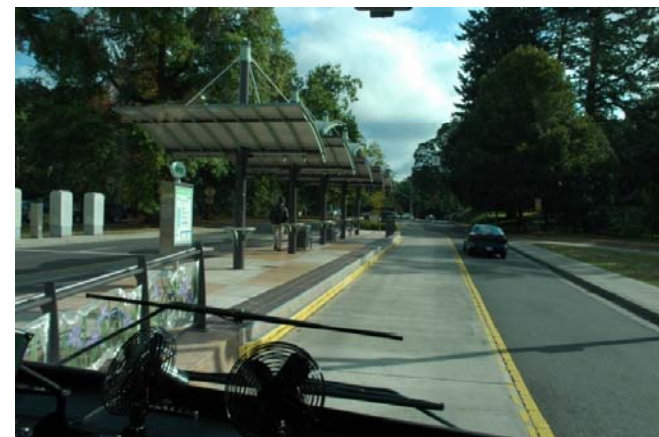
- Diesel, Diesel-Electric Hybrid, or CNG Propulsion
- Capacity: 50-90 passengers/vehicle
- Low initial capital investment
- Highest Flexibility in Route/Feeder Design



SWIFT Bus  
Everett, WA



EmX BRT  
Eugene, Oregon



# Spokane Central City Transit Alternatives Analysis

Caen,  
France



Lyon,  
France



## Electric Trolleybus

- Electric power drawn from overhead trolley wire
- Capacity: 50-90 passengers/vehicle
- May use diesel or battery for off-wire operation
- Quiet operation and swift acceleration on grades
- Higher investment in electric traction power infrastructure and maintenance



# Spokane Central City Transit Alternatives Analysis

## Streetcar

- Electric power drawn from overhead electric catenary
- Capacity: 150-170 passengers per vehicle
- Higher investment in rail and traction power infrastructure
- Lowest route flexibility



Portland Streetcar  
Portland, OR





# Evaluation Framework

CRITERION	MEASURE
<b>Objective A: Increase the effectiveness and efficiency of transit within downtown Spokane</b>	
<b>Travel Time</b>	Actual travel time
	Perceived travel time
<b>Ridership Potential</b>	Likely ridership response
<b>Ease of use</b>	Ability of new and infrequent riders to understand the service and find stops
<b>Reliability of service</b>	Ability of transit service to be maintained due to scheduled or unscheduled events or weather conditions
	Length of reserved transit lanes
<b>Accommodate growth</b>	Ability of mode to serve new land use changes in the downtown area
	Ability of mode to accommodate growth in demand
<b>Efficiency of the transit network</b>	Travel time savings for the existing system
<b>Objective B: Provide improved transit connections to, from, and between downtown activity areas</b>	
<b>Transit accessibility</b>	Number of major activity centers served
	Number of residential units located within 1/4 mile of the alternative
	Number of jobs located within 1/4 mile of the alternative
<b>Pedestrian accessibility</b>	Number of significant pedestrian barriers crossed
<b>Objective C: Support and help stimulate new downtown development and redevelopment</b>	
<b>Potential to create jobs and business opportunities</b>	Number of districts identified by the City as priority job creation areas
	Percentage of parcels within 1/4 mile of the alternative that are considered "developable but underutilized"
<b>Urban form and activity</b>	Increased pedestrian activity at street level



# Evaluation Framework

CRITERION	MEASURE
<b>Objective D: Comply with and support local and regional adopted goals, objectives, and plans</b>	
Land use plans and economic development goals	Consistency with the City of Spokane's Comprehensive Plan Support of Targeted Area Development districts
Transportation plans	Consistency with STA's HPTN Plan Consistency with Metropolitan Transportation Plan
<b>Objective E: Optimize fiscal investments in downtown transit infrastructure and service</b>	
Affordability	Projected capital cost Projected operating cost
Availability of funding	Potential capital cost funding source(s) Potential operating cost funding source(s)
Leverage	Potential to leverage other public/private investments
<b>Objective F: Optimize the engineering design and environmental sensitivity of the project</b>	
Environmental impacts	Number of parcels of land directly affected by the project Number of historic properties potentially adversely affected Number of 4(f) properties potentially used Number of noise-sensitive land uses adjacent to the alternative
Equity	Approximate number of low-income persons within 1/4 mile of the alternative Approximate number of persons of a minority race or ethnicity within 1/4 mile of the alternative Approximate number of transit-inclined persons within 1/4 mile of the alternative
Constructability	Number of new river crossings needed Major design considerations
Energy conservation	Reduction in greenhouse gases



# Key Differentiators

- Capital cost
- Development capacity of land uses along the alignment
  - Ridership



# Summary of Corridor Evaluation: Blue Corridor

## Pros:

- Serves a high number of activity areas and residences
- Highly compatible with existing land use plans
- Few engineering constraints

## Cons:

- Smaller reduction in existing transit travel time than Pink or Plum



# Summary of Corridor Evaluation: Orange Corridor

## Pros:

- Highest presence of pedestrian-friendly features along alignment

## Cons:

- Not as reliable during inclement weather due to the steep grades on South Hill
- Less of a reduction in transit travel time than the Pink or Plum
- More engineering constraints than Blue and Plum



# Summary of Corridor Evaluation: Pink Corridor

## Pros:

- High reduction in transit travel time
- Serves most # of TAD and TIF districts, and has the most vacant parcels
- Highly compatible with existing land use plans
- Serves highest % of low-income and minority residents

## Cons:

- Serves fewer activity areas than Blue and Plum
- More engineering constraints than Blue and Plum



# Summary of Corridor Evaluation: Plum Corridor

## Pros:

- High reduction in transit travel time
- Serves a high number of activity areas and existing residences
- Bisepts the most number of pedestrian barriers
- Serves a high number of existing and forecasted jobs

## Cons:

- Less reliable in inclement weather due to steep grades on South Hill
- Travel time between University and Medical District still drastically higher than driving
- Engineering challenges (especially for streetcar) associated with reaching medical district





# Spokane Central City Transit Alternatives Analysis

## Summary of Mode Evaluation

	<b>Enhanced Bus</b>	<b>Electric Trolleybus</b>	<b>Streetcar</b>
<b>PROS</b>	<ul style="list-style-type: none"> <li>• Low capital cost</li> <li>• Flexible to adapt to new routes</li> <li>• Flexible to accommodate more demand</li> </ul>	<ul style="list-style-type: none"> <li>• Medium capital cost</li> <li>• More likely than Enhanced Bus to encourage private investment</li> <li>• More potential funding sources available</li> </ul>	<ul style="list-style-type: none"> <li>• High potential to increase private investment in concert with other economic development strategies</li> </ul>
<b>CONS</b>	<ul style="list-style-type: none"> <li>• Less-likely to encourage private investment</li> </ul>	<ul style="list-style-type: none"> <li>• More expensive than Enhanced bus</li> <li>• May not be as likely as Streetcar to encourage private investment</li> </ul>	<ul style="list-style-type: none"> <li>• High capital cost</li> <li>• Less flexibility in accommodating growth in demand or new routes</li> </ul>



## Interim Conclusions

- All four corridors meet objectives and selection criteria
- Distinguishing features:
  - Capital Cost
  - Development capacity of land uses along the alignment
  - Ridership



## Interim Conclusions - Modes

- All 3 modes satisfy objectives and criteria
- Distinguishing Features
  - Range of capital costs
  - Influence on development activity
  - Influence on ridership



## Additional Issues to Explore

- What are the desired characteristics of an electric trolleybus for Spokane?
- What are the Capital Cost Estimates for the defined electric trolleybus?
- How effective will it be for stimulating development ?
- What are the interests of major property owners and businesses along each alignment?
- In concept, how to fund the local share.



# Next Steps

## December and January

- Online survey to gather input
- Property owner and business discussions
- Research on ETB issues

## January

- Make preliminary LPA recommendation for a corridor
- Continue mode discussions as appropriate
- Discuss corridor LPA with City Council, STA Board, SRTC Board

## February

- Refine LPA corridor selection
- Present a preliminary finance plan
- Public Open House #3 to gather public comment on corridor LPA

