Urban Mobility STRATEGY

Regional Mobility Pricing Project

Date	September 11, 2023
Subject	Regional Mobility Pricing Project Options: Modeled Findings and Trade Offs Evaluation

Options for the Regional Mobility Pricing Project were recently compared against one another in a screening-level analysis. One option would toll the full system and two options would toll only within toll zones. High level findings and differences between options are summarized below. The results will be considered by ODOT, agency partners and the public before one refined option is selected in fall 2023 for a comprehensive analysis. The options being evaluated are below.

Option 1: Full System	Option 2a: Toll Zones	Option 2b: Toll Zones with Interchange Zone
• Base toll during daytime hours (5 AM to 9 PM) plus Congestion Area tolls during peak hours • All trips using I-5 or I-205 pay a toll during daytime hours (5 AM to 9 PM) • More than 60 toll points on entrance ramps to charge base toll • Five Congestion Area toll points on I-5 and three Congestion Area toll points on I-205	• No base toll • Tolls applied when needed to manage congestion ($0 tolls applied during some daytime hours) • 55% - 60% of trips that use I-5 and I-205 pay a toll • Four toll zones on I-5 and three toll zones on I-205 • One toll paid per zone, regardless of number of toll points passed	• No base toll • Tolls applied when needed to manage congestion ($0 tolls applied during some daytime hours) • 60% - 65% of trips that use I-5 and I-205 pay a toll • Three toll zones on I-5, three toll zones on I-205, and one I-5/I-205 interchange zone • One toll paid per zone, regardless of number of toll points passed

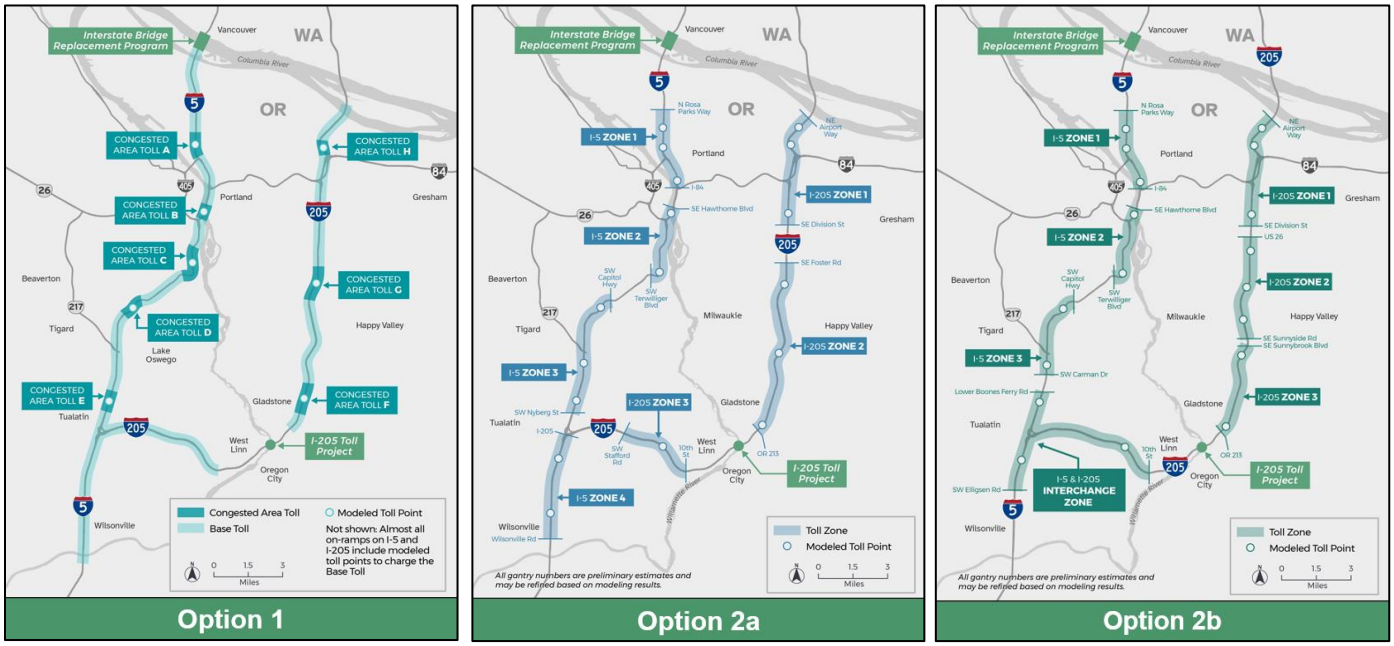
Key Takeaways from RMPP Options Evaluation Process

All options are shown to meet the project objectives with similar outcomes for I-5 and I-205 performance and net revenue. Option 1 would toll all trips with more infrastructure and higher costs, while options 2a and 2b would charge trips in high-traffic areas of I-5 and I-205 with less infrastructure and lower costs. Key takeaways from this stage of the evaluation are:

- All options result in average speeds near 45 mph and through-trip travel time savings with comparable trip costs.
- All options show reductions in vehicle miles traveled (VMT) and vehicle hours traveled (VHT) and mode shifts at the regional level, but option 1 shows the greatest mode shift.
- All options show limited diversion on a regional scale to non-tolled highways and arterials/collectors. Option 2a shows the least amount of total VMT increase on arterials and collectors.
- All options result in decreased freight traffic on local roads (tolling improves present-day freight diversion onto arterials).

- All options are likely to generate net revenue. Option 2b may generate slightly more net revenue than other options. This is due to the larger I-5/I-205 interchange zone.
- Option 1 has the highest capital cost due to more infrastructure. Option 1 also has the greatest potential range of capital costs due to more cost variables and vendor uncertainty.
- Option 1 is likely to take longer to implement than options 2a or 2b.

RMPP Options



Evaluation Matrix

A detailed matrix comparing the project options is attached.

Consideration	Objective	Criteria for Comparison	Option 1: Full System	Option 2a: Toll Zones	Option 2b: Toll Zones with interchange zone
Modeled Considerations					
Congestion and Demand Management on I-5 and I-205*	Improve efficient use of roadway infrastructure and improve travel reliability.	Vehicle Speed	Average speeds near 45 MPH		
		Through Trip Travel Time Savings	5-10 minutes on I-5 and 3-5 minutes on I-205		
Regional System Performance	Reduce vehicle miles traveled and vehicle hours traveled.	Daily Regional VMT	1% - 2% decrease		
		Daily Regional VHT	2% - 3% decrease	1% - 2% decrease	1% - 2% decrease
Diversion and VMT Change	Limit rerouting of trips away from I-5 and I-205.	Daily VMT change on Arterials and Collectors (Total)	2%-3% increase	1%-2% increase	2%-3% increase
		Daily VMT change on Other State Highways (Total)	3% - 4% decrease	2% -3% decrease	2% -3% decrease
		Daily VMT change on Arterials and Collectors (Freight only)	10% - 15% total decrease	5% - 10% total decrease	5% - 10% total decrease
		Daily VMT change on Other State Highways (Freight only)	0% - 5% increase		
Multimodal Travel	Support shifts to higher occupancy vehicles (including carpooling). Support increased transit ridership.	Mode shift to transit, active transportation, and carpool	40,000 fewer vehicles on regional roads	30,000 fewer vehicles on regional roads	30,000 fewer vehicles on regional roads
Equity Analysis of Equity Focus Areas	Support equitable and reliable access to job centers and other important community places.	Share of trips on I-5 and I-205 that start in EFAs	30% - 35%		
	Identify potential project effects to identified historically and currently excluded and underserved communities	Diversion within EFAs	Average volume-to-capacity ratio (v/c) on non-tolled roadways similar to No Action scenario		
Net Revenue Potential	Generate sufficient revenue from congestion pricing for local transportation system investments that support congestion relief and travel demand management.	Net revenue	Net revenue positive.	Net revenue positive.	Revenue positive. Could have highest revenue potential.
Non-Modeled Considerations					
Constructability and Capital Costs	Design a congestion pricing project that can be expanded in scale, integrated with road pricing on other regional roadways, or adapted to future road pricing system applications.	Availability and experience of tolling service providers and vendors	Limited vendors with experience	Greater availability	Greater availability
		System integration	More complex	Less complex	Less complex
		Constructability and capital cost of the toll system	$175 - $250 M (Least cost certainty)	$140 - $200 M (Most cost certainty)	$150 - $200 M (Most cost certainty)
		Schedule to implement	2-4 years longer to implement	Shorter implementation timeline	Shorter implementation timeline

Note: Rate assumptions for this analysis were refined to achieve similar performance in this category. All options achieved objectives for Congestion and Demand Management on I-5 and I-205.

Legend	
	Similar results between options
	Meets project objectives and performs better than other options
	Meets project objectives but does not perform as well as other options
	Challenging to meet project objectives