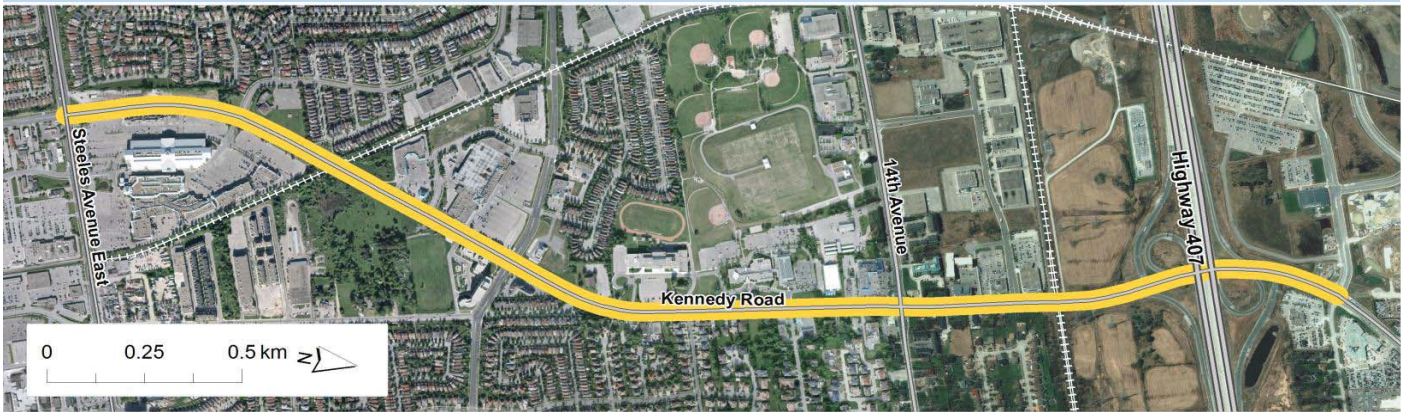
Appendix A – Road Projects

2001 - Kennedy Road - Steeles Avenue to Highway 407

Project Description

Location	Kennedy Road	**Project ID**	**2001**
Municipality	Markham	**Road Segment ID**	03-01 to 03-03
Project Limits	Steeles Avenue to Highway 407	**Length**	3,080 m
Project Type	Widen to 6 lanes		

Map



Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 43 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	2,330	1,580	1.29	0.90
Daily truck volume	3,210 /day	2,000 /day		

Description

Existing 4 general purpose lanes with turning lanes at intersections and median lane in some sections. Crossing over Highway 407 is 6 lanes. Continuous sidewalks on both sides. No dedicated cycling facilities. Curbside transit service. At-grade rail crossing of Stouffville GO Line north of Steeles Ave. CP Havelock railway underpass north of 14th Avenue; structural walls abuts the travel lanes and sidewalks.

Natural and Built Environment

Natural Environment Observations: Existing development on both sides of corridor.

Land Use and Built Environment A number of larger commercial properties including Pacific Mall at northeast corner of Steeles Avenue, public high school and community centre, and surrounding residential community. Constrained corridor at two small cemeteries located on each side of Kennedy Road north of 14th Avenue.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	2,930	1,870	1.62	1.06
2041 Proposed Network	2,840	2,070	1.21	0.89

2001 - Kennedy Road - Steeles Avenue to Highway 407 (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 Corridor experiences congestion in the peak periods and is over capacity in existing and 2041. Widening provides capacity for HOV and transit. Corridor is an important link to Milliken GO station (RER) and capacity improvement is needed to support growth of Markham Centre. Opportunity to improve walking and cycling facilities.

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	$	57,779,400
Incremental Annual Road Operating Cost	$	153,900
Incremental Road Maintenance and Rehabilitation Cost	$	58,100

Related Projects

Name	Project ID
Kennedy Road - Highway 7 to Major Mackenzie Drive - Widen to 6 lanes	2002
Stouffville GO Grade Separation - Kennedy Road north of Steeles Avenue - Rail grade separation	2134

2001 - Kennedy Road - Steeles Avenue to Highway 407 (continued)

Key Intersections and Constraints

Kennedy Road at Steeles Avenue

Kennedy Road at 14th Avenue

Kennedy Road at Highway 407

Railway underpass north of 14th Avenue (Image capture: 2015, ©2016 Google)

2001 - Kennedy Road - Steeles Avenue to Highway 407 (continued)

Key Intersections and Constraints

Stouffville GO at Kennedy Road

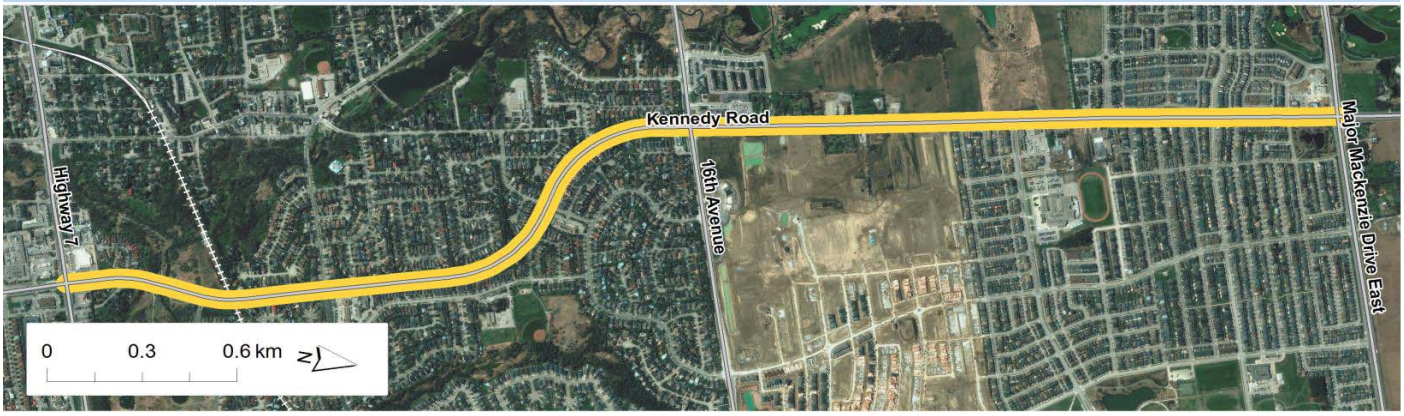
Cemeteries on both sides constrain widening of Kennedy Road north of 14th Avenue

2002 - Kennedy Road - Highway 7 to Major Mackenzie Drive

Project Description

Location	Kennedy Road	**Project ID**	**2002**
Municipality	Markham	**Road Segment ID**	03-06 to 03-08
Project Limits	Highway 7 to Major Mackenzie Drive	**Length**	4,270 m
Project Type	Widen to 6 lanes		

Map



Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 43 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	2,000	1,790	1.11	0.99
Daily truck volume	1,300 /day	1,060 /day		

Description

Existing 4 general purpose lanes with turning lanes at intersections and median lane in some sections. Continuous sidewalks on both sides. No dedicated cycling facilities. Curbside transit service. At-grade rail crossing of Stouffville GO Line north of Highway 7.

Natural and Built Environment

Natural Environment Observations: Existing development on both sides of corridor. Crosses open space and Rouge River north of Highway 7.

Land Use and Built Environment Low density residential backing onto Kennedy between Highway 7 to 16th Avenue. Cemeteries on east and west sides north of 16th Avenue. Some agricultural lands and golf course on the west side. Primarily new residential developments north of 16th Avenue up to Major Mackenzie Drive.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	2,930	2,910	1.62	1.61
2041 Proposed Network	3,320	3,230	1.42	1.38

2002 - Kennedy Road - Highway 7 to Major Mackenzie Drive (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 based on average v/c ratios. 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

Corridor experiences high traffic volumes. Widening provides capacity for HOV and transit. Capacity improvement is needed to support growth of Markham Centre and North Markham. Opportunity to improve walking and cycling facilities.

TMP Phase

2022 to 2026: Highway 7 to 16th Avenue
2027 to 2031: 16th Avenue to Major Mackenzie Drive

Alignment with TMP Objectives

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

Costs

Capital Cost	$	40,843,000
Incremental Annual Road Operating Cost	$	213,400
Incremental Road Maintenance and Rehabilitation Cost	$	80,500

Related Projects

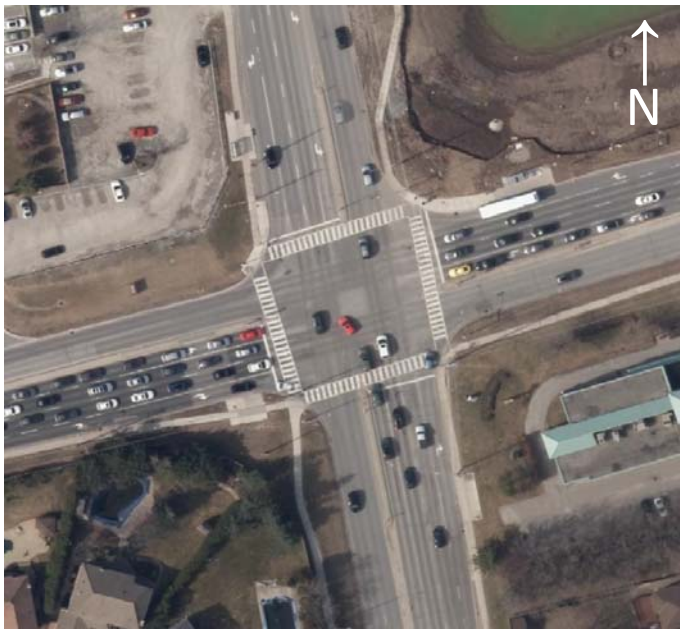
Name	Project ID
Kennedy Road - Steeles Avenue to Highway 407 - Widen to 6 lanes	2001
Kennedy Road - Major Mackenzie Drive to Donald Cousens Parkway - Widen to 4 lanes	2003
Stouffville GO Grade Separation - Kennedy Road north of Highway 7 - Rail grade separation	2137

2002 - Kennedy Road - Highway 7 to Major Mackenzie Drive (continued)

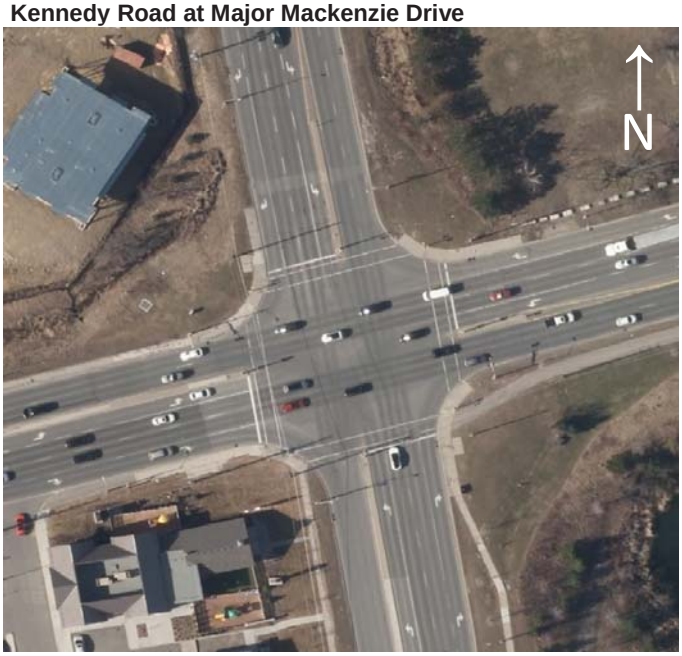
Key Intersections and Constraints

Kennedy Road at Highway 7

Kennedy Road at 16th Avenue



Kennedy Road at Major Mackenzie Drive



Stouffville GO at Kennedy Road

2002 - Kennedy Road - Highway 7 to Major Mackenzie Drive (continued)

Key Intersections and Constraints

Cemetery west of Kennedy Road constrain widening south of Major Mackenzie Drive

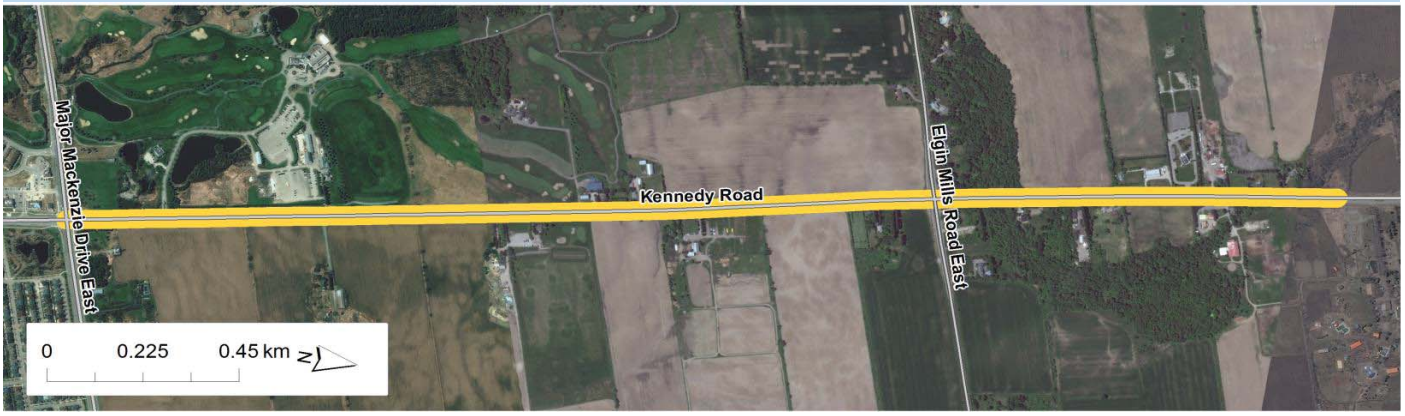
Cemetery east of Kennedy Road constrain widening south of Major Mackenzie Drive

2003 - Kennedy Road - Major Mackenzie Drive to Donald Cousens Parkway

Project Description

Location	Kennedy Road	**Project ID**	**2003**
Municipality	Markham	**Road Segment ID**	03-10 to 03-12
Project Limits	Major Mackenzie Drive to Donald Cousens Parkway	**Length**	2,990 m
Project Type	Widen to 4 lanes		

Map



Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 43 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	800	760	0.80	0.76
Daily truck volume	N/A	N/A		

Description

Existing 4 general purpose lanes from Major Mackenzie Drive to entrance of Angus Glen Golf Club. Existing 2 general purpose lanes from the entrance of Angus Glen Golf Club to Donald Cousens Parkway. No sidewalks on either side. Paved shoulder on Kennedy Road. No transit services.

Natural and Built Environment

Natural Environment Observations: Corridor is adjacent to agricultural fields and golf course.

Land Use and Built Environment Primarily agricultural uses. Angus Glen golf course on the west side.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	1,470	1,430	1.46	1.42
2041 Proposed Network	1,900	1,760	0.95	0.88

2003 - Kennedy Road - Major Mackenzie Drive to Donald Cousens Parkway (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 corridor to 4 lanes and construct to urban arterial standard.

Justification

Forecast meets threshold for 4-lane widening. Provides opportunity to improve walking and cycling facilities. Corridor is needed to support growth in North Markham. Opportunity to improve walking and cycling facilities.

TMP Phase

2027 to 2031; Major Mackenzie Drive to Elgin Mills Road
2032 to 2041: Elgin Mills Road to Donald Cousins Parkway

Alignment with TMP Objectives

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

Costs

Capital Cost	$	18,695,000
Incremental Annual Road Operating Cost	$	149,400
Incremental Road Maintenance and Rehabilitation Cost	$	56,400

Related Projects

Name	Project ID
Kennedy Road - Highway 7 to Major Mackenzie Drive - Widen to 6 lanes	2002

2003 - Kennedy Road - Major Mackenzie Drive to Donald Cousens Parkway (continued)

Key Intersections and Constraints

Kennedy Road at Major Mackenzie Drive

2004 - Keele Street - Steeles Avenue to Highway 407

Project Description

Location	Keele Street	**Project ID**	**2004**
Municipality	Vaughan	**Road Segment ID**	06-01
Project Limits	Steeles Avenue to Highway 407	**Length**	1,240 m
Project Type	Widen to 6 lanes		

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 43 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	2,350	2,180	1.30	1.21
Daily truck volume	4,000 /day	3,910 /day		

Description

Existing 4 general purpose lanes with turning lanes at intersections and median lane in some sections. Crossing over Highway 407 is 6 lanes. Sidewalk on west side between Steeles and south of rail crossing. No dedicated cycling facilities. Curbside transit service. Grade separated rail crossing for CN York Subdivision north of Steeles Avenue.

Natural and Built Environment

Natural Environment Observations: Existing development on both sides of corridor.

Land Use and Built Environment Mainly commercial and light industrial land uses.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	2,780	2,630	1.54	1.46
2041 Proposed Network	3,320	2,620	1.42	1.12

2004 - Keele Street - Steeles Avenue to Highway 407 (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 south of Highway 407 to 6 lanes to implement transit/HOV lanes. Convert 2 existing lanes north of Highway 407 to transit/HOV.

Justification

Future demand meets threshold for 6-lane widening. Capacity improvement also supports goods movement on this Primary Arterial Goods Movement corridor. Section of Keele Street north of Highway 407 is already 6 lanes, and requires conversion of 2 lanes to transit/HOV lanes to provide network continuity. Opportunity to improve walking and cycling facilities.

TMP Phase

2017 to 2021: Steeles Avenue to Highway 407
2022 to 2026: Highway 407 to Highway 7

Alignment with TMP Objectives

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

Costs

Capital Cost	$	22,390,000
Incremental Annual Road Operating Cost	$	62,000
Incremental Road Maintenance and Rehabilitation Cost	$	23,400

Related Projects

Name	Project ID
Keele Street - Highway 7 to Rutherford Road - Widen to 6 lanes	2005

2004 - Keele Street - Steeles Avenue to Highway 407 (continued)

Key Intersections and Constraints

Keele Street at Steeles Avenue

Keele Street at Highway 407

Keele Street at Highway 7

2005 - Keele Street - Highway 7 to Rutherford Road

Project Description

Location	Keele Street	**Project ID**	**2005**
Municipality	Vaughan	**Road Segment ID**	06-04 to 06-06
Project Limits	Highway 7 to Rutherford Road	**Length**	4,090 m
Project Type	Widen to 6 lanes		

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 43 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	1,980	1,710	1.10	0.95
Daily truck volume	2,590 /day	2,250 /day		

Description

Existing 4 general purpose lanes with turning lanes at intersections and median lane in some sections. Continuous sidewalk on east side. Discontinuous sidewalk segments on west side. No dedicated cycling facilities. Curbside transit service.

Natural and Built Environment

Natural Environment Observations: Existing development on both sides of corridor.

Land Use and Built Environment Mostly commercial/industrial/office lands. Small cemetery east side between Langstaff Road and Rutherford Road.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	2,710	2,290	1.50	1.27
2041 Proposed Network	2,980	2,420	1.27	1.03

2005 - Keele Street - Highway 7 to Rutherford Road (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 Future demand meets threshold for 6-lane widening. Capacity improvement will support goods movement on this Primary Arterial Goods Movement corridor. Widening also provides capacity for transit/HOV and provides a continuous transit/HOV corridor on Keele Street. Opportunity to improve walking and cycling facilities.

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	$	34,529,900
Incremental Annual Road Operating Cost	$	204,400
Incremental Road Maintenance and Rehabilitation Cost	$	77,100

Related Projects

Name	Project ID
Keele Street - Steeles Avenue to Highway 407 - Widen to 6 lanes	2004

2005 - Keele Street - Highway 7 to Rutherford Road (continued)

Key Intersections and Constraints

Keele Street at Highway 7

Keele Street at Langstaff Road

Keele Street at Rutherford Road

2007 - Highway 7 (MTO) - Donald Cousens Parkway to York/Durham Line

Project Description

Location	Highway 7 (MTO)	**Project ID**	**2007**
Municipality	Markham	**Road Segment ID**	07-42 to 07-44
Project Limits	Donald Cousens Parkway to York/Durham Line	**Length**	3,110 m
Project Type	Widen to 4 lanes		

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW N/A

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	700	630	0.70	0.62
Daily truck volume	870 /day	440 /day		

Description

Existing 4 general purpose lanes from Donald Cousens Parkway to Reesor Road with turning lanes at intersections and median lane. Tapers off to 2 lanes from Reesor Road to York/Durham Line with turning lanes at intersections. No sidewalks on either side. No dedicated cycling facilities; planned Parks Canada trail paralleling Little Rouge Creek. No transit services. At-grade rail crossing of CN Havelock subdivision east of Donald Cousens Parkway.

Natural and Built Environment

Natural Environment Observations: Corridor crosses of Little Rouge Creek. Corridor traverses Greenlands system east of Reesor Road to York/Durham Line. The majority of this corridor traverses Rouge National Urban Park.

Land Use and Built Environment Primarily agricultural lands on both sides. Cemetery east of Reesor Road on the south side. The majority of this corridor traverses Rouge National Urban Park. The corridor also passes through the Locust Hill hamlet. Its unique heritage character should be considered during the EA process. Parks Canada also notes that the hamlet could, in the future, serve important visitor support functions for the park, such as accommodation and food ser ice

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	1,230	1,000	1.23	1.00
2041 Proposed Network	1,800	1,530	0.90	0.76

2007 - Highway 7 (MTO) - Donald Cousens Parkway to York/Durham Line (continued)

Problem or Opportunity Statement

• 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 maintain rural cross-section - Addresses traffic capacity. Does not improve walking facilities.
5. Widen corridor to 4 lanes and construct to urban arterial standard - Addresses traffic capacity. Opportunity to improve walking and cycling facilities.
6. 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 corridor to 4 lanes and maintain rural cross-section.

Justification Widening addresses future travel demand across the York/Durham boundary. Implement pedestrian/visitor access (e.g. transit stops to trailheads and visitor facilities) and compatible roadside character to support the Markham Gateway, Parks Canada's visitor centre, Locust Hill hamlet and the links between them. Separated bike lanes accommodate cycling. Highway 7 Rapidway terminates at Cornell Terminal, but a further extension of the Rapidway to the east is considered if GO Rail service is provided on the CP Havelock Subdivision with a potential GO station at Highway 7. In that case, an urban cross-section with

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	$	14,016,700
Incremental Annual Road Operating Cost	$	65,400
Incremental Road Maintenance and Rehabilitation Cost	$	58,600

Related Projects

Name	Project ID
Highway 7 - Unionville GO Station to Cornell Terminal - RT Corridor	1010

2007 - Highway 7 (MTO) - Donald Cousens Parkway to York/Durham Line (continued)

Key Intersections and Constraints

Highway 7 at Donald Cousens Parkway

Highway 7 at York/Durham Line

Cemetery south of Highway 7, east of Reesor Road

2009 - Woodbine Avenue - Highway 7 to Major Mackenzie Drive

Project Description

Location	Woodbine Avenue	**Project ID**	**2009**
Municipality	Markham	**Road Segment ID**	08-06 to 08-08
Project Limits	Highway 7 to Major Mackenzie Drive	**Length**	4,080 m
Project Type	Widen to 6 lanes		

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 43 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	2,190	1,840	1.21	1.07
Daily truck volume	2,480 /day	1,730 /day		

Description

Existing 4 general purpose lanes with turning lanes at intersections and median lane in some sections. Continuous sidewalks on both sides. No dedicated cycling facilities. Curbside transit service.

Natural and Built Environment

Natural Environment Observations: Existing development on both sides of corridor. Crosses Regional Greenlands System south of 16th Avenue and north of 16th Avenue.

Land Use and Built Environment Primarily employment lands with commercial and light industrial between Highway 7 and 16th Avenue. Cemetery south of 16th Avenue on the east side. Mainly residential subdivision north of 16th Avenue with some commercial land uses.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	2,850	2,430	1.58	1.42
2041 Proposed Network	2,930	2,920	1.22	1.15

2009 - Woodbine Avenue - Highway 7 to Major Mackenzie Drive (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. Convert 2 existing lanes between Steeles Avenue & Highway 7 to transit/HOV lanes.
Justification	Capacity improvements needed to accommodate forecast traffic demands. Forecast transit ridership meets threshold for designating transit/HOV lane. Continuous transit/HOV lane throughout corridor would support a shift to transit/HOV modes. 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	$	38,786,900
Incremental Annual Road Operating Cost	$	203,900
Incremental Road Maintenance and Rehabilitation Cost	$	76,900

Related Projects

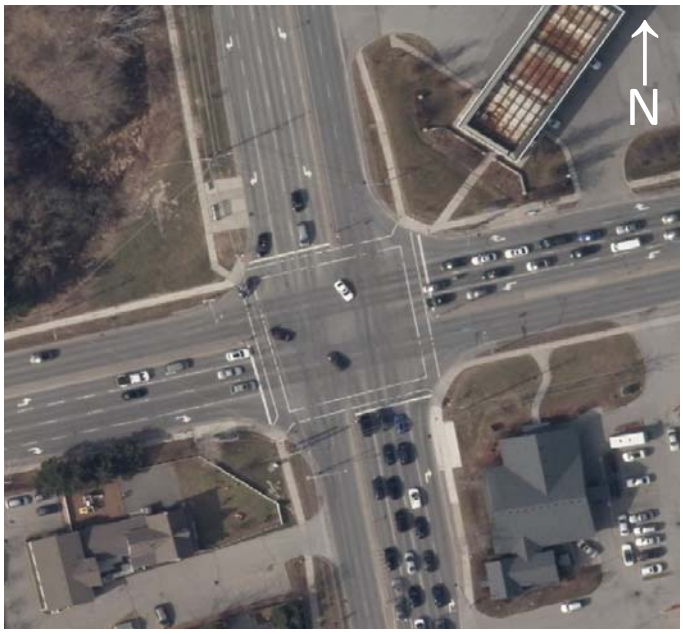
Name	Project ID
Woodbine Avenue - Steeles Avenue to Major Mackenzie - RT Corridor	1023
#N/A	2008

2009 - Woodbine Avenue - Highway 7 to Major Mackenzie Drive (continued)

Key Intersections and Constraints

Woodbine Avenue at Highway 7

Woodbine Avenue at 16th Avenue



Woodbine Avenue at Major Mackenzie Drive

Existing buildings constrain widening through Buttonville south of 16th Avenue

2009 - Woodbine Avenue - Highway 7 to Major Mackenzie Drive (continued)

Key Intersections and Constraints

Cemetery east of Woodbine Avenue, south of 16th Avenue

2010 - Woodbine Avenue - Victoria Square Boulevard to 19th Avenue

Project Description

Location	Woodbine Avenue	**Project ID**	**2010**
Municipality	Markham	**Road Segment ID**	08-12
Project Limits	Victoria Square Boulevard to 19th Avenue	**Length**	1,100 m
Project Type	Widen to 4 lanes		

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 43 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	1,030	1,030	1.03	1.03
Daily truck volume	N/A	N/A		

Description

Tapers from 4 general purpose lane at the intersection of Victoria Square Boulevard (N) to 2 general purpose lanes with rural cross-section and paved shoulder. No sidewalks on either side. No transit service.

Natural and Built Environment

Natural Environment Observations: Agricultural fields on both sides of corridor with newer industrial uses developing on the west.

Land Use and Built Environment Primarily agricultural lands with developing employment area on the west.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	1,800	1,800	1.79	1.79
2041 Proposed Network	2,340	2,340	1.17	1.17

2010 - Woodbine Avenue - Victoria Square Boulevard to 19th Avenue (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 corridor to 4 lanes and construct to urban arterial standard.

Justification Capacity improvements needed to serve designated urban area in North Markham, including new employment lands. 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	$	5,551,600
Incremental Annual Road Operating Cost	$	55,000
Incremental Road Maintenance and Rehabilitation Cost	$	20,700

Related Projects

Name	Project ID

2010 - Woodbine Avenue - Victoria Square Boulevard to 19th Avenue (continued)

Key Intersections and Constraints

Woodbine Avenue at Victoria Square Boulevard

Woodbine at 19th Avenue

2011 - King Road - Caledon-King Townline to Highway 27

Project Description

Location	King Road	**Project ID**	**2011**
Municipality	King	**Road Segment ID**	11-04 to 11-08
Project Limits	Caledon-King Townline to Highway 27	**Length**	5,560 m
Project Type	Widen to 4 lanes		

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 36 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	560	430	0.79	0.61
Daily truck volume	N/A	N/A		

Description

Existing 2 general purpose lanes with turning lanes at some intersections. Sidewalks on both sides between Highway 27 and Wellington Street. Sidewalk on north side only from Wellington Street to Henry Gate. No sidewalk on either side from Henry Gate to Caledon-King Townline. Paved shoulder between 10th concession and Caledon-King Townline. No transit services.

Natural and Built Environment

Natural Environment Observations: Parklands and Humber Valley Heritage trail system in southeast quadrant of King Road and Caledon-King Townline.
Source Water Protection Areas: Designated area centred around King Road and Highway 27.

Land Use and Built Environment Mostly rural / agricultural merging into low density residential near Highway 27 (Nobleton).

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	890	680	1.26	0.97
2041 Proposed Network	980	850	0.70	0.61

2011 - King Road - Caledon-King Townline to Highway 27 (continued)

Problem or Opportunity Statement

• Transportation network improvements are needed to accommodate expansion of the Designated Urban Area.
• 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 maintain rural cross-section - Addresses traffic capacity. Does not improve walking facilities.
5. Widen corridor to 4 lanes and construct to urban arterial standard - Addresses traffic capacity. Opportunity to improve walking and cycling facilities.
6. 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 corridor to 4 lanes and construct to urban arterial standard within designated urban area.

Justification Capacity improvement needed to serve growth in future urban area in Nobleton. Improvement also support goods movement for designated Interim Primary Arterial Goods Movement corridor. Opportunity to improve walking and cycling facilities. Improvements at the intersection of Caledon-King Townline 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

Capital Cost	$	31,103,000
Incremental Annual Road Operating Cost	$	175,700
Incremental Road Maintenance and Rehabilitation Cost	$	104,800

Related Projects

Name	Project ID
King Road - Highway 27 to Highway 400 - Widen to 4 lanes	2012

2011 - King Road - Caledon-King Townline to Highway 27 (continued)

Key Intersections and Constraints

King Road at Highway 27

2012 - King Road - Highway 27 to Highway 400

Project Description

Location	King Road	**Project ID**	**2012**
Municipality	King	**Road Segment ID**	11-10 to 11-15
Project Limits	Highway 27 to Highway 400	**Length**	7,290 m
Project Type	Widen to 4 lanes		

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 36 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	610	510	0.61	0.48
Daily truck volume	N/A	N/A		

Description

Existing 2 general purpose lanes with turning lanes at intersections. Crossing over Highway 400 is 4 lanes. Sidewalk on north side only between Highway 27 and Greenside Drive. No dedicated cycling facilities'. Curbside transit service.

Natural and Built Environment

Natural Environment Observations: Agricultural fields of both sides of corridor.
Environmentally Sensitive Areas: ANSI crosses King Road west of Weston Road.
Source Water Protection Areas: Designated area centred around King Road and Highway 27.

Land Use and Built Environment Low density residential (Nobleton). Primarily rural / agricultural.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	1,480	1,020	1.48	1.09
2041 Proposed Network	1,640	1,220	0.82	0.65

2012 - King Road - Highway 27 to Highway 400 (continued)

Problem or Opportunity Statement

• Transportation network improvements are needed to accommodate expansion of the Designated Urban Area.
• 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 but maintain rural cross-section - Addresses traffic capacity. Does not improve walking facilities.
5. Widen corridor to 4 lanes and construct to urban arterial standard - Addresses traffic capacity. Opportunity to improve walking and cycling facilities.
6. 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 corridor to 4 lanes and construct to urban arterial standard within designated urban area.

Justification King Road is main east-west corridor in west mid-York. Capacity improvements needed to support developing urban area in Nobleton and King. Corridor improvements will also improve walking and cycling facilities as well as support goods movement on this designated Interim Primary Arterial Goods Movement corridor.

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	$	34,263,800
Incremental Annual Road Operating Cost	$	212,400
Incremental Road Maintenance and Rehabilitation Cost	$	137,400

Related Projects

Name	Project ID
King Road - Caledon-King Townline to Highway 27 - Widen to 4 lanes	2011

2012 - King Road - Highway 27 to Highway 400 (continued)

Key Intersections and Constraints

King Road at Highway 27

King Road at Weston Road

King Road at Highway 400

2013 - Leslie Street - Elgin Mills Road to 19th Avenue

Project Description

Location	Leslie Street	**Project ID**	**2013**
Municipality	Richmond Hill	**Road Segment ID**	12-12
Project Limits	Elgin Mills Road to 19th Avenue	**Length**	2,060 m
Project Type	Widen to 4 lanes		

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 43 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	800	800	1.00	1.00
Daily truck volume	700 /day	700 /day		

Description

Existing 4 general purpose lanes from Elgin Mills Road to William F. Bell Parkway with turning lanes at intersections. Tapers into 2 general purpose lanes from William F. Bell Parkway to 19th Avenue. Sidewalk on east side from Elgin Mills to north end of commercial plaza only. No dedicated cycling facilities. Curbside transit service between Elgin Mills and Richmond Green.

Natural and Built Environment

Natural Environment Observations: Agricultural fields of both sides of corridor.

Land Use and Built Environment Primarily agricultural land uses. Richmond Green Sports Centre, public high school, public library, and commercial centre immediately north of Elgin Mills Road.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	1,290	1,290	1.61	1.61
2041 Proposed Network	1,380	1,380	0.86	0.86

2013 - Leslie Street - Elgin Mills Road to 19th Avenue (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 corridor to 4 lanes and construct to urban arterial standard.

Justification Capacity improvements needed to serve growth in future urban area in Richmond Hill. Provides improved walking and cycling facilities.

TMP Phase 2017 to 2021

Alignment with TMP Objectives

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

Costs

Capital Cost	$	15,349,900
Incremental Annual Road Operating Cost	$	103,000
Incremental Road Maintenance and Rehabilitation Cost	$	38,800

Related Projects

Name	Project ID
Leslie Street - 19th Avenue to Wellington Street - Widen to 4 lanes	2014

2013 - Leslie Street - Elgin Mills Road to 19th Avenue (continued)

Key Intersections and Constraints

Leslie Street at Elgin Mills Road

Leslie Street at 19th Avenue

2014 - Leslie Street - 19th Avenue to Wellington Street

Project Description

Location	Leslie Street	**Project ID**	**2014**
Municipality	Richmond Hill, Aurora	**Road Segment ID**	12-14 to 12-22
Project Limits	19th Avenue to Wellington Street	**Length**	10,570 m
Project Type	Widen to 4 lanes		

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 36 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	520	400	0.64	0.50
Daily truck volume	220 /day	140 /day		

Description

Existing 2 general purpose lanes with turning lanes at intersections. Jogged intersection at Stouffville Road. No sidewalk on either side. Paved shoulder between Stouffville Road and Bethesda Sideroad. Shared roadway (unsigned route) between Vandorf Sideroad and Oak Ridges Trail. Curbside transit service between Wellington Street to Don Hillock Drive. At-grade rail crossing of Richmond Hill GO/CN Rail Line south of Stouffville Road.

Natural and Built Environment

Natural Environment Observations: Phyllis Rawlinson Park on the east side north of 19th Avenue. Crossing of Rouge River south of Stouffville Road. Abuts Haynes Lake north of Bethesda Sideroad. Corridor traverses Oak Ridges Moraine from 19th Avenue to south of Wellington Street.
Environmentally Sensitive Areas: ESAs from Wellington Street to Westview Drive, south of Bloomington Road, and northeast of Leslie Street at Bloomington Road. ANSI crosses Leslie Road at Haynes Lake.
Source Water Protection Areas: Designated SWP area just south of Wellington

Land Use and Built Environment Primarily farmland between 19th Avenue and Bloomington Road. Mix of woodlots/farm/low density residential and three golf courses.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	1,100	780	1.37	0.97
2041 Proposed Network	1,600	1,290	0.99	0.81

2014 - Leslie Street - 19th Avenue to Wellington Street (continued)

Problem or Opportunity Statement

- Transportation network improvements are needed to accommodate expansion of the Designated Urban Area.
- Elimination of jogged intersection needed to provide continuous corridor.
- 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 maintain rural cross-section - Addresses traffic capacity. Does not improve walking facilities.
5. Widen corridor to 4 lanes and construct to urban arterial standard - Addresses traffic capacity. Opportunity to improve walking and cycling facilities.
6. 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 corridor to 4 lanes and construct to urban arterial standard within designated urban area and realign jogged intersection.

Justification

High traffic volumes along most of the corridor during peak periods in existing and 2041. Capacity improvement serves growth in future urban area and provides opportunity to improve walking and cycling facilities within urban areas. In rural sections, paved shoulders accommodates cycling. Realigned intersection adds capacity and improves traffic flow.

TMP Phase

2022 to 2026: 19th Avenue to Stouffville Road
2027 to 2031: Vandorf Sideroad to Wellington Street
2032 to 2041: Stouffville Road to Vandorf Sideroad

Alignment with TMP Objectives

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

Costs

Capital Cost	$	47,428,700
Incremental Annual Road Operating Cost	$	280,500
Incremental Road Maintenance and Rehabilitation Cost	$	199,200

Related Projects

Name	Project ID
Leslie Street - Elgin Mills Road to 19th Avenue - Widen to 4 lanes	2013
Leslie Street - Wellington Street to Mulock Drive - Widen to 4 lanes	2015
Richmond Hill GO Grade Separation - Leslie Street south of Stouffville Road - Rail grade separation	2148

2014 - Leslie Street - 19th Avenue to Wellington Street (continued)

Key Intersections and Constraints

Leslie Street at 19th Avenue

Jogged intersection at Leslie Street at Stouffville Road

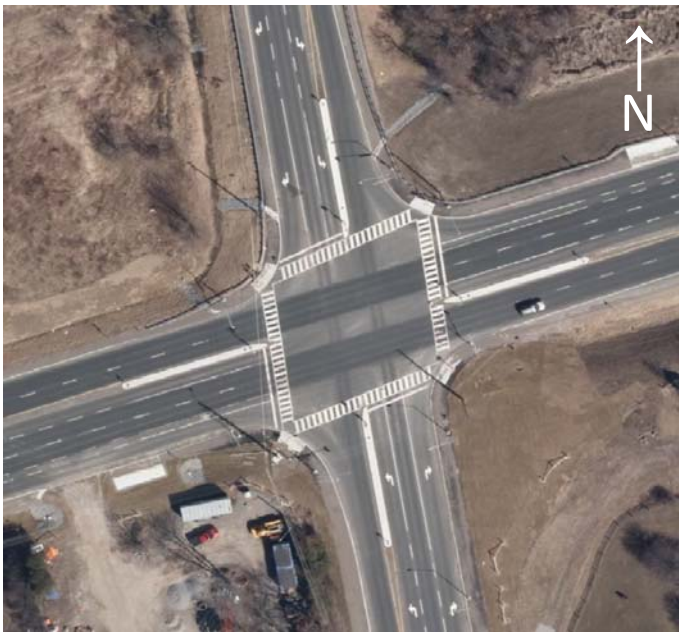
Leslie Street at Stouffville Road (West)

Leslie Street at Stouffville Road (East)

2014 - Leslie Street - 19th Avenue to Wellington Street (continued)

Key Intersections and Constraints

Leslie Street at Bloomington Road



Leslie Street at Wellington Street

Richmond Hill GO at Leslie Street

Constraint: Mature trees on both sides south of Stouffville Road. (Image capture: 2015, ©2016 Google)

2015 - Leslie Street - Wellington Street to Mulock Drive

Project Description

Location	Leslie Street	**Project ID**	**2015**
Municipality	Aurora, Newmarket	**Road Segment ID**	12-24 to 12-26
Project Limits	Wellington Street to Mulock Drive	**Length**	4,140 m
Project Type	Widen to 4 lanes		

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 36 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	620	520	0.77	0.64
Daily truck volume	N/A	N/A		

Description

Existing 4 general purpose lanes from Wellington Street to State Farm Way. Tapers into 2 general purpose lanes from State Farm Way to south of Mulock Drive. Widens back to 4 general purpose lanes approaching Mulock Drive. Turning lanes at intersections. No cycling facilities. Sidewalk facilities are provided at Leslie & Mulock intersection, and on select segments midblock adjacent to residential developments. There is no sidewalk facilities at Leslie & Wellington. There is a multi-use path on the west side of Leslie, south of Mulock to Ivsbridge Blvd / Kingsdale Road. There is no continuous sidewalk facility on Leslie from Mulock Rd to Wellington Street. Curbside transit from Wellington to State Farm Way and from Stonehaven Avenue to Mulock Drive.

Natural and Built Environment

Natural Environment Observations: Crosses Regional Greenlands System. Adjacent wooded areas on both sides of corridor north and south of St. John's Sideroad.
Source Water Protection Areas: Road project is entirely contained within SWP zone.

Land Use and Built Environment Developing residential area south of St. John's Sideroad. Primarily residential north of St John's Sideroad

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	880	700	1.09	0.87
2041 Proposed Network	1,450	1,180	0.91	0.73

2015 - Leslie Street - Wellington Street to Mulock 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 corridor to 4 lanes and construct to urban arterial standard.

Justification Capacity improvement serves growth in future urban area and provides improved walking and cycling facilities. Newmarket section (north of Broughton Lane) is currently under construction. Detailed design is complete for Aurora section (south of Broughton Lane) and construction is expected to commence in spring 2017. Opportunity to improve walking and cycling facilities.

TMP Phase 2017 to 2021

Alignment with TMP Objectives

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

Costs

Capital Cost	$	21,972,900
Incremental Annual Road Operating Cost	$	206,900
Incremental Road Maintenance and Rehabilitation Cost	$	78,000

Related Projects

Name	Project ID
Leslie Street - 19th Avenue to Wellington Street - Widen to 4 lanes	2014

2015 - Leslie Street - Wellington Street to Mulock Drive (continued)

Key Intersections and Constraints

Leslie Street at Wellington Street

Leslie Street at St John's Sideroad

Leslie Street at Mulock Drive

2016 - Leslie Street - Green Lane to Colonel Wayling Boulevard

Project Description

Location	Leslie Street	**Project ID**	**2016**
Municipality	East Gwillimbury	**Road Segment ID**	12-32
Project Limits	Green Lane to Colonel Wayling Boulevard	**Length**	600 m
Project Type	Widen to 4 lanes		

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 43 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	670	670	0.83	0.83
Daily truck volume	N/A	N/A		

Description

Existing 4 general purpose lanes from Green Lane to north of intersection. Tapers into 2 general purpose lanes from north of Green Lane/Leslie Street Intersection to Colonel Wayling Boulevard. Turning lanes at intersections. Sidewalk on west side only between Colonel Wayling Boulevard to Sharon Public School. Shared roadway (unsigned route). Curbside transit service.

Natural and Built Environment

Natural Environment Observations: Agricultural fields on both sides of corridor.
Source Water Protection Areas: Short overlap south of Mt Albert

Land Use and Built Environment Primarily agricultural with some low density residential approaching the established community of Sharon.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	1,130	1,130	1.41	1.41
2041 Proposed Network	1,310	1,310	1.63	1.63

2016 - Leslie Street - Green Lane to Colonel Wayling Boulevard (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 corridor to 4 lanes and construct to urban arterial standard.

Justification Capacity improvement serves growth in future urban area and provides and improves walking and cycling facilities. Widening is extended to Colonel Wayling Blvd which is a major collector road providing access to the new development areas. Leslie Street is not widened north of Colonel Wayling Blvd through established Sharon community.

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	$	4,072,500
Incremental Annual Road Operating Cost	$	30,000
Incremental Road Maintenance and Rehabilitation Cost	$	11,300

Related Projects

Name	Project ID
Leslie Street - Mount Albert Road to Queensville Sideroad - Widen to 4 lanes	2017

2016 - Leslie Street - Green Lane to Colonel Wayling Boulevard (continued)

Key Intersections and Constraints

Leslie Street at Green Lane

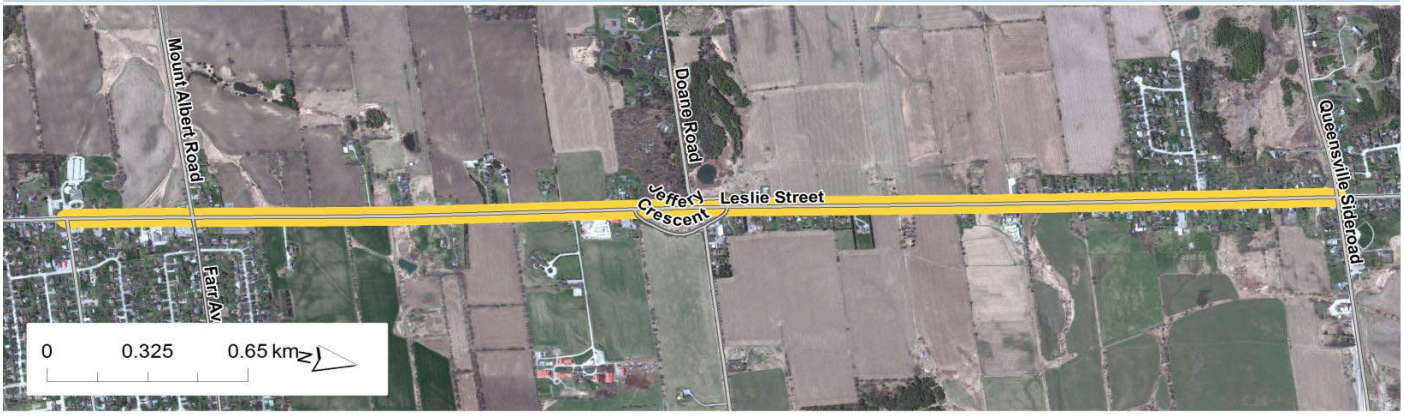
Leslie Street at Colonel Wayling

2017 - Leslie Street - Mount Albert Road to Queensville Sideroad

Project Description

Location	Leslie Street	**Project ID**	**2017**
Municipality	East Gwillimbury	**Road Segment ID**	12-34 to 12-36
Project Limits	Mount Albert Road to Queensville Sideroad	**Length**	3,140 m
Project Type	Widen to 4 lanes		

Map



Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 43 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	700	690	0.86	0.78
Daily truck volume	300 /day	250 /day		

Description

Existing 2 general purpose lanes with turning lanes at intersections. Sidewalks on both sides from Queensville Sideroad to south of Milne Lane. Paved shoulder from Mount Albert Road to Milne Lane. Shared pathway (in-boulevard) from Milne Lane to Queensville Sideroad. Curbside transit service.

Natural and Built Environment

Natural Environment

Observations: Existing development south of Mount Albert Road (N). Agricultural fields between Sharon and Queensville community.
Environmentally Sensitive Areas: Designated area from Doane Road to north of Queensville Sideroad.
Source Water Protection Areas: SWP area located at Mount Albert Road to south of Queensville, centered at Doane Road.

Land Use and Built Environment

Primarily agricultural with some low density residential. Sharon community south of Mount Albert Road (N). Queensville hamlet centred on Leslie Street and Queensville Sideroad.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	1,220	960	1.52	1.11
2041 Proposed Network	1,120	1,060	0.62	0.59

2017 - Leslie Street - Mount Albert Road to Queensville Sideroad (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 corridor to 4 lanes and construct to urban arterial standard.

Justification Corridor serves growth in future urban area and improves walking and cycling facilities. Widening improves access to planned Highway 404 interchange at Doane Road.

TMP Phase 2027 to 2031: Mount Albert Road to Doane Road
2032 to 2041: Doane Road to Queensville Sideroad

Alignment with TMP Objectives

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

Costs

Capital Cost	$	16,066,400
Incremental Annual Road Operating Cost	$	156,900
Incremental Road Maintenance and Rehabilitation Cost	$	59,200

Related Projects

Name	Project ID
Leslie Street - Green Lane to Colonel Wayling Boulevard - Widen to 4 lanes	2016

2017 - Leslie Street - Mount Albert Road to Queensville Sideroad (continued)

Key Intersections and Constraints

Leslie Street at Mount Albert Road (South)

Leslie Street at Mount Albert Road (North)

Leslie Street at Doane Road

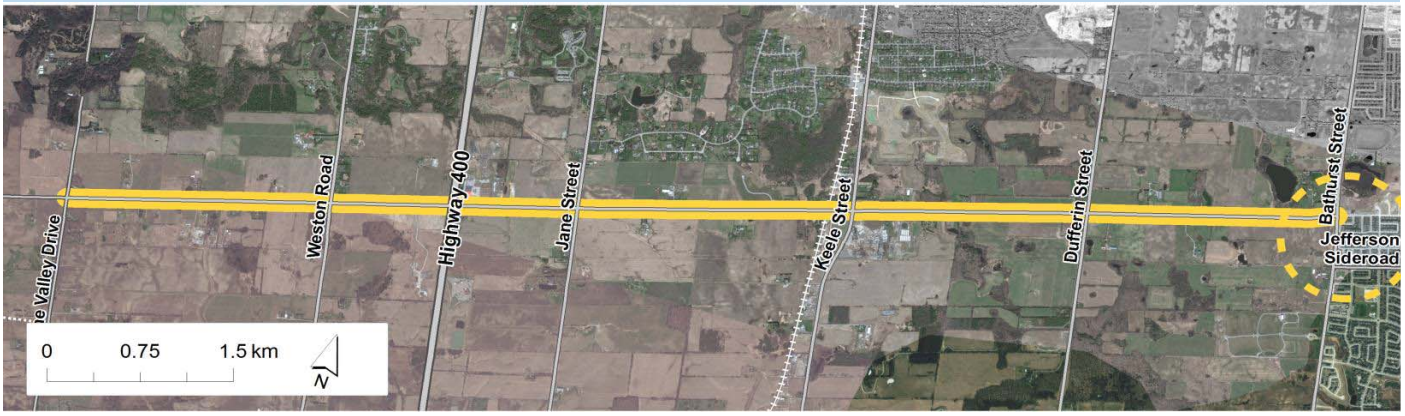
Leslie Street at Queensville Sideroad

2018 - King Vaughan Road - Pine Valley Drive to Bathurst Street

Project Description

Location	King Vaughan Road	**Project ID**	**2018**
Municipality	Vaughan	**Road Segment ID**	14-14 to 14-22
Project Limits	Pine Valley Drive to Bathurst Street	**Length**	10,280 m
Project Type	Widen to 4 lanes		

Map



Existing Conditions

Physical and Transportation Conditions

OP Designated ROW N/A

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	900	720	1.00	0.78
Daily truck volume	N/A	N/A		

Description

Existing 2 general purpose lanes. Turning lanes at intersection of King Vaughan Road/Bathurst Street. No sidewalks on either side. Shared roadway (unsigned route) between Pine Valley Drive and Jane Street. No transit services. At-grade rail crossing of Barrie GO Line west of Keele Street. Jogged intersection exists at Bathurst Street with Jefferson Sideroad continuing eastward.

Natural and Built Environment

Natural Environment Observations: Agricultural fields on both sides of corridor.
Environmentally Sensitive Areas: West of Keele Street; midway between Keele Street and Dufferin Street; short distance north of King Vaughan Road, just west of Bathurst Street

Land Use and Built Environment Primarily agricultural and rural residential.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	1,460	1,200	1.62	1.31
2041 Proposed Network	2,630	1,770	1.52	1.04

2018 - King Vaughan Road - Pine Valley Drive to Bathurst Street (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 maintain rural cross-section - Addresses traffic capacity. Does not improve walking facilities.
5. Widen corridor to 4 lanes and construct to urban arterial standard - Addresses traffic capacity. Opportunity to improve walking and cycling facilities.
6. 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 corridor to 4 lanes and construct to urban arterial standard within designated urban area. Realignment at Bathurst Street to eliminate jogged intersection.

Justification

Corridor serves growth in North Vaughan. Capacity improvements needed to accommodate future demand and improve walking and cycling facilities. Realignment to eliminate jogged intersection at Bathurst Street to improve east-west traffic flow.

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	$	39,617,200
Incremental Annual Road Operating Cost	$	274,100
Incremental Road Maintenance and Rehabilitation Cost	$	193,800

Related Projects

Name	Project ID
Barrie GO Grade Separation - King Vaughan Road west of Keele Street - Rail grade separation	2142
Jefferson Sideroad - Bathurst Street to Yonge Street - Widen to 4 lanes	2019

2018 - King Vaughan Road - Pine Valley Drive to Bathurst Street (continued)

Key Intersections and Constraints

King Vaughan Road at Weston Road

King Vaughan Road at Highway 400

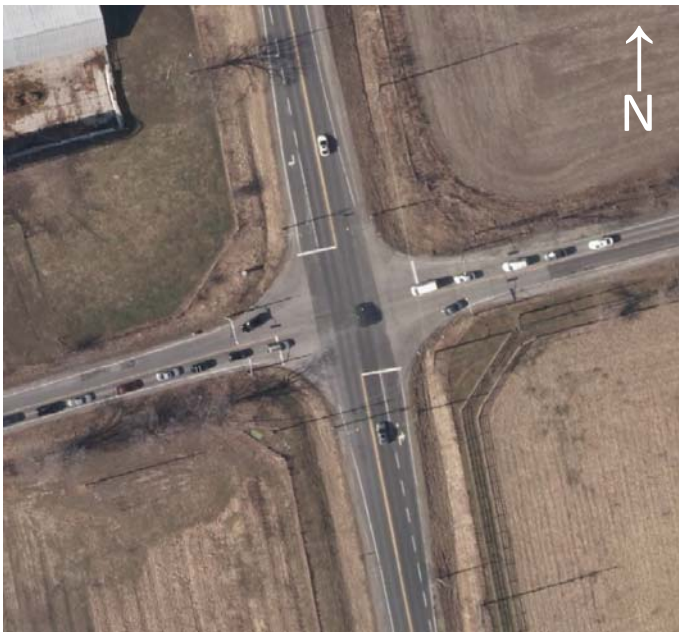
King Vaughan Road at Jane Street

King Vaughan Road at Keele Street

2018 - King Vaughan Road - Pine Valley Drive to Bathurst Street (continued)

Key Intersections and Constraints

King Vaughan Road at Dufferin Street



King Vaughan Road at Bathurst Street

Barrie GO at King Vaughan Road

Jogged intersection at King-Vaughan Road/ Jefferson Sideroad and Bathurst Street

2019 - Jefferson Sideroad - Bathurst Street to Yonge Street

Project Description

Location	Jefferson Sideroad	**Project ID**	**2019**
Municipality	Richmond Hill	**Road Segment ID**	14-24
Project Limits	Bathurst Street to Yonge Street	**Length**	1,670 m
Project Type	Widen to 4 lanes		

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW N/A

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	460	460	0.65	0.65
Daily truck volume	N/A	N/A		

Description

Existing 2 general purpose lanes with turning lanes. Currently under the jurisdiction of Richmond Hill. Continuous sidewalks on both sides. Shared roadway (signed route). Curbside transit available. Jogged intersections exist at Bathurst Street and Yonge Street.

Natural and Built Environment

Natural Environment Observations: Corridor crosses Regional Greenlands System with connections to Oak Ridges Trail. Philips Lake located on north side, west of Lake Forest Drive.
Environmentally Sensitive Areas: Philips Lake and surrounding area is a designated ESA (but not immediately adjacent to corridor).

Land Use and Built Environment Primarily residential subdivision with a small pocket of older, established residential.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	660	660	0.93	0.93
2041 Proposed Network	1,120	1,120	0.79	0.79

2019 - Jefferson Sideroad - Bathurst Street to Yonge Street (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 corridor to 4 lanes and construct to urban arterial standard.

Justification Serves growth in designated built up area. Improves walking and cycling facilities. Realignment to eliminate jogged intersection at Bathurst Street and at Yonge Street to improve east-west traffic flow. Jog elimination at Bathurst Street at Yonge Street should occur at time of widening

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	$	8,348,900
Incremental Annual Road Operating Cost	$	83,500
Incremental Road Maintenance and Rehabilitation Cost	$	31,500

Related Projects

Name	Project ID
King Vaughan Road - Pine Valley Drive to Bathurst Street - Widen to 4 lanes	2018
Stouffville Road - Yonge Street to Highway 404 - Widen to 4 lanes	2020

2019 - Jefferson Sideroad - Bathurst Street to Yonge Street (continued)

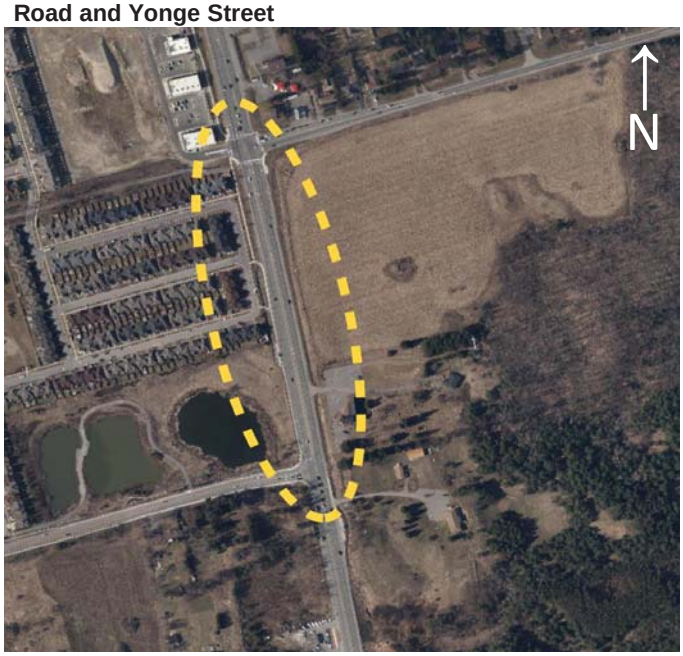
Key Intersections and Constraints

Jefferson Sideroad at Bathurst Street

Jefferson Sideroad at Yonge Street

Jogged intersection at King-Vaughan Road/ Jefferson Sideroad and Bathurst Street

Jogged intersection at Jefferson Sideroad/Stouffville Road and Yonge Street



2020 - Stouffville Road - Yonge Street to Highway 404

Project Description

Location	Stouffville Road	**Project ID**	**2020**
Municipality	Richmond Hill	**Road Segment ID**	14-26 to 14-29
Project Limits	Yonge Street to Highway 404	**Length**	4,800 m
Project Type	Widen to 4 lanes		

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 36 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	1,010	880	1.00	0.88
Daily truck volume	N/A	N/A		

Description

Existing 2 general purpose lanes with turning lanes. Widens to 4 general purpose lanes at the intersection of Stouffville Road/Bayview Avenue and at the crossing over Highway 404. No sidewalks on either side. Shared roadway (unsigned route) between Leslie Street and Highway 404. Curbside transit service. Richmond Hill GO/CN railway underpass east of Leslie Street. Jogged intersection exists at Yonge Street with Jefferson Sideroad continuing westward.

Natural and Built Environment

Natural Environment Observations: Corridor is within the Regional Greenlands System from Yonge Street to Leslie Street. Environmentally Sensitive Areas: Large designated area encompassing most of Stouffville Road from Yonge Street to Leslie Street.

Land Use and Built Environment Estate homes on north side of corridor between Yonge Street and Bayview Avenue with direct driveway access. Estate homes on south side east of Bayview Avenue. Golf course located at southwest quadrant of Stouffville Road and Bayview Avenue. Community of Gormley and agricultural lands approaching Highway 404.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	1,360	1,150	1.36	1.14
2041 Proposed Network	1,940	1,850	0.97	0.92

2020 - Stouffville Road - Yonge Street to Highway 404 (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 corridor to 4 lanes and construct to urban arterial standard within designated urban area. Realignment at Yonge St to eliminate jogged intersection.
Justification	Forecast travel demands exceed volume thresholds for widening. Improves walking and cycling facilities in designated urban area. Realignment to eliminate jogged intersection at Yonge Street to improve east-west traffic flow.
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	$	40,532,600
Incremental Annual Road Operating Cost	$	101,000
Incremental Road Maintenance and Rehabilitation Cost	$	90,500

Related Projects

Name	Project ID
Jefferson Sideroad - Bathurst Street to Yonge Street - Widen to 4 lanes	2019

2020 - Stouffville Road - Yonge Street to Highway 404 (continued)

Key Intersections and Constraints

Stouffville Road at Yonge Street

Stouffville Road at Bayview Avenue

Stouffville Road at Leslie Street (West)

Stouffville Road at Leslie Street (East)

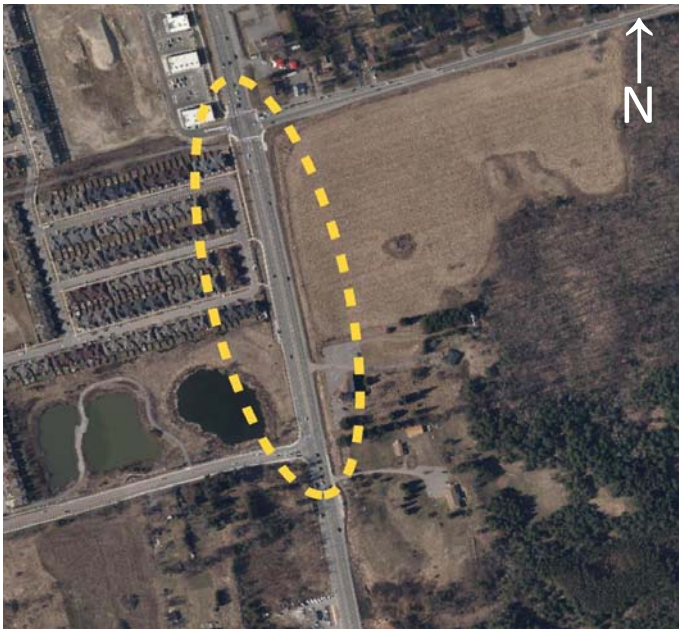
2020 - Stouffville Road - Yonge Street to Highway 404 (continued)

Key Intersections and Constraints

Stouffville Road at Highway 404

Railway underpass east of Leslie Street (Image capture: 2015, ©2016 Google)

Jogged intersection at Jefferson Sideroad/Stouffville Road and Yonge Street



2021 - Wellington Street - Yonge Street to Industrial Parkway

Project Description

Location	Wellington Street	**Project ID**	**2021**
Municipality	Aurora	**Road Segment ID**	15-26
Project Limits	Yonge Street to Industrial Parkway	**Length**	1,000 m
Project Type	Widen to 4 lanes		

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 20 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	1,000	1,000	0.62	0.62
Daily truck volume	N/A	N/A		

Description

Existing 3 general purpose lanes. Widens to 4 lanes at the intersections of Yonge Street/Wellington Street and Industrial Parkway/Wellington Street. There are turning lanes at intersections and median lane in some sections. Continuous sidewalks on both sides. Shared roadway (unsigned route) from Victoria Street to Wells Street North and from Larmont Street to Oak Ridges Trail. Curbside transit available. At-grade rail crossing of Barrie GO Line east of Industrial Parkway South.

Natural and Built Environment

Natural Environment Observations: Existing development on both sides of corridor.
Source Water Protection Areas: Entirely within SWP zone.

Land Use and Built Environment Neighbourhood commercial near Yonge Street. Historic residential homes, some converted to commercial uses, fronting on to Wellington Street east to Aurora GO. Commercial and light industrial from GO Station to Industrial Parkway.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	1,430	1,430	0.89	0.89
2041 Proposed Network	1,360	1,360	0.85	0.85

2021 - Wellington Street - Yonge Street to Industrial Parkway (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 cycling.
- Corridor improvements need to support transit.

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 walking and cycling facilities.

Recommended Improvement and Justification

Recommendation Widen corridor to 4 lanes.

Justification Forecast travel demands exceed volume thresholds for widening. Eliminates an existing bottleneck and completes 4-lane corridor. Opportunity to improve walking and cycling facilities.

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	$	7,090,400
Incremental Annual Road Operating Cost	$	50,000
Incremental Road Maintenance and Rehabilitation Cost	$	18,800

Related Projects

Name	Project ID
Barrie GO Grade Separation - Wellington Street west of Industrial Parkway - Rail grade separation	2132

2021 - Wellington Street - Yonge Street to Industrial Parkway (continued)

Key Intersections and Constraints

Wellington Street at Yonge Street

Barrie GO at Wellington Street

2023 - Green Lane - 2nd Concession to Highway 404

Project Description

Location	Green Lane	**Project ID**	**2023**
Municipality	East Gwillimbury	**Road Segment ID**	19-28 to 19-29
Project Limits	2nd Concession to Highway 404	**Length**	3,100 m
Project Type	Widen to 6 lanes		

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 43 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	1,650	1,530	0.82	0.76
Daily truck volume	1,620 /day	1,280 /day		

Description

Existing 4 general purpose lanes with turning lanes at intersections and median lane in some sections. No sidewalks on either side. Curbside transit available from 2nd Concession to Leslie Street. Shared roadway (unsigned route). At-grade rail crossing of Barrie GO Line east of 2nd Concession.

Natural and Built Environment

Natural Environment Observations: Forest on north side. Abuts Rogers Reservoir Conservation Area
Source Water Protection Areas: Designated area north of Green Lane at 2nd Concession.

Land Use and Built Environment Primarily agricultural lands.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	3,120	2,640	1.56	1.32
2041 Proposed Network	2,320	2,080	1.16	1.04

2023 - Green Lane - 2nd Concession to Highway 404 (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 Forecast demand exceeds threshold for 6-lane widening. Transit/HOV lane may improve transit travel time and provides connection to commuter lot at Highway 404. Transit/HOV lanes connect to rapidway west of 2nd Concession. Opportunity to improve walking and cycling facilities.

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	$	38,841,900
Incremental Annual Road Operating Cost	$	154,900
Incremental Road Maintenance and Rehabilitation Cost	$	58,400

Related Projects

Name	Project ID
Green Lane - Yonge Street to GO Station - RT Corridor	1021
Green Lane - Yonge Street to 2nd Concession - Widen to 6 lanes	2126
Barrie GO Grade Separation - Green Lane east of 2nd Concession - Rail grade separation	2140

2023 - Green Lane - 2nd Concession to Highway 404 (continued)

Key Intersections and Constraints

Green Lane at 2nd Concession

Green Lane at Leslie Street

Green Lane at Highway 404

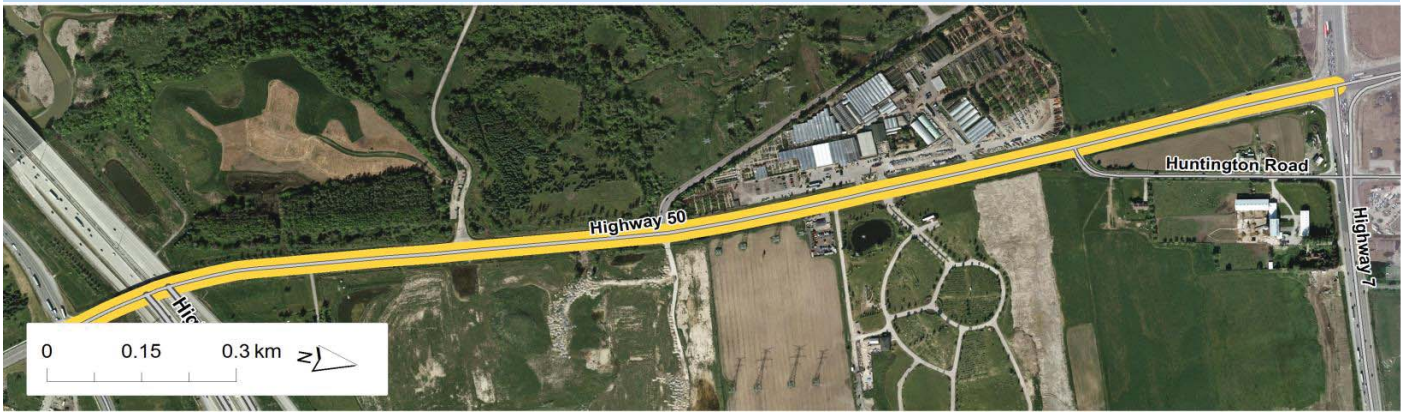
Barrie GO at Green Lane

2024 - Highway 50 - Steeles Avenue to Highway 7

Project Description

Location	Highway 50	**Project ID**	**2024**
Municipality	Vaughan	**Road Segment ID**	24-02
Project Limits	Steeles Avenue to Highway 7	**Length**	1,910 m
Project Type	Widen to 6 lanes		

Map



Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 45 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	1,940	1,940	1.07	1.07
Daily truck volume	3,790 /day	3,790 /day		

Description

Existing 4 general purpose lanes from Steeles approaching Highway 7. Widens to 6 lanes near the intersection of Highway 7/Highway 50. There are turning lanes at intersections and median lane in some sections. No sidewalks on either side. No dedicated cycling facilities. No transit services.

Natural and Built Environment

Natural Environment Observations: Abuts conservation area on the west.

Land Use and Built Environment Clairville Conservation Area located on the west. Glenview Memorial Gardens (cemetery) on the east. Industrial land uses and some agricultural.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	2,720	2,720	1.51	1.51
2041 Proposed Network	3,930	3,930	1.45	1.45

2024 - Highway 50 - Steeles Avenue to Highway 7 (continued)

Problem or Opportunity Statement

• 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. 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 between Peel and York Regions under joint jurisdiction; coordination with Peel Region required. Forecasts exceeds capacity of 4 lane road and widening would provide continuous 6-lane corridor on Highway 50. Potential for implementing HOV lanes jointly with Peel Region. Opportunity to improve walking and cycling facilities.

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	$	28,919,500
Incremental Annual Road Operating Cost	$	95,500
Incremental Road Maintenance and Rehabilitation Cost	$	36,000

Related Projects

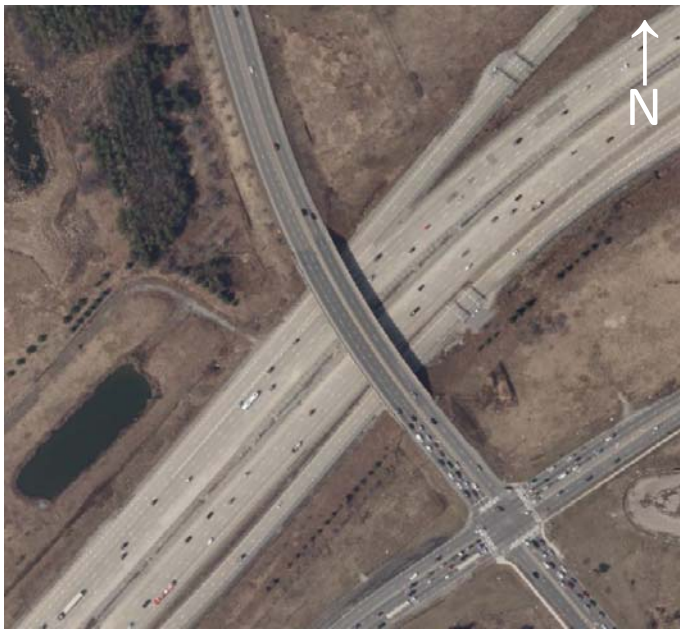
Name	Project ID

2024 - Highway 50 - Steeles Avenue to Highway 7 (continued)

Key Intersections and Constraints

Highway 50 at Steeles Avenue

Highway 50 at Highway 407



Highway 50 at Highway 7

2025 - Highway 50 - Rutherford Road to Albion-Vaughan Road

Project Description

Location	Highway 50	**Project ID**	**2025**
Municipality	Vaughan	**Road Segment ID**	24-08 to 24-12
Project Limits	Rutherford Road to Albion-Vaughan Road	**Length**	5,520 m
Project Type	Widen to 6 lanes		

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 45 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	1,670	1,560	0.93	0.87
Daily truck volume	6,620 /day	5,410 /day		

Description

Existing 4 general purpose lanes with turning lanes at intersections and median lane in some sections. Road widens to 6 lanes at intersection of Rutherford Road/Highway 50. No sidewalks on either side, with the exception of sidewalk facilities at the intersection of Rutherford Road/Highway 50. No dedicated cycling facilities. No transit services.

Natural and Built Environment

Natural Environment Observations: Agricultural fields on both sides.

Land Use and Built Environment Primarily agricultural, but with major inter-modal rail yard on the east side between Rutherford Road and Major Mackenzie Drive.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	2,910	2,410	1.62	1.34
2041 Proposed Network	3,040	2,650	1.12	0.98

2025 - Highway 50 - Rutherford Road to Albion-Vaughan Road (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.

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 between Peel and York Regions under joint jurisdiction and coordination with Peel Region required. High traffic volumes with significant commercial vehicle demand. Serves CP Intermodal and urban development on both sides of boundary area. Widening would provide continuous 6-lane corridor on Highway 50. Potential for implementing HOV lanes jointly with Peel Region. Opportunity to improve walking and cycling facilities.

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	$	30,116,200
Incremental Annual Road Operating Cost	$	275,900
Incremental Road Maintenance and Rehabilitation Cost	$	104,000

Related Projects

Name	Project ID

2025 - Highway 50 - Rutherford Road to Albion-Vaughan Road (continued)

Key Intersections and Constraints

Highway 50 at Rutherford Road

Highway 50 at Major Mackenzie Drive

Highway 50 at Nashville Road

2026 - Major Mackenzie Drive - Highway 50 to Highway 27

Project Description

Location	Major Mackenzie Drive	**Project ID**	**2026**
Municipality	Vaughan	**Road Segment ID**	25-06 to 25-08
Project Limits	Highway 50 to Highway 27	**Length**	2,960 m
Project Type	Widen to 6 lanes		

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 43 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	500	450	0.70	0.63
Daily truck volume	220 /day	160 /day		

Description

Existing 2 general purpose lanes with turning lanes at some intersections. Jogged intersection at Highway 27. No sidewalks on either side. No dedicated cycling facilities. No transit services. At-grade rail crossing for CP Rail Line east of Huntington Road.

Natural and Built Environment

Natural Environment Observations: Forests located west of Highway 27 along Humber River valley lands. Agricultural fields.

Land Use and Built Environment Developing residential area east of Huntington Road. Intermodal rail yard on south side east of Highway 50.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	900	850	1.27	1.20
2041 Proposed Network	1,590	1,380	0.84	0.73

2026 - Major Mackenzie Drive - Highway 50 to Highway 27 (continued)

Problem or Opportunity Statement

- Transportation network improvements are needed to accommodate expansion of the Designated Urban Area.
- Elimination of jogged intersection needed to provide continuous corridor.
- Capacity improvements needed to support goods movement.
- 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 and realign jogged intersection.

Justification Included in 10-year Capital Plan. Construction of section from Highway 50 to CP Rail will coincide with construction of Highway 427 extension to Major Mackenzie Drive. Improvements at Highway 50 intersection will require coordination with Peel Region. Construction of section from CP Rail to Highway 27 will commence in 2016. Realigned intersection adds capacity and improves traffic flow. Improves walking and cycling. Encourages shift to transit/HOV.

TMP Phase 2017 to 2021

Alignment with TMP Objectives

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

Costs

Capital Cost	$	24,235,200
Incremental Annual Road Operating Cost	$	245,600
Incremental Road Maintenance and Rehabilitation Cost	$	111,600

Related Projects

Name	Project ID
Major Mackenzie Drive - Highway 27 to Jane Street - Widen to 6 lanes	2027
CP MacTier Grade Separation - Major Mackenzie Drive west of Highway 27 - Rail grade separation	2141

2026 - Major Mackenzie Drive - Highway 50 to Highway 27 (continued)

Key Intersections and Constraints

Major Mackenzie Drive at Highway 50

Major Mackenzie Drive at Highway 27

Jogged intersection at Major Mackenzie Drive at Highway 27

CP MacTier at Major Mackenzie Drive

2027 - Major Mackenzie Drive - Highway 27 to Jane Street

Project Description

Location	Major Mackenzie Drive	**Project ID**	**2027**
Municipality	Vaughan	**Road Segment ID**	25-09 to 25-16
Project Limits	Highway 27 to Jane Street	**Length**	7,840 m
Project Type	Widen to 6 lanes		

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 45 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	1,830	990	1.06	0.83
Daily truck volume	2,970 /day	1,420 /day		

Description

Existing 2 general purpose lanes from Highway 27 to Lawford Road, with widenings at some intersections in between to 4 lanes. Existing 4 general purpose lanes from Lawford Road to Jane Street. Turning lanes at intersections. Jogged intersection at Highway 27. There is no continuous sidewalks between Highway 27 and Jane Street. There are occasional sidewalks along adjacent commercial developments. Segment of Off-road Multi-use Trail adjacent to Major Mackenzie Drive east of Adlington Avenue. Curbside transit between Pine Valley Drive and Jane Street.

Natural and Built Environment

Natural Environment Observations: Corridor is within Regional Greenlands System between Islington Avenue and Pine Valley Drive with a number of significant forests.
Environmentally Sensitive Areas: Large designated ESA (Kortright Centre for Conservation) between Islington Avenue and Pine Valley Drive. ANSI east of Pine Valley Drive.

Land Use and Built Environment Parklands west of Pine Valley Drive. Major commercial centres surrounded by residential between Pine Valley Drive and Jane Street.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	2,240	1,430	1.34	1.21
2041 Proposed Network	2,270	1,920	0.97	0.80

2027 - Major Mackenzie Drive - Highway 27 to Jane Street (continued)

Problem or Opportunity Statement

- Transportation network improvements are needed to accommodate expansion of the Designated Urban Area.
- Elimination of jogged intersection needed to provide continuous corridor.
- Capacity improvements needed to support goods movement.
- 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 and realign jogged intersection.
Justification	Widening to 6 lanes from Highway 27 to Highway 400 included in 10-year Capital Plan. Construction to begin in 2017. Widening of section from Highway 400 to Jane Street not included in 10-year Capital Plan. Forecasts meet threshold for widening, provides for continuous 6-lane corridor. Realigned intersection adds capacity and improves traffic flow. Opportunity to improve walking and cycling facilities.
TMP Phase	2017 to 2021

Alignment with TMP Objectives

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

Costs

Capital Cost	$	72,797,200
Incremental Annual Road Operating Cost	$	576,300
Incremental Road Maintenance and Rehabilitation Cost	$	257,900

Related Projects

Name	Project ID
Major Mackenzie Drive - Highway 50 to Highway 27 - Widen to 6 lanes	2026
Major Mackenzie Drive - Jane Street to Leslie Street - RT Corridor	1013

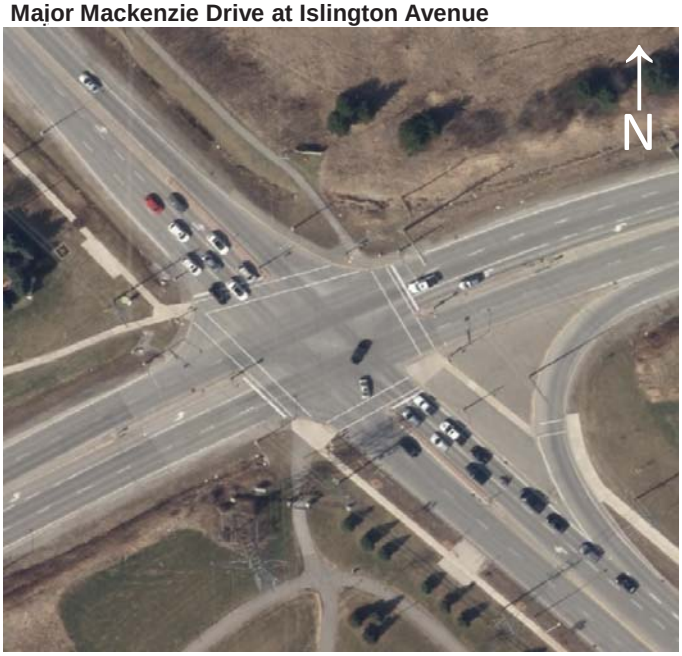
2027 - Major Mackenzie Drive - Highway 27 to Jane Street (continued)

Key Intersections and Constraints

Jogged intersection at Major Mackenzie Drive at Highway 27

Major Mackenzie Drive at Highway 27

Major Mackenzie Drive at Islington Avenue



Major Mackenzie Drive at Pine Valley Drive

2027 - Major Mackenzie Drive - Highway 27 to Jane Street (continued)

Key Intersections and Constraints

Major Mackenzie Drive at Weston Road

Major Mackenzie Drive at Highway 400

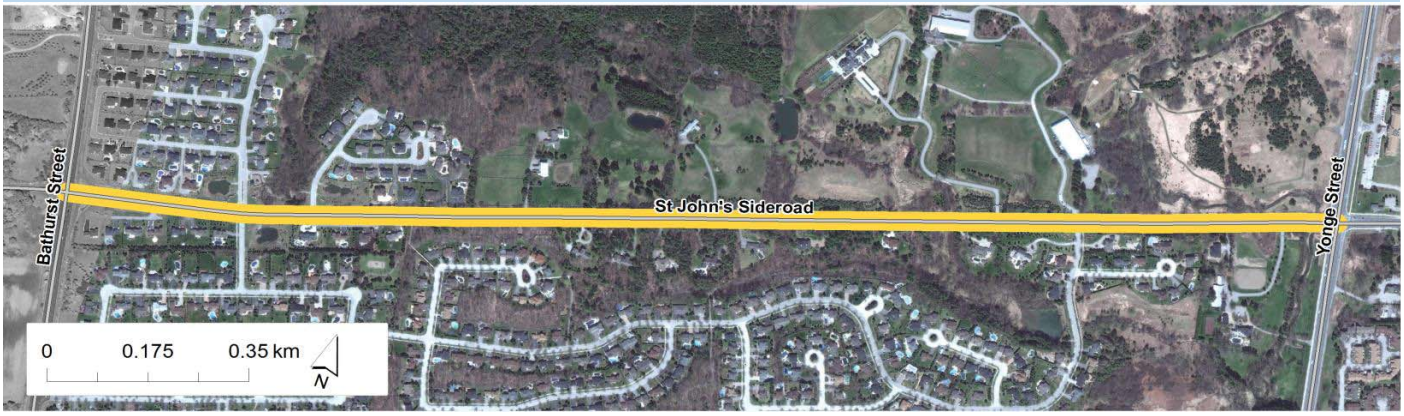
Major Mackenzie Drive at Jane Street

2028 - St John's Sideroad - Bathurst Street to Yonge Street

Project Description

Location	St John's Sideroad	**Project ID**	**2028**
Municipality	Aurora	**Road Segment ID**	26-24
Project Limits	Bathurst Street to Yonge Street	**Length**	2,210 m
Project Type	Widen to 4 lanes		

Map



Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 36 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	390	390	0.48	0.48
Daily truck volume	N/A	N/A		

Description

Existing 2 general purpose lanes with turning lanes at intersections. No sidewalks on either side. Shared roadway (unsigned route). No transit services.

Natural and Built Environment

Natural Environment Observations: Regional Greenlands System on both sides with pockets of significant forest.
Source Water Protection Areas: Majority of corridor within SWP zone.

Land Use and Built Environment Large residential properties fronting St John's Sideroad.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	610	610	0.75	0.75
2041 Proposed Network	740	740	0.46	0.46

2028 - St John's Sideroad - Bathurst Street to Yonge Street (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 corridor to 4 lanes and construct to urban arterial standard.

Justification Serves growth in designated built up area of Aurora. Provides improved 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	$	11,749,600
Incremental Annual Road Operating Cost	$	110,500
Incremental Road Maintenance and Rehabilitation Cost	$	41,700

Related Projects

Name	Project ID

2028 - St John's Sideroad - Bathurst Street to Yonge Street (continued)

Key Intersections and Constraints

St John's Sideroad at Bathurst Street

St John's Sideroad at Yonge Street

2029 - St John's Sideroad - Bayview Avenue to Highway 404

Project Description

Location	St John's Sideroad	**Project ID**	**2029**
Municipality	Aurora	**Road Segment ID**	26-28 to 26-29
Project Limits	Bayview Avenue to Highway 404	**Length**	3,140 m
Project Type	Widen to 4 lanes		

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 36 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	420	410	0.52	0.51
Daily truck volume	N/A	N/A		

Description

Existing 2 general purpose lanes with turning lanes at intersections. No sidewalk on either side. Shared roadway (unsigned route). Curbside transit between Bayview Avenue to Mavrinac Boulevard.

Natural and Built Environment

Natural Environment Observations: Forest located on both sides west of Leslie Street.
Source Water Protection Areas: Majority of corridor within SWP zone.

Land Use and Built Environment New residential subdivision between Bayview Avenue and Leslie Street.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	810	740	1.00	0.92
2041 Proposed Network	1,310	1,200	0.81	0.75

2029 - St John's Sideroad - Bayview Avenue to Highway 404 (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 corridor to 4 lanes and construct to urban arterial standard.

Justification Widening to 4 lanes with on-street cycling facilities is included in the 10-year Capital Plan. Construction to be tendered in Spring 2016. Supports growth in urban area and connects to planned interchange at Highway 404.

TMP Phase 2017 to 2021

Alignment with TMP Objectives

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

Costs

Capital Cost	$	25,460,400
Incremental Annual Road Operating Cost	$	156,900
Incremental Road Maintenance and Rehabilitation Cost	$	59,200

Related Projects

Name	Project ID
Highway 404 New Interchange - at St John's Sideroad - New Interchange	2104

2029 - St John's Sideroad - Bayview Avenue to Highway 404 (continued)

Key Intersections and Constraints

St John's Sideroad at Bayview Avenue

St John's Sideroad at Leslie Street

St John's Sideroad at Highway 404

2030 - Highway 27 - Steeles Avenue to Major Mackenzie Drive

Project Description

Location	Highway 27	**Project ID**	**2030**
Municipality	Vaughan	**Road Segment ID**	27-01 to 27-07
Project Limits	Steeles Avenue to Major Mackenzie Drive	**Length**	7,870 m
Project Type	Widen to 6 lanes		

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 43 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	1,910	1,710	0.93	0.77
Daily truck volume	3,170 /day	1,900 /day		

Description

Existing 4 general purpose lanes with turning lanes at intersections and median lane in some sections. Sidewalk on east side from Rutherford to Royalpark Way and from Martin Grove Road to Langstaff Road. Continuous sidewalks on both side from Langstaff Road to Royal Gate Boulevard. Shared pathway (in-boulevard) from Highway 7 to Milani Boulevard. Curbside transit between Rutherford and Martin Grove Road, Langstaff and Medallion Boulevard, and Zenway Boulevard and Steeles Avenue. CP railway underpass south of Rutherford Road.

Natural and Built Environment

Natural Environment Observations: Crossing of Humber River south of Major Mackenzie Drive. Corridor is within the Regional Greenlands System between Rutherford Road and Major Mackenzie Drive.
Environmentally Sensitive Areas: Designated area in the southeast quadrant of Highway 27 and Rutherford Road.

Land Use and Built Environment Cemetery located on west side north of Highway 407. Large employment area with industrial and commercial uses around Highway 7. low density residential backing onto Highway 27. Primarily agricultural north of Langstaff Road.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	2,860	2,490	1.43	1.13
2041 Proposed Network	3,450	3,150	1.28	1.13

2030 - Highway 27 - Steeles Avenue to Major Mackenzie Drive (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 Corridor experiences high traffic volumes and congestion during peak periods. Volumes exceed threshold for widening to 6 lanes. Transit/HOV lanes provide additional capacity for transit and connection to transit/HOV lanes on Rutherford Road and Major Mackenzie Drive. Opportunity to improve walking and cycling facilities.

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	$	104,081,400
Incremental Annual Road Operating Cost	$	393,400
Incremental Road Maintenance and Rehabilitation Cost	$	148,300

Related Projects

Name	Project ID
Highway 27 - Major Mackenzie Drive to King Road - Widen to 4 lanes	2031

2030 - Highway 27 - Steeles Avenue to Major Mackenzie Drive (continued)

Key Intersections and Constraints

Highway 27 at Steeles Avenue

Highway 27 at Highway 407

Highway 27 at Highway 7

Highway 27 at Langstaff Road

2030 - Highway 27 - Steeles Avenue to Major Mackenzie Drive (continued)

Key Intersections and Constraints

Highway 27 at Rutherford Road

Highway 27 at Major Mackenzie Drive (South)

Railway underpass south of Rutherford Road (Image capture: 2015, ©2016 Google)

2031 - Highway 27 - Major Mackenzie Drive to King Road

Project Description

Location	Highway 27	**Project ID**	**2031**
Municipality	Vaughan, King	**Road Segment ID**	27-08 to 27-16
Project Limits	Major Mackenzie Drive to King Road	**Length**	8,910 m
Project Type	Widen to 4 lanes		

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 36 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	1,300	980	1.04	0.85
Daily truck volume	1,440 /day	790 /day		

Description

Existing 2 general purpose lanes form Major Mackenzie Drive to The Boulevard, with widenings to 4 lanes at intersections. Widens to 3 general purpose lanes between The Boulevard and past Hedgerow Lane. Tapers back into 2 lanes between Hedgerow Lane and King Road. The road widens back into 4 lanes at the intersection of King Road/Highway 27. There are turning lanes at intersections and median lane in some sections. Sidewalk only on east side in front of Villa Colombo located south of Islington Avenue. Paved shoulder from the Boulevard to north of Oliver Emerson Avenue. Shared roadway (unsigned route) from north of Oliver Emerson Avenue to King Road. Curbside transit between Nashville Road and Islington Avenue.

Natural and Built Environment

Natural Environment Observations: Greenlands system to the east and west.
Environmentally Sensitive Areas: Designated area east side of Highway 27, north of Kirby Road.
Source Water Protection Areas: Two protection areas - near Nashville Road and in Nobleton.

Land Use and Built Environment Pockets of low density residential to north of Teston Road. Golf course south of Kirby Road. Primarily agricultural north of Kirby. Low density residential at King Road (Nobleton).

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	2,580	1,730	1.93	1.47
2041 Proposed Network	2,670	2,370	1.33	1.18

2031 - Highway 27 - Major Mackenzie Drive to King Road (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 maintain rural cross-section - Addresses traffic capacity. Does not improve walking facilities.
5. Widen corridor to 4 lanes and construct to urban arterial standard - Addresses traffic capacity. Opportunity to improve walking and cycling facilities.
6. 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 corridor to 4 lanes and construct to urban arterial standard within designated urban areas.

Justification Serves growth in designated built up area. Forecast demands exceed capacity in the peak period. Improves walking and cycling facilities in urban areas. Paved shoulders in rural area accommodate cycling.

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	$	60,334,700
Incremental Annual Road Operating Cost	$	385,100
Incremental Road Maintenance and Rehabilitation Cost	$	167,900

Related Projects

Name	Project ID
Highway 27 - Steeles Avenue to Major Mackenzie Drive - Widen to 6 lanes	2030
Highway 27 - King Road to Highway 9 - Widen to 4 lanes	2032

2031 - Highway 27 - Major Mackenzie Drive to King Road (continued)

Key Intersections and Constraints

Highway 27 at Major Mackenzie Drive (South)

Highway 27 at Major Mackenzie Drive (North)

Highway 27 at Nashville Road

Highway 27 at King Road

2032 - Highway 27 - King Road to Highway 9

Project Description

Location	Highway 27	**Project ID**	**2032**
Municipality	King	**Road Segment ID**	27-18 to 27-28
Project Limits	King Road to Highway 9	**Length**	12,340 m
Project Type	Widen to 4 lanes		

Map

Existing Conditions

Physical and Transportation Conditions

OP Designated ROW Up to 36 metres

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	950	750	0.94	0.78
Daily truck volume	660 /day	510 /day		

Description

Existing 3 general purpose lanes from King Road to Sheardown Drive. Tapers into 2 lanes from Sheardown Drive to Dillane Drive. Widen to 4 lanes between Dillane Drive and Highway 9. Turning lanes at intersections. Sidewalks on both sides from Fairmont Ridge Trail to King Road. Shared roadway (unsigned route) from King Road to Fairmont Ridge Trail. Paved Shoulder from Fairmont Ridge Trail to Dillane Drive. Curbside transit from King Road to Dr. Kay Drive.

Natural and Built Environment

Natural Environment Observations: Majority of corridor is within Regional Greenlands System between 15th Sideroad and 17th Sideroad.
Environmentally Sensitive Areas: Highway 27 bisects a designated ESA just south of 15th Sideroad.
Source Water Protection Areas: Two protection areas centred on Nobleton and Schomberg areas.

Land Use and Built Environment Primarily agricultural lands with small pockets of low density residential. Schomberg community south of Highway 9.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	1,700	1,300	1.69	1.34
2041 Proposed Network	2,150	1,960	1.24	1.02

2032 - Highway 27 - King Road to Highway 9 (continued)

Problem or Opportunity Statement

• 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.
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 maintain rural cross-section - Addresses traffic capacity. Does not improve walking facilities.
5. Widen corridor to 4 lanes and construct to urban arterial standard - Addresses traffic capacity. Opportunity to improve walking and cycling facilities.
6. 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 corridor to 4 lanes and construct to urban arterial standard within designated urban areas.

Justification Additional capacity needed to accommodate forecast traffic demands on primary north-south arterial in western York. Improves walking and cycling faculties in urban sections.

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	$	57,844,500
Incremental Annual Road Operating Cost	$	380,000
Incremental Road Maintenance and Rehabilitation Cost	$	232,600

Related Projects

Name	Project ID
Highway 27 - Major Mackenzie Drive to King Road - Widen to 4 lanes	2031

2032 - Highway 27 - King Road to Highway 9 (continued)

Key Intersections and Constraints

Highway 27 at King Road

Highway 27 at Lloydtown/Aurora Road

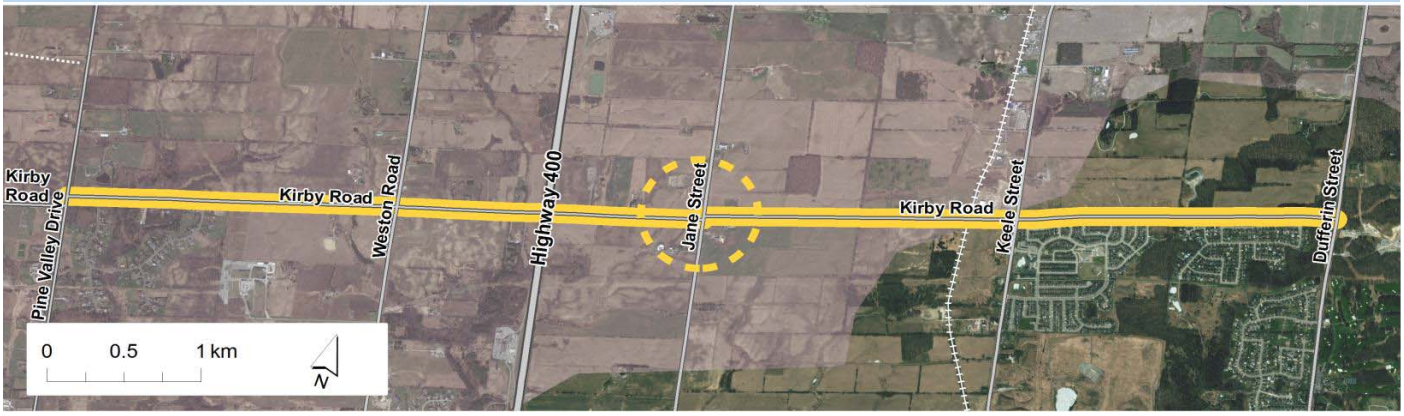
Highway 27 at Highway 9

2034 - Kirby Road - Pine Valley Drive to Dufferin Street

Project Description

Location	Kirby Road	**Project ID**	**2034**
Municipality	Vaughan	**Road Segment ID**	29-14 to 29-20
Project Limits	Pine Valley Drive to Dufferin Street	**Length**	8,280 m
Project Type	Widen to 4 lanes		

Map



Existing Conditions

Physical and Transportation Conditions

OP Designated ROW N/A

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
Model Forecast	Maximum	Average	Maximum	Average
2011 Existing	560	370	0.62	0.40
Daily truck volume	N/A	N/A		

Description

Existing 2 general purpose lanes. Turning lanes at intersection of Keele Street/Kirby Road. Sidewalk on south side only from Dufferin Street to Keele Street. Shared roadway (unsigned route). Curbside transit between Keele Street and Ravineview Drive. Structural walls of Highway 400 overpass abut travel lanes. At-grade rail crossing of Barrie GO Line west of Keele Street.

Natural and Built Environment

Natural Environment Observations: Primarily agricultural lands and wooded areas east of Keele Street with several crossings of the Regional Greenlands System. Wooded areas and Greenlands system interspersed with developed residential subdivisions. Corridor west of Keele Street is within Oak Ridges Moraine.
Environmentally Sensitive Areas: Large designated ESA across Kirby Road between Keele Street and Dufferin Street.

Land Use and Built Environment Primarily agricultural and wooded areas. Low density residential subdivisions west of Dufferin Street.

Future Transportation Conditions

	Peak Hour Auto Volume		Peak Hour V/C Ratio	
	Maximum	Average	Maximum	Average
2041 Do Nothing	1,250	1,000	1.39	1.08
2041 Proposed Network	1,520	1,150	1.08	0.82

2034 - Kirby Road - Pine Valley Drive to Dufferin Street (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 corridor to 4 lanes and construct to urban arterial standard and realign jogged intersection.

Justification

Serves growth in designated built up areas in North Vaughan. Corridor is an Interim Primary Arterial for Goods Movement. Widening provides for continuous 4-lane east-west corridor tying into 19th Avenue and Donald Cousens Parkway to the east with the planned connection of the missing link east of Dufferin Street. Elimination of jogged intersection at Jane Street to improved traffic flow. Opportunity to improve walking and cycling facilities.

TMP Phase

2027 to 2031: Weston Road to Dufferin Street
2032 to 2041: Pine Valley Drive to Weston Road

Alignment with TMP Objectives

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

Costs

Capital Cost	$	76,440,600
Incremental Annual Road Operating Cost	$	413,900
Incremental Road Maintenance and Rehabilitation Cost	$	156,100

Related Projects

Name	Project ID
Kirby Road - Dufferin Street to Bathurst Street - Missing Link	2035
Highway 400 New Interchange - at King Vaughan Road - New Interchange	2112
Barrie GO Grade Separation - Kirby Road west of Keele Street - Rail grade separation	2147

2034 - Kirby Road - Pine Valley Drive to Dufferin Street (continued)

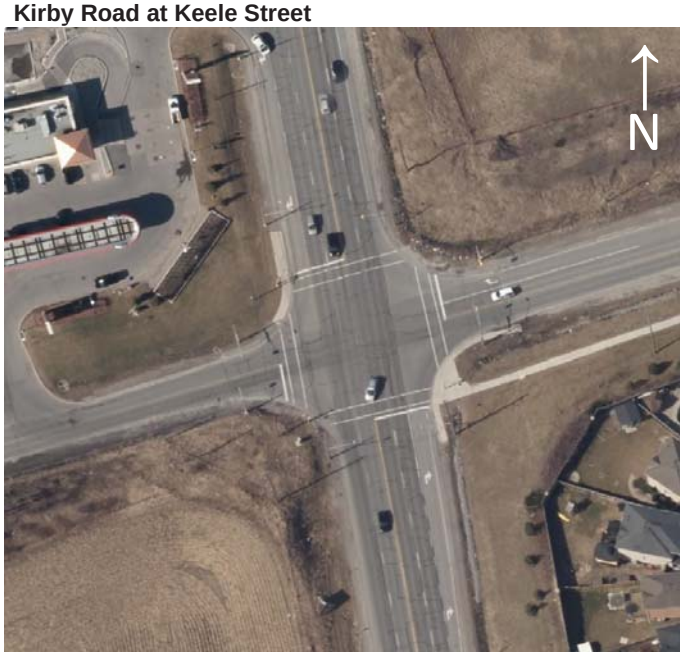
Key Intersections and Constraints

Kirby Road at Weston Road

Kirby Road at Highway 400

Kirby Road at Jane Street

Kirby Road at Keele Street



2034 - Kirby Road - Pine Valley Drive to Dufferin Street (continued)

Key Intersections and Constraints

Kirby Road at Dufferin Street

Highway 400 overpass (Image capture: 2015, ©2016 Google)

Barrie GO at Kirby Road