

**Comparative Evaluation of Net Effects and Ranking – Section S7
2020 Evaluation**

Evaluation Factors and Sub-Factors	Alternative S7-3 (2019 Preferred)	Alternative S7-13	Alternative S7-14
Summary of Potential Net Effects and Ranking			
1.0 Natural Environment			
1.1 Fish and Fish Habitat			
1.1.1 Fish Habitat	<p>Standard net effects to watercourses, as outlined in the accompanying memo, are the following:</p> <p>13 watercourses impacted:</p> <ul style="list-style-type: none"> • 3 permanent, baitfish (coolwater indicators, darters) (tributary to Robinson Creek was dry at the time of the July survey) • 4 intermittent, unconfirmed fish (warmwater) • 6 ephemeral, no fish habitat <p>Net effects associated with the alternative are dependent on the ability to implement avoidance, mitigation, offsetting / enhancement measures; until confirmed, net effects remain the same as potential effects:</p> <ul style="list-style-type: none"> • Impacting long reaches (2.1 km total) of permanent watercourses with moderately sensitive coolwater fish communities • Crossings are within the broad interchange footprint and could be either perpendicular crossings or channel realignments; therefore, effects dependent on interchange configuration. • Network of ephemeral drainage features on west side of alignment will be impacted <p align="center">LOW NET EFFECT RANKING: 1st</p> <p>All alternatives impact the same types of watercourses including the permanent coolwater system of Robinson Creek. The only distinction between alternatives is in incremental lengths of watercourses impacted. This alignment impacts the shortest length of the permanent watercourses.</p>	<p>Standard net effects to watercourses, as outlined in the accompanying memo, are the following:</p> <p>13 watercourses impacted:</p> <ul style="list-style-type: none"> • 2 permanent, baitfish (coolwater indicators, darters) (3 required crossings as main stem Robinson Creek crossed twice) • 4 intermittent, unconfirmed fish (warmwater) • 7 ephemeral, no fish habitat <p>Net effects associated with the alternative are dependent on the ability to implement avoidance, mitigation, offsetting / enhancement measures; until confirmed, net effects remain the same as potential effects:</p> <ul style="list-style-type: none"> • Impacting long reaches (3.72 km total) of permanent watercourses with moderately sensitive coolwater fish communities • Crossings are within the broad interchange footprint and could be either perpendicular crossings or channel realignments; therefore, effects dependent on interchange configuration. • Network of ephemeral drainage features on west and east sides of alternative will be impacted <p align="center">MODERATE NET EFFECT RANKING: 2nd</p> <p>All alternatives impact the same types of watercourses including the permanent coolwater system of Robinson Creek. The only distinction between alternatives is in incremental lengths of watercourses impacted. This alignment impacts the greatest length of the permanent watercourses.</p>	<p>Standard net effects to watercourses, as outlined in the accompanying memo, are the following:</p> <p>13 watercourses impacted:</p> <ul style="list-style-type: none"> • 2 permanent, baitfish (coolwater indicators, darters) (3 required crossings as main stem Robinson Creek crossed twice) • 4 intermittent, unconfirmed fish (warmwater) • 7 ephemeral, no fish habitat <p>Net effects associated with the alternative are dependent on the ability to implement avoidance, mitigation, offsetting / enhancement measures; until confirmed, net effects remain the same as potential effects:</p> <ul style="list-style-type: none"> • Impacting long reaches (2.4 km total) of permanent watercourses with moderately sensitive coolwater fish communities • Crossings are within the broad interchange footprint and could be either perpendicular crossings or channel realignments; therefore, effects dependent on interchange configuration. • A network of three watercourses [2 permanent, 1 Intermittent (+ realignment of intermittent watercourse)] will require crossings in close proximity to each other due to the location of the confluence within the alternative. • Network of ephemeral drainage features on west and east sides of alternative will be impacted <p align="center">MODERATE NET EFFECT RANKING: 2nd</p> <p>All alternatives impact the same types of watercourses including the permanent coolwater system of Robinson Creek. The only distinction between alternatives is in incremental lengths of watercourses impacted. Although this alignment impacts a shorter length of the permanent watercourse in comparison to S7-13, the proximity of and one realignment required on a network of three watercourses results in potentially greater cumulative impacts to this system.</p>
1.1.2 Fish Community	<p>Net effects associated with the alternative are dependent on the ability to implement avoidance, mitigation, offsetting / enhancement measures; until confirmed, net effects remain the same as potential effects:</p> <ul style="list-style-type: none"> • Impacting long reaches (2.1 km total) of permanent watercourses with moderately sensitive coolwater fish communities <p align="center">LOW NET EFFECT RANKING: 1st</p> <p>This alternative does not impact any known sensitive fish communities. Ranking is based on habitat.</p>	<p>Net effects associated with the alternative are dependent on the ability to implement avoidance, mitigation, offsetting / enhancement measures; until confirmed, net effects remain the same as potential effects:</p> <ul style="list-style-type: none"> • Impacting long reaches (3.72 km total) of permanent watercourses with moderately sensitive coolwater fish communities <p align="center">LOW NET EFFECT RANKING: 1st</p> <p>This alternative does not impact any known sensitive fish communities. Ranking is based on habitat.</p>	<p>Net effects associated with the alternative are dependent on the ability to implement avoidance, mitigation, offsetting / enhancement measures; until confirmed, net effects remain the same as potential effects:</p> <ul style="list-style-type: none"> • Impacting long reaches (2.4 km total) of permanent watercourses with moderately sensitive coolwater fish communities <p align="center">LOW NET EFFECT RANKING: 1st</p> <p>This alternative does not impact any known sensitive fish communities. Ranking is based on habitat.</p>
1.2 Terrestrial Ecosystems			

Evaluation Factors and Sub-Factors	Alternative S7-3 (2019 Preferred)	Alternative S7-13 Summary of Potential Net Effects and Ranking	Alternative S7-14
1.2.1 Wildlife and Wildlife Habitat	<p>Net effects associated with the alternative are dependent on the ability to implement avoidance, mitigation, compensation/enhancement measures; until confirmed, net effects remain the same as potential effects.</p> <p>Net effects include:</p> <ul style="list-style-type: none"> • Permanent loss of a relatively small proportion of the identified SWH in the section and relatively small loss of higher quality wildlife habitats. • Permanent loss of habitat for SAR/SCC species including Eastern Wood Pewee (edge removal at one location and substantial removal of habitat at a second location), terrestrial crayfish and Western Chorus Frog. • Removal of Bobolink (THR) habitat (up to 50% removal of breeding habitat), and potential Barn Swallow habitat; however, habitat loss would be compensated through the ESA if present. • Fragmentation of the valley corridor in two locations. • Reduction of wildlife habitat quality through indirect effects that cannot be fully mitigated including edge effects (e.g. increased light and noise and the introduction of pathways for invasive species) and increased potential for animal-vehicle collisions <p>Impacts are generally confined to lower quality habitats within the landscape, however, riparian corridor fragmentation is unavoidable.</p> <p style="text-align: center;">MODERATE NET EFFECT</p>	<p>Net effects associated with the alternative are dependent on the ability to implement avoidance, mitigation, compensation/enhancement measures; until confirmed, net effects remain the same as potential effects.</p> <p>Net effects include:</p> <ul style="list-style-type: none"> • Permanent loss of a relatively small proportion of the identified SWH in the section and relatively small loss of higher quality wildlife habitats. • Permanent loss of habitat for SAR/SCC including Eastern Wood Pewee (edge removal at one location), terrestrial crayfish and Western Chorus Frog. • Possible removal of Barn Swallow and Eastern Meadowlark (THR) habitat; however, loss of habitat would be compensated through ESA if present. • Fragmentation of the valley corridor in two locations. • Reduction of wildlife habitat quality through indirect effects that cannot be fully mitigated including edge effects (e.g. increased light and noise and the introduction of pathways for invasive species) and increased potential for animal-vehicle collisions. <p>Impacts are generally confined to lower quality habitats within the landscape, however, riparian corridor fragmentation is unavoidable.</p> <p style="text-align: center;">MODERATE NET EFFECT</p>	<p>Net effects associated with the alternative are dependent on the ability to implement avoidance, mitigation, compensation/enhancement measures; until confirmed, net effects remain the same as potential effects.</p> <p>Net effects include:</p> <ul style="list-style-type: none"> • Permanent loss of a relatively small proportion of the identified SWH in the section and relatively small loss of higher quality wildlife habitats. • Permanent loss of habitat for SAR/SCC species including Eastern Wood Pewee (edge removal at one location), terrestrial crayfish and Western Chorus Frog. • Possible removal of Barn Swallow and Eastern Meadowlark (THR) habitat; however, loss of habitat would be compensated through ESA if present. • Fragmentation of the valley corridor in two locations. • Reduction of wildlife habitat quality through indirect effects that cannot be fully mitigated including edge effects (e.g. increased light and noise and the introduction of pathways for invasive species) and increased potential for animal-vehicle collisions <p>Impacts are generally confined to lower quality habitats within the landscape, however, riparian corridor fragmentation is unavoidable.</p> <p style="text-align: center;">MODERATE NET EFFECT</p>
	<p style="text-align: center;">RANKING: 1st</p> <p>Alternative ranking decisions were based on the alternative that best avoids impacts to the highest quality habitats, best avoids impacts to a higher diversity of habitat types, and reduces or avoids fragmentation of the vegetated valley corridor. This alternative impacts a moderate amount of higher quality habitats (including a deciduous woodland with SCC), and results in a moderate amount of valley fragmentation over a relatively smaller area. Overall impacts to habitats, including amphibian breeding candidate SWH, and the riparian corridor connectivity are lower than S7-13 and S7-14 alternatives (due to the angle of crossing).</p>	<p style="text-align: center;">RANKING: 2nd</p> <p>Alternative ranking decisions were based on the alternative that best avoids impacts to the highest quality habitats, best avoids impacts to a higher diversity of habitat types, and reduces or avoids fragmentation of the vegetated valley corridor. Although this alternative minimizes impacts on some higher quality habitats (including a deciduous woodland with SCC), it results in a moderate amount of valley fragmentation over a relatively broader area. Overall impacts to habitats, including amphibian breeding candidate SWH, and the riparian corridor connectivity are marginally greater than the S7-14 route alternative and greater than S7-3.</p>	<p style="text-align: center;">RANKING: 2nd</p> <p>Alternative ranking decisions were based on the alternative that best avoids impacts to the highest quality habitats, best avoids impacts to a higher diversity of habitat types, and reduces or avoids fragmentation of the vegetated valley corridor. Although this alternative minimizes impacts on some higher quality habitats (including a deciduous woodland with SCC), it results in a moderate amount of valley fragmentation over a relatively broader area. Overall impacts to habitats, including amphibian breeding candidate SWH, and the riparian corridor connectivity are marginally lower than the S7-13 route alternative and greater than S7-3.</p>

Evaluation Factors and Sub-Factors	Alternative S7-3 (2019 Preferred)	Alternative S7-13 Summary of Potential Net Effects and Ranking	Alternative S7-14
1.2.2 Wetlands	<p>Net effects associated with the alternative are dependent on the ability to implement avoidance, mitigation, compensation/enhancement measures; until confirmed, net effects remain the same as potential effects.</p> <p>Net effects include:</p> <ul style="list-style-type: none"> • Impacts to several wetlands including approximately ~9.8 ha of removal • Reduction in wetland quality through Indirect effects that cannot be fully mitigated including edge effects (e.g. increased light, wind, road contaminants and the introduction of pathways for invasive species) and impacts to hydrologic and groundwater inputs that support these features <p>Affected wetlands are generally small and of lower diversity, however, they contribute a variety of functions to the local landscape.</p> <p style="text-align: center;">MODERATE NET EFFECT</p> <p style="text-align: center;">RANKING: 1st</p> <p>This alternative results in the lowest amount of wetland impact by area; however, it also contains the highest quality wetland communities, including one that is provincially rare (as addressed in Section 1.2.3).</p>	<p>Net effects associated with the alternative are dependent on the ability to implement avoidance, mitigation, compensation / enhancement measures; until confirmed, net effects remain the same as potential effects.</p> <p>Net effects include:</p> <ul style="list-style-type: none"> • Removal of ~20.7 ha of low quality unevaluated wetland • Reduction in wetland quality through indirect effects that cannot be fully mitigated including edge effects (e.g. increased light, wind, road contaminants and the introduction of pathways for invasive species) and impacts to hydrologic and groundwater inputs that support these features <p>Affected wetlands are generally small and of lower diversity, however, they contribute a variety of functions to the local landscape.</p> <p style="text-align: center;">MODERATE NET EFFECT</p> <p style="text-align: center;">RANKING: 1st</p> <p>This alternative results in the highest amount of wetland impact by area (marginally more than S7-14); however, it impacts less high-quality habitat than S7-3 and slightly more habitat of a similar quality than S7-14.</p>	<p>Net effects associated with the alternative are dependent on the ability to implement avoidance, mitigation, compensation / enhancement measures; until confirmed, net effects remain the same as potential effects.</p> <p>Net effects include:</p> <ul style="list-style-type: none"> • Removal of ~18.5 ha of low quality unevaluated wetland • Reduction in wetland quality through indirect effects that cannot be fully mitigated including edge effects (e.g. increased light, wind, road contaminants and the introduction of pathways for invasive species) and impacts to hydrologic and groundwater inputs that support these features <p>Affected wetlands are generally small and of lower diversity, however, they contribute a variety of functions to the local landscape.</p> <p style="text-align: center;">MODERATE NET EFFECT</p> <p style="text-align: center;">RANKING: 1st</p> <p>This alternative results in the second highest amount of wetland impact by area (marginally less than S7-13). However, it does have the lowest overall amount of impact to higher quality wetlands.</p>
1.2.3 Woodlands and Vegetation	<p>Net effects associated with the alternative are dependent on the ability to implement avoidance, mitigation, compensation/enhancement measures; until confirmed, net effects remain the same as potential effects.</p> <p>Net effects include:</p> <ul style="list-style-type: none"> • Removal of ~17.1 ha of cultural thicket and meadow • Removal of ~4.2 ha of deciduous forest and deciduous swamp • Removal of one provincially rare vegetation community. • Reduction in vegetation community quality through indirect effects that cannot be fully mitigated including effects from road contaminants (e.g. salt, heavy metals, sediment / debris), introduction of pathways for invasive species, edge / exposure impacts (e.g. canopy blow down) <p>Vegetation communities within this alternative are generally small and of low diversity, or early-successional and containing higher abundances of non-native and disturbance-tolerant species, however, higher quality and provincially rare habitats are also present. These features represent the only remaining patches of natural vegetation in the general landscape.</p> <p style="text-align: center;">MODERATE NET EFFECT</p> <p style="text-align: center;">RANKING: 3rd</p> <p>This alternative contains the highest amount of vegetation impact by area, and it also has the highest quality vegetation communities, including more mature wooded habitat and a rare vegetation community. Therefore, vegetation impacts are higher than for 1st ranked alternatives.</p>	<p>Net effects associated with the alternative are dependent on the ability to implement avoidance, mitigation, compensation / enhancement measures; until confirmed, net effects remain the same as potential effects.</p> <p>Net effects include:</p> <ul style="list-style-type: none"> • Removal of ~18.5 ha of cultural thicket and meadow with small sections of treed swamp (<0.1 ha) and deciduous forest (0.4 ha) • Reduction in vegetation community quality through indirect effects that cannot be fully mitigated including effects from road contaminants (e.g. salt, heavy metals, sediment / debris), introduction of pathways for invasive species, edge / exposure impacts (e.g. canopy blow down) <p>Vegetation communities within this alternative are generally small, scattered patches of cultural thicket, deciduous forest, deciduous swamp, and cultural meadow.</p> <p style="text-align: center;">LOW NET EFFECT</p> <p style="text-align: center;">RANKING: 1st</p> <p>This alternative has marginally more vegetation impact by area than the S7-14 alternative and a lower overall net effect than S7-3.</p>	<p>Net effects associated with the alternative are dependent on the ability to implement avoidance, mitigation, compensation / enhancement measures; until confirmed, net effects remain the same as potential effects.</p> <p>Net effects include:</p> <ul style="list-style-type: none"> • Removal of ~18.0 ha of cultural thicket and meadow • Removal of 0.4 ha of deciduous forest • Reduction in vegetation community quality through Indirect effects that cannot be fully mitigated including effects from road contaminants (e.g. salt, heavy metals, sediment / debris), introduction of pathways for invasive species, edge / exposure impacts (e.g. canopy blow down) <p>Vegetation communities within this alternative are generally small, scattered patches of cultural thicket, deciduous forest, and cultural meadow</p> <p style="text-align: center;">LOW NET EFFECT</p> <p style="text-align: center;">RANKING: 1st</p> <p>This alternative has the lowest amount of vegetation impact by area and impacts the lowest quality vegetation communities. It is marginally better than the S7-13 alternative.</p>

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1.2.4 Designated/Special/ Natural Areas	<p>Net effects associated with the alternative are dependent on the ability to implement avoidance, mitigation, compensation/enhancement measures; until confirmed, net effects remain the same as potential effects.</p> <p>Net effects include:</p> <ul style="list-style-type: none"> No removals of the Natural Heritage System of the Greenbelt Plan Removals within the York Region 'Greenlands System' and 'Core Features' within the City of Vaughan <p style="text-align: center;">MODERATE NET EFFECT</p>	<p>Net effects associated with the alternative are dependent on the ability to implement avoidance, mitigation, compensation / enhancement measures; until confirmed, net effects remain the same as potential effects.</p> <p>Net effects include:</p> <ul style="list-style-type: none"> Removal of 0.65 ha of the Natural Heritage System of the Greenbelt Plan Removals within the York Region 'Greenlands System' and 'Core Features' within the City of Vaughan <p style="text-align: center;">MODERATE NET EFFECT</p>	<p>Net effects associated with the alternative are dependent on the ability to implement avoidance, mitigation, compensation / enhancement measures; until confirmed, net effects remain the same as potential effects.</p> <p>Net effects include:</p> <ul style="list-style-type: none"> No removals of the Natural Heritage System of the Greenbelt Plan Removals within the York Region 'Greenlands System' and 'Core Features' within the City of Vaughan <p style="text-align: center;">MODERATE NET EFFECT</p>
	<p>RANKING: 1st</p> <p>This alternative does not impact the Natural Heritage System of the Greenbelt Plan, but impacts equal amounts of the York and Vaughan Regional Natural Heritage Systems to that of the other alternatives.</p>	<p>RANKING: 3rd</p> <p>This alternative impacts a small amount of the Natural Heritage System of the Greenbelt Plan, but impacts equal amounts of the York and Vaughan Regional Natural Heritage Systems to that of the other alternatives.</p>	<p>RANKING: 1st</p> <p>This alternative does not impact the Natural Heritage System of the Greenbelt Plan, but impacts equal amounts of the York and Vaughan Regional Natural Heritage Systems to that of the other alternatives.</p>
1.3 Ecosystem Services	<p>Relative ES Value</p> <ul style="list-style-type: none"> Agriculture: Moderate Natural Cover: Low Cumulative: Low <p>ES Value Representation</p> <ul style="list-style-type: none"> Agriculture: 59% Natural Cover: 41% <p style="text-align: center;">LOW NET EFFECT</p>	<p>Relative ES Value</p> <ul style="list-style-type: none"> Agriculture: High Natural Cover: Low Cumulative: Low <p>ES Value Representation</p> <ul style="list-style-type: none"> Agriculture: 52% Natural Cover: 48% <p style="text-align: center;">MODERATE NET EFFECT</p>	<p>Relative ES Value</p> <ul style="list-style-type: none"> Agriculture: Moderate Natural Cover: Low Cumulative: Low <p>ES Value Representation</p> <ul style="list-style-type: none"> Agriculture: 52% Natural Cover: 48% <p style="text-align: center;">LOW NET EFFECT</p>
	<p>RANKING: 1st</p> <p>Alternatives S7-3 and S7-14 have the lowest net effects using the Ecosystem Service (ES) Net Effects weighting. Differentiation between these alternatives is generated by examining the proportion of Natural Cover and relative contribution of Natural Cover ES value to total value. S7-3 has a lower % natural cover than S7-14. S7-3 also has the lowest total ES value for S7.</p>	<p>RANKING: 3rd</p> <p>Alternative S7-13 has the highest net effects (Moderate) using the Ecosystem Service (ES) Net Effects weighting for Section 7, making it the least preferred alternative. It also has the highest total ES value.</p>	<p>RANKING: 2nd</p> <p>Alternatives S7-3 and S7-14 have low net effects using the Ecosystem Service (ES) Net Effects weighting. Differentiation between these alternatives is generated by examining the proportion of Natural Cover and relative contribution of Natural Cover ES value to total value. S7-14 has a higher % natural cover than S7-3. S7-14 also has a higher total ES value than S7-3.</p>
1.4 Groundwater			
1.4.1 Areas of Groundwater Recharge or Discharge	<ul style="list-style-type: none"> Small loss of recharge due to footprint on permeable soils and small loss of discharge due to interception. <p style="text-align: center;">LOW NET EFFECT</p>	<ul style="list-style-type: none"> Small to moderate loss of recharge due to footprint on permeable soils and small loss of discharge due to interception. <p style="text-align: center;">LOW NET EFFECT</p>	<ul style="list-style-type: none"> Small to moderate loss of recharge due to footprint on permeable soils and small loss of discharge due to interception. <p style="text-align: center;">LOW NET EFFECT</p>
	<p>RANKING: 1st</p> <p>Similar relatively low effects to all alternatives.</p>	<p>RANKING: 1st</p> <p>Similar relatively low effects to all alternatives.</p>	<p>RANKING: 1st</p> <p>Similar relatively low effects to all alternatives.</p>
1.4.2 Groundwater Source Areas and Wellhead Protection Areas	<ul style="list-style-type: none"> Footprint is at the far end of the WHPA which remains protected. <p style="text-align: center;">LOW NET EFFECT</p>	<ul style="list-style-type: none"> Footprint passes through the WHPA which remains protected. <p style="text-align: center;">MODERATE NET EFFECT</p>	<ul style="list-style-type: none"> Footprint passes through the WHPA which remains protected. <p style="text-align: center;">MODERATE NET EFFECT</p>
	<p>RANKING: 1st</p> <p>Only a very small area overlies the WHPA.</p>	<p>RANKING: 2nd</p> <p>Only a small area overlies the WHPA.</p>	<p>RANKING: 2nd</p> <p>Only a small area overlies the WHPA.</p>
1.4.3 Large Volume Wells	<ul style="list-style-type: none"> No effects to large capacity wells 	<ul style="list-style-type: none"> No effects to large capacity wells 	<ul style="list-style-type: none"> No effects to large capacity wells

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	<p align="center">NO NET EFFECT RANKING: 1st</p> <p align="center">All alternatives have no net effects and are all ranked the same.</p>	<p align="center">NO NET EFFECT RANKING: 1st</p> <p align="center">All alternatives have no net effects and are all ranked the same.</p>	<p align="center">NO NET EFFECT RANKING: 1st</p> <p align="center">All alternatives have no net effects and are all ranked the same.</p>
1.4.4 Private Wells	<ul style="list-style-type: none"> Potential reduction in water quality in at least 8 wells due to potential salt issue only, because wells are shallow At least 11 wells are to be removed / decommissioned by alternative. <p align="center">MODERATE NET EFFECT RANKING: 3rd</p> <p align="center">The alternative potentially affects a moderate number of wells. 11 wells are to be removed/decommissioned.</p>	<ul style="list-style-type: none"> Potential reduction in water quality in at least 3 wells due to potential salt issue only, because wells are shallow At least 16 wells are to be removed / decommissioned by alternative. <p align="center">LOW NET EFFECT RANKING: 1st</p> <p align="center">The alternative potentially affects a low number of wells. 16 wells are to be removed/decommissioned.</p>	<ul style="list-style-type: none"> Potential reduction in water quality in at least 4 wells due to potential salt issue only, because wells are shallow At least 16 wells are to be removed / decommissioned by alternative. <p align="center">LOW NET EFFECT RANKING: 1st</p> <p align="center">The alternative potentially affects a low number of wells. 16 wells are to be removed/decommissioned.</p>
1.4.5 Groundwater-Dependent Commercial Enterprises	<ul style="list-style-type: none"> No commercial wells displaced. Nine (9) commercial uses adjacent to the alternative potentially affected. <p align="center">MODERATE NET EFFECT RANKING: 1st</p> <p align="center">No commercial wells to be displaced, with nine (9) wells adjacent to the alternative to be potentially affected.</p>	<ul style="list-style-type: none"> Three (3) commercial wells displaced. Six (6) commercial uses adjacent to the alternative potentially affected. <p align="center">MODERATE NET EFFECT RANKING: 2nd</p> <p align="center">There are six (6) wells adjacent to the alternative that will be potentially affected. Three (3) commercial wells to be displaced.</p>	<ul style="list-style-type: none"> Three (3) commercial wells displaced. Six (6) commercial uses adjacent to the alternative potentially affected. <p align="center">MODERATE NET EFFECT RANKING: 2nd</p> <p align="center">There are six (6) wells adjacent to the alternative that will be potentially affected. Three (3) commercial wells to be displaced.</p>
1.4.6 Groundwater-Sensitive Ecosystems	<ul style="list-style-type: none"> Low potential to affect sensitive ecosystems with two (2) wetland areas in buffer zone and warmwater streams that are not dependent on groundwater. <p align="center">LOW NET EFFECT RANKING: 1st</p> <p align="center">Sensitive ecosystems are in the buffer zone only.</p>	<ul style="list-style-type: none"> Moderate potential to affect sensitive ecosystems with seven (7) wetland areas that may be displaced within this alternative. Low potential to affect 12 additional wetland/discharge areas and warmwater streams in the buffer zone that are not dependent on groundwater. <p align="center">MODERATE NET EFFECT RANKING: 2nd</p> <p align="center">Sensitive ecosystems within the alternative and in the buffer zone.</p>	<ul style="list-style-type: none"> Moderate potential to affect sensitive ecosystems with seven (7) wetland areas that may be displaced within this alternative. Low potential to affect 13 additional wetland/discharge areas and warmwater streams in the buffer zone that are not dependent on groundwater. <p align="center">MODERATE NET EFFECT RANKING: 2nd</p> <p align="center">Sensitive ecosystems within the alternative and in the buffer zone.</p>
1.5 Surface Water			
1.5.1 Watershed / Subwatershed Drainage Features / Patterns	<ul style="list-style-type: none"> Complicated crossings of moderate to major watercourses which are actively meandering will require wide spans. <p align="center">HIGH NET EFFECT RANKING: 1st</p> <p align="center">Wide footprint, complicated crossings.</p>	<ul style="list-style-type: none"> Complicated crossings of moderate to major watercourses which are actively meandering will require wide spans. <p align="center">HIGH NET EFFECT RANKING: 2nd</p> <p align="center">Wide footprint, complicated crossings. At least one additional crossing is required than Alternative S7-3.</p>	<ul style="list-style-type: none"> Complicated crossings of moderate to major watercourses which are actively meandering will require wide spans. <p align="center">HIGH NET EFFECT RANKING: 2nd</p> <p align="center">Wide footprint, complicated crossings. At least one additional crossing is required than Alternative S7-3.</p>
1.5.2 Surface Water Quality and Quantity	<ul style="list-style-type: none"> Introduces approximately 60 ha of impervious area to Robinson Creek. Medium impacts on quality through direct and indirect discharges of contaminated and sediment-laden runoff, thermal impact on the coolwater system. Medium impacts on hydrology due to changes in ground permeability. High impacts on modifications to surface drainage patterns and alterations of water bodies. <p align="center">HIGH NET EFFECT</p>	<ul style="list-style-type: none"> Introduces approximately 68 ha of impervious area to Robinson Creek. Medium impacts on quality through direct and indirect discharges of contaminated and sediment-laden runoff, thermal impact on the coolwater system. Medium impacts on hydrology due to changes in ground permeability. High impacts on modifications to surface drainage patterns and alterations of water bodies. <p align="center">HIGH NET EFFECT</p>	<ul style="list-style-type: none"> Introduces approximately 64 ha of impervious area to Robinson Creek. Medium impacts on quality through direct and indirect discharges of contaminated and sediment-laden runoff, thermal impact on the coolwater system. Medium impacts on hydrology due to changes in ground permeability. High impacts on modifications to surface drainage patterns and alterations of water bodies. <p align="center">HIGH NET EFFECT</p>

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	RANKING: 1st Medium size impervious area; significant impact on the regulated watercourse.	RANKING: 3rd Yields the highest impervious area among the three alternative routes; significant impact on the regulated watercourse.	RANKING: 2nd Yields impervious area higher than Alternative S7-3; significant impact on the regulated watercourse.
1.6 Air Quality and Climate Change			
1.6.1 Local and regional air quality impacts; greenhouse gas emissions	<ul style="list-style-type: none"> A few residences may be close enough to experience a change in air quality, but pollutants will be within acceptable levels (mainly where the link to Highway 427 meets Huntington Rd. and Major MacKenzie Dr.). 	<ul style="list-style-type: none"> A few residences may be close enough to experience a change in air quality, but pollutants will be within acceptable levels (mainly where the link to Highway 427 meets Huntington Rd. and Major MacKenzie Dr.). 	<ul style="list-style-type: none"> A few residences may be close enough to experience a change in air quality, but pollutants will be within acceptable levels (mainly where the link to Highway 427 meets Huntington Rd. and Major MacKenzie Dr.).
	LOW NET EFFECT RANKING: 3rd	LOW NET EFFECT RANKING: 1st	LOW NET EFFECT RANKING: 1st
	Closer to residences east of Huntington Road and North Nashville Road.	More distant from residences east of Huntington Road and North of Nashville Road. This alternative has a comparable route length to S7-3 and, thus, is comparable in terms of regional emissions and GHGs.	More distant from residences east of Huntington Road and North of Nashville Road. This alternative has a comparable route length to S7-3 and, thus, is comparable in terms of regional emissions and GHGs.
2.0 Land Use / Socio-Economic Environment			
2.1 Land Use Planning Policies, Goals, Objectives			
2.1.1 Indigenous Land Claims	Treaties including Nanfan (1701), Treaty 3 (1795), Treaty 3.75 (1795), Treaty 13 (1805), Treaty 13A (1805), Treaty 18, 1818, Treaty 19 (1918), Williams Treaty (1923), as well as various Assertions and Claims. <ul style="list-style-type: none"> Additional Indigenous Assertions and/or Claims may be filed and/or proven at any time. 	Treaties including Nanfan (1701), Treaty 3 (1795), Treaty 3.75 (1795), Treaty 13 (1805), Treaty 13A (1805), Treaty 18, 1818, Treaty 19 (1918), Williams Treaty (1923), as well as various Assertions and Claims. <ul style="list-style-type: none"> Additional Indigenous Assertions and/or Claims may be filed and/or proven at any time. 	Treaties including Nanfan (1701), Treaty 3 (1795), Treaty 3.75 (1795), Treaty 13 (1805), Treaty 13A (1805), Treaty 18, 1818, Treaty 19 (1918), Williams Treaty (1923), as well as various Assertions and Claims. <ul style="list-style-type: none"> Additional Indigenous Assertions and/or Claims may be filed and/or proven at any time.
	MODERATE NET EFFECT RANKING: 1st	MODERATE NET EFFECT RANKING: 1st	MODERATE NET EFFECT RANKING: 1st
	No difference between alternatives.	No difference between alternatives.	No difference between alternatives.
2.1.2 Provincial / Federal Land Use Planning Policies / Goals / Objectives	<ul style="list-style-type: none"> Impacts PPS agricultural public space and recreational and employment lands policies. Impacts 128 hectares of Agricultural lands. Impacts 47 hectares of Designated Employment lands. Consistent with the Greenbelt Plan (no impact). Impacts 17 hectares of Environmental Policy Area lands. 	<ul style="list-style-type: none"> Impacts PPS agricultural public space and recreational and employment lands policies. Impacts 162 hectares of Agricultural lands. Impacts 52 hectares of Designated Employment lands. Consistent with the Greenbelt Plan (very small impact of 0.65 ha). Impacts 19 hectares of Environmental Policy Area lands. 	<ul style="list-style-type: none"> Impacts PPS agricultural public space and recreational and employment lands policies. Impacts 147 hectares of Agricultural lands. Impacts 52 hectares of Designated Employment lands. Consistent with the Greenbelt Plan (no impact). Impacts 19 hectares of Environmental Policy Area lands.
	MODERATE NET EFFECT RANKING: 1st	HIGH NET EFFECT RANKING: 3rd	MODERATE NET EFFECT RANKING: 2nd
	This option has a moderate impact on designated agricultural lands and employment lands and no impact on Greenbelt lands.	This option has the highest impact on designated agricultural lands (+34 ha), moderate impact on employment lands, slightly higher impact on environmental policy lands, and very small impact on Greenbelt lands.	This option has a higher impact on designated agricultural lands (+19 ha), moderate impact on employment lands, slightly higher impact on environmental policy lands, and no impact on Greenbelt lands.
2.1.3 Municipal (local and regional) Land Use Planning Policies / Goals / Objectives	<ul style="list-style-type: none"> Impacts 17 hectares of Environmental Policy Area lands. Impacts 60 hectares of Future Urban Area lands. Impacts 8 hectares of Rural Area lands. Impacts 128 hectares of Agricultural lands. Impacts 47 hectares of Designated Employment lands. 	<ul style="list-style-type: none"> Impacts 19 hectares of Environmental Policy Area lands. Impacts 60 hectares of Future Urban Area lands. Impacts 8 hectares of Rural Area lands. Impacts 162 hectares of Agricultural lands. Impacts 52 hectares of Designated Employment lands. 	<ul style="list-style-type: none"> Impacts 19 hectares of Environmental Policy Area lands. Impacts 60 hectares of Future Urban Area lands. Impacts 8 hectares of Rural Area lands. Impacts 147 hectares of Agricultural lands. Impacts 52 hectares of Designated Employment lands.
	LOW NET EFFECT RANKING 1st	MODERATE NET EFFECT RANKING: 2nd	MODERATE NET EFFECT RANKING: 2nd
	This option has a low impact on designated agricultural lands, and moderate impacts on employment lands and future urban area lands.	This option has the highest impact on designated agricultural lands, moderate impact on employment lands and future urban area lands.	This option has a moderate impact on designated agricultural lands, employment lands and future urban area lands.
	<ul style="list-style-type: none"> Impacts approved Highway 50 Truck Stop (2.1 hectares). 	<ul style="list-style-type: none"> Impacts approved Highway 50 Truck Stop (2.1 hectares). 	<ul style="list-style-type: none"> Impacts approved Highway 50 Truck Stop (2.1 hectares)

Evaluation Factors and Sub-Factors	Alternative S7-3 (2019 Preferred)	Alternative S7-13	Alternative S7-14
	Summary of Potential Net Effects and Ranking		
2.1.4 Development Objectives of Private Property Owners	LOW NET EFFECT RANKING: 1st	LOW NET EFFECT RANKING: 1st	LOW NET EFFECT RANKING: 1st
	Impacts a moderate area of the Highway 50 truck stop application.	Impacts a moderate area of the Highway 50 truck stop application.	Impacts a moderate area of the Highway 50 truck stop application.
2.2 Land Use – Community			
2.2.1 First Nation Reserves	• No reserves in study area. NO NET EFFECT RANKING: 1st	• No reserves in study area. NO NET EFFECT RANKING: 1st	• No reserves in study area. NO NET EFFECT RANKING: 1st
	No difference between alternatives.	No difference between alternatives.	No difference between alternatives.
2.2.2 Indigenous Sacred Areas	• No known or reported Indigenous Sacred Areas NO NET EFFECT RANKING: 1st	• No known or reported Indigenous Sacred Areas NO NET EFFECT RANKING: 1st	• No known or reported Indigenous Sacred Areas NO NET EFFECT RANKING: 1st
	No difference between alternatives.	No difference between alternatives.	No difference between alternatives.
2.2.3 Urban and Rural Residential Uses and Properties	• 10 residential properties impacted. MODERATE NET EFFECT RANKING: 3rd	• 7 residential properties impacted. LOW NET EFFECT RANKING: 1st	• 7 residential properties impacted. LOW NET EFFECT RANKING: 1st
	The highest number of residential properties are impacted.	A low number of residential properties are impacted.	A low number of residential properties are impacted.
2.2.4 Commercial/ Industrial Uses and Properties	• Impacts 6 commercial operations: Zara Natural Stone (2.2 hectares), C Valley Paving (6.4 hectares), Nashville Sod Supply (0.05 hectares), Apra Truck Lines Transport (2.0 hectares), SMS Landscaping (0.02 hectares) and Temp Outdoor Storage (0.2 hectares). MODERATE NET EFFECT RANKING: 1st	• Impacts 5 commercial operations: Zara Natural Stone, C Valley Paving, Coffee Time/Esso, Downsview Group Outdoor Storage, Pets Get Physical. MODERATE NET EFFECT RANKING: 1st	• Impacts 5 commercial operations: Zara Natural Stone, C Valley Paving, Coffee Time/Esso, Downsview Group Outdoor Storage, other Outdoor Storage. MODERATE NET EFFECT RANKING: 1st
	Impacts a moderate number of established commercial properties; there is potential for the businesses to relocate given the nature of the business; does not compromise the use of most of the properties. Insignificant differences between alternatives.	Preliminary design will minimize or avoid impacts on Coffee Time/Esso; Other uses are transitional land uses that will change as urbanization occurs. Insignificant differences between alternatives.	Preliminary design will minimize or avoid impacts on Coffee Time/Esso; uses are transitional land uses that will change as urbanization occurs. Insignificant differences between alternatives.
2.2.5 Recreational Areas and Tourist Attractions	• No impacts. NO NET EFFECT RANKING: 1st	• No impacts. NO NET EFFECT RANKING: 1st	• No impacts. NO NET EFFECT RANKING: 1st
	No impacts.	No impacts.	No impacts.
2.2.6 Community Facilities / Institutions	• 2 properties impacted: Nashville Road School/ Community Church (0.3 hectares) and Shiloh Primitive Methodist Cemetery (0.04 hectares). LOW NET EFFECT RANKING: 1st	• Impacts a small portion of the Shiloh Primitive Methodist Cemetery. LOW NET EFFECT RANKING: 1st	• Impacts a small portion of the Shiloh Primitive Methodist Cemetery. LOW NET EFFECT RANKING: 1st
	Impacts the northern portion of the Nashville Road School/ Church property. Impact on school /church property can likely be eliminated in preliminary design. Impacts a small portion of the Shiloh Primitive	Impacts to cemetery can likely be avoided through preliminary design. Insignificant difference between alternatives.	Impacts to cemetery can likely be avoided through preliminary design. Insignificant difference between alternatives.

Evaluation Factors and Sub-Factors	Alternative S7-3 (2019 Preferred)	Alternative S7-13 Summary of Potential Net Effects and Ranking	Alternative S7-14
2.2.7 Municipal Infrastructure and Public Service Facilities	<p>Methodist Cemetery which could possibly be mitigated through preliminary design. Insignificant difference between alternatives.</p> <ul style="list-style-type: none"> 1 rail crossing. <p>LOW NET EFFECT RANKING: 1st</p> <p>All alternatives include 1 rail crossing. Impacts can be mitigated through design refinements.</p>	<ul style="list-style-type: none"> 1 rail crossing. <p>LOW NET EFFECT RANKING: 1st</p> <p>All alternatives include 1 rail crossing. Impacts can be mitigated through design refinements.</p>	<ul style="list-style-type: none"> 1 rail crossing. <p>LOW NET EFFECT RANKING: 1st</p> <p>All alternatives include 1 rail crossing. Impacts can be mitigated through design refinements.</p>
2.3 Noise Sensitive Areas (NSA's)			
2.3.1 Transportation Noise	<ul style="list-style-type: none"> A few residences may be close enough to experience an increase in traffic noise (mainly where the link to Highway 427 meets Huntington Rd. and Major MacKenzie Dr.). <p>LOW NET EFFECT RANKING: 3rd</p> <p>Closer to residences east of Huntington Road and North Nashville Road.</p>	<ul style="list-style-type: none"> A few residences may be close enough to experience an increase in traffic noise (mainly where the link to Highway 427 meets Huntington Rd. and Major MacKenzie Dr.). <p>LOW NET EFFECT RANKING: 1st</p> <p>Farther from residences east of Huntington Road and North Nashville Road.</p>	<ul style="list-style-type: none"> A few residences may be close enough to experience an increase in traffic noise (mainly where the link to Highway 427 meets Huntington Rd. and Major MacKenzie Dr.). <p>LOW NET EFFECT RANKING: 1st</p> <p>Farther from residences east of Huntington Road and North Nashville Road.</p>
2.4 Land Use – Resources			
2.4.1 Indigenous Treaty Rights and Land Use Management	<p>Treaties including Nanfan (1701), Treaty 3 (1795), Treaty 3.75 (1795), Treaty 13 (1805), Treaty 13A (1805), Treaty 18, 1818, Treaty 19 (1918), Williams Treaty (1923), as well as various Assertions and Claims.</p> <ul style="list-style-type: none"> Additional Indigenous Assertions and/or Claims may be filed and/or proven at any time. <p>MODERATE NET EFFECT RANKING: 1st</p> <p>No difference between alternatives.</p>	<p>Treaties including Nanfan (1701), Treaty 3 (1795), Treaty 3.75 (1795), Treaty 13 (1805), Treaty 13A (1805), Treaty 18, 1818, Treaty 19 (1918), Williams Treaty (1923), as well as various Assertions and Claims.</p> <ul style="list-style-type: none"> Additional Indigenous Assertions and/or Claims may be filed and/or proven at any time. <p>MODERATE NET EFFECT RANKING: 1st</p> <p>No difference between alternatives.</p>	<p>Treaties including Nanfan (1701), Treaty 3 (1795), Treaty 3.75 (1795), Treaty 13 (1805), Treaty 13A (1805), Treaty 18, 1818, Treaty 19 (1918), Williams Treaty (1923), as well as various Assertions and Claims.</p> <ul style="list-style-type: none"> Additional Indigenous Assertions and/or Claims may be filed and/or proven at any time. <p>MODERATE NET EFFECT RANKING: 1st</p> <p>No difference between alternatives.</p>
2.4.2 Agriculture / Specialty Crop	<ul style="list-style-type: none"> Removal or sterilization of Class 1 – 3 agricultural lands Specialty Crops/Cropland affected Cropland affected Livestock operations affected Loss of agricultural buildings Agricultural buildings within 50 m <ul style="list-style-type: none"> Loss of 120.5 ha of Class 1 – 3 lands No effect Potential effect remains the same Two livestock operations affected (dairy, horse) (loss of buildings and land for both operations) Potential effect remains the same No effect 	<ul style="list-style-type: none"> Removal or sterilization of Class 1 – 3 agricultural lands Specialty Crops/Cropland affected Cropland affected Livestock operations affected Loss of agricultural buildings Agricultural buildings within 50 m <ul style="list-style-type: none"> Loss of 154.2 ha of Class 1 – 3 lands No effect Potential effect remains the same Two livestock operations affected (poultry, horse) (buildings and land) Potential effect remains the same No effect 	<ul style="list-style-type: none"> Removal or sterilization of Class 1 – 3 agricultural lands Specialty Crops/Cropland affected Cropland affected Livestock operations affected Loss of agricultural buildings Agricultural buildings within 50 m <ul style="list-style-type: none"> Loss of 140.1 ha of Class 1 – 3 lands No effect Potential effect remains the same Two livestock operations affected (poultry, horse) (buildings and land) Potential effect remains the same No effect

Evaluation Factors and Sub-Factors	Alternative S7-3 (2019 Preferred)	Alternative S7-13 Summary of Potential Net Effects and Ranking	Alternative S7-14
<ul style="list-style-type: none"> Field crop operations affected Farm properties greater than 20 ha affected Farm properties less than 20 ha affected Severed parcels greater than 20 ha created Severed parcels less than 20 ha created Landlocked parcels created High investment operations affected Farm equipment transportation routes affected Division of agricultural community areas Loss of tile drainage 	<ul style="list-style-type: none"> Potential effect remains the same Potential effect remains the same Potential effect remains the same No effect Nine severed parcels less than 20 ha created Potential effect remains the same Two high investment operations affected (horse, dairy) (loss of land and buildings for both operations) No effect No effect No effect 	<ul style="list-style-type: none"> Potential effect remains the same Potential effect remains the same Potential effect remains the same Potential effect remains the same Ten severed parcels less than 20 ha created Potential effect remains the same One high investment operation affected (horse) (buildings and land) No effect No effect No effect 	<ul style="list-style-type: none"> Potential effect remains the same Potential effect remains the same Potential effect remains the same Potential effect remains the same Nine severed parcels less than 20 ha created Potential effect remains the same One high investment operation affected (horse) (buildings and land) No effect No effect No effect
	<p style="text-align: center;">HIGH NET EFFECT RANKING: 1st</p> <ul style="list-style-type: none"> Loss of 120.5 ha of Class 1 – 3 lands Two livestock operations affected (dairy, horse) (loss of buildings and land for both operations) Nine severed parcels less than 20 ha created Two high investment operations affected (horse, dairy) (loss of land and buildings for both operations) 	<p style="text-align: center;">HIGH NET EFFECT RANKING: 1st</p> <ul style="list-style-type: none"> Loss of 154.2 ha of Class 1 – 3 lands Two livestock operations affected (poultry, horse) (loss of buildings and land for both operations) Ten severed parcels less than 20 ha created One high investment operation affected (horse) (loss of land and buildings) 	<p style="text-align: center;">HIGH NET EFFECT RANKING: 1st</p> <ul style="list-style-type: none"> Loss of 140.1 ha of Class 1 – 3 lands Two livestock operations affected (poultry, horse) (loss of buildings and land for both operations) Nine severed parcels less than 20 ha created One high investment operations affected (horse) (loss of land and buildings)
2.4.3 Recreation	<ul style="list-style-type: none"> No impacts. <p style="text-align: center;">NO NET EFFECT RANKING: 1st</p> <p style="text-align: center;">No impacts.</p>	<ul style="list-style-type: none"> No impacts. <p style="text-align: center;">NO NET EFFECT RANKING: 1st</p> <p style="text-align: center;">No impacts.</p>	<ul style="list-style-type: none"> No impacts. <p style="text-align: center;">NO NET EFFECT RANKING: 1st</p> <p style="text-align: center;">No impacts.</p>
2.4.4 Aggregate and Mineral Resources	<ul style="list-style-type: none"> No impacts. <p style="text-align: center;">NO NET EFFECT RANKING: 1st</p>	<ul style="list-style-type: none"> No impacts. <p style="text-align: center;">NO NET EFFECT RANKING: 1st</p>	<ul style="list-style-type: none"> No impacts. <p style="text-align: center;">NO NET EFFECT RANKING: 1st</p>

Evaluation Factors and Sub-Factors	Alternative S7-3 (2019 Preferred)	Alternative S7-13 Summary of Potential Net Effects and Ranking	Alternative S7-14
	No impacts.	No impacts.	No impacts.
2.5 Major Utility Transmission Corridors and Pipelines			
2.5.1 Major Existing Utility Transmission Corridors and Pipelines	<ul style="list-style-type: none"> Alternative crosses pipeline, hydro lines and hydro towers. <p style="text-align: center;">LOW NET EFFECT RANKING: 1st</p> <p>All alternatives cross pipelines. Impact can be mitigated through design refinements. Cost of mitigation in constructability and costs criteria.</p>	<ul style="list-style-type: none"> Alternative crosses pipeline, hydro lines and hydro towers. <p style="text-align: center;">LOW NET EFFECT RANKING: 1st</p> <p>All alternatives cross pipeline. Impact can be mitigated through design refinements. Cost of mitigation in constructability and costs criteria.</p>	<ul style="list-style-type: none"> Alternative crosses pipeline, hydro lines and hydro towers. <p style="text-align: center;">LOW NET EFFECT RANKING: 1st</p> <p>All alternatives cross pipelines. Impact can be mitigated through design refinements. Cost of mitigation in constructability and costs criteria.</p>
2.5.2 Major Proposed Utility Transmission Corridors and Pipelines	<ul style="list-style-type: none"> No impacts. <p style="text-align: center;">NO NET EFFECT RANKING: 1st</p> <p style="text-align: center;">No impacts.</p>	<ul style="list-style-type: none"> No impacts. <p style="text-align: center;">NO NET EFFECT RANKING: 1st</p> <p style="text-align: center;">No impacts.</p>	<ul style="list-style-type: none"> No impacts. <p style="text-align: center;">NO NET EFFECT RANKING: 1st</p> <p style="text-align: center;">No impacts.</p>
2.6 Contaminated Property and Waste Management	<p>Properties within alternative:</p> <ul style="list-style-type: none"> One (1) waste disposal site located at 10335 Highway 50; One (1) gas station; One (1) commercial property with automobile storage and stock piles; One (1) industrial property with automobile storage and stock piles; Two (2) private properties with abandoned/ used cars and stock piles; One (1) CNR rail line; One (1) cemetery; One (1) private property with storage of materials and an AST. <p>Properties within 250 m of alternative:</p> <ul style="list-style-type: none"> Two (2) private properties with stock piles and construction work; One (1) commercial property with truck storage. <p style="text-align: center;">HIGH NET EFFECT RANKING: 3rd</p> <p>Two properties of significantly high concern to be directly impacted (gas station and waste disposal site); four properties of high concern to be directly impacted; three properties of medium concern to be directly impacted; three properties of medium concern to be indirectly impacted.</p>	<p>Properties within alternative:</p> <ul style="list-style-type: none"> One (1) waste disposal site at 10335 Highway 50; One (1) gas station; Three (3) commercial properties with storage of automobiles and stock piles; One (1) cemetery; One (1) commercial property with outdoor storage and abandoned/used car; and One (1) CNR rail line. <p>Properties within 250 m of alternative:</p> <ul style="list-style-type: none"> One (1) railway line and railway property; One (1) transformer station property; One (1) landscaping property with storage of automobiles and fill piles. <p style="text-align: center;">HIGH NET EFFECT RANKING: 1st</p> <p>Two properties of significantly high concern to be directly impacted (gas station and waste disposal site); five properties of high concern to be directly impacted; one property of medium concern to be directly impacted; and three properties of high concern to be indirectly impacted.</p>	<p>Properties within alternative:</p> <ul style="list-style-type: none"> One (1) waste disposal site at 10335 Highway 50; One (1) gas station; Three (3) commercial properties with storage of automobiles and stock piles; One (1) cemetery; One (1) commercial property with outdoor storage and abandoned/used car; and One (1) CNR rail line. <p>Properties within 250 m of alternative:</p> <ul style="list-style-type: none"> One (1) railway line and railway property; One (1) transformer station property; One (1) landscaping property with storage of automobiles and fill piles. <p style="text-align: center;">HIGH NET EFFECT RANKING: 1st</p> <p>Two properties of significantly high concern to be directly impacted (gas station and waste disposal site); five properties of high concern to be directly impacted; one property of medium concern to be directly impacted; and three properties of high concern to be indirectly impacted.</p>
2.7 Landscape Composition			
2.7.1 Terrain	<ul style="list-style-type: none"> Predominantly flat topography except for creek valley. Designated predominantly agricultural area, with some environmental policy area, employment area, future urban area and a small portion of rural area. Small area of wetland impacted/removed. Crosses 13 streams/branches of streams. Crosses hydro corridor twice. Part of the alternative encroaches on the Wellhead Protection Area for Kleinberg 	<ul style="list-style-type: none"> Predominantly flat topography except for creek valley. Designated predominantly agricultural area, with some environmental policy area, employment area, future urban area, and small portions of rural area and developed area. Moderate area of wetland impacted/removed. Crosses 13 streams/branches of streams. Crosses hydro corridor twice. Part of the alternative falls on the Wellhead Protection Area. 	<ul style="list-style-type: none"> Predominantly flat topography except for creek valley. Designated predominantly agricultural area, with some environmental policy area, employment area, future urban area, and small portions of rural area and developed area. Moderate area of wetland impacted/removed. Crosses 13 streams/branches of streams. Crosses hydro corridor twice. Part of the alternative falls on the Wellhead Protection Area.

Evaluation Factors and Sub-Factors	Alternative S7-3 (2019 Preferred)	Alternative S7-13 Summary of Potential Net Effects and Ranking	Alternative S7-14
	<ul style="list-style-type: none"> West end of alternative goes partially over Shiloh Primitive Methodist Cemetery. <p style="text-align: center;">MODERATE NET EFFECT RANKING: 1st</p> <p>Low effect on existing buildings/uses, least amount of wetland removal, crosses several watercourses and greenways and a key natural feature, as well as minorly affecting the WHPA.</p>	<ul style="list-style-type: none"> West end of alternative goes over Shiloh Primitive Methodist Cemetery. <p style="text-align: center;">MODERATE NET EFFECT RANKING: 2nd</p> <p>Low effect on existing buildings/uses, highest amount of wetland removal, crosses several watercourses and greenways and a key natural feature, as well as affecting the WHPA.</p>	<ul style="list-style-type: none"> West end of alternative goes over Shiloh Primitive Methodist Cemetery. <p style="text-align: center;">MODERATE NET EFFECT RANKING: 2nd</p> <p>Low effect on existing buildings/uses, lesser amount of wetland removal, crosses several watercourses and greenways and a key natural feature, as well as affecting the WHPA.</p>
2.7.2 Vegetation	<ul style="list-style-type: none"> Interrupts 1 linear vegetation community in 2 locations (unidentified wetland, wood lot and warm-water stream). Crosses 8 unevaluated wetlands. Crosses 2 wooded areas (less than 5 ha). Runs adjacent to 2 woodlots contiguous to streams. <p style="text-align: center;">MODERATE NET EFFECT RANKING: 3rd</p> <p>Higher effect on vegetation compared to the other alternatives.</p>	<ul style="list-style-type: none"> Interrupts 1 linear vegetation community in 2 locations (unidentified wetland, wood lot and warm-water stream). Crosses 11 unevaluated wetlands. Covers or crosses 2 wooded areas (~0.5 ha). <p style="text-align: center;">MODERATE NET EFFECT RANKING: 1st</p> <p>Lower effect on vegetation, although more wetlands are impacted.</p>	<ul style="list-style-type: none"> Interrupts 1 linear vegetation community in 2 locations (unidentified wetland, wood lot and warm-water stream) Crosses 10 unevaluated wetlands Covers or crosses 1 wooded area (~0.5 ha) <p style="text-align: center;">MODERATE NET EFFECT RANKING: 1st</p> <p>Lower effect on vegetation, although more wetlands are impacted.</p>
2.7.3 Visual Impacts	<ul style="list-style-type: none"> Diminished aesthetic quality of scenic views, reduced visual effect through mitigation/compensation measures. This alternative would have a moderate to high effect on the sensitive residential receptors, particularly the subdivision. Low to moderate impacts to sensitive receptor of new subdivision north of Major MacKenzie Drive and east of Huntington Road. Sensitive viewer Nashville Road Community Church will have its northern vista affected by this alternative (moderate effect). A moderate to low spatial dominance in terms of land covered by this alternative, absorptivity of the landscape is low due to primarily flat open agricultural lands. <p style="text-align: center;">MODERATE NET EFFECT RANKING: 3rd</p> <p>Moderate to high effect on sensitive receptors, low to moderate spatial dominance, and low landscape absorptivity.</p>	<ul style="list-style-type: none"> Diminished aesthetic quality of scenic views, reduced visual effect through mitigation/compensation measures. Low to moderate effect on the sensitive residential receptors (subdivision and Nashville Village to the east). Low to moderate impacts to sensitive receptor of new subdivision north of Major MacKenzie Drive and east of Huntington Road. Sensitive receptor Nashville Road Community Church will have its northern vista impacted by this alternative (low to moderate effect). A moderate spatial dominance in terms of land covered by this option, absorptivity of the landscape is low due to primarily flat open agricultural lands at the south end. At the north there is some varied topography and vegetation which increases landscape absorptivity. <p style="text-align: center;">MODERATE NET EFFECT RANKING: 1st</p> <p>Low to moderate effect on sensitive receptors, moderate spatial dominance, and low landscape absorptivity.</p>	<ul style="list-style-type: none"> Diminished aesthetic quality of scenic views, reduced visual effect through mitigation/compensation measures. Low to moderate effect on the sensitive residential receptors (subdivision and Nashville Village to the east) Low to moderate impacts to sensitive receptor of new subdivision north of Major MacKenzie Drive and east of Huntington Road. Sensitive receptor Nashville Road Community Church will have its northern vista impacted by this alternative (low to moderate effect). A moderate spatial dominance in terms of land covered by this option, absorptivity of the landscape is low due to primarily flat open agricultural lands at the south end. At the north there is some varied topography and vegetation which increases landscape absorptivity. <p style="text-align: center;">MODERATE NET EFFECT RANKING: 1st</p> <p>Low to moderate effect on sensitive receptors, moderate spatial dominance, and low landscape absorptivity.</p>
2.7.4 Aesthetics	<ul style="list-style-type: none"> Alignment in this alternative is somewhat integrated with the landscape and interrupts some existing uses (rural, commercial and residential). One (1) cemetery falls partially under this alternative. Potential views and vistas from the corridor include predominantly agricultural lands. <p style="text-align: center;">MODERATE NET EFFECT RANKING: 3rd</p> <p>Alignment is less integrated in this alternative.</p>	<ul style="list-style-type: none"> Alignment in this option is fairly well integrated with the landscape and existing uses. Interrupts some existing uses (rural, commercial and residential). One (1) cemetery falls partially under this alternative. Potential views and vistas from the corridor include predominantly agricultural lands. <p style="text-align: center;">LOW NET EFFECT RANKING: 1st</p> <p>Alignment is better integrated in this alternative making it preferred.</p>	<ul style="list-style-type: none"> Alignment in this option is fairly well integrated with the landscape and existing uses. Interrupts some existing uses (rural, commercial and residential). One (1) cemetery falls partially under this alternative. Potential views and vistas from the corridor include predominantly agricultural lands. <p style="text-align: center;">LOW NET EFFECT RANKING: 1st</p> <p>Alignment is better integrated in this alternative making it preferred.</p>
3.0 Cultural Environment			

Evaluation Factors and Sub-Factors	Alternative S7-3 (2019 Preferred)	Alternative S7-13	Alternative S7-14
Summary of Potential Net Effects and Ranking			
3.1 Built Heritage and Cultural Heritage Landscapes			
3.1.1 Built Heritage Resources	<ul style="list-style-type: none"> There are two (2) potential BHRs (BHR 223 and BHR 226) and one (1) listed BHR (BHR 234) affected by this alternative. <p style="text-align: center;">MODERATE NET EFFECT RANKING: 3rd</p> <p>There are two (2) potential and one (1) listed BHRs affected by this alternative which will require further evaluation in order to determine their Cultural Heritage Value and Interest. Once Cultural Heritage Value and Interest has been determined, avoidance, protection and mitigation measures must be completed.</p>	<ul style="list-style-type: none"> There are two (2) potential BHRs (BHR 223, BHR 226) affected by this alternative. <p style="text-align: center;">LOW NET EFFECT RANKING: 1st</p> <p>There are two (2) potential BHRs affected by this alternative which will require further evaluation in order to determine their Cultural Heritage Value and Interest. Once Cultural Heritage Value and Interest has been determined, avoidance, protection and mitigation measures must be completed.</p>	<ul style="list-style-type: none"> There are two (2) potential BHRs (BHR 223, BHR 226) affected by this alternative. <p style="text-align: center;">LOW NET EFFECT RANKING: 1st</p> <p>There are two (2) potential BHRs affected by this alternative which will require further evaluation in order to determine their Cultural Heritage Value and Interest. Once Cultural Heritage Value and Interest has been determined, avoidance, protection and mitigation measures must be completed.</p>
3.1.2 Heritage Bridges	<ul style="list-style-type: none"> There are no Heritage Bridges affected by this alternative. <p style="text-align: center;">NO NET EFFECT RANKING: 1st</p> <p>There are no Heritage Bridges affected by this alternative.</p>	<ul style="list-style-type: none"> There are no Heritage Bridges affected by this alternative. <p style="text-align: center;">NO NET EFFECT RANKING: 1st</p> <p>There are no Heritage Bridges affected by this alternative.</p>	<ul style="list-style-type: none"> There are no Heritage Bridges affected by this alternative. <p style="text-align: center;">NO NET EFFECT RANKING: 1st</p> <p>There are no Heritage Bridges affected by this alternative.</p>
3.1.3 Cultural Heritage Landscapes	<ul style="list-style-type: none"> There is one (1) designated cemetery CHL (CHL 222) and one (1) listed CHL (CHL 221) affected by this alternative. <p style="text-align: center;">NO NET EFFECT RANKING: 1st</p> <p>There is one (1) designated cemetery CHL (CHL 222) and one (1) listed CHL (CHL 221) affected by this alternative which will require further evaluation in order to determine its Cultural Heritage Value and Interest. Once Cultural Heritage Value and Interest has been determined, avoidance, protection and mitigation measures must be completed. Since the cemetery is on the edge of the 250m corridor, it can be avoided during Preliminary Design.</p>	<ul style="list-style-type: none"> There is one (1) designated cemetery CHL (CHL 222) and one (1) listed CHL (CHL 221) affected by this alternative. <p style="text-align: center;">NO NET EFFECT RANKING: 1st</p> <p>There is one (1) designated cemetery CHL (CHL 222) and one (1) listed CHL (CHL 221) affected by this alternative which will require further evaluation in order to determine its Cultural Heritage Value and Interest. Once Cultural Heritage Value and Interest has been determined, avoidance, protection and mitigation measures must be completed. Since the cemetery is on the edge of the 250m corridor, it can be avoided during Preliminary Design.</p>	<ul style="list-style-type: none"> There is one (1) designated cemetery (CHL 222) and one (1) listed (CHL 221) affected by this alternative. <p style="text-align: center;">NO NET EFFECT RANKING: 1st</p> <p>There is one (1) designated cemetery CHL (CHL 222) and one (1) listed CHL (CHL 221) affected by this alternative which will require further evaluation in order to determine its Cultural Heritage Value and Interest. Once Cultural Heritage Value and Interest has been determined, avoidance, protection and mitigation measures must be completed. Since the cemetery is on the edge of the 250m corridor, it can be avoided during Preliminary Design.</p>
3.2 Archaeology			
3.2.1 Pre-Contact and Contact Indigenous Archaeological Sites	<ul style="list-style-type: none"> Three (3) registered sites (AkGv-308, AkGv-300, AkGv-330), however no further work is required as they have been mitigated. Archaeological potential is present within 192 ha of this alternative. <p style="text-align: center;">LOW NET EFFECT RANKING: 1st</p> <p>Three (3) registered sites (AkGv-308, AkGv-300, AkGv-330), however no further work is required as they have been mitigated. Archaeological potential is also present within much of this alternative.</p>	<ul style="list-style-type: none"> There is one (1) registered pre-contact or contact Indigenous Archaeological site (AkGv-308) within this alternative, although no further work is required as it has been mitigated. Archaeological potential is present within 239 hectares of this alternative. <p style="text-align: center;">LOW NET EFFECT RANKING: 1st</p> <p>There is one (1) registered pre-contact or contact Indigenous Archaeological site (AkGv-308) within this alternative, although no further work is required as it has been mitigated. Archaeological potential is present within 239 hectares of this alternative.</p>	<ul style="list-style-type: none"> There is one (1) registered pre-contact or contact Indigenous Archaeological site (AkGv-308) within this alternative, although no further work is required as it has been mitigated. Archaeological potential is present within 227 hectares of this alternative. <p style="text-align: center;">LOW NET EFFECT RANKING: 1st</p> <p>There is one (1) registered pre-contact or contact Indigenous Archaeological site (AkGv-308) within this alternative, although no further work is required as it has been mitigated. Archaeological potential is present within 227 hectares of this alternative.</p>
3.2.2 Historic Euro-Canadian Archaeological Sites	<ul style="list-style-type: none"> Two (2) registered sites (AkGw-469, AlGw-168), however no further work is required as they have been mitigated. Archaeological potential is present within 192 ha of this alternative <p style="text-align: center;">LOW NET EFFECT RANKING: 1st</p>	<ul style="list-style-type: none"> There are two (2) registered archaeological sites (AlGw-168, AkGw-469) within this alternative, although no further work is required as the sites have been mitigated. Archaeological potential is also present within 239 hectares of this alternative. <p style="text-align: center;">LOW NET EFFECT RANKING: 1st</p>	<ul style="list-style-type: none"> There are two (2) registered archaeological sites (AlGw-168, AkGw-469) within this alternative, although no further work is required as the sites have been mitigated. Archaeological potential is also present within 227 hectares of this alternative. <p style="text-align: center;">LOW NET EFFECT RANKING: 1st</p>

Evaluation Factors and Sub-Factors	Alternative S7-3 (2019 Preferred)	Alternative S7-13 Summary of Potential Net Effects and Ranking	Alternative S7-14
	Two (2) registered sites (AkGw-469, AIGw-168), however no further work is required as they have been mitigated. Archaeological potential is also present within much of this alternative.	There are two (2) registered archaeological sites (AIGw-168, AkGw-469) within this alternative, although no further work is required as the sites have been mitigated. Archaeological potential is also present within 239 hectares of this alternative.	There are two (2) registered archaeological sites (AIGw-168, AkGw-469) within this alternative, although no further work is required as the sites have been mitigated. Archaeological potential is also present within 227 hectares of this alternative.
3.2.3 Indigenous Burial Sites	<ul style="list-style-type: none"> No known or reported Indigenous Burial Sites <p style="text-align: center;">NO NET EFFECT RANKING: 1st</p> <p style="text-align: center;">No difference between alternatives.</p>	<ul style="list-style-type: none"> No known or reported Indigenous Burial Sites <p style="text-align: center;">NO NET EFFECT RANKING: 1st</p> <p style="text-align: center;">No difference between alternatives.</p>	<ul style="list-style-type: none"> No known or reported Indigenous Burial Sites <p style="text-align: center;">NO NET EFFECT RANKING: 1st</p> <p style="text-align: center;">No difference between alternatives.</p>
3.2.4 Cemeteries	<ul style="list-style-type: none"> One (1) registered cemetery is present within this alternative <p style="text-align: center;">NO NET EFFECT RANKING: 1st</p> <p>One (1) registered cemetery is located within this alternative. Since the cemetery is on the edge of the 250m corridor, it can be avoided during Preliminary Design.</p>	<ul style="list-style-type: none"> One (1) registered cemetery is present within this alternative <p style="text-align: center;">NO NET EFFECT RANKING: 1st</p> <p>One (1) registered cemetery is located within this alternative. Since the cemetery is on the edge of the 250m corridor, it can be avoided during Preliminary Design.</p>	<ul style="list-style-type: none"> One (1) registered cemetery is present within this alternative <p style="text-align: center;">NO NET EFFECT RANKING: 1st</p> <p>One (1) registered cemetery is located within this alternative. Since the cemetery is on the edge of the 250m corridor, it can be avoided during Preliminary Design.</p>
4.0 Transportation			
4.1 System Capacity & Efficiency			
4.1.1 Movement of People	<ul style="list-style-type: none"> 706,000 auto vehicle km 2,937,000 auto vehicle km 86% better than LOS D (80% in base without GTAW) 68% better than LOS D (60% in base without GTAW) Improves connections to existing and planned urban centres. Improves connections to transitway from urban centres, mobility hubs, and other transit services. Improved transportation options for travellers. GTA West – 2.5 km, Hwy 427 – 2.3 km <p style="text-align: center;">MODERATE CAPACITY & EFFICIENCY RANKING: 1st</p> <p style="text-align: center;">All alternatives have similar people movements.</p>	<ul style="list-style-type: none"> 706,000 auto vehicle km 2,937,000 auto vehicle km 86% better than LOS D (80% in base without GTAW) 68% better than LOS D (60% in base without GTAW) Improves connections to existing and planned urban centres. Improves connections to transitway from urban centres, mobility hubs, and other transit services. Improved transportation options for travellers. GTA West – 2.5 km, Hwy 427 – 2.3 km <p style="text-align: center;">MODERATE CAPACITY & EFFICIENCY RANKING: 1st</p> <p style="text-align: center;">All alternatives have similar people movements.</p>	<ul style="list-style-type: none"> 706,000 auto vehicle km 2,937,000 auto vehicle km 86% better than LOS D (80% in base without GTAW) 68% better than LOS D (60% in base without GTAW) Improves connections to existing and planned urban centres. Improves connections to transitway from urban centres, mobility hubs, and other transit services. Improved transportation options for travellers. GTA West – 2.5 km, Hwy 427 – 2.3 km <p style="text-align: center;">MODERATE CAPACITY & EFFICIENCY RANKING: 1st</p> <p style="text-align: center;">All alternatives have similar people movements.</p>
4.1.2 Movement of Goods	<ul style="list-style-type: none"> GTAW (East of Hwy 427) - 370 vehicles 52,000 truck vehicle km 255,000 truck vehicle km 85% better than LOS D (78% in base without GTAW) 69% better than LOS D (62% in base without GTAW) Supports connections to existing and planned freight trip generators <p style="text-align: center;">MODERATE CAPACITY & EFFICIENCY RANKING: 1st</p> <p style="text-align: center;">All alternatives have similar goods movements.</p>	<ul style="list-style-type: none"> GTAW (East of Hwy 427) - 370 vehicles 52,000 truck vehicle km 255,000 truck vehicle km 85% better than LOS D (78% in base without GTAW) 69% better than LOS D (62% in base without GTAW) Supports connections to existing and planned freight trip generators <p style="text-align: center;">MODERATE CAPACITY & EFFICIENCY RANKING: 1st</p> <p style="text-align: center;">All alternatives have similar goods movements.</p>	<ul style="list-style-type: none"> GTAW (East of Hwy 427) - 370 vehicles 52,000 truck vehicle km 255,000 truck vehicle km 85% better than LOS D (78% in base without GTAW) 69% better than LOS D (62% in base without GTAW) Supports connections to existing and planned freight trip generators <p style="text-align: center;">MODERATE CAPACITY & EFFICIENCY RANKING: 1st</p> <p style="text-align: center;">All alternatives have similar goods movements.</p>
4.1.3 System performance during peak periods	<ul style="list-style-type: none"> South of Kirby Rd - 0.97 North of Major MacKenzie Dr - 0.61 West of Hwy 50 - 0.52 East of Huntington Rd - 0.62 GTAW (West of Hwy 427) – 0.82 GTAW (East of Hwy 427) – 0.96 	<ul style="list-style-type: none"> South of Kirby Rd – 0.97 North of Major MacKenzie Dr - 0.61 West of Hwy 50 - 0.52 East of Huntington Rd - 0.62 GTAW (West of Hwy 427) – 0.82 GTAW (East of Hwy 427) – 0.96 	<ul style="list-style-type: none"> South of Kirby Rd - 0.97 North of Major MacKenzie Dr - 0.61 West of Hwy 50 - 0.52 East of Huntington Rd - 0.62 GTAW (West of Hwy 427) – 0.82 GTAW (East of Hwy 427) – 0.96

Evaluation Factors and Sub-Factors	Alternative S7-3 (2019 Preferred)	Alternative S7-13 Summary of Potential Net Effects and Ranking	Alternative S7-14
	<ul style="list-style-type: none"> Hwy 427 (South of GTAW) – 0.74 Supports potential demand management strategies and travel demand supportive measures <p style="text-align: center;">MODERATE PERFORMANCE RANKING: 1st</p> <p style="text-align: center;">All alternatives have same performance during peak periods.</p>	<ul style="list-style-type: none"> Hwy 427 (South of GTAW) – 0.74 Supports potential demand management strategies and travel demand supportive measures <p style="text-align: center;">MODERATE PERFORMANCE RANKING: 1st</p> <p style="text-align: center;">All alternatives have same performance during peak periods.</p>	<ul style="list-style-type: none"> Hwy 427 (South of GTAW) – 0.74 Supports potential demand management strategies and travel demand supportive measures <p style="text-align: center;">MODERATE PERFORMANCE RANKING: 1st</p> <p style="text-align: center;">All alternatives have same performance during peak periods.</p>
4.2 System reliability / redundancy	<ul style="list-style-type: none"> Good opportunity for redundancy on the local road network. <p style="text-align: center;">HIGH RELIABILITY / REDUNDANCY RANKING: 1st</p> <p style="text-align: center;">All alternatives have similar reliability / redundancy.</p>	<ul style="list-style-type: none"> Good opportunity for redundancy on the local road network. <p style="text-align: center;">HIGH RELIABILITY / REDUNDANCY RANKING: 1st</p> <p style="text-align: center;">All alternatives have similar reliability / redundancy.</p>	<ul style="list-style-type: none"> Good opportunity for redundancy on the local road network. <p style="text-align: center;">HIGH RELIABILITY / REDUNDANCY RANKING: 1st</p> <p style="text-align: center;">All alternatives have similar reliability / redundancy.</p>
4.3 Safety			
4.3.1 Traffic Safety	<ul style="list-style-type: none"> Good opportunity for traffic safety on the local road network. <p style="text-align: center;">HIGH POTENTIAL FOR IMPROVEMENT RANKING: 1st</p> <p style="text-align: center;">All alternatives have similar improvements to traffic safety.</p>	<ul style="list-style-type: none"> Good opportunity for traffic safety on the local road network. <p style="text-align: center;">HIGH POTENTIAL FOR IMPROVEMENT RANKING: 1st</p> <p style="text-align: center;">All alternatives have similar improvements to traffic safety.</p>	<ul style="list-style-type: none"> Good opportunity for traffic safety on the local road network. <p style="text-align: center;">HIGH POTENTIAL FOR IMPROVEMENT RANKING: 1st</p> <p style="text-align: center;">All alternatives have similar improvements to traffic safety.</p>
4.3.2 Emergency Access	<ul style="list-style-type: none"> High potential for improved access without reductions to existing access. <p style="text-align: center;">HIGH ACCESS RANKING: 1st</p> <p style="text-align: center;">All alternatives have similar improvements to emergency access,</p>	<ul style="list-style-type: none"> High potential for improved access without reductions to existing access. <p style="text-align: center;">HIGH ACCESS RANKING: 1st</p> <p style="text-align: center;">All alternatives have similar improvements to emergency access,</p>	<ul style="list-style-type: none"> High potential for improved access without reductions to existing access. <p style="text-align: center;">HIGH ACCESS RANKING: 1st</p> <p style="text-align: center;">All alternatives have similar improvements to emergency access,</p>
4.4 Mobility & Accessibility			
4.4.1 Modal integration and balance	<ul style="list-style-type: none"> Good opportunity for intermodal connections at transitway stations and carpool lots. <p style="text-align: center;">HIGH POTENTIAL FOR IMPROVEMENT RANKING: 1st</p> <p style="text-align: center;">All alternatives provide high potential for improvements.</p>	<ul style="list-style-type: none"> Good opportunity for intermodal connections at transitway stations and carpool lots. <p style="text-align: center;">HIGH POTENTIAL FOR IMPROVEMENT RANKING: 1st</p> <p style="text-align: center;">All alternatives provide high potential for improvements.</p>	<ul style="list-style-type: none"> Good opportunity for intermodal connections at transitway stations and carpool lots. <p style="text-align: center;">HIGH POTENTIAL FOR IMPROVEMENT RANKING: 1st</p> <p style="text-align: center;">All alternatives provide high potential for improvements.</p>
4.4.2 Linkages to Population and Employment Centres	<ul style="list-style-type: none"> Improved access to future employment lands. Close connection to south Bolton area. <p style="text-align: center;">HIGH ACCESSIBILITY RANKING: 1st</p> <p style="text-align: center;">All alternatives have similar linkages to population and employment centres.</p>	<ul style="list-style-type: none"> Improved access to future employment lands. Close connection to south Bolton area. <p style="text-align: center;">HIGH ACCESSIBILITY RANKING: 1st</p> <p style="text-align: center;">All alternatives have similar linkages to population and employment centres.</p>	<ul style="list-style-type: none"> Improved access to future employment lands. Close connection to south Bolton area. <p style="text-align: center;">HIGH ACCESSIBILITY RANKING: 1st</p> <p style="text-align: center;">All alternatives have similar linkages to population and employment centres.</p>
4.4.3 Recreation and Tourism Travel	<ul style="list-style-type: none"> High support for inter-regional connections. <p style="text-align: center;">HIGH SUPPORT RANKING: 1st</p> <p style="text-align: center;">All alternatives have similar connections to recreation and tourism sites.</p>	<ul style="list-style-type: none"> High support for inter-regional connections. <p style="text-align: center;">HIGH SUPPORT RANKING: 1st</p> <p style="text-align: center;">All alternatives have similar connections to recreation and tourism sites.</p>	<ul style="list-style-type: none"> High support for inter-regional connections. <p style="text-align: center;">HIGH SUPPORT RANKING: 1st</p> <p style="text-align: center;">All alternatives have similar connections to recreation and tourism sites.</p>
4.4.4 Accommodation for pedestrians, cyclists,	<ul style="list-style-type: none"> Maintains all existing roads crossing the future corridor <p style="text-align: center;">HIGH ACCOMMODATION</p>	<ul style="list-style-type: none"> Maintains all existing roads crossing the future corridor <p style="text-align: center;">HIGH ACCOMMODATION</p>	<ul style="list-style-type: none"> Maintains all existing roads crossing the future corridor <p style="text-align: center;">HIGH ACCOMMODATION</p>

Evaluation Factors and Sub-Factors		Alternative S7-3 (2019 Preferred)	Alternative S7-13 Summary of Potential Net Effects and Ranking	Alternative S7-14
snowmobiles, and specialized vehicles	RANKING: 1st All alternatives have similar accommodations for pedestrians, cyclists, snowmobiles, and specialized vehicles.	RANKING: 1st All alternatives have similar accommodations for pedestrians, cyclists, snowmobiles, and specialized vehicles.	RANKING: 1st All alternatives have similar accommodations for pedestrians, cyclists, snowmobiles, and specialized vehicles.	RANKING: 1st All alternatives have similar accommodations for pedestrians, cyclists, snowmobiles, and specialized vehicles.
4.5 Network Compatibility				
4.5.1 Network connectivity	<ul style="list-style-type: none"> High potential for improved connectivity to/from the Study Area HIGH CONNECTIVITY RANKING: 1st All routes have similar connectivity to local network.	<ul style="list-style-type: none"> High potential for improved connectivity to/from the Study Area HIGH CONNECTIVITY RANKING: 1st All routes have similar connectivity to local network.	<ul style="list-style-type: none"> High potential for improved connectivity to/from the Study Area HIGH CONNECTIVITY RANKING: 1st All routes have similar connectivity to local network.	<ul style="list-style-type: none"> High potential for improved connectivity to/from the Study Area HIGH CONNECTIVITY RANKING: 1st All routes have similar connectivity to local network.
4.5.2 Flexibility for future expansion	<ul style="list-style-type: none"> Opportunities to expand freeway and transitway within the proposed right-of-way HIGH FLEXIBILITY RANKING: 1st All alternatives have similar flexibility for future expansion.	<ul style="list-style-type: none"> Opportunities to expand freeway and transitway within the proposed right-of-way HIGH FLEXIBILITY RANKING: 1st All alternatives have similar flexibility for future expansion.	<ul style="list-style-type: none"> Opportunities to expand freeway and transitway within the proposed right-of-way HIGH FLEXIBILITY RANKING: 1st All alternatives have similar flexibility for future expansion.	<ul style="list-style-type: none"> Opportunities to expand freeway and transitway within the proposed right-of-way HIGH FLEXIBILITY RANKING: 1st All alternatives have similar flexibility for future expansion.
4.6 Engineering				
4.6.1 Constructability	<ul style="list-style-type: none"> Only minor constructability issues. LOW POTENTIAL FOR CONSTRUCTABILITY ISSUES RANKING: 1st	<ul style="list-style-type: none"> Moderate constructability issues crossing hydro corridor Increased spacing between the CP Rail line and Huntington Road may facilitate the design of the vertical profiles and grades for the mainline. Huntington Road crossing is near intersection of Kirby Road and Huntington Road. May require relocation of intersection. MODERATE POTENTIAL FOR CONSTRUCTABILITY ISSUES RANKING: 2nd	<ul style="list-style-type: none"> Moderate constructability issues crossing hydro corridor. Increased spacing between the CP Rail line and Huntington Road may facilitate the design of the vertical profiles and grades for the mainline. Huntington Road grade falling to the north. GTA West may have to cross over Huntington Road at a point where Huntington is dropping down towards Kirby Road. This may complicate the crossing design and construction. MODERATE POTENTIAL FOR CONSTRUCTABILITY ISSUES RANKING: 2nd	<ul style="list-style-type: none"> Moderate constructability issues crossing hydro corridor. Increased spacing between the CP Rail line and Huntington Road may facilitate the design of the vertical profiles and grades for the mainline. Huntington Road grade falling to the north. GTA West may have to cross over Huntington Road at a point where Huntington is dropping down towards Kirby Road. This may complicate the crossing design and construction. MODERATE POTENTIAL FOR CONSTRUCTABILITY ISSUES RANKING: 2nd
4.6.2 Compliance with design criteria	<ul style="list-style-type: none"> Conforms to design criteria HIGH CONFORMITY RANKING: 1st All alternatives comply with design criteria.	<ul style="list-style-type: none"> Conforms to design criteria HIGH CONFORMITY RANKING: 1st All alternatives comply with design criteria.	<ul style="list-style-type: none"> Conforms to design criteria HIGH CONFORMITY RANKING: 1st All alternatives comply with design criteria.	<ul style="list-style-type: none"> Conforms to design criteria HIGH CONFORMITY RANKING: 1st All alternatives comply with design criteria.
4.7 Construction Cost	<ul style="list-style-type: none"> Estimated Cost - 161 M dollars MODERATE RELATIVE COST RANKING: 1st	<ul style="list-style-type: none"> Estimated Cost - 165 M dollars Additional cost due to relatively longer alignment and estimated hydro tower relocation MODERATE RELATIVE COST RANKING: 2nd	<ul style="list-style-type: none"> Estimated Cost - 165 M dollars Additional cost due to relatively longer alignment and estimated hydro tower relocation MODERATE RELATIVE COST RANKING: 2nd	<ul style="list-style-type: none"> Estimated Cost - 165 M dollars Additional cost due to relatively longer alignment and estimated hydro tower relocation MODERATE RELATIVE COST RANKING: 2nd
4.8 Traffic Operations	<ul style="list-style-type: none"> Low potential of reduced traffic operations LOW POTENTIAL FOR NEGATIVE EFFECT RANKING: 1st All alternatives have similar effects on traffic operations.	<ul style="list-style-type: none"> Low potential of reduced traffic operations LOW POTENTIAL FOR NEGATIVE EFFECT RANKING: 1st All alternatives have similar effects on traffic operations.	<ul style="list-style-type: none"> Low potential of reduced traffic operations LOW POTENTIAL FOR NEGATIVE EFFECT RANKING: 1st All alternatives have similar effects on traffic operations.	<ul style="list-style-type: none"> Low potential of reduced traffic operations LOW POTENTIAL FOR NEGATIVE EFFECT RANKING: 1st All alternatives have similar effects on traffic operations.