

Appendix I

Satisfying EA Requirements

Satisfying Municipal Class EA Requirements

An important component of the Vaughan Transportation Master Plan (TMP) is fulfilling the requirements of the Municipal Class Environmental Assessment (EA) process to comply with the Environmental Assessment Act, a provincially legislated document governing all public undertakings that have the potential to affect the environment. The Municipal Class EA master planning process recognizes a framework for planning associated with Master Plans that integrate infrastructure requirements for existing and future land use with environmental assessment planning principles.

The Municipal Class EA process consists of five general phases, depending on the complexities of the undertaking. At a minimum, Master Plans address Phases 1 and 2 of the Municipal Class EA process which comprise:

- ▶ **Phase 1 – Problem or Opportunity:** Identify the problem, deficiency or opportunity and develop a clear statement of the issues that are to be addressed; and,
- ▶ **Phase 2 – Alternative Solutions:** Identify the reasonable alternative solutions that could be implemented to address the issues. Establish the preferred solution based on an assessment of the environmental impact, including consideration of stakeholder input.

Depending on the project timing and the scope and complexity of the related environmental impacts, Phases 1 and 2 may have to be revisited as individual projects are examined.

Projects are categorized into different schedules (A, A+, B or C) based on their level of complexity and anticipated environmental effects. Projects identified in the Vaughan TMP are primarily classified as Schedule B or Schedule C undertakings, described as follows:

1. **Schedule B** projects generally include improvements and minor expansions to existing facilities. These projects have some potential for adverse environmental impacts, and consultation with those who may be affected is required. Examples of Schedule B projects include the installation of traffic control devices, or smaller road-related projects. These kinds of projects require only the completion of Phases 1 and 2 of the Class EA process.
2. **Schedule C** projects have the potential for significant environmental effects and must proceed under the full planning and documentation procedures specified in the Class EA document. Examples of Schedule C projects typically include new roads or road-widenings. In addition to fulfilling the requirements of the first two phases of the Municipal Class EA process, Schedule C undertakings also require the need to complete:
 - ▶ **Phase 3 – Alternative Design Concepts for the Preferred Solution:** Identify alternative designs for the preferred solution and their potential effects on the environment, evaluate the alternative designs and select and confirm a preferred solution.

- ▶ **Phase 4 – Environmental Study Report (ESR):**
Complete the ESR which documents the study process.
- ▶ **Phase 5 – Implementation:**
Complete the contract drawings, proceed to construction and operation and monitor for environmental provisions and commitments.

It is within this master planning context that the Vaughan TMP addresses Phases 1 and 2 of the Municipal Class EA requirements of identified individual and/or grouped local road improvement projects. These projects will improve connections to local and Regional infrastructure, improve access to future residential developments, support transit-oriented nodes and corridors, and enhance transit ridership, cycling and walking. **Exhibit 1** illustrates these individual and/or grouped projects and is followed by a summary of each outlining the project purpose, description, justification, potential effects, alternatives considered and conclusions. Cost estimates are approximate only based on similar projects elsewhere or per unit averages.

Generally all projects are growth-related and will be eligible for Development Charge funding. A more detailed review of development charge funding eligibility will be completed as part of the City's Development Charges Update / Background Study.

Summaries for the following projects, for which the City of Vaughan has some or all responsibility and for which environmental studies have not already begun, are included in this appendix:

List of Project EA Summaries

1. Highway 7/Highway 400 Interchange Modifications
2. Creditstone Road Widening
3. Colossus Drive Extension Across Highway 400
4. Portage Parkway Widening and Easterly Extension to Creditstone Road
5. Vaughan Metropolitan Centre Collector Road Network
6. Huntington Road Improvements
7. McGillivray Road Improvements
8. West Vaughan Employment Area Collector Road Improvements
9. Highway 400 North Employment Lands Collector Road Network
10. Kleinburg/Nashville Focus Area Collector Roads
11. Kirby Road Improvements (Bathurst Street to Keele Street)
12. King-Vaughan Road Widening
13. Snidercroft Road Extension and Railway Grade Separation
14. Jog Elimination at Pine Valley Drive and Kirby Road Intersection

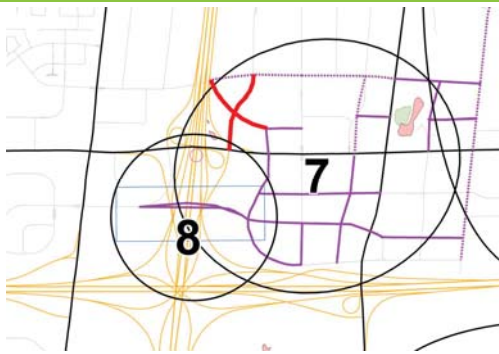
Highway 7 / Highway 400 Interchange Modifications

Purpose: Modifications to the interchange are required to improve access to the VMC and facilitate the diversion of truck traffic from Highway 7, which is to become a more urbanized main street within the VMC, supporting alternative travel modes, including walking and cycling.

Project Description

Name	▶ Highway 7 / Highway 400 Interchange Modifications
Project Limits	▶ East side of Highway 400 north of Highway 7 to Portage Parkway (see map area 7)
Length	▶ Approximately 0.5 km. of new local road, plus new on-ramp to northbound Highway 400 (see map area 7)
Project Type	▶ Highway 7 / Highway 400 interchange modifications, including new north-south local road
Proposed Phasing	▶ 2012 – 2021
Cost	▶ \$6 M

Project Location and Environmental Features



Justification:

- ▶ This is a key proposed improvement that will support the proposed development of the VMC. The proposed modifications were developed in concert with the planning team that created the new secondary plan, and will alleviate traffic congestion on Highway 7 by providing a direct access into the VMC from the existing east ramp terminal at Highway 7 and by relocating the existing westbound to northbound ramp further to the north. The diversion of substantial truck traffic from Highway 7 through the VMC is essential to the urbanization of the street and the ultimate success of the VMC as a Regional Centre.

Alternatives Considered

- Transit** ▶ The Spadina subway extension, with its terminal station and related facilities within the VMC, together with the planned Highway 7 Rapidway (with 3 stations on Highway 7 within the VMC), provided the transit focus for the development of the new VMC transportation plan.
- Roads** ▶ Numerous alternative configurations have been developed and assessed as part of the regional EA study, and a better alternative has not emerged.

Potential Socio-economic and Environmental Impacts: The VMC area has long been designated for major growth and is located well beyond the Oak Ridges Moraine and the Green Belt, and will therefore not significantly impact the natural heritage network.

Conclusion: The class EA being coordinated by the Region, and that had been previously put on hold pending completion of the Vaughan TMP and the VMC secondary plan, should now be resumed and completed, and full concurrence from the Region and Province sought.

Creditstone Road Widening

Purpose: To increase north-south roadway capacity in the Jane Street corridor to meet the demands of intensification, including development of the Vaughan Metropolitan Centre (VMC).

Project Description

Name	▶ Creditstone Road Widening
Project Limits	▶ Peeler Road to Langstaff Road
Length	▶ 2.5 km
Project Type	▶ Widening (2 to 4/5 lanes)
Proposed Phasing	▶ 2012 – 2021
Cost	▶ \$7.5 M

Project Location and Environmental Features



Justification:

▶ The Region has recently designated Jane Street as a Rapid Transit Corridor and, as such, the widening to 6 lanes will accommodate HOV lanes initially and a median roadway in the long term. Additional road capacity will be needed to accommodate future growth in travel, including additional traffic generated by the VMC. This segment of Creditstone Road will also serve as a north-south bypass of the VMC (particularly for trucks), connecting to Langstaff Road and, through an improved Langstaff interchange, to Highway 400. South of the proposed easterly extension of Portage Parkway, a widened Creditstone will comprise an integral component of the VMC road network. An improved Creditstone is expected to help alleviate traffic congestion within the broader Highway 400 corridor, which is congested today, and will be more so by 2021. These improvements are also designated for bike lanes, thus advancing active transportation.

Alternatives Considered

Transit	▶ Improved transit services within the VMC including Spadina Subway Extension and Rapid Transit along Highway 7 and Jane Street have all been considered.
Roads	▶ Regional road improvements, including Jane Street widening (4 to 6 lanes) and Weston Road widening (4 to 6 lanes) will be for HOV and/or transit lanes. ▶ Highway 400 is fully developed.

Potential Socio-economic and Environmental Impacts: Minimal social and environmental impacts are expected, although some property may be required. Appropriate assessment of design alternatives along with identification of mitigation measures will be necessary.

Conclusion: Recommended for Phase 3 and 4 EA study.

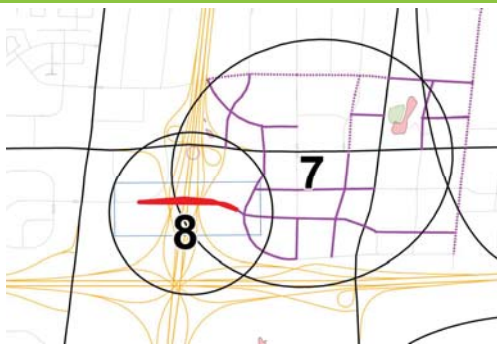
Colossus Drive Extension Across Highway 400

Purpose: Similar to Potage Parkway north of Highway 7, the Colossus extension and widening to 4 lanes throughout the VMC will provide additional east-west capacity across the Highway 400 barrier and act as a Highway 7 bypass for through trips, including truck traffic. It will also support intensification and transit-oriented development in Vaughan's pre-eminent centre and future Downtown.

Project Description

Name	▶ Colossus Drive Extension Across Highway 400
Project Limits	▶ Between Colossus Drive west of Highway 400 to Interchange Way east of Highway 400 (see map area 8)
Length	▶ Approximately 0.5 km (see map area 8)
Project Type	▶ New collector road mid-block crossing of Highway 400
Proposed Phasing	▶ 2012 – 2021, as necessary to support new VMC development
Cost	▶ Approximately \$40 M (see Appendix K)

Project Location and Environmental Features



Justification:

- ▶ This road network improvement will provide much needed additional east-west capacity and will thus support the proposed development of the VMC. It will specifically reduce traffic levels on Highway 7, particularly truck traffic. The proposed road network was developed in concert with the planning team that created the new secondary plan, and is supported by corridor deficiency analysis that identified the number of required lanes. The proposed improvement also strongly supports transit, cycling and pedestrian movement.

Alternatives Considered

Transit	▶ The Spadina subway extension, with its terminal station within the VMC, together with the planned Highway 7 Rapidway, provided the transit focus for the development of the new VMC transportation plan.
Roads	▶ Highway 7 is designated as a Rapid Transit corridor and, thus, will not be able to supply additional road capacity to the area. This led to the need for parallel east-west collector roads extending throughout the VMC, optimizing network flexibility and providing additional east-west capacity. The Colossus extension, as proposed, is located at the point of narrowest crossing of the Highway 400 / ETR 407 interchange, and lines up with existing east-west roadways on both sides creating an efficient network.

Potential Socio-economic and Environmental Impacts: The VMC area has long been designated for major growth and is located well beyond the Oak Ridges Moraine and the Green Belt, and will therefore not significantly impact the natural heritage network.

Conclusion: Recommended for Phase 3 and 4 EA study.

Portage Parkway Widening and Easterly Extension

Purpose: With the recent completion of the Highway 400 crossing, an improved Portage Parkway is a key element of the improved VMC grid road network, supporting intensification and transit-oriented development in Vaughan's pre-eminent centre and future Downtown. The easterly extension to Creditstone Road will provide a direct link from the industrial area east of the VMC to the relocated northbound on-ramp to Highway 400, thus facilitating the diversion of truck traffic from Highway 7.

Project Description

Name	▶ Portage Parkway Widening and Easterly Extension
Project Limits	▶ Between Highway 400 and Creditstone Road (see map area 7)
Length	▶ Approximately 1.5 km (see map area 7)
Project Type	▶ Widening to 4 lanes from Applewood Crescent to Jane Street, and new 4 lane road from Jane Street to Creditstone Road
Proposed Phasing	▶ 2012 – 2021
Cost	▶ \$4 M (excluding property)

Project Location and Environmental Features



Justification:

- ▶ These are key road network improvements that will support the proposed development of the VMC. The proposed road network was developed in concert with the planning team that created the new secondary plan, and is supported by corridor deficiency analysis that identified the number of required lanes. An improved Portage Parkway will also facilitate the diversion of trucks around the VMC. In addition, the project strongly supports transit, cycling and pedestrian movement.

Alternatives Considered

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|----------------|---|
| Transit | ▶ The Spadina subway extension, with its terminal station within the VMC, together with the planned Highway 7 Rapidway, provided the transit focus for the development of the new VMC transportation plan. |
| Roads | ▶ Highway 7 is designated as a Rapid Transit corridor and, thus, will not be able to supply additional road capacity to the area. This led to the need for parallel east-west collector roads extending throughout the VMC, optimizing network flexibility and providing additional east-west capacity. |
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Potential Socio-economic and Environmental Impacts: The VMC area has long been designated for major growth and is located well beyond the Oak Ridges Moraine and the Green Belt, and will therefore not significantly impact the natural heritage network. The extension of Portage Parkway east of Jane Street avoids a wooded area that would have been impacted with implementation of the former road network plan.

Conclusion: Recommended for Phase 3 and 4 EA study.

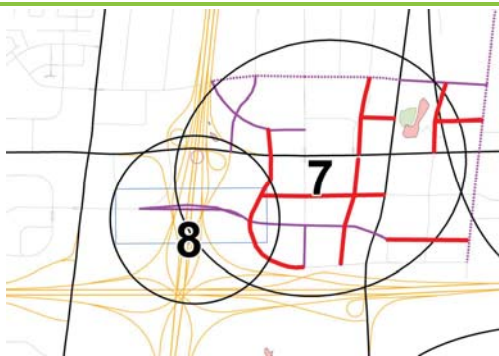
Vaughan Metropolitan Centre Collector Road Network

Purpose: New collector road system to support intensification and transit-oriented development in Vaughan's pre-eminent centre and future Downtown. The network was developed to allow safer and more direct travel, improve access to transit, provide east-west alternatives to Highway 7, re-direct truck traffic away from Highway 7; and generally support alternative modes, including walking and cycling.

Project Description

Name	▶ Vaughan Metropolitan Centre Road Improvements
Project Limits	▶ Between Highway 400 and Creditstone Road from ETR 407 to Portage Parkway (see map area 7)
Length	▶ Approximately 16 km of collector roads (see map area 7)
Project Type	▶ New collector roads and widenings in Area 7 on map. Highway 7/Highway 400 interchange modifications, Portage Road extension, Colossus crossing of Highway 400, and Creditstone Road improvements will be assessed individually
Proposed Phasing	▶ 2012 – 2021 in conjunction with new development
Cost	▶ \$16 M

Project Location and Environmental Features



Justification:

▶ This is a network of needed road improvements that, in combination with a modified Highway 7/Highway 400 interchange, extension of Portage Parkway to Creditstone Road, Creditstone Road improvements, and Highway 400 crossing of Colossus Drive, will support the proposed development in the VMC. The proposed road network was developed in concert with the planning team that created the new secondary plan, and is supported by corridor deficiency analysis that identified the number of required lanes in each direction. The network also strongly supports transit, cycling and pedestrian movement.

Alternatives Considered

Transit	▶ Spadina subway extension, with its terminal station within the VMC, together with the planned Highway 7 Rapidway, provided the focus for the development of the new road network.
Roads	▶ The 2 Regional arterials (Highway 7 and Jane Street) are both designated as Rapid Transit corridors and, thus, will not be able to supply additional road capacity to the area. This led to the need for a strong grid network of collector roads which optimizes network flexibility and provides additional capacity in both north-south and east-west directions. The major components of the network are a modified Highway 7/Highway 400 interchange, and Portage Parkway, Creditstone Road and Colossus Drive improvements, which all should facilitate the diversion of trucks around the VMC. Surrounding arterial improvements, including the Langstaff extension and Langstaff/Highway 400 interchange improvements will also be needed.

Potential Socio-economic and Environmental Impacts: The VMC area has long been designated for major growth and is located well beyond the Oak Ridges Moraine and the Green Belt, and will therefore not significantly impact the natural heritage network. The extension of Portage Parkway east of Jane Street avoids a wooded area that would have been impacted with implementation of the former road network plan.

Conclusion: With the exception of the Highway 7 / Highway 400 interchange modifications, the Portage Parkway extension, the Colossus crossing of Highway 400 and Creditstone Road improvements, these improvements will be considered in more detail and implemented as part of the development process.

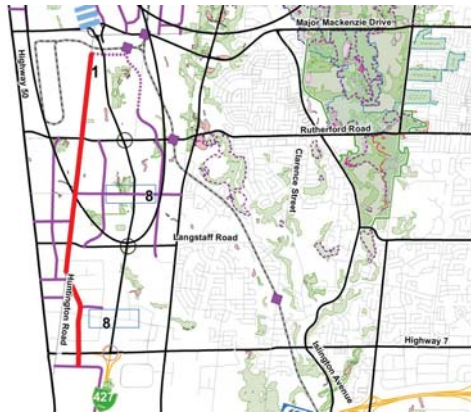
Huntington Road Improvements

Purpose: To increase north-south roadway capacity in the Highway 427 corridor to meet the travel demands of a major new employment area.

Project Description

Name	▶ Huntington Road
Project Limits	▶ Highway 7 to McGillivray Road
Length	▶ 6 km
Project Type	▶ Widening (2 to 4/5 lanes) & Urbanization
Proposed Phasing	▶ 2012 – 2021
Cost	▶ \$17.5 M

Project Location and Environmental Features



Justification:

▶ Huntington Road will become the north-south spine for serving the new large West Vaughan Employment Area. Corridor deficiency analysis indicated that 4 lanes would be required by 2021, assuming a large part of the employment area is built out within that timeframe. Huntington Road will act as the key north-south distributor for trips using the Highway 427 extension with its 3 new interchanges at Langstaff Road, Rutherford Road, and Major Mackenzie Drive. The phasing of improvements will depend upon the timing of development in the various blocks. As a major collector, Huntington Road is expected to accommodate significant bus service and facilitate cycling and pedestrian movements in the corridor.

Alternatives Considered

- Transit** ▶ Improved transit services within the corridor will operate on Highway 50 and Highway 27, as well as east-west arterials. In the long term, a Transitway is planned along Highway 427 to serve long distance trips.
- Roads** ▶ North-south Regional road widenings (from 4 to 6 lanes) include Highway 50 in the short term, and later Highway 27 for HOV and/or transit lanes.
- ▶ Highway 427 will not provide direct access to development.

Potential Socio-economic and Environmental Impacts: Minimal social and environmental impacts are expected, although some property may be required. Appropriate assessment of design alternatives along with identification of mitigation measures will be necessary.

Conclusion: Recommended for Phase 3 and 4 EA study.

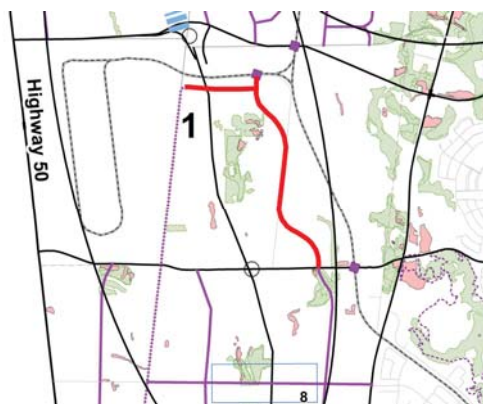
McGillivray Road Improvements

Purpose: To increase north-south roadway capacity in the Highway 427 corridor to meet the travel demands of a major new employment area.

Project Description

Name	▶ McGillivray Road
Project Limits	▶ Huntington Road (south of Major Mackenzie) to North of Rutherford Road
Length	▶ Approximately 2.5 km
Project Type	▶ Widening (2 to 4 lanes) and realignment from Huntington Road to north of Rutherford Road
Proposed Phasing	▶ 2012 – 2021, in conjunction with new development
Cost	▶ Approximately \$10.0 M

Project Location and Environmental Features



Justification:

▶ McGillivray Road will become a major north-south collector providing added road capacity to serve the new large West Vaughan Employment Area. Corridor deficiency analysis indicated that 4 lanes would be required by 2021, assuming a large part of the employment area is built out within that timeframe. Located for the most part east of Highway 427, McGillivray Road will act as the key north-south distributor for trips using the Highway 427 extension with its 3 new interchanges at Langstaff Road, Rutherford Road, and Major Mackenzie Drive. The phasing of improvements will depend upon the timing of development in the various blocks. As a major collector, McGillivray Road is expected to accommodate significant bus service and facilitate cycling and pedestrian movements in the corridor.

Alternatives Considered

Transit	▶ Improved transit services within the corridor will operate on Highway 50 and Highway 27, as well as east-west arterials. In the long term, a Transitway is planned along Highway 427 to serve long distance trips.
Roads	▶ North-south Regional road widenings (from 4 to 6 lanes) include Highway 50 in the short term, and later Highway 27 for HOV and/or transit lanes. ▶ Highway 427 will not provide direct access to development.

Potential Socio-economic and Environmental Impacts: Minimal social and environmental impacts are expected, although there are some nearby environmentally sensitive areas and property will be required. Appropriate assessment of design alternatives along with identification of mitigation measures will be necessary.

Conclusion: Improvements will be considered in more detail and implemented as part of the development process.

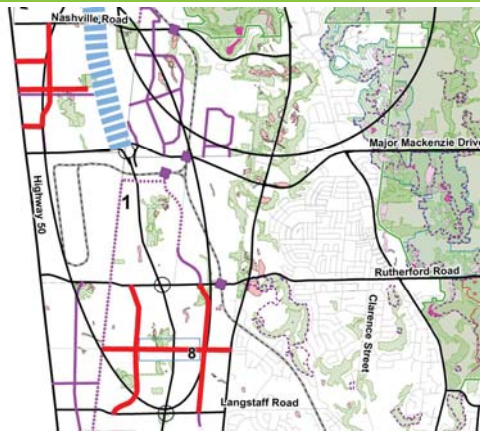
West Vaughan Employment Area Collector Road Improvements

Purpose: To serve the travel needs of the new West Vaughan Employment Area (WVEA) by providing a collector road system that connects to the planned Regional arterial system and to local roads that access new development.

Project Description

Name	▶ West Vaughan Employment Area Collector Road Improvements
Project Limits	▶ See map area 1
Length	▶ Approximately 11 km
Project Type	▶ New collector road system in Area 1 on map (Huntington & McGillivray considered separately)
Proposed Phasing	▶ 2012 – 2021, in conjunction with new development
Cost	▶ ~\$44 M

Project Location and Environmental Features



Justification:

▶ This is a network of collector road improvements that, in combination with improved Huntington and McGillivray Roads, will support the proposed development in the WVEA. The area is currently sparsely developed with only a few minor roads that cannot provide adequate access for the complete and intensive development planned for the area. The road network was developed around the existing Huntington and McGillivray Roads, in concert with the planning team that developed the WVEA secondary plan, and is supported by corridor deficiency analysis that identified the number of required lanes in each direction. The transportation analysis was co-ordinated with the Provincial Highway 427 Extension EA and the Regional Western Vaughan Improvements Individual EA to produce an integrated road network that also supports transit, cycling and pedestrian movement.

Alternatives Considered

Transit	▶ Improved transit services in the Major McKenzie Kirby Road corridor were considered in determining the need for this collection of road network
Roads	▶ Improvements by the Province (Highway 427) and the Regional (Major Mackenzie Road and Langstaff Road) were considered

Potential Socio-economic and Environmental Impacts: This network of road improvements may have some impact on wooded areas and minor watercourses, but it is located outside of the Oak Ridges Moraine and the Green Belt, and will therefore not significantly impact the natural heritage network.

Conclusion: For the most part, these improvements will be considered in more detail and implemented as part of the development process. The exception may be the more strategic east-west major collector proposed between Langstaff and Rutherford Roads (connecting to Martin Grove Road at Highway 27), which should be grade-separated with the Highway 427 extension.

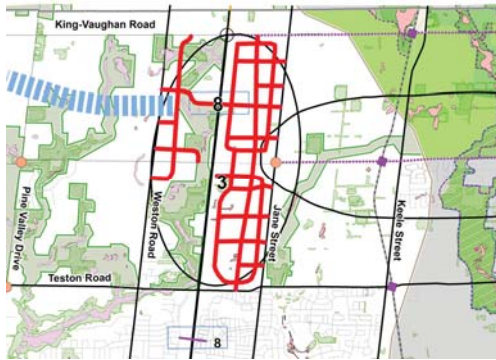
Highway 400 North Employment Lands Collector Road Network

Purpose: New collector road system to provide vehicular access (including transit and cycling) to a major new employment area within the City. The proposed Provincial GTA West Corridor and its possible termination at Highway 400 would have a significant impact on the development potential of the area, and the identified road network, including the location of the proposed Highway 400 mid-block crossing (Area 8).

Project Description

Name	▶ Highway 400 North Employment Lands Collector Road Network
Project Limits	▶ Between Weston Road and Jane Street from Teston Road to King-Vaughan Road (see map area 3)
Length	▶ Approximately 16 km (see map area 3), excluding mid-block Highway 400 crossing
Project Type	▶ Entirely new collector road system (all 2-lane roadways).
Proposed Phasing	▶ post 2021, in conjunction with new development and tied to resolution of GTA West Corridor
Cost	▶ \$61 M

Project Location and Environmental Features



Justification:

- ▶ This is a network of collector road improvements needed to support businesses in the proposed Highway 400 North employment area. The new system of collector roads is required to provide adequate access for the proposed development in the area. The network was developed in concert with the secondary plan for the area (OPA #637). It will also support transit, pedestrian and cycling services.

Alternatives Considered

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| Transit | ▶ Improved transit services in the Highway 400 and Major McKenzie corridors were considered in determining the need for this network of new roads |
| Roads | ▶ Road improvements considered the widening of Highway 400, Weston Road, Jane Street, Teston Road, Kirby Road and King-Vaughan Road. GTA West Corridor conclusions arrived at afterwards. |

Potential Socio-economic and Environmental Impacts: This network of road improvements avoids the more environmentally sensitive areas and is located outside of the Oak Ridges Moraine and the Green Belt, and will therefore not significantly impact the natural heritage network.

Conclusion: Since development of the area is subject to the Provincial GTA West Corridor designation, further collaboration with the Province and Region will be necessary to determine the optimum location of the future GTA West/Highway 400 interchange and the area road network, as well as the future of the entire employment lands area. Amendments to OPA #637 will undoubtedly be required prior to developments proceeding with associated road network improvements.

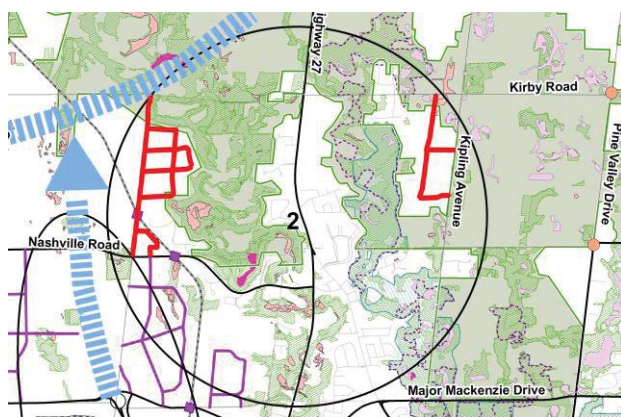
Kleinburg-Nashville Focus Area Collector Roads

Purpose: To provide access to new neighbourhoods and support travel by modes other than the automobile.

Project Description

Name	▶ Kleinburg-Nashville focus area collector roads
Project Limits	▶ See shaded areas in map area 2 below
Length	▶ 4 km of widening plus 5 km of new 2 lane collectors (see map area 2)
Project Type	▶ New collector road system, plus railway grade separation
Proposed Phasing	▶ 2021 – 2031, in conjunction with new development
Cost	▶ \$21.5 M

Project Location and Environmental Features



Justification:

▶ This is a collection new collector road networks required to provide access for three new subdivisions, one located west of Kipling Avenue and two east of Huntington Road. The road improvements will also support the provision of active transportation services within the Kleinburg-Nashville area. The networks were developed in concert with the planning team that prepared the new secondary plans.

Alternatives Considered

Transit	▶ Improved transit services in the Major Mackenzie and Highway 27 corridors, and on the CP rail line to Bolton were considered in determining the need for the road networks
Roads	▶ Improvements by the Province (Highway 427 extension) and by the Region (widening of Highway 27 and Major Mackenzie Drive) were considered. The possibility of a freeway in the GTA West Corridor was also recognized.

Potential Socio-economic and Environmental Impacts: The proposed new neighbourhoods avoid the major valleys and environmentally sensitive areas and, therefore associated road improvements are not expected to impact the natural heritage network.

Conclusion: Improvements for Huntington Road and Kipling Avenue will be considered in more detail and implemented as part of the development process, including the proposed new roads.

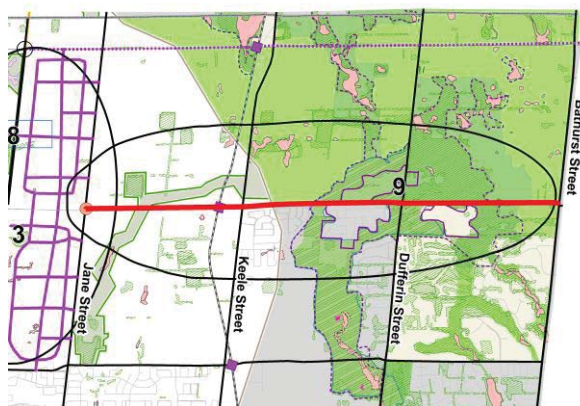
Kirby Road Improvements

Purpose: To serve future Highway 400 North employment area and support provision of enhanced pedestrian / cycling infrastructure; improve network continuity and the effectiveness of the existing network.

Project Description

Name	▶ Kirby Road Extension/Widening
Project Limits	▶ West of Keele Street to Bathurst Street
Length	▶ 4.5 km
Project Type	▶ New 4-lane roadway between Bathurst and Dufferin Streets; Roadway widening to 4 lanes between Dufferin and Keele Streets; railway grade separation west of Keele Street
Proposed Phasing	▶ 2021 – 2031
Cost	▶ \$19.5 M, including railway grade separation west of Keele Street

Project Location and Environmental Features



Justification:

▶ These are strategic road improvements needed to enhance network connectivity and the effectiveness of existing network, including for pedestrian and cycling modes. Corridor deficiency analysis indicates that the Kirby Road corridor will be approaching capacity and will need to be improved given its proximity to the urbanized area and its potential to serve east-west travel oriented to the future Highway 400 North employment area.

Alternatives Considered

Transit	▶ Improved transit services in the Kirby Road corridor are not warranted given that the immediate area is not being proposed for urbanization.
Roads	▶ Regional road improvements along King Vaughan Road and Teston Road were considered in the corridor needs analysis, and have also been incorporated into the recommended TMP road network.

Potential Socio-economic and Environmental Impacts: This project is within the Green Belt, and will therefore impact portions of the natural heritage network, requiring further environmental assessment and appropriate mitigation measures. Also, the residential areas located south of Kirby Road may be impacted by adverse effects from increased traffic flow requiring suitable mitigation measures to be considered.

Conclusion: This and other corridor improvements will be required by 2031, with some being required by 2021. Further study with the Region is needed to determine the sequence of corridor improvements. The requirement for additional improvements to Highway 400 should be assessed in the context of the Region's Mid York East-West study and the GTA West Corridor in the vicinity of Highway 400. Recommended for Phase 3 and 4 EA Study.

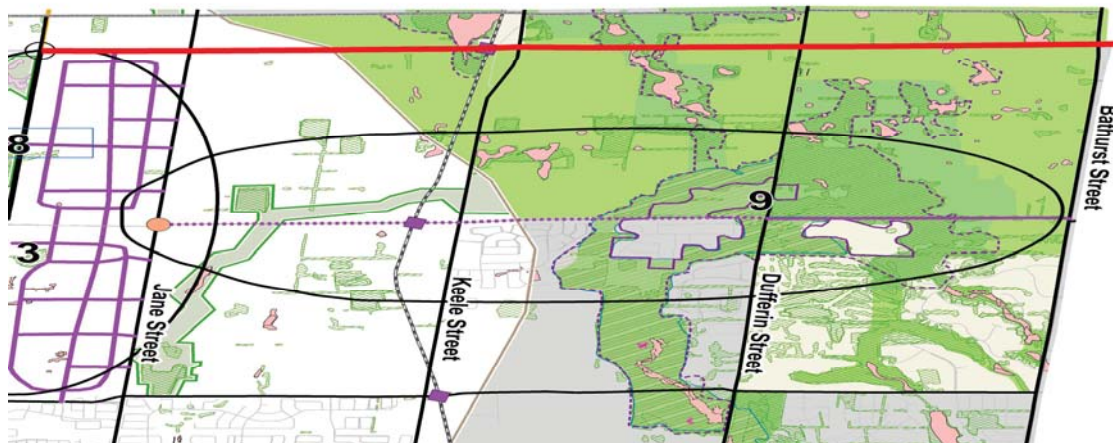
King-Vaughan Road Widening

Purpose: To provide added east-west capacity to serve the future Highway 400 North employment area and support provision of enhanced pedestrian / cycling infrastructure; improve network continuity and the effectiveness of the existing network.

Project Description

Name	▶ King Vaughan Road Widening
Project Limits	▶ Highway 400 to Bathurst Street
Length	▶ 7 km
Project Type	▶ Roadway Widening from 2 to 4 lanes
Proposed Phasing	▶ Keele Street to Bathurst Street required by 2021; Highway 400 to Keele Street required by 2031
Cost	▶ \$22 M, including railway grade separation

Project Location and Environmental Features



Justification:

- ▶ This is a strategic road improvement needed to provide added capacity to the network in support of the Highway 400 North employment area. The corridor deficiency analysis identified the need for the widening between Keele Street and Bathurst by 2021, while the segment between Highway 400 and Keele Street should be completed by 2031. These improvements may be subject to decisions on the GTA West Corridor proposal and the current Regional study addressing Highway 400 interchange locations for a major east-west Regional connection to Highway 404 and beyond.

Alternatives Considered

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| Transit | ▶ Improved transit services in the Kirby Road corridor not a significant consideration, given that the area is not being proposed for urbanization |
| Roads | ▶ Kirby Road and Teston Road improvements were considered and incorporated into the TMP. |

Potential Socio-economic and Environmental Impacts: This project is within the Green Belt, and will therefore impact portions of the natural heritage network, requiring further environmental assessment and appropriate mitigation measures.

Conclusion: King-Vaughan Road and other corridor improvements will be required by 2031, some by 2021. Further study with the Region is needed to determine the sequence of corridor improvements, in the context of conclusions reached on the GTA West Corridor and the above-mentioned Regional study.

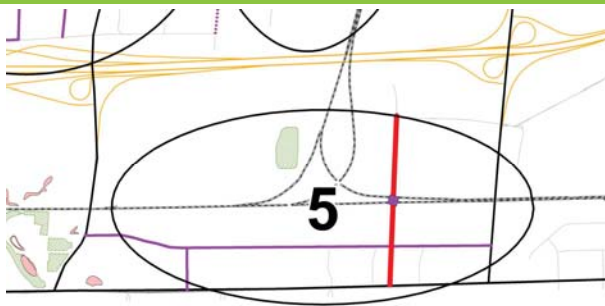
Snidercroft Extension and Railway Grade Separation

Purpose: To support intensification and transit-oriented development in the Steeles corridor near the new Steeles West subway station on the Spadina line extension, to support station facilities (including a large park-n-ride lot) and provide additional north-south capacity across CN York rail line.

Project Description

Name	▶ Snidercroft Extension, east-west collector and north-south connector from Steeles
Project Limits	▶ Existing Snidercroft Road to Steeles Avenue, and Keele Street to Jane Street
Length	▶ 2.5 km (see map area 5)
Project Type	▶ New collector road system and Railway Grade Separation
Proposed Phasing	▶ 2012 – 2021
Cost	▶ \$8.5 M, including railway grade separation

Project Location and Environmental Features



Justification:

▶ This new collector road is needed to help service new transit-oriented development and the new nearby Steeles West subway station facilities (off-street bus terminal and park-n-ride lot). The grade separation across the CN York rail line will provide an alternative to Keele Street for more local traffic. The improvements will also provide safer walking and cycling opportunities. The improvement was developed in concert with the secondary plan for the area (OPA #620).

Alternatives Considered

Transit	▶ Improved transit services planned for the area (Spadina subway extension, 407 Transitway, and Steeles and Jane RT corridors) were all considered in determining the need for these improvements
Roads	▶ A network of new local road improvement was considered together with Regional road improvements such as Major Mackenzie Drive and Teston Road widenings.

Potential Socio-economic and Environmental Impacts: This network of road improvements is located in an urbanized area designated for intensification and well outside of the Oak Ridges Moraine and the Green Belt, and will therefore not significantly impact the natural heritage network.

Conclusion: These improvements will be considered in more detail in the context of the subway station implementation and the general development process. An EA will be pursued separately by the City for this project.

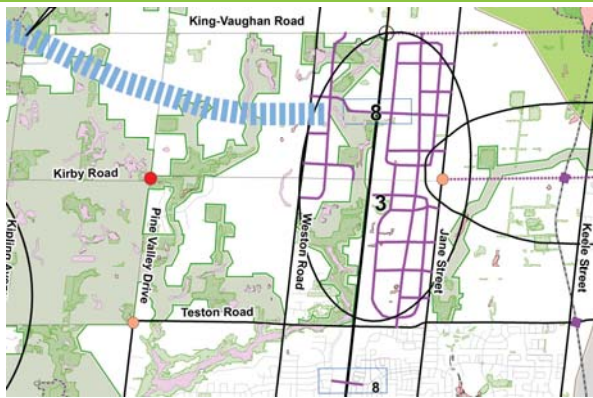
Jog Elimination at Pine Valley Drive and Kirby Road

Purpose: To eliminate the jog at the intersection, thereby improving public safety and the efficiency of traffic flow.

Project Description

Name	▶ Jog Elimination at Pine Valley Drive and Kirby Road
Project Limits	▶ Intersection of Pine Valley Drive and Kirby Road
Length	▶ n/a
Project Type	▶ Intersection reconfiguration
Proposed Phasing	▶ 2012 – 2021, as increases in traffic warrant
Cost	▶ Approximately \$1 M

Project Location and Environmental Features



Justification:

- ▶ The intersection reconfiguration is needed to improve public safety and efficiency of traffic flow.

Alternatives Considered

Transit	▶ n/a
Roads	▶ n/a

Potential Socio-economic and Environmental Impacts: This intersection is in close proximity to environmentally sensitive areas/valley lands. Further investigation will be required to determine the potential impacts to these areas, and they should be considered carefully in assessing alternative design concepts for this jog elimination.

Conclusion: Alternative design concepts for the intersection improvement will be developed as part of the preliminary design phase and further assessment of environmental impacts conducted at that time.