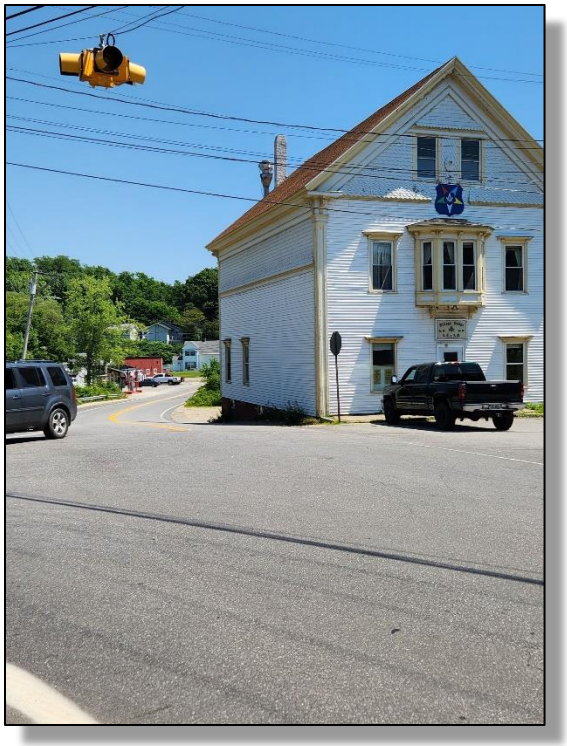


Village Center Planning Study

Planning Partnership Initiative, WIN 28668.00

Bowdoinham, Maine

FINAL REPORT

June 16, 2025

BOWDOINHAM
ON BEAUTIFUL MERRYMEETING BAY

GORRILL PALMER
An LJB Engineering Company

Aceto Kimball
Landscape Architecture

MaineDOT

Table of Contents

Executive Summary

This study focuses on transportation improvements along the Bay Road, River Road, and Main Street corridors in Bowdoinham, Maine, from Wallentine Road to Ridge Road to Fisher Road, totaling 0.68 miles in length. The purpose of this study is to evaluate potential strategies to improve safety, accessibility, and connectivity along these streets, as well as in the downtown village area of Bowdoinham. This study will consider improving safety within the corridor, reducing speeds of approaching traffic, providing better access to adjacent public spaces and recreational areas, and providing new and improved bicycle and pedestrian infrastructure, all while maintaining reasonable levels of mobility.

This study considers improvements to the Bay Road, River Road, and Main Street corridors and numerous side streets that offer important connections for the community and its visitors. Work includes improvements to travel lanes, shoulders, curbing, sidewalks, and intersections.

Bay Road, River Road, and Main Street are two-lane roadways classified as major collectors and corridor priority 4 roadways. They have posted speed limits of 25 mph and 35 mph. The corridor connects public spaces, natural resources, residential neighborhoods, and commercial businesses.

This study has included a robust public facilitation process, including meetings with town officials and the public. Concept plans for the preferred option have been generated. The preferred option has been evaluated on how well it meets this study's purpose and need statement. That evaluation has considered factors such as improvements to safety, accessibility, access management, traffic calming, and bicycle/pedestrian accommodations.

After comparing the preferred option to the study's purpose and need, the study team has determined that it successfully meets its goals and objectives.

The study team has developed an opinion of probable construction costs for the preferred option. Construction costs are the costs needed to build the project. Using the conceptual layouts developed, preliminary quantities were calculated, and construction costs were estimated using MaineDOT average unit pricing and pay items. Work assumes full-depth construction of the shoulders and a pavement mill and overlay of the travel lanes for Main Street and full-depth reconstruction of the other roads. A 25% contingency has been added to the construction cost estimate. The construction costs are presented in 2025 dollars, and no escalation to future years has been included. The conceptual construction cost estimate for the preferred option is $7,050,000.

Total project cost is a MaineDOT term that includes not only the construction costs but also the engineering costs, inspection costs, and right-of-way costs associated with a project. The study team has included engineering costs at 10% of construction costs for each option. Inspection costs have also been estimated at 10% of the construction cost. Right-of-way costs are based on anticipated property impacts and the potential acquisition of land that may be needed for the project. The conceptual total project cost for the preferred option is $9,180,000.

Introduction

The Town of Bowdoinham, in collaboration with the Maine Department of Transportation (MaineDOT), pursuant to a Planning Partnership Initiative (PPI) agreement, has contracted with Gorrill

Palmer and its sub-consultant team to perform a planning study for the village center area. This study will evaluate potential strategies for improving safety and mobility and calming traffic in and around the village center area. This study will also consider improving accessibility for all modes, including new and improved bicycle and pedestrian infrastructure and better access to recreational spaces, historical landmarks, natural resources, and public spaces, all while maintaining reasonable levels of mobility.

Specifically, this study will consider corridor safety, accessibility for all transportation modes, placemaking opportunities, traffic calming, pedestrian connectivity, access management, pedestrian and bicycle accommodations, landscaping, lighting, wayfinding, and streetscape amenities, all to encourage economic development and growth in the downtown area.

While this study will evaluate safety improvements, no comprehensive traffic modeling or intersection analysis will be completed.

Purpose & Need

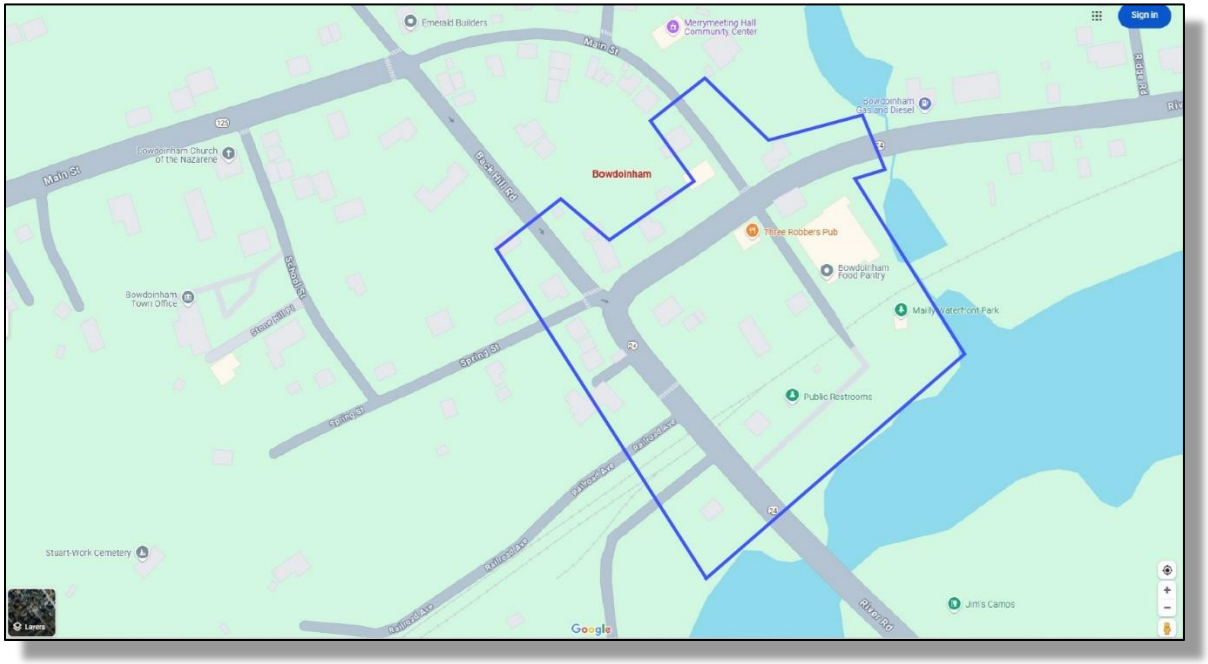
Understanding the above information, the following purpose and need statement has been developed for this study:

*The **purpose** of this study in downtown Bowdoinham is to identify a range of implementable alternatives to improve the safety, connectivity, accessibility, and placemaking of all modes of transportation while maintaining mobility now and in the future.*

*This study's **needs** include improving safety within the downtown area, controlling excessive speeds through town, and providing better connectivity and accessibility to important landmarks. All of this will create a welcoming and inviting downtown that will encourage economic development.*

Study Area

The original study area for this project begins on River Road (Route 24) just north of the Cathance River / Brooklyn Bridge and extends northerly on River Road to just south of the Bowdoinham Country Store. It also includes a short section of Main Street (Route 125) and Back Hill Street nearest River Road. It includes Main Street Extension and the public boat ramp facility in the village center.



As part of the planning study process, the study limits have been extended to include Bay Road (Route 24) from Wallentine Road to the Cathance River / Brooklyn Bridge and traffic calming work on Main Street from Fisher Road to River Road. The length of this study along River Road / Bay Road is 0.68 miles.

This study area covers the heart of Bowdoinham's village center, as shown in blue on the map below.

Important landmarks, historic properties, and natural resources are within proximity of the study corridor. The Cathance River runs through the study area and is a prominent feature in the town center. Along the river edge, there is the Mailly Waterfront Park and Cathance River Boat Ramp facility. On Main Street Extension in the village center, there is a masonic lodge, food pantry, skateboard park, and arts and music facilities. Three Robbers Pub is located at the intersection of Main Street and River Road, and the Bowdoinham Country Store and gas station are located near the northern study limits. Mailly Waterfront Park hosts a weekly farmers market, concerts, and events during the summer months. It is a popular destination for locals and visitors. Swimming at the adjacent boat ramp is also a popular activity in the summer months.

Slightly outside the study limits are the Bowdoinham town offices and public library on School Street and the Bowdoinham Community School on Cemetery Road. A railroad corridor runs through the village center. We understand it is no longer in use but is a candidate for a future trail project. There are no signalized intersections in town.

This study's recommendations include pedestrian and bicycle connections to many of these important community features. Intersection safety and geometric improvements are planned for the River Road intersections with Main Street and Back Hill Street.

Public Process

Public outreach is a key component of this project. In addition, coordination with town officials, interested stakeholders, and MaineDOT on the progress and outcomes of the study is equally important. Below is a summary of meetings that have occurred during this study:

Site Visit

On July 17, 2024, a site visit was conducted with town officials, MaineDOT, interested residents/business owners, and the study team to review existing conditions. The following items were discussed and noted:

- There are two boat ramp areas, one above the bridge for smaller boats and one below the bridge at Mailly Waterfront Park for larger motorized crafts.
- Flooding is an issue in the parks.
- There is a farmers' market at Mailly Waterfront Park during the summer.
- There are conflicts between the users of the Mailly Waterfront Park (farmers market and concerts), the boat ramp, the skateboard park, and swimmers at the dock.
- The driveways between the two boat ramps on River Road should be aligned to be directly opposite each other.
- The sidewalk on the Brooklyn Bridge terminates to the south at no specific destination.
- There is a need to extend a sidewalk on Bay Road through the existing residential area.
- Main Street Extension may be a candidate for the shared street due to its proximity to the Mailly Waterfront Park, boat ramp, and town center. One-way traffic on Main Street Ext should be considered to improve circulation, operations, and safety.
- There is poor sight distance at the exit of Main Street Extension onto River Road, looking to the north, due to the location of the Masonic Lodge building. An all-way stop at this intersection would improve safety.
- There are numerous locations where access management should be considered, including the gravel parking lot just north of the Masonic Lodge Building on River Road.

- The intersection of River Road, Back Hill Street, and Spring Street is unique in its operations. Safety and intersection improvements should be considered.
- Better pedestrian and bicycle accommodations are needed throughout the study area. The Strava heat maps support this.
- Traffic calming is needed on both River Road and Main Street.

- MaineDOT is planning to rehabilitate the Brooklyn Bridge. Work will be limited to structural improvements, and no changes to the travel lane or sidewalk widths are planned.

Public Meeting #1

This public meeting was held on October 15, 2024, at the Bowdoinham Town Offices Building. It was well attended by residents, town officials, select board members, business owners, and abutters. The public meeting format included displaying draft concepts on the walls for the audience to review and comment on. The presentation included introducing the study team, reviewing the study limits, scope, and purpose & need statement, discussing prior work completed, reviewing the Strava heat maps for pedestrian and bicycle movements, and reviewing environmental resource maps. Planning study comments received by the town from the Celebrate Bowdoinham event on September 14, 2024, were also noted in the public meeting. Finally, the active online survey for the study was advertised to the attendees.

Some comments that were received during this meeting include:

- Existing crosswalks need to be repainted.
- There is a large metal culvert just south of the Bowdoinham Country Store that might need to be replaced or widened as part of this project.
- Truck turning movements at intersections were expressed as a concern.
- There was public support for moving the 25-mph speed limit on Bay Road further south, closer to Wallentine Road. There was public support for extending pedestrian accommodations on Bay Road.
- There was a concern about the proposed boat ramp parking facility and the requirement that trucks with trailers back out of parking stalls.
- There was a concern that the proposed boat ramp parking facility would impact the bathhouse as well as the existing railroad right of way.
- The design of the Main Street Extension was discussed, including considerations for a one-way roadway and a shared street.
- The public expressed concern about reducing parking on Main St Extension.

- The public supported the traffic calming features, including gateways, all-stops, and raised intersections. The public felt that the all-way stop at River Road and Back Hill Street might not be needed.
- There is a development project planned to relocate the gas station at the Country Store to the opposite side of the street.
- The public felt that the proposed gateway treatment on River Road would function better if located north of Ridge Road. The public felt that the proposed gateway treatment on Main Street would function better if located at the top of the hill, say west of the Back Hill Street intersection.

- Bicycle traffic on Main Street was identified as a concern, particularly for traveling up the hill. A dedicated space for bikes is needed.
- There is a sight distance issue at the bottom of the hill on Back Hill Street. Clearing of trees and shrubs should improve the sight lines.
- David Asmussen, of Blue Bell Farm in Bowdoinham, provided the study team with sketches and notes for the study area.
- The public felt the proposed sidewalk on the south side of River Road could stop at the Country Store instead of extending to Ridge Road.
- The public felt that speed humps, raised crosswalks, and raised intersections should be vetted with public works and fire & rescue services.
- The multi-use pathway was generally supported by the public.
- The public agreed that out-of-town bike traffic on River Road is heavy and should be addressed in the study.
- Vehicle speeds are a concern approaching the village center on all three state roads (Bay Road, River Road, Main Street).

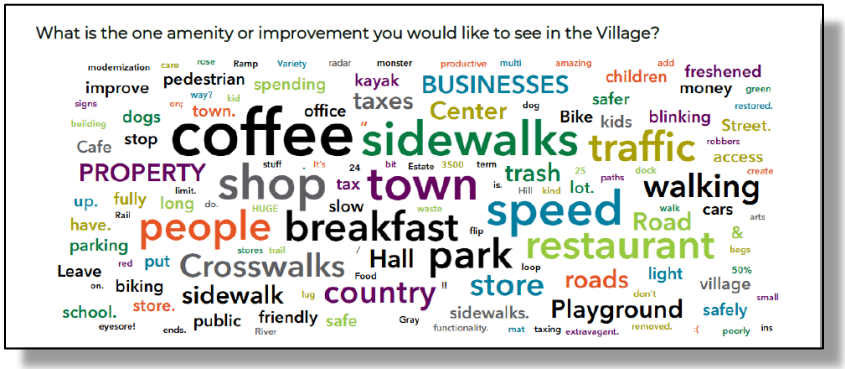
The public was generally supportive of the project. However, the public expressed concerns about changes to the Main Street Extension, the loss of parking, and changes proposed to the boat ramp parking area.

Online Survey

The study team completed an online public survey in conjunction with public meeting #1. The survey included questions about the current and future uses of the village center and Mailly Waterfront Park, village walking and biking, and safety. It was available from September 12 to October 21, 2024, and 114 people responded.

Summary of findings from the online survey includes:

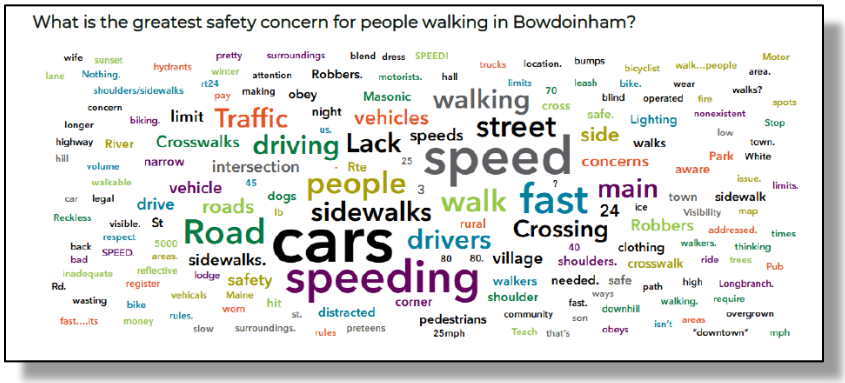
- The survey confirmed that Bowdoinham's village and waterfront parks are walkable destinations. Almost 80% of respondents walk to village locations frequently or often.
- People desire more local businesses and small restaurants or coffee shops that would fit into and support a walkable, mixed-use village.



- The Farmer's Market is the most popular use of Mailly Waterfront Park. Other uses include general recreation,

boating, swimming, and fishing. The diverse uses at the waterfront create conflicts between people with trailered boats, people fishing, and other types of recreation, especially children swimming. The boat launch is central to these use conflicts, but among survey respondents, most boat launch users only use it a few times a month or a few times a year. Better organization of the park space, including traffic flow at the boat launch and dedicated spaces for different types of users, would make the park safer and more usable for all.

- The waterfront parks, Three Robbers Pub, and Bowdoinham Country Store are the most popular village locations that people walk or bike to. The intersections to access these locations were all mapped as the priority places where pedestrian safety needed to improve, with the intersection of Main Street and River Road most frequently cited.



- Cars are the most common form of transportation to get around Bowdoinham, but more than half of the respondents also walk to get around town. Biking is less popular, with only about 20% of respondents who bike to get around town. Notably, this survey did not capture feedback from out-of-town cycling groups that frequently ride through Bowdoinham, which would likely provide different demographic data.

- The biggest safety concern for both pedestrians and bicyclists are speeding cars, especially on Route 24 (River Road). For pedestrians, the main concern is the lack of crosswalks and unsafe crosswalks. For bikes, the top concern is the lack of safe space to bike on the shoulders.

Public Meeting #2

This public meeting was held on March 31, 2025, at the Bowdoinham Town Offices Building. The format included displaying concepts and renderings on the walls for the audience to review. The presentation included reviewing the expanded study limits and scope, and providing a summary of our safety review. Comments from the first public meeting, the Celebrate Bowdoinham event, and the online survey were discussed. A summary of the changes to the draft concepts from the first public meeting was noted, and then the latest concepts and renderings were presented, followed by a public input session.

Comments that were received during this meeting include:

- There was public support for the proposed pedestrian accommodations on Bay Road. Some questioned which side of the Bay Road is best for a new sidewalk.

- There was public support for traffic calming elements on the state roads. Some felt that the traffic calming elements may be too much, and we should avoid recreating what was done in Wiscasset.

- Loss of parking remains a concern at the Masonic Lodge (front and back of building), Three Robbers Pub, and on Main Street extension.

- The raised intersection proposed at the park entrances just north of the Brooklyn Bridge could be problematic for boat trailers entering and exiting both parks.

- The public supported the all-way stop at the River Road intersection with Main Street as presented in the draft concepts at public meeting #1, and does not support the changes being proposed (two-way stop with raised crosswalk) on the latest concepts.
- Of the two options presented for the Main Street Extension, the public supported option one over option two; however, the public supported keeping the existing condition over option one or two. The public was not comfortable making any changes to the Main Street extension.
- The boat ramp parking improvements proposed in the latest concept plans were generally not supported by the public. Concerns regarding circulation, loading, and unloading at the boat ramp persisted with the latest design, and parking for larger-than-normal boat trailers was cited. The public generally preferred the existing condition over the proposed design.
- Concerns with light pollution from the pedestrian-scale lighting proposed.

Overall, the recommendations and concepts for the state roads (Bay Road, River Road, Main Street) were well received by the public, and most were very excited about the transformative changes that this study brings to their community. However, the recommendations and concepts for the Main Street Extension and the boat ramp parking facility were not supported by the public.

Presentation materials from the public outreach process, including the online survey results, can be found in Appendix G.

Existing Conditions

Transportation System

Several state roadways travel to and through the Town of Bowdoinham, including Routes 24 (Bay Road and River Road) and Route 125 (Main Street).

In terms of towns and landmarks surrounding Bowdoinham, Topsham is to the south, Richmond is to the north, Interstate 295 is to the west, and Merrymeeting Bay is to the east.

Within the study limits, the corridor includes intersections with Spring Street, Back Hill Street, Main Street Extension, and Ridge Road. River Road has an abandoned railroad crossing, where a future rail trail is being considered.

There are no traffic signals within the study limits; however, there is an intersection flashing beacon at the River Road & Main Street intersection. There is one large culvert just south of the Bowdoinham Country Store that will need to be extended or replaced to accommodate the proposed roadway template. There is one bridge, called the Brooklyn Bridge, within the study area that is scheduled for rehabilitation by MaineDOT. This study proposes no work on the Brooklyn Bridge. The River Road corridor has a good mix of residential and commercial properties.

Bay Road within the study area is a major collector and a corridor priority 4 roadway. It is used by 1,800 vehicles daily, and the posted speed limit is 35 mph.

River Road within the study area is a major collector and a corridor priority 4 roadway. There are 1,800 vehicles daily south of the Main Street intersection and 2,400 vehicles daily north of the Main Street intersection. The posted speed limit is 25 mph.

Main Street within the study limits is a major collector and a corridor priority 4 roadway. It has a speed limit of 25 mph and receives 2,000 vehicles daily.

Vehicles travel faster than the speed limit on Bay Road, River Road, and Main Street, which creates safety concerns.

Main Street Extension is a town way and a corridor priority 5 roadway. The speed limit is unposted, and fewer than 100 vehicles use it daily.

The characteristics of **Bay Road and River Road** within the study limits include one travel lane in each direction with variable-width shoulders. The shoulders are gravel on Bay Road and paved on River Road and vary from none to 2 ft. in width.

A granite curb is present in areas of sidewalks. There is minimal curb reveal in select areas.

There is a paved sidewalk for a small section on Bay Road near the Brooklyn Bridge and on River Road from the bridge to Ridge Road.

In the study area, there is one mid-block crosswalk on River Road and additional crosswalks at the intersections.

The corridor has no dedicated bicycle facilities, and bus transit does not exist in this community.

The roadways include areas of curbing with closed drainage and areas of roadside ditches with no curbing. Existing guardrail is present at the roadway approaches to the Brooklyn Bridge and at the large culvert crossing.

Overhead utilities and utility poles are present throughout the study limits, and underground public water with fire hydrants is present.

The existing lighting consists of cobra-style lights on utility poles at side street intersections.

Bay Road has a relatively straight alignment with some very minor curves. Its profile is considered rolling terrain, with some downward grades entering the village center. River Road has a sharp 90-degree corner at the Back Hill Street intersection.

Access management is poor in select locations, as noted in the section below.

Safety Review

The study team completed a safety audit and site visit of the corridor on July 17, 2024. The following items were identified from the safety review for this corridor:

- Numerous parcels can benefit from access management.
- The sidewalk on the Brooklyn Bridge terminates to the south at no specific destination.
- The intersection of River Road, Back Hill Street, and Spring Street is unique in its operations and can be confusing for drivers unfamiliar with the area.
- Intersection sight distance is poor at the Main Street Extension intersection with River Road, looking north.
- Crosswalks are missing or unstriped in the village center.
- Bicycle accommodations are lacking in the corridor.
- Speeds entering the village center are a concern in all directions, and traffic calming is needed.
- There is a flashing beacon at the intersection of River Road and Main Street.

For this planning study, the proposed design should include traffic calming measures to control vehicle speeds entering the village. Bicycle accommodations are needed for the full study limits, and improvements to pedestrian accommodations are also needed.

Environmental Review

No formal environmental review has been completed for this study. Below is a summary of general environmental information gained from working on this study:

Historic District—Numerous properties in the village area appear to be eligible for historic designation, and there may be a historic district in the study area. There is a historical society in town. The Merrymeeting Hall, located on Main Street, and the Brooklyn Bridge over the Cathance River appear to be historic.

Impacts on historic properties should be avoided or minimized. It will be important to save existing trees along the frontages of any historic properties.

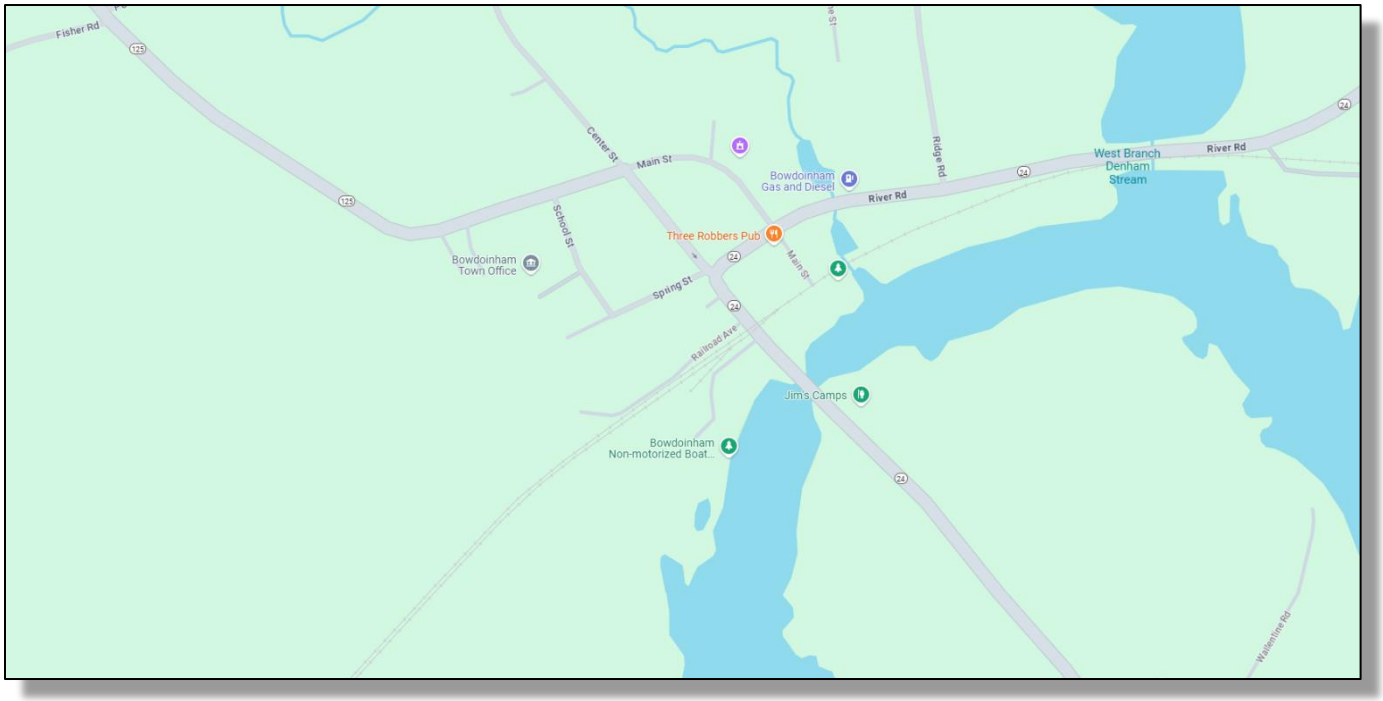
Archaeological Resources – No archaeological resources have been identified in the study area.

Public Spaces Mailly Waterfront Park, Cathance River Boat Ramp(s), and a park at the corner of River Road and Main Street are public spaces and potential 4f eligible properties within the study area.

Hazardous Materials - Any property that once had a gas station or is currently active as a gas station is likely to be identified for potential subsurface petroleum contamination.

Environmental Resources—No environmental resources, such as wetlands or vernal pools, were observed in the study area; however, the Cathance River is present, and wetlands may be associated with that water resource, including at the large culvert near the Bowdoinham Country Store.

A full review of environmental impacts is recommended during the design phase.



Traffic & Capacity Analysis

The average annual daily traffic (AADT) for Bay Road and River Road south of the Main Street intersection within our study limits is 1,800 vehicles. Main Street and River Road north of the Main Street intersection have 2,000 and 2,400 vehicles daily, respectively.

No capacity analysis has been completed for this study, as assessing traffic capacity and vehicle mobility is outside the scope of this study

Crash Data

To better understand the crash patterns in the study area, the study team obtained 2021-2023 crash data from MaineDOT (the latest available data at the beginning of this study) and extended crash history data (2014-2023). To qualify as a high crash location, there needs to be eight or more crashes in a three-year period and a critical rate factor of 1.0 or greater.

The information provided shows no High Crash Locations (HCL) in the study area.

After reviewing a larger window of time (2014 – 2023) that covers pre-COVID, COVID, and post-COVID conditions, we found approximately 10 crashes in the study area. Six occurred at intersections, and four occurred on roadway segments.

All the reported intersection crashes occurred at the intersection of Main Street and River Road.

The average number of crashes is consistently 0 to 2 crashes per year. Half of the crashes occurred during typical commuter hours of 4 pm to 7 pm.

There were no reported fatalities during the 10-year period and no crashes involving bicyclists or pedestrians.

Access management is needed in select areas, as noted in the Existing Conditions section above.

This report contains crash summary information and a safety review memo in Appendix E.

Summary of Options

This section will describe in detail the options being considered for improvements to the Bay Road, River Road, and Main Street corridor and the surrounding village center area. The information presented in this section is based on input and feedback from important town officials, MaineDOT, and the public throughout this study process. It is also based on the data collected, as presented in the previous sections of this report, and site visits.

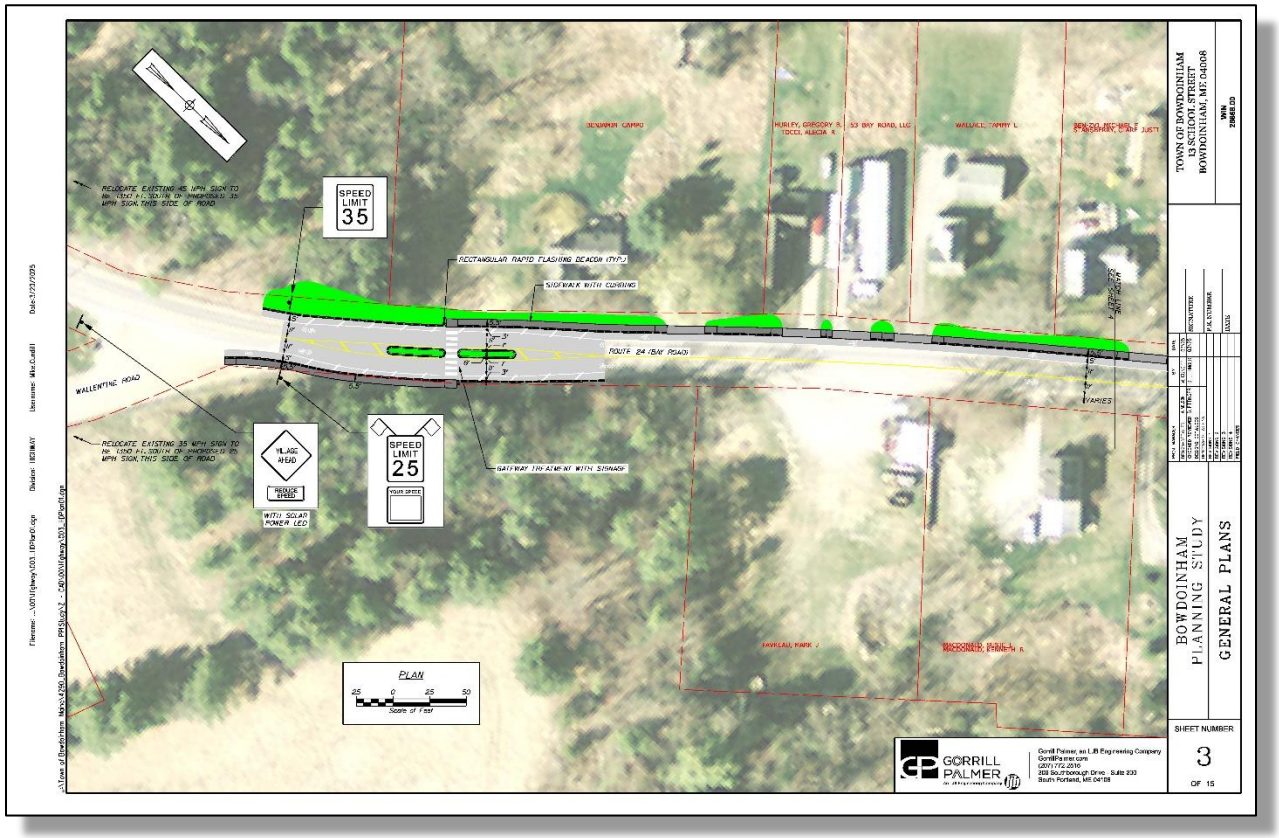
Appendix A of this report provides detailed graphics for the conceptual plans.

This narrative will start at the southern limits of the study area and work northward.

Wallentine Road to Brooklyn Bridge

This Bay Road section represents the southern study limits and begins at the Wallentine Road intersection. The speed limit in this area is 35 mph, and the road alignment is generally straight and rolling. This area is residential and lacks any pedestrian accommodations.

Work in this section includes provisions for a new sidewalk and traffic calming measures. A new sidewalk is proposed from Wallentine Road to the Brooklyn Bridge, where a sidewalk is present. The location of the sidewalk will start and end on the east side of Bay Road, but will be located mostly on the west side, as there is more available right-of-way space and fewer property impacts on the west side. In locations of the sidewalk, work will include provisions for a 5 ft. paved shoulder, granite curbing, and a 5.5 ft. sidewalk without an esplanade, while maintaining an existing 11 ft. travel lane.



Three traffic calming elements are proposed on Bay Road. As you approach from the south, the first traffic calming element will be a raised center median gateway treatment with a mid-block crosswalk and rectangular rapid flashing beacon assembly to improve pedestrian safety and make drivers more aware that they are entering a low-speed pedestrian environment. A second traffic calming element will be a raised speed hump located approximately halfway to the Brooklyn Bridge, and the third traffic calming element will be a raised crosswalk just south of the Brooklyn Bridge. This raised crosswalk will also include a rectangular rapid flashing beacon assembly to improve pedestrian safety.

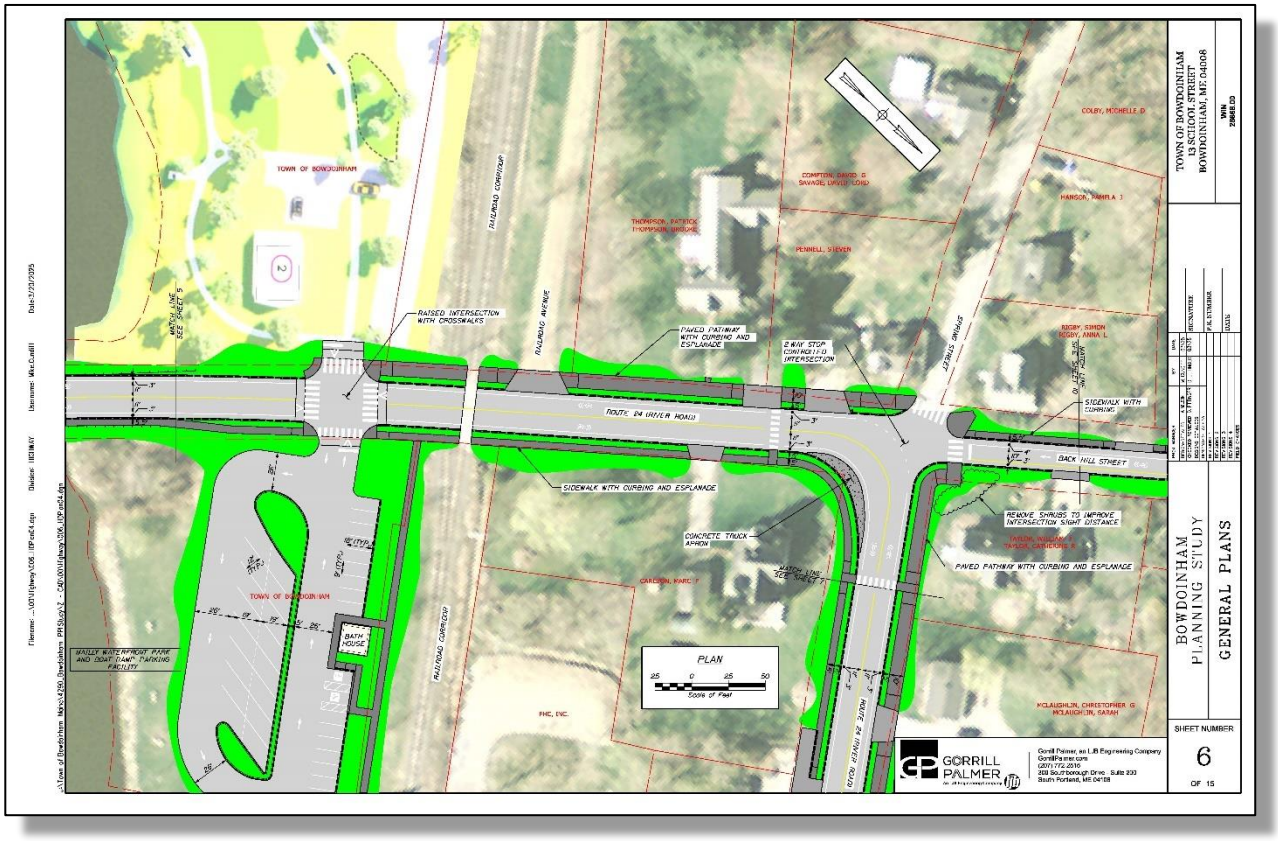
In addition to the traffic calming and sidewalk improvements, we are proposing to relocate the 35 mph to 25 mph speed zone change further south before this residential area. The existing speed zone change is located just north of the Brooklyn Bridge, and we are proposing to relocate the speed zone change to just north of the Wallentine Road intersection, so the residential area has a 25 mph speed limit.

Flashing village ahead signing and flashing 'your speed is' speed limit signing are proposed in advance of the raised median gateway, as you approach this section from the south.

This study assumes no improvements will be required to the Brooklyn Bridge, and this design will match the existing conditions of the bridge on both approaches. This work assumes that the existing guardrail approaches to the bridge will be replaced.

Brooklyn Bridge to Spring Street Intersection

This River Road section represents a full reconstruction roadway section where 11-ft. travel lanes and 3-ft. paved shoulders with vertical granite curbing are proposed. A 10-ft. wide shared-use pathway with a 5-ft. wide esplanade begins at the boat ramp(s) intersection and continues northward on the west side of River Road. A 5-ft wide sidewalk with a 5-ft esplanade is proposed on the



east side of River Road from the bridge extending north. Shared lane striping is proposed for bicycle traffic in addition to the shared-use pathway. A 25-mph speed limit is provided for all streets in the village center area.

Esplanades provide space for utility poles, lighting, landscaping features, and snow storage.

The driveway approaches to the boat ramp facilities on both sides of River Road have been realigned to match each other and to provide a single four-way intersection with River Road. This intersection is proposed to be a raised intersection with crosswalks to improve safety and control vehicle speeds entering the village center.

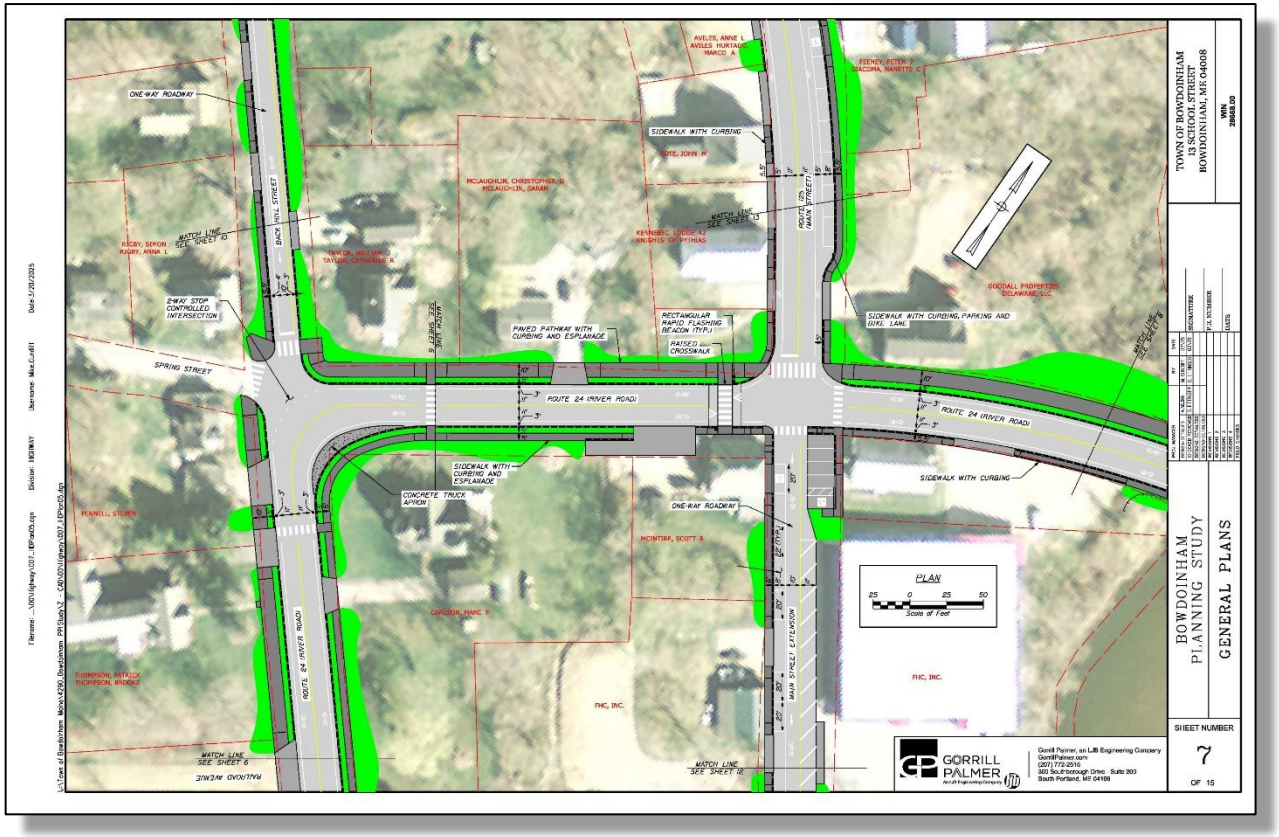
The non-motorized boat ramp facility to the west of River Road is currently under construction, and its entrance will be realigned to match this study's recommendations.

This study proposes to redesign and pave the Cathance River Boat Ramp parking facility. Work will modify the parking and circulation layout and include provisions for sidewalks, curbing, and improved pavement markings. The layout is designed to maintain the existing bathrooms and bathhouse. This area is subject to river flooding during major storm events.

This section has an existing abandoned railroad corridor crossing, and this study has been designed to accommodate a future rail trail.

Spring Street Intersection

The River Road intersection with Spring Street and Back Hill Street is a four-way intersection. River Road has a free-flowing, nonstop movement involving a 90-degree turn. The Spring Street and Back Hill Street approaches are stop conditions. Back Hill Street is a one-way roadway entering the intersection.



Work at this intersection will include designing the turning radius for River Road to accommodate the same size vehicle as the existing condition. 3-ft. paved shoulders are proposed with granite curbing, esplanades, and a shared pathway on the non-river side and a sidewalk on the river side. Crosswalks are proposed on all approaches. The two-way stop configuration in the existing condition will be maintained in the proposed design. There is a sight distance issue on the Back Hill Street approach, so this study recommends removing the shrubs at the intersection corner to improve sight distance and intersection safety.

A flush concrete truck apron is proposed on the inside corner of the River Road movement of this intersection to reduce vehicle speeds and improve safety.

Pedestrian-scale lighting is proposed within the limits of the shared-use pathway, and landscaping and street trees are proposed in esplanade areas throughout the study limits. Cobra-style lights are proposed in non-pathway locations throughout the study limits.

Crosswalk and intersection lighting, following the latest DOT standards, are necessary throughout the study limits.

Spring Street to Main Street

This River Road section maintains a similar roadway footprint as the prior section, where 11-ft. travel lanes, 3-ft. paved shoulders, granite curbing, esplanades, sidewalk, and shared-use pathway are proposed.

The Main Street intersection is a two-way stop condition, with Main Street and Main Street Extension having the stop conditions. There is an intersection flashing beacon that will be maintained in the proposed design. Recommendations at this intersection include provisions for a raised crosswalk on River Road in front of the Three Robber Pub property and crosswalks on all intersection approaches. Esplanades are removed in areas where buildings are located close to the roadway.

Sidewalks without esplanades are proposed on Main Street and Main Street Extension.

The study team originally recommended an all-way stop at this location, but it was removed through MaineDOT coordination. Feedback from the second public meeting strongly suggests that the all-way stop at this location should be reconsidered if this project enters the design phase. If an all-way stop is selected in the future, a normal crosswalk instead of a raised crosswalk should be considered in front of Three Robbers Pub.

Main Street to Ridge Road

This River Road section proposes full-depth reconstruction from the Main Street intersection to just north of the Bowdoinham Country Store. 11-ft. travel lanes and 3-ft. paved shoulders with granite curbing are proposed. Bikes are accommodated via shared lanes and the shared-use pathway on the northern side of River Road. An esplanade with a pathway is provided on the south side of River Road, and a sidewalk is provided on the north side.

Access management is proposed behind the Masonic Lodge building and at the gravel parking lot opposite the Bowdoinham Country Store. A long-striped crosswalk is proposed in front of the country store to better define the pedestrian space from the parking spaces. If the country store and gas station property are redeveloped in the future, this study recommends providing additional provisions for access management along this property.

Back curbing is shown behind sidewalks and pathways in areas where pavement exists on adjacent properties.

This study's recommendations will impact a large culvert just south of the Bowdoinham Country Store. It is planned to replace this culvert.

Three traffic calming elements are proposed on River Road. As you approach from the north, the first traffic calming element will be a raised center median gateway treatment just north of Ridge Road to make drivers more aware that they are entering a low-speed village environment. A second traffic calming element will be a raised crosswalk located between the large culvert and the Bowdoinham Country Store, and the third traffic calming element will be a raised crosswalk at the Three Robbers Pub property. Both raised crosswalks will include rectangular rapid flashing beacon assemblies to improve pedestrian safety.

We are proposing to relocate the 25 mph to 35 mph speed zone change slightly further north beyond the proposed gateway treatment. Flashing village ahead signing and flashing 'your speed is' speed limit signing are proposed in advance of the raised median gateway, as you approach this section from the north.

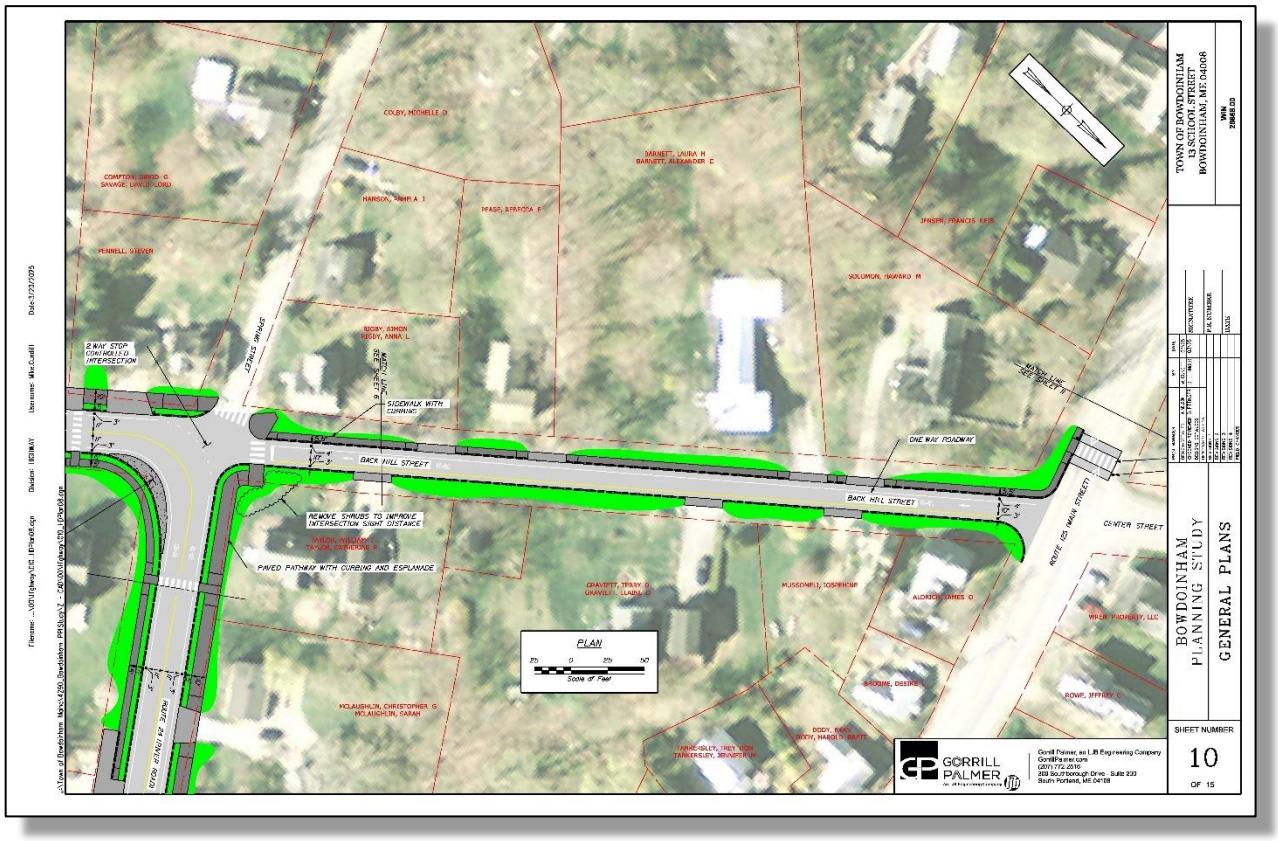
Back Hill Street

Back Hill Street is currently a one-way roadway heading southward and downhill, connecting Main Street and River Road. There are no existing sidewalks.

This study recommends providing one 11'-ft. travel lane, 3-ft. paved left shoulder, 4-ft. paved right shoulder, granite curbing on both sides with a 5.5-ft. sidewalk on the west side without an esplanade.

Upper Main Street

Upper Main Street has a 25-mph speed limit from the village center to the Fisher Road intersection. Three traffic calming elements are proposed on Upper Main Street. As you approach from Interstate 295, the first traffic calming element will be a raised center median gateway treatment just south of the Fisher Road intersection to make drivers more aware that they are entering a low-speed village



environment. A second traffic calming element will be a raised speed hump near the sharp corner between Fisher Road and School Street, and the third traffic calming element will be a raised crosswalk at Back Hill Street intersection. The raised crosswalk will include rectangular rapid flashing beacon assemblies to improve pedestrian safety.

Flashing village ahead signing and flashing 'your speed is' speed limit signing are proposed in advance of the raised median gateway, as you approach this section from Interstate 295.

Lower Main Street

Lower Main Street near the River Road section will consist of 11'-ft. travel lanes, 5-ft. paved shoulders, on-street parking on the north side, and granite curbing and paved sidewalks on both sides.

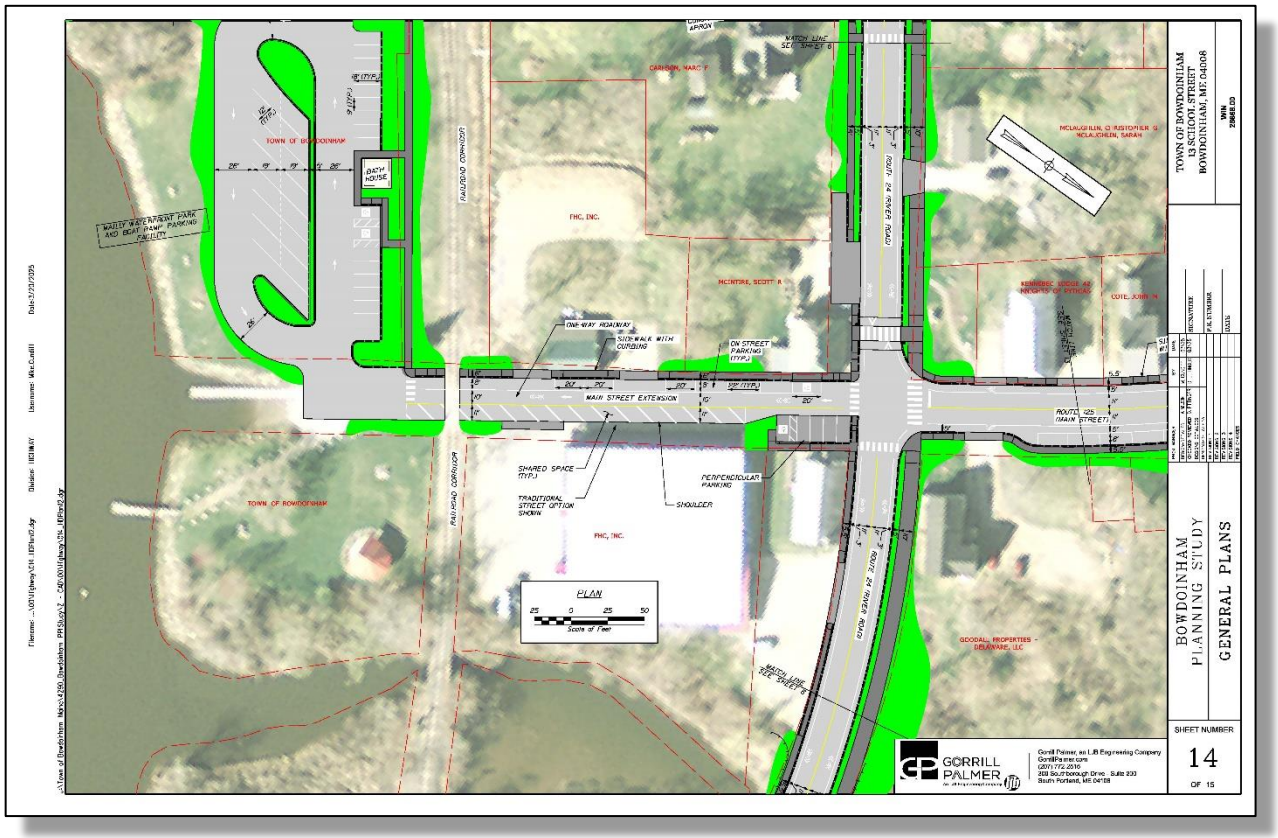
The 5-ft. shoulder is maintained in areas of on-street parking for bikes.

The sidewalk on the south side of Main Street extends from the River Road intersection for three properties only. The sidewalk on the north side ties into an existing sidewalk that continues up the hill to the Center Street intersection.

Main Street Extension

Main Street Extension is a local street that provides access to Mailly Waterfront Park, a skateboard park, and the boat ramp area. It also provides access to adjacent restaurants and businesses. The roadway is currently unstriped with no curbing or sidewalks. The road allows for two-way traffic and on-street parking in addition to the pedestrian traffic that frequents the area. Both perpendicular and parallel on-street parking is provided. In our opinion, this street is the center of the village area and home to many local activities and events.

As part of this study, we recommended several different options to improve the safety and function of this street. Work included proposing a one-way roadway with on-street parking and a raised



sidewalk, and proposing a separate shared street concept. These concepts are best presented in Appendices A and B of this report.

After much discussion with the town officials and the public, it was decided that none of the proposed concepts for Main Street Extension were preferred over the existing condition. The public did like some elements of our concepts, including better-defined pedestrian accommodations; however, maintaining two-way traffic and parking were deemed more important to the residents and business owners of this community.

Typical Section

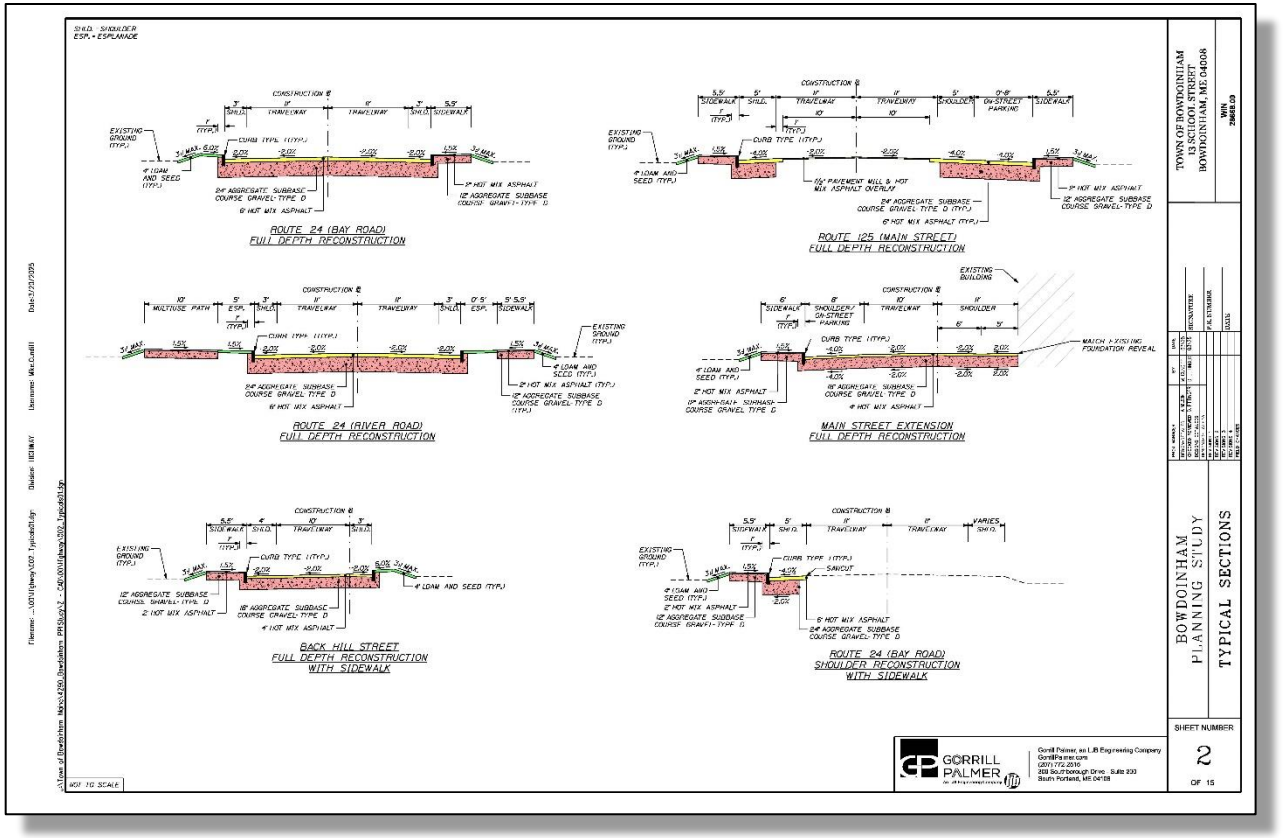
The typical roadway section for the Bay Road, River Road, and Main Street corridors will include one 11 ft. travel lane in each direction, 3 ft. to 5 ft. paved shoulders, vertical granite curbing on both sides, 0 ft. to 5 ft. grassed/landscaped esplanades, and 5.5 ft. min. width paved sidewalks. There are sections where a 10-foot-wide paved shared-use pathway replaces sidewalks. 8 ft. paved shoulders are provided in on-street parking sections.

Work assumes that Main Street's roadway core is a built roadway. Therefore, a 1.5" pavement mill and overlay are planned for the travel lanes, with full-depth reconstruction planned for the shoulders. The other roadways (Bay Road, River Road, Back Hill Street, Main Street Extension) assume full-depth reconstruction of the travel lanes and shoulders.

Pavement and gravel depth should follow MaineDOT standards. The esplanades will create landscaping and streetscape opportunities and should include shade trees and ornamental lighting.

ADA-compliant ramps and crosswalks shall be provided within the study limits. Bicycles will be accommodated with 5 ft. paved shoulders or shared lanes. A 10' shared-use pathway is also available for bicycles along portions of the corridor.

Vertical granite curbing with closed drainage and underdrain is proposed throughout the corridor.



Conceptual Plans

The study team has prepared conceptual plans for the options presented in the previous section. Using base plans developed from aerial images and right-of-way and property-line information from available GIS data, conceptual plans have been prepared for Bay Road, River Road, Main Street, and numerous side streets. These concept plans show travel lanes, shoulders, curbing, esplanades, shared-use pathways, sidewalks, and crosswalks.

The plans are colored. A north arrow and bar scale are provided for reference. A copy of the concept plans is in Appendix A of this report.

Renderings have been developed to illustrate street-view perspectives of the Main Street extension options for this study. Those renderings are in Appendix B of this report.

Construction & Project Costs

Construction Costs

The study team has developed conceptual-level construction costs for the Bay Road, River Road, and Main Street corridors. Construction costs are the costs needed to build the project. Using the conceptual layouts developed, preliminary quantities were calculated, and construction costs were estimated using MaineDOT average unit pricing and pay items. Work assumes a 1.5" pavement mill, pavement overlay of the travel lanes on Main Street, and full-depth construction of the shoulders. All other roads assume full-depth reconstruction of the travel lanes and shoulders. A 25% contingency has been added to the construction cost estimates. The construction costs are presented in 2025 dollars, and no escalation to future years has been included. The conceptual construction cost estimate is summarized below:

Description	Conceptual Construction Costs
Bay Road, River Road, Main Street, Main Street Extension, Side Streets, and Intersections	$7,050,000

Project Costs

Total project cost is a MaineDOT term that includes not only the construction costs but also the engineering costs, inspection costs, and right-of-way costs associated with the project. The study team has included engineering costs at 10% of construction costs and inspection costs at 10% of construction costs. Right-of-way costs are based on anticipated property impacts and the potential acquisition of land that may be needed for the project. The total conceptual project cost is summarized on the right.

Description	Total Project Costs
Bay Road, River Road, Main Street, Main Street Extension, Side Streets, and Intersections	$9,180,000

Appendix C of this report provides a detailed breakdown of the cost estimates. The cost estimates provided in this report are considered conceptual, and further refinements to the estimates can be expected during the design phase.

Property Impacts

Part of the evaluation includes an assessment of potential property impact. While any transportation project's goal is to stay within the limits of available public right-of-way, that is not always possible, and constructing an expanded corridor with enhanced pedestrian/bicycle accommodations may require land acquisition.

Using available GIS mapping for property and right-of-way limits, the study team has developed concept plans with the goal of minimizing property impacts. However, property impacts are still realized in this study. Below is a summary of anticipated property impacts.

In terms of disclaimers, please note that the information presented in this section is planning-level assessments of property impacts based on conceptual plans, tax assessor data, and high-level estimates of land value and is not based on detailed designs with ground survey, accurate right of way, and property line information. No certified land appraiser has been used to calculate land value for this study. Further design refinements and adjustments to property impacts will need to be completed during the design phase. Also, qualified professionals will need to complete the true cost for land and right-of-way acquisition during the design process.

As part of this assessment, the study team has identified parcels that will be temporarily, partially, or fully impacted by the proposed footprints.

Temporary grading rights can be defined as temporary grading of lawn areas and driveways as necessary to complete the construction, but no permanent impacts or takes are necessary. We have identified 40 parcels that will require temporary grading rights. A value assessment of $1,000 per parcel is included in the right-of-way costs for temporary impacts.

Partial acquisitions can be defined as areas that require a permanent easement or partial take. These are areas where the proposed roadway template or intersection layout extends onto private property, and land acquisition is needed to accommodate the proposed roadway footprint. This can also include areas needed for sidewalks or pathways that might be located outside of the available right-of-way. These are often called strip takes, where only a strip of land along the right-of-way frontage is acquired. We have identified 27 parcels that will require partial acquisitions. A value assessment of $25,000 per parcel is included in the right-of-way costs for partial takes.

Full Takes can be defined as acquiring the full property, including all land and buildings associated with that property. Full takes often occur when the proposed roadway project impacts a building or impacts the property enough that the remaining portion of the property is deemed non-conforming or an uneconomical remainder. We have identified no parcels that require a full take.

Recommendations

Evaluation Criteria

An evaluation matrix has been developed to assist in evaluating and comparing the recommendations of this study to the No Build condition. The study team has established the following thirteen (13) criteria for evaluating the effectiveness of the options in meeting the purpose & need of this study. A simple definition or explanation of each criterion is below:

Maintains Traffic Operations—This criterion identifies how well the proposed option improves, maintains, or reduces traffic operations. It is important that the proposed option provides equal or better results than the No Build condition.

Improves Safety – This criterion considers how well the option improves the corridor's safety when considering the vehicle crash history, crash patterns, and contributing factors for those crashes. Improving vehicle safety is an important goal of this study.

Improves Connectivity (all modes)—This criterion checks to ensure that the option provides improved connectivity to important landmarks within the community for pedestrians, bicycles, and vehicles. Landmarks include public spaces, public parks, recreational places, and the school located off Ridge Road.

Improves Accessibility (all modes) - This criterion checks to ensure that the option provides improved accessibility for vehicles, bicycles, and pedestrians to and from side streets.

Improves Intersection – This criterion identifies how well the option creates safer layout and geometry for intersections in the study corridor.

Address Speed Concerns – This criterion identifies how well the option addresses speed control on the Bay Road, River Road, and Main Street corridors.

Improves Bicycle Accommodations - This criterion considers how well the option creates safe bicycle accommodations.

Improves Pedestrian Connections – This criterion considers how well the option improves the safety of pedestrians within the corridor.

Improves Access Management – This criterion considers how well access management is improved within the corridor.

Property Impacts—Can the option be constructed within the limits of the existing right of way, or is the acquisition of additional property necessary? We aim to avoid or minimize property impacts if possible.

Gateway Opportunities – How well does the option provide a gateway to the community, and is there an opportunity to provide a statement of arrival to the community with the option?

Project Costs - How much does the option cost? Project costs include construction, engineering, property, and construction inspection costs.

Meets Purpose & Need – Does the option generally meet the purpose & need statement for the study?

Many of these criteria are represented in the purpose and need statement, which is helpful when comparing the option to the NO Build condition.

Selection and Scoring Criteria

After evaluating and comparing the option to the purpose and need statement, and to the No Build condition, the study team has populated the results of the evaluation criteria into a selection and scoring matrix. Using the thirteen evaluation criteria established by the study team, the following is a summary of the findings:

Bowdoinham PPI Planning Study
WIN 28668.00
EVALUATION MATRIX

	Preferred Option	*No Build*
CRITERIA		*Do Nothing*
Maintains Traffic Operations (LOS)	Yes	*Yes*
Improves Safety (all Modes)	Yes	*No*
Improves Connectivity (all Modes)	Yes	*No*
Improves Accessibility (all Modes)	Yes	*No*
Improves Placemaking	Yes	*No*
Address Speed Concerns	Yes	*No*
Improves Bicycle Accommodations	Yes	*No*
Improves Pedestrian Connections (to public spaces, natural resources, school)	Yes	*No*
Improves Access Management	Yes	*No*
Property Impacts	Worse than No Build	*None*
Gateway Opportunities	Yes	*No*
Total Project Costs (Construction, PE, CE, ROW)	$9.18M	*None*
Meets Purpose & Need	Yes	*No*

RECOMMENDATION:	Preferred Option

The preferred option and the No Build condition maintain traffic operations equally.

The preferred option improves safety, connectivity, and accessibility for all modes within the study area, while the No Build condition does not.

The preferred option addresses speed concerns and improves bicycle and pedestrian accommodations, while the No Build condition does not. To address speed concerns, raised crosswalks, raised intersections, speed humps, and gateway treatments are proposed.

The preferred option provides improved access management, while the No Build condition does not.

The preferred option creates opportunities for placemaking and community gateways, while the No Build condition does not.

The only criterion on which the preferred option scores less than the No Build condition is property impacts and total project costs.

The preferred option meets the purpose and needs statement, while the No Build condition does not.

The results of the evaluation matrix are to the left. Red, yellow, and green color coding was applied to the findings to assist in drawing conclusions. A green code is considered a good score, a yellow code is an average score, and a red code is considered a poor score. This matrix is also provided in Appendix F of this report.

Recommendations

After reviewing the evaluation matrix, the preferred option scores well in all major categories. It improves safety, mobility, and connectivity in the study area for all user modes and addresses all the concerns identified during the public outreach process.

This study recommends that the preferred option be selected for advancement into the project development and preliminary design phases.

Additional Comments

1. Impacts on existing large trees along Bay Road, River Road, Main Street, and within the village center should be coordinated during the design phase.
2. The MaineDOT planned Brooklyn Bridge rehabilitation project should be coordinated during the design phase of this project.
3. This project may require the relocation of utility poles and fire hydrants. Utility coordination should be completed during the design phase.
4. The concepts show crosswalk treatments using high-visibility continental markings; however, special surface treatment at significant crosswalk locations should be considered. Special surface treatments may include concrete, paver, brick, or granite surfaces.
5. The pavement thickness for proposed sidewalks and pathways is shown as 2 inches, which is consistent with MaineDOT practices. However, additional pavement thickness should be considered if heavy equipment is used for winter maintenance and snow removal.
6. The proposed landscaping design (including new trees) should include salt-tolerant species and be mindful of the proximity to utilities and sidewalk pavements.
7. The roadway templates proposed for this study have a centerline-to-curb width of less than 16 ft. in select areas and vertical traffic calming elements throughout. Coordination of winter maintenance and emergency services (fire and rescue) with proposed template widths and traffic calming elements should be discussed during the design phase.
8. The concepts in this study have been developed on aerial imagery with available GIS right-of-way information. The accuracy of the right-of-way information is not known. Some areas do not seem correct, including sections of side roads. Once the survey is collected and the existing right-of-way is determined during the design phase, adjustments to the design may be necessary to avoid or minimize property impacts.
9. The sidewalk location on Bay Road is proposed based on aerial base mapping and available GIS right-of-way information. If this project moves into the design phase with survey and right-of-way information, the sidewalk location should be revisited to ensure it is placed in the best location, considering property impacts and pedestrian safety.
10. Appropriate pedestrian and bicycle signage should be considered throughout the study area. Advanced signing may be necessary at poor sight distance locations.
11. The proposed design will result in significant pavement markings for pedestrian and bicycle accommodations. The town should coordinate with MaineDOT during the design phase to determine responsibility and frequency for restriping efforts.
12. An abandoned rail crossing runs through the study area and is a candidate for a trail corridor project. Coordinating that project with this project is recommended during the design phase.
13. The public supported the all-way stop at the River Road intersection with Main Street as presented in the draft concepts at public meeting #1, and does not support the changes being proposed (two-way stop with raised crosswalk) on the latest concepts. An all-way stop should be reconsidered during the design phase.

14. Of the two options presented for the Main Street Extension, the public supported option one over option two; however, the public supported keeping the existing condition over option one or two. The public was not comfortable making any changes to the Main Street extension. While shown on the concept plans, this study recommends no changes to Main Street Extension, due to public opposition.

15. The boat ramp parking improvements proposed in the latest concept plans were generally not supported by the public. Concerns regarding circulation, loading, and unloading at the boat ramp persisted with the latest design, and parking for larger-than-normal boat trailers was cited. The public generally preferred the existing condition over the proposed design. While shown on the concept plans, this study recommends no changes to the boat ramp parking area, due to public opposition.

Appendix A

Concept Plans

TOWN OF BOWDOINHAM

ROUTE 24

BOWDOINHAM, MAINE

SAGADAHOC COUNTY

WIN 28668.00

VILLAGE PARTNERSHIP INITIATIVE

PROJECT LENGTH: 0.68 MILES

PLAN LEGEND

Town, County, State		Catch Basins	Existing ■ Proposed
Property Lines		Manholes	Existing ● Proposed
R/W Lines-Existing		Proposed Underdrain	
R/W Lines-Proposed		Proposed Ditch	
Culvert-Existing		Existing Ditch	
Culvert Proposed		Utility Poles	Existing ◆ Proposed
Curbing	Existing / Proposed	Fire Hydrants	Existing ◆ Proposed
Type 1		Existing Water Line	
Type 3		Existing San. Sewer	
Type 5		Existing San. Sewer Manhole	
Outline of Bodies of Water		Guardrail-Existing	
Exposed Bedrock		Guardrail-Proposed	
Buildings		Guardrail-Cable, Other	
Trees	Conifer, Deciduous	Centerline-Existing	
Tree Line		Centerline-Proposed	10+00
Clearing Limit Line		Travelway-Existing	
Railroad		Travelway-Proposed	

Boring — HB-XXX-###

Pavement Core — PC-#

Test Pit — TP-XXX-###

Probe — P-#.#X

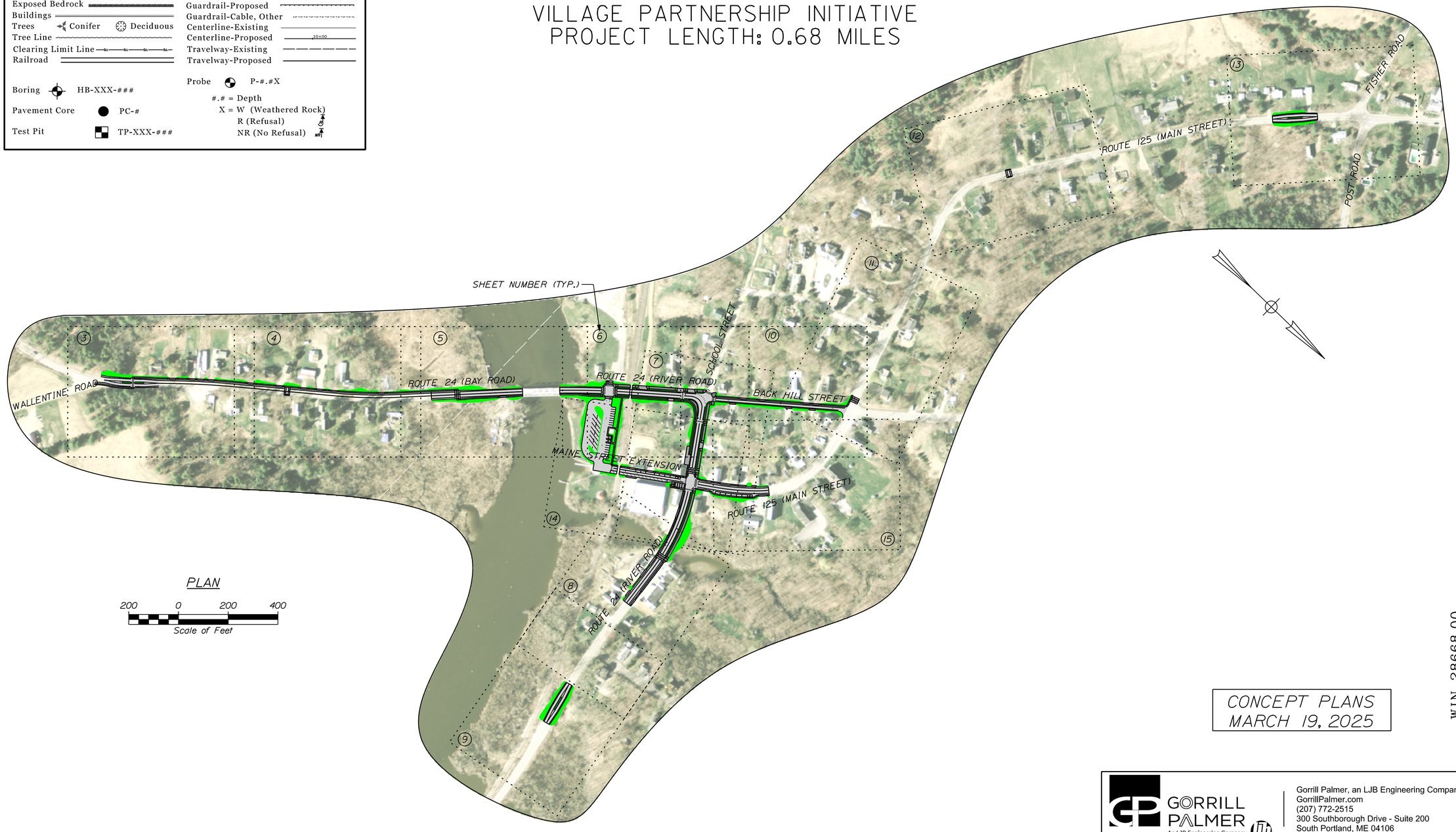
#.# = Depth

X = W (Weathered Rock)

R (Refusal)

NR (No Refusal)

INDEX OF SHEETS



PLAN

200 0 200 400

Scale of Feet

CONCEPT PLANS
MARCH 19, 2025

WIN 28668.00

GORRILL PALMER
An LJB Engineering Company

Gorrill Palmer, an LJB Engineering Company
GorrillPalmer.com
(207) 772-2515
300 Southborough Drive - Suite 200
South Portland, ME 04106

TOWN OF BOWDOINHAM
13 SCHOOL STREET,
BOWDOINHAM, MAINE 04008

WIN 28668.00

PROJECT INFORMATION			
PROGRAM	PLANNING		
PROJECT MANAGER	STEVE COLE	SIGNATURE	
DESIGNER	D. ETTINGER	P.E. NUMBER	
CONSULTANT	GORRILL PALMER		
PROJECT RESIDENT		DATE	
CONTRACTOR			
PROJECT COMPLETION DATE			

BOWDOINHAM
PLANNING STUDY

TITLE SHEET

SHEET NUMBER

1

OF 15

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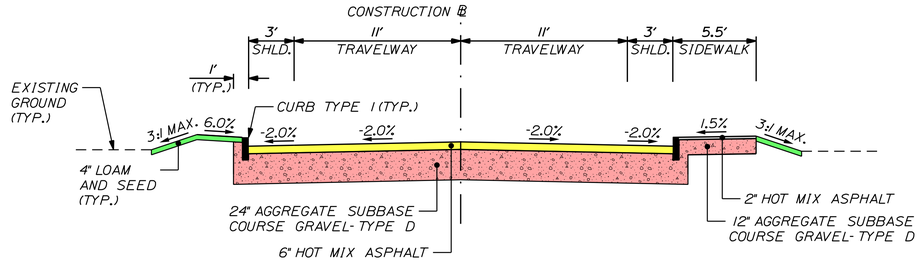
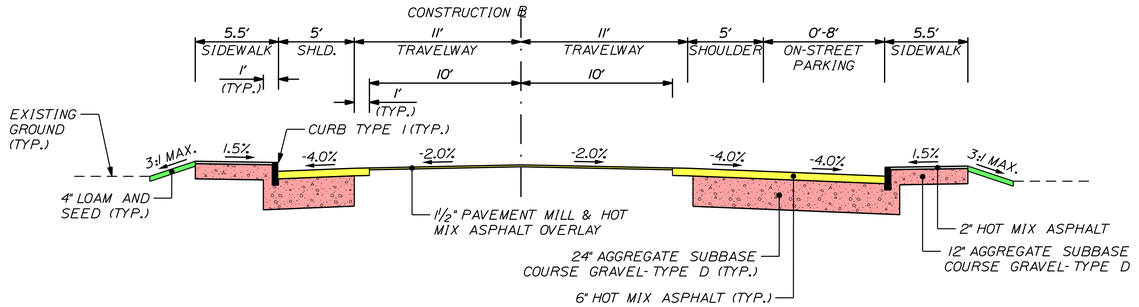
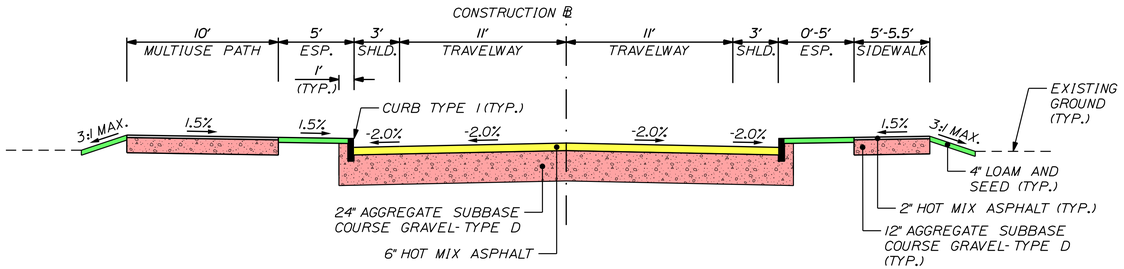
SHLD. = SHOULDER
ESP. = ESPLANADE



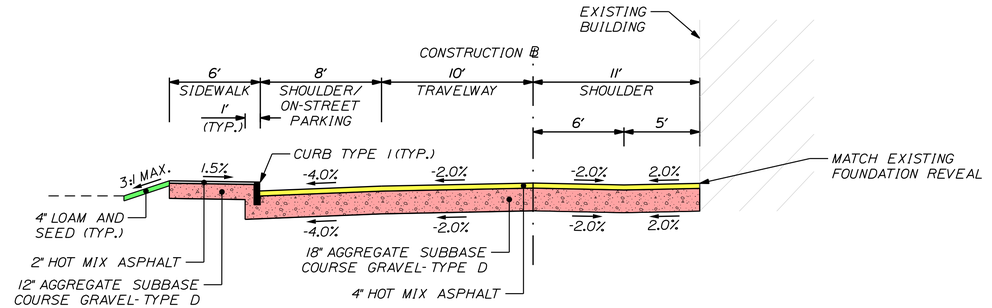
ROUTE 24 (BAY ROAD)
FULL DEPTH RECONSTRUCTION



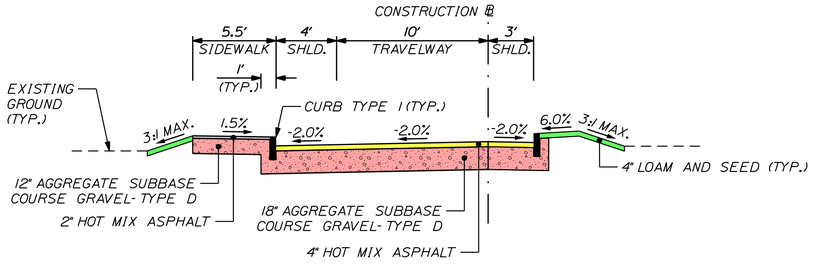
ROUTE 125 (MAIN STREET)
FULL DEPTH RECONSTRUCTION



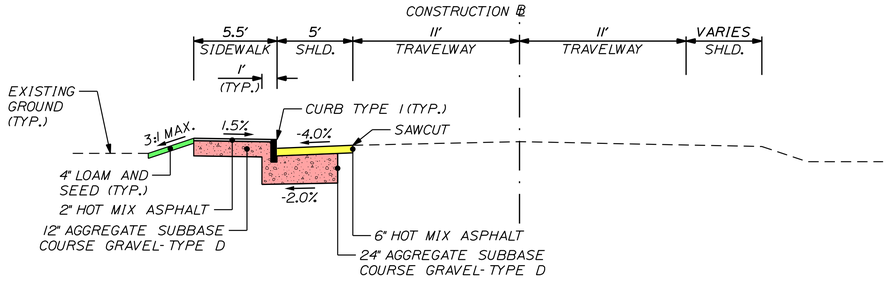
ROUTE 24 (RIVER ROAD)
FULL DEPTH RECONSTRUCTION



MAIN STREET EXTENSION
FULL DEPTH RECONSTRUCTION



BACK HILL STREET
FULL DEPTH RECONSTRUCTION
WITH SIDEWALK



ROUTE 24 (BAY ROAD)
SHOULDER RECONSTRUCTION
WITH SIDEWALK

NOT TO SCALE

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South Portland, ME 04106

TOWN OF BOWDOINHAM
13 SCHOOL STREET
BOWDOINHAM, ME 04008

WIN
28668.00

PROJ. MANAGER	BY	DATE	SIGNATURE
DESIGN- DETAILED	A. NELSON		
CHECKED- REVIEWED	D. ETTINGER		P.E. NUMBER
DESIGN2- DETAILED2	M. CUNDIFF	03\25	
DESIGN3- DETAILED3	D. ETTINGER	03\25	DATE
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BOWDOINHAM
PLANNING STUDY

TYPICAL SECTIONS

SHEET NUMBER
2
OF 15

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U:\Town of Bowdoinham Maine\4290_Bowdoinham PPI Study\Z - CAD\00\Highway\003_HDPlan01.dgn

RELOCATE EXISTING 45 MPH SIGN TO BE 1350 FT. SOUTH OF PROPOSED 35 MPH SIGN, THIS SIDE OF ROAD

SPEED LIMIT 35

RECTANGULAR RAPID FLASHING BEACON (TYP.)

SIDEWALK WITH CURBING

ROUTE 24 (BAY ROAD)

WALLENTINE ROAD

RELOCATE EXISTING 35 MPH SIGN TO BE 1350 FT. SOUTH OF PROPOSED 25 MPH SIGN, THIS SIDE OF ROAD

VILLAGE AHEAD
REDUCE SPEED

WITH SOLAR POWER LED

SPEED LIMIT 25
YOUR SPEED

GATEWAY TREATMENT WITH SIGNAGE

MATCH LINE SEE SHEET 4

VARIES

BENJAMIN CAMPO

HURLEY, GREGORY B.
TOCCI, ALECIA R

53 BAY ROAD, LLC

WALLACE, TAMMY L

BEN-ZVI, MICHAEL F
STANSBERRY, CLARE JUSTI

FAVREAU, MARK J

MACDONALD, SUSIE L
MACDONALD, KENNETH R

PLAN
25 0 25 50
Scale of Feet

TOWN OF BOWDOINHAM
13 SCHOOL STREET
BOWDOINHAM, ME 04008

WIN
28668.00

	BY	DATE
PROJ. MANAGER	A. NELSON	
DESIGN-DETAILED	M. CUNDIFF	03\25
CHECKED-REVIEWED	D. ETTINGER	03\25
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

BOWDOINHAM
PLANNING STUDY

GENERAL PLANS

SHEET NUMBER
3
OF 15

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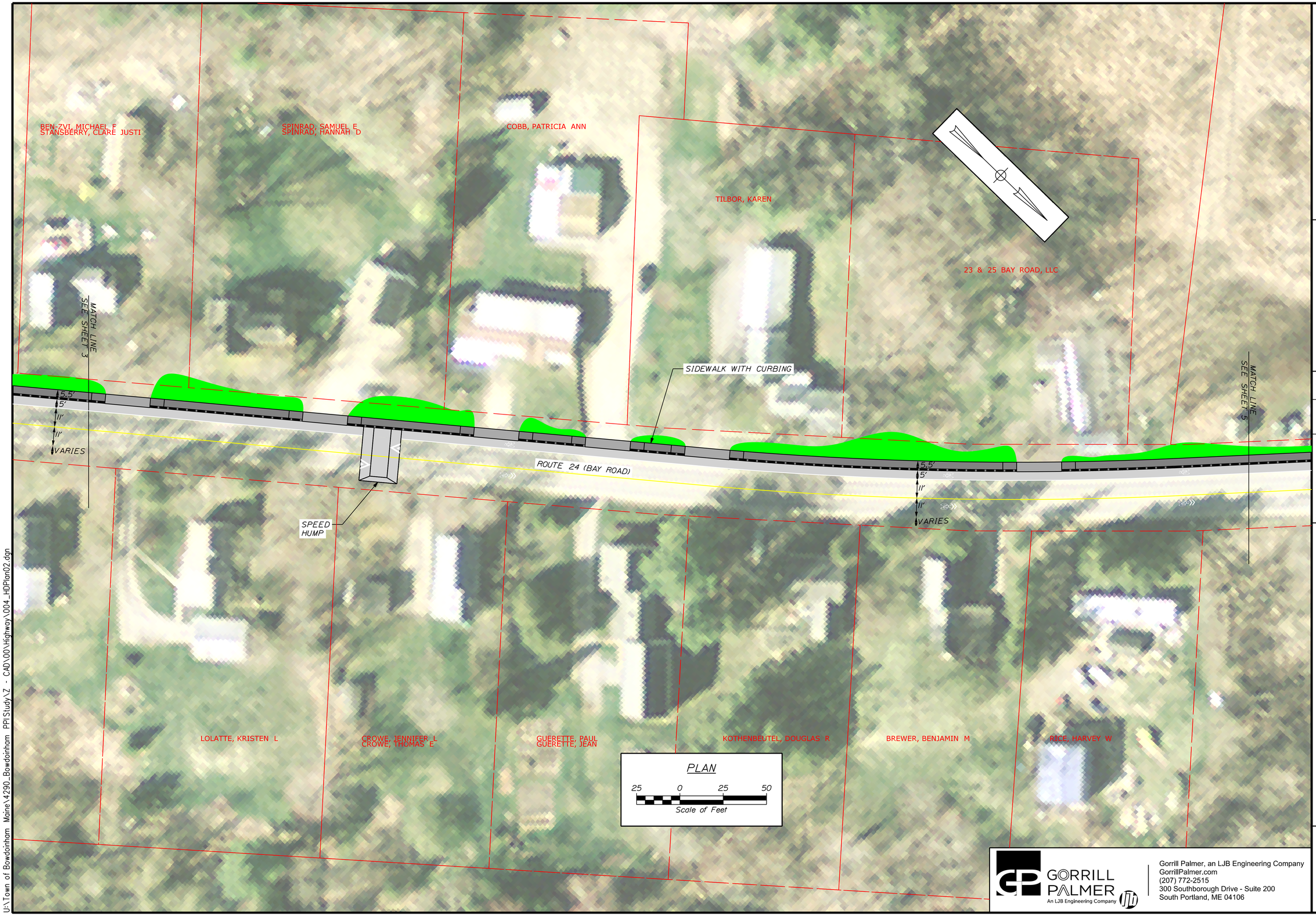
South Portland, ME 04106



TOWN OF BOWDOINHAM
13 SCHOOL STREET
BOWDOINHAM, ME 04008

WIN
28668.00

	BY	DATE
PROJ. MANAGER	A.NELSON	
DESIGN-DETAILED	M. CUNDIFF	03\25
CHECKED-REVIEWED	D. ETTINGER	03\25
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

BOWDOINHAM
PLANNING STUDY

GENERAL PLANS

SHEET NUMBER
4
OF 15

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An LJB Engineering Company

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MCPHERSON, JAMES A

MATCH LINE SEE SHEET 4

SIDEWALK WITH CURBING

RECTANGULAR RAPID FLASHING BEACON (TYP.)

ROUTE 24 (BAY ROAD)

RAISED CROSSWALK

SIDEWALK WITH CURBING

MATCH LINE SEE SHEET 6

BROOKLYN BRIDGE SCHEDULED FOR REHABILITATION IN 2026

MCPHERSON, JAMES A

MAILLY WATERFRONT PARK AND BOAT RAMP PARKING FACILITY

PLAN

25 0 25 50

Scale of Feet

TOWN OF BOWDOINHAM
13 SCHOOL STREET
BOWDOINHAM, ME 04008

WIN
28668.00

	BY	DATE
PROJ. MANAGER		
DESIGN-DETAILED	M. CUNDIFF	03\25
CHECKED-REVIEWED	D. ETTINGER	03\25
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES	A. NELSON	
	D. ETTINGER	

SIGNATURE

P.E. NUMBER

DATE

BOWDOINHAM
PLANNING STUDY

GENERAL PLANS

SHEET NUMBER

5

OF 15

GORRILL PALMER
An LJB Engineering Company

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GorrillPalmer.com
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300 Southborough Drive - Suite 200
South Portland, ME 04106

Filename: ...\00\Highway\006_HDPlan04.dgn Division: HIGHWAY Username: Mike.Cundiff Date:3/20/2025

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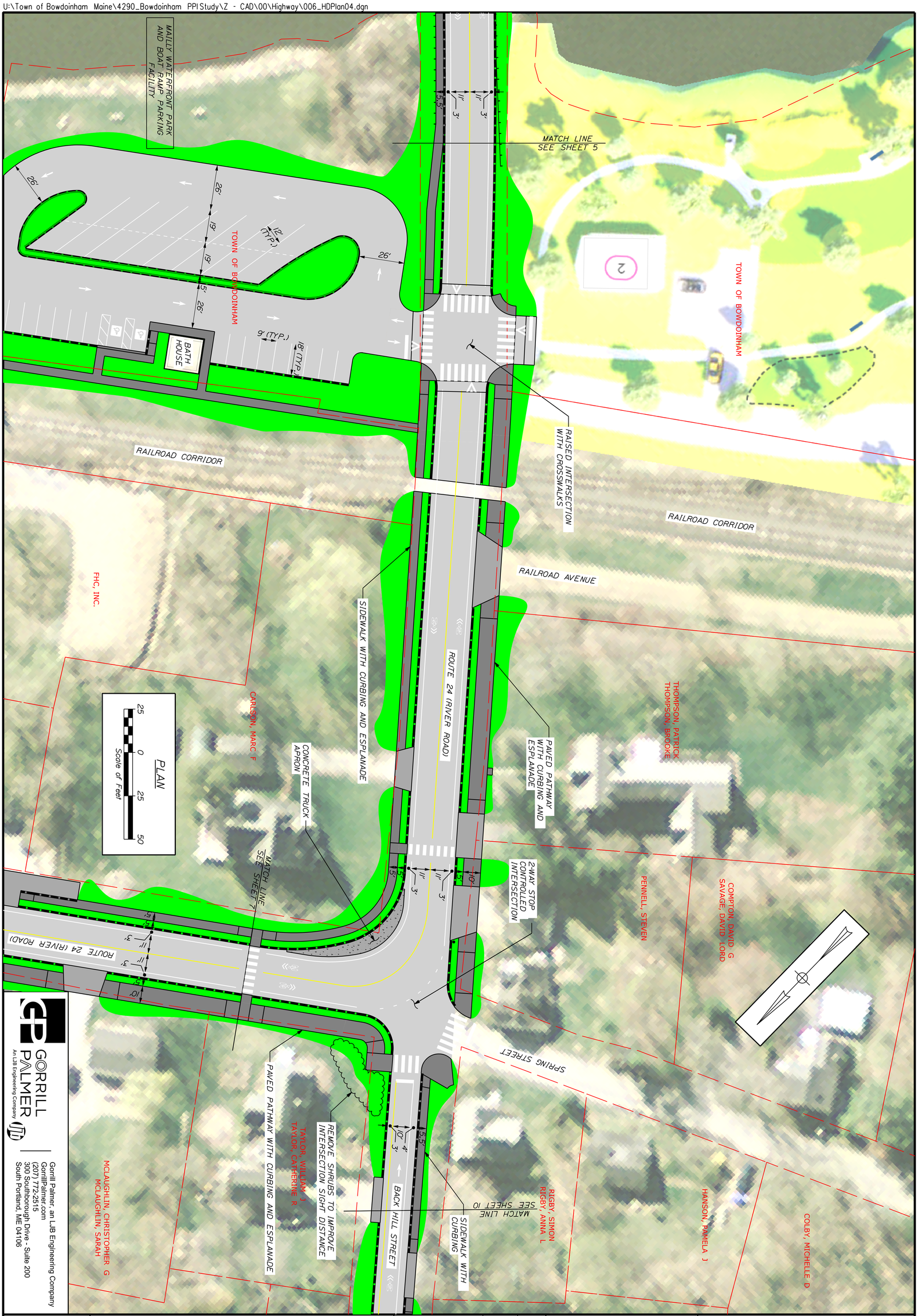

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300 Southborough Drive - Suite 200
South Portland, ME 04106

SHEET NUMBER 6 OF 15

BOWDOINHAM PLANNING STUDY

GENERAL PLANS

PROJ. MANAGER		BY	DATE
DESIGN-DETAILED	A. NELSON	M. CUNDIFF	03\25
CHECKED-REVIEWED	D. ETTINGER	D. ETTINGER	03\25
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

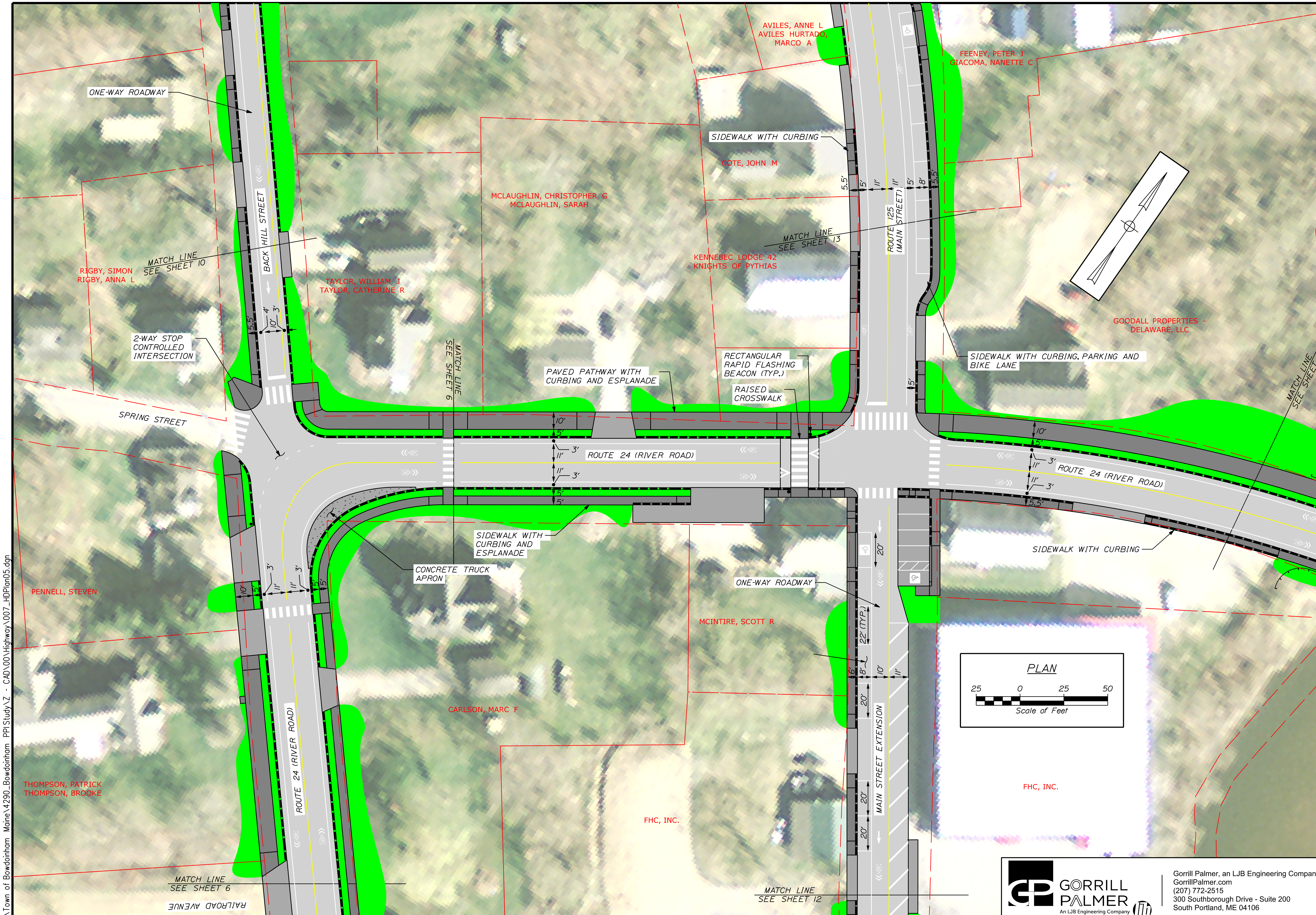
SIGNATURE

P.E. NUMBER

DATE

TOWN OF BOWDOINHAM
13 SCHOOL STREET
BOWDOINHAM, ME 04008

WIN
28668.00



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South Portland, ME 04106

TOWN OF BOWDOINHAM
13 SCHOOL STREET
BOWDOINHAM, ME 04008

WIN
28668.00

	BY	DATE
PROJ. MANAGER	A. NELSON	
DESIGN-DETAILED	M. CUNDIFF	03/25
CHECKED-REVIEWED	D. ETTINGER	03/25
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

BOWDOINHAM PLANNING STUDY

GENERAL PLANS

SHEET NUMBER
7
OF 15

TOWN OF BOWDOINHAM
13 SCHOOL STREET
BOWDOINHAM, ME 04008

WIN
28668.00

	BY	DATE
PROJ. MANAGER	A. NELSON	
DESIGN-DETAILED	M. CUNDIFF	03\25
CHECKED-REVIEWED	D. ETTINGER	03\25
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

BOWDOINHAM
PLANNING STUDY

GENERAL PLANS

SHEET NUMBER
8
OF 15

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Filename: ...\00\Highway\008_HDPlan06.dgn Division: HIGHWAY Username: Mike.Cundiff Date:3/20/2025

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PLEASANT VENTURE LLC

VEILLEUX, VELVET A
VEILLEUX, JAMES A

HASKELL, CAROL

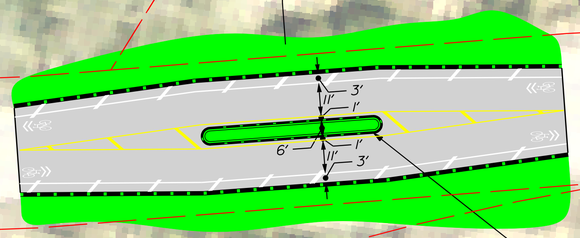
RIDGE ROAD

MATCH LINE
SEE SHEET 8

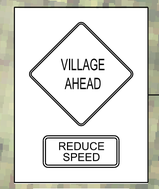
ROUTE 24 (RIVER ROAD)

RAILROAD CORRIDOR

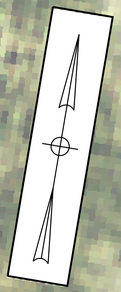
EXISTING 25 MPH | EXISTING 35 MPH



GATEWAY TREATMENT WITH SIGNAGE



WITH SOLAR
POWER LED



PLAN

25 0 25 50

Scale of Feet

TOWN OF BOWDOINHAM
13 SCHOOL STREET
BOWDOINHAM, ME 04008

WIN
28668.00

PROJ. MANAGER	A. NELSON	
DESIGN-DETAILED	M. CUNDIFF	03\25
CHECKED-REVIEWED	D. ETTINGER	03\25
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BY | DATE

SIGNATURE

P.E. NUMBER

DATE

BOWDOINHAM
PLANNING STUDY

GENERAL PLANS

SHEET NUMBER

9

OF 15

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Filename: ...\00\Highway\009_HDPlan07.dgn Division: HIGHWAY Username: Mike.Cundiff Date:3/20/2025

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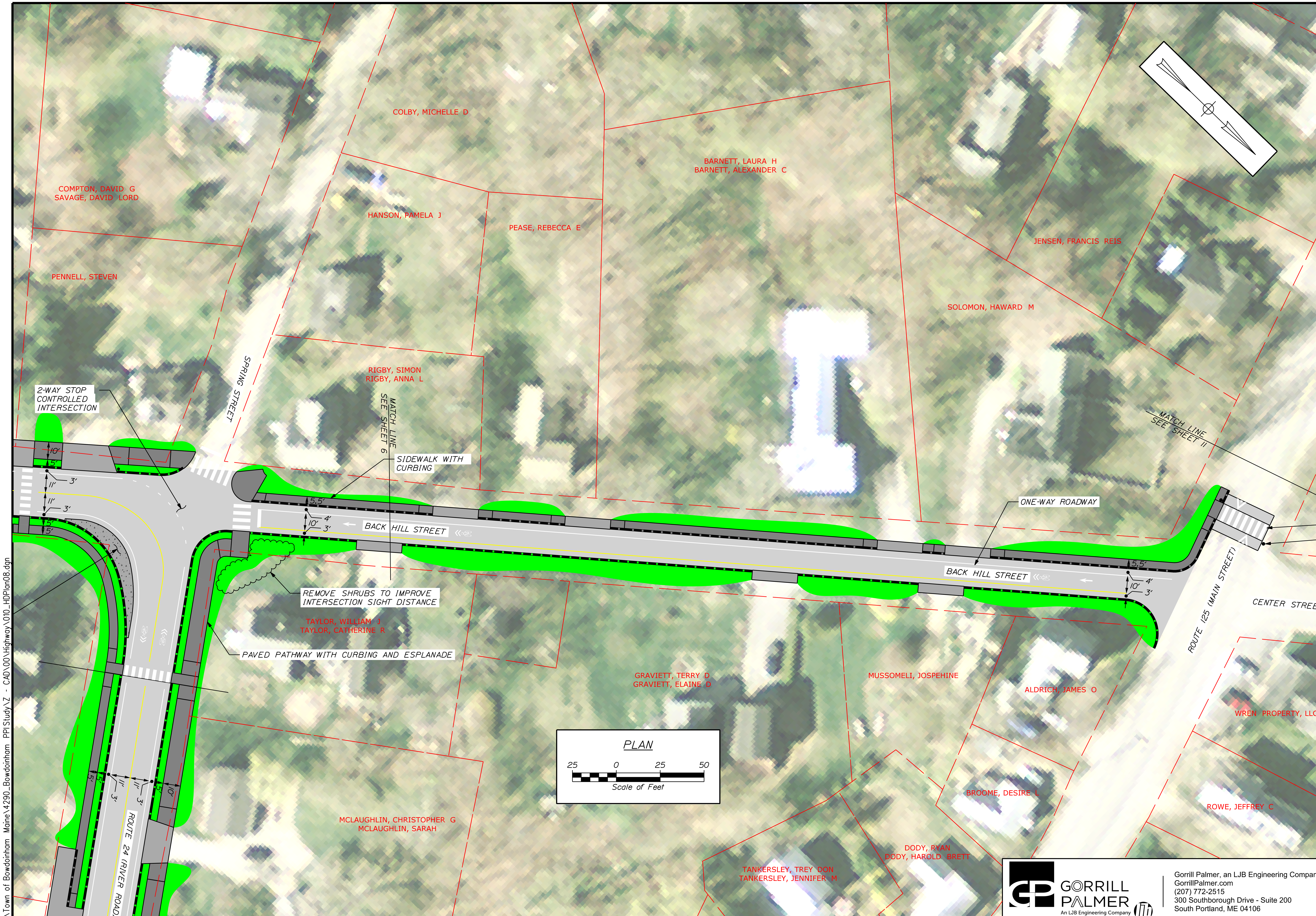

Date:3/20/2025
Username: Mike.Cundiff
Division: HIGHWAY
Filename: ...\00\Highway\010_HDPlan08.dgn
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TOWN OF BOWDOINHAM
13 SCHOOL STREET
BOWDOINHAM, ME 04008

WIN
28668.00

	BY	DATE
PROJ. MANAGER	A. NELSON	
DESIGN-DETAILED	M. CUNDIFF	03/25
CHECKED-REVIEWED	D. ETTINGER	03/25
DESIGN2-DETAILED2	D. ETTINGER	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

BOWDOINHAM PLANNING STUDY

GENERAL PLANS

SHEET NUMBER

10

OF 15

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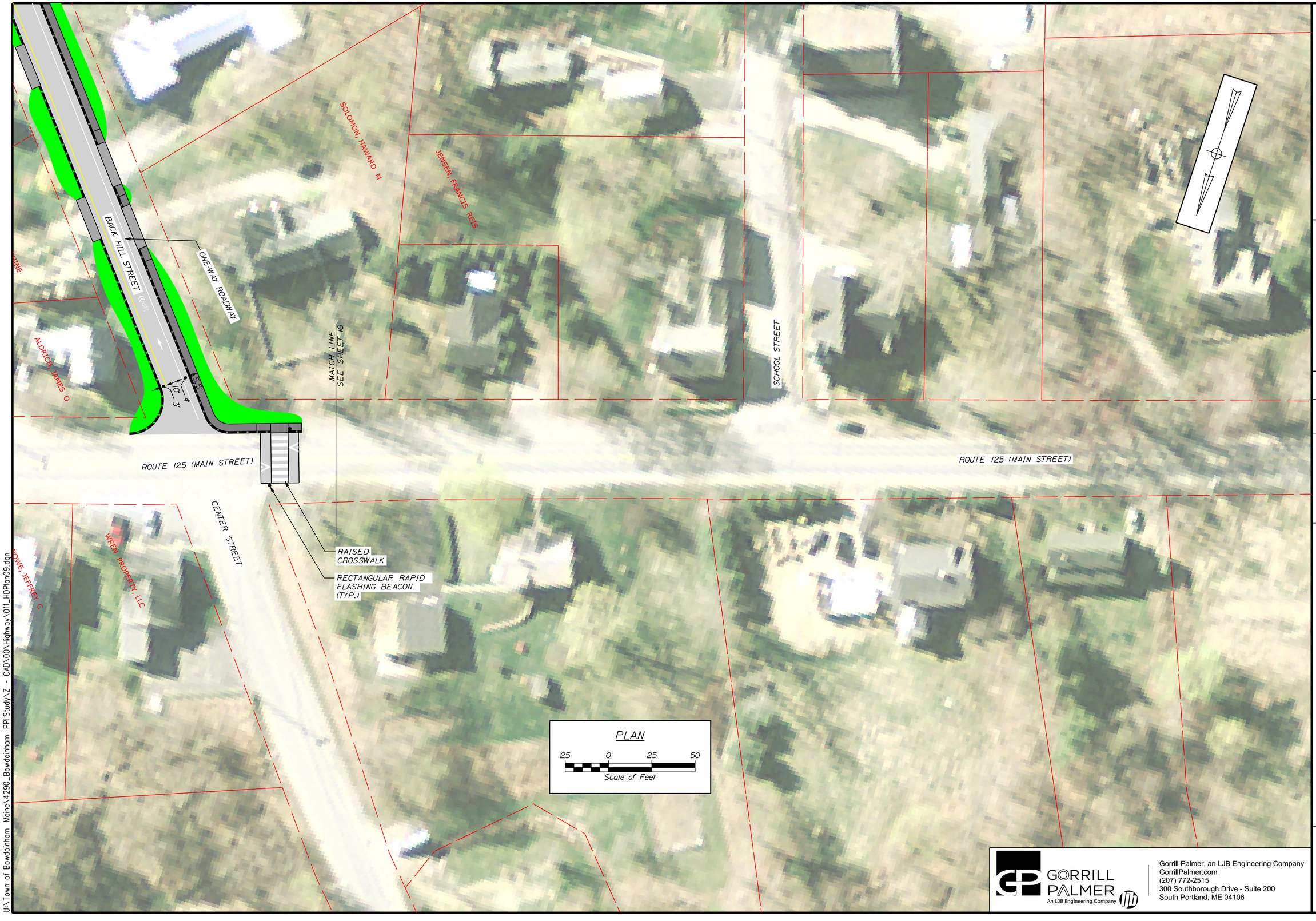
South Portland, ME 04106



TOWN OF BOWDOINHAM
13 SCHOOL STREET
BOWDOINHAM, ME 04008

WIN
28668.00

PROJ. MANAGER		BY	DATE
DESIGN-DETAILED	A. NELSON	M. CUNDIFF	03\25
CHECKED-REVIEWED	D. ETTINGER	D. ETTINGER	03\25
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BOWDOINHAM
PLANNING STUDY

GENERAL PLANS

SHEET NUMBER

11

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Filename: ...\00\Highway\011_HDPlan09.dgn Division: HIGHWAY Username: Mike.Cundiff Date:3/20/2025
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TOWN OF BOWDOINHAM
13 SCHOOL STREET
BOWDOINHAM, ME 04008

WIN
28668.00

		BY	DATE
PROJ. MANAGER			
DESIGN-DETAILED	A. NELSON	M. CUNDIFF	03\25
CHECKED-REVIEWED	D. ETTINGER	D. ETTINGER	03\25
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BOWDOINHAM
PLANNING STUDY

GENERAL PLANS

SHEET NUMBER

12

OF 15

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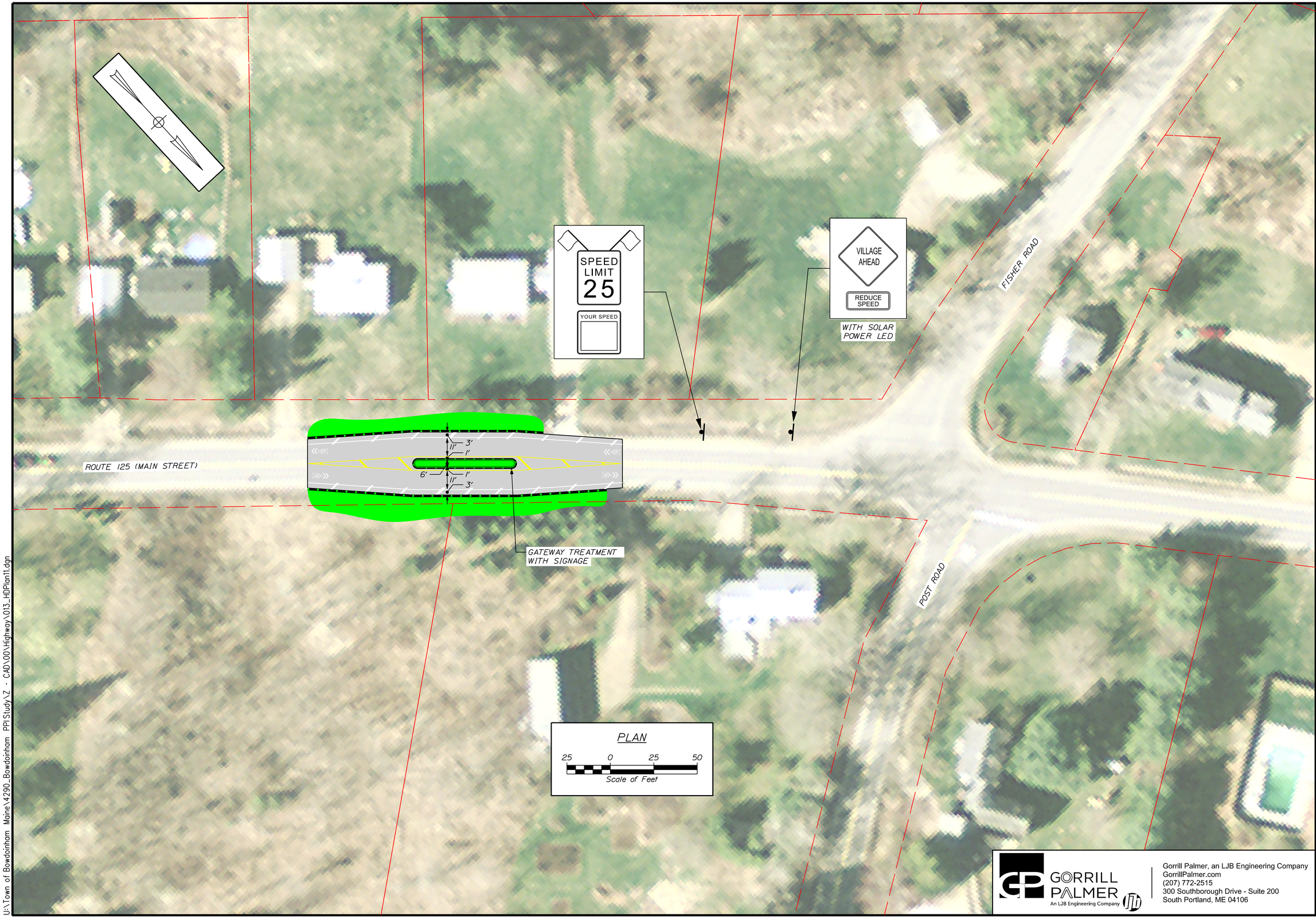
South Portland, ME 04106



TOWN OF BOWDOINHAM
13 SCHOOL STREET
BOWDOINHAM, ME 04008

WIN
28668.00

		BY	DATE
PROJ. MANAGER	A. NELSON		
DESIGN-DETAILED	A. NELSON	M. CUNDIFF	03\25
CHECKED-REVIEWED	D. ETTINGER	D. ETTINGER	03\25
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BOWDOINHAM
PLANNING STUDY

GENERAL PLANS

SHEET NUMBER

13

OF 15

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South Portland, ME 04106

Filename: ...\00\Highway\013_HDPlan11.dgn Division: HIGHWAY Username: Mike.Cundiff Date:3/20/2025
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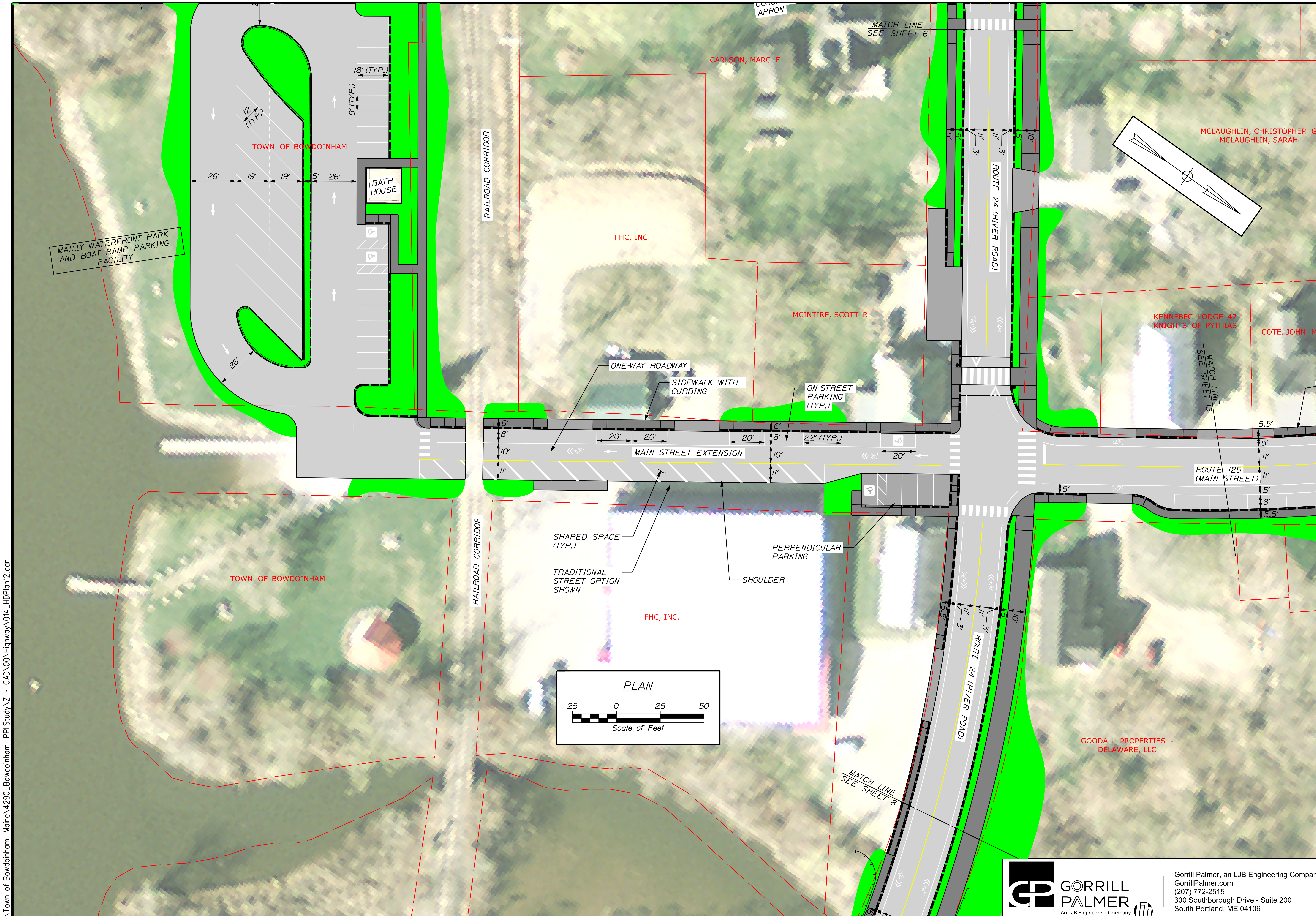

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300 Southborough Drive - Suite 200
South Portland, ME 04106

TOWN OF BOWDOINHAM
13 SCHOOL STREET
BOWDOINHAM, ME 04008

WIN
28668.00

	BY	DATE
PROJ. MANAGER	A. NELSON	
DESIGN-DETAILED	M. CUNDIFF	03/25
CHECKED-REVIEWED	D. ETTINGER	03/25
DESIGN2-DETAILED2	D. ETTINGER	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE
P.E. NUMBER
DATE

BOWDOINHAM PLANNING STUDY

GENERAL PLANS

SHEET NUMBER
14
OF 15

Filename: ...\00\Highway\014_HDPlan12.dgn Division: HIGHWAY Username: Mike.Cundiff Date:3/20/2025
U:\Town of Bowdoinham Maine\4290_Bowdoinham PPI Study\Z - CAD\00\Highway\014_HDPlan12.dgn

GRAVIETT, TERRY D
GRAVIETT, ELAINE D

MUSSOMELI, JOSPEHINE

ALDRICH, JAMES O

WREN PROPERTY, LLC

MCLAUGHLIN, CHRISTOPHER G
MCLAUGHLIN, SARAH

BROOME, DESIRE L

ROWE, JEFFREY C

DODY, RYAN
DODY, HAROLD BRETT

TANKERSLEY, TREY DON
TANKERSLEY, JENNIFER M

BRENNAN, LAURA ANNE

KENNEBEC LODGE 42
KNIGHTS OF PYTHIAS

COTE, JOHN M

COOPER, ANDREW K

LOHR, BRANDI D
LOHR, JOSHUA J

MATCH LINE
SEE SHEET 12

SIDEWALK
WITH CURBING

AVILES, ANNE L
AVILES HURTADO,
MARCO A

5.5'
5'
11'
11'
5'
8'
5.5'

ROUTE 125
(MAIN STREET)

5'
11'
11'
5'
5.5'

POLLIS, ROBERT F JR
POLLIS, ALICE A

SIDEWALK
WITH CURBING,
PARKING AND
BIKE LANE

FEENEY, PETER J
GIACOMA, NANETTE C

PLAN

25 0 25 50

Scale of Feet

TOWN OF BOWDOINHAM
13 SCHOOL STREET
BOWDOINHAM, ME 04008

WIN
28668.00

		BY	DATE
PROJ. MANAGER			
DESIGN-DETAILED	A. NELSON	M. CUNDIFF	03\25
CHECKED-REVIEWED	D. ETTINGER	D. ETTINGER	03\25
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BOWDOINHAM
PLANNING STUDY

GENERAL PLANS

SHEET NUMBER

15

OF 15

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300 Southborough Drive - Suite 200
South Portland, ME 04106

Filename: ...\00\Highway\015_HDPlan13.dgn Division: HIGHWAY Username: Mike.Cundiff Date:3/20/2025

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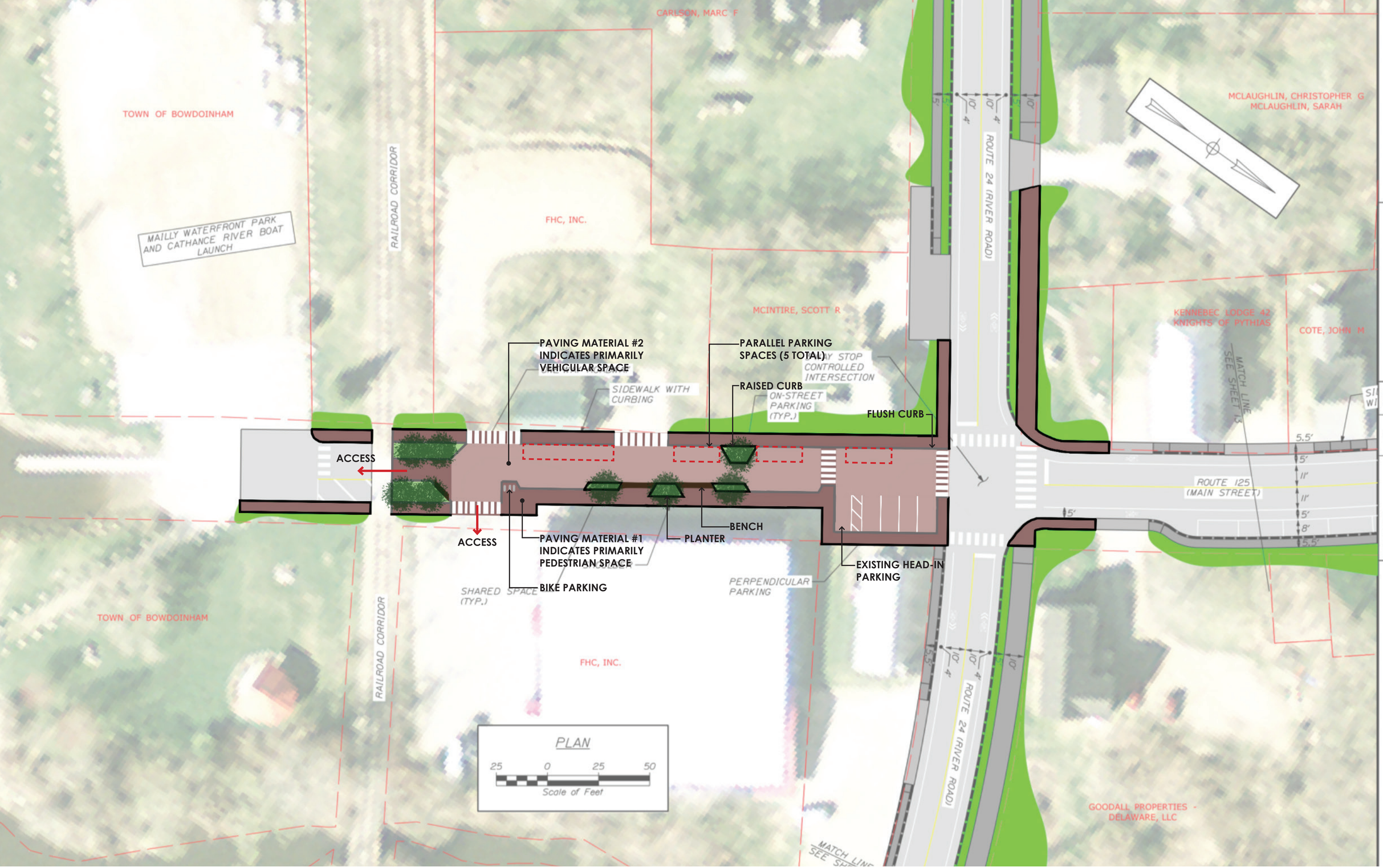
Appendix B

Renderings

BOWDOINHAM VPI - MAILLY WATERFRONT PARK CONCEPT PLAN

ACETO LANDSCAPE ARCHITECTURE + URBAN DESIGN



TOWN OF BOWDOINHAM
13 SCHOOL STREET
BOWDOINHAM, ME 0400

WIN

	BY	DATE
PROJ. MANAGER		
DESIGN-DETAILED	J. FITZMAURICE	12.24
CHECKED-REVIEWED	D. ETTINGER	12.24
DESIGN2-DETAILED2	D. ETTINGER	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2	A. NELSON	12.24
REVISIONS 3		
REVISIONS 4		

SIGNATURE

P.E. NUMBER

DATE

BOWDOINHAM
PLANNING STUDY

GENERAL PLANS

BOWDOINHAM VPI - MAIN ST EXTENSION SHARED STREET CONCEPT PLAN

ACETO LANDSCAPE ARCHITECTURE + URBAN DESIGN

1. SHARED SPACE
2. PERPENDICULAR PARKING
3. ONE-WAY ROADWAY
4. ON-STREET PARKING
5. SIDEWALK WITH CURBING
6. STREET LAMPS

BOWDOINHAM VPI - MAIN ST EXT - PROPOSED TRADITIONAL STREET LOOKING SOUTH

ALA
ACETO LANDSCAPE ARCHITECTURE + URBAN DESIGN

1. **BIKE PARKING** - PROVIDING ADEQUATE BIKE PARKING SPACES PROMOTES THE USE OF ALTERNATIVE FORMS OF TRANSPORTATION
2. **STREET TREES** - STREET PLANTING CREATES A SENSE OF SCALE, PROVIDES SHADE FOR PEDESTRIANS, AND HELPS TO SLOW VEHICULAR TRAFFIC
3. **SHARED STREET CONDITION** - A SHARED STREET WITH FLUSH CURBS PROVIDES A UNIVERSALLY ACCESSIBLE SPACE THAT PUTS THE PEDESTRIAN EXPERIENCE FIRST, AND CREATES A FLEXIBLE PLACE FOR COMMUNITY EVENTS
4. **ON-STREET PARKING** - PROVIDES PARKING FOR LOCAL BUSINESSES, BUT CAN ALSO BE USED AS ADDITIONAL PLAZA SPACE DURING COMMUNITY EVENTS
5. **STREET LAMPS** - PROVIDES PEDESTRIAN SCALE LIGHTING AND SPACE FOR TOWN BANNERS
6. **CAFE SEATING** - CREATES ADDITIONAL OUTDOOR SEATING FOR THREE ROBBERS PUB AND HELPS ACTIVATE THE SHARED STREET SPACE

BOWDOINHAM VPI - MAIN ST EXT - PROPOSED SHARED STREET LOOKING SOUTH

ALA
ACETO LANDSCAPE ARCHITECTURE + URBAN DESIGN

BOWDOINHAM VPI - MAIN ST EXT - PROPOSED SHARED STREET LOOKING NORTH

ACETO LANDSCAPE ARCHITECTURE + URBAN DESIGN

1. **MAILLY PARK CONNECTION** - PROVIDES A CLEAR PEDESTRIAN CONNECTION TO MAILLY PARK AND THE CATHANCE RIVER
2. **STREET TREES** - STREET PLANTING CREATES A SENSE OF SCALE, PROVIDES SHADE FOR PEDESTRIANS, AND HELPS TO SLOW VEHICULAR TRAFFIC
3. **SHARED STREET CONDITION** - A SHARED STREET WITH FLUSH CURBS PROVIDES A UNIVERSALLY ACCESSIBLE SPACE THAT PUTS THE PEDESTRIAN EXPERIENCE FIRST, AND CREATES A FLEXIBLE PLACE FOR COMMUNITY EVENTS
4. **BENCHES**- PROVIDE A SENSE OF SCALE, ENCOURAGE PEDESTRIAN ACTIVITY, AND STREET ACTIVATION

BOWDOINHAM VPI - MAIN ST EXT - PROPOSED SHARED STREET LOOKING NORTH

ACETO LANDSCAPE ARCHITECTURE + URBAN DESIGN

Appendix C

Cost Estimates

Gorrill Palmer
Estimated Quantities

3/31/2025

Job Number: 4290
MaineDOT WIN: 28668.00
Project Location: Bowdoinham VPI Study
Comments: Planning Level Cost Estimates

From: Gorrill Palmer
Date: 3/30/2025

Calculated By: M Cundiff
Checked By: D Ettinger
Reviewed By:

Notes:
1. Planning level cost estimates.
2. Costs calculated for major pay items only. Contingency provided for remaining items.
3. Costs based on planning graphics dated 3/19/2025.
4. Total costs include construction, engineering, right of way, and inspection costs.
5. Excludes utility, environmental, and geotechnical costs.
6. Assumes full depth reconstruction on Bay Road, River Road, Back Hill Street, Main Street Ext.
6. Assumes 1.5" pavement mill and overlay of travel lanes and full depth reconstruction of the shoulders on Main Stree
7. Assumes granite curbing, closed drainage, and bituminuous sidewalks.
8. Includes lighting, landscaping, and street amenities.
9. Costs for Main Street Extension based on traditional street option.

DESCRIPTION: Bowdoinham VPI Study

Item	Item Description	Unit	Unit Price	Quantity	Cost
202.202	REMOVING PAVEMENT SURFACE	SY	$25.00	750	$18,750.00
203.20	COMMON EXCAVATION	CY	$30.00	12500	$375,000.00
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	CY	$50.00	10200	$510,000.00
403.208	HOT MIX ASPHALT, 12.5 MM NOMINAL MAXIMUM SIZE	T	$200.00	4050	$810,000.00
403.209	HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (SIDEWALKS, DRIVES, ISLANDS & INCIDENTALS)	T	$350.00	700	$245,000.00
502.00	CONCRETE TRUCK APRON	CY	$1,000.00	10	$10,000.00
509.00	LARGE CULVERT	LS	$350,000.00	1	$350,000.00
604.00	CATCH BASINS	EA	$5,000.00	53	$265,000.00
605.00	UNDERDRAIN	LF	$90.00	8400	$756,000.00
606.00	GUARDRAIL	LF	$100.00	300	$30,000.00
606.1316	GUARDRAIL END TREATMENT	EA	$5,000.00	8	$40,000.00
609.11	VERTICAL CURB TYPE 1	LF	$60.00	7900	$474,000.00
609.34	SLOPE CURB TYPE 5	LF	$75.00	1200	$90,000.00
621.00	LANDSCAPING	LS	$75,000.00	1	$75,000.00
634.00	LIGHTING	LS	$615,000.00	1	$615,000.00
641.00	STREETSCAPE AMENITIES AND SIGNAGE	LS	$75,000.00	1	$75,000.00
643.00	SOLAR POWERED SIGNS	EA	$7,500.00	6	$45,000.00
652.00	TRAFFIC CONTROL	LS	$100,000.00	1	$100,000.00
652.38	FLAGGERS	HR	$50.00	5200	$260,000.00
659.10	MOBILIZATION	LS	$500,000.00	1	$500,000.00

SUBTOTAL =	$5,643,750.00
25% CONTINGENCY =	$1,410,937.50
CONSTRUCTION TOTAL =	$7,054,687.50
SAY =	**$7,050,000.00**

ENGINEERING (10% CONST) =	$705,000.00
INSPECTION (10% CONST) =	$705,000.00
RIGHT OF WAY =	$715,000.00
PROJECT COST TOTAL =	$9,175,000.00
SAY =	**$9,180,000.00**

Job Number: 4290
MaineDOT WIN: 28668.00
Project Location: Bowdoinham VPI Study
Comments: Planning Level Cost Estimates

From: Gorrill Palmer
Date: 3/30/2025, REC 6/16/2025

Calculated By: M Cundiff
Checked By: D Ettinger
Reviewed By:

Notes:
1. Planning level cost estimates.
2. Costs calculated for major pay items only. Contingency provided for remaining items.
3. Costs based on planning graphics dated 3/19/2025.
4. Total costs include construction, engineering, right of way, and inspection costs.
5. Excludes utility, environmental, and geotechnical costs.
6. Assumes full depth reconstruction on Bay Road, River Road, Back Hill Street, Main Street Ext.
6. Assumes 1.5" pavement mill and overlay of travel lanes and full depth reconstruction of the shoulders on Main Street.
7. Assumes granite curbing, closed drainage, and bituminuous sidewalks.
8. Includes lighting, landscaping, and street amenities.
9. Costs for Main Street Extension based on traditional street option.

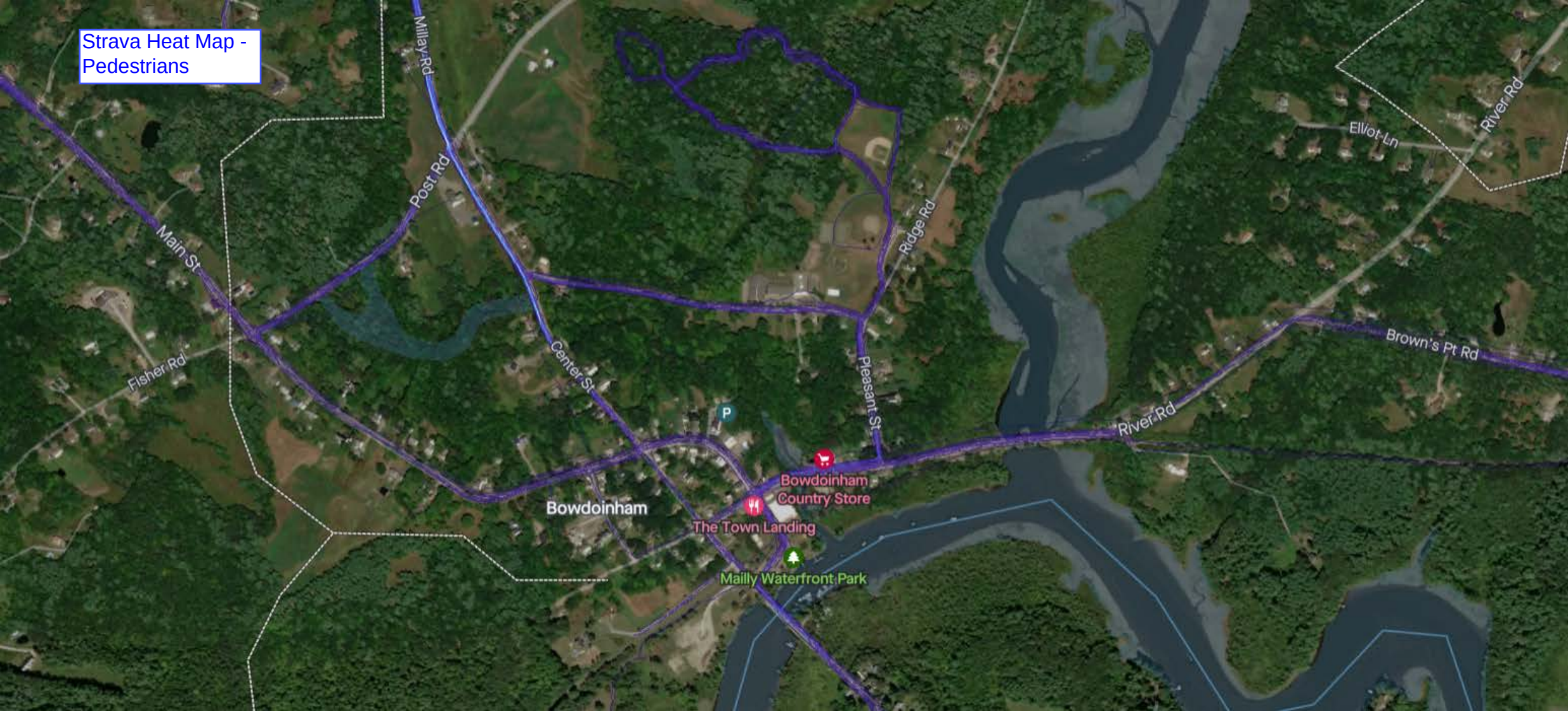
DESCRIPTION: Bowdoinham VPI Study

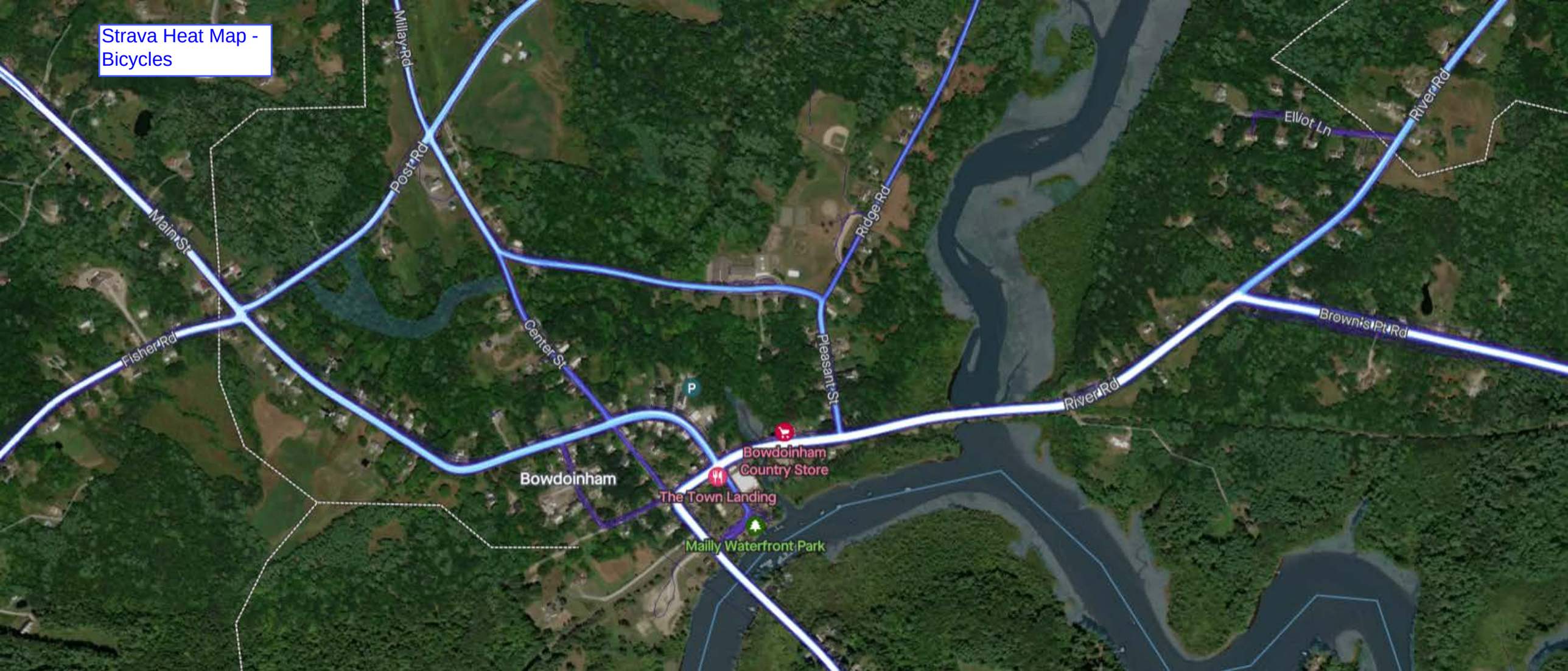
COST BREAKDOWN

Item	Item Description	Unit	Unit Price	Quantity	Cost	*Section 1 (plan sheets 3-5)* Bay Road Quantity	Bay Road Cost	*Section 2 (plan sheets 6-9)* River Road Quantity	River Road Cost	*Section 3 (plan sheet 10)* Back Hill Street Quantity	Back Hill Street Cost	*Section 4 (plan sheets 11-13)* Main St Traffic Calming Quantity	Main St Traffic Calming Cost	*Section 5 (plan sheets 6 & 14)* Boat Ramp Parking Lot Quantity	Boat Ramp Parking Lot Cost	*Section 6 (plan sheet 14)* Main Street Extension Quantity	Main Street Extension Cost	*Section 7 (plan sheet 15)* Main Street Quantity	Main Street Cost
202.202	REMOVING PAVEMENT SURFACE	SY	$25.00	750	$18,750.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00	750	$18,750.00
203.20	COMMON EXCAVATION	CY	$30.00	12500	$375,000.00	2000	$60,000.00	5200	$156,000.00	800	$24,000.00	600	$18,000.00	2700	$81,000.00	800	$24,000.00	400	$12,000.00
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	CY	$50.00	10200	$510,000.00	1600	$80,000.00	4200	$210,000.00	700	$35,000.00	500	$25,000.00	2200	$110,000.00	700	$35,000.00	300	$15,000.00
403.208	HOT MIX ASPHALT, 12.5 MM NOMINAL MAXIMUM SIZE	T	$200.00	4050	$810,000.00	300	$60,000.00	1800	$360,000.00	300	$60,000.00	250	$50,000.00	1000	$200,000.00	300	$60,000.00	100	$20,000.00
403.209	HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (SIDEWALKS, DRIVES, ISLANDS & INCIDENTALS)	T	$350.00	700	$245,000.00	200	$70,000.00	350	$122,500.00	40	$14,000.00	20	$7,000.00	0	$0.00	0	$0.00	90	$31,500.00
502.00	CONCRETE TRUCK APRON	CY	$1,000.00	10	$10,000.00	0	$0.00	10	$10,000.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00
509.00	LARGE CULVERT	LS	$350,000.00	1	$350,000.00	0	$0.00	1	$350,000.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00
604.00	CATCH BASINS	EA	$5,000.00	53	$265,000.00	9	$45,000.00	22	$110,000.00	4	$20,000.00	4	$20,000.00	6	$30,000.00	2	$10,000.00	6	$30,000.00
605.00	UNDERDRAIN	LF	$90.00	8400	$756,000.00	2700	$243,000.00	2940	$264,600.00	1100	$99,000.00	60	$5,400.00	400	$36,000.00	400	$36,000.00	800	$72,000.00
606.00	GUARDRAIL	LF	$100.00	300	$30,000.00	100	$10,000.00	200	$20,000.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00
606.1316	GUARDRAIL END TREATMENT	EA	$5,000.00	8	$40,000.00	2	$10,000.00	6	$30,000.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00
609.11	VERTICAL CURB TYPE 1	LF	$60.00	7900	$474,000.00	2700	$162,000.00	2740	$164,400.00	1100	$66,000.00	360	$21,600.00	0	$0.00	200	$12,000.00	800	$48,000.00
609.34	SLOPE CURB TYPE 5	LF	$75.00	1200	$90,000.00	180	$13,500.00	120	$9,000.00	0	$0.00	120	$9,000.00	780	$58,500.00	0	$0.00	0	$0.00
621.00	LANDSCAPING	LS	$75,000.00	1	$75,000.00	0	$0.00	1	$75,000.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00
634.00	LIGHTING	LS	$615,000.00	1	$615,000.00	0	$0.00	1	$615,000.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00
641.00	STREETSCAPE AMENITIES AND SIGNAGE	LS	$75,000.00	1	$75,000.00	0	$0.00	1	$25,000.00	0	$0.00	0	$0.00	1	$25,000.00	1	$25,000.00	0	$0.00
643.00	SOLAR POWERED SIGNS	EA	$7,500.00	6	$45,000.00	2	$15,000.00	2	$15,000.00	0	$0.00	2	$15,000.00	0	$0.00	0	$0.00	0	$0.00
652.00	TRAFFIC CONTROL	LS	$100,000.00	1	$100,000.00	1	$21,000.00	1	$29,600.00	1	$7,100.00	1	$21,000.00	1	$7,100.00	1	$7,100.00	1	$7,100.00
652.38	FLAGGERS	HR	$50.00	5200	$260,000.00	1110	$55,500.00	1500	$75,000.00	370	$18,500.00	1110	$55,500.00	370	$18,500.00	370	$18,500.00	370	$18,500.00
659.10	MOBILIZATION	LS	$500,000.00	1	$500,000.00	1	$107,000.00	1	$142,000.00	1	$36,000.00	1	$107,000.00	1	$36,000.00	1	$36,000.00	1	$36,000.00
	SUBTOTAL =		$5,643,750.00			$952,000.00		$2,783,100.00		$379,600.00		$354,500.00		$602,100.00		$263,600.00		$308,850.00	
	25% CONTINGENCY =		$1,410,937.50			$238,000.00		$695,775.00		$94,900.00		$88,625.00		$150,525.00		$65,900.00		$77,212.50	
	CONSTRUCTION TOTAL =		$7,054,687.50			$1,190,000.00		$3,478,875.00		$474,500.00		$443,125.00		$752,625.00		$329,500.00		$386,062.50	
	SAY =		**$7,050,000.00**			**$1,190,000.00**		**$3,478,000.00**		**$474,000.00**		**$442,000.00**		**$752,000.00**		**$329,000.00**		**$385,000.00**	
	ENGINEERING (10% CONST) =		$705,000.00			$119,000.00		$347,800.00		$47,400.00		$44,200.00		$75,200.00		$32,900.00		$38,500.00	
	INSPECTION (10% CONST) =		$705,000.00			$119,000.00		$347,800.00		$47,400.00		$44,200.00		$75,200.00		$32,900.00		$38,500.00	
	RIGHT OF WAY =		$715,000.00			$66,000.00		$380,000.00		$9,000.00		$8,000.00		$25,000.00		$100,000.00		$127,000.00	
	PROJECT COST TOTAL =		$9,175,000.00			$1,494,000.00		$4,553,600.00		$577,800.00		$538,400.00		$927,400.00		$494,800.00		$589,000.00	
	SAY =		**$9,180,000.00**			**$1,494,000.00**		**$4,555,000.00**		**$579,000.00**		**$539,000.00**		**$928,000.00**		**$496,000.00**		**$589,000.00**	

Appendix D

Strava Heat Maps


Strava Heat Map - Pedestrians
Millay Rd
Post Rd
Main St
Fisher Rd
Center St
Ridge Rd
Pleasant St
Elliot Ln
River Rd
Brown's Pt Rd
River Rd
P
Bowdoinham
Bowdoinham Country Store
The Town Landing
Mailly Waterfront Park


Strava Heat Map - Bicycles
Milay Rd
Post Rd
Main St
Fisher Rd
Center St
Ridge Rd
Pleasant St
Elliot Ln
River Rd
Brownis Pt Rd
River Rd
Bowdoinham
Bowdoinham Country Store
The Town Landing
Mailly Waterfront Park

Appendix E

Safety Review

GORRILL PALMER
An LJB Engineering Company

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(207) 772-2515|GorrillPalmer.com

Safety Review for
Bowdoinham VPI Study WIN 28668.00
Bowdoinham, Maine

Date: December 9, 2024
Subject: Safety Review – Bowdoinham, Maine (WIN 28668.00)
From: Randy Dunton, PE, PTOE, Don Ettinger, PE – Gorrill Palmer

INTRODUCTION:

The following is a safety review for the Bowdoinham VPI study (WIN 28668.00). The study's original limits are defined in the graphic below and refer to the downtown village area of Bowdoinham. According to MaineDOT Map Viewer, River Road (Route 24) and Main Street (Route 125) are classified as major collectors and posted at 25 mph. Main Street Extension is classified as a Townway and has an unposted speed limit, according to MaineDOT Map Viewer. Route 125 & Route 24 range in AADT from approximately 2012 to 1800. The roads in this area are a single travel lane in each direction with no traffic signals but a flashing beacon at the Route 125/Route 24 intersection.

Sources: This safety review is based on a site visit by the Town, MaineDOT, Gorrill Palmer, Aceto Landscaping, North Star Planning, and Community members on 7/17/2024; MaineDOT crash history for the most recent available three years (2021-2023) at the start of the study and ten-year crash history (2014-2023)

Based on that information, we offer the following summary.

SITE VISIT

A site visit was conducted on July 17, 2024, to observe the existing conditions and complete a safety review and audit. Gorrill Palmer, MaineDOT, the Town of Bowdoinham, sub-consultants, and community members attended this site visit.

The following observations were made:

- The existing condition can benefit from improved access management along both sides of Route 24 between the Main Street intersection and the Ridge Road intersection.

- The existing sight distance on the Main Street Ext. approach to the Route 24 intersection is poor, looking north.
- Vehicles traveling at higher than posted speeds were observed.
- Access management and parking are not well defined along Main Street Ext. and around Three Robbers Pub.
- Crosswalks were missing or unstriped in the village area.

HIGH CRASH LOCATIONS:

One indicator of whether an area has a crash problem is if it is classified as a high crash location. MaineDOT uses two criteria to classify a High Crash Location (HCL). Both criteria must be met to be classified as an HCL.

1. A critical rate factor (CRF) of 1.00 or more for a three-year period. A CRF compares the actual crash rate to the rate for similar intersections in the state. A CRF of less than 1.00 indicates a rate of less than average **and**:

2. A minimum of eight crashes over the same three-year period.

Based on a review of the 2021-2023 crash history data provided by MaineDOT (in Attachment A), there are currently no HCLs within the study area. Two reported vehicle crashes were in the study area from 2021-2023.

CRASH PATTERNS:

The definition of a high crash location, as identified in the previous section, is based on three years of crash history. Unfortunately, crash patterns can sometimes be difficult to identify in short periods of time such as three years. The following identifies crash patterns throughout the study area based on information provided by MaineDOT for the years 2014 – 2023 (10 years). By expanding the review period to 10 years, a broader window that covers pre-covid, covid, and post-covid can be included. Within this 10-year period, there were approximately 10 crashes (6 crashes at intersections and 4 on roadway segments).

The information provided by MaineDOT shows that most crashes occur at the intersection of River Road / Main Street. The information on these crashes is as follows:

Concentration of crashes:

1. River Road / Main Street (node 43965) intersection with six crashes. Of the six crashes, four were property damage and two were injury crashes. The speed limit in this area is 25 mph. The crashes occurred in the following years:

Year	# Crashes
2014	1
2015	2
2016	1

2017	1
2018	0
2019	0
2020	0
2021	0
2022	0
2023	1

Based on a review of the concentration of crashes, it should be noted that the intersection appeared to decrease in reported crashes from 2018 to 2022, as no crashes were reported.

Crash Patterns:

The following identifies additional overall corridor crash patterns based on a review of the MaineDOT Public Map Viewer and Crash History for the 10-year period of 2014-2023.

- Year of Crash: The following identifies the years in which the crashes occurred. The purpose of this review is to identify the consistency of crashes and increasing or decreasing trends:

Year	# Crashes
2014	1
2015	2
2016	1
2017	1
2018	1
2019	0
2020	2
2021	0
2022	1
2023	1
Total	**10**

  As can be seen from the above summary, the study area has been relatively consistent at 1-2 crashes per year.

- Time of Year: The following identifies the time of year in which the crashes occurred. The purpose of this review is to potentially isolate peak times of the year for crashes. This can indicate contributing factors such as the need for additional winter maintenance or the impact on traffic volumes as a result of summer visitors:

Month	# Crashes
January	0
February	0
March	1
April	2
May	0

June	1
July	1
August	2
September	0
October	1
November	1
December	1
Total	**10**

As the above summary shows, there does not appear to be a specific time of year when most of the crashes occur.

- Light Condition Distribution: Light conditions are typically reviewed to identify if the crashes may be a result of poor lighting conditions along the corridor. MaineDOT Crash History indicates that approximately 60% of the crashes occurred in daylight, approximately 10% occurred at dusk, approximately 20% occurred when it was dark but under lighted conditions, and approximately 10% occurred when it was dark with no light. These results indicate that visibility due to available light is not a strong contributing factor to the crashes.

- Time of Day: The time of day a crash occurs is reviewed to identify concentrations of crashes around a certain time of day, such as potentially commuter hours. Based on a review of the MaineDOT crash history, crashes appear to be distributed relatively evenly throughout the day; however, five of the 10 crashes did occur between approximately 4-7 PM, typical commuter hours.

- Day of the Week Distribution: Day of the week distribution is typically reviewed to identify if the crash patterns could be more from commuter traffic (i.e., during the week) or more from weekend events. MaineDOT crash history shows that approximately 60% of the crashes occurred during the week, with approximately 40% on the weekend.

- Crash Injury Level Distribution: The crash injury level is reviewed to identify the severity of the crashes and ranges from property damage to fatality. The following describes the severity levels in more detail:

  PD = Property Damage
  C = Possible Injury
  B = Suspected Minor Injury
  A = Suspected Serious Injury
  K = Fatality

  After reviewing the corridor crashes from the MaineDOT Crash History, it was identified that approximately 80% of the crashes are property damage (PD), and approximately 20% are suspected minor injury (B).

- Fatalities: Fortunately, there have been no reported fatalities (K) or serious injuries (A) within the study area in the 10–year period from 2014 to 2023.

- Bicycles and Pedestrians: A critical component of completing a safety review is identifying whether there have been reported pedestrian or bicycle crashes within the corridor. During the 10-year study period, there were no reported bicycle or pedestrian crashes within the study area.

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Attachment A
MaineDOT Crash History

GORRILL PALMER
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Three-Year Crash History

Maine Department Of Transportation - Office of Safety, Crash Records Section

Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

☑ **Crash Summary I** ☐ **Section Detail** ☑ **Crash Summary II** ☐ **1320 Public** ☐ **1320 Private** ☐ **1320 Summary**

REPORT DESCRIPTION

Bowdoinham
Main St (Rte 125)-River Rd (Rte 24) area

REPORT PARAMETERS

Year 2021, Start Month 1 through Year 2023 End Month: 12

Route: **0125X**	Start Node: **43568**	Start Offset: **0**	☑ **Exclude First Node**
	End Node: **43965**	End Offset: **0**	☐ **Exclude Last Node**
Route: **2300525**	Start Node: **43570**	Start Offset: **0**	☐ **Exclude First Node**
	End Node: **43965**	End Offset: **0**	☑ **Exclude Last Node**
Route: **0024X**	Start Node: **43964**	Start Offset: **0**	☐ **Exclude First Node**
	End Node: **43965**	End Offset: **0**	☑ **Exclude Last Node**
Route: **0024X**	Start Node: **43570**	Start Offset: **0**	☑ **Exclude First Node**
	End Node: **43964**	End Offset: **0**	☑ **Exclude Last Node**

Crash Summary I

Nodes

Node	Route - MP	Node Description	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF
43965	0125X - 22.16	Int of MAIN ST MAIN ST EXT RIVER RD	1	1	0	0	0	0	1	0.0	1.072	0.31	0.49	0.00
												Statewide Crash Rate:	0.13	
43570	2300525 - 0	Int of BAY RD MAIN ST EXT RIVER RD	1	0	0	0	0	0	0	0.0	0.645	0.00	0.54	0.00
												Statewide Crash Rate:	0.13	
43964	0024X - 24.58	Int of BACKHILL ST RIVER RD SPRING ST	1	0	0	0	0	0	0	0.0	1.064	0.00	0.49	0.00
												Statewide Crash Rate:	0.13	
43963	0024X - 24.52	Non Int RIVER RD	1	0	0	0	0	0	0	0.0	0.621	0.00	0.54	0.00
												Statewide Crash Rate:	0.13	
Study Years:	3.00	**NODE TOTALS:**		1	0	0	0	0	1	0.0	3.402	0.10	0.37	0.26

Crash Summary I

Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section Length	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
43568	43965	3119591	0 - 0.08	0125X - 22.08	0.08	1	1	0	0	0	0	1	0.0	0.00055	600.82	752.06	0.00
Int of CHURCH ST MAIN ST				ST RTE 125											Statewide Crash Rate: 187.61		
43570	43965	5103756	0 - 0.13	2300525 - 0	0.13	1	0	0	0	0	0	0	0.0	0.00003	0.00	-1787.98	0.00
Int of BAY RD MAIN ST EXT RIVER RD				RD INV 23 00525											Statewide Crash Rate: 240.46		
43964	43965	3111842	0 - 0.07	0024X - 24.58	0.07	1	0	0	0	0	0	0	0.0	0.00041	0.00	786.24	0.00
Int of BACKHILL ST RIVER RD SPRING ST				ST RTE 24											Statewide Crash Rate: 187.61		
43570	43963	3111739	0 - 0.03	0024X - 24.49	0.03	1	0	0	0	0	0	0	0.0	0.00019	0.00	785.35	0.00
Int of BAY RD MAIN ST EXT RIVER RD				ST RTE 24											Statewide Crash Rate: 187.61		
43963	43964	3111841	0 - 0.06	0024X - 24.52	0.06	1	0	0	0	0	0	0	0.0	0.00037	0.00	795.71	0.00
Non Int RIVER RD				ST RTE 24											Statewide Crash Rate: 187.61		
Study Years: 3.00				**Section Totals:**	0.37		1	0	0	0	0	1	0.0	0.00155	214.73	599.32	0.36
				Grand Totals:	0.37		2	0	0	0	0	2	0.0	0.00155	429.47	669.91	0.64

Crash Summary

Section Details

Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	Injury Crashes K	A	B	C	PD	Crash Report	Crash Date	Crash Mile Point	Injury Degree
43568	43965	3119591	0 - 0.08	0125X - 22.08	1	0	0	0	0	1	2022-37146	11/04/2022	22.12	PD
43570	43965	5103756	0 - 0.13	2300525 - 0	0	0	0	0	0	0				
43964	43965	3111842	0 - 0.07	0024X - 24.58	0	0	0	0	0	0				
43570	43963	3111739	0 - 0.03	0024X - 24.49	0	0	0	0	0	0				
43963	43964	3111841	0 - 0.06	0024X - 24.52	0	0	0	0	0	0				
				Totals:	1	0	0	0	0	1				

Crash Summary II - Characteristics

Crashes by Day and Hour

	AM												PM													
	Hour of Day																									
Day Of Week	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**Un**	**Tot**
SUNDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MONDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TUESDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WEDNESDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
THURSDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FRIDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
SATURDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	**2**

Vehicle Counts by Type

Unit Type	Total
1-Passenger Car	2
2-(Sport) Utility Vehicle	0
3-Passenger Van	0
4-Cargo Van (10K lbs or Less)	0
5-Pickup	1
6-Motor Home	0
7-School Bus	0
8-Transit Bus	0
9-Motor Coach	0
10-Other Bus	0
11-Motorcycle	1
12-Moped	0
13-Low Speed Vehicle	0
14-Autocycle	0
15-Experimental	0
16-Other Light Trucks (10,000 lbs or Less)	0
17-Medium/Heavy Trucks (More than 10,000 lbs)	0
18-ATV - (4 wheel)	0
20-ATV - (2 wheel)	0
21-Snowmobile	0
22-Pedestrian	0

Unit Type	Total
23-Bicyclist	0
24-Witness	0
25-Other	0
26-Construction	0
27-Farm Vehicle	0
28-Horse and Buggy	0
Total	**4**

Crash Summary II - Characteristics

Crashes by Driver Action at Time of Crash

Driver Action at Time of Crash	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
No Contributing Action	0	2	0	0	0	0	2
Ran Off Roadway	1	0	0	0	0	0	1
Failed to Yield Right-of-Way	1	0	0	0	0	0	1
Ran Red Light	0	0	0	0	0	0	0
Ran Stop Sign	0	0	0	0	0	0	0
Disregarded Other Traffic Sign	0	0	0	0	0	0	0
Disregarded Other Road Markings	0	0	0	0	0	0	0
Exceeded Posted Speed Limit	0	0	0	0	0	0	0
Drove Too Fast For Conditions	0	0	0	0	0	0	0
Improper Turn	0	0	0	0	0	0	0
Improper Backing	0	0	0	0	0	0	0
Improper Passing	0	0	0	0	0	0	0
Wrong Way	0	0	0	0	0	0	0
Followed Too Closely	0	0	0	0	0	0	0
Failed to Keep in Proper Lane	0	0	0	0	0	0	0
Operated Motor Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner	0	0	0	0	0	0	0
Swerved or Avoided Due to Wind, Slippery Surface, Motor Vehicle, Object, Non-Motorist in Roadway	0	0	0	0	0	0	0
Over-Correcting/Over-Steering	0	0	0	0	0	0	0
Other Contributing Action	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0
Total	**2**	**2**	**0**	**0**	**0**	**0**	**4**

Crashes by Apparent Physical Condition And Driver

Apparent Physical Condition	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
Apparently Normal	1	2	0	0	0	0	3
Physically Impaired	0	0	0	0	0	0	0
Emotional(Depressed, Angry, Disturbed, etc.)	0	0	0	0	0	0	0
Ill (Sick)	0	0	0	0	0	0	0
Asleep or Fatigued	0	0	0	0	0	0	0
Under the Influence of Medications/Drugs/Alcohol	0	0	0	0	0	0	0
Other	1	0	0	0	0	0	1
Total	**2**	**2**	**0**	**0**	**0**	**0**	**4**

Driver Age by Unit Type

Age	Driver	Bicycle	SnowMobile	Pedestrian	ATV	Total
09-Under	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	0	0	0	0	0	0
20-24	1	0	0	0	0	1
25-29	0	0	0	0	0	0
30-39	1	0	0	0	0	1
40-49	1	0	0	0	0	1
50-59	0	0	0	0	0	0
60-69	1	0	0	0	0	1
70-79	0	0	0	0	0	0
80-Over	0	0	0	0	0	0
Unknown	0	0	0	0	0	0
Total	**4**	**0**	**0**	**0**	**0**	**4**

Crash Summary II - Characteristics

Most Harmful Event

Most Harmful Event	Total	Most Harmful Event	Total
1-Overturn / Rollover	0	38-Other Fixed Object (wall, building, tunnel, etc.)	0
2-Fire / Explosion	0	39-Unknown	0
3-Immersion	0	40-Gate or Cable	0
4-Jackknife	0	41-Pressure Ridge	0
5-Cargo / Equipment Loss Or Shift	0	**Total**	**4**
6-Fell / Jumped from Motor Vehicle	0		
7-Thrown or Falling Object	0		
8-Other Non-Collision	0		
9-Pedestrian	0		
10-Pedalcycle	0		
11-Railway Vehicle - Train, Engine	0		
12-Animal	0		
13-Motor Vehicle in Transport	2		
14-Parked Motor Vehicle	2		
15-Struck by Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle	0		
16-Work Zone / Maintenance Equipment	0		
17-Other Non-Fixed Object	0		
18-Impact Attenuator / Crash Cushion	0		
19-Bridge Overhead Structure	0		
20-Bridge Pier or Support	0		
21-Bridge Rail	0		
22-Cable Barrier	0		
23-Culvert	0		
24-Curb	0		
25-Ditch	0		
26-Embankment	0		
27-Guardrail Face	0		
28-Guardrail End	0		
29-Concrete Traffic Barrier	0		
30-Other Traffic Barrier	0		
31-Tree (Standing)	0		
32-Utility Pole / Light Support	0		
33-Traffic Sign Support	0		
34-Traffic Signal Support	0		
35-Fence	0		
36-Mailbox	0		
37-Other Post, Pole, or Support	0		

Traffic Control Devices

Traffic Control Device	Total
1-Traffic Signals (Stop & Go)	0
2-Traffic Signals (Flashing)	0
3-Advisory/Warning Sign	0
4-Stop Signs - All Approaches	0
5-Stop Signs - Other	1
6-Yield Sign	0
7-Curve Warning Sign	0
8-Officer, Flagman, School Patrol	0
9-School Bus Stop Arm	0
10-School Zone Sign	0
11-R.R. Crossing Device	0
12-No Passing Zone	0
13-None	1
14-Other	0
Total	**2**

Injury Data

Severity Code	Injury Crashes	Number Of Injuries
K	0	0
A	0	0
B	0	0
C	0	0
PD	2	0
Total	**2**	**0**

Road Character

Road Grade	Total
1-Level	0
2-On Grade	1
3-Top of Hill	0
4-Bottom of Hill	1
5-Other	0
Total	**2**

Light

Light Condition	Total
1-Daylight	0
2-Dawn	0
3-Dusk	1
4-Dark - Lighted	0
5-Dark - Not Lighted	1
6-Dark - Unknown Lighting	0
7-Unknown	0
Total	**2**

Crash Summary II - Characteristics

Crashes by Year and Month

Month	2021	2022	2023	Total
JANUARY	0	0	0	0
FEBRUARY	0	0	0	0
MARCH	0	0	0	0
APRIL	0	0	1	1
MAY	0	0	0	0
JUNE	0	0	0	0
JULY	0	0	0	0
AUGUST	0	0	0	0
SEPTEMBER	0	0	0	0
OCTOBER	0	0	0	0
NOVEMBER	0	1	0	1
DECEMBER	0	0	0	0
Total	**0**	**1**	**1**	**2**

Report is limited to the last 10 years of data.

Crash Summary II - Characteristics

Crashes by Crash Type and Type of Location

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five or More Leg Intersection	Driveways	Bridges	Interchanges	Other	Parking Lot	Private Way	Cross Over	Railroad Crossing	Traffic Circle-Roundabout	Total
Object in Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rear End - Sideswipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Head-on - Sideswipe	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Intersection Movement	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Went Off Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All Other Animal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackknife	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rollover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Submersion	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thrown or Falling Object	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Moose	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather / Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Blowing Sand, Soil, Dirt												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Blowing Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Clear												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	1	0	0	0	0	0	0	0	0	0	0	1
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	1	0	0	0	0	0	0	0	0	0	0	1
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Cloudy												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather / Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Fog, Smog, Smoke												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Other												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Rain												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Severe Crosswinds												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Sleet, Hail (Freezing Rain or Drizzle)												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**

Ten-Year Crash History

Maine Department Of Transportation - Office of Safety, Crash Records Section

Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

☑ Crash Summary I ☐ Section Detail ☑ Crash Summary II ☐ 1320 Public ☐ 1320 Private ☐ 1320 Summary

REPORT DESCRIPTION

Bowdoinham
Main St (Rte 125)-River Rd (Rte 24) area (10 year)

REPORT PARAMETERS

Year 2014, Start Month 1 through Year 2023 End Month: 12

Route: 0125X	Start Node: 43568	Start Offset: 0	☑ Exclude First Node
	End Node: 43965	End Offset: 0	☐ Exclude Last Node
Route: 2300525	Start Node: 43570	Start Offset: 0	☐ Exclude First Node
	End Node: 43965	End Offset: 0	☑ Exclude Last Node
Route: 0024X	Start Node: 43964	Start Offset: 0	☐ Exclude First Node
	End Node: 43965	End Offset: 0	☑ Exclude Last Node
Route: 0024X	Start Node: 43570	Start Offset: 0	☑ Exclude First Node
	End Node: 43964	End Offset: 0	☑ Exclude Last Node

Crash Summary I

Nodes

Node	Route - MP	Node Description	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF
43965	0125X - 22.16	Int of MAIN ST MAIN ST EXT RIVER RD	1	6	0	0	2	0	4	33.3	1.072	0.56	0.37	1.52
												Statewide Crash Rate:	0.13	
43570	2300525 - 0	Int of BAY RD MAIN ST EXT RIVER RD	1	0	0	0	0	0	0	0.0	0.645	0.00	0.42	0.00
												Statewide Crash Rate:	0.13	
43964	0024X - 24.58	Int of BACKHILL ST RIVER RD SPRING ST	1	0	0	0	0	0	0	0.0	1.064	0.00	0.37	0.00
												Statewide Crash Rate:	0.13	
43963	0024X - 24.52	Non Int RIVER RD	1	0	0	0	0	0	0	0.0	0.621	0.00	0.42	0.00
												Statewide Crash Rate:	0.13	
Study Years:	10.01	NODE TOTALS:		6	0	0	2	0	4	33.3	3.402	0.18	0.27	0.64

Crash Summary I

Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section Length	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
43568	43965	3119591	0 - 0.08	0125X - 22.08	0.08	1	2	0	0	0	0	2	0.0	0.00055	360.13	571.04	0.00
Int of CHURCH ST MAIN ST				ST RTE 125											Statewide Crash Rate: 187.61		
43570	43965	5103756	0 - 0.13	2300525 - 0	0.13	1	1	0	0	0	0	1	0.0	0.00003	3972.41	771.90	5.15
Int of BAY RD MAIN ST EXT RIVER RD				RD INV 23 00525											Statewide Crash Rate: 240.46		
43964	43965	3111842	0 - 0.07	0024X - 24.58	0.07	1	0	0	0	0	0	0	0.0	0.00041	0.00	615.09	0.00
Int of BACKHILL ST RIVER RD SPRING ST				ST RTE 24											Statewide Crash Rate: 187.61		
43570	43963	3111739	0 - 0.03	0024X - 24.49	0.03	1	0	0	0	0	0	0	0.0	0.00019	0.00	736.66	0.00
Int of BAY RD MAIN ST EXT RIVER RD				ST RTE 24											Statewide Crash Rate: 187.61		
43963	43964	3111841	0 - 0.06	0024X - 24.52	0.06	1	1	0	0	0	0	1	0.0	0.00037	268.33	631.42	0.00
Non Int RIVER RD				ST RTE 24											Statewide Crash Rate: 187.61		
Study Years: 10.01				Section Totals:	0.37		4	0	0	0	0	4	0.0	0.00155	257.42	439.99	0.59
				Grand Totals:	0.37		10	0	0	2	0	8	20.0	0.00155	643.56	492.38	1.31

Crash Summary

Section Details

Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	Injury Crashes K	A	B	C	PD	Crash Report	Crash Date	Crash Mile Point	Injury Degree
43568	43965	3119591	0 - 0.08	0125X - 22.08	2	0	0	0	0	2	2022-37146	11/04/2022	22.12	PD
											2020-7028	03/01/2020	22.14	PD
43570	43965	5103756	0 - 0.13	2300525 - 0	1	0	0	0	0	1	2020-16556	07/11/2020	0.11	PD
43964	43965	3111842	0 - 0.07	0024X - 24.58	0	0	0	0	0	0				
43570	43963	3111739	0 - 0.03	0024X - 24.49	0	0	0	0	0	0				
43963	43964	3111841	0 - 0.06	0024X - 24.52	1	0	0	0	0	1	2018-30713	10/08/2018	24.56	PD
				Totals:	4	0	0	0	0	4				

Crash Summary II - Characteristics

Crashes by Day and Hour

	AM												Hour of Day	PM											
Day Of Week	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	Un	Tot
SUNDAY	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
MONDAY	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	3
TUESDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WEDNESDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
THURSDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
FRIDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
SATURDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
Totals	0	1	0	0	0	0	0	0	0	0	0	1	1	0	1	0	2	1	2	0	0	1	0	0	0	10

Vehicle Counts by Type

Unit Type	Total
1-Passenger Car	11
2-(Sport) Utility Vehicle	4
3-Passenger Van	0
4-Cargo Van (10K lbs or Less)	1
5-Pickup	1
6-Motor Home	0
7-School Bus	0
8-Transit Bus	0
9-Motor Coach	0
10-Other Bus	0
11-Motorcycle	3
12-Moped	0
13-Low Speed Vehicle	0
14-Autocycle	0
15-Experimental	0
16-Other Light Trucks (10,000 lbs or Less)	0
17-Medium/Heavy Trucks (More than 10,000 lbs)	0
18-ATV - (4 wheel)	0
20-ATV - (2 wheel)	0
21-Snowmobile	0
22-Pedestrian	0

Unit Type	Total
23-Bicyclist	0
24-Witness	0
25-Other	0
26-Construction	0
27-Farm Vehicle	0
28-Horse and Buggy	0
Total	20

Crash Summary II - Characteristics

Crashes by Driver Action at Time of Crash

Driver Action at Time of Crash	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
No Contributing Action	0	8	0	0	0	0	8
Ran Off Roadway	1	0	0	0	0	0	1
Failed to Yield Right-of-Way	4	1	0	0	0	0	5
Ran Red Light	0	0	0	0	0	0	0
Ran Stop Sign	0	0	0	0	0	0	0
Disregarded Other Traffic Sign	0	0	0	0	0	0	0
Disregarded Other Road Markings	0	0	0	0	0	0	0
Exceeded Posted Speed Limit	0	0	0	0	0	0	0
Drove Too Fast For Conditions	0	0	0	0	0	0	0
Improper Turn	0	0	0	0	0	0	0
Improper Backing	1	0	0	0	0	0	1
Improper Passing	0	0	0	0	0	0	0
Wrong Way	0	0	0	0	0	0	0
Followed Too Closely	1	0	0	0	0	0	1
Failed to Keep in Proper Lane	1	0	0	0	0	0	1
Operated Motor Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner	0	0	0	0	0	0	0
Swerved or Avoided Due to Wind, Slippery Surface, Motor Vehicle, Object, Non-Motorist in Roadway	0	0	0	0	0	0	0
Over-Correcting/Over-Steering	0	0	0	0	0	0	0
Other Contributing Action	2	0	0	0	0	0	2
Unknown	0	1	0	0	0	0	1
Total	10	10	0	0	0	0	20

Crashes by Apparent Physical Condition And Driver

Apparent Physical Condition	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
Apparently Normal	8	10	0	0	0	0	18
Physically Impaired	0	0	0	0	0	0	0
Emotional(Depressed, Angry, Disturbed, etc.)	0	0	0	0	0	0	0
Ill (Sick)	0	0	0	0	0	0	0
Asleep or Fatigued	0	0	0	0	0	0	0
Under the Influence of Medications/Drugs/Alcohol	1	0	0	0	0	0	1
Other	1	0	0	0	0	0	1
Total	10	10	0	0	0	0	20

Driver Age by Unit Type

Age	Driver	Bicycle	SnowMobile	Pedestrian	ATV	Total
09-Under	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	3	0	0	0	0	3
20-24	2	0	0	0	0	2
25-29	0	0	0	0	0	0
30-39	3	0	0	0	0	3
40-49	2	0	0	0	0	2
50-59	4	0	0	0	0	4
60-69	5	0	0	0	0	5
70-79	1	0	0	0	0	1
80-Over	0	0	0	0	0	0
Unknown	0	0	0	0	0	0
Total	20	0	0	0	0	20

Crash Summary II - Characteristics

Most Harmful Event

Most Harmful Event	Total	Most Harmful Event	Total
1-Overturn / Rollover	0	38-Other Fixed Object (wall, building, tunnel, etc.)	0
2-Fire / Explosion	0	39-Unknown	0
3-Immersion	0	40-Gate or Cable	0
4-Jackknife	0	41-Pressure Ridge	0
5-Cargo / Equipment Loss Or Shift	0	Total	20
6-Fell / Jumped from Motor Vehicle	0		
7-Thrown or Falling Object	0		
8-Other Non-Collision	0		
9-Pedestrian	0		
10-Pedalcycle	0		
11-Railway Vehicle - Train, Engine	0		
12-Animal	0		
13-Motor Vehicle in Transport	16		
14-Parked Motor Vehicle	4		
15-Struck by Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle	0		
16-Work Zone / Maintenance Equipment	0		
17-Other Non-Fixed Object	0		
18-Impact Attenuator / Crash Cushion	0		
19-Bridge Overhead Structure	0		
20-Bridge Pier or Support	0		
21-Bridge Rail	0		
22-Cable Barrier	0		
23-Culvert	0		
24-Curb	0		
25-Ditch	0		
26-Embankment	0		
27-Guardrail Face	0		
28-Guardrail End	0		
29-Concrete Traffic Barrier	0		
30-Other Traffic Barrier	0		
31-Tree (Standing)	0		
32-Utility Pole / Light Support	0		
33-Traffic Sign Support	0		
34-Traffic Signal Support	0		
35-Fence	0		
36-Mailbox	0		
37-Other Post, Pole, or Support	0		

Injury Data

Severity Code	Injury Crashes	Number Of Injuries
K	0	0
A	0	0
B	2	2
C	0	1
PD	8	0
Total	10	3

Road Character

Road Grade	Total
1-Level	6
2-On Grade	1
3-Top of Hill	0
4-Bottom of Hill	3
5-Other	0
Total	10

Traffic Control Devices

Traffic Control Device	Total
1-Traffic Signals (Stop & Go)	0
2-Traffic Signals (Flashing)	4
3-Advisory/Warning Sign	0
4-Stop Signs - All Approaches	0
5-Stop Signs - Other	2
6-Yield Sign	0
7-Curve Warning Sign	0
8-Officer, Flagman, School Patrol	0
9-School Bus Stop Arm	0
10-School Zone Sign	0
11-R.R. Crossing Device	0
12-No Passing Zone	0
13-None	4
14-Other	0
Total	10

Light

Light Condition	Total
1-Daylight	6
2-Dawn	0
3-Dusk	1
4-Dark - Lighted	2
5-Dark - Not Lighted	1
6-Dark - Unknown Lighting	0
7-Unknown	0
Total	10

Crash Summary II - Characteristics

Crashes by Year and Month

Month	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
JANUARY	0	0	0	0	0	0	0	0	0	0	0
FEBRUARY	0	0	0	0	0	0	0	0	0	0	0
MARCH	0	0	0	0	0	0	1	0	0	0	1
APRIL	0	1	0	0	0	0	0	0	0	1	2
MAY	0	0	0	0	0	0	0	0	0	0	0
JUNE	0	0	1	0	0	0	0	0	0	0	1
JULY	0	0	0	0	0	0	1	0	0	0	1
AUGUST	0	1	0	1	0	0	0	0	0	0	2
SEPTEMBER	0	0	0	0	0	0	0	0	0	0	0
OCTOBER	0	0	0	0	1	0	0	0	0	0	1
NOVEMBER	0	0	0	0	0	0	0	0	1	0	1
DECEMBER	1	0	0	0	0	0	0	0	0	0	1
Total	1	2	1	1	1	0	2	0	1	1	10

Report is limited to the last 10 years of data.

Crash Summary II - Characteristics

Crashes by Crash Type and Type of Location

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five or More Leg Intersection	Driveways	Bridges	Interchanges	Other	Parking Lot	Private Way	Cross Over	Railroad Crossing	Traffic Circle-Roundabout	Total
Object in Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rear End - Sideswipe	1	0	0	1	0	1	0	0	0	0	0	0	0	0	3
Head-on - Sideswipe	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Intersection Movement	0	0	0	5	0	1	0	0	0	0	0	0	0	0	6
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Went Off Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All Other Animal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackknife	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rollover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Submersion	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thrown or Falling Object	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Moose	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	1	0	6	0	2	0	0	0	0	0	0	0	0	10

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather / Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Blowing Sand, Soil, Dirt												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Blowing Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Clear												
Dark - Lighted	2	0	0	0	0	0	0	0	0	0	0	2
Dark - Not Lighted	1	0	0	0	0	0	0	0	0	0	0	1
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	6	0	0	0	0	0	0	0	0	0	0	6
Dusk	1	0	0	0	0	0	0	0	0	0	0	1
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Cloudy												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Fog, Smog, Smoke												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Other												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Rain												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Severe Crosswinds												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather / Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Sleet, Hail (Freezing Rain or Drizzle)												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	10	0	0	0	0	0	0	0	0	0	0	10

Appendix F

Evaluation Matrix

Bowdoinham PPI Planning Study
WIN 28668.00
EVALUATION MATRIX

	Preferred Option	*No Build*
CRITERIA		*Do Nothing*
Maintains Traffic Operations (LOS)	**Yes**	*Yes*
Improves Safety (all Modes)	**Yes**	*No*
Improves Connectivity (all Modes)	**Yes**	*No*
Improves Accessibility (all Modes)	**Yes**	*No*
Improves Placemaking	**Yes**	*No*
Address Speed Concerns	**Yes**	*No*
Improves Bicycle Accommodations	**Yes**	*No*
Improves Pedestrian Connections (to public spaces, natural resources, school)	**Yes**	*No*
Improves Access Management	**Yes**	*No*
Property Impacts	**Worse than No Build**	*None*
Gateway Opportunities	**Yes**	*No*
Total Project Costs (Construction, PE, CE, ROW)	**$9.18M**	*None*
Meets Purpose & Need	**Yes**	*No*

RECOMMENDATION: Preferred Option

Appendix G

Public Outreach

NORTHSTAR PLANNING

MEMORANDUM

TO: Don Ettinger, P.E., Gorrill-Palmer

CC: James Tasse, Jame Tasse Consulting
Seth Kimball, PLA, ASLA, Aceto Landscape Architects

From: Kate Burch, Senior Planner, North Star Planning

RE: Bowdoinham PPI Study – Public Engagement & Survey Results

Date: October 31, 2024

North Star Planning (NSP) developed a survey in support of the Bowdoinham PPI Study to get feedback on biking and walking in Bowdoinham, Mailly Waterfront Park, community preferences, and future development in the village.

The survey was available online from September 12 through October 21, and was made available in paper format at the town office. 114 people responded to the survey. The survey consisted of 24 questions that asked about current use and future desires for Bowdoinham's Village and Mailly Waterfront Park, walking and biking safety, and basic demographic information. The survey included both multiple choice and open-ended questions, as well as one map-based question.

The Age Friendly Bowdoinham Committee solicited additional open-ended feedback on the project at the September 13 Celebrate Bowdoinham event.

Summary of Findings

The survey confirmed that Bowdoinham's Village and waterfront parks are walkable destinations. Almost 80% of respondents walk to Village locations frequently or often. People desire more local businesses and small restaurants or coffee shops that would fit into and support a walkable, mixed-use village.

The waterfront parks, Three Robbers Pub, and Bowdoinham Country Store are the most popular Village locations that people walk or bike to. The intersections to access these locations were all mapped as the priority places where pedestrian safety needed to improve, with the intersection of Main Street and Route 24 most frequently cited.

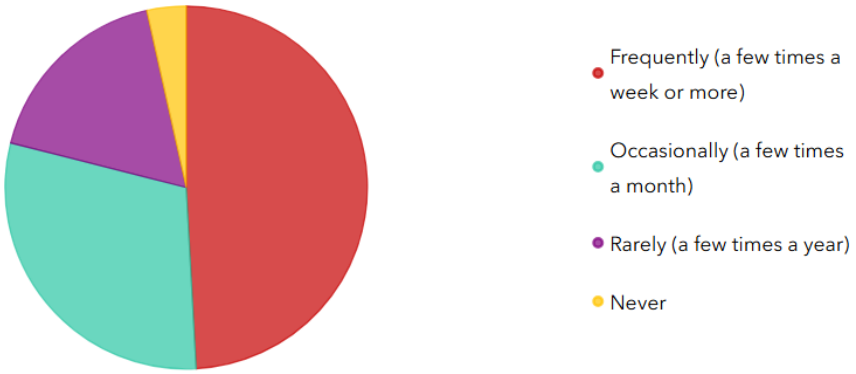
The Farmer's Market is the most popular use of Mailly Waterfront Park. Other uses include general recreation, boating, swimming, and fishing. The diverse uses at the waterfront create conflicts between people with trailered boats, people fishing, and other types of recreation, especially children swimming. The boat launch is central to these use conflicts, but among survey respondents, most boat launch users only use it a few times a month or a few times a year. Better organization of the park space, including traffic flow at the boat launch and dedicated spaces for different types of users, would make the park safer and more usable for all.

Cars are the most common form of transportation to get around Bowdoinham, but more than half of respondents also walk to get around town. Biking is less popular, with only about 20% of respondents who bike to get around town. People who describe themselves as frequent walkers also tend to be the most frequent bikers, and both the most frequent walkers and bikers tend to be younger (under age 50.) Notably, this survey did not capture feedback from out-of-town cycling groups that frequently ride through Bowdoinham, which would likely provide different demographic data.

The biggest safety concern for both pedestrians and bicyclists is speeding cars, especially on Route 24. For pedestrians, lack of crosswalks and unsafe crosswalks are the main concern. For bikes, lack of safe space to bike in the shoulder is the top concern.

Bowdoinham's Village

How often do you visit businesses, shops, parks, or public spaces in Bowdoinham's Village?

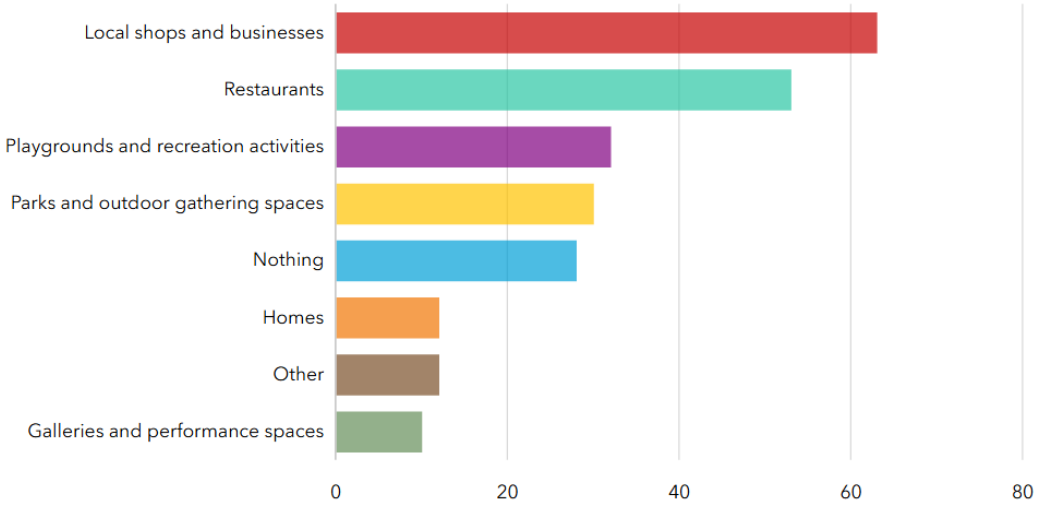


About half (48.7%) of respondents visit the Village frequently (a few times a week), and an additonal 29.5% visit often (a few times a month.)

What is your favorite place in Bowdoinham's Village?

The top result is Mailly Waterfront Park, with about 60 mentions. Other popular locations are the Three Robbers Pub (15 mentions), Bowdoinham Store (10 mentions), and the library (5 mentions.)

What would you like to see more of in Bowdoinham's Village?



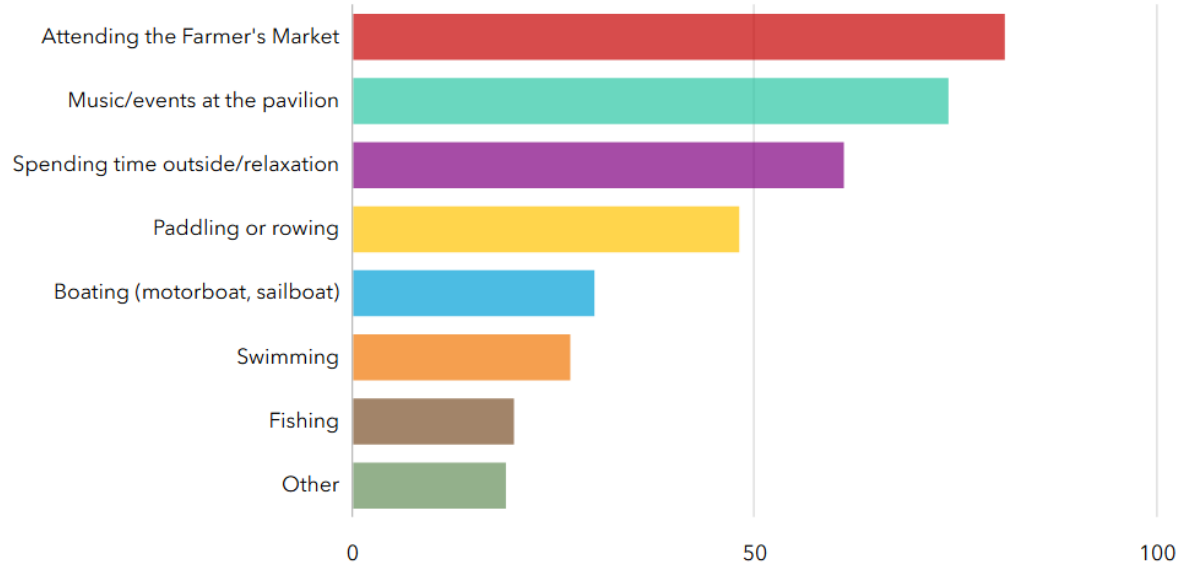
Respondents could select multiple answers to this question. About 50% of respondents desire more local businesses and restaurants in the Village. About 25% are interested in more playgrounds, recreation, parks, and outdoor spaces. 25% responded they do not want anything else in the Village. More housing and art-related spaces were less desirable.

What is the one amenity or improvement you would like to see in the Village?

Responses to this question are highly varied. A coffee shop or place for breakfast is the most popular, with 13 mentions. The other most popular responses are related to traffic improvements or reduced speeding (11 mentions) and sidewalks or walking (10 mentions.)

Mailly Waterfront Park

What activities do you participate in at Mailly Waterfront Park?



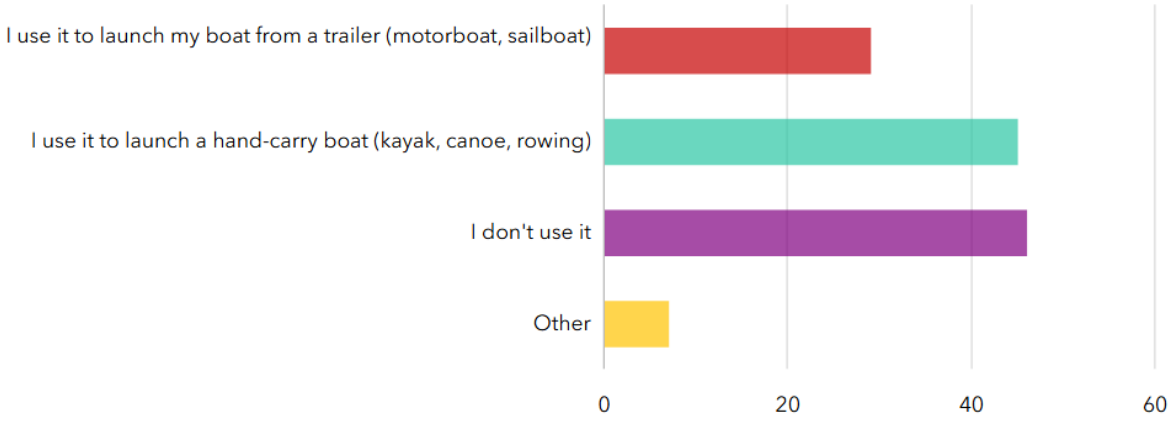
Respondents could select multiple answers to this question. More than half of respondents visit Mailly Waterfront Park to attend the Farmer's Market, attend events at the pavilion, or just to spend time outside. About 40% of respondents use the park for paddling or rowing. Boating, swimming, and fishing were less popular among respondents.

What new events or activities would you like to see at Mailly Waterfront Park?

Only 43 respondents (37%) answered this question. 16 people said they did not want to see anything change at the park. 7 people suggested more events, like festivals, markets, live music, and yoga classes. 5 people requested a playground for kids.

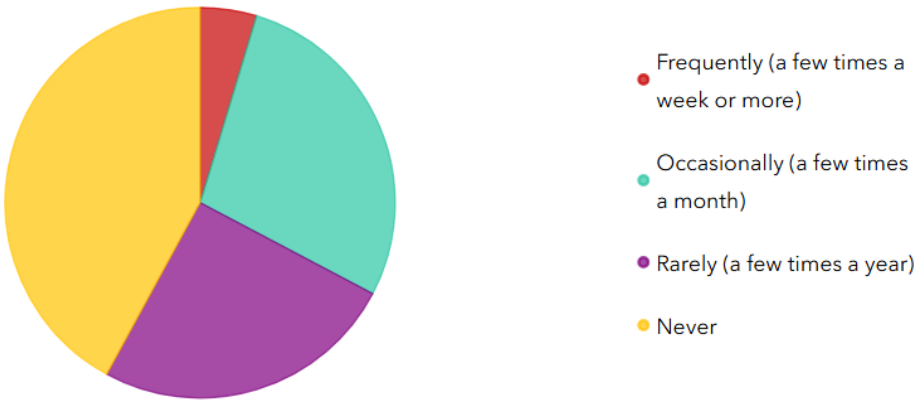
At the Celebrate Bowdoinham event, volunteers asked attendees for amenities they'd like to see at Mailly Waterfront Park. Responses included: dog park, new pavilion, more parking, mature old trees, community compost pile, and decorated sidewalks with colorful polka dots.

Do you use the town boat launch?



Respondents could select multiple answers to this question. 25% of survey respondents use the boat launch to launch a motorboat or sailboat from a trailer. About 40% of respondents use it to launch a hand-carry boat, while 40% don't use it.

How often do you use the town boat launch?

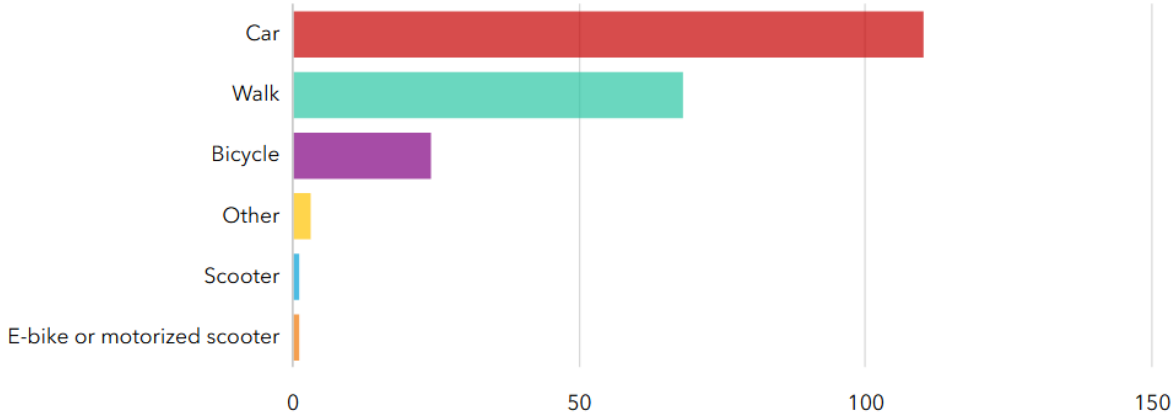


Of those respondents who use the town boat launch, most use it a few times a month or a few times a year.

What improvements or changes would you like to see to the town boat launch?
Only 42 people answered this question. Of these responses, 14 people discussed the conflict between different users of the boat launch, including swimming (especially with children and dogs), fishing, hand-carry boats, and motorboats, and the need for better organization or coordination.

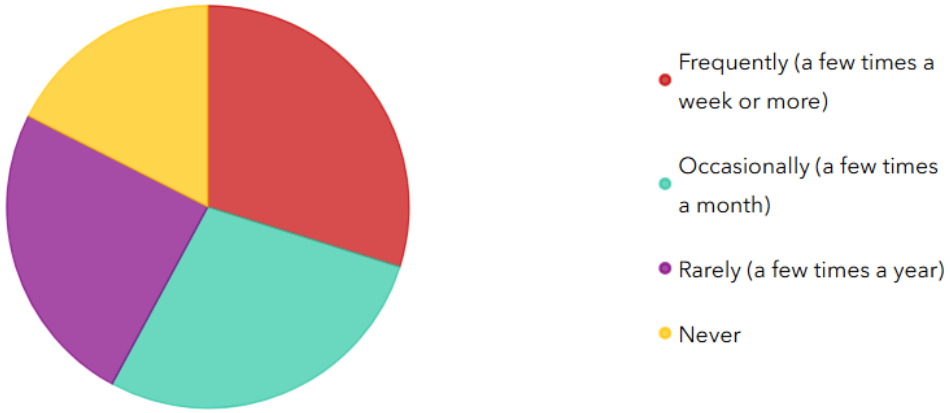
Walking and Biking Around Bowdoinham

What forms of transportation do you use to get around Bowdoinham?



Respondents could select multiple answers to this question. Cars are the most popular method of transportation around Bowdoinham – 95% of users selected this option. About 60% of respondents walk to get around Bowdoinham, and 20% bike.

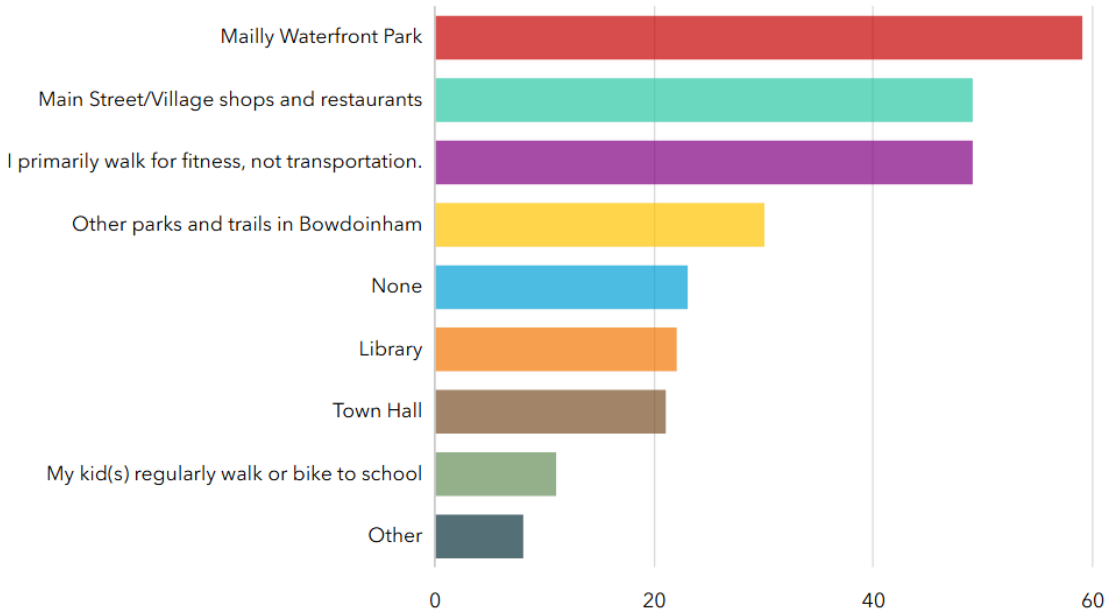
How often do you walk to get around Bowdoinham?



Respondents were almost evenly split on how often they walk around Bowdoinham, with just over 25% each walking frequently or occasionally, and just under 25% each walking rarely or never.

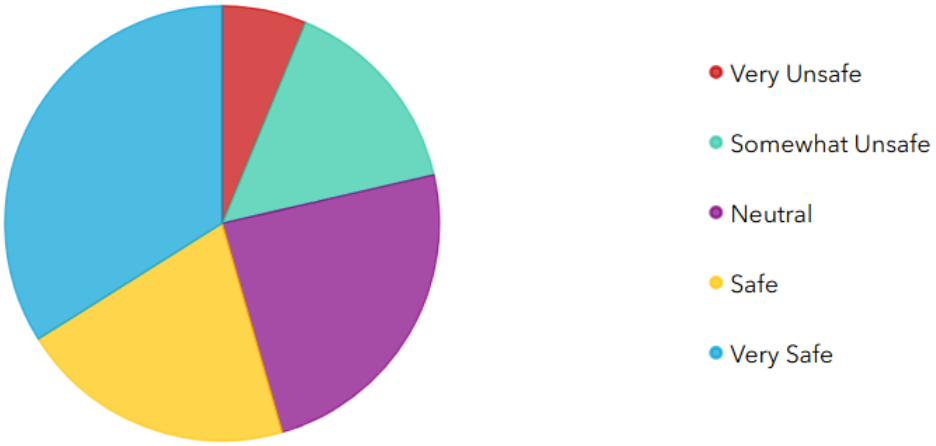
The frequency of walking may be influenced by the age of the respondent. Among frequent walkers, 66% of respondents were younger than 50. Among those who never walk, 62% were age 50 or older.

What places in Bowdoinham to you frequently walk to?



Respondents could select multiple answers to this question. About half of respondents regularly walk to Mailly Waterfront Park. About 40% regularly walk to Main Street/Village shops and restaurants. Another 40% only walk for fitness, not transportation.

How safe do you generally feel walking around Bowdoinham?



About half of respondents feel very safe or safe. About 20% feel neutral, and about 20% feel somewhat or very unsafe.

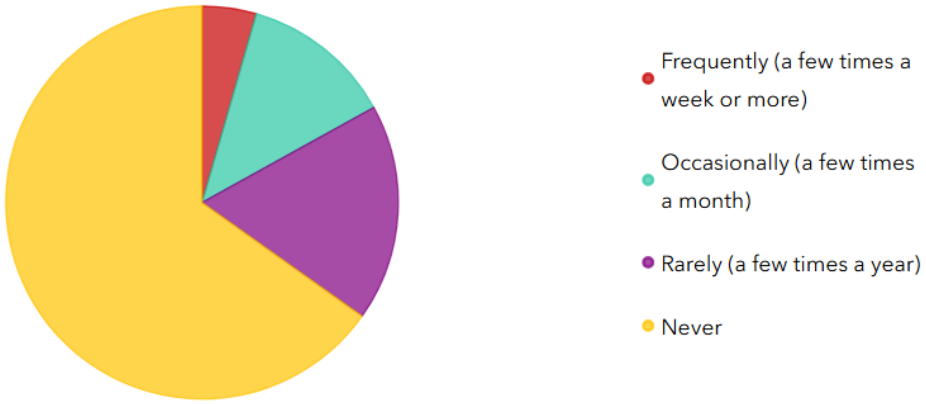
What is the greatest safety concern for people walking in Bowdoinham?

The most common type of answer, with 51 responses, was speeding or cars driving too fast. Others mentioned a lack of sidewalks and crosswalks, particularly crossing Route 24.

Attendees at Celebrate Bowdoinham were asked how to improve safety for pedestrians in town. Crosswalks were mentioned frequently, including the need for more crosswalks on Back Hill Street, a crosswalk connecting the 2 waterfront parks, and a crosswalk on Main Street near the Three Robbers Pub. People also discussed the need for speed bumps, traffic calming, and speed signs in the Village and on the hill, as well as more enforcement for

speeding. Other suggestions included a new sidewalk on Bay Road to Wallentine, making sure sidewalks are plowed in the winter, and rebuilding the walls on Ridge Road and Center Street.

How frequently do you bike (or e-bike, or scooter) to get around Bowdoinham?

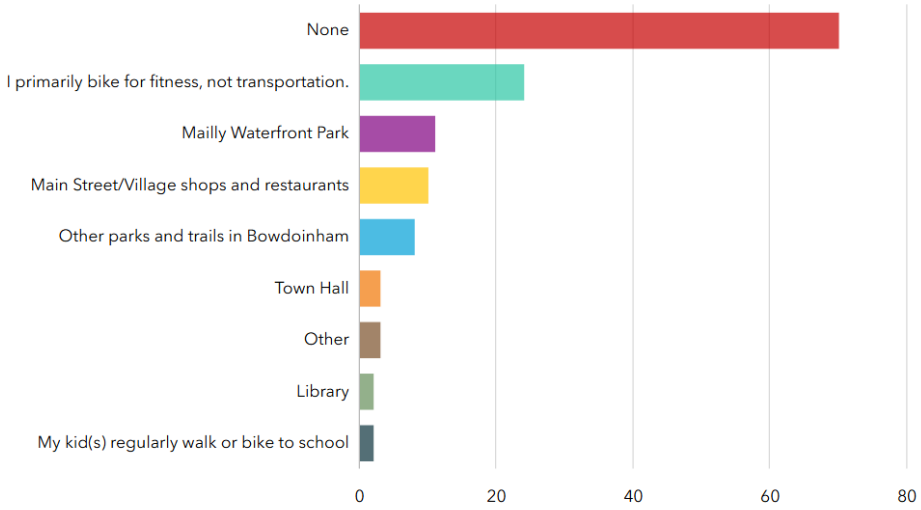


Biking is less popular among survey respondents. 63% stated they never bike. 4% bike frequently, 16% bike occasionally, and 17% bike rarely.

Like walkers, biking frequency may be related to the age of respondent, with more frequent bikers tending to be. 60% of those who bike frequently, 71% of those who bike occasionally, and 60% of those who bike rarely were under the age of 50. However, the age of those who never bike was split almost evenly, with 47% under the age of 50 and 52% over the age of 50.

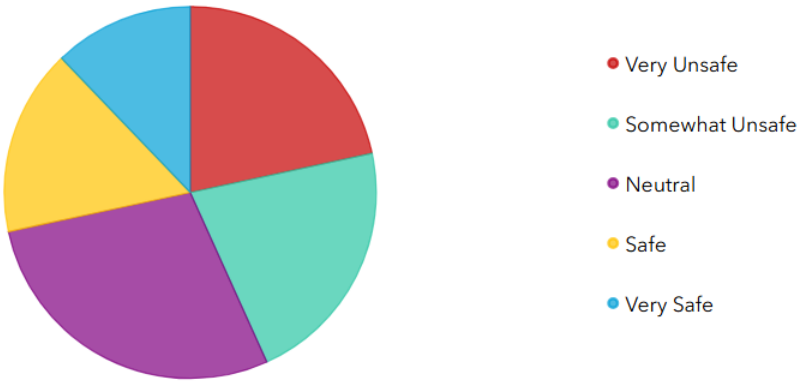
The frequency of biking also may be related to how often people walk to get around Bowdoinham. Among the frequent walkers, 25% are also frequent or occasional bikers; 21% of occasional walkers described themselves as frequent or occasional bikers. Of those who rarely or never walk, only 2 people said they frequently or occasionally bike.

What destinations in Bowdoinham do you frequently bike to?



Among those who do bike, about 20% bike for fitness, not transportation. Just under 10% of respondents bike to visit Mailly Waterfront Park and other Main Street/Village destinations.

How safe do you generally feel biking around Bowdoinham?

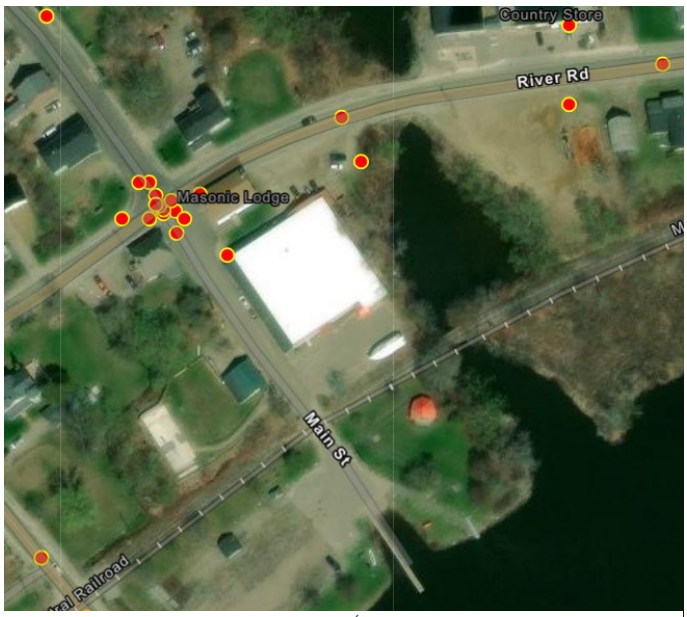


Respondents do not generally feel safe biking around Bowdoinham. About 28% of people feel somewhat or very unsafe biking around Bowdoinham. 18% are neutral. About 17% feel safe or very safe.

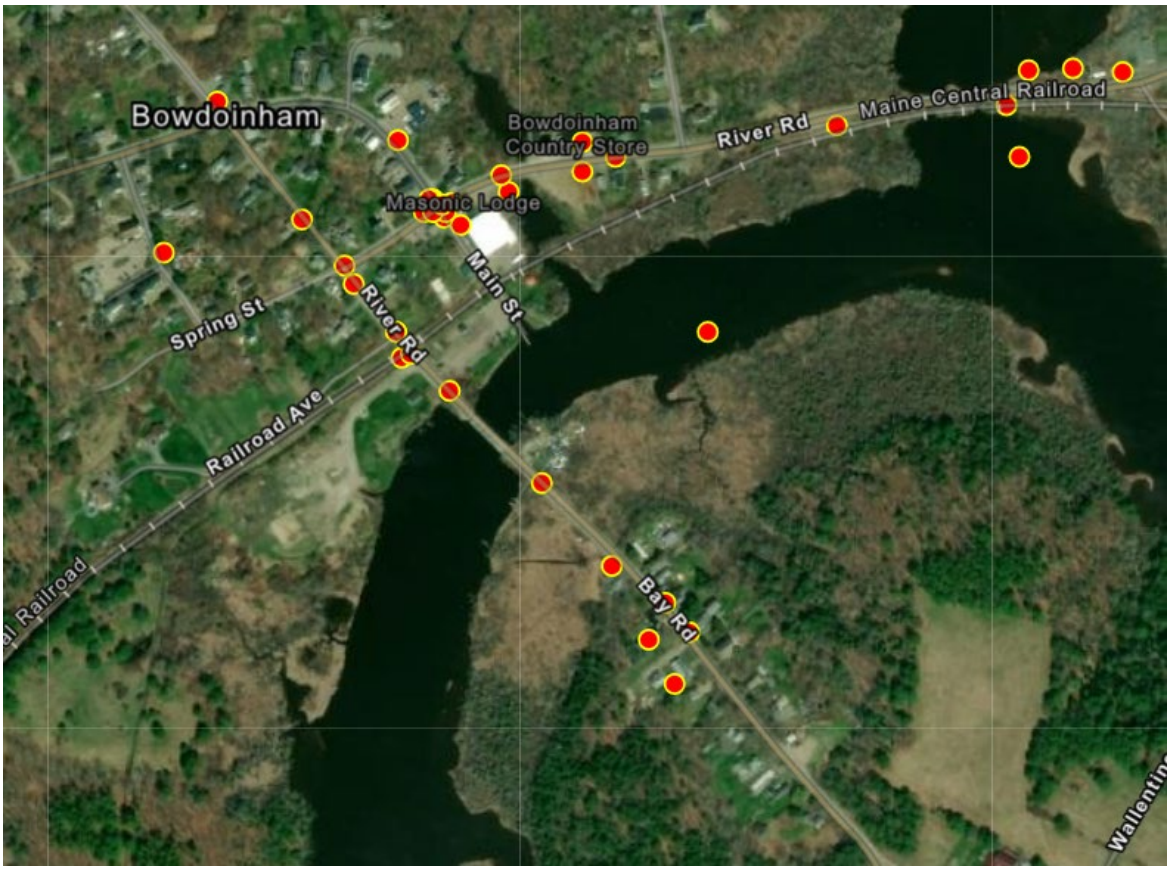
Attendees at Celebrate Bowdoinham were asked how to improve bicycle safety in town. Responses included: improve Route 24, Main Street, and Pond Street; speed bumps or other traffic calming; bike lanes or paths; signage for bicyclists; and converting the train tracks to a multiuse trail.

What is the greatest safety concern for people biking in Bowdoinham?
The most common theme was the speed of traffic, with 31 responses related to cars speeding or fast traffic. 17 people mentioned lack of space in the shoulder.

What is the one place in Bowdoinham where you'd most like to see pedestrian safety improved?
Respondents placed pins on an interactive map to answer this question. The majority of pins (31) were placed along River Road/Route 24, with a cluster of 13 pins at the intersection of Main Street and River Road. These responses correspond to the open-ended responses about walking and biking safety, where River Road/Route 24 was frequently mentioned. Other smaller clusters include at the intersection where the waterfront park entrances meet Route 24, and at the Bowdoinham Country Store.
5 additional pins were placed on Fisher Road, Ridge Road, and Main Street outside of the study area.



Cluster of pins at River Road/Main Street

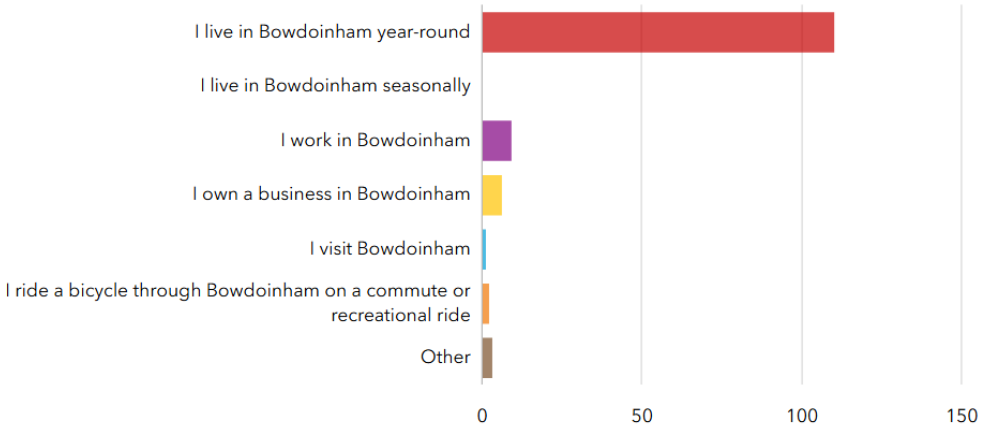


All pins placed in study area.

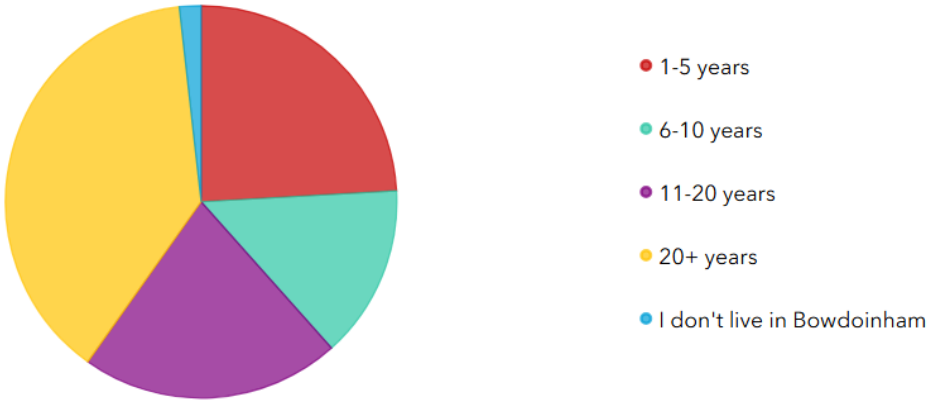
Demographics

The majority of respondents (95%) are year-round residents of Bowdoinham. About 12% of respondents also work or own a business in Bowdoinham. Among Bowdoinham residents, more than half (about 57%) have lived in town for 11 or more years. About half of survey respondents were under the age of 50. About 1/3 have school-age children.

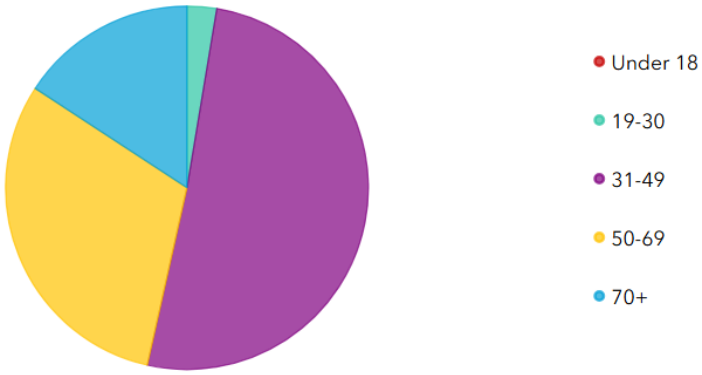
What's your relationship to Bowdoinham?



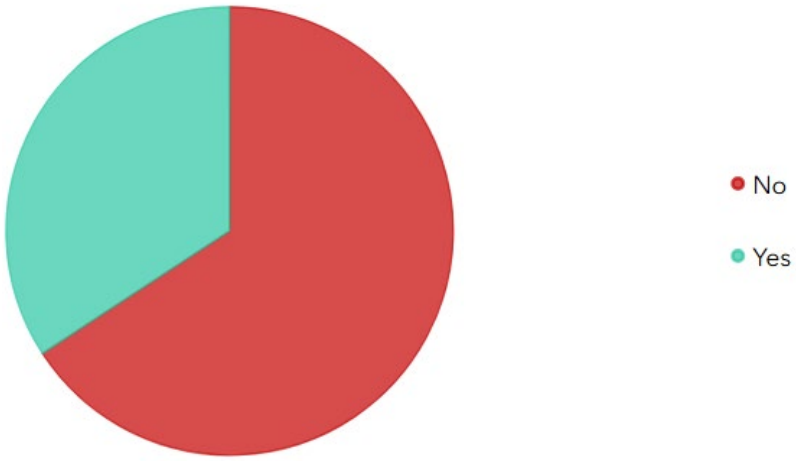
How long have you lived in Bowdoinham?



How old are you?



Do you have school-age children?



Bowdoinham
Village Partnership

Transportation Feasibility Study

Public Meeting

October 15, 2024

GORRILL PALMER
An LJB Engineering Company

Study Team

(Village Partnership Initiative)

Consultant

- Gorrill Palmer
- North Star Planning
- Aceto Landscape Architects
- James Tasse Consulting

Municipality

- Bowdoinham (Yvette Meunier)

MaineDOT

- Steve Cole

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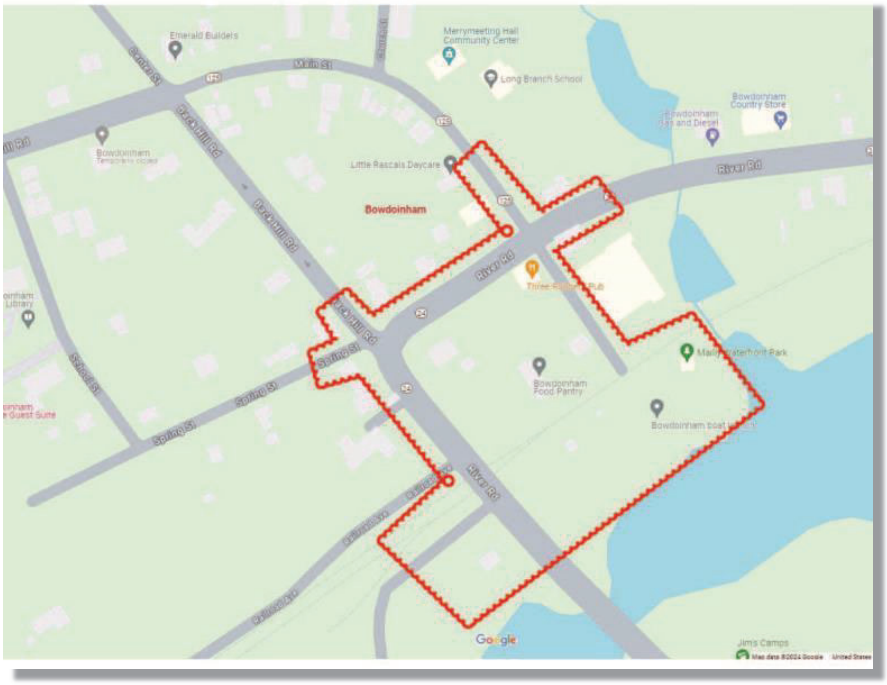
Study Limits

- River Road (Route 24)
- Back Hill Street
- Main Street (Route 125)
- Main Street Extension
- Mailly Waterfront Park
- Cathance River Boat Ramp
- Bay Road (Route 24)

(Wallentine Rd to Ridge Rd)

Length = 0.68 miles



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Study Scope

(Transportation Planning Study)

- Corridor Safety
- Accessibility
- Placemaking Opportunities
- Traffic Calming
- Pedestrian Connectivity
- Review Access Management
- Pedestrian and Bicycle Accommodations
- On-street parking
- Landscaping, Lighting, Wayfinding, Amenities
- Economic Development

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Purpose & Need Statement

The purpose of this study in downtown Bowdoinham is to identify a range of implementable alternatives to improve the safety, connectivity, accessibility and placemaking for all modes of transportation while maintaining mobility both now and into the future.

The needs of this study include improving safety within the downtown area, controlling excessive speeds through town, and providing for better connectivity and accessibility to important landmarks, all in a manner that will create a welcoming and inviting downtown that will encourage economic development.

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Prior Work

- Kickoff Mtg – July 2, 2024
- Site Visit – July 17, 2024
- Base maps
- Environmental desktop screening
- Land use memo
- Online survey
- Initial concepts
- Public Mtg – October 15, 2024

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Temporary Crosswalk and Gateway Demonstration Project Survey Results as of 8/28/23

Introduction

A feedback survey on the demonstration project was launched on 7/21/23. The survey and a project factsheet were posted on either side of the crosswalk as well as on Facebook and on our website. The survey will also be advertised in the September newsletter on the front page. However, on August 28 DOT requested its removal for paving. Therefore, the only visual project elements remaining are the faded sidewalk feature on Main Street.

As of August 28, there have been 102 respondents, of which 99 live in Bowdoinham. Further, 17% (17 respondents) own a business in Bowdoinham. Lastly, 52% (55 respondents) offered their ages, which ranged from 28-84, with only one reporting in their twenties and one in their eighties. Current results are as follows:

Driving Experience

The majority, 88% of respondents, reported driving the area the area daily, with 13% weekly, and 1% rarely. 44% of drivers reported a worse experience, compared to 30% who said there was no change, and 27% that said it was better. Overall, a majority, 57%, found the project either did not interfere with their driving experience or created a better experience.

Taking a closer look at comments left by the 44% of respondents that had a negative experience, 23 individuals advocated for the removal of just the delineators, another 22 specifically said they were in favor of keeping just the crosswalk, and only 13 individuals called for a removal of all elements of the project including the crosswalk.

9. How often do you drive in this area of Bowdoinham?

More Details | Insights

Daily	88
Weekly	13
Rarely	1

1. If you have driven through this roadway since the demo was installed, how was the driving experience?

More Details | Insights

Better	27
No Change	30
Worse	44

Just keep the painted crosswalk lines only, all else is distracting	16

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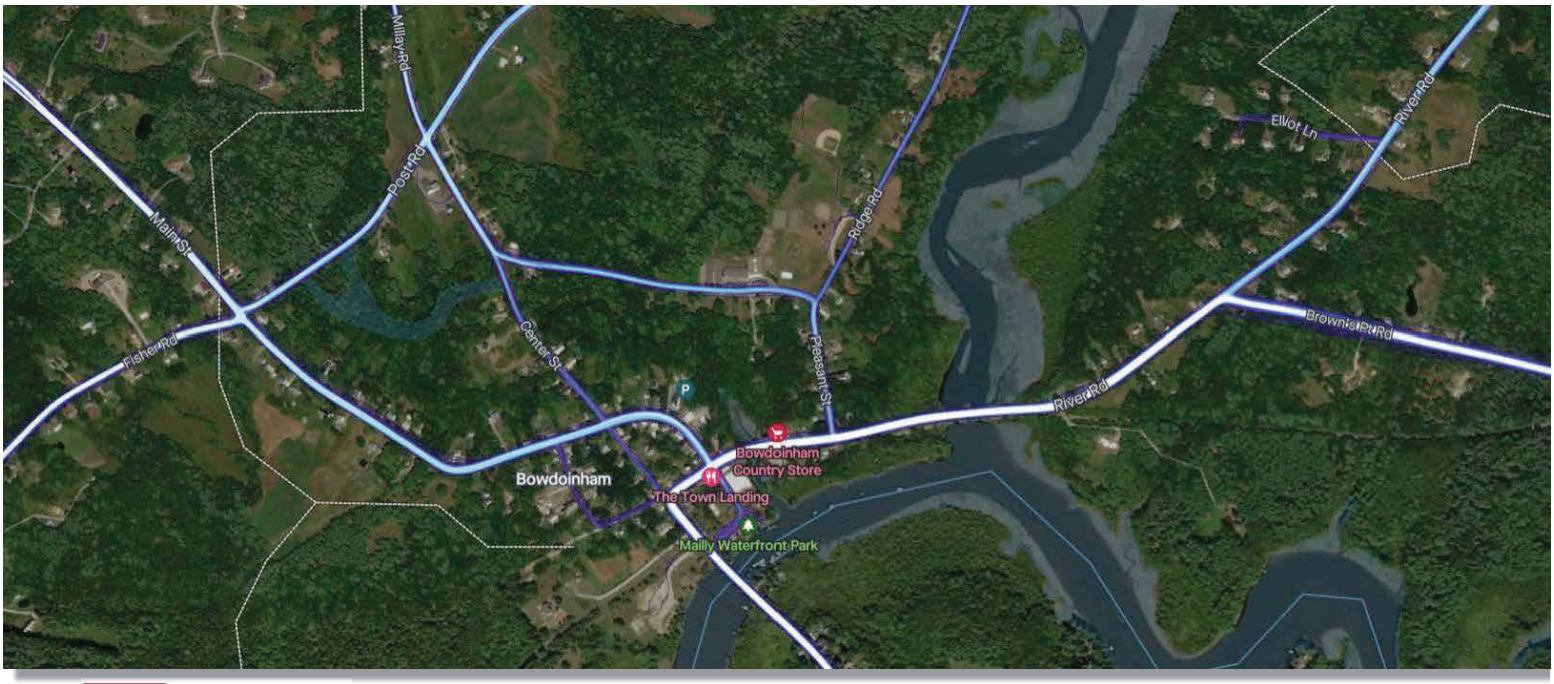
Safety Demonstration Project - 2023



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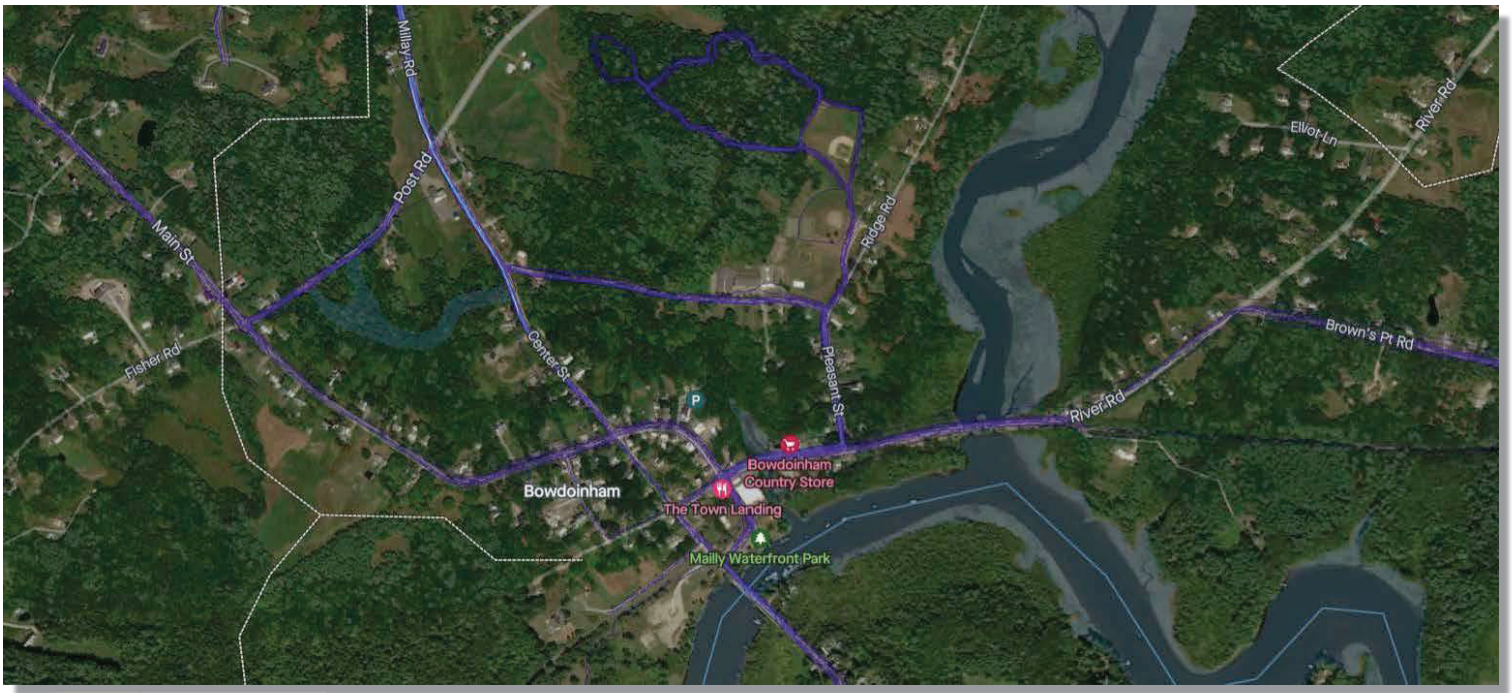
Strava Heat Maps - Bicycles



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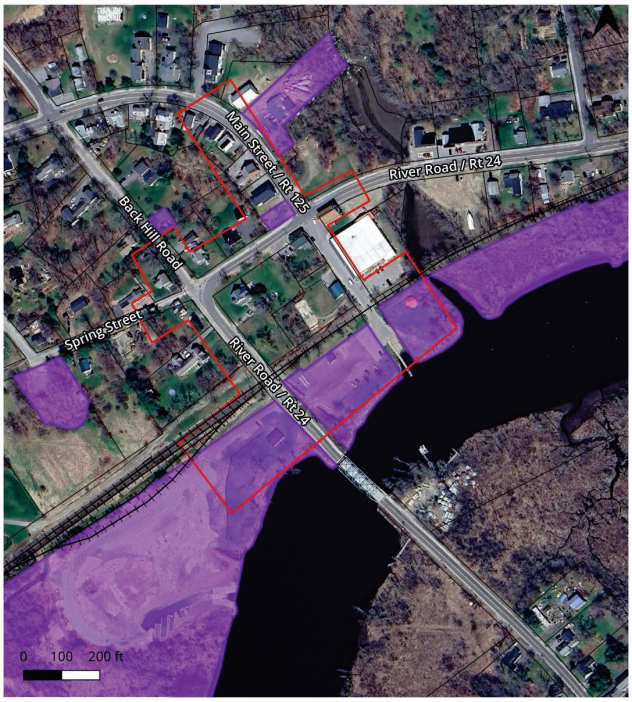
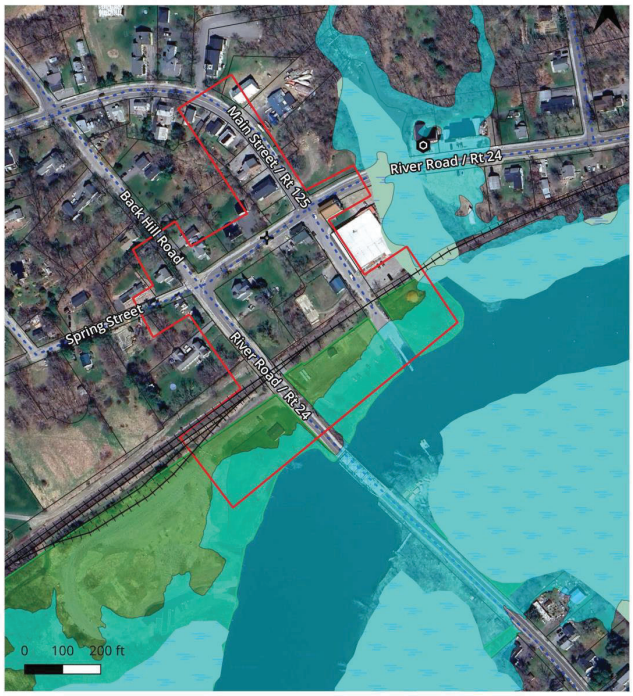
Strava Heat Maps - Pedestrians

Bowdoinham VPI Study - Town-Owned Land



Study Area
Town-Owned Land

Bowdoinham VPI Study - Existing Conditions



Study Area
Public Water
MaineDOT Cross Culverts
MaineDEP Registered Tanks
Special Flood Hazard Area
Wetlands
Conserved Land

Bowdoinham VPI Study - Zoning

Study Area
Village 1 District
Residential-Agricultural District

Bowdoinham VPI Study - Enivronmental Screening

Study Area
Inland Waterfowl and Wading Bird Habitat
Wetlands
Conserved Land

Concept 1

- PREVIOUSLY PERMITTED SHORELINE AREA
- HAND CARRY BOAT LAUNCH
- RESTROOMS
- 40X80' PAVILLION
- NATIVE MEADOW
- HAND CARRY TRAILER PARKING
- PERMITTED VEHICULAR ACCESS AS NEEDED FOR EVENTS
- ACTIVE RECREATION AREA COURT 30X50
  - * Half basketball court & pickleball (multi-court)
  - * Bocce Ball
  - * Outdoor Fitness Equipment
- EARTHEN BERMS W/ SEATING
- NATURE PLAY
- ACCESSIBLE PARKING
- PICNIC AREA
- NATIVE MEADOW
- ACTIVE RECREATION AREA & TRAILHEAD

Celebrate Bowdoinham (Sept 14)

Amenities desired:

- Dog Park
- New Pavilion
- More parking
- Mature old trees
- Community compost pile
- Decorated sidewalks, Colorful polka dots

Bicycle safety:

- Improve safety on Rt-24 (all of it), Pond Rd, and Main St
- Convert the train tracks
- Downtown district area
- Pro speed bumps or other traffic slowing measures
- Improve downtown
- Add bike path
- Bike path and reminders through signage

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Celebrate Bowdoinham (Sept 14)

Pedestrian safety:

- Sidewalk on Bay Rd to Wallentine (3 comments)
- Rebuild walls on Ridge Rd and Center St
- Re-paint existing crosswalks
- Crosswalks on Back Hill St
- Crosswalks connecting the two parks (2 comments)
- Crosswalk to Three Robbers (Main & Rt-24) (2 comments)

Pedestrian safety:

- Main St. in the village needs speed table and more speed signs
- Pro speed bumps or other traffic calming measures
- Make sure sidewalks are plowed for people to walk on safely all winter
- Speed bumps on hill to enforce speed
- Village speed enforcement please

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Schedule

- Public Mtg 1 – October 15, 2024
- Online Survey – October 2024
- Concepts / Revisions / Recommendations – Oct & Nov 2024
- Public Mtg 2 – December 2024
- Draft Report – January 2025
- Final Report – February 2025

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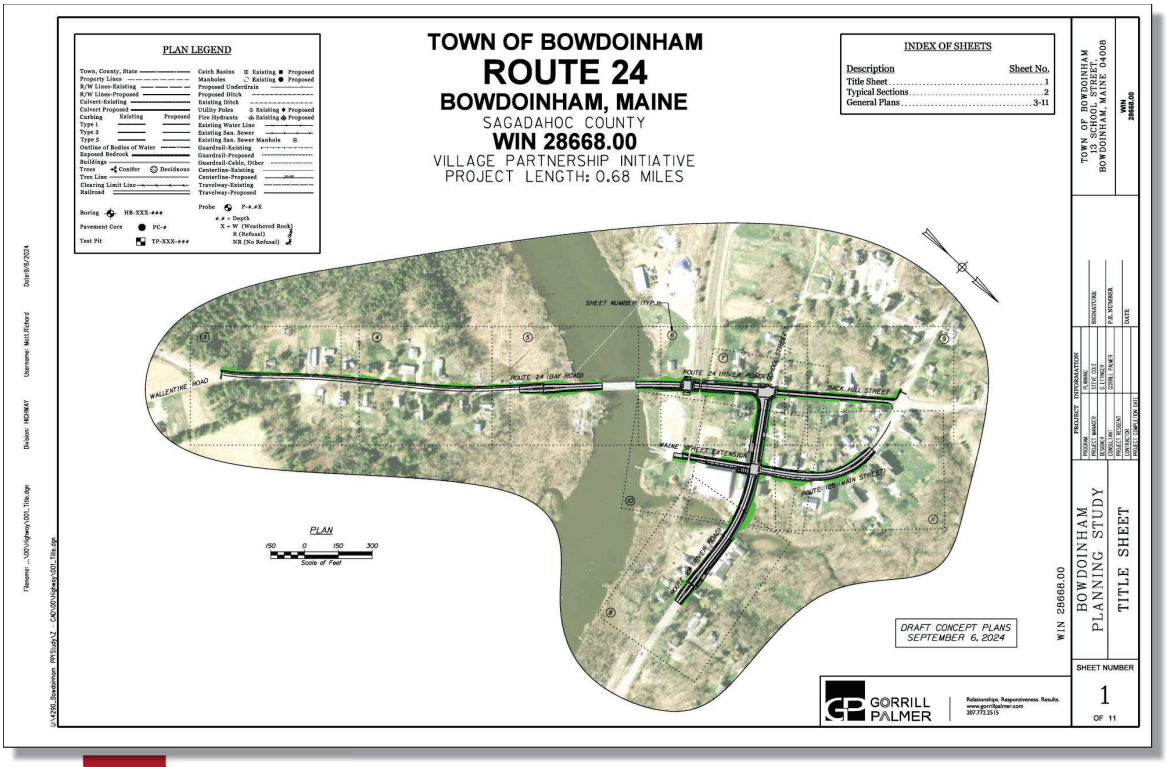

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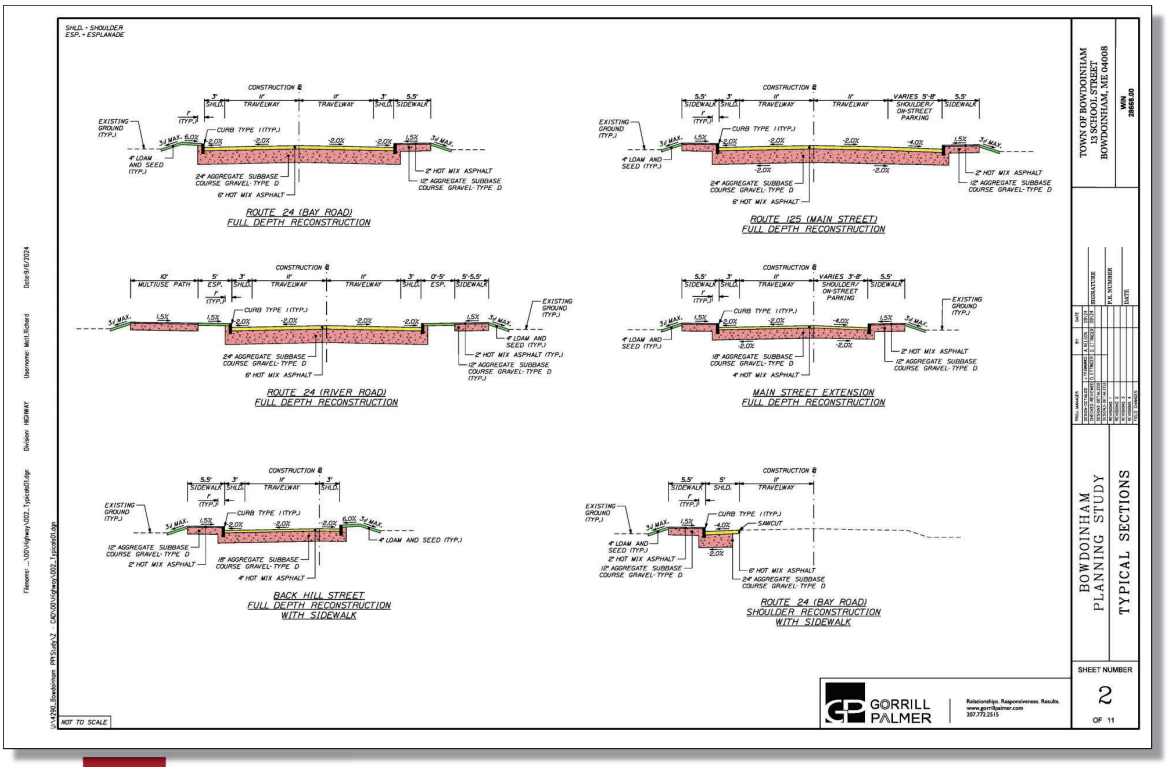
Concepts

Study Limits
River Road
Back Hill Street
Main St
Main St Ext.
Bay Road
Mailly Waterfront Park
Cathance River Boat Ramp



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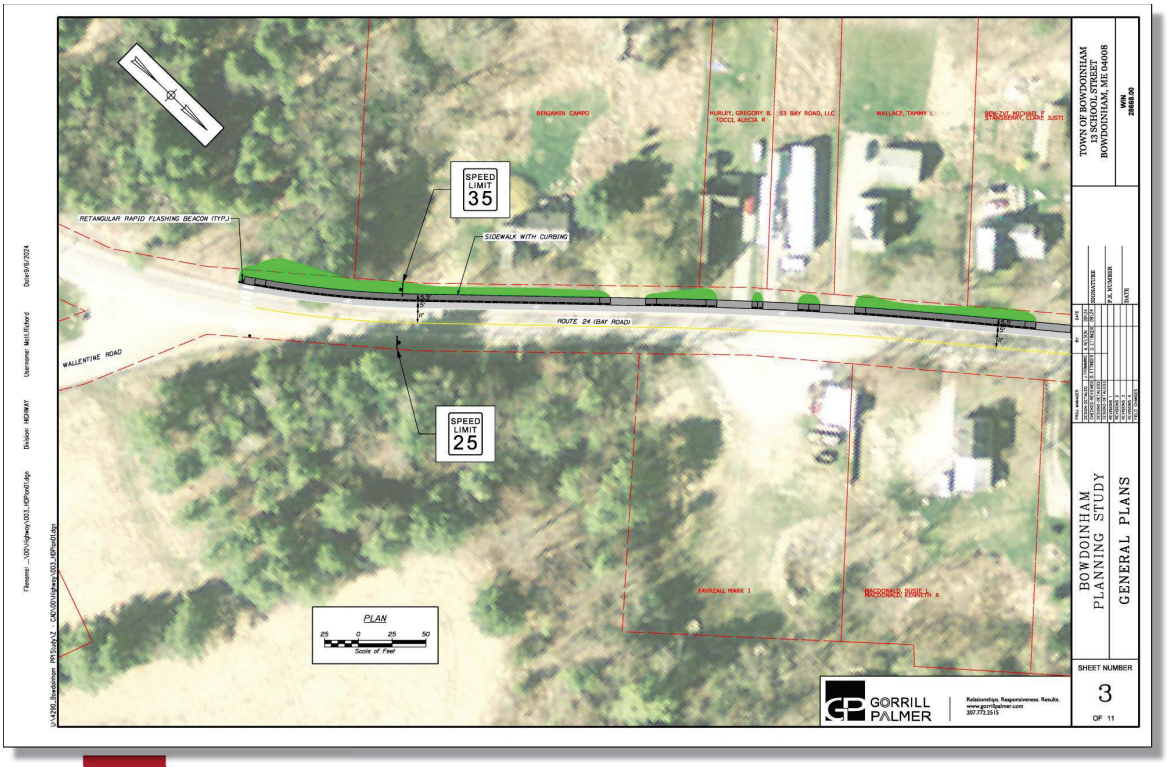
Concepts

- Typical Sections
- Roadway Details



Concepts

- Safety Improvements
- Intersection Improvements
- Pedestrian / Bike Accommodations
- Traffic Calming
- Access Management
- Parking Accommodations
- Pedestrian Connectivity
- Placemaking Opportunities

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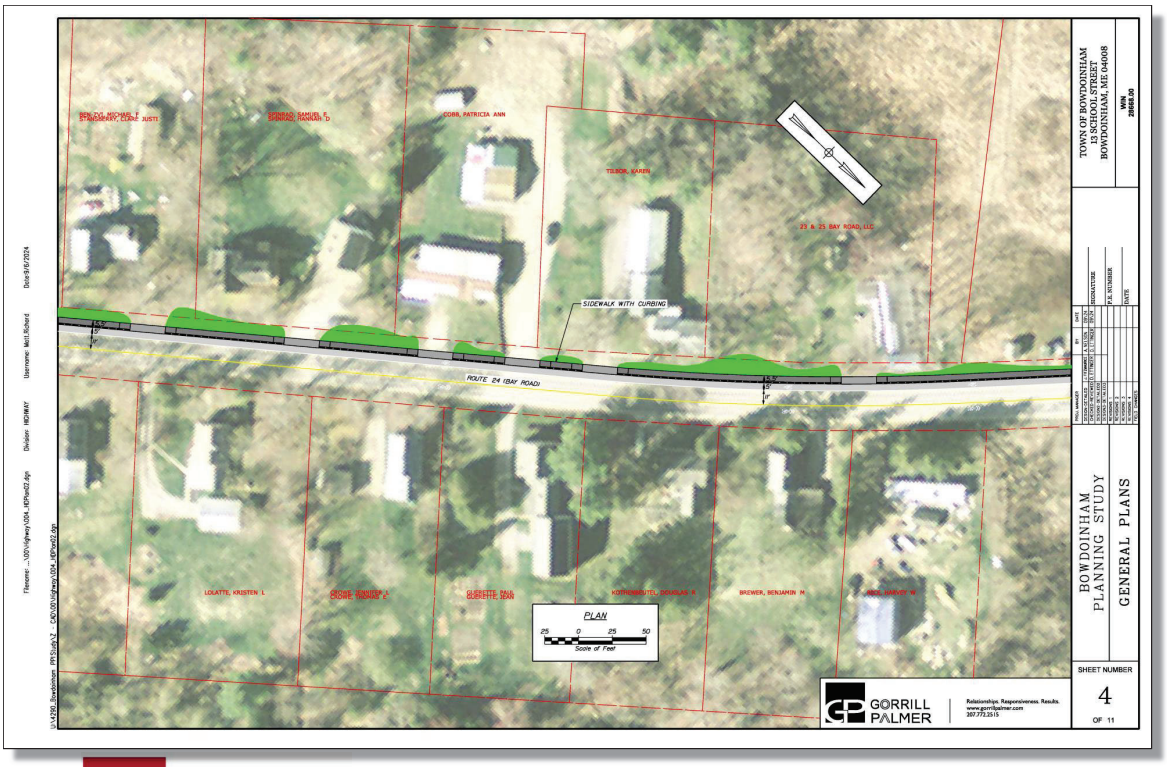

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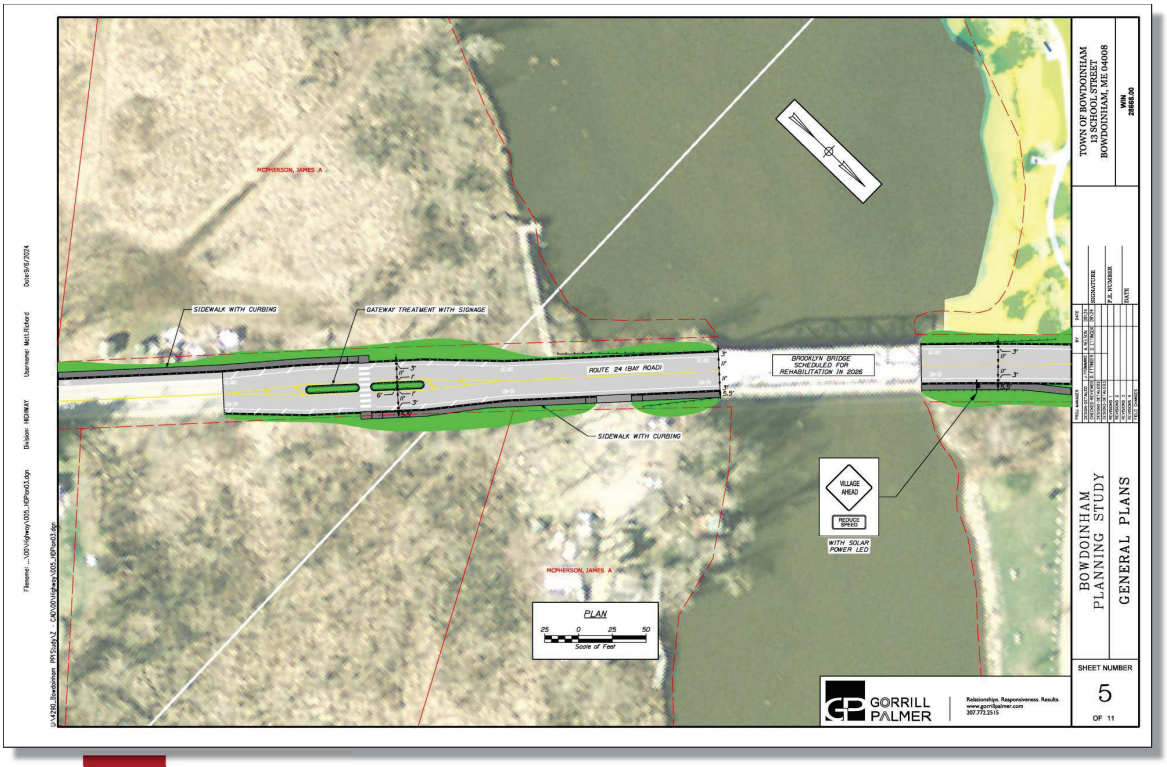

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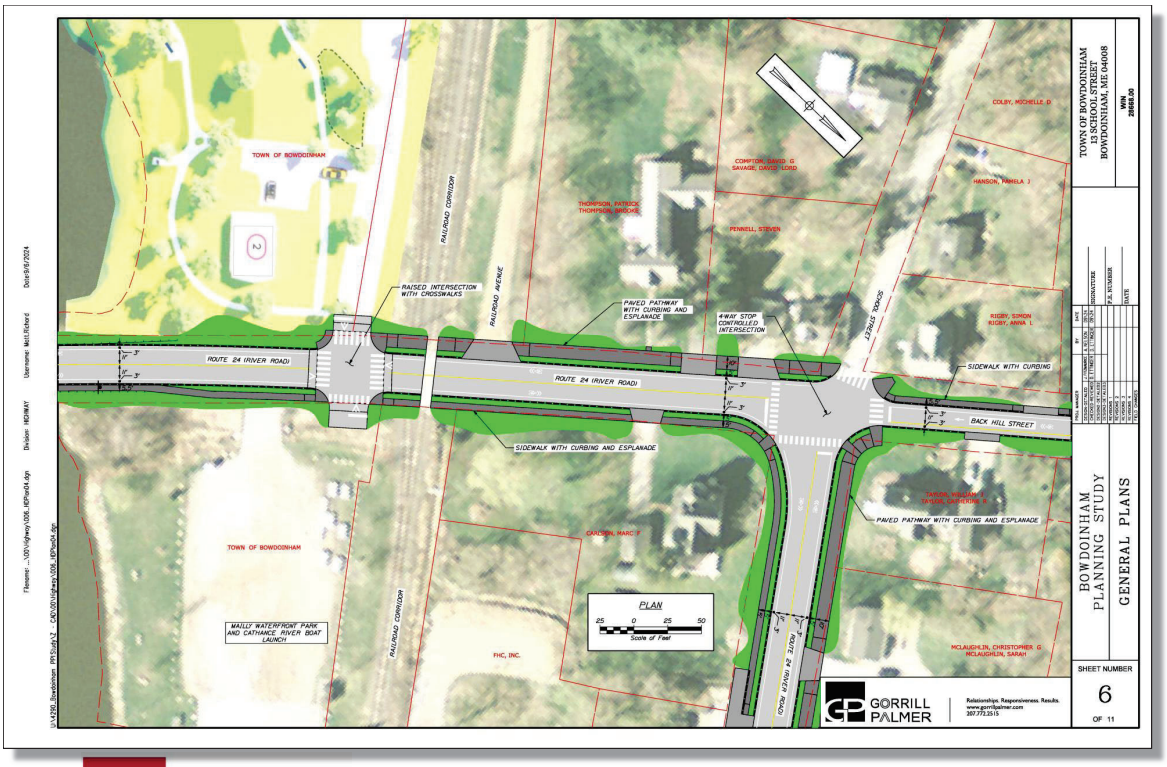

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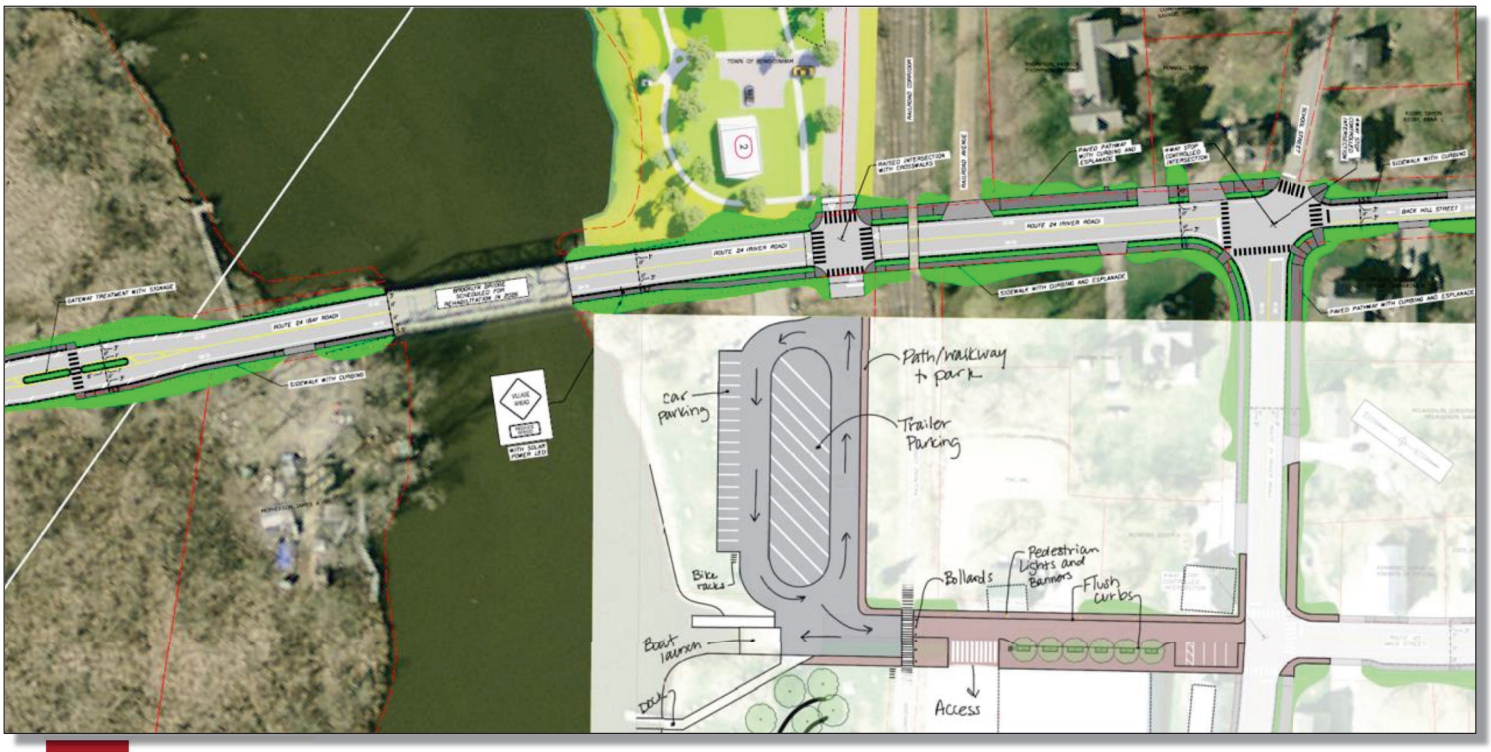

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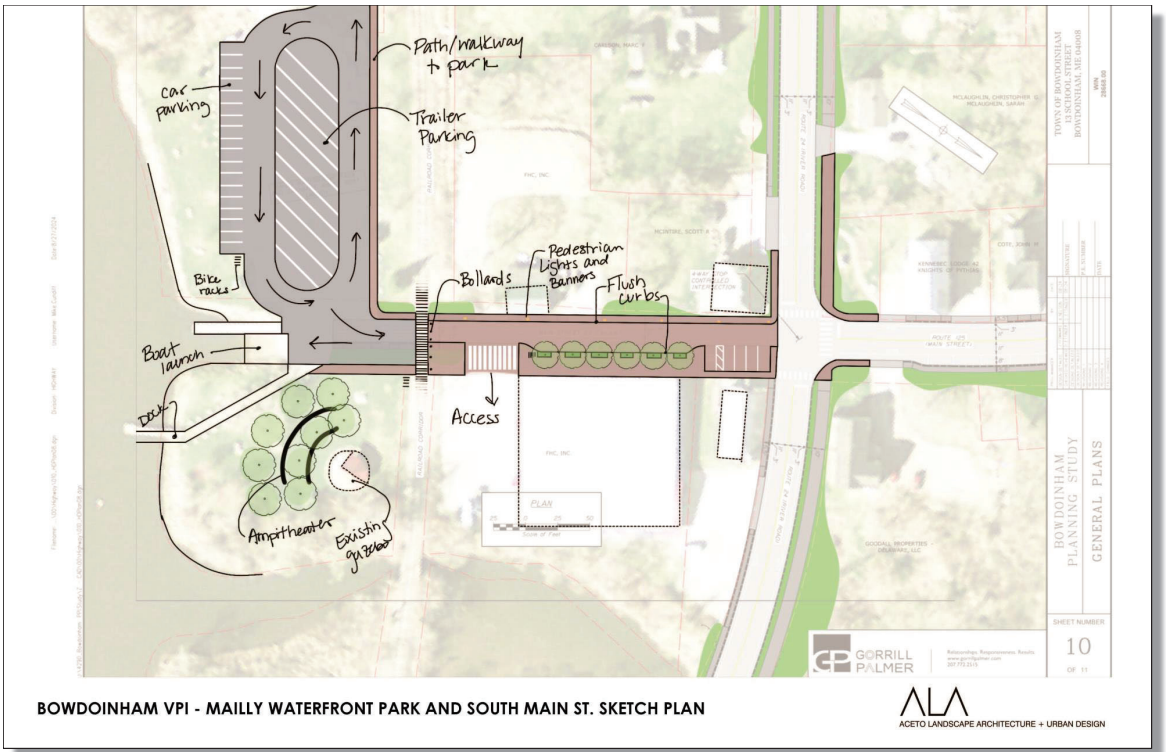

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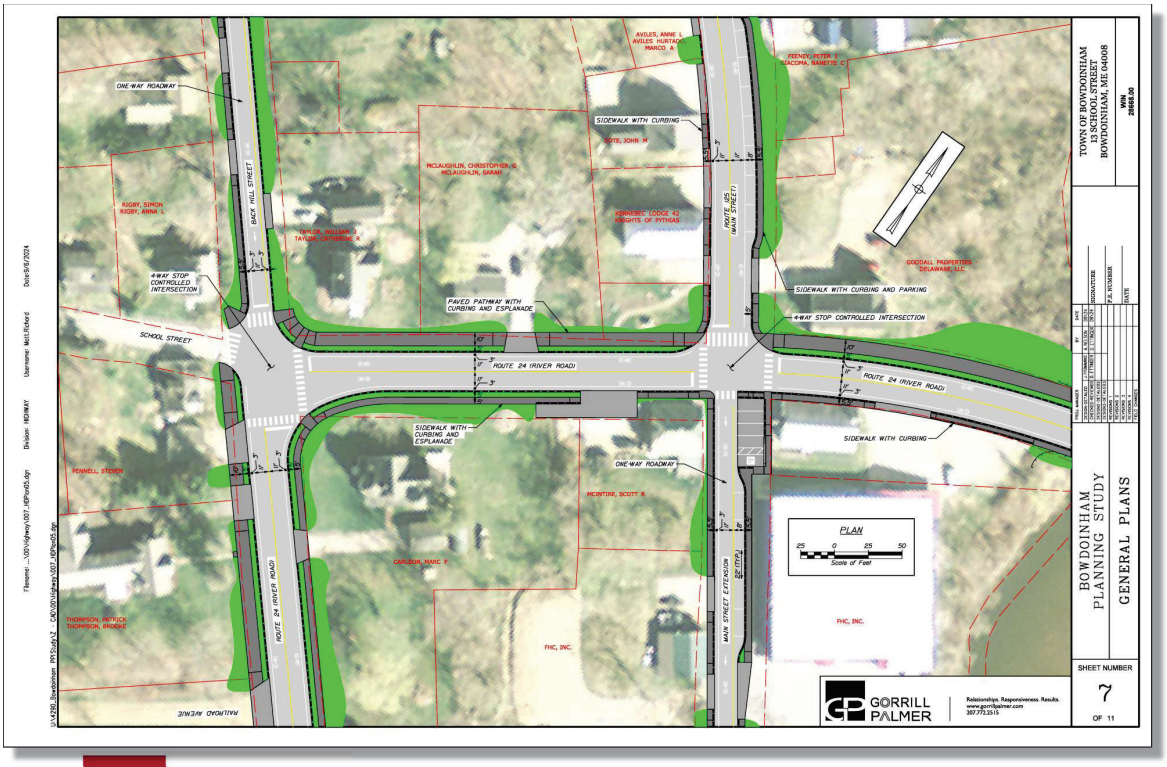

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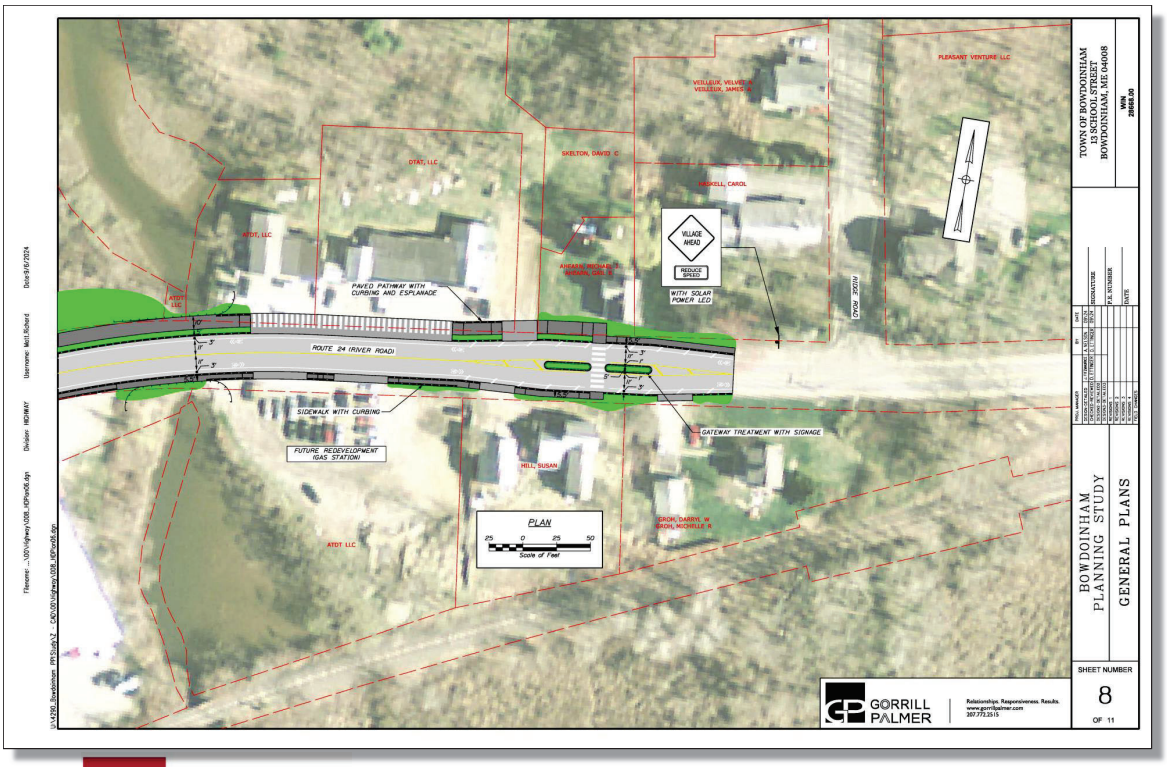

Concepts

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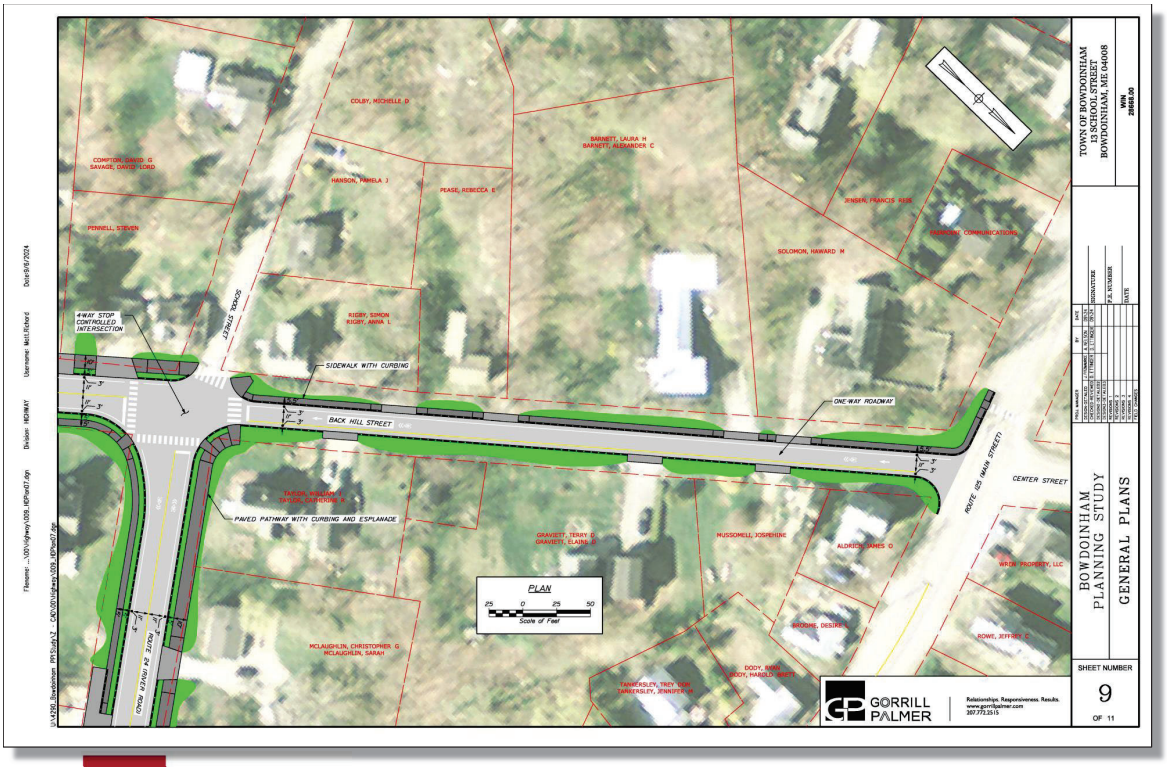

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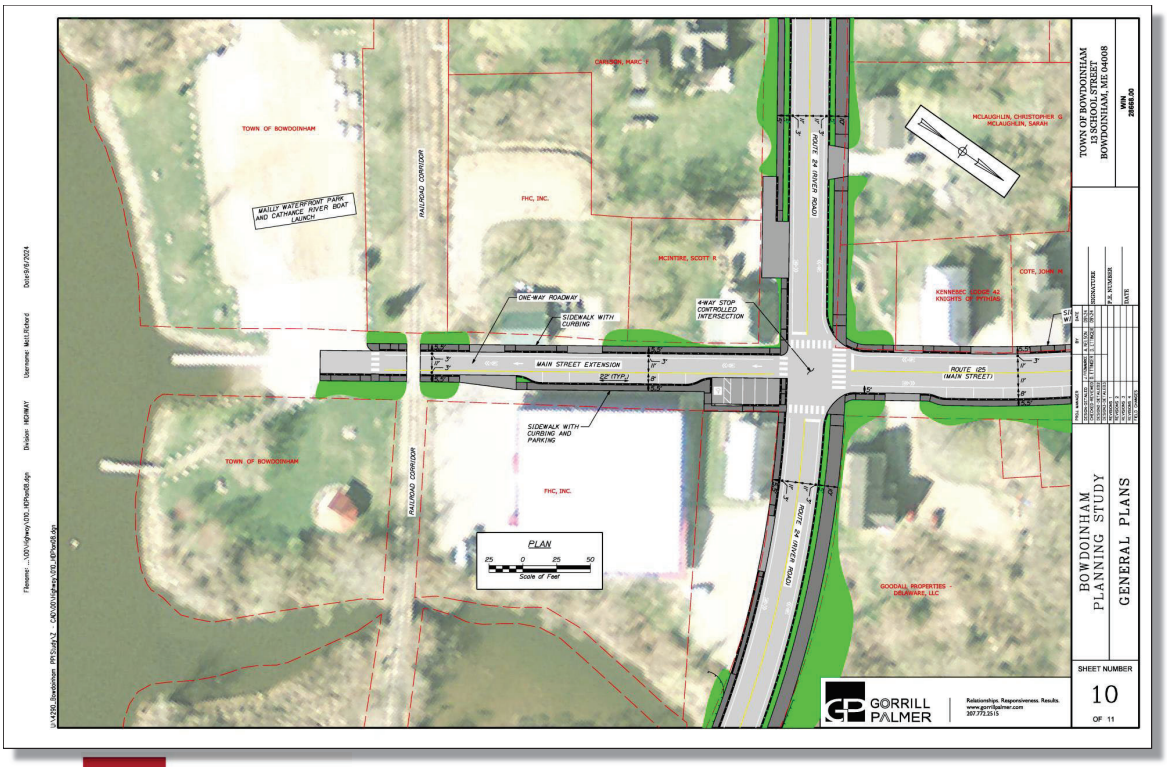

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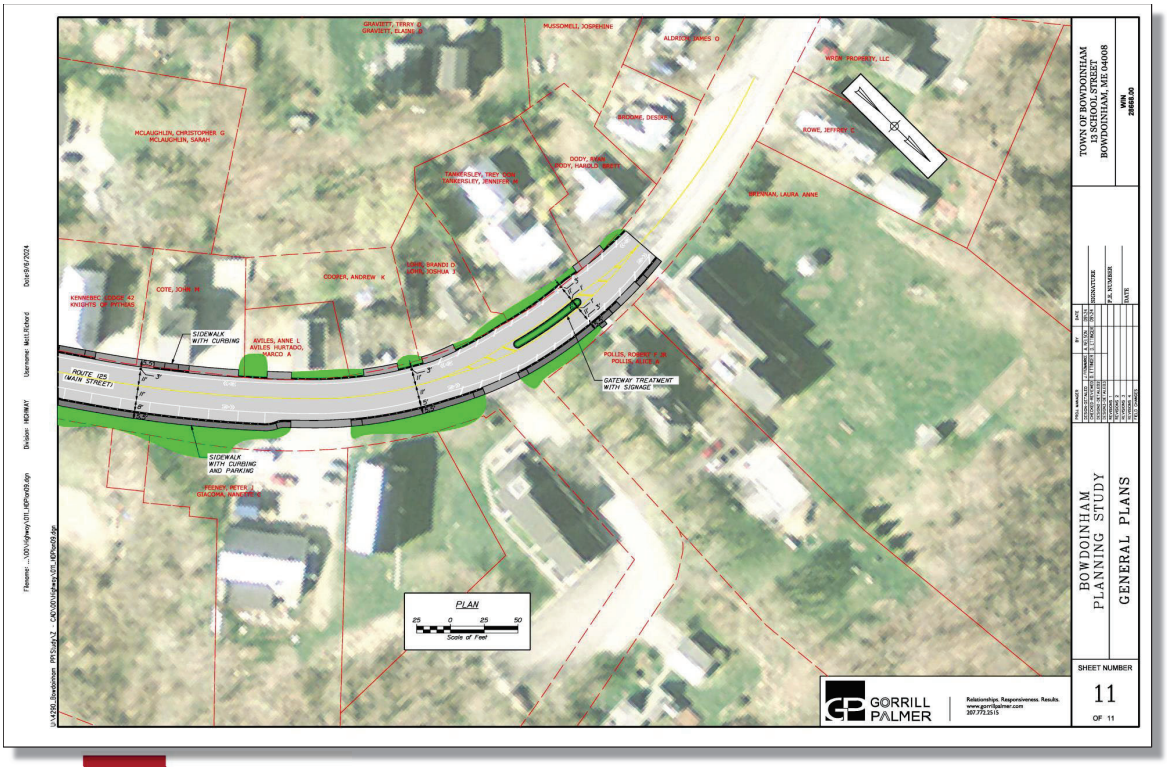

Concepts

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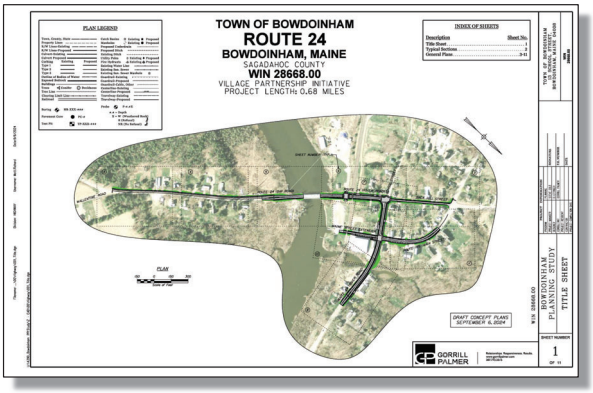
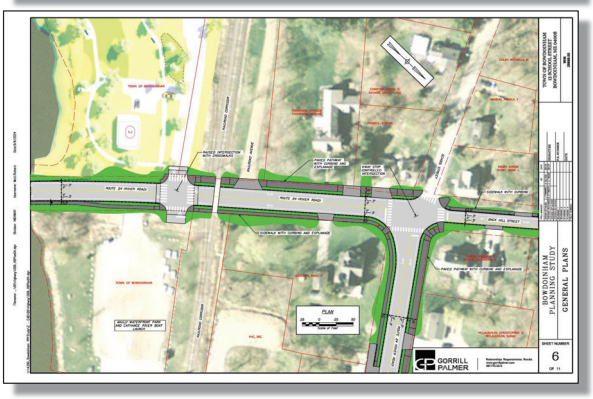
Comments & Feedback

- ❑ Safety Improvements
- ❑ Intersection Improvements
- ❑ Pedestrian / Bike Accommodations
- ❑ Traffic Calming
- ❑ Parking / Access Management
- ❑ Main Street Extension
- ❑ Mailly Waterfront Park
- ❑ Cathance River Boat Facility
- ❑ Placemaking Opportunities
- ❑ Other Items





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Bowdoinham
Village Partnership

Transportation Feasibility Study

Public Meeting #2

March 31, 2025

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Study Team

(Village Partnership Initiative)

Consultant

- Gorrill Palmer
- North Star Planning
- Aceto Landscape Architects
- James Tasse Consulting

Municipality

- Bowdoinham (Yvette Meunier)

MaineDOT

- Ian Gorecki

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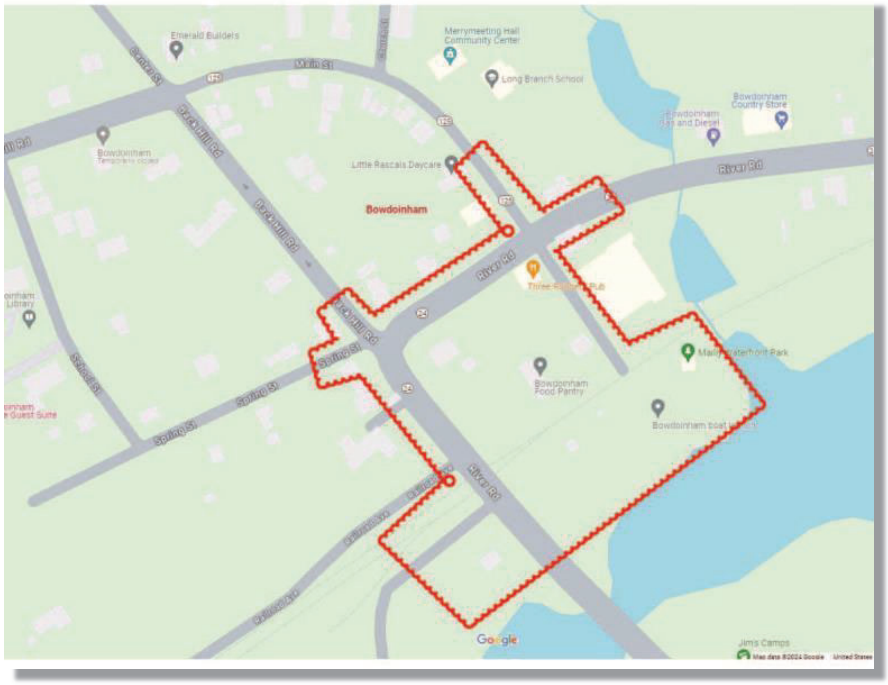
Original Study Limits

- River Road (Route 24)
- Main Street (Route 125)
- Main Street Extension
- Mailly Waterfront Park
- Cathance River Boat Ramp



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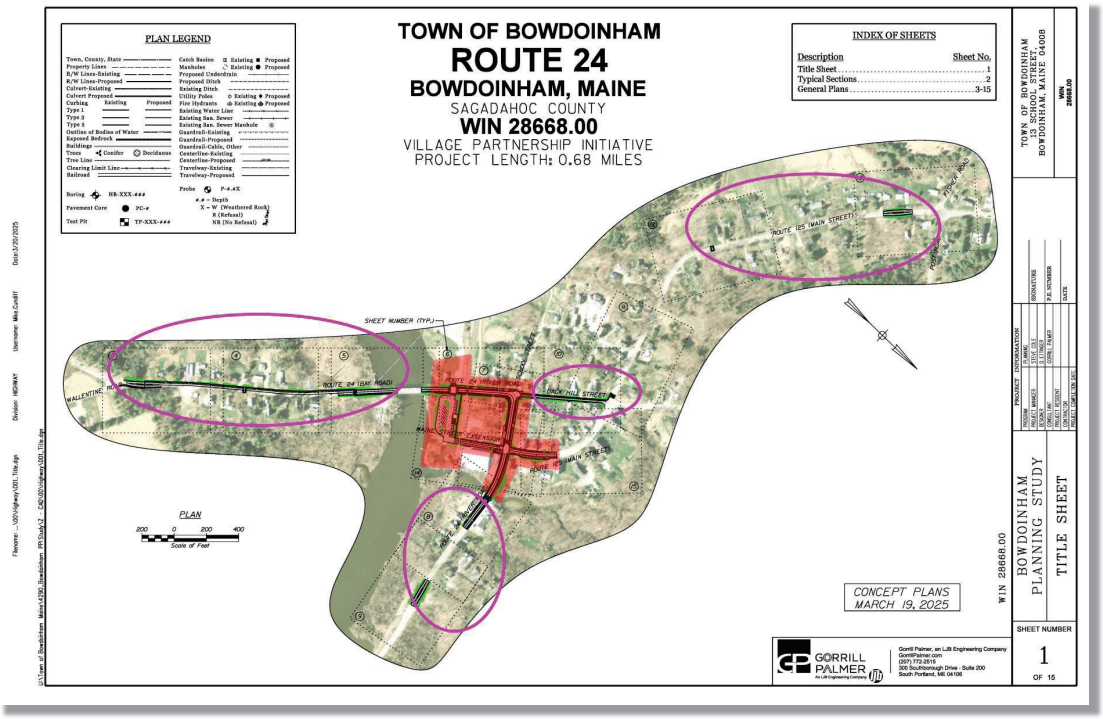
Expanded Study Limits

- Bay Rd (Rte 24)
- River Rd (Rte 24)
- Back Hill Street
- Main St (Rte 125)

(Wallentine Rd to Ridge Rd)

Length = 0.68 mi



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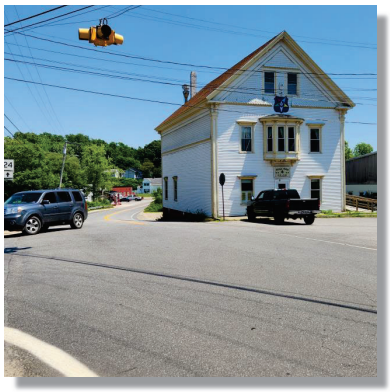
Study Scope

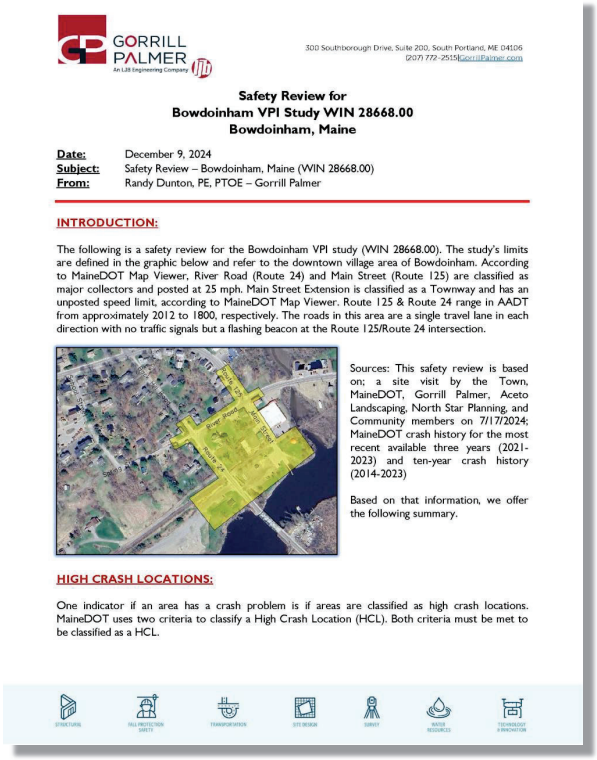
(Transportation Planning Study)

- Corridor Safety
- Traffic Calming
- Pedestrian Connectivity
- Access Management
- Pedestrian and Bicycle Accommodations
- On-street parking
- Placemaking Opportunities
- Landscaping, Lighting, Wayfinding, Amenities
- Economic Development



Safety Review

- High Crash Locations – None
- MaineDOT Crash Summaries
- Two Crashes (2021-2023)
- Ten Crashes (2014-2023)
- Six Crashes at River Rd/Main St Intersection
- No Fatalities/Serious Injuries (2014-2023)
- No Bike or Pedestrian Related Crashes (2014-2023)



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300 Southborough Drive, Suite 200, South Portland, ME 04106
(207) 772-2515|GorrillPalmer.com

Safety Review for
Bowdoinham VPI Study WIN 28668.00
Bowdoinham, Maine

Date: December 9, 2024
Subject: Safety Review – Bowdoinham, Maine (WIN 28668.00)
From: Randy Dunton, PE, PTOE – Gorrill Palmer

INTRODUCTION:

The following is a safety review for the Bowdoinham VPI study (WIN 28668.00). The study's limits are defined in the graphic below and refer to the downtown village area of Bowdoinham. According to MaineDOT Map Viewer, River Road (Route 24) and Main Street (Route 125) are classified as major collectors and posted at 25 mph. Main Street Extension is classified as a Townway and has an unposted speed limit, according to MaineDOT Map Viewer. Route 125 & Route 24 range in AADT from approximately 2012 to 1800, respectively. The roads in this area are a single travel lane in each direction with no traffic signals but a flashing beacon at the Route 125/Route 24 intersection.

Sources: This safety review is based on; a site visit by the Town, MaineDOT, Gorrill Palmer, Aceto Landscaping, North Star Planning, and Community members on 7/17/2024; MaineDOT crash history for the most recent available three years (2021-2023) and ten-year crash history (2014-2023)

Based on that information, we offer the following summary.

HIGH CRASH LOCATIONS:

One indicator if an area has a crash problem is if areas are classified as high crash locations. MaineDOT uses two criteria to classify a High Crash Location (HCL). Both criteria must be met to be classified as a HCL.

Celebrate Bowdoinham (Sept 14)

Amenities desired:

- Dog Park
- New Pavilion
- More parking
- Mature old trees
- Community compost pile
- Decorated sidewalks, Colorful polka dots

Bicycle safety:

- Improve safety on Rt-24 (all of it), Pond Rd, and Main St
- Convert the train tracks
- Downtown district area
- Pro speed bumps or other traffic slowing measures
- Improve downtown
- Add bike path
- Bike path and reminders through signage

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Celebrate Bowdoinham (Sept 14)

Pedestrian safety:

- Sidewalk on Bay Rd to Wallentine (3 comments)
- Rebuild walls on Ridge Rd and Center St
- Re-paint existing crosswalks
- Crosswalks on Back Hill St
- Crosswalks connecting the two parks (2 comments)
- Crosswalk to Three Robbers (Main & Rt-24) (2 comments)

Pedestrian safety:

- Main St. in the village needs speed table and more speed signs
- Pro speed bumps or other traffic calming measures
- Make sure sidewalks are plowed for people to walk on safely all winter
- Speed bumps on hill to enforce speed
- Village speed enforcement please

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Public Meeting #1 (Oct 15)

- Truck turning movement concerns
- Support for 25 mph to Wallentine Rd
- Boat ramp parking concerns
- Concerns with impacts to Bath House
- Impacts to parking or winter maintenance on Main St Ext. concerns.
- Support for traffic calming
- Not sure all-way stop is needed at River / Back Hill Intersection.
- Move gateway treatment north of Ridge Road
- Move gateway treatment up hill on Main Street
- Support for pedestrian and bike Accommodations
- Address bikes on Main St
- Sight distance issue at the bottom of Back Hill Street
- Sidewalks to Country Store.

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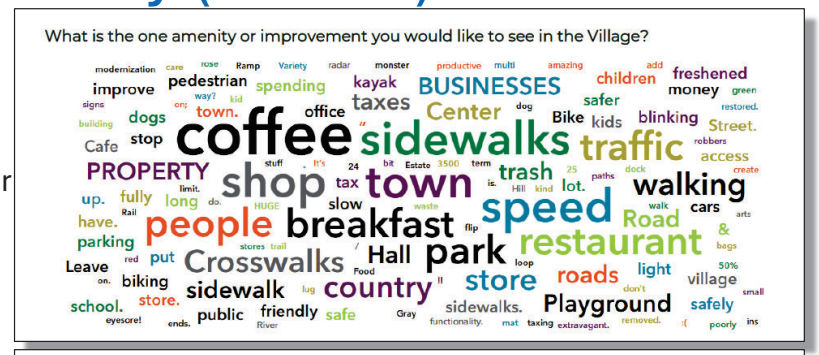
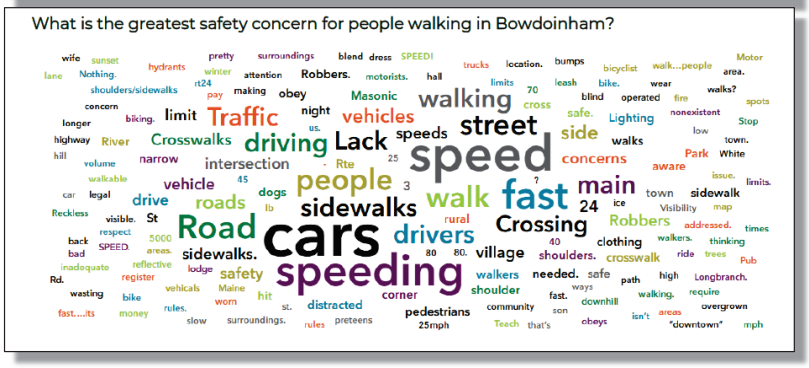
On-Line Survey (Oct 21)

- Village is a desired walkable destination
- Desire for more businesses, restaurants, coffee shops
- Farmer's Market is the most popular use for Mailly Waterfront Park
- Diverse uses of Waterfront Park create conflicts (park, boat launch, swimmers, fishing, pavilion events)
- Better organization for different users would make the park safer.
- Cars are the most common form of transportation, followed by pedestrians and then bicycles.
- Out-of-town bike traffic is prominent.
- Speeding cars are the biggest safety concern for pedestrians and bicyclists.





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Summary of Plan Revisions

- Revisited travel lane and shoulder widths (10' lanes & 4' shoulders) to (11' lanes & 3' shoulders).
- Shifted the boat ramp parking layout and entrance to avoid impacts on the bathhouse.
- Revised the River Road intersection with Back Hill Street / Spring Street from a 4-way stop to a 2-way stop.
- Eliminated the all-way stop at the Main Street and River Road intersection and proposed a raised crosswalk near Three Robbers Pub.
- Revised the sidewalk design near the gas station.
- Shifted the gateway treatments to be further away from the village on all three state road approaches (Bay Road, River Road, Main Street).
- Proposed additional speed humps or raised crosswalks on each approach to slow traffic.
- Added rapid flashing beacon assemblies at numerous crosswalk locations.
- Shifted the locations of 25 mph speed limit signs to be outside the gateway treatment areas.
- Added speed feedback signs at those locations.
- Modified the geometry of the River Road intersection with Back Hill Street and Spring Street, relocated the crosswalks, and added a truck apron to reduce the intersection size.
- Revised the Main Street Extension design to be one-way with parking and a sidewalk. Developed two options for consideration.

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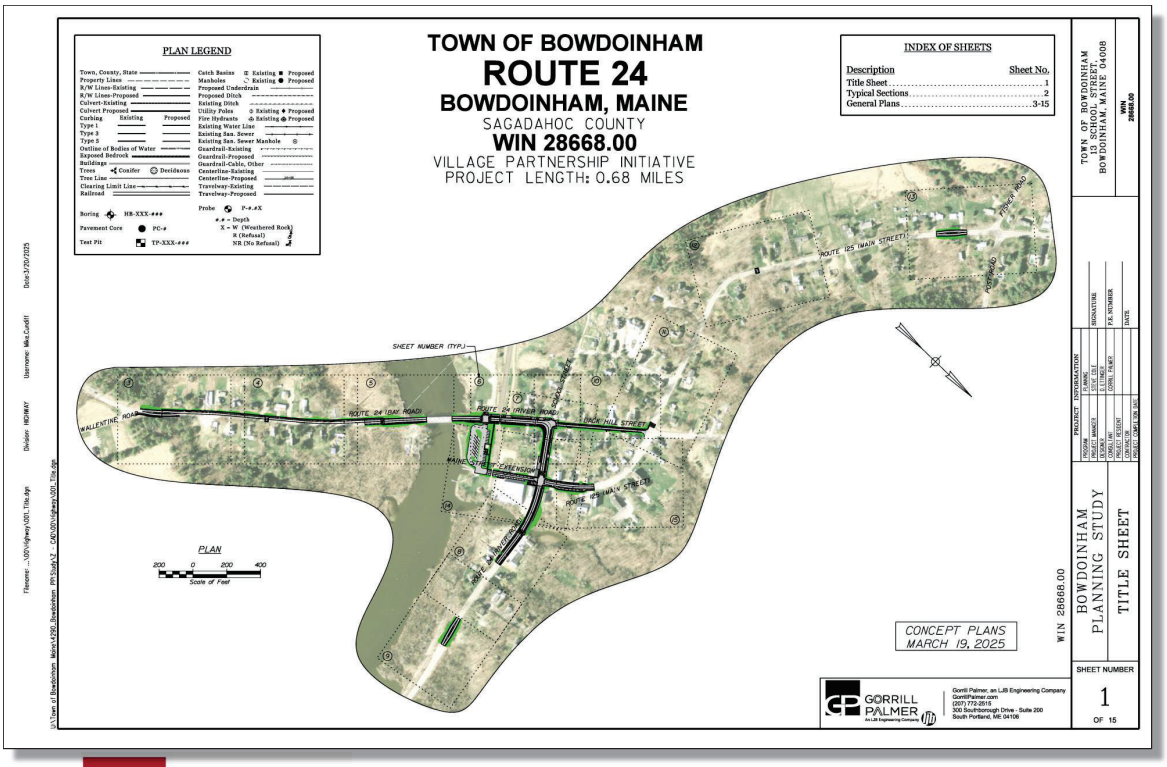

Concepts

Study Limits

Bay Road

River Road

Back Hill Street

Main St

Main St Ext.

Mailly Waterfront Park

Cathance River Boat Ramp

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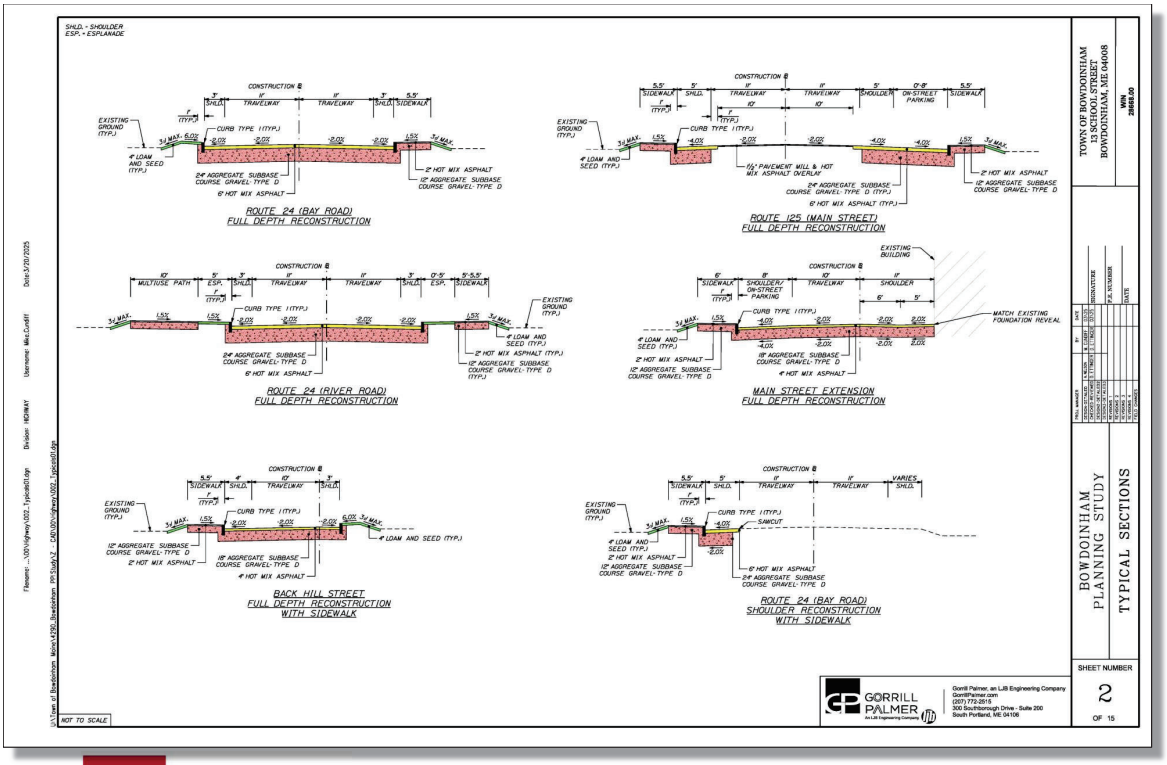
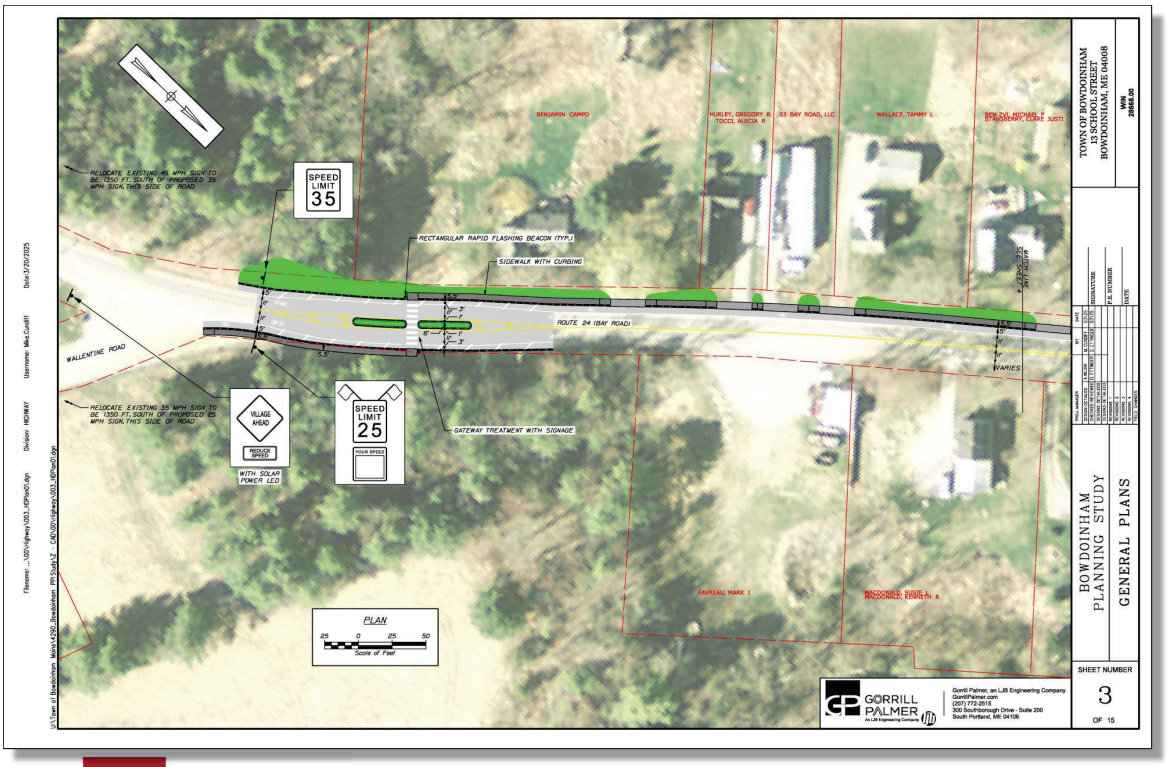


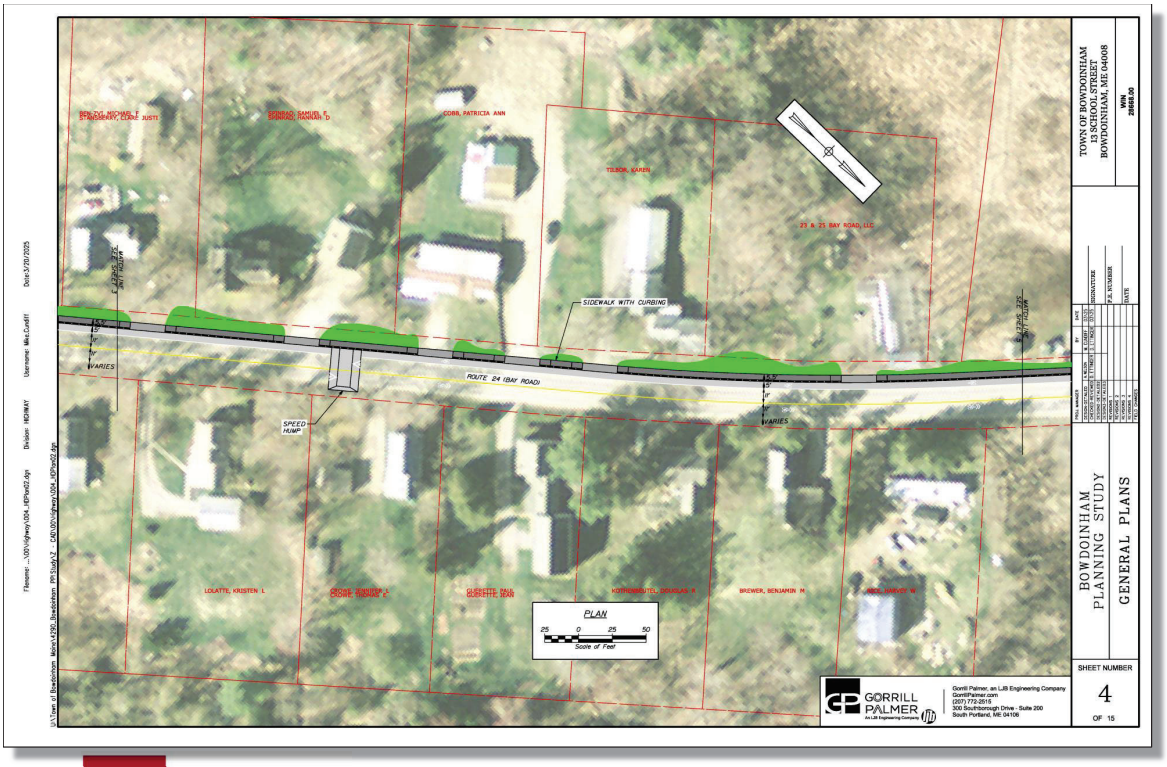
Concepts

- Typical Sections
- Roadway Details



Concepts

- Safety Improvements
- Intersection Improvements
- Pedestrian / Bike Accommodations
- Traffic Calming
- Access Management
- Parking Accommodations
- Pedestrian Connectivity
- Placemaking Opportunities



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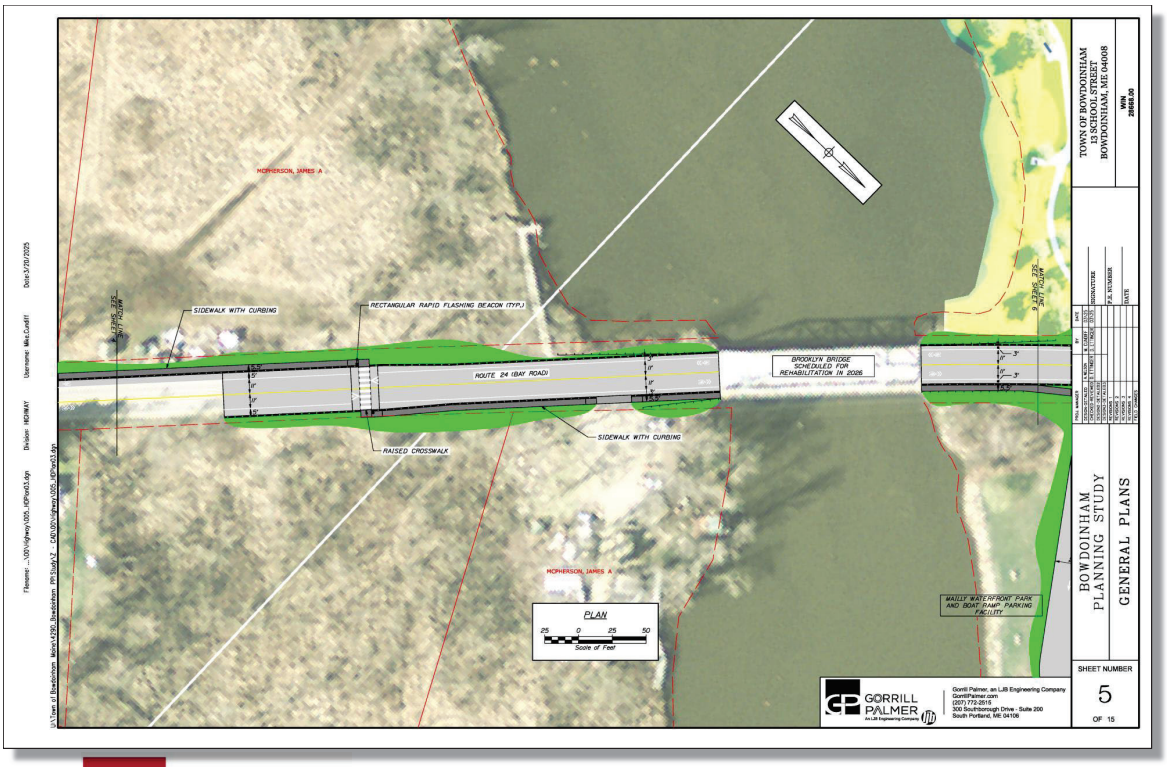

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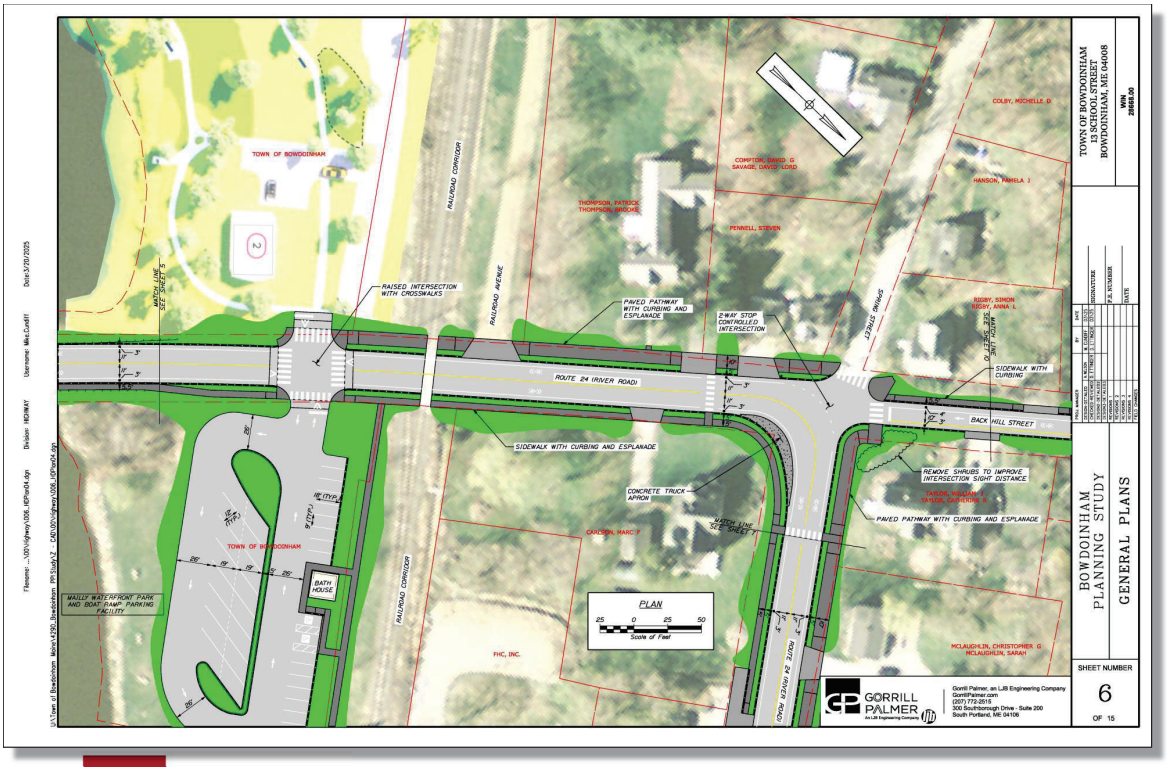

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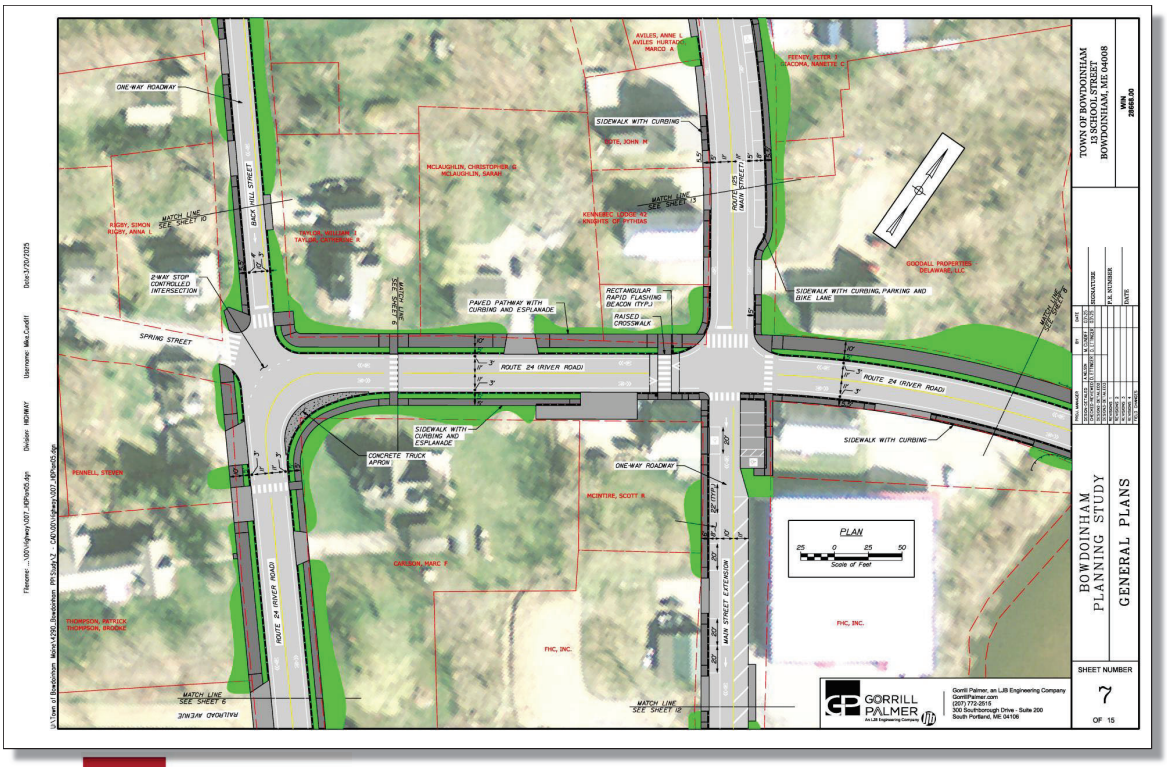

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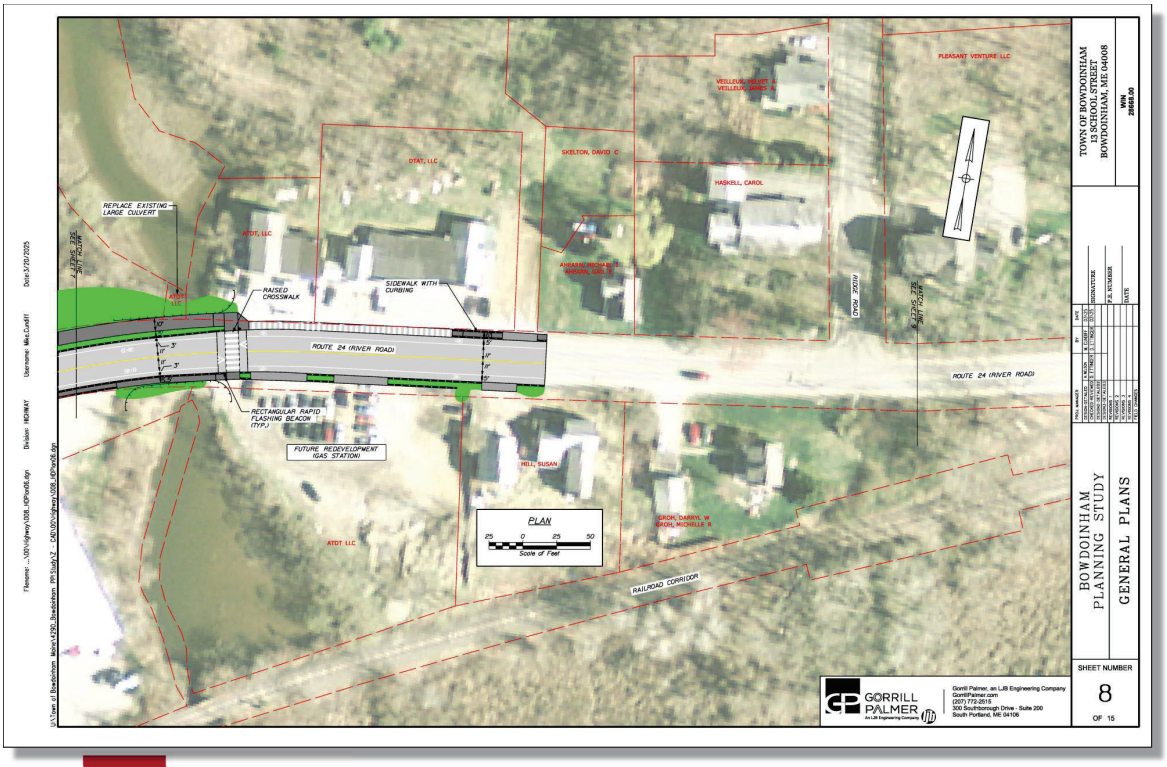

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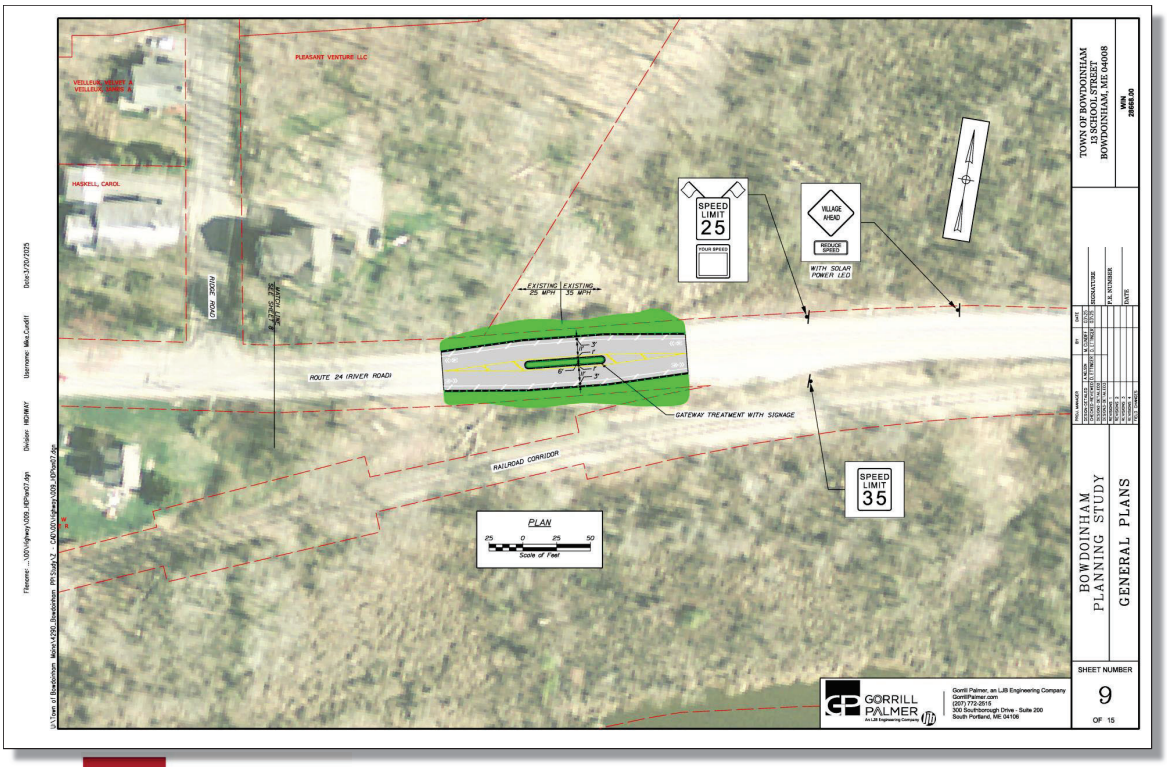

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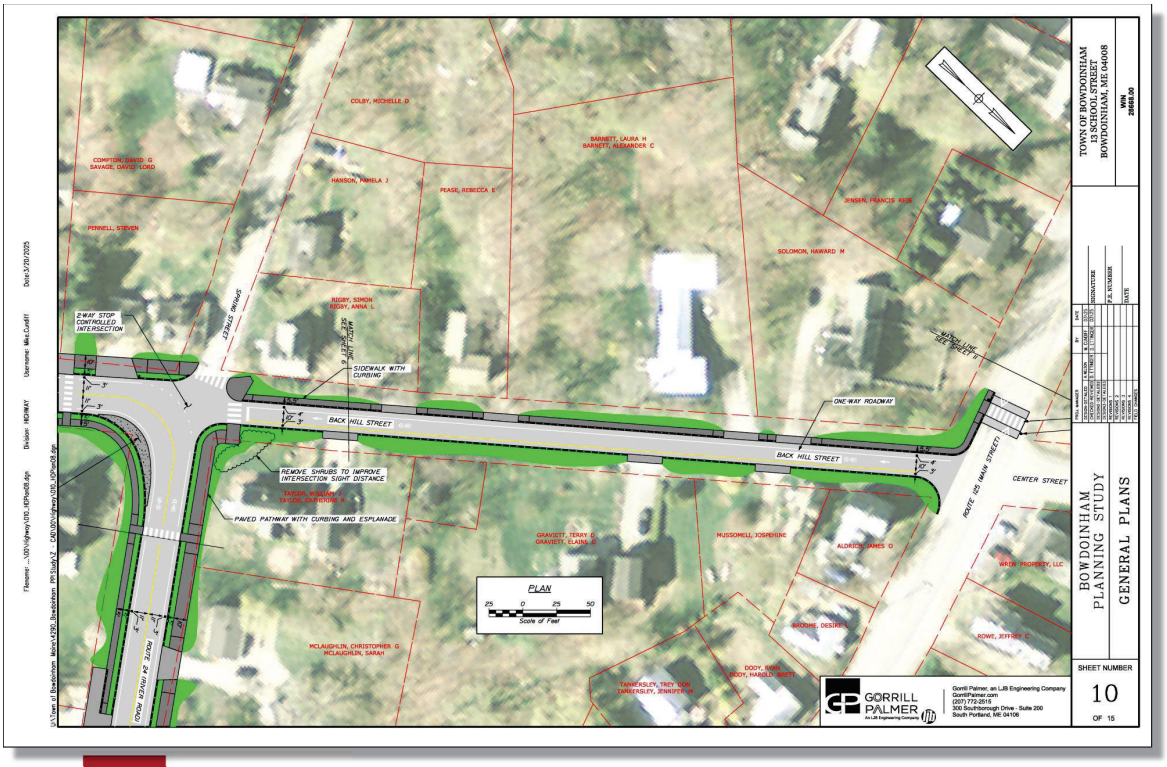

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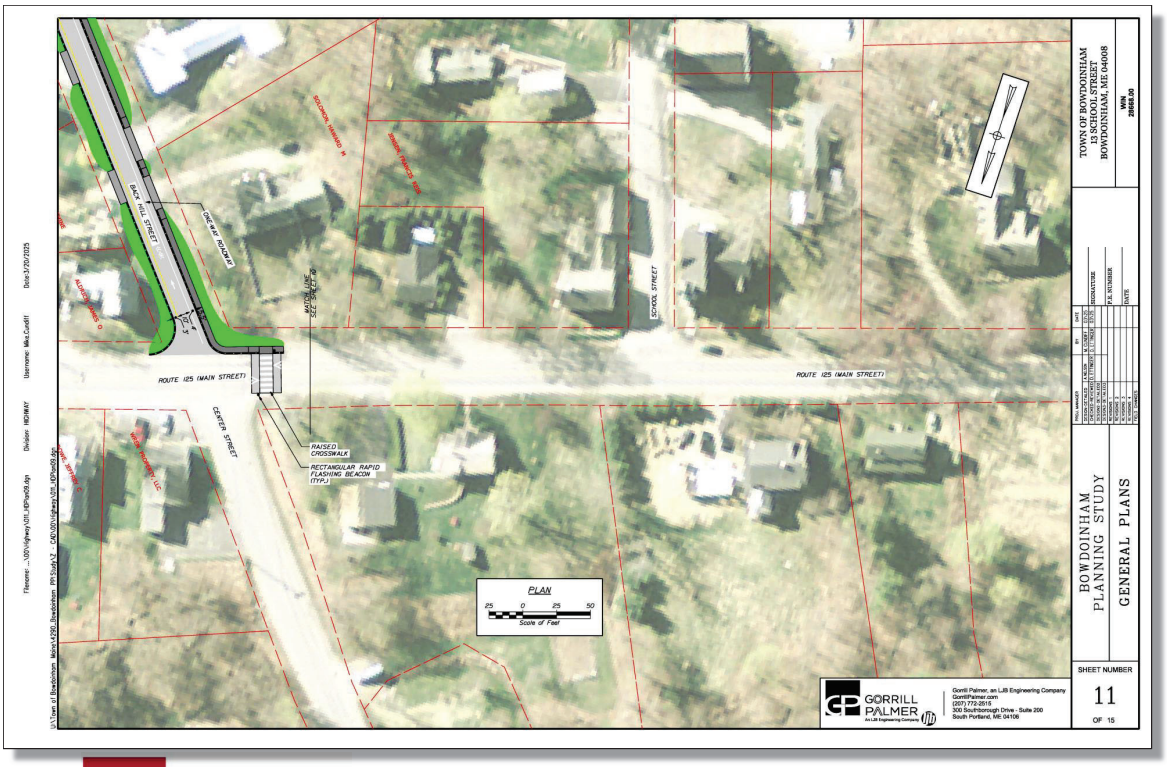

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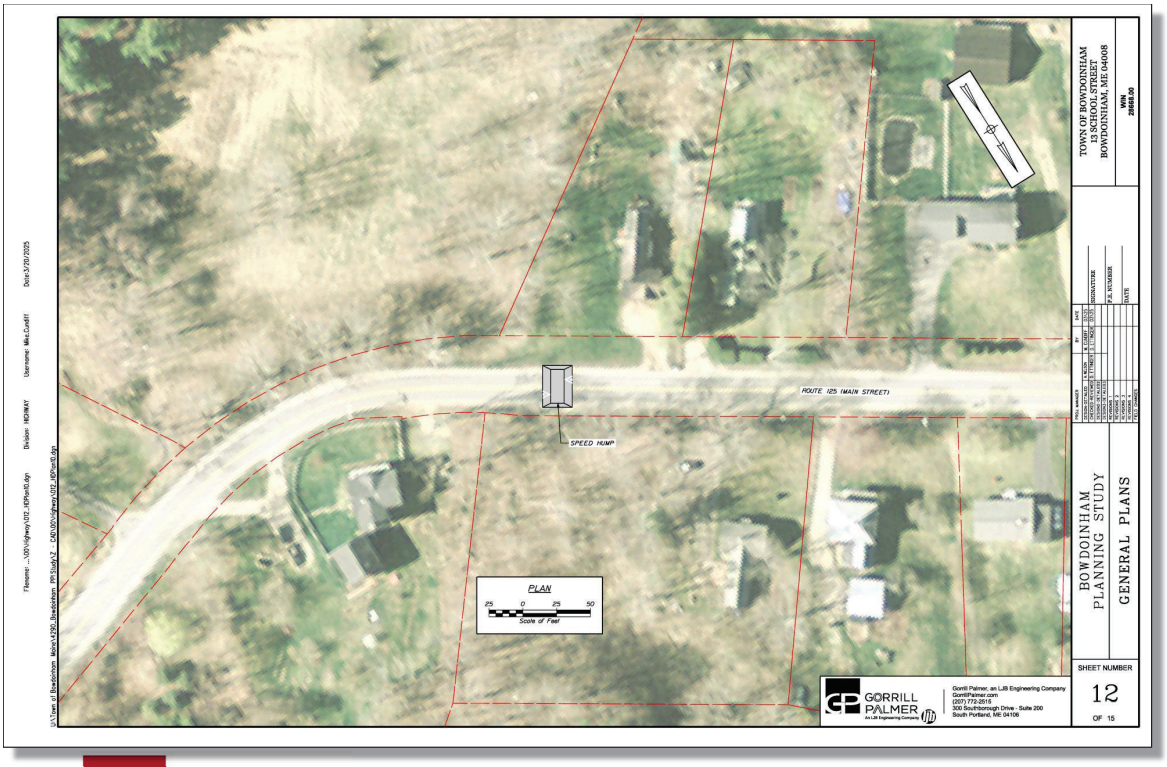

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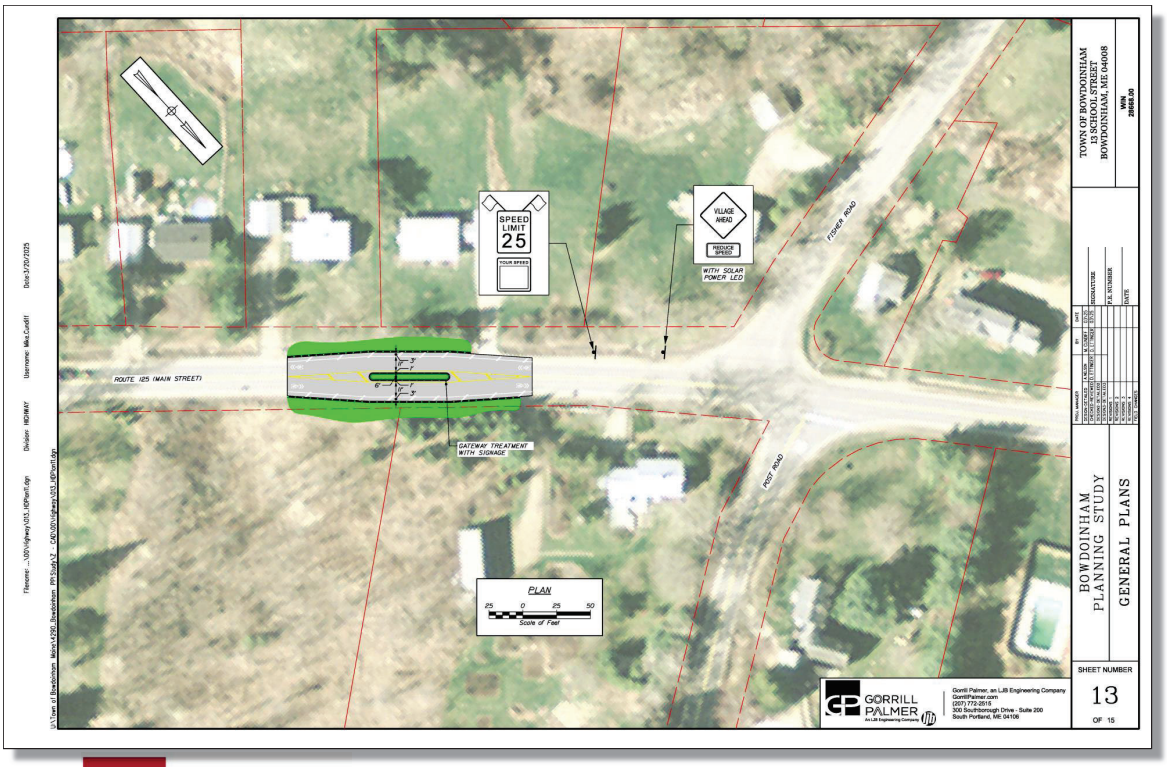

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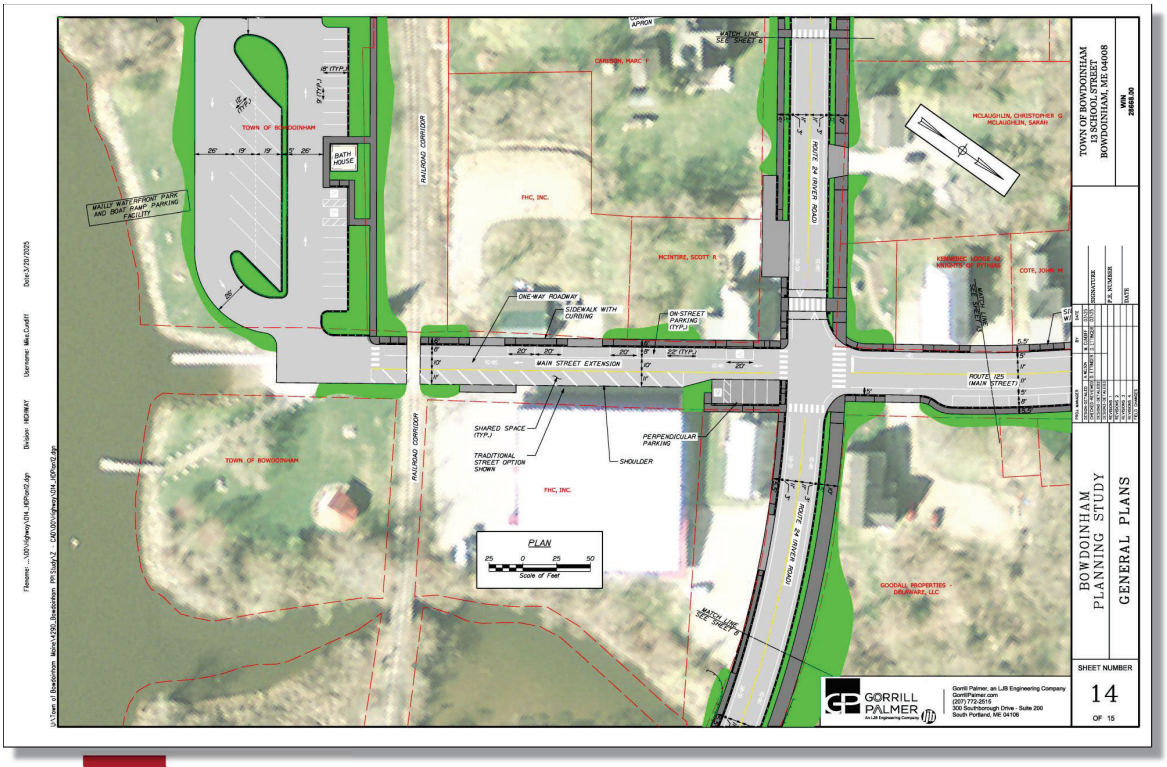

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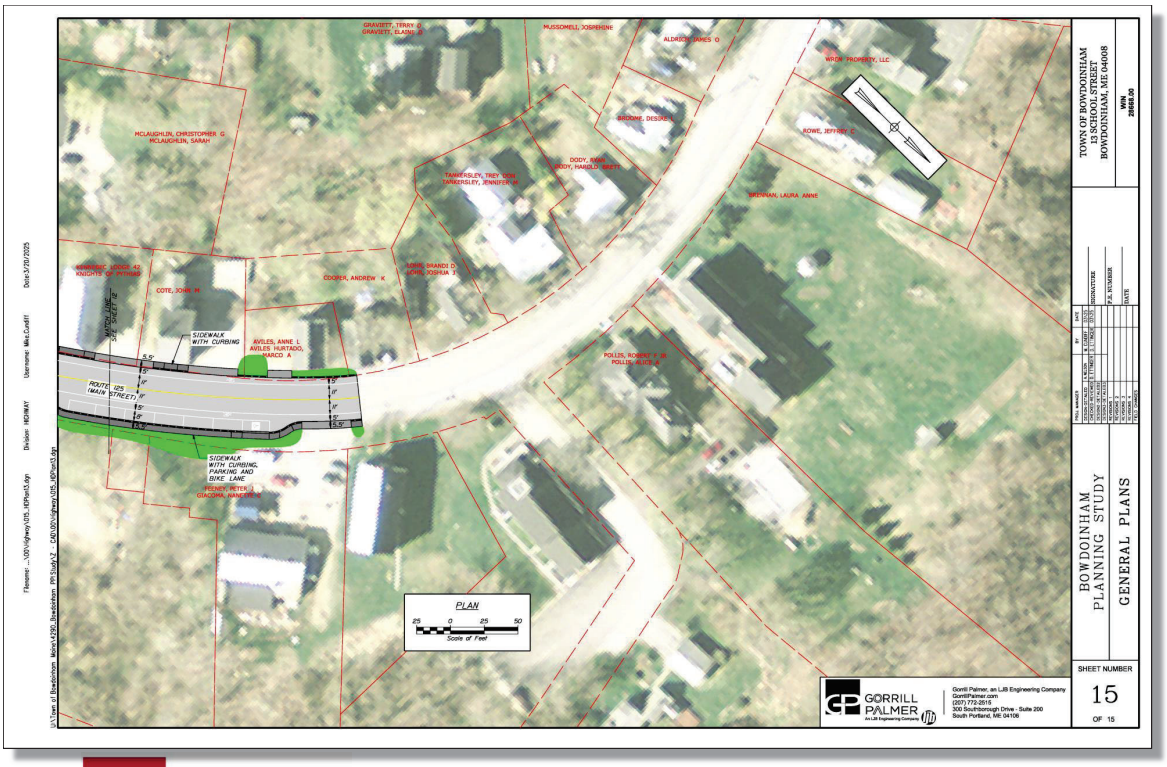

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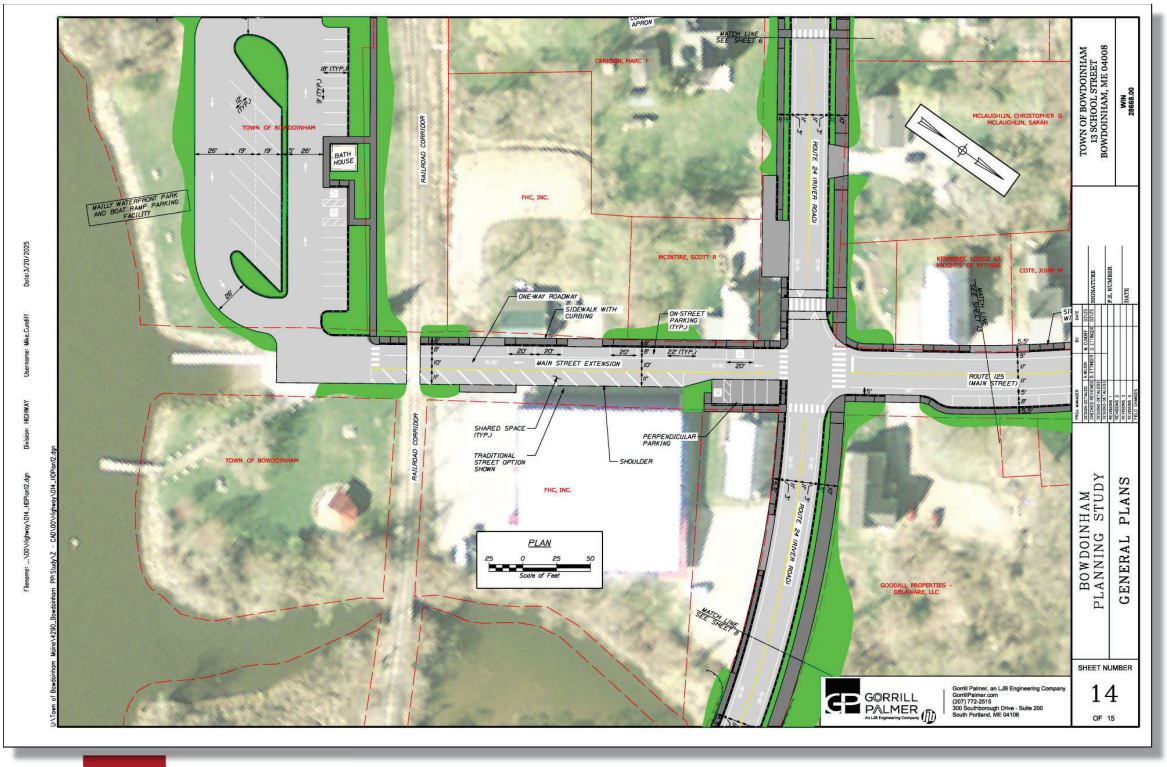
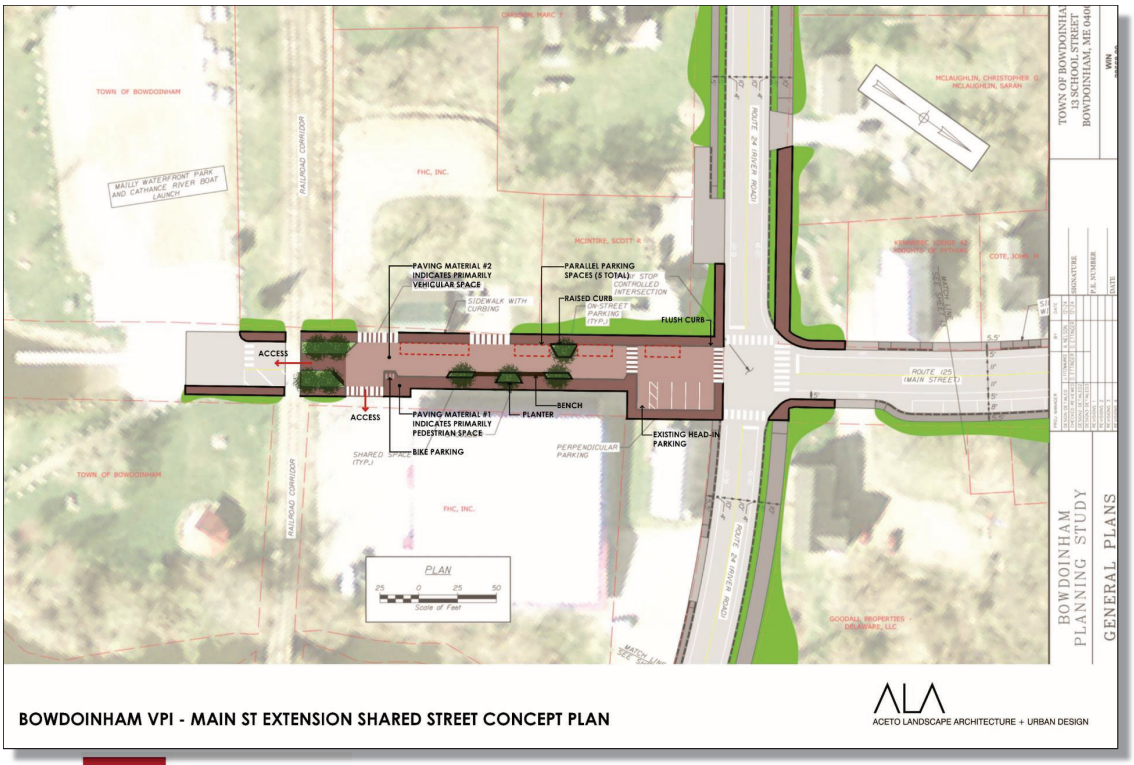


Concepts

- Main Street Ext.
- Option 1
- Traditional Street Layout



Concepts

- Main Street Ext.
- Option 2
- Shared Street Layout

BOWDOINHAM VPI - MAIN ST EXT - PROPOSED TRADITIONAL STREET LOOKING SOUTH

ALA
ACETO LANDSCAPE ARCHITECTURE + URBAN DESIGN

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Concepts

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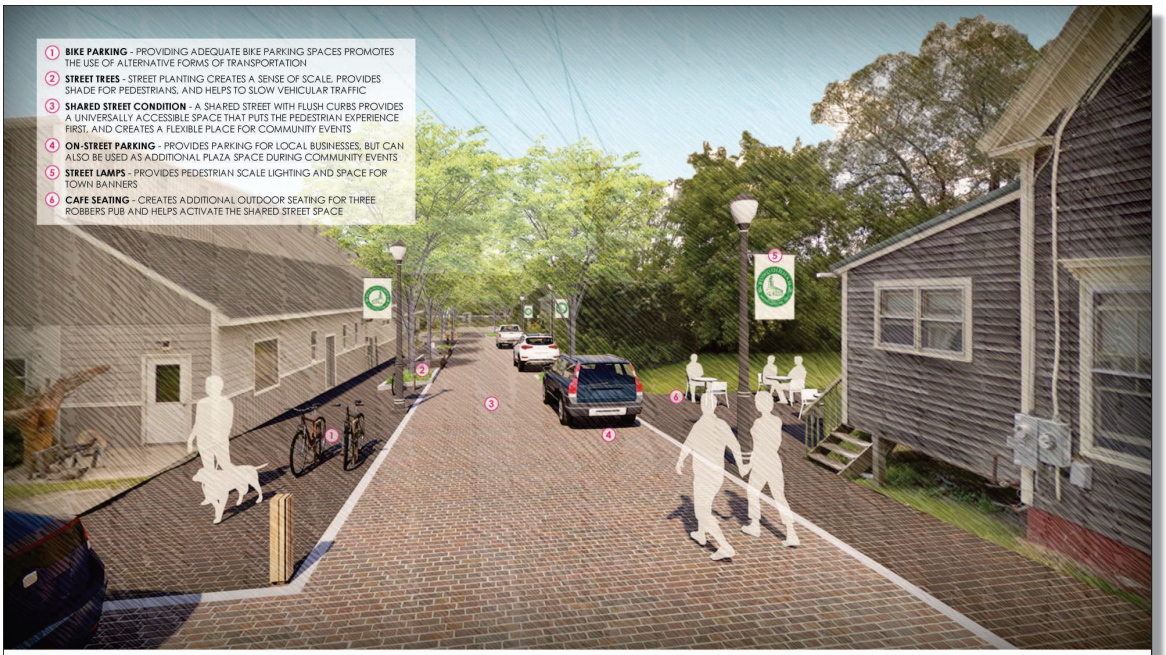
- Traditional Street Layout



BOWDOINHAM VPI - MAIN ST EXT - PROPOSED SHARED STREET LOOKING SOUTH

ALA
ACETO LANDSCAPE ARCHITECTURE + URBAN DESIGN

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Concepts

- Main Street Ext.
- Option 2
- Shared Street Layout

Concepts

- Main Street Ext.
- Option 2
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Schedule

- Public Mtg 1 – October 15, 2024
- Online Survey – October 2024
- Concepts / Revisions / Recommendations – Winter 2024/25
- Public Mtg 2 – March 31, 2025
- Draft Report – April 2025
- Final Report – May 2025

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Comments & Feedback

- ❑ Safety Improvements
- ❑ Traffic Calming
- ❑ Intersection Improvements
- ❑ Pedestrian / Bike Accommodations
- ❑ Parking / Access Management
- ❑ Main Street Extension
- ❑ Mailly Waterfront Park
- ❑ Cathance River Boat Facility
- ❑ Placemaking Opportunities
- ❑ Other Items

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