

Rutland City
Killington Avenue Sidewalk Extension
Scoping Study
Alternatives



Submitted by:

Broadreach Planning & Design

In conjunction with

Lamoureux & Dickinson Consulting Engineers

Heritage Landscapes LLC

University of Vermont Consulting Archaeology Program

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INTRODUCTION

1. OVERVIEW

This study is examining the most appropriate ways to create a complete sidewalk on at least one side of Killington Avenue between S. Main Street and Stratton Road. **Figure B-1** shows the location of the Study Area around Killington Avenue in Rutland City that is the focus of this study.

The new sidewalks on the north side of Killington Avenue in Rutland City extend east from S. Main Street to Butterfly Avenue, with a small, old section of sidewalk on the east side of Butterfly Avenue. The sidewalk extends east from S. Main Street on the south side of Killington Avenue to just west of Lafayette Street. There is also a shorter, isolated section of sidewalk on the south side of Killington Avenue between Lafayette Street and Butterfly Avenue. There are no sidewalks east of Butterfly Avenue on either side of Killington Avenue, other than the short, old section.

The City organized a Steering Committee of local elected officials, citizens, and City and regional planning commission staff. After circulating a Request for Proposals, the City selected a consulting team consisting of Broadreach Planning & Design, Lamoureux & Dickinson, Heritage Landscapes LLC and the University of Vermont Consulting Archeology Program (the BRPD Team) to assist them with the project.

This summary report is the second product of the work of the Steering Committee and the BRPD Team. The summary describes the various alternatives that were initially considered or are still under consideration. The BRPD Team formatted the report for double-sided printing; blank pages are intentional.

2. PURPOSE AND NEED

The purpose of the extension of sidewalks on Killington Avenue is to provide better pedestrian connections to the existing City sidewalk system for the residents of Killington Avenue and the rest of the City in order to provide better mobility for walkers of all ages and abilities.

Needs for the improvements include:

- The lack of sidewalks for at least a third of Killington Avenue;
- There is existing bus service on Killington Avenue without adequate walking facilities to all of the places where the bus can stop;
- The use of Killington Avenue as a major residential collector road for motor vehicle traffic;
- The presence of sidewalks on either side of the portions of Killington Avenue without sidewalks;

- Frequent pedestrian activity as evidenced through dirt paths created along portions of Killington Avenue that do not have sidewalks;
- The designation of Killington Avenue as a bicycle route without sidewalks for portions of the road increases the potential for bicycle/pedestrian conflicts; and
- The high rate of obesity in Rutland caused, in part, by the difficulty of incorporating regular physical activity into daily lives due to the lack of supporting facilities.

3. ALTERNATIVES DEVELOPMENT PROCESS

Once the BRPD Team, with assistance from the Steering Committee, examined the existing conditions, they held an initial public work session on June 2, 2014. After consideration of the comments received at that meeting, the BRPD Team led a work session with the Steering Committee to identify as many alternatives as possible for adding sidewalks along Killington Avenue. The group worked together to do an initial analysis of the alternatives to refine or eliminate those that did not meet the purpose and need or were otherwise unsuitable. Subsequently, the BRPD Team conducted a more detailed analysis of the remaining alternatives and developed a concise, viable set for public discussion. **Table B-1** includes information on the initial alternatives and evaluation conclusions.

Figure B.1 shows the location of the alternatives initially developed by the SC and BRPD Team; **Figures B.2.a, B.3.a, and B.4.a** show the alternatives that remained viable after the initial analysis. **Figures B.2.b, B.3.b and B.4.b** provide more information on the issues or impacts associated with the remaining alternatives.

ALTERNATIVES

1. OVERVIEW

Each of the alternatives presented below would meet the purpose and need for this project, providing a complete sidewalk along at least one side of Killington Avenue.

The Steering Committee considered sidewalks alternatives on both sides of Killington Avenue, to be sure that they were being as thorough as possible. When considering alternatives, they decided that no alternative would include the need to cross Killington Avenue in order to continue to walk east from the existing sidewalks. This meant that the alternatives for sidewalks on the south side of the street started at the end of the existing sidewalk west of Lafayette Street and continued all the way to Stratton Road. The sidewalk alternatives for the north side of Killington Avenue started at near Butterfly Avenue at the eastern end of the new sidewalks recently installed. They did not consider any alternatives that added a crosswalk on Killington Avenue at Butterfly Avenue and continuing a sidewalk east just on the south side of the street from the end of the crosswalk.

Initially, the Steering Committee considered five-foot wide sidewalks on both sides of Killington Avenue generally in three locations - directly adjacent to the curb, approximately four feet away from the curb and at the outside edge of the right-of-way, about six feet away from the edge of the curb. The first analysis eliminated most of these alternatives.

The remaining alternatives described below are each for a five foot-wide sidewalk. The surface could be either asphalt or concrete.

The alternatives are organized as sidewalks on the north side of Killington Avenue, sidewalks on the south side of Killington Avenue and crossing alternatives for Moon Brook. Each of the crossing alternatives could be used either on the north or south side of the street.

2. NORTH SIDE SIDEWALK

Alternative 1 - This alternative would place the sidewalk approximately four feet from the new curb on the north side of the Killington Avenue right-of-way. This alignment would leave most of the utility poles in their current location. The sidewalk would be approximately six feet in from the outer edge of the right-of-way.

Illustration 1 (Not yet completed) shows a typical cross section for Alternative A. **Illustration 2** shows a simulation of what the sidewalk might look like at its western end.

Illustration 2: Alternative 1 Photo Simulation Looking East Towards Moon Brook



The fire hydrants and mailbox would also remain in their current locations. The first and second utility pole east of Ronaldo Court are located about six and five feet respectively behind the new curbs on Killington Avenue. Placing the sidewalk behind these poles would push the sidewalk to the outer edges of the right-of-way. To avoid disturbing an existing stairway up to the front of a house, the sidewalk would need to have a significant curve in it. To avoid this situation, the sidewalk would be routed in front of these two particular poles, placing the sidewalk about two feet away from the curb in this location. **Illustration 3** shows a detail of the alignment in this location.

Illustration 3: Alternative 1 Photo Simulation East of Ronaldo Ct. Looking East



One drainage inlet needs to be addressed as part of this alternative. The inlet could be relocated to the south to lie in the green space between the sidewalk and the curb. **Figure B.2.b** shows the location of this inlet.

Two recently planted crab apple trees on the third property east of Ronaldo Court would need to be relocated outside of the right-of-way and the proposed sidewalk alignment. **Figure B.2.b** shows the location of the two trees that need to be relocated outside of the right-of-way.

3. SOUTH SIDE SIDEWALK

a. Alternative 2 - Sidewalk Next to Curb

Alternative 2 would place a sidewalk on the south side of Killington Avenue directly behind the new curb. In those locations where there is no curb, the sidewalk would be constructed with an adjacent new curb. **Illustration 5** (Not yet completed) shows a typical cross section for Alternative B east of Moon Brook. **Illustration 6** shows a visualization of what the sidewalk might look like.

Illustration 6: Alternative 2 near Stratton Road Looking West



This alternative would require cutting into the rise in land away from Killington Avenue that is in the right-of-way in front of several properties. The cuts would range from approximately one-foot into the slope on the property next to Stratton Road up to five feet on the third property east of Moon Brook. The cuts that would be over two feet would most likely require a short retaining wall to minimize impact to the adjacent property and the large shade trees. **Figure B.2.b** points out the location of the different areas that would need cuts into the bank and the depth of the cut.

The alignment next to the south side curb would need to include special provisions for several storm drains inlets that are located about two feet behind the existing curb. The inlets could be relocated to be within the roadway or a special vertical curb inlet could be used to allow access to the existing storm drain. A metal plate or

other structurally sound material that pedestrians could walk on would cover the top of the inlet at the same grade as the sidewalk. **Figure B.2.b** shows the location of the drainage inlets that need to be modified with Alternative 2.

Alternative 2 would also require the relocation of nine mailboxes to the other side of the road, to a location behind the sidewalk, onto a side street. **Figure B.2.b** shows the location of the mailboxes that need to be relocated.

On the west side of Moon Brook, Alternative 2 would require three larger trees within the right-of-way to be removed and one utility pole to be relocated. **Figure B.3.b** shows the location of the trees and utility pole. It also points out a drain inlet that would need to be modified to work with the sidewalk.

b. Alternative 3 - Sidewalk Four Feet Away from Curb

Alternative 3 would place a sidewalk on the south side of Killington Avenue four feet behind the new curb. Due to the grade of some of the side slopes, it is not practical on several of the parcels on the east side of Moon Brook. **Figure B.2.b** shows where in the right-of-way the slope is too large to accommodate this alternative.

Several trees within the right-of-way just east of Moon Brook would need to be relocated or removed. The particular trees that need to be relocated are included on **Figure B.2.b**

There would be no other significant impacts associated with Alternative 3.

4. BRIDGE ALTERNATIVES

a. Boardwalk with Piles Under Sidewalk

This alternative would lift the sidewalk as it approached Moon Brook so that the sidewalk remained approximately level with Killington Avenue even as the ground dropped down to the level of the normal flow level of the Brook. It could be used on either the north or the south side of the road. **Illustration 7** shows a visual simulation of what the boardwalk might look like.

Illustration 7: Boardwalk Visualization Looking East



This alternative would minimize the amount of fill placed in the Moon Brook flood plain but would not elevate the sidewalk above the floodplain. In this location, the regulated floodplain is above the elevation of Killington Avenue so the boardwalk would be underwater along with the rest of Killington Avenue if the 100-year flood predicted by the FEMA maps ever occurs.

b. Prefabricated Bridge

This alternative would add a prefabricated bridge to either the north or south side of Killington Avenue to match the location of the new sidewalk. The longer the bridge, the higher up on the slope on either side of the Brook it could be placed. The footing would be placed at grade so that the sidewalks leading to it would also be at grade, eliminating the need to place any fill within the 100-year flood plain. **Illustration 8** shows a visual simulation of what the boardwalk.

The opening under the new prefabricated bridge would be larger than the diameter of the existing culvert under Killington Avenue, which would remain undisturbed.

The bridge would be located at least three feet away from the face of the culvert if aligned with the sidewalk alternative located behind the utility poles on the north side of the road. It would be need to be aligned with the alternative located four feet away from the back of the curb if placed on the south side of Killington Avenue.

Illustration 8: Prefabricated Bridge Visualization Looking East



c. Extended Box Culvert

This alternative would replace the existing culvert with a new larger box culvert that would extend at least five feet beyond the edge of the existing culvert on either the north or south side of the road based on which side of the road the sidewalk would be located. Depending on the floodplain regulations, it might be placed on the box culvert and the sidewalk continued directly across it. The existing guardrail on the side of the Killington Avenue with the new sidewalk would be relocated to be on the outside edge of the sidewalk.

4. NO ACTION

It will always be possible for the City to do nothing to get closer to meeting the purpose and need of this project - the No Action Alternative. This alternative would leave conditions as they are now with just partial, disconnected sidewalks on Killington Avenue.