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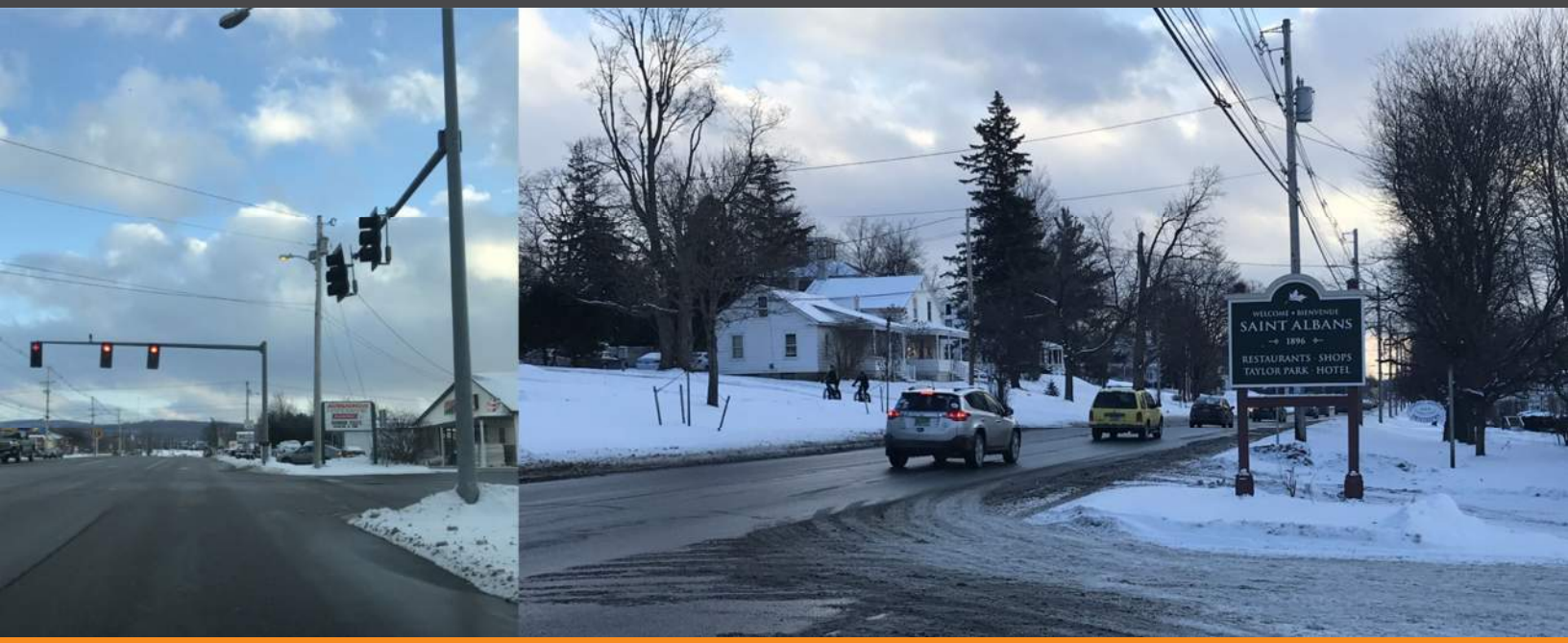
Final Report

Town and City of St. Albans

ROUTE 7 LIVABILITY STUDY

FINAL REPORT | December 17, 2018



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1.0 INTRODUCTION

Study Background

The Route 7 Livability Connection Study has sought to build a stronger connection between the downtown of the City of St. Albans and the growing commercial district of the Town of St. Albans, by way of infrastructure and land use recommendations. Route 7 is the only continuous roadway between the two areas, which rely on each other for housing, jobs, shopping, and recreation. However, the corridor does not fully support the safe and comfortable movement of people walking, taking the bus, or bicycling along it. In spite of these conditions, many people do walk, take transit, and bicycle along the corridor, and there is demand for improved infrastructure for those currently using these modes as well as those who *would* if such improvements were made.

To work toward these improvements, the Town and City of St. Albans, working closely with local nonprofit Rise Vermont, applied for and were awarded the Better Connections Program grant, which is administered by a partnership between the Vermont Agency of Transportation (VTrans) and the Vermont Agency of Commerce and Community Development (ACCD). The Better Connections Program seeks to increase transportation options, build resilience, and strengthen economic vitality in Vermont communities.[1]

This Report

This report is the final report of the Route 7 Livability Connection Study. It summarizes the process of the study, how public and team input was incorporated, and how alternatives were developed and refined. The project **Implementation Plan** is a piece of this report that is intended to be used as a standalone document to guide corridor and land use improvements in a pragmatic, effective, publicly supported way. For an in-depth analysis of existing conditions, see the **Existing Conditions Report** from February 2018 in Appendix A of this report.

Project Team

This study was guided by a Consultant Team and a Project Advisory Committee. In addition, a Steering Committee consisting of the Project Advisory Committee and additional community members has been working continuously since before the study began to conduct public outreach and to discuss the progress of the study.

[1] http://vtrans.vermont.gov/sites/aot/files/planning/documents/scbc/2016_Better_Connections_One_Pager.pdf

The Consultant Team consisted of RSG, which led the study and supported transportation work; Wagner Hodgson, a landscape architecture firm that led infrastructure alternatives development; and Front Porch Planning, which led the land use and regulatory work of the study; and Watershed Associates Inc. who focused on the issues around stormwater management within the corridor, supported the project in an advisory role.

The Project Advisory Committee consisted of representatives from the Town, the City, the Northwest Regional Planning Commission (NRPC), Vermont Agency of Transportation (VTrans), Agency of Commerce and Community Development (ACCD), and Rise Vermont (RiseVT), as well as two residents of St. Albans Town.

Public outreach was a key element of this study. Rise Vermont and the Steering Committee conducted significant outreach both directly and indirectly related to this study – using various forms of media to get public input, to encourage people to use active modes of transportation, and to generally get walking, bicycling, and taking public transit further on the public radar. As part of the study, the Consultant Team conducted a crowdsourced mapping survey to understand perceptions of existing conditions, a public workshop to obtain feedback on alternatives, and public meetings on the Implementation Plan and final report.

Study Area

The study area of the Route 7 Livability Connection Study is located along Route 7 between Lake Street (in the City) and the Swanton Town Line. This 2.8-mile corridor runs through several distinct land uses and has been split into a primary and secondary study area to focus improvements where they are most needed (see Figure 1-1).

The **primary study area** is largely in the commercial-suburban northern part of the Town of St. Albans. It begins just south of the City-Town border and runs north to the Swanton Town Line, passing shopping plazas, the Franklin Park West, and the VT-207 connector to I-89. It is approximately two miles long.

The **secondary study area** is entirely within the City of St. Albans. It comprises the urban downtown and the residential area north of downtown and is approximately 0.8 miles long.

The two study areas meet where the sidewalk in the City ends, at the plaza at 248 North Main Street on the west side of Route 7, just south of Lakeview Terrace. North of this spot, there are no sidewalks along Route 7 in St. Albans City or Town.

FIGURE 1-1 STUDY AREA

Project Goals

Following the project kickoff meeting in October 2017, the following set of project goals were developed. These were referred to throughout the study to ensure the project team's work stayed on track.

1. Create safe and desirable alternative transportation options along Route 7 within the primary study area.

   Success looks like: Short- and long-term recommendations for walking, bicycling, and transit infrastructure. Final recommendations are supported by the selectboard and public.

2. Increase demand for active transportation options.

   Success looks like: Public outreach to and input from people representing a large cross-section of the public, including and beyond those who currently use the corridor regularly.

3. Support an economically vibrant future through land use planning, zoning, and aesthetics.

   Success looks like: Challenges in current zoning are identified and addressed in recommendations. Wayfinding and landscaping supports connection between Town and City and is enjoyable for both residents and visitors.

Project Timeline

Team Meeting 1 (Kickoff Meeting)	October 2, 2017
Crowd-Sourced Mapping	Open November 1 – December 4, 2017
Existing Conditions Report - Transportation	Submitted to PAC December 22, 2017
Existing Conditions Report – Complete with Corridor Management chapter	Submitted to PAC February 13, 2017
Team Meeting 2 (Existing Conditions and Preliminary Alternatives)	March 29, 2018
Draft Alternatives Memo	Submitted to VTrans May 18, 2018
Draft Alternatives Memo	Submitted to PAC May 24, 2018
Meeting with VTrans, City, and Town DPW	June 27, 2018
Public Meeting (Alternatives)	August 18, 2018
Draft Implementation Plan submission	October 31, 2018
Draft final report submission	December 17, 2018

2.0 EXISTING CONDITIONS

An existing conditions analysis was conducted at the beginning of this study to determine problems, needs, and opportunities of the study area. This process was split into two perspectives: 1) infrastructure and transportation and 2) corridor management practices. Transportation and infrastructure involves physical attributes, while corridor management practices include the rules, plans, and standards that guide the way for physical improvements during the land use development process.

The Existing Conditions Report was completed in February 2018 and can be found in Appendix A of this report. Below, key focus areas and findings from the Existing Conditions Report are summarized here.

2.1 INFRASTRUCTURE AND TRANSPORTATION

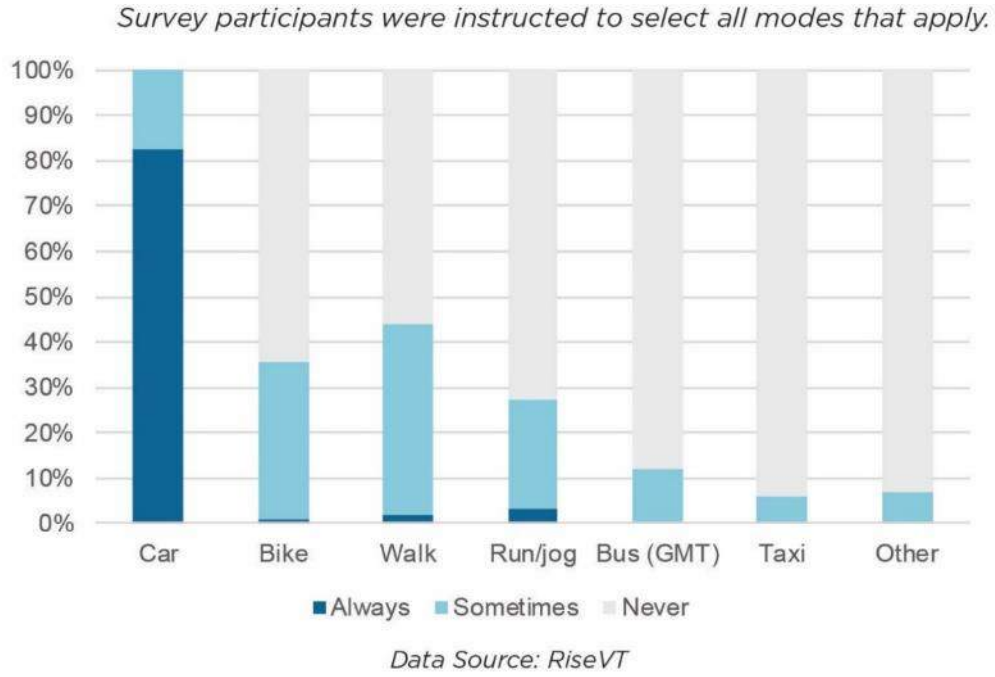
Through a combination of data analysis, observations of the physical corridor, and public input, the project team determined several key issues of the study area. The basis for these was an understanding of who uses the corridor and what their needs are.

Road Users

With several large shopping centers, numerous businesses, an industrial park, residences, the Missisquoi Valley Rail Trail, and downtown St. Albans, people travel along the study corridor to access jobs, homes, errands, community, entertainment, and recreation opportunities. The roadway and bus stops along it also provide access to important community facilities, other communities, and the interstate highway.

Most people who travel along Route 7 primarily drive their personal vehicles along it, which is evident by the traffic on the road and the number of travel lanes and turn lanes dedicated to vehicles. However, many people also walk, ride a bicycle, and ride the bus along the study corridor. Figure 2-1 shows how frequently each transportation mode is use by people who travel along the study corridor, according to a survey conducted by Rise Vermont both online and in-person. Note that many travelers use more than one of these modes depending on their needs of that time. For example, Rise found that some people walk to the grocery store, then take a bus or taxi back home with their shopping bags.

FIGURE 2-1 TRAVEL MODES USED ALONG THE STUDY CORRIDOR



Key Issues

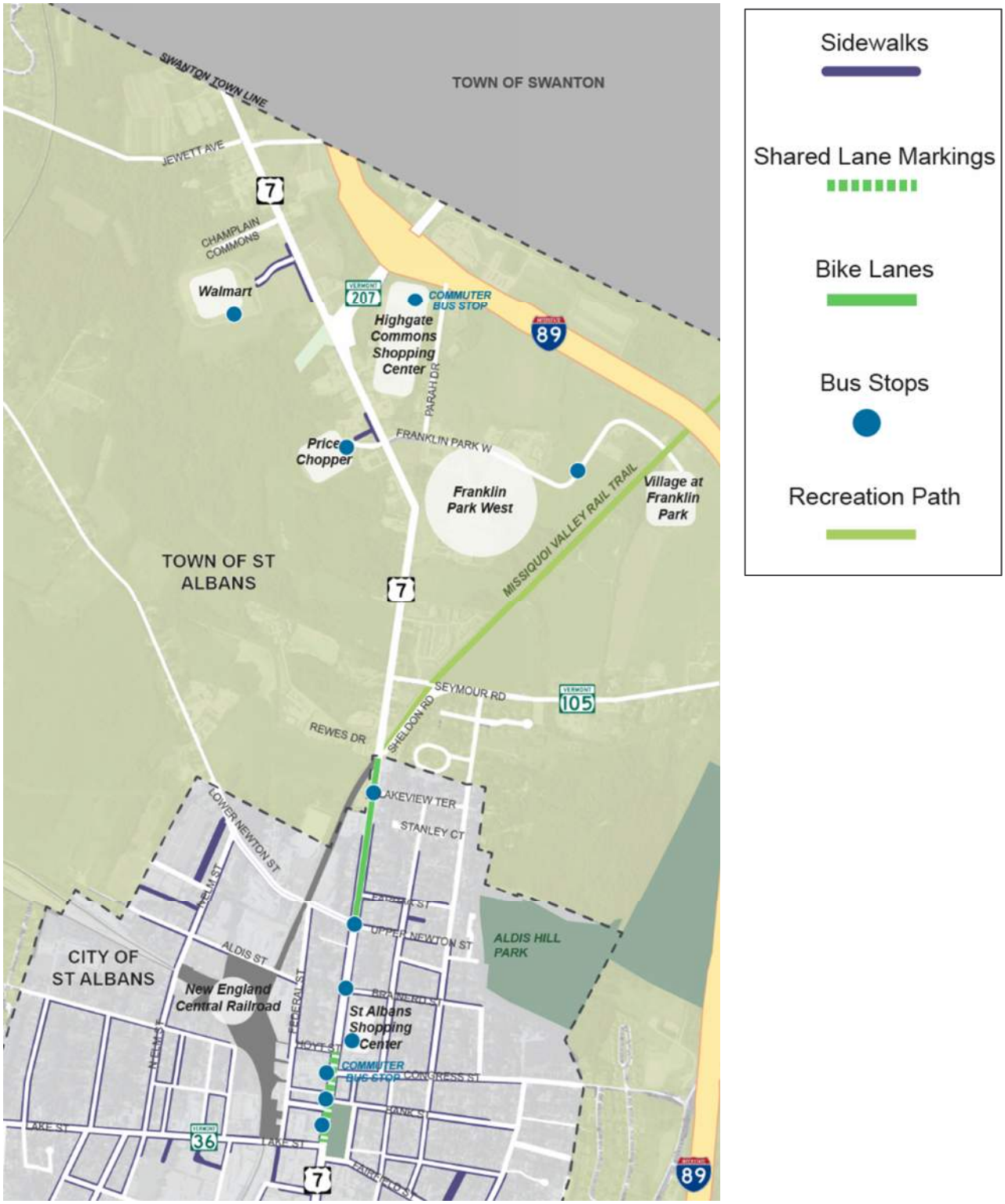
Currently, the roadway does not support alternative modes in safe or inviting ways, due to the key issues identified here:

Pedestrian and bicycle connectivity

See Figure 2-2 for a map of existing pedestrian and bicycle infrastructure, as well as bus stops.

- There are no sidewalks or formal paths in the primary study area. This is unsafe and is and an access problem for people in wheelchairs, with strollers, and who have trouble on uneven ground. Some areas are absent of street lighting as well.
- In the primary study area, there are no marked bike lanes or indications to drivers that bikes may use the full lane. Shoulders without additional markings or protection are not comfortable for less-experienced bicyclists, particularly along a multi-lane roadway.
- The secondary study area has a quarter-mile segment of sharrows (between Lake Street and Hoyt Street) and a quarter-mile segment of bike lanes (north of Newton Street), but these segments have a third-mile between them with no bicycle facilities. In addition, there are reports from the public that gravel can get in the shoulder/roadway.

FIGURE 2-2: EXISTING MULTIMODAL ACCOMMODATIONS



Pedestrian roadway crossings

- There are no marked crossings or pedestrian signals north of St. Albans Shopping Center. There are currently no sidewalks for them to connect, but there are driveways across from each other that offer advantageous curb cuts.
- In the secondary study area, the roadway is wider than necessary, creating a longer crossing distance for pedestrians and encouraging higher vehicle speeds.

Access Management

- There are numerous and excessively wide curb cuts along the study corridor, particularly around the City-Town boundary (see Figure 2-3). These are unsafe, uncomfortable, and confusing for all modes of transportation. They create potential conflict points for drivers and bicyclists and wider crossings for pedestrians.

FIGURE 2-3 EXAMPLES OF NONCONFORMING CURB CUTS

Pedestrian and bus stop amenities

- There are no places to sit and rest or to have relief from the sun or inclement weather along the corridor.
- A lack of pedestrian lighting along most of the corridor is a safety concern and may result in bus drivers not noticing people waiting at bus stops.
- Note that these types of amenities are most appropriate where there are also sidewalks or paths.

Visual appeal and connection

- There are no wayfinding or placemaking features and minimal green space and landscaping along the study corridor, making it an unappealing place to travel in modes other than fast-moving vehicles. In addition, there is no confirmation that one is in the Town of St. Albans or in proximity to downtown St. Albans, St. Albans Bay, or the Missiquoi Valley Rail Trail. Route 7 physically connects these areas but does not visually connect them.

Crash history

- There are two high crash location (HCL) segments (as identified by VTrans) in the primary study area.
- In the past five years, 29% of crashes in the primary study area resulted in injury, and 25% of crashes in the secondary study area resulted in injury.

Node at the City-Town boundary

- A location-specific issue is at the important node of the boundary of the City and Town. This is where several roads, driveways, and the Missisquoi Valley Rail Trail meet at an acute angle, creating a safety challenge for all modes of transportation in this area.

2.2 CORRIDOR MANAGEMENT PRACTICES

State, regional, and local plans and regulations that direct public policy, the pattern of land use and development, and transportation and other supporting infrastructure within the US-7 study area were reviewed as they related to the study corridor and the goals of this study. The purpose of this review is to gain insight into current corridor management practices and to evaluate whether such practices support study goals to:

- Encourage non-motorized transportation and public transit within and along the corridor,
- Support the development of new pedestrian, bicycle and public transit infrastructure along the corridor, Provide the framework for implementation strategies that guide funding efforts, and
- Develop a Complete Streets master plan for the study area, focusing on US Route 7.

Jurisdiction: Roles and Responsibilities

Authority	Yes	Partial	No	Notes
Planning	■			VTrans: State Transportation, Transit, Modal Plans, STIP GMT: Regional Transit Development Plan NRPC: Regional Plan, Transportation Plan, Corridor Plans St. Albans Town: Municipal Plan, Supporting Plans, CIP St. Albans City: Municipal Plan, Supporting Plans, CIP
Development Regulation	■			State/VTrans: Act 250 NRPC: Act 250 St. Albans Town, City: Municipal Bylaws, Act 250
Access Approval	■			US7: VTrans (north of city) US7/Class 1: St. Albans City (within city limits) Local/ Intersecting Roads: St. Albans Town, City
Coordination Agreements/ Protocols		■		Transportation Planning: VTrans/NRPC (TPI/TAC) Transit Planning/Services: VTrans/GMT Agreement US7/Class 1 TH: St. Albans City, VTrans Applications: VTrans referrals (site plans, variances) Water/Wastewater: Intermunicipal Agreement No joint US7 Corridor planning, management agreements No designated Transportation Improvement District(s)

Plans, Policies, Programs

	NRPC	Town	City	Notes
Comprehensive Plan	■	□	■	NRPC: *Plan for the Northwest Region 2015-23* (2015) Town: *St. Albans Town Plan* (2012) – *expired, updating* City: *St. Albans City Plan* (2017)
Supporting/ Master Plans	■	■	■	NRPC: US7 Corridor Study Update (2007), Exit 20 Financing Study, Regional Transportation Plan, 2010-15 (Draft) Town: Sidewalk Master Plan (2003) -- *updating* City: Downtown Master Plan (2009), Growth Center (2010), TIF District (2012)
Data/Trends Analyses	□	□	□	All: Population, housing employment trends/stats Town: Linear population projection to 2030 City: ACCD 2030 projections (2013); noted pop declines NRPC: No regional population, housing, employment forecasts No plan data, stats specific to US7 (AADT, HCLs, LOS, etc.) No pedestrian shed analyses along US7 corridor No buildout analyses, scenarios (included in 2007 US7 Update)
State Planning Goals, Policies	□	□	■	NRPC: Generally referenced as planning policy framework Town: Generally referenced; regionally approved plan City: Specifically addressed (p.5); regionally approved plan
Smart Growth Principles	■	X	■	NRPC: Specifically listed (p.94), along with "Characteristics of Growth Areas", as applied to regional growth area(s) Town: Predates incorporation under 117 City: Referenced in plan policies; specific to designations
Corridor/ Interchange Area Plans, Policies	□	□	■	All: Reference US7 Corridor Study Update (2007)--need for bicycle, pedestrian, intersection improvements, Federal St. RTP (2010-15): Policies, strategies specific to US7-- *expired* City: Policies, recommended streetscape improvements Town: Coordinate w/ VTrans for sidewalks No plan data, stats specific to US7 (AADT, HCLs, LOS, etc.) No functional class references/maps (VTrans: 3,4,6) No interchange area master plans No recommended corridor, interchange districts
Complete Streets Policies	■	□	■	NRPC: Detailed CS policy matrix by planning area (pp.71-73) Town: Plan predates; related policies (sidewalks, paths, etc.) City: referenced throughout (pedestrian, bicycle, transit)
Access Management Policies	□	□	□	All: No references to VTrans AM Guidelines (2005) NRPC: Related policies (strip development, connectivity) Town: Curb cuts; incentives (e.g., for shared driveways) City: Cites lack of comprehensive access management policy
Growth Center Plans/Policies	□	□	■	NRPC: Northwest Regional Growth Area (North Wing) -- compact, high density, mixed use, pedestrian accessible; master planning recommended Town: Growth Center Overlay (North) -- clustered, larger scale commercial, multiunit residential; PUDs, incentive-based City: Growth Center; Downtown; Historic, Business, Design Districts, Gateway -- compatible infill, redevelopment All: No policies specific to nodal development (e.g., TOD, TND) within planned regional, town growth areas, US7 corridor
Coordinated Implementation Policies	■			NRPC: Coordination, collaboration required to implement plan Town: Coordination required to implement transportation plan City: Participate in inter-municipal and regional transportation planning (transportation, growth center, development impacts)
Proposed Transportation Improvements	■	■	■	US 7 Corridor Study (2007) improvements, Federal St Connecting sidewalks, bike lanes, paths along corridor Improved transit service along corridor
Capital Improvement Program	X	■	■	Town: Scheduled highway paving; CIP updates to include sidewalk projects (per staff) City: Annual sidewalk replacements; street improvement plan, bonding for sidewalks (2016); bike lane installation (2017)
Official Map	X	X	X	No recommended, adopted official maps (for planned facilities)
State Designations	■	X	■	NRPC, City: Plans reference St. Albans City designations
TID Designation	■	X	X	NRPC: Recommended for consideration
[■-Yes □-Partial X-No]				

Regulations

Regulations	Town	City	Notes
Unified Regulations	■	■	St. Albans Town Unified Development Bylaws (2016) St. Albans City Land Development Regulations (2017)
Development Review Board	■	■	Bylaws administered by Zoning Administrators, DRBs Allows for concurrent or sequenced review by one board
Applications	◘	◘	Vary by type of review; plans generally required to show lots, rights-of-way, access, driveways, sidewalks; not always in relation to context, infrastructure Trip generation rates, traffic studies may be required--no specific standards *No notice to adjoining municipalities* *No master plan provisions (land use allocations, connectivity, etc.)* *No references to existing, planned transit routes, facilities; pedestrian sheds*
Zoning Districts	◘	◘	Town: Four zoning districts bordering US7; three within primary study area: Commercial -- larger commercial, retail, multiunit residential Mixed Residential-Commercial--residential, neighborhood commercial Industrial -- industrial, some commercial; no residential City: Two zoning districts along US7-- Main Street/Commercial Axis Business 1 (B1) -- Central Business; traditional downtown center Business 2 (B2) - Transitional Business; extended business district
Overlay Districts	◘	◘	Town: Growth Center Overlays -- areas w/ highway access, infrastructure Northern Growth Center Overlay - promote higher density, clustered City: Design Review Overlays--historic, business districts; gateways *No access management, corridor, interchange overlays*
Development Density	◘	◘	Town: Districts: 1.4 to 8.7 units/acre; Overlay: 7.3 to 14.5 units/acre City: Districts: 8.7 to 22.7 units/acre; sidewalks for 1+ dwelling unit/2 acre Allow for residential densities that may support walkability (e.g., 4 Dues/acre and transit (e.g., 8 DUs/acre) -- though limited mainly to MFDs *No nonresidential density standards (defined by coverage, height, wastewater)* *No minimum required development density*
Subdivision Review	◘	◘	Town: DRB -- 3+ lot subdivisions; new/relocated road rights-of-way; PUDs Site plan review also required for all but admin (2-lot) subdivisions City: DRB -- Minor (3-4 lots), Major (5+ lots, new streets, PUDs) Admin-- 2-lot subdivisions *No access management requirements specific to land subdivision* *No master plan requirements; limited bike/ped/transit connectivity standards*
Site Plan Review	◘	◘	Both: Generally regulate access, on-site parking, circulation Town: Sidewalks may be required (per sidewalk master plan) City: Pedestrian, bicycle access shall be provided *No reference to transit facilities*
Conditional Use Review	◘	◘	Both: statutory criteria; generally allow DRB to impose conditions related to highways, traffic, character of area Town: Maintenance agreements may be required City: Offsite improvements may be required for sigificant reduction in LOS *No specific standards/thresholds related to traffic impacts, connections*
Planned Unit Development	◘	◘	Town: Allowed (3+ acres); subdivision, site plan, conditional use Flexibility (waivers); may include mix of allowed uses Incentives--clustering, infill, connecting roads, sidewalks City: Allowed (3x min lot size); subdivision, conditional use Efficient use of land--smaller street, utility networks B1 District--Not allowed; B2 District--only mixed use PUD Incentive--additional housing *No mandated planned development; only incentive based* *No master plan, phasing provisions* *No PUD form/type specified (e.g., TND, TOD), no design criteria*
Highway Standards	◘	◘	Town: References highway ordinance (A-76), sidewalk master plan/policy 60-foot right-of-way required; *no sidewalk, bike lane specifications* Also references fire code (cul-de-sacs, turnarounds) City: As specified by DRB, City Manager, references VTrans Class 2, 3 Street standards also under subdivision review; curbs, sidewalks required *No references to Vermont State Design Standards (1997)* *No specific LOS standards, thresholds*
Access Management Standards	◘	◘	Generally addressed under site plan review (access, circulation); in Town: Largely incentive based; apart from access permit requirement City: Limited one per lot in residential districts; also addressed in design review *No specific standards in relation to subdivisions, functional class, LOS, etc.*
Parking Standards	◘	◘	Minimum standards (spaces/use); no maximums (except lot coverage) Town: onsite parking, bicycle parking; shared parking may be considered *No standards for off-site, on-street, structured parking* City: Onsite not required in B1 District (lots <1 acre); off-site, shared parking (400 FT); siting standards--also regulated under design review *No standards for bicycle parking, structured parking* *No standards for transit facilities, parking structures, demand management*
Infrastructure Improvements	◘	◘	Town/City: onsite improvements to be paid for by applicant; off-site may also be required as needed to serve development Town/City: performance/maintenance bond, other surety may be required Town: Owners association may be required to maintain required improvements Town: Impact fees under separate impact fee ordinance (not sidewalks) Town/City: Formal acceptance required for dedicated infrastructure, facilities *No official map requirements (with regard to planned facilities, infrastructure)* *No development agreement provisions*

[■-Yes ◘-Partial X-No]

Summary of Findings

- Jurisdiction over land use, development, highway and other infrastructure improvements along the US-7 corridor is shared between a number of state, regional and local entities, each having separate but often related areas of responsibility. As a result, interjurisdictional coordination and collaboration is critical, but formal mechanisms for this are currently limited.
- The Northwest Regional Planning Commission, under the state's Transportation Planning Initiative, plays a critical role in integrating transportation and land use planning along the corridor, through its regional plan, transportation development plan, corridor and related studies. The commission however, has no independent authority to regulate development along the corridor. The NRPC has standing in Act 250 proceedings, particularly for development that may have significant regional impacts.
- St. Albans City shares jurisdiction with VTrans for the highway corridor within city limits (as a designated Class 1 Town Highway), allowing for integrated downtown development, on-street parking, bike lanes, pedestrian and other public streetscape improvements. Outside of city limits, VTrans controls access to and improvements within the US-7 right-of-way, while St. Albans Town has the primary responsibility for regulating development along the corridor. The town has no independent ability to require sidewalks or other improvements within the corridor that would benefit other users.
- VTrans and municipalities have standing to participate in Act 250 proceedings, as applicable to larger subdivisions and development along the corridor. Under Act 250 the District Environmental Commission considers project impacts to the environment, community facilities and services, development patterns, and transportation infrastructure; and as a condition of approval, may require transportation improvements or mitigation fees. The Commission has no separate planning function, but is also required to determine project conformance with local and regional plans.
- Green Mountain Transit is responsible for providing public transit services along the corridor, under contract with VTrans, but also relies on local municipalities for funding, pedestrian connections, transit stops, and for promoting forms and densities of development that support regular transit service. GMT has no regulatory authority or standing in Act 250 proceedings. The regional plan recommends NRPC support for GMT participation in Act 250.
- Municipal and regional plans reviewed address recent development trends, but include little information (projections or forecasts) regarding future development within the study area. It is anticipated that growth and development will continue to be concentrated in areas with easy access to I-89– including the study area – however, development will occur at slower, more incremental rates, following statewide trends.

- All plans reviewed, except for the 2012 St. Albans Town Plan, incorporate more recent "smart growth" principles as relevant to development within local and regional growth centers; and "complete streets" principles as applied to local roads, streets and state highways. The regional plan also includes more detailed Complete Streets implementation strategies by planning area – including the Regional Growth Area – for regional and local consideration. Municipal and regional plans do not reference related VTrans Complete Streets Guidance specific to the US-7 corridor.
- Municipal and regional plans reviewed all reference or incorporate findings and related recommendations from the 2007 US7 Corridor Study Update, calling for better access management and multi-modal transportation improvements along the corridor, to include the extension and installation of sidewalks.
- All plans reviewed support coordinated land use and transportation planning with neighboring communities, through the Northwest Regional Planning Commission, and more directly to address the extension of municipal infrastructure along the corridor, including connecting sidewalks and bike lanes.
- The US-7 corridor and study areas are incorporated in planned growth centers in both municipal and regional plans, which are generally consistent in supporting higher density mixed use development within these areas. These include the state designated St; Albans City Growth Center, which does not extend beyond city limits (in part to limit strip development along the corridor); the town's North Growth Center Overlay District, which incorporates most of the primary study area and underlying commercial district, and the NRPC's Regional Growth Area, which extends beyond the two municipal growth centers, to also include a portion of Swanton.
- The city plan highlights compatible forms of mixed use infill and redevelopment within the region's traditional urban center, along with supporting public infrastructure and streetscape improvements.
- The town's growth center overlay is intended to accommodate more clustered forms of larger commercial and multifamily housing development, with incentives for access management, public infrastructure and amenities associated with new development. Strip development is not encouraged nor prohibited.
- The regional plan also calls for more focused, clustered, mixed use development incorporating smart growth principles within the Regional Growth Center, and specifically recommends against additional strip development along the corridor.
- St. Albans City and Town have each adopted conventional, unified zoning and subdivision bylaws that regulate development along the corridor and within the larger study area. Regulations reviewed are generally consistent with municipal plans – the

town's bylaws were recently updated to conform to the 2012 Town Plan, which has since expired.

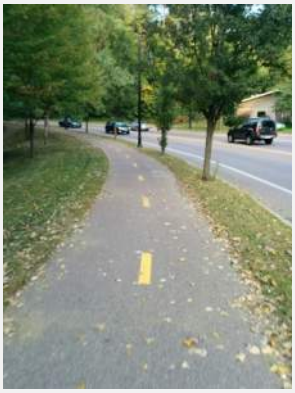
- Current city regulations define uses, densities and patterns of development along the corridor that reflect a more urban, pedestrian and transit-friendly built environment, consistent with the city's traditional downtown character. The siting, layout and form of development is further regulated under related design review district regulations. The City has also explored more form-based codes.
- Town zoning regulations continue to support larger scale, more suburban forms of commercial and industrial development along the corridor, to provide tax base and jobs; but within the growth center overlay also allow for densities of development and incentives that may support more pedestrian- and transit-friendly forms of development. Town regulations do not more specifically address the form or layout of new streets or development within the study area.
- Planned unit developments are allowed, but not required under both city and town bylaws. Related criteria under each provide for the modification or waiver of underlying district dimensional requirements to allow for more clustered, efficient or compatible infill development, without specifying any particular forms or patterns of development (e.g., conservation, traditional neighborhood, or transit-oriented development).
- Subdivision regulations reviewed include limited access management, street design and connectivity requirements – particularly with regard to establishing the overall pattern of new development or redevelopment. Pedestrian sheds, transit sheds or existing or planned transit routes are not incorporated in development review standards.
- Related municipal policies and ordinances reviewed – including city street, sidewalk and wastewater ordinances, and town highway ordinances, fire codes and sidewalk policies – may also affect the density and form of development along the corridor, and within the larger study area.
- The City and Town each have adopted capital improvement programs that schedule planned capital improvements according to available financing. The town's CIP currently addresses only road improvements but may be updated to include public sidewalks or rec paths in accordance with an updated master plan and sidewalk policy (currently under development). The city's CIP more comprehensively addresses a variety of public infrastructure, including sidewalks and other streetscape improvements, as approved by voters. Neither municipality has adopted an "official map" that identifies the location of proposed public facilities and improvements for consideration in the review of new development.

3.0 DESIGN CONSIDERATIONS

Design Features

Based on the existing conditions analysis and the project goals - of creating safe and desirable alternative transportation options, increasing demand for active transportation, and supporting an economically vibrant future - the main design options were clear. The primary need of the study area is for people to have a safe and comfortable way to walk the length of the corridor to access jobs, homes, errands, bus stops, and more. At minimum, a **sidewalk** and/or a **shared use path** - on one or both sides of the roadway and buffered from the busy travel lanes – would meet this need. Safe and accessible **pedestrian crossings** will bridge the two sides of the corridor. **Bike lanes and buffered bike lanes** will support active transportation along the study corridor and beyond. These design features and more are described in further detail in Figure 3-1 along with design standards that optimize safety, accessibility, comfort, and function.

FIGURE 3-1 MAIN DESIGN FEATURES



SHARED USE PATH

For pedestrian and bicyclist use and for other forms of active transportation.

Design Guidance:
10 feet width preferred; 8 feet minimum

SIDEWALKS

Standard facilities for pedestrian use.

Design Guidance:
5 feet minimum width

PEDESTRIAN CROSSINGS

May be at signalized intersections, non-signalized intersections, or between intersections. May be as simple as a crosswalk with signage or have a pedestrian signal.

Design Guidance:
Placement and type per VTrans Crosswalk Guidelines

LANDSCAPING FEATURES

Green strips between a sidewalk or path and the roadway provide a buffer from traffic, a storage location for snow, and stormwater management; trees provide shade to pedestrians and texture along the roadway; and a well-managed landscape enhances the aesthetic character of the corridor.

Design Guidance:
8 feet width or greater preferred; 5 feet minimum

BICYCLE LANES

Bicycle lanes come in a variety of forms: directly adjacent to vehicle traffic, buffered by a hatched striping zone, or protected with a physical barrier (as shown here with flexible posts). The busier and higher-speed a roadway is, the more buffering and protection is needed for people to feel comfortable riding in the bike lane.

Design Guidance:
5 feet preferred width, 4 feet minimum

- When adjacent to curb: 5 feet minimum
- Buffer for buffered or protected bike lanes: 3 feet preferred; 2 feet minimum
- Travel lanes (for vehicles) need not be greater than 11 feet wide. Narrowing existing travel lanes to this width may allow room for bicycle lanes without road widening in many cases.

BUS STOPS

Improved bus stops may include shelters, seating, trash and recycling, static or dynamic signs, and lighting.

Design Guidance: Typical amenities include:

- Lighting
- Static sign
- Dynamic sign
- Shelter
- Seating
- Trash/recycling
- Bike racks

STREET FURNISHINGS

Street furnishings, such as pedestrian scale lighting, benches, trash and recycling bins, bicycle racks, and other hardscape features, when appropriately placed, can make the streetscape more functional and welcoming to non-motorized traffic.

WAYFINDING

Wayfinding helps people learn about and find destinations in a community. This is accomplished primarily through signage and can be supported by transportation infrastructure, landscaping, lighting, and more. Wayfinding signs might include directions to reach places and the distance and/or time to get there by bicycle or on foot.

Design Approach

Several preliminary decisions were made to begin the alternatives development process. They included:

- A **shared use path** should be on one side of the road, starting at the Missisquoi Valley Rail Trail entrance and ending as far north as the Swanton town line or at least up to Route 207. A shared use path was initially suggested by the Project Advisory Committee and would offer a comfortable route both for people walking and bicycling. The east side of Route 7 was preferred due to it having more available space (fewer impacts to existing features), and several more roadside destinations.
- Ideally, there will be a place to walk on both sides of the road. A **sidewalk** could be on the opposite side of the shared use path to connect businesses and destinations on the west side of the road, and it would require less space than a shared use path (and therefore have fewer impacts).
- With the expansion of pedestrian facilities, **pedestrian crossings** should be put in place at existing signalized intersections and at other warranted locations.
- With bicycling as an increasingly popular form of transportation, the presence of bicycle facilities in the City, and available space on the roadway, **bike lanes** should be expanded

into the Town and buffered on the busiest stretches (which is most of the primary study area). Restriping travel lanes to 11 feet would make buffered bike lanes possible in many areas, and road widening could occur where needed to ensure a consistently comfortable facility. Restriping a roadway to include bike lanes is a relatively inexpensive improvement, so although improved bicycle facilities may not be the primary objective, it is a worthy and feasible one.

- The area where the rail trail, Sheldon Road, the Maple City Diner, and the St. Albans Messenger meet should be an area of focus. This area has skew angles long curb cuts and is an opportunity to better define the rail trail and the City-Town boundary.
- In addition to these basic accommodations, other features can be implemented to improve the safety and experience of all road users, including: **street trees**, **green strips**, **lighting**, and **wayfinding**.
- Lastly, there may be changes to make to allow sidewalks, paths, and bike lanes to be constructed, including: **drainage improvements**, **road widening**, **coordinating with property and business owners**, and **increasing maintenance efforts**. This study identifies what may be needed in these areas but focuses on the transportation improvements themselves rather than digging deep into all possible impacts. The impacts and necessary improvements are surmountable, if the community is in support.

Design Assumptions

Several assumptions for the designs were made based on cost and feasibility:

- Design within right of way when possible, at least for short-term alternatives.
- Travel lanes shall not be removed.

Typical Constraints and Impacts

Typical challenges expected include the following:

- **Power lines and poles** may limit placement of paths and trees.
- Some businesses have **landscaping and parking lots within the right-of-way or fronting it**. This may affect the design, or the design may affect these features; this would be determined on a case-by-case basis and in coordination with property and business owners.

4.0 ALTERNATIVES DEVELOPMENT

Alternatives were identified and developed in four areas:

1. The roadway cross-section
2. The Missisquoi Valley Rail Trail entrance and surrounding area
3. Transit
4. Wayfinding

4.1 CROSS-SECTION ANALYSIS AND ALTERNATIVES

During the existing conditions analysis, the study area was divided into six distinct segments that reflect the roadway cross-section elements and the roadside character. These six segments, identified in Figure 4-1, provide opportunities to address specific issues and challenges while respecting the need to harmonize throughout its length.

In this section, each of the six segments are evaluated according to their character, constraints, and opportunities, and options are offered for each that will improve multimodal safety and provide facilities for active travel along Route 7.

NOTE:

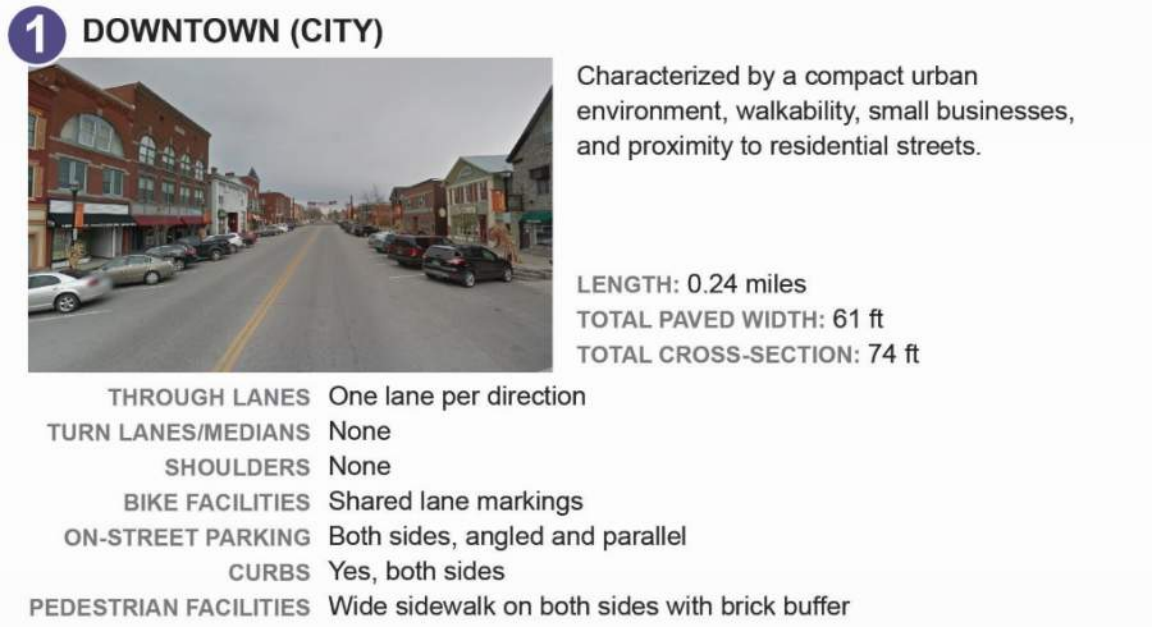
Options listed as bullets (•) can be combined.

Options in number lists (1, 2..) are alternatives to each other (cannot be combined) or are recommended as staged options.

FIGURE 4-1: SIX CORRIDOR SEGMENTS

Downtown (City) - Lake St to Hoyt St

In downtown St Albans City, Route 7 is framed by buildings and Taylor Park. The area has experienced a significant amount of investment in the public streetscape and transportation infrastructure, including curb extensions that make pedestrian crossings shorter. The roadway is wider than needed, which may encourage speeding.



Constraints

- Angled vehicular parking – difficult to see bicyclists in road
- Minimal green strip on the west side – difficult to provide healthy street trees

Opportunities

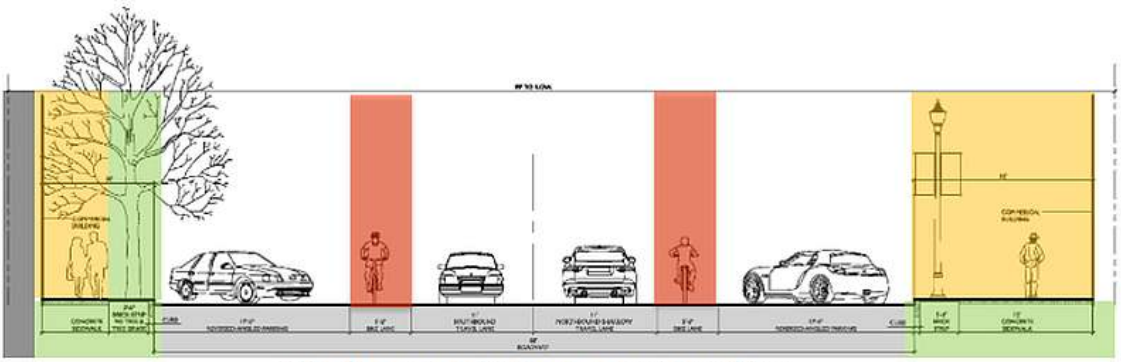
- Large green space on the east side – ample space for street trees and stormwater management
- Extra roadway width

Options

1. Add bike lanes between the travel lanes and the parking aisles and explore reverse angle parking (Figure 4-2). Conventional angled parking adjacent to bike lanes is a safety concern since drivers backing out of spaces have difficulty seeing oncoming bicyclists. With reverse angle parking, drivers back in to spaces and have better visibility when leaving. The parking space angle will need to be increased to fit in bike lanes in some areas.

2. Keep sharrows. This will not solve the issue of extra roadway space, but other traffic calming methods could be explored, such as adding a narrow textured median.

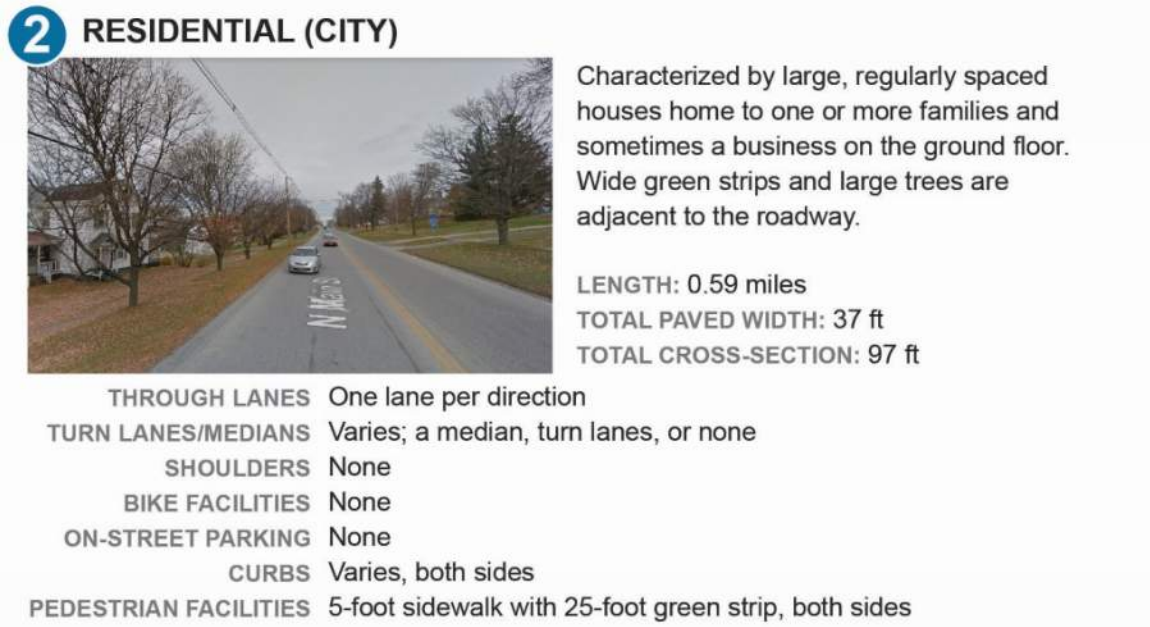
FIGURE 4-2 PROPOSED DOWNTOWN BIKE LANES



Bike lanes and reverse angle parking

Residential (City) – Hoyt St to Plaza at 248 North Main

This segment connects downtown St. Albans to the location where the sidewalk in the City ends (approximately at the plaza at 248 North Main).



Constraints

- Narrow road width at intersections with three lanes of traffic – cannot accommodate designated bike lanes unless curb is relocated.
- Overhead powerlines close to road edge – restricts road expansion to east side.
- Private parking lot in right-of-way – requires coordination efforts with neighboring business.

Opportunities

- Large green strips - accommodates healthy street trees, stormwater management, and utilities, and in the long-term provides space to widen road to implement buffered or protected bike lanes.

Options

Hoyt Street to Newton Street options:

1. Add sharrows. As with this option in the downtown, find other ways to slow traffic.
    - Continue from downtown
    - Can fit on pavement

2. Provide standard bike lanes (5') or buffered/protected bike lanes (3' buffer). At intersections with three lanes of traffic, widen the road by up to 7 feet.

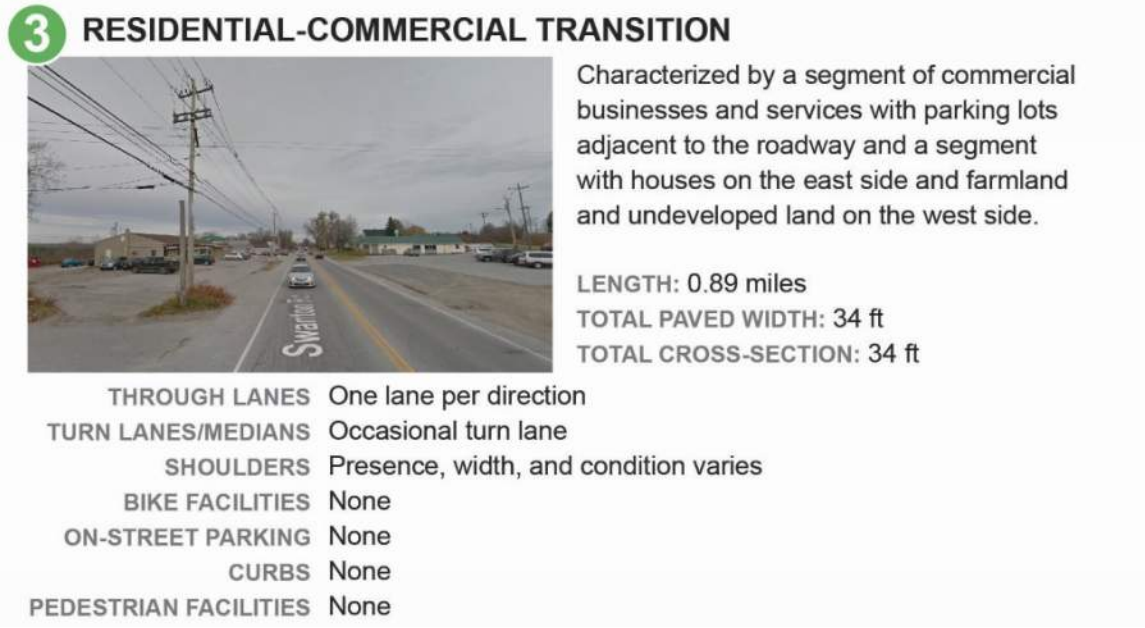
Newton Street to Plaza options:

1. Keep bike lanes as they are.
2. Buffer existing bike lanes, with option for protection
    - Room for 2.5' buffers without widening roadway

FIGURE 4-3 PROPOSED PROTECTED BIKE LANES IN SEGMENT 2

Residential / Commercial Transition – Plaza at 248 North Main to Danform Shoes

The transition zone from the City of St. Albans to the Exit 20 Growth Center to the north has a generally consistent cross section and a mix of suburban commercial land uses in the southern tier, a small amount of residential, and return of commercial uses in the northern area.



For a corresponding visualizations for the following constraints and opportunities identified, see Figure 4-4.

Constraints

- Isolated areas of minimal open space on west side of road.
- Overhead powerlines and woods tight to road on west side – restricts road expansion to eastside.
- Private parking lots within right-of-way – requires coordination efforts with neighboring business.
- Private parking lots fronting on right-of-way – visual implication for pedestrians.

Opportunities

- Wide vehicular travel lanes – can be restriped to accommodate bike lanes.

- Overhead powerline easement – potential shared use path location to backside of Highgate Plaza.
- Ample open space within right-of-way on east side and part of west side of road to accommodate path or sidewalk, street trees, green space, stormwater management, utilities, and connection to Missisquoi Valley Rail Trail.
- Adjoining open space to right-of-way – Potential land to acquire for long term design solutions.

FIGURE 4-4 SEGMENT 3 CONSTRAINTS AND OPPORTUNITIES

Constraints

Opportunities

Options

Up to the Missisquoi Valley Rail Trail:

- Buffer existing bike lanes.
- Extend existing sidewalks up to this point on both sides of road.

FIGURE 4-5: PROPOSED BUFFERED BIKE LANES AND SIDEAWLKS SOUTH OF RAIL TRAIL

Up to Seymour Road:

- Restripe to add buffered bike lanes.
- Shared use path on east side, sidewalk on west side.

Up to Danform Shoes

- Short term: Add 4'-5' bike lanes and buffer where possible
- Longer term: Widen road to have consistent, buffered bike lanes (8' max widening)

Franklin Park & Highgate Commons – Danform Shoes to southern VT-207 Intersection

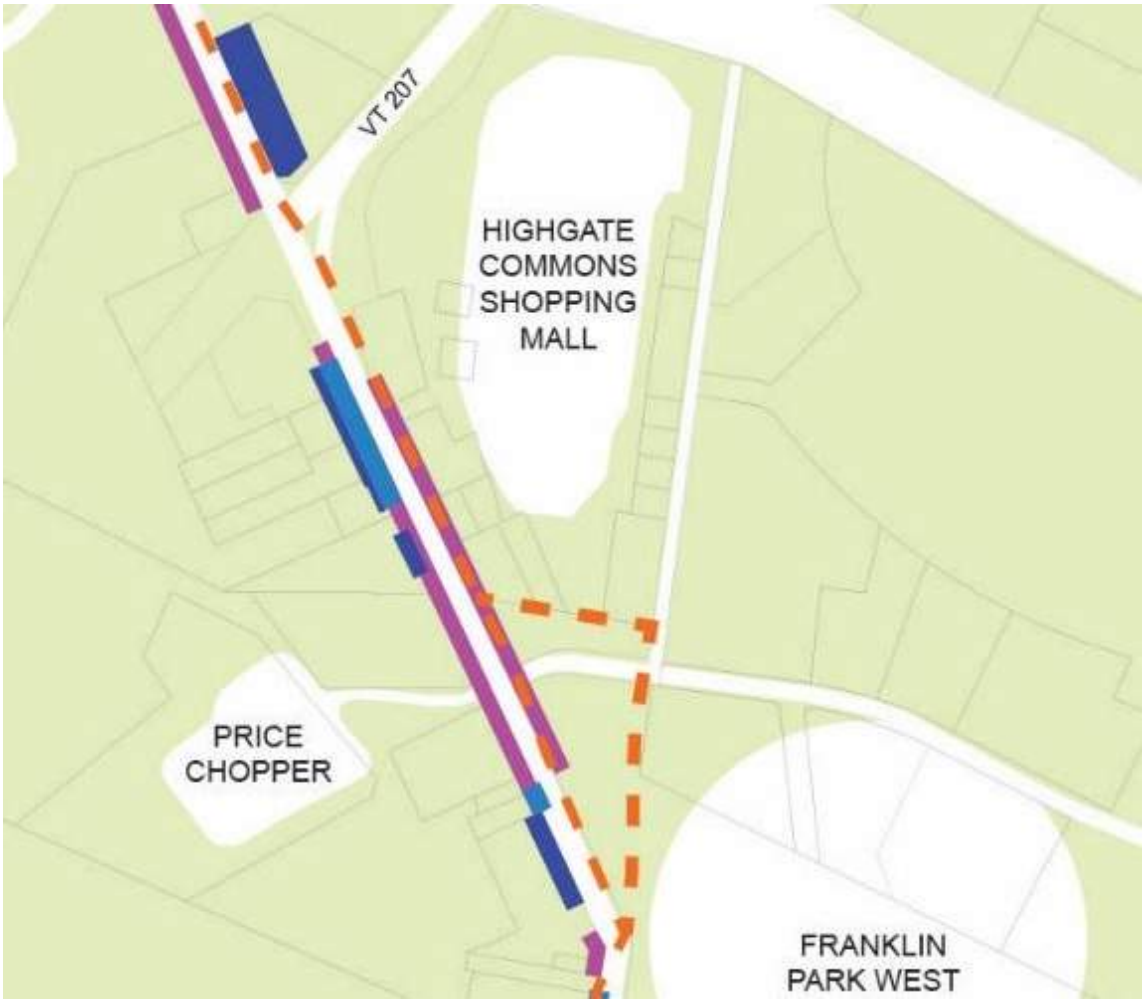
The segment has the highest use of the right-of-way and includes two large signalized intersections as well as direct access to several large commercial land uses. The corridor has up to five travel lanes, all more than 12 feet in width and no existing facilities for pedestrians or bicyclists.

For a corresponding visualizations for the following constraints identified, see Figure 4-6

Constraints

- Minimal open space from road edge to ROW both side of road – limits roadway expansion for bike lanes
- Overhead powerlines close to east side of road – limits pedestrian & shared path opportunities
- Private parking lots within ROW – Requires coordination efforts with neighboring business
- Private parking lots fronting on ROW – visually implication for pedestrian circulation

FIGURE 4-6 SEGMENT 4 CONSTRAINTS



Opportunities

- There are segments of existing sidewalks that could be connected to, though they are not in the right-of-way.
- This area will be further developed in the future; pedestrian facilities could be implemented as that occurs.
- Overhead powerline easement off of Route 7 – could potentially accommodate shared-use path connecting to the mall

Options

- Restripe to add buffered bike lanes.

- Shared use path on east side, sidewalk on west side. As suggested in the August 14, 2018 public meeting, the path could switch to the west side at the Highgate Mall intersection so it can avoid the Route 207 intersection.
- In the utility easement off Route 7, add a shared use path as an alternative bicycle and pedestrian route to the mall.

FIGURE 4-7 PROPOSED PATH, SIDEWALK, AND BUFFERED BIKE LANES IN SEGMENT 4

VT-207 & Walmart – southern VT-207 Intersection to Cobb Auto

The study segment from VT-207 to Cobb Auto (just north of Walmart) was improved as part of the Walmart mitigation. Sidewalks were installed for a length of the segment and additional turn lanes were installed. At the time of this report, the recent Handy Buick project will install additional sidewalk on the east side from Route 207 north to the old drive-in entrance and create a new crosswalk at the Walmart signal across Route 7. Both sidewalks created by Walmart and Handy are outside of the right-of-way.

The study segment from VT-207 to Cobb Auto (just north of Walmart) was improved as part of the Walmart mitigation. Sidewalks were installed for a length of the segment and additional turn lanes were installed. At the time of this report, the recent Handy Buick project will install additional sidewalk on the east side from Route 207 north to the old drive-in entrance and create a new crosswalk at the Walmart signal across Route 7. Both sidewalks created by Walmart and Handy are outside of the right-of-way.

Constraints

- Minimal open space to right-of-way along west side of road – limits road expansion to the east.

Opportunities

- 5 foot (and wider) shoulders

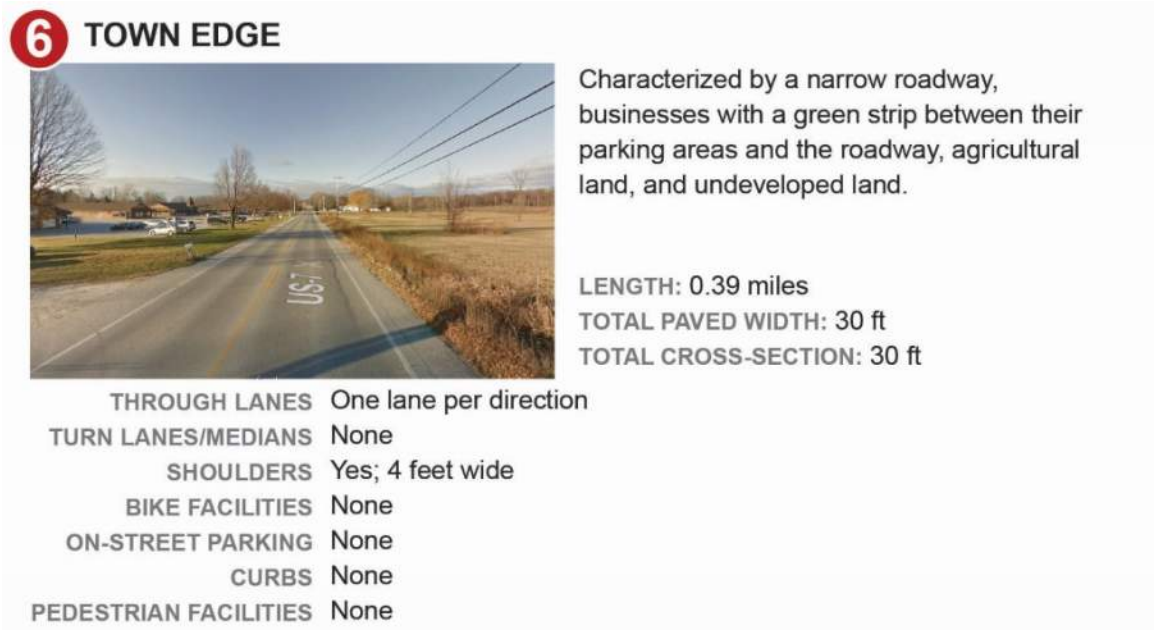
- Wide vehicular travel lanes – width could be reduced to accommodate buffered bike lanes.
- Large green space within right-of-way on east side of road - could accommodate shared use path and street trees.
- The existing sidewalk in front of Walmart could be connected to, though it is not in the right-of-way.

Options

- Bike facilities:
    1. Use signage and pavement markings to designate existing shoulders as bike lanes
    2. Restripe lanes to 11’ to fit buffered bike lanes.
- Sidewalk and Path:
    1. *As development occurs*, continue shared use path on one side and sidewalk on the other side.

FIGURE 4-8 PROPOSED PATH, SIDEWALK, AND BUFFERED BIKE LANES IN SEGMENT 5

Town Edge - Cobb Auto to Swanton Town Line



The northernmost segment lies north of Cobb Auto beyond any of the widening associated with the Walmart to the south. The two-lane segment continues north to the town line with Swanton. The existing roadway provides immediate opportunities to add minimal bike facilities and the existing right-of-way provides opportunities for either sidewalks or paths and green belts.

Constraints

- Swale tight to road edge – restricts road expansion to the west.
- Travel lanes already 11 feet wide – cannot be restriped to reallocate space to bike lanes.

Opportunities

- No curbs - allows for inexpensive roadway expansion to accommodate bike lanes.
- Large green space within ROW both side of road – allows for pedestrian & shared use path when future development occurs or prior if town prefers. Space can also house cluster of trees to shade path and frame views to adjoining agricultural land.

Options

- Bike facilities:
    1. Use signage and pavement markings to designate existing shoulders as bike lanes.
    2. Widen road by 4 feet to provide 6’ bike lanes.
- Sidewalk and path:

1. *As development occurs*, continue shared use path on one side and sidewalk on the other side.

4.2 MISSISQUOI VALLEY RAIL TRAIL

The entrance to the Missisquoi Valley Rail Trail and its surrounding area on Route 7 has several existing issues but significant potential for improvement. Not only is the rail trail an important community destination, but this is where the City and Town meet. This area could be an opportunity for joint effort and by the City and Town and mark a connection rather than a boundary.

The specific **existing issues** are:

- The entrance on Route 7 is not well defined or celebrated except by signage.
- The segment of the trail between Route 7 and Seymour Road is shared with motorized vehicles and has parking along part of it. The trail technically begins at Seymour Road, but many people access it from Route 7. This configuration is not intuitive, is a safety risk, and may be confusing to visitors.
- There are numerous intersections and driveways (some very wide) along Route 7 in the area near the rail trail entrance.

Several **general options** for this area were identified:

- Add a **pedestrian crossing** of Route 7 at the rail trail entrance, with rectangular rapid flashing beacons (**RRFBs**). This would connect to the proposed sidewalk on the west side of Route 7.
- Use **wayfinding and landscaping** to define, formalize, and celebrate the entrance.
- Formalize and expand parking at Seymour Road and prohibit parking along the rail trail.
- Improve motor vehicle access and circulation in conjunction with parking changes.

Motor Vehicle Access and Parking

Option 1: Vehicles to enter the trail midway down Sheldon Road and exit at Seymour Road, thereby reducing the length of shared space. (See Figure 4-9)

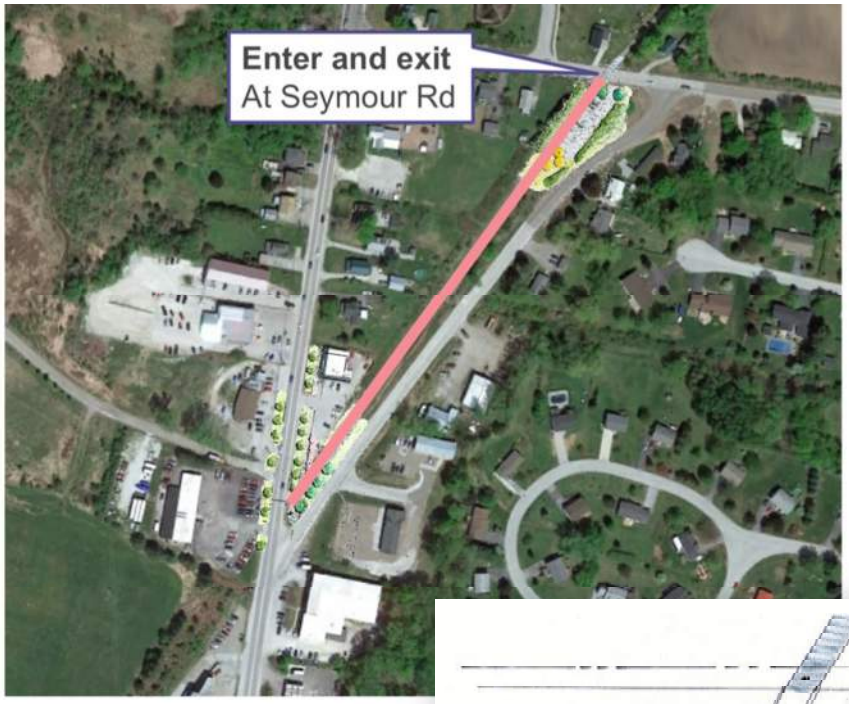
FIGURE 4-9 RAIL TRAIL MOTORIZED VEHICLE ACCESS OPTION 1: ONE-WAY CIRCULATION FROM SHELDON TO SEYMOUR

- One-way loop
- Enter from Sheldon Rd only
- Could expand parking area
- Shorter shared motorized and non-motorized space
- Path next to vehicle segment?

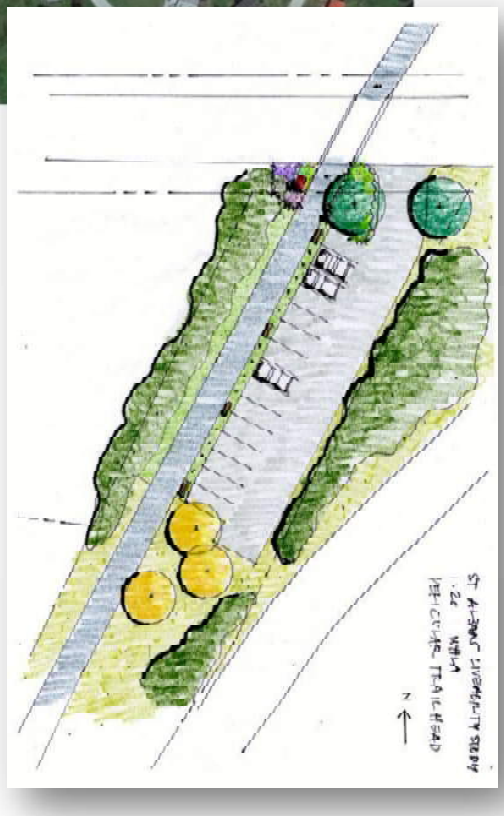
Option 2: Vehicles enter and exit at Seymour Road, thereby eliminating shared space. (See Figure 4-10)

FIGURE 4-10 RAIL TRAIL VEHICLE ACCESS OPTION 2: VIA SEYMOUR ROAD

- Enter and exit at Seymour Rd
- Parking moved adjacent to trail
- No shared motorized and non-motorized space



DETAIL OF PARKING AND ACCESS AT SEYMOUR ROAD



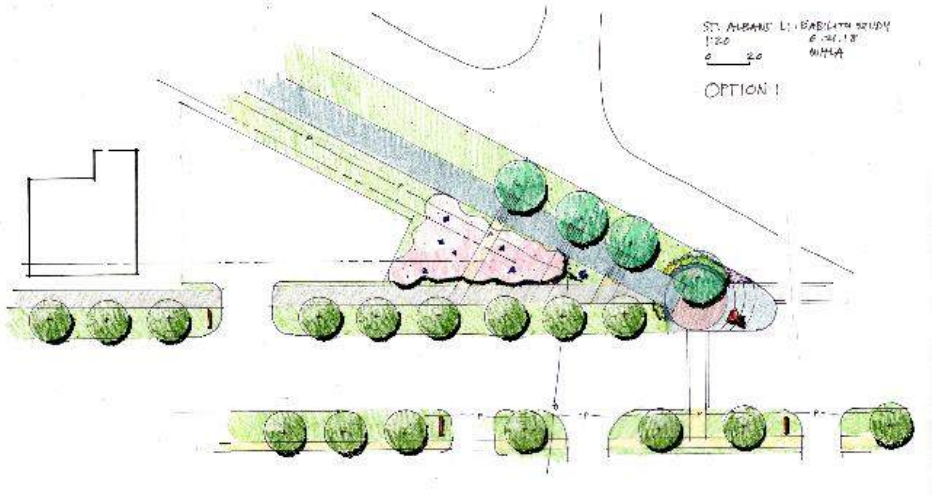
Configuration and Landscaping at Rail Trail Entrance

Three options are offered for defining, formalizing, and celebrating the entrance to the rail trail and the surrounding area. All of them involve the following elements:

- An entry plaza with seating, special paving, and plantings.
- Connection of the rail trail with the proposed shared use path along Route 7
- Street trees, shade trees & grove of ornamental trees to signify gateway
- Sculptural signage at trail entrance
- Connection with proposed crosswalk of Route 7

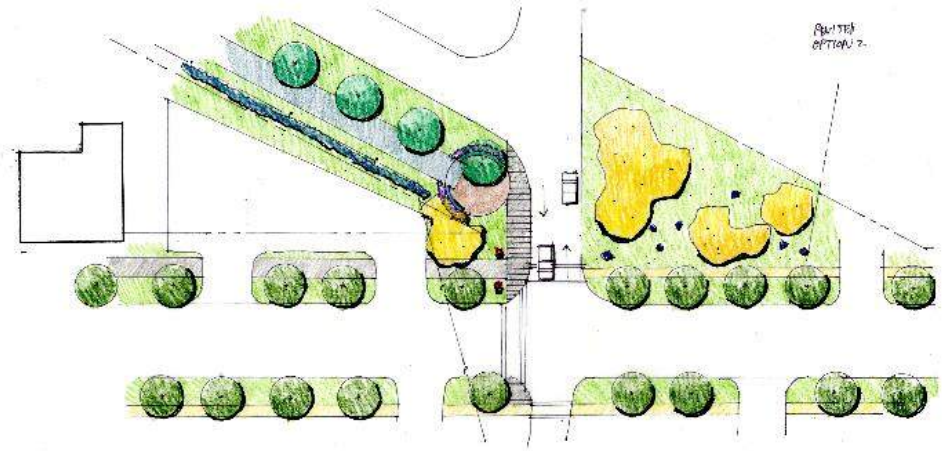
Option 1 (Figure 4-11) includes a flowering tree grove and circular entrance plaza.

FIGURE 4-11 RAIL TRAIL ENTRANCE OPTION 1



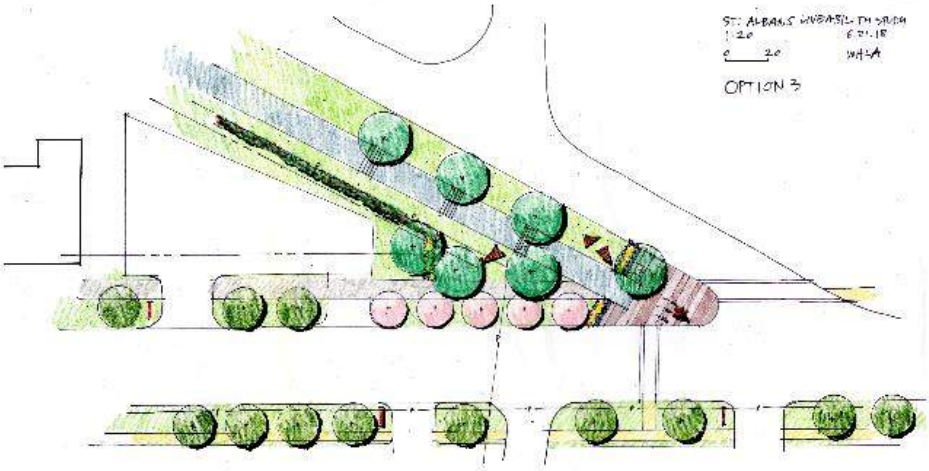
In **Option 2** (Figure 4-12), Sheldon Road is squared off with Route 7, removing the existing skew angle and therefore allowing safer turns in and out and a shorter crossing distance for pedestrians and bicyclists. Birch groves or similar are suggested for the new green space created to the east of the end of Sheldon Road.

FIGURE 4-12: RAIL TRAIL ENTRANCE OPTION 2 (INTERSECTION RECONFIGURATION)



Option 3 (Figure 4-13) is similar to Option 1; there is landscaping but no street reconfiguration. In this case, there is a triangular plaza, a row of flowering trees, and sculptural seating.

FIGURE 4-13 RAIL TRAIL ENTRANCE OPTION 3



4.3 WAYFINDING

The City of St. Albans recently created a graphic style and implemented signs and banners visible in the City portion of the study area. The Town recently created a logo but has no special signage along Route 7, incorporating the logo or not. Future wayfinding signs in the Town could somehow complement the City's, they could be in a style developed for the Town, or there could be a new wayfinding system that is completely consistent between the Town and City (or perhaps, beyond).

Wayfinding could be an entirely separate study, but basic ideas and principles and key sign locations are suggested here.

There are three types of wayfinding that could be used along Route 7. All would be geared toward pedestrians and bicyclists. Examples are shown in Figure 4-14.

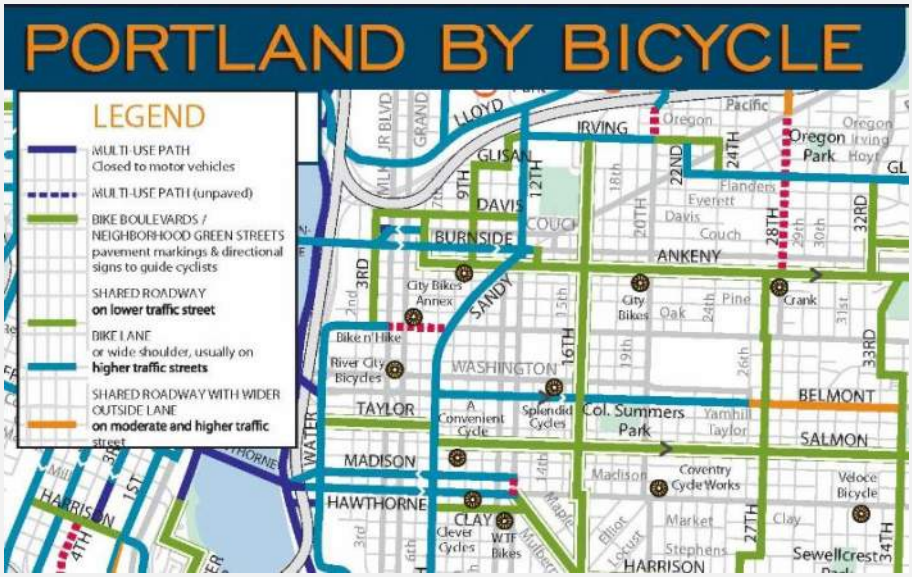
- Maps
- Directional and Informational
- Destination

Maps could be located in both the downtown City and the Town. They may show shared use paths, bicycle routes, and key community destinations.

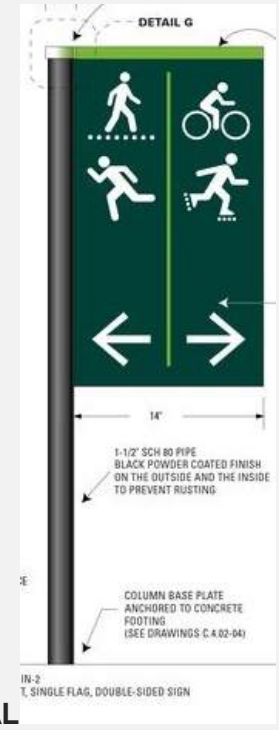
Directional/Informational signs would be positioned at key decision points such as intersections. They would point toward destinations and provide mileage.

Destination signage identifies destinations at their entrances to confirm people have arrived at the right (or wrong) place. Landscaping such as ornamental trees and seasonal plantings can also be used to confirm a sense of arrival.

FIGURE 4-14 WAYFINDING SIGNAGE EXAMPLES



MAP



DIRECTIONAL

DESTINATION

4.4 TRANSIT

Transit remains an important travel option connecting dense residential areas to the south with the regional commercial land uses in the Exit 20 area. The existing transit facilities are limited and require investment to meet expectations of today's and tomorrow's bus riders. With transit improvements, there are several questions at hand:

- How can existing bus stops along the study corridor be improved?
    - What changes are desired and possible for bus stops in the public right-of-way?
    - What changes are desired and possible for bus stops in shopping centers?
- How can the municipalities, GMT, VTrans, and private property owners work together and plan for improved bus stops?
- How should future bus stops be designed?
- Can the sidewalk, path, and bike lane improvements suggested in this report be designed in a way that would more easily accommodate any future bus stops along Route 7?

Some of these questions are more tangible and readily answered than others. In addition, VTrans is currently updating its state-wide Public Transit Plan, and GMT is creating a set of guidelines for its bus stops. When complete, these two documents are expected to provide clarity and guidance to help answer some of these questions.

In the meantime, general best practices are available as a starting point. Table 4-1 Generalized Design Guide for Bus Stop Amenities shows typical amenities and under what circumstances they should be used.

TABLE 4-1 GENERALIZED DESIGN GUIDE FOR BUS STOP AMENITIES

AMENITY	LOCAL STOP <40 BOARDINGS	LOCAL STOP > 40 BOARDINGS	COMMUTER STOP
Lighting	X	X	X
Static sign	X	X	-
Dynamic sign	-	X	X
Shelter	-	X	X
Seating	X	X	X
Trash/Recycling	-	X	X

For All Bus Stops: Static signage should identify the bus stop, route number(s) served, and a timetable. Seating as simple as a bench provides a place to rest while waiting for the bus.

Lighting helps ensure safety, helps identify the bus stop, and helps ensure that people waiting for the bus will be seen by the driver.

Bus stops with over 40 boardings a day: Dynamic signage would show up-to-date bus arrival times and any delays. A shelter with seating and lighting inside would increase the comfort and safety of the numerous people using these stops. Trash and recycling would help keep the ground clear of litter.

Some bus stops in the study area already have some of these features, but a full inventory has not been conducted. Table 4-2 shows bus stops, lines served, whether they are on public or private right-of-way, and the number of boardings per day. From here, an inventory of existing amenities could be conducted to determine what is missing.

TABLE 4-2 BUS STOPS IN STUDY AREA

BUS STOPS	RIGHT OF WAY	LINES SERVED	# BOARDINGS
Twiggs	City	96,	TBD; contact GMT
Bank Street	City	96, 110, 115	TBD; contact GMT
Welden Theater/City Hall/Congress Street	City	96, 115, 116	TBD; contact GMT
Rite Aid	Private	110	TBD; contact GMT
Brainerd Street	City	96	TBD; contact GMT
Lower/Upper Newton	City	96	TBD; contact GMT
Lakeview Terrace	City	96	TBD; contact GMT
Care Partners	Private	110	TBD; contact GMT
Price Chopper	Private	109, 110	TBD; contact GMT
Highgate Plaza	Private	96, 110, 115, 116	TBD; contact GMT
Walmart	Private	110	TBD; contact GMT

5.0 PUBLIC FEEDBACK AND CONSULTANT TEAM RESPONSES

Input was gathered from members of the public, business owners along the study corridor, the City Planning Board, and the Town Department of Public Works. The following summarizes their input and the Consultant Team's responses. Most are general feelings, some are questions, and some are in response to the alternatives.

Public

In addition to input via the Wikimap, members of the public had an opportunity to respond to alternatives at the public meeting on August 14, 2018 and after the meeting by email. At this meeting, the PAC and 17 members of the public were present. Votes were conducted for three decisions:

Shared Use Path: Which side of the road?

Of the six who voted, six preferred **the east side.** There was also a suggestion to switch the path to the west side of the road north of the Highgate Plaza intersection, which was included in the previous chapter of this report as an option.

The group was in support of options for all other aspects of the cross-section.

Rail Trail: Which vehicle access option?

Of the seven people that voted for a vehicle access option, five voted for **Option 2: Access only via Seymour Road.**

Rail Trail: Which rail trail entrance option?

Of the eight people that voted for a rail trail entrance option, six voted for **Option 2: Sheldon Road reconfiguration.**

Route 7 Steering Committee

Priority should be on people who *need* to travel on Route 7. The highest concern is of the segment between Sheldon Road and Seymour Road. They also expressed concern over sign pollution.

→ Consultant response: This input largely confirms the understanding from the beginning of the study and from the existing conditions analysis. Sign pollution will not be specifically studied during this study, but the Implementation Plan can recommend the Town conducting a sign inventory and to attempt to consolidate signage, remove unnecessary signs, and ensure signs are up to the latest standards.

Businesses

Input from businesses was relayed by Rise Vermont. Main comments:

- There is enthusiasm and appreciation for ability of clients, employees, and the public to access businesses by foot and bike.
- There is a desire for safer street crossings, especially for employees who want to run across the street for coffee/lunch/snacks.

City Planning

The City had several inquiries and comments:

- Where are protected bike lanes and paths possible in City?
- Could/should there be a speed limit reduction in the City?
- More bike racks are needed.

→ Consultant responses:

- Protected bike lanes are possible in the residential area north of the downtown.
- With just two lanes of traffic, the possibility of protected bike lanes, and existing sidewalks on both sides of the road, a shared use path would not be necessary. In addition, frequent driveways add a safety risk; fast-moving bicyclists on the path may think cars will stop at driveways, while drivers may not think to look for bicyclists. However, the City could explore this option if the community feels a need and is in support.
- Regarding a speed reduction, roads are ideally self-enforcing. Drivers will drive at the speed they deem comfortable, so roads should be designed to make drivers feel like they should slow down. Once traffic calming measures are put in place, the speed limit could be lowered to reflect these changes.
- Bike rack locations can be determined and placed in the short term or once plans are in place for new bike lanes, paths, and sidewalks. They can always be moved. This study can recommend several key locations for bike racks, but the City and Town may have a better understanding of other locations or could reach out to the public for suggestions.

Town Public Works

Concern of maintenance, interest in Class I TH status, and question of path on west or east side.

The alternatives were presented to the Town Department of Public Works and VTrans at a meeting on June 27, 2018. The Town had several concerns, primarily regarding maintenance and costs. The overarching concerns were:

- **Concern of increased maintenance costs:** Plowing and salting/sanding paths and sidewalks and mowing green strips will require more time, staff, and equipment. A potential new task would be to regularly inspect the closed drainage that may be required with the addition of a path.
- **Question of maintenance responsibilities:** How will VTrans and the Town split maintenance duties? Route 7 in the Town is not a Class 1 Town Highway; could it become one? What are the implications of each scenario?
- **Shared use path location:** The Town felt that the shared use path should be on the west side so it will avoid the swale on the east side.

→ Consultant responses:

- This study will propose the best transportation alternatives to meet the goals determined at the outset of the study by the PAC. Maintenance is necessary for these to occur. The Town can choose to implement the alternatives or not, but the outcomes of this study will be largely based on best practices and public input. The maintenance and drainage needs are surmountable; they will be an added cost but are not exorbitant. The costs will need to be planned for and will be an investment.
- The consultant team has set up a spreadsheet to help the Town determine implications of converting this segment of Route 7 into a Class I Town Highway and to estimate maintenance costs. However, even with limited maintenance cost information available it is an additional yearly cost to assume responsibility and convert into a Class I Town Highway. The Town has not advocated this conversion.

IMPLEMENTATION PLAN

6.0 IMPLEMENTATION PLAN

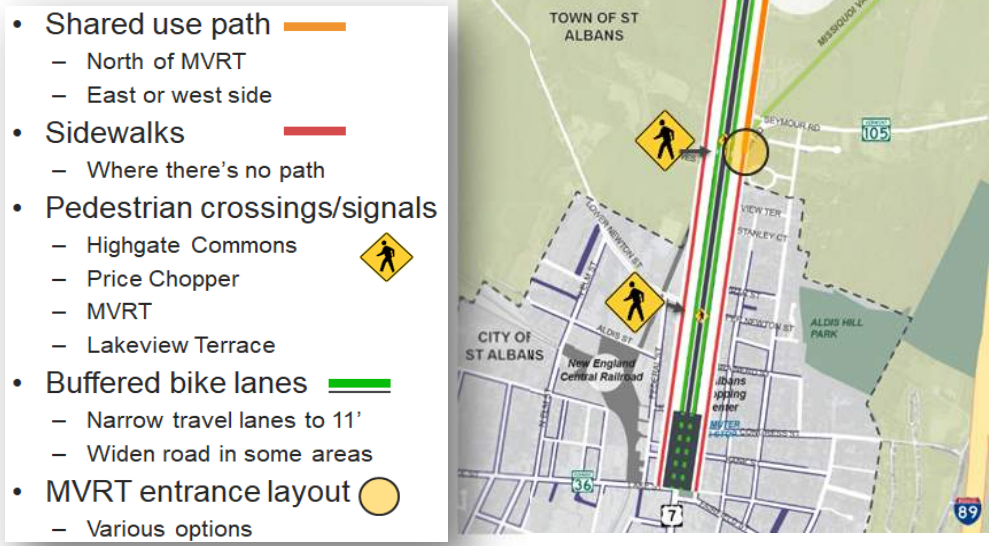
This chapter brings the alternatives and community input together and provides recommendations and notes to turn the concepts into action. This chapter is organized as follows:

1. Cross Sections
2. The Missisquoi Valley Rail Trail entrance and surrounding area
3. Transit
4. Wayfinding
5. Cost Estimates
6. Corridor Management Recommendations

For the most part, the options identified in Chapter 4 do not involve decisions to make; only with the side of the road of the shared use path and options at the rail trail were there options to compare and choose from. In most cases, there was one option, or multiple options that could be combined, or two options that could be done in a staged approach. So rather than this chapter identifying *which* alternative to recommend, it will identify *how* to implement the options.

The general layout of the alternatives and focus areas is shown in Figure 6-1.

FIGURE 6-1 CONCEPTUAL ALTERNATIVES



6.1 CROSS-SECTION RECOMMENDATIONS

Each of the six corridor segments include improvement alternatives, the phases of implementation, cost estimates, and challenges to implementation.

Funding sources are identified so that the implementing agencies can begin to identify relevant sources of funding for specific elements of the plan.

The plan identifies timelines for the improvements, generally defined as:

- **Immediate**: little to no barriers to implementation. Costs are minimal.
- **Short**: typical project. Likely would not require extensive study or property. Costs are moderate.
- **Long**: Larger project requiring environmental review and/or property. Costs are higher

1 - Downtown (City) - Lake St to Hoyt St

This segment is characterized by a compact urban environment, walkability, small businesses, and proximity to residential streets. There are sidewalks on both sides and a recently redeveloped streetscape with features such as curb extensions, but the roadway is wider than necessary, which may encourage speeding. Improvements to this segment would focus on bicycle facilities.

Two options were proposed:

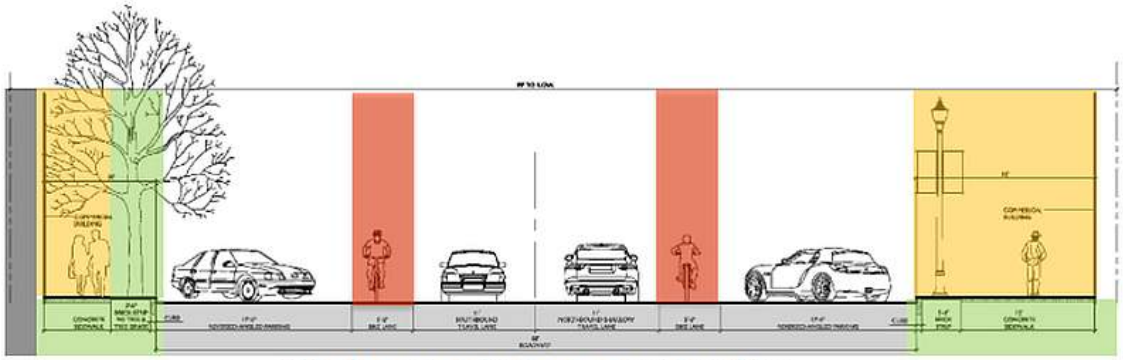
1. Keep the sharrows in place and find another way to calm traffic, perhaps with narrow textured medians.
2. Add bike lanes and change parking to reverse-angle. The angle of the parking may also need to be increased to fit bike lanes in some areas.

The PAC and public had no objections to either option. Both are viable, and both have pros and cons. One con of each is not knowing how well they will function once implemented. Fortunately, both are relatively inexpensive, and the City could implement one or the other for a trial period and measure speeding and public perception before and after.

TABLE 6-1: IMPLEMENTATION MATRIX - SEGMENT 1

Section	Phase	Option	On-Road Bike Facilities	Notes/Conflicts/Challenges
1 - Downtown (City)				
Lake Street to Hoyt Street	**Immediate**	Sharrows	Keep sharrows	Because the travel way is wide, a narrow median - slightly raised, textured, and colored (not curbed) - could be installed in the center. (Example: East Ave & Mansfield Ave in Burlington)
		Bike lanes	Bike Lanes, Reverse Angle Parking	Could try reverse angle parking prior to adding bike lanes to see how they work

FIGURE 6-2 PROPOSED BIKE LANES AND PARKING IN SEGMENT 1



Bike lanes and reverse angle parking

2 - Residential (City) – Hoyt St to Plaza at 248 North Main

This segment connects downtown St. Albans to the City boundary and the transition into commercial land uses to the north. The segment already benefits from good pedestrian facilities with sidewalks and large green strips and street trees on both sides of Route 7.

Improvements identified for this segment involve creating on-road bicycle infrastructure. Phased options are shown in Table 6-2.

TABLE 6-2 IMPLEMENTATION MATRIX - SEGMENT 2

Section	Phase	Option	On-Road Bike Facilities	Notes/Conflicts/Challenges
2 - Residential (City)				
Hoyt Street to Newton Street	**Immediate**	Sharrows	Keep sharrows (coordinate with Section 1)	
	Short/Long	Bike Lanes	Provide standard (5') bike lanes or wider for buffered/protected bike lanes (2.5' buffer). Road widening necessary where there are three lanes unless the bike lanes become sharrows.	At plaza with turn lane, there is barely any room for any bike facilities. Either the bike lane could switch to a sharrow in this section, or the road would need to widen from 35' to 43' (33' for travel lanes and 10' bike lanes)
Newton Street to Plaza at 248 North Main	**Immediate**	Protected Bike Lanes	Install bollards along existing buffered bike lanes	Initiate preliminary design and engineering for protected lanes.

Figure 6-3 shows a conceptual rendering of protected bike lanes with bollards in a painted buffer area north of Newton Street.

FIGURE 6-3: CONCEPTUAL RENDERING – PROPOSED PROTECTED BIKE LANES NORTH OF NEWTON STREET IN SEGMENT 2

3 - Residential / Commercial Transition – Plaza at 248 North Main to Danform Shoes

The transition zone from the City of St. Albans to the Exit 20 Growth Center to the north has a generally consistent cross section and a mix of suburban commercial land uses in the southern tier, a small amount of residential, and return of commercial uses in the northern area.

The segment begins where the City's sidewalks end and includes the intersection with Sheldon/Seymour and the Missisquoi Valley Rail Trail. This node is a critical element of any improvement concepts for this segment.

Improvements to the west side of this segment will require communication and coordination with business owners and property owners who have parking lots and driveways within or adjacent to the right-of-way.

This segment has been split into three subsegements:

- Plaza at 248 North Main to Sheldon Road
- Sheldon Road to Seymour Road
- Seymour Road to Danform Shoes

Phased options are shown in Table 6-3 and a conceptual rendering is shown in Figure 6-4.

TABLE 6-3 IMPLEMENTATION MATRIX - SEGMENT 3

Section	Phase	*Option*	West Side	East Side	Pedestrian Crossings	On-Road Bike Facilities
3 - Residential/Commercial Transition						
Plaza at 248 North Main to MVRT/Sheldon Rd	**Immediate** - protected bike lanes				Crosswalk with RRFB at Lakeview Terrace. Construct accessible landing space that would connect to future sidewalk	Install bollards along existing buffered bike lanes
	Short - extend sidewalk		Extend sidewalk	Extend sidewalk		

MVRT/Sheldon Rd to Seymour Rd	**Immediate** - on-road bike facilities				Crosswalk with RRFB at MVRT	Add buffered bike lanes (2.5' buffer).
	Short - sidewalk/SUP	*East-Side Path*	Extend sidewalk	Shared use path		
Seymour Rd to Danform Shoes	**Immediate** - on-road bike facilities					Add 4'-5' bike lanes where buffered not possible. In sections with 6' or more, use a 2' buffer and remaining space for bike lane (available space for on-road bike facilities ranges from 4’ to 8’ on each side in this stretch)
	Short - sidewalk/SUP	*East-Side Path*	Sidewalk north of tattoo parlor	Shared use path		**Widen road** to have consistent, buffered bike lanes (8' total on each side minimum)

FIGURE 6-4: CONCEPTUAL RENDERING – PROPOSED PATH, SIDEWALK, AND BUFFERED BIKE LANES SOUTH OF RAIL TRAIL IN SEGMENT 3

The shared use path north of Seymour Road could be built on either the west or east side of Route 7. There are pros and cons for each option:

The east side has a more consistent topography and higher elevation than the road as well as several more connections to adjacent land use. The public comment received was in support for the east side. Some of the concerns involve the costs of small lengths of closed drainage culverts that may be necessary as well as avoiding some sensitive trees and other constraints. The drainage has been reviewed and not considered a major constraint and the path could be designed to avoid specific trees or other landscaping concerns by reducing the width of the green belt or the path itself.

The west side would require either extensive fill, protections given the lower elevation from the road, and has fewer connections to the adjacent land use (there are fewer properties on the west side of the corridor) in this segment.

This study outlines some of the preliminary evaluation of the paths, the access management issues, and general right-of-way requirements. The next step for the Town will be to conduct a scoping study on the shared use path to account for gradients, driveway configurations, and drainage details.

4 - Franklin Park & Highgate Commons – Danform Shoes to southern VT-207 Intersection

The segment has the highest use of the right-of-way and includes two large signalized intersections as well as direct access to several large commercial land uses. The corridor has up to five travel lanes, all more than 12 feet in width and no existing facilities for pedestrians or bicyclists.

Alternate shared use path route. Follows the historic right-of-way of Route 207 (pre-interstate) or utility easement from US Route 7 north to access Parah Road and Highgate Commons.

A phased approach is shown in Table 6-4.

TABLE 6-4: IMPLEMENTATION MATRIX - SEGMENT 4

Section	Phase	*Option*	West Side	East Side	Pedestrian Crossings	On-Road Bike Facilities
4 - Franklin Park & Highgate Commons						
Entire section	**Immediate** - on-road bike facilities					Add buffered bike lanes - 3' buffer and remaining space for bike lane (will vary)
	Short/Long - sidewalk/SUP	*East-Side Path*	Sidewalk	Shared use path	Pedestrian crosswalk/signals/phasing at Franklin Park West and at Highgate Commons	

	Short/Long - alternate path			Shared use path on powerline easement from Franklin Park West to Highgate Commons		

FIGURE 6-5 CONCEPTUAL RENDERING - PROPOSED PATH, SIDEWALK, AND BUFFERED BIKE LANES IN SEGMENT 4

5 - VT-207 & Walmart – Southern VT-207 Intersection to Cobb Auto

The study segment from VT-207 to Cobb Auto (just north of Walmart) was improved as part of the Walmart mitigation. Sidewalks were installed for a length of the segment and additional turn lanes were installed. At the time of this report, the recent Handy Buick project will install additional sidewalk on the east side from Route 207 north to the old drive-in entrance and create a new crosswalk at the Walmart signal across Route 7. Both sidewalks created by Walmart and Handy are outside of the right-of-way.

A phased approach is shown in Table 6-5.

TABLE 6-5: IMPLEMENTATION MATRIX - SEGMENT 5

Section	Phase	*Option*	West Side	East Side	Pedestrian Crossings	On-Road Bike Facilities
5 - VT-207 and Walmart						
Entire section	**Immediate** - on-road bike facilities					Use signage and pavement markings to designate existing shoulder as a bike lane
	Short - buffered bike lanes					Restripe with 11' lanes to fit 3' buffer and remaining space for bike lane (will vary)
	Short/Long - sidewalk/SUP	*East-Side Path*	Sidewalk	Shared use path*	At Rt 207 slip lanes, crosswalk and RRFB. At Rt 207 signals, pedestrian crosswalk/signals/phasing on north side. At Walmart signal, pedestrian crosswalk/signals/phasing both sides	

		West-Side Path	Shared use path	Sidewalk*	Pedestrian crosswalk/signals/phasing at Walmart if/when east side sidewalk is built	

FIGURE 6-6: CONCEPTUAL RENDERING – PROPOSED PATH, SIDEWALK, AND BUFFERED BIKE LANES IN SEGMENT 5

6 - Town Edge - Cobb Auto to Swanton Town Line

The northernmost segment lies north of Cobb Auto beyond any of the widening associated with the Walmart to the south. The two-lane segment continues north to the town line with Swanton. The existing roadway provides immediate opportunities to add minimal bike facilities and the existing right-of-way provides opportunities for either sidewalks or paths and green belts.

A phased approach is shown in Table 6-6.

TABLE 6-6: IMPLEMENTATION MATRIX - SEGMENT 6

Section	Phase	*Option*	West Side	East Side	Pedestrian Crossings	On-Road Bike Facilities
6 - Town Edge						
Entire section	**Immediate** - on-road bike facilities					Designate existing 4' shoulders as bike lanes
	Short - widen road for improved bike facilities					Widen road by 2-4 feet to provide 5'-6' bike lanes
	Short/Long - sidewalk/SUP	*East-Side Path*	Sidewalk*	Shared use path*	As warranted with future development	
		West-Side Path	Shared use path*	Sidewalk*	As warranted with future development	

6.2 MISSISQUOI VALLEY RAIL TRAIL RECOMMENDATIONS

The public is in favor of realigning the southern end of Sheldon Road so that it meets Route 7 at more of a right angle (see Figure 6-7) and reconfiguring the trail up to Seymour Road so that vehicles do not drive or park here (see Figure 6-8).

FIGURE 6-7 RAIL TRAIL ENTRANCE ON ROUTE 7 - PREFERRED OPTION

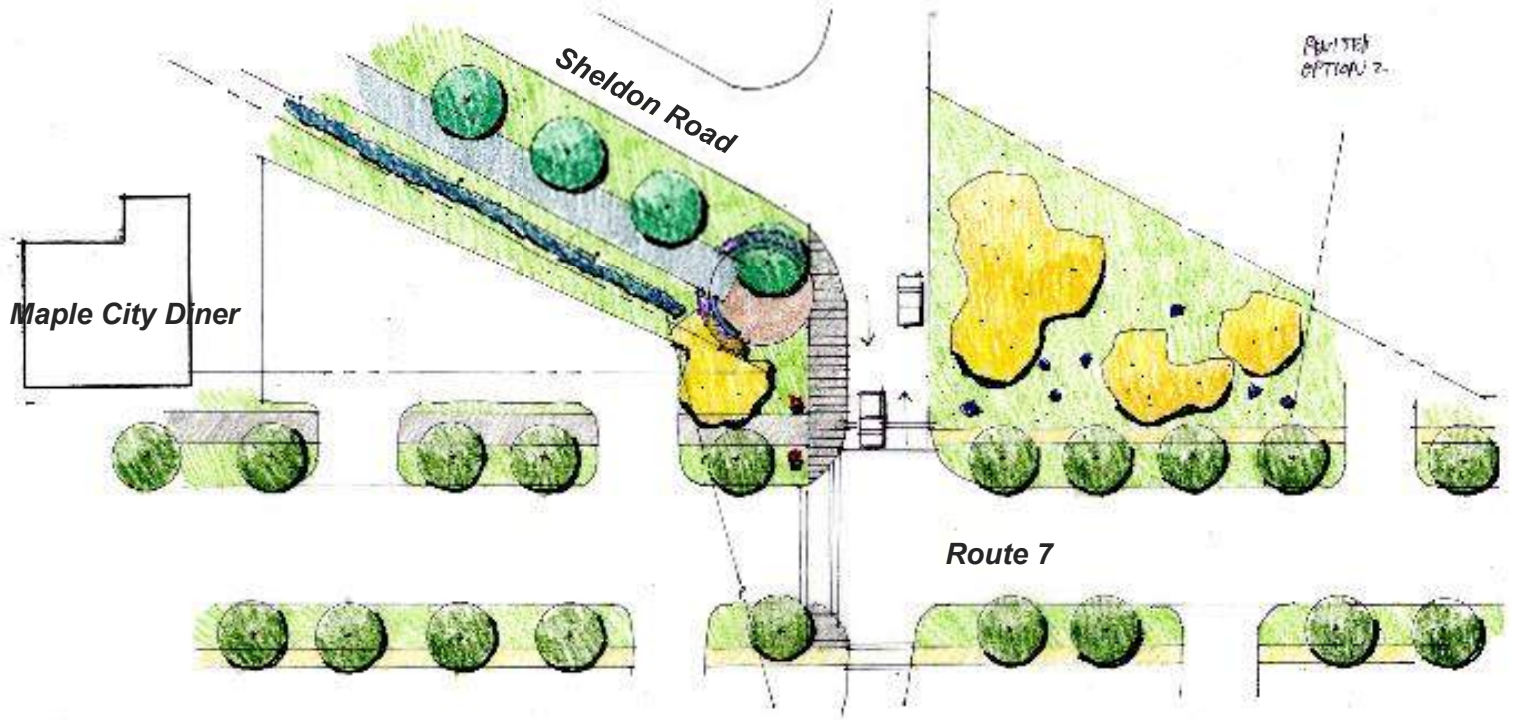
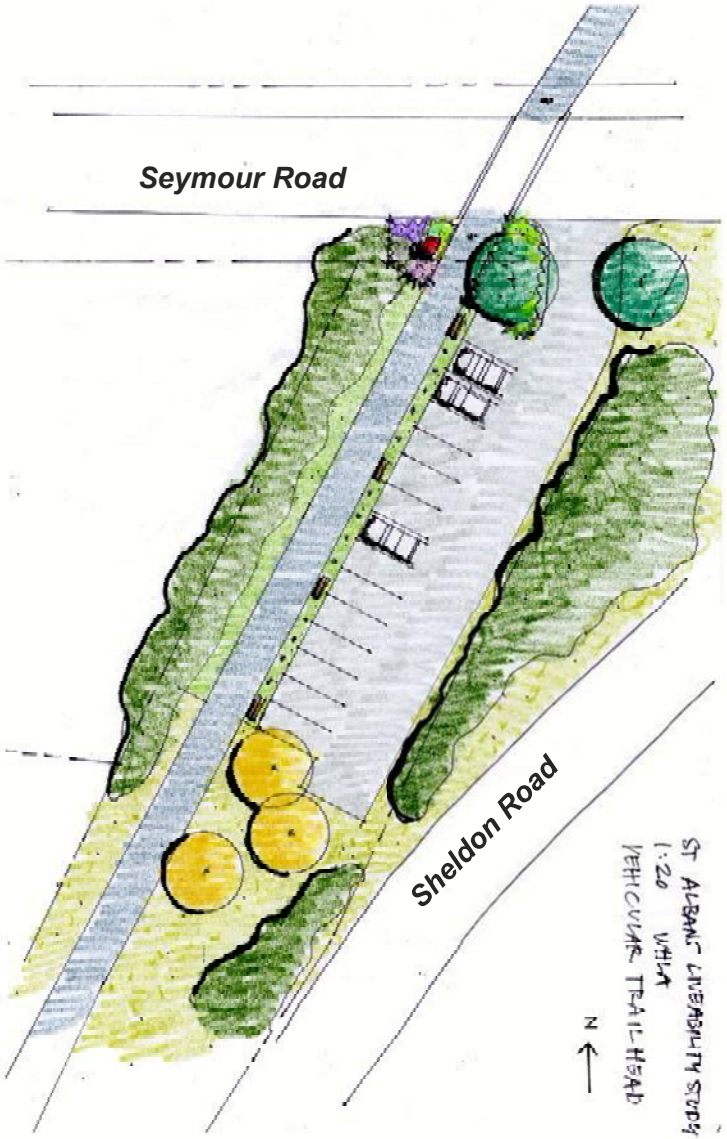


FIGURE 6-8 RAIL TRAIL VEHICLE ACCESS AND PARKING - PREFERRED OPTION



6.3 TRANSIT

It is recommended that an inventory be conducted of existing bus stops in the Town and City, on public and private right-of-way. The needs of each stop should be reviewed and those who ride transit regularly (or wish to) should be consulted. At minimum, static signage, seating, and lighting should be placed at all bus stops.

6.4 WAYFINDING

Locations for each type of wayfinding – maps, directional/informational, and destination – have been mapped out in the plan drawings for the alternatives. These drawings are included in Appendix C

General design guidelines are suggested:

- Focused on pedestrians and bicyclists
- Simple forms, bold colors and clear font
- Color correlates to program
- Incorporate universal graphic symbols

6.5 COST ESTIMATES

The cost estimates for the alternatives and variations developed for the study segments is shown in Table 6-7. The costs are based on the quantities measured from the CAD drawings developed during the study and unit costs taken from applicable state and national examples of similar projects. The costs are planning level costs that are to inform the relative magnitude of the costs of the physical infrastructure and may not fully account for additional costs such as preliminary design and engineering, demolition, utility work, mobilization, traffic management, and contingencies. Depending on the size and scale of the work, these additionals can vary anywhere from 30% to 100% of the unit costs.

TABLE 6-7 COST ESTIMATES

	Segment								
Features	**1**	**2a**	**2b**	**3a**	**3b**	**3c**	**4**	**5**	**6**
	Lake St to Hoyt St (City)	Hoyt St to Newton St (City)	Newton St to Plaza at 248 N Main (City)	Plaza at 248 N Main to MVRT/Sheldon Rd (City)	MVRT/Sheldon Rd to Seymour Rd (Town)	Seymour Rd to Danform Shoes (Town)	Danform Shoes to Maplefields (Town)	Maplefields to Cobb Auto (Town)	Cobb Auto to Town Line (Town)
Sharrows	$ 20,000	-	-	-	-	-	-	-	-
Bike Lanes	$ 30,000	$20,000	$10,000	-	-	$10,000	$10,000	$20,000	$20,000
Buffered Bike Lanes	-	$30,000	$30,000	$20,000	$30,000	$50,000	$40,000	$50,000	$10,000
Protected Bike Lanes	-	$70,000	$90,000	$60,000	-	-	-	-	-
Sidewalk (sidewalk, green, trees, lighting)	-	-	$180,000	$460,000	$300,000	$790,000	$380,000	$270,000	$510,000
Shared Use Path (path, green, trees, lighting, drainage)	-	-	$10,000	$30,000	$290,000	$830,000	$370,000	$530,000	$510,000
Road widening	-	$220,000	-	-	-	$100,000	-	-	$50,000
RRFB pedestrian crossings	-	-	-	$30,000	$30,000	-	-	-	-
Ped crossing at signalized intersection	-	-	-	-	-	-	$600,000	$450,000	-

Rail Trail Improvements

Conceptual costs for improvements to the rail trail are estimated as follows:

- Park at Route 7: $100,000*
- Parking lot and landscaping at Seymour Road: $100,000*
- TOTAL: $200,000

These estimates do not include signage, lighting, utility work, road reconfiguration. They also do not include contingencies.

6.6 SUMMARY SCHEDULE OF PHYSICAL IMPROVEMENTS

Immediate Term

- Segment 1: Sharrows and Bike Lanes & Reverse Angle Parking
- Segment 2: Sharrows between Hoyt Street and Newton Street. Protected and buffered bike lanes between Newton Street and plaza at 248 Main. The Sharrows have been striped in the latest paving project. These should remain and become permanent until bike lanes can be created.
- Segment 3: Protected bike lanes between plaza at 248 Main and MVRT/Sheldon Road. Bike lanes north of Sheldon Road.
- Segment 4: Bike lanes
- Segment 5: Bike lanes
- Segment 6: Bike lanes
- Shared use path planning. Pursue scoping study to assess the engineering feasibility and of constructing on west vs. east side of Route 7. The study could also consider the alternative alignment and route to Highgate Commons.

- Initiate discussions with land owners who have large open driveways or are encroaching in the right of way along Route 7. Discuss options to combine and/or narrow driveways, look at site configurations and explore options to maintain use and function of private land while freeing up the public right of way for other uses.
- Initiate funding options analysis. What is the options for raising the local match for grants, explore the bonding capacity for loans, and alternative funding sources to the local property tax. The Town has taken steps to update the local impact fee ordinance, which could be one route to providing local match funding.
- Agree to maintenance memorandum of understanding with the VTrans district office to develop a maintenance plan to address spring sweeping, line striping, and other low-cost methods to maximize the use and function of the existing facilities.
- Coordination with GMT on the regional routes for bus stop amenities and bus stop location planning. Currently no stops are along US Route 7 requiring private off-highway parking lots to serve as bus stops. What type of amenities should be provided, who owns then, and what are the maintenance agreements? These and other questions need to be pursued by the Town and GMT with assistance from NRPC.
- Review the Class 1 Town Highway cost estimate for the Town to consider assuming full authority for the Route 7 section within the study area. While the finances may not be in the Town's favor for now, additional control over improvements, development review and access, traffic control, and maintenance may provide sufficient additional benefits.

Short Term

- Segment 2: Bike lanes. Widening the road will require most costly curb and drainage infrastructure.
- Segment 3: Extend sidewalk north to MVRT/Sheldon Road. Construct sidewalk and shared use paths north from MVRT. Buffered bike lanes along segment would require widening Route 7.
- Segment 4: Construct sidewalk and shared use paths. Coordinate with sidewalks to be placed at Highgate and Franklin Park. Install pedestrian signals at signalized intersections.
- Segment 5. Buffered bike lanes. Sidewalk and shared use path. Signalized pedestrian crossings at VT-207.
- Segment 6. Bike lanes. Widening the road 2' to 4'. Sidewalk and shared use path.

Long Term

- Segment 4. Shared use path along historic VT-207 alignment. Connect Franklin Park West and Highgate Commons.
- Segment 5. Remove the northbound right turn slip lane to VT-207.
- Segment 6. Complete sidewalk and shared use path.

Any of the immediate, short, and long-term projects can be progressed by initiating funding studies and begin completed preliminary design and engineering studies (concept design, scoping studies, preliminary design, final design). These steps are necessary before right-of-way can be acquired or grants can be applied for the costs of construction.

6.7 CORRIDOR MANAGEMENT RECOMMENDATIONS

Implementation Strategies

The following jurisdictional, policy and regulatory strategies are suggested for further consideration to facilitate project development, and to more generally promote greater multi-modal connectivity, particularly within designated and planned growth centers in the study area, as called for in municipal and regional plans. These strategies were identified from an evaluation of current areas of jurisdiction (state, regional, local) along Route 7; current state, municipal and regional plans and policies (as adopted or in draft form); and relevant rules and regulations, including municipal bylaws and ordinances currently in effect. The results of this review were presented in the accompanying Existing Conditions Report and are included in Appendix A.

Interjurisdictional Coordination

Short-term

- **Coordinated Project Review** – Present report findings and recommendations for local consideration (City Council, Town Selectboard, Planning Commissions, Public Works Departments), and for regional review through Northwest Regional Planning Commission's Transportation Advisory Committee (NRPC TAC), to identify project priorities and promote coordinated project planning and implementation.
- **Intermunicipal Agreement** – Consider an intermunicipal agreement between St. Albans City and Town to develop, finance and maintain needed infrastructure improvements (sidewalks, bike paths, transit stops) along Route 7 that connect and clearly benefit both communities.
- **Finance and Maintenance Agreement** – Work with VTrans to develop a standardized "Finance and Maintenance Agreement" (template) that clearly addresses respective state and municipal financing and long-term maintenance requirements for projects and associated elements located within the state highway right-of-way. This is especially important given that recommended project elements within the Route 7 right-of-way (sidewalks, shared use paths, street lighting, trees, etc.) may not be considered "functionally necessary" under current VTrans policies, and will therefore require grants or other sources of municipal financing and ongoing municipal maintenance.
- **Local Development Review** – Notify and actively seek input in the local development review process for proposed subdivisions or development along the Route 7 corridor from an adjoining municipality within 500 feet of the municipal border, and from VTrans District 8 (including required VTrans' "Letters of Intent") as provided for in

statute – to consider and incorporate sidewalk, bicycle and other infrastructure improvements intended to enhance multi-modal access, mobility and connectivity – especially as specified under intermunicipal or project-related finance and management agreements.

- **Act 250 Review** – Participate in District #6 Act 250 review proceedings for proposed land subdivision, development and redevelopment projects in the study area to ensure that:
    - proposed development conforms to access management, complete streets and smart growth principles that promote connectivity and walkable, transit-oriented, mixed use development, as specified in municipal and regional plans;
    - bicycle and pedestrian connectivity, on-site and off, is incorporated under all phases of development – particularly in relation to existing and planned infrastructure improvements identified in municipal and regional plans, related master plans and studies, and capital or transportation improvement programs; and that
    - transit interests, connections and facilities are also represented and addressed, given that Green Mountain Transit (unlike the City, Town and NRPC) is not a statutory party (party by right) in Act 250 proceedings.

Short/Mid-Term

- **Project Design and Development** – Work directly with the NRPC and VTrans District 8 to identify priority projects located within and along the Route 7 right-of-way for potential state funding, in association with future state transportation projects, as municipally managed projects or under available state grant programs. Coordination during the initial project design phase is critical to:
    - Address right-of-way constraints, environmental constraints and access management concerns (e.g., driveways, intersections, pedestrian crossings);
    - Ensure that “complete streets” project elements (bike lanes, sidewalks, etc) are incorporated in project design;
    - Develop costs estimates that incorporate additional right-of-way acquisition where warranted, and identify the municipal share of funding for any “non-core” project elements (e.g., landscaping, lighting, street trees); and to
    - Determine and assign responsibilities (and associated costs) for ongoing maintenance – particularly for “non-core” elements within the right-of-way that are beyond the state’s capacity to maintain.

- **Green Mountain Transit** – Work with GMT to develop a plan for transit stops along the corridor – to include existing and planned development "nodes" (destinations, origins) along the route, and associated "transit sheds" (e.g., areas within a ½-mile radius), targeting locations for both higher density, clustered, transit-oriented development, and associated pedestrian and bicycle connections and transit facility improvements (signage, platforms, seating, lighting, shelters).

Long-term

- **Class I Highway** – Evaluate reclassification of one or more sections of Route 7 in St. Albans Town north of the city line as a Class I Town Highway, to extend municipal jurisdiction and control over the highway right-of-way. Jurisdiction over a Class 1 Town Highway is jointly shared between the state and municipality, giving the municipality more flexibility and authority over access management, travel lane and shoulder widths, streetscape design and right-of-way improvements, traffic calming measures, on-street parking, crosswalk placement, and coordinated street and utility maintenance. It also, however, requires the municipality to assume long-term highway maintenance costs for highway infrastructure – including routine winter maintenance, paving, bridges, traffic signals and other highway infrastructure – that are currently the responsibility of the state.

Planning

Short-term

- **Municipal and Regional Plans** – Incorporate accepted report findings and recommendations in updated or amended municipal and regional plans and plan maps (by reference, selective incorporation or as an attachment):
    - as the planning and policy basis for proposed projects and other implementation strategies;
    - to identify and prioritize recommended projects for municipal and state funding, including those projects within the Route 7 right-of-way that will also require NRPC support and VTrans approval;
    - for consideration under VTrans' Complete Streets Guidance (2012) applicable to rural and transitional arterials, which specifies consideration of municipal and regional plans, land use regulations and related corridor or mode-specific plans in evaluating whether to incorporate complete street elements (sidewalks, bike lanes, transit) for projects located outside of urban and village centers; and
    - for consideration in Act 250 review under criteria 5 (transportation), 9(K) (public investments) and 10 (conformance with plans, capital improvement programs) for regulated development along the highway right-of-way.

- **Sidewalk Master Plan** – Update the St. Alban's Town Sidewalk Master Plan, as also referenced for consideration under the town's unified development regulations, to incorporate recommended sidewalks, shared use paths and related infrastructure improvements along the Route 7 corridor.
- **Capital and Transportation Improvement Programs** – Update municipal capital and regional transportation improvement programs to incorporate and schedule priority projects in relation to available municipal or state funding.

Mid/Long-term

- **Growth Center Master Plan** – Prepare a master (area) plan for land within the St. Albans Town Growth Center Overlay District-North – as also recommended for the regional growth center including this area identified in the NRPC regional plan – to either guide or to more specifically regulate future development within this area, focusing on:
    - Connectivity – to establish the preferred pattern of development in relation to an interconnected, gridded block and street network of collector and local roads off Route 7.
    - Development nodes – to identify the most suitable locations along the corridor, consistent with VTrans Access Management Program criteria for intersection spacing, for higher densities of new and infill development designed to enhance multimodal (pedestrian, bicycle) connectivity and transit service – e.g., as defined in relation to 1/4-mile "pedestrian sheds" and ½-mile "transit sheds" along the corridor.

HALF-MILE "TRANSIT SHEDS" CENTERED ON EXISTING INTERSECTIONS (NODES) ALONG THE ROUTE 7 CORRIDOR.

Regulation

Short-term

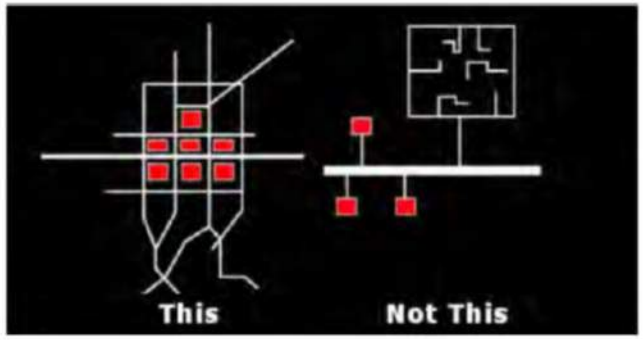
- **Street and road ordinances and standards** – update current road standards, including highway right-of-way specifications (cross-sections):
    - to vary by street type, function and context (e.g., access lane, local or development road, collector road, arterial)
    - to incorporate context-appropriate "Complete Streets" elements – e.g., sidewalks, green strips, bike lanes, on-street parking, landscaping, etc. within the right-of-way – particularly for new local and collector roads within designated growth centers.
- **Access Management** – Update access management provisions under municipal bylaws:
    - for consistency with VTrans Access Management Program Guidelines, particularly for land subdivision, development and redevelopment along Route 7;
    - to limit future access to Route 7 to existing or new collector roads serving adjoining properties, rather than individual driveways, consistent with existing and proposed municipal plan policies and VTrans access management guidance;
    - to prohibit or minimize the encroachment of private parking areas within public highway rights-of-way
    - to require, in consultation with VTrans, the consolidation and reconfiguration of existing access points along the Route 7 right-of-way in association with proposed redevelopment or a change in use, consistent with municipal plan policies and associated access management standards, and to more safely accommodate pedestrian and bicycle infrastructure (e.g., sidewalks, bike lanes) within the highway right-of-way.

Mid-term

- **Bylaws** – Given the expectation that development along the Route 7 corridor will occur incrementally over the next ten to twenty years, review current subdivision and zoning regulations to determine whether:
    - Underlying zoning (lot size, setbacks, density) requirements and existing development incentives (e.g., increase in lot coverage) are sufficient to promote the desired pattern and form of development within planned and designated growth centers, consistent with smart growth and complete streets principles as called for in municipal and regional plans;

- To require master plans for larger, phased development, to ensure that the preferred pattern of development, defined by the proposed street network, maximizes multimodal connectivity for each phase of development; that each phase occurs in a timely and coordinated manner, in relation to the ability of the developer or municipality to provide supporting infrastructure; and to provide needed assurances to the developer (vested rights) to secure financing and successfully manage project buildout over the term of the master plan.

- **Connectivity/Street Network Standards** – Update subdivision and site plan regulations to incorporate street network (connectivity) standards within Growth Center Overlay Districts in St. Albans Town, which could include one or more of the following:
  - Street network requirements – e.g., specifying the establishment or extension of a modified street grid that limits or prohibits permanent dead-ends and cul-de-sacs, while allowing for other forms of traffic calming (e.g. T-intersections, narrower travel lanes).
  - Intersection density standards (e.g., a minimum number of intersections per square mile, in relation to a planned street network).



CONNECTED STREET NETWORKS, WITH MORE FREQUENTLY SPACED STREETS AND SMALLER BLOCKS, SUPPORT WALKABLE AND BIKABLE

  - Street segment standards – e.g., maximum street length between intersections, defined in relation to access management standards (intersection spacing) and a ¼-mile walking distance (for pedestrian intersections, mid-block crossings).
  - Maximum “block” length or perimeter standards defined in relation to minimum lot size requirements and walking distances – e.g., to accommodate two tiers of residential development or larger footprint commercial and mixed-use development. For example, a block prescribed only by a comfortable walking distance would have a maximum length of 660 feet and a maximum perimeter of 2,560 feet (4 x 660’ or ½ mile) – though this would define a very large (10 acre) block. Common “walkable” block lengths generally range from 200 to 400 feet, resulting in an internal block area of around 1 to 3.5 acres – large enough to accommodate even “big box” forms of retail development, especially if parking is located on an adjoining “block” (see example).

Maple Tree Place: Street Grid Supporting Transitional Forms of Commercial Development, Future Redevelopment

The internal lay out of Maple Tree Place in Williston incorporates a gridded street and sidewalk network that connects with adjoining public streets along and intersecting Route 2A.

This street grid establishes pedestrian-scaled "blocks" between 300 and 400 feet in length, and 2 to 3 acres in size – large enough to accommodate big box retail as a principle use. Principal buildings and public spaces are clustered in the center, connected by pedestrian walkways, while shared parking areas are located on outer, adjoining "blocks."

This layout supports pedestrian access to existing businesses, while also anticipating the future redevelopment of surface parking areas, once the overall density of development is enough to justify the cost of shared parking infrastructure.

- **Zoning Regulations** – Update zoning district, site plan and parking regulations applicable to designated and planned growth centers to:
    - Require *minimum* densities of development that support walkability (e.g. 4 single family units/acre) and transit services (e.g., 8+ dwelling units per acre). Other minimum density measures (e.g., minimum employment or gross square footage per acre) should also be considered for nonresidential and mixed-use

development. Such standards also promote a more cost-efficient pattern and density of development for the provision of other public services (e.g., emergency services), utilities and supporting infrastructure.

- Reduce lot frontage (or width), front and side setback requirements to minimize the required spacing (and walking distance) between principal building entrances. Require that onsite parking be located to the side or rear of principle buildings.
- Require the installation or extension of public bike lanes, shared use paths, and sidewalks between adjoining parcels; and internal (e.g., interior block) walkways and pedestrian paths designed to connect and minimize walking distances between all principle building entrances, public spaces, parking areas and transit stops located on and off-site (e.g., within ¼ to ½ mile).
- Allow parking (public or private) as a principal use to accommodate off-site parking within walking distance of adjoining uses – and future parking area ("gray field") redevelopment.
- Incorporate standards for on-site bicycle parking and storage as applicable, for public buildings, multi-family, commercial and mixed-use development, and at designated park and ride locations.
- Require accommodation of existing and planned transit stops within or adjacent to the road right-of-way, and associated pedestrian and bicycle connections and facilities.

- **Development Agreements** – Incorporate provisions under local bylaws or ordinances for negotiated development agreements between the municipality (Council, Selectboard) and the developer, particularly for larger, phased development, to clarify:
  - The need for and timing of required municipal permits and approvals in relation to an agreed upon construction or phasing schedule;
  - Required dedications (path easements, streets, sidewalks) and fees (application, construction, impact fees, payments in lieu).
  - Respective (public/private) responsibilities for the timing, construction and long-term maintenance of required improvements, including streets and sidewalks.
  - The extent and term of vested development rights attached to the project.

- **Official Map** – Consider the adoption of a regulatory "Official Map" (under 24 V.S.A. §4421) that identifies the location of planned public facilities and improvements, such as road or recreational path rights-of-way, for public acquisition in association with the review of subdivision and development proposals. This is especially useful for rights-of-way or easements that extend over several parcels to ensure connectivity in association with incremental subdivision and development, or redevelopment.

- **Form-Based Code** – Evaluate other zoning options within planned growth centers – e.g., to include elements of a "form-based code" which more specifically prescribes and regulates the form of allowed development (e.g., building types, elevations, streetscapes) intended to accommodate planned uses, governed by a more detailed master or "regulating" plan and street network for the district. Such codes typically incorporate standards that more clearly and graphically depict and regulate the "public realm" – including streetscapes as public spaces designed to accommodate a variety of public functions and uses that support both access and mobility.

6.8 FUNDING OPTIONS

A variety of funding options are available to begin progressing the improvements identified along the Route 7 study corridor. The funds differ in the amount of funding available, whether they are grants or loans, and the amount of planning and preliminary engineering required in the application.

Grants are clearly the most preferable since the funds do not need to be repaid, however, grant programs are extremely competitive. Loans provide additional flexibility and are often much easier to obtain, however, the funds are to be repaid with interest.

Many of the programs require a local match with the third-party funding. Most local matches are in the 10-20%, while some are up to the 50% amount.

Grants

- Transportation Alternatives Program is one of the most likely sources of funds for the improvements. The current funding is restricted to stormwater focused projects; however, it is likely to return to a bike, ped, active mode focus.
- Bicycle and Pedestrian Program offers another important source of funds for this project. Focused on pedestrian and bicycle infrastructure this grant program is extremely competitive. Federal Street sidewalk in St. Albans City received funding in FY19 under this program.
- Municipal Assistance Bureau (MAB). This general program provides assistance to complete locally scoped projects.
- Recreation Trails Grant Program could provide funding for improvements around the MVRT and other components of the shared use paths proposed.

- Downtown Transportation Fund Grant is applicable in the City of St. Albans for portions of the project. St. Albans City is a designated downtown and eligible to apply for these grants reserved for downtowns.
- Town Highway Grants would provide funds for St. Albans City where the study corridor is a Class 1 Town Highway. The funds are distributed to municipalities on a mileage basis and the grants provide municipalities with funds to maintain the facilities.
- Vermont Community Development Program includes implementation and planning grants for community infrastructure to retain jobs, housing units,

Loans

- State Infrastructure Bank provides Vermont municipalities low rates for loans and bonding for infrastructure projects.
- Community Facilities Direct Loan & Grant Program in Vermont. A USDA rural development loan and grant program. Eligibility levels restrict the amount and locations of applications. St. Albans City could apply for projects that might be considered essential to supporting economic and community development.

Table 6-8 provides a summary of the sources of funds.

TABLE 6-8: FUNDING OPTIONS

Name	Agency	Contact	Type	Use	Funding Source	Local Match	Eligibility	Application Deadline	Remarks	Website
Town Highway Grants	VTrans	Dave Blackmore District 5/8 DTA 802-655-1580 or 802-524-5926	Annual allocation based on miles of Class 1,2, and 3 roads.	Highway & bridge improvement, maintenance, construction and bicycle routes	State	None	Class 1 Town Highways	None; distribution made quarterly	Must complete an annual town plan. May be used to maintain recreation paths.	http://apps.vtrans.vermont.gov/THGProgram/fintowngrant.aspx
Transportation Alternatives Grant Program	VTrans	Scott Robertson MAB – Local Projects 802-828-5799	Competitive Grant	Bike and pedestrian facilities, environmental mitigation, viewing areas, others	Federal and Local	20% for construction projects, 50% for scoping studies	Projects evaluated relative to Federal criteria	October	$300,000 max award. Only environmental (i.e. stormwater) mitigation projects eligible through SFY2019	https://vtrans.vermont.gov/highway/local-projects/transport-alt
Bicycle and Pedestrian Program	VTrans	Jon Kaplan, VT Bike/Ped Coordinator 802-828-0059	Competitive Grant	Bike and pedestrian facility scoping, design and construction	Federal, State and Local	20% for construction projects, 50% for scoping studies	Municipalities, NWRPC, GMT schools eligible to apply	July	$4 million available statewide	https://vtrans.vermont.gov/highway/local-projects/bike-ped
Municipal Assistance Bureau	VTrans	Sue Scribner MAB Program Manager 802-828-3588	Contract agreement with VTrans allowing municipality to manage projects	Preservation, rehabilitation or reconstruction projects	Federal, State and Local	10 to 20%	All projects must be eligible for federal funding	Ongoing	Must have completed scoping	https://vtrans.vermont.gov/highway/local-projects
Recreation Trails Grant Program	Dept. of Forests, Parks and Recreation	Sherry Winnie Rec Trails Program Administrator 802-760-8450	Competitive Grant	Maintenance, restoration and construction of recreational trails	Federal, State and Local	20%	Almost any trails project on public or private land	February	$50,000 max award	https://fpr.vermont.gov/recreation/grants/rtp
State Infrastructure Bank	VTrans & Vermont Economic Development Authority	Vermont Economic Development Authority 802-828-5627	Loan	Any transportation project that is eligible for federal funds	Federal, State and Local	10%-20% down	Any transportation project that is eligible for federal funds	Ongoing	Must have revenue source to pay back loan	https://www.veda.org/financing-options/other-financing-option/state-infrastructure-bank-program/
Downtown Transportation Fund Grant	VT Dept. of Housing and Community Development	Gary Holloway, Downtown Program Coordinator 802-828-3220	Competitive Grant	Transportationrelated capital improvements	State	50% match in cash or in-kind	St. Albans City: Must be a Designated Downtown; project must be in or serve a downtown district	March	Approx $350,000 available annually. Max award is $100,000	https://accd.vermont.gov/community-development/funding-incentives/downtown-transportation-fund
Vermont Community Development Program	ACCD	Cindy Blondin, Grants Specialist 802-828-5219 One National Life Drive Deane C. Davis Building, 6th Floor Montpelier, VT 05620-0501	Competitive Grant	**Implementation Grants (IG)** Examples: Assist businesses to create or retain jobs, create or rehabilitate housing units, build infrastructure, create or assist childcare and senior centers etc. **Planning Grants (PG)** Examples: Conduct feasibility studies and marketing plans, produce architectural and engineering plans, etc.	Federal		Any municipality	Rolling basis	Implementation Grant Range: $50,000-$1,000,000 Planning Grant Range: $3,000-$60,000	https://accd.vermont.gov/community-development/funding-incentives/vcdp/applicant-guidance
Community Facilities Direct Loan & Grant Program in Vermont	USDA	Misty Sinsigalli 481 Summer Street, Suite 203 St. Johnsbury, VT 05819 802-424-3156 Misty.sinsigalli@vt.usda.gov	Competitive Grant & Loans	Support development of essential community facilities.	Federal	varies	Municipalities which meet eligibility criteria	State: December National: April		https://www.rd.usda.gov/programs-services/community-facilities-direct-loan-grant-program/vt

APPENDIX A. EXISTING CONDITIONS REPORT

APPENDIX B. REGULATORY REVIEW

APPENDIX C. CONCEPT PLANS

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