

Municipal Class EA To Address Traffic Congestion Along Ontario Street Corridor Grand Bend

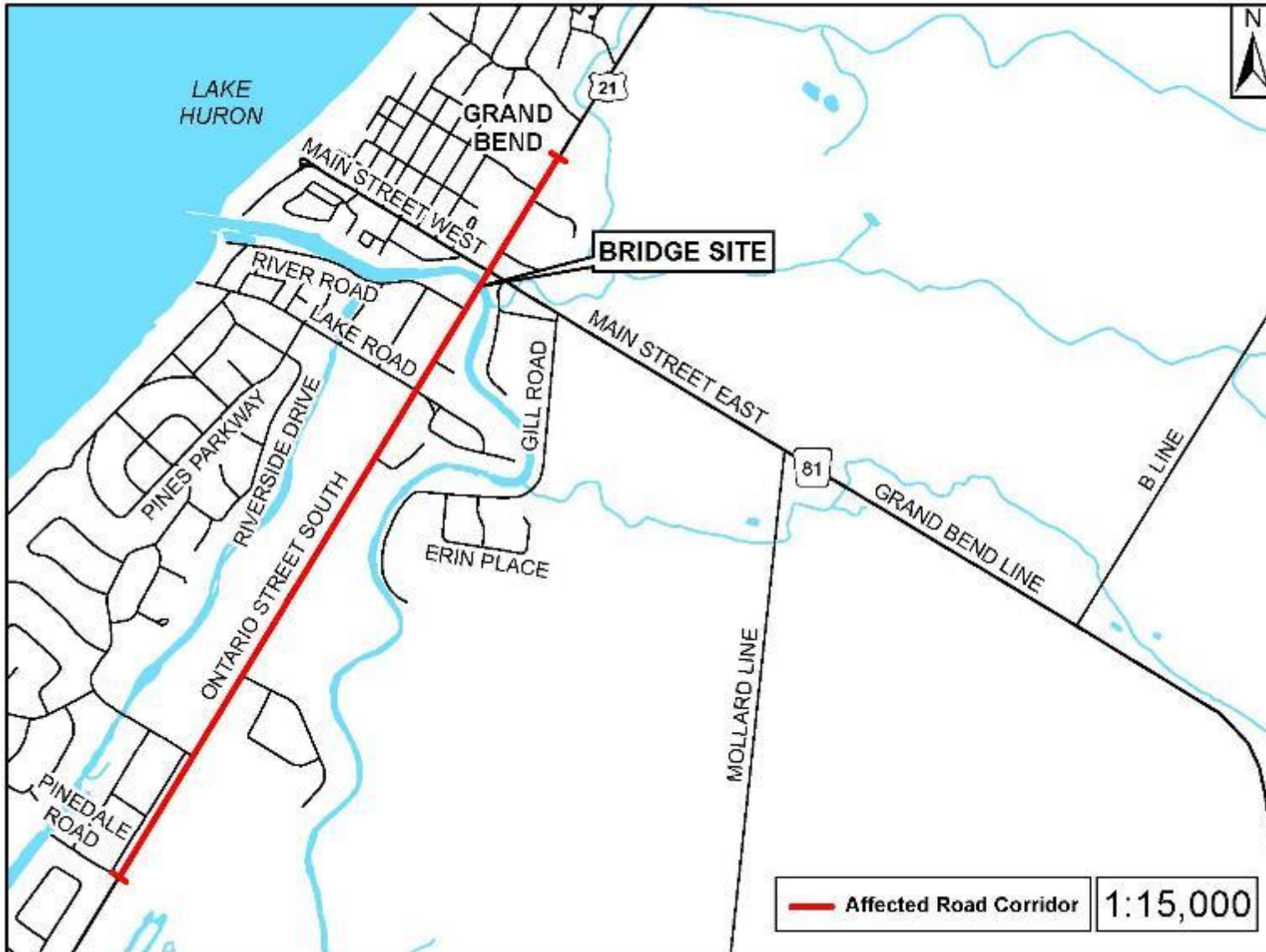
Public Information Meeting
August 24, 2016



Agenda

- Introduction
- Background
- Class EA Process
- Preliminary Engineering
- Traffic Study
- Class EA Alternatives
- Next Steps
- Questions

Project Study Area



Highway 21 Corridor – Study Area

- Connecting Link Section Through Grand Bend
- Extends from Pinedale Road at the South End to Municipal Boundary (Lambton Shores/Grand Bend) at North End
- Provincial Highway corridor, owned and maintained by Lambton Shores



Ontario Street Corridor looking north

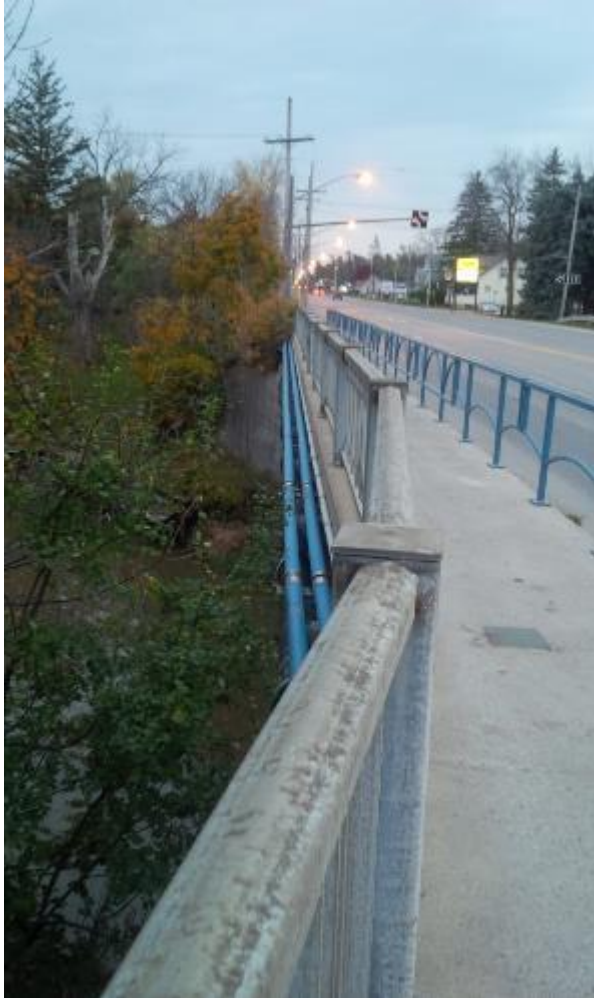
Existing Conditions

Existing Bridge Description



View looking west (downstream) from river side docks ▲

Bridge Photos



East Sidewalk



West Sidewalk

Ontario Street Bridge

- Spans Parkhill Creek
- Concrete Post Tension Frame Bridge
- Constructed Circa 1963
- No Record of Previous Major Rehabilitation

Traffic Lined Up at Bridge ►



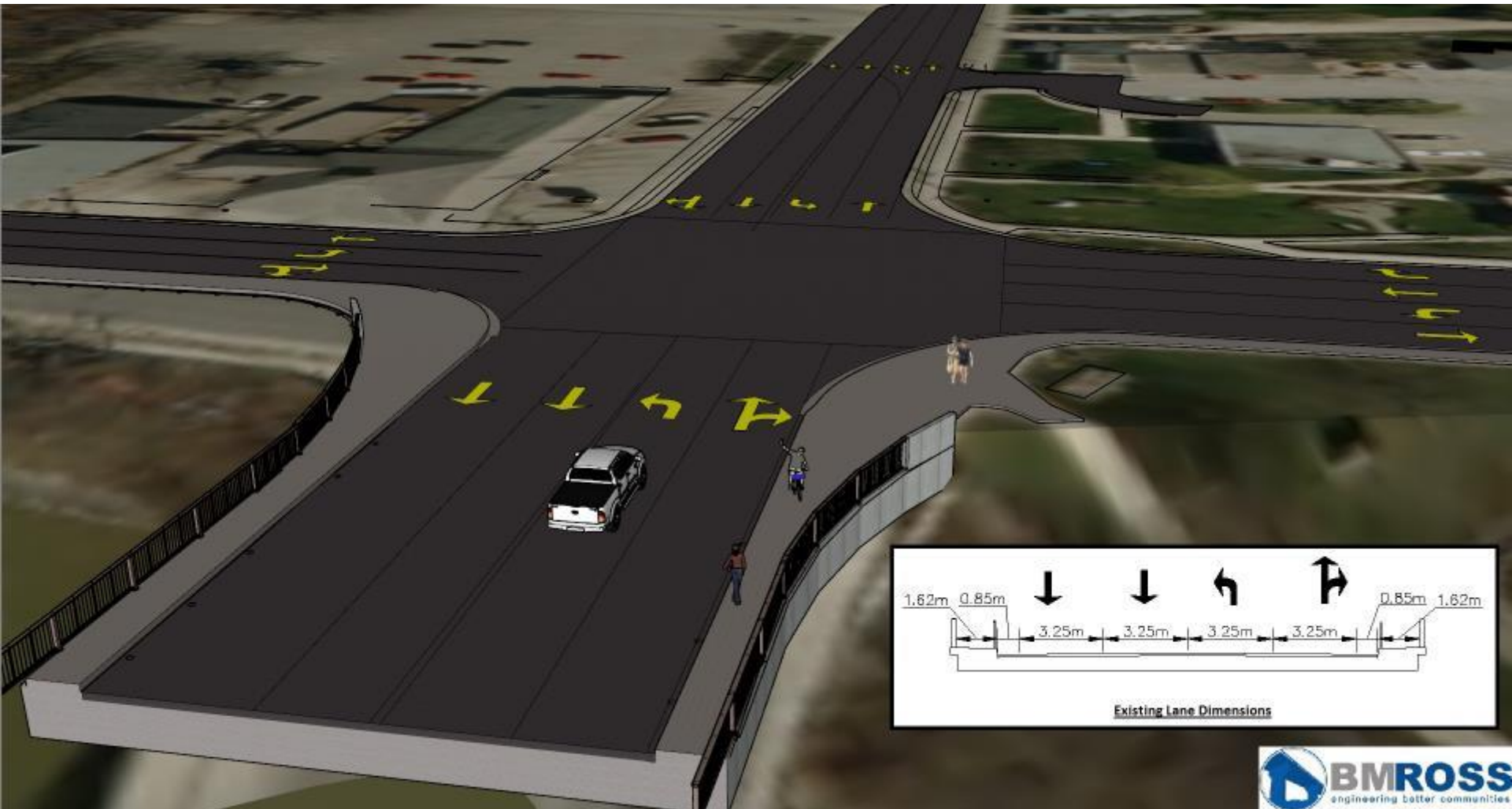
Existing Intersection Configuration



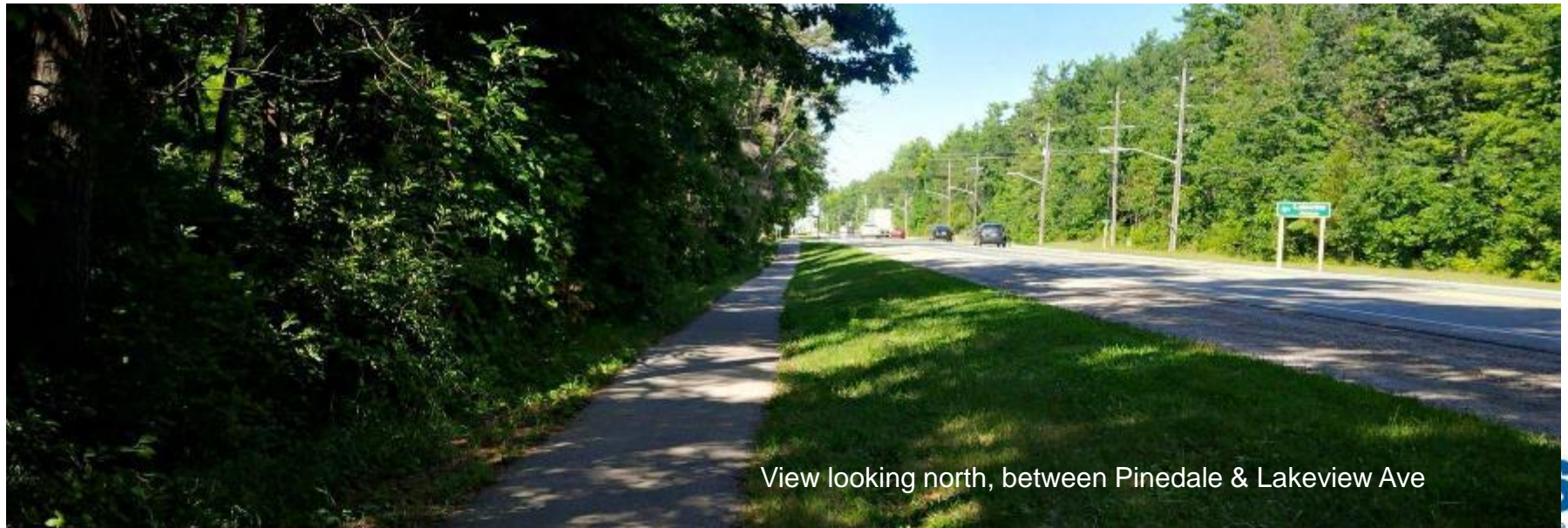
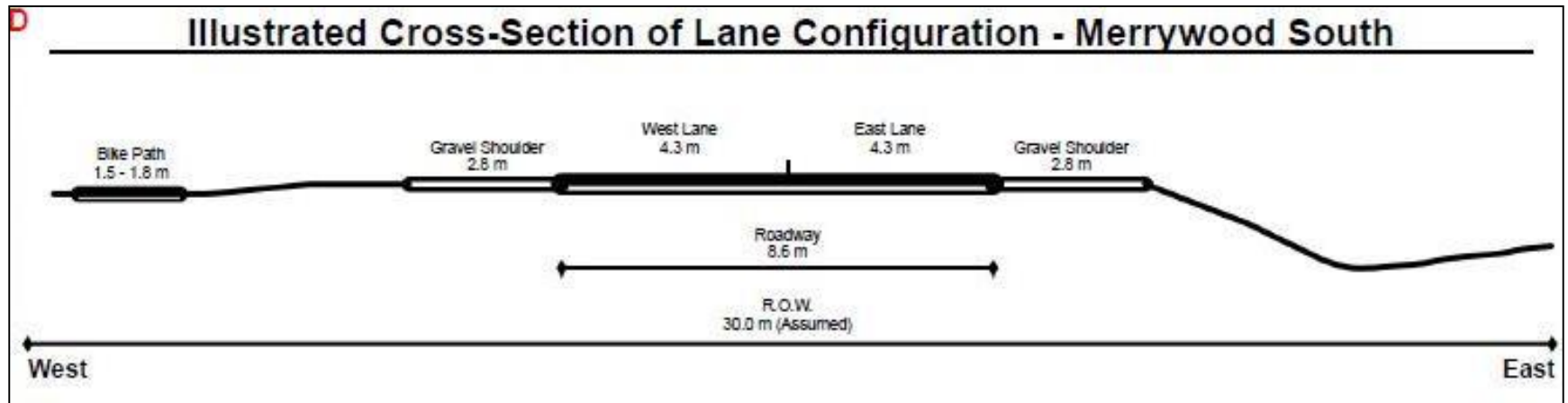
Existing Lane Configuration



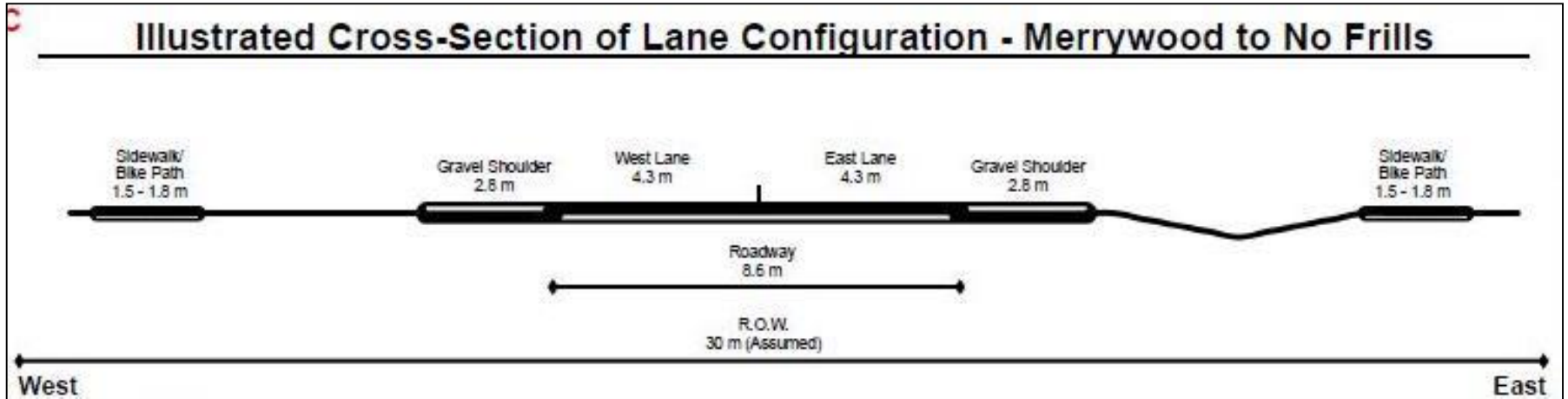
Existing Conditions



Corridor – South of Merrywood Dr.

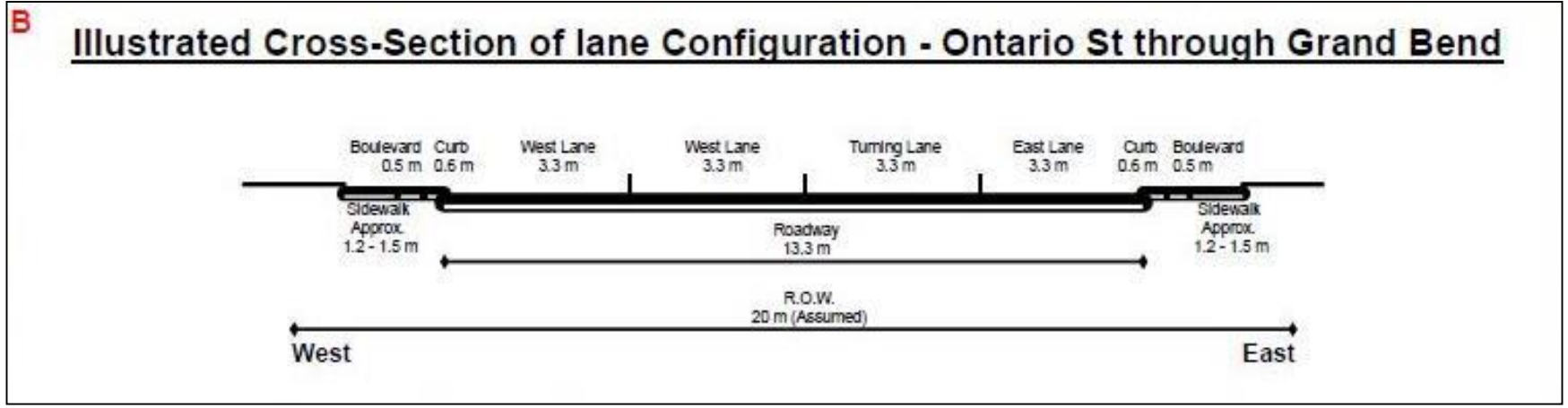


Corridor – South of No Frills



View looking north, between Merrywood Dr. & No Frills

Multi-Lane Corridor – No Frills to Municipal Limit



Project Timelines

- Project Initiated (March 2015)
- Small Communities Fund Grant Application (Sept. 2015)
- Preliminary Engineering Completed (Winter 2015/16)
- Traffic Operations Study Completed (February 2016)
- Presentation to Council (June 28, 2016)
- Study Scope Expanded to Include Full Connecting Link Corridor
- Class Environmental Assessment Initiated(August 2016)
- Public Information Meeting (August 2016)

CLASS EA PROCESS

CLASS EA STUDY PHASES

PROBLEM/OPPORTUNITY DEFINITION



IDENTIFICATION OF ALTERNATIVES



CONSULTATION WITH PUBLIC AND REVIEW AGENCIES



EVALUATION OF ALTERNATIVES



SELECTION OF PREFERRED ALTERNATIVE

Problem Summary

- Only One Crossing of the River available for Vehicular and Pedestrian Traffic Volumes in the Community
- Significant Traffic Congestion and Delays on Ontario Street, especially for northbound traffic on Long Weekends.
- High volume of Pedestrian Traffic needs to be Addressed
- Traffic delays are an Inconvenience to the public and slow response times for Emergency Vehicles
- Existing corridor may be too narrow to accommodate bike lanes or more traffic lanes.

Consultation Program

- Initial Notice/Public Meeting Notice – August 2016
 - Published in Local Papers and Direct-Mailed to Adjacent Property Owners
- Agency Consultation – August 2016
 - Provincial/Federal Review Agencies
 - MTO/ MNRF/ MTCS/ ABCA
 - Adjacent Municipalities
 - Emergency Services
- Aboriginal Consultation – August 2016
- First Public Meeting – August 24, 2016
- Additional Consultation once Preferred Alternative Selected

Engineering Review

Engineering Review

- Inspection of the Condition of the Existing Bridge
- Survey of Road Profiles through Project Study Area
- Survey of lands located adjacent to the crossing and intersection where modifications may be required to achieve road design standards – check for potential conflicts
- Identification of potential Alternatives to address existing deficiencies
- Identification of Potential By-Pass Route
- Calculate Probable Costs for All Options

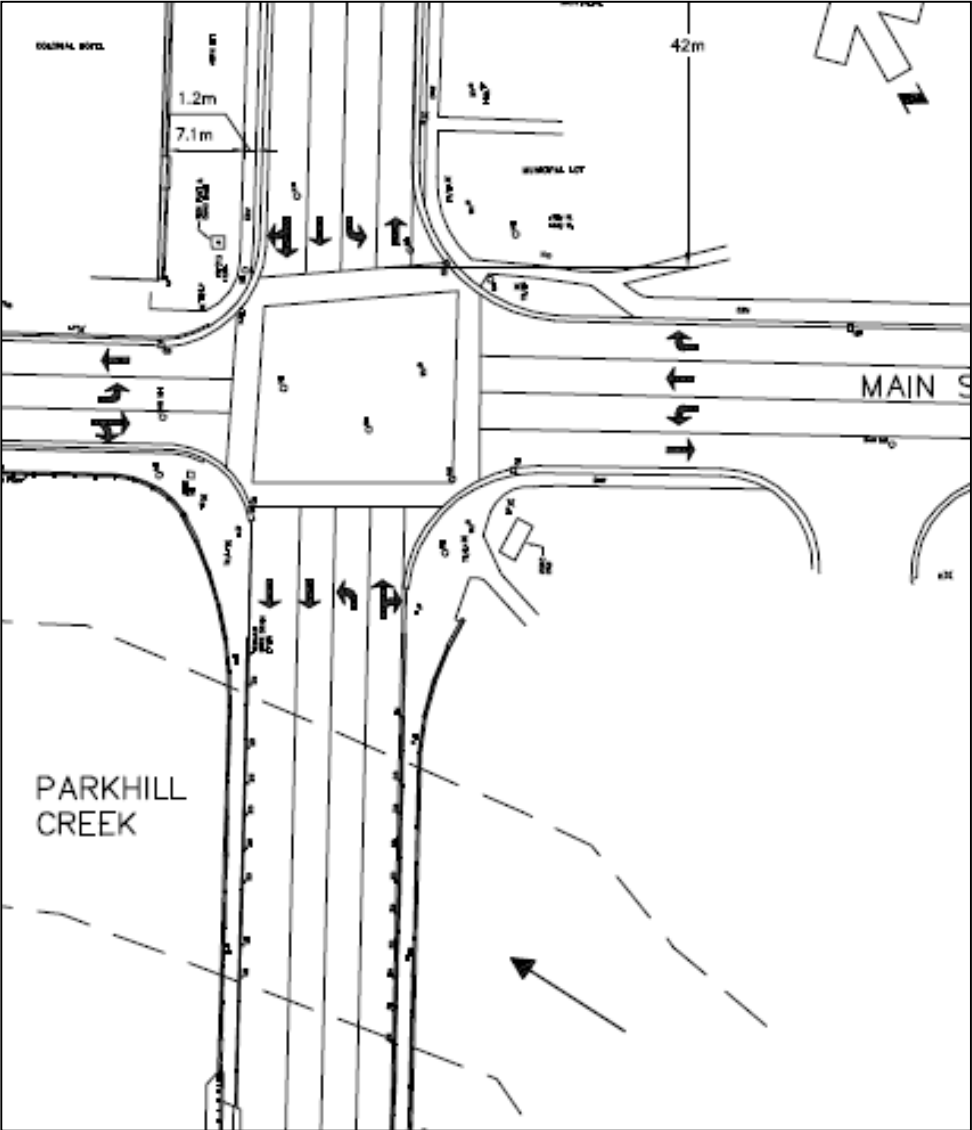
Traffic Study

Paradigm Transportation Solutions

Traffic Study - Paradigm

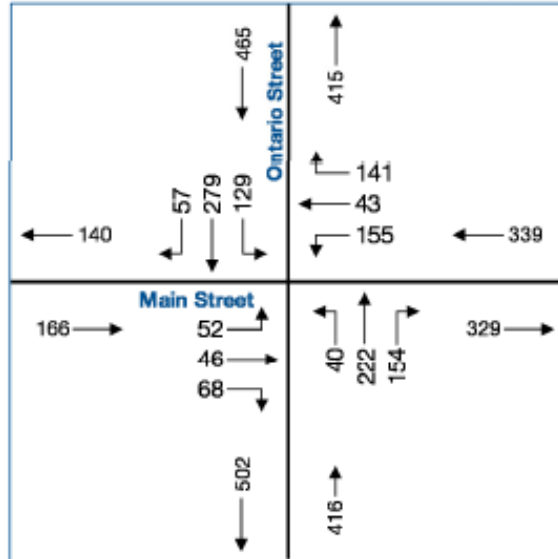
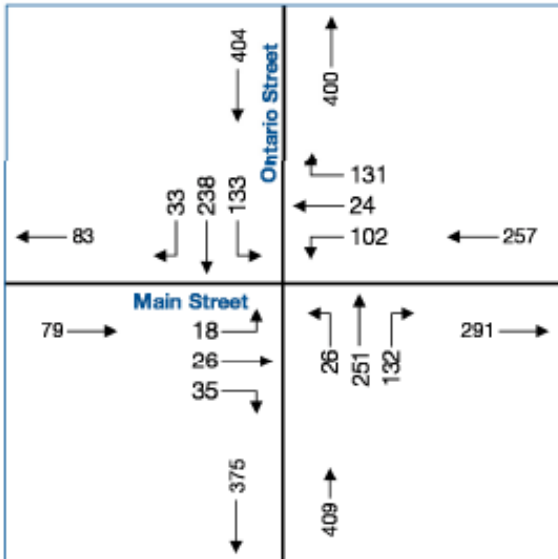
- Analyzed Current and Future Traffic Operations for Intersection
 - Analysis of Existing Traffic Conditions
 - Traffic Forecasts for a Five Year (2020) Horizon
 - Analysis of Potential Remedial Measures
- Turning Movement Volumes of Intersection Counted
 - Weekday in June 2015
 - Victoria Day Long Weekend
 - Canada Day Long Weekend
- Identified Current Operational and Safety Deficiencies

Current Intersection Configuration



June Weekday
AM Peak Hour

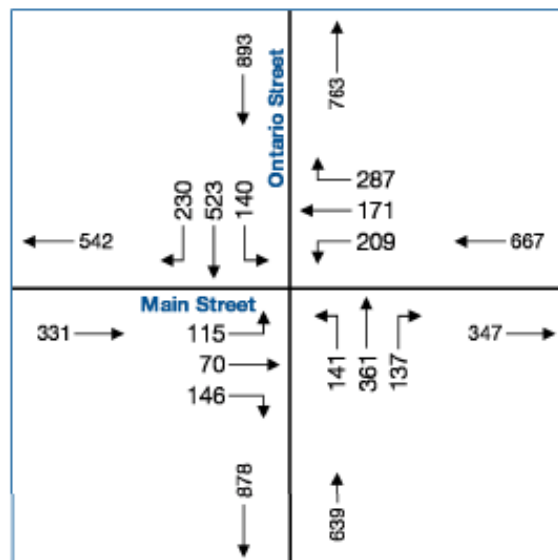
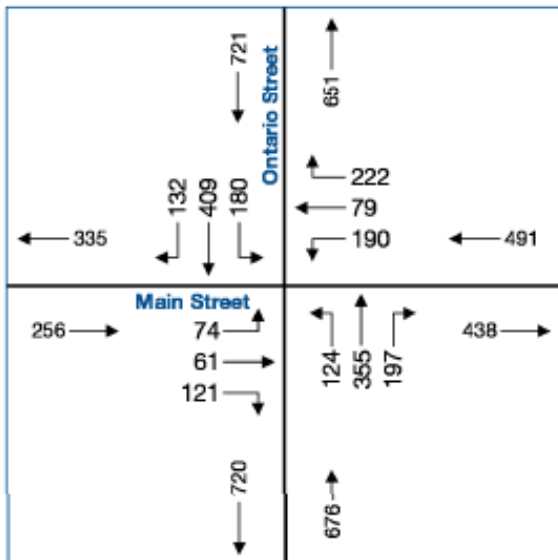
June Weekday
PM Peak Hour



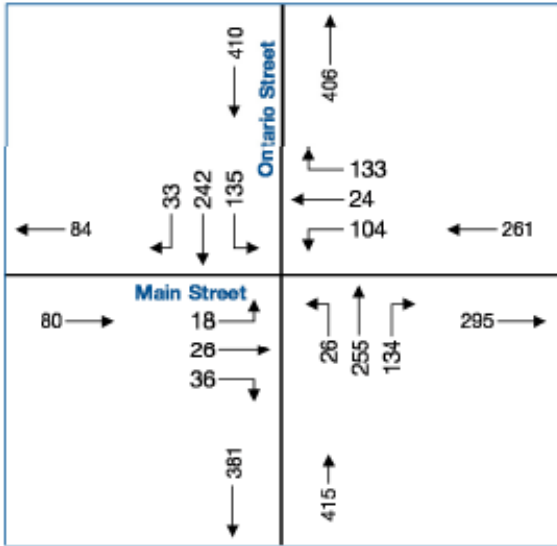
Traffic Movement Counts

May Long Weekend
Saturday Peak Hour

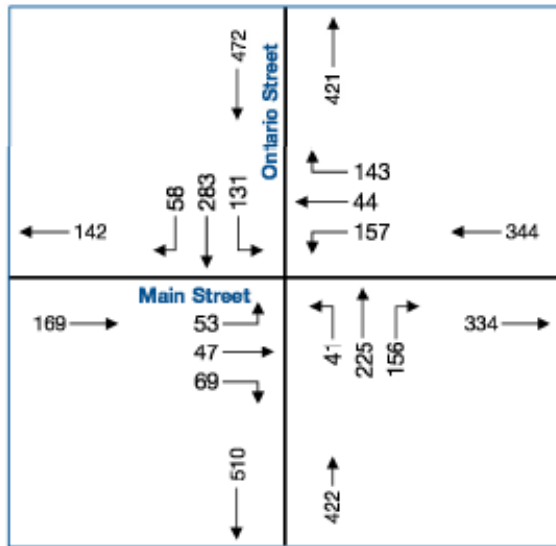
July Long Weekend
Saturday Peak Hour



June Weekday
AM Peak Hour

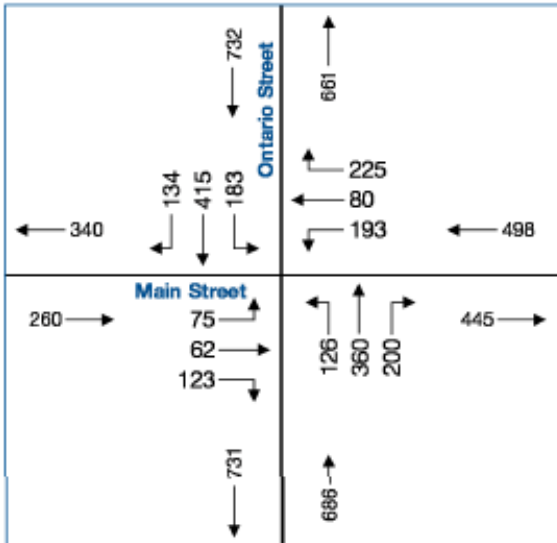


June Weekday
PM Peak Hour

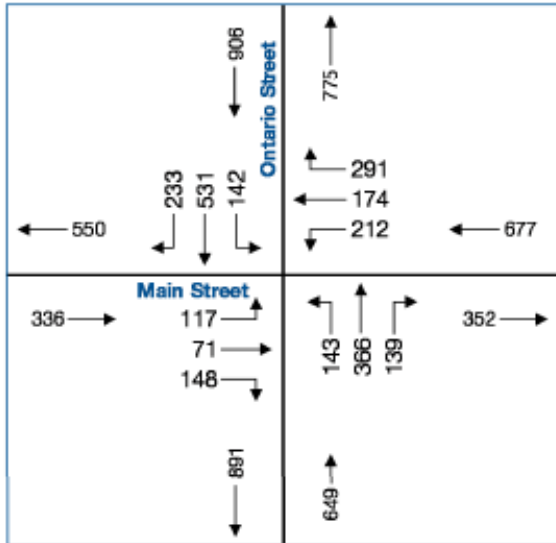


2020 Peak Volume Forecasts

May Long Weekend
Saturday Peak Hour



July Long Weekend
Saturday Peak Hour



Pedestrian Counts - Weekday

Date	Time	Temp	Main St West leg	Main St East Leg	Ontario South Leg	Ontario North Leg
June 3-4, 2015 (Wed & Thur)	3:00 – 6:00 pm & 7:00 am – 1:00 pm	19°C	46	49	69	54
June 3-4, 2015 Wednesday	3:00 – 4:00 pm (Peak Hour Data)	19°C	6	10	12	14
June 4, 2015 Thursday	9:00 – 10:00 am (Peak Hour Data)	15°C	10	7	0	6
June 4, 2015	11:00am – 12:00pm (Peak Hour Data)	18°C	0	14	0	0
June 4, 2015	12:00 – 1:00 pm (Peak Hour Data)	21°C	6	4	14	7

Pedestrian Counts - Weekend

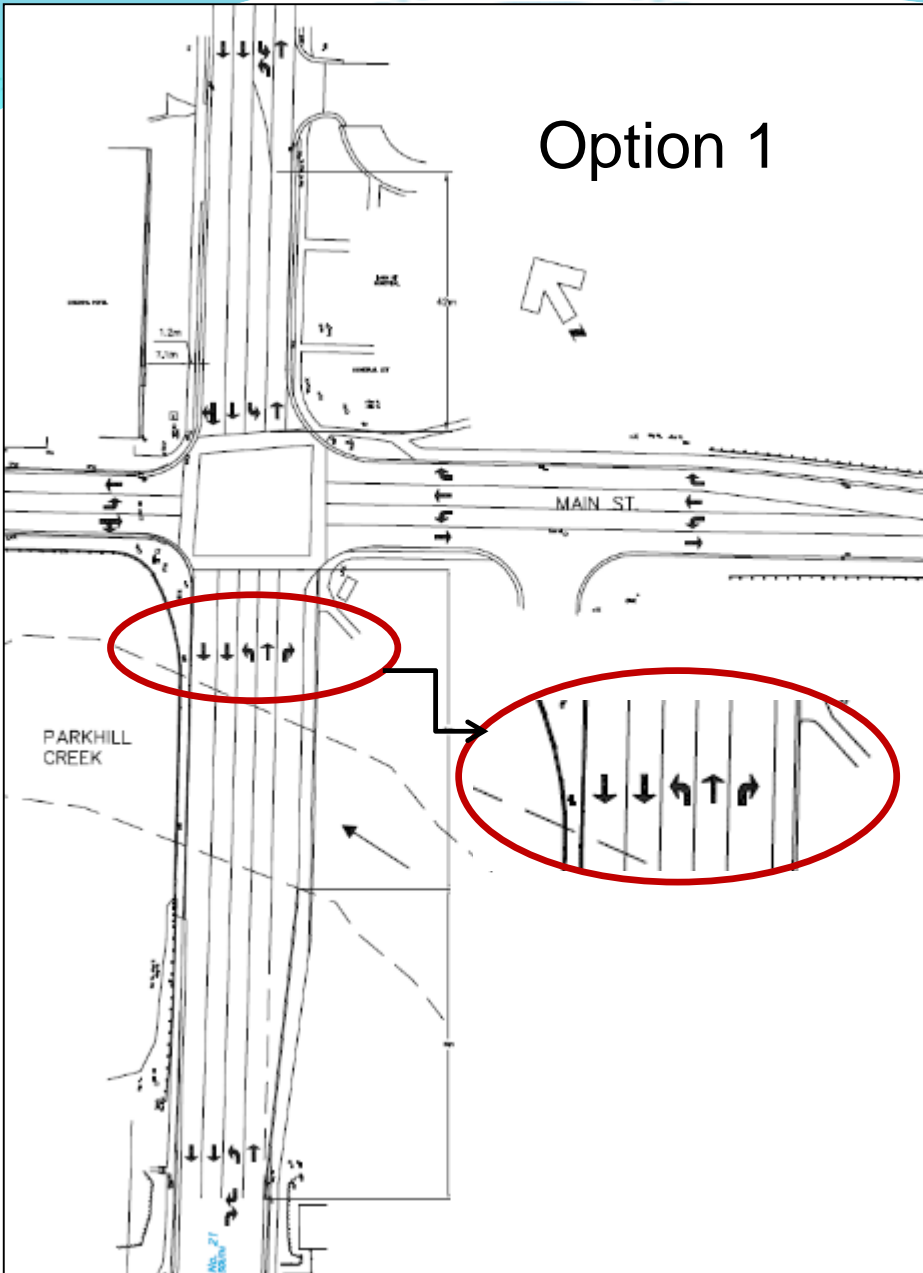
Date	Time	Temp	Main St West Leg	Main St East Leg	Ontario South Leg	Ontario North Leg
May 16, 2015 (Saturday)	10:00 am – 5:15 pm (Total Day Count)	13°C	396	189	429	373
May 16, 2015	11:00 am – 12:00 pm (Peak Hour Data)	12°C	39	10	28	38
May 16, 2015	12:30 – 1:30 pm (Peak Hour Data)	14°C	65	32	72	56
July 4, 2015 (Saturday)	10:00 am – 5:15 pm (Total Day Count)	20°C	679	235	758	859
July 4, 2015	11:00 am – 12:00 pm (Peak Hour Data)	19°C	43	32	40	61
July 4, 2015	12:30 – 1:30 pm (Peak Hour Data)	19°C	111	26	151	114

Traffic Study - Paradigm

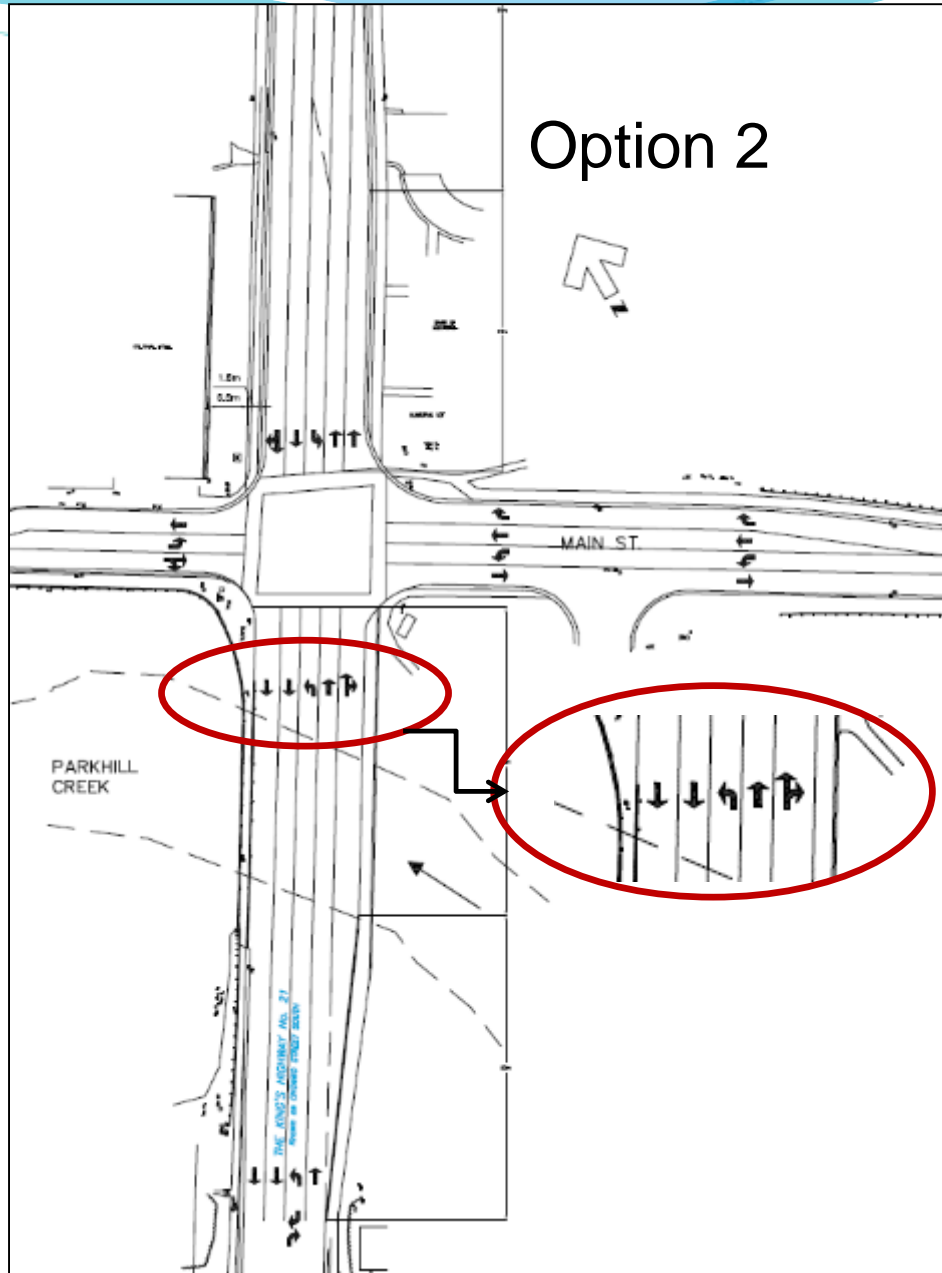
Potential Improvements

- Intersection improvements predicated upon the assumption that the bridge will be widened to accommodate more lanes of traffic.
- **OPTION 1:** Exclusive Northbound Right Turn Lane
 - Widen Bridge to Provide a Five Lane Cross-Section
 - Use Dedicated Northbound Lane to Separate Left Turn and Right Turn Lanes (3 northbound lanes)
- **OPTION 2:** Additional Northbound Through Lane
 - Widen Bridge to Provide a Five Lane Cross-Section
 - Three Northbound Lanes to include a Left Turn Lane, a Dedicated Northbound Through Lane, and a Shared Northbound/Right Turn Lane

Option 1



Option 2



Traffic Study Recommendations*

- Current Intersection Configuration is Insufficient for Traffic Volumes seen on Summer Weekends and Long Weekends
- Widening of the Bridge is forecast to provide the Capacity Needed to Accommodate northbound traffic.
- Option 1 provides improvements and will bring intersection within accepted volumes, and would not require construction of an additional receiving lane on the north side.
- Implementation of Option 2 is recommended but would require the implementation of an additional receiving lane on the north side of the intersection.

* **Pedestrian Traffic Taken into Consideration**

Class EA Study Alternatives

Bridge Alternatives

- **Alternative 1:** Replace bridge with a new structure capable of conveying greater traffic volumes
- **Alternative 2:** Widen the bridge to accommodate great volumes of traffic
- **Alternative 3:** Do Nothing

Corridor Alternatives

- **Alternative 1:** Modify lane configuration along corridor
- **Alternative 2:** Add or extend additional traffic lanes and/or bike lanes to corridor
- **Alternative 3:** Construct a by-pass around Grand Bend to divert through traffic around the Community
- **Alternative 4:** Do Nothing

Bridge Alternatives

Bridge Alternative # 1 – New Bridge

- Replace bridge within the existing or slightly modified location
- Construct new bridge crossing with wider bridge deck to accommodate more traffic volume
- On approaches, widen roadway and sidewalks to match new wider bridge deck
- Replace existing utilities on crossing (watermain, sanitary sewer, phone, gas)

Bridge Alternative # 2A – Widen Bridge

- Widen the bridge on east side with new footings and extend abutments
- Widen bridge deck, sidewalks, etc.
- Rehabilitate Deteriorated Bridge Components
- Install New Traffic Signals, relocate Utilities, etc.
- Reconstruct road surface and lane markings to provide dedicated right turn, north bound & left turning lanes.

Bridge Alternative 2A



Alternative 2A



Bridge Alternative # 2B – Widen Bridge with Additional North Bound Lane

- Same improvements as proposed with Alternative #2A

Except:

- Reconstruct road surface and lane markings to provide dedicated right turn, north bound and joint right turn and north bound lane.

Alternative 2B



Alternative 2B



Bridge Alternative 2B



Bridge Alternative # 2C – Widen Bridge & Realign Road

- Provide cantilevered supports on both sides of the bridge deck to support sidewalks
- Realign road approaches to blend with wider bridge
- Rehabilitate Deteriorated Bridge Components
- Install New Traffic Signals, relocate Utilities, etc.
- Reconstruct road surface and lane markings to include dedicated left turn, north bound lane and joint right turn and north bound lane.

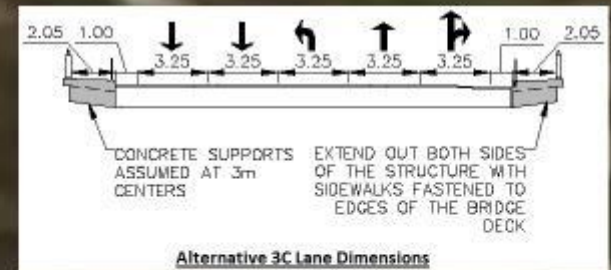
Bridge Alternative 2C



Alternative 2C



Bridge Alternative 2C



Corridor Alternatives

Corridor Alternative 1: Modify Lane Configuration

- Examine extent and efficacy of existing center left turning lane through corridor
- Review location and use of Cross-Walks
- Review signalization along corridor
- Evaluate impact of pedestrians at the intersection



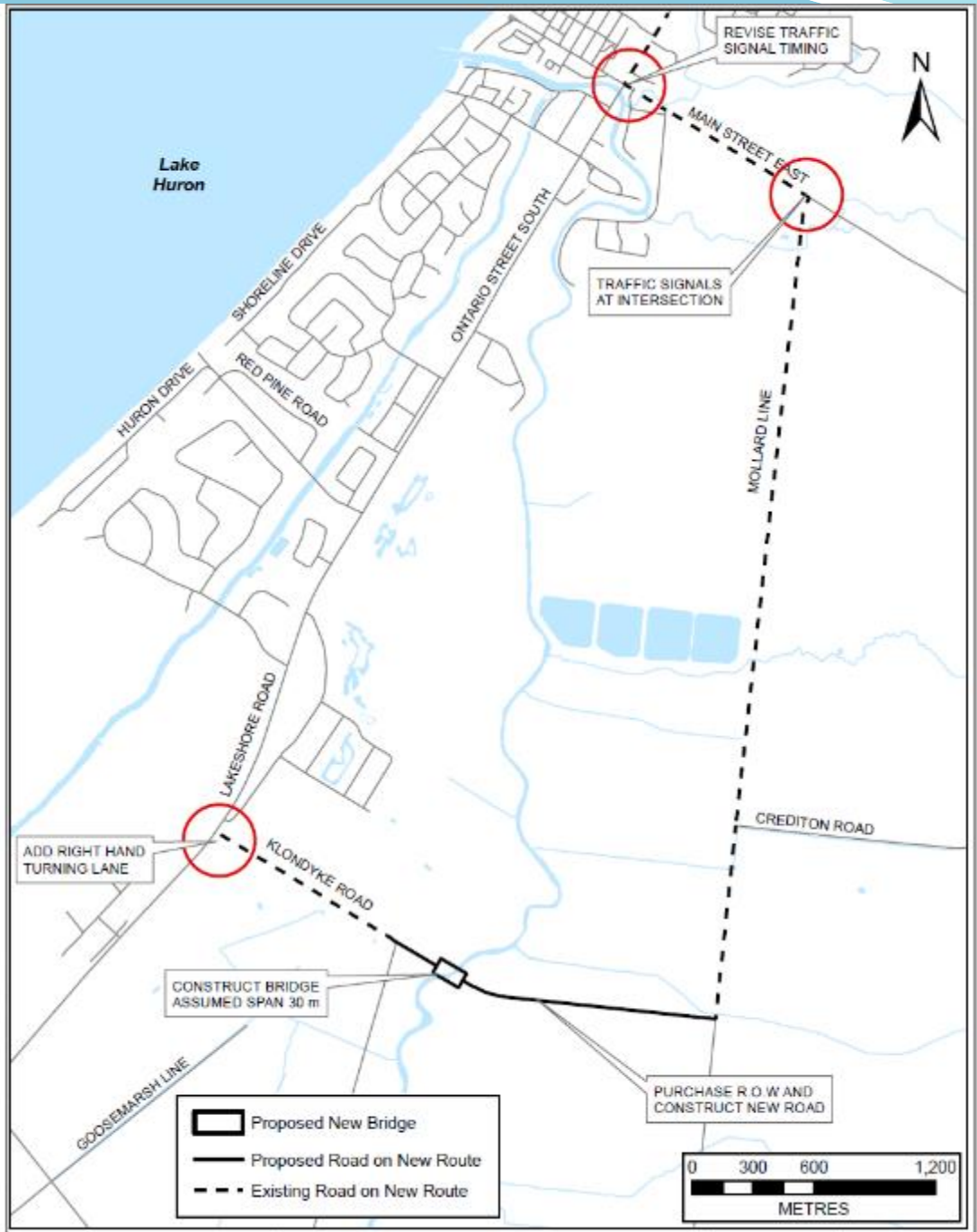
Corridor Alternative 2: Widen or Extend Corridor

- Evaluate opportunities and need to widen all or portions of the existing corridor through the addition of traffic lanes and/or cycling lanes
- Examine options for extension of the multi-lane corridor to the north or south



Corridor Alternative # 3 – By-Pass

- Identify Preferred Location for By-Pass Route Around Grand Bend
- Construct a new bridge crossing on By-Pass Route
- Purchase Property from Affected Landowners to Permit Construction of Bridge and Approaches
- Construct new Road Approaches on By-Pass and Connect to Existing Road Network
- Modify Existing Roadways to Incorporate By-Pass



Corridor Alternative #3 Proposed By-Pass

Anticipated Costs

Bridge Options

- Alternative 1 – New Bridge \$ 6.0 m+
- Alternative 2A – Widen Bridge \$ 2.4 m
- Alternative 2B – Widen Bridge & Add'l N. Lane \$ 2.6 m
- Alternative 2C – Widen Bridge & Realign Rd \$ 1.9 m

Corridor Options

- Alternative 1 – Modify Lane Configuration ?
- Alternative 2 – Widen or Extend Corridor ?
- Alternative 3 – By-Pass Route \$ 4.0 m+

* Preliminary Costs include an allowance for engineering and approvals but not for property acquisition.

Other Potential Issues

- Private Property Impacts at Bridge site and along the Corridor
- Parking Impacts on north section of Highway 21 Associated with Option 2C
- Future Growth
- Sidewalk and Railing Configuration
- Accessibility for Ontarians with Disabilities Act (AODA)
- Other Issues??

Next Steps

- Collect Feedback from Residents/Agencies/Aboriginal Communities following Initial Consultation Phase
- Collect Feedback from Public Meeting
- Continue to Consult with Stakeholders
- Expand the traffic study to assess corridor issues
- Continue with Review of Alternatives Based Upon Feedback Received through Above-Noted Consultation

Questions?