

DATE: June 28, 2019
TO: Plan for Ashuelot Rail Trail Project Advisory Committee
FROM: SWRPC Staff
RE: Existing Conditions Assessment - Policy Integration

In order for the Ashuelot Rail Trail to achieve its full potential as a recreation and transportation asset, it needs to be integrated with the surrounding roadway network. Many local trail users reach the trail via non-motorized transportation modes, like walking and bicycling. Considering their journey before and after using the trail is equally important as evaluating their on-trail experience. Even trail users who initially travel to the trail by car may wish to visit off-trail destinations, like businesses or tourist attractions, while traveling along the trail on foot, by bicycle, or via another permitted transportation mode. The presence, character and quality of pedestrian and cyclist facilities in between the Trail and nearby points of interest can play a critical role in encouraging trail users to visit those destinations. Similarly, nearby organizations, including camps, schools, and daycare facilities, may be more inclined to develop on-trail programming if a safe, convenient route exists by which their campers or students can access a trailhead.

Municipal policies and guidelines can help communities work towards better integrating the Ashuelot Rail Trail with the surrounding street network. This memo focuses on how a particular type of policy framework, “complete streets,” is already helping guide communities to develop streets that serve all users, especially pedestrian and cyclists. It also addresses how complete streets policies and guidelines could serve as an important tool to improve connections between the Ashuelot Rail Trail and important origins and destinations along its route.

Before examining how complete streets can complement rail trail facilities, it is important to establish what a complete street is. A “complete street” is a street that serves everyone, regardless of age, ability, or how people get around. Complete streets emphasize safety, mobility and accessibility for a wide variety of transportation modes, including walking, cycling and public transit. A complete street’s ideal design depends on a number of factors, including where the street is located, the character of nearby land uses and who uses the street. Common complete street elements include things like sidewalks, crosswalks, bicycle lanes, and traffic calming features such as narrowed travel lanes and raised intersections.

As an initial step towards implementing complete streets principles, a municipality can adopt a complete streets policy, which establishes a local government’s support for developing and maintaining a road network that serves all users. In addition to affirming support for complete streets principles, complete streets policies often lay out steps that the municipality will take to carry out those principles, such as reviewing and modifying roadway design standards and project selection criteria. Complete streets policies often extend beyond the street network itself, considering also how off-street pathways, including rail trails, play an integral role in supporting pedestrian and cyclist mobility.

All four towns along the Ashuelot Rail Trail have adopted complete streets policies. Together, Keene, Swanzey, Winchester, and Hinsdale make up the largest contiguous cluster of municipalities statewide with a documented commitment to complete streets. This hotbed of complete streets policymaking represents a unique opportunity for integrating a regional rail trail with local transportation networks.

In addition to adopting complete streets policies, all four municipalities along the Ashuelot Rail Trail have also developed complete streets planning and design guidelines. These planning and design guidelines identify the role each street plays in the surrounding roadway network and suggest design elements that would enhance street performance for all users. For example, certain streets may function as primary corridors for vehicle traffic while others are low-volume streets in residential areas. Streets with different functions will benefit from different improvements.

Examining each municipality's complete streets policy, as well as their planning and design guidelines, helps determine how the Ashuelot Rail Trail currently fits into the wider transportation network. It also helps identify where and how connections might be improved between the rail trail and important origins and destinations, such as a residential neighborhood, businesses and schools. The Ashuelot Rail Trail is a valuable asset for transportation and recreation, but it will not reach its full potential unless it is fully integrated with its surrounding context.

I. Keene

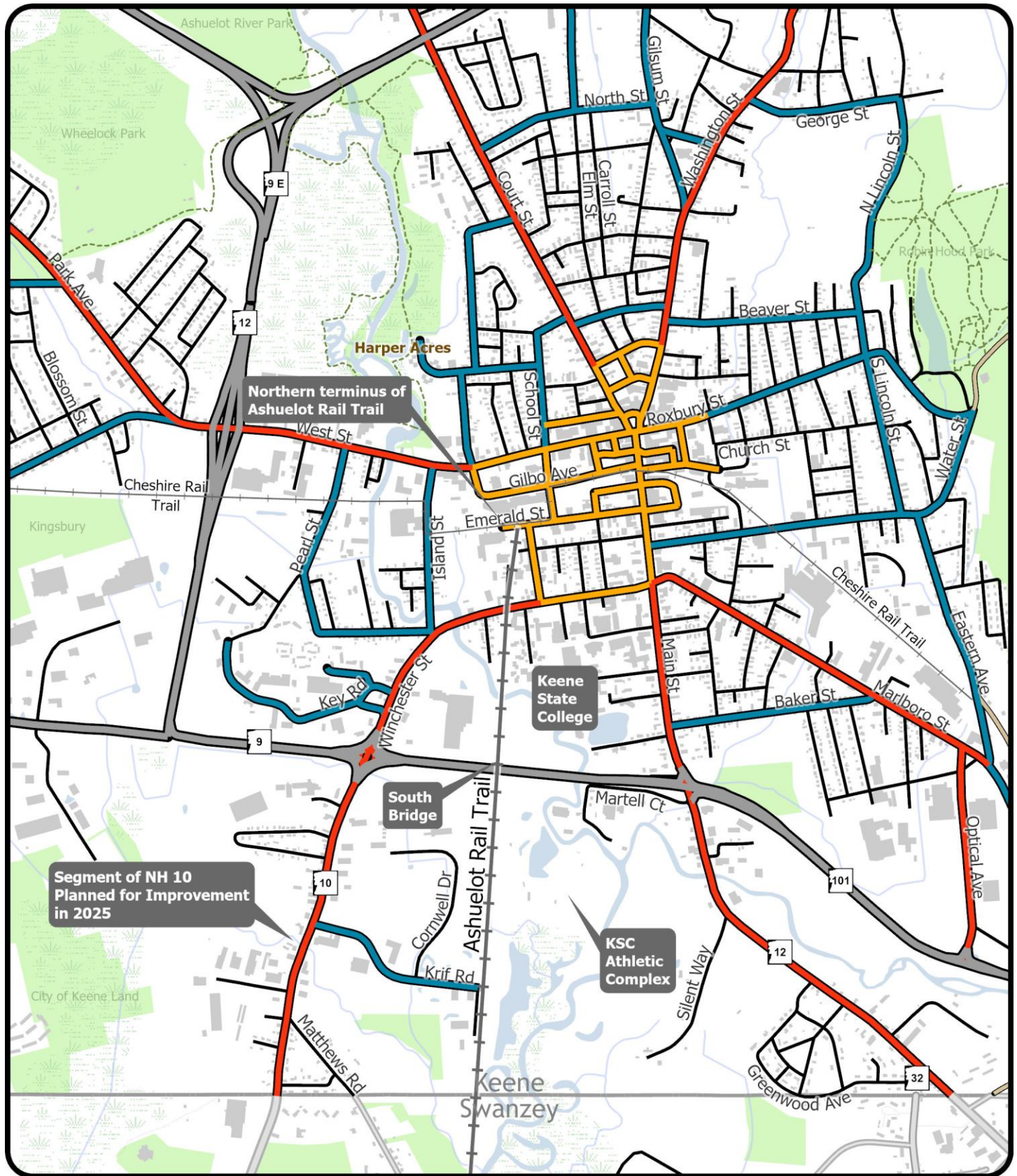
The City of Keene adopted its Complete Streets Policy in 2015, marking an official commitment to incorporate complete streets principles into maintenance and development of the City's transportation network. Later that year, the City of Keene Public Works Department and Planning Department partnered with Southwest Region Planning Commission to develop the Keene Complete Streets Planning and Design Guidelines. The Guidelines established a complete street typology, which classified streets by roadway function and surrounding land use context. The complete street types can be summarized as follows:

- **Slow streets** concentrate in downtown Keene and are characterized by mixed land use and multimodal activity. Pedestrians, bicyclists, public transit, and passenger vehicles all place high demand on slow streets.
- **Gateway streets** are arterial connectors that emanate from the city's downtown to state routes.
- **Bicycle streets** give bicycles priority treatment through street improvements like bike lanes and racks.
- **Neighborhood streets** are primarily side streets in medium to high density residential neighborhoods that experience low traffic volumes.
- **Rural streets** are local and collector streets in rural parts of the City.
- **Transit overlay** streets are currently served by fixed-route public transportation services. Transit overlay streets are also categorized as one of the previously listed complete street types.

By applying the complete street typology to the City's road network, the City aims to develop an integrated bicycle and pedestrian network that includes both on-street facilities and the rail trail system. The Ashuelot Rail Trail serves as an important component of that network. It functions as a corridor that connects downtown Keene, Keene State College, and points south of NH 101 (Figure 1). It is one of the few routes that pedestrians and cyclists can use to cross NH 101 safely.

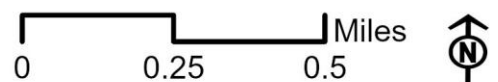
The Trail's northern terminus is located on Emerald Street, where it connects with the system of slow streets that pervade the central core of downtown Keene. According to the City's Complete Streets Planning and Design Guidelines, slow streets should give priority to pedestrian convenience. Specific slow street features include wide sidewalks (8-10'), street furniture, safe pedestrian crossings, pedestrian-scaled lighting, and landscape elements. The guidelines also call for narrow travel lanes, which help reduce traffic speeds. If slow streets guidelines are fully implemented, trail users arriving on foot in downtown Keene will be able to walk safely and comfortably throughout the area.

Figure 1 – Keene Complete Street Types



Complete Street Type

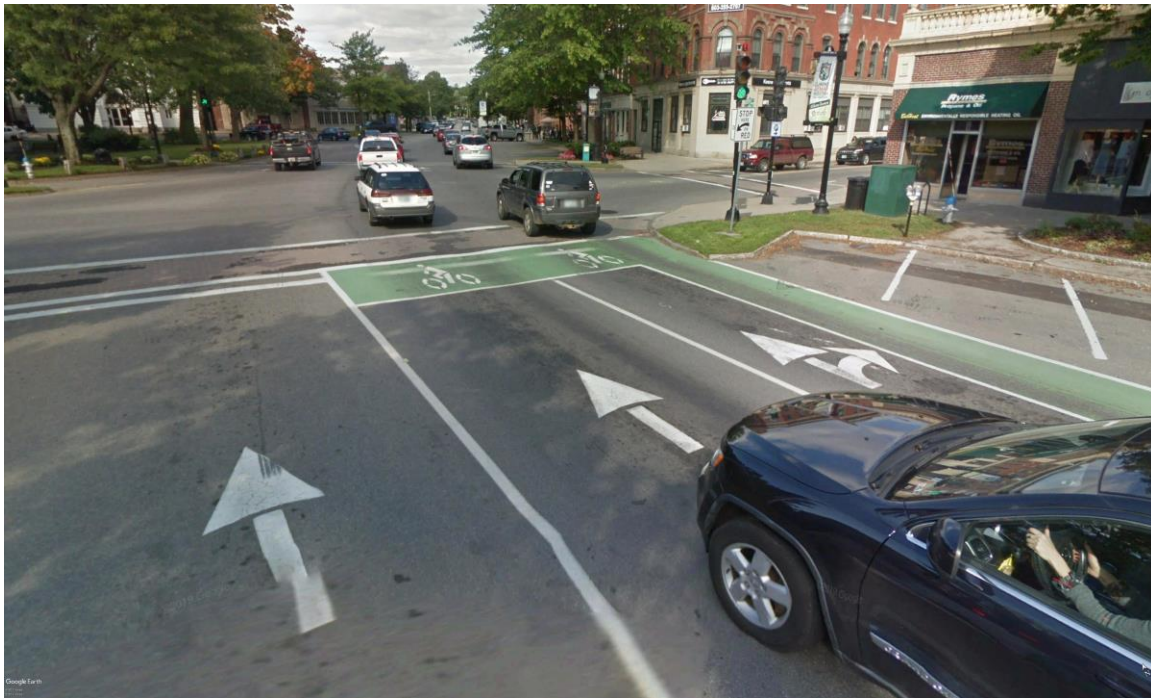
- State Routes
- Slow Street
- Rural Street
- Gateway Street
- Bicycle Street
- Neighborhood Street



Many pedestrian-oriented design elements are already present on slow streets in downtown Keene. On upper Main Street, for example, street trees, broad sidewalks and frequently marked pedestrian crossings work together to create a pedestrian-friendly environment. Recent installation of concrete ADA-compliant sidewalks on Emerald Street also represents a significant step towards fully realizing slow street design guidelines.

Despite the lack of on-street bicycle facilities required by slow street design guidelines, some slow streets in downtown Keene currently include bicycle-friendly features. Two intersections in Central Square, for example, include bike boxes, which were funded in part by a complete streets implementation grant provided through the NH Charitable Foundation. Bike boxes are marked areas at the head of a traffic lane that allow bicyclists to position themselves in front of traffic queuing at a red light (Figure 2). Bike boxes may improve the riding experience of confident cyclists, but, taken alone, they do not create a street environment that adequately supports less experienced riders.

Figure 2 – Bike box at the intersection of Main Street, Roxbury Street, and Central Square



In addition to serving as an important connection point to downtown Keene, the Ashuelot Rail Trail serves as a vital bicyclist and pedestrian route to residential and commercial development along the segment of NH 10 south of the Winchester Street/NH 9/NH 10 roundabout. Pedestrians traveling across the roundabout must navigate four lanes of constantly moving traffic. Bicyclists must do the same or share the roadway with motorists traveling at high speeds. The Ashuelot Rail Trail presents a much safer alternative, since pedestrian and cyclists can cross NH 101 using South Bridge, a footbridge that spans the highway. Trail users can then reach NH 10 via Krif Road, a designated bicycle street. The bicycle street design guidelines recommend both sidewalks and bike lanes. From the Winchester Street/NH 9/NH 10 roundabout to the Swanzey town line, NH 10 is classified as a gateway street. Like the bicycle street design guidelines, the gateway street guidelines recommend both sidewalks and bike lanes. If the City fully implements the complete street guidelines assigned to Krif Road and NH 10, the Ashuelot Rail Trail will be well-linked to an important corridor of retail businesses, significant employers and residential neighborhoods.

Today, implementation of the complete streets guidelines on Krif Road and NH 10 has been only partially realized. Krif Road lacks bike lanes or sidewalks, as called for by the bicycle streets design guidelines. It does, however, have wide striped shoulders, which provide demarcated areas for cyclists and pedestrians to travel (Figure 3). Although not a strategy specified in the bicycle street design guidelines, pedestrian and cyclist prioritization along roadway shoulders could be better established by painting cyclist and pedestrian icons on the road shoulder surface.

Figure 3 – Krif Road, looking west from the Ashuelot Rail Trail



NH 10 currently lacks any pedestrian or cyclist facilities and is quite dangerous for either cyclist or pedestrian travel (Figure 4). The City of Keene, however, plans to improve pedestrian and bicyclist facilities during a project scheduled for construction in 2025.² Preliminary engineering is set to begin in 2022. The project represents an important opportunity to connect an area that is currently quite inaccessible on foot or by bike to the Ashuelot Rail Trail and, as a consequence, to other commercial and population centers within the City.

² NHDOT Ten Year Plan Project #40666

Figure 4 – NH 10, looking south from Krif Road



a. **Swanzy**

Like the City of Keene, The Town of Swanzy has also adopted a complete streets policy and developed complete streets planning and design guidelines. The street typology differs somewhat from that of Keene's. It includes the following street types:

- **Collector Streets** link neighborhoods and local streets to arterial roadways. Although designed primarily to accommodate vehicle through-traffic, they are used by bicyclists and pedestrians and serve as important connector routes for all modes of transportation.
- **Compact Neighborhood Streets** are local streets located in medium to high density residential areas of Swanzy, exhibit low traffic volumes and speeds, and experience higher volumes of pedestrian and bicycle activity.
- **Residential Streets** are located in low density residential areas, with houses spaced further apart and set back from the roadway.
- **Rural Streets** are located in areas with very low density residential development, agriculture, forestry, or open space. Rural Streets are exempt from Swanzy's Complete Streets Policy.
- **State Routes** are not owned or regulated by the Town of Swanzy. They provide essential connections between local streets and neighborhoods. The Town, to the extent feasible, will work with NHDOT to implement complete streets principles on State Routes within the Town.

The Ashuelot Rail Trail interfaces with several different complete street types in Swanzy. As the trail progresses from the Keene-Swanzy town line to Swanzy Station, the trail crosses Matthews Road three times (Figure 5). Matthews Road traces a sinuous path through a predominately forested area, and is characterized by several blind curves, many of which occur at intersections with the Ashuelot Rail Trail. It is classified as a Collector Street. The Swanzy Complete Streets Planning and Design Guidelines recommend that Collector Streets include sidewalks, bike lanes, crosswalks, and a variety of other pedestrian and cyclist facilities. Such

pedestrian and cyclist facilities would provide better access to the Ashuelot Rail Trail from residences along Matthews Road as well as denser residential development near the junction of Matthews Road and NH 10. Market Basket is located on NH 10, just south of Matthews Road. Implementation of Collector Street design guidelines would enhance cyclist and pedestrian access to groceries and other basic necessities from the Ashuelot Rail Trail.

Today, cyclist and pedestrian facilities are absent from Matthews Road. Given the rural character of the road segment, implementation of all the guidelines may not be cost-effective, but strategic enhancements at key locations could provide valuable benefits. Marked crosswalks, for example, could work in tandem with already present pedestrian warning signs to enhance safety at trail road crossings. Narrowing travel lanes from twelve feet to ten feet would help calm traffic speeds and provide a wider shoulder for cyclists. Although installation of sidewalks along all of Matthews Road may be cost-prohibitive, a sidewalk from the public parking lot east of Matthews Road may be worth considering. The lot connects with the Ashuelot Rail Trail and its driveway is located less than 1,500 feet southeast of the Matthews Road/NH 10 intersection (Figure 6). A sidewalk along this road section, in combination with the Ashuelot Rail Trail, would provide a safe pedestrian route from areas of central Swanzey to Market Basket and other businesses along NH 10. A bike lane would provide an improved cycling route.

Figure 5 – Swanzy Complete Streets Guidelines

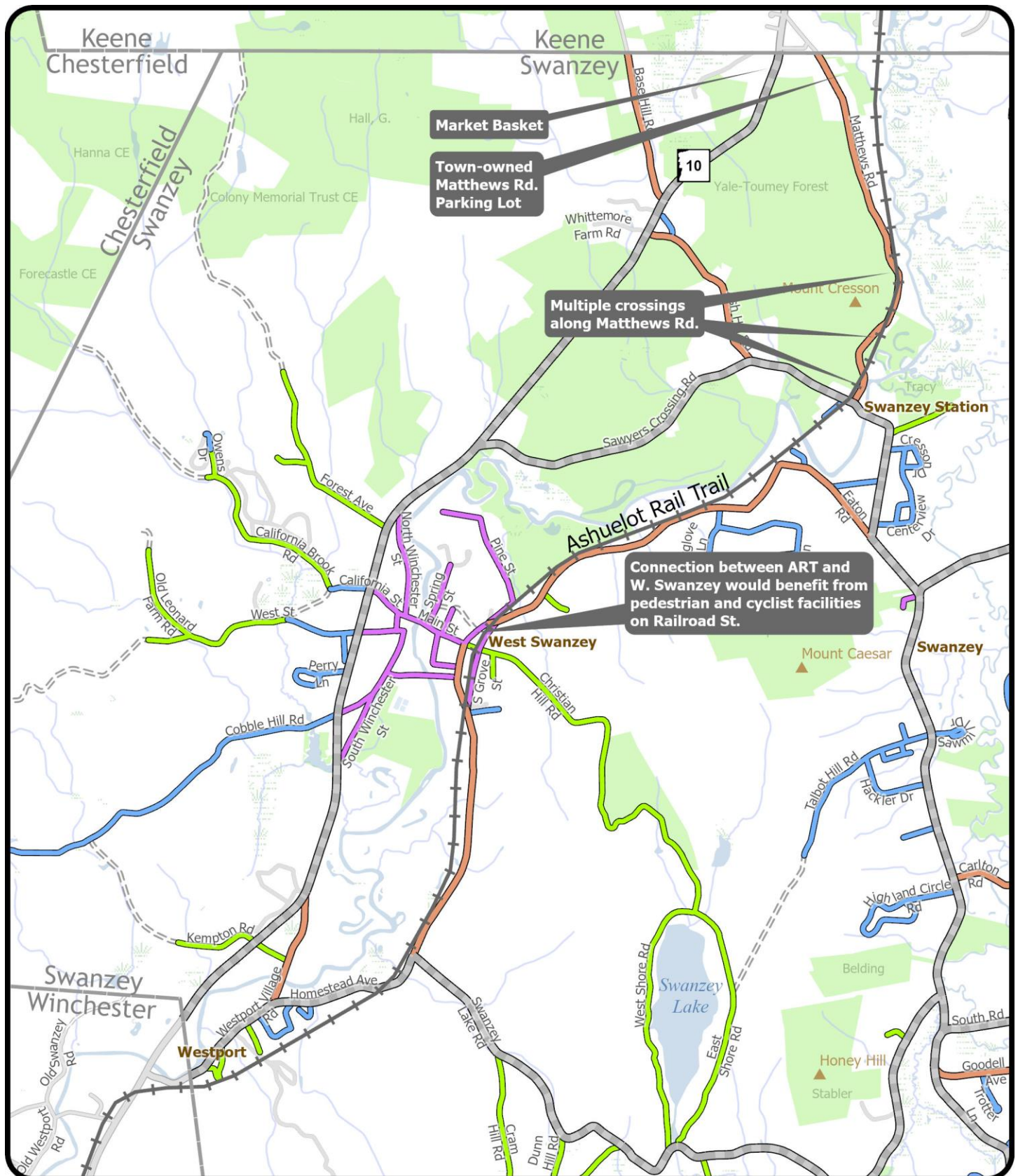


Figure 6 – Matthews Road, looking north. The Ashuelot Rail Trail is accessible via the driveway and public parking lot to the right



Further to the south, in West Swanzey, the Ashuelot Rail Trail comes into close contact with a system of Compact Neighborhood Streets that pervade the village center. The Compact Neighborhood Street design guidelines recommend sidewalks, marked share lanes in areas with high bicycle volumes and preferred shoulder widths of four feet. If fully implemented, residents in West Swanzey would enjoy safe pedestrian and cyclist access to a premier recreational asset. Trail users would also be able to travel safely to the Stratton Free Library, the West Swanzey Community Church and Whitcomb Hall, a town-owned building frequently used for events.

Although sidewalks currently line Main Street in West Swanzy, both pedestrian and cyclist facilities are absent from Railroad Street, which connects Ashuelot Rail Trail to the center of West Swanzy (Figure 7). Less than 500 feet of sidewalk would be required to connect the Ashuelot Rail Trail with an existing sidewalk further south on Railroad Street. An extended sidewalk on Railroad Street, together with new crosswalks and shared lane markings, would create a valuable connection between the Ashuelot Rail Trail and one of Swanzy’s residential and cultural centers.

Figure 7 – Intersection of Easton Road, Pine Street, and Railroad Street, looking south from Pine Street towards Railroad Street. The Ashuelot Rail Trail appears to the left of Railroad Street.



b. Winchester

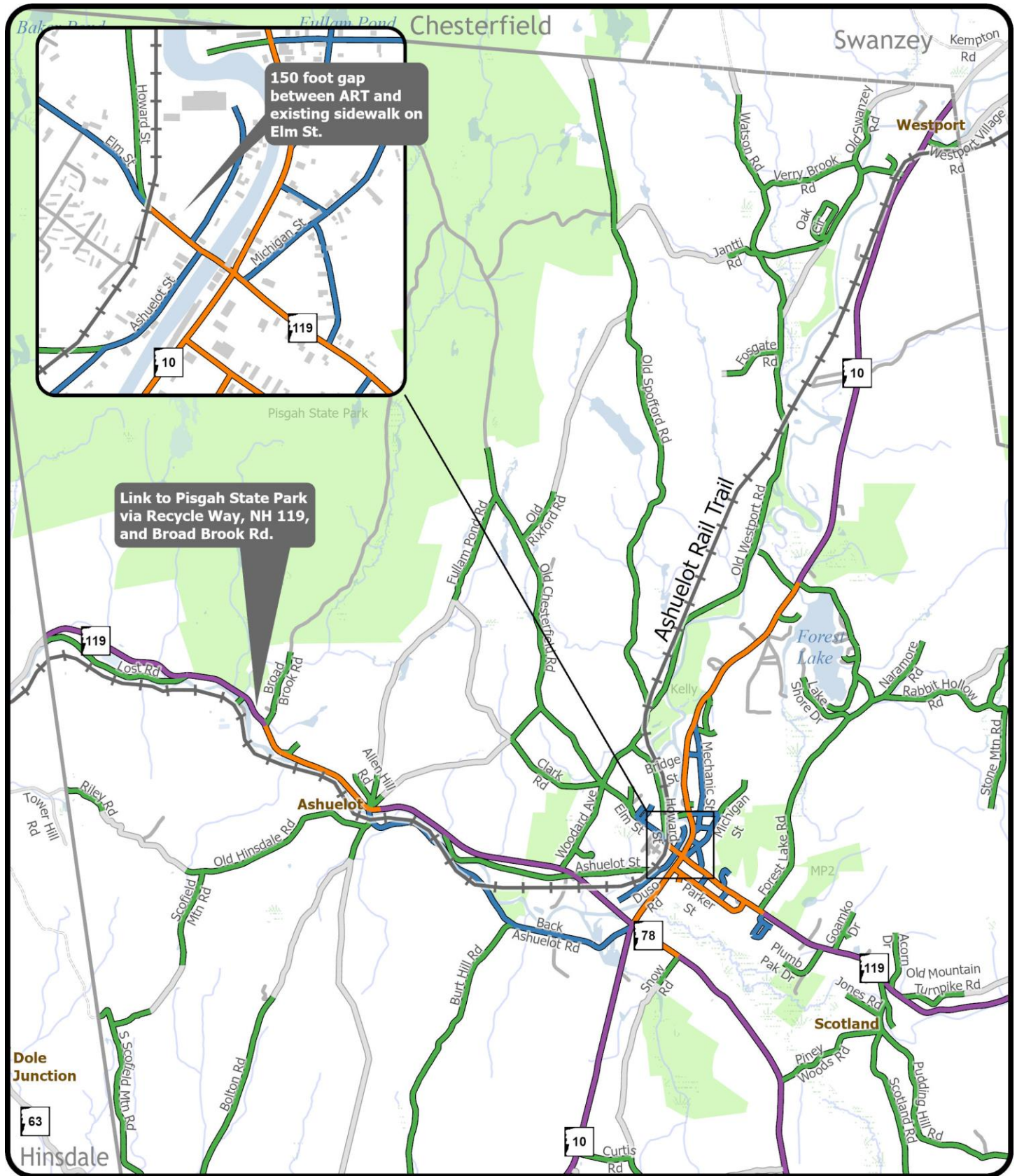
Winchester adopted a Complete Streets Policy and developed Planning and Design Guidelines in 2017. The preamble of the Policy explicitly mentions the importance of integrating local streets with the Ashuelot Rail Trail. The Policy also includes as a performance measure the “number of new or improved bicycle and pedestrian points on the rail trail.”⁴ The Planning and Design Guidelines share many similarities to those of Keene and Swanzey, with some slight differences. The Guidelines establish the following complete street types:

- **Slow Streets** are located in downtown and village areas. They are characterized by mixed land use and are located in areas where pedestrian safety and convenience should be given special attention.
- **Neighborhood Streets** are located in more densely developed residential areas or near downtown and villages areas. They experience low traffic volumes. Special attention should be given to pedestrians and bicyclists, especially near multi-family housing.
- **Connector Streets** are arterial roadways that pass through the Town. Although designed for motor vehicle traffic, they are also used by bicyclists and pedestrians and function as important connector routes.
- **Rural Streets** are located in low-density residential, natural, or agricultural areas.

The Ashuelot Rail Trail interacts with a variety of complete street types in Winchester (Figure 8). Perhaps most significantly, the Trail intersects with Elm Street, less than one thousand feet from the principal intersection in downtown Winchester (NH 10/NH 119/Elm Street). The short segment of Elm Street represents an excellent opportunity to connect the Rail Trail with downtown businesses and residences. The Planning and Design Guidelines classifies the segment as a Slow Street, a street type for which a variety of pedestrian and bicycle features are recommended, including sidewalks and bicycle lanes. It should also be noted that the Planning and Design Guidelines recommend wayfinding signage for key intersections and near rail trails. Wayfinding signs help guide roadway or trail users to key destinations and amenities, like businesses, cultural attractions, or parking.

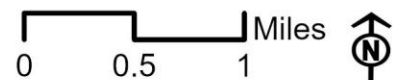
⁴ Section III.C.6

Figure 8 – Winchester Complete Street Types



Complete Street Type

- Connector
- Neighborhood
- Excluded - Not Maintained
- Slow
- Rural
- Excluded - Private



Today, a sidewalk runs along the south side of Elm Street for most, but not all, of the segment between the Ashuelot Rail Trail and NH 10. The sidewalk, with one section constructed out of concrete, another out of asphalt, continues past Hildreth Street, but stops approximately 150 feet east of where the Ashuelot Rail Trail intersects Elm Street (Figure 9). Bike facilities and wayfinding signage are absent from the road segment. Given that the Rail Trail passes within such close proximity of the Town's economic and cultural heart, pedestrian and cyclist enhancements along this section of Elm Street likely represent some of the most cost-effective complete streets investments the Town could make. Wayfinding signage alone would help integrate the rail trail with downtown Winchester. Complete streets improvements along Elm Street would also be a logical next step to the sidewalk improvements the Town is planning to implement through a private complete streets implementation grant and Town-appropriated funds.⁵ Sidewalk improvements are planned for the west side of Main Street (NH 10), running 200 feet south from the NH 10/ NH 119/Elm Street intersection.

Figure 9 – Elm Street, looking east from the intersection with the Ashuelot Rail Trail



Further to the east, the Ashuelot Rail Trail passes by Recycle Way, from which trail users can access Pisgah State Park, via NH 119 and Broad Brook Road. These three road segments offer the quickest link between the Ashuelot Rail Trail and southwest New Hampshire's largest property in the New Hampshire state park system. The property totals 21 square miles and offers an extensive trail system for both motorized and non-motorized uses. The Winchester Complete Streets Planning and Design Guidelines categorize both Recycle Way and Broad Brook Road as Rural Streets. Given that Rural Streets experience low traffic volumes, the Guidelines recommend minimal roadway treatments, such as striped shoulders. The segment of NH 119 that connects Recycle Way and Broad Brook Road experiences relatively higher levels of traffic (3,201 AADT) and is classified as a Connector Street.⁶ The Planning and Design Guidelines recommend a variety of pedestrian and bicyclist facilities, including sidewalks and bike lanes.

Currently, the segment of NH 119 that connects Recycle Way and Broad Brook Road lacks pedestrian and bicycle facilities (Figure 10). Narrow shoulders and blind curves render the road

⁵ The private complete streets implementation grant was made available by the NH Charitable Foundation and was administered by the Monadnock Alliance for Sustainable Transportation and SWRPC.

⁶ Annual Average Daily Traffic. Source: NHDOT Transportation Data Management System.

segment inhospitable to both pedestrians and bicyclists. Widened shoulders, sidewalks, marked crosswalks, and pedestrian warning signs may improve pedestrian and cyclist safety along the road segment. Both Recycle Way and Broad Brook Road, considering their low traffic volumes, likely require no more than wayfinding signage to enhance the connection between the Ashuelot Rail Trail and Pisgah State Park.

Figure 10 – NH 119, in between Recycle Way and Broad Brook Road, looking east.



c. Hinsdale

The Town of Hinsdale adopted its Complete Streets Policy and developed Complete Streets Planning and Design Guidelines in 2016. The Complete Streets Policy recognizes the importance of integrating rail trails and the roadway network. The number of new or improved pedestrian and cyclist connection points with rail trails is included as a policy performance measure. Like the complete streets planning and design guidelines in Keene, Swanzey, and Winchester, the guidelines in Hinsdale establish a complete street typology that includes several complete street functional types:

- **Town Center Streets** are located in the historic center of Hinsdale where there is a mix of land uses and destinations. Special attention should be given to pedestrian safety and convenience.
- **Gateway Streets** are arterial roads that pass through town. They should accommodate all travel modes and help signal to motorists that they are arriving at the historic center of Hinsdale.
- **Neighborhood Streets** are located in relatively densely developed residential neighborhoods. Special attention should be given to accommodating pedestrian and bicyclists, especially near multifamily and manufactured housing.
- **Rural Connector Streets** are located in low-density residential, natural and agricultural areas.

- **Rural Residential Streets** are located in low-density residential subdivisions where destinations are frequently farther apart. Traffic calming to encourage slower, safer vehicle speeds is a major consideration on these streets.

Depot Street is perhaps the most significant connection point between the Ashuelot Rail Trail and the Hinsdale street network, considering that it links the Trail to Hinsdale's historic downtown. Where it crosses the Rail Trail, Depot Street is classified as a Rural Connector Street (Figure 11). Traveling north, it becomes a Residential Street after intersecting with Glen Street and then a Town Center Street after crossing the Ashuelot River. In total, the Depot Street trailhead is located about 1,200 feet southwest of the Depot Street/Main Street (NH 119) intersection in downtown Hinsdale.

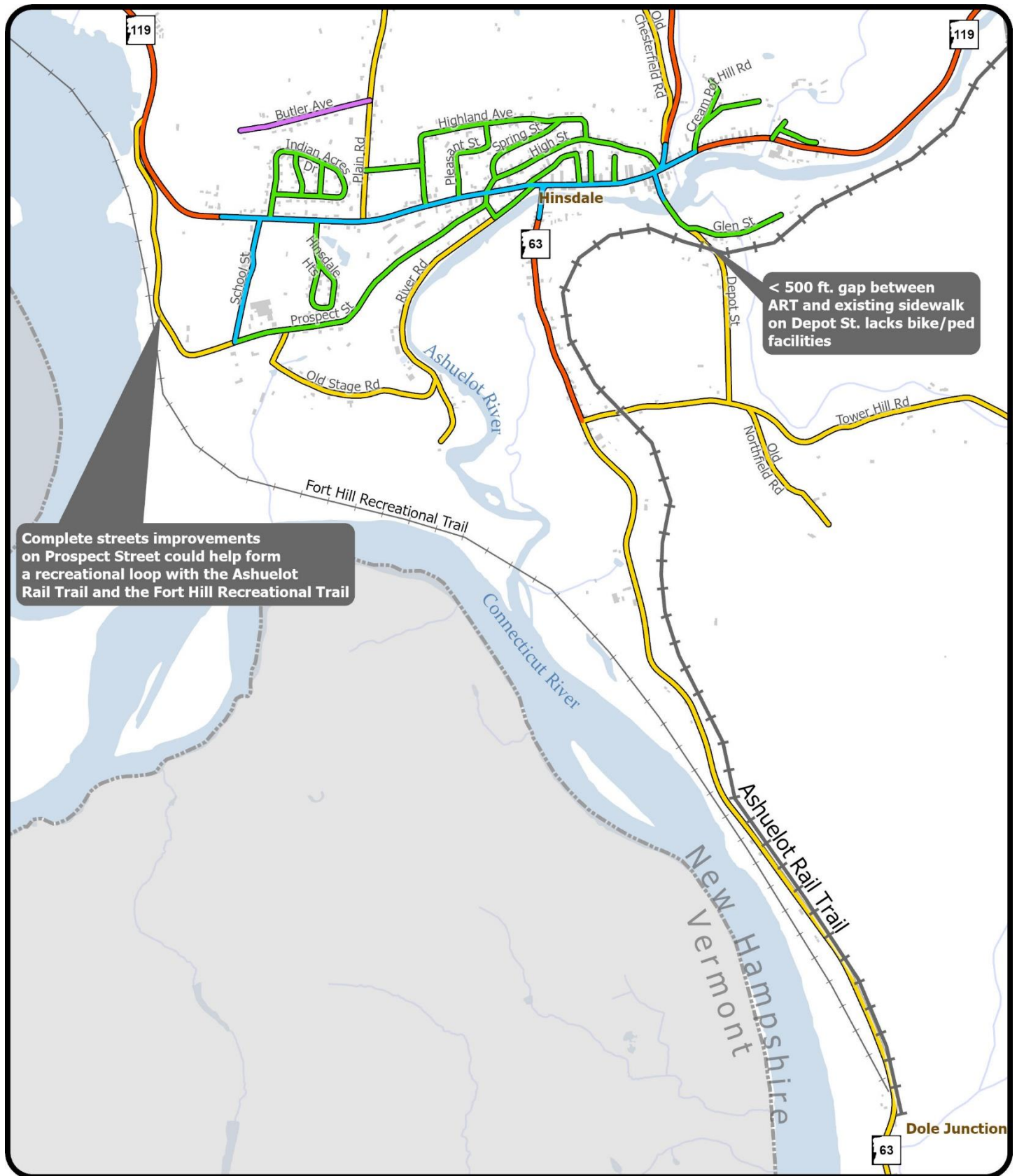
The Planning and Design Guidelines recommend various bicyclist and pedestrian treatments for the complete street types found on Depot Street. Facilities along Rural Connector Streets are simple, relatively low-cost and include features like paved or unpaved shoulders and "share the road" signs. The guidelines for Residential Streets place greater emphasis on pedestrian facilities, recommending a sidewalk on at least one side of the street. The guidelines for Town Center Streets recommend even more extensive pedestrian facilities, calling for sidewalks on both sides of the street. The guidelines also promote bike lanes or sharrows on Town Center Streets.

Today on Depot Street, pedestrian and bicycle facilities do not yet meet the recommendations of the planning and design guidelines. For example, at the Depot Street trailhead, no shoulders are present, forcing pedestrians or cyclists to share the travel lane (Figure 12). North of the Ashuelot River, where either bicycle lanes or sharrows are recommended by the Town Center Street guidelines, neither are present. Crosswalks, broadly recommended for various complete street types, are also absent from the entire road segment.

It is worth noting that the Planning and Design Guidelines establish a Priority Area for the implementation of complete streets principles. In designating the Priority Area, the Town recognizes that funding for complete street implementation is limited and, given the concentration of key destinations along Main Street, Hinsdale's historic center should be prioritized for improved multimodal facilities. Only a portion of Depot Street - from the Ashuelot River to Main Street - is included in the Priority Area. A modest expansion of the Priority Area along Depot Street (< 1000 feet), would include access to the Ashuelot Rail Trail. Given the transportation, recreation and economic benefits that an improved connection to/from the Trail could yield, such an expansion of the Priority Area might be worth considering.

In addition to considering how complete streets implementation could help connect the Rail Trail with specific points in the Town of Hinsdale, implementation should also consider how complete street improvements might help form loops attractive to recreational users. For example, the southern terminus of the Ashuelot Rail Trail is located across NH 63 from the southern end point of the Fort Hill Recreational Trail. In conjunction with Prospect Street, Main Street and Depot Street, these two rail trails could form a loop that features stunning vista of the Connecticut River as well as access to downtown businesses in Hinsdale's historic center.

Figure 11 – Hinsdale Complete Street Types



Complete Street Type

- Village/Downtown
- Rural Residential
- Rural Connector
- Residential
- Gateway
- Unclassified

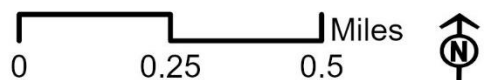


Figure 12 – Depot Street, looking north towards the Ashuelot Rail Trail Crossing



Findings:

1. The Ashuelot Rail Trail is the only rail trail in the state where every trailside municipality has adopted both a complete streets policy and complete streets planning and design guidelines. Consequently, a unique opportunity exists to integrate a rail trail and on-street facilities into a cohesive pedestrian and bicyclist network.
2. All of the trailside municipalities have made progress towards implementing their complete streets planning and design guidelines, but numerous opportunities exist to improve complete street facilities on roadways that form key connections with the Rail Trail.
3. At several locations, the Rail Trail passes within close proximity of town/village centers. In most instances, the connecting roadways do not yet meet the pertinent complete street planning and design guidelines. Improvements to pedestrian and cyclist facilities along these relatively short road segments would improve trail access to/from important commercial and residential areas.
4. Some complete street planning and design guidelines may warrant revision to accommodate all roadway users. For example, planning and design guidelines for streets in the City of Keene may benefit from the addition of bicycle facility recommendations.

Recommendations:

1. Rail trail project prioritization should include not only on-trail facilities but also potential complete streets improvements to connecting roadways. In some cases, like in locations with dense residential development or commercial activity, improvements to connecting roadways may yield larger increases in trail utilization than would improvements to the trail itself. A project prioritization process is expected to occur as part of implementation plan development. The project prioritization process should consider both important origins and destinations as well as loops that could be formed by combining the rail trail, connecting streets and other trails. Loops would provide attractive routes for recreational users planning round trips from trailheads or nearby starting points.

2. Municipalities should consider where complete streets measures could be implemented incrementally. Although in some cases comprehensive roadway construction may be the best approach, in others, small steps could yield large benefits. For example, some of the examined complete streets planning and design guidelines recommend wayfinding signage as a strategy that could be implemented on a number of different roadway types. Wayfinding signage and maps represent a low-cost, high-return investment that could help attract trail users to nearby points of interest and, vice versa, help draw nearby residents, workers and visitors onto the trail. Trailside businesses may be interested in helping fund sign design and installation. Wayfinding signage could drive increased travel activity between the Rail Trail and nearby origins and destinations, which, in turn, could demonstrate to decision makers that there is public demand for further complete streets improvements.
3. Municipalities should work across departments to ensure that capital improvement plans and/or street paving plans incorporate complete streets principles. In some cases, pedestrian and cyclist safety could be improved at low or minimal cost during routine pavement maintenance. For example, after repaving, travel lanes could be restriped at narrower widths, calming traffic and opening space for widened shoulders.