

Evaluation Matrix: What Have We Learned?

Note: All dollar values are year 2001 dollars. All values except Existing Conditions (Row A) are year 2020 projections.



Objective		Evaluation Factor No. 1.1 Improve Travel Times on I-5 (Mainline Performance)						Evaluation Factor No. 1.1 Improve Travel Times to I-5 (Arterial Performance)		Evaluation Factor No. 1.2 Maintain/Reduce Congestion				Evaluation Factor No. 1.3 Promote Transportation Choices										
		Portland CBD to Vancouver CBD			Salmon Creek to Portland CBD			Key Employment Locations to I-5 ¹		I-5/I-205 Lane Miles Congested ³	Highway/Arterial Lane Miles Congested ³	Study Area Vehicle Hours of Delay		Study Area				Downtown Portland to All Destinations				Downtown Vancouver to All Destinations		
Measure	Period	Transit	SOV & Truck	HOV	Transit	SOV & Truck	HOV	Travel Times for Autos & Trucks	Percent of Total Miles			Percent of Total Miles	All Roadways	Truck Routes	Transit	SOV	HOV	Bike/Ped	Transit	SOV	HOV	Bike/Ped	Transit	SOV
		Minutes	Minutes	Minutes	Minutes	Minutes	Minutes	Rating ²			Total Hours	Total Hours	Percent of All Trips	Percent of All Trips	Percent of All Trips	Percent of All Trips	Percent of All Trips	Percent of All Trips	Percent of All Trips	Percent of All Trips	Percent of All Trips	Percent of All Trips	Percent of All Trips	Percent of All Trips
Option Package		PM-2 Hr.	PM-2 Hr.	PM-2 Hr.	AM-2 Hr.	AM-2 Hr.	AM-2 Hr.	AM-3 Hr./PM-4 Hr.	PM-4 Hr.	PM-4 Hr.	PM-4 Hr.	PM-4 Hr.	PM-4 Hr.	PM-4 Hr.	PM-4 Hr.	PM-4 Hr.	PM-4 Hr.	PM-4 Hr.	PM-4 Hr.	PM-4 Hr.	PM-4 Hr.	PM-4 Hr.	PM-4 Hr.	PM-4 Hr.
A	Existing Conditions (2000)	27.3	27.7	23.2	N/A	36.9	36.9	Moderate	24.1%	4.4%	18,141	13,390	9.3%	56.2%	32.6%	1.9%	23.5%	45.3%	25.4%	5.8%	5.6%	63.9%	28.9%	1.7%
B	No-Build (2020)	55.4	34.2	27.0	N/A	42.9	41.7	High	33.7%	9.8%	32,048	25,767	12.5%	52.6%	32.3%	2.6%	29.3%	35.5%	23.4%	11.8%	4.9%	61.4%	30.3%	3.4%
C	Baseline: Planned Regional Priority Baseline System (2020)	40.5	30.1	25.1	N/A	42.3	37.8	Moderate	30.4%	6.2%	21,447	17,088	18.4%	47.4%	29.9%	4.2%	37.4%	28.4%	19.2%	15.0%	6.7%	59.5%	29.4%	4.4%
D	New West Arterial	35.9	24.5	19.8	N/A	35.0	30.1	High (Vancouver)	25.2%	6.4%	17,188	13,123	18.7%	47.3%	29.9%	4.2%	38.8%	27.6%	18.7%	14.9%	7.2%	59.0%	29.5%	4.3%
E	Express Bus: 3 Lanes w/ Supplemental 4 Lane Bridge	35.4	21.5	18.4	N/A	32.2	26.1	Moderate	19.8%	5.9%	16,637	12,310	18.7%	47.3%	29.9%	4.2%	38.7%	27.7%	18.8%	14.9%	7.2%	59.0%	29.4%	4.3%
F	LRT: 3 Lanes w/ Supplemental 4 Lane Bridge	24.6	20.6	17.7	N/A	31.2	25.7	Moderate	19.5%	6.2%	15,826	11,629	18.5%	47.4%	29.8%	4.2%	39.4%	27.2%	18.5%	14.9%	9.8%	56.9%	28.9%	4.4%
G	Express Bus: Add 4th Lane (HOV) w/ Supplemental 6 lane Bridge	25.3	21.3	19.6	N/A	30.0	23.4	Moderate	13.6%	4.9%	15,888	11,997	18.6%	47.3%	29.9%	4.2%	39.1%	27.5%	18.7%	14.7%	7.4%	58.9%	29.5%	4.2%
H	LRT: Add 4th Lane (Reversible) w/ Supplemental 6 Lane Bridge	24.6	19.2	17.0	N/A	21.1	20.9	Moderate	13.0%	5.2%	17,667	13,986	18.4%	47.5%	29.9%	4.2%	39.1%	27.5%	18.7%	14.7%	9.5%	57.3%	28.9%	4.3%
No Build	Change from 2000	28.1	6.5	3.8		6.0	4.8		0.1	0.1	13907.0	12377.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	0.1	-0.007	0.0	0.0	0.0
	% change from 2000	102.9%	23.5%	16.4%		16.3%	13.0%		39.8%	122.7%	76.7%	92.4%	34.4%	-6.4%	-0.9%	36.8%	24.7%	-21.6%	-7.9%	103.4%	-12.5%	-3.9%	4.8%	100.0%
Baseline	Change from 2000	13.2	2.4	1.9		5.4	0.9		0.1	0.0	3306.0	3698.0	0.1	-0.1	0.0	0.0	0.1	-0.2	-0.1	0.1	0.011	0.0	0.0	0.0
	% change from 2000	48.4%	8.7%	8.2%		14.6%	2.4%		26.1%	40.9%	18.2%	27.6%	97.8%	-15.7%	-8.3%	121.1%	59.1%	-37.3%	-24.4%	158.6%	19.6%	-6.9%	1.7%	158.8%
New West	Change from Baseline	-4.6	-5.6	-5.3		-7.3	-7.7		-0.1	0.0	-4259.0	-3965.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.005	0.0	0.0	0.0
	% change from Baseline	-11.4%	-18.6%	-21.1%		-17.3%	-20.4%		-17.1%	3.2%	-19.9%	-23.2%	1.6%	-0.2%	0.0%	0.0%	3.7%	-2.8%	-2.6%	-0.7%	7.5%	-0.8%	0.3%	-2.3%
Express 3	Change from Baseline	-5.1	-8.6	-6.7		-10.1	-11.7		-0.1	0.0	-4810.0	-4778.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.005	0.0	0.0	0.0
	% change from Baseline	-12.6%	-28.6%	-26.7%		-23.9%	-31.0%		-34.9%	-4.8%	-22.4%	-28.0%	1.6%	-0.2%	0.0%	0.0%	3.5%	-2.5%	-2.1%	-0.7%	7.5%	-0.8%	0.0%	-2.3%
LRT 3	Change from Baseline	-15.9	-9.5	-7.4		-11.1	-12.1		-0.1	0.0	-5621.0	-5459.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.031	0.0	0.0	0.0
	% change from Baseline	-39.3%	-31.6%	-29.5%		-26.2%	-32.0%		-35.9%	0.0%	-26.2%	-31.9%	0.5%	0.0%	-0.3%	0.0%	5.3%	-4.2%	-3.6%	-0.7%	46.3%	-4.4%	-1.7%	0.0%
Express 4	Change from Baseline	-15.2	-8.8	-5.5		-12.3	-14.4		-0.2	0.0	-5559.0	-5091.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.007	0.0	0.0	0.0
	% change from Baseline	-37.5%	-29.2%	-21.9%		-29.1%	-38.1%		-55.3%	-21.0%	-25.9%	-29.8%	1.1%	-0.2%	0.0%	0.0%	4.5%	-3.2%	-2.6%	-2.0%	10.4%	-1.0%	0.3%	-4.5%
LRT 4	Change from Baseline	-15.9	-10.9	-8.1		-21.2	-16.9		-0.2	0.0	-3780.0	-3102.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.028	0.0	0.0	0.0
	% change from Baseline	-39.3%	-36.2%	-32.3%		-50.1%	-44.7%		-57.2%	-16.1%	-17.6%	-18.2%	0.0%	0.2%	0.0%	0.0%	4.5%	-3.2%	-2.6%	-2.0%	41.8%	-3.7%	-1.7%	-2.3%
TDM	Change from baseline	-15.9	-3.0	-2.9		-4.8	-4.5		-0.1	0.0	-3010.0	-2638.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.118	-0.1	0.0	0.0
	% change from Baseline	-39.3%	-10.0%	-11.6%		-11.3%	-11.9%		-16.4%	-8.1%	-14.0%	-15.4%	1.6%	-0.6%	0.0%	2.4%	5.3%	-4.6%	-3.6%	0.0%	176.1%	-18.8%	-3.4%	9.1%
Real Data																								
I	Enhanced TDM	24.6	27.1	22.2	N/A	37.5	33.3	Moderate	25.4%	5.7%	18,437	14,450	18.7%	47.1%	29.9%	4.3%	39.4%	27.1%	18.5%	15.0%	18.5%	48.3%	28.4%	4.8%

Evaluation Matrix: What Have We Learned?

Note: All dollar values are year 2001 dollars. All values except Existing Conditions (Row A) are year 2020 projections.



Objective	Evaluation Factor No. 1.3 Ability to Cross Columbia River				Evaluation Factor No. 1.3 Reduce Vehicle Miles Traveled (VMT)		Evaluation Factor No. 1.4 Enhance Public Safety			Evaluation Factor No. 1.5 Improve Travel Reliability				Evaluation Factor No. 1.6 Minimize Impacts on Other Highways and Streets (Spillover Traffic)			Evaluation Factor No. 1.7 Strengthen Regional Infrastructure (Reduce Freight)	
										Exclusive Linear Miles				Rush Hour Traffic on Highways/Streets Near I-5				
	Transit	SOV	HOV	Total			Number of Traffic Conflict Points	Access for Emergency Vehicles/ Incident Management	Enroachment into Pearson Airpark Flight Path	LRT	HOV/ Express Bus	Qualitative Measure for Autos/Trucks	Cost of Bridge Lift Delay	Oregon - North of Columbia Blvd.	Oregon - North of Going/Prescott	Washington - South of Fourth Plain Blvd.	Travel Times for Auto/Truck from Key Industrial Areas To I-5 ⁷	
	Persons Crossing River on All Bridges	Persons Crossing River on All Bridges	Persons Crossing River on All Bridges	Persons Crossing River on All Bridges	Total Regional VMT	VMT per Capita	Rating ⁴	Rating ⁵		New Miles	New Miles	Rating ⁶		Total Number of Autos and Trucks at Selected Screenlines	Total Number of Autos and Trucks at Selected Screenlines	Total Number of Autos and Trucks at Selected Screenlines	Rating ⁸	
Period	PM-4 Hr.	PM-4 Hr.	PM-4 Hr.	PM-4 Hr.	Daily	Daily							PM-4 Hr.	PM-4 Hr.	PM-4 Hr.	AM-3 Hr./PM-4 Hr.		
Row	Option Package																	
A	Existing Conditions (2000)	2,110	53,695	28,963	84,768	29,426,812	16.41	High	Poor	See separate Decision 5 materials			Low	See separate Decision 5 materials	17,300	60,900	36,600	Moderate
B	No-Build (2020)	3,340	55,883	27,117	86,340	37,583,680	16.16	High	Poor				Low		21,600	79,900	41,900	High
C	Baseline: Planned Regional Priority Baseline System (2020)	6,472	57,008	27,022	90,502	36,801,172	15.83	High	Poor			1.5	Low/Moderate		18,900	65,900	45,700	High
D	New West Arterial	8,755	59,037	27,925	95,717	36,682,260	15.78	High	Poor/Good			1.5	Moderate		26,800	65,000	47,800	High (Vancouver)
E	Express Bus: 3 Lanes w/ Supplemental 4 Lane Bridge	9,003	60,815	29,052	98,870	36,783,648	15.82	Moderate/High	Good			12	Moderate		22,500	67,800	46,600	Moderate
F	LRT: 3 Lanes w/ Supplemental 4 Lane Bridge	13,113	57,365	28,090	98,568	36,584,920	15.73	Moderate/High	Good		34	1.5	Moderate		22,000	66,200	44,300	Moderate
G	Express Bus: Add 4th Lane (HOV) w/ Supplemental 6 lane Bridge	10,564	60,731	29,168	100,463	36,756,984	15.81	Moderate	Best			25	Moderate/High		17,800	58,400	43,300	Moderate
H	LRT: Add 4th Lane (Reversible) w/ Supplemental 6 Lane Bridge	12,570	58,116	27,690	98,376	36,638,888	15.76	Moderate	Best		34	3	High		15,300	56,700	38,000	Moderate
No Build	Change from 2000	1230.0	2188.0	-1846.0	1572.0	8156868.0	-0.3						4300.0	19000.0	5300.0			
	% change from 2000	58.3%	4.1%	-6.4%	1.9%	27.7%	-1.5%						24.9%	31.2%	14.5%			
Baseline	Change from 2000	4362.0	3313.0	-1941.0	5734.0	7374360.0	-0.6						1600.0	5000.0	9100.0			
	% change from 2000	206.7%	6.2%	-6.7%	6.8%	25.1%	-3.5%						9.2%	8.2%	24.9%			
New West	Change from Baseline	2283.0	2029.0	903.0	5215.0	-118912.0	-0.1						7900.0	-900.0	2100.0			
	% change from Baseline	35.3%	3.6%	3.3%	5.8%	-0.3%	-0.3%						41.8%	-1.4%	4.6%			
Express 3	Change from Baseline	2531.0	3807.0	2030.0	8368.0	-17524.0	0.0						3600.0	1900.0	900.0			
	% change from Baseline	39.1%	6.7%	7.5%	9.2%	0.0%	-0.1%						19.0%	2.9%	2.0%			
LRT 3	Change from Baseline	6641.0	357.0	1068.0	8066.0	-216252.0	-0.1						3100.0	300.0	-1400.0			
	% change from Baseline	102.6%	0.6%	4.0%	8.9%	-0.6%	-0.6%						16.4%	0.5%	-3.1%			
Express 4	Change from Baseline	4092.0	3723.0	2146.0	9961.0	-44188.0	0.0						-1100.0	-7500.0	-2400.0			
	% change from Baseline	63.2%	6.5%	7.9%	11.0%	-0.1%	-0.1%						-5.8%	-11.4%	-5.3%			
LRT 4	Change from Baseline	6098.0	1108.0	668.0	7874.0	-162284.0	-0.1						-3600.0	-9200.0	-7700.0			
	% change from Baseline	94.2%	1.9%	2.5%	8.7%	-0.4%	-0.4%						-19.0%	-14.0%	-16.8%			
TDM	Change from baseline	7655.0	-4667.0	-1492.0	1496.0	-591632.0	-0.3						-100.0	-2100.0	-2700.0			
	% change from Baseline	118.3%	-8.2%	-5.5%	1.7%	-1.6%	-1.6%						-0.5%	-3.2%	-5.9%			
Real Data																		
I	Enhanced TDM	14,127	52,341	25,530	91,998	36,209,540	15.57				1.5	Moderate	18,800	63,800	43,000	Moderate		

Evaluation Matrix: What Have We Learned?

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Row	Option Package	Objective		Evaluation Factor No. 3.2 Support Adopted City of Portland, City of Vancouver, and Clark County Plans			Evaluation Factor No. 3.7 Maximize Vehicle Capacity (Untapped Capacity)	Evaluation Factor No. 3.10 Minimize Time Cost of Travel				Evaluation Factor No. 7.1 Evaluate Project Capital and Operating Costs (Public Sector)			
		Truck Route Lane Miles Congested	Value of Truck Hours of Delay in Study Area	Consistency with Local/Neighborhood Livability & Transportation Goals			Average Auto Occupancy at Columbia River (HOV and SOV)	Value of Hours of Travel in Study Area ¹⁰				Annual Transit Operating Costs		Capital Costs	
		Percent of Total Miles	Dollars (@ \$35/hr.)	City of Portland	City of Vancouver	Clark County	Number	Transit	SOV	HOV	Trucks	Transit (Start-up)	Roads/ Structures	Total Capital	
		Period	Annual (250 Days)				PM-4 Hr.	PM-2 Hr.	PM-4 Hr.	PM-4 Hr.	PM-4 Hr.	Dollars (Millions)	Dollars (Millions)	Dollars (Millions)	
A	Existing Conditions (2000)	19.3%	\$14,094,000	None of the options have major conflicts with existing city, county, or regional plans or policies. Any selected option would need further design work to minimize and mitigate land use and environmental impacts to ensure plan consistency. See separate Decision materials for additional discussion.			1.29	\$66,888	\$644,522	\$304,807	\$101,745				
B	No-Build (2020)	30.1%	\$33,989,500				1.42	\$104,013	\$831,959	\$388,229	\$173,180	\$139.4		\$0	\$0
C	Baseline: Planned Regional Priority Baseline System (2020)	25.1%	\$26,462,250				1.42	\$139,751	\$740,001	\$338,598	\$158,270	\$260.3		\$291	\$291
D	New West Arterial	22.6%	\$21,311,750				1.38	\$145,435	\$713,110	\$329,374	\$151,165	\$263.5	\$8	\$1,238	\$1,246
E	Express Bus: 3 Lanes w/ Supplemental 4 Lane Bridge	21.1%	\$20,396,250				1.36	\$148,049	\$714,390	\$327,794	\$150,465	\$262.7	\$66	\$907	\$973
F	LRT: 3 Lanes w/ Supplemental 4 Lane Bridge	20.7%	\$19,721,500				1.37	\$159,159	\$701,246	\$322,442	\$149,730	\$272.2	\$1,215	\$907	\$2,122
G	Express Bus: Add 4th Lane (HOV) w/ Supplemental 6 lane Bridge	18.9%	\$17,238,500				1.37	\$149,619	\$710,169	\$327,433	\$147,175	\$265.7	\$83	\$1,675	\$1,758
H	LRT: Add 4th Lane (Reversible) w/ Supplemental 6 Lane Bridge	18.7%	\$16,890,750				1.37	\$153,756	\$705,650	\$327,850	\$139,895	\$271.9	\$1,215	\$1,675	\$2,890
No Build	Change from 2000	0.1	19895500.0				0.1	37125.0	187437.0	83422.0	71435.0				
	% change from 2000	56.0%	141.2%				10.1%	55.5%	29.1%	27.4%	70.2%				
Baseline	Change from 2000	0.1	12368250.0				0.1	72863.0	95479.0	33791.0	56525.0				
	% change from 2000	30.1%	87.8%				10.1%	108.9%	14.8%	11.1%	55.6%				
New West	Change from Baseline	0.0	-5150500.0				0.0	5684.0	-26891.0	-9224.0	-7105.0	3.2	8.4		
	% change from Baseline	-10.0%	-19.5%				-2.8%	4.1%	-3.6%	-2.7%	-4.5%	1.2%	#DIV/0!		
Express 3	Change from Baseline	0.0	-6066000.0				-0.1	8298.0	-25611.0	-10804.0	-7805.0	2.4	66.0		
	% change from Baseline	-15.9%	-22.9%				-4.2%	5.9%	-3.5%	-3.2%	-4.9%	0.9%	#DIV/0!		
LRT 3	Change from Baseline	0.0	-6740750.0				0.0	19408.0	-38755.0	-16156.0	-8540.0	11.9	1215.0		
	% change from Baseline	-17.5%	-25.5%				-3.5%	13.9%	-5.2%	-4.8%	-5.4%	4.6%	#DIV/0!		
Express 4	Change from Baseline	-0.1	-9223750.0				0.0	9868.0	-29832.0	-11165.0	-11095.0	5.4	83.0		
	% change from Baseline	-24.7%	-34.9%				-3.5%	7.1%	-4.0%	-3.3%	-7.0%	2.1%	#DIV/0!		
LRT 4	Change from Baseline	-0.1	-9571500.0				0.0	14005.0	-34351.0	-10748.0	-18375.0	11.6	1215.0		
	% change from Baseline	-25.5%	-36.2%				-3.5%	10.0%	-4.6%	-3.2%	-11.6%	4.5%	#DIV/0!		
TDM	Change from baseline	0.0	-2768250.0				0.0	24551.0	-33566.0	-10996.0	-3570.0	12.2	1217.0		
	% change from Baseline	-8.8%	-10.5%				0.7%	17.6%	-4.5%	-3.2%	-2.3%	4.7%	#DIV/0!		
Real Data															
I	Enhanced TDM	22.9%	\$23,694,000				1.43	\$164,302	\$706,435	\$327,602	\$154,700	\$272.5	\$1,217		
											\$291	\$1,508			