October 2021

Androscoggin Brunswick-Topsham Riverwalk Feasibility Study

Brunswick maine

MaineDOT

Illustration by Anthony Muench RLA

Contents

1.0 INTRODUCTION

The Town of Brunswick and the Maine Department of Transportation (MaineDOT) contracted with T. Y. Lin International (TYLI) to conduct a feasibility study for the Androscoggin Brunswick-Topsham Riverwalk beginning at the Swinging Bridge and ending at the Frank J. Wood Bridge via Mill, Bow, Cabot, and Maine Streets. The purpose of the study is to create and widen a bicycle and pedestrian travel-way to the recommended minimum 8-foot width to accommodate concurrent use by bicyclists, pedestrians, and people with disabilities. Guardrails (separating vehicles from bicyclists and pedestrians), handrails, safety bollards and detectable warning fields will be installed as required and appropriate for optimum safety.

1.1 Study Area

Figure 1.1 shows the study area between the Swinging Bridge and the Frank J. Wood Bridge.

1.2 Advisory Committee

The following Advisory Committee was formed to help guide the study.

- Tom Farrell, Town of Brunswick
- Ryan Leighton, Town of Brunswick
- Jay Astle, Town of Brunswick
- Ryan Barnes, Town of Brunswick
- Josh Katz, Riverwalk Committee
- Nate Howard, MaineDOT
- Patrick Adams, MaineDOT
- Tom Errico, T.Y. Lin International

1.3 Related Studies

The following studies were used in development of recommendations:

- MaineDOT QCP 2014-2015 Application dated July 2012
- Brunswick Maine Street Feasibility Study, MaineDOT
- Frank J. Wood Bridge Replacement Project

1.4 Background Information

The MaineDOT QCP Application noted the following:

- Describe the project(s) transportation value(s) and purpose(s):

Cyclists and pedestrians are challenged to travel to and from the Swinging Bridge and the Frank J. Wood Bridge via Mill, Bow, Cabot, and Maine streets. A safety upgrade is necessary. Improvements proposed in this grant application will allow safe passage and clear separation of cyclists and pedestrians from vehicular traffic along intensely busy urban streets in a 1.25 mile loop running between Brunswick and Topsham. It should be noted that this is from the application for the original project and not all elements have been constructed.

- Describe why this project is important to your community and region):

March 2007, building on the success of the rehabilitation of the historic John A. Roebling designed Swinging Bridge, residents of Topsham and Brunswick formed the Androscoggin Brunswick-Topsham Riverwalk Advisory Committee. This Advisory Committee brings together the Topsham and Brunswick communities to design, support, and create a 1.25-mile, 4-season, fully accessible, dedicated in-town walking loop along both sides of the Androscoggin River. The plan envisions a safe route along the Androscoggin River that encompasses and enhances the Swinging Bridge and the Frank J. Wood Bridge connecting the two communities.

- Describe the potential positive impacts on the community, including at a minimum improving safety, mobility, or transportation in general, and the local/regional economy:

Phase 3. In Brunswick, construct a safe bike/pedestrian travel way along Mill Street from Bow Street intersection with Route 1 entrance ramp to the Androscoggin Swinging Bridge. Parts of the walkway will be widened to provide overlooks. The walkway will be inside the guardrail to protect pedestrians and cyclists from roadway traffic. Phase 4. In Brunswick, wide sidewalks from Maine Street along Cabot and Bow streets to the Route 1 entrance ramp. Project will include widening and clearly defining Cabot Street sidewalk through Fort Andross parking areas and adding green space as possible. Phase 5. In Topsham at 2 Main Street, create a pocket park along river and stairway up to Frank J. Wood Bridge ("Green Bridge"). The stairway will have two semi-circular river overlooks. Access to the Green Bridge from the pocket park for wheelchairs, bicycles, and strollers will be maintained on
Summer and Main Street sidewalks around the Priority Business Center, 2 Main Street. Trails link historic and cultural sites, providing opportunities for community festivals, events, and competitions. Interpretive signs along trails identify areas of historical interest, such as buildings, river transportation, bridges, rail lines, and native heritage. The trails also provide bike routes so that urban commuters can ride their bikes to work or walk, which reduces smog emissions.

1.5 Purpose and Need

The purpose of the study is to create and widen a bicycle and pedestrian travel-way to the recommended minimum 8-foot width to accommodate concurrent use by bicyclists, pedestrians, and people with disabilities. The need is associated with creating a 1.25-mile, 4-season, fully accessible, dedicated in-town walking loop along both sides of the Androscoggin River. The plan envisions a safe route along the Androscoggin River that encompasses and enhances the Swinging Bridge and the Frank J. Wood Bridge connecting Brunswick and Topsham.

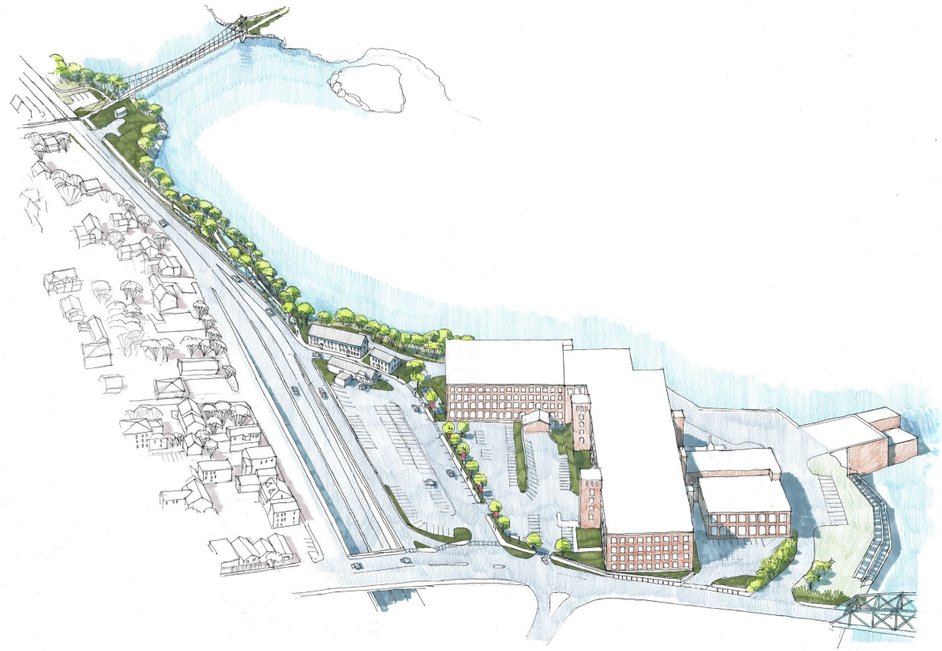
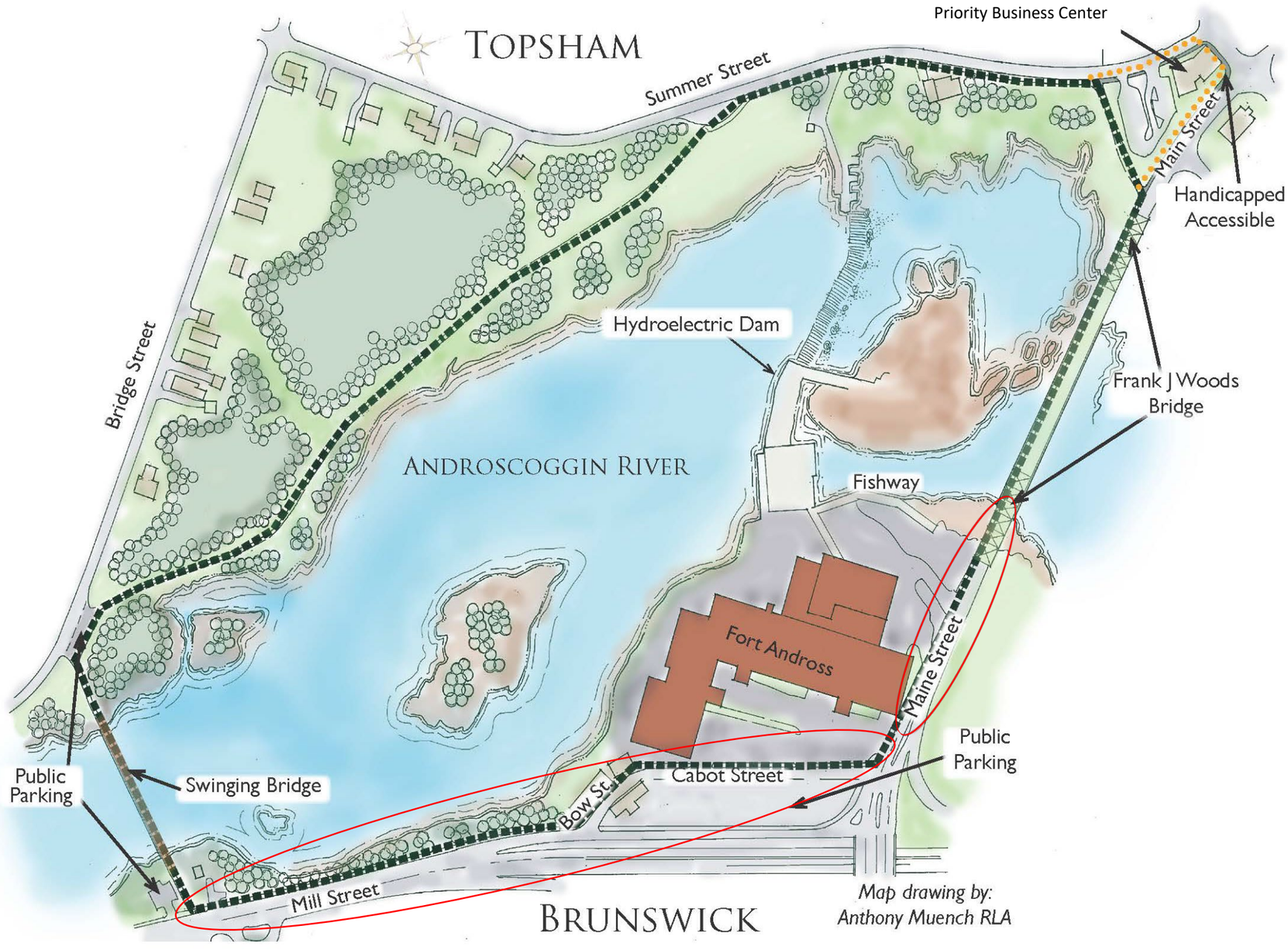


Figure 1.1: Study Area



2.0 PROJECT INITIATION AND DATA COLLECTION

2.1 Kick-off Meeting

A Kick-Off meeting was held on December 11, 2018 and key discussion items included:

- The section of roadway was recently repaved and designed by Wright-Pierce. They have cross-section data that can be supplemented with LIDAR data.
- The Committee was unsure of the available right-of-way information available. MaineDOT will check what information they have. Wright-Pierce may also have some available information. TYLI will inquire with them.
- The sewer pump station may have some equipment in the area. The utilities can be found using Brunswick's online GIS database. Any design needs to consider impacts on utilities.
- The mill-and-fill project puts a moratorium on touching the pavement. We can get a waiver to do shoulder work.
- TYLI will look at what environmental information is available in the area from the Frank J. Wood Bridge project.
- Due to the proximity to the mill, Cabot Street may have historic protections as well as the apartment buildings on the west side of Bow Street.
- TYLI will get information on the drilling samples from the Frank J. Wood project.
- The "Pool Table" bridge feasibility project has the potential to aid or hinder this project and needs to be considered in any designs.
- The Town and the State will create minimum design requirements.
- 10' is the preferred width for a shared use path but special constraints are understood for this project. The curb separation standard needs to be clarified by MaineDOT. Standard best practice is to separate the path from the road.
- The Riverwalk Committee would prefer a barrier for the path. MaineDOT will determine if the barrier needs to be crash worthy. Federal guidelines say it doesn't.
- There is a possibility that Cabot Street and the Route 1 On-Ramp will get combined into one road.
- The Riverwalk Committee would prefer to carry the path along the river. It is not likely due to an approximately one-story grade separation behind the mill. The Committee will need to document why we aren't proceeding with this alternative.
- Transitioning from bicycle lanes and sidewalks to a multi-use path is a major design requirement. It is likely easiest to transition at the signal at the Pool Table intersection area.
- The Pool Table bridge project is looking at a roundabout, a new ramp, combining streets, changing traffic flow, and adding a Single Point Interchange (SPUI). These alternatives will change traffic flow in the study area which needs to be considered during any Route 1 road diet analysis.
- The Town will need to write to MaineDOT after the study to acquire funds.
- MaineDOT is looking at about $400,000-$500,000 for the project.

2.2 Project Survey / Base Mapping

The base map for the project was based on a review of available information provided by the Town and available LIDAR survey from the Frank J. Wood Bridge and Maine Street/Route 1 MaineDOT projects.

2.3 Design Field Reviews / Review of Existing Conditions

TYLI conducted a field review of conditions particularly as it relates to roadway measurements as documented later in this report.

2.4 Environmental Field Reviews / Review of Existing Data

TYLI obtained information about the environmental resources in the project area to identify potential impacts to natural resources. This will assist with impact avoidance and minimization discussions and decisions during the future design process; assist in identifying the environmental permit requirements for federal, state, and local authorities; and facilitate project planning and permitting discussions.

3.0 Alternative Alignment Analysis

For the purposes of this feasibility study, the general path alignment evaluated is along Mill Street, Bow Street, Cabot Street, and Maine Street between the Swinging Bridge and ending at the Frank J. Wood Bridge. It is assumed that this effort will investigate a location of the Riverwalk parallel to Mill Street to the west and investigate various options along Bow Street and Cabot Street depending on information from the MaineDOT Maine Street Bridge Feasibility Study and design plans for the Frank J. Wood Bridge project.

At the Kick-Off meeting it was noted that ideally the Riverwalk Committee would prefer to have an alignment that would follow the river. Given significant constraints between the river and the mill building and parking areas and the grade difference at the hydroelectric dam wall, this alignment was eliminated from consideration.

3.1 Segment A – Swinging Bridge to Bow Street

Alternative 1

This alternative investigated reduction of lane and shoulder widths on Route 1 to eliminate or minimize the need for retaining walls along the path in accordance with MaineDOT's HCP philosophy and flexible design guidelines. Specifically, TYLI reviewed traffic volumes and safety information and identified a possible roadway cross-section given the Route 1 HCP 1 classification. This Alternative in essence investigated travel lane width and shoulder width reductions that would minimize or eliminate retaining structures along the slope to the Androscoggin River. Detailed field measurements were obtained to evaluate the feasibility of this alternative.

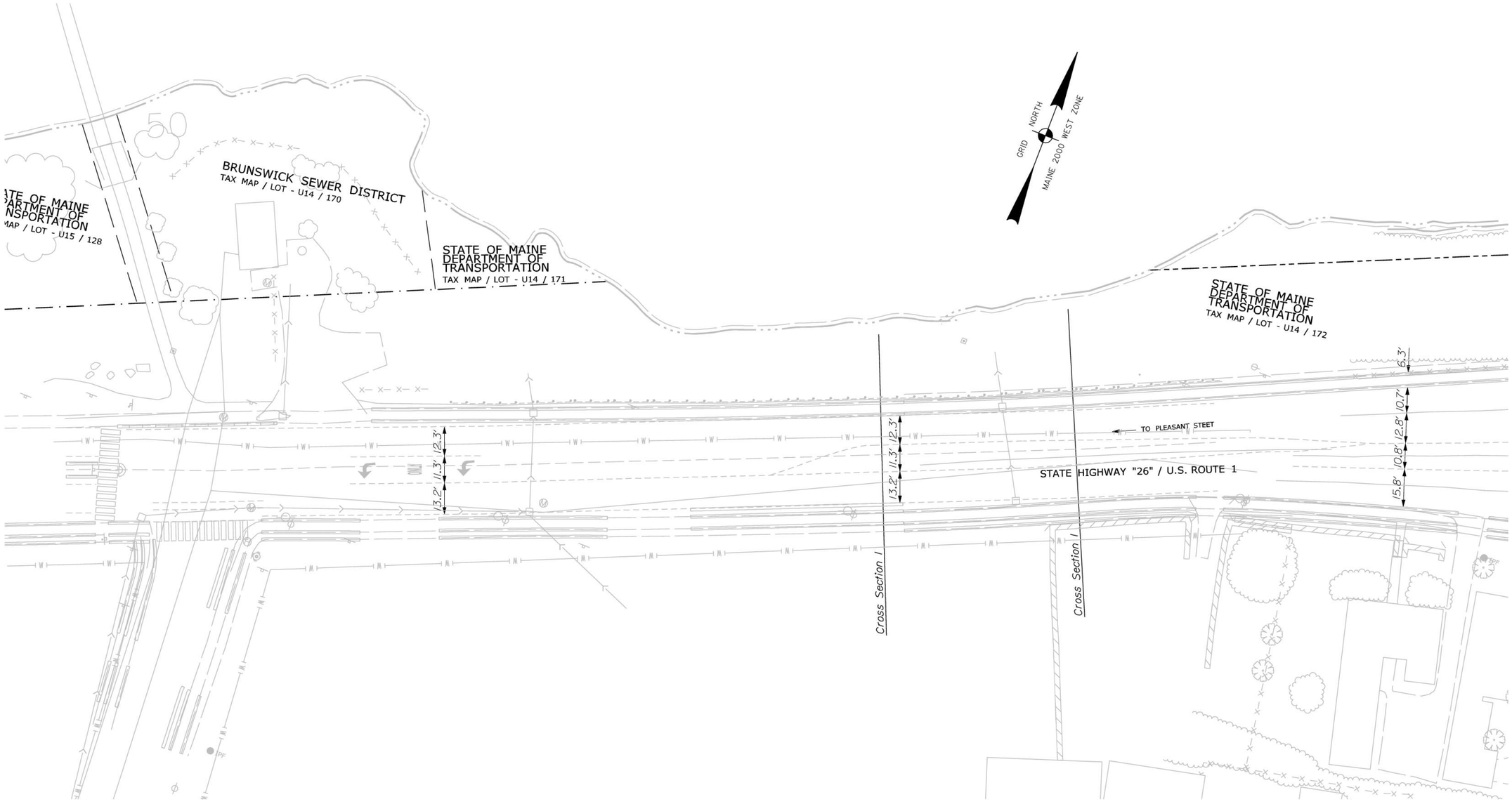
Narrowing Route 1 Roadway Pavement Cross-Section

The existing dimension of the Route 1 cross-section just north of Cushing Street is (see **Figure 3.1**):

- 5'6" Sidewalk
- 3'6" Shoulder
- 12'4" Travel lane
- 11'3" Left turn lane
- 13'2" Travel lane
- 3'4" Shoulder

MaineDOT requires a typical roadway section based on the Priority Classification for Route 1 which is providing 4-foot shoulders and 11-foot travel lanes. It may be possible to have a 10-foot left-turn lane. However, this left-turn lane is used by MaineDOT plows trucks and other large vehicles, so a wider 11-foot lane is suggested. Assuming 11-foot travel lanes and 4-foot shoulders, Route 1 could consist of a curb-to-curb width of 41 feet compared to the existing 43 feet 7 inches. Accordingly, the northerly curb line could be adjusted to gain 2.5 feet for the path. The existing sidewalk is 5'6" wide, so the curb adjustment may provide sufficient space for an 8-foot path without any widening toward the river. To obtain the 10-foot preferred width, plus an additional foot for a barrier (separating path users from Route 1 traffic), it would require adjusting the location of the guardrail location about 3 feet towards the river.

Figure 3.1: Existing Roadway Dimensions



Eliminating the Route 1 Left-Turn Lane

The key concern with eliminating the left-turn lane on southbound Route 1 is the impact a shared through/left lane would have on mobility and safety. Intersection turning movement volumes are not available. However, MaineDOT conducted Automatic Traffic Recorder counts on Cushing Street and Route 1 in August 2019. Those counts are presented to the right and indicates Route 1 has a daily volume of approximately 29,000 vehicles and Cushing Street has a daily volume of 1,800 vehicles. The heaviest two-way peak hour volume on Cushing Street is 164 vehicles between 3:00 and 4:00 PM. The corresponding two-way volume on Route 1 is 1,982 vehicles. The magnitude of traffic on Route 1 would warrant the need for a left-turn lane for a very low level of left turning traffic. Assuming a 50/50 distribution (half of the 164 vehicles) and the 60% is originating from the north, the peak hour left-turn volume is estimated to be approximately 50 vehicles. This level of traffic would easily warrant a lane and therefore elimination of the left-turn lane is not recommended.

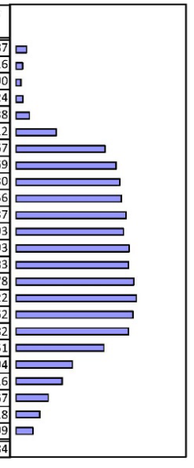
Conclusion: Given limited available excess pavement on Route 1, the cost to adjust the curb location and the desire to maintain a left-turn lane for movements onto Cushing Street, Alternative 1 is not recommended.

9/17/2020 9:36 AM

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING DIVISION
TRAFFIC MONITORING SECTION

Town Brunswick — Map U/11D — **Sta. 230503001003**
County Cumberland — Town # 05030
Location **US 1 (MILL ST) E/O CUSHING ST** — County # 05
Start Date 08/07/19 — Counter #

Date	08/04/19	08/05/19	08/06/19	08/07/19	08/08/19	08/09/19	08/10/19	week day
Time	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	average
0:00					187			187
1:00					116			116
2:00					90			90
3:00					124			124
4:00					238			238
5:00					712			712
6:00				1567				1567
7:00				1769				1769
8:00				1830				1830
9:00				1856				1856
10:00				1937				1937
11:00				1893				1893
12:00				1993				1993
13:00				1983				1983
14:00				2078				2078
15:00				2122				2122
16:00				2062				2062
17:00				1982				1982
18:00				1551				1551
19:00				994				994
20:00				816				816
21:00				567				567
22:00				418				418
23:00				299				299
Total	0	0	0	27717	1467	0	0	29184



AM Peak 1937 712
PM Peak 2122
24 Duration

9/17/2020 9:37 AM

MAINE DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING DIVISION
TRAFFIC MONITORING SECTION

Town Brunswick — Map U/11D — **Sta. 230503001005**
County Cumberland — Town # 05030
Location **CUSHING ST S/O US 1 (MILL ST)** — County # 05
Start Date 04/25/19 — Counter # 699

Date	04/21/19	04/22/19	04/23/19	04/24/19	04/25/19	04/26/19	04/27/19	week day
Time	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	average
0:00						5		5
1:00						2		2
2:00						2		2
3:00						2		2
4:00						2		2
5:00						19		19
6:00						57		57
7:00						120		120
8:00						123		123
9:00						129		129
10:00						145		145
11:00					126	151		139
12:00					140	156		140
13:00					114			114
14:00					148			148
15:00					126			126
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17:00					164			164
18:00					86			86
19:00					76			76
20:00					56			56
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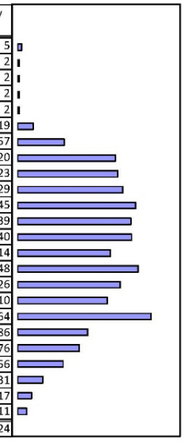
22:00					17			17
23:00					11			11
Total	0	0	0	0	1205	913	0	1824



AM Peak 126 151
26 Duration
PM Peak 164 156
Peak hour count 164
DHV Factor 1.11
DHV % of AADT = 0.11 11%

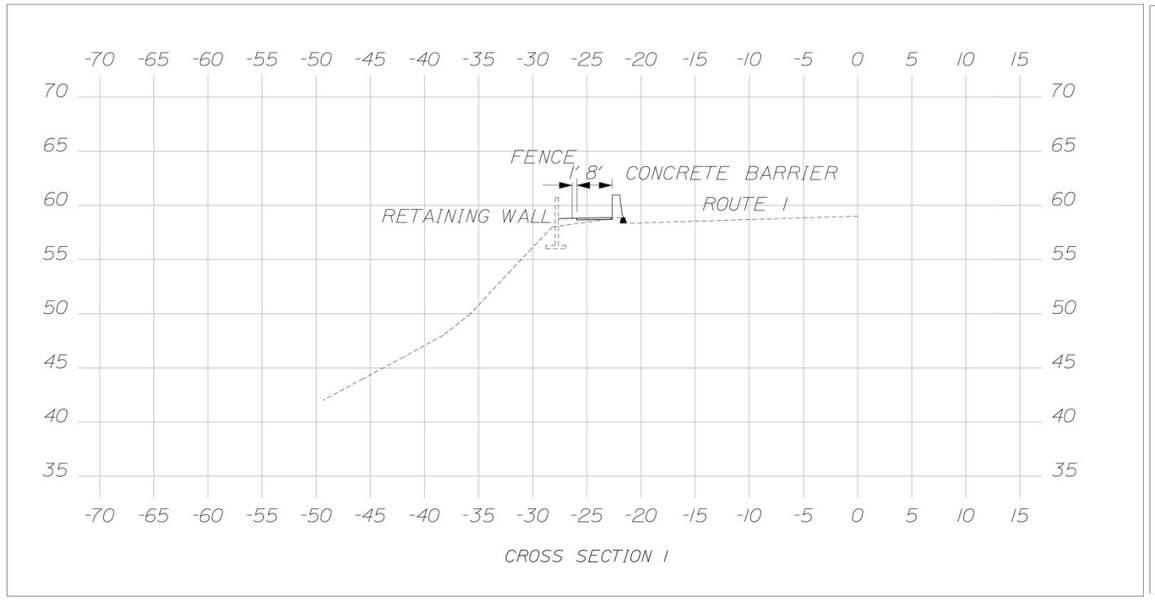
Alternative 2

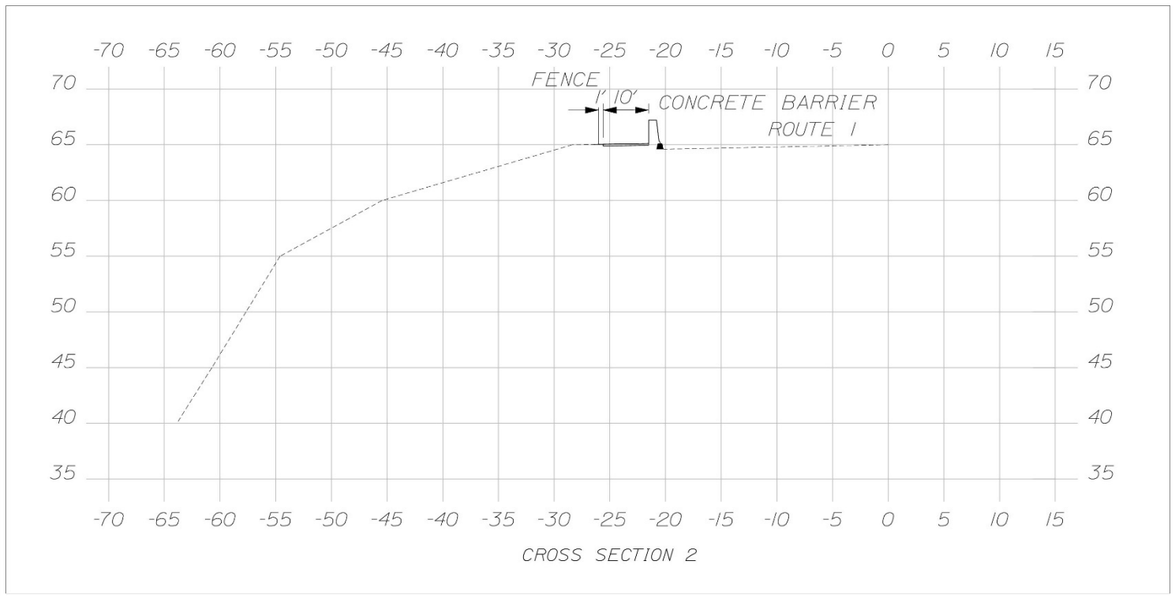
This Alternative assumes no changes to the Route 1 (Mill Street) roadway pavement configuration and thus assumes the path will be located north of the existing Route 1 curb line (the sidewalk will be widened). Just north of the Swinging Bridge the Androscoggin River gets very close to the road (see cross-sections). It will be difficult to construct a 10-foot path and barrier along Route 1 without the need for a retaining structure. Accordingly, a retaining structure that is approximately 150 feet in length will be required.

Figure 3.2 illustrates the path plan view location and details. **Figure 3.3** depicts cross-section details along Route 1.

Figure 3.2: Recommended Path Alignment

Figure 3.3: Cross-Sections (see Figure 3.2 for location)





3.2 Segment B – Bow Street/Cabot Street to Maine Street

Two alternatives were evaluated from a cost perspective. Alternative 1 assumes the recommendation from the Maine Street Bridge Feasibility Study is constructed and thus the cost is only for adding the path. Alternative 2 assumes the Maine Street Bridge Feasibility Study recommendation is not implemented and the path is constructed under existing conditions on Bow and Cabot Streets.

Alternative 1: With the Brunswick Maine Street Bridge Feasibility Study Recommended Concept

The Brunswick Maine Street Bridge was initially funded as a deck replacement in MaineDOT's 3-Year Work Plan. In 2018, the feasibility study was initiated by the Bureau of Planning at the request of the Bridge Program to evaluate mobility issues and to consider transportation improvement alternatives on or adjacent to the Maine Street Bridge over Route 1 in downtown Brunswick. Alternative A6 - Simplified Maine Street/Cabot Street Intersection with a New Signal at Mason Street was recommended and assumed the Route 1 Southbound On-Ramp is combined with Cabot Street to create one eastbound approach. A traffic signal was also added at Mason Street to allow the southbound left-turn movement to pass more easily. **Figures 3.4 and 3.5** depict the A6 Alternative and that concept plan includes the provision of a 10-foot path located within the reconfigured Fort Andross Mill parking lot. Some details are noted as follows.

- The area at the corner of Bow Street and the Route 1 Southbound On-Ramp is constrained. The A6 plan includes changes to this merge area such that space is created for construction of the path around the corner.
- The path terminates at Maine Street, where a signalized crossing is proposed. The crosswalk and signal timing shall account for bicycles.
- The layout of the parking spaces will need to consider vehicle overhang impacts to trail users. Appropriate separation is suggested.
- It is suggested that the parking lot driveway crossings of the path be designed for optimal safety of path users. A raised path is suggested.
- Final details on access to Bow Street properties and the side of Fort Andross were not determined during the Maine Street Feasibility Study. Driveway crossings of the path are likely, and that design should also favor the safety of path users versus vehicles.

Figure 3.4: Alternative 1 Path Alignment

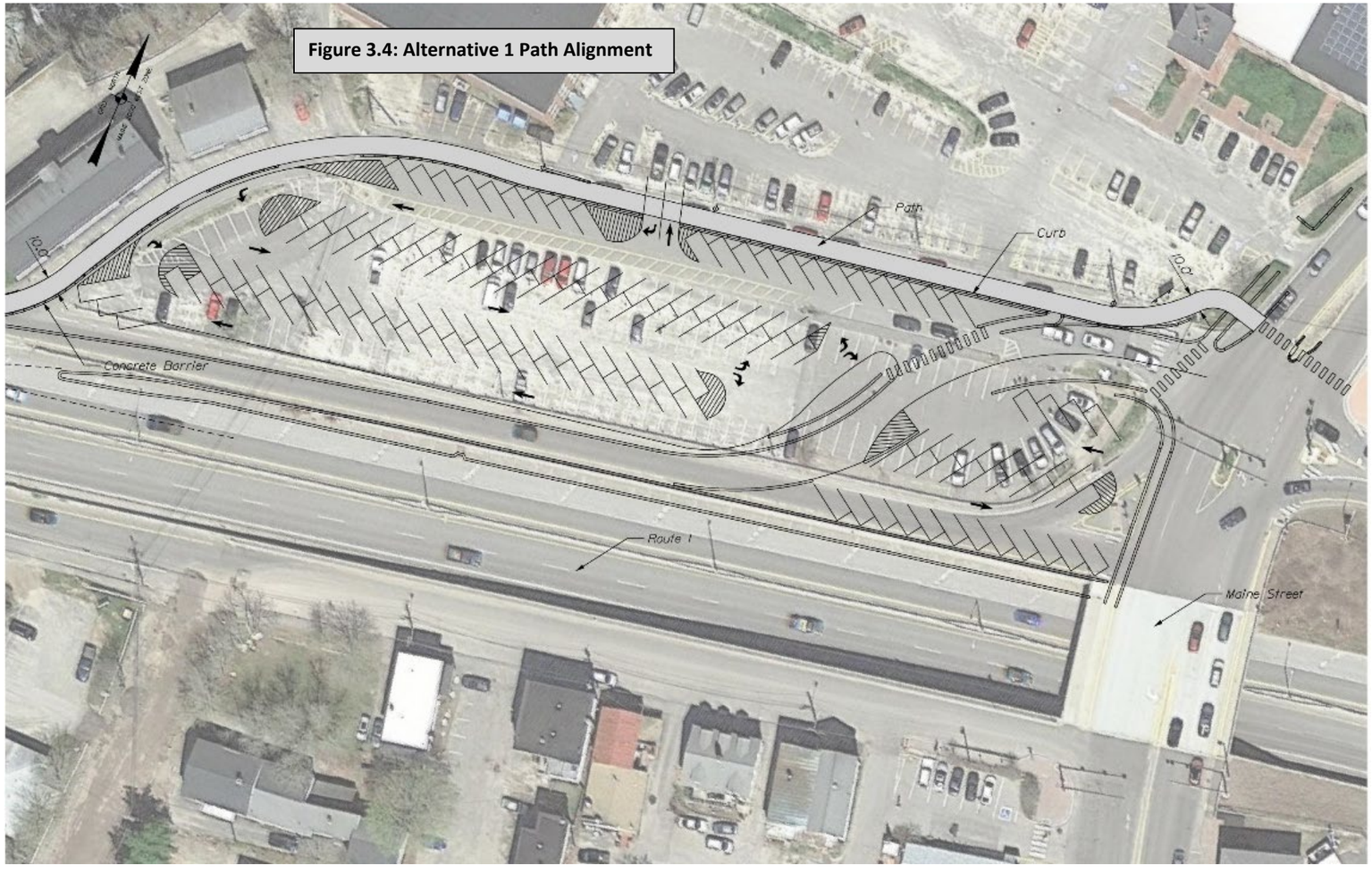


Figure 3.5: Alternative 1 Path Alignment

Alternative 2: Without the Brunswick Maine Street Bridge Feasibility Study Recommended Concept

Alternative 2 assumes the path is constructed in the location of the existing sidewalk along Bow and Cabot Streets. See **Figures 3.6, 3.7 and 3.8** depict Alternative 2 conditions**.** The following should be noted with this Alternative:

- The path is assumed to be 10 feet wide.
- Improvements are required at the corner of Bow Street and the Route 1 southbound On-Ramp. This will require modification to the Waterfront Maine Brunswick LLC parking area.
- On-Street parking is eliminated.
- Existing utility poles may impact the effective width of the path and relocation may be required.

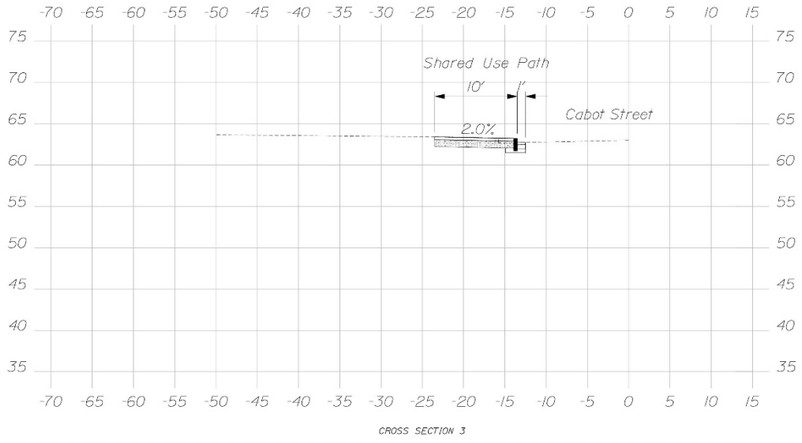


Figure 3.7: Alternative 2 Cabot St. Cross-Section

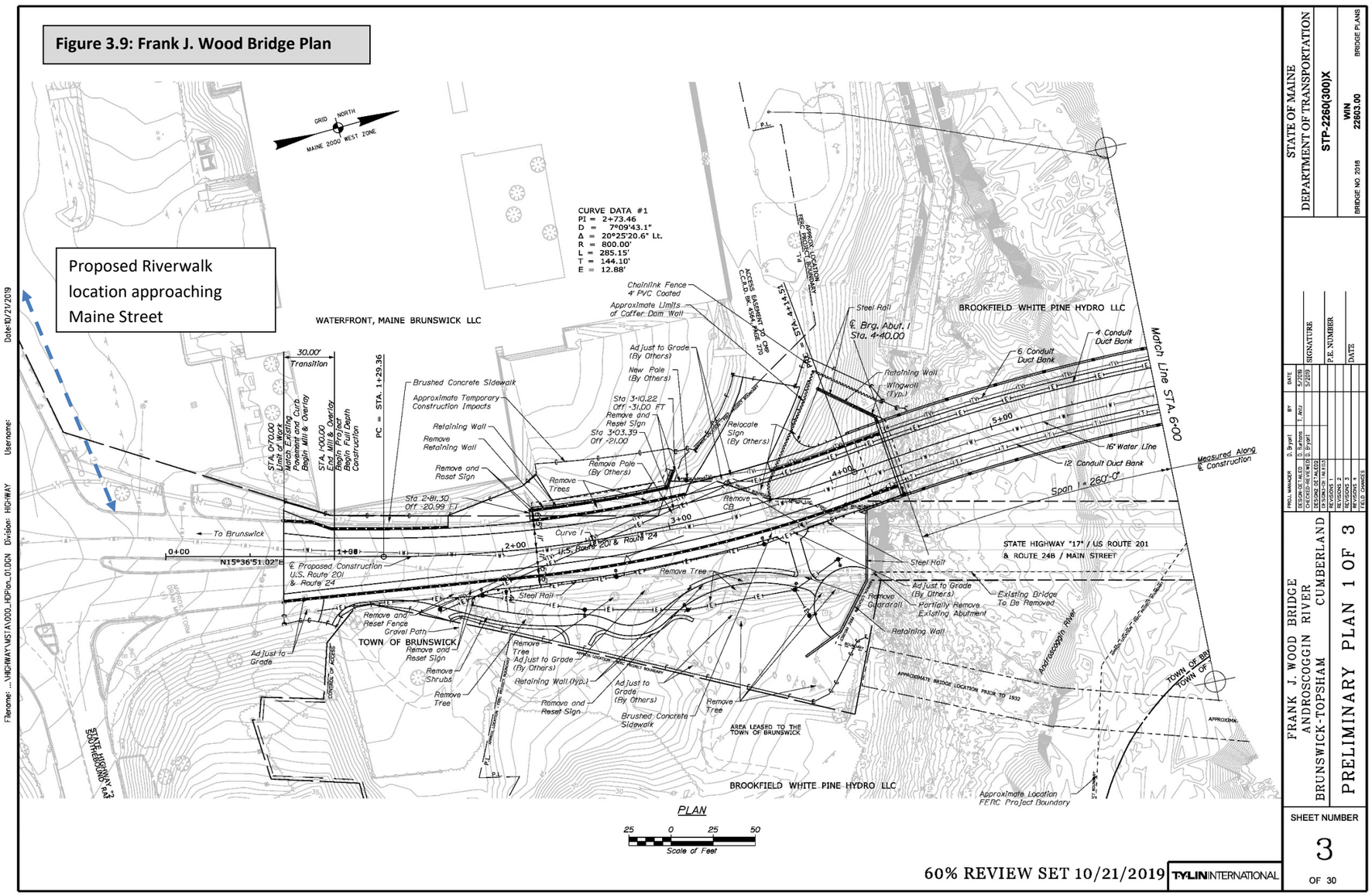
Figure 3.6: Alternative 2 Path Alignment

Figure 3.8: Alternative 2 Path Alignment

Frank J. Wood Bridge Project

Figure 3.9 illustrates the preliminary design plan for the project, the limit of work ends prior to the Cabot Street intersection. The project will be providing two 5-foot shoulders and 6-foot sidewalks on both sides of the bridge. Bicyclists traveling from the proposed Riverwalk will cross at the signalized Cabot Street intersection to access the shoulder/bike lane.

Figure 3.9: Frank J. Wood Bridge Plan



4.0 ENVIRONMENTAL RESOURCES

The following documents environmental resources obtained from Town and State online resources. These include a review of historic, state conserved land, and plant and animal habitat.

4.1 Historic

According to state data, there are three properties in the vicinity of the project that are eligible for historic designation (see **Figure 4.1** and appendix). These properties include:

- 2 Bow Street – Cabot Mill Tenement
- 18 Bow Street
- Fort Andross

Figure 4.1: Historic Resources

The Maine Department of Transportation provides this publication for information only. Reliance upon this information is at user risk. It is subject to revision and may be incomplete depending upon changing conditions. The Department assumes no liability if injuries or damages result from this information. This map is not intended to support emergency dispatch.

4.2 State Conservation Land

As noted in **Figure 4.2**, there are no state conservation lands located within the study area. The nearest conservation land is the 250th Anniversary Park located across Maine Street at Cabot Street.

Figure 4.2: Conservation Land

4.3 Plant and Animal Habitat

No know endangered plant or animal habitat were identified in the project area. See **Figure 4.3**

4.4 Wetlands

No know wetlands were identified in the project area.

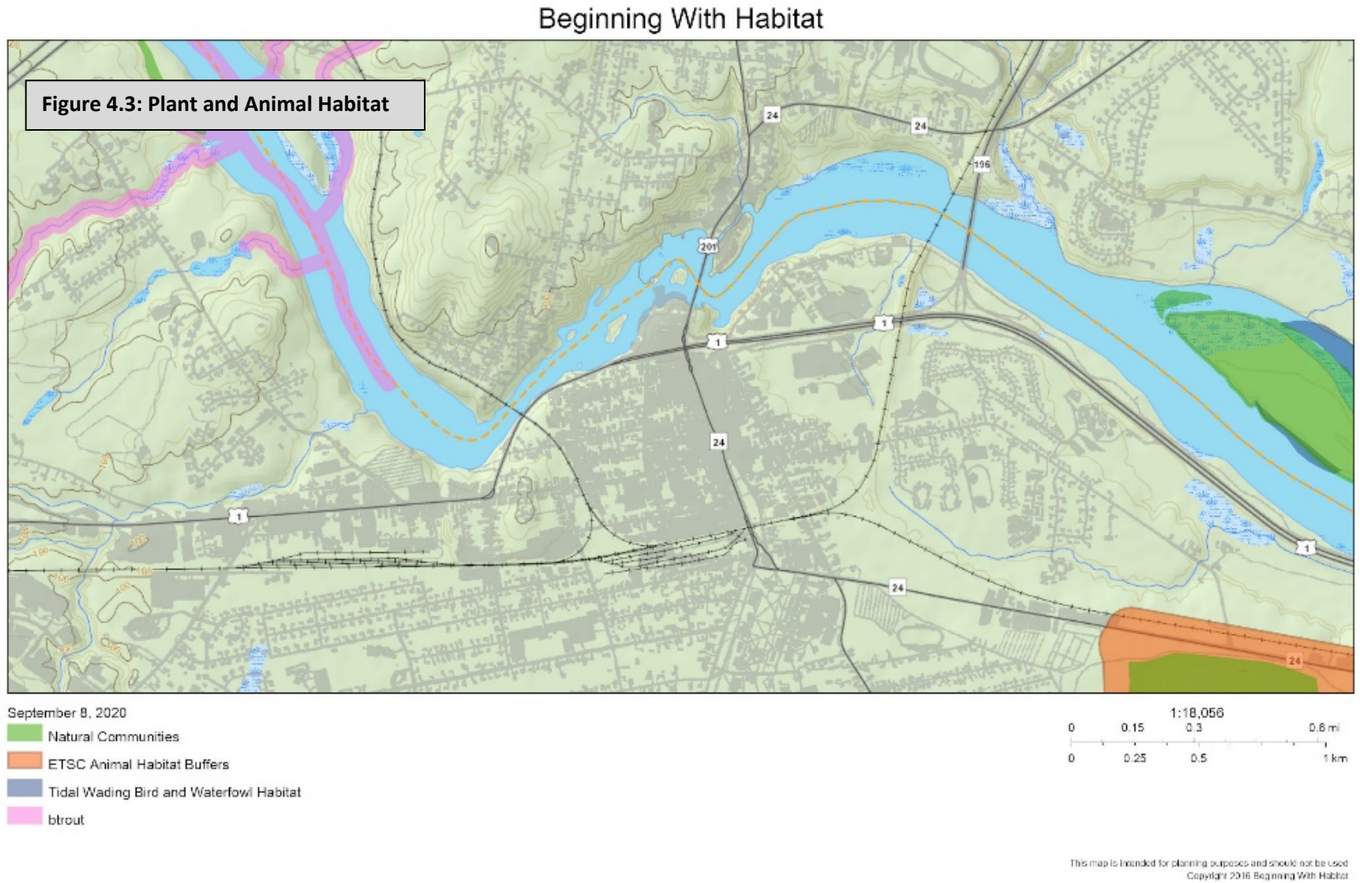


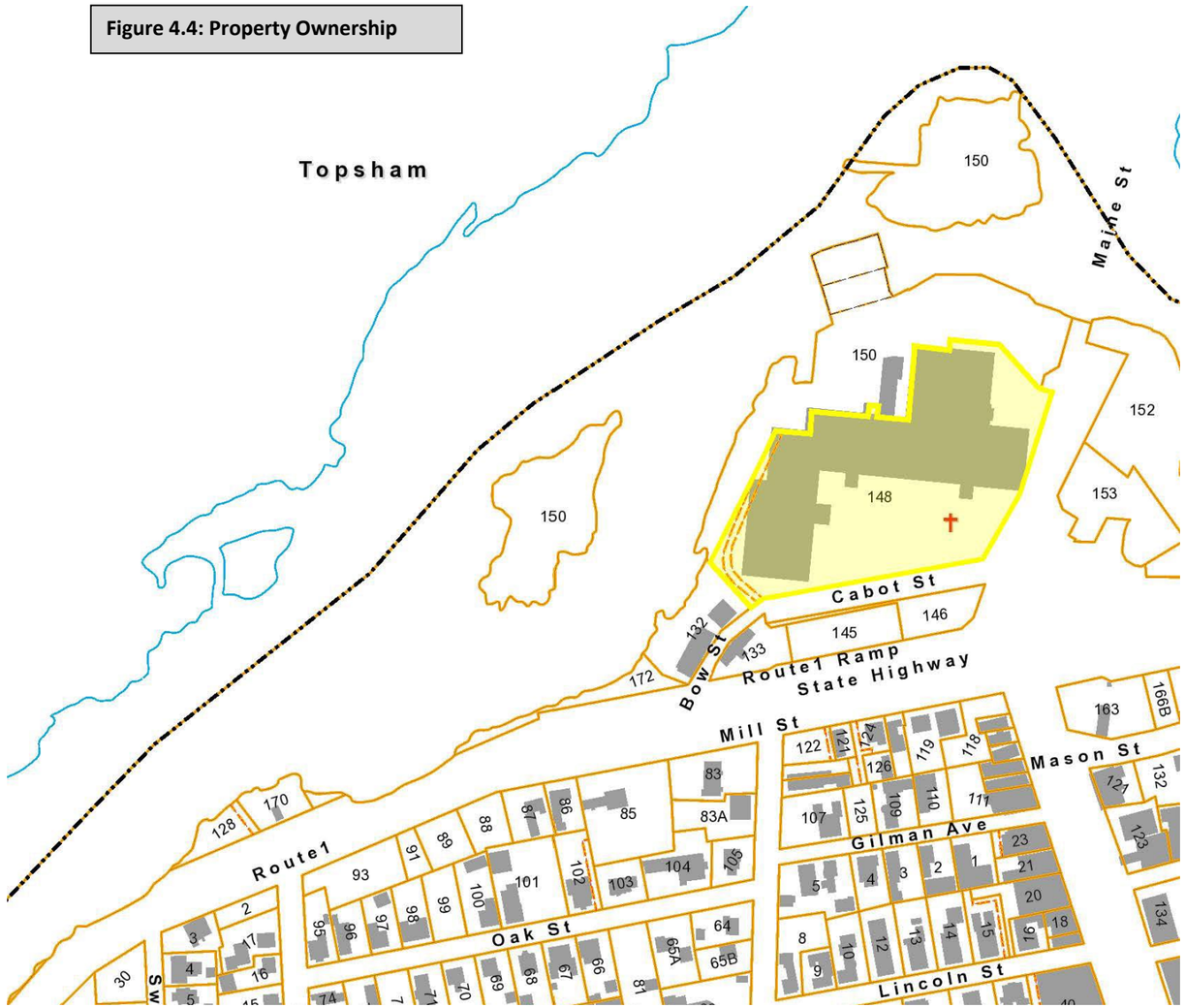
Figure 4.3: Plant and Animal Habitat

4.5 Property Ownership

Figure 4.4 depicts property lots according to Town of Brunswick information. From the Swinging Bridge to Bow Street properties along the path alignment are owned by State and Municipal entities. A summary of each lot ownership is provided as follows:

- Lot 128 – MaineDOT
- Lot 170 – Brunswick Sewer District
- Lot 172 – MaineDOT
- Lot 132 – Taggart Realty, LLC
- Lot 148 – Waterfront Maine Brunswick, LLC
- Lot 133 – Waterfront Maine Brunswick, LLC
- Lot 145 – Town of Brunswick
- Lot 146 – MaineDOT

Figure 4.4: Property Ownership



5.0 ALTERNATIVE COST ANALYSIS

TYLI developed planning-level cost estimates for recommendations (including highway and trail and potential right-of-way costs) according to concept level plans. Cost estimates were prepared for the path segments identified previously.

5.1 Segment A – Swinging Bridge to Bow Street

The Town requested that a cost be estimated for widening the path to 10-feet in the constrained section, where it is assumed to be 8-feet wide. The 2-foot widening would add $35,000.00 to the project cost (which is not included in the table to the right). Given that the cost to widen the path to 10-feet is only $35,000.00, it is recommended that the project include this and the total cost for Segment A is $1,032,237.13.

Segment A - Swinging Bridge to Bow Street					
Description	**Item #**	**Quantity**	**Say**	**Unit Price**	**Cost**
Common Excavation	203.20	295.24	300	$ 30.00	$9,000.00
Gravel	304.10	306.30	325	$ 45.00	$14,625.00
Pavement	403	101.06	110	$ 214.54	$23,599.40
Perm. Conc. Barrier	526.321	65.00	65	$ 299.35	$19,457.75
G.R. Double Faced	606.1302	793.00	793	$45.75	$36,279.75
Chain link Fence	607.16	825	825	$34.10	$28,132.50
Mech. Stab. E. R. Wall	677.2	4550	4550	$ 73.71	$335,380.50
Curb Type 3	609.31	793	793	$ 15.00	$11,895.00
Drum	652.33	45	45	$ 65.00	$2,925.00
Cone	652.34	100	100	$ 20.00	$2,000.00
Construction Signs	652.35	400	400	$ 15.00	$6,000.00
MOTCD	652.36	80	80	$ 250.00	$20,000.00
Flagger	652.38	1800	1800	$ 27.00	$48,600.00
Sub Total					$557,894.90
30% Contingency					$167,368.47
Mobilization	659.10				$72,526.34
Construction Total			$797,789.71		
Preliminary Engineering 15%			$119,668.46		
Right-of-Way			$0		
Construction Engineering 10%			$79,778.97		
Project Total			**$997,237.13**		

5.2 Segment B – Bow Street/Cabot Street to Maine Street

Alternative 1 – Riverwalk Abuts Maine Street Bridge Feasibility Project

Alternative 1 – Riverwalk Abuts Maine Street Bridge Feasibility Project				
Description	Item #	Quantity	Unit Price	Cost
Common Excavation	203.20	362.963	$ 30.00	$10,888.89
Gravel	304.10	259.2593	$ 45.00	$11,666.67
Pavement	403	85.56	$ 250.00	$21,388.89
Curb Type 5	609.34/35	24	$ 65.00	$1,560.00
Pavement Marking	627.744	160	$ 3.75	$600.00
Drum	652.33	15	$ 65.00	$975.00
Cone	652.34	35	$ 20.00	$700.00
MOTCD	652.36	30	$ 250.00	$7,500.00
Flagger	652.38	250	$ 27.00	$6,750.00
Sub Total				$62,029.44
30% Contingency				$18,608.83
Mobilization	659.10			$8,063.83
Construction Total				$88,702.11
Preliminary Engineering 15%				$13,305.32
Right-of-Way				$30,000.00
Construction Engineering 10%				$8,870.21
Project Total				**$140,877.64**

Alternative 2 – Separate Path Project

Alternative 2 – Separate Path Project					
Description	**Item #**	**Quantity**	**Say**	**Unit Price**	**Cost**
Common Excavation	203.20	723.70	750	$30.00	$ 22,500.00
Gravel	304.10	499.26	550	$45.00	$24,750.00
Pavement	403	194.44	200	$200.00	$40,000.00
Vertical Curb Type 1	609.11	640	640	$40.00	$25,600.00
Term. Curb Type 1-8'	609.238	12	12	$350.00	$4,200.00
Curb Type 5	609.34/35	23.55	24	$65.00	$1,560.00
Reset Curb Type 1	609.38	50	50	$35.00	$1,750.00
Pavement Marking	627.744	156	160	$3.75	$600.00
Drum	652.33	45	45	$65.00	$2,925.00
Cone	652.34	100	100	$20.00	$2,000.00
Construction Signs	652.35	250	250	$15.00	$3,750.00
MOTCD	652.36	65	65	$250.00	$16,250.00
Flagger	652.38	700	700	$27.00	$18,900.00
Sub Total					$164,785.00
30% Contingency					$49,435.50
Mobilization	659.10				$21,422.05
Construction Total			$235,642.55		
Preliminary Engineering 15%			$35,346.38		
Right-of-Way			$30,000.00		
Construction Engineering 10%			$23,564.26		
Project Total			**$324,553.19**		

* This estimate assumes the Maine Street Bridge project is not completed.

5.3 Total Cost Summary

- ***Alternative in conjunction with Maine Street Bridge Project – $1,174,000.00***
- ***Alternative without Maine Street Bridge Project – $1,357,000.00***

6.0 PUBLIC OUTREACH

6.1 Advisory Committee Kick-Off Meeting

A Kick-Off meeting was held on December 11, 2018 and key discussion items included:

- The section of roadway was recently repaved and designed by Wright-Pierce. They have cross-section data that can be supplemented with LIDAR data.
- The Committee was unsure of the available right-of-way information available. MaineDOT will check what information they have. Wright-Pierce may also have some available information. TYLI will inquire with them.
- The sewer pump station may have some equipment in the area. The utilities can be found using Brunswick's online GIS database. Any design needs to consider impacts on utilities.
- The mill-and-fill project puts a moratorium on touching the pavement. We can get a waiver to do shoulder work.
- TYLI will look at what environmental information is available in the area from the Frank J. Wood Bridge project.
- Due to the proximity to the mill, Cabot Street may have historic protections as well as the apartment buildings on the west side of Bow Street.
- TYLI will get information on the drilling samples from the Frank J. Wood project.
- The "Pool Table" bridge feasibility project has the potential to aid or hinder this project and needs to be considered in any designs.
- The Town and the State will create minimum design requirements.
- 10' is the preferred width for a shared use path but special constraints are understood for this project. The curb separation standard needs to be clarified by MaineDOT. Standard best practice is to separate the path from the road.
- The Riverwalk Committee would prefer a barrier for the path. MaineDOT will determine if the barrier needs to be crash worthy. Federal guidelines say it doesn't.
- There is a possibility that Cabot and the Route 1 On-Ramp will get combined into one road.
- The Riverwalk Committee would prefer to carry the path along the river. It is not likely due to an approximately one-story grade separation behind the mill. The Committee will need to document why we aren't proceeding with this alternative.
- Transitioning from bicycle lanes and sidewalks to a multi-use path is a major design requirement. It is likely easiest to transition at the signal at the Pool Table intersection area.
- The Pool Table bridge project is looking at a roundabout, a new ramp, combining streets, changing traffic flow, and adding a Single Point Interchange (SPUI). These alternatives will change traffic flow in the study area which needs to be considered during any Route 1 road diet analysis.
- The Town will need to write to MaineDOT after the study to acquire funds.
- MaineDOT is looking at about $400,000-$500,000 for the project

6.2 Advisory Committee Working Session

A status meeting was held on November 22, 2019 to discuss progress. Discussion items included:

- In the area from the Swinging Bridge to Bow Street changes to the Route 1 cross-section are not feasible. Accordingly, a section of the path will require a retaining structure. This was specifically discussed in terms of field measurements and traffic conditions.
- Reviewing the draft recommendations for the Maine Street Bridge Street Feasibility Study. Specifically, the path alignment was presented.
- It was noted that the path will terminate at Maine Street and bicyclists headed to Topsham would need to cross at the signalized intersection.

6.3 Riverwalk Committee Meetings to present the Draft and Final Recommendations.

May 27, 2020 Zoom Meeting (Notes provide by the Riverwalk Committee)

Present: Co-Chairs: Nancy E. Randolph & Josh Katz, *Secretary*: Don Gower *Members:* Tom Farrell, Bill Brillant, Mellissa Fochesato, Rick Wilcox & Pam LeDuc **Guests:** Ryan Barnes, Tom Errico, Patrick Adams, Nate Howard and Martin Rooney **Absent:** Members: Alison Harris & Dot Riendeau **Advisory Member:** Tony Muench

Pre-meeting workshop 7:01 – 7:29 p.m.:

TY-Lin engineer, Tom Errico, walked us through his Power Point presentation of the preliminary Riverwalk plan. He will forward Nancy E. Randolph a pdf of the presentation. Some key points of discussion were:

1. The estimated cost of the plan is $1,280,000 (rough estimate and no lighting is included).
2. The current curb-line along Mill Street will need to be maintained. The plan calls for a reduction of the path width from 10' to 8' for an estimated 100' (Tom Errico will confirm the exact distance) along Mill Street. This is due to the limited real estate between Route 1 and the Androscoggin River and the cost of a retaining wall. Nancy E. Randolph stressed the need to maintain the 10' width for the entire length of the path. Tom Errico agreed to provide a cost estimate to do that. Patrick Adams noted that the 8' width meets national standards.
3. The plan calls for the path to follow the current location of the sidewalk along Cabot Street.
4. The plan does not include any details or cost for the connection to the new/rebuilt FJW Bridge.
5. None of the path cost is included in the Main Street Bridge project (Pool Table). In fact, much of the current Riverwalk plan might need to be modified if the Pool Table project is changed from the currently preferred option.
6. The estimated timeline is for a draft by July, Town Council/Riverwalk Committee approval in August & September leading to final plans by October.

Our Committee thanked all the guests who participated in the meeting. Regular Meeting

Josh Katz called the meeting to order at 7:29 p.m.

Minutes: The April 22, 2020 minutes were unanimously accepted as presented. (Nancy E. Randolph motioned and Melissa Fochesato 2nd).

Old Business:

I. Discussion of the Feasibility Study Draft Report:
   1. Increasing the width to 10' for the entire length is our only open question at the moment.
   2. Tom Farrell informed us that MDOT might be limiting any Bike/Ped projects $400,000 to $500,000 next year. This would seriously increase our fundraising need. Tom Farrell will follow-up on this concern. Nancy E. Randolph suggested we contact Senator Angus King for some federal support of

the project.

3. MDOT has taken over the design work from Ty-Lin for the Maine Street Bridge (Pool Table) project. This, and expected 2021 budgeting issues, could affect the final plan and how it relates to our project.
4. Tom Errico suggested we have a fall back plan to complete the walkway in sections. He recommended focusing on the Swinging Bridge to Cabot Street section.
5. No EPA study cost has been included with the project.
6. Tom Farrell brought up a question about the need for public input. Other than lighting there is limited opportunity for input. We will review this as needed along the path to approval.
7. The RTP Grant proposal is still on the table. However, we might not have the final plan ready by the September 25, 2020 deadline.

6.4 Town Council Meeting

On October 4, 2021, Town Staff review the Riverwalk project with the Town Council, and they unanimously approved the following resolution to request funding for the portion of the Riverwalk project located from the Swinging Bridge to Bow Street.

TOWN OF BRUNSWICK, MAINE
TOWN COUNCIL

A Resolution Endorsing Segment A of a Multi-Use Pathway (the Riverwalk) along the Androscoggin River from the Swinging Bridge to Bow and Cabot Streets

WHEREAS, for several years, the Town of Brunswick has participated with the Riverwalk Advisory Committee and the Town of Topsham in the planning and construction of the Riverwalk: a 1.25 mile Androscoggin Brunswick-Topsham walking loop ("Riverwalk"); and

WHEREAS, the Riverwalk project has been included in the Capital Improvement Program since 2010; and

WHEREAS, the 2011 Master Plan for Downtown Brunswick & the Outer Pleasant Street Corridor recommends support for the development of the Androscoggin Riverwalk, with pedestrian connections to Fort Andross, Frank Wood Bridge, the Swinging Bridge and Topsham; and

WHEREAS, in 2017 the Maine Department of Transportation ("MDOT") and Brunswick Town Council approved an $80,000 project of a "Feasibility study and possibly the preliminary design of a multiuse pathway along the Androscoggin River beginning at the Swinging Bridge, to Mill Street, Bow Street and Cabot Street ending at Frank J. Wood Bridge"; and

WHEREAS, in 2021 the Androscoggin Brunswick-Topsham Riverwalk Feasibility Study has been completed and recommends the project be completed in separate segments; and

WHEREAS, the MDOT and the Riverwalk Advisory Committee support completing Segment A from the Swinging Bridge to Cabot and Bow Streets;

NOW THEREFORE BE IT RESOLVED, that in cooperation with MDOT the Town Council endorses proceeding with preliminary design of Segment A of the Riverwalk from the Brunswick end of the Swinging bridge along Mill Street to Cabot Street as proposed in the Androscoggin Brunswick-Topsham Riverwalk Feasibility Study. In endorsing the project, the Town Council recognizes that the Town of Brunswick could be responsible for 100% of the preliminary engineering and related costs should the Town decide not to proceed with the project without good cause.

Proposed to Town Council: October 4, 2021
Adopted by Town Council: October 4, 2021