
















Analysis and Evaluation of the Lauzon Parkway Extension Route Alternatives – Highway 401 to Highway 3

Factor/Criteria	Highway 401 to Highway 3		
	Option 1 (Red)	Option 2 (Purple)	Option 3 (Orange)
1.0 SOCIO-ECONOMIC ENVIRONMENT			
1.1 Impacts to Property – number of properties impacted – residences/businesses displaced – accesses affected	– Impacts 10 properties – Potentially displaces 1 residence at Sexton Sideroad & Highway 3 – Maintains all accesses, however, 4 existing Sexton Sideroad accesses will now be onto a 4-lane arterial roadway.	– Impacts 14 properties – Potentially displaces 1 residences at Sexton Sideroad & Highway 3 – Maintains all accesses, however, results in indirect access for 3 properties via a new local access road.	– Impacts 14 properties – Displaces 0 residences/businesses – Maintains all accesses, however, results in a new access route to Highway 3 to/from Sexton Sideroad as a result of the cul-de-sac.
1.2 Potential effects on agricultural lands	– All property in the area is designated Class 2 agricultural; removes 11.2 ha of agricultural land – Edge impacts to 9 agricultural properties – Severance of 1 agricultural property	– All property in the area is designated Class 2 agricultural; removes 15.7 ha of agricultural land – Edge impacts to 9 agricultural properties – Severance of 4 agricultural properties	– All property in the area is designated Class 2 agricultural; removes 17.2 ha of agricultural land – Edge impacts to 8 agricultural properties, including impacts to 5 properties south of Highway 3. – Severance of 6 agricultural properties
1.3 Potential Nuisance effects – Noise, air quality, etc.	– 5 residences on Sexton Sideroad, adjacent to the corridor, will be exposed to increased traffic volumes and exposure to associated nuisance effects (i.e., noise and air quality)	– 1 residences at Sexton Sideroad & CR 46, adjacent to the corridor will be exposed to increased traffic volumes and exposure to associated nuisance effects (i.e., noise and air quality)	– No impact
1.4 Impacts to cemeteries, schools, places of worship, unique community features	No Impact		
1.5 Impacts to Recreational Features	No Impact		
1.6 Opportunity for pedestrian/cycling facilities	All options provide the opportunity for pedestrian/cycling facilities.		
1.7 Compatibility with or impacts to future land use	The Lauzon Parkway Extension provides the transportation network that is required to support the future growth planned		
Socio-Economic Environment Summary			
<p>Option 3 is the least preferred as it results in the greatest number (14) of property impacts: severance of 4 agricultural properties and 8 agricultural edge impacts, including impacts to 5 properties south of Highway 3.</p> <p>In comparing Options 1 and 2, Option 2 results in less potential nuisance effects (i.e., noise and air quality) with only 1 residence at Sexton Sideroad & CR 42 exposed to increased traffic volumes, while Option 1 results in 5 residences on Sexton Sideroad exposed to increased volumes. However, Option 2 results in greater overall property and agricultural impacts, including severance of 4 agricultural properties.</p> <p>Therefore, although Option 1 results in greater nuisance effects to 5 residences adjacent to the corridor, it results in the least overall direct property impacts. Also, it is anticipated displacement of the residence at Sexton Sideroad and Highway 3 can be avoided through refinement of the corridor during the next phase of design.</p> <p>Therefore, from a socio-economic perspective Option 1 is preferred.</p>			

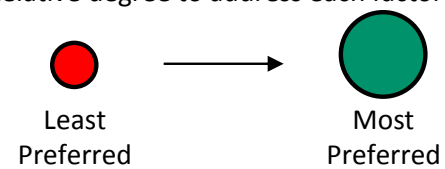
Factor/Criteria	Highway 401 to Highway 3		
	Option 1 (Red)	Option 2 (Purple)	Option 3 (Orange)
2.0 CULTURAL ENVIRONMENT			
2.1 Impact to built heritage resources (BHR)/ cultural heritage landscapes (CHL)	<ul style="list-style-type: none"> – Potentially displaces 5412 Highway 3, a potential built heritage feature – Minor edge effects to 2 potential heritage landscapes, agricultural farm complexes at 5676/5680 Highway 3 and 6703/6715 CR 42 	<ul style="list-style-type: none"> – Potentially displaces 5412 Highway 3, a potential built heritage feature – Severs a potential heritage landscape, agricultural farm complex 6703/6715 CR 42 – Minor edge effects to a potential heritage landscape, agricultural farm complex at 5676/5680 Highway 3 	<ul style="list-style-type: none"> – Minor edge effects to 2 potential heritage landscapes, agricultural farm complexes at 5676/5680 Highway 3 and 6703/6715 CR 42
2.2 Impact to archaeological resources	Stage 2 Archaeological Assessment required for the new route		
Cultural Environment Summary			
<p>From a cultural environment perspective, Option 2 is least preferred as it results in the potential displacement of one residence that is a potential built heritage feature, and results in property taking from 2 farm complexes identified as potential cultural heritage landscapes. Option 3 results in the least impacts to the built heritage resources / cultural heritage landscapes in the study</p> <p>All alternatives result in similar impacts to archaeology as the entire study area is within an area of archaeological potential. A Stage 2 Archaeological Assessment will be carried out for the</p>			
3.0 NATURAL ENVIRONMENT			
3.1 Impact to vegetation	<ul style="list-style-type: none"> – Crosses agricultural lands between Highway 401 & CR 46. – Natural vegetation potentially removed is limited to a narrow band of cultural habitat along Sexton Sideroad and a small area of cultural habitat at CR 46 and rail crossings. – Several plant species of conservation concern have been identified along the rail line; most are located southwest of the option. – Potentially displaces a small population of a (non-native) plant species of conservation concern (SE1). 	<ul style="list-style-type: none"> – Crosses predominantly agricultural lands. – Natural vegetation potentially removed is limited to a small area of cultural habitat at CR 46 and rail crossings. – Several plant species of conservation concern have been identified along the rail line. Potentially displaces 2 plant species of conservation concern (S3 and S4). 	<ul style="list-style-type: none"> – Crosses predominantly agricultural lands. – Natural vegetation potentially removed is limited to a small area of cultural habitat at CR 46 and rail crossings. – Several plant species of conservation concern have been identified located along the rail line. Potentially displaces 2 plant species of conservation concern (S3 and S4).
3.2 Impact to aquatic habitat	<ul style="list-style-type: none"> – Removes isolated dug pond on east side of Little River, likely not a constraint from a fisheries perspective. – Parallels Little River to the east in a section with limited riparian cover – does not preclude future riparian enhancement. 	<ul style="list-style-type: none"> – Removes isolated dug pond on east side of Little River, likely not a constraint from a fisheries perspective. – Parallels Little River for a shorter distance than Option 1, then shifts further east. – Requires a new crossing of Sullivan Creek Drain (east-west reach south of the rail line). 	<ul style="list-style-type: none"> – Removes isolated dug pond on east side of Little River, likely not a constraint from a fisheries perspective. – Parallels Little River for a shorter distance than Options 1 and 2, then shifts further east. – Requires a new crossing of Sullivan Creek Drain (east-west reach south of the rail line).
3.3 Impact to wildlife	<ul style="list-style-type: none"> – No faunal species of conservation concern have been recorded along the corridor option. – There may be some suitable habitat for SAR / S1-S3 species. However, it is anticipated that given the proposed 	<ul style="list-style-type: none"> – No faunal species of conservation concern have been recorded along the corridor option. – There may be some suitable habitat for the SAR / S1-S3 species. However, it is anticipated that given the 	<ul style="list-style-type: none"> – One faunal species of conservation concern (Giant Swallowtail; S3) was recorded along the rail line. – There may be some suitable habitat for the SAR / S1-S3 species. However, it is anticipated that given the

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	works and minimal habitat removals, that impacts would be fairly minor and mitigatable. – Other potential faunal habitat impacts are anticipated to be fairly minor and mitigatable, given the nature of the proposed works (i.e. linear crossings or removals of narrow, culturally influenced vegetation and removal of the small dug pond – potential turtle habitat).	proposed works and minimal habitat removals, that impacts would be fairly minor and mitigatable. – Other potential faunal habitat impacts are anticipated to be fairly minor and mitigatable, given the nature of the proposed works (i.e. linear crossings or removals of narrow, culturally influenced vegetation and removal of the small dug pond – potential turtle habitat).	proposed works and minimal habitat removals, that impacts would be fairly minor and mitigatable. – Other potential faunal habitat impacts are anticipated to be fairly minor and mitigatable, given the nature of the proposed works (i.e. linear crossings or removals of narrow, culturally influenced vegetation and removal of the small dug pond – potential turtle habitat).
3.4 Impact to natural heritage planning	This route is outside of the area for which an NHS is being developed.		
3.5 Impact to stormwater management	Similar measures required for stormwater management (quality and quantity)		
Natural Environment Summary			
	<p>Based on field work and analysis completed to date, it is anticipated that any potential impacts are mitigatable and all options could be supported from a natural heritage perspective.</p> <p>All options require the removal of an isolated dug pond and small amounts of cultural habitat (road / rail edges; hedgerow trees).</p> <p>Option 1 is preferred over Option 2 and Option 3, as it results in relatively less potential for direct impact to plant species of conservation concern as well as no new watercourse crossings required.</p> <p>Therefore, from a natural environment perspective Option 1 is preferred.</p>		
4.0 TRANSPORTATION AND ENGINEERING			
4.1 Compatibility / connectivity with local road network	<ul style="list-style-type: none"> – Lauzon Parkway Extension would utilize the existing Sexton Sideroad from CR 46 to Highway 3. – The roadway would also be realigned at Highway 3 to eliminate the skewed intersection, which would also result in realignment (175 m) of Sexton Sideroad south of Highway 3. – The existing function of Sexton Sideroad to provide access to local properties would be maintained from CR 46 to Highway 3; an undivided 4-lane cross-section is proposed for this section. 	<ul style="list-style-type: none"> – Lauzon Parkway Extension would utilize the existing Sexton Sideroad for a short segment north of Highway 3, similar to Option 1. – Same as Option 1, the roadway would also be realigned at Highway 3 to eliminate the skewed intersection, which would also result in realignment (175 m) of Sexton Sideroad south of Highway 3. – At CR 46, the existing Sexton Sideroad intersection is too close to the proposed Lauzon Parkway intersection, and the Sexton Sideroad intersection at CR 46 would be closed. – The remaining portion of Sexton Sideroad would be cul-de-sac'd at the rail line and a new local roadway connection to the Lauzon Parkway Extension would be provided. 	<ul style="list-style-type: none"> – The future intersection of the Lauzon Parkway Extension at Highway 3 impacts the existing Sexton Sideroad at Highway 3, as it is too close (i.e., less than 2 km). – Highway 3 is classified as a Principle Arterial Highway and in accordance with MTO standards, the desired intersection spacing is between 3 km and 8 km, with a minimum spacing of 2 km. – The existing Sexton Sideroad intersection at Highway 3 would be cul-de-sac'd and a new local roadway connection to the Lauzon Parkway Extension would be provided – Sexton Sideroad south of Highway 3 would also be significantly realigned to avoid having two offset T-intersections on Highway 3, resulting in approximately 1.2 km of out-of-way travel compared to options 1 or 2
4.2 Future Traffic Needs	All alternative provide adequate capacity to accommodate forecasted traffic volumes.		
4.3 Road Safety & Geometrics			
• Horizontal alignment (number of	– 4 horizontal curves @ design speed 100 km/h (R 490m)	– 3 horizontal curves @ design speed 100 km/h (R 490m)	– 4 horizontal curves @ design speed 100 km/h or greater

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horizontal curves)	– 2 horizontal curves south of Highway 3 (R 70m and R 250m)	– 1 horizontal curve @ design speed 90 km/h (R 350m) – 2 horizontal curves south of Highway 3 (R 70m and R 250m)	(R 500m; R 600m; R 6000m; R 1500m) – 1 horizontal curve @ design speed 90 km/h (R 380m) – 2 horizontal curves south of Highway 3 @ design speed 80 km/h (R 250m)
• Intersection spacing of crossing roads	– Good spacing to the existing CR 46/CR 17 intersection (775 m unsignalized)	– Very closely spaced to the existing CR 46/Sexton Sideroad intersection (125 m - unsignalized) – Good spacing to existing CR 46/ CR 17 intersection (650 m – unsignalized)	– Good spacing to the existing CR 46/Sexton Sideroad intersection (475 m - unsignalized) – Good spacing to existing CR 46/ CR 17 intersection (325 m - unsignalized)
• Number of skewed intersections	1 - 76° skew (County Road 46)	1 - 73° skew (County Road 46) 1 – 63° skew (rail line)	No skewed intersection
• Intersection spacing to at-grade rail tracks (CN) crossing	Very close spacing to County Road 46 – 150 m, however, considering the very low usage or the potential abandonment of the rail line, no significant impacts are expected.	Adequate spacing to County Road 46 – 250 m, and considering the very low usage or the potential abandonment of the rail line, no significant impacts are expected.	Adequate spacing to County Road 46 – 300 m, and considering the very low usage or the potential abandonment of the rail line, no significant impacts are expected.
• Safety concerns associated with the new alignment and any changes to the local road network	All alternatives provide standard lane and shoulder widths; therefore, similar safety performances		
4.4 Constructability	Not difficult to construct. Temporary measures required to maintain traffic on Sexton Sideroad.	Route along new alignment. No constructability issues.	
4.5 Utilities	Relocation of hydro poles located along west side of Sexton Sideroad Potential minor relocation of hydro poles located along north side County Road 46	Potential minor relocation of hydro poles located along north side County Road 46	Potential minor relocation of hydro poles located along north side County Road 46
4.6 Costs (Construction and Property)	Lower cost associated with widening existing Sexton Sideroad (lower property and construction costs)	Higher cost associated with acquiring additional property and constructing a new roadway.	Higher cost associated with acquiring additional property and constructing a new roadway.
Transportation Summary			
	<p>All alternative provide adequate capacity to accommodate forecasted traffic volumes.</p> <p>Option 3 results in significant impacts to the existing local road network, requiring a cul-de-sec of Sexton Sideroad, implementation of a new local roadway to provide access between Sexton Sideroad and the Lauzon Parkway Extension, and a significant realignment (~1.2 km) of Sexton Sideroad south of Highway 3. Option 3 results in close intersection spacing on Highway 3 to Sexton Sideroad and requires a cul-de-sac of Sexton Sideroad just north of Highway 3. It is also recognized that the study area is primarily agricultural land uses and that any significant changes to the existing local road network has the potential to impact the movement of farm traffic.</p> <p>Option 1 utilizes an existing transportation corridor, Sexton Sideroad from County Road 46 to Highway 3 and would maintain the function of the existing roadway by maintaining the existing 4 property accesses. The roadway would also be realigned at Highway 3 to eliminate the existing skewed intersection. All options result in realignment of Sexton Sideroad south of Highway 3.</p> <p>In considering roadway geometrics and safety, Option 1 is preferred in that it has a relatively straight alignment and maintains good intersection spacing on CR 46 and Highway 3, while Options 2 and 3 both have curvilinear alignments. Although Option 1 results in close spacing (150 m) of the rail line to the Sexton Sideroad & CR 46 intersection, however, considering the very low usage or the potential abandonment of the rail line, no significant impacts are expected. In the event the rail line is maintained, recognizing the local rural land use and the anticipated, the intersection signals could be coordinated with the adjacent rail crossing to minimizing potential conflicts. It is also recognized that there is a possibility this rail corridor could be converted into a</p>		

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<p>local recreation trail.</p> <p>In terms of constructability, utilities and costs (construction and property), Option 1 would require relocation of the existing hydro poles along the west side of Sexton Sideroad as well as temporary traffic staging on Sexton Sideroad during construction; however, Option 1 results in lower property and construction costs due to efficient use of existing infrastructure and right-of-way.</p> <p>From a transportation perspective, Option 1 is preferred.</p>			
<p>Overall Summary</p>			
	<p>Option 3 is the least preferred as Socio-Economic Environment as it results in the greatest number of property and agricultural impacts; and is also the least preferred in Technical Considerations, as it results in significant impacts to the existing local road network, requiring a cul-de-sac of Sexton Sideroad, implementation of a new local roadway to provide access between Sexton Sideroad and the Lauzon Parkway Extension, and a significant realignment (~1.2 km) of Sexton Sideroad south of Highway 3.</p> <p>In comparing Options 1 and 2, Option 2 results in less potential nuisance effects (i.e., noise and air quality) with only 1 residence at Sexton Sideroad & CR 42 exposed to increased traffic volumes, while Option 1 results in 5 residences on Sexton Sideroad exposed to increased volumes. However, Option 2 results in greater overall property and agricultural impacts, including severance of 4 agricultural properties, as well as greater impacts to the local road network, resulting in the closure of the existing Sexton Sideroad intersection at CR 46 as it would be too close the Lauzon Parkway & CR 46 intersection.</p> <p>Therefore, Option 1 is preferred in Socio-Economic and Natural Environments, as well as Technical Considerations. Option 1 results in the least overall property impacts, although it results in incrementally greater nuisance effects to residences adjacent to the corridor; it utilizes an existing transportation corridor with a relatively straight alignment and adequate intersection spacing while maintaining the local access function to 4 adjacent properties; it also results in relatively less potential for direct impact to plant species of conservation concern as well as no new watercourse crossings.</p> <p>Therefore, Option 1 is preferred over Options 2 and 3.</p>		

Relative degree to address each factor:



Analysis and Evaluation of Lauzon Parkway & Highway 401 Interchange Alternatives

Factor/Criteria	Option1: Parclo A 4 Alternative	Option 2: Interim Roundabout & Ultimate Parclo A4
1.0 SOCIO-ECONOMIC ENVIRONMENT		
1.1 Impacts to Property and Access – Residential, commercial, industrial and agricultural properties	– Both alternatives have similar footprints and property requirements. – The lands north of Highway 401 are part of the Sandwich South Secondary plan and are designated for urban growth. – The lands south of Highway 401 are planned to remain agricultural; both alternatives result in similar edge impacts to two properties.	
1.2 Community effects – Gateway features to new community – Accommodation of pedestrian / cycling facilities	– Opportunity for a gateway signage feature could be located within the interchange footprint subject to MTO permit approval – A separate multi-use trail crossing of Highway 401 will be provided within the vicinity of the interchange (location TBD)	– The roundabout intersection structure would provide a special gateway feature and landscaping to the Sandwich South Community and to East Windsor, and also reinforce the change in driving environment along Lauzon Parkway from urban to the north to rural to the south – A separate multi-use trail crossing of Highway 401 will be provided (location TBD)
2.0 CULTURAL ENVIRONMENT		
2.1 Archaeology and Heritage Features	Stage 2 Archeology Assessment is required for the new route and interchange	
3.0 NATURAL ENVIRONMENT		
3.1 Impacts to stormwater management	Similar measures required for stormwater management (quality + quantity)	
3.2 Impact on vegetation, wildlife, landscape, and aquatic resources	Similar minimal impacts on natural resources. A small section of the Little River Drain channel is within the footprint of both options and would require new culvert installations/extensions. Both options cross predominately agricultural land and would remove a small amount of culturally influenced vegetation.	
4.0 TECHNICAL CONSIDERATIONS		
4.1 Traffic Operations (level of service)	This alternative would provide good level-of-service for full build-out of the Sandwich South Area, which is beyond the 2031 planning horizon	– Provides good LOS (C/D) for the 2031 planning horizon – Provides poor LOS for full build-out scenario (beyond 2031)
4.2 Geometric and Safety	– Designed to meet geometric design standards – Parclo A4 is a standard type of interchange and users are very familiar with this type of design in southern Ontario. This configuration provides: <ul style="list-style-type: none"> ○ High capacity configuration as mostly free-flow moves; with both off-ramps signal-controlled at the crossing road (Lauzon Parkway) ○ Simple three-leg ramp terminal intersections ○ Direct on-ramps improves operations and safety for entering freeway traffic (i.e. no-left turn traffic through roundabout) ○ The signalized ramp terminals have left-turn conflict points from the off-ramps only. 	– Designed to meet geometric design standards, including sightlines; profile on Lauzon Parkway flattened to 2% through roundabouts – The Diamond configuration is a standard type of interchange and users are very familiar with this type of design in southern Ontario; however, the ramp terminal intersections are roundabouts rather than signalized intersection. Roundabouts at interchange ramp terminals are uncommon and users would require some extra level of attention initially. Overall, this configuration provides: <ul style="list-style-type: none"> ○ Fewer overall conflict points and no left-turn conflicts ○ Can reduce lane requirements between intersections, including bridges between interchange ramp terminals as compared to a diamond with signalized ramp terminals ○ Slightly less capacity on crossing road (Lauzon Parkway) as roundabout reduces traffic speeds; however reduces queue lengths for exiting freeway traffic
4.3 Flexibility to Meet Future Needs	– Accommodates full build-out (i.e., beyond 2031) traffic demand of Secondary Plan	– Designed to accommodate future bridge widening for expansion to Parclo A-4 interchange when warranted by ramp terminal LOS
4.4 Integration to Adjacent Network	– Interim 2021 plan includes a roundabout at E-W Arterial to the north and traffic signals at CR46 to the south – Ultimate 2031 adjacent north and south intersections will be signalized	– Interim 2021 plan includes a roundabout at E-W Arterial to the north and traffic signals at CR46 to the south – Ultimate 2031 adjacent north and south intersections will be signalized
4.5 Emergency Services	– Optional installation of signal pre-emption hardware for emergency vehicles	– No signal pre-emption for emergency vehicles; however delays are minimal and should allow quick access for emergency vehicles

Analysis and Evaluation of Lauzon Parkway & Highway 401 Interchange Alternatives

Factor/Criteria	Option1: Parclo A 4 Alternative	Option 2: Interim Roundabout & Ultimate Parclo A4
4.6 Cost <ul style="list-style-type: none"> - Construction and Property - Maintenance 	<ul style="list-style-type: none"> - Both Option 1 and 2 have Lauzon Parkway over Highway 401. A preliminary screening of Lauzon Parkway going over vs. under Highway 401 was considered. Lauzon Parkway going over Highway 401 was preferred as it would: require less embankment fill due to the smaller roadway width of Lauzon Parkway; provide for one narrower bridge structure whereas the divided Highway 401 would require two structures; and provide for easier on-going bridge maintenance, traffic management, and staging. 	<ul style="list-style-type: none"> - Construction Costs \$32.2 M (including NPV of future Parclo A4 conversion) - Property Costs for both options are similar as they have the same ultimate interchange footprint - Both options have similar maintenance costs, traffic signals only required when future conversion. Also this option has a narrower bridge and two less ramps nominally reducing costs for routine bridge and pavement rehab for the interim condition.
Overall Summary	<p>Option 2: Interim Roundabout & Ultimate Parclo A4 is the preferred alternative as it meets the interim and ultimate traffic demand with good LOS with lower present day construction costs. The interim Diamond configuration with roundabout ramp terminal intersections has an initial build of 4 ramps, compared with 6 ramps in the Parclo A-4, and eliminates the need to construct and maintain traffic signals for potentially upwards of 30-40 years. Although the roundabout ramp terminal may be an unconventional intersection for a freeway interchange, it reduces the severity of accidents by increasing driver attentiveness and decreasing T-Bone collisions.</p> <p>Additionally, the roundabout offers unique and special gateway features for the planned Sandwich South Secondary Plan area, without major differences on impacts to the surrounding properties, cultural or natural environments.</p> <p>Overall, Option 2 offers flexibility to reduce initial construction costs with staged implementation of interchange capacity (i.e., ramps and structure width) to meet the forecasted traffic demands as growth occurs in the Sandwich South Secondary Plan area for the next 30-40 years and beyond.</p>	

Assessment and Evaluation of Lauzon Parkway & Highway 3 Intersection Alternatives

Alternatives	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Factor/Criteria	Sexton Sideroad	East of Sexton Sideroad	West of Sexton Sideroad	West of Sexton Sideroad
1.0 SOCIO-ECONOMIC ENVIRONMENT				
1.1 Property and Access - Impacts on residential, commercial, industrial and agricultural properties	<ul style="list-style-type: none"> - Directly impacts 4 properties - Potentially displaces 1 residence at Sexton Sideroad and Highway 3 - Minor edge impacts to 3 Class 2 agricultural properties 	<ul style="list-style-type: none"> - Directly impacts 5 properties - Edge impacts to 1 Class 2 agricultural properties - Severance of 4 Class 2 agricultural properties - Significant impacts to agricultural operations 	<ul style="list-style-type: none"> - Directly impacts 5 properties - Edge impacts to 1 Class 2 agricultural properties - Severance of 4 Class 2 agricultural properties 	<ul style="list-style-type: none"> - Directly impacts 7 properties - Edge impacts to 2 Class 2 agricultural properties - Severance of 5 Class 2 agricultural properties
1.2 Community Effects - Impacts on institutions (schools, places of worship) - Air Quality / Noise - Accommodation of pedestrian / cycling facilities	<ul style="list-style-type: none"> - One (1) residence at Highway 3 & Sexton Sideroad intersection, adjacent to corridor would be exposed to increased traffic volumes and exposure to nuisance effects - Pedestrians and cyclists would be accommodated along proposed multi-use trail with an at-grade crossing at the Highway 3 intersection 	<ul style="list-style-type: none"> - One (1) residence on Highway 3, adjacent to corridor would be exposed to increased traffic volumes and exposure to nuisance effects - Pedestrians and cyclists would be accommodated along proposed multi-use trail with an at-grade crossing at the Highway 3 intersection 	<ul style="list-style-type: none"> - Three (3) residences on Highway 3, adjacent to corridor would be exposed to increased traffic volumes and exposure to nuisance effects - Pedestrians and cyclists would be accommodated along proposed multi-use trail with an at-grade crossing at the Highway 3 intersection 	<ul style="list-style-type: none"> - Two (2) residences on Highway 3, adjacent to corridor would be exposed to increased traffic volumes and exposure to nuisance effects - Pedestrians and cyclists would be accommodated along proposed multi-use trail with an at-grade crossing at the Highway 3 intersection
2.0 CULTURAL ENVIRONMENT				
2.1 Archaeology	Stage 2 Archaeological Assessment required for the new route			
2.2 Heritage Features	<ul style="list-style-type: none"> - Potentially displaces 5412 Highway 3, at Sexton Sideroad intersection, a potential built heritage feature 	<ul style="list-style-type: none"> - Minor edge effects to a potential cultural heritage landscape, agricultural farm complex at 5680 Highway 3 	- No impact	- No impact
3.0 NATURAL ENVIRONMENT				
3.1 Impacts to stormwater management	Similar measures required for stormwater management (quantity and quality)			
3.2 Impacts to vegetation, wildlife, and aquatic resources	Similar minimal impacts to natural resources; the alignments cross primarily agricultural lands and culturally dominated vegetation			
4.0 TECHNICAL CONSIDERATIONS				
4.1 Transportation <ul style="list-style-type: none"> - Traffic Operations (future demand/LOS) - Safety and geometrics - Connectivity with local road network - Highway 3 Intersection spacing 	<ul style="list-style-type: none"> - All alternatives provide adequate capacity to accommodate forecasted traffic volumes - All alternatives meet geometric design standards (i.e., horizontal curve radii) - Realignment of existing Highway 3 intersection to eliminate the skew - Not within proximity to intersection to effect Highway 3 operations 	<ul style="list-style-type: none"> - All alternatives provide adequate capacity to accommodate forecasted traffic volumes - All alternatives meet geometric design standards (i.e., horizontal curve radii) - Closure of existing Sexton Sideroad & Highway 3 intersection - Not within proximity to intersection to effect Highway 3 operations 	<ul style="list-style-type: none"> - All alternatives provide adequate capacity to accommodate forecasted traffic volumes - All alternatives meet geometric design standards (i.e., horizontal curve radii) - Closure of existing Sexton Sideroad & Highway 3 intersection - Some out-of-way travel for traffic to/from Highway 3 EB/SB - Will effect Highway 3 operations 	<ul style="list-style-type: none"> - All alternatives provide adequate capacity to accommodate forecasted traffic volumes - All alternatives meet geometric design standards (i.e., horizontal curve radii) - Closure of existing Sexton Sideroad & Highway 3 intersection - Some out-of-way travel for traffic to/from Highway 3 EB/SB - Will effect Highway 3 operations
4.4 Cost (property/construction)	Similar costs associated with each alternative.			
Overall Summary	All alternatives accommodate forecasted traffic volumes, meet geometric design standards, and will require closure of the existing Sexton Sideroad and Highway 3 intersection. Alternative 4 is the least preferred overall as it results in the greatest direct property impacts (7) and the most out-of-way travel. In comparing Alternatives 2 and 3, it is noted they result in similar direct property impacts (5), however Alternative 3 results in additional nuisance effects, newly exposing three residences on Highway 3 to increased traffic volumes.			

Assessment and Evaluation of Lauzon Parkway & Highway 3 Intersection Alternatives

	<p>Alternative 1 is preferred overall in that it results in the least (4) direct impacts to agricultural lands. Although, Alternative 1 potentially displaces 1 residence at the intersection of Highway 3 & Sexton Sideroad and newly exposes one residence on Highway 3 to increased traffic volumes, it does not severe any existing agricultural properties, and results in only minor edge impacts to two agricultural properties.</p>
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Analysis and Evaluation of Lauzon Parkway & Highway 401 Multi-Use Trail Crossing Alternatives

Factor/Criteria	Option 1 Adjacent to Lauzon Parkway Bridge	Option 2 Separate Crossing	Option 3 Mid Block Separate Crossing	Option 4 Shared Crossing with 9 th Concession
1.0 SOCIO-ECONOMIC ENVIRONMENT				
1.1 Impacts to Property and Access – Residential, commercial, industrial and agricultural properties	– Minimal impact to property beyond the Highway 401 Interchange; 0.85 ha of ROW required for path and bridge embankments	– Minimal impact to property beyond the Highway 401 Interchange; 0.29 ha of ROW required for path and bridge embankments	– Minimal impact to property beyond the Highway 401 Interchange; 0.35 ha of ROW required for path and bridge embankments	– Minimal impact to property beyond the Highway 401 Interchange; 0.45 ha of ROW required for path and bridge embankments
	– The lands north of Highway 401 are part of the Sandwich South Secondary plan and are designated for urban growth. – The lands south of Highway 401 are planned to remain agricultural; both alternatives result in similar edge impacts to two properties.			
1.2 Community effects – Accommodation of pedestrians / cyclists	– Maintains continuity of Lauzon Parkway Multi-use Trail	– Maintains continuity of Lauzon Parkway Multi-use Trail with some out of way travel	– Maintains continuity of Lauzon Parkway Multi-use Trail with some out of way travel	– Maintains continuity of Lauzon Parkway Multi-use Trail, however crosses at the 9 th Concession, with out of way travel
2.0 CULTURAL ENVIRONMENT				
2.1 Archaeology and Heritage Features	Stage 2 Archeology Assessment is required for the new Lauzon Parkway route and interchange			
3.0 NATURAL ENVIRONMENT				
3.1 Impacts to stormwater management	– Crosses the Little River north of the interchange.	– Crosses the Little River north and south of the interchange.	– Crosses the Little River north and south of the interchange.	– Crosses the Little River north and south of the interchange.
3.2 Impact on vegetation, wildlife, landscape, and aquatic resources	Similar minimal impacts on natural resources. A small section of the Little River Drain channel is within the footprint of all. All options cross predominately agricultural land and would remove a small amount of culturally influenced vegetation. Adjacent lands north of Highway 401 are included in the Secondary Plan.			
4.0 TECHNICAL CONSIDERATIONS				
4.1 Geometrics and Safety	– Designed to meet geometric design standards for cycling facilities – Complete separation of vehicles and cyclists/pedestrians – Pathway is close to traffic – Close proximity of bridges and high fills to the interchange ramp terminals. Intersections may cause sight distance issues	– Designed to meet geometric design standards for cycling facilities – Complete separation of vehicles and cyclists/pedestrians – Requires construction of embankment in ROW – Close proximity of bridges and high fills to the interchange ramp terminals. Intersections may cause sight distance issues	– Designed to meet geometric design standards for cycling facilities – Complete separation of vehicles and cyclists/pedestrians – Users may travel along Lauzon Parkway in order to avoid perceived out-of-way travel	– Designed to meet geometric design standards for cycling facilities – Complete separation of vehicles and cyclists/pedestrians – Users may travel along Lauzon Parkway in order to avoid out-of-way travel
4.2 Out-of-Way Travel – Pedestrians (1.2m/s) – Cyclists (4.2m/s)	– This is the most direct route	– Out-of-Way distance is 450 m, which correlates to about 6 min for pedestrians and 2 min for cyclists	– Out-of-Way distance is 700 m, which correlates to about 10 min for pedestrians and 3 min for cyclists	– Out-of-Way distance is 1500 m, which correlates to about 21 min for pedestrians and 6 min for cyclists
4.3 Connectivity with planned and existing Active Transportation Network and Interchange	– Good integration with planned Lauzon Parkway Multi-use Trail	– Good integration with planned Lauzon Parkway Multi-use Trail	– Good integration with planned Lauzon Parkway Multi-use Trail – Good opportunity for connections to 9 th Concession and to roads in adjacent planned development	– Integration with planned Lauzon Parkway Multi-use Trail, with out-of-way travel
4.4 Cost – Construction (Assumed typical truss type pedestrian structures)	– 1 bridge over N-W Ramp (2 spans totalling 72 m) – 1 bridge over Highway 401 and W-N/S ramp (6 spans totalling 252 m) – Assume 1 bridge crossings over Little River (12 m) – 1 retaining wall – \$ 6.3 million Bridges and Embankments	– 1 bridge over Highway 401 (3 spans totalling 132 m) – 1 bridge over interchange ramps (2 spans totalling 93 m) – Assume 2 bridge crossings over Little River – \$ 4.0 million Bridges and Embankments	– 1 bridge over Highway 401 (3 spans totalling 129 m) – Assume 2 bridge crossings over Little River – \$ 2.7 million Bridges and Embankments	– Assume 2 bridge crossings over Little River – 1 bridge over Highway 401 (98 m length) – \$ 2.4 million Bridges and Embankments
Overall Summary	<p>In summary all alternatives provide a continuous connection of the Lauzon Parkway Multi-use Trail north and south of Highway 401 and a connection that is completely separated from the roadway vehicle traffic. Overall, Options 1 and 4 are the least preferred. Option 1 results in significantly higher construction costs than the other three alternatives as it requires 3 new structures and 1 retaining wall. Option 4 results in significantly longer out-of-way travel than the other three alternatives, potentially reducing the attractiveness of the facility for recreational users.</p> <p>In comparing Options 2 and 3, it is noted that both alternatives have similar out-of-way travel, however Option 3 requires 1 bridge resulting in lower construction costs. Option 3 also has the potential to offer good connectivity with other future cycling routes as the surrounding areas are developed.</p> <p>Therefore, Option 3 is the preferred alternative overall.</p>			

Assessment and Evaluation County Road 42 Widening Alternatives

Two options were considered in the widening of County Road 42 from Manning Road (CR 19) to Puce Road (CR 25):

Option 1 – Widen North

This option would widen the roadway to the north and hold the south edge of pavement.

Option 2 – Widen from Centreline

This option would widen the roadway symmetrically, north and south, from the existing pavement centreline.

Factor/Criteria	Option 1 Widen North	Option 2 Widen from Centreline
SOCIO-ECONOMIC ENVIRONMENT		
Property and Access – Residential, commercial, industrial, agricultural	<ul style="list-style-type: none"> – Edge impacts to 14 residential properties <ul style="list-style-type: none"> – Displaces 1 residence at 390 CR 42 – Close proximity to 9 residences; potential nuisance effects due to increased traffic exposure – Edge impacts to 13 agricultural properties – Edge impacts to 4 commercial properties <ul style="list-style-type: none"> – Displaces some parking for 1 business (Floor Mart) – Impacts gas station at CR 42 and Elmstead Rd. 	<ul style="list-style-type: none"> – Edge impacts to 35 residential properties <ul style="list-style-type: none"> – Displaces 1 residence at 390 CR 42 – Close proximity to 5 residences; potential nuisance effects due to increased traffic exposure – Edge impacts to 33 agricultural properties – Edge impacts to 5 commercial properties <ul style="list-style-type: none"> – Displaces some parking for 1 business (Floor Mart) – Impacts gas station at CR 42 and Elmstead Rd.
CULTURAL ENVIRONMENT		
Archaeology	– A Stage 1 archaeological assessment of CR 42 has been completed; given the extensive disturbance due to ditching and service installation along CR 42, no further archeological assessment is required.	
Built Heritage Resources (BHR) and Cultural Heritage Landscapes (CHL)	Preliminary identification of built heritage features older than forty years of age and cultural heritage landscapes based solely on visual inspection from the public roadways:	
	<ul style="list-style-type: none"> – Impacts 3 CHLs: <ul style="list-style-type: none"> ○ CR42 through Lakeshore is a CHL ○ Edge impacts to 1 farm complex and 1 former farm complex – Indirect effects to BHR – residence at corner of Patillo Road – In close proximity to Puce Memorial Cemetery (CHL) – Requires widening of the Puce River Bridge (BHR) 	<ul style="list-style-type: none"> – Impacts 7 CHLs: <ul style="list-style-type: none"> ○ CR42 through Lakeshore is a CHL ○ Edge impacts to 5 farm complexes and 1 former farm complex – Indirect effects to BHR – residence at corner of Patillo Road – In close proximity to Puce Memorial Cemetery (CHL) – Requires widening of the Puce River Bridge (BHR)

Assessment and Evaluation County Road 42 Widening Alternatives

Factor/Criteria	Option 1 Widen North	Option 2 Widen from Centreline
NATURAL ENVIRONMENT		
Drainage and stormwater management	<ul style="list-style-type: none"> – Requires widening of 2 bridges: Pike Creek Bridge and Puce River Bridge – Requires extension of 4 culverts on CR 42 	<ul style="list-style-type: none"> – Requires widening of 2 bridges: Pike Creek Bridge and Puce River Bridge – Requires extension of 4 culverts on CR 42 – Requires relocation of 4 culverts crossing 6th, 7th, 8th, and 9th Concession Road south of CR 42 – Impacts 3 medium to large size municipal drains on south side of CR 42; Chauvin Drain, 8th Concession Drain, and Baseline Drain
Vegetation	<ul style="list-style-type: none"> – 1 SAR and 1 S3 species were recorded north and south of CR 42; both species are candidates for transplantation – 1 SAR species present north and south of Pike Creek Bridge 	<ul style="list-style-type: none"> – 1 SAR and one S3 species were recorded north and south of CR 42; both species are candidates for transplantation – 1 SAR species present north and south of Pike Creek Bridge – 1 Unidentified species recoded on south side of CR 42 – More populations of vegetation species on south side of CR 42 due to open water drains
Aquatic resources	<ul style="list-style-type: none"> – Impacts Pike Creek and Puce River due to bridge widening 	<ul style="list-style-type: none"> – Impacts Pike Creek and Puce River due to bridge widening – All drains on south side of CR 42 support fish habitat
Wildlife	<ul style="list-style-type: none"> – Several SAR were recorded within or adjacent to the ROW – Potential habitat for additional SAR 	
TECHNICAL CONSIDERATIONS		
Utilities	<ul style="list-style-type: none"> – Requires re-alignment of wooden hydro poles on north side of CR 42 for extent of roadway, approximately 6.8 km – Potential re-alignment of 200 mm watermain on north side of CR 42 	<ul style="list-style-type: none"> – Requires re-alignment of wooden hydro poles on north side of CR 42 for extent of roadway, approximately 6.8 km – Potential re-alignment of 200 mm watermain on north side of CR 42
Cost	<ul style="list-style-type: none"> – Lower cost to widen 2 bridge structures to one side – Estimated \$2.8 million for hydro pole relocation – Similar property cost 	<ul style="list-style-type: none"> – Higher cost to widen 2 structures in on both sides – Estimated \$2.8 million for hydro pole relocation – Estimated \$2.6 million for drain re-alignment – Similar property cost









Assessment and Evaluation County Road 42 Widening Alternatives

Factor/Criteria	Option 1 Widen North	Option 2 Widen from Centreline
OVERALL SUMMAY	<p>Overall, Option 1 results in fewer impacts to properties, cultural heritage landscapes, and the natural environment. Although, both options displace one residence, are in close proximity to the Puce Memorial Cemetery, and involve the re-alignment of the existing hydro poles along the north side of CR42, Option 2 also results in additional cost to re-align the municipal drains located on the south side of CR42.</p> <p>It is noted that the potential property impacts along the north side of CR42 between the Puce River Bridge and Puce Road can be avoided through refinement of the roadway alignment in preliminary design, recognizing that there is available ROW along the south side of CR42 and north of the Standish Drain. It is also noted that there are opportunities to reduce the standard cross-section in limited areas to minimize/avoid potential residential/commercial property impacts.</p> <p>Therefore Option 1: widening to the north is the preferred alternative.</p>	

Assessment and Evaluation of 7th Concession Road Alternatives (at Walker Road)

Alternatives	1	1A	2	2A	3	4	5	
Factor/Criteria	Do Nothing	Roundabout (5 leg)	Roundabout (4 leg)	RIRO with Realignment	RIRO without Realignment	Alternative Connection to Walker Road (South Option)	Alternative Connection to Walker Road (North Option)	Cul de Sac
1.0 SOCIO-ECONOMIC ENVIRONMENT								
1.1 Property and Access - Impacts to existing property and access	- No direct or indirect property or access impacts	- Some direct property and parking impacts to accommodate roundabout	- Some direct property and parking impacts to accommodate roundabout	- 7 th Connection realignment directly impacts (severs) adjacent property located between 7 th Concession and CN Rail north of E-W Arterial - Significant opposition from the adjacent property owner for this option	- No direct or indirect property or access impacts	- Property impact (business) for proposed alternative connection between 7 th Concession Road and Walker Road	- Minor property (parking lot) impacts for proposed alternative connection between 7 th Concession Road and Walker Road	- No direct property impacts - Indirect impacts to properties between Walker Road and 7 th Concession due to potential traffic infiltration
1.2 Community Effects - Impacts on institutions (schools, places of worship) - Air Quality / Noise - Accommodation of pedestrian / cycling facilities - Compatibility with or impacts to future land uses	- No impacts to existing air quality and noise levels - Pedestrian and cycling facilities are available - Does not support approved East Pelton and proposed Sandwich South Secondary Area Plans, does not provide proposed east-west roadway connection to Walker Road	- Minor improvements to air quality and noise levels - On-road bike lanes will terminate through the roundabout and cyclists must merge with traffic - Support future land use plans	- Minor improvements to air quality and noise levels - On-road bike lanes will terminate through the roundabout and cyclists must merge with traffic - Support future land use plans	- No impacts to existing air quality and noise levels - Pedestrian and cycling facilities to be provided - Support future land use plans	- No impacts to existing air quality and noise levels - Pedestrian and cycling facilities to be provided - Support future land use plans	- No impacts to existing air quality and noise levels - Pedestrian and cycling facilities to be provided - Support future land use plans	- No impacts to existing air quality and noise levels - Pedestrian and cycling facilities to be provided - Support future land use plans	- No impacts to existing air quality and noise levels - Pedestrian and cycling facilities to be provided - Support future land use plans
2.0 CULTURAL ENVIRONMENT								
2.1 Archaeology	- No impact on archaeological resources	- No impact on archaeological resources	- No impact on archaeological resources	- No impact on archaeological resources	- No impact on archaeological resources	- No impact on archaeological resources	- No impact on archaeological resources	- No impact on archaeological resources
2.2 Heritage Features	- No impact on cultural or heritage resources	- No impact on cultural or heritage resources	- No impact on cultural or heritage resources	- No impact on cultural or heritage resources	- No impact on cultural or heritage resources	- No impact on cultural or heritage resources	- No impact on cultural or heritage resources	- No impact on cultural or heritage resources
3.0 NATURAL								

ENVIRONMENT								
3.1 Impacts on the existing drainage / storm water system, and property waste facilities	- No impact to drainage or storm water system	- Impacts existing drainage and storm water system	- Impacts existing drainage and storm water system	- Impacts existing drainage and storm water system	- Impacts existing drainage and storm water system	- Impacts existing drainage and storm water system	- Impacts existing drainage and storm water system	- Impacts existing drainage and storm water system
3.2 Impact on vegetation, wildlife, landscape features, and aquatic resources	- No Impacts to natural resources (vegetation, wildlife, landscape features and aquatic resources) as new road alignment passes through existing vegetation	- Impacts natural resources (vegetation, wildlife, landscape features and aquatic resources) as new road alignment passes through existing vegetation	- Impacts natural resources (vegetation, wildlife, landscape features and aquatic resources) as new road alignment passes through existing vegetation	- Impacts natural resources (vegetation, wildlife, landscape features and aquatic resources) as new road alignment passes through existing vegetation	- Impacts natural resources (vegetation, wildlife, landscape features and aquatic resources) as new road alignment passes through existing vegetation	- Impacts natural resources (vegetation, wildlife, landscape features and aquatic resources) as new road alignment passes through existing vegetation	- Impacts natural resources (vegetation, wildlife, landscape features and aquatic resources) as new road alignment passes through existing vegetation	- Impacts natural resources (vegetation, wildlife, landscape features and aquatic resources) as new road alignment passes through existing vegetation
4.0 TECHNICAL CONSIDERATIONS								
4.1 Transportation - Traffic operations: Addresses future transportation demand (2031Ultimate)	- Does not provide future east-west roadway connections	- Level of Service F - Significant queues along 7 th Concession and Legacy Park Drive	- Level of Service F - Result in poor level of service for Legacy Park Drive - Potential weaving issue on E-W Arterial between 'right-out' traffic from 7 th Concession and through/right turn traffic from E-W arterial with close intersection spacing (though less severe than Option 2A as traffic needs to weave one lane only)	- Level of Service D at Walker Road and E-W Arterial - Traffic operations would be slightly improved as the realigned intersection would not conflict with the turning lanes on E-W Arterial at Walker Road, however intersection spacing with CNR only 35 m	- Level of Service D at Walker Road and E-W Arterial. - Potential weaving issues on E-W Arterial between 'right-out' traffic from 7 th Concession and through/right turn traffic from E-W arterial and very close intersection spacing. (Single IT, max queue :112m, Dbl LT max queue: 55m) - A double left-turn lane required to minimize queue lengths on E-W Arterial	- Level of Service C at Walker Road and E-W Arterial	- Level of Service C at Walker Road and E-W Arterial	- Level of Service C at Walker Road and E-W Arterial
- Safety and geometrics: Intersection spacing (i.e., Walker Road, 7 th Concessions, CN Rail)	- No change / no impact to existing safety and geometrics	- Meets geometric design standards, 100 m intersection spacing from CNR	- Meets geometric design standards, 100m intersection spacing from CNR	- A spacing of 95 m between 7 th Concession and Walker Road, but the 7 th Concession intersection is very close to CNR (35 m spacing); avoids conflicts with turning lanes on E-W Arterial at Walker Road	- Results in very close intersection spacing of 50 m and potential conflicts with turning movements and the CN Rail at-grade crossing. The maximum queue length with a single left turn on E-W Arterial is 112m,	- Meets geometric design standards - New connection at Walker Road could be connected using existing intersection (north of Costco entrance)	- Very close spacing between new intersection and existing railway crossings on 7 th Concession - This alternative would result in a new intersection on Walker Road which results in very close intersection	- Meet geometric standards; no safety concerns

<p>- Compatibility / Connectivity with local road networks</p>	<p>- Not compatible as it does not provide network connectivity without a direct connection between E-W Arterial and Walker Road - Indirect access to E-W Arterial and Walker Road through approved East Pelton Area Secondary Plan</p>	<p>- Direct 7th Concession access to/from E-W Arterial and to/from Walker Road - Indirect access to E-W Arterial and Walker Road through approved East Pelton Area Secondary Plan</p>	<p>- Limited 7th Concession access to/from E-W Arterial and to/from Walker Road - Indirect access to E-W Arterial and Walker Road through approved East Pelton Area Secondary Plan</p>	<p>- Limited 7th Concession access to/from E-W Arterial and to/from Walker Road - Indirect access to E-W Arterial and Walker Road through approved East Pelton Area Secondary Plan</p>	<p>which is approaching the 130m spacing between Walker Road and CNR as most of traffic from 7th Concession would make left turn on southbound Walker Road - Limited 7th Concession access to/from E-W Arterial and to/from Walker Road - Indirect access to E-W Arterial and Walker Road through approved East Pelton Area Secondary Plan</p>	<p>- Direct 7th Concession access to/from Walker Road - No direct connection between 7th Concession and E-W Arterial - Indirect access to E-W Arterial and Walker Road through approved East Pelton Area Secondary Plan</p>	<p>spacing of 65 m on Walker Road south of existing signalized intersection (Canadian Tire entrance) - Direct 7th Concession access to/from Walker Road - No direct connection between 7th Concession and E-W Arterial - Indirect access to E-W Arterial and Walker Road through approved East Pelton Area Secondary Plan</p>	<p>- No direct connection between 7th Concession and E-W Arterial - Indirect access to E-W Arterial and Walker Road through approved East Pelton Area Secondary Plan</p>
<p>4.2 Emergency Response</p>	<p>- No change / no impact to existing emergency response and access</p>	<p>- Less desirable emergency response, significant queues along 7th Concession and Legacy Park Drive, potential to obstruct emergency vehicles - No signal pre-emption for emergency vehicles at roundabout</p>	<p>- Less desirable emergency response, significance queues along Legacy Park Drive - No signal pre-emption for emergency vehicles at roundabout</p>	<p>- No significant impact to existing emergency response and access</p>	<p>- No significant impact to existing emergency response and access</p>	<p>- No significant impact to existing emergency response and access</p>	<p>- No significant impact to existing emergency response and access</p>	<p>- Less direct emergency route (via approved East Pelton Area Secondary Plan Road network)</p>
<p>4.3 Utilities</p>	<p>- No impact to utilities</p>	<p>- Impacts utilities within intersection and beyond current intersection limits</p>	<p>- Impacts utilities within intersection and beyond current intersection limits</p>	<p>- Less impact to utilities at intersection; possible impacts with re-alignment</p>	<p>- Less impact to utilities at intersection</p>	<p>- Less impact to utilities at intersection; possible impacts on alternate connection</p>	<p>- Less impact to utilities at intersection; possible impacts on alternate connection</p>	<p>- Less impact to utilities at intersection</p>
<p>4.4 Cost - Capital / operational / maintenance cost</p>	<p>- No cost</p>	<p>- Higher cost associated with property and construction</p>	<p>- Higher cost associated with property and construction</p>	<p>- High cost associated with property and construction</p>	<p>- Low cost associated with construction</p>	<p>- High cost associated with property and construction</p>	<p>- High cost associated with property and construction</p>	<p>- Low cost associated with construction</p>
<p>Overall Summary</p>								

	<p>Do Nothing is not preferred because it does not address the transportation needs to support the areas future uses and maintains substandard intersection geometry resulting in safety issues.</p> <p>Although the Roundabout options (Option 1 and 1A) maintain network connectivity and support future land use, they have same property impacts and it result in very poor traffic operations compared to the other alternatives.</p> <p>The RIRO with Realignment (Option 2) results in the most direct/property impacts compared to the other alternatives, severs the property between 7th Concession and CNR, north of E-W Arterial. It has the most direct property impacts compared to the other alternatives, with only slightly improved traffic operations on the E-W Arterial. The adjacent property owner has shown significant opposition for this alternative.</p> <p>The RIRO without Realignment (Option 2A) option does not directly impact property or accesses, maintains road network connectivity, and accommodates the future traffic demand; however, the close spacing of the intersection results in potential conflicts with the turning movements on the E-W Arterial at the intersection with Walker Road.</p> <p>The Alternative Connection to Walker Road from 7th Concession Road (Option 3 and 4) would require property acquisitions. Option 4 results in undesirable traffic operations in terms of very close spacing between new intersection and existing railway crossings on 7th Concession. Hence, these options are not recommended.</p> <p>The Cul-de-Sac Option (Option 5) results in good traffic operations compared to the other alternatives with good intersection spacing from Walker Road to CN Rail, results in no direct property impacts and support the future land uses; however, there is potential for traffic infiltration through the properties located between Walker Road and 7th Concession, less direct connection to the E-W Arterial through the East Pelton lands, and less direct emergency routing.</p> <p>For Consideration: The RIRO option (Option 2A) is recommended for the interim condition, when only a portion of the E-W Arterial is in place (i.e, the intersection with Walker Road and no E-W connection to Lauzon Parkway). If required, based on actual operation after opening, the potential conflict between the 'right-out' traffic from 7th Concession and the through movements on the E-W Arterial at the intersection with Walker Road could be eliminated by installing a raised island between the through lanes and the left turns lanes on E-W Arterial.</p> <p>Once ultimate build-out of the planned road network to support the Sandwich South and Pelton West Plans are in place, the intersection of 7th Concession and E-W Arterial would be removed and 7th Concession cul-de-sac. The ultimate road network would include the E-W Arterial between Walker Road and Lauzon Parkway, as well as the planned roadways through Pelton West connecting 7th Concession to the E-W Arterial.</p>
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Relative degree to address each factor:

