

Welcome

Harvie Road, Essa Road and Bryne Drive Class Environmental Assessment Study

Public Information Centre

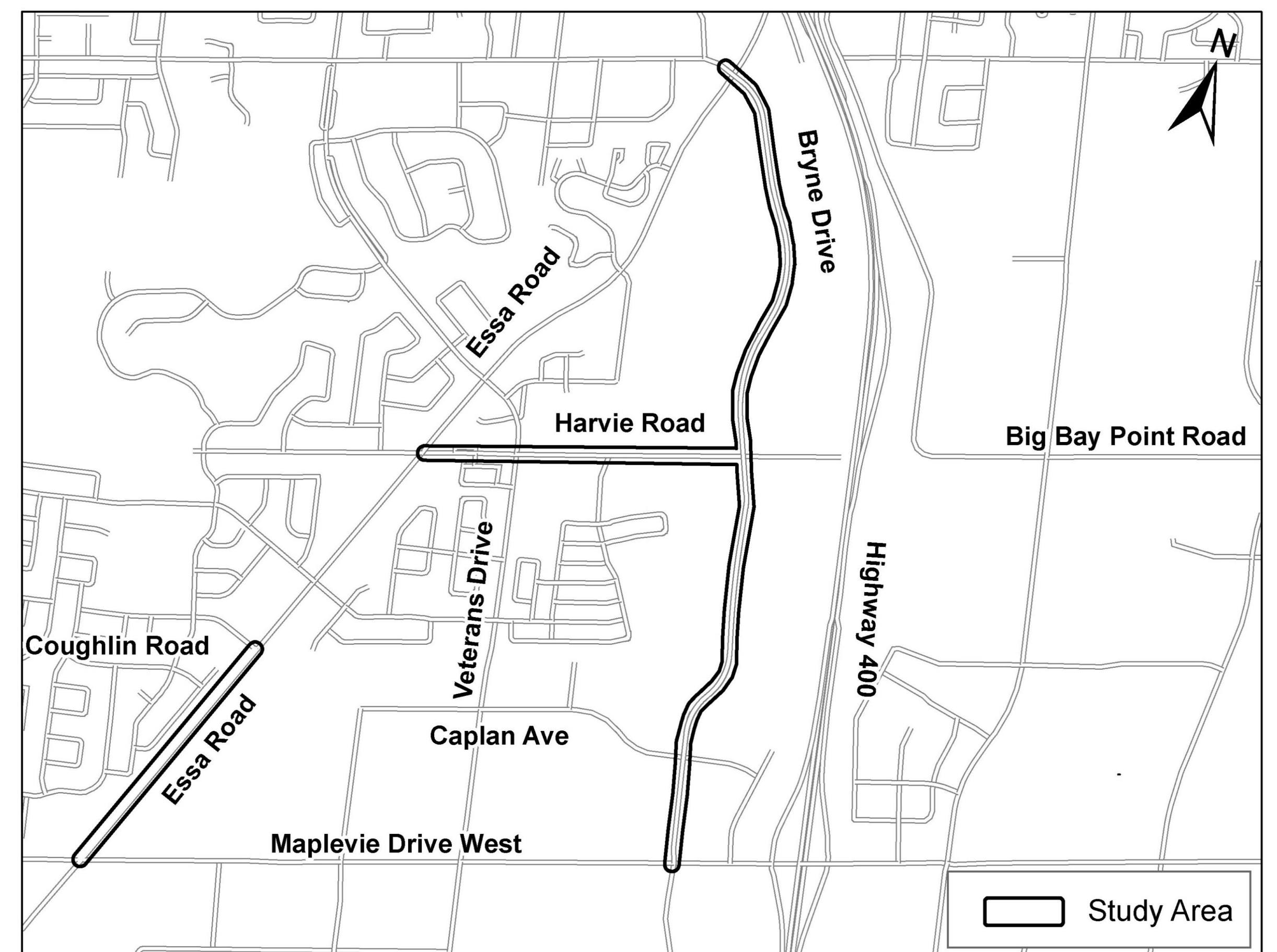
June 22, 2017

*Members of the Project Team are available
to discuss and answer any questions you may have*

Study Area

The Study Area includes the following improvements:

- Harvie Road improvements from Essa Road to the future Bryne Drive
- Essa Road improvements from Maplevie Drive West to Coughlin Road
- Bryne Drive from Caplan Avenue to Essa Road



Study Background

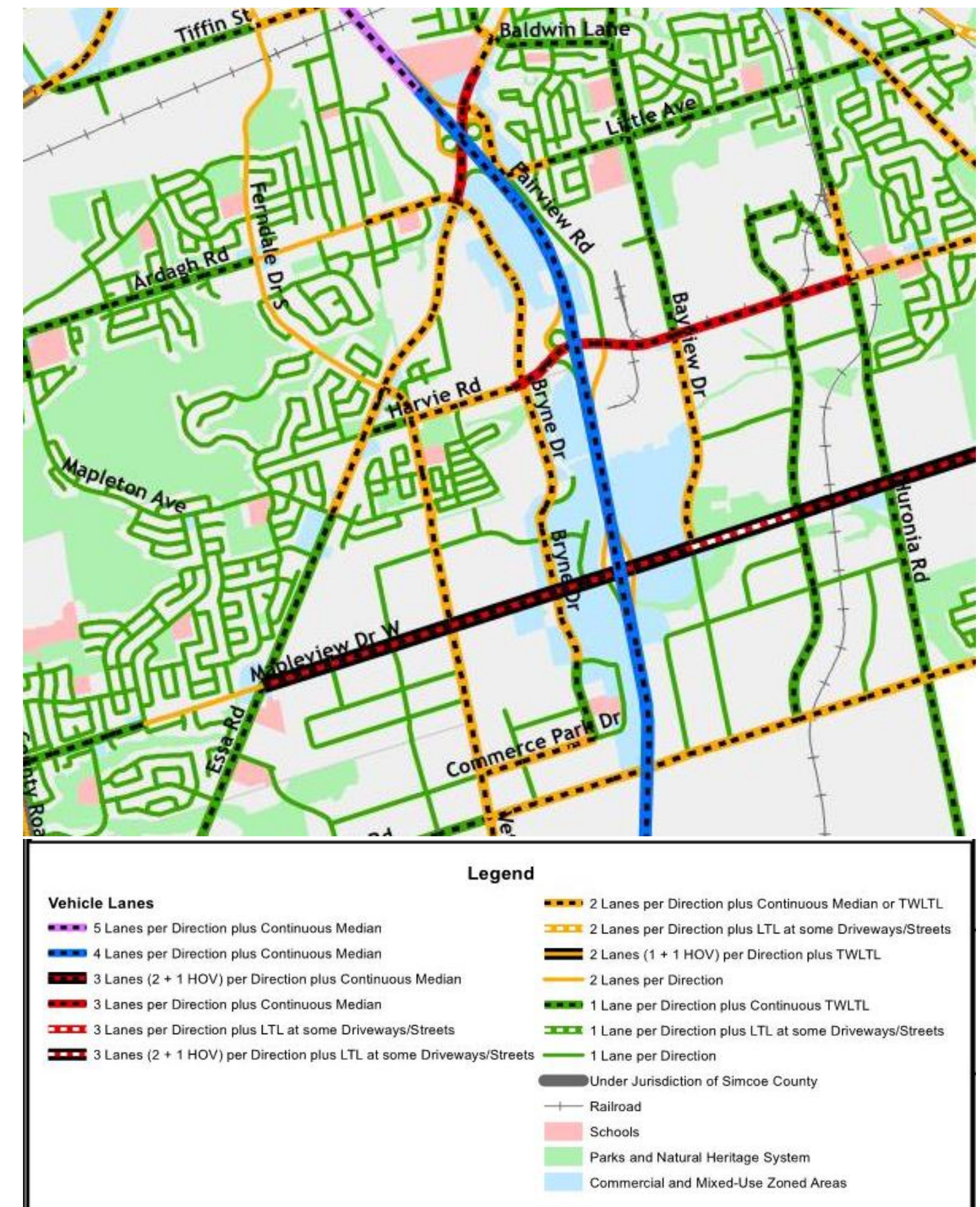
- The City of Barrie's Multi-Modal Active Transportation Master Plan (MMATMP) was approved by Council in 2013. The study identified transportation needs to support growth to 2031
- The Opportunity Statement is as follows:
 - The City of Barrie has identified the need for a transportation system that will accommodate growth to 2031. An opportunity exists to plan a system which is:
 - Safe, efficient and accessible with mobility choice
 - Fosters the use and development of a sustainable transportation network
 - Provides a public transit system that can offer a real alternative to single automobile use
 - Provides a network of on-road and off-road pedestrian and cycling facilities that allow the use of active transportation modes as an alternative to the automobile

MMATMP – Road Network

The MMATMP Road Network recommendations include:

- **Harvie Road (3 and 5 lane profile):**
 - 2 lanes + TWLTL (or continuous median) (Essa Rd to Veterans Dr) – 27m ROW
 - 4 lanes + TWLTL (or continuous median) (Veterans Dr to Bryne Dr) – 34m ROW
- **Essa Road (3 lane profile):**
 - 2 lanes + TWLTL (or continuous median)
 - 27m ROW
- **Bryne Drive (5 lane profile):**
 - 4 lanes + TWLTL (or continuous median)
 - 34m ROW

Total Number of Vehicle Lanes
Proposed Preferred Scenario - 2031



Source: MMATMP – Figure 7-6

MMATMP – Active Transportation

The MMATMP Active Transportation recommendations include:

- **Harvie Road:**
 - Sidewalks
 - Buffered Bike Lanes
- **Essa Road:**
 - Sidewalks
 - Buffered Bike Lanes
- **Bryne Drive:**
 - Sidewalks
 - Bike Lanes

Cycling, Pathway and Trail Network
Proposed Preferred Scenario - 2031



Source: MMATMP – Figure 7-4

Study Objectives

- Complete the Class EA process initiated through the Multi-Modal Active Transportation Master Plan (2014) and the Bryne Drive Master Plan Update (2016)
- Improve Harvie Road, Essa Road and Bryne Drive to accommodate future growth to 2031
- Reduce traffic congestion in the south end of Barrie
- Consider supporting other infrastructure improvements (i.e., watermain, stormwater, stormsewer, etc.) in parallel with proposed transportation improvements

Study Purpose

The purpose of the Study is to:

- Develop alternative design concepts for the preferred solution identified in the Multi-Modal Active Transportation Master Plan and the Bryne Drive Master Plan Update (2016)
- Assess and document the existing affected environment
- Evaluate the design alternatives based on the potential environmental impacts
- Identify a preliminary preferred design
- Seek public input and comment
- Identify mitigation measures to address adverse impacts
- Document the process followed in an Environmental Study Report for 30-calendar day review period

Technical Studies

The following studies are on-going to document the existing conditions in the Study Area and to assist in the impact assessment of the design concepts



Traffic and Transportation



Geomorphology



Drainage & Stormwater Management



Structural and Culvert Assessment



Noise Impact



Stage 1 & 2 Archaeological Assessment

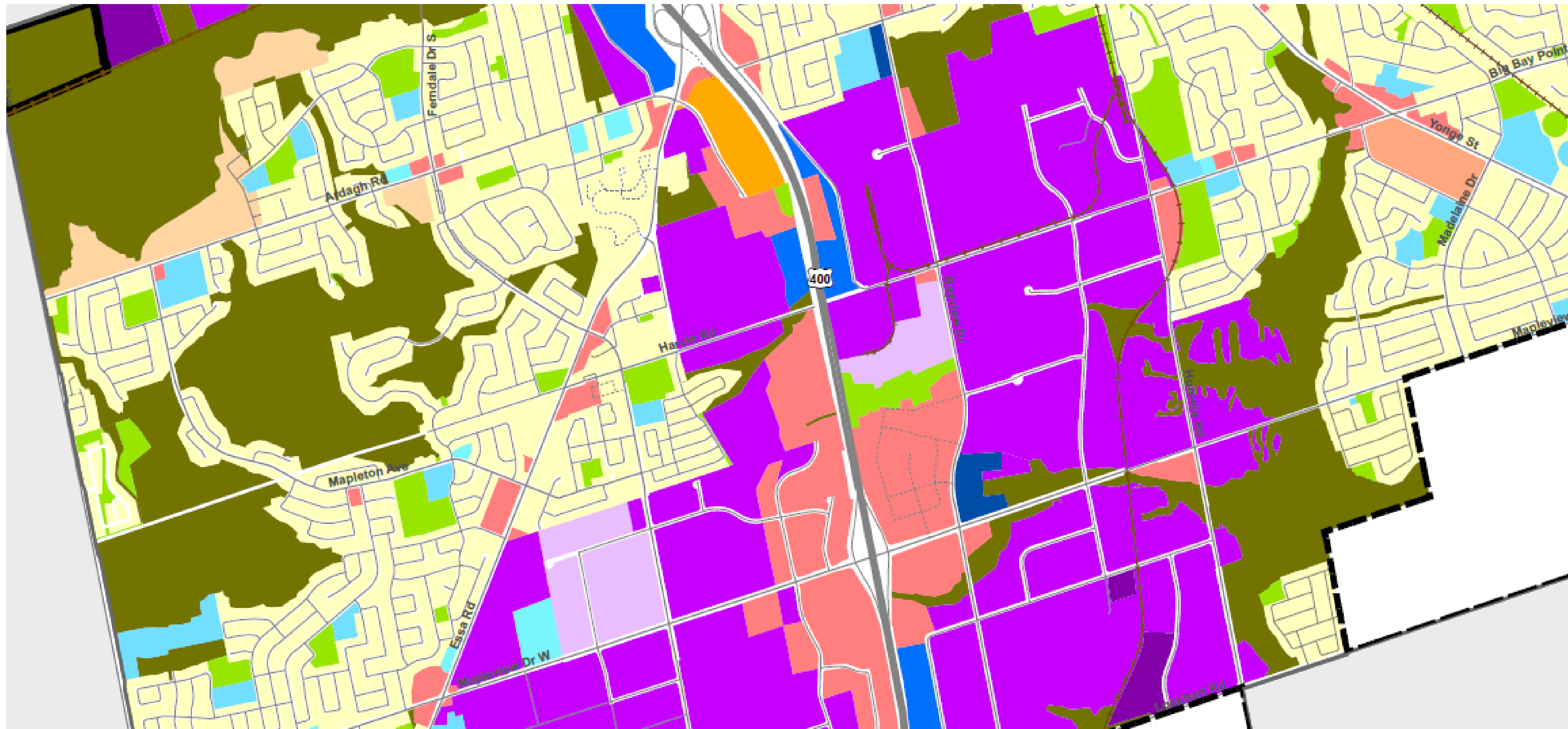


Natural Environment –
Terrestrial & Aquatic



Cultural Heritage Assessment

Existing Land Use



OFFICIAL PLAN

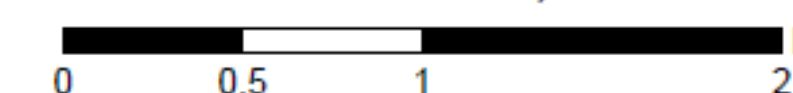
Schedule A Land Use

March 2017



The City of
BARRIE

1:20,000



The City of Barrie does not warrant the accuracy, completeness, content, or currency of the information provided.
This is not a legal Plan of Survey
Copyright ©City of Barrie 2017
Produced (in part) under license from:
© Queens Printer, Ontario Ministry of Natural Resources. All rights reserved;
© Her Majesty the Queen in Right of Canada, Department of Natural Resources. All rights reserved;
© Members of the Ontario Geospatial Data Exchange. All rights reserved.
For information please contact Service Barrie at 705-726-4242 or ServiceBarrie@barrie.ca

GIS Branch 4/5/2017

Natural Heritage

| | Wildlife  | Vegetation  | Aquatic  | SAR  |
|--------------------|--|--|---|---|
| Harvie Road | <ul style="list-style-type: none"> 12 bird species documented – all common in Ontario | <ul style="list-style-type: none"> Regulated woodlot located north of Harvie Road, just west of Hwy 400 Regulated woodlot located south of Harvie Road (between Veterans Drive and Thrushwood Drive) | <ul style="list-style-type: none"> Whiskey Creek – Harvie Road crosses main branch - identified as cold water fisheries; channel showing signs of erosion; no fish found but considered to contribute to downstream habitat which supports brook trout | <ul style="list-style-type: none"> Eastern Wood Pewee Endangered SAR bats Butternut Bobolink Eastern Meadowlark Henslow Sparrow Golden Winged Warbler Monarch Butterfly |
| Essa Road | <ul style="list-style-type: none"> Few bird species documented – all common in Ontario | <ul style="list-style-type: none"> Forests dominated by trembling aspen, white pine and/or green ash – predominantly young | <ul style="list-style-type: none"> Bear Creek - includes wetland/cattail marsh associated with creek on both sides of Essa Road | <ul style="list-style-type: none"> Butternut Bobolink Eastern Meadowlark Henslow Sparrow Monarch Butterfly |
| Bryne Drive | <ul style="list-style-type: none"> Minimal wildlife documented in previous report (2005) 69 bird species documented and protected under Migratory Bird Convention Act (2005) | <ul style="list-style-type: none"> Forests dominated by trembling aspen, white pine and/or green ash – predominantly young Regulated Woodlot located north of Harvie Road | <ul style="list-style-type: none"> Hotchkiss Creek Lovers Creek and Whiskey Creek – contributes to downstream habitat which supports brook trout –cold water fishery Small wetland located in northwest quadrant of future Bryne Drive/Harvie Road | <ul style="list-style-type: none"> Eastern Wood Pewee Eastern Whip-Poor-Will Red-headed Woodpecker Endangered SAR bats Butternut |

Geomorphology

| Corridor | Crossing | Substrate | Creek Stability | Soil Conditions | Final Meander Belt Width |
|-------------|---------------|-------------|-------------------------|-----------------|--------------------------|
| Harvie Road | Whiskey Creek | Sand/gravel | Transitional/ Stressed | Good | 39m to 43m |
| Essa Road | Bear Creek | Muck/Sand | In Regime | Poor | 11m |
| Bryne Drive | Whiskey Creek | Sand | In Regime | Good | 51m |
| | Lovers Creek | Sand/gravel | Transitional / Stressed | Fair | 44m to 46m |

- The Lake Simcoe and Region Conservation Authority has established 15m setback requirements on both sides of the channel
- Bear Creek is a constructed drainage channel unlikely to meander out of its current alignment
- Whiskey Creek and Lovers Creek are well defined channels

Archaeology – Harvie Rd & Essa Rd

Harvie Road

- There are 11 previously registered archaeological sites within one kilometre of the Study Area, and one of which is within 50m
- Portions of the Study Area require Stage 2 assessment to further assess the impact of proposed improvements
- Five of the sites are known ancestral Huron-Wendat villages, of which ossuaries have not been located for four sites

Essa Road

- There are 14 previously registered archaeological sites within one kilometre of the Study Area, and one of which is within 50m
- The former Holly Post Office is known to have been located in the northeast quadrant of the intersection of Maplevue Drive and Essa Road. There remains potential for deeply buried archaeological deposits below the deep fill layer, requiring Stage 2 assessment
- Portions of the Study Area require Stage 2 assessment to further assess the impact of proposed improvements

Archaeology – Bryne Drive

- **A Stage 1 Archaeological Assessment was completed in 2005; the findings are as follows:**
 - 12 sites registered within one kilometer of the Study Area, including nine related to First Nations activities
 - Study Area exhibits high potential for significant archaeological resources of Native origin and high potential for those of Euro-Canadian origins
 - Stage 2 Archaeological Assessment (test pit and pedestrian survey) is required along significant portion of Study Area

Cultural Heritage

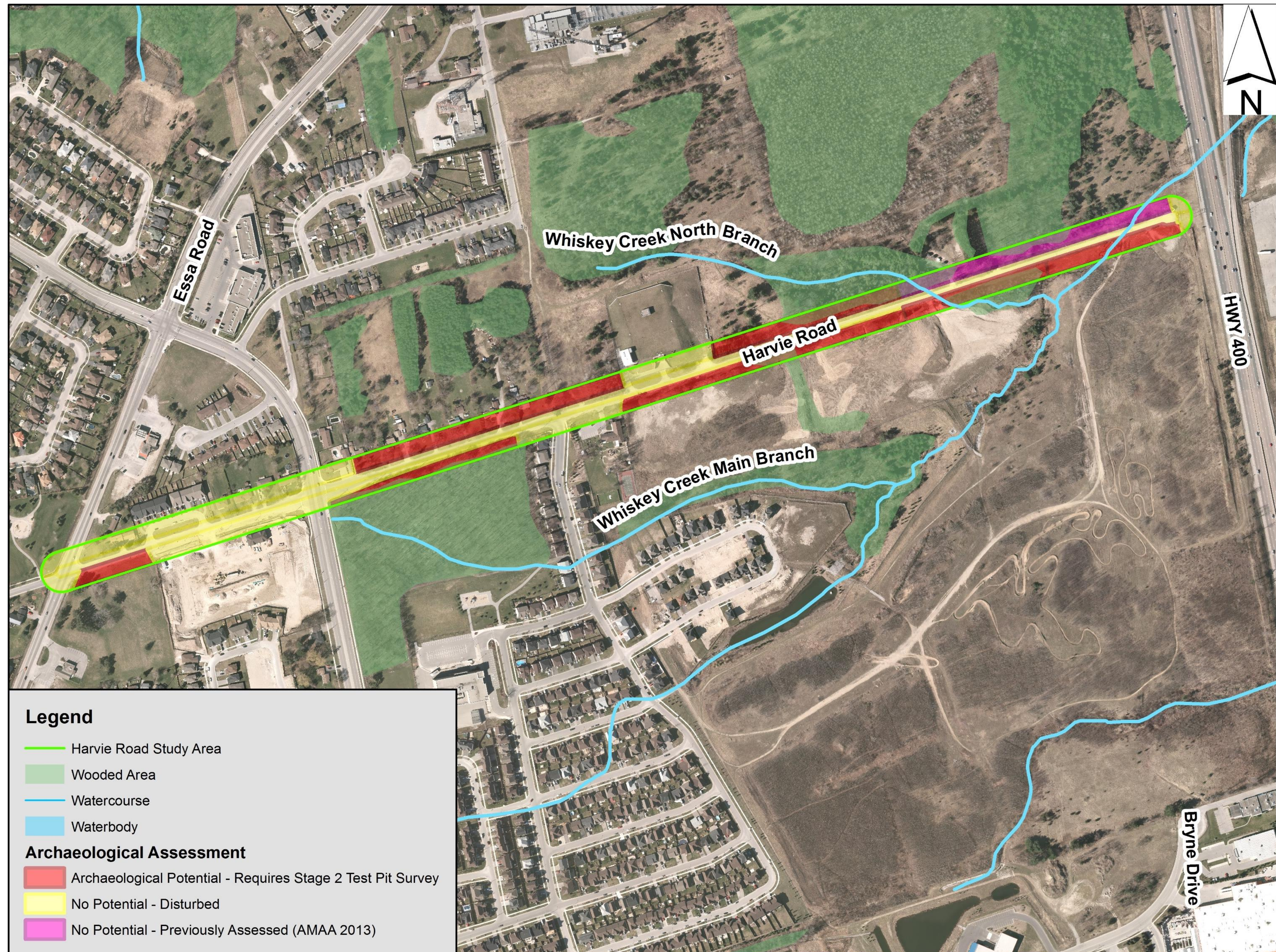
Harvie Road/Bryne Drive

- There are no properties located in or adjacent to the Study Area identified to have potential cultural heritage interest

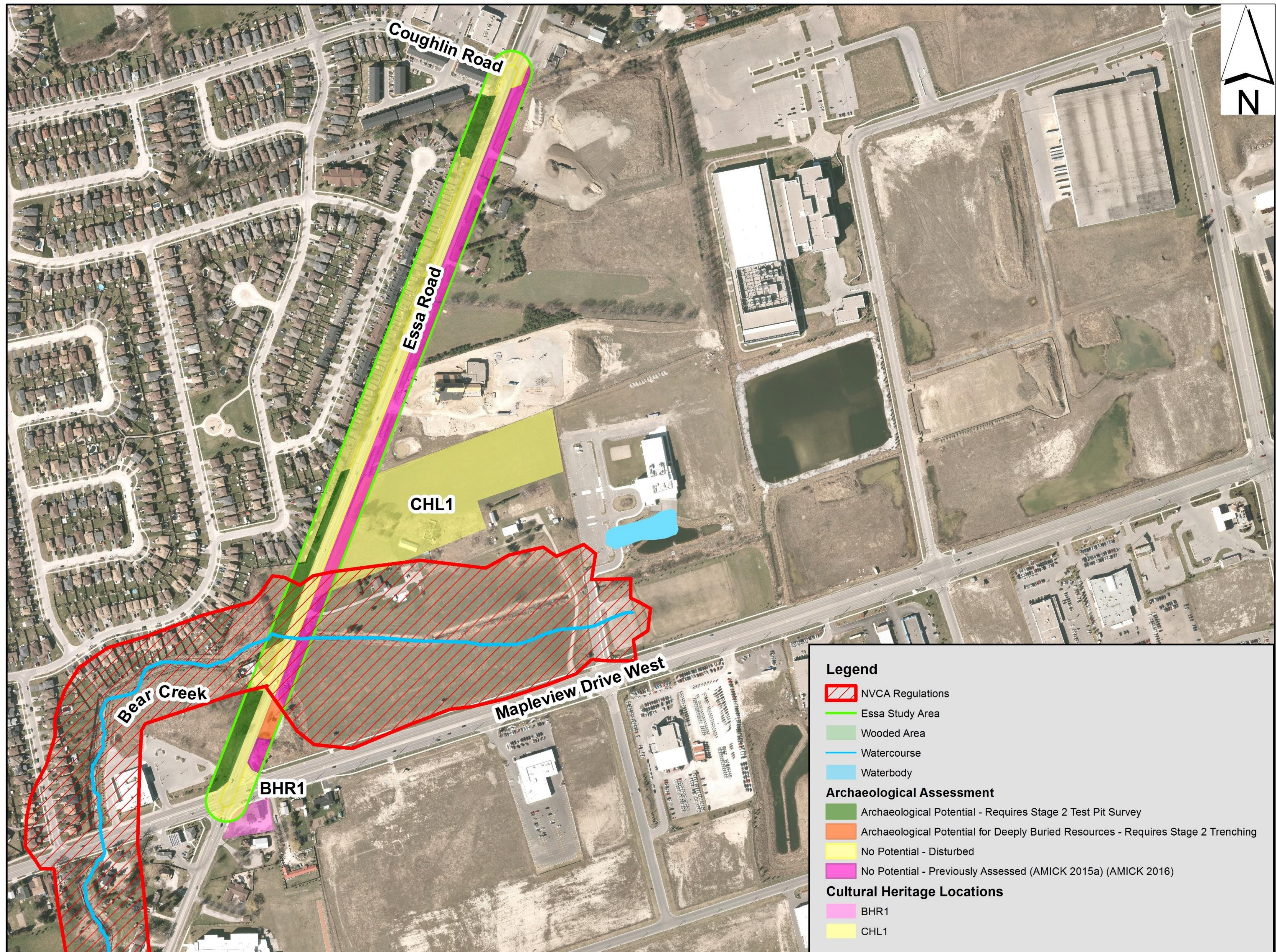
Essa Road

- Two cultural heritage resources were identified including one built heritage resources (Church) and one cultural heritage landscape (farmscape)
- Further assessment is required following the identification of the preferred design concept to confirm impacts and mitigation measures

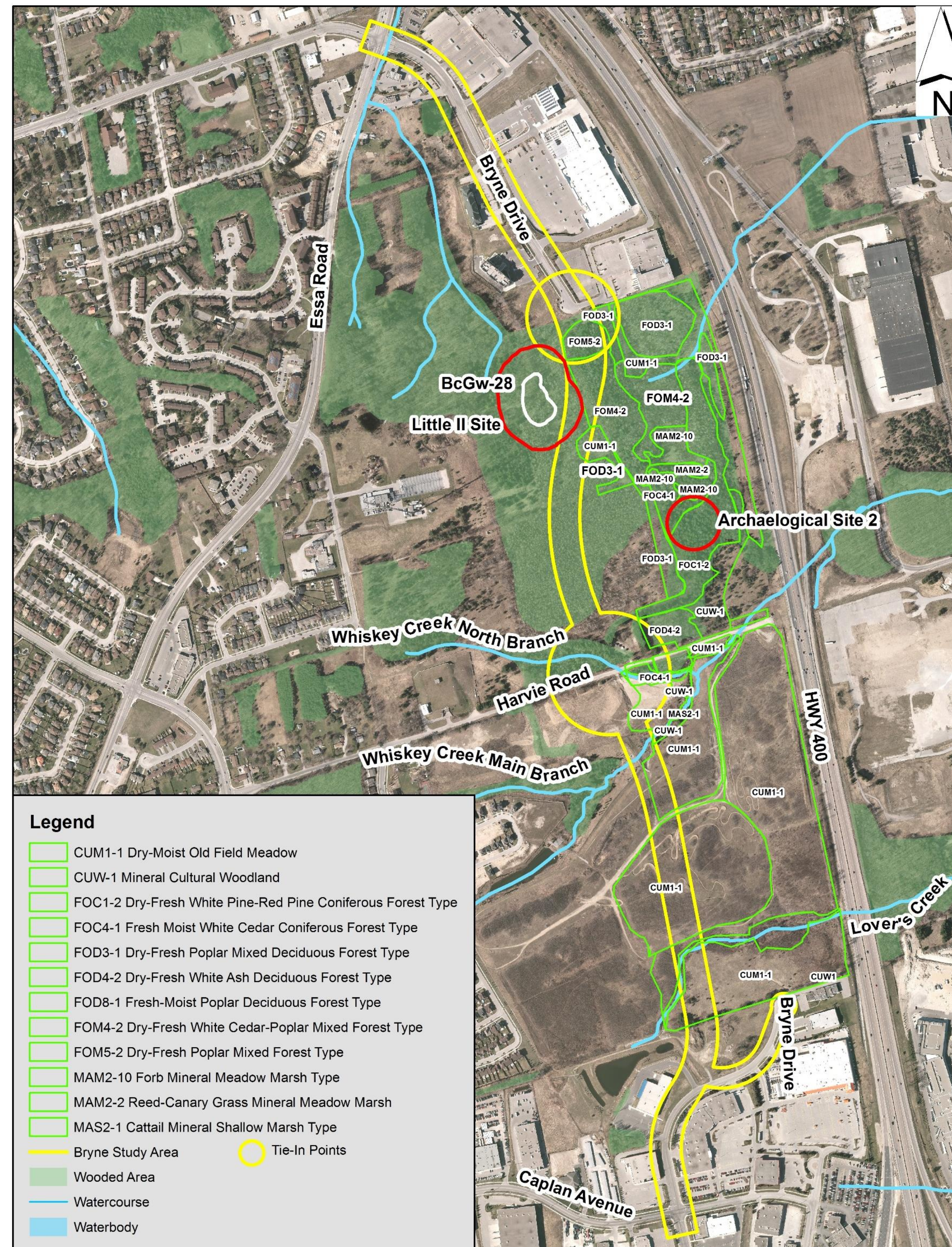
Constraints: Harvie Road



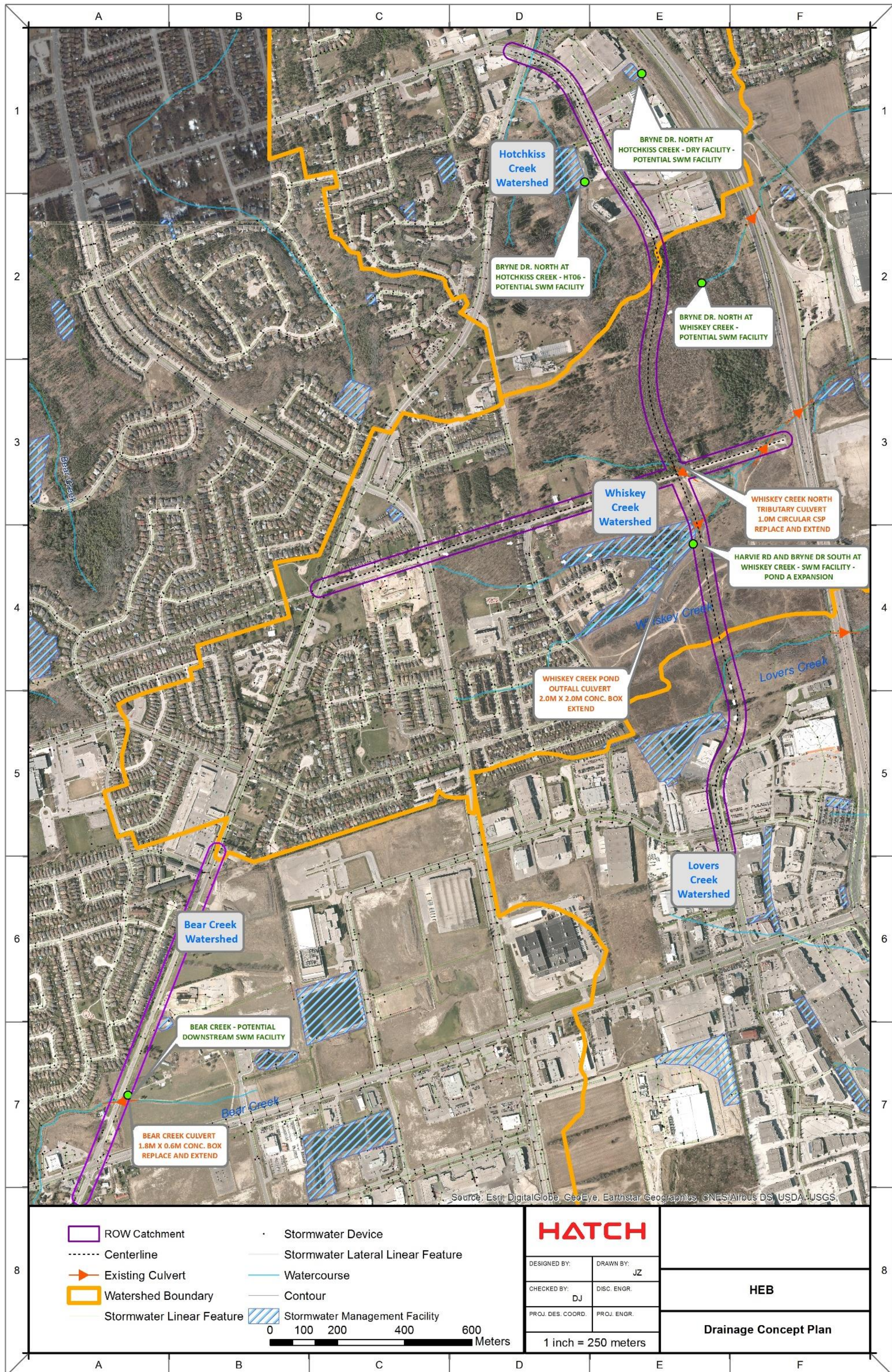
Constraints: Essa Road



Constraints: Bryne Drive



Stormwater Management Concept Plan



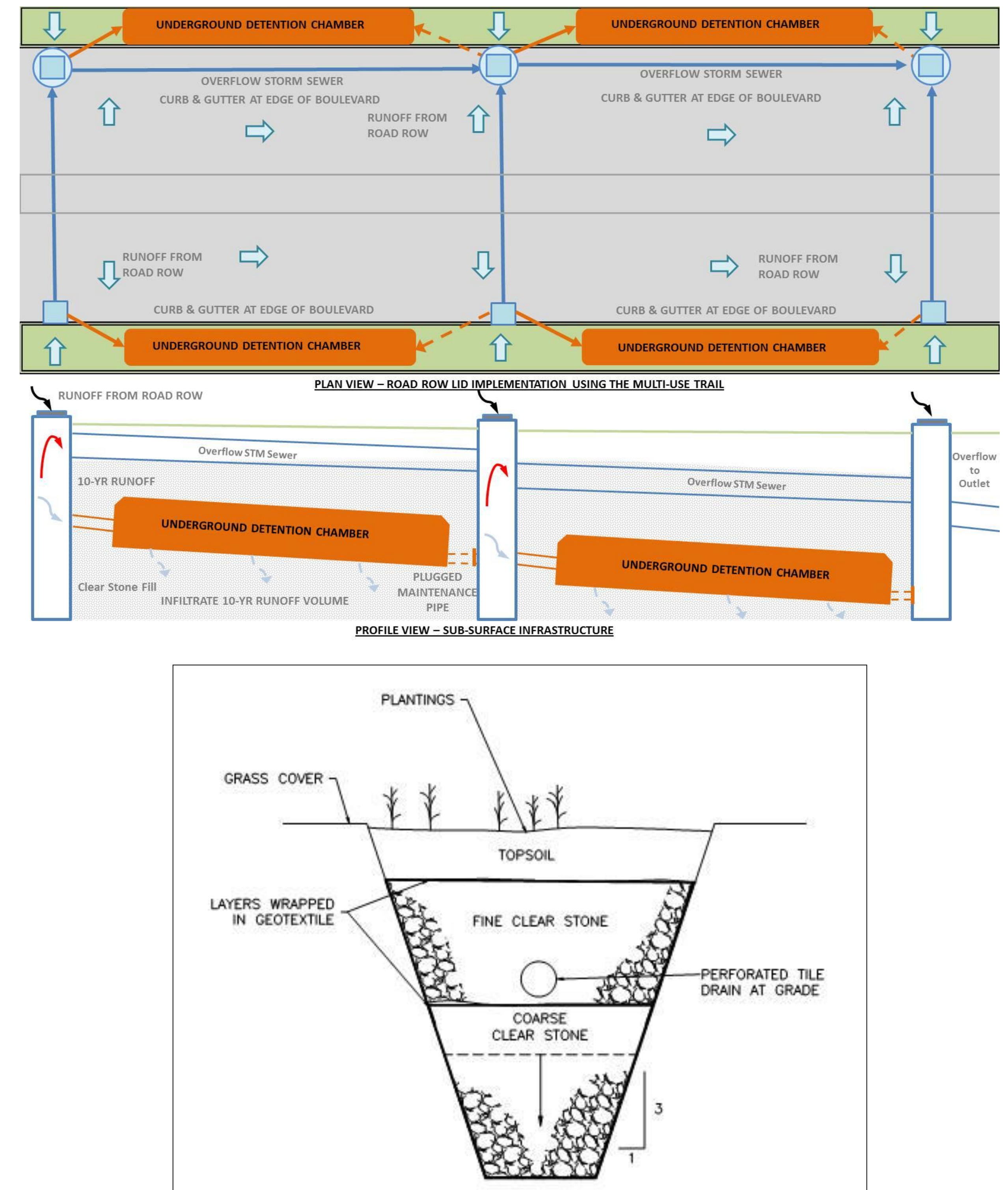
Drainage/ SWM

- Drainage and Stormwater Management (SWM) designs were developed and evaluated for:
 - Existing drainage features within the Study Area:
 - Main storm sewer network along Bryne Drive North and South
 - Conveyance ditching along Essa Road and Harvie Road
 - Three (3) major culvert watercourse crossings along Harvie Road, Essa Road and Bryne Drive at Whiskey Creek, Bear Creek and Lovers Creek
 - Existing and future proposed development drainage design can be divided into:
 - Right-of-Way (ROW) drainage catchments including drainage conveyance and SWM opportunities
 - External drainage catchments modeled on an approved hydrologic/hydraulic modeling basis for major culvert crossings
 - SWM Water Quantity and Quality control considered where feasible for post-development ROW conditions.

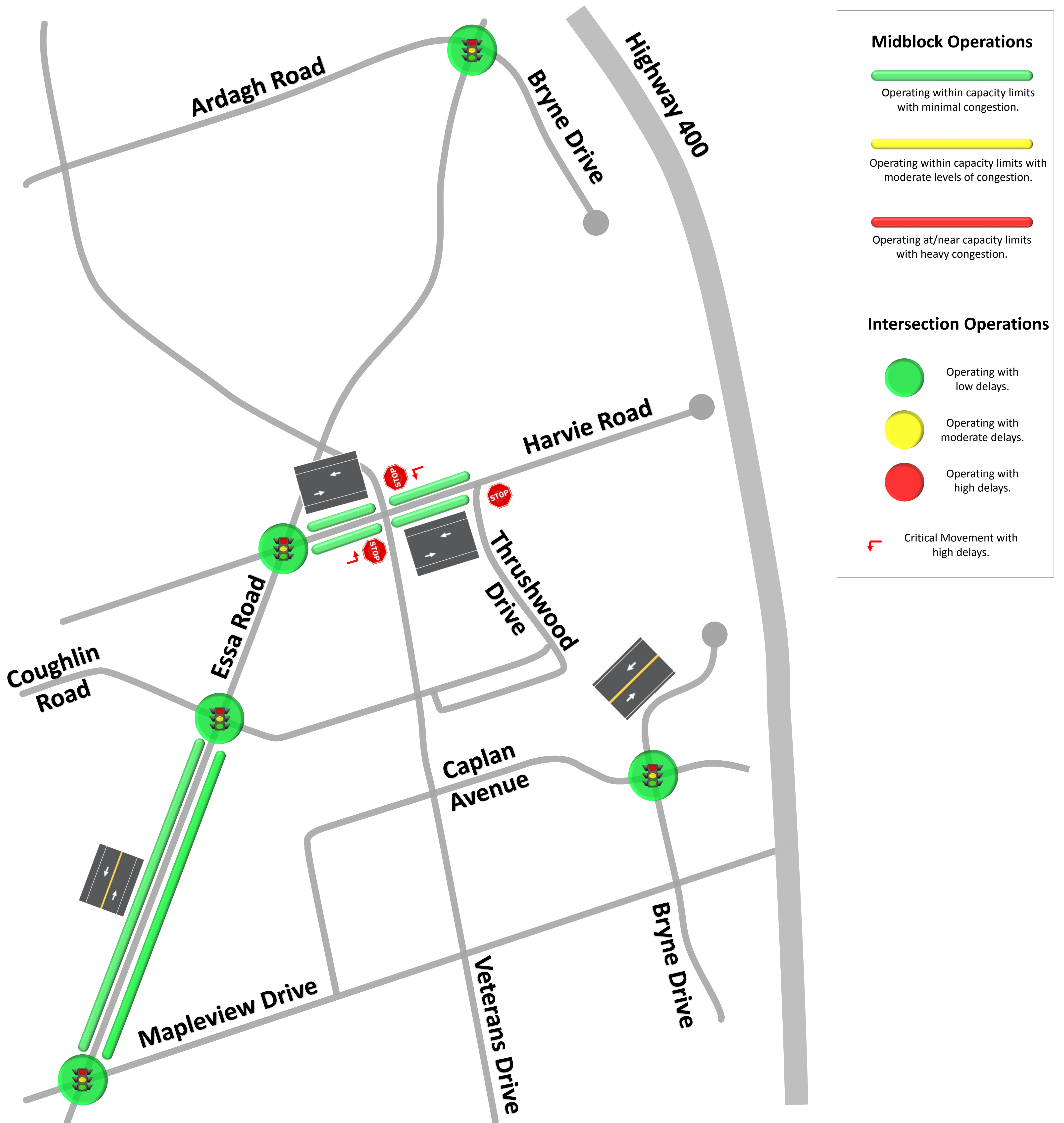


Drainage/SWM - LID

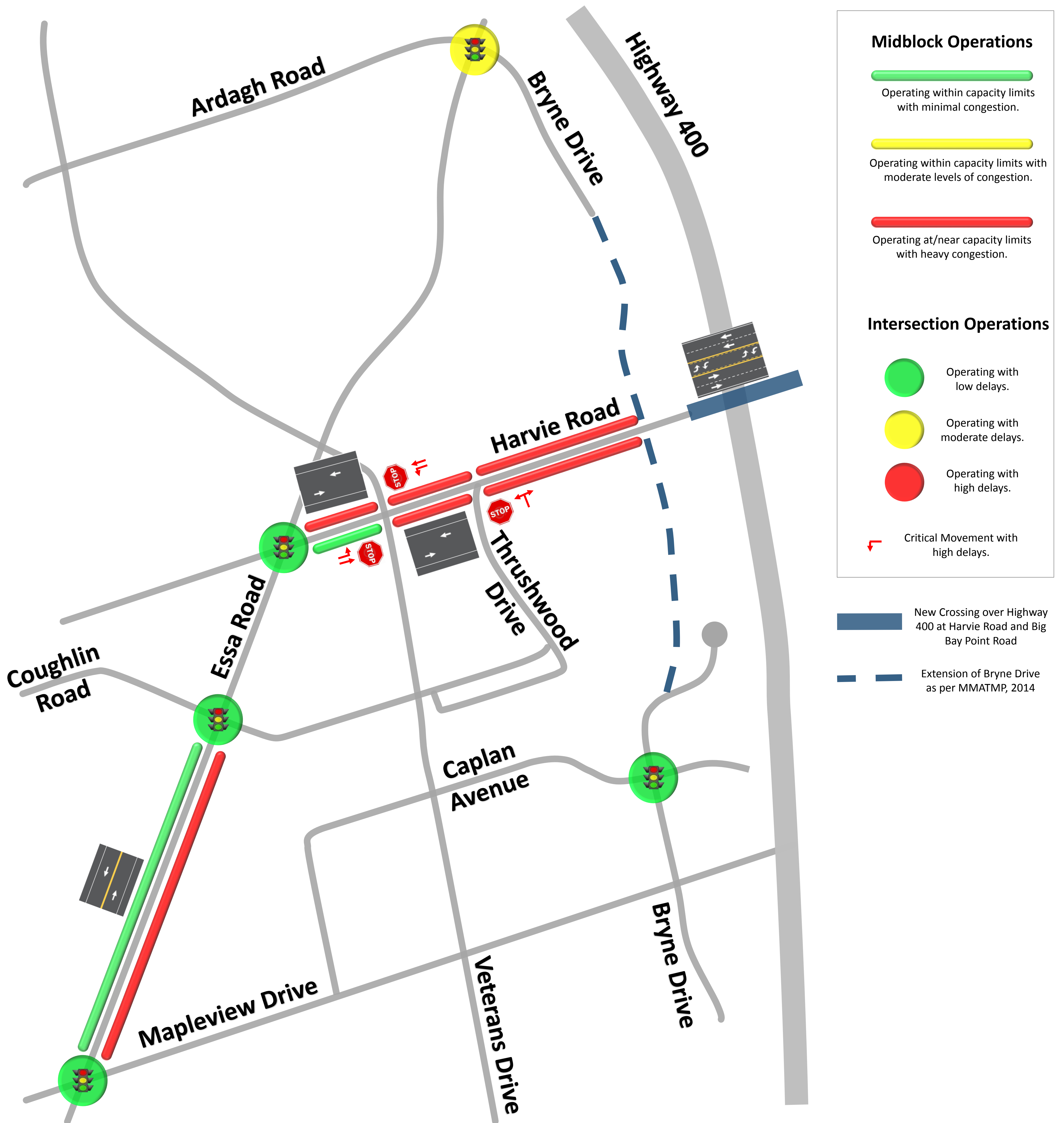
- Stormwater Management in the form of linear Low Impact Development (LID) and centralized peak flow quantity control facilities.
- LID concepts and target treatment volumes developed in consideration of the Lake Simcoe and Region Conservation Authority 2016 Guidelines (LSRCA, 2016).
- Recommended options for Centralized LID in the form of Underground Detention Chamber or Bioretention Facilities to treat required runoff where feasible.



Traffic Analysis – 2017 Existing Conditions



Traffic Analysis – Do Nothing 2031 Future Conditions



Alternative Design Concepts

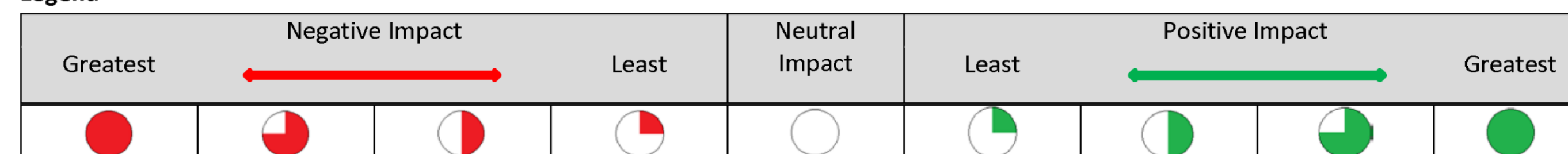
- The following Alternative Design Concepts were evaluated based on a set of criteria to identify a Recommended Preferred Alternative Design Concept

| Roadway | Alternative Design Concepts |
|--|---|
| Harvie Road 3-lane profile (27m ROW) – Essa Road to Veterans Drive and 5-lane profile (34m ROW)- Veterans Drive to Bryne Drive | <ul style="list-style-type: none"> Do Nothing Widen to the north Widen to the south Widen about the centre-line |
| Essa Road 5-lane profile (30m ROW) | <ul style="list-style-type: none"> Do Nothing Widen to the west Widen to the east Widen about the centre-line |
| Bryne Drive 5-lane profile (34m ROW) | <ul style="list-style-type: none"> Extend along 3R alignment (2016 Master Plan Update) Shift to west (north of Harvie Road) Shift to east (north of Harvie Road) |

Evaluation – Harvie Road

| Harvie Road Essa Road to Bryne Drive Evaluation Criteria | | How Criteria is Being Assessed | Do Nothing | Widen to the South | Widen along the Centre | Widen to the North | | |
|--|---|--|------------|--|------------------------|--|--|--|
| Engineering / Operational Environment | Traffic operations (MMATMP, safety, capacity, congestion, etc.) | Impact to operations and road capacity (based on traffic operations assessment – increase capacity, reduce congestion and delays). Impact to safety. | | No improvement, no connectivity; increased congestion | | Opportunity for improved operations, capacity and safety | | Opportunity for improved operations, capacity and safety |
| | Cycling operations | Adequacy to accommodate Cyclists | | No improvement | | Provision for bike lanes | | Provision for bike lanes |
| | Pedestrian operations | Adequacy to accommodate Pedestrians | | No improvement | | Improved sidewalk connectivity | | Improved sidewalk connectivity |
| | Driveway Impacts | Impacts on driveway accessibility and operations | | No impact | | Reduced driveway lengths | | Reduced driveway length; may include relocating one driveway |
| | Municipal Services (water and sanitary sewer) | Upgrades | | No improvement | | Opportunity for Improvement | | Opportunity for Improvement |
| | Stormwater management | Ability to accommodate drainage and stormwater management. Use of LIDs | | No change | | SWM improvements can be incorporated | | SWM improvements can be incorporated |
| | Potential impact to surface water | Potential impact to vulnerable aquifer, wellhead and groundwater recharge areas | | No impact | | Potential impact (west end) | | Potential impact (west end) |
| | Utilities | Potential impact to Hydro, Bell, Alletra, etc. | | No impact | | Potential impact to hydro corridor south side | | Potential impact to hydro corridor (south side) |
| | Impacts to structures | Impact on structures and other infrastructure | | No change | | Lengthening of Whiskey Creek culvert (may require realignment of Creek) | | Lengthening of Whiskey Creek culvert |
| | Emergency Services | Impact on Emergency Service movement | | No improvement | | Improved access | | Improved access |
| Natural Environment | Water courses/fisheries/aquatic impacts | Potential impact on existing watercourses Impact on fish/fish habitat (Brook Trout) | | No impact | | Potential impact to Brook Trout – Whiskey Creek | | Potential impact to Brook Trout – Whiskey Creek |
| | Species at risk | Potential impact on Species at Risk | | No impact | | Potential impact to bats located north of road | | Potential impact to bats located north of road |
| | Vegetation Impacts | Potential impact on Significant Woodlands, other wooded areas and areas of natural vegetation communities (excluding wetlands) | | No impact | | Potential impact to woodlot associated with Veteran's Woods Park and Harvie Road Greenbelt | | Potential impact to Significant Woodlot on north side of Harvie Road |
| | Impacts to Wetlands/PSW | Potential impact on locally significant wetlands and unevaluated wetlands | | No impact | | Minimal potential to wetland north of road | | Potential impact to wetland on north side of road |
| | Land use | Compatibility with land use (existing and future) | | No change | | Potential impact to property on south near Thrushwood Drive | | Moderate impact to residents on north side of Harvie Road |
| Social Impact | Property acquisition | Degree of Property required and households/business affected | | No impact | | Moderate impact to open land; one buy-out (south side) | | Moderate residential property (north and south sides) |
| | Aesthetics | Ability to improve visual aesthetics of roadway and community | | No impact | | Opportunity to improve aesthetics, however will change the road use | | Opportunity to improve aesthetics, however will change the road use |
| | Noise impacts | Number of noise walls or mitigations measured required. | | No impact | | Potential increase in noise, as roadway will be closer to homes | | Potential increase in noise, as roadway will be closer to homes |
| | Accessibility and Public Safety | Compliance with AODA and elimination of conflict points, improved infrastructure for all users | | No improved safety or AODA | | Improved active transportation and turning movements | | Improved active transportation and turning movements |
| | Construction impacts | Disruption to businesses; residents during construction | | No impact | | Nuisances during construction | | Nuisances during construction |
| Cultural/Heritage | Archaeological impacts | Potential impact to archaeological resources (per Stage 1 Archaeological Assessment); potential impact to First Nation's interests, traditional land, etc. | | No impact | | Archaeological potential (Stage 2 AA required) | | Archaeological potential (Stage 2 AA required) |
| | Cultural heritage impacts | Potential for direct or indirect impacts to built heritage resources and cultural heritage landscapes | | No impact | | No impact | | No impact |
| Economic Environment | Construction Costs | Costs to construct individual alternatives | | No impact | | Similar cost to construct | | Similar cost to construct |
| | Maintenance Costs | Future maintenance costs | | Road will continue to deteriorate with increased traffic | | No significant difference between alternatives | | No significant difference between alternatives |
| | Land acquisition costs | Total costs for property acquisition | | No costs | | Moderate costs | | Moderate costs |

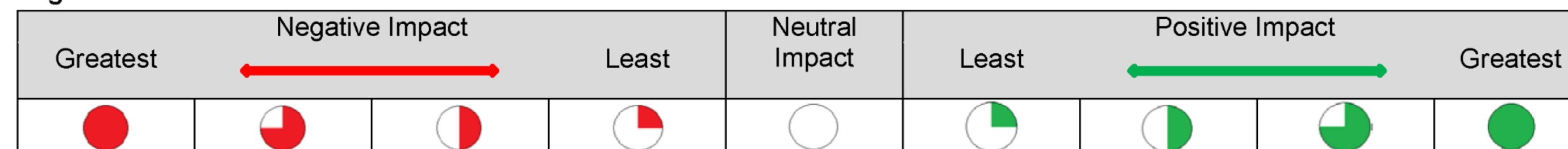
Legend



Evaluation – Essa Road

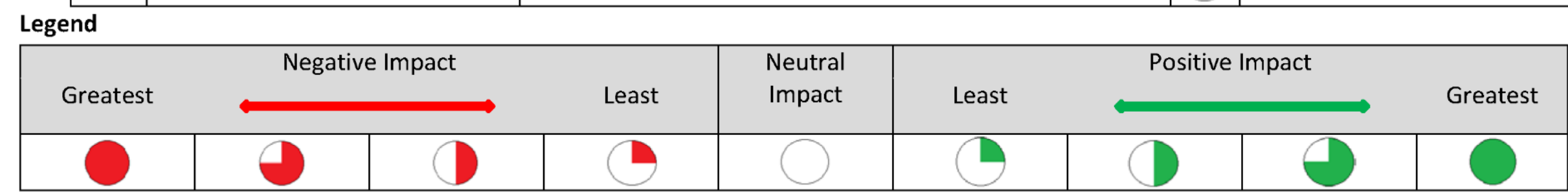
| Essa Road: Mapleview Drive to Coughlin Road Evaluation Criteria | | How Criteria is Being Assessed | Do Nothing | | Widen to the West | | Widen along the Centre | | Widen to the East | |
|--|---|---|------------|--|-------------------|---|------------------------|---|-------------------|---|
| Engineering / Operational Environment | Traffic operations (MMATMP, safety, capacity, congestion, etc.) | Impact to operations and road capacity (based on traffic operations assessment – increase capacity, reduce congestion and delays). Impact to safety | | No improvement | | Opportunity for improved operations, capacity and safety | | Improved tie-in to the north (improved operations, capacity and safety) | | Opportunity for improved operations, capacity and safety |
| | Cycling operations | Adequacy to accommodate Cyclists | | No improvement | | Provision of a multi-use path | | Provision of a multi-use path | | Provision of a multi-use path |
| | Pedestrian operations | Adequacy to accommodate Pedestrians | | No improvement | | Improved sidewalk connectivity | | Improved sidewalk connectivity | | Improved sidewalk connectivity |
| | Driveway Impacts | Impacts on driveway accessibility and operations | | No impact | | No impact | | Minimal impact on driveways (east side) | | Minimal impact on driveways (east side) |
| | Municipal Services (water, and sanitary sewer) | Upgrades | | No improvement | | Opportunity for sanitary sewer; minimal adjustments to watermain | | Opportunity for sanitary sewer; minimal adjustments to watermain | | Opportunity for sanitary sewer. Not desirable for watermain connection |
| | Stormwater management | Ability to accommodate drainage and stormwater management. Use of LIDs | | No change | | SWM improvements can be incorporated; opportunity to replace Bear Creek culvert | | SWM improvements can be incorporated; opportunity to replace Bear Creek culvert | | SWM improvements can be incorporated; opportunity to replace Bear Creek culvert |
| | Potential impact to surface water | Potential impact to vulnerable aquifer, wellhead and groundwater recharge areas | | No impact | | Potential impact | | Potential impact | | Potential impact |
| | Utilities | Potential impact to Bell, Hydro, Allectra, etc. | | No impact | | No impact | | Hydro corridor (east side) may require relocation | | Hydro corridor (east side) will require relocation |
| | Impacts to structures | Impact on structures and other infrastructure | | No impact | | Potential lengthening of Bear Creek culvert | | Potential lengthening of Bear Creek culvert | | Potential lengthening of Bear Creek culvert |
| | Emergency Services Impact | Impact on Emergency Services during/after construction | | No improvement | | Improved access | | Improved access | | Improved access |
| Natural Environment | Water courses/fisheries/aquatic impacts | Potential impact on existing watercourses Impact on fish/fish habitat (Brook Trout) | | No impact | | Potential impact to fish habitat | | Potential impact to fish habitat | | Potential impact to fish habitat |
| | Species at risk | Potential impact on Species at Risk | | No impact | | No potential impact | | No potential impact | | No potential impact |
| | Vegetation Impacts | Potential impact on Significant Woodlands, other wooded areas and areas of natural vegetation communities | | No impact | | Minimal impact to vegetation at Bear Creek crossing | | Minimal impact to vegetation at Bear Creek crossing | | Minimal impact to vegetation at Bear Creek crossing |
| | Impacts to Wetlands/PSW | Potential Impact on locally significant wetlands and unevaluated wetlands | | No impact | | Potential impact to wetland/cattail marsh associated with Bear Creek | | Potential impact to wetland/cattail marsh associated with Bear Creek | | Potential impact to wetland/cattail marsh associated with Bear Creek |
| | Land use | Impacts on surrounding land uses | | No impact | | Significant impact – encroaching residential property west side | | Minimal impact to existing | | Significant impact – roadway encroaching agricultural land/ church |
| Social Impact | Property acquisition | Degree of Property required and households/business affected | | No impact | | Significant property required (west side) | | Minimal property required | | Significant property required (east side) |
| | Aesthetics | Ability to improve visual aesthetics of roadway and community | | No change | | Improved continuity | | Improved continuity | | Improved continuity |
| | Noise impacts | Impacts to residents/businesses during construction and future impacts to residents/businesses following construction | | No impact | | Potential noise impacts to houses on west side | | Moderate noise impact to houses west side | | Minimal change from existing |
| | Accessibility and Public Safety | Compliance with AODA. Elimination of conflict points, improved infrastructure for all users | | No improved safety /AODA | | Improved active transportation and turning movements | | Improved active transportation and turning movements | | Improved active transportation and turning movements |
| | Construction impacts | Disruption to businesses; residents during construction | | No impact | | Nuisances during construction | | Nuisances during construction | | Nuisances during construction |
| Cultural/ Heritage | Archaeological impacts | Potential impact to archaeological resources (per Stage 1 Archaeological Assessment). Also potential impact to First Nation's interests, traditional land, etc. | | No impact | | Moderate impact - Stage 2 AA requirements north and south ends | | Minimal impact – Stage 2 AA requirement west side | | Potential impact (former Holly Post Office - Stage 2 AA req.) |
| | Cultural heritage impacts | Potential for direct or indirect impacts to built heritage resources and cultural heritage landscapes | | No impact | | No impact | | No impact | | Potential impact to Cultural Heritage Resource |
| Economic Environment | Construction Costs | Costs to construct individual alternatives | | No impact | | Similar cost to construct | | Similar cost to construct | | Similar cost to construct |
| | Maintenance Costs | Future maintenance requirements | | Road/culverts will continue to deteriorate | | No significant difference between alternatives | | No significant difference between alternatives | | No significant difference between alternatives |
| | Land acquisition costs | Total costs for property acquisition | | No impact | | Significant cost (residential land) | | Moderate cost | | Significant cost (agricultural land) |

Legend



Evaluation – Bryne Drive

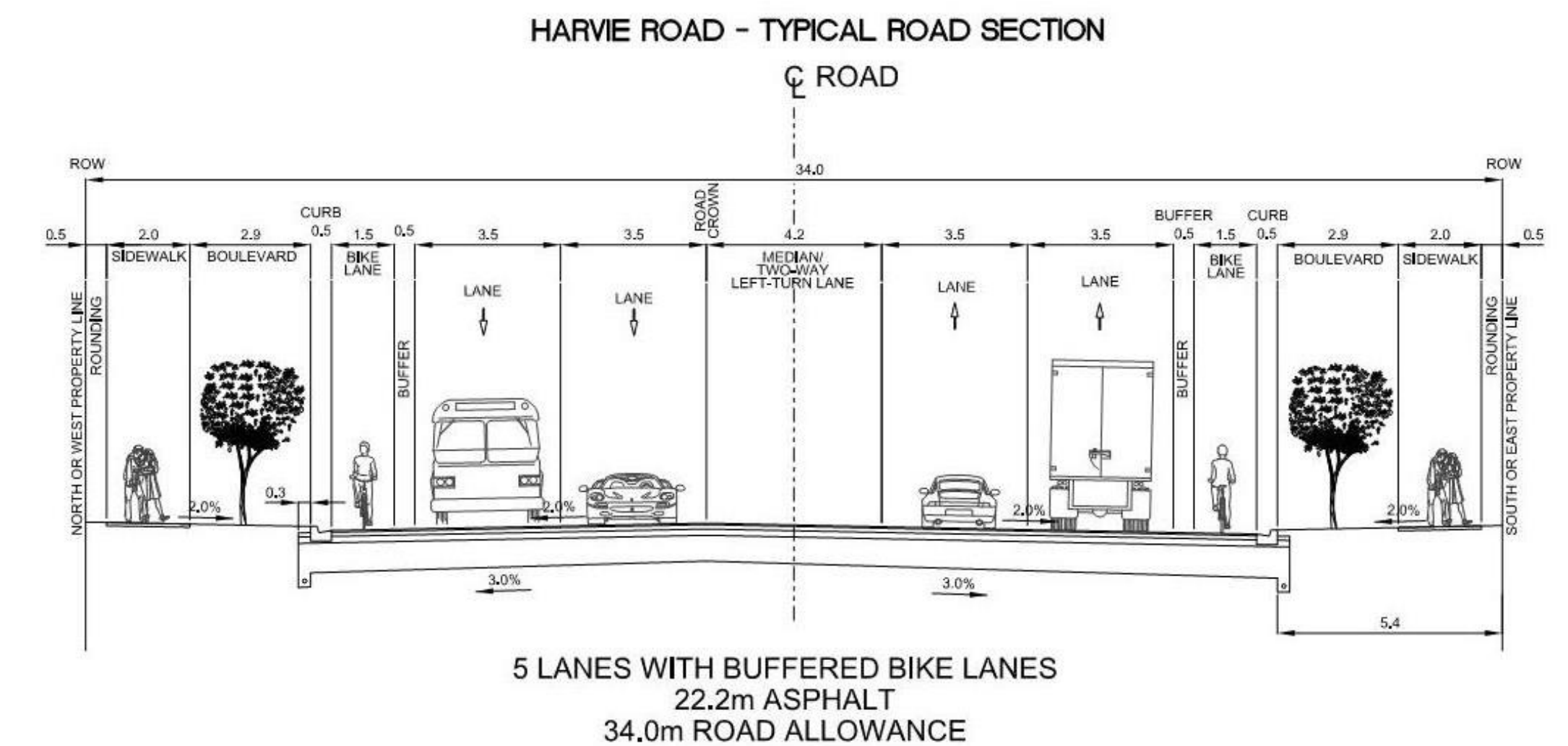
| Bryne Drive Coughlin Ave to Essa Road Evaluation Criteria | | How Criteria is Being Assessed | Do Nothing | Extend to the West | Widen along the Centre | Extend to the East | | |
|---|---|---|------------|----------------------------|------------------------|---|--|---|
| Engineering / Operational Environment | Traffic operations (MMATMP, safety, capacity, congestion, etc.) | Impact to operations and road capacity (based on traffic operations assessment – increase capacity, reduce congestion and delays), impact to safety | | No improvement | | Opportunity for improved operations, capacity, and connectivity | | Opportunity for improved operations, capacity, and connectivity |
| | Cycling operations | Adequacy to accommodate Cyclists | | No improvement | | Provision of bike lanes | | Provision of bike lanes |
| | Pedestrian operations | Adequacy to accommodate Pedestrians | | No improvement | | Improved pedestrian connectivity | | Improved pedestrian connectivity |
| | Driveway Impacts | Impacts on driveway accessibility and operations | | No impact | | No impact | | No impact |
| | Municipal Services (water and sanitary sewer) | Upgrades | | No improvement | | Opportunity for improvement | | Opportunity for improvement |
| | Stormwater management | Ability to accommodate drainage and stormwater management. Use of LIDs | | No improvement | | SWM improvements can be incorporated | | SWM improvements can be incorporated |
| | Potential impact to surface water | Potential impact to vulnerable aquifer, wellhead and groundwater recharge areas | | No impact | | Potential impact | | Potential impact |
| | Utilities | Impact to utilities | | No impact | | Significant impact on CTV lands | | Minimal impact on CTV lands |
| | Impacts to structures | Impact on structures and other infrastructure | | No impact | | Whiskey Creek Pond outfall extension and new culvert at Lovers Creek | | Whiskey Creek Pond outfall extension and new culvert at Lovers Creek |
| | Emergency Service Impact | Impact to emergency services during and after construction | | No improvement | | Improved connectivity | | Improved connectivity |
| Natural Environment | Water courses/fisheries/aquatic impacts | Potential impact on existing watercourses Impact on fish/fish habitat (Brook Trout) | | No impact | | Potential impact to Brook Trout – sensitive coldwater species – recorded outside Study Area | | Potential impact to Brook Trout – sensitive coldwater species – recorded outside Study Area |
| | Species at risk | Potential impact on Species at Risk | | No impact | | Potential impact to SAR (species and habitat) - bats | | Potential impact to SAR (species and habitat) - bats |
| | Vegetation | Potential impact on Significant Woodlands, other wooded areas and areas of natural vegetation communities | | No impact | | Significant impact to regulated woodlot north of Harvie Rd | | Significant impact to regulated woodlot north of Harvie Rd |
| | Impacts to Wetlands/PSW | Potential Impact on locally significant wetlands and unevaluated wetlands | | No impact | | Impact to wetland at Harvie/Bryne intersection | | Impact to wetland at Harvie/Bryne intersection |
| | Land use | Impacts on surrounding land uses | | No impact | | Impact to existing land use (woodlot, CTV property and agricultural) | | Impact to existing land use (woodlot and agricultural) |
| Social Impact | Property acquisition | Degree of Property required and households/business affected | | No impact | | Mixture of business (moderate north end), CTV lands and vacant (Bell Media) | | Mixture of business (minimal north end), vacant (Bell Media) |
| | Aesthetics | Ability to improve visual aesthetics of roadway and community | | No change | | Improved connectivity for development potential | | Improved connectivity for development potential |
| | Noise impacts | Number of noise walls or mitigations measured required. | | No impact | | No impact | | No impact |
| | Accessibility and Public Safety | Compliance with AODA and elimination of conflict points, improved infrastructure for all users | | No improved safety or AODA | | Improved accessibility and connectivity | | Improved accessibility and connectivity |
| | Construction impacts | Disruption to businesses, residents during construction | | No impact | | Minimal – new build | | Minimal – new build |
| Cultural/Heritage | Archaeological impacts | Potential impact to archaeological resources (per Stage 1 Archaeological Assessment), also potential impact to First Nation's interests, traditional land, etc. | | No impact | | Significant impact (Little II Site) | | Potential impact to Archaeological Site 2 |
| | Cultural heritage impacts | Potential for direct or indirect impacts to built heritage resources and cultural heritage landscapes | | No impact | | No impact | | No impact |
| Economic Environment | Construction Costs | Costs to construct individual alternatives | | No impact | | Similar cost to construct | | Similar cost to construct |
| | Maintenance Costs | Future maintenance requirements | | N/A | | No significant difference between alternatives | | No significant difference between alternatives |
| | Land acquisition costs | Total costs for property acquisition | | No impact | | Moderate property costs | | Similar property costs |



Recommended Preliminary Preferred Design Concepts

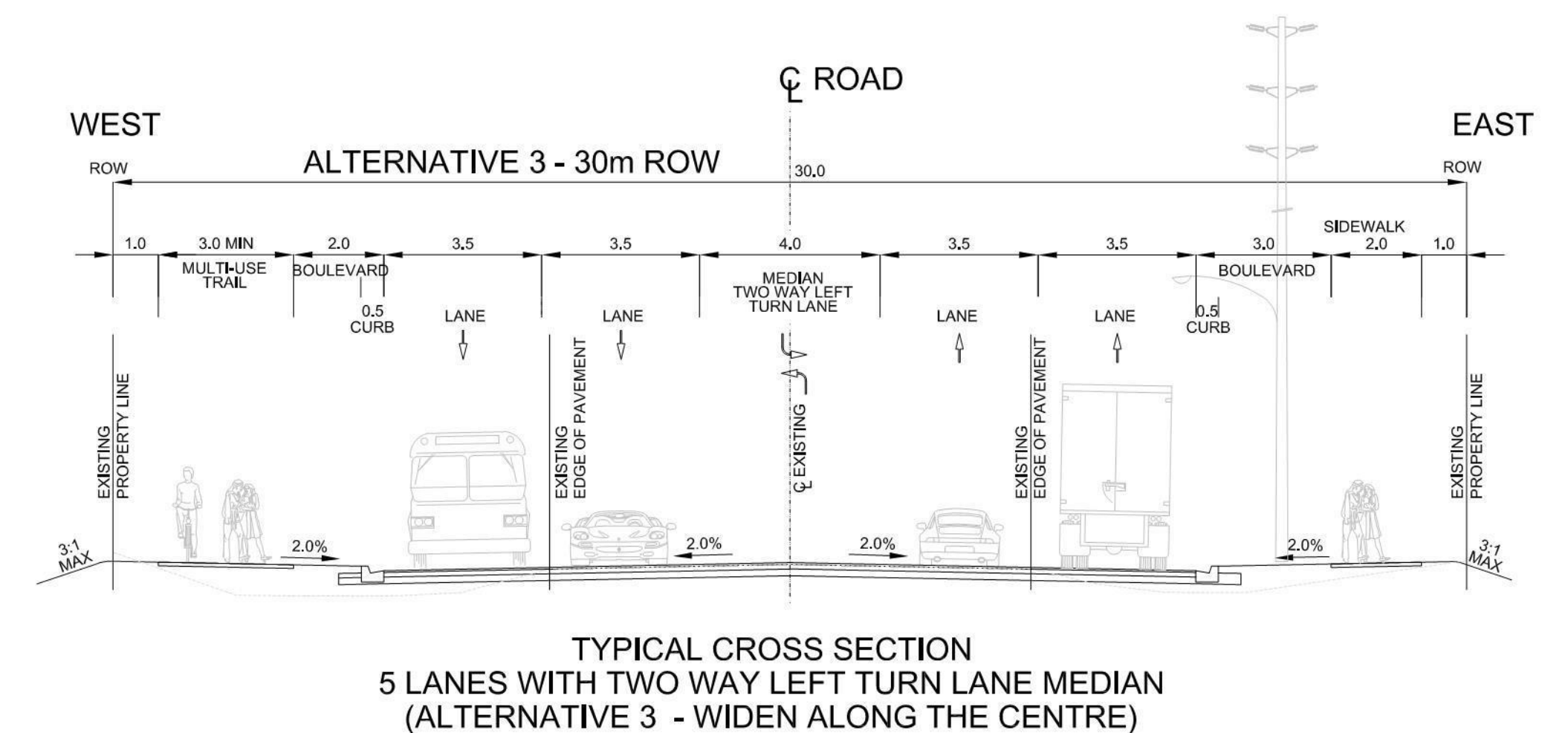
Harvie Road:

- 3-lane cross-section (from Essa Road to Veterans Drive) about the centre-line
- 5-lane cross-section (from Veterans Drive to Bryne Drive) about the centre-line
 - Buffered bike lanes
 - Sidewalks on both sides



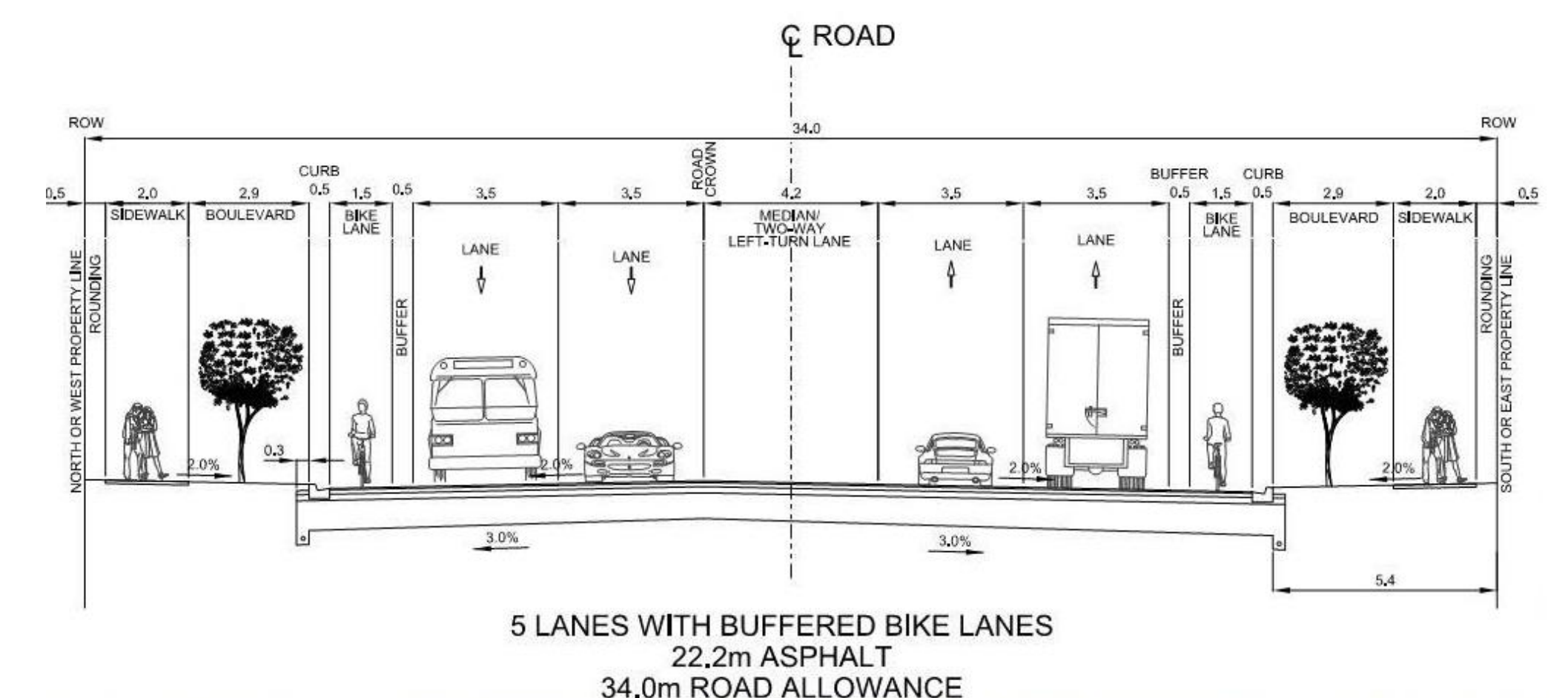
Essa Road:

- 5-lane cross-section about the centre-line
 - Multi-use trail (west)
 - Sidewalk (east)



Bryne Drive:

- 5-lane cross-section along 3R alignment (about the centre-line)
 - Buffered bike lanes
 - Sidewalks on both sides



Next Steps

- Receive public input on the Recommended Preliminary Preferred Design Concepts
- Respond to comments received from PIC
- Prepare Environmental Study Report (ESR) and issue Notice of Study Completion announcing start of 30-day public review period

Thank You for Attending

We value your input and encourage you to stay connected by:

- Visiting the Project Website at: www.barrie.ca/eastudies.
- Requesting to be added to the Project Contact list

Contact the Project Coordinator with any additional comments or questions at any time:

Alvaro Almuina, P.Eng.

City of Barrie

Phone: 705-739-4220 Ext. 4458

Email: Alvaro.Almuina@barrie.ca

Please remember to drop off your completed Comment Form in the Comment Box before you leave or send it to us before July 7th, 2017