

5.0 Alternative Design Concepts

Table 5.5: Evaluation of Alternative Design Concepts Section 3 – Sta. 3+100 to Sta. to Graham Sideroad

EVALUATION FACTOR / CRITERIA	ALTERNATIVE A: WIDENING THE ROAD EQUALLY	ALTERNATIVE B: WIDEN TO THE WEST	ALTERNATIVE C: WIDEN TO THE EAST
SOCIAL ENVIRONMENT			
Impact on Existing Residences and Communities	Ranked Second: There are 10 residences on the east side in this section and 1 on the west side. This alternative will bring the property line closer to residences on the east however the impact would not be as significant as it is for Alternative C.	Ranked First: There are 10 residences on the east side in this section and 1 on the west side. The residence on the west is well removed from the existing road. Shifting to the west will not bring the property line too close to the residence.	Ranked Third: There are 10 residences on the east side in this section and 1 on the west side. Many of the residences on the east are close to the existing road. Shifting the road to the east would bring the property line significantly closer to these residences.
Impact on Community and Recreational Features	Ranked Equally: There are no community/recreational features in this section of the study area.	Ranked Equally: There are no community/recreational features in this section of the study area.	Ranked Equally: There are no community/recreational features in this section of the study area.
PLANNED LAND USE			
Conformity to Environmental & Planning Legislation	Ranked equally: All alternatives are within the Greenbelt.	Ranked equally: All alternatives are within the Greenbelt.	Ranked equally: All alternatives are within the Greenbelt.
Impact on Future Development	Ranked Equally: All alternatives will result in an improved Bathurst Street thus supporting future growth in this area of York Region. It is noted that the Holland Marsh District Christian School has plans to move to the southwest corner of Graham Sideroad and Bathurst. Alternatives A and B affect the property they have identified. It is noted however that no development approval has been granted and neither alternative would impact the property significantly enough to remove development potential.	Ranked Equally: All alternatives will result in an improved Bathurst Street thus supporting future growth in this area of York Region. It is noted that the Holland Marsh District Christian School has plans to move to the southwest corner of Graham Sideroad and Bathurst. Alternatives A and B affect the property they have identified. It is noted however that no development approval has been granted and neither alternative would impact the property significantly enough to remove development potential.	Ranked Equally: All alternatives will result in an improved Bathurst Street thus supporting future growth in this area of York Region.

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EVALUATION FACTOR / CRITERIA	ALTERNATIVE A: WIDENING THE ROAD EQUALLY	ALTERNATIVE B: WIDEN TO THE WEST	ALTERNATIVE C: WIDEN TO THE EAST
ECONOMIC ENVIRONMENT			
Impact on Existing Businesses	Ranked Second: There are 2 businesses identified on the east side and 1 on the west in this section of Bathurst Street. This alternative will bring the road closer to businesses on the east but the proximity impact would not be as significant as for Alternative C.	Ranked First: There are 2 businesses identified on the east side and 1 on the west in this section of Bathurst Street. The businesses to the west are well set back from the road and while property would be required, it is not expected to impact the business.	Ranked Third: There are 2 businesses identified on the east side and 1 on the west in this section of Bathurst Street. Widening to the east would bring the road quite close to the businesses on the east.
Impact on Agriculture	Ranked Equally: There are no farm operations in this section of Bathurst Street.	Ranked Equally: There are no farm operations in this section of Bathurst Street.	Ranked Equally: There are no farm operations in this section of Bathurst Street.
CULTURAL RESOURCES			
Impact on Archaeological Resources	Ranked Equally: There is potential archaeology in this area. A Stage 2 Archaeological Assessment is required for much of the alignment in this section.	Ranked Equally: There is potential archaeology in this area. A Stage 2 Archaeological Assessment is required for much of the alignment in this section.	Ranked Equally: There is potential archaeology in this area. A Stage 2 Archaeological Assessment is required for much of the alignment in this section.
Impact on Built Heritage Resources	Ranked Second: Alternatives A and B may impact the Agricultural landscape (CLU4) on the east of Bathurst Street. It is also noted that Bathurst Street is identified as a cultural landscape unit throughout the study area (CLU1). All alternatives have the same potential to impact this CLU.	Ranked Second: Alternatives A and B may impact the Agricultural landscape (CLU4) on the east of Bathurst Street. It is also noted that Bathurst Street is identified as a cultural landscape unit throughout the study area (CLU1). All alternatives have the same potential to impact this CLU.	Ranked First: This alternative will not impact heritage features. It is also noted that Bathurst Street is identified as a cultural landscape unit throughout the study area (CLU1). All alternatives have the same potential to impact this CLU.
COST			
Construction Costs	Ranked Equal: Construction cost is expected to be similar for all alternatives.		
Operation and Maintenance Cost	Ranked Equal: Operation/maintenance cost is expected to be similar for all alternatives.		

5.0 Alternative Design Concepts

Table 5.7: Evaluation of Alternative Design Concepts - Section 4 – Bathurst and Yonge Intersection

EVALUATION FACTOR / CRITERIA	IMPROVED AT-GRADE CROSSING	ROUNDABOUT	GRADE SEPARATION
TRAFFIC OPERATIONS			
Traffic Safety	Ranked Equally: No traffic safety concerns.	Ranked Equally: No traffic safety concerns.	Ranked Equally: No traffic safety concerns..
Level of service	Ranked Equally: The road capacity and level of service will be the same for all alternatives	Ranked Equally: The road capacity and level of service will be the same for all alternatives	Ranked Equally: The road capacity and level of service will be the same for all alternatives
Regional Road Network Continuity	Ranked Equally: All alternatives will improve network continuity.	Ranked Equally: All alternatives will improve network continuity.	Ranked Equally: All alternatives will improve network continuity.
NATURAL ENVIRONMENT			
Impact on Terrestrial Habitat	Ranked First: Has the potential to impact some trees and vegetation. It is noted, however, that this impact will be minimal as vegetation in this section is limited.	Ranked First: Has the potential to impact some trees and vegetation. It is noted, however, that this impact will be minimal as vegetation in this section is limited.	Ranked Third: Has the potential to impact some trees and vegetation. It is noted, however, that this impact will be minimal as vegetation in this section is limited. Potential impact to street trees along Bathurst Street north of Yonge Street.
Impact on Aquatic Resources	Ranked Equally: There are no watercourse crossings in this section.	Ranked Equally: There are no watercourse crossings in this section.	Ranked Equally: There are no watercourse crossings in this section.
Impact on Groundwater and Surface Water Resources	Ranked Equally: All of the alternatives have minimal potential for impact on ground or surface water.	Ranked Equally: All of the alternatives have minimal potential for impact on ground or surface water.	Ranked Equally: All of the alternatives have minimal potential for impact on ground or surface water.

5.0 Alternative Design Concepts

Table 5.7: Evaluation of Alternative Design Concepts - Section 4 – Bathurst and Yonge Intersection

EVALUATION FACTOR / CRITERIA	IMPROVED AT-GRADE CROSSING	ROUNDABOUT	GRADE SEPARATION
SOCIAL ENVIRONMENT			
Impact on Existing Residences and Communities	Ranked First: There are 2 residences west of Bathurst in this section. Alternatives A and B will maintain the location of the road or move it further from these residences as these alternatives bring the intersection with Yonge to the south to allow for greater storage lanes on Bathurst and Holland Landing.	Ranked First: There are 2 residences west of Bathurst in this section. Alternatives A and B will maintain the location of the road or move it further from these residences as these alternatives bring the intersection with Yonge to the south to allow for greater storage lanes on Bathurst and Holland Landing.	Ranked Third: The grade separation option has a greater potential to impact residences as road grade change would likely follow the existing Bathurst alignment and the grade adjustment affecting property and driveways north of Yonge Street.
Impact on Community and Recreational Features	Ranked Equally: There are no community/recreational features in this section of the study area.	Ranked Equally: There are no community/recreational features in this section of the study area.	Ranked Equally: There are no community/recreational features in this section of the study area.
PLANNED LAND USE			
Conformity to Environmental & Planning Legislation	Ranked Equally: All alternatives are within the Greenbelt.		
Impact on Future Development	Ranked First: This alternative will result in an improved Bathurst Street thus supporting future growth in this area of York Region.	Ranked Second: This alternative will result in an improved Bathurst Street thus supporting future growth in this area of York Region. Greater impact on future commercial site in S-E quadrant.	Ranked Second: This alternative will result in an improved Bathurst Street thus supporting future growth in this area of York Region. Potential for greater impact on future commercial site in S-E quadrant.
ECONOMIC ENVIRONMENT			
Impact on Existing Businesses	Ranked First: There is 1 business in this section of Bathurst Street, on the east side. All alternatives are likely to require minimal property from this business.	Ranked First: There is 1 business in this section of Bathurst Street on the east side. All alternatives are likely to require minimal property from this business.	Ranked Third: There is 1 business in this section of Bathurst Street on the east side. All alternatives are likely to require minimal property from this business. Impacts to businesses may be disrupted due to grade change and the potential for additional frontage impacts along Yonge Street.

5.0 Alternative Design Concepts

Table 5.7: Evaluation of Alternative Design Concepts - Section 4 – Bathurst and Yonge Intersection

EVALUATION FACTOR / CRITERIA	IMPROVED AT-GRADE CROSSING	ROUNDBOUT	GRADE SEPARATION
Impact on Agriculture	Ranked Equally: There are no farm operations in this section of Bathurst Street.	Ranked Equally: There are no farm operations in this section of Bathurst Street.	Ranked Equally: There are no farm operations in this section of Bathurst Street.
CULTURAL RESOURCES			
Impact on Archaeological Resources	Ranked First: There is archaeological potential identified west of Yonge Street in this section. A Stage 2 Archaeological assessment will be required.	Ranked First: There is archaeological potential identified west of Yonge Street in this section. A Stage 2 Archaeological assessment will be required.	Ranked Third: There is archaeological potential identified west of Yonge Street in this section. A Stage 2 Archaeological assessment will be required. Potential for additional impact to lands north of Yonge Street along the extended Bathurst street corridor.
Impact on Built Heritage Resources	Ranked First: This alternative will impact cultural landscape units – Bathurst Street (CLU1) and Yonge Street (CLU3).	Ranked First: This alternative will impact cultural landscape units – Bathurst Street (CLU1) and Yonge Street (CLU3).	Ranked Third: All alternatives will impact cultural landscape units – Bathurst Street (CLU1) and Yonge Street (CLU3). Potential for additional impact to lands north of Yonge Street along the extended Bathurst street corridor.
COST			
Construction Costs	Ranked First: Lowest cost alternative.	Ranked Second: The roundabout alternative is expected to be greater in cost than the at-grade alternative and significantly less expensive than a grade separated alternative.	Ranked Third: A grade separated alternative would be the most costly to construct.
Operation and Maintenance Cost	Ranked Equally: All alternatives are expected to have similar operation and maintenance costs.		

6.0 Preferred Design Concepts

Table 6.9 Summary of Mitigation Measures and Net Effects for the Bathurst Street Improvements

Activity/Potential Effect	Proposed Mitigation and Monitoring	Net Effect
Vegetation removal	During Design - Road improvement is designed and located to minimize vegetation removal and grading necessary - Consideration will be given to construction practices that can further minimize vegetation removal impacts - A vegetation replacement strategy has been identified and includes replanting lost vegetation as a 2:1 ratio. Plantings should be placed in areas that will expand upland communities in the study area or appropriate adjacent areas. The type of vegetation planted should, conform to habitat that is lost as a result of the undertaking. Alternatively, more targeted restoration of fewer higher quality habitat types may be considered. The extent of habitat to be replaced should conform to the no net loss principle. - Discussions with LSRCA will continue during detailed design to formalize the vegetation replacement strategy During Construction - Construction will be scheduled to avoid breeding bird season - Vegetation removal will be kept to a minimum and trees and shrubs to remain will be protected during construction - To mitigate against the affects of removal of edge vegetation along forested areas, a woodland edge management plan will be designed to facilitate the development of a new edge that incorporates native plantings, cutting of hazard trees and promotes natural regeneration in edge environments. Quick establishment of fast growing native vegetation on exposed slopes is encouraged to reduce the establishment of non-native species - An Adaptive Environmental Monitoring Plan for during construction and ongoing should be developed to assess the successful implementation key mitigation.	No net effect anticipated
Impact on breeding birds and threatened species	During Design - Higher quality bird habitat has been avoided by the proposed road alignment to the degree possible. - Design of additional plantings/habitat creation to offset the direct and indirect impacts on breeding birds - Follow-up studies for the hooded warbler to determine the presence/absence of this species and nesting status, where appropriate.	No net effect anticipated

6.0 Preferred Design Concepts

Table 6.9 Summary of Mitigation Measures and Net Effects for the Bathurst Street Improvements

Activity/Potential Effect	Proposed Mitigation and Monitoring	Net Effect
Removal of Butternut Trees	During Construction - Tree removal will be scheduled to avoid breeding bird season; if this is not possible, a nesting survey will be undertaken by a qualified biologist just prior to removal to identify and avoid any nesting sites in fulfillment of the <i>Migratory Bird Conventions Act</i>, 1994. During Design - Design a specific grading treatment to prevent the footprint from displacing the individual Butternut tree to the east - MNR to evaluation the health of the butternut tree to be removed during the growing season. - Permit for removal of this individual to be obtained from the MNR. - Based on guideline and consultation with MNR a mitigation and monitoring plan should be developed. During Construction - Butternut plantings in ratio to the size and age of the tree removed as well as monitoring of tree health.	No net effect anticipated
Impact on wildlife habitat	During Design - The road improvement has been designed with wildlife structures to facilitate connectivity and wildlife passage: three large wildlife crossing structures; one medium (1.35m x 7m); and four small culvert crossings (600mm to 1500mm); grading and funnel fencing or structure will help direct species toward crossing - Design of plantings to develop natural noise buffer for wildlife During Construction - Ensure grading does not create additional depressions that may produce non-viable vernal pool habitat	There will be a net improvement in wildlife connectivity between the east and west sides of Bathurst Street although the increased traffic and road profile may increase the potential for incidents.
Construction in potential fish habitat areas	During Design - Design minor realignment areas for Crossing 3 and 5 and prepare compensation plan - Design plantings for crossings where identified to enhance riparian vegetation During Construction - Construction will be undertaken within appropriate timing periods - The re-vegetation plan will be implemented - Appropriate construction practices will be adopted to minimize impacts on surface water including: - Stabilize disturbed surfaces as soon as possible following construction	No net effect anticipated

6.0 Preferred Design Concepts

Table 6.9 Summary of Mitigation Measures and Net Effects for the Bathurst Street Improvements		
Activity/Potential Effect	Proposed Mitigation and Monitoring	Net Effect
	○ Install and maintain sediment and erosion control measures ○ Prevent debris and substances from entering watercourse during construction ○ Stockpile construction material away from floodplain ○ Sediment laden water and runoff from construction areas should be treated before permitted to enter watercourse	
Contamination of surface waters through sedimentation/erosion, spills or leaks	During Construction • Refueling of equipment will be undertaken away from any surface water • Sedimentation and erosion control measures (e.g. Silt fences) will be installed during construction and remain in place until soil stabilization is achieved • Sediment laden water and runoff originating from construction areas to be treated using appropriate methods before it is permitted to enter any watercourse • Stabilize disturbed surfaces as soon as possible following construction • Stockpile construction material outside of the floodplain and prevent debris and deleterious substances, such as sediment, from entering watercourses during construction	No net effect anticipated
Significant archaeological sites	During Design • A Stage 2 archaeological assessment will be completed during detailed design • First Nations shall be notified of findings of Stage 2 archaeological assessment During Construction • If any remains are encountered during construction, work will stop and York Region and the Ministry of Culture will be notified immediately	No Net effect anticipated
Noise	During Construction • Construction will be scheduled to meet York Region/King Township/Town of East Gwillimbury noise by-laws • Area residents will be notified of construction timing in advance During Operation • Should noise complaints be raised, the Region will deal directly with the person raising the issue	There will be a noise increase over existing levels for some residences. Based on the Region's noise policy, none of the increases require mitigation
Traffic disruption	During Design • Detailed staging assessments to be completed based on the results of additional geotechnical work carried out during the design phase During Construction • A minimum of one lane of traffic will remain open at all other times; appropriate signage and	No net effect anticipated

6.0 Preferred Design Concepts

Table 6.9 Summary of Mitigation Measures and Net Effects for the Bathurst Street Improvements

Activity/Potential Effect	Proposed Mitigation and Monitoring	Net Effect
	- flagmen will be in-place to direct traffic during these times - Area residents will be notified of construction timing in advance - The timing of driveway reconstruction will be discussed with specific property owner	
Visual intrusion during operation	<i>During Design</i> - Design of landscaping to minimize views of road <i>During Construction and Operation</i> - Practices will be adopted by the Region to ensure planting treatments are appropriately maintained	No net effect anticipated
Road runoff entering surface waters	- Use of vegetated swales - Improved roadside drainage conditions throughout the corridor	Improved roadside drainage will minimize potential impacts over existing conditions
Property purchase	<i>During Design</i> York Region will negotiate with property owners for purchase	No net effect anticipated
Addition of trail linkages	<i>During Design</i> Continued discussion with East Gwillimbury to facilitate trail connection from the southeast corner of Bathurst and Green Lane to the Cawthra Mulock Nature Reserve	Net benefit anticipated
Grading	<i>During Design</i> - Additional geotechnical work will be undertaken during detailed design to confirm extent and character of soil to be removed <i>During Construction</i> - Investigation of appropriate disposal options to be carried out; sale of removed peat material is anticipated	No net effect anticipated
Dewatering of Construction area	<i>During Design</i> - Specific dewatering requirements to be confirmed (minor dewatering required related to construction of structure and culverts; no deep excavation anticipated) <i>During Construction</i> - Limiting the depth of excavations - Minimizing open excavation time	No net effect anticipated

TOWNSHIP OF KING

TO: FILE
CAO, ROB FLINDALL

EXTRACT FROM THE MINUTES OF THE COUNCIL MEETING HELD ON APRIL 26TH, 2010

10. ADOPTION OF COMMITTEE OF THE WHOLE REPORTS OF APRIL 26th, 2010

Councillor Rupke requested Item #3 of the Committee of the Whole Agenda of April 26th, 2010, being Engineering and Public Works Department Report EPW 2010-03 regarding the Regional Municipality of York Environmental Assessment (EA) for Improvements to Bathurst Street between Green Lane and Yonge Street be voted on separately, and requested a Recorded Vote.

10. (a) Item #3 – Engineering and Public Works Department Report Number
EPW 2010-03
Re: Regional Municipality of York Environmental Assessment (EA) for
Improvements to Bathurst Street between Green Lane and Yonge Street

A motion was made by Councillor Rupke, seconded by Councillor Pabst that the Committee of the Whole revised recommendation regarding Engineering and Public Works Department Report EPW 2010-03 with respect to the Regional Municipality of York Environmental Assessment (EA) for improvements to Bathurst Street between Green Lane and Yonge Street, be adopted, as amended, as follows:

1. Report No. EPW 2010-03 be received as information.
2. That King Township is supportive of the Class Environmental Assessment undertaken by the Regional Municipality of York with respect to Bathurst Street from Green Lane to north of Yonge Street; it being pointed out that the Township confirms that it supports the Bathurst Street home owners in the continued efforts to mitigate the ecological impact, destruction of trees and reduction of grading and prevention of ground water disturbance that may result from the Bathurst Street project between Yonge Street and Green lane.
3. That King Township understands the need for the re-opening of Bathurst Street north of Morning Side Road, Town of East Gwillimbury; on the understanding that the necessary works to achieve this objective are undertaken by the Region of York in an economical and environmentally vigilant manner without any detriment to the ongoing and necessary upgrading and maintenance of existing Regional Roads within the Township;
4. That copies of this resolution be forwarded to the Regional Municipality of York and the Towns of East Gwillimbury, Newmarket and Bradford-West Gwillimbury.

The Clerk called the recorded vote as follows:

FOR: Black, Pabst, Cober, Rupke
AGAINST: Mortelliti, Laidlaw, Underhill

Motion Carried

A motion was made by Councillor Cober, seconded by Councillor Pabst and carried that the recommendations of Items #1, 2, 4, 5, 6, 7, 8, 9, 10 and 11 of the Committee of the Whole Report for the Meeting of April 26th, 2010 be adopted.

CHRIS SOMERVILLE
CLERK