

MEMORANDUM

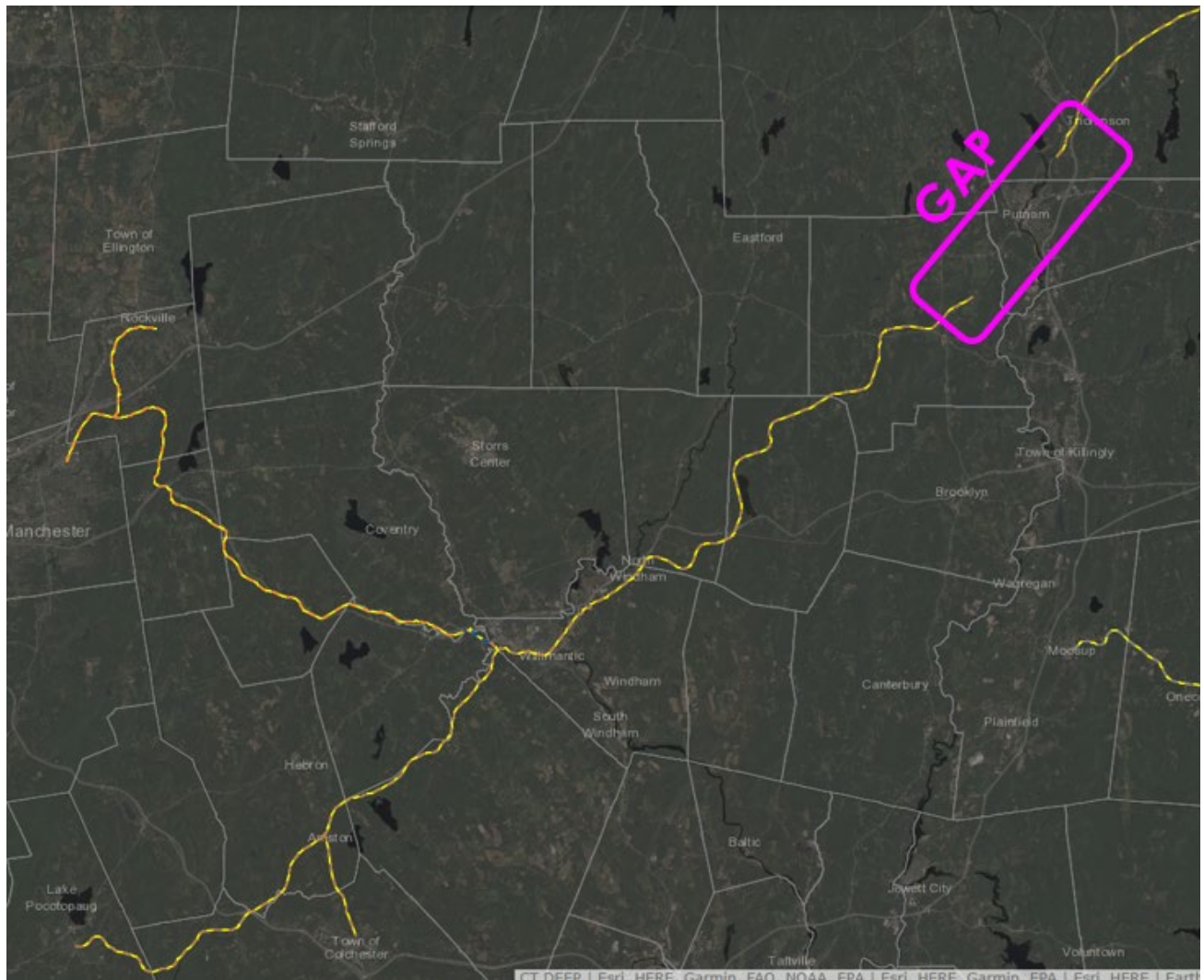
TO: Elaine Sistare (Town of Putnam)

FROM: Ryan Chmielewski and Cass Chroust (Weston & Sampson)

DATE: July 14, 2022

SUBJECT: Air Line Trail Gap Connection – Executive Summary

The Town of Putnam, Connecticut is working with Weston & Sampson to address the current “gap” between the Town of Putnam’s River Trail and the State of Connecticut’s Air Line Trail State Park. The approximate 1.8-mile gap is generally located between the intersection of Kennedy Drive and Providence Street in Putnam and the Air Line Trailhead located on Riverside Drive in Thompson, Connecticut.



The Town of Putnam was awarded a State of Connecticut Department of Energy and Environmental Protection (CTDEEP) Grant to use towards finding solutions to the gap between the Putnam River Trail and the Air Line Trailhead in Thompson, Connecticut.

The objective of connecting these two trailheads is to provide a safe and pleasant multi-use connection for both transportation and recreation as well as serve as a crucial spur in the East Coast Greenway trail.



Project Extents

PHASE 1 ALTERNATIVE EVALUATION OVERVIEW

A review of the existing conditions, opportunities, and constraints of multiple route alignments and input from various project stakeholders have resulted in a recommendation to pursue a preferred trail alignment that would maximize trail utility and recreational quality.

PROJECT STUDY AREA SITE WALK

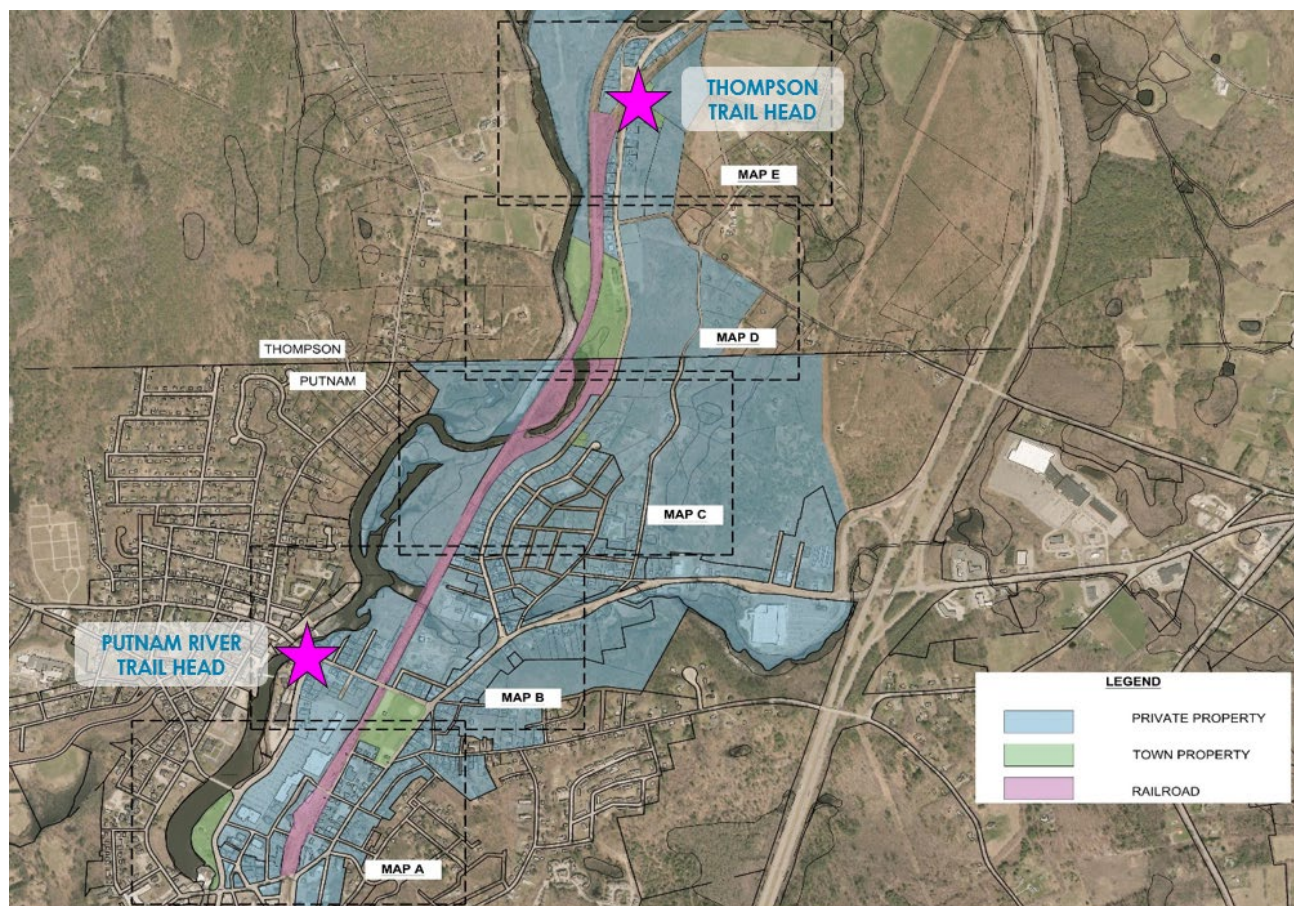
A comprehensive site walk with Town representatives, including members of the Putnam and Thompson Trail Committees, was performed on July 7, 2021. The extents of the walk included walking the rail corridor, properties adjacent to the rail corridor, Mechanics Street, School Street, and Providence Street.





PROPERTY OWNERSHIP MAP

The study area encompasses municipal, railroad, and private properties. The following property ownership map identifies privately-owned property (blue), town-owned property (green), and railroad-owned property (pink).



The railroad corridor is listed as being owned and operated by Providence and Worcester Railroad on a regular basis for freight purposes. Providence and Worcester is owned by a parent company, Genesee & Wyoming, Inc. (www.gwrr.com) through an acquisition in 2016.

TRAIL ROUTE EVALUATION

The primary route alignments were evaluated to compare the benefits and costs of each alternative. The evaluation is meant to realistically compare routes rather than indicate a decision on which route alignment should be progressed into design and construction. The selection of route alignments for consideration focused on seeking an alignment that separates trail users from vehicle traffic as much as possible. Each route was evaluated on user qualities, feasibility criteria, and property owner impacts.

User Quality Criteria

SAFETY

Safety for users can be both an actual and perceived concern. This criterion focused on design safety and evaluated potential conflicts with motor vehicles, conflicts between pedestrians and cyclists, and the perceived safety of the multi-use path by accessing whether a route provides greater visibility and access.

BIKE/PEDESTRIAN CONNECTION

This criterion evaluated connections to existing facilities and destinations for trail users and the ability to meet AASHTO's design standards for multi-use paths.

ACCESSIBILITY

This criterion evaluated how easily the route can be accessed from adjacent sites, facilities, and destination points. Accessibility is important to accommodate users of all abilities and skill levels.

Feasibility Criteria

ENGINEERING

Each alternative is evaluated based on engineering constraints, the complexity of each route and challenges that may be encountered. Engineering challenges may include topography, traffic conflicts, and/or railroad crossings. Potential environmental impacts are considered such as water resources, endangered species habitat, and cultural resources.

IMPLEMENTATION

The implementation criteria include constructability, which involves access to the site for construction crews, work zone traffic control, and utility coordination. This also considers potential construction impacts like changes to drainage patterns, proximity to residential and commercial uses, impacts on vegetation, and roadway impacts.

COSTS

The potential cost of each alternative is an important consideration. Some routes may be fiscally prohibitive. Planning level cost estimates are considered when evaluating each alternative.

Operations Criteria

IMPACT ON VEHICLE AND ROADWAY OPERATIONS

Qualitative assessment of impacts to vehicle and roadway operations.

IMPACT TO PROPERTY OWNER OPERATIONS

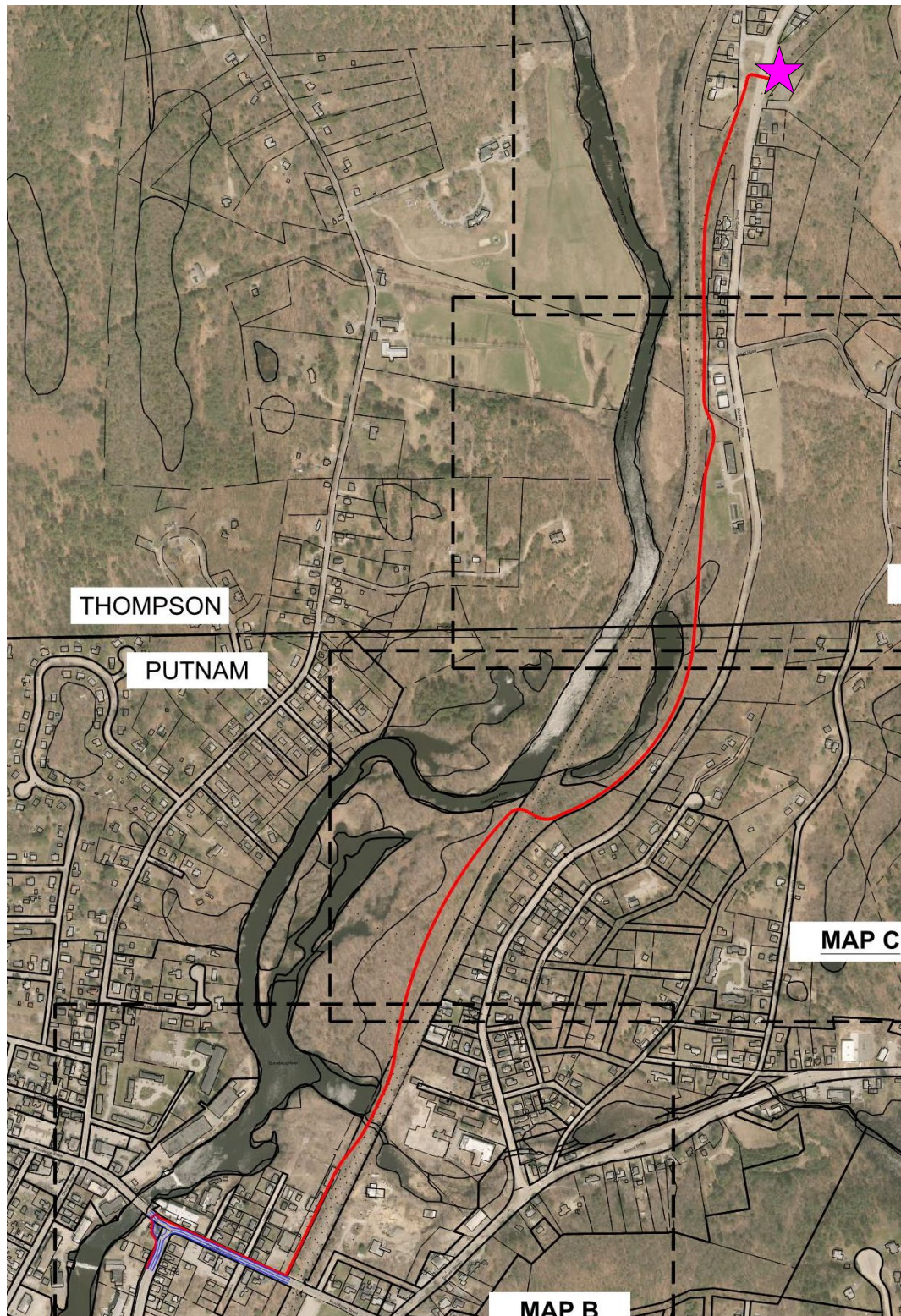
Assessment of impact to public or private property owner maintenance and operations.

POTENTIAL TRAIL ROUTE ALIGNMENTS

See below for the four (4) primary trail route alignments investigated. Information includes key dimensions of trail width, shoulder, road lane widths and requirements, etc.

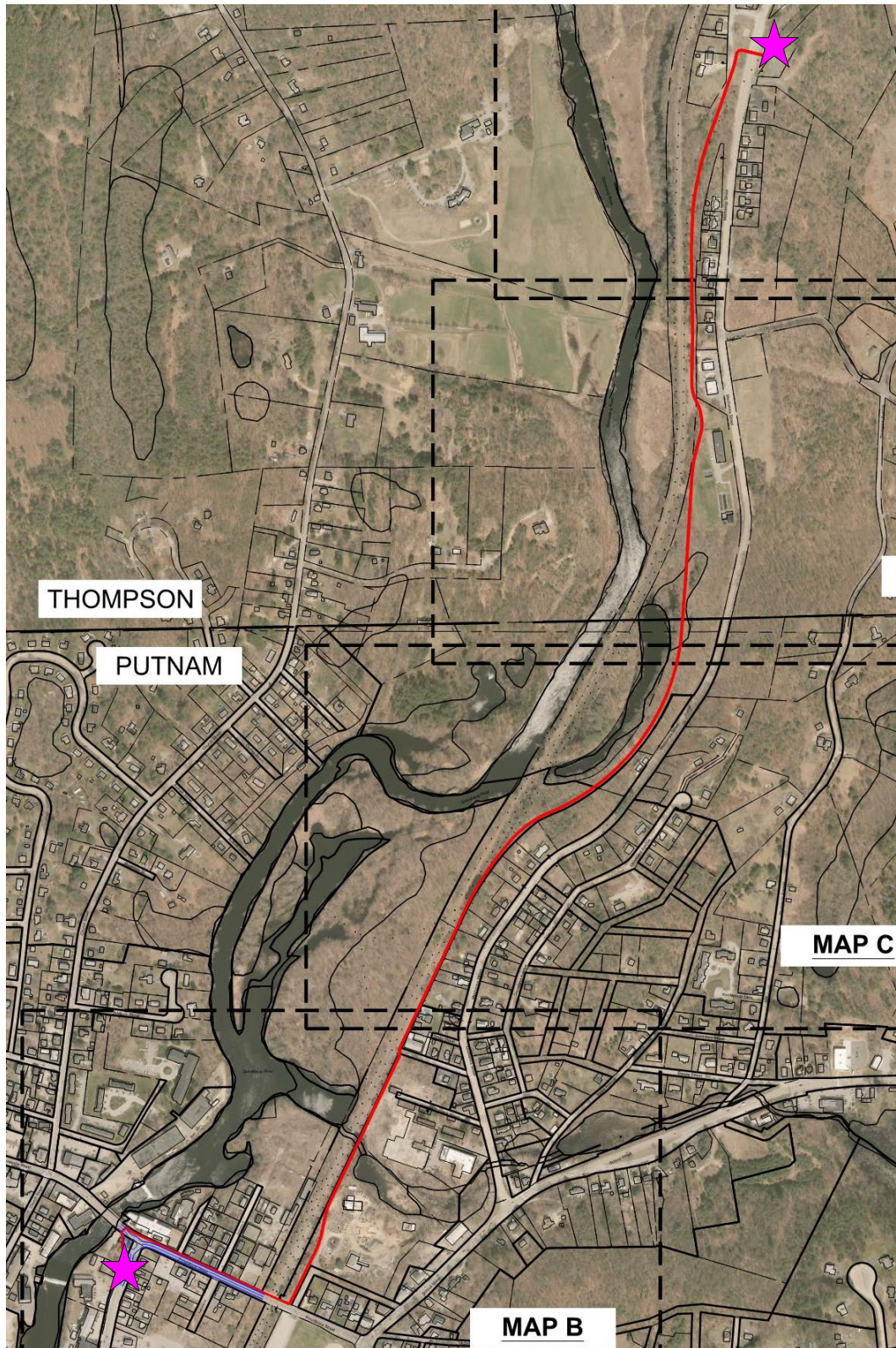
Option 1

This route is located mostly off-street and travels along the western side of the railroad in Putnam before crossing the east side of the tracks near the Putnam / Thompson border. At the crossing, the trail follows the abandoned trolley line and behind the Thompson Wastewater Treatment Plant before entering the small neighborhood park in Thompson and crossing Mechanics Street to connect to the existing Air Line Trailhead.



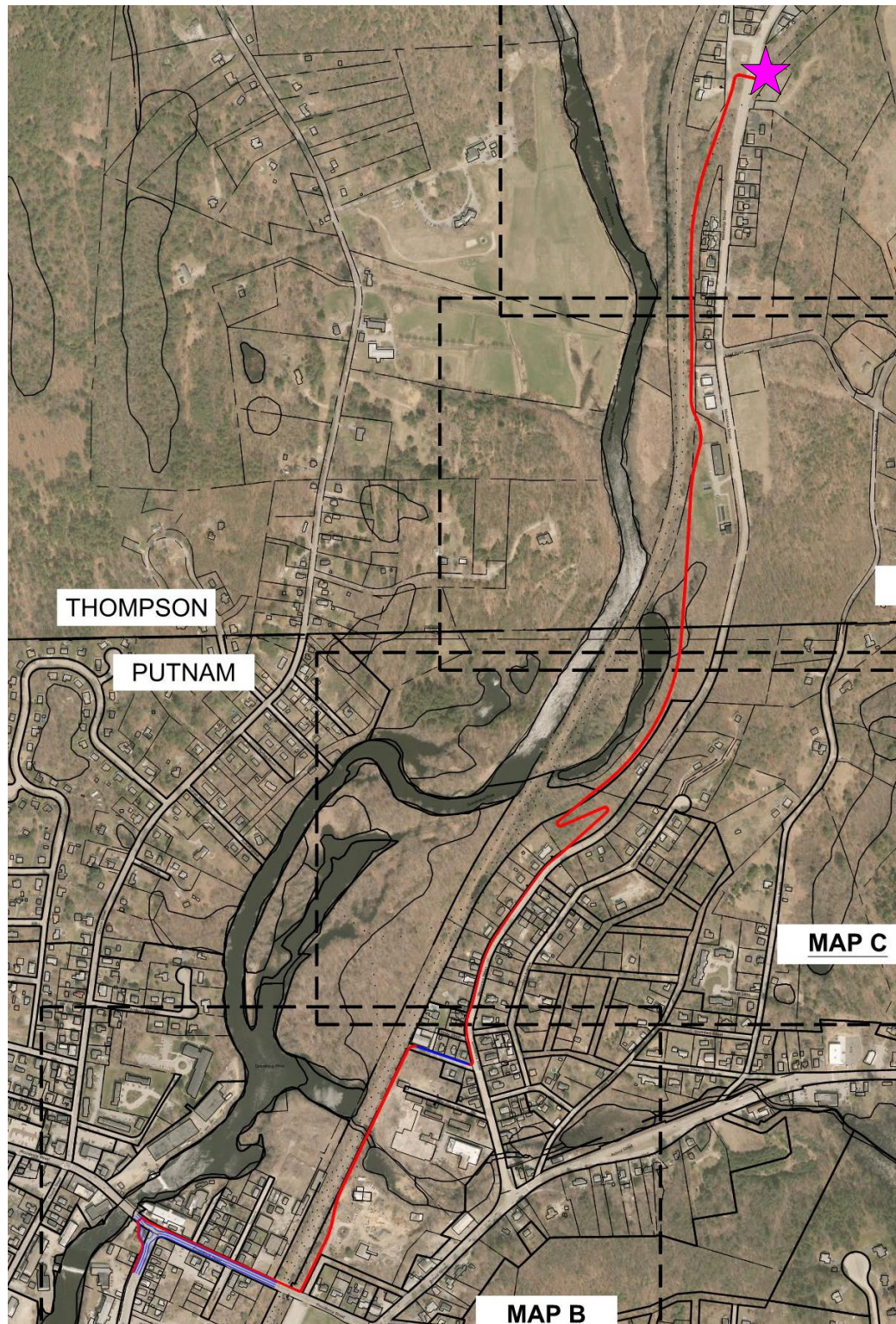
Option 2

This route is located mostly off-street and travels entirely on the eastern side of the rail corridor before following the same northern alignment as Option 1 at the abandoned trolley line.



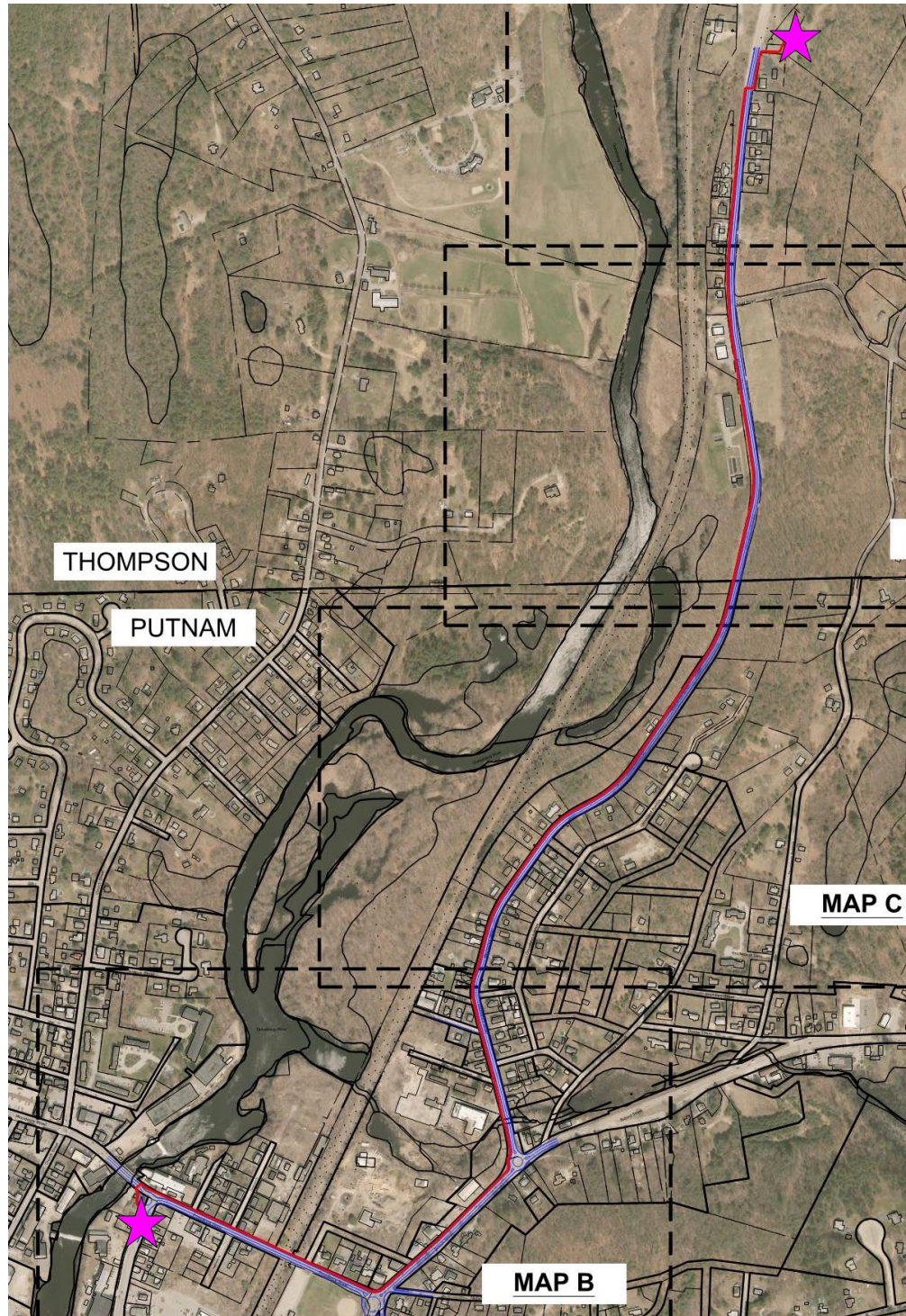
Option 3

This route is partly off-street and partly on-street. Like Option 2, it travels along the eastern side of the railroad in Putnam, but turns east onto Intervale Street past Deary Brothers Ice Cream Stand. Next, it travels north onto the west side of Mechanics Street before turning into 174 Mechanics Street, a vacant property, to traverse down slope onto the abandoned trolley line. From there it follows the same northern alignment as Options 1 and 2.



Option 4

This route is entirely on-street and requires modifications to the existing roadway layouts and proposes three (3) roundabouts to provide a consistent pathway width, shoulder widths, and maintain separation from vehicles. The pathway is located on the north side of Providence Street, west side of School Street, and the west side of Mechanics Street. A 90' roundabout is proposed at the corner of Kennedy Drive and Providence Street, a 120' roundabout at the intersection of Providence and School Street, and a 90' roundabout at the intersection of School Street and Mechanics Street. Two street crossings are proposed near each trailhead in Putnam and Thompson.



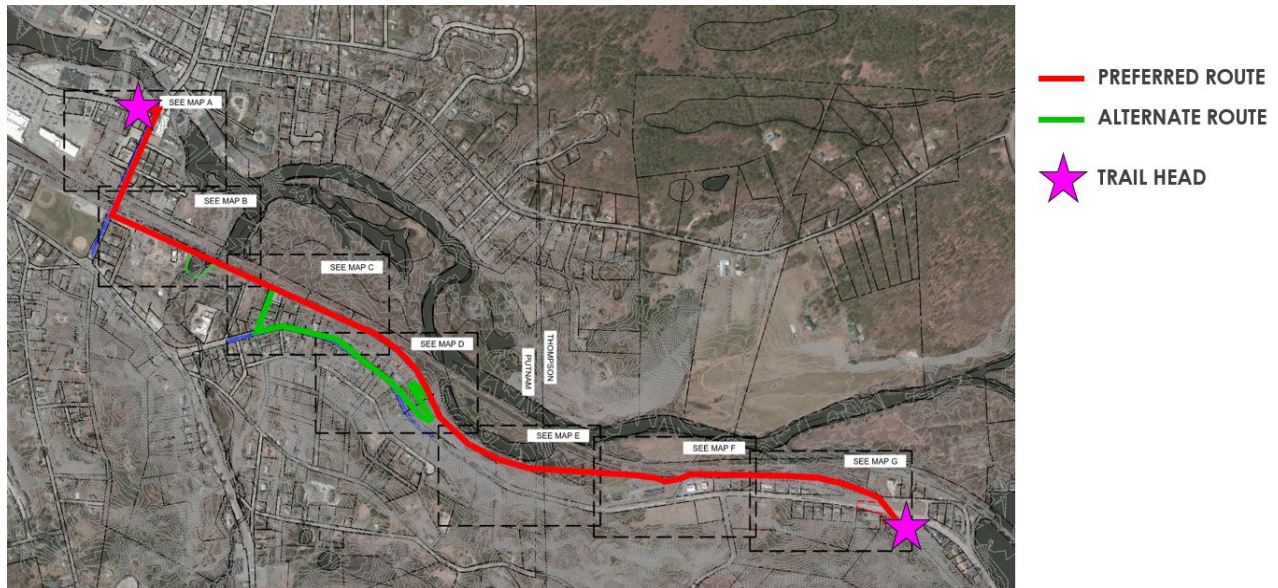
EVALUATION PROCESS – TRAIL EVALUATION MATRIX

A ratings matrix was developed and each potential trail route was evaluated individually across a range of criteria. The rating of each criteria score was weighted to better reflect its importance to Putnam in determining a preferred route. It is important to note that the score of the Railroad Easements Needed rating was weighted at a much higher level than the others due to the inherent challenges (time, acquisition cost, design acceptance, etc.) of securing the right-of-ways from the various railroad entities. A summary of the matrix is shown in the table below.

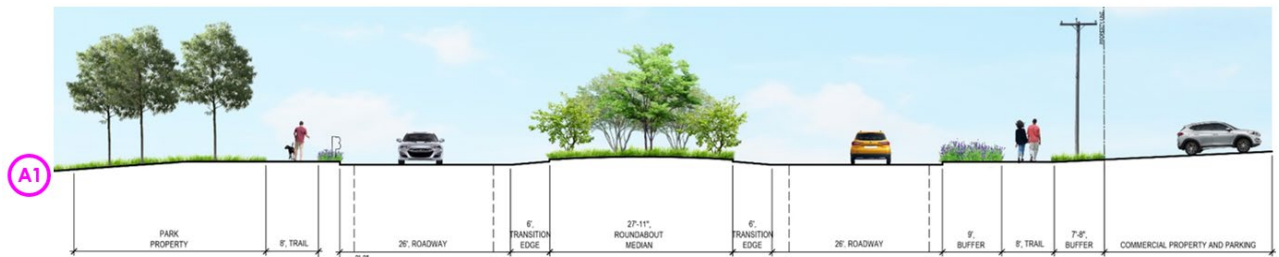
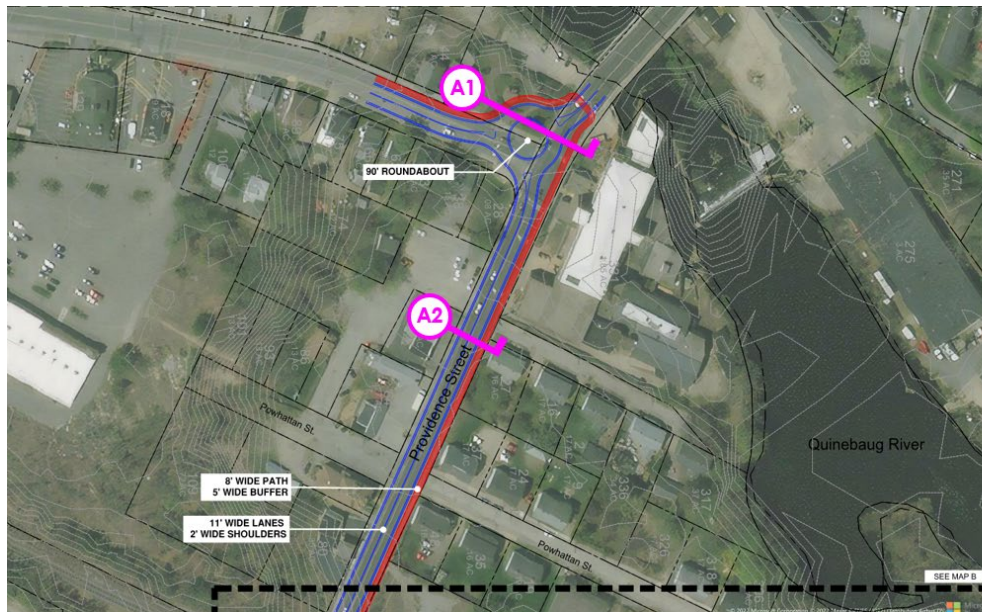
TRAIL EVALUATION MATRIX - PATHWAY OPTIONS									
PUTNAM, AIRLINE GAP MULTI-USE TRAIL									
SELECTION CRITERIA	PRIORITY	RANKING				WEIGHTED SCORE (PRIORITY x RANKING)			
DESCRIPTION	RATING	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 1 SCORE	OPTION 2 SCORE	OPTION 3 SCORE	OPTION 4 SCORE
DOWNTOWN CONNECTIVITY / ACCESS	3	3	3	3	3	9	9	9	9
SAFETY	3	3	3	2	2	9	9	6	6
STREET CROSSINGS (MID-BLOCK)	2	3	3	2	2	6	6	4	4
DRIVEWAY CROSSINGS	1	3	3	2	1	3	3	2	1
RAILROAD CROSSINGS	3	1	3	3	3	3	9	9	9
RAILROAD EASEMENTS NEEDED	5	1	1	2	3	5	5	10	15
PRIVATE PROPERTY EASEMENTS NEEDED	3	1	1	2	2	3	3	6	6
PROPERTY ACQUISITION NEEDED	3	2	2	1	3	6	6	3	9
STREET RECONSTRUCTION NEEDED	3	3	3	2	1	9	9	6	3
PEDESTRIAN BRIDGE NEEDED	2	1	1	3	3	2	2	6	6
STREET INTERSECTIONS	2	3	3	2	2	6	6	4	4
CROSSWALK CONNECTIONS	3	3	3	2	2	9	9	6	6
EXISTING STREET ALIGNMENT IMPACT	3	3	3	2	1	9	9	6	3
ABUTTERS - DRIVEWAY IMPACTS	1	3	2	2	1	3	2	2	1
ABUTTERS - FRONT YARD IMPACTS	2	3	3	2	1	6	6	4	2
TOPOGRAPHY	2	3	3	2	3	6	6	4	6
WETLAND IMPACTS	2	1	1	2	3	2	2	4	6
MAINTENANCE	2	3	3	2	1	6	6	4	2
COST ORDER OF MAGNITUDE	4	1	1	3	1	4	4	12	4
NDDP/ TREE IMPACTS	1	1	2	2	3	1	2	2	3
UTILITY CONFLICTS - OVERHEAD & WATER	1	3	3	3	1	3	3	3	1
TOTALS		48	50	46	42	110	116	112	106

PREFERRED ROUTE

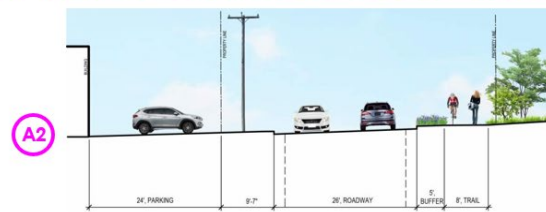
The highest scoring route in the matrix evaluation is Option 2 due to its consistent off-road alignment. Aligning the trail on the east side of the rail corridor eliminates the need to cross the active railroad tracks.



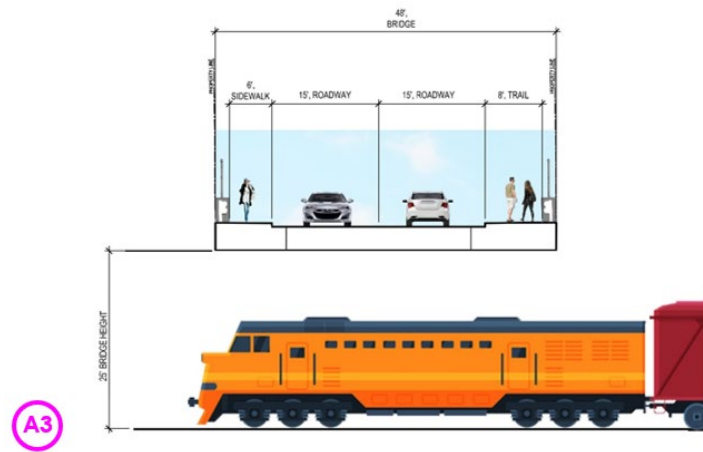
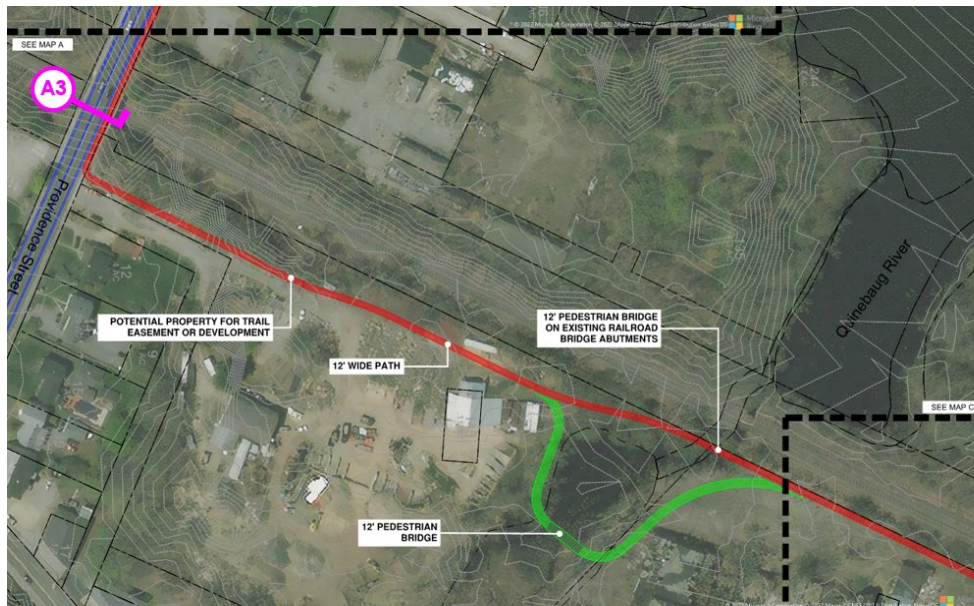
The southern portion of the route begins by proposing a roundabout at the intersection of Kennedy Drive and Providence Street. In this road configuration, the existing turn lane on Providence Street can be eliminated to make room for the proposed trail as a side path. It is important to note that the Town of Putnam owns the two properties on each corner of this intersection. After going east on the northern side of Providence Street, the trail turns north off-road into the commercial property at 35 Providence Street. Further investigation will need to be performed in this area where the trail crosses the water body named Little Dam Tavern Brook due to the wider extents of the railroad right-of-way in this area. The alignment continues north parallel to the railroad right-of-way through 2 Furnace Street. After Intervale Street, the trail travels north along the eastern edge of the railroad right-of-way. The trail continues north behind the residential properties on Mechanics Street. The trail curves east away from the active railroad tracks to follow the old trolley line rail bed. The trail continues north along the old trolley line and onto the Thompson water treatment facility property. The alignment follows the old trolley line to the pocket park in Thompson where it crosses Riverside Drive, either at grade or via tunnel, to connect to the existing trailhead in Thompson. Note that Mechanics Street in Putnam becomes Riverside Drive in Thompson.



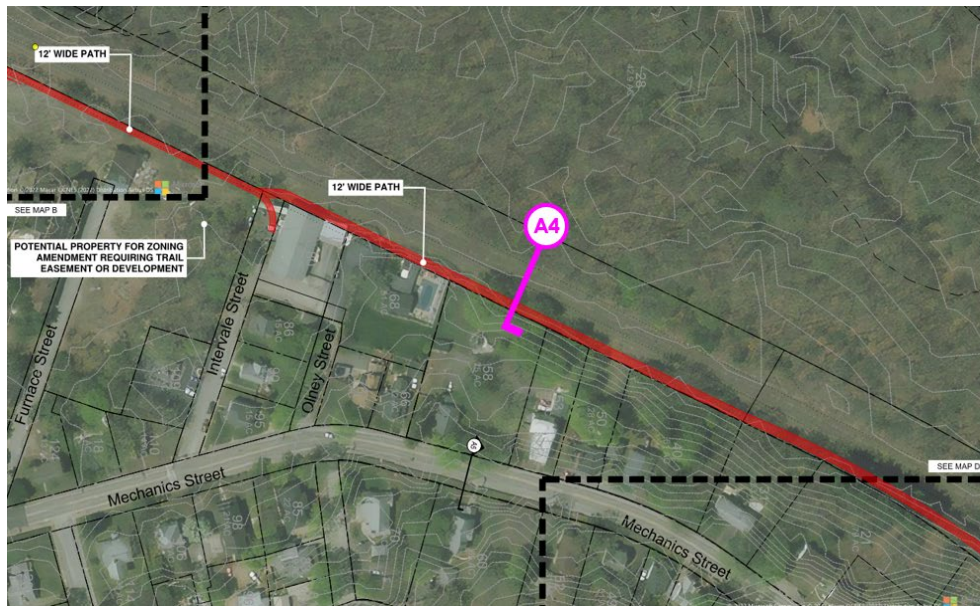
90' ROUNDABOUT AT PROVIDENCE ST + KENNEDY DR



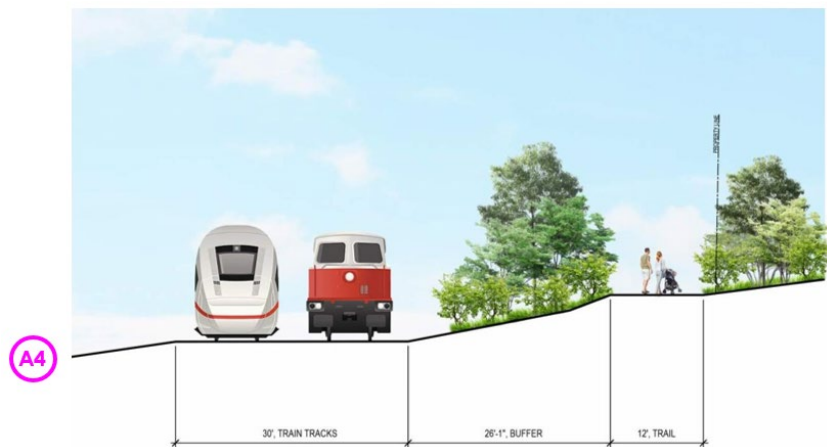
PROVIDENCE ST



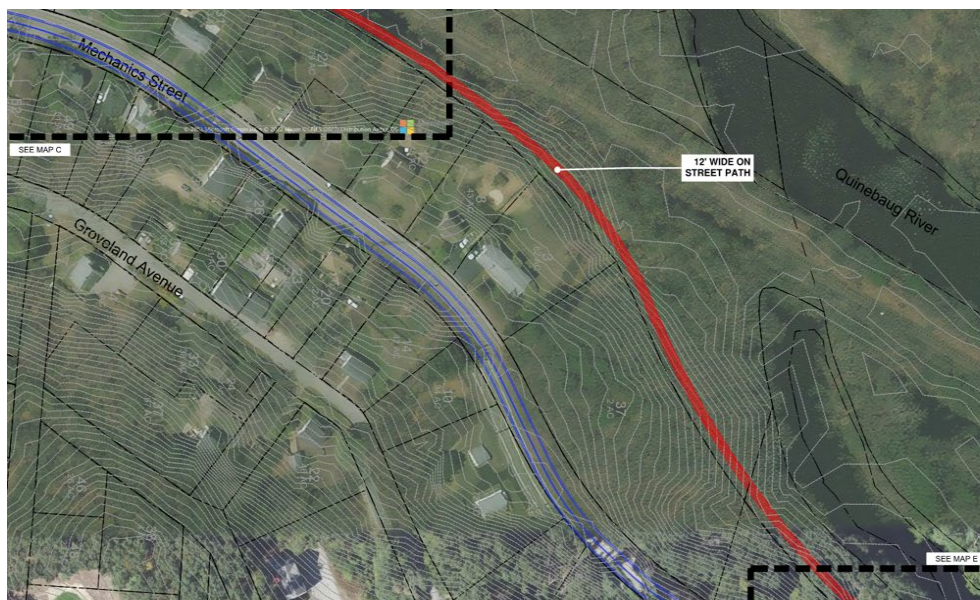
PROVIDENCE ST BRIDGE OVER RR TRACKS



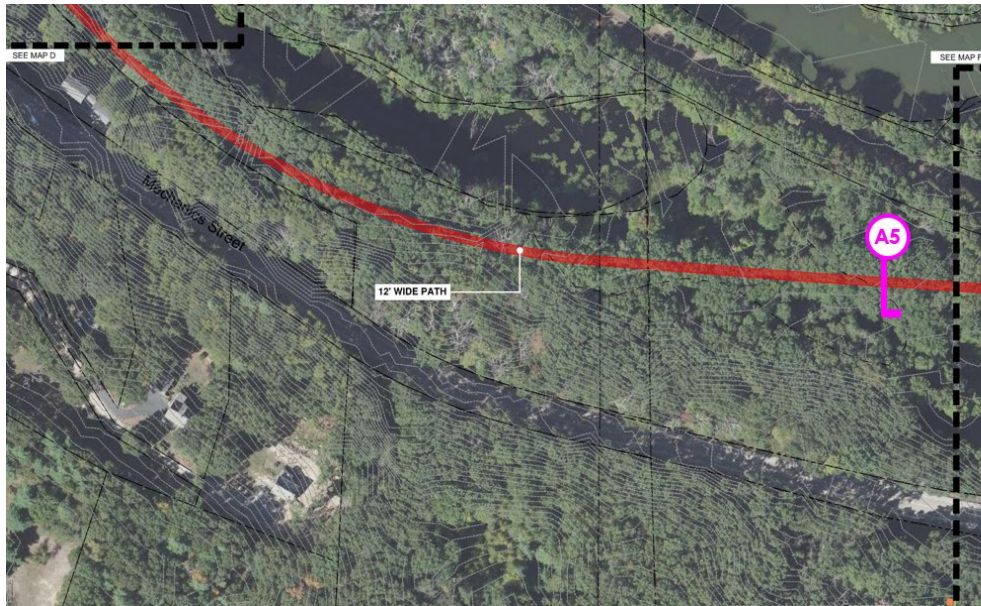
PREFERRED TRAIL ROUTE



ROUTE IN RR ROW



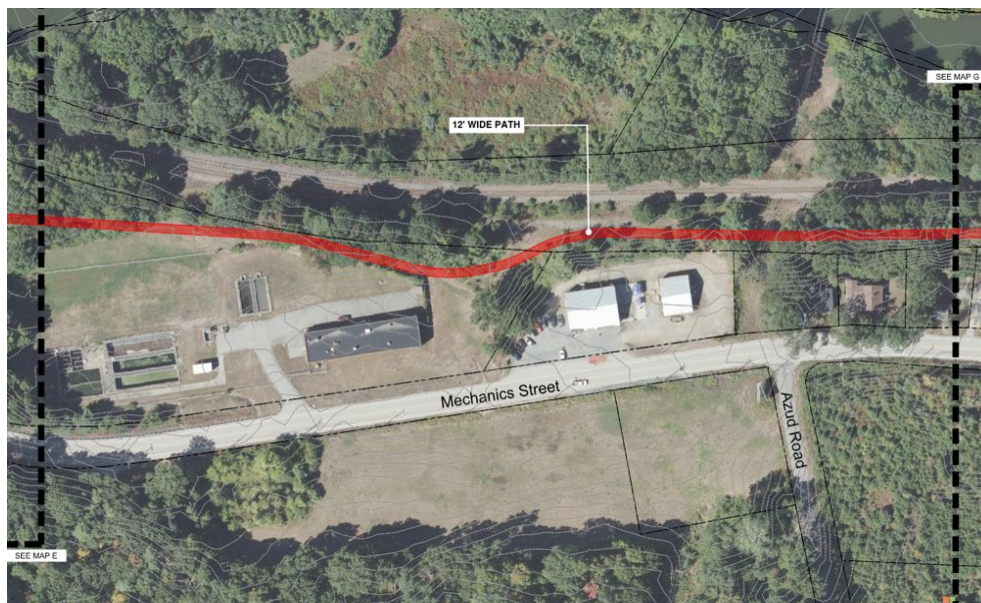
PREFERRED TRAIL ROUTE



PREFERRED TRAIL ROUTE



OLD TROLLEY RAIL BED

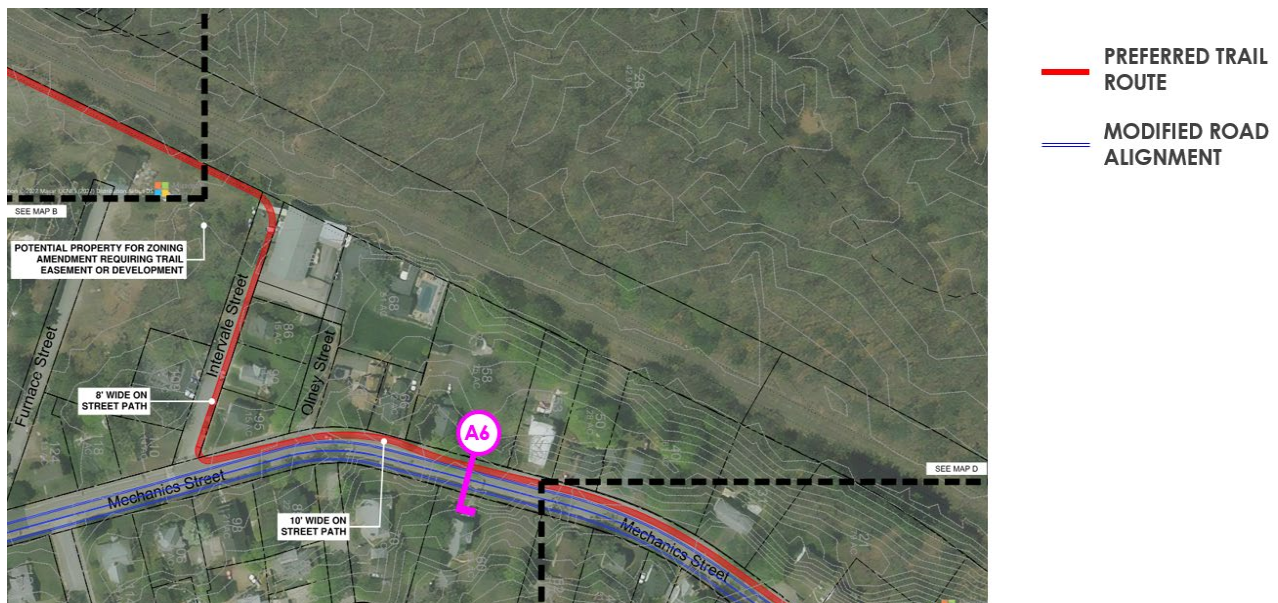


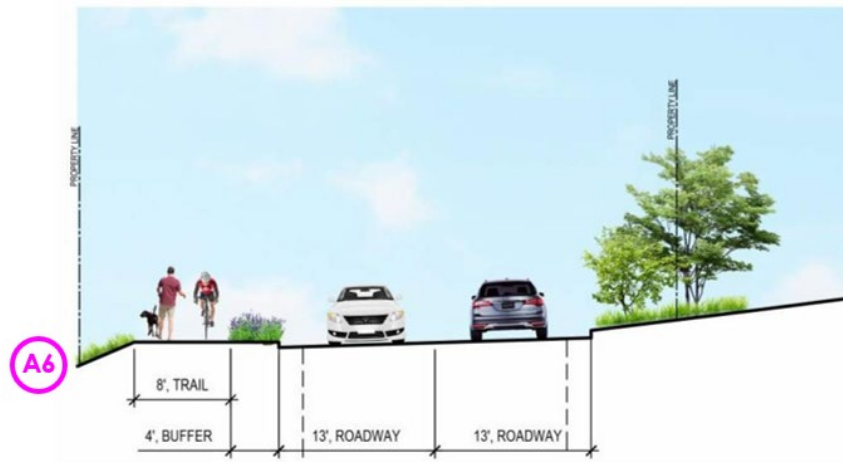
PREFERRED TRAIL ROUTE



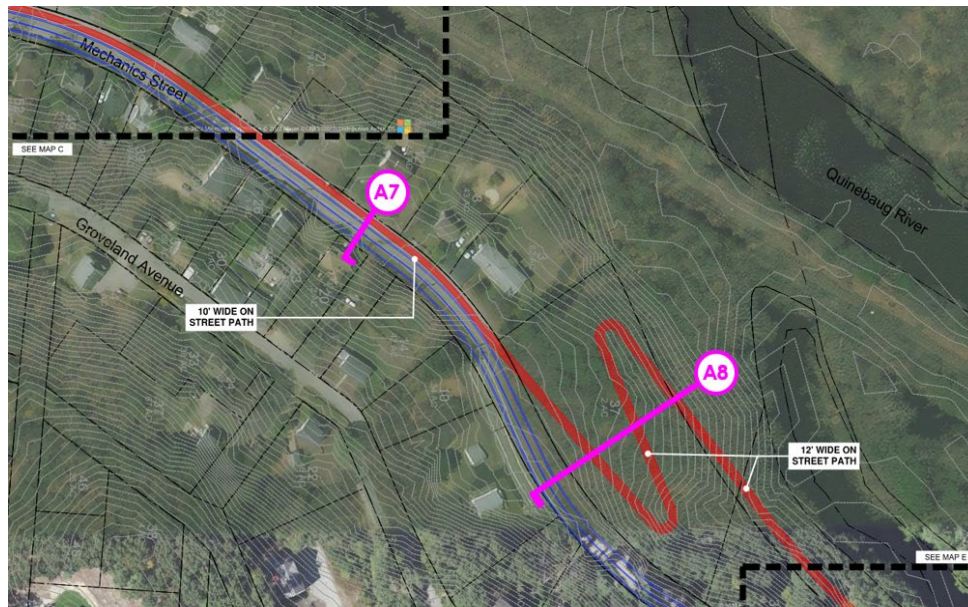
PREFERRED ROUTE - ALTERNATIVE

Because the preferred route, Option 2 described above, is dependent on easements / acquisitions from the railroad, it is recommended to simultaneously pursue an alternative section of trail on Intervale Street and Mechanics Street to avoid the narrow, active section of the railroad right-of-way. This trail alignment, Option 3, scored second highest in the matrix evaluation due to its hybrid approach of off-road and on-road alignments. After crossing the Little Dam Tavern Brook, the Option 3 alignment travels east on Intervale Street and north on Mechanics Street as a side path. The trail then transitions back off-road at 174 Mechanics Street going down gradient to the old trolley line rail bed. Once on the old trolley rail bed, the route follows the same alignment north as Option 2 to the trailhead in Thompson.

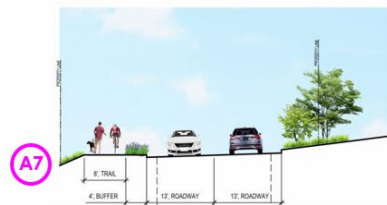




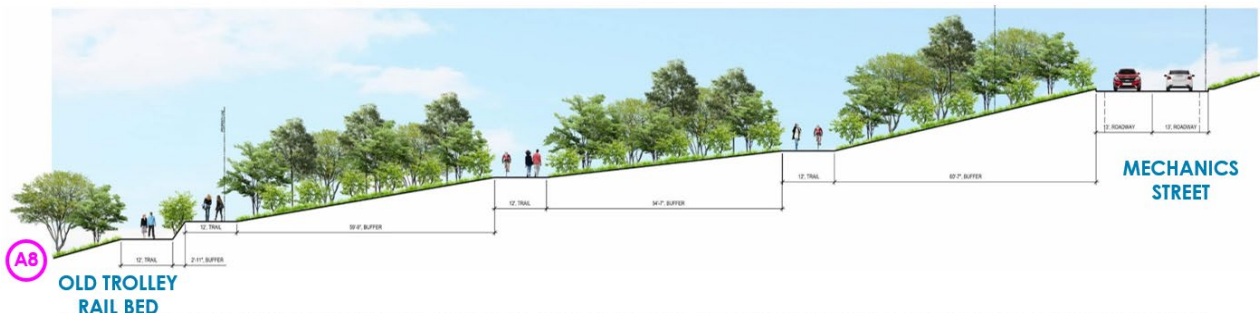
MECHANICS STREET SIDE PATH



PREFERRED TRAIL ROUTE
MODIFIED ROAD ALIGNMENT



MECHANICS STREET SIDE PATH



RECOMMENDED NEXT STEPS

While the preferred route is outlined above, the trail alignment traverses privately-owned properties. Initial next steps are to immediately engage these property owners to discuss the potential of establishing a trail easement or the selling of part, or all, of the parcel to the Town of Putnam. It should be noted that a major property owner/operator is the Providence & Worcester Railroad Company. Railroad companies have a reputation for slow communication and a reluctance for allowing trails in close proximity to active rail lines.

In a meeting with CTDOT representatives, who have frequent interactions with railroad companies, they confirmed the railroad companies' reputations. However, they did indicate there is potential to get a license to use a portion of the rail corridor "If they like the concept" and proper precautions are taken (i.e., barriers to prevent trail-user access to the active rails). Furthermore, they stated the railroad companies typically retain all the rights (i.e., utility, fiber, etc.) that are inherent in the rail corridor property.

While coordination efforts with private property owners continues, it is also recommended that the Town develop a strategic plan to pursue various funding opportunities to help offset the cost of acquiring easements or parcels for the trail's development.