



# OPERATIONS COMMITTEE AGENDA

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Operations Committee Meeting  
**Monday, October 21, 2019**  
Tom Davies Square - Council Chamber

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## COUNCILLOR DEB MCINTOSH, CHAIR

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**Mark Signoretti, Vice-Chair**

2:00 p.m. OPERATIONS COMMITTEE MEETING  
COUNCIL CHAMBER

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## **DECLARATIONS OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF**

## **PRESENTATIONS**

1. Report dated October 8, 2019 from the General Manager of Growth and Infrastructure regarding Hot In-Place Recycling Asphalt Pilot Project. **4 - 6**  
**(ELECTRONIC PRESENTATION) (FOR INFORMATION ONLY)**
  - David Shelsted, Director, Infrastructure Capital Planning Services

(This report provides a general overview of Hot In-Place Recycling for asphalt and information on next steps for a pilot project.)

## **REGULAR AGENDA**

### **MANAGERS' REPORTS**

- R-1. Report dated October 7, 2019 from the General Manager of Growth and Infrastructure regarding Annual Active Transportation Winter Maintenance Plan. **7 - 45**  
**(RESOLUTION PREPARED)**

(This report provides recommendations for winter maintenance on the City of Greater Sudbury's Active Transportation Network.)
- R-2. Report dated September 30, 2019 from the General Manager of Growth and Infrastructure regarding Parking Restrictions - Prete Street and Connaught Avenue. **46 - 48**  
**(RESOLUTION PREPARED)**

(This report recommends parking restrictions for Prete Street and Connaught Avenue.)
- R-3. Report dated September 27, 2019 from the General Manager of Growth and Infrastructure regarding Parking Restrictions - Morgan Road, Chelmsford. **49 - 50**  
**(RESOLUTION PREPARED)**

(This report provides information and a recommendation regarding parking restrictions on Morgan Road, Chelmsford.)
- R-4. Report dated October 8, 2019 from the General Manager of Growth and Infrastructure regarding Maley Drive Traffic and Parking By-law Updates. **51 - 59**  
**(RESOLUTION PREPARED)**

(This report recommends revisions to the Traffic Parking By-law 2010-1 for the opening of the new Maley Drive extension.)
- R-5. Report dated October 7, 2019 from the General Manager of Growth and Infrastructure regarding Overnight Parking Restrictions. **60 - 63**  
**(FOR INFORMATION ONLY)**

(This report provides an overview of the current overnight parking restrictions and the impact of reducing the hours from 2:00 a.m. to 6:00 a.m. from December 1 to March 31.)

### **MEMBERS' MOTIONS**

## **CORRESPONDENCE FOR INFORMATION ONLY**

- I-1. Report dated October 8, 2019 from the General Manager of Growth and Infrastructure regarding Contracting In Initiatives.  
**(FOR INFORMATION ONLY)**

**64 - 75**

(This report provides an update on Contracting In Initiatives underway in Linear Infrastructure Services.)

## **ADDENDUM**

## **CIVIC PETITIONS**

## **QUESTION PERIOD**

## **ADJOURNMENT**

Presented To:	Operations Committee
Presented:	Monday, Oct 21, 2019
Report Date	Tuesday, Oct 08, 2019
Type:	Presentations

## For Information Only

### Hot In-Place Recycling Asphalt Pilot Project

#### Resolution

For Information Only

#### Relationship to the Strategic Plan / Health Impact Assessment

This report refers to operational matters.

#### Report Summary

This report summarizes the research and discussions Staff has had to date, and information on next steps to undertake a Hot In-place Recycling (HIR) pilot project. Since the June 11, 2019, Council Report on Federal Gas Tax Additional Funding, Staff has had discussions with other municipalities, the Ministry of Transportation, and two contractors that offer HIR as part of their services.

#### Financial Implications

At the June 11, 2019 meeting, Council approved \$700,000 from the additional Federal Gas Tax funding for the asphalt recycling pilot project in Council Resolution CC2019-189.

#### Signed By

**Report Prepared By**

David Shelsted  
Director of Infrastructure Capital  
Planning Services  
*Digitally Signed Oct 8, 19*

**Financial Implications**

Apryl Lukezic  
Co-ordinator of Budgets  
*Digitally Signed Oct 9, 19*

**Recommended by the Department**

Tony Cecutti  
General Manager of Growth and  
Infrastructure  
*Digitally Signed Oct 9, 19*

**Recommended by the C.A.O.**

Ed Archer  
Chief Administrative Officer  
*Digitally Signed Oct 9, 19*

## **Background**

Hot In-Place Recycling (HIR) is an on-site, in-place method that rehabilitates deteriorated asphalt pavements and thereby minimizes the use of new materials while extending the asset life. This process consists generally of four steps:

1. Softening of the asphalt pavement surface with heat;
2. Scarification and/or mechanical removal of the surface material;
3. Mixing of the material with recycling agent, asphalt binder, or new mix; and,
4. Placement of the recycled mix on the pavement surface.

The primary purpose of HIR is to correct surface distresses not caused by structural inadequacy, such as raveling, non-structural cracks, minor rutting, and shoves and bumps. The HIR may be left as the surface course or covered with a new wearing course. The advantages of HIR are that elevations are maintained, it is comparatively economical, and needs less traffic control than the other rehabilitation techniques. HIR is usually performed to a depth of 20 mm to 50 mm, with 50 mm being a typical depth.

At the June 11, 2019, Council Meeting, \$700,000 for an asphalt recycling pilot project was approved with Council Resolution CC2019-189.

## **Research and Discussion Summary**

From the research and discussions the following criteria are required for a successful HIR project:

1. The existing pavement needs to be in the right condition. The pavement should be generally free of major structural distress, and the asphalt is to be of similar properties (placed at the same time and the same mix for the entire length). Pothole repair material or crack sealing is to be removed prior to the HIR process. Areas with extensive repairs or cuts are to be avoided. The HIR process is not meant to address structural failures of the pavement such as structural rutting, existing mixture instability, or underlying failures in the subbase.
2. The existing asphalt cement needs to be conducive to the HIR process. Samples of the existing asphalt cement need to be tested prior to issuing a contract to ensure that the recycling agent will achieve the desired results.
3. The geometry of the road has to be conducive to the long train of the HIR process. The equipment train of the HIR process includes pre-heating units, scarifiers, mixing unit, placement unit, and compaction equipment (and can include equipment that introduces new material into the mix if required). This equipment has difficulty making the sharp corners and cul-de-sacs that exist in many subdivisions.
4. The size of the project needs to be sufficient to be cost effective. There are few HIR contracts being tendered in Ontario currently, and contractors have indicated that contracts in the range of 100,000 to 150,000 square metres are required for them to be cost competitive with other rehabilitation techniques. The contracts currently being tendered by the MTO are in the Thunder Bay and Kenora region, and are over 300,000 square metres in quantity.

## **Cost**

In discussions with the HIR Contractors, they indicated that the City can expect to receive pricing in the \$14 to 16 per square metre range (50 mm depth) provided there is sufficient quantity included in the contract and that the road segment selected provides the opportunity for high productivity.

The sufficient quantity was stated to be in the 100,000 to 150,000 square metre range. An alternative to the City issuing a contract for this quantity is to partner with others on a HIR contract. Staff reached out to the MTO Northeast Region, and while they consider HIR, it is unlikely that they have a suitable road candidate scheduled for construction in 2020. Staff will remain in contact with the MTO Northeast Region and other nearby municipalities to see if there are future procurement partnership opportunities.

For comparison purposes, the most common asphalt recycling technique currently used by the City is Cold In-place Recycling with Expanded Asphalt Mix (CIREAM). The City specifies 100 mm of CIREAM and in relatively small quantities, ranging from 20,000 to 35,000 square metres. In the last five years the cost has ranged from \$12 to \$17 per square metre, making it approximately half the cost of HIR when prorated for depth.

One of the main differences between CIREAM and HIR, is that CIREAM cannot be left as surface, and must be covered, typically with new hot mix asphalt.

There is competition in the Sudbury market for CIREAM, as one of the local contractors can produce the product and there are sub-contractors available that competitively bid in the area.

Some examples of past CIREAM projects include MR 84 (Capreol Road), MR 89 (Longyear Road), and MR 15 (Main Street).

### **Next Steps**

Through all of the discussions and research, it was stressed that the right road needs to be selected. The road cannot have structural deficiencies and must have asphalt cement that can be rejuvenated in the HIR process.

In order to provide the HIR pilot project the opportunity for success, a geotechnical consultant with HIR experience will be retained. The geotechnical consultant will assist Staff in identifying the appropriate road segment, and will core the existing asphalt and test the asphalt cement for compatibility with the HIR process. This will also be coordinated with contractors in the HIR business.

Some of the roads being considered for HIR evaluation include the Kingsway (between the bypass and Falconbridge Highway), MR 35 (between the LaSalle Extension and Azilda), Skead Road/Radar Road, and road segments.

The scope of the contract will also be reviewed. Council set aside \$700,000 of the Additional Federal Gas Tax Funding for the pilot project, the need to add ancillary items to any contract, such as culvert replacement, curb repair, or guide rails, will mean that the suggested minimum square metres of HIR will not be met. HIR will not be considered at a location where underground infrastructure (ie. water main) requires replacement.

A report will be prepared for the Operations Committee in 2020 summarizing the findings of the geotechnical work.

### **Reference**

Federal Gas Tax Additional Funding, Council Report of June 11, 2019

<http://agendasonline.greatersudbury.ca/index.cfm?pg=feed&action=file&agenda=report&itemid=14&id=1324>

Presented To:	Operations Committee
Presented:	Monday, Oct 21, 2019
Report Date	Monday, Oct 07, 2019
Type:	Managers' Reports

## Request for Decision

### Annual Active Transportation Winter Maintenance Plan

#### Resolution

THAT the City of Greater Sudbury approves the winter maintenance plan for the Active Transportation Network as outlined in the report entitled “Annual Active Transportation Winter Maintenance Plan”, from the General Manager of Growth and Infrastructure, presented at the Operations Committee meeting of October 21, 2019.

#### Relationship to the Strategic Plan / Health Impact Assessment

This report refers to operational matters.

#### Report Summary

This report identifies the plan for winter maintenance services for the active transportation network (sidewalks, bicycle paths and off-road recreational trails) including minor changes to the sidewalk winter maintenance plan, for the upcoming winter season (November 1st, 2019 to April 30th, 2020). If the plan is approved, staff will finalize a Bylaw closing all of the active transportation network that won't be maintained (snow plowed/sanded) during the winter season. There are no budgetary impacts identified in this report. This is the inaugural report of its kind that will continue on an annual basis for the foreseeable future.

#### Financial Implications

This report has no financial implications.

#### Signed By

##### **Report Prepared By**

Tony De Silva  
Roads Operations Engineer  
*Digitally Signed Oct 7, 19*

##### **Division Review**

Randy Halverson  
Director of Linear Infrastructure Services  
*Digitally Signed Oct 7, 19*

##### **Financial Implications**

Liisa Lenz  
Coordinator of Budgets  
*Digitally Signed Oct 8, 19*

##### **Recommended by the Department**

Tony Cecutti  
General Manager of Growth and Infrastructure  
*Digitally Signed Oct 8, 19*

##### **Recommended by the C.A.O.**

Ed Archer  
Chief Administrative Officer  
*Digitally Signed Oct 8, 19*

## Background:

As of May 3, 2018, substantive changes to the Minimum Maintenance Standards for Municipal Highways, O. Reg. 239/02 came into force and effect. The most notable changes impacting the maintenance of active transportation facilities are:

1. The introduction of winter maintenance standards, including patrol obligations, for sidewalks;
2. The introduction of winter maintenance standards for bicycle lanes;
3. The ability for municipalities to declare a "significant weather event" with implications for winter maintenance on roadways, bicycle lanes and sidewalks during the duration of the event

On August 12, 2019, by resolution (OP2019-14) the Operation Committee passed the "Active Transportation Winter Maintenance Policy" which was subsequently ratified by Council on August 13, 2019. The report recommended the following:

1. Designated cycling facilities be closed by Bylaw seasonally during the winter months;
2. Any changes to the existing sidewalk winter maintenance routes be consistent with the criteria established in Table 2 of the Active Transportation Winter Maintenance Policy;
3. Winter maintenance sidewalk and off-road trails be annually approved, through Operations Committee, subject to the annual budget process. The complete report to Operations Committee can be viewed at the following link:  
<http://agendasonline.greatersudbury.ca/index.cfm?pg=agenda&action=navigator&lang=en&id=1344&itemid=17288>

## Recommendation:

This report seeks to fulfill the requirements of the Active Transportation Policy by returning to Operations Committee to approve minor changes to the winter maintained portion of the Active Transportation network for the upcoming winter season (November 1<sup>st</sup>, 2019 to April 30<sup>th</sup>, 2020). Table 1 summarizes the said changes. It also lists the off-road trails that are officially being included as part of the winter maintained portion of the Active Transportation Network.

Table 1 – Active Transportation Winter Maintenance Changes for the 2019 / 2020 Winter

<b>Sidewalks</b>			
<b>Additions to Winter Maintenance in 2019 / 2020:</b>	<b>Location of Route</b>	<b>Bus Stops on Route</b>	<b>Reason for Change</b>
1. 3rd Avenue, Phillip St. to Anderson Dr.	Lively	None	Meets Criteria #4 & #7 of the Active Transportation Winter Maintenance Approach. Forms a connected route

2. Pathway, Government Rd. and Second Av.	Coniston	Yes	Meets Criteria #3 of the Active Transportation Winter Maintenance Approach. Forms a connected route
3. Concession Street, Emery St. to Second Av.	Coniston	None	Meets Criteria #4 & #7 of the Active Transportation Winter Maintenance Approach. Forms a connected route
4. Second Av. (east side), Kenwood St. to First Av	Sudbury	Yes	Meets Criteria #1 of the Active Transportation Winter Maintenance Approach. Maintaining multi-use path for pedestrians use only on an arterial road
5. Whittaker Street (east side of road), Isabel St. to Victoria St.	Sudbury	None	Meets Criteria #1 of the Active Transportation Winter Maintenance Approach. Maintain one side of a double sided sidewalk
6. Horobin Street, Willard to Arnley	Sudbury	At corner of Willard & Horobin	Meets Criteria #5 of the Active Transportation Winter Maintenance Approach. Connects to cemetery
7. Patterson St. (south side), College St. to Mackenzie St.	Sudbury	None	Meets Criteria #7 of the Active Transportation Winter Maintenance Approach. Forms connected route
8. St. Charles St. (south side), Notre Dame Av. to Morin Av.	Sudbury	None	Meets Criteria #7 of the Active Transportation Winter Maintenance Approach. Forms connected route
9. Birch St. (south side), William St. to Beech St.	Garson	None	Meets Criteria #1 of the Active Transportation Winter Maintenance Approach. Maintain one side of a double sided sidewalk
10. York St. (north side), Regent St. to Paris St. (new construction)	Sudbury	None	Meets Criteria #1 of the Active Transportation Winter Maintenance Approach. Maintain both sides of a connected sidewalk on a collector road.
11. Regent St. (south side), Old Burwash Rd. to Long Lake Rd. (new construction)	Sudbury	Yes	Meets Criteria #1 of the Active Transportation Winter Maintenance Approach. Maintain both sides of a connected sidewalk on an

			arterial road.
12. Dominion Dr. (north side), MR80 to Elmview Dr. (new construction)	Hanmer	Yes	Meets Criteria #1 of the Active Transportation Winter Maintenance Approach. Maintaining multi-use path for pedestrians use only on a collector road
<b>Sidewalks</b>			
<b>Deletions to Winter Maintenance in 2019 / 2020:</b>	<b>Location of Route</b>	<b>Bus Stops on Route</b>	<b>Reason for Change</b>
1. Second Avenue South, Levack Dr. to Carter St.	Levack	None	Does not meet Criteria Table of the Active Transportation Winter Maintenance Approach. Dead-end Street
2. Union Street, north of Park St.	Copper Cliff	None	Does not meet Criteria Table Active Transportation Maintenance Approach. Dead-end Street
3. Oliver Street, north of Rink St.	Copper Cliff	None	Does not meet Criteria Table of the Active Transportation Winter Maintenance Approach. Dead-end Street
4. Nickel Street, west of William St.	Coniston	None	Does not meet Criteria Table of the Active Transportation Winter Maintenance Approach. Dead-end Street
5. Whittaker Street (west side of road), Isabel St. to Victoria St.	Sudbury	None	Does not meet Criteria Table of the Active Transportation Winter Maintenance Approach. Disconnected route
6. Patterson St. (north side), College St. to Mackenzie St.	Sudbury	None	Meets Criteria #1 of the Active Transportation Winter Maintenance Approach. Switching winter maintenance to south side in 2019/2020, per Councilors request.
7. St. Charles St. (north side), Notre Dame Av. to Morin Av.	Sudbury	None	Meets Criteria #1 of the Active Transportation Winter Maintenance Approach. Switching winter maintenance to south side in 2019/2020, per Councilors request.
<b>Cycling Facilities</b>			
All 21 Km's of the designated cycling facilities will not be maintained from November 1st to April 30th			
<b>Off-road Trails</b>			
<b>Continue Winter Maintenance in 2019 / 2020:</b>	<b>Location</b>	<b>Comments</b>	

1. Jim Gordon Boardwalk by Ramsey Lake	Sudbury	No change from past years
2. Ramsey Lake road trail	Sudbury	No change from past years
3. Delki Dozzi path, off Glover Av.	Sudbury	No change from past years

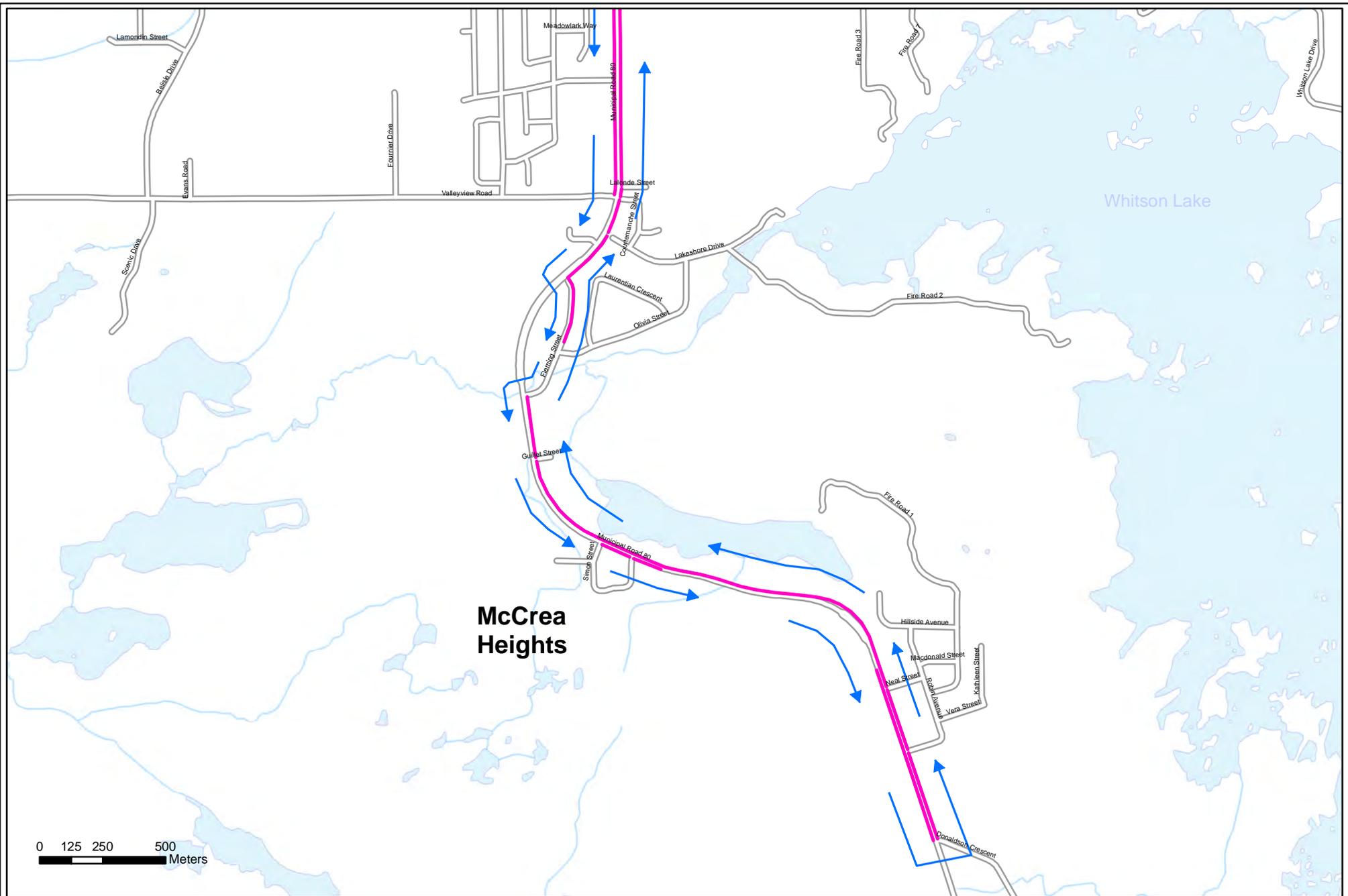
Schedule 1 provides a complete list of sidewalks that will be maintained during the upcoming winter season (November 1<sup>st</sup>, 2019 to April 30<sup>th</sup>, 2020).

**Next Steps:**

If approved, staff will conduct the following:

1. Finalize a bylaw that will temporarily close all unmaintained portions of the Active Transportation network during the winter months (November 1<sup>st</sup> to April 30<sup>th</sup>).
2. To ensure the public is made aware of any approved changes to the winter maintenance of active transportation facilities, staff will work with Communications and Community Engagement staff to ensure all relevant information, including lists of closed sidewalks and cycling facilities, will be posted to the City's website, be communicated by Public Service Announcement each year as well as sending letters to the impacted residents (abutting the infrastructure) who will be impacted by the changes to the active transportation winter maintenance plan.





# NORTHEAST SECTION 2019-2020

Date: September 12, 2019

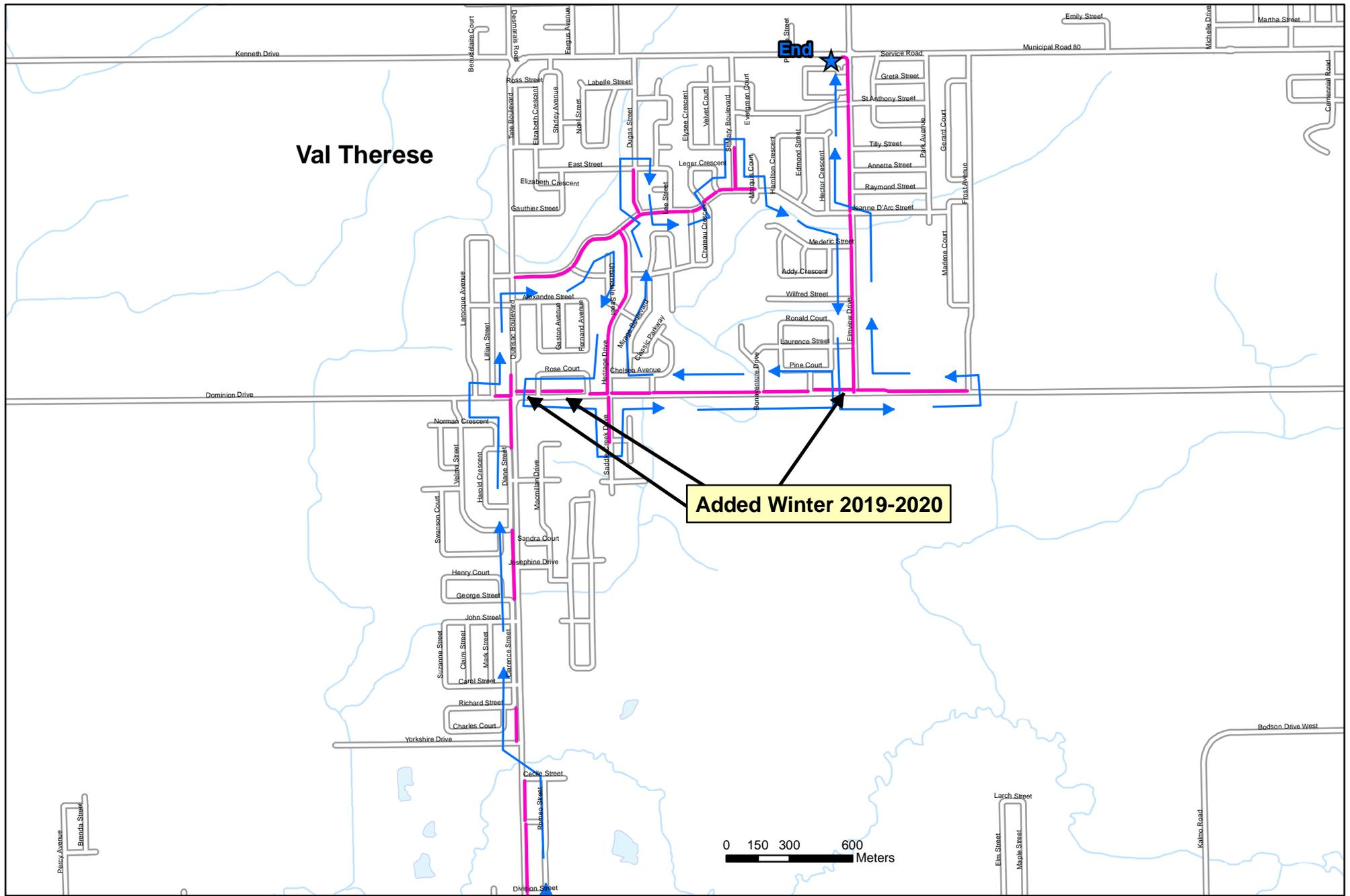
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# SIDEWALK 1

2 of 3

13 of 75

Vehicle: S-235-15



# NORTHEAST SECTION 2019-2020

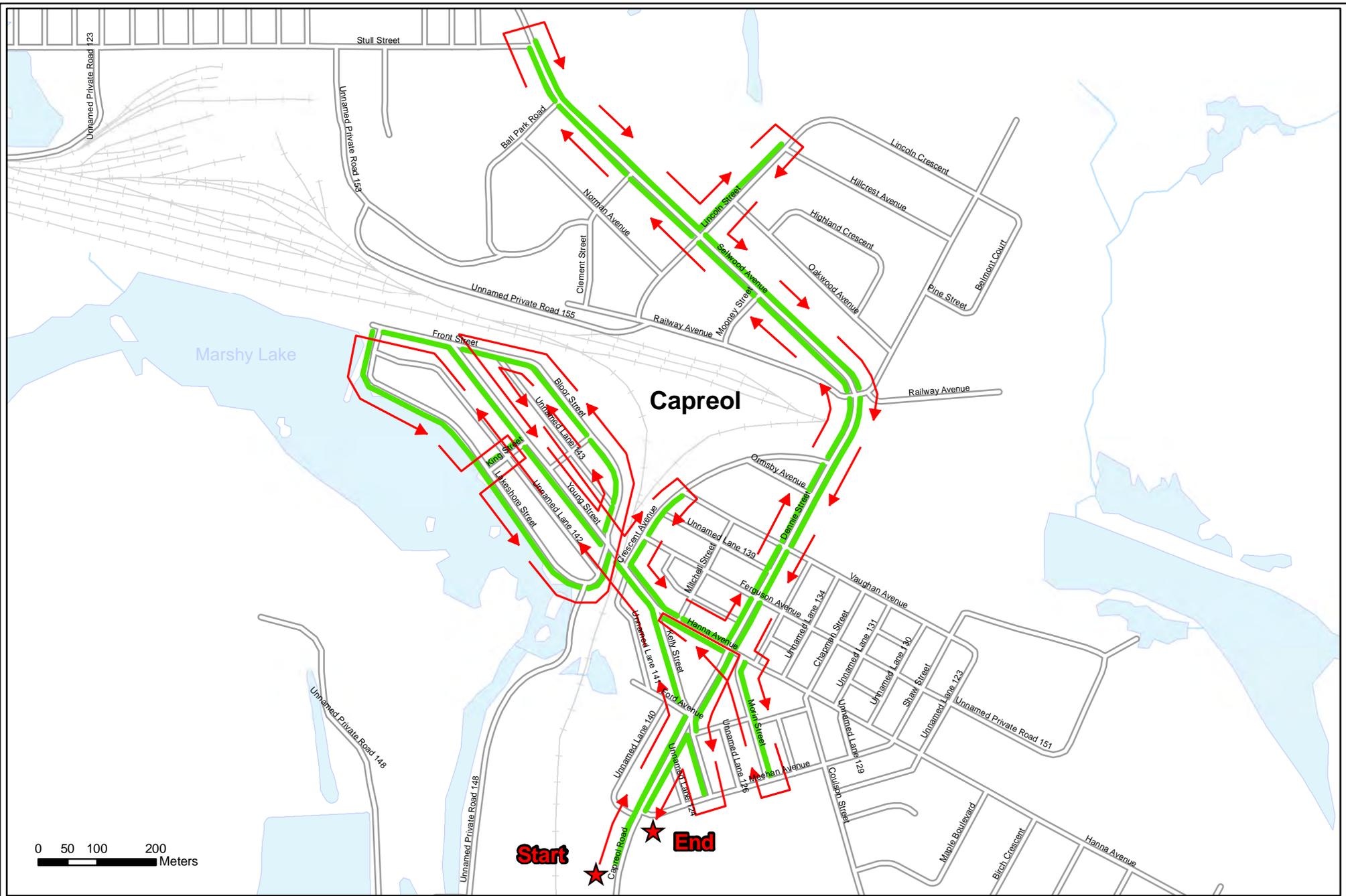
# SIDEWALK 1

Date: October 7, 2019

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3 of 3  
14 of 75

Vehicle: S-235-15



# NORTHEAST SECTION 2019-2020

# SIDEWALK 2

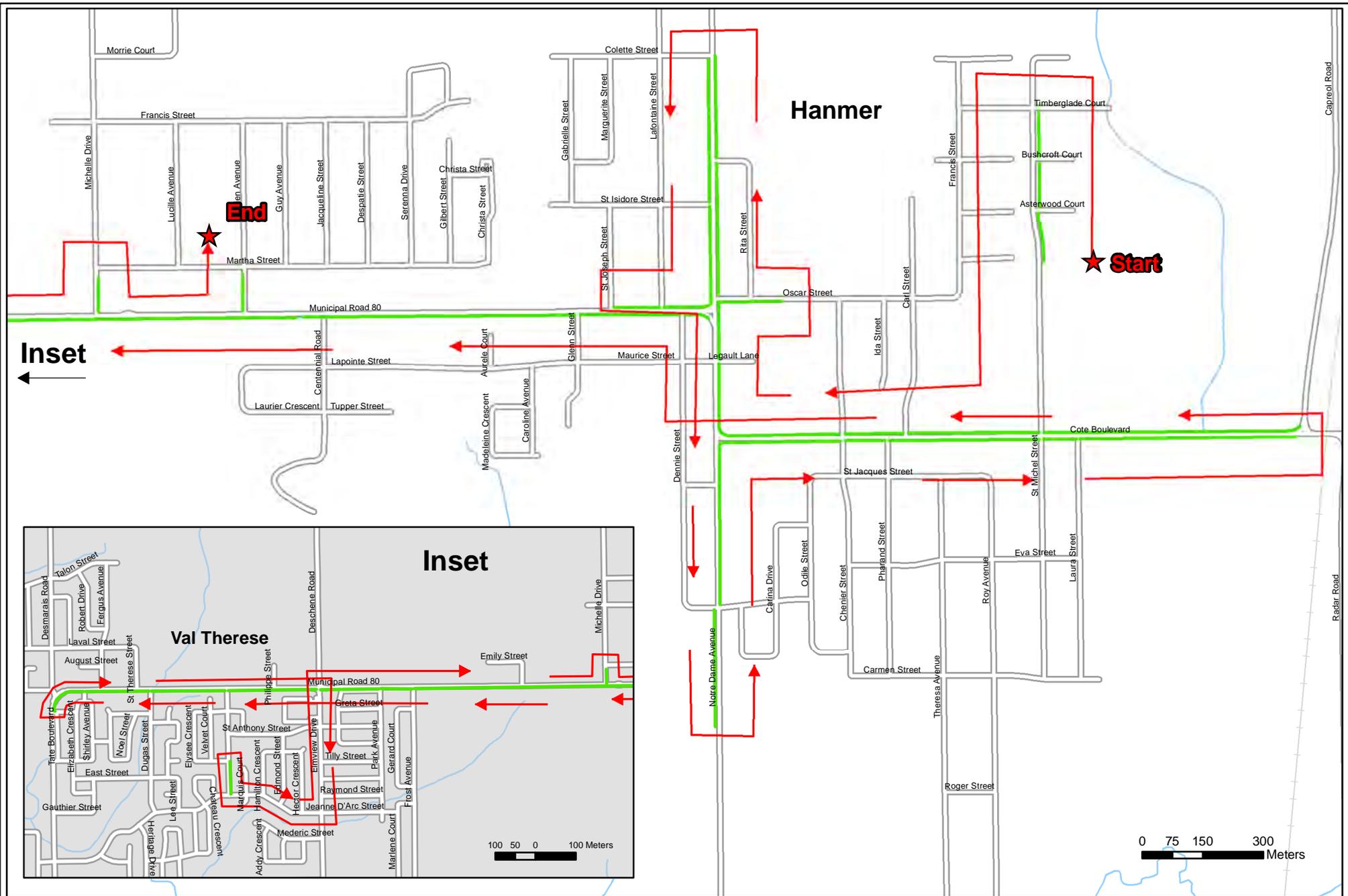
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1 of 2

15 of 75

Vehicle: S-1252



# NORTHEAST SECTION 2019-2020

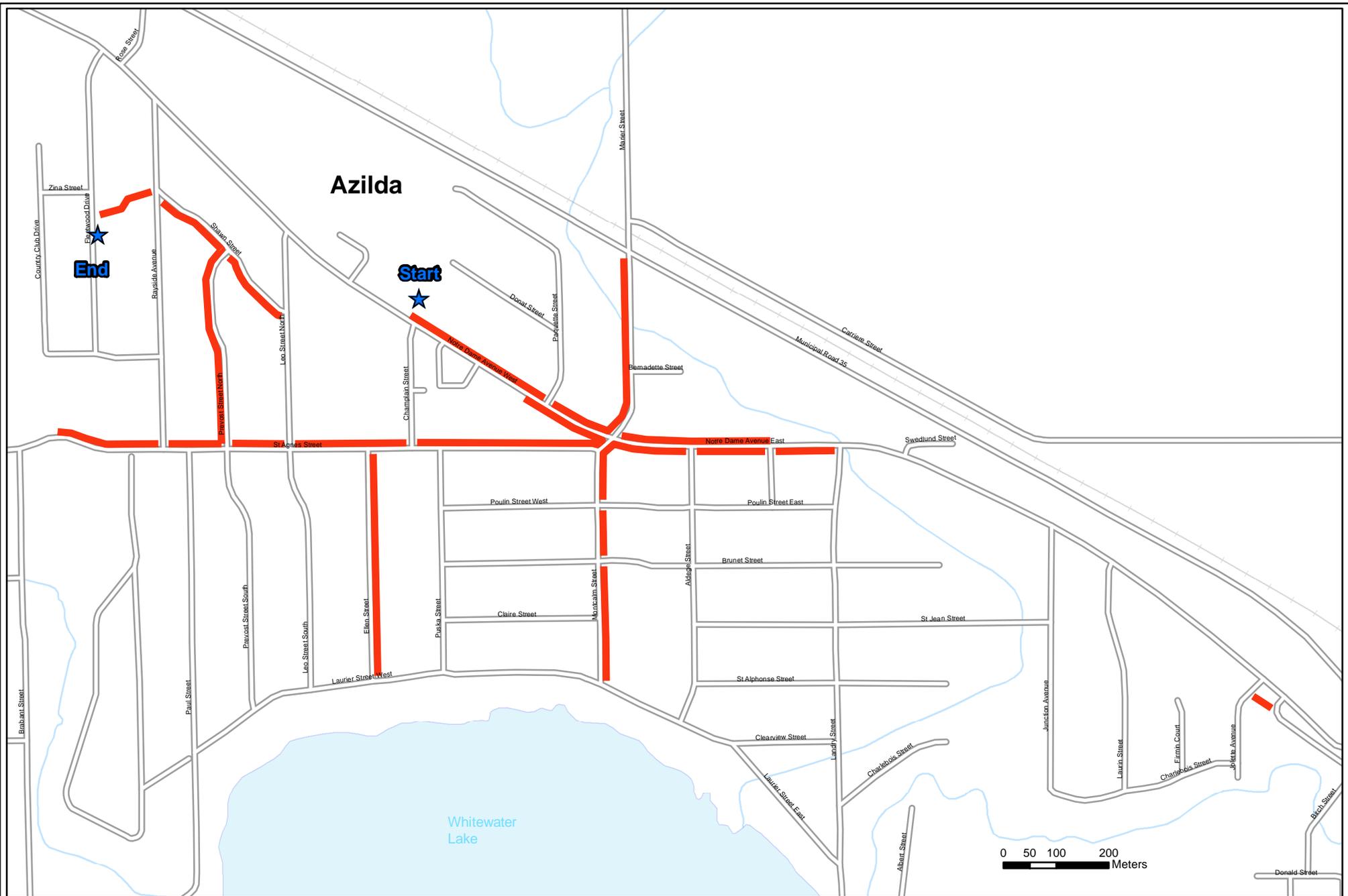
# SIDEWALK 2

Date: September 12, 2019

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2 of 2

Vehicle: S-1252

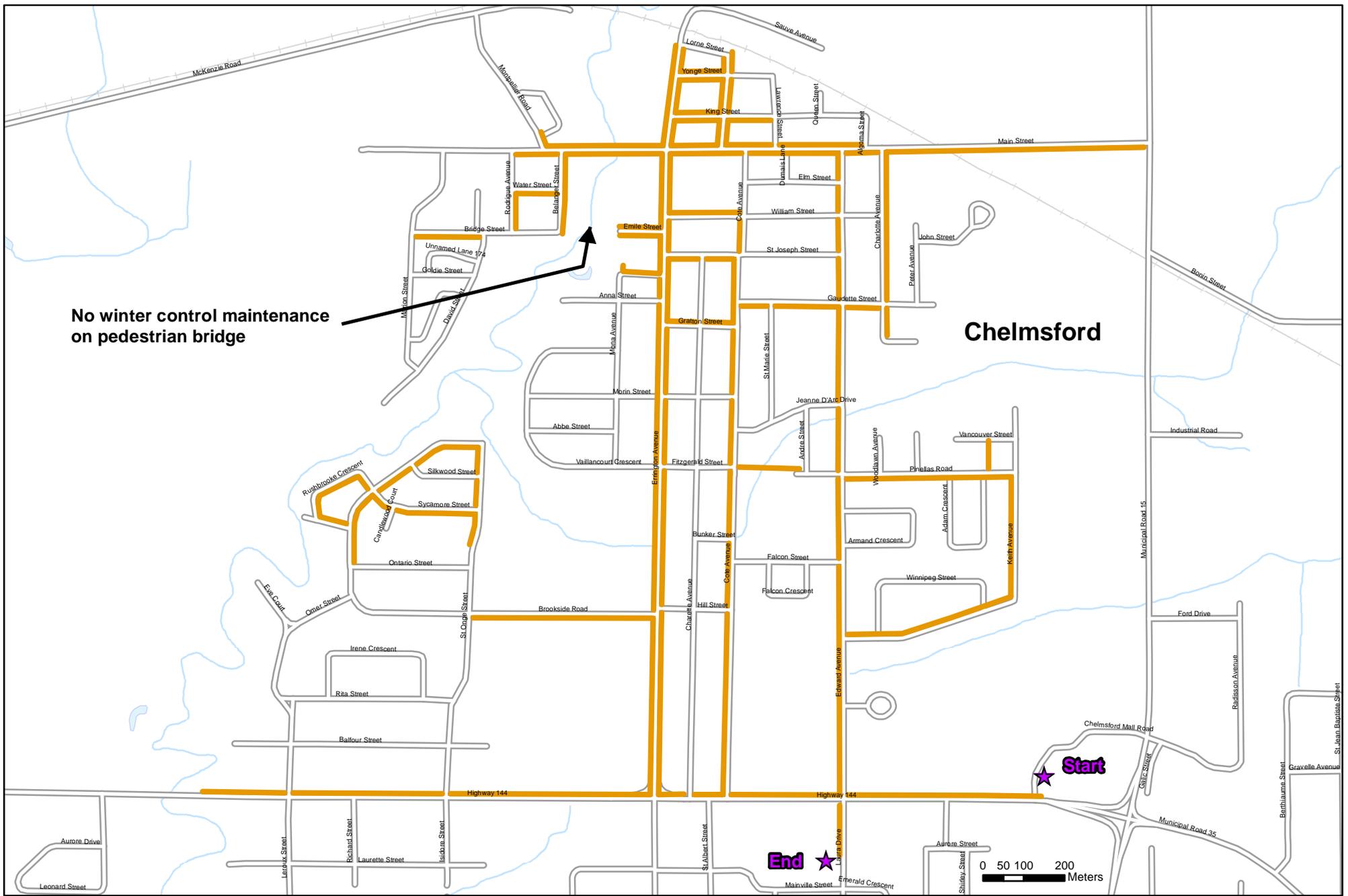


# NORTHWEST SECTION 2019-2020

# SIDEWALK 1

Date: September 12, 2019

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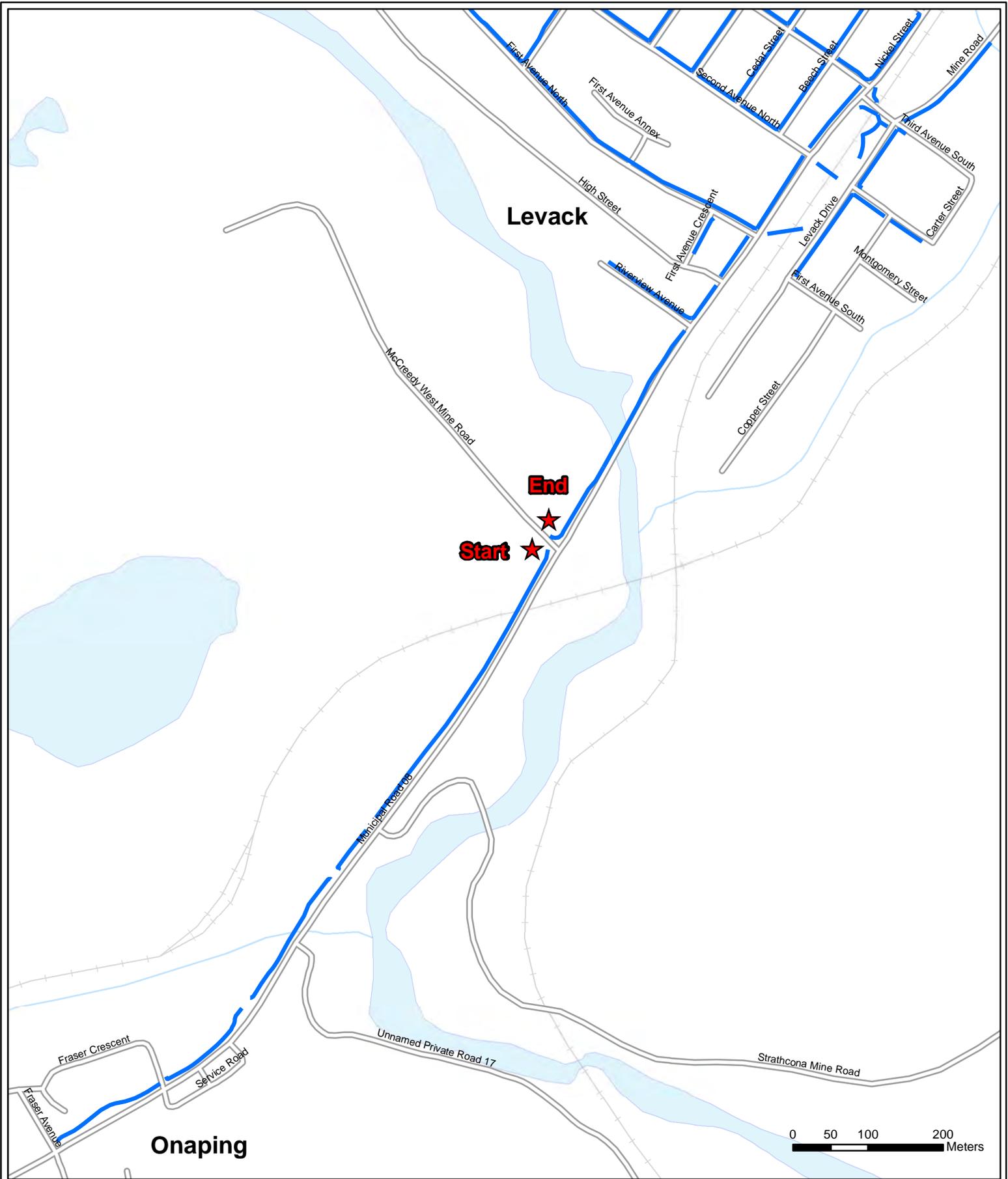


# NORTHWEST SECTION 2019-2020

# SIDEWALK 2

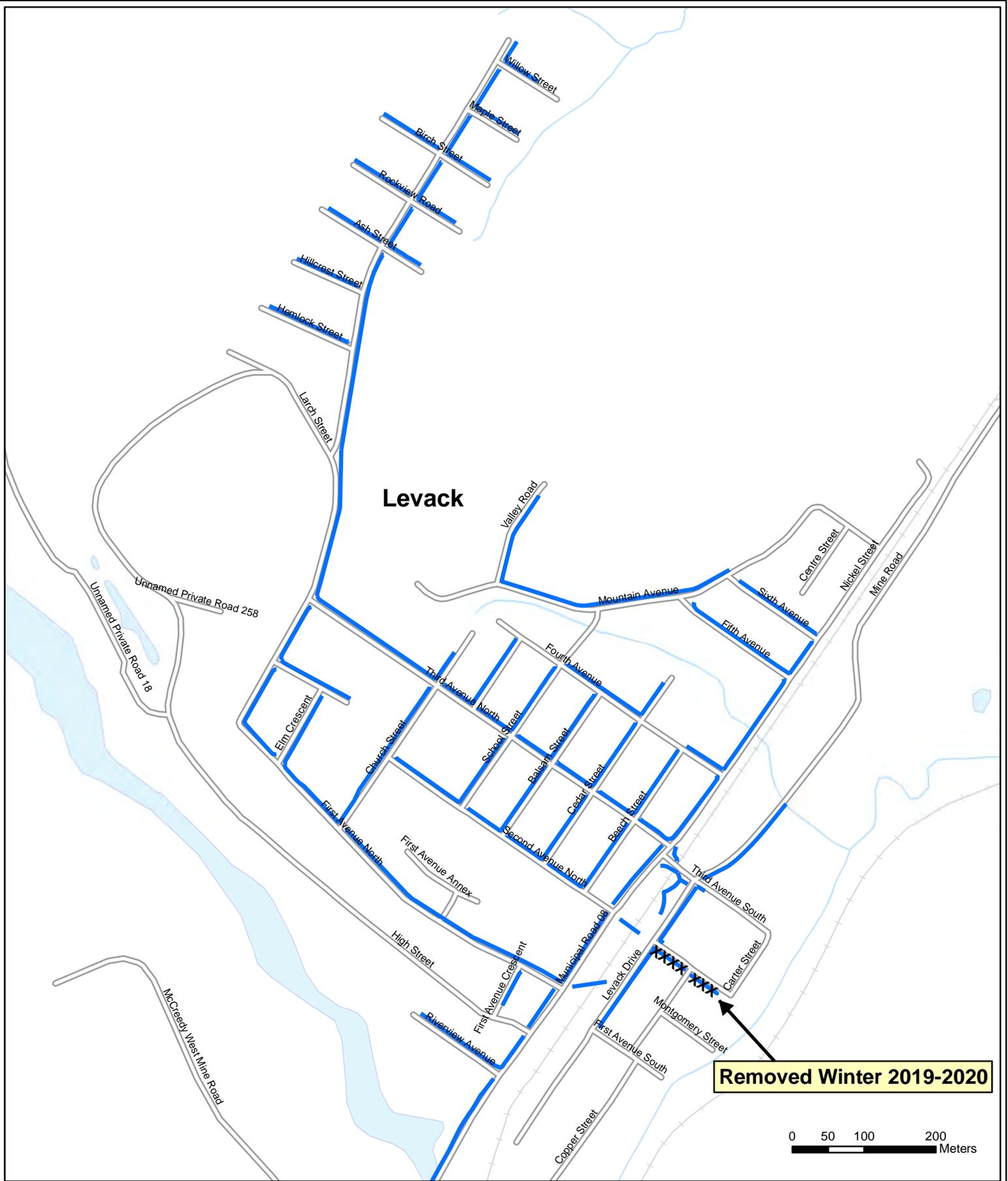
Date: September 12, 2019

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# NORTHWEST SECTION 2019-2020

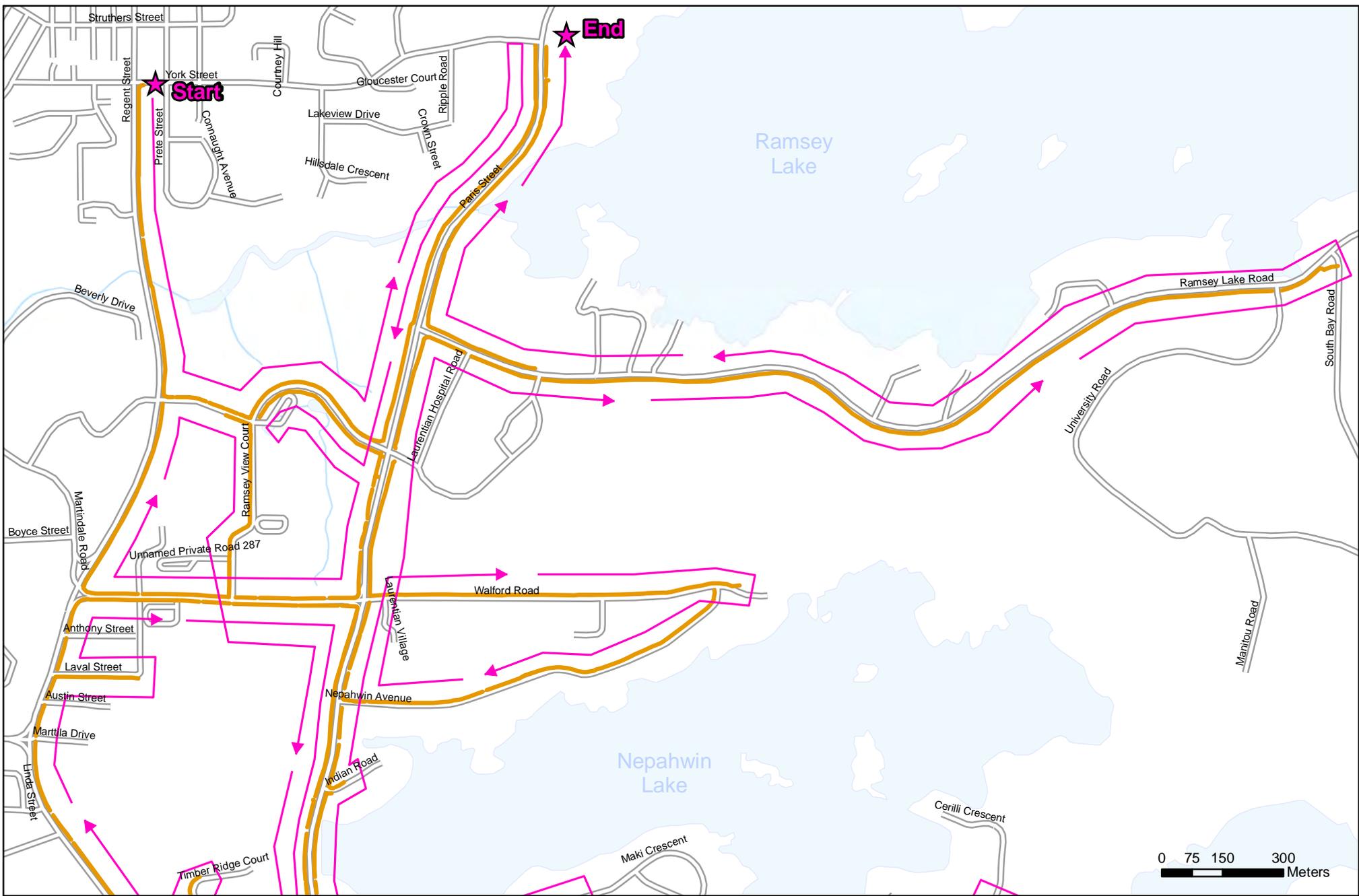
# SIDEWALK 3



# NORTHWEST SECTION 2019-2020

# SIDEWALK 3

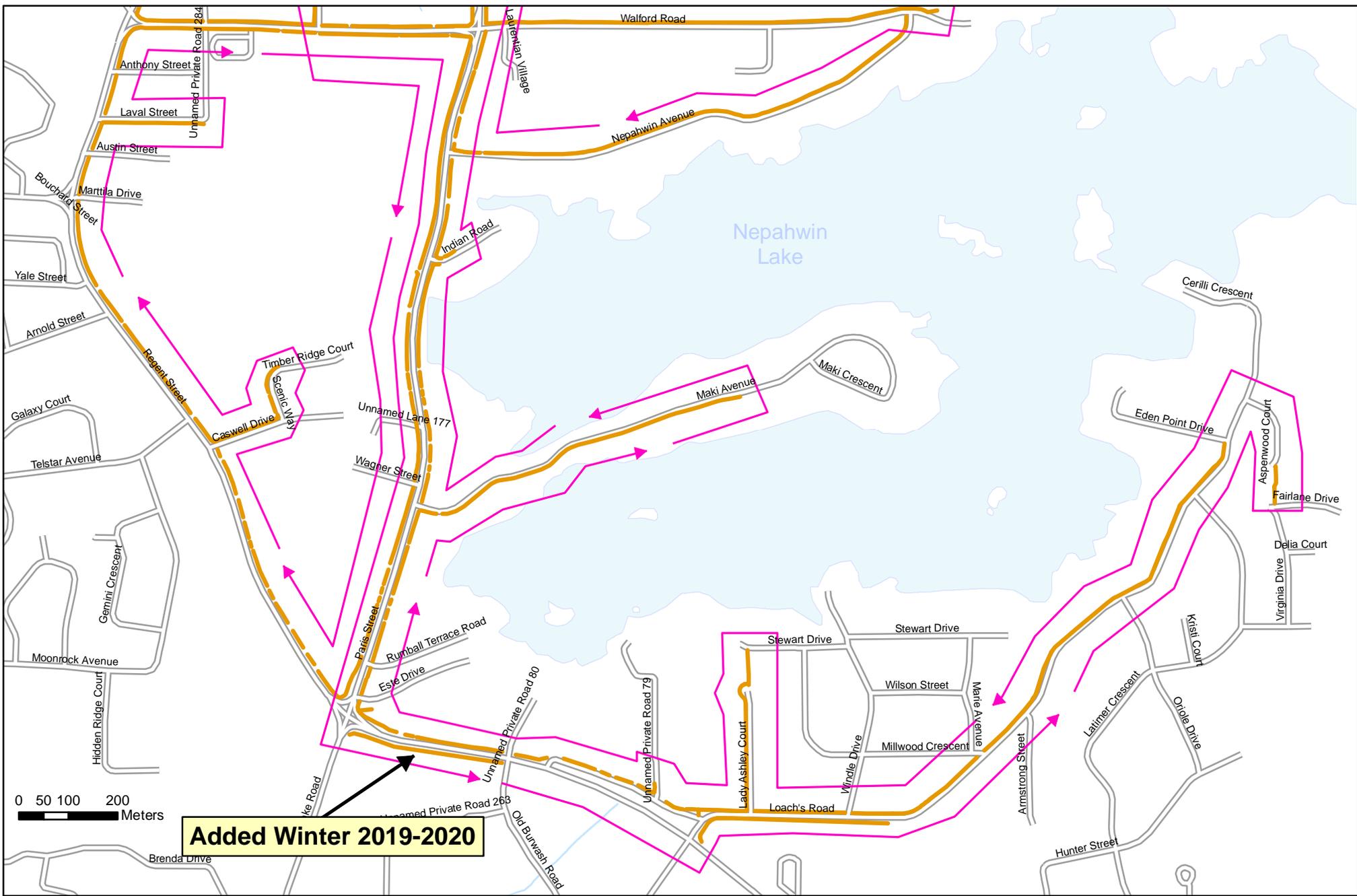




# SOUTH SECTION 2019-2020

# SIDEWALK 1

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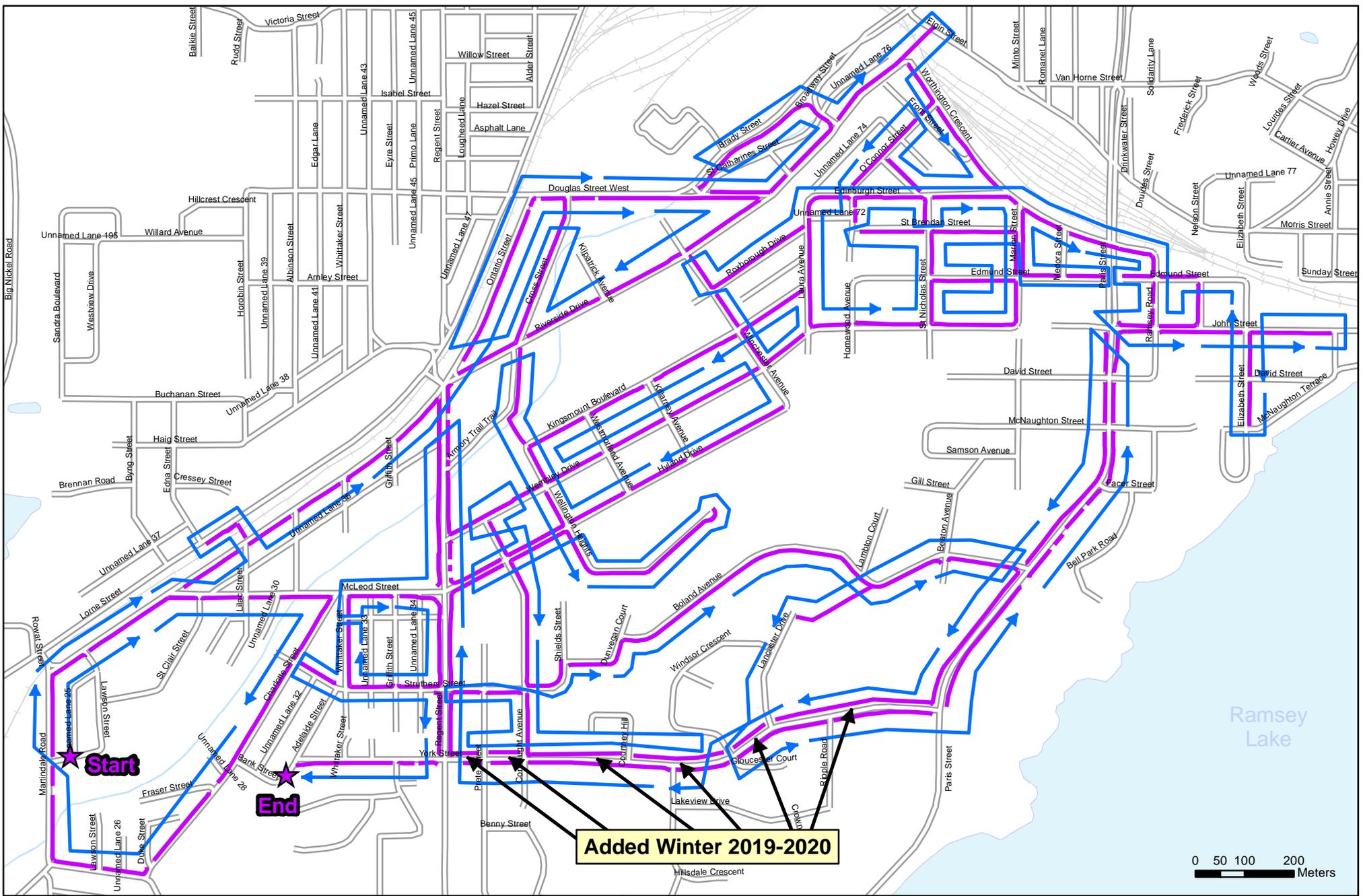


# SOUTH SECTION 2019-2020

# SIDEWALK 1

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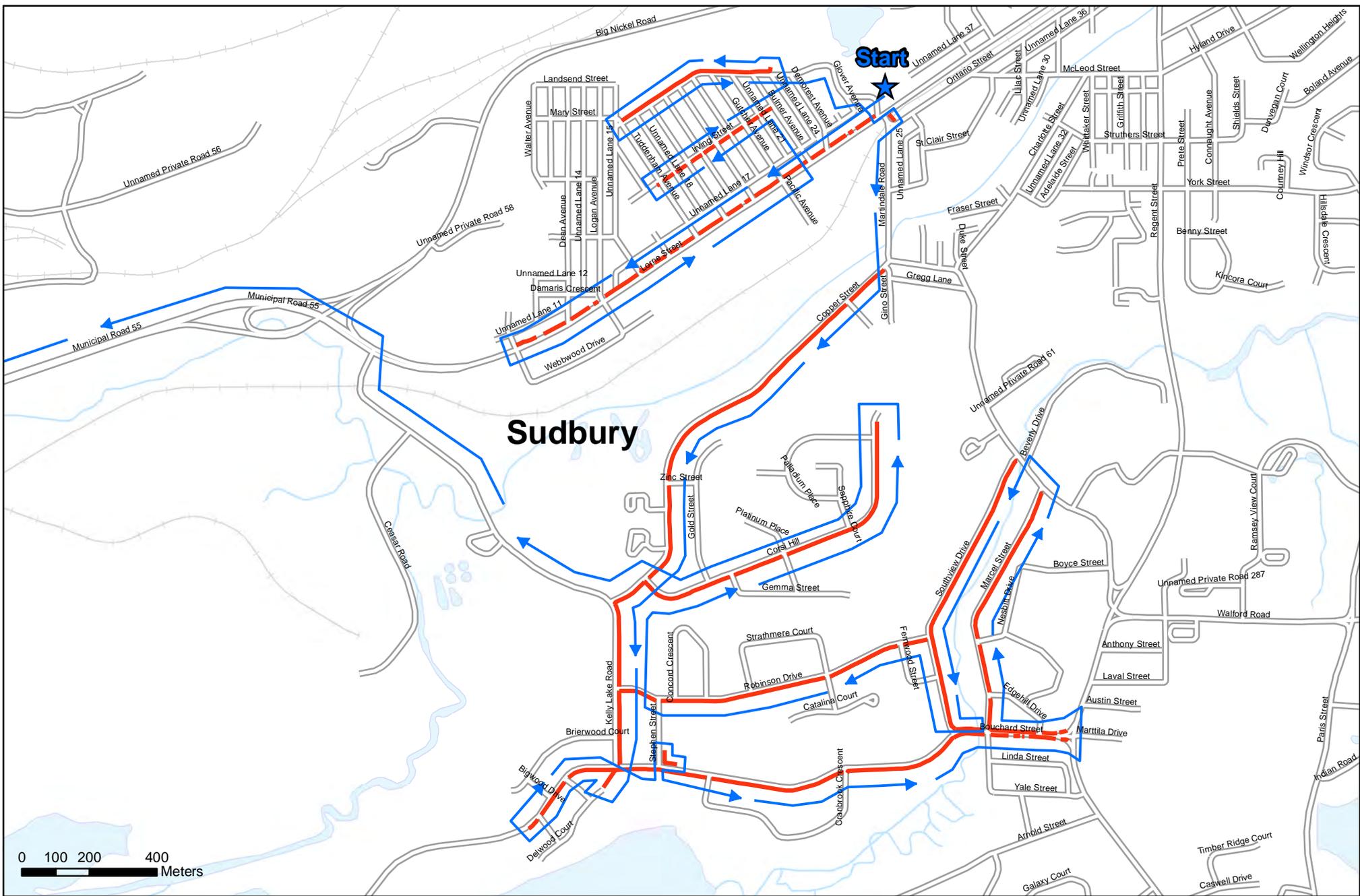
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# SOUTH SECTION 2019-2020

# SIDEWALK 2

Date: October 7, 2019  
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# SOUTH SECTION 2019-2020

# SIDEWALK 3

Date: September 12, 2019  
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Removed Winter 2019-2020

Removed Winter 2019-2020

# Copper Cliff

End

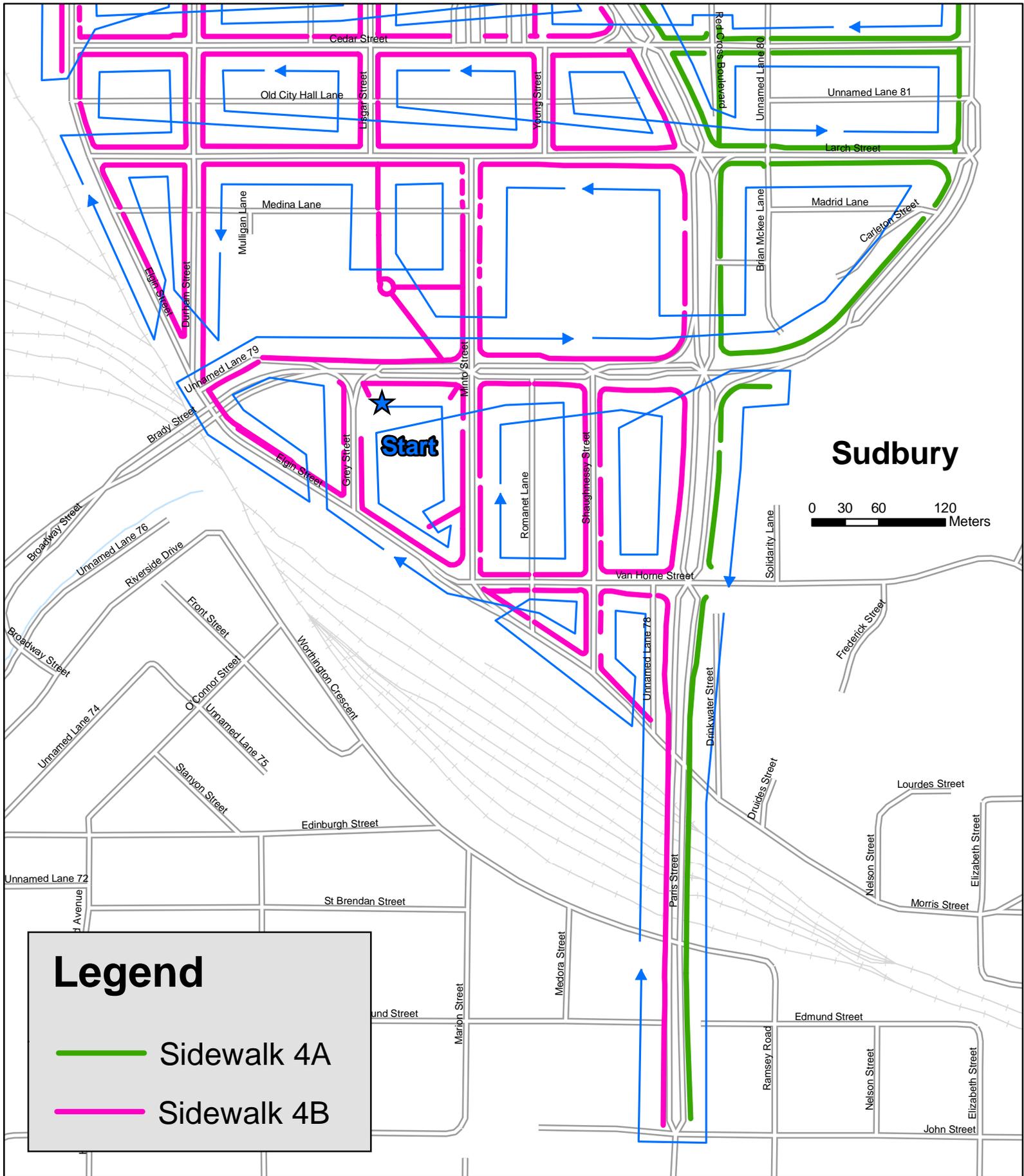


## SOUTH SECTION 2019-2020

## SIDEWALK 3

Date: September 26, 2019

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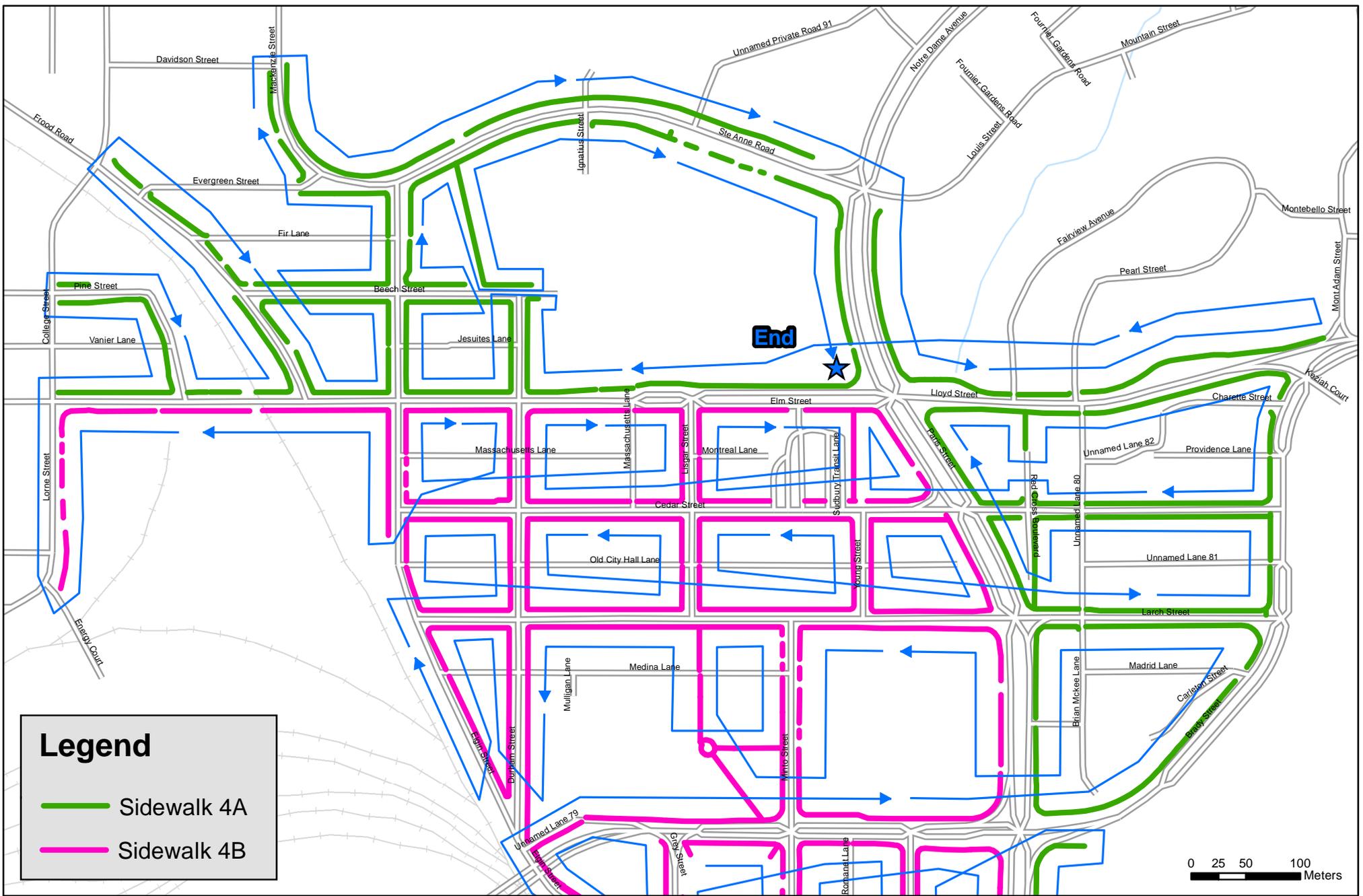


**Legend**

- Sidewalk 4A
- Sidewalk 4B

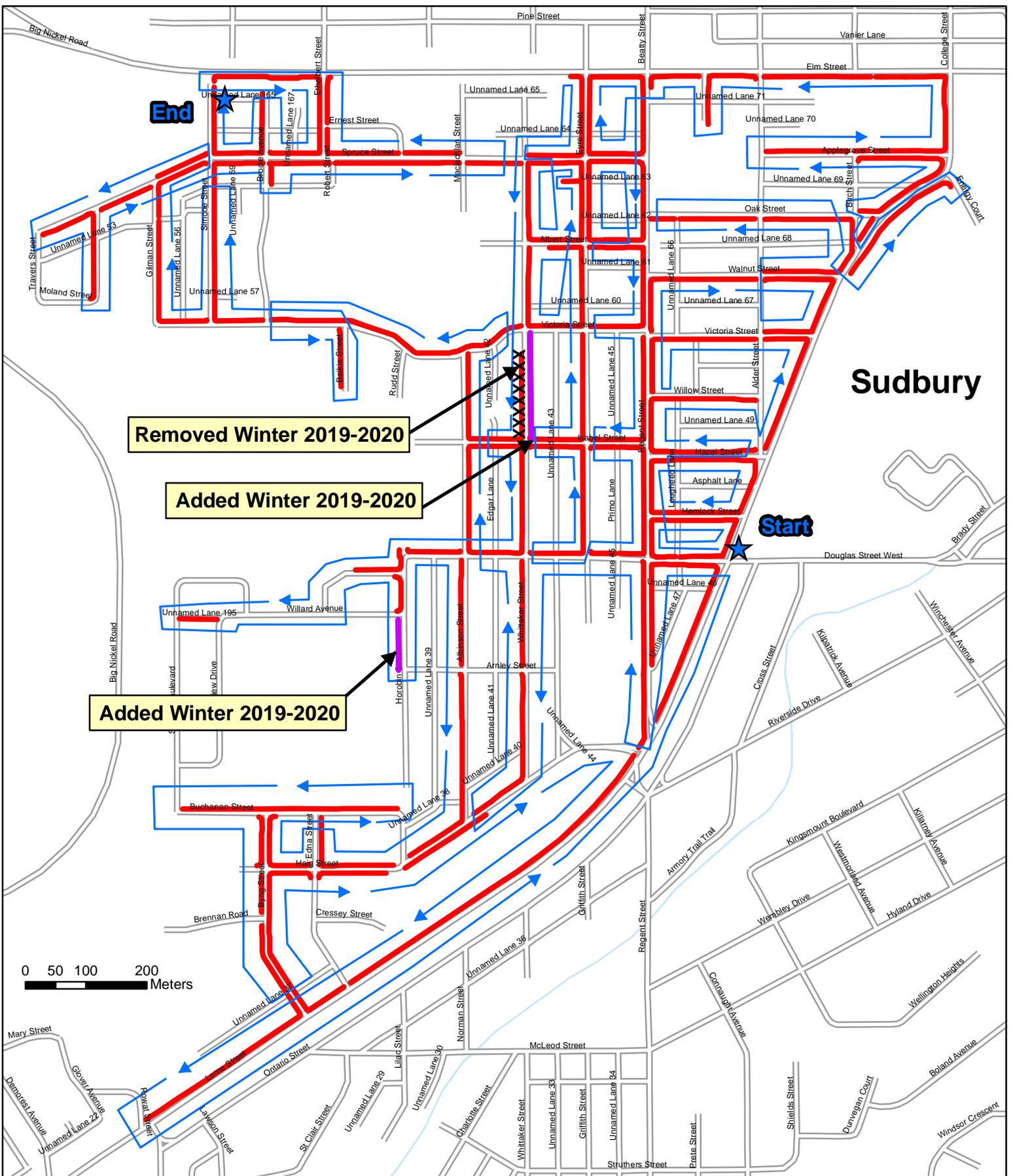
**SOUTH SECTION 2019-2020**

**SIDEWALK 4**



# SOUTH SECTION 2019-2020

# SIDEWALK 4



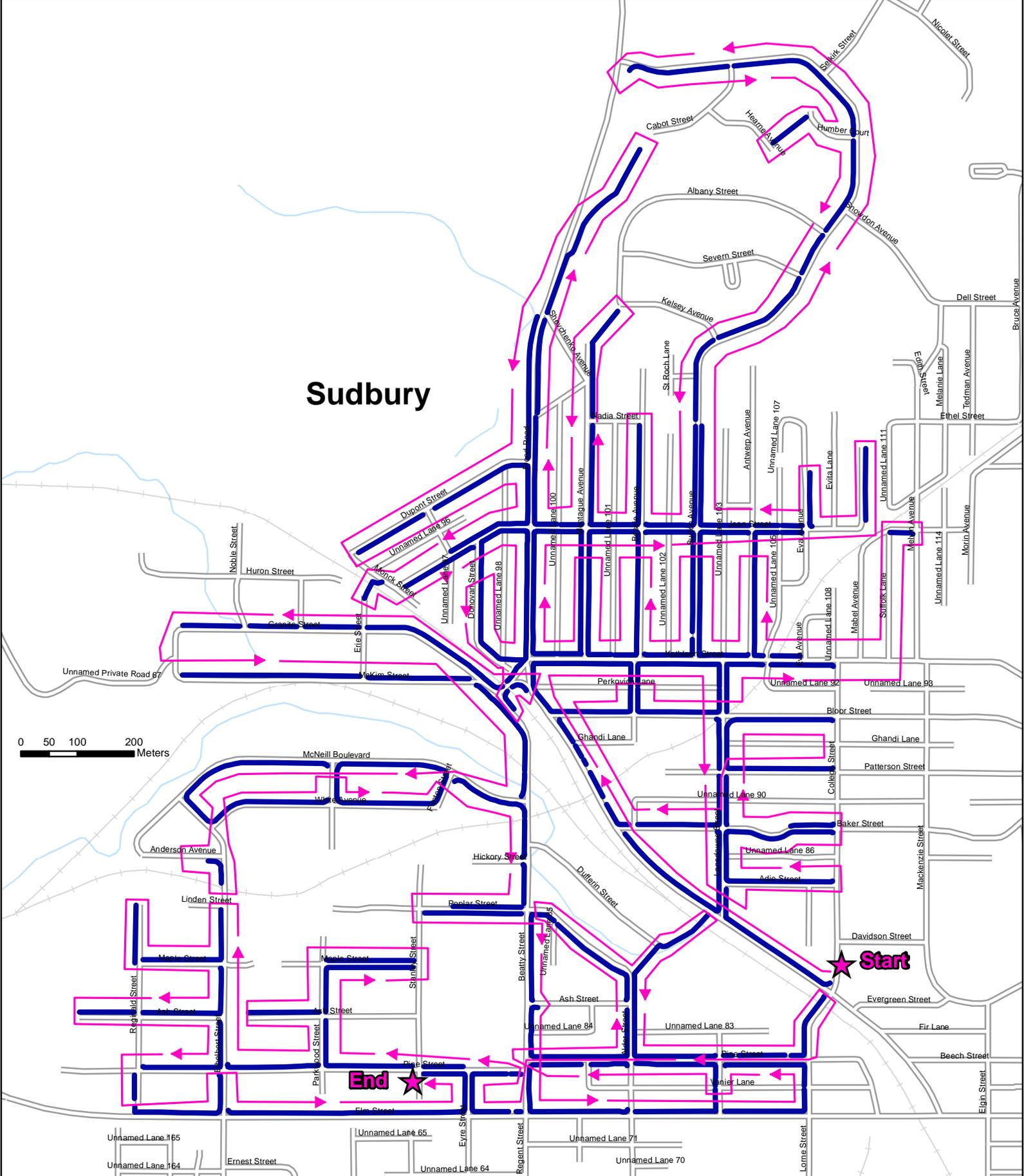
# SOUTH SECTION 2019-2020

# SIDEWALK 5

Date: September 27, 2019

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# Sudbury

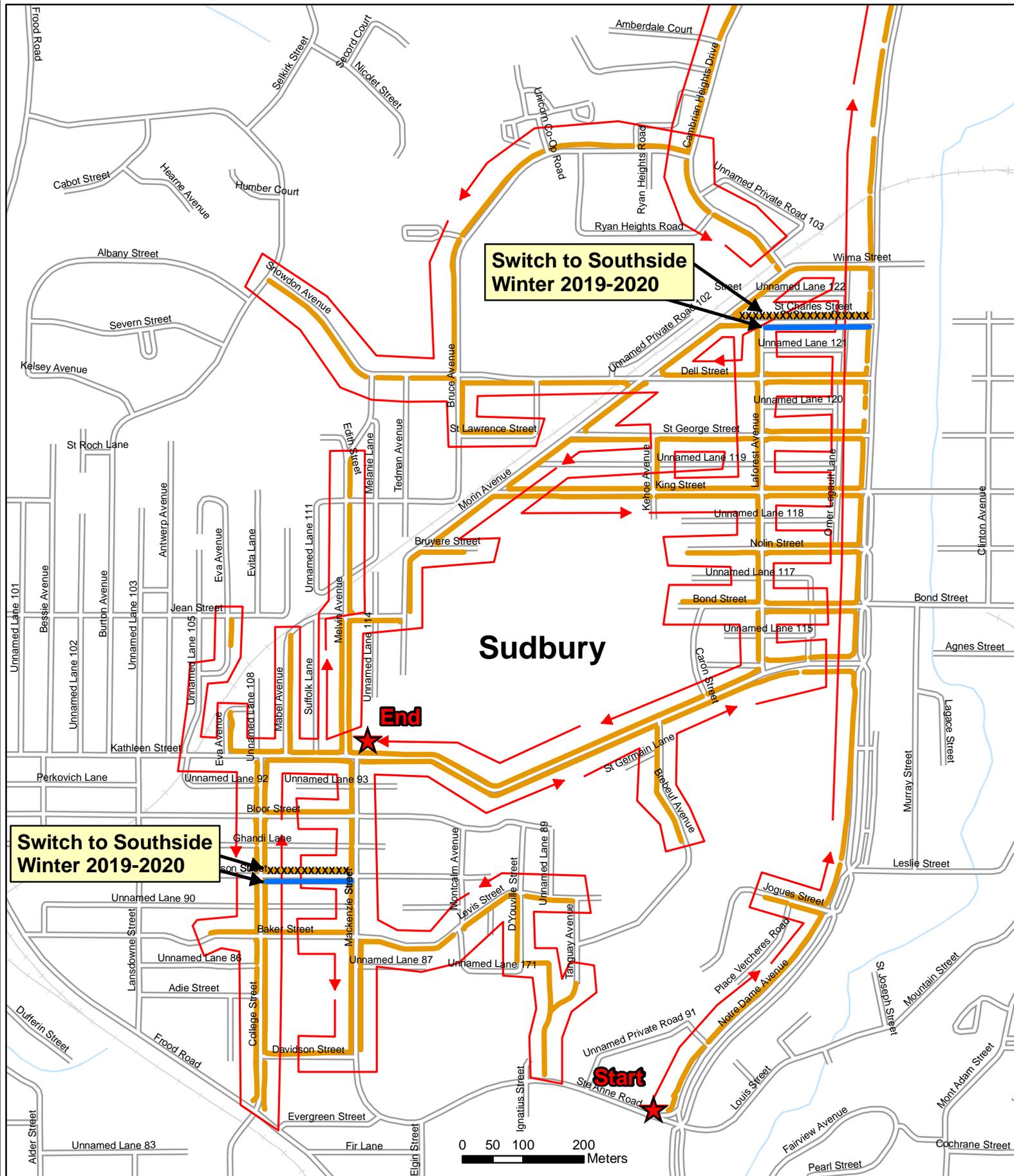


## SOUTH SECTION 2019-2020

## SIDEWALK 6

Date: September 30, 2019

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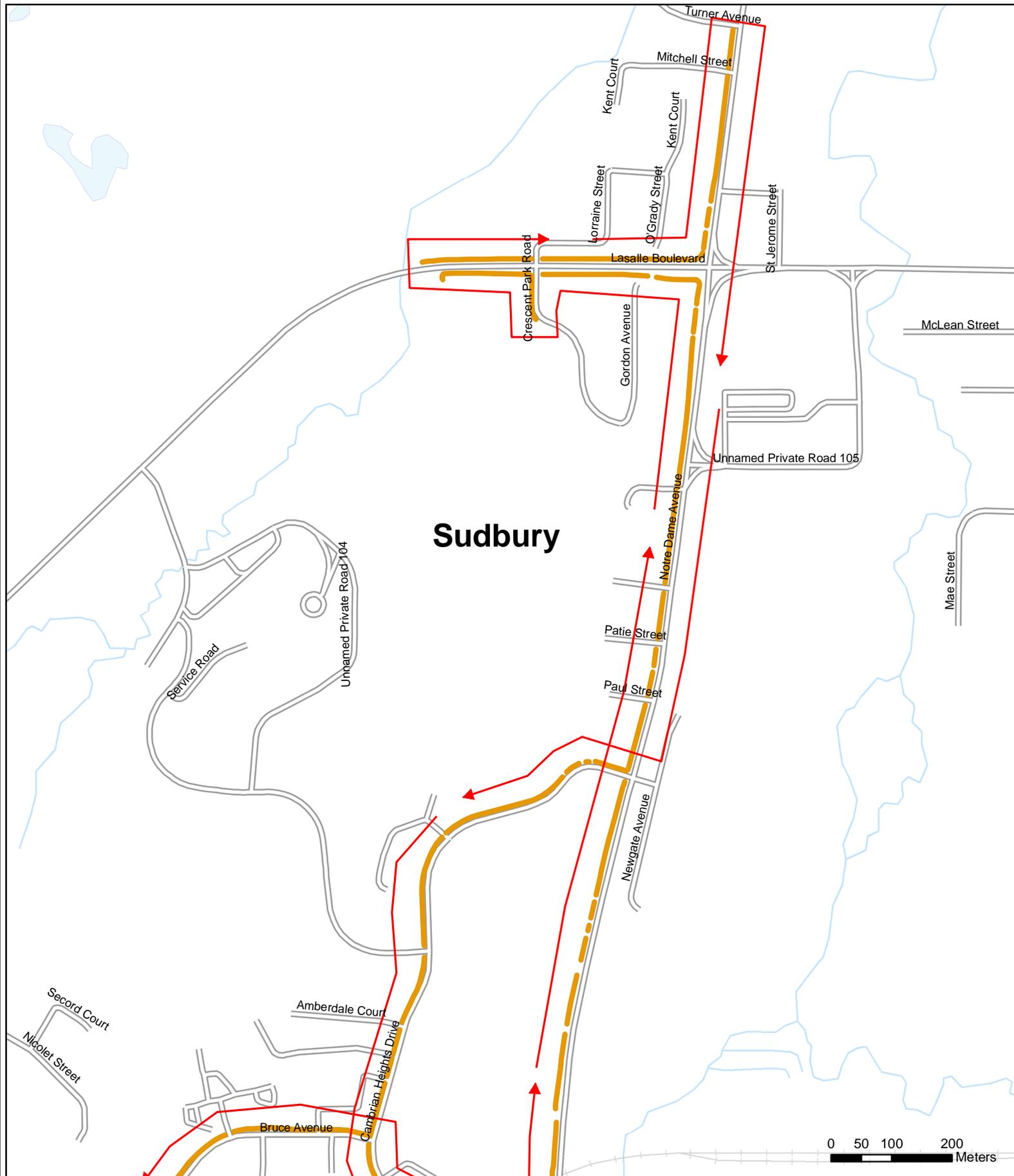


# SOUTH SECTION 2019-2020

# SIDEWALK 7

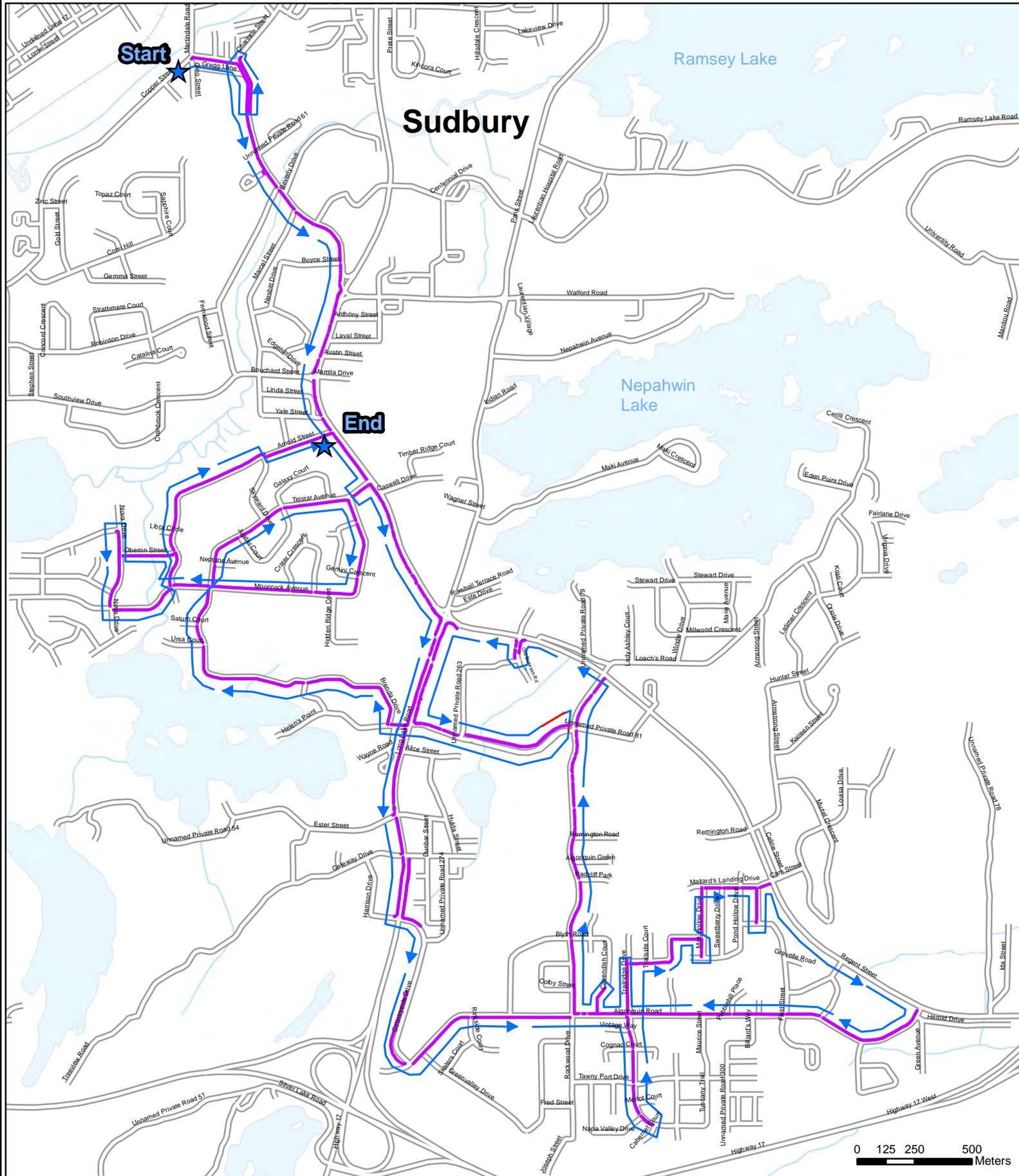
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# SOUTH SECTION 2019-2020

# SIDEWALK 7

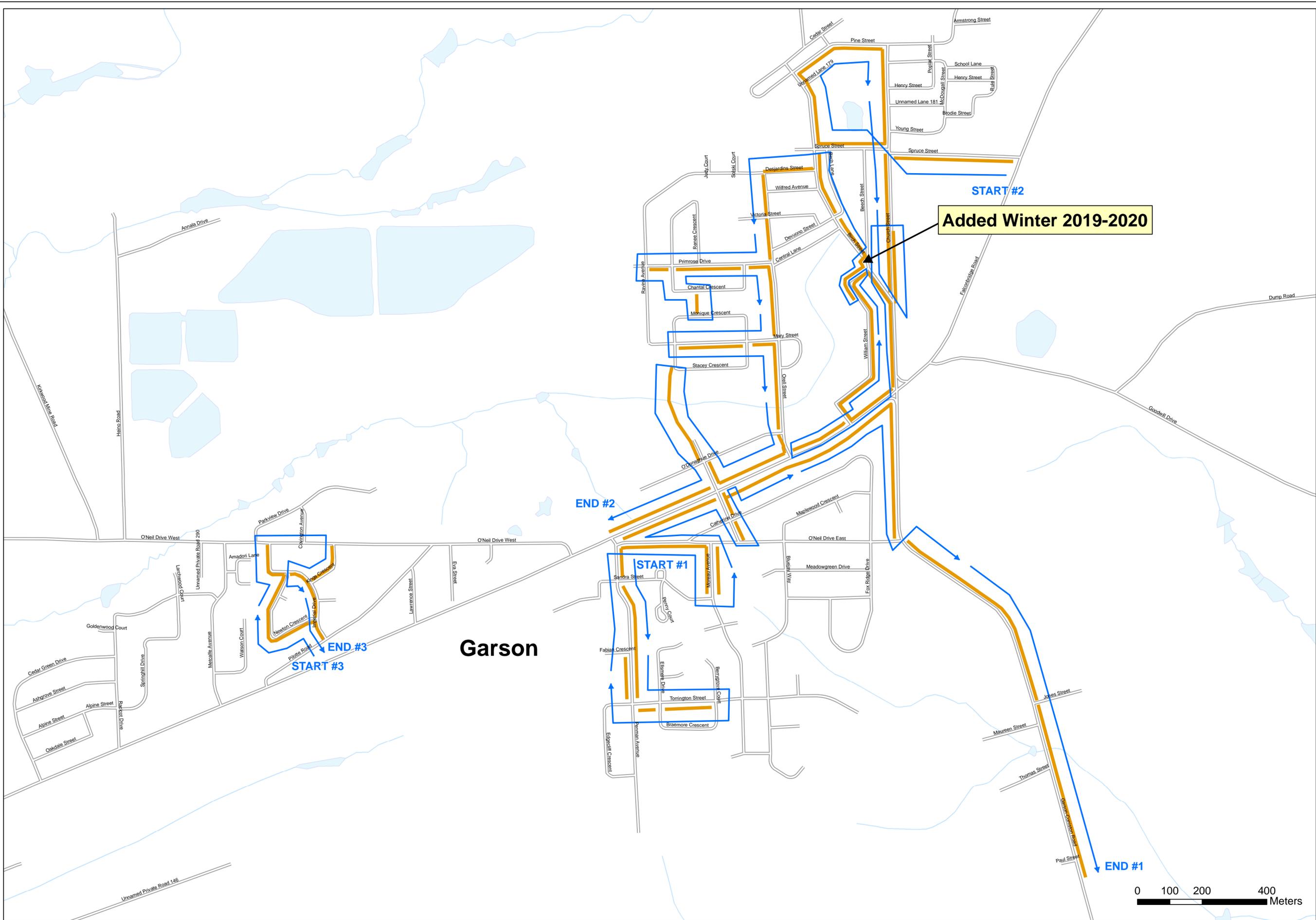


# SOUTH SECTION 2019-2020

# SIDEWALK 8

Date: September 12, 2019

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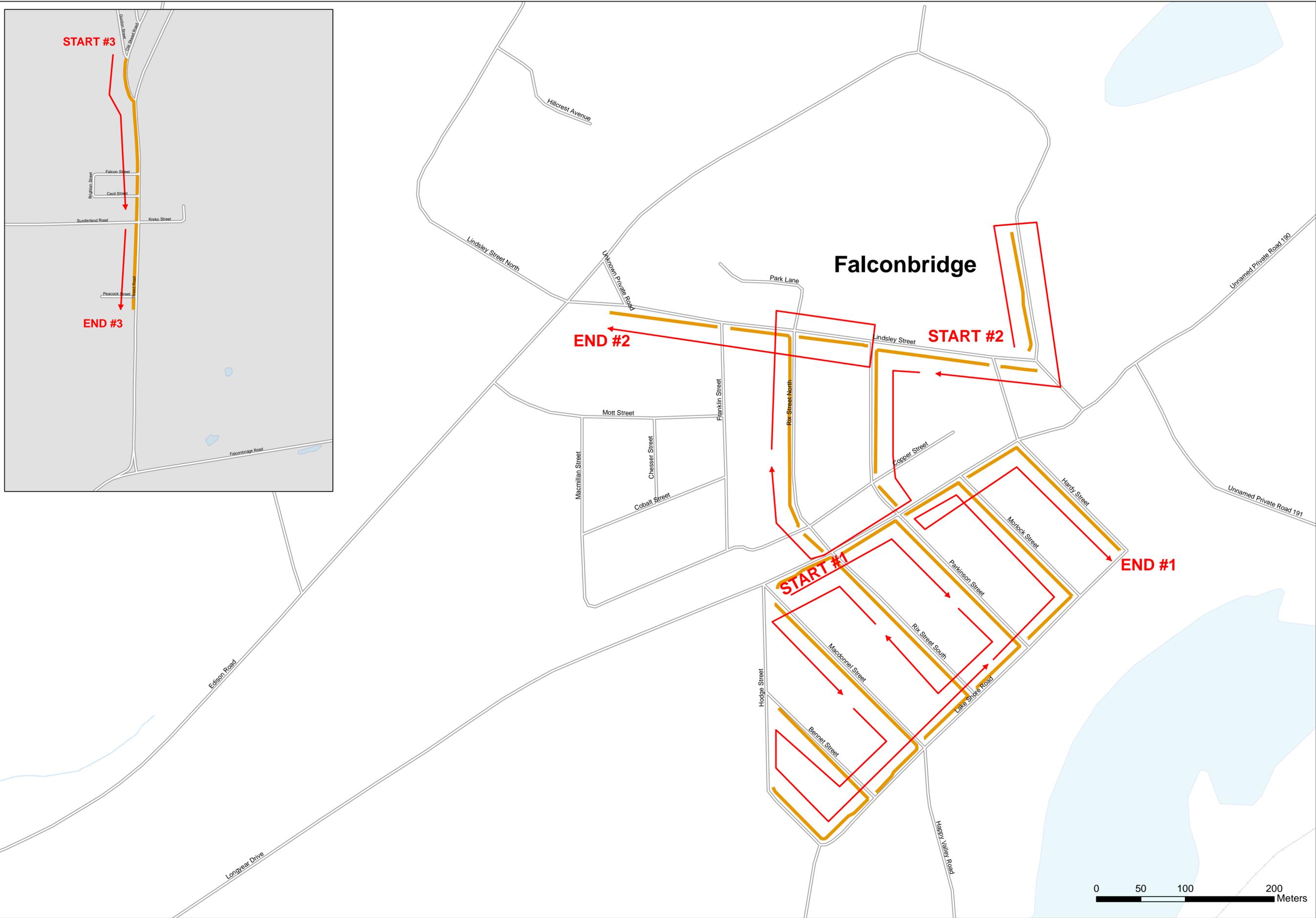


# SOUTHEAST SECTION 2019-2020

Date: October 7, 2019  
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# SIDEWALK 1

Vehicle:



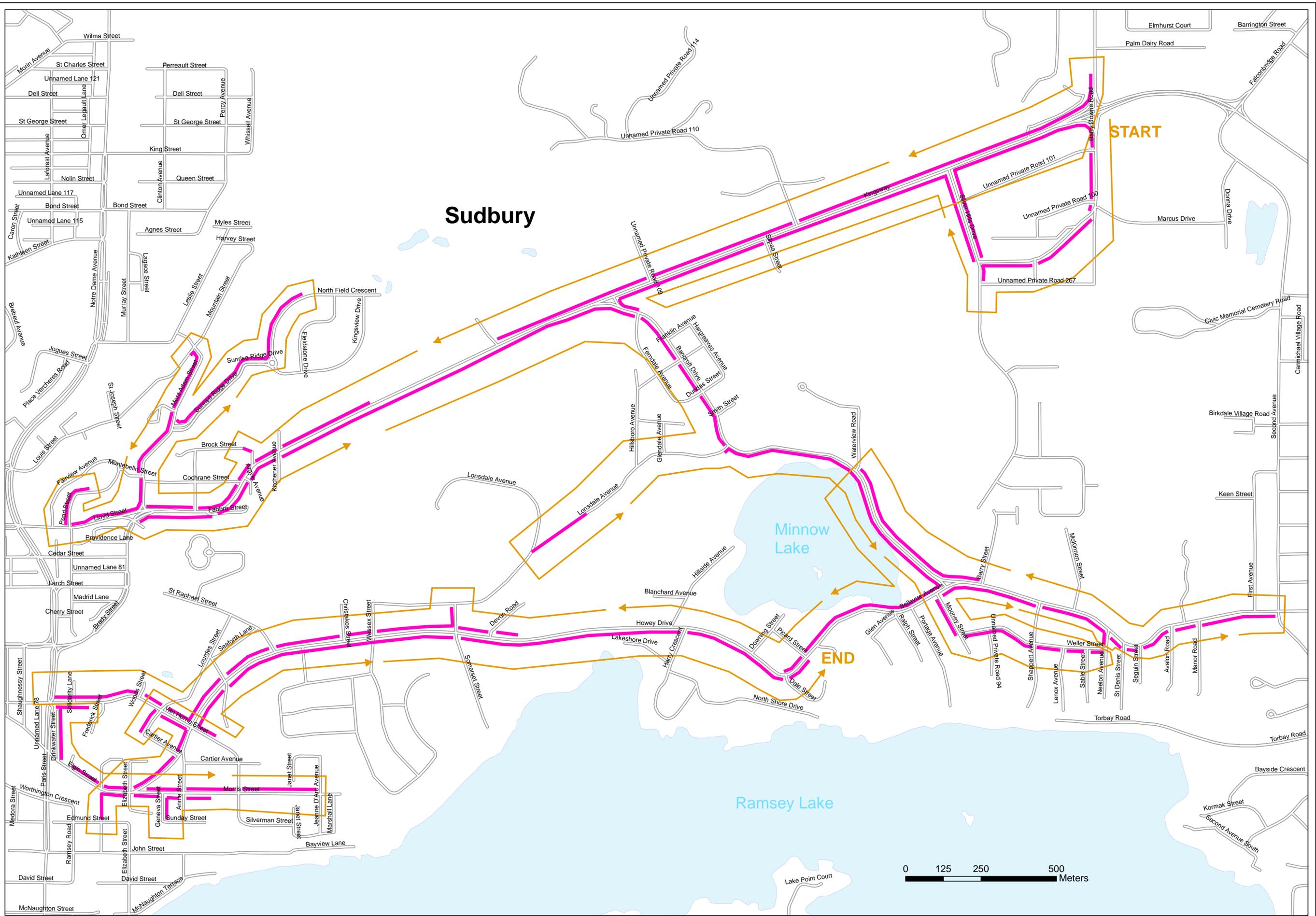
# SOUTHEAST SECTION 2019-2020

Date: September 12, 2019  
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# SIDEWALK 1

2 of 2

Vehicle:



# SOUTHEAST SECTION 2019-2020

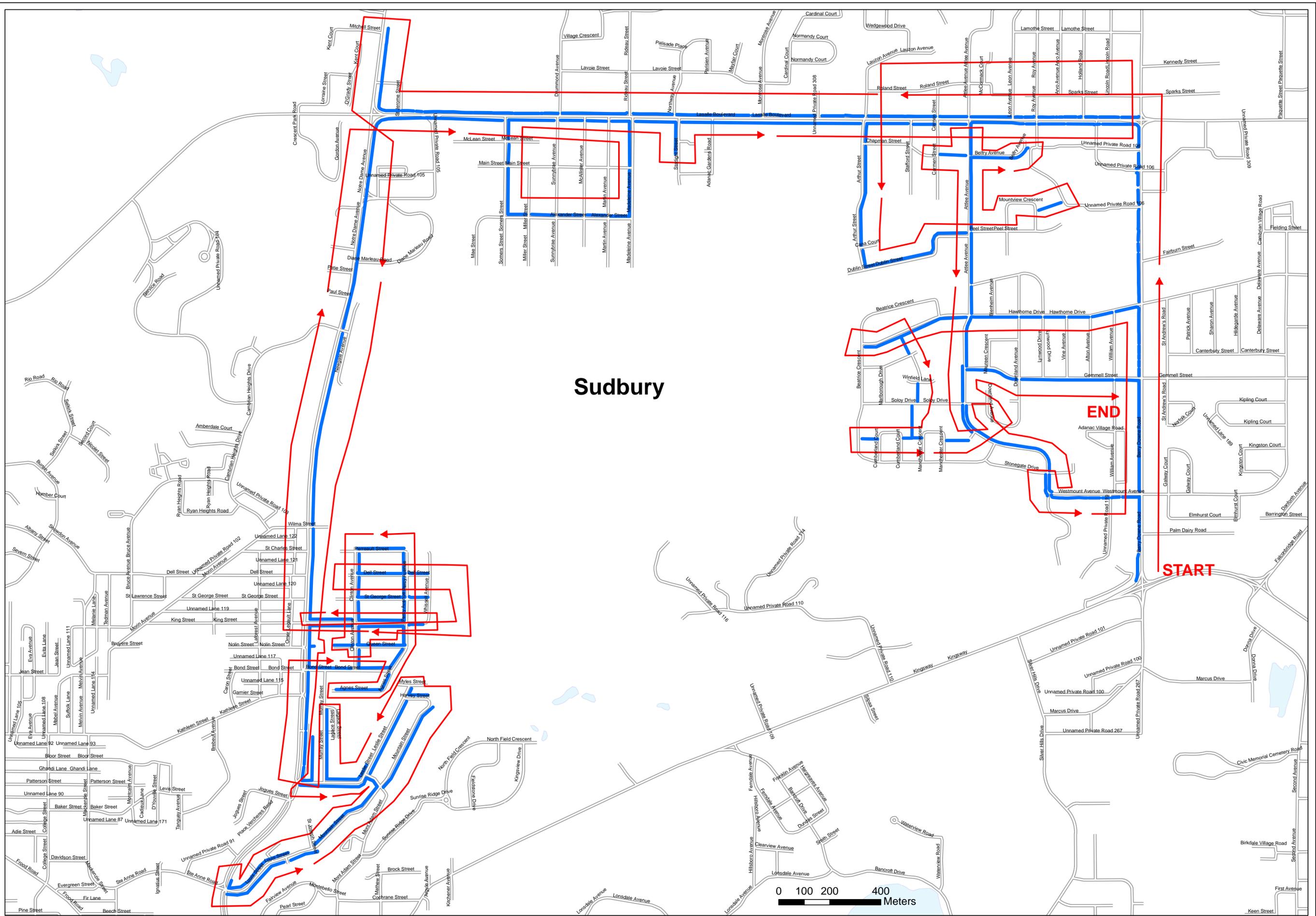
Date: September 12, 2019

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# SIDEWALK 2

1 of 1

Vehicle:



# SOUTHEAST SECTION 2019-2020

# SIDEWALK 3

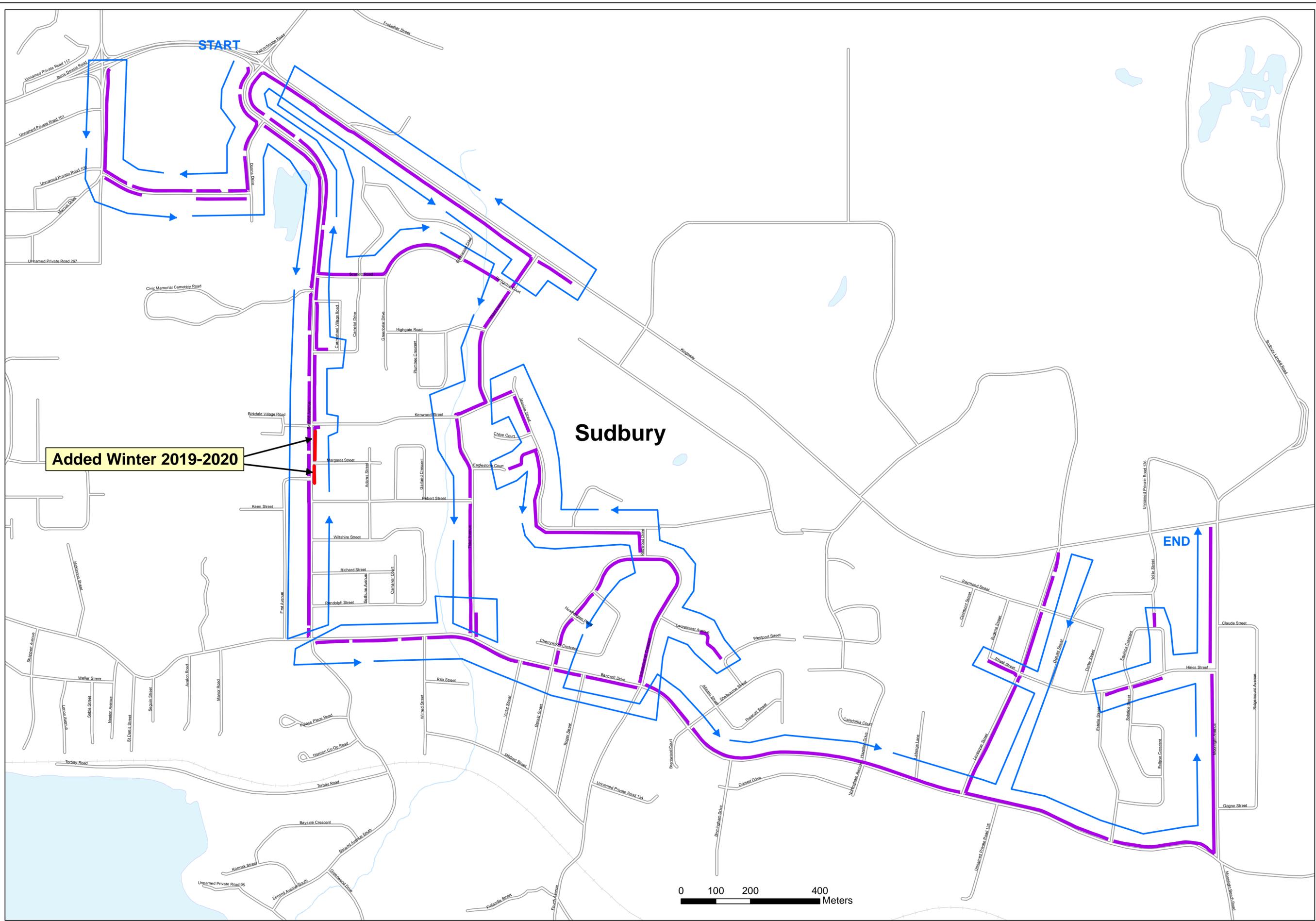
Date: September 12, 2019

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Created by the Analytics and GIS Section, Growth & Infrastructure, City of Greater Sudbury

Vehicle:





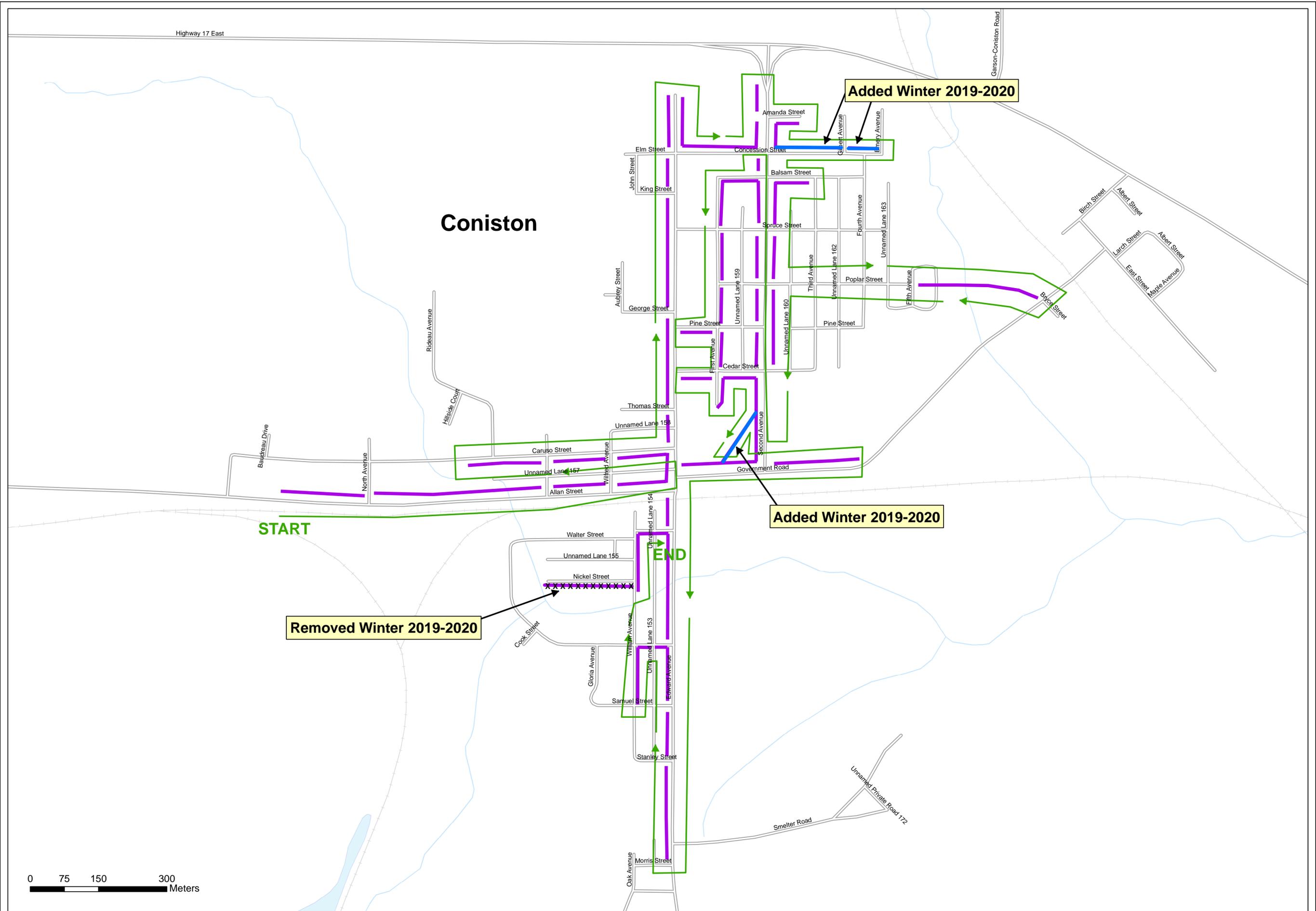
# SOUTHEAST SECTION 2019-2020

Date: October 1, 2019  
 Created by the Analytics and GIS Section, Growth & Infrastructure, City of Greater Sudbury

# SIDEWALK 5

1 of 2

Vehicle:



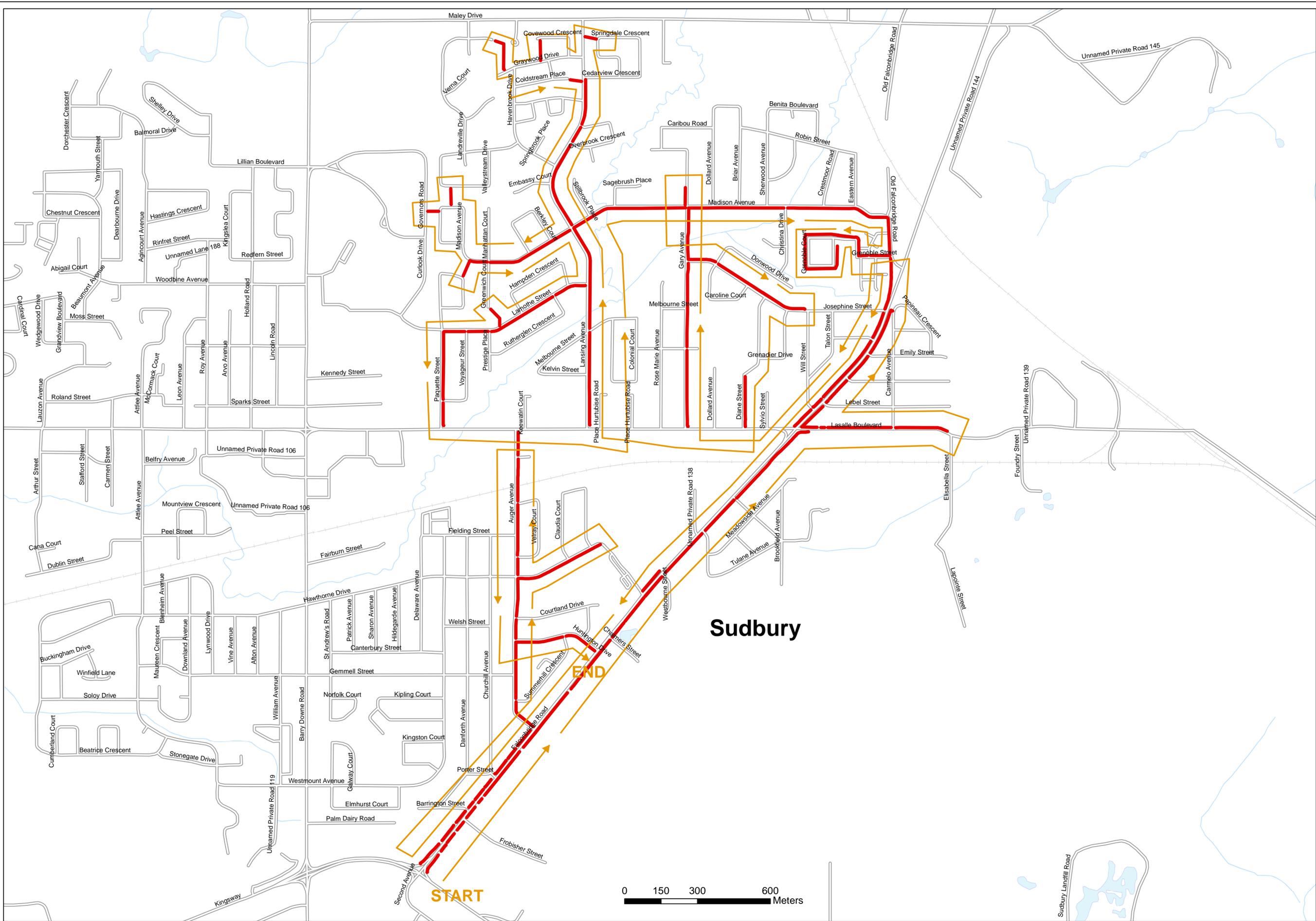
# SOUTHEAST SECTION 2019-2020

Date: September 27, 2019  
 Created by the Analytics and GIS Section, Growth & Infrastructure, City of Greater Sudbury

# SIDEWALK 5

2 of 2

Vehicle:



# SOUTHEAST SECTION 2019-2020

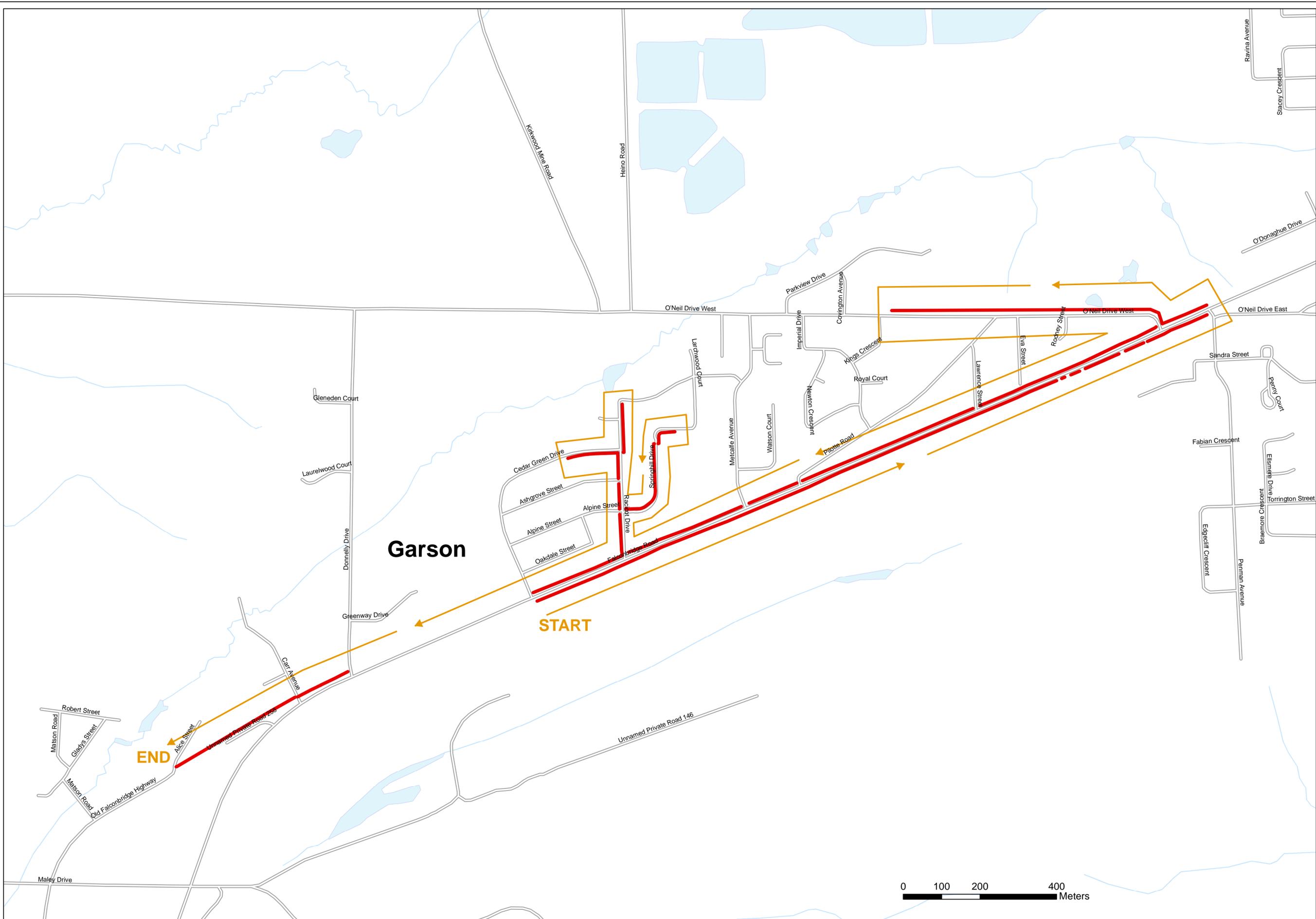
Date: September 12, 2019

Created by the Analytics and GIS Section, Growth & Infrastructure, City of Greater Sudbury

# SIDEWALK 6

1 of 2

Vehicle:

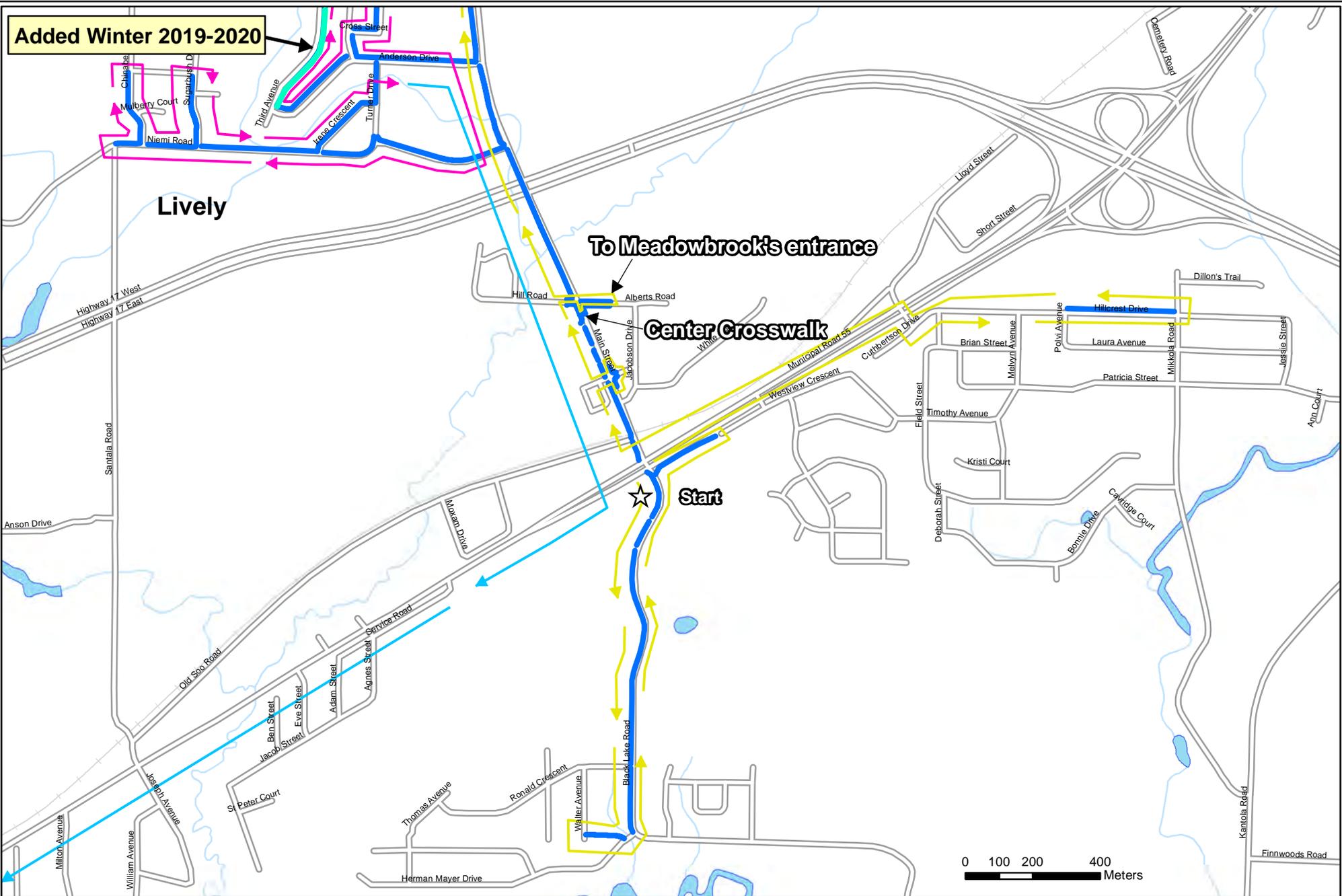


# SOUTHEAST SECTION 2019-2020

# SIDEWALK 6

Date: September 12, 2019  
 Created by the Analytics and GIS Section, Growth & Infrastructure, City of Greater Sudbury

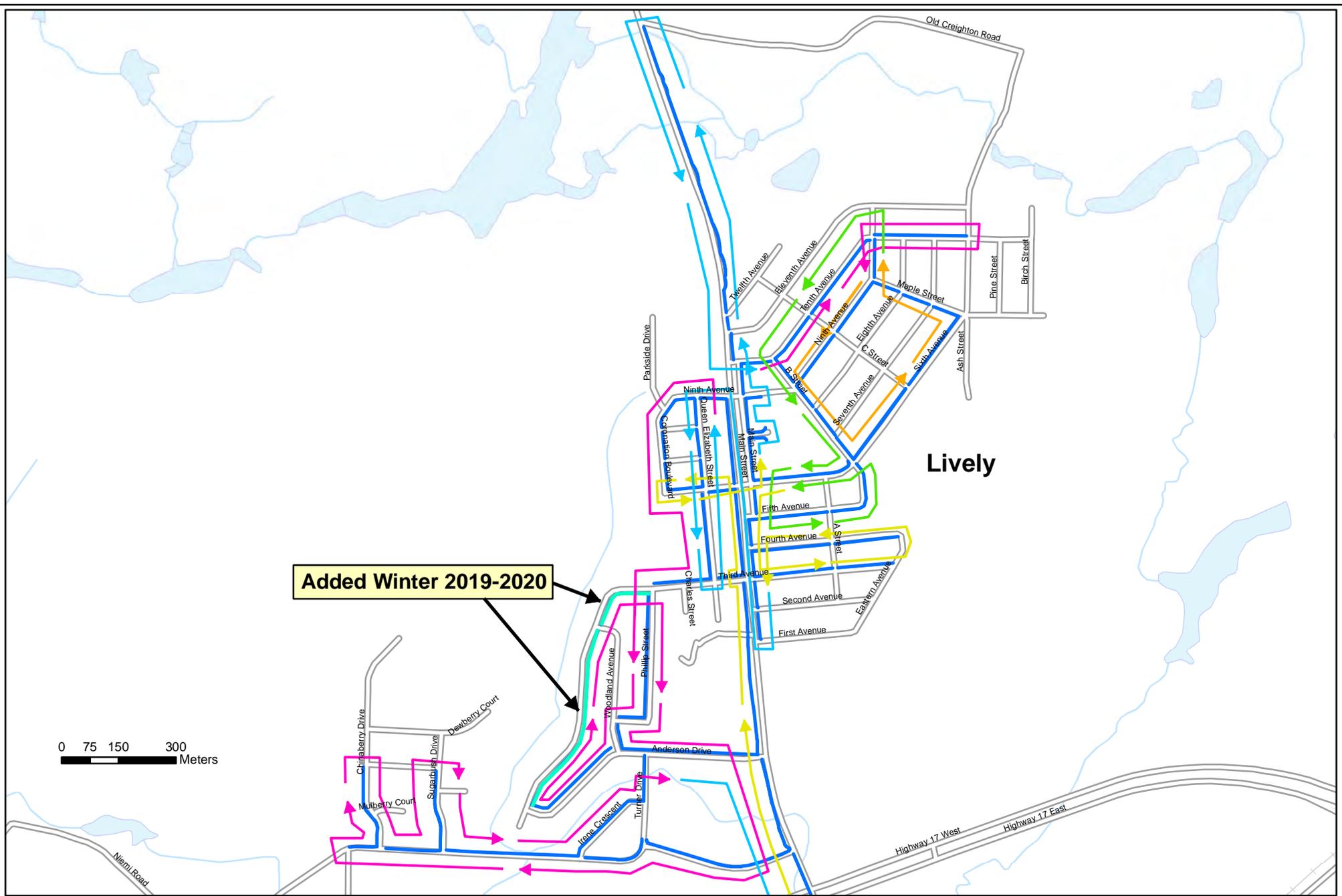
Vehicle:



# SOUTHWEST SECTION 2019-2020

# SIDEWALK 1

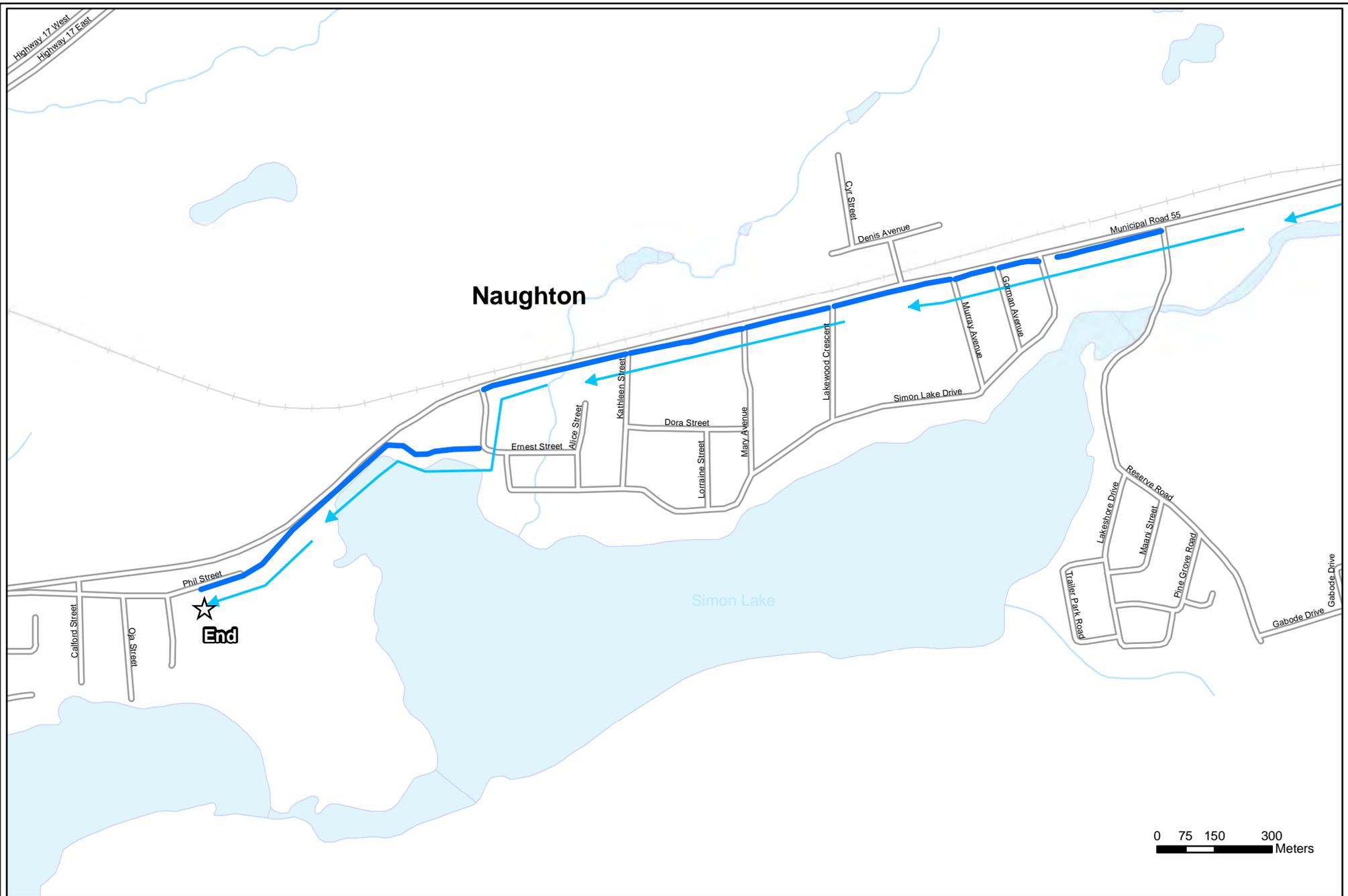
Date: September 24, 2019  
 Created by the Analytics and GIS Section, Growth & Infrastructure, City of Greater Sudbury



# SOUTHWEST SECTION 2019-2020

# SIDEWALK 1

Date: September 24, 2019  
 Created by the Analytics and GIS Section, Growth & Infrastructure, City of Greater Sudbury



# SOUTHWEST SECTION 2019-2020

# SIDEWALK 1

Date: September 12, 2019  
 Created by the Analytics and GIS Section, Growth & Infrastructure, City of Greater Sudbury

Presented To:	Operations Committee
Presented:	Monday, Oct 21, 2019
Report Date	Monday, Sep 30, 2019
Type:	Managers' Reports

## Request for Decision

### Parking Restrictions - Prete Street and Connaught Avenue

#### Resolution

THAT the City of Greater Sudbury prohibits parking at all times of the day on both sides of Prete Street from Benny Street to Connaught Avenue and at all times of the day on both sides of Connaught Avenue from Prete Street to Kincora Court;

AND THAT staff be directed to prepare a by-law to amend Traffic and Parking By-Law 2010-1 to implement the recommended changes as outlined in the report entitled "Parking Restrictions - Prete Street and Connaught Avenue" from the General Manager of Growth and Infrastructure, presented at the Operations Committee meeting on October 21, 2019.

#### Relationship to the Strategic Plan / Health Impact Assessment

This report refers to operational matters.

#### Report Summary

Transportation and Innovation Services staff received a request from a resident of Prete Street asking that the sight lines be reviewed for on street parking in the area of the hill. This report recommends appropriate parking restrictions for Prete Street and Connaught Avenue.

#### Financial Implications

Recommendations of this report may be carried out within existing approved budget and staff complement.

#### Signed By

##### **Report Prepared By**

David Knutson  
Traffic and Transportation Technologist  
*Digitally Signed Sep 30, 19*

##### **Manager Review**

Joe Rocca  
Traffic and Asset Management  
Supervisor  
*Digitally Signed Sep 30, 19*

##### **Division Review**

Akli Ben-Anteur  
Project Engineer  
*Digitally Signed Sep 30, 19*

##### **Financial Implications**

Liisa Lenz  
Coordinator of Budgets  
*Digitally Signed Oct 2, 19*

##### **Recommended by the Department**

Tony Cecutti  
General Manager of Growth and  
Infrastructure  
*Digitally Signed Oct 4, 19*

##### **Recommended by the C.A.O.**

Ed Archer  
Chief Administrative Officer  
*Digitally Signed Oct 4, 19*

## Parking Restrictions Prete Street and Connaught Avenue

Transportation and Innovation Services staff received a request from an area resident to restrict on street parking on Prete Street in the area of the large hill south of York Street. Prete Street and Connaught Avenue are paved residential roadways with an operating width of approximately 9 metres, curb and gutter, no sidewalks and a posted speed limit of 50 km/h (Figure 1 & 2). Parking is currently permitted on both sides of the roadway.



**Figure 1 – Prete Street Overview**



**Figure 2 – Prete Street Street View**

The primary function of a public road is for the safe and efficient movement of traffic. On-street parking may be considered when this criterion is met.

The concern brought forward is in relation to the hill obstructing the vertical sight lines of motorists and does not allow sufficient stopping sight distance when required. The stopping sight distance is calculated based on the speed limit of the road, the amount of time it takes a person to see the hazard and realize they need to take action (commonly referred to as the Perception and Reaction time) and how quickly a vehicle can brake to come to a complete stop. This concern is amplified during the winter months when the roadway is narrower and the surface is snow covered. Staff reviewed the vertical sight lines using the stopping sight distance outlined in the Transportation Association of Canada Geometric Design Guide for Canadian Roads and found the vertical sight lines to be insufficient. Due to the nature of the hill motorists cannot see vehicles, parked or otherwise, in the roadway at a sufficient distance to be able to avoid a potential collision. As well, while staff was reviewing the area it was noted that the tight curve on the southern portion of Prete Street where it changes to Connaught Avenue had potentially insufficient horizontal sight lines. Staff reviewed the horizontal sight lines using the stopping sight distance and found the sight lines were indeed insufficient to safely permit parking in the area. Since eliminating the vertical or horizontal sight line obstructions is not feasible, staff recommend that on-street parking be prohibited on both sides of Prete Street from Benny Street to Connaught Avenue and on both sides of Connaught Avenue from Prete Street to Kincora Court at all times of the day. Figure 3 below shows an overview of where parking is recommended to be prohibited.



**Figure 3**

**Resources Cited:**

Transportation Association of Canada, *Geometric Design Guide for Canadian Roads*, June 2017

Presented To:	Operations Committee
Presented:	Monday, Oct 21, 2019
Report Date	Friday, Sep 27, 2019
Type:	Managers' Reports

## Request for Decision

### Parking Restrictions - Morgan Road, Chelmsford

#### Resolution

THAT the City of Greater Sudbury prohibits parking on the north side of Morgan Road from 100 metres east of Nickel Offset Road to 500 metres east of Nickel Offset Road;

AND THAT staff be directed to prepare a by-law to amend Traffic and Parking By-Law 2010-1 to implement the recommended changes, as outlined in the report entitled “Parking Restrictions – Morgan Road, Chelmsford”, from the General Manager of Growth and Infrastructure, presented at the Operations Committee meeting on October 21, 2019.

#### Relationship to the Strategic Plan / Health Impact Assessment

This report refers to operational matters.

#### Report Summary

Transportation and Innovation Services staff received a request to restrict parking on Morgan Road between Nickel Offset Road and Fire Route E due to motorists parking on both sides of the road to access a beach along the Vermilion River and the increase in farm equipment travelling on the road. This report recommends parking restrictions on Morgan Road, Chelmsford.

#### Financial Implications

Recommendations of this report may be carried out within existing approved budget and staff complement.

#### Signed By

##### **Report Prepared By**

Ryan Purdy  
Traffic and Transportation Engineering Analyst  
*Digitally Signed Sep 27, 19*

##### **Manager Review**

Joe Rocca  
Traffic and Asset Management Supervisor  
*Digitally Signed Sep 27, 19*

##### **Division Review**

Akli Ben-Anteur  
Project Engineer  
*Digitally Signed Sep 27, 19*

##### **Financial Implications**

Liisa Lenz  
Coordinator of Budgets  
*Digitally Signed Oct 2, 19*

##### **Recommended by the Department**

Tony Cecutti  
General Manager of Growth and Infrastructure  
*Digitally Signed Oct 4, 19*

##### **Recommended by the C.A.O.**

Ed Archer  
Chief Administrative Officer  
*Digitally Signed Oct 4, 19*

## Parking Restrictions – Morgan Road, Chelmsford

Transportation and Innovation Services staff received a request to restrict parking on Morgan Road between Nickel Offset Road and Fire Route E due to motorists parking on both sides of the road to access a beach along the Vermilion River.

The section of Morgan Road under review is located between Nickel Offset Road and Fire Route E (see Figure 1 below). This surface treated residential roadway has an operating width of 7 metres with gravel shoulders.

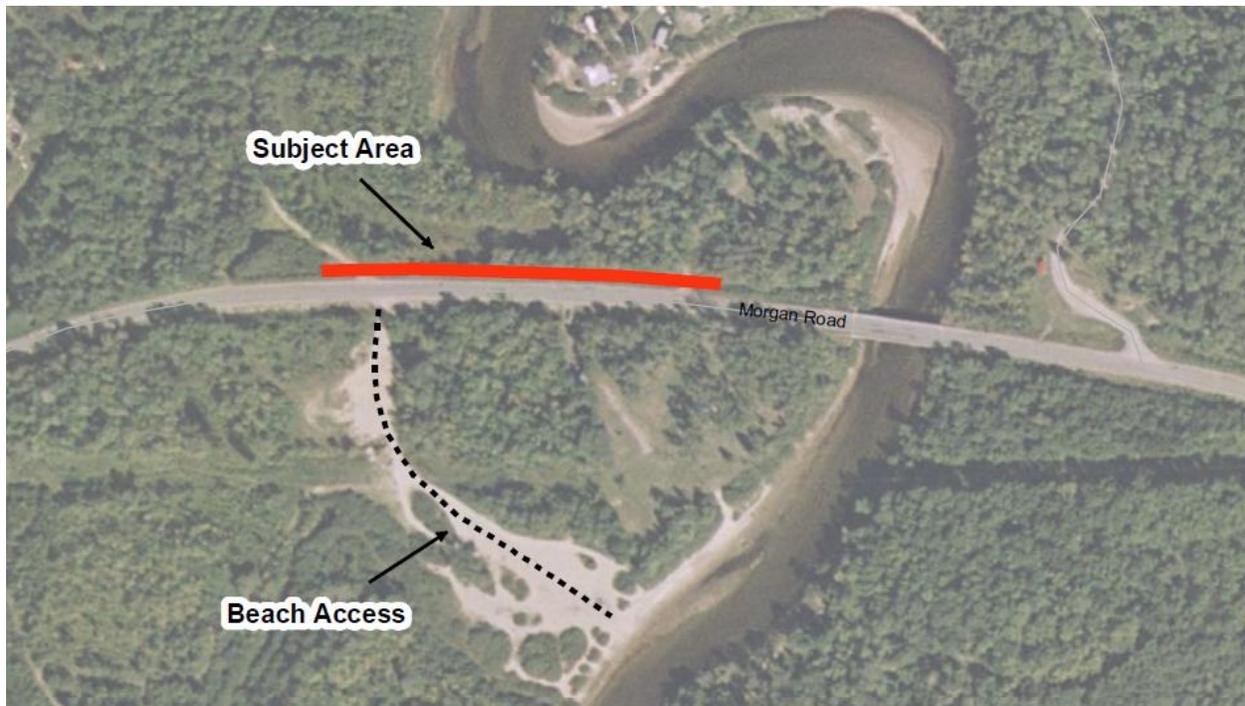


Figure 1

In the middle of the subject area there is an access point on the south side of Morgan Road that is used to reach a beach on the Vermilion River. This beach is on private property.

The primary function of a public road is for the safe and efficient movement of people and goods. On-street parking is usually permitted when this criteria is met. In this case, when vehicles are parked on both sides of Morgan Road it becomes difficult for vehicles to travel through that section of the roadway and restricts access to abutting properties. In addition, there has recently been an increase in commercial farming in the area and a subsequent increase in farming equipment travelling on the road between farming sites. At times these farm vehicles are unable to travel through this portion of Morgan Road when vehicles are parked on both sides.

To improve safety and the road functions, it is recommended that parking be prohibited along the north side of Morgan Road from 100 metres east of Nickel Offset Road to 500 metres east of Nickel Offset Road.

Presented To:	Operations Committee
Presented:	Monday, Oct 21, 2019
Report Date	Tuesday, Oct 08, 2019
Type:	Managers' Reports

## Request for Decision

### Maley Drive Traffic and Parking By-law Updates

#### Resolution

THAT the City of Greater Sudbury directs staff to prepare a by-law to amend Traffic and Parking By-Law 2010-1 to implement the recommended changes as outlined in the report entitled “Maley Drive Traffic and Parking By-law Updates” from the General Manager of Growth and Infrastructure, presented at the Operations Committee meeting on October 21, 2019.

#### Relationship to the Strategic Plan / Health Impact Assessment

This report refers to operational matters.

#### Report Summary

This report recommends revisions to the Traffic and Parking By-law 2010-1 for the opening of the new Maley Drive extension.

#### Financial Implications

Recommendations of this report may be carried out within existing approved budget and staff complement.

#### Signed By

**Report Prepared By**

David Knutson  
Traffic and Transportation Technologist  
*Digitally Signed Oct 8, 19*

**Manager Review**

Joe Rocca  
Traffic and Asset Management  
Supervisor  
*Digitally Signed Oct 8, 19*

**Division Review**

Akli Ben-Anteur  
Project Engineer  
*Digitally Signed Oct 8, 19*

**Financial Implications**

Apryl Lukezic  
Co-ordinator of Budgets  
*Digitally Signed Oct 8, 19*

**Recommended by the Department**

Tony Cecutti  
General Manager of Growth and  
Infrastructure  
*Digitally Signed Oct 8, 19*

**Recommended by the C.A.O.**

Ed Archer  
Chief Administrative Officer  
*Digitally Signed Oct 8, 19*

## Background

With the upcoming opening of the Maley Drive Extension many updates are required to the Traffic and Parking By-law 2010-1 to establish how the road will operate as well update existing by-laws to reflect the new built form of the existing section of Maley Drive. Details on the project may be found at <https://www.greatersudbury.ca/live/transportation-parking-and-roads/road-construction-and-projects/maley-drive-extension/>. The required by-law amendments are summarized in Table 1 below.

**Table 1 – Summary of Changes to the Traffic and Parking By-law**

<b><u>Schedule</u></b>	<b><u>Change</u></b>
“A” – Placement of Traffic Control Signal System Devices	Remove the intersection of College Boreal and Lasalle Blvd. from Schedule A as it will be controlled with a roundabout instead of traffic control signals.
“B” – Parking Prohibited at any Time	In order to ensure the safe and efficient movement of people and goods on the City’s arterial roads, staff recommend parking be prohibited at anytime on all arterial roads. It is recommended to add Maley Drive from Barry Downe Road to Lasalle Boulevard to Schedule B.
“J” – Excess Loads	The reconstructed and new section of Maley Drive can support heavy truck traffic at all times of the year. It is recommend to add Maley Drive from National Street to Lasalle Boulevard to the schedule of roadways that are exempt from the reduced load restrictions in the spring.
“K” – “U” Turns prohibited	Maley Drive between Barry Downe Road and Lasalle Boulevard will include gravel crossovers to allow emergency vehicles to turnaround prior to reaching the next intersection. To ensure the safe operation of the road, it is recommended that “U” turns be prohibited at these locations.
“N” – Through Highways	Maley Drive will act as the new through highway between College Boreal and Barry Downe Road. It is recommended to add Maley Drive from Lasalle Boulevard to Barry Downe Road to Schedule N.
“O” – Stops at Intersections	The stop controlled intersection at Maley Drive and Barrydowne Road will be replaced with a roundabout. This intersection is required to be removed from Schedule O.
“Q” – Designated Truck Routes	Designated truck routes are roadways on which commercial vehicles over 5 tonnes are permitted to travel through the City. It is recommended to add Maley Drive from Lasalle Boulevard to Falconbridge Road to the schedule of designated truck routes.
“R” – Designated Traffic Lanes	The reconstructed intersection of Maley Drive and Falconbridge Road includes dedicated double left hand turning lanes for the west side of the intersection and a dedicated left and right hand turning lane from Maley Drive onto Falconbridge Road on the east side of the intersection. It is required that the description of these turning lanes be added to Schedule R.
“S” – Designated Centre Lane of Roadway for Left Turns Only	The reconstructed easterly portion of Maley Drive includes a two way centre left hand turn lane from National Street to Falconbridge Road. It is required that this centre left hand turn lane be added to Schedule S.
“U” – Higher or Lower Rates of Speed Than That Prescribed by the Highway Traffic Act	The new section of Maley Drive is recommended to be posted at 80 km/h and the reconstructed section of Maley Drive is recommended to maintain the current posted speed limits. Details regarding the recommended speed limits are found below.

## Maley Drive Speed Limit Analysis

In 2010, City Council adopted the use of the Canadian Guidelines for Establishing Posted Speed Limits published by the Transportation Association of Canada (TAC) for evaluating posted speeds on arterial and major collector roadways. These guidelines assess appropriate posted speed limits based primarily on the classification, function and physical characteristics of a roadway.

In order to complete the analysis of Maley Drive, staff segmented Maley Drive into four segments based on the construction of the road (divided vs. undivided), the roadside environment (rural vs. urban) and the classification of the road (primary arterial vs. secondary arterial). The four segments along with the current posted speed limits, the speed limits recommended by the TAC Guidelines and staff's recommended posted speed limits can be found in Table 2 below.

**Table 2 – Summary of Recommended Posted Speed Limits**

<u>Location</u>	<u>Current Posted Speed Limit</u>	<u>TAC Guidelines Recommended Speed Limit</u>	<u>Staff Recommended Posted Speed Limit</u>
Lasalle Boulevard to Barry Downe Road	N/A	100 km/h	80 km/h
Barry Downe Road to Lansing Avenue	70 km/h	90 km/h	70 km/h
Lansing Avenue to National Street	70 km/h & 60 km/h	80 km/h	60 km/h
National Street to Falconbridge Road	60 km/h	60 km/h	60 km/h

As noted in Table 2, staff are recommending speed limits less than what is recommended by the TAC Guidelines for 3 of the 4 segments. These reduced speed limits are being recommended for the following reasons:

- Maley Drive has been designed for operating speeds up to 100 km/h in the rural divided area and 80 km/h in the urban undivided area. The design speed of a road is used to select the appropriate values for geometric features on a road such as the radii of horizontal curves and length of vertical curves and which are based on the minimum stopping sight distances for the selected speed when driving conditions are optimal. It is common practice that jurisdictions design roads for 20 km/h over the anticipated posted speed limit for rural connecting roads (ex. Municipal Road 35 or Municipal Road 80) and 10 km/h for roads within a more densely developed area. This difference between the design speed and posted speed limit introduces a factor of safety during periods when driving conditions are not optimal, like during inclement weather, as well as anticipates that a percentage of vehicles will always travel in excess of the posted speed limit. This factor of safety also provides a higher level of safety for the vehicles that travel the posted speed limit and must share the road with those who do not drive according to the conditions or those who are driving in excess of the posted speed limit.
- Horizontal curves have been designed into the approaches of the Maley Drive roundabouts to help reduce the operating speeds of vehicles as they approach the roundabouts. These horizontal curves will have a posted advisory speed of 30 km/h. The lower the speed differential between vehicles entering the roundabout area and those already within it has shown to have a positive impact on safety within the roundabout and the roadway itself.

- Staff are recommending that the transitions from the recommended 80 km/h posted speed limit and the 60 km/h posted occur through the roundabouts. As drivers will already be required to reduce their speed when entering the roundabout, the roundabouts act to slow vehicles for the posted speed reduction and to better define the different speed zones. The recommended 70 km/h speed zone would act as a transition area between the rural divided portion of Maley Drive and the undivided built up portion east of Lansing Avenue. This will reinforce to drivers that the surrounding built environment is changing and slower speeds and more caution is required.

### **Recommendation**

As described in this report, many updates to the Traffic and Parking By-Law 2010-1 are required to establish how Maley Drive will operate as well update existing by-laws to reflect the new built form of the existing section of the road. Staff recommend a by-law be passed by City Council to update the Traffic and Parking By-Law 2010-1 to implement the changes detailed in this report.

### **Resources Cited:**

City of Greater Sudbury, *Maximum Road Speed Limits*, September 2010,

Accessed Online:

<http://agendasonline.greatersudbury.ca/index.cfm?pg=agenda&action=navigator&id=310&itemid=3480&lang=en>

# Appendix 'A'



# Automated Speed Limit Guidelines

## FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:  
10-Apr-09

Name of Corridor:	Maley Drive		
Segment Evaluated:	Lasalle Boulevard	to	Barry Downe Road
Geographic Region:	Sudbury		
Road Agency:	City of Greater Sudbury		
Road Classification:	Arterial	Length of Corridor:	4,500 m
Urban / Rural:	Rural	Design Speed: (Required for Freeway, Expressway, Highway)	100 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	km/h
Major / Minor:	Major	Prevailing Speed: (85th Percentile - for information only)	km/h
# Through Lanes Per Direction:	2+ lanes	Policy: (Maximum Posted Speed)	No policy

		RISK	Score
<b>A1</b>	<b>GEOMETRY (Horizontal)</b>	Lower	3
<b>A2</b>	<b>GEOMETRY (Vertical)</b>	Lower	3
<b>A3</b>	<b>AVERAGE LANE WIDTH</b>	Lower	3
<b>B</b>	<b>ROADSIDE HAZARDS</b>	Medium	6
<b>C1</b>	<b>PEDESTRIAN EXPOSURE</b>	Medium	4
<b>C2</b>	<b>CYCLIST EXPOSURE</b>	Medium	6
<b>D</b>	<b>PAVEMENT SURFACE</b>	Lower	3
<b>E1</b>	<b>NUMBER OF INTERSECTIONS WITH PUBLIC ROADS</b>	<i>Number of Occurrences</i>	1
	STOP controlled intersection	0	
	Signalized intersection	0	
	Roundabout or traffic circle	2	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	0	
<b>E2</b>	<b>NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS</b>	<i>Number of Occurrences</i>	0
	Left turn movements permitted	0	
	Right-in / Right-out only	0	
<b>E3</b>	<b>NUMBER OF INTERCHANGES</b>	<i>Number of Occurrences</i>	1
	Number of interchanges along corridor	2	
<b>F</b>	<b>ON-STREET PARKING</b>	N/A	0

**Total Risk Score:**

30
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**Recommended Posted Speed Limit (km/h):**

As determined by road characteristics

100
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As determined by policy

No policy
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The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

**Comments:**



# Automated Speed Limit Guidelines

## FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:  
10-Apr-09

Name of Corridor:	Maley Drive		
Segment Evaluated:	Barry Downe Road	to	Lansing Avenue
Geographic Region:	Sudbury		
Road Agency:	City of Greater Sudbury		
Road Classification:	Arterial	Length of Corridor:	1,100 m
Urban / Rural:	Rural	Design Speed: (Required for Freeway, Expressway, Highway)	100 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	70 km/h
Major / Minor:	Minor	Prevailing Speed: (85th Percentile - for information only)	km/h
# Through Lanes Per Direction:	2+ lanes	Policy: (Maximum Posted Speed)	No policy

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	3
A2	GEOMETRY (Vertical)	Lower	3
A3	AVERAGE LANE WIDTH	Lower	3
B	ROADSIDE HAZARDS	Medium	6
C1	PEDESTRIAN EXPOSURE	Medium	4
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	3
E1	<b>NUMBER OF INTERSECTIONS WITH PUBLIC ROADS</b>	<i>Number of Occurrences</i>	5
	STOP controlled intersection	0	
	Signalized intersection	0	
	Roundabout or traffic circle	2	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	1	
E2	<b>NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS</b>	<i>Number of Occurrences</i>	1
	Left turn movements permitted	0	
	Right-in / Right-out only	3	
E3	<b>NUMBER OF INTERCHANGES</b>	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	N/A	0

**Total Risk Score:**

34
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**Recommended Posted Speed Limit (km/h):**

As determined by road characteristics

90
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As determined by policy

No policy
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The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

**Comments:**



# Automated Speed Limit Guidelines

## FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:  
10-Apr-09

Name of Corridor:	Maley Drive		
Segment Evaluated:	Lansing Avenue	to	National Street
Geographic Region:	Sudbury		
Road Agency:	City of Greater Sudbury		
Road Classification:	Arterial	Length of Corridor:	1,000 m
Urban / Rural:	Rural	Design Speed: (Required for Freeway, Expressway, Highway)	80 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Minor	Prevailing Speed: (85th Percentile - for information only)	km/h
# Through Lanes Per Direction:	2+ lanes	Policy: (Maximum Posted Speed)	No policy

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	3
A2	GEOMETRY (Vertical)	Lower	3
A3	AVERAGE LANE WIDTH	Lower	3
B	ROADSIDE HAZARDS	Medium	6
C1	PEDESTRIAN EXPOSURE	Medium	4
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	3
E1	<b>NUMBER OF INTERSECTIONS WITH PUBLIC ROADS</b>	<i>Number of Occurrences</i>	5
	STOP controlled intersection	0	
	Signalized intersection	0	
	Roundabout or traffic circle	1	
	Crosswalk	0	
	Active, at-grade railroad crossing	1	
	Sidestreet STOP-controlled or lane	1	
E2	<b>NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS</b>	<i>Number of Occurrences</i>	5
	Left turn movements permitted	8	
	Right-in / Right-out only	1	
E3	<b>NUMBER OF INTERCHANGES</b>	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	N/A	0

**Total Risk Score:**

38
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**Recommended Posted Speed Limit (km/h):**

As determined by road characteristics

80
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As determined by policy

No policy
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The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

**Comments:**



# Automated Speed Limit Guidelines

## FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:  
10-Apr-09

Name of Corridor:	Maley Drive		
Segment Evaluated:	National Street	to	Falconbridge Road
Geographic Region:	Sudbury		
Road Agency:	City of Greater Sudbury		
Road Classification:	Arterial	Length of Corridor:	600 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	80 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Minor	Prevailing Speed: (85th Percentile - for information only)	km/h
# Through Lanes Per Direction:	2+ lanes	Policy: (Maximum Posted Speed)	No policy

		RISK	Score
<b>A1</b>	<b>GEOMETRY (Horizontal)</b>	Lower	2
<b>A2</b>	<b>GEOMETRY (Vertical)</b>	Lower	2
<b>A3</b>	<b>AVERAGE LANE WIDTH</b>	Lower	2
<b>B</b>	<b>ROADSIDE HAZARDS</b>	Medium	2
<b>C1</b>	<b>PEDESTRIAN EXPOSURE</b>	Medium	6
<b>C2</b>	<b>CYCLIST EXPOSURE</b>	Medium	6
<b>D</b>	<b>PAVEMENT SURFACE</b>	Lower	1
<b>E1</b>	<b>NUMBER OF INTERSECTIONS WITH PUBLIC ROADS</b>	<i>Number of Occurrences</i>	10
	STOP controlled intersection	0	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	2	
<b>E2</b>	<b>NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS</b>	<i>Number of Occurrences</i>	15
	Left turn movements permitted	16	
	Right-in / Right-out only	0	
<b>E3</b>	<b>NUMBER OF INTERCHANGES</b>	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
<b>F</b>	<b>ON-STREET PARKING</b>	N/A	0

**Total Risk Score:**

46

**Recommended Posted Speed Limit (km/h):**

As determined by road characteristics

60

As determined by policy

No policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

**Comments:**

Presented To:	Operations Committee
Presented:	Monday, Oct 21, 2019
Report Date	Monday, Oct 07, 2019
Type:	Managers' Reports

## For Information Only

### Overnight Parking Restrictions

#### Resolution

For Information Only

#### Relationship to the Strategic Plan / Health Impact Assessment

This report refers to operational matters.

#### Report Summary

The existing overnight parking ban of midnight to 7:00 am, from December 1st to March 31st in any winter season mitigates risk and ensures the most cost effective and efficient manner of providing winter maintenance of City roadways.

#### Financial Implications

This report has no financial implications.

#### Signed By

**Report Prepared By**

Tony De Silva  
Roads Operations Engineer  
*Digitally Signed Oct 7, 19*

**Division Review**

Randy Halverson  
Director of Linear Infrastructure  
Services  
*Digitally Signed Oct 7, 19*

**Financial Implications**

Apryl Lukezic  
Co-ordinator of Budgets  
*Digitally Signed Oct 7, 19*

**Recommended by the Department**

Tony Cecutti  
General Manager of Growth and  
Infrastructure  
*Digitally Signed Oct 7, 19*

**Recommended by the C.A.O.**

Ed Archer  
Chief Administrative Officer  
*Digitally Signed Oct 8, 19*

**Background:**

At the March 18, 2019 Operations Committee Meeting, resolution OP2019-05 was passed, directing staff to bring forward a report to the Operations Committee to consider reducing the overnight parking prohibition to the hours of 2:00 am to 6:00 am from December 1<sup>st</sup> to March 31<sup>st</sup>.

The City's Traffic and Parking By-Law presently prohibits the parking of vehicles on any road from midnight to 7:00 am, from December 1<sup>st</sup> to March 31<sup>st</sup>. These restrictions are in place to help facilitate the efficient plowing and sanding / salting of City roads during the winter months. While the overnight parking ban applies to all roads within the City of Greater Sudbury it has the greatest implication to narrow residential roads (Class 4 – 6 roads, where on-street parking is typically permitted for up to 4 hours) as well as streets in the various downtown centres.

As a comparison, staff reviewed current policies in place in some other northern municipalities and a summary of the findings are below:

<b>North Bay</b>
Overnight parking ban - Nov. 1st to Apr. 15th Downtown Improvement Area, no parking - 3:00 am to 6:30 am On blocks containing cul-de-sacs and dead end roads, no parking - 3:00 am to 8:30 am On all other streets, no parking - 3:00 am to 7:30 am On any city street within 12 hours of posting snow removal signs and within 24 hours of a snowfall.
<b>Timmins</b>
Overnight parking ban - Nov. 1st to Apr. 30th Any road, no parking - 11:30 pm to 7:30 am
<b>Sault Ste. Marie</b>
Overnight parking ban - Nov. 1st to Apr. 30th Any road, no parking - midnight to 6:00 am
<b>Thunder Bay</b>

Overnight parking ban - Residential Streets - Nov. 15th to Mar. 31st, Priority routes -  
Nov. 15th to Apr. 30th

Residential Streets, no parking - 9 am to 5 pm (alternating sides of the road by  
odd/even days)

Priority routes, no parking 2 am to 7 am

\*Priority routes: Routes used by service and emergency vehicles

### **Existing Snow Plow Practice:**

The existing winter overnight parking ban coincides with the City's night shift for snow plow operators. Last winter, snow plow operators were utilized (as required) on 28 sand routes and 24 salt routes, from midnight to 8:00 am (night shift) and noon to 8:00 pm (day shift), five (5) days a week (Monday through Friday). Following the recently ratified collective bargaining agreement, the City will be utilizing (as required) snow plow operators on 6 routes within the South and SE sections from midnight to 8:00 am (night shift) and noon to 8:00 pm (day shift), for the two remaining weekdays (Saturday & Sunday).

The purpose of this model enhancement was in part to maximize the unobstructed street plowing time available for narrow residential streets. The success of the model is largely contingent on the existing overnight parking ban.

During the winter months, the night shift operators are often utilized to perform snow cleanup operations (or General Callout plowing operations) in busy / narrow areas such as the Downtown Sudbury, Old Hospital area, Donovan, Flour Mill, Westend, Minnow Lake (i.e. Hillside), Garson (i.e. Ravina Gardens), New Sudbury (i.e. Beatrice Cr.) etc.

Snow plow trucks have predefined routes for maintaining the City's road network during the winter months. Some narrow two-lane roads may become impassable for a snow plow when one or both sides of a street (with snow banks) allow on-street parking. It means that snow plow trucks may have to 'skip a street' and 'try again' at a later time to clear snow from these streets. During a General Callout, this may mean that a snow plow may not return to the 'skipped street' until after the 24 hour limit outlined in the City's winter maintenance standard for Class 4 – 6 roadways. This approach may expose the City to additional risk.

Depending on weather and the delayed time it takes to return to plow these streets, hardening of snow / ice may create ridges / unevenness in the snow-packed roadways, potentially leading to unsafe road conditions that may also expose the City to risk. Once hardening of snow and ice has occurred, the City may have to deploy

additional resources (such as graders that can apply downward pressure) to remedy the situation. This may result in additional cost being incurred by the City and moving resources away from other areas of the City's road network.

Another significant challenge if the overnight parking restrictions are modified would be our snow removal activity in the downtown centres. Currently, it takes the City approximately five (5) nights to complete snow clearing of the downtown core (Sudbury) during the night shift. Crews take advantage of the midnight to 7:00 am overnight parking ban to complete this operation in a timely fashion. The time and cost to clear the downtown will increase if the overnight parking ban is reduced from 7 hours (midnight to 7:00 am) to 4 hours (2:00 am to 6:00 am).

**For Information Only**  
**Contracting In Initiatives**

Presented To:	Operations Committee
Presented:	Monday, Oct 21, 2019
Report Date	Tuesday, Oct 08, 2019
Type:	Correspondence for Information Only

**Resolution**

For Information Only

**Relationship to the Strategic Plan / Health Impact Assessment**

A pillar of the Strategic Plan 2019 – 2027 is the Asset Management and Service Excellence strategic initiative. One of the tenets of this initiative is to continually look for innovative and cost-effective approaches for the services staff deliver each day. It is prudent and appropriate that the corporation’s road and distribution and collection maintenance service levels and approaches for providing them are subject to periodic review.

**Report Summary**

This report presents an update on the status of Contracting In Initiatives that have taken place in Roads / Distribution and Collection Maintenance to date as well as insight on the future plans for business cases that involve potential additional contracting in scenarios.

This report also describes principles that guide the delivery of these services and factors influencing choices about how to conduct the work associated with maintaining expected service levels. It concludes with a description of next steps for a detailed review of these services that will inform choices about the extent to which the service levels should be provided by in-house or contracted resources.

**Financial Implications**

There are no financial implications in this report. As staff continue to analyze options, business cases will be developed and presented to council as part of a future budget process.

**Signed By**

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*Digitally Signed Oct 8, 19*

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## Background

In March 2018, the Operations Committee was presented with a report entitled "[Winter Control Operations Update for December 2017](#)". This report provided the Committee with financial results of the 2017 winter control season. During the presentation, members of the Operations Committee asked staff questions regarding the relative efficiency of services delivered with internal resources compared to services delivered by contracted (i.e. private sector) resources. Ultimately, the Committee passed resolution OP2018-07, directing staff to report back to Council with analysis and, potentially a business case, to adjust resources so that an appropriate balance of in-house and contracted resources are available to meet Council's desired service levels for both summer and winter road maintenance services.

As per the Operations Committee resolution staff returned to Council in September 2018 with a report titled "[Overview and Analysis of Approach to Roads and Distribution & Collection Maintenance Services](#)" which provided an overview of current maintenance services for roads and distribution and collection infrastructure. The report concludes with a description of opportunities and next steps for a detailed review of these services that will inform choices about the extent to which the service levels should be provided by in-house or contracted resources. Furthermore, the future contracting in initiatives detailed within this report align with the objective to analyze the potential for service changes which is contained within the Next Steps section of the "[Core Service Review Phase 1](#)" report presented to Council September 24, 2019 (a copy of the report and service level profiles for Roads/D&C, Appendix B - pages 88 to 92 are attached ).

The areas identified for future investigation within this report includes;

1. Contracting in a higher proportion of winter snow plowing services;
2. Investigating opportunities to complete a portion of spring street sweeping using internal resources;
3. Contracting in more excavation and road restoration work (i.e. temporary asphalt patches for watermain breaks) associated with distribution and collection reactive maintenance activities;
4. Continuing to evaluate the existing approach to addressing reactive maintenance needs in distribution and collection; and
5. Evaluating our existing maintenance vehicle fleet to ensure it is optimized to meet core service obligations.

The data contained herein provides an update on how we have progressed on these initiatives to date with details on what staff will be studying in the coming months

## **Contracting In Initiatives to Date**

As part of the 2019 collective bargaining agreement staff were able to negotiate shift schedules for both Roads Maintenance and Distribution and Collection Maintenance. The schedules allow for a limited number of work crews to work a seven day work schedule rather than five day work schedule we had previously. The crews will allow us to have first response maintenance services available each day.

In Roads Maintenance, we will have six maintenance crews available during the winter control period (November – April) on the new seven day work schedule. This approach will allow us to better respond to emerging issues as well as provide consistent plowing/sanding/salting services with internal staff. Furthermore, these crews will be able to provide our community with other general winter maintenance services such as snow removal, pothole patching and drainage issues to name a few. One of the impacts of having staff available seven days a week is it will allow us to avoid excessive overtime and the use of Contractors. To date, we have completed hiring our new staff and are in the final preparations of winter control services.

In Distribution and Collection, we will have four maintenance crews available twelve months a year on a new seven day work schedule. Having these crews available on this schedule will ensure we have at least one crew available seven days a week to perform emergency watermain repairs as well as other routine maintenance tasks. The result of having the additional labour is that we will eliminate the need for some contract services and will now have the ability to review and establish a more fulsome preventative maintenance program for both our water and sewer pipes and appurtenances. This initiative has helped us address reactive maintenance needs in the distribution and collection maintenance area which was identified in item 4 in the Opportunities and Next Steps section of the September 2018 Council Report (Overview and Analysis of Approach to Roads and Distribution & Collection Maintenance Services). We are currently in the planning stages of hiring the additional staff necessary to fulfill our new schedule. Over the coming weeks we plan on meeting with Union executive of CUPE 4705, Outside and commencing work on hiring the first response crews.

## **Future Contracting In Initiatives**

Over the coming months staff will commence work on the preparation of business cases on services that currently rely on Contractors to provide all or part of them. We have chosen four areas where staff feels the greatest opportunity exist to consider delivering the services with internal staff rather than Contractors. In determining whether a maintenance activity will be more efficiently and effectively delivered using

internal resources or contracted/purchased services requires careful consideration and a balance of a variety of factors:

**1. The availability and expected utilization of specialized skills.** One of the primary factors in this decision-making process is the capacity and availability of specialized or skilled labour within the existing internal employee pool. Skilled trades' people provide valuable services for specific maintenance activities; however it is not always feasible or necessary to retain these specialized staff as full-time employees. It can be a much more cost-effective approach to contract or purchase skilled trades services, as required to complete maintenance activities. By procuring external specialized services, the contracted service employees come highly skilled and trained to complete the task required, reducing the need to undertake extensive training activities internally.

**2. The availability and need for specialized equipment.** In addition, contracting for specialized skills means these individuals typically own or have access to the proper specialized equipment required to complete the task, again potentially realizing a cost-savings to the municipality from having to purchase specialized equipment which may only be used on a small number of occasions.

**3. The consistency and volume of work.** An additional factor to consider in deciding whether or not to contract/purchase equipment or services is whether the City's existing staff capacity and availability is sufficient to be able to meet the needs of reactive maintenance activities. Contractors are often able to provide "on-demand" services and work well within tight response timelines, whereas limitations on number of consecutive hours worked for internal staff as outlined in the Collective Bargaining Agreement, for example, may pose a challenge to the City being able to address a time-sensitive emergency effectively. In this regard, the use of contractors may also help to reduce the burden on internal staff, allowing them instead to focus on delivering long-term, preventative maintenance activities, rather than on short-term reactive work.

**4. The risk and consequence of service interruptions.** Maintaining a mix of in-house and contracted resources helps minimize the risk and consequence of service interruptions. When staff become unavailable for a variety of reasons, or when operating conditions create peak demands, contracted resources help ensure services continue to be provided.

Based on the factors noted above staff have selected the following four services to review.

## **1. Temporary Asphalt Repairs for Distribution & Collection Excavations**

### **Description**

The Distribution and Collection section of the Linear Infrastructure Services Division undertakes approximately 500 excavations per year for planned and reactive maintenance including watermain breaks, curb box repairs, water service leaks, and sanitary sewer lateral and main repairs. These repairs are undertaken 365 days a year on a 24/7 basis as required. When an excavation is completed outside of construction season, a temporary repair to the roadway is required in order to allow full driving access for the remainder of the season. These temporary repairs are required to be maintained throughout the winter until a permanent repair can be carried out during the spring/summer construction season. The annual budget for Distribution and Collection road and property restoration is \$1.2 million of which, approximately 15% is allotted to temporary asphalt repairs.

### **Current Service Level**

Upon completion of an excavation on Class 4-6 roads city operations crews backfill to surface with granulars and place the location on a list for Construction Services to access and provide to a contractor. The contractor then has 72 hours to attend the location and temporarily repair the asphalt with cold mix. On Class 1-3 roads city operations crews backfill to surface with granulars and place cold mix asphalt at the location before placing it on a list for Construction Services to access and provide to a contractor. The contractor then has 24 hours to attend the location and begin any maintenance that is required until paving warm mix is undertaken at the location within 2 weeks of the excavation. These locations are then continuously monitored for settlement and/or deterioration and topped up as required by the contractor.

### **Drivers for Proposed Course of Action**

Currently, the City relies solely upon contractors to monitor and maintain these patches and due to this, when a patch is in need of significant maintenance in order to protect the integrity of the roadway, it is sometimes challenging to get the issue resolved in a timely fashion. This can lead to dissatisfied motorists and, in extreme cases, damage to vehicles.

In order to ensure service levels are being met, the contractor is required to react quickly to all patch deficiencies which could mean working on evenings and weekends. This requirement for response comes at a premium cost to the City. With increased shift flexibility for city staff within Linear Infrastructure Services, there will be available staff on straight time for a majority of this work and stand-by crews available outside of regular shifts if necessary. This is contemplated to be a significant cost savings.

There is also a potential that the City will see an added benefit to increasing staff operations hours in order to undertake this work as there may be more available hours to increase preventative maintenance activities within the Linear Infrastructure Services division. Additional staffing could be utilized to undertake such activities as pothole patching, manhole inspections, snow plowing, and street sweeping when they are not required to undertake temporary asphalt repairs.

Overall, contracting in more work is anticipated to provide the public with significantly higher quality service. Undertaking temporary asphalt repairs with city staff will allow for more city control over patch maintenance, a more organized and efficient approach to maintenance, and more timely reactions to urgent maintenance requirements. This is anticipated to significantly increase resident satisfaction and has the potential to result in cost savings.

### **Next Steps**

A detailed analysis must be undertaken to determine the specific requirements for additional equipment and staffing hours to undertake temporary asphalt repairs with internal forces. Once the volume of work is understood, staff will analyze the best approach to staffing for this initiative whether it be with full-time, part-time, or temporary employees or a combination of the aforementioned.

### **Risks/Challenges**

Additional staff and equipment would be required to undertake this work. This could mean that the City would be required to purchase equipment which could sit idle during certain periods of time when no work is required to be done. There is also a potential for surplus staff time when no temporary restorations are required to be completed but this time is contemplated to be utilized to supplement the existing preventative maintenance program.

The recommended solution could include temporary or part-time staffing to undertake this work which could run the risk of the City not retaining appropriate, qualified staffing. If there were to be a problem with retention, it has the potential to take away from other preventative maintenance activities or see the temporary asphalt repairs not being completed in a timely fashion.

## **2. Permanent Restoration of Distribution & Collection Excavations**

### **Description**

The Distribution and Collection section of the Linear Infrastructure Services Division undertakes approximately 500 excavations per year for planned and reactive maintenance including watermain breaks, curb box repairs, water service leaks, and sanitary sewer lateral and main repairs. These repairs are undertaken 365 days a year on a 24/7 basis as required and are required to be fully restored during the following spring/summer construction season. Such restoration is contemplated to include curb, sidewalk, asphalt, sod, and driveways. The annual budget for Distribution and Collection property and road restoration is \$1.2 million of which, approximately 85% is allotted to permanent restoration of property and roadways.

### **Current Service Level**

A contractor undertakes all permanent restoration of Distribution and Collection excavations on an annual basis. The contractor is responsible to complete all restoration work for all locations by the end of each construction season.

### **Drivers for Proposed Course of Action**

Currently, the City relies solely upon contractors to complete permanent restoration on Distribution and Collection excavations. Historically, there have been significant issues with getting the contractor to complete this work in a timely fashion and prioritize appropriately. Specifically, with an inability to control the contractor's work plan, often sod work is completed last leaving many residents dissatisfied with the fact that their yard goes unrestored through the majority of the spring/summer months. The City currently receives approximately 170 calls annually from residents with requests/inquiries relating to property and road restoration, this initiative is anticipated to significantly decrease these calls.

Many of the restoration activities such as sod, fence and retaining wall repairs, and tree planting are outside of the prime contractor's specific expertise. Due to this, they tend to hire subcontractors to complete this work which leads to significant price implications. Undertaking this work with internal forces is anticipated to result in significant cost savings.

There is also a potential that the City will see an added benefit to increasing staff operations hours in order to undertake this work as there will be more available hours to increase preventative maintenance activities within the Linear Infrastructure Services division. Additional staffing could be utilized to undertake such activities as pothole patching, manhole inspections, snow plowing, and street sweeping when they are not required to undertake temporary asphalt repairs.

Overall, contracting in more work is anticipated to provide the public with significantly higher quality service. Undertaking some permanent restoration activities with city staff will allow for more city control over schedule for permanent restorations, a more organized and efficient approach to undertaking these restorations, and more timely reactions to resident concerns. This is anticipated to significantly increase resident satisfaction and decrease costs.

### **Next Steps**

Staff must fully analyze all permanent restoration activities and determine which activities are feasible and appropriate to be done internally by city staff. Once this is completed, a detailed analysis must be undertaken to determine the specific requirements for additional equipment and staffing hours to undertake these activities with internal forces. Upon understanding the volume of work, staff will analyze the best approach to staffing for this initiative whether it be with full-time, part-time, or temporary employees or a combination of the aforementioned.

### **Risks/Challenges**

Some aspects of permanent restorations require specialized skills and equipment to undertake the work. This will lead to a hybrid approach where city forces undertake such restoration activities as sod, fences, retaining walls, hand laid asphalt patches, and hand laid concrete curb and sidewalk while a contractor would undertake larger spreader laid patches and curb and sidewalk patches. In order to implement this, significant co-ordination would be required between city and contract forces in order to effectively and efficiently complete the work.

Additional staff and equipment would be required to undertake this work which could mean that the City would be required to purchase equipment that could sit idle through the winter months. There is also a potential for surplus staff time when no permanent restorations are required by internal forces but this time is contemplated to be utilized to supplement the existing preventative maintenance program.

The recommended solution could include temporary or part-time staffing to undertake this work which could run the risk of the City not retaining appropriate, qualified staffing. If there were to be a problem with retention, it has the potential to take away from other preventative maintenance activities or see the permanent restoration activities not being completed in a timely fashion.

### **3. Spring Clean Up – Street Sweeping**

#### **Description**

Street sweeping operations makes up part of the Roads Operations spring clean-up and is considered to be part of winter maintenance activities. Sweeping begins as soon as possible in the spring time once snow banks have melted and nighttime temperatures reach consistently above freezing.

Sweeping operations are initially focused on environmentally sensitive areas such as Ramsey Lake, downtown centres, as well as marathon routes. Historically the Sudbury Rocks Marathon has been the second Sunday of May and a main priority for street sweeping. Recently other, early Spring community events have been added as priority.

Typically, a Contractor is hired to sweep the majority of the curbed streets throughout the City. Initially, City crews sweep the sand from the sidewalks and boulevards into the curb along the roadway. The Contractor then sweeps the sand from the roadway into the curb and then utilizes a specialized piece of equipment to pick up the sand from the curb line. Currently City crews are sweeping all sidewalks, a small percentage of curbed streets and all curbless streets.

#### **Current Service Level**

Street Sweeping Operations can start as early as the middle of March or as late as the end of April and typically takes 6-10 weeks to complete the majority of the roads and sidewalk throughout the City. The amount of sand used throughout the winter can impact street sweeping productivity and the type of winter dictates sand usage. The City uses somewhere between 60,000 and 85,000 tonnes of sand per year. This means that the sand volume fluctuates by up to 50% year to year.

The Contractor is currently responsible for sweeping 795 km's or 78% of the curbed roads throughout the City. The Contractor runs a 24hr/7day a week operation, or 2 crews to complete all major arterial roads and completes the remainder of the roads with a 12hr/7day a week operation, or 1 crew. The Contractors program typically takes 6 weeks to complete.

City crews are responsible to sweep 215 km's or 22% of the curbed roads throughout the City, 440km's of sidewalk and all of the City's curbless road network. City crews normally operate in 3 shifts each day, with multiple crews each shift, working throughout the City 5 days a week. The City's program typically takes 6-10 weeks to complete.

## **Drivers for Proposed Course of Action**

With the current program, each maintenance section start their sweeping program as soon as possible in the springtime so City crews are actively working throughout the City during the entire sweeping program. The Contractor starts sweeping in one area of the City and progressively works from one community to the next throughout the City. This can result in some parts of a community swept well in advance of other parts or one entire community swept, well in advance of another. This generates confusion among residents as well dissatisfaction of their current service level.

As well, many municipalities require this service largely at the same time of the year. This can make it difficult to ensure a timely start of the Contractor's program.

## **Next Steps**

To evaluate the current program structure focusing on the evaluation of distribution of sweeping routes completed by City crews and Contractor crews with emphasis on schedule cohesiveness and appropriate equipment requirements. The Contractor currently uses specialized equipment not owned by the City to complete the majority of the curbed roadways throughout the City. The cost of owning this specialized equipment to complete more sweeping internally, with cost of equipment and labour, and possible additional training can be reviewed.

## **Risks and Challenges**

The current program is structured so that the City hires a Contractor to perform the majority of the work requiring the highly specialized equipment. If owned, this equipment cannot be repurposed for other activities and is only required for 6-10 weeks once a year. If utilizing existing staff to operate this specialized equipment, this has the potential to take away from other maintenance activities such as potholes repairs.

## **4. Snow Plowing**

### **Description**

Snow plowing operations is the major component of the Roads Operations winter maintenance program. Crews start preparation for winter activities in the fall. Some examples of these activities include ensuring winter sand and salt deliveries to the depots and transitioning equipment from summer maintenance requirements to winter maintenance requirements

Throughout the winter months, when it's not snowing, crews are actively working on other maintenance activities. Some examples of these activities include snow removal at intersections, winter ditching pothole patching, sanding sidewalks and local roads and monitoring road conditions throughout the City.

City hired Contractors are required to be available from November 15 to March 31 annually to supplement snowplowing operations during winter storms. Contractors are obligated to ensure timely deployment. To do this, the required number of plow trucks are stationed each City depot.

### **Current Service Level**

City crews sand or salt all arterials and major collector roads when its starts to snow. These routes are designed to be completed within 2-4 hours of the storm beginning. Once snow accumulation has reached 5cm (2"), crews begin plowing all arterials and major collector roads. These routes are designed to be completed within 3-8 hours once a storm has ended.

Full deployment of City and Contractor crews occurs when snow accumulation reaches 8cm (3"). At this stage of a winter event, City crews continue to plow all arterials and major collector roads. Contractor and supplemental city crews begin plowing and sanding residential and rural roads for the duration of the storm. These routes are designed to be complete within 8-24hrs once a typical storm has ended. The Contractor equipment completing these routes includes multi-use plow trucks, graders and 4x4 trucks depending on route requirements.

Bus stops are cleared by Contractor crews within a day or two of the end of the storm and sidewalks are sanded and plowed by City crews within 24hrs of the storm being completed

### **Drivers for Proposed Course of Action**

Winter has been starting early and lasting into the spring months. The average snow accumulation through the winter months has increased in the last few years. With more extreme weather conditions, including freezing rain events, extreme low temperatures and high number of freeze thaw conditions, the City has consistently been over spending the winter maintenance budget to maintain service level. An increase in call volume to 311, specifically relating to plowing and snow removal concerns demonstrates that resident are unsatisfied with the level of service that they are receiving considering the changing weather implications.

### **Next Steps**

To evaluate the current program for efficiencies and cost saving measures.

For example, the City currently owns 5 graders. These graders are mainly utilized for summer maintenance and are used as spare units when required in the winter to supplement a plowing route, as well as for ice blading residential roads. Ice blading is a requirement when there is reoccurring freeze thaw conditions and severe rutting occurs. A contemplated option could be to complete Contractor routes that utilize a

grader with City crews and City owned graders with cost of labour, and possible additional training to be reviewed.

## **Risks and Challenges**

Contract requirements state that all Contractor crews must deploy within a certain timeframe at the beginning of a storm. For equipment such as graders, Contractors typically maintain their equipment near the plowing route. A City Grader would deploy from a City depot. The additional time it takes for this equipment to begin plowing its designated route will increase the risk of not meeting the service level target for that route.

Also, if Contractors are not contracted to provide graders for plowing through the winter months, Contractors may not be able to provide the equipment on an as needed basis. This type of equipment is typically winterized and would be unavailable in short notice.

This initiative would also require additional staff and additional training needs.

## **Resources Cited:**

Winter Control Operations Update for December 2017, presented to Operations Committee on March 19, 2018.

<https://agendasonline.greatersudbury.ca/index.cfm?pg=agenda&action=navigator&lang=en&id=1253&itemid=14744>

Overview and Analysis of Approach to Roads and Distribution & Collection Maintenance Services, presented to City Council on September 25, 2018.

<https://agendasonline.greatersudbury.ca/?pg=agenda&action=navigator&lang=en&id=1247&itemid=15615>

Core Service Review Phase 1, presented to City Council on September 24, 2019.

<http://agendasonline.greatersudbury.ca/?pg=agenda&action=navigator&lang=en&id=1329&itemid=17502>