**Project Description**

**Location**  
Highway 404 New Interchange

**Municipality**  
East Gwillimbury

**Project Limits**  
at Doane Road

**Project Type**  
New Interchange

**Map**

![Map of the project area](image)

**Existing Conditions**

**Physical and Transportation Conditions**

**OP Designated ROW**  
Up to 36 metres

**Description**

Components of interchange ramps have been pre-constructed as part of Highway 404 extension.

**Natural and Built Environment**

**Natural Environment**

Observations: Regional Greenlands System south of Doan Road.  
Environmentally Sensitive Areas: ESAs across Highway 404 north of Doane  
Source Water Protection Areas: Within SWP zone

**Land Use and Built Environment**

Primarily agricultural lands.

**Problem or Opportunity Statement**

- Improved network connectivity needed to move people and goods.  
- Network improvements needed to accommodate expansion of the Designated Urban Area.  
- Capacity improvements needed to accommodate future travel demands.

**Alternatives Considered**

1. Do Nothing - Does not address Problem or Opportunity Statement.  
2. Interchange improvements at adjacent interchange - Potential to divert travel demand to other corridors. Does not address travel demand in corridor.  
3. New partial interchange - Improves access to highway, but only to/from select directions.  
4. New full interchange - Addresses travel demand and improves highway access to/from all directions.
2102 - Highway 404 New Interchange - at Doane Road (continued)

**Recommended Improvement and Justification**

**Recommendation**
Construct new full interchange.

**Justification**
Identified in 2009 TMP and confirmed through Doane Road EA. Interchange is required to serve growth in Queensville and Sharon. Interchange ramps already partially roughed in. Opportunity to include park and ride lot with interchange improvements. Approval required from MTO.

**TMP Phase**
2022 to 2026

**Alignment with TMP Objectives**

<table>
<thead>
<tr>
<th>Support Transit</th>
<th>Support Road Network</th>
<th>Support Active Transportation</th>
<th>Support Goods Movement</th>
<th>Support Last Mile</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

**Costs**

- **Capital Cost**: $4,063,000
- **Incremental Annual Road Operating Cost**: $-
- **Incremental Road Maintenance and Rehabilitation Cost**: $-

**Related Projects**

<table>
<thead>
<tr>
<th>Name</th>
<th>Project ID</th>
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</thead>
<tbody>
<tr>
<td>Doane Road - Yonge Street to Woodbine Avenue - Widen to 4 lanes</td>
<td>2056</td>
</tr>
</tbody>
</table>

**Key Intersections and Constraints**

**Highway 404 at Doane Road**

[Image of Highway 404 at Doane Road]
**Project Description**

**Location**
Highway 404 Interchange Improvements

**Municipality**
Newmarket, Whitchurch-Stouffville

**Project Limits**
at Mulock Drive

**Project Type**
Interchange Improvements

**Map**

**Existing Conditions**

**Physical and Transportation Conditions**

**OP Designated ROW**
Up to 36 metres

**Description**

Existing partial interchange with access to/from the south. Signalized intersection at northbound off-ramp.

**Natural and Built Environment**

**Natural Environment**
Observations: Forested areas and watercourse in the northeast and northwest quadrants.
Source Water Protection Areas: Within SWP zone

**Land Use and Built Environment**
Agricultural lands to the east. Low density residential to the southwest and employment lands to the northwest.

**Problem or Opportunity Statement**

- Improved network connectivity needed to move people and goods.
- Capacity improvements needed to address existing congestion.
- Capacity improvements needed to accommodate future travel demands.

**Alternatives Considered**

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Interchange improvements at adjacent interchange - Potential to divert travel demand to adjacent corridor. Does not address travel demand in corridor.
3. Interchange improvements - Addresses travel demand and improves access to/from Highway 404.
2103 - Highway 404 Interchange Improvements - at Mulock Drive (continued)

Recommended Improvement and Justification

**Recommendation**
Interchange improvements.

**Justification**
Additional ramps to/from north at Mulock Drive interchange are needed for improved connectivity. Interchange reduces traffic on local/collector streets including Harry Walker Parkway and Davis Drive. MTO conducting Class EA for improvements along Highway 404 from Highway 407 to Green Lane. MTO plans include missing ramps to/from north at Mulock Drive. Opportunity to include park and ride lot with interchange improvements.

**TMP Phase**
2022 to 2026

Alignment with TMP Objectives

<table>
<thead>
<tr>
<th>Support Transit</th>
<th>Support Road Network</th>
<th>Support Active Transportation</th>
<th>Support Goods Movement</th>
<th>Support Last Mile</th>
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<tbody>
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**Costs**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Capital Cost</td>
<td>$ 6,000,000</td>
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<td>Incremental Annual Road Operating Cost</td>
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<td>Incremental Road Maintenance and Rehabilitation Cost</td>
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Related Projects

<table>
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<th>Name</th>
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<tbody>
<tr>
<td>Highway 404 at Mulock Drive</td>
<td>A-370</td>
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Key Intersections and Constraints

Highway 404 at Mulock Drive
2104 - Highway 404 New Interchange - at St John's Sideroad

**Project Description**

<table>
<thead>
<tr>
<th>Location</th>
<th>Highway 404 New Interchange</th>
<th>Project ID</th>
<th>2104</th>
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<tbody>
<tr>
<td>Municipality</td>
<td>Aurora, Whitchurch-Stouffville</td>
<td>Road Segment ID</td>
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<td>Project Type</td>
<td>New Interchange</td>
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</table>

**Map**

![Map of Highway 404 New Interchange at St John's Sideroad]

**Existing Conditions**

**Physical and Transportation Conditions**

**OP Designated ROW** Up to 36 metres

**Description**

Existing Highway 404 underpass of St. John's Sideroad.

**Natural and Built Environment**

**Natural Environment**

Observations: Regional Greenlands System to the north and south.
Source Water Protection Areas: Near SWP zone

**Land Use and Built Environment**

Agricultural lands to the northwest, southwest and southeast. Residential parcels with direct frontage on St. John’s Sideroad to the east.

**Problem or Opportunity Statement**

- Improved network connectivity needed to move people and goods.
- Network improvements needed to accommodate expansion of the Designated Urban Area.
- Capacity improvements needed to accommodate future travel demands.

**Alternatives Considered**

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Interchange improvements at adjacent interchange - Potential to divert travel demand to other corridors. Does not address travel demand in corridor.
3. New partial interchange - Improves access to highway, but only to/from select directions.
4. New full interchange - Addresses travel demand and improves highway access to/from all directions.
2104 - Highway 404 New Interchange - at St John's Sideroad (continued)

Recommended Improvement and Justification

Recommendation
Construct new full interchange.

Justification
New interchange needed to accommodate growth in east Aurora. Interchange provides alternative access to Highway 404 and relieves traffic on Wellington Street, eliminating the need to widen Wellington beyond the current 4 lanes. Approval required from MTO.

TMP Phase
2027 to 2031

Alignment with TMP Objectives

Support Transit | Support Road Network | Support Active Transportation | Support Goods Movement | Support Last Mile
--- | --- | --- | --- | ---
〇 | 〇 | 〇 | 〇 | 〇

Costs

Capital Cost $40,250,000
Incremental Annual Road Operating Cost $-
Incremental Road Maintenance and Rehabilitation Cost $-

Related Projects

Name
St John's Sideroad - Bayview Avenue to Highway 404 - Widen to 4 lanes

Key Intersections and Constraints

Highway 404 at St John's Sideroad
2105 - Highway 404 New Interchange - at 19th Avenue

Project Description

Location  Highway 404 New Interchange
Municipality  Richmond Hill, Markham
Project Limits  at 19th Avenue
Project Type  New Interchange

Map

Existing Conditions

Physical and Transportation Conditions
OP Designated ROW  Up to 43 metres

Description
Existing Highway 404 underpass of 19th Avenue.

Natural and Built Environment
Natural Environment  Observations: Regional Greenlands System with watercourse on the west side of Highway 404.
Land Use and Built Environment  Primarily agricultural uses. Industrial site in the southeast quadrant.

Problem or Opportunity Statement
• Improved network connectivity needed to move people and goods.
• Network improvements needed to accommodate growth in Designated Urban Area.
• Capacity improvements needed to accommodate future travel demands.

Alternatives Considered
1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Interchange improvements at adjacent interchange - Potential to divert travel demand to other corridors. Does not address travel demand in corridor.
3. New partial interchange - Improves access to highway, but only to/from select directions.
4. New full interchange - Addresses travel demand and improves highway access to/from all directions.
2105 - Highway 404 New Interchange - at 19th Avenue (continued)

**Recommended Improvement and Justification**

**Recommendation**
Construct new full interchange.

**Justification**
New interchange needed as connection to Donald Cousens Parkway and to accommodate growth in North Markham and Richmond Hill. 19th Avenue is currently under the jurisdiction of Richmond Hill/Markham and is a candidate for transfer to the Region. A new interchange has been protected in North Leslie Secondary Plan approvals. Approval required from MTO.

**TMP Phase**
2027 to 2031

**Alignment with TMP Objectives**

<table>
<thead>
<tr>
<th>Support Transit</th>
<th>Support Road Network</th>
<th>Support Active Transportation</th>
<th>Support Goods Movement</th>
<th>Support Last Mile</th>
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**Costs**

<table>
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<tr>
<th>Description</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>Capital Cost</td>
<td>$40,250,000</td>
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<tr>
<td>Incremental Annual Road Operating Cost</td>
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<tr>
<td>Incremental Road Maintenance and Rehabilitation Cost</td>
<td>$-</td>
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</table>

**Related Projects**

<table>
<thead>
<tr>
<th>Name</th>
<th>Project ID</th>
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</thead>
<tbody>
<tr>
<td>19th Avenue - Bayview Avenue to Woodbine Avenue - Widen to 4 lanes</td>
<td>2037</td>
</tr>
<tr>
<td>Donald Cousens Parkway (19th Avenue) - Woodbine Avenue to Major Mackenzie Drive - Widen to 4 lanes; New ar</td>
<td>2053</td>
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**Key Intersections and Constraints**

**Highway 404 at 19th Avenue**
2106 - Highway 404 Interchange Improvements - at 16th Avenue

**Project Description**

<table>
<thead>
<tr>
<th>Location</th>
<th>Highway 404 Interchange Improvements</th>
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<tbody>
<tr>
<td>Municipality</td>
<td>Richmond Hill, Markham</td>
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<tr>
<td>Project Limits</td>
<td>at 16th Avenue</td>
</tr>
<tr>
<td>Project Type</td>
<td>Interchange Improvements</td>
</tr>
<tr>
<td></td>
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</tbody>
</table>

**Map**

![Map of Highway 404 Interchange Improvements at 16th Avenue](image)

**Existing Conditions**

**Physical and Transportation Conditions**

**OP Designated ROW**

Up to 43 metres

**Description**

Existing interchange (ParClo AB).

**Natural and Built Environment**

**Natural Environment**

Observations: Existing development on both sides.

**Land Use and Built Environment**

Primarily employment lands in surrounding area. Buttonville airport in southeast corner.

**Problem or Opportunity Statement**

- Improved network connectivity needed to move people and goods.
- Capacity improvements needed to address existing congestion.
- Capacity improvements needed to accommodate future travel demands.

**Alternatives Considered**

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Interchange improvements at adjacent interchange - Potential to divert travel demand to adjacent corridor. Does not address travel demand in corridor.
3. Interchange improvements - Addresses travel demand and improves access to/from highway.
**Recommended Improvement and Justification**

**Recommendation**: Interchange improvements.

**Justification**: Interchange re-configuration improves capacity and reduces delay at the intersections. MTO conducting Class EA for improvements along Highway 404 from Highway 407 to Green Lane. MTO plans include reconfiguration of existing interchange to Parco A once Buttonville Airport redevelops. Opportunity for new park and ride facility. Approval required from MTO.

**TMP Phase**: 2017 to 2021

### Alignment with TMP Objectives

<table>
<thead>
<tr>
<th>Support Transit</th>
<th>Support Road Network</th>
<th>Support Active Transportation</th>
<th>Support Goods Movement</th>
<th>Support Last Mile</th>
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<tbody>
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### Costs

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<tr>
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<td>Incremental Road Maintenance and Rehabilitation Cost</td>
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### Related Projects

<table>
<thead>
<tr>
<th>Name</th>
<th>Project ID</th>
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</thead>
<tbody>
<tr>
<td>16th Avenue - Leslie Street to Woodbine Avenue - Widen to 6 lanes</td>
<td>2087</td>
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</table>

### Key Intersections and Constraints

**Highway 404 at 16th Avenue**
# 2107 - Highway 407 New Interchange - at Martin Grove Road

## Project Description

<table>
<thead>
<tr>
<th>Location</th>
<th>Highway 407 New Interchange</th>
<th>Project ID</th>
<th>2107</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipality</td>
<td>Vaughan</td>
<td>Road Segment ID</td>
<td>07-10</td>
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<td>Project Limits</td>
<td>at Martin Grove Road</td>
<td></td>
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</tr>
<tr>
<td>Project Type</td>
<td>New Interchange</td>
<td></td>
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</tr>
</tbody>
</table>

### Map

![Map of 2107 - Highway 407 New Interchange - at Martin Grove Road](image)

## Existing Conditions

### Physical and Transportation Conditions

| OP Designated ROW | N/A |

### Description

Existing Highway 407 underpass. This section of Martin Grove Road is 4 general purpose lanes with continuous sidewalks on both sides. No dedicated cycling facilities.

## Natural and Built Environment

### Natural Environment

Observations: Existing development on both sides.

### Land Use and Built Environment

Hydro corridor to the northeast. Large industrial/commercial building to the northwest.

## Problem or Opportunity Statement

- Improved network connectivity needed to move people and goods.
- Capacity improvements needed to address existing congestion.
- Capacity improvements needed to accommodate future travel demands.

## Alternatives Considered

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Interchange improvements at adjacent interchange - Potential to divert travel demand to other corridors. Does not address travel demand in corridor.
3. New partial interchange - Improves access to highway, but only to/from select directions.
4. New full interchange - Addresses travel demand and improves highway access to/from all directions.
2107 - Highway 407 New Interchange - at Martin Grove Road (continued)

**Recommended Improvement and Justification**

**Recommendation**
Construct new interchange.

**Justification**
New Highway 407 interchange at Martin Grove Road was identified in 2009 TMP. Previous feasibility study indicated that a partial interchange to/from the east is feasible within the existing Highway 407 right-of-way. Interchange would serve residential and industrial areas to the south and industrial areas to the north, providing improved accessibility to Highway 407. Approval required from MTO and 407 ETR.

**TMP Phase**
2027 to 2031

**Alignment with TMP Objectives**

<table>
<thead>
<tr>
<th>Support Transit</th>
<th>Support Road Network</th>
<th>Support Active Transportation</th>
<th>Support Goods Movement</th>
<th>Support Last Mile</th>
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</thead>
<tbody>
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**Costs**

<table>
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<tr>
<th>Description</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
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<tr>
<td>Incremental Annual Road Operating Cost</td>
<td>$-</td>
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<td>Incremental Road Maintenance and Rehabilitation Cost</td>
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**Related Projects**

**Name**

<table>
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<th>Name</th>
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<tbody>
<tr>
<td>Highway 407 at Martin Grove Road</td>
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**Key Intersections and Constraints**

Highway 407 at Martin Grove Road
2108 - Highway 407 New Interchange - at Centre Street

Project Description

<table>
<thead>
<tr>
<th>Location</th>
<th>Highway 407 New Interchange</th>
<th>Project ID</th>
<th>2108</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipality</td>
<td>Vaughan</td>
<td>Road Segment ID</td>
<td>71-19 to 71-21</td>
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<tr>
<td>Project Limits</td>
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<tr>
<td>Project Type</td>
<td>New Interchange</td>
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<td></td>
</tr>
</tbody>
</table>

Map

Existing Conditions

Physical and Transportation Conditions

| OP Designated ROW | Up to 45 metres |

Description

Existing Highway 407 overpass. This section of Centre Street is 4 general purpose lanes with paved shoulders with a median island under the structure. A sidewalk is provided on the south side. No dedicated cycling facilities.

Natural and Built Environment

Natural Environment

Observations: Greenlands system, watercourse and trail in the southwest quadrant.

Land Use and Built Environment

Hydro corridor parallel to Highway 407 on the east side. Approx 130 m to Highway 7 on the west side. Community park in the northeast quadrant.

Problem or Opportunity Statement

• Improved network connectivity needed to move people and goods.
• Capacity improvements needed to address existing congestion.
• Capacity improvements needed to accommodate future travel demands.

Alternatives Considered

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Interchange improvements at adjacent interchange - Potential to divert travel demand to other corridors. Does not address travel demand in corridor.
3. New partial interchange - Improves access to highway, but only to/from select directions.
4. New full interchange - Addresses travel demand and improves highway access to/from all directions.
2108 - Highway 407 New Interchange - at Centre Street (continued)

**Recommended Improvement and Justification**

**Recommendation**
Construct new interchange.

**Justification**
New Highway 407 interchange at Centre Street was identified in 2009 TMP. Previous feasibility study indicated several design concepts for this interchange would be feasible. The Interchange serves the residential and commercial areas to the southeast and industrial areas to the northwest. Approval required from MTO and 407 ETR.

**TMP Phase**
2032 to 2041

**Alignment with TMP Objectives**

<table>
<thead>
<tr>
<th>Support Transit</th>
<th>Support Road Network</th>
<th>Support Active Transportation</th>
<th>Support Goods Movement</th>
<th>Support Last Mile</th>
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<tbody>
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**Costs**

- **Capital Cost**
  $40,250,000
- **Incremental Annual Road Operating Cost**
  $-
- **Incremental Road Maintenance and Rehabilitation Cost**
  $-

**Related Projects**

<table>
<thead>
<tr>
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<tbody>
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<td>Highway 7 - Helen Street to Yonge Street - RT Corridor</td>
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**Key Intersections and Constraints**

**Highway 407 at Centre Street**
2109 - Highway 407 Interchange Improvements - at Ninth Line

Project Description

<table>
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<th>Location</th>
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<tbody>
<tr>
<td>Municipality</td>
<td>Markham</td>
</tr>
<tr>
<td>Project Limits</td>
<td>at Ninth Line</td>
</tr>
<tr>
<td>Project Type</td>
<td>Interchange Improvements</td>
</tr>
</tbody>
</table>

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 45 metres

Description

Existing interchange (ParClo A) without the S-E on-ramp in the southeast quadrant. This section of Ninth Line is 4 general purpose lanes (5 lanes on the structure) with continuous sidewalks on both sides. No dedicated cycling facilities.

Natural and Built Environment

Natural Environment Observations: Greenlands system with watercourse in the southeast quadrant.

Land Use and Built Environment

Primarily lower density residential. Big box retail commercial in the southeast quadrant.

Problem or Opportunity Statement

• Improved network connectivity needed to move people and goods.
• Network improvements needed to accommodate growth in Designated Urban Area.
• Capacity improvements needed to accommodate future travel demands.

Alternatives Considered

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Interchange improvements at adjacent interchange - Potential to divert travel demand to adjacent corridor. Does not address travel demand in corridor.
3. Interchange improvements - Addresses travel demand and improves access to/from highway.
### Recommended Improvement and Justification

**Recommendation**
Interchange improvements.

**Justification**
New ramp from South to East needed to serve growth in Markham. York Region completed interchange feasibility study identifying the need for missing ramp. A full interchange improves utility of Ninth Line. 407 ETR has not committed to improvements, but will consider if BCA thresholds are met. Approval required from MTO and 407 ETR.

### TMP Phase
2032 to 2041

### Alignment with TMP Objectives

<table>
<thead>
<tr>
<th>Support Transit</th>
<th>Support Road Network</th>
<th>Support Active Transportation</th>
<th>Support Goods Movement</th>
<th>Support Last Mile</th>
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### Costs

- **Capital Cost**: $3,750,000
- **Incremental Annual Road Operating Cost**: $-
- **Incremental Road Maintenance and Rehabilitation Cost**: $-

### Related Projects

<table>
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<th>Name</th>
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### Key Intersections and Constraints

**Highway 407 at Ninth Line**
Project Description

<table>
<thead>
<tr>
<th>Location</th>
<th>Highway 407 Interchange Improvements</th>
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</thead>
<tbody>
<tr>
<td>Municipality</td>
<td>Markham</td>
</tr>
<tr>
<td>Project Limits</td>
<td>at Donald Cousens Parkway</td>
</tr>
<tr>
<td>Project Type</td>
<td>Interchange Improvements</td>
</tr>
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</table>

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 36 metres

Description

Existing partial interchange missing S-W on-ramp and S-E on-ramp.

Natural and Built Environment

Natural Environment

Observations: Regional Greenlands System adjacent to Highway 407 on the north side.

Land Use and Built Environment

Big box retail commercial to the southwest. Agricultural and open space in the northwest, northeast and southeast quadrants.

Problem or Opportunity Statement

- Improved network connectivity needed to move people and goods.
- Network improvements needed to accommodate growth in Designated Urban Area.
- Capacity improvements needed to accommodate future travel demands.

Alternatives Considered

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Interchange improvements at adjacent interchange - Potential to divert travel demand to adjacent corridor. Does not address travel demand in corridor.
3. Interchange improvements - Addresses travel demand and improves access to/from highway.
Recommended Improvement and Justification

**Recommendation**
Interchange improvements.

**Justification**
Donald Cousens Parkway to Morningside Link EA recommended completing interchange with the addition of ramps to/from south. 407 ETR has not committed to improvements, but will consider if BCA thresholds are met. Approval required from MTO and 407 ETR.

**TMP Phase**
2022 to 2026

### Alignment with TMP Objectives

- [ ] Support Transit
- [ ] Support Road Network
- [ ] Support Active Transportation
- [ ] Support Goods Movement
- [ ] Support Last Mile

### Costs

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### Related Projects

<table>
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</thead>
</table>

### Key Intersections and Constraints

**Highway 407 at Donald Cousens Parkway**
2111 - Highway 400 New Interchange - at 15th Sideroad

Project Description

<table>
<thead>
<tr>
<th>Location</th>
<th>Highway 400 New Interchange</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipality</td>
<td>King</td>
</tr>
<tr>
<td>Project Limits</td>
<td>at 15th Sideroad</td>
</tr>
<tr>
<td>Project Type</td>
<td>New Interchange</td>
</tr>
<tr>
<td>Project ID</td>
<td>2111</td>
</tr>
<tr>
<td>Road Segment ID</td>
<td>40-15 to 40-16</td>
</tr>
</tbody>
</table>

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW N/A

Description

15th Sideroad is discontinuous at Highway 400. Existing corridor is unpaved, gravel surface.

Natural and Built Environment

Natural Environment

Observations: Interchange is located within Regional Greenlands System.
Environmentally Sensitive Areas: ANSI in southwest quadrant.

Land Use and Built Environment

Primarily agricultural lands in the vicinity. MTO weigh station located on Highway 400 just north of 15th Sideroad.

Problem or Opportunity Statement

- Improved network connectivity needed to move people and goods.
- Network improvements needed to accommodate growth in Designated Urban Area.
- Capacity improvements needed to accommodate future travel demands.

Alternatives Considered

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Interchange improvements at adjacent interchange - Potential to divert travel demand to other corridors. Does not address travel demand in corridor.
3. New partial interchange - Improves access to highway, but only to/from select directions.
4. New full interchange - Addresses travel demand and improves highway access to/from all directions.
Recommended Improvement and Justification

**Recommendation**
Construct new full interchange.

**Justification**
New interchange identified in Mid-York East-West Transportation Corridor Feasibility study as a carry-forward corridor. 15th Sideroad currently under jurisdiction of King Township and is a candidate for transfer to the Region. Need for interchange related to planned improvements on 15th Sideroad resulting in a continuous east-west road, eliminating the missing link between Jane and Keele, and across Highway 400. New interchange and corridor improvements provide traffic relief on King Road through King City and provides alternate truck route bypassing King City. Approval required from MTO.

**TMP Phase**
2032 to 2041

Alignment with TMP Objectives

<table>
<thead>
<tr>
<th>Support Transit</th>
<th>Support Road Network</th>
<th>Support Active Transportation</th>
<th>Support Goods Movement</th>
<th>Support Last Mile</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Costs

- **Capital Cost**: $40,250,000
- **Incremental Annual Road Operating Cost**: $-
- **Incremental Road Maintenance and Rehabilitation Cost**: $-

Related Projects

<table>
<thead>
<tr>
<th>Name</th>
<th>Project ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>15th Sideroad - Highway 400 to Jane Street - Widen to 4 lanes</td>
<td>2049</td>
</tr>
</tbody>
</table>

Key Intersections and Constraints

Highway 400 at 15th Sideroad
2112 - Highway 400 New Interchange - at King Vaughan Road

Project Description

Location: Highway 400 New Interchange
Municipality: Vaughan
Project Limits: at King Vaughan Road
Project Type: New Interchange

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW: N/A

Description

Existing Highway 400 underpass with 2-lanes on King Vaughan Road.

Natural and Built Environment

Natural Environment
Observations: Regional Greenlands System located in southwest quadrant. Watercourses on both sides of Highway 400.

Land Use and Built Environment
Industrial land use in the northeast quadrant. Primarily agricultural lands on northwest, southwest and southeast quadrants. Private residence located in southeast quadrant approx 50 m from Highway 400.

Problem or Opportunity Statement

• Improved network connectivity needed to move people and goods.
• Network improvements needed to accommodate expansion of the Designated Urban Area.
• Capacity improvements needed to accommodate future travel demands.

Alternatives Considered

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Interchange improvements at adjacent interchange - Potential to divert travel demand to other corridors. Does not address travel demand in corridor.
3. New partial interchange - Improves access to highway, but only to/from select directions.
4. New full interchange - Addresses travel demand and improves highway access to/from all directions.
Recommended Improvement and Justification

Recommendation
Construct new interchange.

Justification
Interchange required to support growth in Northern Vaughan. Interchange provides connection to Highway 400 and also to GTA West. Interchange feasibility to be confirmed through GTA West EA. York Region working with MTO and Vaughan through the GTA West EA to confirm final interchange configuration in the area of the future GTA West / Highway 400 freeway to freeway interchange. Identified as a carry-forward corridor in the Mid-York East-West Transportation Study. Approval required from MTO.

TMP Phase
2032 to 2041

Alignment with TMP Objectives

Support Transit  Support Road Network  Support Active Transportation  Support Goods Movement  Support Last Mile

Costs

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Cost</td>
<td>$40,250,000</td>
</tr>
<tr>
<td>Incremental Annual Road Operating Cost</td>
<td>$-</td>
</tr>
<tr>
<td>Incremental Road Maintenance and Rehabilitation Cost</td>
<td>$-</td>
</tr>
</tbody>
</table>

Related Projects

<table>
<thead>
<tr>
<th>Name</th>
<th>Project ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>King Vaughan Road - Pine Valley Drive to Bathurst Street - Widen to 4 lanes</td>
<td>2018</td>
</tr>
</tbody>
</table>

Key Intersections and Constraints

Highway 400 at King Vaughan Road
2113 - Highway 400 Interchange Improvements - at Langstaff Road

**Project Description**

<table>
<thead>
<tr>
<th>Location</th>
<th>Highway 400 Interchange Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipality</td>
<td>Vaughan</td>
</tr>
<tr>
<td>Project Limits</td>
<td>at Langstaff Road</td>
</tr>
<tr>
<td>Project Type</td>
<td>Interchange Improvements</td>
</tr>
</tbody>
</table>

**Map**

![Map of Highway 400 Interchange Improvements at Langstaff Road](image)

**Existing Conditions**

**Physical and Transportation Conditions**

**OP Designated ROW** Up to 36 metres

**Description**

Existing partial interchange with access to/from the south only. Signalized intersection at northbound off-ramp.

**Natural and Built Environment**

**Natural Environment**

Observations: Watercourse on east side of Highway 400 crossing to west side north of Langstaff Road.

**Land Use and Built Environment**

Employment/industrial lands surrounds interchange area.

**Problem or Opportunity Statement**

- Improved network connectivity needed to move people and goods.
- Capacity improvements needed to address existing congestion.
- Capacity improvements needed to accommodate future travel demands.

**Alternatives Considered**

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Interchange improvements at adjacent interchange - Potential to divert travel demand to adjacent corridor. Does not address travel demand in corridor.
3. Interchange improvements - Addresses travel demand and improves access to/from highway.
**Recommended Improvement and Justification**

**Recommendation**
Interchange improvements.

**Justification**
Interchange improvements needed to provide access to/from the north. A full interchange provides improved highway connectivity for goods movement. Need for improvement increases when Langstaff Road missing link is constructed between Jane Street and Keele Street. Opportunity for new park and ride facility. Langstaff Road EA (Weston to Highway 7) is scheduled to commence in 2016. Approval required from MTO.

**TMP Phase**
2027 to 2031

**Alignment with TMP Objectives**

<table>
<thead>
<tr>
<th>Support Transit</th>
<th>Support Road Network</th>
<th>Support Active Transportation</th>
<th>Support Goods Movement</th>
<th>Support Last Mile</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Costs**

- **Capital Cost**
  - $14,250,000
- **Incremental Annual Road Operating Cost**
  - $
- **Incremental Road Maintenance and Rehabilitation Cost**
  - $

**Related Projects**

- **Name**
  - Langstaff Road - Weston Road to Jane Street - Widen to 6 lanes
- **Project ID**
  - 2079

**Key Intersections and Constraints**

**Highway 400 at Langstaff Road**
## Project Description

<table>
<thead>
<tr>
<th>Location</th>
<th>Highway 400 Interchange Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipality</td>
<td>Vaughan</td>
</tr>
<tr>
<td>Project Limits</td>
<td>at Highway 7 - Vaughan Metropolitan Centre</td>
</tr>
<tr>
<td>Project Type</td>
<td>Interchange Improvements</td>
</tr>
</tbody>
</table>

## Map

![Map of Highway 400 Interchange Improvements](image)

## Existing Conditions

### Physical and Transportation Conditions

| OP Designated ROW | Up to 60 metres |

### Description

Existing full interchange at Highway 7

## Natural and Built Environment

### Natural Environment

Observations: Watercourse on east side of Highway 400 ramps.

### Land Use and Built Environment

Major commercial/employment area in the surrounding vicinity.

## Problem or Opportunity Statement

- Improved network connectivity needed to move people and goods.
- Capacity improvements needed to address existing congestion.
- Capacity improvements needed to accommodate future travel demands.

## Alternatives Considered

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Interchange improvements at adjacent interchange - Potential to divert travel demand to adjacent corridor. Does not address travel demand in corridor.
3. Interchange improvements - Addresses travel demand and improves access to/from highway.

October 2016
2114 - Highway 400 Interchange Improvements - at Highway 7 - Vaughan Metropolitan Centre (continued)

Recommended Improvement and Justification

Recommendation  
Interchange improvements.

Justification  
Improvements to existing full interchange on Highway 400 at Highway 7 is needed to accommodate Vaughan Corporate Centre Plan. Approval required from MTO.

TMP Phase  
2017 to 2021

Alignment with TMP Objectives

<table>
<thead>
<tr>
<th>Support Transit</th>
<th>Support Road Network</th>
<th>Support Active Transportation</th>
<th>Support Goods Movement</th>
<th>Support Last Mile</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
<td>★</td>
<td>○</td>
<td>★</td>
<td>★</td>
</tr>
</tbody>
</table>

Costs

<table>
<thead>
<tr>
<th>Category</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td>Capital Cost</td>
<td>$19,200,000</td>
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<tr>
<td>Incremental Annual Road Operating Cost</td>
<td>$ -</td>
</tr>
<tr>
<td>Incremental Road Maintenance and Rehabilitation Cost</td>
<td>$ -</td>
</tr>
</tbody>
</table>

Related Projects

<table>
<thead>
<tr>
<th>Name</th>
<th>Project ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highway 7 - Helen Street to Yonge Street - RT Corridor</td>
<td>1007</td>
</tr>
</tbody>
</table>

Key Intersections and Constraints

Highway 400 at Highway 7
**Project Description**

**Location**
Highway 7

**Municipality**
Vaughan

**Project Limits**
Kipling Avenue to Helen Street

**Project Type**
Widen to 6 lanes

**Road Segment ID**
07-11 to 07-12

**Length**
1,400 m

**Map**

**Existing Conditions**

**Physical and Transportation Conditions**

**OP Designated ROW**
Up to 45 metres

<table>
<thead>
<tr>
<th>Model Forecast</th>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum</td>
<td>Average</td>
</tr>
<tr>
<td>2011 Existing</td>
<td>2,070</td>
<td>1,280</td>
</tr>
<tr>
<td>Daily truck volume</td>
<td>4,280 /day</td>
<td>2,710 /day</td>
</tr>
</tbody>
</table>

**Description**
Existing 4 general purpose lanes with turning lanes at intersections. Continuous sidewalk on the north side. No pedestrians allowed on the south side between McKenzie St & Wallace St. No dedicated cycling facilities. CP MacTier Subdivision railway underpass east of Kipling Avenue; structural walls abuts travel lanes. Curbside transit service, including Viva Orange.

**Natural and Built Environment**

**Natural Environment**
Observations: Crosses the Humber River valley between Kipling Avenue and Islington Avenue.

**Land Use and Built Environment**
Mostly low-density residential; parkland in the Humber River valley, public school, pool and arena to the north

**Future Transportation Conditions**

<table>
<thead>
<tr>
<th>Year</th>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum</td>
<td>Average</td>
</tr>
<tr>
<td>2041 Do Nothing</td>
<td>2,690</td>
<td>1,680</td>
</tr>
<tr>
<td>2041 Proposed Network</td>
<td>3,240</td>
<td>2,000</td>
</tr>
</tbody>
</table>

**October 2016**
2115 - Highway 7 - Kipling Avenue to Helen Street (continued)

Problem or Opportunity Statement

- Corridor improvements needed to address high transit demands along Highway 7 corridor
- Constrained section from Kipling to Helen impacts both road and transit operations.
- Corridor improvements needed to increase transit speed and reliability.

Alternatives Considered

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Optimize existing facility with intersection improvements only - Minor improvement for corridor traffic flow. Does not address overall traffic congestion. Does not improve transit/HOV and active modes.
3. Widen corridor to 6 lanes for general purpose capacity improvements - Improves traffic flow and reduces congestion. Opportunity to improve walking and cycling facilities.
4. Widen corridor to implement dedicated rapid transit - Does not address traffic congestion. Opportunity to improve walking and cycling facilities.
5. Widen parallel/adjacent corridor - Potential to divert some traffic to other corridors. Does not address corridor congestion and travel demand, no improvements to walking and cycling facilities, does not encourage shift to transit/HOV.

Recommended Improvement and Justification

Recommendation

Widen to 6 lanes in addition to dedicated rapidway. Construction to be coordinated with rapidway construction.

Justification

EA provides detailed justification for dedicated rapidway. Eliminating constraint (railway underpass) improves transit speeds and service reliability and maximizes ridership potential. Opportunity to improve walking and cycling facilities.

TMP Phase

2027 to 2031

Alignment with TMP Objectives

<table>
<thead>
<tr>
<th>Support Transit</th>
<th>Support Road Network</th>
<th>Support Active Transportation</th>
<th>Support Goods Movement</th>
<th>Support Last Mile</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Costs

- Capital Cost $ 65,608,800
- Incremental Annual Road Operating Cost $ 70,000
- Incremental Road Maintenance and Rehabilitation Cost $ 26,400

Related Projects

Name | Project ID
--- | ---
Highway 7 - Highway 50 to Helen Street - RT Corridor | 1006
Highway 7 - Helen Street to Yonge Street - RT Corridor | 1007
### Key Intersections and Constraints

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highway 7 at Islington Avenue</td>
<td><img src="image1.jpg" alt="Image of Highway 7 at Islington Avenue" /></td>
</tr>
<tr>
<td>Railway underpass east of Kipling Avenue</td>
<td><img src="image2.jpg" alt="Image of Railway underpass east of Kipling Avenue" /></td>
</tr>
</tbody>
</table>
2116 - Steeles Avenue - Highway 50 to Islington Avenue

Project Description

<table>
<thead>
<tr>
<th>Location</th>
<th>Steeles Avenue</th>
<th>Project ID</th>
<th>2116</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipality</td>
<td>Vaughan</td>
<td>Road Segment ID</td>
<td>95-07 to 95-11</td>
</tr>
<tr>
<td>Project Limits</td>
<td>Highway 50 to Islington Avenue</td>
<td>Length</td>
<td>4,230 m</td>
</tr>
<tr>
<td>Project Type</td>
<td>Steeles (Widen to 6 lanes)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW 45 metres

<table>
<thead>
<tr>
<th>Model Forecast</th>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum</td>
<td>Average</td>
</tr>
<tr>
<td>2011 Existing</td>
<td>940</td>
<td>640</td>
</tr>
</tbody>
</table>

Daily truck volume N/A N/A

Description

Existing 4 general purpose lanes with turning lanes at intersections. Continuous sidewalk on south side. No continuous sidewalk on north side from Highway 50 to Islington Avenue. No dedicated cycling facilities. Curbside transit service between Highway 427 and Islington Avenue. Grade separated rail crossing for CN York Subdivision under the intersection of Steeles Avenue/Martin Grove Road.

Natural and Built Environment

Natural Environment

Observations: Thackeray Park and Humber River valley lands located on both sides of Steeles Avenue between Kipling Avenue and Islington Avenue.

Land Use and Built Environment

Industrial/commercial land uses to east of Highway 27. Primarily residential on the south side from east of Highway 27 to Islington Avenue.

Future Transportation Conditions

<table>
<thead>
<tr>
<th>Year</th>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum</td>
<td>Average</td>
</tr>
<tr>
<td>2041 Do Nothing</td>
<td>1,220</td>
<td>990</td>
</tr>
<tr>
<td>2041 Proposed Network</td>
<td>1,450</td>
<td>1,330</td>
</tr>
</tbody>
</table>

October 2016
Problem or Opportunity Statement

• Capacity improvements needed to address existing congestion.
• Capacity improvements needed to accommodate future travel demands.

Alternatives Considered

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Optimize existing facility with intersection improvements only - Minor improvement for corridor traffic flow. Does not address overall traffic congestion. Does not improve transit/HOV and active modes.
3. Widen corridor to 6 lanes for general purpose capacity improvements - Improves traffic flow and reduces congestion. Opportunity to improve walking and cycling facilities. Does not support shift to transit/HOV. Not consistent with Council policy to widen to 6 lanes for transit/HOV lanes only.
4. Widen corridor to 6 lanes to implement transit/HOV lanes - Addresses traffic capacity. Opportunity to improve walking and cycling facilities. Potential to improve transit travel time and encourage shift to transit/HOV.
5. Widen corridor to implement rapid transit - Does not address traffic congestion. Transit ridership does not meet RT threshold.
6. Widen parallel/adjacent corridor - Potential to divert some traffic to other corridors. Does not address corridor congestion and travel demand, no improvements to walking and cycling facilities, does not encourage shift to transit/HOV.

Recommended Improvement and Justification

Recommendation
Widen corridor to 6 lanes for general purpose capacity improvements.

Justification
Boundary road under the jurisdiction of the City of Toronto. Widening provides a continuous 6-lane corridor on Steeles Avenue. Potential for implementing HOV lanes jointly with City of Toronto. Improvements at the intersection of Highway 50 will require coordination with Peel Region.

TMP Phase
2032 to 2041

Alignment with TMP Objectives

Support Transit
Support Road Network
Support Active Transportation
Support Goods Movement
Support Last Mile

Costs

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Cost</td>
<td>$54,205,700</td>
</tr>
<tr>
<td>Incremental Annual Road Operating Cost</td>
<td>$211,400</td>
</tr>
<tr>
<td>Incremental Road Maintenance and Rehabilitation Cost</td>
<td>$79,700</td>
</tr>
</tbody>
</table>

Related Projects

<table>
<thead>
<tr>
<th>Name</th>
<th>Project ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steeles Avenue - Pine Valley Drive to Jane Street - Steeles (Widen to 6 lanes)</td>
<td>2117</td>
</tr>
</tbody>
</table>
Key Intersections and Constraints

Steeles Avenue at Highway 50

Steeles Avenue at Highway 427

Steeles Avenue at Highway 27

Steeles Avenue at Islington Avenue
2117 - Steeles Avenue - Pine Valley Drive to Jane Street

Project Description

Location: Steeles Avenue
Municipality: Vaughan
Project Limits: Pine Valley Drive to Jane Street
Project Type: Steeles (Widen to 6 lanes)
Project ID: 2117
Road Segment ID: 95-14 to 95-16
Length: 3,610 m

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW: 45 metres

<table>
<thead>
<tr>
<th>Model Forecast</th>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum</td>
<td>Average</td>
</tr>
<tr>
<td>2011 Existing</td>
<td>1,590</td>
<td>1,400</td>
</tr>
<tr>
<td>Daily truck volume</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Description

Existing 4 general purpose lanes with turning lanes at intersections. Widens to 6 lanes at the intersection of Pine Valley Drive/Steeles Avenue. Continuous sidewalk on south side. Sidewalk on north side, with a disconnect at the overpass of Highway 400. No dedicated cycling facilities. Curbside transit service.

Natural and Built Environment

Observations: Small pocket of Regional Greenlands System and forest at the northwest quadrant of Jane Street at Steeles Avenue.

Land Use and Built Environment

Large employment area with industrial land uses on both sides of Steeles Avenue.

Future Transportation Conditions

<table>
<thead>
<tr>
<th></th>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum</td>
<td>Average</td>
</tr>
<tr>
<td>2041 Do Nothing</td>
<td>1,970</td>
<td>1,600</td>
</tr>
<tr>
<td>2041 Proposed Network</td>
<td>2,240</td>
<td>2,200</td>
</tr>
</tbody>
</table>

October 2016
Problem or Opportunity Statement

- Capacity improvements needed to address existing congestion.
- Capacity improvements needed to accommodate future travel demands.

Alternatives Considered

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Optimize existing facility with intersection improvements only - Minor improvement for corridor traffic flow. Does not address overall traffic congestion. Does not improve transit/HOV and active modes.
3. Widen corridor to 6 lanes for general purpose capacity improvements - Improves traffic flow and reduces congestion. Opportunity to improve walking and cycling facilities. Does not support shift to transit/HOV. Not consistent with Council policy to widen to 6 lanes for transit/HOV lanes only.
4. Widen corridor to 6 lanes to implement transit/HOV lanes - Addresses traffic capacity. Opportunity to improve walking and cycling facilities. Potential to improve transit travel time and encourage shift to transit/HOV.
5. Widen corridor to implement rapid transit - Does not address traffic congestion. Transit ridership does not meet RT threshold.
6. Widen parallel/adjacent corridor - Potential to divert some traffic to other corridors. Does not address corridor congestion and travel demand, no improvements to walking and cycling facilities, does not encourage shift to transit/HOV.

Recommended Improvement and Justification

Recommendation

Widen corridor to 6 lanes for general purpose capacity improvements.

Justification

Boundary road under the jurisdiction of the City of Toronto. Forecast demand meets threshold for widening to 6 lanes and provides a continuous 6-lane corridor on Steeles Avenue. Potential for implementing HOV lanes jointly with City of Toronto.

TMP Phase

2032 to 2041

Alignment with TMP Objectives

Support Transit Support Road Network Support Active Transportation Support Goods Movement Support Last Mile

Costs

- Capital Cost: $28,905,900
- Incremental Annual Road Operating Cost: $180,400
- Incremental Road Maintenance and Rehabilitation Cost: $68,000

Related Projects

Name

Steeles Avenue - Highway 50 to Islington Avenue - Steeles (Widen to 6 lanes)

Project ID

2116
Key Intersections and Constraints

Steeles Avenue at Pine Valley Drive

Steeles Avenue at Weston Road

Steeles Avenue at Jane Street
2118 - Steeles Avenue - Bathurst Street to Hilda Avenue

**Project Description**

**Location**
- Steeles Avenue

**Municipality**
- Vaughan, Toronto

**Project Limits**
- Bathurst Street to Hilda Avenue

**Project Type**
- Steeles (Widen to 6 lanes)

**Road Segment ID**
- 95-24

**Length**
- 1,380 m

**Map**

![Map of Steeles Avenue](image)

**Existing Conditions**

**Physical and Transportation Conditions**

**OP Designated ROW**
- 36 metres

**Model Forecast**

<table>
<thead>
<tr>
<th>Model Forecast</th>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011 Existing</td>
<td>Maximum: 1,400</td>
<td>Maximum: 0.87</td>
</tr>
<tr>
<td></td>
<td>Average: 1,400</td>
<td>Average: 0.87</td>
</tr>
<tr>
<td>Daily truck volume</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Description**

Existing 4 general purpose lanes with turning lanes at intersections. Continuous sidewalks on both sides. No dedicated cycling facilities. Curbside transit service.

**Natural and Built Environment**

**Natural Environment**
- Observations: Existing development on both sides.

**Land Use and Built Environment**
- Mostly tower residential from Bathurst Street to Pam Gate Boulevard, commercial on the north side and residential on the south side to Hilda Avenue.

**Future Transportation Conditions**

<table>
<thead>
<tr>
<th></th>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2041 Do Nothing</td>
<td>Maximum: 1,550</td>
<td>Maximum: 0.96</td>
</tr>
<tr>
<td></td>
<td>Average: 1,550</td>
<td>Average: 0.96</td>
</tr>
<tr>
<td>2041 Proposed Network</td>
<td>Maximum: 1,300</td>
<td>Maximum: 0.81</td>
</tr>
<tr>
<td></td>
<td>Average: 1,300</td>
<td>Average: 0.81</td>
</tr>
</tbody>
</table>
Problem or Opportunity Statement

- Capacity improvements needed to address existing congestion.
- Capacity improvements needed to accommodate future travel demands.

Alternatives Considered

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Optimize existing facility with intersection improvements only - Minor improvement for corridor traffic flow. Does not address overall traffic congestion. Does not improve transit/HOV and active modes.
3. Widen corridor to 6 lanes for general purpose capacity improvements - Improves traffic flow and reduces congestion. Opportunity to improve walking and cycling facilities. Does not support shift to transit/HOV. Not consistent with Council policy to widen to 6 lanes for transit/HOV lanes only.
4. Widen corridor to 6 lanes to implement transit/HOV lanes - Addresses traffic capacity. Opportunity to improve walking and cycling facilities. Potential to improve transit travel time and encourage shift to transit/HOV.
5. Widen corridor to implement rapid transit - Does not address traffic congestion. Transit ridership does not meet RT threshold.
6. Widen parallel/adjacent corridor - Potential to divert some traffic to other corridors. Does not address corridor congestion and travel demand, no improvements to walking and cycling facilities, does not encourage shift to transit/HOV.

Recommended Improvement and Justification

Recommendation

Interim widening to 6 general purpose lanes.

Justification

Boundary road under the jurisdiction of the City of Toronto. Forecast demand meets threshold for widening to 6 lanes and provides a continuous 6-lane corridor on Steeles Avenue. Potential for implementing HOV lanes jointly with City of Toronto. Potential for conversion to Rapid Transit as per Metrolinx plans.

TMP Phase

2022 to 2026

Alignment with TMP Objectives

Support Transit: 
Support Road Network: 
Support Active Transportation: 
Support Goods Movement: 
Support Last Mile: 

Costs

- Capital Cost: $15,458,400
- Incremental Annual Road Operating Cost: $69,000
- Incremental Road Maintenance and Rehabilitation Cost: $26,000

Related Projects

- Steeles Avenue - Spadina Subway to Milliken GO - RT Corridor

- Project ID: 1024

October 2016
Key Intersections and Constraints

Steeles Avenue at Bathurst Street
**Project Description**

Location: Steeles Avenue
Municipality: Markham
Project Limits: Kennedy Road to Markham Road
Project Type: Steeles (Widen to 6 lanes)

**Map**

![Map Image]

**Existing Conditions**

**Physical and Transportation Conditions**

OP Designated ROW: 36 metres

<table>
<thead>
<tr>
<th>Model Forecast</th>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum</td>
<td>Average</td>
</tr>
<tr>
<td>2011 Existing</td>
<td>1,400</td>
<td>1,250</td>
</tr>
</tbody>
</table>

Daily truck volume: N/A

**Description**

Existing 4 general purpose lanes with turning lanes at intersections. Continuous sidewalks on the north side. Sidewalk on south side is disconnected at one point, with a multi-use path (as a potential alternative for pedestrians) on south side between McCowan Road and Middlefield Road connecting sidewalks. Bike lane between McCowan Road and Markham Road. Curbside transit service.

**Natural and Built Environment**

**Natural Environment**
Observations: Milliken Park on south side between McCowan Road and Middlefield Road.

**Land Use and Built Environment**
Primarily residential north of Steeles Avenue. Regional shopping centre and commercial/industrial area at Kennedy Road and Steeles Avenue. Big box commercial on southwest quadrant of Markham Road and Steeles Avenue.

**Future Transportation Conditions**

<table>
<thead>
<tr>
<th>Model Forecast</th>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum</td>
<td>Average</td>
</tr>
<tr>
<td>2041 Do Nothing</td>
<td>1,910</td>
<td>1,730</td>
</tr>
<tr>
<td>2041 Proposed Network</td>
<td>1,950</td>
<td>1,810</td>
</tr>
</tbody>
</table>
Problem or Opportunity Statement

- Capacity improvements needed to address existing congestion.
- Capacity improvements needed to accommodate future travel demands.

Alternatives Considered

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Optimize existing facility with intersection improvements only - Minor improvement for corridor traffic flow. Does not address overall traffic congestion. Does not improve transit/HOV and active modes.
3. Widen corridor to 6 lanes for general purpose capacity improvements - Improves traffic flow and reduces congestion. Opportunity to improve walking and cycling facilities. Does not support shift to transit/HOV. Not consistent with Council policy to widen to 6 lanes for transit/HOV lanes only.
4. Widen corridor to 6 lanes to implement transit/HOV lanes - Addresses traffic capacity. Opportunity to improve walking and cycling facilities. Potential to improve transit travel time and encourage shift to transit/HOV.
5. Widen corridor to implement rapid transit - Does not address traffic congestion. Transit ridership does not meet RT threshold.
6. Widen parallel/adjacent corridor - Potential to divert some traffic to other corridors. Does not address corridor congestion and travel demand, no improvements to walking and cycling facilities, does not encourage shift to transit/HOV.

Recommended Improvement and Justification

Recommendation

Widening to 6 general purpose lanes. The potential for lane conversion to transit or HOV use will depend on City of Toronto and Metrolinx plans for the corridor.

Justification

Boundary road under the jurisdiction of the City of Toronto. Forecast demand meets threshold for widening to 6 lanes and provides a continuous 6-lane corridor on Steeles Avenue. Opportunity to improve cycling facilities. Potential for implementing HOV lanes jointly with City of Toronto. Potential for conversion to Rapid Transit as per City of Toronto and Metrolinx plans.

TMP Phase

2027 to 2031

Alignment with TMP Objectives

Support Transit | Support Road Network | Support Active Transportation | Support Goods Movement | Support Last Mile
---|---|---|---|---
[ ] | [ ] | [ ] | [ ] | [ ]

Costs

- Capital Cost: $37,981,200
- Incremental Annual Road Operating Cost: $236,900
- Incremental Road Maintenance and Rehabilitation Cost: $89,300

Related Projects

<table>
<thead>
<tr>
<th>Name</th>
<th>Project ID</th>
</tr>
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<tbody>
<tr>
<td>Steeles Avenue - Spadina Subway to Milliken GO - RT Corridor</td>
<td>1024</td>
</tr>
<tr>
<td>Steeles Avenue - Markham Road to 11th Concession - Steeles (Widen to 6 lanes)</td>
<td>2122</td>
</tr>
<tr>
<td>Stouffville GO Grade Separation - Steeles Avenue east of Kennedy Road - Rail grade separation</td>
<td>2133</td>
</tr>
</tbody>
</table>
### Key Intersections and Constraints

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steeles Avenue at Kennedy Road</td>
<td><img src="image1" alt="Steeles Avenue at Kennedy Road" /></td>
</tr>
<tr>
<td>Steeles Avenue at McCowan Road</td>
<td><img src="image2" alt="Steeles Avenue at McCowan Road" /></td>
</tr>
<tr>
<td>Steeles Avenue at Markham Road</td>
<td><img src="image3" alt="Steeles Avenue at Markham Road" /></td>
</tr>
<tr>
<td>Stouffville GO at Steeles Avenue</td>
<td><img src="image4" alt="Stouffville GO at Steeles Avenue" /></td>
</tr>
</tbody>
</table>
# Project Description

**Location**: Steeles Avenue  
**Municipality**: Markham  
**Project Limits**: Markham Road to 11th Concession  
**Project Type**: Steeles (Widen to 6 lanes)

## Map

![Map of the project area]

## Existing Conditions

### Physical and Transportation Conditions

**OP Designated ROW**: 36 metres

<table>
<thead>
<tr>
<th>Model Forecast</th>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum</td>
<td>Average</td>
</tr>
<tr>
<td>2011 Existing</td>
<td>830</td>
<td>680</td>
</tr>
<tr>
<td>Daily truck volume</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Description**: Existing 2 general purpose lanes with turning lanes at some intersections. Widens to 4 lanes at the intersections of Markham Road/Steeles Avenue, Staines Road/Steeles Avenue, and Beare Road/Steeles Avenue. No continuous sidewalk from Markham Road to Beare Road. No dedicated cycling facilities, but a potential north-south Rouge National Urban Park trail crossing of Steeles Avenue at Reesor Road / Little Rouge Creek. Curbside transit service from Markham Road to Staines Road. At-grade rail crossing for CP Havelock Rail Line located east of Markham Road. CN York Subdivision railway underpass located east of Ninth Line. A potential north-south Rouge National Urban Park trail crossing of Steeles Avenue at Reesor Road / Little Rouge Creek.

### Natural and Built Environment

**Natural Environment**: Observations: Several crossings of Regional Greenlands System and forested areas. Crossing of Rouge River west of Ninth Line. Crossing of Little Rouge Creek at Reesor Road. Corridor traverses Rouge National Urban Park east of Ninth Line.

**Land Use and Built Environment**: Mix of agricultural and parklands. Small pockets of residential development between Markham Road and Ninth Line. Cemetery on north side east of Reesor Road. Corridor traverses Rouge National Urban Park east of Ninth Line.

## Future Transportation Conditions

<table>
<thead>
<tr>
<th></th>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum</td>
<td>Average</td>
</tr>
<tr>
<td>2041 Do Nothing</td>
<td>970</td>
<td>830</td>
</tr>
<tr>
<td>2041 Proposed Network</td>
<td>2,080</td>
<td>1,580</td>
</tr>
</tbody>
</table>

October 2016
Problem or Opportunity Statement

- Capacity improvements needed to address existing congestion.
- Capacity improvements needed to accommodate future travel demands.

Alternatives Considered

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Optimize existing facility with intersection improvements only - Minor improvement for corridor traffic flow. Does not address overall traffic congestion. Does not improve transit/HOV and active modes.
3. Widen corridor to 6 lanes for general purpose capacity improvements - Improves traffic flow and reduces congestion. Opportunity to improve walking and cycling facilities. Does not support shift to transit/HOV. Not consistent with Council policy to widen to 6 lanes for transit/HOV lanes only.
4. Widen corridor to 6 lanes to implement transit/HOV lanes - Addresses traffic capacity. Opportunity to improve walking and cycling facilities. Potential to improve transit travel time and encourage shift to transit/HOV.
5. Widen corridor to implement rapid transit - Does not address traffic congestion. Transit ridership does not meet RT threshold.
6. Widen parallel/adjacent corridor - Potential to divert some traffic to other corridors. Does not address corridor congestion and travel demand, no improvements to walking and cycling facilities, does not encourage shift to transit/HOV.

Recommended Improvement and Justification

Recommendation

Widening to 6 general purpose lanes and potential jog elimination at Reesor Road. The potential for lane conversion to transit or HOV use will depend on City of Toronto and Metrolinx plans for the corridor.

Justification

Boundary road under the jurisdiction of the City of Toronto. Forecast demand meets threshold for widening to 6 lanes and provides a continuous 6-lane corridor on Steeles Avenue. Opportunity to improve walking and cycling facilities. Potential for implementing HOV lanes jointly with City of Toronto. Potential for conversion to Rapid Transit as per Metrolinx plans. Intersection improvements at Reesor Road can improve traffic flow; further study is required to assess the need for this jog elimination.

TMP Phase

2017 to 2021: Markham Road to Ninth Line
2027 to 2031: Ninth Line to 11th Concession

Alignment with TMP Objectives

Support Transit | Support Road Network | Support Active Transportation | Support Goods Movement | Support Last Mile
--- | --- | --- | --- | ---
[ ] | [ ] | [ ] | [ ] | [ ]

Costs

- Capital Cost: $80,819,300
- Incremental Annual Road Operating Cost: $509,400
- Incremental Road Maintenance and Rehabilitation Cost: $231,500

Related Projects

- Steeles Avenue - Spadina Subway to Milliken GO - RT Corridor 1024
- Steeles Avenue - Kennedy Road to Markham Road - Steeles (Widen to 6 lanes) 2121
- Steeles Avenue - 11th Concession to York/Durham Line - Steeles (Widen to 6 lanes) 2123
- CP Havelock Grade Separation - Steeles Avenue east of Tapscott Road - Rail grade separation 2161
2122 - Steeles Avenue - Markham Road to 11th Concession (continued)

## Key Intersections and Constraints

<table>
<thead>
<tr>
<th>Steeles Avenue at Markham Road</th>
<th>Steeles Avenue at Ninth Line</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
</tbody>
</table>

**Railway underpass east of Ninth Line (Image capture: 2015, ©2016 Google)**
Project Description

Location: Steeles Avenue  
Municipality: Markham  
Project Limits: 11th Concession to York/Durham Line  
Project Type: Steeles (Widen to 6 lanes)

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW: 36 metres

<table>
<thead>
<tr>
<th>Model Forecast</th>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011 Existing</td>
<td>Maximum: 690</td>
<td>Maximum: 0.43</td>
</tr>
<tr>
<td></td>
<td>Average: 690</td>
<td>Average: 0.43</td>
</tr>
<tr>
<td>Daily truck volume</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

Description

Existing 4 general purpose lanes. No sidewalks on either side. No dedicated cycling facilities. No transit services.

Natural and Built Environment

Natural Environment

Land Use and Built Environment
Woodlots and agricultural fields. Corridor is traverses Rouge National Urban Park.

Future Transportation Conditions

<table>
<thead>
<tr>
<th></th>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum</td>
<td>Average</td>
</tr>
<tr>
<td>2041 Do Nothing</td>
<td>1,340</td>
<td>1,340</td>
</tr>
<tr>
<td>2041 Proposed Network</td>
<td>1,450</td>
<td>1,450</td>
</tr>
</tbody>
</table>

October 2016
Problem or Opportunity Statement

- Capacity improvements needed to address existing congestion.
- Capacity improvements needed to accommodate future travel demands.

Alternatives Considered

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Optimize existing facility with intersection improvements only - Minor improvement for corridor traffic flow. Does not address overall traffic congestion. Does not improve transit/HOV and active modes.
3. Widen corridor to 6 lanes for general purpose capacity improvements - Improves traffic flow and reduces congestion. Opportunity to improve walking and cycling facilities. Does not support shift to transit/HOV. Not consistent with Council policy to widen to 6 lanes for transit/HOV lanes only.
4. Widen corridor to 6 lanes to implement transit/HOV lanes - Addresses traffic capacity. Opportunity to improve walking and cycling facilities. Potential to improve transit travel time and encourage shift to transit/HOV.
5. Widen corridor to implement rapid transit - Does not address traffic congestion. Transit ridership does not meet RT threshold.
6. Widen parallel/adjacent corridor - Potential to divert some traffic to other corridors. Does not address corridor congestion and travel demand, no improvements to walking and cycling facilities, does not encourage shift to transit/HOV.

Recommended Improvement and Justification

Recommendation

Widening to 6 general purpose lanes. The potential for lane conversion to transit or HOV use will depend on City of Toronto and Metrolinx plans for the corridor.

Justification

Boundary road under the jurisdiction of the City of Toronto. Forecast demand meets threshold for widening to 6 lanes and provides a continuous 6-lane corridor on Steeles Avenue. Opportunity to improve walking and cycling facilities. Potential for implementing HOV lanes jointly with City of Toronto. Potential for conversion to Rapid Transit as per Metrolinx plans.

TMP Phase

2027 to 2031

Alignment with TMP Objectives

<table>
<thead>
<tr>
<th>Support Transit</th>
<th>Support Road Network</th>
<th>Support Active Transportation</th>
<th>Support Goods Movement</th>
<th>Support Last Mile</th>
</tr>
</thead>
</table>

Costs

- Capital Cost: $4,787,000
- Incremental Annual Road Operating Cost: $31,000
- Incremental Road Maintenance and Rehabilitation Cost: $11,700

Related Projects

- Steeles Avenue - Spadina Subway to Milliken GO - RT Corridor
- Steeles Avenue - Markham Road to 11th Concession - Steeles (Widen to 6 lanes)

October 2016
Key Intersections and Constraints

Steeles Avenue at York/Durham Line
2124 - Yonge Street - Davis Drive to Green Lane

**Project Description**

<table>
<thead>
<tr>
<th>Location</th>
<th>Yonge Street</th>
<th>Project ID</th>
<th>2124</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipality</td>
<td>Newmarket</td>
<td>Road Segment ID</td>
<td>01-30</td>
</tr>
<tr>
<td>Project Limits</td>
<td>Davis Drive to Green Lane</td>
<td>Length</td>
<td>2,040 m</td>
</tr>
<tr>
<td>Project Type</td>
<td>Widen to 6 lanes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Map**

![Map of Yonge Street from Davis Drive to Green Lane](image)

**Existing Conditions**

**Physical and Transportation Conditions**

**Model Forecast**

<table>
<thead>
<tr>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum</td>
<td>Average</td>
</tr>
<tr>
<td>2011 Existing</td>
<td>1,320</td>
</tr>
<tr>
<td>Daily truck volume</td>
<td>1,200 /day</td>
</tr>
</tbody>
</table>

**Description**

Existing 4 general purpose lanes with turning lanes at intersections. Continuous sidewalk on east side. Sidewalk on west side from Green Lane to Upper Canada Mall entrance. Shared roadway (unsigned route) Green Lane to the border of East Gwillimbury/Newmarket.

**Natural and Built Environment**

**Natural Environment**

Observations: Existing development on both sides of corridor.

Source Water Protection Areas: Corridor is within a source water protection area.

**Land Use and Built Environment**

Primarily retail commercial with some residential backing onto Yonge Street on the east side. Regional shopping centre in the northwest quadrant of Yonge Street and Davis Road. Stormwater management ponds on west side.

**Future Transportation Conditions**

<table>
<thead>
<tr>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum</td>
<td>Average</td>
</tr>
<tr>
<td>2041 Do Nothing</td>
<td>2,570</td>
</tr>
<tr>
<td>2041 Proposed Network</td>
<td>2,600</td>
</tr>
</tbody>
</table>
Problem or Opportunity Statement

- Capacity improvements needed to address existing congestion.
- Capacity improvements needed to accommodate future travel demands.
- Corridor improvements needed to support walking and cycling.
- Corridor improvements needed to support transit and HOV.

Alternatives Considered

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Optimize existing facility with intersection improvements only - Minor improvement for corridor traffic flow. Does not address overall traffic congestion. Does not improve transit/HOV and active modes.
3. Widen corridor to 6 lanes for general purpose capacity improvements - Improves traffic flow and reduces congestion. Opportunity to improve walking and cycling facilities. Does not support shift to transit/HOV. Not consistent with Council policy to widen to 6 lanes for transit/HOV lanes only.
4. Widen corridor to 6 lanes to implement transit/HOV lanes - Addresses traffic capacity. Opportunity to improve walking and cycling facilities. Potential to improve transit travel time and encourage shift to transit/HOV.
5. Widen corridor to implement rapid transit - Does not address traffic congestion. Transit ridership does not meet RT threshold.
6. Widen parallel/adjacent corridor - Potential to divert some traffic to other corridors. Does not address corridor congestion and travel demand, no improvements to walking and cycling facilities, does not encourage shift to transit/HOV.

Recommended Improvement and Justification

Recommendation

Interim widening to 6 lanes to implement transit/HOV lanes.

Justification

Road widening to 6 lanes with transit/HOV lanes and improved cycling facilities included in 10-year Capital Plan. Corridor will accommodate increasing transit frequencies prior to evolving to a rapid transit corridor with 4 general purpose lanes and median rapidway.

TMP Phase

2017 to 2021

Alignment with TMP Objectives

<table>
<thead>
<tr>
<th>Support Transit</th>
<th>Support Road Network</th>
<th>Support Active Transportation</th>
<th>Support Goods Movement</th>
<th>Support Last Mile</th>
</tr>
</thead>
<tbody>
<tr>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

Costs

- Capital Cost: $18,137,200
- Incremental Annual Road Operating Cost: $102,000
- Incremental Road Maintenance and Rehabilitation Cost: $38,500

Related Projects

<table>
<thead>
<tr>
<th>Name</th>
<th>Project ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yonge Street - Davis Drive to Green Lane - RT Corridor</td>
<td>1005</td>
</tr>
<tr>
<td>Yonge Street - Mulock Drive to Davis Drive - RT Corridor</td>
<td>1004</td>
</tr>
</tbody>
</table>
## Key Intersections and Constraints

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yonge Street at Davis Drive</td>
<td><img src="image1" alt="Yonge Street at Davis Drive" /></td>
</tr>
<tr>
<td>Yonge Street at Green Lane</td>
<td><img src="image2" alt="Yonge Street at Green Lane" /></td>
</tr>
</tbody>
</table>
2125 - Major Mackenzie Drive - Leslie Street to Kennedy Road

Project Description

<table>
<thead>
<tr>
<th>Location</th>
<th>Major Mackenzie Drive</th>
<th>Project ID</th>
<th>2125</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipality</td>
<td>Richmond Hill, Markham</td>
<td>Road Segment ID</td>
<td>25-29 to 25-40</td>
</tr>
<tr>
<td>Project Limits</td>
<td>Leslie Street to Kennedy Road</td>
<td>Length</td>
<td>6,170 m</td>
</tr>
<tr>
<td>Project Type</td>
<td>Widen to 6 lanes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW | Up to 45 metres |

<table>
<thead>
<tr>
<th>Model Forecast</th>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011 Existing</td>
<td>Maximum: 1,800</td>
<td>Maximum: 1.00</td>
</tr>
<tr>
<td></td>
<td>Average: 1,450</td>
<td>Average: 0.81</td>
</tr>
<tr>
<td>Daily truck volume</td>
<td>1,360/day</td>
<td>910/day</td>
</tr>
</tbody>
</table>

Description

Existing 4 general purpose lanes with turning lanes at intersections. Sidewalk on north side. Shared pathway (in-boulevard) between Woodbine Avenue and Kennedy Road on south side. Curbside transit service.

Natural and Built Environment

Natural Environment

Observations: Several crossings of Regional Greenlands System and watercourses at Leslie Street, Woodbine Avenue, Warden Avenue, west of Kennedy Road and west of McCowan Road.

Land Use and Built Environment

Range of residential developments from medium density to estate residential on the south side. Primarily agricultural uses and golf course on the north side. Community centre located east of Warden Avenue.

Future Transportation Conditions

<table>
<thead>
<tr>
<th></th>
<th>2041 Do Nothing</th>
<th>2041 Proposed Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak Hour Auto Volume</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>2,930</td>
<td>2,670</td>
</tr>
<tr>
<td>Average</td>
<td>2,360</td>
<td>2,070</td>
</tr>
<tr>
<td>Peak Hour V/C Ratio</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>1.63</td>
<td>1.48</td>
</tr>
<tr>
<td>Average</td>
<td>1.32</td>
<td>1.12</td>
</tr>
</tbody>
</table>

October 2016
Problem or Opportunity Statement

- Capacity improvements needed to address existing congestion.
- Capacity improvements needed to accommodate future travel demands.
- Corridor improvements needed to support walking and cycling.
- Corridor improvements needed to support transit and HOV.

Alternatives Considered

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Optimize existing facility with intersection improvements only - Minor improvement for corridor traffic flow. Does not address overall traffic congestion. Does not improve transit/HOV and active modes.
3. Widen corridor to 6 lanes for general purpose capacity improvements - Improves traffic flow and reduces congestion. Opportunity to improve walking and cycling facilities. Does not support shift to transit/HOV. Not consistent with Council policy to widen to 6 lanes for transit/HOV lanes only.
4. Widen corridor to 6 lanes to implement transit/HOV lanes - Addresses traffic capacity. Opportunity to improve walking and cycling facilities. Potential to improve transit travel time and encourage shift to transit/HOV.
5. Widen corridor to implement rapid transit - Does not address congestion. Transit ridership does not meet RT threshold.
6. Widen parallel/adjacent corridor - Potential to divert some traffic to other corridors. Does not address corridor congestion and travel demand, no improvements to walking and cycling facilities, does not encourage shift to transit/HOV.

Recommended Improvement and Justification

Recommendation

Interim widening to 6 lanes to implement transit/HOV lanes.

Justification

Meets volume threshold for 6 lanes. Meets criteria for HOV lane. Interim widening to 6 lanes with transit/HOV lane prior to implementation of rapidway. Provides continuous 6-lane corridor with transit/HOV lane. Opportunity to improve walking and cycling facilities.

TMP Phase

2022 to 2026: Leslie Street to Woodbine Avenue
2027 to 2031: Woodbine Avenue to Kennedy Road

Alignment with TMP Objectives

Support Transit

Support Road Network

Support Active Transportation

Support Goods Movement

Support Last Mile

Costs

Capital Cost $64,925,500
Incremental Annual Road Operating Cost $308,400
Incremental Road Maintenance and Rehabilitation Cost $116,300

Related Projects

<table>
<thead>
<tr>
<th>Name</th>
<th>Project ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Mackenzie Drive - Jane Street to Leslie Street - RT Corridor</td>
<td>1013</td>
</tr>
<tr>
<td>Major Mackenzie Drive - Leslie Street to Donald Cousens Parkway - RT Corridor</td>
<td>1014</td>
</tr>
<tr>
<td>Major Mackenzie Drive - Donald Cousens Parkway to Delray Drive - Widen to 4 lanes</td>
<td>2128</td>
</tr>
</tbody>
</table>
Key Intersections and Constraints

Major Mackenzie Drive at Leslie Street

Major Mackenzie Drive at Highway 404

Major Mackenzie Drive at Woodbine Avenue

Major Mackenzie Drive at Warden Avenue
2125 - Major Mackenzie Drive - Leslie Street to Kennedy Road (continued)

Key Intersections and Constraints

Major Mackenzie Drive at Kennedy Road
2126 - Green Lane - Yonge Street to 2nd Concession

**Project Description**

<table>
<thead>
<tr>
<th>Location</th>
<th>Green Lane</th>
<th>Project ID</th>
<th>2126</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipality</td>
<td>East Gwillimbury</td>
<td>Road Segment ID</td>
<td>19-26</td>
</tr>
<tr>
<td>Project Limits</td>
<td>Yonge Street to 2nd Concession</td>
<td>Length</td>
<td>2,050 m</td>
</tr>
<tr>
<td>Project Type</td>
<td>Widen to 6 lanes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Map**

![Map of Green Lane](image)

**Existing Conditions**

### Physical and Transportation Conditions

**OP Designated ROW**

- Up to 45 metres

<table>
<thead>
<tr>
<th>Model Forecast</th>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011 Existing</td>
<td>Maximum 1,450</td>
<td>Average 1,450</td>
</tr>
<tr>
<td></td>
<td>Maximum 0.72</td>
<td>Average 0.72</td>
</tr>
<tr>
<td>Daily truck volume</td>
<td>1,530 /day</td>
<td>1,530 /day</td>
</tr>
</tbody>
</table>

**Description**

Existing 4 general purpose lanes with turning lanes at intersections. Sidewalk on north side only from Yonge Street to east of the commercial plaza at the intersection of Yonge Street/Green Lane. Shared roadway (unsigned route). Curbside transit service.

**Natural and Built Environment**

**Natural Environment**

- Observations: Forested areas to the north and south.
- Source Water Protection Areas: Protection area located north of Green Lane at 2nd Concession.

**Land Use and Built Environment**

Retail commercial at Yonge Street. Primarily agricultural lands easterly to 2nd Concession.

### Future Transportation Conditions

<table>
<thead>
<tr>
<th></th>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum</td>
<td>Average</td>
</tr>
<tr>
<td>2041 Do Nothing</td>
<td>2,390</td>
<td>2,390</td>
</tr>
<tr>
<td>2041 Proposed Network</td>
<td>2,120</td>
<td>2,120</td>
</tr>
</tbody>
</table>

October 2016
## 2126 - Green Lane - Yonge Street to 2nd Concession (continued)

### Problem or Opportunity Statement
- Capacity improvements needed to address existing congestion.
- Capacity improvements needed to accommodate future travel demands.
- Corridor improvements needed to support walking and cycling.
- Corridor improvements needed to support transit and HOV.

### Alternatives Considered
1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Optimize existing facility with intersection improvements only - Minor improvement for corridor traffic flow. Does not address overall traffic congestion. Does not improve transit/HOV and active modes.
3. Widen corridor to 6 lanes for general purpose capacity improvements - Improves traffic flow and reduces congestion. Opportunity to improve walking and cycling facilities. Does not support shift to transit/HOV. Not consistent with Council policy to widen to 6 lanes for transit/HOV lanes only.
4. Widen corridor to 6 lanes to implement transit/HOV lanes - Addresses traffic capacity. Opportunity to improve walking and cycling facilities. Potential to improve transit travel time and encourage shift to transit/HOV.
5. Widen corridor to implement rapid transit - Does not address traffic congestion. Transit ridership does not meet RT threshold.
6. Widen parallel/adjacent corridor - Potential to divert some traffic to other corridors. Does not address corridor congestion and travel demand, no improvements to walking and cycling facilities, does not encourage shift to transit/HOV.

### Recommended Improvement and Justification
**Recommendation**
Interim widening to 6 lanes to implement transit/HOV lanes.

**Justification**
Interim road widening to 6 lanes with transit/HOV lanes and improved cycling facilities. Corridor will accommodate increasing transit frequencies prior to evolving to a rapid transit corridor with 4 general purpose lanes and median rapidway.

**TMP Phase**
2022 to 2026

### Alignment with TMP Objectives

<table>
<thead>
<tr>
<th>Support Transit</th>
<th>Support Road Network</th>
<th>Support Active Transportation</th>
<th>Support Goods Movement</th>
<th>Support Last Mile</th>
</tr>
</thead>
<tbody>
<tr>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

### Costs

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Cost</td>
<td>$16,708,000</td>
</tr>
<tr>
<td>Incremental Annual Road Operating Cost</td>
<td>$102,500</td>
</tr>
<tr>
<td>Incremental Road Maintenance and Rehabilitation Cost</td>
<td>$38,600</td>
</tr>
</tbody>
</table>

### Related Projects

<table>
<thead>
<tr>
<th>Name</th>
<th>Project ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Lane - 2nd Concession to Highway 404 - Widen to 6 lanes</td>
<td>2023</td>
</tr>
<tr>
<td>Green Lane - Yonge Street to GO Station - RT Corridor</td>
<td>1021</td>
</tr>
</tbody>
</table>
2126 - Green Lane - Yonge Street to 2nd Concession (continued)

Key Intersections and Constraints

Green Lane at Yonge Street

Green Lane at 2nd Concession
**2127 - Pine Valley Drive - Steeles Avenue to Highway 7**

**Project Description**

<table>
<thead>
<tr>
<th>Location</th>
<th>Pine Valley Drive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipality</td>
<td>Vaughan</td>
</tr>
<tr>
<td>Project Limits</td>
<td>Steeles Avenue to Highway 7</td>
</tr>
<tr>
<td>Project Type</td>
<td>Widen to 6 lanes</td>
</tr>
</tbody>
</table>

**Map**

![Map Image](image)

**Existing Conditions**

**Physical and Transportation Conditions**

| OP Designated ROW | Up to 36 metres |

**Model Forecast**

<table>
<thead>
<tr>
<th></th>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum</td>
<td>Average</td>
</tr>
<tr>
<td>2011 Existing</td>
<td>1,610</td>
<td>1,520</td>
</tr>
<tr>
<td>Daily truck volume</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Description**

Existing 4 general purpose lanes with turning lanes at intersections. Crossing over Highway 407 is 6 lanes. Continuous sidewalks on west side. Sidewalk on east side south of Hanlan Road only. No dedicated cycling facilities. Curbside transit service. CP Havelock railway underpass south of Highway 407; structural walls abuts travel lanes and sidewalk.

**Natural and Built Environment**

**Natural Environment**

Observations: Existing development on both sides.

**Land Use and Built Environment**


**Future Transportation Conditions**

<table>
<thead>
<tr>
<th></th>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum</td>
<td>Average</td>
</tr>
<tr>
<td>2041 Do Nothing</td>
<td>2,030</td>
<td>1,980</td>
</tr>
<tr>
<td>2041 Proposed Network</td>
<td>2,540</td>
<td>2,510</td>
</tr>
</tbody>
</table>

October 2016
2127 - Pine Valley Drive - Steeles Avenue to Highway 7 (continued)

### Problem or Opportunity Statement
- Capacity improvements needed to address existing congestion.
- Capacity improvements needed to accommodate future travel demands.
- Corridor improvements needed to support walking and cycling.
- Corridor improvements needed to support transit and HOV.

### Alternatives Considered
1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Optimize existing facility with intersection improvements only - Minor improvement for corridor traffic flow. Does not address overall traffic congestion. Does not improve transit/HOV and active modes.
3. Widen corridor to 6 lanes for general purpose capacity improvements - Improves traffic flow and reduces congestion. Opportunity to improve walking and cycling facilities. Does not support shift to transit/HOV. Not consistent with Council policy to widen to 6 lanes for transit/HOV lanes only.
4. Widen corridor to 6 lanes to implement transit/HOV lanes - Addresses traffic capacity. Opportunity to improve walking and cycling facilities. Potential to improve transit travel time and encourage shift to transit/HOV.
5. Widen corridor to implement rapid transit - Does not address traffic congestion. Transit ridership does not meet RT threshold.
6. Widen parallel/adjacent corridor - Potential to divert some traffic to other corridors. Does not address corridor congestion and travel demand, no improvements to walking and cycling facilities, does not encourage shift to transit/HOV.

### Recommended Improvement and Justification

**Recommendation**
Widen corridor to 6 lanes to implement transit/HOV lanes.

**Justification**
Need identified in Western Vaughan IEA. Widening from Hwy 407 to Hwy 7 is in the 10-year capital program.

### TMP Phase
2032 to 2041

### Alignment with TMP Objectives

<table>
<thead>
<tr>
<th>Support Transit</th>
<th>Support Road Network</th>
<th>Support Active Transportation</th>
<th>Support Goods Movement</th>
<th>Support Last Mile</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Support Transit" /></td>
<td><img src="image" alt="Support Road Network" /></td>
<td><img src="image" alt="Support Active Transportation" /></td>
<td><img src="image" alt="Support Goods Movement" /></td>
<td><img src="image" alt="Support Last Mile" /></td>
</tr>
</tbody>
</table>

### Costs

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Cost</td>
<td>$52,331,800</td>
</tr>
<tr>
<td>Incremental Annual Road Operating Cost</td>
<td>$110,000</td>
</tr>
<tr>
<td>Incremental Road Maintenance and Rehabilitation Cost</td>
<td>$41,500</td>
</tr>
</tbody>
</table>

### Related Projects

<table>
<thead>
<tr>
<th>Name</th>
<th>Project ID</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A-434</td>
</tr>
</tbody>
</table>
Key Intersections and Constraints

Pine Valley Drive at Steeles Avenue

Pine Valley Drive at Highway 7
2128 - Major Mackenzie Drive - Donald Cousens Parkway to Delray Drive

**Project Description**

- **Location**: Major Mackenzie Drive
- **Municipality**: Markham
- **Project Limits**: Donald Cousens Parkway to Delray Drive
- **Project Type**: Widen to 4 lanes

**Map**

![Map of Major Mackenzie Drive](image)

**Existing Conditions**

**Physical and Transportation Conditions**

<table>
<thead>
<tr>
<th>OP Designated ROW</th>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Forecast</td>
<td>Maximum</td>
<td>Average</td>
</tr>
<tr>
<td>2011 Existing</td>
<td>450</td>
<td>450</td>
</tr>
</tbody>
</table>

- **Daily truck volume**: N/A

**Description**

Existing 2 general purpose lanes with turning lanes at intersections. Widens to 3 general purpose lanes at the intersections of Donald Cousens Parkway/Major Mackenzie Drive and Delray Drive/Major Mackenzie Drive. Major Mackenzie Drive corridor to the east and west is 4 lanes. No sidewalks on either side. No dedicated cycling facilities. No transit services.

**Natural and Built Environment**

**Natural Environment**

Observations: Adjacent to Regional Greenlands System and forested area on the north side.

**Land Use and Built Environment**

Forested area on the north side. Residential development on the south side.

**Future Transportation Conditions**

<table>
<thead>
<tr>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2041 Do Nothing</td>
<td>Maximum</td>
</tr>
<tr>
<td></td>
<td>590</td>
</tr>
<tr>
<td>2041 Proposed Network</td>
<td>1,040</td>
</tr>
</tbody>
</table>

October 2016
2128 - Major Mackenzie Drive - Donald Cousens Parkway to Delray Drive (continued)

**Problem or Opportunity Statement**

- Transportation network improvements are needed to accommodate expansion of the Designated Urban Area.
- Capacity improvements needed to accommodate future travel demands.
- Corridor improvements needed to support walking and cycling.

**Alternatives Considered**

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Optimize existing facility with intersection improvements only - Minor improvement for corridor traffic flow. Does not address overall traffic congestion.
3. Urbanize corridor but maintain 2-lane cross-section - Does not address traffic congestion. Opportunity to improve walking and cycling facilities.
4. Widen corridor to 4 lanes and construct to urban arterial standard - Addresses traffic capacity. Opportunity to improve walking and cycling facilities.
5. Widen parallel/adjacent corridor - Potential to divert some traffic to other corridors. Does not address corridor congestion and provides no improvements to walking and cycling facilities.

**Recommended Improvement and Justification**

**Recommendation**
Widen to 4 lanes and construct to urban arterial standard.

**Justification**
Road section approaching Ninth Line has already been widened to 4 lanes. Approx 400 m section from Donald Cousens Parkway to Delray Drive needs to be widened from 2 lanes to 4 lanes. Included in 10-year capital plan. Volumes do not meet thresholds for widening beyond 4 lanes. Opportunity to improve walking and cycling facilities.

**TMP Phase**
2027 to 2031

**Alignment with TMP Objectives**

- Support Transit: 
- Support Road Network: 
- Support Active Transportation: 
- Support Goods Movement: 
- Support Last Mile: 

**Costs**

- Capital Cost: $4,613,700
- Incremental Annual Road Operating Cost: $20,000
- Incremental Road Maintenance and Rehabilitation Cost: $7,500

**Related Projects**

<table>
<thead>
<tr>
<th>Name</th>
<th>Project ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Mackenzie Drive - Leslie Street to Donald Cousens Parkway - RT Corridor</td>
<td>1014</td>
</tr>
<tr>
<td>Major Mackenzie Drive - Leslie Street to Kennedy Road - Widen to 6 lanes</td>
<td>2125</td>
</tr>
</tbody>
</table>
Key Intersections and Constraints

Major Mackenzie Drive at Donald Cousens Parkway
2130 - Islington Avenue - Willis Road to Langstaff Road

**Project Description**

<table>
<thead>
<tr>
<th>Location</th>
<th>Islington Avenue</th>
<th>Project ID</th>
<th>2130</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipality</td>
<td>Vaughan</td>
<td>Road Segment ID</td>
<td>17-04</td>
</tr>
<tr>
<td>Project Limits</td>
<td>Willis Road to Langstaff Road</td>
<td>Length</td>
<td>1,100 m</td>
</tr>
<tr>
<td>Project Type</td>
<td>Widen to 4 lanes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Map**

![Map of Islington Avenue from Willis Road to Langstaff Road](image)

**Existing Conditions**

**Physical and Transportation Conditions**

**OP Designated ROW**

<table>
<thead>
<tr>
<th>Model Forecast</th>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011 Existing</td>
<td>Maximum: 800</td>
<td>Maximum: 0.50</td>
</tr>
<tr>
<td></td>
<td>Average: 800</td>
<td>Average: 0.50</td>
</tr>
</tbody>
</table>

Daily truck volume

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing 2 general purpose lanes with continuous two-way left turn lane. Widens to 4 general purpose lane at Langstaff Road and at Willis Road. Sidewalks on both sides. No cycling facilities. Curbside transit service.</td>
</tr>
</tbody>
</table>

**Natural and Built Environment**

**Natural Environment**

- Observations: Conservation area to the northeast. Regional Greenslands System parallel to Islington Ave on the east side.
- Environmentally Sensitive Areas: Designated ESA in the southeast quadrant of Islington Avenue and Langstaff Road.

**Land Use and Built Environment**

- Mix of single-family and multi-family residential buildings, churches and park lands.

**Future Transportation Conditions**

<table>
<thead>
<tr>
<th>Description</th>
<th>Peak Hour Auto Volume</th>
<th>Peak Hour V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2041 Do Nothing</td>
<td>Maximum: 1,190</td>
<td>Maximum: 0.74</td>
</tr>
<tr>
<td></td>
<td>Average: 1,190</td>
<td>Average: 0.74</td>
</tr>
<tr>
<td>2041 Proposed Network</td>
<td>Maximum: 1,210</td>
<td>Maximum: 0.75</td>
</tr>
<tr>
<td></td>
<td>Average: 1,210</td>
<td>Average: 0.75</td>
</tr>
</tbody>
</table>

October 2016
Problem or Opportunity Statement

- Capacity improvements needed to address existing congestion.
- Capacity improvements needed to accommodate future travel demands.
- Corridor improvements needed to support cycling.

Alternatives Considered

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Optimize existing facility with intersection improvements only - Minor improvement for corridor traffic flow. Does not address overall traffic congestion.
3. Widen corridor to 4 lanes - Addresses traffic capacity. Opportunity to improve cycling facilities.
4. Widen parallel/adjacent corridor - Potential to divert some traffic to other corridors. Does not address corridor congestion and provides no improvements to cycling facilities.

Recommended Improvement and Justification

Recommendation: Widen corridor to 4 lanes.

Justification: Volumes meet threshold for widening. Widening accommodates existing and future demand and provides for a continuous 4-lane cross-section. Opportunity to improve cycling facilities.

TMP Phase: 2027 to 2031

Alignment with TMP Objectives

<table>
<thead>
<tr>
<th>Support Transit</th>
<th>Support Road Network</th>
<th>Support Active Transportation</th>
<th>Support Goods Movement</th>
<th>Support Last Mile</th>
</tr>
</thead>
<tbody>
<tr>
<td>📚</td>
<td>📚</td>
<td>📚</td>
<td>📚</td>
<td>📚</td>
</tr>
</tbody>
</table>

Costs

- Capital Cost: $8,683,200
- Incremental Annual Road Operating Cost: $55,000
- Incremental Road Maintenance and Rehabilitation Cost: $20,700

Related Projects

<table>
<thead>
<tr>
<th>Name</th>
<th>Project ID</th>
</tr>
</thead>
</table>
2130 - Islington Avenue - Willis Road to Langstaff Road (continued)

Key Intersections and Constraints

Islington Avenue at Langstaff Road
2131 - Barrie GO Grade Separation - Rutherford Road east of Keele Street

Project Description

<table>
<thead>
<tr>
<th>Location</th>
<th>Barrie GO Grade Separation</th>
<th>Project ID</th>
<th>2131</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipality</td>
<td>Vaughan</td>
<td>Road Segment ID</td>
<td>73-20</td>
</tr>
<tr>
<td>Project Limits</td>
<td>Rutherford Road east of Keele Street</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Type</td>
<td>Rail grade separation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 43 metres

Description


Natural and Built Environment

Natural Environment Observations: Pond and trail system in the northeast quadrant

Land Use and Built Environment

Rutherford GO station located in southwest quadrant. Residential to the northwest and southeast.

Problem or Opportunity Statement

• Capacity improvements needed to address existing congestion.
• Capacity improvements needed to accommodate future travel demands.
• Corridor improvements needed to support walking, cycling and transit.

Alternatives Considered

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Improve grade crossing safety - Potential to improve walking and cycling facilities and address any safety concerns.
3. Transportation improvements to adjacent/parallel corridor - Potential to divert travel demand to other corridor. No improvement to walking and cycling. No improvement to transit.
2131 - Barrie GO Grade Separation - Rutherford Road east of Keele Street (continued)

Recommended Improvement and Justification
Recommendation: Construct rail grade separation structure.

Justification: Existing traffic and train volumes exceed exposure warrants for grade separation. Grade separation improves pedestrian and cyclist safety and reduces delay to transit and traffic along the corridor. Grade separation needed to support planned RER service improvements.

TMP Phase: 2017 to 2021

Alignment with TMP Objectives

<table>
<thead>
<tr>
<th>Support Transit</th>
<th>Support Road Network</th>
<th>Support Active Transportation</th>
<th>Support Goods Movement</th>
<th>Support Last Mile</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Costs

- Capital Cost: $48,151,900
- Incremental Annual Road Operating Cost: $-
- Incremental Road Maintenance and Rehabilitation Cost: $-

Related Projects

- Rutherford Road - Jane Street to Bathurst Street - Widen to 6 lanes: Project ID 2084

Key Intersections and Constraints

Barrie GO at Rutherford Road
# 2132 - Barrie GO Grade Separation - Wellington Street west of Industrial Parkway

## Project Description

<table>
<thead>
<tr>
<th>Location</th>
<th>Barrie GO Grade Separation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipality</td>
<td>Aurora</td>
</tr>
<tr>
<td>Project Limits</td>
<td>Wellington Street west of Industrial Parkway</td>
</tr>
<tr>
<td>Project Type</td>
<td>Rail grade separation</td>
</tr>
</tbody>
</table>

### Map
![Map of Wellington Street west of Industrial Parkway](image)

## Existing Conditions

### Physical and Transportation Conditions

<table>
<thead>
<tr>
<th>OP Designated ROW</th>
<th>Up to 20 metres</th>
</tr>
</thead>
</table>

### Description

Existing 2 general purpose lanes with median lane. Sidewalks on both side. Railway crossing warning system with gates. No dedicated cycling facilities. Curbside transit service.

### Natural and Built Environment

#### Natural Environment
- Observations: Existing development in the immediate area.
- Source Water Protection Areas: Located within SWP zone.

#### Land Use and Built Environment
- Aurora GO station located in the southeast quadrant. GO station parking located in the south west quadrant. Retail commercial on the north side.

### Problem or Opportunity Statement

- Capacity improvements needed to address existing congestion.
- Capacity improvements needed to accommodate future travel demands.
- Corridor improvements needed to support walking, cycling and transit.

### Alternatives Considered

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Improve grade crossing safety - Potential to improve walking and cycling facilities and address any safety concerns.
3. Transportation improvements to adjacent/parallel corridor - Potential to divert travel demand to other corridor. No improvement to walking and cycling. No improvement to transit.
Recommended Improvement and Justification

Recommendation: Construct rail grade separation structure.

Justification: Existing traffic and train volumes exceed exposure warrants for grade separation. Grade separation improves pedestrian and cyclist safety and reduces delay to transit and traffic along the corridor. Grade separation needed to support planned RER service improvements.

TMP Phase: 2022 to 2026

Alignment with TMP Objectives

<table>
<thead>
<tr>
<th>Support Transit</th>
<th>Support Road Network</th>
<th>Support Active Transportation</th>
<th>Support Goods Movement</th>
<th>Support Last Mile</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Costs

- Capital Cost: $44,394,900
- Incremental Annual Road Operating Cost: $-
- Incremental Road Maintenance and Rehabilitation Cost: $-

Related Projects

<table>
<thead>
<tr>
<th>Name</th>
<th>Project ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wellington Street - Yonge Street to Industrial Parkway - Widen to 4 lanes</td>
<td>2021</td>
</tr>
</tbody>
</table>

Key Intersections and Constraints

Barrie GO at Wellington Street
2133 - Stouffville GO Grade Separation - Steeles Avenue east of Kennedy Road

**Project Description**

<table>
<thead>
<tr>
<th>Location</th>
<th>Stouffville GO Grade Separation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipality</td>
<td>Markham</td>
</tr>
<tr>
<td>Project Limits</td>
<td>Steeles Avenue east of Kennedy Road</td>
</tr>
<tr>
<td>Project Type</td>
<td>Rail grade separation</td>
</tr>
</tbody>
</table>

**Map**

![Map of Stouffville GO Grade Separation](image)

**Existing Conditions**

**Physical and Transportation Conditions**

**OP Designated ROW** Up to 36 metres

**Description**

Existing 4 general purpose lanes. Sidewalks on both sides. Railway crossing warning system with gates. No dedicated cycling facilities. Curbside transit service.

**Natural and Built Environment**

**Natural Environment**

Observations: Existing development in the immediate area.

**Land Use and Built Environment**

Retail commercial located on all 4 quadrants. Milliken GO Station to the southwest.

**Problem or Opportunity Statement**

- Capacity improvements needed to address existing congestion.
- Capacity improvements needed to accommodate future travel demands.
- Corridor improvements needed to support walking, cycling and transit.

**Alternatives Considered**

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Improve grade crossing safety - Potential to improve walking and cycling facilities and address any safety concerns.
3. Transportation improvements to adjacent/parallel corridor - Potential to divert travel demand to other corridor. No improvement to walking and cycling. No improvement to transit.
2133 - Stouffville GO Grade Separation - Steeles Avenue east of Kennedy Road (continued)

**Recommended Improvement and Justification**

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Construct rail grade separation structure.</th>
</tr>
</thead>
</table>

**Justification**

Existing traffic and train volumes exceed exposure warrants for grade separation. Grade separation improves pedestrian and cyclist safety and reduces delay to transit and traffic along the corridor. Grade separation needed to support planned RER service improvements.

**TMP Phase**

2017 to 2021

**Alignment with TMP Objectives**

<table>
<thead>
<tr>
<th>Support Transit</th>
<th>Support Road Network</th>
<th>Support Active Transportation</th>
<th>Support Goods Movement</th>
<th>Support Last Mile</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Diagram" /></td>
<td><img src="image2" alt="Diagram" /></td>
<td><img src="image3" alt="Diagram" /></td>
<td><img src="image4" alt="Diagram" /></td>
<td><img src="image5" alt="Diagram" /></td>
</tr>
</tbody>
</table>

**Costs**

- **Capital Cost**: $46,576,900
- **Incremental Annual Road Operating Cost**: $-
- **Incremental Road Maintenance and Rehabilitation Cost**: $-

**Related Projects**

<table>
<thead>
<tr>
<th>Name</th>
<th>Project ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steeles Avenue - Kennedy Road to Markham Road - Steeles (Widen to 6 lanes)</td>
<td>2121</td>
</tr>
</tbody>
</table>

**Key Intersections and Constraints**

**Stouffville GO at Steeles Avenue**
## Project Description

<table>
<thead>
<tr>
<th>Location</th>
<th>Stouffville GO Grade Separation</th>
<th>Project ID</th>
<th>2134</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipality</td>
<td>Markham</td>
<td>Road Segment ID</td>
<td>03-01</td>
</tr>
<tr>
<td>Project Limits</td>
<td>Kennedy Road north of Steeles Avenue</td>
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<td></td>
</tr>
<tr>
<td>Project Type</td>
<td>Rail grade separation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Map
![Map Image](image_url)

### Existing Conditions

#### Physical and Transportation Conditions

**OP Designated ROW**
- Up to 43 metres

**Description**
- Existing 4 general purpose lanes. Sidewalks on both sides. Railway crossing warning system with gates. No dedicated cycling facilities. Curbside transit service.

### Natural and Built Environment

#### Natural Environment
- Observations: Existing development in the immediate area.

#### Land Use and Built Environment
- Residential to the southwest. Retail commercial to the southeast. Treed areas the north.

### Problem or Opportunity Statement

- Capacity improvements needed to address existing congestion.
- Capacity improvements needed to accommodate future travel demands.
- Corridor improvements needed to support walking, cycling and transit.

### Alternatives Considered

1. Do Nothing - Does not address Problem or Opportunity Statement.
2. Improve grade crossing safety - Potential to improve walking and cycling facilities and address any safety concerns.
3. Transportation improvements to adjacent/parallel corridor - Potential to divert travel demand to other corridor. No improvement to walking and cycling. No improvement to transit.
Recommended Improvement and Justification

**Recommendation**
Construct rail grade separation structure.

**Justification**
Existing traffic and train volumes exceed exposure warrants for grade separation. Grade separation improves pedestrian and cyclist safety and reduces delay to transit and traffic along the corridor. Grade separation needed to support planned RER service improvements.

**TMP Phase**
2022 to 2026

### Alignment with TMP Objectives

<table>
<thead>
<tr>
<th>Support Transit</th>
<th>Support Road Network</th>
<th>Support Active Transportation</th>
<th>Support Goods Movement</th>
<th>Support Last Mile</th>
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</thead>
<tbody>
<tr>
<td>![Icon]</td>
<td>![Icon]</td>
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<td>![Icon]</td>
</tr>
</tbody>
</table>

### Costs

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Cost</td>
<td>$46,206,900</td>
</tr>
<tr>
<td>Incremental Annual Road Operating Cost</td>
<td>$ -</td>
</tr>
<tr>
<td>Incremental Road Maintenance and Rehabilitation Cost</td>
<td>$ -</td>
</tr>
</tbody>
</table>

### Related Projects

<table>
<thead>
<tr>
<th>Name</th>
<th>Project ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kennedy Road - Steeles Avenue to Highway 407 - Widen to 6 lanes</td>
<td>2001</td>
</tr>
</tbody>
</table>

### Key Intersections and Constraints

**Stouffville GO at Kennedy Road (north of Steeles Avenue)**

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October 2016

A-452