

NW Bethany Blvd. Roadway Improvement Project - Alternatives Comparison

(NW Bronson Rd. to NW West Union Rd.)

January 27, 2011



Alternatives Impacts Analysis							Comments	Project Issues Descriptions
Project Issue	Alignment Alternative							
	1 5 Lane	2 4 Lane	3 5/3/5 Lane	4 3 Lane	No Build			
1. Traffic and Circulation								1. Traffic and Circulation
A) Side Street Access	(AM / PM)	(AM / PM)	(AM / PM)	(AM / PM)	(AM / PM)		A. Side Street Access: Impact of each alternative on the circulation and geometrics at side street intersections	
1. Ridgetop Lane	B / B	B / B	F / F	F / F	F / F	Alts 3 and 4 expected to reach LOS "F" by 2025-2030	Level of Service D or better is acceptable	
2. Telshire Drive	D / D	E / E	F / F	F / F	F / F	Alts 3 and 4 expected to reach LOS "F" by approx. 2020.	Level of Service D or better is acceptable	
3. Audrey Drive	D / C	D / C	F / D	F / F	F / F	Alts 3 and 4 expected to reach LOS "F" by 2015-2020	Level of Service D or better is acceptable	
4. Emily Lane	C / B	C / C	F / F	F / F	F / F	Alts 3 and 4 expected to reach LOS "F" by 2020-2025	Level of Service D or better is acceptable	
5. Avondale Drive	C / B	C / C	F / C	F / F	F / F	Alts 3 & 4 expected to reach LOS "F" by 2015-2020	Level of Service D or better is acceptable	
B) Driveway/ Property Access	Acceptable	Acceptable	Acceptable	Acceptable	No impact		B. Property Access (Alternative Access): Impact on access to property (where alternative access must be created for a site)	
C) Traffic Capacity (volume/capacity)	(AM / PM)	(AM / PM)	(AM / PM)	(AM / PM)	(AM / PM)		C. Traffic Capacity: The level to which each alternative provides for the 20 year design life standards at intersections and the corridor for each alternative.	
1. West Union Road	0.90 / 0.93	0.90 / 0.93	0.99 / 1.14	1.18 / 1.22	1.46 / 1.64	Alt 3 expected to reach V/C > 1 by 2025. Alt 4 by 2015.	Volume/ capacity ratio	
2. Oak Hills Drive	0.78 / 0.83	0.78 / 0.83	1.03 / 1.08	1.06 / 1.13	>2.00 / >3.00	Alt 3 expected to reach V/C > 1 by 2025. Alt 4 by 2020.	Volume/ capacity ratio	
3. Bronson Road	0.89 / 0.90	0.89 / 0.90	1.07 / 1.05	0.67 / 0.69	>3.00 / >3.00	Alt. 3 expected to reach V/C > 1 by 2030.	Volume/ capacity ratio	
D) Other Access							D. Other Access: The level to which each alternative meets the County's road standards. This includes considering items as described.	
1. Bicycle	Acceptable	Acceptable	Acceptable	Acceptable	No improvement	Bicycle lane provided both sides	1. Consider ability to provide complete bicycle accessibility through corridor and at intersections	
2. Pedestrian	Acceptable	Acceptable	Acceptable	Acceptable	No improvement	Sidewalks provided both sides	2. Consider ability to provide complete pedestrian accessibility through corridor and to adjacent streets	
3. Transit	Acceptable	Acceptable	Acceptable	Acceptable	No improvement	Work with TriMet to accommodate bus stop needs	3. Consider ability to provide for bus stop for the current transit service routes	
E) Safety							E. Safety: The level of each alternative improving current safety concerns.	
1. Intersection	Acceptable	Acceptable	Acceptable	Acceptable	No improvement	Alternative 2 provides best intersection safety by limiting left turns	1. Consider ability to improve safety at intersections with a high level of accidents.	
2. Bicycle	Acceptable	Acceptable	Acceptable	Acceptable	No improvement	All alternatives provide equal safety	2. Consider ability to provide for safe through bicycle safety and crossings at intersections.	
3. Pedestrian	Acceptable	Acceptable	Acceptable	Acceptable	No improvement	Alternative 4 provides safest crossings since distance is less.	3. Consider ability to provide for safe through pedestrian safety and crossings at intersections.	
4. School zone crossing	Acceptable	Acceptable	Acceptable	Acceptable	No improvement	Alternative 4 provides safest crossings since distance is less.	4. Consider ability to provide safe access to and from Oak Hills Elementary School	
5. Emergency vehicles access	Acceptable	Acceptable	Acceptable	Acceptable	No improvement	Alternative 1 provides best access with additional lanes to pass.	5. Consider ability for emergency vehicles to travel through corridor	
F) Other								
1. Truck Mobility	Acceptable	Acceptable	Acceptable	Acceptable	No improvement		1. The ability for trucks and large vehicles to make turns	
2. Conformance with current TSP	Yes	Yes	No	No	No	Alternatives 3 and 4 are interim improvements in 3 lane section.	2	
3. Impact of Lane Width Reduction	4' Each Side	4' Each Side	4' Each Side	0'	None	Turn lanes reduced by 1', through lanes by 1', bike lanes by 1' each side	3. Impact Design Exception has on the right-of-way width required	
2. Community Impacts								2. Community Impacts
A) Property Impacts							A. Property acquisition needed to construct the project	
1. Right-of-way Acq. Area	1.1 acres	1.1 acres	0.9 acres	0.6 acres	0		1. Right-of-way: Area of right-of-way needed for purchase	
2. Permanent Easement Area	1500 sq. ft.	1500 sq.ft.	1500 sq.ft.	1500 sq.ft.	0	Potential utility easements not included with these figures	2. Easements: Area of permanent easements needed for purchase	
3. Number of Properties Affected	3W + 27E = 30	3W + 27E = 30	3W + 27E = 30	3W + 17E = 20	0	W = west side of Bethany, E = east side	3. Total number of properties with purchase of right-of-way or permanent easements required	
4. House Acquisitions	1	1	1	0	0	Narrowing of lanes and shifting of the roadway may prevent the one house from being impacted by ROW/roadway improvements.	4. House Acquisition: Number of properties that must be acquired because the proposed right-of-way and roadway improvements impacts the house	
5. Other Structures	2D + 1P	2D + 1P	2D + 1P	1P	0	D = Attached decks, P = Pools	5. Other Structures: number of misc. structures other than primary residence impacted by project.	
6. Retaining walls (sq. ft.)	12,700 sq. ft.	11,400 sq.ft.	9,500 sq.ft.	5,000 sq.ft.	0	If sound walls are needed; these would be reduced significantly.	6. Retaining walls: Estimate of area of retaining walls needed.	
B) Cultural & Historic Resources	Potential	Potential	Potential	No impact	No impact		B. Cultural/Historic Resources: Includes impact to archaeological and historic structures or features	
C) Visual Resources & Tree Impacts	Mod. High - 168 Trees Impacted	Moderate - 164 Trees Impacted	Moderate - 152 Trees Impacted	Mod. Low - 87 Trees Impacted	No impact		C. Visual Resources: Impact to visual components of the corridor including significant trees, viewpoints affected, other topographic features, etc	
D) Recreation Resources	No impact	No impact	No impact	No impact	No impact		D. Recreation Resources: Includes potential impacts to recreational sites along the corridor.	
E) Livability	See separate spreadsheet for livability evaluation						E. Evaluation on attached separate matrix	
3. Project Costs								3. Project Costs
A) Right-of-way Costs	TBD	TBD	TBD	TBD			1. Right-of-way: Cost of right-of-way needed for purchase	
B) Easement Costs	TBD	TBD	TBD	TBD			2. Easements: Cost of permanent easements needed for purchase	
C) Construction Costs	\$9.3 mil	\$9.1 mil	\$8.4 mil	\$6.3 mil			3. Total construction cost	
4. Natural Environment								4. Natural Environment
A) Air Quality	TBD	TBD	TBD	TBD	No impact	No impacts expected. Analysis has not been completed.	A. Air Quality: Impact to air quality along the corridor	
B) Noise	Acceptable with mitigation	Acceptable with mitigation	Increased	Increased	No impact	Preliminary analysis has been completed. Mitigation provided where allowed by standards; see Livability Matrix for detail.	B. Noise: Noise impacts along the corridor	
C) Hydrology & Drainage	Acceptable	Acceptable	Acceptable	Acceptable	No impact	Construction addresses impacts.	C. Hydrology and Drainage: Impact of additional runoff from project on the downstream drainage system	
D) Water Quality	Acceptable	Acceptable	Acceptable	Acceptable	No impact	Construction addresses impacts.	D. Water Quality: Impact of additional drainage work on the water quality of the drainage basins	
E) Aquatic Resources & ESA	No impact	No impact	No impact	No impact	No impact		E. Aquatic Resources/ESA: Impact to riparian and in-stream resources (fish and invertebrate populations); includes permitting required if threatened or endangered species in project.	
F) Wetlands (sq.ft.)	Negligible to None	Negligible to None	Negligible to None	Negligible to None	None	Mitigation will be provided for all alternatives if impacted	F. Wetlands: Impact to delineated wetlands (acres of wetlands affected)	
G) Hazardous Materials	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Report has not identified any hazardous materials sites in project.	G. Hazardous Materials: Impact of any adverse environmental conditions (e.g. contamination) on each alternative	
5. Community Support								5. Community Support
A) PFG Support	Some	Some	None	Most	None		A. Based on discussion at 12/2/10 Meeting	
B) Community at large Support							B. Based on comments at Open House	
Quantity or Area Legend		Traffic Analysis						
W = West side of NW Bethany Blvd.		NW 173rd Overpass assumed to not be constructed when determining traffic volumes.						
E = East side of NW Bethany Blvd.		Traffic modeling shows completing the 173rd Overpass does not substantially alter the traffic volumes on Bethany Blvd.						
TBD = To be determined								

