



# Complete Streets Guidance

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Figure 2: Photo by Local Motion (2022-1012\_LocalMotion\_DSC\_0067(1))



Figure 3: Bicycle lane, crosswalks, and lane restriction in West Rutland, VT. Photo by Matt Bogaczyk

## 1. Introduction

Complete Streets policies and treatments ensure that the planning, design, and maintenance of streets are safe for all users of all ages and abilities. There is no single “Complete Street” design; there are many elements which together provide for the safety of all roadway users.

The application of a Complete Streets approach is required under Act 34, Section 1 of the 2011 Vermont State Legislature, where both the state and municipalities are required to:

***“Ensure that the needs of all users of Vermont’s transportation system— including motorists, bicyclists, public transportation users, and pedestrians of all ages and abilities—are considered in all state and municipally managed transportation projects and project phases, including planning, development, construction, and maintenance.”***

In addition to setting a broad Complete Streets policy goal, Act 34 also mandates reporting on Complete Streets implementation on an annual basis:

***“The state transportation policy shall be to encompass, coordinate, and integrate all modes of transportation, and to consider “Complete Streets” principles, which are principles of safety and accommodation of all transportation system users, regardless of age, ability, or modal preference...If, after the consideration required under this subdivision, a state-managed project does not incorporate complete streets principles, the project manager shall make a written determination, supported by documentation and available for public inspection at the agency.”***

Responding to this requirement and to continued calls for progressive, holistic transportation planning, VTrans developed the 2012 VTrans Complete Streets Guidance. Since 2012, this document has remained the primary point of reference for VTrans project managers as they consider Complete Streets measures within VTrans managed projects.

More than a decade has passed since the creation of the 2012 VTrans Complete Streets Guidance. In this decade, Vermont has grown in population and the population is rapidly aging; rebuilt from the catastrophic impacts of Tropical Storm Irene; increasingly responded to the realities of global climate change; adopted new forms of transportation; begun to tackle challenges of equity and accessibility; and, most recently, weathered the unprecedented global Covid-19 pandemic. Transportation patterns have changed, ushering in a higher demand for, and use of, public transit, walking, and bicycling.

The latest transportation funding bill (the Infrastructure Investment and Jobs Act – IIJA) has an increased focus on Complete Streets. Over the past 10 years, FHWA has issued several guidance documents with a focus on planning and designing facilities for people walking and bicycling. Independently and concurrently, communities in Vermont are increasingly seeking to make their downtowns and village centers safe places for people to walk, ride bicycles and to limit the negative impacts of vehicle traffic.

VTrans continues to make tremendous strides in incorporating Complete Streets practice into project planning and implementation through the consideration of all roadway users and will continue to build upon this work. These efforts include but are not limited to:

- The refinement of the Agency’s extensive project development and review process to provide a forum for collaboration across project teams and divisions to include Complete Streets considerations.
- The creation and implementation of Agency strategic plans such as the On-road Bicycle Facility Plan and Bicycle Pedestrian Strategic Plan that identify needs and provide strategic roadmaps for a more holistic application of Complete Streets elements in VTrans projects
- Incorporating corridor planning principles into project programming

There remains more work to be done and more processes to be refined. VTrans stands ready to respond to this challenge.

## 2. Guidance Purpose

This guidance represents a menu of design options rather than specific prescriptions and is intended to supplement existing engineering and environmental standards, requirements, or guidelines. Many factors contribute to project scope; these same factors will dictate the level of appropriate Complete Streets elements incorporated in a project.

**Context is critical. Project managers are encouraged to consider the suggestions in this document along with other factors such as geographic location, users of the facility, gaps in existing infrastructure, local plans, changes in land use, budget, schedule, scope, and others to arrive at a balanced project solution.**

When in doubt of the appropriate application of Complete Streets elements, VTrans Project Managers are encouraged to contact the Asset Management Bureau, the appropriate PPAID Planning Coordinator, the Public Transit section, VTrans Landscape Architect, and the VTrans Bicycle and Pedestrian Coordinator.

## 3. How To Use This Guide

This guide describes how Complete Streets best practices can be applied in a variety of project contexts. VTrans Project Managers and designers are encouraged to use this guide when developing scopes of work, proposing, and reviewing design alternatives, and planning and designing projects.

The primary audience of this document is those involved in the planning and development of projects including consultants, planners, engineers, etc. Agency partners and/or other stakeholders may also benefit from the review and application of this guidance.

**This guide is divided into three (3) sections:**

- 1. Section A: context for Complete Streets practice for those looking to learn more.**
- 2. Section B: a framework for consideration of Complete Streets project elements.**
- 3. Section C: guidance documents for implementing Complete Streets elements**



Streets and their sidewalks - the main public places of a city - are its most vital organs.”  
- Jane Jacobs, The Death and Life of Great American Cities, 2016 (vintage), pg. 27



Figure 4: Railroad crossing in St. Albans, VT.



Figure 5: Roundabout at Burlington HES 5000(18)

## 4. SECTION A – CONTEXT FOR COMPLETE STREETS PRACTICE

### 4.1. What Are Complete Streets?

Complete Streets is an approach to planning, designing, and building streets that enables safe access for all users, including but not limited to pedestrians, bicyclists, motorists and transit riders of all ages and abilities. There is no single “Complete Street” solution; there are many Complete Street design elements (widened shoulders, sidewalks, pedestrian islands, curb extensions, Bicycle lanes, etc.) that may be incorporated into a project, depending on its context and scope. The application of Complete Streets design elements is informed by context and the needs of the users of the specific transportation facility, meaning that Complete Streets elements may vary considerably between rural, suburban, and urban areas.

Project Managers are encouraged to continually return to the questions below to ensure that Complete Streets principles are considered:

- What types of multi-modal transportation are currently provided?
  - Who is using the area?
  - How do they get around?
  - How are the modes of transportation connected?
- How are all roadway users being provided for, including the most vulnerable?
- Are ADA accessibility needs being addressed? If not, how can they be?
- How can this project include or at the very least not preclude Complete Streets elements?
- Can phased implementation occur? I.e., can some elements of Complete Streets be included, even if everything needed can’t be included in a single project?
- Does the adjacent land use indicate a strong likelihood that people will be walking or bicycling in this area either now or in the future?
- Does the community have plans to make this area more conducive to walking or bicycling? (This information will be available on Town websites in the form of Town Plans, transportation corridor plans, Better Connections plans, State, or privately funded grant reports, etc.)

The images on the following page provide a few visual examples of Complete Streets elements:





### Wide shoulder

Something as simple as a wide shoulder can make a huge difference for pedestrians and bicyclists on rural roads.



### Crosswalk

Carefully planned crosswalks prioritize the pedestrian experience and can connect communities in ways that weren't possible (or safe) before.



### Painted bike lane

Painted bike lanes are low-cost ways to accommodate bicyclists in the roadway. Designs can be tested over time to see what works best.



### Curb extensions

Curb extensions shorten pedestrian crossings, calm traffic, & improve visibility for all users. They are also useful for mid-block crossings.



### Shared-use path

Separating vehicular from active transportation users can create destinations for locals and tourists alike, supporting the local economy.



### Sidewalks

Providing clear space for pedestrians on roadways helps create places that people want to be. Sidewalks bring people, & people bring life to streets.



### Street trees

Street trees create a welcoming and warm ambiance to streets and pedestrian places. They buffer traffic noise, provide stormwater management, counteract urban heat island effects, add to property values, and add a human-scale to downtown streets.



### Benches

Providing places for people to sit, rest and enjoy downtown streets humanizes roadsides. These simple amenities can make places more accessible, people-friendly, and support economic growth by encouraging people to linger.



### Transit shelters

Transit shelters are critical infrastructure that help connect people to public transportation systems. They provide cover from the elements, resources like schedules, and key visual indicators that help people know how they can get from place to place.



## 4.2. Historic Context

Prior to the advent of the automobile, streets were human-scaled, multi-use, public spaces where life unfolded – they were places of movement, as well as places of gathering to eat, shop, and experience community. In the Post World War II era and after the signing of the Federal-Aid Highway Act of 1956, streets were transformed from lively, multi-modal, pedestrian-scaled public places to vast infrastructure networks that were designed with the assumption that the automobile would be the primary mode of transportation of all users. Engineering standards and Federal policy and funding prioritized the efficient, safe movement of vehicular traffic over all other modes of transportation, creating extensive stretches of roadway that allowed vehicles to get from place to place in the quickest way possible.

Vibrant cities and towns with pedestrian-scaled infrastructure were razed in the paths of interstates and widened roadways that eviscerated character of place. Under the Federal Housing Act of 1949, whole portions of city and town centers were designated for “slum clearance” in the name of urban renewal, which almost exclusively targeted and displaced communities of color and low-income communities through for the construction of new housing infrastructure. The same Federal Housing Act of 1949 that paved the way for urban renewal in cities and towns also provided direct subsidies to suburban developments where white, middle-class families fled. Former pedestrian-scaled city streets and neighborhoods were transformed into high-density public housing or “towers in a park” and separated by the extensive and unprecedented expansion of vehicular infrastructure.

These dual processes accelerated major changes to land use, community systems, and the human experience of transportation infrastructure forever. More than fifty years later, we have learned that the prioritization of vehicular traffic over pedestrians, cyclists, and public transportation creates homogenous, inequitable spaces devoid of vitality that do not comprehensively meet the infrastructure needs of their communities.

Complete Streets thought and practice represent a return to a multi-modal design standard grounded in a human scale that aims to learn from and repair the mistakes from the past, creating equitable, sustainable, accessible, and safe places for multi-modal transportation users to thrive. People in the streets create life in the streets, boosting local economies and creating more dynamic places.

## 4.3. Vermont Context

The diversity of Vermont’s landscape presents many challenges and opportunities regarding the implementation of Complete Streets practices.

- Vermont is composed of mountainous rural and open spaces punctuated by small to medium sized town centers that serve as important commercial and social hubs.
- Primary roadway users to consider include cars, trucks and agricultural equipment, buses and other forms of public transportation, bicyclists (e-bikes and traditional), and pedestrians, who may use the roadway for work and recreation purposes.
  - The volumes and speeds of these users, as well as Right of Way (ROW) limitations, all represent design inputs and considerations that require context specific applications of Complete Streets elements that are appropriate to Vermont.
- State Highways may serve multiple functions such as regional multimodal connectors, vibrant town main streets, scenic activity routes, commercial vehicle routes, and more – implementing projects in this context requires considering the multiple identities of the State Highway in a specific geography.

#### 4.4. Equity Context

Vermont State government is increasingly addressing equity. Many of Vermont's most vulnerable communities have experienced systemic underinvestment, a lack of service provision through traditional transportation planning and design approaches, and a missing seat at the table in conversations related to project design and community impact. These communities include, but are not limited to: Black, Indigenous, Hispanic / Latino/a/x communities, other people of color; older adults; people with disabilities, people with neurodivergence; people with chronic illness; people with mental health conditions; people without access to vehicles.

Equity in a project context refers to considering the needs and collective visions of underrepresented communities. Project managers are encouraged to continually ask the following questions to address equity concerns:

- Is there a group in this community or municipality that is missing from our conversation?
- How can I structure public involvement to get input from all segments of the population? See VTrans' [Public Involvement Guide](#) for more ideas.
- Is the design of this project creating a disservice, limiting, or negatively impacting traditionally underrepresented communities?
- How can this project cultivate justice, diversity, equity, and inclusion?

VTrans is in the process of developing a Transportation Equity Framework, which aims to guide the Agency in how investments and services are carried out throughout the state. As of this guidance, the Framework has not been completed, and will be incorporated in future updates.

#### 4.5. Land Use Context

There is a continuum of land use contexts to be considered during project scope development, refinement, and implementation that in turn informs the contextual application of Complete Streets elements. These land uses inform everything from traffic volumes and width of roadway, types of roadway users, and availability of adjacent space to the overall character of place. The below table provides broad examples of how this land use continuum may inform the types of Complete Streets treatments ultimately deployed.



Table 1 – Examples Complete Streets Strategies for Different Land Use Contexts			
	Town / Village Center	Suburban	Rural
<b>Context Description</b>	Concentration of retail, commercial and social activity interspersed with housing and recreational amenities. These spaces are often walkable.	More dispersed, lower density retail, commercial and social activity; housing may be interspersed but is most likely separated from other land uses; recreational amenities also separate but linked.	Completely dispersed uses – commercial / social, residential, recreational – widely separated.
<b>Complete Streets Objective</b>	Prioritize pedestrian spaces. Clearly delineate space for different users; where possible separate and protect vulnerable users; motor vehicle speed to be limited by design elements; some amount of congestion is expected and tolerated.	Provide access for all users. Clearly delineate space for different roadway users; promote visibility between roadway users and create buffers where space permits; control vehicle speeds where there are interactions with vulnerable users.	Create space for and promote visibility between different roadway users; target improvements at major intersections. Consider how rural areas are connected to suburban areas and town centers.



Figure 6: Permanent curb extension in Hardwick, VT



Figure 77: Temporary curb extension, photo by Local Motion

**4.6. Project Life Cycle Context**

Transportation infrastructure has real and long-lasting impacts on all users. This elicits two important considerations in terms of Complete Streets elements:

- 1) New or rehabilitated infrastructure may last decades or 100 years during which time land use patterns and community character may change.
- 2) Asset design life and frequency of maintenance may vary considerably by asset, potentially limiting opportunities to respond to these changes.

For example, a new bridge has a service life of 100 years or more, requiring project managers to predict well into the future in terms of land use and the needs of all users. Once constructed, modifying the structure to respond to additional needs may be prohibitively expensive or infeasible and therefore limit future opportunities for Complete Streets elements. Paving overlay projects, in comparison, revisit a location at a regular interval, creating more frequent opportunities to install Complete Streets elements such as narrowing the travel lanes or possibly adding shoulder width.

Project managers are encouraged to think about the overall lifecycle of a project to strategically incorporate Complete Streets elements where feasible, or at the very least not preclude future Complete Streets elements from being installed. Some suggestions are provided below.

#### 4.6.1. Planning

Complete Streets consideration starts at the beginning of a project in the planning phase. Planning typically consists of analyses that identify opportunities and constraints to a series of proposed changes. These opportunities and constraints focus on who is currently using a facility, how they are using it, and whether there is a problem to be solved. Planning provides an opportunity to evaluate alternative solutions that consider existing and future facility users. In terms of Complete Streets practice, planning represents a first opportunity to holistically consider the needs of roadway users; it is important to inform design with the following questions in mind:

- Who are the groups/modes using the space the most? Are there competing uses?
- Are there conflicting needs that need to be resolved? What designs may exist to respond to these needs?
- Are there roadway users who are not being included in the conversation whose needs and desires may be addressed by a project?

#### 4.6.2. Construction

Implementation of any type of project disrupts normal movement patterns for all modes of transportation: sidewalks, travel lanes, and bikeways may be temporarily closed; roadway conditions may vary and make travel more challenging; all modes of transportation may be rerouted to alternative routes; parking may be removed. During project construction, it is critical to consider that disruptions create temporary needs for all roadway users that must be addressed:

- Are all roadway users guaranteed safe spaces adjacent to or through construction sites?
- How do alternate routes impact all roadway users? Are they a reasonable distance for all roadway users?
- Is there any opportunity that a temporary facility (Bicycle lane, pedestrian space) used during construction could become a permanent facility in the future?
- Is there an opportunity to repurpose space that will be occupied by construction equipment for new future uses?
- Are the needs of people with disabilities met by any temporary facility being used? How is accessibility being addressed during construction?

For more detail on how to address bicycle and pedestrian needs during construction, Project Managers and others should reference the July 2018 Vermont [Bicycle and Pedestrian Work Zone Traffic Control Guide](#), [Manual on Uniform Traffic Control Devices](#) (MUTCD) (Section 6), and [Public Rights-of-Way Accessibility Guidelines \(PROWAG\)](#) (Section R205).



### 4.6.3. Maintenance

Regular maintenance is a crucial element to consider since Vermont experiences four unique and strong seasons that greatly impact transportation infrastructure. Complete Streets design elements within this context should also be framed with the following list of maintenance questions:

- If and how do proposed Complete Street elements conform to minimum design widths for maintenance equipment per existing state standards and engineering instructions? If not, what alternatives exist if there are conflicts with these standards and engineering instructions?
- How is drainage managed and how does this impact transportation infrastructure?
- Who is maintaining these elements after their completion?
- Do such elements still allow for snow removal?
- Do such elements still allow for culvert access and cleaning?
- Are the materials of these elements readily available in the event they need to be replaced?
- If road patching is being done, how will this impact accessibility and use of existing elements (i.e. surface evenness on road shoulders, etc.).

“A city walk illustrates its many variations: the quick goal-oriented walk from A to B, the slow stroll to enjoy city life or a sunset, children’s zig-zagging, and senior citizens’ determined walk to get fresh air and exercise or do an errand. Regardless of the purpose, a walk in the city space is a “forum” for the social activities that take place along the way as an integral part of pedestrian activities. Heads move from side to side, walkers turn or stop to see everything, or to greet or talk with others. Walking is a form of transport, but it is also a potential beginning or an occasion for many other activities.”

– Jan Gehl, *Cities for People*, 2010, p. 120.



Figure 88: Bicycle ramp on Burlington HES 5000(18) roundabout



## 5. SECTION B - COMPLETE STREETS PRACTICE IN VTRANS PROJECTS

Designing to an engineering standard is one piece of the puzzle that Complete Streets treatments help complete. In designing to an engineering standard, project managers typically focus on decisions that are scientific in nature and grounded in math and physics – e.g., a bridge spanning a certain length, requiring a structure of a specific size to handle the expected loads.

**Incorporation of Complete Streets elements into a project is nuanced and contextual. From a Complete Streets perspective, transportation infrastructure does not exist in a vacuum; it represents a large part of our public space, and its design has serious implications on safety, economic development, and the overall livability of the community in which it is located.**

While a bridge may be designed to adequately bear a load and allow for the passage of automobiles, it may not provide adequate space for other roadway users or connections to nearby waterfront amenities, which may consequently divide communities on either side.

Complete Streets elements require project managers to broaden their perspective from the project itself and to think about the surrounding land use, existing and potential use of the road by all users, and to think about how conditions might change in the future. Additionally, project managers should consider how infrastructure design might impact vulnerable populations and how it might support or detract from the quality-of-life for the community in which it is located.

**Ultimately, people will use and bring life to transportation infrastructure; their holistic experience must be considered in the spaces being created.**

### 5.1. Best Practices

#### 5.1.1. Start with the Human Dimension

Complete Streets principles and elements are informed by human experience of our transportation infrastructure, and embody the tenet that streets are for people, not just automobiles. How spaces are designed has a direct impact on how people use and feel in them. Walking next to a highway without a shoulder feels different than walking on a sidewalk in a tree-lined downtown. Design of transportation infrastructure can have a significant, and meaningful, impact on the human experience of a place.

Some questions to consider:

- Should every place that we design throughout Vermont look and feel the same?
- Should Vermont look like anywhere in the USA? If not, how can we emphasize what is unique about each town and community?
- How can we design public places for people to live, work and play?

#### 5.1.2. Consider Early and Often

Complete Streets principles should be considered as early in the project planning process as possible, as it is much easier and cost effective to consider and design for the needs of all road users early in scope development rather than attempting to make a last-minute design change. As a project moves through the planning process, there is an inherent increase in the complexity and cost of alterations; this is because the planning process is iterative with processes such as NEPA and Right of Way acquisition predicated on the identification of specific design alternatives and geometry. A change to a project scope later in the planning process after passing thresholds such as

NEPA, permitting, and ROW is costly because it requires redoing previously accomplished and approved work.

### 5.1.3. Context Is Crucial

Projects exist in complex geographic and social contexts: Section A outlines those that are perhaps most relevant to project managers at VTrans as they consider the incorporation of Complete Streets elements into their work. Assume that any VTrans project will have complex impacts and repercussions well beyond project boundaries, and that the consideration of these impacts constitutes a first step in the application of Complete Streets practice.

## 5.2. Complete Streets in VTrans Projects

The following is a partial list of VTrans activities during which Complete Streets should be considered:

- Corridor Planning
- Scoping Studies
- New Project Summaries
- Development Review/Act 250
- Transit Planning
- Safety Planning e.g. the State Highway Safety Plan (SHSP) and Highway Safety Improvement Plan (HSIP)
- Design
  - Conceptual Plans
  - Preliminary Plans
  - Final Plans (as needed)
- Environmental Review
  - Resource ID
  - NEPA
- Maintenance
  - District leveling
  - Culvert replacements
  - Snow removal
- Construction/work zones
- Other points as needed

## 5.3. Exemptions

19 V.S.A. § 10b (as of April 2023), cites several exemptions to incorporating Complete Streets. On a project-by-project basis, the following exemptions are documented by the project manager using the Complete Streets Compliance Form.

1. The use of the transportation facility by pedestrians or bicyclists is prohibited. This would apply to fully limited access facilities like the Interstates and to some partial limited access roads. Note that not all partial limited access roads are closed to bicycling – see Appendix 3 for a list.
2. The cost of incorporating Complete Streets principles is “disproportionate to the need or probable use” as determined by several factors related to project context.



3. Incorporating Complete Streets is “outside the scope” of a project by its very nature. There are several VTrans activities where there are limited or no opportunities to make substantive Complete Streets improvements given scope constraints. The following list serves as a “blanket” exemption of such activities.

**Please note that even with these limited scope projects, small adjustments may be made to include Complete Streets elements or at the very least make sure not to preclude improvements.**

- Crack sealing
- Emergency repairs
- Guardrail Replacement
- Ledge/slope projects
- Preventative Maintenance (where asset dimensions are not impacted)
  - Roadside mowing
  - Road/shoulder sweeping
  - Pothole Repair
  - Other miscellaneous maintenance activities
- Bridge and Culvert Maintenance (where asset dimensions are not impacted)
- Sign replacement

**NOTE - Given the 1) broad range of transportation funding available, and 2) the broad eligibility within different categories, the excessive cost of Complete Streets elements in a project is often not a salient argument. There is no more specific guidance to make this determination, and generally this exemption is not used.**

#### 5.4. Complete Streets Relative to the Scope of the Project

This guidance has focused on the contextual nature of Complete Streets elements, challenging project managers to think about external realities that may impact or be impacted by project design and implementation. In addition to these external realities, the scope of a project also dictates the types of Complete Streets elements incorporated into a project.

**Whatever the scope of a project, it is always more desirable to provide some Complete Streets elements within a project than to not consider them at all.**

An example would be to what extent Complete Streets elements may be incorporated into a level and overlay project versus a full roadway reconstruction or installation of an entirely new piece of infrastructure. In the case of the level and overlay project, there are still opportunities. While it may be possible to gain shoulder width by modifying an existing 12-foot lane to an 11-foot lane, this may be the extent to which the project can incorporate Complete Streets. On the other hand, a full roadway reconstruction or the installation of an entirely new piece of infrastructure such as a bridge are examples of projects with scopes sufficient in scale to offer more opportunity to fully consider more extensive Complete Streets, especially if they are in a Town Center context.

## 6. SECTION C - IMPLEMENTING COMPLETE STREETS

There are many planning and design resources available to assist in planning for and designing Complete Streets. Section C summarizes these resources in one location, and also comprises reporting documents, decision making guides, and visual references to facilitate the incorporation of Complete Streets elements into Agency projects.

### VTrans Bicycle/Ped Design Resources page.

- <https://vtrans.vermont.gov/highway/local-projects/bike-ped/resources>

### Requirements

- [Proposed Public Rights-of-Way Accessibility Guidelines \(PROWAG\)](#)
- [Manual on Uniform Traffic Control Devices \(MUTCD\)](#) (Section 9: Traffic Control for Bicycle Facilities)

### State Guidelines (for State Highways)

- [HSDEI 24-001](#) Complete Streets Guidance
- [HSDEI 15-103](#) 11 Foot Lane Width
- [HSDEI 16-102](#) Guidelines for Pedestrian Crossing Treatments
- [HSDEI 17-100](#) Bicycle Facility Design Guidance (use of buffers and green markings)
- [TEI 18-606](#) Pedestrian and Bicycle Work Zone Guidance

### National Guidelines

- AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities (Agency subscription required for access)
- [AASHTO Guide for the Development of Bicycle Facilities](#) (to be updated in 2023)



**“In choosing street types and traffic solutions, it is important to start with the human dimension. People must be able to move comfortably and safely in cities on foot or by bicycle, and when traffic solutions are adopted, special considerations must be given to children, the young, [older adults], and people with disabilities. Quality for people and pedestrian safety must be key concerns.”**

– Jan Gehl, *Cities for People*, 2010, p. 93



*Figure 9: Crosswalks and pedestrian islands in West Rutland, VT. Photo by Matt Bogaczyk*

## 6.1. Complete Streets Questionnaire

For any non-exempt VTrans project, the project manager is encouraged to complete the Complete Streets Questionnaire. The results of the questionnaire shall be included in all studies and reports as an appendix. Once a project has been programmed to move forward in design and construction, the project manager may revisit the questionnaire and add or modify information that may have changed since the original planning level work was completed.

**Only in rare cases should the proposed Complete Streets elements be removed from a project if they were included in the planning level.**

Answering the following questions will guide the project manager to include appropriate Complete Streets elements given the project's scope and context.

**The answers to these questions should be part of any project documentation and may be revised by Project Managers as the project moves from planning/scoping into project development.**

For any non-exempt VTrans project, the project manager should complete the Complete Streets Questionnaire. The results of the questionnaire will be included in all applicable studies and reports as an appendix. Once a project has been programmed to move forward in design and construction, the project manager may revisit the questionnaire and add or modify information that may have changed since the original planning level work was completed. In general, the proposed Complete Streets elements should not be removed from a project if they were included in the planning level.

Answering the following questions will guide the project manager to include appropriate complete streets elements given the project's scope and context. **The answers to these questions should be part of any project documentation and may be revised by Project Managers as the project moves from planning/scoping into project development.**

### **Applicability of Complete Streets**

- 1. Does the project meet one of the three statutory exemptions?**
  - a. If yes, document which exemption and no further questions need to be addressed.**
  - b. If not, then all the following information should be provided.**

**Project Context** – refer to Table 1 found earlier in document in section 4.5.

1. Identify the land use context in reference to the categories listed in Table 1.
2. Is the land use adjacent to the project likely to change (will require specific input from the municipality)? Examples of documents to be reviewed – Town plan, results of studies like Better Connections, review the zoning and planned development in the area, etc. Consider past or current permitted improvements through 1111.
3. Does the municipality have local bicycle and/or pedestrian network plans, projects, or initiatives that should be considered?
4. Obtain RPC input about possible regional needs within the project limits or to identify know development plans or land use changes.

### **Access/Safety of people walking and/or bicycling**

5. What pedestrian facilities currently exist? Who is using them?
6. How easily can people cross the road (if land use indicates a need for this)?
7. Are there barriers to people with disabilities?
8. What bicycle facilities currently exist? Who is using them? What origins and destinations are being served by them?
9. What is the bicycle priority of the corridor (VTrans Bicycle Priority map)?
10. What is the existing predominant Bicycle Level of Comfort (BLOC) of the corridor?
11. Are there connecting sidewalks, bicycle lanes, shared use paths or trails that will influence non-motorized transportation in the project area?
12. How will bicyclist and pedestrian travel be addressed during construction?

### **Transit**

13. Are there transit stops within the project limits?
14. Are there project elements that would result in a safety benefit for transit users?



15. Consider how transit users will access stops and where they are likely to go when they disembark (may result in a need for a safe pedestrian crossing of the road).

### **Traffic operations and safety improvements**

16. Are there roadway elements known to be a safety issue – slip lanes, wyes, wide radii, offset intersections, extreme skew of intersecting roads, etc.
17. How well do the number of lanes align with the existing and realistically projected traffic?
18. Are shoulders wider than necessary (encourages higher travel speed)?
19. Are there identified problems with freight traffic, regular traffic?
20. What exists for overhead lighting? Is it adequate?
21. Does crash data indicate a particular issue to be addressed?

### **Maintenance Issues**

22. Consult with the District about known issues in the area.
23. Is there a plan to address ongoing maintenance of all project elements?
24. Has the affected municipality agreed to maintain any sidewalks within the project?

### **Environmental Considerations**

25. What environmental impacts (archaeology, historical architecture, natural resources, stormwater, etc.) will result if roadway changes are made to fully include Complete Streets principles?
  - a. If there are key resources, such as a public waterway, historic feature or other resource that would be negatively impacted by incorporating CS elements, please explain what the feature is, to what extent CS elements have been included and any mitigation provided so that a balance of road user safety and resource protection has been provided.

### **Complete Streets Elements**

Does the project context and scope call for any of the following:

- Bicycle facilities (lanes, racks, parking, repair facilities)
- Pedestrian crossing improvements (curb extension, pedestrian refuge islands, accessible curb ramps)
- Street furniture (benches, trash/recycling cans, etc.)
- Pedestrian Wayfinding signs
- Green infrastructure (street trees, rain gardens, etc.)

If the answer is no for any item in this list of Complete Streets elements, please provide an explanation why.

## 6.2. Complete Streets Compliance Form

The Complete Streets Compliance Form must be completed by project managers. This form was previously in a pdf format then annually summarized in a static document for external viewing on the VTrans Complete Streets website. The documentation process changed for projects advertised in 2023, and the website now has a reporting tool that provides greater detail about each project, is refreshed daily and provides greater detail about the complete streets elements associated with each project.

The pdf form has been replaced with a SharePoint List that is user friendly and allows project managers to document complete streets in a standardized manner. This list is in Microsoft Teams for internal Agency use. A reporting tool for external use has been developed for greater information sharing for all who would like to understand specifics of the complete streets' elements incorporated into a project.

Click [here](#) for access to Complete Streets SharePoint list (access is limited to AOT project/program managers)

Click [here](#) for access to the Projects Exempt from Complete Streets SharePoint list (access is limited to AOT project/program managers)

Projects exemptions are discussed in section 5.3.

Click [here](#) to go directly to the Complete Streets reporting tool.

Detailed information received from Project Managers is described [here](#) in the form of a data dictionary.

## 6.3. Partial Limited Access Roads and Cycling

The following list identifies segments of partial limited access roads that are open to bicycle use. This should be considered when evaluating possible Complete Streets treatments on those roads.



# Certification #: 180515-08

## State of Vermont

### CERTIFIED STATEMENT PERTAINING TO BICYCLE OPERATION ON PARTIALLY CONTROLLED ACCESS HIGHWAYS

In accordance with Article 1.8(c) of the Traffic Committee Regulations established in accordance with 23V.S.A. § 1004(c), bicycle operation is allowed on the shoulders of the following partially controlled access highways.

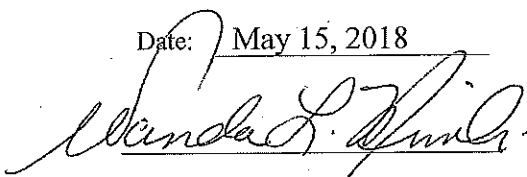
Route	Town	Begin MP	Town	End MP	Length
US 5	Hartford	3.69	Hartford	4.30	0.61
US 5	St Johnsbury	0.64	St Johnsbury	1.32	0.68
US 7	Ferrisburgh	0.24	Ferrisburgh	1.5	1.27
VT 7A	Arlington	2.18	Arlington	2.77	0.59
VT-63	Berlin	0.24	Barre Town	3.90	3.66
VT 100	Waterbury	0.00	Waterbury	0.67	0.67
VT-127	Burlington	0	Burlington	0.37	0.37
VT 191	Derby	0.17	Newport	1.29	1.46
VT 207	St Albans	0	St Albans	0.34	0.34
VT 313	Arlington	6.63	Sunderland	0.72	1.99
Bennington SH	Bennington	0	Bennington	0.37	0.37
Berlin SH	Berlin	1.21	Berlin	2.28	1.06
Montpelier SH	Montpelier	0	Montpelier	0.85	0.85
St Albans SH	St Albans	0	St Albans	1.05	1.05
St Johnsbury SH	St Johnsbury	0.68	St Johnsbury	1.02	0.33
Westminster SH	Westminster	0	Westminster	0.92	0.92
Wilder SH	Hartford	0.31	Hartford	0.74	0.43

In accordance with 23V.S.A. § 1139(d), bicycle operation is prohibited on the following partially controlled access highways.

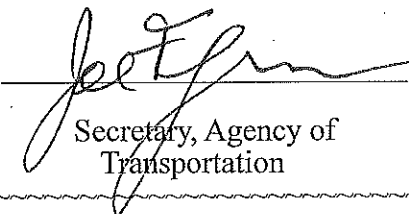
Route	Town	Begin MP	Town	End MP	Length
US 2	Danville	6.81	St Johnsbury	2.69	4.94
US 7	Wallingford	6.46	Rutland Town	0.66	6.96
VT-62	Berlin	0.00	Barre City	1.58	4.52
VT-63	Berlin	0.00	Berlin	0.24	0.24
VT-289	Essex	7.76	Essex	11.85	4.08
Bennington N SH	Bennington	0.00	Bennington	0.37	0.37

Certified and signed by the Vermont Traffic Committee at Montpelier, Vermont.

Date: May 15, 2018



Commissioner of  
Motor Vehicles



Secretary, Agency of  
Transportation



Commissioner of  
Public Safety

## 6.4. Complete Streets Matrix

A matrix has been created to give additional guidance on what could be incorporated into a project. The complete street tools (or elements) will depend on both the project type and land use context. The matrix is to serve as educational reference and a comprehensive checklist. There may be constraints that need to be balanced with environmental, stormwater or ROW considerations. As an example, resurfacing projects are designed within the State ROW where reconstruction projects have longer development time that can accommodate ROW acquisition.

Project Types

		Class 1 Paving	Resurface/Paving Projects	Reconstruction	Signal Maintenance	Intersection Improvements	Intersection Reconstruction	Bridge Rehab	Bridge Replacement
Speed Management/Traffic Calming	<b>Complete Streets Elements</b>								
	<b>Bicycle Facilities/Treatments</b>								
	Include resurfacing of shoulders								
	Lane width reduction (12 ft to 11 ft)								
	Lane width reduction (12 ft/ 11 ft to 10ft if AADT less than 2000)								
	Bicycle lanes (context based)								
	Extend shoulder width (change lane width or increase total roadway width)								
	Remove excess shoulder width (bridges or roadways)		depends on treatment						
	Reconfigure lanes (remove turning lanes, remove travel lanes)								
	Shared lane markings/sharrows (low speeds)								
	Drainage improvements (obstructions for people biking)								
	T- intersection								
	Speed management (roadside design features, traffic calming, splitter island, gateway sign)								
	Street trees								
	<b>Pedestrian Treatments</b>								
	Corner radii (truck apron)								
	Signal coordination (operating speeds and ped signal delay)								
	Bulb outs								
	Median refuge								
	Grass strip along a sidewalk								
Crosswalks									
Seperated Path in ROW									
Additional sidewalk									
Upgrade pedestrian signals									
Lighting									
Rectangular rapid flashing beacon									
<b>Additional Elements</b>									
Bike racks									
Street furniture									
Transit infrastructure									
Incorporate elements for future development									

CS element - generally N/A to this type of project  
 CS element - could be considered within this type of project



## 6.5. Visual Examples

The following diagrams are examples of how Complete Streets can be implemented on VTrans projects. The diagrams are conceptual in nature and intended as teaching moments that will encourage practitioners to think of all road users on VTrans projects. The feasibility of including Complete Streets elements depends largely upon:

- Type of project
- Roadway jurisdiction
- Right-of-Way constraints
- Environmental impacts
- Permitting restrictions
- Other agency policies

BEFORE

No shoulder on culvert crossing



**ATTENTION:** This analysis is conceptual in nature. The “before” images are conceptual in nature and intended as teaching moments that will encourage practitioners to think of all road users on VTrans projects

AFTER

Expand shoulder at  
culvert to create  
space for pedestrians  
and bicyclists

**COMPLETE STREETS TIPS**

Sometimes small  
improvements, like  
widening a shoulder, can  
have huge benefits for  
active transportation users.



**LEGEND**

-  Sidewalk
-  Crosswalk
-  Access management
-  Pedestrian island
-  Bike lane
-  Street trees

**ATTENTION:** The feasibility of including Complete Streets elements depends largely upon the type of project, roadway jurisdiction, Right-of-Way constraints, environmental impacts, permitting restrictions, and other agency policies. The ideas shown are conceptual only and illustrate Complete Street elements.



BEFORE

Manage vehicular access for pedestrian safety by reducing large, unstructured paved areas

Wide, underutilized shoulders or excess parking in downtown areas



Wide intersections

Wide turning radiuses

**ATTENTION:** This analysis is conceptual in nature. The “before” images are conceptual in nature and intended as teaching moments that will encourage practitioners to think of all road users on VTrans projects

Rural intersection

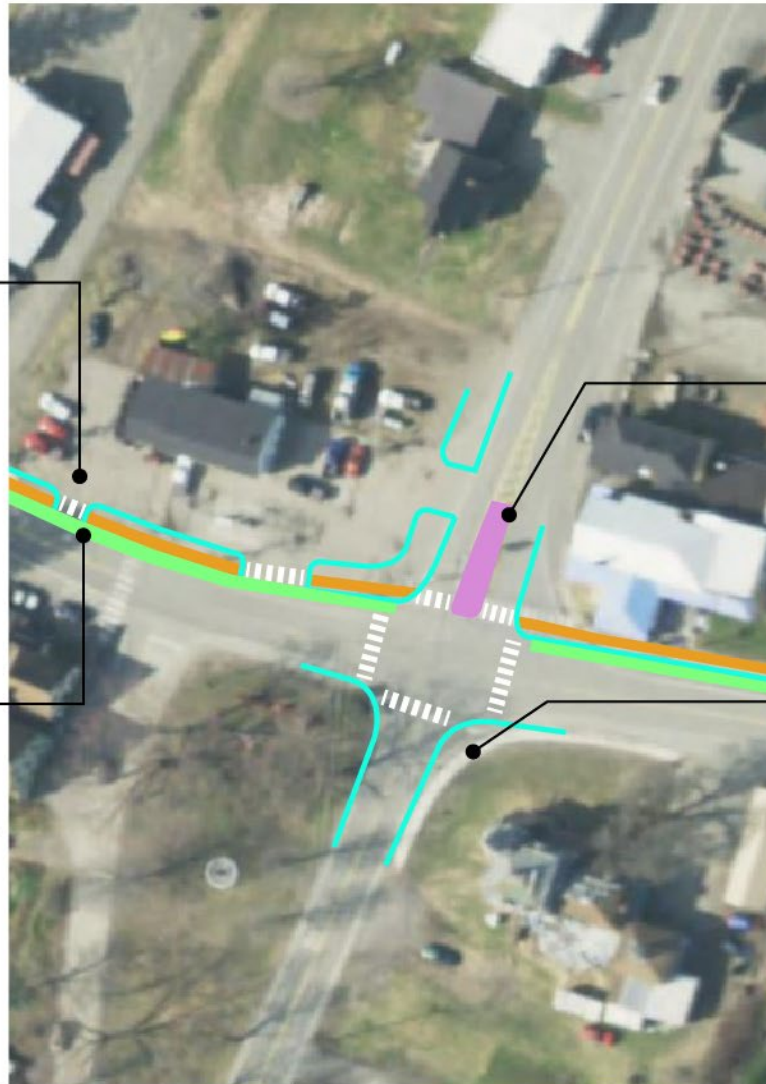
AFTER

Manage vehicular access in large open lots for pedestrian safety

Add bike lanes in spots with wide shoulders

**COMPLETE STREETS TIPS**

Intersections are important locations to consider how all roadway users can navigate the space.



Add pedestrian island to make wide intersections more accessible.

Squeeze turning radiuses to make intersections safer for pedestrians.

**LEGEND**

- Sidewalk
- Crosswalk
- Access management
- Pedestrian island
- Bike lane
- Street trees

**ATTENTION:** The feasibility of including Complete Streets elements depends largely upon the type of project, roadway jurisdiction, Right-of-Way constraints, environmental impacts, permitting restrictions, and other agency policies. The ideas shown are conceptual only and illustrate Complete Street elements.

Rural intersection

BEFORE

Wide bridge deck in  
downtown setting



Large underutilized  
shoulders

**ATTENTION:** This analysis is conceptual in nature. The “before” images are conceptual in nature and intended as teaching moments that will encourage practitioners to think of all road users on VTrans projects

Downtown/village bridge



AFTER

Add crosswalks for pedestrian safety

Squeeze extra large bridge decks in downtowns to reduce traffic speed

Add sidewalks on both sides of bridge for optimal pedestrian mobility

Convert large shoulders into bike lanes

**COMPLETE STREETS TIPS**

Downtown and village centers are excellent candidates for Complete Streets elements, and contribute to their vitality.

**LEGEND**

- Sidewalk
- Crosswalk
- Access management
- Pedestrian island
- Bike lane



**ATTENTION:** The feasibility of including Complete Streets elements depends largely upon the type of project, roadway jurisdiction, Right-of-Way constraints, environmental impacts, permitting restrictions, and other agency policies. The ideas shown are conceptual only and illustrate Complete Street elements.

Downtown/village bridge



BEFORE

Lack of crosswalks



Lack of pedestrian infrastructure like sidewalks

Wide turning radius

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Commercial intersection

AFTER

Add sidewalks to increase pedestrian access

Add mid-block crosswalks where feasible

Add crosswalks for pedestrian safety

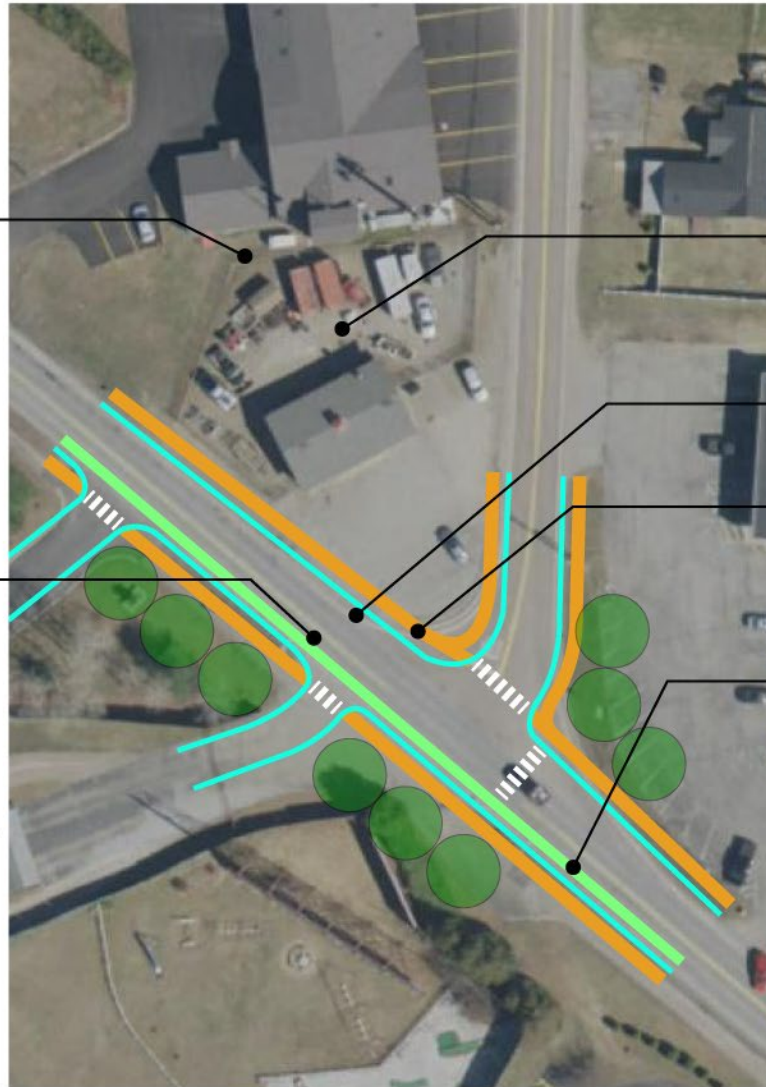
Offer pedestrian islands for safe crossing

Squeeze turning radii for more pedestrian-friendly streetscapes

Add bike lanes in place of wide shoulders and underutilized parking

**COMPLETE STREETS TIPS**

Existing commercial areas are excellent opportunities to evaluate where bike/ped improvements can be made.



**LEGEND**

- Sidewalk
- Crosswalk
- Access management
- Pedestrian island
- Bike lane
- Street trees

**ATTENTION:** The feasibility of including Complete Streets elements depends largely upon the type of project, roadway jurisdiction, Right-of-Way constraints, environmental impacts, permitting restrictions, and other agency policies. The ideas shown are conceptual only and illustrate Complete Street elements.

**Commercial intersection**

BEFORE

Lack of sidewalks to connect pedestrians to food, jobs and resources.



Large, unstructured paved areas without clear delineation of pedestrian space

Lack of safe crossings to allow people who do not have access to vehicles to access services

**ATTENTION:** This analysis is conceptual in nature. The “before” images are conceptual in nature and intended as teaching moments that will encourage practitioners to think of all road users on VTrans projects



AFTER

Street trees  
Add sidewalks to increase pedestrian access

Add crosswalks for pedestrian safety

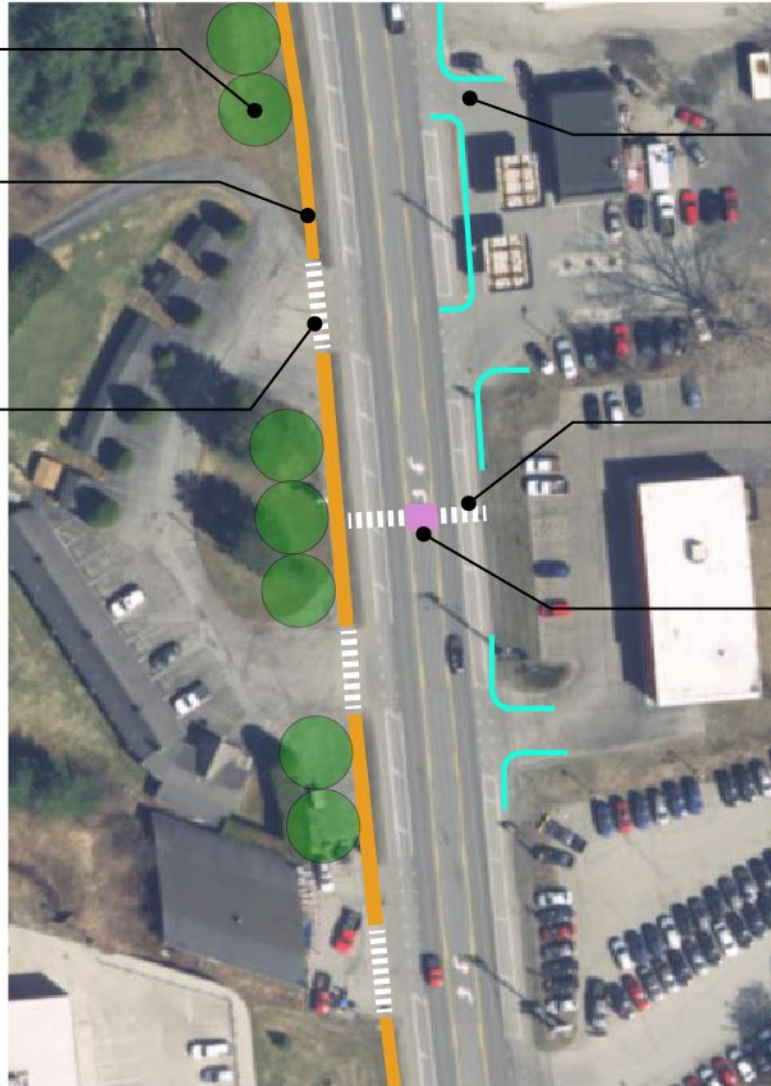
Manage vehicular access for pedestrian safety by reducing large, unstructured paved areas

Add mid-block crosswalks where feasible

Offer pedestrian islands for safe crossing

**COMPLETE STREETS TIPS**

Consider context - do people live along the route? How do they get to food, supplies, jobs?



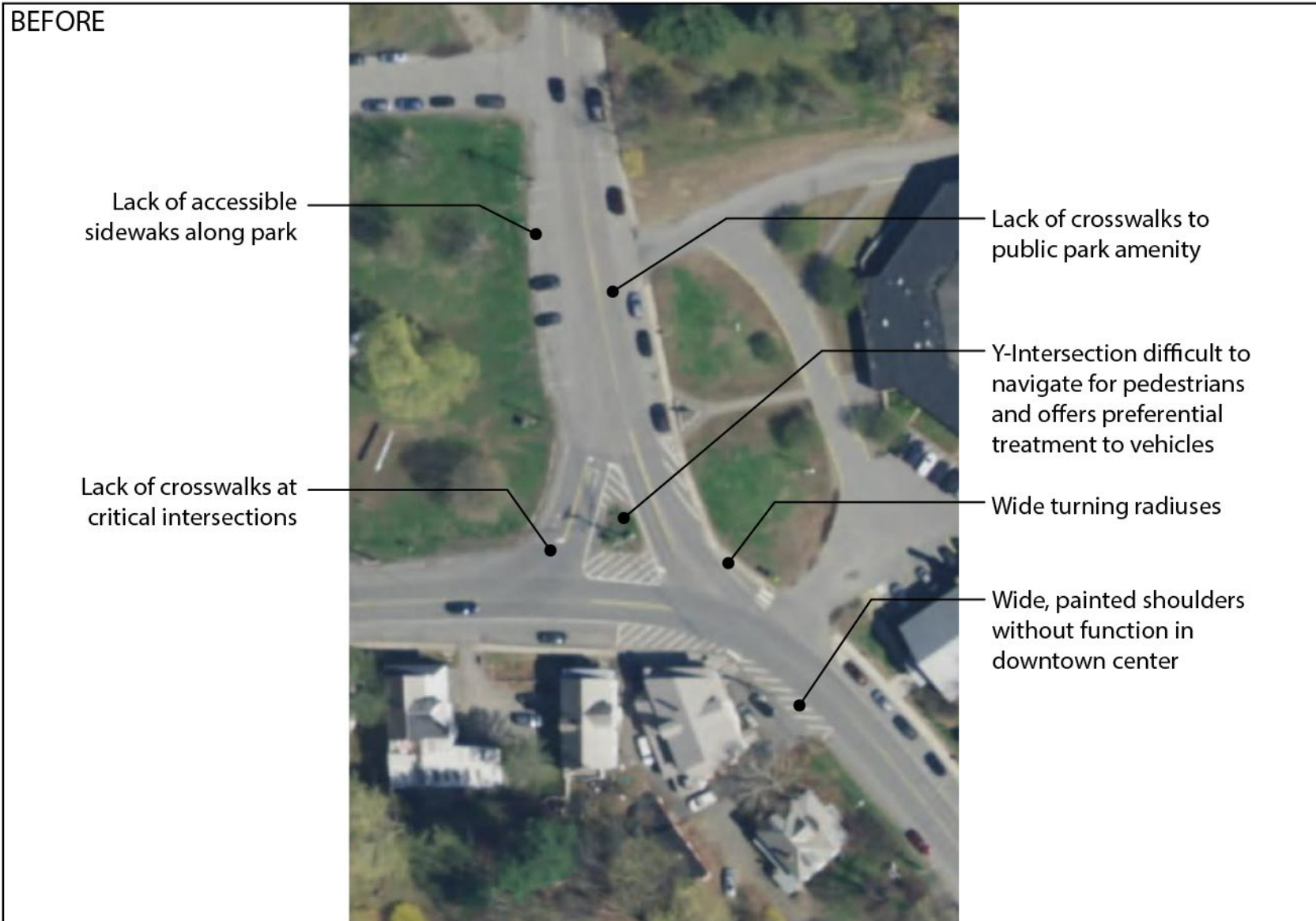
LEGEND

	Sidewalk
	Crosswalk
	Access management
	Pedestrian island
	Bike lane
	Street trees

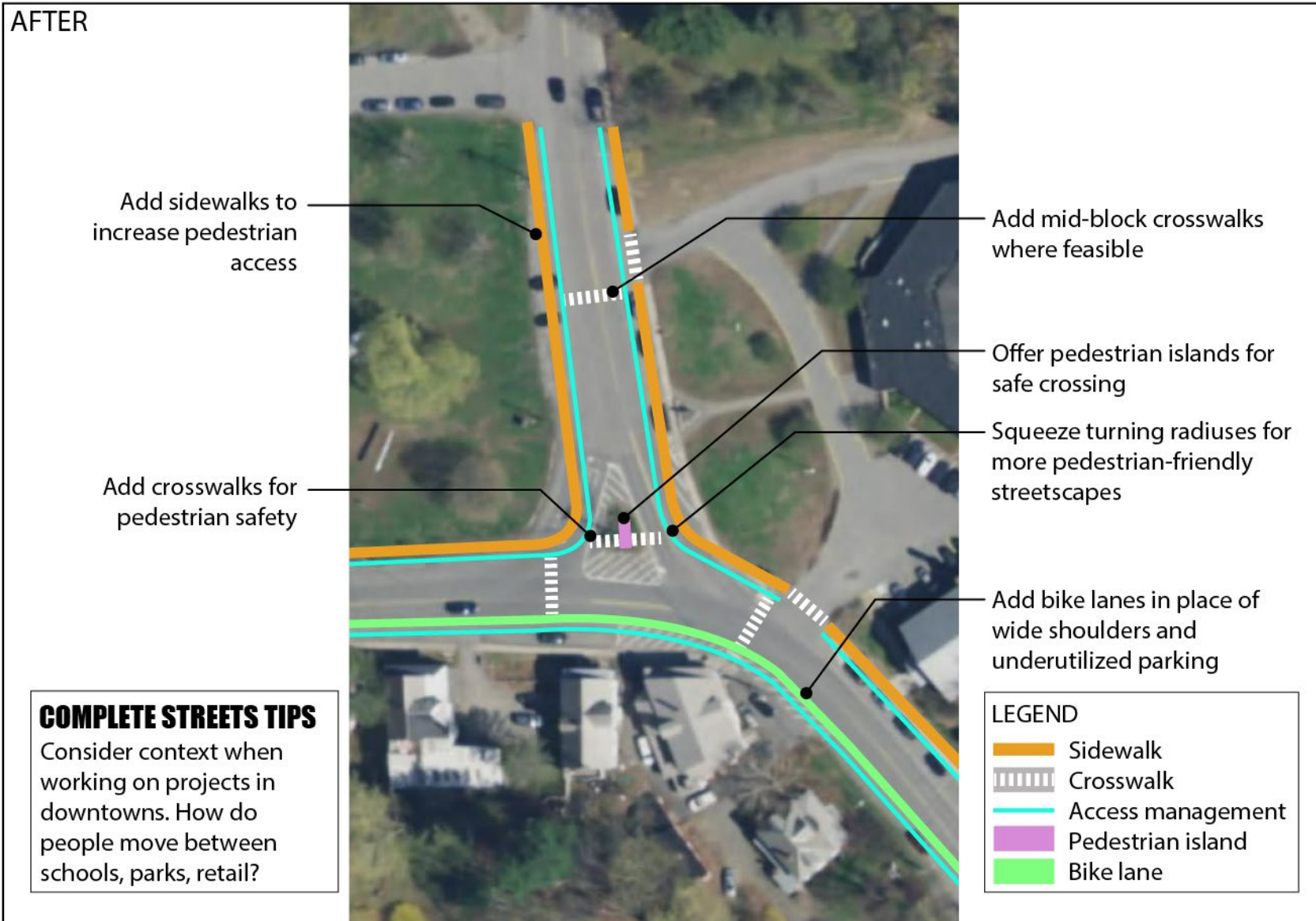
**ATTENTION:** The feasibility of including Complete Streets elements depends largely upon the type of project, roadway jurisdiction, Right-of-Way constraints, environmental impacts, permitting restrictions, and other agency policies. The ideas shown are conceptual only and illustrate Complete Street elements.

Commercial strip





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