

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST FORM
FY23 FALL TOWN MEETING REQUEST FORM**

Department:	Priority #:	
Project Title and Description:	Total Project Cost:	

Department/Division Head:

Check if project is: New Resubmitted Cost estimate was developed: Internally Externally

For project re-submittals, list prior year(s):

List any funding sources and amounts already granted: _____

Basis of Estimated Costs (attach additional information if available)			If project has impact on 5 Year Plan and future operating budgets, insert estimated amounts.		
Capital:	Cost	Comments	Fiscal Year:	Capital	Operations & Maintenance
<i>Planning and Design</i>			<i>FY23</i>		
<i>Labor and Materials</i>			<i>FY24</i>		
<i>Administration</i>			<i>FY25</i>		
<i>Land Acquisition</i>			<i>FY26</i>		
<i>Equipment</i>			<i>FY27</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital					

Project Justification and Objective: _____

For Capital Project Requests:

Will this project be phased over more than one fiscal year? If yes, enter it on the 5 Year Plan Yes No
 Can this project be phased over more than one fiscal year? Yes No

For Capital Equipment Requests:

Check if equipment requested is replacement and enter the year, make & model, VIN and present condition of existing equipment

What is the expected lifespan of this new/replacement equipment: _____

Attach backup information, estimates, or justification to support this request.



Scope of Services
Jenney Pond Bypass Channel & Town Brook Trail improvements
Plymouth, Massachusetts
SLR #141.11982.P0008
August 11, 2022

BACKGROUND

Following the removal of the Billington Street Dam in 2002, renovation of the Jenney Grist Mill fish ladder in 2006, was the second project to restore fish passage along Town Brook in Plymouth, Massachusetts. At that time, the concrete fish ladder was retrofitted with a new aluminum Steeppass that was inserted into the existing concrete ladder. In the intervening 14 years, four additional barrier removal projects have been completed along Town Brook (Off-Billington, Water Street, Plymco, and Holmes). The Jenney Grist Mill fish ladder has become the final impediment to the migration of sea run fish up Town Brook to spawn into the Billington Sea. This fishway does function. However, the number of fish able to traverse the ladder is limited primarily due to its capacity. Consequently, fish become stacked at the entrance, vying for a chance to enter. This may cause a portion of the migrating population to abandon the attempt to spawn upstream. Previously, the Town of Plymouth, with the assistance of SLR International Corporation (SLR), formerly Milone & MacBroom Inc. (MMI), evaluated the possibility of constructing a fish bypass channel on the back side of the grist mill building to supplement the capacity of fish currently traveling up the Steeppass fishway.

The existing fishway is located on the north side of the grist mill building. A pedestrian walkway traverses around the south side of the building, connecting to the sidewalk on Spring Street. The walkway proceeds downstream along Town Brook to Brewster Garden, just upstream from Plymouth Harbor. Preliminary design plans have been prepared for a bypass channel on the south side of the grist mill building. This land is part of the private property owned by the grist mill but subject to an easement that allows for utilities as well as use by pedestrians. The bypass channel will be contained within this easement. Relocation of the pedestrian access has also been included in harmony with the bypass conceptual design. A sewer trunk line is also located within this easement and will need to be relocated as a part of the bypass design. The Preliminary Design Plans identified and included numerous additional site improvements including the access and landscaping area to the lower level of the grist mill below the dam, the upper-level grist mill access suspended decking, planting and landscape area adjacent to the private property to the south, reconstruction of Spring Lane (storm drainage, utilities, sidewalks, curbing, lighting, handicap access to the grist mill and crosswalk), and a structural retaining wall along the back side of the Spring Lane sidewalk, north of the fish ladder.

This scope of services is proposed for the purpose of advancing the preliminary design of the bypass channel, reconstructing the pedestrian walkways, grist mill access, hardscape, and plantings, Spring Lane reconstruction, and relocating the sewer trunk line around the south side of the Jenney Grist Mill. This area has high visibility, is aesthetically beautiful and is historically important. As such, the bypass

channel, walkways, and planting areas will need to be designed with aesthetics that are congruent with the surrounding features and to be pedestrian friendly.

A fair amount of work has been completed to date at the grist mill site in conjunction with the pond dredging, pedestrian bridge, and dam repair projects, including extensive base mapping, survey, and field investigations. This scope of services is proposed by SLR to further advance the design of the fish bypass, improvements to Spring Lane, structural retaining walls and hardscape and landscaping features. The project design includes the following more specific design elements:

- A new fish bypass channel from Jenney Pond under Spring Lane extending behind the grist mill building before joining Town Brook downstream of the existing weir. It also includes a new concrete replacement weir across Town Brook and integral with the fish bypass channel, concrete sidewalls, a new concrete box culvert under Spring Lane, new sidewalks, plantings, and overlook area along the fish bypass, a new pedestrian footbridge over the fish bypass, and a new relocated trunk sewer parallel to the fish bypass.
- Reconstruction of Spring Lane from the Summer Street intersection to the sawcut line near the orthodontist's office. The roadway reconstruction includes a new water main within the roadway, the curbing, sidewalk, and new lighting along the east side of the roadway, as well as a soldier pile wall behind the sidewalk to allow for the grade change between the sidewalk and the neighboring property, and to replace the existing stone wall. It is assumed that the west side curbing may remain.
- Repairs to Jenney Pond Dam identified in the phase 2 inspection report, including drainage improvements within Spring Lane, seepage controls downstream of the dam, and the fish bypass culvert designed to function as an emergency spillway.
- Additional landscape architecture hardscape and planting improvements beyond those mentioned above, including improved access to the upper level of the Grist Mill Museum directly from Spring Lane, improved accessible ramp access to the lower level of the Grist Mill Museum with new planting beds, revised landscaping between the orthodontist's office and the new fish bypass channel, and new pedestrian crossing of Spring Lane.
- An electrical engineering subconsultant to design decorative street lighting and wiring along Spring Lane and continuing behind the grist mill building along the fish bypass channel walkway.
- Additional elements include the fish counting overlook area at the outlet into Jenney Pond, a new concrete pad at the existing pond outlet headwall, and relocation of the dumpster behind the grist mill building.

Task numbering for the Jenney Grist Mill work follows the progression from previously completed contract tasks.

It is also our understanding that the town wishes to develop plans to reconstruct the existing Town Brook Trail from the proposed fishway bypass project downstream limits extending further downstream to the

Brewster Gardens, as well as a separate, ADA accessible, walkway extension that conveys pedestrians up onto the sidewalk at the intersection of Pleasant Street and Sandwich Street. The Town Brook Trail portion will essentially follow its current alignment along the brook, extending under Market Street on the south side abutment on an existing elevated concrete sidewalk and further downstream under Main Street extension. The walkway alignment will also be along the south abutment of Main Street Extension at the same height as the existing walkway. The downstream Town Brook Trail (TBT) project limit is just to the east of Main Street Extension, which is the limit of Brewster Gardens. The scope of work tasks will include a conceptual plan, preliminary design plans for permitting and final construction documents. The plans will depict the walkway layout, landscaping, short structural concrete walls at the bridge approaches, lighting, and associated drainage improvements. It is assumed that the TBT project will be a separate set of drawings and can be bid as a separate project from the Jenney Grist Mill design work.

Task numbering for the Town Brook Trail (TBT) work follows the progression from the Jenney Grist Mill contract tasks with the TBT designation after the task description.

SCOPE OF SERVICES

Task 8 – Meetings and Coordination – Final Design

- 8.1 Progress Meetings – Participate in three project meetings, one as an initial kickoff of this next phase of the project, one during the advancement of design to discuss progress, and one at the completion of Semi-Final Design. It is assumed that two of these meetings will be held virtually and hosted by SLR, and one will be held onsite.
- 8.2 Conference Calls – Host and participate in conference calls throughout the project, as requested.
- 8.3 Additional Structural Investigation – Perform a site reconnaissance of the Jenney Grist Mill site to evaluate the existing grist mill decking and access off the Spring Lane sidewalk as well as the stone retaining wall along the east side of the Spring Lane sidewalk. This effort will facilitate the final design of structural elements on the site.

Task 9 – Semi-Final (90%) Design Plans and Specifications

Under this phase of work, the project team will advance the preliminary (60%) design plans to semi-final design of the proposed facilities, which includes the following improvements identified under this task:

- 9.1 Design Plans – Prepare semi-final (90% completion) design plans for the proposed fishway. Plans will include the following items:
 - Title sheet
 - Beginning and end of project, project limit lines
 - Existing conditions, including titles of adjacent roadways and watercourses, location of

utilities, drainage facilities, and associated appurtenances, designated wetlands, and property lines and related information

- Plan view and profile of existing conditions
- Proposed improvements, including plan view and longitudinal profile of proposed facilities
- Proposed grading
- Typical cross sections
- Proposed planting/restoration plans
- Proposed water control
- Standard design details
- Special design details
- Proposed soil erosion and sedimentation controls
- Sequence of construction

9.2 Updated Design Memorandum – Update the design memorandum to access fish passage to reflect any changes that occurred between the 60 percent and 90 percent design. The hydraulic analysis of the fishway will be rerun in the Hydrologic Engineering Center River Analysis System (HEC-RAS) to finalize the design and to confirm fish pass ability.

9.3 Project Manual – Develop technical specifications (Special Provisions) suitable for bidding. Incorporate review comments and make minor revisions. It is assumed that the town will prepare the typical front-end bidding documents. SLR will assist with preparation of the bid notice and bid form.

9.4 Quantity and Cost Estimate – Compute estimated quantities and prepare an engineer's final opinion of probable construction costs.

9.5 Submission – Provide three paper copies of the plans, specifications, and quantity estimates to the town. Meet with representatives to discuss the submittal.

Task 10 – Final (100%) Design Plans and Specifications

Prepare and submit final design (100 %) plans and contract documents. The final design will include final project design drawings, construction cost opinion, and contract documents signed and sealed by an engineer who is licensed in Massachusetts. It is understood that the gap between the 90% and 100% design submissions should be limited to the incorporation of final comments and should not require any additional design development.

Task 11 – Bidding Assistance

11.1 Bid Issuance – Assist the town with advertising and obtaining bids. As part of this task, SLR will identify a list of contractors with known experience to whom the bid request

can be sent.

11.2 Prebid Meeting – Prepare for and attend a pre-bid conference/site walk with prospective bidders to review sequence, methods, and other variables crucial to the attainment of the project goals.

11.3 Response to Bidders – Respond to inquiries from potential bidders and issue addenda as necessary. Copy the town on all correspondence and communications.

11.4 Bid Tabulation – Develop a bid tabulation.

11.5 Review of Contractor Submissions – Assist the town in the review of contractor submissions.

Task 11 Deliverables: bid documents, meeting summary, correspondence, and bid tabulation

Task 12.0 – Data Collection, Base Mapping and Meetings- TBT

12.1 A Landscape Architect and a Structural Engineer will perform site reconnaissance to document existing site conditions through digital photography and field notes.

12.2 Compile available mapping from the city, including topographic survey mapping and wetland delineation prepared by the Town of Plymouth and utility company mapping to create a base map in *AutoCAD® Civil 3D* at a scale of 1 inch = 20 feet with 1-foot contour intervals and spot elevations of the project area to be used as a basis for final design and development of construction documents. It is assumed that the town will provide the survey and wetland delineation in a suitable digital AutoCAD format. The base map will include the limits of the Federal Emergency Management Agency (FEMA) floodway and the floodplain for Town Brook.

12.3 Contact local utility service providers to request copies of existing mapping of underground utility locations in the area. The information received by SLR will be compiled in the base mapping when compared to visible utilities located as part of the topographic survey. No ground-penetrating radar location or underground utility mark-out is anticipated at this point in time.

12.4 Project team members will participate in internal design meetings/conference calls with the project team throughout the duration of the project. Virtual meetings with Town staff are also included.

Task 13.0 – Concept Development - TBT

13.1 In close coordination with the Town, SLR will develop one illustrative concept plan with callouts depicting proposed site elements and a precedent image board that characterizes material elements and three-dimensional hand sketches that communicate conceptual ideas.

- 13.2 Prepare a conceptual drainage plan that identifies the probable locations for stormwater quality/management elements (rain gardens) that control surface run-off and the management and design features for the existing seep locations present in the area.
- 13.3 Meet with town staff to review the conceptual plans.
- 13.4 Based on one round of comments refine the conceptual plan into a final preferred plan.

Task 14.0 – Preliminary Design Plans - TBT

- 14.1 Based on the Concept Plan, prepare preliminary design plans in *AutoCAD® Civil 3D*. Drawings will be prepared at a scale of 1 inch = 10 feet or 1 inch = 20 feet, and include dimensions, callouts, and specifications related to site improvements. This design set will be used for submission to regulatory agencies, and shall include the following:
 - Title Sheet
 - Existing Conditions Base Map/Topographic Survey
 - Layout Plan (including general dimensions and callouts)
 - Grading Plan and Utilities Plan (including proposed contours and locations of storm drainage)
 - Planting Plan (including species schedule, size, and quantities)
 - Lighting Plan (including fixture schedule, image and photometrics)
 - Sediment and Erosion Control Plan – Details and Specifications
 - Site Details
- 14.2 Meet with the Town to review the Preliminary Design Plans
- 14.3 Refine plans, as necessary, based on the comments. For the purpose of this proposal, it is assumed that the revisions will consist of one round of staff comments and require no more than a day of drafting.
- 14.4 Develop an engineer's preliminary opinion of probable construction costs for the project to reflect those items of work noted above.

Task 15.0 – Regulatory Permitting Assistance - TBT

The trail reconstruction project located between the Jenny Grist Mill and Brewster Gardens is within or immediately adjacent to sensitive regulated resource areas associated with Town Brook and Plymouth Harbor. Town Brook has a FEMA designated 100-year floodplain and floodway and segments of the existing trail to be reconstructed are located within the 100-year floodplain. The coastal zone boundary associated with Plymouth Harbor extends upstream of Main Street Extension with a portion of the trail

within this boundary. It is anticipated that work within the floodplain and coastal zone boundary, which will include trail reconstruction, bank stabilization and limited dredging (removal of less than 100 Cubic Yards (CY)) of sediment from Town Brook will trigger federal, state, and local Conservation Commission permitting. In addition, there are several bordering vegetated and isolated vegetated wetland seeps located adjacent to the existing trail that may require some drainage system improvements to be installed within them to address seasonal high groundwater flows and stormwater runoff over the existing trail. Based upon SLR's knowledge of these resource areas the following assumptions have been made to prepare the regulatory permitting scope.

SLR assumes the following design parameters will be met:

- Dredging of sediment from Town Brook will be less than 100 CY.
- Bank stabilization measures will disturb less than 100 linear feet of the bank.
- Bordering and isolated vegetated wetland impacts will be less than 5,000 square feet.

Based on the assumptions presented above SLR will assist the Town in preparing the following regulatory permits:

Federal Permits

- 15.1 Review United States Fish and Wildlife (USFWS) Information for Planning and Consultation (IPaC) website to determine potential for federally listed species. Provide a determination letter from USFWS to support permits.
- 15.2 Review National Oceanic and Atmospheric Administration (NOAA) Essential Fish Habitat (EFH) Mapper and provide EFH consultation coordination as required.
- 15.3 Prepare United States Army Corps of Engineers Self Verification Notification Form for General Permits No. 1 Maintenance and No. 7 Bank Stabilization.

Please note that SLR assumes that the Town will be responsible for retaining the services of a qualified historical/cultural consultant to provide Section 106 compliance support for the federal permits.

State Permits

A coastal zone federal consistency review will be triggered by the need for a federal permit for those activities associated with bank stabilization located within the coastal zone boundary.

- 15.4 Coordinate and attend a Pre-Application Consultation Federal Consistency Review with the Massachusetts Office of Coastal Zone Management (CZM). It is assumed that this meeting will be conducted through TEAMS and/or Zoom.

- 15.5 Prepare and submit letter to CZM requesting a federal consistency review. Provide the supporting materials requested during the pre-application consultation meeting with CZM.

Local Permits

- 15.6 Prepare a Notice of Intent (NOI) and supporting materials and submit them to the Plymouth Conservation Commission (Con Com).
- 15.7 SLR will attend up to two (2) Con Com meetings to present the project.

SLR assumes that the Town will retain a consultant to provide a wetland delineation and impact assessment report in support of the NOI. SLR assumes that the Town will be responsible for publication of Public Notices and required application mailings.

Task 16.0 – Construction Documents - TBT

Under this phase of work, the project team will advance the preliminary (60%) design plans to semi-final design of the proposed facilities, which includes the following improvements identified under this task:

- 16.1 Design Plans – Prepare semi-final (90% completion) design plans for the proposed fishway. Plans will include the following items:
- Title sheet
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 - Plan view and profile of existing conditions
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 - Proposed grading
 - Typical cross sections
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 - Proposed water control
 - Standard design details
 - Special design details
 - Proposed soil erosion and sedimentation controls
 - Sequence of construction
- 16.2 Updated Design Memorandum – Update the design memorandum to access fish passage to reflect any changes that occurred between the 60 percent and 90 percent design. The

hydraulic analysis of the fishway will be rerun in the Hydrologic Engineering Center River Analysis System (HEC-RAS) to finalize the design and to confirm fish pass ability.

- 16.3 Project Manual – Develop technical specifications (Special Provisions) suitable for bidding. Incorporate review comments and make minor revisions. It is assumed that the town will prepare the typical front-end bidding documents. SLR will assist with preparation of the bid notice and bid form.
- 16.4 Quantity and Cost Estimate – Compute estimated quantities and prepare an engineer's final opinion of probable construction costs.
- 16.5 Submission – Provide three paper copies of the plans, specifications, and quantity estimates to the town. Meet with representatives to discuss the submittal.
- 16.6 Prepare and submit final design (100 %) plans and contract documents. The final design will include final project design drawings, construction cost opinion, and contract documents signed and sealed by an engineer who is licensed in Massachusetts. It is understood that the gap between the 90 % and 100 % design submissions should be limited to the incorporation of final comments and should not require any additional design development.

PROFESSIONAL FEES

The lump sum fees for Tasks 8 through 11 are as follows:

Task 8 – Meetings and Coordination – Final Design	\$13,530
Task 9 – Semi-Final (90%) Design Plans and Specifications	\$82,450
Task 10 – Final (100%) Design Plans and Specifications	\$30,980
Task 11 – Bidding Assistance	\$6,900
Jenney Grist Mill Subtotal	\$133,860
Task 12 – Data Collection, Base Mapping & Meetings - TBT	\$12,300
Task 13 – Concept Development - TBT	\$6,000
Task 14 – Preliminary Design Plans - TBT	\$21,950
Task 15 – Regulatory Permitting Assistance -TBT	\$23,150
Task 16 – Construction Documents - TBT	<u>\$29,800</u>
Town Brook Trail - TBT Subtotal	\$93,200
Project Total	\$227,060

The Direct Expenses, including the Silver Petrucelli Associates fees for electrical engineering, is included for both projects.

EXCLUSIONS/LIMITATIONS

Please note that the following services are **not** included at this time:

- Sediment testing or analysis of dredge material within Town Brook. It is assumed that the 95 CY will be disposed of in a manner consistent with prior projects along Town Brook.
- Field Survey or Easement mapping
- Application fees
- Hydrology or Hydraulic Flood modeling other than work already completed.
- Nonlocal permits other than those specifically identified
- Design and analysis of offsite roadway or utility improvements
- Archaeology or cultural resource analysis (the town may need to contract directly for these services for (TBT)
- Mechanical and plumbing engineering
- Design of pump stations
- Irrigation design
- Ground improvement design for foundations
- Construction testing and full-time inspection services
- Redesign or excessive revisions required by the Client or public agencies. The fee specified is based on reasonable and customary revisions required by public agencies. Redesign or excessive revisions will constitute additional services.



March 17, 2022

Town of Plymouth, DPW
11 Lincoln St
Plymouth, MA 02360

Subject: Reminder to Conduct a Dam Safety Phase I Inspection

Dear Dam Owner.

This message is a reminder from the Office of Dam Safety (ODS) regarding Phase I inspections that are past due and/or upcoming through the end of 2022.

Dam owners are required to hire a registered professional engineer with dam engineering experience to inspect and report results every two (2) years for High Hazard Potential dams, every five (5) years for Significant Hazard Potential dams and every ten (10) years for Low Hazard Potential dams. Inspections are essential to identify problems and provide safe maintenance of a dam.

The following dams owned by you require Phase I inspections be completed by the dates noted below:

- MA00907, Jenney (Arms House) Pond Dam, Plymouth, Significant Hazard Potential, Date of Last Phase I Inspection Date: December 5, 2017, Next Phase I Inspection Due Date: December 5, 2022
- MA02462, Store Pond Dam, Plymouth, Significant Hazard Potential, Date of Last Phase I Inspection Date: December 5, 2017, Next Phase I Inspection Due Date: December 5, 2022

If you have an up-to-date Phase I inspection report on file, please forward a copy of the report to the ODS within 21 days of receipt of this notice for review. If you have recently submitted a Phase I inspection report to our office, a letter confirming receipt will be issued to you upon review of the report.

Please note that ODS has revised the required form and inspection template. When you submit your Phase I inspection report you must ensure that you are using the correct documents, which can be found at and downloaded from our website: www.mass.gov/office-of-dam-safety.

For dams determined to be in Poor or Unsafe condition and also required to have Follow-up inspections completed, a Phase I inspection, being more comprehensive than a Follow-up inspection, will satisfy a Poor or Unsafe condition Follow-up inspection requirement for that dam for one cycle. The next Poor or Unsafe condition Follow-up inspection would therefore be due six (6) or three (3) months, respectively, from the date of the Phase I inspection. If this is unclear, please contact our office for clarification.

We remind you that it is the obligation of the dam owner to contact and notify all applicable



local, state and federal permitting agencies prior to conducting any work at a dam including manipulation of water levels. Additionally, it is the obligation of any dam owner planning to conduct any material alterations or repairs to a dam to file with the ODS a Chapter 253 Dam Safety Permit Application. The Permit Application template is also available on our website.

If you have any questions, please do not hesitate to contact our office by phone at 617-620-8583 or by email at dam.safety@mass.gov. Thank you for your time.

Sincerely,

A handwritten signature in black ink, appearing to read "William C. Salomaa". The signature is fluid and cursive, with the first name being the most prominent.

William C. Salomaa, Director
Office of Dam Safety