

Alternatives Criteria	Do Nothing	Conventional Intersection	Roundabout
Transportation			
Improves traffic operations	<ul style="list-style-type: none"> Does not improve intersection operations 	<ul style="list-style-type: none"> Acceptable traffic operations where signals are warranted (Olde Base Line Road) 	<ul style="list-style-type: none"> Not warranted where traffic signals are not warranted (Castleberg Side Road / Boston Mills Road, Cranston Drive, Walker Road, Huntsmill Drive)
Improves traffic safety	<ul style="list-style-type: none"> No change to traffic safety 	<ul style="list-style-type: none"> Effectiveness of roundabout versus intersection may decrease with one versus two lane roundabout, and/or transition from single lane roundabout to multi-lane roundabout or conventional intersection 	<ul style="list-style-type: none"> May encourage slower traffic speeds and therefore considered for traffic calming at Castleberg Side Road / Boston Mills Road, Olde Base Line Road, Cranston Drive, Walker Road and Huntsmill Drive
		<ul style="list-style-type: none"> Greater chance for severe collisions compared to roundabout 	<ul style="list-style-type: none"> Reduces severity of collisions, however may increase likelihood of non-fatal collisions
		<ul style="list-style-type: none"> Motorists are familiar with intersection configuration 	<ul style="list-style-type: none"> Motorists may not be familiar with unique roundabout treatment and will require enhanced driver education
<ul style="list-style-type: none"> May improve perceptions of safety for pedestrians and cyclists, improving comfort for crossing busy intersections 	<ul style="list-style-type: none"> Pedestrians and cyclists crossing a busy roundabout may prefer other nearby crossing locations where available 		
Encourages some trucks to use other truck routes	<ul style="list-style-type: none"> No change to truck traffic 	<ul style="list-style-type: none"> Frequent stops may encourage truck diversion 	<ul style="list-style-type: none"> Slower traffic speeds may encourage truck diversion
Improves road geometrics	<ul style="list-style-type: none"> No change to road alignment 	<ul style="list-style-type: none"> Opportunity to realign offset intersection at Castleberg Side Road / Boston Mills Road 	<ul style="list-style-type: none"> Eliminates offset intersection at Castleberg Side Road / Boston Mills Road Flared two-lane entry geometry to maximize capacity is unique in North American context and adds risk that capacity is constrained
Conforms to transportation planning policies and plans	<ul style="list-style-type: none"> Not consistent with transportation planning policies and plans 	<ul style="list-style-type: none"> Consistent with transportation planning policies and plans 	<ul style="list-style-type: none"> Consistent with transportation planning policies and plans
Maintains emergency response time	<ul style="list-style-type: none"> No change to emergency response time 	<ul style="list-style-type: none"> No change to emergency response time 	<ul style="list-style-type: none"> No change to emergency response time
		<ul style="list-style-type: none"> Design will accommodate emergency vehicles 	<ul style="list-style-type: none"> Design will accommodate emergency vehicles
Natural Environment			
Complies with Provincial environmental planning policies	<ul style="list-style-type: none"> Located within Oak Ridges Moraine (Olde Base Line Road, Walker Road, and Huntsmill Drive) 	<ul style="list-style-type: none"> Consistent with Oak Ridges Moraine Conservation Plan (Olde Base Line Road, Walker Road, and Huntsmill Drive within Oak Ridges Moraine) 	<ul style="list-style-type: none"> Consistent with Oak Ridges Moraine Conservation Plan (Olde Base Line Road, Walker Road, and Huntsmill Drive within Oak Ridges Moraine)
	<ul style="list-style-type: none"> Located within Greenbelt Plan Area (Cranston Drive) 	<ul style="list-style-type: none"> Consistent with Greenbelt Plan (Cranston Drive within Greenbelt Plan Area) 	<ul style="list-style-type: none"> Consistent with Greenbelt Plan (Cranston Drive within Greenbelt Plan Area)

<div style="text-align: center;">Alternatives</div> <div style="text-align: left;">Criteria</div>	Do Nothing	Conventional Intersection	Roundabout
Avoids or reduces negative impacts on natural heritage features and wildlife and wildlife habitat	<ul style="list-style-type: none"> Avoids negative impacts on natural heritage features and wildlife and wildlife habitat 	<ul style="list-style-type: none"> Moderate negative impact on natural heritage features and wildlife and wildlife habitat: 	<ul style="list-style-type: none"> Moderate to high negative impact on natural heritage features and wildlife and wildlife habitat:
		<ul style="list-style-type: none"> Minor to moderate tree removals 	<ul style="list-style-type: none"> Moderate to high tree removals
		<ul style="list-style-type: none"> Minor loss of roadside and agricultural field communities at Castleberg Side Road / Boston Mills Road 	<ul style="list-style-type: none"> Moderate loss of agricultural field communities at Castleberg Side Road / Boston Mills Road and Cranston Drive
		<ul style="list-style-type: none"> Minor loss of wildlife (birds) habitat at Walker Road 	<ul style="list-style-type: none"> Minor loss of wildlife (birds) habitat at Walker Road
		<ul style="list-style-type: none"> Minor encroachment into minimum protection zone of locally significant wetland and Area of Natural and Scientific Interest at Huntsmill Drive 	<ul style="list-style-type: none"> Significant encroachment into locally significant wetland and minimum protection zone and Area of Natural and Scientific Interest at Huntsmill Drive
		<ul style="list-style-type: none"> Minor encroachment into habitat for species of regional concern at Huntsmill Drive 	<ul style="list-style-type: none"> Loss of habitat for species of regional concern at Huntsmill Drive
		<ul style="list-style-type: none"> No impact on species at risk and their habitat 	<ul style="list-style-type: none"> No impact on species at risk and their habitat
Introduces opportunity to protect and/or enhance natural heritage features and wildlife and wildlife habitat	<ul style="list-style-type: none"> No opportunity to enhance natural heritage features and wildlife and wildlife habitat 	<ul style="list-style-type: none"> Topography limits opportunity to install new crossings to facilitate wildlife crossings 	<ul style="list-style-type: none"> Topography limits opportunity to install new crossings to facilitate wildlife crossings
			<ul style="list-style-type: none"> Opportunity for additional culverts to increase passage of amphibians and small mammals under roadway between adjacent wetlands at Huntsmill Drive
Maintains or reduces risk for natural hazards	<ul style="list-style-type: none"> No opportunity to reduce risk for natural hazards 	<ul style="list-style-type: none"> Increased impervious area contributing to stormwater runoff 	<ul style="list-style-type: none"> Increased impervious area contributing to stormwater runoff
		<ul style="list-style-type: none"> Potential treatment for stormwater runoff 	<ul style="list-style-type: none"> Potential treatment for stormwater runoff
		<ul style="list-style-type: none"> Sediment and erosion control plan will be applied during construction 	<ul style="list-style-type: none"> Sediment and erosion control plan will be applied during construction
Protects sources of drinking water	<ul style="list-style-type: none"> Located within Wellhead Protection Area 	<ul style="list-style-type: none"> Part of corridor is located within Wellhead Protection Area 	<ul style="list-style-type: none"> Part of corridor is located within Wellhead Protection Area
	<ul style="list-style-type: none"> Majority of corridor is within Highly Vulnerable Aquifer area 	<ul style="list-style-type: none"> Majority of corridor is within Highly Vulnerable Aquifer Area 	<ul style="list-style-type: none"> Majority of corridor is within Highly Vulnerable Aquifer Area
	<ul style="list-style-type: none"> Sections of corridor are within Significant Groundwater Recharge Areas 	<ul style="list-style-type: none"> Sections of corridor are within Significant Groundwater Recharge Areas 	<ul style="list-style-type: none"> Sections of corridor are within Significant Groundwater Recharge Areas
Provides opportunity to adapt to or mitigate the effects of climate change	<ul style="list-style-type: none"> No opportunity to adapt to or mitigate the effects of climate change 	<ul style="list-style-type: none"> Potential for low impact development may be restricted in wellhead protection areas 	<ul style="list-style-type: none"> Potential for low impact development may be restricted in wellhead protection areas
		<ul style="list-style-type: none"> Vehicles continue to idle at all approaches of signalized intersections 	<ul style="list-style-type: none"> Less vehicles idle at roundabouts compared to conventional intersection

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Healthy Communities			
Provides for active transportation	<ul style="list-style-type: none"> Limited pedestrian crossing facilities 	<ul style="list-style-type: none"> Controlled crossing with crosswalks and/or cross rides may facilitate pedestrian and cyclist crossings 	<ul style="list-style-type: none"> Shared crossing for pedestrians and cyclists, although cyclists may need to dismount and walk their bikes at the roundabout
Reduces risk of chronic conditions through active transportation	<ul style="list-style-type: none"> Limited active transportation facilities 	<ul style="list-style-type: none"> Continuous facility crossing for pedestrians and cyclists is dependent on corridor alternatives 	<ul style="list-style-type: none"> Continuous facility crossing for pedestrians and cyclists is dependent on corridor alternatives
		<ul style="list-style-type: none"> Crosswalks and Crossrides may not provide wide separation between pedestrians and cyclists 	<ul style="list-style-type: none"> Crossings do not provide separation between pedestrians and cyclists
		<ul style="list-style-type: none"> Reduced lane widths to cross 	<ul style="list-style-type: none"> Lane widths become slightly larger at roundabout (overall walking distance to cross intersection is greater)
		<ul style="list-style-type: none"> Opportunity for flared sidewalks No refuge median or pedestrian islands, although may not be necessary for two-lane intersection 	<ul style="list-style-type: none"> Refuge median or pedestrian island
		<ul style="list-style-type: none"> Complies with Accessibility for Ontarians with Disabilities Act 	<ul style="list-style-type: none"> May be challenging to cross for pedestrians with visual impairments with different auditory or tactile cues than signalized intersections
Supports age friendly and accessible living	<ul style="list-style-type: none"> No opportunities to promote healthy, age-friendly and accessible environments 	<ul style="list-style-type: none"> Complies with Accessibility for Ontarians with Disabilities Act 	<ul style="list-style-type: none"> May be challenging to cross for pedestrians with visual impairments with different auditory or tactile cues than signalized intersections
Reduces risk of respiratory and cardiovascular outcomes associated with exposure to traffic related air pollution	<ul style="list-style-type: none"> Avoids air quality impacts 	<ul style="list-style-type: none"> Air quality impacts are similar to air quality impacts of future no-build scenario 	<ul style="list-style-type: none"> Air quality impacts are similar to air quality impacts of future no-build scenario
		<ul style="list-style-type: none"> Increased dust during construction will be controlled by an Emissions Management Plan 	<ul style="list-style-type: none"> Increased dust during construction will be controlled by an Emissions Management Plan
Avoids or reduces noise impacts	<ul style="list-style-type: none"> Avoids noise impacts 	<ul style="list-style-type: none"> Future sound levels are predicated to exceed threshold (60dba) at some sensitive receptors 	<ul style="list-style-type: none"> Future sound levels are predicated to exceed threshold (60dba) at some sensitive receptors
		<ul style="list-style-type: none"> Noise barriers will be implemented where warranted 	<ul style="list-style-type: none"> Noise barriers will be implemented where warranted
		<ul style="list-style-type: none"> Increased noise during construction will be controlled by Construction Code of Practice 	<ul style="list-style-type: none"> Increased noise during construction will be controlled by Construction Code of Practice
Social, Cultural and Economic Environment			
Conforms to Municipal planning policies and community plans	<ul style="list-style-type: none"> Not consistent with Municipal planning policies and community plans 	<ul style="list-style-type: none"> Consistent with Municipal planning policies and community plans 	<ul style="list-style-type: none"> Consistent with Municipal planning policies and community plans
Compatible with existing and planned future land uses	<ul style="list-style-type: none"> No impact on existing and planned future land uses 	<ul style="list-style-type: none"> Compatible with existing and planned future land uses 	<ul style="list-style-type: none"> Compatible with existing and planned future land uses
Avoids or reduces property impacts	<ul style="list-style-type: none"> Avoids property impacts 	<ul style="list-style-type: none"> Moderate to high property impacts 	<ul style="list-style-type: none"> High property impacts

Alternatives Criteria	Do Nothing	Conventional Intersection	Roundabout
Avoids or reduces negative impacts on cultural heritage features	<ul style="list-style-type: none"> Avoids negative impacts on cultural heritage features 	<ul style="list-style-type: none"> Most major intersections adjacent to identified cultural heritage resources (2 designated under Part IV of the Ontario Heritage Act) 	<ul style="list-style-type: none"> Most major intersections adjacent to identified cultural heritage resources (2 designated under Part IV of the Ontario Heritage Act)
		<ul style="list-style-type: none"> Stage 2 Archaeological Assessment required in areas beyond disturbed right-of-way 	<ul style="list-style-type: none"> Stage 2 Archaeological Assessment required in areas beyond disturbed right-of-way
Supports goods movement	<ul style="list-style-type: none"> Airport Road is a goods movement corridor 	<ul style="list-style-type: none"> Airport Road will remain as a goods movement corridor 	<ul style="list-style-type: none"> Airport Road will remain as a goods movement corridor
		<ul style="list-style-type: none"> Design will accommodate transport trucks 	<ul style="list-style-type: none"> Design will accommodate transport trucks
Supports local economic sustainability	<ul style="list-style-type: none"> No opportunity to improve local economic sustainability Avoids impacts to on-street parking 	<ul style="list-style-type: none"> No impact on customer access 	<ul style="list-style-type: none"> Potential impact on customer access to business frontages at Olde Base Line Road
		<ul style="list-style-type: none"> Minor to moderate parking loss: No loss of parking spaces at Olde Base Line Road 	<ul style="list-style-type: none"> Moderate to high parking loss: Potential for loss of parking spaces at Olde Base Line Road
	<ul style="list-style-type: none"> No opportunity to improve streetscape and aesthetics Sections between north of King Street and north of Boston Mills Road, and south of Cranston Drive and Hilltop Drive are located within Prime Agricultural Area 	<ul style="list-style-type: none"> Loss of side street parking at Walker Road 	<ul style="list-style-type: none"> Loss of side street parking at Walker Road
		<ul style="list-style-type: none"> Potential for improvement to streetscape and aesthetics 	<ul style="list-style-type: none"> Potential gateway features at Cranston Drive and Walker Road
		<ul style="list-style-type: none"> No impact on Prime Agricultural Areas 	<ul style="list-style-type: none"> Encroaches into Prime Agricultural Area at Castlederg Side Road / Boston Mills Road and Cranston Drive
Reduces complexity of construction	<ul style="list-style-type: none"> No conflicts with utilities and municipal infrastructure No construction staging No construction cost No change to operations and maintenance cost 	<ul style="list-style-type: none"> Potential utility relocation or impacts 	<ul style="list-style-type: none"> Utility relocation
		<ul style="list-style-type: none"> Minimal and temporary traffic impacts due to construction staging 	<ul style="list-style-type: none"> Temporary road detours may be required for staging
		<ul style="list-style-type: none"> Significantly less cost to construct than roundabout due to less staging, complexity and property impacts 	<ul style="list-style-type: none"> Significantly greater cost to construct than conventional intersection due to temporary road detours and property impacts
		<ul style="list-style-type: none"> Greater ongoing cost to operate and maintain than roundabout 	<ul style="list-style-type: none"> Less ongoing cost to operate and maintain than conventional intersection
Evaluation			
	Not Carried Forward	Preferred at Olde Base Line Road, Walker Road & Huntsmill Drive	Preferred at Castlederg / Boston Mills Side Road & Cranston Drive

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<div style="text-align: left;">Summary</div>	<p>Does not address problem and opportunity (included for comparison)</p>	<p>Effective in improving operations. Property is a constraint for roundabouts.</p>	<p>Provides traffic calming corridor in combination with roundabouts south of Study Area, slowing northbound traffic toward Caledon East. Roundabout eliminates offset intersection at Castlederg / Boston Mills Side Road and provides opportunity for gateway feature at Cranston Drive.</p>