



ACTIVE TRANSPORTATION PLAN

MARCH 2026



ACCESSIBLE - CONNECTED - MULTIMODAL - WALKABLE

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EXECUTIVE SUMMARY

This Active Transportation Plan (ATP) was initiated in 2025 by the Town of Windham, in partnership with the Greater Portland Council of Governments (GPCOG) and Sebago Technics. This planning effort was undertaken to address growing community needs for safe, accessible pedestrian and bicycle infrastructure to support future development patterns and enhance the quality of life for all residents. This Plan outlines strategic steps and priority projects that the town can pursue to enhance active transportation facilities throughout the town.

Project Scope:

Four (4) key areas were selected for this project and are identified within the town's 2016 Comprehensive Plan as the North Windham Growth Area, Windham Center Growth Area, Windham Residential Growth Area, and the South Windham Growth Area. Each of these areas were studied to evaluate the existing conditions of active transportation infrastructure within each growth area. Data also included within this review consisted of identifying high crash locations, assessing Maine DOT corridor priorities, and other traffic data to inform future recommendations. Public engagement efforts under this plan consisted of an in-person workshop in conjunction with a digital survey. Obtaining public input was critical in the development of this plan, as public feedback was considered during the formation of each recommended project.

Included within this plan are ten (10) infrastructure improvement recommendations that address critical gaps within Windham's current active transportation network. These improvements range from sidewalk extensions and paved shoulders to traffic-calming measures and improved pedestrian crossing infrastructure. Each recommendation has been carefully evaluated based on existing conditions, public feedback, benefits to the community, technical feasibility and implementation considerations, and cost-effectiveness.

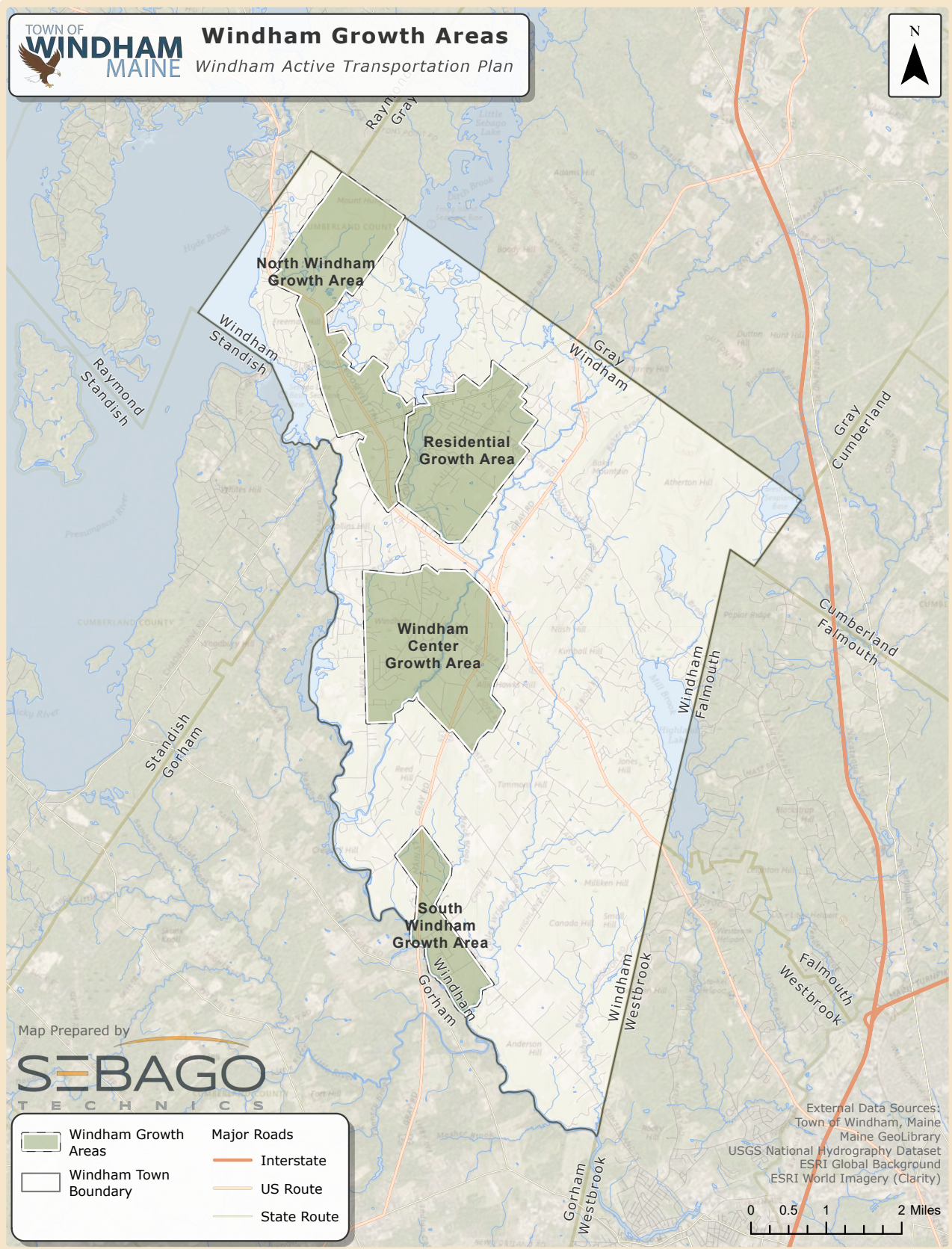
Funding:

This plan identifies funding sources and mechanisms that the town can utilize to support implementation. These sources range from federal, state, and local options to provide the town flexibility while maximizing its ability to advance multiple projects simultaneously.



Windham Growth Areas

Windham Active Transportation Plan



EXISTING CONDITIONS

Overview:

A complete copy of the Existing Conditions Memorandum is enclosed within Appendix A of this Active Transportation Plan document. Field assessments within each of the growth areas were conducted in the summer and fall of 2025, which involved inventorying approximately fifty (50) miles of roadways across Windham. In total, nearly seventeen (17) miles of sidewalks were identified, and zero (0) dedicated bike lanes were identified within the growth areas.

The North Windham Growth Area contains a large amount of pedestrian facilities, with a majority located adjacent to and along Route 302 and the intersection of Tandberg Trail. Several gaps exist within this infrastructure, with most of the facilities only located along one side of Route 302 (eastern side) and Route 115 (northern side). The Windham Center Growth Area contains approximately five (5) miles of sidewalks, largely concentrated near the Windham High School and Middle School campus. However, isolated residential subdivisions lack connectivity to the pedestrian generators within the growth area. The Residential Growth Area indicates higher sidewalk quality within individual residential neighborhoods, but zero (0) marked crosswalks along public roadways. The South Windham Growth Area demonstrates the highest quality of active transportation infrastructure due to recent construction along Main Street, with approximately two (2) miles of sidewalks mapped and graded within this growth area.

Prior Planning Efforts:

This ATP builds upon the Town's 2016 Comprehensive Plan, which identified "Four Big Things", including transforming North Windham, Windham Center, and South Windham into true community centers. Prior planning efforts acknowledge challenges with incomplete sidewalk networks and a lack of designated bicycle lanes. The North Windham Moves study (2022) provided a detailed recommendation for the Route 302 corridor, including connector roads with complete street features, ADA-compliant sidewalk reconstruction, and traffic calming measures. Regional guidance from GPCOG's Connect 2045 Long-Range Transportation Plan and PACTS Regional Complete Streets Policy (2024) emphasizes that every transportation improvement should create safer, more accessible roadways for all users. These principles were key themes that this ATP advances and integrates these principles through its recommendations.

PUBLIC ENGAGEMENT

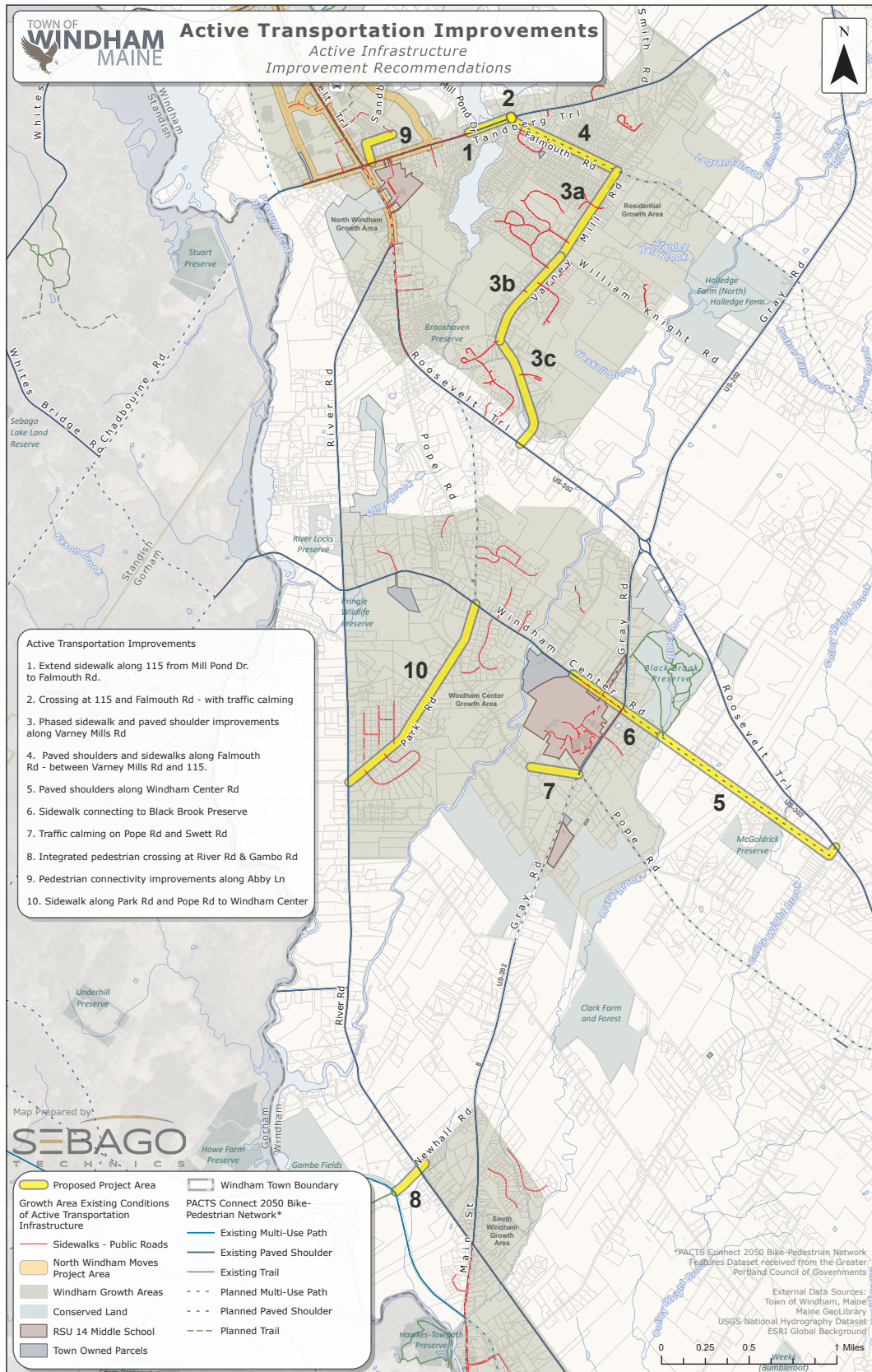
One in-person public workshop was held on December 3, 2025. The format of this public engagement workshop began with a presentation to provide members of the community with a summary of the project's purpose and need, and present findings from the existing conditions analysis for each growth area. Then, members in attendance rotated throughout the room to focus on each growth area and provide specific comments in relation to existing gaps within the active transportation network, leading to recommended infrastructure improvements the town could make to promote active transportation.

A supplementary online digital survey ran concurrently with the in-person public engagement workshop. This method asked users similar prompts as the in-person event, and resulted in a higher yield of results. A summary of the findings from the public engagement survey is included within the attached Appendix B of this Active Transportation Plan document.

RECOMMENDATIONS

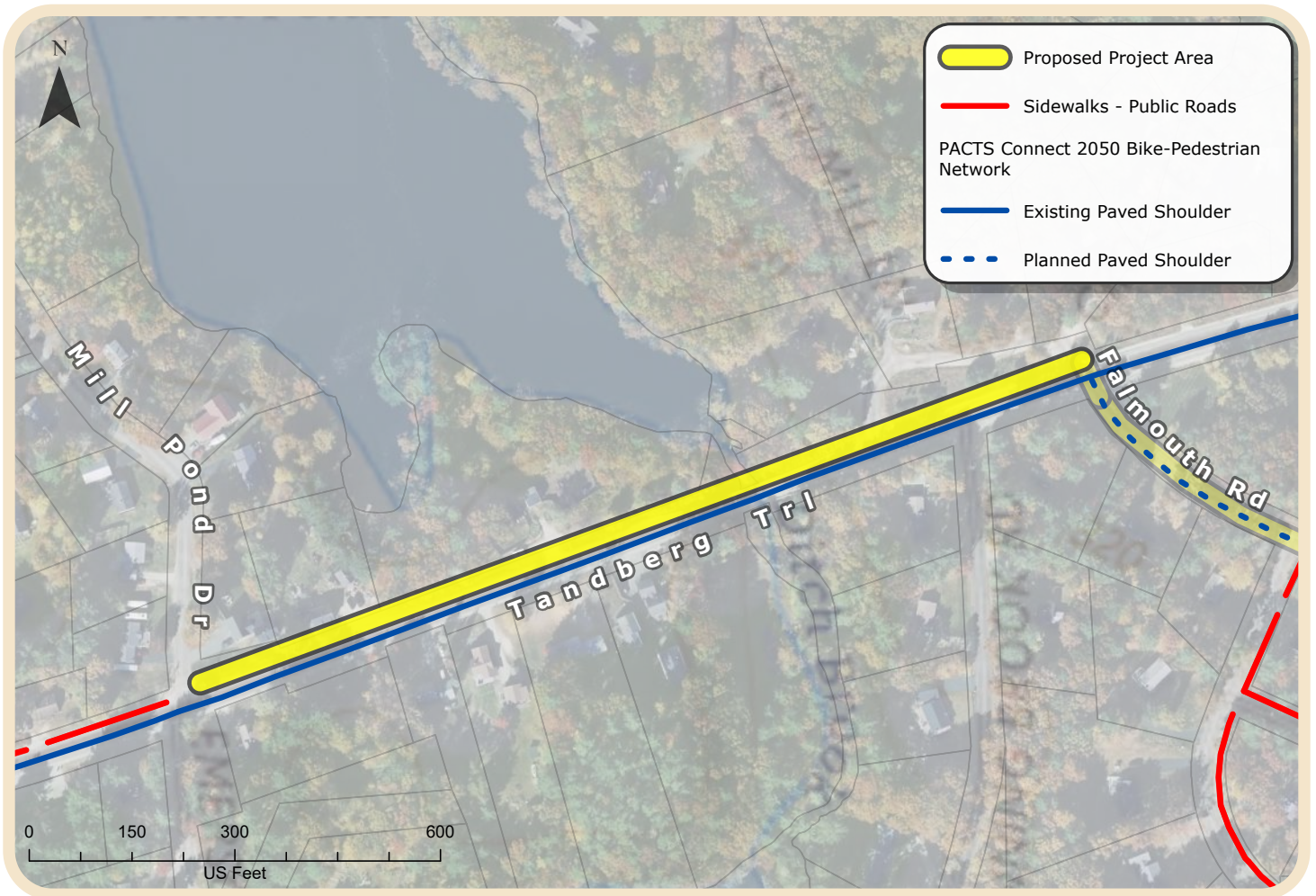
A total of ten (10) active transportation infrastructure improvements were identified through this planning effort. These projects were primarily selected based on the existing infrastructure conditions in and around the project area, while also balancing public input received during the public engagement process. The recommendations contained herein are not organized in an order of importance. Recommendations work to address significant gaps identified within the existing conditions analysis and as part of the public engagement process. Projects shown on maps as “Planned” do not specify or delineate which planned projects are funded (such as North Windham Moves) versus conceptual planned projects identified within PACTS 2045 Long-Range Transportation Plan. Additionally, because a planned project is included within PACTS’ plan does not guarantee future funding.

Each proposed recommendation includes a project description, project purpose, high-level community benefits, feasibility and implementation considerations, and an analysis of spatial impact and cost.



RECOMMENDATION 1

Tandberg Trail (Route 115) Sidewalk Extension (Mill Pond Drive to Falmouth Rd.)



RECOMMENDATION 1

Project Description:

This recommended project involves the extension of the existing sidewalk network along the northern side of Tandberg Trail (Route 115) to Falmouth Road. This approximately 0.3 mile extension would create a continuous connection from the existing pedestrian facilities along Roosevelt Trail (Route 302) to the Tandberg Trail (Route 115)/Falmouth Road intersection. This recommendation would include the construction of a paved sidewalk with a minimum width of five (5) ft., built to ADA standards, including compliant curb ramps, associated signage, and markings at all intersections and driveway crossings.

Purpose & Benefits:

Through this recommendation, and in conjunction with Recommendations 2, 3, and 4, this corridor could serve as a link between the commercial businesses within North Windham and the established residential neighborhoods within the Residential Growth Area. Where currently there are no pedestrian facilities that connect these two areas, this infrastructure would provide safe means of passage for pedestrians. Benefits of this recommendation include:

- Improved safety for any pedestrians using the current paved shoulder along this corridor
- Improving accessibility to local retail and service businesses for nearby residents
- Reducing vehicular-dependent trips for short-distance shopping and errands

Feasibility & Implementation Considerations:

One primary consideration specific to this recommendation includes coordination with MaineDOT for the crossing over Ditch Brook along Route 115. This bridge is owned by MaineDOT and was originally constructed in 1959. In discussions with MaineDOT, this bridge is planned to have improvements done in 2030, considering a range of alternatives. Coordination with state agencies will be required to incorporate any sidewalk designs prior to reconstruction. Other considerations involve evaluating the status of the right-of-way, and formulating a strategy for acquisition where needed. This recommendation also involves coordination with the local utility companies, as there are existing utility lines and poles located along the northern side of Route 115.

Considerations should be made to relocate these poles behind the proposed sidewalk for improved maintenance and accessibility for all users. Where utilities may be relocated through this recommendation, the town should evaluate whether this project would warrant pedestrian-scale street lighting to be installed for additional pedestrian safety.

Spatial Impacts & Cost Estimation:

The conceptual sidewalk recommended between Mill Pond Drive and Falmouth Road is envisioned to be paved to a five (5) ft. width, constructed along the northern side of Route 115. This would include installing of a new granite curbline to match the existing curbing throughout the area. Drainage considerations for this project would include the installation of a closed drainage system, with an outlet close to the bridge. Factors in this cost estimate assume that traffic control would proceed with minimal traffic disruption, and rely on a temporary lane shift made feasible by the existing pavement width of Route 115. This estimate does not account for any property acquisitions, easements, or utility relocations that may be necessary. Similarly, this cost estimate excludes costs for reconstructing the Mill Pond bridge or its approaches.

Windham Active Transportation Plan - Recommendation 1 Project No 240311-02 Preliminary Engineer's Estimate

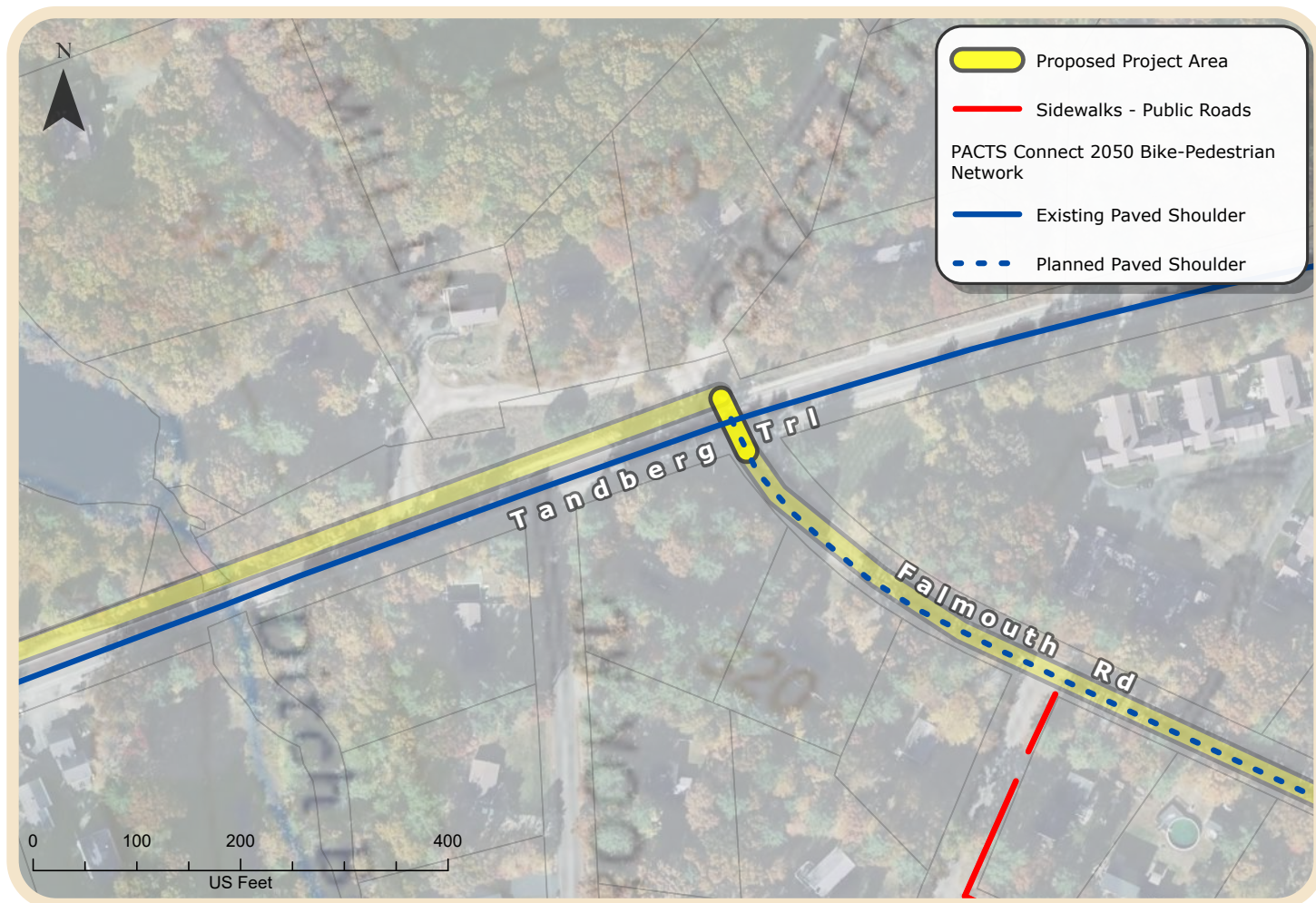
ITEM DESCRIPTION	UNIT	AVERAGE UNIT COST	QUANTITY	COST
COMMON EXCAVATION (PLAN QUANTITY)	CY	\$ 50.00	700	\$ 35,000.00
COMMON BORROW	CY	\$ 50.00	50	\$ 2,500.00
AGGREGATE SUBBASE COURSE - GRAVEL	CY	\$ 60.00	475	\$ 28,500.00
HMA 19.0 MM	TONS	\$ 175.00	75	\$ 13,125.00
HMA PAVEMENT 9.5 MM (SIDEWALKS, DRIVES, ETC.)	TONS	\$ 250.00	125	\$ 31,250.00
HOT MIX ASPHALT 12.5 MM	TONS	\$ 175.00	50	\$ 8,750.00
BITUMINOUS TACK COAT	GAL	\$ 10.00	40	\$ 400.00
CURB RAMP DETECTABLE WARNING FIELD	SF	\$ 110.00	22	\$ 2,420.00
VERTICAL CURB TYPE 1	LF	\$ 70.00	1400	\$ 98,000.00
LOAM (PLAN QUANTITY)	CY	\$ 75.00	130	\$ 9,750.00
SEEDING METHOD NUMBER 1 (PLAN QUANTITY)	UN	\$ 70.00	7	\$ 490.00
MULCH (PLAN QUANTITY)	UN	\$ 70.00	7	\$ 490.00
PROPOSED DRAINAGE IMPROVEMENTS (ALLOWANCE)	LS	\$ 205,000.00	1	\$ 205,000.00
MAINTENANCE OF TRAFFIC CONTROL	LS	\$ 60,000.00	1	\$ 60,000.00
TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LS	\$ 20,000.00	1	\$ 20,000.00
MOBILIZATION AND GENERAL CONDITIONS (10%)	LS	\$ 25,783.75	1	\$ 25,783.75
CONSTRUCTION SUBTOTAL				\$ 541,000.00
CONTINGENCY 25%				\$ 135,300.00
PRELIMINARY ENGINEERING (ASSUMED 10%)				\$ 54,100.00
CONSTRUCTION ENGINEERING / INSPECTION (ASSUMED 10%)				\$ 54,100.00
TOTAL 2026 ESTIMATED CONSTRUCTION COST				\$ 784,500.00

Assumptions/Exclusions

1. Estimate is based on 2026 construction pricing
2. Tandberg Trail is classified as a Corridor Priority 2 roadway.
3. This estimate does not include bridge or bridge approach reconstruction efforts for the bridge over Ditch Brook which will require reconstruction to accommodate a proposed sidewalk.
4. This estimate assumes that the proposed sidewalk construction can be completed with minimal disruption in traffic, and based on the existing pavement width of Tandberg Trail, a lane shift is currently being assumed. No police detail, nightwork or flaggers were assumed herein.
5. The drainage allowance assumes 12" Type C underdrain the entire length of the sidewalk which will convey water towards the bridge from the closed drainage system.
6. This estimate does not quantify any property acquisitions, easements or utility relocations required as a part of this project.
7. This estimate does not include costs for pedestrian scale lighting or street lighting required for the project.

RECOMMENDATION 2

Pedestrian Crossing at Falmouth Road and Tandberg Trail (Route 115) Intersection



RECOMMENDATION 2

Project Description:

This recommended project involves constructing a pedestrian crossing at the signalized intersection of Tandberg Trail (Route 115) and Falmouth Road, along with associated traffic-calming measures. Through this improvement, and in conjunction with Recommendations 1, 3, and 4, pedestrians would have a designated access way to the commercial center in North Windham and the residential neighborhoods within the Residential Growth Area. Traffic calming measures associated with this project could include high-visibility crosswalks, pedestrian signage, street markings, flashing beacon systems, and potential adjustments to the intersection's geometry to reduce vehicle speeds.

Purpose & Benefits:

This recommended intersection crossing would serve as a junction to the existing gap within Windham's active transportation network. Through public engagement efforts performed under this plan, this intersection was identified as a priority location for safety improvements by residents. Benefits of this recommendation include:

- Reduced vehicular speeds through the intersection, decreasing the likelihood of crash frequency and severity
- Increased driver awareness of pedestrian traffic
- Safer crossings and reduced exposure time for pedestrians with vehicles
- Establishing a model intersection design that can be replicated at other locations

Feasibility & Implementation Considerations:

The primary consideration with this recommendation is the required coordination with MaineDOT. Where this project is recommending a pedestrian crossing at a signalized intersection, signal phasing and timing modifications would be required. Recommended modifications would include the installation of pedestrian signals, including pedestal poles with Accessible Pedestrian Signal (APS) buttons, trenching for new signal conduit, and signal re-timing to incorporate the pedestrian phasing. Based on the existing lane use at the intersection, it may be feasible to retrofit the existing signal cabinet to incorporate new signal phasing. However, it is recommended that this is investigated further during the conceptual design process to determine the feasibility of this. If, during the design phase, it is determined that the proposed signal and crossing improvements make the existing cabinet unusable, a new signal cabinet would be required. This cost has not been included in the estimate for this section.

There are a variety of different traffic calming measures that could be utilized for this proposed pedestrian crossing. Solutions such as additional striping or stenciling are relatively inexpensive, but require yearly maintenance. This solution offers the town a quick “win”, but is not recommended as a long-term solution. Medium-tier improvements would consist of the installation of static or flashing signage along Route 115.

Signage should be of sufficient sizing and scale (refer to the Manual on Uniform Traffic Control Devices (MUTCD)) to convey the intent of protecting pedestrians crossing at this intersection. Another option for this recommended project could be a flashing speed feedback sign, which involves an electronic radar detection device inside a message board, mounted with a static sign indicating the legally posted speed limit. This sign would measure an approaching car’s speed and display it in large, lighted numbers to provide drivers feedback on their traveling speed. It is recommended that, if this option were to be utilized, these types of signs and striping solutions be installed farther away from the intersection to notify traveling motorists to reduce their speed, thus maximizing the solution's effectiveness. The higher tier of improvement that could be achieved would be a permanent, substantial intersection modification. Examples like an intersection reconfiguration and curb installation to facilitate the pedestrian crossing could be considered as a long-term and permanent solution. When installing one or more traffic calming solutions on a state or state-aid roadway, the municipality should consult with MaineDOT on seeking the appropriate levels of approvals required.

Spatial Impacts & Cost Estimation:

This recommendation’s scale ranges from smaller, quick “win” projects to larger, potentially intersection-altering improvements. At a minimum, the project’s scope includes the installation of a pedestrian signal at the intersection. These improvements consist of the addition of signal poles, signal foundations, and APS push buttons for the use of pedestrians to actuate the signalized crossing. The cost estimate below includes the costs for two (2) flashing speed feedback signs to be placed on intersection approaches. This estimate does not account for any property acquisitions, easements, or utility relocations that may be necessary.

Windham Active Transportation Plan - Recommendation 2
Project No 240311-02
Preliminary Engineer's Estimate

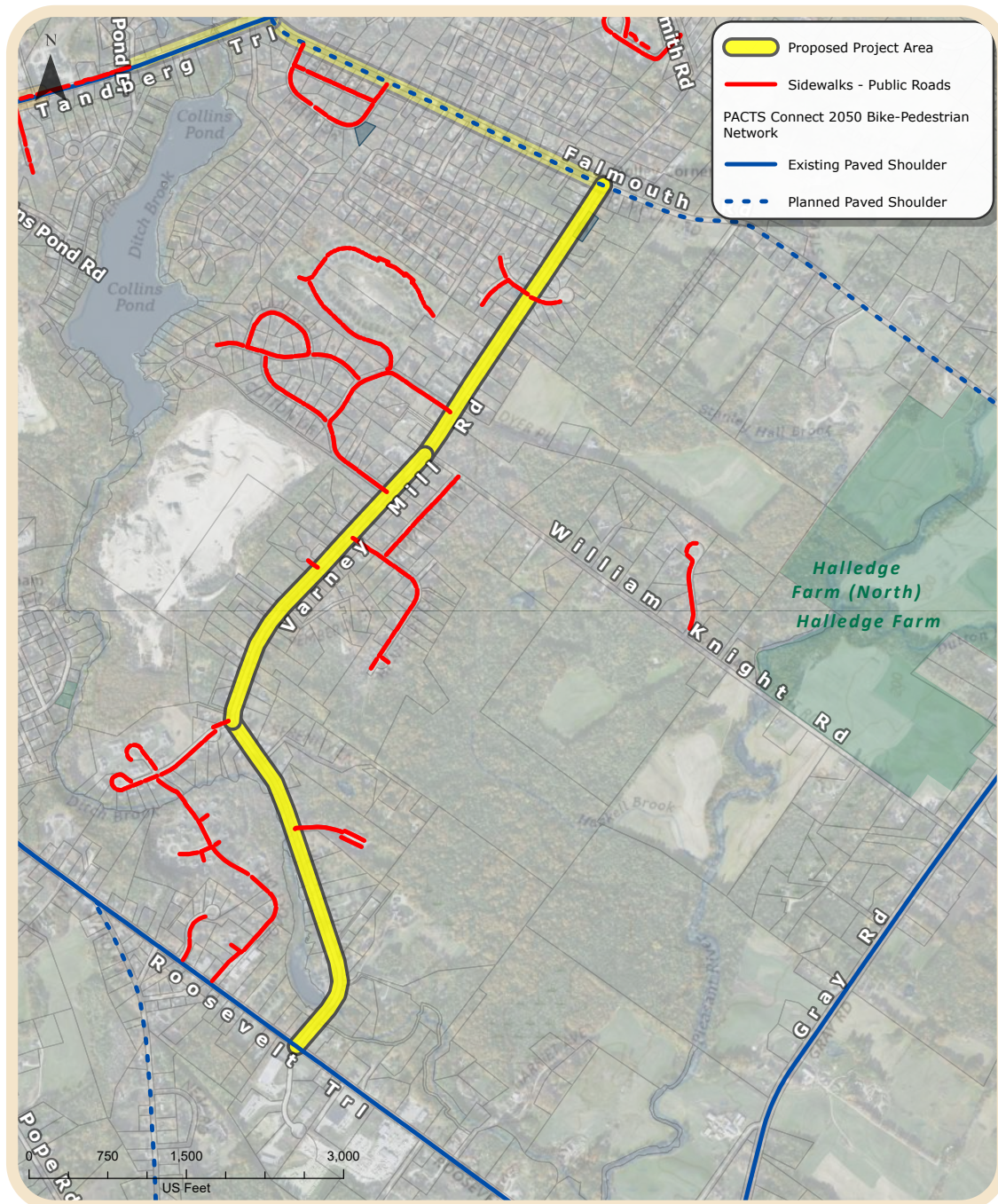
ITEM DESCRIPTION	UNIT	AVERAGE UNIT COST	QUANTITY	COST
COMMON EXCAVATION (PLAN QUANTITY)	CY	\$ 50.00	25	\$ 1,250.00
AGGREGATE SUBBASE COURSE - GRAVEL	CY	\$ 60.00	25	\$ 1,500.00
SITE STABILIZATION (LOAM, SEED, MULCH)	LS	\$ 3,000.00	1	\$ 3,000.00
HMA 19.0 MM	TONS	\$ 175.00	5	\$ 875.00
HOT MIX ASPHALT 12.5 MM	TONS	\$ 175.00	5	\$ 875.00
SIGNAL IMPROVEMENTS	LS	\$ 25,000.00	1	\$ 25,000.00
TRAFFIC CALMING DEVICES	LS	\$ 20,000.00	1	\$ 20,000.00
MAINTENANCE OF TRAFFIC CONTROL	LS	\$ 20,000.00	1	\$ 20,000.00
TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LS	\$ 20,000.00	1	\$ 20,000.00
MOBILIZATION AND GENERAL CONDITIONS (10%)	LS	\$ 4,625.00	1	\$ 4,625.00
CONSTRUCTION SUBTOTAL				\$ 97,000.00
CONTINGENCY 25%				\$ 24,300.00
PRELIMINARY ENGINEERING (ASSUMED 10%)				\$ 9,700.00
CONSTRUCTION ENGINEERING / INSPECTION (ASSUMED 10%)				\$ 9,700.00
TOTAL 2026 ESTIMATED CONSTRUCTION COST				\$ 140,700.00

Assumptions/Exclusions

1. Estimate is based on 2026 construction pricing
2. Tandberg Trail is classified as a Corridor Priority 2 roadway.
3. This estimate does not quantify any property acquisitions, easements or utility relocations required as a part of this project.

RECOMMENDATION 3

Varney Mill Road – (Phased) Pedestrian Connectivity & Paved Shoulders



RECOMMENDATION 3

Project Description:

This recommendation takes a phased approach to developing a sidewalk and paved shoulder network along Varney Mill Road. This road currently serves as a key corridor to existing pockets of isolated sidewalks within residential neighborhoods, as well as connecting Falmouth Road to Roosevelt Trail (Route 302). This recommended project consists of constructing a five (5)- ft-wide paved sidewalk along the eastern side of Varney Mill Road, with associated paved shoulders of sufficient width to accommodate and promote bicycle use. The phased approach for this recommendation is broken down into the following:

- A. Section of Varney Mill Road between Falmouth Road and William Knight Road (approximately 0.57 mi.).
- B. Section of Varney Mill Road between William Knight Road and Corner Brook Road (approximately 0.60 mi.).
- C. Section of Varney Mill Road between Corner Brook Road and Roosevelt Trail (approximately 0.65 mi.).

Purpose & Benefits:

Varney Mill Road currently serves as a vehicular-focused connection from residential neighborhoods to larger commercial centers. By completing this recommended project, Varney Mill Road could serve as a model for what a complete streets environment in Windham could look like, including sufficient infrastructure for active transportation. The benefits of a phased approach give the town greater flexibility to break up construction phases as funding becomes available. Other benefits include:

- Safe active transportation facilities for residents traveling between residential neighborhoods
- Connect the isolated pockets of sidewalks within residential subdivisions to an overall, larger network
- Support compact development patterns by providing non-vehicular transportation options adjacent to the North Windham area

Feasibility & Implementation Considerations:

The proposed phases of this project prioritize segments of Varney Mill Road with the highest pedestrian demand. The first phase between Falmouth Road and William Knight Road will provide the most connectivity, particularly for subdivisions with existing pedestrian infrastructure.

From there, the remaining two phases are broken up to extend the network along Varney Mill and connect to Roosevelt Trail (Route 302). Through each phase, and in conjunction with Recommendations 1, 2, and 4, this project would create an extensive active transportation network that spans the Residential Growth Area and North Windham Growth Area. Primary considerations in relation to this recommendation are budget and associated funding sources. Where this project's scope and scale are significant, it is recommended that the town pursue a variety of funding sources to ensure sufficient funds to complete this project. Other considerations include the need to coordinate with the MaineDOT regarding the Route 302 connection and with Public Works to integrate sidewalk construction with any planned roadway maintenance and utility improvements. The town should also consider evaluating the status of the right-of-way, and formulate a strategy for acquisition or the securing of easements where needed. Finally, where Varney Mill Road currently has an open drainage system, consideration should be given to the feasibility of a closed drainage system. Where this project would introduce wider shoulders and curbed sidewalks, a closed drainage system will be needed, and the town would need to consider additional costs for construction and future maintenance.

Spatial Impacts & Cost Estimation:

Varney Mill Road is currently classified by MaineDOT as having a Corridor Priority of 5 (local road). This recommended project consists of the construction of a paved five (5) ft. wide sidewalk, with granite curbing along the east side of Varney Mill Road. The east side of Varney Mill Road was chosen for this concept due to the presence of several utility poles located directly adjacent to the roadway on the west side of Varney Mill Road and due to the existing granite curb on the east side of Varney Mill Road which could be used in the proposed project. Based on aerial imagery, it is estimated that the current pavement lane width is approximately fourteen (14) ft. The cost estimate assumes that two (2) ft. of additional roadway width is needed before the proposed curb line, and that the existing shoulder is removed and repaved to create a proposed eleven (11)- ft. travel lane with a five (5)- ft. shoulder to accommodate a bicycle lane. Based on the existing pavement width of Varney Mill Road, it is assumed that two-way traffic cannot be accommodated during construction; flagger hours are included within the projected traffic control allowance. The largest cost consideration line item includes the construction of a closed drainage system, which runs the full length of the proposed sidewalk. This estimate does not account for any property acquisitions, easements, or utility relocation that may be required. For example, in Section 3a, the proposed sidewalk would be constructed adjacent to the existing Dolley Cemetery, which appears to have on-street parking along Varney Mill Road. During the design process, it is recommended that Town staff, the engineer, and cemetery officials coordinate on how the proposed sidewalk interfaces with the cemetery frontage to ensure an optimal solution is agreed upon.

Windham Active Transportation Plan - Recommendation 3a
Project No 240311-02
Preliminary Engineer's Estimate

ITEM DESCRIPTION	UNIT	AVERAGE UNIT COST	QUANTITY	COST
COMMON EXCAVATION (PLAN QUANTITY)	CY	\$ 50.00	1575	\$ 78,750.00
COMMON BORROW	CY	\$ 50.00	100	\$ 5,000.00
AGGREGATE SUBBASE COURSE - GRAVEL	CY	\$ 60.00	950	\$ 57,000.00
HMA 19.0 MM	TONS	\$ 175.00	250	\$ 43,750.00
HMA PAVEMENT 9.5 MM (SIDEWALKS, DRIVES, SURFACE, ETC)	TONS	\$ 175.00	400	\$ 70,000.00
BITUMINOUS TACK COAT	GAL	\$ 10.00	110	\$ 1,100.00
CURB RAMP DETECTABLE WARNING FIELD	SF	\$ 110.00	44	\$ 4,840.00
VERTICAL CURB TYPE 1	LF	\$ 70.00	2750	\$ 192,500.00
LOAM (PLAN QUANTITY)	CY	\$ 75.00	300	\$ 22,500.00
SEEDING METHOD NUMBER 1 (PLAN QUANTITY)	UN	\$ 70.00	16	\$ 1,120.00
MULCH (PLAN QUANTITY)	UN	\$ 70.00	16	\$ 1,120.00
PROPOSED DRAINAGE IMPROVEMENTS (ALLOWANCE)	LS	\$ 450,000.00	1	\$ 450,000.00
MAINTENANCE OF TRAFFIC CONTROL	LS	\$ 230,000.00	1	\$ 230,000.00
TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LS	\$ 25,000.00	1	\$ 25,000.00
MOBILIZATION AND GENERAL CONDITIONS (5%)	LS	\$ 59,134.00	1	\$ 59,134.00
CONSTRUCTION SUBTOTAL				\$ 1,242,000.00
CONTINGENCY 25%				\$ 310,500.00
PRELIMINARY ENGINEERING (ASSUMED 10%)				\$ 124,200.00
CONSTRUCTION ENGINEERING / INSPECTION (ASSUMED 10%)				\$ 124,200.00
TOTAL 2026 ESTIMATED CONSTRUCTION COST				\$ 1,800,900.00

Assumptions/Exclusions

1. Estimate is based on 2026 construction pricing
2. Varney Mill Road is classified as a Corridor Priority 5 roadway. As a result, a lane width of 11.0' and shoulder width of 5.0' were assumed to accommodate safe biking lanes.
3. This concept estimate assumes sidewalk construction on the east side of Varney Mill Road. Based on aerial imagery, it looks like the existing pavement width of Varney Mill Road is approximately 14.0'. Therefore 2.0' of additional full reconstruction were assumed before the proposed curbline. Repaving of the full shoulder was assumed as a part of this estimate.
4. Based on the existing pavement width of Varney Mill Road, it is assumed that two-way traffic can not be accommodated during construction and flagger hours have been incorporated into the traffic control allowance.
5. The drainage allowance assumes 12" Type C underdrain the entire length of the sidewalk which will convey water towards the bridge from the closed drainage system.
6. This estimate does not quantify any property acquisitions, easements or utility relocations required as a part of this project.
7. This estimate does not include costs for pedestrian scale lighting or street lighting required for the project.

Windham Active Transportation Plan - Recommendation 3b
Project No 240311-02
Preliminary Engineer's Estimate

ITEM DESCRIPTION	UNIT	AVERAGE UNIT COST	QUANTITY	COST
COMMON EXCAVATION (PLAN QUANTITY)	CY	\$ 50.00	1625	\$ 81,250.00
COMMON BORROW	CY	\$ 50.00	100	\$ 5,000.00
AGGREGATE SUBBASE COURSE - GRAVEL	CY	\$ 60.00	975	\$ 58,500.00
HMA 19.0 MM	TONS	\$ 175.00	250	\$ 43,750.00
HMA PAVEMENT 9.5 MM (SIDEWALKS, DRIVES, SURFACE, ETC)	TONS	\$ 175.00	400	\$ 70,000.00
BITUMINOUS TACK COAT	GAL	\$ 10.00	110	\$ 1,100.00
CURB RAMP DETECTABLE WARNING FIELD	SF	\$ 110.00	33	\$ 3,630.00
VERTICAL CURB TYPE 1	LF	\$ 70.00	2750	\$ 192,500.00
LOAM (PLAN QUANTITY)	CY	\$ 75.00	300	\$ 22,500.00
SEEDING METHOD NUMBER 1 (PLAN QUANTITY)	UN	\$ 70.00	16	\$ 1,120.00
MULCH (PLAN QUANTITY)	UN	\$ 70.00	16	\$ 1,120.00
PROPOSED DRAINAGE IMPROVEMENTS (ALLOWANCE)	LS	\$ 465,000.00	1	\$ 465,000.00
MAINTENANCE OF TRAFFIC CONTROL	LS	\$ 230,000.00	1	\$ 230,000.00
TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LS	\$ 25,000.00	1	\$ 25,000.00
MOBILIZATION AND GENERAL CONDITIONS (10%)	LS	\$ 60,023.50	1	\$ 60,023.50
CONSTRUCTION SUBTOTAL				\$ 1,260,000.00
CONTINGENCY 25%				\$ 315,000.00
PRELIMINARY ENGINEERING (ASSUMED 10%)				\$ 126,000.00
CONSTRUCTION ENGINEERING / INSPECTION (ASSUMED 10%)				\$ 126,000.00
TOTAL 2026 ESTIMATED CONSTRUCTION COST				\$ 1,827,000.00

Assumptions/Exclusions

1. Estimate is based on 2026 construction pricing
2. Varney Mill Road is classified as a Corridor Priority 5 roadway. As a result, a lane width of 11.0' and shoulder width of 5.0' were assumed to accommodate safe biking lanes.
3. This concept estimate assumes sidewalk construction on the east side of Varney Mill Road. Based on aerial imagery, it looks like the existing pavement width of Varney Mill Road is approximately 14.0'. Therefore 2.0' of additional full reconstruction were assumed before the proposed curbline. Repaving of the full shoulder was assumed as a part of this estimate.
4. Based on the existing pavement width of Varney Mill Road, it is assumed that two-way traffic can not be accommodated during construction and flagger hours have been incorporated into the traffic control allowance.
5. The drainage allowance assumes 12" Type C underdrain the entire length of the sidewalk which will convey water towards the bridge from the closed drainage system.
6. This estimate does not quantify any property acquisitions, easements or utility relocations required as a part of this project.
7. This estimate does not include costs for pedestrian scale lighting or street lighting required for the project.

Windham Active Transportation Plan - Recommendation 3c
Project No 240311-02
Preliminary Engineer's Estimate

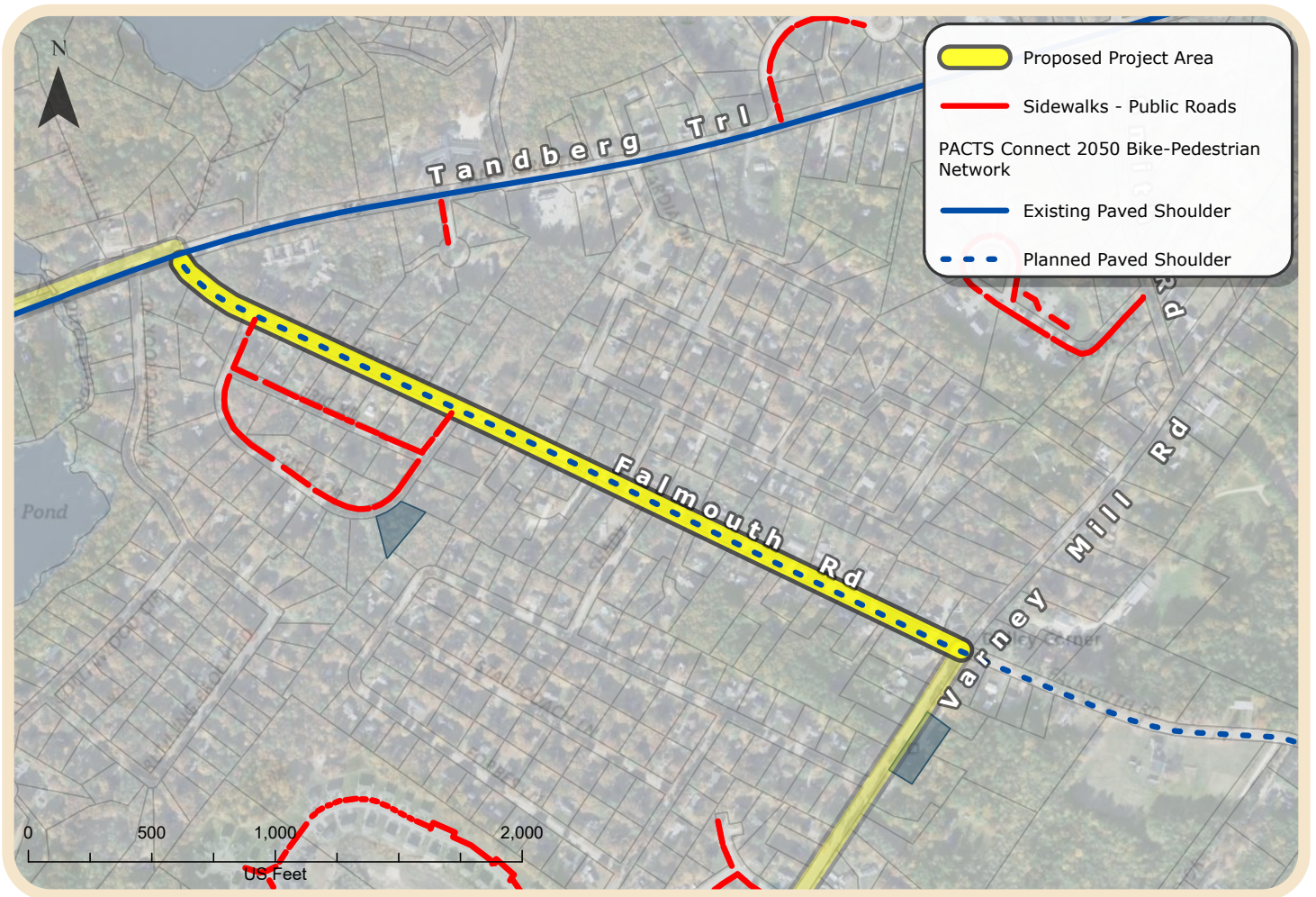
ITEM DESCRIPTION	UNIT	AVERAGE UNIT COST	QUANTITY	COST
COMMON EXCAVATION (PLAN QUANTITY)	CY	\$ 50.00	1800	\$ 90,000.00
COMMON BORROW	CY	\$ 50.00	100	\$ 5,000.00
AGGREGATE SUBBASE COURSE - GRAVEL	CY	\$ 60.00	1600	\$ 96,000.00
HMA 19.0 MM	TONS	\$ 175.00	275	\$ 48,125.00
HMA PAVEMENT 9.5 MM (SIDEWALKS, DRIVES, ETC.)	TONS	\$ 250.00	450	\$ 112,500.00
BITUMINOUS TACK COAT	GAL	\$ 10.00	110	\$ 1,100.00
CURB RAMP DETECTABLE WARNING FIELD	SF	\$ 110.00	11	\$ 1,210.00
VERTICAL CURB TYPE 1	LF	\$ 70.00	3450	\$ 241,500.00
LOAM (PLAN QUANTITY)	CY	\$ 75.00	325	\$ 24,375.00
SEEDING METHOD NUMBER 1 (PLAN QUANTITY)	UN	\$ 70.00	18	\$ 1,260.00
MULCH (PLAN QUANTITY)	UN	\$ 70.00	18	\$ 1,260.00
PROPOSED DRAINAGE IMPROVEMENTS (ALLOWANCE)	LS	\$ 510,000.00	1	\$ 510,000.00
MAINTENANCE OF TRAFFIC CONTROL	LS	\$ 75,000.00	1	\$ 75,000.00
TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LS	\$ 25,000.00	1	\$ 25,000.00
MOBILIZATION AND GENERAL CONDITIONS (10%)	LS	\$ 61,616.50	1	\$ 61,616.50
CONSTRUCTION SUBTOTAL				\$ 1,294,000.00
CONTINGENCY 25%				\$ 323,500.00
PRELIMINARY ENGINEERING (ASSUMED 10%)				\$ 129,400.00
CONSTRUCTION ENGINEERING / INSPECTION (ASSUMED 10%)				\$ 129,400.00
TOTAL 2026 ESTIMATED CONSTRUCTION COST				\$ 1,876,300.00

Assumptions/Exclusions

1. Estimate is based on 2026 construction pricing
2. Varney Mill Road is classified as a Corridor Priority 5 roadway. As a result, a lane width of 11.0' and shoulder width of 5.0' were assumed to accommodate safe biking lanes.
3. This concept estimate assumes sidewalk construction on the east side of Varney Mill Road. Based on aerial imagery, it looks like the existing pavement width of Varney Mill Road is approximately 14.0'. Therefore 2.0' of additional full reconstruction were assumed before the proposed curbline. Repaving of the full shoulder was assumed as a part of this estimate.
4. Based on the existing pavement width of Varney Mill Road, it is assumed that two-way traffic can not be accommodated during construction and flagger hours have been incorporated into the traffic control allowance.
5. The drainage allowance assumes 12" Type C underdrain the entire length of the sidewalk which will convey water towards the bridge from the closed drainage system.
6. This estimate does not quantify any property acquisitions, easements or utility relocations required as a part of this project.
7. This estimate does not include costs for pedestrian scale lighting or street lighting required for the project.

RECOMMENDATION 4

Pedestrian Connection on Falmouth Road (Varney Mill Road to Route 115)



RECOMMENDATION 4

Project Description:

This proposed project includes the construction of a five (5) ft. wide sidewalk with an associated paved shoulder on a section of Falmouth Road. Through this recommended project, Falmouth Road serves as a connector between the Tandberg Trail (Route 115) and Varney Mill Road pedestrian facilities. This recommended project also serves as a starting point for the town to expand this network further down Falmouth Road to connect to other areas of interest such as the East Windham Conservation Area.

Purpose & Benefits:

Falmouth Road is a critical connector between the residential areas and the Tandberg Trail (Route 115)/North Windham commercial area. Currently, this section of roadway lacks pedestrian facilities and bicycle infrastructure. Through this recommendation, and in conjunction with Recommendations 1, 2, and 3, an approximately 5.5 mile loop of active transportation infrastructure will be created. This specific project offers:

- A link to residential areas to the wider, proposed network along Varney Mill Road and Tandberg Trail (Route 115)
- Promotes the North Windham Moves project by connecting more local roads to the overall network
- Provides safe cyclist routes for transportation to the North Windham commercial area, as well as for recreational uses
- Establishes a starting point for future improvements along Falmouth Road to connect to additional residential areas and conserved lands

Feasibility & Implementation Considerations:

This project should consider adding bicycle lane markings with high-visibility materials where appropriate. The project should also include clear wayfinding signage to direct users to key destinations. The town might also consider developing a strategy for right-of-way acquisition or securing easements where necessary. Where current information indicates that there may be sufficient room to incorporate the project's design, additional considerations, such as impacts to existing trees or utilities, will require official investigations during the design phase. Other feasibility considerations include a closed drainage system and collaboration with Public Works to align the proposed improvements with road maintenance cycles for a more cost-effective approach.

Spatial Impacts & Cost Estimation:

This estimate includes a paved five (5) ft. wide sidewalk, with associated granite curbing, proposed along the southern side of Falmouth Road. Falmouth Road is classified as a Corridor Priority 4 roadway by MaineDOT. Based on aerial imagery indicating an existing pavement lane width of approximately thirteen (13) ft., the estimate assumes three (3) ft. of additional full depth reconstruction before the proposed curbline, along with repaving of the full shoulder to create a proposed eleven (11) ft. travel lane with five (5) ft. wide paved shoulders to accommodate a bike lane. Based on the existing pavement width, it is assumed that two-way traffic cannot be accommodated, and flagger hours are included within the traffic control allowance line item. Drainage considerations include constructing a closed drainage system running the full length of the sidewalk. This estimate does not account for any property acquisitions, easements, or utility relocations that may be required, nor does it include costs for pedestrian scale or street lighting that could be necessary as the project progresses

Windham Active Transportation Plan - Recommendation 4 Project No 240311-02 Preliminary Engineer's Estimate

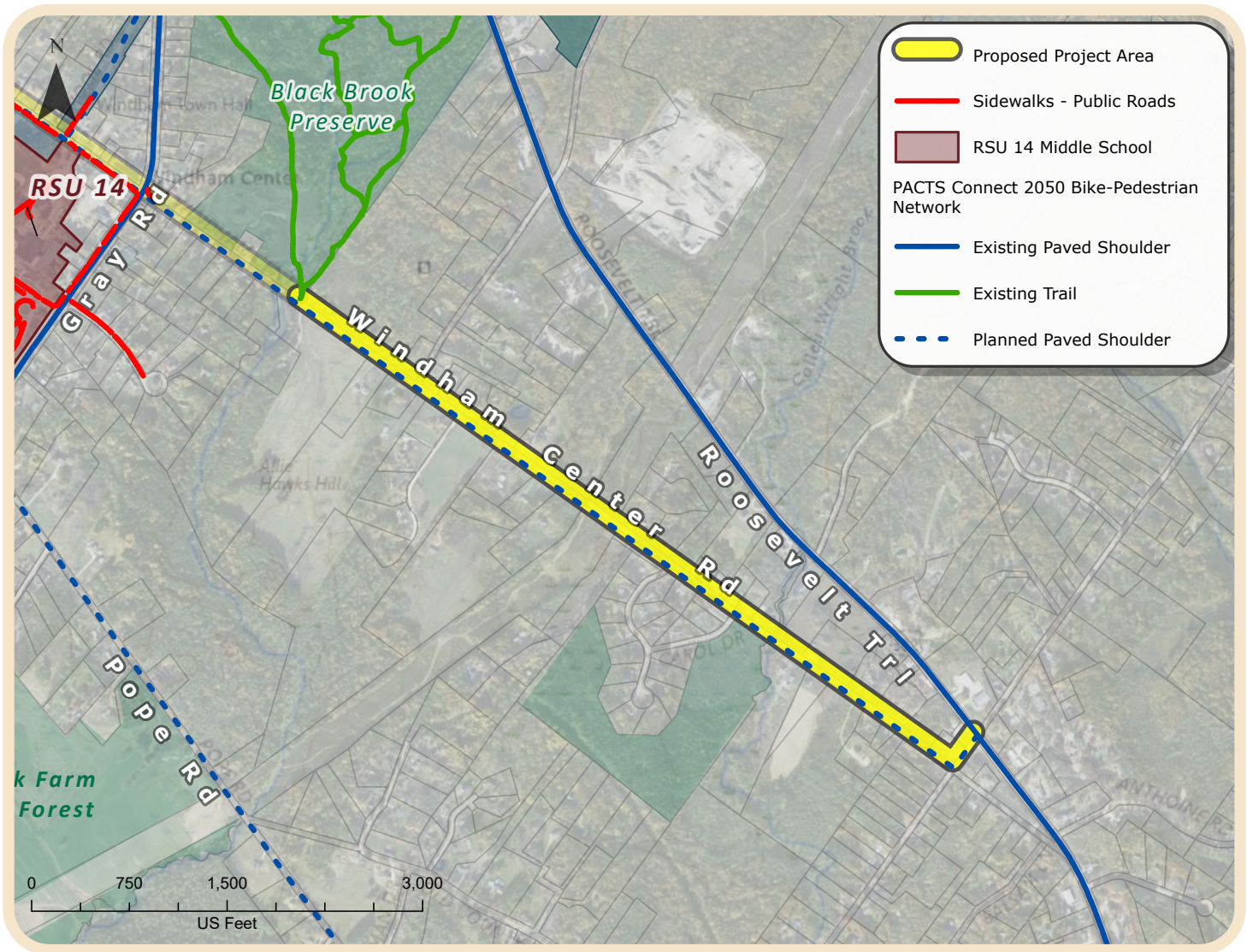
ITEM DESCRIPTION	UNIT	AVERAGE UNIT COST	QUANTITY	COST
COMMON EXCAVATION (PLAN QUANTITY)	CY	\$ 50.00	2150	\$ 107,500.00
COMMON BORROW	CY	\$ 50.00	100	\$ 5,000.00
AGGREGATE SUBBASE COURSE - GRAVEL	CY	\$ 60.00	1350	\$ 81,000.00
HMA 19.0 MM	TONS	\$ 175.00	400	\$ 70,000.00
HMA PAVEMENT 9.5 MM (SIDEWALKS, DRIVES, ETC.)	TONS	\$ 250.00	275	\$ 68,750.00
HOT MIX ASPHALT 12.5 MM	TONS	\$ 175.00	170	\$ 29,750.00
BITUMINOUS TACK COAT	GAL	\$ 10.00	125	\$ 1,250.00
CURB RAMP DETECTABLE WARNING FIELD	SF	\$ 110.00	77	\$ 8,470.00
VERTICAL CURB TYPE 1	LF	\$ 70.00	3525	\$ 246,750.00
LOAM (PLAN QUANTITY)	CY	\$ 75.00	330	\$ 24,750.00
SEEDING METHOD NUMBER 1 (PLAN QUANTITY)	UN	\$ 70.00	18	\$ 1,260.00
MULCH (PLAN QUANTITY)	UN	\$ 70.00	18	\$ 1,260.00
PROPOSED DRAINAGE IMPROVEMENTS (ALLOWANCE)	LS	\$ 525,000.00	1	\$ 525,000.00
MAINTENANCE OF TRAFFIC CONTROL	LS	\$ 230,000.00	1	\$ 230,000.00
TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LS	\$ 25,000.00	1	\$ 25,000.00
MOBILIZATION AND GENERAL CONDITIONS (10%)	LS	\$ 71,287.00	1	\$ 71,287.00
CONSTRUCTION SUBTOTAL				\$ 1,497,000.00
CONTINGENCY 25%				\$ 374,300.00
PRELIMINARY ENGINEERING (ASSUMED 10%)				\$ 149,700.00
CONSTRUCTION ENGINEERING / INSPECTION (ASSUMED 10%)				\$ 149,700.00
TOTAL 2026 ESTIMATED CONSTRUCTION COST				\$ 2,170,700.00

Assumptions/Exclusions

1. Estimate is based on 2026 construction pricing
2. This concept estimate assumes sidewalk construction on the south side of Falmouth Road and assumes a 5.0' sidewalk and 5.0' wide shoulder to accommodate a potential bike lane. Based on aerial imagery, it looks like the existing pavement width of Falmouth Road is approximately 13.0'. Therefore 3.0' of additional full reconstruction were assumed before the proposed curbline. Repaving of the full shoulder was assumed as a part of this estimate.
3. Based on the existing pavement width of Falmouth Road, it is assumed that two-way traffic can not be accommodated during construction and flagger hours have been incorporated into the traffic control allowance.
4. The drainage allowance assumes 12" Type C underdrain the entire length of the sidewalk which will convey water towards the bridge from the closed drainage system.
5. This estimate does not quantify any property acquisitions, easements or utility relocations required as a part of this project.
6. This estimate does not include costs for pedestrian scale lighting or street lighting required for the project.

RECOMMENDATION 5

Paved Shoulders on Windham Center Road



RECOMMENDATION 5

Project Description:

This recommended project includes constructing a paved five (5) ft-wide shoulder along Windham Center Road from the school campus to Roosevelt Trail (Route 302). This project is located within and extends out of the Windham Center Growth Area, and expands upon existing active transportation infrastructure around the school campus. Through this project, the paved shoulder's design is intended to promote bicycle usage along this corridor by providing better separation from vehicular traffic. Under this recommendation, roadway shoulders should be clearly marked with appropriate markings and signage and should complement the proposed sidewalk in Recommendation 6.

Purpose & Benefits:

Windham Center Road primarily serves as a vehicular connection from residential areas to the town center, educational institutions, and conservation areas. Paved shoulders within this area provide:

- Safe space for cyclists traveling within the corridor
- Reduced potential for conflict with vehicular traffic and bicycle traffic by creating physical separation
- Complement pedestrian infrastructure to create a multi-modal corridor

Feasibility & Implementation Considerations:

It is recommended that this project be coordinated with planned roadway resurfacing to minimize costs and improve efficiency. Right-of-way requirements should be assessed early in the design process, as widening for paved shoulders may require securing easements in some locations. The recommended project should also include a maintenance plan in partnership with Public Works to ensure that shoulders remain clear of debris, vegetation, and snow throughout the year.

Spatial Impacts & Cost Estimation:

This recommendation includes the construction of a five-foot 5 ft. wide paved shoulder along Windham Center Road. Windham Center Road is classified as a Corridor Priority 4 roadway by MaineDOT. Aerial imagery indicated an existing pavement lane width of approximately fourteen (14) ft. Therefore, this estimate assumes an additional two (2) ft. of full-depth reconstruction before the existing edge of pavement, along with replacing the full shoulder to create a proposed eleven (11) ft. travel lane with an associated five (5) ft.

wide paved shoulder to accommodate bicycle travel. Based on the existing pavement width of Windham Center Road, it is assumed that two-way traffic is not feasible, and flagger hours are included within the traffic control allowance line item. It is also recommended that the proposed paved shoulder construction be included in the scheduled pavement maintenance for the corridor. Drainage considerations include matching existing open drainage conditions and replacing driveway culverts that conflict with the proposed pavement extension improvements. This estimate does not account for any property acquisitions, easements, or utility relocations that may be required, nor does it include costs for pedestrian scale or street lighting that may be necessary as the project advances. A budgetary price for culvert replacement adjacent to 335 Windham Center Road (over Colley Wright Brook) was estimated for this crossing based on previously constructed projects. This budgetary cost includes replacing the existing culverts with a precast concrete box structure which would be sized at 1.2 times the bankfull width per Maine Audubon's StreamSmart Principles. Additional design and permitting considerations would be required to complete the replacement.

Windham Active Transportation Plan - Recommendation 5
Project No 240311-02
Preliminary Engineer's Estimate

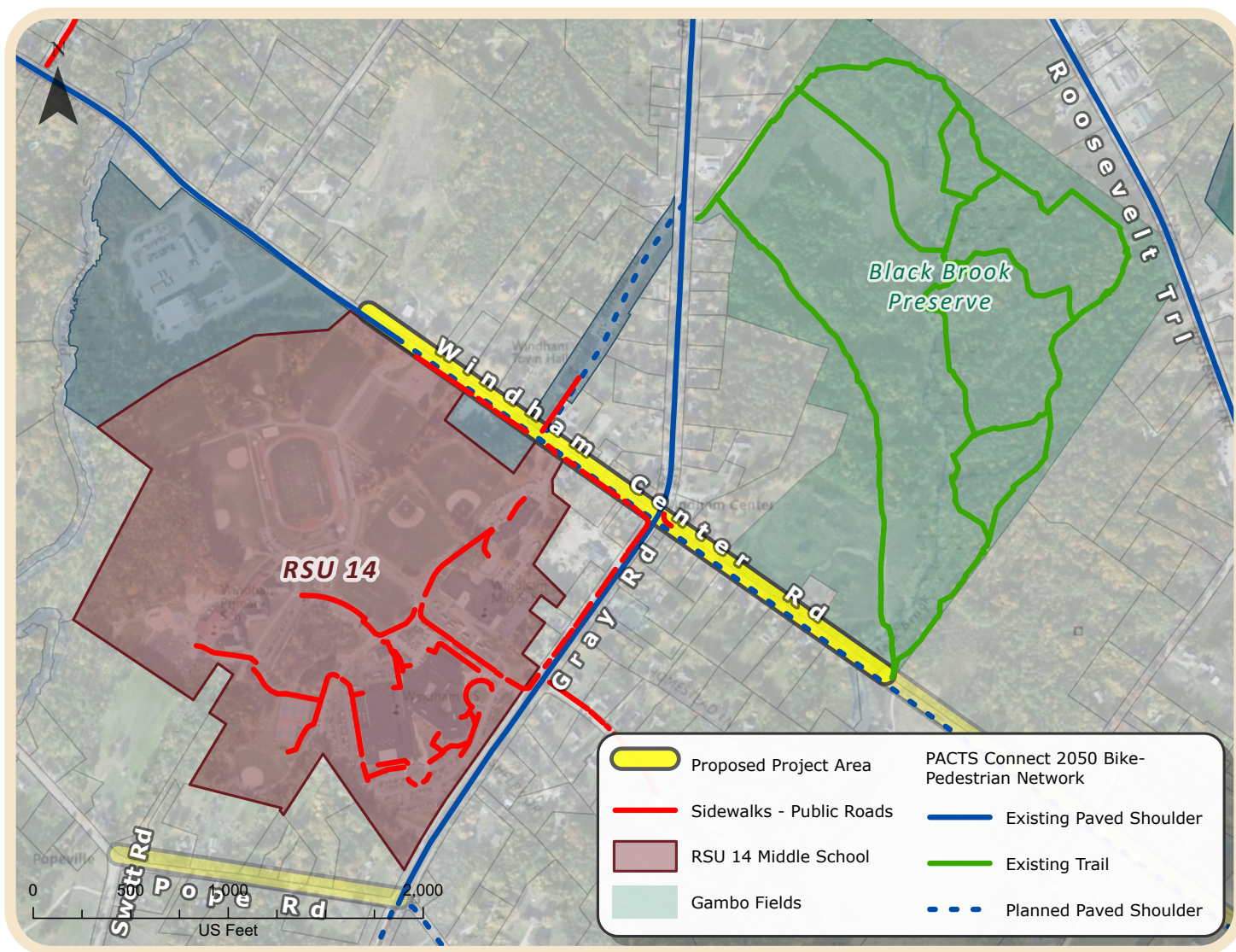
ITEM DESCRIPTION	UNIT	AVERAGE UNIT COST	QUANTITY	COST
COMMON EXCAVATION (PLAN QUANTITY)	CY	\$ 50.00	950	\$ 47,500.00
AGGREGATE SUBBASE COURSE - GRAVEL	CY	\$ 60.00	200	\$ 12,000.00
HMA 19.0 MM	TONS	\$ 175.00	525	\$ 91,875.00
HMA PAVEMENT 9.5 MM (SIDEWALKS, DRIVES, ETC.)	TONS	\$ 250.00	325	\$ 81,250.00
BITUMINOUS TACK COAT	GAL	\$ 10.00	125	\$ 1,250.00
LOAM (PLAN QUANTITY)	CY	\$ 75.00	625	\$ 46,875.00
SEEDING METHOD NUMBER 1 (PLAN QUANTITY)	UN	\$ 70.00	33	\$ 2,310.00
MULCH (PLAN QUANTITY)	UN	\$ 70.00	33	\$ 2,310.00
PROPOSED DRAINAGE IMPROVEMENTS (ALLOWANCE)	LS	\$ 25,000.00	1	\$ 25,000.00
CULVERT REPLACEMENT PER STREAMSMART PRINCIPLES	LS	\$ 750,000.00	1	\$ 750,000.00
MAINTENANCE OF TRAFFIC CONTROL	LS	\$ 230,000.00	1	\$ 230,000.00
TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LS	\$ 25,000.00	1	\$ 25,000.00
MOBILIZATION AND GENERAL CONDITIONS (10%)	LS	\$ 65,768.50	1	\$ 65,768.50
CONSTRUCTION SUBTOTAL				\$ 1,381,000.00
CONTINGENCY 25%				\$ 345,300.00
PRELIMINARY ENGINEERING (ASSUMED 10%)				\$ 138,100.00
CONSTRUCTION ENGINEERING / INSPECTION (ASSUMED 10%)				\$ 138,100.00
TOTAL 2026 ESTIMATED CONSTRUCTION COST				\$ 2,002,500.00

Assumptions/Exclusions

1. Estimate is based on 2026 construction pricing
2. Windham Center Road is considered by MaineDOT as a Corridor Priority 4.
3. Per MaineDOT highway design standards, this concept assumes striping a 11.0' lane width with a 5.0' shoulder to accommodate a bike lane. The average existing width of Windham Center lanes is 14.0' based on aerial data, so as a result this concept assumes removing pavement at least 11.0' off centerline and constructing an additional 2.0' pavement extension
4. Based on the existing pavement width of Windham Center Road, it is assumed that two-way traffic can not be accommodated during construction and flagger hours have been incorporated into the traffic control allowance.
5. This estimate does not quantify any property acquisitions, easements or utility relocations required as a part of this project.

RECOMMENDATION 6

School Campus to Black Brook Preserve Pedestrian Connectivity



RECOMMENDATION 6

Project Description:

This proposed recommendation includes continuing and constructing a dedicated sidewalk and formal pedestrian crossing along the northern side of Windham Center Road and connects to Black Brook Preserve. This project creates a safe pedestrian corridor from the school campus to the conservation area. The sidewalk should be designed in accordance with all ADA requirements and include high-visibility markings and signage for the crossing to the preserve. Trailhead amenities such as benches, bicycle racks, and informational kiosks may be incorporated at the preserve's entrance to further enhance this recommendation.

Purpose & Benefits:

Black Brook Preserve is an important natural resource conservation area and recreational destination within the Windham Center Growth Area. Further, this area also connects the school campus, thus offering:

- Enabling students and residents to walk safely to the preserve for recreation
- Support public health by making outdoor recreation more accessible
- Potential for reduced vehicular traffic at the preserve, thus minimizing environmental impacts
- Create safer educational opportunities by improving access for school groups and environmental education programs

Feasibility & Implementation Considerations:

The primary consideration for this recommendation is early and active coordination with the Presumpscot Regional Land Trust to ensure the sidewalk design aligns with conservation objectives. Coordination with school administrators and educational organizations may also present opportunities for partnerships, funding support, or in-kind contributions to advance this recommendation. The existing roadway contains ditches on both sides immediately adjacent to the pavement edge; therefore, adding a sidewalk would create a closed drainage condition on that side of the road, requiring new drainage structures. Additional design considerations should include appropriate stormwater management strategies to protect water quality within the preserve. Adjacent to the entrance, the roadway includes a guardrail section that spans an existing stream, and any modifications to this crossing will require special evaluation to determine how they can be designed to accommodate the proposed sidewalk.

Spatial Impacts & Cost Estimation:

This recommendation includes the construction of a paved five (5) ft. wide sidewalk, with associated granite curbing, along the southern side of Windham Center Road. Windham Center Road is classified as a Corridor Priority 4 roadway by MaineDOT which requires an eleven (11) ft. minimum travel way width, with three (3) ft. wide shoulders. Based on aerial imagery, an existing pavement lane width of approximately fourteen (14) feet exists today. The estimate assumes three (3) ft. of full-depth reconstruction before the proposed curblin in order to install the proposed drainage network. Based on the existing pavement width, it is assumed that two-way traffic cannot be accommodated, and flagger hours are included within the traffic control allowance line item. Drainage considerations include the construction of a closed drainage system running the full length of the sidewalk.

This estimate does not account for any property acquisitions, easements, or utility relocations that may be required, nor does it include costs for pedestrian scale or street lighting that could be necessary as the project progresses. An existing culvert structure, which facilitates a stream crossing, exists directly adjacent to the preserve entrance. Because the expanded road footprint required to accommodate the sidewalk would be needed, this crossing would need to be expanded or reconstructed. A price for the culvert replacement was estimated based on previously constructed projects. This budgetary cost includes replacing the existing culverts with a precast concrete box structure which would be sized at 1.2 times the bankfull width per Maine Audubon's StreamSmart Principles. Additional design and permitting considerations would be required to complete the replacement.

Windham Active Transportation Plan - Recommendation 6
Project No 240311-02
Preliminary Engineer's Estimate

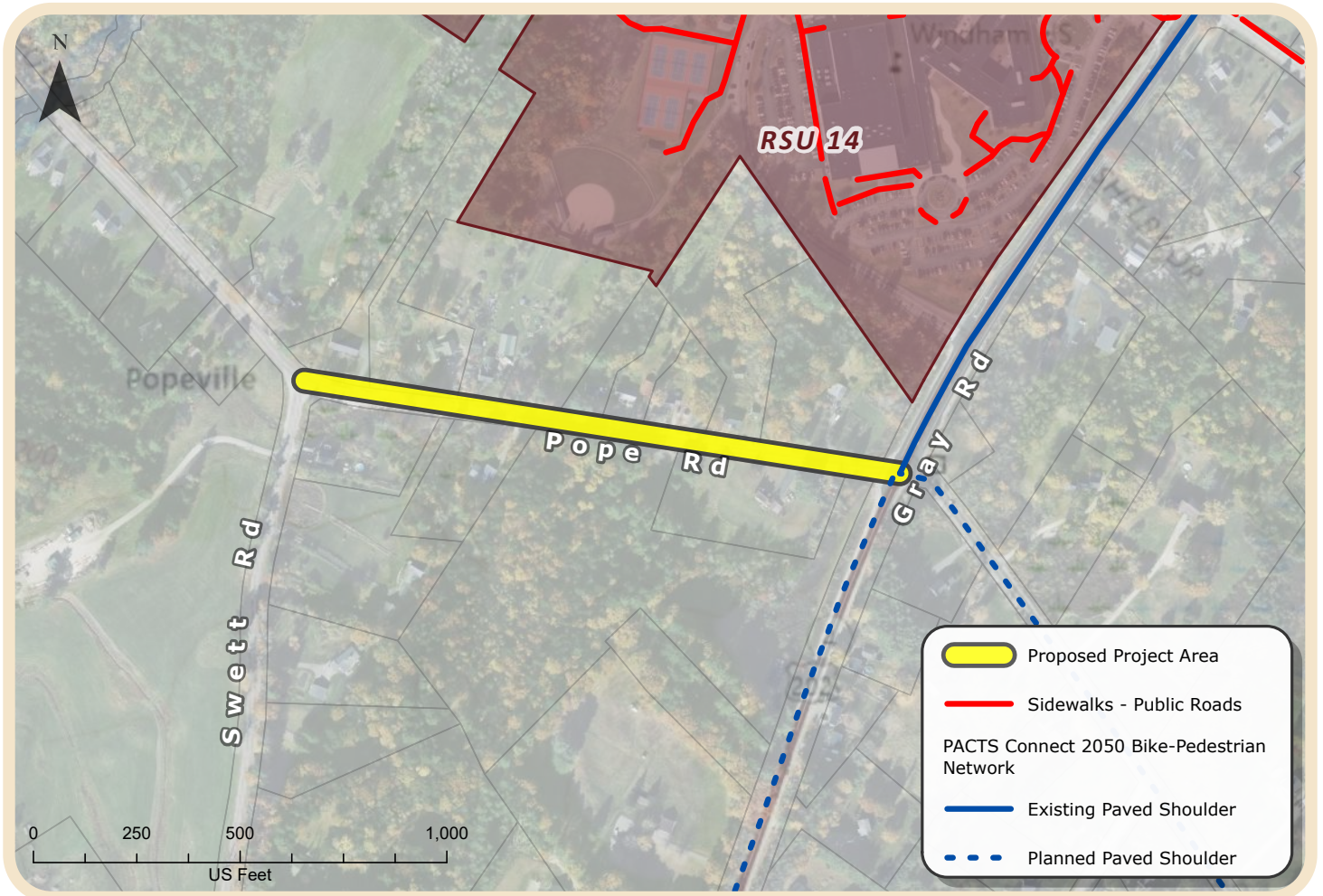
ITEM DESCRIPTION	UNIT	AVERAGE UNIT COST	QUANTITY	COST
COMMON EXCAVATION (PLAN QUANTITY)	CY	\$ 50.00	825	\$ 41,250.00
COMMON BORROW	CY	\$ 50.00	100	\$ 5,000.00
AGGREGATE SUBBASE COURSE - GRAVEL	CY	\$ 60.00	600	\$ 36,000.00
HMA 19.0 MM	TONS	\$ 175.00	75	\$ 13,125.00
HMA PAVEMENT 9.5 MM (SIDEWALKS, DRIVES, SURFACE, ETC)	TONS	\$ 175.00	175	\$ 30,625.00
BITUMINOUS TACK COAT	GAL	\$ 10.00	50	\$ 500.00
CURB RAMP DETECTABLE WARNING FIELD	SF	\$ 110.00	22	\$ 2,420.00
VERTICAL CURB TYPE 1	LF	\$ 70.00	1450	\$ 101,500.00
LOAM (PLAN QUANTITY)	CY	\$ 75.00	150	\$ 11,250.00
SEEDING METHOD NUMBER 1 (PLAN QUANTITY)	UN	\$ 70.00	8	\$ 560.00
MULCH (PLAN QUANTITY)	UN	\$ 70.00	8	\$ 560.00
PROPOSED DRAINAGE IMPROVEMENTS (ALLOWANCE)	LS	\$ 220,000.00	1	\$ 220,000.00
CULVERT REPLACEMENT PER STREAMSMART PRINCIPLES	LS	\$ 750,000.00	1	\$ 750,000.00
MAINTENANCE OF TRAFFIC CONTROL	LS	\$ 230,000.00	1	\$ 230,000.00
TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LS	\$ 25,000.00	1	\$ 25,000.00
MOBILIZATION AND GENERAL CONDITIONS (5%)	LS	\$ 73,389.50	1	\$ 73,389.50
CONSTRUCTION SUBTOTAL				\$ 1,541,000.00
CONTINGENCY 25%				\$ 385,300.00
PRELIMINARY ENGINEERING (ASSUMED 10%)				\$ 154,100.00
CONSTRUCTION ENGINEERING / INSPECTION (ASSUMED 10%)				\$ 154,100.00
TOTAL 2026 ESTIMATED CONSTRUCTION COST				\$ 2,234,500.00

Assumptions/Exclusions

1. Estimate is based on 2026 construction pricing
2. This concept estimate assumes sidewalk construction on the north side of Windham Center Road. New sidewalk was estimated from the intersection of Windham Center Road and Route 202 to the Black Brook Preserve entrance.
3. Per MaineDOT highway design standards for a corridor priority 4 road, this concept assumes striping a 11.0' lane width with a min. 3.0' shoulder before the curbline. The average existing width of Windham Center lanes is 14.0' based on aerial data, so as a result this concept assumes removing pavement at least 11.0' off centerline to
4. This estimate assumes that the proposed sidewalk construction can only be completed with alternating one-way traffic based on the existing pavement width of Windham Center Road. Assumed flagger hours are included within the "Maintenance of Traffic Control" item.
5. The drainage allowance assumes 12" Type C underdrain the entire length of the sidewalk which will convey water towards the bridge from the closed drainage system.
6. This estimate does not quantify any property acquisitions, easements or utility relocations required as a part of this project.
7. This estimate does not include costs for pedestrian scale lighting or street lighting required for the project.

RECOMMENDATION 7

Pope Rd./Swett Rd. Intersection to Gray Rd. Traffic Calming & Paved Shoulders



RECOMMENDATION 7

Project Description:

This recommendation includes the construction of enhanced pedestrian safety and traffic calming measures at the intersection of Pope Road and Swett Road. This recommendation also includes extending paved shoulders from the existing network along Gray Road (Route 202) to the intersection of Pope Road/Swett Road. Traffic calming measures, such as speed feedback signage or narrower travel lanes, promote safer active transportation in this corridor and direct infrastructure toward the school campuses.

Purpose & Benefits:

Public input during this plan's engagement efforts identified this as a priority for improvement. In particular, vehicular speed was identified as a concern and a barrier for pedestrian activity. The town's Public Works Department notes similar conditions at other intersections located throughout the town, offering the opportunity for this project to serve as a model for other intersections. This project can:

- Create safer conditions for pedestrians and cyclists
- Reduce vehicular speeds through traffic calming treatments
- Establish traffic calming standards and design templates for replication elsewhere

Feasibility & Implementation Considerations:

It is recommended that the town pursue smaller improvements, such as striping or flashing signage, to be installed along the corridor and monitored for effectiveness. It is also recommended that the design process include a speed study to evaluate the roadway's existing conditions before and after construction. This enables the town to document the effectiveness of the proposed improvements and potentially use this project as a model for future safety enhancements at other similar intersections. To prioritize cost-effectiveness, it is recommended that the proposed paved shoulder's construction be scheduled during corridor roadway pavement maintenance, as any shoulder improvements will require one-way alternating traffic flow. This enhancement should also include a coordinated maintenance plan with Public Works to ensure that shoulders remain free of debris, vegetation, and snow throughout the year, given adjacent educational facilities. In addition, right of way needs should be assessed early in the design process, as shoulder widening may require the acquisition of easements in certain locations.

Spatial Impacts & Cost Estimation:

This recommendation includes the construction of a paved five (5) ft. wide paved shoulder along Pope Road. MaineDOT classifies Pope Road as a Corridor Priority 5 (local road). The cost estimate assumes that an additional four (4) ft. of full-depth reconstruction will be required before the existing edge of pavement, along with the repaving of the full shoulder to create a proposed eleven (11) ft. travel lane with a five (5) ft. shoulder to accommodate bicycle infrastructure. This project's scope includes the excavation of the existing shoulder material to the bottom of pavement, shaping and shimming shoulder areas where necessary, and paving the shoulder area. Based on the existing pavement width of Pope Road, it is assumed that two-way traffic cannot be accommodated, and flagger hours are included within the traffic control allowance line item. To maximize cost effectiveness, it is recommended that the proposed paved shoulder construction accompany scheduled pavement maintenance for the corridor, as any shoulder improvements would require one-way alternating traffic. Drainage considerations include matching existing open drainage conditions and replacing driveway culverts that conflict with the proposed pavement extension improvements. Assumptions were made regarding two (2) flashing speed feedback signs for this recommendation. This estimate does not account for any property acquisitions, easements, or utility relocations that may be required, nor does it include costs for additional street lighting that could be necessary as the project advances to enhance pedestrian safety in the area.

Windham Active Transportation Plan - Recommendation 7 Project No 240311-02 Preliminary Engineer's Estimate

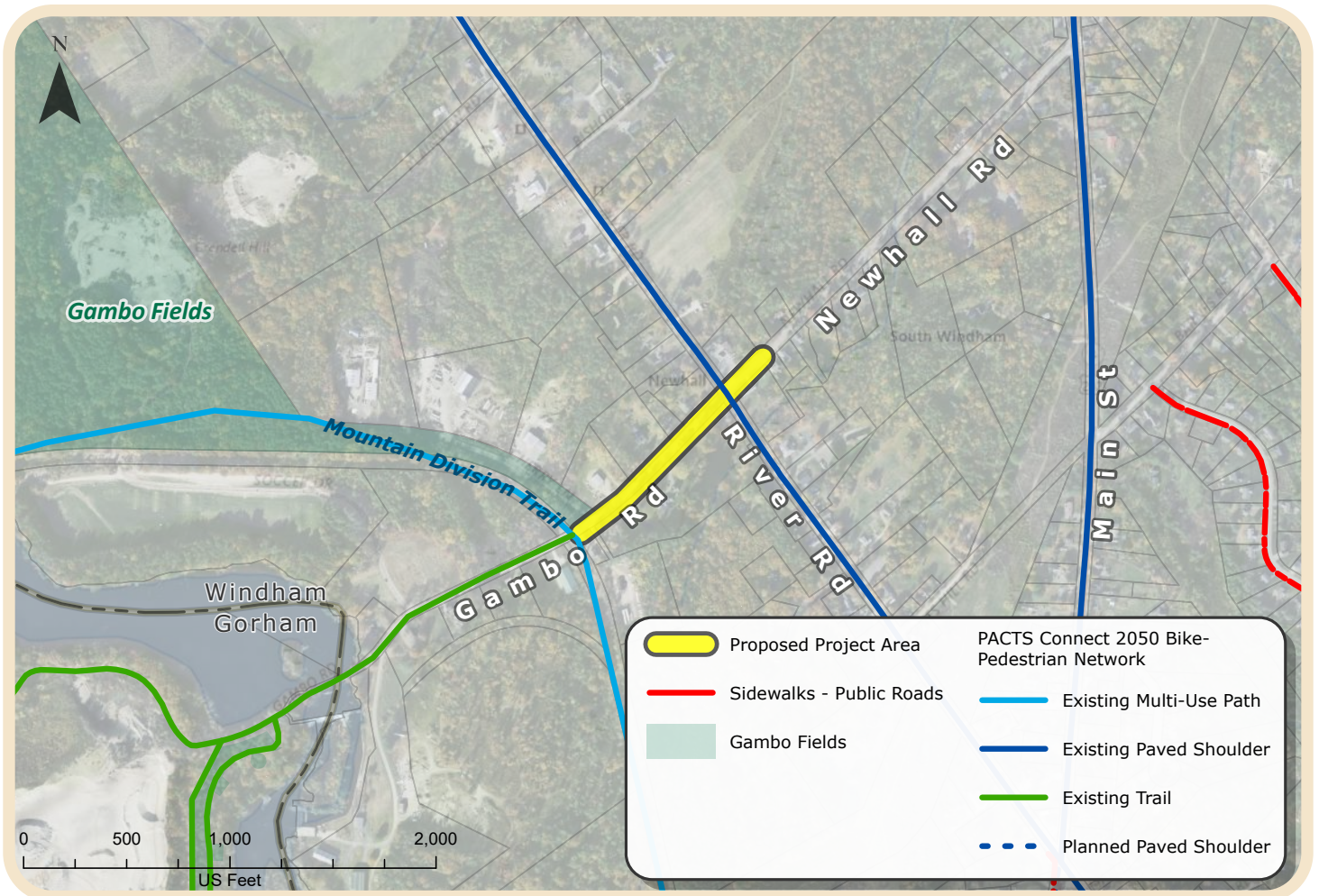
ITEM DESCRIPTION	UNIT	AVERAGE UNIT COST	QUANTITY	COST
COMMON EXCAVATION (PLAN QUANTITY)	CY	\$ 50.00	250	\$ 12,500.00
AGGREGATE SUBBASE COURSE - GRAVEL	CY	\$ 60.00	50	\$ 3,000.00
HMA 19.0 MM	TONS	\$ 175.00	125	\$ 21,875.00
HMA PAVEMENT 9.5 MM (SIDEWALKS, DRIVES, ETC.)	TONS	\$ 250.00	75	\$ 18,750.00
BITUMINOUS TACK COAT	GAL	\$ 10.00	25	\$ 250.00
LOAM (PLAN QUANTITY)	CY	\$ 75.00	150	\$ 11,250.00
SEEDING METHOD NUMBER 1 (PLAN QUANTITY)	UN	\$ 70.00	7	\$ 490.00
MULCH (PLAN QUANTITY)	UN	\$ 70.00	7	\$ 490.00
PROPOSED DRAINAGE IMPROVEMENTS (ALLOWANCE)	LS	\$ 25,000.00	1	\$ 25,000.00
TRAFFIC CALMING DEVICES	LS	\$ 20,000.00	1	\$ 20,000.00
MAINTENANCE OF TRAFFIC CONTROL	LS	\$ 75,000.00	1	\$ 75,000.00
TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LS	\$ 25,000.00	1	\$ 25,000.00
MOBILIZATION AND GENERAL CONDITIONS (10%)	LS	\$ 10,680.25	1	\$ 10,680.25
CONSTRUCTION SUBTOTAL				\$ 224,000.00
CONTINGENCY 25%				\$ 56,000.00
PRELIMINARY ENGINEERING (ASSUMED 10%)				\$ 22,400.00
CONSTRUCTION ENGINEERING / INSPECTION (ASSUMED 10%)				\$ 22,400.00
TOTAL 2026 ESTIMATED CONSTRUCTION COST				\$ 324,800.00

Assumptions/Exclusions

1. Estimate is based on 2026 construction pricing
2. Pope Road is considered by MaineDOT as a Corridor Priority 5.
3. Per MaineDOT highway design standards, this concept assumes striping a 11.0' lane width with a 5.0' shoulder to accommodate a bike lane. The average existing width of Pope Road lanes is approximately 12.0' based on aerial data, so as a result this concept assumes removing pavement at least 11.0' off centerline and constructing an additional 4.0' pavement extension
4. This estimate does not quantify any property acquisitions, easements or utility relocations required as a part of this project.

RECOMMENDATION 8

River Road & Gambo Road Intersection Improvements



RECOMMENDATION 8

Project Description:

This recommended project proposes a pedestrian crossing at the River Road and Gambo Road intersection, and extends a pedestrian sidewalk to connect to the Gambo Fields property. While this project is largely outside the South Windham Growth Area, the proposed connection allows residents within the area to use existing active transportation infrastructure and facilities. The proposed crossing should include high-visibility markings, signage, and, if appropriate, active warning systems.

Purpose & Benefits:

This recommended project would offer an expanded means of connection to the Mountain Division Trail and recreational facilities at Gambo Fields, providing a range of destinations throughout the year. This project also addresses an existing gap between the Dolley Farm subdivision and the Duck Pond variety store. Benefits of this project include:

- Providing safe access to recreational facilities for families and youth sports
- Support connections to the greater active transportation and recreational network
- Potentially reduce vehicular traffic at Gambo Fields by improving and encouraging pedestrian traffic

Feasibility & Implementation Considerations:

Larger considerations for this project include coordination between the town, Gambo Fields ownership, and the Mountain Division Trail stakeholders, to align the proposed sidewalk with intended uses for the property and surrounding uses. It is recommended that the intersection of River Road/Gambo Road be evaluated by a traffic engineer to determine the most appropriate warning and control devices for the proposed crossing. Key design considerations include closed drainage analysis, utility pole relocations and right-of-way impacts. The town should also consider the potential for a public-private partnership to explore ideas on shared project costs.

Spatial Impacts & Cost Estimation:

This recommended project includes the construction of a five (5) ft. wide paved sidewalk, with associated granite curbing, along the northern side of Gambo Road between the Mountain Division Trail and River Road. MaineDOT classifies Gambo Road as a Corridor Priority 5 (local road), requiring a minimum of eleven (11) ft. for travel way width, and three (3) ft. shoulders. Based on aerial imagery, this estimate assumes the construction of an

additional two (2) ft. of full-depth reconstruction before the proposed curblin in order to install the proposed sidewalk and drainage network. Based on the existing pavement width, it is assumed that two-way traffic cannot be accommodated, and flagger hours are included within the traffic control allowance line item. Drainage considerations include construction of a closed drainage system running the full length of the sidewalk. Furthermore, a crosswalk with a pair of Rectangular Rapid Flashing Beacons (RRFBs) was assumed at the intersection of River Road/Gambo Road. This estimate does not account for any property acquisitions, easements, or utility relocations that may be required, nor does it include costs for pedestrian-scale or street lighting that may be necessary as the project progresses.

Windham Active Transportation Plan - Recommendation 8 Project No 240311-02 Preliminary Engineer's Estimate

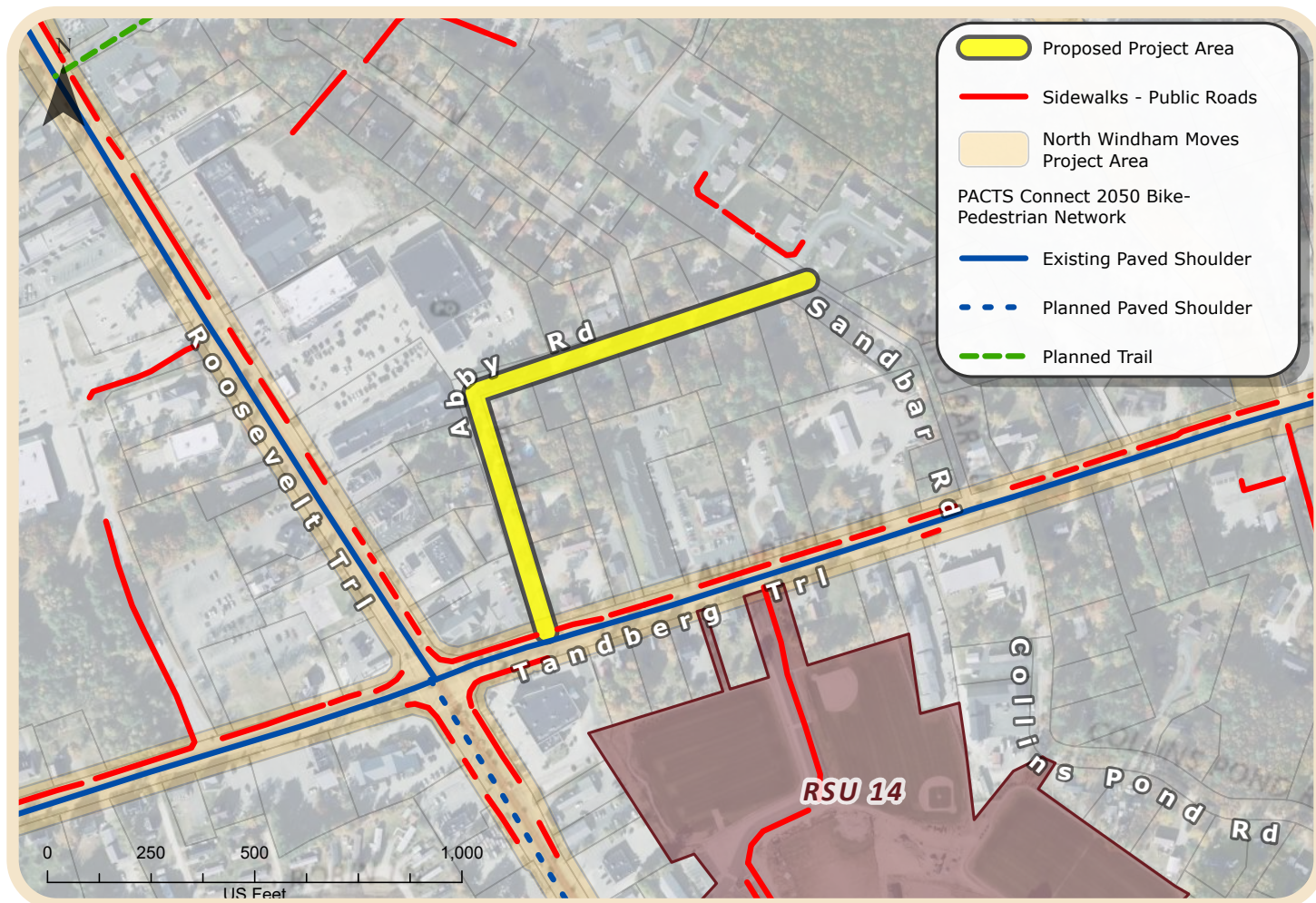
ITEM DESCRIPTION	UNIT	AVERAGE UNIT COST	QUANTITY	COST
COMMON EXCAVATION (PLAN QUANTITY)	CY	\$ 50.00	550	\$ 27,500.00
COMMON BORROW	CY	\$ 50.00	100	\$ 5,000.00
AGGREGATE SUBBASE COURSE - GRAVEL	CY	\$ 60.00	400	\$ 24,000.00
HMA 19.0 MM	TONS	\$ 175.00	50	\$ 8,750.00
HMA PAVEMENT 9.5 MM (SIDEWALKS, DRIVES, ETC.)	TONS	\$ 250.00	130	\$ 32,500.00
BITUMINOUS TACK COAT	GAL	\$ 10.00	30	\$ 300.00
CURB RAMP DETECTABLE WARNING FIELD	SF	\$ 110.00	22	\$ 2,420.00
VERTICAL CURB TYPE 1	LF	\$ 70.00	1000	\$ 70,000.00
LOAM (PLAN QUANTITY)	CY	\$ 75.00	100	\$ 7,500.00
SEEDING METHOD NUMBER 1 (PLAN QUANTITY)	UN	\$ 70.00	6	\$ 420.00
MULCH (PLAN QUANTITY)	UN	\$ 70.00	6	\$ 420.00
SOLAR POWERED RECTANGULAR RAPID FLASHING BEACONS (PAIR)	EA	\$ 25,000.00	1	\$ 25,000.00
PROPOSED DRAINAGE IMPROVEMENTS (ALLOWANCE)	LS	\$ 160,000.00	1	\$ 160,000.00
MAINTENANCE OF TRAFFIC CONTROL	LS	\$ 120,000.00	1	\$ 120,000.00
TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LS	\$ 25,000.00	1	\$ 25,000.00
MOBILIZATION AND GENERAL CONDITIONS (10%)	LS	\$ 25,440.50	1	\$ 25,440.50
CONSTRUCTION SUBTOTAL				\$ 534,000.00
CONTINGENCY 25%				\$ 133,500.00
PRELIMINARY ENGINEERING (ASSUMED 10%)				\$ 53,400.00
CONSTRUCTION ENGINEERING / INSPECTION (ASSUMED 10%)				\$ 53,400.00
TOTAL 2026 ESTIMATED CONSTRUCTION COST				\$ 774,300.00

Assumptions/Exclusions

1. Estimate is based on 2026 construction pricing
2. Gambo Road is classified as a Corridor Priority 5 roadway. As a result, a lane width of 11.0' and shoulder width of 3.0' were assumed to accommodate a sidewalk with the least amount of impacts.
3. This concept estimate assumes sidewalk construction on the north side of Gambo Road. Based on aerial imagery, it looks like the existing pavement width of Gambo Rd. is approximately 12.0'. Therefore 2.0' of additional full reconstruction were assumed before the proposed curblin. Repaving of the full shoulder was assumed as a part of this estimate.
4. This estimate assumes that the proposed sidewalk construction can only be completed with alternating one-way traffic based on the existing pavement width of Gambo Road. Assumed flagger hours are included within the "Maintenance of Traffic Control" item.
5. The drainage allowance assumes 12" Type C underdrain the entire length of the sidewalk which will convey water towards the bridge from the closed drainage system.
6. This estimate does not quantify any property acquisitions, easements or utility relocations required as a part of this project.
7. This estimate does not include costs for pedestrian scale lighting or street lighting required for the project.

RECOMMENDATION 9

Abby Road Pedestrian Improvements



RECOMMENDATION 9

Project Description:

This recommended project includes the construction of a proposed sidewalk to provide pedestrian connectivity along Abby Road. This project is located within the North Windham Growth Area and would connect Abby Road to Tandberg Trail (Route 115). Through this project, pedestrians would have greater access to the shopping center's retail and service businesses, communal destinations such as the post office, and adjacent residential areas. The proposed sidewalk should be constructed to ADA standards and include a pedestrian crossing at the corner joining the commercial area.

Purpose & Benefits:

This project can serve as a quick “win” for the town since it connects a local road to adjacent commercial and residential areas. Where this travel way currently lacks pedestrian infrastructure, this project can enable residents to walk safely from their homes to the post office, or other retail and service businesses within North Windham. This project also:

- Supports local business vitality by improving customer access
- Improves accessibility for residents without access to personal vehicles
- Connects to the larger overall planned improvements within the North Windham Moves project, thus reinforcing active transportation within the area

Feasibility & Implementation Considerations:

It is recommended that the town conduct public outreach to adjacent businesses to explore opportunities for public-private partnerships. If feasible, commercial owners could contribute to construction costs, or provide easements, to reduce the overall cost to the town. The town should evaluate potential impacts within the right-of-way, as well as consider the feasibility of a closed drainage system. Some businesses within the project area may need to relocate signage behind the proposed sidewalk where needed. The project should also consider clear wayfinding signage to building entrances and coordinate with local businesses during construction to minimize disturbance.

Spatial Impacts & Cost Estimation:

This recommended project consists of the construction of a five (5) ft. wide paved sidewalk, with associated granite curbing, along the eastern and northern sides of Abby Road. MaineDOT classifies Abby Road as a Corridor Priority 5 (local road), which requires a minimum eleven (11) ft. travel way width, and a minimum three (3) ft. wide shoulder. Based on aerial imagery, this cost estimate assumes that an additional three (3) ft. of full-depth reconstruction before the proposed curbline is required. Further, based on the existing pavement width, it is assumed that two-way traffic cannot be accommodated, and flagger hours are included within the traffic control allowance line item. Drainage considerations include constructing a closed drainage system running the full length of the sidewalk. This estimate does not account for any property acquisitions, easements, or utility relocations that may be required, nor does it include costs for pedestrian scale or street lighting that could be necessary as the project progresses.

Windham Active Transportation Plan - Recommendation 9 Project No 240311-02 Preliminary Engineer's Estimate

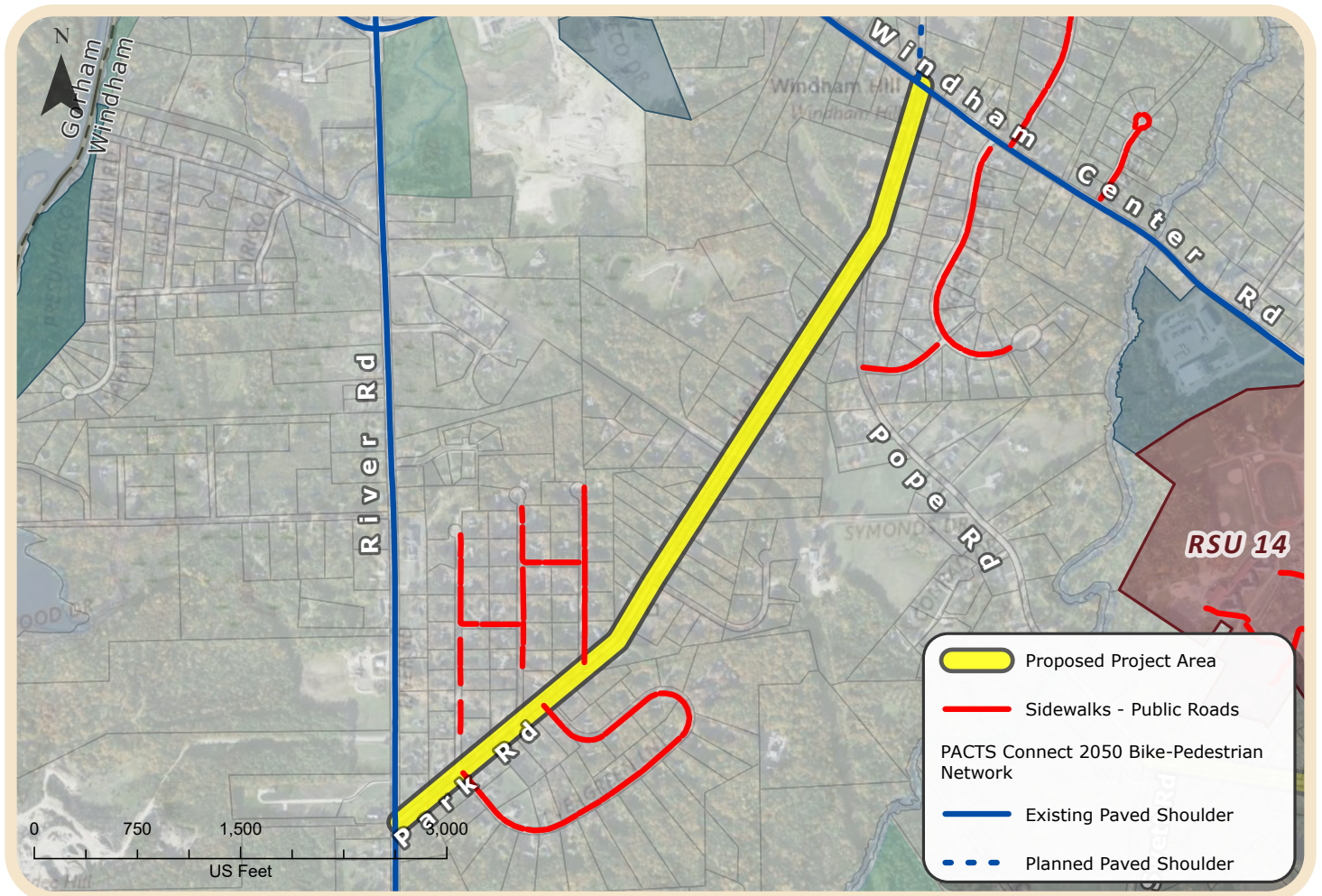
ITEM DESCRIPTION	UNIT	AVERAGE UNIT COST	QUANTITY	COST
COMMON EXCAVATION (PLAN QUANTITY)	CY	\$ 50.00	800	\$ 40,000.00
COMMON BORROW	CY	\$ 50.00	100	\$ 5,000.00
AGGREGATE SUBBASE COURSE - GRAVEL	CY	\$ 60.00	530	\$ 31,800.00
HMA 19.0 MM	TONS	\$ 175.00	70	\$ 12,250.00
HMA PAVEMENT 9.5 MM (SIDEWALKS, DRIVES, ETC.)	TONS	\$ 250.00	160	\$ 40,000.00
BITUMINOUS TACK COAT	GAL	\$ 10.00	40	\$ 400.00
CURB RAMP DETECTABLE WARNING FIELD	SF	\$ 110.00	22	\$ 2,420.00
VERTICAL CURB TYPE 1	LF	\$ 70.00	1400	\$ 98,000.00
LOAM (PLAN QUANTITY)	CY	\$ 75.00	140	\$ 10,500.00
SEEDING METHOD NUMBER 1 (PLAN QUANTITY)	UN	\$ 70.00	7	\$ 490.00
MULCH (PLAN QUANTITY)	UN	\$ 70.00	7	\$ 490.00
PROPOSED DRAINAGE IMPROVEMENTS (ALLOWANCE)	LS	\$ 210,000.00	1	\$ 210,000.00
MAINTENANCE OF TRAFFIC CONTROL	LS	\$ 120,000.00	1	\$ 120,000.00
TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LS	\$ 25,000.00	1	\$ 25,000.00
MOBILIZATION AND GENERAL CONDITIONS (10%)	LS	\$ 29,817.50	1	\$ 29,817.50
CONSTRUCTION SUBTOTAL				\$ 626,000.00
CONTINGENCY 25%				\$ 156,500.00
PRELIMINARY ENGINEERING (ASSUMED 10%)				\$ 62,600.00
CONSTRUCTION ENGINEERING / INSPECTION (ASSUMED 10%)				\$ 62,600.00
TOTAL 2026 ESTIMATED CONSTRUCTION COST				\$ 907,700.00

Assumptions/Exclusions

1. Estimate is based on 2026 construction pricing
2. Abby Road is classified as a Corridor Priority 5 roadway. As a result, a lane width of 11.0' and shoulder width of 3.0' were assumed to accommodate a sidewalk with the least amount of impacts.
3. This concept estimate assumes sidewalk construction on the east side of Abby Road. Based on aerial imagery, it looks like the existing pavement width of Abby Rd. is approximately 11.0'. Therefore 3.0' of additional full reconstruction were assumed before the proposed curbline. Repaving of the full shoulder was assumed as a part of this estimate.
4. This estimate assumes that the proposed sidewalk construction can only be completed with alternating one-way traffic based on the existing pavement width of Abby Road. Assumed flagger hours are included within the "Maintenance of Traffic Control" item.
5. The drainage allowance assumes 12" Type C underdrain the entire length of the sidewalk which will convey water towards the bridge from the closed drainage system.
6. This estimate does not quantify any property acquisitions, easements or utility relocations required as a part of this project.
7. This estimate does not include costs for pedestrian scale lighting or street lighting required for the project.

RECOMMENDATION 10

Park Road Pedestrian Improvements



RECOMMENDATION 10

Project Description:

This recommended project involves constructing a sidewalk along Park Road to provide a pedestrian connection from Windham Center Road to River Road. The proposed sidewalk would connect the existing residential subdivisions to their associated pedestrian infrastructure along Park Road. In turn, this creates a broader active transportation network and provides safer passage for residents who currently walk Park Road for recreation. This project can also provide a framework for future opportunities to improve pedestrian connections to nearby school campuses.

Purpose & Benefits:

This proposed recommendation will provide a connection that addresses an existing active transportation gap within the Windham Center Growth Area. Currently, existing subdivisions have sidewalks that terminate along Park Road. This area was also identified as a priority during public engagement activities conducted under this plan. Thus, this project will provide a pedestrian connection to adjacent residential areas, and provide a framework for a larger, overall active transportation network. This project will also:

- Unite fragmented sidewalks within the area and connect them to a larger network
- Provide safer walking routes to school campuses
- Enable walking trips between residential neighborhoods

Feasibility & Implementation Considerations:

Because this project was identified as a priority during public engagement efforts, the town should consider coordination with nearby residents and homeowner's associations. Where community input may indicate support for this project, the town should also consider public outreach mechanisms to build consensus, define if a portion of the project could be funded through adjacent homeowner's associations, and engage in property owners where right-of-way expansion or securement of easements may be needed. The town should also evaluate whether to phase this project. Phasing this project offers the opportunity to break up the project cost or align with scheduled maintenance along Park Road.

Spatial Impacts & Cost Estimation:

This recommendation includes the construction of a five (5) ft. wide paved sidewalk, with associated granite curbing, along the eastern side of Park Road. MaineDOT classifies Park Road under a Corridor Priority 5 (local road), which requires a minimum eleven (11) ft. travel way width and three (3) ft. wide shoulders. Aerial imagery indicates an existing pavement lane width of approximately thirteen (13) ft. Thus, the cost estimate assumes the construction of an additional one (1) ft. full reconstruction before the proposed curb line to accommodate for a closed drainage system. Given the existing width of Park Road, it is assumed that two-way traffic cannot be accommodated during construction, requiring flagger hours within the traffic control line item. Drainage considerations for this consist of a closed drainage system that runs the full length of the sidewalk along Park Road. This estimate does not account for any property acquisitions, easements, or utility relocations that may be required.

Windham Active Transportation Plan - Recommendation 10

Project No 240311-02

Preliminary Engineer's Estimate

ITEM DESCRIPTION	UNIT	AVERAGE UNIT COST	QUANTITY	COST
COMMON EXCAVATION (PLAN QUANTITY)	CY	\$ 50.00	2800	\$ 140,000.00
COMMON BORROW	CY	\$ 50.00	100	\$ 5,000.00
AGGREGATE SUBBASE COURSE - GRAVEL	CY	\$ 60.00	2050	\$ 123,000.00
HMA 19.0 MM	TONS	\$ 175.00	310	\$ 54,250.00
HMA PAVEMENT 9.5 MM (SIDEWALKS, DRIVES, SURFACE, ETC)	TONS	\$ 175.00	725	\$ 126,875.00
BITUMINOUS TACK COAT	GAL	\$ 10.00	180	\$ 1,800.00
CURB RAMP DETECTABLE WARNING FIELD	SF	\$ 110.00	55	\$ 6,050.00
VERTICAL CURB TYPE 1	LF	\$ 70.00	6700	\$ 469,000.00
LOAM (PLAN QUANTITY)	CY	\$ 75.00	625	\$ 46,875.00
SEEDING METHOD NUMBER 1 (PLAN QUANTITY)	UN	\$ 70.00	34	\$ 2,380.00
MULCH (PLAN QUANTITY)	UN	\$ 70.00	34	\$ 2,380.00
PROPOSED DRAINAGE IMPROVEMENTS (ALLOWANCE)	LS	\$ 1,000,000.00	1	\$ 1,000,000.00
MAINTENANCE OF TRAFFIC CONTROL	LS	\$ 230,000.00	1	\$ 230,000.00
TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LS	\$ 25,000.00	1	\$ 25,000.00
MOBILIZATION AND GENERAL CONDITIONS (5%)	LS	\$ 111,630.50	1	\$ 111,630.50
CONSTRUCTION SUBTOTAL				\$ 2,344,000.00
CONTINGENCY 25%				\$ 586,000.00
PRELIMINARY ENGINEERING (ASSUMED 10%)				\$ 234,400.00
CONSTRUCTION ENGINEERING / INSPECTION (ASSUMED 10%)				\$ 234,400.00
TOTAL 2026 ESTIMATED CONSTRUCTION COST				\$ 3,398,800.00

Assumptions/Exclusions

1. Estimate is based on 2026 construction pricing
2. Park Road is classified as a Corridor Priority 5 roadway. As a result, a lane width of 11.0' and shoulder width of 3.0' were assumed to accommodate a sidewalk with the least amount of impacts.
3. This concept estimate assumes sidewalk construction on the east side of Park Road. Based on aerial imagery, it looks like the existing pavement lane width of Park Road is approximately 13.0'. Therefore 1.0' of additional full reconstruction were assumed before the proposed curbline. Repaving of the full shoulder was assumed as a part of this estimate.
4. This estimate assumes that the proposed sidewalk construction can only be completed with alternating one-way traffic based on the existing pavement width of Park Road. Assumed flagger hours are included within the "Maintenance of Traffic Control" item.
5. The drainage allowance assumes 12" Type C underdrain the entire length of the sidewalk which will convey water from the closed drainage system.
6. This estimate does not quantify any property acquisitions, easements or utility relocations required as a part of this project.
7. This estimate does not include costs for pedestrian scale lighting or street lighting required for the project.

FUNDING SOURCES

Implementing the recommendations within this Active Transportation Plan will require a diverse portfolio of funding sources. By combining federal, state, regional, and local funding sources, this can reduce costs borne by the town and lighten the burden on taxpayers. This section outlines opportunities for potential funding sources, eligibility requirements, and strategic steps the Town can take to access these funds.

Federal BUILD Grant

The U.S. Department of Transportation (USDOT) Better Utilizing Investments to Leverage Development (BUILD) Grant Program, previously known as RAISE/TIGER, provides grants for surface transportation infrastructure projects with significant local or regional impact. Because the program is multimodal, project sponsors, including local governments, can pursue larger active transportation projects.

Portland Area Comprehensive Transportation System (PACTS)

PACTS coordinates regional transportation planning and funding decisions for the Greater Portland region, which includes Windham. PACTS develops, in collaboration with MaineDOT, the Transportation Improvement Program (TIP), which lists all federally funded capital project in the region. PACTS also develops the Unified Planning Work Program, which outlines regional planning activities. Through these programs and related funding initiatives, PACTS can provide technical support and prioritize projects. Windham may advance active transportation projects by collaborating with PACTS and participating in its project selection processes. Of note, the new Urban Partnership Initiative (UPI) utilizes state funds to target active transportation improvements. For the UPI program, PACTS solicits project proposals from municipalities and submits a list of prioritized projects to MaineDOT. UPI is the only source of construction funding for which PACTS directly selects projects.

Maine Department of Transportation

MaineDOT offers a variety of different programs for which Windham active transportation infrastructure improvements would be eligible. Of note is the Business Partnership Initiative (BPI) through which Windham would partner with one or more local businesses to improve a portion of a state or state-aid highway to enhance bicycle and pedestrian access and safety.

MaineDOT (cont.)

MaineDOT also created the Active Transportation Partnership Initiative (ATPI) to assist in the funding of small, location-specific improvements in a transportation system that enhances the safety and mobility for vulnerable road users (VRU). This initiative aims to foster safe and usable human-scale transportation options, and intends on creating strong municipal-State partnerships for safe and walkable village and downtown centers. The ATPI program seeks to design and implement transportation system improvements in partnership with municipal partners via three (3) available implementation tracks: Targeted Transportation Improvements, Measurable Safety Interventions, and Demonstration/Pilot Projects.

Municipal Tax Increment Financing

The State of Maine allows communities to capture incremental growth in property tax revenue over a period of time for reinvestment within the community. TIF revenues provide opportunities to fund local development projects, such as the recommended pedestrian and bicycle infrastructure projects, and also contain a mechanism for local grant matching.

Safe Routes to Schools

Some of the proposed recommendations may qualify under a Safe Routes to School program. The State of Maine offers grant opportunities to municipalities to pursue these types of projects and design safe pedestrian and bicycle infrastructure to school facilities. When there is an opportunity to expand the existing network around the school campus and the future middle school is nearing completion, the town should consider applying for these funds to improve active transportation infrastructure in this corridor.

Other State Funds

There are several other state programs that provide funding specifically for active transportation infrastructure development and improvements. In particular, the Maine Dept. of Economic and Community Development provides Community Development Block Grants (CDBG) to local governments specifically for active transportation infrastructure improvements. Objectives of this program are to benefit low and moderate income households, prevention and elimination of blight conditions, or meeting community development needs.

Public-Private Partnerships

Though not a formal funding source, these partnerships provide incentives to collaborate with private entities to share project costs. While most of these recommended projects could involve a partnership of this nature, the town should build on existing relationships and work to develop new ones. Events like a Business Appreciation Breakfast offer excellent opportunities for municipal staff to network with private owners and discuss planned projects or improvements within their vicinity.

Municipal Capital Improvement Program (CIP)

Local funding through the town's annual capital improvement program can provide essential match funding for grants, and can support projects that are not competitive for external funding. This funding strategy can establish dedicated annual funds for active transportation projects, demonstrating a sustained commitment to improving the town's active transportation infrastructure.

Revisions to Municipal Impact Fee Structure

Where the town's current land use ordinance incentivizes private developments to construct their own internal infrastructure, the town could require developers to also install pedestrian access ways and facilities along the frontage of public streets. The town should also consider revising the ordinance's impact fee structure by tailoring impact fees for each of the identified growth areas. Through this, the town can ensure that collected impact fees are used for the planned projects in each growth area.



APPENDIX A

Existing Conditions Memorandum



Existing Conditions Memorandum

Date: November 14, 2025

To: Stephen Puleo, *Planning Director, Town of Windham*
Amanda Lessard, *Senior Planner, Town of Windham*
Ron Landis, *Regional Transportation Planner, GPCOG*

From: Brett Wiemken, *Planning Consultant/Project Manager*
Bradley Lyon, P.E., PTOE, *VP, Transportation Engineering*
Sebago Technics, Inc.
75 John Roberts Rd. Ste. 4A, South Portland ME 04106

Subject: Windham Active Transportation Plan
Existing Conditions Memorandum & Mapping Exhibits

Introduction

Sebago Technics, Inc. (Sebago), has been retained by the Greater Portland Council of Governments (GPCOG) to conduct an Active Transportation Plan (ATP) for the Town of Windham, Maine. The following summary and associated exhibits represent an overview of the purpose and need behind this plan, the designated study area, prior planning efforts, methodology utilized to conduct fieldwork, and the existing conditions found in each the study areas. In total, approximately fifty (50) miles of roadway were visited and inventoried. The four (4) key areas are identified within the Town's 2016 Comprehensive Plan and include, the North Windham Growth Area, Windham Center Growth Area, Windham Residential Growth Area, and the South Windham Growth Area.

Purpose & Need

The Town is undertaking these efforts to promote an integrated multi-modal transportation network throughout the Town. By assessing the current conditions and obtaining community and stakeholder feedback, Sebago will develop actionable plans with associated cost estimates to establish short and long term recommendations for improvements.

Study Area

The North Windham Growth District is centered at the Roosevelt Trail (Route 302) and Tandberg Trail (Route 115) intersection. The area is generally bound by the Pope Road intersection at the south, Enterprise Drive to the north, and Sebago Lake to the west. The eastern boundary encloses various developments on the eastern side of Roosevelt Trail. This growth area largely contains commercial zoning (Zones: C-1, C-1N, C-2, C-4), with a small area of medium residential (Zone: RM), and other zoning districts (Zones: ED, F, SLZ).

The Central Windham Growth District is generally bound by Roosevelt Trail to the east, and River Road to the west. This growth area is largely residential in nature (Zone: VR) and portions of

commercial (Zones: C-3, WC) and other areas (Zones: SLZ, RCCF, and other Contract Zones). The primary pedestrian generator within this area is the Windham High School, which is supported by various residential neighborhoods.

The Residential Growth District is generally bound by Brand Road to the east, Roosevelt Trail to the South and Tanberg Trail to the North. A small amount of residential developments north of Tanberg Trail are included in the district. This growth area is largely zoned Residential Medium (Zone: RM) and Village Residential (Zone: VR). There is also a small portion of Resource Protection/Limited Residential District surrounding Collins Pond.

The South Windham Growth District is bound by River Road to the east and the Gorham-Windham town border to the west. This area is the most diverse areas being studied, as it contains residential areas (Zones: VR & RM), and has portions of commercial and industrial (Zones: VC & I). Specifically, the Village Commercial District is where a majority of the pedestrian traffic is expected given the higher density of businesses within this area.

Please see the attached mapping exhibits located within Appendix 1. Map 1 provides overall context to where each of the respective growth areas are located within the Town of Windham, and Maps 2 through 5 provide a zoomed in view on each of their respective areas and associated features.

Methodology

Prior to commencing data collection in the field, initial GIS data layers containing active transportation features were provided by GPCOG and the Town of Windham. The selected scope of features included sidewalks, crosswalks, bike lanes, trail intersections, paved shoulders, and signage/fixed structures on public roads and/or property within the four study areas.

Fieldwork assessments for the existing conditions were conducted between mid-summer and early fall of 2025. Data was collected utilizing the ArcGIS Field Maps integrated positioning systems, which were post-processed and adjusted using recent ortho-rectified imagery. Sidewalk and crosswalk features were mapped from start to end for each segment, i.e. sidewalk mapping reflects gaps in continuous sidewalk due to driveway entrances. Definitions of the attributes referenced in this memo and collected by Sebago are provided within the Appendix 2.

The conditions for sidewalks, specifically, were graded on a scale of Excellent, Good, Fair, Poor, and Severe. Criteria utilized for this grading scale are provided below, and examples of different types of sidewalk conditions are presented later in the memo.

Table 1: Infrastructure Attribute Grading Scale and Definitions

Grade	Description
Excellent	<i>The sidewalk has no observable structural or cosmetic defects.</i>
Good	<i>The sidewalk has no observable structural defects, but has some cosmetic defects.</i>
Fair	<i>The sidewalk has observable, minor structural defects such as cracking or rutting, but is still navigable by the user.</i>
Poor	<i>The sidewalk has observable structural defects such as cracking, rutting, or crumbling that impedes user navigation.</i>
Severe	<i>The sidewalk has major structural defects that impede user navigation and present potential hazards to the user.</i>

Where newly constructed infrastructure was identified within the four (4) study areas, field data was collected to ensure the features were included in our existing conditions assessment. Collecting detailed data of infrastructure located on private streets was not included within the scope of field work. However, efforts included confirming the location of existing infrastructure within these areas, which are reflected on the attached mapping exhibits.

By utilizing existing data layers provided by the Town and GPCOG, and our supplementary field assessment, we have compiled this data into a digital asset inventory database. This inventory includes active transportation features, as described above, within each of the study areas. Geo-tagged photographs of pedestrian infrastructure were also collected during fieldwork and are included in Appendix 2.

Previous Study Efforts

As provided by GPCOG, we have included their prepared document review summary within Appendix 3. This document and the summary below provides context on existing planning documents and publications that directly relate to Windham and active transportation planning. Key themes are provided below:

Comprehensive Master Plan – Windham, 2016:

This Plan was utilized to narrow the scope of the existing conditions analysis, to the four key areas discussed previously. The Comprehensive Plan identifies “*Four Big Things*”, which are high priority subject items and areas that summarize the results of extensive public engagement and detail measures for implementation. Each of these four (4) items and how they relate to the scope of this project are detailed below:

- *Big Thing 1 – Change the Game for North Windham, Windham Center, & South Windham:* Each of these three (3) areas were specifically considered and included within this Existing Conditions Analysis. The Comprehensive Plan identifies that these Growth Areas need to begin groundwork to ensure that these areas become true centers for the Town. With each area having their own unique set of characteristics, it is critical to capitalize on their differences and allow for different types and scales of development to make Windham a community for all people, ages, and economic means. The main objective of this point is to expand the range of options available for individuals looking to make Windham a place to call home, or start or expand a business. This includes maintaining the North Windham Growth Area as a place for active mixed-use and commercial activity, the Central Windham Growth Area to serve as the civic core of the community, and the South Windham Growth Area to encourage higher density residential development and improve village-scale commercial opportunities.
- *Big Thing 2 – Create a North Windham to Be Proud Of:* As North Windham serves as the economic and social center for the community, the Town felt that it was critical to build on the success of the area and ensure it stays successful for future generations. Public input indicated that investments should be made in this area, and that future development or redevelopment should become high assets to the community.
- *Big Thing 3 – Invest in Rural Windham to Keep It Rural:* This point largely focuses on rural areas outside of the scope of this project. However, protecting open spaces and scenic

vistas for pedestrian uses remains a focal point of this goal and relates to active transportation.

- *Big Thing 4 – Focus on Community Facilities & Programs:* This point aligns with objectives of this Active Transportation Plan, as the community indicates an interest in maintaining existing facilities, parks, and recreation lands, as well as addressing the needs of a growing community.

The Comprehensive Plan also discusses bicycle and pedestrian facilities exclusively (pg. 130-132), where it identifies challenges that the existing and limited network faces. These challenges align with the findings of this analysis, where incomplete sidewalk networks and a lack of crosswalks present barriers to means of active transportation. Additionally, there are not any designated bike lanes within the entirety of Windham. Routes 302 and 202 both remain popular for biking activities, as users utilize the paved shoulders to their advantage. The Mountain Division Trail also provides a five (5) mile paved multi-use trail that connects Gorham, Standish, and Windham. Further, regional considerations for active transportation are focused within the South Windham Growth Area, as varying conditions of existing sidewalks connect village-scale commercial developments to the Town of Gorham.

The Comprehensive Plan acknowledges opportunities within the Town to where measures can be taken to promote active transportation. In North Windham specifically, the Plan identifies that large expanses of parking lots could be reclaimed to provide opportunities for pedestrian-focused improvements and development. This area also contains opportunities to improve pedestrian crossings, as this area navigates challenges around traffic volume and lane configurations. Additionally, the overall Comprehensive Plan calls for additional off-road connections for cyclists, and recommends that trails along utility corridors can be expanded to provide options for active transportation usership.

North Windham Moves: Regional Mobility & Local Access - Windham, 2022:

This study was primarily focused along Route 302 and the surrounding North Windham area, and considers the impacts of new ideas related to connector roads, access management strategies, and corridor & intersection improvements for all modes of transportation, including methods of active transportation. High-level recommendations from this plan include:

- *East Connector Road, Middle Connector Road, West Connector Road (pg. 35-36):* This idea focuses on the construction of three (3) new connector roads to direct vehicular traffic off of Route 302. The intention behind this recommendation is to provide better access to local roads that serve local businesses and promote the local economy. These roads would be designed to incorporate three (3) ft. shoulders, five (5) ft. sidewalks on one side, and a ten (10) ft. multi-use path on the other side to enhance walkability and increase foot-traffic to this commercial center.
- *Formalizing Local Streets (pg. 36):* This recommendation calls for the transformation of existing accessways and turn them into local streets. These would also be complete with sidewalks, street trees, and appropriate lighting to improve pedestrian connectivity, and offer access to existing and connecting road systems.

- *Route 302, Route 35/155 Improvements (pg. 37):* This recommendation proposes that new sidewalks are to be constructed in all areas where they are not currently present. It also calls for the reconstruction of sidewalks that are not currently compliant with the Americans with Disabilities Act (ADA) standards, lack a curb reveal, or have major obstructions within their walking spaces. This recommendation also provides guidance to improve active transportation features by including ADA compliant sidewalk landings and ramps and creating crosswalks at all signalized intersections.
- *Whites Bridge Road Improvements (pg. 37):* This recommendation proposes a new multi-use path, ten (10) ft. in width, located at the Whites Bridge Road and Route 302 intersection. This idea would further promote walkability and multi-modal transit within the corridor and connect other residential areas to the commercial hub.
- *Traffic Calming Opportunities (pg. 40):* This recommendation provides guidance on the installation of traffic calming tools, such as speed tables, raised crosswalks, and raised intersections. These tools are recommended to be placed along road segments to aid in traffic calming, and enhancing pedestrian safety within the area.

Connect 2045: Long-Range Transportation Plan for Greater Portland (GPCOG, 2022):

Federal law requires that all urbanized areas with a population greater than 50,000 in the United States develop a long-range transportation plan (LRTP) to maintain eligibility for federal programming. LRTP's aid in establishing the collective vision for a region, and guide decision making to prioritize investments. This LRTP, published by GPCOG, envisions that the Greater Portland region contains access to transportation choices that are safe, reliable, and environmentally responsible. This vision optimizes infrastructure, reduces harm to the environment, and supports great places and a thriving economy. Specific recommendations and goals within the document related to the Town of Windham and this plan include:

- *Bicycle & Pedestrian Network (pg. 28-31):* This recommendation follows two (2) key ideas. The first is a Complete Streets policy to guide street design to provide convenient, safe, and equitable access on all roads for all users. Characteristics of complete streets are to include sidewalks, frequent and safe pedestrian crossings, bicycle usership accommodations (bike lanes, shared lanes, or paved shoulders), accessible transit stops, and narrower travel lanes to slow vehicular traffic. This plan includes an illustration that shows the existing pedestrian and bicycle network within the PACTS region, and also includes proposed on-road and off-road facilities. The second key idea is for the inclusion of region-wide off-road routes for transportation. Several local groups within the region are actively advocating for the buildout of a regional off-road trail network. This idea would connect several communities and key destinations within the region. The proposed Mountain Division trails would be constructed along existing rail corridors and connect to existing portions of the trail which currently run through the Town of Windham.
- *Roadway/Multi-Modal Fiscally Constrained Projects (pg. 121-123):* Regulations for LRTP's require that they include a list of projects that are within the region's fiscal constraints over the next twenty (20) years. Projects included within the LRTP are aligned with the plan's vision and goals, however, inclusion within the plan does not guarantee that a project will be funded. Funding decisions are ultimately made when PACTS and

MaineDOT select projects for the Transportation Improvement Program (TIP), of which, the Mountain Division Trail – Sebago to the Sea (Windham to Westbrook section) was identified as a fiscally constrained project.

PACTS Regional Complete Streets Policy (GPCOG, 2024):

The primary goals outlined within the PACTS Regional Complete Streets Policy are that all users are considered, complete the regional network, promote great design, and apply the policy to all projects and phases. Key principles within the policy provide direction on how to identify, screen, prioritize, and implement all transportation project types. Criteria utilized include measures for ensuring safety, sufficient space for all street users, balancing means of mobility, complimenting surrounding land use and environment types, sustainability, and equity. This policy recommends that every transportation improvement project should be approached as an opportunity to create safer, more accessible, and connected roadways for all usership types. This approach applies to any phase of a project, ranging from project planning, programming, design, right-of-way acquisition, construction, reconstruction, and operations. Cross-sectional changes to transportation facilities within street rights-of-way are also included to consider capital improvements, re-channelization, and maintenance measures like resurfacing, repaving, or restriping.

As described, municipalities are encouraged to consult best practices, design guidelines, standards, and resources including but not limited to the design publications recommended by FHWA and the PACTS *Update to Regional Bicycle & Pedestrian Facility Design Guidelines – Region of Portland, Maine (2015)* and the upcoming PACTS *Regional Complete Street Guidebook (2025)*.

Existing Conditions

Roadway, Traffic, and Crash Data

The Maine Department of Transportation’s (MaineDOT) Public Map Viewer was utilized to compile roadway information to offer context to the assessment of the study area. Factors of identified importance include the roadway’s priority, historical average annual daily traffic, speed limit, and proximity to the urban compact.

Sebago first identified all state aid roadways within the study areas (Priorities 1 – 4) , as MaineDOT classifies roadways in the state by priority, ranging from 1 (Maine Turnpike, Interstate System, and key arterials) to 5 (local roadways). This identifier, coupled with the above listed data aids, are critical components that direct the development of concepts and recommendations, as they are the controlling criteria for allowable lane widths, crosswalk applications, etc. Tables 2 – 5 outline this information for the state aid roads and other identified priority roadways within each growth area.

Table 2: Roadway Information – North Windham Growth Area

Location	Average Annual Daily Traffic (AADT)	Corridor Priority	Speed Limit (MPH)
Roosevelt Trail (Route 302) N/O Tandberg Trail (Route 115)	29,635	1	30
Tandberg Trail (Route 115) E/O Roosevelt (Route 302)	14,688	2	30
River Road W/O Roosevelt Trail (Route 302).	7,904	3	35

Table 3: Roadway Information – Central Windham Growth Area

Location	Average Annual Daily Traffic (AADT)	Corridor Priority	Speed Limit (MPH)
Ward Road N/O Windham Center Road	1,705	5	35
Windham Center Road. W/O Pope Road.	1,836	4	35
Gray Road (Route 202). @ Windham High School	6,900	2	35
Windham Center Rd. @ WHS	6,882	2	35
Gray Road. NE/O Pope Road.	6,744	2	35

Table 4: Roadway Information – Residential Growth Area

Location	Average Annual Daily Traffic (AADT)	Corridor Priority	Speed Limit (MPH)
Tanberg Trail E/O Falmouth Road	10,966	2	35
Falmouth Road S/O Tanberg Trail	4,344	4	35
Varney Mills Road S/O Falmouth Road	1,600	5	35

Table 5: Roadway Information – South Windham Growth Area

Location	Average Annual Daily Traffic (AADT)	Corridor Priority	Speed Limit (MPH)
Depot Street E/O Gray Road (Route 202)	1,018	5	30
Main Street (Route 202) S/O Depot Street.	7,390	2	25
High Street S/O Depot Street	566	5	25

In addition to the outlined roadway characteristic data, a crash history inventory was completed for the roadways in the study area. MaineDOT classifies high crash locations (HCL's) as intersections or segments of roadways which experience eight (8) or more crashes over a three (3) year time period, and a critical rate factor (CRF) of over 1.0. The most recent three-year period from 2022 to 2024 demonstrated the following HCLs per growth area, as detailed in Tables 6 -9.

Table 6: HCL Summary – North Windham Growth Area

Intersection/Segment Name	# of Crashes	CRF
Roosevelt Trail between Landing Road. and Franklin Drive	16	1.18
Roosevelt Trail between Tanberg Trail and Shaws Entrance	45	2.19
Abbey Road. @ Tandberg Trail.	25	4.02
Manchester Drive @ Tandberg Trail.	11	2.24
Roosevelt Trail. N/O River Rd.	70	1.86
Roosevelt Trail. S/O River Rd.	15	1.25

Table 7: HCL Summary – Central Windham Growth Area

Intersection/Segment Name	# of Crashes	CRF
River Road. @ Windham Center Road	9	2.5

Table 8: HCL Summary – Residential Growth Area

Intersection/Segment Name	# of Crashes	CRF
Falmouth Road. @ Varney Mills Road	14	5.71

Table 9: HCL Summary – South Windham Growth Area

Intersection/Segment Name	# of Crashes	CRF
Chute Road. @ Depot Street. @ River Road.	10	3.39
Mallison Falls Road. @ River Road	13	3.86

As identified above, each area has identified HCLs. The diagrams created by MaineDOT will be reviewed in conjunction with the upcoming recommendation efforts. Additionally, each of the study areas were also reviewed over a ten (10) year period for both bicycle and pedestrian crashes, which are summarized below in *Table 10*.

Table 10: Bike & Pedestrian Crash Summary – All Growth Areas

Growth Area	# of Ped Crashes	# of Bike Crashes
North Windham Growth Area	8	6
Central Windham Growth Area	2	1
Residential Growth Area	1	0
South Windham Growth Area	2	0

As shown in Table 10, the majority of the bike and pedestrian crashes are located within the North Windham Growth Area.

Field Data Collection

North Windham Growth Area

The North Windham Growth Area is approximately 3.25 square miles in size and is centered around Roosevelt Trail (Route 302) and Tandberg Trail (Route 115) intersection. A portion of this area is



*Existing pedestrian signal and button
@ Roosevelt Trail and Tanberg Trail*

directly adjacent to the Arlington School property. A majority of sidewalks in the direct vicinity of the intersection varied in width from four (4) to five (5) feet, and were bituminous with granite curbs. Crosswalks at signalized intersections had pedestrian signals and pedestrian actuated buttons. However, not all buttons were located within the ten (10) inch maximum reach requirement, or are within an area considered ADA accessible.

Further from the intersection, there is an existing sidewalk network along the eastern side of Roosevelt Trail and the northern side of Tandberg Trail. This network extends to nearly the entire extent of the North Windham Growth Area. Approximately five (5) total miles of sidewalks were mapped within this area, with around 89% of the sidewalks found graded from “Excellent” to “Fair”. Although there is an existing

sidewalk along almost the entirety of the northern side of the Tandberg Trail, there are few sidewalks on the south side, thus resulting in few opportunities for crosswalks. However, it should be noted that the proposed North Windham Moves project will provide a new sidewalk along the South side of Tanberg Trail in this area.

A similar pedestrian movement issue is prevalent along the western side of Roosevelt Trail, as most existing pedestrian infrastructure largely exists exclusively along the eastern side. There are only a limited and highly segmented number of existing sidewalks along the western side of Route 302. During our field assessment, several occasions were observed where gaps within the sidewalk network resulted in pedestrians attempting to cross the road outside of allocated crossing areas instead of traversing to the nearest crosswalk. Pedestrian facilities along Route 302, adjacent to the Manchester School were generally graded as “Severe”, with portions of the sidewalk crumbling and other portions overgrown



*Example of sidewalk graded at ‘Severe’
(Roosevelt Trail)*

with organic material encroaching from neighboring properties. Some areas were also found to present potential for mobility impediments. These areas will also be reconstructed as a part of the proposed North Windham Moves project. Those project limits can be found on Map 2 in Appendix 1.



*Crosswalk on school property
(Windham High School)*

Central Windham Growth Area:

The Central Windham Growth Area is approximately 3.46 square miles in size, and contains major pedestrian generators, including the Windham High School and Windham Middle School. There is also a variety of isolated residential development scattered around this growth area. No sidewalk connections currently exist between these subdivisions or residential areas and the High School. Additionally, within this area are the recreational courts and community gardens located on the eastern side of Gray Road near the Windham Fire Rescue property. Approximately five (5) miles of sidewalks and twenty-five (25) crosswalks were identified within this area, with 91.6% of the sidewalks being graded between “Excellent” to “Fair”.

Approximately half of the sidewalks and crosswalks mapped within this area are in close proximity to the Windham High School property. Sidewalks in this area are approximately 4.5 to 5.5’ wide and are bituminous

with granite curb. Sidewalks directly adjacent to the high school are concrete. It is important to note that none of the crossings within the mapped area contained pedestrian signalization such as a rectangular rapid flashing beacons (RRFB) and many landings containing detectable warning field placement that was not ADA compliant.

Residential Growth Area:

The Residential Growth Area is approximately 2.65 square miles in size and the majority of the area is zoned “Residential Medium” and “ Village Residential”. This growth area does not include any major commercial or educational pedestrian generators. 88.2% of the sidewalk in this area are graded between fair and excellent. Sidewalks in this area are mostly bituminous varying from 4.5’-5.0’ in width and are within residential neighborhoods which are typically separated by a grassed or landscaped esplanade. Zero painted/delineated crosswalks were mapped in the entirety of the growth area along public ways. There are several pockets of pedestrian facilities within the subdivisions along Varney Mill Road, one of the main collectors in this growth area. Varney Mill Road, has no defined pedestrian facilities along it and thus offers few pedestrian connections between neighborhoods. Varney Mill Road has gravel shoulders from the Falmouth Road intersection to the intersection of Tanberg Trail.

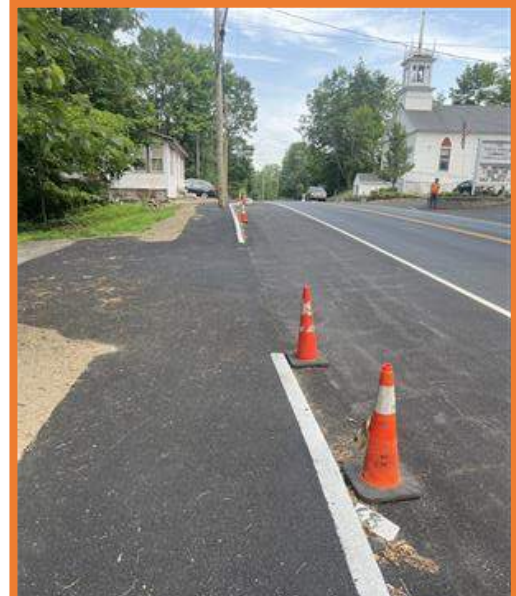


*Residential sidewalk graded ‘Good’
along Goldfinch Dr.*

South Windham Growth Area:

The South Windham Growth Area is approximately 1.11 square miles in size, and contains nearly two (2) miles of mapped sidewalks. Pedestrian facilities are largely centered along Main Street and at the Main Street-Depot Street intersection. Sidewalks in this particular area are generally in the best condition of the growth areas, with 91.4% receiving a grade of “Excellent” to “Fair”. Many of the sidewalks with the “Excellent” grade are due to new construction, or have been recently reconstructed. Sidewalks in this area range from 5.0’-6.0’ in width the curb materials varies between granite at the new construction to bituminous as you travel north.

A total of eight (8) crosswalks were located within this growth area, six (6) of which were controlled by pedestrian actuated RRFBs. There is also a segment of the Mountain Division Trail that bisects this growth area, and contains multi-use pathways that connect Windham to the surrounding, regional network.



*Sidewalk graded at ‘Excellent’
(Main Street)*

Traversing away from the Main Street and Depot Road intersection, sidewalk grades generally decrease from “Good” to “Fair” particularly along the northern edge of the growth area. High Street intersects Depot Street, and contains a sidewalk along its western side. This segment is generally graded from “Fair” to “Poor”. Facilities located along High Street generally link the residential use areas directly to the adjacent Village District.



*RRFB controlled crosswalk
on River Road*



*Sidewalk graded at ‘Poor’
(Main Street)*

Closing

Sebago has completed the existing conditions inventory analysis to provide a foundation for the forthcoming public engagement process and active transportation recommendation development. Given the information contained herein, we are prepared to move to the next stage of the project to obtain input from the Town of Windham. Sebago will work with GPCOG to compile feedback and other information to develop the recommendations and conceptual plans.

In the interim, please let us know if you have any questions or considerations in response to this memorandum. We thank you for your work and continued coordination throughout this project, and look forward to its successful implementation.

Sincerely,



Bradley Lyon, PE, PTOE
Vice President, Transportation Engineering



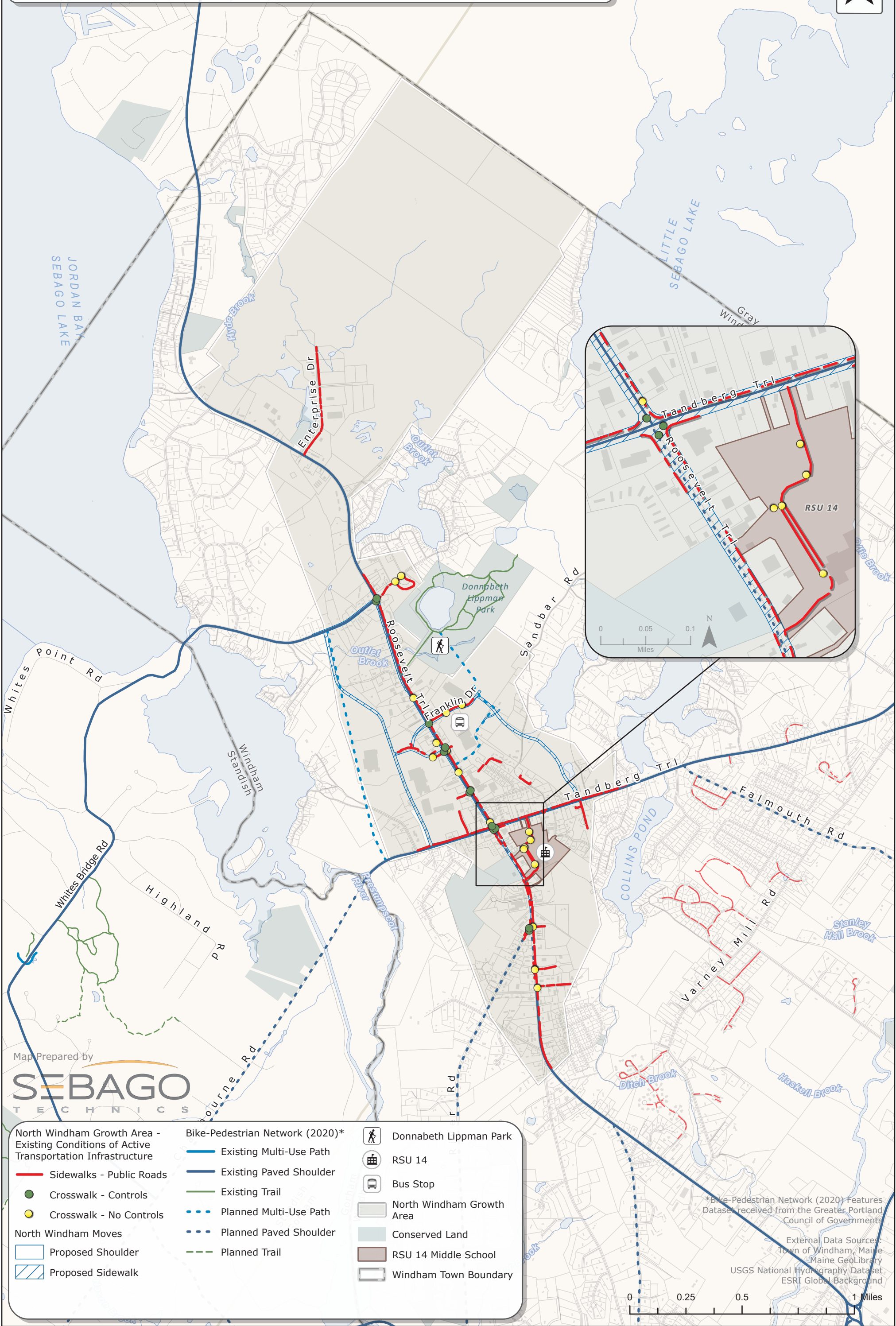
Brett Wiemken
Planning Consultant/Project Manager

CC: Nicole Conant, PE, *Director of Project Delivery (STI)*
Aaron Radziucz, EI, *Transportation Engineer (STI)*
Maria Morris, *GIS Specialist (STI)*

Enc:

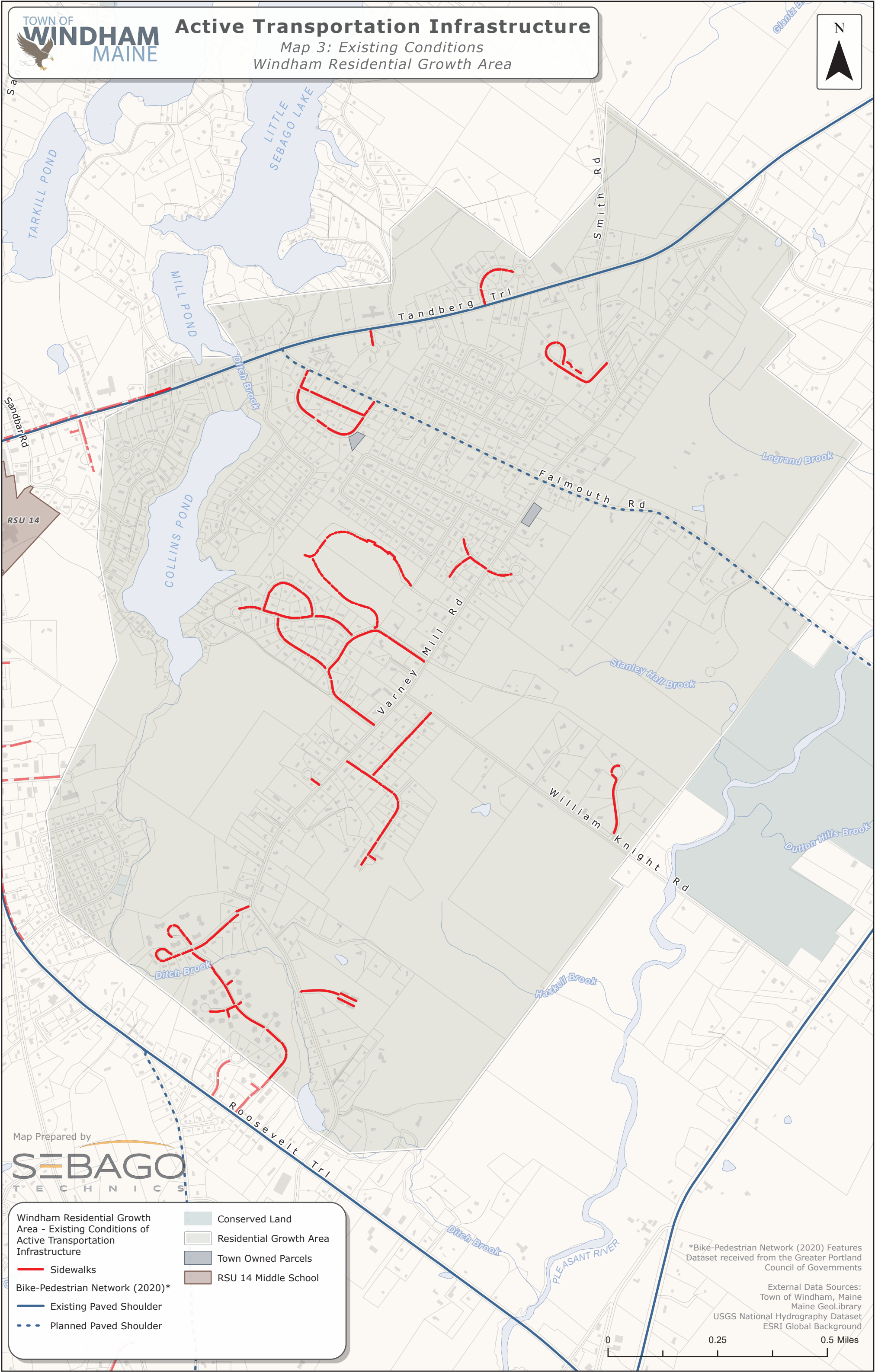
- Appendix 1: Existing Conditions Maps
 - Map 1: Overall Windham Growth Area Location Map
 - Map 2: North Windham Growth Area Existing Conditions Map
 - Map 3: Residential Growth Area Existing Conditions Map
 - Map 4: Windham Central Growth Area Existing Conditions Map
 - Map 5: South Windham Growth Area Existing Conditions Map
- Appendix 2: Glossary of Terms & Definitions Summary
- Appendix 3: GPCOG Technical Memorandum of Document Review

Appendix 1 – Existing Conditions Maps



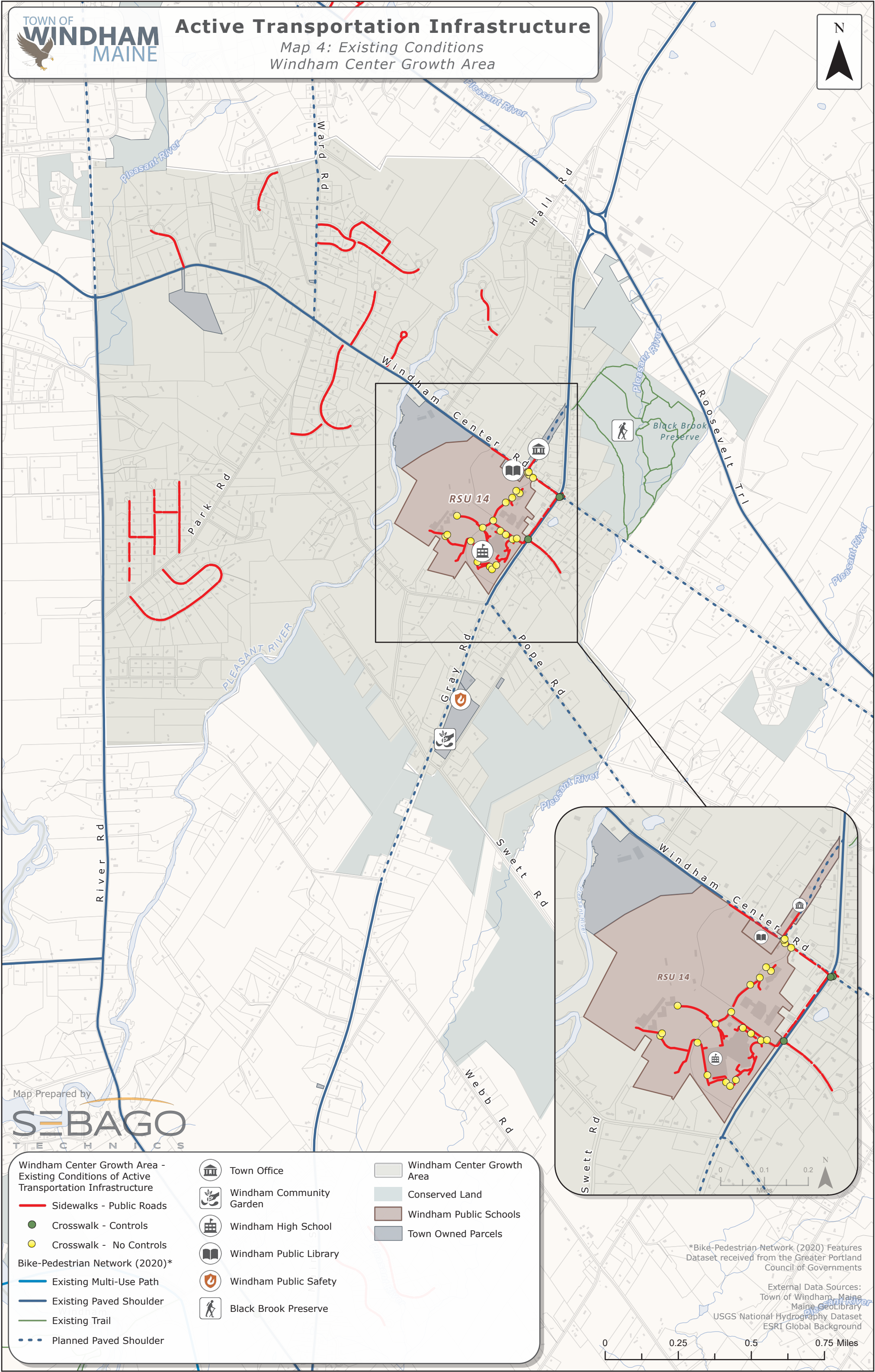
Active Transportation Infrastructure

Map 3: Existing Conditions
Windham Residential Growth Area



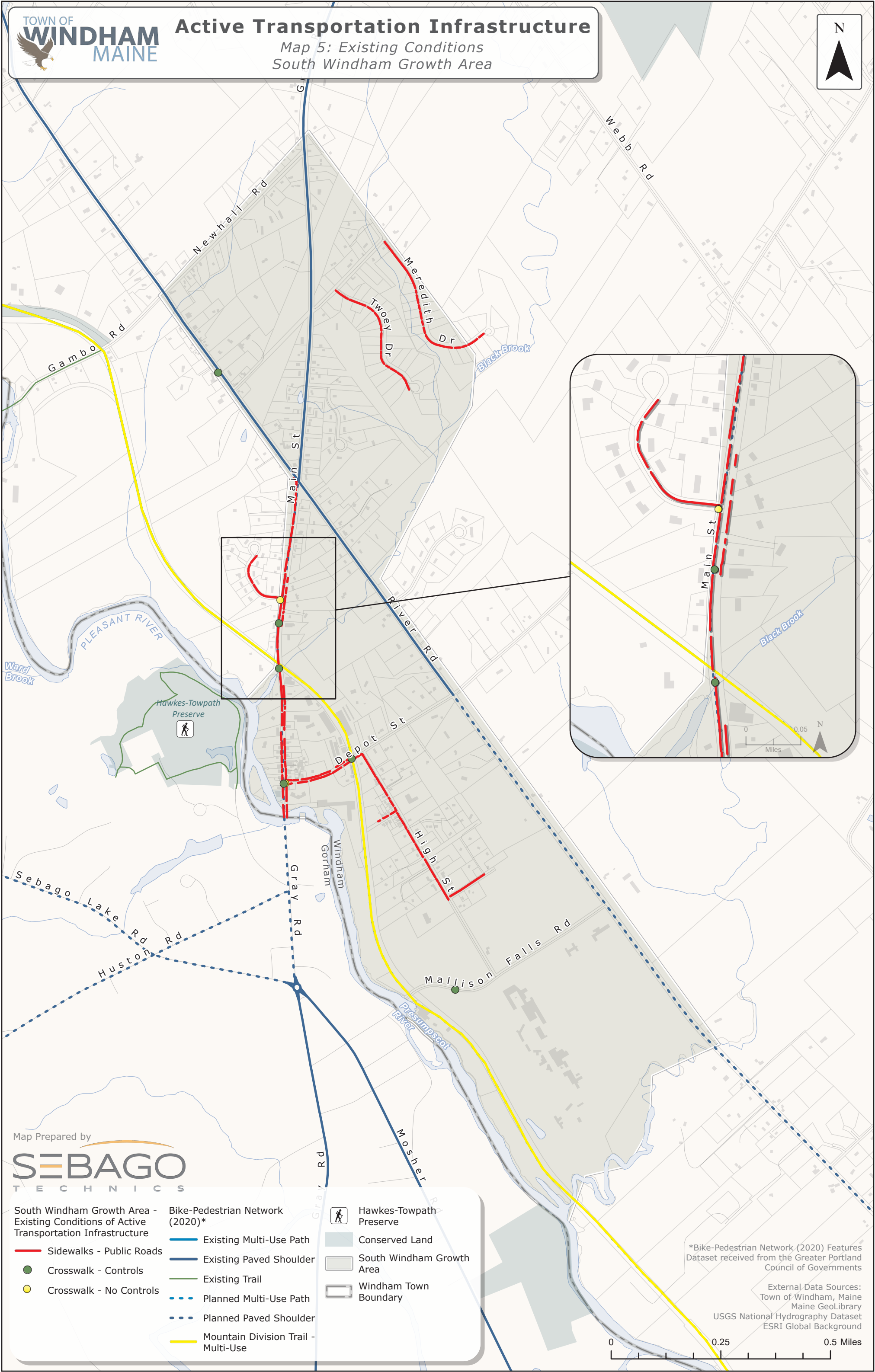
Active Transportation Infrastructure

Map 4: Existing Conditions
Windham Center Growth Area



Active Transportation Infrastructure

Map 5: Existing Conditions
South Windham Growth Area



Map Prepared by

SEBAGO
TECHNICS

South Windham Growth Area -
Existing Conditions of Active
Transportation Infrastructure

- Sidewalks - Public Roads
- Crosswalk - Controls
- Crosswalk - No Controls

Bike-Pedestrian Network
(2020)*

- Existing Multi-Use Path
- Existing Paved Shoulder
- Existing Trail
- Planned Multi-Use Path
- Planned Paved Shoulder
- Mountain Division Trail -
Multi-Use

- Hawkew-Towpath
Preserve
- Conserved Land
- South Windham Growth
Area
- Windham Town
Boundary

*Bike-Pedestrian Network (2020) Features
Dataset received from the Greater Portland
Council of Governments

External Data Sources:
Town of Windham, Maine
Maine GeoLibrary
USGS National Hydrography Dataset
ESRI Global Background

0 0.25 0.5 Miles

Appendix 2 - Definitions and Summary Tables



Appendix 2. Glossary and Definitions

Table 2.A. Field Assessment Data Definitions

Feature Type	Definition
Sidewalk	Designated non-motorized pedestrian way adjacent to vehicular roadway
Crosswalk	Designated crossing as indicated by paint striping and/or signage and crossing controls
Bike Lane	Designated travel lane with striping for bicycle transportation
Trail Intersection	Trail head locations at intersections with roadways
Signs & Fixed Structures	Signage and structures such as school zone, pedestrian crossing signage, and speed limit signage and radar.
Paved Shoulders	Paved unprotected path adjacent to roadway that may or may not be safely navigable by non-motorized and motorized users (pedestrians, bicycles, e-bikes, etc), regardless of intended use.

Table 2.B. Sidewalk Condition Definitions

Grade	Definition
Excellent	Sidewalk has no observable structural or cosmetic defects
Good	Sidewalk has no observable structural defects, sidewalk has some cosmetic defects
Fair	Sidewalk has observable minor structural defects such as cracking or rutting but is still navigable
Poor	Sidewalk has observable structural defects such as cracking, rutting, crumbling, that impedes navigation
Severe	Sidewalk has major structural defects that impede navigation and present potential hazards to users

Active Transportation Field Assessment Database Structure

Table 2.C. Sidewalk Feature Attributes

Condition	Width (ft)	Material	Separated (Y/N)	Tip-Down (Y/N)	Detectable Warning Field (Y/N)	Notes
Excellent Good Fair Poor Severe	Width in feet measured to inside of curb	Asphalt Concrete Brick Gravel Dirt Other	Is sidewalk separated from roadway by landscaping or infrastructure?	Does sidewalk have a curb tip-down at either end?	Does Tip-Down have a Detectable Warning Field?	

Table 2.D. Crosswalk Feature Attributes

Tip-Down (Y/N)	Detectable Warning Field (Y/N)	Crossing Control (Y/N)	Raised (Y/N)	Notes
Does sidewalk have a curb tip-down at either end?	Does Tip-Down have a Detectable Warning Field?	Is there a pedestrian control device present? i.e RRFB or Pedestrian Signal	Is crosswalk raised?	

Table 2.E. Crossing Control Attributes

Button (Y/N)	Tactile (Y/N)	Audible (Y/N)	Flashing Lights (Y/N)	Countdown Timer (Y/N)	Time to Cross (seconds)	Notes
Does the control device have a pedestrian actuated crossing button?	Does the crossing button include tactile features, such as raised directional arrows?	Does the control include audible features such as beeping or voice commands?	Does the control include flashing lights as indicators to vehicles?	Does the control include a countdown timer?	What is the time to cross (in seconds)?	

Active Transportation Existing Conditions Summary

Table. 2.F. Overall Feature Counts

Sidewalks (approx. miles)	Crosswalks	Bike Lanes
16	63	0

Table 2.G. Study Area Size (Approx. Square Miles)

North Windham Growth Area	South Windham Growth Area	Windham Center Growth Area	Residential Growth Area
3.25	1.11	3.46	2.65

Table 2.H. North Windham Growth Area Summary

Sidewalks (approx. miles)	Sidewalk Condition (% Fair – Excellent)	Crosswalks	Crosswalks w/ Controls
5	88.6%	30	12

Table 2.I. Residential Growth Area Summary

Sidewalks (approx. miles)	Sidewalk Condition (% Fair-Excellent)	Crosswalks	Crosswalks w/ Controls
4	88.2%	0	0

Table 2.J. Windham Center Growth Area Summary

Sidewalks (approx. miles)	Sidewalk Condition (% Fair-Excellent)	Crosswalks	Crosswalks w/ Controls
5	91.6%	25	3

Table 2.K. South Windham Growth Area Summary

Sidewalks (approx. miles)	Sidewalk Condition (% Fair-Excellent)	Crosswalks	Crosswalks w/ Controls
2	91.4%	8	6

Appendix 3 – GPCOG Technical Memorandum of Document Review

Technical Memorandum #1

Document Review

Windham Active Transportation Plan

Table of Contents

Town of Windham Publications	2
Plan Windham: Comprehensive Master Plan (2016)	2
North Windham Moves: Regional Mobility, Local Access (2022).....	4
GPCOG Publications	5
Connect 2045: A Long-Range Transportation Plan for Greater Portland, Maine (2022)	5
PACTS Regional Complete Streets Policy (2024)	6
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References	8

Town of Windham Publications

Plan Windham: Comprehensive Master Plan (2016)

Future Land Use (pp. 27-30)

- ***Three Growth Areas (p. 30)***
 - North Windham
 - Envisioned to be the active mixed use, commercial center of Windham. Stretches from north of the Pleasant River along Route 302 to the Raymond town line.
 - Windham Center
 - Also known as Windham Hill and Popeville. This area serves as the civic core of the community, and as such, more walkable, connected residential development should be encouraged in this area. Located between River Road and Route 202, north of Swett Road and south of the Rotary at Routes 302/202 and south of Otterbrook Drive off River Road.
 - South Windham
 - Known as “the Village”, this area encourages additional higher density residential development, as well as local and village-scale commercial development. Located in the area immediately north, east, and south of the intersection of Route 202 and River Road.
 - A map illustrating the growth areas within the Town is available on p. 29.

The Four Big Things (pp. 31-34)

The four big things are high priority subject areas identified in the plan that summarize the results of public engagement efforts and implement the goals & strategies of the plan. These are seen as subjects that the Town Council and the community at large should prioritize in the short term.

- **Big Thing #1 – Change the game for Windham’s Growth Areas: North Windham, Windham Center, South Windham**
 - Windham needs to begin thoughtfully and proactively laying the groundwork for these three traditional activity centers to become true centers for Windham. These three areas are very unique within Windham, and these differences are great strengths that allow for different types and scales of neighborhood development that will make Windham a community for all people, ages, and economic means. This Big Thing is all about expanding the range of options available for people to choose from when considering Windham for a home or a place to start or expand a business.
- **Big Thing #2 – Create a North Windham to be proud of**

- North Windham is the economic and social center for the community. Most in the community feel that we should be building on North Windham's success to ensure that it is successful economic and social center for future generations to come. In order to inspire pride of place and transform North Windham from a major convenience retail center to a place where people choose to spend time, play and recreate, work and live, improvements and investments need to be made. These upgrades include changes to North Windham's transportation network, installation of new infrastructure for wastewater treatment and high speed broadband internet services and doing our best to ensure that when new development or redevelopment is proposed, sites are designed to become high-quality assets to the community.
- **Big Thing #3 – Invest in Rural Windham to keep it rural**
 - Preservation of rural character and protecting important open spaces and scenic views has been a focal point of many prior planning efforts in Windham. Getting serious about Rural Windham means making investments to purchase outright, or at least the develop rights, to the most special and iconic rural land in the community.
- **Big Thing #4 – Focus on Community Facilities and Programs**
 - Includes prioritizing the basic maintenance of existing facilities, which include roads, municipal and school buildings, and park and recreation lands, as well as address the needs of a growing community from the standpoints of athletic facilities and community center space.

Conditions and Trends

Bicycle and Pedestrian Facilities (pp. 130-132)

- Windham's bicycle and pedestrian networks are limited. Current challenges include an incomplete sidewalk network, a lack of crosswalks and sufficient pedestrian crossing signals, large expanses of parking lots (especially along Route 302 in North Windham), a lack of safe bicycle routes and racks. Existing sidewalks are primary located in North Windham, Windham Center, and South Windham neighborhoods.
- In South Windham, sidewalks of varying condition link to existing sidewalks in Gorham, and provide access to commercial areas. In North Windham, sidewalks extend along both sides of Route 302 with some consistency, but locating pedestrian crossings is still challenging due to the sheer volume of traffic in the area and the lane configuration. In Windham Center, home to the Town Office, library, skate park and RSU 14 School Complex, there is limited sidewalk and shoulder infrastructure of varying condition. Following a similar effort by MaineDOT, the town recently adopted a Complete Streets Policy that requires the town to consider bicycle pedestrian facilities as part of any transportation project.

- There are no designated bike lanes in Windham. Routes 302 and 202 are still popular for biking with paved shoulders adequate for biking.
- The Mountain Division Trail also provides a five-mile paved trail that's connects Standish, Windham and Gorham and allows access to bicycles.

Analysis

Bicycle and Pedestrian Networks (pp. 136-137)

- In recent years, the Greater Portland Council of Governments (GPCOG) conducted a sidewalk analysis of both the North Windham and Windham Center areas. Although both assessments identify many gaps in the networks and recommend potential infrastructure upgrades for sidewalks and shoulders, there is potential to build a stronger network for bicycle and pedestrian access. Additionally, there are also opportunities for potential off-road connections for cyclists and people who want to walk or jog. Trails along existing utility corridors could be improved or even paved to provide the type of opportunities enjoyed by users of the Mountain Division Trail described above. Overhead electrical and separate buried oil and natural gas pipeline corridors all traverse Windham in north/south direction. These corridors are in close proximity in the North Windham area and generally run parallel with Route 302 on the western side of that road until they cross in the vicinity of Enterprise Drive. Overhead electrical transmission lines run from just north of Forest Lake on the Gray town line to just north of South Windham Village, roughly in a northeast/southwest direction.

[North Windham Moves: Regional Mobility, Local Access \(2022\)](#)

This study focuses on transportation improvements along Route 302 in the North Windham area. The purpose of this study is to evaluate, analyze and improve local mobility and accessibility for the North Windham Downtown District while also providing for safety and mobility improvements for regional users along the Route 302 corridor. This study will consider new local connector roads, access management, and corridor & intersection improvements for all transportation modes.

Recommendations (pp. 35-42)

- The study recommends several opportunities to improve mobility for all users in North Windham. Examples include:
 - East Connector Road, Middle Connector Road, West Connector Road (pp. 35-36)
 - Construction of three new connector roads to direct traffic off of Route 302 with the intention to serve as local roads providing access to local businesses.
 - These roads will include 3 ft. paved shoulders and 5 ft. sidewalk on one side, and 10 ft. multiuse paths on the other side.

- Formalizing Local Streets (p. 36)
 - Transforming accessways into local streets, complete with sidewalks, street trees, and lighting. Provides access to recommended connector roads system.
- Route 302, Route 35/155, Improvements (p. 37)
 - Improvements include building new sidewalks in all areas where sidewalks are not currently present. Rebuild existing sidewalks that are not compliant, lack curb reveal or have major obstructions within their walking space. Provide crosswalks at all signalized intersection approaches with ADA compliant sidewalk landings and ramps.
- Whites Bridge Road Improvements (p. 37)
 - Improvements include a new 10 ft. multiuse path connecting the new intersection at West Connector Road with Route 302.
- Traffic Calming Opportunities (p. 40)
 - Installing traffic calming tools such as speed tables, raised crosswalks, raised intersections, etc. along the recommended connector road segments.

GPCOG Publications

[Connect 2045: A Long-Range Transportation Plan for Greater Portland, Maine \(2022\)](#)

Federal law requires that all urbanized areas with populations over 50,000 in the United States develop a long-range transportation plan (LRTP) to maintain eligibility for federal programs. The LRTP serves two major functions:

- It establishes the collective vision and goals of the region.
- It guides decision-making and prioritizes investments.

Vision & Goals (pp. 87-93)

- Our Vision: All people have access to transportation choices that are safe, reliable, and environmentally responsible. The transportation system optimizes infrastructure, reduces harm to the environment, and supports great places and a thriving economy.
- Our Goals:
 - Provide Equitable Access
 - Support Great Places
 - Improve Safety
 - Expand Choices
 - Protect the Environment

- Optimize Infrastructure

The Bicycle & Pedestrian Network (pp. 28-31)

- Complete Streets (p. 29)
 - Complete Streets provide convenient, safe, and equitable access on our roads for all users.
 - Roads that are planned and designed using a Complete Streets approach often include: sidewalks, frequent and safe crossings, accommodation for bikes (bike lanes, shared lanes, or paved shoulders), accessible transit stops, and narrower travel lanes to slow traffic, among other features.
 - Page 30 illustrates the bicycle & pedestrian network in the PACTS region and shows both existing and proposed on and off-road facilities.
- Regional Off-Road Routes, including the map on p. 31
 - Several local groups are advocating for the build out of a regional off-road trail network that would connect multiple communities and key destinations in the region.
 - The proposed Mountain Division trails would be built along rail corridors.

Roadway/Multimodal Fiscally Constrained Projects (pp.121-123)

- Federal regulations require the LRTP to include a list of projects that are within our fiscal constraints over the next 20 years. Projects included in the LRTP are aligned with the LRTP's goals; however, inclusion in the plan does not guarantee a project will be funded. Funding decisions are ultimately made when PACTS and MaineDOT select projects for the Transportation Improvement Program (TIP). [Mountain Division Rail-Trail - Sebago to the Sea](#) (Windham to Bridge St. in Westbrook) was identified as a fiscally constrained project and included in the plan.

[PACTS Regional Complete Streets Policy \(2024\)](#)

Goals (p. 4)

- The goals of the PACTS Regional Complete Streets Policy are:
 - Consider All Users
 - Complete the Network
 - Promote Great Design
 - Apply to All Projects and Phases

Key Principles (p. 4)

- Key principles provide direction and inform the process of identifying, screening, prioritizing, and implementing transportation projects.
 - Safety: Ensure safety for all street users
 - Space: Support the needs of all users

- Balance: Balance mobility needs between modes
- Appropriateness: Complement surrounding land uses, environment, and community
- Sustainability: Address air and water quality
- Equity: Ensure equity

All Projects and Phases (p. 6)

- Every transportation improvement project should be approached as an opportunity to create safer, more accessible, and connected roadways for all users. This policy applies to all phases of project development including planning, programming, design, right-of-way acquisition, construction, construction engineering, reconstruction, and operations as well as any cross-sectional change to transportation facilities within street rights-of-way such as capital improvements, re-channelization projects and major maintenance such as resurfacing, repaving, restriping, and rehabilitation.

Design Guidelines (pp. 8-9)

- Municipalities are encouraged to consult best practices' design guidelines, standards, and resources—including, but not limited to, the [design publications recommended by FHWA](#) and the PACTS resources:
 - [PACTS Update to Regional Bicycle and Pedestrian Facility Design Guidelines-Region of Portland, Maine, 2015](#)
 - PACTS Regional Complete Streets Guidebook, to be completed in 2025

Appendix A: Publications & References

Publications

- [Plan Windham: Comprehensive Master Plan, 2016 Update](#)
- [North Windham Moves: Regional Mobility, Local Access](#)
- [Connect 2045: A Long-Range Transportation Plan for Greater Portland, Maine](#)
- [PACTS Regional Complete Streets Policy](#)

References

- Plan Windham: Comprehensive Master Plan, 2016 Update
 - Future Land Use map, p. 29
- Connect 2045: A Long-Range Transportation Plan for Greater Portland, Maine
 - Regional Off-Road Routes map available on p. 31
 - Project application: Mountain Division Rail-Trail - Sebago to the Sea (Windham to Bridge St. in Westbrook), Appendix C, p. 64
- PACTS Regional Complete Streets Policy
 - FHWA-recognized publications, <https://www.fhwa.dot.gov/design/altstandards/>
 - [PACTS Update to Regional Bicycle and Pedestrian Facility Design Guidelines-Region of Portland, Maine, 2015](#)



APPENDIX B

Summary of Public Survey

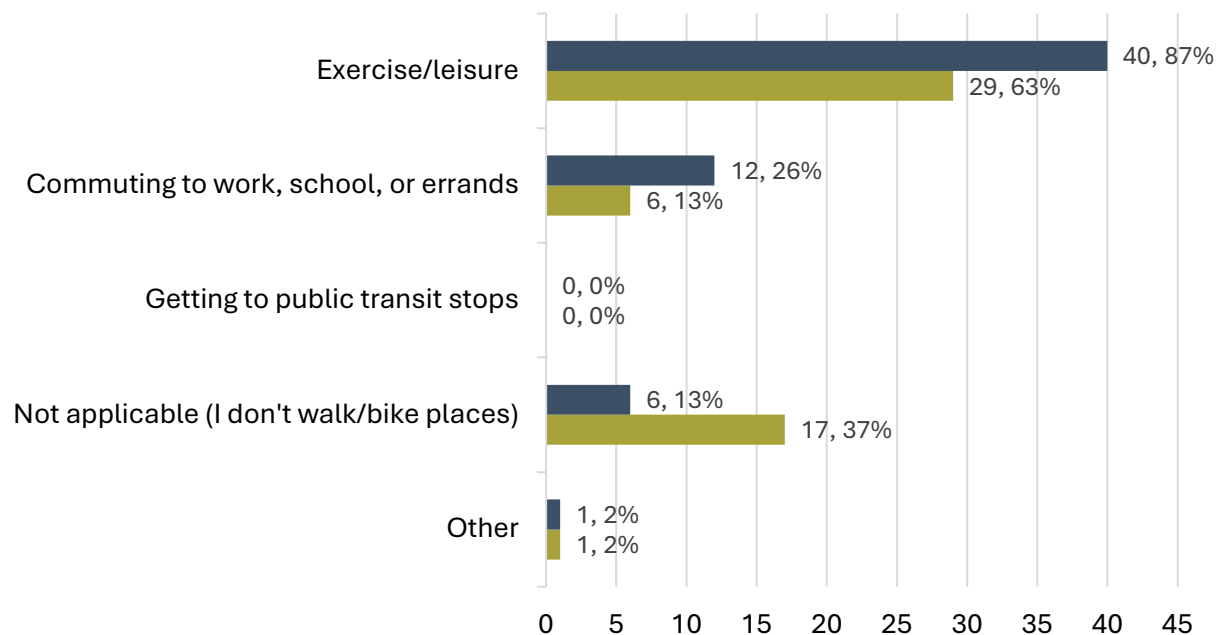
Windham Active Transportation Plan Survey Analysis

Introduction

A survey was conducted in December of 2025 to gather public input for the Windham Active Transportation Plan. The survey received 46 responses, providing insight into residents' walking and biking habits, perceived challenges, and potential improvements for active transportation in Windham. This report presents the findings of the survey. It is important to note that this is a relatively small sample of Windham residents so results may not be representative of Windham as a whole.

Q1 & Q2: Reasons for walking & biking

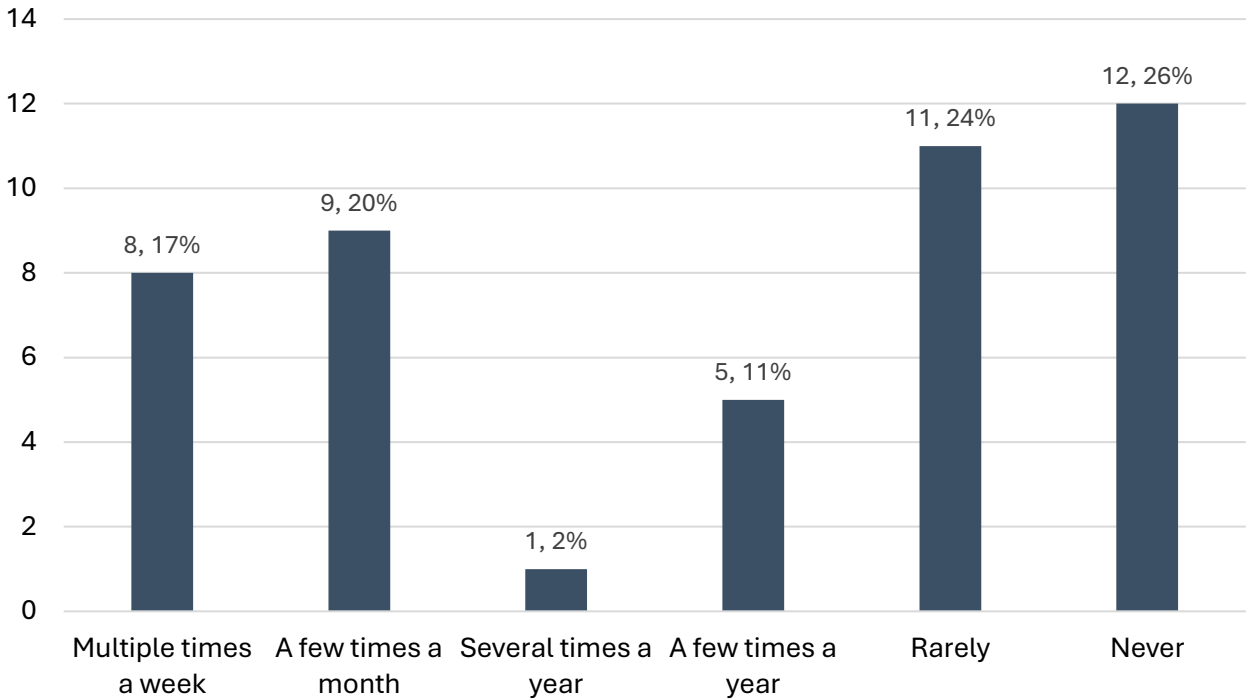
Why do you walk and bike in Windham?



Summary: More respondents walk than bike, with 87% (40 respondents) reporting that they walk and 63% (29 respondents) reporting that they bike. Five respondents indicated that they neither walk nor bike. All respondents who walk or bike reported doing so for exercise/leisure. Additionally, 26% (12 respondents) walk and 13% (6 respondents) bike to commute. No respondents walk or bike to access transit stops. One respondent noted that they walk/bike on Windham roads to get to trails.

Q3: Frequency

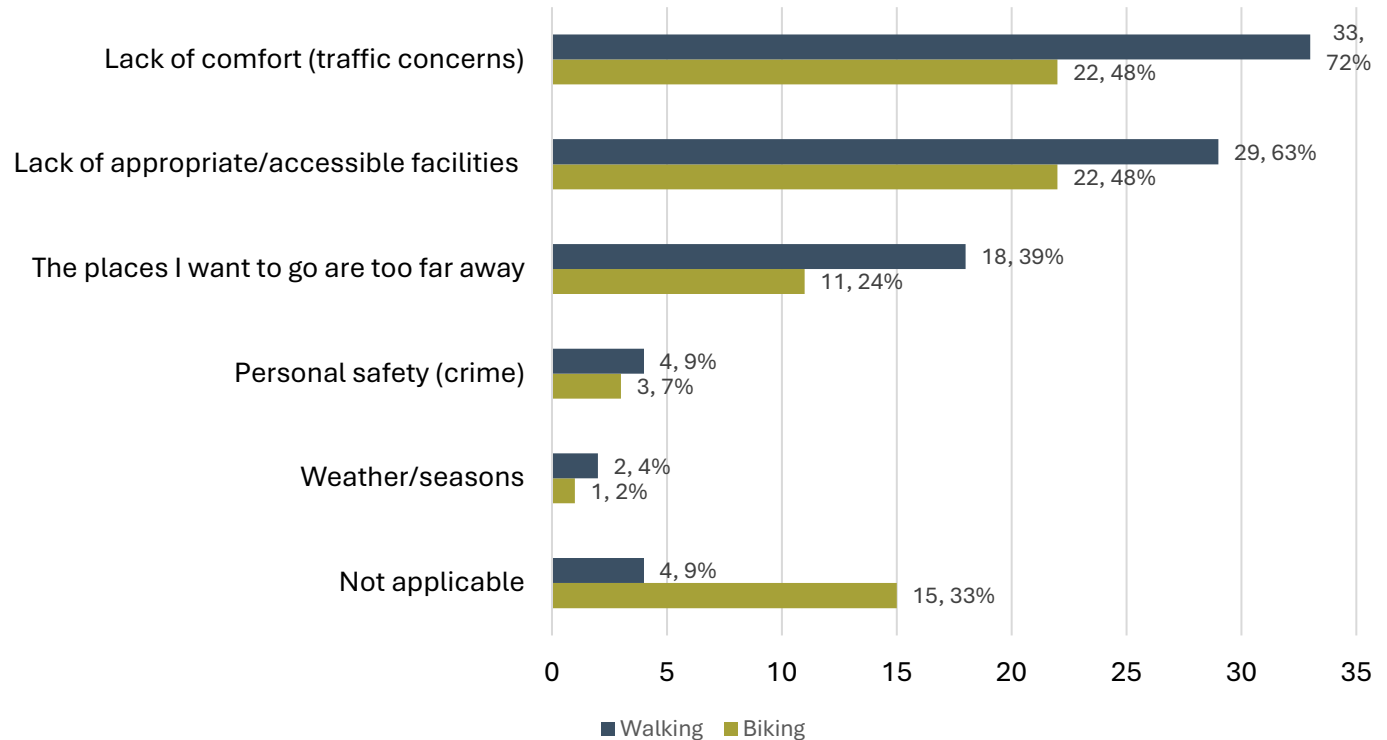
How often do you walk or bike to your destination in Windham?



Summary: Around 70% (34) of respondents walk or bike to their destination in Windham at least some of the time, with half of those people doing so relatively often (a few times a month or more), and half doing so less frequently.

Q4 & Q5: Barriers

What barriers prevent you from walking and biking as often as you would like?



Summary: Pedestrians and bicyclists identified similar barriers that prevent them from using these modes. Both identified traffic concerns and lack of facilities as the top concerns. Distance was a barrier as well, while relatively few people identified personal safety as a barrier. In addition to the options given in the survey, 2 respondents identified winter weather as a barrier to walking and/or biking.

Q6: Improvements

What improvements to Windham's biking or walking facilities do you believe would be most effective at encouraging more residents to walk or bike to their destinations?

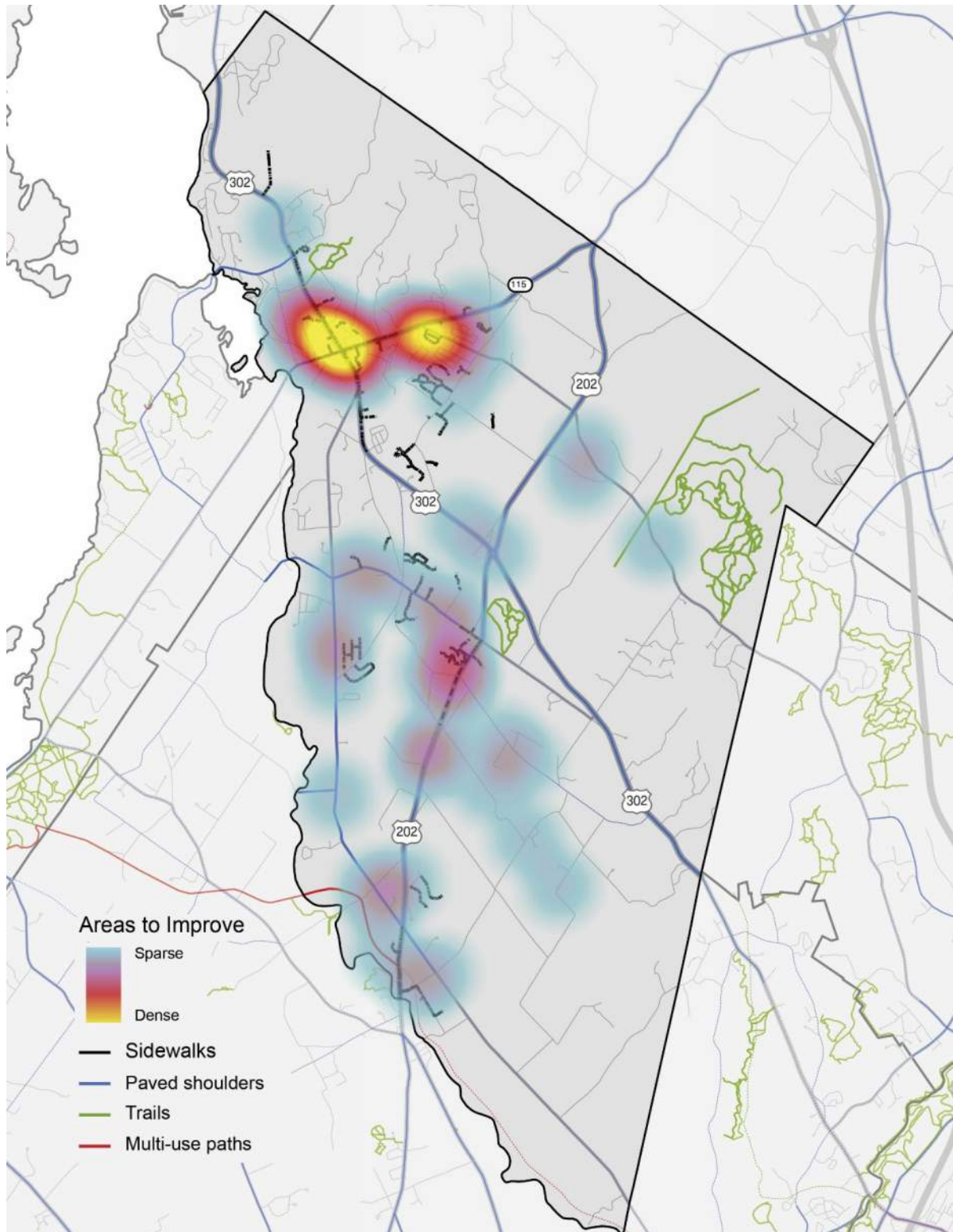
Summary: By far the most cited improvement is the expansion of sidewalks, with more than half of respondents identifying this as a measure that would encourage an increase in active transportation. Respondents emphasized the need to improve connectivity to village and commercial areas such as North Windham and South Windham and around schools. They noted the importance of ensuring the usability of these sidewalks through the presence of safe and well-marked crosswalks, particularly in busier areas like North Windham.

More respondents mentioned pedestrian walking facilities than bicycle facilities (corresponding with the lower rate of cyclists that responded to the survey). However, 5 respondents expressed a desire for expanded bike lanes, and 3 identified a need for wider shoulders for biking and/or walking.

Respondents expressed that general traffic calming, lowering of speed limits, and enforcement of speed limits would increase their sense of safety while walking and biking, particularly along busy corridors and in more commercial areas.

Q7: Improvements (locations)

What places need bike/pedestrian improvements?



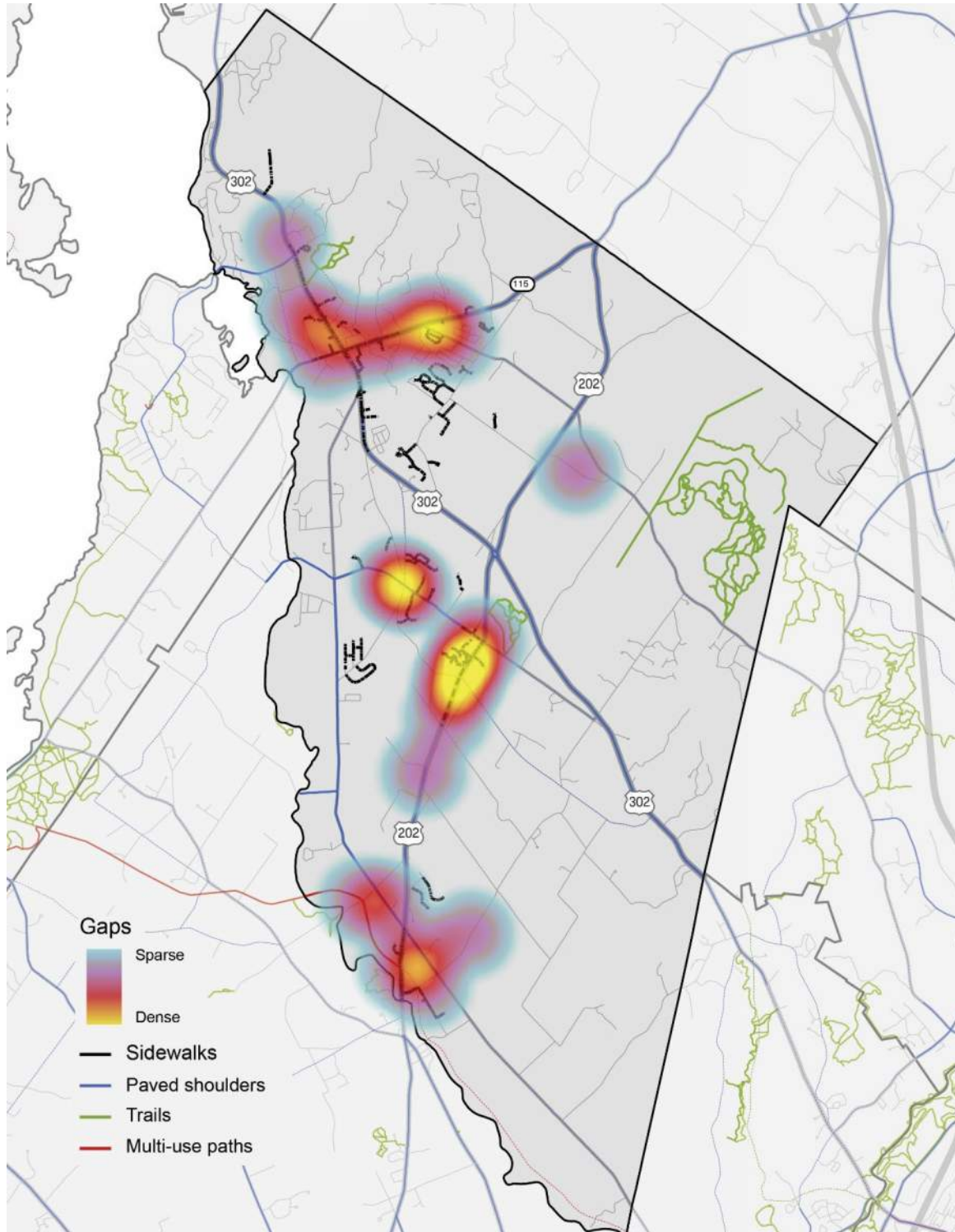
Summary: Respondents submitted 67 locations that they believe would benefit from bicycle/pedestrian improvements. These locations were heavily concentrated in North Windham, with approximately half of all submitted points located in this area. Five respondents (7%) pinpointed the intersection of Rt 302 and Rt 115 as an area that needs improvement, and 14 (21%) more points were submitted in the surrounding area along Rt 302, Rt 115, and Manchester Rd. Respondents noted challenges posed by high traffic volumes and speeds, combined with the need to access nearby businesses and other resources in the area. They cited a lack of adequate sidewalks and crosswalks, and a general need for traffic calming infrastructure or enforcement in this area due to limited motorist compliance with existing pedestrian facilities.

An additional 13 points (19%) were located nearby in the vicinity of the intersection of Rt 115 and Falmouth Rd. Respondents expressed a desire to extend sidewalks along Rt 115 and to a lesser extent Falmouth Rd, noting that the absence of facilities makes it difficult to safely access nearby businesses without a vehicle.

The remaining locations were more widely distributed, primarily along River Rd, Windham Center Rd, and the southern section of Rt 202. Respondents raised concerns about the lack of sidewalks and bicycle facilities on high-speed, high-volume roadways, particularly in proximity to schools.

Q8: Gaps (locations)

Where would you like to see new sidewalks or bike facilities? Where are there gaps in the current system?

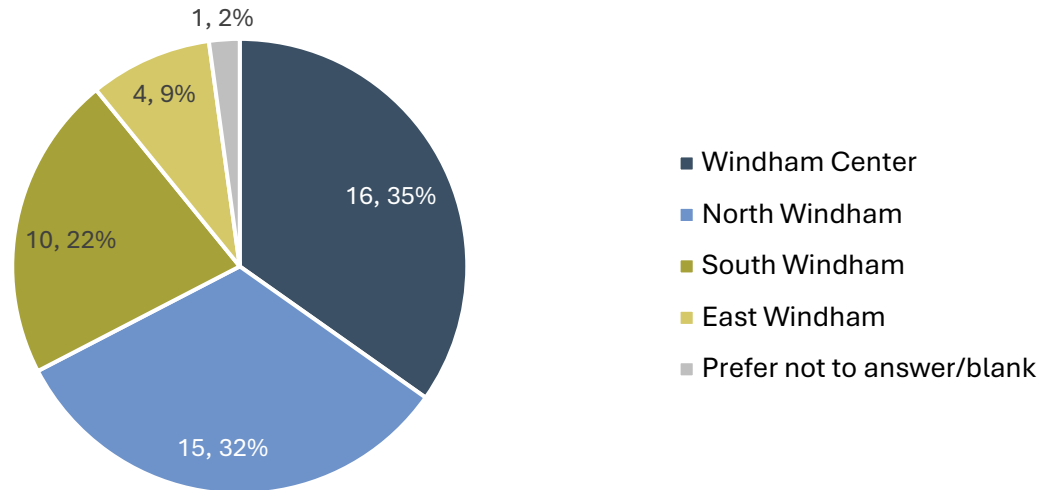


Summary:

Respondents identified 26 locations of gaps in the current active transportation network that would benefit from pedestrian and/or bicycle facilities. These locations were more dispersed than the improvement locations discussed above, although hotspots occurred along Rt 202 near Windham High School, along Rt 302 and Rt 115, on Windham Center Rd, and in South Windham. Seven respondents (27%) identified a need to expand sidewalks near the Windham High School, particularly between the high school and Moody Courts/Windham Skatepark. Nine respondents (35%) identified a need to connect existing sidewalks and expand sidewalks further in North Windham in the vicinity of Rt 302 and Rt 115. They also emphasized the need for safe and adequate crosswalks to connect both existing and expanded sidewalks. Three respondents (12%) identified a need for better bicycle/pedestrian facilities on Windham Center Rd, noting its narrow shoulders and importance in connectivity to the new middle school, library, high school, and Mountain Division Trail. Six gap locations (23%) were identified in South Windham, with one respondent noting the importance of better connectivity to the Mountain Division Trail.

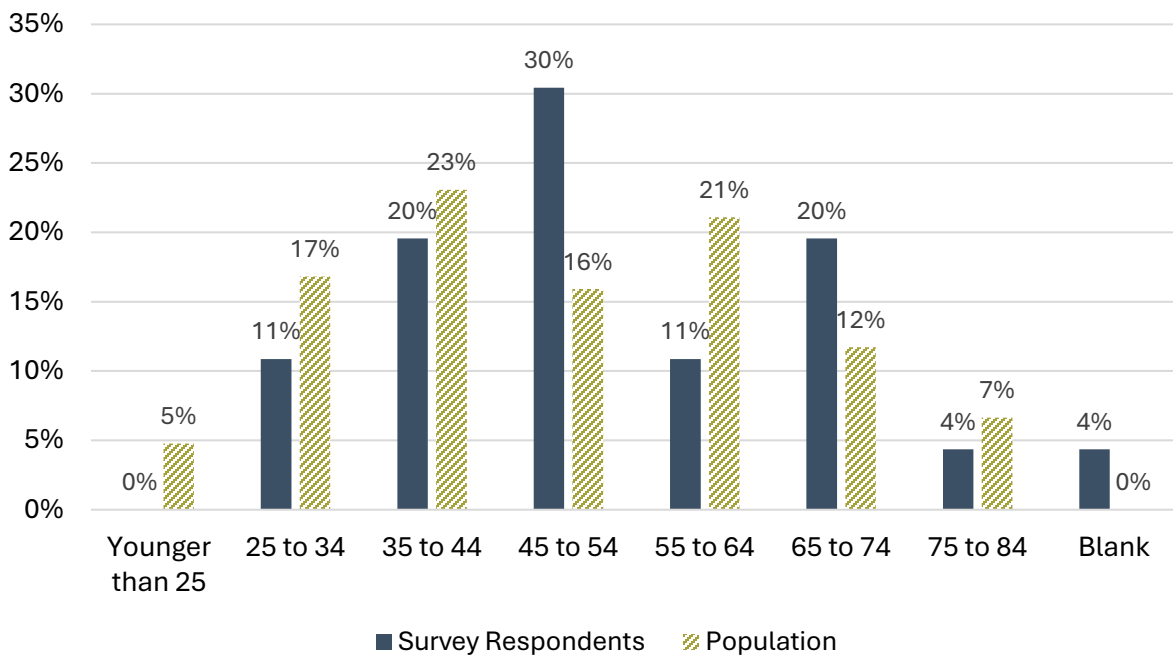
Q10: Residence

Where do you live in Windham?



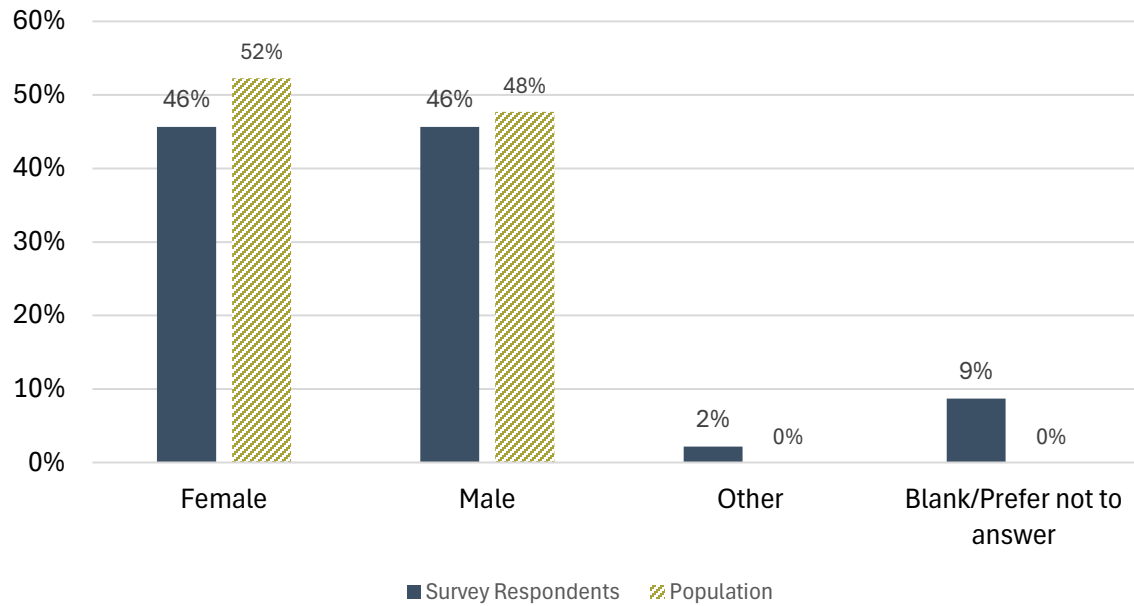
Q11: Age

What is your current age?



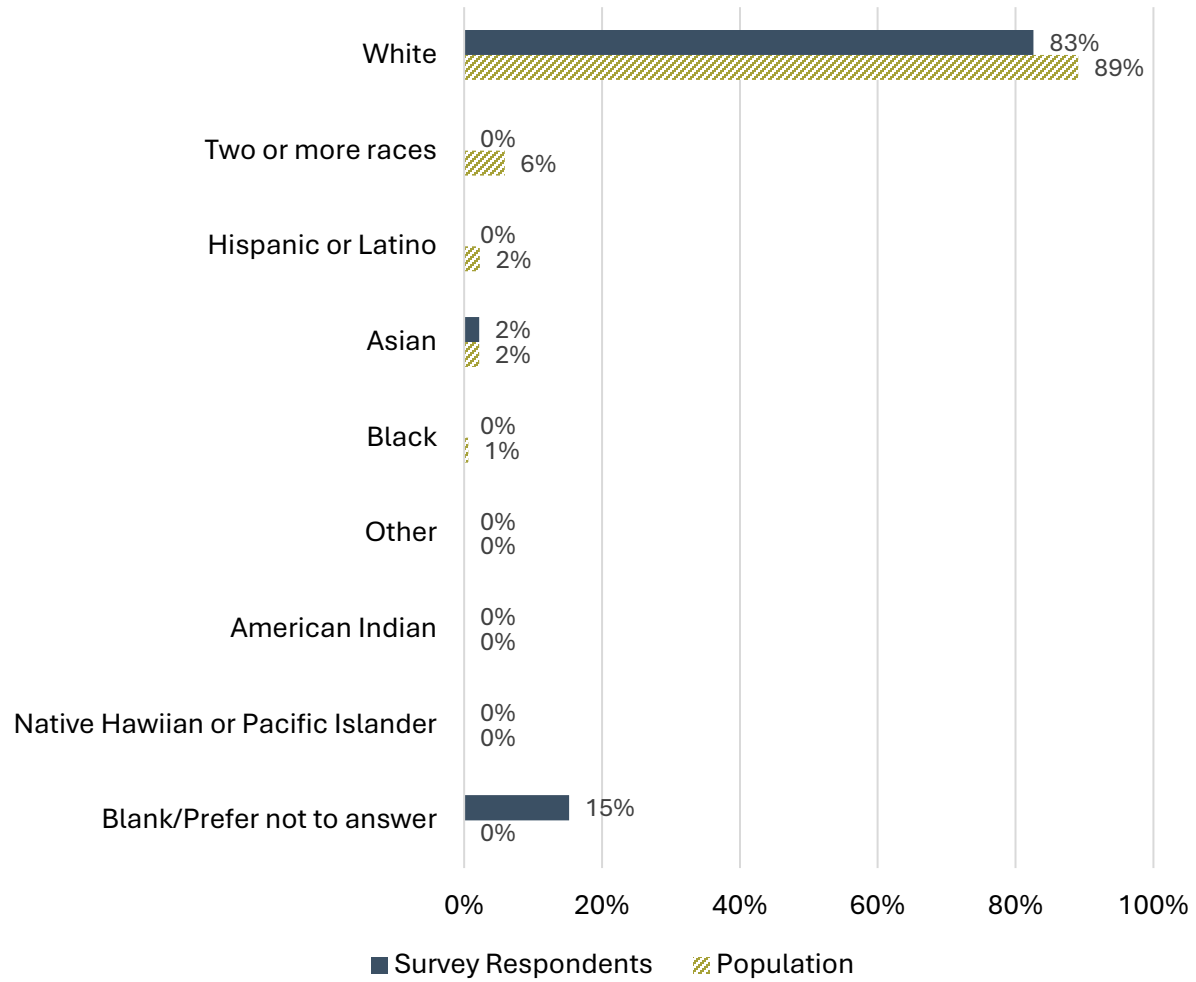
Q12: Gender

What is your gender identity?



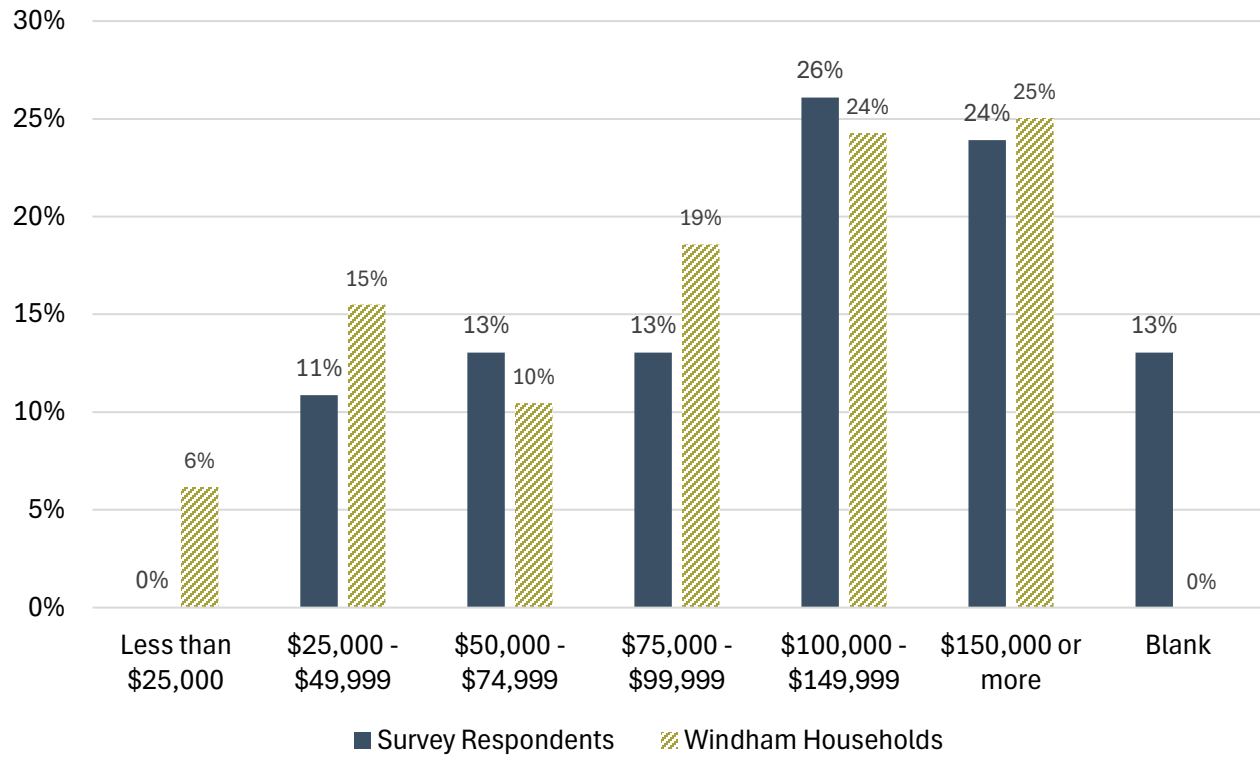
Q13: Race/Ethnicity

Which of the following best describes your race/ethnicity? Select all that apply.



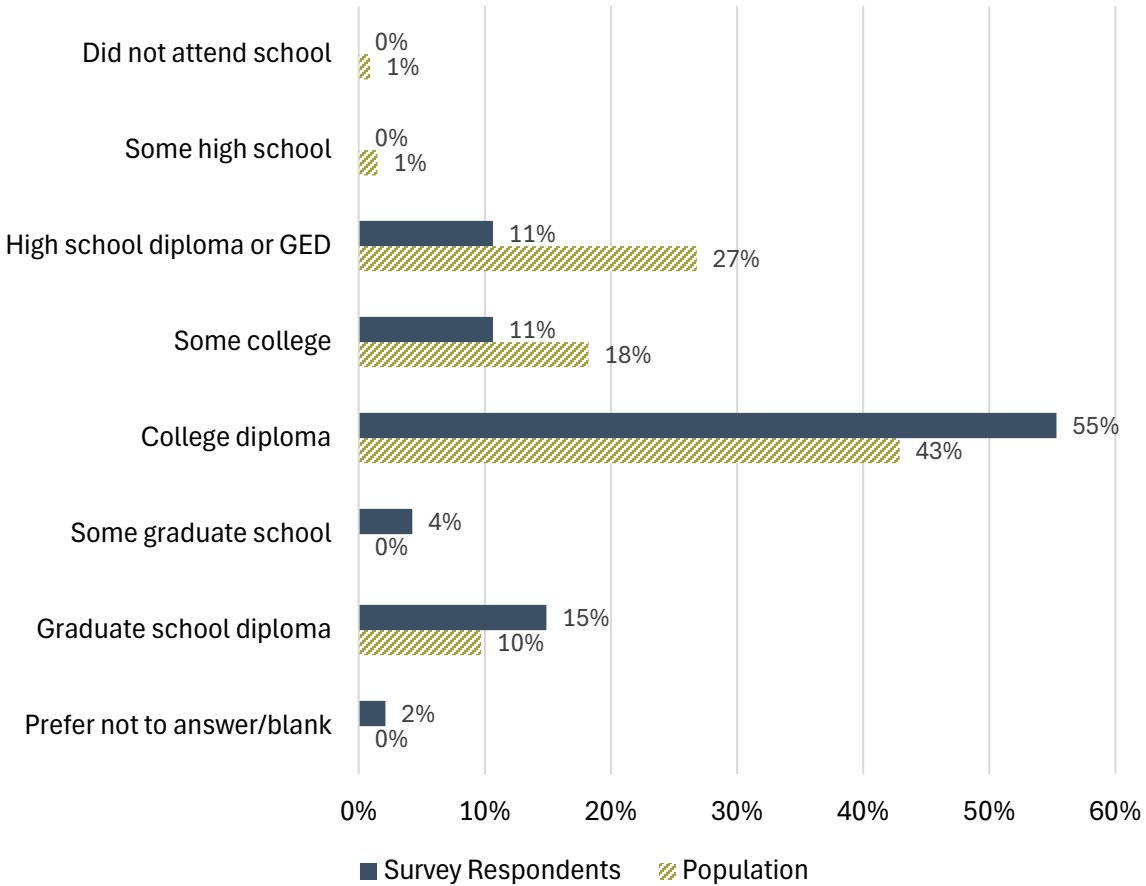
Q14: Income

What is your approximate yearly household income?



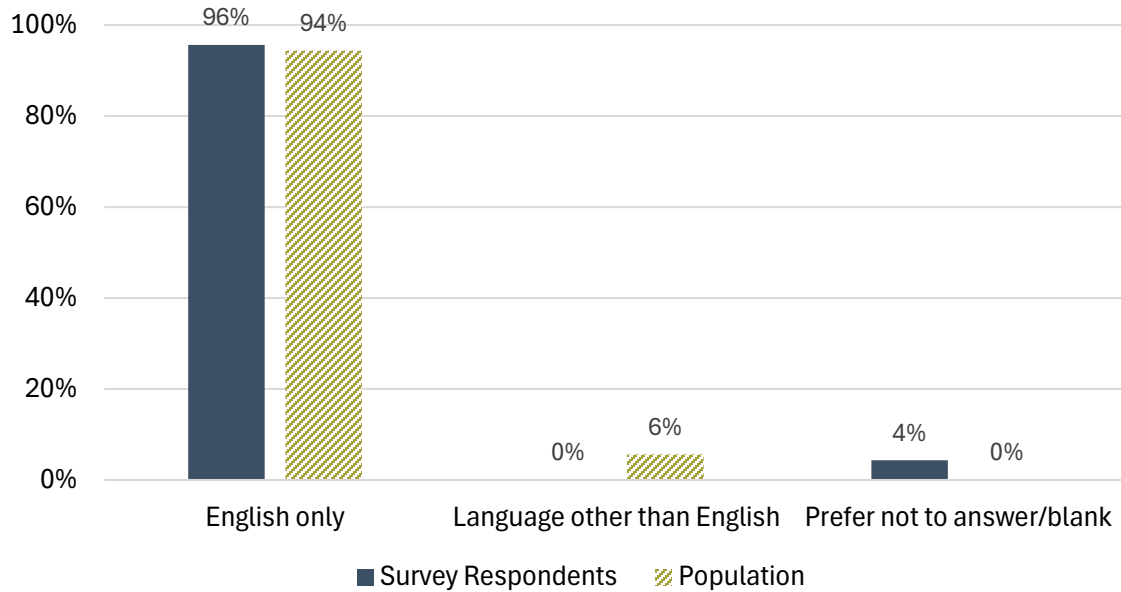
Q15: Education

What best describes your educational experience?



Q16: Language

What language(s) do you speak at home?



Q16: Housing

What type of housing do you live in?

