

## ***Appendix C: Circulation Scenario Evaluation***

## HAYDEN ISLAND LOCAL ACCESS OPTIONS EVALUATION MATRIX WESTSIDE CIRCULATION ROAD OPTIONS

**Option 1:** Unsignalized full-movement intersections at Avenue C on N Hayden Island Drive and N Jantzen Avenue; signalized full-movement intersections at Avenue B on N Hayden Island Drive and N Jantzen Avenue; and unsignalized right-in/right-out intersections at Avenue A on N Hayden Island Drive and N Jantzen Avenue.

**Option 2:** Unsignalized full-movement intersections at Avenue C on N Hayden Island Drive and N Jantzen Avenue; signalized full-movement intersections at Avenue B on N Hayden Island Drive and N Jantzen Avenue; and no connections to Avenue A from N Hayden Island Drive and N Jantzen Avenue.

**Option 3:** Signalized full-movement intersections at Avenue C on N Hayden Island Drive and N Jantzen Avenue; unsignalized right-in/right-out intersections at Avenue B on N Hayden Island Drive and N Jantzen Avenue; and no connections to Avenue A from N Hayden Island Drive and N Jantzen Avenue.

EVALUATION FACTORS	SCORING PARAMETERS	Option 1 (Appendix B, Scenario 2a)		Option 2 (Appendix B, Scenario 7b)		Option 3 (Appendix B, Scenario 9b)	
Meets OHP volume to capacity ratio standards at ramp terminals	V/C = 0.85 or alternative adopted by OTC	●	Yes	●	Yes	●	Yes
Meets City of Portland performance standards in Portland Policy TRN 10.27	LOS D for signalized intersections, LOS E for stop-controlled intersections	●	Yes	●	Yes	●	Yes

Extent to which ODOT access spacing standards are met	1,320' to first full movement connection, 750' to first right in/right out connection moving away from the interchange and 990' to first right in/right out connection moving toward the interchange	○	Sunrise is at the beginning of the taper for the southbound on-ramp on Hayden Island Dr. and only 150' west of the southbound off-ramp on Jantzen Dr. This location would be unacceptable, so other factors were not evaluated.	●	Main is 625' west of these tapers and Sunset is 1,285' west of these ramps.	●	Main is 625' west of these tapers and Sunset is 1,285' west of these ramps.
Efficient and safe movement of freight on locally designated truck access streets	Out of direction travel, difficult turning radii, congested routes			●	Any trips from the eastside of I-5 that use Jantzen Drive to get to the southbound I-5 on-ramp would have some out of direction travel to Main Street and would travel through the heart of the shopping center.	●	The freight travel pattern for this scenario is similar to Scenario 7b except that some additional out of direction travel would be required.
Safe and convenient auto, bicycle and pedestrian movements	Number of impediments, out of direction travel.			●	Some out of direction travel would be required for the circulation trips from east of I-5 and for trips originating within the shopping center. This travel would be through the existing Jantzen Beach shopping center.	○	This alternative would require further out of direction travel for trips from the shopping center to the neighborhood to the north. It would require the eastside circulation trips to either use Main, which would not be signalized at either end or travel further to the signalized Sunset intersections.
Degree to which system hierarchy is maintained	Freeways to arterials, arterials to collectors, collectors to local streets			○	Hayden Island Drive is a District Collector. Jantzen Drive is a private street, and would be used for eastside circulation trips.	○	Hayden Island Drive is a Neighborhood Collector. Jantzen Drive is a private street, and would be used for eastside circulation trips.

Number of businesses and jobs displaced; other negative business impacts	Visibility, direct routes, uncongested			●	No jobs would be displaced. This route would reduce visibility for some businesses and put potentially problematic through traffic past others.	●	No jobs would be displaced. This route would reduce visibility for some businesses and put potentially problematic through traffic past others.
Number of residences displaced; other negative residential impacts	Noise, air quality, livability			●	No negative residential impacts.	●	This circulation traffic would use the intersection on Hayden Island Dr. that also serves as the entrance into the residential area north of Hayden Island Dr. This traffic also would travel along the back property line of several residential units north of Hayden Island Dr.
Development opportunities	Qualitative assessment of development potential of meeting local goals			●	Consistent with development opportunities in Hayden Island Plan. Lack of connection at Sunrise would reduce direct auto access to northeast part of existing Jantzen Beach shopping center.	●	Consistent with development opportunities in Hayden Island Plan. Lack of connection at Sunrise would reduce direct auto access to northeast part of existing Jantzen Beach shopping center.
Environmental impacts	Wetlands, water quality, T&E species, cultural			●	Has no direct environmental impacts to natural resources.	●	Has no direct environmental impacts to natural resources.
Cost	Construction, right-of-way, maintenance			●	Costs of alternatives are roughly similar.	●	Costs of alternatives are roughly similar.



Good



Fair



Poor

## HAYDEN ISLAND LOCAL ACCESS OPTIONS EVALUATION MATRIX EASTSIDE LOOP ROAD OPTIONS

**Option 1:** Signalized full-movement intersections at N Jantzen Drive on N Hayden Island Drive and N Tomahawk Island Drive.

**Option 2:** Removal of N Jantzen Drive between N Hayden Island Drive and N Tomahawk Island Drive. Signalized full-movement intersections at N Jantzen Beach Avenue on N Hayden Island Drive and N Tomahawk Island Drive.

**Option 3:** Right-in/right-out on N Jantzen Drive from N Hayden Island Drive and N Tomahawk Island Drive. Signalized full-movement intersections at N Jantzen Beach Avenue on N Hayden Island Drive and N Tomahawk Island Drive.

EVALUATION FACTORS	SCORING PARAMETERS	Option 1 (Appendix B, Scenario 2a)		Option 2 (Appendix B, Scenario 3b)		Option 3 (Appendix B, Scenario 11)	
Meets OHP volume to capacity ratio standards	V/C = 0.85 or alternative adopted by OTC	●	Yes	●	Yes	●	Yes
Meets City of Portland performance standards in Portland Policy TRN 10.27	LOS D for signalized intersections, LOS E for stop-controlled intersections	●	Yes	●	Yes	●	Yes
Extent to which ODOT access spacing standards are met	1,320' to first full movement connection, 750' to first right in/right out connection moving away from the interchange and 990' to first right in/right out connection moving toward the interchange	○	Jantzen Drive is about 760' from northbound off-ramp and Tomahawk Drive is about 500' from beginning of northbound on-ramp right turn lane.	●	Jantzen Beach Avenue is about 1,210' from northbound off-ramp and Tomahawk Drive would be 750' from beginning of northbound on-ramp right turn lane.	●	Jantzen Beach Avenue is about 1,210' from northbound off-ramp, Jantzen Drive is about 760' from the same ramp and Tomahawk Drive would be 750' from beginning of northbound on-ramp right turn lane.

Efficient and safe movement of freight on locally designated truck access streets	Out of direction travel, difficult turning radii, congested routes	●	This "inner loop" is the shorter of the two options and provides for freight movement in the commercial area.	○	This outer loop is about 700' longer than the other option and it directs freight movement adjacent to a residential area.	○	This outer loop is about 700' longer than the other option and it directs freight movement adjacent to a residential area.
Safe and convenient auto, bicycle and pedestrian movements	Number of impediments, out of direction travel.	●	Close-in loop provides direct access to both sides of split single point interchange.	○	As compared to the "inner loop", this "outer loop" adds about 700' of travel distance to area circulation. The pedestrian/auto mix would be more problematic for this option because of the adjacent residential property.	○	As compared to the "inner loop", this "outer loop" adds about 700' of travel distance to area circulation. The pedestrian/auto mix would be more problematic for this option because of the adjacent residential property.
Degree to which system hierarchy is maintained	Freeways to arterials, arterials to collectors, collectors to local streets	●	Hayden Island Drive and Jantzen Drive are District Collectors.	○	East of Jantzen Drive, Hayden Island Drive is a Local Service street and Jantzen Beach is a Local Service street.	○	East of Jantzen Drive, Hayden Island Drive is a Local Service street and Jantzen Beach is a Local Service street.
Number of businesses and jobs displaced; other negative business impacts	Visibility, direct routes, uncongested	●	Routing of traffic would use existing road locations.	○	This is a more indirect route and business visibility is diminished. The hotel and multi-family residential units may be negatively impacted. The Zupan property would probably not be viable for commercial use.	○	This is more indirect route and business visibility is diminished, even though Jantzen Drive is connected via RI/RO. The Zupan property would probably not be viable for commercial use.
Number of residences displaced; other negative residential impacts	Noise, air quality, livability	●	There are no residential impacts.	○	Jantzen Beach Avenue would be widened immediately adjacent to the multi-family residential units south of Hayden Island Drive.	○	Jantzen Beach Avenue would be widened immediately adjacent to the multi-family residential units south of Hayden Island Drive.

Development opportunities	Qualitative assessment of development potential of meeting local goals	●	Consistent with development opportunities in Hayden Island Plan.	○	Would eliminate the Zupan property from any development and makes the properties north of Tomahawk less desirable for future development with the current or proposed zoning.	○	Eliminates the Zupan property from any development and makes the properties north of Tomahawk less desirable for future development with the current or proposed zoning.
Environmental impacts	Wetlands, water quality, T&E species, cultural	●	Has no direct environmental impacts to natural resources.	●	Has no direct environmental impacts to natural resources.	●	Has no direct environmental impacts to natural resources.
Cost	Construction, right-of-way, maintenance	●	Total recon level cost = \$22 M (Construction = \$2 M, R/W = \$20 M).	○	Total recon level cost = \$30 M (Construction = \$3 M, R/W = \$27 M)	○	Total recon level cost = \$30 M (Construction = \$3 M, R/W = \$27 M). All estimates assume complete reconstruction of streets, so maintenance cost is equal.



Good



Fair



Poor

