6.4 Drainage and Stormwater Management

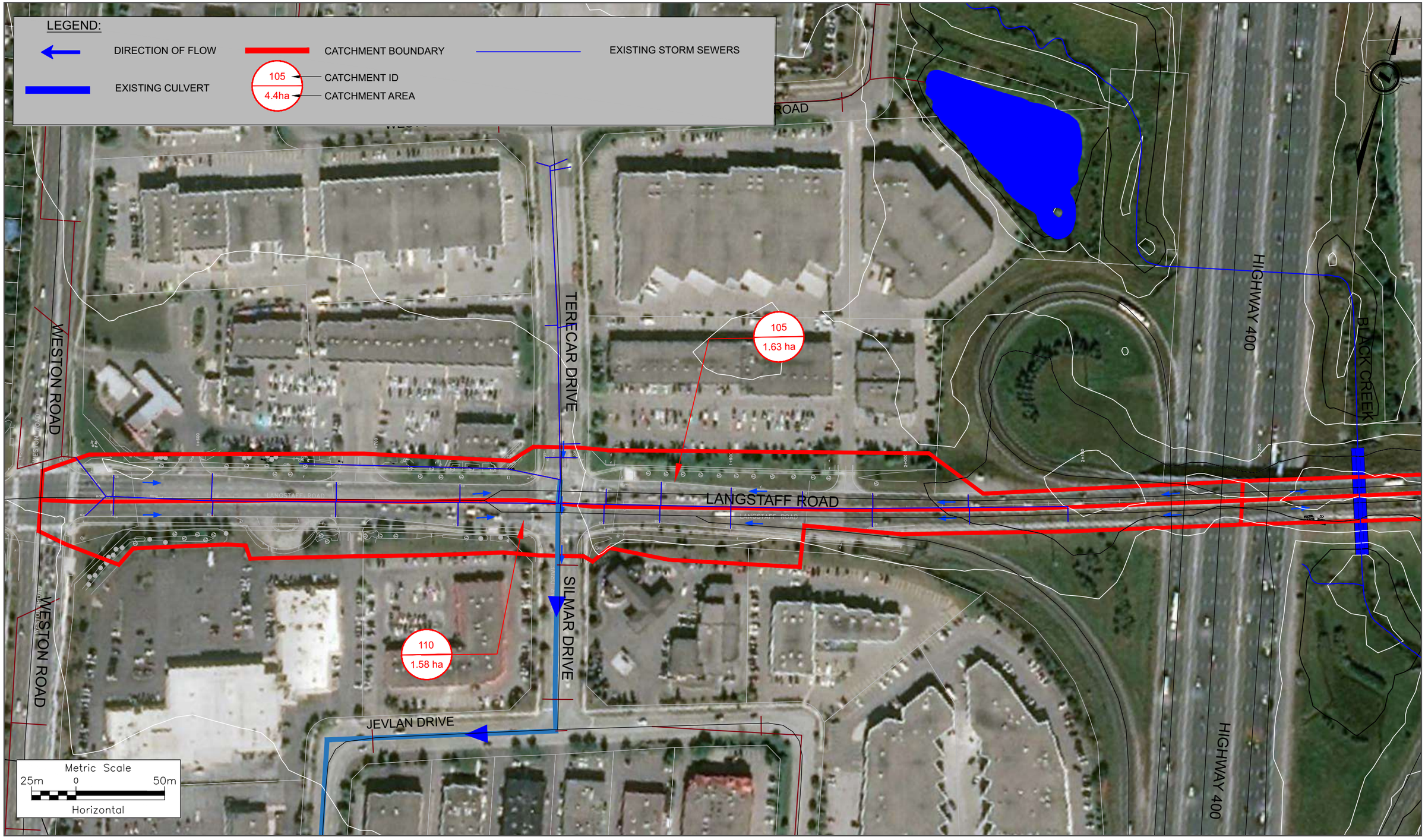
A Drainage and Stormwater Management Report was prepared as part of the Langstaff Road Class EA study (**Appendix I**) to provide a clear and traceable decision making process with respect to the proposed watercourse crossing design and stormwater management design concept to support seeking 'approval in principle' from the relevant regulatory agencies such as TRCA and NDMNRF, for watercourse crossing structures and stormwater management associated with the preliminary design. It should be noted that the drainage and stormwater management review of existing conditions focused on features along the Langstaff Road corridor only as that is where the proposed roadway improvements will be located.

The Drainage and Stormwater Management Report documents the hydrologic and hydraulic analyses undertaken, addresses the existing drainage characteristics, identifies issues related to drainage and stormwater management conditions, determines acceptable opening sizes of major crossing structures and proposes a feasible stormwater management strategy for the proposed roadways.

Field investigations of the study area and existing drainage features (including a photo inventory) were conducted in April 2018. Photographic inventory of the site investigations is provided in the appendix of the Drainage Report. There are two watercourse crossing culverts and one bridge structure along Langstaff Road. The two watercourse crossing culverts are at Black Creek (on the east side of Highway 400) and Westminster Creek (west of Dufferin Street). The bridge structure is located over the West Don River, east of Keele Street (see **Exhibits 6-5a to 6-5i**).

In addition to two watercourse crossing culverts, there are three drainage culverts conveying roadway runoff across Langstaff Road – one is located east of Planchet Road and the other two (double culverts) are located east of Spinnaker Way/Connie Crescent. In general, the flows from Langstaff Road area between Jane Street and Weston Road falls under the Humber River Watershed and the flow east of Jane Street to Dufferin Street falls under the West Don River Watershed.

A review of relevant background information was conducted before proceeding with the hydraulic analysis of these structures. The drainage boundaries, as well as findings from the hydrologic analysis and hydraulic analysis can be found in **Appendix I** Drainage and Stormwater Management Report. The catchment area and existing drainage conditions can be found in **Exhibits 6-5a to 6-5i**.



LANGSTAFF ROAD ENVIRONMENTAL ASSESSMENT

Existing Drainage Conditions

Exhibit

6-5a

LEGEND:

DIRECTION OF FLOW

CATCHMENT BOUNDARY

EXISTING STORM SEWERS

EXISTING CULVERT

105 / 4.4ha — CATCHMENT ID / CATCHMENT AREA

115 / 1.00 ha

120 / 1.24 ha

HIGHWAY 400

BLACK CREEK

EDGELEY BOULEVARD

LANGSTAFF ROAD

Metric Scale
25m 0 50m
Horizontal

wsp

LANGSTAFF ROAD ENVIRONMENTAL ASSESSMENT
Existing Drainage Conditions

Exhibit
6-5b

LEGEND:

DIRECTION OF FLOW

CATCHMENT BOUNDARY

EXISTING STORM SEWERS

EXISTING CULVERT

105 — CATCHMENT ID
4.4ha — CATCHMENT AREA

125
1.23 ha

125A
1.03 ha

135
1.43 ha

130
1.08 ha

130A
0.98 ha

140
1.27 ha

LANGSTAFF ROAD

MILLWAY AVENUE

JANE STREET

SARAMIA CRESCENT

Metric Scale
25m 0 50m
Horizontal

WSP

LANGSTAFF ROAD ENVIRONMENTAL ASSESSMENT
Existing Drainage Conditions

Exhibit
6-5c

LEGEND:

DIRECTION OF FLOW

CATCHMENT BOUNDARY

EXISTING STORM SEWERS

EXISTING CULVERT

105 / 4.4ha — CATCHMENT ID / CATCHMENT AREA

SARAMIA CRESCENT

LANGSTAFF ROAD

CREDITSTONE ROAD

STM SEWER C

135 / 1.43 ha

140 / 1.27 ha

300 / 21.7 ha

145 / 3.05 ha

350 / 0.90 ha

EXISTING CULVERTS

OUTLET OF STORM SEWER D

Metric Scale
25m 0 50m
Horizontal

wsp

LANGSTAFF ROAD ENVIRONMENTAL ASSESSMENT
Existing Drainage Conditions

Exhibit
6-5d

LEGEND:

DIRECTION OF FLOW

CATCHMENT BOUNDARY

EXISTING STORM SEWERS

EXISTING CULVERT

105 — CATCHMENT ID

4.4ha — CATCHMENT AREA

CN MACMILLAN YARD

150

3.81 ha

Metric Scale

25m 0 50m

Horizontal

LANGSTAFF ROAD ENVIRONMENTAL ASSESSMENT

Existing Drainage Conditions

Exhibit

6-5e

LEGEND:

DIRECTION OF FLOW

CATCHMENT BOUNDARY

EXISTING STORM SEWERS

EXISTING CULVERT

105 — CATCHMENT ID

4.4ha — CATCHMENT AREA

KEELE STREET

WEST DON RIVER

LANGSTAFF

155
0.53 ha

160
0.46 ha

ELEVATION DIFF SURVEYED DATA VS MAPPING 8 CM

ELEVATION DIFF SURVEYED DATA VS MAPPING -17 CM

ELEVATION DIFF SURVEYED DATA VS MAPPING 5 CM

DIFF SURVEYED DATA VS MAPPING AN 0.7m

Metric Scale
25m 0 50m
Horizontal

LANGSTAFF ROAD ENVIRONMENTAL ASSESSMENT
Existing Drainage Conditions

Exhibit
6-5f

LEGEND:

DIRECTION OF FLOW

CATCHMENT BOUNDARY

EXISTING STORM SEWERS

EXISTING CULVERT

105 — CATCHMENT ID
4.4ha — CATCHMENT AREA

165
0.60 ha

180
0.65 ha

190
0.86 ha

170
0.43 ha

185
0.47 ha

195
0.79 ha

LANGSTAFF ROAD

LANGSTAFF ROAD

PLANCHET ROAD

GO-BARRIE LINE

GO-BARRIE LINE

WEST DON RIVER

WEST DON RIVER

WEST DON RIVER

Metric Scale
25m 0 50m
Horizontal

WSP

LANGSTAFF ROAD ENVIRONMENTAL ASSESSMENT
Existing Drainage Conditions

Exhibit
6-5g

LEGEND:

DIRECTION OF FLOW

CATCHMENT BOUNDARY

EXISTING STORM SEWERS

EXISTING CULVERT

105 / 4.4ha — CATCHMENT ID / CATCHMENT AREA

BASALTIC ROAD

GO-BARRIE LINE

CITRON COURT

SPINNAKER WAY

LANGSTAFF ROAD

CONNIE CRESCENT

180 / 0.65 ha

190 / 0.86 ha

185 / 0.47 ha

195 / 0.79 ha

Metric Scale
25m 0 50m
Horizontal

EXHIBIT 10

LANGSTAFF ROAD ENVIRONMENTAL ASSESSMENT
Existing Drainage Conditions

Exhibit
6-5h

LEGEND:

DIRECTION OF FLOW

EXISTING CULVERT

CATCHMENT BOUNDARY

105 — CATCHMENT ID
4.4ha — CATCHMENT AREA

EXISTING STORM SEWERS

205
1.10 ha

215
0.58 ha

225
0.90 ha

210
0.96 ha

220
0.65 ha

230
0.70 ha

LANGSTAFF ROAD

STAFFERN DRIVE

WESTMINSTER CREEK

DUFFERIN STREET

N. RIVERMEDE ROAD

CONNIE CRESCENT

YELLOWOOD CIR.

Metric Scale
25m 0 50m
Horizontal

wsp

LANGSTAFF ROAD ENVIRONMENTAL ASSESSMENT
Existing Drainage Conditions

Exhibit
6-5i

6.5 Hydrogeology

A Hydrogeological Assessment Report was prepared for the Langstaff Road Class EA study. The full report is provided in **Appendix J** and the existing conditions are summarized below.

The Langstaff Road Class EA study corridor is already fully urbanized, primarily with light industrial lands, along with commercial and residential lands, parks and open spaces, natural and naturalized lands, and transportation related lands and corridors, most notably the CN MacMillan Rail Yard. The most notable naturalized corridor is the greenbelt area classified as an Urban River Valley along the West Don River. There are also isolated woodlots and green spaces around storm water management facilities, as well as manicured parks and lawns. Otherwise, the land is heavily urbanized, including large areas of industrial and commercial buildings with flat roofs surrounded by pavement areas for parking and driveways.

The geology in the study area is generally described as follows, as per TRCA:

- The surficial geology has been heavily modified as a result of urban developments;
- The near-surface geology consists almost entirely of low-permeability sandy to clayey silt till (Halton Till);
- The regionally extensive Halton Till provides a protective cover for the underlying regionally extensive silty to gravely sand aquifer, referred to as the Oak Ridges Moraine Aquifer Complex;
- There are numerous deeper sequences of regionally extensive aquitards (glacial till units) and aquifers, including (in descending order): the Newmarket Till, the Thorncliffe Aquifer, the Sunnybrook Drift, and the Scarborough Aquifer; and
- Total overburden thickness ranges from 100 to 200 metres thick in the study area, overlying bedrock, consisting of grey shale interbedded with lesser amounts of limestone (Georgian Bay Formation).
- In addition, MECP water well records along the Langstaff Road corridor were reviewed, to produce a generalized geological cross-section, depicting the upper overburden units as part of this sequence.

- The area is fully municipally serviced, and it is interpreted that there are few remaining groundwater users. Nonetheless, there may be property owners who have drilled or maintained a water well for auxiliary water supplies.
- As per the Toronto and Region Source Protection Area (SPA) Assessment Report (2015), total annual precipitation is approximately 970 mm/year in the area. Due to the fact that much of the land use in the vicinity of Langstaff Road includes commercial and industrial related buildings with flat roofs and surrounded by paved parking and driveway areas, about 67% of precipitation water is estimated to end up as runoff, with only about 10% infiltrating into groundwater, for the area as a whole.
- The City of Vaughan (Cole Engineering, June 2014) has identified several existing problem areas with respect to erosion along creeks in the area, as well as flood prone areas, and therefore has developed a strategy for creek corridor naturalization and bank stabilization, as well as stormwater management improvement opportunities.

6.6 Contamination Overview Study

A Contamination Overview Study (COS) Report was prepared for the Langstaff Road Class EA study. The full report is provided in **Appendix K** and the existing conditions and impact assessment is summarized below. It should be noted that the Contamination Overview Study of existing conditions focused on features along the Langstaff Road corridor only as that is where the proposed roadway improvements will be located.

The principal objective of the COS was to:

- Identify and review properties/areas whereby the current or historical operations on the property may have contributed to soil and groundwater impacts along the corridor that may impact future road improvements; and
- Identify appropriate future environmental studies and mitigation measurements required to be implemented during the design and construction phases of this project.

The objective of the COS was achieved through the completion of a comprehensive records review, study area inspection and the documentation of the results in a COS report.

Based on the findings of this report, eighty-nine (89) Areas of Potential Environmental Concern (APECs) have been identified within the study area. The APECs correspond to locations within the study area where potential environmental impacts may be present and have been categorized (low, moderate and high) by assessing the overall relative potential of environmental impacts to be present within the subsurface. These are shown on **Exhibit 6-6a to 6-6c**.

Of the 89 APECs:

- 73 APECs identified were categorized as high potential for environmental impacts. These locations include the following land uses: gas stations (active and historical), automotive centers, dry cleaners, industrial plazas, rail yards and rail lines, transport depots, historic has stations, historic cemeteries, and construction sites. Some of these were identified as having potential contaminating activity (per Ontario Regulation 153/04).
- 16 APECs identified were categorized as moderate potential for environmental impacts. These areas represent land uses that are commercial/light industrial properties, suspected of using chemical compounds or performing activities that may impact soil and/or groundwater within the study area, according to Ontario Regulation 153/04, as amended.

All other areas not included as APECs indicate land use features considered to have a low potential for environmental impacts. The areas are generally classified as natural areas, open space or residential land use, which are not suspected of using chemical compounds harmful to the environment or human health.

Exhibit 6-21a: Areas of Potential Environmental Concern

Exhibit 6-22b: Areas of Potential Environmental Concern

Exhibit 6-23c: Areas of Potential Environmental Concern

7 PLANNING ALTERNATIVES

The Class Environmental Assessment for Municipal Road Projects, Schedule 'C' requires that, once a transportation need is determined (Phase 1), planning alternatives (alternative solutions) be considered (Phase 2).

Sections 2, 3 and 4 of this report set out the transportation needs (Phase 1) by providing the transportation and planning policy context (**Chapter 3**) and the analysis of existing and future traffic conditions to identify the transportation deficiencies (**Chapter 4**). The problems and opportunities that have been identified through the Phase 1 and the Problem and Opportunity Statement was developed (**Chapter 5**).

7.1 Alternative Solutions

Alternative solutions represent reasonable means of addressing the stated transportation problems and opportunities. In addition to 'Do Nothing', alternative solutions to address deficiencies in the transportation network capacity typically include those that increase network capacity, reduce transportation demand or combinations thereof.

Alternative solutions provide an opportunity to examine, in a broad and general way, fundamentally different ways of addressing transportation problems. The alternative solutions are assessed against their ability to reasonably address the problems and opportunities, and in consideration of the constraints identified in the early stages of the study, to identify a preferred solution(s) for which alternative designs can be developed. For this study, alternative solutions have been identified as:

- Alternative 1: Do Nothing
- Alternative 2: Transportation Demand Management
- Alternative 3: Alternative Modes of Transportation
- Alternative 4: Operational Improvements
- Alternative 5: Upgrade Parallel Roads Beyond Planned Improvements
- Alternative 6: Langstaff Road and Highway 400 Interchange Improvements

The analysis and evaluation of the alternative solutions are further discussed in **Section 7.2** and **Table 7-2**.

7.1.1 Alternative 1 – Do Nothing

'Do Nothing' is considered the status quo, maintaining the existing road network as is on Langstaff Road, with activities being limited to regular operations and maintenance. To maintain the status quo would result in the escalation of the existing traffic congestion issues, and continuing operational issues at intersections within the transportation network. It would not address any of the identified problems and opportunities. This alternative would provide no appreciable improvement to traffic capacity and operations and is not consistent with Region transportation policies.

7.1.2 Alternative 2 – Transportation Demand Management

This alternative seeks to reduce traffic demand on Langstaff Road by implementing Transportation Demand Management (TDM) strategies such as: shifting demands to time periods outside of rush hours (encouraging flex time work schedules); encourage behavioural shift to alternative modes of transportation (transit, cycling, walking) or rideshare; providing traveler information tools including intelligent transportation systems, mobile and social applications and other methods for promoting more efficient use of the transportation network. TDM strategies are already being implemented by the Region (for example, the *MyTrip* program), as part of the Preferred Design Planning solution. Over 1000 household have completed the initial travel survey as part of the *MyTrip* program and have received travel incentive to help them explore different travel options such as public transit, walking, cycling and carpooling. The Region is currently conducting a follow-up survey to measure the success of the program. While TDM is a key component to sustainable transportation choices, on its own, it does not fully address the needs on Langstaff Road.

7.1.3 Alternative 3 – Alternative Modes of Transportation

This alternative encourages the reduction in automobile use by providing safe and attractive pedestrian and cycling facilities and improving transit system efficiency and reliability by introducing transit priority measures such as transit queue jump lanes. On its own, this alternative does not address the overall traffic capacity needs. However, it is recommended as part of the Preferred Design Planning solution.

7.1.4 Alternative 4 – Operational Improvements

This alternative involves undertaking intersection improvements such as providing dedicated turn lanes, installation of new traffic signals and improving signal timing and phasing as a means of improving traffic operations. This alternative does not address the overall traffic capacity needs. However, it is recommended as part of the Preferred Design Planning solution.

7.1.5 Alternative 5 – Upgrade Parallel Roads Beyond Planned Improvements

Undertake capital improvements to widen other east-west roads (Rutherford Road, Highway 7) beyond planned improvements (for example, widening from four to eight lanes) to address the need for increased east-west traffic capacity. This does not address the problems and opportunities on Langstaff Road. This alternative is not recommended.

7.1.6 Alternative 6 – Langstaff Road / Highway 400 Interchange Improvements

This alternative considers widening Langstaff Road, construction of a road connection crossing of the CN MacMillan Rail Yard and consideration of improvements to the Highway 400 interchange in order to increase east-west traffic capacity and optimize traffic flow.

7.2 Analysis and Evaluation of Planning Solutions

As noted above, alternative solutions were assessed against their ability to reasonably address the problems and opportunities. Criteria were developed to guide the assessment process so that transportation planning, technical and environmental (socio-economic, cultural environment, natural environment) conditions were all factored into the assessment. The assessment criteria are listed in **Table 7-1** and the comparison of the alternative solutions can be found in **Table 7-2** with a summary provided in **Table 7-3**.

Table 7-1: Factors Considered in Evaluating Alternative Solutions

Category	Factors
Social / Economy/ Community	▶ Amount and type of property required ▶ Supports future growth and employment and economic sustainability (movement of people and goods) ▶ Potential impact to businesses (disruption and nuisance) ▶ Potential impacts to residences ▶ Ability to enhance access to employment areas
Natural Environment	▶ Potential impacts to environmentally sensitive areas ▶ Potential impacts to terrestrial and aquatic species and habitats ▶ Potential changes to drainage
Cultural Environment	▶ Effects on archaeological resources ▶ Effects on built heritage resources
Transportation	▶ Addresses existing and future capacity concerns on Langstaff Road and adjacent arterials ▶ Consistency with Region planning and policy documents ▶ Improves goods movement efficiency and reliability ▶ Improves transit network operations ▶ Improves active transportation network connectivity (pedestrians, cyclists) ▶ Improves traffic operations
Cost	▶ Comparative cost including utility relocation, capital, property and operations/maintenance

Table 7-2: Assessment of Alternative Solutions

Category	Alternative 1: Do Nothing	Alternative 2: Transportation Demand Management	Alternative 3: Alternative Modes of Transportation	Alternative 4: Operation Improvements	Alternative 5: Upgrade Parallel Roads Beyond Planned Improvements	Alternative 6: Langstaff Road and Hwy 400 Interchange Improvements
Social / Economy / Community	- No property required - Congestion will worsen impacting local and regional trips - No opportunity to improve transit and cycling / pedestrian activities on Langstaff Road - No opportunity to provide support for goods movement - No opportunity to enhance access to employment areas	- No property required - Congestion will worsen impacting local and regional trips - Although supportive of transit, cycling and pedestrian activities, this does not provide the infrastructure to support or enhance these forms of transportation - No opportunity to enhance access to employment areas	- Some property may be required but likely minimal - Congestion will worsen impacting local and regional trips - Some opportunity to enhance access to employment areas - No opportunity to provide support for goods movement	- Some property may be required in localized areas - Congestion will worsen impacting local and regional trips - No opportunity to improve transit and cycling / pedestrian activities - Limited opportunity to enhance access to employment areas - Limited opportunity to provide support for goods movement	- Widening Highway 7 and Rutherford Road with one additional lane in each direction - significant property impacts - No opportunity to improve transit and cycling / pedestrian activities on Langstaff Road	- May result in property impacts - Supports mobility for all modes within local community and across Region - Provides opportunity to enhance access to employment areas - Provides opportunity to enhance goods movement
Natural Environment	- Avoids potential impacts to natural environment	- Avoids potential impacts to natural environment	- Very low potential for impacts to natural environment, since pedestrian and cycling opportunities may be kept within the existing right-of-way	- Very low potential for impacts to natural environment, since the implementation of operation improvements such as turning lanes may be kept within the existing right-of-way	- Avoids potential impact to natural environment along Langstaff Road but likely significant impacts to natural features along other corridors	- Moderate potential for impacts to natural features since crossings at Black Creek, Westminster Creek and the West Don River may require replacement - Impacts can likely be minimized through mitigation measures
Cultural Environment	- No potential built heritage or archaeological impacts	- No potential built heritage or archaeological impacts	- Low potential built heritage or archaeological impacts	- Low potential built heritage or archaeological impacts	- High potential for impacts to archaeological and Built Heritage features in other corridors	- Some potential archaeological impacts in undisturbed areas - High potential to impact built heritage property
Transportation	- Not consistent with City / Region planning policies - Does not address anticipated transportation needs	- Currently being implemented through Region policies - Does not fully address anticipated transportation	- Consistent with Region planning policies - Does not fully address anticipated transportation needs	- Consistent with Region planning policies - Improves operations at intersections but not for	- Not consistent with Region planning policies - Would provide additional west-east capacity in other corridors	- Consistent with Region planning policies - Addresses anticipated transportation needs

Category	Alternative 1: Do Nothing	Alternative 2: Transportation Demand Management	Alternative 3: Alternative Modes of Transportation	Alternative 4: Operation Improvements	Alternative 5: Upgrade Parallel Roads Beyond Planned Improvements	Alternative 6: Langstaff Road and Hwy 400 Interchange Improvements
	- Does not improve network connectivity - Does not improve road operations - Does not support improvements to transit, pedestrian and cycling	needs or improve network connectivity, transit, pedestrian and cycling facilities - May result in some shift in travel demand but overall does not improve road operations	- Does not improve network connectivity for all users - Does not improve road operations - Supports transit, cycling and pedestrian facilities	the entire Langstaff Road corridor - Only minor contribution to network connectivity	- Does not improve network connectivity - Would not improve operations on Langstaff Road - Does not improve transit, pedestrian and cycling facilities along Langstaff Road	- Improves network connectivity for all users - Improves road operations
Cost	- N/A - No capital costs - Continual costs for operations and maintenance	- $ - No capital costs - Nominal costs associated with program implementation - Continual costs for operations and maintenance	- $$ - Costs associated with implementation of new transit routes and sidewalks/multi-use trails are low compared to other alternatives	- $$ - Costs associated with construction and implementation of operational improvements are low compared to other alternatives	- $$$$$ - Construction costs are significant	- $$$$$$$ - Costs associated with construction for widening, grade separation, new connection, as well as replacement of existing structures and improvements to pedestrian and cycling facilities
Evaluation Result	Not Recommended	Already Being Implemented	**Recommended**	**Recommended**	Not Recommended	**Recommended**

Table 7-3: Alternative Solutions Evaluation Summary

Category	Alternative 1: Do Nothing	Alternative 2: Transportation Demand Management (TDM)	Alternative 3: Alternative Modes of Transportation	Alternative 4: Operation Improvements	Alternative 5: Upgrade Parallel Roads Beyond Planned Improvements	Alternative 6: Langstaff Road and Hwy 400 Interchange Improvements
Social / Economy/ Community						
Natural Environment						
Cultural Environment						
Transportation						
Cost	**$**	**$$**	**$$$**	**$$$**	**$$$$$**	**$$$$$$$**
Recommendation	**Not Recommended** Does not address the needs for the Langstaff Road.	**Already Being Implemented** TDM is already being implemented through various Region programs and policies. TDM, on its own, does not fully address the needs on Langstaff Road but is viewed as a key component to sustainable transportation choices.	**Recommended** These improvements alone would only partially address the transportation needs. Will work in combination with the preferred solution (i.e., Langstaff Road and Highway 400 interchange improvements).	**Recommended** These improvements alone would only partially address the transportation needs. Will work in combination with the preferred solution (i.e., Langstaff Road and Highway 400 interchange improvements).	**Not Recommended** Significantly greater impacts than other alternatives. Does not address needs on Langstaff Road and not consistent with York Region plans/policies.	**Recommended** Provides necessary roadway infrastructure to improve connectivity and efficiency for goods and people movement, as well as to support economic growth in the area. Consistent with Region plans/policies. Opportunity to mitigate some impacts.

Legend: Most Preferred → Least Preferred

7.3 Preliminary Preferred Solution

Based on the assessment and evaluation, the preliminary Preferred Planning Solution carried forward for public review at Open House 1 includes a combination of Alternatives 3, 4 and 6, as follows:

- **Add New Lanes:** Widen Langstaff Road to provide increased traffic capacity by adding new lanes to optimize traffic flow.
- **Langstaff Road Connection:** Construct Langstaff Road link across the CN MacMillan Rail Yard.
- **Highway 400 Interchange Improvements:** Convert the Highway 400 / Langstaff Road Interchange to a full-move interchange to provide better connection and to optimize traffic flow.
- **Grade Separation with GO Transit Barrie Line:** Construct grade separation at Langstaff Road and GO Transit Barrie Line
- **Intersection Improvements:** Consideration of turning lanes, traffic signal timing optimization, etc.
- **Alternative Modes of Transportation**: Provision of or improvements to pedestrian and cycling facilities (e.g. AODA compliance, reduced curb radii (where technically feasible), pavement markings including cross-rides and signal heads, etc.). Improvements to transit system (e.g. improved transit amenities).

7.4 Consultation During Phases 1 and 2

The public consultation aspects of the Langstaff Road Class EA study are summarized in **Chapter 2** and are summarized here as they specifically relate to Phases 1 and 2 of the Class EA process.

The Notice of Study Commencement, issued December 8, 2016, invited interested parties to provide information that might be relevant to the study such as existing issues, concerns, opportunities for improvements, and desired study outcomes.

Members of the public were invited to contact the Region at any time during the study however, formal points of contact during Phases 1 and 2 were provided at Open House 1 (OH1) (June 14, 2017).

7.4.1 Notice of Study Commencement

Community feedback received in response to the Notice of Study Commencement was overwhelmingly supportive and enthusiastic about the improvements being considered in the study and included the following general themes:

- High level of support for road connection over CN MacMillan Rail Yard to relieve congestion on Highway 7 and Rutherford Road;
- High level of support for full interchange at Highway 400; and
- Concern about increased truck traffic in residential areas.

7.4.2 Open House 1 (June 14, 2017)

The purpose of Open House 1 (OH1) was to:

- Present background on York Region's Plans and Policies related to growth, transportation, infrastructure planning, active transportation, streetscape and design, which serve as the basis for this study;
- Provide an overview of the Class EA study including rationale and Regional context, existing and future needs, options being considered to address needs, and supporting technical studies;
- Provide a summary of feedback received to date (i.e. following the Notice of Study Commencement); and
- Invite members of the public to provide input early in the study and ask questions.

Feedback received around OH1 included the following general themes:

- York Region Cycling Coalition indicated strong support for the consideration of cycling facilities on Langstaff Road;
- High level of community support for the new road connection across CN MacMillan Rail Yard;
- High level of interest in the study by business community;
- Some resident concerns about truck traffic west of Highway 400.

7.4.3 Stakeholder and Agency Meetings During Phases 1 and 2

Chapter 2 documents all meetings with stakeholders and agencies during the Class EA study. Meetings convened during Phases 1 and 2 of the Class EA study focused on the key approval agencies and included:

- MTO (3 meetings – December 2, 2016, May 10, 2017, July 26, 2017);
- CN Rail (3 meetings – January 20, 2017, May 15, 2017, June 29, 2017);
- TRCA (1 meeting – February 16, 2017); and
- Metrolinx (1 meeting – January 20, 2017).

7.5 Confirmation of the Preferred Design Planning Solution

Public and agency feedback received during and following OH1 did not trigger any changes to the alternative solutions being considered or the selection of the preliminary Preferred Design Planning solution for Langstaff Road.

Following OH1, the preliminary Preferred Design Planning solution was confirmed as the Preferred Design Planning Solution to be carried forward into Phase 3 of the Class EA process.