



Appendix N

SUMMARY OF EVALUATION OF ALTERNATIVE DESIGNS



EVALUATION OF ALTERNATIVE DESIGNS

Millway Avenue

Factor / Indicator	Alternative Design - Do Nothing	Millway Alternative Design - Option 1	Millway Alternative Design - Option 2	Millway Avenue Alternative Design Option 3
Natural Environment				
1. Vegetation and Natural Heritage Features	No impacts/changes. 	Only vegetated area is a manicured lawn near the south end of the alignment, and a few young street trees. No concern for removal of the manicured area or young street trees. 	Longer portion of the manicured lawn will remain intact following construction. Tree removals will be the same as Option 1. 	Larger portion of manicured lawn remains compared to other two options, but the area is highly disturbed. 
There is a negligible difference between the three options and impacts on the vegetation and natural features. Although Option 3 impacts the smallest amount of the natural feature, the feature itself is manicured lawn which provides little in the way of natural habitat, other than a permeable surface for water retention and conveyance.				
2. Wildlife and Species of Concern o Impacts to wildlife habitats and movement corridors	No impacts/changes. 	Manicured area provides very little cover for wildlife, as such it is likely only used by urban adapted small wildlife. 	Longer portion of linear track remaining for general wildlife movement. 	Larger portion of manicured lawn remains compared to other two options, but the area is highly disturbed and offers very little habitat for wildlife or vegetation. 
3. Watercourses o Impacts to watercourses, fish and fish habitat, including the Black Creek	No impacts/changes. 	No watercourse within alignment options. 		
4. Groundwater	No impacts/changes. 	No impacts to groundwater anticipated. 		
5. Stormwater Management o Impacts to stormwater runoff (water quantity)	No impacts/changes. 	Minimal increase in imperviousness/stormwater runoff. There is no significant difference between options 1,2 and 3. 		
6. Air Quality & Greenhouse Gas Emissions o Impacts to local sustainability and greenhouse gases. o Impacts to air quality through exhaust and dust	<u>Operational</u> <ul style="list-style-type: none"> Air emission increase with expected population growth in the area; more vehicles on the road. Do Nothing Scenario could see gradual increase in idling vehicles over time (resulting in an increase in air emissions) due to congested traffic on the existing surrounding roadways as population (and vehicles) increase. <u>During Construction</u>	<u>Operational</u> <ul style="list-style-type: none"> The closest (existing) residential receptors is the condominium development currently under construction at 55 Interchange Way. In all three options, a new intersection will be introduced immediately opposite this development, which would likely increase air quality concentrations at this location but there is no significant change in impact predicted between options 1-3. <u>During Construction</u> <ul style="list-style-type: none"> Construction activities will lead to combined effects of zone construction emissions plus existing vehicle traffic emissions. Potential road closure/detours during construction increases emissions in the vicinity of the construction. There is no significant difference between options 1,2 and 3. 		



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	<ul style="list-style-type: none"> Do Nothing Scenario, no construction, no combined effects air emission impact. 			
7. Potentially Contaminated Lands	No impacts/changes. 	Based on the result from the Contaminant Overview Study, there are further Phase Two ESA be completed for all options, to characterize soil and groundwater conditions that may impact soil management and disposal, dewatering and other aspects related to options. 		
8. Floodplain	No impacts to floodplain 			
Evaluation	 Preferred			
Summary	<p>Do nothing option is preferred from a natural environment perspective since it does not have any additional environmental impacts, although this option could see a gradual increase in idling vehicles over time (resulting in an increase in air emissions) due to congested traffic on the existing surrounding roadways as population (and vehicles) increase.</p> <p>Options 1,2,3, are equally positioned behind the Do Nothing option . Although the result of the comparison is a slightly larger section of the manicured lawn retained for Option 3, the lawn is highly disturbed and offers very little in the way of natural habitat. As such, there is no clear distinction for a preferred option based on environmental impacts. Do nothing scenario would have an increase of air emissions likely with congestion in the study area expected with population growth.</p>			
Socio-Economic Environment				
1. Property	<ul style="list-style-type: none"> Property requirements Property access - impacts to private driveways and maintaining access are also important as changes to access will impact properties being affected and potentially adjacent properties. <p style="text-align: center;">No impacts to property. </p>	<p>Best suited for the property owner for the redevelopment of the land in this area. The total amount of property requirement is 16,486 m²</p>	<p>Generally, options 2 and 3 have an adverse impact on development potential and regularity of development blocks along this corridor . The total amount of property requirement is 16, 417 m²</p>	<p>Generally, options 2 and 3 have an adverse impact on development potential and regularity of development blocks along this corridor. . The total amount of property requirement is 16,529 m²</p>



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2. Noise and Nuisance <ul style="list-style-type: none"> Impacts to Noise Sensitive Areas (NSAs) 	There are no NSAs located within 500 m of the study area as the entire area is primarily industrial land uses (and any new residential development will be subject to carrying out their own noise impact study as part of development application). <div style="text-align: center;"></div>			
3. Compliance with Federal, Provincial, Regional and City Policies and Guidelines	Not able to accommodate intensification of land uses per Federal, Provincial, Regional and City Policies and Guidelines. <div style="text-align: center;"></div>	Enables redevelopment for additional housing and jobs in VMC. There is no significant difference between options 1,2 and 3. <div style="text-align: center;"></div>		
4. Ability to Provide Streetscape Amenities and Landscape Elements.	No opportunity for Streetscape Amenities, Planted Boulevards, Low-Impact-Development (LID) Measures, Hardscape Features or Highway 7 / Millway Ave. Gateway Design <div style="text-align: center;"></div>	Softscape Boulevard with LID features <ul style="list-style-type: none"> Opportunity for green planted boulevards with Low-Impact-Development (LID) features such as bioswales Opportunity for planted boulevards with formal, moderate to higher-maintenance planting beds to enhance and celebrate this important corridor Hardscape Boulevard with LID Features <ul style="list-style-type: none"> Opportunity for hardscaped areas with higher proportion of decorative paving and incorporation of LID features such as permeable paving and small rain gardens Opportunity for tree grates and soil cells to support healthy tree and plant growth Millway Ave / Highway 7 Intersection <ul style="list-style-type: none"> Opportunity for this area to be designed as a gateway with enhanced pedestrian amenities (e.g., benches, bollards, planting) and potential for public art and wayfinding amenities There is no significant difference between options 1,2 and 3. <div style="text-align: center;"></div>		
5. Future Public Park(s) and/or Facilities as Identified in the VMC Secondary Plan	No impact to future public park (s) and/or facilities, but also does not support future parks. <div style="text-align: center;"></div>	<ul style="list-style-type: none"> Greater opportunity than Options 2 and 3 for connection with future new parks (e.g., South Urban Park, Millway Ave. Linear park) and open spaces in conjunction with future development. Highway 7 intersection design to be coordinated with the planned transit hub and VivaNext, this area will be designed as a gateway with enhanced pedestrian amenities and potential for public art and wayfinding amenities. <div style="text-align: center;"></div>	<ul style="list-style-type: none"> Opportunity for connection with future new parks (e.g., South Urban Park, Millway Ave. Linear park) and open spaces in conjunction with future development Highway 7 intersection design to be coordinated with the planned transit hub and VivaNext, this area will be designed as a gateway with enhanced pedestrian amenities and potential for public art and wayfinding amenities There is no significant difference between options 2 and 3. <div style="text-align: center;"></div>	



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Evaluation		Preferred		
Summary	<p>Option 1 emerged as the preferred alternative from a socio-economic perspective relative to Options 2 and 3 and is recommended to be carried forward. Generally, Options 2 and 3 have an adverse impact on development potential and regularity of development blocks along this corridor.</p> <p>While Do- nothing is preferred in a number of factor, it does not support and advance the establishment implementation of new public street extension of Millway Avenue as part of more broadly the VMC planned street network and provides greater opportunity for future park connection.</p>			
Cultural Environment				
1. Built Heritage Resources and Cultural Heritage landscapes	No Built Heritage Resources and/or Cultural Heritage Landscapes were identified in the study area, thus no impacts are anticipated.			
2. Archeological Resources	No impacts to archaeological resources are anticipated.			
Evaluation	Preferred	Preferred	Preferred	Preferred
Summary	<p>All options are preferred from a cultural environment perspective. There is no preference between any options as there are no archaeological or built or cultural heritage impacts.</p>			
Transportation				



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1. Promotion of Comfortable Cycling and Walking Routes <ul style="list-style-type: none"> ○ Opportunities for transportation choices other than vehicle use ○ Address the challenges associated with new growth in the City, ○ Provide a multi-modal vision of “sustainable mobility” that can accommodate vehicles, transit, cyclists and pedestrians in a healthy community ○ Considerations for the City Active Transportation Plan 	No additional cycling and walking routes provided. 	Improves walking and cycling in south-central VMC through the addition of separated cycle tracks and sidewalk facilities along the new corridor – including improved active transportation access to subway and BRT stations. New corridor is specifically identified in Vaughan’s Transportation Plan (2023). There is no significant difference between options 1,2 and 3. 		
2. Safety for All Modes of Travel	The growth in population and road users could result in increased safety concerns for all modes of travel as no additional infrastructure is being provided. 	New road will improve safety for all modes of travel by providing additional multi-modal facilities. There is no significant difference between options 1 and 3 		
3. Accessible Network for All Ages and Abilities	Limited internal access between Highway 7 and Interchange Way for all modes. 	Improved internal access between Highway 7 and Interchange Way for all modes. New road will improve accessibility for all ages and abilities through the addition of multi-modal transportation facilities. There is no significant difference between options 1,2 and 3. 		
4. Provide Equitable, Safe and Reliable Access to High Quality, Efficient Transit	Properties adjacent to Highway 7 maintain good access to transit, properties not adjacent to Highway 7 have less connectivity to transit. 	New road will improve site access to VMC subway station, bus exchange, and transit services along Highway 7 as well as provide a potential new link for an internal transit circulator. There is no significant difference between options 1,2 and 3. 		
5. Road Capacity and/or Traffic Flow	Development would result in high levels of traffic congestion. 	Provides additional roadway capacity to help improve traffic flow. There is no significant difference between options 1,2 and 3. 		
6. Network Resiliency for Emergency Services		Provides an additional through network link, which provides an alternative to Jane Street and could improve emergency response times. There is no significant difference between options 1,2 and 3.		



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<ul style="list-style-type: none"> Potential to improve response time/accessibility for emergency vehicles due to changes in travel time. 	No potential to improve response times, response times likely to increase due to added congestion. 			
7. Protect for Future Transportation Trends <ul style="list-style-type: none"> Promotes autonomous vehicles Promotes micromobility Promotes drone technology 	No protection for future transportation trends offered. 	New connection improves opportunities for circulation, which support Autonomous Vehicle movement. Safe micro-mobility movement enabled in cycle track facilities. There is no significant difference between options 1,2 and 3. 		
Evaluation		 Preferred	 Preferred	 Preferred
Summary	Options 1,2,3 are equally preferred from a Transportation perspective as they all improve safety, cycling, future transportation trends, network resiliency etc. The do nothing option does not improve these transportation aspects and increases traffic and emergency response times etc.			
Constructability and Cost				
1. Construction Costs	No costs. 	Approximately \$1.2M 		
2. Existing Utilities	No utility impacts. 	Similar utility impacts for all options. There is no significant difference between options 1,2 and 3. 		
3. Construction Phasing	No construction. 	Same construction phasing applicable to all options. There is no significant difference between options 1,2 and 3. 		
4. Constructability Complexity <ul style="list-style-type: none"> Construction of soil conditions, geometrics etc. 	No constructability. 	Similar constructability complexity between all options. There is no significant difference between options 1,2 and 3. 		

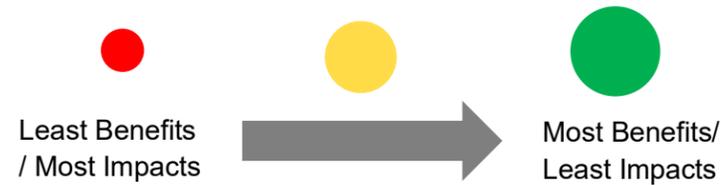


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Evaluation	 Preferred			
Summary	Do nothing is preferred from constructability and cost perspective since it has no additional costs or construction. Options 1,2,3 are all equal in constructability and cost comparison.			
Overall Evaluation	 Not Preferred	 Preferred	 Not Preferred	 Not Preferred
PREFERRED SUMMARY	Option 1 emerged as the preferred alternative relative to Options 2 and 3 and is recommended to be carried forward. Generally, Options 2 and 3 have an adverse impact on development potential and regularity of development blocks along this corridor. While Do- nothing is preferred in a number of factor, it does not support and advance the establishment implementation of new public street extension of Millway Avenue as part of more broadly the VMC planned street network and provides greater opportunity for future park connection.			

Legend



 Not Preferred

 Preferred