CHAPTER 4: RECOMMENDATIONS AND IMPLEMENTATION PLAN

This Chapter describes the final concepts presented to and chosen by the Advisory Committee for short-, medium- and long-term multimodal improvement concepts for the City's consideration and possible approval. These improvement concepts were developed and refined through an extensive public process and committee input and were evaluated for their ability to meet the corridor's vision and goals (see page TBD). A detailed description of all concepts is provided in Chapter 3 of this report.

The Advisory Committee's recommended improvement concepts are presented in the *Implementation Matrix* section of this Chapter. The study team (staff from DPW, CCRPC and PB) has concerns on the ability to implement some of these concepts, which are discussed in detail in subsequent sections of this chapter.

Implementation Timeframes

All improvement concepts were organized into three implementation periods:

- Short term (< 3 years)
- Medium term (3 to 7 years)
- Long term (> 7 years)

These timeframes help differentiate between concepts that could be implemented relatively quickly versus concepts that require additional time to develop. Improvement concepts were placed into each implementation period based on several factors, including project complexity (i.e., the extent of evaluation, scoping, and design required), length of the public process, construction costs, and feasibility of obtaining funding.

Short Term

Short-term projects could be implemented in less than three years because there are minimal evaluation/design requirements and no major reconstruction of the roadway. Examples of short-term projects include new striping (e.g., bike lanes, narrowed lanes, on-street parking), traffic signal optimization, ADA improvements, high-priority new pedestrian crossings, high-priority and minor intersection construction, and new transit shelters. Some short-term projects will require additional public process for regulatory changes, some will benefit from additional public engagement, but the most basic short-term projects will advance without any additional review (e.g. signal optimization, pedestrian countdown signals, and ADA improvements).

Medium Term

Medium-term projects could be implemented within three to seven years. These projects require a more detailed design process because of more complex construction, which may include curb relocations at some locations. Examples of medium-term projects include gateway treatments (i.e., curb extensions, special pavement), minor intersection construction, and more complex striping patterns. These projects require a greater degree of public input and additional time may be needed to seek funding from multiple sources.

Long Term

Long-term projects represent the most significant investments in the North Avenue Corridor, and may take more than seven years to fully implement. Long-term projects require full evaluation, scoping, and design, as well as a robust public involvement process throughout all phases of the project, including construction. Examples of long-term projects include full curb and planting strip reconstruction, low-stress cycling facilities (e.g., protected bike lanes), utility burial or relocation, more complex intersection reconstruction, and stormwater treatments. Long-term projects also take more time to implement due to their high costs (could exceed several millions of dollars) which makes securing a variety of funding sources critical to their implementation.

Voting for Preferred Concepts

At their last meeting on July 1, 2014, the Advisory Committee voted for their preferred cross-sections, intersections, crosswalks and corridor-wide concepts by timeframe. Concepts that received a simple majority were advanced as Committee recommendations for the Transportation, Energy, and Utility Committee's (TEUC) and City Council's consideration and possible approval. The final Implementation Plan will be selected by the City Council during their meeting in September 2014.

The organizations represented on the Advisory Committee are:

- American Association of Retired Persons (AARP)
- Burlington Partnership for a Healthy Community (BPHC)
- Chittenden County Transportation Authority (CCTA)
- City Council
- Burlington Department of Public Works (DPW)
- Local Motion
- Burlington Department of Planning and Zoning
- Burlington Department of Community and Economic Development
- Neighborhood Planning Assembly (NPA) Representatives from Wards 3, 4, and 7
- Burlington School District
- Vermont Agency of Transportation

Each organization represented on the Advisory Committee received a single vote, although not every organization participated in the voting process. Short, medium and long-term improvement concepts representing the voting options for the Advisory Committee are discussed in the following sections.

Cross-Section Concepts

The Advisory Committee was asked to vote for preferred cross-section concepts and their implementation timeframe (see Chapter 3 for more details on the concepts considered and the criteria used to evaluate them). Committee members were asked the following questions:

1. Do you support the short-term cross section Concept A1 (Figure 1), or do you prefer another concept?
2. Do you support the medium-term cross section Concept A2 (Figure 2), or do you prefer another concept?
3. Which long-term cross section concept do you prefer?

Short- & Medium-Term

The Advisory Committee rejected short-term Concept A1 which included the following elements:

- Parking only on one-side of the avenue
- On-street bike lanes where feasible (Plattsburg Ave to Shore Rd and VT 127 to Institute Rd)
- Begin planning for a 4-lane to a 3-lane conversion from Shore Rd to VT 127 but retain 4 lanes in the short-term

The committee also rejected Concept A2 which called for a 4-lane to 3-lane conversion from Shore Rd to VT 127 in the medium term and instead voted (8 to 2) in favor of a new short-term pilot project (Concept A3: see Figure 3) with the following elements:

- Three-lane configuration between Shore Rd and VT 127 with 10.5 foot travel lanes and 4.5 foot bike lanes
- 25 MPH throughout the corridor
- All parking eliminated north of Washington Street
- Bike lanes, enhanced/buffered where space allows
- Protected bike lanes (with flex posts) from VT 127 to Institute Road

- Replacement of existing drainage grates with bicycle-friendly grates

The study team has concerns with some elements of Concept A3 including the 4.5' bike lane (DPW's standard is 5' minimum for new bike lanes) and the comprehensive parking removal north of Washington Street. The comprehensive parking removal was not evaluated or thoroughly discussed during the public outreach phase of this study; retaining on-street parking on one side of North Avenue could accommodate demands in areas such as St. Mark's Church and could also bolster the economic sustainability of the North Avenue corridor by inviting future street-facing neighborhood commercial activities. In addition, the team has concerns with the feasibility of a 4- to 3-lane conversion between Shore Road and VT 127 within the 3-year timeframe endorsed by the Advisory Committee. The 4- to 3-lane conversion pilot project will need a strong public outreach plan, a comprehensive data collection plan, necessary funding, and the political support to complete within the 3 year timeframe.

As a result, the study team's recommended short-term cross-section is A1 and medium-term cross-section is A2.

Figure 1: Study Team's Recommended Short-term Cross-section Concept A1

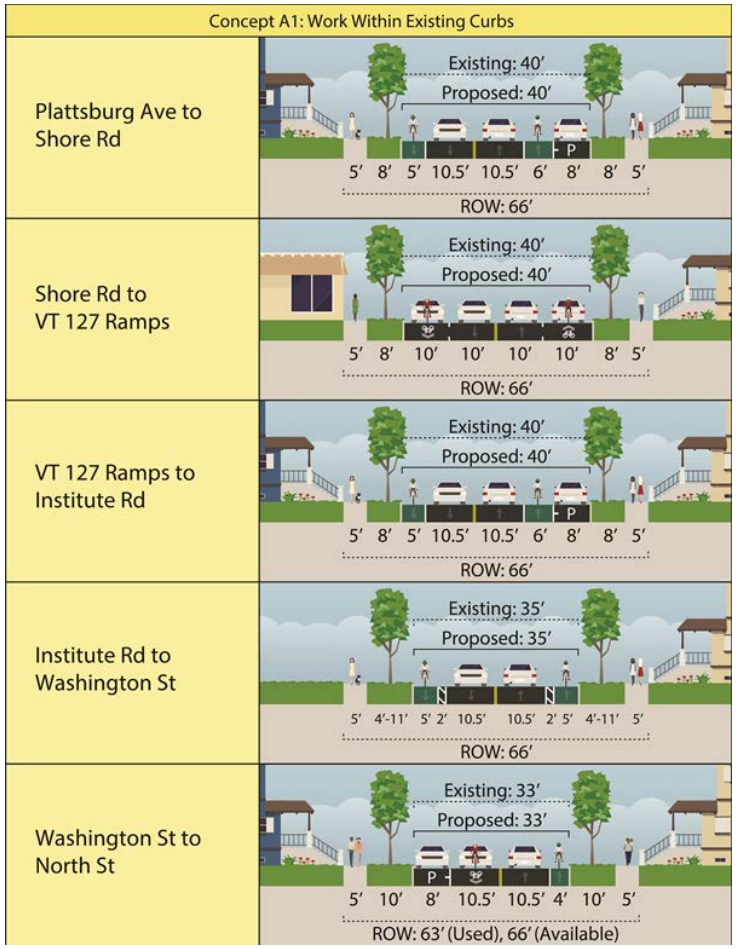


Figure 2: Study Team's Recommended Medium-term Cross-section Concept A2

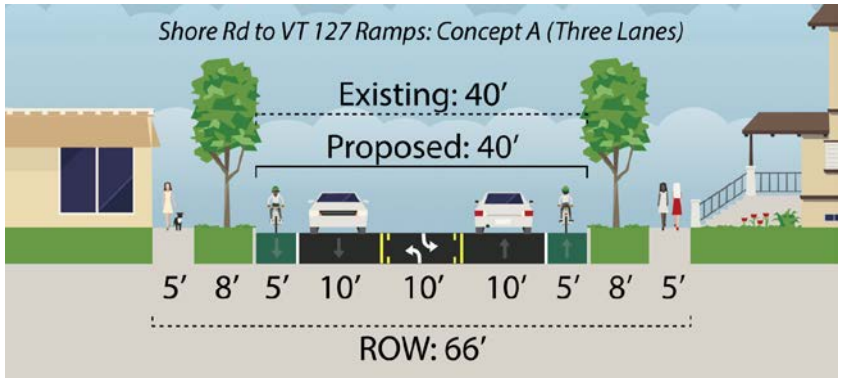
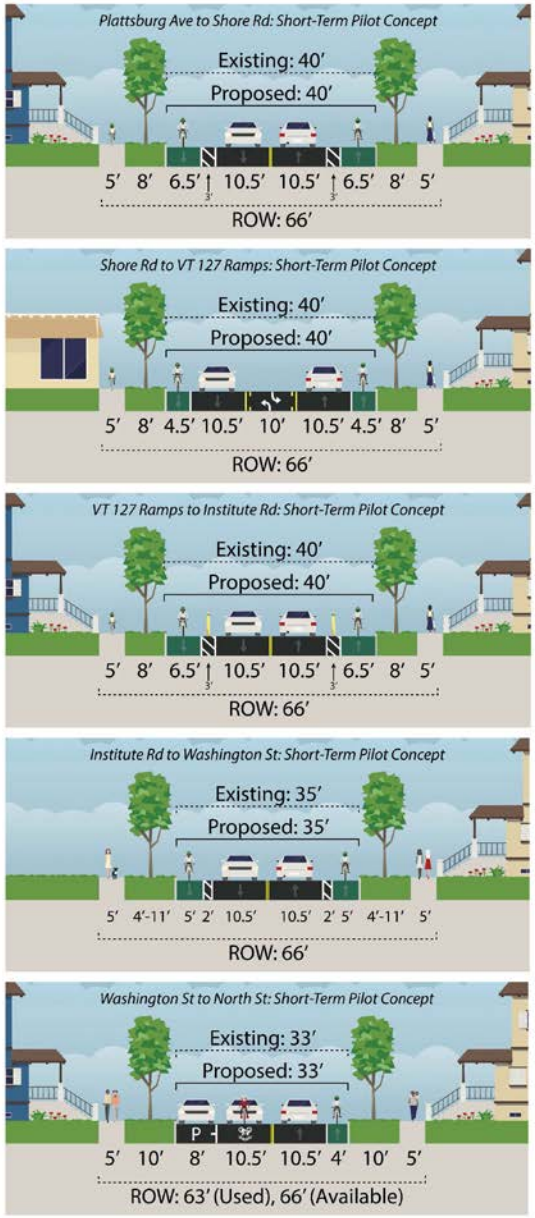


Figure 3: Advisory Committee's Preferred Short-term Cross-section Concept A3

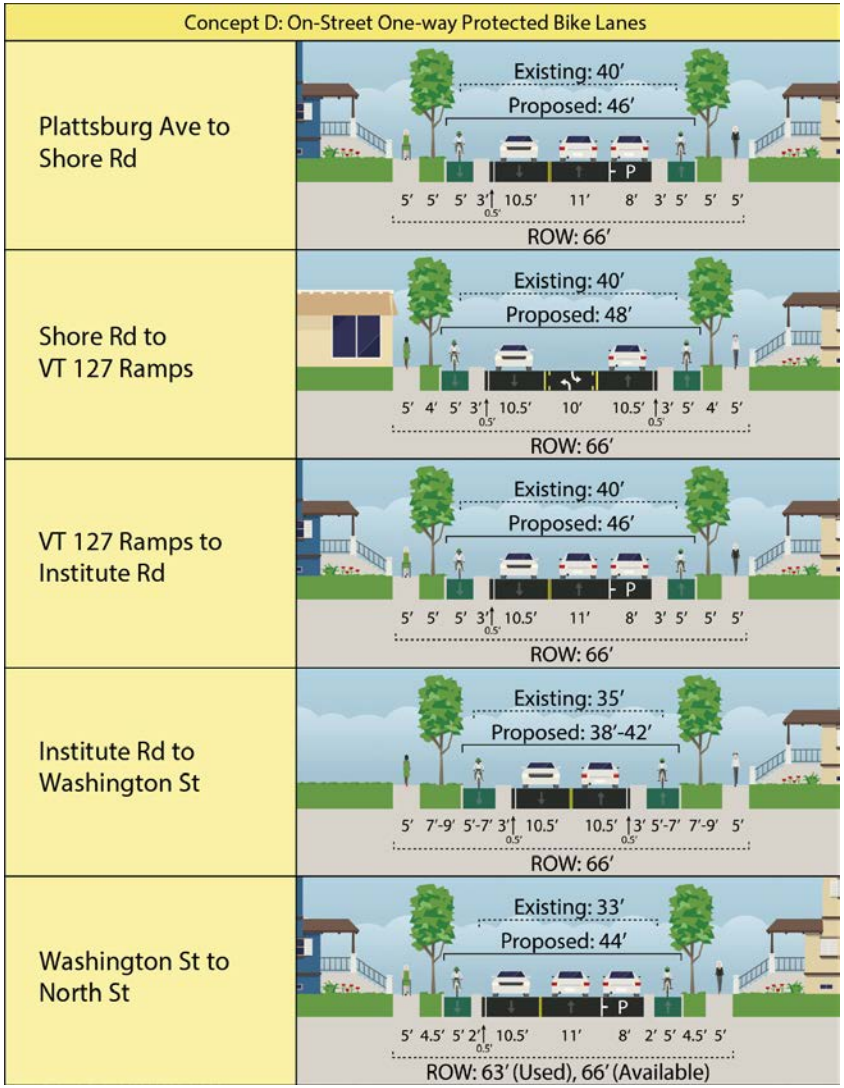


Long-Term

The Advisory Committee voted (6 to 4) in favor of *Concept D: On-Street One-Way Protected Bike Lanes* (Figure 4) as the long-term cross-section for North Avenue. The Study Team also supports this concept.

Please note that the need for on-street parking north of Washington St. in the long-term will be evaluated during the scoping study for Concept D.

Figure 4: Long-term Cross-section Concept D: On-Street One-Way Protected Bike Lanes



Unsignalized/Mid-Block Pedestrian Crossings

A list of nine candidate locations for new unsignalized/mid-block pedestrian crossings was developed based on comments received from the public via the online voting tool and public meetings. Advisory Committee members were asked to vote for three to five preferred locations. The five locations with the most votes were assigned to the short-term timeframe, and the remaining four were assigned to the medium term.

Based on additional comments received through the online input tool and public meetings, the study team also assigned four additional pedestrian crossings to the long-term timeframe, which are intended to provide safer crossing opportunities for bus passengers at stops along North Avenue (Table 1 and Figure 5). All unsignalized/mid-block crossing locations will be evaluated for the most appropriate crosswalk design features, which may include high-visibility treatments, lighting, and alignment.

Table 1: Implementation Timeframes for Unsignalized/Mid-Block Pedestrian Crossings

Proposed Pedestrian Crossing Location (Listed North to South)	Timeframe
Loaldo Drive/Fairmont Place	Medium
Green Acres Drive/Cayuga Court	Short
Staniford Road	Long
Gosse Court	Short
Poirier Place	Medium
Lakewood Parkway	Medium
Killarney Drive/Village Green Drive	Short
Saratoga Avenue	Medium
Mid-block at bus stop pair south of VT 127 ramps	Long
Burlington College	Short
Convent Square	Long
Ward Street	Short
Canfield Street	Long

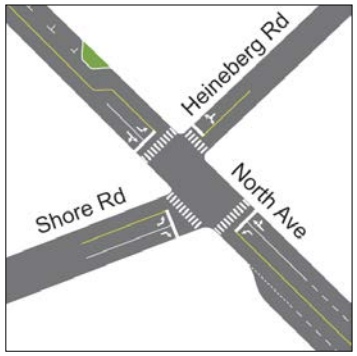
Figure 5: Implementation Timeframe for Unsignalized/Mid-Block Pedestrian Crossings

Intersection Concepts

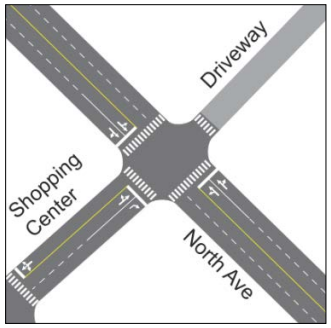
The Advisory Committee was asked to vote on preferred short, medium, long-term concepts for all signalized intersections in the corridor and the unsignalized Washington St. intersection. The committee unanimously supported the following corridor-wide short-term intersection improvements.

- Crosswalks on all approaches at signalized intersections
- Audible pedestrian countdown timers
- Minimum of 5 seconds (push-button) leading pedestrian interval at signalized intersection
- Where present in advance of intersections, bicycle facilities will be maintained through intersections

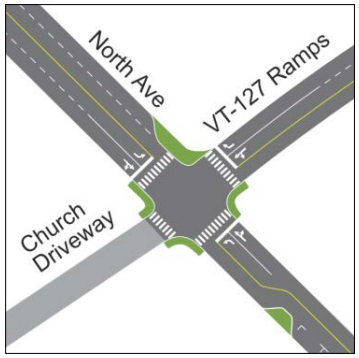
Preferred Short-term Intersection Improvements:



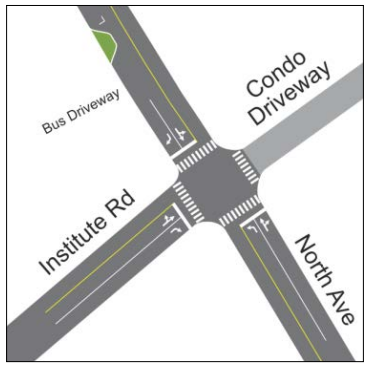
Shore Road: increase pedestrian crossing times, implement split phasing for Shore Road and Heineberg Road approaches, and install pedestrian-activated no right turn on red



Ethan Allen Shopping Center: increase pedestrian crossing times and install pedestrian-activated no right turn on red.

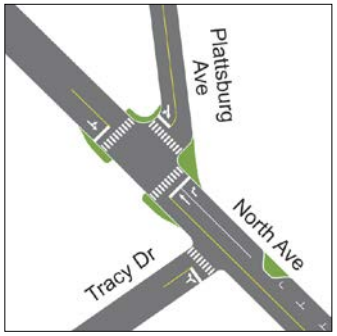


VT 127: remove high-speed northbound and westbound ramps.

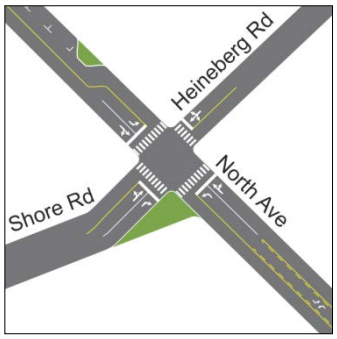


Institute Road: reduce intersection footprint (using paint for short-term), relocate northbound bus shelter to north of Institute Road, realign southbound sidewalk, and install pedestrian-activated no right turn on red.

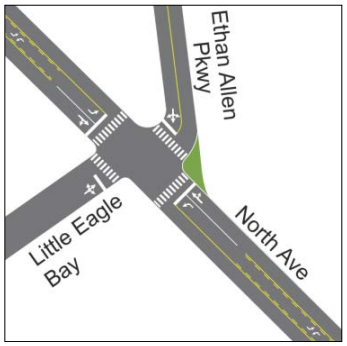
Preferred Medium-term Intersection Improvements:



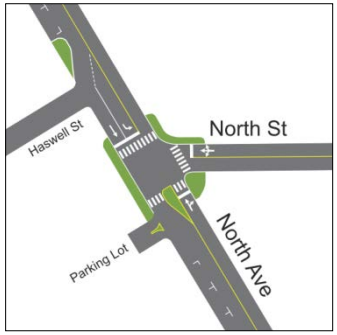
Plattsburg Avenue: eliminate high-speed northbound right turn and pedestrian activated no right on red.



Shore Road: if ROW is donated or easily acquired, realign Shore Road, keep longer crossing times and pedestrian-activated no right on red.

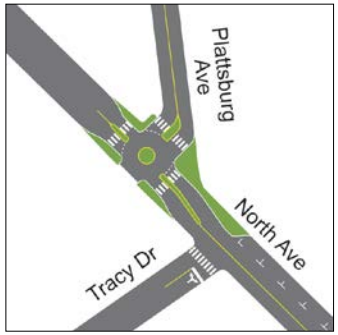


Ethan Allen Parkway: scoping study to relocate Park entrance and remove from intersection, add Little Eagle Bay into signal, eliminate high-speed northbound right turn.

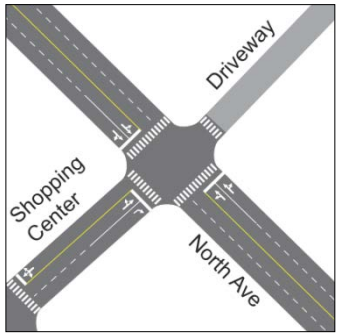


North Street: parking lot right in / right out or curb cut removal, realign north and south crosswalks, add protected / permitted southbound left turns, pedestrian-activated no right turn on red

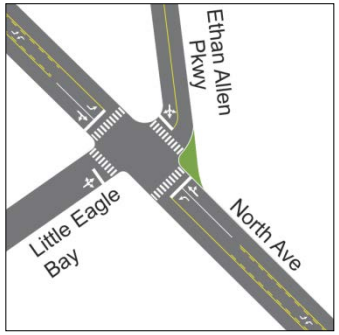
Preferred Long-term Intersection Improvements:



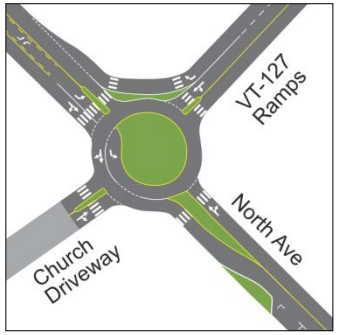
Plattsburg Avenue: scoping for single-lane mini-roundabout



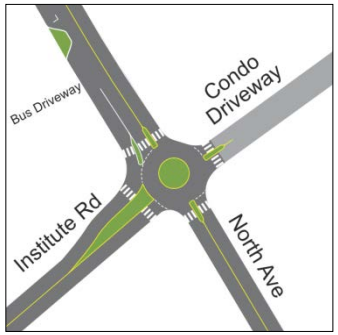
Ethan Allen Shopping Center: reconstruct curb and sidewalk at Farrington's Mobile Home Park and Bamboo Hut to reduce curb cut and define the driveway.



Ethan Allen Parkway: signalized intersection



VT 127: scoping for roundabout



Institute Road: scoping for roundabout and resolution of the bus driveway

Transit Concepts

Even though there is currently transit service on North Avenue provided by CCTA, improvements to the routes and shelters have been consistently identified by the public as a critical issue for this corridor.

The following transit improvements for the North Ave corridor were supported by the Advisory Committee and CCTA, pending funding availability:

- Additional bus shelters at high-usage stops and larger shelters at Burlington High School (CCTA supports up to three new shelters in the short term);
- Fifteen-minute peak period weekday headways for Route 7 in the medium-term; and
- Increased weekend services

These three transit recommendations were carried forward as part of the Advisory Committee's preferred concepts for approval by the TEUC and City Council.

In addition, the committee paid particular attention to the interaction between protected bike lanes (the preferred long-term cross-section for North Avenue) and bus stops. Bus stops and conventional bike lanes typically conflict with one another because buses must pull into the bike lane to reach the curb. This creates an unsafe interaction on the street between buses and cyclists. Protected bike lanes are designed to travel behind bus stops—in effect creating a floating bus bulb—removing direct conflicts between buses and cyclists. The conflict between buses and cyclists was a vital consideration and topic of much discussion, particularly when weighing advantages and disadvantages between one-way or two-way protected bike lanes. As a result, the committee noted that future scoping, evaluation, and design of cross-section Concept D should incorporate safe and proven designs at bus stop locations.

Implementation Matrix

The Implementation Matrix provides a summary of the Advisory Committee's preferred Implementation Plan for short-, medium- and long-term multimodal improvement concepts. This plan will be presented at the August 13, 2014 TEUC meeting for consideration.

[Placeholder for results from the TEUC approval process.]

The Implementation Matrix describes important aspects associated with each recommendation, including:

- Details: An overview of the elements and design features.
- Leader(s): Those agencies expected to take the lead for implementation of a project.
- Direct Partners: Those agencies expected to have direct involvement to support the implementation of a project.
- Next Steps/Comments: Summary of important notes and next steps to advancing the recommendation.

Implementation Matrix: Short -Term Recommendations

Recommendation	Details	Leaders	Direct Partners	Next Steps/Comments

Cross-section Concept A3: Corridor-wide on-road improvements	• Consistent 25 mph speed limit
	• 3-lane cross section between Shore Rd and VT 127 ramps
	• Bicycle facilities:
	  o Plattsburg to Shore: buffered bike lanes
	  o Shore to VT 127: conventional bike lanes
	  o VT 127 to Institute: protected bike lanes (flexposts)
	  o Institute to Washington: buffered bike lanes
	  o Washington to Institute: conventional bike lane (NB), Sharrows (SB)
	• 10.5' travel lanes
	• All parking eliminated north of Washington St
	• Replace existing drainage grates with bicycle-friendly grates
		DPW	CCRPC, Public Works Commission, Public	• Initiate planning and design for pilot project, including 90-second cycle lengths and signal coordination.
				• Initiate public involvement process.
				• Identify duration of the pilot.
				• Define measurable multimodal metrics, both quantitative (e.g. crashes, number of cyclists, vehicle delay, etc.) and qualitative (e.g. survey responses), to track before and after performance and assess effectiveness.
				• Identify funding source(s).

High priority pedestrian crossings at unsignalized intersections or mid-block locations	• Green Acres Dr/Cayuga Ct • Gosse Ct • Killarney Dr/Village Green Dr* • Burlington College • Ward St	DPW	Public Works Commission, Public, CCTA	• Identify the highest priority pedestrian improvement projects • Initiate public involvement process. • Assess the need for flashing beacons or refuge islands at unsignalized/mid-block crossings.
Pedestrian crossings on all approaches of	• High visibility continental or solid (red) crosswalks	DPW		

Recommendation	Details	Leaders	Direct Partners	Next Steps/Comments
all signalized intersections	• American with Disabilities (ADA) compliant curb ramps with detectable warning surfaces			• Coordinate with CCTA regarding bus stop location near proposed crossings (relocate stops if necessary). • Investigate drainage issues at ADA ramps for long-term solutions (e.g. raised crossings at side streets). • Identify funding source(s). • *Note:* Killarney Dr/Village Green Dr crossing only compatible with a three-lane conversion.
Leading pedestrian intervals (LPIs) on all approaches of all signalized intersections	• Minimum 5-second length • Audible, pedestrian countdown timers • Push-button activation			
Bicycle facilities (where provided) maintained through all intersections	• Crossbike markings • Bike boxes • Two-stage left-turn boxes	DPW		• Initiate public involvement process. • Coordinate with and implement alongside Concept A3, as well as short-term intersection concepts at Shore, Ethan Allen Shopping Center, VT 127, and Institute Rd.
Shore Rd/Heineberg Rd Intersection - Concept 1	• Increase pedestrian crossing times for seniors • Pedestrian activated no right turn on red • Split phasing	DPW		• Identify funding source(s). • Initiate public involvement and outreach.
Ethan Allen Shopping Center Intersection - Concept 1	• Increase pedestrian crossing times for seniors • Pedestrian activated no right turn on red			• Identify funding source(s).

Recommendation	Details	Leaders	Direct Partners	Next Steps/Comments
VT 127 Intersection - Concept 1	• Close high-speed NB on-ramp • Remove free flow WB right-turn • Remove gantry		VTrans, City, CCRPC, Public	• Initiate planning and design. • Initiate public involvement process. • Initiate public outreach process and educational campaign of proposed changes. • Identify funding source(s).
Institute Rd Intersection Concept 1	• Fix vehicle detection • Pedestrian activated no right turn on red • Address conflict between SB cyclists and right-turning vehicles • Reduce intersection footprint (with paint for short-term) • Relocate NB bus stop to far side • Resolve bus driveway access		City, VTrans, CCRPC, CCTA, BSD	• Initiate planning and design. • Initiate public involvement process. • Coordinate with CCTA to relocate the NB bus stop. • Coordinate with Burlington School Department to resolve driveway access. • Identify funding source(s).
Transit: New bus shelters	• Additional shelters at high ridership stops (up to three shelters in the short term, pending funding) • Larger shelters at Burlington High School	CCTA	City, BSD	• Initiate public involvement process. • Investigate high ridership stops for candidate shelter locations • Assess site restrictions and land availability • Coordinate with Burlington School Department regarding shelter sizes at Burlington High School • Identify funding source(s).

Implementation Matrix Medium -Term Recommendations

Project	Project Details	Leaders	Direct Partners	Next Steps/Comments
Additional pedestrian crossings at unsignalized intersections or mid-block locations	• Loaldo Dr • Poirier Pl* • Lakewood Pkwy* • Saratoga Ave*	DPW	Public Works Commission, Public	• Initiate public involvement process. • Assess the need for flashing beacons or refuge islands are warranted for unsignalized/mid-block crossings. • Coordinate with CCTA regarding bus stop location near proposed crossings (relocate stops if necessary). • Identify funding sources. • *Note:* Poirier Pl, Lakewood Pkwy, and Saratoga Ave crossings only compatible with a three-lane conversion. • Identify funding source(s).
Plattsburg Ave Intersection - Concept 1	• Slow high-speed NB right turns with curb extension • Resolve Tracy Dr turns and access to Merola's Market • Exclusive pedestrian phase at south crosswalk • Gateway treatments (north entrance to corridor)	DPW	VTrans, CCRPC, Burlington City Arts, Public	• Initiate planning and design. • Initiate public involvement process. • Identify funding source(s).
Shore Rd / Heineberg Rd Intersection - Concept 2	• Increase pedestrian crossing times for seniors • Pedestrian activated no right turn on red		VTrans, CCRPC, Public, Private landowner	• Initiate planning and design. • Initiate public involvement process. • Coordinate with St. Mark Church regarding permanent easement

Project	Project Details	Leaders	Direct Partners	Next Steps/Comments
	• Realign Shore Rd (contingent upon St. Mark Church right-of-way donation)			or ROW donation for Shore Rd realignment • Identify funding source(s).
Ethan Allen Pkwy Intersection - Concept 1	• Incorporate Little Eagle Bay into signal • Slow high-speed NB right turns with curb extension • Opposing NB/SB left-turn lanes • Relocate vehicle entrance to park	DPW/CCRPC	VTrans, Burlington Department of Parks and Recreation, Public	• Initiate scoping and design, including alternative for single-lane roundabout. • Initiate public involvement process. • Coordinate with Department of Parks and Recreation to locate a suitable vehicle entrance for Ethan Allen Park. • Identify funding source(s).
Washington St Intersection - Concept 1	• Consider raised intersection with special pavement material • Rapid flash beacon for crosswalk • Gateway treatments (transition between Old and New North End)	DPW	VTrans, CCRPC, Burlington Fire Department, Burlington City Arts, Public	• Initiate planning and design. • Initiate public involvement process. • Identify funding source(s).
North St Intersection - Concept 1	• Pedestrian activated co right turn on red • Right-in, right-out or curb cut removal at parking lot access • Realign south crosswalk and add pedestrian refuge • Realign north crosswalk to align with push button • Protected/permitted SB left turns		VTrans, CCRPC, VT Division for Historic Preservation, Burlington City Arts, Public	• Initiate planning and design. • Initiate public involvement process. • Study access to parking lot and Depot St to determine whether right in, right out or curb cut removal is best solution. • Coordinate with the Vermont Division for Historic Preservation

Project	Project Details	Leaders	Direct Partners	Next Steps/Comments
	• Gateway treatments (southern entrance to corridor, entrance to North Street Historic District)			regarding potential impacts to North Street Historic District. • Identify funding source(s).
Transit: 15-minute peak period weekday headways on North Ave	• Upgrade AM and PM peak period headways from 30 minutes to 15 minutes.	CCTA		• Continue to develop existing plans for 15-minute service on North Avenue. • Identify funding source(s).
Transit: Increased weekend services on North Ave	• Replace Route 18 (limited Sunday service only) on North Avenue with new Sunday service on Route 7			• Identify funding source(s).

Implementation Matrix Long -Term Recommendations

Project	Project Details	Leaders	Direct Partners	Next Steps/Comments

Cross-section – Concept D: On-street one-way protected bike lanes	• Consistent 25 mph speed limit
	• 3-lane cross section between Shore Rd and VT 127 ramps (maintained from short-term pilot project)
	• Bicycle facilities:
	  o 5’ to 7’ on-street protected bike lanes
	  o 2’ to 3’ raised curb buffer
	• 10.5’ travel lanes with 0.5’ shoulders against curbs/parking
	• Potential 8’ parallel parking on one side of the street (pending results of pilot project)
	• Utility burial or relocation, as needed for curb movement
	• Stormwater management (address ponding issues)
	• Use bicycle-friendly drainage grates
		DPW/CCRPC	VTrans, private utilities, CCTA, DPR, VT Division for Historic Preservation, Public	• Initiate scoping study with a robust public involvement process.
				• Evaluate results of the pilot project (Concept A3), including the on-street parking north of Washington St.
				• Coordinate with Department of Parks and Recreation to incorporate clear, safe, and inviting pedestrian and bicycle connections to pathways (Island Line Trail and 127 Path) and parkland via side streets (e.g. Shore Rd, Leddy Park Rd, etc.).
				• Create maintenance and snow plowing policy and action plan for protected bike lanes.
				• Coordinate with utilities regarding burial or relocation as curbs are moved.
				• Coordinate with CCTA regarding bus stop consolidation or relocation, as well as interaction between cycle tracks and bus stops.
				• Coordinate with the Vermont Division for Historic Preservation regarding potential impacts to North Street Historic District.
				• Identify funding source(s).

Project	Project Details	Leaders	Direct Partners	Next Steps/Comments
Additional pedestrian crossings at unsignalized intersections or mid-block locations	• Staniford Rd • Mid-block at bus stop pair south of VT 127 ramps • Convent Sq • Canfield St	DPW	Public Works Commission, Public	• Initiate public involvement process. • Assess the need for flashing beacons or refuge islands are warranted for unsignalized/mid-block crossings. • Coordinate with CCTA regarding bus stop location near proposed crossings (relocate stops if necessary). • Identify funding sources.
Plattsburg Ave Intersection - Concept 3	• Maintain Concept 1 improvements • Mini-roundabout o No flared entry to increase visibility of pedestrians and cyclists to drivers, and to slow turns into roundabout o Separated protected bike lane around roundabout • Additional gateway treatments (northern entrance to corridor)	DPW/CCRPC	VTrans, Public	• Initiate Scoping and alternatives evaluation before proceeding to design. • Initiate public involvement process. • Identify funding source(s).
Ethan Allen Shopping Center Intersection - Concept 2	• Maintain Concept 1 improvements • Reconstruct Farrington's Mobile Home Park entrance • Reconstruct Bamboo Hut sidewalk and curb cuts	DPW	Public	• Initiate design of intersection. • Initiate public involvement process. • Coordinate with Bamboo Hut and Farrington's Mobile Home Park • Identify funding source(s).
VT 127 Ramps - Concept 3	• Gateway treatments (transition between highway speeds and 25 mph corridor)	DPW	VTrans, Burlington City Arts, CCRPC, Public	• Initiate scoping and evaluation of alternatives (including a single lane roundabout) before proceeding to design.

Project	Project Details	Leaders	Direct Partners	Next Steps/Comments
	• Remove unused ramp pavement • Roundabout: o Dual SB approach lanes o WB right-turn bypass lane o No flared entry to increase visibility of pedestrians and cyclists to drivers, and to slow turns into roundabout o Separated cycle track around roundabout			• Initiate public involvement process. • Identify funding source(s).
Institute Rd Intersection - Concept 2	• Roundabout: o SB right-turn bypass lane o No flared entry to increase visibility of pedestrians and cyclists to drivers, and to slow turns into roundabout o Resolve bus driveway access (this is included in Concept 1, but driveway may need to be moved again with a roundabout concept) o Separated cycle track around roundabout	DPW	VTrans, CCRPC, BSD	• Initiate scoping and evaluation of alternatives (including a single lane roundabout) before proceeding to design. • Initiate public involvement process. • Coordinate with Burlington School Department to resolve driveway access and regarding ROW needs for a roundabout. • Identify funding source(s).

Next Steps

Improving and reconstructing North Avenue will occur in phases. Over the next years and into the next decade, the multimodal improvements outlined in the Implementation Matrix will transform North Avenue into the safe, efficient, and convenient corridor that the community has envisioned.

The recommendations in this report are concepts and detailed visions for the community to work toward. The next step for many recommendations will be a Scoping Study, which will clearly define the project and identify any impacts to adjacent resources. The recommendation will be vetted against other potential alternatives, and a more detailed conceptual design and cost estimate will be developed. The scoping process includes a public involvement plan similar to the public involvement for this Corridor Study. Following the scoping process, projects will undergo preliminary and final design, right-of-way acquisition (if needed), and construction. Public outreach and involvement will occur throughout the process, as projects progress from scoping to construction.

Central to these efforts is the identification of funding to complete design and construction work. Implementing any recommended project will require a combination of funding sources, which may include:

- Federal:
    - Congestion Mitigation and Air Quality Improvement Program
    - Highway Safety Improvement Program
    - Surface Transportation Program
    - Transportation Alternatives Program
- State:
    - Bicycle and Pedestrian Program
    - Statewide Transportation Improvement Program (STIP)
    - Development impact fees, including those generated by the recently passed Fair Share legislation
    - Local planning assistance grants
- Regional:
    - Unified Planning Work Program
    - Transportation Improvement Program (TIP)
    - Sidewalk Program
- Local:
    - Bond measures (popular vote)
    - Capital infrastructure funds
    - Voter-approved sales tax
- Private:
    - Developers
    - Institutions

CITY OF BURLINGTON, VERMONT
CITY COUNCIL TRANSPORTATION, ENERGY & UTILITIES COMMITTEE
c/o Department of Public Works
645 Pine Street, Suite A
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Councilor Maxwell Tracy, Chair *WARD 2*
Councilor Tom Ayres, *WARD 7*
Councilor William "Chip" Mason, *WARD 5*

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Transportation, Energy and Utilities Committee of the City Council

Wednesday, September 10th, 2014 at 6:00 PM

Burlington Police Department – Community Room

1 North Avenue – Burlington, VT

–AGENDA–

1. Agenda
    a. DISCUSSION
    b. ACTION
2. Public Forum
3. Minutes of 8/13/2014
    a. DISCUSSION
    b. ACTION
4. Adoption of the NACTO Urban Streets Design Guide – Nicole Losch, DPW
5. Formal Presentation North Avenue Corridor Study – Nicole Losch, DPW
   TEUC to vote on the North Avenue Corridor Implementation Plan.
6. Councilors' Updates
7. Adjourn

North Avenue Corridor Study

Transportation, Energy and Utilities Committee

September 10, 2014

PARSONS BRINCKERHOFF

Presentation Outline

- **Project Initiation: Why North Avenue?**
- **Existing Conditions + Issues**
- **Vision + Goals**
- **Improvement Options - *Development /Evaluation***
- **Implementation Plan - *Recommended Concepts***
- **Action**

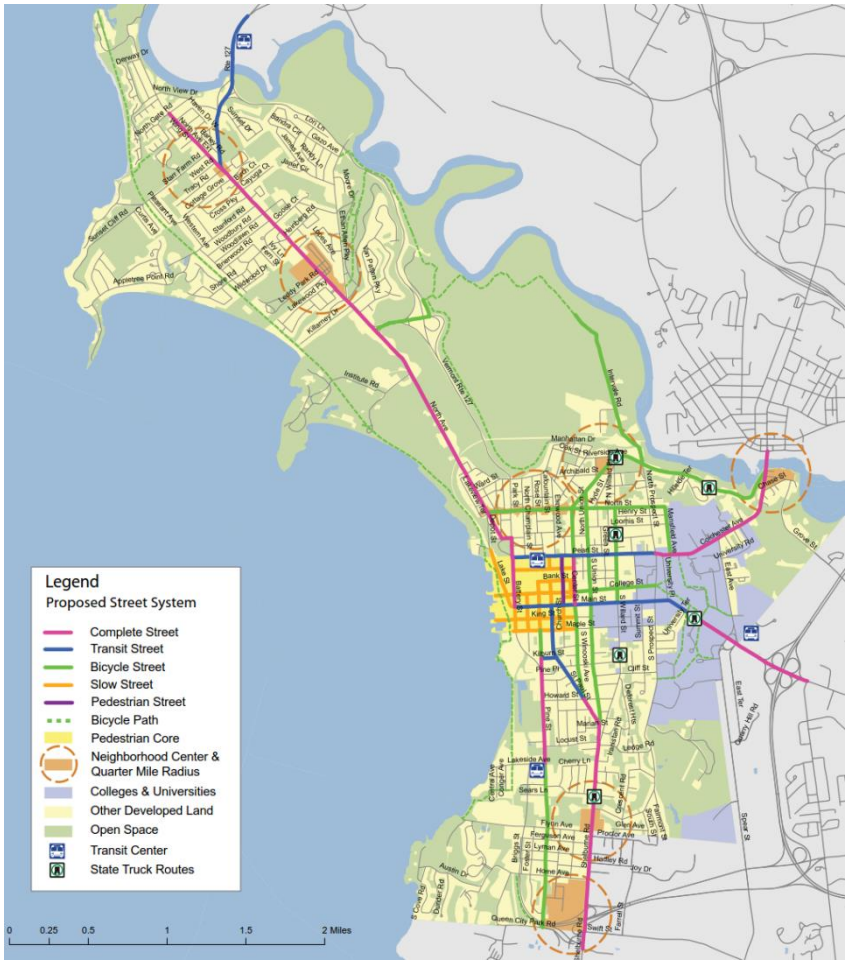
Corridor Study Origin

2011 Transportation Plan

"…A shift to a complete streets *strategy…*

Burlington's gateway streets must carry all travel modes – cars and trucks, buses, bikes, and pedestrians - because no alternatives exist…

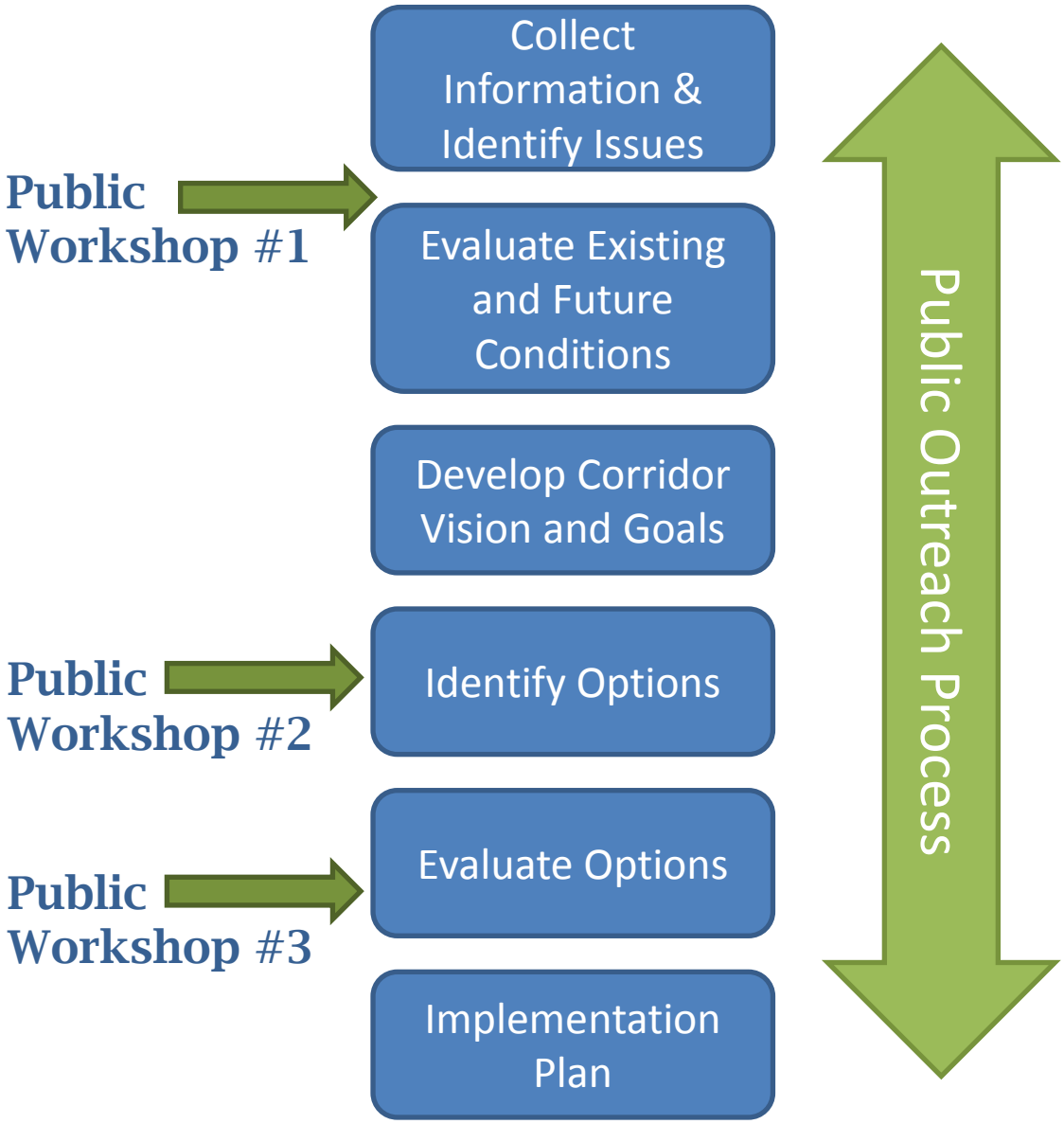
The only essential element of a complete street is accommodating all travel modes safely and efficiently."



Implementation through Corridor Studies:

1. 2009 Battery Street (preliminary analysis)
2. 2011 Colchester Avenue
3. 2013 North Avenue
4. 2014 Winooski Avenue
5. Battery Street and Shelburne Street TBD

Corridor Study Process



Advisory Committee Participants

- Burlington City Council
- Burlington School District
- City of Burlington Departments
- CCRPC
- CCTA
- AARP
- NPA Reps from Wards 3, 4 and 7
- Burlington Partnership for a Healthy Community
- Local Motion

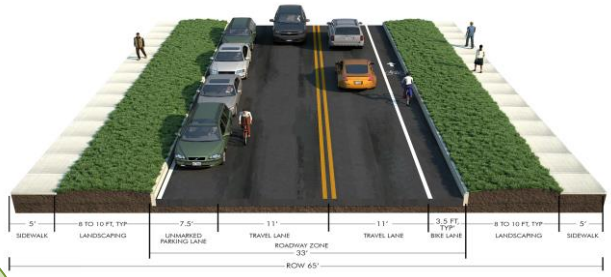
Other Outreach

- Direct outreach to stakeholders
- Online input tool
- Website & email comments
- Heineberg Senior Center
- JJ Flynn PTO

Corridor Conditions & Issues

Existing Conditions

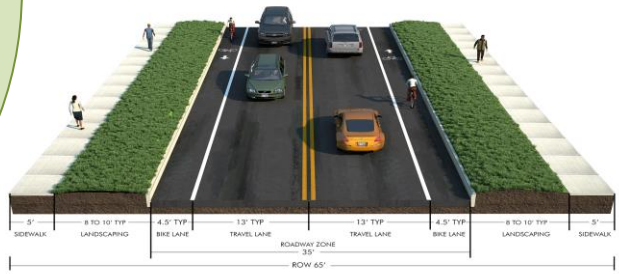
Plattsburg Ave to Shore Rd



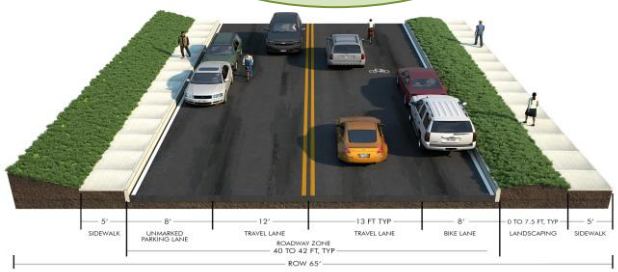
Washington St to North St

- 66' ROW, but constrained
- Sidewalks throughout, but poor condition and few crossings
- Inconsistent bike facilities, limited connections to paths
- Single family + multi-family + scattered retail + institutions
- Frequent driveways
- CCTA Route 7
- Unclear parking
- Skewed intersections, high-speed right turns

Shore Rd to VT 127



Institute Rd to Washington St



VT 127 to Institute Rd

Average Daily Traffic Volumes + Future Growth

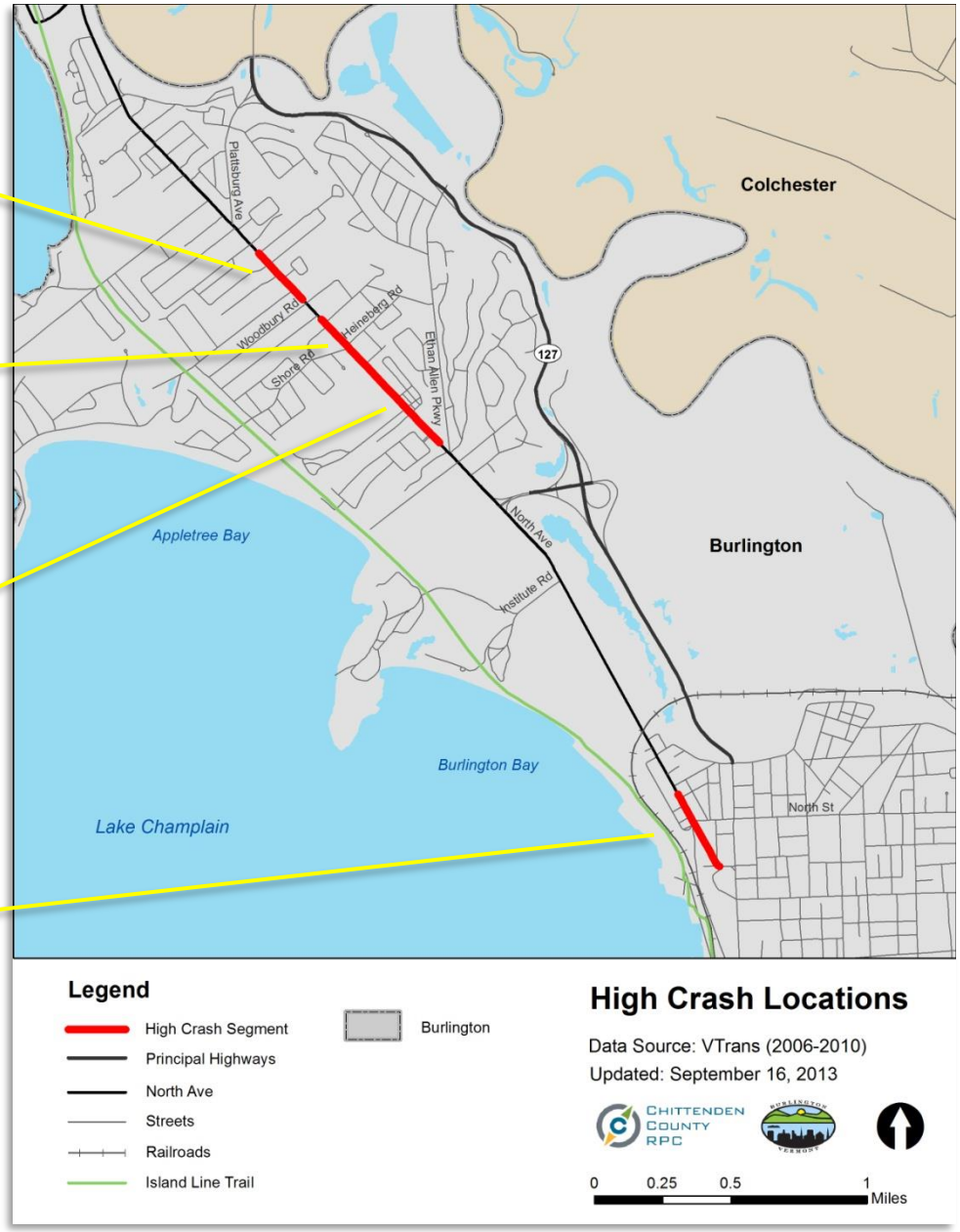
High Crash Locations (2006-2010)

Birch Ct to Woodbury Rd
Crashes: 39
PDO: 33 (85%)
Crash Rate: 6.48 per MVM
Actual/Critical Ratio: 1.23
Severity Index: $21,677

Gosse Ct/Woodlawn Rd to Poirer Pl
Crashes: 46
PDO: 42 (91%)
Crash Rate: 6.18 per MVM
Actual/Critical Ratio: 1.22
Severity Index: $13,100

Lakewood Pkwy to Ethan Allen Pkwy
Crashes: 76
PDO: 60 (79%)
Crash Rate: 10.16 per MVM
Actual/Critical Ratio: 2.00
Severity Index: $41,204

Strong St/Ward St to Sherman St
Crashes: 58
PDO: 4 (93%)
Crash Rate: 9.51 per MVM
Actual/Critical Ratio: 1.81
Severity Index: $12,107



Vision & Goals

Vision Statement for North Avenue*

North Avenue will continue to serve as the **primary transportation corridor** connecting Burlington's New North End with the rest of the City.

As the North End's "Main Street," North Avenue will provide for **safe, inviting, and convenient travel for all users of all ages and abilities**—including motorists, pedestrians, bicyclists, and public transportation riders.

The **need to move people through the corridor will be balanced with the need to provide access to homes, businesses, and local institutions**.

The corridor will develop into an **attractive public space** through creative streetscape, signage, and other site design features.

The corridor will become **more livable and desirable by promoting social interaction, public health, economic development and environmentally sustainable initiatives.**

*modified from 2012 EPA's *Building Blocks for a Sustainable Community Workshop* ,Complete Streets Vision for Burlington

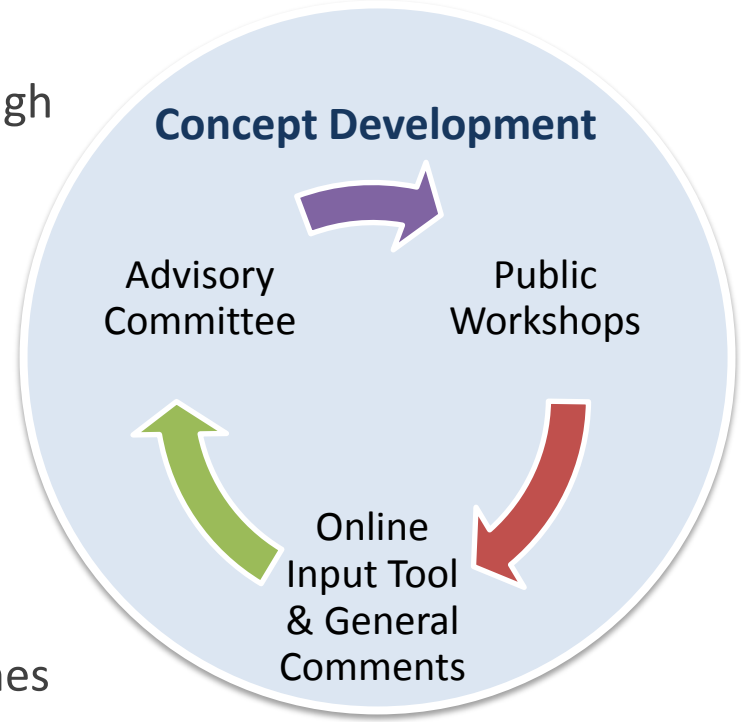
Major Goals for North Avenue

- Remake the North Ave corridor into a “Complete Street” that accommodates the safe and efficient travel for all users of all abilities and provides transportation choices.
- Improve safety for all users.
- Provide a range of convenient and efficient travel options and improve multimodal connections.
- Develop strategies that support vibrant and livable neighborhoods in the New North End; enhance the quality of life of residents and visitors; and support sustainable economic growth.

Concept Development

Initial Universe of Improvement Options

- **Intersection treatments**
  - Signal improvements, re-alignment, high speed turn elimination, and/or roundabouts
  - Improved pedestrian and bicycle travel through intersections
- **Travel lane, parking and bicycle-related treatments**
  - Lane width reductions, travel lane reduction, turn lane creation, and/or lanes for bicycle travel
  - On-street parking on one side, both sides, and/or removed
  - Designated bike facilities: Sharrows / bike lanes (regular, buffered, or protected)
- **Pedestrian facilities**
  - Crosswalks, pedestrian signal improvements, and/or gateway treatments



Improvement Options

Cross Sections:

- Short-Term Improvements
- Medium- to Long-Term Options

Intersections:

- Plattsburg Ave
- Shore Rd/Heineberg Rd
- Ethan Allen Shopping Center
- Ethan Allen Pkwy
- VT 127 Ramps
- Institute Rd
- North St

Short, Medium, & Long Term Implementation

- Short term = minimal design; completion within 1-3 years; basic improvements to advance without additional public process (e.g. signal timing, ADA improvements)
- Medium term = design needed; completion within 3-7 years; public process included in design process
- Long term = evaluation, scoping and design needed; completion is more than 7 years; robust public involvement

Evaluation Criteria

- Evaluation criteria based on **study goals**:
  - Accommodates safe & efficient travel for all users
  - Improves safety for all users
  - Balances transportation choices
  - Improves multimodal connectivity
- Other goals informed the improvement options development as **design criteria**:
  - Consistent facilities throughout corridor
  - Supports vibrant and livable community
  - Supports sustainable economic growth

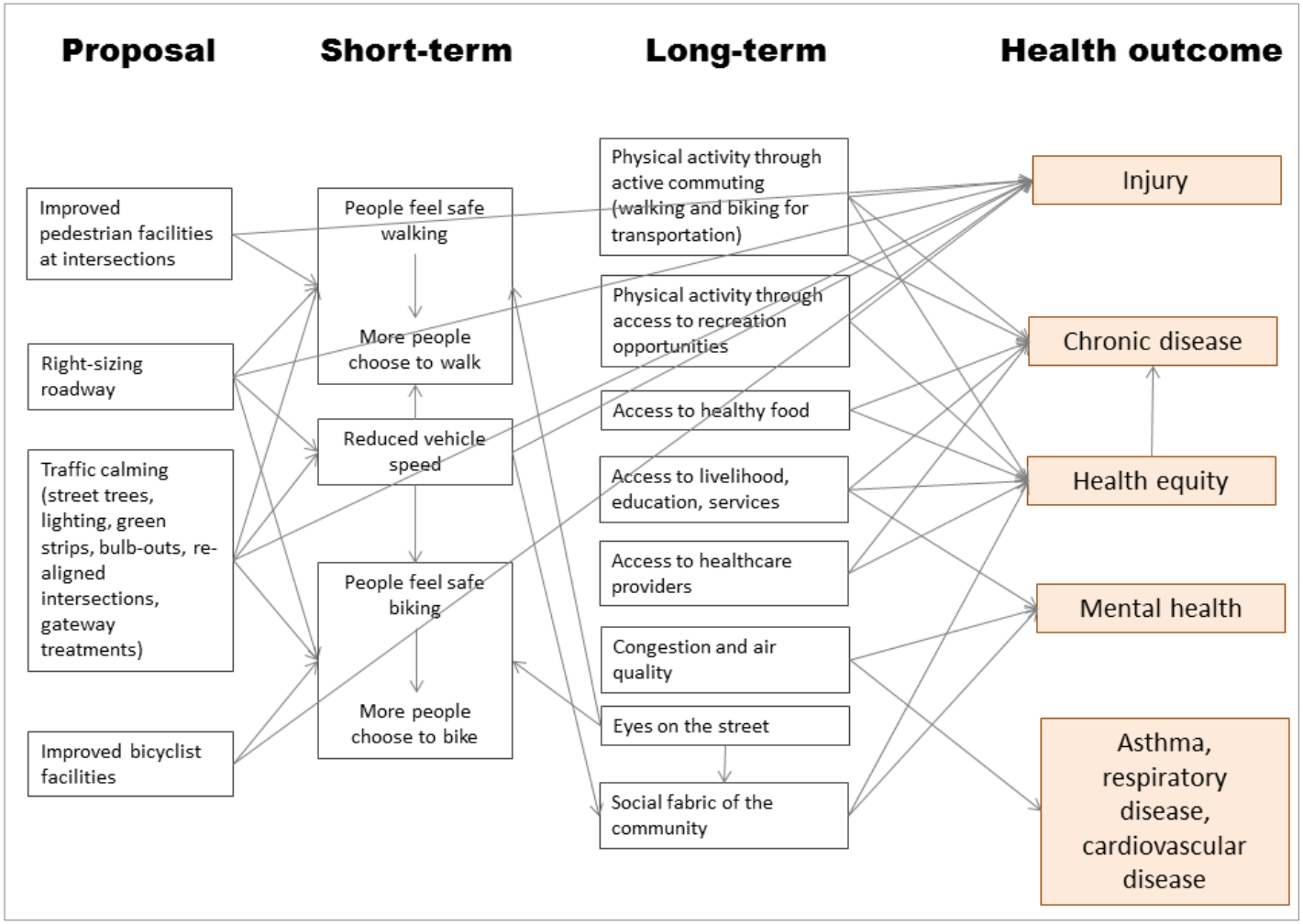
Evaluation Criteria

Criteria	Cross Sections	Intersections
Consistency with *Burlington Complete Street Design Guidelines*	✓	
Opportunities to improve accessibility	✓	✓
Vehicle speed reduction treatments	✓	✓
Level of traffic stress	✓	✓
Vehicle/bike conflicts	✓	✓
Bus/bike conflicts	✓	
Vehicle delay/level of service		✓
Vehicle queues		✓
Bus stop/crosswalk pairing	✓	
Opportunities for bus bulbs	✓	
Cyclist access	✓	
New ROW needs	✓	✓
Planting strip impacts	✓	✓
Snow plowing and storage	✓	
Drainage	✓	

Health Impact Assessment

What are the potential health impacts of proposed changes to North Avenue?

Which proposals have the most potential to improve the health of vulnerable populations?



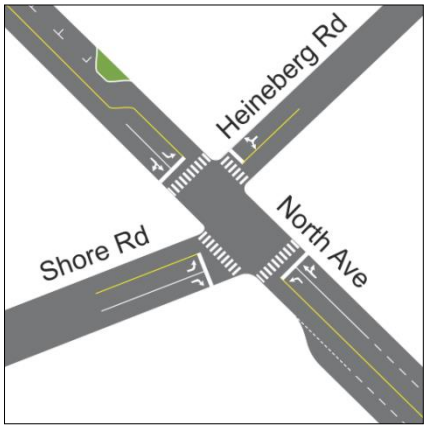
Implementation Plan
(*Recommended Concepts)*

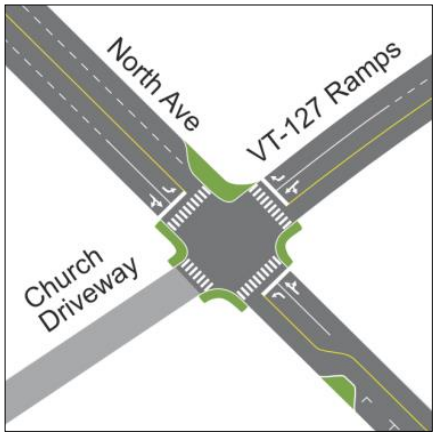
Short-Term Concepts

- All intersections
  - ADA-compliant curb ramps and crosswalks on all approaches;
  - audible pedestrian countdown timers with a minimum 5-second (push-button) Leading Pedestrian Interval (LPI); and
  - bicycle facilities maintained through intersections (where provided in advance of intersections).
- New crosswalks:
  - Burlington College
  - Gosse Court
  - Killarney Drive / Village Green Drive
  - Green Acres / Cayuga Court

Short-Term Intersection Concepts

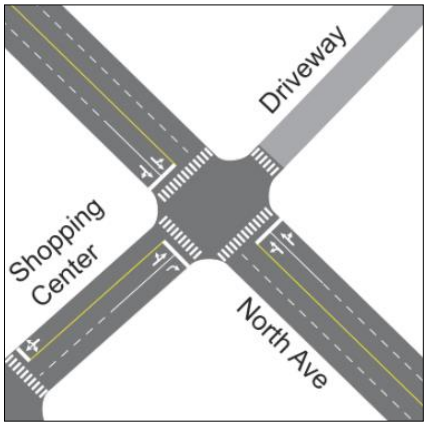
Shore Road: increase pedestrian crossing times, split phasing, pedestrian-activated no right turn on red.

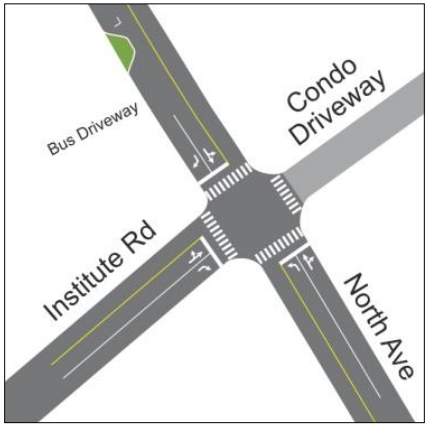




VT 127: remove high-speed northbound and westbound ramps

Ethan Allen Shopping Center: increase pedestrian crossing times, pedestrian-activated no right turn on red.





Institute Road: reduce intersection footprint, relocate northbound bus shelter, realign southbound sidewalk, pedestrian-activated no right turn on red

VT 127 Intersection

Concept	AM/PM Cycle Length (seconds)	LOS (NB/SB/EB/WB)								Average Queue (NB/SB/EB/WB in terms of # of Vehicles)							
		AM Peak				PM Peak				AM Peak				PM Peak			
Existing Configuration (Existing traffic volumes)	70/70	F	E	B	C	B	B	B	A	17	12	1	3	3	1	1	1
3-Lane Conversion • Maintain existing geometry (including NB right-turn ramp and unrestricted WB right-turn) • Optimize signal timing	90/90	D	C	C	C	B	A	C	A	13	9	1	4	8	2	1	1
Existing Configuration (2035 traffic volumes)	70/70	F	E	B	C	B	B	B	A	21	16	1	4	4	1	1	1
Concept 1 (4 Lanes) • 5-second LPI • Remove high-speed NB/WB rights	90/90	C	D	C	C	D	C	C	C	12	15	1	3	21	6	1	6

Note: high-speed ramp removal + LPI creates LOS improvement in NB AM peak because NB exclusive left turn lane is added. Without exclusive NB left turn LOS changes from C to E.

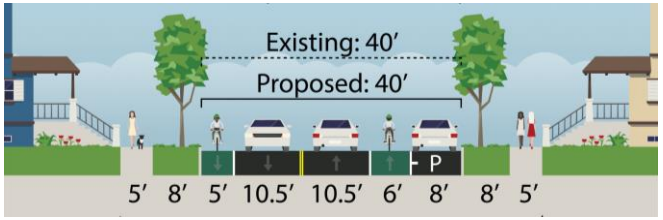
**more recent analysis indicates improved LOS; results to be updated as soon as possible*

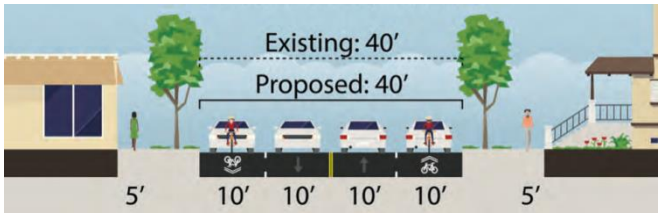
LOS	Signalized Intersection
A	≤10 sec
B	10–20 sec
C	20–35 sec
D	35–55 sec
E	55–80 sec
F	≥80 sec

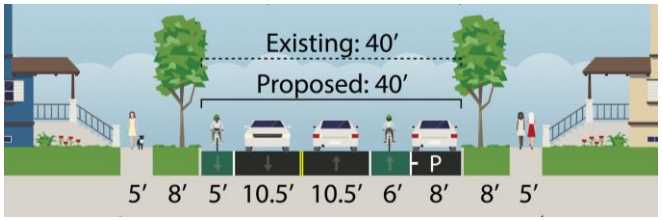
VT 127 Traffic Simulations
2035 AM/PM
4 lanes / 3 lanes

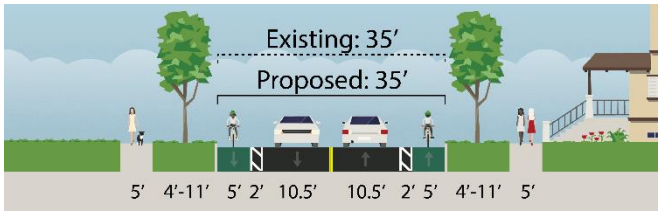
Short-Term Cross-Sections - 2 Concepts

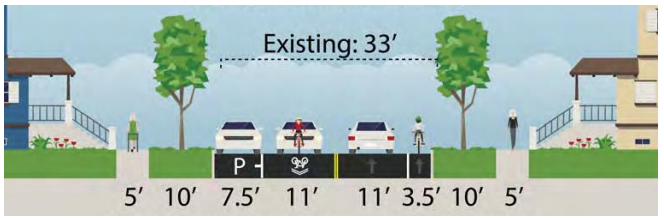
Study Team - Concept 1



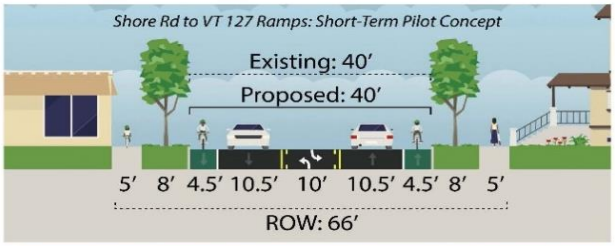








Advisory Committee - Concept 2



Short-Term Cross-Section Concept Differences

Major Differences between Concepts 1 and 2:

Parking

- Concept 1: parking on one side (except between Shore Rd and VT 127)
- Concept 2: no parking north of Institute Rd

Lane reassignment between Shore Rd and VT 127

- Concept 1: medium-term implementation of 4- to 3-lane pilot project
- Concept 2: short-term implementation of 4- to 3-lane pilot project

Bike Facilities

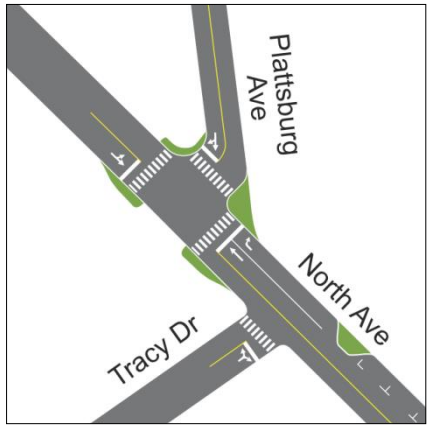
- Concept 1: short-term on-street bike lanes (except between Shore Rd and VT 127)
- Concept 2: short-tern on-street buffered/protected bike lanes north of Institute Rd

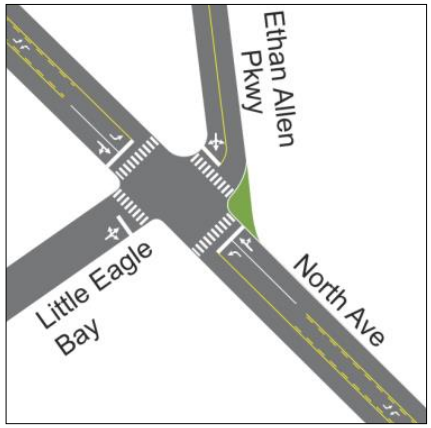
Speed Limit

- Concept 1: No change in the short-term
- Concept 2: Implement 25 mph north of VT 127

Medium-Term Intersection Concepts

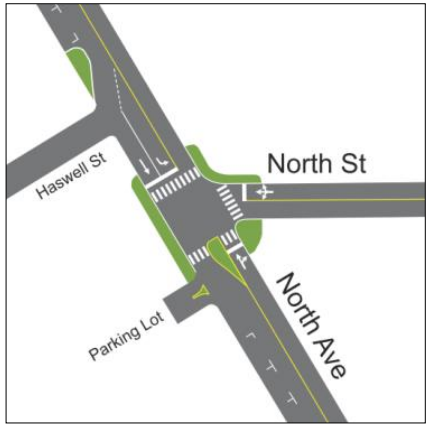
Plattsburg Avenue: eliminate high-speed northbound right turn, add pedestrian activated no right on red.





Ethan Allen Parkway: scoping to relocate Park entrance, add Little Eagle Bay into signal, eliminate high-speed northbound right turn.

Shore Road: if ROW is donated or easily acquired, realign Shore Road, keep longer crossing times and pedestrian-activated no right on red.



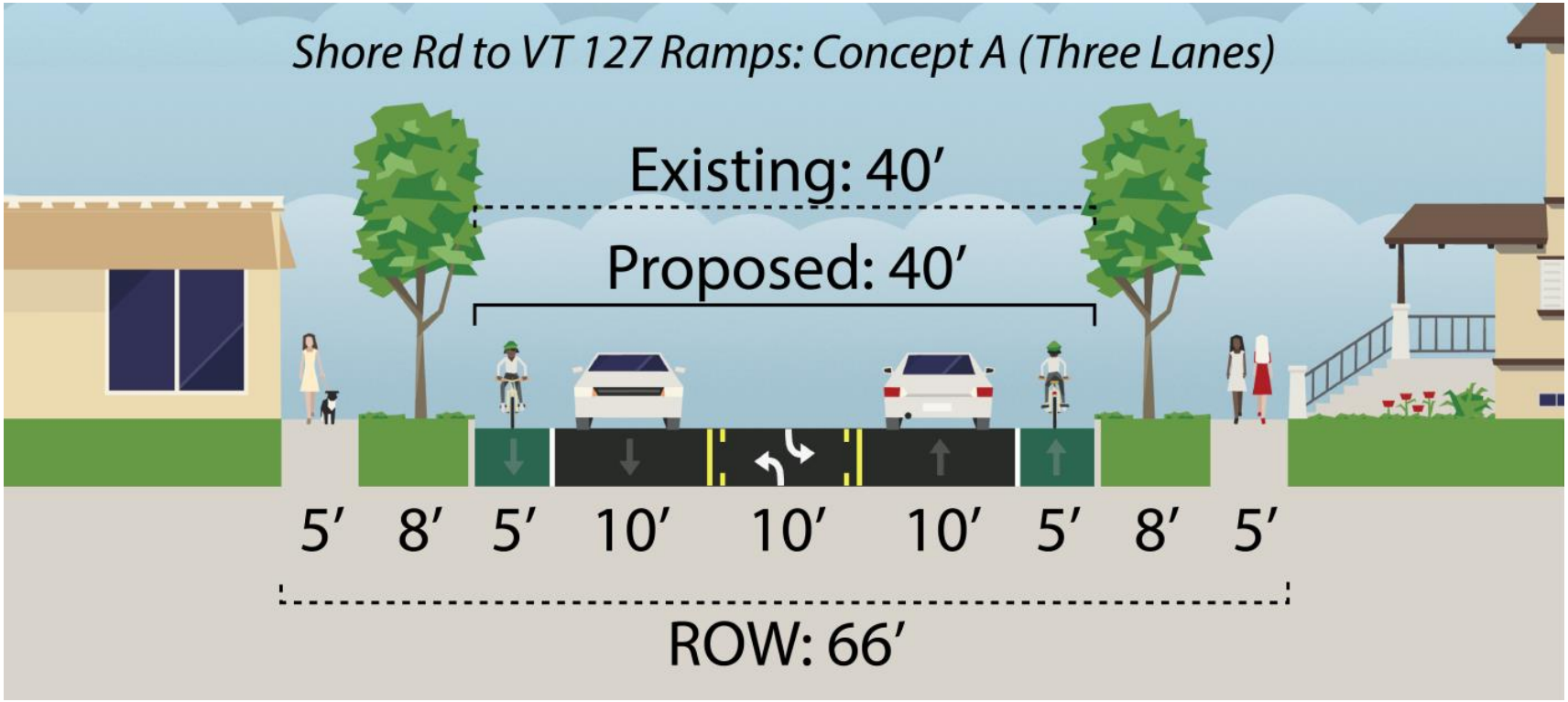
North Street: parking lot right in / right out or curb cut removal, realign north and south crosswalks, add protected / permitted southbound left turns, pedestrian-activated no right turn on red

Medium-Term crosswalks

- **Washington Street**: raised intersection
- **Potential crosswalks** for medium-or long-term:
  - Ward Street
  - Saratoga Avenue
  - Poirier Place
  - Loaldo Drive
  - Lakewood Parkway
  - Staniford Road
  - Mid-block between VT 127 and Institute Road
  - Convent Square
  - Canfield Street

Medium-Term Cross-Section Concepts

Study Team's Recommendation: 4- to 3-lane pilot project in medium-term

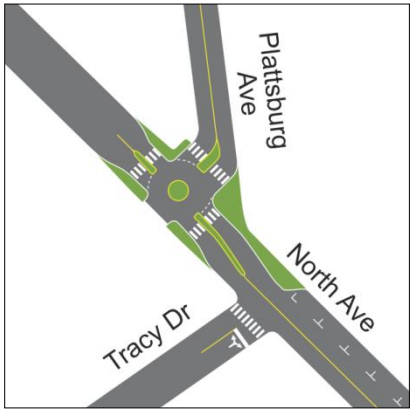


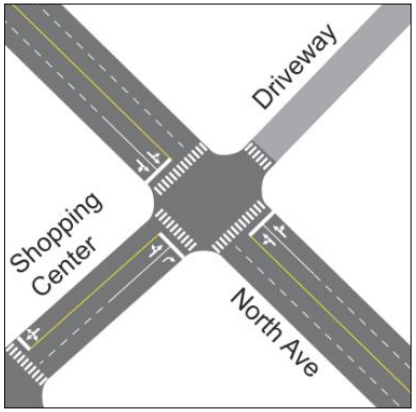
New Information

This concept could move into the short-term implementation plan, pending an intensive public outreach effort and comprehensive data collection plan (e.g. traffic speeds, travel times, turning movements, bike/ped counts, crash incidents, public perception)

Long-Term Intersection Concepts

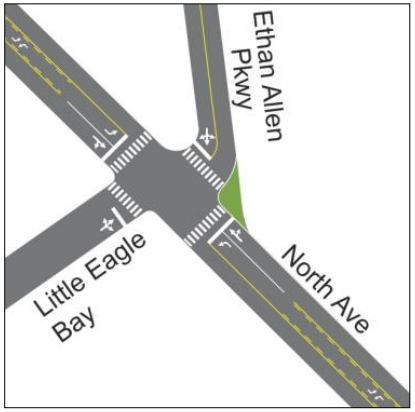
Plattsburg Avenue: scoping for single-lane mini-roundabout

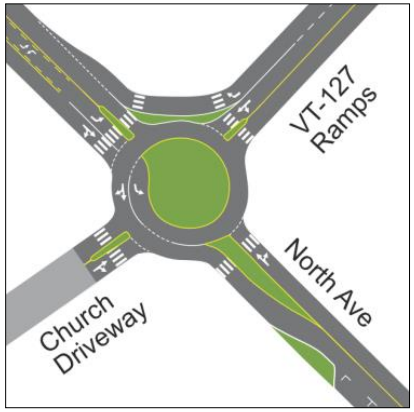




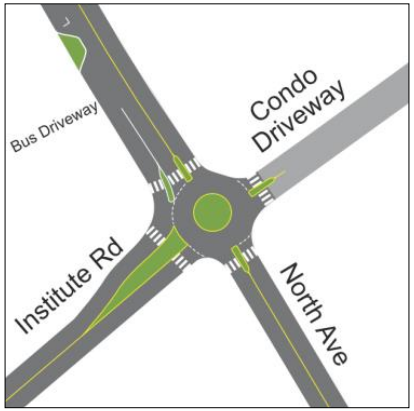
Ethan Allen Shopping Center: reconstruct curb and sidewalk at Farrington's Mobile Home Park and Bamboo Hut

Ethan Allen Parkway: implement scoping study recommendation (signal or roundabout)



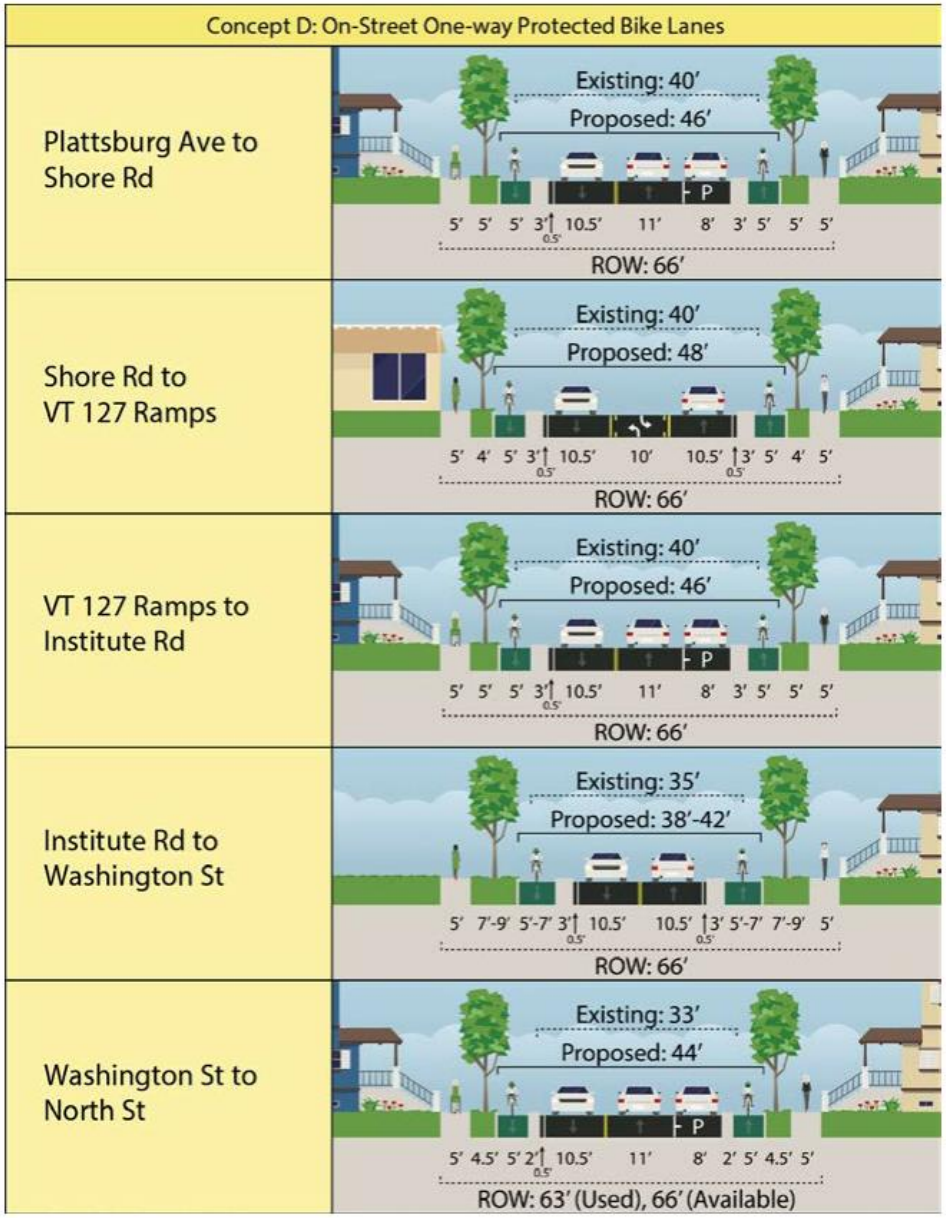


VT 127: scoping study for roundabout



Institute Road: roundabout, resolve bus driveway

Long-Term Cross Sections Concept



High-Level Cost Estimates

Concept	Estimated Costs
4- to 3-lane pilot:	
Planning + implementation	$52,000
Short Term:	
Basic – Enhanced Crosswalks	$25,000 - $110,000
Intersections' minor reconstruction	$70,000
Buffered / protected bike lanes	$60,000
Medium Term:	
Basic – Enhanced Crosswalks	$45,000 - $180,000
Intersections	TBD with scoping study
Long Term cross section:	
On-Street One-Way Protected Bike Lanes	$7,479,000

Creating a Corridor Plan

- Implementation Plan / Implementation Matrix
  - Chapter 4 of Corridor Plan
- Corridor Plan
  - Chapters & Appendices
    - Corridor Study Process/Background
    - Vision & Goals
    - Existing & Future Conditions
    - Development & Evaluation of Improvement Options
    - Implementation Plan / Matrix
    - Public Process
    - Health Impact Assessment (Full Report)

TEUC Action

Decisionmaking

The Transportation, Energy and Utilities Committee is asked to approve a North Avenue *Implementation Plan* (or elements of the Plan) and advance the final draft to the City Council for consideration and approval at the September 22, 2014 meeting.

Approving the Implementation Plan

Short Term Implementation?

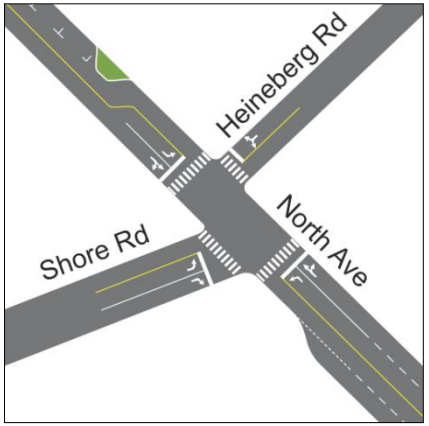
- At all intersections
  1. ADA-compliant curb ramps and crosswalks on all approaches;
  2. audible pedestrian countdown timers with a minimum 5-second (push-button) Leading Pedestrian Interval (LPI); and
  3. bicycle facilities maintained through intersections (where provided in advance of intersections)

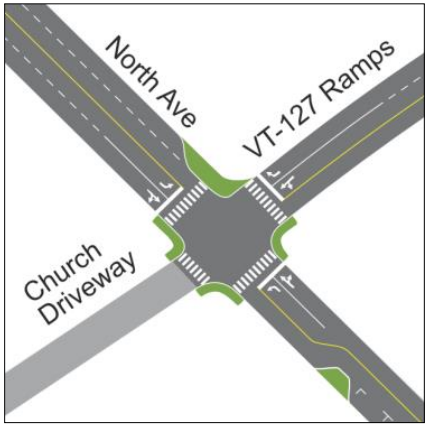
- New crosswalks:
  1. Burlington College
  2. Gosse Court
  3. Killarney Drive / Village Green Drive
  4. Green Acres / Cayuga Court

Approving the Implementation Plan

Short Term Implementation?

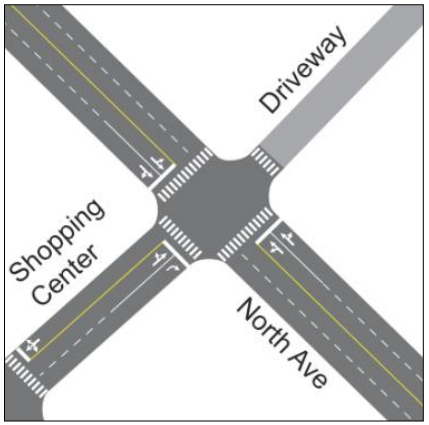
Shore Road: increase pedestrian crossing times, split phasing, pedestrian-activated no right turn on red.

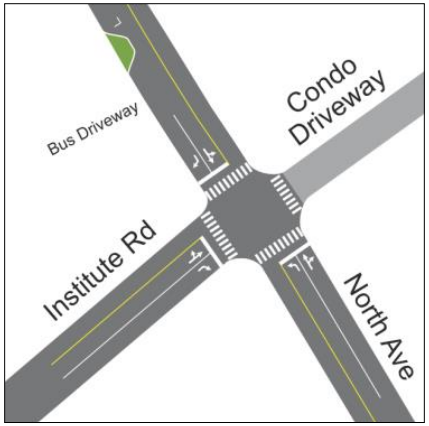




VT 127: remove high-speed northbound and westbound ramps

Ethan Allen Shopping Center: increase pedestrian crossing times, pedestrian-activated no right turn on red.





Institute Road: reduce intersection footprint, relocate northbound bus shelter, realign southbound sidewalk, pedestrian-activated no right turn on red

Approving the Implementation Plan

Short Term Implementation?

- Cross sections:
  1. 4- to 3- lane pilot project between Shore Road and VT 127?
  2. On street parking north of Institute Road?
  3. 25 mph speed limit?

Approving the Implementation Plan

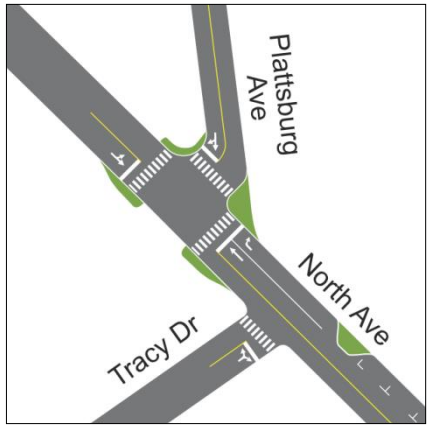
Medium Term Implementation?

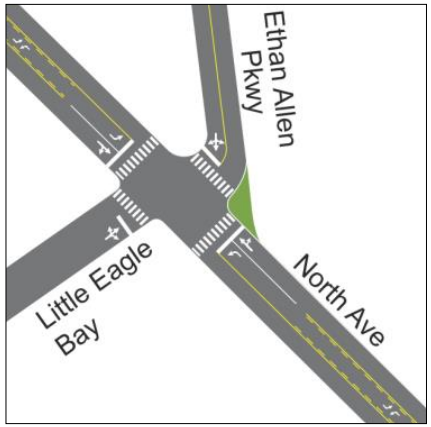
- **Washington Street**: raised intersection
- **Potential crosswalks** for medium-or long-term:
  - Ward Street
  - Saratoga Avenue
  - Poirier Place
  - Loaldo Drive
  - Lakewood Parkway
  - Staniford Road
  - Mid-block between VT 127 and Institute Road
  - Convent Square
  - Canfield Street

Approving the Implementation Plan

Medium Term Implementation?

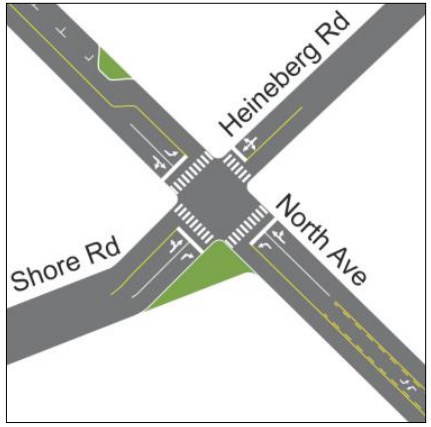
Plattsburg Avenue: eliminate high-speed northbound right turn, add pedestrian activated no right on red.

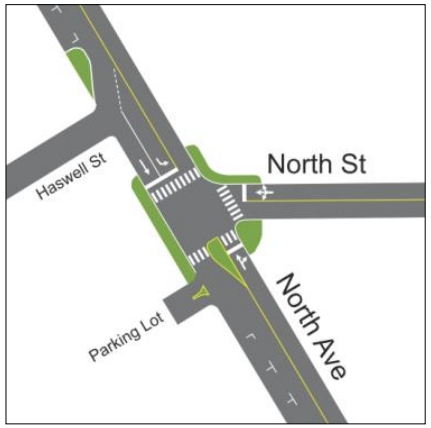




Ethan Allen Parkway: scoping to relocate Park entrance, add Little Eagle Bay into signal, eliminate high-speed northbound right turn.

Shore Road: if ROW is donated or easily acquired, realign Shore Road, keep longer crossing times and pedestrian-activated no right on red.

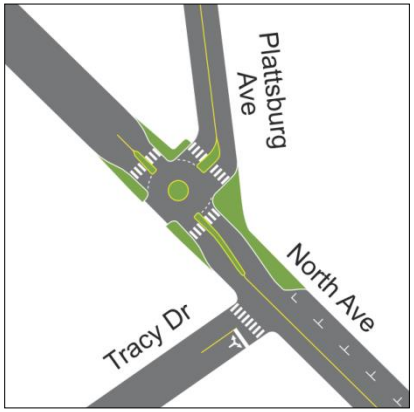


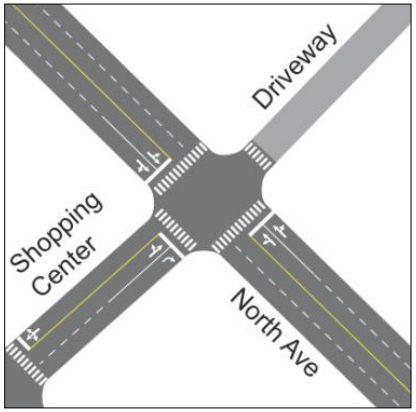


North Street: parking lot right in / right out or curb cut removal, realign north and south crosswalks, add protected / permitted southbound left turns, pedestrian-activated no right turn on red

Approving the Implementation Plan

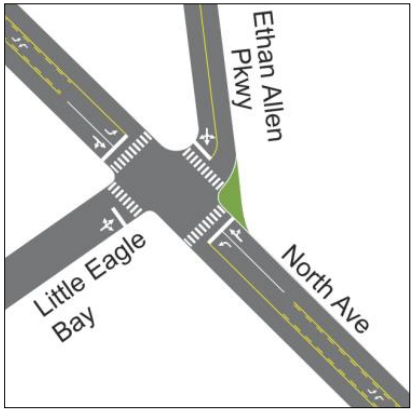
Plattsburg Avenue: scoping for single-lane mini-roundabout

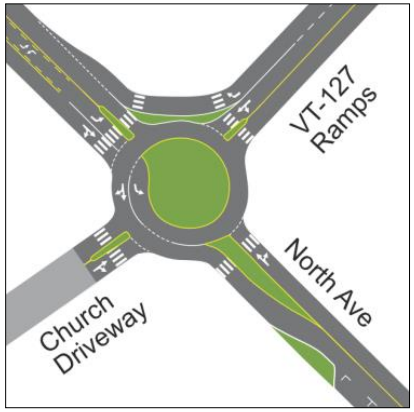




Ethan Allen Shopping Center: reconstruct curb and sidewalk at Farrington's Mobile Home Park and Bamboo Hut

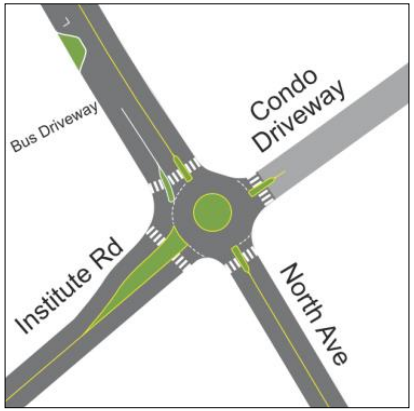
Ethan Allen Parkway: implement scoping study recommendation (signal or roundabout)





VT 127: scoping study for roundabout

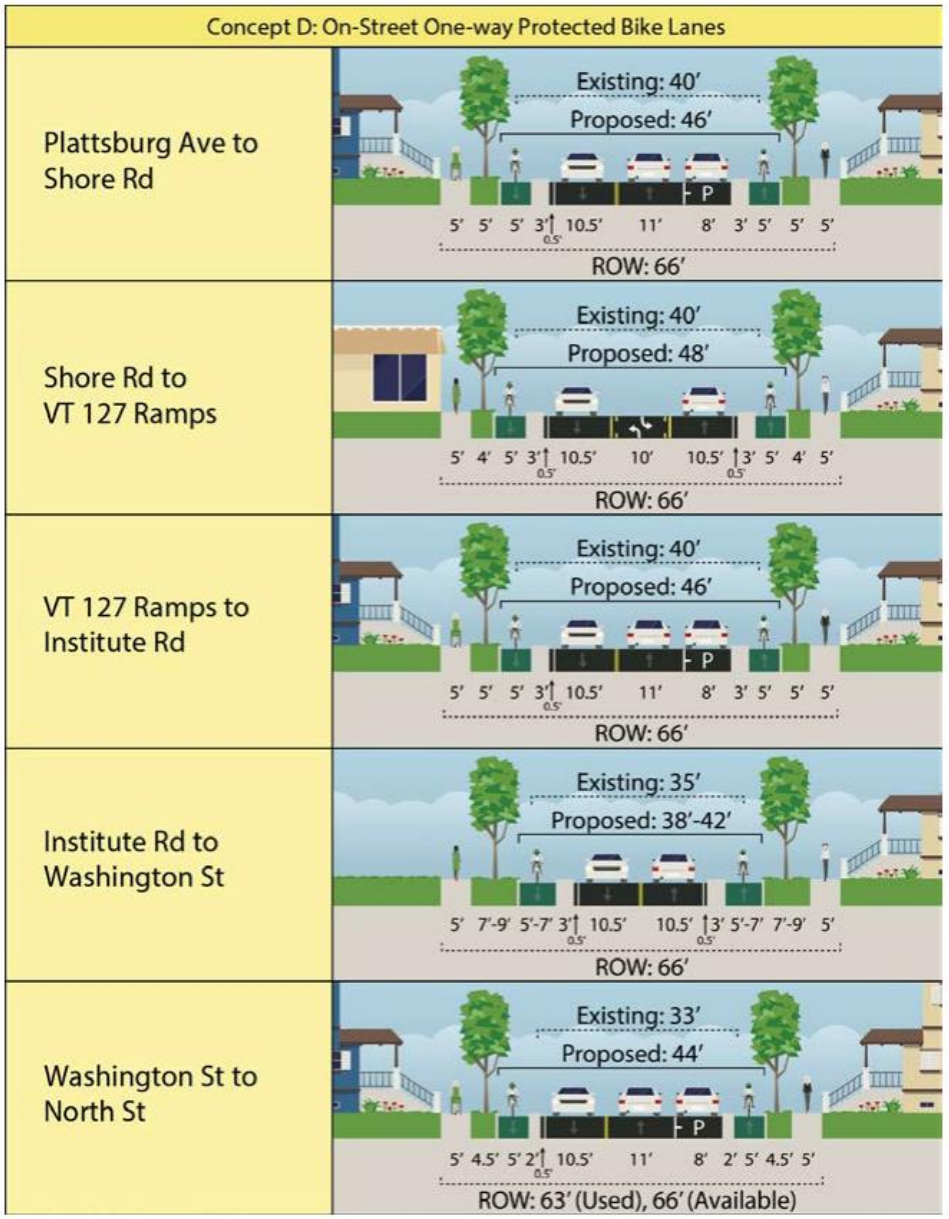
Long Term Implementation?



Institute Road: roundabout, resolve bus driveway

Approving the Implementation Plan

Long Term Implementation?



Resources

- Project website: http://www.bit.ly/north-ave
  - Vision and Goals – Full text
  - Existing and Future Conditions Report
  - Draft Implementation Plan
  - Public meeting agendas, meeting notes, and presentations
  - Advisory Committee agendas, meeting notes, and presentations
  - ***North Avenue Corridor Plan: Posted by September 15th***

Thank You!

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Councilor, Tom Ayres, *WARD 7*
Councilor William "Chip" Mason, *WARD 5*

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Transportation, Energy and Utilities Committee

DRAFT MEETING MINUTES:

Wednesday, September 10th - 2014 at 6:00 PM

Burlington Police Department – Community Room
1 North Avenue – Burlington, VT

Members present:	Chair, Maxwell Tracy	(TEUC)
	Tom Ayres	(TEUC)
	Chip Mason	(TEUC)
Others present:	See attached sign-in sheet	

Chair Tracy called the meeting to order at 6:05 pm.

1. **Agenda**

Chair Tracy moved to approve the agenda with a change in the order of the items: the Public Forum will occur after the presentation of the North Avenue Corridor Study.

All in favor

2. **Minutes of 8/13/14**

All in favor to approve minutes from 8/13/14

3. **Adoption of NACTO Street Design Guide – Nicole Losch, DPW; Eleni Churchill, CCRPC; Jason Charest, CCRPC**

Losch: Given the agenda we have to North Avenue, we haven't prepared a lot of information about this guide right now. We have provided the link to the NACTO Street Design Guide for you to digest this guide and take action about this issue in the next meeting. We have been using these guides in some of our projects. FHWA recently endorsed these guides, recognizing that they give more flexibility in design.

Mason: I propose delaying action on this item to the next TEUC meeting.

All in favor.

4. **North Avenue Corridor Study - Nicole Losch, DPW**

Nicole Losch from DPW, Eleni Churchill and Jason Charest from CCRPC gave a presentation of the North Avenue Corridor Study and of the Implementation Plan. See meeting materials for both the presentation and the Implementation Plan.

5. **Public Forum**

Residents gave their opinions on the Corridor Study and the Implementation Plan. See attached list of members of the public who provided comments.

Deliberation

TEUC members deliberated before taking action regarding the Implementation Plan for the North Avenue Corridor Study:

Ayres: I have amendments, and I have some questions about some of the minutia. Just so we have them on the public record.

Tracy: What I would like to do is to move the recommendations as a whole. As we do in the regular City Council, if Councilors have amendments they can make them

Mason: I move the adoption of the implementation plan from the advisory study for consideration to the full City Council on September 22

Ayres: I second that but I would like to have the floor back have some amendments for when you deem it appropriate.

Tracy: You can have the floor now

Ayres: If I may, I will ask two relatively simple questions: In the short term crosswalk additions. What sort of signifiers will there be present to call attention to the fact that there will be a crosswalk? How will I, as a driver, know when there will be a crosswalk?

Losch: Each location is different. The basic enhancement will be the crosswalk and warning signing at the crossing to let the drivers know there is a crosswalk. Additional enhancements can be either with paint or extending the curb into the street to make pedestrians more visible and shorten the crossing distance. One more option is the Rectangular Rapid Flashing Beacons

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(RRFB), like the ones on Pine Street. We will look at each location in particular. We look at traffic speeds, number of pedestrians, street lighting, the number of lanes pedestrians will need to cross. Depending on the information at each location we will develop a plan to make sure the crossing is visible and safe to cross.

Ayres: The second question that I have relates to something that has been discussed a lot. It's related to the 127 slip lane, I wish we could pilot this. What is the approx. cost of the elimination plan, and if proven not feasible, how simple would it be to backtrack?

Losch: It is difficult to give an estimate for the reconstruction. We gave a quick estimate is $70,000 for everything from removing the concrete island to making the signal adjustments. That is a very rough estimate but we don't have a lot of data. We wanted to have a placeholder. The biggest component in terms of construction would be to remove the concrete island, which is not complicated, in the grand scheme of things. Based on recent projects, my guess would be $10-25K, removal would be a bit less, but reinstalling it would be a similar cost.

Ayres: I don't have any further questions.

Mason: Paul Sisson had asked this question previously. Assuming we adopt the pilot, who determines if the pilot project is a success or failure and modifications? Who makes the decisions?

Losch: It is an iterative process. Typically for large projects like this, it is necessary to get feedback from as many people as possible including residents and City Council. Public Works takes all this feedback into consideration for the decision. However, there are so many components to what can be considered success or a failure. From our experience, public input is equally important when we review. What I expect is that we will present all the metrics in community meetings, to this committee, to the full Council, if they are interested, and determine the level of comfort where the project stands.

Mason: To ask it differently, in the case of the pilot project of 4 lanes to 3 lanes for example, would it be possible for the Council to reserve that authority to make the decision?

Losch: Yes

Mason: I'm not suggesting it would be that way, but if there were desire to do that, it would be a possibility.

Spencer: Yes.

Tracy: In terms of the bike lane piece. The lanes in the short term are buffered lanes. Correct?

Losch: Correct. There is one section from Institute Road to 127 that was recommended to be a pilot protected bike lane.

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Tracy: I just want to make sure people understand the difference between buffered and protected. Buffered means space in between traffic and people, but no physical barrier. A point of reference is South Union. Protected lanes have a physical barrier between cars and bikes.

Tracy: In terms of parking, south of Washington Street, that remains in the current draft.

Losch: That is correct.

Mason: Before we go to amendments, to talk about Local Motion's proposal, there is an expense to remove the island. Local Motion developed a proposal leaving the island. What would be the expense of putting a bike signal and leaving the island? Is that a nominal expense?

Losch: We just saw this proposal very recently and I don't know with the signal infrastructure that is out there, how feasible this alternative is. Signal hardware is relatively expensive, so even if this is a bike signal, it wouldn't be a lot less expensive than having a regular traffic signal. The other consideration with this concept is that it is proposing an enhanced crossing across the slip lanes and providing a point of control across the actual approach, it doesn't give improvements to any other modes, whereas the other concept provides more thorough consideration to the other modes.

Tracy: Do any of the councilors have amendments that they want to bring forward at this time?

Ayres: I have three amendments. My proposal is to move the 4 to 3 plan, currently in the mid-term and move it to the short term.

Losch: The implementation plan under consideration now is the advisory committee's recommendation, which has the pilot in the short term.

Ayres: In this case, I will withdraw my amendment.

Losch: The differences between the two recommendations are in slide 37.

Ayres: I need some clarification. Does moving to on-street parking north of Institute Road require an amendment?

Losch: Yes

Ayres: The amendment I propose is that counter to the advisory committee's recommendation, the plan we move forward to the City Council calls for a continuation for on-street parking north of Institute Road.

Mason: I will second. Is that on both sides or on one side of North Avenue?

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Ayres: Both sides

Losch: If we retain parking on both sides, we won't be able to accommodate any bike lanes in any sections north of Institute Road. If we retain parking on one side, we can accommodate bike lanes in each direction

Ayres: the short term recommendations were to eliminate all parking on both sides north of Washington Street. Correct?

Losch: The advisory committee's recommendation

Ayres: What I am suggesting is that we continue to allow parking. Essentially retain the existing conditions as opposed to eliminate parking on both sides of the Avenue.

Mason: There is some confusion. With what Councilor Ayres has proposed, would that allow for bike lane on one side of North Avenue?

Losch: No. Parking is currently allowed on both sides of North Avenue, north of Institute Road.

Ayres: What is the study group's recommendation?

Losch: Retain parking on one side of North Avenue, north of Institute Road.

Ayres: That is my amendment.

Mason: May I ask the position of the Director of Public Works?

Spencer: DPW was part of the study team. Our recommendation was to go with parking on one side of the road north of Institute Road.

Mason: To be clear, this would allow continuous bike lanes?

Spencer: Yes. With parking on one side of the road, we would be able to accommodate bike lanes on both sides.

Churchill: the Advisory committee meeting's alternative is eliminating parking on both sides. If you want to retain parking on one side of Institute Road, yes we can have bike lanes on both sides of North Avenue, but not protected or buffered.

Mason: Can you restate the amendment?

Losch: Continue on-street parking on one side of North Avenue North of Institute Road.

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Mason: Is this all the way to Plattsburgh Avenue or to 127?

Ayres: Only until 127

Mason: My concern is the high school. To have no bike lane seems to me a little bit silly. To be clear what Nicole said is one lane of parking from Institute Road to VT-127.

Losch: That is an option

Mason: What I am hearing is until 127.

Ayres: When you say we are proposing, do you mean the study group or the advisory committee.

Ayres: I would eliminate advisory recommendation that all parking north of Washington be eliminated. Instead, amend report parking on one side between Institute and 127 and between Shore road and Plattsburgh Ave.

Public: Are you taking comments on that?

Tracy: We can't. That is not the protocol for Robert's Rules.

Mason: There will be an opportunity before the Council, but there is a motion on the floor.

Tracy: Do you second that?

Mason: I don't second that.

Tracy: Motion fails.

Mason: I would propose an amendment to allow parking on one side of North Avenue only between Institute Road and 127.

Ayres: I will second that.

Tracy: Do you want to speak on that?

Ayres: Given that I drive through this stretch almost every day I would say this is almost a non-issue. When I drive by, I hardly see any vehicles there.

Tracy: One thing that I am hearing is that it is important to restrict parking, not only for the short term but also for the future to do a protected bike lane. If this parking is hardly used, I think it's a waste to change the game at this stage. Having study group recommendations and advisory committee recommendations has created a lot of confusion.

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Mason: I don't drive this segment daily, so I withdraw my amendment.

Ayres: Does this bring us back to the advisory committee's recommendation of eliminating parking on both sides of North Avenue north of Washington Street?

Mason: The only place of North Ave north of Washington, there is currently a prohibition to Institute Road, it is allowed between Institute and 127, not allowed between 127 and Shore Road and then allowed between Shore Road and Plattsburgh Ave on both sides of the street?

Losch: Yes

Mason: Thanks for the clarification

Ayres: Henceforth, based on the advisory committee's recommendations there will be no parking north of Shore Road to Plattsburgh on either side of the street?

Losch: And also between Institute Road and 127

Mason: Anecdotally, Saint Mark's sees a lot of parking during mass on Saturday afternoon

Ayres: This is beyond anecdotally, and continues to be the case.

Spencer: Just want to underscore that parking changes need to go through the DPW Commission.

Mason: Does this mean that if Council were to approve the plan, parking changes would still need to go through the Commission?

Spencer: Correct

Losch: Many of the recommendations in here are really to authorize the City to pursue implementation.

Mason: What would the commission do to come up with a determination? How do they evaluate parking removal?

Losch: There is a public forum process, they advise that we contact affected adjacent property owners and they will take this into consideration to make the decision.

Mason: But no further studies?

Losch: They may ask for parking counts or additional information, but until we take it to the commission, we won't know.

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Tracy: We are back on the floor with open discussion on the original motion

Ayres: I have one more amendment. It has to do with a consistent 25 MPH speed limit. I would like to amend the plan to maintain the 30 mph speed limit, in those stretches of the corridor where it exists. I would like to speak to that if I get a second.

Mason: I second.

Ayres: From the beginning of this process I was involved in this project, initially as a concerned citizen observing the workshops. In April of this year I was appointed to take the place of former Councilor Paul Decelles in the advisory committee. Over the course of the deliberations of the committee, I have said consistently that the 4 to 3 reconfiguration is the linchpin of this entire effort. Because of that, the calming effect of the new configuration, the speed is going to be tamped down.

This 5 mph speed reduction has been a point of significant contention for neighbors in the New North End. I have received a number of calls on both sides of this issue. I think that if we can move the 4 to 3 lane study, I think a natural result of this will be traffic calming.

Tracy: I do not support this recommendation. I was in the Public Works Commission when we went to the 25 mph limit in residential areas. We were presented with a lot of good data from traffic studies from around the country that proved that even that small 5 mph reduction can create substantial advantages in terms of safety. The fatality rate, the injury rate all go down. I think if we can increase safety, we should. I think we should be bringing the limit down to 25 mph, so I will be voting against the amendment.

Losch: I just want to add that the design speed is a big consideration. There is always a concern that if you set a speed limit that is too low for the street design, you could be creating a hazardous situation based on the fact that cars will continue to drive at a higher rate of speed.

Ayres: I want to add another comment. This whole question of speed is as much a question of enforcement as it is of regulation. I want to echo the comments of Megan Burns who stated earlier, we need to ask our officials at BPD to help us enforcing the limit. I hear a lot about speed issues, and I am talking about excessive speed. Not by a few miles. If we don't do enforce the speed limit, there won't be much difference.

Tracy: The motion passes with Councilors Ayres and Mason voting in favor, Councilor Tracy voting against. Any additional comments?

Spencer: I wanted to let the councilors know that councilor Wright, who couldn't stay, suggested that under the pilot project there was discussion about metrics for the success of the pilot. He was suggesting that your committee might benefit from fleshing out what those metrics would be so the community would know from the start what the measurements would

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make the pilot successful or unsuccessful. He wanted me to pass this information during your deliberation to you to see whether you would want to delve into that as part of your motion or not.

Mason: I am not an expert and I believe none of us are, so it can't fathom to what those metrics are. To me it all comes back to determine whether this is an administrative decision or a Council decision. My inclination is that the decision to make the pilot a permanent change should be a decision of the Council and not a decision of the Director of Public Works, whoever he or she may be at the time. I don't know what my colleagues think.
Ayres: Would it be to the satisfaction of the TEUC to insert language that states that there will be metrics (some of the metrics included in the relevant slide of the presentation)? We could include language in the study that suggests what the metrics might be.

Mason: Assuming we list the measures, there is the question about how much weight to give to each of the metrics.

Tracy: The information collected will be presented to the TEUC and the Council after the pilot?

Losch: Our intent is also to present the information on the pilot project at the beginning, to see what information people think they need to see so this data can be collected before and after the pilot.

Tracy: That is satisfactory to me. I want to thank everyone involved in this process. We got comments from people across the City, and that speaks to the importance of this corridor to the City.

The implementation plan, as amended, passed unanimously.

DRAFT

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Councilor, Tom Ayres, *WARD 7*
Councilor William "Chip" Mason, *WARD 5*

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Transportation, Energy and Utilities Committee

DRAFT MEETING MINUTES:

Wednesday, August 13th - 2014 at 4:45 PM

Burlington Police Department – Community Room
1 North Avenue – Burlington, VT

Members present:	Chair, Maxwell Tracy	(TEUC)
	Tom Ayres	(TEUC)
	Chip Mason	(TEUC)

Others present:
Pat Buteau, DPW
Guillermo Gomez, DPW
Liam Griffin
Phil Hammerslough
RJ Lalumiere
Nicole Losch, DPW
Bill McGrath
Tom Moreau, CSWD
Jon Olin, Hoyle Tanner & Associates
Tony Redington
Paul Sisson
Chapin Spencer, DPW
Charlene Wallace, Local Motion

Chair Tracy called the meeting to order at 4:53 pm.

1. **Agenda**

Chair Tracy moved to approve the agenda. All in favor.

2. **Public Forum**

3. **Minutes of 7/1/14**

Councilor Ayres moved to approve minutes from 5/28/14. All in favor.

4. **Downtown Parking Initiative – Pat Buteau (DPW) & John Olin (Hoyle Tanner & Associates)**

See supporting documents for this meeting for the Executive Summary of the Garage Assessment Report

Buteau: I want to introduce you to Jon Olin, who is with Hoyle Tanner, representing the consultant hired to do the garage assessment for the City. He will introduce some of the key findings from the study.

Olin: Thanks. I am with Hoyle Tanner & Associates. We recently completed the garage assessment for the City. Our approach to this project was to assess and understand the needs for repairs on the garages and classify and price all these needs. We classified the repair list depending on the urgency of the work needed into the following categories:

- Immediate repairs
- Short term repairs (1-2 years)
- Mid-term repairs (2-5 years)
- Long-term repairs (10 years)

We also helped identify an annual maintenance plan.

In the College Street Garage we found poor lighting and structural deficiencies. Repairs are mostly at the floor level.

The Lakeview Garage, being the newest, has significantly less needs, mostly preventive work.

Buteau: We are looking to finance the repairs. We will shuffle around some of the repairs. We will need to borrow money in two stages. We will borrow once to get us through the next five years (immediate, short and mid-term repairs), and then once again for the long term repairs identified. We will be pledging part of the increased revenue from the parking rate increase for repayment.

Tracy: Will the increase bring enough revenue?

Buteau: This increased revenue will be good for the short term and the debt service.

Tracy: What is the timeline?

Olin: Preliminary engineering for the immediate repairs should start as soon as possible, with construction starting in the next construction season.

Buteau: Construction will depend on how long the engineering takes.

Olin: Replacements are repairs for each garage.

Buteau: We will be replacing components.

Mason: How did we get to where we are right now?

Buteau: It's a combination of factors. On one hand we have deferred maintenance from lack of funds. On the other hand, we have an inherited garage that the City got from the private sector.

Mason: Do garages support themselves with the parking fees collected?

Buteau: They will after the rate changes.

Tracy: Jon, from your experience doing work in other places, how do we compare? Are there things being done elsewhere that we could be doing?

Olin: In things like the Electronic Vehicle charging stations, Burlington is definitely leading.

Tracy: We want to improve the customer experience, but we also need to look at more things.

Olin: Garages are inherently expensive structures. They have to sustain unique uses and environmental factors. This is why planning for maintenance is really important. It might seem expensive at the beginning, but we will save in the long run if we invest in the maintenance of our garages.

Spencer: As next steps, the CAO and CEDO are looking to see if there is any interest in redeveloping any of the existing parking garage structures, before making any major investments. The information from this Garage Assessment will be included in the Parking Study.

5. **Consolidated Collection – Tom Moreau, CSWD**

See supporting documents for this meeting for the Consolidated Collection Info Sheet and Timeline

Moreau: CSWD has the mission of dealing with waste in an economic and efficient way. One of the things we are looking at right now is consolidating the collection of waste in the County. There are currently five trucks from five different companies that collect waste in my street. This situation replicates all over Chittenden County. I pay approximately $34 a month and get the trash collected every two weeks.

CSWD is looking into consolidating collection in order to reduce cost to residents and businesses, reduce the environmental impact of excessive truck traffic and increase the level of recycling.
Currently, ten private haulers provide trash collection services in Chittenden County. The City of Burlington used to provide trash collection services, but this service went private in the 1950s. In Burlington, there are currently six companies offering the service. Countywide, approximately 90% of the waste is collected by the top 3 haulers. Our current mode of waste collection is used in less than 15% of the municipalities in the country. Other municipalities typically provide collection service directly or contract a private hauler to provide the service.

Estimated cost savings from consolidating collection are about $4.4 million in savings in overall collection costs over the current system (Countywide). Consolidating commercial collection would add $1.6 million to the savings. These savings do not include those related to reduced emissions, noise and road maintenance. CSWD is currently recommending that only households in structures with less than five units be included in a consolidated collection system. Cost savings reflecting this are currently in the works.

Some of the concerns people have about having a consolidated collection system include:

- Customers will have no choice of who provides the service
- Smaller haulers might be negatively affected, unable to compete with larger haulers.
- Some haulers believe they will lose customers to Drop-Off Centers.
- Haulers may lose the ability to grow for the term of the contract
- Some people believe that government should not interfere with the operations of private enterprises.

CSWD developed a list of questions that come from haulers, staff, board members and municipal governing boards to get a better picture of how the implementation of a consolidated collection system would look like. (See supporting documents for the list of questions and answers).
There will need to be a public process in order to move this forward (see supporting documents).

Spencer: I am the representative for the City of Burlington. I voted in favor of continuing the exploration of Consolidated Collection.

Moreau: If CSWD goes forward with this, each town will decide whether to send this item to vote. Towns can also group together.

Ayres: From an economic stand point, is this model more efficient?

Moreau: On a regional level the answer is not clear. There are pros and cons. There will be efficiencies from consolidating, but the tradeoff is less choices.

Mason: How do you bid this out?

Moreau: You bid out specific routes. CSWD would structure the routes, and then routes would be advertised for bid.

Sisson: Has this been vetted by attorneys?

Moreau: Yes. Municipalities have the right to regulate trash collection. It has to be proved that we are doing a verifiable public good. It is a privilege, not a right for haulers to provide this service to municipalities.

Sisson: Would it be charged in the property tax or separately?

Moreau: It could be charged through the property tax.

Griffin: When I moved to Burlington I found it mind-blowing how fragmented the trash collection service is.

Moreau: The biggest impact this model has is in the collection of recyclables.

Griffin: Where I used to live, trash collection was charged in the property taxes.

Lalumiere: I am also frustrated. There is no organics collection. Everything is done on different days, and I find the service expensive.

6. **North Avenue Corridor Study – Nicole Losch, DPW**

Nicole Losch from DPW presented with an overview of the Corridor Study. See supporting documents for this meeting for a PDF of the presentation.

Ayers: If a pilot doesn't work, what is the cost of the removal?

Losch: Depends on many factors. Grinding and repainting markings can be done under $30,000. North Avenue will be repaved in a few years. If the timing is correct, the repaving of the street could take care of this.

Wallace: There is a great graphic that I have seen in other presentations, which shows the relationship between speed limit and traffic safety. The lower speed limit is a concern for some residents, so I think it would be useful if you could include this slide in the final presentation to help illustrate the safety impacts of reducing the speed limit. Also, an estimate of the increased travel time with the lower speed limit would be useful. I also want to point out how much a protected bike lanes attract many more users. There is a chart from studies done in Portland

that shows that there are lots of potential bike riders who don't use unprotected bike lanes because of concerns about their safety.

Hammerslough: People with visual disabilities take longer to cross a street. Estimates show that the people with visual disabilities will double in the next few decades. I would like improvements to be extended to all crossings. I have noticed that in Colchester Avenue there is no parking on either side. I don't think it would be such a hardship if parking was removed along North Avenue.

Sisson: I think one simple and cheap improvement that we can do is eliminating parking on the west side of North Avenue. The cross sections shown in the presentation don't show utility poles. I know it is expensive, but burying utilities would free up space. Additionally, ten foot setbacks should not be allowed in residential areas. I think there is a risk of increased traffic, especially in the morning if we implement the changes discussed. The public input process is flawed. All the meetings were held at the same time. If people were not able to attend the meetings, how could they give their input? I think there are some refinements that can be made on the corridor (crosswalks, lower speed limit), but I disagree with the elimination of one travel lane. We are lucky to have two great biking facilities (the Bike Path by the lake and the Route 127 bike path).

Griffin: I ride between the New North End and downtown. We have two bike paths, but they are not the most convenient way to travel between the New North End and downtown. I want to thank the committee for the work they have done. The slide that showed the accidents was very useful. I would like to know what effect the conversion would have on the number of accidents. I support the conversion, both as a driver and a biker.

Lalumiere: A high crash rate is reason enough to do this study and evaluate the implementation of some of these changes to the corridor. Whenever my wife rides, she goes way out of her way, avoiding the corridor just to feel safe while riding. One question that I have is if we implement a pilot for a year, would that be enough time to see a noticeable impact in the crash rate? Something else that I want to point out is the economic benefit of complete streets. Studies have shown that more inviting streets bring an economic benefit to adjacent businesses.

Redington: Regarding the reduction of number of lanes, from four to three, AARP has done studies where these lane reductions have taken place. These studies have shown that after two years, there is a reduction in the crash rate, and an increase in use of other modes of transportation (increase in bicycle ridership). All we are saying is "try before you buy". You can allow some changes as a pilot project, and if there is no acceptance for the pilot, we will find out. Also, a demo of a mini roundabout should be built soon. The community needs to see an example of a real roundabout before the one planned for Shelburne Road is built (scheduled for 2017). The changes that the city will experience if we implement these changes will be tremendous. Think of what our city would be like if projects like the bike path and the beltline never would have happened.

McGrath: I don't understand why the focus is here, when there are other parts of the city that have more serious issues. Shouldn't we deal with current serious issues before we do all this? All of the improvements in the study sound great, but if we don't deal with what we currently have, how can we embark in all these new projects? I don't have the answer, but I have questions. Where is the money for all this coming from? I think we should go slowly.

Lalumiere: I echo what you are saying, but I think North Avenue does have issues that we need to deal with. It is troublesome that I can't ride with my family to downtown in the most direct way.

Sisson: There are tractor-trailers coming out of Ethan Allen Shopping Center bringing supplies to Hannaford that already have difficulty maneuvering under existing conditions.

Ayres: Regarding throughput with the 4 to 3 lane conversion, would it be possible to get data from similar cases in the region?

Losch: We might be able to find other studies.

Sisson: Who determines if the pilot is or isn't successful?

Losch: The Public Works Commission would have some input, depending on the components of the pilot.

Tracy: The TEUC will be making a recommendation for the full City Council in September.

Wallace: It would be useful for the September meeting if you have answers to questions as to why we are doing each improvement.

Griffin: A slide with the potential costs of short-term, mid-term and long-term improvements would also be useful.

7. **Councilors' Updates**

8. **Adjourn**

Tracy moves to adjourn. All in favor. Meeting adjourned at 6:40 PM.

TEUC Meeting - 9/10/14 - Attendees

Jason Van Driesche,	Local Motion
Jason L'Ecuyer,	Ward 4/7 NPA
Tony REDINGTON	Ward 2/3 N/A
Robin Southere	Ward 4.
Chapin Spencer	Burlington DPW
Erik Brown	Burlington Walk/Bike Cou
Jim Holway	jime 05408.org
Ken Peterson	Concerned Citizen
Bob Orr	New North End
Brian Perkins	Decatur St.
Bob Alberry	Killarney DR.
Jim Brophy	Ward 3
Stu Lindsay	Burlington Walk/Bike Cou
CHRIS CASWELL	WARD 3
PAUL SISSON	WARD 4
Alex Messinger	Ward 4
BRENT WRIGHT	ward
Leelou Stoops	Ward 5
Andy Stoops	ward5
RJ Lalumiere	Ward 7
Andy Montroll	Ward 5 / CCRPC
RICH KENNEY	WARD 4
Andrea (Andy) Kenney	Ward 4
Rachel Gitajn	Ward 5
Meghan Burns	WARD 7
Nathaniel Burns	Ward 7

Kurt Wright	Ward 4	
~~Joe Hasig~~	Ward 7	
Caryn Long	Ward 1	carynlong@burlingtontelecom.net
~~Pat Sullivan~~	Ward 7	
Russell Ellis	Ward 4	
Nancy Ellis	Ward 4	nrellis@burlingtontelecom
Tom Morley	Ward 7	Tommy51944@yahoo.com
Barbara Kleinman	Ward 7	barbarask47@yahoo.com
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Theresa Surdek	4	surdeke@comcast.net
Muffie Milens	7	Omilens@gmail.com
Liam Griffin	7	LIAMGRIFFIN@mac.com
Julie Campoli		
Curt McCormack	2	curtomccormack@gmail
Joanna Cole	7	joanna.cole1@comcast.ne

TEUC Meeting 9/10/14 - COMMENTS

Curt McCormack	Ward 2
Jason L'Ecuyer	Ward 7 N
TOM REDINGTON	" 3
LIAM GRIFFIN	WARD 7
Tony Redington	w 3
Steve Norman	w 4
Jason Driescle	
Russell Ellis	w 4
Dan Mulligan	Ward 5
Nate Burns	Ward 7
Jason Van Driescle	Local Motion
Joe Harig	Ward 7
Andy (Andrea) Kenney	Ward 4
Meg Burns	Ward 7
RJ Lalumiere	Ward 7
PR SISSON	WARD 4
Jim Brophy	WARD 3
Erik Brown Brotz	ward 5
Jim Holway	Ward 4
Ken Peterson	WARD 4
Jon Adams-Kollitz	5