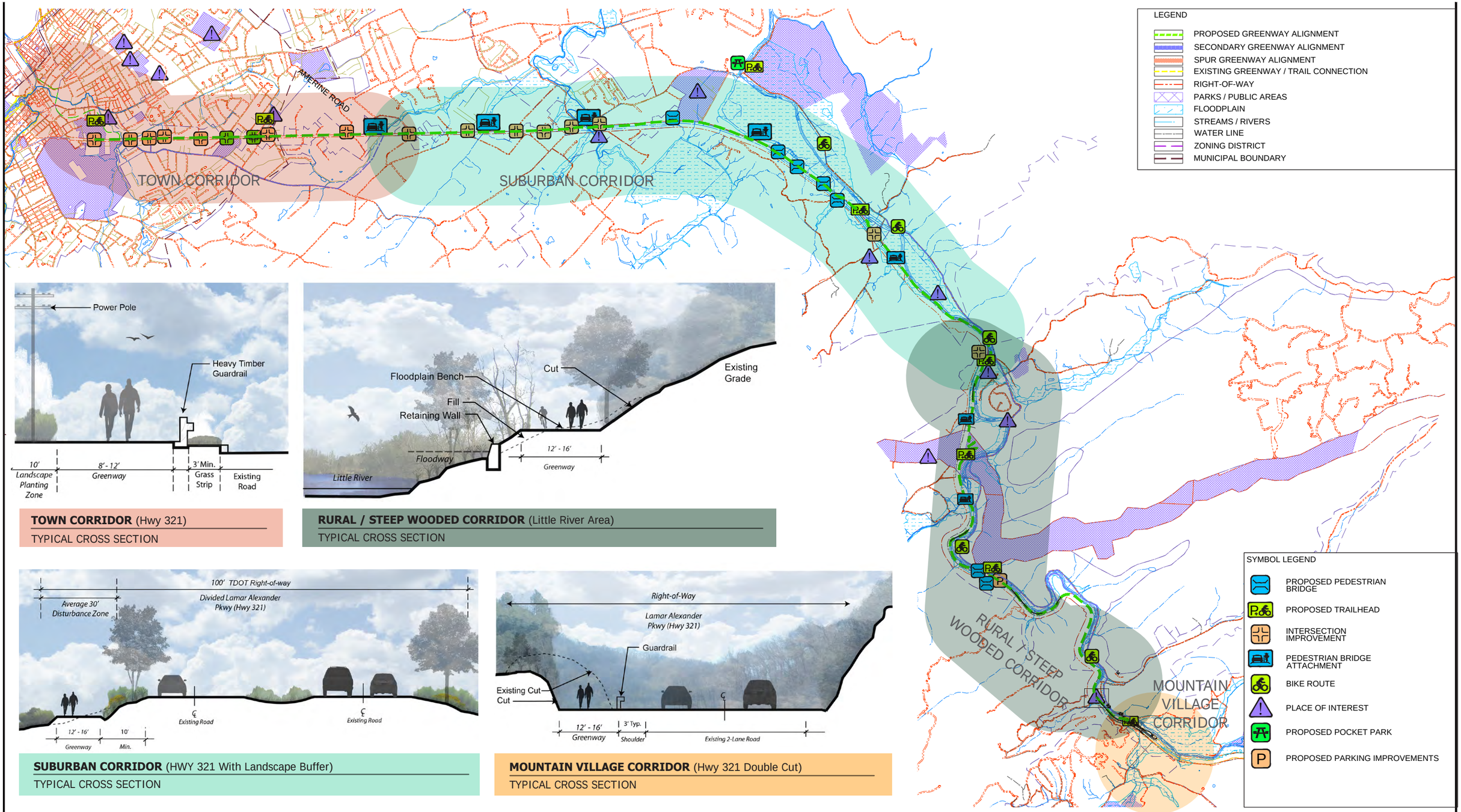


TOWN CORRIDOR (Hwy 321)
TYPICAL CROSS SECTION

RURAL / STEEP WOODED CORRIDOR (Little River Area)
TYPICAL CROSS SECTION

SUBURBAN CORRIDOR (HWY 321 With Landscape Buffer)
TYPICAL CROSS SECTION

MOUNTAIN VILLAGE CORRIDOR (Hwy 321 Double Cut)
TYPICAL CROSS SECTION

MASTER PLAN

Knoxville Regional Greenway Study: Maryville to Townsend

MARYVILLE-TO-TOWNSEND GREENWAY · EQUINOX ENVIRONMENTAL CONSULTATION & DESIGN · Kostelec PLANNING

SCALE 1" = 600'
6 300 0 600 1200 1800

SECTION IV. CORRIDOR DESIGN

Overall Corridor Design Considerations

This chapter serves as a catalog of design treatments and overall design considerations for the Maryville-to-Townsend Greenway in a variety of contexts. Design guidelines ("typologies") are provided to blend sections of the overall corridor with appropriate land uses while promoting consistency throughout the larger greenway system. The overall greenway trail width is proposed as a minimum of 8 feet with an ideal width of 12 feet. The greenway trail along U.S. Highway 321 will take the form of a side path that utilizes the existing sidewalk and includes widening it to a width of 10 feet. A landscape buffer between U.S. Highway 321 and the greenway to mitigate noise and air pollution and create a visually interesting and more enjoyable greenway experience should be provided whenever possible. When this is not possible, a physical barrier should be used to separate motor vehicles from pedestrians and bicyclists to provide a sense of safety. In the more remote sections of the greenway, particularly in the Walland Gap area, a cantilevered greenway system is proposed to navigate the steep terrain in the approach to Townsend. This section of the greenway may serve as a landmark feature and a destination for recreational users of the greenway system. While not conveyed on the maps, alternative routes for the greenway along the Little River should be explored as landowner support allows.

Locations for intersection improvements to provide safe greenways crossings have been identified as well as proposed locations for shelters, pedestrian bridges, bike routes, places of interest, pocket parks, and other design features.

Standard trailhead features as identified in Figure 15 should be implemented based on the location and the anticipated use and can be upgraded as the greenway is implemented over time.

Figure 15— Standard Trailhead Features

Kiosk	Drinking Water	Trash & Recycling
Picnic Table	Restrooms	Interpretive Signage
Parking Areas	Plantings	Directional & Informational Signage
Bike Parking	Pet Cleanup/Water	Shelters

Introduction to the Corridor Typologies

Figure 16—Existing Features of Corridor Typologies

	TOWN	SUBURBAN	RURAL/ STEEP WOODED	MOUNTAIN VILLAGE
	CURRENT CONDITIONS:			
Land Use	urban village / commercial	suburban / rural / agricultural	agricultural / wooded /riparian	village / commercial
Typical Right-of-way	100'- varies	200'- varies	100'- varies	400'- average
Topography	flat	rolling hills	steep / mountains	gradual grade

The study area is divided for planning purposes into four corridor areas, each with its own character typology. These typologies are grouped into areas that have similar existing conditions of visual quality, terrain, land use, cultural character, and common corridor traits like right-of-way. The four corridor typologies also have proposed future qualities for landscape features, gateway and wayfinding signage, benches, and more. The four corridor typologies are:

- **Corridor Area 1:** Town Corridor
- **Corridor Area 2:** Suburban Corridor (U.S. 321)
- **Corridor Area 3:** Rural/Steep Wooded (Walland Gap)
- **Corridor Area 4:** Mountain Village Corridor (Townsend)

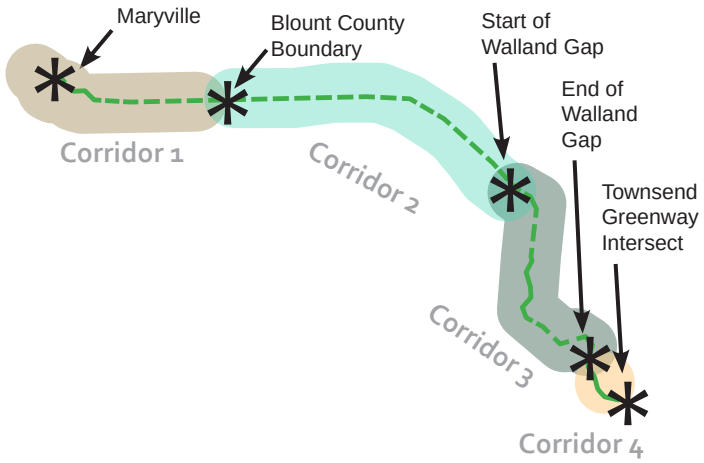


Figure 17—Typology Diagram

Figure 18—Pathway Approach to Signalized Intersection, Ketchum, ID

Figure 19—Multi-Use Trail Approach to Sidewalk Intersection & Mid-Block Crossing, Milton, DE

Figure 20—Inlaid Pavement Markings on Pathway & Street, Toronto, ON

Figure 21—Pathway Approach on the American Tobacco Trail, Durham, NC

Street Crossing Design Concepts

Much of the Maryville-to-Townsend Greenway within the city limits of Maryville will run adjacent to U.S. Highway 321 in the form of a side path. Constraints dictate that the multi-use trail will run alongside the street.

A major concern with side paths is the number of driveway crossings along the path. It is key to make users visible to motorists entering or exiting businesses along the route, as motorists tend to overlook the potential for cross traffic on the side path, particularly bicycle riders.

Guidance on how to best treat side path design is not outlined in great detail in many prevailing design guides, because of the variety of contexts in which side paths exist. This section contains some conceptual design treatments, based on how other communities have addressed side paths.

A key policy initiative that can be undertaken by Maryville, Townsend and Blount County is to reduce the number of driveway crossings with direct access to the greenway. The divided highway section of U.S. Highway 321 is access-controlled, so there will be fewer conflicts in this section. Reducing the number of driveway crossings can be very expensive to incorporate into the overall design and construction of the greenway. These changes are likely to occur over time as properties along the route redevelop or are subject to regulations resulting from a change in land use. Communities can regulate the number of access points along streets through redevelopment or rezoning, and this policy should be considered along U.S. Highway 321.

Below is a catalog of potential treatments for communities to consider as they move toward implementation. Details of appropriate design treatments should be evaluated when the greenway enters the design phase and more detailed information is obtained through in-the-field surveys of conditions.

Pathway Approaches

Side path approaches to driveways and intersections should be designed to encourage both path and road users to exercise caution and be aware of other users. Designers have greater latitude in the realm of pathway design as compared with public street rights-of-way, which

are subject to standards established through the Manual on Uniform Traffic Control Devices (MUTCD)

Figure 18 shows a pathway approach to a signalized intersection where designers used pavement markings to caution pedestrians and bicyclists to the approaching intersection.

Colored markings can also be used to alert pathway users to an approaching intersection or driveway. Figure 19 illustrates an inlaid brick transition space from a pathway, letting users know they are entering a place where conditions change.

More elaborate treatments can be pursued based on the context of surrounding land uses and volumes of pathway traffic. Figure 20 illustrates an approach to a two-staged mid-block crossing with inlaid pavement markings on both the pathway and street to alert motorists and pedestrians to the crossing. Inlaid pavements markings can cost more to install and maintain.

The use of bollards and markings on pathway approaches to streets alerts pedestrians and bicyclists to the crossing. Painting the name of cross streets on the trail allows users to orient themselves to their surroundings, especially if their destination requires them to veer off the trail and use sidewalks or streets to reach it.

Side paths serve a dual function along streets as a multi-use trail and sidewalk. For these reasons, the street interface with the side path should be treated as a sidewalk approach when considering accommodation of Americans with Disabilities Act (ADA) Public Right-of-Way Accessibility Guidelines (PROWAG) established by the United States Access Board. Figure 22 shows a side path approach to the street that includes the following ADA features:

- Curb ramp width that is the same as the side path width (minimum 10 feet);
- Detectable warning surface (truncated domes) spanning the entire width of the ramp; and
- Colored detectable warning surface that meets visual contrast standards with the paving material.

Street Approaches

In most situations, motorists are accustomed to the presence of pedestrians on sidewalks that cross public streets and driveway. The dynamic changes when multi-use trail users are introduced to that setting. Bicyclists travel at higher speed than pedestrians, therefore motorists may not be looking for someone traveling at 8, 10 or 12 mph. If motorists are accustomed to seeing bicyclists on the streets, they may also not be prepared for bicyclists

Figure 22—Side path curb ramp, Burlington, WA

Figure 23—MUTCD signage (W-11-15P) on street approach to trail crossing, Asheville, NC

crossing from two directions in front of their path.

Driveways and streets can be treated differently, as private driveways are not subject to requirements of MUTCD, which dictates the type of traffic control devices (signs, pavement markings, etc.) that can be installed on public streets. A common treatment on street approaches to trail crossings is installation of MUTCD-compliant signage (reference sign W11-15P) that indicates the presence of pedestrian and bicyclists at a trail crossing. Exhibit 23 shows an example of this sign application.

Pavement marking treatments at the intersection of a side path and a street can range from standard and high-visibility crosswalks to raised crosswalks and inlaid colored pavement or similar

Figure 24—Path crossing advanced warning markings on private street, Ketchum, ID

Figure 25—Path crossing advanced warning markings on private street, Ketchum, ID

Figure 26—Path Crossing From Private Street, Ketchum, ID

Figure 27—Colored pavement at two-way path / driveway crossing (NACTO)

Figure 28—Shared sidewalk signage, Halifax, NS

Figure 29—Shared route signage along public street, Moncton, NB

treatments. Maintenance costs are a primary consideration in determining which treatment works best. Raised crosswalks are more appropriate for downtown areas, whereas high-visibility crosswalks are typically found in more suburban locations. As use of the greenway increases, additional marking options can be pursued to raise awareness of the trail.

As noted, driveway and private street crossings allow for greater latitude in terms of treatment options. The following exhibits illustrate potential pavement markings and signage for driveway crossings of the greenway.

The National Association of City Transportation Officials (NACTO) is developing new treatments for bicycle facilities that are considered experimental in the eyes of Federal Highway Administration. Much of the emphasis in NACTO is how to integrate non-traditional bicycle facilities (e.g. cycle tracks, bike boxes) into an urban environment. Figure 27 illustrates a concept in the NACTO design guide for a driveway crossing of a two-way cycle track. The green pavement marking at the crossing raises the visibility of the crossing to entering and exiting motorists. A similar application could be applied to driveway crossings along the greenway.

Other Signage Options

Communities have addressed shared-use pathways in several different ways. Figure 30 shows several potential treatments that communities can pursue to raise awareness of and promote safety along the greenway.

Figure 30—Other greenway signs for various conditions

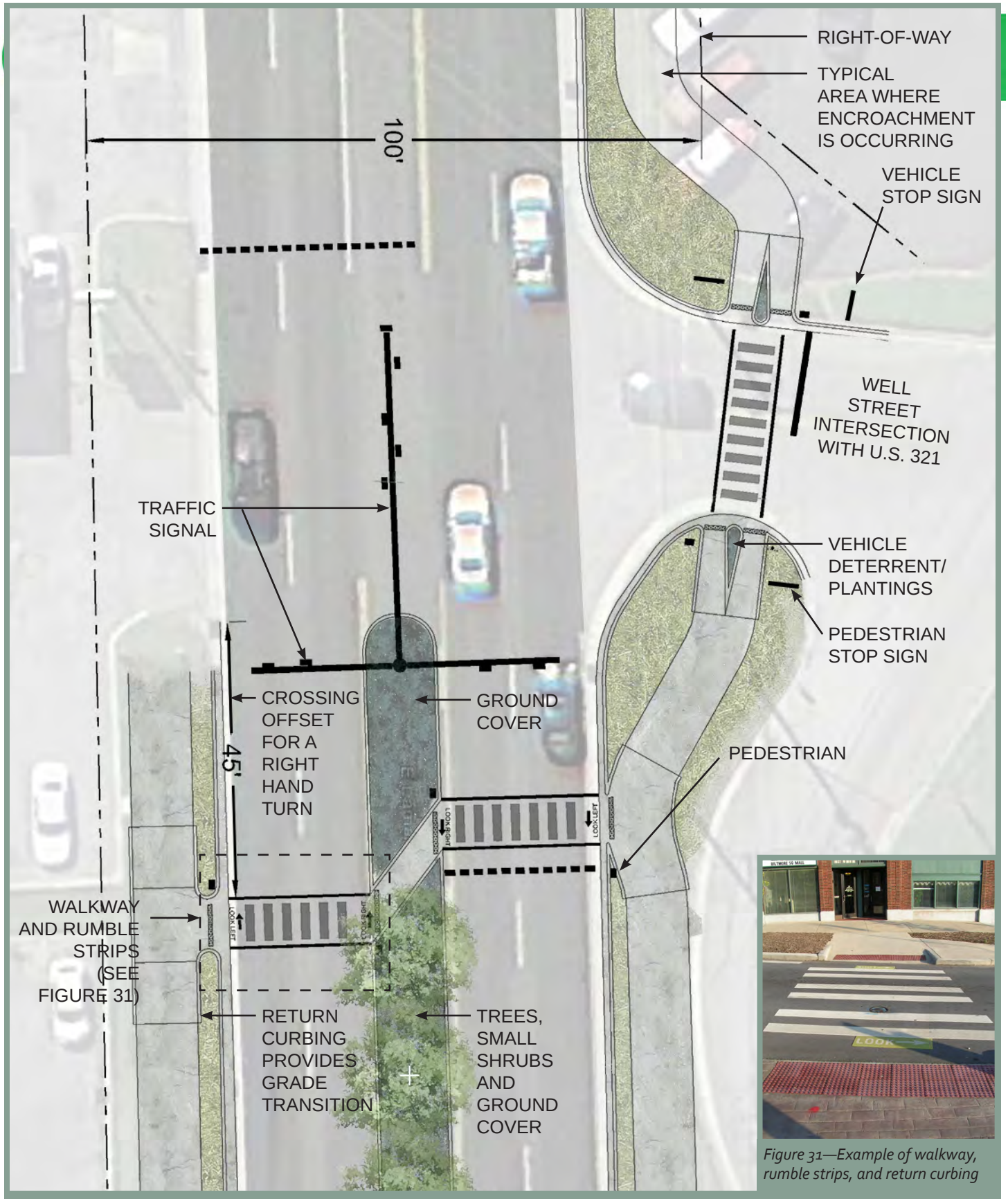


Figure 31—Example of walkway, rumble strips, and return curbing

Figure 32—

HWY 321 CROSSINGS INTERSECTION IMPROVEMENT EXHIBIT

Future Land Use

The four corridor areas will receive different levels of development pressure in the future. It is important to recognize land use planning's role in helping to maintain a greenway that is attractive, accessible, and safe for users. Some future land use considerations are:

Commercial Development on the Greenway:
Ordinances that promote a connection from the greenway to infill and new development will help maintain character of the greenway. Form-based codes or setback requirements can help define how development connects to and takes advantage of the greenway. Some ways for this to occur include:

- Parking that fronts the greenway is minimized. Parking for commercial lots should be located along the edge or rear of the property
- Maximum and minimum setbacks help define a relationship to the greenway. Commercial buildings should allow users to enter the building directly from the greenway with easy access.

Highway 321 Access:
Many properties on Hwy 321 have multiple access points, which can lead to a decreased user experience and safety issues on the greenway. Access should be addressed in the future as properties are redeveloped. Treatments for reducing access points (especially for those properties with more than two access points) should be encouraged.

Greenways & Sustainability

Greenways are an integral part of the infrastructure that provides for a sustainable community and contributes to quality of life within a community. There are many definitions of sustainability, but for the purpose of this plan, the following definition has been applied: sustainability – creating a meaningful, vibrant and affordable practice today that does not deplete our resources for tomorrow. A true sustainable model integrates community values with the environment, as well as social and fiscal responsibility. In order to help facilitate a sustainable community and a sustainable greenway corridor, the Maryville-to-Townsend Greenway is based on the following planning principles.

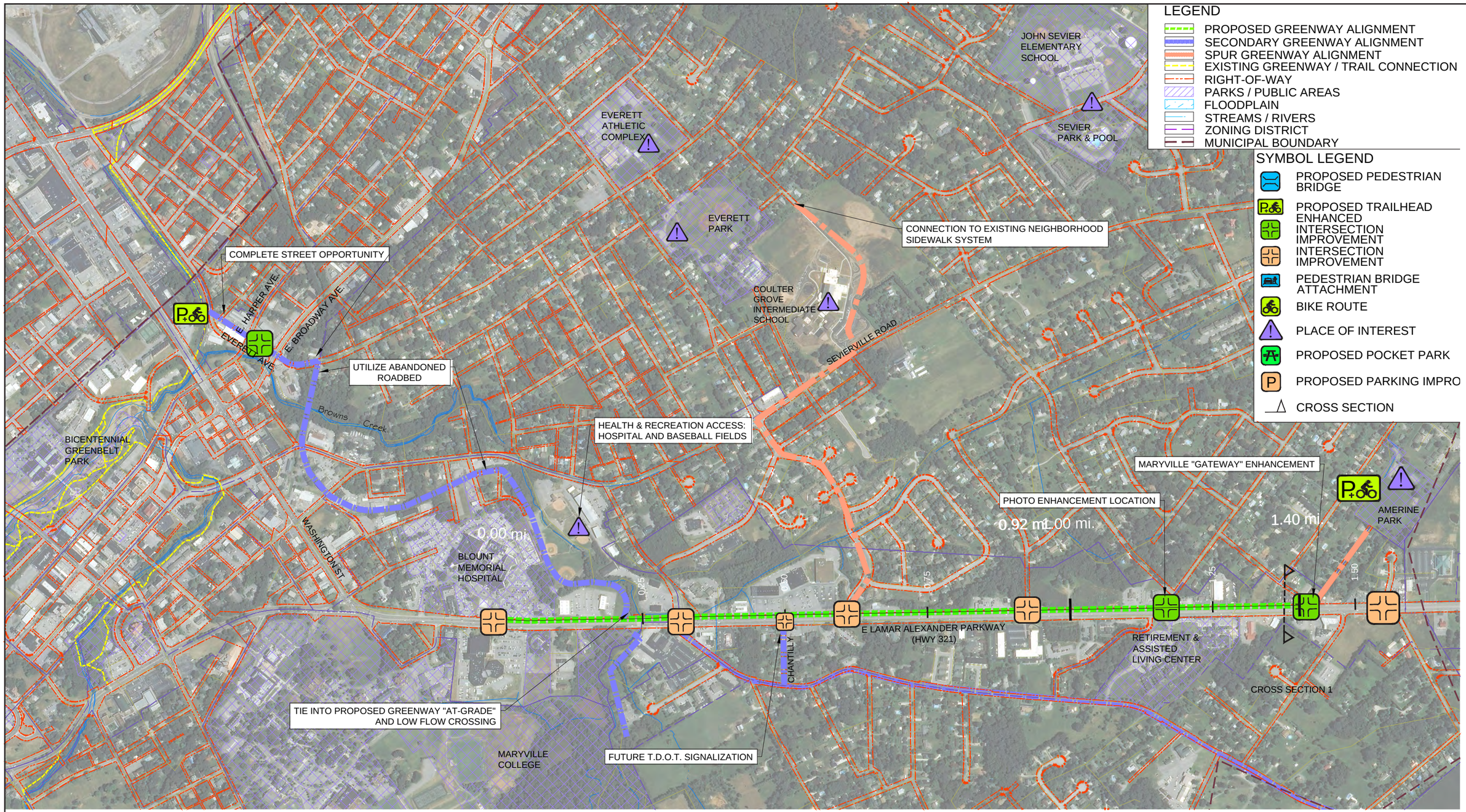
Principle 1: Connecting Infrastructure
A connected greenway system will support alternative transportation. Connecting neighborhoods to commercial corridors, schools and other popular destinations offers viable opportunities to use the greenway as a non-motorized form of transportation.

Principle 2: Social Equity
Greenways provide equitable access for all citizens to physical activity that can improve health and wellness.

Principle 3: Economic Prosperity
Greenways are a proven economic development tool. One of the largest industries in Blount County is tourism. Tourism also ranks as the second largest industry in Tennessee. This type of economic development is a very logical investment to help promote tourism. Greenways have also been identified as key reasons in relocating or expanding a business to a community.

Principle 4: Environmental & Ecological
For the sections of the Maryville-to-Townsend Greenway located adjacent or within close proximity to the Little River, a drinking water source for Blount County, ecological buffers should be provided to protect quality. In addition to the planning principles outlined above, the following guidelines should be applied during the design and implementation of the Maryville-to-Townsend Greenway. These guidelines will help foster the building of an environmentally sensitive greenways system and minimize environmental impacts of the construction process.

- Protect environmentally sensitive areas
- Reduce exotic invasive plants that out-compete natural vegetation
- Reduce sediment and erosion problems through use of best management practices (BMPs)
- Reduce stormwater runoff or treat runoff to improve water quality through the use of stormwater BMPs
- Increase wildlife habitat
- Increase / maintain floodplain flood storage
- Increase / maintain riparian buffers
- Maximize "soft" engineering solutions that utilize bio-engineering techniques
- Maximize "green" construction and maintenance practices
- Minimize life cycle and true environmental costs of greenway materials, construction methods, and maintenance activities



CORRIDOR 1 : 1.41 Mi.

Knoxville Regional Greenway Study: Maryville to Townsend

Corridor 1: Town Corridor (Maryville)

Typology Overview

The Town Corridor section has a well-established identity because of the appealing visual qualities of the City of Maryville, as well as the existing greenway network which helps establish character for this corridor. Maryville has a quaint and historic feel with use of brick, iron, and more formalized landscaping. This character heavily influences proposed amenities. The following is a "menu" of prescribed amenities and features which informs the future character of the greenway in this section. As U.S. Highway 321 leaves Maryville, a sidewalk exists from Jones Avenue along the north side for approximately 1 mile. This existing sidewalk does not provide multi-modal use, therefore, expansion of the existing sidewalk from 6 feet to 10 feet has been proposed in an effort to create a multiple-use trail that provides a more desirable and safer user experience along U.S. Highway 321.

Corridor Prescriptions

Formalized "nodes": During trail design and construction, opportunities for trailheads in addition to those suggested in this study may be identified as a result of future development patterns. Aluminum Avenue provides a logical location for a trailhead. However, more comprehensive improvements to include the business and street interface should be considered as the alignment along Everett Avenue passes between East Broadway and East Harper Avenue. Complete Street principles should be used along this route to create a safe environment for pedestrians and bicyclists while also providing aesthetic enhancements and increased business opportunities. As part of the design, "nodes" have been identified at defined locations along the U.S. Highway 321 corridor (primarily at road crossings) as enhancements that reflect the vernacular of Maryville.

Intersection Improvements: Eight intersection improvements have been identified within Corridor 1. These improvements are necessary to provide safe crossings where feeder roads meet U.S. Highway 321. Intersections will also provide visual interest that promotes recognition of the greenway to vehicular traffic. Businesses are located both north and south of the highway. The proposed alignment of the greenway extends the existing sidewalk along the north side of the highway . In order to connect the greenway to the businesses and neighborhoods along the southern portion of the highway, pedestrian crossings of U.S. Highway 321 should be considered. TDOT has plans to signalize the intersection of the highway and Chantilly Lane. However, additional U.S. Highway 321 road crossing locations will be necessary to maximize use of the

TOWN CORRIDOR

CORRIDOR PRESCRIPTIONS:

LIGHTING

Figure 33—

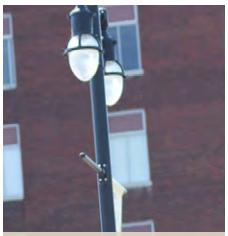


Figure 34—

SIGNAGE / MONUMENTS

Figure 35—

Figure 36—

BENCHES

Figure 37—

Figure 38—

FENCING

Figure 39—

LANDSCAPE TREATMENTS

Figure 40—

Figure 41—

TOWN CORRIDOR

CORRIDOR PRESCRIPTIONS:

SURFACE TREATMENTS

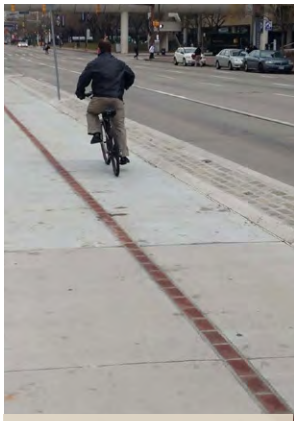


Figure 42—

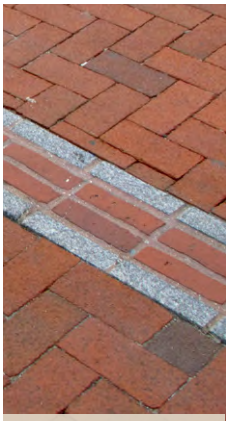


Figure 43—

INTERSECTION IMPROVEMENTS

Figure 44—

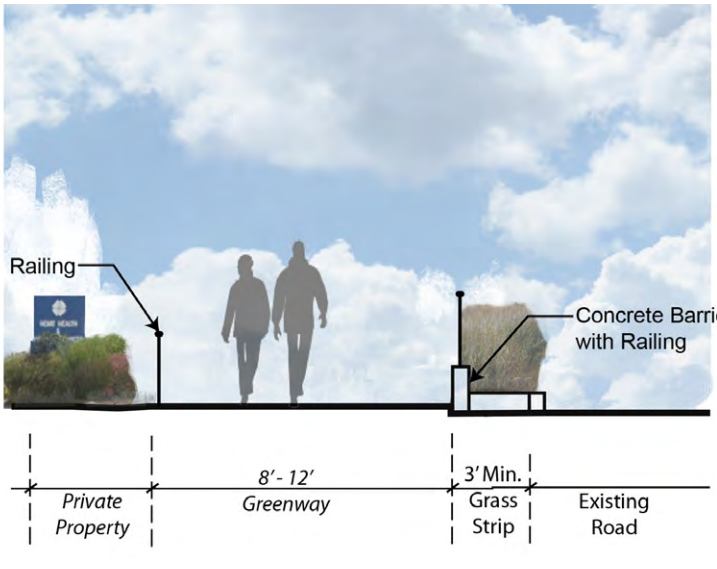
greenway system and increase pedestrian connectivity as a whole. Considerations should be made to provide pedestrian refuges utilizing existing turn lanes.

Signage: While signage throughout the greenway should maintain a consistent theme within Corridor 1, it will reflect a more refined town/urban character of Maryville. Signage will be utilized at roadway crossings as well as nodes. Signage can serve as wayfinding for pedestrians and also provide visual cues for drivers along U.S. Highway 321.

Fences / Walls: The use of fences and walls is encouraged to promote a safe environment by separating pedestrians and cyclists from motor vehicles. Specifically, areas where existing parking immediately abuts the proposed greenway and locations in which utilities and other challenges may cause the greenway to be located immediately along the back of curb should include physical barriers .

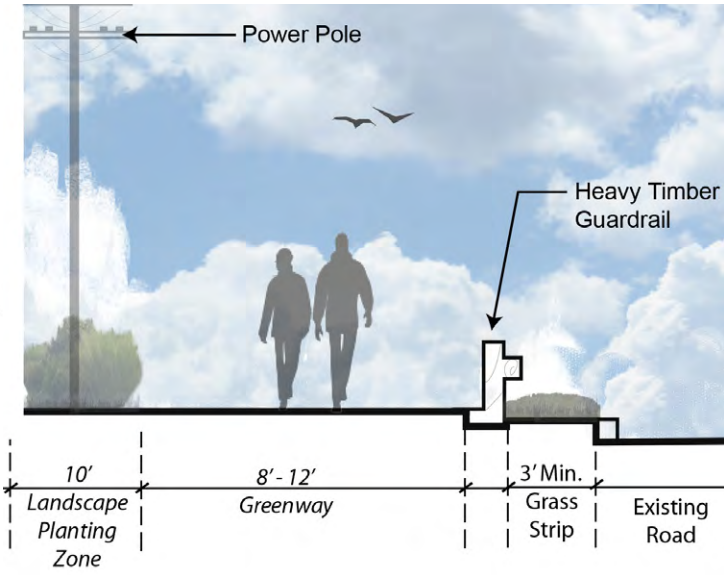
Use of the Right-of-Way Parking areas directly abut the U.S. Highway 321 right-of-way and in many instances the adjacent private parking areas actually encroach into the right-of-way. In these situations, TDOT should reclaim this right-of-way to accommodate the greenway trail . Fencing and planting areas should be used in the reclaimed areas as a buffer to U.S. Highway 321 and adjacent parking. As a typical condition, the right-of-way in Corridor 1 should have a planting/buffer between any land use that may detract from the greenway user's experience.

Places of Interest & Unique Features: It will be important to tie the proposed greenway into the existing Maryville/



CROSS SECTION 1

TOWN CORRIDOR SECTION



CROSS SECTION 2

TOWN CORRIDOR SECTION

GREENWAY AND ROAD CROSSINGS

Figure 45—U.S. Highway 321 at the intersection of Merritt Road

AFTER

Alcoa greenway system. One potential connection is located at the existing trailhead along the Alcoa/ Maryville Greenway adjacent to Aluminum Avenue. A connection from Aluminum Avenue to U.S. Highway 321 is currently being explored by the City of Maryville along Brown's Creek. Another potential option includes a connection utilizing an abandoned roadbed that begins at East Broadway Avenue and connects to U.S. Highway 321 via the Little League ball fields adjacent to Blount Memorial Hospital (see Opportunities and Challenges on page 9-10 for a detailed description). At these ball fields, an opportunity exists to provide access to Maryville College and the neighborhoods that are located along Tuckaleechee Pike via the existing culvert under U.S. Highway 321.

BEFORE

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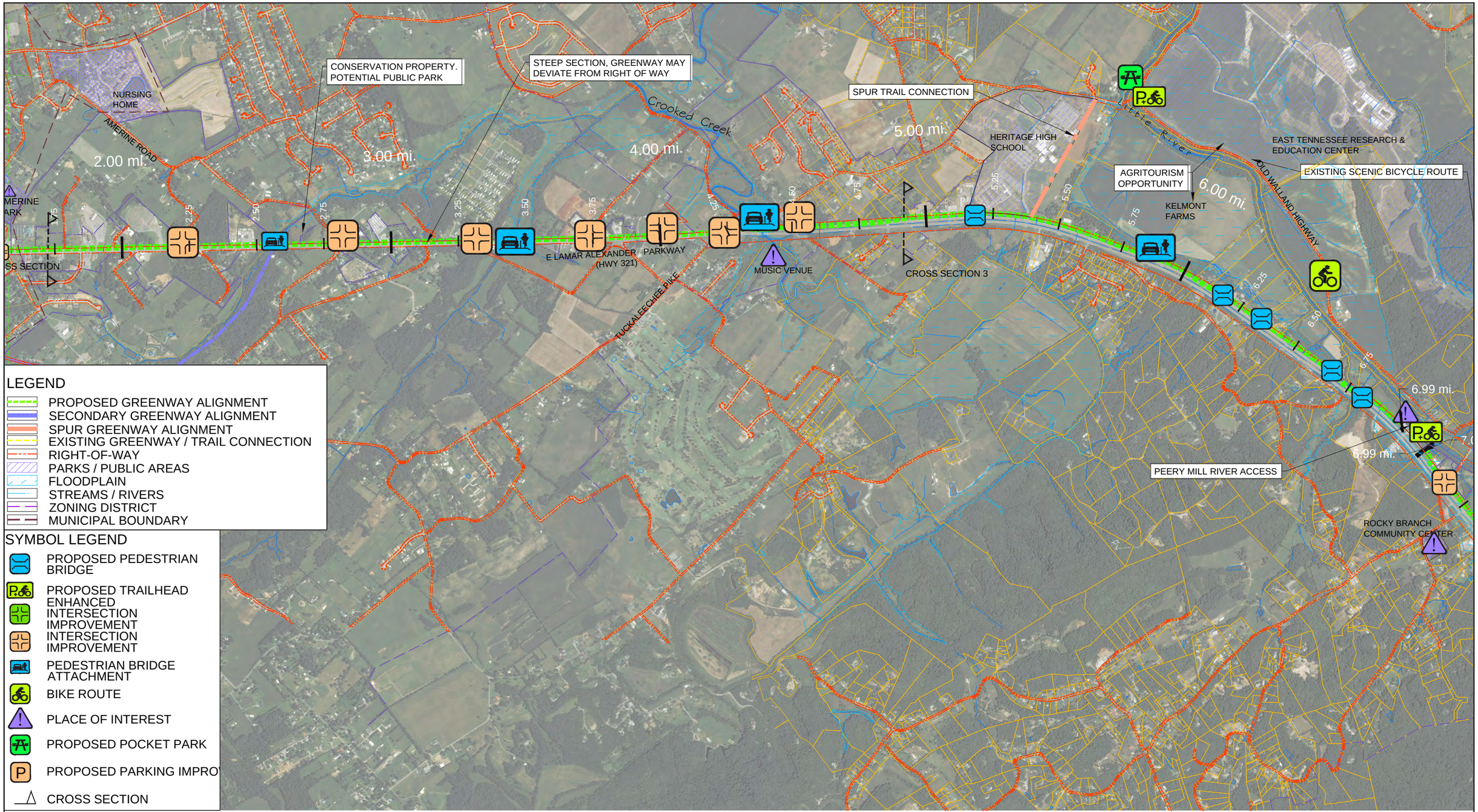


LEGEND

- PROPOSED GREENWAY ALIGNMENT
- SECONDARY GREENWAY ALIGNMENT
- SPUR GREENWAY ALIGNMENT
- EXISTING GREENWAY / TRAIL CONNECTION
- RIGHT-OF-WAY
- PARKS / PUBLIC AREAS
- FLOODPLAIN
- STREAMS / RIVERS
- ZONING DISTRICT
- MUNICIPAL BOUNDARY

SYMBOL LEGEND

- PROPOSED PEDESTRIAN BRIDGE
- PROPOSED TRAILHEAD ENHANCED
- INTERSECTION IMPROVEMENT
- INTERSECTION IMPROVEMENT
- PEDESTRIAN BRIDGE ATTACHMENT
- BIKE ROUTE
- PLACE OF INTEREST
- PROPOSED POCKET PARK
- PROPOSED PARKING IMPRO
- CROSS SECTION

SCALE 1" = 850'

850 425 0 850 1700 2550

CORRIDOR 2: 5.59 mi.

Knoxville Regional Greenway Study: Maryville to Townsend

Figure 47—Perry's Mill Dam

SUBURBAN CORRIDOR

CORRIDOR PRESCRIPTIONS:

SIGNAGE / MONUMENTS

Figure 48—

BENCHES

Figure 49—

FENCING

Figure 50—

BRIDGES

Figure 51—

Corridor 2: Suburban Corridor (Hwy 321)

Typology Overview

The Suburban corridor is defined by U.S. Highway 321, a four-lane divided highway with a 100' right-of-way. There are challenges in creating a desirable greenway experience along the side of a highway. However this corridor is characterized by scenic views, the potential for a buffer between the highway and greenway, and opportunities for landscaped gateways at major intersections. These gateways can enhance character and visibility of the greenway and provide safe pedestrian and bicycle crossing of US. Highway 321 and side streets. The typology character is defined by the semi-rural quality of informal planting areas, use of stone, and other rustic materials.

Figure 46—Example of creating separation from Hwy 321 (Note: This is a similar treatment of greenway/ highway separation from a greenway study done in Robbinsville, NC)

Corridor Prescriptions

Proposed Trailheads: There are two proposed trailheads. One location is Perry's Mill (Figure 47). Its current use as river access and informal parking area can be transformed to accommodate a greenway trailhead. The trailhead could have designated parking, stormwater treatment of the parking, a kiosk, historical interpretation, a restroom facility, and picnic tables.

The second site is proposed near the UT dairy farm (see Figure 52) behind Heritage High School at the intersection of Old Walland Highway and Ellejoy Road. This location is currently utilized as river access and cyclist parking, but has the potential of serving as a small pocket park area. A parking area currently exists, but space exists to provide

more parking (which should include accommodations for small boat put-in staging). This location will serves as a destination via a spur trail that originates from the main greenway corridor along Hwy 321. In the future if the greenway is located along the Little River it will serve as a major trailhead for the greenway system.

Signage: In addition to interpretive signage at the trailheads, this corridor will primarily include utilitarian signage such as mile markers and road crossing warning signs.

Figure 52—Potential trailhead location at the UT Dairy area

Fences / Walls: Retaining walls will be necessary in a few areas throughout this corridor. Existing road "cuts" have been made as a result of widening of U.S. Highway 321 to create a divided highway. For the greenway to remain within the TDOT right-of-way, retaining walls will be needed to address spatial challenges and topography in several locations. Based on the public input process, physical barriers such as low walls or raised curbs are preferred in locations where the proposed greenway alignment is within 2 to 5 feet of the highway.

Intersection Improvements: In the suburban corridor,there are eight intersections where a side road will cross the greenway trail. Treatment of these crossings will have less landscape treatments than the Maryville corridor and will primarily serve to provide safe crossing for pedestrians

SUBURBAN CORRIDOR

CORRIDOR PRESCRIPTIONS:

LANDSCAPE TREATMENTS

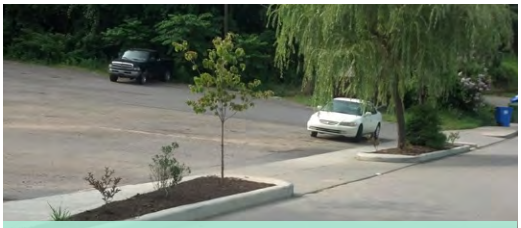


Figure 53—

Figure 54—

SURFACE TREATMENTS

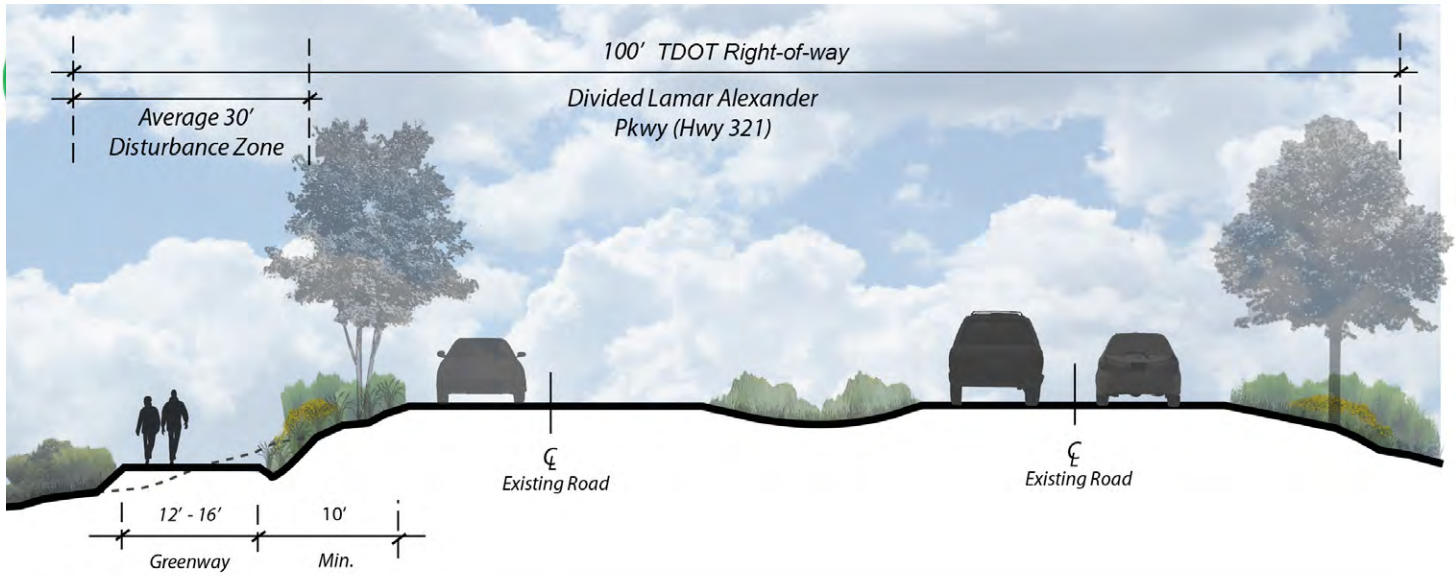
Figure 55—

WALLS

Figure 56—

INTERSECTION IMPROVEMENTS

Figure 57—



CROSS SECTION 3

SUBURBAN CORRIDOR SECTION / HWY 321 WITH LANDSCAPE BUFFER

and cyclists. These treatments should include: high visibility reflective ladder striping, pedestrian crossings set back from the actual intersection, pedestrian yield or stop signs, and approach indicators with either rumble strips or truncated domes. In key locations, split rail fencing or other rural vernacular materials can be applied.

Use of the Right-of-Way: The alignment has been designed to remain solely within the TDOT right-of-way throughout Corridor 2 unless opportunities arise to connect to other public lands or easements. Such is the case with the parcel that will soon be placed into conservation easement and utilized for Blount County sports-related activities. To provide the best greenway experience, land beyond the right-of-way should be considered to provide an adequate (minimum 15 foot) buffer between the greenway and the edge of the road.

Places of Interest & Unique Features: The newly conserved parcel to be developed as a sports park would serve as an ideal trailhead due to its location which is approximately halfway between Maryville and Heritage High School.

Perry's Mill dam (the first dam on the Little River, constructed in 1842) is identified as the terminus of Corridor 2. This location also offers opportunities for historic interpretation. Recent river-related injuries and fatalities also speak to the need for higher visibility. Local sentiment suggests that signage around the dam is insufficient to warn visitors of the dangers of the dam. Locals frequently recreate in the waters above and below the dam and, according to public accounts, have lost the fear of the dangers around the dam.

Heritage High School (HHS) is located on a secured campus with fencing surrounding the perimeter. A secondary connection has been identified near HHS for access to Ellejoy Road and proposed trailhead. The Blount County Board of Education should be approached to explore the possibilities of relocating the existing fence line into the campus at a minimum of 30 feet to accommodate greenway connection. If possible the fence in this location could be removed to provide access for students and teachers to access the greenway.

The views east to the Great Smoky Mountains and rural agricultural feel of the area provide a unique user experience. With visual and audible separation between the highway and greenway, pedestrians and cyclists will experience solitude and be exposed to the agrarian feel of the corridor. The Little River is a wonderful natural resource and connection via the greenway to HHS could serve as an opportunity for teachers to use the greenway as an outdoor learning laboratory.

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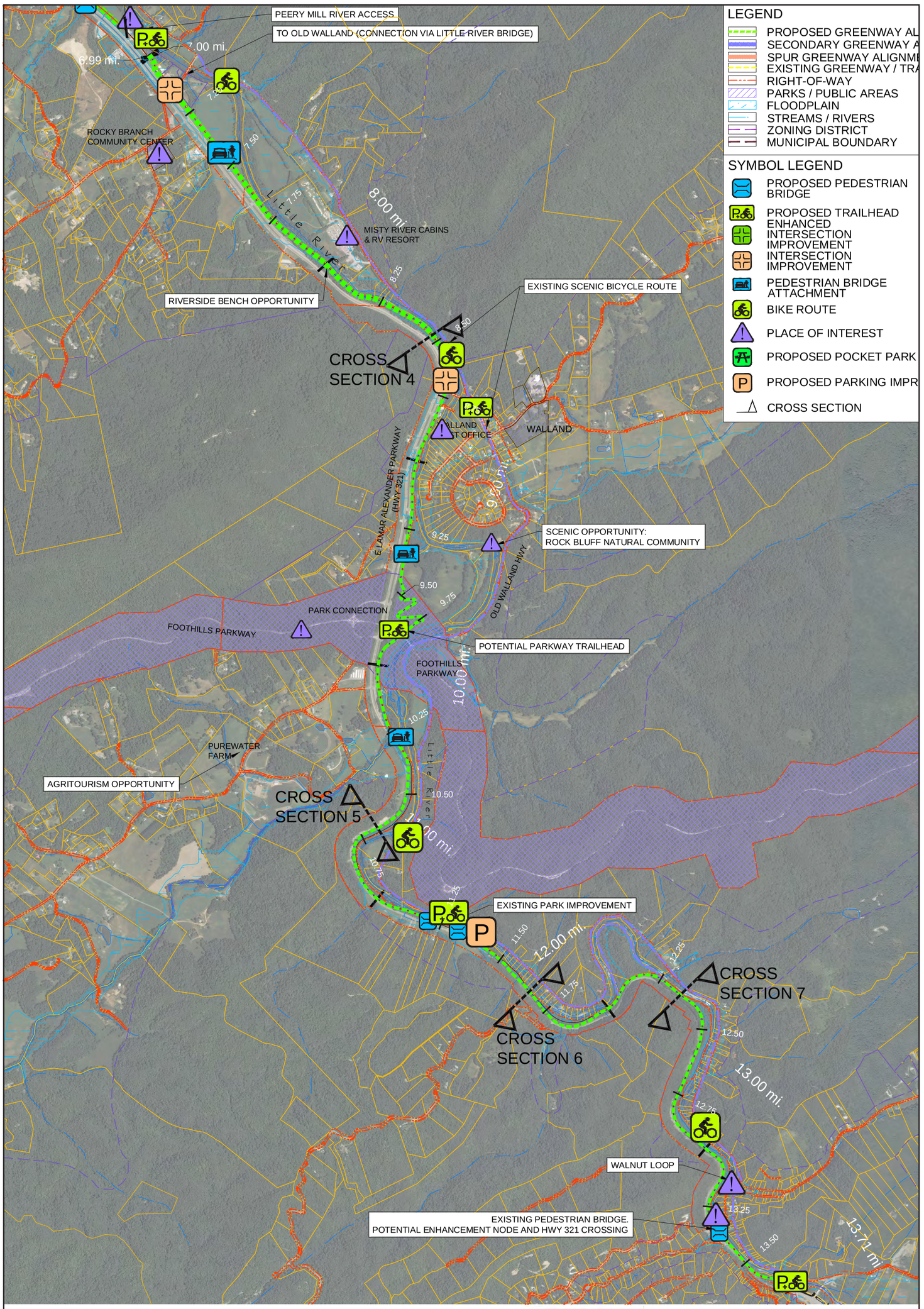


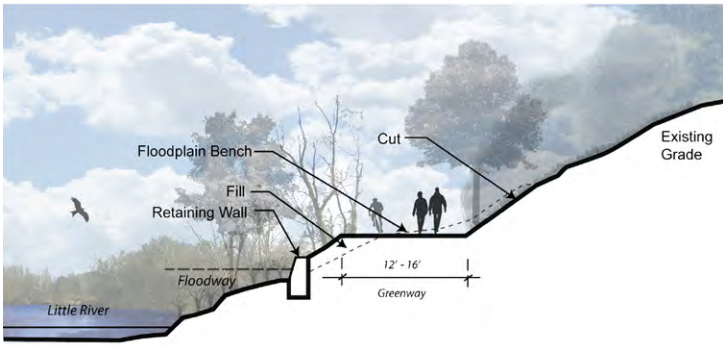
Corridor 3 : 6.73 mi.

Knoxville Regional Greenway Study: Maryville to Townsend

Corridor 3: Rural / Steep Wooded Corridor

Typology Overview

The character of the greenway is wooded and undulating with gradual ascending and descending portions that parallel the U.S. Highway 321 and the Little River, and feel the most removed from highway. Preservation of the riparian zone in this corridor will demand special consideration to minimize earthwork that may compromise the existing vegetation's ability to stabilize the banks of the Little River. Any landscape improvements should blend in with existing native vegetation and should be used as a buffer to Hwy 321. A cantilevered section of greenway is proposed for this section of the greenway due to the steep landforms through Walland Gap. Such a system will serve as a landmark feature for the Maryville-to-Townsend Greenway and will provide a destination for locals and visitors alike offering a unique walking and biking experience. Safety railings that span the cantilever



CROSS SECTION 4
LITTLE RIVER

and bridge sections within the corridor should utilize materials that minimize visual obstruction to the natural features within the Little River corridor. Other built features and amenities should be rustic with the use of natural materials like rough-hewn timber and boards, and simple and non-ornate designs of benches, kiosks, bridges, and other structures. The use of stone in columns, walls, and structural footings will also enhance the character as greenway users approach Townsend, the gateway community to Great Smoky Mountains National Park.

Corridor Prescriptions

Proposed Trailheads: Two trailhead opportunities lie within Walland Gap. These trailheads, combined with the trailheads at Perry's Mill (Corridor 2) and Townsend (Corridor 4), almost evenly divide Walland Gap providing exceptional resting and access opportunities for users and tourists.

RURAL/ STEEP WOODED CORRIDOR

CORRIDOR PRESCRIPTIONS:

SIGNAGE / MONUMENTS

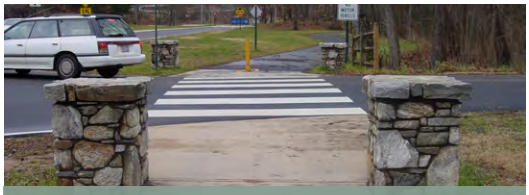


Figure 58—

Figure 59—

BENCHES

Figure 60—

FENCING

Figure 61—

BRIDGES

Figure 62—

RURAL/ STEEP WOODED CORRIDOR

CORRIDOR PRESCRIPTIONS:

LANDSCAPE TREATMENTS

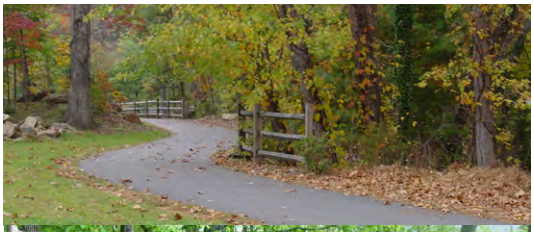


Figure 63—

SURFACE TREATMENTS

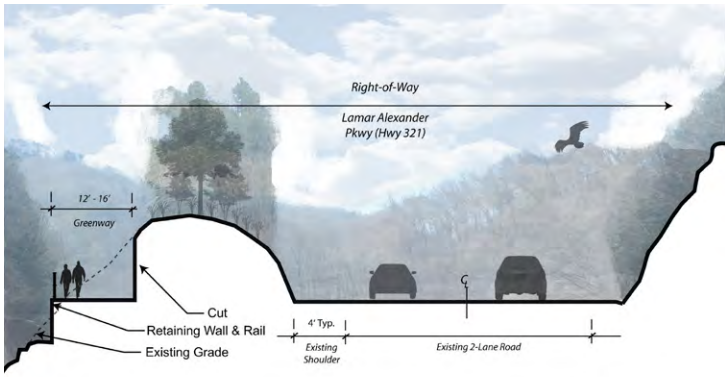
Figure 64—

WALLS

Figure 65—

INTERSECTION IMPROVEMENTS

Figure 66—



CROSS SECTION 5

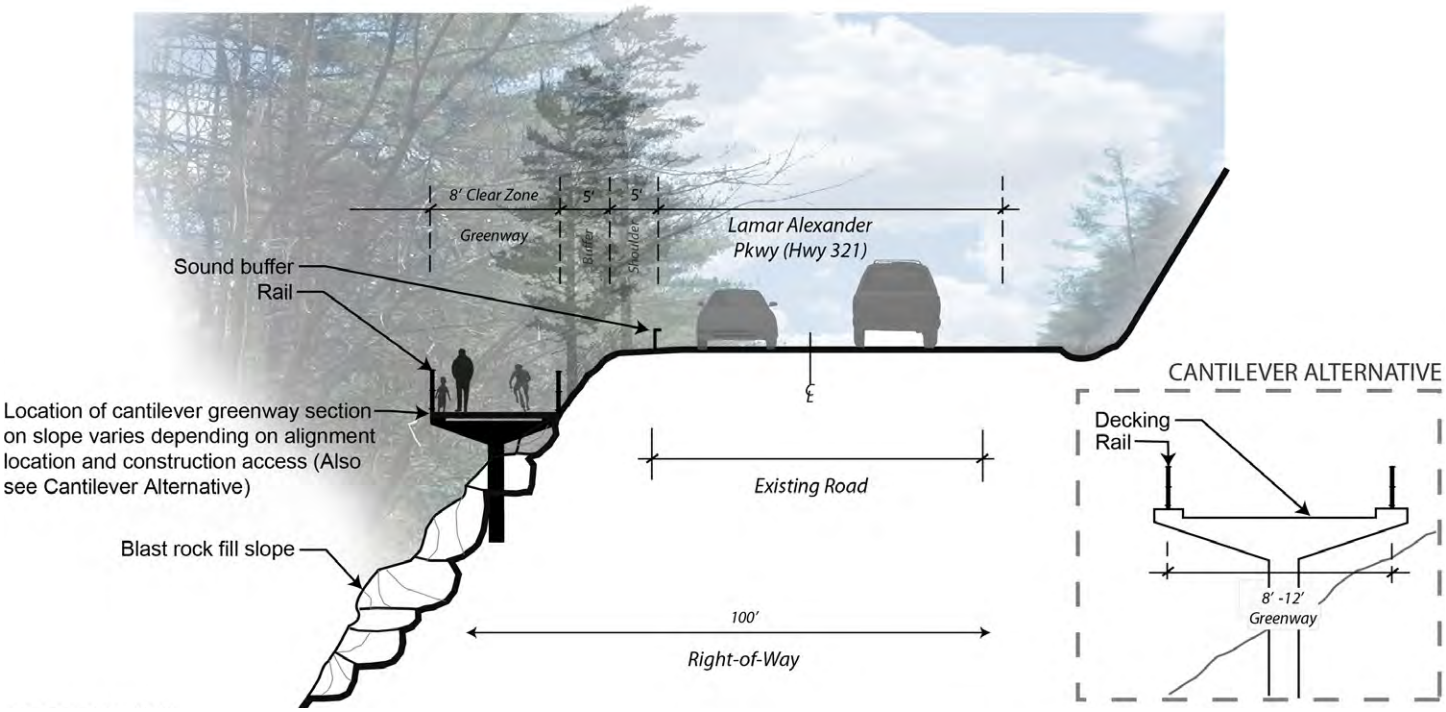
HWY 321 DOUBLE CUT

These trailheads should reflect those in the Great Smoky Mountains National Park, using similar materials and design principles.

One of the trailhead locations is proposed for the intersection of U.S. Highway 321 and the current terminus of the Foothills Parkway. Although the Foothills Parkway is closed northbound, many road cyclists park in this location and ride southbound. A large area to the east and west of this intersection is owned by the National Park Service. Use of these areas to accommodate a greenway alignment should be explored. The second potential trailhead location is currently being utilized as river access. Much of the parking is within TDOT right-of-way. There are opportunities to better define parking, and to provide restroom facilities, and trail and interpretive signage. However, based on tax data records there is a small sliver of land between right-of-way and the Little River that is privately owned. Blount County and TDOT should examine the land ownership in this location as it could serve as an important trailhead with river access.

Intersection Improvements: Few intersection improvements will be required in this corridor due to the trail alignment's location between U.S. Highway 321 and the Little River.

Signage: In addition to mile marker signs, the natural environment and wooded nature of this corridor provides opportunity for interpretive signage identifying native flora and fauna, history of the area and more.



CROSS SECTION 6

CANTILEVER OPTIONS

Figure 67—The relationship of the greenway to U.S. 321

BEFORE

AFTER

Fences / Walls: Structural elements will be numerous in this corridor, contributing to its expense as compared to other sections of the Maryville-to-Townsend Greenway. An existing roadbed is located along the Little River within the floodplain/ floodway. However, this roadbed abruptly terminates in several locations into spoil slopes which were generated by the construction of U.S. Highway 321. Trail construction will have to minimize impacts in these area as they provide stability for the highway. These slopes often exceed 1:1 (1 foot horizontal for 1 foot vertical), or 50%. Geo-technical exploration will be required when considering constructing footings within the slope.

Use of the Right-of-Way: The TDOT right-of-way stretches from the upper slopes above U.S. Highway 321 to the Little River (averaging 200 feet), and for the most part provides adequate space for a greenway trail. In limited circumstances greenway easements may be needed to locate the greenway along the Little River or address topographical challenges.

Places of Interest & Unique Features: The main

Figure 68—The cantilever option

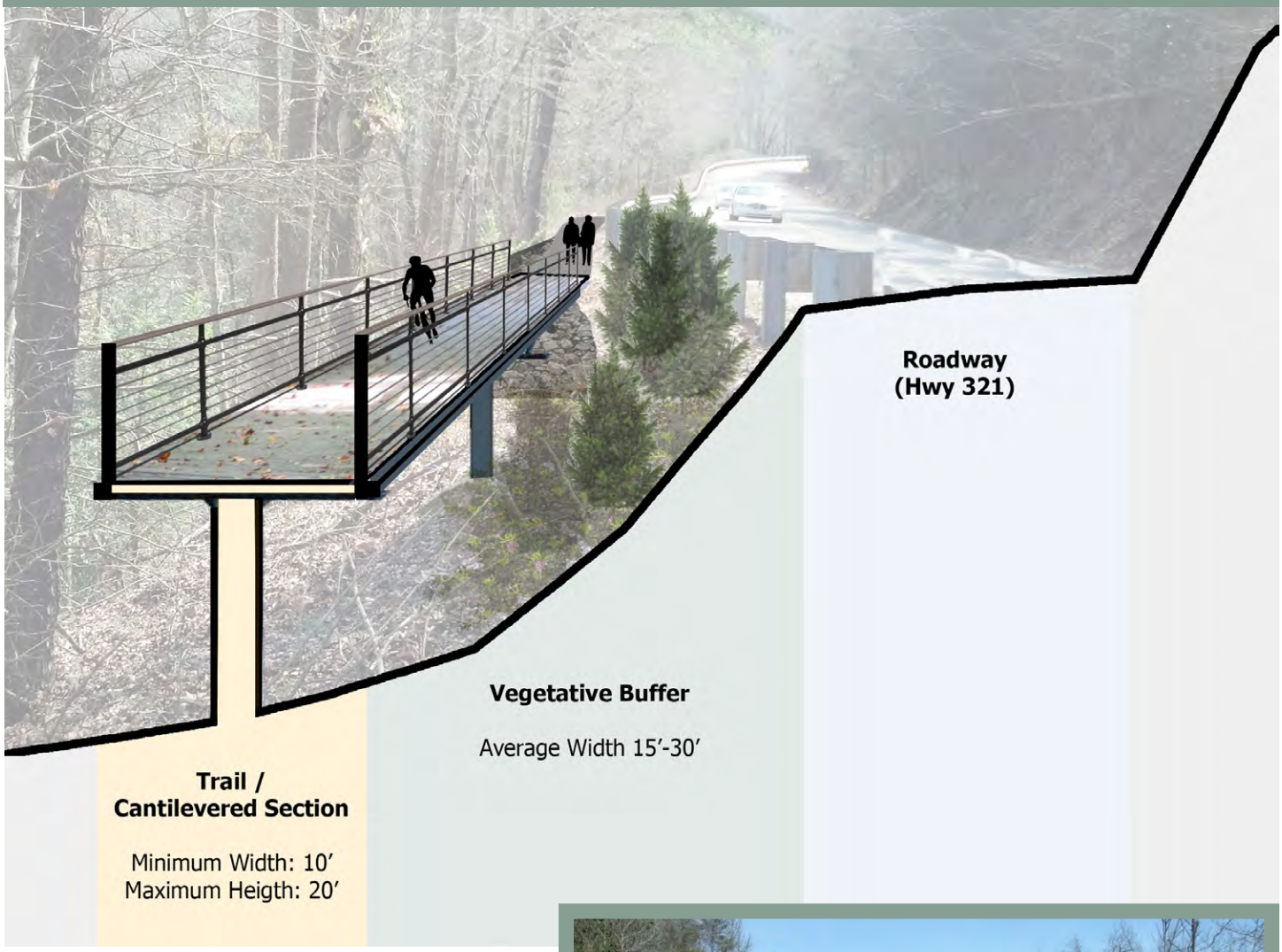
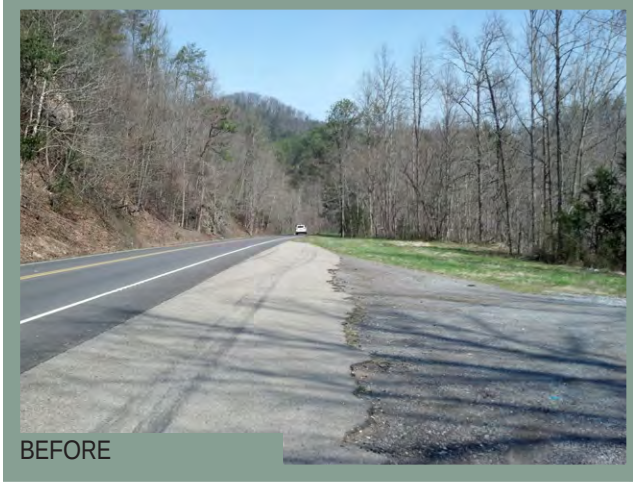


Figure 69—Greenway parking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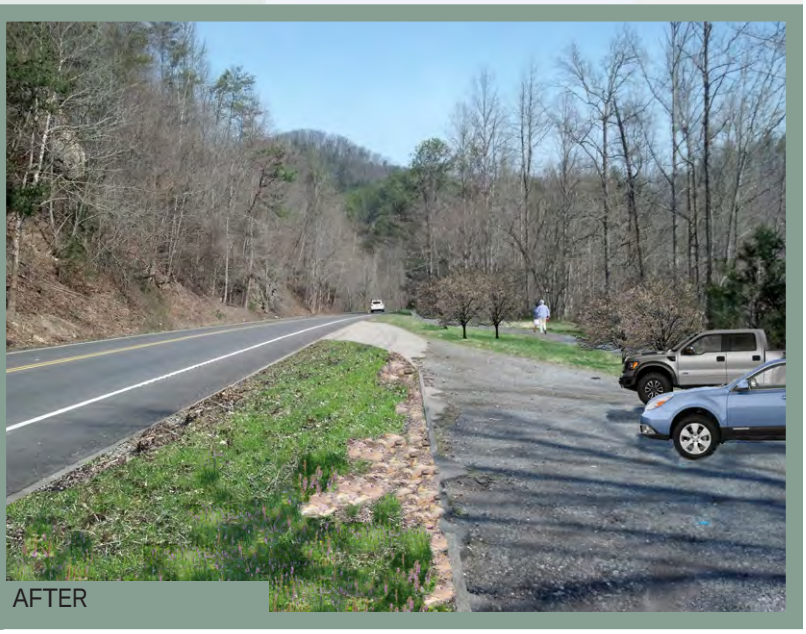
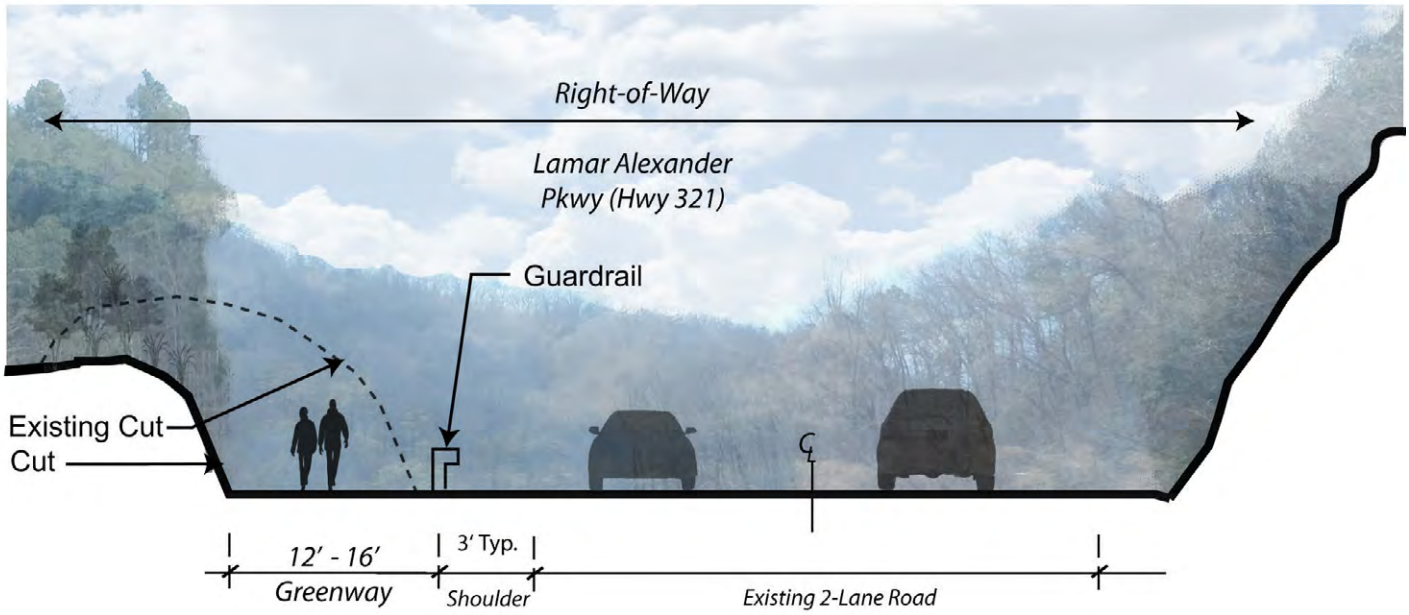
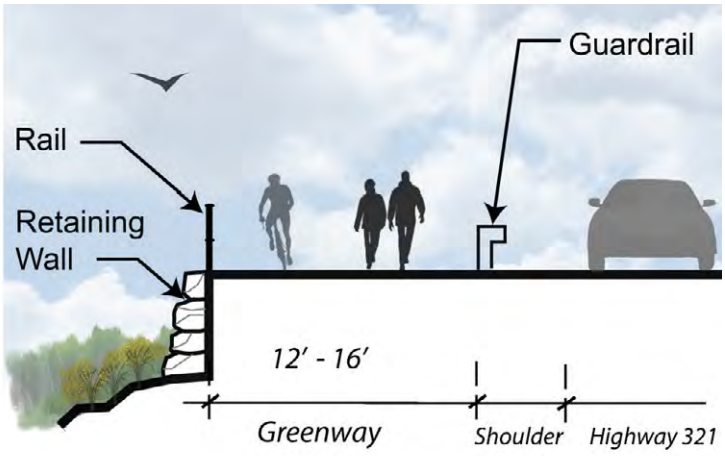

AFTER



CROSS SECTION 7

U.S. 321



CROSS SECTION 8

U.S. 321 ON-GRADE OPTION

Figure 70—Example Of Creating Separation From Roads

feature of this section is the Little River, which flows down from its source on the northern slopes of Clingmans Dome en route to the flatlands of Blount County. The river's valley divides Hurricane and Bates Mountain and splits a gap through Chilhowee Mountain. Historically this valley provided a convenient bottom land for trails and roads linking the coves of the Northern Smokies. The geology of Walland Gap is inherently interesting providing exceptional opportunities for wildlife viewing, recreational river access, and natural system interpretive signage.

In addition, the area on U.S. Highway 321 adjacent to the existing pedestrian bridge (across the Little River) near Long Branch Road would make a good commercial node due to its visibility and its proximity to Townsend.

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CONNECTION TO CORRIDOR 3

ENHANCED GATEWAY PLAZA SEE BLOWUP

"WORM" SPLIT RAIL FENCING

EXISTING GREENWAY

EMERGENCY SHOULDER

PLANTING BUFFER (MIN.)

RESTROOM FACILITY (VAULTED TOILET)

FORMALIZED PARKING

ENTRY SIGN/KIOSK

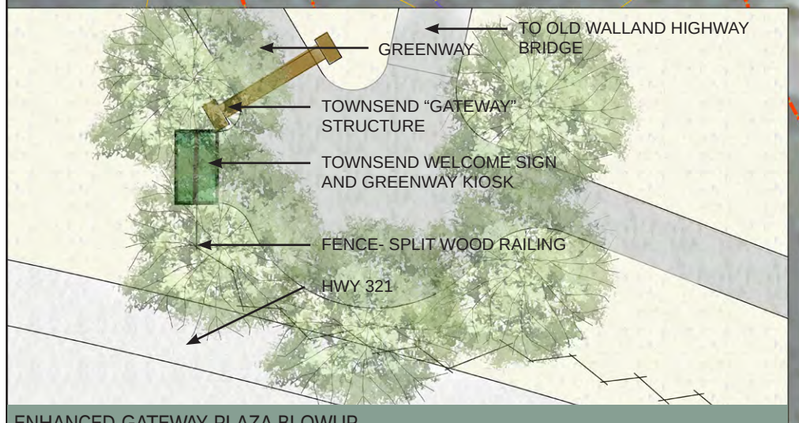
28 spaces

LEGEND

- PROPOSED GREENWAY ALIGNMENT
- SECONDARY GREENWAY ALIGNMENT
- SPUR GREENWAY ALIGNMENT
- EXISTING GREENWAY / TRAIL CONNECTION
- RIGHT-OF-WAY
- PARKS / PUBLIC AREAS
- FLOODPLAIN
- STREAMS / RIVERS
- ZONING DISTRICT
- MUNICIPAL BOUNDARY

SYMBOL LEGEND

- PROPOSED PEDESTRIAN BRIDGE
- PROPOSED TRAILHEAD
- ENHANCED INTERSECTION IMPROVEMENT
- INTERSECTION IMPROVEMENT
- PEDESTRIAN BRIDGE ATTACHMENT
- BIKE ROUTE
- PLACE OF INTEREST
- PROPOSED POCKET PARK
- PROPOSED PARKING IMPROV
- CROSS SECTION



ENHANCED GATEWAY PLAZA BLOWUP

CORRIDOR 4 : 0.00 Mi. (ENHANCEMENT)

Knoxville Regional Greenway Study: Maryville to Townsend

SCALE 1" = 60'

60 30 0 60 120 180

MOUNTAIN VILLAGE

CORRIDOR PRESCRIPTIONS:

SIGNAGE / MONUMENTS

Figure 73

Corridor 4: Mountain Village Corridor

Typology Overview

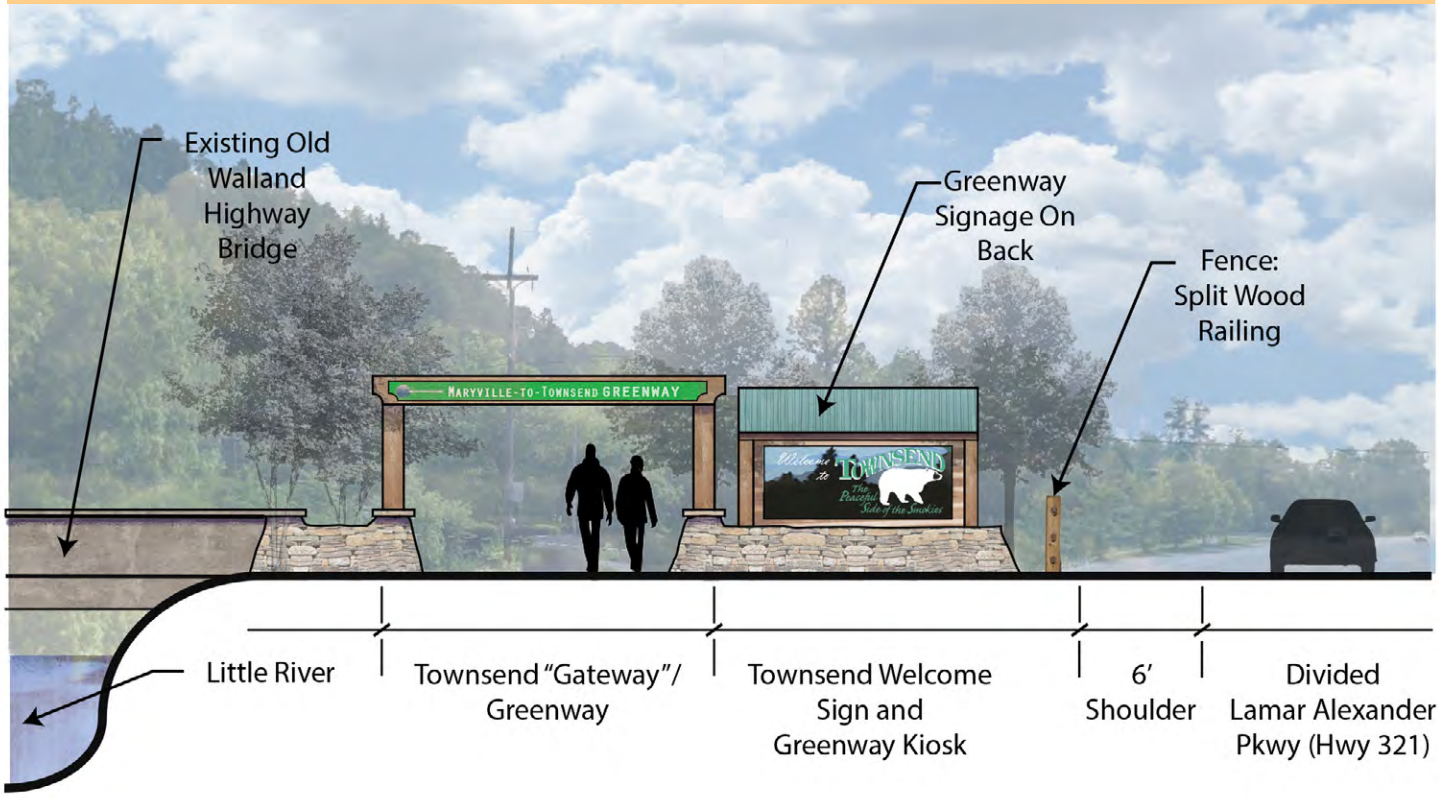
The termination of this corridor is where the proposed greenway meets the current Townsend greenway. This section of the greenway can act as an iconic gateway entrance into the mountain village of Townsend. This corridor doubles as a trailhead and visual welcoming to Townsend. Currently there is a very small "Welcome to Townsend" sign. Proposed improvements would elevate recognition of the greenway as well as the entrance into Townsend. The corridor should borrow on themes from the current greenway as well as visual elements from Great Smoky Mountain National Park and the Foothills Parkway. Improvements should include the use of stone and rough-hewn timber, and can have an increased concentration of plantings along the approach into Townsend.

Corridor Prescriptions

Proposed Trailheads: There is currently a small parking lot/ trailhead along the existing Townsend Greenway. The parking area is approximately ¼ mile east of where the current greenway terminates at the Old Walland Highway bridge. The trailhead is relatively unimproved lacking signage and plantings.

CROSS SECTION 9

HWY 321 AND THE TOWNSEND GATEWAY



Enhancement of this trailhead should reflect the materials, character, and craftsmanship of trailheads found in the Great Smoky Mountains National Park.

Intersection Improvements: No significant intersection improvements are needed but it is important to note that there is an existing pedestrian underpass just east of where the proposed and existing greenways connect.

Signage : Two signage areas are needed for better way-finding and awareness of the greenway. Signage at the parking area could be used to better inform greenway users of nearby destinations in Townsend as well as the distance to both Townsend and Maryville. A trailhead kiosk with map of the entire greenway corridor is proposed at the Old Walland Highway Bridge. This kiosk would display the greenway map on one side and then serve as a gateway welcome sign into Townsend on the other.

Fences / Walls: Split rail fencing is needed from the kiosk area to the Cameron Road intersection to deter users from crossing the busy highway instead of using the pedestrian underpass which is not immediately visible from the kiosk.

Use of the Right-of-Way: The area recommended for trailhead/ kiosk improvements would reduce the amount of pavement that is being used currently as an informal parking area.

Places of Interest & Unique Features: One other feature of the trailhead/ kiosk area is a "gateway threshold" or built arch from stone and wood that would give greenway users and passing automobiles an iconic feel of "passing through" into Townsend.

MOUNTAIN VILLAGE

CORRIDOR PRESCRIPTIONS:

FENCING / BRIDGES

Figure 80—

LANDSCAPE TREATMENTS

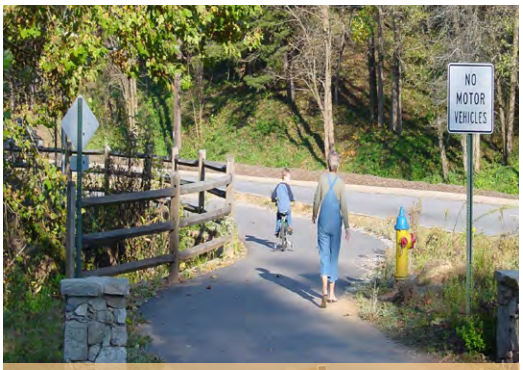


Figure 81—

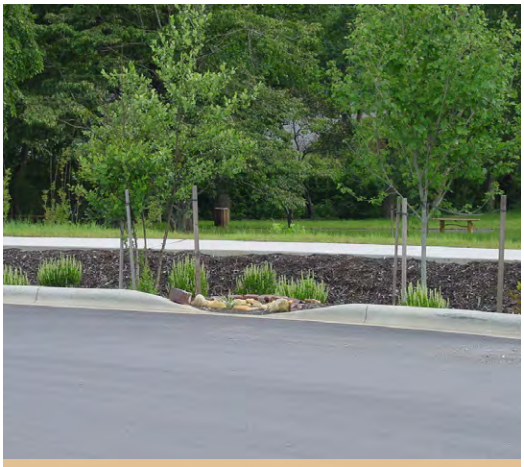


Figure 82—

WALLS

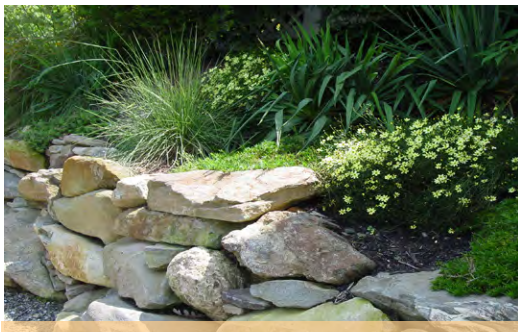


Figure 83—