

Bellevue Way SE HOV – 112th Ave SE ‘Y’ to South Bellevue P&R

Staff recommendation

January 25th , 2018 – Transportation Commission

Presenter:

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Tonight's Agenda:

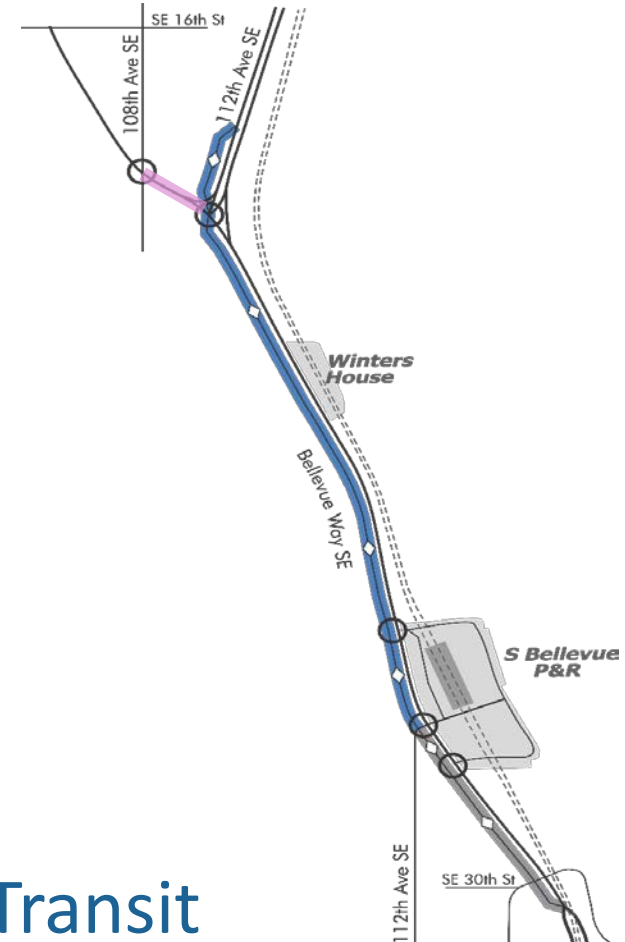
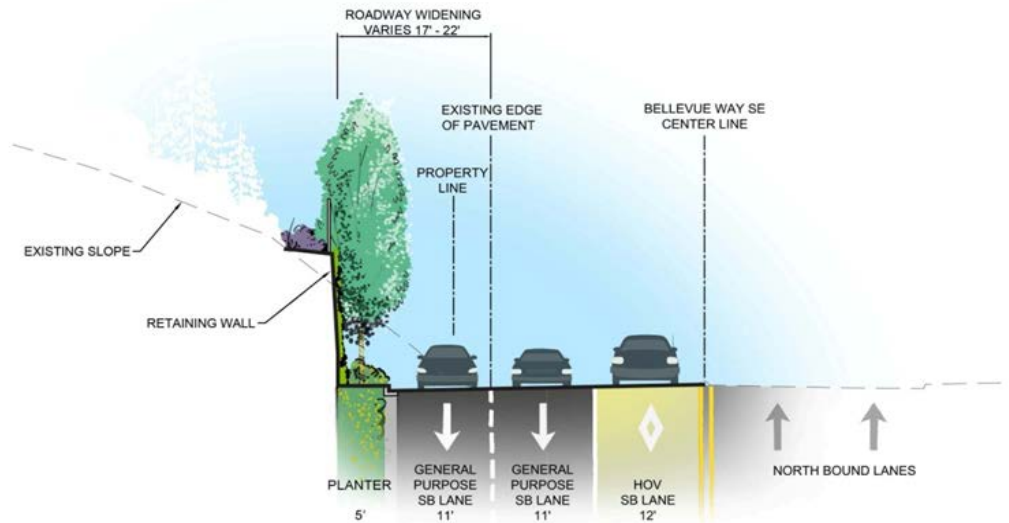
- Project status
- Construction phasing and associated cost
- Implementation options and b/c analysis
- Staff recommendation
- Comments and questions
- Motion to Approve Staff Recommendation
- Next Step



Project Status:

- Project Scope approved by City Council on April 6, 2017
- Completed 30% design and prepared environmental documentation
- Continue engaging with community and stakeholders
- Developed construction phasing and associated cost
- Developed project implementation options

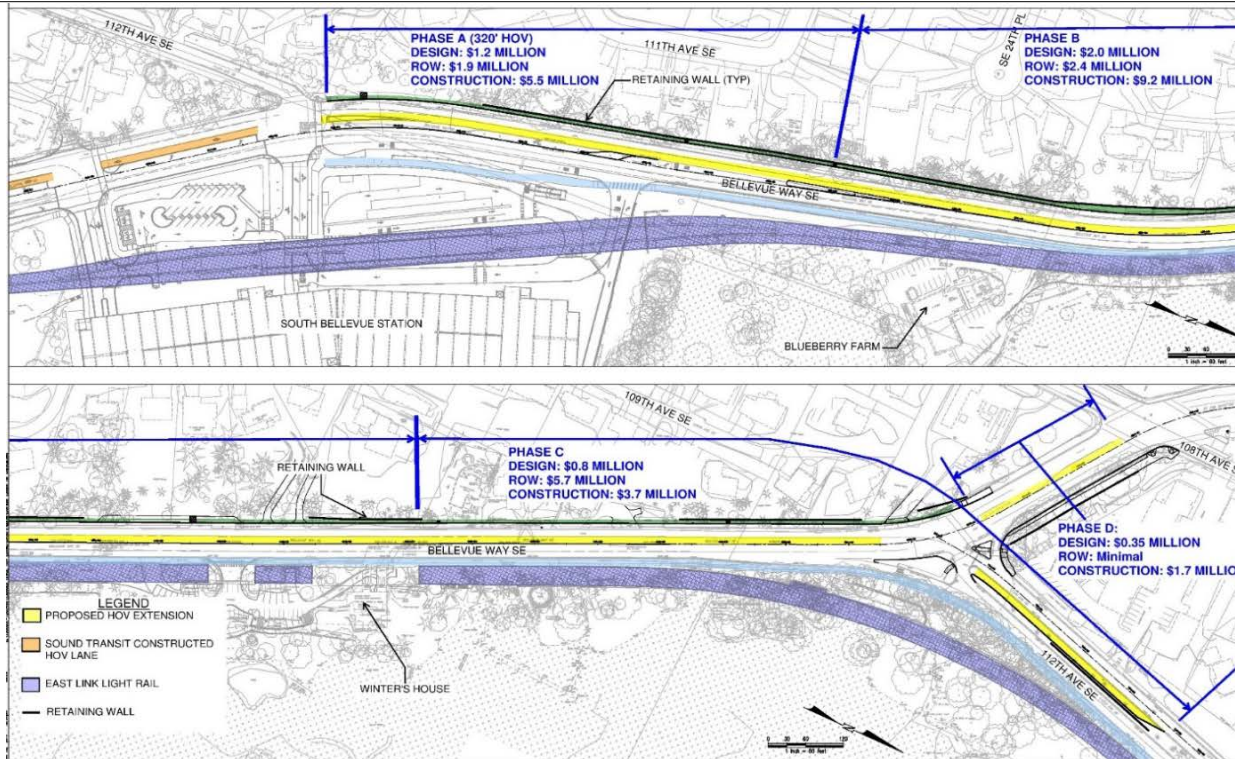
Bellevue Way SB HOV Project – Approved Project Scope



Project Objective:

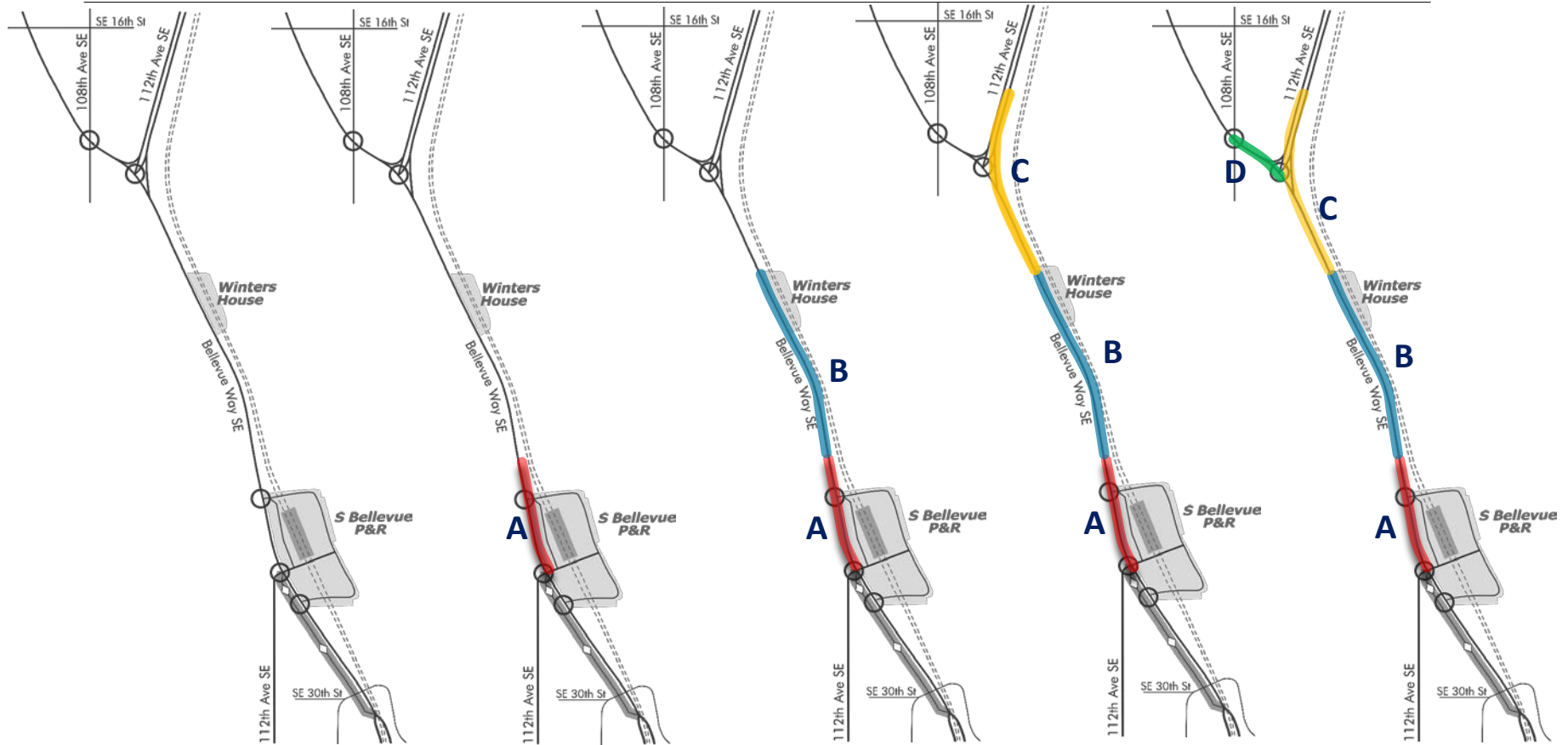
- Improve transit reliability
- Improve multi-modal access
- Encourage mode shift to HOV/Transit

Bellevue Way SB HOV Project - Construction Phasing and Costs



	Design Costs	ROW Costs	Construction Costs	Total Costs
Phase A	\$1,200,000	\$1,900,000	\$5,500,000	\$8,600,000
Phase B	\$2,000,000	\$2,400,000	\$9,200,000	\$13,600,000
Phase C	\$800,000	\$5,700,000	\$3,700,000	\$10,200,000
Phase D	\$350,000	\$0	\$1,700,000	\$2,050,000

Bellevue Way SB HOV Project-Implementation Options and Cost



Options	2030 No-Build	A	A + B	A + B + C	A + B + C + D
Cost (\$)	n/a	\$8,600,000	\$22,200,000	\$32,400,000	\$34,450,000

Implementation Option Comparison – Throughput & Travel Time Savings

	2015 Existing Conditions	2030 Baseline No Build	Option A: 320-ft HOV	Option A +B: HOV to Winters House	Option A+B+C: HOV through "Y" 112th only	Option A+B+C+D: HOV through "Y" 112th and BWSE to 108th
<i>Southbound Throughput from Both Directions (Bellevue Way and 112th Ave)</i>						
Vehicles	2,303	2,163	2,242	2,433	2,456	2,469
People	2,665	3,876	3,966	4,405	4,483	4,496
Bellevue Way SE Travel Time (Min/Veh)			<i>Travel Time Savings compared to 2030 Baseline (Min/Veh)</i>			
SOV	5.6	7.5	-0.5	-0.9	0.1	0.2
HOV	5.6	7.2	-1.0	-2.5	-3.0	-3.1
Transit	5.7	6.7	-0.6	-1.9	-2.5	-2.7
112th Ave SE Travel Time (Min/Veh)			<i>Travel Time Savings compared to 2030 Baseline (Min/Veh)</i>			
SOV	7.6	9.9	-0.6	-0.9	0.4	0.9
HOV	7.6	9.5	-1.0	-2.6	-4.0	-3.6
Transit	6.2	10.6	-1.0	-2.2	-3.7	-3.5

Note: for PM Peak Hourly



Implementation Option Comparison – Annual Delay and Travel Time Savings (\$)

	2015 Existing Conditions	2030 Baseline No Build	Option A: 320-ft HOV	Option A +B: HOV to Winters House	Option A+B+C: HOV through "Y" 112th only	Option A+B+C+D: HOV through "Y" 112th and BWSE to 108th
	<i>Annual Cost of Delay for all users*</i>		<i>Annual Travel Time Savings for all users over 2030 Baseline*</i>			
Time in \$	\$2,975,201	\$6,602,836	\$758,001	\$2,031,800	\$2,138,645	\$1,999,954

Annual Cost of Delay = (Congested Travel Time – Free Flow Travel Time) * Value of Time

Annual Travel Time Savings = (Option Travel Time – No Build Travel time)* Value of Time

- Time savings reflect cumulative benefit for all modes for each Option
 - Vehicle Occupancy: SOV = 1 person/veh, HOV = 2.2 persons/veh, Transit = 75 persons/bus
 - Value of Time: \$22/hour (2018 dollars)
 - Travel time savings from 3 hour PM peak period (260 working days/year)
- Annual cost of person delay is projected to double from 2015 to 2030
 - Annual travel time savings used to develop Benefit/Costs of possible phasing options

Implementation Option Comparison- Benefit / Cost

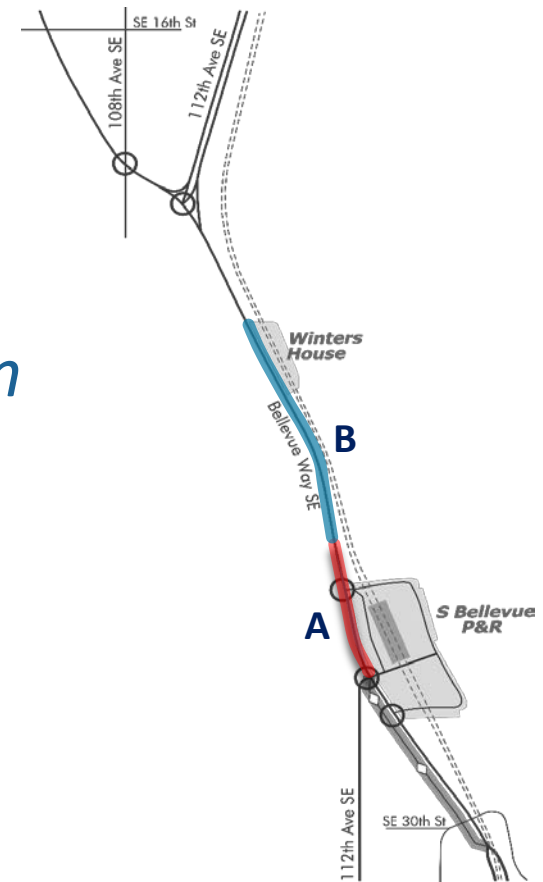
Options	Cumulative Costs	Annual Value of Travel Time Savings	Benefit / Cost Ratio (ex. 10-yr duration)
A	\$8,600,000	\$758,000	0.88
A+B	\$22,200,000	\$2,031,800	0.91
A+B+C	\$32,400,000	\$2,138,645	0.65
A+B+C+D	\$34,450,000	\$1,999,954	0.57

- Option A+B has the highest B/C ratio
- Option A+B+C has the the highest annual travel time saving but lower B/C ratio
- Option A+B+C+D and Option A+B+C has similar levels of person throughput but lower overall travel time savings than Option A+B+C.

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Staff recommendation:

- Full Implementation of Option A+B
- *Defer Phase C and D Implementation for future years*

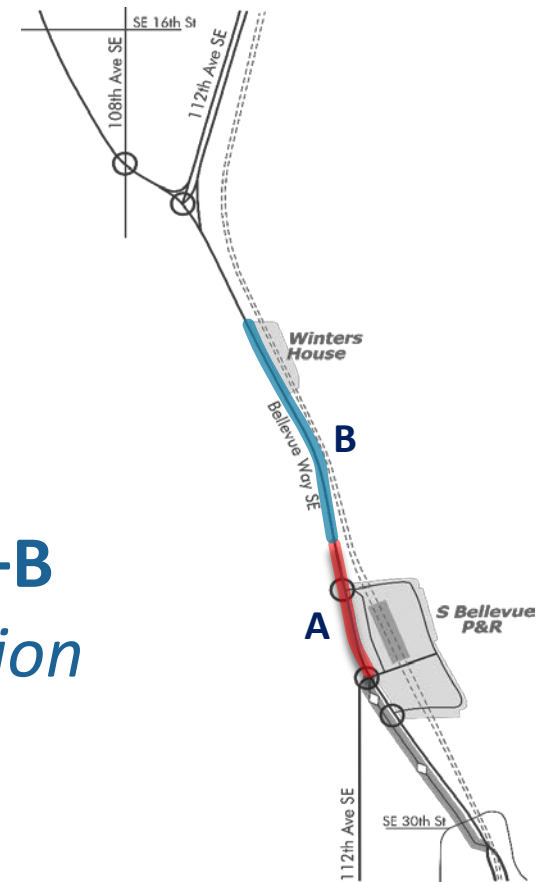


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Comments and Questions?

Motion to **APPROVE** staff
recommendation:

- **Full Implementation of Option A+B**
- *Defer Phase C and D Implementation
for future years*



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NEXT STEP:

- Seek City Council approval of staff recommendation on February 20th, 2018

Thank You!

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