PLANNING STUDY TO IMPROVE PEDESTRIAN CONNECTIVITY BETWEEN BOARDMAN STREET & HANNAFORD PLAZA

Addison County Regional Planning Commission Transportation Advisory Committee (TAC) Meeting
SEPTEMBER 21, 2022
MIDDLEBURY PEDESTRIAN CONNECTIVITY PLANNING STUDY (BOARDMAN STREET to HANNAFORD PLAZA): ACRPC TAC MEETING

- Project Overview
- Kick-Off Meeting
- Existing Conditions
- Local Concerns Meeting
- Project Alternatives & Evaluations
- Alternatives Presentation Meeting
- Planning Study Report
PROJECT GOAL:

Develop a Scoping Study Report that identifies and evaluates alternatives for pedestrian infrastructure options along Rte 7 between Boardman Street and Hannaford Plaza for the Town to consider for future design and construction.

Project funded through ACRPC Transportation Planning Initiative Grant.
KICK-OFF MEETING:

- Attendees included representatives from the Town, ACRPC, VTrans, and D&K.
- Reviewed project scope, project area limits, schedule, and project logistics.
MIDDLEBURY PEDESTRIAN CONNECTIVITY PLANNING STUDY (BOARDMAN STREET to HANNAFORD PLAZA): ACRPC TAC MEETING

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Existing Conditions: Overall Project Area

Not shown: Underground utilities (water on north side, sewer on south side of Route 7)
MIDDLEBURY PEDESTRIAN CONNECTIVITY PLANNING STUDY (BOARDMAN STREET to HANNAFORD PLAZA): ACRPC TAC MEETING

- Project Overview
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- **Existing Conditions**
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**Existing Conditions: Environmental Resources**

- Potential areas of unmapped wetlands
- VT Protected Land (Middlebury Area Land Trust)
- State-threatened vertebrate animal
- Class II wetland
- Bedrock outcrop

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**Legend**
- Project Area
- Parcels
- Streams
- Trails
- Contours 1ft
- Bedrock Outcrops
- Rare, Threatened, Endangered Species and Significant Natural Communities
- VT Protected Lands
- Wetlands
Based on the ARA Report findings, the only area of potential concern as it relates to historical / archeological concerns is potential precontact sensitivity is on the east side of the road at the location of the raised and rounded knoll north of Boardman Street. If this area will be impacted during sidewalk construction, a Phase IB field investigation is recommended.
LOCAL CONCERNS MEETING:

Public meeting to solicit public input on the
- interests,
- concerns, and
- thoughts on pros/cons of the project area.
MIDDLEBURY PEDESTRIAN CONNECTIVITY PLANNING STUDY (BOARDMAN STREET to HANNAFORD PLAZA): ACRPC TAC MEETING

- Project Alternatives & Evaluations
- Alternatives Presentation Meeting
- Planning Study Report
ALTERNATIVE 1

- 5' curbed concrete sidewalk on northerly side of Route 7 beginning at end of existing sidewalk
- 5' asphalt pedestrian sidewalk on south side to provide access to apartment complex

Legend
- Project Area
- Alternative 1
- Parcels
- Culvert
- Guardrail
- Overhead utilities
- Streams
- Trails
- Existing pedestrian facilities

5' asphalt sidewalk to match existing path to apartment complex

Guardrail relocation required
ALTERNATIVE 2

- 5' concrete sidewalk with green strip on northerly side of Route 7 beginning at end of existing sidewalk, transitioning to curbed sidewalk at southern end

- 5' asphalt pedestrian sidewalk on south side to provide access to apartment complex

5' concrete sidewalk with grass strip. May require additional archeological resource investigations.

5' concrete curbed sidewalk

Guardrail relocation required

Extend cattle pass

5' asphalt sidewalk to match existing path to apartment complex

Guardrail relocation required

Legend
- Project Area
- Alternative 2
- Parcels
- Culvert
- Guardrail
- Overhead utilities
- Streams
- Trails
- Existing pedestrian facilities

Feet

0 150
ALTERNATIVE 3

MIDDLEBURY PEDESTRIAN CONNECTIVITY PLANNING STUDY (BOARDMAN STREET to HANNAFORD PLAZA): ACRPC TAC MEETING

- 8' asphalt multi-use path set back away from the road on northerly side of Route 7 beginning at end of existing sidewalk

- 5' asphalt pedestrian sidewalk on south side to provide access to apartment complex

5' asphalt sidewalk to match existing path to apartment complex

8' asphalt multi-use path offset approx. 2' from road right-of-way

Alignment would require additional archaeological investigations along this section

new pedestrian structure

Legend
- Project Area
- Alternative 3
- Parcels
- culvert
- guardrail
- overhead utilities
- Streams
- Trails
- Existing pedestrian facilities
ALTERNATIVE 4

MIDDLEBURY PEDESTRIAN CONNECTIVITY PLANNING STUDY (BOARDMAN STREET to HANNAFORD PLAZA): ACRPC TAC MEETING

- 5’ concrete sidewalk on existing path alignment on south side transitioning to north side of road with green strip

- 5’ curbed concrete sidewalk on eastern end of project

Alignment would require additional archaeological investigations along this section

5' concrete sidewalk along existing path to apartment complex

5' concrete sidewalk with grass strip

new pedestrian tunnel

5' concrete curbed sidewalk

Guardrail relocation required

Legend
- Project Area
- Alternative 4
- Parcels
- Culvert
- Guardrail
- Overhead utilities
- Streams
- Trails
- Existing pedestrian facilities
MIDDLEBURY PEDESTRIAN CONNECTIVITY PLANNING STUDY (BOARDMAN STREET to HANNAFORD PLAZA): ACRPC TAC MEETING

ALTERNATIVE 5

- 5' curbed concrete sidewalk on southerly side of Route 7

- New crosswalk; cross on south/east side to minimize impacts on north side at guardrail

Guardrail relocation required

Legend

- Project Area
- Alternative 5
- Parcels
- Culvert
- Guardrail
- Overhead utilities
- Streams
- Trails
- Existing pedestrian facilities

5' concrete curbed sidewalk

Guardrail relocation required

Legend

- Project Area
- Alternative 5
- Parcels
- Culvert
- Guardrail
- Overhead utilities
- Streams
- Trails
- Existing pedestrian facilities

5' curbed concrete sidewalk on southerly side of Route 7

Guardrail relocation required

New crosswalk; cross on south/east side to minimize impacts on north side at guardrail
ALTERNATIVE 6

- 5' concrete sidewalk on southerly side of Route 7 along existing path alignment, transitioning to curbed sidewalk on eastern end of project area

guardrail relocation required

new crosswalk; cross on south/east side to minimize impacts on north side at guardrail
## Project Cost Estimates Based on VTrans Guidance

<table>
<thead>
<tr>
<th>Sidewalk / Path Base Cost</th>
<th>Alt. 1</th>
<th>Alt. 2</th>
<th>Alt. 3</th>
<th>Alt. 4</th>
<th>Alt. 5</th>
<th>Alt. 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>5' curbed sidewalk on north with pedestrian access to apartment complex</td>
<td>$411,820</td>
<td>$305,790</td>
<td>$433,680</td>
<td>$311,200</td>
<td>$445,970</td>
<td>$558,675</td>
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<td>5' sidewalk with green strip on north with pedestrian access to apartment complex</td>
<td>$16,200</td>
<td>$23,100</td>
<td>$20,460</td>
<td>$6,680</td>
<td>$39,000</td>
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<td>8' shared use path on north with pedestrian access to apartment complex</td>
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<td>$14,872</td>
<td>$120</td>
<td>$6,149</td>
<td>$17,875</td>
<td>$5,005</td>
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<td>Seeding and topsoil items</td>
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<td>$2,262</td>
<td>$2,813</td>
<td>$2,498</td>
<td>$2,566</td>
<td>$937</td>
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<td>Extend Cattle Pass</td>
<td>$400,000</td>
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<td>Pedestrian Structure</td>
<td></td>
<td>$450,000</td>
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<tr>
<td>Pedestrian Tunnel</td>
<td></td>
<td></td>
<td>$800,000</td>
<td></td>
<td></td>
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<tr>
<td>Mobilization / Demobilization (beyond typ. sidewalk const.)</td>
<td>$5,000</td>
<td>$45,000</td>
<td>$45,000</td>
<td>$85,000</td>
<td>$5,000</td>
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<tr>
<td>20% Contingency on Alternative Specific Items</td>
<td>$9,888</td>
<td>$98,976</td>
<td>$102,927</td>
<td>$178,473</td>
<td>$14,589</td>
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<td>Cost of Conceptual-Level Opinion of Probable Construction Cost</td>
<td>$460,000</td>
<td>$890,000</td>
<td>$1,060,000</td>
<td>$1,390,000</td>
<td>$530,000</td>
<td>$590,000</td>
</tr>
<tr>
<td>Engineering, Construction Resident, and Admin</td>
<td>$170,000</td>
<td>$320,000</td>
<td>$380,000</td>
<td>$500,000</td>
<td>$190,000</td>
<td>$210,000</td>
</tr>
</tbody>
</table>

### Rounded Total Project Costs (Excluding ROW)

<table>
<thead>
<tr>
<th>Alt. 1</th>
<th>Alt. 2</th>
<th>Alt. 3</th>
<th>Alt. 4</th>
<th>Alt. 5</th>
<th>Alt. 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>$630,000</td>
<td>$1,210,000</td>
<td>$1,440,000</td>
<td>$1,890,000</td>
<td>$720,000</td>
<td>$800,000</td>
</tr>
</tbody>
</table>

### Assumptions:

1. **Average base sidewalk construction cost value from the VTrans Report on Shared-Use Path and Sidewalk Costs, January 2020.**
2. Estimates for engineering, construction resident, and administration based on VTrans Report on Shared-Use Path and Sidewalk Costs guidance, adjusted for rounding.
3. Utility company will pay for costs associated with required relocation of utility poles.
### Evaluation Matrix

#### Project Goals

<table>
<thead>
<tr>
<th>Goal</th>
<th>Alt. 1</th>
<th>Alt. 2</th>
<th>Alt. 3</th>
<th>Alt. 4</th>
<th>Alt. 5</th>
<th>Alt. 6</th>
<th>No Build</th>
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</thead>
<tbody>
<tr>
<td>Improved Pedestrian Safety</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no improvement</td>
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#### Project Costs

<table>
<thead>
<tr>
<th>Cost Type</th>
<th>Alt. 1</th>
<th>Alt. 2</th>
<th>Alt. 3</th>
<th>Alt. 4</th>
<th>Alt. 5</th>
<th>Alt. 6</th>
<th>No Build</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>$460,000</td>
<td>$890,000</td>
<td>$1,060,000</td>
<td>$1,390,000</td>
<td>$530,000</td>
<td>$590,000</td>
<td>$0</td>
</tr>
<tr>
<td>Engineering Design + Resident Engineer</td>
<td>$170,000</td>
<td>$320,000</td>
<td>$380,000</td>
<td>$500,000</td>
<td>$190,000</td>
<td>$210,000</td>
<td>$0</td>
</tr>
<tr>
<td>Total Project Costs (excluding ROW)</td>
<td>$630,000</td>
<td>$1,210,000</td>
<td>$1,440,000</td>
<td>$1,890,000</td>
<td>$720,000</td>
<td>$800,000</td>
<td>$0</td>
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#### Land Use and Local Context

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>Alt. 1</th>
<th>Alt. 2</th>
<th>Alt. 3</th>
<th>Alt. 4</th>
<th>Alt. 5</th>
<th>Alt. 6</th>
<th>No Build</th>
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</thead>
<tbody>
<tr>
<td>ROW and Utility impacts</td>
<td>minor</td>
<td>minor</td>
<td>potential</td>
<td>potential</td>
<td>unlikely</td>
<td>unlikely</td>
<td>-</td>
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<tr>
<td>Local Context (drive crossings, local input, etc.)</td>
<td>improved, 1 drive</td>
<td>improved, 1 drive</td>
<td>improved, 1 drive</td>
<td>improved, 1 drive</td>
<td>drive crossings, potential concern in front of car dealership, need for crosswalk at Boardman</td>
<td>no improvements</td>
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#### Environmental / Cultural

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>Alt. 1</th>
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<tbody>
<tr>
<td>Floodplains</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Fish &amp; wildlife</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Wetlands</td>
<td>unlikely/minor</td>
<td>unlikely/minor</td>
<td>potential</td>
<td>unlikely/minor</td>
<td>unlikely/minor</td>
<td>unlikely/minor</td>
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<tr>
<td>R/T/E Species; Wildlife; Conservation Areas</td>
<td>state endangered animal within project area</td>
<td>state endangered animal within project area</td>
<td>state endangered animal within project area</td>
<td>state endangered animal within project area</td>
<td>Middlebury Area Land Trust is adjacent to road ROW on south side at eastern end, no anticipated impact. State endangered animal within project area.</td>
<td>-</td>
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</tr>
<tr>
<td>Archaeological / Historic</td>
<td>unlikely</td>
<td>-</td>
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<tr>
<td>Public Lands (Section 4(f))</td>
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<td>LWCF (Section 6(f))</td>
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<tr>
<td>Agricultural lands</td>
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<tr>
<td>Hazardous waste sites</td>
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#### Permitting

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<tr>
<th>Permit Type</th>
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<th>Alt. 4</th>
<th>Alt. 5</th>
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<tbody>
<tr>
<td>NEPA</td>
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<tr>
<td>Section 404 (wetlands) / State Wetlands Permit</td>
<td>potential</td>
<td>potential</td>
<td>potential</td>
<td>potential</td>
<td>potential</td>
<td>potential</td>
<td>potential</td>
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<tr>
<td>Section 401 Water Quality</td>
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<tr>
<td>Stream Alteration Permit</td>
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<tr>
<td>Construction Phase Stormwater Permit</td>
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<tr>
<td>Operational Phase Stormwater Permit</td>
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<tr>
<td>Lakes &amp; Ponds</td>
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<tr>
<td>R, T, E Species</td>
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<td>-</td>
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<tr>
<td>Section 1111 Permit</td>
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</tr>
</tbody>
</table>
**Alternative 1:** Curbed sidewalk on north side, and sidewalk section on south side to apartment complex.

**Alternative 2:** Sidewalk on north side with grass strip, and sidewalk section on south side to apartment complex.

**Alternative 3:** Multi-use path on north side, and sidewalk section on south side to apartment complex.

**Alternative 4:** Sidewalk on south side along existing path alignment and transition to north side (through new pedestrian tunnel).

**Alternative 5:** Curbed sidewalk on south side with crosswalk at Boardman Street.

**Alternative 6:** Sidewalk along existing path alignment on south side and transition to curbed sidewalk, with crosswalk at Boardman Street.

<table>
<thead>
<tr>
<th>Points Value Per Criteria</th>
<th>Alt. 1</th>
<th>Alt. 2</th>
<th>Alt. 3</th>
<th>Alt. 4</th>
<th>Alt. 5</th>
<th>Alt. 6</th>
<th>No Build</th>
<th>Total Possible Points</th>
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<tr>
<td>Project Goals</td>
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<td>8</td>
<td>22</td>
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<tr>
<td>Land Use and Local Context</td>
<td>24</td>
<td>24</td>
<td>21</td>
<td>23</td>
<td>15</td>
<td>15</td>
<td>5</td>
<td>25</td>
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<tr>
<td>Env'l / Cultural / Permitting</td>
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<td>22</td>
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<td>19</td>
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<td>25</td>
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<tr>
<td>Total Points and Ranking per Alternative</td>
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<td>80</td>
<td>71</td>
<td>78</td>
<td>81</td>
<td>79</td>
<td>52</td>
<td>100</td>
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</tbody>
</table>
MIDDLEBURY PEDESTRIAN CONNECTIVITY PLANNING STUDY (BOARDMAN STREET to HANNAFORD PLAZA): ACRPC TAC MEETING

- **Project Overview**
- **Kick-Off Meeting**
- **Existing Conditions**
- **Local Concerns Meeting**
- **Project Alternatives & Evaluations**
- **Alternatives Presentation Meeting**
- **Planning Study Report**

**ALTERNATIVES PRESENTATION MEETING:**

- Scheduled for Sept. 26th
- Public meeting to present project alternatives to the public.
- Input to date suggests preference for an alternative on the north side of the road.
MIDDLEBURY PEDESTRIAN CONNECTIVITY PLANNING STUDY (BOARDMAN STREET to HANNAFORD PLAZA): ACRPC TAC MEETING

NEXT STEP:
- ACRPC TAC Meeting
- Finalize Scoping Study Report

- Project Overview
- Kick-Off Meeting
- Existing Conditions
- Local Concerns Meeting
- Project Alternatives & Evaluations
- Alternatives Presentation Meeting
- Planning Study Report
MIDDLEBURY PEDESTRIAN CONNECTIVITY PLANNING STUDY (BOARDMAN STREET to HANNAFORD PLAZA): ALTERNATIVES PRESENTATION MEETING

COMMENTS? QUESTIONS?

Kathleen Ramsay
Town Manager

Jennifer Murray
Town Planning & Zoning Director

Mike Winslow
Addison County Regional Planning Commission

Jenny Austin, P.E.
DuBois & King, Inc.