

Navy and Water Street Wastewater Pumping Stations & Collection System

Municipal Class Environmental Assessment Study

Public Information Centre

March 20, 2014

INTRODUCTION

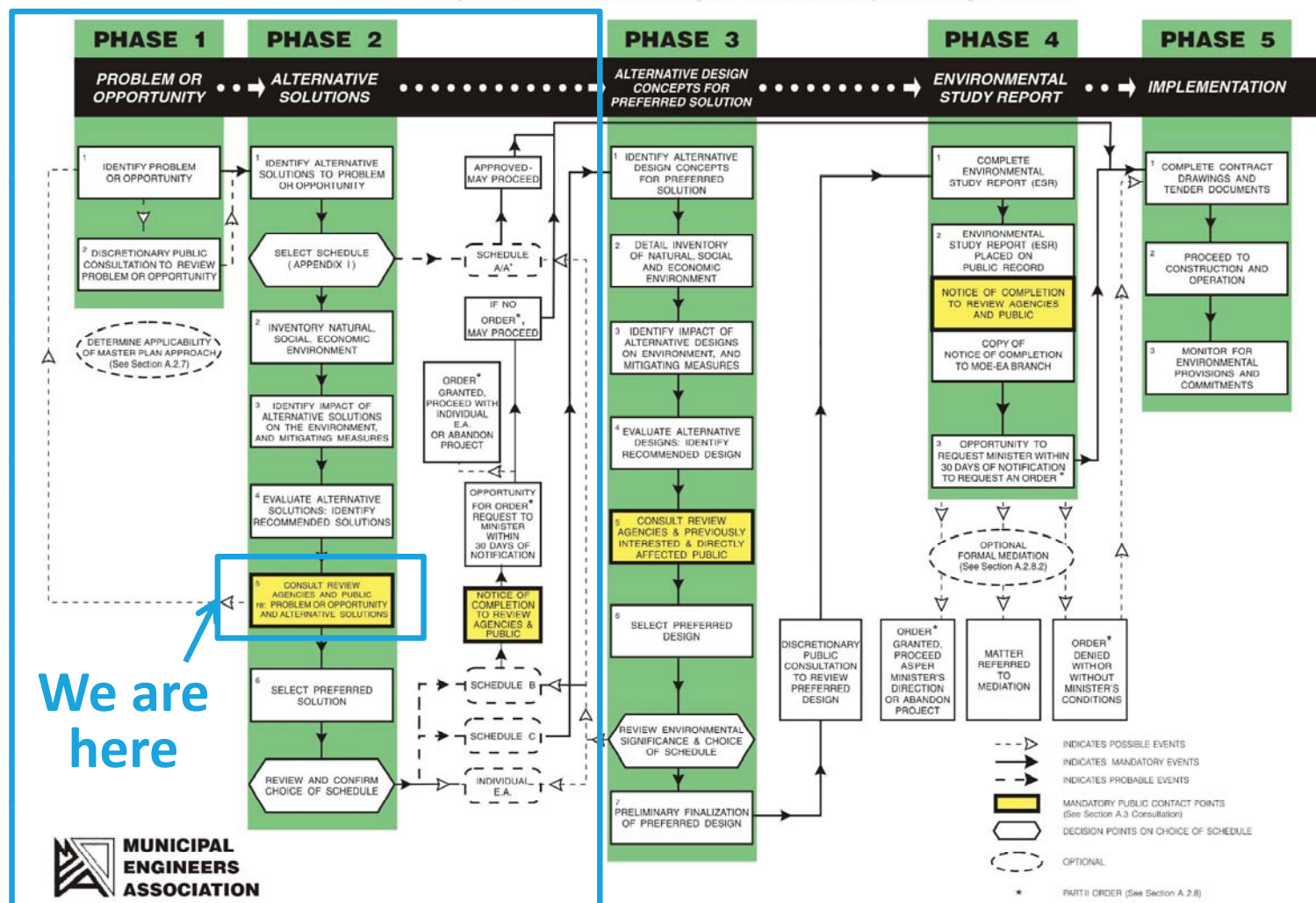
- Oakville Downtown Core identified as priority area for intensification
- Area serviced by Navy St and Water St wastewater pumping stations which have capacity constraints and operational concerns
- In 2012, South Halton Wastewater Pumping Station Master Plan recommended a strategy to *“eliminate as many pumping stations as possible where there are net positive benefits (financial, social, environmental, or operational) that align with ongoing state of good repair work”*
- A Municipal Class Environmental Assessment (EA) was initiated in October 2013 to address the wastewater pumping stations’ and collection system’s ability to service the downtown core of the Town of Oakville

MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT PROCESS

EXHIBIT A.2

MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA

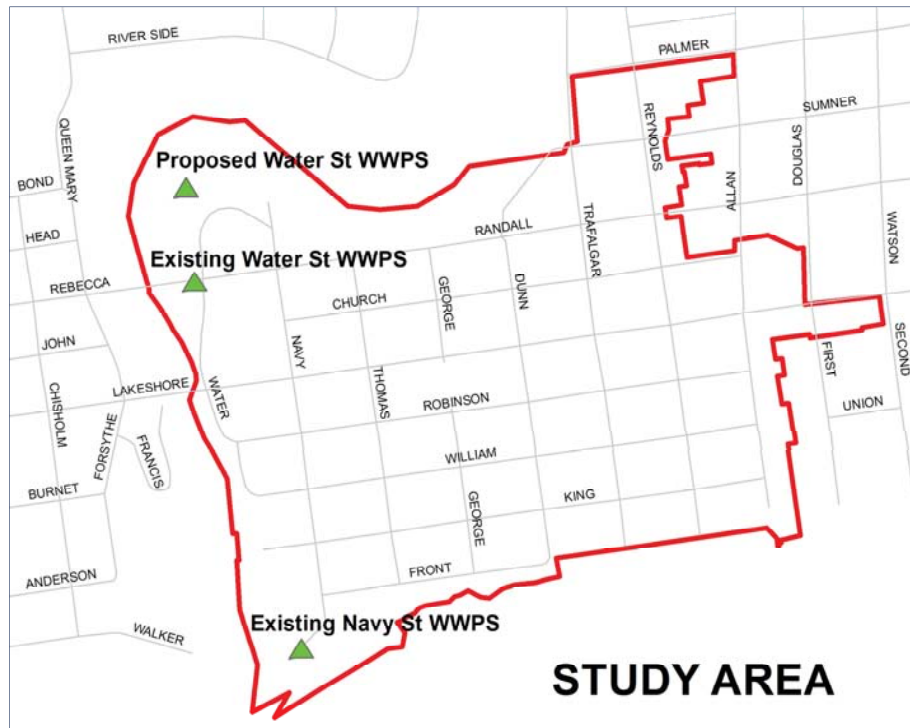


We are here

Phases 1 & 2

MUNICIPAL ENGINEERS ASSOCIATION

STUDY AREA



PROBLEM STATEMENT

- **Navy St Pumping Station has capacity constraints and operational issues under normal conditions.**

- Constructed 1985
 - Nearing end of design life
- No backup power
- Low wet well retention time
- Insufficient ventilation
- Operating at maximum capacity
 - Current capacity 66 L/s
 - Future flow 100 L/s
- Some exterior damage to building

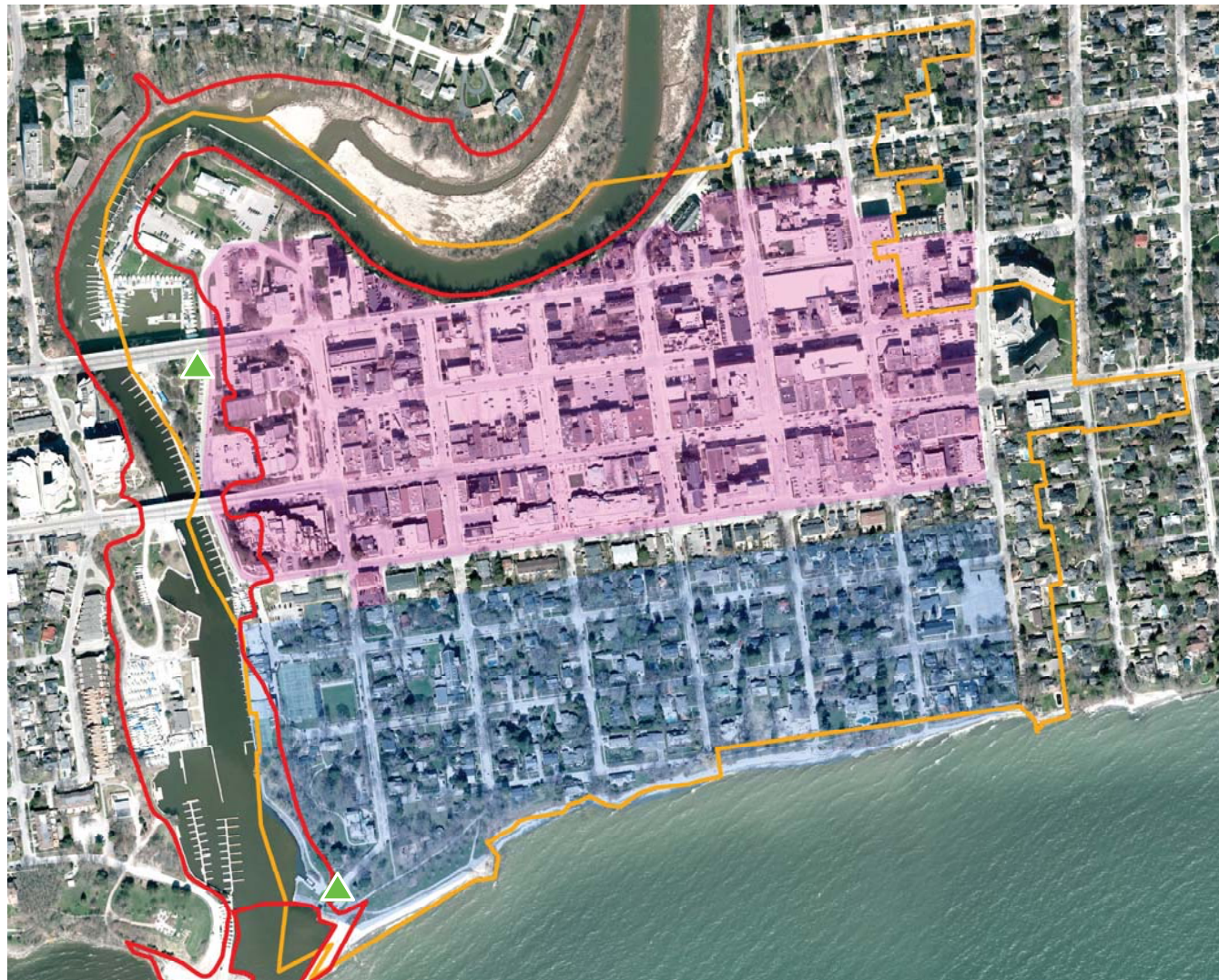


- **Water St Pumping Station is aged and has operational issues under normal conditions**



- Constructed 1967
 - Nearing end of design life
- No backup power
- Low wet well retention time
- Pumping capacity
 - Current capacity 21 L/s
 - Future flow 10 L/s
- Located in Sixteen Mile Creek floodplain

KEY CONSIDERATIONS – IMPORTANT AREAS



- Study Area
- Sixteen Mile Creek Floodplain
- ▲ Existing Wastewater Pumping Station
- Old Oakville Heritage Conservation District
(Source: Town of Oakville)
- Downtown Cultural Hub Study by Town of Oakville
(Source: Town of Oakville)
- Downtown Transportation and Streetscape Study
(Source: Town of Oakville)

KEY CONSIDERATIONS – IMPORTANT SITES



Erchless Estate



Estate Gardens



Merrick Thomas House



Oakville's first post office



TOWARF access



Lakefront Community Areas



Community Trails



Lakeside Park



Powerboat Club and Marina



Hillmer Park and Burloak Canoe Club



The Oakville Club

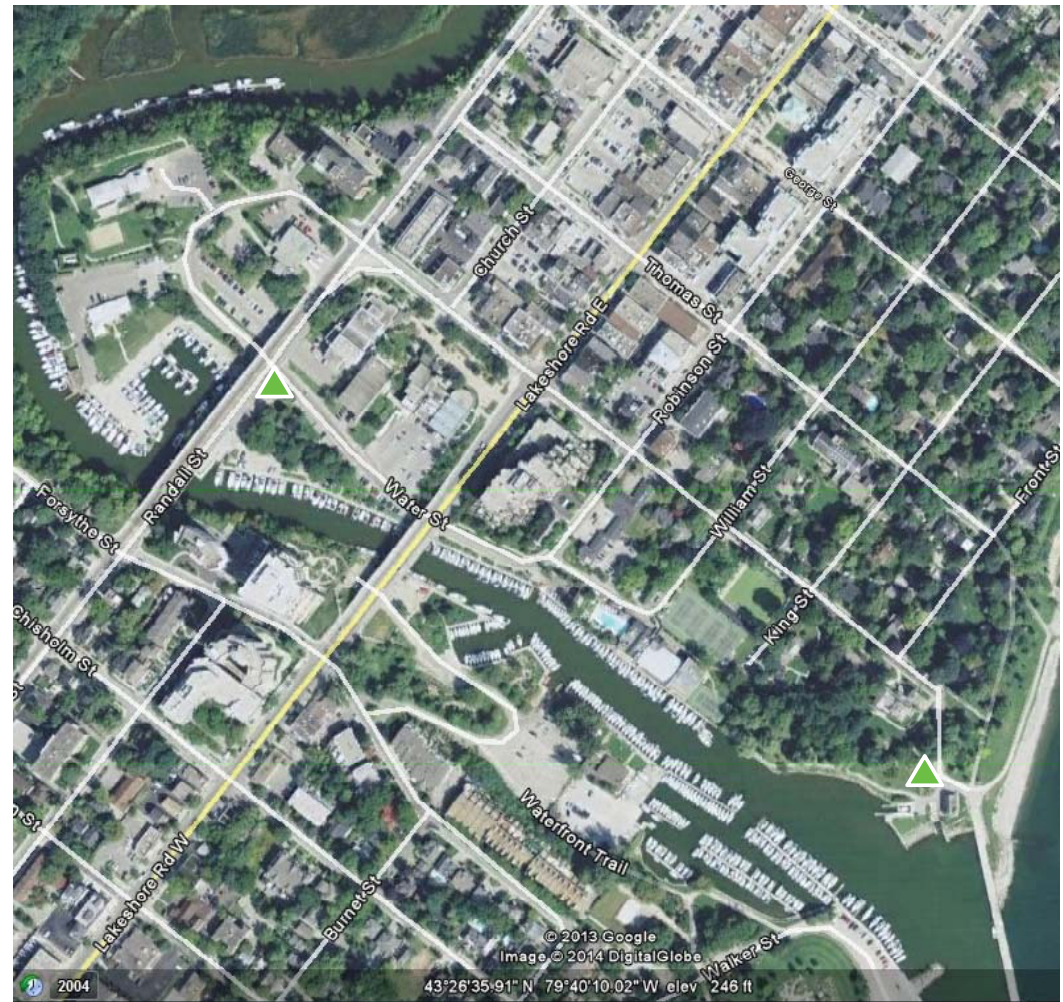
& many others...

ALTERNATIVE DEVELOPMENT

- **STATUS QUO (DO NOTHING)**
 - Continue with operation as usual
 - Replace and repair as needed
- **ALTERNATIVE 1 “New Navy St Pumping Station”**
 - Navy St pumping station is upgraded to future capacity
 - Water St pumping station remains operational at current capacity
- **ALTERNATIVE 2 “New Water St Pumping Station”**
 - Eliminate Navy St pumping station
 - Divert total flows to Water St pumping station
- **ALTERNATIVE 3 “Partial Diversion”**
 - Navy St pumping station remains operational at current capacity
 - Divert partial flows to Water St pumping station

STATUS QUO

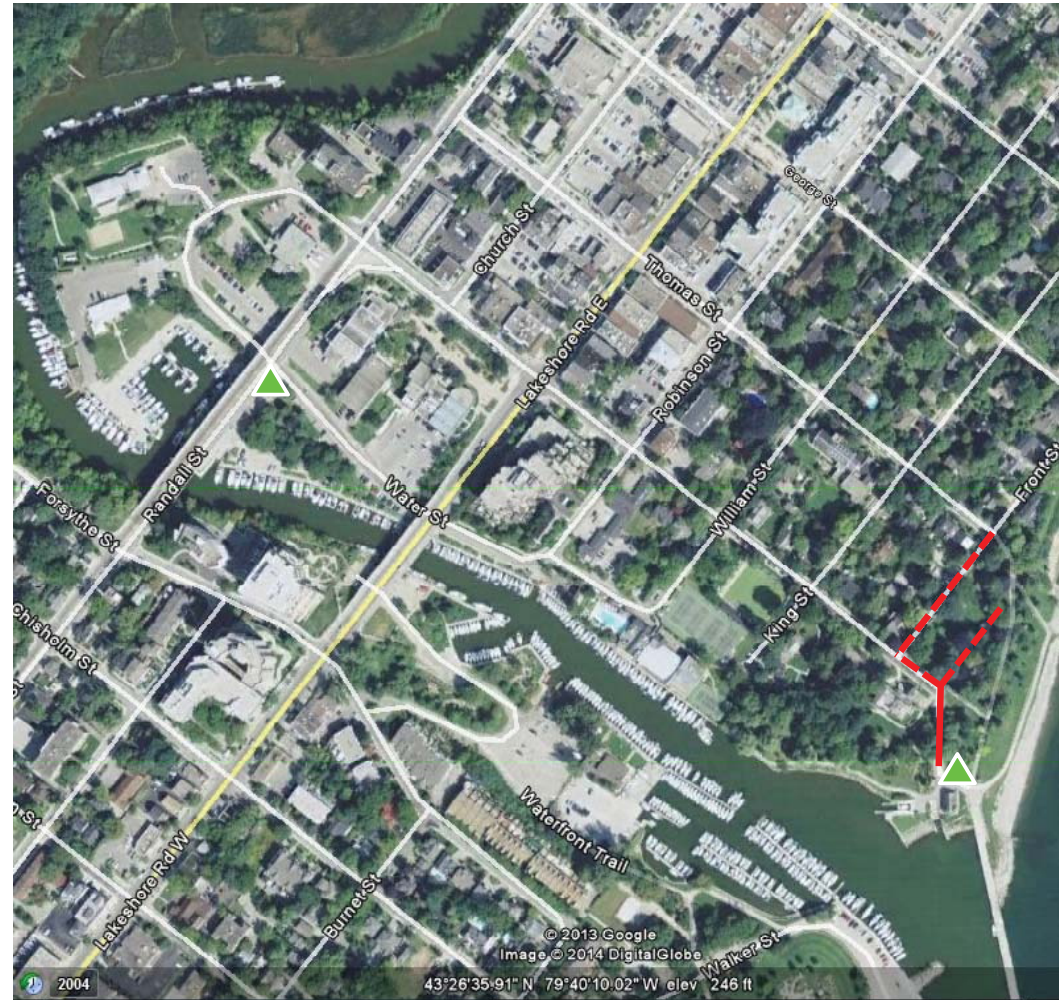
- **No major upgrade**
 - Capacity will remain same
- **Operate as status quo**
 - Replace and repair as needed
- **Development restricted**
 - Unable to proceed with planned intensification
- **Greater risk to environment due to lack of backup power and emergency overflows**
- **Available capacity at Water St pumping station**



▲ Pumping Stations

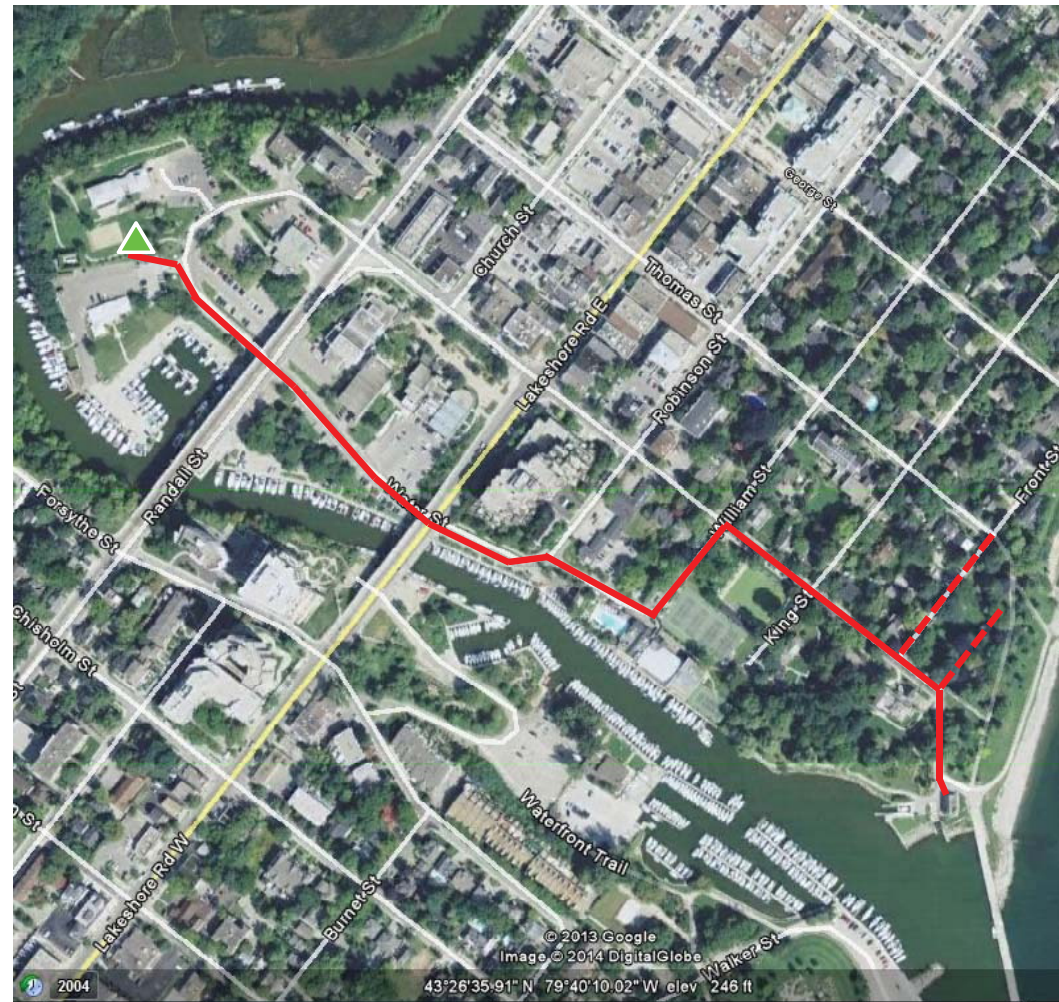
ALTERNATIVE 1: NEW NAVY ST PUMPING STATION

- **Navy St Pumping Station** ▲
 - New wet well / dry well type pumping station
 - New generator
- **Water St Pumping Station** ▲
 - New generator
 - Major rehabilitation in 5 years (& move outside floodplain)
- **Collection System** —
 - New sewer either through Park or along Front St (detailed design)
 - Larger sewer section on Navy St
- **Capital Cost: \$6.0 million**
- **Life Cycle Cost: \$11.2 million**
- **Operating Cost: \$134,000**



ALTERNATIVE 2: NEW WATER ST PUMPING STATION

- **Navy St Pumping Station**
 - Demolished
- **Water St Pumping Station ▲**
 - Outside Floodplain
 - New wet well / dry well type pumping station
 - New generator
- **Collection System —**
 - New sewer from Navy St to Water St pumping stations
 - New sewer either through Park or along Front St (detailed design)
- **Capital Cost: \$9.8 million**
- **Life Cycle Cost: \$11.0 million**
- **Operating Cost: \$66,000**



ALTERNATIVE 3: PARTIAL DIVERSION

- **Navy St Pumping Station** ▲
 - New wet well
 - New generator
- **Water St Pumping Station** ▲
 - Replace with larger pumps
 - New generator
 - Major rehabilitation in 5 years (& move outside floodplain)
- **Collection System** —
 - New sewer along Robinson, Navy, William and Water Streets and Lakeshore Road
- **Capital Cost: \$4.8 million**
- **Life Cycle Cost: \$13.3 million**
- **Operating Cost: \$131,000**



ALTERNATIVE COMPARISON – EVALUATION CRITERIA

CRITERIA	DEFINITION
Socio-economical Impacts	Potential impacts on existing land uses (residential, commercial/industrial, recreational), noise, dust, vibration, transportation, and aesthetics (visual impact).
Environmental Impacts	Potential impacts on vegetation and flora, wildlife resources, fisheries and aquatic resources, and natural heritage policies.
Cost	A study of construction components, methodology, duration, and contractor competition, as well as an evaluation of benefits and drawbacks of design elements on short-term capital costing and long-term operations and maintenance costing.
Land Ownership	A study of ownership of required land by Region of Halton, Town of Oakville or other owners.
Constructability	Potential impacts on current systems/operation and pedestrian and pedestrian/road traffic.
Operation & Maintenance	Potential impacts, including level of service required, resulting from improvements to, or lack thereof, the pumping station and sewer collection system.

ALTERNATIVE COMPARISON – EVALUATION

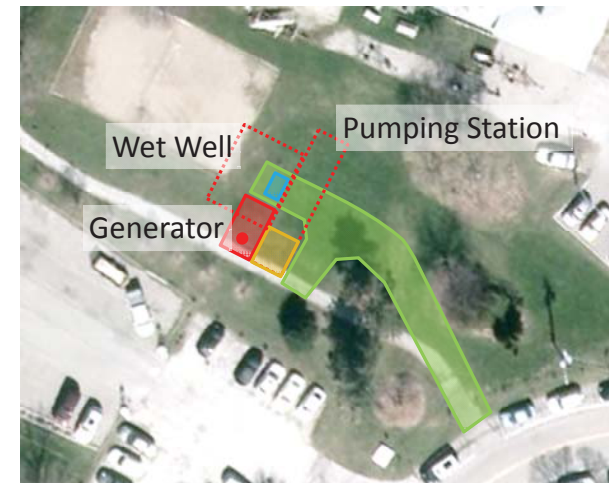
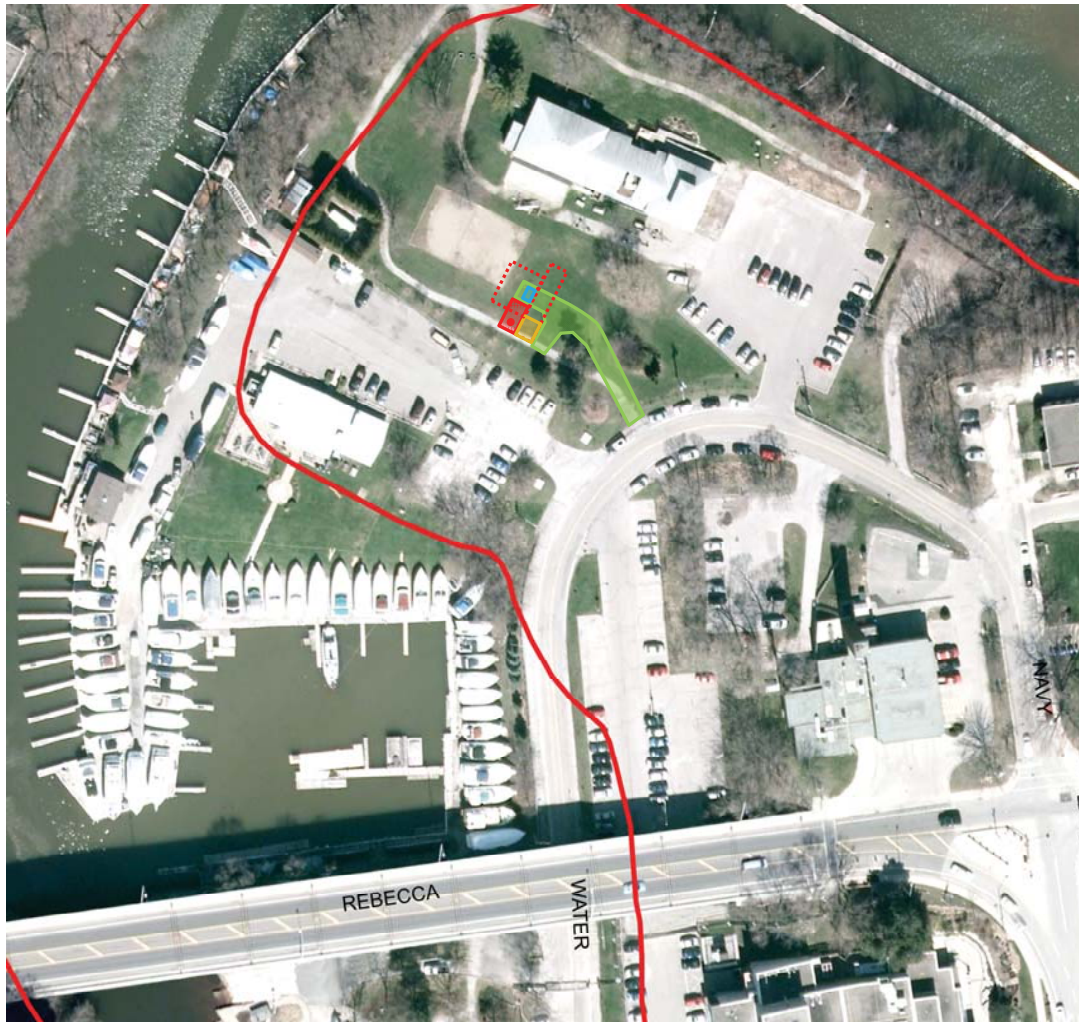
CRITERIA	STATUS QUO (DO NOTHING)	ALT. 1 NEW NAVY ST PUMP STATION	ALT. 2 NEW WATER ST PUMP STATION	ALT. 3 PARTIAL DIVERSION
Socio-economical Impacts (land uses, noise, vibration, etc.)	●	●	●	●
Environmental Impacts (wildlife, fisheries, natural heritage, etc.)	●	●	●	●
Cost (construction, maintenance, etc.)	--	●	●	●
Land Ownership (land acquisition)	●	●	●	●
Constructability (current system operation, traffic disruptions, etc.)	●	●	●	●
Operation & Maintenance (level of service)	●	●	●	●

- Low impact, desirable
- Moderate impact, neutral
- High impact, undesirable

PRELIMINARY PREFERRED: ALTERNATIVE 2 NEW WATER ST PUMPING STATION

- Diversion of all flow to New Water St pumping station
- Complete replacement of existing pumping stations
- Reduced emergency repairs
- Lowest operating cost
- Removal of Navy St Pumping Station from area of high interest
- Removal of Water St Pumping Station from the Sixteen Mile Creek floodplain
- Centralized operation of the drainage area at the new Water St Pumping Station
- Costs
 - Capital Cost: \$9.8 million
 - Life Cycle Cost: \$11.0 million
 - Operating Cost: \$66,000

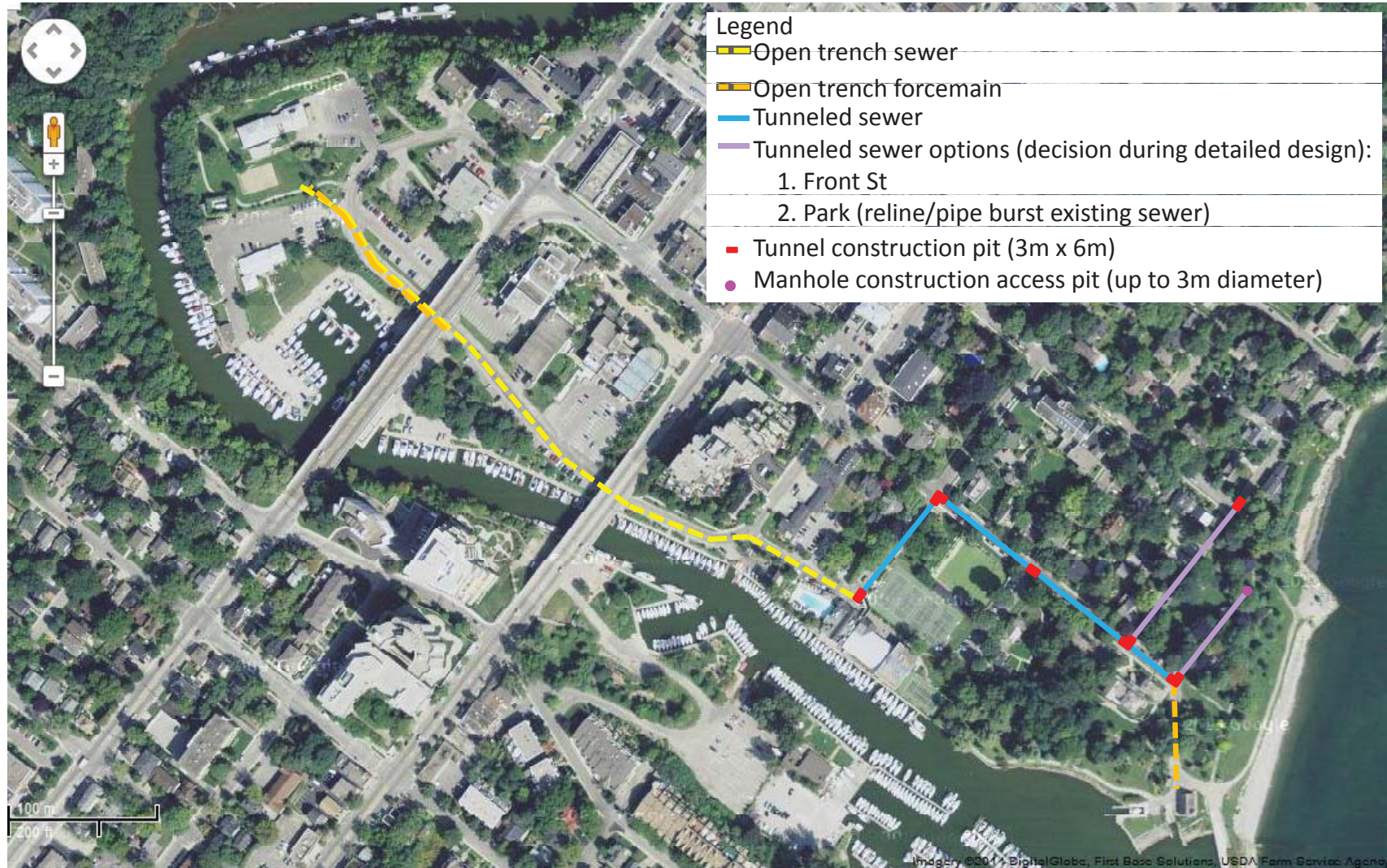
PRELIMINARY PREFERRED: ALTERNATIVE 2 NEW WATER ST PUMPING STATION



Legend

- Above ground generator (up to 3m above grade)
- Pumping Station Access (up to 0.6m above grade)
- Maintenance access area
- Wet well access hatches
- ⋯ Underground structures
- Generator exhaust stack (up to 6.5m)
- Sixteen Mile Creek floodplain

PRELIMINARY PREFERRED ALTERNATIVE 2: NEW WATER ST PUMPING STATION COLLECTION SYSTEM



IMPACT ASSESSMENT AND MITIGATION

- **Cultural Heritage**

- Infrastructure to avoid and protect identified cultural heritage
- Vibration impact studies to be conducted during construction
- Post construction landscaping to restore conditions
- Tree hoarding to protect trees during construction
- Coordination with Town of Oakville for Downtown Cultural Hub and Streetscape studies

- **Archaeological Potential**

- All areas of construction already disturbed

- **Air Quality and Noise Potential**

- Stack (up to 6.5m high) to provide separation between generator exhaust (tested for 1 hour every 2 weeks) and park area
- Noise attenuation to meet Ministry of the Environment requirements for standby generators

- **Construction Impact Mitigation**

- Noise control
- Dust suppression
- Vibration monitoring
- Traffic management – 1 lane traffic to be maintained
- Tree hoarding and protection

WHAT'S NEXT?

Your Input

- **You have “local knowledge”**
 - Concerns with Currently Preferred Alternative?
 - Other impacts not identified?
- **Please submit your Comment Form**

After Your Input

- **Review and integrate feedback from Public Information Centre**
- **Confirm Preferred Alternative**
- **Finalize Project File, and issue Notice of Completion for 30-day review period**
- **Complete Class EA Study**
- **Proceed to detailed design 2015**
- **Construction start anticipated 2016**