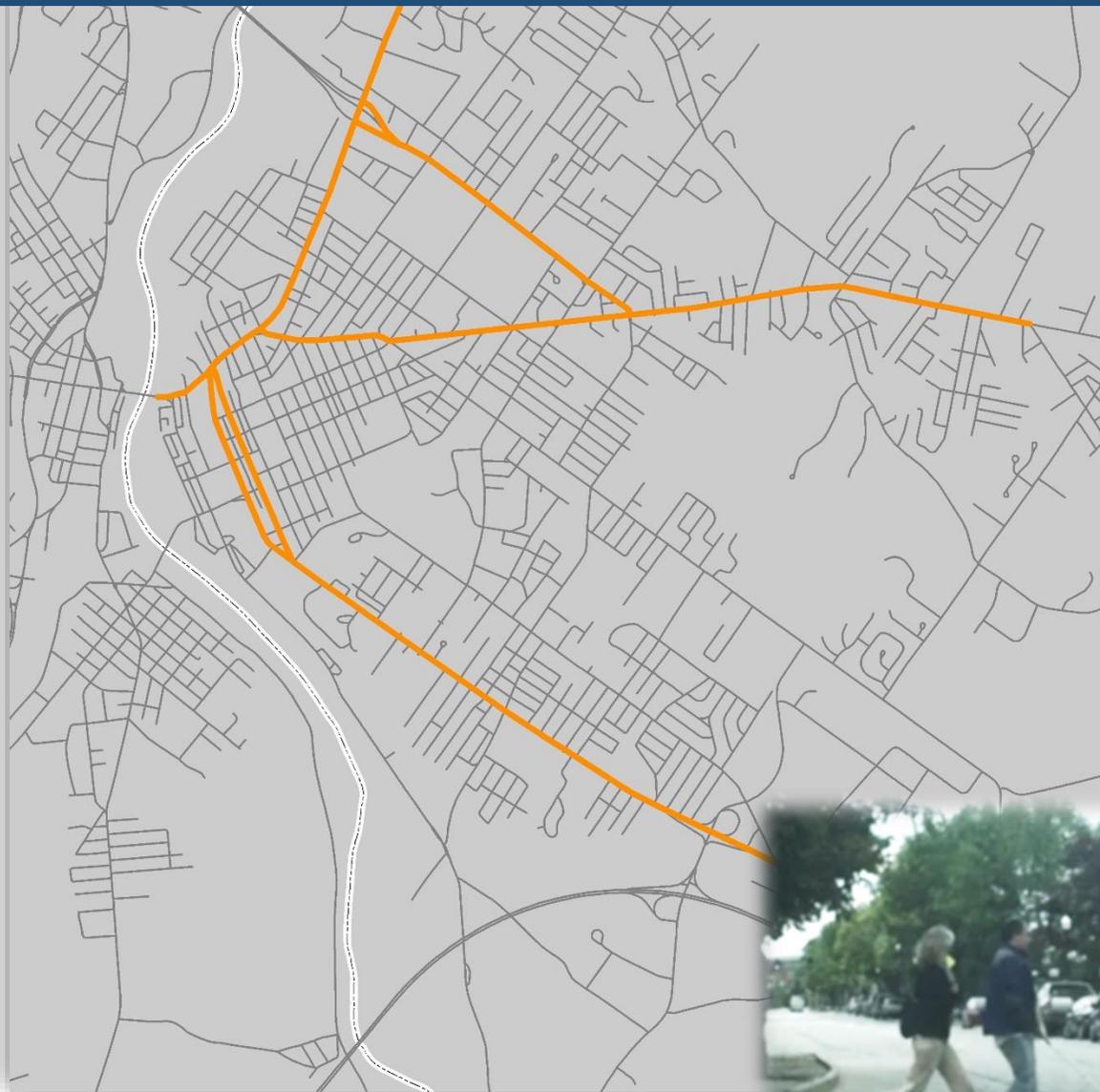




# Lewiston Pedestrian Crossing Study



**HNTB**

4/15/2019

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## Executive Summary

The City of Lewiston engaged HNTB to conduct a pedestrian crossing study along key corridors to evaluate existing crossings and identify potential new crossing locations. In addition, this analysis will provide planning level cost estimates for each of the individual crossings evaluated. An initial field walk of this study area was conducted on April 13, 2018, and the photo documentation is included in Appendix A: Photo Log. The corridors reviewed in the study area include:

- **Main Street.** This 2.5-mile corridor begins at the intersection with Court Street and extends northeast to the intersection with Switzerland Road.
- **Sabattus Street.** This corridor begins at the intersection with Main Street and extends 2.75 miles east to the intersection with Grove Street.
- **Russell Street.** This corridor begins at Sabattus Street and extends northwest for 1.25 miles, terminating at the ramps connecting Main Street to the Memorial Bridge.
- **Lisbon Street.** This 3-mile corridor begins at Main Street and extends southeast to Drew Street, located about a half-mile east of the interchange with Plourde Parkway.
- **Canal Street.** This is the shortest corridor at 0.75 mile. It begins at Main Street and extends southeast to the intersection with Lisbon Street.

This study is timely in that it responds to an increasing concern in the state of Maine about the need to make pedestrian corridors as safe as possible. Specific actions to mitigate this concern include making improvements in accordance with current standards mandated by the American's with Disabilities Act (ADA), improving visibility of existing crossings, maintaining existing pedestrian facilities, and providing new crossings and facilities to help with pedestrian compliance. Two leaders in this effort include the Bicycle Coalition of Maine and the Maine Department of Transportation (MaineDOT) Task Force for Safety. These entities created the Heads Up! program that involves meeting with residents and users in communities all over the state. Thus far, two such meetings took place in Lewiston, the first on May 15, 2017 and a second one on November 15, 2018. At these meetings, users identified intersections of focus and suggestions for improvement. The City of Lewiston used these findings to implement many of the suggested improvements including the addition of high visibility crosswalk striping in many of the City's busiest intersections. Coordination between these entities and the City was an important element in the development of report recommendations.

Parking, pedestrian facilities, schools, and public transit routes were also evaluated as part of this study to determine their role in existing and future pedestrian crossing locations. Some relevant information from this includes the following:

- There are five City Link<sup>1</sup> bus loops that operate in Lewiston – the Main Street Loop, the Downtown Shuttle Loop, the Sabattus Street Loop, the Lisbon Street Loop, and the College Street Loop. Detailed routes and schedules are provided in Appendix B: Transit.
- The City of Lewiston has a variety of parking along the key corridors – parking garages in the dense urban core, on-street parking throughout and numerous off-street parking lots, the costs of which vary considerably. On-street parking ranges from free to \$0.50 per hour whereas parking garages can cost up to \$55 per month. During inclement weather and seasonal street cleaning, on-street parking can be restricted, thus impacting pedestrian activity.
- The Safe Routes to School program is a collaboration by The Bicycle Coalition of Maine and the MaineDOT that promotes safe walking and biking to school for K-8 age children. The Bicycle Coalition of Maine also collaborated with schools on two additional programs, Walking School Bus and Bicycle Train, to help students safely navigate to school. This study also mapped schools in the municipality and gleaned relevant information from public forums to consider potential crossing needs of students within the study area.

The following sections identify suggested improvements by corridor at existing crossings with the overall costs associated with each improvement. A more complete cost breakdown is located in Appendix C: Cost Breakdown. It should be noted that these estimates include only costs related to construction, design, and construction engineering, but not those associated with the right-of-way process. Included in these cost estimates are general pedestrian facility enhancements applicable to the entire project, such as upgrading signal timing to better accommodate pedestrian crossings, updating intersection approach signage to better notify motorists of pedestrian crossings, providing high visibility pavement markings at pedestrian crossings, and upgrading pedestrian facilities to meet Americans with Disabilities Act (ADA) standards. (Examples of pertinent ADA details are located in Appendix D: ADA Details.) The study does not evaluate minor side-street crossings, which are excluded in the tables that follow.

To identify key locations with the most need, a priority rating system was established and is included with the cost estimates that follow. The priorities are divided into three tiers:

- Tier 1: Proposed intersection improvements are prioritized for the top eleven intersections. These intersections have priority over all other intersections in the corridor with pedestrian crossings because they have higher usage and/or safety concerns.
- Tier 2: These are crossings with some ADA and minor fixes that should be updated as budget and time allow.
- Tier 3: These are crossings that recommend signage, potential new crossings, and/or improvements to be made as new development occurs.

The Tier 1 proposed improvements are listed in Table ES-1 in order from the highest priority to the lowest. In addition to traditional funding sources such as MaineDOT and Federal funding, the City has also allocated funds for pedestrian facility improvements for the next five years. This includes \$350,000 for sidewalks and \$200,000 for crossings.

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<sup>1</sup> See <http://www.avcog.org/index.aspx?NID=884> accessed 8/28/2018

| Table ES-1: Priority I Proposed Improvements:<br>Tier I Ranked from I to 11* |  |                 |        |                 |
|--|--|-----------------|--------|-----------------|
| Priority   | Intersection                           | Corridor        | Cost   | Cumulative Cost |
| 1  | Main Street at Middle Street (DHHS)    | Main Street     | \$100k | \$100k          |
| 2  | Main Street at Lisbon Street           | Main Street     | \$40k  | \$140k          |
| 3  | Main Street at Canal Street            | Main Street     | \$70k  | \$210k          |
| 4  | Main Street at Lincoln Street          | Main Street     | \$100k | \$310k          |
| 5  | Sabattus Street at Main Street         | Sabattus Street | \$60k  | \$370k          |
| 6  | Main Street at Bates Street            | Main Street     | \$50k  | \$420k          |
| 7  | Main Street at High Street             | Main Street     | \$60k  | \$480k          |
| 8  | Sabattus Street at Oak/Bartlett Street | Sabattus Street | \$70k  | \$550k          |
| 9  | Sabattus Street at Howe/Wood Street    | Sabattus Street | \$60k  | \$610k          |
| 10   | Canal Street at Ash Street             | Canal Street    | \$30k  | \$640k          |
| 11   | Canal Street at Pine Street            | Canal Street    | \$20k  | \$660k          |

\*Note that no new crossings are designated as priority I improvements.

## Main Street

Most of the 2.5-mile Main Street corridor is lined by sidewalks extending on both sides, with some in need of repair. Two sections of this corridor have long distances between existing crossings, and three new crossings are presented for consideration in the following table – Main Street at Mountain Avenue, Main Street at Montello and Landry Road (midblock crossing), and Main Street at Marden’s Shopping Center.

The Central Maine Medical Center (CMMC) and Dunkin Donuts crossing, will remain an active location for pedestrians with the parking across from the hospital, even with the planned relocation of Dunkin Donuts. Because the crossing is in a difficult location for site distance and safety, we recommend that CMMC, the MaineDOT and the City coordinate to maintain the current infrastructure. A summary of recommended improvements and planning level cost estimates follows in Table ES-2, with new crossings noted in bold italics at the end of the table.

**Table ES-2: Main Street Crossing Evaluation Summary**

| Priority | Intersection   | Suggested Improvement  | Cost         |
|----------|--|--|--------------|
| I.4      | Main Street at Lincoln Street                                      | <ul style="list-style-type: none"> <li>Two-stage Pedestrian Crossing</li> <li>Signalized Red Turn Arrows</li> <li>Improved Pedestrian Signage</li> <li>Accessible Pedestrian Signal (APS) Push Buttons and Pedestrian Countdown Heads</li> <li>ADA Improvements</li> </ul> | \$100k       |
| I.3      | Main Street at Canal Street  | <ul style="list-style-type: none"> <li>APS Push Buttons and Pedestrian Countdown Heads</li> <li>Reduce Turn Radiuses</li> <li>Passive Pedestrian Detection Linked to High Visibility Signage for Turning Vehicles</li> <li>ADA Improvements</li> </ul>                     | \$70k        |
| I.2      | Main Street at Lisbon Street                                       | <ul style="list-style-type: none"> <li>APS Push Buttons and Pedestrian Countdown Heads</li> <li>Reduce Turn Radiuses</li> <li>ADA Improvements</li> </ul>  | \$40k        |
| I.1      | Main Street at Middle Street (DHHS)                                | <ul style="list-style-type: none"> <li>Two-stage Pedestrian Crossing</li> <li>Improved Pedestrian Signage</li> <li>APS Push Buttons and Pedestrian Countdown Heads</li> <li>ADA Improvements</li> </ul>  | \$100k       |
| I.6      | Main Street at Bates Street  | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> <li>APS Push Button and Pedestrian Countdown Heads</li> <li>ADA Improvements</li> </ul>  | \$50k        |
| 3        | Main Street at Dunkin Donuts and CMMC (midblock crossing)          | <ul style="list-style-type: none"> <li>Fix Existing High Visibility Lighting</li> <li>Coordinate between the City, CMMC, and MaineDOT</li> </ul>   | \$30k        |
| I.7      | Main Street at High Street   | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> <li>APS Push Button</li> <li>ADA Improvements</li> </ul>   | \$60k        |
| -        | Main Street at Frye Street   | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| -        | Main Street at Russell Street Ramps                                | <ul style="list-style-type: none"> <li>None (Upgrades to be implemented as part of another project)</li> </ul>   | -            |
| -        | Main Street at Strawberry Avenue                                   | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| 3        | Main Street at Mollison Way  | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>  | \$1k         |
| -        | Main Street near Switzerland Road (midblock crossing)              | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| 3        | <b>Main Street at Mountain Avenue</b>                              | <ul style="list-style-type: none"> <li><b>New Crossing</b></li> </ul>  | <b>\$50k</b> |
| 2        | <b>Main Street at Montello and Landry Road (midblock crossing)</b> | <ul style="list-style-type: none"> <li><b>New Crossing</b></li> </ul>  | <b>\$50k</b> |
| 3        | <b>Main Street at Marden's Shopping Center</b>                     | <ul style="list-style-type: none"> <li><b>Cross Connections between Properties</b></li> <li><b>Combine Entrances</b></li> <li><b>New Crossing</b></li> </ul>   | <b>\$50k</b> |

## Sabattus Street

Most of the 2.75-mile stretch of the Sabattus Street corridor is lined by sidewalks extending on both sides, with some in need of repair. Crossings are generally reasonably spaced and located near public transit stops, although we recommend that a new crossing at Sabattus Street and Fairlawn/Farewell Avenue be considered. Since many of the existing crossings were recently upgraded, we recommend no changes to those. A summary of recommended improvements and planning level cost estimates follows in Table ES-3, with new crossings noted in bold italics at the end of the table.

| <b>Table ES-3: Sabattus Street Crossing Evaluation Summary</b> |  |  |              |
|--|--|--|--------------|
| <b>Priority</b>  | <b>Intersection</b>  | <b>Suggested Improvement</b>   | <b>Cost</b>  |
| 1.5  | Sabattus Street at Main Street                                       | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> <li>ADA Improvements</li> </ul>  | \$60k        |
| 1.8  | Sabattus Street at Oak/Bartlett Street                               | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> <li>Improved Vehicle Signage</li> <li>RRFBs</li> <li>ADA Improvements</li> </ul> | \$70k        |
| -  | Sabattus Street at College/Horton Street                             | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| 1.9  | Sabattus Street at Howe/Wood Street                                  | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> <li>ADA Improvements</li> <li>RRFBs</li> </ul>                                   | \$60k        |
| -  | Sabattus Street at Central Avenue/Webster/Ash Street                 | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| -  | Sabattus Street at Lafayette Street/Sylvan/Campus Avenue             | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| -  | Sabattus Street at East Avenue                                       | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| -  | Sabattus Street at Russell Street                                    | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| 3  | Sabattus East of Laurier Street (midblock crossing)                  | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>  | \$1k         |
| -  | Sabattus Street at Bradford Street                                   | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| -  | Sabattus Street at Wildwood Drive                                    | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| -  | Sabattus Street at Randall Road                                      | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| -  | Sabattus Street at Temple Street                                     | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| <b>3</b>   | <b><i>Sabattus Street at Fairlawn Avenue and Farewell Street</i></b> | <ul style="list-style-type: none"> <li><b><i>New Crossing</i></b></li> </ul>   | <b>\$60k</b> |

## Russell Street

The relatively small 1.25-mile stretch of Russell Street has a sidewalk on the easterly side of the road opposite Bates College, but the westerly side does not. Pedestrians have worn a footpath on the westerly side, and we recommend replacing this with a sidewalk. The intersection of Russell Street and Lafayette Street warrants a new crossing since it was the site of a pedestrian crash, although it is not recommended due to the high rate of speed for this corridor and the four-lane section of roadway. Furthermore, although the Russell Street and East Avenue is signalized, the slip lane in the northwesterly corner is a free movement, and not part of the signal. Consideration should be given for signalization of this right turn movement to provide a safer pedestrian crossing. A summary of recommended improvements and planning level cost estimates follows in Table ES-4, with new crossings noted in bold italics at the end of the table.

| Priority | Intersection  | Suggested Improvement  | Cost         |
|----------|---|--|--------------|
| 2        | Russell Street at East Avenue                             | <ul style="list-style-type: none"><li>Right Turn Arrow at Slip Lane</li></ul>                            | \$4k         |
| 3        | Russell Street at Central Avenue                          | <ul style="list-style-type: none"><li>Improved Pedestrian Signage</li></ul>                              | \$3k         |
| -        | Russell Street at Lewiston Variety II (midblock crossing) | <ul style="list-style-type: none"><li>None</li></ul>   | -            |
| 3        | Russell Street at College Street                          | <ul style="list-style-type: none"><li>Improved Pedestrian Signage</li></ul>                              | \$3k         |
| <b>3</b> | <b><i>Russell Street at Lafayette Street</i></b>          | <ul style="list-style-type: none"><li><b><i>New Crossing Warranted but not Recommended</i></b></li></ul> | <b>\$50k</b> |

## Lisbon Street

Sidewalks line both sides of the 3-mile Lisbon Street corridor, except near the ramps. For the most part, these are in good condition although there is some cracking on the southerly asphalt sidewalk. Crossings are generally reasonably spaced, except at the ramps. Adding a crossing at Lisbon and Webber Streets was considered but is not recommended because the pedestrian fatality was a unique situation and it is not a popular pedestrian crossing location. The intersection at Lisbon Street and Jones Avenue was also examined but improvements are not recommended due to the high speed of travel across five lanes. Finally, since a previous project on Lisbon Street improved many crossings, we recommend only that signage be added to increase visibility to further improve the intersection.

A summary of recommended improvements and planning level cost estimates follows in Table ES-5, with new crossings noted in bold italics at the end of the table.

| <b>Table ES-5: Lisbon Street Crossing Evaluation Summary</b> |   |   |              |
|--|---|---|--------------|
| <b>Priority</b>  | <b>Intersection</b>   | <b>Suggested Improvement</b>  | <b>Cost</b>  |
| 3  | Lisbon Street at Ash Street   | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>                           | \$3k         |
| 3  | Lisbon Street Between Ash Street and Pine Street (midblock crossing)      | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>                           | \$1k         |
| 3  | Lisbon Street at Pine Street  | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>                           | \$3k         |
| 3  | Lisbon Street between Pine Street and Chestnut Street (midblock crossing) | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>                           | \$1k         |
| 3  | Lisbon Street at Chestnut Street  | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>                           | \$3k         |
| 3  | Lisbon Street at Spruce Street  | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>                           | \$1k         |
| 3  | Lisbon Street at Cedar Street   | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>                           | \$1k         |
| 3  | Lisbon Street Between Cedar Street and Maple Street (midblock crossing)   | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>                           | \$1k         |
| 3  | Lisbon Street at Maple Street   | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>                           | \$1k         |
| 3  | Lisbon Street at Locust Street  | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>                           | \$1k         |
| -  | Lisbon Street at Essex Street   | <ul style="list-style-type: none"> <li>Improvements Under a Current Design Contract</li> </ul>          | -            |
| -  | Lisbon Street at East Avenue  | <ul style="list-style-type: none"> <li>Improvements Under a Current Design Contract</li> </ul>          | -            |
| 2  | Lisbon Street at South Avenue   | <ul style="list-style-type: none"> <li>ADA Improvements</li> <li>Improved Pedestrian Signage</li> </ul> | \$40k        |
| 2  | Lisbon Street at St. Croix Street   | <ul style="list-style-type: none"> <li>ADA Improvements</li> <li>Improved Pedestrian Signage</li> </ul> | \$40k        |
| 2  | Lisbon Street at Scribner Boulevard                                       | <ul style="list-style-type: none"> <li>ADA Improvements</li> <li>Improved Pedestrian Signage</li> </ul> | \$40k        |
| -  | <b>Lisbon Street at Webber Street</b>                                     | <ul style="list-style-type: none"> <li><b>New Crossing</b></li> </ul>                                   | <b>\$60k</b> |
| -  | <b>Lisbon Street at Jones Avenue</b>                                      | <ul style="list-style-type: none"> <li><b>New Crossing Warranted but not Recommended</b></li> </ul>     | <b>\$60k</b> |

## Canal Street

The .75-mile corridor connecting with Lisbon Street is a one-way street in an area of dense parking both on street and off. Crossings are generally spaced appropriately. We evaluated the need for a crossing from a parking garage but deemed it unnecessary because most bike and pedestrian crashes were caused by noncompliant use of the facilities. We recommend re-evaluating the inclusion of pedestrian facilities at the Chestnut Street Bridge when consideration for retrofit and redesign is undertaken in the future. We also recommend the removal of the southwesterly ramp on the Cedar Street Bridge to discourage noncompliant pedestrian behavior. A summary of recommended improvements and planning level cost estimates follows in Table ES-6, with new crossings noted in bold italics at the end of the table.

| <b>Table ES-6: Canal Street Crossing Evaluation Summary</b> |  |   |              |
|---|--|---|--------------|
| <b>Priority</b>   | <b>Intersection</b>                          | <b>Suggested Improvement</b>  | <b>Cost</b>  |
| 1.10  | Canal Street at Ash Street                   | <ul style="list-style-type: none"> <li>• ADA Improvements</li> </ul>  | \$30k        |
| 1.11  | Canal Street at Pine Street                  | <ul style="list-style-type: none"> <li>• ADA Improvements</li> </ul>  | \$20k        |
| 3   | Canal Street at Chestnut Street Bridge       | <ul style="list-style-type: none"> <li>• Re-evaluate Bridge During Retrofit and Redesign Opportunities</li> </ul> | \$3k         |
| 2   | Canal Street at Cedar Street Bridge          | <ul style="list-style-type: none"> <li>• Eliminate Southwesterly Ramp</li> </ul>                                  | \$20k        |
| 2   | Canal Street at Maple Street                 | <ul style="list-style-type: none"> <li>• RRFBs</li> </ul>   | \$30k        |
| <b>3</b>  | <b><i>Canal Street at Parking Garage</i></b> | <ul style="list-style-type: none"> <li>• <b><i>New Crossing</i></b></li> </ul>                                    | <b>\$50k</b> |

## Additional Recommendations

The following recommendations are made as part of this evaluation:

- Further evaluate pedestrian ramps to ensure they meet ADA standards as part of new development and consider future citizen involvement.
- Improve unsignalized side streets to meet current ADA standards. In addition to cross and side-slopes it is recommended that detectable warning surfaces be placed at either end of crossings and that all road crossings be striped.
- Evaluate corridor driveways and entrances to reduce possible conflict with pedestrians on sidewalks using access management guidelines, combining adjacent property entrances, and utilizing right-in/right-out movements.
- Evaluate the need for midblock crossings in areas to encourage pedestrians to avoid unsafe illegal crossings.
- Ensure that all pedestrian crossings have properly functioning countdown heads, Accessible Pedestrian Signal (APS) push buttons, and that crossing times meet guidelines set forth by the Manual on Uniform Traffic Control Devices (MUTCD).
- Remove existing pedestrian ramps that no longer lead to crossings.
- Control vehicular speeding and alleviate safety concerns at high crash locations (HCLs).<sup>2</sup>
- Evaluate lighting at the vehicular and pedestrian level, considering replacement of bulbs with LEDs.
- Create a bicycle and pedestrian safety campaign to encourage bicyclists to wear high visibility bike clothing and enforce jaywalking with a stop and educate campaign at HCLs.
- Consider locations where bike lanes meet criteria for implementation.

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<sup>2</sup> MaineDOT defines a high crash location (HCL) as "...a location that has had eight or more traffic crashes and a Critical Rate Factor (CRF) greater than 1.00 in a three-year period. A highway location with a CRF greater than 1.00 has a frequency of crashes that is greater than the statewide average for similar locations." (See <http://www.itemaine.org/trafficdata/highcrashlocations/>, accessed on 08/20/2018.)

## Additional Intersections Evaluated

The City of Lewiston requested the evaluation of the following four intersections outside the corridor:

- Lincoln at Oxford Street
- Basilica of Saints Peter and Paul Crossing
- Lincoln Street, River Road, and South Avenue Bus Stop
- Franco Center Crossing

A summary of the suggested improvement for these additional crossings is shown in Table ES-7.

| <b>Intersection</b>                                  | <b>Suggested Improvement</b>  | <b>Notes</b>  | <b>Cost</b> |
|--|---|---|-------------|
| Lincoln Street at Oxford Street                      | <ul style="list-style-type: none"> <li>• Upgraded signage</li> <li>• ADA improvements</li> <li>• Detectable warning surfaces</li> </ul>               |   | \$30k       |
| Basilica of Saints Peter and Paul Crossing           | <ul style="list-style-type: none"> <li>• None</li> </ul>  | Adding RRFBs would not be detrimental if the church wants to place signs              | -           |
| Lincoln Street, River Road and South Avenue Bus Stop | <ul style="list-style-type: none"> <li>• Crossing with</li> <li>• Striping</li> <li>• Pedestrian signage</li> <li>• ADA compliant landings</li> </ul> | Due to safety concerns, evaluate vehicular speeds and consider additional enforcement | \$35k       |
| Franco Center Crossing                               | <ul style="list-style-type: none"> <li>• Striping with proper pedestrian signage</li> <li>• ADA compliance</li> </ul>                                 |   | \$20k       |

Detail of those evaluations is not addressed in this study, but it is contained in Appendix E: Additional Pedestrian Crossings Evaluated.

## Section 1. Background

The streets in the City of Lewiston—Maine’s second largest city—are bustling with vehicular, bicycle, and pedestrian traffic. The city has a unique blend of pedestrian infrastructure located adjacent to and connecting commercial centers, business hubs, residences, educational facilities, and medical establishments. As a result, pedestrian crossings are an integral and critical component of Lewiston’s vibrant economic activity. A focused effort is required to preserve pedestrian safety and enhance pedestrian mobility amid increasing vehicle traffic. In doing so, Lewiston can maintain its unique character as a center for commercial and residential activity.

## Section 2. Purpose

The purpose of this report is to provide a detailed review of existing and potential future pedestrian crossing conditions along five key pedestrian corridors in the City of Lewiston. This review will include a summary of pedestrian infrastructure, bicycle and pedestrian crash data, public transit routes, and parking. It will also note locations where upgrades are required to meet the requirements of the ADA. Based upon the results of this review, HNTB will identify the following:

- Locations where enhancements should be considered,
- Locations where new pedestrian crossings should be considered, and
- Potential construction costs that would be associated with these enhancements.

## Section 3. Report Overview

The analysis contained in this report will begin by discussing overall corridor conditions followed by a focus on each of the following five corridors:

- **Main Street.** This 2.5-mile corridor begins at the intersection with Court Street and extends northeast to the intersection with Switzerland Road.
- **Sabattus Street.** This corridor begins at the intersection with Main Street and extends 2.75 miles east to the intersection with Grove Street.
- **Russell Street.** This corridor begins at Sabattus Street and extends northwest for 1.25 miles, terminating at the ramps connecting Main Street to the Memorial Bridge.
- **Lisbon Street.** This 3-mile corridor begins at Main Street and extends southeast to Drew Street, located about a half-mile east of the interchange with Plourde Parkway.
- **Canal Street.** This is the shortest corridor at 0.75 mile. It begins at Main Street and extends southeast to the intersection with Lisbon Street.

Figure 3.1 provides an overview of the corridors evaluated during this study.

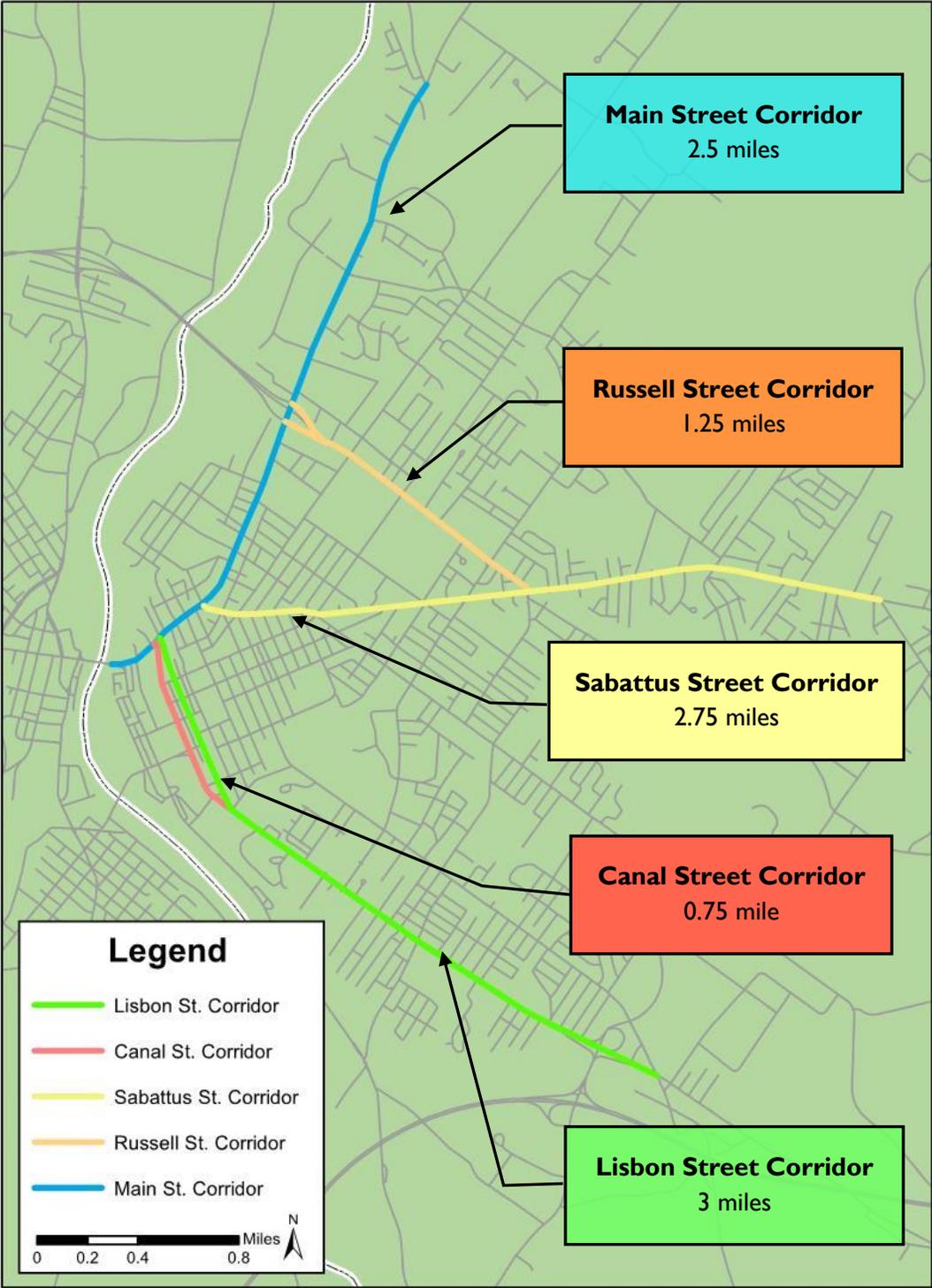
Sections 4 through 9 of this report will review the study area as a whole, as well as each corridor individually. Each section will provide the following information for its respective corridor:

- Maps highlighting the following details:
  - Locations of existing sidewalks;
  - Locations of all existing crossings, highlighting those enhanced by beacons;
  - Existing bus routes;
  - Corridor parking; and
  - Approximate locations at which bicycle, and/or pedestrian collisions have been recorded; and
  - Intersections currently classified by MaineDOT as HCLs.
- A summary of the key deficiencies identified as a result of meeting with key Lewiston staff, on-site corridor evaluation, and historic data review.
- An assessment of existing crossings that require enhancements to promote pedestrian safety and satisfy ADA requirements.
- A discussion of potential locations at which new pedestrian crossings would be appropriate.

Section 10 will provide a summary of planning-level construction costs for the various proposed improvements. Finally, Section 11 will summarize the key findings of the study and will provide HNTB's recommendations for next steps.

# Figure 3.1 Pedestrian Corridors

City of Lewiston, Maine



## Section 4. Pedestrian Overview

This section will focus on the overall pedestrian activity in the corridor. It will discuss three generators for pedestrian activity – transit systems, schools and parking, both on-street and in garages.

### 4.1 Study Area Transit

Relevant bus routes were reviewed for pedestrian facility needs. The City of Lewiston has the City Link bus<sup>3</sup> with service between Auburn and Lewiston, Maine. A map of the routes in Lewiston as shown in Figure 4.1. The following identifies bus loops are within the study area:

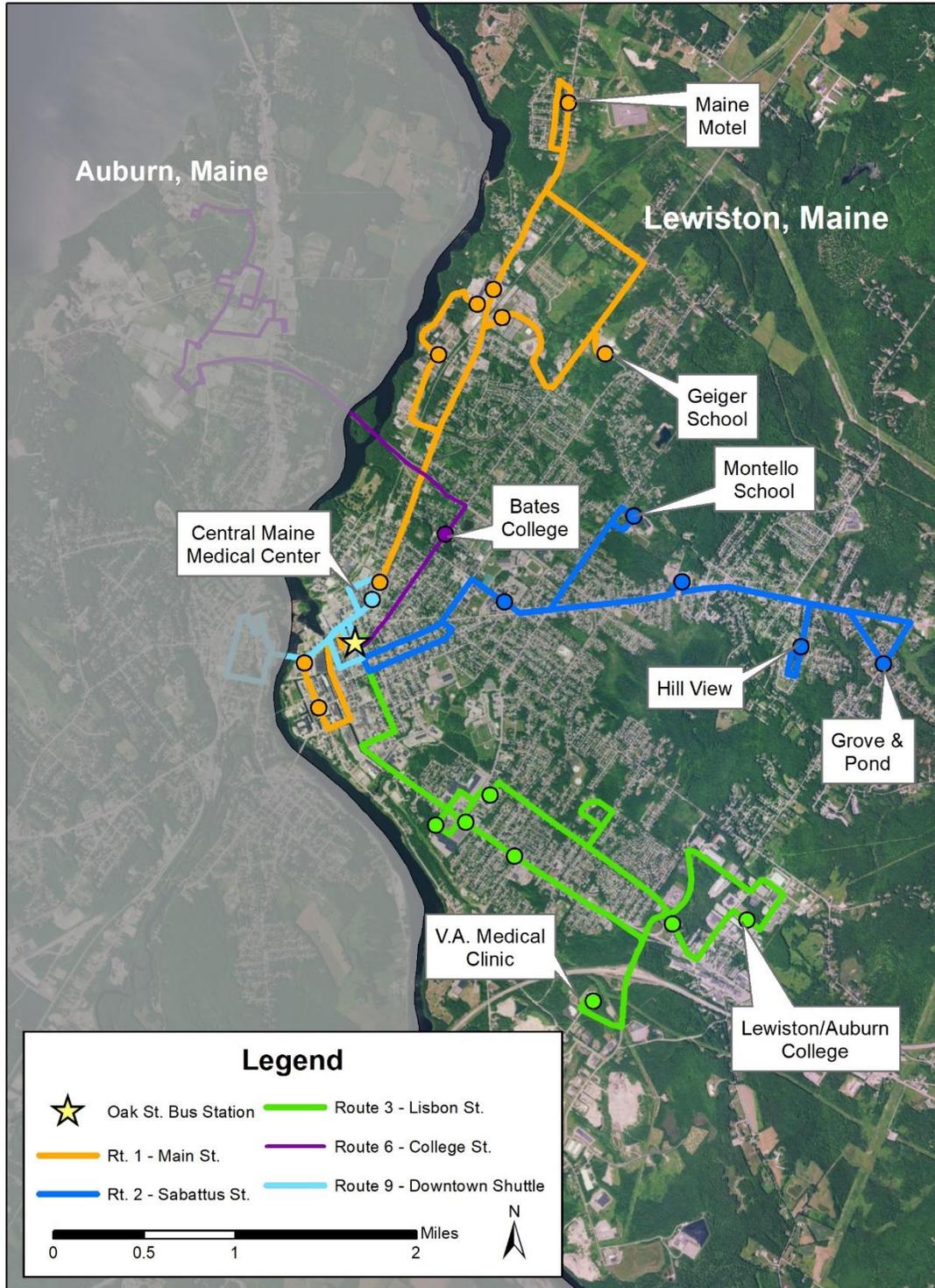
- *Main Street Loop*: This loop generally follows Main Street from Lincoln Street to Deer Road with related loops around College Road, Strawberry Avenue and Lincoln/Canal Street.
- *Downtown Shuttle Loop*: This loop continues from Auburn up to the intersection with Holland Street.
- *Sabattus Street Loop*: This loop begins on Bates Street and follows Sabattus Street east to the intersection with Sabattus and Pond Road.
- *Lisbon Street Loop*: This loop continues from Oak Street to the intersection of Lisbon and Westminster Street following a significant loop on Webster Street.
- *College Street Loop*: This loop follows College Street up to Russell Street and continues across the river to Auburn.

These routes will be discussed in more detail within their respective sections later in the report. Complete route maps and schedules are located in Appendix B: Transit.

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<sup>3</sup> See <http://www.avcog.org/index.aspx?NID=884> accessed 8/28/2018

**Figure 4.1**  
**City Link Bus Routes**  
*City of Lewiston, Maine*



## 4.2 Pedestrian-Based School Transportation Programs

Pedestrian-based school transportation also influences pedestrian facilities, so popular pedestrian routes were reviewed. The Bicycle Coalition of Maine hosted meetings that focused on schools in 2015 and 2016, which identified the following general themes relating to this report:

- Better-connected and available sidewalks, walking trails, and bike paths
- Lack of safe crossings for students
- Existing unsatisfactory crosswalks
- A disregard/lack of knowledge for the rules from both drivers and pedestrians
- Inadequate signage/visibility
- City of Lewiston and the Bicycle Coalition of Maine are continuing to formalize Safe Routes to School

One outcome of these meetings was the creation of the Walking School Bus and the Bicycle Train educational programs to help students more safely navigate routes to school.

## 4.3 Study Area Parking

Parking is a key driver of downtown pedestrian activity. In downtown urban areas it is nearly impossible to have enough parking adjacent to the desired destination so users must park and walk to their destinations. Figure 4.2 shows parking in this urban core.<sup>4</sup>

There are two types of parking depicted on this map – on-street parking and parking garages. Metered spaces are \$0.50 per hour with varying maximum durations of one, two, and four hours. Parking garage rates are \$1 per hour with a maximum of \$6 per day. Monthly rates vary between \$42 (resident) and \$55 (non-resident) per month. Parking is free over-night and is available during winter parking bans. There are five parking garages and one surface lot in the study area.

Pedestrian facilities in this area need to be abundant and up to current accessibility standards. Adequate and well-planned pedestrian facilities will provide safe and direct access for pedestrians.

## 4.4 Other

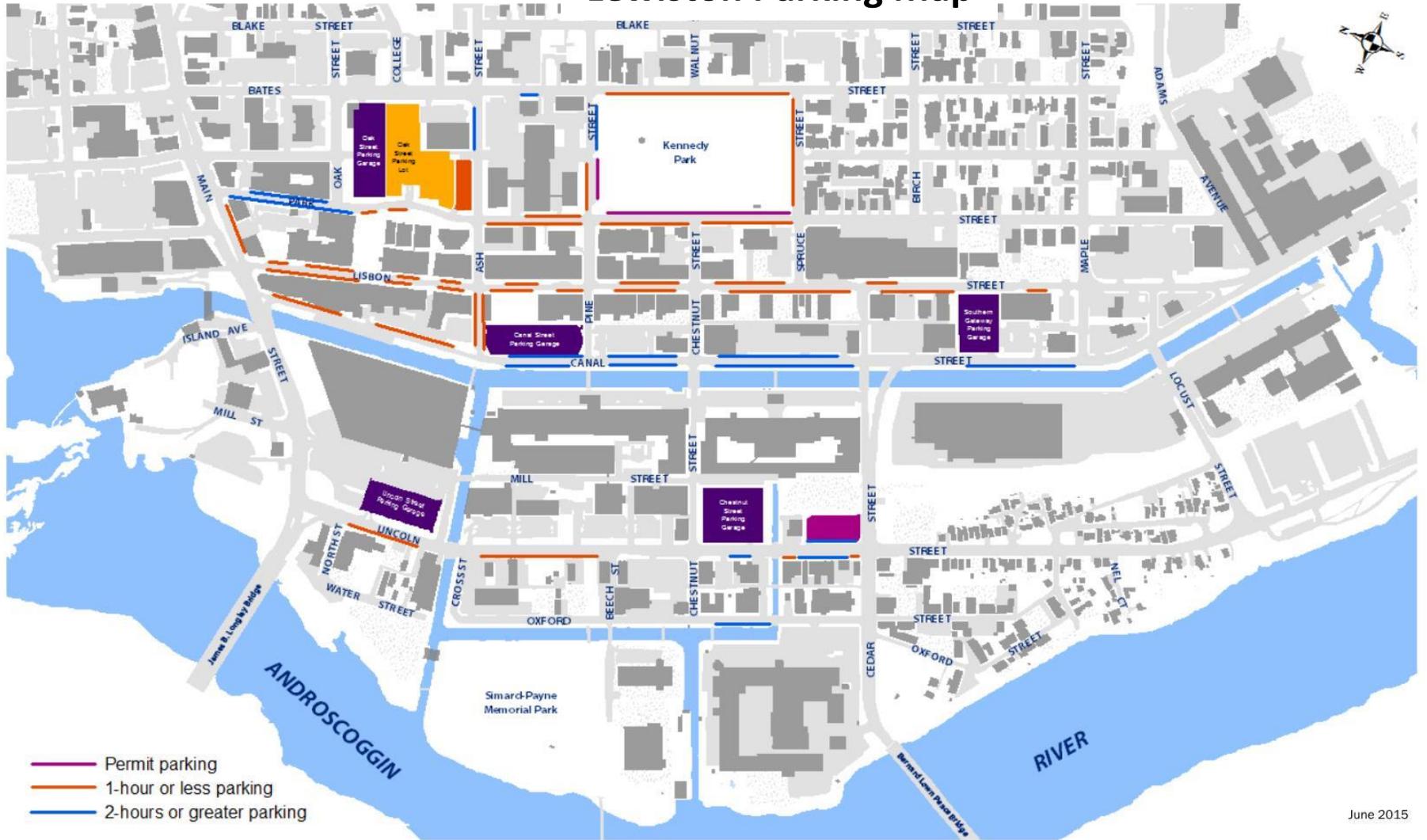
MaineDOT and the Bicycle Coalition of Maine have teamed up to sponsor the Heads Up! program. This program is available to local communities to improve safety and facilities in the area. The group has met with the City of Lewiston twice, once in 2017 and once in 2018, allowing residents and users to identify key areas of concern.

Many of the intersections and improvements identified from the 2017 meeting have been improved. This includes the intersection of Main Street and Frye Street (the site of the pedestrian fatality), the implementation of high visibility crossings, and, although outside the study area, a review of the new crossing at the Basilica, which is detailed further in Appendix E: Additional Pedestrian Crossings Evaluated.

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<sup>4</sup> See <http://www.lewistonmaine.gov/DocumentCenter/View/5709/Parking-Map-2015?bidId=> Accessed 8/28/18

**Figure 4.2  
Lewiston Parking Map**



June 2015

## Section 5. Pedestrian Corridor #1 – Main Street

The west end of the Main Street corridor is situated at the Androscoggin River, where Court Street (on the Auburn side of the Androscoggin River) turns into Main Street in Lewiston. The corridor extends for 2.5 miles to the northeast and includes major intersections at Route 196 (Canal Street / Lisbon Street), Route 126 (Sabattus Street), and Russell Street. According to MaineDOT's Traffic Volume Annual Report,<sup>5</sup> daily traffic volumes in the corridor range from about 12,000 vehicles per day (at the northeast end of the corridor) to about 19,000 vehicles per day (near Russell Street). CMMC is a major employer located just north of the intersection with Sabattus Street.

### 5.1 Main Street Existing Pedestrian Conditions

The following two figures identify existing pedestrian facilities in the corridor. Figure 5.1 shows existing crosswalks and signalized intersections. The second, Figure 5.2 shows pedestrian crossings by type of crossing and location of pedestrian crossings.

#### **Overview of Sidewalks and Pedestrian Crossings**

There are three sidewalk materials in this section of corridor: brick, concrete and asphalt. Pedestrian facilities exist for the entire length of the corridor with two small gaps on the southerly sidewalk side. However, utility poles are located within the sidewalks impeding pedestrian activity. Many sidewalks have reduced widths and there are sections of sidewalk in disrepair. A site walk revealed many sidewalks were completely blocked by trash on pick-up day. These are illustrated by site walk photos, located in Appendix A: Site Photos.

In addition, there are long stretches of sidewalks on outer Main Street without mainline crossings causing noncompliant and unsafe behavior. In terms of existing crossings, many do not meet ADA standards, lacking pedestrian countdown heads, APS push buttons, compliant ramps slopes, visible pavement markings, and are also missing detectable warning surfaces.

It should be noted that the intersections of Main Street and the Russell Street Ramps are currently in the design phase for ADA improvements and signal upgrades.

#### **Transit**

There are two key transit routes that operate near Main Street:

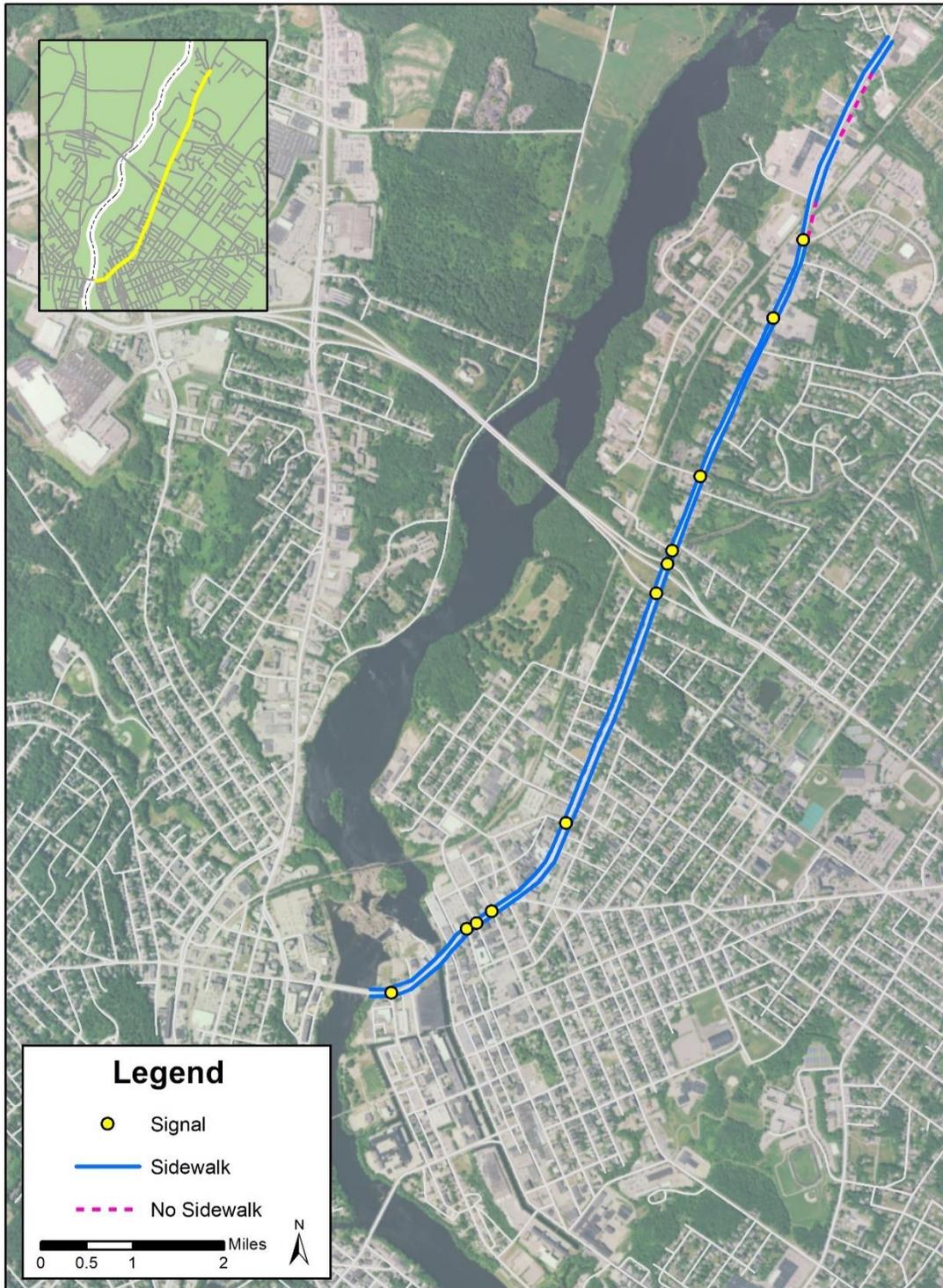
- *The Downtown Shuttle*: This loop continues from Auburn up to the intersection with Holland Street with stops at Great Falls (Auburn), Spring Street, Roak Block (Auburn), Oak Street, and CMMC.
- *Main Street*: This loop generally follows Main Street from Lincoln Street to Deer Road. There are stops at Oak Street, CMMC, Market Place Mall, the Career Center (Mollison Way), Maine Motel, the Geiger School (College Street), Marden's, River Valley Village (Strawberry Avenue), Canal Plaza, and Hampton Inn. Many stops do not have marked crossings, but all have sidewalks.

Route maps and schedules are located in Appendix B: Transit.

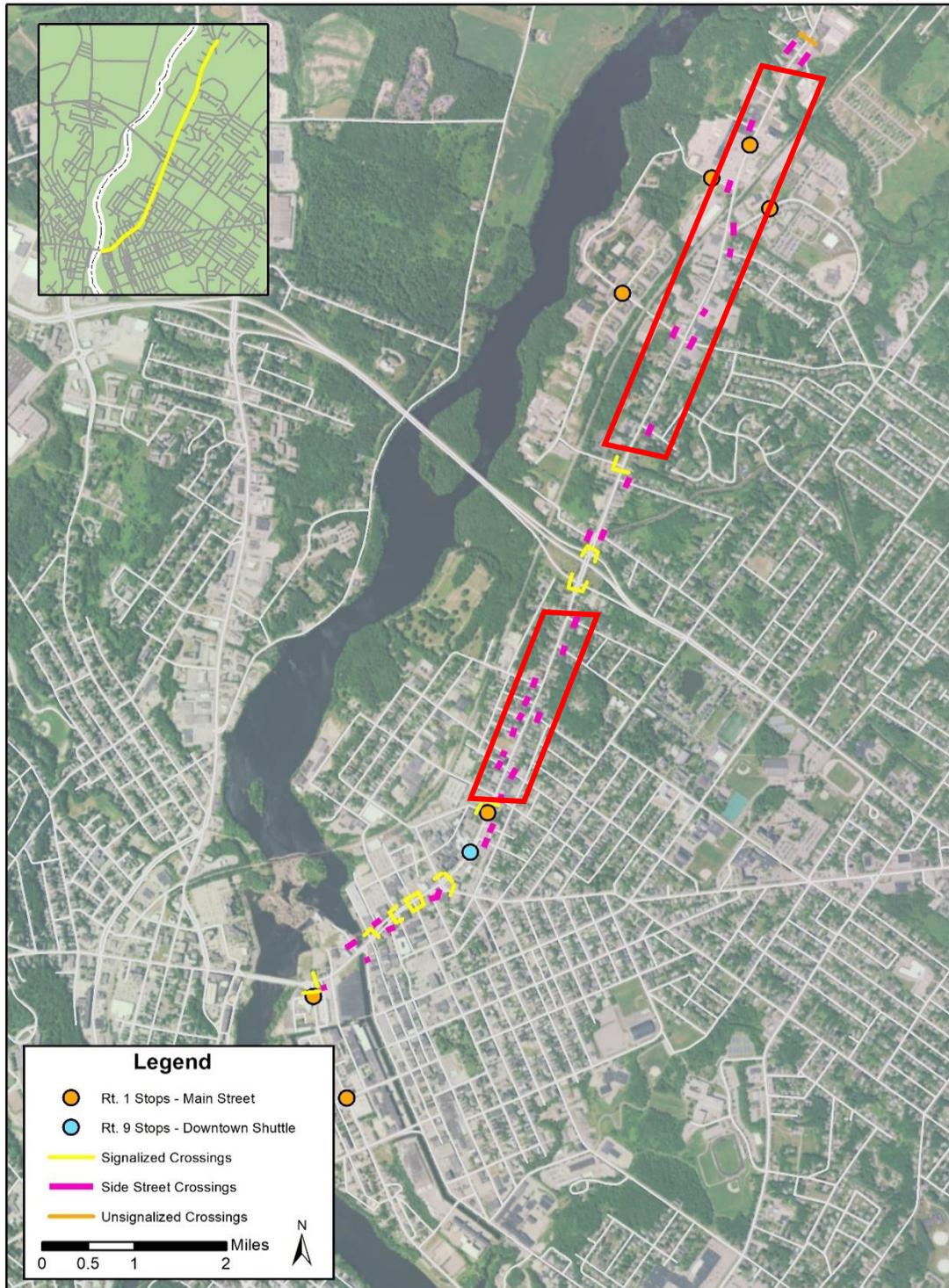
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<sup>5</sup> Available at <https://www1.maine.gov/mdot/traffic/ytcl/>.

**Figure 5.1**  
**Main Street Signals & Sidewalks**  
*City of Lewiston, Maine*



**Figure 5.2**  
**Main Street Pedestrian Crossings**  
*City of Lewiston, Maine*



## 5.2 Main Street Pedestrian Safety

Figure 5.3 depicts key crash information throughout the corridor for pedestrians, bicycles, and vehicles. Overall, the 2.5-mile corridor experienced ten pedestrian collisions and nine bicycle collisions in the past three years.<sup>6</sup> The corridor has six locations currently identified as HCLs.

### Pedestrian Crash Characteristics:

- The corridor had 4 pedestrian crash locations involving 6 pedestrians.
- Most pedestrian crashes occurred between Island Avenue and Sabattus Street within a crosswalk from both left and right turning movements.
- Most pedestrian crashes that occurred outside of the Island Avenue and Sabattus Street corridor were with pedestrians outside of a crosswalk.
- One pedestrian crash involved a skateboard.
- One pedestrian crash was from poor visibility due to rain.
- One pedestrian crash involved a pedestrian in a wheelchair within a crosswalk.
- One pedestrian crash involved a worker picking up cones wearing high visibility clothing.

### Bike Crash Characteristics:

- The corridor had 5 bicycle crash locations involving 6 individuals.
- Most bike crashes occurred between Lincoln Street and Middle, and between Holland Street and Whipple Street.
- Nearly half of bike crashes involved a bicyclist on the sidewalk or in the crosswalk, conflicting with a turning vehicle.
- Several bike crashes were due to poor visibility.
- Several bike crashes involved a bicyclist riding opposite the flow of traffic.
- Nearly all bike crashes were due to illegal operation by the cyclist (e.g. in the crosswalk, on sidewalk, opposite side of the road).

### High Crash Location Characteristics:

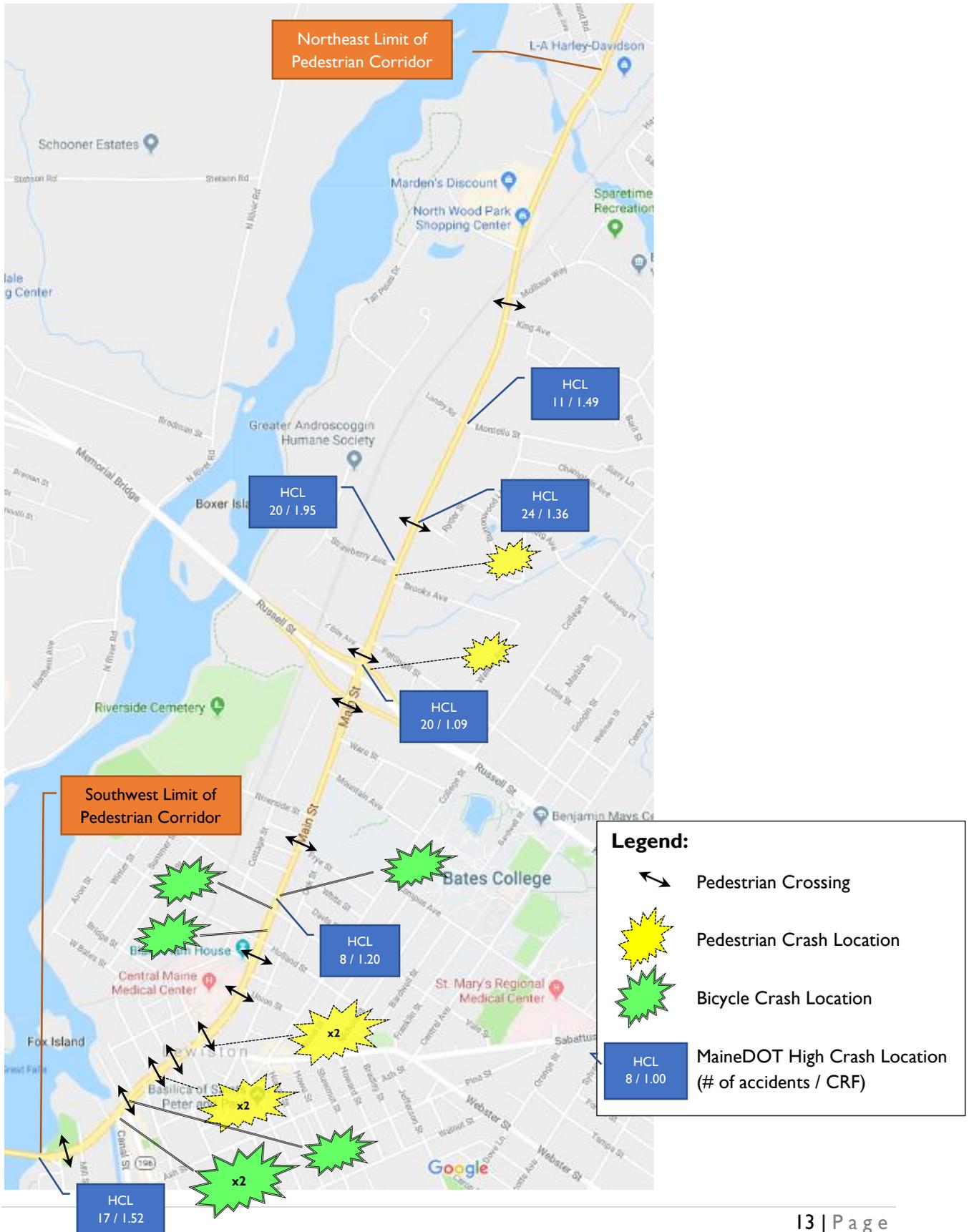
- None of the HCLs occurred within the denser urban center of Lewiston, between Canal Street and Sabattus Street.
- Most of the HCLs occurred north of the Veterans Memorial Bridge intersection with four HCLs, with Critical Rate Factors<sup>7</sup> (CRF) higher than the statewide average:
  - Main at Russel Street EB Ramp..... 20 crashes ..... CRF 1.09
  - Main at Strawberry Avenue..... 20 crashes ..... CRF 1.95
  - Main at Bearce Avenue..... 24 crashes ..... CRF 1.36
  - Main at Montello Street..... 11 crashes ..... CRF 1.49

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<sup>6</sup> Data obtained from MaineDOT Crash Data Request.

<sup>7</sup> The Critical Rate Factor (CRF) is the ratio of the crash rate of a given location to the statewide crash rate for roads of similar classification and urban/rural rating. A highway location with a CRF greater than 1.00 has a frequency of crashes that is greater than the statewide average for similar locations.

# Figure 5.3 Main Street Pedestrian Corridor Safety



### 5.3 Existing Main Street Crossing Evaluations

The following summarizes notable existing crossings along the Main Street Corridor. Note that most side streets do require improvements to meet current ADA standards, but priority in this study is made for crossings that involve Main Street and signalized crossings.

#### ***Intersection of Main Street and Lincoln Street***

The intersection of Main and Lincoln Street has a pedestrian crossing at Lincoln Street and the easterly approach on Main Street. This intersection is shown in Figure 5.4. Recently the crossings at this location were upgraded from standard parallel line crossings to high visibility block crossings.

This was the location of a fatality (victim was a cyclist operating under the influence). The two concerns on this road are visibility and high speeds. Considerations for this intersection:

- It should include a two-stage pedestrian crossing Main Street for this location, as shown in Figure 5.5;<sup>8</sup>
- Consideration should be given to using embedded LEDs for improved visibility;
- Signalized red turn arrows should be added to provide additional protection.

In addition, it is recommended that signage be placed alerting drivers turning right from Lincoln Street that they must yield to pedestrians in the crosswalk. Further pedestrian upgrades at this location should be made including APS push buttons, pedestrian countdown heads, and detectable warning surfaces.



Figure 5.4 Main Street at Lincoln Street Aerial



Figure 5.5 Two-Stage Pedestrian Crossing

<sup>8</sup> Source: FHWA, Las Vegas ([https://safety.fhwa.dot.gov/ped\\_bike/tools\\_solve/ped\\_scdproj/lasvegas/images/image047.jpg](https://safety.fhwa.dot.gov/ped_bike/tools_solve/ped_scdproj/lasvegas/images/image047.jpg))

### **Intersection of Main Street with Canal and Lisbon Streets**

The intersection of Main Street with Canal and Lisbon Streets is a difficult to navigate for both motorists and pedestrians. Contributing factors are the close proximity of the side streets, the geometry of the intersection, and the location of the buildings relative to the intersection as shown in Figure 5.6 and Figure 5.7.



Figure 5.6 Main Street at Canal/Lisbon Street Aerial



Figure 5.7 Main Street at Canal/Lisbon Street View

Site distance for motorists turning left from Main Street onto Canal Street is inherently limited. It is recommended that the Canal Street crossing be upgraded to current ADA standards and that APS push buttons and pedestrian countdown heads be placed in this area to help reduce conflict with left-turning vehicles. In addition, a possible improvement might be reducing the radius and adding passive pedestrian detection that illuminates a signal on the mast arm pole as depicted in Figure 5.8.<sup>9</sup> These improvements will be in addition to the already completed high visibility markings in this intersection. This will improve safety as it currently is the site of multiple bike and pedestrian crashes.



Figure 5.8 Pedestrian Detection Photo-Sensor Bollard

Removal of the existing crossing at Main Street was examined, however, this is a very active crossing from an area of dense parking to areas along Main Street. It is recommended that this crossing be upgraded with APS push buttons, pedestrian countdown heads, detectable warning surfaces and safe landing areas as well as consideration for widening the island to allow for a pedestrian refuge.

<sup>9</sup> Source: <https://binged.it/2GgIKjK>

**Intersection of Main Street and Middle Street (DHHS)**

The crosswalk striping across Main Street at Middle Street was recently replaced with high visibility striping. Updated signage, APS push buttons, a two-stage pedestrian crossing, and detectable warning surfaces are recommended in this location. Figures 5.9 and 5.10 below show this intersection.



Figure 5.9 Main Street at Middle Street Aerial



Figure 5.10 Main Street at Middle Street View

**Intersection of Main Street and Bates Street**

As with the other intersections on Main Street, all legs of this intersection were recently restriped with high visibility striped crossings. Updated signage, APS push buttons and detectable warning surfaces are recommended in this location. Figures 5.11 and 5.12 below show this intersection.

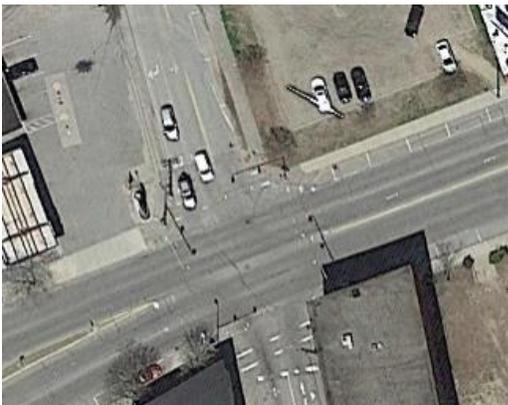


Figure 5.11 Main Street at Bates Street Aerial



Figure 5.12 Main Street at Bates Street View

### **Intersection of Main Street and Sabattus Street**

The intersection of Main Street and Sabattus has recently been restriped with high visibility crosswalk markings. Updated signage, APS push buttons and detectable warning surfaces are recommended in this location. Figures 5.13 and 5.14 below show this intersection.



Figure 5.13 Main Street at Sabattus Street Aerial



Figure 5.14 Main Street at Sabattus Street View

**Midblock Crossing between Dunkin Donuts and Central Maine Medical Center**

This midblock crossing has been the source of previous safety investigations. Figures 5.15 and 5.16 below show this intersection. Currently there are identifying signs and lighted signs and the crosswalk has high visibility pavement markings. Whereas the Dunkin Donuts is moving from this location to another, the crosswalk will remain a large draw due to the CMMC parking lot. Maintaining the current infrastructure and further coordination between CMMC, MaineDOT and the City is recommended to improve safety.



Figure 5.15 – Main Street at Maine Medical Center Aerial



Figure 5.16 – Main Street at Maine Medical Center Street View

**Intersection of Main Street and High Street**

The intersection of Main Street and High Street was recently upgraded from parallel crossing striping to high visibility blocks. Updated signage, APS push buttons and detectable warning surfaces are recommended in this location. Figures 5.17 and 5.18 below show this intersection.



Figure 5.17 Main Street at High Street Aerial



Figure 5.18 Main Street at High Street View

### **Intersection of Main Street and Frye Street**

Since this is the location of a fatal crash, the intersection of Main Street and Frye Street was upgraded to a high visibility crossing, with RRFBs, and ADA upgrades. Figures 5.19 and 5.20 below show this intersection.

No additional improvements are recommended at this time.



Figure 5.19 Main Street at Frye Street Aerial



Figure 5.20 Main Street at Frye Street View

### **Intersection of Main Street and the Russell Street Ramps**

These two intersections will be upgraded to meet current standards with another project.

### **Intersection of Main Street and Strawberry Avenue**

The intersection of Main Street and Strawberry Avenue is an HCL, the area has recently been updated as part of a separate project. Figures 5.21 and 5.22 below show this intersection.



Figure 5.21 Main Street at Strawberry Avenue Aerial



Figure 5.22 Main Street at Strawberry Avenue Street View

### **Intersection of Main Street and Mollison Way**

The intersection of Main Street and Mollison Way has recently been upgraded to enhanced block striping along with ADA upgrades, APS push buttons and detectible warning tiles. Figures 5.23 and 5.24 below show this intersection.

Updated signage is recommended for this location.



Figure 5.23 Main Street at Mollison Way Aerial



Figure 5.24 Main Street at Mollison Way Street View

### **Midblock Crossing**

The final existing marked crossing is located near Switzerland Road, which is shown in Figures 5.25 and 5.26 below. The crossing has detectable warning surfaces, RRFBs and high visibility blocked pavement markings. No additional improvements are recommended at this time.



Figure 5.25 Main Street Near Switzerland Road Aerial



Figure 5.26 Main Street Near Switzerland Road Street View

## 5.4 Potential New Main Street Crossings

There are two sections of outer Main Street where there are large spans between Main Street pedestrian crossings where potential new crossings could be located.

### **Intersection of Main Street and Mountain Avenue**

A midblock crossing at the intersection of Main Street and Mountain Avenue, shown in Figure 5.27, would be a logical consideration for a crossing since it is the midpoint between two existing pedestrian crossings, although there are not many draws in this area for pedestrian activity.



Figure 5.27 Main Street at Mountain Avenue Aerial

### **Intersection of Main Street, Montello Street, and Landry Road**

A crossing at the intersection of Main Street, Montello Street and Landry Road, shown in Figure 5.28, would help provide a connection for bus users as there are numerous bus stops in this stretch of the corridor. This is an HCL, so if a crossing is placed at this intersection every effort must be made to improve vehicular safety.



Figure 5.28 Main Street at Montello/Landry Street Aerial

**Across Main Street to the Marden's Shopping Center**

A new pedestrian crossing is recommended across Main Street across from the Marden's Shopping Center (Figure 5.29) to address the long distance between crossings and would be collocated at a bus stop. If property across from the Marden's Shopping Center is redeveloped, the City should consider requiring cross connections between properties and combining entrances due to the high number of driveways/entrances in this section of roadway.



Figure 5.29 Main Street at Marden's Aerial

## Section 6. Pedestrian Corridor #2 – Sabattus Street

The western boundary of this corridor lies in the heart of downtown Lewiston, at the intersection of Sabattus Street and Main Street. From there, the corridor stretches eastward for 2.75 miles, passing by St. Mary's Regional Medical Center, Bates College, and numerous commercial establishments such as Hannaford and Dunkin' Donuts. The corridor's eastern terminus lies at Grove Street. Traffic volumes on the west side of the corridor, between Main Street and Russell Street, range from about 10,000 to 12,000 vehicles per day, while traffic volumes on the eastern end, between Russell Street and Grove Street, range from 15,000 to 20,000 vehicles per day.

### 6.1 Sabattus Street Existing Pedestrian Conditions

The following two figures identify existing pedestrian facilities in the corridor. The first, Figure 6.1 shows existing crosswalks and signalized locations. The second, Figure 6.2 shows pedestrian crossings by type and location.

#### **Overview of Sidewalks and Pedestrian Crossings**

There are three sidewalk materials in this section of corridor: brick, concrete, and asphalt (the majority being concrete and asphalt) with pedestrian facilities for the entire length of the corridor on both sides. In sections without esplanades, utility poles are located within the sidewalks, impeding pedestrian activity. Sidewalks are generally in good condition.

There are nine signalized crossings along this 2.75-mile stretch along with a number of unsignalized crossing locations. Many of these existing crossings do not meet ADA standards with regards to pedestrian countdown heads, APS Push buttons, ramp slopes, and pavement markings and are also missing detectable warning surfaces,

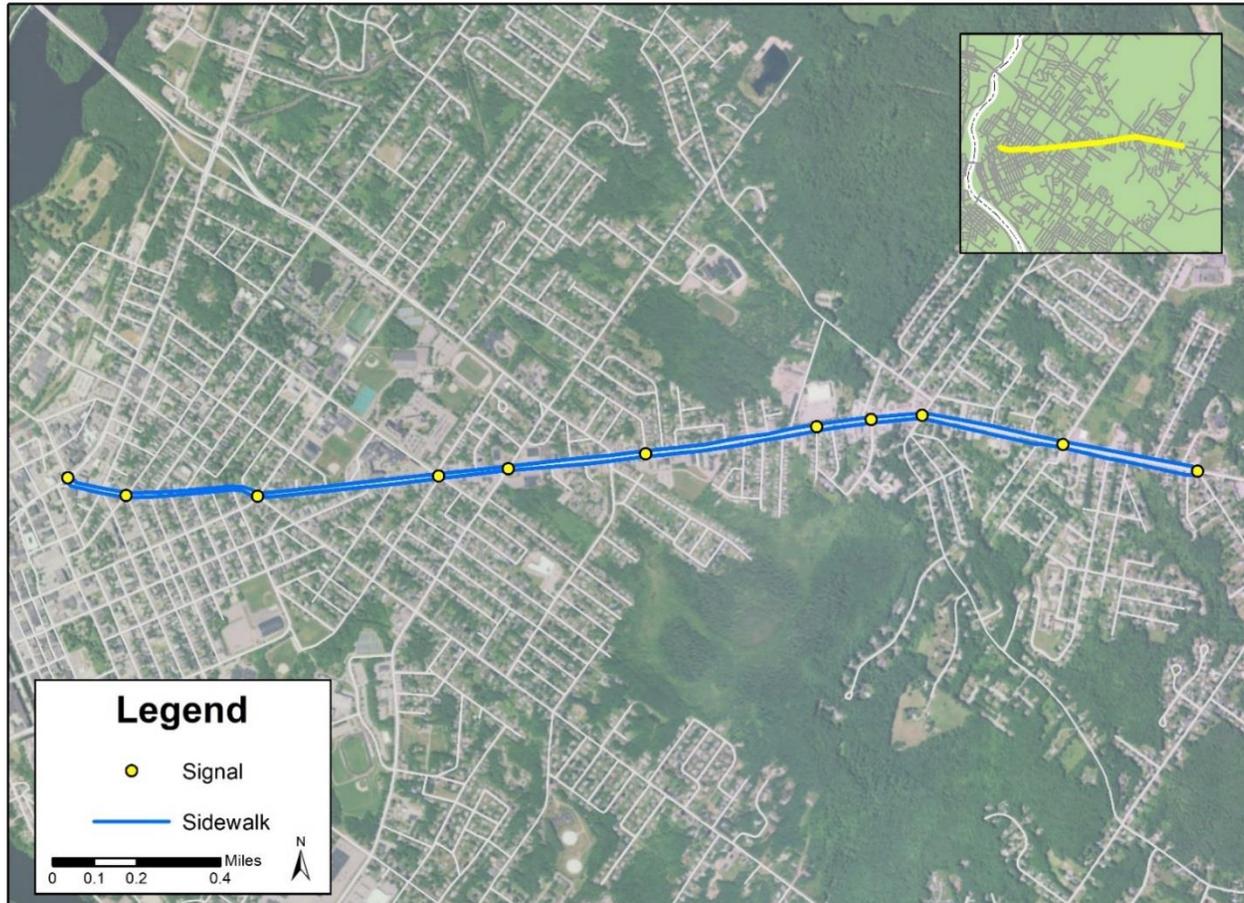
#### **Transit**

The Sabattus Street loop is the primary pedestrian driver in this corridor:

- *Sabattus Street*: As previously mentioned, this loop begins on Bates Street and follows Sabattus Street east to the intersection with Sabattus and Pond Road. Stops are located at Oak Street, St. Mary's Hospital, Hannaford, Hill View, Grove and Pond, and Montello School.

Route maps and schedules are located in Appendix B: Transit.

**Figure 6.1**  
**Sabattus Street Signals & Sidewalks**  
*City of Lewiston, Maine*



**Figure 6.2**  
**Sabattus Street Crossings**  
*City of Lewiston, Maine*



## 6.2 Sabattus Street Pedestrian Safety

The 2.75-mile corridor experienced nine pedestrian collisions and four bicycle collisions in the past three years. Figure 6.3 provides an overview of the key characteristics of the Sabattus Street corridor. The corridor has five locations currently identified as HCLs.

### Pedestrian Crash Characteristics:

- The corridor had 6 pedestrian crash locations with 6 pedestrians, one at each location.
- Most of the pedestrian crashes occurred within a crosswalk.
- Some of the pedestrian crashes involved a pedestrian crossing against the signal and being struck by a turning vehicle.
- One pedestrian crash involved a skateboard.
- Some pedestrian crashes involved pedestrians running into the roadway.
- One pedestrian crash occurred at a midblock crossing.

### Bike Crash Characteristics:

- The corridor had 3 bicycle crash locations involving 3 individuals.
- Most bike crashes occurred from the bicyclist hitting a vehicle and not a vehicle hitting a bicyclist.
- One bike crash occurred from a bicyclist traveling in the wrong direction.
- Bike crashes were spread out from one end of the corridor to the other.

### High Crash Location Characteristics:

- One HCL occurred within the denser part of Lewiston:
  - Sabattus at Bartlett and Oak Street..... 13 crashes.....CRF 2.72
- Most of the HCLs occurred outside of the denser part of Lewiston:
  - Sabattus at Perley Street ..... 12 crashes.....CRF 1.62
  - Sabattus near Laurier Street..... 14 crashes.....CRF 1.30
  - Sabattus at Temple Street..... 10 crashes.....CRF 1.07
  - Sabattus at Rideout Avenue..... 12 crashes.....CRF 1.89
- The 2.75-mile corridor had a total of 130 crashes with a CRF 1.11.

### Figure 6.3 Sabattus Street Pedestrian Corridor Safety



### 6.3 Existing Sabattus Street Crossing Evaluations

The following discussion details existing crossings along the Sabattus Street Corridor. It should be noted that most side streets require improvements to meet current ADA standards, but priority is made for crossings that involve Sabattus Street and signalized crossings.

#### **Intersection of Sabattus Street and Main Street**

The Sabattus Street and Main Street intersection has recently been restriped to include high visibility block striping. It is recommended that crosswalk signage be placed to increase the visibility of this crossing. ADA improvements are also necessary at this crossing such as the addition of detectable warning surfaces. Figures 6.4 and 6.5 below show this intersection.



Figure 6.4 Sabattus Street at Main Street Aerial



Figure 6.5 Sabattus Street at Main Street View

#### **Intersections of Sabattus Street with Oak Street and College Street/Horton Street**

The intersection of Sabattus Street with Oak Street is a complex five-leg intersection with both bicycle and pedestrian crashes as well as a vehicular HCL. These intersection is shown in Figures 6.6, 6.7 and 6.8. We recommend adding signage where needed to enhance visibility of existing pedestrian crossings. Adding RRFBs should be considered as well as ADA improvements.



Figure 6.6 Sabattus Street at Oak Street Aerial



Figure 6.7 Sabattus Street at Oak Street View

The intersection of Sabattus Street at College Street and Horton Street is similarly complex. The intersection has recently been restriped with high visibility block striping across Sabattus Street and ADA improvements and right turn signage to meet current standards. No changes are proposed for this location.



Figure 6.8 Sabattus Street at College/Horton Street View

**Intersection of Sabattus Street with Howe Street and Wood Street**

The intersection of Sabattus Street at Howe Street and Wood Street was recently restriped with the high visibility block striping. These are shown in Figures 6.9 and 6.10. We suggest that RRFBs and new signage be added to draw attention to the crossing as well as ADA improvements at this intersection.



Figure 6.9 Sabattus Street at Howe Street Aerial



Figure 6.10 Sabattus Street at Howe Street View

**Intersection of Sabattus Street with Central Avenue, Webster Street and Ash Street**

This is another five-leg intersection and also the location of a pedestrian crash. Figures 6.11 and 6.12 show this intersection. Crosswalk striping has recently been upgraded from two solid parallel lines to enhanced block striping. Because of this and recent intersection upgrades, no additional improvements are recommended at this time.



Figure 6.11 Sabattus Street at Central, Webster and Ash Streets Aerial



Figure 6.12 Sabattus Street at Central, Webster and Ash Streets View

**Intersection of Sabattus Street with Lafayette Street, Sylvan Avenue, and Campus Avenue**

The intersection of Sabattus Street with Lafayette Street, Sylvan Avenue, and Campus Avenue is shown in Figures 6.13 and 6.14. Crosswalk striping was recently upgraded in this intersection from two solid parallel lines to enhanced block striping. Because of this and recent intersection upgrades, no additional improvements are recommended at this time.



Figure 6.13 Sabattus Street at Lafayette, Sylvan, and Campus Avenues Aerial



Figure 6.14 Sabattus Street at Lafayette, Sylvan, and Campus Avenues View

**Intersection of Sabattus Street with East Avenue**

As with other intersections in the corridor, the intersection of Sabattus Street and East Avenue was recently upgraded to enhanced block striping, signage and ADA improvements. This intersection is shown in Figures 6.15 and 6.16. No additional improvements are recommended at this time.



Figure 6.15 Sabattus Street at East Avenue Aerial



Figure 6.16 Sabattus Street at East Avenue Street View

**Intersection of Sabattus Street and Russell Street**

As with other intersections in the corridor, the intersection of Sabattus and Russell Streets was recently upgraded to enhanced block striping, signage and ADA improvements. This intersection is shown in Figures 6.17 and 6.18. No additional improvements are recommended at this time.



Figure 6.17 Sabattus Street at Russell Street Aerial



Figure 6.18 Sabattus Street at Russell Street View

### **Midblock Crossing East of Laurier Street**

The midblock crossing east of Laurier Street was recently upgraded, as shown in Figures 6.19 and 6.20, to include pedestrian signage, pedestrian-activated overhead flashing beacons and detectable warning surfaces. No additional improvements are recommended at this time.



Figure 6.19 Sabattus Street East of Laurier Street Aerial



Figure 6.20 Sabattus Street East of Laurier Street View

### **Intersection of Sabattus Street and Bradford Street**

As with other intersections in the corridor, the intersection of Sabattus and Bradford Streets was recently upgraded to enhanced block striping, signage and ADA improvements. This intersection is shown in Figures 6.21 and 6.22. No additional improvements are recommended at this time.



Figure 6.21 Sabattus Street at Bradford Street Aerial



Figure 6.22 Sabattus Street at Bradford Street View

### **Intersection of Sabattus Street and Wildwood Drive**

As with other intersections in the corridor, the intersection of Sabattus Street and Wildwood Drive was recently upgraded to enhanced block striping, signage and ADA improvements. This intersection is shown in Figures 6.23 and 6.24. No additional improvements are recommended at this time.



Figure 6.23 Sabattus Street at Wildwood Drive



Figure 6.24 Sabattus Street at Wildwood Drive Street View

### **Intersection of Sabattus Street and Randall Road**

As with other intersections in the corridor, the Sabattus Street and Randall Road intersection was recently upgraded to enhanced block striping, signage and ADA improvements. This intersection is shown in Figures 6.25 and 6.26. No additional improvements are recommended at this time.



Figure 6.25 Sabattus Street at Randall Road Aerial



Figure 6.26 Sabattus Street at Randall Road Street View

### **Intersection of Sabattus Street and Temple Street**

This intersection of Sabattus and Temple Street is currently identified as an HCL, and is shown in Figures 6.27 and 6.28. As with other intersections in the corridor, this intersection was recently upgraded to enhanced block striping, signage and ADA improvements. No additional improvements are recommended at this time.



Figure 6.27 Sabattus Street at Temple Street Aerial



Figure 6.28 Sabattus Street at Temple Street View

## 6.4 Potential New Sabattus Street Crossings

In general, crossings are reasonably spaced in this corridor, although one potential crossing location is suggested for further study.

### **Intersection of Sabattus Street, Fairlawn, and Farwell Streets**

With two recent pedestrian crashes in the vicinity of Sabattus Street and Fairlawn/Farwell Streets and its being on a school bus route, a crossing at this signalized intersection should be considered. This intersection is shown in Figure 6.29. Installing a new pedestrian crossing, will encourage the use of the facility and lessen the occurrence of jaywalking.

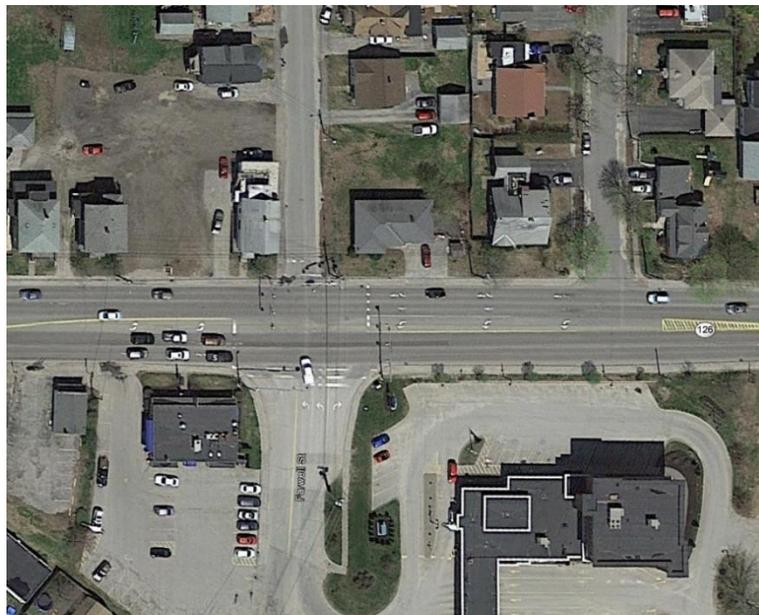


Figure 6.29 Sabattus Street at Fairlawn and Farwell Streets Aerial

## Section 7. Pedestrian Corridor #3 – Russell Street

The Russell Street corridor begins at Main Street and runs in a southeasterly direction for 1.25 miles, ending at the intersection with Sabattus Street. Numerous residential neighborhoods are located on the northeast side of the road, and Bates College is on its southwest side. Russell Street is perhaps the busiest corridor from the perspective of vehicular traffic, serving over 20,000 vehicles per day for its entire length.

### 7.1 Russell Street Existing Pedestrian Conditions

The following two figures identify existing pedestrian facilities in the corridor. The first, Figure 7.1 shows existing crosswalks and signalized locations. The second, Figure 7.2 shows pedestrian crossings by type of crossing and locations of pedestrian crossings.

#### **Overview of Sidewalks and Pedestrian Crossings**

There are two sidewalk materials in this section of corridor: concrete and asphalt. While there are pedestrian facilities for the entire length of the corridor, there are significant breaks in the continuity of the sidewalk on the westerly side of Russell Street, and a foot path has been worn in this area. In sections without esplanades, utility poles are located within the bounds of the sidewalks, impeding pedestrian activity. Sidewalks are generally in good condition.

In areas of esplanade, signs and utility poles are placed accordingly, however, in some areas utility poles line the sidewalks impeding pedestrian activity. Sidewalks are generally in good condition.

There are five signalized crossings along this 1.25-mile stretch and one unsignalized marked crossing location. Several do not meet ADA standards, lacking pedestrian countdown heads, APS Push buttons, ramp slopes, and pavement markings and are also missing detectable warning surfaces.

As previously mentioned, ADA and signal improvements at the intersections of Main Street and the Russell Street Ramps are currently in the design phase.

#### **Transit**

The College Street loop is the main pedestrian funnel in this corridor:

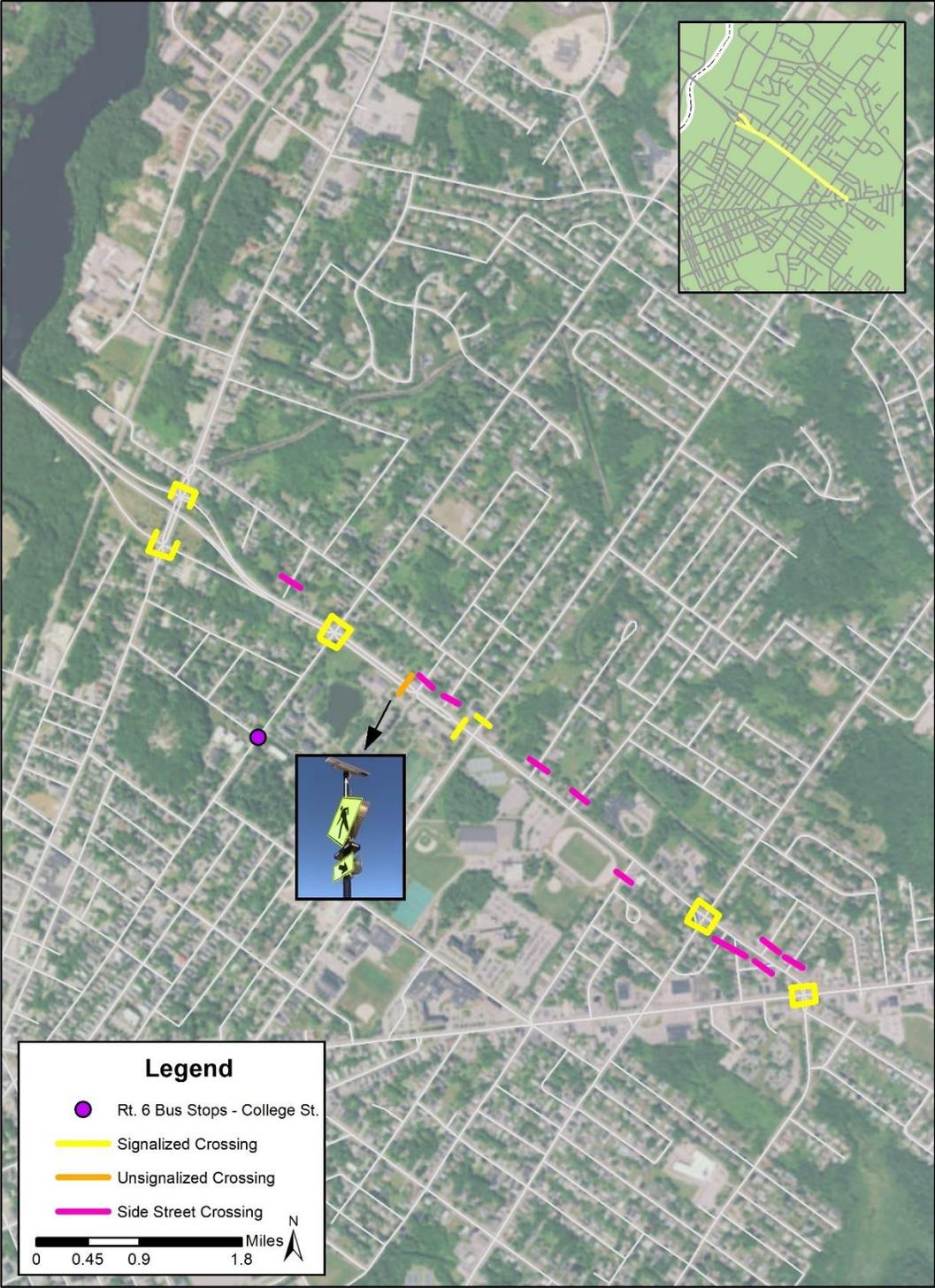
- *College Street:* This loop follows College Street up to Russell Street and continues across the river to Auburn. There are only two stops on this route in Lewiston – at Bates College and the Oak Street Bus Station.

Route maps and schedules are located in Appendix B: Transit.

**Figure 7.1**  
**Russell Street Signals and Sidewalks**  
*City of Lewiston, Maine*



**Figure 7.2**  
**Russell Street Pedestrian Crossings**  
*City of Lewiston, Maine*



## 7.2 Russell Street Pedestrian Safety

Figure 7.3 provides an overview of the key characteristics of the Russell Street corridor. The 1.25-mile corridor experienced four pedestrian collisions in the past three years, one of which involved personal injury, although no bicycle collisions were reported. Three of the corridor's intersections are currently classified as HCLs.

### Pedestrian Crash Characteristics:

- The corridor had 3 pedestrian crash locations involving 4 pedestrians.
- Most pedestrian crashes occurred close to Bates College in close proximity to crosswalks.
- Two pedestrian crashes involved skateboards.
- One pedestrian crash resulted in an injury.

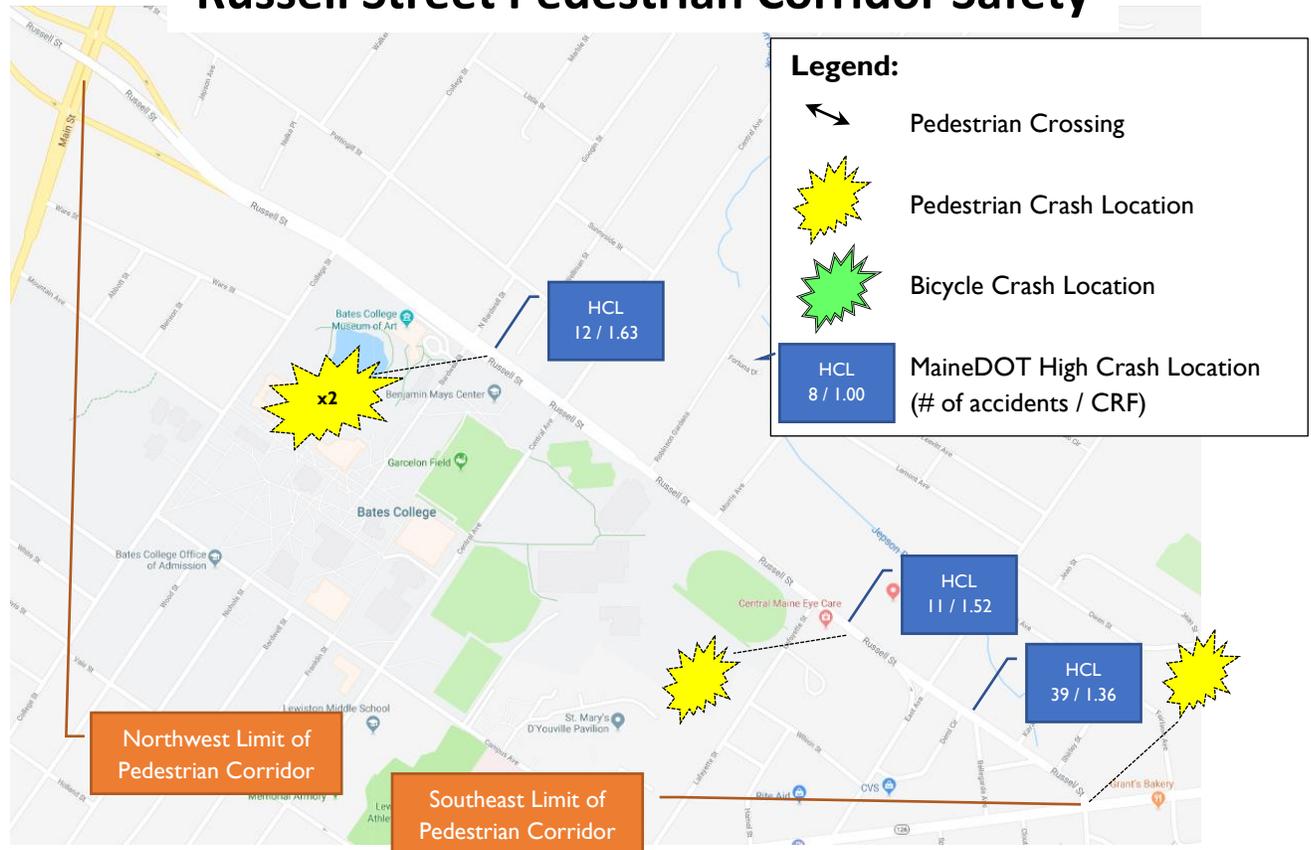
### Bike Crash Characteristics:

- There were no bike crashes reported.

### High Crash Location Characteristics:

- Most of the HCLs occurred close to Bates College:
  - Russell between Wellman and Bardwell..... 12 crashes ..... CRF 1.63
  - Russell between East Ave and Lafayette..... 11 crashes ..... CRF 1.52
  - Russell at Demi Circle ..... 39 crashes ..... CRF 1.36

# Figure 7.3 Russell Street Pedestrian Corridor Safety



### 7.3 Existing Russell Street Crossing Evaluations

The following identifies notable existing crossings along the Russell Street Corridor. Note that most side streets do require improvements to meet current ADA standards, but priority is given to crossings that occur at signalized crossings on Russell Street.

#### **Intersection of Russell Street and East Avenue**

The intersection of Russell Street and East Avenue has been classified as an HCL and is shown in Figures 7.4 and 7.5. It has been recently enhanced with new high visibility block crossing striping. We recommend that a right turn arrow be added for pedestrians crossing the slip lane.



Figure 7.4 Russell Street at East Avenue Aerial



Figure 7.5 Russell Street at East Avenue Street View

#### **Intersection of Russell Street and Central Avenue**

The intersection of Russell Street and Central Avenue has recently been restriped with high visibility block crossing striping. The intersection is shown in Figures 7.6 and 7.7. Yield to pedestrians in crosswalk signing should be placed on the mast arms where applicable.



Figure 7.6 Russell Street at Central Avenue Aerial



Figure 7.7 Russell Street at Central Avenue Street View

### **Midblock Crossing at Lewiston Variety II**

The midblock crossing at Lewiston Variety on Russell Street was recent upgraded to include high visibility block crossing striping and LED crosswalk indications as shown below. The intersection is shown in Figures 7.8 and 7.9. No recommendations for improvements are made at this time.



Figure 7.8 Russell Street at Lewiston Variety Aerial



Figure 7.9 Russell Street at Lewiston Variety Street View

### **Intersection of Russell Street and College Street**

The intersection Russell Street and College Street has recently been restriped to include a high visibility crosswalk block crossing. This intersection is shown in Figures 7.10 and 7.11. Signage enhancements at this intersection are recommended to improve driver awareness of the crossing.



Figure 7.10 Russell Street at College Street Aerial



Figure 7.11 Russell Street at College Street View

## 7.4 Potential New Russell Street Crossings

In general, crossings are reasonably spaced in this corridor. There is one potential crossing location suggested for further study:

### **Intersection of Russell Street and Lafayette Street**

A crosswalk was considered at the intersection of Russell and Lafayette Streets, but due to its history as an HCL, high vehicular speeds, and need for pedestrians to cross four lanes of traffic, it is not recommended to add a crosswalk at this location at this time. This intersection is shown in Figure 7.12. If a new sidewalk is added in this area, a crossing should be reconsidered.



Figure 7.12 Russell Street at Lafayette Street Aerial

## Section 8. Pedestrian Corridor #4 – Lisbon Street

This corridor represents the longest of the five pedestrian corridors examined as part of this study. Similar to the Russell Street corridor, the Lisbon Street corridor generally runs from northwest to southeast. It begins at Main Street and extends 3 miles in a southeasterly direction to Drew Street. The corridor is highly developed, serving numerous grocery stores, two malls (the Lewiston Mall and the Promenade Mall), and a variety of fast food venues. East Avenue, located near the corridor's mid-point, is also the entrance to Lewiston High School.

Traffic volumes through the corridor exhibit considerable variation. At the northwest extreme (where Lisbon Street is a one-way street heading northwest), the volume is just over 4,000 vehicles per day. The volumes peak near East Avenue, at which two-way volumes average over 20,000 vehicles per day. Traffic at the southeast end of the corridor tapers down to about 16,000 vehicles per day.

### 8.1 Lisbon Street Existing Pedestrian Conditions

The following two figures identify existing pedestrian facilities in the corridor. The first, Figure 8.1 shows existing crosswalks and signalized locations. The second, Figure 8.2 shows pedestrian crossings by type of crossing and location of pedestrian crossings.

#### **Overview of Sidewalks and Pedestrian Crossings**

There are three sidewalk materials in this section of corridor: brick near the urban core, concrete and asphalt towards Drew Street. Whereas pedestrian facilities are located throughout the entire length of the corridor, there are sidewalk gaps on the westerly side of Lisbon Street near the ramps on the southerly end. In many sections, utility poles and other obstructions are offset from the sidewalk, however, there are other sections where utility poles impede pedestrian activity. Sidewalks are generally in good condition with some cracking on the southerly asphalt sidewalk.

Near the urban core there is a mix of signalized and unsignalized crossing locations, although the number of crossings declines at the termination of Canal Street. Many crossings near the urban core were recently upgraded to meet all ADA standards. Several crossings further out do not meet ADA standards, lacking pedestrian countdown heads, APS Push buttons, ramp slopes, and pavement markings and are also missing detectable warning surfaces.

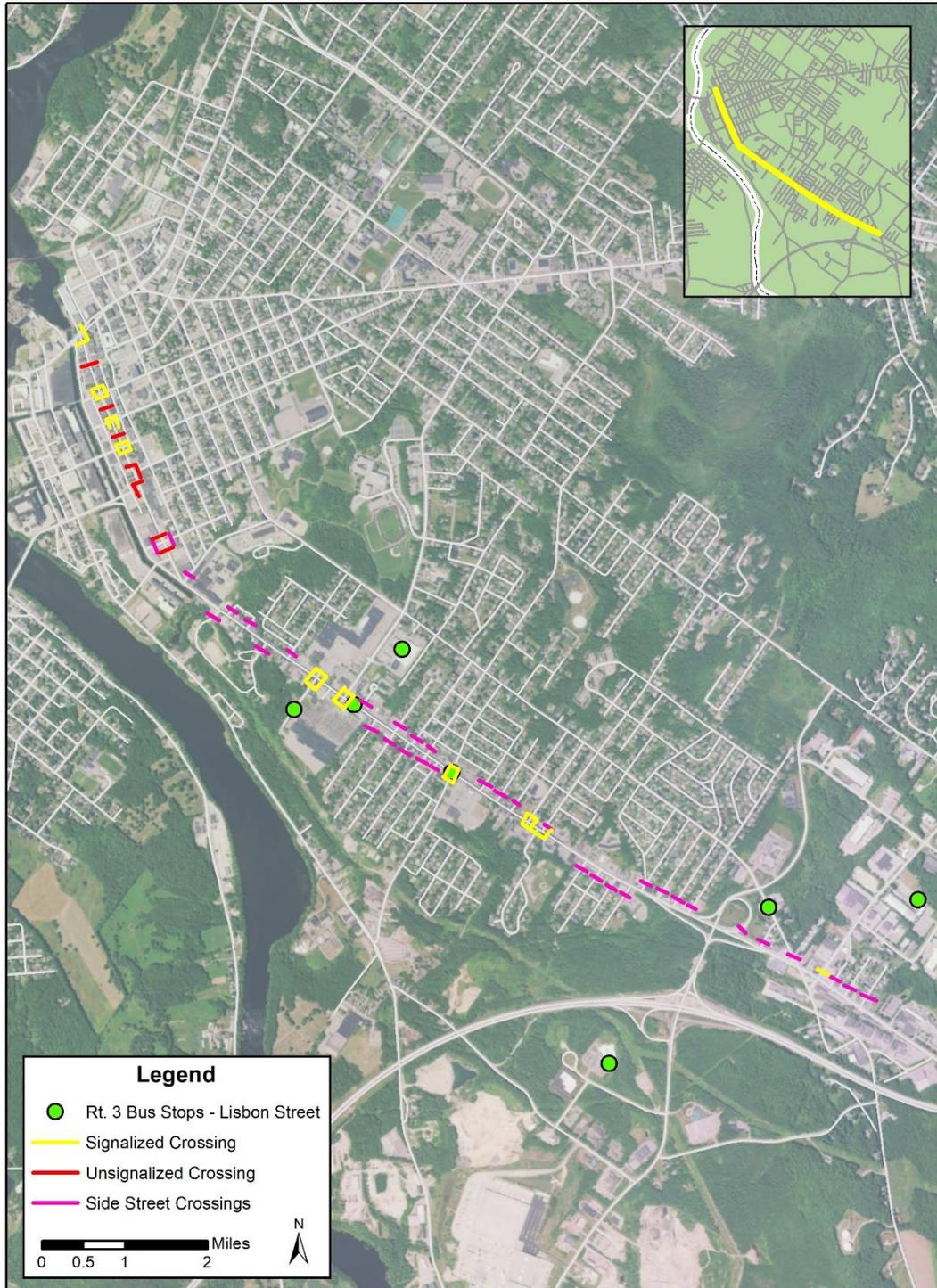
Note that ADA and signal improvements at the intersections of Lisbon and Essex Street and Lisbon and East Avenue are currently in the design phase.

# Figure 8.1 Lisbon Street Signals & Sidewalks

City of Lewiston, Maine



**Figure 8.2**  
**Lisbon Street Pedestrian Crossings**  
*City of Lewiston, Maine*



## Transit

The Lisbon Street loop is the main pedestrian funnel in this corridor:

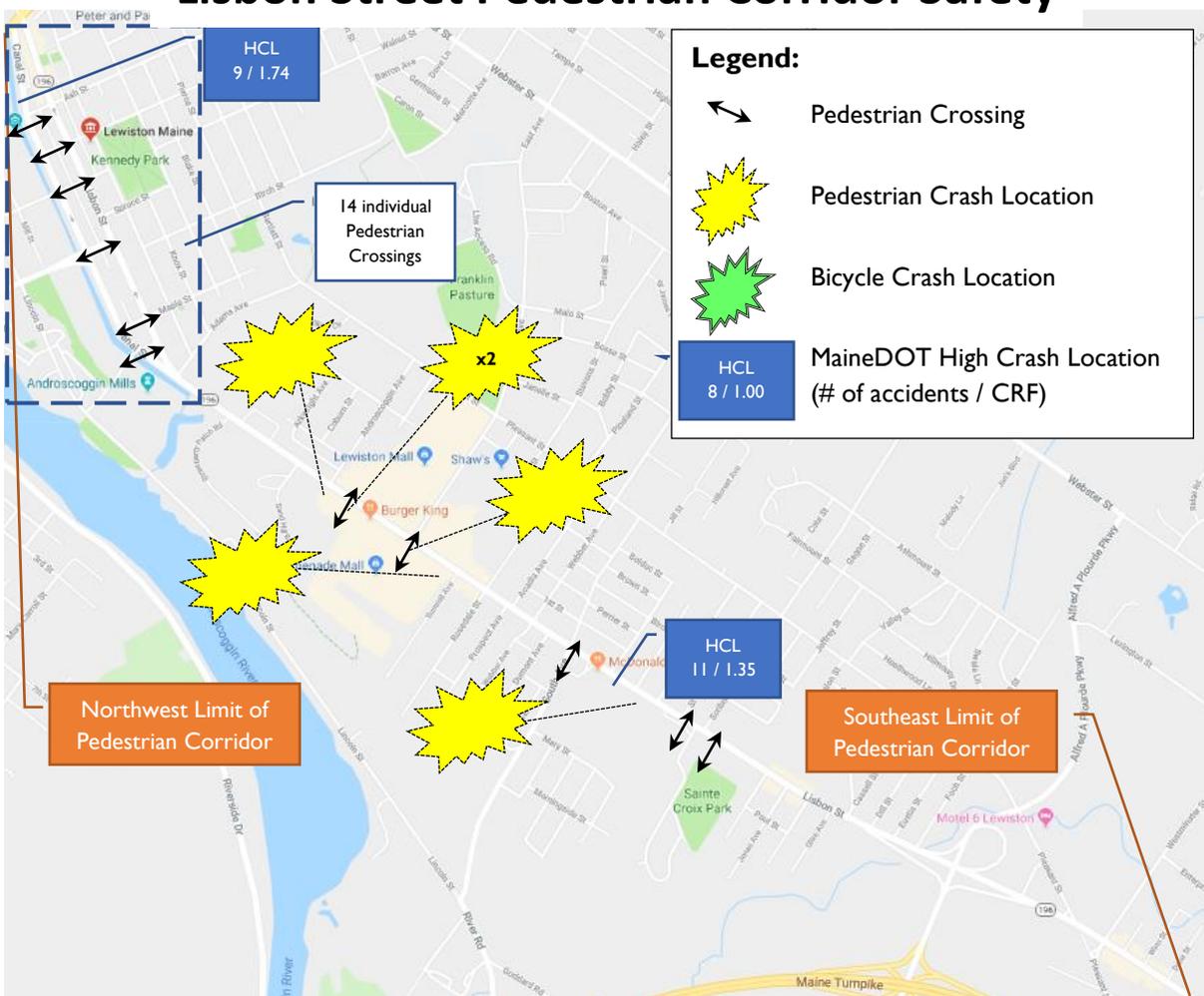
- *Lisbon Street*: This loop continues from Oak Street to the intersection of Lisbon and Westminster Street following a loop on Webster Street. Stops for this route include Oak Street, Save-a-Lot, Shaw's, Staples, South Avenue, the VA Clinic, Motel 6, and University of Southern Maine Lewiston - Auburn College.

Route maps and schedules are located in Appendix B: Transit.

## 8.2 Lisbon Street Pedestrian Safety

Figure 8.3 provides an overview of the key characteristics of the Lisbon Street corridor. The 3-mile corridor experienced six pedestrian collisions in the past three years, one of which involved a fatality. No bicycle collisions were reported. Overall, this corridor experienced 122 vehicular crashes. Three of the corridor's intersections are currently classified as HCLs.

**Figure 8.3**  
**Lisbon Street Pedestrian Corridor Safety**



#### Pedestrian Crash Characteristics:

- The corridor had 5 pedestrian crash locations involving 6 pedestrians.
- Most pedestrian crashes occurred between Summit Avenue and Androscoggin Avenue within the Mall area.
- Two pedestrian crashes resulted in fatalities.
- One pedestrian crash resulted in an injury.
- Most pedestrian crashes occurred within a crosswalk.
- Some pedestrian crashes occurred due to lack of driver awareness.
- One pedestrian crash involved a wheelchair crossing illegally.

#### Bike Crash Characteristics:

- No bike crashes were reported.

#### High Crash Location Characteristics:

- One HCL exists within the denser part of Lewiston:
  - Lisbon at Ash Street..... 9 crashes..... CRF 1.74
- The other HCL exists southeast of the Mall area:
  - Lisbon at Simard Avenue..... 11 crashes ..... CRF 1.35
- No HCLs exist within the Mall area where the two fatalities and injuries occurred.
- The 3-mile corridor had a total of 122 crashes with a CRF of 0.99.

### 8.3 Existing Lisbon Street Crossing Evaluations

The following addresses notable existing crossings along the Lisbon Street Corridor. Note that most side streets do require improvements to meet current ADA standards, but priority is made for crossings that involve Lisbon Street and signalized crossings.

#### ***Intersection of Lisbon Street and Ash Street***

The intersection of Lisbon Street and Ash Street has been recently restriped and upgraded to meet all ADA standards. Figures 8.4 and 8.5 show this intersection. The only improvement that is suggested is improving pedestrian signage.



Figure 8.4 Lisbon Street at Ash Street Aerial



Figure 8.5 Lisbon Street at Ash Street View

**Midblock Crossing between Ash Street and Pine Street**

The midblock crossing between Ash Street and Pine Street has been recently restriped and upgraded to meet all ADA standards. This intersection is shown in Figures 8.6 and 8.7. No additional improvements are recommended at this time.



Figure 8.6 Lisbon Street between Ash and Pine Street Aerial



Figure 8.7 Lisbon Street between Ash and Pine Street View

**Intersection of Lisbon Street and Pine Street**

The intersection of Lisbon Street and Pine Street has been recently restriped and upgraded to meet all ADA standards. Figures 8.8 and 8.9 show this intersection. No additional improvements are recommended at this time.



Figure 8.8 Lisbon Street at Pine Street Aerial



Figure 8.9 Lisbon Street at Pine Street View

**Midblock Crossing between Pine Street and Chestnut Street**

The midblock crossing between Pine Street and Chestnut Street has been recently restriped and meets all ADA standards. It is shown in Figures 8.10 and 8.11. No additional improvements are recommended at this time.



Figure 8.10 Lisbon Street between Pine and Chestnut Street Aerial



Figure 8.11 Lisbon Street between Pine and Chestnut Street View

**Intersection of Lisbon Street and Chestnut Street**

The intersection of Lisbon Street and Chestnut Street has recently been upgraded with high visibility crosswalk striping and ADA improvements. This intersection is shown in Figures 8.12 and 8.13. No additional improvements are recommended at this time.



Figure 8.12 Lisbon Street at Chestnut Street Aerial



Figure 8.13 Lisbon Street at Chestnut Street View

**Intersection of Lisbon Street and Spruce Street**

The intersection of Lisbon Street and Spruce Street has recently been upgraded with high visibility block crosswalk striping and ADA improvements. This intersection is shown in Figures 8.14 and 8.15. No additional improvements are recommended at this time.



Figure 8.14 Lisbon Street at Spruce Street Aerial



Figure 8.15 Lisbon Street at Spruce Street View

**Intersection of Lisbon Street and Cedar Street**

The intersection of Lisbon Street and Cedar Street has recently been upgraded with high visibility block crosswalk striping and ADA improvements, including signage.



Figure 8.16 Lisbon Street at Cedar Street Aerial



Figure 8.17 Lisbon Street at Cedar Street View

**Midblock Crossing between Cedar Street and Maple Street**

The midblock crossing between Cedar Street and Maple Street was recently updated with new high visibility block crosswalk striping and ADA improvements, including RRFBs. The intersection is shown in Figures 8.18 and 8.19. No additional improvements are recommended at this time.



Figure 8.18 Lisbon Street between Cedar and Maple Street Aerial



Figure 8.19 Lisbon Street between Cedar and Maple Street View

**Intersection of Lisbon Street and Maple Street**

The intersection of Lisbon Street and Maple Street has been updated recently with new high visibility crosswalk striping and ADA improvements. This intersection is shown in Figures 8.20 and 8.21. No additional improvements are recommended at this time.



Figure 8.20 Lisbon Street at Maple Street Aerial



Figure 8.21 Lisbon Street at Maple Street View

**Intersection of Lisbon Street and Locust Street**

The intersection of Lisbon Street and Locust Street has been updated recently with new high visibility block crosswalk striping. This intersection is shown In Figures 8.22 and 8.23. No additional improvements are recommended at this time.



Figure 8.22 Lisbon Street at Locust Street Aerial



Figure 8.23 Lisbon Street at Locust Street View

**Intersections of Lisbon Street and Essex Street and Lisbon Street and East Avenue**

Improvements for the intersections of Lisbon and Essex Streets and Lisbon Street and East Avenue are currently in the design phase. The Lisbon and Essex Street intersection is shown in Figure 8.24, and the Lisbon Street and East Avenue intersection is shown in Figure 8.25.



Figure 8.24 Lisbon Street at Essex Street Aerial



Figure 8.25 Lisbon Street at East Avenue Aerial

### **Intersection of Lisbon Street and South Avenue**

The intersection of Lisbon Street and South Avenue has been restriped to include high visibility block striping at all crossings, and it is shown in Figures 8.26 and 8.27. Updated signs and ADA pedestrian upgrades are recommended.



Figure 8.26 Lisbon Street at South Avenue Aerial



Figure 8.27 Lisbon Street at South Avenue Street View

### **Intersection of Lisbon Street and St. Croix Street**

The intersection of Lisbon Street and St. Croix Street has been updated recently with new high visibility block crosswalk striping. It is shown in Figures 8.28 and 8.29. ADA upgrades, APS push buttons signs, and detectable warning surfaces are recommended.



Figure 8.28 Lisbon Street at St. Croix Street Aerial



Figure 8.29 Lisbon Street at St. Croix Street View

### **Intersection of Lisbon Street and Scribner Boulevard**

This intersection of Lisbon Street and Scribner Boulevard has been updated with new high visibility block crosswalk striping. ADA upgrades, APS push buttons and detectable warning surfaces are recommended. The intersection is shown in Figures 8.30 and 8.31.

Bumpouts were examined for use at this location, but due to the narrow lanes on both Lisbon Street and Scribner Boulevard, they are not recommended in this location. Likewise, after evaluating the potential use of small bumpouts, it was determined that they would not significantly reduce crossing lengths and would cause maintenance concerns relating to snow removal, so they are not recommended. Straightening the crossing and ensuring adequate crossing time with countdown heads will have a more significant improvement at this location, so they are recommended.



Figure 8.30 Lisbon Street at Scribner Boulevard Aerial



Figure 8.31 Lisbon Street at Scribner Boulevard Street View

## 8.4 Potential New Lisbon Street Crossings

There were two areas on Lisbon Street that warrant new crossings.

### **Intersection of Lisbon Street and Webber Street**

There was one fatality at the intersection of Lisbon and Weber Streets, but it was unique in that it involved one specific pedestrian who frequently jaywalking here without a crosswalk. This intersection is shown in Figure 8.32. As it is an area with high vehicular speeds and many driveways and entrances, a pedestrian crossing is not recommended at this time.



Figure 8.32 Lisbon Street at Webber Street Aerial

### **Intersection of Lisbon Street and Jones Avenue**

The intersection of Lisbon Street and Jones Avenue is shown in Figure 8.33. Although this intersection might appear to be an ideal location for a pedestrian crosswalk, five lanes of high-speed travel would make it dangerous for pedestrians even if a mid-point pedestrian refuge was provided. Therefore, a crossing at this location not recommended.

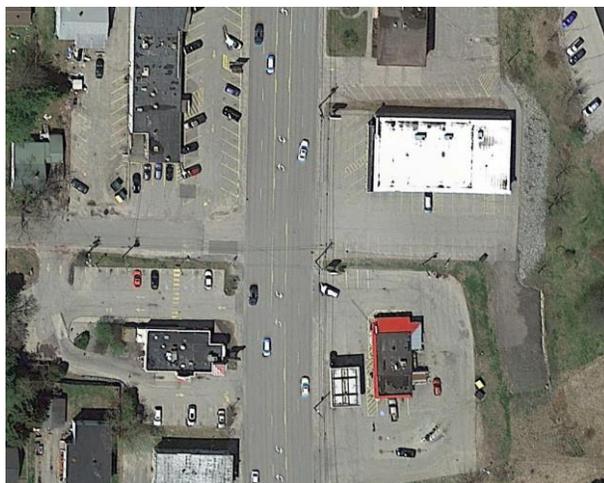


Figure 8.33 Lisbon Street at Jones Avenue Aerial

## Section 9. Pedestrian Corridor #5 – Canal Street

With a length of 0.75 mile, this corridor is the shortest of the five corridors evaluated as part of this study. Canal Street, which runs parallel to Lisbon Street, services one-way traffic heading in a southerly direction. The roadway begins at Main Street and terminates where it merges with Lisbon Street. Many parking lots and parking garages are located along the Canal Street corridor. Traffic volumes at the northern end of the corridor average about 5,000 vehicles per day, rising to about 9,000 vehicles per day at the southern end.

### 9.1 Canal Street Existing Pedestrian Conditions

The following two figures show existing pedestrian facilities in the corridor. The first, Figure 9.1 shows existing crosswalks and signalized locations. The second, Figure 9.2 shows pedestrian crossings by type of crossing and locations of pedestrian crossings.

#### ***Overview of Sidewalks and Pedestrian Crossings***

The primary material in this corridor is brick. There has been settlement of the sidewalk, especially on the easterly side, resulting in an uneven walkway in need of improvement. Sidewalks also have reduced widths where on-street parking occurs, and parking meters and street lights line the sidewalks impeding pedestrian activity.

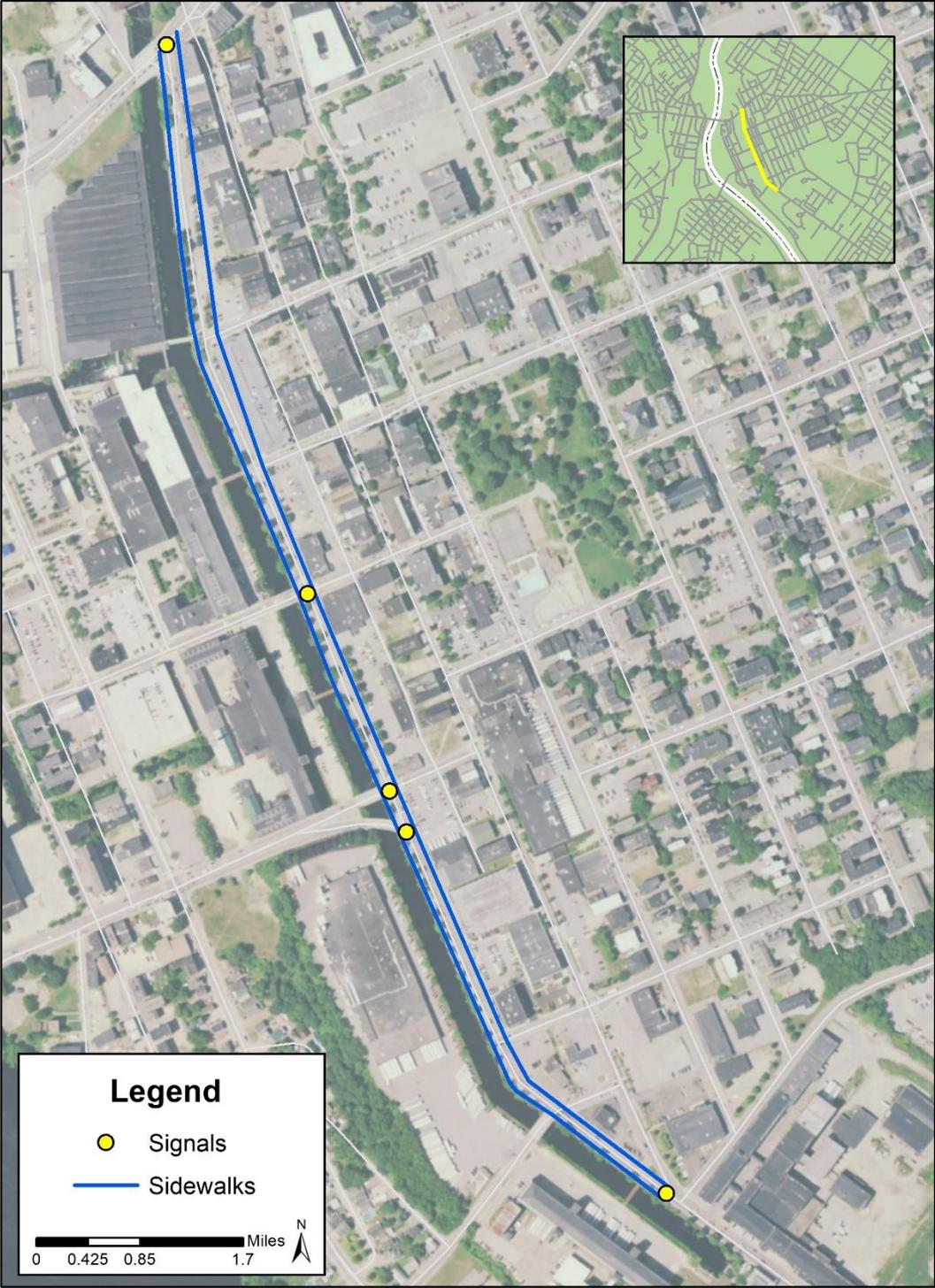
Many crossings do not meet ADA standards, lacking pedestrian countdown heads, APS Push buttons, ramp slopes, and pavement markings and are also missing detectable warning surfaces.

#### ***Transit***

The Main Street loop passes through Canal Street. Route maps and schedules are located in Appendix B: Transit.

# Figure 9.1 Canal Street Signals & Sidewalks

City of Lewiston, Maine



**Figure 9.2**  
**Canal Street Pedestrian Crossings**  
*City of Lewiston, Maine*



## 9.2 Canal Street Pedestrian Safety

Figure 9.3 provides an overview of the key characteristics of the Canal Street corridor. Two pedestrian collisions and two bicycle collisions have been reported over the past three years. The corridor experienced twenty-two vehicular crashes. Two intersections within the corridor are currently classified as HCLs.

### Pedestrian Crash Characteristics:

- The corridor had 2 pedestrian crash locations involving 2 pedestrians.
- Pedestrian crashes occurred while crossing Canal Street at a designated crosswalk.
- One pedestrian crash occurred when the pedestrian ran into the road while wearing headphones.

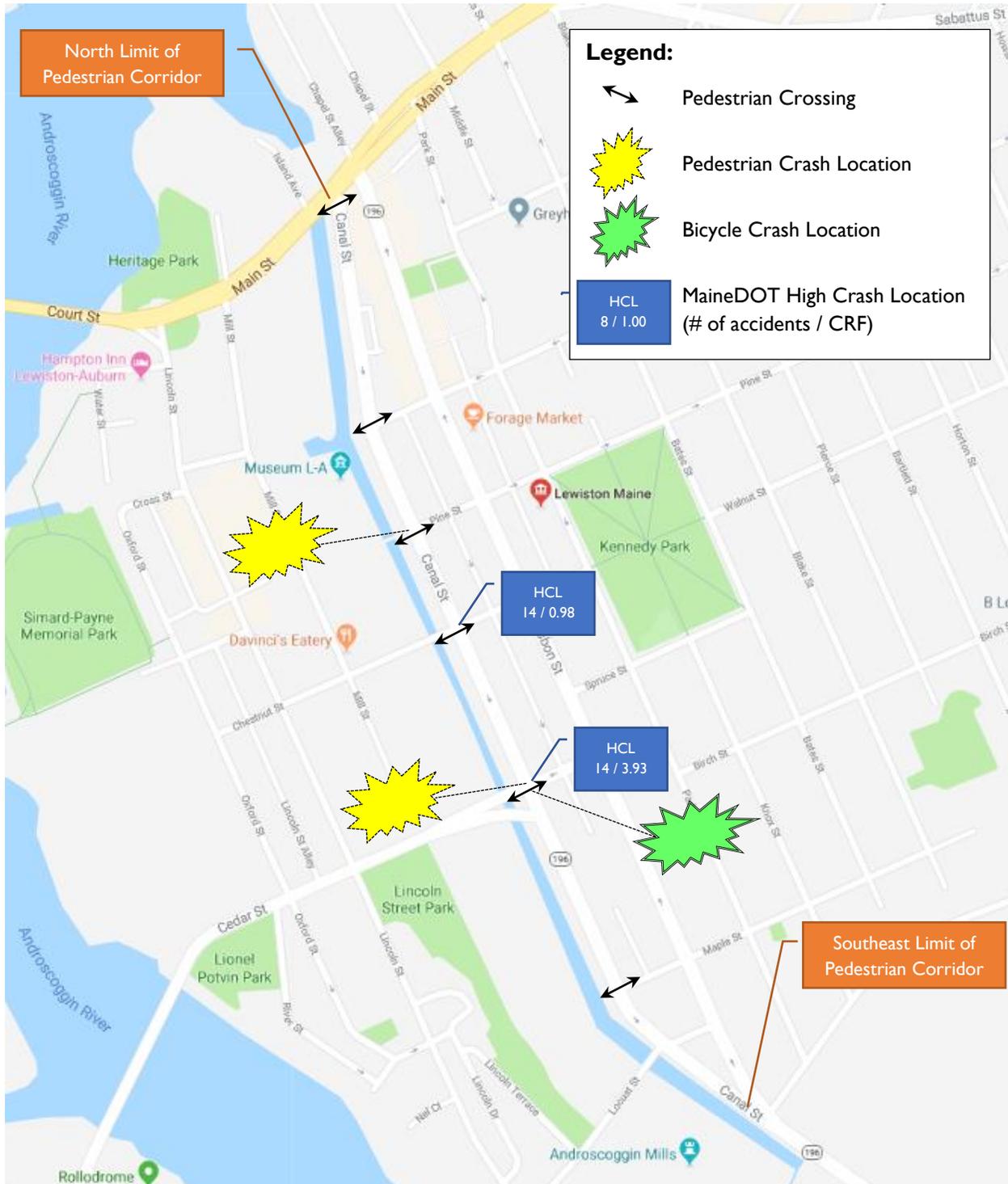
### Bike Crash Characteristics:

- There was one bike crash involving a sole cyclist that occurred at the intersection of Cedar and Canal Street.
- The bike crash occurred with the bicyclist was crossing traffic against the signal.

### High Crash Location Characteristics:

- There were two HCLs in this corridor:
  - Canal at Ash Street..... 14 crashes ..... CRF 3.93
  - Canal at Chestnut Street..... 14 crashes ..... CRF 0.98
- The 0.75-mile corridor had a total of twenty-two crashes with a CRF of 1.07.

# Figure 9.3 Canal Street Pedestrian Corridor Safety



### 9.3 Existing Canal Street Crossing Evaluations

The following addresses notable existing crossings along the Lisbon Street Corridor. Note that most side streets require improvements to meet current ADA standards, but priority is given to crossings that involve Lisbon Street and signalized crossings.

#### **Intersection of Canal Street and Ash Street**

The intersection of Canal Street and Ash Street has recently been restriped to be a high visibility block crossing. ADA improvements are recommended at this location. Figures 9.4 and 9.5 show this intersection.



Figure 9.4 Canal Street at Ash Street Aerial



Figure 9.5 Canal Street at Ash Street View

#### **Intersection of Canal Street and Pine Street**

The intersection of Canal Street and Pine Street has previously been a pedestrian crash location, and it is shown in Figures 9.6 and 9.7. This intersection has recently been restriped to be a high visibility block crossing. ADA improvements are recommended at this location.



Figure 9.6 Canal Street at Pine Street Aerial



Figure 9.7 Canal Street at Pine Street View

### **Intersection of Canal Street and Chestnut Street Bridge**

The intersection of Canal Street and the Chestnut Street Bridge has previously been classified as an HCL. It is shown in Figures 9.8 and 9.9. This intersection has recently been upgraded with high visibility block crossing striping with ADA improvements. We recommended a re-evaluation of the bridge to the mill during retrofit and redesign opportunities in the future.



Figure 9.8 Canal Street at Chestnut Street Aerial



Figure 9.9 Canal Street at Chestnut Street View

### **Intersection of Canal Street and Cedar Street Bridge**

The intersection of Canal Street and the Cedar Street Bridge has a history of being an HCL with both bicycle and pedestrian crashes. It is shown in Figures 9.10 and 9.11. The intersection has recently been upgraded with high visibility block crossing striping and ADA improvements. We recommended consideration be given to eliminating the southwesterly pedestrian ramp on the corner of the bridge to discourage pedestrians from walking along the southerly side of the bridge.



Figure 9.10 Canal Street at Cedar Street Aerial



Figure 9.11 Canal Street at Cedar Street View

### **Intersection of Canal Street and Maple Street**

The intersection of Canal Street and Maple Street is in an area of historic speeding. It is shown in Figures 9.12 and 9.13. The crossing has recently been upgraded to high visibility block crossing striping with ADA improvements. We recommend consideration of the use of RRFBs.



Figure 9.12 Canal Street at Maple Street Aerial



Figure 9.13 Canal Street at Maple Street View

### 9.4 Potential New Canal Street Crossings

There is one location at Canal Street for a potential new crossing that crosses the parking lot to the parking garage to reduce the number of noncompliant users. It is shown in Figure 9.14. This location may not have enough use and further evaluation should be conducted.

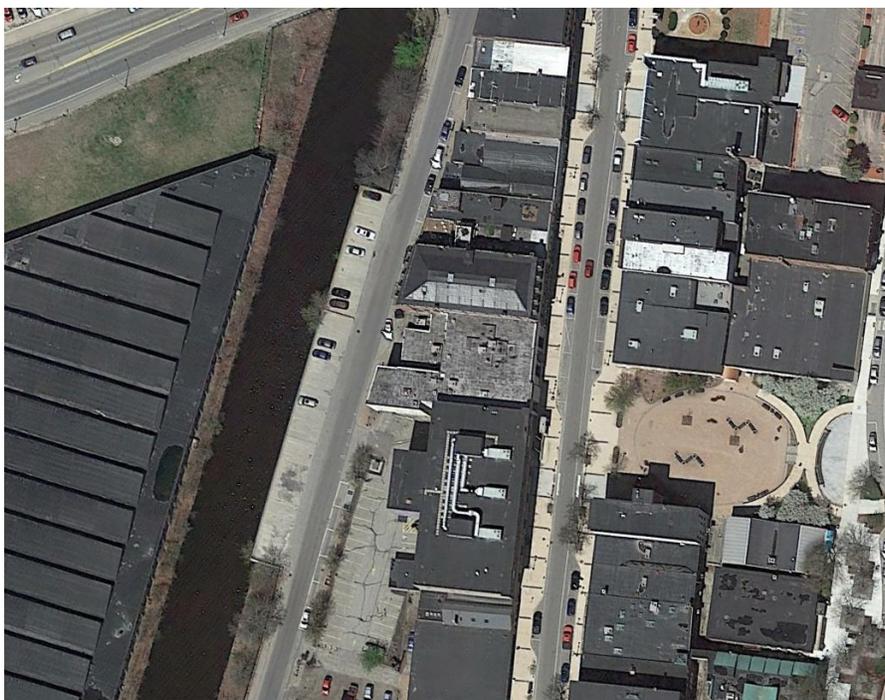


Figure 9.14 Canal Street at Parking Garage

## Section 10. Cost Estimates

The following outline the intersection improvements by corridor; Main Street, Sabattus Street, Russell Street, Lisbon Street and Canal Street; along with the costs associated with those improvements. A detailed cost estimate is located in Appendix C: Cost Estimate.

Also included with the costs is a priority rating. The priorities are divided into three tiers:

- Tier 1: Proposed intersection improvements are prioritized for the top eleven intersections. These are intersections that have priority over all other intersections in the corridor. They are pedestrian crossings with higher usage and/or safety concerns.
- Tier 2: These are crossings with some ADA and minor fixes that should be updated as budget and time allow.
- Tier 3: These are crossings that recommend signage, potential new crossings, and/or improvements to be made as new development occurs.

In addition to traditional funding sources such as MaineDOT and Federal funding, the City has also allocated funds for pedestrian facility improvements for the next five years. This includes \$350,000 for sidewalks and \$200,000 for crossings.

### 10.1 Main Street

Most of the 2.5-mile Main Street corridor is lined by sidewalks extending on both sides, with some in need of repair. Two sections of this corridor have long distances between existing crossings, and three new crossings are presented for consideration in the following table – Main Street at Mountain Avenue, Main Street at Montello and Landry Road (midblock crossing), and Main Street at Marden’s Shopping Center.

The Central Maine Medical Center (CMMC) and Dunkin Donuts crossing, will remain an active location for pedestrians with the parking across from the hospital, even with the planned relocation of Dunkin Donuts. Because the crossing is in a difficult location for site distance and safety, we recommend that CMMC, the MaineDOT and the City coordinate to maintain the current infrastructure. A summary of recommended improvements and planning level cost estimates follows in Table ES-2, with new crossings noted in bold italics at the end of the table.

There are six HCLs within the corridor, none of which occurred within the denser urban center of Lewiston. Additionally, there were six pedestrian crashes, mostly occurring between Island Avenue and Sabattus Street, within crosswalks. These crashes related to turning movements, indicating the need for additional signage. The crashes in the less urban areas occurred outside of crosswalks, indicating the need for additional crossings. There were also six bicycle crashes within the corridor. While bike crashes followed a similar pattern of conflict with turning vehicles, most crashes were caused by illegal operation by the cyclist, therefore no improvements are recommended.

General recommendations include repair of sidewalks in poor condition, educating residents and users to reduce sidewalk impediments and increase visibility, additional signage reminding vehicles to look for pedestrians when making turning movements, and ADA upgrades.

**Table 10-1: Main Street Crossing Evaluation Summary**

| Priority | Intersection   | Suggested Improvement  | Cost         |
|----------|--|--|--------------|
| I.4      | Main Street at Lincoln Street                                      | <ul style="list-style-type: none"> <li>Two-stage Pedestrian Crossing</li> <li>Signalized Red Turn Arrows</li> <li>Improved Pedestrian Signage</li> <li>Assessible Pedestrian Signal (APS) Push Buttons and Pedestrian Countdown Heads</li> <li>ADA Improvements</li> </ul> | \$100k       |
| I.3      | Main Street at Canal Street  | <ul style="list-style-type: none"> <li>APS Push Buttons and Pedestrian Countdown Heads</li> <li>Reduce Turn Radiuses</li> <li>Passive Pedestrian Detection Linked to High Visibility Signage for Turning Vehicles</li> <li>ADA Improvements</li> </ul>                     | \$70k        |
| I.2      | Main Street at Lisbon Street                                       | <ul style="list-style-type: none"> <li>APS Push Buttons and Pedestrian Countdown Heads</li> <li>Reduce Turn Radiuses</li> <li>ADA Improvements</li> </ul>  | \$40k        |
| I.1      | Main Street at Middle Street (DHHS)                                | <ul style="list-style-type: none"> <li>Two-stage Pedestrian Crossing</li> <li>Improved Pedestrian Signage</li> <li>APS Push Buttons and Pedestrian Countdown Heads</li> <li>ADA Improvements</li> </ul>  | \$100k       |
| I.6      | Main Street at Bates Street  | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> <li>APS Push Button and Pedestrian Countdown Heads</li> <li>ADA Improvements</li> </ul>  | \$50k        |
| 3        | Main Street at Dunkin Donuts and CMMC (midblock crossing)          | <ul style="list-style-type: none"> <li>Fix Existing High Visibility Lighting</li> <li>Coordinate between the City, CMMC, and MaineDOT</li> </ul>   | \$30k        |
| I.7      | Main Street at High Street   | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> <li>APS Push Button</li> <li>ADA Improvements</li> </ul>   | \$60k        |
| -        | Main Street at Frye Street   | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| -        | Main Street at Russell Street Ramps                                | <ul style="list-style-type: none"> <li>None (Upgrades to be implemented as part of another project)</li> </ul>   | -            |
| -        | Main Street at Strawberry Avenue                                   | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| 3        | Main Street at Mollison Way  | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>  | \$1k         |
| -        | Main Street near Switzerland Road (midblock crossing)              | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| 3        | <b>Main Street at Mountain Avenue</b>                              | <ul style="list-style-type: none"> <li><b>New Crossing</b></li> </ul>  | <b>\$50k</b> |
| 2        | <b>Main Street at Montello and Landry Road (midblock crossing)</b> | <ul style="list-style-type: none"> <li><b>New Crossing</b></li> </ul>  | <b>\$50k</b> |
| 3        | <b>Main Street at Marden's Shopping Center</b>                     | <ul style="list-style-type: none"> <li><b>Cross Connections between Properties</b></li> <li><b>Combine Entrances</b></li> <li><b>New Crossing</b></li> </ul>   | <b>\$50k</b> |

## 10.2 Sabattus Street

Most of the 2.75-mile stretch of the Sabattus Street corridor is lined by sidewalks extending on both sides, with some in need of repair. Crossings are generally reasonably spaced and located near public transit stops, although we recommend that a new crossing at Sabattus Street and Fairlawn/Farewell Avenue be considered. Since many of the existing crossings were recently upgraded, we recommend no changes to those. A summary of recommended improvements and planning level cost estimates follows in Table 10-2, with new crossings noted in bold italics at the end of the table.

There are five HCLs within the corridor, most occurring towards the eastern limits of the pedestrian study area. There were six pedestrian crashes, most occurring within a crosswalk, but some did involve a pedestrian crossing against the signal. As with Main Street, bicycle crashes were largely operator error, most of the crashes involved a bicycle hitting the car, one with a bike traveling in the wrong direction.

General recommendations include repair of sidewalks in poor condition, educating residents and users to reduce sidewalk impediments and increase visibility, additional signage reminding vehicles to look for pedestrians when making turning movements, and ADA upgrades.

**Table 10-2: Sabattus Street Crossing Evaluation Summary**

| <b>Priority</b> | <b>Intersection</b>   | <b>Suggested Improvement</b>   | <b>Cost</b>  |
|-----------------|---|--|--------------|
| 1.5             | Sabattus Street at Main Street                                | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> <li>ADA Improvements</li> </ul>  | \$60k        |
| 1.8             | Sabattus Street at Oak/Bartlett Street                        | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> <li>Improved Vehicle Signage</li> <li>RRFBs</li> <li>ADA Improvements</li> </ul> | \$70k        |
| -               | Sabattus Street at College/Horton Street                      | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| 1.9             | Sabattus Street at Howe/Wood Street                           | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> <li>ADA Improvements</li> <li>RRFBs</li> </ul>                                   | \$60k        |
| -               | Sabattus Street at Central Avenue/Webster/Ash Street          | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| -               | Sabattus Street at Lafayette Street/Sylvan/Campus Avenue      | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| -               | Sabattus Street at East Avenue                                | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| -               | Sabattus Street at Russell Street                             | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| 3               | Sabattus East of Laurier Street (midblock crossing)           | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>  | \$1k         |
| -               | Sabattus Street at Bradford Street                            | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| -               | Sabattus Street at Wildwood Drive                             | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| -               | Sabattus Street at Randall Road                               | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| -               | Sabattus Street at Temple Street                              | <ul style="list-style-type: none"> <li>None</li> </ul>   | -            |
| <b>3</b>        | <b>Sabattus Street at Fairlawn Avenue and Farewell Street</b> | <ul style="list-style-type: none"> <li><b>New Crossing</b></li> </ul>  | <b>\$60k</b> |

### 10.3 Russell Street

The relatively small 1.25-mile stretch of Russell Street has a sidewalk on the easterly side of the road opposite Bates College, but the westerly side does not. Pedestrians have worn a footpath on the westerly side, and we recommend replacing this with a sidewalk. The intersection of Russell Street and Lafayette Street warrants a new crossing since it was the site of a pedestrian crash, but it is not recommended. Furthermore, although the Russell Street and East Avenue is signalized, the slip lane in the northwesterly corner is a free movement, and not part of the signal. Consideration should be given for signalization of this right turn movement to provide a safer pedestrian crossing. A summary of recommended improvements and planning level cost estimates follows in Table 10-3, with new crossings noted in bold italics at the end of the table.

There are three HCLs within the corridor, most occurring around Bates College. There was only one pedestrian crash at the intersection of Lafayette and Russell Streets.

General recommendations include repair of sidewalks in poor condition, educating residents and users to reduce sidewalk impediments and increase visibility, additional signage reminding vehicles to look for pedestrians when making turning movements, and ADA upgrades. Due to the large turning radius of the slip lane at the intersection of Russell Street and East Avenue, the recommendation was made to signalize this movement and provide pedestrians with a safe crossing at this location.

| Table 10-3: Russell Street Crossing Evaluation Summary |   |  |                     |
|--|---|--|---------------------|
| Priority   | Intersection  | Suggested Improvement  | Cost                |
| 2  | Russell Street at East Avenue                             | <ul style="list-style-type: none"> <li>Right Turn Arrow at Slip Lane</li> </ul>                            | \$4k                |
| 3  | Russell Street at Central Avenue                          | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>                              | \$3k                |
| -  | Russell Street at Lewiston Variety II (midblock crossing) | <ul style="list-style-type: none"> <li>None</li> </ul>   | -                   |
| 3  | Russell Street at College Street                          | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>                              | \$3k                |
| <b>3</b>   | <b><i>Russell Street at Lafayette Street</i></b>          | <ul style="list-style-type: none"> <li><b><i>New Crossing Warranted but not Recommended</i></b></li> </ul> | <b><i>\$50k</i></b> |

### 10.4 Lisbon Street

Sidewalks line both sides of the 3-mile Lisbon Street corridor, except near the ramps. For the most part, these are in good condition although there is some cracking on the southerly asphalt sidewalk. Crossings are generally reasonably spaced, except at the ramps. Adding a crossing at Lisbon and Webber Streets was considered but is not recommended because the pedestrian fatality was a unique situation and it is not a popular pedestrian crossing location. Lisbon Street and Jones Avenue intersection was also examined but improvements are not recommended due to the high speed of vehicular travel and the long distance required for pedestrians to cross five vehicular lanes. Finally, since a previous project on Lisbon Street improved many crossings, we recommend only that signage be added to increase visibility to further improve the intersection.

A summary of recommended improvements and planning level cost estimates follows in Table 10-4, with new crossings that are warranted noted in bold italics at the end of the table

There are two HCLs in this corridor. There were six pedestrian crashes, mostly between Summit Avenue and Androscoggin Avenue. Two of those crashes resulted in a fatality, both occurring within a crosswalk. No bike crashes were reported.

General recommendations include repair of sidewalks in poor condition, educating residents and users to reduce sidewalk impediments and increase visibility, additional signage reminding vehicles to look for pedestrians when making turning movements, and ADA upgrades. A project on Lisbon Street improved many crossings and therefore a large section of this road has no pedestrian improvement recommendations, aside from possibly looking at adding some signage to increase visibility.

| <b>Table 10-4: Lisbon Street Crossing Evaluation Summary</b> |   |   |              |
|--|---|---|--------------|
| <b>Priority</b>  | <b>Intersection</b>   | <b>Suggested Improvement</b>  | <b>Cost</b>  |
| 3  | Lisbon Street at Ash Street   | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>                           | \$3k         |
| 3  | Lisbon Street between Ash Street and Pine Street (midblock crossing)      | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>                           | \$1k         |
| 3  | Lisbon Street at Pine Street  | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>                           | \$3k         |
| 3  | Lisbon Street between Pine Street and Chestnut Street (midblock crossing) | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>                           | \$1k         |
| 3  | Lisbon Street at Chestnut Street  | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>                           | \$3k         |
| 3  | Lisbon Street at Spruce Street  | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>                           | \$1k         |
| 3  | Lisbon Street at Cedar Street   | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>                           | \$1k         |
| 3  | Lisbon Street between Cedar Street and Maple Street (midblock crossing)   | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>                           | \$1k         |
| 3  | Lisbon Street at Maple Street   | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>                           | \$1k         |
| 3  | Lisbon Street at Locust Street  | <ul style="list-style-type: none"> <li>Improved Pedestrian Signage</li> </ul>                           | \$1k         |
| -  | Lisbon Street at Essex Street   | <ul style="list-style-type: none"> <li>Improvements Under a Current Design Contract</li> </ul>          | -            |
| -  | Lisbon Street at East Avenue  | <ul style="list-style-type: none"> <li>Improvements Under a Current Design Contract</li> </ul>          | -            |
| 2  | Lisbon Street at South Avenue   | <ul style="list-style-type: none"> <li>ADA Improvements</li> <li>Improved Pedestrian Signage</li> </ul> | \$40k        |
| 2  | Lisbon Street at St. Croix Street   | <ul style="list-style-type: none"> <li>ADA Improvements</li> <li>Improved Pedestrian Signage</li> </ul> | \$40k        |
| 2  | Lisbon Street at Scribner Boulevard                                       | <ul style="list-style-type: none"> <li>ADA Improvements</li> <li>Improved Pedestrian Signage</li> </ul> | \$40k        |
| -  | <b>Lisbon Street at Webber Street</b>                                     | <ul style="list-style-type: none"> <li><b>New Crossing</b></li> </ul>                                   | <b>\$60k</b> |
| -  | <b>Lisbon Street at Jones Avenue</b>                                      | <ul style="list-style-type: none"> <li><b>New Crossing Warranted but not Recommended</b></li> </ul>     | <b>\$60k</b> |

## 10.5 Canal Street

The .75-mile corridor connecting with Lisbon Street is a one-way street in an area of dense parking both on street and off. Crossings are generally spaced appropriately. We evaluated the need for a crossing from a parking garage but deemed it unnecessary because most bike and pedestrian crashes were caused by noncompliant use of the facilities. We recommend re-evaluating the inclusion of pedestrian facilities at the Chestnut Street Bridge when consideration for retrofit and redesign is undertaken in the future. We also recommend the removal of the southwesterly ramp on the Cedar Street Bridge to discourage noncompliant pedestrian behavior. A summary of recommended improvements and planning level cost estimates follows in Table 10-5, with new crossings noted in bold italics at the end of the table.

There were two HCLs across from the Cedar Street and Chestnut Street Bridges. Pedestrian crashes occurred while crossing Canal Street at Pine and Cedar Street at designated crosswalks, although one user was not aware of their surroundings and ran into the road with headphones. Additionally, there was one bike crash at Cedar Street and Canal Street, however the bike was crossing traffic against the signal.

General recommendations include repair of sidewalks in poor condition, educating residents and users to reduce sidewalk impediments and increase visibility, additional signage reminding vehicles to look for pedestrians when making turning movements, and ADA upgrades. Recent enhancements were made to striping and the intersection with Maple Street to increase its visibility.

| <b>Table 10-5: Canal Street Crossing Evaluation Summary</b> |  |   |                     |
|---|--|---|---------------------|
| <b>Priority</b>   | <b>Intersection</b>                          | <b>Suggested Improvement</b>  | <b>Cost</b>         |
| 1.10  | Canal Street at Ash Street                   | <ul style="list-style-type: none"> <li>• ADA Improvements</li> </ul>  | \$30k               |
| 1.11  | Canal Street at Pine Street                  | <ul style="list-style-type: none"> <li>• ADA Improvements</li> </ul>  | \$20k               |
| 3   | Canal Street at Chestnut Street Bridge       | <ul style="list-style-type: none"> <li>• Re-evaluate Bridge During Retrofit and Redesign Opportunities</li> </ul> | \$3k                |
| 2   | Canal Street at Cedar Street Bridge          | <ul style="list-style-type: none"> <li>• Eliminate Southwesterly Ramp</li> </ul>                                  | \$20k               |
| 2   | Canal Street at Maple Street                 | <ul style="list-style-type: none"> <li>• RRFBS</li> </ul>   | \$30k               |
| <b>3</b>  | <b><i>Canal Street at Parking Garage</i></b> | <ul style="list-style-type: none"> <li>• <b><i>New Crossing Warranted but not Recommended</i></b></li> </ul>      | <b><i>\$50k</i></b> |

## Section 11. Recommendations

Based on HNTB's detailed evaluation, the following recommendations are made as part of this study:

- Continue to evaluate ramps to ensure they meet ADA standards.
  - This can be done in combination with new development, re-evaluating each crossing as new developments are undertaken, requiring new developments upgrade crossings to be ADA compliant.
- When undertaking a widescale evaluation involving several large corridors, it would be invaluable to involve City engineering staff who understand the scope of the needed upgrades and maintenance of the pedestrian facilities. It is recommended to involve those city engineering staff who understand the magnitude and specific details for upgrades to be able to oversee the projects once design and construction is started.
- Evaluate signal timing to ensure it meets current MUTCD pedestrian signal timing recommendations, allowing for longer passage times within school zones.
- Evaluate corridor driveways and entrances to reduce possible conflict with pedestrians on sidewalks.
  - Ensure that new development driveways and entrances meet MaineDOT minimum access management standards in terms of the number of driveways, driveway width, and corner clearance.
  - Wherever possible, reduce the number of driveways and entrances when there are several adjacent commercial properties, considering the use of connector roads between properties that are off the main corridors to reduce conflict points.
  - Evaluate opportunities with new and existing property developments to implement driveways with right-in/right-out movements.
- Consider midblock crossings in the locations identified within the study to encourage pedestrians to avoid unsafe illegal crossings.
- Confirm that all pedestrian heads have countdown functions with APS push buttons and that crossing times meet guidelines set forth by the MUTCD.



Pedestrians Countdown Head



APS Push Buttons

- Remove existing pedestrian ramps that no longer lead to crossings.
- Repair sidewalks in poor condition.

- Consider additional methods to control vehicular speeding that could potentially alleviate HCLs.
- Add signs on all span wires and mast arms where right turns on red are permitted, reminding turning vehicles to watch out for pedestrians and bicyclists. Consider making lead or exclusive pedestrian phases where visibility is difficult.<sup>10</sup>



Yield to Pedestrians Sign

- Evaluate overhead lighting at the vehicular and pedestrian level and consider replacement of existing bulbs with LEDs to improve illumination.
- Build upon the existing safety campaigns developed by Bicycle Coalition of Maine and the MaineDOT Task Force for Safety
  - Educate residents regarding appropriate places to locate trash.
  - Encourage bicyclists and pedestrians to wear high visibility clothing.
  - Enforce jaywalking laws with a stop and educate campaign at high incident locations.
  - Consider locations where bike lanes can and should be implemented.
  - Remind users to look for cars before crossing – consider adding pavement markings for this such as:<sup>11</sup>



Look for Cars Before Crossing Marking

<sup>10</sup> Source: Traffic Sign Store (<http://store.trafficsignstore.com/merchant2/graphics/00000001/R10-15.jpg>)

<sup>11</sup> Source: Redmond, WA (<https://www.redmond.gov/common/pages/UserFile.aspx?fileId=35936>)

- Consider locations where bike lanes can and should be implemented. Consider the use of sharrows<sup>12</sup> and bike lanes<sup>13</sup>.



Sharrow Marking



Bike Lane Marking

- Improve unsignalized side streets to meet current ADA standards, as this was not addressed in this study. In addition to evaluating tip-down cross and side-slopes, it is recommended that detectable warning surfaces be placed at either end of crossings and that all pedestrian crossings have appropriate pavement markings.

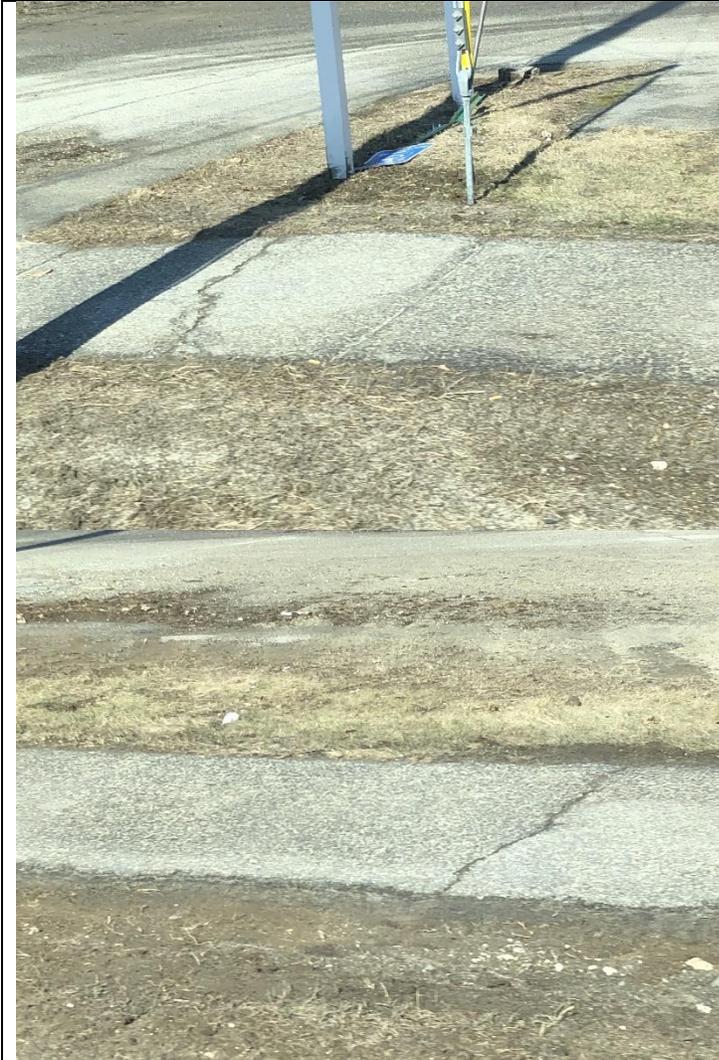
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<sup>12</sup> Source: Move It People (<http://moveitpeople.com/wp-content/uploads/2013/09/Sharrow.jpg>)

<sup>13</sup> Source: Bike San Diego ([http://www.bikesd.org/wp-content/uploads/2011/06/ParkBlvd\\_BikeLane.jpg](http://www.bikesd.org/wp-content/uploads/2011/06/ParkBlvd_BikeLane.jpg))

**Appendix A**  
**Photo Log**

|   |   |
|---|---|
|   | <p><b>Location:</b> Intersection of Main Street and Bearce Avenue</p> <p><b>Description:</b> Three-lane roadway with a shared left-turn lane, sidewalks on both sides</p>                   |
|  | <p><b>Location:</b> Intersection of Main Street and Bearce Avenue</p> <p><b>Description:</b> Driveway access to local business</p> <p><b>Problem:</b> Deteriorating pavement and debris</p> |



**Location:** Intersection of Main Street and Bearce Avenue

**Description:** Sidewalk close to driveway access to local business

**Problem:** Deteriorating sidewalk pavement



**Location:** Intersection of Lisbon Street and Mollison Way

**Description:** Signalized T-intersection, three-lane roadway with left-turn lanes, bridge with train tracks passing over Main Street approaching intersection heading downtown, sidewalk on one side

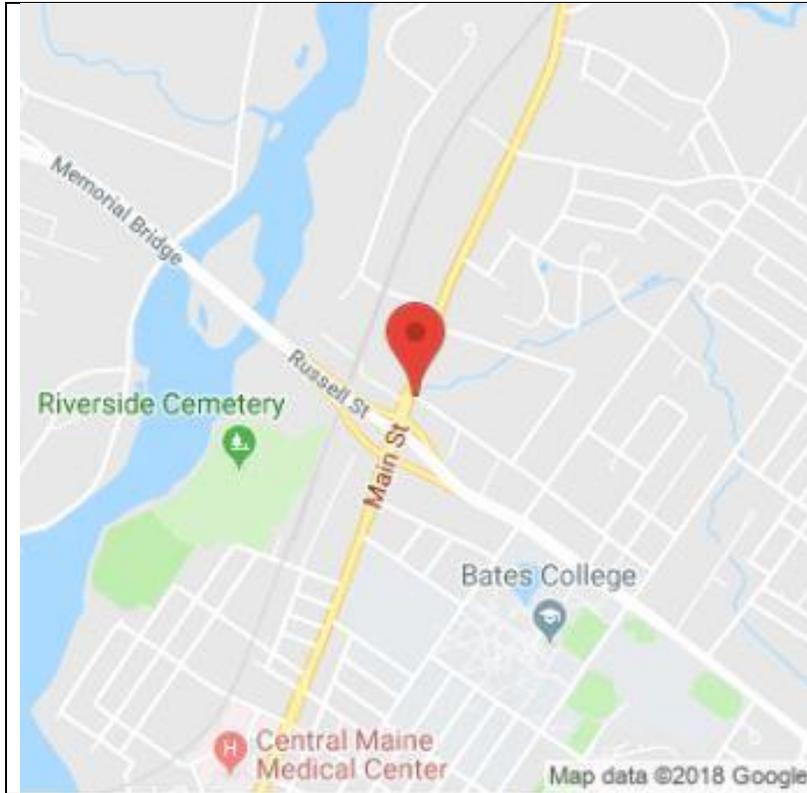


**Location:** Intersection of Lisbon Street and Mollison Way

**Description:** Sidewalk along Main Street

**Problem:** Mast arm and utility pole obstructing sidewalk, no pedestrian signs or signals or markings across driveway or Main Street, obstructed site distance due to bridge





**Location:** Intersection of Main Street and Pettingill Street

**Description:** Five-lane roadway with two through-lanes in each direction and a shared left-turn lane, sidewalks on both sides



**Location:** Intersection of Main Street and Pettingill Street

**Description:** Sidewalk along Main Street with driveway access and side streets

**Problem:** Pavement deteriorating with debris, no pedestrian signs, signals or markings across driveway or side street



**Location:** Intersection of Main Street and Pettingill Street

**Description:** Pedestrian using sidewalk

**Problem:** None



**Location:** Intersection of Main Street and Pettingill Street

**Description:** Crosswalk across side street along Main Street

**Problem:** No pedestrian signs or signals, faded crosswalk marking, pavement deteriorating



**Location:** Intersection of Main Street and Pettingill Street

**Description:** Sidewalk along Main Street with driveway access

**Problem:** Vehicle obstructing sidewalk, sidewalk deteriorating with debris

Source: Google Earth

|  |  |
|--|--|
|  <p>A Google Map showing the intersection of Sabattus and Laurier Street. A red location pin is placed at the intersection. To the north is the Thorncrag Bird Sanctuary, shown in green. Other streets labeled include Russell St and Webster St. A road sign for 126 is visible. Map data is attributed to ©2018 Google.</p>                                    | <p><b>Location:</b> Intersection of Sabattus and Laurier Street next to Holy Family Church</p> <p><b>Description:</b> Four-lane roadway with sidewalks on either side, pedestrian crossing with signs and signal, driveway access</p>                                    |
|  <p>A photograph of a sidewalk along Sabattus Street. In the foreground, a black signpost with a 'city' logo and 'BUS STOP' text stands on the sidewalk. To the right, a utility pole with multiple wires is positioned near the sidewalk. In the background, there are houses, trees, and a clear sky with some clouds. A white car is visible on the road.</p> | <p><b>Location:</b> Intersection of Sabattus and Laurier Street next to Holy Family Church</p> <p><b>Description:</b> Sidewalk along Sabattus Streets with driveway access</p> <p><b>Problem:</b> Deteriorating sidewalk with obstructions (utility poles and trash)</p> |



**Location:** Intersection of Sabattus and Laurier Street next to Holy Family Church

**Description:** Sidewalk along Sabattus Streets with driveway access

**Problem:** deteriorating sidewalk with obstructions (utility poles and trash), debris in sidewalk, not ADA compliant



**Location:** Intersection of Sabattus Street and Fairlawn Avenue

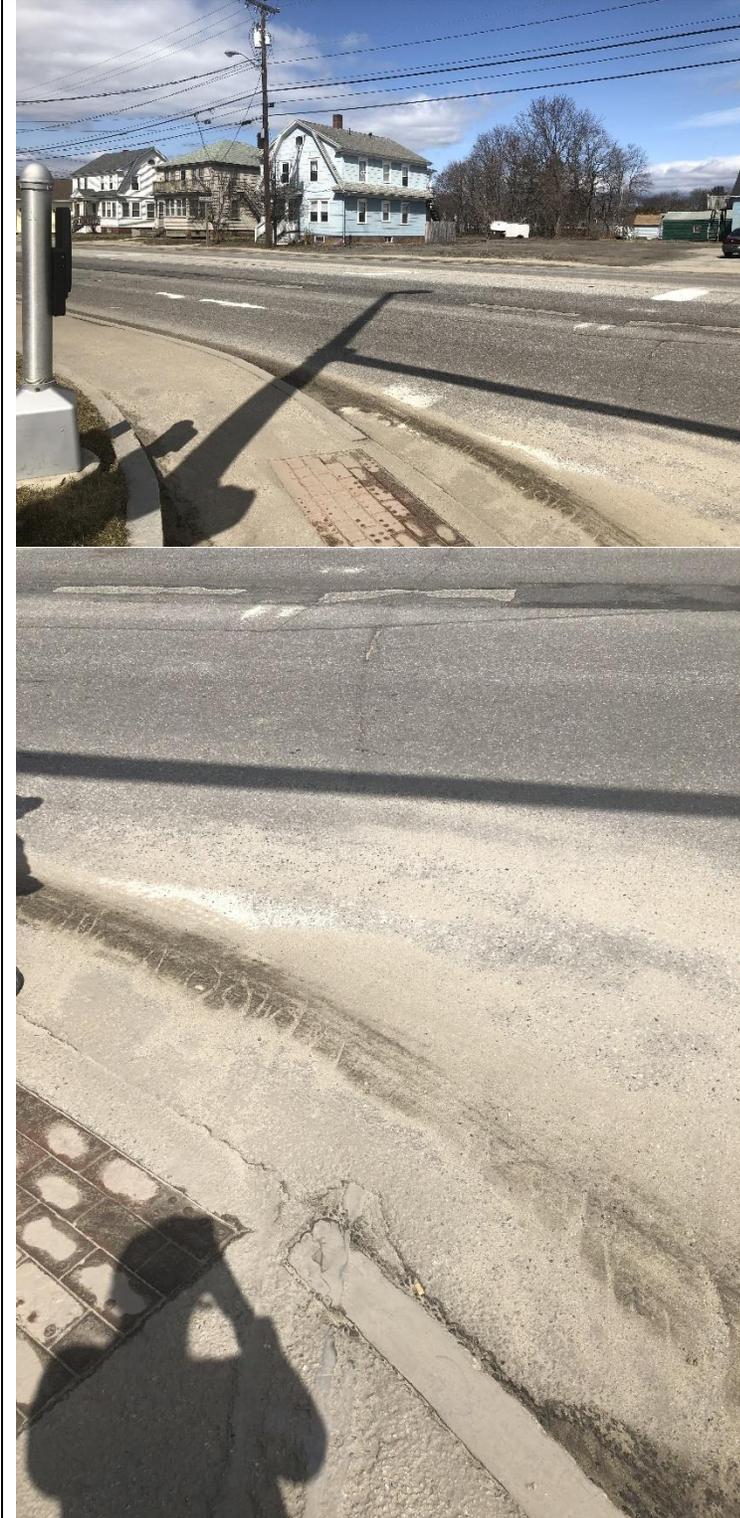
**Description:** Signalized five-lane roadway with two through-lanes and dedicated left-turn lanes, crosswalks across side streets and one leg of Sabattus Street, sidewalks on both sides



**Location:** Intersection of Sabattus Street and Fairlawn Avenue

**Description:** Pedestrian pedestal with push button

**Problem:** None



**Location:** Intersection of Sabattus Street and Fairlawn Avenue

**Description:** Crosswalk across Sabattus Street and pedestrian push button

**Problem:** Fading crosswalk markings, ruts in pavement, debris in roadway (excess dirt)



**Location:** Intersection of Sabattus Street and Furbush Street

**Description:** Four-lane roadway with sidewalks on either side, driveway access and side streets



**Location:** Intersection of Sabattus Street and Furbush Street

**Description:** Sidewalk with abutting car dealership along Sabattus Street

**Problem:** Bicyclist using sidewalks, lack of bike lanes or markings



**Location:** Intersection of Sabattus Street and Furbush Street

**Description:** Side street access to Sabattus Street with crosswalk

**Problem:** Vehicle blocking crosswalk at stop intersection on Sabattus Street



**Location:** Intersection of Sabattus Street and Furbush Street

**Description:** Crosswalk with ramp along Sabattus Street

**Problem:** No detectable warning surfaces, no pedestrian markings, signs or signals, obstructions and debris in sidewalk, not ADA compliant

|  |  |
|--|--|
|   | <p><b>Location:</b> Intersection of Sabattus Street and Hannaford</p> <p><b>Description:</b> Signalized intersection for four-lane roadway with crosswalks on three legs and sidewalks on both sides</p>     |
|  | <p><b>Location:</b> Intersection of Sabattus Street and Hannaford</p> <p><b>Description:</b> Sidewalk along Sabattus Street with granite curb</p> <p><b>Problem:</b> Obstruction in sidewalk with debris</p> |



**Location:** Intersection of Sabattus Street and Hannaford

**Description:** Sidewalk along Sabattus Street with granite curb and driveway access

**Problem:** Obstruction in sidewalk with debris, not ADA compliant



**Location:** Intersection of Sabattus Street and Old Green Road

**Description:** Skewed 4-way signalized intersection with crosswalks across all four legs and sidewalks on either side

**Problem:** Sidewalk pavement deteriorating



Source: Google Earth



**Location:** Intersection of Russell Street and College Street

**Description:** Five-lane roadway with two through-lanes and left-turn lanes, next to Bates College, sidewalk on either side and crosswalks on all four legs



**Location:** Intersection of Russell Street and College Street

**Description:** Sidewalk along Russell Street

**Problem:** Sidewalk not wide enough, not ADA compliant



**Location:** Intersection of Russell Street and Morris Avenue

**Description:** Four-lane roadway with a sidewalk on one side of the road, driveway access to Bates athletic field and facility



**Location:** Intersection of Russell Street and Morris Avenue

**Description:** Sidewalk with granite curb along Russell Street

**Problem:** Deteriorating sidewalk pavement



**Location:** Intersection of Russell Street and Morris Avenue

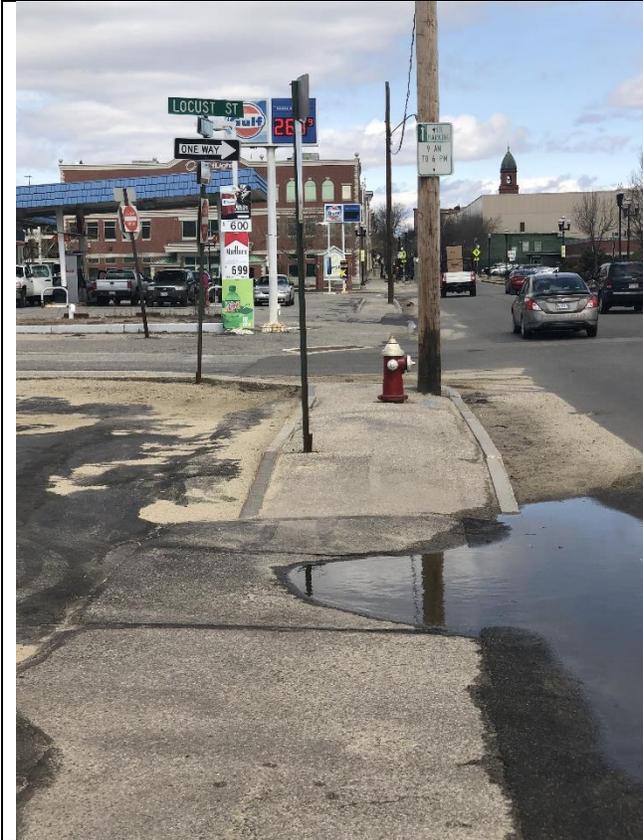
**Description:** Sidewalk and crosswalk with ramp along Russell Street

**Problem:** No detectable warning surface, obstruction in sidewalk, not ADA compliant



Source: Google Earth

|  |   |
|--|---|
|   | <p><b>Location:</b> Lisbon Street (Route 196) split near Canal Street</p> <p><b>Description:</b> One-way, two-lane street with sidewalks on either side and driveway access to local businesses</p>   |
|  | <p><b>Location:</b> Lisbon Street (Route 196) split near Canal Street</p> <p><b>Description:</b> Brick crosswalk across Lisbon Street</p> <p><b>Problem:</b> Faded cross walk markings, no pedestrian signs or signals, only one detectable warning surface</p> <p><b>Problem:</b> None</p> |



**Location:** Lisbon Street (Route 196) split near Canal Street

**Description:** Sidewalk with driveway to local business on Lisbon Street

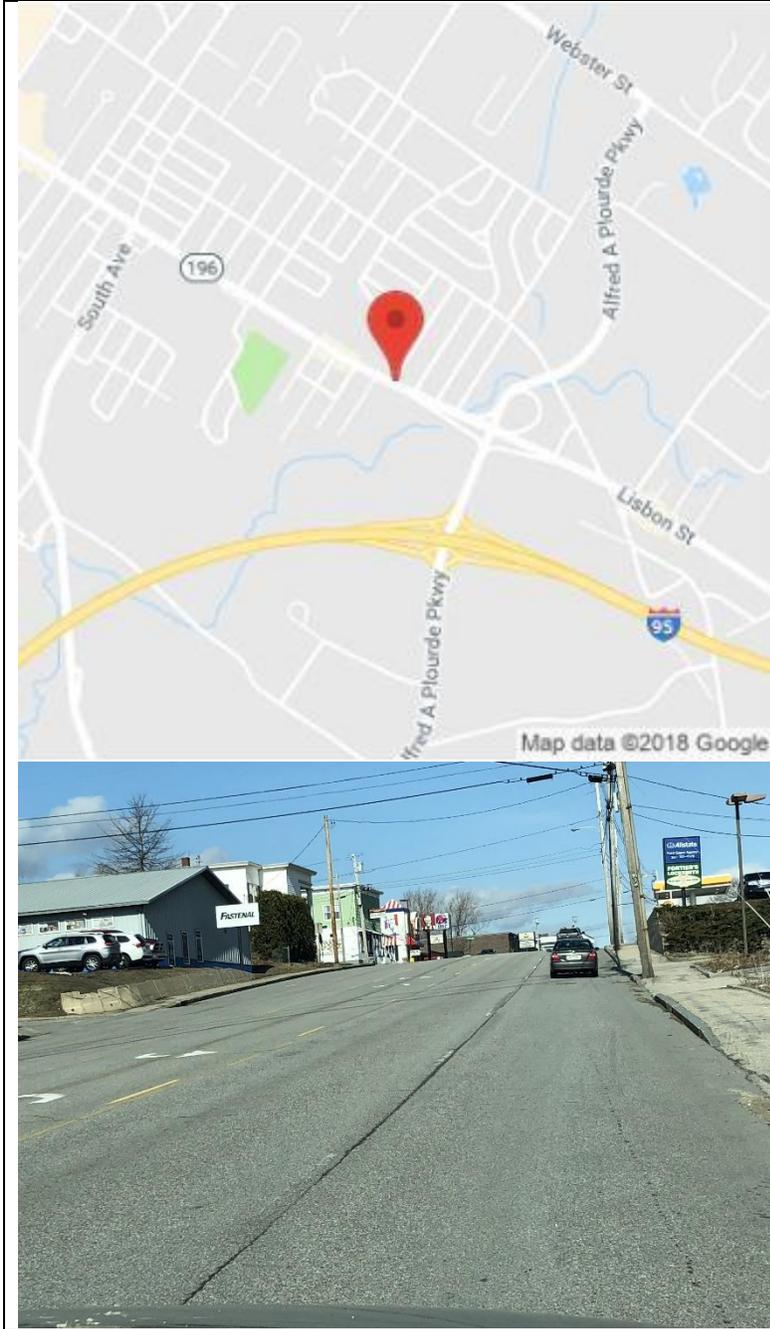
**Problem:** Drainage issues, flooded driveway



**Location:** Lisbon Street (Route 196) split near Canal Street

**Description:** Sidewalk and crosswalk across side street along Lisbon Street

**Problem:** Obstruction in sidewalk, no pedestrian or signs or signals, faded crosswalk



**Location:** Intersection of Lisbon Street and Cassell Street

**Description:** Five-lane roadway with two-lanes in each direction with a shared left-turn lane, driveway access to local businesses on both sides of roadway

**Problem:** Grades are steeper than allowable per ADA, faded pavement markings

|   |   |
|---|---|
|    | <p><b>Location:</b> Lisbon Street downtown</p> <p><b>Description:</b> Downtown Lewiston along Lisbon Street, on-street parking on both sides of roadway, large sidewalks, pedestrian plaza, and planters</p>                      |
|   | <p><b>Location:</b> Location: Lisbon Street downtown</p> <p><b>Description:</b> Bike rack</p> <p><b>Problem:</b> None</p>   |
|  | <p><b>Location:</b> Lisbon Street downtown</p> <p><b>Description:</b> Large crosswalk across Lisbon Street to Centreville Plaza with lighting</p> <p><b>Problem:</b> Faded crosswalk markings, no pedestrian signs or signals</p> |



**Location:** Lisbon Street downtown

**Description:** Pedestrian Plaza with planters

**Problem:** None



**Location:** Lisbon Street downtown

**Description:** Pedestrian area with back entrance to businesses

**Problem:** Vehicle parked in pedestrian area



**Location:** Intersection of Lisbon Street and Drew Street

**Description:** Four-lane roadway with two lanes in each direction, driveway access to businesses and side street, sidewalks on both sides of roadway

**Problem:** Bike using sidewalk, lack of bike markings/lanes on road, degrading sidewalk pavement





**Location:** Intersection of Lisbon Street and Louise Avenue

**Description:** Five-lane roadway with two lanes in each direction and one shared left-turn lane, sidewalk on both sides of roadway

**Problem:** Obstruction in sidewalk





**Location:** Close to the intersection of Lisbon Street and Scribner Boulevard

**Description:** Five-lane roadway with two-lanes in each direction and one shared left-turn lane, sidewalk on both sides of roadway and driveway access to businesses

**Problem:** Degrading sidewalk pavement, large drop-off





**Location:** Lisbon Street between intersection with Cedar Street, and intersection with Canal Street

**Description:** One-way, two-lane roadway with sidewalks on both sides, on-street parking on left side and a parking garage



**Location:** Lisbon Street between intersection with Cedar Street, and intersection with Canal Street

**Description:** Pedestrian crosswalk in front of parking entrance, trees separating sidewalk and roadway

**Problem:** No pedestrian signs or signals



**Location:** Lisbon Street between intersection with Cedar Street, and intersection with Canal Street

**Description:** Sidewalk approaching parking garage, trees separating sidewalk and roadway

**Problem:** Obstruction in sidewalk, no bike lanes, cyclist in sidewalk



**Location:** Lisbon Street between intersection with Cedar Street, and intersection with Canal Street

**Description:** Large sidewalk approaching parking garage

**Problem:** None



**Location:** Lisbon Street between intersection with Cedar Street, and intersection with Canal Street

**Description:** Crosswalk to parking area with pedestrian signs and signals

**Problem:** Faded crosswalk markings



**Location:** Intersection of Lisbon Street and Alfred A. Plourde Parkway

**Description:** Two-lane roadway under Alfred A. Plourde Parkway bridge with a sidewalk on right side

**Problem:** No bike lanes or markings



|  |   |
|--|---|
|   | <p><b>Location:</b> Intersection of Lisbon Street and South Avenue</p> <p><b>Description:</b> Five-lane roadway with two through-lanes and dedicated left-turn lanes approaching the intersection from both directions, sidewalk on both sides and pedestrian crossings on all four sides</p> |
|  | <p><b>Location:</b> Intersection of Lisbon Street and South Avenue</p> <p><b>Description:</b> Sidewalk along Lisbon Street</p> <p><b>Problem:</b> Sidewalk pavement deteriorating</p>   |



**Location:** Intersection of Lisbon Street and South Avenue

**Description:** Sidewalk along Lisbon Street

**Problem:** Frequent driveway access with no pedestrian signs, markings or signals, obstruction in sidewalk

Source: Google Earth



**Location:** Intersection of Canal Street and Cedar Street

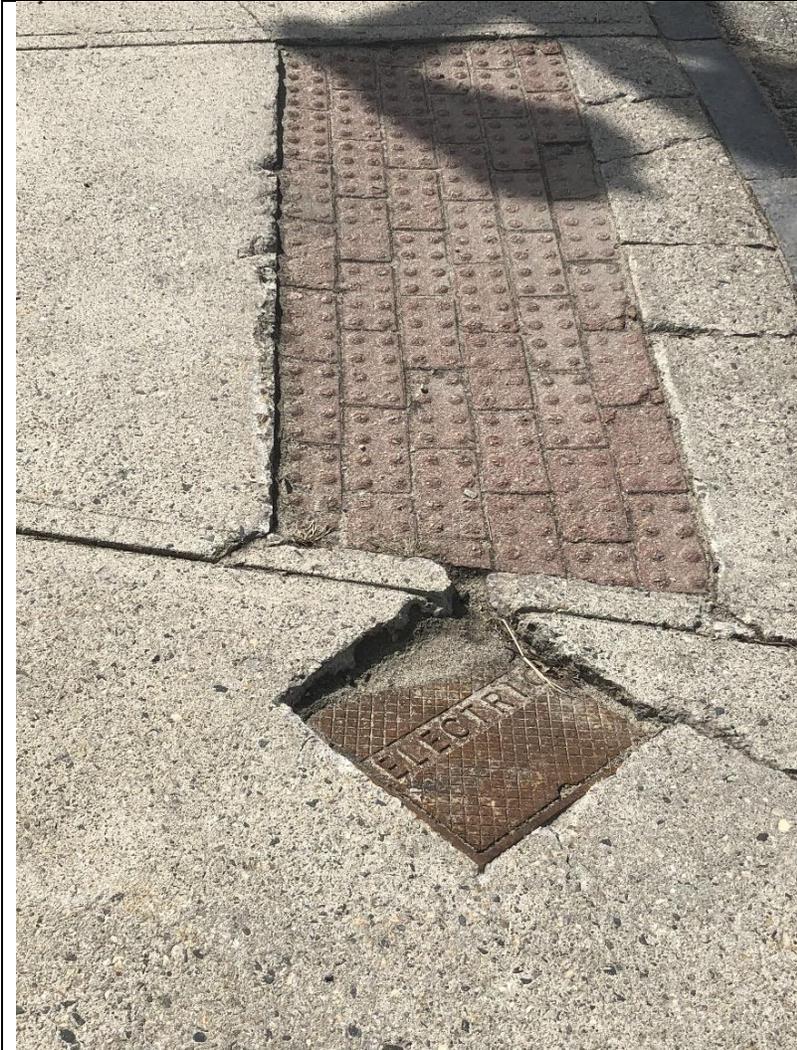
**Description:** One-way signalized T-intersection with two lanes of traffic for each movement, pedestrian crossings for all four movements



**Location:** Intersection of Canal Street and Cedar Street

**Description:** Brick sidewalk with utility poles

**Problem:** Degraded sidewalk with debris, no clear driveway signs or pedestrian markings, poles obstruct pedestrian movement, not ADA compliant



**Location:** Intersection of Canal Street and Cedar Street

**Description:** Detectable warning surface and electric utility

**Problem:** Degrading concrete sidewalk, older detectable warning surface and electric utility, depression in sidewalk from electrical utility



**Location:** Intersection of Canal Street and Cedar Street

**Description:** Pedestrian crossing across Canal Street at parking garage

**Problem:** Faded crosswalk, no pedestrian signs or signals, older detectable warning surfaces



**Location:** Intersection of Canal Street and Cedar Street

**Description:** Pedestrian crossing across Canal Street at parking garage

**Problem:** Faded crosswalk, no pedestrian signs, older detectable warning surfaces, degradation of sidewalk



**Location:** Intersection of Canal Street and Main Street downtown

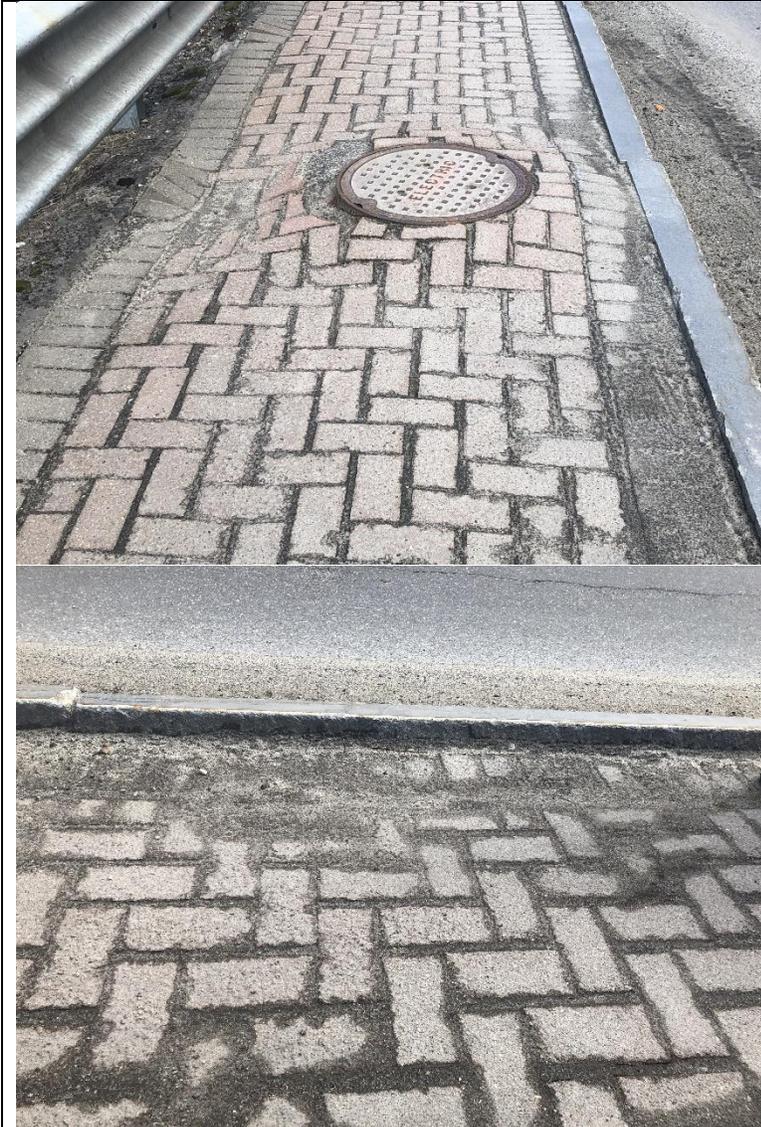
**Description:** Signalized skewed T-intersection with one-way traffic on Canal Street and two-way traffic on Main Street, pedestrian crossing across Canal Street



**Location:** Intersection of Canal Street and Main Street downtown

**Description:** Main Street brick sidewalk with guardrail

**Problem:** Degrading sidewalk



**Location:** Intersection of Canal Street and Main Street downtown

**Description:** Brick sidewalk with electrical utility, guardrail and granite curb

**Problem:** Degrading sidewalk with debris, hump developing around electric utility



**Location:** Intersection of Canal Street and Main Street downtown

**Description:** Pedestrian crossing across three movements with parking garage

**Problem:** Faded crosswalk, older/no detectable warning surfaces, no ADA ramp on one of the movements, no pedestrian signs or signals



**Location:** Intersection of Canal Street and Main Street downtown

**Description:** Pedestrian crossing in front of parking garage entrance

**Problem:** No crosswalk, no ADA ramps, no pedestrian signs or signals

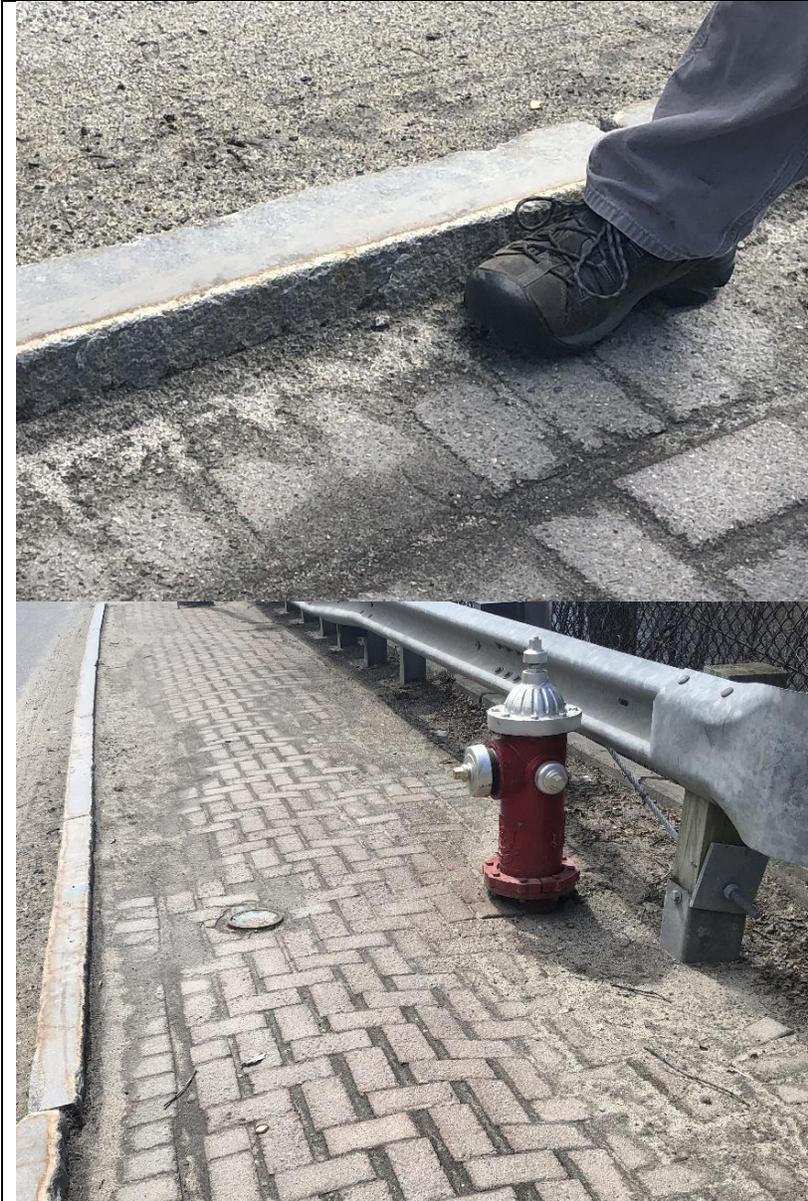


**Location:** Intersection of Canal Street and Main Street downtown

**Description:** Canal Street, one-way, on-street parking on either side

**Problem:** Lack of parking signs, excess pavement for one-way street





**Location:** Intersection of Canal Street and Main Street downtown

**Description:** Sidewalk on Canal Street with granite curb, guardrail and fire hydrant

**Problem:** Granite curb too low, degrading brick sidewalk, obstruction in sidewalk



**Location:** Intersection of Canal Street and Main Street downtown

**Description:** Canal Street sidewalk with on-street parking, granite curb and planters

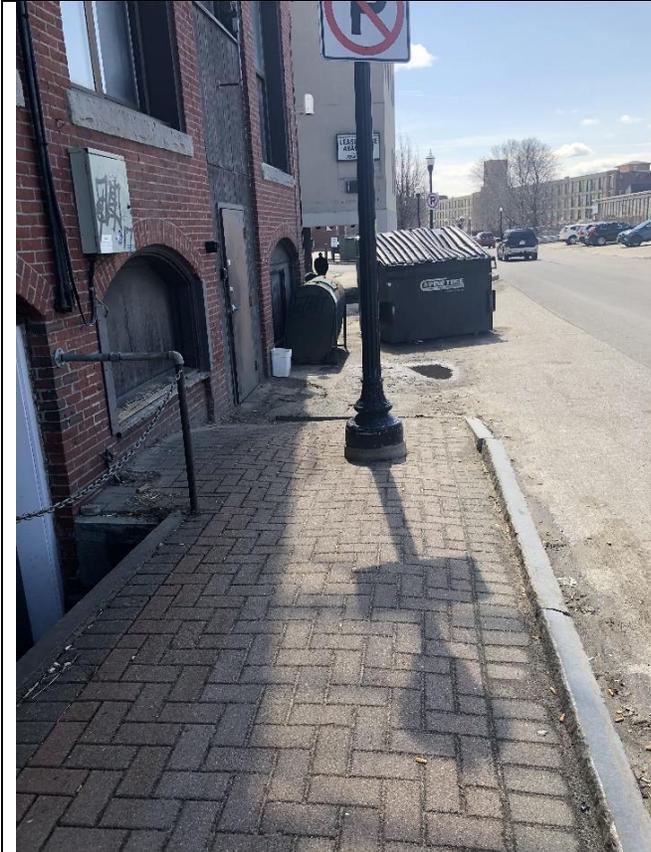
**Problem:** Obstruction in sidewalk



**Location:** Intersection of Canal Street and Main Street downtown

**Description:** Canal Street brick sidewalk with driveway, no on-street parking

**Problem:** Degrading sidewalk with debris, obstruction in sidewalk, low granite curb where a ramp should be, no clear driveway markings



**Location:** Intersection of Canal Street and Main Street downtown

**Description:** Canal Street brick sidewalk with driveway

**Problem:** Obstruction in sidewalk, no detectable warning surfaces, obstruction in driveway, no pedestrian signs or signals



**Location:** Intersection of Canal Street and Main Street downtown

**Description:** Canal Street brick sidewalk with exposed utility pole

**Problem:** Exposed utility pole in sidewalk

|  |   |
|--|---|
|   | <p><b>Location:</b> Split of Canal Street and Route 196 (Lisbon Street)</p> <p><b>Description:</b> Merge onto Route 196 to a four-lane arterial, left-turn lane onto Route 196 heading downtown</p>   |
|  | <p><b>Location:</b> Split of Canal Street and Route 196 (Lisbon Street)</p> <p><b>Description:</b> Asphalt sidewalk along Canal Street with driveway access to local business</p> <p><b>Problem:</b> Degrading sidewalk, no separation between sidewalk and parking for local business, obstruction in sidewalk</p> |



**Location:** Split of Canal Street and Route 196 (Lisbon Street)

**Description:** Sidewalk along Canal Street prior to Route 196 merge with mast arm

**Problem:** Mast arm obstruction in sidewalk



**Location:** Split of Canal Street and Route 196 (Lisbon Street)

**Description:** Crosswalk at the intersection of Canal Street and Maple Street

**Problem:** Degrading sidewalk and detectable warning surface, no detectable warning surface on opposite side, no crosswalk markings, no pedestrian signs or signals



**Location:** Split of Canal Street and Route 196 (Lisbon Street)

**Description:** Asphalt sidewalk along Canal Street with driveway access to local business

**Problem:** Cracks in sidewalk, no clear pedestrians markings, signs or signals, no parking lot separation from sidewalk, no detectable warning surfaces, obstruction in sidewalk



**Location:** Split of Canal Street and Route 196 (Lisbon Street)

**Description:** Brick sidewalk along Canal Street at merge into Route 196

**Problem:** Vehicle obstructing sidewalk



**Location:** Split of Canal Street and Route 196 (Lisbon Street)

**Description:** Canal Street sidewalk with separation from roadway and planters

**Problem:** None

# **Appendix B**

## **Transit**



Home > Programs > Transit- citylink Bus System > Maps and Schedules > 1 Main Street

- 1 Main Street
- 2 Sabattus Street
- 3 Lisbon Street
- 4 New Auburn
- 5 Minot Avenue
- 6 College Street
- 7 Auburn Malls
- 8 Mall Shuttle
- 9 Downtown Shuttle
- Saturday Service

## 1 Main Street

### 1 main street

| L            | B            | C                 | D             | J           | E             | D             | F              | F              | G                    | H            | I           | L           |
|--------------|--------------|-------------------|---------------|-------------|---------------|---------------|----------------|----------------|----------------------|--------------|-------------|-------------|
| Oak Street   | CMMC         | Market Place Mall | Career Center | Maine Motel | Geiger School | Career Center | Arrive Mardens | Depart Mardens | River Valley Village | Canal Plaza  | Hampton Inn | Oak Street  |
| 6:00         | 6:02         | 6:04              | 6:08          | 6:14        | -             | -             | -              | 6:19           | 6:21                 | -            | -           | 6:27        |
| 6:30         | 6:32         | 6:34              | 6:38          | 6:42        | -             | -             | -              | 9:49           | 6:51                 | -            | -           | 6:57        |
| 7:15         | 7:19         | 7:21              | 7:23          | 7:24        | 7:34          | 7:37          | 7:38           | 7:48           | 7:50                 | 7:58         | 8:00        | 8:05        |
| 8:15         | 8:19         | 8:21              | 8:23          | -           | 8:30          | 8:33          | 8:34           | 8:48           | 8:50                 | 8:58         | 9:00        | 9:05        |
| 9:15         | 9:19         | 9:21              | 9:23          | -           | 9:30          | 9:33          | 9:34           | 9:48           | 9:50                 | 9:58         | 10:00       | 10:05       |
| 10:15        | 10:19        | 10:21             | 10:23         | -           | 10:30         | 10:33         | 10:34          | 10:48          | 10:50                | 10:58        | 11:00       | 11:05       |
| 11:15        | 11:19        | 11:21             | 11:23         | -           | 11:30         | 11:33         | 11:34          | 11:48          | 11:50                | 11:58        | 12:00       | 12:05       |
| <b>12:15</b> | <b>12:19</b> | <b>12:21</b>      | 12:23         | -           | 12:30         | <b>12:33</b>  | <b>12:34</b>   | <b>12:48</b>   | <b>12:50</b>         | <b>12:58</b> | <b>1:00</b> | <b>1:05</b> |
| <b>1:15</b>  | <b>1:19</b>  | <b>1:21</b>       | 1:23          | -           | 1:30          | <b>1:33</b>   | <b>1:34</b>    | <b>1:48</b>    | <b>1:50</b>          | <b>1:58</b>  | <b>2:00</b> | <b>2:05</b> |
| <b>2:15</b>  | <b>2:19</b>  | <b>2:21</b>       | 2:23          | -           | 2:30          | <b>2:33</b>   | <b>2:34</b>    | <b>2:48</b>    | <b>2:50</b>          | <b>2:58</b>  | <b>3:00</b> | <b>3:05</b> |
| <b>3:15</b>  | <b>3:19</b>  | <b>3:21</b>       | 3:23          | <b>D</b>    | 3:30          | <b>3:33</b>   | <b>3:34</b>    | <b>3:48</b>    | <b>3:50</b>          | <b>3:58</b>  | <b>4:00</b> | <b>4:05</b> |
| <b>4:15</b>  | <b>4:19</b>  | <b>4:21</b>       | 4:23          | <b>D</b>    | <b>4:30</b>   | <b>4:33</b>   | <b>4:34</b>    | <b>4:48</b>    | <b>4:50</b>          | <b>4:58</b>  | <b>5:00</b> | <b>5:05</b> |
| <b>5:15</b>  | <b>5:19</b>  | <b>5:21</b>       | 5:23          | -           | 5:30          | <b>5:33</b>   | <b>5:34</b>    | <b>5:48</b>    | <b>5:50</b>          | <b>5:58</b>  | <b>6:00</b> | <b>6:05</b> |

D Stop on request only to drop off passengers.

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### Route Description

**1 – Main Street bus route:** Depart Oak Street Bus Station, Oak Street, turn left onto Bates Street turn right onto Main Street,

A. (6:00 and 6:30 AM) – ... continue Main Street turn right onto Mollison Way, turn left onto Fair Street, turn left onto College Street, turn left onto Montello Street, turn right onto Fair Street, turn right onto Mollison Way, turn right onto Main Street, turn left onto Deer Road, turn left onto McArthur Avenue, turn left onto Nimitz Street, turn right onto Main Street right, turn right onto Northwood Road, turn right into Marden’s parking lot. From Marden’s parking lot exit onto Northwood Road, turn right, turn left onto Tall Pine Drive, turn right onto Strawberry Avenue, turn right onto Main Street, turn left onto Park Street, turn left onto Oak Street, arrive at Oak Street bus station.

B. (7:00 AM, 3:15 and 4:15 PM route deviation) - ... continue on Main Street, turn right onto Mollison Way, turn left onto Fair Street, turn left onto College Street, turn left onto Montello Street, turn right onto Fair Street, turn right onto Mollison Way, turn right onto Main Street, turn left onto Deer Road, turn left onto McArthur Avenue, turn left onto Nimitz Street, turn right onto Main Street, turn left onto Stetson Road, turn right onto College Street, turn left into Geiger School. Depart Geiger School, turn left onto College Street, turn right onto Montello Street, turn right onto Fair Street, turn right onto Mollison Way, turn right onto Main Street, turn left onto Northwood Road, turn right into Marden’s parking lot. From Marden’s parking lot exit onto Northwood Road, turn right, turn left onto Tall Pine Drive, turn right onto Strawberry Avenue, turn right onto Main Street, turn left onto Canal Street, turn right on to Cedar Street, turn right onto Lincoln Street, turn right onto Main Street, turn right onto Park Street, turn left onto Oak Street, arrive at Oak Street bus station.

C Depart Oak Street Bus Station, Oak Street, turn left onto Bates Street, turn right onto Main Street, turn left onto Hammond Street, turn right onto High Street, turn left onto Main Street, turn right onto Mollison Way, turn left onto Fair Street, turn left onto College Street, turn left onto Montello Street, turn right onto Fair Street, turn right onto Mollison Way, turn right onto Main Street, turn right onto Stetson Road, turn right onto College Street, turn left into Geiger School. Depart Geiger School, turn left onto College Street, turn right onto Montello Street, turn right onto Fair Street, turn right onto Mollison Way, turn right onto Main Street, turn left onto Northwood Road, turn right into Marden’s parking lot. From Marden’s parking lot exit onto Northwood Road, turn right, turn left onto Tall Pine Drive, turn right onto Strawberry Avenue, turn right onto Main Street, turn left onto Canal Street, turn right on to Cedar Street, turn right onto Lincoln Street, turn right onto Main Street, turn right onto Park Street, turn left onto Oak Street, arrive at Oak Street bus station.

\* On-demand service to Maine Motel on the 3:15 PM and 4:15 PM run.



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- 1 Main Street
- 2 Sabattus Street
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- 5 Minot Avenue
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- 7 Auburn Malls
- 8 Mall Shuttle
- 9 Downtown Shuttle
- Saturday Service >

## 2 Sabattus Street

### 2 sabattus street

| L            | B                | C            | D            | E            | C            | F               | B            | L           |
|--------------|------------------|--------------|--------------|--------------|--------------|-----------------|--------------|-------------|
| Oak Street   | Mary's St. Hops. | Hanna-ford   | Hill View    | Grove & Pond | Hanna-ford   | Montello School | Mary's Hosp. | Oak Street  |
| 6:00         | 6:05             | -            | -            | 6:15         | 6:20         | -               | 6:23         | 6:27        |
| 6:30         | 6:35             | -            | -            | 6:45         | 6:50         | -               | 6:53         | 6:57        |
| 7:15         | 7:21             | 7:27         | 7:32         | 7:38         | 7:43         | 7:50            | 7:56         | 8:03        |
| 8:15         | 8:21             | 8:27         | 8:32         | 8:38         | 8:43         | 8:50            | 8:56         | 9:03        |
| 9:15         | 9:21             | 9:27         | 9:32         | 9:38         | 9:43         | 9:50            | 9:56         | 10:03       |
| 10:15        | 10:21            | 10:27        | 10:32        | 10:38        | 10:43        | 10:50           | 10:56        | 11:03       |
| 11:15        | 11:21            | 11:27        | 11:32        | 11:38        | 11:43        | 11:50           | 11:56        | 12:03       |
| <b>12:15</b> | <b>12:21</b>     | <b>12:27</b> | <b>12:32</b> | <b>12:38</b> | <b>12:43</b> | <b>12:50</b>    | <b>12:56</b> | <b>1:03</b> |
| <b>1:15</b>  | <b>1:21</b>      | <b>1:27</b>  | <b>1:32</b>  | <b>1:38</b>  | <b>1:43</b>  | <b>1:50</b>     | <b>1:56</b>  | <b>2:03</b> |
| <b>2:15</b>  | <b>2:21</b>      | <b>2:27</b>  | <b>2:32</b>  | <b>2:38</b>  | <b>2:43</b>  | <b>2:50</b>     | <b>2:56</b>  | <b>3:03</b> |
| <b>3:15</b>  | <b>3:21</b>      | <b>3:27</b>  | <b>3:32</b>  | <b>3:38</b>  | <b>3:43</b>  | <b>3:50</b>     | <b>3:56</b>  | <b>4:03</b> |
| <b>4:15</b>  | <b>4:21</b>      | <b>4:27</b>  | <b>4:32</b>  | <b>4:38</b>  | <b>4:43</b>  | <b>4:50</b>     | <b>4:56</b>  | <b>5:03</b> |
| <b>5:15</b>  | <b>5:21</b>      | <b>5:27</b>  | <b>5:32</b>  | <b>5:38</b>  | <b>5:43</b>  | <b>5:50</b>     | <b>5:56</b>  | <b>6:03</b> |

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## Route Description

### 2 – Sabattus Street bus route:

A. (6:00 and 6:30 AM) Depart Oak Street Bus Station, Bates Street, turn left onto Pine Street, turn left onto Leeds Street, turn left onto Webster Street, turn right onto Central Avenue, turn right onto Campus Avenue, turn left onto Sabattus Street, turn right onto Pond Road, turn right onto Grove Street, turn left onto Sabattus Street, turn right into Hannaford Supermarket parking lot, exit parking lot onto Highland Spring Road, turn left onto Highland Spring Road, turn right onto Sabattus Street, turn right onto Campus Avenue, turn left onto Central Avenue, proceed straight onto Ash Street, turn right onto Bates Street, turn right onto College Street, turn left onto Blake Street, turn left onto Oak Street, turn left onto Bates Street, arrive at Oak Street Bus Station.

B. Depart Oak Street Bus Station, Bates Street, turn left onto Pine Street, turn left onto Leeds Street, turn left onto Webster Street, turn right onto Central Avenue, turn right onto Campus Avenue, turn left onto Sabattus Street, turn left onto Highland Spring Road, turn right into Hannaford Supermarket parking lot, exit parking lot turning left onto Sabattus Street, turn right onto Rideout Avenue, turn right onto Fisher Avenue, turn onto Hillside Lane, turn left onto Cole Street, turn left onto Rideout Avenue, turn right onto Sabattus Street, turn right onto Pond Road, turn right onto Grove Street, turn left onto Sabattus Street, turn right into Hannaford parking lot, exit Hannaford parking lot onto Highland Spring Road, turn left, turn right onto Sabattus Street, turn right onto East Avenue, turn right into Montello Elementary School, depart Montello Elementary turning left onto East Avenue, turn right onto Sabattus Street, turn right onto Campus Avenue, turn left onto Central Avenue, proceed straight onto Ash Street, turn right onto Bates Street, turn right onto College Street, turn left onto Blake Street, turn left onto Oak Street, turn left onto Bates Street, arrive at Oak Street Bus Station.



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### 3 Lisbon Street

## 3 lisbon street

|  | L<br>Oak<br>Street | B<br>Save-A-<br>Lot | C<br>Shaw's  | D<br>Staples | E<br>South<br>Ave. | F<br>VA<br>Clinic | G<br>Motel 6 | H<br>L.A.<br>College | C<br>Shaw's  | B<br>Save-A-<br>Lot | L<br>Oak<br>Street |
|--|--------------------|---------------------|--------------|--------------|--------------------|-------------------|--------------|----------------------|--------------|---------------------|--------------------|
|  | 6:00               | -                   | -            | -            | 6:15               | -                 | -            | 6:17                 | 6:24         | 6:26                | 6:30               |
|  | 6:30               | -                   | -            | -            | 6:45               | -                 | -            | 6:47                 | 6:54         | 6:56                | 7:00               |
|  | 7:15               | 7:22                | 7:25         | 7:30         | 7:32               | 7:37              | 7:41         | 7:44                 | 7:59         | 8:00                | 8:05               |
|  | 8:15               | 8:22                | 8:25         | 8:30         | 8:32               | 8:37              | 8:41         | 8:44                 | 8:59         | 9:02                | 9:05               |
|  | 9:15               | 9:22                | 9:25         | 9:30         | 9:32               | 9:37              | 9:41         | 9:44                 | 9:59         | 10:02               | 10:05              |
|  | 10:15              | 10:22               | 10:25        | 10:30        | 10:32              | 10:37             | 10:41        | 10:44                | 10:59        | 11:02               | 11:05              |
|  | 11:15              | 11:22               | 11:25        | 11:30        | 11:32              | 11:37             | 11:41        | 11:44                | 11:59        | <b>12:02</b>        | <b>12:05</b>       |
|  | <b>12:15</b>       | <b>12:22</b>        | <b>12:25</b> | <b>12:30</b> | <b>12:32</b>       | <b>12:37</b>      | <b>12:41</b> | <b>12:44</b>         | <b>12:59</b> | <b>1:02</b>         | <b>1:05</b>        |
|  | <b>1:15</b>        | <b>1:22</b>         | <b>1:25</b>  | <b>1:30</b>  | <b>1:32</b>        | <b>1:37</b>       | <b>1:41</b>  | <b>1:44</b>          | <b>1:59</b>  | <b>2:02</b>         | <b>2:05</b>        |
|  | <b>2:15</b>        | <b>2:22</b>         | <b>2:25</b>  | <b>2:30</b>  | <b>2:32</b>        | <b>2:37</b>       | <b>2:41</b>  | <b>2:44</b>          | <b>2:59</b>  | <b>3:02</b>         | <b>3:05</b>        |
|  | <b>3:15</b>        | <b>3:22</b>         | <b>3:25</b>  | <b>3:30</b>  | <b>3:32</b>        | <b>3:37</b>       | <b>3:41</b>  | <b>3:44</b>          | <b>3:59</b>  | <b>4:02</b>         | <b>4:05</b>        |
|  | <b>4:15</b>        | <b>4:22</b>         | <b>4:25</b>  | <b>4:30</b>  | <b>4:32</b>        | <b>4:37</b>       | <b>4:41</b>  | <b>4:44</b>          | <b>4:59</b>  | <b>5:02</b>         | <b>5:05</b>        |
|  | <b>5:15</b>        | <b>5:22</b>         | <b>5:25</b>  | <b>5:30</b>  | <b>5:32</b>        | <b>5:37</b>       | <b>5:41</b>  | <b>5:44</b>          | <b>5:59</b>  | <b>6:02</b>         | <b>6:05</b>        |

## Route Description

### 3 – Lisbon Street bus route:

A. (6:00 and 6:30 AM) Depart Oak Street Bus Station, Bates Street, proceed on Bates Street, turn right onto Maple Street, turn left onto Canal Street, merge onto Lisbon Street, proceed to Westminster Street, turn left onto Westminster Street, turn right into University of Southern Maine-L/A (through campus parking lot), exit left onto Saratoga Street, turn left onto Forrestral Street, turn left onto Westminster Street, turn right onto Lexington Street, turn left onto Alfred Plourde Parkway, turn right onto Pleasant Street, turn left into Shaw's. Exit Shaw's at East Avenue entrance, proceed straight into Lewiston Mall parking lot exiting at Essex Street entrance, turning right onto Lisbon Street, turn right onto Maple Street, turn left onto Bates Street, turn right onto College Street, turn left onto Blake Street, turn left onto Oak Street, turn left onto Bates Street, arrive at Oak Street Bus Station.

B. Depart Oak Street Bus Station, Bates Street, proceed on Bates Street, turn right onto Maple Street, turn left onto Canal Street, merge onto Lisbon Street, turn left into Lewiston Mall parking lot at Essex Street, proceed through parking lot exiting on East Avenue, proceed straight to Shaw's, exit Shaw's parking lot onto Pleasant Street, turn left onto East Avenue, proceed straight into Promenade Mall (Staples), exit Promenade Mall at East Avenue entrance, turn right onto Lisbon Street, turn right onto South Avenue, turn left into US Post Office parking lot, proceed through parking lot serving FedCap, Dollar Tree and McDonald's, exit parking lot onto Lisbon Street, turn right, yield right to Exit 80/Alfred Plourde Parkway, turn right onto Challenger Drive, turn right into Veterans Administration Health Clinic, exit VA onto Challenger Drive, proceed straight onto Atlantis Way, turn left onto Goddard Road, turn left onto Alfred Plourde Parkway, turn right onto Pleasant Street, turn left onto Lisbon Street, turn left onto Westminster Street, turn right into University of Southern Maine-L/A (through campus parking lot), exit left onto Saratoga Street, turn left onto Forrestral Street turn left onto Westminster Street, turn right onto Lexington Street, turn left onto Alfred Plourde Parkway, turn right onto Pleasant Street, turn right onto Scribner Boulevard, turn left onto Ashmount Street to Pleasant View Apartments exiting on Fairmount Street, turn right onto Scribner Boulevard, turn left onto Pleasant Street, turn left into Shaw's. Exit Shaw's at East Avenue entrance, proceed straight into Lewiston Mall parking lot exiting at Essex Street entrance, turning right onto Lisbon Street, turn right onto Maple Street, turn left onto Bates Street, turn right onto College Street, turn left onto Blake Street, turn left onto Oak Street, turn left onto Bates Street, arrive at Oak Street Bus Station.

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## 4 New Auburn

### 4 new auburn

| A            | B                    | C            | D             | E             | F              | A            |              |
|--------------|----------------------|--------------|---------------|---------------|----------------|--------------|--------------|
| Great Falls  | Spring St/ Hannaford | Barker Arms  | So Main /Cook | Walton School | Dunn & 2nd St. | Roak Block   | Great Falls  |
| 7:45         | 7:47                 | 7:53         | 7:56          | 8:00          | 8:02           | 8:05         | 8:08         |
| 8:45         | 8:47                 | 8:53         | 8:56          | 9:00          | 9:02           | 9:05         | 9:08         |
| 9:45         | 9:47                 | 9:53         | 9:56          | 10:00         | 10:02          | 10:05        | 10:08        |
| 10:45        | 10:47                | 10:53        | 10:56         | 11:00         | 11:02          | 11:05        | 11:08        |
| 11:45        | 11:47                | 11:53        | 11:56         | <b>12:00</b>  | <b>12:02</b>   | <b>12:05</b> | <b>12:08</b> |
| <b>12:45</b> | <b>12:47</b>         | <b>12:53</b> | <b>12:56</b>  | <b>1:00</b>   | <b>1:02</b>    | <b>1:05</b>  | <b>1:08</b>  |
| <b>1:45</b>  | <b>1:47</b>          | <b>1:53</b>  | <b>1:56</b>   | <b>2:00</b>   | <b>2:02</b>    | <b>2:05</b>  | <b>2:08</b>  |
| <b>2:45</b>  | <b>2:47</b>          | <b>2:53</b>  | <b>2:56</b>   | <b>3:00</b>   | <b>3:02</b>    | <b>3:05</b>  | <b>3:08</b>  |
| <b>3:45</b>  | <b>3:47</b>          | <b>3:53</b>  | <b>3:56</b>   | <b>4:00</b>   | <b>4:02</b>    | <b>4:05</b>  | <b>4:08</b>  |
| <b>4:45</b>  | <b>4:47</b>          | <b>4:53</b>  | <b>4:56</b>   | <b>5:00</b>   | <b>5:02</b>    | <b>5:05</b>  | <b>5:08</b>  |

### Route Description

Depart Auburn Bus Station, exit Great Falls Plaza via Turner Street, turn right onto Turner Street, turn left Troy Street, turn left onto Spring Street, turn left onto Elm Street, turn right onto Main Street, turn right onto Mill Street to Barker Arms, turn around at Barker Arms, exist via Mill Street, turn right onto South Main Street, turn right onto Cook Street, turn right onto 8th Street, turn left onto South Main Street, turn right onto 7th Street, turn left onto Mary Carroll Street, turn left onto 6th Street, turn right onto Roak Street, turn left onto 3<sup>rd</sup> Street, turn right onto Dunn Street, turn left onto 2nd Street, turn left onto Mill Street, turn right onto Main Street, straight to Great Falls Plaza, straight to the Auburn Bus Station.

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## 5 Minot Avenue

| 5 minot avenue |              |                 |                 |              |                          |              |                          |              |
|----------------|--------------|-----------------|-----------------|--------------|--------------------------|--------------|--------------------------|--------------|
| A              | B            | C               | D               | E            | F                        | E            | A                        |              |
| Great Falls    | Hanna- ford  | Minot & Western | Western & Court | ELHS         | Bedard's/ Minot & Poland | Health South | Bedard's/ Minot & Poland | Great Falls  |
| 8:15           | 8:17         | 8:20            | 8:22            | 8:24         | 8:26                     | 8:31         | 8:36                     | 8:40         |
| 9:15           | 9:17         | 9:20            | 9:22            | 9:24         | 9:26                     | 9:31         | 9:36                     | 9:40         |
| 10:15          | 10:17        | 10:20           | 10:22           | 10:24        | 10:26                    | 10:31        | 10:36                    | 10:40        |
| 11:15          | 11:17        | 11:20           | 11:22           | 11:24        | 11:26                    | 11:31        | 11:36                    | 11:40        |
| <b>12:15</b>   | <b>12:17</b> | <b>12:20</b>    | <b>12:22</b>    | <b>12:24</b> | <b>12:26</b>             | <b>12:31</b> | <b>12:36</b>             | <b>12:40</b> |
| <b>1:15</b>    | <b>1:17</b>  | <b>1:20</b>     | <b>1:22</b>     | <b>1:24</b>  | <b>1:26</b>              | <b>1:31</b>  | <b>1:36</b>              | <b>1:40</b>  |
| <b>2:15</b>    | <b>2:17</b>  | <b>2:20</b>     | <b>2:22</b>     | <b>2:24</b>  | <b>2:26</b>              | <b>2:31</b>  | <b>2:36</b>              | <b>2:40</b>  |
| <b>3:15</b>    | <b>3:17</b>  | <b>3:20</b>     | <b>3:22</b>     | <b>3:24</b>  | <b>3:26</b>              | <b>3:31</b>  | <b>3:36</b>              | <b>3:40</b>  |
| <b>4:15</b>    | <b>4:17</b>  | <b>4:20</b>     | <b>4:22</b>     | <b>4:24</b>  | <b>4:26</b>              | <b>4:31</b>  | <b>4:36</b>              | <b>4:40</b>  |
| <b>5:15</b>    | <b>5:17</b>  | <b>5:20</b>     | <b>5:22</b>     | <b>5:24</b>  | <b>5:26</b>              | <b>5:31</b>  | <b>5:36</b>              | <b>5:40</b>  |

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## Route Description

### 5 – Minot Avenue bus route:

Depart Auburn Bus Station, exit Great Falls Plaza via Turner Street entrance, turn right onto Turner Street, turn left onto Troy Street, turn left onto Spring Street, turn right onto Elm Street, turn left onto Minot Avenue, turn right onto Western Avenue, turn right onto Court Street, turn right onto Harris Street, turn right onto Edgehill Avenue, turn right onto Auburn Heights, turn left onto Western Avenue, turn right onto Minot Avenue, turn left onto Hotel Road, turn left onto Rodman Road, turn left onto Manley Road, turn right into Rite Aid/Health South entrance, proceed behind Rite Aid exiting right onto Minot Avenue, turn right onto Elm Street, turn left onto Spring Street, turn right onto Hampshire Street, proceed straight to Great Falls Plaza, turn left to Auburn Bus Station.

# citylink



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## 6 College Street

### 6 college street

| L<br>Oak<br>Street | B<br>Bates<br>College | D<br>Wal-<br>Mart | E<br>Auburn<br>Mall | F<br>Shaw's | G<br>K-Mart | H<br>Auburn<br>Plaza | I<br>CMCC | D<br>Wal-<br>Mart | B<br>Bates<br>College | L<br>Oak<br>Street |
|--------------------|-----------------------|-------------------|---------------------|-------------|-------------|----------------------|-----------|-------------------|-----------------------|--------------------|
| 6:15               | 6:19                  | 6:30              | 6:33                | 6:35        | 6:37        | 6:40                 | 6:45      | 7:00              | 7:02                  | 7:05               |
| 7:15               | 7:19                  | 7:30              | 7:33                | 7:35        | 7:37        | 7:40                 | 7:45      | 8:00              | 8:02                  | 8:05               |
| 8:15               | 8:19                  | 8:30              | 8:33                | 8:35        | 8:37        | 8:40                 | 8:45      | 9:00              | 9:02                  | 9:05               |
| 9:15               | 9:19                  | 9:30              | 9:33                | 9:35        | 9:37        | 9:40                 | 9:45      | 10:00             | 10:02                 | 10:05              |
| 10:15              | 10:19                 | 10:30             | 10:33               | 10:35       | 10:37       | 10:40                | 10:45     | 11:00             | 11:02                 | 11:05              |
| 11:15              | 11:19                 | 11:30             | 11:33               | 11:35       | 11:37       | 11:40                | 11:45     | 12:00             | 12:02                 | 12:05              |
| 12:15              | 12:19                 | 12:30             | 12:33               | 12:35       | 12:37       | 12:40                | 12:45     | 1:00              | 1:02                  | 1:05               |
| 1:15               | 1:19                  | 1:30              | 1:33                | 1:35        | 1:37        | 1:40                 | 1:45      | 2:00              | 2:02                  | 2:05               |
| 2:15               | 2:19                  | 2:30              | 2:33                | 2:35        | 2:37        | 2:40                 | 2:45      | 3:00              | 3:02                  | 3:05               |
| 3:15               | 3:19                  | 3:30              | 3:33                | 3:35        | 3:37        | 3:40                 | 3:45      | 4:00              | 4:02                  | 4:05               |
| 4:15               | 4:19                  | 4:30              | 4:33                | 4:35        | 4:37        | 4:40                 | 4:45      | 5:00              | 5:02                  | 5:05               |
| 5:15               | 5:19                  | 5:30              | 5:33                | 5:35        | 5:37        | 5:40                 | 5:45      | 6:00              | 6:02                  | 6:05               |

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## Route Description

### 6 – College Street bus route:

Depart Oak Street Bus Station (to Auburn), Bates Street, turn left onto College Street, turn left onto Russell Street, proceed across Veteran's Memorial Bridge to Auburn onto Mount Auburn Avenue, turn left onto Turner Street, turn right into Wal-Mart parking lot, proceed to bus stop at Wal-Mart.

Depart Wal-Mart (to Lewiston), via Turner Street parking lot entrance, turn right through round-about, exiting Turner Street northerly, turn right onto Mount Auburn Avenue, proceed across Veteran's Memorial Bridge into Lewiston onto Russell Street, turn right onto College Street, turn right onto Blake Street, turn left onto Oak Street, turn left onto Bates Street, arrive at Oak Street Bus Station.

# citylink

## 7 Auburn Malls

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| 7 auburn malls |                |                  |                  |          |                  |                  |                |             |
|----------------|----------------|------------------|------------------|----------|------------------|------------------|----------------|-------------|
| A              | B              | C                | J                | D        | J                | C                | B              | A           |
| Great Falls    | Webster School | Towne House Apts | Auburn Mall Apts | Wal-Mart | Auburn Mall Apts | Towne House Apts | Webster School | Great Falls |
| 8:15           | 8:18           | 8:23             | 8:27             | 8:30     | 8:32             | 8:35             | 8:38           | 8:45        |
| 9:15           | 9:18           | 9:23             | 9:27             | 9:30     | 9:32             | 9:35             | 9:38           | 9:45        |
| 10:15          | 10:18          | 10:23            | 10:27            | 10:30    | 10:32            | 10:35            | 10:38          | 10:45       |
| 11:15          | 11:18          | 11:23            | 11:27            | 11:30    | 11:32            | 11:35            | 11:38          | 11:45       |
| 12:15          | 12:18          | 12:23            | 12:27            | 12:30    | 12:32            | 12:35            | 12:38          | 12:45       |
| 1:15           | 1:18           | 1:23             | 1:27             | 1:30     | 1:32             | 1:35             | 1:38           | 1:45        |
| 2:15           | 2:18           | 2:23             | 2:27             | 2:30     | 2:32             | 2:35             | 2:38           | 2:45        |
| 3:15           | 3:18           | 3:23             | 3:27             | 3:30     | 3:32             | 3:35             | 3:38           | 3:45        |
| 4:15           | 4:18           | 4:23             | 4:27             | 4:30     | 4:32             | 4:35             | 4:38           | 4:45        |
| 5:15           | 5:18           | 5:23             | 5:27             | 5:30     | 5:32             | 5:35             | 5:38           | 5:45        |

## Route Description

### 7 – Auburn Malls bus route:

Depart Auburn Bus Station, exit Great Falls Plaza via Turner Street entrance, turn right onto Turner Street, turn left onto Troy Street, turn right onto Hampshire Street, turn right onto Gamage Avenue, turn right onto Dennison Street, turn left onto Turner Street, turn right onto Lake Auburn Avenue, turn left onto Center Street, turn left onto Alpha Street, turn right onto University Street, turn left onto Aron Drive, turn right onto Dany Drive, turn left onto Plummer Street, turn right onto Turner Street, enter round-about, exit third right to Wal-Mart.

Depart Wal-Mart exiting parking lot via Turner Street, enter round-about, exiting first right southerly on Turner Street, turn left onto Plummer Street, turn right onto Dany Drive, turn left onto Aron Drive, turn right onto University Street, turn left onto Alpha Street, turn right onto Center Street, turn right onto Lake Auburn Avenue, turn left onto Turner Street, turn right onto Dennison Street, turn left onto Gamage Avenue, turn left onto Hampshire Street, straight to Great Falls Plaza, turn left to Auburn Bus Station.



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## 8 Mall Shuttle

| 8 mall shuttle    |                     |             |             |                      |           |                   |
|-------------------|---------------------|-------------|-------------|----------------------|-----------|-------------------|
| D<br>Wal-<br>Mart | E<br>Auburn<br>Mall | F<br>Shaw's | G<br>K-Mart | H<br>Auburn<br>Plaza | I<br>CMCC | D<br>Wal-<br>Mart |
| 6:30              | 6:33                | 6:35        | 6:37        | 6:40                 | 6:45      | 6:55              |
| 7:30              | 7:33                | 7:35        | 7:37        | 7:40                 | 7:45      | 7:55              |
| 8:30              | 8:33                | 8:35        | 8:37        | 8:40                 | 8:45      | 8:55              |
| 9:30              | 9:33                | 9:35        | 9:37        | 9:40                 | 9:45      | 9:55              |
| 10:30             | 10:33               | 10:35       | 10:37       | 10:40                | 10:45     | 10:55             |
| 11:30             | 11:33               | 11:35       | 11:37       | 11:40                | 11:45     | 11:55             |
| 12:30             | 12:33               | 12:35       | 12:37       | 12:40                | 12:45     | 12:55             |
| 1:30              | 1:33                | 1:35        | 1:37        | 1:40                 | 1:45      | 1:55              |
| 2:30              | 2:33                | 2:35        | 2:37        | 2:40                 | 2:45      | 2:55              |
| 3:30              | 3:33                | 3:35        | 3:37        | 3:40                 | 3:45      | 3:55              |
| 4:30              | 4:33                | 4:35        | 4:37        | 4:40                 | 4:45      | 4:55              |
| 5:30              | 5:33                | 5:35        | 5:37        | 5:40                 | 5:45      | 5:55              |

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## Route Description

**8 – Mall Shuttle bus route:** Depart Wal-Mart via Mount Auburn Avenue parking lot entrance, proceed straight to Kohl's, turn right (towards Lamey Wellehan), proceed through round-about exiting second right to Auburn Mall, turn left to Goodwill, turn left to go around westerly end of the Auburn Mall, turn right, proceed in along northerly side of the Auburn Mall, turn left to proceed into Shaw's plaza parking lot, exit via northerly parking lot entrance, proceed straight across Center Street into the K-Mart parking lot. After stopping at K-Mart, exit the parking lot via the northerly entrance, turning right onto Center Street, turn left into Auburn Plaza (stops at Dollar Store, Big Lots, and Hoyt Cinema), exit parking lot turning left onto Joline Drive, turn right onto Turner Street, turn left into Central Maine Community College. Depart Central Maine Community College, turn right onto Turner Street, enter round-about, turn at first right to Kohl's, turn left, straight to traffic light at Mount Auburn Avenue, straight to Wal-Mart.



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## 9 Downtown Shuttle

### Schedule

| 9 downtown shuttle  |                  |               |                    |              |                    |                     |
|---------------------|------------------|---------------|--------------------|--------------|--------------------|---------------------|
| A<br>Great<br>Falls | Spring<br>Street | Roak<br>Block | L<br>Oak<br>Street | CMMC         | L<br>Oak<br>Street | A<br>Great<br>Falls |
| 7:45                | 7:47             | 7:53          | 7:58               | 8:03         | 8:08               | 8:10                |
| 8:45                | 8:47             | 8:53          | 8:58               | 9:03         | 9:08               | 9:10                |
| 9:45                | 9:47             | 9:53          | 9:58               | 10:03        | 10:08              | 10:10               |
| 10:45               | 10:47            | 10:53         | 10:58              | 11:03        | 11:08              | 11:10               |
| 11:45               | 11:47            | 11:53         | 11:58              | <b>12:03</b> | <b>12:08</b>       | <b>12:10</b>        |
| <b>12:45</b>        | <b>12:47</b>     | <b>12:53</b>  | <b>12:58</b>       | <b>1:03</b>  | <b>1:08</b>        | <b>1:10</b>         |
| <b>1:45</b>         | <b>1:47</b>      | <b>1:53</b>   | <b>1:58</b>        | <b>2:03</b>  | <b>2:08</b>        | <b>2:10</b>         |
| <b>2:45</b>         | <b>2:47</b>      | <b>2:53</b>   | <b>2:58</b>        | <b>3:03</b>  | <b>3:08</b>        | <b>3:10</b>         |
| <b>3:45</b>         | <b>3:47</b>      | <b>3:53</b>   | <b>3:58</b>        | <b>4:03</b>  | <b>4:08</b>        | <b>4:10</b>         |
| <b>4:45</b>         | <b>4:47</b>      | <b>4:53</b>   | <b>4:58</b>        | <b>5:03</b>  | <b>5:08</b>        | <b>5:10</b>         |

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### Route Description

#### 9 – Downtown Shuttle bus route:

Depart Auburn Bus Station, exit Great Falls Plaza via Turner Street entrance, turn right onto Turner Street, turn left onto Troy Street, turn left onto Spring Street, turn left onto Elm Street, turn left onto Main Street, turn right onto Court Street, proceed across Longley Bridge to Lewiston onto Main Street, turn right onto Park Street, turn left onto Oak Street, arrive at Oak Street Bus Station.

Depart Oak Street Bus Station, turn left onto Bates Street, turn right onto Main Street, turn left onto Hammond Street, turn right onto High Street, turn right onto Main Street, turn left onto Park Street, turn left onto Oak Street, arrive at Oak Street Bus Station.

Depart Bus Station, turn right onto Bates Street, turn right onto Ash Street, turn right onto Lisbon Street, turn left onto Main Street, proceed across Longley Bridge to Auburn, turn right into Great Falls Plaza, proceed straight to Auburn Bus Station.

**Appendix C**  
**Cost Breakdown**

| Corridor              | Intersection  | Improvement   |                                    |                                   |                          |                    |                       |                     | Costs        |              |              |                   |                    |                          |              | Intersection          | Corridor  |
|-----------------------|---|---------------|------------------------------------|-----------------------------------|--------------------------|--------------------|-----------------------|---------------------|--------------|--------------|--------------|-------------------|--------------------|--------------------------|--------------|-----------------------|---|
|                       |   | ADA Quadrants | Rectangular Rapid Flashing Beacons | Passive Pedestrian Detection Sign | APS Push Button and Sign | Signage & Striping | Protected Turn Signal | Check Signal Timing | Other        | Cost         | Contingency  | Construction Cost | Design Engineering | Construction Engineering | Total Cost   |                       |   |
|                       | Cost  | \$ 5,000.00   | \$ 10,000.00                       | \$ 10,000.00                      | \$ 2,000.00              | \$ 500.00          | \$ 1,000.00           | \$ 1,000.00         | 1            |              | 15%          |                   | 10%                | 12%                      |              | Cost                  |   |
| Main Street           | at Lincoln Street   | 4             | -                                  | -                                 | 6                        | 1                  | 1                     | 1                   | \$ 30,000.00 | \$ 64,500.00 | \$ 9,675.00  | \$ 74,175.00      | \$ 7,417.50        | \$ 8,901.00              | \$ 90,493.50 | \$ 100,000.00         | at Lincoln Street   |
|                       | at Canal Street   | 2             | -                                  | 2                                 | 2                        | 1                  | -                     | 1                   | \$ 10,000.00 | \$ 45,500.00 | \$ 6,825.00  | \$ 52,325.00      | \$ 5,232.50        | \$ 6,279.00              | \$ 63,836.50 | \$ 70,000.00          | at Canal Street   |
|                       | at Lisbon Street  | 2             | -                                  | -                                 | 2                        | 1                  | -                     | 1                   | \$ 10,000.00 | \$ 25,500.00 | \$ 3,825.00  | \$ 29,325.00      | \$ 2,932.50        | \$ 3,519.00              | \$ 35,776.50 | \$ 40,000.00          | at Lisbon Street  |
|                       | at Middle Street  | 4             | -                                  | -                                 | 8                        | 1                  | -                     | 1                   | \$ 30,000.00 | \$ 67,500.00 | \$ 10,125.00 | \$ 77,625.00      | \$ 7,762.50        | \$ 9,315.00              | \$ 94,702.50 | \$ 100,000.00         | at Middle Street  |
|                       | at Bates Street   | 4             | -                                  | -                                 | 4                        | 1                  | -                     | 1                   | -            | \$ 29,500.00 | \$ 4,425.00  | \$ 33,925.00      | \$ 3,392.50        | \$ 4,071.00              | \$ 41,388.50 | \$ 50,000.00          | at Bates Street   |
|                       | at CMMC   | -             | -                                  | -                                 | -                        | -                  | -                     | -                   | \$ 20,000.00 | \$ 20,000.00 | \$ 3,000.00  | \$ 23,000.00      | \$ 2,300.00        | \$ 2,760.00              | \$ 28,060.00 | \$ 30,000.00          | at CMMC   |
|                       | at High Street  | 4             | -                                  | -                                 | 8                        | 1                  | -                     | 1                   | -            | \$ 37,500.00 | \$ 5,625.00  | \$ 43,125.00      | \$ 4,312.50        | \$ 5,175.00              | \$ 52,612.50 | \$ 60,000.00          | at High Street  |
|                       | at Frye Street  | -             | -                                  | -                                 | -                        | -                  | -                     | -                   | -            | \$ -         | \$ -         | \$ -              | \$ -               | \$ -                     | \$ -         | \$ -                  | at Frye Street  |
|                       | at Russell Street   | -             | -                                  | -                                 | -                        | -                  | -                     | -                   | -            | \$ -         | \$ -         | \$ -              | \$ -               | \$ -                     | \$ -         | \$ -                  | at Russell Street   |
|                       | at Russell Street   | -             | -                                  | -                                 | -                        | -                  | -                     | -                   | -            | \$ -         | \$ -         | \$ -              | \$ -               | \$ -                     | \$ -         | \$ -                  | at Russell Street   |
|                       | at Strawberry   | -             | -                                  | -                                 | -                        | -                  | -                     | -                   | -            | \$ -         | \$ -         | \$ -              | \$ -               | \$ -                     | \$ -         | \$ -                  | at Strawberry   |
|                       | at Mollison Way   | -             | -                                  | -                                 | -                        | 1                  | -                     | -                   | -            | \$ 500.00    | \$ 75.00     | \$ 575.00         | \$ 57.50           | \$ 69.00                 | \$ 701.50    | \$ 1,000.00           | at Mollison Way   |
|                       | near Switzerland Road                                       | -             | -                                  | -                                 | -                        | -                  | -                     | -                   | -            | \$ -         | \$ -         | \$ -              | \$ -               | \$ -                     | \$ -         | \$ -                  | near Switzerland Road                                       |
|                       | at Mountain Street  | 3             | 2                                  | -                                 | -                        | 1                  | -                     | -                   | -            | \$ 35,500.00 | \$ 5,325.00  | \$ 40,825.00      | \$ 4,082.50        | \$ 4,899.00              | \$ 49,806.50 | \$ 50,000.00          | at Mountain Street  |
| at Landry Road        | 2   | 2             | -                                  | -                                 | 1                        | -                  | -                     | -                   | \$ 30,500.00 | \$ 4,575.00  | \$ 35,075.00 | \$ 3,507.50       | \$ 4,209.00        | \$ 42,791.50             | \$ 50,000.00 | at Landry Road        |   |
| at Marden's *         | 2   | 2             | -                                  | -                                 | 1                        | -                  | -                     | -                   | \$ 30,500.00 | \$ 4,575.00  | \$ 35,075.00 | \$ 3,507.50       | \$ 4,209.00        | \$ 42,791.50             | \$ 50,000.00 | at Marden's           |   |
| Sabattus Street       | at Main Street  | 4             | -                                  | -                                 | 8                        | 1                  | -                     | 1                   | -            | \$ 37,500.00 | \$ 5,625.00  | \$ 43,125.00      | \$ 4,312.50        | \$ 5,175.00              | \$ 52,612.50 | \$ 60,000.00          | at Main Street  |
|                       | at Oak/Bartlett Street                                      | 5             | 2                                  | -                                 | -                        | 1                  | -                     | -                   | -            | \$ 45,500.00 | \$ 6,825.00  | \$ 52,325.00      | \$ 5,232.50        | \$ 6,279.00              | \$ 63,836.50 | \$ 70,000.00          | at Oak/Bartlett Street                                      |
|                       | at College/Horton Street                                    | -             | -                                  | -                                 | -                        | -                  | -                     | -                   | -            | \$ -         | \$ -         | \$ -              | \$ -               | \$ -                     | \$ -         | \$ -                  | at College/Horton Street                                    |
|                       | at Howe/Wood Street   | 4             | 2                                  | -                                 | -                        | 1                  | -                     | -                   | -            | \$ 40,500.00 | \$ 6,075.00  | \$ 46,575.00      | \$ 4,657.50        | \$ 5,589.00              | \$ 56,821.50 | \$ 60,000.00          | at Howe/Wood Street   |
|                       | at Central Avenue, Webster/Ash Street                       | -             | -                                  | -                                 | -                        | -                  | -                     | -                   | -            | \$ -         | \$ -         | \$ -              | \$ -               | \$ -                     | \$ -         | \$ -                  | at Central Avenue, Webster/Ash Street                       |
|                       | at Lafayette Street, Sylvan/Campus Avenue                   | -             | -                                  | -                                 | -                        | -                  | -                     | -                   | -            | \$ -         | \$ -         | \$ -              | \$ -               | \$ -                     | \$ -         | \$ -                  | at Lafayette Street, Sylvan/Campus Avenue                   |
|                       | at East Avenue  | -             | -                                  | -                                 | -                        | -                  | -                     | -                   | -            | \$ -         | \$ -         | \$ -              | \$ -               | \$ -                     | \$ -         | \$ -                  | at East Avenue  |
|                       | at Russell Street   | -             | -                                  | -                                 | -                        | -                  | -                     | -                   | -            | \$ -         | \$ -         | \$ -              | \$ -               | \$ -                     | \$ -         | \$ -                  | at Russell Street   |
|                       | East of Lauier Street                                       | -             | -                                  | -                                 | -                        | 1                  | -                     | -                   | -            | \$ 500.00    | \$ 75.00     | \$ 575.00         | \$ 57.50           | \$ 69.00                 | \$ 701.50    | \$ 1,000.00           | East of Lauier Street                                       |
|                       | at Bradford Street  | -             | -                                  | -                                 | -                        | -                  | -                     | -                   | -            | \$ -         | \$ -         | \$ -              | \$ -               | \$ -                     | \$ -         | \$ -                  | at Bradford Street  |
|                       | at Wildwood Drive   | -             | -                                  | -                                 | -                        | -                  | -                     | -                   | -            | \$ -         | \$ -         | \$ -              | \$ -               | \$ -                     | \$ -         | \$ -                  | at Wildwood Drive   |
|                       | at Randall Road   | -             | -                                  | -                                 | -                        | -                  | -                     | -                   | -            | \$ -         | \$ -         | \$ -              | \$ -               | \$ -                     | \$ -         | \$ -                  | at Randall Road   |
|                       | at Temple   | -             | -                                  | -                                 | -                        | -                  | -                     | -                   | -            | \$ -         | \$ -         | \$ -              | \$ -               | \$ -                     | \$ -         | \$ -                  | at Temple   |
|                       | at Fairlawn Avenue and Farewell Street                      | 4             | -                                  | -                                 | 8                        | 1                  | -                     | 1                   | -            | \$ 37,500.00 | \$ 5,625.00  | \$ 43,125.00      | \$ 4,312.50        | \$ 5,175.00              | \$ 52,612.50 | \$ 60,000.00          | at Fairlawn Avenue and Farewell Street                      |
| Russell Street        | at East Avenue  | -             | -                                  | -                                 | -                        | 1                  | 1                     | 1                   | -            | \$ 2,500.00  | \$ 375.00    | \$ 2,875.00       | \$ 287.50          | \$ 345.00                | \$ 3,507.50  | \$ 4,000.00           | at East Avenue  |
|                       | at Central Avenue   | -             | -                                  | -                                 | -                        | 1                  | -                     | 1                   | -            | \$ 1,500.00  | \$ 225.00    | \$ 1,725.00       | \$ 172.50          | \$ 207.00                | \$ 2,104.50  | \$ 3,000.00           | at Central Avenue   |
|                       | at Lewiston Variety II (Midblock Crossing)                  | -             | -                                  | -                                 | -                        | -                  | -                     | -                   | -            | \$ -         | \$ -         | \$ -              | \$ -               | \$ -                     | \$ -         | \$ -                  | at Lewiston Variety II (Midblock Crossing)                  |
|                       | at College Street   | -             | -                                  | -                                 | -                        | 1                  | -                     | 1                   | -            | \$ 1,500.00  | \$ 225.00    | \$ 1,725.00       | \$ 172.50          | \$ 207.00                | \$ 2,104.50  | \$ 3,000.00           | at College Street   |
|                       | at Lafayette Street   | 3             | 2                                  | -                                 | -                        | 1                  | -                     | -                   | -            | \$ 35,500.00 | \$ 5,325.00  | \$ 40,825.00      | \$ 4,082.50        | \$ 4,899.00              | \$ 49,806.50 | \$ 50,000.00          | at Lafayette Street   |
| Lisbon Street         | at Ash Street   | -             | -                                  | -                                 | -                        | 1                  | -                     | 1                   | -            | \$ 1,500.00  | \$ 225.00    | \$ 1,725.00       | \$ 172.50          | \$ 207.00                | \$ 2,104.50  | \$ 3,000.00           | at Ash Street   |
|                       | Between Ash Street and Pine Street (Midblock Crossing)      | -             | -                                  | -                                 | -                        | 1                  | -                     | -                   | -            | \$ 500.00    | \$ 75.00     | \$ 575.00         | \$ 57.50           | \$ 69.00                 | \$ 701.50    | \$ 1,000.00           | Between Ash Street and Pine Street (Midblock Crossing)      |
|                       | at Pine Street  | -             | -                                  | -                                 | -                        | 1                  | -                     | 1                   | -            | \$ 1,500.00  | \$ 225.00    | \$ 1,725.00       | \$ 172.50          | \$ 207.00                | \$ 2,104.50  | \$ 3,000.00           | at Pine Street  |
|                       | Between Pine Street and Chestnut Street (Midblock Crossing) | -             | -                                  | -                                 | -                        | 1                  | -                     | -                   | -            | \$ 500.00    | \$ 75.00     | \$ 575.00         | \$ 57.50           | \$ 69.00                 | \$ 701.50    | \$ 1,000.00           | Between Pine Street and Chestnut Street (Midblock Crossing) |
|                       | at Chestnut Street  | -             | -                                  | -                                 | -                        | 1                  | -                     | 1                   | -            | \$ 1,500.00  | \$ 225.00    | \$ 1,725.00       | \$ 172.50          | \$ 207.00                | \$ 2,104.50  | \$ 3,000.00           | at Chestnut Street  |
|                       | at Spruce Street  | -             | -                                  | -                                 | -                        | 1                  | -                     | -                   | -            | \$ 500.00    | \$ 75.00     | \$ 575.00         | \$ 57.50           | \$ 69.00                 | \$ 701.50    | \$ 1,000.00           | at Spruce Street  |
|                       | at Cedar Street   | -             | -                                  | -                                 | -                        | 1                  | -                     | -                   | -            | \$ 500.00    | \$ 75.00     | \$ 575.00         | \$ 57.50           | \$ 69.00                 | \$ 701.50    | \$ 1,000.00           | at Cedar Street   |
|                       | Between Cedar Street and Maple Street (Midblock Crossing)   | -             | -                                  | -                                 | -                        | 1                  | -                     | -                   | -            | \$ 500.00    | \$ 75.00     | \$ 575.00         | \$ 57.50           | \$ 69.00                 | \$ 701.50    | \$ 1,000.00           | Between Cedar Street and Maple Street (Midblock Crossing)   |
|                       | at Maple Street   | -             | -                                  | -                                 | -                        | 1                  | -                     | -                   | -            | \$ 500.00    | \$ 75.00     | \$ 575.00         | \$ 57.50           | \$ 69.00                 | \$ 701.50    | \$ 1,000.00           | at Maple Street   |
|                       | at Locust Street  | -             | -                                  | -                                 | -                        | 1                  | -                     | -                   | -            | \$ 500.00    | \$ 75.00     | \$ 575.00         | \$ 57.50           | \$ 69.00                 | \$ 701.50    | \$ 1,000.00           | at Locust Street  |
|                       | at Essex Street   | -             | -                                  | -                                 | -                        | -                  | -                     | -                   | -            | \$ -         | \$ -         | \$ -              | \$ -               | \$ -                     | \$ -         | \$ -                  | at Essex Street   |
|                       | at East Avenue  | -             | -                                  | -                                 | -                        | -                  | -                     | -                   | -            | \$ -         | \$ -         | \$ -              | \$ -               | \$ -                     | \$ -         | \$ -                  | at East Avenue  |
|                       | at South Avenue   | 4             | -                                  | -                                 | 4                        | 1                  | -                     | -                   | -            | \$ 28,500.00 | \$ 4,275.00  | \$ 32,775.00      | \$ 3,277.50        | \$ 3,933.00              | \$ 39,985.50 | \$ 40,000.00          | at South Avenue   |
|                       | at St. Croix Street   | 4             | -                                  | -                                 | 4                        | 1                  | -                     | -                   | -            | \$ 28,500.00 | \$ 4,275.00  | \$ 32,775.00      | \$ 3,277.50        | \$ 3,933.00              | \$ 39,985.50 | \$ 40,000.00          | at St. Croix Street   |
| at Scribner Boulevard | 4   | -             | -                                  | 4                                 | 1                        | -                  | -                     | -                   | \$ 28,500.00 | \$ 4,275.00  | \$ 32,775.00 | \$ 3,277.50       | \$ 3,933.00        | \$ 39,985.50             | \$ 40,000.00 | at Scribner Boulevard |   |
| at Webber Street      | 4   | 2             | -                                  | -                                 | 1                        | -                  | 1                     | -                   | \$ 41,500.00 | \$ 6,225.00  | \$ 47,725.00 | \$ 4,772.50       | \$ 5,727.00        | \$ 58,224.50             | \$ 60,000.00 | at Webber Street      |   |
| at Jones Avenue       | 4   | 2             | -                                  | -                                 | 1                        | -                  | 1                     | -                   | \$ 41,500.00 | \$ 6,225.00  | \$ 47,725.00 | \$ 4,772.50       | \$ 5,727.00        | \$ 58,224.50             | \$ 60,000.00 | at Jones Avenue       |   |
| Canal Street          | at Ash Street   | 3             | -                                  | -                                 | -                        | 1                  | -                     | -                   | -            | \$ 15,500.00 | \$ 2,325.00  | \$ 17,825.00      | \$ 1,782.50        | \$ 2,139.00              | \$ 21,746.50 | \$ 30,000.00          | at Ash Street   |
|                       | at Pine Street  | 2             | -                                  | -                                 | -                        | 1                  | -                     | -                   | -            | \$ 10,500.00 | \$ 1,575.00  | \$ 12,075.00      | \$ 1,207.50        | \$ 1,449.00              | \$ 14,731.50 | \$ 20,000.00          | at Pine Street  |
|                       | at Chestnut Street Bridge                                   | -             | -                                  | -                                 | -                        | 1                  | -                     | 1                   | -            | \$ 1,500.00  | \$ 225.00    | \$ 1,725.00       | \$ 172.50          | \$ 207.00                | \$ 2,104.50  | \$ 3,000.00           | at Chestnut Street Bridge                                   |
|                       | at Cedar Street Bridge                                      | 2             | -                                  | -                                 | -                        | 1                  | -                     | 1                   | -            | \$ 11,500.00 | \$ 1,725.00  | \$ 13,225.00      | \$ 1,322.50        | \$ 1,587.00              | \$ 16,134.50 | \$ 20,000.00          | at Cedar Street Bridge                                      |
|                       | at Maple Street   | -             | 2                                  | -                                 | -                        | 1                  | -                     | -                   | -            | \$ 20,500.00 | \$ 3,075.00  | \$ 23,575.00      | \$ 2,357.50        | \$ 2,829.00              | \$ 28,761.50 | \$ 30,000.00          | at Maple Street   |
| at Parking Garage     | 2   | 2             | -                                  | -                                 | 1                        | -                  | -                     | -                   | \$ 30,500.00 | \$ 4,575.00  | \$ 35,075.00 | \$ 3,507.50       | \$ 4,209.00        | \$ 42,791.50             | \$ 50,000.00 | at Parking Garage     |   |

\*Cross connections are not included in this cost.

**Appendix D**  
**ADA Details**

**NOTES:**

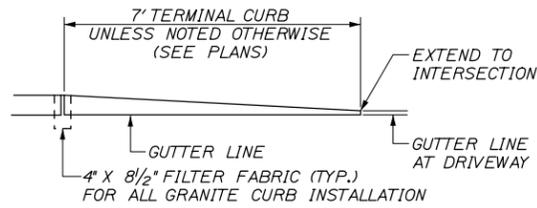
1. DETECTABLE WARNING DEVICES SHALL BE NEW CAST IRON AND SHALL HAVE A NATURAL FINISH.

2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MAINE D.O.T. CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A GROOVED EDGE BETWEEN THE PANEL AND CONCRETE, ALONG WITH A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.

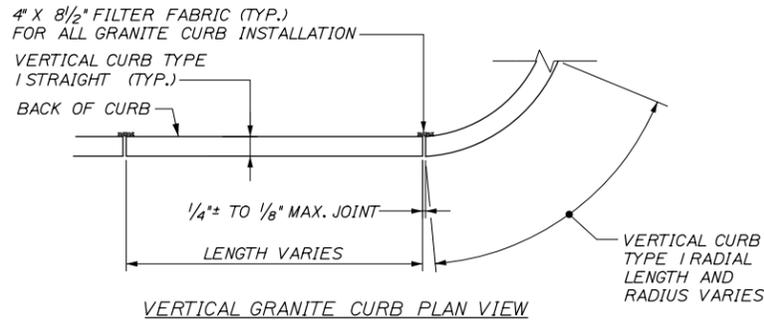
3. TRUNCATED DOMES SHALL BE ALIGNED IN ROWS, PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. TRUNCATED DOME BRICKS AND GRANITE PAVERS ARE NOT ALLOWED.

4. SIZE: THE DETECTABLE WARNING DEVICE SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION TO THE STREET.

5. ORIENTATION: THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.



**TERMINAL CURB PROFILE**



**VERTICAL GRANITE CURB PLAN VIEW**

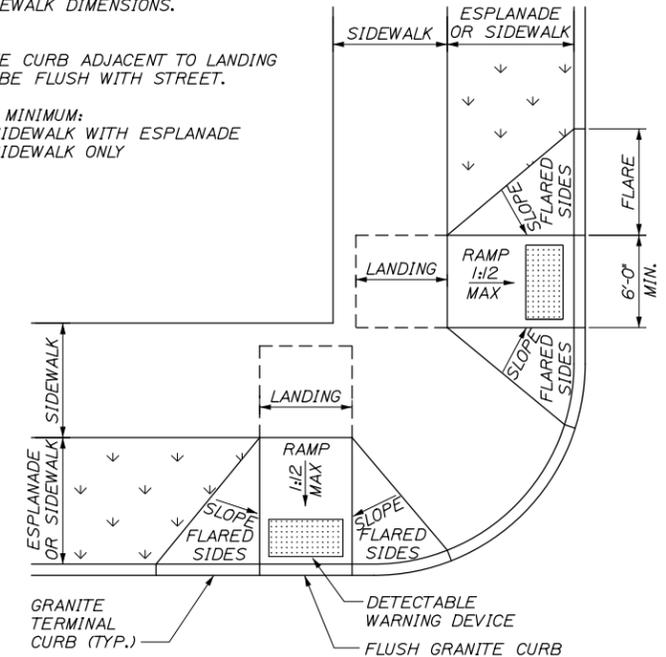
**NOTES:**

ALL RAMPS SHALL COMPLY WITH ADA STANDARDS.

LANDING AREA MAY BE REQUIRED BASED ON SIDEWALK DIMENSIONS.

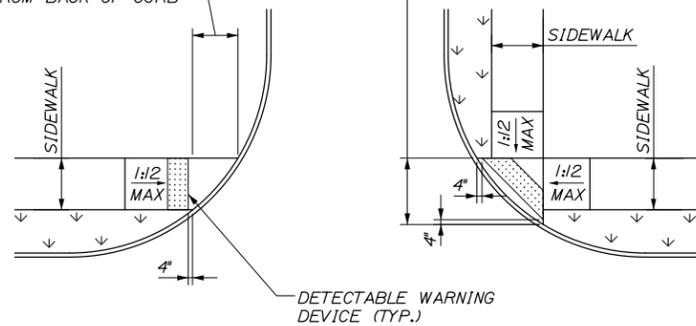
GRANITE CURB ADJACENT TO LANDING SHALL BE FLUSH WITH STREET.

FLARE MINIMUM:  
4'-0" - SIDEWALK WITH ESPLANADE  
7'-0" - SIDEWALK ONLY

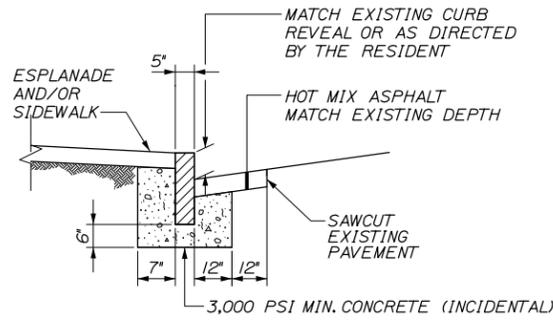


**PERPENDICULAR RAMP LAYOUT**

BOTH ENDS OF THE BOTTOM GRADE BREAK ARE LESS THAN 5' FROM BACK OF CURB

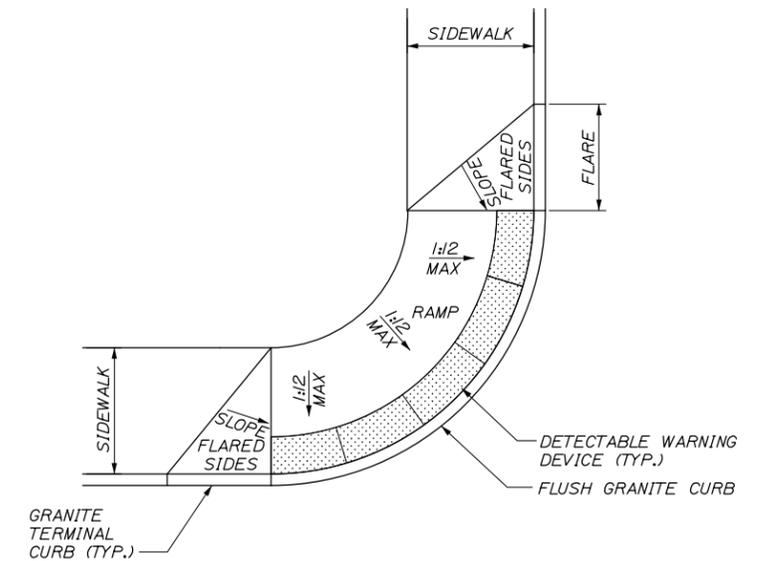


**SIDEWALK RAMP DETECTABLE WARNING FIELD**



**VERTICAL GRANITE CURB CROSS SECTION**

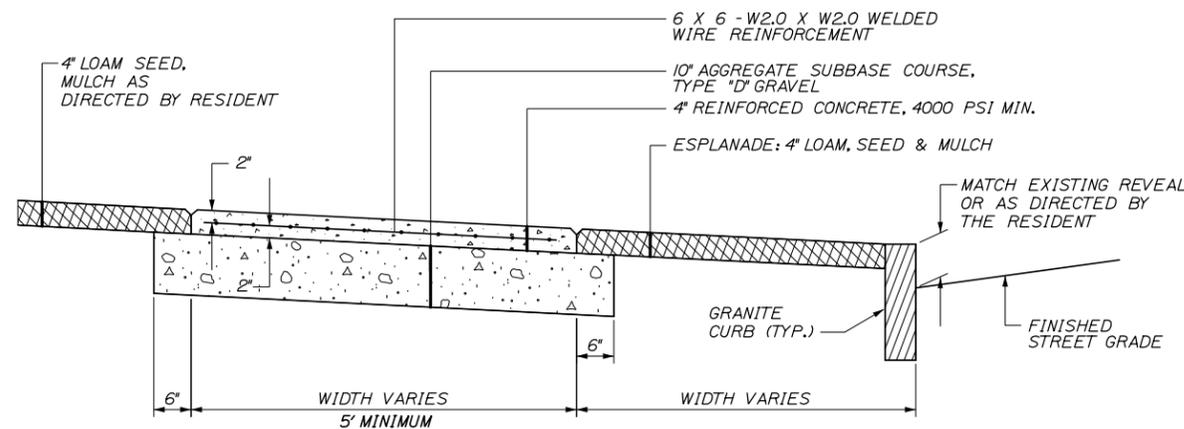
**VERTICAL GRANITE CURB INSTALLATION IN EXISTING STREETS**



**BLENDED RAMP LAYOUT**



**PHOTO OF DWF INSTALLATION**



**REINFORCED CONCRETE SIDEWALK**

**Appendix E**  
**Additional Pedestrian**  
**Crossings Evaluated**



**Date:**

February 19, 2019  
(Revision of 11/1/2018 Memo)

**To**

City of Lewiston

**Project  
Correspondence**

**From**

HNTB

**Subject**

Lincoln Street at Oxford Street Evaluation

The crossings at Lincoln Street at Oxford Street are shown in Figures 1 and 2 below. The intersection is a four-way unsignalized intersection with three crossings, one crossing on the major street and two on the side streets. The side streets are stop controlled (Oxford Street) and the major street is free (Lincoln Street), with sidewalks and on street parking on both sides. The intersection serves as a bus stop for the Martel School and is surrounded by a mixture of single-family housing and apartment buildings. There are no public transit routes that pass through the intersection; the closest bus routes are the Main Street Loop and Lisbon Street Loop.

Within the last three years there are no recorded crashes at the intersection, pedestrian or vehicle. The intersection roughly 750 feet north of Cedar Street and Lincoln, however, is considered a high crash location. Based on the existing data and conditions, it is recommended that the upgraded signage, ADA improvements and detectable warning tiles be implemented at the intersection to improve pedestrian safety. These improvements will cost roughly \$30,000 to implement.



Figure 1 – Basilica Aerial



Figure 2 – Basilica Street View

**Date:**

February 19, 2019  
(Revision of 11/1/2018 Memo)

**Project  
Correspondence**

**To**  
City of Lewiston

**From**  
HNTB

**Subject**  
Basilica of Saints Peter and Paul Crossing Evaluation



The Basilica of Saints Peter and Paul crossing are shown in Figures 1 and 2 below. This midblock crossing was recently upgraded as shown in Figure 2 the picture to the right. The crossing is located on Bartlet Street between Ash Street and College Street, that providing a safe crossing from the parking lot to the Basilica of Saints Peter and Paul Church. The surrounding area is a mixture of single family housing, apartments and businesses. There is access to all five bus city link bus loops routes which are identified in Section 4, Figure 4.1 in the body of this report the Lewiston Pedestrian Crossing Study. The routes include the; Main Street, Sabattus Street, Lisbon Street, College Street and the Downtown Shuttle loops. There is also easy access to the Oak Street. Bus Station, which serves as the central hub for public transportation. Within the last three years, there are no recorded crashes, pedestrian or vehicle, at the crossing.

Because the crossing is used at very specific times of day with large quantities numbers of people, and because site distance is more than adequate at this location, beacons are not necessary for the current crossing use. If the church would like to place the signs with Rectangular Rapid Flashing Beacons (RRFBs), these could be added without detriment to safety. No additional improvements are recommended at this time.

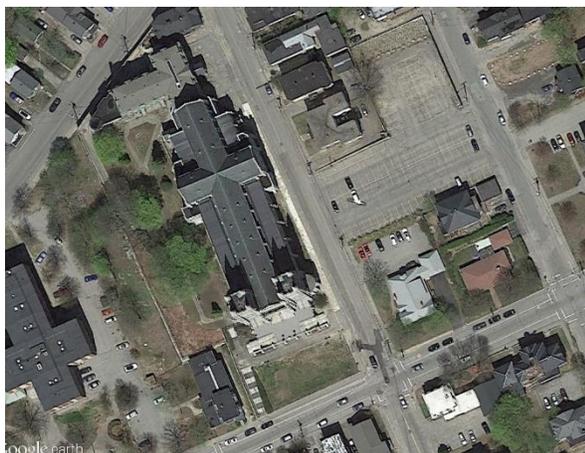


Figure 1 – Basilica Aerial



Figure 2 – Basilica Street View

**Date:**

February 19, 2019  
(Revision of 1/14/2019 Memo)

**To**  
City of Lewiston



**Project  
Correspondence**

**From**  
HNTB

**Subject**  
Lincoln Street, River Road and South Avenue Bus Stop Evaluation

This potential new crossing is located at the intersection of Lincoln Street, River Road and South Avenue as shown in Figures 1 and 2. The surrounding area is a mix of single- family housing, small businesses and industrial. While there is no City bus route that passes through this corridor, it does have an existing school bus pick up location. Within the last three years, there have been four recorded crashes in the area of the Lincoln Street, River Road and South Avenue intersection. Two of the crashes resulted in property damage only, and two crashes resulted in an injury. No crashes resulted in a fatality nor did they involved a bicycle/pedestrian.

The additions of aA crossing with flashing beacons, striping, pedestrian signage and ADA compliant landings are recommended for the school bus stop location at the intersection of Lincoln Street, River Road and South Avenue. While adding a crosswalk to this location is not ideal due to estimated vehicular speeds, every effort should be taken to make the intersection safe. Overall a planning level cost of improvements would be approximately \$35,000.



Figure 1 – Intersection Aerial



Figure 2 – Intersection Street View

**Date:**

February 19, 2019  
(Revision of 1/11/2019 Memo)

**To**

City of Lewiston



**From**

HNTB

**Project Correspondence**

**Subject**

Franco Center Crossing Evaluation

The proposed location of the Franco Center crossing is shown in Figures 1 and 2 below. The potential new crossing is located on Oxford Street, from the parking lot to the Franco Center side entrance shown in Figure 2. The surrounding area is a mixture of single- family housing, apartments and businesses. There is access to one bus loop identified in Section 4, Ffigure 4.1 of this report; the Main Street loop. There is also easy access to a bus stop along the Main Street loop close to the Franco Center, and which is within a mile of the Oak Street Bus Station, which serveings as the central hub for public transportation. Within the last three years, there are no recorded crashes, pedestrian or vehicle, at the crossing potential new crossing location. However, there have been eight8 recorded crashes south of the new crossing location at the intersection of Oxford and Cedar Street, one involving a pedestrian, and one crash north of the new crossing at the Grace Street Recovery Services business.

Striping with proper pedestrian signage and full ADA compliaaince is recommended for the new crossing between the parking lot and the Franco Center. Because of the low volume on Oxford Street, a Rectangular Rapid Flashing Beacon (RRFB) is likely not necessary at this time. Overall a planning level cost of improvements, includng design, construction and contingency, would be approximately \$20,000.



Figure 1 – Franco Center Aerial

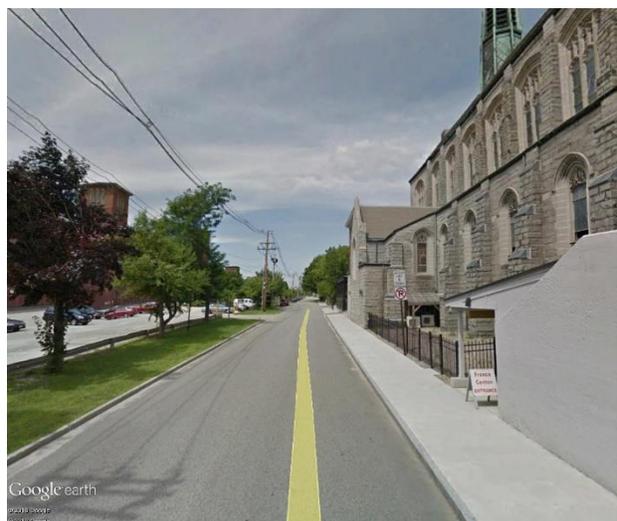


Figure 2 – Franco Center Street View