

Appendix I

Evaluation of Alternative Design Concepts

Mapleview Drive Huronia Road to Country Lane Evaluation Criteria		How Criteria is Being Assessed		Do Nothing		Alternative 1: 7 lanes, 4.2m median, 2m bike lanes, 2m sidewalks		Alternative 2: 7 lanes, 4.2m median, 2m bike lanes, 2m sidewalks, LID features		Alternative 3: 7 lanes, 4.2m median, 3m MUT, 1.6m sidewalk	
Engineering / Operational Environment	Traffic Operations (MMATMP, safety, capacity, congestion, etc.)	Ability to	(i) improve connectivity to existing road network; (ii) to meet Barrie's MMATMP (iii) to improve traffic safety (iv) to improve traffic operations (increase capacity, reduce congestion and delays)								
	Cycling Operations	Adequacy to accommodate cyclists									
	Transit Operations/Services	Adequacy for transit operations/services									
	Pedestrian Operations	Adequacy to accommodate pedestrians									
	Driveway Impacts	Impacts on driveway accessibility and operations									
	Stormwater Management	Ability to accommodate drainage and stormwater management. Use of LIDs									
	Operations and Maintenance Requirements	Ease and cost of O & M requirements									
	Impacts to Structures	Impact on structures and other infrastructure (i.e. railways)									
Natural Environment	Water Courses/Fisheries/Aquatic Impacts	Potential impact on existing watercourses/impact on fish/fish habitat (Brook Trout)									
	Wildlife and Wildlife Habitat	Potential impact on Significant Wildlife Habitat, including Species of Conservation Concern									
	Species at Risk	Potential impact on Species at Risk									
	Vegetation	Potential impact on Significant Woodlands, other wooded areas and areas of natural vegetation communities (excluding wetlands)									
	Impacts to Wetlands/PSW	Potential impact on Lover's Creek, Provincially Significant Wetland Complex, locally significant wetlands and unevaluated wetlands									
	Land Use	Compatibility with land use (existing and future)									
	Environmental Improvements	Opportunities to enhance aquatic/terrestrial features					Deer wintering areas		Deer wintering areas		Deer wintering areas
Social Impact	Property Acquisition	Degree of property required and households/business affected									
	Aesthetics	Ability to improve visual aesthetics of roadway and community									
	Noise Impacts	Number of noise walls or mitigations measured required									
	Accessibility	Compliance with AODA									
	Public Safety	Elimination of conflict points; improved infrastructure for all users									
	Local Businesses	Disruption/permanent impact to businesses									
Cultural/Heritage Environment	Archaeological Impacts	Potential impact to archaeological resources									
	Cultural Heritage Impacts	Potential for direct or indirect impacts to built heritage resources and cultural heritage landscapes									
	First Nations Impacts	Potential impact to First Nations interests, traditional land use and aboriginal or treaty rights									
Economic Environment	Project Capital Costs	Total projects costs for capital improvements									
	Life – Cycle Costs (25 year)	Net Present Value of 25-year life cycle costs									
	Land Acquisition Costs	Total costs for property acquisition									
SUMMARY				NOT PREFERRED Although it has minimal impact on the natural heritage and cost, it does not address the need for improvements.		PREFERRED Addresses need for improvements. Some opportunity for improvement to transit, cycling and pedestrian access.		PREFERRED Addresses need for improvements. Some opportunity for improvement to transit, cycling and pedestrian access.		MOST PREFERRED Best addresses need for improvements, and provides safer opportunities for cyclists. Impacts on natural and social environment can be mitigated.	

Mapleview Drive Country Lane to Madelaine Drive Evaluation Criteria		How Criteria is Being Assessed	Do Nothing	Alternative 1: 7 lanes, 4.2m median, 2m bike lanes, 2m sidewalks	Alternative 2: 7 lanes, 4.2m median, 2m bike lanes, 2m sidewalks, LID features	Alternative 3: 7 lanes, 4.2m median, 3m MUT, 1.6m sidewalk
Engineering / Operational Environment	Traffic Operations (MMATMP, safety, capacity, congestion, etc.)	Ability to (i) improve connectivity to existing road network (ii) to meet Barrie's MMATMP (iii) to improve traffic safety (iv) to improve traffic operations (increase capacity, reduce congestion and delays)				
	Cycling Operations	Adequacy to accommodate cyclists				
	Transit Operations/Services	Adequacy for transit operations/services				
	Pedestrian Operations	Adequacy to accommodate pedestrians				
	Driveway Impacts	Impacts on driveway accessibility and operations				
	Stormwater Management	Ability to accommodate drainage and stormwater management. Use of LIDs				
	Operations and Maintenance requirements	Ease and cost of O & M requirements				
	Impacts to Structures	Impact on structures and other infrastructure (i.e. railways)				
Natural Environment	Water courses/Fisheries/Aquatic Impacts	Potential impact on existing watercourses/impact on fish/fish habitat (Brook Trout)				
	Wildlife and Wildlife Habitat	Potential impact on Significant Wildlife Habitat, including Species of Conservation Concern				
	Species at Risk	Potential impact on Species at Risk				
	Vegetation	Potential impact on Significant Woodlands, other wooded areas and areas of natural vegetation communities (excluding wetlands)				
	Impacts to Wetlands/PSW	Potential impact on Lover's Creek, Provincially Significant Wetland Complex, locally significant wetlands and unevaluated wetlands				
	Land Use	Compatibility with land use (existing and future)				
	Environmental Improvements	Opportunities to enhance aquatic/terrestrial features				
Social Impact	Property Acquisition	Degree of property required and households/business affected				
	Aesthetics	Ability to improve visual aesthetics of roadway and community				
	Noise Impacts	Number of noise walls or mitigations measured required				
	Accessibility	Compliance with AODA				
	Public Safety	Elimination of conflict points; improved infrastructure for all users				
	Local Businesses	Disruption/permanent impact to businesses				
Cultural/Heritage Environment	Archaeological Impacts	Potential impact to archaeological resources				
	Cultural Heritage Impacts	Potential for direct or indirect impacts to built heritage resources and cultural heritage landscapes				
	First Nations Impacts	Potential impact to First Nations interests, traditional land use and aboriginal or treaty rights				
Economic Environment	Project Capital Costs	Total projects costs for capital improvements				
	Life – Cycle Costs (25 year)	Net Present Value of 25-year life cycle costs				
	Land Acquisition Costs	Total costs for property acquisition				
SUMMARY			NOT PREFERRED Although it has minimal impact on the natural heritage and cost, it does not address the need for improvements	PREFERRED Addresses need for improvements. Some opportunity for improvement to transit, cycling and pedestrian access.	PREFERRED Addresses need for improvements. Some opportunity for improvement to transit, cycling and pedestrian access.	MOST PREFERRED Best addresses need for improvements, and provides safe opportunities for cyclists. Impacts to natural and social environment can be mitigated.

Mapleview Drive Madeline Drive to Yonge Street Evaluation Criteria		How Criteria is Being Assessed		Do Nothing		Alternative 1: 5 lanes, 4.2m median, 2m bike lanes, 2m sidewalks,		Alternative 2: 5 lanes, 4.2m median, 2m bike lanes, 2m sidewalks, LID features		Alternative 3: 5 lanes, 4m TWLTL, 3m MUT, 1.6m sidewalk	
Engineering / Operational Environment	Traffic Operations (MMATMP, safety, capacity, congestion, etc.)	Ability to	(i) improve connectivity to existing road network (ii) to meet Barrie's MMATMP (iii) to improve traffic safety (iv) to improve traffic operations (increase capacity, reduce congestion and delays)								
	Cycling Operations	Adequacy to accommodate cyclists									
	Transit Operations/Services	Adequacy for transit operations/services									
	Pedestrian Operations	Adequacy to accommodate pedestrians									
	Driveway Impacts	Impacts on driveway accessibility and operations									
	Stormwater Management	Ability to accommodate drainage and stormwater management. Use of LIDs									
	Operations and Maintenance Requirements	Ease and cost of O & M requirements									
	Impacts to Structures	Impact on structures and other infrastructure (i.e. railways)									
Natural Environment	Water Courses/Fisheries/Aquatic Impacts	Potential impact on existing watercourses/impact on fish/fish habitat (Brook Trout)									
	Wildlife and Wildlife Habitat	Potential impact on Significant Wildlife Habitat, including Species of Conservation Concern									
	Species at Risk	Potential impact on Species at Risk									
	Vegetation	Potential impact on Significant Woodlands, other wooded areas and areas of natural vegetation communities (excluding wetlands)									
	Impacts to Wetlands/PSW	Potential impact on Lover's Creek, Provincially Significant Wetland Complex, locally significant wetlands and unevaluated wetlands									
	Land Use	Compatibility with land use (existing and future)									
	Environmental Improvements	Opportunities to enhance aquatic/terrestrial features									
Social Impact	Property Acquisition	Degree of property required and households/business affected									
	Aesthetics	Ability to improve visual aesthetics of roadway and community									
	Noise Impacts	Number of noise walls or mitigations measured required									
	Accessibility	Compliance with AODA									
	Public Safety	Elimination of conflict points; improved infrastructure for all users									
	Local Businesses	Disruption/permanent impact to businesses									
Cultural/ Heritage Environment	Archaeological Impacts	Potential impact to archaeological resources									
	Cultural Heritage Impacts	Potential for direct or indirect impacts to built heritage resources and cultural heritage landscapes									
	First Nations Impacts	Potential impact to First Nations interests, traditional land use and aboriginal or treaty rights									
Economic Environment	Project Capital Costs	Total projects costs for capital improvements									
	Life – Cycle Costs (25 year)	Net Present Value of 25-year life cycle costs									
	Land Acquisition Costs	Total costs for property acquisition									
SUMMARY				NOT PREFERRED Although it has minimal impact on the natural heritage and cost, it does not address the need for improvements	PREFERRED Addresses need for improvements. Some opportunity for improvement to transit, cycling and pedestrian access.	PREFERRED Addresses need for improvements. Some opportunity for improvement to transit, cycling and pedestrian access.	PREFERRED Addresses need for improvements. Some opportunity for improvement to transit, cycling and pedestrian access.	MOST PREFERRED Best addresses need for improvements, and provides safe opportunities for cyclists. Impacts to natural and social environment can be mitigated.			

Mapleview Drive Yonge Street to Prince William Way Evaluation Criteria		How Criteria is Being Assessed		Do Nothing		Alternative 1: 5 lanes, 4.2m median, 2m bike lanes, 2m sidewalks,		Alternative 2: 5 lanes, 4.2m median, 2m bike lanes, 2m sidewalks, LID features		Alternative 3: 4 lanes, 3m MUT, 1.6m sidewalk, turning lanes at intersections	
Engineering / Operational Environment	Traffic Operations (MMATMP, safety, capacity, congestion, etc.)	Ability to	(i) improve connectivity to existing road network (ii) to meet Barrie's MMATMP (iii) to improve traffic safety (iv) to improve traffic operations (increase capacity, reduce congestion and delays)								
	Cycling Operations	Adequacy to accommodate cyclists									
	Transit Operations/Services	Adequacy for transit operations/services									
	Pedestrian Operations	Adequacy to accommodate pedestrians									
	Driveway Impacts	Impacts on driveway accessibility and operations									
	Stormwater Management	Ability to accommodate drainage and stormwater management. Use of LIDs									
	Operations and Maintenance Requirements	Ease and cost of O & M requirements									
	Impacts to Structures	Impact on structures and other infrastructure (i.e. railways)									
Natural Environment	Water Courses/Fisheries/Aquatic Impacts	Potential impact on existing watercourses/impact on fish/fish habitat (Brook Trout)									
	Wildlife and Wildlife Habitat	Potential impact on Significant Wildlife Habitat, including Species of Conservation Concern									
	Species at Risk	Potential impact on Species at Risk									
	Vegetation	Potential impact on Significant Woodlands, other wooded areas and areas of natural vegetation communities (excluding wetlands)									
	Impacts to Wetlands/PSW	Potential impact on Lover's Creek, Provincially Significant Wetland Complex, locally significant wetlands and unevaluated wetlands									
	Land Use	Compatibility with land use (existing and future)									
	Environmental Improvements	Opportunities to enhance aquatic/terrestrial features									
Social Impact	Property Acquisition	Degree of property required and households/business affected									
	Aesthetics	Ability to improve visual aesthetics of roadway and community									
	Noise Impacts	Number of noise walls or mitigations measured required									
	Accessibility	Compliance with AODA									
	Public Safety	Elimination of conflict points; improved infrastructure for all users									
	Local Businesses	Disruption/permanent impact to businesses									
Cultural/Heritage Environment	Archaeological Impacts	Potential impact to archaeological resources									
	Cultural Heritage Impacts	Potential for direct or indirect impacts to built heritage resources and cultural heritage landscapes									
	First Nations Impacts	Potential impact to First Nations interests, traditional land use and aboriginal or treaty rights									
Economic Environment	Project Capital Costs	Total projects costs for capital improvements									
	Life – Cycle Costs (25 year)	Net Present Value of 25-year life cycle costs									
	Land Acquisition Costs	Total costs for property acquisition									
SUMMARY				NOT PREFERRED Although it has minimal impact on the natural heritage and cost, it does not address the need for improvements		PREFERRED Addresses need for improvements. Some opportunity for improvement to transit, cycling and pedestrian access.		PREFERRED Addresses need for improvements. Some opportunity for improvement to transit, cycling and pedestrian access.		MOST PREFERRED Best addresses need for improvements, and provides safe opportunities for cyclists. Impacts to natural and social environment can be mitigated.	

Mapleview Drive Prince William Way to 20 th Sideroad Evaluation Criteria		How Criteria is Being Assessed	Do Nothing	Alternative 1: 3 lanes, 4.2m median, 2m bike lanes, 2m sidewalks,	Alternative 2: 3 lanes, 4.2m median, 2m bike lanes, 2m sidewalks, LID features	Alternative 3: 3 lanes, 4m TWLTL, 3m MUT, 1.6m sidewalk
Engineering / Operational Environment	Traffic Operations (MMATMP, safety, capacity, congestion, etc.)	Ability to (i) improve connectivity to existing road network (ii) to meet Barrie's MMATMP (iii) to improve traffic safety (iv) to improve traffic operations (increase capacity, reduce congestion and delays)				
	Cycling Operations	Adequacy to accommodate cyclists				
	Transit Operations/Services	Adequacy for transit operations/services				
	Pedestrian Operations	Adequacy to accommodate pedestrians				
	Driveway Impacts	Impacts on driveway accessibility and operations				
	Stormwater Management	Ability to accommodate drainage and stormwater management. Use of LIDs				
	Operations and Maintenance Requirements	Ease and cost of O & M requirements				
	Impacts to Structures	Impact on structures and other infrastructure (i.e. railways)				
Natural Environment	Water Courses/Fisheries/Aquatic Impacts	Potential impact on existing watercourses/impact on fish/fish habitat (Brook Trout)				
	Wildlife and Wildlife Habitat	Potential impact on Significant Wildlife Habitat, including Species of Conservation Concern				
	Species at Risk	Potential impact on Species at Risk				
	Vegetation	Potential impact on Significant Woodlands, other wooded areas and areas of natural vegetation communities (excluding wetlands)				
	Impacts to Wetlands/PSW	Potential impact on Lover's Creek, Provincially Significant Wetland Complex, locally significant wetlands and unevaluated wetlands				
	Land Use	Compatibility with land use (existing and future)				
	Environmental Improvements	Opportunities to enhance aquatic/terrestrial features				
Social Impact	Property Acquisition	Degree of property required and households/business affected				
	Aesthetics	Ability to improve visual aesthetics of roadway and community				
	Noise Impacts	Number of noise walls or mitigations measured required				
	Accessibility	Compliance with AODA				
	Public Safety	Elimination of conflict points; improved infrastructure for all users				
	Local Businesses	Disruption/permanent impact to businesses				
Cultural/Heritage Environment	Archaeological Impacts	Potential impact to archaeological resources				
	Cultural Heritage Impacts	Potential for direct or indirect impacts to built heritage resources and cultural heritage landscapes				
	First Nations Impacts	Potential impact to First Nations interests, traditional land use and aboriginal or treaty rights				
Economic Environment	Project Capital Costs	Total projects costs for capital improvements				
	Life – Cycle Costs (25 year)	Net Present Value of 25-year life cycle costs				
	Land Acquisition Costs	Total costs for property acquisition				
SUMMARY			NOT PREFERRED Although it has minimal impact on the natural heritage and cost, it does not address the need for improvements	PREFERRED Addresses need for improvements. Some opportunity for improvement to transit, cycling and pedestrian access.	PREFERRED Addresses need for improvements. Some opportunity for improvement to transit, cycling and pedestrian access.	MOST PREFERRED Best addresses need for improvements, and provides safe opportunities for cyclists. Impacts to natural and social environment can be mitigated.

Lockhart Road Huronion Road to 600m East Evaluation Criteria		How Criteria is Being Assessed	Do Nothing	Alternative 1: 5 lanes, 4.2m median, 2m bike lanes, 2m sidewalks,	Alternative 2: 5 lanes, 4.2m median, 2m bike lanes, 2m sidewalks, LID features	Alternative 3: 4 lanes, 3m MUT, south side ditch, turning lanes at intersections
Engineering / Operational Environment	Traffic Operations (MMATMP, safety, capacity, congestion, etc.)	Ability to (i) improve connectivity to existing road network (ii) to meet Barrie's MMATMP (iii) to improve traffic safety (iv) to improve traffic operations (increase capacity, reduce congestion and delays)				
	Cycling Operations	Adequacy to accommodate cyclists				
	Transit Operations/Services	Adequacy for transit operations/services				
	Pedestrian Operations	Adequacy to accommodate pedestrians				
	Stormwater Management	Ability to accommodate drainage and stormwater management. Use of LIDs				
	Operations and Maintenance Requirements	Ease and cost of O & M requirements				
	Impacts to Structures	Impact on structures and other infrastructure (i.e. railways)				
Natural Environment	Water Courses/Fisheries/Aquatic Impacts	Potential impact on existing watercourses/impact on fish/fish habitat (Brook Trout)				
	Wildlife and Wildlife Habitat	Potential impact on Significant Wildlife Habitat, including Species of Conservation Concern				
	Species at Risk	Potential impact on Species at Risk				
	Vegetation	Potential impact on Significant Woodlands, other wooded areas and areas of natural vegetation communities (excluding wetlands)				
	Impacts to Wetlands/PSW	Potential impact on Lover's Creek, Provincially Significant Wetland Complex, locally significant wetlands and unevaluated wetlands				
	Land Use	Compatibility with land use (existing and future)				
	Environmental Improvements	Opportunities to enhance aquatic/terrestrial features				
Social Impact	Property Acquisition	Degree of property required and households/business affected				
	Aesthetics	Ability to improve visual aesthetics of roadway and community				
	Noise Impacts	Number of noise walls or mitigations measured required				
	Accessibility	Compliance with AODA				
	Public Safety	Elimination of conflict points; improved infrastructure for all users				
	Local Businesses	Disruption/permanent impact to businesses				
Cultural/Heritage Environment	Archaeological Impacts	Potential impact to archaeological resources				
	Cultural Heritage Impacts	Potential for direct or indirect impacts to built heritage resources and cultural heritage landscapes				
	First Nations Impacts	Potential impact to First Nations interests, traditional land use and aboriginal or treaty rights				
Economic Environment	Project Capital Costs	Total projects costs for capital improvements				
	Life – Cycle Costs (25 year)	Net Present Value of 25-year life cycle costs				
	Land Acquisition Costs	Total costs for property acquisition				
SUMMARY			NOT PREFERRED Although it has minimal impact on the natural, social and cost, it does not address the need for improvements.	PREFERRED Addresses need for improvements. Some opportunity for improvement to transit, cycling and transit access.	PREFERRED Addresses need for improvements. Some opportunity for improvement to transit, cycling and transit access.	MOST PREFERRED Best addresses need for improvements and provides safer opportunities for cyclists. Impacts natural and social environment which can be mitigated.

Lockhart Road 600m East of Huronia Road to Yonge Street Evaluation Criteria		How Criteria is Being Assessed		Do Nothing	Alternative 1: 5 lanes, 4.2m median, 2m bike lanes, 2m sidewalks	Alternative 2: 5 lanes, 4.2m median, 2m bike lanes, 2m sidewalks	Alternative 3: 4 lanes, 3m MUT, south ditch, turning lanes at intersections
Engineering / Operational Environment	Traffic Operations (MMATMP, safety, capacity, congestion, etc.)	Ability to	(i) improve connectivity to existing road network (ii) to meet Barrie's MMATMP (iii) to improve traffic safety (iv) to improve traffic operations (increase capacity, reduce congestion and delays)				
	Cycling Operations	Adequacy to accommodate cyclists					
	Transit Operations/Services	Adequacy for transit operations/service					
	Pedestrian Operations	Adequacy to accommodate pedestrians					
	Driveway Impacts	Impacts on driveway accessibility and operations					
	Stormwater Management	Ability to accommodate drainage and stormwater management. Use of LIDs					
	Operations and Maintenance Requirements	Ease and cost of O & M requirements					
	Impacts to Structures	Impact on structures and other infrastructure (i.e. railways)					
Natural Environment	Water Courses/Fisheries/Aquatic Impacts	Potential impact on existing watercourses/impact on fish/fish habitat (Brook Trout)					
	Wildlife and Wildlife Habitat	Potential impact on Significant Wildlife Habitat, including Species of Conservation Concern					
	Species at Risk	Potential impact on Species at Risk					
	Vegetation	Potential impact on Significant Woodlands, other wooded areas and areas of natural vegetation communities (excluding wetlands)					
	Impacts to Wetlands/PSW	Potential impact on Lover's Creek, Provincially Significant Wetland Complex, locally significant wetlands and unevaluated wetlands					
	Land Use	Compatibility with land use (existing and future)					
	Environmental Improvements	Opportunities to enhance aquatic/terrestrial features					
Social Impact	Property Acquisition	Degree of property required and households/business affected					
	Aesthetics	Ability to improve visual aesthetics of roadway and community					
	Noise Impacts	Number of noise walls or mitigations measured required					
	Accessibility	Compliance with AODA					
	Public Safety	Elimination of conflict points; improved infrastructure for all users					
	Local Businesses	Disruption/permanent impact to businesses					
Cultural/Heritage Environment	Archaeological Impacts	Potential impact to archaeological resources					
	Cultural Heritage Impacts	Potential for direct or indirect impacts to built heritage resources and cultural heritage landscapes					
	First Nations Impacts	Potential impact to First Nations interests, traditional land use and aboriginal or treaty rights					
Economic Environment	Project Capital Costs	Total projects costs for capital improvements					
	Life – Cycle Costs (25 year)	Net Present Value of 25-year life cycle costs					
	Land Acquisition Costs	Total costs for property acquisition					
SUMMARY				NOT PREFERRED Although it has minimal impact on the natural, social and cost, it does not address the need for improvements.	PREFERRED Addresses need for improvements. Some opportunity for improvement to transit, cycling and transit access.	PREFERRED Addresses need for improvements. Some opportunity for improvement to transit, cycling and transit access.	MOST PREFERRED Best addresses need for improvements and provides safer opportunities for cyclists. Impacts natural and social environment which can be mitigated.

Lockhart Road 800m East of Yonge Street to Prince William Way Evaluation Criteria		How Criteria is Being Assessed	Do Nothing	Alternative 1: 5 lanes, 4.2m median, 2m bike lanes, 2m sidewalks	Alternative 2: 5 lanes, 4.2m median, 2m bike lanes, 2m sidewalks, LID features	Alternative 3: 4 lanes, 3m MUT, south ditch, turning lanes at intersections
Engineering / Operational Environment	Traffic Operations (MMATMP, safety, capacity, congestion, etc.)	Ability to (i) improve connectivity to existing road network (ii) to meet Barrie's MMATMP (iii) to improve traffic safety (iv) to improve traffic operations (increase capacity, reduce congestion and delays)				
	Cycling Operations	Adequacy to accommodate cyclists				
	Transit Operations/Services	Adequacy for transit operations/services				
	Pedestrian Operations	Adequacy to accommodate pedestrians				
	Driveway Impacts	Impacts on driveway accessibility and operations				
	Stormwater Management	Ability to accommodate drainage and stormwater management. Use of LIDs				
	Operations and Maintenance Requirements	Ease and cost of O & M requirements				
	Impacts to Structures	Impact on structures and other infrastructure (i.e. railways)				
Natural Environment	Water Courses/Fisheries/Aquatic Impacts	Potential impact on existing watercourses/impact on fish/fish habitat (Brook Trout)				
	Wildlife and Wildlife Habitat	Potential impact on Significant Wildlife Habitat, including Species of Conservation Concern				
	Species at Risk	Potential impact on Species at Risk				
	Vegetation	Potential impact on Significant Woodlands, other wooded areas and areas of natural vegetation communities (excluding wetlands)				
	Impacts to Wetlands/PSW	Potential impact on Lover's Creek, Provincially Significant Wetland Complex, locally significant wetlands and unevaluated wetlands				
	Land Use	Compatibility with land use (existing and future)				
	Environmental Improvements	Opportunities to enhance aquatic/terrestrial features				
Social Impact	Property Acquisition	Degree of property required and households/business affected				
	Aesthetics	Ability to improve visual aesthetics of roadway and community				
	Noise Impacts	Number of noise walls or mitigations measured required				
	Accessibility	Compliance with AODA				
	Public Safety	Elimination of conflict points; improved infrastructure for all users				
	Local Businesses	Disruption/permanent impact to businesses				
Cultural/ Heritage Environment	Archaeological Impacts	Potential impact to archaeological resources				
	Cultural Heritage Impacts	Potential for direct or indirect impacts to built heritage resources and cultural heritage landscapes				
	First Nations Impacts	Potential impact to First Nations interests, traditional land use and aboriginal or treaty rights				
Economic Environment	Project Capital Costs	Total projects costs for capital improvements				
	Life – Cycle Costs (25 year)	Net Present Value of 25-year life cycle costs				
	Land Acquisition Costs	Total costs for property acquisition				
SUMMARY			NOT PREFERRED Although it has minimal impact on the natural, social and cost, it does not address the need for improvements.	PREFERRED Addresses need for improvements. Some opportunity for improvement to transit, cycling and transit access.	PREFERRED Addresses need for improvements. Some opportunity for improvement to transit, cycling and transit access.	MOST PREFERRED Best addresses need for improvements and provides safer opportunities for cyclists. Impacts natural and social environment which can be mitigated.

Lockhart Road Prince William Way to Phase 1 Boundary Evaluation Criteria		How Criteria is Being Assessed		Do Nothing		Alternative 1: 3 lanes, 4.2m median, 2m bike lanes, 2m sidewalks		Alternative 2: 3 lanes, 4.2m median, 2m bike lanes, 2m sidewalks, LID features		Alternative 3: 3 lanes, 4m TWLTL, 3m MUT south side, 1.6m sidewalk	
Engineering / Operational Environment	Traffic Operations (MMATMP, safety, capacity, congestion, etc.)	Ability to	(i) improve connectivity to existing road network (ii) to meet Barrie's MMATMP (iii) to improve traffic safety (iv) to improve traffic operations (increase capacity, reduce congestion and delays)								
	Cycling Operations	Adequacy to accommodate cyclists									
	Transit Operations/Services	Adequacy for transit operations/services									
	Pedestrian Operations	Adequacy to accommodate pedestrians									
	Driveway Impacts	Impacts on driveway accessibility and operations									
	Stormwater Management	Ability to accommodate drainage and stormwater management. Use of LIDs									
	Operations and Maintenance Requirements	Ease and cost of O & M requirements									
	Impacts to Structures	Impact on structures and other infrastructure (i.e. railways)									
Natural Environment	Water Courses/Fisheries/Aquatic Impacts	Potential impact on existing watercourses/impact on fish/fish habitat (Brook Trout)									
	Wildlife and Wildlife Habitat	Potential impact on Significant Wildlife Habitat, including Species of Conservation Concern									
	Species at Risk	Potential impact on Species at Risk									
	Vegetation	Potential impact on Significant Woodlands, other wooded areas and areas of natural vegetation communities (excluding wetlands)									
	Impacts to Wetlands/PSW	Potential impact on Lover's Creek, Provincially Significant Wetland Complex, locally significant wetlands and unevaluated wetlands									
	Land Use	Compatibility with land use (existing and future)									
	Environmental Improvements	Opportunities to enhance aquatic/terrestrial features									
Social Impact	Property Acquisition	Degree of property required and households/business affected									
	Aesthetics	Ability to improve visual aesthetics of roadway and community									
	Noise Impacts	Number of noise walls or mitigations measured required									
	Accessibility	Compliance with AODA									
	Public Safety	Elimination of conflict points; improved infrastructure for all users									
	Local Businesses	Disruption/permanent impact to businesses									
Cultural/Heritage Environment	Archaeological Impacts	Potential impact to archaeological resources									
	Cultural Heritage Impacts	Potential for direct or indirect impacts to built heritage resources and cultural heritage landscapes									
	First Nations Impacts	Potential impact to First Nations interests, traditional land use and aboriginal or treaty rights									
Economic Environment	Project Capital Costs	Total projects costs for capital improvements									
	Life – Cycle Costs (25 year)	Net Present Value of 25-year life cycle costs									
	Land Acquisition Costs	Total costs for property acquisition									
SUMMARY				NOT PREFERRED Although it has minimal impact on the natural, social and cost, it does not address the need for improvements.	PREFERRED Addresses need for improvements. Some opportunity for improvement to transit, cycling and transit access.	PREFERRED Addresses need for improvements. Some opportunity for improvement to transit, cycling and transit access.	PREFERRED Addresses need for improvements. Some opportunity for improvement to transit, cycling and transit access.	MOST PREFERRED Best addresses need for improvements and provides safer opportunities for cyclists. Impacts natural and social environment which can be mitigated.			

Yonge Street Lockhart Road to Mapleview Drive East Evaluation Criteria		How Criteria is Being Assessed		Do Nothing		Alternative 1: 5 lanes, 4.2m median, 2m bike lanes, 2m sidewalks		Alternative 2: 5 lanes, 4.2m median, 2m bike lanes, 2m sidewalks, LID features	
Engineering / Operational Environment	Traffic Operations (MMATMP, safety, capacity, congestion, etc.)	Ability to	(i) improve connectivity to existing road network (ii) to meet Barrie's MMATMP (iii) to improve traffic safety (iv) to improve traffic operations (increase capacity, reduce congestion and delays)						
	Cycling Operations	Adequacy to accommodate cyclists							
	Transit Operations/Services	Adequacy for transit operations/services							
	Pedestrian Operations	Adequacy to accommodate pedestrians							
	Driveway Impacts	Impacts on driveway accessibility and operations							
	Stormwater Management	Ability to accommodate drainage and stormwater management. Use of LIDs							
	Operations and Maintenance Requirements	Ease and cost of O & M requirements							
	Impacts to Structures	Impact on structures and other infrastructure (i.e. railways)							
Natural Environment	Water Courses/Fisheries/Aquatic Impacts	Potential impact on existing watercourses/impact on fish/fish habitat (Brook Trout)							
	Wildlife and Wildlife Habitat	Potential impact on Significant Wildlife Habitat, including Species of Conservation Concern							
	Species at Risk	Potential impact on Species at Risk							
	Vegetation	Potential impact on Significant Woodlands, other wooded areas and areas of natural vegetation communities (excluding wetlands)							
	Impacts to Wetlands/PSW	Potential impact on Lover's Creek, Provincially Significant Wetland Complex, locally significant wetlands and unevaluated wetlands							
	Land Use	Compatibility with land use (existing and future)							
	Environmental Improvements	Opportunities to enhance aquatic/terrestrial features							
Social Impact	Property Acquisition	Degree of property required and households/business affected							
	Aesthetics	Ability to improve visual aesthetics of roadway and community							
	Noise Impacts	Number of noise walls or mitigations measured required							
	Accessibility	Compliance with AODA							
	Public Safety	Elimination of conflict points; improved infrastructure for all users							
	Local Businesses	Disruption/permanent impact to businesses							
Cultural/Heritage Environment	Archaeological Impacts	Potential impact to archaeological resources							
	Cultural Heritage Impacts	Potential for direct or indirect impacts to built heritage resources and cultural heritage landscapes							
	First Nations Impacts	Potential impact to First Nations interests, traditional land use and aboriginal or treaty rights							
Economic Environment	Project Capital Costs	Total projects costs for capital improvements							
	Life – Cycle Costs (25 year)	Net Present Value of 25-year life cycle costs							
	Land Acquisition Costs	Total costs for property acquisition							
SUMMARY				NOT PREFERRED Although it has minimal impact on the natural heritage and cost, it does not address the need for improvements.		PREFERRED Addresses need for improvements, however more impact on the natural, social, cultural and economic environments. Some opportunity for improvements to transit, cycling and pedestrian access.		MOST PREFERRED Addresses the need for improvements, and provides safer opportunities for cyclists and pedestrians, however impacts the natural, social, cultural and economic environments. There is an opportunity to mitigate the impacts.	

Big Bay Point Road City Boundary to Collector 11 Evaluation Criteria		How Criteria is Being Assessed	Do Nothing		Alternative 1: 5 lanes; 2 bike lanes, 2m sidewalks, 4.2m median		Alternative 2: 5 lanes, 2m bike lanes, 2m sidewalks, 4.2m median, LID features		Alternative 3: 5 lanes, 4m TWLTL, 3m MUT south side, fixed north side		Alternative 4: 4 lanes, 2 bike lanes, 1.5m sidewalk south side (Interim)	
Engineering / Operational Environment	Traffic Operations (MMATMP, safety, capacity, congestion, etc.)	Ability to (i) improve connectivity to existing road network (ii) to meet Barrie's MMATMP (iii) to improve traffic safety (iv) to improve traffic operations (increase capacity, reduce congestion and delays)										Some improvement over existing
	Cycling Operations	Adequacy to accommodate cyclists										Some improvement over existing
	Transit Operations/Services	Adequacy for transit operations/services										Some improvement over existing
	Pedestrian Operations	Adequacy to accommodate pedestrians										Some improvement over existing
	Driveway Impacts	Impacts on driveway accessibility and operations										Some improvement over existing
	Stormwater Management	Ability to accommodate drainage and stormwater management. Use of LIDs										Some improvement over existing
	Operations and Maintenance Requirements	Ease and cost of O & M requirements										
	Impacts to Structures	Impact on structures and other infrastructure (i.e. railways)										
Natural Environment	Water Courses/Fisheries/Aquatic Impacts	Potential impact on existing watercourses/impact on fish/fish habitat (Brook Trout)										
	Wildlife and Wildlife Habitat	Potential impact on Significant Wildlife Habitat, including Species of Conservation Concern										
	Species at Risk	Potential impact on Species at Risk										
	Vegetation	Potential impact on Significant Woodlands, other wooded areas and areas of natural vegetation communities (excluding wetlands)										
	Impacts to Wetlands/PSW	Potential impact on Lover's Creek, Provincially Significant Wetland Complex, locally significant wetlands and unevaluated wetlands										
	Land Use	Compatibility with land use (existing and future)										Some improvement over existing
	Environmental Improvements	Opportunities to enhance aquatic/terrestrial features										Some improvement over existing
Social Impact	Property Acquisition	Degree of property required and households/business affected										Interim solution
	Aesthetics	Ability to improve visual aesthetics of roadway and community										Some improvement over existing
	Noise Impacts	Number of noise walls or mitigations measured required										
	Accessibility	Compliance with AODA										Some improvement over existing
	Public Safety	Elimination of conflict points; improved infrastructure for all users										
	Local Businesses	Disruption/permanent impact to businesses										Some improvement over existing
Cultural/Heritage Environment	Archaeological Impacts	Potential impact to archaeological resources										
	Cultural Heritage Impacts	Potential for direct or indirect impacts to built heritage resources and cultural heritage landscapes										
	First Nations Impacts	Potential impact to First Nations interests, traditional land use and aboriginal or treaty rights										
Economic Environment	Project Capital Costs	Total projects costs for capital improvements										Interim solution
	Life – Cycle Costs (25 year)	Net Present Value of 25-year life cycle costs										Interim Solution - high potential for throw-away costs
	Land Acquisition Costs	Total costs for property acquisition										
SUMMARY			NOT PREFERRED Although it has minimal impact on the natural heritage and cost, it does not address the need for improvements.		PREFERRED Addresses need for improvements. Some opportunity for improvements to transit, cycling and pedestrian access.		PREFERRED Addresses need for improvements. Some opportunity for improvements to transit, cycling and pedestrian access.		MOST PREFERRED Best addresses need for improvements, and provides safer opportunities for cyclists.		NOT PREFERRED	

Big Bay Point Road Collector 11 to Phase 1 Boundary Evaluation Criteria		How Criteria is Being Assessed		Do Nothing		Alternative 1: 3 lanes, 2m bike lanes, 2m sidewalks, 4.2m TWLTL		Alternative 2: 3 lanes, 2m bike lanes, 2m sidewalks, 4.2m TWLTL, 2m LID features		Alternative 3: 3 lanes, 4m TWLTL, 3m MUT south side		Alternative 4: 4 lanes, 2 bike lanes, 1.5m sidewalk south side	
Engineering / Operational Environment	Traffic Operations (MMATMP, safety, capacity, congestion, etc.)	Ability to	(i) improve connectivity to existing road network (ii) to meet Barrie's MMATMP (iii) to improve traffic safety (iv) to improve traffic operations (increase capacity, reduce congestion and delays)										Some improvement over existing
	Cycling Operations	Adequacy to accommodate cyclists											Some improvement over existing
	Transit Operations/Services	Adequacy for transit operations/services											Some improvement over existing
	Pedestrian Operations	Adequacy to accommodate pedestrians											Some improvement over existing
	Driveway Impacts	Impacts on driveway accessibility and operations											Some improvement over existing
	Stormwater Management	Ability to accommodate drainage and stormwater management. Use of LIDs											Some improvement over existing
	Operations and Maintenance Requirements	Ease and cost of O & M requirements											
	Impacts to Structures	Impact on structures and other infrastructure (i.e. railways)											
Natural Environment	Water Courses/Fisheries/Aquatic Impacts	Potential impact on existing watercourses/impact on fish/fish habitat (Brook Trout)											
	Wildlife and Wildlife Habitat	Potential impact on Significant Wildlife Habitat, including Species of Conservation Concern											
	Species at Risk	Potential impact on Species at Risk											
	Vegetation	Potential impact on Significant Woodlands, other wooded areas and areas of natural vegetation communities (excluding wetlands)											
	Impacts to Wetlands/PSW	Potential impact on Lover's Creek, Provincially Significant Wetland Complex, locally significant wetlands and unevaluated wetlands											
	Land Use	Compatibility with land use (existing and future)											Some improvement over existing
	Environmental Improvements	Opportunities to enhance aquatic/terrestrial features											Some improvement over existing
Social Impact	Property Acquisition	Degree of property required and households/business affected											Interim solution
	Aesthetics	Ability to improve visual aesthetics of roadway and community											Some improvement over existing
	Noise Impacts	Number of noise walls or mitigations measured required											
	Accessibility	Compliance with AODA											Some improvement over existing
	Public Safety	Elimination of conflict points; improved infrastructure for all users											
	Local Businesses	Disruption/permanent impact to businesses											Some improvement over existing
Cultural/Heritage Environment	Archaeological Impacts	Potential impact to archaeological resources											
	Cultural Heritage Impacts	Potential for direct or indirect impacts to built heritage resources and cultural heritage landscapes											
	First Nations Impacts	Potential impact to First Nations interests, traditional land use and aboriginal or treaty rights											
Economic Environment	Project Capital Costs	Total projects costs for capital improvements											Interim solution
	Life – Cycle Costs (25 year)	Net Present Value of 25-year life cycle costs											Interim Solution high potential for throw-away costs
	Land Acquisition Costs	Total costs for property acquisition											
				NOT PREFERRED Although it has minimal impact on the natural heritage and cost, it does not address the need for improvements.		PREFERRED Addresses need for improvements. Some opportunity for improvements to transit, cycling and pedestrian access.		PREFERRED Addresses need for improvements. Some opportunity for improvements to transit, cycling and pedestrian access.		MOST PREFERRED Best addresses need for improvements, and provides safer opportunities for cyclists.		NOT PREFERRED	

Mapleview Rail Crossing		How Criteria is Being Assessed		Do Nothing		Alternative 1: Overpass, 5 lanes, centre median, 2.5m sidewalks, 2m side clearance, 1.5m bike lanes		Alternative 2: Underpass, 4 lanes, centre pier, 2.5m sidewalks, 2m side clearance, 1.5m bike lanes	
Evaluation Criteria									
Engineering / Operational Environment	Traffic Operations (MMATMP, safety, capacity, congestion, etc.)	Ability to	(i) improve connectivity to existing road network (ii) to meet Barrie's MMATMP (iii) to improve traffic safety (iv) to improve traffic operations (increase capacity, reduce congestion and delays)						
	Cycling Operations	Adequacy to accommodate cyclists							
	Transit Operations/Services	Adequacy for transit operations/services							
	Pedestrian Operations	Adequacy to accommodate pedestrians							
	Driveway Impacts	Impacts on driveway accessibility and operations							
	Constructability	Feasibility and ease of construction							
	Operations and Maintenance requirements	Ease and cost of O & M requirements							
	Impacts to Structures	Impact on structures and other infrastructure (i.e. railways)							
Natural Environment	Water Courses/Fisheries/Aquatic Impacts	Potential impact on existing watercourses/impact on fish/fish habitat (Brook Trout)							
	Wildlife and Wildlife Habitat	Potential impact on Significant Wildlife Habitat, including Species of Conservation Concern							
	Species at Risk	Potential impact on Species at Risk							
	Vegetation	Potential impact on Significant Woodlands, other wooded areas and areas of natural vegetation communities (excluding wetlands)							
	Impacts to Wetlands/PSW	Potential impact on Lover's Creek, Provincially Significant Wetland Complex, locally significant wetlands and unevaluated wetlands							
	Land Use	Compatibility with land use (existing and future)							
	Environmental Improvements	Opportunities to enhance aquatic/terrestrial features							
Social Impact	Property Acquisition	Degree of property required and households/business affected							
	Aesthetics	Ability to improve visual aesthetics of roadway and community							
	Noise Impacts	Number of noise walls or mitigations measured required							
	Accessibility	Compliance with AODA							
	Public Safety	Elimination of conflict points; improved infrastructure for all users							
	Local Businesses	Disruption/permanent impact to businesses							
Cultural/Heritage Environment	Archaeological Impacts	Potential impact to archaeological resources							
	Cultural Heritage Impacts	Potential for direct or indirect impacts to built heritage resources and cultural heritage landscapes							
	First Nations Impacts	Potential impact to First Nations interests, traditional land use and aboriginal or treaty rights							
Economic Environment	Project Capital Costs	Total projects costs for capital improvements							
	Life – Cycle Costs (25 year)	Net Present Value of 25-year life cycle costs							
	Land Acquisition Costs	Total costs for property acquisition							
SUMMARY				NOT PREFERRED Does not address need and justification for improved access, or provide improved safety for pedestrians and cyclists. Increased rail traffic along the GO Transit corridor requires a grade separation		PREFERRED Addresses need and justification for improved connectivity, including provision for improved safety for pedestrians and cyclists, however impacts the natural and social environment, all of which can be mitigated. Amount of property is greater for an overpass at this location. Negative impacts on adjacent development applications and heritage property		MOST PREFERRED Addresses need and justification for improved connectivity, including provision for improved safety for pedestrians and cyclists, however impacts the natural and social environment, which can be mitigated, although has a higher cost.	

Lockhart Rail Crossing		How Criteria is Being Assessed	Do Nothing	Alternative 1: Overpass, alignment shift to north, 4 lanes, 1.5m sidewalks, 2m side clearance, 1.5m bike lanes	Alternative 2: Underpass, alignment shift to north, 4 lanes, median, 2.5m sidewalks, 2m side clearance and 1.5m bike lanes
Evaluation Criteria					
Engineering / Operational Environment	Traffic Operations (MMATMP, safety, capacity, congestion, etc.)	Ability to (i) improve connectivity to existing road network (ii) to meet Barrie's MMATMP (iii) to improve traffic safety (iv) to improve traffic operations (increase capacity, reduce congestion and delays)			
	Cycling Operations	Adequacy to accommodate cyclists			
	Transit Operations/Services	Adequacy for transit operations/service			
	Pedestrian Operations	Adequacy to accommodate pedestrians			
	Driveway Impacts	Impacts on driveway accessibility and operations			
	Constructability	Feasibility and ease of construction			
	Operations and Maintenance Requirements	Ease and cost of O & M requirements			
	Impacts to structures	Impact on structures and other infrastructure (i.e. railways)			
Natural Environment	Water Courses/Fisheries/Aquatic Impacts	Potential impact on existing watercourses/impact on fish/fish habitat (Brook Trout)			
	Wildlife and Wildlife Habitat	Potential impact on Significant Wildlife Habitat, including Species of Conservation Concern			
	Species at Risk	Potential impact on Species at Risk			
	Vegetation	Potential impact on Significant Woodlands, other wooded areas and areas of natural vegetation communities (excluding wetlands)			
	Impacts to Wetlands/PSW	Potential impact on Lover's Creek, Provincially Significant Wetland Complex, locally significant wetlands and unevaluated wetlands			
	Land Use	Compatibility with land use (existing and future)			
	Environmental Improvements	Opportunities to enhance aquatic/terrestrial features			
Social Impact	Property Acquisition	Degree of property required and households/business affected			
	Aesthetics	Ability to improve visual aesthetics of roadway and community			
	Noise Impacts	Number of noise walls or mitigations measured required			
	Accessibility	Compliance with AODA			
	Public Safety	Elimination of conflict points; improved infrastructure for all users			
	Local Businesses	Disruption/permanent impact to businesses			
Cultural/ Heritage Environment	Archaeological Impacts	Potential impact to archaeological resources			
	Cultural Heritage Impacts	Potential for direct or indirect impacts to built heritage resources and cultural heritage landscapes			
	First Nations Impacts	Potential impact to First Nations interests, traditional land use and aboriginal or treaty rights			
Economic Environment	Project Capital Costs	Total projects costs for capital improvements			
	Life – Cycle Costs (25 year)	Net Present Value of 25-year life cycle costs			
	Land Acquisition Costs	Total costs for property acquisition			
			NOT PREFERRED Does not address need and justification for improved access, or provide improved safety for pedestrians and cyclists. Increased rail traffic requires the use of a grade separation	MOST PREFERRED Addresses need and justification for improved connectivity, including provision for improved safety for pedestrians and cyclists, however impacts the natural and social environment, all of which can be mitigated.	PREFERRED Addresses need and justification for improved connectivity, including provision for improved safety for pedestrians and cyclists, however impacts the natural and social environment, all of which can be mitigated, however with a higher cost.