Appendix I

Evaluation of Alternative Routes

Ranking for Sensitivity Analysis:

Factor/Sub-factor	N2-A	N2-B	Comments:
Transportation			
Accommodation of future vehicular travel demand	No difference	No difference	
Accommodation of pedestrian and cyclist movements	No difference	No difference	
Travel safety	No sub-standards elements	Better geometry	refinement of alignment possible (design alternatives)
Emergency service	No difference	No difference	
Future transportation network connectivity and compatibility	No difference	No difference	
Commercial goods movement	No difference	No difference	
Recreational trails	Trail modifications required along S. Monck. Trail crossings	Fewer conflicts with trails	Corridor can be designed to support snowmobiles and vehicles
Natural Environment			
Watercourses/fisheries/ aquatic habitat	crossings upgraded	new watercourse crossings	
Vegetation and woodlots	edge impacts along existing gravel road	new alignment - undisturbed area	Avoidance is preferred mitigation measure
Wildlife/terrestrial habitat	edge impacts along existing gravel road	new alignment - undisturbed area	Avoidance is preferred mitigation measure
Wetlands	edge impacts along existing gravel road	new alignment - undisturbed area	Avoidance is preferred mitigation measure
Species at Risk	edge impacts along existing gravel road	new alignment - undisturbed area	Avoidance is preferred mitigation measure
Socio-cultural Environment			
Noise	close to one OLA		mitigation includes screening with berms and vegetation
Visual aesthetics	3 homes with reduced aesthetics due to new road		mitigation includes screening with berms and vegetation
Residential property required	more properties impacted but less area	Fewer properties but more area	Impacts to properties with existing buildings a greater concern
Recreational/property impacts	More seasonable property impacts	minimum impacts to seasonal property	parcels are generally large
Other property required	Some impact on vacant, commercial and managed forest	More impact on vacant lanes and managed forest	
Compatibility with existing/ future land uses/ plans	No difference	No difference	
Archaeological resources	Entire route lies in an area of archaeological potential.	Most of the route lies in an area of archaeological potential.	
Heritage resources	3 historic buildings along existing corridor	no historic buildings	buildings can be located and avoided in design

Economic Environment			
Future development potential	No difference	No difference	
Accessibility to existing commercial areas	No difference	No difference	
Engineering/Constructability			
Construction impacts	Intersections required with Falkenburg Rd, Nichols Rd and South Monck Dr. 1.4 km of road construction along Falkenburg, 3.45 km of new road construction including S. Monck reconstruction, 1 major creek crossing.	Intersections required with Falkenburg Rd, Nichols Rd and South Monck Dr. 3.79 km of new road construction including S. Monck Drive, 2 major creek crossings	
Utility/service conflicts	local power lines need relocation	No power lines require relocation	(can be planned to coincide with scheduled renewal of lines)
Construction Cost			
Estimated capital construction cost	150,800 m3 rock cut; 38,300 fill	72,300 m3 rock cut; 74,000 fill	
Estimated utility relocation cost	local power lines to be relocated		(can be planned to coincide with scheduled renewal of lines)

Ranking for Sensitivity Analysis: Preferred alternative for that factor

Higher Impact = 3
Average Impact = 2
Lower Impact = 1

Factor/Sub-factor	N2-A	Rank	N2-B	Rank	Unit of Measure
Transportation					
Accommodation of future vehicular travel demand	Both are in the same area and would attract the same traffic away from downtown. Alternative A is slightly longer but the difference in travel time would not be significant.	2	Both are in the same area and would attract the same traffic away from downtown. Alternative A is slightly longer than alternative B but the difference in travel time would not be significant.	2	Relative attractiveness/potential difference in travel time of alternative routes. (Less Attractive = 3, Average Attractiveness = 2, Highest Attractiveness= 1)
Accommodation of pedestrian and cyclist movements	Paved shoulders to accommodate non-auto modes. Connections to trails as appropriate.	1	Paved shoulders to accommodate non-auto modes. Connections to trails as appropriate.	1	Comparative ability to accomodate paved shoulders, sidewalks and/or pathways for non-auto modes (Poor Ability = 3, Average Ability= 2, Highest Ability = 1)
Travel safety	No sub-standards elements	2	Better geometry	1	Comparative negative impact on adherence to design standards for safety (Higher = 3, Average = 2, Lower = 1)
Emergency service	Similar transportation service, alleviate traffic in downtown to a similar extent and improve access to rural properties in the Falkenburg-South Monck areas. May provide better access to some existing residents.	2	Similar transportation service, alleviate traffic in downtown to a similar extent and improve access to rural properties in the Falkenburg-South Monck areas.	2	Comparative ability to improve routing for emergency services (Poor Ability = 3, Average Ability= 2, Highest Ability= 1)
Future transportation network connectivity and compatibility	Similar network connectivity improving the link between Falkenburg Road and South Monck Drive. Compatible with planned infrastructure and development.	2	Similar network connectivity improving the link between Falkenburg Road and South Monck Drive. Compatible with planned infrastructure and development.	2	Relative improvement in connectivity and compatibility with other planned infrastructure. (Less Improvement = 3, Average Improvement = 2, More Improvement = 1)
Commercial goods movement	Part of a desirable route allowing trucks to bypass downtown. Helps alleviate traffic congestion downtown.	1	Part of a desirable route allowing trucks to bypass downtown. Helps alleviate traffic congestion downtown.	1	Comparative ability of route to accommodate commercial vehicles. (Lower = 3, Average = 2, Higher = 1)
Recreational trails	Trail modifications required along S. Monck. Trail crossings	2	Fewer conflicts with trails	1	Comparative negative effect on trails affected (Higher = 3, Average = 2, Lower = 1)
Natural Environment					
Watercourses/fisheries/ aquatic habitat	crossings upgraded	2	new watercourse crossings	3	Comparative negative impact on crossings (Higher = 3, Average = 2, Lower = 1)
Vegetation and woodlots	edge impacts along existing gravel road	1	new alignment - undisturbed area	3	Comparative negative impact on vegetation and woodlots (Higher = 3, Average = 2, Lower = 1)
Wildlife/terrestrial habitat	edge impacts along existing gravel road	1	new alignment - undisturbed area	3	Comparative negative impact on wildlife/terrestrial (Higher = 3, Average = 2, Lower = 1)
Wetlands	edge impacts along existing gravel road	1	new alignment - undisturbed area	3	Comparative negative impact on wetlands (Higher = 3, Average = 2, Lower = 1)
Species at Risk	edge impacts along existing gravel road	1	new alignment - undisturbed area	3	Comparative negative impact on species at risk (Higher = 3, Average = 2, Lower = 1)
Socio-cultural Environment					
Noise	close to one OLA	2	no identified impacts	1	Comparative number of sensitive receptors negatively impacted (Higher = 3, Average = 2, Lower = 1)
Visual aesthetics	4 homes with reduced aesthetics due to new road	3	Views of road shielded	1	Comparative number of properties with negative visual impacts (Higher = 3, Average = 2, Lower = 1)
Residential property required	more properties impacted but less area	3	Fewer properties but more area	2	Comparative number of residential properties/area impacted (where impacts to existing buildings is of greater concern) (Higher = 3, Average = 2, Lower = 1)
Recreational/property impacts	More seasonable property impacts	3	minimum impacts to seasonal property	2	Comparative number of recreational properties/area impacted (where impacts to existing buildings is of greater concern) (Higher = 3, Average = 2, Lower = 1)
Other property required	Some impact on vacant, commercial and managed forest	2	More impact on vacant lands and managed forest	3	Comparative number of other properties/area impacted (where impacts to existing buildings is of greater concern) (Higher = 3, Average = 2, Lower = 1)
Compatibility with existing/ future land uses/ plans	Outside the urban area, part of a corridor providing an alternative route for land developments on the west side of Bracebridge.	2	Outside the urban area, part of a corridor providing an alternative route for land developments on the west side of Bracebridge.	2	Relative accommodation of existing and future land uses and Official Plan policies. (Less Accommodating = 3, Average Accommodation = 2, More Accommodating = 1)
Archaeological resources	Entire route lies in an area of archaeological potential.	2	Most of the route lies in an area of archaeological potential.	2	Relative area of high archaeological potential affected. (More Area = 3, Average Area = 2, Less Area = 1)
Heritage resources	4 historic buildings along existing corridor	2	no historic buildings	1	Comparative number of historic buildings that would be negatively impacted (Higher = 3, Average = 2, Lower = 1)
Economic Environment					
Future development potential	Part of a corridor providing an alternative route for land developments on the west side of Bracebridge.	1	Part of a corridor providing an alternative route for land developments on the west side of Bracebridge.	1	Comparative effect on accessibility of planned future development areas (Higher = 3, Average = 2, Lower = 1)
Accessibility to existing commercial areas	Will attract the same amount of traffic away from existing routes.	1	Will attract the same amount of traffic away from existing routes.	1	Comparative effect on accessibility to existing commercial areas in Bracebridge and beyond (Higher = 3, Average = 2, Lower = 1)
Engineering/ Constructability					
Construction impacts	Intersections required with Falkenburg Rd, Nichols Rd and South Monck Dr. 1.4 km of road construction along Falkenburg, 3.45 km of new road construction including S. Monck reconstruction, 1 major creek crossing.	2	Intersections required with Falkenburg Rd, Nichols Rd and South Monck Dr. 3.79 km of new road construction including S. Monck Drive, 2 major creek crossings	3	Comparative number of at-grade intersections, km of road construction along existing road corridors and/or km of new road construction required; # of major creek crossings required; potential to provide a grade-separated crossing of the rail line (Higher = 3, Average = 2, Lower = 1)
Utility/service conflicts	local power lines need relocation	2	No power lines require relocation	1	Comparative number # of pipeline crossings required and other utilities and services required. (Higher = 3, Average = 2, Lower = 1)
Construction Cost					
Estimated capital construction cost	150,800 m3 rock cut; 38,300 fill	3	72,300 m3 rock cut; 74,000 fill (less rock exc)	2	Comparative cost based on preliminary profile and cross-section. (Higher = 3, Average = 2, Lower = 1)
Estimated utility relocation cost	local power lines to be relocated	2	no utilities identified	1	Comparative cost based on previous experience and consultation with affected utilities. (Higher = 3, Average = 2, Lower = 1)

Segment N2

Factor/Sub-factor	Significance Level
Transportation	
Accommodation of future vehicular travel demand	high
Accommodation of pedestrian and cyclist movements	medium
Travel safety	high
Emergency service	high
Future transportation network connectivity and compatibility	medium
Commercial goods movement	medium
Recreational trails	medium
Natural Environment	
Watercourses/fisheries/ aquatic habitat	medium
Vegetation and woodlots	medium
Wildlife/terrestrial habitat	medium
Wetlands	high
Species at Risk	high
Socio-cultural Environment	
Noise	high
Visual aesthetics	medium
Residential property required	high
Recreational/property impacts	high
Other property required	high
Compatibility with existing/ future land uses/ plans	medium
Archaeological resources	low
Heritage resources	low
Economic Environment	
Future development potential	low
Accessibility to existing commercial areas	medium
Engineering/Constructability	
Construction impacts	medium
Utility/service conflicts	medium
Construction Cost	
Estimated capital construction cost	low
Estimated utility relocation cost	low

			Common Scale	
Factor/Sub-factor	**N2-A**	**N2-B**	**N2-A**	**N2-B**
Transportation				
Accommodation of future vehicular travel demand	2	2	0.67	0.67
Accommodation of pedestrian and cyclist movements	1	1	0.33	0.33
Travel safety	2	1	0.67	0.33
Emergency service	2	2	0.67	0.67
Future transportation network connectivity and compatibility	2	2	0.67	0.67
Commercial goods movement	1	1	0.33	0.33
Recreational trails	2	1	0.67	0.33
Natural Environment				
Watercourses/fisheries/ aquatic habitat	2	3	0.67	1.00
Vegetation and woodlots	1	3	0.33	1.00
Wildlife/terrestrial habitat	1	3	0.33	1.00
Wetlands	1	3	0.33	1.00
Species at Risk	1	3	0.33	1.00
Socio-cultural Environment				
Noise	2	1	0.67	0.33
Visual aesthetics	3	1	1.00	0.33
Residential property required	3	2	1.00	0.67
Recreational/property impacts	3	2	1.00	0.67
Other property required	2	3	0.67	1.00
Compatibility with existing/ future land uses/ plans	2	2	0.67	0.67
Archaeological resources	2	2	0.67	0.67
Heritage resources	2	1	0.67	0.33
Economic Environment				
Future development potential	1	1	0.33	0.33
Accessibility to existing commercial areas	1	1	0.33	0.33
Engineering/Constructability				
Construction impacts	2	3	0.67	1.00
Utility/service conflicts	2	1	0.67	0.33
Construction Cost				
Estimated capital construction cost	3	2	1.00	0.67
Estimated utility relocation cost	2	1	0.67	0.33

Weighting based on Significance of Potential impacts (low = 1, medium = 4 and high = 10)

Factor/Sub-factor	Weight	Weighted Ranking	
		N2-A	N2-B
Transportation			
Accommodation of future vehicular travel demand	10	6.7	6.7
Accommodation of pedestrian and cyclist movements	4	1.3	1.3
Travel safety	10	6.7	3.3
Emergency service	10	6.7	6.7
Future transportation network connectivity and compatibility	4	2.7	2.7
Commercial goods movement	4	1.3	1.3
Recreational trails	4	2.7	1.3
Natural Environment			
Watercourses/fisheries/ aquatic habitat	4	2.7	4.0
Vegetation and woodlots	4	1.3	4.0
Wildlife/terrestrial habitat	4	1.3	4.0
Wetlands	10	3.3	10.0
Species at Risk	10	3.3	10.0
Socio-cultural Environment			
Noise	10	6.7	3.3
Visual aesthetics	4	4.0	1.3
Residential property required	10	10.0	6.7
Recreational/property impacts	10	10.0	6.7
Other property required	10	6.7	10.0
Compatibility with existing/ future land uses/ plans	4	2.7	2.7
Archaeological resources	1	0.7	0.7
Heritage resources	1	0.7	0.3
Economic Environment			
Future development potential	4	1.3	1.3
Accessibility to existing commercial areas	4	1.3	1.3
Engineering			
Construction impacts	4	2.7	4.0
Utility/service conflicts	4	2.7	1.3
Construction Cost			
Estimated capital construction cost	1	1.0	0.7
Estimated utility relocation cost	1	0.7	0.3
		91.0	**96.0**

Factor/Sub-factor	Significance Level
Transportation	
Accommodation of future vehicular travel demand	high
Accommodation of pedestrian and cyclist movements	medium
Travel safety	high
Emergency service	high
Future transportation network connectivity and compatibility	medium
Commercial goods movement	medium
Recreational trails	medium
Natural Environment	
Watercourses/fisheries/ aquatic habitat	medium
Vegetation and woodlots	medium
Wildlife/terrestrial habitat	medium
Wetlands	high
Species at Risk	high
Socio-cultural Environment	
Noise	high
Visual aesthetics	medium
Residential property required	high
Recreational/property impacts	high
Other property required	high
Compatibility with existing/ future land uses/ plans	medium
Archaeological resources	low
Heritage resources	low
Economic Environment	
Future development potential	medium
Accessibility to existing commercial areas	medium
Engineering/Constructability	
Construction impacts	medium
Utility/service conflicts	medium
Construction Cost	
Estimated capital construction cost	low
Estimated utility relocation cost	low

Ranking for Sensitivity Analysis:

Factor/Sub-factor	Alternative 5-A	Alternative 5-B	Comments:
Transportation			
Accommodation of future vehicular travel demand	Alt A has a T-intersection at 118, requiring two turns to access Golden Beach Rd and potentially the future West Transpo Corridor	Alt B connects with Golden Beach Rd and potentially the future West Transpo Corridor at 118, facilitating movements at 118	Both in same area and attract same traffic from downtown
Accommodation of pedestrian and cyclist movements	No difference between alternatives. Both will be designed with paved shoulders to accommodate non-auto modes		
Travel safety	Design speed of 80 km/h. Tangent alignment with T-intersections at Hwy 118	Design speed of 80 km/h. Min radii used. Would require new driveway for Animal Hospital	
Emergency service	Both provide similar emergency service and improve rural access		
Future transportation network connectivity and compatibility	Alt A is compatible with planned infrastructure and development	Alt B provides better network connectivity with the connection to Golden Beach Rd & future West Transpo Corridor at 118	
Commercial goods movement	Both part of desirable route outside downtown. Both alleviate traffic congestion		
Recreational trails	Both have no crossings of OFSC trails or Trans Canada Trail		
Natural Environment			
Watercourses/fisheries/ aquatic habitat	1 channel crossing, with intermittent flow. Water inputs from upstream sources and road drainage	2 channel crossings, 1 with intermittent flow.	Pools observed upstream and downstream of Monck Rd.
Vegetation and woodlots	Affects edge of meadown that contains smooth brome grass, Timothy grass and orchard grass		
Wildlife/terrestrial habitat	Community types are associated with foraging habitat for insectivorous species		
Wetlands	Overall community not considered provincially significant		
Species at Risk	Affects some habitat for Threatened Bobolink		
Socio-cultural Environment			
Noise	2 receptors	1 receptor	
Visual aesthetics	One house within 200 m of the corridors and its view will be unchanged		
Residential property required	2 parcels - 5m width (700m2)	1 parcel - 5m width (280m2)	
Recreational/property impacts	No recreational or seasonal residential identified		
Other property required	Commercial: 2 parcels - 5m width (0.2 ha & 365 m2) Farmland: 1 parcel - 5m width (0.3ha)	Farmland/Driving range: 1.6 ha	
Compatibility with existing/ future land uses/ plans	Road uses existing road right-of-way	Road travels through an existing driving range/golf course	Both alternatives part of a corridor providing an alt route for land developments on the
Archaeological resources	Less undisturbed and affected,	Greater amount of undisturbed land	
Heritage resources	One known historic buildings exists roughly 700m north of Hwy 118		
Economic Environment			
Future development potential	Both part of a corridor providing an alternative route for land developments on		
Accessibility to existing commercial areas	Both attract the same amount of traffic away from existing routes		
Engineering/Constructability			
Construction impacts	Intersection required with MR 118. 660m of road construction along existing road corridor. No major creek crossings	Intersection with MR 118. 680m of new road construction and removal of existing road where no longer needed. No major creek crossings	# of at grade intersections & grade seperations, # of km of road construction along existing road corridors and # of km of new road construction, # of major creek crossings
Utility/service conflicts	No pipeline crossing in this section.		# of pipelines and power transmission line crossings
Construction Cost			
Estimated capital construction cost	Road improvement only - 660m 3200 m3 rock exc 3700 m3 earth exc 900 m3 fill	New road construction - 680m 2500 m3 rock exc 3800 m3 earth exc 200 m3 fill	Major quantities required
Estimated utility relocation cost	Some power poles may require relocation		Description of requirements

Ranking for Sensitivity Analysis:

Higher Impact = 3
Average Impact = 2
Lower Impact = 1

Factor/Sub-factor	Alternative 5-A	Rank	Alternative 5-B	Rank	Unit of Measure
Transportation					
Accommodation of future vehicular travel demand	T-intersection at 118, requiring two turns to access Golden Beach Rd and potentially the future West Transpo Corridor	2	Connects with Golden Beach Rd and potentially the future West Transpo Corridor at 118, facilitating movements at 118	1	Relative attractiveness/potential difference in travel time of alternative routes. (Less Attractive = 3, Average Attractiveness = 2, Highest Attractiveness= 1)
Accommodation of pedestrian and cyclist movements	Designed with paved shoulders to accommodate non-auto modes.	1	Designed with paved shoulders to accommodate non-auto modes.	1	Comparative ability to accomodate paved shoulders, sidewalks and/or pathways for non-auto modes (Poor Ability = 3, Average Ability= 2, Highest Ability = 1)
Travel safety	Tangent alignment with T-intersections at Hwy 118	1	Min radii used. Would require new driveway for Animal Hospital	2	Comparative negative impact on adherence to design standards for safety (Higher = 3, Average = 2, Lower = 1)
Emergency service	Provide similar emergency service and improve access to rural properties in the South Monck area.	2	Provide similar emergency service and improve access to rural properties in the South Monck area.	2	Comparative ability to improve routing for emergency services (Poor Ability = 3, Average Ability= 2, Highest Ability= 1)
Future transportation network connectivity and compatibility	Compatible with planned infrastructure and development	2	Provides better network connectivity with the connection to Golden Beach Rd & future West Transpo Corridor at 118	1	Relative improvement in connectivity and compatibility with other planned infrastructure. (Less Improvement = 3, Average Improvement = 2, More Improvement = 1)
Commercial goods movement	Part of a desirable route allowing trucks to bypass downtown. Helps alleviate traffic congestion downtown.	1	Part of a desirable route allowing trucks to bypass downtown. Helps alleviate traffic congestion downtown.	1	Comparative ability of allowing routes outside of downtown area for commercial vehicles. (Lower = 3, Average = 2, Higherr = 1)
Recreational trails	No crossings of OFSC trails or Trans Canada Trail in this section.	1	No crossings of OFSC trails or Trans Canada Trail in this section.	1	Comparative negative effect on number of trails affected (Higher = 3, Average = 2, Lower = 1)
Natural Environment					
Watercourses/fisheries/ aquatic habitat	1 channel crossing, with intermittent flow. Water inputs from upstream sources and road drainage	1	2 channel crossings, 1 with intermittent flow.	2	Comparative negative impact on crossings (Higher = 3, Average = 2, Lower = 1)
Vegetation and woodlots	Effects edge of meadow containing common species. This area was farmed historically and has gone fallow.	1	Effects edge of meadow containing common species. This area was farmed historically and has gone fallow.	1	Comparative negative impact on vegetation and woodlots (Higher = 3, Average = 2, Lower = 1)
Wildlife/terrestrial habitat	Community types are associated with foraging habitat for insectivorous species.	2	Community types are associated with foraging habitat for insectivorous species.	2	Comparative negative impact on wildlife/terrestrial (Higher = 3, Average = 2, Lower = 1)
Wetlands	Affects meadow marsh associated with channel and contains reed canary grass. Not considered provincially significant and contains common species.	2	Affects meadow marsh associated with channel and contains reed canary grass. Not considered provincially significant and contains common species.	2	Comparative negative impact on wetlands (Higher = 3, Average = 2, Lower = 1)
Species at Risk	Affects some habitat for Threatened Bobolink. During investigations, a Bobolink individual was heard calling within a field to the north.	3	Affects some habitat for Threatened Bobolink. During investigations, a Bobolink individual was heard calling within a field to the north.	3	Comparative negative impact on species at risk (Higher = 3, Average = 2, Lower = 1)
Socio-cultural Environment					
Noise	2 receptors	2	1 receptor	1	Comparative number of sensitive receptors negatively impacted (Higher = 3, Average = 2, Lower = 1)
Visual aesthetics	One house is within 200 m of the corridors and its full view will be unchanged.	1	One house is within 200 m of the corridors and its full view will be unchanged.	1	Comparative number of properties with negative visual impacts (Higher = 3, Average = 2, Lower = 1)
Residential property required	2 parcels - 3m width (700m2)	3	1 parcel - 3m width (280m2)	2	Comparative number of residential properties/area impacted (where impacts to existing buildings is of greater concern) (Higher = 3, Average = 2, Lower = 1)
Recreational/property impacts	No recreational or seasonal residential identified	1	No recreational or seasonal residential identified	1	Comparative number of recreational properties/area impacted (where impacts to existing buildings is of greater concern) (Higher = 3, Average = 2, Lower = 1)
Other property required	Commercial: 2 parcels - 3m width (0.2 ha & 463 m2) Farmland: 1 parcel - 3m width (0.4ha)	1	Farmland/Driving range: 1.6 ha	3	Comparative number of other properties/area impacted (where impacts to existing buildings is of greater concern) (Higher = 3, Average = 2, Lower = 1)
Compatibility with existing/ future land uses/ plans	Road uses existing road right-of-way	1	Road travels through an existing driving range/golf course	3	Relative accommodation of existing and future land uses and Official Plan policies. (Less Accommodating = 3, Average Accommodation = 2, More Accommodating = 1)
Archaeological resources	Less undisturbed and affected, requiring Stage 2 assessment	1	Greater amount of undisturbed land affected, requiring Stage 2	2	Relative area of high archaeological potential affected. (More Area = 3, Average Area = 2, Less Area = 1)
Heritage resources	One known historic buildings exists roughly 700 m north of Highway 118.	1	One known historic buildings exists roughly 700 m north of Highway 118.	1	Comparative number of historic buildings that would be negatively impacted (Higher = 3, Average = 2, Lower = 1)
Economic Environment					
Future development potential	Part of a corridor providing an alternative route for land developments on the west side of Bracebridge .	1	Part of a corridor providing an alternative route for land developments on the west side of Bracebridge .	1	Comparative effect on accessibility of planned future development areas (Higher = 3, Average = 2, Lower = 1)
Accessibility to existing commercial areas	Will attract the same amount of traffic away from existing routes, thereby improving access for those wanting to visit the commercial areas.	1	Will attract the same amount of traffic away from existing routes, thereby improving access for those wanting to visit the commercial areas.	1	Comparative effect on accessibility to existing commercial areas in Bracebridge and beyond (Higher = 3, Average = 2, Lower = 1)
Engineering/Constructability					
Construction impacts	Intersection required with MR 118. 660m of road construction along existing road corridor	1	Intersection with MR 118. 680m of new road construction and removal of existing road where no longer needed	2	Comparative number of at-grade intersections, km of road construction along existing road corridors and km of new road construction required; # of major creek crossings required; potential to provide a grade-separated crossing of the rail line (Higher = 3, Average = 2, Lower = 1)
Utility/service conflicts	No crossings. Some pole relocations.	1	No crossings. Some pole relocations.	1	Comparative number # of pipeline crossings required and other utilities and services required. (Higher = 3, Average = 2, Lower = 1)
Construction Cost					
Estimated capital construction cost	Road improvement only - 660m 4200 m3 rock exc 4700 m3 earth exc 900 m3 fill	1	New road construction - 680m 2300 m3 rock exc 4800 m3 earth exc 200 m3 fill	2	Comparative cost based on preliminary profile and cross-section. (Higher = 3, Average = 2, Lower = 1)
Estimated utility relocation cost	Some power poles may require relocation	2	Some power poles may require relocation	2	Comparative cost based on previous experience and consultation with affected utilities. (Higher = 3, Average = 2, Lower = 1)

Segment S5

Factor/Sub-factor	Significance Level
Transportation	
Accommodation of future vehicular travel demand	high
Accommodation of pedestrian and cyclist movements	medium
Travel safety	high
Emergency service	high
Future transportation network connectivity and compatibility	medium
Commercial goods movement	medium
Recreational trails	medium
Natural Environment	
Watercourses/fisheries/ aquatic habitat	medium
Vegetation and woodlots	medium
Wildlife/terrestrial habitat	medium
Wetlands	high
Species at Risk	high
Socio-cultural Environment	
Noise	high
Visual aesthetics	medium
Residential property required	high
Recreational/property impacts	high
Other property required	high
Compatibility with existing/ future land uses/ plans	medium
Archaeological resources	low
Heritage resources	low
Economic Environment	
Future development potential	low
Accessibility to existing commercial areas	medium
Engineering/Constructability	
Construction impacts	medium
Utility/service conflicts	medium
Construction Cost	
Estimated capital construction cost	low
Estimated utility relocation cost	low

			Common Scale	
Factor/Sub-factor	**5-A**	**5-B**	**5-A**	**5-B**
Transportation				
Accommodation of future vehicular travel demand	2	1	0.67	0.33
Accommodation of pedestrian and cyclist movements	1	1	0.33	0.33
Travel safety	1	2	0.33	0.67
Emergency service	2	2	0.67	0.67
Future transportation network connectivity and compatibility	2	1	0.67	0.33
Commercial goods movement	1	1	0.33	0.33
Recreational trails	1	1	0.33	0.33
Natural Environment				
Watercourses/fisheries/ aquatic habitat	1	2	0.33	0.67
Vegetation and woodlots	1	1	0.33	0.33
Wildlife/terrestrial habitat	2	2	0.67	0.67
Wetlands	2	2	0.67	0.67
Species at Risk	3	3	1.00	1.00
Socio-cultural Environment				
Noise	2	1	0.67	0.33
Visual aesthetics	1	1	0.33	0.33
Residential property required	3	2	1.00	0.67
Recreational/property impacts	1	1	0.33	0.33
Other property required	1	3	0.33	1.00
Compatibility with existing/ future land uses/ plans	1	3	0.33	1.00
Archaeological resources	1	2	0.33	0.67
Heritage resources	1	1	0.33	0.33
Economic Environment				
Future development potential	1	1	0.33	0.33
Accessibility to existing commercial areas	1	1	0.33	0.33
Engineering/Constructability				
Construction impacts	1	2	0.33	0.67
Utility/service conflicts	1	1	0.33	0.33
Construction Cost				
Estimated capital construction cost	1	2	0.33	0.67
Estimated utility relocation cost	2	2	0.67	0.67

Weighting based on Significance of Potential impacts (low = 1, medium = 4 and high = 10)

Factor/Sub-factor	Weight	Weighted Ranking 5-A	Weighted Ranking 5-B
Transportation			
Accommodation of future vehicular travel demand	10	6.7	3.3
Accommodation of pedestrian and cyclist movements	4	1.3	1.3
Travel safety	10	3.3	6.7
Emergency service	10	6.7	6.7
Future transportation network connectivity and compatibility	4	2.7	1.3
Commercial goods movement	4	1.3	1.3
Recreational trails	4	1.3	1.3
Natural Environment			
Watercourses/fisheries/ aquatic habitat	4	1.3	2.7
Vegetation and woodlots	4	1.3	1.3
Wildlife/terrestrial habitat	4	2.7	2.7
Wetlands	10	6.7	6.7
Species at Risk	10	10.0	10.0
Socio-cultural Environment			
Noise	10	6.7	3.3
Visual aesthetics	4	1.3	1.3
Residential property required	10	10.0	6.7
Recreational/property impacts	10	3.3	3.3
Other property required	10	3.3	10.0
Compatibility with existing/ future land uses/ plans	4	1.3	4.0
Archaeological resources	1	0.3	0.7
Heritage resources	1	0.3	0.3
Economic Environment			
Future development potential	4	1.3	1.3
Accessibility to existing commercial areas	4	1.3	1.3
Engineering/Constructability			
Construction impacts	4	1.3	2.7
Utility/service conflicts	4	1.3	1.3
Construction Cost			
Estimated capital construction cost	1	0.3	0.7
Estimated utility relocation cost	1	0.7	0.7
		78.3	**83.0**

Factor/Sub-factor	Significance Level
Transportation	
Accommodation of future vehicular travel demand	high
Accommodation of pedestrian and cyclist movements	medium
Travel safety	high
Emergency service	high
Future transportation network connectivity and compatibility	medium
Commercial goods movement	medium
Recreational trails	medium
Natural Environment	
Watercourses/fisheries/ aquatic habitat	medium
Vegetation and woodlots	medium
Wildlife/terrestrial habitat	medium
Wetlands	high
Species at Risk	high
Socio-cultural Environment	
Noise	high
Visual aesthetics	medium
Residential property required	high
Recreational/property impacts	high
Other property required	high
Compatibility with existing/ future land uses/ plans	medium
Archaeological resources	low
Heritage resources	low
Economic Environment	
Future development potential	medium
Accessibility to existing commercial areas	medium
Engineering/Constructability	
Construction impacts	medium
Utility/service conflicts	medium
Construction Cost	
Estimated capital construction cost	low
Estimated utility relocation cost	low

Ranking for Sensitivity Analysis:

Factor/Sub-factor	Alternative S2-A	Alternative S2-B	Alternative S2-C	Alternative S2-D	Comments:
Transportation					
Accommodation of future vehicular travel demand	All in same vicinity and would attract same traffic from downtown. Difference in travel time would not be significant between alternatives.				
Accommodation of pedestrian and cyclist movements	Steep grades to High Falls Road		Better grades with grade seperation of High Falls Road and new road connection between S2-C and High Falls Road	Best grades with grade seperation of High Falls Road and new road connection between S2-C route and High Falls Road	
Travel safety	Intersections with High Falls Road and Bonnell Road on steep grades. 7 existing driveways on the section of High Falls Road included in the BNTC would need to be connected directly to the BNTC	Intersections with High Falls Road located at reasonable grades. 10 existing driveways on the section of High Falls Road included in the BNTC would need to be connected directly to the BNTC	New connection from BNTC to High Falls Road with grade seperation of the BNTC and High Falls Road. 1 existing driveway north of BNTC alignment would need to be connected directly to the BNTC	Intersection of BNTC and High Falls Road located in area with gentle grades. No requirements for grade seperation. No driveways to be connected directly to the BNTC.	
Emergency service	All alternatives connect to High Falls Road. Steeper grades and frequent driveways may be a concern. Alternatives provide similar service for emergency vehicles and improve access to rural properties in the High Falls Road area.		All alternatives connect to High Falls Road. Alternatives provide similar service for emergency vehicles and improve access to rural properties in the High Falls Road area.		
Transportation network connectivity and compatibility	Provide similar network connectivity improving the link between High Falls Road and a controlled-access Highway 11 in the future. They are compatible with planned infrastructre and development noted in the Official Plans.				
Commercial goods movement	Part of a route allowing trucks to bypass downtown. Alleviate traffic congestion downtown. Add truck traffic to a section of High Falls Road		Part of a route allowing trucks to bypass downtown. Alleviate traffic congestion downtown.		
Recreational trails	No trail crossings in this section.				
Natural Environment					
Watercourses/fisheries/ aquatic habitat		Crosses 2 coldwater watercourses with likely Brook Trout habitat. (1 existing) Flow runs southerly	Crosses 2 coldwater watercourses with likely Brook Trout habitat. Flow runs southerly	Crosses 2 coldwater watercourses futher upstream than A, B & C	
Vegetation and woodlots		Forest stands of deciduous and coniferous trees, cultural woodland and cultural meadow			
Wildlife/terrestrial habitat		Route crosses through incised valley system. Disrupts landscape connectivity for wildlife movement			
Wetlands		Affects swamp thicket communities at existing crossing location	Affects swamp thicket communities at new crossing		
Species at Risk		May potentiall affect habitat for Hognose, Ribbon snake (Provincially threatened species)			
Socio-cultural Environment					
Noise		11 receptors	2 receptors	1 receptor	
Visual aesthetics		15 houses within 200m of corridor 11 full views 4 obscured distant views	12 houses within 200m 6 full views 6 obscured distant views	4 houses within 200m 1 full view 3 obscured distant views	
Residential property required		4 parcels (1.7 & 0.3ha, 81 & 70m2)	2 parcels (1.4 & 0.3 ha)	3 parcels (0.5, 1.2 & 0.05 ha)	
Recreational/property impacts		N/A			
Other property required		Vacant: 2 parcels (1.1 & 0.1 ha)	Vacant: 4 parcels (0.7, 0.4 & 0.1 ha & 110m2) Farmland: 1 parcel (1.0 ha)	Vacant: 3 parcels (1.7, 0.14 & 0.1ha) Farmland: 1 parcel (670 m2)	
Compatibility with existing/ future land uses/ plans		Outside urban area and part of a corridor providing alternative route for land developments west and north in Bracebridge			
Archaeological resources		All routes lie completely within areas of archaelogical potential, which includes the ROW within 300m of a permanent			
Heritage resources		Historic buildings shown schematically on lots fronting High Falls Road on the 1879 Township maps. This is not detailed enough to distinguish between alternatives.			
Economic Environment					
Future development potential		Part of a corridor providing an alternative route for land developments on the west side of Bracebridge			
Accessibility to existing commercial areas		Will attract same amount of traffic away from existing routes, thereby improving access for those wanting to visit commerical areas downtown			
Engineering					
Construction impacts		Intersections with High Falls Road (2) and Bonnell Road (1)	Intersections with High Falls Road (1) and Bonnell Road (1). Grade seperation of High Falls Road	Intersections with High Falls Road (1) and Bonnell Road (1)	# of at grade intersections & grade seperations
Construction impacts		1.3 km of new road. 400 m along existing road. Staging and traffic mgmt required for section of High Falls Road included in BNTC	1.4 km of new road including connection to High Falls Road required due to grade seperation	1.5 km of new road	# of km of road construction along existing road corridors and # of km of new road construction
Construction impacts		Crosses creek at current High Falls Road location, second creek with 2+ m fill	High fills (10 & 12m +/-) at creek valley crossings	Highest fills (8 & 18 +/-) across creek valleys	# of major creek crossings
Utility/service conflicts		Crosses pipeline at current crossing of High Falls Road	New pipeline crossing north of HFR. Road profile can be adjusted	New pipeline crossing north of HFR. Road profile can be adjusted	# of pipelines and power transmission line crossings
Construction Cost					
Estimated capital construction cost		46,200 m3 rock exc 9,000 m3 earth exc 22,600 m3 fill New medium span creek culvert	26,300 m3 rock exc 6,600 m3 earth exc 45,400 m3 fill Grade seperation, pipeline cross, large & medium span creek culvert	34,300 m3 rock exc 8,800 m3 earth exc 56,300 m3 fill New pipeline crossing, large & medium span creek culvert	Major quantities required
Estimated utility relocation cost		Crossed pipeline at current HFR crossing	New crossing of pipeline north of HFR. Road profile can be adjusted	New crossing of pipeline north of HFR. Road profile can be adjusted	Description of requirements

screened out due to safety issues

Ranking for Sensitivity Analysis: Preferred alternative for that factor

Higher Impact = 3
Average Impact = 2
Lower Impact = 1

Factor/Sub-factor	Alternative S2-A	Rank	Alternative S2-B	Rank	Alternative S2-C	Rank	Alternative S2-D	Rank	Unit of Measure
Transportation									
Accommodation of future vehicular travel demand	All in same vicinity and would attract same traffic from downtown. Difference in travel time would not be significant between alternatives.	1	All in same vicinity and would attract same traffic from downtown. Difference in travel time would not be significant between alternatives.	1	All in same vicinity and would attract same traffic from downtown. Difference in travel time would not be significant between alternatives.	1	All in same vicinity and would attract same traffic from downtown. Difference in travel time would not be significant between alternatives.	1	Relative attractiveness/potential difference in travel time of alternative routes. (Less Attractive = 3, Average Attractiveness = 2, Highest Attractiveness= 1)
Accommodation of pedestrian and cyclist movements	Steep grades to High Falls Road	3	Steep grades to High Falls Road	3	Better grades with grade separation of High Falls Road and new road connection between S2-C and High Falls Road	2	Best grades with grade separation of High Falls Road and new road connection between S2-C route and High Falls Road	1	Comparative ability to accomodate paved shoulders, sidewalks and/or pathways for non-auto modes (Poor Ability = 3, Average Ability= 2, Highest Ability = 1)
Travel safety	Intersections with High Falls Road and Bonnell Road on steep grades. 7 existing driveways on the section of High Falls Road included in the BNTC would need to be connected directly to the BNTC	3	Intersections with High Falls Road located at reasonable grades. 10 existing driveways on the section of High Falls Road included in the BNTC would need to be connected directly to the BNTC	2	New connection from BNTC to High Falls Road with grade separation of the BNTC and High Falls Road. 1 existing driveway north of BNTC alignment would need to be connected directly to the BNTC	2	Intersection of BNTC and High Falls Road located in area with gentle grades. No requirements for grade separation. No driveways to be connected directly to the BNTC.	1	Comparative negative impact on adherence to design standards for safety (Higher = 3, Average = 2, Lower = 1)
Emergency service	All alternatives connect to High Falls Road. Steeper grades and frequent driveways may be a concern. Alternatives provide similar service for emergency vehicles and improve access to rural properties in the High Falls Road area.	3	All alternatives connect to High Falls Road. Steeper grades and frequent driveways may be a concern. Alternatives provide similar service for emergency vehicles and improve access to rural properties in the High Falls Road area.	3	All alternatives connect to High Falls Road. Alternatives provide similar service for emergency vehicles and improve access to rural properties in the High Falls Road area.	2	All alternatives connect to High Falls Road. Alternatives provide similar service for emergency vehicles and improve access to rural properties in the High Falls Road area.	2	Comparative ability to improve routing for emergency services (Poor Ability = 3, Average Ability= 2, Highest Ability= 1)
Transportation network connectivity and compatibility	Provide similar network connectivity improving the link between High Falls Road and a controlled-access Highway 11 in the future. They are compatible with planned infrastructre and development noted in the Official Plans.	1	Provide similar network connectivity improving the link between High Falls Road and a controlled-access Highway 11 in the future. They are compatible with planned infrastructre and development noted in the Official Plans.	1	Provide similar network connectivity improving the link between High Falls Road and a controlled-access Highway 11 in the future. They are compatible with planned infrastructre and development noted in the Official Plans.	1	Provide similar network connectivity improving the link between High Falls Road and a controlled-access Highway 11 in the future. They are compatible with planned infrastructre and development noted in the Official Plans.	1	Relative improvement in connectivity and compatibility with other planned infrastructure. (Less Improvement = 3, Average Improvement = 2, More Improvement = 1)
Commercial goods movement	Part of a route allowing trucks to bypass downtown. Alleviate traffic congestion downtown. Add truck traffic to a section of High Falls Road	2	Part of a route allowing trucks to bypass downtown. Alleviate traffic congestion downtown. Add truck traffic to a section of High Falls Road	2	Part of a route allowing trucks to bypass downtown. Alleviate traffic congestion downtown.	1	Part of a route allowing trucks to bypass downtown. Alleviate traffic congestion downtown.	1	Comparative ability of allowing routes outside of downtown area for commercial vehicles. (Lower = 3, Average = 2, Higherr = 1)
Recreational trails	No trail crossings in this section.	1	No trail crossings in this section.	1	No trail crossings in this section.	1	No trail crossings in this section.	1	Comparative negative effect on number of trails affected (Higher = 3, Average = 2, Lower = 1)
Natural Environment									
Watercourses/fisheries/ aquatic habitat			Crosses 2 coldwater watercourses with likely Brook Trout habitat. (1 existing) Flow runs southerly	1	Crosses 2 coldwater watercourses with likely Brook Trout habitat. Flow runs southerly	2	Crosses 2 coldwater watercourses further upstream than A, B & C	3	Comparative negative impact on crossings (Higher = 3, Average = 2, Lower = 1)
Vegetation and woodlots			Forest stands of deciduous and coniferous trees, cultural woodland and cultural meadow	2	Forest stands of deciduous and coniferous trees, cultural woodland and cultural meadow	2	Forest stands of deciduous and coniferous trees, cultural woodland and cultural meadow	2	Comparative negative impact on vegetation and woodlots (Higher = 3, Average = 2, Lower = 1)
Wildlife/terrestrial habitat			Route crosses through incised valley system. Disrupts landscape connectivity for wildlife movement	2	Route crosses through incised valley system. Disrupts landscape connectivity for wildlife movement	2	Route crosses through incised valley system. Disrupts landscape connectivity for wildlife movement	2	Comparative negative impact on wildlife/terrestrial (Higher = 3, Average = 2, Lower = 1)
Wetlands			Affects swamp thicket communities at existing crossing location	1	Affects swamp thicket communities at new crossing	2	Affects swamp thicket communities at new crossing	3	Comparative negative impact on wetlands (Higher = 3, Average = 2, Lower = 1)
Species at Risk			May potentially affect habitat for Hognose, Ribbon snake (Provincially	2	May potentially affect habitat for Hognose, Ribbon snake (Provincially	2	May potentially affect habitat for Hognose, Ribbon snake (Provincially	2	Comparative negative impact on species at risk
Socio-cultural Environment									
Noise			11 receptors	3	2 receptors	2	1 receptor	1	Comparative number of sensitive receptors negatively impacted (Higher = 3, Average = 2, Lower = 1)
Visual aesthetics			15 houses within 200m of corridor 11 full views 4 obscured distant views	3	12 houses within 200m 6 full views 6 obscured distant views	2	4 houses within 200m 1 full view 3 obscured distant views	1	Comparative number of properties with negative visual impacts (Higher = 3, Average = 2, Lower = 1)

Residential property required			4 parcels (1.7 & 0.3ha, 81 & 70m2)	3	2 parcels (1.4 & 0.3 ha)	1	3 parcels (0.5, 1.2 & 0.05 ha)	2	Comparative number of residential properties/area impacted (where impacts to existing buildings is of greater concern) (Higher = 3, Average = 2, Lower = 1)
Recreational/property impacts			None	1	None	1	None	1	Comparative number of recreational properties/area impacted (where impacts to existing buildings is of greater concern) (Higher = 3, Average = 2, Lower = 1)
Other property required			Vacant: 2 parcels (1.1 & 0.1 ha)	1	Vacant: 4 parcels (0.7, 0.4 & 0.1 ha & 110m2) Farmland: 1 parcel (1.0 ha)	2	Vacant: 3 parcels (1.7, 0.14 & 0.1ha) Farmland: 1 parcel (670 m2)	2	Comparative number of other properties/area impacted (where impacts to existing buildings is of greater concern) (Higher = 3, Average = 2, Lower = 1)
Compatibility with existing/ future land uses/ plans			Outside urban area and part of a corridor providing alternative route for land developments west and north in Bracebridge	1	Outside urban area and part of a corridor providing alternative route for land developments west and north in Bracebridge	1	Outside urban area and part of a corridor providing alternative route for land developments west and north in Bracebridge	1	Relative accommodation of existing and future land uses and Official Plan policies. (Less Accommodating = 3, Average Accommodation = 2, More Accommodating = 1)
Archaeological resources			All routes lie completely within areas of archaelogical potential, which includes the ROW within 300m of a permanent watercourse.	2	All routes lie completely within areas of archaelogical potential, which includes the ROW within 300m of a permanent watercourse.	2	All routes lie completely within areas of archaelogical potential, which includes the ROW within 300m of a permanent watercourse.	2	Relative area of high archaeological potential affected. (More Area = 3, Average Area = 2, Less Area = 1)
Heritage resources			Historic buildings shown schematically on lots fronting High Falls Road on the 1879 Township maps. This is not detailed enough to distinguish between alternatives.	2	Historic buildings shown schematically on lots fronting High Falls Road on the 1879 Township maps. This is not detailed enough to distinguish between alternatives.	2	Historic buildings shown schematically on lots fronting High Falls Road on the 1879 Township maps. This is not detailed enough to distinguish between alternatives.	2	Comparative number of historic buildings that would be negatively impacted (Higher = 3, Average = 2, Lower = 1)
Economic Environment									
Future development potential			Part of a corridor providing an alternative route for land developments on the west side of Bracebridge	1	Part of a corridor providing an alternative route for land developments on the west side of Bracebridge	1	Part of a corridor providing an alternative route for land developments on the west side of Bracebridge	1	Comparative effect on accessibility of planned future development areas (Higher = 3, Average = 2, Lower = 1)
Accessibility to existing commercial areas			Will attract same amount of traffic away from existing routes, thereby improving access for those wanting to visit commerical areas downtown	1	Will attract same amount of traffic away from existing routes, thereby improving access for those wanting to visit commerical areas downtown	1	Will attract same amount of traffic away from existing routes, thereby improving access for those wanting to visit commerical areas downtown	1	Comparative effect on accessibility to existing commercial areas in Bracebridge and beyond (Higher = 3, Average = 2, Lower = 1)
Engineering/constructability									
Construction impacts			Intersections with High Falls Road (2) and Bonnell Road (1), 1.3 km of new road. 400 m along existing road. Staging and traffic mgmt required for section of High Falls Road included in BNTC, Crosses creek at current High Falls Road location, second creek with 2+ m fill	2	Intersections with High Falls Road (1) and Bonnell Road (1). Grade separation of High Falls Road, 1.4 km of new road including connection to High Falls Road required due to grade separation, High fills (10 & 12m +/-) at creek valley crossings	3	Intersections with High Falls Road (1) and Bonnell Road (1), 1.5 km of new road, Highest fills (8 & 18 +/-) across creek valleys	1	Comparative number of at-grade intersections, km of road construction along existing road corridors and km of new road construction required; # of major creek crossings required; potential to provide a grade-separated crossing of the rail line (Higher = 3, Average = 2, Lower = 1)
Utility/service conflicts			Crosses pipeline at current crossing of High Falls Road	1	New pipeline crossing north of HFR. Road profile can be adjusted	3	New pipeline crossing north of HFR. Road profile can be adjusted	3	Comparative number # of pipeline crossings required and other utilities and services required. (Higher = 3, Average = 2, Lower = 1)
Construction Cost									
Estimated capital construction cost			46,200 m3 rock exc 9,000 m3 earth exc 22,600 m3 fill New medium span creek culvert	2	26,300 m3 rock exc 6,600 m3 earth exc 45,400 m3 fill Grade separation, pipeline cross, large & medium span creek culvert	3	34,300 m3 rock exc 8,800 m3 earth exc 56,300 m3 fill New pipeline crossing, large & medium span creek culvert	3	Comparative cost based on preliminary profile and cross-section. (Higher = 3, Average = 2, Lower = 1)
Estimated utility relocation cost			Crossed pipeline at current HFR crossing	1	New crossing of pipeline north of HFR. Road profile can be adjusted	3	New crossing of pipeline north of HFR. Road profile can be adjusted	3	Comparative cost based on previous experience and consultation with affected utilities. (Higher = 3, Average = 2, Lower = 1)

screened out due to safety concerns

Segment S2

Factor/Sub-factor	Significance Level	Factor/Sub-factor	Alternative S2-A	Alternative S2-B	Alternative S2-C	Alternative S2-D	Common Scale Alternative S2-A	Common Scale Alternative S2-B	Common Scale Alternative S2-C	Common Scale Alternative S2-D
Transportation		**Transportation**								
Accommodation of future vehicular travel demand	high	Accommodation of future vehicular travel demand	1	1	1	1	0.33	0.33	0.33	0.33
Accommodation of pedestrian and cyclist movements	medium	Accommodation of pedestrian and cyclist movements	3	3	2	1	1.00	1.00	0.67	0.33
Travel safety	high	Travel safety	3	2	2	1	1.00	0.67	0.67	0.33
Emergency service	high	Emergency service	3	3	2	2	1.00	1.00	0.67	0.67
Future transportation network connectivity and compatibility	medium	Future transportation network connectivity and compatibility	1	1	1	1	0.33	0.33	0.33	0.33
Commercial goods movement	medium	Commercial goods movement	2	2	1	1	0.67	0.67	0.33	0.33
Recreational trails	medium	Recreational trails	1	1	1	1	0.33	0.33	0.33	0.33
Natural Environment		**Natural Environment**								
Watercourses/fisheries/ aquatic habitat	medium	Watercourses/fisheries/ aquatic habitat		1	2	3		0.33	0.67	1.00
Vegetation and woodlots	medium	Vegetation and woodlots		2	2	2		0.67	0.67	0.67
Wildlife/terrestrial habitat	medium	Wildlife/terrestrial habitat		2	2	2		0.67	0.67	0.67
Wetlands	high	Wetlands		1	2	3		0.33	0.67	1.00
Species at Risk	high	Species at Risk		2	2	2		0.67	0.67	0.67
Socio-cultural Environment		**Socio-cultural Environment**								
Noise	high	Noise		3	2	1		1.00	0.67	0.33
Visual aesthetics	medium	Visual aesthetics		3	2	1		1.00	0.67	0.33
Residential property required	high	Residential property required		3	1	2		1.00	0.33	0.67
Recreational/property impacts	high	Recreational/property impacts		1	1	1		0.33	0.33	0.33
Other property required	high	Other property required		1	2	2		0.33	0.67	0.67
Compatibility with existing/ future land uses/ plans	medium	Compatibility with existing/ future land uses/ plans		1	1	1		0.33	0.33	0.33
Archaeological resources	low	Archaeological resources		2	2	2		0.67	0.67	0.67
Heritage resources	low	Heritage resources		2	2	2		0.67	0.67	0.67
Economic Environment		**Economic Environment**								
Future development potential	low	Future development potential		1	1	1		0.33	0.33	0.33
Accessibility to existing commercial areas	medium	Accessibility to existing commercial areas		1	1	1		0.33	0.33	0.33
Engineering/Constructability		**Engineering/Constructability**								
Construction impacts	medium	Construction impacts		2	3	1		0.67	1.00	0.33
Utility/service conflicts	medium	Utility/service conflicts		1	3	3		0.33	1.00	1.00
Construction Cost		**Construction Cost**								
Estimated capital construction cost	low	Estimated capital construction cost		2	3	3		0.67	1.00	1.00
Estimated utility relocation cost	low	Estimated utility relocation cost		1	3	3		0.33	1.00	1.00

Weighting based on Significance of Potential impacts (low = 1, medium = 4 and high = 10)

Factor/Sub-factor	Weight	Weighted Ranking			
		Alternative S2-A	Alternative S2-B	Alternative S2-C	Alternative S2-D
Transportation					
Accommodation of future vehicular travel demand	10	3.3	3.3	3.3	3.3
Accommodation of pedestrian and cyclist movements	4	4.0	4.0	2.7	1.3
Travel safety	10	10.0	6.7	6.7	3.3
Emergency service	10	10.0	10.0	6.7	6.7
Future transportation network connectivity and compatibility	4	1.3	1.3	1.3	1.3
Commercial goods movement	4	2.7	2.7	1.3	1.3
Recreational trails	4	1.3	1.3	1.3	1.3
Natural Environment					
Watercourses/fisheries/ aquatic habitat	4		1.3	2.7	4.0
Vegetation and woodlots	4		2.7	2.7	2.7
Wildlife/terrestrial habitat	4		2.7	2.7	2.7
Wetlands	10		3.3	6.7	10.0
Species at Risk	10		6.7	6.7	6.7
Socio-cultural Environment					
Noise	10		10.0	6.7	3.3
Visual aesthetics	4		4.0	2.7	1.3
Residential property required	10		10.0	3.3	6.7
Recreational/property impacts	10		3.3	3.3	3.3
Other property required	10		3.3	6.7	6.7
Compatibility with existing/ future land uses/ plans	4		1.3	1.3	1.3
Archaeological resources	1		0.7	0.7	0.7
Heritage resources	1		0.7	0.7	0.7
Economic Environment					
Future development potential	4		1.3	1.3	1.3
Accessibility to existing commercial areas	4		1.3	1.3	1.3
Engineering/Constructability					
Construction impacts	4		2.7	4.0	1.3
Utility/service conflicts	4		1.3	4.0	4.0
Construction Cost					
Estimated capital construction cost	1		0.7	1.0	1.0
Estimated utility relocation cost	1		0.3	1.0	1.0
		Screened Out	**87.0**	**82.7**	**78.7**

Factor/Sub-factor	Significance Level
Transportation	
Accommodation of future vehicular travel demand	high
Accommodation of pedestrian and cyclist movements	medium
Travel safety	high
Emergency service	high
Future transportation network connectivity and compatibility	medium
Commercial goods movement	medium
Recreational trails	medium
Natural Environment	
Watercourses/fisheries/ aquatic habitat	medium
Vegetation and woodlots	medium
Wildlife/terrestrial habitat	medium
Wetlands	high
Species at Risk	high
Socio-cultural Environment	
Noise	high
Visual aesthetics	medium
Residential property required	high
Recreational/property impacts	high
Other property required	high
Compatibility with existing/ future land uses/ plans	medium
Archaeological resources	low
Heritage resources	low
Economic Environment	
Future development potential	medium
Accessibility to existing commercial areas	medium
Engineering/Constructability	
Construction impacts	medium
Utility/service conflicts	medium
Construction Cost	
Estimated capital construction cost	low
Estimated utility relocation cost	low

Ranking for Sensitivity Analysis:

Factor/Sub-factor	Alt. M3-A	Alt. M3-B	Comments:
Transportation			
Accommodation of future vehicular travel demand	Both in same area and attract same traffic away from downtown. Difference in travel time not significant		
Accommodation of pedestrian and cyclist movements	Both will be designed with paved shoulders to accommodate non0auto modes. 6% & 7% grades may discuourage some users		
Travel safety	2 intersections with Nichols Road on 6% grades undesirable. Minimal impacts on driveways	1 intersection with Nichols Road on 4% grade. Fewer intersections than Route A	
Emergency service	Alternative A is slightly longer	Alternative B is slightly shorter	Both alternatives provide similar emergency service and improve access to rural properties
Future transportation network connectivity and compatibility	Both alternatives compatible with planned infrastructure and development		
Commercial goods movement	Both part of desirable route outside downtown allowing trucks to bypass downtown. Both alleviate traffic congestion downtown		
Recreational trails	No difference between alts. One crossing of C102D for each alternative		
Natural Environment			
Watercourses/fisheries/ aquatic habitat	Crosses 3 coldwater watercourses (two existing crossings by Nichols)	Crosses 2 coldwater watercourses	Brook trout habitat
Vegetation and woodlots	Natural vegetation affected includes forest stands of deciduous & coniferous trees, cultural woodland & cultural meadow		
Wildlife/terrestrial habitat	Affects breeding, foraging and migration habiats for numberous species		
Wetlands	Affects open water & marginal meadow marsh associated with ponds & watercourse crossings		
Species at Risk	May affect habitat for Hognose, Ribbon snake		
Socio-cultural Environment			
Noise	4 receptors	1 receptor	
Visual aesthetics	2 houses within 200 m of corridor 1 house with partial view 1 house with unchanged full view	No houses within 200 m of the corridor	
Residential property required	Residential: 10 parcels (85, 350, 190, 570, 570, 405, 1790, 1640, 310 & 4000 m2)	Residential: 6 parcels (85, 370 & 315 m2, 1.3, 1.2 & 1.9 ha)	
Recreational/property impacts	Seasonal residential: 1 parcel (110m2)		
Other property required	Commercial: 2 parcels (2.6 & 0.4 ha) Vacant : 3 parcels (1.15, 0.7, 2.7 ha)	Commercial: 2 parcels (2.2 ha & 500 m2) Vacant: 4 parcels (1.4, 0.7, 0.4, 1.0 ha)	
Compatibility with existing/ future land uses/ plans	Both outside urban area and part of a corridor providing an alternative route for land developments west and north in Bracebridge		
Archaeological resources	Most of the proposed route lies within an area of archaelogical potential		
Heritage resources	No difference between the alternatives		
Economic Environment			
Future development potential	Both part of a corridor providing an alternative route for land developments on the west side of Bracebridge		
Accessibility to existing commercial areas	Both alternatives attract the same amount of traffic away from existing routes		
Engineering			
Construction impacts	Intersections required with Nichols Rd (3) & South Monck Dr (1)	Intersections required with Nichols Rd (1) & South Monck Dr (1)	# of at grade intersections & grade seperations
	3.5 km of road construction	2.9 km of new road construction	# of km of road construction along existing road corridors and # of km of new road construction
	1 major creek crossing (12m +/- fill)	1 major creek crossing (21m +/- fill)	# of major creek crossings
	N/A		Potential to provide a grade seperated crossing of the rail line
Utility/service conflicts	Need to relocate power lines along existing roads	No utilities identified	# of pipelines and power transmission line crossings
Construction Cost			
Estimated capital construction cost	71,600 m3 rock exc 16,900 m3 earth exc 95,500 m3 fill 1 large span creek culvert 4 small span creek culverts (2 at locations with existing culverts)	73,800 m3 rock exc 12,500 m3 earth exc 98,300 m3 fill 1 large span creek culvert 5 small span creek culverts	Major quantities required
Estimated utility relocation cost	Relocation of power line along South Monck Dr. & Nichols Rd.		Description of requirements

Ranking for Sensitivity Analysis: Preferred alternative for that factor

Higher Impact = 3
Average Impact = 2
Lower Impact = 1

Factor/Sub-factor	Alt. M3-A	Rank	Alt. M3-B	Rank	Unit of Measure
Transportation					
Accommodation of future vehicular travel demand	Both in same area and attract same traffic away from downtown. Difference in travel time not significant	1	Both in same area and attract same traffic away from downtown. Difference in travel time not significant	1	Relative attractiveness/potential difference in travel time of alternative routes. (Less Attractive = 3, Average Attractiveness = 2, Highest Attractiveness= 1)
Accommodation of pedestrian and cyclist movements	Both will be designed with paved shoulders to accommodate non-auto modes. 6%-7% grades may discuourage some users	2	Both will be designed with paved shoulders to accommodate non-auto modes. 6%-7% grades may discuourage some users	2	Comparative ability to accomodate paved shoulders, sidewalks and/or pathways for non-auto modes (Poor Ability = 3, Average Ability= 2, Highest Ability = 1)
Travel safety	2 intersections with Nichols Road on 6% grades undesirable. Minimal impacts on driveways	2	1 intersection with Nichols Road on 4% grade. Fewer intersections than Route A	1	Comparative negative impact on adherence to design standards for safety (Higher = 3, Average = 2, Lower = 1)
Emergency service	Alternative A is slightly longer	2	Alternative B is slightly shorter	1	Comparative ability to improve routing for emergency services (Poor Ability = 3, Average Ability= 2, Highest Ability= 1)
Future transportation network connectivity and compatibility	Both alternatives compatible with planned infrastructure and development	1	Both alternatives compatible with planned infrastructure and development	1	Relative improvement in connectivity and compatibility with other planned infrastructure. (Less Improvement = 3, Average Improvement = 2, More Improvement = 1)
Commercial goods movement	Both part of desirable route outside downtown allowing trucks to bypass downtown. Both alleviate traffic congestion downtown	1	Both part of desirable route outside downtown allowing trucks to bypass downtown. Both alleviate traffic congestion downtown	1	Comparative ability of allowing routes outside of downtown area for commercial vehicles. (Lower = 3, Average = 2, Higherr = 1)
Recreational trails	No difference between alts. One crossing of C102D for each alternative	2	No difference between alts. One crossing of C102D for each alternative	2	Comparative negative effect on number of trails affected (Higher = 3, Average = 2, Lower = 1)
Natural Environment					
Watercourses/fisheries/ aquatic habitat	Crosses 3 coldwater watercourses (two existing crossings by Nichols)	2	Crosses 2 coldwater watercourses	1	Comparative negative impact on crossings (Higher = 3, Average = 2, Lower = 1)
Vegetation and woodlots	Natural vegetation affected includes forest stands of deciduous & coniferous trees, cultural woodland & cultural meadow	2	Natural vegetation affected includes forest stands of deciduous & coniferous trees, cultural woodland & cultural meadow	2	Comparative negative impact on vegetation and woodlots (Higher = 3, Average = 2, Lower = 1)
Wildlife/terrestrial habitat	Affects breeding, foraging and migration habiats for numerous species	2	Affects breeding, foraging and migration habiats for numerous species	2	Comparative negative impact on wildlife/terrestrial (Higher = 3, Average = 2, Lower = 1)
Wetlands	Affects open water & marginal meadow marsh associated with ponds & watercourse crossings	2	Affects open water & marginal meadow marsh associated with ponds & watercourse crossings	2	Comparative negative impact on wetlands (Higher = 3, Average = 2, Lower = 1)
Species at Risk	May affect habitat for Hognose, Ribbon snake	2	May affect habitat for Hognose, Ribbon snake	2	Comparative negative impact on species at risk (Higher = 3, Average = 2, Lower = 1)
Socio-cultural Environment					
Noise	4 receptors	2	1 receptor	1	Comparative number of sensitive receptors negatively impacted (Higher = 3, Average = 2, Lower = 1)
Visual aesthetics	2 houses within 200 m of corridor 1 house with partial view 1 house with unchanged full view	2	No houses within 200 m of the corridor	1	Comparative number of properties with negative visual impacts (Higher = 3, Average = 2, Lower = 1)
Residential property required	Residential: 10 parcels (85, 350, 190, 570, 570, 405, 1790, 1640, 310 & 4000 m2)	3	Residential: 6 parcels (85, 370 & 315 m2, 1.3, 1.2 & 1.9 ha)	2	Comparative number of residential properties/area impacted (where impacts to existing buildings is of greater concern) (Higher = 3, Average = 2, Lower = 1)
Recreational/property impacts	Seasonal residential: 1 parcel (110m2)	2		1	Comparative number of recreational properties/area impacted (where impacts to existing buildings is of greater concern) (Higher = 3, Average = 2, Lower = 1)
Other property required	Commercial: 2 parcels (2.6 & 0.4 ha) Vacant : 3 parcels (1.15, 0.7, 2.7 ha)	3	Commercial: 2 parcels (2.2 ha & 500 m2) Vacant: 4 parcels (1.4, 0.7, 0.4, 1.0 ha)	2	Comparative number of other properties/area impacted (where impacts to existing buildings is of greater concern) (Higher = 3, Average = 2, Lower = 1)
Compatibility with existing/ future land uses/ plans	Both outside urban area and part of a corridor providing an alternative route for land developments west and north in Bracebridge	1	Both outside urban area and part of a corridor providing an alternative route for land developments west and north in Bracebridge	1	Relative accommodation of existing and future land uses and Official Plan policies. (Less Accommodating = 3, Average Accommodation = 2, More Accommodating = 1)
Archaeological resources	Most of the proposed route lies within an area of archaelogical potential	2	Most of the proposed route lies within an area of archaelogical potential	2	Relative area of high archaeological potential affected. (More Area = 3, Average Area = 2, Less Area = 1)
Heritage resources	No difference between the alternatives	1	No difference between the alternatives	1	Comparative number of historic buildings that would be negatively impacted (Higher = 3, Average = 2, Lower = 1)
Economic Environment - N/A					
Future development potential	Both part of a corridor providing an alternative route for land developments on the west side of Bracebridge	1	Both part of a corridor providing an alternative route for land developments on the west side of Bracebridge	1	Comparative effect on accessibility of planned future development areas (Higher = 3, Average = 2, Lower = 1)

Accessibility to existing commercial areas	Both alternatives attract the same amount of traffic away from existing routes	1	Both alternatives attract the same amount of traffic away from existing routes	1	Comparative effect on accessibility to existing commercial areas in Bracebridge and beyond (Higher = 3, Average = 2, Lower = 1)
Engineering					
Construction impacts	Intersections required with Nichols Rd (3) & South Monck Dr (1), 3.5 km of road construction, 1 major creek crossing (12m +/- fill)	2	Intersections required with Nichols Rd (1) & South Monck Dr (1), 2.9 km of new road construction, 1 major creek crossing (21m +/- fill)	2	Comparative number of at-grade intersections, km of road construction along existing road corridors and km of new road construction required; # of major creek crossings required; potential to provide a grade-separated crossing of the rail line (Higher = 3, Average = 2, Lower = 1)
Utility/service conflicts	Need to relocate power lines along existing roads	2	No utilities identified	1	Comparative number # of pipeline crossings required and other utilities and services required. (Higher = 3, Average = 2, Lower = 1)
Construction Cost					
Estimated capital construction cost	71,600 m3 rock exc 16,900 m3 earth exc 95,500 m3 fill 1 large span creek culvert 4 small span creek culverts (2 at locations with existing culverts)	1	73,800 m3 rock exc 12,500 m3 earth exc 98,300 m3 fill 1 large span creek culvert 5 small span creek culverts	2	Comparative cost based on preliminary profile and cross-section. (Higher = 3, Average = 2, Lower = 1)
Estimated utility relocation cost	Relocation of power line along South Monck Dr. & Nichols Rd.	2	no relocations	1	Comparative cost based on previous experience and consultation with affected utilities. (Higher = 3, Average = 2, Lower = 1)

Segment M3

Factor/Sub-factor	Significance Level
Transportation	
Accommodation of future vehicular travel demand	high
Accommodation of pedestrian and cyclist movements	medium
Travel safety	high
Emergency service	high
Future transportation network connectivity and compatibility	medium
Commercial goods movement	medium
Recreational trails	medium
Natural Environment	
Watercourses/fisheries/ aquatic habitat	medium
Vegetation and woodlots	medium
Wildlife/terrestrial habitat	medium
Wetlands	high
Species at Risk	high
Socio-cultural Environment	
Noise	high
Visual aesthetics	medium
Residential property required	high
Recreational/property impacts	high
Other property required	high
Compatibility with existing/ future land uses/ plans	medium
Archaeological resources	low
Heritage resources	low
Economic Environment	
Future development potential	low
Accessibility to existing commercial areas	medium
Engineering/Constructability	
Construction impacts	medium
Utility/service conflicts	medium
Construction Cost	
Estimated capital construction cost	low
Estimated utility relocation cost	low

			Common Scale	
Factor/Sub-factor	**Alt. M3-A**	**Alt. M3-B**	**Alt. M3-A**	**Alt. M3-B**
Transportation				
Accommodation of future vehicular travel demand	1	1	0.33	0.33
Accommodation of pedestrian and cyclist movements	2	2	0.67	0.67
Travel safety	2	1	0.67	0.33
Emergency service	2	1	0.67	0.33
Future transportation network connectivity and compatibility	1	1	0.33	0.33
Commercial goods movement	1	1	0.33	0.33
Recreational trails	2	2	0.67	0.67
Natural Environment				
Watercourses/fisheries/ aquatic habitat	2	1	0.67	0.33
Vegetation and woodlots	2	2	0.67	0.67
Wildlife/terrestrial habitat	2	2	0.67	0.67
Wetlands	2	2	0.67	0.67
Species at Risk	2	2	0.67	0.67
Socio-cultural Environment				
Noise	2	1	0.67	0.33
Visual aesthetics	2	1	0.67	0.33
Residential property required	3	2	1.00	0.67
Recreational/property impacts	2	1	0.67	0.33
Other property required	3	2	1.00	0.67
Compatibility with existing/ future land uses/ plans	1	1	0.33	0.33
Archaeological resources	2	2	0.67	0.67
Heritage resources	1	1	0.33	0.33
Economic Environment				
Future development potential	1	1	0.33	0.33
Accessibility to existing commercial areas	1	1	0.33	0.33
Engineering/Constructability				
Construction impacts	2	2	0.67	0.67
Utility/service conflicts	2	1	0.67	0.33
Construction Cost				
Estimated capital construction cost	1	2	0.33	0.67
Estimated utility relocation cost	2	1	0.67	0.33

Weighting based on Significance of Potential impacts (low = 1, medium = 4 and high = 10)

Factor/Sub-factor	Weight	Weighted Ranking	
		Alt. M3-A	Alt. M3-B
Transportation			
Accommodation of future vehicular travel demand	10	3.3	3.3
Accommodation of pedestrian and cyclist movements	4	2.7	2.7
Travel safety	10	6.7	3.3
Emergency service	10	6.7	3.3
Future transportation network connectivity and	4	1.3	1.3
Commercial goods movement	4	1.3	1.3
Recreational trails	4	2.7	2.7
Natural Environment			
Watercourses/fisheries/ aquatic habitat	4	2.7	1.3
Vegetation and woodlots	4	2.7	2.7
Wildlife/terrestrial habitat	4	2.7	2.7
Wetlands	10	6.7	6.7
Species at Risk	10	6.7	6.7
Socio-cultural Environment			
Noise	10	6.7	3.3
Visual aesthetics	4	2.7	1.3
Residential property required	10	10.0	6.7
Recreational/property impacts	10	6.7	3.3
Other property required	10	10.0	6.7
Compatibility with existing/ future land uses/ plans	4	1.3	1.3
Archaeological resources	1	0.7	0.7
Heritage resources	1	0.3	0.3
Economic Environment			
Future development potential	4	1.3	1.3
Accessibility to existing commercial areas	4	1.3	1.3
Engineering/Constructability			
Construction impacts	4	2.7	2.7
Utility/service conflicts	4	2.7	1.3
Construction Cost			
Estimated capital construction cost	1	0.3	0.7
Estimated utility relocation cost	1	0.7	0.3
		93.3	**69.3**

Factor/Sub-factor	Significance Level
Transportation	
Accommodation of future vehicular travel demand	high
Accommodation of pedestrian and cyclist movements	medium
Travel safety	high
Emergency service	high
Future transportation network connectivity and compatibility	medium
Commercial goods movement	medium
Recreational trails	medium
Natural Environment	
Watercourses/fisheries/ aquatic habitat	medium
Vegetation and woodlots	medium
Wildlife/terrestrial habitat	medium
Wetlands	high
Species at Risk	high
Socio-cultural Environment	
Noise	high
Visual aesthetics	medium
Residential property required	high
Recreational/property impacts	high
Other property required	high
Compatibility with existing/ future land uses/ plans	medium
Archaeological resources	low
Heritage resources	low
Economic Environment	
Future development potential	medium
Accessibility to existing commercial areas	medium
Engineering/Constructability	
Construction impacts	medium
Utility/service conflicts	medium
Construction Cost	
Estimated capital construction cost	low
Estimated utility relocation cost	low

Ranking for Sensitivity Analysis:

Factor/Sub-factor	Middle Alt. M2, M3-B	South Alt. S2-D, S3	Comments:
Transportation			
Accommodation of future vehicular travel demand	Along a portion of existing High Falls Road and Nichols Road with driveways (less overall capacity)	Closer to downtown for much of length and may be perceived as more attractive	
Accommodation of pedestrian and cyclist movements	One steeper grade. Paved shoulders to accommodate non-auto modes	Paved shoulders to accommodate non-auto modes	
Travel safety	More conflicts at driveways. Alignment and grades reasonable	Potential for grade-seperated rail crossing. Alignment and grades reasonable.	
Emergency service	Improves access to rural properites		
Future transportation network connectivity and compatibility	Arterial not desirable along High Falls Road	Provides oppportunity to construct grade seperation with CN Rail	
Commercial goods movement	Provides desirable route outside downtown.		
Recreational trails	One crossing of TOP D for each location		
Natural Environment			
Watercourses/fisheries/ aquatic habitat	Crosses 5 permanent coldwater watercourses with Brook Trout habitat	Crosses 5 permanent coldwater watercourses with Brook Trout habitat (further downstream than M2, M3-B)	
Vegetation and woodlots	Directly affects forest stands of deciduous and coniferous trees, cultural woodland and cultural meadow. Area east of Manitoba Street more open habitat		
Wildlife/terrestrial habitat	Affects overall breeding and forging habitat for numberous species		
Wetlands	Affects open water and marginal meadow marsh associated with ponds and watercourse crossings		
Species at Risk	Effects on potential habitat for SAR	May potentially affect habitat for Hognose, Ribbonsnake	
Socio-cultural Environment			
Noise	M2 - info needed. M3B - noise mitigation not required.	S2D - Noise mitigation required on western side, to a limited extent. S3 - info needed	
Visual aesthetics	35 houses within 200m 14 houses have view of road 9 houses have partial view of road 12 have unchanged full view	8 houses within 200m 1 houses have view of road 7 have unchanged full view	
Residential property required	28 parcels	6 parcels	
Recreational/property impacts	N/A	Seasonal: 1 parcel (0.93 ha)	
Other property required	Vacant land: 8 parcels Commercial: 2 parcels Managed forest: 1 parcel Farmland: 1 parcel	Vacant land: 10 parcels Commercial: 1 parcels Managed forest: 1 parcel Farmland: 1 parcel	
Compatibility with existing/ future land uses/ plans	Outside urban boundary. Provides alternative route for future developments in west/north	Outside, close to urban boundary. Provides alternative route for future developments in west/north	
Archaeological resources	Most of the proposed route lies within an area of archaelogical potential		
Heritage resources	No difference between the alternatives		
Economic Environment			
Future development potential	Both part of a corridor providing an alternative route for land developments on the north/west side of Bracebridge	Southerly route may be perceived to be closer to town and more supportive of development	
Accessibility to existing commercial areas	May attract a similar amount of traffic away from existing routes, depending on travellers' perceptions	Southerly route may attract more traffic away from existing routes if it is perceived to be closer to town	
Engineering/constructability			
Construction impacts	Intersections required with High Falls Road and Manitoba Street (at existing High Falls Road location) and Nichols Road 4.8 km of new road construction 2 major valley crossings (11 and 21m± fill) At-grade rail crossing (at existing High Falls Road location)	Intersections required with High Falls Road, Bonnell Road, Manitoba Street 4.5 km of new road construction 4 major valley crossings (8, 17, 18, and 21m±) Potential for grade-separated rail crossing	Comparative number of at-grade intersections, km of road construction along existing road corridors and km of new road construction required; # of major creek crossings required; potential to provide a grade-separated crossing of the rail line (Higher = 3, Average = 2, Lower = 1)
Utility/service conflicts	New crossing of pipleline north of High Falls Road. Relocation of power poles along High Falls Road-Nichols Road	Requires new crossing of pipleine north of High Falls Road	# of pipelines and power transmission line crossings
Construction Cost			
Estimated capital construction cost	115,800 m3 rock exc 23,900 m3 earth exc 128,900m3 fill New pipeline crossing, 2 largespan creek culverts, 8 smaller span creek culverts	103,400 m3 rock exc 27,200 m3 earth exc 114,600m3 fill New pipeline crossing, new largespan creek culvert, new medium span creek culvert	Major quantities required
Estimated utility relocation cost	Requires new crossing of pipeline north of High Falls Road Relocation of power poles along High Falls Road-Nichols Road	Requires new crossing of pipeline north of High Falls Road	Description of requirements

Ranking for Sensitivity Analysis: Preferred alternative for that factor

Higher Impact = 3
Average Impact = 2
Lower Impact = 1

Factor/Sub-factor	Middle Alt. M2, M3-B	Rank	South Alt. S2-D, S3	Rank	Unit of Measure
Transportation					
Accommodation of future vehicular travel demand	Along a portion of existing High Falls Road and Nichols Road with driveways (less overall capacity)	3	Closer to downtown for much of length and may be perceived as more attractive	2	Relative attractiveness/potential difference in travel time of alternative routes. (Less Attractive = 3, Average Attractiveness = 2, Highest Attractiveness= 1)
Accommodation of pedestrian and cyclist movements	One steeper grade. Paved shoulders to accommodate non-auto modes	2	Paved shoulders to accommodate non-auto modes	1	Comparative ability to accomodate paved shoulders, sidewalks and/or pathways for non-auto modes (Poor Ability = 3, Average Ability= 2, Highest Ability = 1)
Travel safety	More conflicts at driveways. Alignment and grades reasonable	2	Potential for grade-separated rail crossing. Alignment and grades reasonable.	1	Comparative negative impact on adherence to design standards for safety (Higher = 3, Average = 2, Lower = 1)
Emergency service	Improves access to rural properites	1	Improves access to rural properites	1	Comparative ability to improve routing for emergency services (Poor Ability = 3, Average Ability= 2, Highest Ability= 1)
Transportation network connectivity and compatibility	Arterial not desirable along High Falls Road	3	Provides opportunity to construct grade separation with CN Rail	1	Relative improvement in connectivity and compatibility with other planned infrastructure. (Less Improvement = 3, Average Improvement = 2, More Improvement = 1)
Commercial goods movement	Provides desirable route outside downtown.	1	Provides desirable route outside downtown.	1	Comparative ability of allowing routes outside of downtown area for commercial vehicles. (Lower = 3, Average = 2, Higherr = 1)
Recreational trails	One crossing of TOP D for each location	2	One crossing of TOP D for each location	2	Comparative negative effect on number of trails affected (Higher = 3, Average = 2, Lower = 1)
Natural Environment					
Watercourses/fisheries/ aquatic habitat	Crosses 5 permanent coldwater watercourses with Brook Trout habitat	2	Crosses 5 permanent coldwater watercourses with Brook Trout habitat (further downstream than M2, M3-B)	2	Comparative negative impact on crossings (Higher = 3, Average = 2, Lower = 1)
Vegetation and woodlots	Directly affects forest stands of deciduous and coniferous trees, cultural woodland and cultural meadow. Area east of Manitoba Street more open habitat	2	Directly affects forest stands of deciduous and coniferous trees, cultural woodland and cultural meadow. Area east of Manitoba Street more open habitat	2	Comparative negative impact on vegetation and woodlots (Higher = 3, Average = 2, Lower = 1)
Wildlife/terrestrial habitat	Affects overall breeding and forging habitat for numberous species	2	Affects overall breeding and forging habitat for numberous species	2	Comparative negative impact on wildlife/terrestrial (Higher = 3, Average = 2, Lower = 1)
Wetlands	Affects open water and marginal meadow marsh associated with ponds and watercourse crossings	2	Affects open water and marginal meadow marsh associated with ponds and watercourse crossings	2	Comparative negative impact on wetlands (Higher = 3, Average = 2, Lower = 1)
Species at Risk	Effects on potential habitat for SAR	2	May potentially affect habitat for Hognose, Ribbonsnake	2	Comparative negative impact on species at risk (Higher = 3, Average = 2, Lower = 1)
Socio-cultural Environment					
Noise	M2 along High Falls Road M3B - noise mitigation not required.	2	S2D - Noise mitigation required on western side, to a limited extent. S3 - back yards to south near Manitoba St. Rail overpass a concern	3	Comparative number of sensitive receptors negatively impacted (Higher = 3, Average = 2, Lower = 1)
Visual aesthetics	35 houses within 200m 14 houses have view of road 9 houses have partial view of road 12 have unchanged full view	3	8 houses within 200m 1 houses have view of road 7 have unchanged full view	1	Comparative number of properties with negative visual impacts (Higher = 3, Average = 2, Lower = 1)
Residential property required	6.65 ha (20 parcels)	3	1.82 ha (6 parcels)	1	Comparative number of residential properties/area impacted (where impacts to existing buildings is of greater concern) (Higher = 3, Average = 2, Lower = 1)
Recreational/property impacts	None	1	Seasonal: 0.93 ha (1 parcel)	2	Comparative number of recreational properties/area impacted (where impacts to existing buildings is of greater concern) (Higher = 3, Average = 2, Lower = 1)
Other property required	Commercial: 2.25 ha (2 parcels) Vacant land: 3.95 ha (8 parcels) Farmland: 2m strip (1 parcel) Managed Forest: 340m2 (1 parcel)	3	Vacant land: 7.2 ha (10 parcels) Farmland: 0.07 ha (1 parcel) Commercial: 80 m2 (1 parcel) Managed Forest: 3.95 ha (1 parcel)	2	Comparative number of other properties/area impacted (where impacts to existing buildings is of greater concern) (Higher = 3, Average = 2, Lower = 1)
Compatibility with existing/ future land uses/ plans	Outside urban boundary. Provides alternative route for future developments in west/north	1	Outside, close to urban boundary. Provides alternative route for future developments in west/north	1	Relative accommodation of existing and future land uses and Official Plan policies. (Less Accommodating = 3, Average Accommodation = 2, More Accommodating = 1)
Archaeological resources	Most of the proposed route lies within an area of archaelogical potential	2	Most of the proposed route lies within an area of archaelogical potential	2	Relative area of high archaeological potential affected. (More Area = 3, Average Area = 2, Less Area = 1)
Heritage resources	No difference between the alternatives	1	No difference between the alternatives	1	Comparative number of historic buildings that would be negatively impacted (Higher = 3, Average = 2, Lower = 1)
Economic Environment					
Future development potential	Part of a corridor providing an alternative route for land developments on the north/west side of Bracebridge	2	Part of a corridor providing an alternative route for land developments on the north/west side of Bracebridge. May be perceived to be closer to town and more supportive of development	1	Comparative effect on accessibility of planned future development areas (Higher = 3, Average = 2, Lower = 1)
Accessibility to existing commercial areas	May attract a less traffic away from existing routes, depending on travellers' perceptions	2	Southerly route may attract more traffic away from existing routes if it is perceived to be closer to town	1	Comparative effect on accessibility to existing commercial areas in Bracebridge and beyond (Higher = 3, Average = 2, Lower = 1)
Engineering/Constructability					

Construction impacts	Intersections required with High Falls Road and Manitoba Street (at existing High Falls Road location) and Nichols Road 4.8 km of new road construction 2 major valley crossings (11 and 21m± fill) At-grade rail crossing (at existing High Falls Road location)	2	Intersections required with High Falls Road, Bonnell Road, Manitoba Street 4.5 km of new road construction 4 major valley crossings (8, 17, 18, and 21m±) Potential for grade-separated rail crossing	2	Comparative number of at-grade intersections, km of road construction along existing road corridors and km of new road construction required; # of major creek crossings required; potential to provide a grade-separated crossing of the rail line (Higher = 3, Average = 2, Lower = 1)
Utility/service conflicts	New crossing of pipeline north of High Falls Road. Relocation of power poles along High Falls Road-Nichols Road	3	Requires new crossing of pipeline north of High Falls Road	2	Comparative number # of pipeline crossings required and other utilities and services required. (Higher = 3, Average = 2, Lower = 1)
Construction Cost					
Estimated capital construction cost	115,800 m3 rock exc 23,900 m3 earth exc 128,900m3 fill New pipeline crossing, 2 large span creek culverts, 8 smaller span creek culverts	3	103,400 m3 rock exc 27,200 m3 earth exc 114,600m3 fill New pipeline crossing, new large span creek culvert, new medium span creek culvert	2	Comparative cost based on preliminary profile and cross-section. (Higher = 3, Average = 2, Lower = 1)
Estimated utility relocation cost	Requires new crossing of pipeline north of High Falls Road Relocation of power poles along High Falls Road-Nichols Road	3	Requires new crossing of pipeline north of High Falls Road	2	Comparative cost based on previous experience and consultation with affected utilities. (Higher = 3, Average = 2, Lower = 1)

Segment Middle-South

Factor/Sub-factor	Significance Level
Transportation	
Accommodation of future vehicular travel demand	high
Accommodation of pedestrian and cyclist movements	medium
Travel safety	high
Emergency service	high
Future transportation network connectivity and compatibility	medium
Commercial goods movement	medium
Recreational trails	medium
Natural Environment	
Watercourses/fisheries/ aquatic habitat	medium
Vegetation and woodlots	medium
Wildlife/terrestrial habitat	medium
Wetlands	high
Species at Risk	high
Socio-cultural Environment	
Noise	high
Visual aesthetics	medium
Residential property required	high
Recreational/property impacts	high
Other property required	high
Compatibility with existing/ future land uses/ plans	medium
Archaeological resources	low
Heritage resources	low
Economic Environment	
Future development potential	low
Accessibility to existing commercial areas	medium
Engineering/Constructability	
Construction impacts	medium
Utility/service conflicts	medium
Construction Cost	
Estimated capital construction cost	low
Estimated utility relocation cost	low

			Common Scale	
Factor/Sub-factor	Middle Alt. M2, M3-B	South Alt. S2-D, S3	Middle Alt. M2, M3-B	South Alt. S2-D, S3
Transportation				
Accommodation of future vehicular travel demand	3	2	1.00	0.67
Accommodation of pedestrian and cyclist movements	2	1	0.67	0.33
Travel safety	2	1	0.67	0.33
Emergency service	1	1	0.33	0.33
Future transportation network connectivity and compatibility	3	1	1.00	0.33
Commercial goods movement	1	1	0.33	0.33
Recreational trails	2	2	0.67	0.67
Natural Environment				
Watercourses/fisheries/ aquatic habitat	2	2	0.67	0.67
Vegetation and woodlots	2	2	0.67	0.67
Wildlife/terrestrial habitat	2	2	0.67	0.67
Wetlands	2	2	0.67	0.67
Species at Risk	2	2	0.67	0.67
Socio-cultural Environment				
Noise	2	3	0.67	1.00
Visual aesthetics	3	1	1.00	0.33
Residential property required	3	1	1.00	0.33
Recreational/property impacts	1	2	0.33	0.67
Other property required	3	2	1.00	0.67
Compatibility with existing/ future land uses/ plans	1	1	0.33	0.33
Archaeological resources	2	2	0.67	0.67
Heritage resources	1	1	0.33	0.33
Economic Environment				
Future development potential	2	1	0.67	0.33
Accessibility to existing commercial areas	2	1	0.67	0.33
Engineering/Constructability				
Construction impacts	2	2	0.67	0.67
Utility/service conflicts	3	2	1.00	0.67
Construction Cost				
Estimated capital construction cost	3	2	1.00	0.67
Estimated utility relocation cost	3	2	1.00	0.67

Weighting based on Significance of Potential impacts (low = 1, medium = 4 and high = 10)

Factor/Sub-factor	Weight	Weighted Ranking	
		Middle Alt. M2, M3-B	South Alt. S2-D, S3
Transportation			
Accommodation of future vehicular travel demand	10	10.0	6.7
Accommodation of pedestrian and cyclist movements	4	2.7	1.3
Travel safety	10	6.7	3.3
Emergency service	10	3.3	3.3
Future transportation network connectivity and	4	4.0	1.3
Commercial goods movement	4	1.3	1.3
Recreational trails	4	2.7	2.7
Natural Environment			
Watercourses/fisheries/ aquatic habitat	4	2.7	2.7
Vegetation and woodlots	4	2.7	2.7
Wildlife/terrestrial habitat	4	2.7	2.7
Wetlands	10	6.7	6.7
Species at Risk	10	6.7	6.7
Socio-cultural Environment			
Noise	10	6.7	10.0
Visual aesthetics	4	4.0	1.3
Residential property required	10	10.0	3.3
Recreational/property impacts	10	3.3	6.7
Other property required	10	10.0	6.7
Compatibility with existing/ future land uses/ plans	4	1.3	1.3
Archaeological resources	1	0.7	0.7
Heritage resources	1	0.3	0.3
Economic Environment			
Future development potential	4	2.7	1.3
Accessibility to existing commercial areas	4	2.7	1.3
Engineering/Constructability			
Construction impacts	4	2.7	2.7
Utility/service conflicts	4	4.0	2.7
Construction Cost			
Estimated capital construction cost	1	1.0	0.7
Estimated utility relocation cost	1	1.0	0.7
		102.3	**81.0**

Factor/Sub-factor	Significance Level
Transportation	
Accommodation of future vehicular travel demand	high
Accommodation of pedestrian and cyclist movements	medium
Travel safety	high
Emergency service	high
Future transportation network connectivity and compatibility	medium
Commercial goods movement	medium
Recreational trails	medium
Natural Environment	
Watercourses/fisheries/ aquatic habitat	medium
Vegetation and woodlots	medium
Wildlife/terrestrial habitat	medium
Wetlands	high
Species at Risk	high
Socio-cultural Environment	
Noise	high
Visual aesthetics	medium
Residential property required	high
Recreational/property impacts	high
Other property required	high
Compatibility with existing/ future land uses/ plans	medium
Archaeological resources	low
Heritage resources	low
Economic Environment	
Future development potential	medium
Accessibility to existing commercial areas	medium
Engineering/Constructability	
Construction impacts	medium
Utility/service conflicts	medium
Construction Cost	
Estimated capital construction cost	low
Estimated utility relocation cost	low

Ranking for Sensitivity Analysis:

Factor/Sub-factor	Alternative MTO-1	Alternative MTO-2	Comments:
Transportation			
Accommodation of future vehicular travel demand	No difference between alternatives. Are within same vicinity, will attract same traffic from downtown. Difference in travel time is not significant.		
Accommodation of pedestrian and cyclist movements	Similar grades. Paved shoulders will be provided. Connect to High Falls Road across Highway 11		
Travel safety	Tighter radius, steeper grades, one intersection on curve	Flatter alginment, one intersection to High Falls Rd less skew on bridge	
Emergency service	All alternatives connect to south and middle route alternatives. Both provide similar emergency response service.		
Transportation network connectivity and compatibility	Similar network connectivity. Traffic must use Cedar Lane interchange to access Hwy 11 using new bridge over Muskoka River. All alternatives are compatible with the MTO Hwy 11 improvements.		
Commercial goods movement	Part of a route outside downtown area of Bracebridge, allowing trucks to bypass downtown. Help alleviate traffic congestion downtown		
Recreational trails	Alternatives provide culvert underpass of arterial just west of Hwy 11 in vicinity of existing trails		
Natural Environment			
Watercourses/fisheries/ aquatic habitat	Both require new bridge over Muskoka river and high level crossing of creek valley		
Vegetation and woodlots	Similar habitat area affected		
Wildlife/terrestrial habitat	Similar habitat area affected		
Wetlands	Similar wetland area in vicinty of major creek crossing affected		
Species at Risk	Similar potential effects		
Socio-cultural Environment			
Noise	1, increased by 5 - 10 dB(A)	1, increased by 10 - 15 dB(A)	
Visual aesthetics	Road in front of home in 2+m cut	Road behind home, behind out-buildings, in 1m+/- cut	
Residential property required	Residential: 3 parcels (0.94, 3.0 ha and 73 m3)	Residential: 3 parcels (1.69, 2.95 ha and 73 m3)	
Recreational/property impacts	N/A		
Other property required	Vacant/crown land 2 parcels (1.13, 0.44 ha). No impact on BRMC, Includes underpass for trails	Vacant/crown land 2 parcels (1.14, 0.55 ha). No impact on BRMC. Includes an underpass for trails.	
Compatibility with existing/ future land uses/ plans	Outside urban area and part of a corridor providing an alternative route for future land development. Do not provide new interchange with full movements as anticipated in official plans		
Archaeological resources	Area of high archaelogical potential include ROW within 300m of a permanent		
Heritage resources	No difference between alternatives		
Economic Environment			
Future development potential	They are part of a corridor providing an alternative route for future development in west Bracebridge		
Accessibility to existing commercial areas	They will attract the same amount of traffic away from existing routes, thereby improving access for those wanting to visit the commercial areas downtown and in urban Bracebridge		
Engineering			
Construction impacts	2 intersections required with High Falls Road	1 intersection with High Falls Road	# of at grade intersections & grade seperations
Construction impacts	935m of road construction. Staging and traffic management required for section of High Falls Road impacted by alignment	885 m of road construction	# of km of road construction along existing road corridors and # of km of new road construction
Construction impacts	1 major creek crossing (19m +/- fill) and 5m culvert underpass for access		# of major creek crossings
Construction impacts	N/A		Potential to provide a grade seperated crossing of the rail line
Utility/service conflicts	No pipeling crossings in this section. Some power pole relocations may be required		# of pipelines and power transmission line crossings
Construction Cost			
Estimated capital construction cost	Skewed bridge over Hwy 11 will be slightly more costly than perpendicular alignment. Proximity to High Falls Road adds to costs. Minor difference in road length.	Somewhat less construction cost risk due to bridge and road alignment	Major quantities required
Estimated utility relocation cost	Not a significant known cost		Description of requirements

Ranking for Sensitivity Analysis: Preferred alternative for that factor

Higher Impact = 3
Average Impact = 2
Lower Impact = 1

Factor/Sub-factor	Alternative MTO-1	Rank	Alternative MTO-2	Rank	Unit of Measure
Transportation					
Accommodation of future vehicular travel demand	No difference between alternatives. Are within same vicinity, will attract same traffic from downtown. Difference in travel time is not significant.	1	No difference between alternatives. Are within same vicinity, will attract same traffic from downtown. Difference in travel time is not significant.	1	Relative attractiveness/potential difference in travel time of alternative routes. (Less Attractive = 3, Average Attractiveness = 2, Highest Attractiveness= 1)
Accommodation of pedestrian and cyclist movements	Similar grades. Paved shoulders will be provided. Connect to High Falls Road across Highway 11	1	Similar grades. Paved shoulders will be provided. Connect to High Falls Road across Highway 11	1	Comparative ability to accomodate paved shoulders, sidewalks and/or pathways for non auto modes (Poor Ability = 3, Average Ability= 2, Highest Ability = 1)
Travel safety	Tighter radius, steeper grades, one intersection on curve	3	Flatter alignment, one intersection to High Falls Rd, less skew on bridge	1	Comparative negative impact on adherence to design standards for safety (Higher = 3, Average = 2, Lower = 1)
Emergency service	All alternatives connect to south and middle route alternatives. Both provide similar emergency response service.	1	All alternatives connect to south and middle route alternatives. Both provide similar emergency response service.	1	Comparative ability to improve routing for emergency services (Poor Ability = 3, Average Ability= 2, Highest Ability= 1)
Transportation network connectivity and compatibility	Similar network connectivity. Traffic must use Cedar Lane interchange to access Hwy 11 using new bridge over Muskoka River. All alternatives are compatible with the MTO Hwy 11 improvements.	1	Similar network connectivity. Traffic must use Cedar Lane interchange to access Hwy 11 using new bridge over Muskoka River. All alternatives are compatible with the MTO Hwy 11 improvements.	1	Relative improvement in connectivity and compatibility with other planned infrastructure. (Less Improvement = 3, Average Improvement = 2, More Improvement = 1)
Commercial goods movement	Part of a route outside downtown area of Bracebridge, allowing trucks to bypass downtown. Help alleviate traffic congestion downtown	1	Part of a route outside downtown area of Bracebridge, allowing trucks to bypass downtown. Help alleviate traffic congestion downtown	1	Comparative ability of allowing routes outside of downtown area for commercial vehicles. (Lower = 3, Average = 2, Higherr = 1)
Recreational trails	Alternatives provide culvert underpass of arterial just west of Hwy 11 in vicinity of existing trails	1	Alternatives provide culvert underpass of arterial just west of Hwy 11 in vicinity of existing trails	1	Comparative negative effect on number of trails affected (Higher = 3, Average = 2, Lower = 1)
Natural Environment					
Watercourses/fisheries/ aquatic habitat	Both require new bridge over Muskoka river and high level crossing of creek valley	2	Both require new bridge over Muskoka river and high level crossing of creek valley	2	Comparative negative impact on crossings (Higher = 3, Average = 2, Lower = 1)
Vegetation and woodlots	Similar habitat area affected	2	Similar habitat area affected	2	Comparative negative impact on vegetation and woodlots (Higher = 3, Average = 2, Lower = 1)
Wildlife/terrestrial habitat	Similar habitat area affected	2	Similar habitat area affected	2	Comparative negative impact on wildlife/terrestrial (Higher = 3, Average = 2, Lower = 1)
Wetlands	Similar wetland area in vicinty of major creek crossing affected	2	Similar wetland area in vicinty of major creek crossing affected	2	Comparative negative impact on wetlands (Higher = 3, Average = 2, Lower = 1)
Species at Risk	Similar potential effects	2	Similar potential effects	2	Comparative negative impact on species at risk (Higher = 3, Average = 2, Lower = 1)
Socio-cultural Environment					
Noise	1, increased by 5 - 10 dB(A)	2	1, increased by 10 - 15 dB(A)	3	Comparative number of sensitive receptors negatively impacted (Higher = 3, Average = 2, Lower = 1)
Visual aesthetics	Road in front of home in 2+m cut	1	Road behind home, behind out-buildings, in 1m+/- cut	3	Comparative number of properties with negative visual impacts (Higher = 3, Average = 2, Lower = 1)
Residential property required	Residential: 3 parcels (0.94, 3.0 ha and 73 m3)	2	Residential: 3 parcels (1.69, 2.95 ha and 73 m3)	3	Comparative number of residential properties/area impacted (where impacts to existing buildings is of greater concern) (Higher = 3, Average = 2, Lower = 1)
Recreational/property impacts	N/A	1	N/A	1	Comparative number of recreational properties/area impacted (where impacts to existing buildings is of greater concern) (Higher = 3, Average = 2, Lower = 1)
Other property required	Vacant/crown land 2 parcels (1.13, 0.44 ha). Includes underpass for trails	2	Vacant/crown land 2 parcels (1.14, 0.55 ha). Includes an underpass for trails.	2	Comparative number of other properties/area impacted (where impacts to existing buildings is of greater concern) (Higher = 3, Average = 2, Lower = 1)
Compatibility with existing/ future land uses/ plans	Outside urban area and part of a corridor providing an alternative route for future land development. Does not provide new interchange with full movements as anticipated in official plans	2	Outside urban area and part of a corridor providing an alternative route for future land development. Does not provide new interchange with full movements as anticipated in official plans	2	Relative accommodation of existing and future land uses and Official Plan policies. (Less Accommodating = 3, Average Accommodation = 2, More Accommodating = 1)
Archaeological resources	Area of high archaelogical potential include ROW within 300m of a permanent watercourse, which involves most of the study area	2	Area of high archaelogical potential include ROW within 300m of a permanent watercourse, which involves most of the study area	2	Relative area of high archaeological potential affected. (More Area = 3, Average Area = 2, Less Area = 1)
Heritage resources	No difference between alternatives	1	No difference between alternatives	1	Comparative number of historic buildings that would be negatively impacted (Higher = 3, Average = 2, Lower = 1)
Economic Environment - N/A					
Future development potential	They are part of a corridor providing an alternative route for future development in west Bracebridge	1	They are part of a corridor providing an alternative route for future development in west Bracebridge	1	Comparative effect on accessibility of planned future development areas (Higher = 3, Average = 2, Lower = 1)
Accessibility to existing commercial areas	They will attract the same amount of traffic away from existing routes, thereby improving access for those wanting to visit the commercial areas downtown and in urban Bracebridge	1	They will attract the same amount of traffic away from existing routes, thereby improving access for those wanting to visit the commercial areas downtown and in urban Bracebridge	1	Comparative effect on accessibility to existing commercial areas in Bracebridge and beyond (Higher = 3, Average = 2, Lower = 1)
Engineering					
Construction impacts	2 intersections required with High Falls Road, 935m of road construction. Staging and traffic management required for section of High Falls Road impacted by alignment, 1 major creek crossing (19m +/- fill) and 5m culvert underpass for access	3	1 intersection with High Falls Road, 885 m of road construction, 1 major creek crossing (19m +/- fill) and 5m culvert underpass for access	2	Comparative number of at-grade intersections, km of road construction along existing road corridors and km of new road construction required; # of major creek crossings required; potential to provide a grade-separated crossing of the rail line (Higher = 3, Average = 2, Lower = 1)
Utility/service conflicts	No pipeline crossings in this section. Some power pole relocations may be required	1	No pipeline crossings in this section. Some power pole relocations may be required	1	Comparative number # of pipeline crossings required and other utilities and services required. (Higher = 3, Average = 2, Lower = 1)
Construction Cost					
Estimated capital construction cost	Skewed bridge over Hwy 11 will be slightly more costly than perpendicular alignment. Proximity to High Falls Road adds to costs. Minor difference in road length.	3	Somewhat less construction cost risk due to bridge and road alignment	2	Comparative cost based on preliminary profile and cross-section. (Higher = 3, Average = 2, Lower = 1)
Estimated utility relocation cost	Not a significant known cost	1	Not a significant known cost	1	

Segment MTO

Factor/Sub-factor	Significance Level
Transportation	
Accommodation of future vehicular travel demand	high
Accommodation of pedestrian and cyclist movements	medium
Travel safety	high
Emergency service	high
Future transportation network connectivity and compatibility	medium
Commercial goods movement	medium
Recreational trails	medium
Natural Environment	
Watercourses/fisheries/ aquatic habitat	medium
Vegetation and woodlots	medium
Wildlife/terrestrial habitat	medium
Wetlands	high
Species at Risk	high
Socio-cultural Environment	
Noise	high
Visual aesthetics	medium
Residential property required	high
Recreational/property impacts	high
Other property required	high
Compatibility with existing/ future land uses/ plans	medium
Archaeological resources	low
Heritage resources	low
Economic Environment	
Future development potential	low
Accessibility to existing commercial areas	medium
Engineering/Constructability	
Construction impacts	medium
Utility/service conflicts	medium
Construction Cost	
Estimated capital construction cost	low
Estimated utility relocation cost	low

			Common Scale	
Factor/Sub-factor	**Alternative MTO-1**	**Alternative MTO-2**	**Alternative MTO-1**	**Alternative MTO-2**
Transportation				
Accommodation of future vehicular travel demand	1	1	0.33	0.33
Accommodation of pedestrian and cyclist movements	1	1	0.33	0.33
Travel safety	3	1	1.00	0.33
Emergency service	1	1	0.33	0.33
Future transportation network connectivity and compatibility	1	1	0.33	0.33
Commercial goods movement	1	1	0.33	0.33
Recreational trails	1	1	0.33	0.33
Natural Environment				
Watercourses/fisheries/ aquatic habitat	2	2	0.67	0.67
Vegetation and woodlots	2	2	0.67	0.67
Wildlife/terrestrial habitat	2	2	0.67	0.67
Wetlands	2	2	0.67	0.67
Species at Risk	2	2	0.67	0.67
Socio-cultural Environment				
Noise	2	3	0.67	1.00
Visual aesthetics	1	3	0.33	1.00
Residential property required	2	3	0.67	1.00
Recreational/property impacts	1	1	0.33	0.33
Other property required	2	2	0.67	0.67
Compatibility with existing/ future land uses/ plans	2	2	0.67	0.67
Archaeological resources	2	2	0.67	0.67
Heritage resources	1	1	0.33	0.33
Economic Environment				
Future development potential	1	1	0.33	0.33
Accessibility to existing commercial areas	1	1	0.33	0.33
Engineering/Constructability				
Construction impacts	3	2	1.00	0.67
Utility/service conflicts	1	1	0.33	0.33
Construction Cost				
Estimated capital construction cost	3	2	1.00	0.67
Estimated utility relocation cost	1	1	0.33	0.33

Weighting based on Significance of Potential impacts (low = 1, medium = 4 and high = 10)

Factor/Sub-factor	Weight	Weighted Ranking	
		Alternative MTO-1	Alternative MTO-2
Transportation			
Accommodation of future vehicular travel demand	10	3.3	3.3
Accommodation of pedestrian and cyclist movements	4	1.3	1.3
Travel safety	10	10.0	3.3
Emergency service	10	3.3	3.3
Future transportation network connectivity and	4	1.3	1.3
Commercial goods movement	4	1.3	1.3
Recreational trails	4	1.3	1.3
Natural Environment			
Watercourses/fisheries/ aquatic habitat	4	2.7	2.7
Vegetation and woodlots	4	2.7	2.7
Wildlife/terrestrial habitat	4	2.7	2.7
Wetlands	10	6.7	6.7
Species at Risk	10	6.7	6.7
Socio-cultural Environment			
Noise	10	6.7	10.0
Visual aesthetics	4	1.3	4.0
Residential property required	10	6.7	10.0
Recreational/property impacts	10	3.3	3.3
Other property required	10	6.7	6.7
Compatibility with existing/ future land uses/ plans	4	2.7	2.7
Archaeological resources	1	0.7	0.7
Heritage resources	1	0.3	0.3
Economic Environment			
Future development potential	4	1.3	1.3
Accessibility to existing commercial areas	4	1.3	1.3
Engineering			
Construction impacts	4	4.0	2.7
Utility/service conflicts	4	1.3	1.3
Construction Cost			
Estimated capital construction cost	1	1.0	0.7
Estimated utility relocation cost	1	0.3	0.3
		81.0	**82.0**

Factor/Sub-factor	Significance Level
Transportation	
Accommodation of future vehicular travel demand	high
Accommodation of pedestrian and cyclist movements	medium
Travel safety	high
Emergency service	high
Future transportation network connectivity and compatibility	medium
Commercial goods movement	medium
Recreational trails	medium
Natural Environment	
Watercourses/fisheries/ aquatic habitat	medium
Vegetation and woodlots	medium
Wildlife/terrestrial habitat	medium
Wetlands	high
Species at Risk	high
Socio-cultural Environment	
Noise	high
Visual aesthetics	medium
Residential property required	high
Recreational/property impacts	high
Other property required	high
Compatibility with existing/ future land uses/ plans	medium
Archaeological resources	low
Heritage resources	low
Economic Environment	
Future development potential	medium
Accessibility to existing commercial areas	medium
Engineering/Constructability	
Construction impacts	medium
Utility/service conflicts	medium
Construction Cost	
Estimated capital construction cost	low
Estimated utility relocation cost	low

Ranking for Sensitivity Analysis:

Factor/Sub-factor	Do Nothing	Preferred North Alternative	Preferred Middle Alternative	Preferred South Alternative	MTO Alternative with connection to preferred
Transportation					
Accommodation of future vehicular travel demand	Does not address travel demand. Routes through downtown and along High Falls Road will continue to attract more traffic	Further from downtown. Less attractive to travellers from/to the south due to greater travel time.	Most southerly location for full interchange while keeping all Cedar Lane/117 ramps open.	Partial interchange closest to downtown. New SB ramps only. NB drivers must use Cedar Lane (SB ramps closed at this location) and cross river on new bridge to access BNTC. High Falls Road connects via Service Road to interchange.	Ramp terminal intersections at Cedar Lane interchange will have a reduced level of service in the future.
Accommodation of pedestrian and cyclist movements	Existing routes do not have paved shoulders, in general	Alternatives will be designed with paved shoulders to accommodate non-auto modes. Connections to trails will be made as appropriate. Routes closer to Town may attract more usage.			
Travel safety	High Falls Road has variable design speed. There are numerous conflicts through downtown	Existing driveways along existing roads. Minimum radii used to reduce property impacts. Intersections on curve with 6% superelevation on outside so sight distance will be good.	Few driveway accesses. Intersections on reasonable grades. Horizontal and vertical alignment to standard.		
Emergency service	No improvement for emergency responders. Congestion will increase.	Provides new east-west arterial in Falkenburg Road area. May improve rural response times. Out of way travel to reach HFR.	Provides new east-west arterial close to northerly development in Bracebridge. May improve rural response times. Less out of way travel for HFR travellers.		
Future transportation network connectivity and compatibility	Connection from Cedar Lane to High Falls Road will continue pressure along High Falls Road, especially with increased development north of downtown.	Provides new and improved north-south (S. Monck Drive) and east-west (Falkenburg Road-Naismith to Hwy 11). Somewhat removed from Town. Flyover at High Falls Road to Service Rd would improve connectivity and reduce out of way travel for HFR travellers.	Provides new and improved north-south (portion of S. Monck Drive) and east-west road to Hwy 11 just north of planned subdivisions. Full interchange with Highway 11. Connection to HFR and to East Service Road. Grade separation of rail.	Provides new and improved north-south (portion of S. Monck Drive) and east-west road to Hwy 11 just north of planned subdivisions. Split interchange with Cedar Lane due to proximity. Provides new bridge over Muskoka River, grade separation of rail.	Consistent with approved TESR for Highway 11. Provides new and improved north-south (portion of S. Monck Drive) and east-west road to Hwy 11 just north of planned subdivisions. Provides new bridge over Muskoka River, grade separation of rail.
Commercial goods movement	No new route outside of the downtown area for commercial vehicles.	Alternatives are part of a desirable route outside the downtown area allowing trucks to bypass the downtown if desired. North alternative may be less attractive to vehicles from the south due to backtracking.	Alternatives are part of a desirable route outside the downtown area allowing trucks to bypass the downtown if desired. Middle alternative may be more attractive to vehicles from the south. Backtracking still required.	Alternatives are part of a desirable route outside the downtown area allowing trucks to bypass the downtown if desired. South alternative may be more attractive to vehicles from the south. Backtracking still required.	Alternatives are part of a desirable route outside the downtown area allowing trucks to bypass the downtown if desired. MTO alternative may be slightly less attractive to vehicles from the north.
Recreational trails	No new road crossings for trails or trail relocations required.	More impact on TOP and OFSC trails along Naismith Road and S. Monck Drive and crossings.	Short length of impact on TOP trails along S. Monck Dr and two trail crossings.		
Natural Environment					
Watercourses/fisheries/ aquatic habitat	Potential impacts due to new bridge over Muskoka River and additional traffic with more potential conflicts along existing routes.	Alternatives have a similar number of watercourse crossings. North route generally further upstream than other routes.	Alternatives have a similar number of watercourse crossings, further downstream than north route.	Alternatives have a similar number of watercourse crossings, further downstream than north route.	Potential impacts due to new bridge over Muskoka River; plus similar number of watercourse crossings, further downstream than north route.
Vegetation and woodlots	No additional impacts on natural vegetation/ woodlots.		Service roads and ramps avoid but are close to Red Oak research plots.	Route is through Managed forest west of Manitoba Street.	
Wildlife/terrestrial habitat	No additional impacts on terrestrial habitat.	More potential for wildlife impacts in natural areas remote from town.	Winter study revealed little deer activity near the Muskoka River.	Winter study revealed little deer activity near the Muskoka River.	Winter study revealed little deer activity near the Muskoka River.
Wetlands	No additional impacts on wetland habitat.	Impacts more wetland area along Naismith, Falkenburg and S. Monck Roads.	Impacts wetlands adjacent to creek valleys and on S. Monck Road north of Partridge Lane.	Impacts wetlands adjacent to creek valleys and on S. Monck Road north of Partridge Lane.	Impacts wetlands adjacent to creek valleys and on S. Monck Road north of Partridge Lane.
Species at Risk	No additional effects on potential habitat for SAR (2012).	May potentially affect habitat for Hognose, Ribbon snake (Provincially Threatened species).	May potentially affect habitat for Hognose, Ribbon snake (Provincially Threatened species).	May potentially affect habitat for Hognose, Ribbon snake (Provincially Threatened species).	May potentially affect habitat for Hognose, Ribbon snake (Provincially Threatened species).
Socio-cultural Environment					
Noise	Noise will increase along existing developed road corridors but not due to road widening (no mitigation warranted).	Affects more homes along existing roads.	Avoids most homes along existing roads.	More potential impacts along Muskoka River with added bridge.	More potential impacts along Muskoka River with added bridge.
Visual aesthetics	Views will not change.	More homes along existing roads have a view of the new arterial.	Minimizes number of existing homes with a view of the new arterial.	Views from Muskoka homes with added bridge.	Views from Muskoka homes with added bridge.
Residential property required	No impacts beyond MTO Recommended Plan.	Strips of ROW required at existing homes where route is along existing road. 42 parcels will be affected totaling 4.063 ha.	Route through less developed area and not along existing roads except for 0.35 km along Bonnell Road and 2.25 km along South Monck Drive. **Residential:** 20 parcels will be affected totaling 8.84 ha.	Route through less developed area and not along existing roads except for 0.35 km along Bonnell Road and 2.25 km along South Monck Drive. **Residential:** 22 parcels will be affected totaling 8.08 ha.	Impact along High Falls Road in addition to Middle and South Route impacts. **Residential:** 22 parcels will be affected totaling 8.42 ha.
Recreational/property impacts	No impacts beyond MTO Recommended Plan.	Impact on several BRMC trails near entrance. **Seasonal Residential**: 6	Impact on one BRMC trail at south end.	Impact on one BRMC trail at south end.	Minimal impact on BRMC. **Seasonal Residential:** 1 parcel is affected
Other property required	No impacts beyond MTO Recommended Plan.	**Vacant Land:** 8 parcels/14.41 ha. **Commercial:** 8 parcels/0.78 ha. **Managed forest:** 3 parcels/0.21 ha. **Farmland:** 3 parcels/0.52 ha. **Farm Residential:** 1 parcel/0.07 ha. **Religious:** 1 parcel/0.07 ha. **Other:** 1 parcel/0.51 ha.	**Vacant Land (include crown land):** 17 parcels/22.6 ha. **Commercial:** 7 parcels/0.78 ha. **Managed forest:** 1 parcel/3.85 ha. **Farmland**: 4 parcels/0.59 ha. **Farm Residential:** 1 parcel/0.07 ha.	**Vacant Land (include crown land):** 17 parcels/15.3 ha. **Commercial:** 7 parcels/0.78 ha. **Managed forest:** 1 parcel/3.85 ha. **Farmland**: 4 parcels/0.59 ha. **Farm Residential:** 1 parcel/0.07 ha.	**Vacant Land (include crown land):** 9.65 ha. **Commercial:** 0.78 ha. **Managed forest:** 3.85 ha. **Farmland:** 0.59 ha. **Farmland Residential:** 0.07 ha.
Compatibility with existing/ future land uses/ plans	Compatible with MTO approved TESR for Highway 11. Does not accommodate future land uses. BNTC is shown in the Official Plan.	Supports development plans. All routes have impacts along S. Monck Drive.	Supports development plans. . All routes have impacts along S. Monck Drive.	Supports development plans. New bridge undesirable to existing users. . All routes have impacts along S. Monck Drive.	Configuration may not support full development plans. New bridge undesirable to existing users. . All routes have impacts along S. Monck Drive.
Archaeological resources	No impacts beyond MTO Recommended Plan.	No differences between the alternatives. Area of high archaeological potential include ROW within 300m of a permanent watercourse, which involves most of the Study Area. Stage 2 Archeological assessment will be required for selected route in undisturbed areas.			
Heritage resources	No impacts beyond MTO Recommended Plan.	Church and graveyard at Manitoba Street.			
Economic Environment					
Future development potential	Does not provide access to new development	Less desirable as an alternative route for developments west of Bracebridge .	Will provide an alternative route to planned development.	Will provide an alternative route to planned development.	Development limited by interchange capacity.
Accessibility to existing commercial areas	Does not improve access to existing commercial areas in Bracebridge and beyond.	May attract less traffic away from existing routes, thereby providing less improvement to traffic level of service in downtown and urban Bracebridge.	May attract more traffic from existing routes resulting in better LOS in downtown and urban Bracebridge.	May attract more traffic from existing routes resulting in better LOS in downtown and urban Bracebridge.	May attract more traffic from existing routes resulting in better LOS in downtown and urban Bracebridge.
Engineering					
Construction impacts	No impacts beyond MTO Recommended Plan. No rail grade separation possible	Intersections: Lone Pine Drive, Manitoba Street, Falkenburg Road, S. Monck Drive, Nichols Road, Partridge Lane, MR 118. 11.7 km including 1.75km along existing road profile. No rail grade separation possible	Intersections: High Falls Road, Bonnell Road, Manitoba Street, Partridge Lane, MR 118. 9.8 km generally new road (S. Monck will require reconstruction). West Service Road required. Rail grade separation possible	Intersections: High Falls Road, Bonnell Road, Manitoba Street, Partridge Lane, MR 118. 9.4 km generally new road. New Muskoka bridge and connection to Cedar Lane. Rail grade separation possible	Intersections: High Falls Road (2), Bonnell Road, Manitoba Street, Partridge Lane, MR 118. 9.5 km generally new road. New Muskoka bridge and connection to Cedar Lane. Rail grade separation possible
Utility/service conflicts	No impacts beyond MTO Recommended Plan.	All routes include a crossing of the pipeline. North route has power lines along Naismith, Falkenburg, S. Monck.	All routes include a crossing of the pipeline. Middle and South routes have power lines along portion of S. Monck	All routes include a crossing of the pipeline. Middle and South routes have power lines along portion of S. Monck	All routes include a crossing of the pipeline. MTO route has power lines along portion of HFR and S. Monck
Construction Cost					
Estimated capital construction cost	No costs beyond MTO Recommended Plan.	New road construction – 10.2 km m Road improvement – 1.5 km 296,800 m3 rock exc. 63,400 m3 earth exc. 164,300 m3 fill Plus East Service Road; 2 new large span creek culverts; 6 new medium span creek culverts.	New road construction – 9.8 km 284,000 m3 rock exc. 54,400 m3 earth exc. 449,400 m3 fill Plus East Service Road; Grade separation of Rail; 3 new large span creek culverts; 6 new medium span creek culverts.	New road construction – 9.4 km 212,300 m3 rock exc. 48,900 m3 earth exc. 254,400 m3 fill Plus East Service Road; Grade separation of Rail; new Muskoka River Bridge; 3 new large span creek culverts; 6 new medium span creek culverts.	New road construction – 9.0 km 189,400 m3 rock exc. 44,500 m3 earth exc. 290,900 m3 fill Grade separation of Rail; new Muskoka River Bridge; 3 new large span creek culverts; 6 new medium span creek culverts.
Estimated utility relocation cost	No costs beyond MTO Recommended Plan.	New pipeline crossing. Power lines along existing roads.	New pipeline crossing. Fewer power lines along existing roads.	New pipeline crossing. Fewer power lines along existing roads.	New pipeline crossing. Fewer power lines along existing roads.

Ranking for Sensitivity Analysis: Preferred alternative for that factor

Higher Impact = 3 | Average Impact = 2 | Lower Impact = 1

Factor/Sub-factor	Do Nothing	Rank	Preferred North Alternative	Rank	Preferred Middle Alternative	Rank	Preferred South Alternative	Rank	MTO Alternative with connection to preferred	Rank	Unit of Measure
Transportation											
Accommodation of future vehicular travel demand	Does not address	3	Further away from downtown, longer travel time, less attractive	2	Most southerly location for full interchange while keeping all Cedar Lane/117 ramps open.	1	Partial interchange closest to downtown. New SB ramps only. NB drivers must use Cedar Lane (SB ramps closed at this location) and cross river on new bridge to access BNTC. High Falls Road connects via Service Road to interchange.	2	Ramp terminal intersections at Cedar Lane interchange will have a reduced level of service in the future.	2	Relative attractiveness/potential difference in travel time of alternative routes. (Less Attractive = 3, Average Attractiveness = 2, Highest Attractiveness= 1)
Accommodation of pedestrian and cyclist movements	Does not accommodate - no paved shoulders in general	3	Will be designed to accommodate	1	Will be designed to accommodate	1	Will be designed to accommodate	1	Will be designed to accommodate	1	Comparative ability to accomodate paved shoulders, sidewalks and/or pathways for non auto modes (Poor Ability = 3, Average Ability= 2, Highest Ability = 1)
Travel safety	Conflicts through downtown and variable design speeds	3	Existing driveways along existing roads.	2	Few driveways. Intersections on reasonable grades.	1	Few driveways. Intersections on reasonable grades.	1	Few driveways. Intersections on reasonable grades.	1	Comparative negative impact on adherence to design standards for safety (Higher = 3, Average = 2, Lower = 1)
Emergency service	Congestion will increase, no improvement for emergency responders.	3	May improve rural response times. Out of way travel to reach HFR.	2	May improve rural response times. Less out of way travel for HFR travellers.	1	May improve rural response times. Less out of way travel for HFR travellers.	1	May improve rural response times. Less out of way travel for HFR travellers.	1	Comparative ability to improve routing for emergency services (Poor Ability = 3, Average Ability= 2, Highest Ability= 1)
Future transportation network connectivity and compatibility	Continued pressure on High Falls Road.	3	Provides new and improved north-south (S. Monck Drive) and east-west (Falkenburg Road-Naismith to Hwy 11). Somewhat removed from Town. Flyover at High Falls Road to Service Rd would improve connectivity and reduce out of way travel for HFR travellers.	2	Provides new and improved north-south (portion of S. Monck Drive) and east-west road to Hwy 11 just north of planned subdivisions. Full interchange with Highway 11. Connection to HFR and to East Service Road. Grade separation of rail.	1	Provides new and improved north-south (portion of S. Monck Drive) and east-west road to Hwy 11 just north of planned subdivisions. Split interchange with Cedar Lane due to proximity. Provides new bridge over Muskoka River, grade separation of rail.	1	Consistent with approved TESR for Highway 11. No new interchange on Highway 11. Provides new and improved north-south (portion of S. Monck Drive) and east-west road to Hwy 11 just north of planned subdivisions. Provides new bridge over Muskoka River, grade separation of rail.	1	Relative improvement in connectivity and compatibility with other planned infrastructure. (Less Improvement = 3, Average Improvement = 2, More Improvement = 1)
Commercial goods movement	No new route for commercial goods.	3	Allows trucks to bypass the downtown if desired. Good connection for vehicles from the north. Less attractive to vehicles from the south due to backtracking to MR-118.	2	Allows trucks to bypass the downtown if desired. Good connection for vehicles from the north. Some backtracking still required for vehicles from the south.	1	Allows trucks to bypass the downtown if desired. Good connection for vehicles from the north. Vehicles from the south reach the BNTC via Cedar Lane interchange to East Service Rd. to South Interchange.	2	Allows trucks to bypass the downtown if desired. Good connection for vehicles from the north. Vehicles from the south reach the BNTC via Cedar Lane interchange to East Service Rd. to High Falls flyover.	2	Comparative ability of allowing routes outside of downtown area for commercial vehicles. (Lower = 3, Average = 2, Higherr = 1)
Recreational trails	No new road crossings for trails or trail relocations required.	1	More impact on TOP and OFSC trails.	3	Short length of impact on TOP trails and two trail crossings.	2	Short length of impact on TOP trails and two trail crossings.	2	Short length of impact on TOP trails and two trail crossings.	2	Comparative negative effect on number of trails affected (Higher = 3, Average = 2, Lower = 1)
Natural Environment											
Watercourses/fisheries/ aquatic habitat	No in-water works for new bridge over Muskoka River; additional traffic with more potential conflicts at existing crossings.	1	Similar number of watercourse crossings, generally further upstream than other routes.	2	Similar number of watercourse crossings, generally further downstream than north route.	2	Similar number of watercourse crossings, generally further downstream than north route.	2	No in-water works for bridge over Muskoka River; Similar number of watercourse crossings, further downstream than north route.	2	Comparative negative impact on crossings (Higher = 3, Average = 2, Lower = 1)
Vegetation and woodlots	No additional impacts on natural vegetation/ woodlots.	1	General impacts along corridor.	2	Service roads and ramps avoid, but are close to, Red Oak research plots. Route is through Managed forest west of Manitoba Street. General impacts along corridor.	3	Route is through Managed forest west of Manitoba Street. General impacts along corridor.	2	Route is through Managed forest west of Manitoba Street. General impacts along corridor.	2	Comparative negative impact on vegetation and woodlots (Higher = 3, Average = 2, Lower = 1)
Wildlife/terrestrial habitat	No additional impacts on terrestrial habitat.	1	More potential for wildlife impacts in natural areas remote from town.	3	Winter study revealed little deer activity near the Muskoka River.	2	Winter study revealed little deer activity near the Muskoka River.	2	Winter study revealed little deer activity near the Muskoka River.	2	Comparative negative impact on wildlife/terrestrial (Higher = 3, Average = 2, Lower = 1)
Wetlands	No additional impacts on wetland habitat.	1	Impacts more wetland area along Naismith, Falkenburg and S. Monck Roads.	3	Impacts wetlands adjacent to creek valleys and on S. Monck Road north of Partridge Lane.	2	Impacts wetlands adjacent to creek valleys and on S. Monck Road north of Partridge Lane.	2	Impacts wetlands adjacent to creek valleys and on S. Monck Road north of Partridge Lane.	2	Comparative negative impact on wetlands (Higher = 3, Average = 2, Lower = 1)
Species at Risk	No additional effects on potential habitat for SAR (2012).	1	May potentially affect habitat for Hognose, Ribbon snake (Provincially Threatened species).	2	May potentially affect habitat for Hognose, Ribbon snake (Provincially Threatened species).	2	May potentially affect habitat for Hognose, Ribbon snake (Provincially Threatened species).	2	May potentially affect habitat for Hognose, Ribbon snake (Provincially Threatened species).	2	Comparative negative impact on species at risk (Higher = 3, Average = 2, Lower = 1)
Socio-cultural Environment											
Noise	Noise will increase along existing developed road corridors but not due to road widening (no mitigation warranted).	2	Affects more homes along existing roads.	3	Avoids most homes along existing roads.	1	More potential impacts along Muskoka River with added bridge.	3	More potential impacts along Muskoka River with added bridge.	3	Comparative number of sensitive receptors negatively impacted (Higher = 3, Average = 2, Lower = 1)
Visual aesthetics	Views from Muskoka homes with added bridge.	2	More homes along existing roads have a view of the new arterial.	3	Minimizes number of existing homes with a view of the new arterial.	2	Views from Muskoka homes with added bridge.	3	Views from Muskoka homes with added bridge.	3	Comparative number of properties with negative visual impacts (Higher = 3, Average = 2, Lower = 1)

Residential property required	No impacts beyond MTO Recommended Plan.	1	Strips of ROW required at existing homes where route is along existing road. 42 parcels will be affected totaling 4.064 ha.	3	Route through less developed area and not along existing roads except for 0.410 km along Bonnell Road and 2.210 km along South Monck Drive. Residential: 20 parcels will be affected totaling 8.84 ha.	2	Route through less developed area and not along existing roads except for 0.410 km along Bonnell Road and 2.210 km along South Monck Drive. Residential: 22 parcels will be affected totaling 8.08 ha.	2	Impact along High Falls Road in addition to Middle and South Route impacts. **Residential:** 22 parcels will be affected totaling 8.42 ha.	2	Comparative number of residential properties/area impacted (where impacts to existing buildings is of greater concern) (Higher = 3, Average = 2, Lower = 1)
Recreational/property impacts	No impacts beyond MTO Recommended Plan.	1	Impact on several BRMC trails near entrance. Seasonal Residential: 6 parcels/ 4.29 ha.	3	Impact on one BRMC trail at south end.	2	Impact on one BRMC trail at south end.	2	Minimal impact on BRMC. Seasonal Residential: 1 parcel is affected totaling 0.94 ha.	2	Comparative number of recreational properties/area impacted (where impacts to existing buildings is of greater concern) (Higher = 3, Average = 2, Lower = 1)
Other property required	No impacts beyond MTO Recommended Plan.	1	Vacant Land: 8 parcels/14.41 ha. Commercial: 8 parcels/0.78 ha. Managed forest: 4 parcels/0.21 ha. Farmland: 4 parcels/0.102 ha. Farm Residential: 1 parcel/0.07 ha. Religious: 1 parcel/0.07 ha. Other: 1 parcel/0.101 ha.	3	Vacant Land (include crown land): 17 parcels/22.6 ha. Commercial: 7 parcels/0.78 ha. Managed forest: 1 parcel/4.810 ha. Farmland: 4 parcels/0.109 ha. Farm Residential: 1 parcel/0.07 ha.	2	Vacant Land (include crown land): 17 parcels/110.4 ha. Commercial: 7 parcels/0.78 ha. Managed forest: 1 parcel/4.810 ha. Farmland: 4 parcels/0.109 ha. Farm Residential: 1 parcel/0.07 ha.	2	Vacant Land (include crown land): 9.610 ha. Commercial: 0.78 ha. Managed forest: 4.810 ha. Farmland: 0.109 ha. Farmland Residential: 0.07 ha.	2	Comparative number of other properties/area impacted (where impacts to existing buildings is of greater concern) (Higher = 3, Average = 2, Lower = 1)
Compatibility with existing/ future land uses/ plans	Compatible with MTO approved TESR for Highway 11. Does not accommodate future land uses. BNTC is shown in the Official Plan.	1	Supports development plans. All routes have impacts along S. Monck Drive.	1	Supports development plans. All routes have impacts along S. Monck Drive.	1	Supports development plans. New bridge undesirable to existing users. . All routes have impacts along S. Monck Drive.	2	Configuration may not support full development plans. New bridge undesirable to existing users. . All routes have impacts along S. Monck Drive.	3	Relative accommodation of existing and future land uses and Official Plan policies. (Less Accommodating = 3, Average Accommodation = 2, More Accommodating = 1)
Archaeological resources	No impacts beyond MTO Recommended Plan.	1	Area of high archaeological potential include ROW within 400m of a permanent watercourse, which involves most of the Study Area. Stage 2 Archeological assessment will be required for selected route in undisturbed areas.	2	Area of high archaeological potential include ROW within 400m of a permanent watercourse, which involves most of the Study Area. Stage 2 Archeological assessment will be required for selected route in undisturbed areas.	2	Area of high archaeological potential include ROW within 400m of a permanent watercourse, which involves most of the Study Area. Stage 2 Archeological assessment will be required for selected route in undisturbed areas.	2	Area of high archaeological potential include ROW within 400m of a permanent watercourse, which involves most of the Study Area. Stage 2 Archeological assessment will be required for selected route in undisturbed areas.	2	Relative area of high archaeological potential affected. (More Area = 3, Average Area = 2, Less Area = 1)
Heritage resources	No impacts beyond MTO Recommended Plan.	1	Church and graveyard at Manitoba Street.	2	Church and graveyard at Manitoba Street.	2	Church and graveyard at Manitoba Street.	2	Church and graveyard at Manitoba Street.	2	Comparative number of historic buildings that would be negatively impacted (Higher = 3, Average = 2, Lower = 1)
Economic Environment											
Future development potential	Does not provide access to new development	3	Less desirable as an alternative route for developments west of Bracebridge .	2	Will provide an alternative route to planned development.	1	Will provide an alternative route to planned development.	1	Development limited by interchange capacity.	2	Comparative effect on accessibility of planned future development areas (Higher = 3, Average = 2, Lower = 1)
Accessibility to existing commercial areas	Does not improve access to existing commercial areas in Bracebridge and beyond.	3	May attract less traffic away from existing routes, thereby providing less improvement to traffic level of service in downtown and urban Bracebridge.	3	May attract more traffic from existing routes resulting in better LOS in downtown and urban Bracebridge.	2	May attract more traffic from existing routes resulting in better LOS in downtown and urban Bracebridge.	2	May attract more traffic from existing routes resulting in better LOS in downtown and urban Bracebridge.	2	Comparative effect on accessibility to existing commercial areas in Bracebridge and beyond (Higher = 3, Average = 2, Lower = 1)
Engineering											
Construction impacts	No impacts beyond MTO Recommended Plan. No rail grade separation possible	1	Intersections: Lone Pine Drive, Manitoba Street, Falkenburg Road, S. Monck Drive, Nichols Road, Partridge Lane, MR 118. 11.7 km including 1.710km along existing road profile. No rail grade separation possible	3	Intersections: High Falls Road, Bonnell Road, Manitoba Street, Partridge Lane, MR 118. 9.8 km generally new road (S. Monck will require reconstruction). West Service Road required. Rail grade separation possible	2	Intersections: High Falls Road, Bonnell Road, Manitoba Street, Partridge Lane, MR 118. 9.4 km generally new road. New Muskoka bridge and connection to Cedar Lane. Rail grade separation possible	2	Intersections: High Falls Road (2), Bonnell Road, Manitoba Street, Partridge Lane, MR 118. 9.10 km generally new road. New Muskoka bridge and connection to Cedar Lane. Rail grade separation possible	2	Comparative number of at-grade intersections, km of road construction along existing road corridors and km of new road construction required; # of major creek crossings required; potential to provide a grade-separated crossing of the rail line (Higher = 3, Average = 2, Lower = 1)
Utility/service conflicts	No impacts beyond MTO Recommended Plan.	1	All routes include a crossing of the pipeline. Power lines required along Naismith, Falkenburg, S. Monck.	3	All routes include a crossing of the pipeline. Power lines required along portion of S. Monck	3	All routes include a crossing of the pipeline. Power lines required along portion of S. Monck	3	All routes include a crossing of the pipeline. Power lines required along portion of HFR and S. Monck	3	Comparative number # of pipeline crossings required and other utilities and services required. (Higher = 3, Average = 2, Lower = 1)
Construction Cost											
Estimated capital construction cost	No costs beyond MTO Recommended Plan.	1	New road construction – 10.2 km Road improvement – 1.10 km 296,800 m3 rock exc. 64,400 m3 earth exc. 164,400 m3 fill Plus East Service Road; 2 new large span creek culverts; 6 new medium span creek culverts.	3	New road construction – 9.8 km 284,000 m3 rock exc. 104,400 m3 earth exc. 449,400 m3 fill Plus East Service Road; Grade separation of Rail; 4 new large span creek culverts; 6 new medium span creek culverts.	3	New road construction – 9.4 km 212,400 m3 rock exc. 48,900 m3 earth exc. 254,400 m3 fill Plus East Service Road; Grade separation of Rail; new Muskoka River Bridge; 4 new large span creek culverts; 6 new medium span creek culverts.	3	New road construction – 9.0 km 189,400 m3 rock exc. 44,1000 m3 earth exc. 290,900 m3 fill Plus East Service Road; Grade separation of Rail; new Muskoka River Bridge; 4 new large span creek culverts; 6 new medium span creek culverts.	3	Comparative cost based on preliminary profile and cross-section. (Higher = 3, Average = 2, Lower = 1)
Estimated utility relocation cost	No costs beyond MTO Recommended Plan.	1	New pipeline crossing. Power lines along existing roads.	3	New pipeline crossing. Fewer power lines along existing roads.	2	New pipeline crossing. Fewer power lines along existing roads.	2	New pipeline crossing. Fewer power lines along existing roads.	2	Comparative cost based on previous experience and consultation with affected utilities. (Higher = 3, Average = 2, Lower = 1)

Factor/Sub-factor	Significance Level	Factor/Sub-factor	Do Nothing	Preferred North Alternative	Preferred Middle Alternative	Preferred South Alternative	MTO Alternative with connection to preferred	Common Scale				
								Do Nothing	Preferred North Alternative	Preferred Middle Alternative	Preferred South Alternative	MTO Alternative with connection to preferred
Transportation		**Transportation**										
Accommodation of future vehicular travel demand	high	Accommodation of future vehicular travel demand	3	2	1	2	2	1.00	0.67	0.33	0.67	0.67
Accommodation of pedestrian and cyclist movements	medium	Accommodation of pedestrian and cyclist movements	3	1	1	1	1	1.00	0.33	0.33	0.33	0.33
Travel safety	high	Travel safety	3	2	1	1	1	1.00	0.67	0.33	0.33	0.33
Emergency service	high	Emergency service	3	2	1	1	1	1.00	0.67	0.33	0.33	0.33
Future transportation network connectivity and compatibility	medium	Future transportation network connectivity and compatibility	3	2	1	1	1	1.00	0.67	0.33	0.33	0.33
Commercial goods movement	medium	Commercial goods movement	3	2	1	2	2	1.00	0.67	0.33	0.67	0.67
Recreational trails	medium	Recreational trails	1	3	2	2	2	0.33	1.00	0.67	0.67	0.67
Natural Environment		**Natural Environment**										
Watercourses/fisheries/ aquatic habitat	medium	Watercourses/fisheries/ aquatic habitat	1	2	2	2	2	0.33	0.67	0.67	0.67	0.67
Vegetation and woodlots	medium	Vegetation and woodlots	1	2	3	2	2	0.33	0.67	1.00	0.67	0.67
Wildlife/terrestrial habitat	medium	Wildlife/terrestrial habitat	1	3	2	2	2	0.33	1.00	0.67	0.67	0.67
Wetlands	high	Wetlands	1	3	2	2	2	0.33	1.00	0.67	0.67	0.67
Species at Risk	high	Species at Risk	1	2	2	2	2	0.33	0.67	0.67	0.67	0.67
Socio-cultural Environment		**Socio-cultural Environment**										
Noise	high	Noise	2	3	1	3	3	0.67	1.00	0.33	1.00	1.00
Visual aesthetics	medium	Visual aesthetics	2	3	2	3	3	0.67	1.00	0.67	1.00	1.00
Residential property required	high	Residential property required	1	3	2	2	2	0.33	1.00	0.67	0.67	0.67
Recreational/property impacts	high	Recreational/property impacts	1	3	2	2	2	0.33	1.00	0.67	0.67	0.67
Other property required	high	Other property required	1	3	2	2	2	0.33	1.00	0.67	0.67	0.67
Compatibility with existing/ future land uses/ plans	medium	Compatibility with existing/ future land uses/ plans	1	1	1	2	3	0.33	0.33	0.33	0.67	1.00
Archaeological resources	low	Archaeological resources	1	2	2	2	2	0.33	0.67	0.67	0.67	0.67
Heritage resources	low	Heritage resources	1	2	2	2	2	0.33	0.67	0.67	0.67	0.67
Economic Environment		**Economic Environment**										
Future development potential	low	Future development potential	3	2	1	1	2	1.00	0.67	0.33	0.33	0.67
Accessibility to existing commercial areas	medium	Accessibility to existing commercial areas	3	3	2	2	2	1.00	1.00	0.67	0.67	0.67
Engineering/Constructability		**Engineering/Constructability**										
Construction impacts	medium	Construction impacts	1	3	2	2	2	0.33	1.00	0.67	0.67	0.67
Utility/service conflicts	medium	Utility/service conflicts	1	3	3	3	3	0.33	1.00	1.00	1.00	1.00
Construction Cost		**Construction Cost**										
Estimated capital construction cost	low	Estimated capital construction cost	1	3	3	3	3	0.33	1.00	1.00	1.00	1.00
Estimated utility relocation cost	low	Estimated utility relocation cost	1	3	2	2	2	0.33	1.00	0.67	0.67	0.67

Weighting based on Significance of Potential impacts (low = 1, medium = 4 and high = 10)

Factor/Sub-factor	Weight	Weighted Ranking				
		Do Nothing	Preferred North Alternative	Preferred Middle Alternative	Preferred South Alternative	MTO Alternative with connection to preferred
Transportation						
Accommodation of future vehicular travel demand	10	10.0	6.7	3.3	6.7	6.7
Accommodation of pedestrian and cyclist movements	4	4.0	1.3	1.3	1.3	1.3
Travel safety	10	10.0	6.7	3.3	3.3	3.3
Emergency service	10	10.0	6.7	3.3	3.3	3.3
Future transportation network connectivity and compatibility	4	4.0	2.7	1.3	1.3	1.3
Commercial goods movement	4	4.0	2.7	1.3	2.7	2.7
Recreational trails	4	1.3	4.0	2.7	2.7	2.7
Natural Environment						
Watercourses/fisheries/ aquatic habitat	4	1.3	2.7	2.7	2.7	2.7
Vegetation and woodlots	4	1.3	2.7	4.0	2.7	2.7
Wildlife/terrestrial habitat	4	1.3	4.0	2.7	2.7	2.7
Wetlands	10	3.3	10.0	6.7	6.7	6.7
Species at Risk	10	3.3	6.7	6.7	6.7	6.7
Socio-cultural Environment						
Noise	10	6.7	10.0	3.3	10.0	10.0
Visual aesthetics	4	2.7	4.0	2.7	4.0	4.0
Residential property required	10	3.3	10.0	6.7	6.7	6.7
Recreational/property impacts	10	3.3	10.0	6.7	6.7	6.7
Other property required	10	3.3	10.0	6.7	6.7	6.7
Compatibility with existing/ future land uses/ plans	4	1.3	1.3	1.3	2.7	4.0
Archaeological resources	1	0.3	0.7	0.7	0.7	0.7
Heritage resources	1	0.3	0.7	0.7	0.7	0.7
Economic Environment						
Future development potential	4	4.0	2.7	1.3	1.3	2.7
Accessibility to existing commercial areas	4	4.0	4.0	2.7	2.7	2.7
Engineering						
Construction impacts	4	1.3	4.0	2.7	2.7	2.7
Utility/service conflicts	4	1.3	4.0	4.0	4.0	4.0
Construction Cost						
Estimated capital construction cost	1	0.3	1.0	1.0	1.0	1.0
Estimated utility relocation cost	1	0.3	1.0	0.7	0.7	0.7
		86.7	**120.0**	**80.3**	**93.0**	**95.7**

Factor/Sub-factor	Significance Level
Transportation	
Accommodation of future vehicular travel demand	high
Accommodation of pedestrian and cyclist movements	medium
Travel safety	high
Emergency service	high
Future transportation network connectivity and compatibility	medium
Commercial goods movement	medium
Recreational trails	medium
Natural Environment	
Watercourses/fisheries/ aquatic habitat	medium
Vegetation and woodlots	medium
Wildlife/terrestrial habitat	medium
Wetlands	high
Species at Risk	high
Socio-cultural Environment	
Noise	high
Visual aesthetics	medium
Residential property required	high
Recreational/property impacts	high
Other property required	high
Compatibility with existing/ future land uses/ plans	medium
Archaeological resources	low
Heritage resources	low
Economic Environment	
Future development potential	medium
Accessibility to existing commercial areas	medium
Engineering/Constructability	
Construction impacts	medium
Utility/service conflicts	medium
Construction Cost	
Estimated capital construction cost	low
Estimated utility relocation cost	low

Ranking for Sensitivity Analysis:

Factor/Sub-factor	Alternative M1 - S2-D	Alternative M1 - S2-E	Comments:
Transportation			
Accommodation of future vehicular travel demand	All in same vicinity and would attract same traffic from downtown. Difference in travel time would not be significant between alternatives.		
Accommodation of pedestrian and cyclist movements	5-7% grades in creek valley west of Hwy 11; grades under 3% to HFR; 5% grade south of HFR to Bonnell	3-7% grades in creek valley west of Hwy 11; 8% grade in creek valley north of HFR/Bonnell; grades up to 3.5% to HFR; 5% grade south of HFR to Bonnell	
Travel safety	Intersection of BNTC and High Falls Road located in area with gentle grades. Potential for driveways resulting from subdivision of land to be connected directly to the BNTC.		
Emergency service	Both alternatives connect to High Falls Road and Hwy 11 at same place. Alternatives provide similar service for emergency vehicles and improve access to rural properties in the High Falls Road area.		
Transportation network connectivity and compatibility	Provide similar network connectivity improving the link between High Falls Road and a controlled-access Highway 11 in the future. They are compatible with planned infrastructre and development noted in the Official Plans.		
Commercial goods movement	Part of a route allowing trucks to bypass downtown. Alleviate traffic congestion downtown.		
Recreational trails	Both alternatives involve crossings of trails in the vicinity of the interchange with Highway 11. Recommended Plan will include trail relocation and crossings at roundabout		
Natural Environment			
Watercourses/fisheries/ aquatic habitat	Crosses 2 coldwater watercourses	Crosses 3 coldwater watercourses further upstream than D (one tributary of another)	
Vegetation and woodlots	Forest stands of deciduous and coniferous trees, cultural woodland and cultural meadow		
Wildlife/terrestrial habitat	Route crosses through incised creek valleys further north of HFR behind homes. Disrupts landscape connectivity for wildlife movement. Outside of revised deer yard boundaries	Route crosses through incised creek valleys at property line through deer yard. Disrupts landscape connectivity for wildlife movement.	
Wetlands	Affects swamp thicket communities at new crossings		
Species at Risk	May affect potential habitat for Hognose, Ribbon snake (Provincially threatened species)		
Socio-cultural Environment			
Noise	1 receptor (at High Falls Road intersection)		
Visual aesthetics	4 houses within 200m 1 full view 3 obscured distant views	2 houses within 200m 1 full view 1 more distant view	
Residential property required	4 parcels (4.3, 0.5, 1.2 & 0.05 ha)	4 parcels (0.8, 0.7, 0.7 & 0.05 ha)	
Recreational/property impacts			
Other property required	Vacant: 3 parcels (1.7, 0.14 & 0.11 ha) Farmland: 1 parcel (670 m2) Crown land: 1 parcel (5.8 ha)	Vacant: 7 parcels (0.9, 0.7, 0.7, 3.0, 0.16 & 0.14 ha, 670 m2) Farmland: 1 parcel (670 m2) Crown land: 2 parcels (4.8, 0.7 ha) Managed Forest: 1 parcel (1.1 ha)	
Compatibility with existing/ future land uses/ plans	Outside urban area and part of a corridor providing alternative route for land developments west and north in Bracebridge		
Archaeological resources	All routes lie completely within areas of archaelogical potential, which includes the ROW within 300m of a permanent watercourse.		
Heritage resources	Historic buildings shown schematically along High Falls Road on the 1879 Township maps. Routes cross HFR at the same location so any impacts would be the same.		
Economic Environment			
Future development potential	Part of a corridor providing an alternative route for land developments on the west side of Bracebridge		
Accessibility to existing commercial areas	Will attract same amount of traffic away from existing routes, thereby improving access for those wanting to visit commerical areas downtown		
Engineering			
Construction impacts	Intersections with High Falls Road (1) and Bonnell Road (1)		# of at grade intersections & grade seperations
Construction impacts	3.0 km of new road	3.2 km new road	# of km of road construction (no significant difference in these numbers wrt impacts)
Construction impacts	Highest fills (13, 18 and 25m +/-) across creek valleys	Highest fills (13, 15, 17m +/-) across creek valleys	# of major creek crossings
Utility/service conflicts	New pipeline crossing north of HFR. Road profile can be adjusted		# of pipelines and power transmission line crossings
Construction Cost			
Estimated capital construction cost	137,800 m3 rock exc 16,700 m3 earth exc 220,600 m3 fill New pipeline crossing, 2 large & 2 medium span creek culverts	89,800 m3 rock exc 45,000 m3 earth exc 178,000 m3 fill New pipeline crossing, 2 large & 2 medium span creek culverts	Major quantities required
Estimated utility relocation cost	New crossing of pipeline est at $250,000		Description of requirements

Ranking for Sensitivity Analysis: Preferred alternative for that factor

Higher Impact = 3
Average Impact = 2
Lower Impact = 1

Factor/Sub-factor	Alternative M1 - S2-D	Rank	Alternative M1 - S2-E	Rank
Transportation				
Accommodation of future vehicular travel demand	All in same vicinity and would attract same traffic from downtown. Difference in travel time would not be significant between alternatives.	1	All in same vicinity and would attract same traffic from downtown. Difference in travel time would not be significant between alternatives.	1
Accommodation of pedestrian and cyclist movements	5-7% grades in creek valley west of Hwy 11; grades under 3% to HFR; 5% grade south of HFR to Bonnell	2	3-7% grades in creek valley west of Hwy 11; 8% grade in creek valley north of HFR/Bonnell; grades up to 3.5% to HFR; 5% grade south of HFR to Bonnell	3
Travel safety	Intersection of BNTC and High Falls Road located in area with gentle grades. Potential for driveways resulting from subdivision of land to be connected directly to the BNTC.	1	Intersection of BNTC and High Falls Road located in area with gentle grades. Potential for driveways resulting from subdivision of land to be connected directly to the BNTC.	1
Emergency service	Both alternatives connect to High Falls Road and Hwy 11 at same place. Alternatives provide similar service for emergency vehicles and improve access to rural properties in the High Falls Road area.	1	Both alternatives connect to High Falls Road and Hwy 11 at same place. Alternatives provide similar service for emergency vehicles and improve access to rural properties in the High Falls Road area.	1
Transportation network connectivity and compatibility	Provide similar network connectivity improving the link between High Falls Road and a controlled-access Highway 11 in the future. They are compatible with planned infrastructre and development noted in the Official Plans.	1	Provide similar network connectivity improving the link between High Falls Road and a controlled-access Highway 11 in the future. They are compatible with planned infrastructre and development noted in the Official Plans.	1
Commercial goods movement	Part of a route allowing trucks to bypass downtown. Alleviate traffic congestion downtown.	1	Part of a route allowing trucks to bypass downtown. Alleviate traffic congestion downtown.	1
Recreational trails	Both alternatives involve crossings of trails in the vicinity of the interchange with Highway 11. Recommended Plan will include trail relocation and crossings at roundabout	1	Both alternatives involve crossings of trails in the vicinity of the interchange with Highway 11. Recommended Plan will include trail relocation and crossings at roundabout	1
Natural Environment				
Watercourses/fisheries/ aquatic habitat	Crosses 2 coldwater watercourses	2	Crosses 3 coldwater watercourses further upstream than D (one tributary of another)	3
Vegetation and woodlots	Forest stands of deciduous and coniferous trees, cultural woodland and cultural meadow	1	Forest stands of deciduous and coniferous trees, cultural woodland and cultural meadow	1
Wildlife/terrestrial habitat	Route crosses through incised creek valleys further north of HFR behind homes. Disrupts landscape connectivity for wildlife movement. Outside of revised deer yard boundaries	2	Route crosses through incised creek valleys at property line through deer yard. Disrupts landscape connectivity for wildlife movement.	3
Wetlands	Affects swamp thicket communities at new crossings	1	Affects swamp thicket communities at new crossings	1
Species at Risk	May affect potential habitat for Hognose, Ribbon snake (Provincially threatened species)	1	May affect potential habitat for Hognose, Ribbon snake (Provincially threatened species)	1
Socio-cultural Environment				
Noise	1 receptor (at High Falls Road intersection)	1	1 receptor (at High Falls Road intersection)	1
Visual aesthetics	4 houses within 200m 1 full view 3 obscured distant views	3	2 houses within 200m 1 full view 1 more distant view	1
Residential property required	4 parcels (4.3, 0.5, 1.2 & 0.05 ha)	3	4 parcels (0.8, 0.7, 0.7 & 0.05 ha)	1
Recreational/property impacts		1		1
Other property required	Vacant: 3 parcels (1.7, 0.14 & 0.11 ha) Farmland: 1 parcel (670 m2) Crown land: 1 parcel (5.8 ha)	2	Vacant: 7 parcels (0.9, 0.7, 0.7, 3.0, 0.16 & 0.14 ha, 670 m2) Farmland: 1 parcel (670 m2) Crown land: 2 parcels (4.8, 0.7 ha) Managed Forest: 1 parcel (1.1 ha)	3
Compatibility with existing/ future land uses/ plans	Outside urban area and part of a corridor providing alternative route for land developments west and north in Bracebridge	1	Outside urban area and part of a corridor providing alternative route for land developments west and north in Bracebridge	1
Archaeological resources	All routes lie completely within areas of archaelogical potential, which includes the ROW within 300m of a permanent watercourse.	1	All routes lie completely within areas of archaelogical potential, which includes the ROW within 300m of a permanent watercourse.	1
Heritage resources	Historic buildings shown schematically along High Falls Road on the 1879 Township maps. Routes cross HFR at the same location so any impacts would be the same.	1	Historic buildings shown schematically along High Falls Road on the 1879 Township maps. Routes cross HFR at the same location so any impacts would be the same.	1
Economic Environment				
Future development potential	Part of a corridor providing an alternative route for land developments on the west side of Bracebridge	1	Part of a corridor providing an alternative route for land developments on the west side of Bracebridge	1
Accessibility to existing commercial areas	Will attract same amount of traffic away from existing routes, thereby improving access for those wanting to visit commerical areas downtown	1	Will attract same amount of traffic away from existing routes, thereby improving access for those wanting to visit commerical areas downtown	1
Engineering/constructability				
Construction impacts	Intersections with High Falls Road (1) and Bonnell Road (1)	1	Intersections with High Falls Road (1) and Bonnell Road (1)	1
Construction impacts	3.0 km of new road	1	3.2 km new road	1
Construction impacts	Highest fills (13, 18 and 25m +/-) across creek valleys	3	Highest fills (13, 15, 17m +/-) across creek valleys	2
Utility/service conflicts	New pipeline crossing north of HFR. Road profile can be adjusted	1	New pipeline crossing north of HFR. Road profile can be adjusted	1
Construction Cost				
Estimated capital construction cost	137,800 m3 rock exc 16,700 m3 earth exc 220,600 m3 fill New pipeline crossing, 2 large & 2 medium span creek culverts	3	89,800 m3 rock exc 45,000 m3 earth exc 178,000 m3 fill New pipeline crossing, 2 large & 2 medium span creek culverts	2
Estimated utility relocation cost	New crossing of pipeline est at $250,000	1	New crossing of pipeline est at $250,000	1

Segment M1-S2

Factor/Sub-factor	Significance Level	Factor/Sub-factor	Alternative M1 - S2-D	Alternative M1 - S2-E	Common Scale Alternative M1 - S2-D	Common Scale Alternative M1 - S2-E
Transportation		**Transportation**				
Accommodation of future vehicular travel demand	high	Accommodation of future vehicular travel demand	1	1	0.33	0.33
Accommodation of pedestrian and cyclist movements	medium	Accommodation of pedestrian and cyclist movements	2	3	0.67	1.00
Travel safety	high	Travel safety	1	1	0.33	0.33
Emergency service	high	Emergency service	1	1	0.33	0.33
Future transportation network connectivity and compatibility	medium	Future transportation network connectivity and compatibility	1	1	0.33	0.33
Commercial goods movement	medium	Commercial goods movement	1	1	0.33	0.33
Recreational trails	medium	Recreational trails	1	1	0.33	0.33
Natural Environment		**Natural Environment**				
Watercourses/fisheries/ aquatic habitat	medium	Watercourses/fisheries/ aquatic habitat	2	3	0.67	1.00
Vegetation and woodlots	medium	Vegetation and woodlots	1	1	0.33	0.33
Wildlife/terrestrial habitat	medium	Wildlife/terrestrial habitat	2	3	0.67	1.00
Wetlands	high	Wetlands	1	1	0.33	0.33
Species at Risk	high	Species at Risk	1	1	0.33	0.33
Socio-cultural Environment		**Socio-cultural Environment**				
Noise	high	Noise	1	1	0.33	0.33
Visual aesthetics	medium	Visual aesthetics	3	1	1.00	0.33
Residential property required	high	Residential property required	3	1	1.00	0.33
Recreational/property impacts	high	Recreational/property impacts	1	1	0.33	0.33
Other property required	high	Other property required	2	3	0.67	1.00
Compatibility with existing/ future land uses/ plans	medium	Compatibility with existing/ future land uses/ plans	1	1	0.33	0.33
Archaeological resources	low	Archaeological resources	1	1	0.33	0.33
Heritage resources	low	Heritage resources	1	1	0.33	0.33
Economic Environment		**Economic Environment**				
Future development potential	low	Future development potential	1	1	0.33	0.33
Accessibility to existing commercial areas	medium	Accessibility to existing commercial areas	1	1	0.33	0.33
Engineering/Constructability		**Engineering/Constructability**				
Construction impacts	medium	Construction impacts	1	1	0.33	0.33
Construction impacts	medium	Construction impacts	1	1	0.33	0.33
Construction impacts	medium	Construction impacts	3	2	1.00	0.67
Utility/service conflicts	medium	Utility/service conflicts	1	1	0.33	0.33
Construction Cost		**Construction Cost**				
Estimated capital construction cost	low	Estimated capital construction cost	3	2	1.00	0.67
Estimated utility relocation cost	low	Estimated utility relocation cost	1	1	0.33	0.33

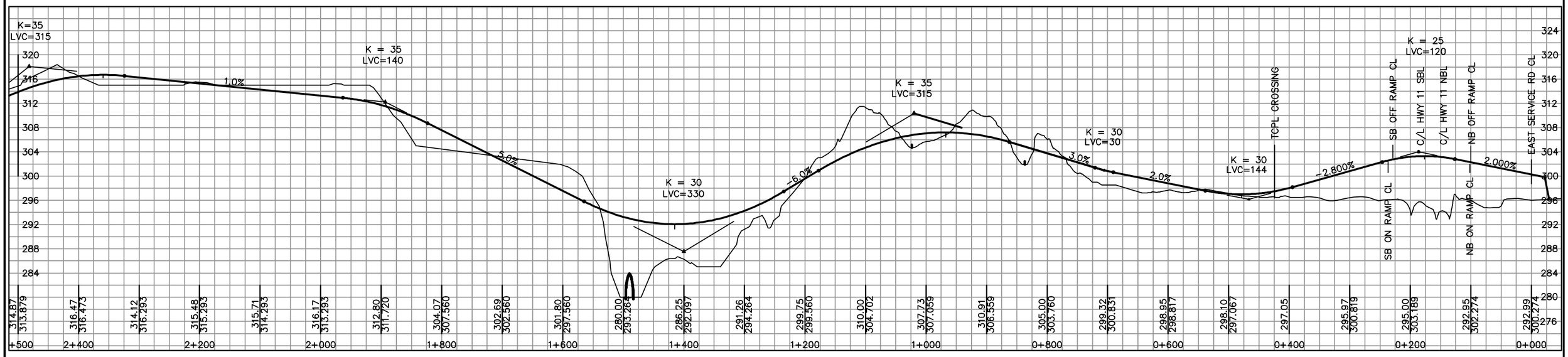
Weighting based on Significance of Potential impacts (low = 1, medium = 4 and high = 10)

Factor/Sub-factor	Weight	Weighted Ranking	
		Alternative M1 - S2-D	Alternative M1 - S2-E
Transportation			
Accommodation of future vehicular travel demand	10	3.3	3.3
Accommodation of pedestrian and cyclist movements	4	2.7	4.0
Travel safety	10	3.3	3.3
Emergency service	10	3.3	3.3
Future transportation network connectivity and compatibility	4	1.3	1.3
Commercial goods movement	4	1.3	1.3
Recreational trails	4	1.3	1.3
Natural Environment			
Watercourses/fisheries/ aquatic habitat	4	2.7	4.0
Vegetation and woodlots	4	1.3	1.3
Wildlife/terrestrial habitat	4	2.7	4.0
Wetlands	10	3.3	3.3
Species at Risk	10	3.3	3.3
Socio-cultural Environment			
Noise	10	3.3	3.3
Visual aesthetics	4	4.0	1.3
Residential property required	10	10.0	3.3
Recreational/property impacts	10	3.3	3.3
Other property required	10	6.7	10.0
Compatibility with existing/ future land uses/ plans	4	1.3	1.3
Archaeological resources	1	0.3	0.3
Heritage resources	1	0.3	0.3
Economic Environment			
Future development potential	4	1.3	1.3
Accessibility to existing commercial areas	4	1.3	1.3
Engineering/Constructability			
Construction impacts	4	1.3	1.3
Construction impacts	4	1.3	1.3
Construction impacts	4	4.0	2.7
Utility/service conflicts	4	1.3	1.3
Construction Cost			
Estimated capital construction cost	1	1.0	0.7
Estimated utility relocation cost	1	0.3	0.3
		71.3	**67.7**

Factor/Sub-factor	Significance Level
Transportation	
Accommodation of future vehicular travel demand	high
Accommodation of pedestrian and cyclist movements	medium
Travel safety	high
Emergency service	high
Future transportation network connectivity and compatibility	medium
Commercial goods movement	medium
Recreational trails	medium
Natural Environment	
Watercourses/fisheries/ aquatic habitat	medium
Vegetation and woodlots	medium
Wildlife/terrestrial habitat	medium
Wetlands	high
Species at Risk	high
Socio-cultural Environment	
Noise	high
Visual aesthetics	medium
Residential property required	high
Recreational/property impacts	high
Other property required	high
Compatibility with existing/ future land uses/ plans	medium
Archaeological resources	low
Heritage resources	low
Economic Environment	
Future development potential	medium
Accessibility to existing commercial areas	medium
Engineering/Constructability	
Construction impacts	medium
Construction impacts	medium
Construction impacts	medium
Utility/service conflicts	medium
Construction Cost	
Estimated capital construction cost	low
Estimated utility relocation cost	low

LEGEND

- MUNICIPAL BOUNDARY
- TOWN OF BRACEBRIDGE URBAN BOUNDARY
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS



AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA
Managing Our Legacy Together

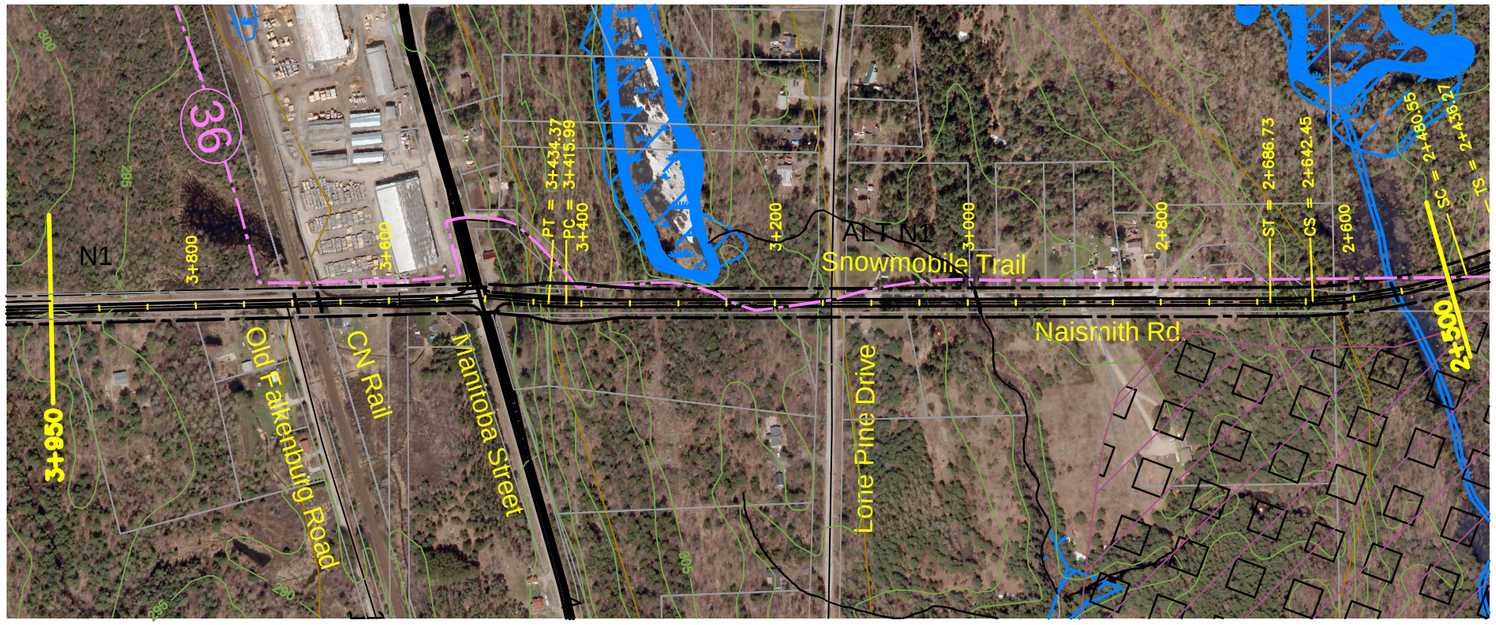
HOR: 0 100 200 m

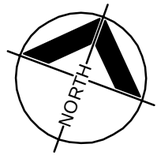
VERT: 0 10 20 m

NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

ALTERNATIVE N1
STA. 0+000 TO STA. 2+500

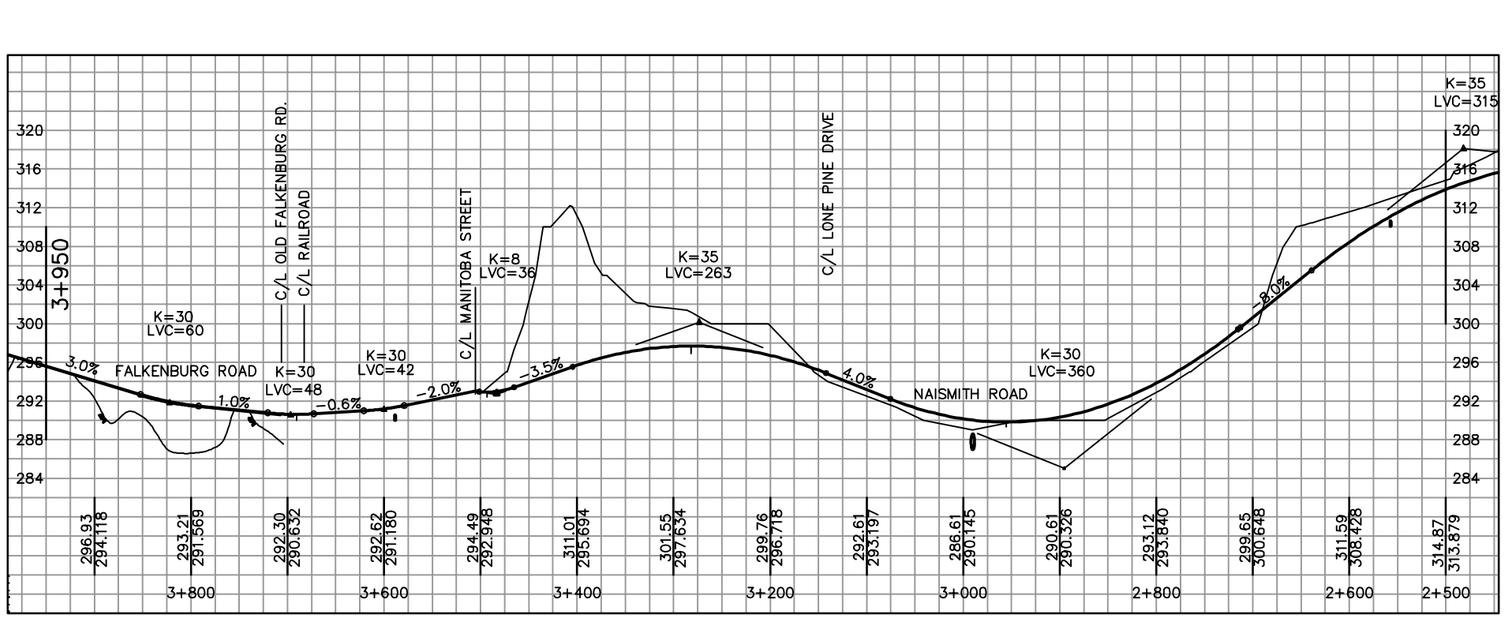
SCALE: –	DATE: 12/14/12	PROJECT: 60241537	DWG: N1-1





LEGEND

- MUNICIPAL BOUNDARY
- TOWN OF BRACEBRIDGE URBAN BOUNDARY
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS



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THE DISTRICT MUNICIPALITY OF MUSKOKA

HOR: 0 100 200 m

VERT: 0 10 20 m

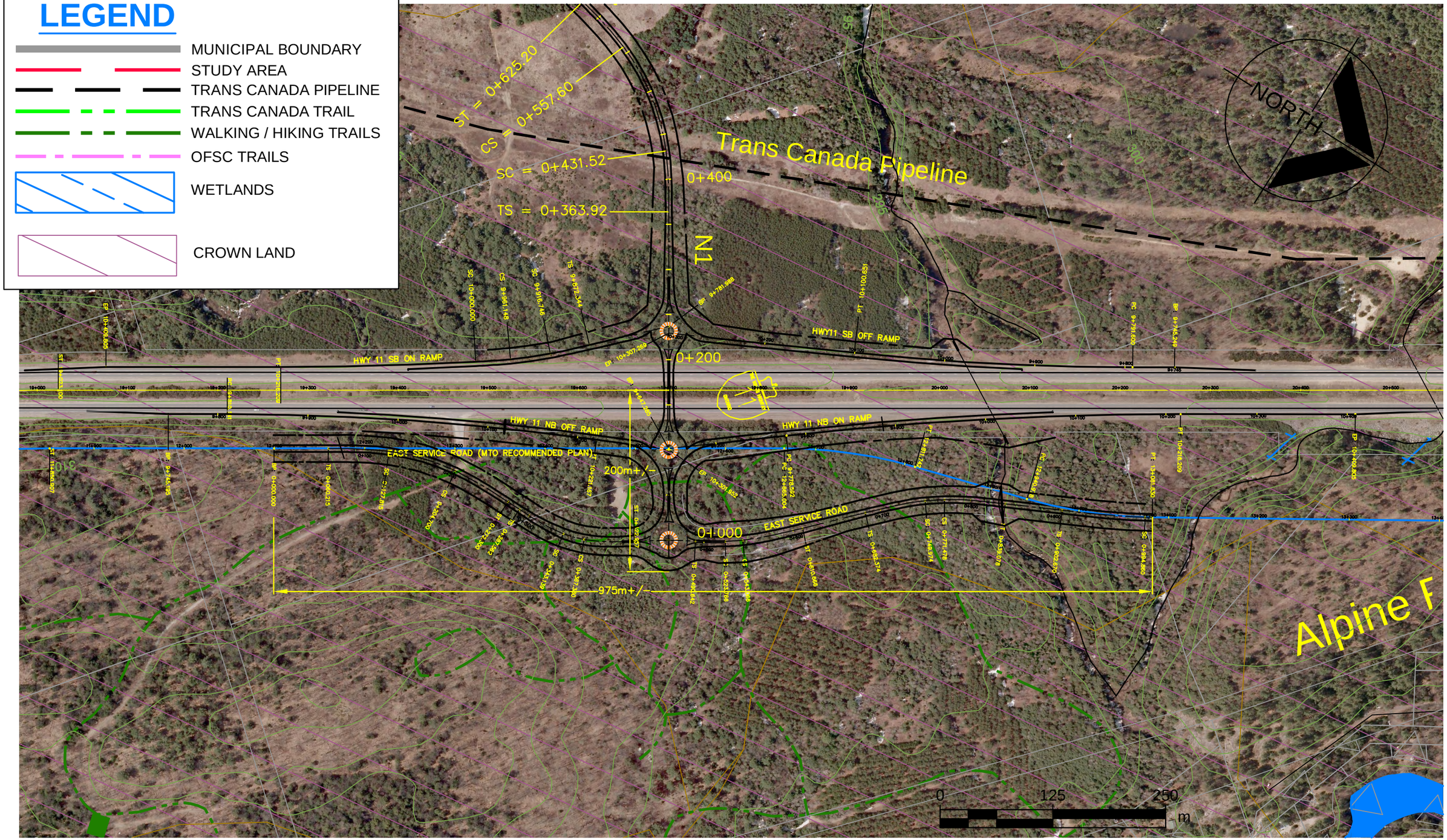
NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

ALTERNATIVE N1
STA. 2+500 TO STA. 3+950

SCALE: –	DATE: 12/14/12	PROJECT: 60241537	DWG: N1-2

LEGEND

- MUNICIPAL BOUNDARY
- STUDY AREA
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS
- CROWN LAND



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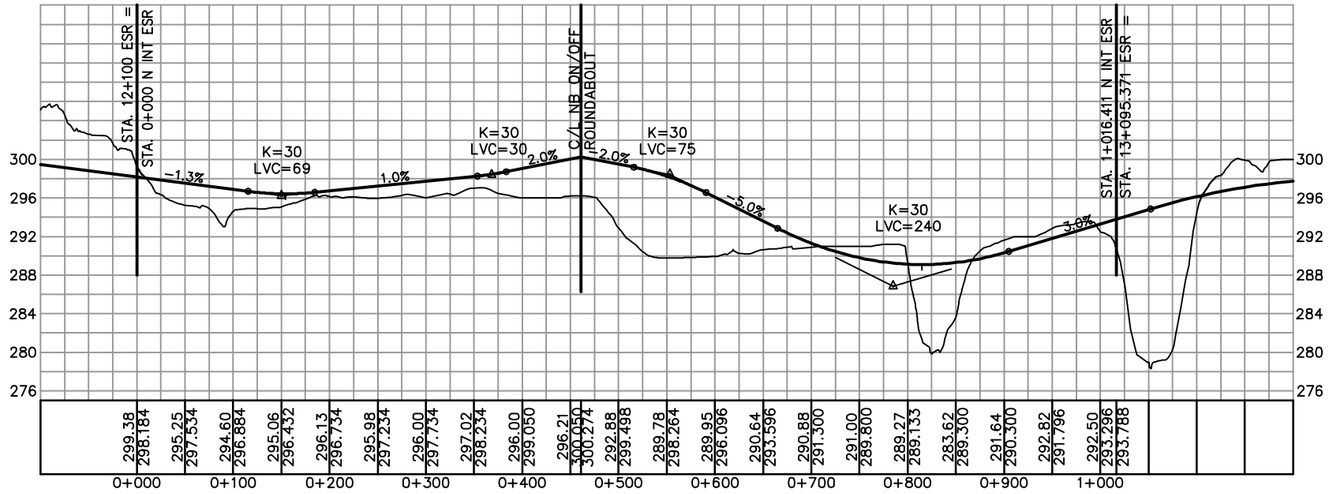
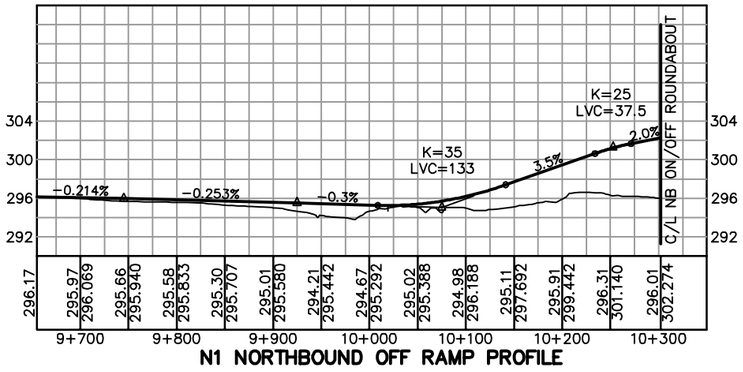
NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

ALTERNATIVE N1
HWY 11 INTERCHANGE

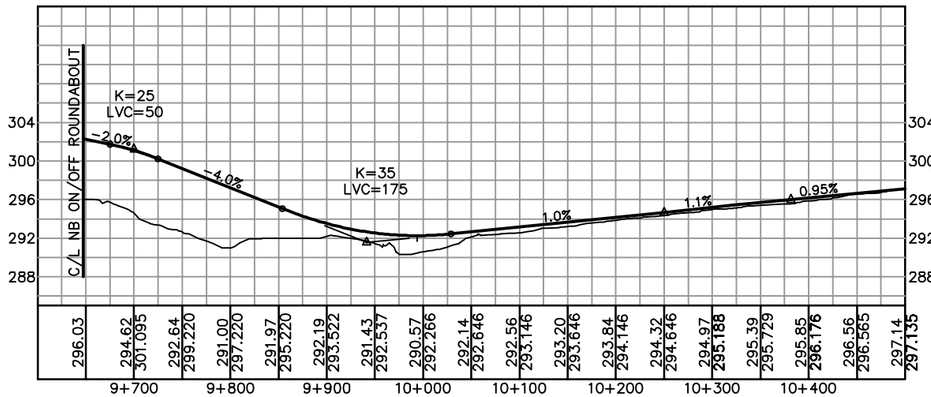
SCALE:	–	DATE:	12/14/12	PROJECT:	60241537	DWG:	N1-INT



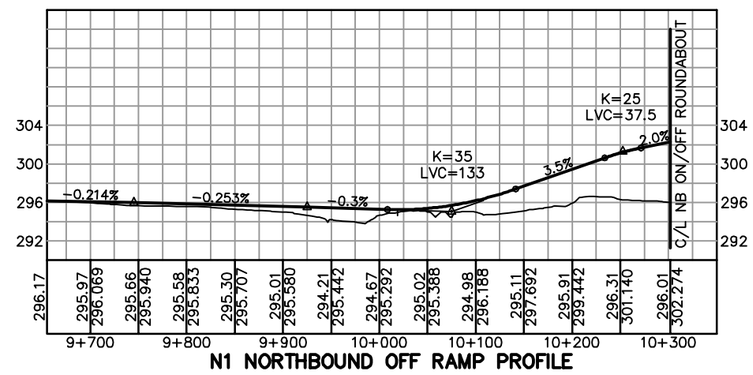
N1 ESR PROFILE



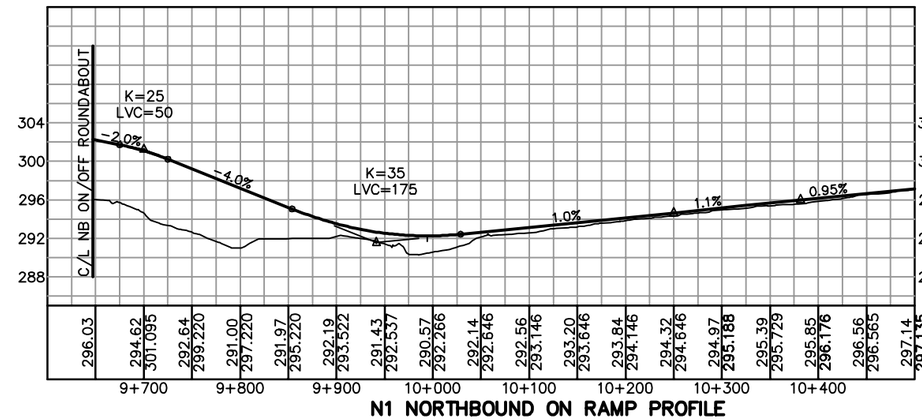
N1 NORTHBOUND OFF RAMP PROFILE



N1 NORTHBOUND ON RAMP PROFILE



N1 NORTHBOUND OFF RAMP PROFILE



N1 NORTHBOUND ON RAMP PROFILE

AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA

HOR: 0 100 200 m

VERT: 0 10 20 m

NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

ALTERNATIVE N1
HWY 11 INTERCHNGE PROFILES

SCALE: –

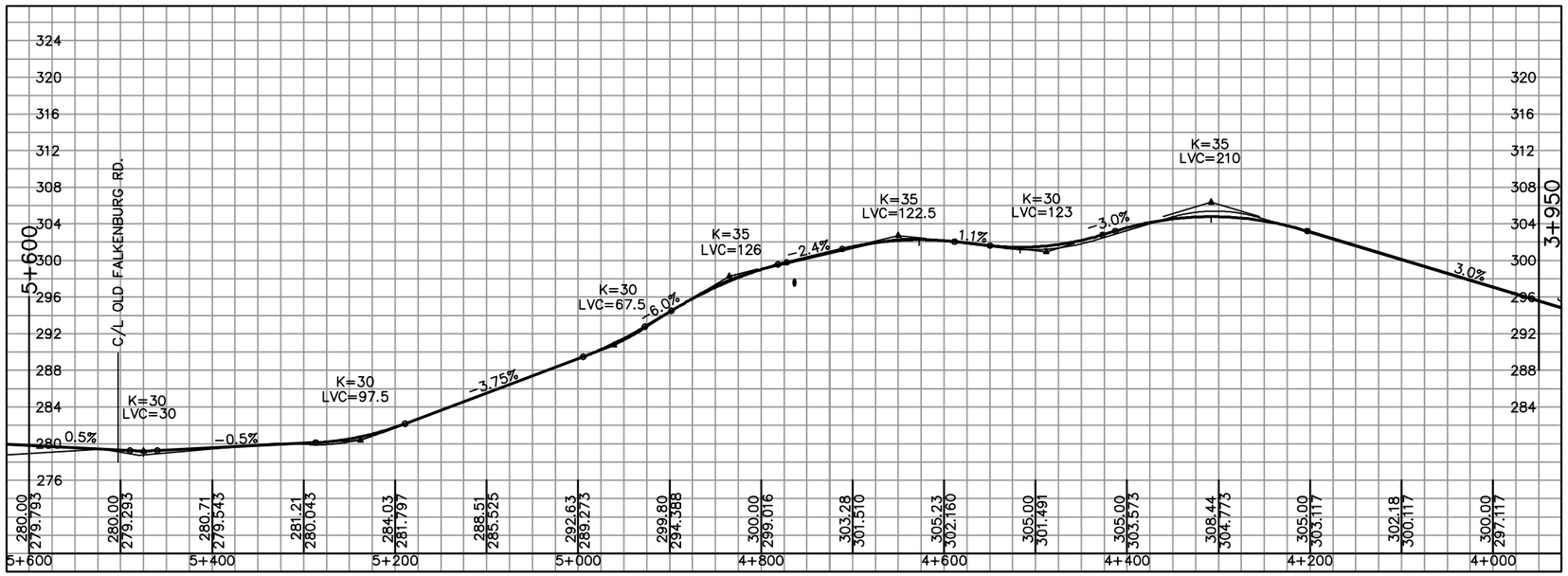
DATE: 12/14/12

PROJECT: 60241537

DWG: N1-INT-P

LEGEND

- MUNICIPAL BOUNDARY
- TOWN OF BRACEBRIDGE URBAN BOUNDARY
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS



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HOR: 0 100 200 m

VERT: 0 10 20 m

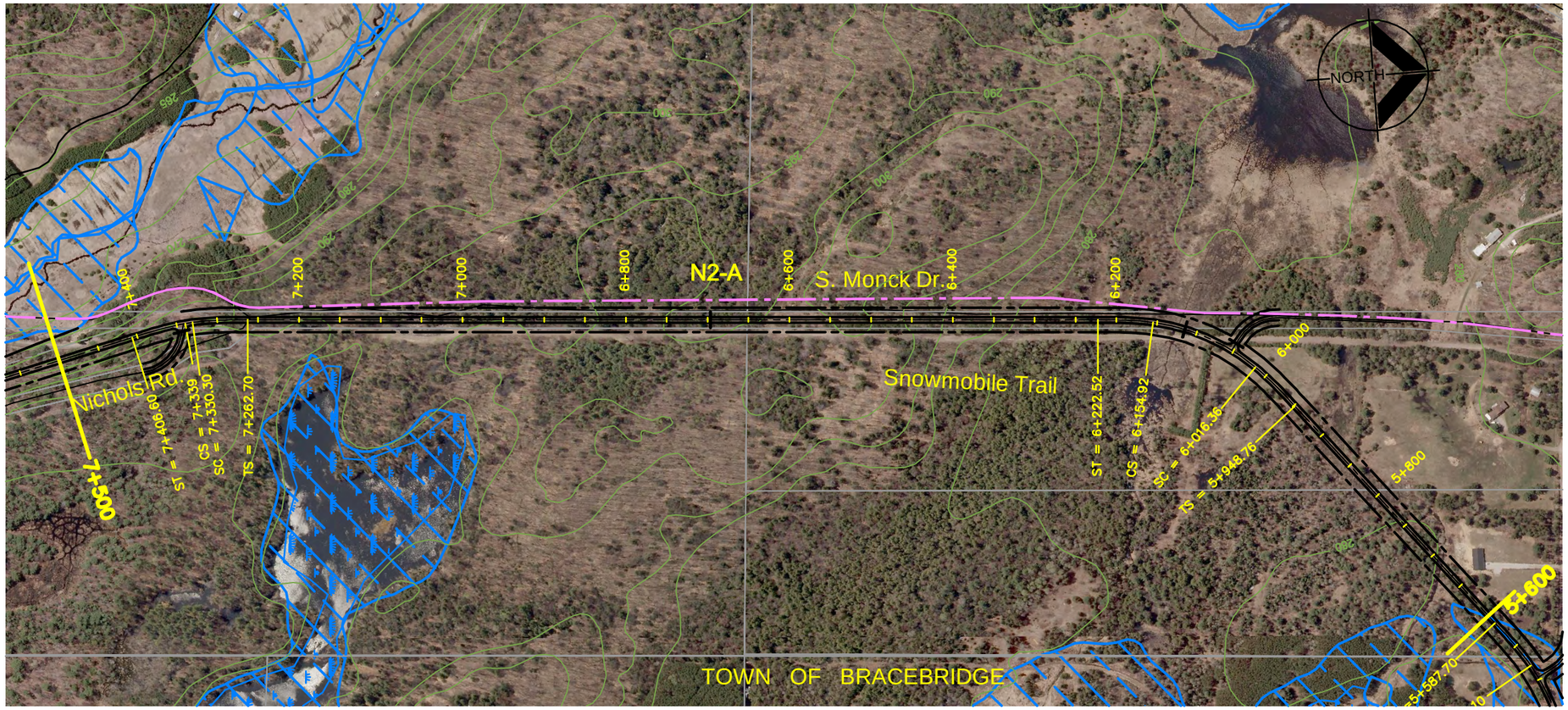
NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

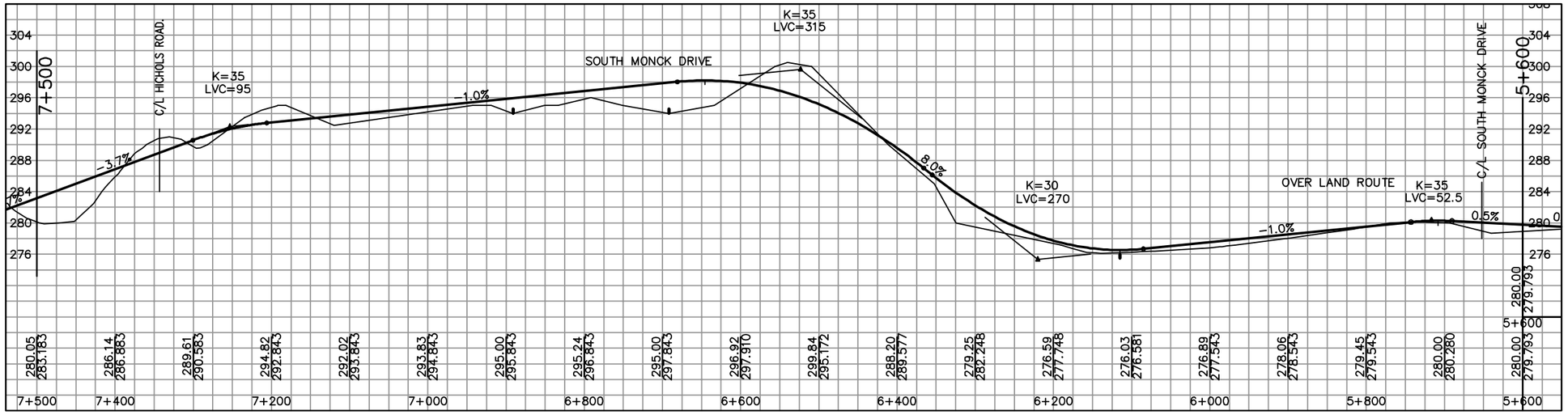
ALTERNATIVE N2-A
STA. 3+950 TO STA. 5+600

SCALE:	–	DATE: 12/14/12	PROJECT: 60241537	DWG: N2-A1

LEGEND

- MUNICIPAL BOUNDARY
- **TOWN OF BRACEBRIDGE URBAN BOUNDARY**
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS





AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA
Managing Our Legacy Together

HOR: 0 100 200 m

VERT: 0 10 20 m

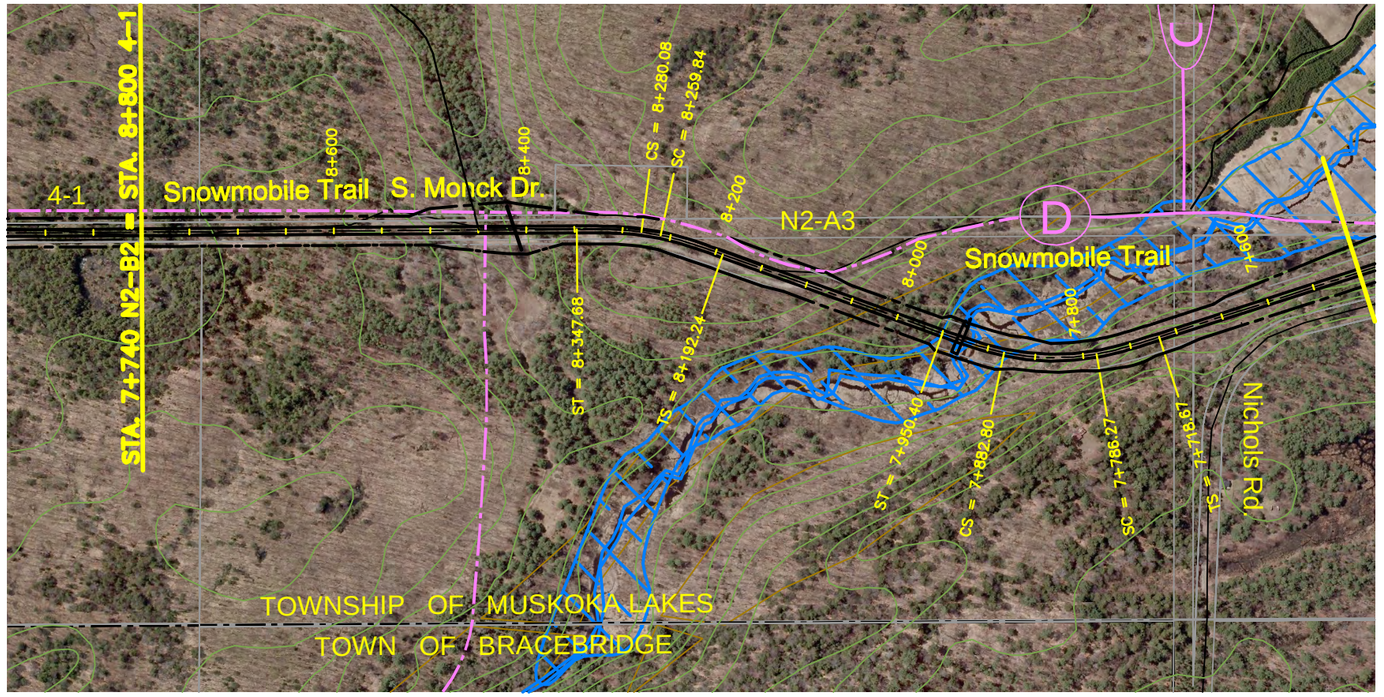
NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

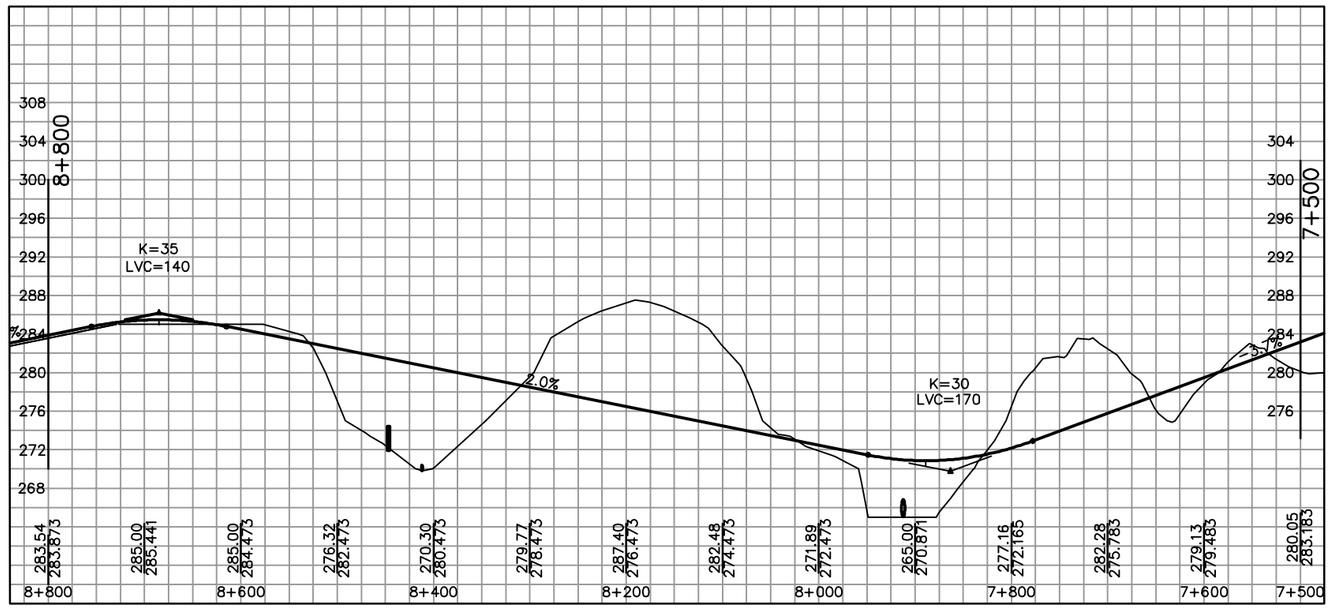
ALTERNATIVE N2-A
STA. 5+600 TO STA. 7+500

SCALE:	–	DATE: 12/14/12	PROJECT: 60241537	DWG: N2-A2

LEGEND

- MUNICIPAL BOUNDARY
- TOWN OF BRACEBRIDGE URBAN BOUNDARY
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS





AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA

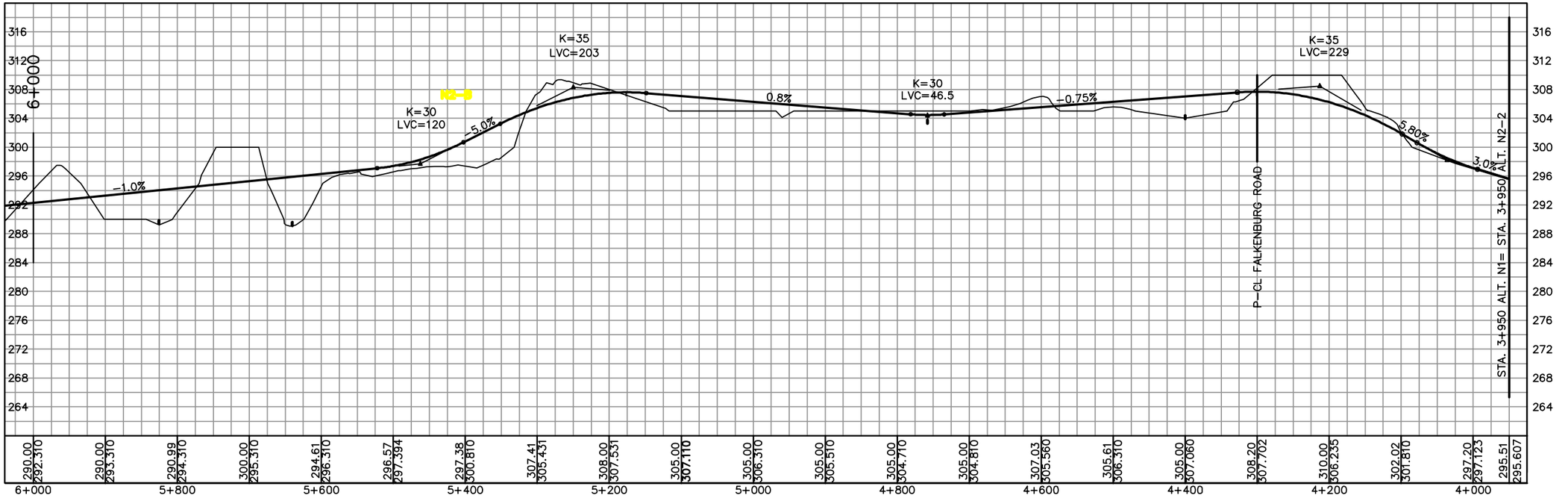
HOR: 0 100 200 m

VERT: 0 10 20 m

NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

ALTERNATIVE N2-A
STA. 7+500 TO STA. 8+800

SCALE: –	DATE: 12/14/12	PROJECT: 60241537	DWG: N2-A3



AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA

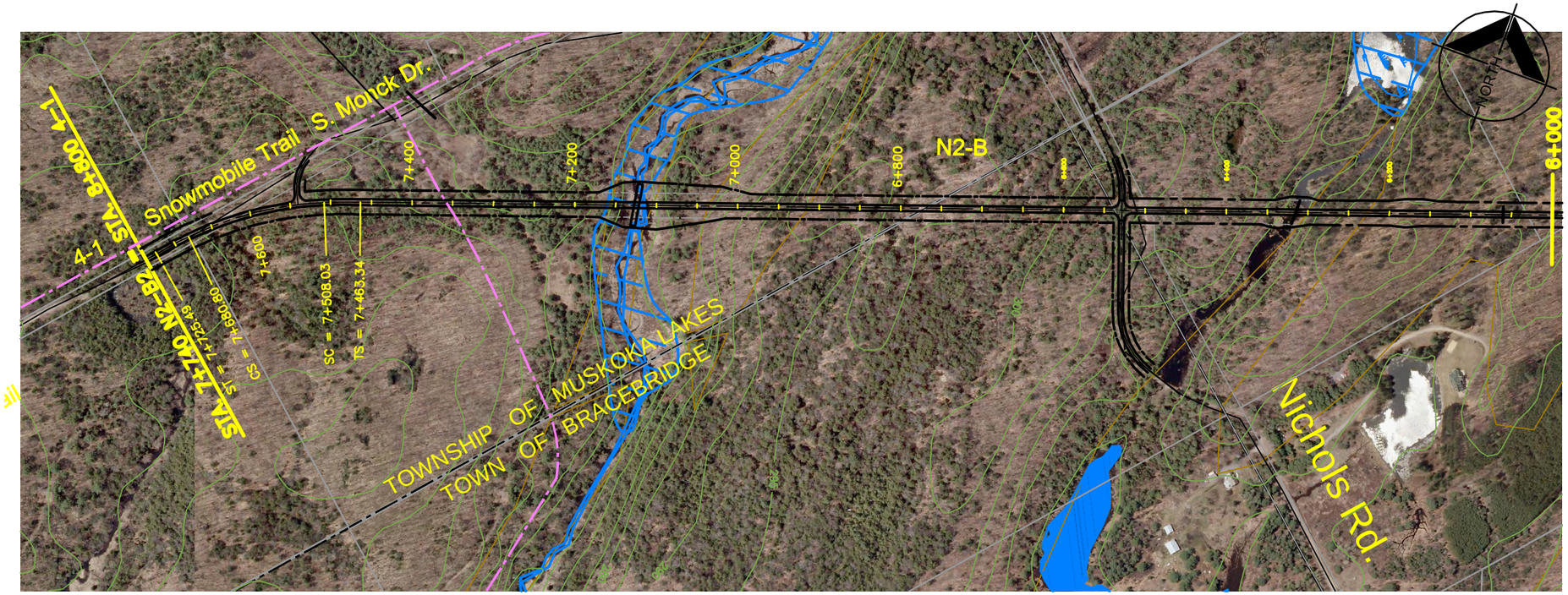
HOR: 0 100 200 m

VERT: 0 10 20 m

NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

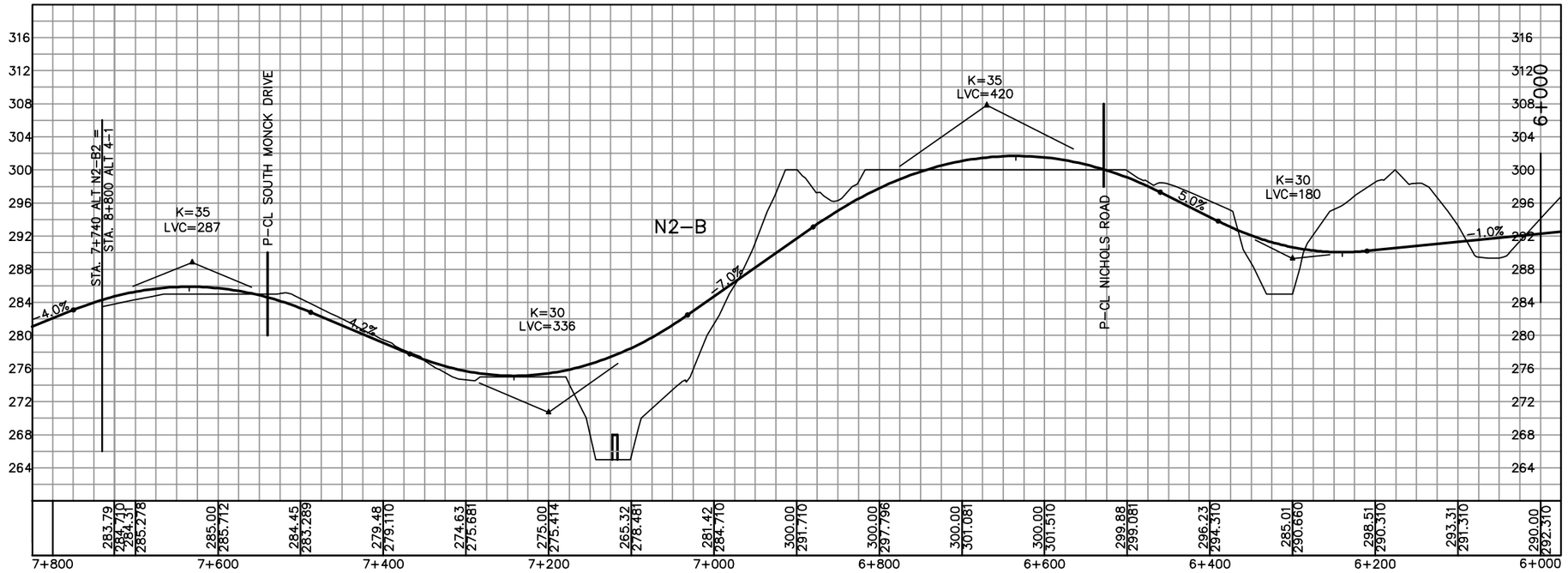
ALTERNATIVE N2-B
STA.3+950 TO STA. 6+000

SCALE:	–	DATE: 12/14/12	PROJECT: 60241537	DWG: N2-B1



LEGEND

- MUNICIPAL BOUNDARY
- TOWN OF BRACEBRIDGE URBAN BOUNDARY
- STUDY AREA
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS



AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA

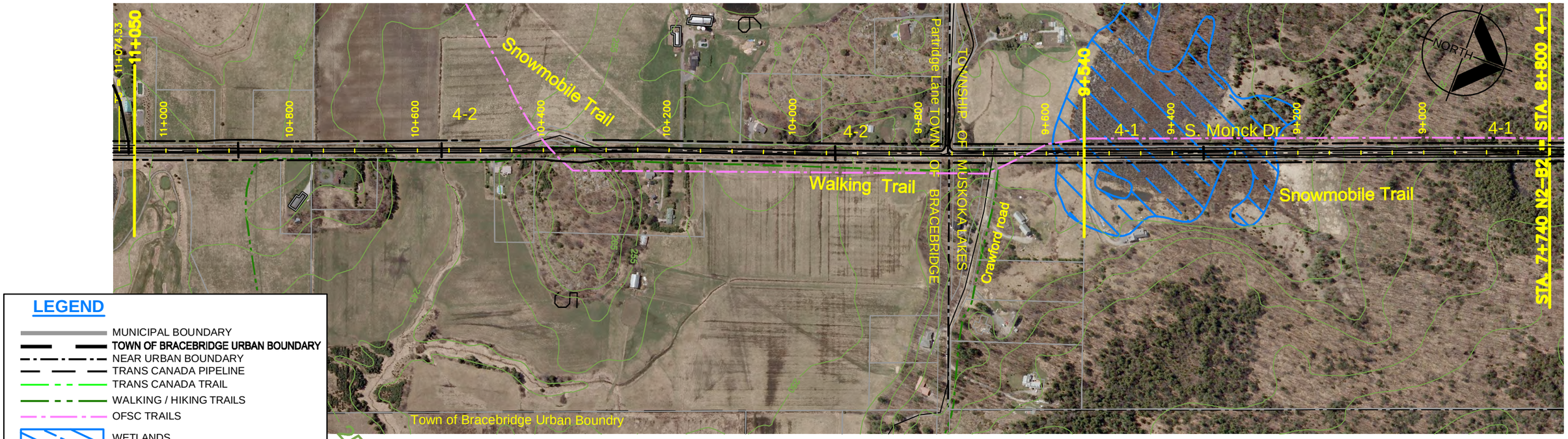
HOR: 0 100 200 m

VERT: 0 10 20 m

NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

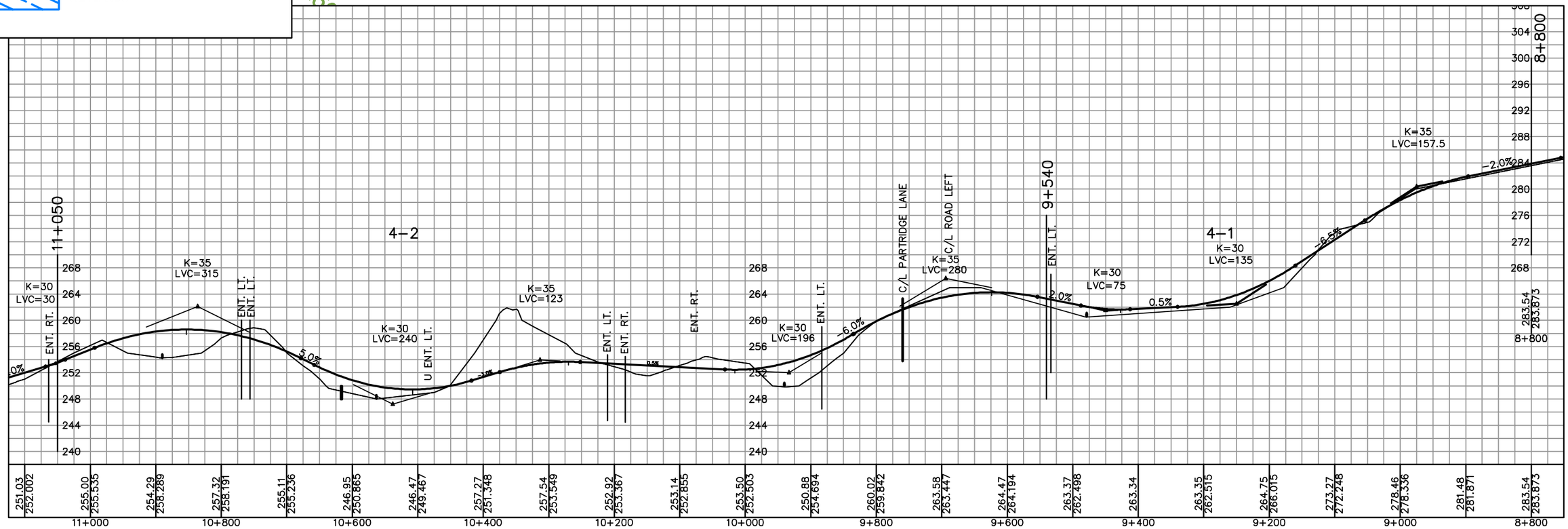
ALTERNATIVE N2-2B
STA. 6+000 TO STA. 7+740

SCALE:	–	DATE: 12/14/12	PROJECT: 60241537	DWG: N2-B2



LEGEND

- MUNICIPAL BOUNDARY
- TOWN OF BRACEBRIDGE URBAN BOUNDARY
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS



AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA

HOR: 0 100 200 m

VERT: 0 10 20 m

NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

ALTERNATIVE 4-1 AND 4-2
4-1 STA. 8+800 TO STA. 9+540
4-2 STA. 9+540 TO STA. 11+050

SCALE: –

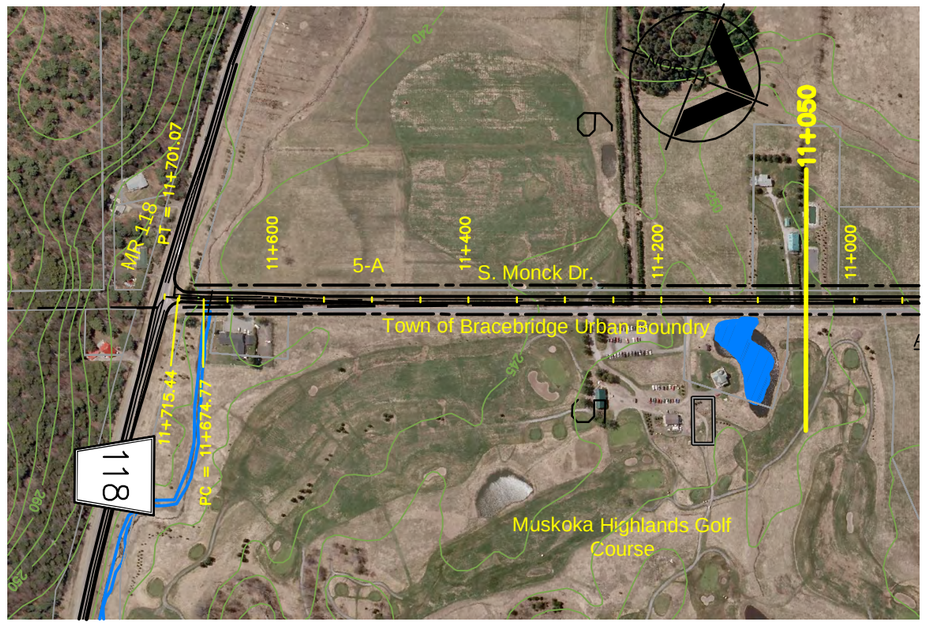
DATE: 12/14/12

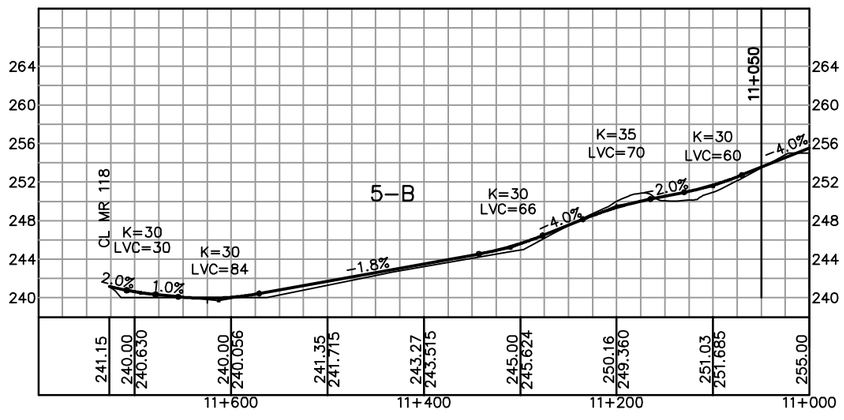
PROJECT: 60241537

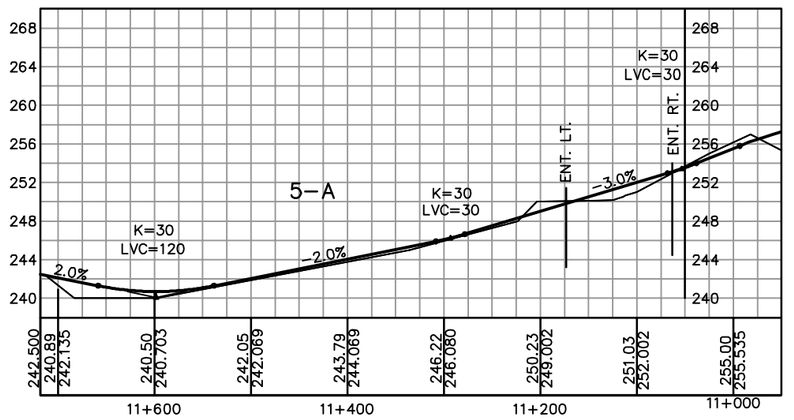
DWG: 4-1/4-2

LEGEND

- MUNICIPAL BOUNDARY
- **TOWN OF BRACEBRIDGE URBAN BOUNDARY**
- STUDY AREA
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS







AECOM

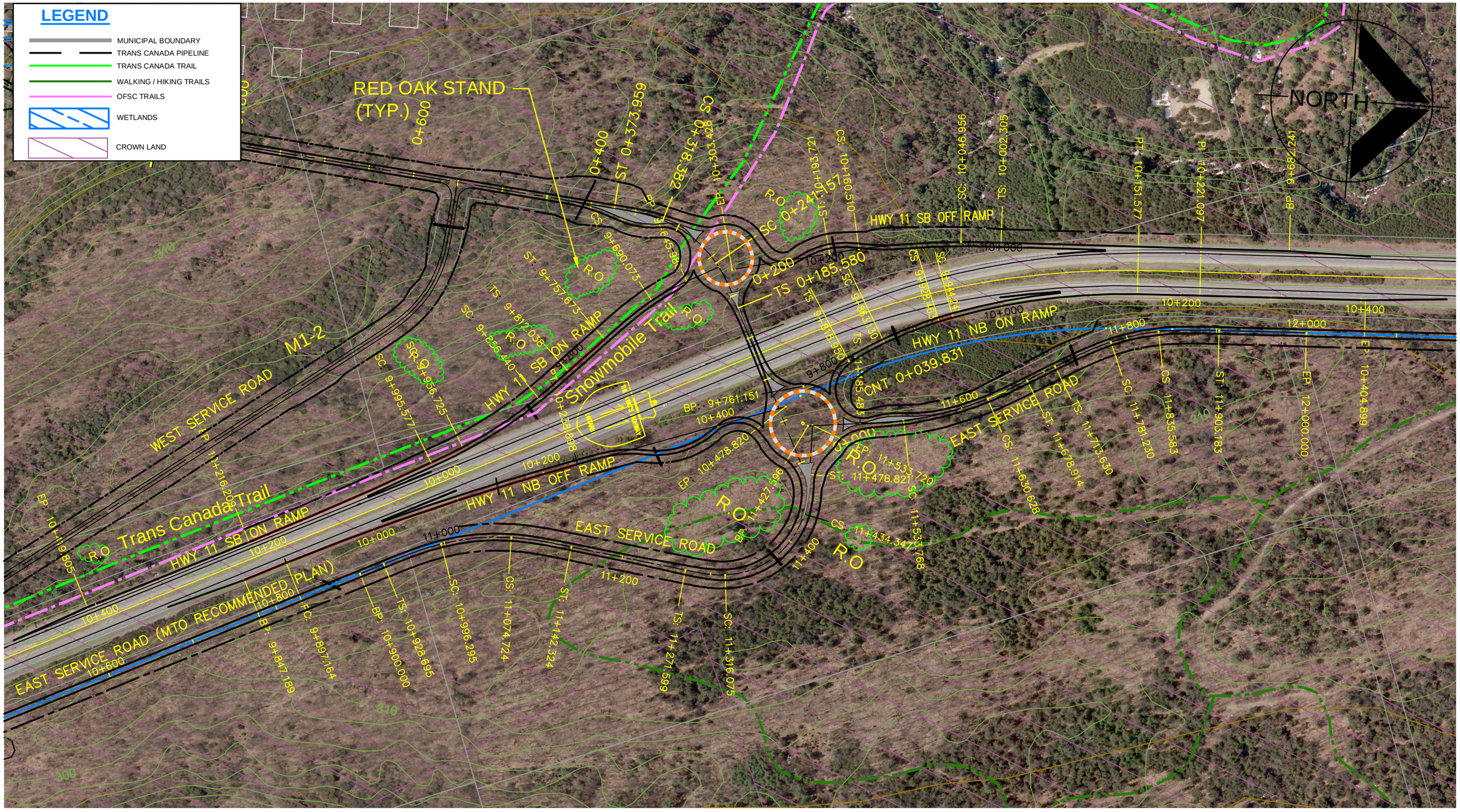
THE DISTRICT MUNICIPALITY OF MUSKOKA
Managing Our Legacy Together

HOR: 0 100 200 m
VERT: 0 10 20 m

NORTHER N TRANSPORTATION CORRIDOR
BRACEBRIDGE

ALTERNATIVE 5-A AND 5-B
5-A STA. 11+050 TO STA. 11+715.44
5-B STA. 11+050 TO STA. 11+726.53

SCALE: –	DATE: 12/12/12	PROJECT: 60241537	DWG: 5-A/5-B



0 125 250

HOR: m

AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA
Managing Our Legacy Together

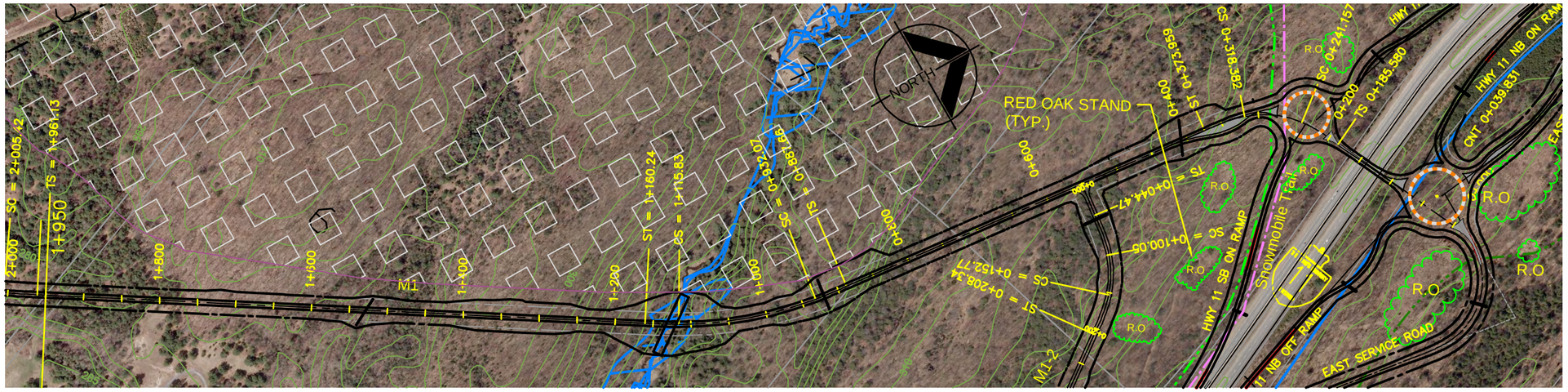
NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

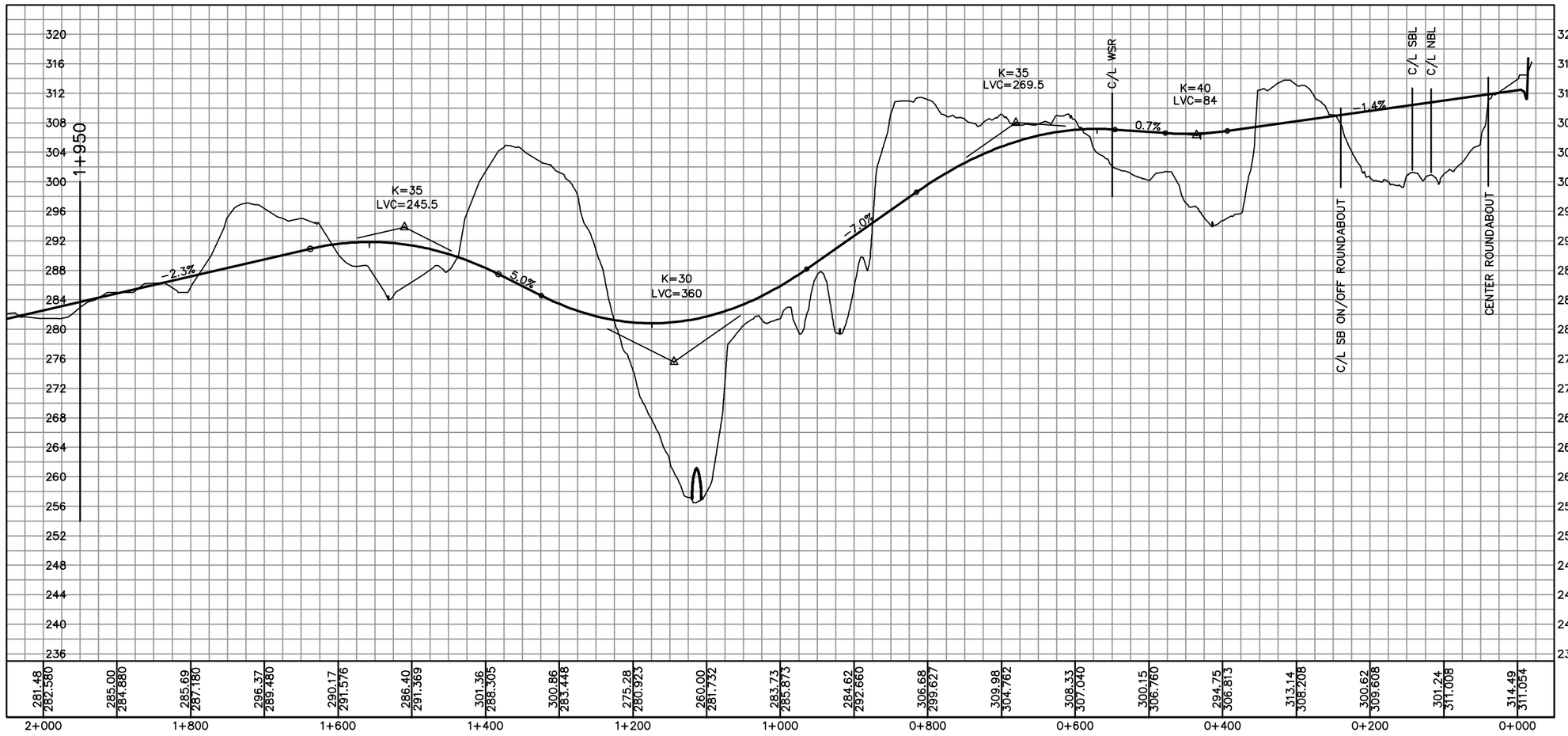
ALTERNATIVE M
HWY 11 INTERCHANGE

SCALE:	–	DATE: 12/14/12	PROJECT: 60241537	DWG: M-INT-11

LEGEND

- MUNICIPAL BOUNDARY
- TOWN OF BRACEBRIDGE URBAN BOUNDARY
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS





AECOM

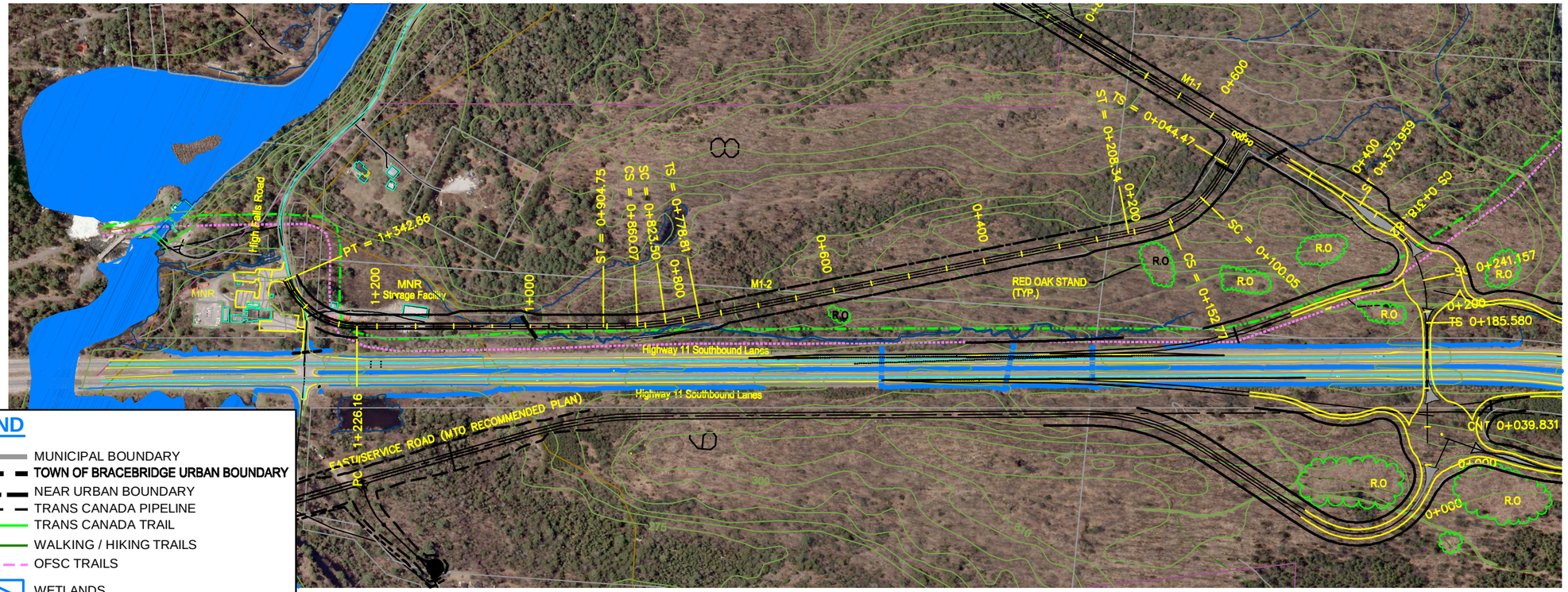
THE DISTRICT MUNICIPALITY OF MUSKOKA
Managing Our Legacy Together

HOR: 0 100 200 m
VERT: 0 10 20 m

NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

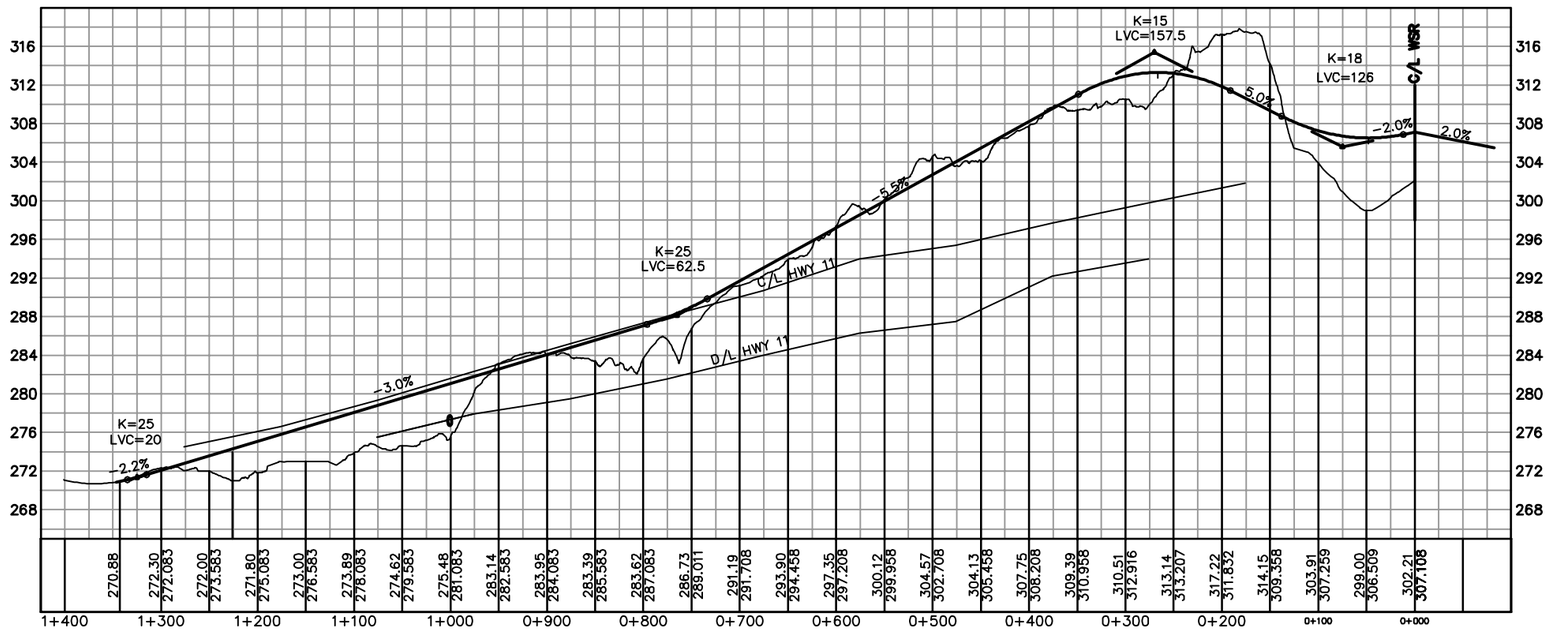
ALTERNATIVE M1
STA. 0+000 TO STA.1+950

SCALE: –	DATE: 12/14/12	PROJECT: 60241537	DWG: M1-1



LEGEND

- MUNICIPAL BOUNDARY
- TOWN OF BRACEBRIDGE URBAN BOUNDARY
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS



AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA

HOR: 0 100 200 m

VERT: 0 10 20 m

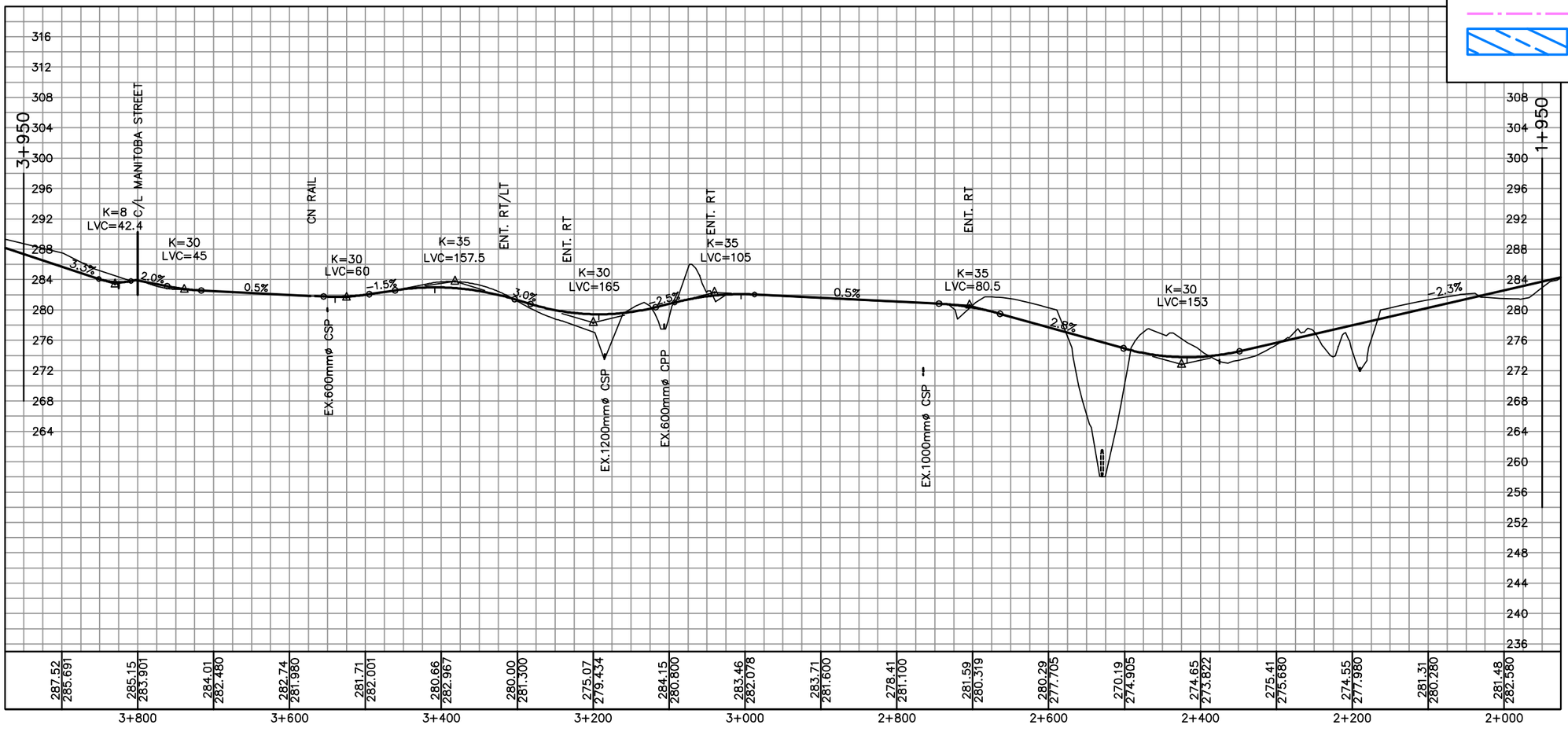
NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

ALTERNATIVE M1
STA. 0+000 TO STA. 1+400

SCALE: –	DATE: 12/14/12	PROJECT: 60241537	DWG: M1-2

LEGEND

- MUNICIPAL BOUNDARY
- **TOWN OF BRACEBRIDGE URBAN BOUNDARY**
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS



AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA

HOR: 0 100 200 m

VERT: 0 10 20 m

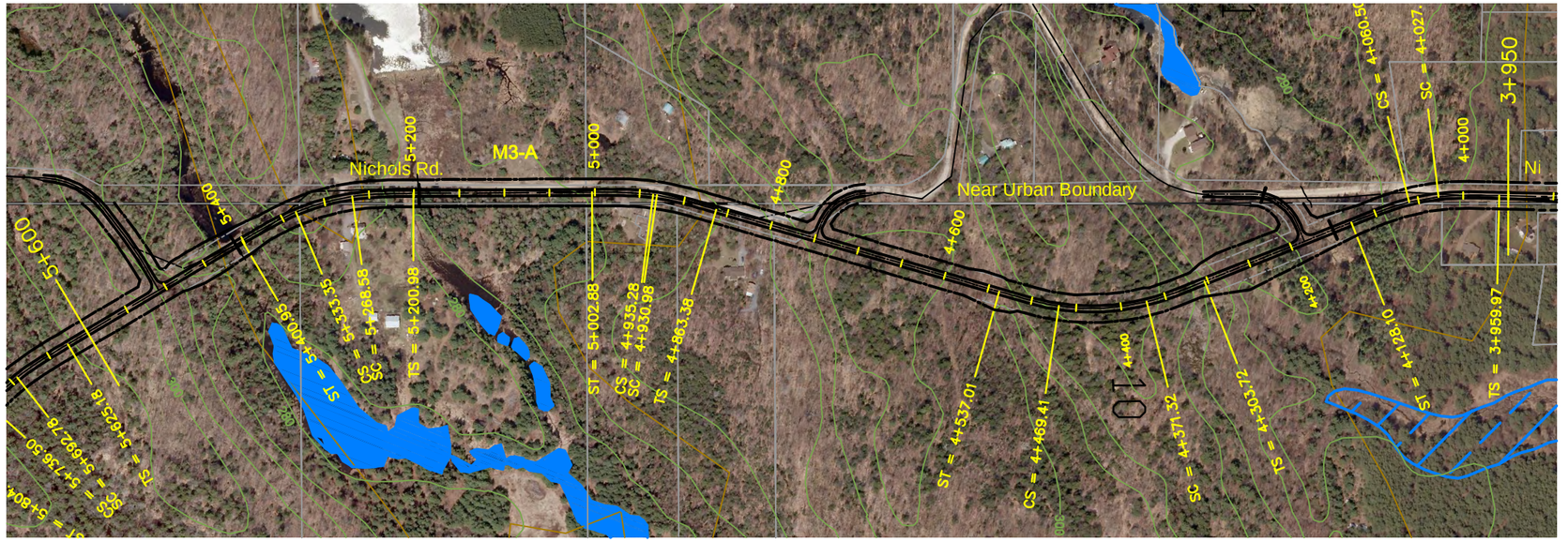
NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

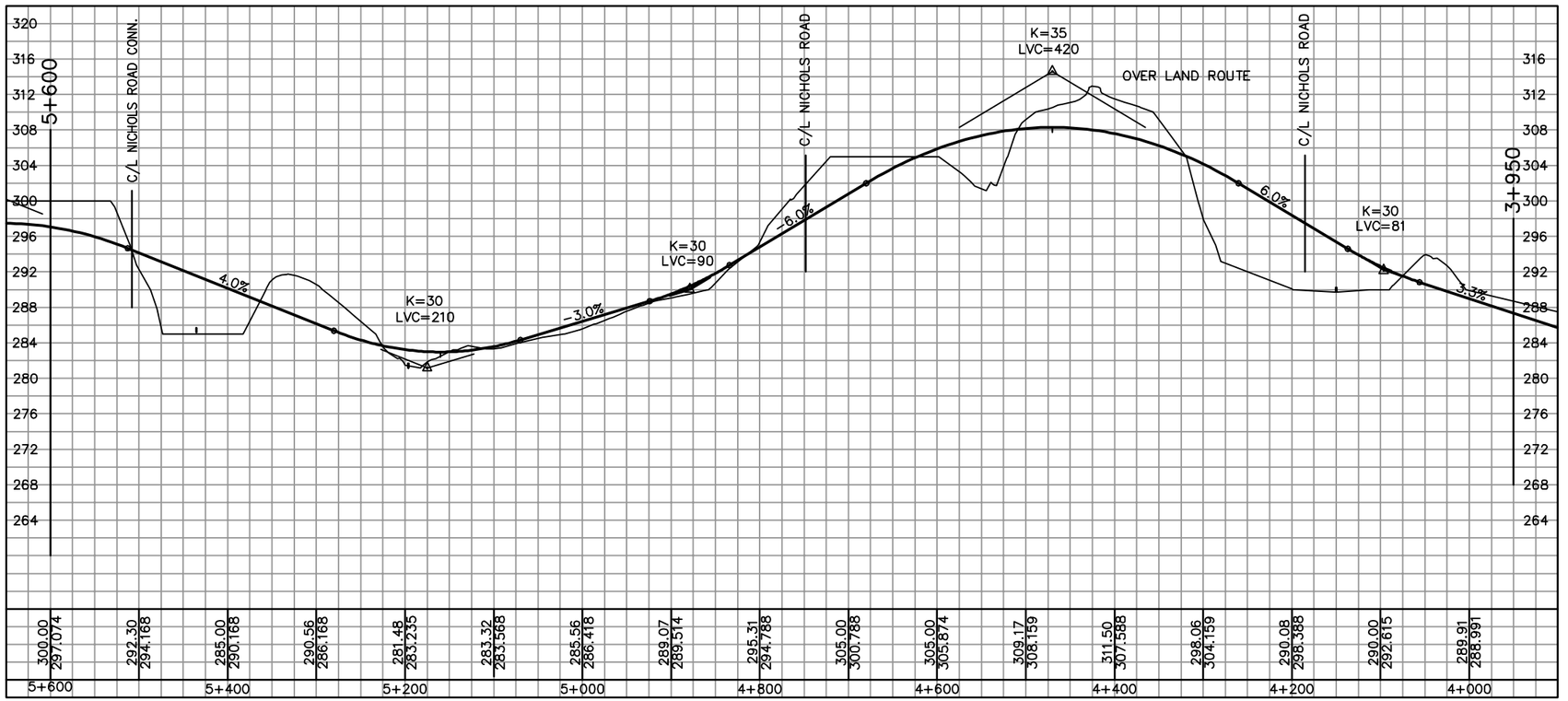
ALTERNATIVE M2
STA.1+950 TO STA. 3+950

SCALE: –	DATE: 12/14/12	PROJECT: 60241537	DWG: M2

LEGEND

- MUNICIPAL BOUNDARY
- TOWN OF BRACEBRIDGE URBAN BOUNDARY
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS





AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA

HOR: 0 100 200 m

VERT: 0 10 20 m

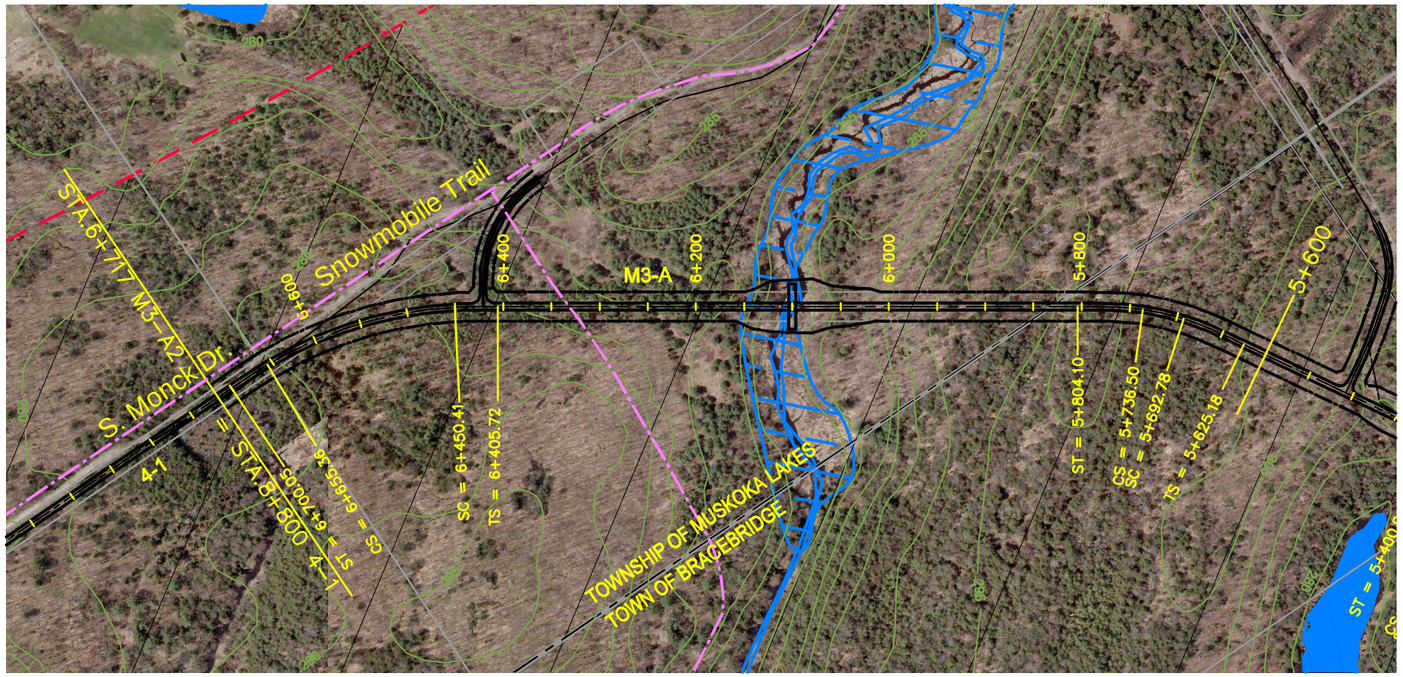
NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

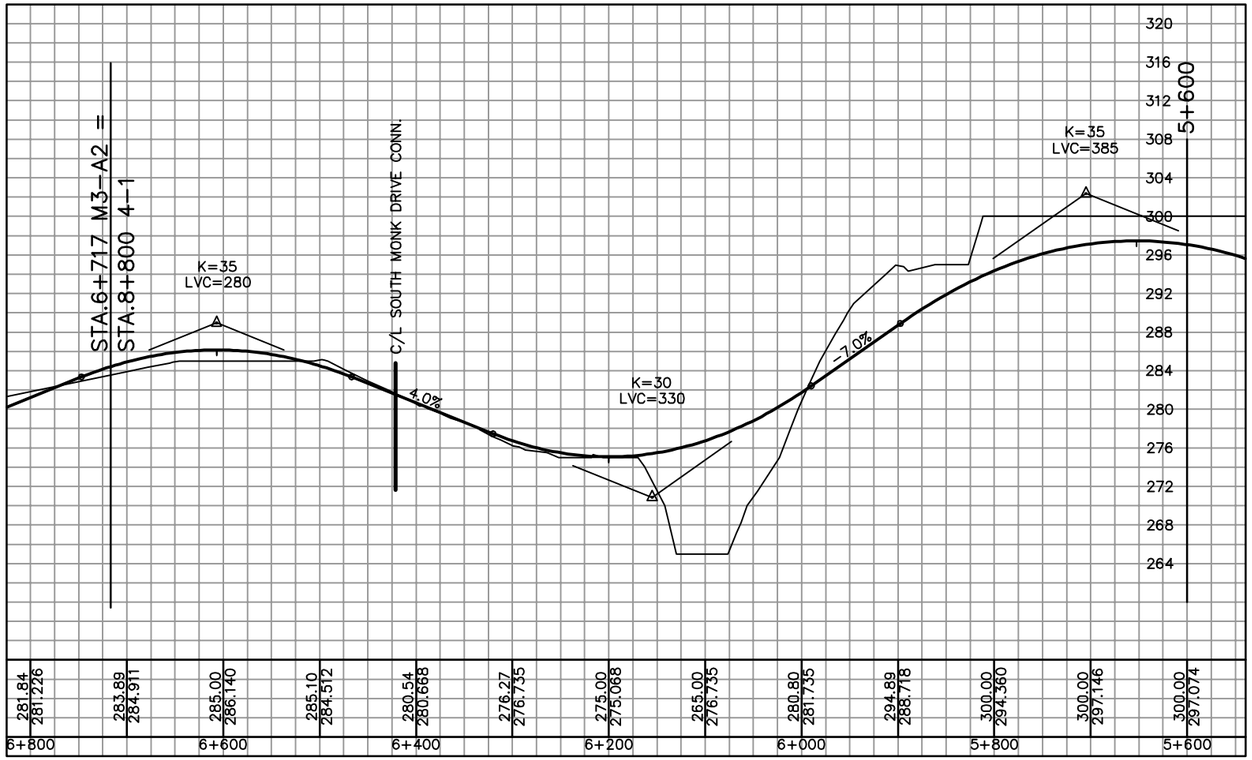
ALTERNATIVE M3-A
STA.3+950 TO STA. 5+600

SCALE: –	DATE: 12/14/12	PROJECT: 60241537	DWG: M3-A1

LEGEND

- MUNICIPAL BOUNDARY
- TOWN OF BRACEBRIDGE URBAN BOUNDARY
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS





AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA
Managing Our Legacy Together

HOR: 0 100 200 m

VERT: 0 10 20 m

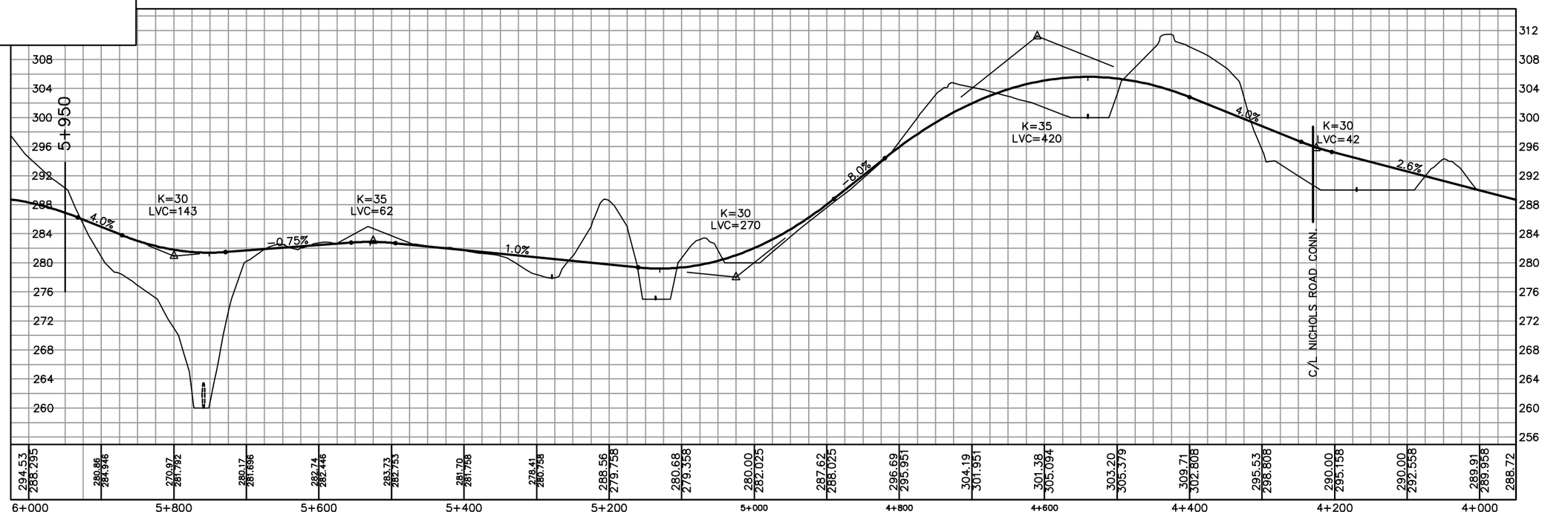
NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

ALTERNATIVE M3-A
STA.5+600 TO STA. 6+717

SCALE:	–	DATE: 12/14/12	PROJECT: 60241537	DWG: M3-A2

LEGEND

- MUNICIPAL BOUNDARY
- TOWN OF BRACEBRIDGE URBAN BOUNDARY
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS



PROFILE M3–B

AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA
Managing Our Legacy Together

HOR: 0 100 200 m

VERT: 0 10 20 m

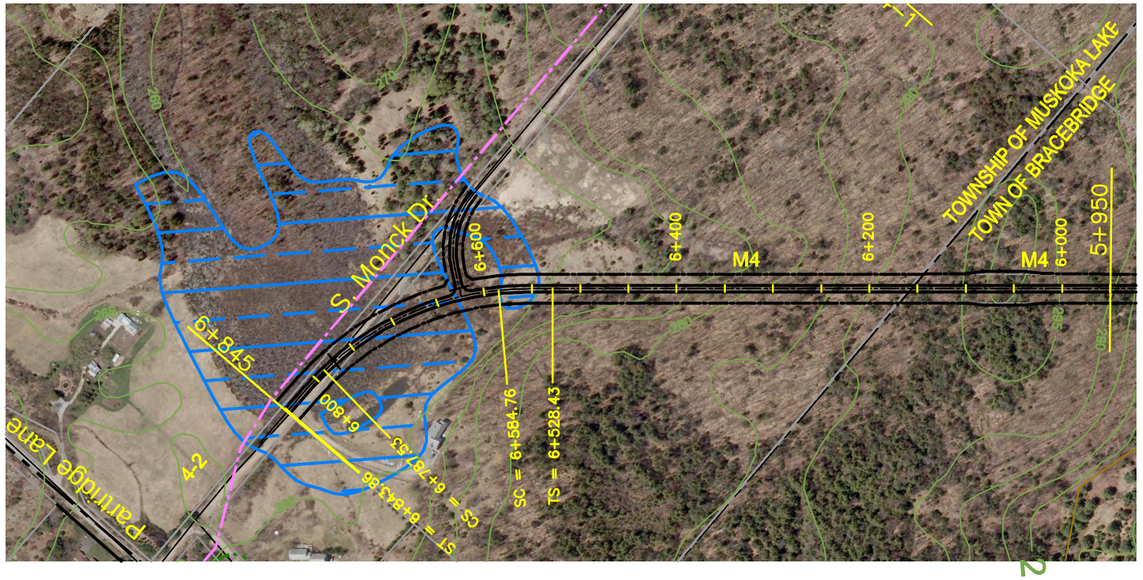
NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

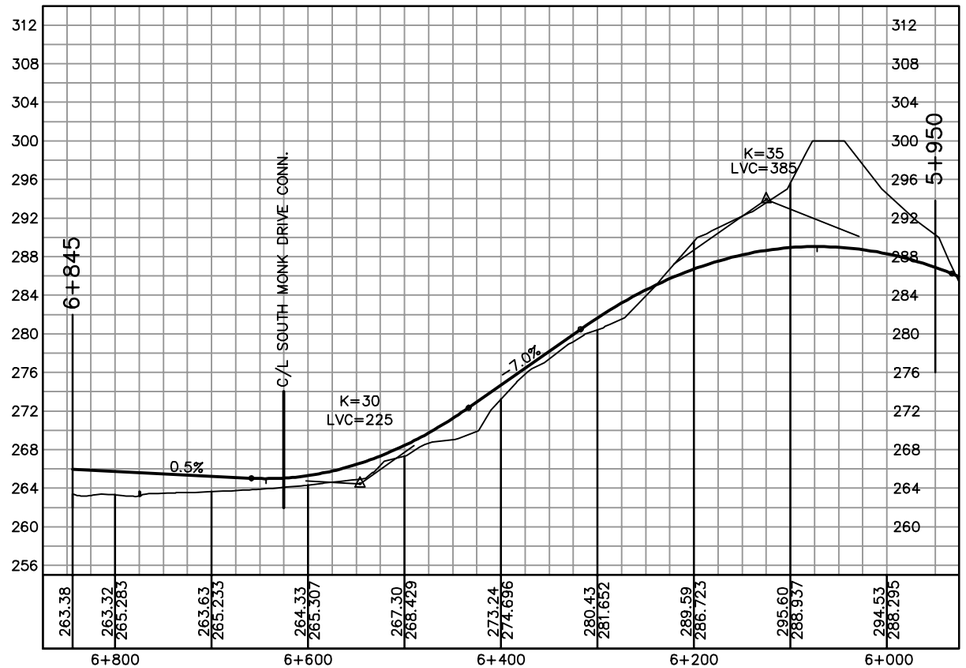
ALTERNATIVE M3-B
STA. 3+950 TO STA. 5+950

SCALE: –	DATE: 12/14/12	PROJECT: 60241537	DWG: M:

LEGEND

- MUNICIPAL BOUNDARY
- TOWN OF BRACEBRIDGE URBAN BOUNDARY
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS





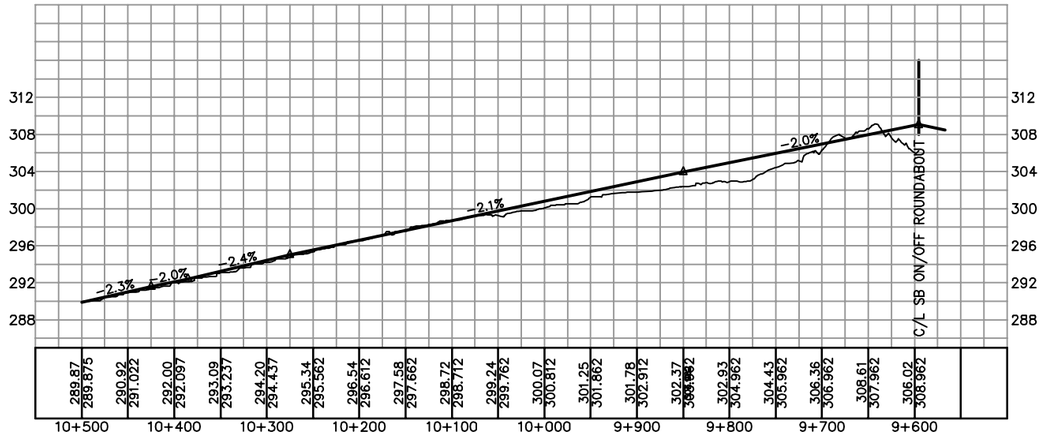
HOR: 0 100 200 m

VERT: 0 10 20 m

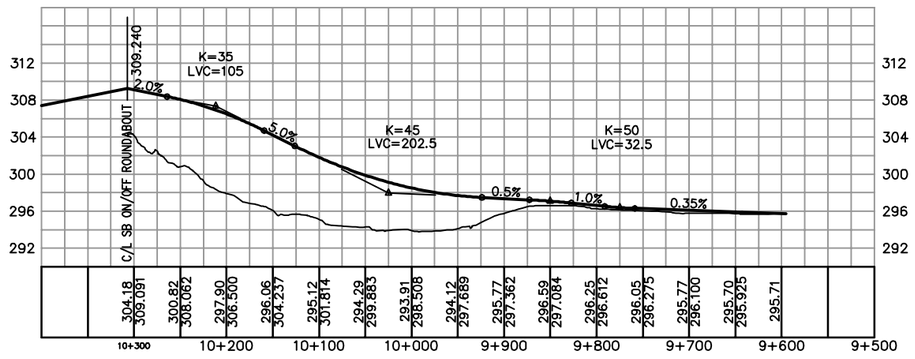
NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

ALTERNATIVE M4
STA. 5+950 TO STA. 6+845

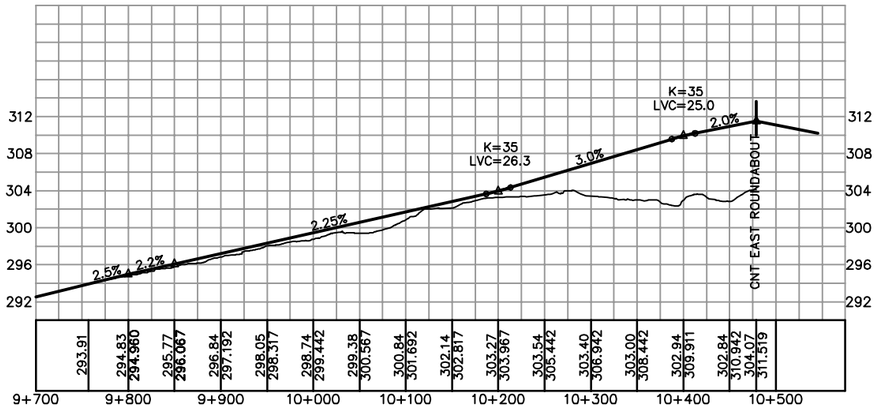
SCALE: +– | DATE: 12/14/12 | PROJECT: 60241537 | DWG: M4



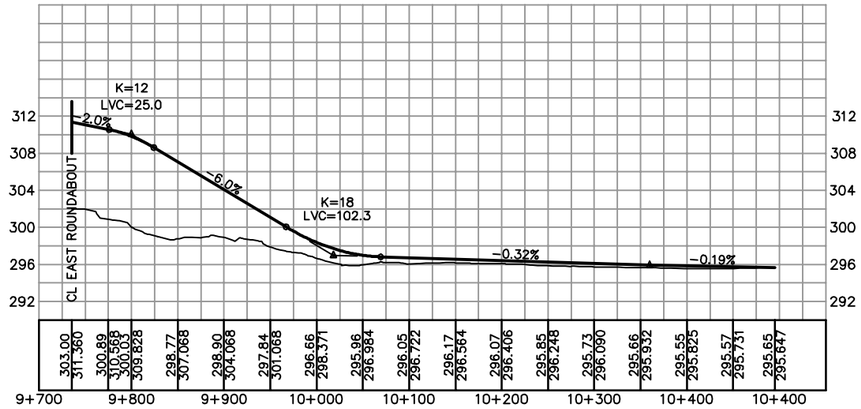
M1 HWY 11 SOUTHBOUND ON RAMP



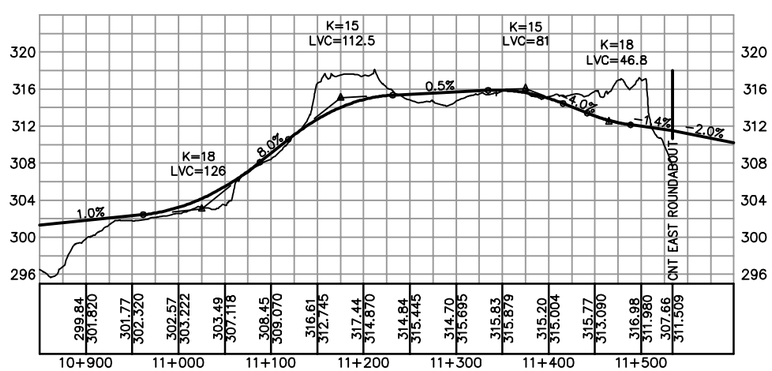
M1 HWY 11 SOUTHBOUND OFF RAMP



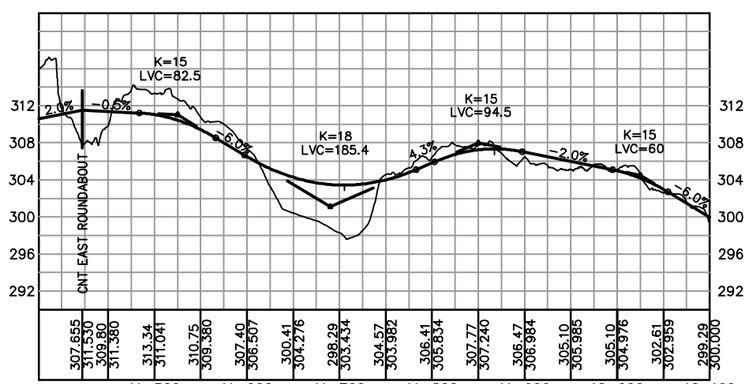
M1 HWY 11 NORTHBOUND OFF RAMP



M1 HWY 11 NORTHBOUND ON RAMP



EAST SERVICE ROAD SOUTH M1



EAST SERVICE ROAD SOUTH M1

AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA

HOR: 0 100 200 m

VERT: 0 10 20 m

NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

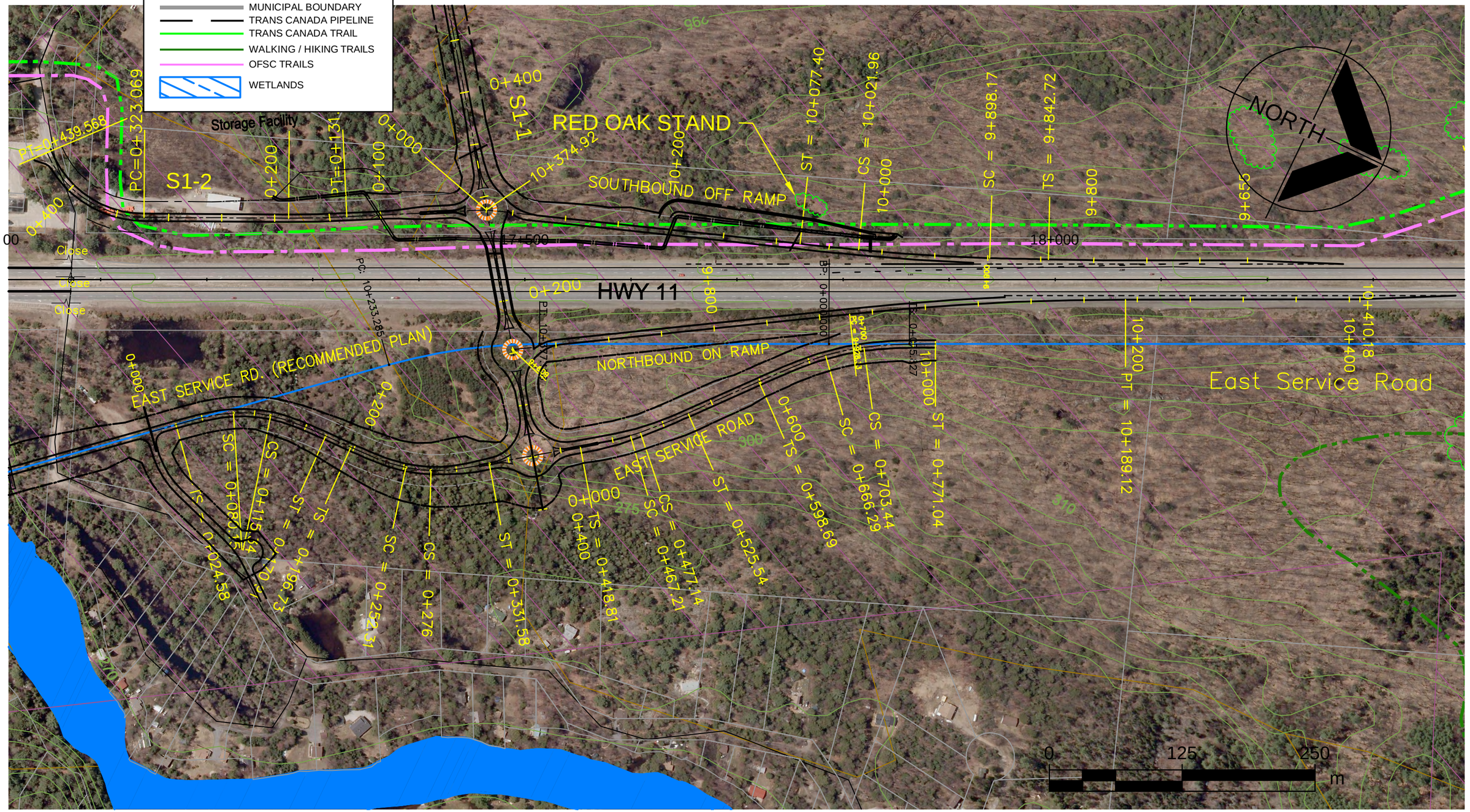
MIDDLE ROUTE
RAMPS AND ESR PROFILES

SCALE: –

DATE: 03/20/13

PROJECT: 60241537

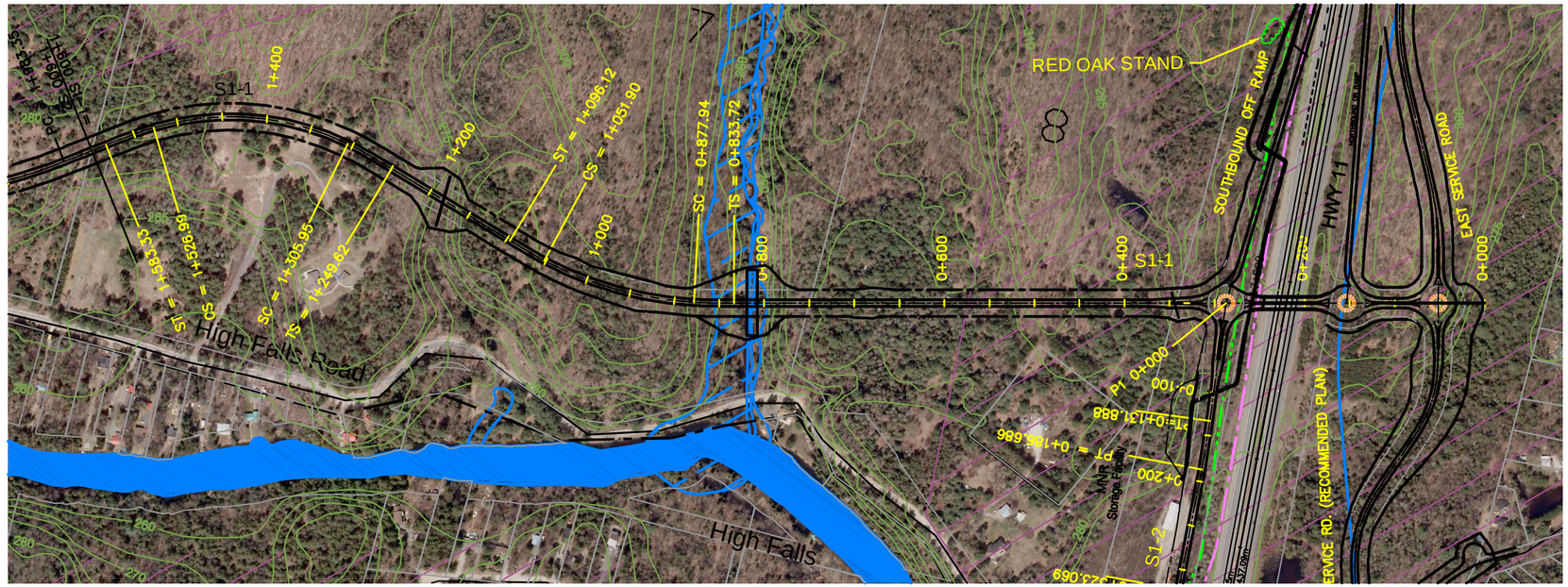
DWG: M-PRO-2

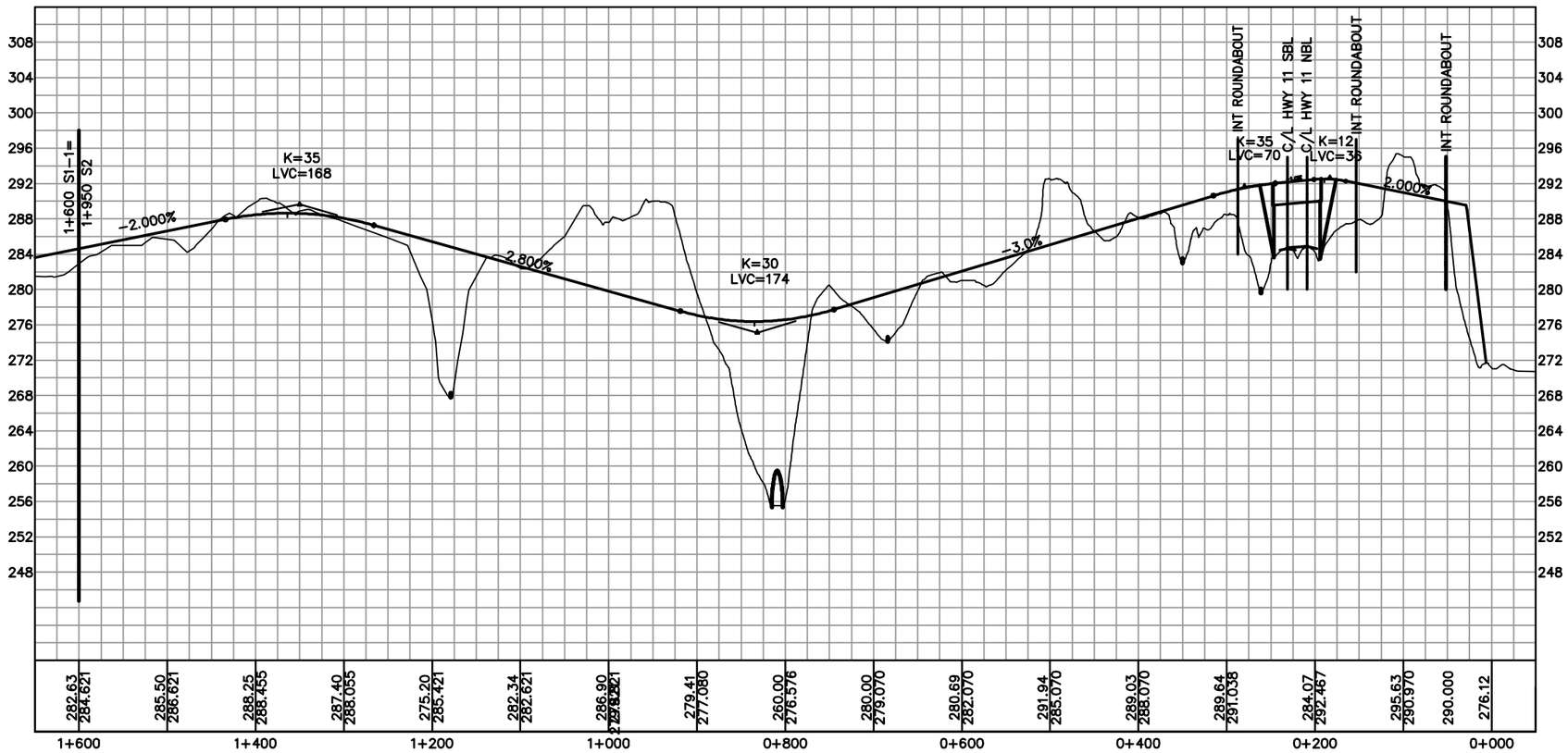


AECOM	THE DISTRICT MUNICIPALITY OF MUSKOKA		NORTHERN TRANSPORTATION CORRIDOR BRACEBRIDGE	ALTERNATIVE S1 HWY 11 INTERCHANGE		
				SCALE: –	DATE: 12/14/12	PROJECT: 60241537	DWG: SI-INT

LEGEND

- MUNICIPAL BOUNDARY
- **TOWN OF BRACEBRIDGE URBAN BOUNDARY**
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS





AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA

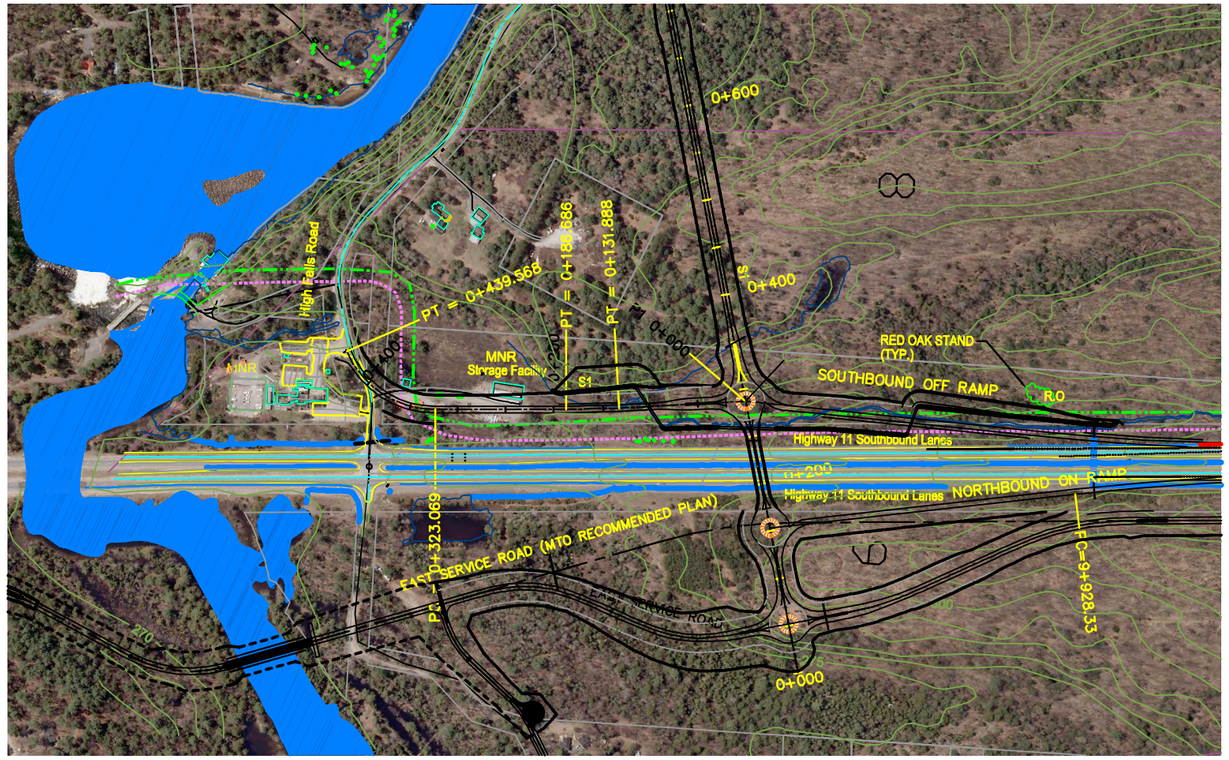
HOR: 0 100 200 m

VERT: 0 10 20 m

NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

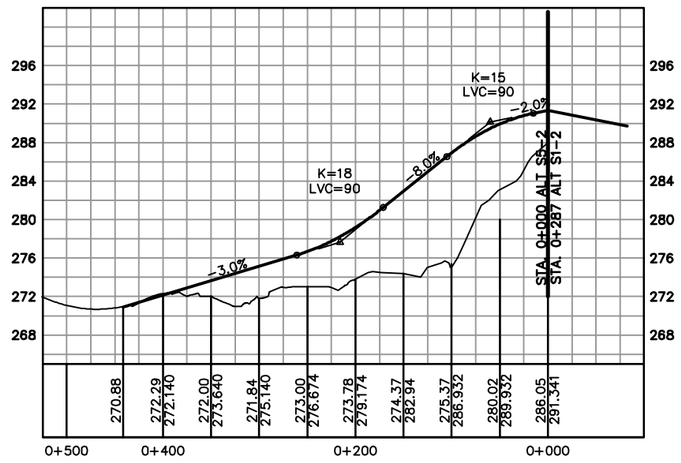
ALTERNATIVE S1
STA. 0+000 TO STA. 1+600

SCALE: –	DATE: 12/14/12	PROJECT: 60241537	DWG: S1-1



LEGEND

- MUNICIPAL BOUNDARY
- **TOWN OF BRACEBRIDGE URBAN BOUNDARY**
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS



AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA

HOR: 0 100 200 m

VERT: 0 10 20 m

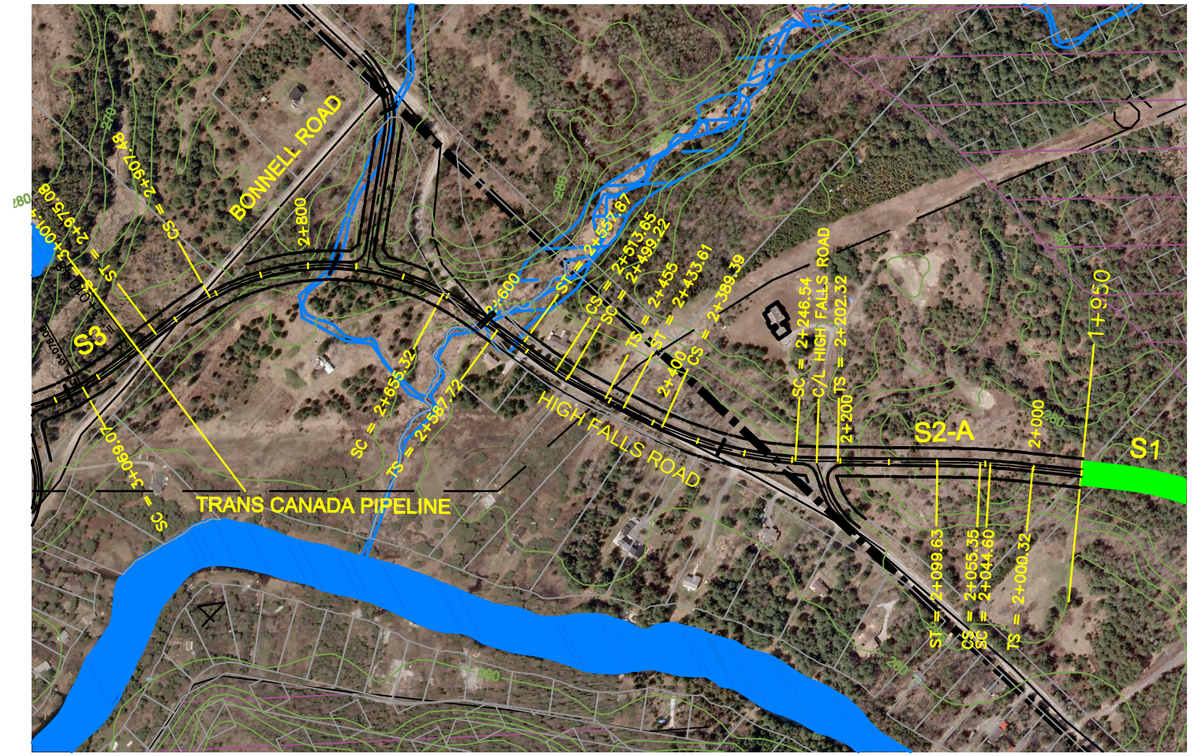
NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

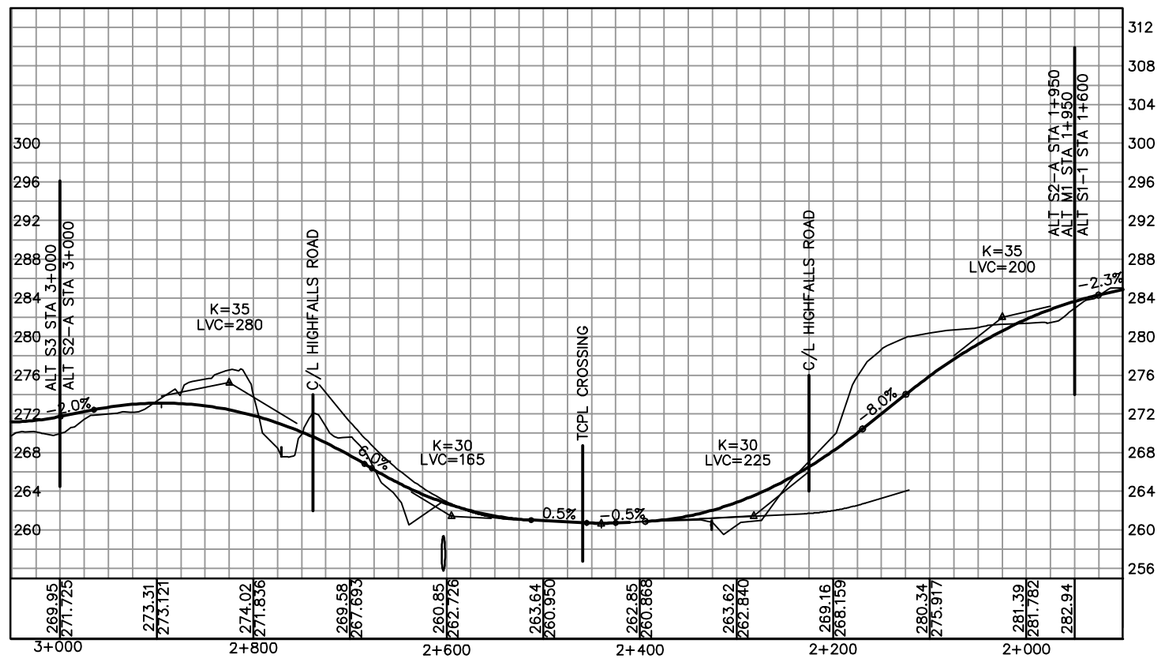
ALTERNATIVE S1
STA. 0+000 TO STA. 0+500

SCALE: –	DATE: 12/14/12	PROJECT: 60241537	DWG: S1-2

LEGEND

- MUNICIPAL BOUNDARY
- TOWN OF BRACEBRIDGE URBAN BOUNDARY
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS





AECOM

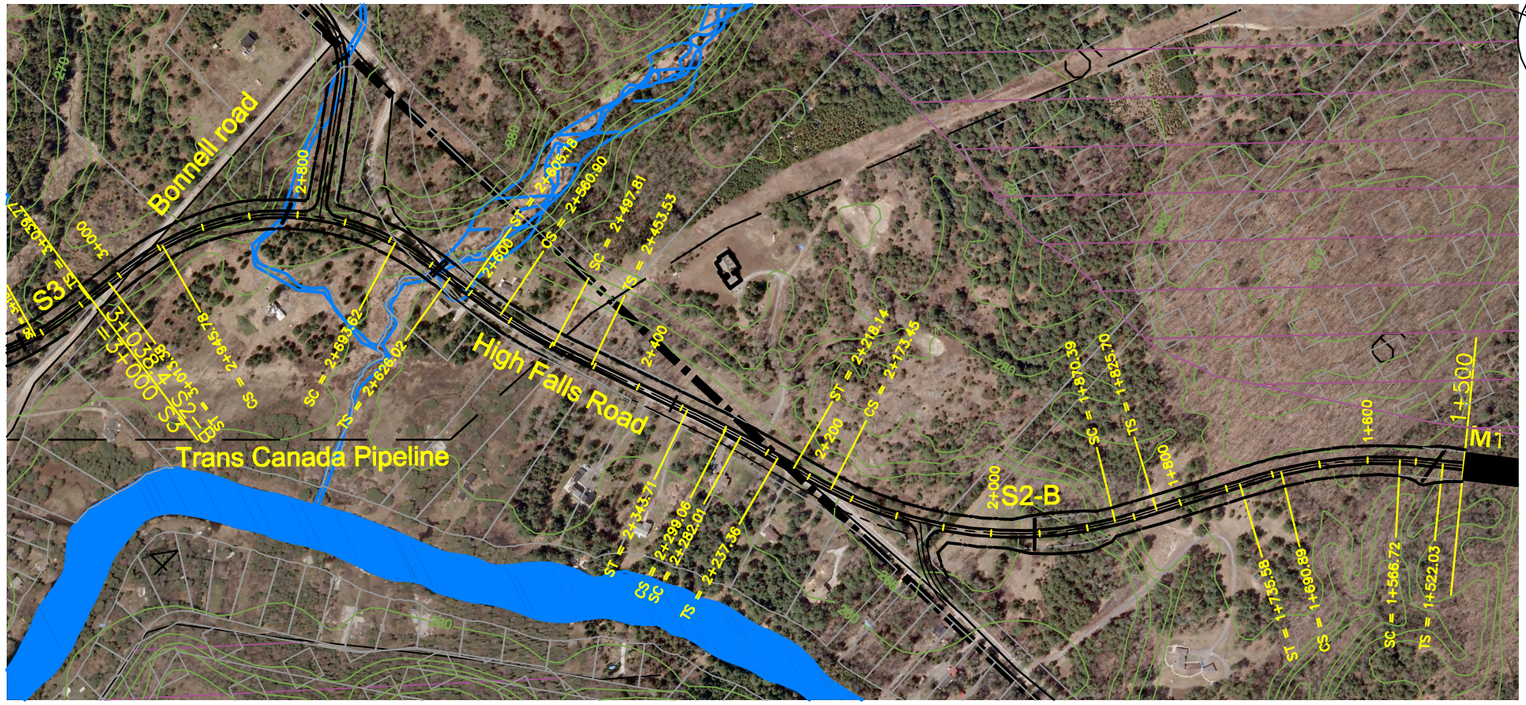
THE DISTRICT MUNICIPALITY OF MUSKOKA
Managing Our Legacy Together

HOR: 0 100 200 m
VERT: 0 10 20 m

NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

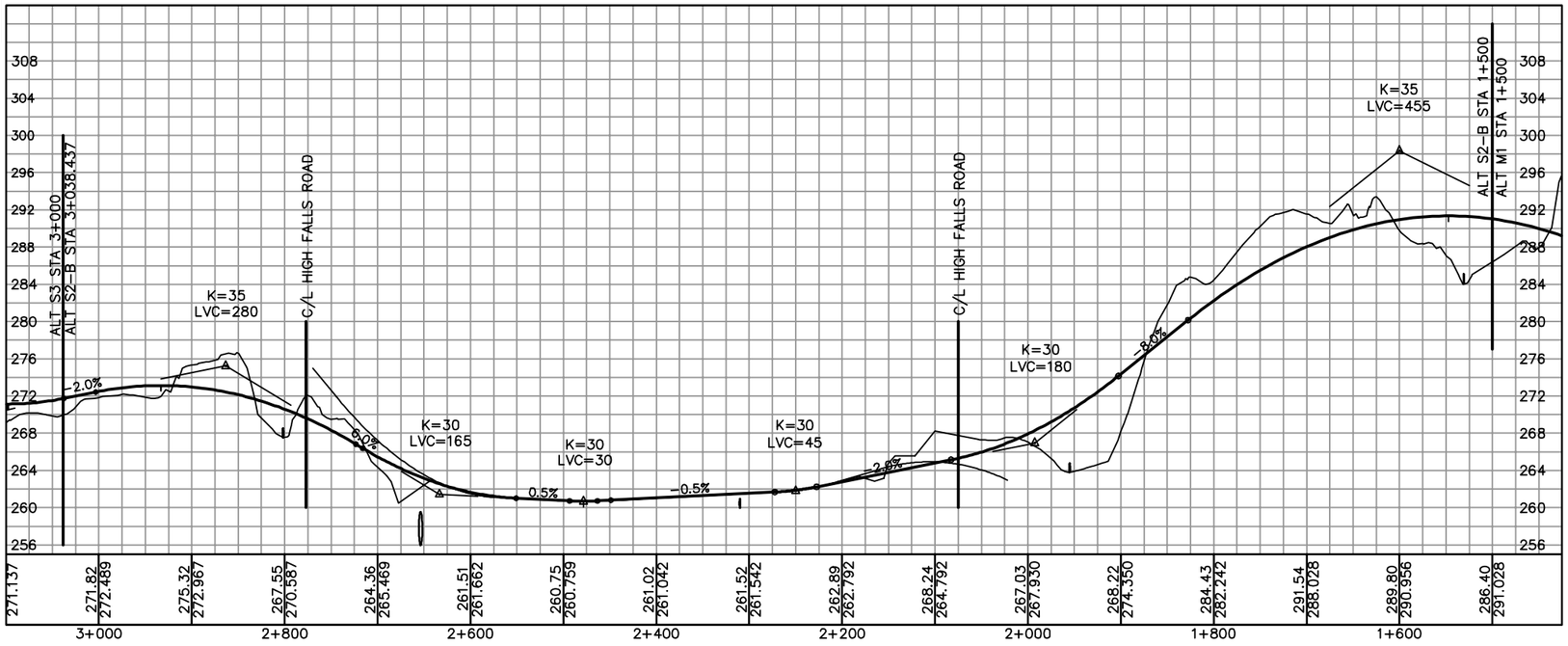
ALTERNATIVE S2-A
STA. 1+950 TO STA. 3+000

SCALE: –	DATE: 12/14/12	PROJECT: 60241537	DWG: S2-A



LEGEND

- MUNICIPAL BOUNDARY
- TOWN OF BRACEBRIDGE URBAN BOUNDARY
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS

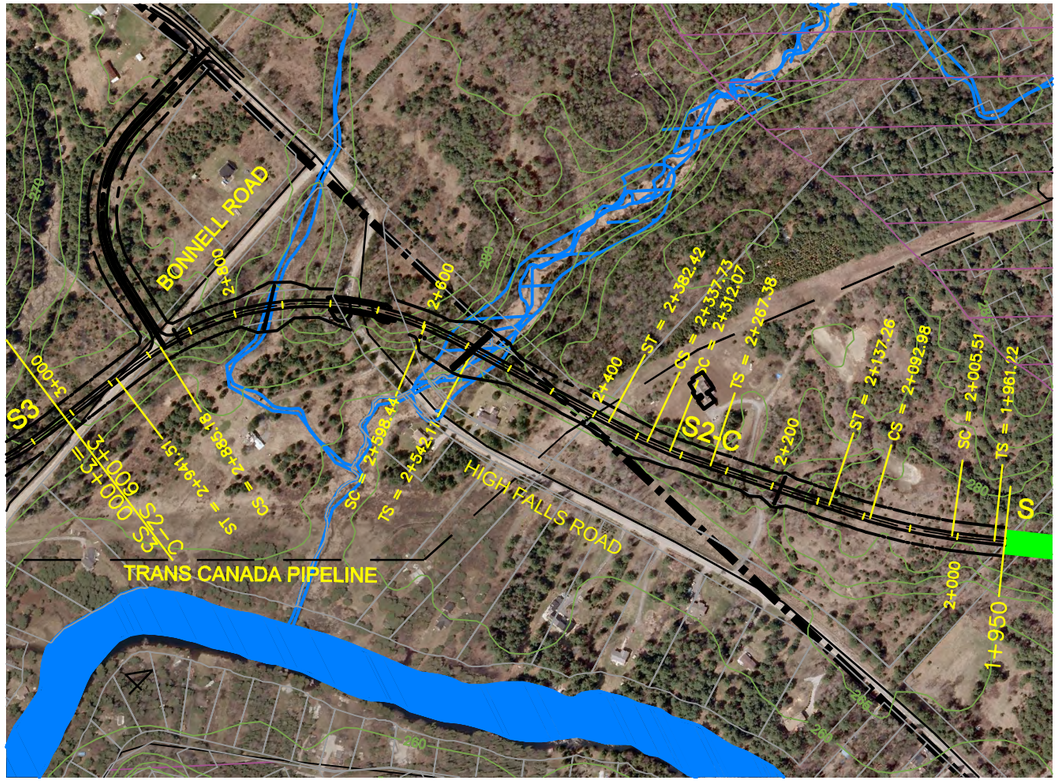


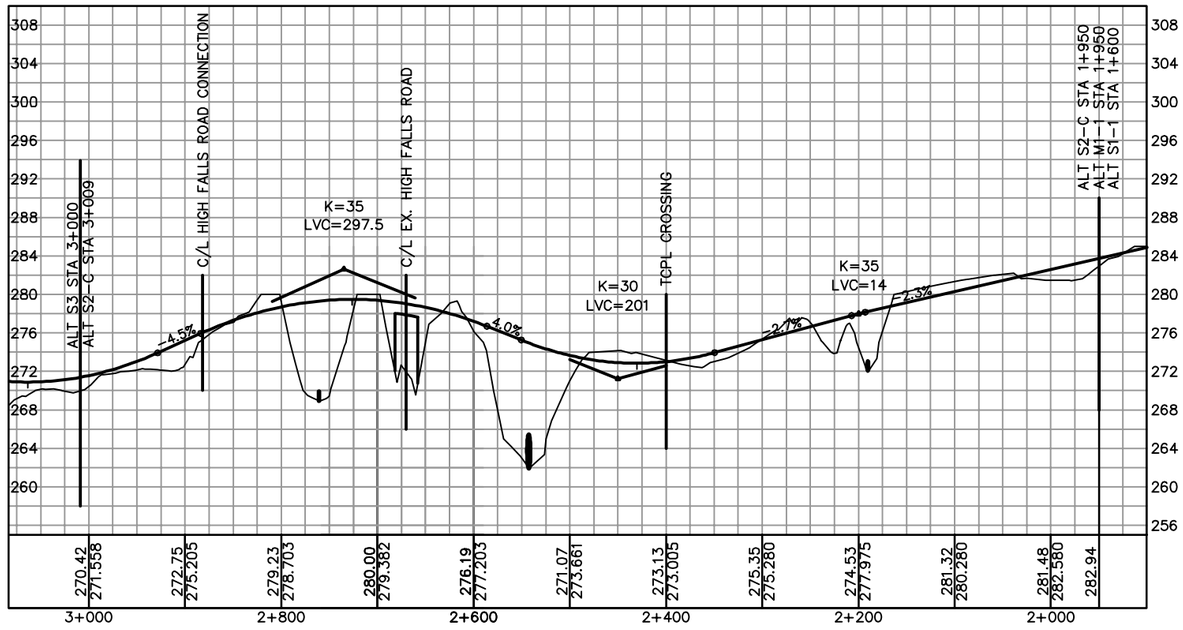
AECOM	THE DISTRICT MUNICIPALITY OF MUSKOKA — Managing Our Legacy Together	HOR: 0 100 200 m VERT: 0 10 20 m	NORTHERN TRANSPORTATION CORRIDOR BRACEBRIDGE	ALTERNATIVE S2-B / S3 STA. 1+500 TO STA. 3+038.437

SCALE:	DATE:	PROJECT:	DWG:
–	12/14/12	60241537	S2-B

LEGEND

- MUNICIPAL BOUNDARY
- TOWN OF BRACEBRIDGE URBAN BOUNDARY
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS





THE DISTRICT MUNICIPALITY OF MUSKOKA

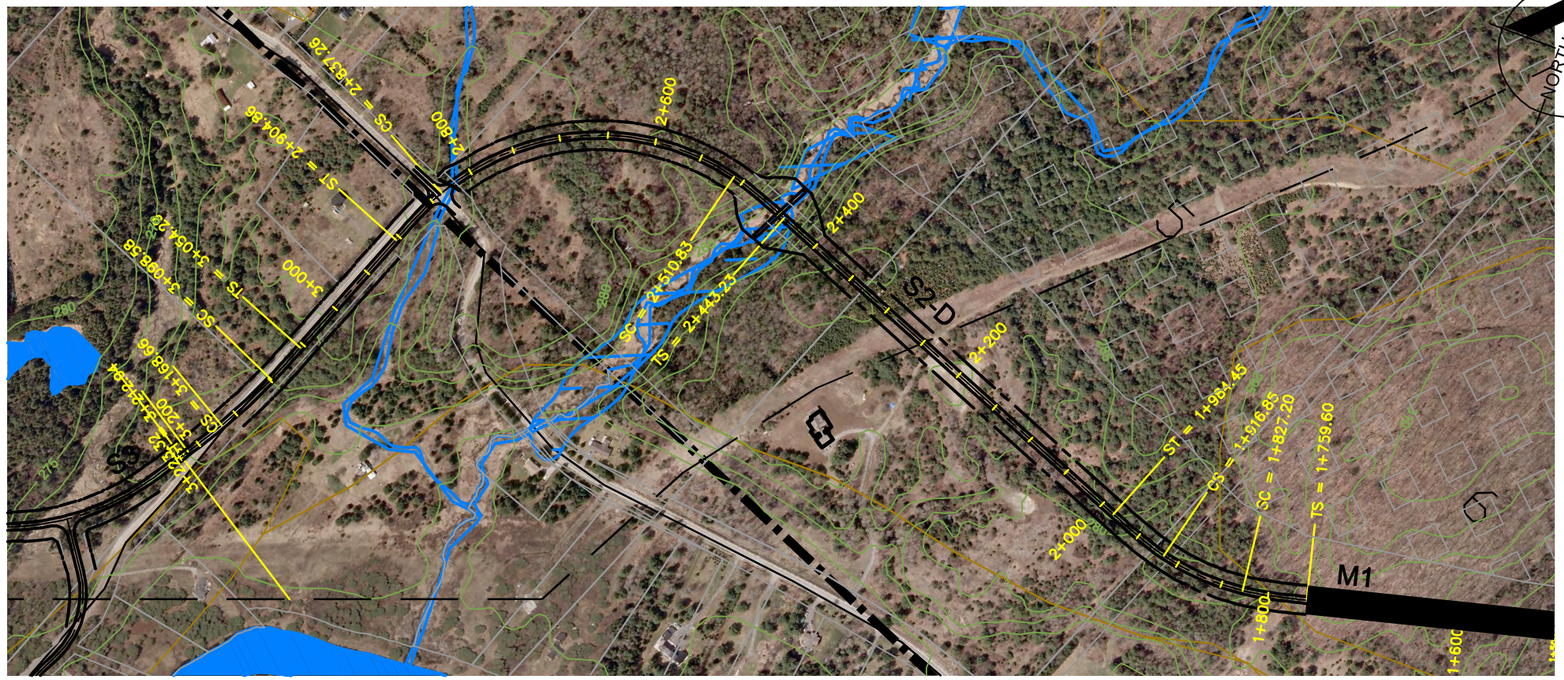
HOR: 0 100 200 m

VERT: 0 10 20 m

NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

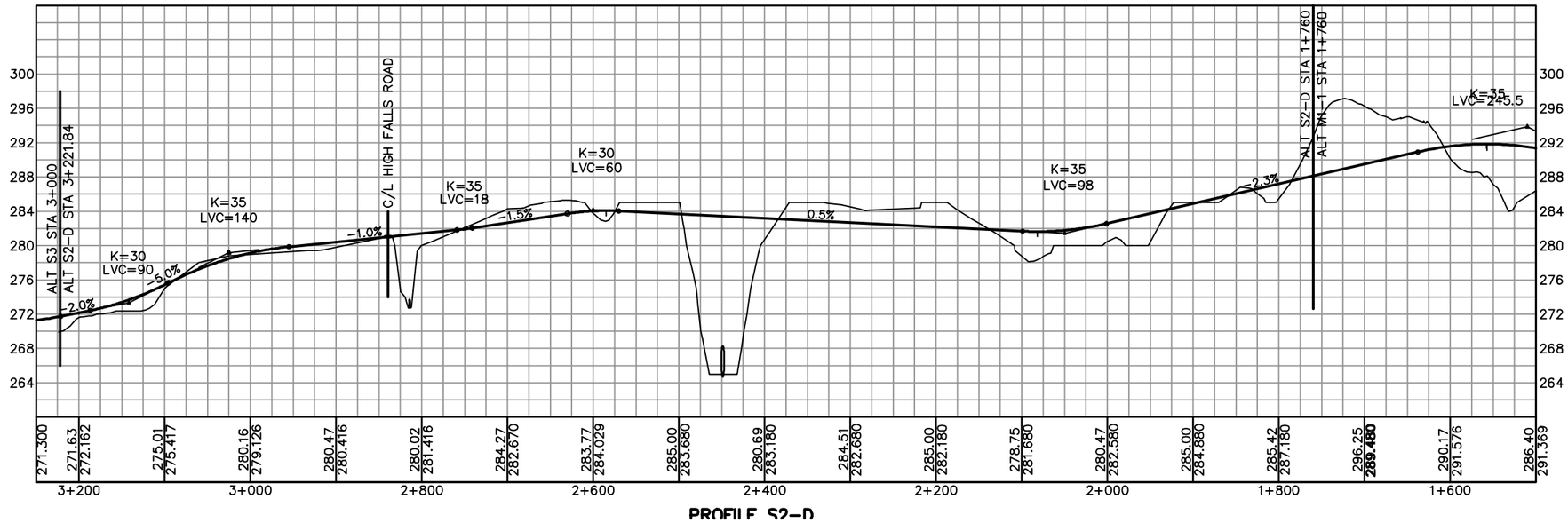
ALTERNATIVE S2-C
STA. 1+950 TO STA. 1+600

SCALE: –	DATE: 12/14/12	PROJECT: 60241537	DWG: S2-C



LEGEND

- MUNICIPAL BOUNDARY
- TOWN OF BRACEBRIDGE URBAN BOUNDARY
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS



PROFILE S2-D

AECOM

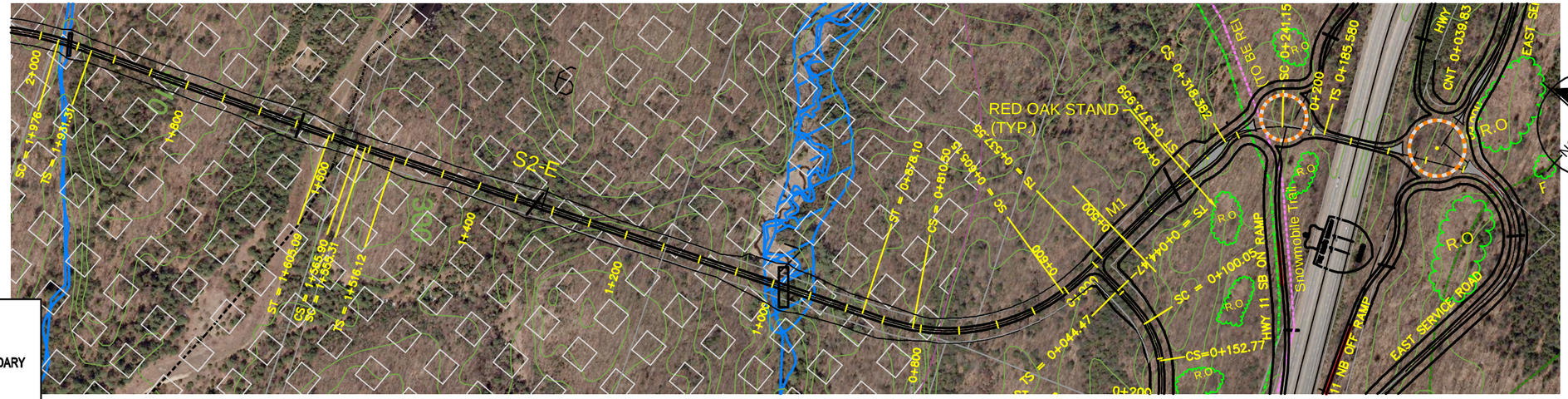
THE DISTRICT MUNICIPALITY OF MUSKOKA
Managing Our Legacy Together

HOR: 0 100 200 m
VERT: 0 10 20 m

NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

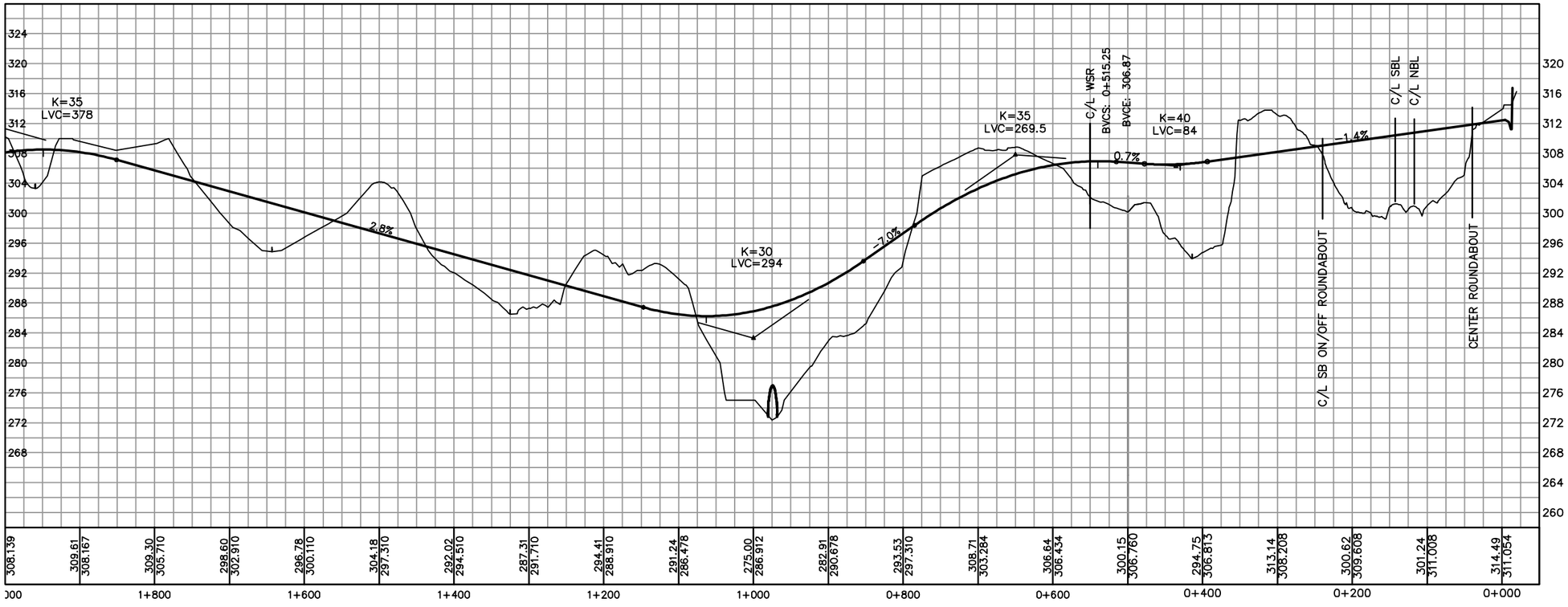
ALTERNATIVE S2-D
STA. 1+760 TO STA. 3+2214.84

SCALE: –	DATE: 12/14/12	PROJECT: 60241537	DWG: S2-D



LEGEND

- MUNICIPAL BOUNDARY
- **TOWN OF BRACEBRIDGE URBAN BOUNDARY**
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS



AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA
Managing Our Legacy Together

HOR: 0 100 200 m
VERT: 0 10 20 m

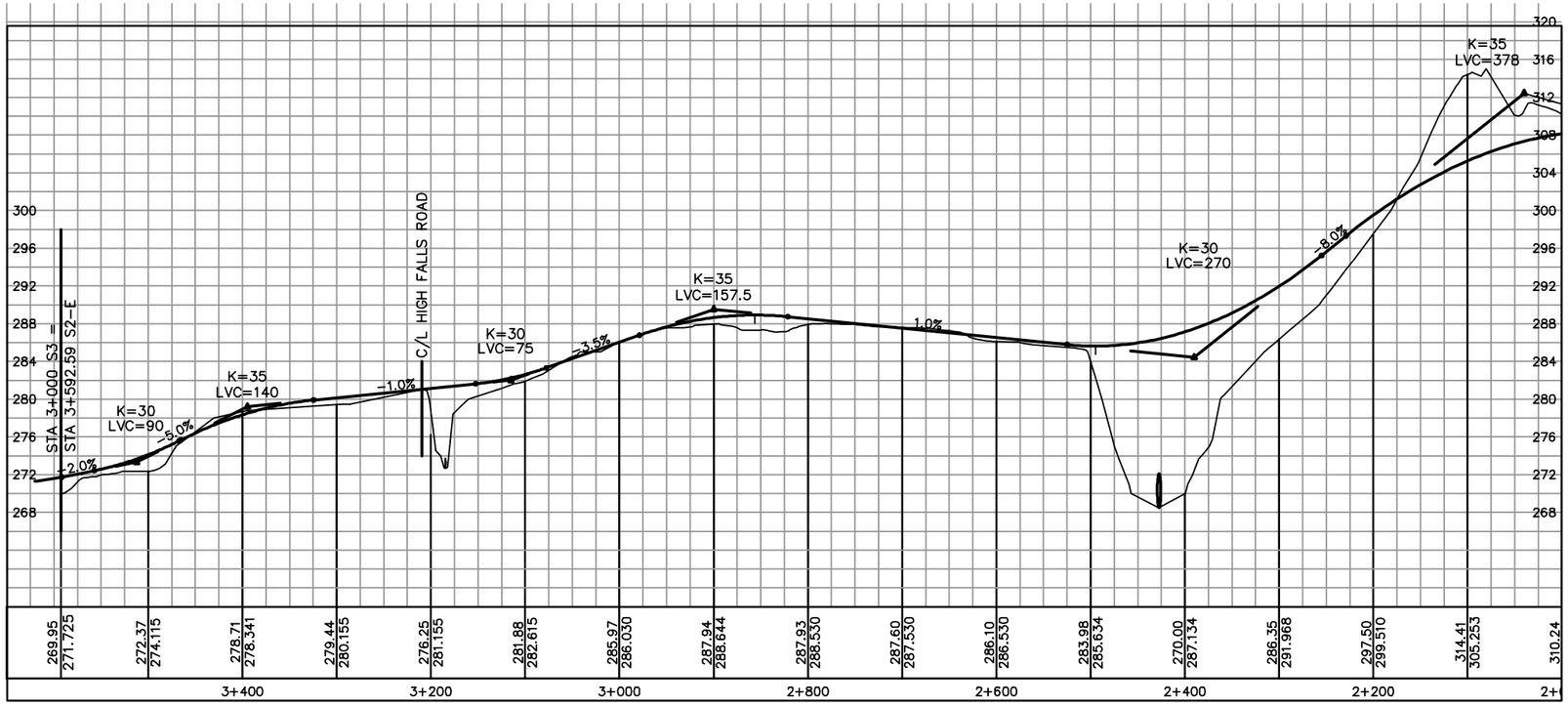
NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

ALTERNATIVE S2-E
STA. 0+000 TO STA. 2+000

SCALE: –	DATE: 01/05/14	PROJECT: 60241537	DWG: S2E-1

LEGEND

- MUNICIPAL BOUNDARY
- TOWN OF BRACEBRIDGE URBAN BOUNDARY
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS



AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA

HOR: 0 100 200 m

VERT: 0 10 20 m

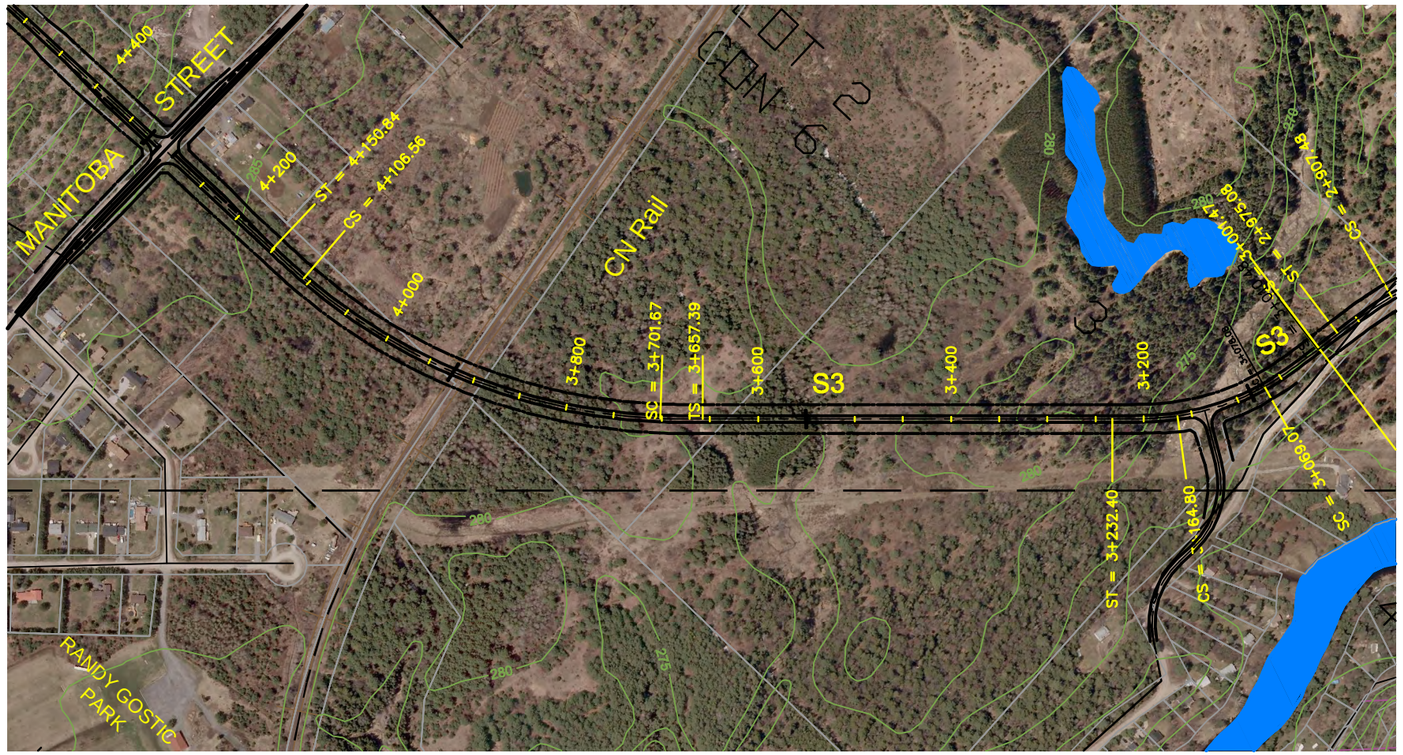
NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

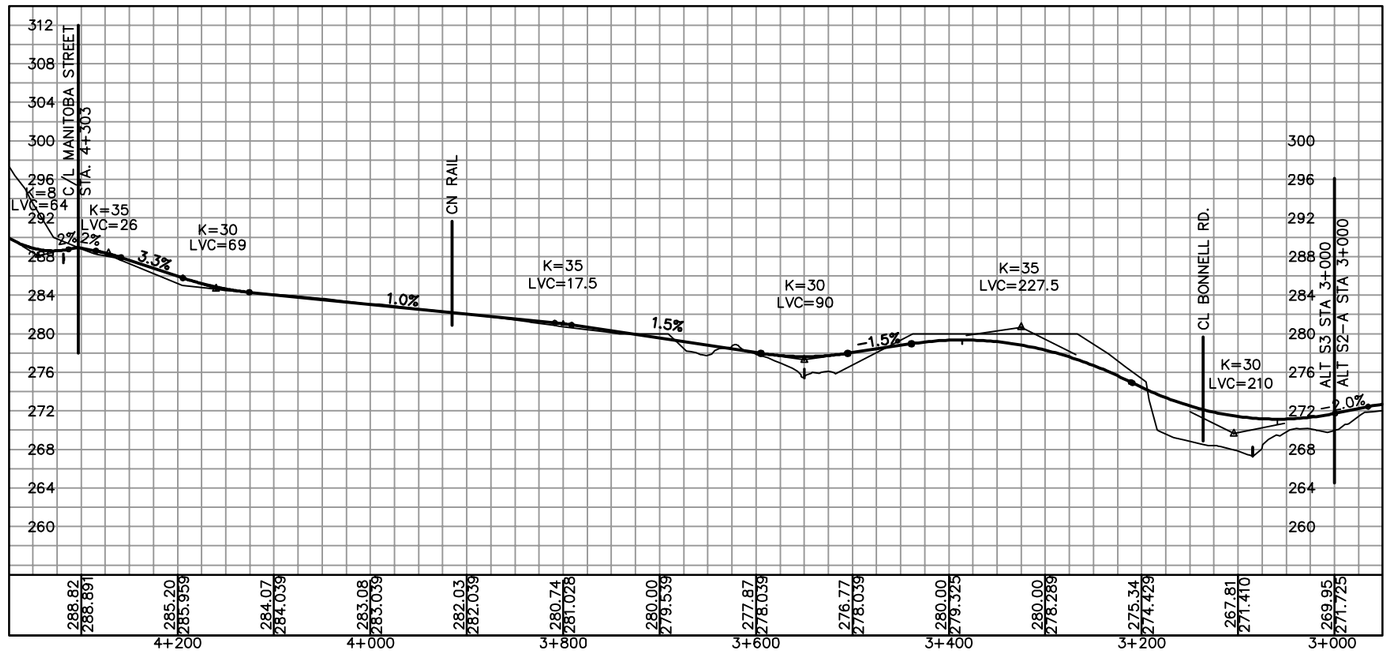
ALTERNATIVE S2-E
STA. 2+000 TO STA. 3+592.59

SCALE:	–	DATE: 01/05/14	PROJECT: 60241537	DWG: S2E-2

LEGEND

- MUNICIPAL BOUNDARY
- TOWN OF BRACEBRIDGE URBAN BOUNDARY
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS





AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA

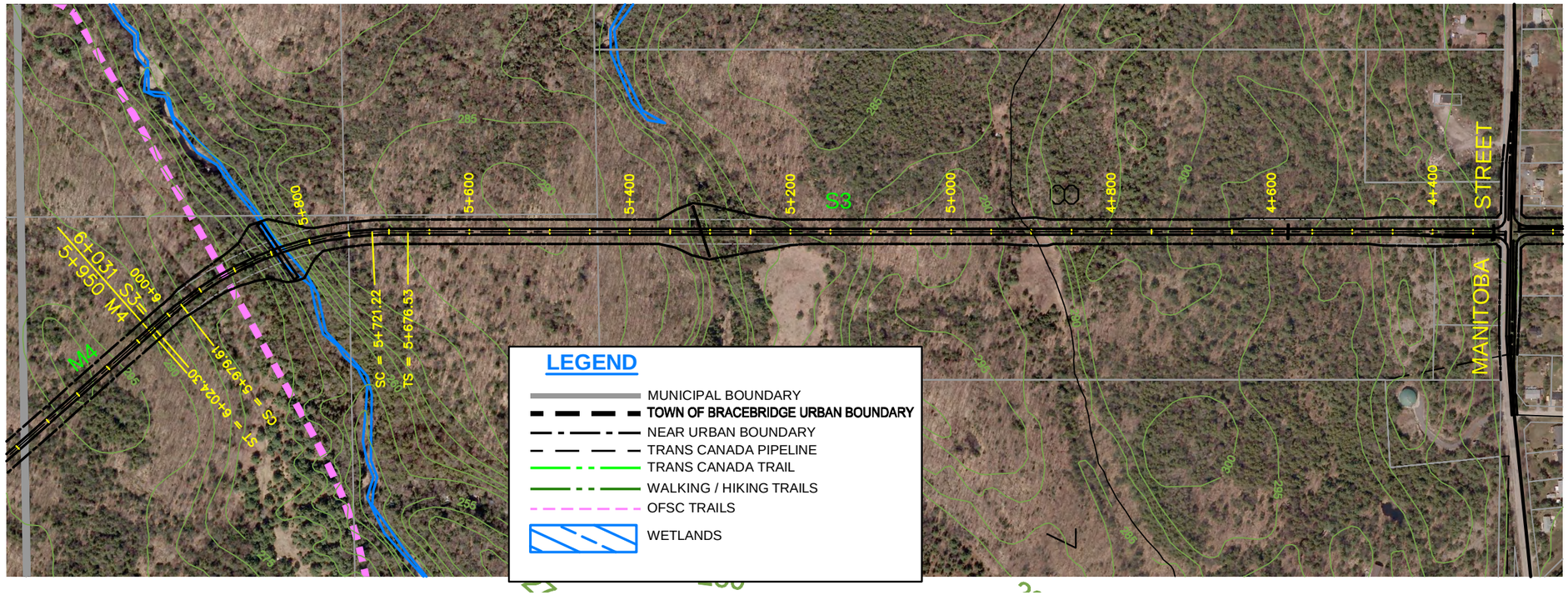
HOR: 0 100 200 m

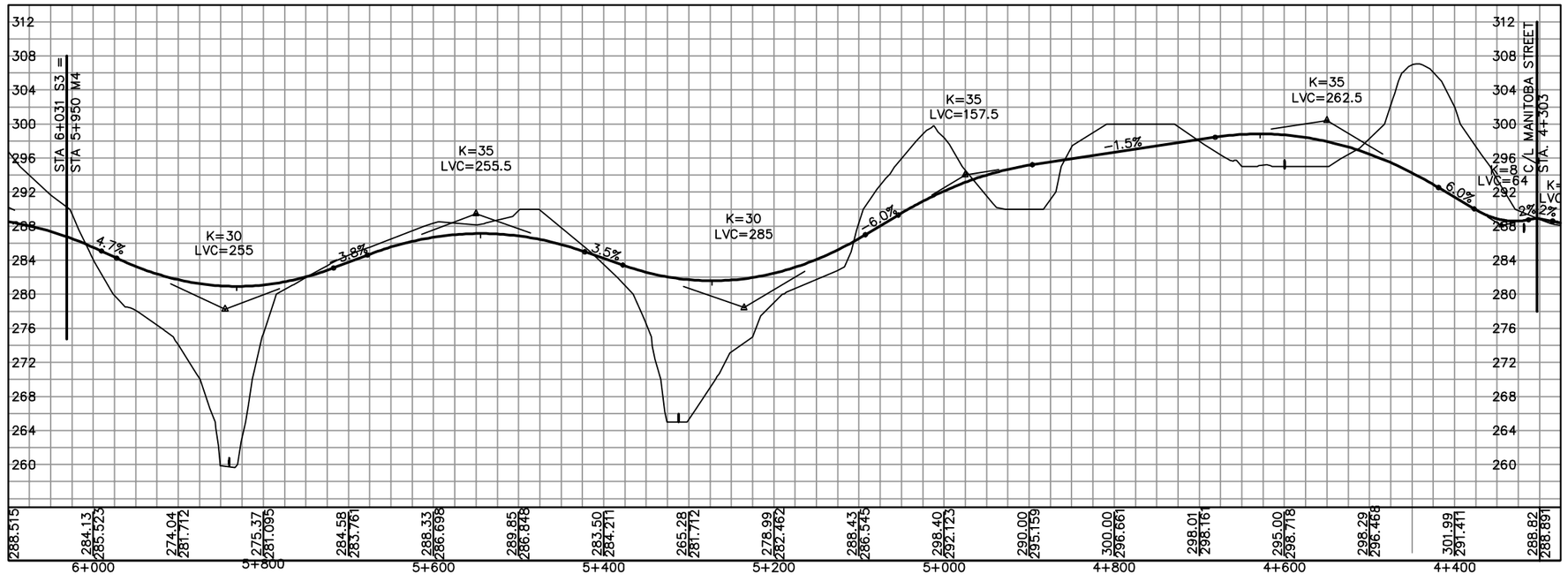
VERT: 0 10 20 m

NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

ALTERNATIVE S3
STA. 3+000 TO STA. 4+303

SCALE: –	DATE: 12/14/12	PROJECT: 60241537	DWG: S3-1





AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA

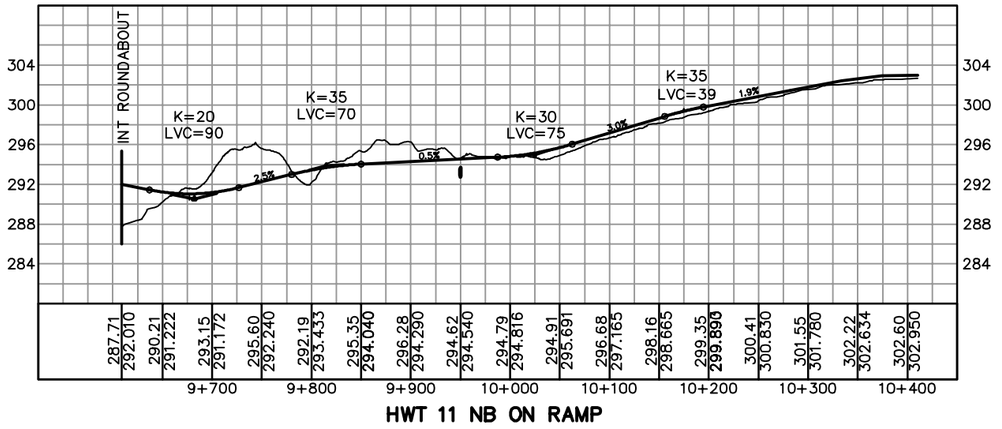
HOR: 0 100 200 m

VERT: 0 10 20 m

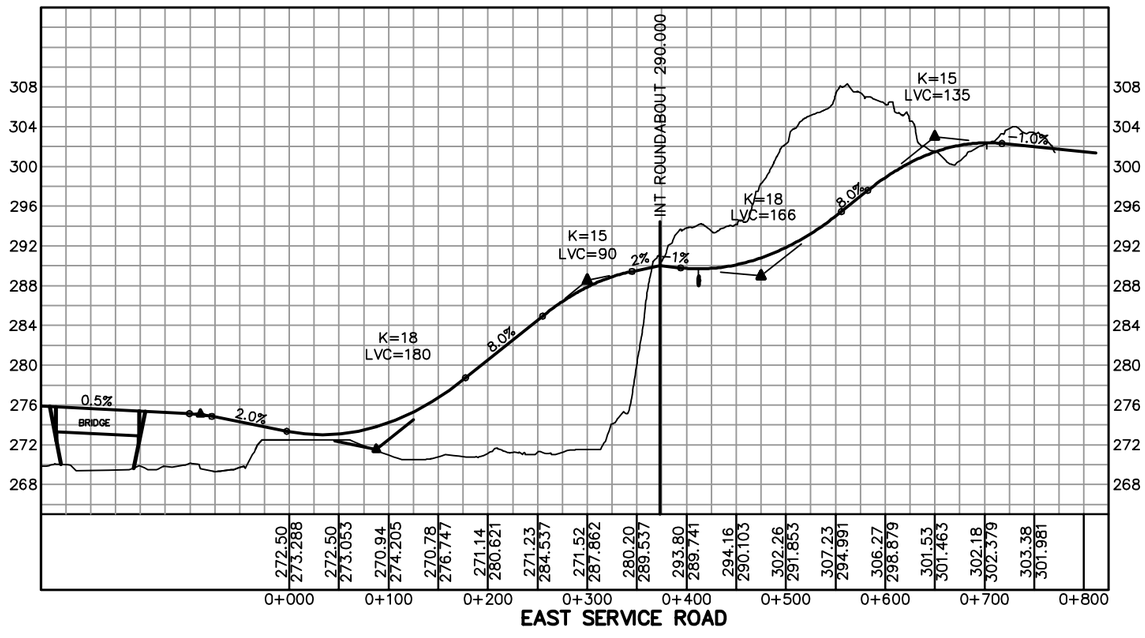
NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

ALTERNATIVE S3
STA. 4+303 TO STA. 6+031

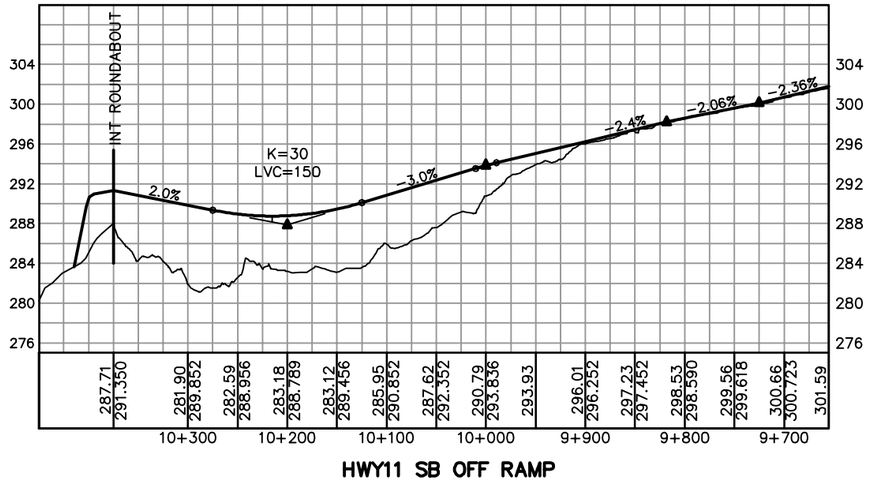
SCALE: –	DATE: 12/14/12	PROJECT: 60241537	DWG: S3-2



HWT 11 NB ON RAMP



EAST SERVICE ROAD



HWY11 SB OFF RAMP

AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA
Managing Our Legacy Together

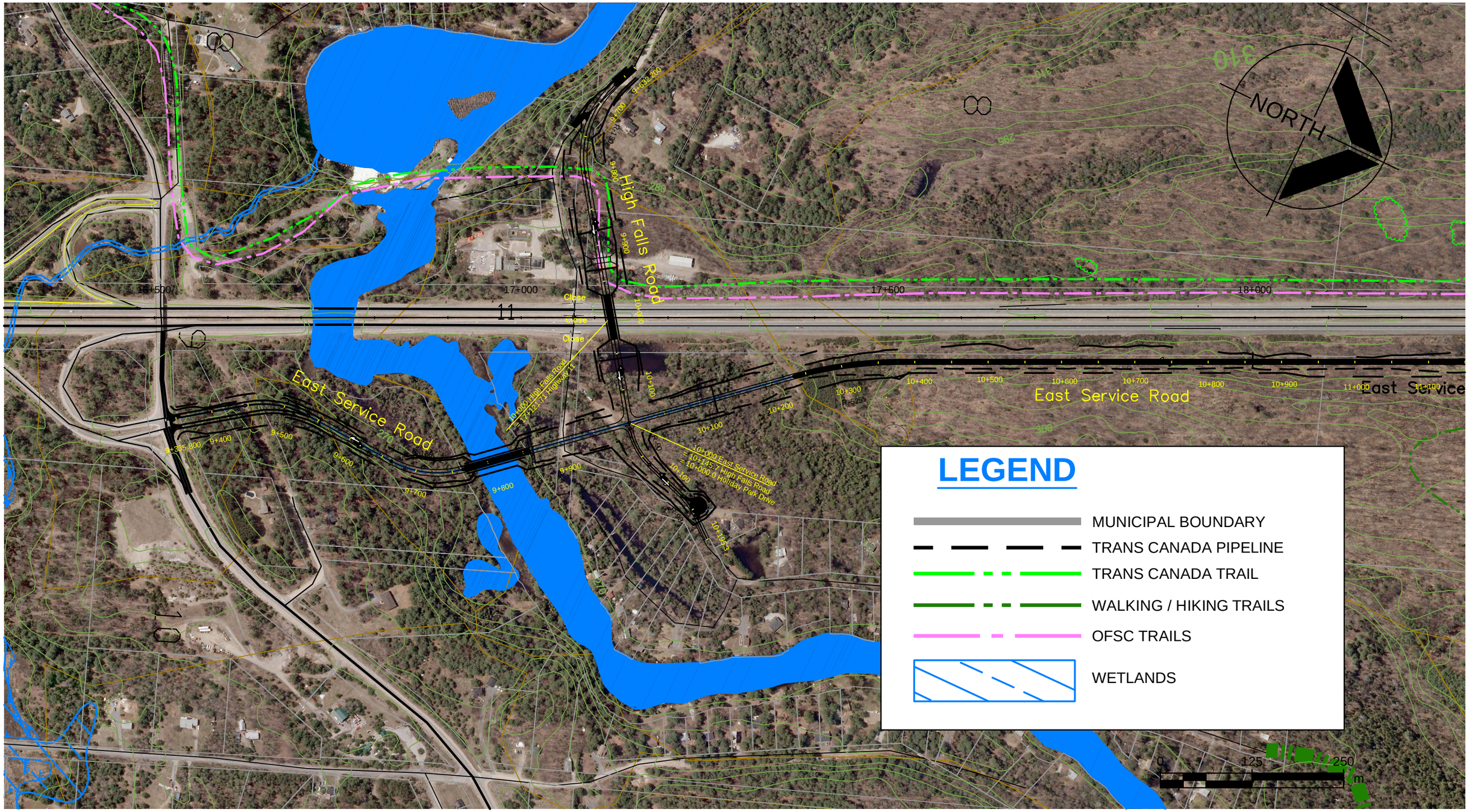
HOR: 0 100 200 m

VERT: 0 10 20 m

NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

SOUTH ROUTE
HWY 11 INT. PROFILES

SCALE: N.T.S. | DATE: 12/14/12 | PROJECT: 60241537 | DWG: S-IT-PRO



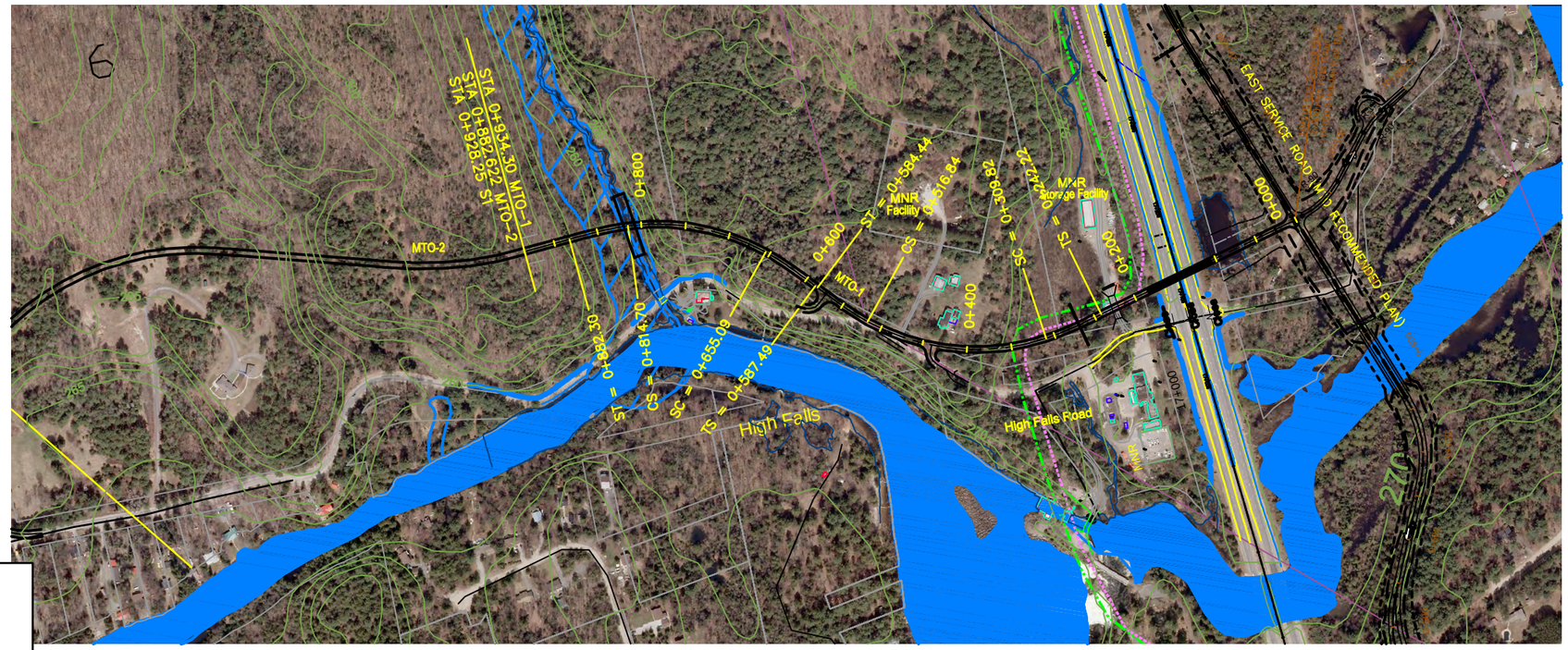
AECOM

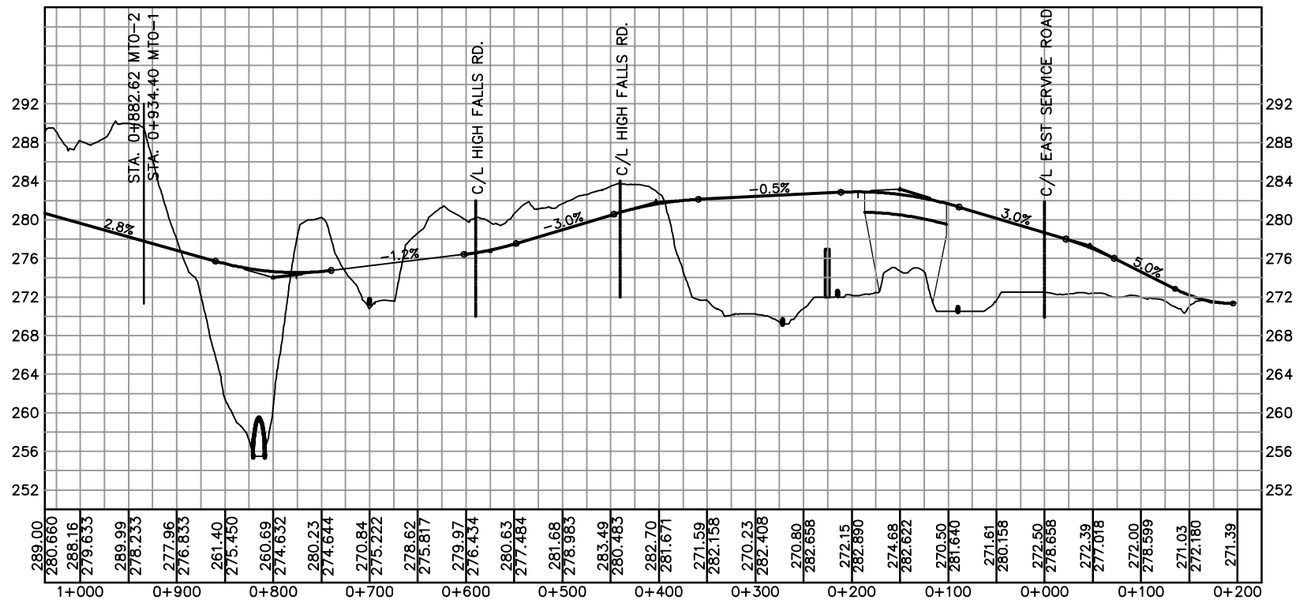
THE DISTRICT MUNICIPALITY OF MUSKOKA

NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

MTO ALTERNATIVE
HWY 11 INTERCHANGE

SCALE: N.T.S.	DATE: 12/14/12	PROJECT: 60241537	DWG: MTO





LEGEND

- MUNICIPAL BOUNDARY
- TOWN OF BRACEBRIDGE URBAN BOUNDARY
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS

AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA

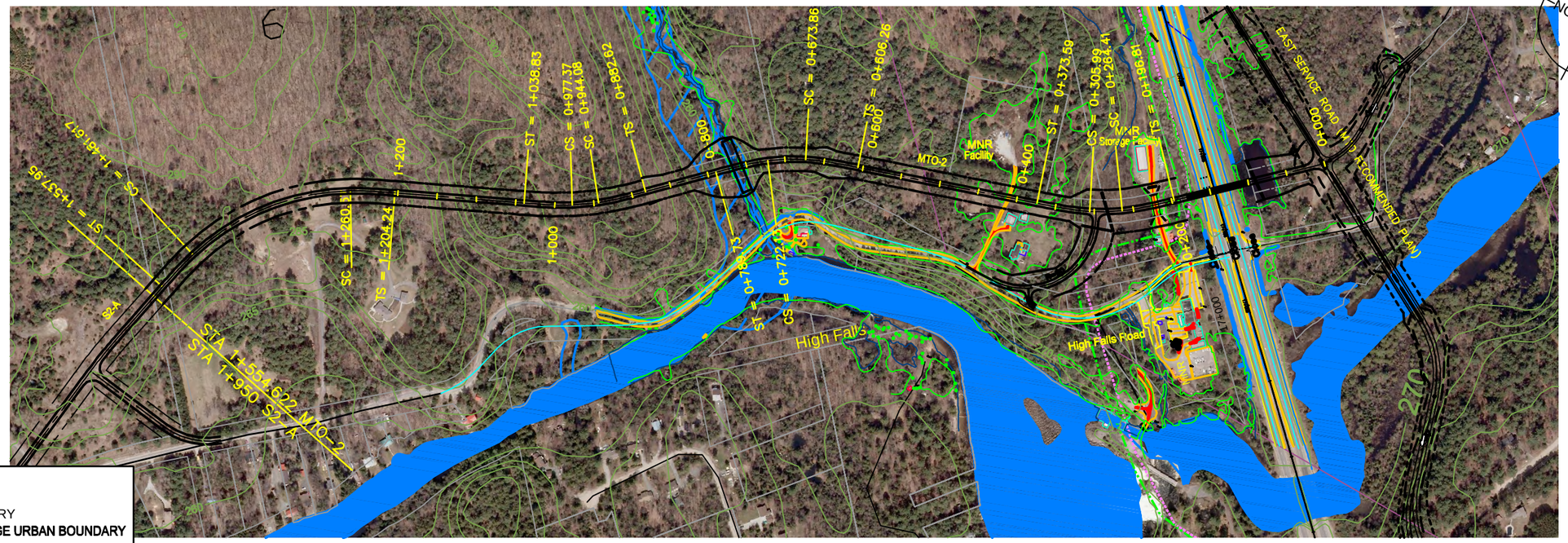
HOR: 0 100 200 m

VERT: 0 10 20 m

NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

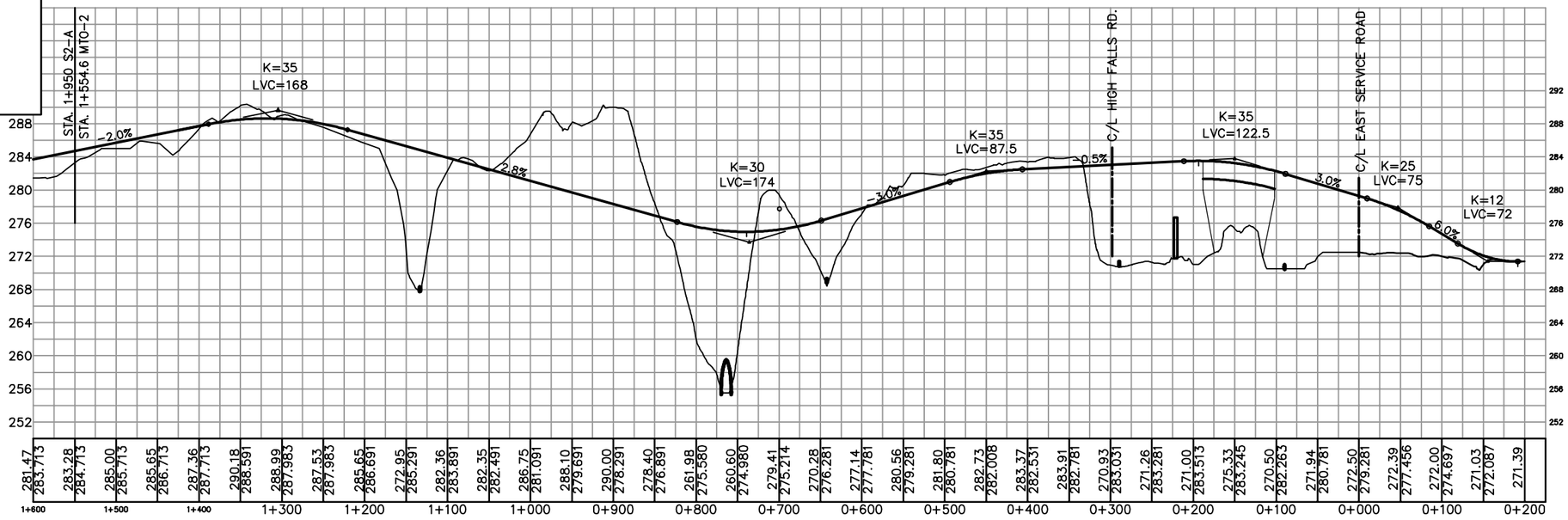
ALTERNATIVE MTO-1
STA. -0+200 TO STA. 1+000

SCALE:	–	DATE: 12/14/12	PROJECT: 60241537	DWG: MTO-1



LEGEND

- MUNICIPAL BOUNDARY
- **TOWN OF BRACEBRIDGE URBAN BOUNDARY**
- NEAR URBAN BOUNDARY
- TRANS CANADA PIPELINE
- TRANS CANADA TRAIL
- WALKING / HIKING TRAILS
- OFSC TRAILS
- WETLANDS



AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA

HOR: 0 100 200 m

VERT: 0 10 20 m

NORTHERN TRANSPORTATION CORRIDOR
BRACEBRIDGE

ALTERNATIVE MTO-2
STA. -0+200 TO STA. 1+600

SCALE:	–	DATE: 12/14/12	PROJECT: 60241537	DWG: MTO-2