

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Plymouth Public Schools	Priority #: 1	
Project Title and Description: Cold Spring / HES Study	Total Project Cost:	\$2,000,000.00

Department/Division Head: Adam Blaisdell

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>	\$2,000,000.00	Estimate provided by MSBA	FY27		
<i>Labor and Materials</i>			FY28		
<i>Administration</i>			FY29		
<i>Land Acquisition</i>			FY30		
<i>Equipment</i>			FY31		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$2,000,000.00				

Project Justification and Objective: A statement of Interest has been submitted to the Massachusetts School Building Authority to replace/rebuild Cold Spring and combine Hedge with CSES. If accepted in December, 2024, the next step in the process is a feasibility/design/additional study.

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.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Plymouth Public Schools	Priority #:	2
Project Title and Description: District Wide HVAC Repairs	Total Project Cost:	\$500,000.00

Department/Division Head: School Facilities - Matt Durkee

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
Planning and Design			FY23		
Labor and Materials	\$500,000.00		FY24		
Administration			FY25		
Land Acquisition			FY26		
Equipment			FY27		
Other					
Contingency					
Total Capital	\$500,000.00				

Project Justification and Objective: With (13) schools in the Plymouth Public School District the HVAC repairs are extensive. The Plymouth School Facilities Department has met with our HVAC Contractors and have identified district wide HVAC repairs to be completed. The repair list far exceeds the \$500,000 request but we'll make repair decisions on a priority basis.

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.

Town of Plymouth Public School Systems (9/26/2024) Immediate Needs

1. Federal Furnace Elementary School

- a. ERU-4
 - i. Exhaust fan bearings are loud.
- b. HV-1
 - i. Does not run in heat
- c. ERU-6
 - i. Exhaust fan motor bearings noisy
 - ii. Possible condenser fan motor needs to be replaced.
 - iii. Supply fan bearings are loud.
- d. Boiler #2
 - i. Loss of flame during ignition.
- e. ERU-2
 - i. Circuit #1 – off on low pressure.
 - ii. Supply Fan Loud Bearings.
 - iii. Would not run in high fire for heating attempted to work with ENE.
- f. ERU-5
 - i. Gas cock is off to the unit.
 - ii. Exhaust fan bearings are loud
- g. RTU-7
 - i. Supply Fan belt loose

2. Indian Brook Elementary School

- a. ERU-1
 - i. Compressor vfd screen periodic visual distortion
- b. ERU-2
 - i. Circuit #1 tripped on low pressure.
 - ii. Energy Wheel has no belt.
 - iii. Return fan has loud bearings.
- c. ERU-3
 - i. Airflow screen not functioning.
 - ii. Energy recovery wheel needs to be tightened
- d. ERU-4
 - i. Compressor vfd screen not working
 - ii. Excessive vibration from compressor
 - iii. Burner fan motor is running during cooling operation.
- e. ERU-5
 - i. Compressor vfd screen not working.
 - ii. Circuit #1 site glass is flashing but condenser coil needs to be cleaned before evaluation.
- f. ERU-6
 - i. Compressor vfd screen not working.
 - ii. Burner was in fault mode at time of evaluation.

3. Plymouth Admin Building

- a. RTU-4
 - i. Evaluate the unit for heating operation.
 - ii. Check with James for BMS operation of the boiler.

4. Plymouth South Middle School

- a. Create a service call for a building wide evaluation.
- b. AC-9
 - i. Replace the entire unit
- c. AC-4
 - i. Condenser coil is deteriorated beyond repair.
- d. AC-1
 - i. In need of replacement
- e. AC-2
 - i. In need of replacement
- f. Evaluation of water coil valves and pressure for the system.

5. Hedge Elementary School

- a. No problems present. No Cooling in this school.
- b. There is only cooling in the gym. This is a portable cooler.

6. West Elementary School

- a. ERU-1
 - i. Evaluate operation
- b. ERU-2
 - i. Circuit #1 has high superheat and no subcooling.
 - ii. Circuit #2 is out of refrigerant.
 - iii. Energy Wheel belt is broken.
 - iv. Supply fan motor has oil and failed bearings.
 - v. Return Fan has oil on the end bell.
- c. ERU-3
 - i. Circuit #1 suspected leak and condenser fan vfd issue.
 - ii. Circuit #2 is off due to a refrigerant leak.
- d. ERU-4
 - i. Circuit#1 switch is off.
- e. ERU-5
 - i. Circuit #1 copeland digital scroll in alarm for locked rotor.
 - ii. Circuit #2 subcooling is low and superheat is high
 - iii. Energy recovery wheel covered in oil and bearings are clicking.
 - iv. Supply fan bearings are clicking.
- f. ERU-6
 - i. Circuit #1 TXV Replacement
 - ii. Circuit #2 is low on refrigerant. Hot gas is constantly active.
 - iii. Energy Recovery Wheel bearings are clicking.
- g. HV-1
 - i. Supply Fan belts loose

7. North High School

- a. Chilled Water Pump (Possibly 3)
 - i. Locked out and tagged out. Need to figure out why.
- b. Check the glycol percentage of both hot water and chilled water loops
- c. 2 – boilers are off. Need to address during the pm.
- d. Look at adding side stream filtration for the condenser water loop.
- e. Service Call for the athletic directors office. Condensate issues. Work with John from facilities to provide permanent solution. Possibly adding ductless split system.
 - i. Possibly use the carrier equipment that's in the maintenance
- f. MDF Closets. Revisit the Samsung quotes from Ed Mattos for this project.

8. Cold Spring Elementary School

- a. \$40k Cooling Station Project.
- b. Exhaust Fans for the building need to be replaced. Work with matt on the procurement process for this school. 5 or 6 fans total.

9. Nathaniel Morton Elementary School

- a. Cooling Station – \$100k
- b. Kitchen Exhaust fan operation. Need to evaluate.

10. Manomet Elementary

- a. Outside air damper issues for combustion air.
- b. Univent Actuation. Look at loop pressure and valve/actuator issues.
- c. Look into rooftop replacement for main office.

11. Plymouth Community Intermediate School

- a. Paid for (5) Compressors.
- b. Paid for two of the above compressors to be installed.
 - i. Matt to decide Diamond Mechanicals involvement
- c. Multiple (19-20 Condenser Fan Replacements)
- d. Look into differential pressure for chilled instead of the paddle style flow switch.
- e. RTU-25 Trane said there is nothing they can do and it needs to be replaced.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Plymouth Public Schools	Priority #:	3
Project Title and Description: Manomet Ele Replace Rubber Roof(added scope)	Total Project Cost:	\$240,000.00

Department/Division Head: School Facilities - Matt Durkee

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

For project re-submittals, list prior year(s): CAP PLAN FY25

List any funding sources and amounts already granted: \$388,500 - CAP PLAN FY 25

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
Planning and Design			FY23		
Labor and Materials	\$200,000.00		FY24		
Administration			FY25		
Land Acquisition			FY26		
Equipment			FY27		
Other					
Contingency	\$40,000				
Total Capital	\$240,000.00				

Project Justification and Objective: The PPS bid the Manomet Roof Replacement for the summer of '24. There was added scope to the original roof project because of the new roofing insulation bringing the roof elevation up over the existing cafeteria windows. Resubmitting to address the added masonry scope of the project.

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: 25 years

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

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Plymouth Public Schools	Priority #:	4
Project Title and Description: PCIS Fire Alarm System Upgrade	Total Project Cost:	\$104,251.00

Department/Division Head: School Facilities - Matt Durkee

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>			FY23		
<i>Labor and Materials</i>	\$94,774.00		FY24		
<i>Administration</i>			FY25		
<i>Land Acquisition</i>			FY26		
<i>Equipment</i>			FY27		
<i>Other</i>					
<i>Contingency</i>	\$9,477.00				
Total Capital	\$104,251.00				

Project Justification and Objective: PCIS needs to upgrade their Fire Alarm System. This has been identified as an ongoing issue with the Plymouth Fire Dept.

Some classrooms cannot clearly hear alarms and commands. Strobes to be added with new Fire Alarm Panel. Ongoing repairs that do not correct the issues.

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.



From

Davco Security Systems

4 Webb Place

Saugus MA 01906

800-227-1726

www.davcosystems.com

MA License 1215C

Quote No.**0003168**

Type

Installation

Prepared By

Scott Nixon

Created On

08/02/2024

Valid Until

11/01/2024

Quote For**Plymouth Public Schools**

Plymouth Community

Intermediate School (PCIS)

117 Long Pond Road

Plymouth MA 02360

5088304450

Description of Work

This fire alarm notification upgrade / installation proposal, is based upon the request of the facility management and a recent site visit by Davco Systems, Inc., to review the existing fire alarm conditions. **NOTE:** This plan has not been approved by the Plymouth FD, who may require additional devices or services. Any item or service that is not on this proposal, but will be required to complete this job, will be priced separately.

This proposal includes upgrading the existing FCI, addressable, specific duct smoke heads only and open are smoke heads to the new Velocity addressable protocol. The existing Clip Mode protocol, per the manufacture, will becoming to an end of life with manufacturing and no longer available. Due to the small number of these existing addressable smoke heads, it is recommended to perform this task earlier than later.

This proposal includes the upgrading of the existing, discontinued, base building horn/flasher notification devices, with new using the same locations, mounting heights, back box and wiring. This proposal includes the installation of specific new notification devices to assist with audible notification of alarm mode only. All new added notification devices will be ceiling mounted and white in color. Due to the size of the building, and base building fire alarm system capacity, there is not sufficient notification circuit capacity to handle the newly added alarm mode only requirement. Therefore, in each wing, a new UL, listed and compatible, remote notification booster power supply set-up will be installed. These new remote booster panels will ensure the new alarm mode only power requirement and code required synchronization. These new remote booster panels will also provide expansion capability for the future, if required. For the these new remote notification booster power supply set-ups, these locations will be coordinated with the facility management. The facility management is responsible for providing each new booster power set-up a new, dedicated, 20amp breaker service and associated wiring. All of the wing specific newly added notification devices will be installed on a new notification circuit from the new power supply location. Building notification synchronization will not exist, until the overall upgrade / installation work is completed.

DISCLAIMER: This proposal is valid for 30 days. This proposal assumes that the existing field notification wiring is in proper working order. Should any deficiencies be found, ie: splices, T-taps, grounds, shorts, etc, they will be brought to the attention of the facility management. Should technical support be required to clear these deficiencies, the cost for these services will be billed in addition to the quotation price and billed on a Time and Material basis. Written Acknowledgement and acceptance is required prior to providing these services. All upgrade / installation work is to be performed during normal business hours, Monday - Friday only, 07:00AM - 04:00PM. This upgrade / installation work will require the building notification devices to be activated for a brief time. Any fire alarm notification activation, will be coordinated with the facility management, due to the occupancy. For areas that require a use of a lift, due to height locations, the facility management will provide such lift. Any patching and or painting, is the responsibility of the facility management, if required. **NOTE:** for locations where a drop ceiling tile grid system does not existing, Davco Systems, Inc. will coordinate with the facility management for either wall or ceiling mounting. This upgrade / installation work will be performed (X1,) wing at a time. **BILLING**

REQUIREMENTS: Deposit of 50% is due upon acceptance of this proposal, the remaining 50% balance is due 15 days from substantial completion.

This proposal includes: Submittals, electrical for fire alarm and fire alarm permits with the town of Plymouth, equipment, upgrade / installation, system programming, documented pre-testing and acceptance testing with ISD and PFD to close out open Davco Systems, Inc., permits, at prevailing wage rates. This proposal does not include tax. **NOTE:** It is to be made known that during this work, at no

time, will the building fire alarm notification system be left out of service.

NOTE: Should the PFD, require current base building fire alarm prints, during the permitting process, these will be be priced separately and are not included in this proposal.

Services to be completed

Fire Alarm

Existing base building fire alarm notification device upgrades.

Item	Qty	Amt
Fees		\$2,010.00
Electrical Permit	1	
Fire Alarm Permit	1	
Freight Charge	1	
Labor		\$61,544.00
Engineering	8	
Fire Alarm Labor	144	
Fire Alarm Labor Tech 2	144	
Labor - Programming	15	
Fire Alarm Pretest	15	
Fire Department Acceptance Test	18	
Materials		\$5,062.50
Misc Equipment	1	
Parts		\$26,156.99
14-02 UNS SOL FPLP Red Jkt	20	
16-02 UNS SOL FPLP Red Jkt	10	
10.0 AMPS, 120VAC, REMOTE POWER SUPPLY, RED.	5	
OPTIONAL CLASS A OUTPUT CONVERTER MODULE.	5	
SPACEAGE Hybrid Surge Prot	5	
Addressable monitor module, Class âAâ	5	
UltraTech IM-1280F1 12V, 8.0 Ah SLA Battery, F1 Terminal	10	
Analog photoelectronic sensor, Velociti only, bright white color	6	
6" FLANGED MOUNTING BASE, WHITE	6	
REMOTE ANNUNCIATOR, 7MA, 3.1-32 VDC FOR DUCT & BEAM DETECTORS	5	
Universal Wall Trim Ring, Red 5 pk	7	
GRAND TOTAL		\$94,773.49

Item	Qty	Amt
LED HORN STROBE; WALL, RED; FIRE; 2-WIRE	35	
LED HORN STROBE; CEILING; WHITE; FIRE; 2-WIRE	36	
LED STROBE; CEILING; WHITE; FIRE; 2-WIRE	40	
LED STROBE; WALL; RED; FIRE; 2-WIRE	4	
Analog photoelectronic sensor, remote test capable, Velociti only, bright white color	27	
GRAND TOTAL		\$94,773.49

By my signature below, I authorize work to begin and agree to pay the Grand Total.

Name: _____ Date: _____

Signature: _____

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Plymouth Public Schools	Priority #:	5
Project Title and Description: South High Maintenance Garage	Total Project Cost:	\$69,390.00

Department/Division Head: School Facilities - Matt Durkee

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
Planning and Design			FY23		
Labor and Materials	\$69,390.00		FY24		
Administration			FY25		
Land Acquisition			FY26		
Equipment			FY27		
Other					
Contingency					
Total Capital	\$69,390.00				

Project Justification and Objective: The South High Maintenance Garage needs work to make it a safe and healthy place for our employees.

Paving to make a safe work place for our trucks, plows, sanders. Current large potholes make this process dangerous. Replace current carpet since a water damage. New ceiling tiles, paint, roof work and gutters.

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.

PRESTIGE SEALCOATING

DRIVEWAYS-SIDEWALKS-PARKING LOTS

www.pavingbyprestige.com

NAME: Plymouth South High School- Maintenance Building

ADDRESS: 490 Long Pond Road

CITY: Plymouth, MA 02360

PHONE: (508) 830-4390 **E-Mail:** mdurkee@plymouth.k.12.ma.us

- ☐ Prep area around maintenance building for Asphalt Installation
- ☐ Areas include: Triangle dirt/grass area; Roadway into Maintenance Building; Front of Maintenance Building; Plow Area; Risers for Caps/Drains.
- ☐ Add Re-Processed Gravel to necessary areas
- ☐ Install Asphalt to above areas (Roll to Compact)
- ☐ Install Berms to area next to maintenance building

Total: \$48,600

*All work Guaranteed for 2 years against workmanship. Prestige Paving cannot be responsible for chemical spills, vegetation growth, marks due to sharp objects, tire marks, and settlement. If any other work is done over and above the paving work performed by Prestige Paving (Including Sealcoating) the guarantee will be null and void.

Customer Signature:

Authorized Signature: KWB

Flooring Designs Inc
707 Centre Street
Brockton, MA 02302

Estimate

Date 9/11/2024
Estimate # 14619

Name / Address

Plymouth Public Schools
Town of Plymouth
26 Court Street
Plymouth, MA 02360

Project Name/Location

Plymouth South
High School
490 Longpond Rd

Rep:

P.O. #

Description	Qty	Units	Rate	Total
Maintenance offices				
Indestructible 28 plank color silver oak	710	sf	2.83	2,009.30
Installation	710	sf	2.75	1,952.50
Existing rip up of and disposal	710	sf	1.60	1,136.00
Existing rip up of carpet and disposal	80	sy	5.00	400.00
Adhesive taylor	2	ea	144.00	288.00
Silpro floor prep	710	sf	1.00	710.00
Johnsonite cove base color TBD	240	sf	3.00	720.00
* 2 layer rip up				
			Subtotal	\$7,215.80
			Sales Tax (0.0%)	\$0.00
			Total	\$7,215.80

flooringdesign@verizon.net

508-580-3232
508-580-1114

I accept the above proposed material and pricing Estimate in full and I authorize Flooring Designs to proceed with ordering and installation.

Signature of Acceptance

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Plymouth Public Schools	Priority #:	6
Project Title and Description: North High Soccer Turf Replacement	Total Project Cost:	\$763,158.00

Department/Division Head: School Facilities - Matt Durkee

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
Planning and Design			FY23		
Labor and Materials	\$693,780.00		FY24		
Administration			FY25		
Land Acquisition			FY26		
Equipment			FY27		
Other					
Contingency	\$69,378.00				
Total Capital	\$763,158.00				

Project Justification and Objective: The North High Soccer/Football artificial turf field has come to the end of its useful life and needs to be replaced.

The foam pad under the turf will and needs to be replaced for safety. The Turf needs and will be replaced. Game lines done and removal of the old artificial turf is included.

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.



October 1, 2024

Matt Durkee

Director of Facilities
Plymouth North High School
41 Obery Street
Plymouth, MA 02360
Phone (508) 830-4005
mdurkee@plymouth.k12.ma.us

RE: Proposal for Synthetic Turf Replacement Project at Plymouth North High School

Dear Mr. Durkee,

R.A.D. Sports is pleased to provide the following proposal for the synthetic turf field replacement scope of work on the Plymouth North High School campus in Plymouth, MA. Our pricing is based on the following scope:

SURFACING PRODUCT	INFILL DESCRIPTION	DIMENSION	PRICE
OPTION 1 Legion+ 2.0 @ 41 oz. Shock Pad: NXTPlay	Rubber/Sand	80,000 SF	\$693,780.00
OPTION 2 GameON @ 46 oz. Shock Pad: NXTPlay	Rubber/Sand	80,000 SF	\$808,165.00

*Taxes are not included in the above pricing. Customer to provide proof of tax-exempt status/certificate.

Scope of Work:

- Pricing based on MHEC Cooperative Contract
- Remove and **Fully Recycle** existing synthetic turf system (carpet and infill)
- Perform infiltration testing on existing stone base (completed by third party)
- Fine grade synthetic turf field footprint using dual target laser grader.
- Supply and install NXTPlay shock pad.
- Supply and install Shaw Sports Turf Synthetic Turf products generally in accordance with manufacturer product specifications and installation methods (including turf, sundries and infill materials)
 - Legion+ 2.0
 - Infill 40% rubber and 60% sand with 5/8" fiber reveal
 - Permanent Marking as follows:
 - Football
 - Soccer
 - Men's Lacrosse
 - Women's Lacrosse
 - Field Hockey
 - Center Field Logo (5 colors)
 - End Zone Letters (2 Colors)
- Samples, submittal information, shop drawings as required.

PROPRIETARY AND CONFIDENTIAL



- Price based upon Shaw Sports Turf standard colors for each product (custom color yarns not included).
- One (1) GMAX test performed at each field upon completion.
- All usable remnants of new material generated by Shaw Sports Turf shall become property of the owner.
- Quote based upon use of Shaw Sports Turf standard adhesive, other adhesives at additional.
- Shaw Sports Turf Standard (8) Year Manufacturer's Warranty for turf products only.
- Maintenance-instruction and training for best practices in field care and maintenance and review of the Shaw Sports Turf Maintenance Manual.
- Prices based upon one mobilization. If the site is not ready and additional mobilizations are necessary additional charges will apply for each re-mobilization.

Exclusions:

- Union wages
- Any removal of existing pad
- Any fencing/netting
- Any site improvements (walkways, drainage, etc.)
- Any independent testing or testing of any kind not specified above.
- Any sub grade or base testing of any kind not specified above.
- Synthetic turf maintenance equipment - Maintenance of field or other turf treatments.
- Any materials, labor or equipment associated with the following: grading, hauling, over-excavating, soil treatment/remediation/stabilization, sub grade work, excavation of heavy rock, any concrete curbing installation.
- Locating, relocation, removal, supply, installation and/or repair of any existing or proposed utilities of any kind.
- Contaminated soils, unsuitable soils, hazardous material removal and remediation.
- Any lettering, logos and/or additional field markings not specified above.
- Provision of any additional sports equipment such as score clocks, soccer nets, corner flags, netting, goal posts, etc. (no labor or furnishing materials of any kind).
- Site Security.
- Anything not specifically stated in our above Scope of Work.

Conditions:

- This bid proposal and its acceptance is subject to Force Majeure and delays beyond Shaw Sports Turf/R.A.D. Sports reasonable control. In the event of any such delay, the date of completion shall be extended to compensate for the delay.
- R.A.D. Sports requires access to the site and a suitable staging area no more than 100 feet from the site.
- Proposal contingent upon executed contract approved by R.A.D. Sports.
- Changes in the specifications and/or scope of work are subject to change orders and may require additional charges and/or fees added to the agreed contract price. Changes in the scope of work require appropriate change order submittal, approval and execution from the appropriate parties.
- R.A.D. Sports shall not be bound by any liquidated damages or penalty clauses.
- Standard manufacturing lead time is 90 working days from signed contract and /shop drawing approval.
- Proposal and Contract Price(s) are subject to increase. Items that may affect increase(s) include but are not limited to: raw material costs, freight costs, manufacturing costs, labor cost, etc.
- This proposal expires thirty (30) days after the Proposal Date written above.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Plymouth Public Schools	Priority #:	7
Project Title and Description: PCIS Parking Lot Pave/Stripe	Total Project Cost:	\$1,196,000.00

Department/Division Head: School Facilities - Matt Durkee

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>	\$1,196,000.00		<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	\$1,196,000.00				

Project Justification and Objective: PCIS has numerous pot holes that make it difficult for parents and buses to navigate campus. Annual pot hole repairs are not enough.

This project will replace the entire PCIS parking lot and driveways including improving on the current design to increase ease of traffic flow and parking.

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.

PRESTIGE ASPHALT

DRIVEWAYS-SIDEWALKS-PARKING LOTS

www.pavingbyprestige.com

NAME: Plymouth Community Intermediate School

ADDRESS: 117 Long Pond Road

CITY: Plymouth, MA 02360

PHONE: (508) 830-4450 **E-Mail:** mdurkee@plymouth.k12.ma.us

- ☐ Asphalt Installation Preparation will include: Parking, Roadways, Loading Docks, Sidewalks, Walkways:
- ☐ Remove Existing Asphalt to necessary areas and Add Topcoat to Necessary Areas (Roll to Compact)
- ☐ Add Reprocessed Gravel to Necessary Areas and Complete with Asphalt Coat Installation (Roll to Compact)
- ☐ Line Striping to Include: Parking Spots, Handicap, Crosswalks, Arrows, "No Parking" and "Fire Lane"
- ☐ Total: \$1,196,000.00

Prestige Paving cannot be responsible for chemical spills, vegetation growth, marks due to sharp objects, tire marks, settlement and sprinkler systems splashing sealcoat onto buildings, cars or any other areas, or washing away newly applied sealcoat. Not responsible for pedestrians walking and driving through blocked-off and completed work. If any other work is done over and above the paving work performed by Prestige Paving (Including Sealcoating) the guarantee will be null and void.

Customer Signature:

Authorized Signature: KWB

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Plymouth Public Schools	Priority #:	8
Project Title and Description: District Wide Roofing Assessment and Repairs	Total Project Cost:	\$51,950.00

Department/Division Head: School Facilities - Matt Durkee

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
Planning and Design			FY23		
Labor and Materials	\$51,950.00		FY24		
Administration			FY25		
Land Acquisition			FY26		
Equipment			FY27		
Other					
Contingency					
Total Capital	\$51,950.00				

Project Justification and Objective: This will address roof issues for all (13) of our schools. Preventative maintenance as well as an infrared roof scan of PSMS.

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.



July 18, 2024

Matt Durkee, Director of Facilities
Plymouth Public Schools
11 Lincoln Street
Plymouth, MA 02360

Re: Infrared Roof Moisture Survey – Plymouth South Middle School - Plymouth, MA – 90,000 SF

Dear Sir/Madam,

Per your request, the following is our proposal for performing an infrared roof moisture survey on the existing roof systems installed at the above referenced facility(s) totaling approximately 90,000 square feet of low slope roof area.

The infrared moisture survey and roof condition evaluation shall include the following:

1. Furnish 11" x 17" roof plan drawings identifying all suspect wet roof areas. All defined wet areas shall be outlined on the roof surface with highly reflective spray paint, will be shown on our roof plan drawing and infrared images of defined wet areas shall be included in our written report.
2. The final report shall contain as a minimum, but is not limited to, the following items:
 - (A) Roof inspection summary of the existing roof assembly
 - (B) Photographs documenting deficiencies
 - (C) Infrared Images of identified wet areas
 - (D) Infrared moisture survey / roof plan drawings

We propose the above referenced infrared roof moisture survey for - \$6,450.00

Terms & Conditions:

We will provide ladders to reach heights of 20 feet from the ground. Owner will provide safe access to higher roof elevations. Inaccessible roof areas that require aerial lifts/staging are excluded. Ballasted roofs will have visual inspection only. Steep slope roofs to be inspected by drone as allowed by law and FAA requirements. Infrared surveys cannot detect moisture through multiple roof systems or beneath overburden. A certificate of insurance will be supplied at the client's request. Any additional costs for services not listed above will be added to our fee. Payment is due upon delivery (POD) of the report/invoice.

589 Atwells Avenue
Suite 4E
Providence, RI 02909

617-259-7990
aerialinsight360@gmail.com
www.aerialinsight360.com



Deliverables:

We will provide a complete PDF copy of our written report including roof plan drawings emailed to you for review.

The infrared moisture survey must be performed during nighttime hours. The inspection team will arrive on site at dusk to perform the infrared inspection. The following day, the team would be back on site to perform the visual inspection and verification of identified / suspect wet areas.

Acceptance of Proposal – the price per proposal above, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified.

Signature _____
Owner

Date: _____

Printed Name _____

Signature _____
B.M. Wall, Principal

Date: _____

Please contact me with any questions or concerns. Thank you.

Sincerely,

B.M. Wall, Principal
Aerial Insight, LLC

589 Atwells Avenue
Suite 4E
Providence, RI 02909

617-259-7990
aerialinsight360@gmail.com
www.aerialinsight360.com



October 1, 2024

Matt Durkee
Plymouth Schools

Re: Roof Inspection and Repairs

We propose to furnish all labor and material required to complete the referenced project per our proposal only, for the sum of:

\$5,980.00 Plymouth Community Intermediate School/Early Childhood Center
\$5,730.00 Plymouth North High School
\$5,730.00 Plymouth South High School
\$5,730.00 Plymouth South Middle School
\$4,360.00 Plymouth South Elementary School
\$2,990.00 Plymouth West Elementary School
\$2,990.00 Indian Brook Elementary School
\$2,990.00 Federal Furnace Elementary School
\$2,990.00 Manomet Elementary School
\$2,990.00 Nathaniel Morton Elementary School
\$1,520.00 Hedge Elementary School
\$1,500.00 Cold Spring Elementary School

Qualifications:

1. Walk roof areas and inspect for deficiencies.
2. Clean and remove all debris from roof surface.
3. Perform minor repairs to existing roof systems found during inspection.
4. All debris will be removed by K1 Roofing.
5. Owner to provide access to K1 roofing equipment and personnel.
6. Includes MA prevailing wages.

Exclusions:

1. Exclude MA sales tax.
2. Exclude snow, ice and ponding water removal.
3. Exclude any off hours, weekend and night work.

Sincerely,


David Laranjo

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Plymouth Public Schools	Priority #:	9
Project Title and Description: Purchase School Bus	Total Project Cost:	\$147,302.00

Department/Division Head: Adam Blaisdell

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>			FY27		
<i>Labor and Materials</i>			FY28		
<i>Administration</i>			FY29		
<i>Land Acquisition</i>			FY30		
<i>Equipment</i>	\$137,667.00	includes \$11,000 CARB surcharge	FY31		
<i>Other</i>					
<i>Contingency</i>	\$9,635.00				
Total Capital	\$147,302.00				

Project Justification and Objective: Plymouth currently runs 5 home to school routes, field trips and athletic trips for the Plymouth Public Schools. We currently have 15 school buses - 5 buses are 2013 (105000 - 135000 miles). Higher mileage buses are spending more time being repaired and costing more.

For Capital Project Requests:

Will this project be phased over more than one fiscal year? If yes, enter it on the 5 Year Plan
Can this project be phased over more than one fiscal year?

Yes ☐ No ☒
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: 10 - 12 years depending on use

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



Customer Quotation

Prepared For:

Plymouth Public Schools
11 Lincoln Street
Plymouth, MA 02360
Adam Blaisdell Ed.D.
508-224-5039
ablaisdell@plymouth.k12.ma.us

Prepared By :

New England Transit Sales, Inc.
30 Progress Ave.
Tyngsboro, MA 01879
978-748-3336
Nathan Martin
nmartin@newenglandtransit.com

Quote Number:
408323

Quote Date:
9/27/2024

Customer Order No:
240517-240532

Model Profile: Saf-T-Liner C2 341TS

Product Type: School Transportation
Year: 2026
Chassis Model: B2 106
Chassis MFG: FLNER
GVWR: GVWR
Passenger Capacity: 77
Headroom: 78
Wheelbase: 279
Brake Type: AIR
Engine Type: CUMMINS B6.7 200 DIESEL, 6 Cyl, 200 HP, 2600 RPM
Fuel Type: DIESEL
Fuel Tank Capacity: 100
Transmission Type: AUTOMATIC
Axle, Front: 10000-lb Capacity
Axle, Rear: 21000-lb Capacity
Tires, Front: FRONT HANKOOK AH24 11R22.5 14 PLY TIRES
Tires, Rear: REAR HANKOOK DH06 11R22.5 14 PLY TIRES

Total for 1 complete unit(s):
Delivery Cost:

\$126,667.00 Sourcewell Pricing
Delivery Included

Includes the Following Equipment:**BODY****ACCESSORIES**

- 1 HOLDER-CERTIFICATE 4"X 6"

CERTIFICATION/SAFETY

- 4 REFLECTTAPE-P/O WDO YEL
- 1 REFLECTIVE TAPE-EMERGENCY DOOR REAR YELLOW
- 1 FIRE EXTINGUISHER-5 3A-40BC
- 1 REFLECTORS-AMBER(2) MID BDY 3"
- 1 REFLECTORS-RED (4) RR/RR SI 3"
- 1 ELECTRICAL-ROOF ESCAPE HATCH POS 3
- 1 HANDLES-W/S SERVICE, BLACK
- 1 LABEL-PASS ADVISOR INSTRUCTION
- 1 LOC-VEST.FLR.PLT.LEFT 5LB F.E. & FRICTION BRACKET
- 1 TRIANGLES-REFL. 3 W/BOX
- 1 MIR-A OPEN-VIEW HTD STAINLESS STEEL BRACKET
- 1 MIRROR-SYSTEM B EXTERIOR CROSSVIEW STAINLESS STEEL BRACKET
- 1 SIGN-STOP, AIR FRT #2900-1C
- 1 MOTOR-XING ARM AIR, SPECIALTY
- 1 MIRROR-INTERIOR 6"X30" WITH RUBBER EDGE
- 1 LABEL(S)-SPECIAL DATA, MA
- 1 LABEL-VEHICLE CERTIFICATION
- 1 DOMICILED USA-EXCLUDING CALIFORNIA AND CARB OPT-IN STATES

DOORS

- 1 STEP-RS ALUM.ENT.DR W/HTR 8.75"RISER
- 1 HANDLE-INT RR DR BLACK
- 1 HANDLE-EXTERIOR REAR DOOR WITH RECESS
- 1 LATCH-DOOR INTERIOR STORAGE OVER WINDSHIELD
- 1 DOOR-ENT AG2 TINT TEMP LO. STEP
- 1 POWER SYSTEM-AG2 AIR ENTRANCE DOOR
- 1 ELEC-AG2 AIR OPERATED ENTRANCE DOOR
- 1 RELEASE-ALUM.AIR.ENT DR.MAN.OP.EXT.
- 1 PULL-ENTRANCE DOOR, EXTERNAL ALUMINUM
- 1 SWITCH-PAD. ENT.DOOR AIR RS
- 1 KEY-VANDALOCK REAR DOOR NONE
- 1 TRIM-ENTRANCE DOOR INTERIOR
- 1 PAD-DR HEADER, RR EMER 36"W
- 1 TRIM-STEPWELL HORIZONTAL WITH RIBBED NOSE

ELECTRICAL - BODY

- 1 FAN-CIRC MID W/S HDR BLACK
- 1 ELEC-FAN MID W/S HDR
- 1 FAN-CIRC DRV'S WDO HDR BLACK
- 1 ELECTRICAL-FAN DRIVER'S WINDOW HEADER
- 1 RADIO-AM/FM DEAS10 W/PAGE
- 1 ELEC-VIDEO CAMERA POWER SUPPLY ONLY
- 1 ELEC-ZONAR STANDARD MONITORING
- 1 ELEC-PWR CELL PHONE OUTLET LS
- 1 OPER-DOOR AIR ENT.W/ BAT.2 POS.
- 1 MONITOR-LPS WARN
- 1 LAMPS-DOME OVER DRIVER
- 1 LPS-DOME PASS 6 MIN LED 341T
- 1 MODULE-PWR.DIST.ELEC.SYS.
- 1 LPS-INT RED LED OVER RR EMG DR
- 1 ELEC-LPS EXT AFT OF ENT DOOR
- 1 OPERATION-STEPWELL LAMPS WITH IGNITION & ENTRANCE DOOR
- 1 LPS-STP/TAIL/DIR AMBER/REV LED
- 1 ELEC-LPS STOP/TAIL/TURN/REV
- 1 ADVISORY-PASSENGER BUZZER ACTIVATION, WITH SWITCH
- 1 ELEC-PWR, GND, NETWORK, BUZZ
- 1 LAMPS-PILOT POST TRIP INSPECTION RED
- 1 LAMPS-SIDE DIRECTIONAL AMBER FRONT 2 CP LED
- 1 LPS-WARNING LED (8)
- 1 OPERATION-LAMPS WARNING (8) PACKAGE 39
- 1 OPERATION-LAMPS REVERSE WITH REAR EMERGENCY DOOR OPEN
- 1 LPS-ID AMB/RED LED
- 1 LPS-MKR ROOF F/R LED W/SHLD
- 1 LPS-MKR ROOF MID LED W/SHLD
- 1 ELEC-LPS ID/MKR PARK/SWITCH
- 1 LPS- STOP/TAIL 4" FLS.MT L.E.D.
- 1 SWITCH-ROCKER FAN DEFROST WINDSHIELD
- 1 LPS-SI DIR AMB LED GRD RR.AXLE
- 1 LAMPS-PILOT WARNING LIGHTS RED
- 1 LAMPS-PILOT WARNING LIGHTS AMBER
- 1 LAMPS-PILOT WARNING LIGHTS MASTER GREEN
- 1 ELEC-CABLE PRIM PWR & GND-CUSTOMER ACCESS
- 1 OPERATION-LAMPS SIDE DIRECT.ONLY
- 1 BLOCK-FUSE CUSTOMER ACCESS
- 1 OPER-PRE-TRIP INSPECTION
- 1 ELEC-SEAT BELT PILOT LAMP
- 1 OPER-SEAT BELT PILOT LAMP
- 1 LAYOUT-ROCKER SWITCH STANDARD
- 1 CIRCUITRY-MULTIPLEX PRESENT
- 1 ELEC-AIR STOP SIGN FRT
- 1 SPEAKERS-INT. 30 WAT.(6) 341T
- 1 ELEC- (6) INT SPEAKERS 341T
- 1 ELEC-HTR ENT DOOR STEPWELL
- 1 ELEC-PEDESTAL, HEATED SEAT
- 1 112DB BACKUP ALARM

EXTERIOR

- 1 FLAPS-MUD, REAR 22.5"W
- 1 FLAPS-MUD, FRONT 16"W X 12"H
- 1 STEPS-EXT W/S SERVICE
- 1 FENDER-QUARTER 24" BATTERY BOX DOOR
- 1 BODY ADJUSTMENT-FREIGHTLINER, BTR RS FUEL FILL LOCATION
- 1 REINFORCEMENT-FRAME STD 24" BATTERY BOX DOOR
- 1 CAP-ENTRANCE DOOR STANDARD
- 1 FLOOR-NON ADA
- 1 BUMPER-RR 2 BRACES LS EXH HOLE
- 1 SKT.FWD.STPWLL LO DEF
- 1 CAP-FRT ROOF VENT W/WARN.LPS.
- 1 CAP-REAR ROOF W/WARN.LPS.
- 1 GUSSET-21"H LWR SIDE SHEET
- 1 SHEET-LWR, L MID 20G,21"
- 1 SHEET-LWR,L RR 20G,21"
- 1 SHEET-LWR,R MID 20G,21"
- 1 SHEET-LWR,R RR 20G,21"
- 1 DOOR-U/B L BATTERY 24"
- 1 DOOR-FUEL FILL ACCESS BTR
- 1 FENDERETTE-STL 21" SKIRT
- 1 LATCH-BATT DOOR NON-LOCKING
- 1 LATCH-FUEL FILL ACCESS (THUMB)
- 1 VENT-STATIC PRESENT
- 1 PILASTER - 341T, 900
- 1 LATCH-NON-LOCKING DEF ACCESS DOOR
- 1 RAIL-SNOW RAIL PRESENT
- 1 HARDWARE-MOUNTING CLIPS STANDARD

HVAC

- 1 AIR COND - NONE
- 1 HTR-U/S LS 84,000 BTU LOC 9
- 1 HOSE-HTR BLUSTRIP W/ W/H POS 9
- 1 HEATER-ENTRANCE DOOR STEPWELL
- 1 CLAMPS-PLUMBING HEATER CONSTANT TORQUE
- 1 CLAMPS-UNDERSEAT HEATER CONSTANT TORQUE
- 1 NO AIR CONDITIONING COMPRESSOR
- 1 MANIFOLD PLUMBING,COMBINED SHUTOFF DASH&AUX HTR FWD STAINLES

INTERIOR

- 1 VISOR-WINDSHIELD SUN 6"X30" TINTED
- 1 DOOR-STORAGE BOX W/O GLASS
- 1 TRIM-LOWER REAR HEATER NO A/C
- 1 DOOR-ACC SOLID PANEL
- 1 LATCH-DR INT STOR OVR DRVRSHDR
- 1 BTR FUEL FILL RECESS, W/DOOR
- 1 COVER-TRIM DRVS HDR W/STORAGE
- 1 COVER-TRIM FRT END W/S HEADER
- 1 COVER-TRIM FRT ENT.ALUM.DR HDR.AIR.OP.
- 1 LINE - STANDEE 4" WHITE
- 1 FLR-BLK VINYL W/13" CTR AISLE 341T
- 1 FLR-BLK WHEELHOUSE AND HEATER
- 1 FLR-PLYWOOD 5/8" 341T
- 1 LINING-SIDE INT.
- 1 H/L-1ST WDO SEC ACOUS GRY 341T
- 1 TUBE-FILL BTR & OVERFLOW HOSE
- 1 CAP-FUEL FILL BTR NON-LOCKING
- 1 IN DASH STORAGE BIN

MISC

- 1 PRODUCTION CY2024 SCHEDULE MT
- 1 PDI IDENTIFIER-DEALER PERFORMED
- 1 MANUAL-DRVR'S/MAINT.ENGLISH
- 1 APPLICATION - SCHOOL
- 1 NO COOLANT HEATER - GAS/DIESEL
- 1 ALL UNIT(S) KEYED ALIKE WITH CUSTOMER SPECIFIED KEY #FT101
- 1 NO A/C PLUMBING - MAIN

- 1 70 MPH ROAD SPEED LIMIT
- 1 SAF-T-LINER C2

PAINT/LETTERING

- 1 DECAL-UNITED AUTO WORKERS
- 4 LABEL-P/O WDO EMER EXIT 2" BLACK
- 1 LABEL-ENGLISH AG2.AIR.ENT DR
- 1 REFLECTTAPE-@ ROOF HATCH YEL
- 1 DECAL-BACKING ALARM
- 1 DECAL-LOW SULFUR FUEL
- 1 LABEL-RR DR EMERGENCY DOOR DO NOT BLOCK
- 1 LABEL-RR EMERGENCY DOOR INSTRUCTION
- 1 LABEL-"DEF ONLY"
- 1 LABEL-REGENERATION WARNING 2010/2013 EPA ENGLISH
- 1 PAINT-EXT HNDLE(S) BLACK
- 1 DECAL-REFL FRT CAP "SCHOOL BUS"
- 1 DECAL-REFL RR CAP "SCHOOL BUS"
- 1 DECAL-"DIESEL"
- 1 PAINT-EXT WINDOW AREA BLACK
- 1 PAINT-EXT GRD RAIL @ WINDOW BLACK
- 1 PAINT-EXT GRD RAIL @ SEAT BLACK
- 1 PAINT-EXT GRD RAIL @ FLOOR BLACK
- 1 PAINT-EXT GRD RAIL @ SKRT BLACK
- 1 PAINT-EXT BUMPER REAR BLACK
- 1 PAINT-BLACK TRIM-FRONT/REAR ROOF CAPS
- 1 PAINT-SOLID COLOR YELLOW
- 1 DECAL-APPROVED FUEL TYPE
- 1 HEADLINING-VESTIBULE ACOUSTIC, GRAY, DRIVER LAMP
- 1 PAINT - MATTE BLACK ANTI-GLARE PANEL
- 1 CAB COLOR A:L5898EB SCHOOL BUS YELLOW ELITE BC
- 1 CAB COLOR B: E180KM005 LOW GLOSS BLACK BASF
- 1 CAB COLOR C: NONE
- 1 GRILLE: SILVER N3388H IMRON 5000

SEATS

- 1 2014 SEATING ALERT
- 1 BELT-ELR SHOULDER/PUSH BUT LAP
- 1 39" BARR-VERT,WALL MT 45"H RS 2009
- 1 39"8DEG BARR-REV. WALL-MT 45"H 2009
- 2 SPANISH GREEN UPHOLSTERY-45"HIGH RECESSED BARRIER
- 1 RAIL-ASSIST FRT ENT DR 39"W
- 1 SEAT-DRIVER NATIONAL W/HEAT
- 1 ARMREST NATIONAL DRV'R'S ST. RS
- 1 UPH DR.ST.FABRIC BLK NATIONAL
- 1 PEDESTAL-NATIONAL AIR W/2 SHOCKS
- 1 COVER PEDASTAL NATIONAL NONE
- 1 SLIDE STOP NATIONAL DR.ST. NONE
- 1 RETAINER NATIONAL DR.ST.BELT
- 1 POUCH-DR.ST.STORAGE NONE
- 1 KICKPLATE-MOD.PANEL RS 39"
- 1 RISER-DRIVERS SEAT, NATIONAL
- 1 HAPTICS-NOT PRESENT
- 13 S3B 39"RS WALL MT RESTRAINING/NO BELT
- 1 S3B 26" LS WALL MT RESTRAINING/NO BELT
- 12 S3B 39"LS WALL MT RESTRAINING/NO BELT
- 26 42 OZ SPANISH GREEN UPHOLSTERY - S3B SEAT
- 26 S3B WALL MT HARDWARE-RESTRAINT

WINDOWS/GLASS

- 1 GLASS-WINDSHIELD ONE PIECE WITH TINTED BAND
- 1 GLASS-RS FRT STAT TNT TEMP
- 1 GLASS-LS FRT STAT TNT TEMP
- 1 GLASS-REAR STATIONARY TINTED TEMPERED
- 1 GLASS-REAR END STATIONARY SIDE, TINTED TEMPERED
- 1 FRAME-WDO SPLIT
- 16 FRAME-WDO SPLIT 30"W
- 2 FRAME-WDO SPLIT 40"W

- 2 FRAME-WDO P/O VERT TEMP TINT RS
- 16 GLASS-WDO TINT TEMP 30"
- 2 GLASS-WDO TINT TEMP 40"
- 1 STOPS-WDO 12"
- 1 GLS-LWR RR DR TEMP TNT
- 1 GLS-UPR RR DR TEMP TNT
- 1 WDO-DRIVER'S TEMP TINT

OTHER

- 1 2019 CUMMINS ENGINE TARIFF
- 1 SURCHARGE-RAW MATERIAL (STEEL)
- 1 LOGO-FRT RS & RR
- 1 LOGO-THOMAS DECALS YELLOW
- 1 HATCH-RF ESC SPEC ADVANTAGE H1975-015-131 ENGLISH (2)
- 1 ELEC-RF ESC HATCH POS 9
- 1 ARM ASSEMBLY-WINDSHIELD WIPER (2)
- 1 ELECTRICAL-ROOF HATCH OR P/O WINDOW (DASH)
- 1 OPER-FAN W/S HDR
- 1 OPER-FAN DRV'S WDO HDR
- 1 OPER-ALARM BACKING W/REV.
- 1 OPER-RF HATCH BUZZER
- 1 LOC-O/H ENT.DOOR RS CERT.HLDR
- 1 LOCATION-VESTIBULE FLOOR PLATE AFT REFLECTIVE TRIANGLE
- 1 AC DUCT-NOT PRESENT NO SIDE EVAP
- 1 CONDENSER ALERT - NONE
- 1 EVAPORATOR QTY - NONE
- 1 ANTENNA - RADIO SWIVEL BASE
- 1 ELEC-ANTENNA RADIO COAXIAL
- 1 KIT-RADIO ANTENNA MOUNTING @ DRIVER'S HEADER
- 1 ALERT-CONDENSER NONE
- 1 341T30_N
- 1 TRIM-A POST
- 1 WHEELHOUSES-REAR L&R
- 1 STRINGER-ROOF 341T
- 1 FRONT END FRAME
- 1 FRT END FRAME MTG KIT
- 1 REAR END FRAME-28.68"DEEP
- 1 FLOOR-GALVALUME STEEL MID BODY
- 1 LOC-40" RAF SP 11TH 341T
- 1 RS TANK ALERT - NONE
- 1 DOOR ALERT - LS ENT NONE
- 1 TRIM-REAR DOOR
- 1 VANDALOCK-NONE REQUIRED
- 1 HINGES-REAR DOOR PIN TYPE
- 1 LATCH-SINGLE-POINT, REAR EMERGENCY DOOR
- 1 STOP-DOOR REAR EMERGENCY, 1-POS
- 1 OPER-DR.RR.EMG.W/BUZ
- 1 ELEC-SIDE EMERGENCY DOOR(S)
- 1 DOOR-LS ENT RS EXIT -NONE REQD
- 1 INT COLOR -RR DOOR GRAY
- 1 VANDALOCK-NONE REQUIRED RS
- 1 VANDALOCK-NONE REQUIRED LS
- 1 DOOR ALERT - RS EXIT NONE
- 1 DOOR, REAR EMERGENCY
- 1 THRESHOLD REAR EMERGENCY DOOR
- 1 ELEC-DRIVER'S DOME LPS
- 1 ELEC-PASS DOME LPS MIN (6)
- 1 SWITCH-RKR DOME LPS ALL
- 1 ELEC-LPS-INT RED O/H RR EMG DR
- 1 LPS-EXT AFT OF ENT DOOR
- 1 LPS-STPWLL LED (1)
- 1 ELEC-PASSENGER ADVISORY 341T
- 1 OPER-PASS ADV IGN/WARN/BUZZER
- 1 SWITCH-RKR FAN DEFROST L.S.
- 1 BUZZER-SWITCH PANEL 1 TONE
- 1 ELECTRICAL-LAMPS WARNING,8 LAMPS 341T

- 1 OPER-LPS, DOME STANDARD
- 1 OPER-LPS BODY TAIL W/PARK SW.
- 1 LAMPS-LICENSE PLATE ILLUMINATION
- 1 ELEC-LPS SI DIRECTIONAL 341T
- 1 SWITCH-ROCKER DOME LAMPS DRIVER ON/OFF
- 1 OPER-DRVR'S DOME LPS ON/OFF
- 1 OPERATION-LAMPS INTERIOR/EXTERIOR RIGHT FRONT ENTRANCE DOOR
- 1 OPER-LPS SERVICE BRAKE
- 1 OPERATION-SWITCH ID/MARKER LAMPS WITH PARK
- 1 OPER-LPS DOME (1)ON/OFF
- 1 OPER-LPS REVERSE
- 1 ELEC-(2) SWITCH BANKS
- 1 SWITCH-WARN.LPS ON/AMB ACT.
- 1 SWITCH-ROCKER WARNING LAMPS OVERRIDE MOMENTARY ACTIVATION
- 1 ELEC-HARNESS COMP ASM 341T
- 1 ELEC-ELECTRONIC COMP ASM
- 1 OPER-LPS DIR./HAZ.
- 1 SWITCH-RKR MIRROR HTR.
- 1 ELEC-MIR A HTD
- 1 POWER SYSTEM-STOP SIGN AIR FRT
- 1 RAIL-EXTERIOR GUARD @ WINDOW,SEAT,FLOOR,SKIRT
- 1 RAIL-EXT GRD @ SEAT FRT END LS
- 1 RAIL-EXT GRD@ FLOOR, NONE
- 1 TRIM-FRT CAP RS/LS
- 1 PANELS-EXTERIOR REAR
- 1 SHEET-DRIVERS EXTERIOR 20 GA.
- 1 SHEET-UPPER SIDE EXTERIOR
- 1 OPER-MIRRORS EXT HTD.
- 1 UNDERCOATING-ASPHALT EMULSION
- 1 HEADERS-WINDOW INTERIOR 341T
- 1 PAINT-EXT ENT DOOR NONE
- 1 PANELS-EXTERIOR REAR SIDE LONG W/STATIONARY GLASS
- 1 LS STORAGE BOX 1 - NONE
- 1 LS STORAGE BOX 2 - NONE
- 1 ROOF SHEETS-(2)HATCH - 341T
- 1 RS STORAGE BOX 1 - NONE
- 1 RS STORAGE BOX 2 - NONE
- 1 RS STORAGE BOX ROH - NONE
- 1 LS STORAGE BOX ROH - NONE
- 1 PANELS-REAR END INTERIOR REAR GALVALUME
- 1 PANELS-RR END INT SI LONG W/ST
- 1 BULKHEAD-RR END INT.GRY
- 1 PANELS-ACCESS RR GRAY PASS ADVISORY
- 1 COVER-HARNESS ACCESS@HDR
- 1 COVER-ACCESS RR END HARNESS
- 1 COVER-ACCESS FRT END HARNESS
- 1 HEADLINING-REAR LONG SMOOTH, GRAY
- 1 STRIPS - AISLE, SNAP-IN BLACK
- 1 COVER-FUEL SENDING INSPECTION
- 1 MOLDING-SHOE 341T
- 1 SWITCH-ROCKER HEATER STEPWELL
- 1 LUGGAGE RACK ALERT - NONE
- 1 SWITCH-ROCKER HEATER LEFT 2ND
- 1 ELECTRICAL-HEATER UNDERSEAT POSITION 9
- 1 RAIL-SEAT
- 1 LAYOUT-SEAT RAIL HOLES RS
- 1 LAYOUT-SEAT RAIL HOLES LS
- 1 CABINET-SW, FWD
- 1 CABINET-SWITCH, LOWER WITHOUT POCKET
- 1 CABINET-SWITCH, UPPER
- 1 CABINET-TOP PLATE (2 BANKS)
- 1 TREAD-STEP ALUMINUM ENTRANCE DOOR BLACK
- 1 OPER-HTR STEPWELL
- 1 INSULATION-VEST HEADLINING 2"
- 1 INSULATION-SIDELINING 2" POLY

- 1 INSULATION-RR BULKHEAD 2" POLY
- 1 INSULATION-FRONT BULKHEAD 2"POLYESTER
- 1 OPER-HTR U/ SEAT LS AFT
- 1 HEADERS-WINDOW EXTERIOR 341T
- 1 HARNESS COVER COLOR - GRAY
- 1 SPEAKER ALERT - PRESENT
- 1 DOME LPS - MINIMUM
- 1 HEADLINING COLOR - GREY
- 1 HDLINING TYPE-1ST WDO ACOUSTIC
- 1 MAT, FLOOR VESTIBULE
- 1 TRIM-INTERIOR DASH FORWARD
- 1 INSTALLATION-PARK BRAKE NONE
- 1 INSULATION-INT LONG REAR WDO
- 1 LUGGAGE RACK ALERT - NONE
- 1 PLATE-ACCELERATOR
- 1 LABEL-QR CODE
- 2 FRAME-WDO P/O VERT TEMP TINT LS
- 1 OPER-WDO P/O
- 1 LOWER RADIATOR GUARD
- 1 REINFORCED NYLON FUEL LINES
- 1 PAINTED FUEL TANK, PAINTED BANDS
- 1 SINGLE SUCTION AND RETURN FUEL LINES
- 1 FUEL TANK MOUNTED BETWEEN RAILS, AFT OF REAR AXLE, WITH CAGE
- 1 STAINLESS STEEL CHARGE AIR COOLER PLUMBING
- 1 REMOTE-MOUNTED SURGE TANK
- 1 BASIC WIRING SCHEMATIC, UNMOUNTED, 12-VOLT NEGATIVE GROUND SYS
- 1 PAINTED BATTERY PANEL COVER
- 1 BATTERY BOX FRAME MOUNTED
- 1 (3) DTNA 3000CCA FLOODED STARTING, 555RC THREADED STUD BATTE
- 1 INTEGRAL ELECTRONIC TURN SIGNAL FLASHER
- 1 BATT ENABLED 3 AMBER INBOARD ID LAMPS, 2 AMBER OUTBOARD MARKE
- 1 LED WARNING SYSTEM LAMPS
- 1 STANDARD BODY VISUAL WARNING, LOWER RR, REV LAMPS ON DR/OPEN
- 1 STANDARD WIRING
- 1 DRIVER'S IGNITION OPERATED DOME LP WITH ON/OFF SW
- 1 PASSENGER COMPARTMENT DOME LAMPS, IGNITION ACTIVATED
- 1 PASSENGER COMPARTMENT DOME LPS, SINGLE ON/OFF SW
- 1 STEPWELL LAMP ON WITH DOOR OPEN AND IGNITION ON
- 1 SHIFT LEVER, CABLE LINKAGE, AUTOMATIC TRANSMISSION
- 1 DRIVELINE GUARD
- 1 NON-ASBESTOS FRONT BRAKE LININGS
- 1 FRONT SHOCK ABSORBERS
- 1 NON-ASBESTOS REAR BRAKE LININGS
- 1 NO DRIVELINE PARKING BRAKE
- 1 REAR OIL SEALS
- 1 NO POLISHED FRONT WHEELS
- 1 NO POLISHED REAR WHEELS
- 1 TWO QUART SEE THRU POWER STEERING RESERVOIR
- 1 STD FITTINGS POWER STEERING GEAR
- 1 POWER STEERING PUMP
- 1 ZINC-PLATED HEXHEAD CHASSIS FASTENERS
- 1 3975MM (155") REAR FRAME OVERHANG
- 1 SQUARE END OF FRAME
- 1 BUMPER MOUNTING FOR SINGLE LICENSE PLATE
- 1 COMBINATION S/T/T/R LAMPS, LED
- 1 REAR EMERGENCY DOOR, IGNITION CONTROL, BUZZER ON W/DOOR OPEN
- 1 MAINTENANCE-FREE RUBBER BUSHINGS - FRONT SUSPENSION
- 1 CAB MOUNTING FOR HOOD AND COWL CHASSIS
- 1 MANUAL ENT DOOR LOCK/BUZZER ON W/EMERGENCY DOORS UNLATCHED
- 1 ONE GALLON WINDSHIELD WASHER RESERVOIR
- 1 BLACK HOOD MOUNTED AIR INTAKE GRILLE
- 1 SINGLE ELECTRIC WINDSHIELD WIPER MOTOR W/DELAY
- 1 GRAY/CHARCOAL FLAT DASH
- 1 NO FCCC SUPPLIED AC COMPONENTS ON COMPLETED VEHICLE
- 1 STANDARD TUNNEL/FIREWALL LINER

- 1 NO AIR CONDITIONER CONDENSER
- 1 HEATER AND DEFROSTER
- 1 STANDARD HVAC DUCTING
- 1 MAIN HVAC CONTROLS WITHOUT RECIRCULATION SWITCH
- 1 WINDSHIELD FAN,(1) HEADER MOUNTED
- 1 DRIVER'S FAN,(1) MOUNTED ABOVE SIDE WINDOW
- 1 AUXILIARY BODY HEATER, UNDER SEAT, AFT
- 1 GRAY INSTRUMENT PANEL-DRIVER
- 1 NO CENTER INSTRUMENT PANEL
- 1 BODY SUPPLIED HEATED MIRRORS
- 1 AIR PROVISIONS FOR CUSTOMER FURN DRIVERS AIR RIDE SEAT
- 1 ROOF MOUNTED VENT/ESCAPE HATCH
- 1 PUSH OUT BODY SIDE WINDOWS, BUZZER WITH WINDOW UNLATCHED
- 1 PROVISION FOR EVIR ZONAR
- 1 STANDARD PANEL LAMP DIMMER
- 1 CHASSIS COWL AND HOOD ONLY
- 1 NO TCU-TRANSMISSION OPTIMIZED(NO FUEL SENSE)
- 1 STANDARD BRAKE WIRING
- 1 NO DETROIT CONNECT SERVICES SELECTED
- 1 AIR PROVISION FOR CUSTOMER SUPPLIED STOP ARM
- 1 BUMPER: BLACK
- 1 NO SPARE WHEEL PAINT
- 1 CHASSIS: VENDOR BLACK
- 1 J1939 ELECTRICAL ARCHITECTURE
- 1 EXPECTED GROSS VEHICLE WEIGHT CAPACITY
- 1 EXPECTED FRONT AXLE(S) LOAD
- 1 EXPECTED REAR DRIVE AXLE(S) LOAD
- 1 SCHOOL BUS SERVICE
- 1 COWL CHASSIS CONFIGURATION COMPLIES WITH SBMTC
- 1 BUS BODY WITH WHEELWELL
- 1 PASSENGER COMMODITY
- 1 100% ON-HIGHWAY (CITY) TERRAIN
- 1 DOMICILED MASSACHUSETTS
- 1 THOMAS BUILT SCHOOL BUS 341T

CHASSIS

AXLES AND SUSPENSIONS

- 1 ALIGNMENT-4-WHEEL SAF-T-LINER C2
- 1 SPL100 DANA SPICER MAIN DRIVELINE
- 1 DA-F-10-3 10,000# FF1 71.5 KPI/3.74 DROP SINGLE FRONT AXLE
- 1 FRONT OIL SEALS
- 1 SYNTHETIC 75W-90 FRONT AXLE LUBE
- 1 CONMET IRON FRONT HUBS
- 1 SYNTHETIC 75W-90 REAR AXLE LUBE
- 1 DA-RS-21-4 21K R-SERIES SINGLE REAR AXLE
- 1 5.56 REAR AXLE RATIO
- 1 IRON REAR AXLE CARRIER HOUSING
- 1 REAR SHOCK ABSORBERS - ONE AXLE
- 1 CONMET IRON REAR HUBS
- 1 10,000 LB. TAPERLEAF FRONT SUSPENSION
- 1 AIRLINER 21,000 LB. REAR SUSPENSION
- 1 COMFORT-TEC SUSPENSION
- 1 SINGLE AIR SUSPN LEVELING VALVES

BRAKES

- 1 ALERT-ENHANCED STABILITY CONTROL
- 1 AIR BRAKE PACKAGE
- 1 MERITOR 15 X 4 Q+ CAM FRONT BRAKES (ROCKWELL)
- 1 HALDEX LONGSTROKE FRONT BRAKE CHAMBER
- 1 HALDEX AUTOMATIC FRONT SLACK ADJUSTERS
- 1 CONMET CAST IRON FRONT BRAKE DRUMS
- 1 MERITOR 16 1/2 X 7 Q+ CAM REAR BRAKES, DBL-ANCHOR, FAB SHOES
- 1 REAR BRAKE DUST SHIELDS
- 1 HALDEX, LONGSTROKE, SINGLE DRIVE AXLE, SPRING-PARK CHAMBERS
- 1 FRONT BRAKE DUST SHIELDS
- 1 HALDEX AUTOMATIC SLACK ADJUSTERS

- 1 CONMET CAST IRON REAR BRAKE DRUMS
- 1 STEEL AIR BRAKE RESERVOIRS INSIDE FRAME RAILS
- 1 BENDIX AD-9 AIR DRYER WITH HEATER
- 1 WABCO 4S/4M ABS W/TRACTION CONTROL
- 1 ONE-VALVE PARKING BRAKE SYSTEM WITH WARNING

CHASSIS EQUIPMENT

- 1 EXHAUST-LS, THRU REAR BUMPER
- 1 ANTI-FREEZE, OAT -34 DEGREE
- 1 WINTERFRONT-CHASSIS GRILLE YELLOW
- 1 SHIELD-EXHAUST PIPE
- 1 B2 106 CONVENTIONAL CHASSIS
- 1 SET-BACK AXLE - TRUCK
- 1 ELECTRIC GRID AIR INTAKE WARMER
- 1 DELCO 12V 29MT STARTER WITH INTEGRATED M
- 1 NO CLUTCH PEDAL WITH NON-ADJUSTABLE
- 1 INTAKE MOUNTED AIR RESTRICTION INDICATOR WITHOUT GRADUATIONS
- 1 RIGHT HAND SIDE-FILL FUEL TANK CAP
- 1 100GALLON/378 LITER STEEL RECTANGULAR FUEL TANK,BETWEEN RAIL
- 1 HORIZONTAL TAILPIPE, LH SIDE, EXIT THROUGH BUMPER
- 1 11.5 GALLON DEF TANK
- 1 ENGINE AFTER TREATMENT DEVICE AUTOMATIC
- 1 NO BUMPER FRONT VISUAL WARNING DEVICE
- 1 MAGNETIC ENGINE DRAIN, REAR AXLE DRAIN & FILL PLUG
- 1 NO TRACTION STABILIZER
- 1 700 CUBIC INCH MINIMUM AUXILIARY AIR
- 1 PETCOCK DRAIN VALVES ON ALL AIR TANKS
- 1 ADJUSTABLE STEERING COLUMN
- 1 TRW THP-60 POWER STEERING
- 1 450MM(18") LK FOUR-SPOKE CHARCOAL STEERING WHEEL
- 1 7075MM (279") WHEELBASE
- 1 5/16" X 3" X 10-1/8" STEEL FRAME 120,000 PSI YIELD
- 1 ONE-PIECE 14" PAINTED STEEL BUMPER
- 1 FRONT FRAME-MOUNTED TOW HOOKS
- 1 NO AUTO TRACTION CHAINS
- 1 NO REAR TOWING DEVICE
- 1 STANDARD DUTY HOOD MOUNTING
- 1 FIBERGLASS HOOD
- 1 PAINTED PLASTIC GRILLE
- 1 YELLOW WINTERFRONT
- 1 (2) CUPHOLDERS, LEFT HAND AND RIGHT HAND DASH
- 1 REINFORCED NYLON, FABRIC AND WIRE BRAID CHASSIS AIR LINES

ELECTRICAL - CHASSIS

- 1 DR 12V 160 AMP 28 SI QUADRAMOUNT PAD ALTERNATOR
- 1 CRUISE CONTROL-ELEC ENG,W/SWITCHES IN LH SWITCH PANEL
- 1 DIAGNOSTIC INTERFACE CONNECTOR,9-PIN, S
- 1 NO BOOSTER PUMP
- 1 12VOLT POWER SUPPLY LH PANEL
- 1 SOLID STATE CIRCUIT PROTECTION, PDMS WIT
- 1 COLE HERSEE BATTERY CUT-OFF SWITCH, BATTERY BOX MOUNTED
- 1 SELF CANCEL TURN SIGNAL SWITCH W/DIM/WASH&HAZZARD IN HANDLE
- 1 STANDARD FRONT TURN SIGNAL LIGHTS
- 1 PARK LMP SW INTGRAL W/HL SWITCH, ID/MARKER/CLEARANCE/PARK ON
- 1 NO FENDER MTD TURN/MARK COMBO LPS
- 1 AMBER LED MIDSHIP TURN SIGNALS
- 1 RED LED OVER REAR WHEELS MTD TURN SIGNALS GUARD
- 1 DAYTIME RUNNING LIGHTS SET @ 100% & EXTERIOR LAMPS W/ENG RUN
- 1 LED HEADLIGHT ASS & INCANDESCENT MARKER/TURN LAMP
- 1 NO UTILITY/ADVERTISING LIGHT
- 1 STOP SIGN PRESENT
- 1 NO BAGGAGE COMPARTMENT LAMP
- 1 NO BODY MTD INT SPOT/WORK LAMP
- 1 EIGHT LAMP WARNING SYSTEM, LH DASH SWITCH(ES), PACKAGE 39
- 1 ELECTRONIC STABILITY CONTROL
- 1 AIR OPERATED BATTERY CONTROLLED RH FRONT ENTRANCE DOOR

- 1 BAT PWD 2-POS INT DOOR CONTROL LOCATED AT CENTER DASH PANEL
- 1 DUAL ELEC HORN, PASSENGER ADVISORY BUZZER ON W/IGN AND WARN
- 1 NO OBSTACLE DETECTION SYSTEM
- 1 NO CAMERA/VIDEO/IMAGING SYSTEM
- 1 C/F J1939 RADIO W/PA
- 1 FASTEN SEAT BELT INDICATOR FOR CUSTOMER SUPPLIED SEAT BELT
- 1 LOCATING SYSTEM WITH VEHICLE MONITORING
- 1 ELECTRONIC SPEEDOMETER WITH SECONDARY KPH SCALE, NO ODOMETER
- 1 ICU3S, 132x48 Display w/Diagnostics, 28 LED Warn Lamps
- 1 NO INFORMATION CENTER
- 1 PRE/POST TRIP SYSTEM TEST
- 1 ENGINE AND HOUR METERS INTEGRAL WITH DRIVER DISPLAY
- 1 DIGITAL VOLTAGE DISPLAY INTEGRAL WITH DRIVER DISPLAY
- 1 PRIMARY AND SECONDARY AIR PRESSURE GAUGES
- 1 ELECTRIC FUEL GAUGE
- 1 AMMETER
- 1 ELECTRIC ENGINE OIL PRESSURE GAUGE
- 1 ELECTRICAL ENGINE COOLANT TEMPERATURE GAUGE
- 1 TRANSMISSION OIL TEMPERATURE INDICATOR LIGHT

ENGINE AND EQUIPMENT

- 1 CUM B6.7 200 HP @ 2400 RPM, 2600 GOV, 600 LB/FT @ 1600 RPM
- 1 ANTI-FREEZE TO -34F, OAT (NITRITE AND SILICATE FREE)EXT LIFE
- 1 ENGINE-MOUNTED OIL CHECK AND FILL
- 1 CUMMINS 18.7 CFM COMPRESSOR
- 1 CUMMINS SPIN ON FUEL FILTER
- 1 STANDARD ENGINE OIL
- 1 FULL FLOW OIL FILTER
- 1 DAVCO 245 FUEL/WATER SEPARATORW/12V HEAT & WIF
- 1 EXHAUST BRAKE NONE
- 1 ALUMINUM FLYWHEEL HOUSING
- 1 PHILLIPS 750 WATT/115 VOLT BLOCK HEATER
- 1 STANDARD OIL PAN
- 1 ENGINE HEATER RECEPTACLE MOUNTED FACE OF BUMPER, LEFT SIDE
- 1 PRE-SET FAST IDLE FOR ELECTRONIC ENGINES
- 1 ELECTRONIC ENGINE, INTEGRAL WARNING & DERATE PROTECTION SYST
- 1 IDLE LIMITER ELECTRONIC ENGINE
- 1 GATES BLUE STRIPE COOLANT HOSES
- 1 CONSTANT TORQUE BREEZE CLAMPS ON 1" IN DIA GREATER, SS C
- 1 30,600 BTU STEPWELL HEATER, RH FRONT ENTRANCE DOOR
- 1 DONALDSON ONE-STAGE AIR CLEANER
- 1 700 SQUARE INCH ALUMINUM RADIATOR
- 1 VISCOUS FAN DRIVE
- 1 OMIT STANDARD EXHAUST DIFFUSER
- 1 15 MINUTES IDLE SHUTDOWN
- 1 ELECTRONIC TACHOMETER 3000 RPM

TRANSMISSION AND EQUIPMENT

- 1 ALLISON 2500 PTS AUTOMATIC TRANSMISSION
- 1 ALLISON VOCATIONAL PACKAGE 354 - FIFTH GEN
- 1 TRANSMISSION OIL CHECK AND FILL
- 1 SYNTHETIC 50W TRANSMISSION LUBE (TES-295 COMPLIANT)
- 1 WATER TO OIL TRANSMISSION COOLER - IN RADIATOR END TANK
- 1 NO TCU-LBSS VAC
- 1 NO MODE SWITCH

WHEELS AND TIRES

- 1 FRONT HANKOOK AH24 11R22.5 14 PLY TIRES
- 1 REAR HANKOOK DH06 11R22.5 14 PLY TIRES
- 1 NO TIRE PRESSURE CONTROL/SENSOR
- 1 FRONT ACCURIDE 51487 22.5X8.25 10-HUB PILOT, 5-HAND WHEELS
- 1 REAR ACCURIDE 51487 22.5X8.25 10-HUB PILOT, 5-HAND WHEELS
- 1 TIRE/WHEEL BALANCING-LEAD FREE WEIGHTS
- 1 ACCURIDE PK-BLACK21 POWDER BLACK WHEEL (N0001H)- FRONT
- 1 ACCURIDE PKBLK21 POWDER BLACK WHEEL (N0001H) - REAR

OTHER TYPE

GEARS

- 1 PRIMARY MODE GEARS, 5 FORWARD

DEALER ADD On's**EQUIPMENT**

- 1 safety & lettering
- 1 CAMERA-INTERIOR (3) W/DVR

Meets all FMVSS requirements in effect at the time of manufacture.

Total for 1 complete unit(s):

\$126,667.00

Delivery Cost:

Delivery Included

Terms and Conditions:

Quote Expires:

Customer Signature:

Date:

Dealer Signature:

Date:

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Plymouth Public Schools	Priority #:	10
Project Title and Description: Purchase 7D Van	Total Project Cost:	\$88,765.00

Department/Division Head: Adam Blaisdell

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>			FY27		
<i>Labor and Materials</i>			FY28		
<i>Administration</i>			FY29		
<i>Land Acquisition</i>			FY30		
<i>Equipment</i>	\$80,693.00		FY31		
<i>Other</i>					
<i>Contingency</i>	\$8,072.00	at rec from vendor			
Total Capital	\$88,765.00				

Project Justification and Objective: Plymouth currently runs home to school routes for students who are on Individualized Education Plans. Private contractors are charging between \$600 and \$900 per day (over \$100,000 per year in some cases). This allows us to run the routes for a percentage of the cost.

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: 10 - 12 years depending on use

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

NATIONAL VAN BUILDERS, INC.

80 PINE STREET
 ATTLEBORO, MA 02703-3907

Sales Order

Phone(800) 527-7477

Fax: (508) 222-7882

Customer No.: PLYSCH

Order No.: 24089

Bill To: **PLYMOUTH PUBLIC SCHOOLS**
 11 LINCOLN STREET
 PLYMOUTH, MA 02360

Ship To: **PLYMOUTH PUBLIC SCHOOLS**
 11 LINCOLN STREET
 PLYMOUTH, MA 02360

Attention ADAM BLAISDELL

Date	Ship Via		F.O.B.	Terms		
05/07/2024			Origin	C.O.D.		
Purchase Order Number		Required Date	Sales Person		Our Order Number	
RPM Shuttle		05/07/2024	PETER ROONEY		24089	
Quantity			Item Number	Description	Unit Price	Amount
Required	Shipped	B.O.				

1

2024 RAM Promaster 2500
 8,900 GVWR, 159" wheelbase
 white exterior, 3.6L V6

engine, 6-speed automatic
 transmission, front wheel
 drive, 195 amp alternator,

U connect AM/FM/CD/BT, HD
 batteries, power folding
 heated mirrors, rear defrost

backup camera, privacy glass
 daytime running lamps, blind
 spot & cross path detection

remote start, passive entry
 adaptive cruise control,
 navigation, voice command

bluetooth, XLT+ trim

1

National Van Builders
 Conversion

1

Loncoin one-piece RAM
 flooring over 3/4" tongue &
 groove subfloor - 159" wb

Unibody steel floor
 structure for FMVSS
 compliance

1

ABS Interior Package

1

NVB Quiet Tech Package
 full insulation wrap

1

Freedman single passenger
 GO ES rigid seat 3PT w/
 integrated shoulder belt

NATIONAL VAN BUILDERS, INC.80 PINE STREET
ATTLEBORO, MA 02703-3907

Sales Order

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Fax: (508) 222-7882

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Date		Ship Via		F.O.B.		Terms	
05/07/2024				Origin		C.O.D.	
Purchase Order Number			Required Date	Sales Person			Our Order Number
RPM Shuttle			05/07/2024	PETER ROONEY			24089
Quantity			Item Number	Description	Unit Price	Amount	
Required	Shipped	B.O.					

1	Freedman 2 passenger GO ES rigid seat 3PT w/ integrated shoulder belts
1	Freedman Caregiver single ICS rigid seat 3PT w/ integrated shoulder belt
2	Freedman Caregiver double ICS 3PT rigid seat 2 position ICS
1	Driver's door Luverne Step Aluminum, powder coated black
1	Passenger side step Aluminum, powder coated black
1	23000 BTU AC /29000 BTU heat - Ceiling mount above driver with ABS cover
1	Stainless steel grab pole
1	Fire extinguisher, first aid kit, and triangle reflectors
1	Premium vinyl lettering one color
1	7D compliance kit Mid / High roof vans - 2 LED flashing lights above windshield, School bus lettering, WING STYLE school bus sign w. fish lights above rear doors LED door ajar light, body fluid kit, (2) chock blocks, web cutter

NATIONAL VAN BUILDERS, INC.
80 PINE STREET
ATTLEBORO, MA 02703-3907

Sales Order

Phone(800) 527-7477
Fax: (508) 222-7882

Customer No.: PLYSCH
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11 LINCOLN STREET
PLYMOUTH, MA 02360

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11 LINCOLN STREET
PLYMOUTH, MA 02360

Attention ADAM BLAISDELL

Date		Ship Via		F.O.B.		Terms	
05/07/2024				Origin		C.O.D.	
Purchase Order Number			Required Date	Sales Person			Our Order Number
RPM Shuttle			05/07/2024	PETER ROONEY			24089
Quantity			Item Number	Description		Unit Price	Amount
Required	Shipped	B.O.					

1 7d first aid kit, 5# fire
extinguisher, triangle kit

1 Child Checkmate System

VAN MUST HAVE BACKUP ALARM

1 DELIVERY TO 02360 INCLUDED
SALES TAX NOT INCLUDED

CHASSIS PRICING AND REBATES
AVAILABLE AT THE TIME OF
INVOICING WILL APPLY

ALL AVAILABLE REBATES HAVE
BEEN APPLIED TO THE TOTALS

END USERS CAN GO AFTER FCA'S
\$1,000 REBATE ONCE THE SALE
OF THE VAN HAS BEEN REPORTED

Order subtotal 80692.90

Order total 80692.90

Sales Order Accepted By: _____ (Authorized Signature)

Date: _____ Printed Name: _____ Title: _____

*** Please confirm that Bill & Ship To addresses are correct. _____ (Initial here) ***
Bill To information will be used to fill out Bill of Sale and MSO for registering your vehicle.

Thank You

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Plymouth Public Schools	Priority #:	11
Project Title and Description: Federal Furnace Multi-use Tractor	Total Project Cost:	\$57,221.00

Department/Division Head: School Facilities - Matt Durkee

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
Planning and Design			FY23		
Labor and Materials	\$54,493.00		FY24		
Administration			FY25		
Land Acquisition			FY26		
Equipment			FY27		
Other					
Contingency	\$2,728.00				
Total Capital	\$57,221.00				

Project Justification and Objective: Federal Furnace is in desperate need of a multi purpose tractor. The current tractor is 24 years old and rusting apart.

This tractor will address snow, ice, and lawn care needs.

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

2000 Toro Ride on tractor with enclosed cab, rusted and dangerous to operate

What is the expected lifespan of this new/replacement equipment: 20+ years

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



www.norfolkpower.com
info@norfolkpower.com

Ship To: IN STORE PICKUP

5 Cushing Drive
Wrentham, MA 02093
Tel: (508) 384-0011
Fax: (508) 384-8667

846 Bronco Highway
Burrillville, RI 02830
Tel: (401) 710-9911
Fax: (401) 710-9466

45 North Main Street
Carver, MA 02330
Tel: (774) 213-9190
Fax: (508) 465-0931

Please remit payment to Wrentham address

Invoice To: PLYMOUTH PUBLIC SCHOOLS
ACCOUNTING PAYABLE DEPARTMENT
11 LINCOLN ST.
PLYMOUTH MA 02360

Branch 03 - CARVER		
Date 09/05/2024	Time 12:24:09 (O)	Page 1
Account No PLYMO013	Phone No 5088304005	Est No 01 Q05049
Ship Via	Purchase Order F2690	
Tax ID No		
JASON DONOVAN		Salesperson JWD / JWD

EQUIPMENT ESTIMATE - NOT AN INVOICE

Description	** Q U O T E **	EXPIRY DATE: 12/04/2024	Amount
KUBOTA F2690 4WD DIESEL TRACTOR			40878.00
KUBOTA F5206 HARD CAB			
KUBOTA F5311 HEATER			
KUBOTA F5254 CAB SEAL KIT			
KUBOTA F5313 ROOF MOUNTED STROBE			
KUBOTA F5312 REAR LED LIGHT KIT			
KUBOTA F5216 REMOTE HYDRAULIC KIT			
KUBOTA BL8060 (QTY) 4 SUITCASE WEIGHTS			
KUBOTA BL8062 (QTY) 4 BOLTS			
KUBOTA BX8064 WEIGHT BRACKET			
KUBOTA F8283 SINGLE HYDRAULIC VALVE			
KUBOTA F5212A QUICK HITCH			
KUBOTA RCK72P-F39 72" MOWER DECK			
Sale # 01 Subtotal:			40878.00
Total:			40878.00
KUBOTA F5220B 51" SNOWBLOWER			5792.00
KUBOTA B2516A ELECTRIC CHUTE DEFLECTOR			
Sale # 02 Subtotal:			5792.00
Total:			5792.00
KUBOTA B2765A 60" FRONT HYDRAULIC BLADE			2297.00
Sale # 03 Subtotal:			2297.00
Total:			2297.00
KUBOTA L2163 60" FRONT SWEEPER BROOM			5526.00
KUBOTA F2524 PTO SHAFT			
Sale # 04 Subtotal:			5526.00
Total:			5526.00

WHOLESALE RETURN POLICY: (1) All new equipment comes with a written manufacturer's warranty. Any defects in material workmanship are subject to repair according to the manufacturer's warranty. Unless directed by the manufacturer, equipment will not be replaced. (2) Equipment returned within seven business days in new unused condition may be exchanged or refunded for the full amount. (3) Equipment returned within seven business days and has been used subject to a thirty percent restocking fee. (4) No returns after seven business days. (5) All special orders subject to a twenty percent cancellation fee. (6) Special order items are non-refundable. Norfolk Power Equipment, Inc. reserves the right to add a price increase to any quote or customer order prior to shipment, in order to address increases in commodity prices and surcharges imposed by manufacturers during the period from the date hereof to the shipment date. Norfolk Power Equipment, Inc. will notify the buyer of the increase prior to shipment of new machine. The buyer shall have the right to cancel the order within 10 days of receipt of final price. At that time the unit will become available to the next customer to line.

All new equipment quotes valid for 10 days unless stated otherwise.

Thank You For Your Business!



www.norfolkpower.com
info@norfolkpower.com

Ship To: IN STORE PICKUP

5 Cushing Drive
Wrentham, MA 02093
Tel: (508) 384-0011
Fax: (508) 384-8667

846 Bronco Highway
Burrillville, RI 02830
Tel: (401) 710-9911
Fax: (401) 710-9466

45 North Main Street
Carver, MA 02330
Tel: (774) 213-9190
Fax: (508) 465-0931

Please remit payment to Wrentham address

Invoice To: PLYMOUTH PUBLIC SCHOOLS
ACCOUNTING PAYABLE DEPARTMENT
11 LINCOLN ST.
PLYMOUTH MA 02360

Branch 03 - CARVER		
Date 09/05/2024	Time 12:24:09 (O)	Page 2
Account No PLYMO013	Phone No 5088304005	Est No 01 Q05049
Ship Via		Purchase Order F2690
Tax ID No		
JASON DONOVAN		Salesperson JWD / JWD

EQUIPMENT ESTIMATE - NOT AN INVOICE

Description	** Q U O T E **	EXPIRY DATE: 12/04/2024	Amount
Miscellaneous Charges/Credits			

STATE CONTRACT	Qty: 1	Price: 7359.00	7359.00-
STATE CONTRACT	1	1043.00	1043.00-
STATE CONTRACT	1	414.00	414.00-
STATE CONTRACT	1	995.00	995.00-
Miscellaneous Charges/Credits Total:			9811.00-
Subtotal:			44682.00
Quote Total:			44682.00

Authorization: _____

WHOLESALE RETURN POLICY: (1) All new equipment comes with a written manufacturer's warranty. Any defects in material workmanship are subject to repair according to the manufacturer's warranty. Unless directed by the manufacturer, equipment will not be replaced. (2) Equipment returned within seven business days in new unused condition may be exchanged or refunded for the full amount. (3) Equipment returned within seven business days and has been used subject to a thirty percent restocking fee. (4) No returns after seven business days. (5) All special orders subject to a twenty percent cancellation fee. (6) Special order units are non-refundable. Norfolk Power Equipment, Inc. reserves the right to add a price increase to any quote or customer order prior to shipment, in order to address increases in commodity prices and surcharges imposed by manufacturers during the period from the date hereof to the shipment date. Norfolk Power Equipment, Inc. will notify the buyer of the increase prior to assembly of new machine. The buyer shall have the right to cancel the order within 10 days of receipt of final price. At that time the unit will become available to the next customer in line.

All new equipment quotes valid for 10 days unless stated otherwise.

Thank You For Your Business!

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Plymouth Public Schools	Priority #:	12
Project Title and Description: North High School Main Entry Drain Install	Total Project Cost:	\$33,653.00

Department/Division Head: School Facilities - Matt Durkee

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
Planning and Design	\$12,050.00		FY23		
Labor and Materials	\$20,000.00		FY24		
Administration			FY25		
Land Acquisition			FY26		
Equipment			FY27		
Other					
Contingency	\$1,603.00				
Total Capital	\$33,653.00				

Project Justification and Objective: North High since its opening has experienced significant flooding through the main entry doors due to undersized drainage.

This project will engineer and then install (3) slit drains in the existing sidewalk, tying back into the current drainage system.

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.

Plymouth Public Schools



Matthew Durkee <mdurkee@plymouth.k12.ma.us>

Drainage work

2 messages

Dennis Bent <dbentconcrete@gmail.com>

Tue, Oct 1, 2024 at 10:37 AM

To: Matt Durkee <mdurkee@plymouth.k12.ma.us>

Good morning Matt,

Your looking at roughly \$20k for the drainage work at plymouth north will be able to get you a solid number once we have a drainage plan.

Thank you.

Sent from my iPhone

Matthew Durkee <mdurkee@plymouth.k12.ma.us>

Tue, Oct 1, 2024 at 10:54 AM

To: Dennis Bent <dbentconcrete@gmail.com>

Sounds good, thank you.

[Quoted text hidden]



Gale Associates, Inc.

300 Ledgewood Place, Suite 300 | Rockland, MA 02370

P 781.335.6465 F 781.335.6467

www.galeassociates.com

July 25, 2024

Plymouth Public Schools
11 Lincoln Street
Plymouth, MA 02360

Attn: Mr. Matthew Durkee, Director of Facilities
T: (781) 217-8460
E: mdurkee@plymouth.k12.ma.us

Re: Drainage Evaluation and Design Services
Plymouth North High School
Plymouth, MA
Gale P07345

Dear Mr. Durkee:

Gale Associates, Inc. (Gale) is pleased to present this proposal to provide Engineering Consulting Services to Plymouth Public Schools (PPS) regarding the above-referenced facility.

PROJECT UNDERSTANDING

PPS has reported ponding water during and after rainfall at the entry plaza at Plymouth North High School. Based on photos and plans of the area, a single area drain grate in the center of the plaza appears to be the only drainage structure serving the paved entry walkways.

It is our understanding that PPS would like to consider the installation of trench drains as a possible repair/upgrade option. PPS has requested Gale to evaluate the conditions and provide repair or upgrade options to address the issue.

PPS has reported that there is also an existing area drain in the landscaped area within the project limits that appears to be clogged with debris/silt. We further understand that PPS will clean out this area drain prior to Gale performing an evaluation so that we can observe the condition of the structure.

Based on the above understanding, Gale will provide engineering services for design, bid, and construction phase services, as follows:

Phase 1 – Evaluation and Repair Option Development

- Attend a virtual “start-up” meeting with PPS to finalize the project goals, design criteria, and milestone schedule. Prepare the meeting agenda and issue related meeting minutes.

SINCE 1964

Connecticut | Florida | Maine | Maryland | Massachusetts | New Hampshire | Virginia



- Perform limited topographic survey of the existing conditions, extending approximately twenty feet (20') beyond the project limits:
 - Prepare a plan depicting 1-foot contours and applicable spot grades, as well as existing site features.
 - Field locate site utilities, including rim and invert elevations, based on record information and visible above-ground appurtenances.
 - Provide an existing conditions base plan in AutoCAD.
 - This proposal does not include a property boundary survey. Therefore, the resultant plan will not be stamped by a Professional Land Surveyor (PLS).
- It does not appear that there are project elements within one-hundred feet (100') of a jurisdictional resource area. As such, permitting under the state wetlands protection act is not anticipated for this project.
- Research available information on utility locations within the project limits. Utilities to be researched include water, storm drainage, electric, communications, and gas. Identify visible utility constraints and conflicts bearing on the proposed improvements. This utilities evaluation will be based on available record plans provided by PPS.
- Using the existing conditions information compiled, Gale will prepare a summary letter report listing two (2) potential repair options using trench drains and estimated construction costs for the proposed improvements. Meet virtually with PPS on one (1) occasion to review the repair alternatives.

Phase 2 – Engineering and Design

- Prepare a repair plan based on the repair option selected by PPS from the Evaluation and Repair Option Development Phase. The repair plan will show proposed spot grades and contours, materials, and layout of proposed improvements.
- The repair plan set will generally include:
 - Existing Conditions
 - Layout and Materials
 - Grading and Drainage
 - Details and Specifications
- Make a design development progress submission at the 90% stage of completion. The submission will include plans, details, technical specifications, and a construction cost estimate. Technical specifications will be provided as notes on the plans. Meet with PPS to present and review the design, and develop and issue meeting minutes to confirm our understanding of PPS' intent.



Phase 3 – Bid Phase Services

- Following receipt of PPS' comments, we will finalize the site design documents suitable pricing in accordance with M.G.L. chapter 30 § 39M for projects under \$50,000.00. Provide PPS with a set of construction drawings stamped by a Registered Civil Engineer, as appropriate.
- PPS will provide the non-technical "front-end" contract requirements for the preparation of the contract documents or Gale will provide a standard AIA A104, Standard Abbreviated Form of Agreement Between Owner and Contractor front end for PPS's comment and review.
- Assist PPS with procurement services:
 - Respond to requests for clarification.
 - Issue addenda, if required.

Phase 4 – Construction Phase Services

- Receive and review contractor's shop drawings and submittals for acceptance or rejection prior to project start-up. Rejected submittals will be returned to the contractor for resubmittal. We recommend all submittals be received and reviewed by Gale prior to the pre-construction meeting and job start-up.
- Respond to requests for information (RFIs) and issue clarification sketches, if needed. Review contractor requests for payment and assist with the preparation of change orders.
- Observe the project's general compliance with the contract requirements and schedule. We have based this Scope of Services on a construction duration of two (2) weeks. Gale's proposal is predicated on one (1) construction site visit.
- Gale will conduct a final site visit to review the project, following notification from the contractor of Substantial Completion. The following services will be provided to assist PPS with project close-out:
 - Certify Substantial Completion.
 - Provide a summary of punch list items requiring completion by the contractor.
 - Review contractor provided as-built drawings/mark-ups.
 - Review close-out documents to be provided by the contractor (e.g., warranties, lien releases, maintenance manuals, etc.).
 - Provide an opinion regarding final payment, release of retainage, and final acceptance by PPS.



COMPENSATION

- Gale's compensation to provide the Scope of Services will be a fixed fee, detailed as follows:

Phase 1 – Evaluation and Repair Option Development	\$ 3,315.00
Phase 2 – Engineering and Design	\$ 4,445.00
Phase 3 – Bid Phase Services	\$ 1,005.00
Phase 4 – Construction Phase Services	\$ <u>3,285.00</u>
TOTAL	\$ <u>12,050.00</u>

- Gale's compensation for the Scope of Services includes miscellaneous reimbursable expenses, such as mailing, mileage, printing, etc., associated with the project.
- Gale's services will be performed in accordance with our General Terms and Conditions and Schedule of Fees, dated April 2024, attached.

PROJECT PARAMETERS AND LIMITATIONS

- Record plans will be provided to Gale by PPS.
- Utilities may exist at the site for which there are no records. Gale's proposal does not include research or field services to locate non-record utilities.
- Technical specifications will be included on the repair plans.
- Preliminary estimates of construction costs and detailed estimates of construction cost prepared by Gale represent Gale's judgment as a design professional familiar with the construction industry. It is recognized that neither Gale nor PPS has control over the cost of labor, materials, or equipment, over the contractor's methods and means of construction, or any of the other variables involved in construction bidding. Accordingly, Gale does not warrant or represent that construction costs will not vary from the project budget or cost estimates.
- PPS acknowledges that the proposed development is not "by right", and that Gale cannot guarantee permit approvals. The filing fees for all required permits, if not waived, will be paid by PPS. Building permits, other utility connection permits, demolition permits, and any other municipal construction permits required will be the responsibility of the general contractor.
- Procurement services assumes that construction costs will be less than \$50,000.00 and, as such, do not require sealed bids. Gale will advertise the project in the Central Register. PPS will be responsible for postings at the office of the awarding authority and in COMMBUYS.



- Gale's review of shop drawings and material submittals is not for the purpose of determining the accuracy and completeness of other information, such as dimensions, quantities, and installation or performance of equipment or systems, which are the contractor's responsibility. Gale's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by Gale, of any construction means, methods, techniques, sequences, or procedures. Gale's approval of a specific item shall not indicate approval of an assembly of which the item is a component.
- Job site safety is the contractor's responsibility. Gale representatives, including subconsultants retained by Gale, may visit the job site from time to time. These visits are for clarifications of specific design related issues only and are not for the purposes of job site safety. It is the contractor's sole responsibility to comply with all site safety applicable requirements.
- The correction of issues noted by Gale during this construction phase is the responsibility of the contractor, as is documentation of the correction. Gale bears no liability for further or additional observations or follow-up of issues identified. Lists generated by Gale are not considered to be all inclusive and represent only those issues actually observed and noted by Gale personnel while on-site. Gale has been tasked to observe specific construction elements only, and the absence of notations with respect to any other construction elements neither creates any liability on Gale's part, nor alters the contractor's responsibility to complete all work in accordance with the contract documents.
- Gale's fee does not include:
 - Meetings beyond those defined/enumerated above.
 - Physical location, camera inspection, or the evaluation of condition of utilities.
 - Services related to drainage calculations of the existing drainage system.
 - Architectural or structural design services.
 - Development of financial or legal analyses.
 - Property line and easement survey.
 - Permitting.
 - Permitting for open Order of Conditions of previous projects.
 - SWPPP and NPDES Permits
 - Services related to a bid protest.
 - Re-work due to change in regulations.
 - Mechanical/electrical/plumbing/fire protection services.
 - Stormwater hydrological calculations.
 - Third party professional cost estimating.
 - Contractor services and associated equipment, including third party testing.
 - Services related to site contamination or hazardous materials testing (LSP services).
 - Construction as-built survey or plan preparation.

Mr. Matthew Durkee
Plymouth Public Schools
Re: Plymouth North High School Drainage Evaluation & Design Services
July 25, 2024
Page 6



Should services be required in these areas, or areas not previously described, Gale will prepare a proposal or amendment, at PPS' request, which contains the scope of services, fee and schedule required to complete the additional services.

REQUIRED DOCUMENTS

- If this proposal is acceptable, please sign below and return one (1) copy to this office. Gale's receipt of an executed will constitute a Notice to Proceed with the services outlined herein and contract for services.
- Receipt of this signed proposal is required prior to Gale initiating services on the project.
- Should PPS submit a contract to Gale for this project, rather than sign this proposal, the above Scope of Services and Project Parameters and Limitations must be included in such contract. Please note that it is Gale's policy to have all contracts reviewed by our attorney prior to execution. Accordingly, if a contract is submitted, project start-up may be delayed while the contract is reviewed and negotiated.

Thank you for considering Gale for this project. Should there be any questions, please do not hesitate to contact the undersigned.

Best regards,
GALE ASSOCIATES, INC.

Peter Spanos/cmh

Peter Spanos, PE, CFM, LEED AP
Director of Civil Engineering & Athletics

PS/cmh

Enclosures:

- General Terms and Conditions
- Schedule of Fees

Accepted for:

PLYMOUTH PUBLIC SCHOOLS (PPS)

The Undersigned represents that he/she is an officer/principal of PPS and is duly authorized to execute this contract on behalf of PPS.

Signature

Type Name and Title

Date

W:\Proposals\Town-Municipal Bldgs-Schools\MA\Plymouth\North High School\Main Entrance Drainage\2024 0423 PNHS Drainage Proposal.docx

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Plymouth Public Schools	Priority #:	13
Project Title and Description: Administration Building exterior repairs and Cupola	Total Project Cost:	\$46,988.00

Department/Division Head: School Facilities - Matt Durkee

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
Planning and Design			FY23		
Labor and Materials	\$44,750.00		FY24		
Administration			FY25		
Land Acquisition			FY26		
Equipment			FY27		
Other					
Contingency	\$2,238.00				
Total Capital	\$46,988.00				

Project Justification and Objective: The Plymouth Schools Administration Building needs carpentry repairs and the Cupola repaired.

This project will address immediate building needs and help prevent envelope issues from becoming worse.

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.

Estimate

Estimate # 27356

Expires 30 Days From 10/1/2024

Estimate for:

Plymouth Public School District
Matt Durkee
11 Lincoln Street
Plymouth, MA. 02360

Job Scope	Amount
<p>-We shall apply three coats of SW Duration paint to the entire wood structure including the window sash.</p> <p>-We shall apply two coats to the entry door (unsure if you want to replace it with fiberglass door to withstand the salt air or if you going to stay with the metal door in which case we shall sand and prime the areas of concern that are rusted)</p> <p>* The above scope includes all labor, materials, and insurance to complete as outlined. I will also include the cost of the scaffold erection dismantling as noted above. I will now leave our carpentry rates below for your review</p> <p>***NOTE: Staging shall be erected by triple G scaffolding in compliance with state safety guidelines, my price will include the erection and dismantle of everything, to allow a safe and easy access for the painting project</p> <p>Carpentry Rates/Option;</p> <p>-We can perform any carpentry repairs that you may need. We do so at a T/M rate of \$75.00 per hour, per carpenter (standard is a team of 2) for labor, and materials added as needed. (larger amounts of repairs may result in the need of a dumpster or disposal fees that are not included but we can take care for you if needed)</p> <p>Rot: The variable with pricing repairs due to rot is that we are basing cost of labor and materials on what we can see from the ground. Often, once we get underway with exterior repairs, we may possibly uncover rot beneath the surface, or uncover rot that simply could not be determined from the ground.</p> <p>SCOPE/BUDGET:</p> <p>I see approximately one week of carpentry for a two-man team, it is approximately \$1200 per day, including materials. If you mentally budgets \$6000 for labor, I think another thousand dollars for materials would be extremely safe at this point. I don't see your budget exceeding \$7000 but if we opened up an area and we had a problem structurally we would let you know right away. From what I have seen we have to replace the siding along the bottom siding line against the roofing, some dental molding, the steel entry door is rusted and a new fiberglass door at this time may be wise, and miscellaneous trim boards.</p> <p>Per request i am adding in a hard budget for carpentry of \$4800, bringing total to \$44,750. This will allow for 3 days of carpentry for two, and a materials budget of \$1200 (we can mix labor/materials but starting budget is set at a firm \$4800</p>	<p>4,800.00</p>
Total	\$44,750.00

Estimate

Estimate # 27356

Expires 30 Days From 10/1/2024

Estimate for:

Plymouth Public School District
Matt Durkee
11 Lincoln Street
Plymouth, MA. 02360

Job Scope	Amount
WORK AT; 11 Lincoln Street (Main Office building) Cupola	39,950.00

NOTE; I am proposing a four (4) coat system while we have safe and easy access. We shall apply one full primer coat, followed by (3) three coats of the best trim paint available, the can will inform you of a lifetime warranty , please do not take that to heart. It will last far longer than average coating especially with three full coats over a primer coat. My goal is to have his last as long as possible so you do not have to worry about this for many years to come. The painting is a minor part of the job scope the preparation, carpentry, and staging is where the money is to be spent. The paint is such a minor portion it would be a shame to not put an additional two coats on wall we are here. It will surely extend the life of the coating immensely.

SCOPE; Upper Cupola.

Wash/Prep; -We shall properly clean all exterior surfaces of the Cupola to remove all dirt and mildew and preventive services for painting. We shall allow ample time for the woodwork to dry, and we shall perform carpentry services prior to the painting *(see carpentry rates/budget below)

LEAD SAFE: Per federal laws, we are certified to perform work on lead paint structures and we will adhere to the guidelines set up under said program. Our staff will contain and mark off areas to restrict entry during project (lower door to access roof shall be marked and this will help immensely on our efforts. We will also modify the coverage area to include staging only, this will give us a safe zone to work within and to contain the debris which will be disposed of upon completion per state guidelines. Not all of the surface will be led, it looks limited to the upper trim area and possibly some of the lower trim, the clap would have been replaced and are standard paint. Naturally our staff will wear appropriate safety clothing and breathing protectors of course

-We shall first scrape all areas of lead paint to eliminate this step. We will then dispose of all of the debris properly and the paint area will not resort to a standard job site as opposed to a lead paint zone.

-We shall strip remaining areas to remove any loose paint coatings, we shall putty and caulk all trim new and old as needed, and we shall remove and replace any loose glazing on the Windows at the same time.

-We shall apply one full coat of oil primer to all of the above wooden structure including the window sash.

Total

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Plymouth Public Schools	Priority #:	14
Project Title and Description: West Ele Tennis/Bball court/sidewalk repave and stripe	Total Project Cost:	\$104,160.00

Department/Division Head: School Facilities - Matt Durkee

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
Planning and Design			FY23		
Labor and Materials	\$99,200.00		FY24		
Administration			FY25		
Land Acquisition			FY26		
Equipment			FY27		
Other					
Contingency	\$4,960.00				
Total Capital	\$104,160.00				

Project Justification and Objective: West Elementary has cracking and broken tennis courts and basketball courts. Dangerous sidewalks to ballfields.

This project will address safety issues at the recess and playground areas. This will help address some community concerns about the state of grounds at West Elementary School.

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.

PRESTIGE ASPHALT

DRIVEWAYS-SIDEWALKS-PARKING LOTS

www.pavingbyprestige.com

NAME: West Elementary School

ADDRESS: 170 Plympton Road

CITY: Plymouth, MA 02360

PHONE: (508) 830-4450 **E-Mail:** mdurkee@plymouth.k12.ma.us

- ☐ Prep basketball court for topcoat finish, ensuring court is level for repave
- ☐ Install 2" Topcoat of Asphalt to walkway area at front of court (this will include a berm)
- ☐ Install 2" Asphalt Topcoat (Roll to Compact)
- ☐ Line stripe for four hoops and two center court areas (white paint)
- ☐ **Total: \$28,500**

Prestige Paving cannot be responsible for chemical spills, vegetation growth, marks due to sharp objects, tire marks, settlement and sprinkler systems splashing sealcoat onto buildings, cars or any other areas, or washing away newly applied sealcoat. Not responsible for pedestrians walking and driving through blocked-off and completed work. If any other work is done over and above the paving work performed by Prestige Paving (Including Sealcoating) the guarantee will be null and void.

Customer Signature:

Authorized Signature: KWB

PRESTIGE ASPHALT

DRIVEWAYS-SIDEWALKS-PARKING LOTS

www.pavingbyprestige.com

NAME: West Elementary School

ADDRESS: 170 Plympton Road

CITY: Plymouth, MA 02360

PHONE: (508) 830-4450 **E-Mail:** mdurkee@plymouth.k12.ma.us

- ☐ Prep damaged walkway area
- ☐ Remove asphalt for majority of walkway, including protruding roots
- ☐ Apply Re-Processed gravel to removed area and tack to asphalt area
- ☐ Install Asphalt topcoat and regular coat (Compact)
- ☐ Total: \$4500

Prestige Paving cannot be responsible for chemical spills, vegetation growth, marks due to sharp objects, tire marks, settlement and sprinkler systems splashing sealcoat onto buildings, cars or any other areas, or washing away newly applied sealcoat. Not responsible for pedestrians walking and driving through blocked-off and completed work. If any other work is done over and above the paving work performed by Prestige Paving (Including Sealcoating) the guarantee will be null and void.

Customer Signature:

Authorized Signature: KWB

PRESTIGE ASPHALT

DRIVEWAYS-SIDEWALKS-PARKING LOTS

www.pavingbyprestige.com

NAME: West Elementary School

ADDRESS: 170 Plympton Road

CITY: Plymouth, MA 02360

PHONE: (508) 830-4450 **E-Mail:** mdurkee@plymouth.k12.ma.us

- ☐ Prep Tennis Court for topcoat finish
- ☐ Apply 2" Asphalt Topcoat (Roll to Compact)
- ☐ Apply paint to entirety of tennis court
- ☐ Line stripe for 2 Tennis Courts (white paint)
- ☐ Total: \$66,200

Prestige Paving cannot be responsible for chemical spills, vegetation growth, marks due to sharp objects, tire marks, settlement and sprinkler systems splashing sealcoat onto buildings, cars or any other areas, or washing away newly applied sealcoat. Not responsible for pedestrians walking and driving through blocked-off and completed work. If any other work is done over and above the paving work performed by Prestige Paving (Including Sealcoating) the guarantee will be null and void.

Customer Signature:

Authorized Signature: KWB

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Plymouth Public Schools	Priority #:	15
Project Title and Description: South Ele. Final Asphalt Coat of side parking lot	Total Project Cost:	\$51,975.00

Department/Division Head: School Facilities - Matt Durkee

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>			FY23		
<i>Labor and Materials</i>	\$49,500.00		FY24		
<i>Administration</i>			FY25		
<i>Land Acquisition</i>			FY26		
<i>Equipment</i>			FY27		
<i>Other</i>					
<i>Contingency</i>	\$2,475.00				
Total Capital	\$51,975.00				

Project Justification and Objective: South Elementary School has a side parking lot with only the base grade down. This project finishes with berms on the sides.

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.

PRESTIGE SEALCOATING

DRIVEWAYS-SIDEWALKS-PARKING LOTS

www.pavingbyprestige.com

NAME: Plymouth South Elementary School

ADDRESS: 178 Bourne Road

CITY: Plymouth, MA 02360

PHONE: (508) 830-4390 **E-Mail:** mdurkee@plymouth.k.12.ma.us

- ☐ Prep first parking lot on right upon entering school
- ☐ Add tack to necessary areas in preparation for asphalt installation
- ☐ Install 2" topcoat of asphalt to parking area
- ☐ Install berm around edges of entire area
- ☐ Parking lot to be line-striped upon completion of asphalt installation

Total: \$49,500

*All work Guaranteed for 2 years against workmanship. Prestige Paving cannot be responsible for chemical spills, vegetation growth, marks due to sharp objects, tire marks, and settlement. If any other work is done over and above the paving work performed by Prestige Paving (Including Sealcoating) the guarantee will be null and void.

Customer Signature:

Authorized Signature: KWB

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Plymouth Public Schools	Priority #:	16
Project Title and Description: Nathaniel Morton Stairwell Renovations	Total Project Cost:	\$110,250.00

Department/Division Head: School Facilities - Matt Durkee

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
Planning and Design			FY23		
Labor and Materials	\$105,000		FY24		
Administration			FY25		
Land Acquisition			FY26		
Equipment			FY27		
Other					
Contingency	\$5,250.00				
Total Capital	\$110,250.00				

Project Justification and Objective: This is the next phase of rehabilitating the interior of this old beautiful building. All metal stairs will be sandblasted and repainted.
The concrete steps will be polished. Wooden banisters will be sanded and stained. Sand and stain landings.

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.



ESTIMATE

EST-2556

Griffin Maintenance Services, Inc.

Facilities Maintenance & Electrical Services
25 Fairway Drive
Bridgewater 02324
(508)697-9400

GriffinMaintenanceServices.com

Bill To
Plymouth Public Schools

Estimate Date : 10/23/2023

Expiry Date : 12/23/2024

#	Item & Description	Qty	Rate	Amount
1	Stairwell Renovations Location: Nathaniel Morton School Concrete stairs with metal risers (3 stairwells, approx 120 stairs) -Grind/sand metal risers -Paint risers with one coat rust inhibiting primer and 1 coat DTM paint -Sand and stain wooden hand rails -Sand and paint metal spindles to match metal risers -Sand and paint metal underside of stairs -Grind and polish concrete stairs and landings Wooden stairs (2 stairwells, approx 80 stairs) -Remove existing rubber stair treads -Sand smooth and install new rubber stair treads -Sand and stain wood landings	1.00	105,000.00	105,000.00

Sub Total 105,000.00

Total \$105,000.00

Notes

We look forward to working with you. Feel free to contact us with any questions.

Terms & Conditions

This estimate is based on information provided by the client and is subject to change should the job description change or complications arise.

For any estimate over \$500, please sign & date below and return to GMSI

Customer Signature / Date

By signing the above estimate, the customer agrees to the terms and conditions of GMSI's service agreement.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Plymouth Public Schools	Priority #:	17
Project Title and Description: Administration Building Generator Replacement	Total Project Cost:	\$110,000.00

Department/Division Head: School Facilities - Matt Durkee

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>			FY23		
<i>Labor and Materials</i>	\$100,000		FY24		
<i>Administration</i>			FY25		
<i>Land Acquisition</i>			FY26		
<i>Equipment</i>			FY27		
<i>Other</i>					
<i>Contingency</i>	\$10,000.00				
Total Capital	\$110,000.00				

Project Justification and Objective: The Administration Building emergency generator needs to be replaced with a new 150KW Class generator with 24 hour tank

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

Kohler 150 Generator

What is the expected lifespan of this new/replacement equipment: 30+

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

Quick overview for equipment and Scope of Work:

- Remove existing generator and remediate fuel for disposal
- Place new 150KW Class generator with 24-hour tank
 - Tank rating is an NFPA classification and your actual runtime would be 72+ hours
- NFPA 110-7 commissioning startup including load bank
- System has 2 – 400 amp Automatic Transfer Switches (ATS)
 - One is a currently supported ASCO ATS and there is no benefit in replacement
 - Second one is a +/- 40-year-old Westinghouse (labeled Superior) and is at end of serviceable life and needs to be replaced for reliability

\$80K for generator only and a \$20K adder for replacement of just the Westinghouse ATS for a budgeted total of \$100K

Of note:

- Does not include fuel and would be quoted at time of delivery
 - Estimated by today's cost would be in the range of \$1500 with delivery
- Equipment and materials cost have been volatile, and you may want to add an extra 20%/25% when seeking capital for next year
- Mass DEP has mandates for exhaust stacks, technically the engine classification on the proposed generator does not trigger the need for an engineered stack above the building roof line
 - We are providing for a 10' stack above the generator with a 90-degree turnout pointed away from the building
 - Replicating what is existing today, just 10' higher
 - If requested, we can provide cost on a system to extend the stack above the roof line
 - Estimated +/- \$30K

Best regards,

Steven W. Belcher
Special Accounts Project Manager
UL Standard 6200 Technical Panel
EGSA & NFPA Member

FM Generator – Canton MA
781-828-0026 – Office
339-222-0945 – Cell
sbelcher@fmgenerator.com



Steven W. Belcher

Special Accounts Project Manager

UL Standard 6200 Technical Panel

EGSA & NFPA Member

FM Generator – Canton MA

781-828-0026 – Office

339-222-0945 – Cell

sbelcher@fmgenerator.com

www.fmgenerator.com

From: Steve Belcher

Sent: Wednesday, October 18, 2023 10:26 AM

To: kmalaguti@plymouth.k12.ma.us

Cc: Tracy Daniel <TDaniel@fmgenerator.com>; Sandy Kutasz-Johnson <skutasz-johnson@fmgenerator.com>;
CommercialSales <commercialsales@fmgenerator.com>

Subject: FM Generator RE: SALES QUOTE NEEDED ASAP Plymouth Public Schools @ 11 Lincoln St Generator

Keith,

I can be out later today to look at this replacement. Is there and on-site contact? I would like to look at the ATS and see if it needs to be part of the capital project – Steve

Regards,

Steven W. Belcher

Special Accounts Project Manager

UL Standard 6200 Technical Panel

EGSA & NFPA Member

FM Generator – Canton MA

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Plymouth Public Schools	Priority #:	18
Project Title and Description: South Ele. Replacement of remaining RTUs and controls	Total Project Cost:	\$2,000,000.00

Department/Division Head: School Facilities - Matt Durkee

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
Planning and Design			FY23		
Labor and Materials	2,000,000.00		FY24		
Administration			FY25		
Land Acquisition			FY26		
Equipment			FY27		
Other					
Contingency					
Total Capital	\$2,000,000.00				

Project Justification and Objective: This request will fund the replacement of the remaining RTUs at South Elementary. We have had the current manufacturer's of the existing Roof Top Units Vice President and Regional Sales representative come and provide construction documents to use during the Bid process. REF: MARQUIS Assessment

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.

Project Scope

We are proposing two solutions for consideration.

Option A is a replacement of the rooftop units in-kind. Due to changes in industry standards, the replacement units will be custom multi-zone units. They are expected to be larger and heavier than the existing units in order to accommodate current refrigerant regulations. This solution is expected to be less efficient but will cause far less work within the building. All existing ductwork and interior finishes will remain in place, and new multi-zone roof mounted units will connect directly to it. Interior disturbances are limited to what is necessary to support the connection to new controls alone.

Option B replaces the existing multi-zone system with a more efficient variable air volume system. It consists of custom roof top units with built-in boilers and water storage tanks that connect to a new VAV boxes for each zone. The existing supply ductwork in the direct vicinity of each unit will need to be removed, and new ductwork will connect the unit to new VAV boxes, which will then tie back into the existing ductwork system. The new roof top units will consistently provide 55°F air to the system and the VAV boxes with hydronic heating coils will modulate the air flow and temperature being delivered to each zone. Zone pumps and valves accessibly located in the roof top unit will work together to modulate the water flow required to support each VAV box. Interior finish disturbances are expected to affect interior ceilings and associated systems (lighting sprinklers etc), directly surrounding each roof top unit. Limited disturbances to support a new controls system are also included here.

Alternates include:

1. Add a built-in boiler, water tank and reheat coils internal to the new rooftop units.
 - a. This alternate is applicable to Option A only.
2. CO2 Controls
 - a. This alternate is applicable to both Options A & B.
3. Repair Unit 8 in lieu of replacement

The built-in boiler will limit new piping in the building. The system requires connection from the boiler in the unit to each new VAV box.

The alternate is to connect each VAV box through the building to a central boiler. This option was evaluated and considered too invasive.

The built-in water tank will maintain pressure on the water system, negating the need to connect back to the buildings well-fed potable water system, which has been deemed unreliable by Plymouth Public School Facilities.

Base Scope

The renovation base scope associated with each option is detailed below by discipline.

MECHANICAL

Option A – Multi-Zone System

Option B – Variable Air Volume System

Units

Replace units with custom multi-zone roof top units equipped with R410a refrigerant and sized in accordance with the requirements identified in Attachment A. New units shall have a minimum efficiency of 80%. Units shall be by Seasons 4, model TDMZ, with new DDC controls.

Maintain existing unit curb, unless notes otherwise. Provide a curb adapter to transition from the existing curb to the new unit size.

Replace units with custom roof top units each with a built-in boiler and 5 gal. water storage tank. Units and boilers shall be sized in accordance with the requirements identified in Attachment A. New units shall have a minimum efficiency of 96%.

Maintain existing unit curb, unless notes otherwise. Provide a curb adapter to transition from the existing curb to the new unit size.

Water Distribution

None

Connect in-unit water storage tank to the in-unit boiler. Connect boiler to and from each VAV box with a closed loop. Assume an average of 50 LF for each VAV.

Controls

Provide new monitoring system, Supply and return air temperature sensors and space temperature sensors for each zone that allows the new monitoring software to collect live temperature data, this monitoring software

Scope is the same as shown for Option A.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Department of Public Works	Priority #:	1
Project Title and Description: Roadway Improvement Program & Preservation	Total Project Cost:	\$5,000,000.00

Department/Division Head: James Downey, Assistant Director of Public Works

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>			FY27		
<i>Labor and Materials</i>	\$5,000,000.00		FY28		
<i>Administration</i>			FY29		
<i>Land Acquisition</i>			FY30		
<i>Equipment</i>			FY31		
<i>Other</i>					
<i>Contingency</i>					
Total Capital					

Project Justification and Objective: As part of the Town's annual roadway improvement program, these funds will be used to improve and preserve roads identified in the pavement management program prepared by BETA Engineering.

For Capital Project Requests:

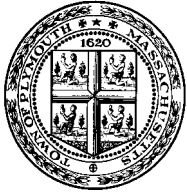
Will this project be phased over more than one fiscal year? If yes, enter it on the 5 Year Plan Yes ☐ No ☒
Can this project be phased over more than one fiscal year? Yes ☐ No ☒

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.



TOWN OF PLYMOUTH

Department of Public Works
159 Camelot Drive
Plymouth, Massachusetts 02360

MEMO

Date: October 1, 2024

To: Lynne Barret, Finance Director

From: James Downey, Assistant Director of Public Works

CC: Derek Brindisi, Town Manager
Silvio Genao, Assistant Town Manager
William Coyle, Director of Public Works

Roadway Improvement Program and Preservation

As part of the Town's Annual Roadway Improvement Program, we are requesting these funds to improve and preserve roads identified in the Pavement Management Program prepared by Beta Engineering.

We currently have over 300 miles of accepted and unaccepted roadways totaling an estimated \$133,790,221.60 in backlog with an overall RSR of 67.91 as of 02-08-2024.

James Downey
Assistant Director of Public Works
Plymouth MA. 02360
508-830-4162 ex. 12102

Town of Plymouth, Massachusetts



Pavement Management Program

Date: February 8, 2024

Date of Inspections: Winter 2022 - 2023

Plymouth, MA

Roadway Status Summary

Roadway Type		Length (Miles)
Town Classification: Accepted		
BC		229.01
GR		14.31
Total:		243.32
Town Classification: Unaccepted		
BC		73.72
GR		60.08
Total:		133.80
Town Classification: State		
BC		102.38
GR		47.16
UNK		1.13
Total:		150.67
Town Classification: Exclusion		
BC		71.16
GR		62.49
Total:		133.65
Total:		661.45

FY 2024 Chapter 90 Accepted Road Miles - 237.14

*State Grouping includes roads classified as State Forest

**Exclusion Grouping only includes roads classified as Private

Plymouth, MA

Roadway Repair Categories and Banding

Repair Method	Banding Low Range	Banding High Range	Unit Cost Sq.Yrd.
Major Rehabilitation			
Major Rehabilitation	0	50	\$100.00
Reconstruction			\$120.00
Reclamation			\$80.00
Minor Rehabilitation			
Minor Rehabilitation	50	70	\$25.00
Cold-In-Place Recycling - 3" HMA			\$25.00
Cold-In-Place Recycling - 3" HMA (No Structures)			\$22.00
Mill and Overlay - 2"			\$20.00
Hot-In-Place Recycling - 1" Top			\$20.00
Level and Overlay - 2.5"			\$20.00
Mill and Overlay - 1.5"			\$18.00
Preventative Maintenance			
Pavement Preservation	70	80	\$15.00
Nova Chip			\$15.00
Microsurface - Double (w/Fiber)			\$15.00
Cape Seal			\$12.00
Double Chip Seal			\$10.00
Rubber Asphalt Chip (20%)			\$10.00
Microsurface - Single Lift			\$8.00
Routine Maintenance			
Routine Maintenance	80	90	\$1.00
Fog Seal			\$1.80
Crack Seal			\$0.60
Defer Maintenance			
No Maintenance Required	90	100	\$0.00

Plymouth, MA

Estimated Roadway Improvement Costs - Overall

Repair Method	Length (Miles)	Square Yards	Percent Repair	Estimated Cost
Major Rehabilitation	56.70	820,459.35	18.67%	\$82,045,935.22
Minor Rehabilitation	104.22	1,597,896.94	34.32%	\$39,947,423.41
Pavement Preservation	45.75	734,723.99	15.07%	\$11,020,859.85
Routine Maintenance	46.22	776,003.12	15.22%	\$776,003.12
No Maintenance Required	50.76	794,193.42	16.72%	\$0.00

Total:

303.66

4,723,276.82

100.00%

\$133,790,221.60

Average RSR By Segment:

67.91

*RSR - Road Surface Rating (0-100)

Please Note: Unit pricing accounts for curb to curb improvements only; Does not include any drainage, sidewalk, ADA, gravel subbase or utility improvements.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Facilities	Priority #:	2¹
Project Title and Description: FS1 HQ Brick Repointing	Total Project Cost:	161,710

Department/Division Head: K. J. Anderson

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

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

List any funding sources and amounts already granted: N/A

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>			FY27		
<i>Labor and Materials</i>	161,710		FY28		
<i>Administration</i>			FY29		
<i>Land Acquisition</i>			FY30		
<i>Equipment</i>			FY31		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	161,710				

Project Justification and Objective: FS1 (HQ) @ 114 Sandwich St was constructed in 1979 and recommended for brick repointing in 2019 as part of a Facility Condition Assessment completed by EMG (now Bureau Veritas). The building has water intrusion in the bunk room that has not abated through multiple remediation techniques and may be solved with more advanced concepts.

For Capital Project Requests:

Will this project be phased over more than one fiscal year? If yes, enter it on the 5 Year Plan
Can this project be phased over more than one fiscal year?

Yes ☐ No ☒
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: 15 years

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



TOWN OF PLYMOUTH

Department of Public Works
159 Camelot Drive
Plymouth, Massachusetts 02360
508-830-4162

MEMORANDUM

Date: 01OCT2024

To: L. A. Barrett
Finance Director

From: K. J. Anderson
DPW Facilities Manager

Thru: W. A. Coyle
DPW Director

Subject: FIRE STATION #1 (HQ) FY26 CAPITAL REQUEST

-
1. Plymouth Fire Station #1 (FS1) serves as Headquarters for the Fire Department and was constructed in 1979. The mission of the Plymouth Fire Department is to protect the lives and property within America's Hometown by reducing the effects of fire, assisting with medical emergencies, hazardous materials incidents, special rescues, and disasters.
 2. A Facility Condition assessment was completed in 2019 which determined that FS1 needed tuck-pointing on the exterior brick to prevent water intrusion and additional deterioration. To date, the brick hasn't been repaired and there is continuous leaking during rainstorms when accompanied by a heavy wind. Internal remediation and roof repairs have been effective to an extent, but the mortar and brick are still a source of water intrusion.
 3. FS1 is one of the oldest remaining Fire Stations and may reasonably be expected to continue needing costly upgrades and repairs to preserve and maintain the integrity of the building.
 4. Facilities Division (422) is requesting funding in the amount of \$161,710 in support of an assessment to develop a scope of work, brick repointing, and additional repairs as necessary.
 5. Thank you for your consideration.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Facilities	Priority #:	3²
Project Title and Description: PDHQ Locker Room / Restroom Renovation	Total Project Cost:	458,390

Department/Division Head: K. J. Anderson

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

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

List any funding sources and amounts already granted: N/A

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>	45,839		FY27		
<i>Labor and Materials</i>	412,551		FY28		
<i>Administration</i>			FY29		
<i>Land Acquisition</i>			FY30		
<i>Equipment</i>			FY31		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	458,390				

Project Justification and Objective: Built in 1995, Police Dept HQ interior restroom and locker room facilities are original construction and the associated plumbing and fixtures are dated, dingy, and inadequate when measured against the growth of the department over 30 years.

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: 20 years

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



TOWN OF PLYMOUTH

Department of Public Works
159 Camelot Drive
Plymouth, Massachusetts 02360
508-830-4162

MEMORANDUM

Date: 01OCT2024

To: L. A. Barrett
Finance Director

From: K. J. Anderson
DPW Facilities Manager

Thru: W. A. Coyle
DPW Director

Subject: POLICE DEPT HQ LOCKER ROOM / RESTROOMS FY26 CAPITAL REQUEST

-
1. Built in 1995, the police headquarters at 20 Long Pond Rd is heavily trafficked as the department has grown significantly in the past 30 years. The sworn members of the Plymouth Police Department (PPD) are dedicated to the service and protection of all who visit, work, and live in the town. Their mission is to safeguard the public trust, protect life and property, and uphold the law. Receiving accreditation status from the Massachusetts Police Accreditation Commission (MPAC) is demonstrative of the department's commitment to the safety and security of Plymouth residents.
 2. The locker room, adjacent restroom, and command restrooms with associated plumbing have fallen into a state of disrepair through heavy usage and minimal maintenance. The spaces are dingy, dated, worn, and in need of renovation to support the number of officers and administrative support staff on duty daily.
 3. A Facility Condition assessment was completed in 2019 which determined that interior upgrades would be required within a five-year period to maintain a safe and satisfactory living condition. The female restroom and two Command restrooms (M+F) will be included in the renovations.
 4. Facilities Division (422) is requesting funding in the amount of \$458,390 to complete renovations to the locker room and restrooms at PPD HQ to support our officers in a manner consistent with the support they provide residents and visitors of Plymouth, MA.
 5. Thank you for your consideration.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: HIGHWAY	Priority #:	1
Project Title and Description: Replace F-550 Bucket Truck 2008	Total Project Cost:	\$267,623.00

Department/Division Head: Highway Tim Balboni

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>FY27</i>		
<i>Labor and Materials</i>			<i>FY28</i>		
<i>Administration</i>			<i>FY29</i>		
<i>Land Acquisition</i>			<i>FY30</i>		
<i>Equipment</i>	\$223,023.00		<i>FY31</i>		
<i>Other</i>					
<i>Contingency</i>	\$44,600.00				
Total Capital	\$267,623.00				

Project Justification and Objective: High mileage, 121,641. Frame and utility body is rotting out. The bucket and boom are going to need extensive repairs in the next couple of years.

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

2008 Ford F-550 Bucket Truck 1HTWDAAR49J124798

What is the expected lifespan of this new/replacement equipment: 15 / 20 years

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



TOWN OF PLYMOUTH

Department of Public Works
159 Camelot Drive
Plymouth, Massachusetts 02360
Office: (508) 830-4162

William A. Coyle, P.E.
Director of Public Works

James L. Downey,
Assistant Director of Public Works

MEMORANDUM

Date: May 16, 2024

To: Lynne Barret, Finance Director

From: William Coyle, P.E. DPW Director

RE: 2026 DPW Highway Capital

The DPW - Highway Division is requesting \$738,674 in fiscal year 2026 to replace 4 pieces of equipment that are in disrepair. The cost to continue maintaining these vehicles is not justifiable and in some cases the age of the equipment may create a safety concern if left in service.

Attached, please find quotes for a 1-Ton Bucket Truck, 1-Ton Utility Body, Roadside Mower and a Skid Steer. All four pieces of equipment are critical to the operations and maintenance of DPW infrastructure and highway operations.

Please let me know if you have any questions or require additional information.



Quote Number: 1691887
Opportunity Number: 24124676
Sourcewell Contract #: 110421-ALT
Date: 9.30.2024

Quoted for: Town of Plymouth
Customer Contact: Tim Balboni
Phone: / Email: 508-830-4162 tbalboni@plymouth-ma.gov
Quoted by: Wesley Garner
Phone: / Email: 919-698-7493 wesley.garner@altec.com
Altec Account Manager: Eric D'Alessandro

REFERENCE ALTEC MODEL		Sourcewell Price
AT41M	Articulating Telescopic Aerial Device with Material Handling Insulated, 41'	\$221,241

(A.) SOURCEWELL OPTIONS ON CONTRACT (Unit)

1			
2			
3			
4			

(A1.) SOURCEWELL OPTIONS ON CONTRACT (General)

1	PSW11	Inverter with minimum 2000W 120V @ 16A pure sine wave output, hardwired to outlets and 12VDC input	\$2,972
2	SPOT4	SIX (6) POINT STROBE SYSTEM (LED)	\$1,220
3			
4			
5			
6			
7			
8			
9			
10			
SOURCEWELL OPTIONS TOTAL:			\$225,433

(B.) OPEN MARKET ITEMS (Customer Requested)

1	UNIT		\$0
2	UNIT & HYDRAULIC ACC		\$0
3	BODY	Altec Custom Body with Drawer Kit in CS1V and Aluminum Sloped Ladder Rack	\$4,875
4	BODY & CHASSIS ACC		\$301
5	ELECTRICAL	One GFCI outlet and One non-GFCI outlet at rear of body, CS, SS	\$3,134
6	FINISHING		\$0
7	CHASSIS	2026 Ford F550 4x4 Diesel Extended Cab	-\$2,952
8	OTHER	Altec MY Price Adjustment	-\$10,683
OPEN MARKET OPTIONS TOTAL:			-\$5,325

SUB-TOTAL FOR UNIT/BODY/CHASSIS: \$220,108.00
Delivery to Customer: \$2,915.00
Estimated Taxes (Delivery non-taxable):
FET:
CA Doc/Admin/Tire Fees:
Extended Warranty:

TOTAL FOR UNIT/BODY/CHASSIS: \$223,023.00

(C.) ADDITIONAL ITEMS (items are not included in total above)

1			
2			
3			
4			

Pricing valid for 45 days

NOTES

PRICING: Altec will make every effort to honor this quotation, subject to the following provisions. Prices for equipment with production start dates 12 months and beyond are budgetary only due to irregular cost inflation and market volatility. These prices will be reviewed based on market conditions and confirmed closer to the production date. Quotes and orders with chassis model year beyond the current open order bank, should be considered estimates only. Altec's turn-key pricing is subject to change in accordance with chassis pricing received from the OEM. Chassis model year, specifications and price will be reviewed and confirmed when specific model year information becomes available from the OEM and that chassis price difference will be passed through to the customer.

PAINT COLOR: White to match chassis, unless otherwise specified

WARRANTY: Standard Altec Warranty for Aerials and Derricks - One (1) year parts warranty One (1) year labor warranty Ninety (90)

TO ORDER: To order, please contact the Altec Account Manager listed above.

CHASSIS: Per Altec Commercial Standard

DELIVERY: TBD Based on availability, FOB Customer Location

TERMS: Net 30 days

BEST VALUE: Altec boasts the following "Best Value" features: Altec ISO Grip Controls for Extra Protection, Only Lifetime Warranty on Structural Components in Industry, Largest Service Network in Industry (Domestic and Overseas), Altec SENTRY Web/CD Based Training, Dedicated/Direct Gov't Sales Manager, In-Service Training with Every Order.

TRADE-IN: Please ask your Altec Account Manager for more information



September 30, 2024
Our 95th Year

Ship To:
TOWN OF PLYMOUTH
159 CAMELOT DR
PLYMOUTH, MA 02360
US

Bill To:
TOWN OF PLYMOUTH
11 LINCOLN ST
NORTH PLYMOUTH, MA 02360
United States

Attn: TIM BALBONI
Phone: 508-8304162
Email: tbalboni@plymouth-ma.gov

Altec Quotation Number: 1691887 - 1
Account Manager: Eric D'Alessandro
Technical Sales Rep: Wesley Thomas Garner

<u>Item</u>	<u>Description</u>	<u>Qty</u>
	<u>Unit</u>	
1.	Altec Model AT41M Articulating Telescopic Aerial Device with a fiberglass upper boom and fiberglass insulator in the articulating arm and proportional joystick upper controls. Built in accordance to ALTEC's standard specifications and to include the following features: <ul style="list-style-type: none">A. Ground to Bottom of Platform Height: 40.8 feet at 7.3 feet from centerline of rotation (12.45 m at 2.21 m)B. Working Height: 45.8 feet (13.96 m)C. Maximum reach to edge of platform with Upper Boom Non- overcenter: 30.1 feet (at 17.3 feet platform height)D. Upper boom extension: 110 inchesE. Continuous rotationF. Articulating Arm: Articulation is from -3 to 82 degrees. Insulator provides 19 inches of isolation.G. Compensation System: By raising the articulating arm only, the telescopic boom maintains its relative angle in relation to the ground. The work position is achieved through a single function operation.H. Upper Boom: Articulation is from -25 to 85 degrees. The fiberglass section provides a minimum of 10.9 inches of isolation in the upper boom (when retracted and 42.3 inches when extended).I. Platform leveling is achieved by a hydraulic master-slave leveling system. This lifetime system is very low maintenance.J. The dielectrically tested, insulating upper control system includes the following boom tip components that can provide an additional layer of secondary electrical contact protection. Control Handle: A single handle controller incorporating high electrical resistance components that is dielectrically tested to 40 kV AC with no more than 400 microampers of leakage. The control handle is green in color to differentiate it from other non-tested controllers. The handle also includes an interlock guard that reduces the potential for inadvertent boom operation. Auxiliary Control Covers: Non-tested blue silicon covers for auxiliary controls. Control Console: Non-tested non-metallic control console plate. Boom Tip Covers: Non-tested non-metallic boom tip covers. The covers are not	1

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<u>Item</u>	<u>Description</u>	<u>Qty</u>
	dielectrically tested, but they may provide some protection against electrical hazards.	
K.	Hydraulic system: Open center (full pressure), maximum flow 6 GPM, maximum operating pressure 3,000.	
L.	Dielectric rating: Category C, 46 kV and below	
M.	Unit is painted with a powder coat paint process which provides a finish-painted surface that is highly resistant to chipping, scratching, abrasion and corrosion. Paint is electrostatically applied to the inside as well as outside of fabricated parts then high temperature cured prior to assembly ensuring maximum coverage and protection.	
N.	Manuals: Two (2) Operator's and two (2) Maintenance/ Parts manuals containing instructional markings indicating hazards inherent in the operation of an aerial device.	
O.	Unit meets or exceeds ANSI 92.2 standards.	
2.	Pedestal	1
3.	Install Boom Mounted Components For Use With Manual Boom Securing System	1
4.	Single 1-Man Platform, Fiberglass, 24" x 30" x 42", End Mount, 180 Degree Rotation	1
5.	Platform Mounted Single Handle Controls	1
6.	Material Handling Jib/Winch, Hydraulically Articulating, Top Mounted, Round (ARM Jib)	1
7.	One (1) Platform Step - located on the side of the platform nearest the elbow in the stowed position	1
8.	Platform Cover - soft vinyl, 24 x 30 inches (610 x 762 mm)	1
9.	Platform Liner, 24 x 30 x 42 inches (610 x 762 x 1067 mm), 50 kV Rating	1
10.	Hydraulic Tool Circuit at Platform: One set of quick disconnect couplings at the boom tip for open center tools.	1
11.	Engine Start/Stop & Secondary Stowage System: 12 VDC powered motor and pump assembly for temporary operation of the unit in a situation wherein the primary hydraulic source fails. Electric motor is powered by the chassis battery. This feature allows the operator to completely stow the booms, platform, and outriggers. Secondary Stowage & Start/Stop is activated with an air plunger at the platform or momentary switch at the lower control station and outriggers.	1
12.	Jib Stick, 36" L, non-extension, non certified, grey in color	1
13.	Slip Ring: Required for engine start/stop, secondary stowage system, and throttle control options	1
14.	Outriggers, Primary, Modified A-Frame With Integrated Subbase, 30"-34" Chassis Height, Electric Interlock, No Valves On Legs, 114" Spread, Fixed Shoe (AT37/41 M/ME/P/PE/S/SE)	1
15.	Winch load line swivel hook	1
16.	Altec Unit Powder Painted White	1

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<u>Item</u>	<u>Description</u>	<u>Qty</u>
<u>Unit & Hydraulic Acc.</u>		
17.	Scuff Pad 24 x 30 With Step For Use With Platform Liner (U&H Acc)	1
18.	Electric Outrigger Controls for one (1) set of outriggers, drive hydraulic outrigger control valves. Durable weather proof sealed electronic switches mounted in aluminum boxes located at the rear of the unit.	1
19.	Hydraulic Reservoir, 15 Gallon, with Temp Sight Gauge	1
20.	Hydraulic Oil, HVI-22 with Ultraviolet Dye (Standard)	25
21.	Standard Pump For PTO	1
22.	Electric Shifted PTO	1
23.	Standard Altec PTO/Transmission Functionality for Non-Allison Automatic Transmissions: -PTO will engage when transmission is in park and the Parking Brake is engaged. -If transmission is in gear, and PTO switch is activated, PTO will not engage. Transmission will remain in gear. -Once the transmission is shifted back into gear the PTO will disengage. For some truck configurations the PTO switch must be turned off to allow the transmission to shift into gear.	1
24.	Standard Parking Brake Machine Interlock: Parking (holding) brake must be set before machine is operable.	1
<u>Body</u>		
25.	Altec Body	1
26.	Steel Body	1
27.	Body Is To Be Built In Accordance With The Following Altec Standard Specifications: A. Basic Body Fabricated From A40 Grade 100% Zinc Alloy Coated Steel. B. All Doors Are Full, Double Paneled, Self-Sealed With Built-In Drainage For Maximum Weather-Tightness. Stainless Steel Hinge Rods Extend Full Length Of Door. C. Heavy-Gauge Welded Steel Frame Construction. D. Integrated Door Header Drip Rail At Top For Maximum Weather Protection. E. Fender Panels Are Either Roll Formed Or Have Neoprene Fenderettes Mechanically Fastened. F. Steel Treated For Improved Primer Bond And Rust Resistance. G. Automotive Type Non-Porous Door Seals Fastened To The Door Facing. H. B-Line Channel Installed In Compartments	1
28.	Smooth Galvanneal Steel Floor	1
29.	Low-Side General Service With Step (LGSS)	1
30.	Finish Paint Body Altec White	1
31.	Undercoat Body	1

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<u>Item</u>	<u>Description</u>	<u>Qty</u>
32.	132" Estimated Body Length (Engineering To Determine Final Length)	1
33.	94" Body Width	1
34.	40" Body Compartment Height	1
35.	20" Body Compartment Depth	1
36.	5.5 Inch Drop-In Wood Cargo Retaining Board At Rear Of Body	1
37.	5.5 Inch Drop-In Wood Cargo Retaining Board At Top Of Side Access Step	1
38.	Curbside Smooth Compartment Tops	1
39.	Streetside Smooth Compartment Tops	1
40.	Adhesive Strip Lighting (LED) Around Top And Sides Of Compartment Door Facings	7
41.	Stainless Steel Rotary Paddle Latches With Keyed Locks	7
42.	All Locks Keyed Alike Including Accessories (Preferred Option)	1
43.	Standard Master Body Locking System	7
44.	Gas Prop Rigid Door Holders On All Vertical Doors	1
45.	Chains On All Horizontal Doors	1
46.	One Chock Holder On Each Side of Body With Retaining Lip In Fender Panel	1
47.	Hotstick Shelf Extending Full Length Of Body On Streetside	1
48.	Two Hotstick Brackets On Streetside	1
49.	Standard Drop-Down Hotstick Door For One (1) Shelf On Streetside, Stainless Steel Slam Paddle Latch With Keyed Lock	1
50.	1st Vertical (SS) - Adjustable Shelf With Removable Dividers On 4" Centers	2
51.	1st Vertical (SS) - Outrigger Housing, With Outrigger Pin Access As Needed	1
52.	2nd Vertical (SS) - Adjustable Shelf With Removable Dividers On 4" Centers	2
53.	1st Horizontal (SS) - Fixed Shelf With Removable Dividers On 4 Inch Centers On Bottom of Compartment	1
54.	Rear Vertical (SS) - Locking Swivel Hooks On An Adjustable Rail - Left Wall	1
55.	Rear Vertical (SS) - Locking Swivel Hooks On An Adjustable Rail - Rear Wall	3
56.	Rear Vertical (SS) - Locking Swivel Hooks On An Adjustable Rail - Right Wall	1
57.	1st vertical (CS) - 3 in high drawer kit on slides, as wide as possible, latched	1

Details:

-Locate above inverter

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<u>Item</u>	<u>Description</u>	<u>Qty</u>
	-As many drawers as possible -Dividers on 4" Centers	
58.	1st Vertical (CS) - Outrigger Housing, With Outrigger Pin Access As Needed	1
59.	1st Vertical (CS) - Inverter Storage Inside Of Body Compartment With Guard And Provisions For Remote GFCI Receptacle (Mounted On Bottom Shelf Unless Otherwise Specified)	1
60.	2nd Vertical (CS) - Gripstrut (Preferred) Access Steps w/ Two (2) Sloped Grab Handles, Chain Storage (Keyed Lock)	1
61.	1st Horizontal (CS) - Adjustable Shelf With Removable Dividers On 4" Centers	1
62.	1st Horizontal (CS) - Fixed Shelf With Removable Dividers On 4 Inch Centers On Bottom of Compartment	1
63.	Rear Vertical (CS) - Locking Swivel Hooks On An Adjustable Rail - Left Wall	1
64.	Rear Vertical (CS) - Locking Swivel Hooks On An Adjustable Rail - Rear Wall	3
65.	Rear Vertical (CS) - Locking Swivel Hooks On An Adjustable Rail - Right Wall	1
66.	Underbody Channels For Wiring And Plumbing.	1
67.	29" L Steel Tailshelf, Width To Match Body	1
68.	Steel Cross Storage Located Between Tailshelf Floor And Top Of Chassis Frame Rail, With Drop Down Doors And Keyed Latches On Streetside And Curbside, As Wide As Possible	1
69.	Smooth Galvanneal Steel Tailshelf	1
70.	Ladder Rack, 126"L, Sloped Front To Rear, Alum, Roller At Rear, Retaining Brckts And Strap, 21" Clear Int Width, Typ Mounted Flush At Rear Of Body And Overhung Toward Cargo Area	1
	Details: -Locate to of SS compartments	

Body and Chassis Accessories

71.	Set of Safety Chain Eye Bolts	1
72.	Combination 2 Ball (10,000 LB MGTW) and Rigid Pintle Hitch (16,000 LB MGTW with 3,000 LB MVL), 4-Bolt, Buyers BH82000	1
73.	Underride Protection Bumper, Installed at Rear	1
74.	Driveaway Safety Kit	1
75.	Rigid Step Mounted Beneath Side Access Steps (Installed to Extend Approx. 2 inches Outward) (Creedmoor)	1
76.	Boom Rest for a Telescopic Unit (Located in Cargo Area), Manual Boom Latch	1

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<u>Item</u>	<u>Description</u>	<u>Qty</u>
77.	Manual Boom Stow Securing System Installed on Boom Rest	1
78.	Platform Rest, Rigid with Rubber Tube, 24 Inch	1
79.	Nylon Outrigger Pad, Yellow, 18 x 18 x 0.63, With Handle (Reforge/Altec Preferred)	2
80.	Outrigger Pad Holder, 20 L x 20 W x 3 H Fits 19.5 x 19.5 x 2 and Smaller Pads Bolt-On Bottom, Washout Holes with 3/4 Inch Lip Retainer, Steel	2
81.	Pendulum Retainers for Outrigger Pad Holders	2
82.	Wheel Chocks Rubber with Metal Hairpin Handle 9.75 L x 7.75 W x 5 H (Pair) (Altec Preferred)	1
83.	Mud Flaps with Altec Logo (Pair)	1
84.	Safety Harness and 4.5 Ft Lanyard (Fits Medium to Xlarge)	1
85.	Slope Indicator Assembly (Pair) for Machine with Outrigger	1
86.	Vinyl Manual Pouch for Storage of All Operator and Parts Manuals	1

Electrical Accessories

87.	Compartment Lights Wired to Dash Mounted Master Switch in Chassis Cab	1
88.	Lights And Reflectors In Accordance With FMVSS 108 (Complete LED)	1
89.	6-Position Strokes, Amber, LED, Two (2) Surface Mounted Lights In Grille, Two (2) Oval Lights On Body Sides, Two (2) Round Lights At Rear, Class II (Permit May Be Required)	1
90.	Strobe Lights Wired Ignition Hot	1
91.	Remote Spot Light, LED, Permanent Mount, With Programmable Wireless Remote (Go-Light #30004ST)	2
	Details: -Locate on brackets off of chassis front quarter panes, CS, SS	
92.	Dual Tone Backup Alarm With Outrigger Motion Alarm	1
93.	PTO Hour Meter, Digital, With 10 000 Hour Display	1
94.	Trailer Receptacle, 6-Way (Pin Type) Installed At Rear	1
95.	Altec Standard Trailer Plug Wiring	1
96.	Upfitter Switches, Ford (Supplied with Chassis)	1
97.	Inverter with Minimum 2000W 120V @ 16A Pure Sine Wave Output, Hardwired to Outlets and 12VDC Input. Features Include Surge Ratings at 300 Percent for 1 ms, 200 Percent for 100 ms and 4/0 AWG 12V Wiring.	1
98.	Inverter Wired Ignition Hot with Switch in Chassis Cab	1
99.	Mounting Bracket For Inverter Mounted At Bottom Of Body Compartment Or Storage	1

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<u>Item</u>	<u>Description</u>	<u>Qty</u>
	Box	
100.	Electrical Receptacle, 120 Volt, GFCI, Includes Weather-Resistant Enclosure	1
	Details: -Locate on rear of CS	
101.	120 Volt Non-GFCI Receptacle Includes Weather-Resistant Enclosure Requires at least 1 GFCI Receptacle	1
	Details: -Locate on rear of SS	
102.	Hard Wire GFCI Receptacle To Protect Additional Non-GFCI Receptacles	1
103.	Power Distribution Module (PDM-6) is a compact self-contained electronic system that provides a standardized interface with the chassis electrical system. (Includes Operator's Manual)	1
104.	One Emergency Stop Located at Ground Level Installed at the Rear of the Vehicle	1
105.	Install Chassis (OEM) Supplied Backup Camera In Final Assembly	1
106.	Install Outrigger Interlock System In Final Assembly	1
107.	Install Remote Engine Start/Stop and Secondary Stowage Systems in Final Assembly	1
108.	Heavy Duty Secondary Stowage Pump (Supplied By Final Assembly)	1
109.	PTO Indicator Light, Installed In Cab	1
<u>Finishing Details</u>		
110.	Front and Rear Frame Mounted and Under Body Mounted Components (With the Exception of Rust Resistant Components) Will Be Painted Black DEPS 005 DEPS 095 (Includes Non OEM Front Bumpers and Cabguards)	1
111.	Powder Coat Unit Altec White	1
112.	Apply Non-Skid Coating (Black) to All Walking Surfaces DEPS 057	1
113.	Placard, Engine Block Heater	1
114.	Safety and Instructional Decals English	1
115.	Vehicle Height Placard Installed In Cab DEPS 002	1
116.	HVI-22 Hydraulic Oil Placard	1
117.	Dielectric Test Unit According to ANSI Requirements	1
118.	Stability Test Unit According to ANSI Requirements	1
119.	Focus Factory Build	1
120.	Delivery Of Completed Unit	1

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<u>Item</u>	<u>Description</u>	<u>Qty</u>
121.	Inbound Freight	1
122.	As Built Electrical and Hydraulic Schematics to be Included In the Manual Pouch (Deps 024)	1
123.	Completed Test Forms To Be Included In The Manual Pouch: -Stability Test Form -Dielectric Test Form (For Insulated Units)	1
124.	Final Assembly Electrical and Hydraulic Installation for Crew Cab or Extended Cab Chassis	1
<u>Chassis</u>		
125.	Altec Supplied Chassis	1
126.	Chassis	1
127.	2026 Model Year	1
128.	Ford F550	1
129.	Dual Rear Wheel	1
130.	4x4	1
131.	Chassis Cab	1
132.	Extended Cab (Larger Cab With Half-Length Rear Doors Or No Rear Doors)	1
133.	Chassis Color - White	1
134.	Automatic Emergency Braking	1
135.	Forward Collision Warning	1
136.	Lane Departure Warning System	1
137.	AM/FM Radio	1
138.	Bluetooth	1
139.	Ford SYNC	1
140.	Block Heater	1
141.	Limited Slip Rear Axle	1
142.	Trailer Brake Controller (Factory Installed)	1
143.	Side Mirrors, Power Adjusting, Manual Folding, Manual Telescoping with Heated Glass	1
144.	Cruise Control	1
145.	110VAC Outlet, OEM Supplied	1

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<u>Item</u>	<u>Description</u>	<u>Qty</u>
146.	Air Conditioning	1
147.	Backup Camera, OEM Supplied	1
148.	Keyless Entry	1
149.	Power Door Locks	1
150.	Power Windows	1
151.	Tilt Steering Wheel	1
152.	84 Clear CA (Round To Next Whole Number)	1
153.	GVWR 19,500 LBS	1
154.	7,500 LBS Front GAWR	1
155.	14,706 LBS Rear GAWR	1
156.	Spring Suspension	1
157.	Ford 6.7L Power Stroke Diesel	1
158.	Diesel	1
159.	Ford Torqshift 10-Speed Automatic Transmission (w/PTO Provision)	1
160.	Ford 40 Gallon Fuel Tank (Rear)	1
161.	Ford 7.2 Gallon DEF Tank (Mid Mount)	1
162.	Ford E/F250-550 Single Horizontal Right Side Exhaust	1
163.	CARB Clean Idle Certification	1
164.	EPA Clean Idle Certification	1
165.	CARB Compliant	1
166.	No Idle Engine Shut-Down Required	1
167.	Hydraulic Brakes	1
168.	Electronic Park Brake In Rear Wheels	1
169.	Dual Alternator (350 amp Minimum)	1
170.	872 - Rear View Camera and Prep Kit	1
171.	98R - Operator Commanded Regeneration (OCR)	1
172.	Vinyl Split Bench Seat	1

Additional Pricing

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<u>Item</u>	<u>Description</u>	<u>Qty</u>
173.	Standard Altec Warranty: One (1) year parts warranty, one (1) year labor warranty, ninety (90) days warranty for travel charges, limited lifetime structural warranty	1
<u>Miscellaneous</u>		
174.	Massachusetts Vehicle Registration	1

Altec Industries, Inc.

BY

Wesley Thomas Garner

Notes:

- 1 Altec will make every effort to honor this quotation, subject to the following provisions. Prices for equipment with production start dates 12 months and beyond are budgetary only due to irregular cost inflation and market volatility. These prices will be reviewed based on market conditions and confirmed closer to the production date.

For a quoted chassis model year beyond the current open order bank, chassis model year, specifications and price should be considered estimates only and subject to change. Chassis model year, specifications and price will be reviewed and confirmed when specific model year information becomes available from the OEM.
- 2 Estimated Delivery: 22-24 months after receipt of order PROVIDING:
A. Customer supplied chassis (if applicable) is received a minimum of sixty (60) days before scheduled delivery.
B. Customer approval drawings are returned by requested date.
C. Customer supplied accessories are received by date necessary for compliance with scheduled delivery.
D. Customer expectations are accurately captured prior to major components being ordered (body, chassis) and line set date. Unexpected additions or changes made after this time or at a customer inspection will delay the delivery of the vehicle.

Estimated Delivery is based on information at time of quote and is subject to change.

Altec reserves the right to change suppliers in order to meet customer delivery requirements, unless specifically identified, by the customer, during the quote and or ordering process.
- 3 This quotation is valid until NOV 07,2024. After this date, please contact Altec Industries, Inc. for a possible extension.
- 4 F.O.B. - Customer Site
- 5 Interest charge of 1/2% per month to be added for late payment.
- 6 FINANCING AVAILABLE: Please contact Altec Capital at (888) 408-8148 or email finance@altec.com for more information.

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- 7 Price does not reflect any local, state or Federal Excise Taxes (F.E.T). The quote also does not reflect any local title or licensing fees. All appropriate taxes will be added to the final price in accordance with regulations in effect at time of invoicing.
- 8 Changes made to this order may affect whether or not this vehicle is subject to F.E.T. A review will be made at the time of invoicing and any applicable F.E.T. will be added to the invoice amount.
- 9 Any payment made by a credit card may be subject to a surcharge fee.
- 10 Altec Standard Warranty:
- One (1) year parts warranty.
- One (1) year labor warranty.
- Ninety (90) days warranty for travel charges.
- Warranty on structural integrity of the following major components is to be warranted for so long as the initial purchaser owns the product: Booms, boom articulation links, hydraulic cylinder structures, outrigger weldments, pedestals, subbases and turntables.
- Altec is to supply a self-directed, computer based training (CBT) program. This program will provide basic instruction in the safe operation of this aerial device. This program will also include and explain ANSI and OSHA requirements related to the proper use and operation of this unit.
- Altec offers its standard limited warranty with the Altec supplied components which make up the Altec Unit and its installation, but expressly disclaims any and all warranties, liabilities, and responsibilities, including any implied warranties of fitness for a particular purpose and merchantability, for any customer supplied parts
- Altec designs and manufactures to applicable Federal Motor Vehicle Safety and DOT standards
- 11 Altec Extended Warranty Option:
- An Altec Extended Warranty is an extension of Altec's Limited Warranty and protects you from the repair cost associated with defects of materials and workmanship after the standard Limited Warranty expires.
- Altec offers many types of coverages and coverage packages. Ask your Altec account manager for details. Quotes are available upon request.
- 12 After the initial warranty period, Altec Industries, Inc. offers mobile service units, in-shop service and same day parts shipments on most parts from service locations nationwide at an additional competitive labor and parts rate. Call 877-GO-ALTEC for all of your Parts and Service needs.
- 13 Trade-in offer is conditional upon equipment being maintained to DOT (Department of Transportation) operating and safety standards and remaining in compliance of DOT until arrival at an Altec Facility. This will include, but is not limited to engine, tires, lights, brakes, glass, etc. All equipment, i.e., jibs, winches, pintle hooks, trailer connectors, etc., are to remain with unit unless otherwise agreed upon in writing by both parties. ALTEC Industries reserves the right to re-negotiate its trade-in offer if these conditions are not met.
- All reasonable and necessary expenses required of ALTEC Industries to execute transportation of the trade-in will be invoiced to the customer for payment if these conditions are not met to maintain DOT standards.

Customer may exercise the option to rescind this agreement in writing within sixty (60) days after receipt of purchase order. After that time ALTEC Industries will expect receipt of trade-in vehicle upon delivery of new equipment as part of the terms of the purchase order unless other arrangements have been made.

14 The final fully loaded weight of the truck and structural ratings of the hitch assembly may reduce the towing capacity and the vertical load capacity of the finished truck. These capacities may not match the ratings of the chassis or hitch.

15 Altec takes pride in offering solutions that provide a safer work environment for our customers. In an effort to focus on safety, we would encourage you to consider the following items:

Outrigger pads (When Applicable)
Fall Protection System
Fire extinguisher/DOT kit
Platform Liner (When Applicable)
Altec Sentry Training
Wheel Chocks

The aforementioned equipment can be offered in our new equipment quotations. If you find that any of these items have not been listed as priced options with an item number in the body of your quotation and are required by your company, we would encourage you to contact your Altec Account Manager and have an updated quote version sent to you. These options must be listed with an item number in the quotation for them to be supplied by Altec.

16 Altec values your data privacy. The Altec Family of Companies (including Altec, Inc., and its subsidiaries) may collect telematics data from the equipment you own. Please review Altec's Equipment Data Privacy Notice on www.altec.com for more information. By purchasing equipment from Altec, you consent to Altec's right to collect and use such data.

17 **RECOMMENDED OPTIONS AND ACCESSORIES:** These options are not included in the quote total price. Selected options will change the quote total. Any options added after initial order will be re-quoted.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: HIGHWAY	Priority #:	2
Project Title and Description: Replace F-350 Utility Body	Total Project Cost:	\$112,830.00

Department/Division Head: Highway Tim Balboni

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>FY27</i>		
<i>Labor and Materials</i>			<i>FY28</i>		
<i>Administration</i>			<i>FY29</i>		
<i>Land Acquisition</i>			<i>FY30</i>		
<i>Equipment</i>	\$94,025.00		<i>FY31</i>		
<i>Other</i>					
<i>Contingency</i>	\$18,800.00				
Total Capital	\$112,830.00				

Project Justification and Objective: High mileage, 130,678. Frame and utility body is rotting out and it's in poor condition

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

2012 Ford F-250 Utility 1FTBF2AT5CEA45311 very poor condition

What is the expected lifespan of this new/replacement equipment: 15 / 20 years

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



TOWN OF PLYMOUTH

Department of Public Works
159 Camelot Drive
Plymouth, Massachusetts 02360
Office: (508) 830-4162

William A. Coyle, P.E.
Director of Public Works

James L. Downey,
Assistant Director of Public Works

MEMORANDUM

Date: May 16, 2024

To: Lynne Barret, Finance Director

From: William Coyle, P.E. DPW Director

RE: 2026 DPW Highway Capital

The DPW - Highway Division is requesting \$738,674 in fiscal year 2026 to replace 4 pieces of equipment that are in disrepair. The cost to continue maintaining these vehicles is not justifiable and in some cases the age of the equipment may create a safety concern if left in service.

Attached, please find quotes for a 1-Ton Bucket Truck, 1-Ton Utility Body, Roadside Mower and a Skid Steer. All four pieces of equipment are critical to the operations and maintenance of DPW infrastructure and highway operations.

Please let me know if you have any questions or require additional information.



Preview Order D004 - X3B 4x4 Super Cab SRW: Order Summary Time of Preview: 09/30/2024 11:34:04 Receipt: NA

Dealership Name: Colonial Ford, Inc.

Sales Code: F11647

Dealer Rep.	Dell Roderick	Type	Fleet	Vehicle Line	Superduty	Order Code	D004
Customer Name	COLONIAL FORD	Priority Code	M1	Model Year	2025	Price Level	515

DESCRIPTION	MSRP	DESCRIPTION	MSRP
F350 4X4 SUPERCAB PICKUP/164	\$51925	PLATFORM RUNNING BOARDS	\$445
164 INCH WHEELBASE	\$0	11300# GVWR PACKAGE	\$0
GREEN GEM	\$660	50 STATE EMISSIONS	\$0
VINYL 40/20/40 SEATS	\$0	BACKGLASS DEFROST	\$0
MEDIUM DARK SLATE	\$0	POWER SLIDING REAR WINDOW	\$405
PREFERRED EQUIPMENT PKG.610A	\$0	SNOW PLOW PREP PACKAGE	\$250
.XL TRIM	\$0	.RAPID HEAT SUPPLEMENTAL HEATER	\$0
.AIR CONDITIONING -- CFC FREE	\$0	ROOF CLEARANCE LIGHTS	\$95
.AM/FM STEREO MP3/CLK	\$0	JACK	\$0
6.7L POWER STROKE V8 DIESEL	\$10495	UPFITTER SWITCHES	\$165
10-SPEED AUTO TORQSHIFT	\$0	410 AMP ALTERNATOR	\$0
.LT245/75R17E BSW ALL-SEASON	\$0	DUAL BATTERY	\$0
3.31 ELECTRONIC-LOCKING AXLE	\$430	PRIVACY GLASS	\$30
JOB #1 ORDER	\$0	FUEL CHARGE	\$0
CV LOT MANAGEMENT	\$0	PRICED DORA	\$0
FRONT LICENSE PLATE BRACKET	\$0	DESTINATION & DELIVERY	\$1995
TOTAL BASE AND OPTIONS			MSRP \$66895
DISCOUNTS			NA
TOTAL			\$66895

ORDERING FIN: ST999 END USER FIN: ST999

Customer Name:
Customer Address:

Customer Email:
Customer Phone:

Customer Signature

Date

total \$94025

This order has not been submitted to the order bank.
This is not an invoice.

BRAKE & CLUTCH INC.**QUOTATION****63 BRIDGE ST. SALEM, MA. 01970****978-745-2500,4484-FAX****WWW.BRAKEANDCLUTCH.COM****TO: COLONIAL FORD****ATTN: DELL****FROM: JEFF****DATE: 9/30/2024****STOCK #****CHASSIS TYPE****8' BED****LAST 8 OF VIN#****TBD****NOTE SPECIAL CONSIDERATIONS FOR 2023/2024 PICK UP TAKE OFF LIMITATION PER FORD****READING U98ASW CLASSIC II STEEL SERVICE BODY****SRW 56" C/A REQUIRED****STANDARD FEATURES -**

BODY LENGTH: 98" BODY WIDTH: 77.5" UNDERSTRUCTURE: 5"
COMPARTMENT HEIGHT: 40" COMPARTMENT DEPTH: 14.5" LOAD FLOOR WIDTH: 48.5"
COMPLETE STAINLESS STEEL PADDLE LATCHES WITH ROTARY LOCKS
A60 GALVANNEALED STEEL, E-COAT IMMERSION PRIMING SYSTEM
PATENTED HIDDEN HINGES WITH OVERLAPPING DOOR CONSTRUCTION
FLUSH MOUNT LED TAIL LIGHTS
NITROGEN GAS STRUT DOOR HOLDERS ON ALL VERTICAL DOORS
FULLY PRIMED & UNDERCOATED UNDERSTRUCTURE
STANDARD SHELVING & DIVIDERS
POOCHED REAR BUMPER
READING 6 YEAR LIMITED WARRANTY

INCLUDES AFTERMARKET FUEL DELIVERY KIT, BCM FLASH

LIQUID TOPCOAT PAINT - ALL EXTERIOR SURFACES: GEM GREEN
INCLUDES DOOR JAMBS AND INSTALLATION OF NEW RUBBER DOOR SEALS.
EXACT PAINT MATCH NOT GUARANTEED.

COMPLETE & INSTALLED- DELIVERED**OPTIONS: (SELECT FROM LIST BELOW)****__X__ LINEX CARGO AREA, BOX TOPS & BUMPER**

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: HIGHWAY	Priority #:	3
Project Title and Description: New Roadside Mower	Total Project Cost:	\$245,421.00

Department/Division Head: Highway Tim Balboni

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>			FY27		
<i>Labor and Materials</i>			FY28		
<i>Administration</i>			FY29		
<i>Land Acquisition</i>			FY30		
<i>Equipment</i>	\$204,518.00		FY31		
<i>Other</i>					
<i>Contingency</i>	\$40,903.00				
Total Capital	\$245,421.00				

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

NEW

What is the expected lifespan of this new/replacement equipment: 15 / 20 years

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



TOWN OF PLYMOUTH

Department of Public Works
159 Camelot Drive
Plymouth, Massachusetts 02360
Office: (508) 830-4162

William A. Coyle, P.E.
Director of Public Works

James L. Downey,
Assistant Director of Public Works

MEMORANDUM

Date: May 16, 2024

To: Lynne Barret, Finance Director

From: William Coyle, P.E. DPW Director

RE: 2026 DPW Highway Capital

The DPW - Highway Division is requesting \$738,674 in fiscal year 2026 to replace 4 pieces of equipment that are in disrepair. The cost to continue maintaining these vehicles is not justifiable and in some cases the age of the equipment may create a safety concern if left in service.

Attached, please find quotes for a 1-Ton Bucket Truck, 1-Ton Utility Body, Roadside Mower and a Skid Steer. All four pieces of equipment are critical to the operations and maintenance of DPW infrastructure and highway operations.

Please let me know if you have any questions or require additional information.



www.norfolkpower.com
info@norfolkpower.com

Ship To: IN STORE PICKUP

5 Cushing Drive
Wrentham, MA 02093
Tel: (508) 384-0011
Fax: (508) 384-8667

846 Bronco Highway
Burrillville, RI 02830
Tel: (401) 710-9911
Fax: (401) 710-9466

45 North Main Street
Carver, MA 02330
Tel: (774) 213-9190
Fax: (508) 465-0931

Please remit payment to Wrentham address

Invoice To: PLYMOUTH HIGHWAY DEPT.
159 CAMELOT DR.
PLYMOUTH MA 02360

Branch 03 - CARVER		
Date 09/12/2024	Time 14:56:31 (O)	Page 1
Account No PLYMO018	Phone No 5088304162	Est No 01 Q04341
Ship Via	Purchase Order TERRAIN	
Tax ID No		
JASON DONOVAN		Salesperson JWD / JWD

EQUIPMENT ESTIMATE - NOT AN INVOICE

Description ** Q U O T E ** EXPIRY DATE: 12/31/2024 Amount

MINIMUM 6 MONTH LEADTIME ONCE ORDER IS PLACED

PRICING UPDATED 9/12/24

KUBOTA M6-111DTC-F-1 4WD TRACTOR 112320.00
FACTORY CAB WITH HEAT AND A/C
24 SPEED PUSH BUTTON INTELI SHIFT TRANSMISSION
HYDRAULIC SHUTTLE SHIFT
KUBOTA AMR9304 R14 FRONT HYBRID TIRES
KUBOTA AMR9284TK REAR R14 HYBRID CAST CENTER REARS

Sale # 01 Subtotal: 112320.00
Total: 112320.00

TERRAIN KING KB2200 22' MID MOUNT BOOM MOWER 106800.00
PROPORTIONAL JOYSTICK CONTROL
48" HEAVY DUTY FLAIL HEAD
QUICK HITCH MOUNT FOR OPTIONAL HEADS
FACTORY MOUNTING

Sale # 02 Subtotal: 106800.00
Total: 106800.00

Miscellaneous Charges/Credits

=====

STATE CONTRACT Qty: 1 Price: 14602.00 14602.00-

Miscellaneous Charges/Credits Total: 14602.00-

Subtotal: 204518.00

Authorization: _____

Quote Total: 204518.00

WHOLEGOODS RETURN POLICY: (1) All new equipment comes with a written manufacturer's warranty. Any defects in material workmanship are subject to repair according to the manufacturer's warranty. Unless directed by the manufacturer, equipment will not be replaced. (2) Equipment returned within seven business days in new unused conditions may be exchanged or refunded for the full amount. (3) Equipment returned within seven business days and has been used subject to a thirty percent restocking fee. (4) No returns after seven business days. (5) All special orders subject to a twenty percent cancellation fee. (6) Special order units are non-returnable. Norfolk Power Equipment, Inc. reserves the right to add a price increase to any quote or customer order prior to shipment, in order to address increases in commodity prices and surcharges imposed by manufacturers during the period from the date hereof to the shipment date. Norfolk Power Equipment, Inc. will notify the buyer of the finance price due prior to assembly of new machine. The buyer shall have the right to cancel the order within 10 days of receipt of final price. At that time the unit will become available to the next customer in line.

All new equipment quotes valid for 10 days unless stated otherwise.

Thank You For Your Business!

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: HIGHWAY	Priority #:	4
Project Title and Description: Replace 2014 John Deere Skid Steer	Total Project Cost:	\$112,800.00

Department/Division Head: Highway Tim Balboni

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>			FY27		
<i>Labor and Materials</i>			FY28		
<i>Administration</i>			FY29		
<i>Land Acquisition</i>			FY30		
<i>Equipment</i>	\$94,000.00		FY31		
<i>Other</i>					
<i>Contingency</i>	\$18,800.00				
Total Capital	\$112,800.00				

Project Justification and Objective: This piece of equipment gets used on a daily basis. Gets used on the beach and for snow and ice operations. The under carriage will need extensive repairs in the next 2-3 years

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

2014 John Deere Skid Steer 1T0323EMCEJ264973

What is the expected lifespan of this new/replacement equipment: 10/15 years

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



TOWN OF PLYMOUTH

Department of Public Works
159 Camelot Drive
Plymouth, Massachusetts 02360
Office: (508) 830-4162

William A. Coyle, P.E.
Director of Public Works

James L. Downey,
Assistant Director of Public Works

MEMORANDUM

Date: May 16, 2024

To: Lynne Barret, Finance Director

From: William Coyle, P.E. DPW Director

RE: 2026 DPW Highway Capital

The DPW - Highway Division is requesting \$738,674 in fiscal year 2026 to replace 4 pieces of equipment that are in disrepair. The cost to continue maintaining these vehicles is not justifiable and in some cases the age of the equipment may create a safety concern if left in service.

Attached, please find quotes for a 1-Ton Bucket Truck, 1-Ton Utility Body, Roadside Mower and a Skid Steer. All four pieces of equipment are critical to the operations and maintenance of DPW infrastructure and highway operations.

Please let me know if you have any questions or require additional information.

Quote Summary**Prepared For:**

TOWN OF PLYMOUTH DPW - HWY
159 CAMELOT DR
PLYMOUTH, MA 02360
Business: 508-830-4162

Prepared By:

ROBERT CYBULSKI
United Construction & Forestry
88 Camelot Drive
Plymouth, MA 02360
Phone: 508-830-9997
robert.cybulski@ucfne.com

BUDGET NUMBER**Quote Id:** 31725121**Expiration Date:** 07 October 2024

Equipment Summary**Qty****Extended**

2024 JOHN DEERE 325G
COMPACT TRACK LOADER -
1T0325GMARJ471929

1

Extended Warranty

Extended Warranty, 325G, Power Train
And Hydraulics, 5000 Total Hours or 60
Total Months, \$0 Deductible

Equipment Total**\$ 94,000.00**

Quote Summary

Equipment Total \$ 94,000.00

SubTotal \$ 94,000.00

Est. Service Agreement Tax \$ 0.00

Total \$ 94,000.00

Balance Due \$ 94,000.00

Salesperson : X _____**Accepted By : X** _____



Selling Equipment

Quote Id: 31725121

Customer: TOWN OF PLYMOUTH DPW - HWY

2024 JOHN DEERE 325G COMPACT TRACK LOADER - 1T0325GMARJ471929

Hours: 1

Stock Number: 372008

Code	Description	Qty
00D2T	2024 JOHN DEERE 325G COMPACT TRACK LDR BASE - HI FLOW	1
Standard Options - Per Unit		
170K	JDLINK	1
0770	2SP HIFL SLEV RC CB/AC PQT	1
0953	ISO SWITCHABLE CTLS & JS PPK	1
1301	ENGINE TURBO 4TNV98CT	1
1501	ENGLISH OP MAN & DECALS	1
2645	WIDE ZIG ZAG 15.8" 400MM TRK	1
4003	3" SEAT BELT W/2"SHLDR STRAP	1
6006	AIR RIDE SEAT (CLOTH W HEAT)	1
8042	REAR VIEW CAMERA	1
8050	COLD START PACKAGE 110V	1
8060	PRE CLEANER	1
8300	CTRWGT STACK SINGLE SET	1
8370	HD REAR GRILLE	1
8380	FOOTREST WITH FLOORMAT	1
9052	HD 78 IN CONST BUCKET W EDGE	1
Value Added Services		
Extended Warranty		
Other Charges		
Freight		1
Setup		1

**Extended Warranty Proposal****PowerGard™ Protection Plan****Compact Construction Equipment****Date :** September 24, 2024**Machine/Use Information****Plan Description****Price**

Manufacturer	JOHN DEERE	Plan Type:	Extended Warranty	Deductible:	\$ 0
Equipment Type	Compact Construction Equipment	Coverage:	Power Train And Hydraulics	Quoted Price	\$ 0.00
Model	325G	Total Months:	60		
Country	US	Total Hours:	5000	Date Quoted	September 24, 2024
MFWD/Tracks	N				

Scraper Use

Extended Warranty is available only through authorized John Deere Dealers for John Deere Products, and may be purchased at any time before the product's Standard Warranty, or Extended Warranty expires.

Extended Warranty Proposal Prepared for:

I have been offered this extended warranty and

Customer Name - Please Print

☒ I ACCEPT the Extended Warranty☐ I DECLINE the Extended Warranty

Customer Signature

If declined, I fully understand that any equipment listed above is not covered for customer expenses due to component failures beyond the original basic warranty period provided by John Deere.

Note : This is not a contract. For specific Extended Warranty coverage terms and conditions, please refer to the actual Extended Warranty contract for more information and the terms, conditions and limitations of the agreement.

What Extended Warranty is :

The Extended Warranty Program is for the reimbursement on parts and labor for covered components that fail due to faulty material or original workmanship that occur beyond the John Deere Basic Warranty coverage period. The agreement is between Deere & Company and the owners of select John Deere Construction and Forestry equipment, who purchase the Extended Warranty Plans for the desired coverage as indicated in this proposal.

What Extended Warranty is not :

Extended Warranty is not insurance. It also does not cover routine maintenance or high wear items, or insurance-related risks/perils such as collision, overturn, vandalism, wind, fire, hail, etc. It does not cover loss of income during or after an equipment failure. See the actual product-specific Extended Warranty agreement for a complete listing of covered components, and limitations and conditions under the program.

Features/Benefits:

- Extended Warranty includes the following features and benefits under the program :
- Pays for parts and labor costs incurred on failed covered components (less any applicable deductibles),
- Does not require pre-approval before repairs are made by the authorized John Deere dealership,
- Payments are reimbursed directly to the dealership with no prepayment required by the contract holder.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Parks and Forestry	Priority #:	1
Project Title and Description: Training Green ADA Improvements and Upgrades	Total Project Cost:	\$744,000

Department/Division Head: Nick Faiella

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

For project re-submittals, list prior year(s): This has been on the Parks and Forestry 10 year plan for FY26

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>FY27</i>		
<i>Labor and Materials</i>	\$620,000		<i>FY28</i>		
<i>Administration</i>			<i>FY29</i>		
<i>Land Acquisition</i>			<i>FY30</i>		
<i>Equipment</i>			<i>FY31</i>		
<i>Other</i>					
<i>Contingency</i>	\$124,000	20% for unknowns			
Total Capital	\$744,000				

Project Justification and Objective: Please see attached "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

N/A

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

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

FY26 Capital Improvement Request

Parks and Forestry

Priority: 1 – Plymouth Training Green ADA Improvements and Upgrades

Project Justification and Objective:

The Plymouth Training Green, originally used as a perpetual common or training place in 1711, was later designed to have curbing and walkways in 1889, by the famous landscape architect known as Fredrick Law Olmstead. The park is known to be one of the oldest continuously used parks in the country.

Currently, the walkways are cracked and crumbled and are beginning to be an unsafe area for walking and leisure activities. This design and engineering plan would address these safety issues by including improvements such as ADA compliant entries and walkways, MAAB compliant stairway entrances, LED lighting to areas of the park and flag pole, and an irrigation system to keep the grass green during the summer months, all while keeping the design true to Olmstead's original design. These improvements would not only bring aesthetically pleasing qualities but would make pedestrian travel safe within the park.

Plymouth Training Green Improvements
Plymouth, Massachusetts
Prepared For: Plymouth Parks Department
SLR # 11982.00028



October 11, 2024

Order of Magnitude Cost Summary

	DESIGN ELEMENT	COST
1	Gen. Conditions, S&E, Mobilization, Staking, Temp Construction Fencing, Misc. Removals)	\$ 67,000
2	Site Preparation & Removals	\$ 31,000
3	Site Improvements - Concrete Walks	\$ 93,000
4	Site Improvements - Site Electrical & Lighting	\$ 225,000
5	Site Improvements - Irrigation	\$ 116,000
6	Site Improvements - Landscape	\$ 50,000
7	Site Improvements - Amenities	\$ 8,000
ST	Sub-Total	\$ 620,000
CONT	Contingency on Subtotal at 20%	\$ 124,000
T	Total	\$ 744,000

General Notes:

1. Costs above are based upon conceptual masterplan and should be considered approximate in nature and used for planning purposes.











**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 ANNUAL TOWN MEETING**

Department: Parks and Forestry	Priority #: 2
Project Title and Description: Reconstructing Tennis Courts: Briggs Field and Elmer Raymond	Total Project Cost: \$801,060

Department/Division Head: Nick Faiella

Check if project is: Resubmitted

Cost estimate was developed: Externally

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

FY24, FY25

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>			FY23		
<i>Labor and Materials</i>	\$667,550	Elmer - \$357,100 Briggs - \$310,450	FY24		
<i>Administration</i>			FY25		
<i>Land Acquisition</i>			FY26		
<i>Equipment</i>			FY27		
<i>Other</i>					
<i>Contingency</i>	\$133,510	20% increase for material increase and unknowns			
Total Capital	\$801,060	Project plus contingency			

Project Justification and Objective:

Multiple reputable tennis court companies have expressed that these courts need reconstruction as opposed to repair. Due to their state of condition, the cracks will continue to separate after repair and will require constant attention for repair. Reconstructing these tennis courts using post tension will save costs over the next 25-30 years because the lifespan of post tension surface. Construction of a post tension court involves pouring concrete over interlocking cables that extend the length of the court. As the concrete hardens, the cables are mechanically tightened until the concrete hardens, causing the courts to remain without cracks for at least twenty-five years. Asphalt courts have shown to start producing cracks after two years. All four playing courts will be striped for both tennis and pickleball use. The nets will be tennis regulation. This cost also includes new fencing around each site.

For Capital Project Requests:

Will this project be phased over more than one fiscal year? If yes, enter it on the 5 Year Plan
Can this project be phased over more than one fiscal year?

No
No

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



September 23, 2024

Town of Plymouth, Massachusetts

Scope: Tennis Court Budget Pricing

**Elmer Raymond Jr. Memorial Park
1138 Long Pond Rd.
Plymouth MA 02360**

Scope of work and product specifications available upon request

I. Re-construction of (2) Tennis Courts in Post Tensioned Concrete (+/- 1,400 SY, 120' x 120' Courts)

1. Tear down and dispose of existing fence
2. Pulverize courts and grade
3. Laser grade base to .83% slope
4. Provide and install new net footings, posts, nets, and center straps
5. Provide and install 4 1/2" post tensioned tennis court slab
6. Provide and install 480' of 1 1/4" black fusion bonded 8-gauge vinyl tennis fencing with 3" posts
7. Surface courts with California Products Color system
Colors- TBD

All post tensioned courts come with a 25-year guarantee against any structural cracking

Price: \$357,100.00

**Briggs Field
838 State Rd
Plymouth MA 02360**

II. Re-construction of (2) Tennis Courts in Post Tensioned Concrete (+/- 1,334 SY, 120' x 100' Courts)

1. Tear down and dispose of existing fence
2. Pulverize courts and grade
3. Laser grade base to .83% slope
4. Provide and install new net footings, posts, nets, and center straps
5. Provide and install 4 ½" post tensioned tennis court slab
6. Provide and install 440 linear feet of 1 ¾" black fusion bonded 8-gauge vinyl tennis fencing with 3" posts, top rail, corner bracing and bottom rail
7. Surface courts with California Products Color system
Colors- TBD

All post tensioned courts come with a 25-year guarantee against any structural cracking

Price: \$310,450.00

Owner Responsibilities:

Owner is responsible for any clearing, ledge removal, retaining walls, drainage and landscaping unless otherwise specified.

Provide any necessary permits; Local authorities required set back distance from lot lines.

Locate and establish all property boundaries pertaining to courts.

Provide suitable access for heavy trucks and equipment.

Locate and establish all underground utilities, septic or sewer lines. Call Dig Safe 1-888-344-7233.

Due to volatility in both availability and cost of construction materials, all pricing is subject to change without notice.

Where necessary, remove trees and vegetation including their root systems. We recommend clearing tree's and root systems a minimum of 10' beyond actual court dimensions.

All material is guaranteed to be as specified. All work to be completed in a workman like manner according to standard practices. Any alteration or deviation from the above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond

our control. Owner to carry fire, tornado and other necessary insurance. The contractor agrees to carry Workmen's Compensation and Public Liability Insurance required by the United States Government and the state in which this work is to be performed.

Authorized Signature: _____

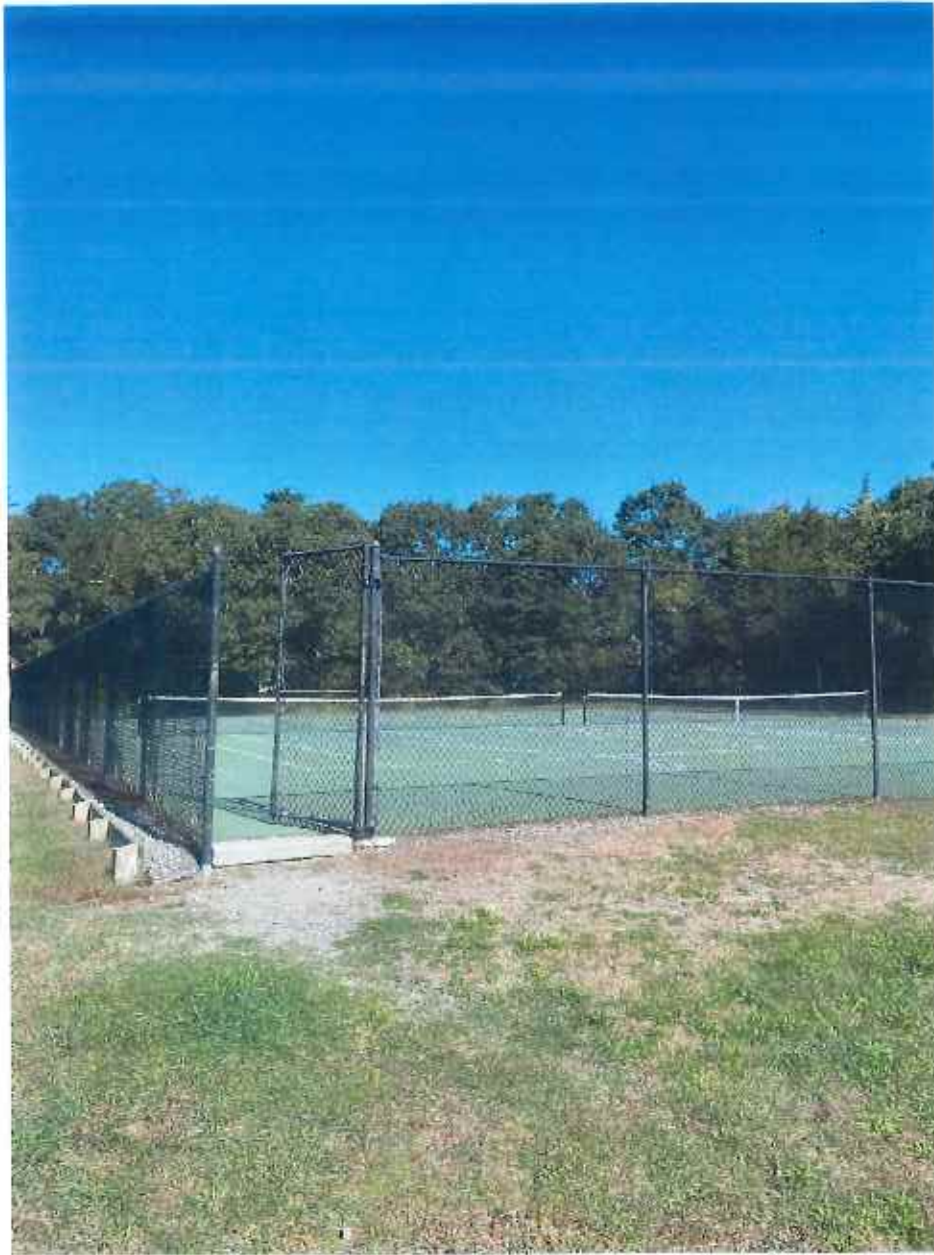
Eric Loftus, Vice President

A handwritten signature in black ink, appearing to be 'EL', written over a horizontal line.

Date: 9/23/2024



Briggs



Briggs



Elmer



Briggs



Elmer



Elmer



Elmer



Elmer



Elmer

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Parks and Forestry	Priority #:	3
Project Title and Description: Replace Parks Truck 23, utility pickup truck	Total Project Cost:	\$112,830

Department/Division Head: Nick Faiella

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>			FY27		
<i>Labor and Materials</i>			FY28		
<i>Administration</i>			FY29		
<i>Land Acquisition</i>			FY30		
<i>Equipment</i>	\$94,025		FY31		
<i>Other</i>					
<i>Contingency</i>	\$18,805	20% for price increases and unknowns			
Total Capital	\$112,830				

Project Justification and Objective: Please see attached justification and back up. _____

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

Year: 2013, Make: Ford, Model: F-150, VIN: 1FTFX1ET9DFD18698

What is the expected lifespan of this new/replacement equipment: 10 YEARS

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

FY26 Capital Improvement Request

Parks and Forestry

Priority: 3 – Replace “Parks truck 23” with F350 Pickup Utility Bed

Project Justification and Objective:

Truck P23 is currently 13 years old with over 100,000 miles and is out of service with a projected repair cost of \$4,659 (attached). This truck is in the fleet maintenance barn as often as it is on the road due to old age, wear and tear, and truck life expectancy. P23 is primarily used for the Parks Small Engine Repair Mechanic when needing to pick up parts or make emergency repairs on the field. For example: this truck would meet a crew at a park or cemetery location, to make an unexpected repair such as a broken engine belt or a broken recoil. Tools are currently stored in the bed toolbox or in the extended cab of the P23 truck. The proposed replacement would be a pickup truck with a utility bed for lockable tool storage allowing appropriate space for tools and equipment needed on the go.



Preview Order D004 - X3B 4x4 Super Cab SRW: Order Summary Time of Preview: 09/30/2024 11:31:04 Receipt: NA

Dealership Name: Colonial Ford, Inc.

Sales Code: F11647

Dealer Rep.	Dell Roderick	Type	Fleet	Vehicle Line	Superduty	Order Code	D004
Customer Name	COLONIAL FORD	Priority Code	M1	Model Year	2025	Price Level	515

DESCRIPTION	MSRP	DESCRIPTION	MSRP
F350 4X4 SUPERCAB PICKUP/164	\$51925	PLATFORM RUNNING BOARDS	\$445
164 INCH WHEELBASE	\$0	11300H GVWR PACKAGE	\$0
GREEN GEM	\$660	50 STATE EMISSIONS	\$0
VINYL 40/20/40 SEATS	\$0	BACKLASS DEFROST	\$0
MEDIUM DARK SLATE	\$0	POWER SLIDING REAR WINDOW	\$405
PREFERRED EQUIPMENT PKG.610A	\$0	SNOW PLOW PREP PACKAGE	\$250
.XL TRIM	\$0	RAPID HEAT SUPPLEMENTAL HEATER	\$0
AIR CONDITIONING -- CFC FREE	\$0	ROOF CLEARANCE LIGHTS	\$95
AM/FM STEREO MP3/CLK	\$0	JACK	\$0
6.7L POWER STROKE V8 DIESEL	\$10495	UPFITTER SWITCHES	\$165
10-SPEED AUTO TORQSHIFT	\$0	410 AMP ALTERNATOR	\$0
17245/75R17E BSW ALL-SEASON	\$0	DUAL BATTERY	\$0
3.31 ELECTRONIC-LOCKING AXLE	\$430	PRIVACY GLASS	\$30
JOB #1 ORDER	\$0	FUEL CHARGE	\$0
CV LOT MANAGEMENT	\$0	PRICED DORA	\$0
FRONT LICENSE PLATE BRACKET	\$0	DESTINATION & DELIVERY	\$1995
			MSRP
TOTAL BASE AND OPTIONS			\$66895
DISCOUNTS			NA
TOTAL			\$66895

ORDERING FIN: \$1999 END USER FIN: \$1999

Customer Name:
Customer Address:

66895
\$17645 Util. Body
\$7990 8' Plow
\$1495 Strobe Lights

Customer Email:
Customer Phone:

Customer Signature

Date

total *94025

This order has not been submitted to the order bank.
This is not an invoice.

+ Taxes and Fees

BRAKE & CLUTCH INC.**QUOTATION****63 BRIDGE ST. SALEM, MA. 01970****978-745-2500,4484-FAX****WWW.BRAKEANDCLUTCH.COM****TO: COLONIAL FORD****CHASSIS TYPE****ATTN: DELL****8' BED****FROM: JEFF****LAST 8 OF VIN#****DATE: 9/30/2024****STOCK #****TBD**

NOTE SPECIAL CONSIDERATIONS FOR 2023/2024 PICK UP TAKE OFF LIMITATION PER FORD

READING U98ASW CLASSIC II STEEL SERVICE BODY**SRW 56" C/A REQUIRED****STANDARD FEATURES -**

BODY LENGTH: 98" BODY WIDTH: 77.5" UNDERSTRUCTURE: 5"
COMPARTMENT HEIGHT: 40" COMPARTMENT DEPTH: 14.5" LOAD FLOOR WIDTH: 48.5"
COMPLETE STAINLESS STEEL PADDLE LATCHES WITH ROTARY LOCKS
A60 GALVANNEALED STEEL, E-COAT IMMERSION PRIMING SYSTEM
PATENTED HIDDEN HINGES WITH OVERLAPPING DOOR CONSTRUCTION
FLUSH MOUNT LED TAIL LIGHTS
NITROGEN GAS STRUT DOOR HOLDERS ON ALL VERTICAL DOORS
FULLY PRIMED & UNDERCOATED UNDERSTRUCTURE
STANDARD SHELVING & DIVIDERS
POOCHED REAR BUMPER
READING 6 YEAR LIMITED WARRANTY

INCLUDES AFTERMARKET FUEL DELIVERY KIT, BCM FLASH

LIQUID TOPCOAT PAINT - ALL EXTERIOR SURFACES- GEM GREENINCLUDES DOOR JAMBS AND INSTALLATION OF NEW RUBBER DOOR SEALS.
EXACT PAINT MATCH NOT GUARANTEED.**COMPLETE & INSTALLED- DELIVERED****OPTIONS: (SELECT FROM LIST BELOW)**☒ **X** LINEX CARGO AREA, BOX TOPS & BUMPER



COLONIAL
AUTOMOTIVE GROUP



COLONIAL FORD OF PLYMOUTH

11 PILGRIM HILL RD.
PLYMOUTH, MA 02360
508-746-3400

WWW.COLONIALFORD.COM

48938PLY

Est Deliver Date: 10/01/2024

Printed: 10/01/2024 11:18

Sold To R.O. SALE
PLYMOUTH PUBLIC WORKS
159 CAMELOT DR
PLYMOUTH, MA 02360

VIN: 1FTFX1ET9DFD18698

Service Advisor: 658

(508) 830-4162 (HOME)
(781) 831-4700 (WORK)

Ship To R.O. SALE
PLYMOUTH PUBLIC WORKS
159 CAMELOT DR
PLYMOUTH, MA 02360

DATE	QUOTE NO.	REPAIR ORDER
10/01/2024	48938	80513
SOLD BY	PAY TYPE	P.O. NO.

972

Repair Order
Quote

1 day
out A18

NO RETURNS ON SHEET METAL OR ELECTRICAL PARTS
ONCE GLASS IS ORDERED IT CANNOT BE CANCELLED

RETURNS MUST BE SENT WITHIN 21 DAYS OF PURCHASE
ALL RETURNS SUBJECT TO 20% HANDLING FEE

QTY	PART NUMBER	DESCRIPTION	BIN	LIST	NET	AMOUNT
1	DL3Z 6K682 F	TURBOCHARGER ASY	1008-C	945.00	708.75	708.75
1		CLEAN CORE		250.00	250.00	250.00
1	BL3Z 9430 D	MANIFOLD ASY -	1009-F	313.33	235.00	235.00
1	BL3Z 9G441 E	TUBE ASY	1090-B	121.50	91.13	91.13
1	BL3Z 6N652 B	GASKET	1061-F	9.11	6.83	6.83
1	CL3Z 9450 A	GASKET - EXHAUST MAN	1090-B	25.67	19.25	19.25
1	W715673 S900	BOLT	HW2-I	13.33	10.00	10.00
1	BL3Z 8L625 F	OIL COOLER AND	1061-D	30.44	22.83	22.83
1	BL3Z 8A520 A	TUBE ASY	1071-G	25.83	19.37	19.37
1	BL3Z 8K153 AB	TUBE - WATER OUTLET	1071-C	53.58	40.19	40.19
2	BL3Z 6A968 JD	CONNECTOR - OIL TUBE	1206	15.55	11.06	23.32
1	BL3Z 6A968 B	CONNECTOR - OIL TUBE	1206	11.12	8.34	8.34
1	BL3Z 6A968 C	CONNECTOR - OIL TUBE	1206	12.63	9.47	9.47
1	BL3Z 9448 C	GASKET	1306	68.83	51.62	51.62
1	CL3Z 9450 A	GASKET - EXHAUST MAN	1090-B	25.67	19.25	19.25
9	W701706 S430	NUT - HEX. - FLANGED	HW1-J	2.44	1.83	16.47
9	W712244 S300	STUD	HW2-G	1.88	1.41	12.69
1	BL3Z 9450 A	GASKET	1090-B	30.50	22.88	22.88
1	BL3Z 9N496 A	ADAPTOR	1091-D	31.17	23.38	23.38
2	W520514 S440	NUT - HEX.	HW1-C	2.06	1.55	3.10
2	W716667 S900	STUD	HW2-J	15.50	11.63	23.26
1	AA5Z 8714 A	FILTER ASY - OIL	1319	8.95	6.71	6.71
6	XO 5W30 BSP	5W30 SYTH/BLEND	SHOP	5.10	3.83	22.98
3	VC 13DL G	ANTI-FREEZE	1119	15.99	14.99	44.97

Continued...

Thank You

Any warranties on the products sold hereby are those made by the manufacturer. The Seller hereby expressly disclaims all warranties, either expressed or implied, including any implied warranty of merchantability of fitness for a particular purpose, and neither assumes nor authorizes any other person to assume for it any liability in connection with sale of said products.

Received by _____

Page 1

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COLONIAL
AUTOMOTIVE GROUP



COLONIAL FORD OF PLYMOUTH

11 PILGRIM HILL RD.
PLYMOUTH, MA 02360
508-746-3400
WWW.COLONIALFORD.COM

48938PLY

Est Deliver Date: 10/01/2024

Printed: 10/01/2024 11:18

Sold to
R.O. SALE
PLYMOUTH PUBLIC WORKS
159 CAMELOT DR
PLYMOUTH, MA 02360

VIN: 1FTFX1ET9DFD18698

Service Advisor: 658

(508) 830-4162 (HOME)
(781) 831-4700 (WORK)

DATE	QUOTE NO.	REPAIR ORDER
10/01/2024	48938	80513
SOLD BY	PAY TYPE	P.O. NO.
972	Repair Order Quote	

NO RETURNS ON SHEET METAL OR ELECTRICAL PARTS
ONCE GLASS IS ORDERED IT CANNOT BE CANCELLED

RETURNS MUST BE SENT WITHIN 21 DAYS OF PURCHASE
ALL RETURNS SUBJECT TO 20% HANDLING FEE

QTY	PART NUMBER	DESCRIPTION	BIN	LIST	NET	AMOUNT
-----	-------------	-------------	-----	------	-----	--------

Continued...

Sub Total	1691.79
Tax	0.00
TOTAL QUOTE-DO NOT PAY	1691.79
QUOTE - QUOTE - QUOTE - QUOTE	

Thank You

Any warranties on the products sold hereby are those made by the manufacturer. The Seller hereby expressly disclaims all warranties, either expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose, and neither assumes nor authorizes any other person to assume for it any liability in connection with sale of said products.

Received by _____

Page 2 CUSTOMER COPY

Repair Work Sheet

Year: 2013 Model: Ford F350 Engine: _____

Comments	









TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST FORM
FY26 ANNUAL TOWN MEETING REQUEST FORM

Department: SEWER DIVISION		1
Project Title and Description: CMOM Repairs	Total Project Cost:	\$1,300,000.00

Department/Division Head: Doug Pinard

Cost estimate was developed: Internally ☒ Externally ☐

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	O & M
<i>Planning and Design</i>			<i>FY27</i>	\$600,000.00	
<i>Labor and Materials</i>	\$1,180,000.00		<i>FY28</i>	\$600,000.00	
<i>Administration</i>			<i>FY29</i>	\$600,000.00	
<i>Land Acquisition</i>			<i>FY30</i>	\$1000,000.00	
<i>Equipment</i>			<i>FY31</i>	\$1,000,000.00	
<i>Other</i>					
<i>Contingency</i>	10%				
Total Capital	\$1,300,000.00				

Possible sources and amounts of funding, if known: _____

Project Justification and Objective: __Capacity, Management, Operations and Maintenance program. A CMOM program is an information – based program to effectively run a collection system and help lower the risk of National Pollutant Discharge Elimination System (NPDES) permit violation and discharge permit. This will be to address issues found during inspections.

For Capital Project Requests:

Will this project be phased over more than one fiscal year? If yes, enter it on the next 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

--

Attach additional information, estimates, or justification.

CMOM Rehab 2025

Town of Plymouth, Massachusetts

Opinion of Probable Cost Estimate dated September 2024

Pipeline Rehabilitation Summary					
Item	Item Description	Unit	Unit Price	Quantity	Cost
1	Phase 1 CMOM Pipeline Rehab Work	ls	\$ 371,533.50	1	\$ 371,533.50
2	Phase 2 CMOM Pipeline Rehab Work	ls	\$ 446,441.80	1	\$ 446,441.80
				Subtotal	\$ 817,975.30
Manhole Rehabilitation Summary					
Item	Item Description	Unit	Unit Price	Quantity	Cost
3	Phase 1 CMOM Manhole Rehab Work	ls	\$ 83,308.00	1	\$ 83,308.00
4	Phase 2 CMOM Manhole Rehab Work	ls	\$ 277,860.00	1	\$ 277,860.00
				Subtotal	\$ 361,168.00
				Total ¹	\$ 1,179,143.30

Notes:

1: The total cost listed does not include costs for mobilization/demobilization, police details, traffic controls, and other miscellaneous work items.

TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST FORM
FY26 ANNUAL FALL TOWN MEETING REQUEST FORM

Department: SEWER DIVISION			2
Project Title and Description: Sewer System Improvements		Total Project Cost:	\$200,000.00

Department/Division Head:	Doug Pinard
----------------------------------	--------------------

Cost estimate was developed: Internally ☒ Externally ☐

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	O & M
<i>Planning and Design</i>			<i>FY27</i>	\$200,000.00	
<i>Labor and Materials</i>	\$200,000.00		<i>FY28</i>	\$200,000.00	
<i>Administration</i>			<i>FY29</i>	\$200,000.00	
<i>Land Acquisition</i>			<i>FY30</i>	\$200,000.00	
<i>Equipment</i>			<i>FY31</i>	\$200,000.00	
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$200,000.00				

Possible sources and amounts of funding, if known: _____

Project Justification and Objective: __ This appropriation of funds will give the Town of Plymouth Sewer department the ability to pay invoices for contractor/s for emergency services related to 24-hour, 7-days per week, on-call emergency services to repair and or replace, sewer infrastructure in the Town of Plymouth.

For Capital Project Requests:

Will this project be phased over more than one fiscal year? If yes, enter it on the next 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

--

Attach additional information, estimates, or justification.

OBJECTIVE:

The Town of Plymouth (Town) has established an emergency on-call protocol to allow the Town to quickly contact contractors to respond during emergency situations. The objective of this article is to respectfully request a **\$200,000.00** fund to cover the invoice amounts for emergency wastewater responses for the town. The cost of an emergency call to do a typical wastewater repair could range between \$40,000 to \$75,000 per event, depending on the severity of the situation. This separate fund will be to pay the contractor on an emergency basis until such a time as the town can resume its normal sewer operations. The contractor(s) agrees to perform such emergency services for the town on a as needed basis and as designated by Plymouth DPW. If an emergency arises, as determined by the DPW's discretion, the DPW may contact contractor(s) to respond to the emergency events. This article will provide the funds to have the contractor(s) the means to safely mobilize, stabilize and repair any wastewater incident that may occur.

TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST FORM
FY26 ANNUAL TOWN MEETING REQUEST FORM

Department: SEWER DIVISION		3
Project Title and Description: Truck Replacement S55	Total Project Cost:	\$160,000.00

Department/Division Head: Doug Pinard Wastewater Superintendent

Cost estimate was developed: Internally ☐ Externally ☒

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	O & M
<i>Planning and Design</i>			<i>FY27</i>		
<i>Labor and Materials</i>			<i>FY28</i>		
<i>Administration</i>			<i>FY29</i>		
<i>Land Acquisition</i>			<i>FY30</i>		
<i>Equipment</i>	\$130,000.00		<i>FY31</i>		
<i>Other</i>					
<i>Contingency</i>	\$30,000.00				
Total Capital	\$160,000.00				

Possible sources and amounts of funding, if known: _____

Project Justification and Objective: __This request is to replace a 2012 Ford Hitch- go dump truck to be operated by sewer department staff. This important piece of equipment is responsible for snow plowing, road repairs and hauling debris to Bourne landfill. _____

For Capital Project Requests:

Will this project be phased over more than one fiscal year? If yes, enter it on the next 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

2012, Ford, Model DRWSUP, VIN#1FDUF5HT3CEC96100 This is an important part of equipment for the sewer department and is vital to daily operations. This truck is a 2012 Ford hitch and go dump truck and has become costly to maintain due to frequent breakdowns. Safety has also become an issue with deterioration of the cab and dump body. See attached back up for existing equipment condition.

Attach additional information, estimates, or justification.











Preview Order D218 - F5H 4x4 Reg Chas Cab DRW: Order Summary Time of Preview: 09/30/2024 13:31:52 Receipt: NA

Dealership Name: Colonial Ford, Inc.

Sales Code: F11647

Dealer Rep.	Dell Roderick	Type	Fleet	Vehicle Line	Superduty	Order Code	D218
Customer Name	COLONIAL FORD	Priority Code	M1	Model Year	2025	Price Level	515

DESCRIPTION	MSRP	DESCRIPTION	MSRP
F550 4X4 CHASSIS CAB DRW/145	\$59250	FRONT LICENSE PLATE BRACKET	\$0
145 INCH WHEELBASE	\$0	PLATFORM RUNNING BOARDS	\$320
GREEN GEM	\$660	19500# GVWR PACKAGE	\$0
VINYL 40/20/40 SEATS	\$0	ENGINE BLOCK HEATER	\$190
MEDIUM DARK SLATE	\$0	SKID PLATES	\$100
PREFERRED EQUIPMENT PKG.660A	\$0	50 STATE EMISSIONS	\$0
.XL TRIM	\$0	SNOW PLOW PREP PACKAGE	\$250
.AIR CONDITIONING -- CFC FREE	\$0	HIGH CAPACITY TRAILER TOW PKG	\$580
.AM/FM STEREO MP3/CLK	\$0	40 GAL AFT OF AXLE FUEL TKN	\$0
6.7L POWER STROKE V8 DIESEL	\$10495	410 AMP ALTERNATOR	\$115
10-SPEED AUTO TORQSHIFT	\$0	DUAL BATTERY	\$0
225/70R19.5G BSW ALL POSITION	\$0	REAR VIEW CAMERA & PREP KIT	\$415
4.30 RATIO LIMITED SLIP AXLE	\$395	FUEL CHARGE	\$0
RAPID HEAT SUPPLEMENTAL HEATER	\$250	PRICED DORA	\$0
PAYLOAD PLUS PACKAGE UPGRADE	\$1155	DESTINATION & DELIVERY	\$1995
CV LOT MANAGEMENT	\$0		

TOTAL BASE AND OPTIONS
DISCOUNTS
TOTAL

76270
10,500

86,770 w/ flow
(9.6 xuz plow)

MSRP
\$76170
NA
\$76170

ORDERING FIN: ST999 END USER FIN: ST999

Customer Name:
Customer Address:

Customer Email:

Customer Phone:

Customer Signature

Date

This order has not been submitted to the order bank.

This is **not** an invoice.



Carey Auto Inc
37 County Road
Plympton, MA 02367
Tel : 781-582-1378
fax: 781-585-4438

Quote

Date	Quote #
9/30/2024	19653

Name / Address
Town of Plymouth Highway Division 159 Camelot Drive Plymouth, MA 02360

Vehicle Information
Rick

Quoted by
Carlos

Item	Description	Qty	Price Each	Total
Switch N Go ...	Switch-n-go HOIST,9-4016-15E-11T SWITCH-N-GO 9' ELECTRIC HOIST SYSTEM 15,000 LBS WINCH LOADING CAPACITY UP TO 6 FULLY LOADED PULLS PER DAY APPROX. DUMPING CAPACITY 11 TON STANDARD 18" REAR OVERHANG RECOMMENDED TRUCK SPECS: CA: 60", CEF: 9' GVWR: 16,000-23,000 LBS Body/up backup alarms Fenders with custom made brackets Pintol/plate with 7 way plug 2" receiver Fully painted Installed		20,341.00	20,341.00
*** Subject to Steel Surcharge ***		Subtotal \$20,341.00		
** Quoted Price May be Subject to Tax if Applicable** Thank you for the opportunity to quote you. Please call with any questions. Prices subject to change without notice. Offer accepted: _____		Sales Tax (0.0%) \$0.00		
		Total \$20,341.00		

Phone #	Fax #	E-mail	Web Site
781-582-1378	781-585-4438	careyauto@comcast.net	www.careytruck.com

Carey Auto Inc
37 County Road
Plympton, MA 02367
Tel : 781-582-1378
fax: 781-585-4438

Quote

Date	Quote #
10/1/2024	19654

Name / Address
Town of Plymouth Highway Division 159 Camelot Drive Plymouth, MA 02360

Vehicle Information

Quoted by
Carlos

Item	Description	Qty	Price Each	Total
Drop Box	SWITCH-N-GO- MDRB-851A-SS 8' FLOOR 51" SIDES MEDIUM DUTY DROP BOX ADDITIONAL 1' REAR APRON WITH CLIPPED CORNERS SINGLE SIDE SWING DOOR WITH RUBBER GASKET BINDER RACKET AND CHAIN	2	6,550.00	13,100.00
*** Subject to Steel Surcharge ***		Subtotal \$13,100.00		
** Quoted Price May be Subject to Tax if Applicable** Thank you for the opportunity to quote you. Please call with any questions. Prices subject to change without notice. Offer accepted: _____		Sales Tax (0.0%) \$0.00		
		Total \$13,100.00		

Phone #	Fax #	E-mail	Web Site
781-582-1378	781-585-4438	careyauto@comcast.net	www.careytruck.com

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Water Division	Priority #:	1
Project Title and Description: Distribution System Improvements	Total Project Cost:	\$750,000

Department/Division Head: Peter Gordon

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>FY27</i>	\$250,000	
<i>Labor and Materials</i>	\$750,000		<i>FY28</i>	\$250,000	
<i>Administration</i>			<i>FY29</i>	\$250,000	
<i>Land Acquisition</i>			<i>FY30</i>		
<i>Equipment</i>			<i>FY31</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital					

Project Justification and Objective: Distribution system improvement funding will be used to identify and replace lead service lines, repair or replace valves and piping in Plymouth's pressure reducing valve vaults, and any other critical infrastructure repairs or upgrades as necessary.

For Capital Project Requests:

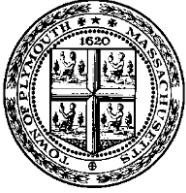
Will this project be phased over more than one fiscal year? If yes, enter it on the 5 Year Plan Yes ☒ No ☐
Can this project be phased over more than one fiscal year? Yes ☐ No ☐

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.



TOWN OF PLYMOUTH

Water Division
169 Camelot Drive
Plymouth, Massachusetts 02360

MEMO

To: Lynne Barret, Finance Director

From: Peter Gordon, Water Division Superintendent

CC: Derek Brindisi, Town Manager
Silvio Genao, Assistant Town Manager
William Coyle, Director of Public Works

Distribution System Improvements

The Water Division is requesting the sum of \$750,000.00 for improvements to the distribution system. The primary intent of this funding will be to aid the Division in the identification and replacement of residential lead service lines in accordance with the Lead and Copper rule revisions that will be promulgated by the EPA and instituted by the DEP on October 16, 2024. Additional funding for lead service line replacement will be requested once the precise number and location of all remaining lead service lines has been determined. If approved, this article will also help fund inspection, maintenance, and any necessary repairs of the Town's 5 pressure reducing valves. All 5 pressure reducing valves are currently inactive however, since they are located in vaults below ground level and are not buried, they do represent areas of potential vulnerability and as so must be appropriately maintained.

Peter Gordon
Water Division Superintendent
Plymouth MA. 02360
508-830-4162 ex. 12141

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Water Division	Priority #:	2
Project Title and Description: Water System Improvements	Total Project Cost:	\$100,000

Department/Division Head: Peter Gordon

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>FY27</i>		
<i>Labor and Materials</i>	\$100,000		<i>FY28</i>		
<i>Administration</i>			<i>FY29</i>		
<i>Land Acquisition</i>			<i>FY30</i>		
<i>Equipment</i>			<i>FY31</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital					

Project Justification and Objective: This request would primarily be a funding source for the emergency on-call contract, but could also be used for other critical infrastructure maintenance or repairs.

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.



TOWN OF PLYMOUTH

Water Division
169 Camelot Drive
Plymouth, Massachusetts 02360

MEMO

To: Lynne Barret, Finance Director

From: Peter Gordon, Water Division Superintendent

**CC: Derek Brindisi, Town Manager
Silvio Genao, Assistant Town Manager
William Coyle, Director of Public Works**

Water System Improvements

The Water Division is requesting the sum of \$100,000.00 to fund the emergency on-call contract and any other significant repairs of an unanticipated nature.

The Emergency on-call contract, formerly awarded to the D'Allisandro Corp. has expired, and is currently being reviewed for bidding. This contract protects the Town against failure of Asbestos Cement water mains which the Water Division Staff cannot repair due to unresolved issues between the labor union and the Town. This contract also provides for emergency repairs to water mains larger than twelve inches.

Additionally, this funding will be available for any potential emergency repairs to any critical infrastructure such as well pumps/motors, chemical feed or communications equipment, and valve or booster stations.

**Peter Gordon
Water Division Superintendent
Plymouth MA. 02360
508-830-4162 ex. 12141**

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Cemetery	Priority #:	1
Project Title and Description: White Horse Cemetery Easement Construction	Total Project Cost:	\$192,000

Department/Division Head: Diane Maguire

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>FY27</i>		
<i>Labor and Materials</i>	\$175,000		<i>FY28</i>		
<i>Administration</i>			<i>FY29</i>		
<i>Land Acquisition</i>			<i>FY30</i>		
<i>Equipment</i>			<i>FY31</i>		
<i>Other</i>					
<i>Contingency</i>	\$17,500				
Total Capital	\$192,500				

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.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Police	Priority #:	1
Project Title and Description: Property/Evidence Climate Control	Total Project Cost:	\$67,850.

Department/Division Head: Chief Dana Flynn

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>FY27</i>		
<i>Labor and Materials</i>			<i>FY28</i>		
<i>Administration</i>			<i>FY29</i>		
<i>Land Acquisition</i>			<i>FY30</i>		
<i>Equipment</i>	\$59,000.		<i>FY31</i>		
<i>Other</i>					
<i>Contingency</i>	\$8,850.	15%			
Total Capital	\$67,850.				

Project Justification and Objective: We are responsible for the preservation and safekeep of all property and evidence that comes under our control. Climate control is the biggest challenge to preventing damage and destruction of items in our control. Our current building climate system is inadequate and long overdue for replacement.

For Capital Project Requests:

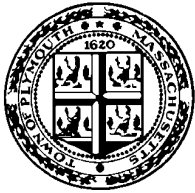
Will this project be phased over more than one fiscal year? If yes, enter it on the 5 Year Plan Yes ☐ No ☒
Can this project be phased over more than one fiscal year? Yes ☒ No ☐

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: 10+ years

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



Plymouth Police Department

Memo

To: Advisory and Finance Committee, Director of Finance Lynne Barrett
From: Chief Dana Flynn
CC: Derek Brindisi, Town Manager
Date: 10/2/24
Re: Capital Request FY26 – Property & Evidence Climate Control

The Plymouth Police Department is requesting funding of \$67,850 for a standalone Climate Control system for the main property and evidence storage room at the police department. The police department is responsible for maintaining and preserving the property and evidence that comes into our possession, much of which must remain in our possession for years, in the manner and condition in which it was received or seized as failure to do so can jeopardize criminal cases or result in liability claims against the department.

The building's current HVAC system is not adequate for proper preservation and security of stored property and evidence. The evidence Officer presently utilizes two separate standalone dehumidifiers and other means to maintain a climate that is acceptable for the items stored within our property and evidence rooms. A dedicated system will allow for consistent temperature control throughout which will ensure that property and evidence in our possession will maintain its integrity through the holding process.

Thank you for your consideration.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Police	Priority #:	2
Project Title and Description: Feasibilty Study - Police HQ	Total Project Cost:	\$150,000.

Department/Division Head: Chief Dana Flynn

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: N/A

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>FY27</i>		
<i>Labor and Materials</i>			<i>FY28</i>		
<i>Administration</i>			<i>FY29</i>		
<i>Land Acquisition</i>			<i>FY30</i>		
<i>Equipment</i>			<i>FY31</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$150,000.				

Project Justification and Objective: To determine if the current Police Facility is suitable for expansion to address current space concerns and future growth.

For Capital Project Requests:

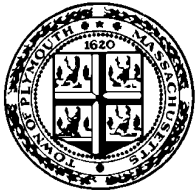
Will this project be phased over more than one fiscal year? If yes, enter it on the 5 Year Plan Yes ☐ No ☒
Can this project be phased over more than one fiscal year? Yes ☒ No ☐

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: 30+ years

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



Plymouth Police Department

Memo

To: Advisory and Finance Committee; Director of Finance Lynne Barrett
From: Chief Dana Flynn
CC: Derek Brindisi, Town Manager
Date: 11/25/2024
Re: Capital Request FY26 – Feasibility Study – Police Headquarters Expansion

The Police Department is requesting funding in the amount of \$150,000 to conduct a feasibility study to determine if Police Headquarters is suitable for expansion to address current space concerns and future growth.

Plymouth Police Headquarters is located at 20 Long Pond Road. It was built in 1995 on the site of the former South Street Landfill. The landfill was closed in 1973 and in 2015 the Town completed required methane migration mediation to stem the flow of the flammable gas into police headquarters.

When the current building was constructed the Town had a population of approximately 58,000, the police department logged roughly 20,000 calls for service, and was comprised of:

- 16 Superior Officers
- 65 Patrol Officers
- 4.5 Clerical Staff
- 1 Custodian
- 5 Dispatchers

Presently, the Town of Plymouth has a population of over 68,000, the police department logs 40,000 calls for service, and the department is comprised of:

- 25 Superior Officers
- 102 Patrol Officers
- 5 Clerical Staff
- 2 Custodians

The Town has done well in maintaining the building for the past 30 years and I have a custodial staff that takes great pride in their daily routine and other maintenance and upkeep. However, due to the current staffing levels, along with the expected continued growth we are severely lacking space.

Current employee locker and shower facilities, which are long overdue for upgrades, are at capacity, and recent changes due to police reform, police accreditation, the creation of new specialty assignments, and the implementation of the use of body cameras have resulted in all available office spaces being utilized.

In order to address both current and future spacing concerns I respectfully request funding approval of the feasibility study.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Police	Priority #:	3
Project Title and Description: Armored Vehicle (Bearcat) Replacement	Total Project Cost:	\$404,934.

Department/Division Head: Dana Flynn

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: 50% via a grant from the Southeast Regional Homeland Security Council (SRHSC)

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>FY27</i>		
<i>Labor and Materials</i>			<i>FY28</i>		
<i>Administration</i>			<i>FY29</i>		
<i>Land Acquisition</i>			<i>FY30</i>		
<i>Equipment</i>	\$202,467		<i>FY31</i>		
<i>Other</i>					
<i>Contingency</i>	\$40,493				
Total Capital	\$242,960				

Project Justification and Objective: This would replace our current 2008 Bearcat (See attached memo) and would be contingent on confirmation of grant from SRHSC.

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 ☒

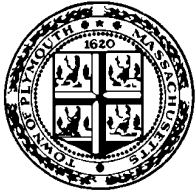
For Capital Equipment Requests:

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

2008 Lenco Bearcat

What is the expected lifespan of this new/replacement equipment: 15 -20 years

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



Plymouth Police Department

Memo

To: Advisory and Finance Committee; Director of Finance Lynne Barrett
From: Chief Dana Flynn
CC: Derek Brindisi, Town Manager
Date: 11/25/2024
Re: Capital Request FY26 – Armored Vehicle (BearCat) Replacement

The Police Department is requesting funding in the amount of \$242,960 (total estimated cost \$404, 934) to replace our current armored vehicle (Bearcat). The replacement of the Bearcat has been on our 10-year capital improvement plan for several years and is currently listed for a request in FY-27.

We have just been notified of a grant opportunity from the Southeast Region Homeland Security Council that will provide fifty percent (50%) matching funds, and this purchase is contingent on receipt of such award.

The Town of Plymouth faces a variety of significant threats, including natural disasters, violent crime, and potential mass casualty incidents. These challenges require the Plymouth Police Department to remain fully prepared to respond effectively to critical incidents to protect our community, critical infrastructure, and Officers.

To address these challenges, the department urgently needs to replace its current 2008 BearCat, which has reached the end of its useful life due to severe wear and frequent mechanical failures. This outdated vehicle compromises our ability to safely respond to emergencies such as active shooter situations, rescue task force incidents, or natural disasters.

The new BearCat provides ballistic protection and advanced features such as:

- Hardened walls and blast-proof windows to safeguard passengers during emergencies.
- 4-wheel drive and heightened ground clearance for navigating flood-prone roads, debris-strewn areas, and adverse conditions.
- Remote-controlled spotlights to assist in search and rescue operations.
- An intercom system for secure communication during standoffs.
- A 14-foot hydraulic ram to breach barricaded structures without exposing personnel.
- A radiation detection system critical for incidents at sensitive sites like the Holtec Nuclear waste facility.

This investment will allow the Plymouth Police Department to continue delivering life-saving services during natural disasters, violent incidents, and other emergencies. The vehicle's capacity

to carry up to 12 fully equipped officers or transport up to 20 civilians in need of rescue ensures that our community is prepared for a wide range of scenarios.

Built on a durable Ford F550 chassis, the BearCat is cost-effective to maintain and is expected to serve the department for 15-20 years. By securing this equipment, we will significantly enhance our operational readiness, reduce risk to officers and civilians, and uphold our commitment to the safety of the Town of Plymouth.

This specialized multipurpose rescue vehicle is essential for responding to high-risk incidents in Plymouth and enhancing the safety of both our officers and residents.

We appreciate your consideration of this critical request.



Protecting Our Nation's Defenders™

10 Betnr Industrial Drive - Pittsfield, MA 01201

PH: 413-443-7359 - FAX: 413-445-7865

Quotation 108308

Customer Code: PL005

Quotation Date: 11/21/24

Lenco Tax ID#: 04-2719777

Page #: 1 of 2

Bill To

Plymouth Police Department
159 Camelot Drive
Plymouth, MA 02360 USA

Ship To

Customer Pick-Up
10 Betnr Industrial Dr
Pittsfield, MA 01201 USA

Payment Terms	Shipping Terms	Ship Via
Payment Upon Pick-up	FOB: Origin	Customer Pickup
Estimated Completion	Lenco Contact	Inspection & Acceptance
See Notes	Jim Massery	At Lenco's Facility, Pittsfield, MA

Item:	Product #	Qty	Unit Price	Total
Vehicle configuration	2934			
Lenco BearCat	BC55003-BASE	1	\$264,310.00	\$264,310.00
Options:				
LED All Blue	LED_BLUE	1		
Exterior Paint Color: Charcoal Gray	CHARCOAL_GRAY	1		
BearCat G3 4-Wheel Off-Road Upgrade Pkg w/Run-Flats	BC3WOFFRD	1	\$38,454.00	\$38,454.00
Diesel Engine, 6.7L Turbo	BCDLEN	1	\$9,995.00	\$9,995.00
4-Door Configuration	BC4DR	1	\$9,823.00	\$9,823.00
(1) 7" Vertical GunPort Upgrade	BCGP7	8	\$228.00	\$1,824.00
Heated Windshield Upgrade	BCHGW	1	\$2,800.00	\$2,800.00
360 Camera System	BC360DEG	1	\$4,422.00	\$4,422.00
Rear A/C - Heating System: High Capacity Upgrade	BCHACUP	1	\$8,250.00	\$8,250.00
Hydraulic Front Mounted Receiver with Ram Post and Plate	BCHYDRAM	1	\$16,975.00	\$16,975.00
Door Pivoting Ram Head	BCDPRH	1	\$1,880.00	\$1,880.00
VSP Style Low Profile & Scene Lighting Pkg	BCVSPL	1	\$6,102.00	\$6,102.00
Roof Mounted Remote Control Spot Light - LED	BCSLLED	2	\$1,404.00	\$2,808.00
High Intensity Driving Lights in Front Bumper	BCHIDL	1	\$1,840.00	\$1,840.00
Take Down Light (Bumper Mounted)	BCTDL	1	\$1,853.00	\$1,853.00
AC-DC Power Inverter w/ Auto Eject	BCINV2000	1	\$6,387.00	\$6,387.00
Rear Tow Hitch Receiver	BCRTOWR	1	\$1,508.00	\$1,508.00
Ballistic Skip Round Shield	BCBSRS	2	\$2,820.00	\$5,640.00
2 Rear Area Electric Fans	BC2RELFAN	1	\$1,200.00	\$1,200.00
Intercom System Inside to Outside	BCINT	1	\$3,280.00	\$3,280.00
Interior Rubber Mats (In Place of Carpets)	BCRMF	1	\$1,250.00	\$1,250.00
Weapons Mount	BCWMT	6	\$600.00	\$3,600.00
UV Protective Window Covers	BCWC	1	\$1,800.00	\$1,800.00
Bedrock Paint	BCPJ	1	\$7,500.00	\$7,500.00
Height Adjustable Front Seat	BCHEIGHTSEAT	1	\$1,433.00	\$1,433.00
Configuration Subtotal:				\$404,934.00
Lenco BearCat	NEWCONFIG	1	\$404,934.00	\$404,934.00
Net Total				\$404,934.00



Protecting Our Nation's Defenders™

10 Betnr Industrial Drive - Pittsfield, MA 01201

PH: 413-443-7359 - FAX: 413-445-7865

Quotation 108308

Customer Code: PL005

Quotation Date: 11/21/24

Lenco Tax ID#: 04-2719777

Page #: 2 of 2

Notes:

Estimated completion 18 months (+ or -) ARO.

WARNING: Information Subject to Export Control Laws

The written approval of the Directorate of US Defense Trade Controls and Lenco Industries, Inc. must be obtained before reselling, transferring, transshipping or disposing of a defense article to any end user, end use or destination other than as stated on this Lenco quote or the shipper's export declaration in cases where an exemption is claimed under this subchapter ITAR 123.9(A).

Acceptance of this quotation or entering into a purchase agreement with Lenco, the purchaser agrees to Lenco's full Terms and Conditions of Sale, available upon request. This quote will be valid for 60 days.

ACCEPTANCE OF PROPOSAL

Authorized

Signature: _____

Please sign and return

Authorized

Signature: James Massery

Jim Massery

Thank you

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Harbormaster - Police	Priority #:	1
Project Title and Description: Harbormaster 34' Calvin Beal - Refit	Total Project Cost:	\$120,000

Department/Division Head: Harbormaster - Chad Hunter

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>			FY27		
<i>Labor and Materials</i>	\$88,000		FY28		
<i>Administration</i>			FY29		
<i>Land Acquisition</i>			FY30		
<i>Equipment</i>	\$20,000		FY31		
<i>Other</i>					
<i>Contingency</i>	\$12,000	10%			
Total Capital	\$120,000				

Project Justification and Objective: Memo attached. _____

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.



TOWN OF PLYMOUTH

HARBORMASTER

185 WATER STREET PLYMOUTH, MA
(508) 830-4182 / HARBORMASTER@PLYMOUTH-MA.GOV

MEMORANDUM

TO: SANDRA STRASSEL – PROCUREMENT OFFICER

FROM: CHAD HUNTER, HARBORMASTER

SUBJECT: CAPITAL REQUEST – 34' CALVIN BEAL- REFIT

DATE: SEPTEMBER 26, 2024

Sandra,

We would like to respectfully request \$120,000 from the waterway uses account to perform needed maintenance to the Harbormaster 34' Calvin Beal boat. This vessel is the largest Harbormaster vessel and has provided the Town with 20 years of service to date (built 2004). This vessel is equipped to handle year-round emergencies, search and rescue, and is specialized to handle rough in climate weather.

The Harbormaster Division has carefully maintained the vessel including annual haul out to bottom paint and replace zincs, painting, oil changes, gear oil changes, and many electronic repairs to keep the vessel in response ready condition. In 2018, the Division was able to secure a Port Security Grant (FEMA) to re-power the vessel with a new 600 horsepower Cummins diesel and transmission. While we have done an excellent job maintaining the vessel, there are some repairs that are best left to the professionals. The request before you is to complete the following items that have degraded due to age:

- Remove and replace fiberglass over plywood deck due to soft spots and water intrusion.
- Remove and inspect diesel tanks under the aft deck, replace if necessary.
- Replace Marine Electronics to include Chart Plotter and Depth Sounder.
- Touch up fiberglass repairs needed due to cracking on pilot house.
- Add an inflatable life raft to enhance crew safety.

As mentioned above, the majority of repairs are fiberglass related and fall outside Harbormaster staff expertise. The repairs will protect the safety and integrity of the vessel for years to come and enhance crew safety during critical missions. Please let me know if you have any questions related to the request or project.

Respectfully submitted,

Chad Hunter – Plymouth Harbormaster

Cc. Police Chief -Dana Flynn

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Harbormaster - Police	Priority #:	2
Project Title and Description: Town Wharf Extension	Total Project Cost:	\$750,000

Department/Division Head: Harbormaster - Chad Hunter

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

For project re-submittals, list prior year(s): FY 24 Fall Annual Town Meeting

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>			FY27		
<i>Labor and Materials</i>	\$630,000		FY28		
<i>Administration</i>			FY29		
<i>Land Acquisition</i>			FY30		
<i>Equipment</i>			FY31		
<i>Other</i>					
<i>Contingency</i>	\$120,000	recommended by GEI MARINE CONSTRUCTION			
Total Capital	\$750,000				

Project Justification and Objective: Memo attached. Would extend Town Wharf from 220 feet to 295 feet in length to supports cruise ships, commercial vessel dockage, and Town special events (Tall Ships).

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: 25+ years

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



TOWN OF PLYMOUTH

HARBORMASTER

185 WATER STREET PLYMOUTH, MA
(508) 830-4182 / HARBORMASTER@PLYMOUTH-MA.GOV

MEMORANDUM

TO: SANDRA STRASSEL – PROCUREMENT OFFICER

FROM: CHAD HUNTER, HARBORMASTER

SUBJECT: CAPITAL REQUEST – TOWN WHARF EXTENSION

DATE: SEPTEMBER 26, 2024

Sandra,

We would like to respectfully request \$750,000 from the waterway uses account to construct and install the Town Wharf Pier extension (plan attached). The pier extension will increase the cruise ship's safety when in port and provide additional dockage on the inshore side for commercial boats. When the cruise ship is not in port, the extension can assist the Town with visiting tall ships and/or commercial special use dockage. This project was previously presented at Fall Town meeting in 2023 and did not pass due to the concern of the potential impacts the Cruise Ship visits may have on the commercial fishermen.

In 2024, the cruise ship made 25 visits to Town Wharf with minimal interruptions to the commercial fishermen and lobstermen. Harbormaster staff closely monitored the visits and quickly responded to any concerns or issues while the ship was in port. During all cruise ship visits, the 3 winch offloading locations remained accessible and commercial buyers were able to easily access the pier to load catch.

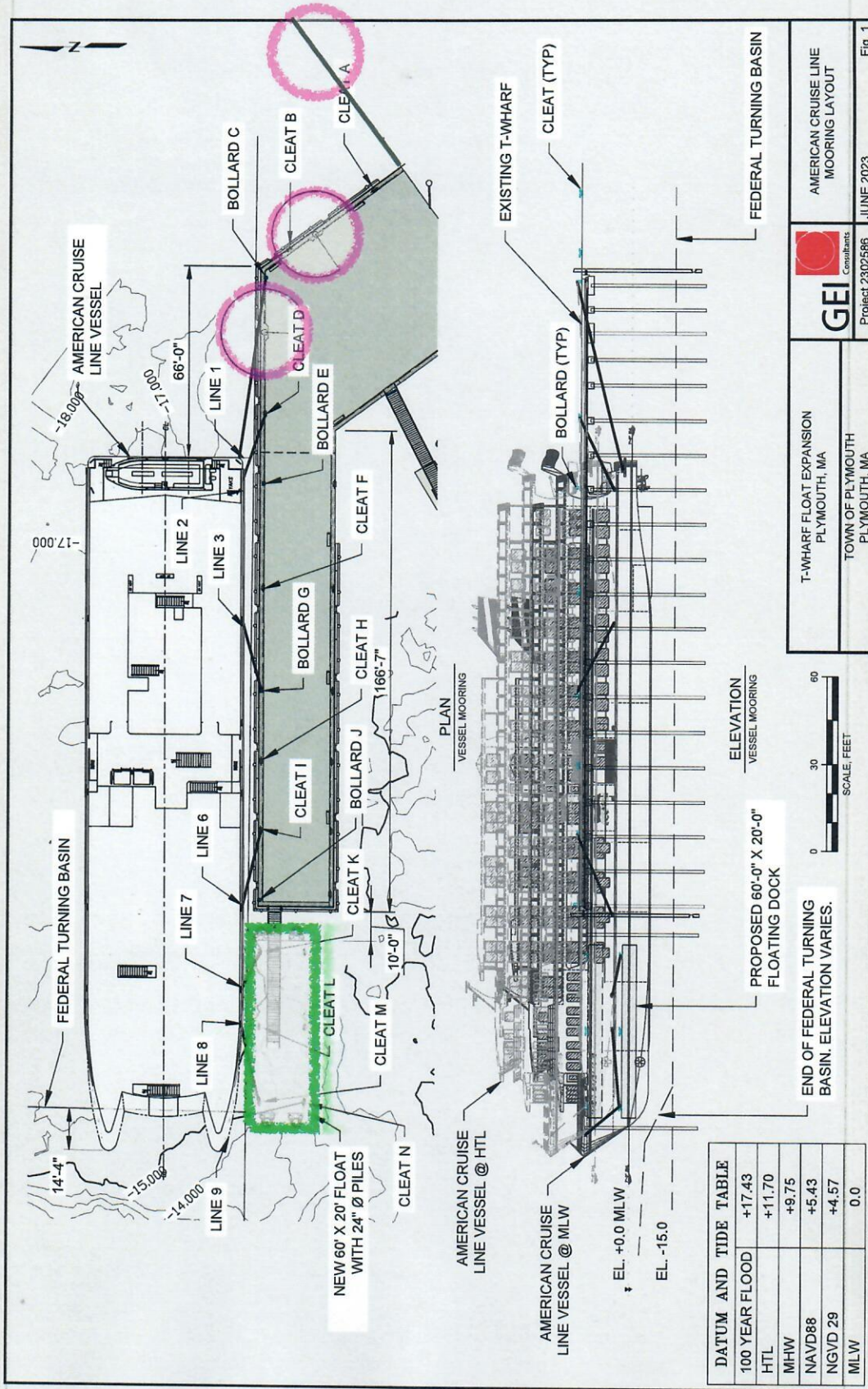
The Town has been in discussions with ACL for a longer-term contract and ACL has already requested 38 visits in 2025 and 48 visits in 2026. While the details of the contract are not finalized, ACL and the Town are committed to continuing the visits into the future.

In the spring of 2024, The Town did apply for a Port Infrastructure Development Grant for Town Wharf Maintenance and the pier extension. At the time of this memo, we have not heard back regarding awards. If the grant award comes through, this appropriation would be returned to the Town. If the grant is not awarded, we would like to move forward with the project and utilize revenue generated from the cruise ship contract to offset costs to the Town.

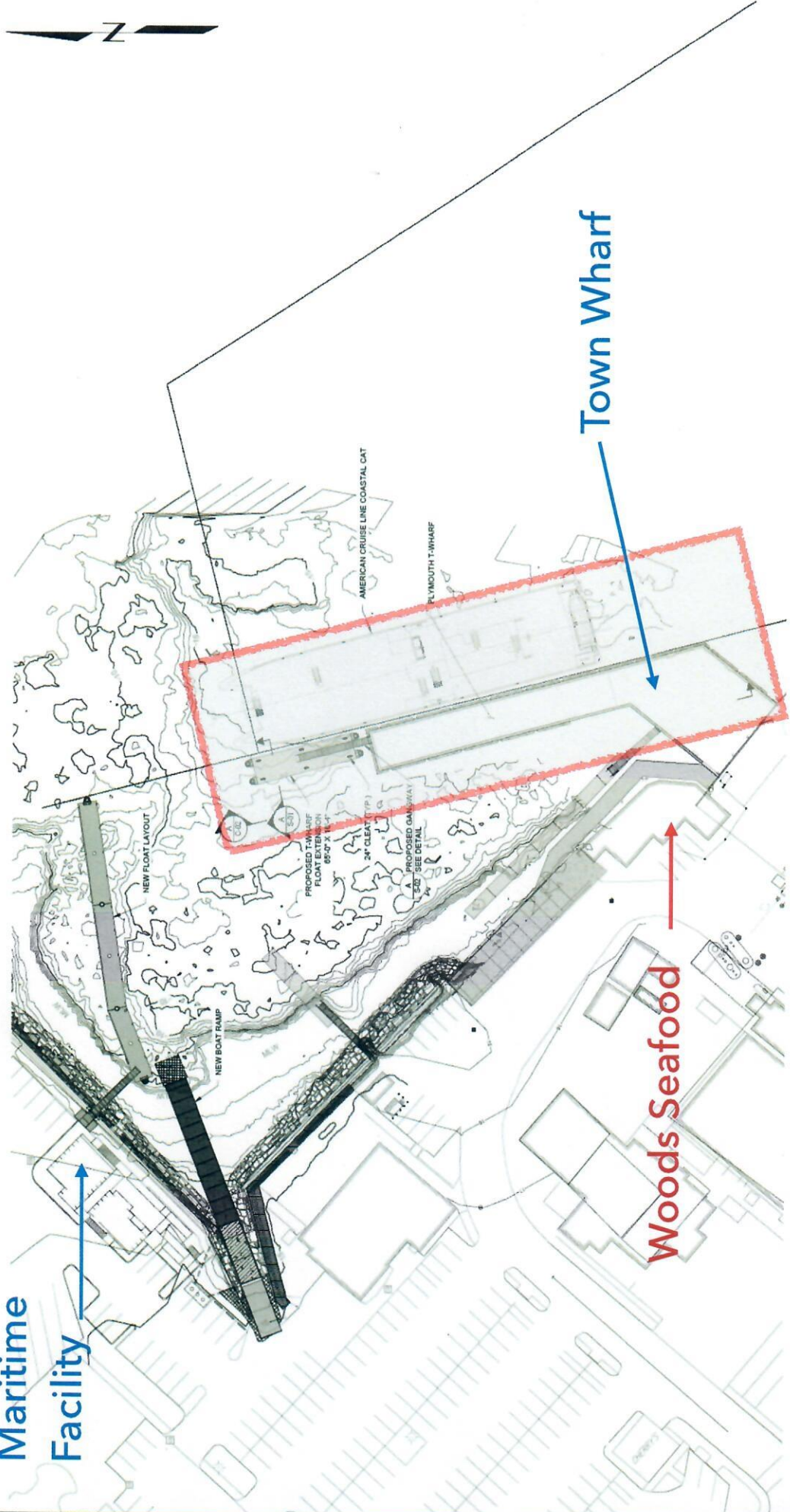
Respectfully submitted,

Chad Hunter – Plymouth Harbormaster

Cc. Police Chief -Dana Flynn



Maritime
Facility



Town Wharf

Woods Seafood

DATUM	1985
100 YR FLOOD	+15.85
10 YR FLOOD	+11.75

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Fire 220	Priority #:	1
Project Title and Description: Replace and Equip 2006 Aerial Platform	Total Project Cost:	\$2,283,467.00

Department/Division Head: Chief Neil Foley

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>			FY27		
<i>Labor and Materials</i>			FY28		
<i>Administration</i>			FY29		
<i>Land Acquisition</i>			FY30		
<i>Equipment</i>	\$2,283,467.00		FY31		
<i>Other</i>					
<i>Contingency</i>					
Total Capital					

Project Justification and Objective: Current lead time are approaching 48 months for Aerial Platforms. If ordered today we would not expect delivery until sometime in 2029.

In addition, price increases have maintained a minimum of 7 percent annually, and that trend is expected to continue. This project is in-line with the departments apparatus replacement plan.

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

2006 Pierce Tower 100ft platform VIN# 4P1CD01H27A006884 Good/Fair condition

What is the expected lifespan of this new/replacement equipment: 15+ years

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



Town of Plymouth
Fire Department
114 Sandwich Street
Plymouth, Massachusetts 02360
508-830-4213
Fax 508-830-4174

Date: October 9, 2024

To: Capital Improvement Committee

Cc: Lynne Barrett, Finance Director
Derek Brindisi, Town Manager
Silvio Genao, Asst. Town Manager
Sandra Strassel, Procurement Officer

From: Neil Foley, Chief of Department

Re: Fire Department Request Replace and Equip 2006 Ladder Tower (\$2,283,467.00)

Tower 1 is a 2006 Pierce Dash Elevated Platform equipped with a 300-gallon water tank and a 1,500-gallon-per-minute fire pump. This apparatus has 74,698 odometer miles and 7,361 engine hours, translating to 257,363.5 road miles. It has a Massachusetts registration of MF 1948 and a VIN of 4P1CD01H27A006884.

Tower 1 has been in service for 18 years and underwent substantial rehabilitation in 2018. It has responded to thousands of emergencies throughout the town and is currently stationed at Fire Headquarters on Sandwich Street.

This specialized firefighting apparatus, often referred to as a ladder tower, has unique capabilities that extend beyond the iconic "bucket" at the end of the ladder. Ladder towers carry additional ground ladders for every conceivable need at a fire scene. They also come equipped with specialized rescue tools, various ladders, and breathing air, making them the "toolbox" of the fireground. The tower can extend up to 100 feet, allowing for rescues from buildings or over hazards when no other paths or ground ladders can reach. It can also deliver a large volume of water to a fire from an elevated position, which helps prevent large fires from spreading to other homes and buildings, reducing additional community risk.

These are just a few examples of their capabilities. Ladder towers often play a crucial role in special rescue scenarios, such as medical emergencies where patient access is limited or unavailable with conventional ladder trucks, enhancing safety for both the patient and the rescuers. The versatility of this specialized equipment is vital to the department's mission. Since we have only one tower ladder and no backup, it is essential that it remains reliable and operational.

The National Fire Protection Agency (NFPA) and the Insurance Service Organization (ISO) stipulate that aerial apparatus (ladders and towers) must be strategically located and able to respond as part of a full alarm assignment within 480 seconds. Given Plymouth's size and road systems, meeting this

standard is already challenging and would be impossible without Tower 1. While life safety and property preservation are our goals, these standards also influence community risk ratings for insurance purposes. Significant past expenditures have improved our ISO rating, which has lowered insurance rates for property owners. If Tower 1 were to go out of service, our ISO rating would decrease, negatively affecting insurance costs.

The department's Chief Master Mechanic has rated Tower 1 in "good" condition but has noted some corrosion of vehicle components and increased maintenance costs and shop hours. While it is currently in good condition, we have been informed that due to manufacturing delays, it would take at least four years to complete the manufacturing of a new tower ladder if ordered today. This is a substantial increase from the three-year delay we experienced just a year ago. This situation and a consistent price increase of about 9% annually have prompted the department to move up the replacement request to this town meeting.

The Director of Finance, Lynne Barrett, agrees with this change in our capital planning due to the extended lead time for delivery and has noted that sufficient debt will fall off when this purchase's financial commitment is realized.

Although the current tower ladder will be approaching 25 years of service by the time the new one is delivered, we hope that the existing Tower will remain a viable spare, ensuring that Plymouth always has a tower ladder available.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Fire 220	Priority #:	2
Project Title and Description: Replace and Equip 2007 Pumping Engine	Total Project Cost:	\$1,186,294.00

Department/Division Head: Chief Neil Foley

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>			FY27		
<i>Labor and Materials</i>			FY28		
<i>Administration</i>			FY29		
<i>Land Acquisition</i>			FY30		
<i>Equipment</i>	\$1,186,294.00		FY31		
<i>Other</i>					
<i>Contingency</i>					
Total Capital					

Project Justification and Objective: Current lead time are approaching 36 months for pumping engines. If ordered today we would not expect delivery until sometime in 2028.

In addition, price increases have maintained a minimum of 7 percent annually, and that trend is expected to continue

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

2007 Pierce Contender 1250gpm Pumping Engine VIN# 1HTMKAZR77H504465 Good condition

What is the expected lifespan of this new/replacement equipment: 15+ years

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



Town of Plymouth
Fire Department
114 Sandwich Street
Plymouth, Massachusetts 02360
508-830-4213
Fax 508-830-4174

Date: October 9, 2024

To: Capital Improvement Committee

Cc: Lynne Barrett, Finance Director
Derek Brindisi, Town Manager
Silvio Genao, Asst. Town Manager
Sandra Strassel, Procurement Officer

From: Neil Foley, Chief of Department

Re: FY25 Capital Request

Fire Department Request Replace and Equip 2007 Pumping Engine (\$1,186,294.00)

Engine 10 is a 2007 Peirce Contender pumping Engine equipped with a 1000-gallon water tank, Class A foam capabilities, and a 1,250-gallon per minute fire pump. This apparatus has 93,227 odometer miles and 8,198 engine hours, calculating to 286,930 road miles. Massachusetts Registration MF 6165, VIN 1HTMKAZR97H504466.

Engine 10 has been a “Reserve” Engine for the last seven years after serving the Cedarville Village area for over ten years, before becoming a reserve engine. The Reserve pumpers play an extremely important role in the department’s ability to maintain the in-service apparatus. After nearly 20 years of service, this engine has served our community well. However, it has reached the end of its serviceable life. High call volume and corrosion of vehicle components, caused by years of corrosive road treatments used in the northeast, have led to significant frame and mechanical failures. Repairing these issues requires excessive shop hours and operational funding.

These deficiencies are not a result of deferred maintenance. Our repair division meets or exceeds the maintenance standards outlined in the National Fire Protection Agency [NFPA 1901: Standard for Automotive Fire Apparatus](#). Our Chief Master Mechanic has rated this engine as fair to poor and suggests that it is likely that we will need to remove it from service before we see a replacement. This project aims to move the current 2011 Engine 1 at Headquarters, which was fully rehabbed in 2023, to reserve status, providing a reliable pumping engine to replace Engine 10, which will be permanently retired from service.

Just two years ago, a pumping engine took an average of 18 to 22 months to manufacture from the order date. The most recent estimate we received is that it will take three full years before we see delivery. Speaking with our Director of Finance, Lynne Barrett, this delay is operationally problematic for the department, but it does allow adequate time to plan for it from a fiscal aspect.

This engine has been on the 10-year capital plan for a replacement at this Spring Town Meeting. Any delays could likely result in increased repair costs and reduced reliability of the department's fleet. Life-safety equipment needs to be reliable.

This new pumping engine will be equipped with all current safety devices and meet all NFPA 1901 Standards.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Fire 220	Priority #:	3
Project Title and Description: Replace and Equip Command Vehicles	Total Project Cost:	\$166,238.00

Department/Division Head: Chief Neil Foley

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: \$100,000.00 Fire Prevention Revolving account

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>			FY27		
<i>Labor and Materials</i>			FY28		
<i>Administration</i>			FY29		
<i>Land Acquisition</i>			FY30		
<i>Equipment</i>	\$166,238.00	Price includes allowance for required emergency warning lights	FY31		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$166,238.00				

Project Justification and Objective: _____

Both Vehicles are at end of life and require replacement.

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

2008 Tahoe VIN#1GNFK13018R269581 Fair 2008 Tahoe VIN#1GNFK13028J239777 Poor

What is the expected lifespan of this new/replacement equipment: 15+ years

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



Town of Plymouth
Fire Department
114 Sandwich Street
Plymouth, Massachusetts 02360
508-830-4213
Fax 508-830-4174

Date: October 9, 2024

To: Capital Improvement Committee

Cc: Lynne Barrett, Finance Director
Derek Brindisi, Town Manager
Silvio Genao, Asst. Town Manager
Sandra Strassel, Procurement Officer

From: Neil Foley, Chief of Department

Re: Fire Department Request to Replace and Equip two Command Vehicles (\$166,238.00)

Fire department command vehicles are specialized four-wheel-drive vehicles designed to meet the unique needs of the department during emergencies, both on and off-road and in all weather conditions. These vehicles are equipped with the latest technology for effective command and control at complex emergency scenes.

The new vehicles will replace two 2008 Chevy Tahoe's: C13 VIN# 1GNFK13018R269581 and C14 VIN# 1GNFK13028J239777. Vehicle C14 has already been taken out of service due to extensive corrosion of its frame. C13 is in fair condition, but any major component failure will also lead to its removal from service.

This project has been included in the department's capital plan for replacement at the Spring Town Meeting. Delaying it to a future meeting could impact the department's operational capacity.

Partial funding for this project will come from the Fire Safety and Prevention Revolving Account (Org. 2624226, Obj. 540000), which will provide up to \$100,000.00.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: 541/CAL	Priority #:	1
Project Title and Description: Moving wall replacement	Total Project Cost:	125,000.00

Department/Division Head: Michelle Bratti/Caitlyn Correa

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

For project re-submittals, list prior year(s): FY26

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>			FY27		
<i>Labor and Materials</i>	125,000	Estimate 9/30/24	FY28		
<i>Administration</i>			FY29		
<i>Land Acquisition</i>			FY30		
<i>Equipment</i>			FY31		
<i>Other</i>					
<i>Contingency</i>					
Total Capital					

Project Justification and Objective: The current model is motorized and has many electrical issues. Maintenance on this motorized wall is unattainable. The company suggested installing a manual wall which is much easier on maintenance and tends to last longer.

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

Original wall was installed when the building was built in 2012.

What is the expected lifespan of this new/replacement equipment: 15-20 years

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

Caitlyn Correa

To: Neal Donahue
Subject: RE: Retracting Wall

From: Neal Donahue <ndonahue@alltechprod.com>
Sent: Monday, September 30, 2024 1:57 PM
To: Caitlyn Correa <ccorrea@plymouth-ma.gov>
Subject: RE: Retracting Wall

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Hi Caitlyn,

The best I can do for now is provide you with budget numbers as follows:

Function Room only:

Electric: \$175,000 - \$190,000

Manual: \$115,000 - \$125,000

Both budget numbers include the following:

- Demolition and disposal of the existing track, panels, and pocket doors.
- Furnish and install new track, panels, and pocket doors.
- Patch GWB soffit to paint ready condition.
- All equipment required for operable partition turnkey project.

Please note the following exclusions:

- Sales tax.
- All electrical wiring and connections.
- Paint.

I will send a formal proposal for both systems by the end of this week.

Please let me know if you have any questions.

Regards,
Neal T. Donahue

Alltech

Products, Inc.

Office: (781) 871-4941

Mobile: (781) 953-4515

ndonahue@alltechprod.com

Please visit our website to view product offerings:

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Recreation 630	Priority #:	1
Project Title and Description: Forges Pickleball Court Drainage/pathway	Total Project Cost:	\$97,000

Department/Division Head: Anne Slusser-Huff

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>	\$0	Engineering developed the plan already	FY27		
<i>Labor and Materials</i>	97,000	this was produced by the town engineering division	FY28		
<i>Administration</i>			FY29		
<i>Land Acquisition</i>			FY30		
<i>Equipment</i>			FY31		
<i>Other</i>					
<i>Contingency</i>					
Total Capital					

Project Justification and Objective: The drainage swells around the Forges Pickleball courts needs to be dug out and re-constructed. Currently they are full, and anytime it rains the dirt and sediment from the land next to the courts washes out on to the courts. The swells will capture this material keeping the courts clear from debris.

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.



Town of Plymouth – Recreation

26 Court St
Plymouth, MA 02360
(508) 747-1620 Ext. 10136

Date: 9/26/24
From: Anne Slusser – Recreation Director
RE: Forges Pickleball Court Drainage Improvements

The drainage system around the Forges Pickleball Courts needs to be replaced. Currently, the swales surrounding the courts are clogged with debris, causing dirt and other materials to wash onto the courts during rainstorms. The Town's Engineering Department has developed a new drainage plan, including a cost estimate for the necessary improvements.

Along with the drainage upgrades, we plan to install an ADA-compliant pathway leading to the back of the courts, ensuring accessibility for all community members. Additionally, the Recreation Department will add benches and shaded areas where players and spectators can relax while waiting or watching games.

These upgrades will greatly improve the experience for everyone using the courts, enhancing both safety and comfort. The Forges Pickleball Courts remain the most popular in town, hosting all the Recreation Division's programs.

We anticipate the work will begin in the Summer of 2026 and will keep the community updated on the progress. Your support and input on these improvements are greatly appreciated as we continue to make the courts a welcoming space for all.

Thank you,

Anne Slusser
Recreation Director
Town Of Plymouth
26 Court St
Plymouth MA 02360
508-747-1620 Ext. 10136
aslusser@plymouth-ma.gov

COST ESTIMATE FORGES FIELD PICKLE BALL COURT DRAINAGE IMPROVEMENTS AND NEW SIDEWALK 9-10-2024								
ITEM #	DESCRIPTION	EST. QUANTITY	UNIT	UNIT COST	COST	POLICE DETAIL (20%)	(15%) CONTINGENCY	TOTAL EST. COST
1	UNCLASSIFIED EXCAVATION	200	C.Y.	\$140.00	\$28,000.00			
2	SILT SOCK	50	L.F.	\$10.00	\$500.00			
3	LOAM	100	C.Y.	\$150.00	\$15,000.00			
4	SEEDING	600	S.Y.	\$3.00	\$1,800.00			
5	CEMENT CONCRETE SIDEWALK	190	S.Y.	\$75.00	\$14,250.00			
6	RECLAIMED ASPHALT	75	TON	\$15.00	\$1,125.00			
7	FILL	75	TON	\$15.00	\$1,125.00			
8	GUARD RAIL REMOVAL & DISPOSAL	150	L.F.	\$30.00	\$4,500.00			
9	CONCRETE PAD	16	S.Y.	\$100.00	\$1,600.00			
10	RIP RAP INCLUDING FILTER FABRIC	150	S.Y.	\$30.00	\$4,500.00			
					Total			
					\$72,400.00	N.A.	\$10,860.00	\$83,260.00

TOTAL ESTIMATE = \$85,000.00

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Energy and Environment	Priority #:	1 - Special
Project Title and Description: Jenney Pond Dam Repairs/Bypass Channel	Total Project Cost:	6,738,500

Department/Division Head: David Gould, Director

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

For project re-submittals, list prior year(s): FY25

List any funding sources and amounts already granted:

\$10,021,000 in NOAA BIL funding for bypass channel and associated improvements. \$1,500,000 in CPA funds for trail/walking path reconstruction.

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>FY27</i>		
<i>Labor and Materials</i>	\$6,738,500		<i>FY28</i>		
<i>Administration</i>			<i>FY29</i>		
<i>Land Acquisition</i>			<i>FY30</i>		
<i>Equipment</i>			<i>FY31</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$6,738,500				

Project Justification and Objective:

Jenney Pond Dam needs to be brought up to MA Office of Dam Safety standards based upon recent inspections. The proposed bypass improves both fish passage and helps to increase spillway capacity. Trail improvements result in ADA compliance and an enhanced public space.

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.



Town of Plymouth
Department of Energy & Environment
26 Court Street, Plymouth, MA 02360



MEMO

To: Derek Brindisi, Town Manager
Lynne Barrett, Finance Director

From: David Gould, Director of Energy and Environment

Re: **Capital Request – Jenney Pond Dam Repairs**

Date: November 6, 2024

The proposed dam repairs at Jenney Pond would bring the structure into compliance with the Massachusetts Office of Dam Safety (ODS) standards. The Town has been working with ODS over the last several years as we have progressed through engineering, permitting and fund raising for this project so that they were aware we were moving ahead with the necessary repairs. The proposed nature-like fishway/bypass which will be funded by NOAA provides not only fish passage but allows an increase in spillway capacity thereby allowing the dam to pass the 100-year storm event which it cannot currently do. Work within the bypass footprint can be covered by NOAA funding so some road, sidewalk and landscaping work will be covered by the federal funding but the capital request for \$6,738,500 will go only towards dam repair work.

It is important to realize that the Jenney Pond Dam consists of the upstream and downstream slopes of the structure along with Spring Lane as the roadway is the crest of the dam. As detailed in the cost breakdown backup materials submitted with this project the dam repair work includes removal of most of the road, curb, sidewalk, signage, trees, light poles and the set up of erosion controls and water control systems including cofferdams, pumps and bypasses and temporary road access for vehicular traffic.



Town of Plymouth
Department of Energy & Environment
26 Court Street, Plymouth, MA 02360



In addition, there is considerable work to regrade the road, replace the water main, and reset the road, curbing, sidewalks and other features that are disturbed during the repairs including fences, signage, benches, lighting, conduit, and plantings.

Lastly, there are significant structural repairs including a cutoff wall, retaining walls, headwall repairs, masonry and culvert repairs and the necessary temporary shoring and supports to complete this work.

In conclusion, while the dam repair costs are significant it would be even more expensive without the NOAA grant funding that will not only result in conveyance of the 100-year storm but also offset costs within its footprint.

Should you have any questions regarding this work please contact me at your earliest convenience. Thanks.

Opinion of Estimated Construction Costs
Jenney Grist Mill Bypass - Dam Repairs, Grist Mill & Spring Lane Improvements
Plymouth, Massachusetts
Preliminary Design
11982.00018
Prepared on: 9/23/2024 by SLR

ITEM NO.	ITEM/DESCRIPTION	UNIT	QTY	UNIT COST	AMOUNT IN FIGURES
1.0	Site Preparation, Removals & Mobilization				
	Mobilization & Bonding (10%)	LS	1	\$ 444,800	\$444,800
	Construction Staking	LS	1	\$ 43,200	\$43,200
	Test Pits	EA	15	\$ 2,700	\$40,500
	Chainlink Safety Fence	LF	300	\$ 13	\$3,888
	Temporary Signage and Vehicular and Pedestrian Traffic Control	LS	1	\$ 486,000	\$486,000
	Removal of Concrete	SF	200	\$ 27	\$5,400
	Removal of Brick Pavers	SF	200	\$ 11	\$2,160
	Removal of Bituminous Paving	SF	11,500	\$ 5	\$62,100
	Removal of Granite Curb	LF	650	\$ 43	\$28,080
	Removal of Wood Guardrail	LF	150	\$ 54	\$8,100
	Removals of Existing Stone Pavers	SF	40	\$ 27	\$1,093
	Grind Existing Stump	EA	1	\$ 1,080	\$1,080
	Removal of Existing Deck, Hatches, and Hinges	SF	500	\$ 11	\$5,400
	Removal of Portion of Stone Wall (adjacent to deck)	LF	90	\$ 92	\$8,262
	Removal of Portion of Buried Concrete Wall (at Spring Lane sidewalk)	LF	50	\$ 216	\$10,800
	Removal of Existing Wood Picket Fence	LF	200	\$ 32	\$6,415
	Removal of Existing Light Poles and Foundations	EA	9	\$ 864	\$7,776
	Removal of Existing Signage	EA	4	\$ 540	\$2,160
	Removal of Existing Trees	EA	5	\$ 1,296	\$6,480
	Tree Protection	EA	3	\$ 702	\$2,106
	Topsoil-strip and Stockpile (6" Depth)	CY	20	\$ 27	\$540
	Clearing and Grubbing	LS	1	\$ 17,820	\$17,820
					\$1,195,000
2.0	Sediment and Erosion Controls & Water Control				
	Construction Entrance Pad	EA	2	\$ 2,700	\$5,400
	Temporary Road & E&S Measures	LS	1	\$ 48,600	\$48,600
	Silt Fence & Haybales	LF	650	\$ 11	\$7,020
	Turbidity Curtains	LS	1	\$ 16,200	\$16,200
	Water Control (Cofferdamming, Bypass, Pumping, Etc.)	LS	1	\$ 140,400	\$140,400
					\$218,000
3.0	Earthwork and Grading				
	Formation of Subgrade for Paving	SY	1,800	\$ 81	\$145,800
	Subgrade Material to be Excavated/Reused	CY	150	\$ 49	\$7,290
	Subgrade Material to be Imported	CY	100	\$ 97	\$9,720
	Subgrade Material to be Exported	CY	1,060	\$ 103	\$108,756
					\$272,000

Opinion of Estimated Construction Costs
Jenney Grist Mill Bypass - Dam Repairs, Grist Mill & Spring Lane Improvements
Plymouth, Massachusetts
Preliminary Design
11982.00018
Prepared on: 9/23/2024 by SLR

ITEM NO.	ITEM/DESCRIPTION	UNIT	QTY	UNIT COST	AMOUNT IN FIGURES
4.0	Site Features				
	Reset Existing Granite Curbing	LF	700	\$ 70	\$49,140
	Bituminous Concrete Paving (3" Depth)	TON	167	\$ 265	\$44,188
	Processed Aggregate Base for Bituminous Concrete Paving (6" depth)	CY	170	\$ 70	\$11,934
	Gravel Subbase for Bituminous Concrete Paving (8" depth)	CY	230	\$ 97	\$22,356
	Colored Concrete Paving (4" depth)	SY	100	\$ 103	\$10,260
	Gravel Subbase for concrete (6" depth)	CY	20	\$ 97	\$1,944
	Brick (Sidewalks)	SF	3,100	\$ 43	\$133,920
	Concrete Slab Below Brick Sidewalks	CY	60	\$ 1,080	\$64,800
	Granite Curb Edger	LF	30	\$ 162	\$4,860
	Granite Paver Banding	SF	1,000	\$ 38	\$37,800
	Wood Decking	SF	500	\$ 27	\$13,500
	Recycled Brick (setting only)	SY	40	\$ 130	\$5,184
	Concrete Slab for Recycled Brick and Granite Paver Banding	CY	7	\$ 1,620	\$11,340
	Stop Sign	EA	1	\$ 540	\$540
	Pedestrian Crossing Sign	EA	2	\$ 540	\$1,080
	Downward Diagonal Arrow Sign	EA	2	\$ 540	\$1,080
	Jenney Pond - Rip Rap for Dam Repairs	TN	500	\$ 130	\$64,800
	Granite Bollards	EA	7	\$ 1,080	\$7,560
	Safety Railing on Wall	LF	50	\$ 151	\$7,560
	Granite Block Steps to Existing Headwall	LS	1	\$ 5,940	\$5,940
	4'-0" Wood Gates at Headwall	EA	2	\$ 1,026	\$2,052
	Decorative Granite Post and Wood Picket Fence	LF	300	\$ 1,188	\$356,400
	Relocate Existing Wood Guardrail	LF	150	\$ 119	\$17,820
	Dumpster Enclosure	LS	1	\$ 27,000	\$27,000
	Epoxy Parking Re-striping, Double Yellow Line, Stop Bar, and Crosswalk	LS	1	\$ 5,940	\$5,940
	Detectable Warning Strip	EA	1	\$ 1,080	\$1,080
					\$911,000
5.0	Park-Site Furniture				
	New Granite Block Benches (Product & Install)	EA	6	\$ 2,700	\$16,200
	Salvaged Granite Block Benches (setting only)	EA	12	\$ 594	\$7,128
	Traditional Colonial Hinges (Product & Install)	EA	5	\$ 432	\$2,160
	Informational Sign (Sign Design, Fabrication, and Installation)	EA	1	\$ 7,128	\$7,128
	Relocate Existing Informational Sign	EA	2	\$ 378	\$756
	Relocate and Mount Existing Signs on Wood Posts	EA	2	\$ 594	\$1,188
	Reinstall Existing Bus Signage	EA	3	\$ 216	\$648
	Relocate Existing Sculpture and Memorial Bench	EA	2	\$ 1,080	\$2,160
	Pole Mounted Site Light (Product & Install)	EA	5	\$ 14,580	\$72,900
	Light Bollard	EA	13	\$ 3,780	\$49,140
	Wall Mounted Lighting	EA	6	\$ 2,376	\$14,256
					\$174,000
6.0	Topsoil				
	Furnish and Place Topsoil (Planting Areas) 12" Depth	CY	75	\$ 59	\$4,455
					\$5,000
7.0	Plantings				
	Trees	EA	4	\$ 1,620	\$6,480
	Shrubs	EA	50	\$ 97	\$4,860
	Perennials	EA	350	\$ 43	\$15,120
	Pine Bark Mulch (4" Depth)	SY	200	\$ 11	\$2,160
	Temporary Irrigation	SF	4000	\$ 1	\$2,376
					\$31,000

Opinion of Estimated Construction Costs
Jenney Grist Mill Bypass - Dam Repairs, Grist Mill & Spring Lane Improvements
Plymouth, Massachusetts
Preliminary Design
11982.00018
Prepared on: 9/23/2024 by SLR

ITEM NO.	ITEM/DESCRIPTION	UNIT	QTY	UNIT COST	AMOUNT IN FIGURES
8.0	Structural				
	Spring Lane Cutoff Wall	LS	1	\$ 86,400	\$86,400
	Spring Lane Retaining Wall & Railing	LS	1	\$ 302,400	\$302,400
	Dam Headwall Repairs	LS	1	\$ 27,000	\$27,000
	Grist Mill Deck Repairs and Reconstruction	LS	1	\$ 216,000	\$216,000
	Platform for AC Units and Utilities	LS	1	\$ 43,200	\$43,200
	Masonry Repairs under Grist Mill and Within Culvert	LS	1	\$ 54,000	\$54,000
	Miscellaneous Structural Items	LS	1	\$ 64,800	\$64,800
	Temporary Shoring, Supports and Specialty Equipment	LS	1	\$ 86,400	\$86,400
					\$881,000
9.0	Utilities				
	Water Main Replacement	LS	1	\$ 529,200	\$529,200
	Drainage Improvements	LS	1	\$ 124,200	\$124,200
	Electrical Improvements	LS	1	\$ 172,800	\$172,800
	Eversource Pole & Duct Bank Relocation Coordination	LS	1	\$ 86,400	\$86,400
	Electric and Com Service Reconnections	LS	1	\$ 151,200	\$151,200
	HVAC, Misc. Utility Relocation, & Utility Coordination	LS	1	\$ 140,400	\$140,400
					\$1,205,000
10.0	Construction Incidentals (±5%)				\$ 222,400
11.0	Project Closeout (±2%)				\$ 89,000
CONTRACT ITEMS SUBTOTAL =					\$5,203,400
12.0	CONTINGENCY (±17.5%)				\$910,600
TOTAL CONSTRUCTION					\$6,114,000
13.0	CONSTRUCTION PHASE ENGINEERING AND CONSULTING (±12%)				\$624,500
TOTAL CONSTRUCTION PHASE					\$6,738,500

TO: Massachusetts Office of Dam Safety
FROM: Milone & MacBroom, Inc., now part of SLR International Corporation
RE: Hydrologic Analysis of Jenney (Arms House) Pond Dam
DATE: December 1, 2020
MMI #: 1982-08-25

1.0 PROJECT DESCRIPTION

Milone & MacBroom, Inc. (MMI) was retained by the Town of Plymouth to conduct a Phase II Inspection of Jenney (aka Arms House) Pond Dam, which is located along Town Brook in Plymouth, Massachusetts. As part of the inspection, MMI developed a hydrologic model for the dam, its impoundment (Jenney Pond), and the Town Brook watershed (see Figure 1-1). The model was used to determine the discharge capacity of the dam, assess whether it meets state requirements for spillway capacity and freeboard, and evaluate how much a proposed fish passage culvert at the dam will improve its capacity.

As part of this analysis, the Massachusetts Office of Dam Safety (ODS) requested that MMI perform a dam breach analysis for Jenney Pond Dam to determine if the current hazard classification is appropriate based on the risk to downstream areas posed by a potential dam breach. Currently, Jenney Pond Dam is classified as an Intermediate size, Significant (Class II) Hazard Potential. According to the Massachusetts dam safety guidelines provided in 302 CMR 10, failure of a significant hazard dam may cause "loss of life and damage to home(s), industrial or commercial facilities, secondary highway(s) or railroad(s) or cause interruption of use and service of relatively important facilities." If loss of life and severe damage to downstream properties and infrastructure appear to be "likely" based on the results of the dam breach analysis, the dam classification would need to be upgraded to a High (Class I) Hazard Potential.

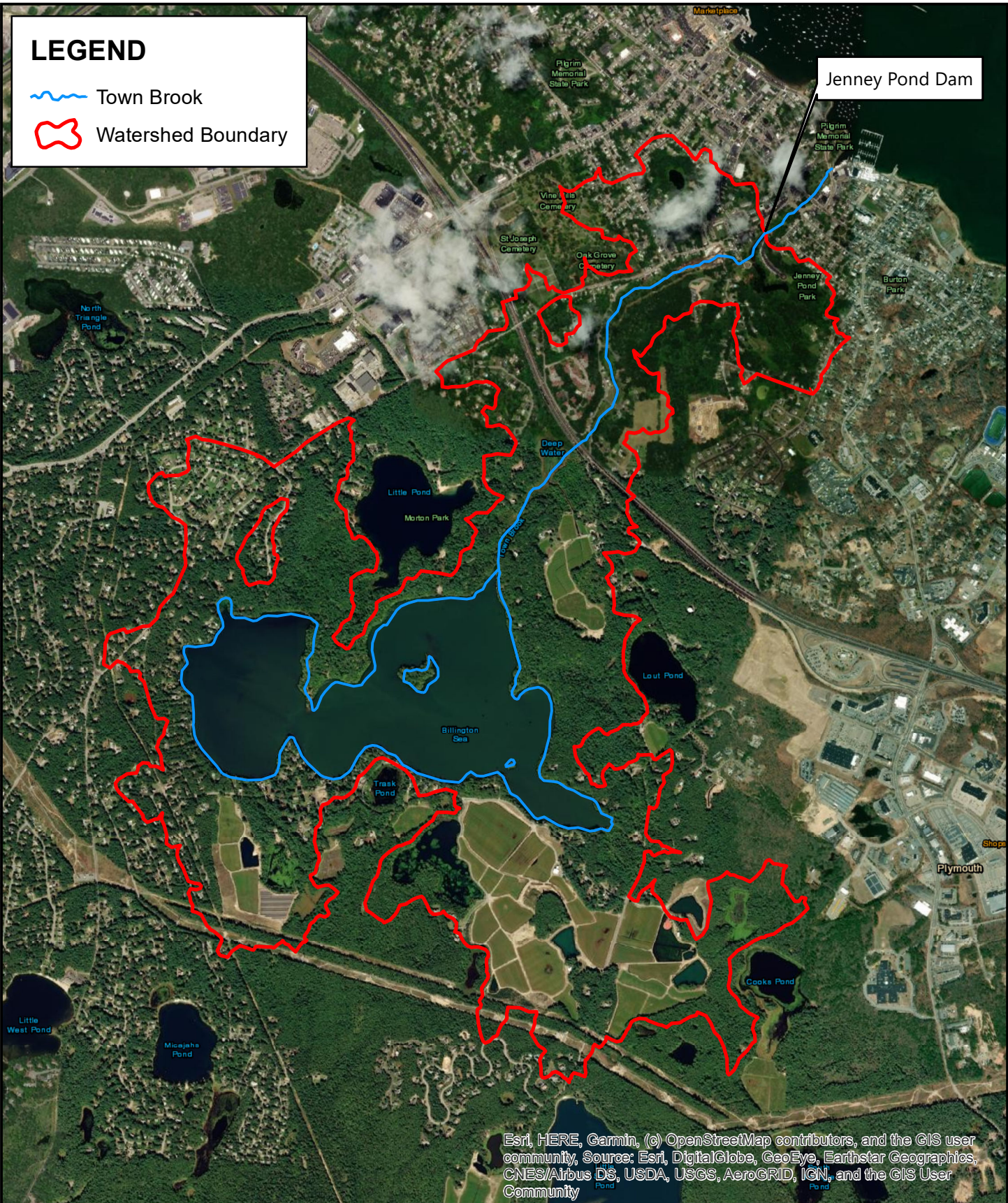
The flood hazard potential for the area downstream of the dam was assessed based on the resulting flooding extents, water surface elevations, and flow velocities for various dam breach scenarios, which were simulated using a two-dimensional (2D) hydraulic model developed with the Hydrologic Engineering Center – *River Analysis System* (HEC-RAS) computer software. The dam breach analysis for Jenney Pond Dam was performed according to the procedures described in the Federal Guidelines for Inundation Mapping of Flood Risks Associated with Dam Incidents and Failures (FEMA P-946, 2013).

Jenney Pond Dam (State ID #7-12-239-4, National ID #MA00907) is an intermediate size, earthen structure with a maximum storage capacity of approximately 27.6 acre-feet and a structural height of 12 feet. The dam has two outlets: a concrete arch culvert, which discharges to the water wheel at the restored grist mill immediately downstream of the dam, and a concrete pipe culvert, which discharges to a Denil fish ladder. Outflows from the pond are controlled by stoplogs installed along the inlets of the culverts. Spring Lane, a paved roadway, forms the crest of the dam.

The Town Brook watershed, which drains to Jenney Pond, has an area of 2.32 square miles and includes the Billington Sea, numerous kettle ponds and wetlands, and a network of cranberry bogs. The water level in each of the bogs and flow between bogs is loosely controlled with an assortment of culverts, pumps, and stoplogs. The rest of the watershed consists of forest, wetlands, and some developed areas near the downstream end. Due to the sandy soils within the watershed, infiltration rates are high, and flows along Town Brook are primarily controlled by groundwater. Due to these characteristics, the region regression equations for peak flood flows which were developed for Massachusetts do not apply to Plymouth or the Town Brook watershed (Wandle 1983).

Currently, the only flood flow estimates for Town Brook were those developed for the Federal Emergency Management Agency (FEMA) Flood Insurance Study (FIS #25023CV001C). These peak flows, which are presented in Table 1-1, were estimated using the United States Army Corps of Engineers (USACE) HEC-1 flood hydrograph computer model. The model was calibrated using the discharge data from United States Geological Survey (USGS) Gauge #01105870, which is on the Jones River in the town of Kingston. For the FIS, the Town Brook watershed was estimated to be 3.9 square miles at the Sandwich Street bridge, approximately 600 feet downstream of Jenney Pond Dam. The watershed area differs from the new delineation due to changes in the watershed and a more detailed field investigation of the watershed boundaries and noncontributing area.

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WWW.MMINC.COM

TOWN BROOK WATERSHED
JENNEY POND DAM - HYDROLOGIC ANALYSIS
TOWN OF PLYMOUTH
Spring Lane
Plymouth, MA



0 500 1,000
Feet

SCALE 1" = 2,000'
DATE 9/21/2020
1982-08
PROJ. NO.

FIG. 1-1

TABLE 1-1
FEMA FIS Peak Discharges for Town Brook at Sandwich Street in Plymouth

Flood Event	Peak Discharge (CFS)
10-Year	132
50-Year	174
100-Year	202
500-Year	255

CFS = cubic feet per second

2.0 MODELING INPUT PARAMETERS

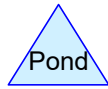
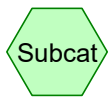
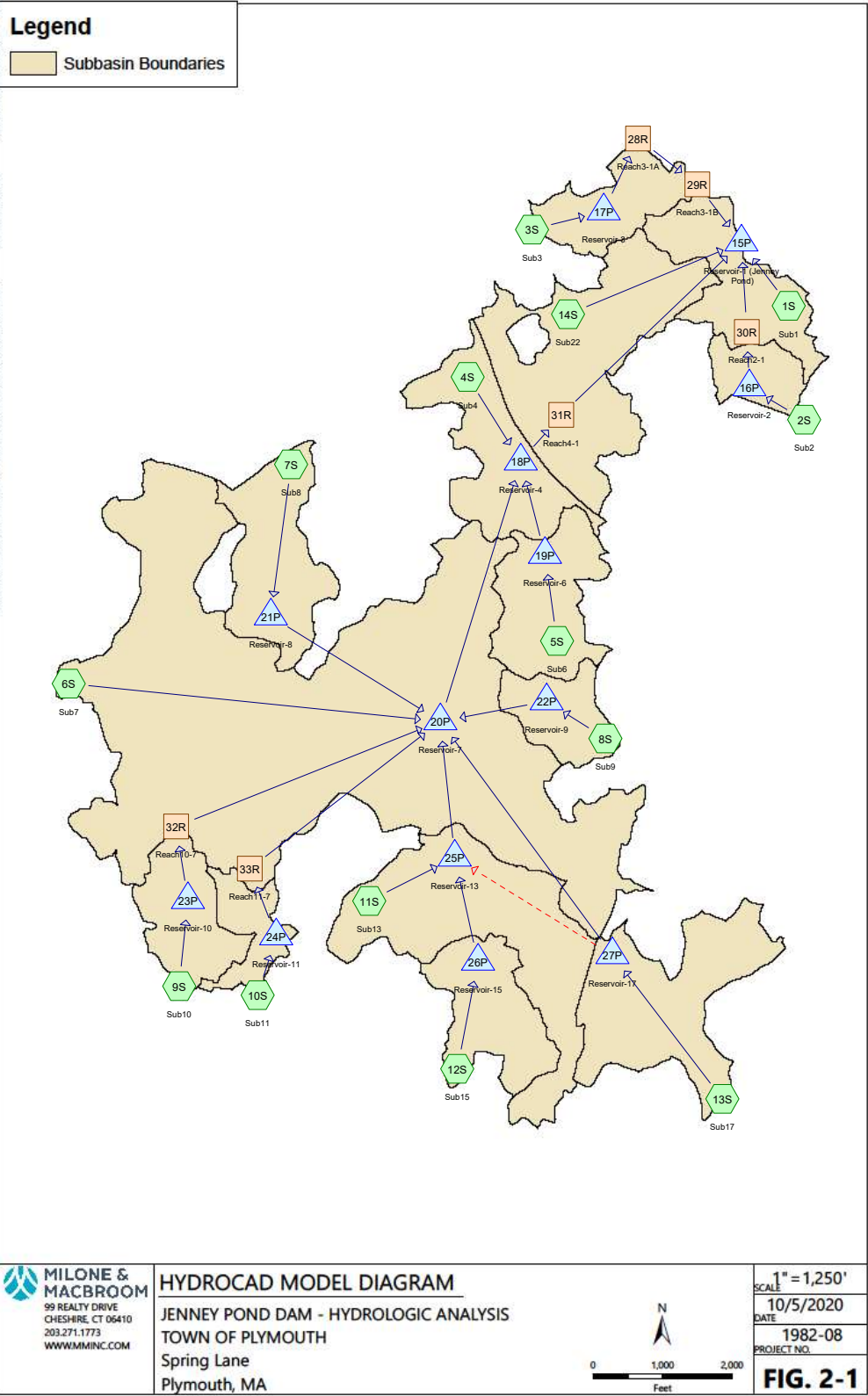
2.1 Hydrologic Model

The hydrologic model for Town Brook and Jenney Pond Dam was developed using the *HydroCAD Stormwater Modeling* program (version 10.0). The model is a TR-20 type rainfall-runoff model (SCS 1992), which calculates surface runoff according to the Soil Conservation Service (SCS) Curve Number (CN) method and routes flows downstream to a point of interest. There are three basic components to the model: subbasin nodes, reach nodes, and pond/reservoir nodes. The Town Brook watershed area was divided up into 14 subbasin nodes, 13 pond/reservoir nodes, and 6 reach nodes. A diagram of the model, showing the components and how they are linked, is presented in Figure 2-1. The HydroCAD model report, containing the results from the 100-year flood simulation, is presented in Appendix A.

2.1.1 Subbasin Nodes

The subbasin nodes represent various sections of the watershed area. Runoff calculations were performed for each subbasin using the SCS-CN method, which utilizes the SCS Unit Hydrograph. The method requires various input parameters, including the watershed area, CN value, and time of concentration (T_c). The subbasins were delineated in *ArcGIS* using contours developed from 3-meter resolution Light Detection and Ranging (LiDAR) data and updated based on field observations. CN values were primarily obtained from Table 2-2 in *Technical Release 55* (TR-55) (USDA-NRCS 1986) and are based on mapped hydrologic soil groups (HSGs) and landcover data. For landcover types that do not appear in TR-55, such as wetlands and cranberry bogs, CN values were chosen based on recommendations from the draft publication *Hydrologic Soil-Cover Complexes in the National Engineering Handbook* (NRCS-USDA 2017). CN values for wetlands and cranberry bogs may vary significantly depending on the water levels in these areas at the time of a storm event. A single, area-weighted CN value was then calculated for each of the subbasins. The T_c for each subbasin was calculated using the velocity method (NRCS-USDA 2010). Various input parameters for the subbasin model nodes are presented in Table 2-1.

Document Path: C:\p\proj\1982-08 Jenney Pond Dam\GIS\MapDocs\HydroCAD Model Background.mxd Date Saved: 10/5/2020 Copyright Milone & MacBroom, Inc. - 2020



Routing Diagram for TownBrookHydrology_1982-08_ExCon
Prepared by Milone & MacBroom, Inc., Printed 10/5/2020
HydroCAD® 10.00-25 s/n 11053 © 2019 HydroCAD Software Solutions LLC

TABLE 2-1
Subbasin Nodes – Model Input Parameters

Subbasin Node	Drainage Area (acres)	Weighted CN	Time of Concentration (min)
Sub1	64.8	57	13.9
Sub2	25.1	45	15.7
Sub3	43.2	60	25.6
Sub4	72.2	59	42.1
Sub6	65.1	53	20.1
Sub7	579.7	73	39.0
Sub8	73.1	50	58.8
Sub9	36.6	44	21.6
Sub10	50.5	54	20.2
Sub11	26.9	55	20.1
Sub13	137.3	65	28.1
Sub15	59.4	58	30.9
Sub17	101.7	53	37.3
Sub22	137.4	54	31.7

2.1.2 Pond/Reservoir nodes

The Town Brook watershed includes many different waterbodies, including kettle ponds, wetlands, cranberry bogs, and ponds. Some of these waterbodies, such as Little Pond which is immediately north of Billington Sea, are hydrologically isolated and do not drain downstream to Town Brook. Others are highly interconnected due to a network of man-made channels and culverts used to control water levels. Additionally, flows between cranberry bogs and some ponds are controlled by pumping water from one waterbody to another. In order to incorporate the waterbodies into the *HydroCAD* model, a variety of simplifying assumptions were made. Hydrologically connected waterbodies within the Town Brook watershed were modeled using 13 reservoir nodes. Groups of waterbodies that were highly interconnected and could be assumed to maintain a similar water level were incorporated into individual nodes. This helped to significantly reduce the number of reservoir nodes and the data requirements for the model.

Input parameters for each node include storage volumes and outlet information (see Table 2-2). Volumes were calculated from elevation-area curves, which were primarily calculated using LiDAR-based contours. No bathymetric information was available for the waterbodies except for Billington Sea and Jenney Pond, for which average depths were obtained from local officials. Because LiDAR is ineffective at penetrating water, elevation-area curves primarily begin at water surface elevations at the time the LiDAR was collected. Assumptions about the depth of various waterbodies were only made if outlets could not be incorporated into a node without lowering the initial elevation of storage. For example, if a pond has a 3-foot-diameter outlet culvert and the elevation-area curve for the pond starts 2 feet below the top elevation of the road, the depth of the pond was assumed to be 1 foot so that the minimum pond elevation is at or below the inlet elevation of the outlet.

TABLE 2-2
Reservoir Nodes – Model Input Parameters

Reservoir Node	Name/Description	Primary Outlet	Emergency Spillway
Reservoir-1	Jenney Pond	5.5' by 7' concrete arch culvert and 24" reinforced concrete pipe culvert	Top of Dam/Roadway (Elev. = 25.3')
Reservoir-2	Unnamed Pond	Channel outlet modeled as weir	N/A
Reservoir-3	Unnamed Pond	36" corrugated metal pipe culvert	Top of Roadway (Elev. = 47.6')
Reservoir-4	Morton Pond	14.1' by 9.5' concrete box culvert	Top of Roadway (Elev. = 89.0')
Reservoir-6	Cranberry Bogs	4.3' by 3.4' concrete box culvert	Top of Roadway (Elev. = 82.6')
Reservoir-7	Billington Sea	6.9' by 6.0' concrete box culvert	Top of Roadway (Elev. = 84.5')
Reservoir-8	Wetland	24" corrugated metal pipe culvert	Top of Roadway (Elev. = 84.2')
Reservoir-9	Wetland/Abandoned Cranberry Bog	24" corrugated metal pipe culvert	Top of Roadway (Elev. = 82.5')
Reservoir-10	Cranberry Bogs	24" reinforced concrete pipe culvert	Top of Roadway (Elev. = 90.8')
Reservoir-11	Unnamed Pond and Wetland	24" corrugated metal pipe culvert	Top of Roadway (Elev. = 89.2')
Reservoir-13	Briggs Reservoir and Cranberry Bogs	4.0' by 3.0' elliptical corrugated metal pipe culvert	Top of Roadway (Elev. = 86.4')
Reservoir-15	Cranberry Bogs	24" corrugated plastic pipe culvert	Top of Roadway (Elev. = 89.3')
Reservoir-17	Cranberry Bogs and Unnamed Pond	36" corrugated metal pipe culvert	Top of Roadway (Elev. = 85.6')

Outlet information for each reservoir node was obtained from 3-meter resolution LiDAR data, field measurements, and the hydraulic model used in development of the FEMA effective FIS (FIS #25023CV001C) for Town Brook. If outlet invert elevations could not be measured in the field or were not available in the flood insurance model, the values were estimated based on LiDAR data. Additionally, outlet dimensions for Reservoir-2, -3, -8, and -9 were inaccessible during fieldwork and were therefore estimated based on photographs. Reservoir routing calculations were performed using the dynamic storage-indication method.

2.1.3 Reach Nodes

A total of six reach nodes were used to model the flow of runoff through the various channels connecting waterbodies within the Town Brook watershed. Each reach node was labeled based on the reservoir nodes that it links. For example, Reach 4-1 represents the section of Town Brook that connects Reservoir-4 (Billington Sea) to Reservoir-1 (Jenney Pond). Reach input parameters, including channel length and slope, were calculated using LiDAR data and are presented in Table 2-3. Channel dimensions for all reaches were also estimated using LiDAR data except Reach 4-1, for which channel dimensions were available from as-built drawings from several dam removal projects that have been performed along Town Brook since 2002. Reach routing calculations were performed using the dynamic storage-indication method.

TABLE 2-3
Reach Nodes – Model Input Parameters

Reach Node	Channel Length (ft)	Channel Slope (ft/ft)	Manning's n Value
Reach 2-1	636	0.030	0.045
Reach 3-1A	365	0.010	0.045
Reach 3-1B	590	0.028	0.013
Reach 4-1	4,473	0.012	0.045
Reach 10-7	370	0.024	0.045
Reach 11-7	1,244	0.007	0.045

2.1.4 Rainfall Data

Rainfall data for the Town Brook hydrologic model was obtained from the precipitation frequency data from National Oceanic and Atmospheric Administration (NOAA) Atlas 14 (Station ID: 19-6486). For Plymouth, Massachusetts, the estimated rainfall depth for the 24-hour duration, 100-year return period event is 7.49 inches. This event was selected because Jenney Pond Dam is required to pass the 100-year flood event with 1 foot of freeboard according to regulations for Significant Hazard dams. Rainfall depths for the 10-, 50-, and 500-year return period events, presented in Table 2-4, were also modeled for comparison purposes. The rainfall distribution for each event was modeled according to the SCS Type III rainfall distribution described in TR-55 (USDA-NRCS 1986).

TABLE 2-4
Precipitation Frequency Estimates for Plymouth-Kingston, Massachusetts
NOAA Atlas 14

Return Period	24-Hr Rainfall Depth
10-Year	5.00
50-Year	6.72
100-Year	7.49
500-Year	9.56

2.1.5 Baseflow and Initial Conditions

Baseflow conditions within the Town Brook watershed are controlled by groundwater levels and can vary seasonally based on infiltration. Due to the complexity of the Town Brook watershed and lack of available groundwater and/or USGS gauge data, baseflow conditions could not be estimated for each of the subbasins and reservoirs within the watershed. However, several flow measurements were taken downstream of Jenney Pond Dam between June and August 2020. These flow values provide a measure of the total baseflow for Town Brook during this period but could not be used to determine baseflows for individual subbasins and reservoirs upstream of Jenney Pond. The average of the flow measurements, which was approximately 25 cubic feet per second (CFS), was used as the constant baseflow for Reservoir-7 (i.e., Billington Sea). This waterbody is most likely the primary contributor of baseflow to Town Brook due to its size and because the majority of the watershed drains into it. All other subbasin and reservoir nodes were assumed to have zero baseflow.

Initial water surface elevations (WSEs) for most of the reservoirs, except Reservoir-1, -4, and -7, were set at the invert elevations of their primary outlets unless the tailwater elevation was estimated to be higher. This produced a baseline condition to which various alternative conditions could be compared. The actual water level in each waterbody could be significantly different depending on the groundwater level, if stoplogs are being used to increase the WSE, or if water is being pumped from one waterbody to another. The initial WSEs in Reservoir-1, -4, and -7 were adjusted to maintain the baseflow condition along Town Brook. For example, the initial WSE for Reservoir-7 was set to 80.27 feet so that the baseflow entering the reservoir is equal to the outflow. The same was done for Reservoir-1 (Jenney Pond) and Reservoir-4.

2.1.6 Dam Breach Modeling

Three different flooding scenarios were evaluated as part of the Jenney Pond dam breach analysis: (1) a "fair-weather" dam breach scenario, (2) a "rainy-day" dam breach scenario, and (3) a "rainy-day" scenario without a dam breach. For the fair-weather breach scenario, the dam breach is assumed to occur spontaneously under normal baseflow conditions without the influence of a storm event. Under these conditions, breaches of earthen dams usually occur as piping failures where seepage through the dam leads to destabilization of the fill material, internal erosion, and the eventual failure of the structure. Rainy-day dam breaches occur during storm events and are usually modeled as overtopping failures where flood flows exceed the capacity of a dam's outlets and spillways, overtop the dam, and cause erosion of the dam crest and/or downstream face of the structure, eventually leading to a head cut and complete structural failure. The spillway design flood (SDF) is modeled as the associated storm event for the rainy-day breach scenario because Massachusetts dam safety regulations require dams to have the capacity to pass the SDF with a specific amount of freeboard. As an intermediate size, significant hazard structure, Jenney Pond Dam has an SDF equal to the peak discharge from the 100-year storm event for the Town Brook watershed (302 CMR 10).

The third scenario, which simulates the rainy-day storm event without a dam breach, was modeled for comparison purposes. When performing a dam breach analysis, the flooding

resulting from the rainy-day breach is compared to that which results from the rainy-day, no-breach scenario in order to evaluate the incremental increase in flooding related to the dam breach. Under certain conditions, the flooding caused by a breach may be insignificant compared to the flooding caused by the rainy-day storm event or vice versa.

The discharge hydrograph for each flood scenario was developed using the hydrologic model described previously. Dam breach parameters, including the type, dimensions, and timing of a breach, were used to define the characteristics of the breach in the model. Initial estimates for the parameters were calculated using empirical formulas that relate the parameters to various dimensions of the dam and its impoundment. These values, which are presented in Table 2-5, were then modified to better present site-specific characteristics of Jenney Pond Dam.

TABLE 2-5
Dam Breach Parameters for Jenney Pond Dam

Breach Parameters	Fair-Weather Scenario	Rainy-Day Scenario
Initial Reservoir Water Surface Elevations (ft)	21.9	26.0
Failure Mode	Piping	Overtopping
Breach Bottom Elevation (ft)	15.0	15.0
Breach Height (ft)	10.3	10.3
Side Slopes (H:V)	1:1	1:1
Mean Width (ft)	30.9	30.9
Bottom Width (ft)	20.6	20.6
Formation Time (hr)	1.0	1.0

2.2 Hydraulic Model

Downstream flooding caused by the potential failure of Jenney Pond Dam was modeled using a 2D, unsteady-state hydraulic model that was developed using HEC-RAS. The model encompasses both Town Brook and its surrounding floodplain, extending approximately 2,000 feet downstream of the dam to where Town Brook flows into Plymouth Harbor. Unlike the more commonly used one-dimensional models, the 2D model simulates the flow of water through a gridded mesh of cells rather than linearly between cross sections. The water surface elevation in each cell and the flow between adjacent cells are calculated iteratively for each time step of a flood hydrograph. Flow is computed based on the St. Venant shallow water approximations of the Navier-Stokes equations for fluid flow in three dimensions as numerically discretized by HEC. Two-dimensional modeling can be advantageous for flood simulations, especially when modeling complex, nonlinear flow paths, because it allows water surface elevations to vary spatially and allows for a more detailed assessment of flooding. Additionally, unsteady-state models allow for simulation of an entire flood hydrograph rather than a single peak discharge. Diagrams showing the hydraulic model extent, 2D mesh, model terrain, and flood hydrographs are presented in Appendix B.

Various structures downstream of the dam, including the Plimoth Grist Mill building, downstream spillway, and four stream crossings were incorporated into the hydraulic model in order to

determine how the structures influence flooding. Input parameters for each of the structures are presented in Tables 2-6 and 2-7. During a dam failure, the location of the grist mill building immediately downstream of the dam has a significant impact on how the flood wave travels downstream. Flows must either pass through the opening underneath the building, around the sides of the building, or through the building, if the flooding depths are significant. In the hydraulic model, the grist mill was simulated as a solid obstruction with a culvert at its base.

TABLE 2-6
Bridge and Culvert Input Parameters for the
Jenney Pond Dam Hydraulic Model

Input Parameters	Opening Under the Grist Mill	Market St Bridge	Main St Ext Bridge	Pedestrian Bridge	Water St Bridge
Opening Type	Box Culvert	Arch Culvert	Arch Culvert	Box Culvert	Box Culvert
Span (ft)	20.0	30.0	38.2	24.1	15.0
Rise (ft)	2.5	19.0	21.0	3.0	4.3
Culvert Length (ft)	15.0	30.0	36.0	9.0	39.2
Entrance Loss Coefficient	0.5	0.5	0.5	0.4	0.5
Exit Loss Coefficient	1.0	1.0	1.0	1.0	1.0
Inlet Invert Elevation (ft)	11.5	8.3	5.85	4.2	3.7
Outlet Invert Elevation (ft)	11.5	8.3	5.7	4.2	1.1
Manning's n for Bottom	0.04	0.05	0.05	0.04	0.04
Manning's n for Top	0.02	0.013	0.013	0.024	0.024

TABLE 2-7
Bridge Deck and Spillway Input Parameters for the
Jenney Pond Dam Hydraulic Model

Input Parameters	Spillway Downstream of Grist Mill	Market St Bridge	Main St Ext Bridge	Pedestrian Bridge	Water St Bridge
Weir Coefficient	2.6	2.6	2.6	2.9	2.6
Bridge Deck/Weir Width (ft)	1.5	50.0	55.0	9.0	38.0
Crest Elevation (ft)	12.43	Varies	Varies	Varies	Varies

In order to assess the flooding under worst-case conditions, the downstream boundary condition was configured to represent the water surface elevation of Plymouth Harbor during high tide. The hydrographs for the three flooding scenarios from the hydrologic model were used as input for the hydraulic model. The resulting flooding extents, water surface elevations, and flow velocities produced by the hydraulic model were evaluated to determine the potential consequences of the various dam breach scenarios.

3.0 HYDROLOGIC MODEL RESULTS AND ANALYSIS

For the 24-hour duration, 100-year return period storm event, the model produces a peak discharge of 245 CFS at Jenney Pond Dam. This results in a peak water surface elevation of 22.4 feet in Jenney Pond, which is approximately 2.9 feet below the top of the dam elevation of 25.3 feet. The capacity of the dam outlets is approximately 410 CFS when there are no stoplogs in place. When considering this result, one should remember that the initial water surface in Jenney Pond was set based on the assumption that the stoplogs at the outlets were removed and the pond had drained down prior to the storm event. In the past, when a large storm event has been forecasted, the Town of Plymouth has removed the logs to drain the pond and prevent the structure from being overtopped. When the stoplogs are in place, the capacity of the outlet is significantly reduced. For the same storm event, the dam would be overtopped by approximately 0.7 feet if the stoplogs were installed as they are currently (i.e., set to a top elevation of approximately 21 feet or 1.0 foot below the top of the culvert). The stoplogs reduce the discharge capacity of the dam's outlets to approximately 70 CFS.

The top elevation of the stoplogs at the primary outlet was varied in the model in order to determine what configuration would allow Jenney Pond Dam to pass the 100-year flood. Table 3-1 presents the resulting peak discharges and pond water surface elevations when the stoplogs are set at different elevations. If the stoplogs were lowered from an elevation of 21.0 feet to 19.7 feet, the dam can just barely pass the 100-year flood without being overtopped. By lowering the stoplogs by another 0.9 feet to a top elevation of 18.8 feet, the dam passes the 100-year flood with at least a foot of freeboard. The model results show that the stoplogs' elevation significantly affects the capacity of the dam but could be lowered to pass the 100-year flood with a foot of freeboard.

TABLE 3-1
Peak Discharge and Water Surface Elevation for Jenney Pond Dam
Depending on Stoplog Configuration

Stoplog Top Elevation (ft)	Discharge (CFS)	Water Surface Elevation (ft)
16.6 (No Stoplogs)	244	22.4
21.0	188	26.0
19.7	155	25.3
18.8	189	24.3

CFS = cubic feet per second

In order to validate the results, the model was run for a large storm event that occurred on July 12, 2019, and produced approximately 5.33 inches of rain in less than 24 hours according to the rain gauge data from the Plymouth Municipal Airport. Even though the stoplogs were in place at the Jenney Pond Dam outlet, the water level in the pond only reached an elevation of approximately 24.5 feet (about 1 foot below the top of dam) based on a photo taken the day of the event (see Figure 3-1). If a SCS Type-III rainfall distribution is used to model the July 12 rain event, the resulting water surface elevation in Jenney Pond is approximately 24.8 feet. The minor discrepancy between these values suggests that the model is effectively estimating runoff flows from the Town Brook watershed.



FIGURE 3-1
Photo of Jenney Pond Dam during a Large Rainstorm
Taken at 8:03 a.m. on July 12, 2019

In comparison to the estimated peak flows from the FEMA FIS, the modeled 50-, 100-, and 500-year peak flows are all slightly higher while the 10-year peak flow is lower (see Table 3-2). The variation between the model and FEMA FIS may be due to several differences between FEMA's model and the model used for this study, including watershed area, changes in landcover, and the inclusion of the stoplogs at the outlet of Jenney Pond. One should note that the watershed area defined in the FEMA FIS is approximately 1.6 square miles larger than the modeled watershed area in this study.

TABLE 3-2
Peak Flow Comparison – Jenney Pond Dam

Flood Event	FEMA FIS Flows (CFS)	Town Brook Model Flows (CFS)
10-Year	132	114
50-Year	174	205
100-Year	202	244
500-Year	255	341

CFS = cubic feet per second

Another way to assess the accuracy of the model is to compare the flow per unit area, calculated by dividing a flow by the watershed area, for the modeled watershed to a gauging station along a nearby waterway. USGS Gauge 01105870 along the Jones River in Kingston, Massachusetts, was selected for this comparison because it is the closest stream gauge to Jenney Pond Dam and has similar watershed characteristics, including high infiltration rates and a large storage capacity, to the Town Brook watershed. A *Bulletin-17C* gauge analysis was performed for the gauge to determine peak flood flows. For the 100-year return period event, the Jones River produces a flow per unit area of 33 cubic feet per second per square mile (CFSM) (see Table 3-2). This means that 33 CFS is produced for each square mile of the Jones River watershed on average.

TABLE 3-3
Comparison of Flow per Unit Area

Source	Flow per Unit Area (CFSM)
Town Brook Model (No Stoplogs)	105
Town Brook Model (Stoplogs in Place)	81
FEMA FIS	52
Jones River – USGS Gauge Analysis	33

CFSM = Cubic Feet per Second per Square Mile

For the FEMA FIS, the flow per unit area was approximately 52 CFSM for the 100-year flood, which is fairly close to the estimate for the Jones River watershed. In contrast, the Town Brook model produces a flow per unit area of 105 CFSM for the 100-year event, which is significantly higher. However, the peak discharge from Jenney Pond is highly dependent on the elevation of the stoplogs at the primary outlet. If the stoplogs are in place, as they are currently, the peak discharge for Jenney Pond Dam decreases to approximately 188 CFS and the flow per unit area decreases to 81 CFSM. The flow per unit area comparison may not be a reasonable comparison due to the effects of stoplogs at the Jenney Pond Dam outlets and the presence of other flow control structures throughout the Town Brook Watershed.

4.0 DAM BREACH RESULTS AND ANALYSIS

As outlined in Section 2.1.6, three dam breach scenarios were modeled: a fair-weather breach, which assumes that Jenney Pond Dam fails during normal baseflow conditions independent of a storm event; a rainy-day breach, which assumes that the dam fails when the pond reaches its maximum elevation during the spillway design flood (i.e., the 100-year storm event); and a rainy-day no-breach scenario, which is used for comparison as a baseline of the expected downstream flooding during the spillway design flood. One should note that during all three scenarios the stoplogs that control the water surface elevation in Jenney Pond were assumed to be installed to a top elevation of 21.0 feet. Inundation maps were developed from the results of the 2D hydraulic model to evaluate potential hazards and assess the consequences of a breach. The

depth of flooding, flow velocities, and number of affected properties were considered when quantifying downstream hazards.

The peak discharge and water surface elevation for Jenney Pond during each flooding scenario are presented in Table 4-1. At 808 CFS, the peak discharge for the rainy-day dam breach scenario is over two and half times larger than the peak discharge for the fair-weather breach and over four times larger than that of the rainy-day, no-breach scenario. This is primarily due to volume of water within the reservoir prior to dam failure. Many years of accumulated sediment within the reservoir have significantly reduced storage volume within the reservoir to only 7.3 acre-feet under baseflow conditions, limiting the amount of water that can be discharged downstream during a fair-weather breach. During the 100-year storm event, the reservoir storage increases to 33.6 acre-feet, creating a much higher peak discharge for the rainy-day dam breach scenario.

TABLE 4-1
Peak Discharge and Water Surface Elevation for Jenney Pond Dam
Depending on Stoplog Configuration

Flooding Scenario	Discharge (CFS)	Water Surface Elevation (ft)
Fair-Weather Breach	294	21.9
Rainy-Day (SDF) – No Breach	188	26.0
Rainy-Day Dam Breach	808	26.0

CFS = cubic feet per second

During the fair-weather dam breach scenario (see Figure 4-1), the extent and severity of flooding along Town Brook are relatively minimal. The only building that experiences flooding is the Plimoth Grist Mill, which crosses over Town Brook immediately downstream of Jenney Pond Dam. During the dam breach, the flood flows are constricted by the opening underneath the mill building causing the water surface to rise to a peak elevation of approximately 16.1 feet. With a first-floor elevation of approximately 15.2 feet, the building has just under a foot of flooding. Downstream of the mill, the breach leads to some minor flooding of the pedestrian bridge and foot paths in the Brewster Gardens park but does not impact any other structures.

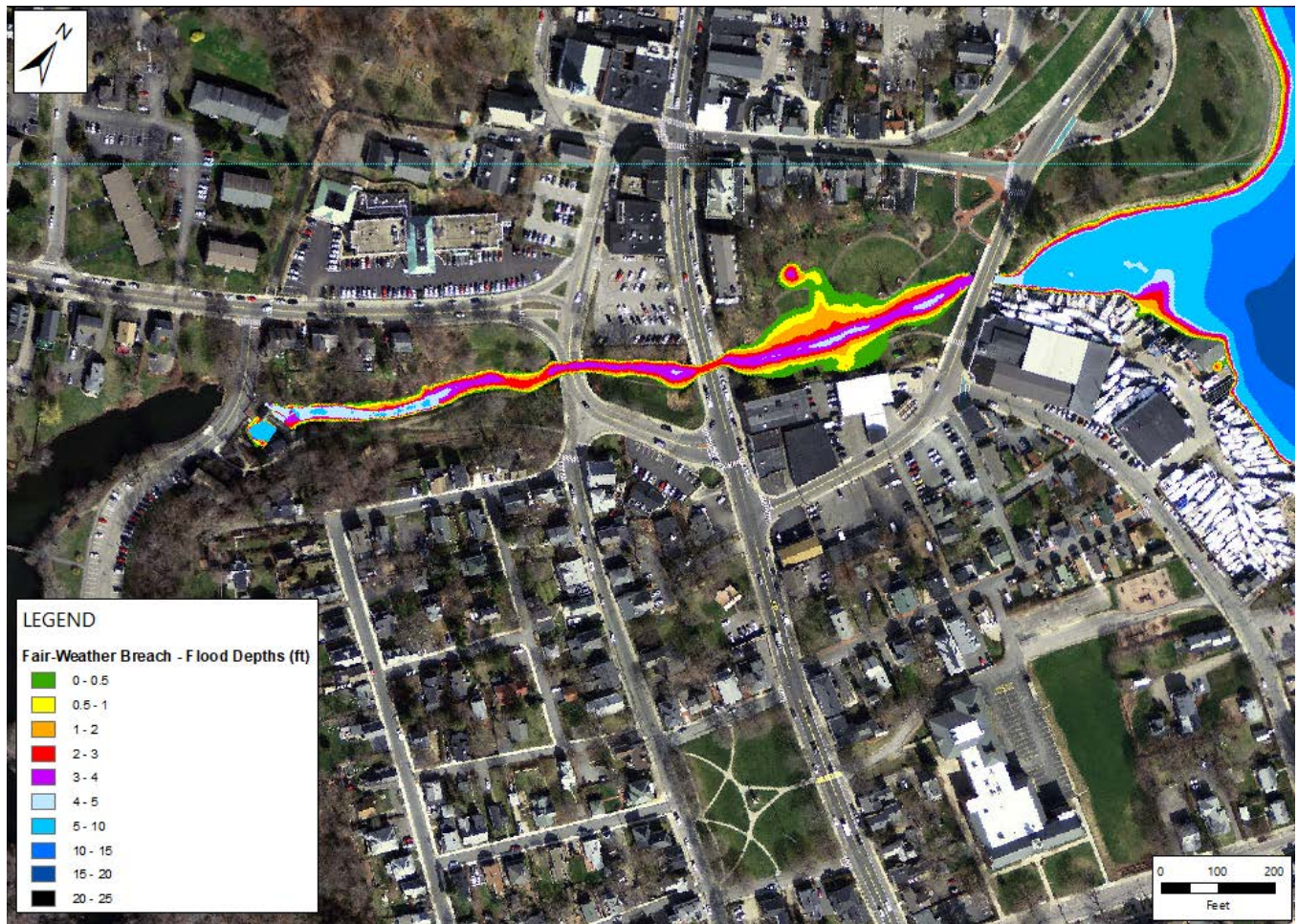


FIGURE 4-1
Fair-Weather Dam Breach Scenario – Flooding Depths

The rainy-day dam breach causes significantly more flooding than the fair-weather breach. Approximately 10 buildings experience minor flooding due to the breach, with the majority of the flooding occurring along Water Street, Union Street, Watercure Street, and Freedom Street due to the channel constriction created by the Water Street culvert (see Figure 4-2). The Plimoth Grist Mill experiences severe flooding due to the breach with flood depths as high as 6.6 feet above the first-floor elevation. As in the fair-weather breach scenario, the pedestrian bridge and foot paths in the Brewster Gardens park are also inundated. Figure 4-3 presents the flood depth grid map for the rainy-day, no breach scenario and the inundation extent of the rainy-day dam breach scenario for comparison. Without the dam breach, the 100-year storm event does not cause any significant flooding downstream of Jenney Pond Dam. However, as described in the previous section, Jenney Pond Dam does not have the capacity to pass the 100-year flood if the stoplogs are installed to a top elevation of 21.0 feet at its primary outlet. The dam would be overtopped by approximately 0.7 feet, which could lead to erosion of the dam crest and the downstream face of the structure and damage Spring Lane, which runs along its crest. For comparison, Table 4-2 provides the peak water surface elevations for each flooding scenario at the stream crossings downstream of Jenney Pond Dam.

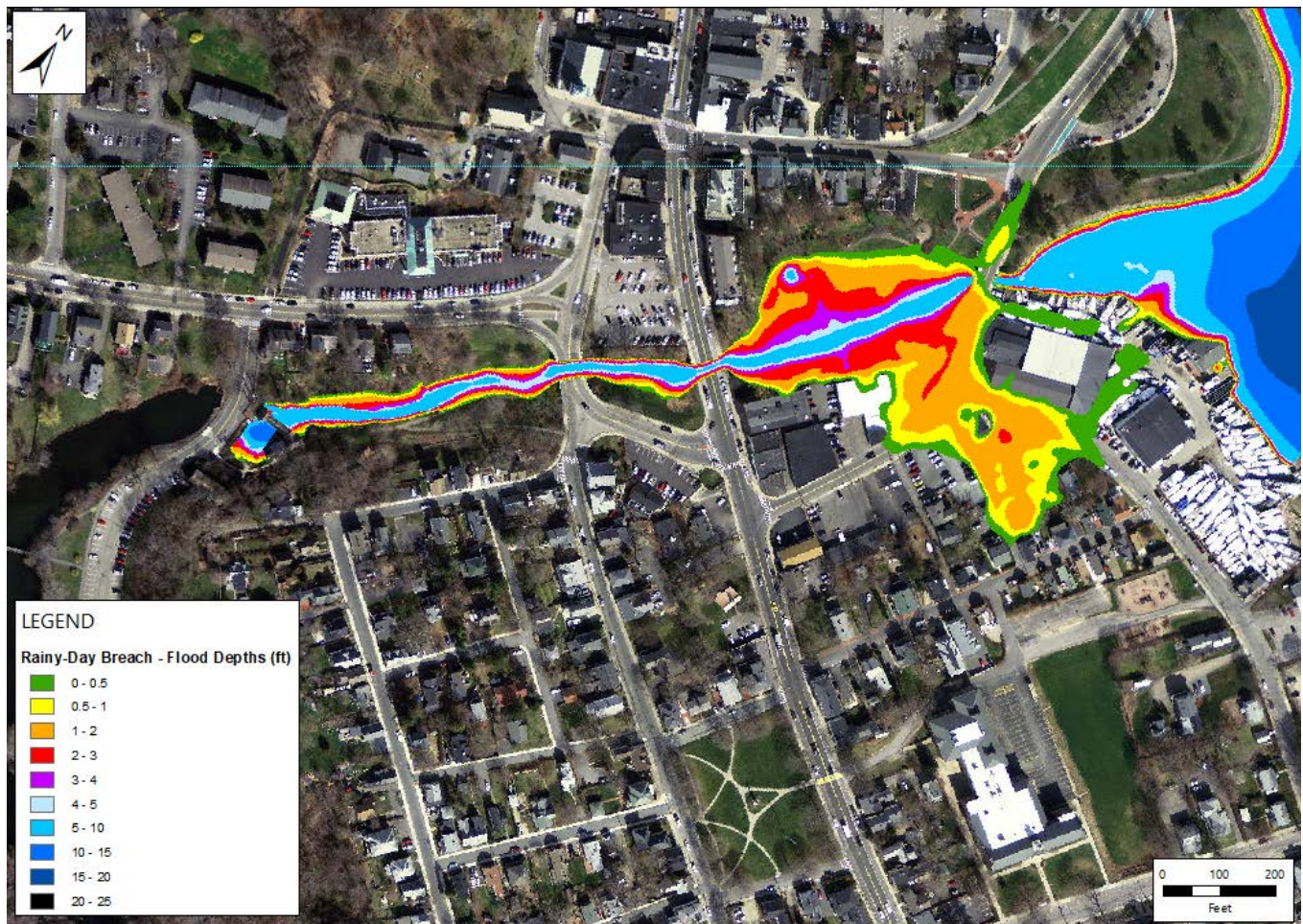


FIGURE 4-2
Rainy-Day Dam Breach Scenario – Flooding Depths

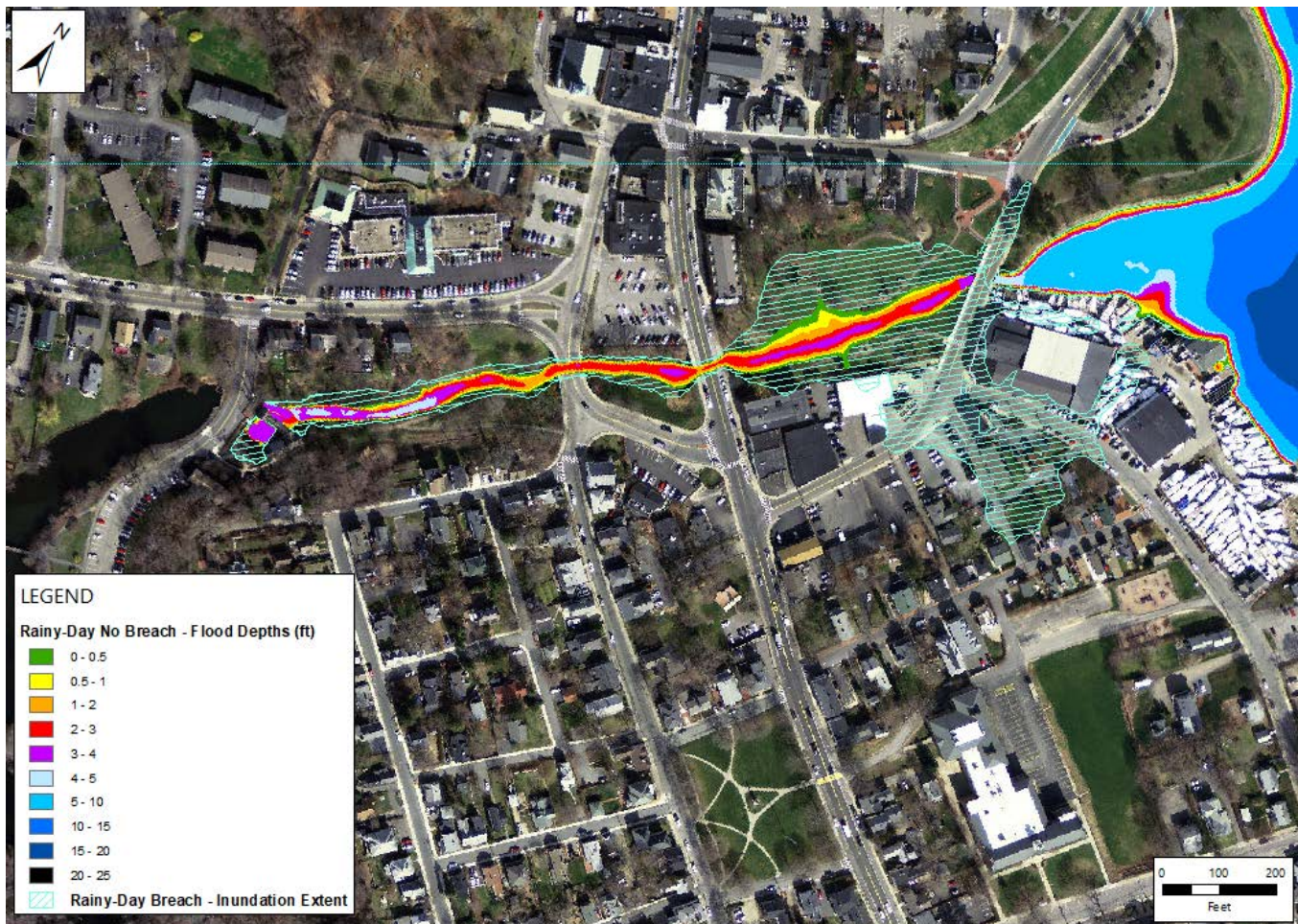


FIGURE 4-3
Rainy-Day No-Breach Scenario – Flooding Depths

TABLE 4-2
Peak Water Surface Elevations at
Stream Crossings Downstream of Jenney Pond Dam

Structure	Roadway Elevation (ft)	Water Surface Elevation (ft)		
		Rainy-Day Dam Breach	Rainy-Day - No Breach	Fair-Weather Dam Breach
Grist Mill Building	15.2 (First-floor elev.)	21.8	14.8	16.1
Market Street Bridge	30	14.2	11	11.7
Main Street Ext. Bridge	24.6	11.6	8.4	9.1
Pedestrian Bridge	8.8	10.5	7.4	8.3
Water Street Bridge	8.9	10	6.7	7.5

Downstream flooding hazards due to high-flow velocities were also assessed as part of the dam breach analysis. Depending on the depth of flooding, high flow velocities could be dangerous for people sheltering inside buildings. *Technical Memorandum No. 11* (1988), a publication of the U.S. Bureau of Reclamation, provides guidelines for classifying downstream dam breach hazards according to the relationship between flood depth and flow velocity. The guidelines describe three danger zones, which are defined based on the likelihood that potentially fatal conditions may result. If flooding depths and velocities at a specific home are relatively low, the home is considered to be within the low-danger zone because it is unlikely that lives are in jeopardy. When flooding depths and velocities are high, there is a much higher likelihood that conditions could lead to a fatality, and the home is classified as being in the high-danger zone. The third zone is referred to as the judgement zone because one must consider other factors when determining whether there is the potential for fatalities. For example, it is less likely that a flood will cause loss of life if the home being flooded has two floors and the living quarters are on the second floor. However, residents of a one-story home may have more difficulty escaping the floodwaters.

For the fair-weather breach scenario, the Plimoth Grist Mill is flooded by approximately 0.9 feet of water and is subjected to peak flow velocities of approximately 1.5 feet per second. Under these conditions, the mill building is within the low-danger zone, and loss of life is considered unlikely. For the rainy-day dam breach scenario, the peak flooding depth of 6.6 feet and peak flow velocity of 1.7 feet per second puts the mill building in the high danger zone. All of the other buildings that are impacted, including four businesses, four single-family homes, and one apartment complex, are within the low-danger zone due to minor flooding depths and low flow velocities. The results of the depth-velocity hazard analysis for the rainy-day dam breach scenario are presented in Figure 4-4.

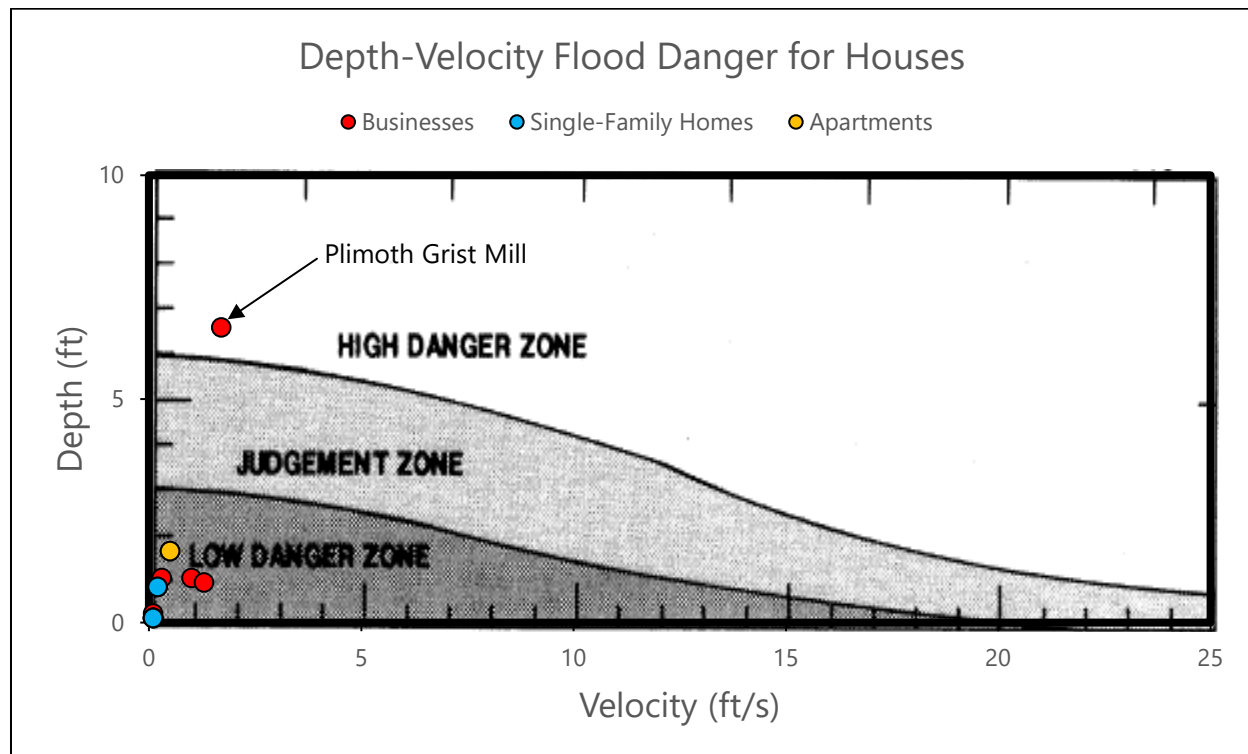


FIGURE 4-4
Flooding Depth and Flow Velocities for Buildings during the Rainy-Day Dam Breach Scenario
Plotted on Figure 2 from ACER Technical Memorandum No. 11

Overall, Jenney Pond Dam appears to satisfy the definition for a significant hazard dam in that it is unlikely to cause loss of life due to a breach event but may cause some damage to homes, industrial/commercial facilities, and public infrastructure. During a fair-weather breach, the Plimoth Grist Mill experiences only minor flooding of less than 1 foot above the first-floor elevation. This is unlikely to cause loss of life even if the breach were to happen without significant warning time. No other buildings are flooded during the fair-weather breach scenario. During a rainy-day dam breach scenario, the flooding of the grist mill building is more severe and is classified within the high danger zone based on water depth and flow velocity. However, people would most likely not be in the building during a significant flood event, such as the 100-year storm, and would most likely have enough time to leave the mill building and seek shelter before the dam fails. The nine other buildings that are impacted during the rainy-day breach scenario experience only minor flooding. The only major stream crossing that is impacted is the Water Street culvert, which would be overtopped during the rainy-day breach scenario. If this were to occur and the stream crossing were to be damaged, there are numerous potential detour routes available. Based on the results of this analysis, MMI recommends that Jenney Pond Dam remains classified as a Significant (Class II) Hazard dam.

It is recommended that the operation and maintenance manual (OMM) for Jenny Pond Dam be modified to require staged evacuation of the Plimoth Grist Mill and the pedestrian bridge and foot paths in the Brewster Gardens park when water first begins to discharge over Spring Lane.

The revised OMM will provide for adequate time to evacuate these downstream structures prior to a potential breach and any loss of life.

5.0 PROPOSED IMPROVEMENTS

An additional outlet is currently being proposed for Jenney Pond Dam to improve fish passage. The structure would have the added benefit of increasing the discharge capacity of the dam. The proposed outlet consists of a 2-foot by 5-foot box culvert which discharges to a constructed, natural-bottom channel that will reconnect with Town Brook approximately 50 feet downstream of the dam. Based on the results of the hydrologic model, installing the proposed fish passage culvert would increase the dam's discharge capacity from 410 CFS to around 510 CFS when stoplogs are not in place. Under these conditions, the dam could pass the 100-year flood event with a peak water surface elevation in Jenney Pond of 22.2 feet, providing 3.1 feet of freeboard.

When the flashboards are in place and set to a top elevation of 21.0 feet, the proposed fish passage culvert increases the discharge capacity of the dam to approximately 170 CFS, which reduces the peak water surface elevation to 25.2 feet so that the dam has approximately 0.1 feet of freeboard during the 100-year flood event. To get a foot of freeboard, the stoplogs would need to be lowered to an elevation of 19.9 feet or less.

Under current conditions, Jenney Pond Dam can only satisfy the discharge and freeboard requirements for a significant hazard dam if the stoplogs are removed or lowered by at least 2.2 feet. With the addition of the proposed fish passage culvert, the model shows that the stoplogs would only have to be lowered by 1.1 foot to allow for the passage of the 100-year flood with a foot of freeboard.

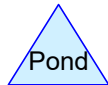
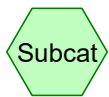
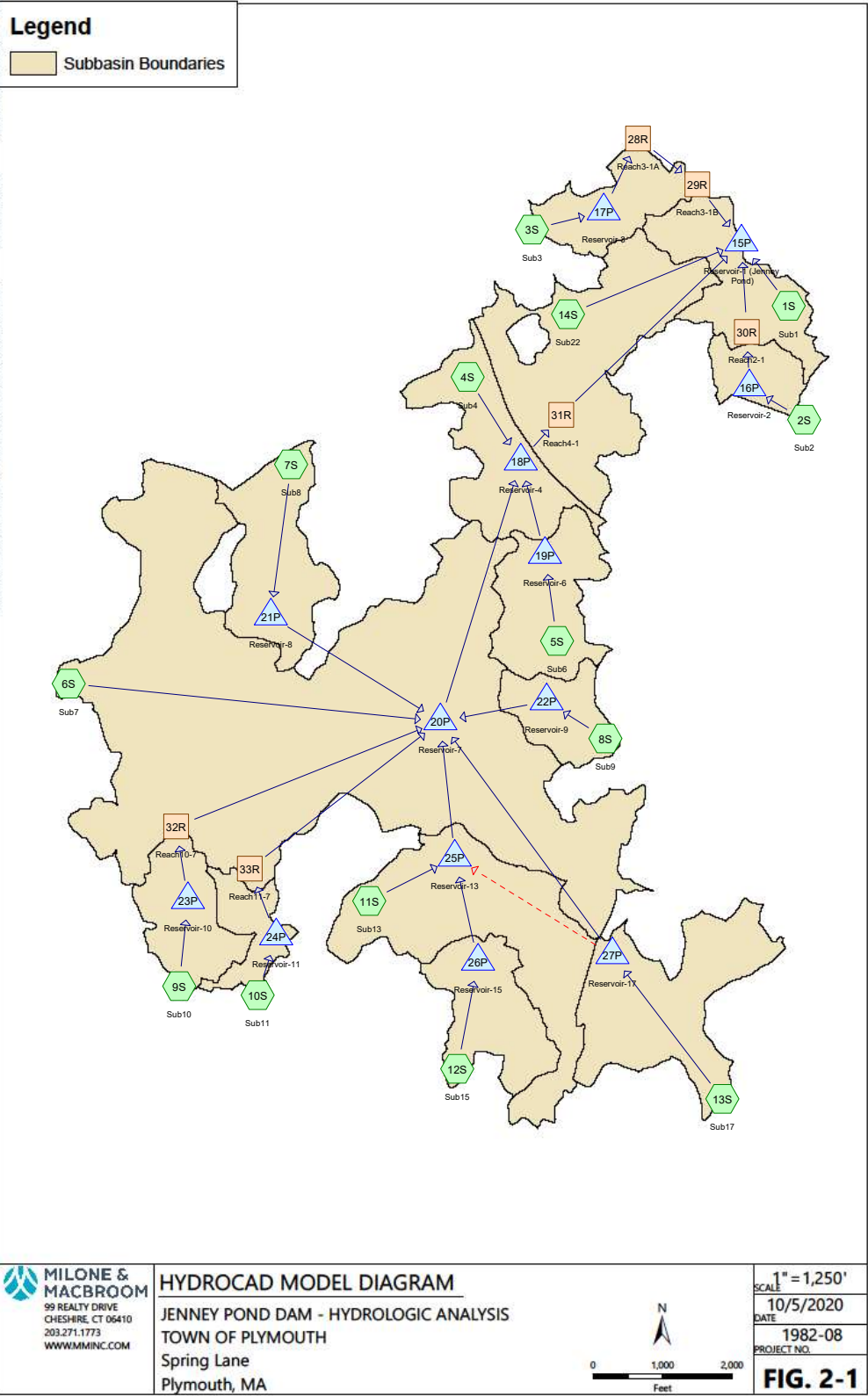
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APPENDIX A

Hydrologic Model Report – 100-Yr Flood Event

Document Path: C:\p\proj\1982-08 Jenney Pond Dam\GIS\MapDocs\HydroCAD Model Background.mxd Date Saved: 10/5/2020 Copyright Milone & Macbroom, Inc. - 2020



Routing Diagram for TownBrookHydrology_1982-08_ExCon
Prepared by {enter your company name here}, Printed 12/1/2020
HydroCAD® 10.00-25 s/n 11053 © 2019 HydroCAD Software Solutions LLC

Summary for Subcatchment 1S: Sub1

Runoff = 149.55 cfs @ 12.20 hrs, Volume= 14.283 af, Depth= 2.65"

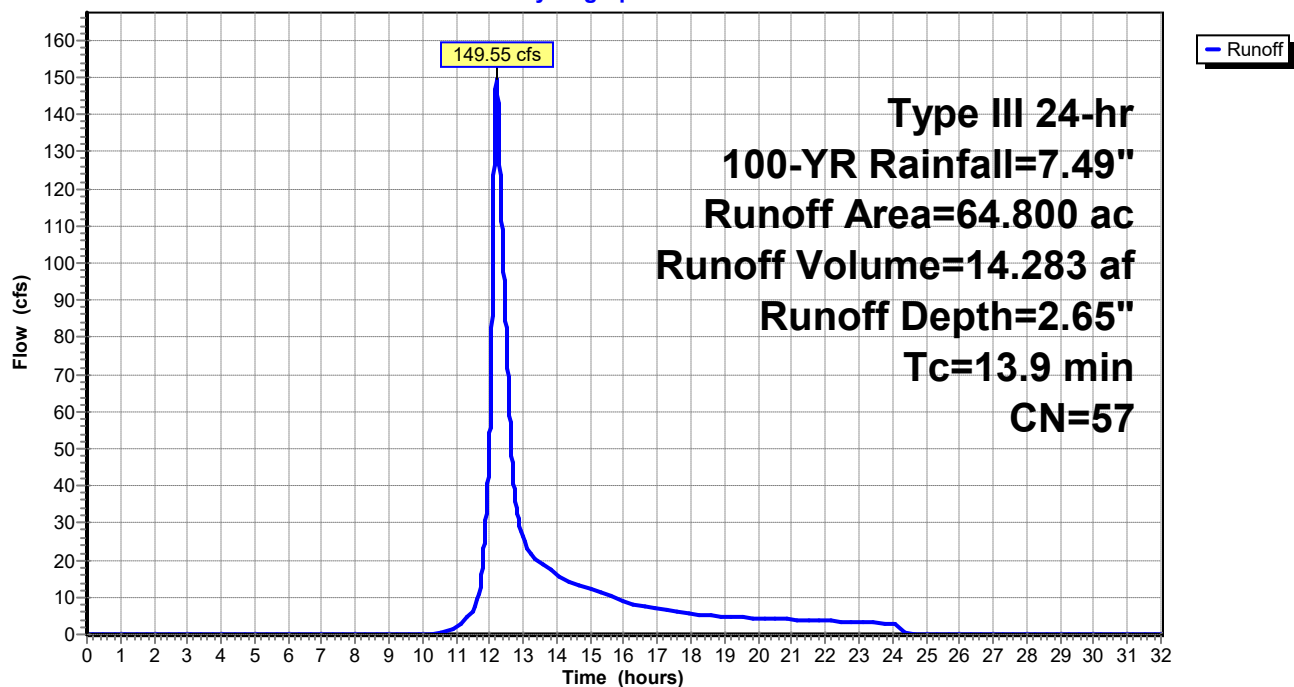
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs
Type III 24-hr 100-YR Rainfall=7.49"

Area (ac)	CN	Description
* 64.800	57	Weighted CN value
64.800		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.9					Direct Entry, Velocity method

Subcatchment 1S: Sub1

Hydrograph



Summary for Subcatchment 2S: Sub2

Runoff = 30.61 cfs @ 12.15 hrs, Volume= 3.084 af, Depth= 1.47"

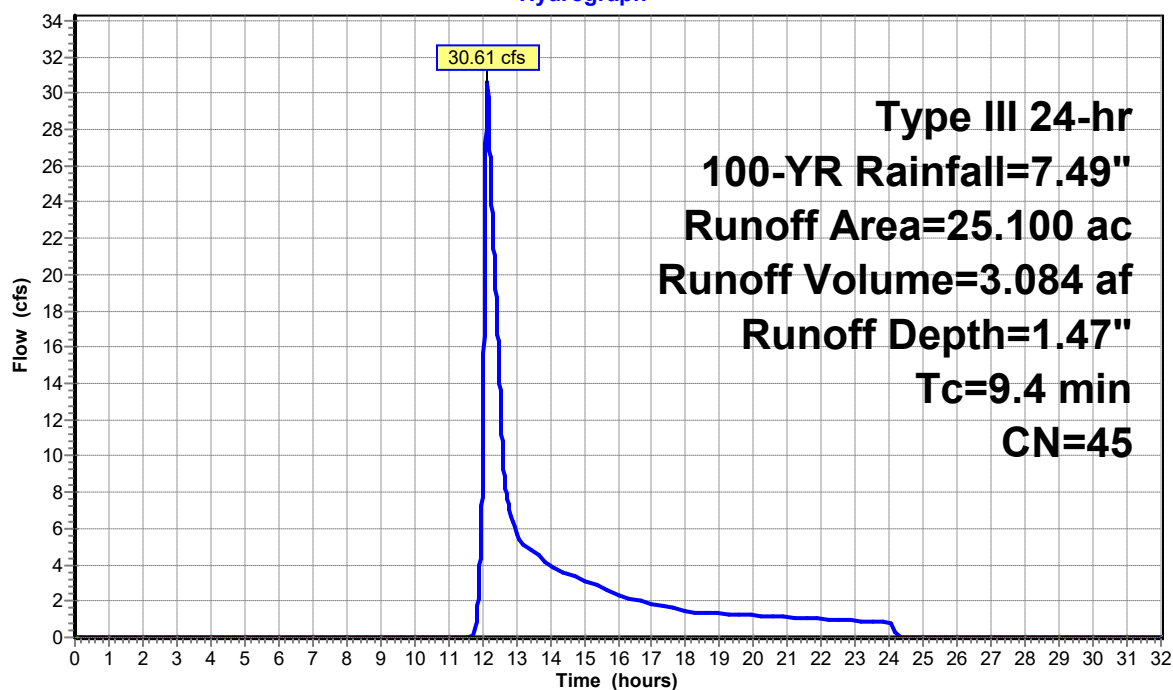
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Type III 24-hr 100-YR Rainfall=7.49"

Area (ac)	CN	Description
* 25.100	45	Weighted CN value
25.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4					Direct Entry, Velocity Method

Subcatchment 2S: Sub2

Hydrograph



Summary for Subcatchment 3S: Sub3

Runoff = 88.67 cfs @ 12.37 hrs, Volume= 10.641 af, Depth= 2.96"

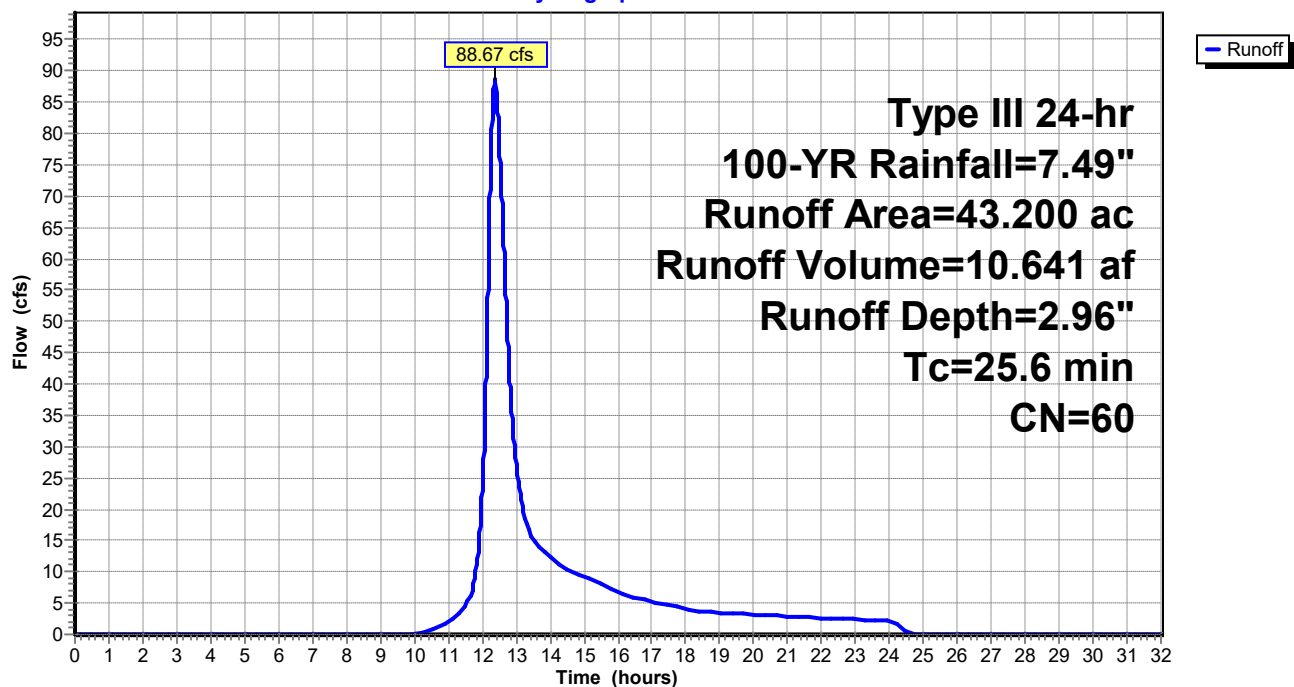
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs
Type III 24-hr 100-YR Rainfall=7.49"

Area (ac)	CN	Description
* 43.200	60	Weighted CN value
43.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.6					Direct Entry, Velocity method

Subcatchment 3S: Sub3

Hydrograph



Summary for Subcatchment 4S: Sub4

Runoff = 112.28 cfs @ 12.59 hrs, Volume= 17.157 af, Depth= 2.85"

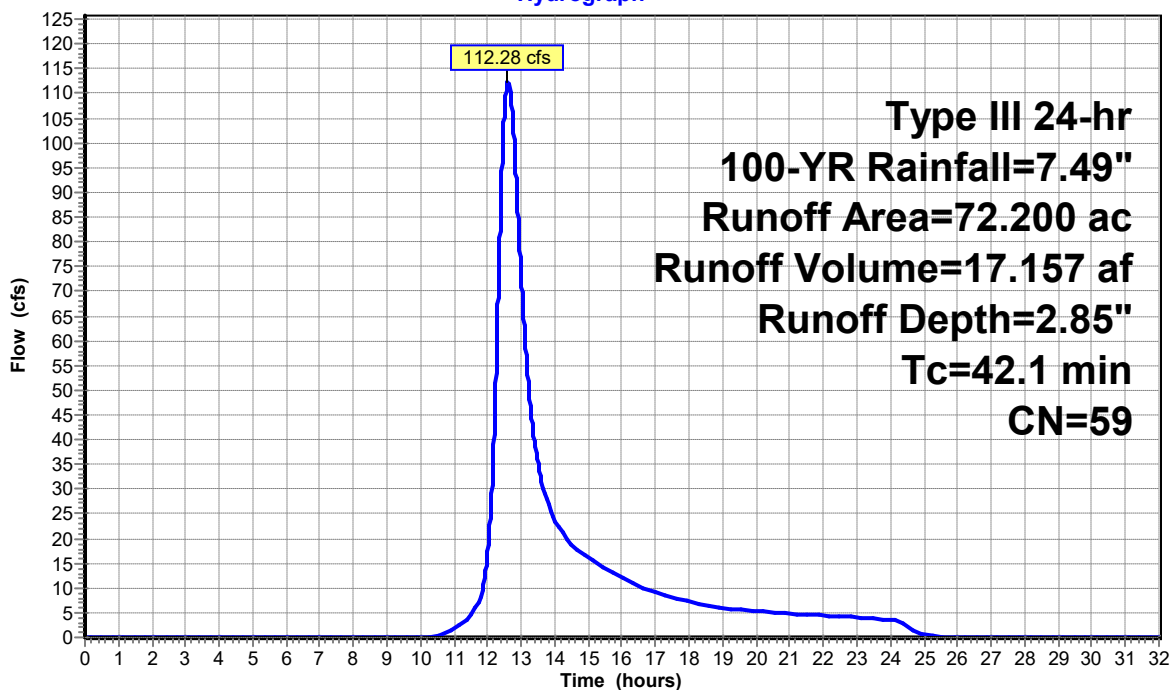
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs
Type III 24-hr 100-YR Rainfall=7.49"

Area (ac)	CN	Description
* 72.200	59	Weighted CN value
72.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
42.1					Direct Entry, Velocity Method

Subcatchment 4S: Sub4

Hydrograph



Summary for Subcatchment 5S: Sub6

Runoff = 106.44 cfs @ 12.31 hrs, Volume= 12.155 af, Depth= 2.24"

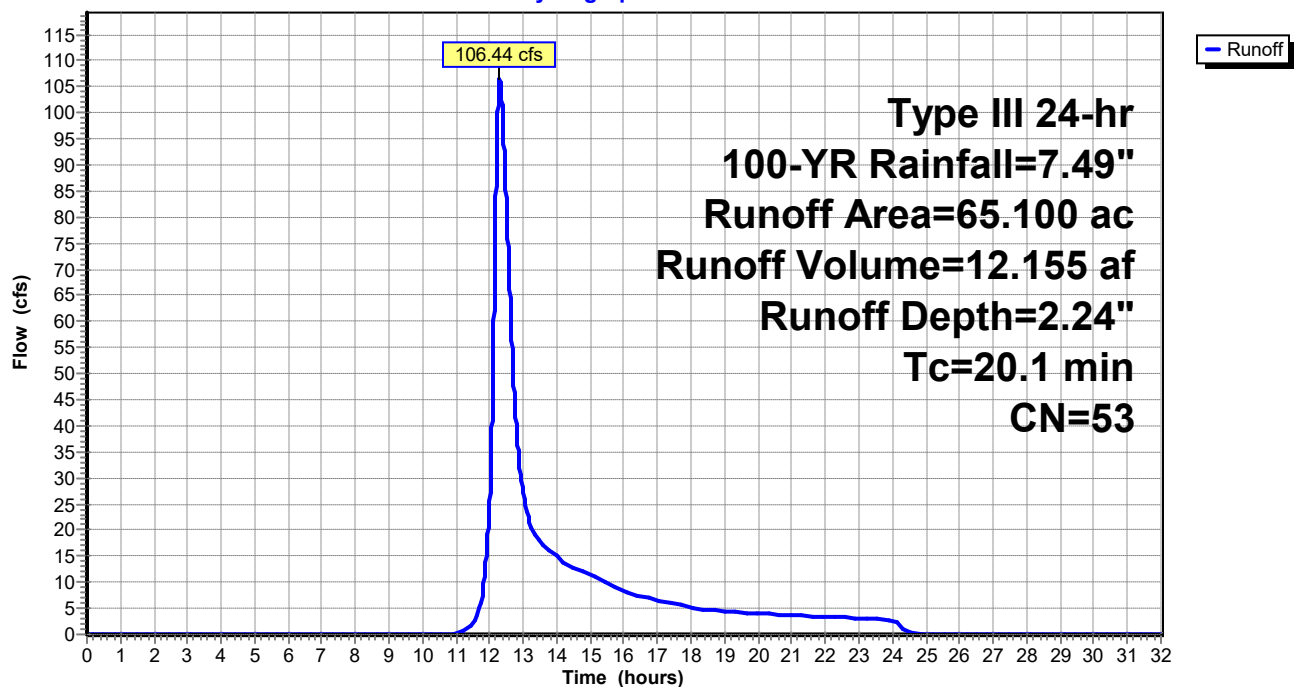
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs
Type III 24-hr 100-YR Rainfall=7.49"

Area (ac)	CN	Description
* 65.100	53	Weighted CN value
65.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1					Direct Entry, Velocity Method

Subcatchment 5S: Sub6

Hydrograph



Summary for Subcatchment 6S: Sub7

Runoff = 1,481.02 cfs @ 12.53 hrs, Volume= 210.666 af, Depth= 4.36"

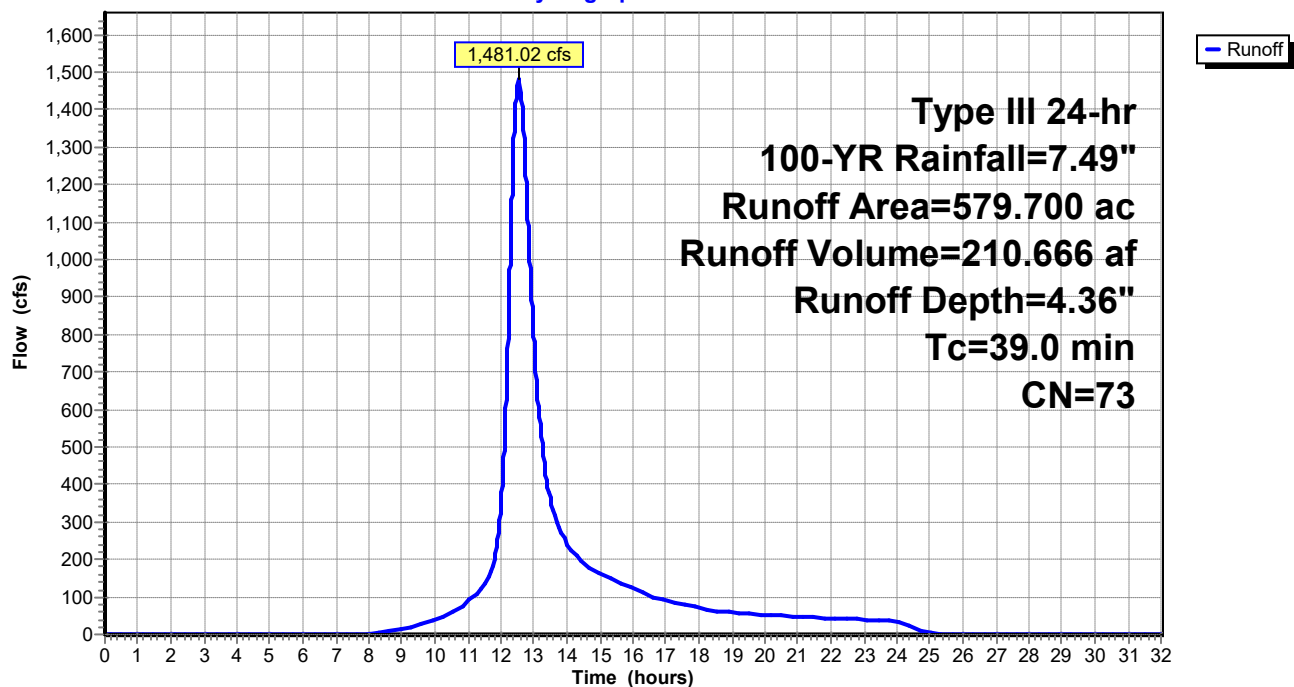
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs
Type III 24-hr 100-YR Rainfall=7.49"

Area (ac)	CN	Description
* 579.700	73	Weighted CN value
579.700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
39.0					Direct Entry, Velocity Method

Subcatchment 6S: Sub7

Hydrograph



Summary for Subcatchment 7S: Sub8

Runoff = 59.05 cfs @ 12.87 hrs, Volume= 11.853 af, Depth= 1.95"

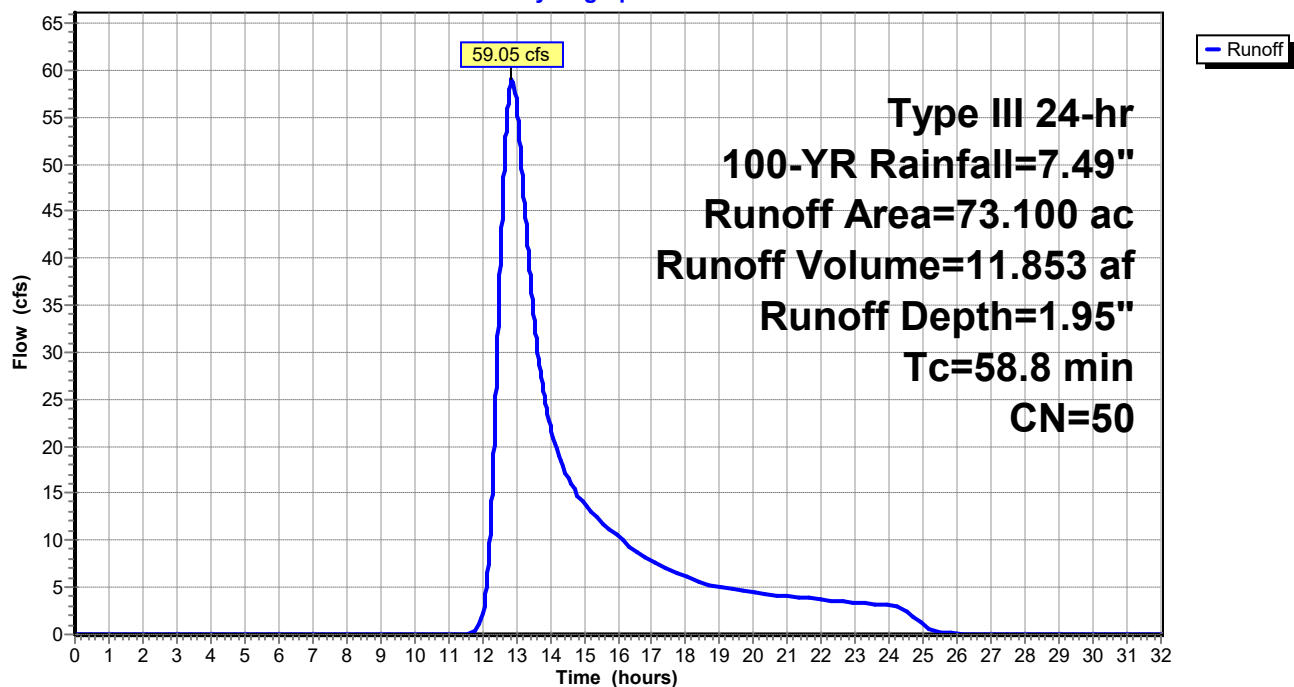
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs
Type III 24-hr 100-YR Rainfall=7.49"

Area (ac)	CN	Description
* 73.100	50	Weighted CN value
73.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
58.8					Direct Entry, Velocity Method

Subcatchment 7S: Sub8

Hydrograph



Summary for Subcatchment 8S: Sub9

Runoff = 30.13 cfs @ 12.36 hrs, Volume= 4.220 af, Depth= 1.38"

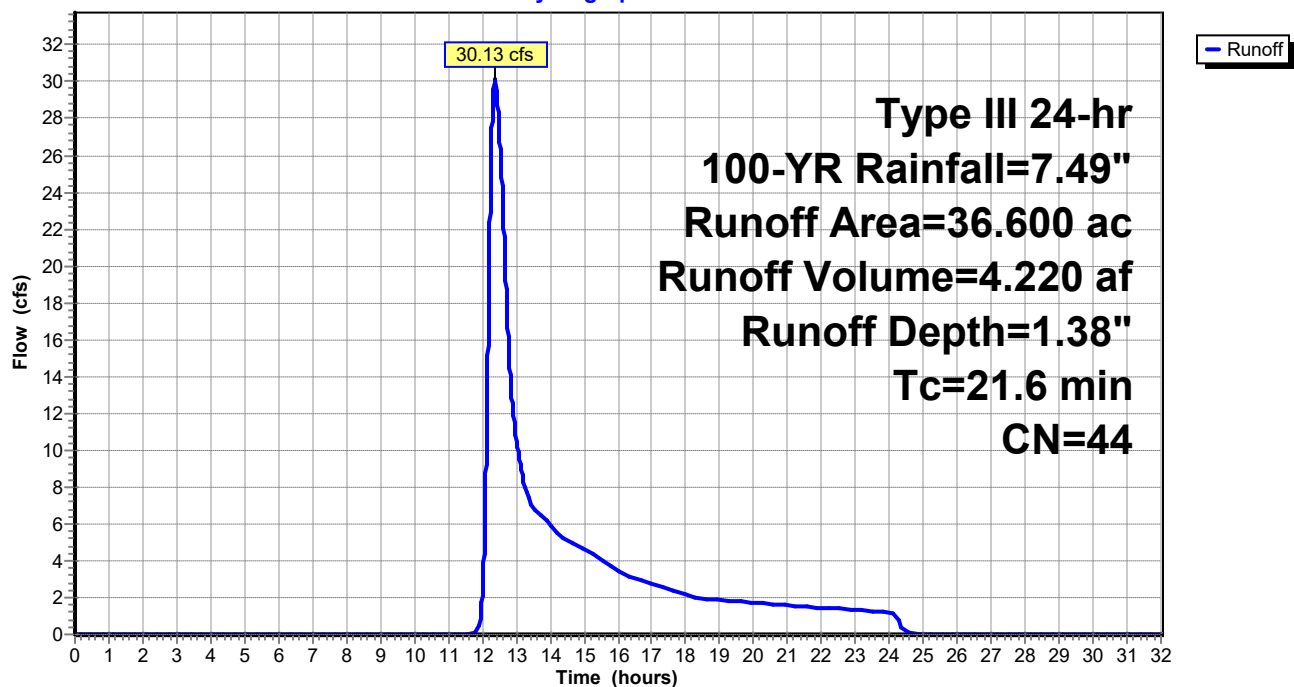
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs
Type III 24-hr 100-YR Rainfall=7.49"

Area (ac)	CN	Description
* 36.600	44	Weighted CN value
36.600		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.6					Direct Entry, Velocity Method

Subcatchment 8S: Sub9

Hydrograph



Summary for Subcatchment 9S: Sub10

Runoff = 86.78 cfs @ 12.30 hrs, Volume= 9.850 af, Depth= 2.34"

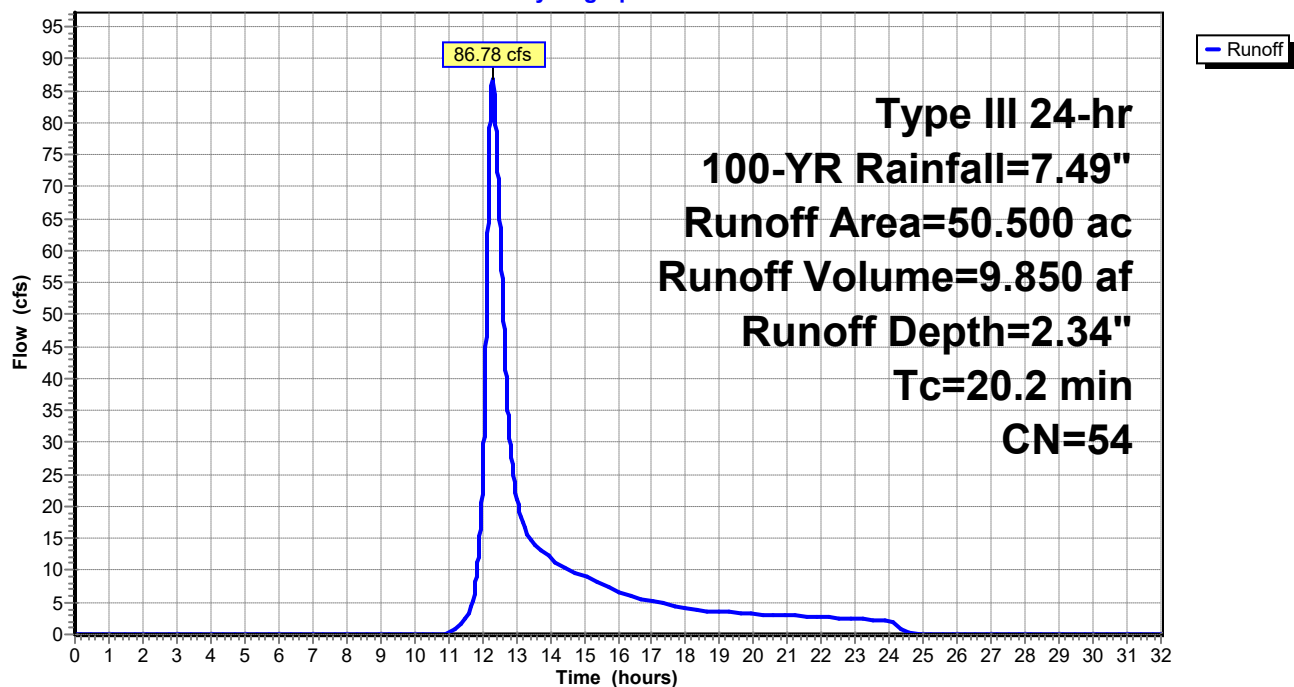
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs
Type III 24-hr 100-YR Rainfall=7.49"

Area (ac)	CN	Description
* 50.500	54	Weighted CN value
50.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.2					Direct Entry, Velocity Method

Subcatchment 9S: Sub10

Hydrograph



Summary for Subcatchment 10S: Sub11

Runoff = 48.84 cfs @ 12.30 hrs, Volume= 5.473 af, Depth= 2.44"

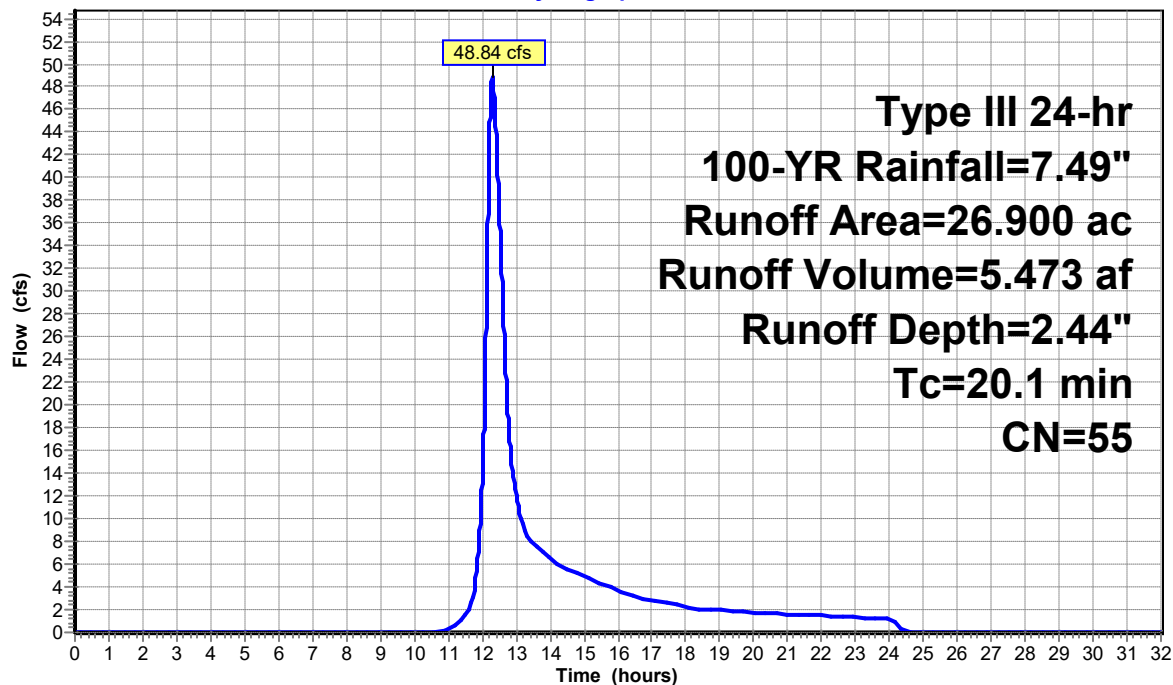
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs
Type III 24-hr 100-YR Rainfall=7.49"

Area (ac)	CN	Description
* 26.900	55	Weighted CN value
26.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1					Direct Entry, Velocity Method

Subcatchment 10S: Sub11

Hydrograph



Summary for Subcatchment 11S: Sub13

Runoff = 324.80 cfs @ 12.40 hrs, Volume= 39.886 af, Depth= 3.49"

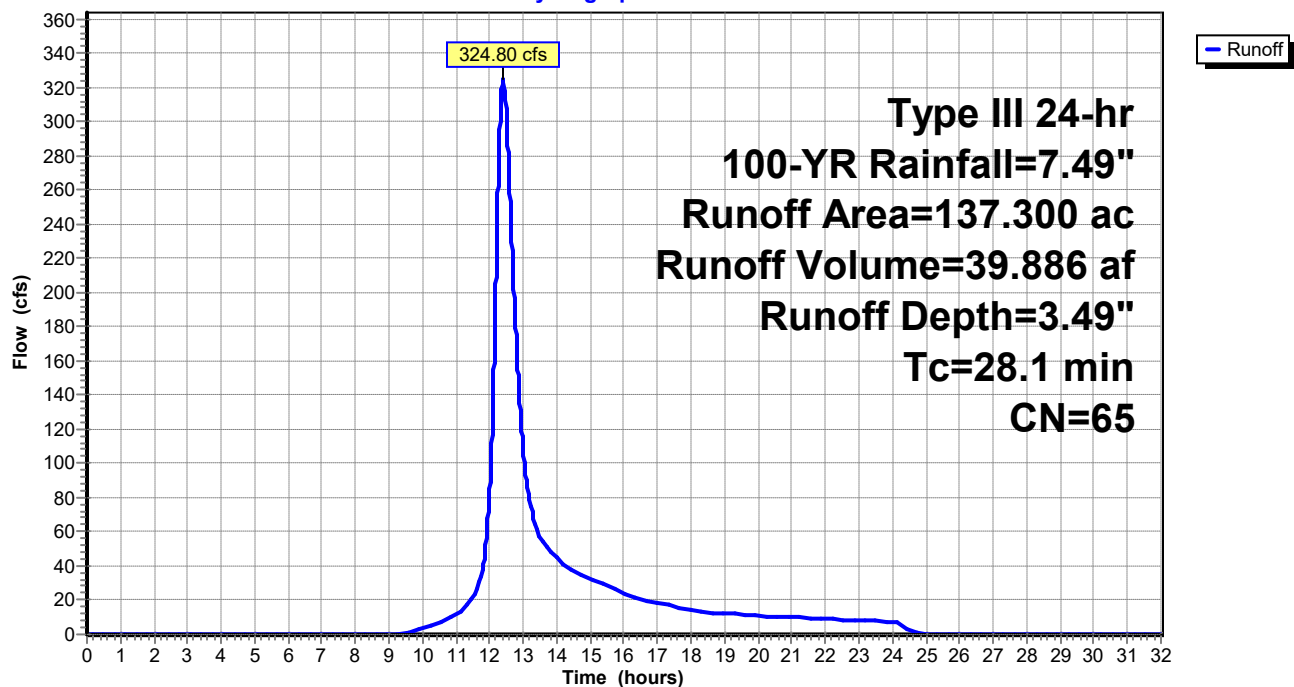
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs
Type III 24-hr 100-YR Rainfall=7.49"

Area (ac)	CN	Description
* 137.300	65	Weighted CN value
137.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.1					Direct Entry, Velocity Method

Subcatchment 11S: Sub13

Hydrograph



Summary for Subcatchment 12S: Sub15

Runoff = 103.17 cfs @ 12.46 hrs, Volume= 13.603 af, Depth= 2.75"

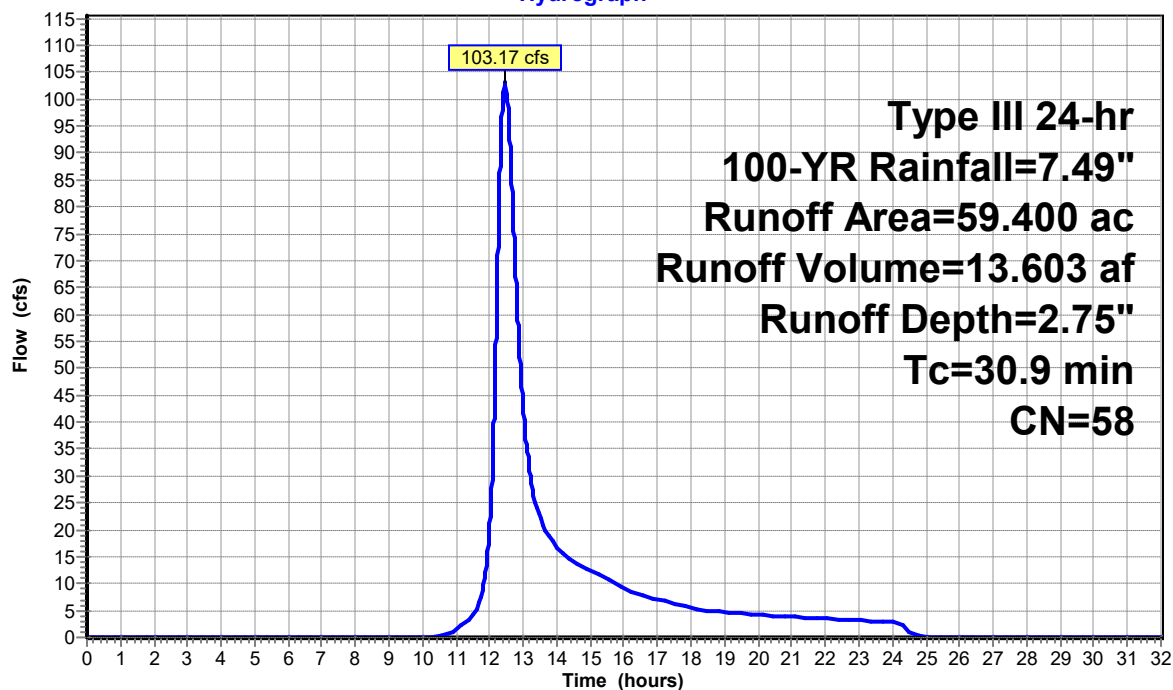
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs
Type III 24-hr 100-YR Rainfall=7.49"

Area (ac)	CN	Description
* 59.400	58	Weighted CN value
59.400		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.9					Direct Entry, Velocity Method

Subcatchment 12S: Sub15

Hydrograph



Summary for Subcatchment 13S: Sub17

Runoff = 126.77 cfs @ 12.56 hrs, Volume= 18.989 af, Depth= 2.24"

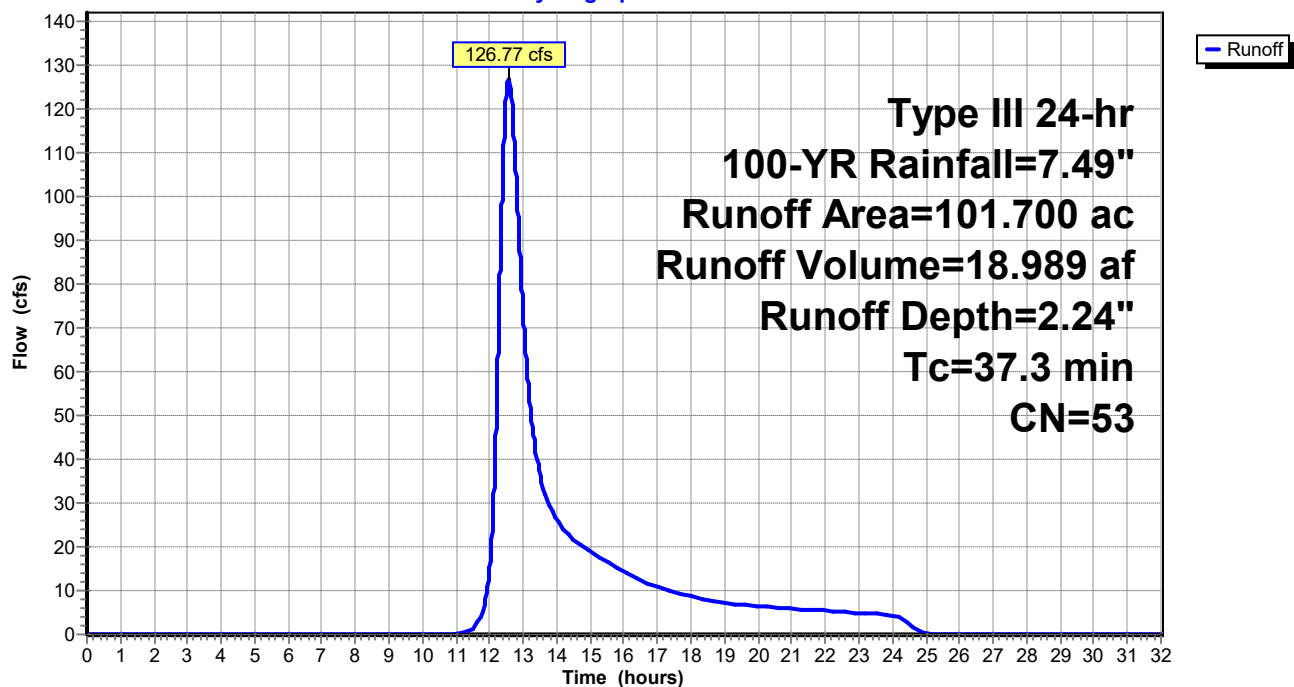
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs
Type III 24-hr 100-YR Rainfall=7.49"

Area (ac)	CN	Description
* 101.700	53	Weighted CN value
101.700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
37.3					Direct Entry, Velocity Method

Subcatchment 13S: Sub17

Hydrograph



Summary for Subcatchment 14S: Sub22

Runoff = 194.90 cfs @ 12.50 hrs, Volume= 26.798 af, Depth= 2.34"

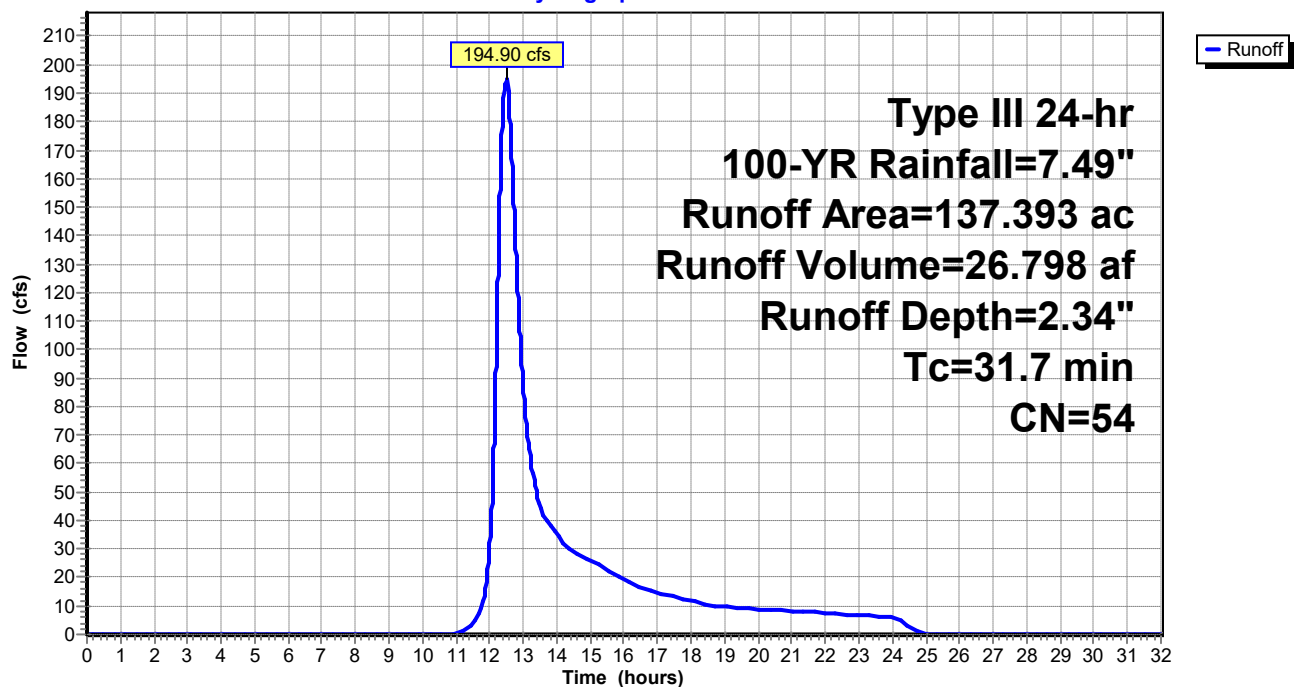
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs
Type III 24-hr 100-YR Rainfall=7.49"

Area (ac)	CN	Description
* 137.393	54	Weighted CN value
137.393		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.7					Direct Entry, Velocity method

Subcatchment 14S: Sub22

Hydrograph



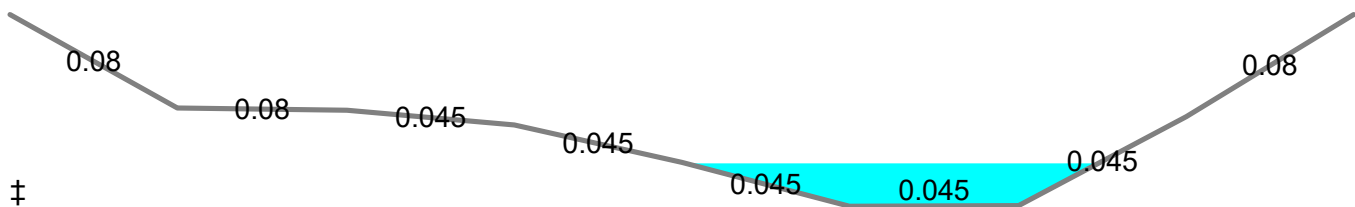
Summary for Reach 28R: Reach3-1A

Inflow Area = 43.200 ac, 0.00% Impervious, Inflow Depth > 2.72" for 100-YR event
 Inflow = 15.05 cfs @ 13.53 hrs, Volume= 9.796 af
 Outflow = 15.04 cfs @ 13.57 hrs, Volume= 9.787 af, Atten= 0%, Lag= 2.7 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs / 3
 Max. Velocity= 1.77 fps, Min. Travel Time= 3.4 min
 Avg. Velocity= 1.18 fps, Avg. Travel Time= 5.2 min

Peak Storage= 3,094 cf @ 13.57 hrs
 Average Depth at Peak Storage= 0.56'
 Bank-Full Depth= 2.50' Flow Area= 107.4 sf, Capacity= 475.63 cfs

Custom cross-section, Length= 365.0' Slope= 0.0101 '/' (104 Elevation Intervals)
 Flow calculated by Manning's Subdivision method
 Inlet Invert= 44.00', Outlet Invert= 40.30'

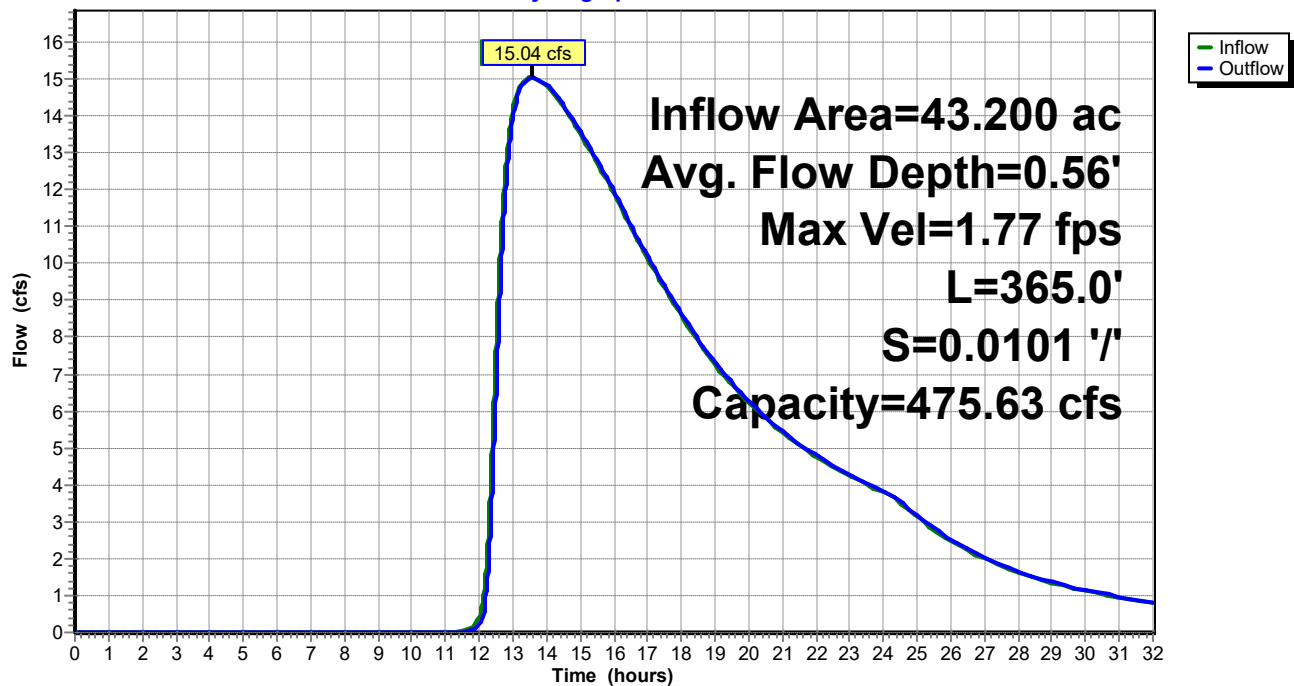


Offset (feet)	Elevation (feet)	Chan.Depth (feet)	n	Description
0.00	2.50	0.00		
8.80	1.28	1.22	0.080	
17.70	1.25	1.25	0.080	
26.50	1.06	1.44	0.045	
35.30	0.57	1.93	0.045	
44.10	0.00	2.50	0.045	
53.00	0.01	2.49	0.045	
61.80	1.17	1.33	0.045	
70.60	2.50	0.00	0.080	

Depth (feet)	End Area (sq-ft)	Perim. (feet)	Storage (cubic-feet)	Discharge (cfs)
0.00	0.0	0.0	0	0.00
0.01	0.0	9.1	17	0.00
0.57	8.7	22.0	3,185	15.66
1.06	22.5	34.6	8,230	56.38
1.17	26.7	40.5	9,733	67.09
1.25	30.1	44.7	10,974	77.22
1.28	31.5	53.8	11,514	83.00
2.50	107.4	70.9	39,194	475.63

Reach 28R: Reach3-1A

Hydrograph



Summary for Reach 29R: Reach3-1B

[52] Hint: Inlet/Outlet conditions not evaluated

[62] Hint: Exceeded Reach 28R OUTLET depth by 0.19' @ 13.62 hrs

Inflow Area = 43.200 ac, 0.00% Impervious, Inflow Depth > 2.72" for 100-YR event
Inflow = 15.04 cfs @ 13.57 hrs, Volume= 9.787 af
Outflow = 15.04 cfs @ 13.58 hrs, Volume= 9.784 af, Atten= 0%, Lag= 0.7 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs / 3

Max. Velocity= 10.96 fps, Min. Travel Time= 0.9 min

Avg. Velocity= 7.43 fps, Avg. Travel Time= 1.3 min

Peak Storage= 810 cf @ 13.58 hrs

Average Depth at Peak Storage= 0.75'

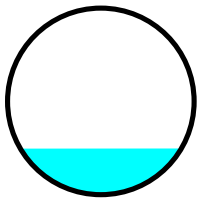
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 110.86 cfs

36.0" Round Pipe

n= 0.013 Concrete pipe, bends & connections

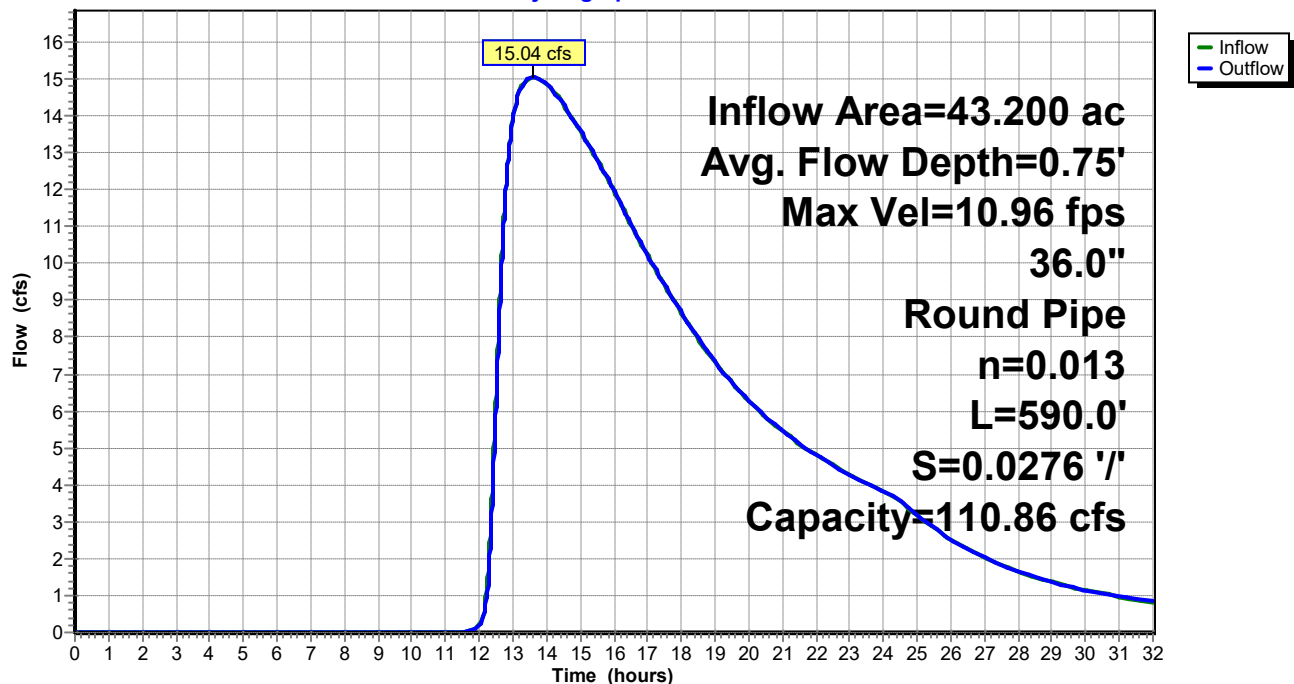
Length= 590.0' Slope= 0.0276 '/'

Inlet Invert= 40.30', Outlet Invert= 24.00'



Reach 29R: Reach3-1B

Hydrograph



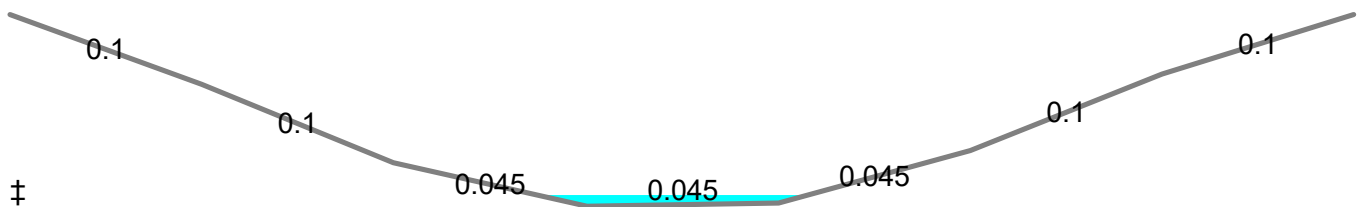
Summary for Reach 30R: Reach2-1

Inflow Area = 25.100 ac, 0.00% Impervious, Inflow Depth > 1.45" for 100-YR event
 Inflow = 15.18 cfs @ 12.49 hrs, Volume= 3.042 af
 Outflow = 15.02 cfs @ 12.54 hrs, Volume= 3.041 af, Atten= 1%, Lag= 2.6 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs / 3
 Max. Velocity= 2.98 fps, Min. Travel Time= 3.6 min
 Avg. Velocity= 1.24 fps, Avg. Travel Time= 8.6 min

Peak Storage= 3,201 cf @ 12.54 hrs
 Average Depth at Peak Storage= 0.51'
 Bank-Full Depth= 8.70' Flow Area= 339.4 sf, Capacity= 5,622.83 cfs

Custom cross-section, Length= 635.9' Slope= 0.0300 '/' (104 Elevation Intervals)
 Flow calculated by Manning's Subdivision method
 Inlet Invert= 40.50', Outlet Invert= 21.42'

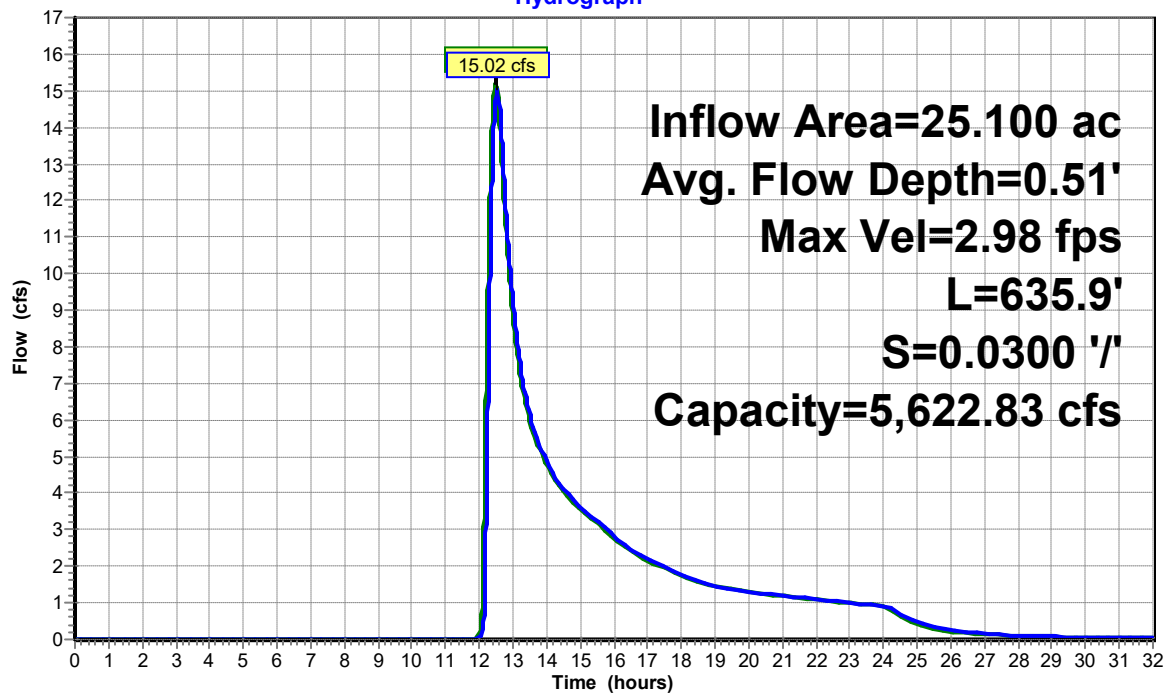


Offset (feet)	Elevation (feet)	Chan.Depth (feet)	n	Description
0.00	8.70	0.00		
9.40	5.53	3.17	0.100	
18.80	1.98	6.72	0.100	
28.30	0.00	8.70	0.045	
37.70	0.14	8.56	0.045	
47.10	2.53	6.17	0.045	
56.50	6.00	2.70	0.100	
65.90	8.70	0.00	0.100	

Depth (feet)	End Area (sq-ft)	Perim. (feet)	Storage (cubic-feet)	Discharge (cfs)
0.00	0.0	0.0	0	0.00
0.14	0.7	10.1	448	0.68
1.98	34.0	26.6	21,631	229.41
2.53	49.4	30.4	31,406	399.65
5.53	162.8	47.5	103,500	2,232.64
6.00	184.9	50.3	117,596	2,639.30
8.70	339.4	68.6	215,798	5,622.83

Reach 30R: Reach2-1

Hydrograph



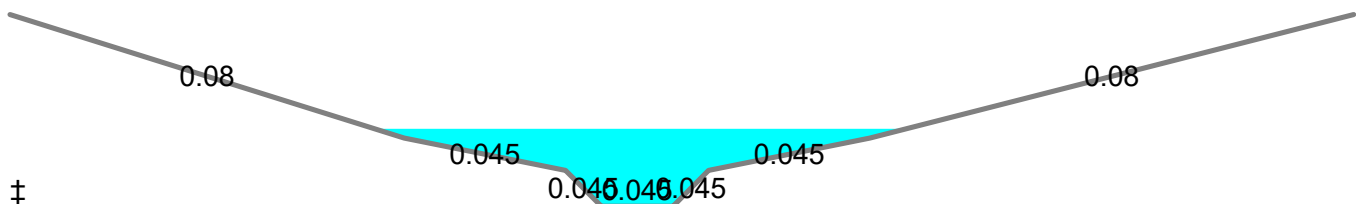
Summary for Reach 31R: Reach4-1

Inflow Area = 1,202.500 ac, 0.00% Impervious, Inflow Depth > 1.33" for 100-YR event
 Inflow = 128.33 cfs @ 13.19 hrs, Volume= 133.465 af
 Outflow = 125.82 cfs @ 13.44 hrs, Volume= 131.727 af, Atten= 2%, Lag= 15.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs / 3
 Max. Velocity= 3.99 fps, Min. Travel Time= 18.7 min
 Avg. Velocity= 3.11 fps, Avg. Travel Time= 23.9 min

Peak Storage= 141,201 cf @ 13.44 hrs
 Average Depth at Peak Storage= 2.39'
 Bank-Full Depth= 5.90' Flow Area= 215.5 sf, Capacity= 1,526.64 cfs

Custom cross-section, Length= 4,473.0' Slope= 0.0123 '/' (102 Elevation Intervals)
 Flow calculated by Manning's Subdivision method
 Inlet Invert= 75.80', Outlet Invert= 21.00'

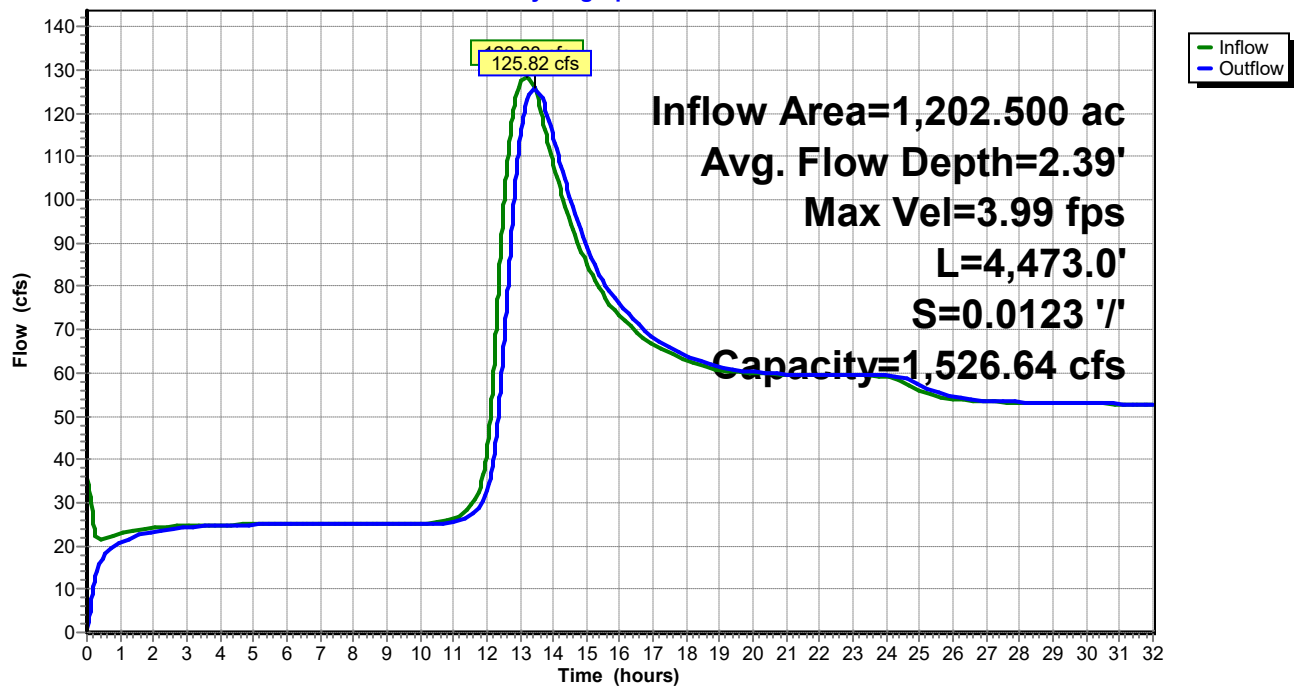


Offset (feet)	Elevation (feet)	Chan.Depth (feet)	n	Description
0.00	5.90	0.00		
22.00	2.10	3.80	0.080	
31.00	1.10	4.80	0.045	
33.00	0.00	5.90	0.045	
37.00	0.00	5.90	0.045	
39.00	1.10	4.80	0.045	
48.00	2.10	3.80	0.045	
75.00	5.90	0.00	0.080	

Depth (feet)	End Area (sq-ft)	Perim. (feet)	Storage (cubic-feet)	Discharge (cfs)
0.00	0.0	4.0	0	0.00
1.10	6.6	8.6	29,522	20.28
2.10	23.6	26.7	105,563	79.49
5.90	215.5	76.3	963,932	1,526.64

Reach 31R: Reach4-1

Hydrograph



Summary for Reach 32R: Reach10-7

Inflow Area = 50.500 ac, 0.00% Impervious, Inflow Depth > 1.83" for 100-YR event
 Inflow = 6.92 cfs @ 15.92 hrs, Volume= 7.697 af
 Outflow = 6.92 cfs @ 15.94 hrs, Volume= 7.687 af, Atten= 0%, Lag= 1.5 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs / 3

Max. Velocity= 2.56 fps, Min. Travel Time= 2.4 min

Avg. Velocity = 2.14 fps, Avg. Travel Time= 2.9 min

Peak Storage= 1,000 cf @ 15.94 hrs

Average Depth at Peak Storage= 0.43'

Bank-Full Depth= 3.00' Flow Area= 42.0 sf, Capacity= 314.35 cfs

5.00' x 3.00' deep channel, n= 0.045

Side Slope Z-value= 3.0 '/' Top Width= 23.00'

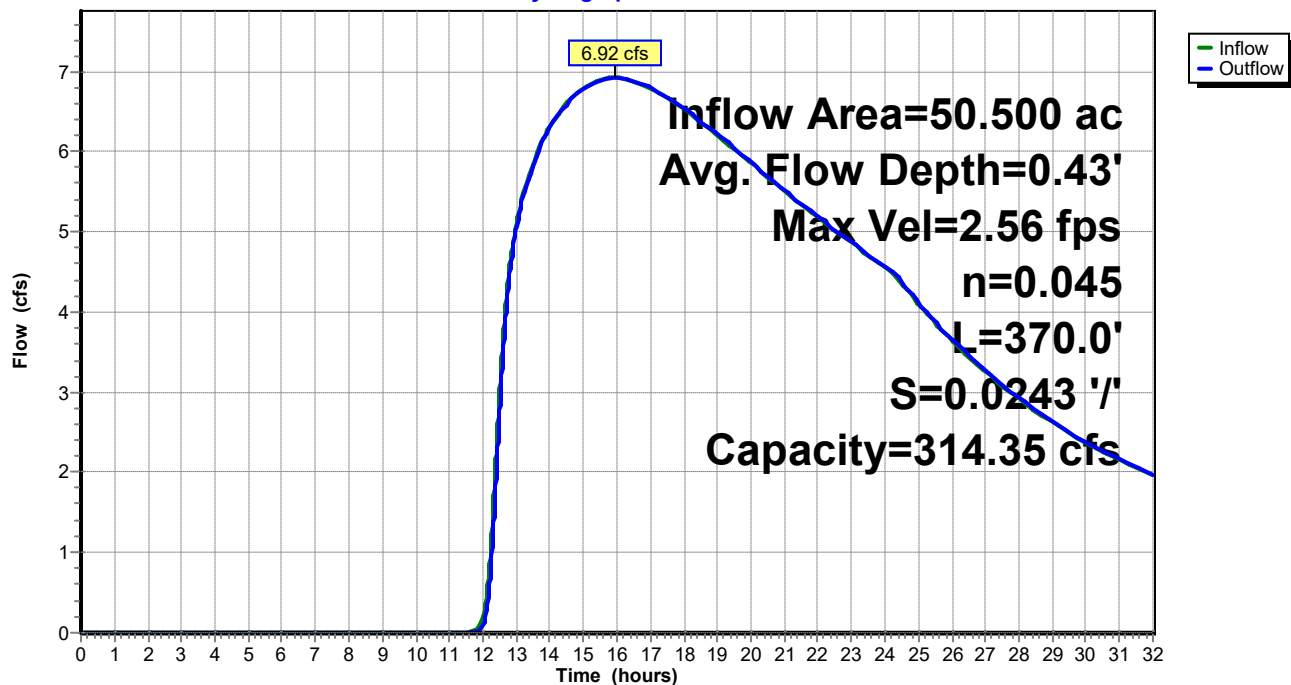
Length= 370.0' Slope= 0.0243 '/'

Inlet Invert= 87.00', Outlet Invert= 78.00'



Reach 32R: Reach10-7

Hydrograph



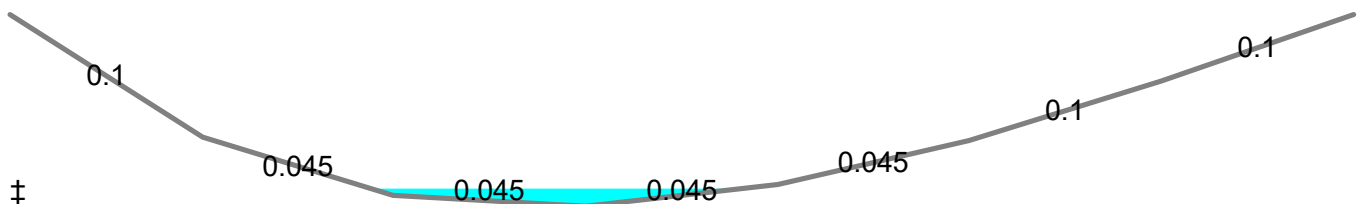
Summary for Reach 33R: Reach11-7

Inflow Area = 26.900 ac, 0.00% Impervious, Inflow Depth > 1.21" for 100-YR event
 Inflow = 2.07 cfs @ 18.35 hrs, Volume= 2.716 af
 Outflow = 2.07 cfs @ 18.76 hrs, Volume= 2.665 af, Atten= 0%, Lag= 24.6 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs / 3
 Max. Velocity= 0.77 fps, Min. Travel Time= 26.9 min
 Avg. Velocity= 0.69 fps, Avg. Travel Time= 30.0 min

Peak Storage= 3,330 cf @ 18.76 hrs
 Average Depth at Peak Storage= 0.26'
 Bank-Full Depth= 2.80' Flow Area= 117.3 sf, Capacity= 482.65 cfs

Custom cross-section, Length= 1,244.0' Slope= 0.0069 '/' (104 Elevation Intervals)
 Flow calculated by Manning's Subdivision method
 Inlet Invert= 86.60', Outlet Invert= 78.00'

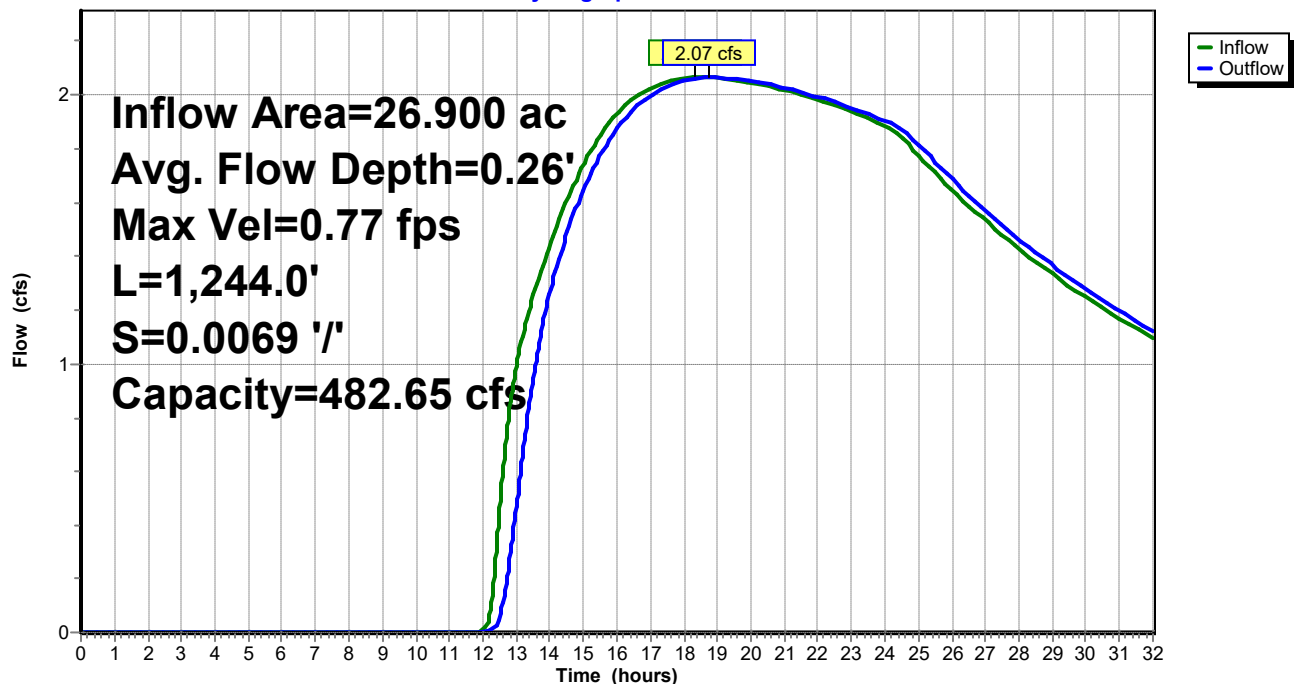


Offset (feet)	Elevation (feet)	Chan.Depth (feet)	n	Description
0.00	2.80	0.00		
9.40	1.01	1.79	0.100	
18.70	0.16	2.64	0.045	
28.10	0.00	2.80	0.045	
37.50	0.32	2.48	0.045	
46.80	0.96	1.84	0.045	
56.20	1.83	0.97	0.100	
65.60	2.80	0.00	0.100	

Depth (feet)	End Area (sq-ft)	Perim. (feet)	Storage (cubic-feet)	Discharge (cfs)
0.00	0.0	0.0	0	0.00
0.16	1.1	14.1	1,403	0.57
0.32	3.9	20.6	4,852	3.53
0.96	22.3	36.9	27,703	43.65
1.01	24.1	38.0	30,029	49.42
1.83	60.6	51.3	75,446	197.91
2.80	117.3	65.9	145,860	482.65

Reach 33R: Reach11-7

Hydrograph



Summary for Pond 15P: Reservoir-1 (Jenney Pond)

[62] Hint: Exceeded Reach 29R OUTLET depth by 1.24' @ 14.00 hrs

[62] Hint: Exceeded Reach 30R OUTLET depth by 4.27' @ 14.08 hrs

[62] Hint: Exceeded Reach 31R OUTLET depth by 2.71' @ 15.01 hrs

Inflow Area = 1,472.993 ac, 0.00% Impervious, Inflow Depth > 1.51" for 100-YR event
 Inflow = 363.10 cfs @ 12.44 hrs, Volume= 185.634 af
 Outflow = 187.57 cfs @ 13.95 hrs, Volume= 172.614 af, Atten= 48%, Lag= 91.0 min
 Primary = 74.37 cfs @ 13.95 hrs, Volume= 138.739 af
 Secondary = 113.19 cfs @ 13.95 hrs, Volume= 33.875 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs / 3
 Starting Elev= 22.20' Surf.Area= 4.465 ac Storage= 8.700 af
 Peak Elev= 25.98' @ 13.95 hrs Surf.Area= 9.267 ac Storage= 33.575 af (24.875 af above start)

Plug-Flow detention time= 209.2 min calculated for 163.914 af (88% of inflow)
 Center-of-Mass det. time= 60.2 min (1,104.8 - 1,044.6)

Volume	Invert	Avail.Storage	Storage Description	
#1	15.00'	54.701 af	Custom Stage Data (Conic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
15.00	0.000	0.000	0.000	0.000
18.00	0.007	0.007	0.007	0.007
19.00	0.707	0.261	0.268	0.707
20.00	2.105	1.344	1.612	2.105
21.00	3.028	2.553	4.165	3.029
22.00	4.323	3.656	7.821	4.324
23.00	5.054	4.684	12.505	5.056
24.00	6.177	5.606	18.111	6.180
25.00	7.928	7.034	25.145	7.932
26.00	9.293	8.601	33.747	9.297
27.00	10.326	9.805	43.552	10.332
28.00	11.992	11.149	54.701	11.999

Device	Routing	Invert	Outlet Devices
#1	Primary	21.00'	84.0" W x 66.0" H, R=42.0" Arch Culvert w/ 53.0" inside fill L= 45.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 16.58' / 16.58' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 3.79 sf
#2	Primary	19.47'	24.0" Round RCP_Round 24" L= 45.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 19.47' / 19.00' S= 0.0104 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf
#3	Secondary	25.30'	Asymmetrical Weir, C= 2.67 Offset (feet) 0.00 19.50 38.80 58.00 77.10 85.80 112.00 138.10 147.00 164.90 183.00 201.50 219.90 238.40 256.80 275.20 Height (feet) 4.50 2.92 1.74 0.79 0.13 0.00 0.00 0.00 0.19 0.76 1.56 2.40 3.04 3.77 4.08 4.50

Primary OutFlow Max=74.37 cfs @ 13.95 hrs HW=25.98' (Free Discharge)

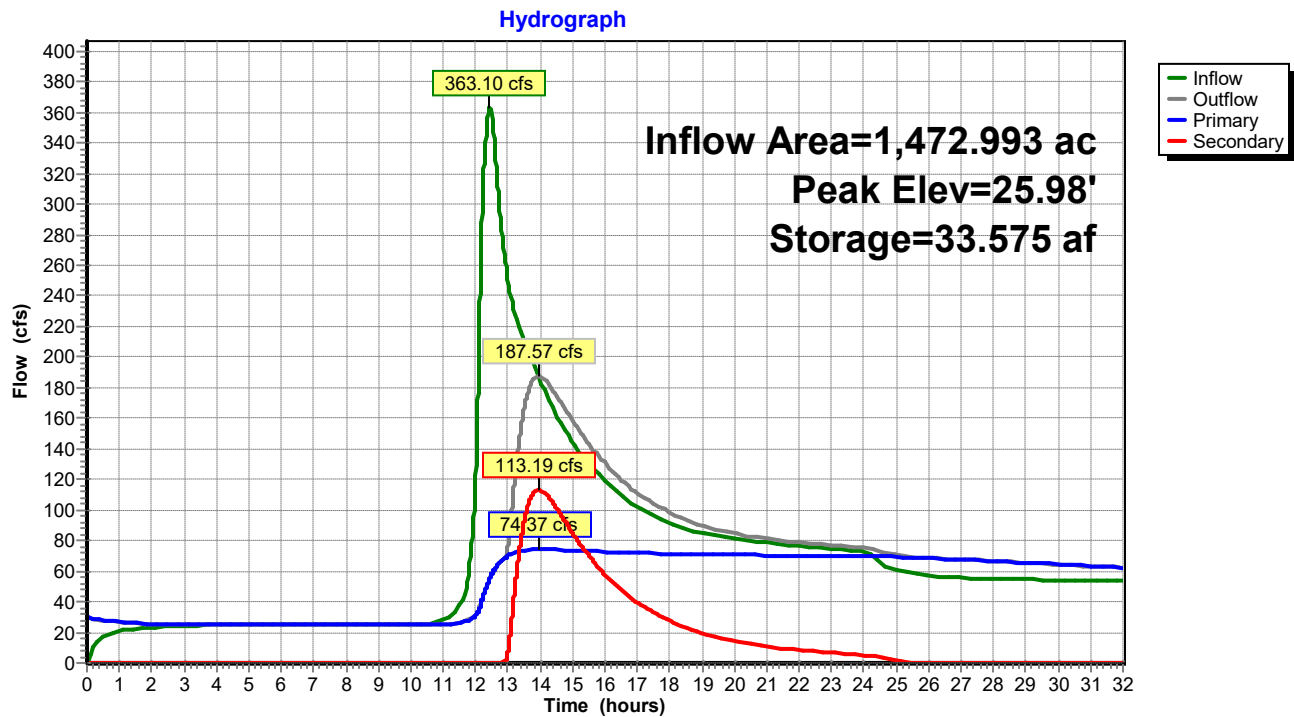
1=Culvert (Inlet Controls 38.86 cfs @ 10.26 fps)

2=RCP_Round 24" (Inlet Controls 35.51 cfs @ 11.30 fps)

Secondary OutFlow Max=113.19 cfs @ 13.95 hrs HW=25.98' (Free Discharge)

3=Asymmetrical Weir (Weir Controls 113.19 cfs @ 1.77 fps)

Pond 15P: Reservoir-1 (Jenney Pond)



Summary for Pond 16P: Reservoir-2

Inflow Area = 25.100 ac, 0.00% Impervious, Inflow Depth = 1.47" for 100-YR event
 Inflow = 30.61 cfs @ 12.15 hrs, Volume= 3.084 af
 Outflow = 15.18 cfs @ 12.49 hrs, Volume= 3.042 af, Atten= 50%, Lag= 20.3 min
 Primary = 15.18 cfs @ 12.49 hrs, Volume= 3.042 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs / 3
 Starting Elev= 41.20' Surf.Area= 1.306 ac Storage= 1.326 af
 Peak Elev= 41.64' @ 12.49 hrs Surf.Area= 1.453 ac Storage= 1.939 af (0.613 af above start)

Plug-Flow detention time= 330.9 min calculated for 1.716 af (56% of inflow)
 Center-of-Mass det. time= 55.7 min (951.2 - 895.5)

Volume	Invert	Avail.Storage	Storage Description
#1	40.00'	6.062 af	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
40.00	0.909	0.000	0.000	0.909
41.00	1.242	1.071	1.071	1.242
42.00	1.576	1.406	2.477	1.577
43.00	1.806	1.690	4.167	1.808
44.00	1.987	1.896	6.062	1.991

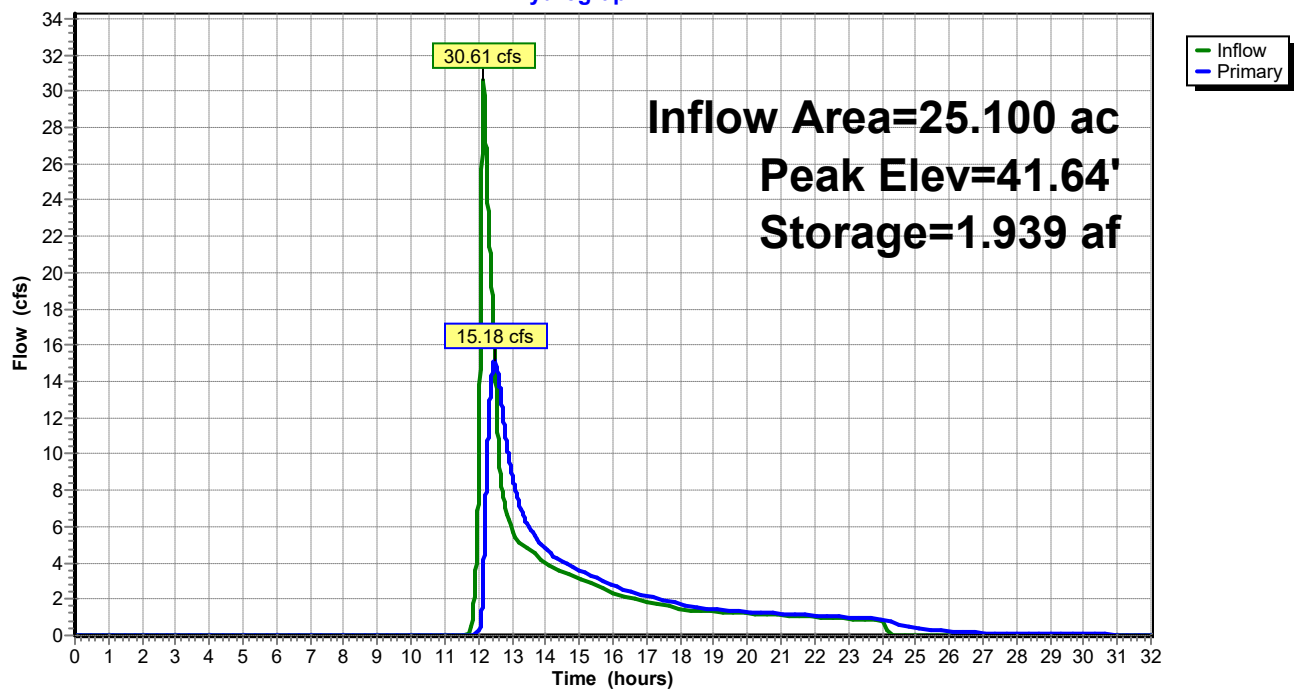
Device	Routing	Invert	Outlet Devices
#1	Primary	41.20'	Asymmetrical Weir, C= 2.67 Offset (feet) 0.00 8.30 16.60 24.90 33.20 41.90 50.60 59.20 67.90 76.60 84.40 92.60 Height (feet) 3.20 2.21 1.41 0.69 0.28 0.20 0.31 0.64 0.83 1.25 2.07 3.20

Primary OutFlow Max=15.18 cfs @ 12.49 hrs HW=41.64' TW=41.01' (Dynamic Tailwater)

↑1=Asymmetrical Weir (Weir Controls 15.18 cfs @ 1.14 fps)

Pond 16P: Reservoir-2

Hydrograph



Summary for Pond 17P: Reservoir-3

Inflow Area = 43.200 ac, 0.00% Impervious, Inflow Depth = 2.96" for 100-YR event
 Inflow = 88.67 cfs @ 12.37 hrs, Volume= 10.641 af
 Outflow = 15.05 cfs @ 13.53 hrs, Volume= 9.796 af, Atten= 83%, Lag= 69.3 min
 Primary = 15.05 cfs @ 13.53 hrs, Volume= 9.796 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs / 3
 Starting Elev= 45.00' Surf.Area= 1.691 ac Storage= 1.217 af
 Peak Elev= 47.01' @ 13.53 hrs Surf.Area= 2.976 ac Storage= 6.135 af (4.918 af above start)

Plug-Flow detention time= 340.9 min calculated for 8.578 af (81% of inflow)
 Center-of-Mass det. time= 218.3 min (1,086.2 - 867.9)

Volume	Invert	Avail.Storage	Storage Description
#1	44.00'	12.801 af	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
44.00	0.798	0.000	0.000	0.798
45.00	1.691	1.217	1.217	1.691
46.00	2.584	2.122	3.339	2.585
47.00	2.973	2.776	6.115	2.975
48.00	3.397	3.183	9.298	3.400
49.00	3.612	3.504	12.801	3.617

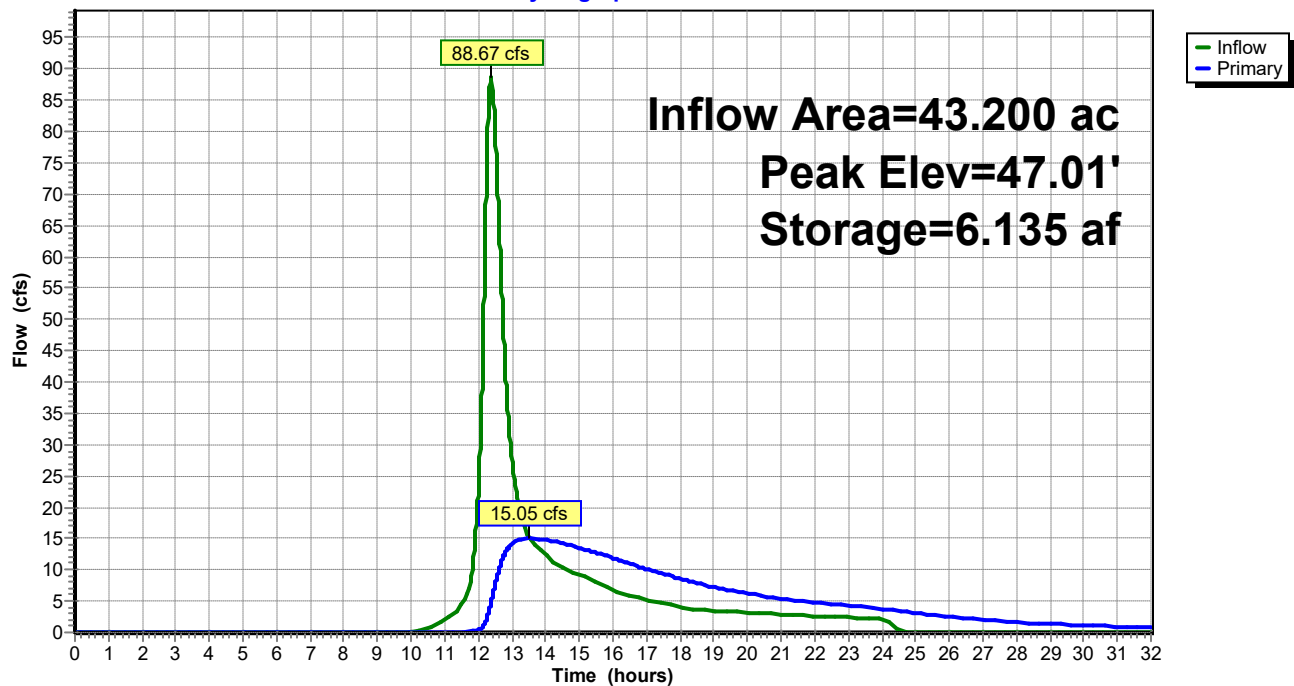
Device	Routing	Invert	Outlet Devices
#1	Primary	45.00'	36.0" Round Culvert L= 130.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 45.00' / 44.00' S= 0.0077 ' S= 0.0077 ' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 7.07 sf
#2	Primary	47.60'	60.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=15.05 cfs @ 13.53 hrs HW=47.01' TW=44.56' (Dynamic Tailwater)

1=Culvert (Barrel Controls 15.05 cfs @ 4.24 fps)
 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 17P: Reservoir-3

Hydrograph



Summary for Pond 18P: Reservoir-4

[80] Warning: Exceeded Pond 19P by 0.06' @ 10.94 hrs (0.19 cfs 0.061 af)

Inflow Area = 1,202.500 ac, 0.00% Impervious, Inflow Depth > 1.35" for 100-YR event
 Inflow = 202.54 cfs @ 12.63 hrs, Volume= 135.177 af
 Outflow = 128.33 cfs @ 13.19 hrs, Volume= 133.465 af, Atten= 37%, Lag= 33.9 min
 Primary = 128.33 cfs @ 13.19 hrs, Volume= 133.465 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs / 3
 Starting Elev= 77.00' Surf.Area= 0.993 ac Storage= 0.331 af
 Peak Elev= 78.72' @ 13.31 hrs Surf.Area= 9.203 ac Storage= 7.254 af (6.923 af above start)

Plug-Flow detention time= 28.7 min calculated for 133.108 af (98% of inflow)
 Center-of-Mass det. time= 13.1 min (1,082.5 - 1,069.4)

Volume	Invert	Avail.Storage	Storage Description		
#1	76.00'	107.316 af	Custom Stage Data (Conic) Listed below (Recalc)		
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)	
76.00	0.000	0.000	0.000	0.000	
78.00	3.972	2.648	2.648	3.972	
79.00	11.838	7.556	10.204	11.838	
80.00	18.579	15.082	25.286	18.580	
81.00	19.496	19.036	44.322	19.500	
82.00	20.499	19.995	64.317	20.505	
83.00	21.789	21.141	85.458	21.798	
84.00	21.927	21.858	107.316	21.957	

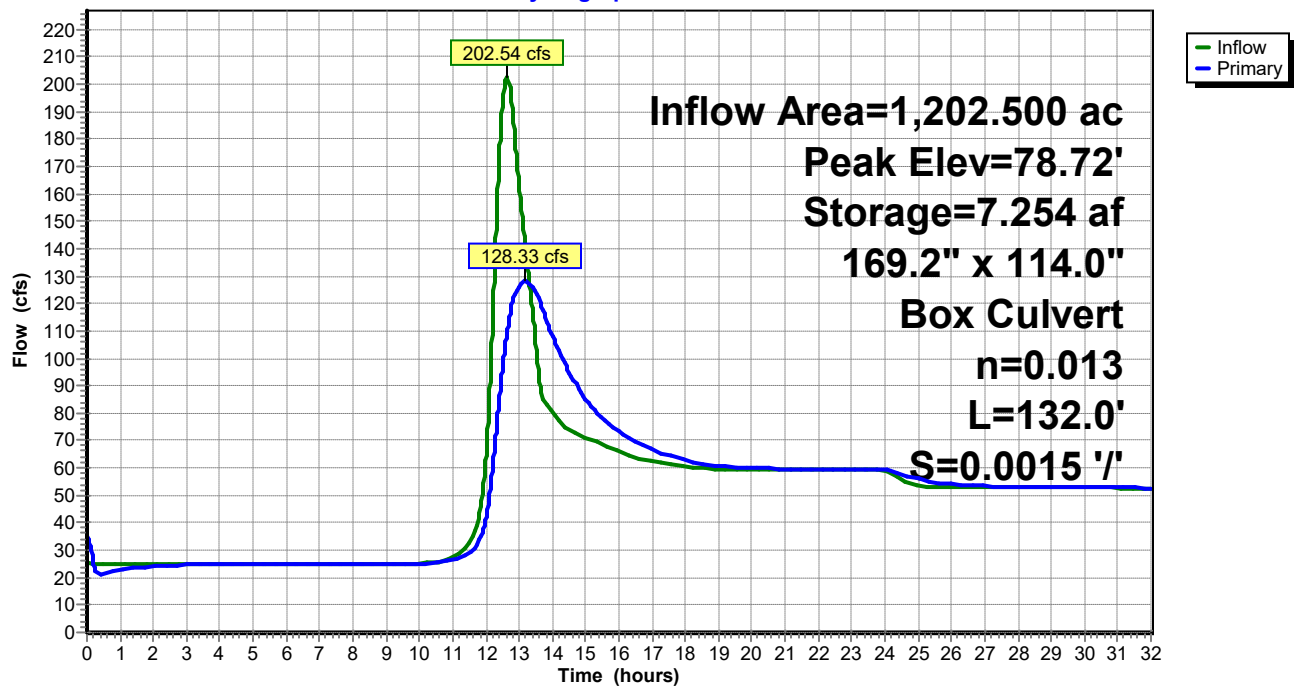
Device	Routing	Invert	Outlet Devices
#1	Primary	76.00'	169.2" W x 114.0" H Box Culvert L= 132.0' Box, 30-75° wingwalls, square crown, Ke= 0.400 Inlet / Outlet Invert= 76.00' / 75.80' S= 0.0015 '/' Cc= 0.900 n= 0.013 Concrete, trowel finish, Flow Area= 133.95 sf

Primary OutFlow Max=128.33 cfs @ 13.19 hrs HW=78.71' TW=78.17' (Dynamic Tailwater)

↑ **1=Culvert** (Outlet Controls 128.33 cfs @ 4.47 fps)

Pond 18P: Reservoir-4

Hydrograph



Summary for Pond 19P: Reservoir-6

Inflow Area = 65.100 ac, 0.00% Impervious, Inflow Depth = 2.24" for 100-YR event
 Inflow = 106.44 cfs @ 12.31 hrs, Volume= 12.155 af
 Outflow = 57.62 cfs @ 12.65 hrs, Volume= 12.141 af, Atten= 46%, Lag= 20.9 min
 Primary = 57.62 cfs @ 12.65 hrs, Volume= 12.141 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs / 3
 Starting Elev= 77.30' Surf.Area= 0.014 ac Storage= 0.004 af
 Peak Elev= 80.38' @ 12.65 hrs Surf.Area= 4.721 ac Storage= 1.732 af (1.728 af above start)

Plug-Flow detention time= 9.5 min calculated for 12.136 af (100% of inflow)
 Center-of-Mass det. time= 8.4 min (888.5 - 880.1)

Volume	Invert	Avail.Storage	Storage Description	
#1	76.50'	42.654 af	Custom Stage Data (Conic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
76.50	0.000	0.000	0.000	0.000
79.00	0.139	0.116	0.116	0.139
80.00	1.172	0.572	0.687	1.172
81.00	15.621	7.024	7.711	15.621
82.00	17.437	16.521	24.232	17.439
83.00	19.424	18.422	42.654	19.427

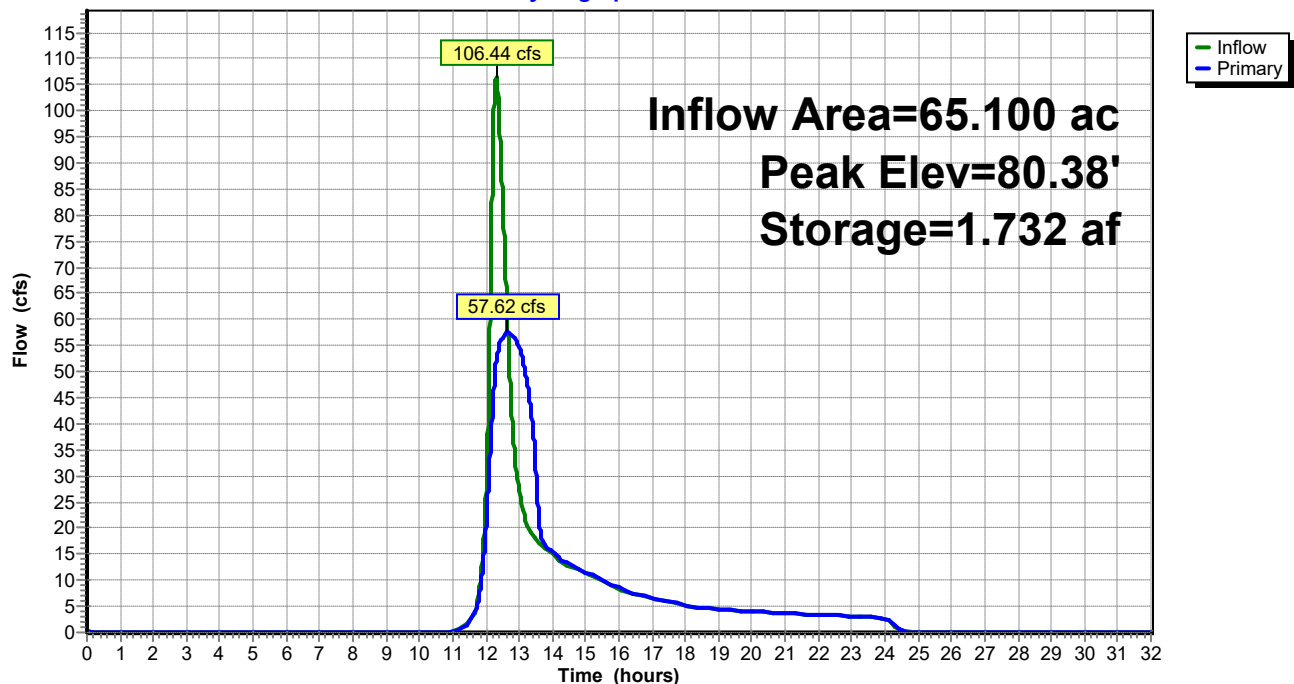
Device	Routing	Invert	Outlet Devices
#1	Primary	77.20'	51.6" W x 40.8" H Box Culvert L= 27.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 76.60' / 77.20' S= -0.0222 '/' Cc= 0.900 n= 0.045, Flow Area= 14.62 sf
#2	Primary	82.60'	60.0' long x 15.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=57.62 cfs @ 12.65 hrs HW=80.38' TW=78.43' (Dynamic Tailwater)

1=Culvert (Barrel Controls 57.62 cfs @ 4.73 fps)
 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 19P: Reservoir-6

Hydrograph



Summary for Pond 20P: Reservoir-7

[62] Hint: Exceeded Reach 32R OUTLET depth by 2.90' @ 32.00 hrs

[62] Hint: Exceeded Reach 33R OUTLET depth by 2.91' @ 32.00 hrs

Inflow Area = 1,065.200 ac, 0.00% Impervious, Inflow Depth > 3.97" for 100-YR event
 Inflow = 1,541.52 cfs @ 12.53 hrs, Volume= 352.528 af, Incl. 24.00 cfs Base Flow
 Outflow = 53.10 cfs @ 25.90 hrs, Volume= 105.878 af, Atten= 97%, Lag= 802.6 min
 Primary = 53.10 cfs @ 25.90 hrs, Volume= 105.878 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs / 3
 Starting Elev= 80.27' Surf.Area= 286.579 ac Storage= 2,835.526 af
 Peak Elev= 81.12' @ 25.90 hrs Surf.Area= 300.842 ac Storage= 3,086.403 af (250.877 af above start)

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)

Center-of-Mass det. time= 178.9 min (1,119.9 - 941.1)

Volume	Invert	Avail.Storage	Storage Description	
#1	69.00'	3,353.418 af	Custom Stage Data (Conic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
69.00	220.799	0.000	0.000	220.799
79.00	276.201	2,479.837	2,479.837	276.265
80.00	281.741	278.966	2,758.804	281.813
81.00	299.866	290.756	3,049.560	299.940
82.00	307.867	303.858	3,353.418	307.947

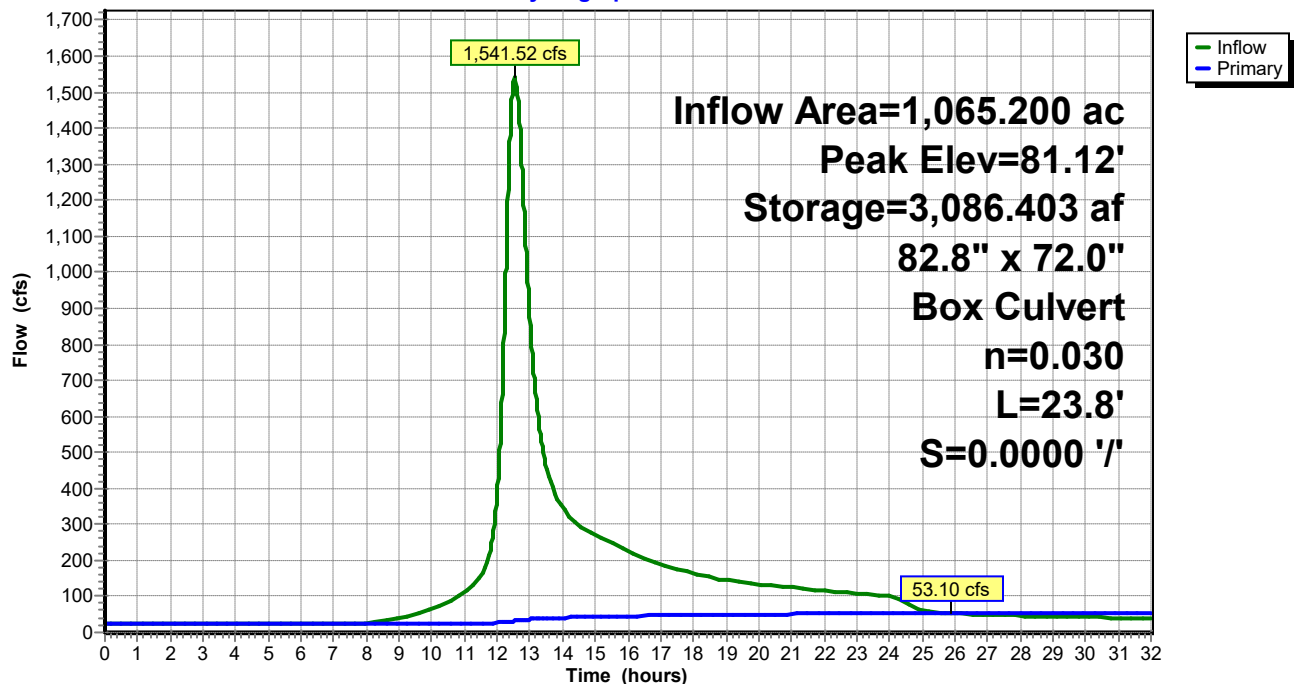
Device	Routing	Invert	Outlet Devices
#1	Primary	78.80'	82.8" W x 72.0" H Box Culvert L= 23.8' Box, 30-75° wingwalls, square crown, Ke= 0.400 Inlet / Outlet Invert= 78.80' / 78.80' S= 0.0000 ' / Cc= 0.900 n= 0.030, Flow Area= 41.40 sf

Primary OutFlow Max=53.10 cfs @ 25.90 hrs HW=81.12' TW=77.86' (Dynamic Tailwater)

↑ **1=Culvert** (Barrel Controls 53.10 cfs @ 4.42 fps)

Pond 20P: Reservoir-7

Hydrograph



Summary for Pond 21P: Reservoir-8

Inflow Area = 73.100 ac, 0.00% Impervious, Inflow Depth = 1.95" for 100-YR event
 Inflow = 59.05 cfs @ 12.87 hrs, Volume= 11.853 af
 Outflow = 21.42 cfs @ 14.06 hrs, Volume= 11.673 af, Atten= 64%, Lag= 71.6 min
 Primary = 21.42 cfs @ 14.06 hrs, Volume= 11.673 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs / 3
 Peak Elev= 84.46' @ 14.06 hrs Surf.Area= 10.023 ac Storage= 4.144 af

Plug-Flow detention time= 183.2 min calculated for 11.673 af (98% of inflow)
 Center-of-Mass det. time= 174.7 min (1,099.1 - 924.5)

Volume	Invert	Avail.Storage	Storage Description
#1	83.00'	31.523 af	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
83.00	0.000	0.000	0.000
84.00	2.507	1.253	1.253
85.00	18.795	10.651	11.904
86.00	20.441	19.618	31.523

Device	Routing	Invert	Outlet Devices
#1	Primary	83.00'	24.0" Round CMP_Round 24" L= 30.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 83.00' / 82.00' S= 0.0333 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf
#2	Primary	84.20'	40.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

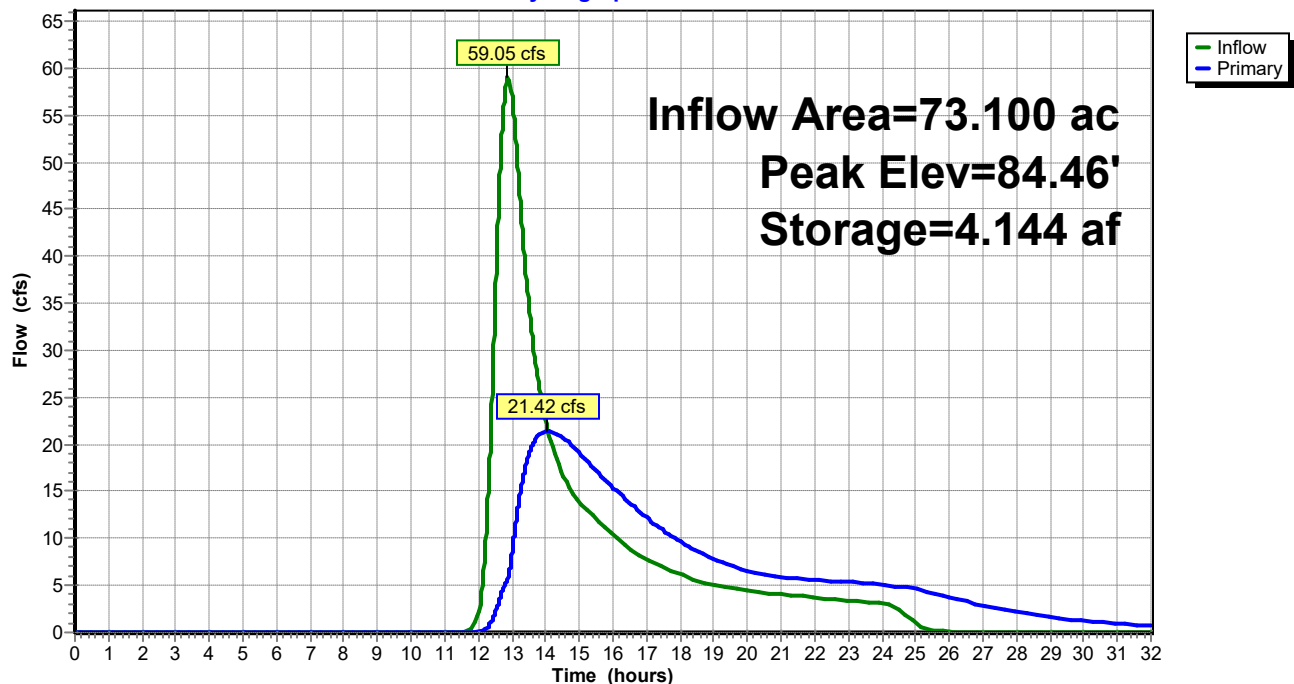
Primary OutFlow Max=21.42 cfs @ 14.06 hrs HW=84.46' TW=80.79' (Dynamic Tailwater)

1=CMP_Round 24" (Inlet Controls 7.99 cfs @ 3.25 fps)

2=Broad-Crested Rectangular Weir (Weir Controls 13.43 cfs @ 1.28 fps)

Pond 21P: Reservoir-8

Hydrograph



Summary for Pond 22P: Reservoir-9

Inflow Area = 36.600 ac, 0.00% Impervious, Inflow Depth = 1.38" for 100-YR event
 Inflow = 30.13 cfs @ 12.36 hrs, Volume= 4.220 af
 Outflow = 1.55 cfs @ 13.03 hrs, Volume= 2.067 af, Atten= 95%, Lag= 39.7 min
 Primary = 1.55 cfs @ 13.03 hrs, Volume= 2.067 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs / 3
 Starting Elev= 80.80' Surf.Area= 6.673 ac Storage= 4.862 af
 Peak Elev= 81.12' @ 25.21 hrs Surf.Area= 7.154 ac Storage= 7.072 af (2.211 af above start)

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: outflow precedes inflow)

Volume	Invert	Avail.Storage	Storage Description	
#1	80.00'	33.039 af	Custom Stage Data (Conic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
80.00	5.500	0.000	0.000	5.500
81.00	6.984	6.227	6.227	6.985
82.00	8.467	7.714	13.941	8.468
83.00	9.600	9.028	22.968	9.603
84.00	10.548	10.070	33.039	10.552

Device	Routing	Invert	Outlet Devices
#1	Primary	80.00'	24.0" Round CMP_Round 24" L= 40.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 80.00' / 80.00' S= 0.0000 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf
#2	Primary	82.50'	80.0' long x 82.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

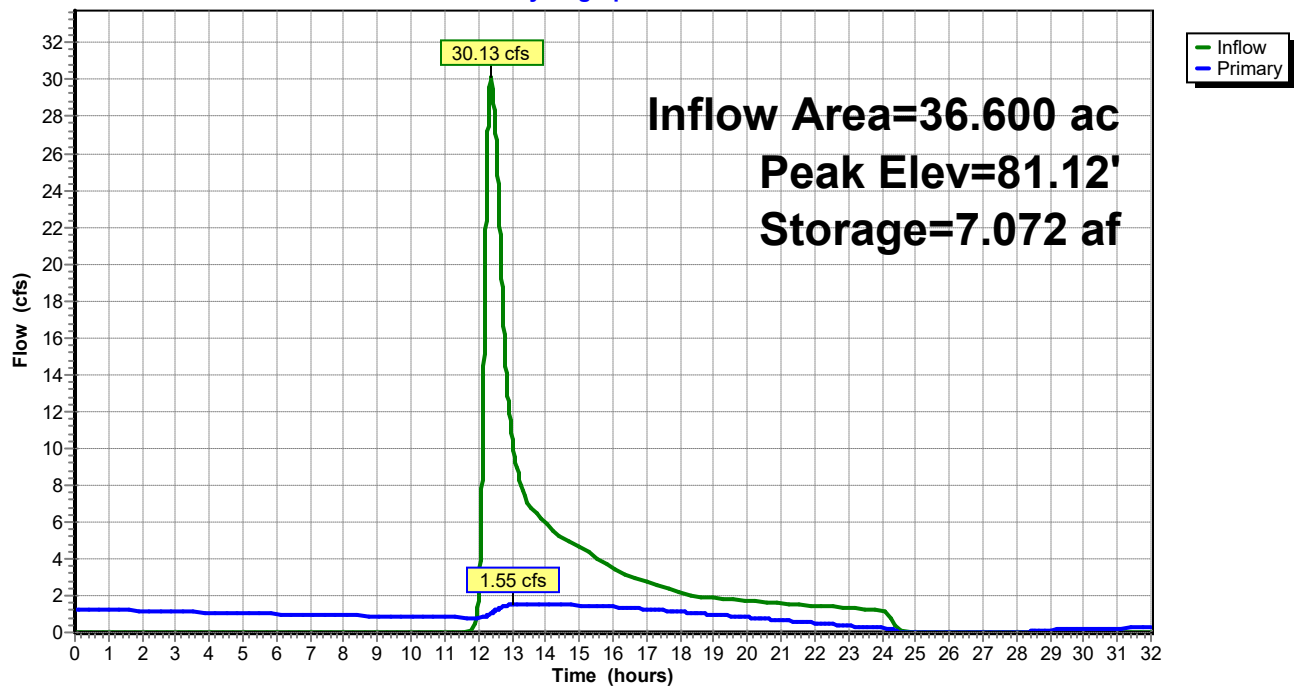
Primary OutFlow Max=1.55 cfs @ 13.03 hrs HW=80.87' TW=80.66' (Dynamic Tailwater)

1=CMP_Round 24" (Outlet Controls 1.55 cfs @ 1.73 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 22P: Reservoir-9

Hydrograph



Summary for Pond 23P: Reservoir-10

Inflow Area = 50.500 ac, 0.00% Impervious, Inflow Depth = 2.34" for 100-YR event
 Inflow = 86.78 cfs @ 12.30 hrs, Volume= 9.850 af
 Outflow = 6.92 cfs @ 15.92 hrs, Volume= 7.697 af, Atten= 92%, Lag= 216.8 min
 Primary = 6.92 cfs @ 15.92 hrs, Volume= 7.697 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs / 3
 Starting Elev= 89.50' Surf.Area= 1.528 ac Storage= 0.273 af
 Peak Elev= 90.67' @ 15.92 hrs Surf.Area= 6.048 ac Storage= 5.891 af (5.618 af above start)

Plug-Flow detention time= 459.7 min calculated for 7.424 af (75% of inflow)
 Center-of-Mass det. time= 349.1 min (1,226.6 - 877.5)

Volume	Invert	Avail.Storage	Storage Description	
#1	89.00'	56.465 af	Custom Stage Data (Conic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
89.00	0.007	0.000	0.000	0.007
90.00	5.707	1.971	1.971	5.707
91.00	6.222	5.963	7.934	6.224
92.00	8.875	7.509	15.443	8.877
93.00	9.670	9.270	24.713	9.674
94.00	10.441	10.053	34.766	10.447
95.00	10.824	10.632	45.398	10.834
96.00	11.312	11.067	56.465	11.325

Device	Routing	Invert	Outlet Devices
#1	Primary	89.50'	24.0" Round RCP_Round 24" L= 30.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 89.50' / 89.00' S= 0.0167 ' / S= 0.0167 ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf
#2	Primary	90.80'	30.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

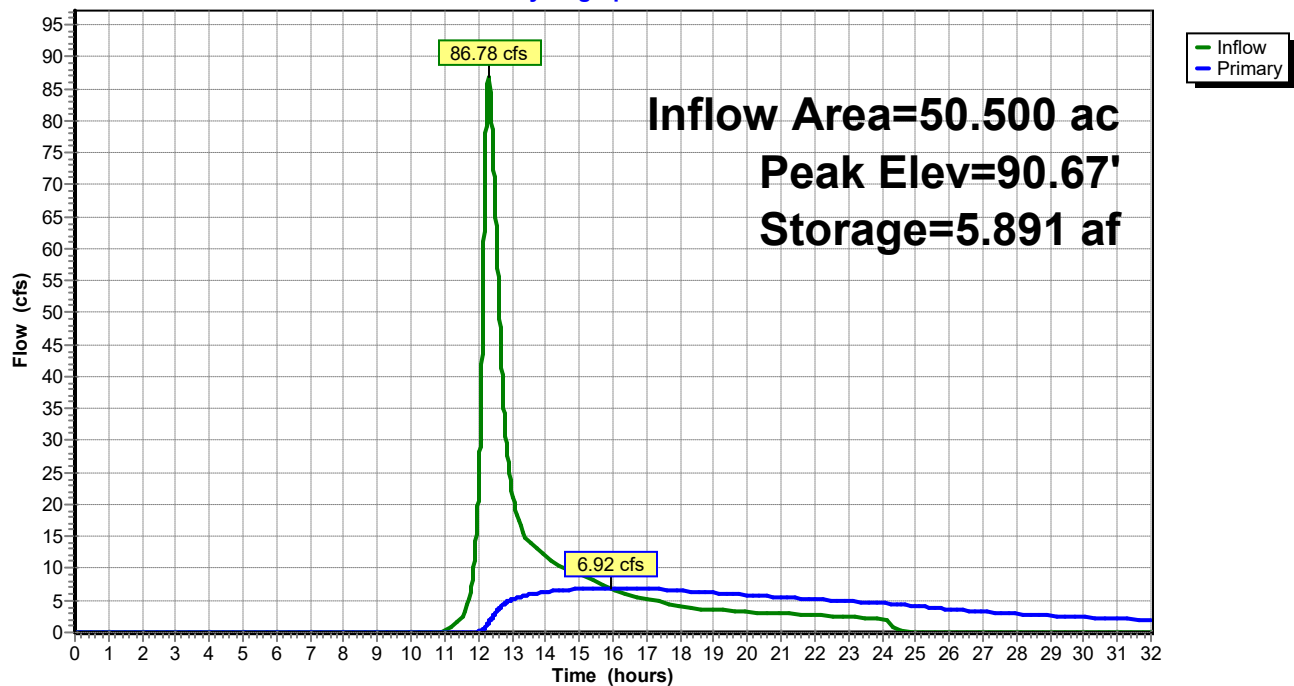
Primary OutFlow Max=6.92 cfs @ 15.92 hrs HW=90.67' TW=87.43' (Dynamic Tailwater)

1=RCP_Round 24" (Barrel Controls 6.92 cfs @ 5.24 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 23P: Reservoir-10

Hydrograph



Summary for Pond 24P: Reservoir-11

Inflow Area = 26.900 ac, 0.00% Impervious, Inflow Depth = 2.44" for 100-YR event
 Inflow = 48.84 cfs @ 12.30 hrs, Volume= 5.473 af
 Outflow = 2.07 cfs @ 18.35 hrs, Volume= 2.716 af, Atten= 96%, Lag= 362.7 min
 Primary = 2.07 cfs @ 18.35 hrs, Volume= 2.716 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs / 3
 Peak Elev= 87.72' @ 18.35 hrs Surf.Area= 5.557 ac Storage= 3.878 af

Plug-Flow detention time= 565.6 min calculated for 2.716 af (50% of inflow)
 Center-of-Mass det. time= 434.2 min (1,309.1 - 874.8)

Volume	Invert	Avail.Storage	Storage Description		
#1	87.00'	67.471 af	Custom Stage Data (Conic) Listed below (Recalc)		
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)	
87.00	5.151	0.000	0.000	5.151	
88.00	5.716	5.431	5.431	5.717	
89.00	6.280	5.996	11.427	6.283	
90.00	7.124	6.698	18.124	7.128	
91.00	7.911	7.514	25.638	7.916	
92.00	8.367	8.138	33.776	8.375	
93.00	9.714	9.032	42.809	9.723	
94.00	12.862	11.251	54.060	12.871	
95.00	13.968	13.411	67.471	13.979	

Device	Routing	Invert	Outlet Devices
#1	Primary	87.00'	24.0" Round CMP_Round 24" L= 35.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 87.00' / 86.50' S= 0.0143 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf
#2	Primary	89.20'	60.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

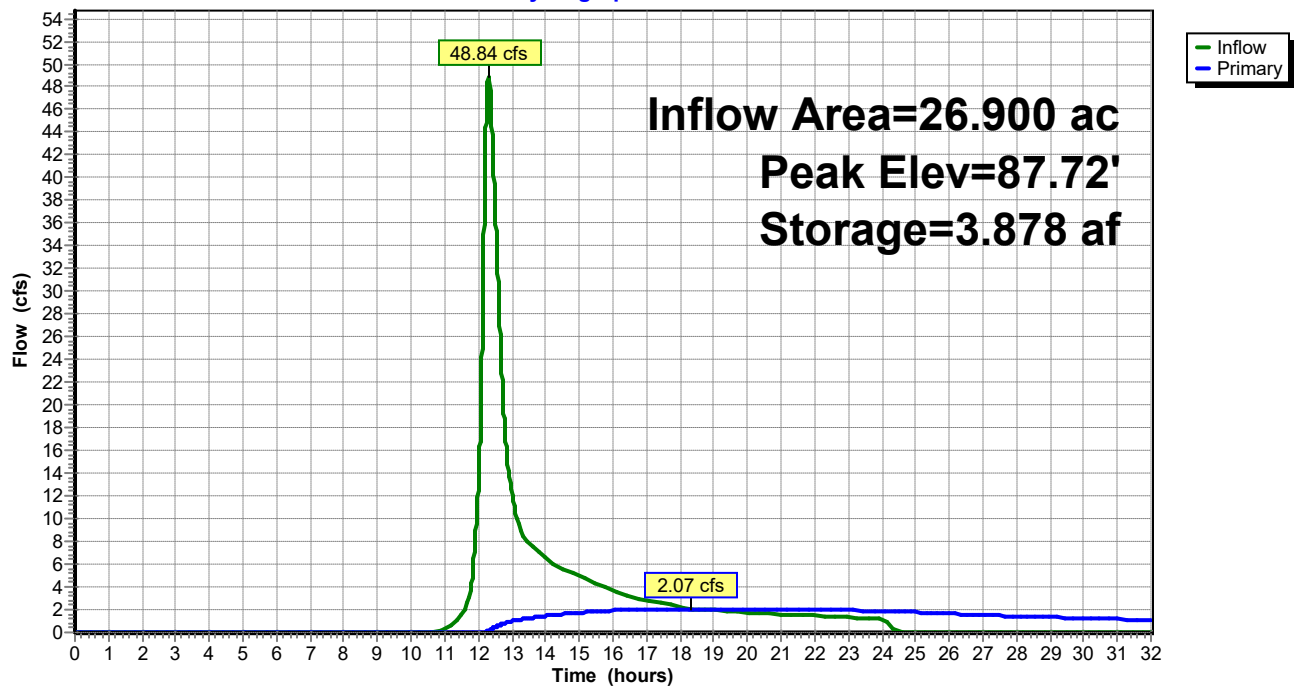
Primary OutFlow Max=2.07 cfs @ 18.35 hrs HW=87.72' TW=86.86' (Dynamic Tailwater)

1=CMP_Round 24" (Barrel Controls 2.07 cfs @ 3.00 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 24P: Reservoir-11

Hydrograph



Summary for Pond 25P: Reservoir-13

Inflow Area = 196.700 ac, 0.00% Impervious, Inflow Depth > 3.00" for 100-YR event
 Inflow = 325.62 cfs @ 12.40 hrs, Volume= 49.185 af
 Outflow = 29.68 cfs @ 16.21 hrs, Volume= 35.266 af, Atten= 91%, Lag= 228.9 min
 Primary = 29.68 cfs @ 16.21 hrs, Volume= 35.266 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs / 3
 Starting Elev= 80.50' Surf.Area= 2.180 ac Storage= 0.363 af
 Peak Elev= 82.55' @ 16.66 hrs Surf.Area= 22.567 ac Storage= 27.710 af (27.347 af above start)

Plug-Flow detention time= 469.1 min calculated for 34.898 af (71% of inflow)
 Center-of-Mass det. time= 336.5 min (1,249.8 - 913.3)

Volume	Invert	Avail.Storage	Storage Description	
#1	80.00'	293.577 af	Custom Stage Data (Conic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
80.00	0.000	0.000	0.000	0.000
81.00	8.720	2.907	2.907	8.720
82.00	18.890	13.481	16.388	18.890
83.00	25.860	22.284	38.672	25.861
84.00	30.520	28.158	66.830	30.522
85.00	35.220	32.842	99.672	35.223
86.00	40.690	37.922	137.594	40.694
87.00	50.460	45.487	183.081	50.464
88.00	56.520	53.461	236.543	56.526
89.00	57.550	57.034	293.577	57.563

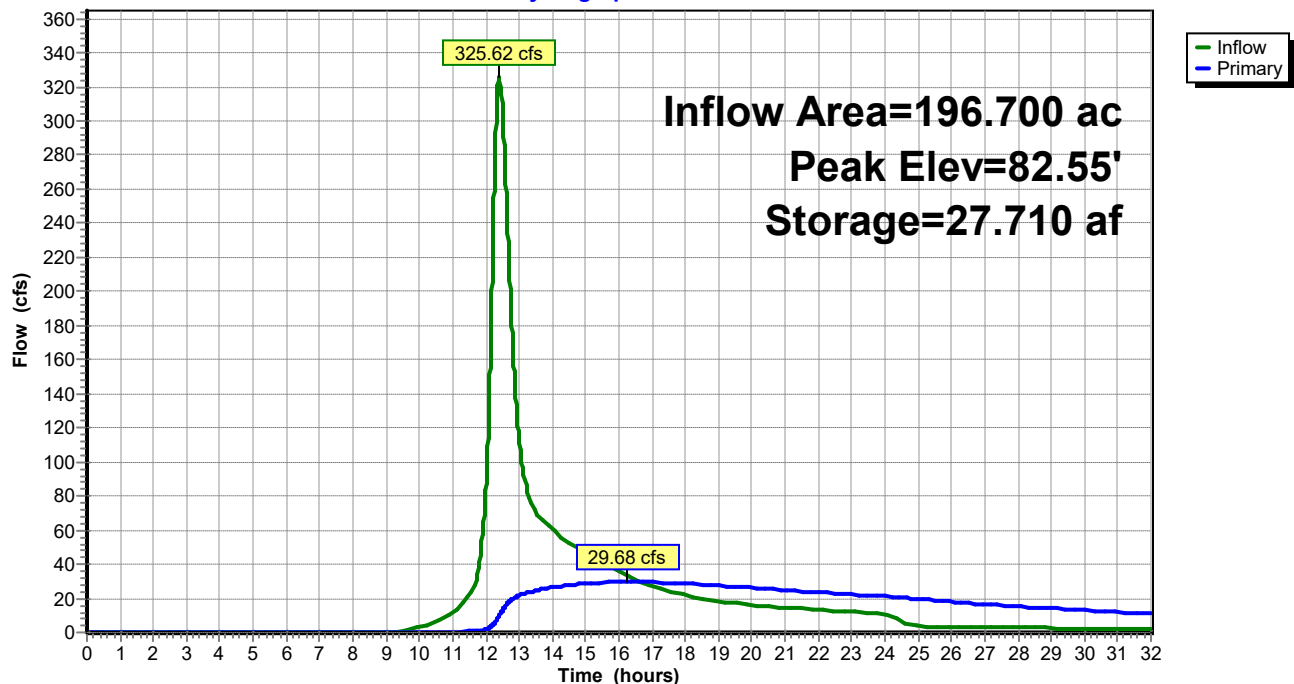
Device	Routing	Invert	Outlet Devices
#1	Primary	80.50'	48.0" W x 36.0" H, R=35.0" Elliptical Culvert L= 65.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 80.50' / 79.00' S= 0.0231 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 9.65 sf
#2	Primary	86.40'	40.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=29.68 cfs @ 16.21 hrs HW=82.54' TW=80.92' (Dynamic Tailwater)

1=Culvert (Outlet Controls 29.68 cfs @ 5.99 fps)
 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 25P: Reservoir-13

Hydrograph



Summary for Pond 26P: Reservoir-15

Inflow Area = 59.400 ac, 0.00% Impervious, Inflow Depth = 2.75" for 100-YR event
 Inflow = 103.17 cfs @ 12.46 hrs, Volume= 13.603 af
 Outflow = 16.02 cfs @ 14.12 hrs, Volume= 9.299 af, Atten= 84%, Lag= 99.5 min
 Primary = 16.02 cfs @ 14.12 hrs, Volume= 9.299 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs / 3
 Starting Elev= 88.50' Surf.Area= 6.013 ac Storage= 4.461 af
 Peak Elev= 89.42' @ 14.12 hrs Surf.Area= 9.589 ac Storage= 11.626 af (7.164 af above start)

Plug-Flow detention time= 638.1 min calculated for 4.837 af (36% of inflow)
 Center-of-Mass det. time= 268.5 min (1,146.0 - 877.5)

Volume	Invert	Avail.Storage	Storage Description	
#1	86.00'	91.535 af	Custom Stage Data (Conic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
86.00	0.000	0.000	0.000	0.000
87.00	0.187	0.062	0.062	0.187
88.00	4.360	1.817	1.879	4.360
89.00	7.931	6.057	7.936	7.931
90.00	12.117	9.950	17.886	12.118
91.00	22.197	16.905	34.791	22.198
92.00	29.577	25.799	60.590	29.578
93.00	32.334	30.945	91.535	32.337

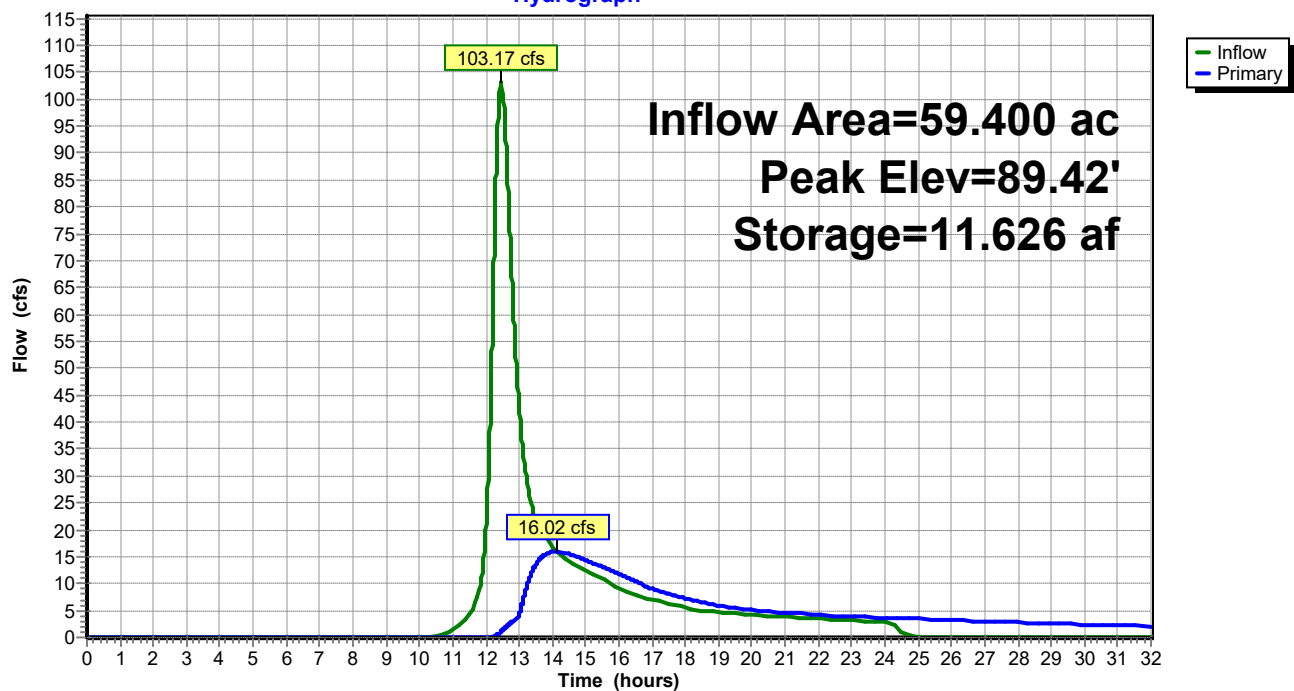
Device	Routing	Invert	Outlet Devices
#1	Primary	88.50'	24.0" Round CMP_Round 24" L= 95.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 88.50' / 86.50' S= 0.0211 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 3.14 sf
#2	Primary	89.30'	100.0' long x 30.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=16.02 cfs @ 14.12 hrs HW=89.42' TW=82.41' (Dynamic Tailwater)

1=CMP_Round 24" (Inlet Controls 4.62 cfs @ 3.27 fps)
 2=Broad-Crested Rectangular Weir (Weir Controls 11.39 cfs @ 0.94 fps)

Pond 26P: Reservoir-15

Hydrograph



Summary for Pond 27P: Reservoir-17

Inflow Area = 101.700 ac, 0.00% Impervious, Inflow Depth = 2.24" for 100-YR event
 Inflow = 126.77 cfs @ 12.56 hrs, Volume= 18.989 af
 Outflow = 25.26 cfs @ 14.10 hrs, Volume= 19.022 af, Atten= 80%, Lag= 92.2 min
 Primary = 25.26 cfs @ 14.10 hrs, Volume= 19.022 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-32.00 hrs, dt= 0.005 hrs / 3
 Starting Elev= 81.50' Surf.Area= 0.200 ac Storage= 0.033 af
 Peak Elev= 83.49' @ 14.10 hrs Surf.Area= 9.418 ac Storage= 7.446 af (7.413 af above start)

Plug-Flow detention time= 158.2 min calculated for 18.989 af (100% of inflow)
 Center-of-Mass det. time= 156.3 min (1,052.3 - 896.0)

Volume	Invert	Avail.Storage	Storage Description	
#1	81.00'	264.118 af	Custom Stage Data (Conic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
81.00	0.000	0.000	0.000	0.000
82.00	0.800	0.267	0.267	0.800
83.00	6.623	3.242	3.508	6.623
84.00	12.798	9.543	13.051	12.798
85.00	25.231	18.666	31.717	25.232
86.00	30.123	27.641	59.358	30.124
87.00	33.641	31.866	91.224	33.644
88.00	37.810	35.705	126.929	37.814
89.00	44.775	41.243	168.172	44.780
90.00	48.907	46.826	214.998	48.913
91.00	49.332	49.119	264.118	49.355

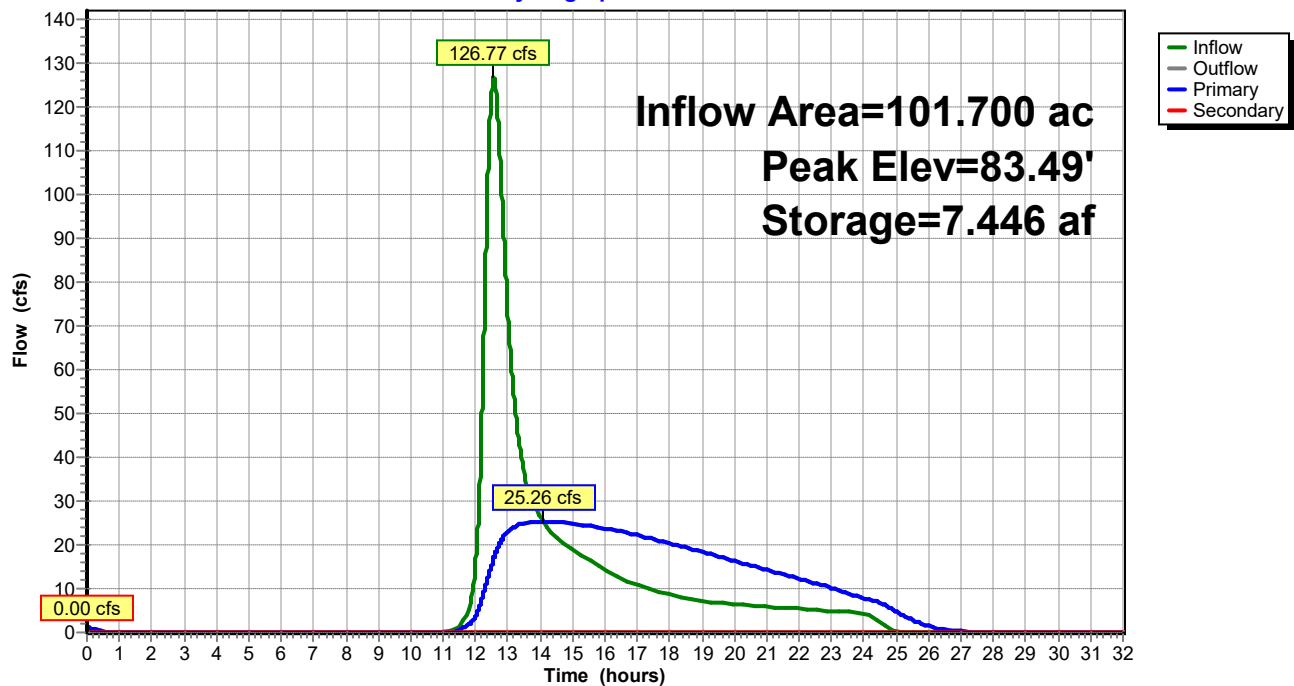
Device	Routing	Invert	Outlet Devices
#1	Primary	81.00'	36.0" Round Culvert L= 71.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 81.00' / 80.00' S= 0.0141 ' / Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 7.07 sf
#2	Secondary	85.60'	140.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=25.26 cfs @ 14.10 hrs HW=83.49' TW=80.79' (Dynamic Tailwater)
 ↑1=Culvert (Barrel Controls 25.26 cfs @ 5.45 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=81.50' TW=80.50' (Dynamic Tailwater)
 ↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

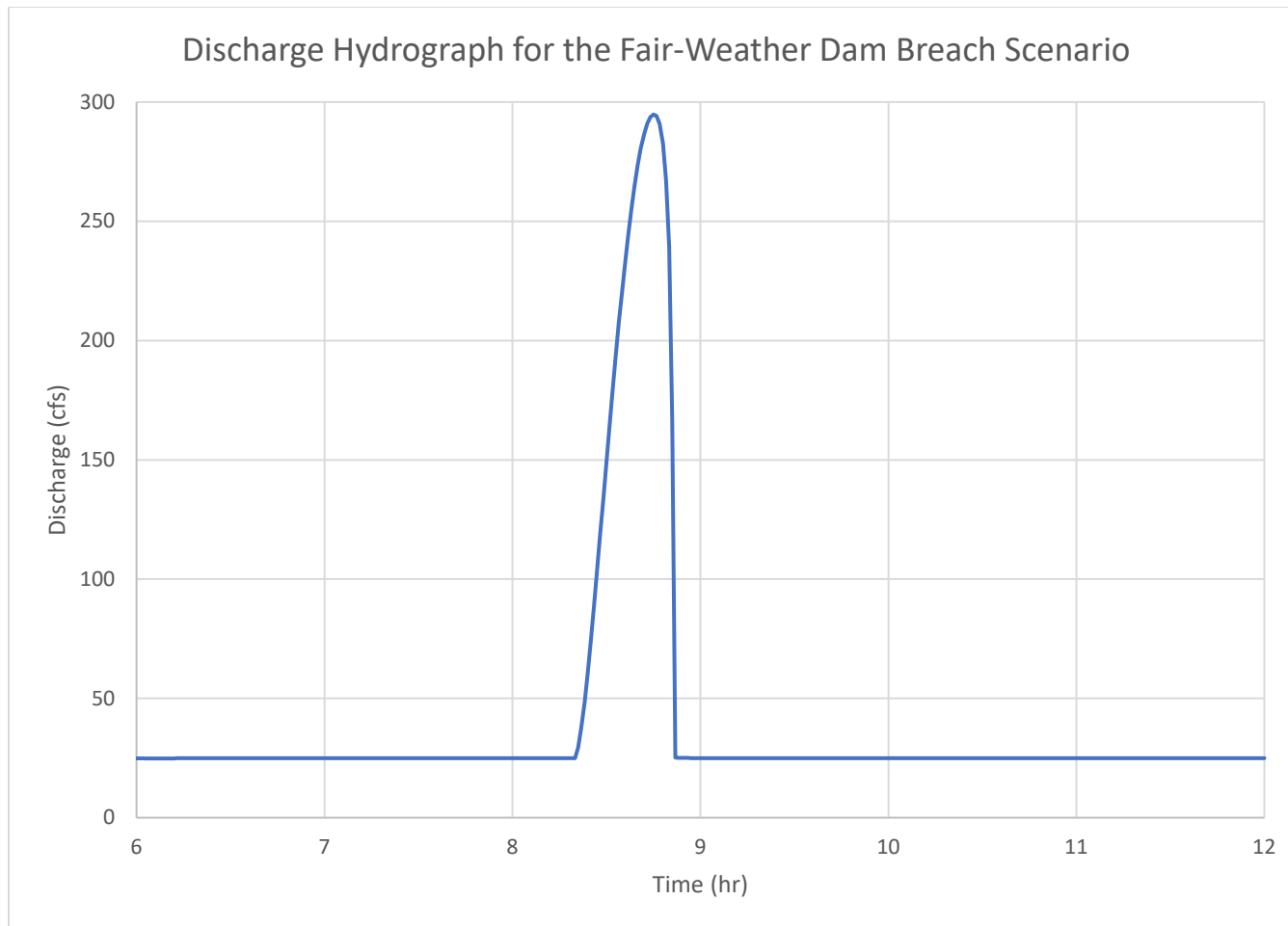
Pond 27P: Reservoir-17

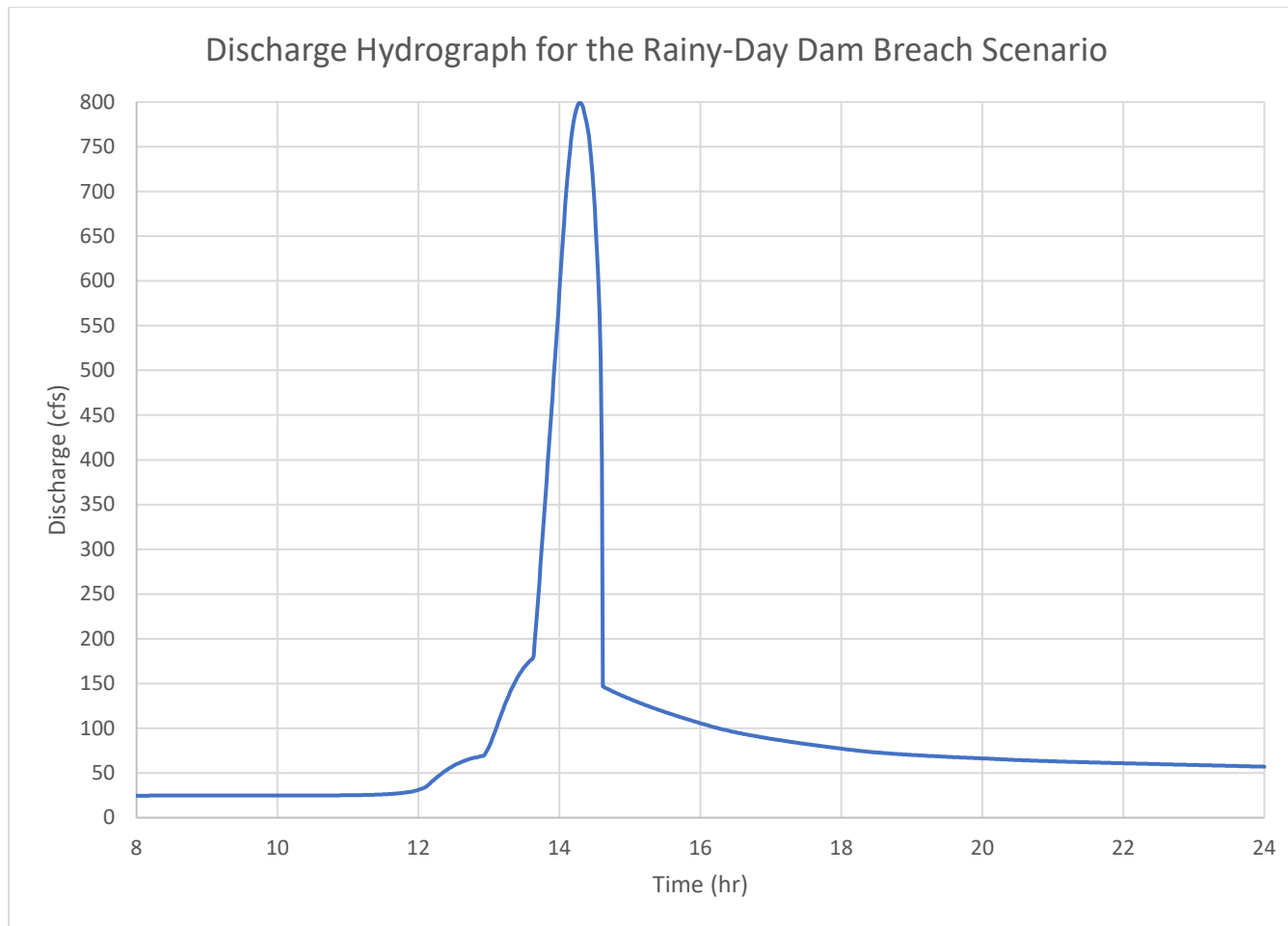
Hydrograph

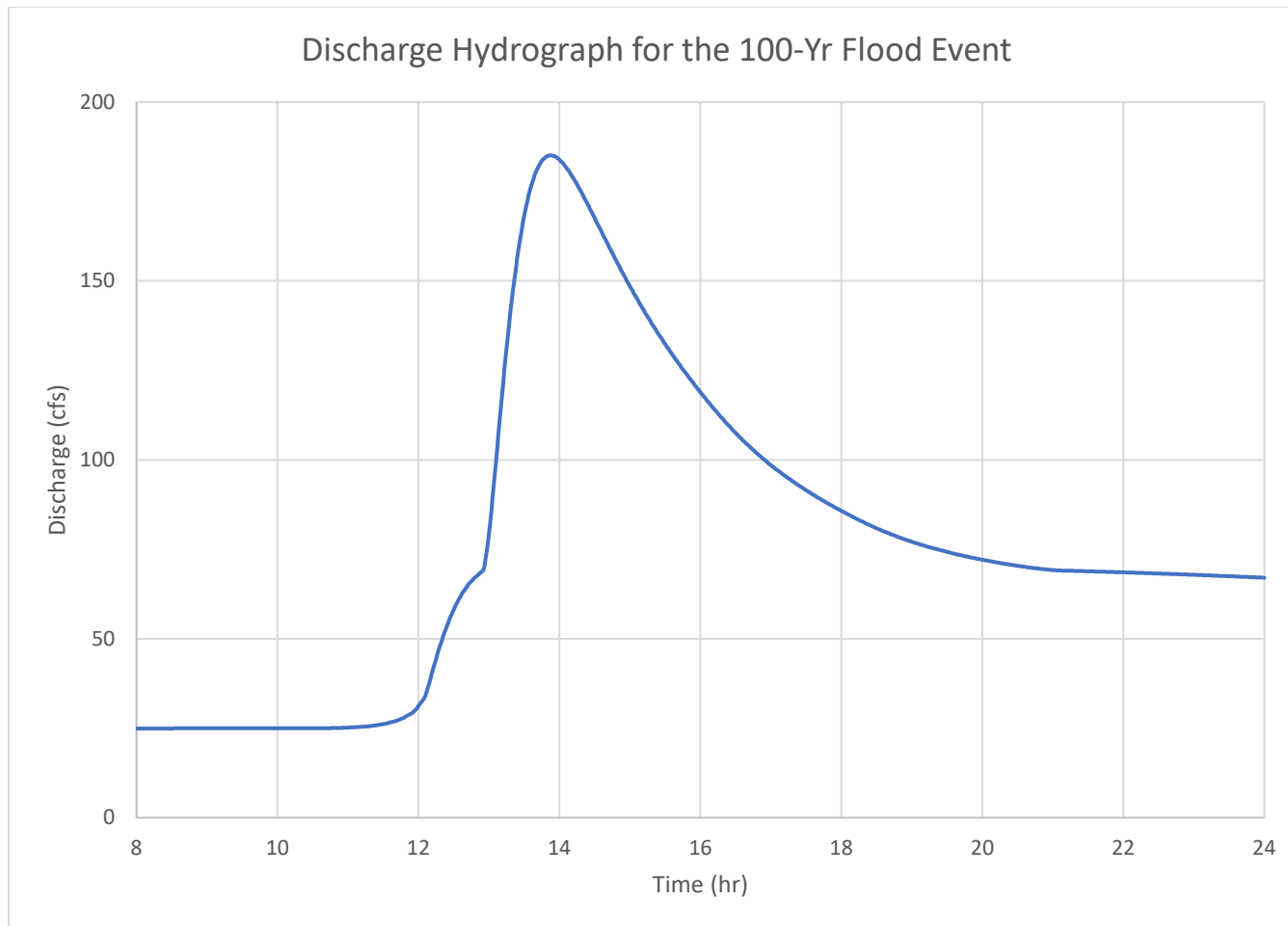


APPENDIX B

Hydraulic Model Diagrams

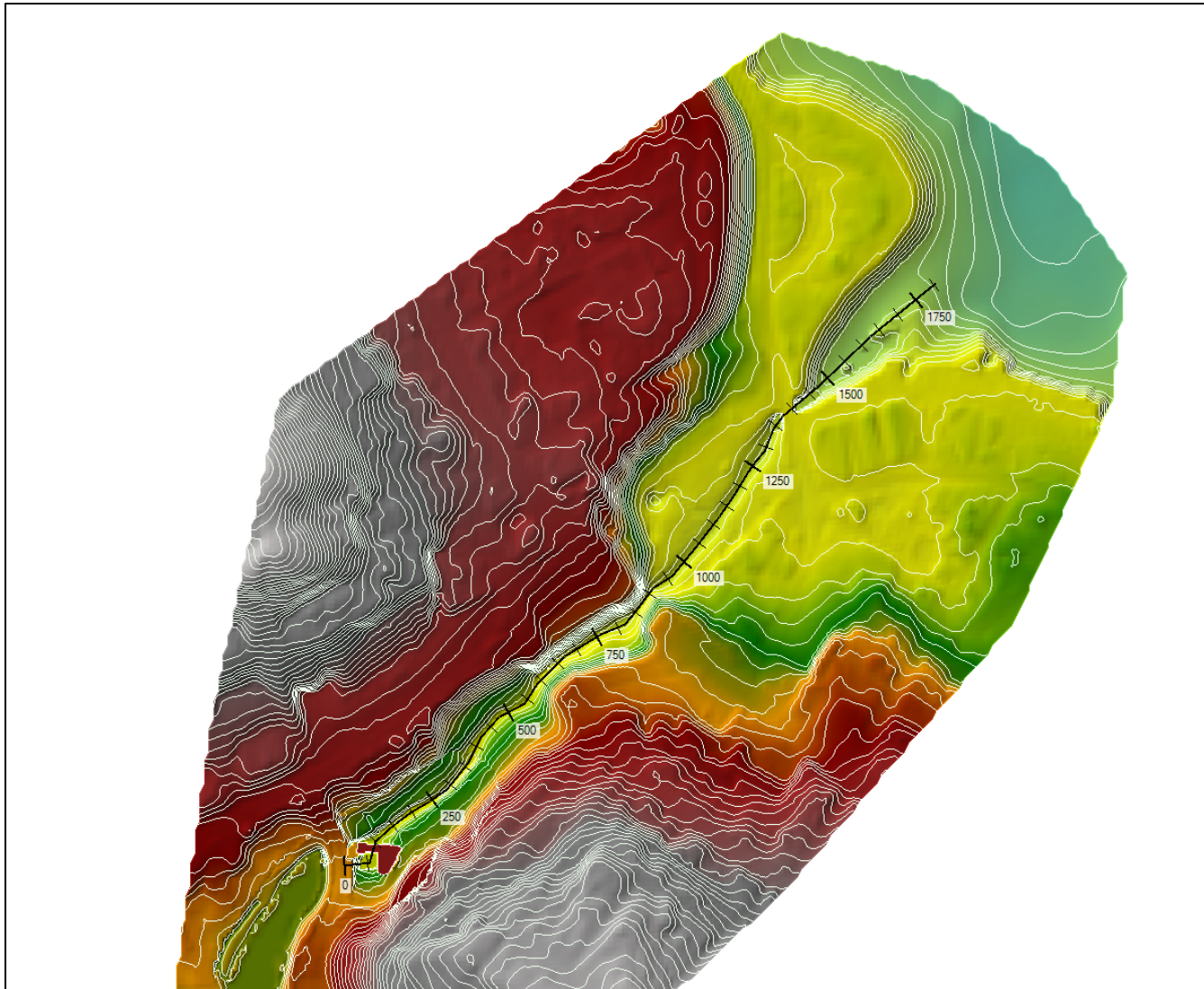




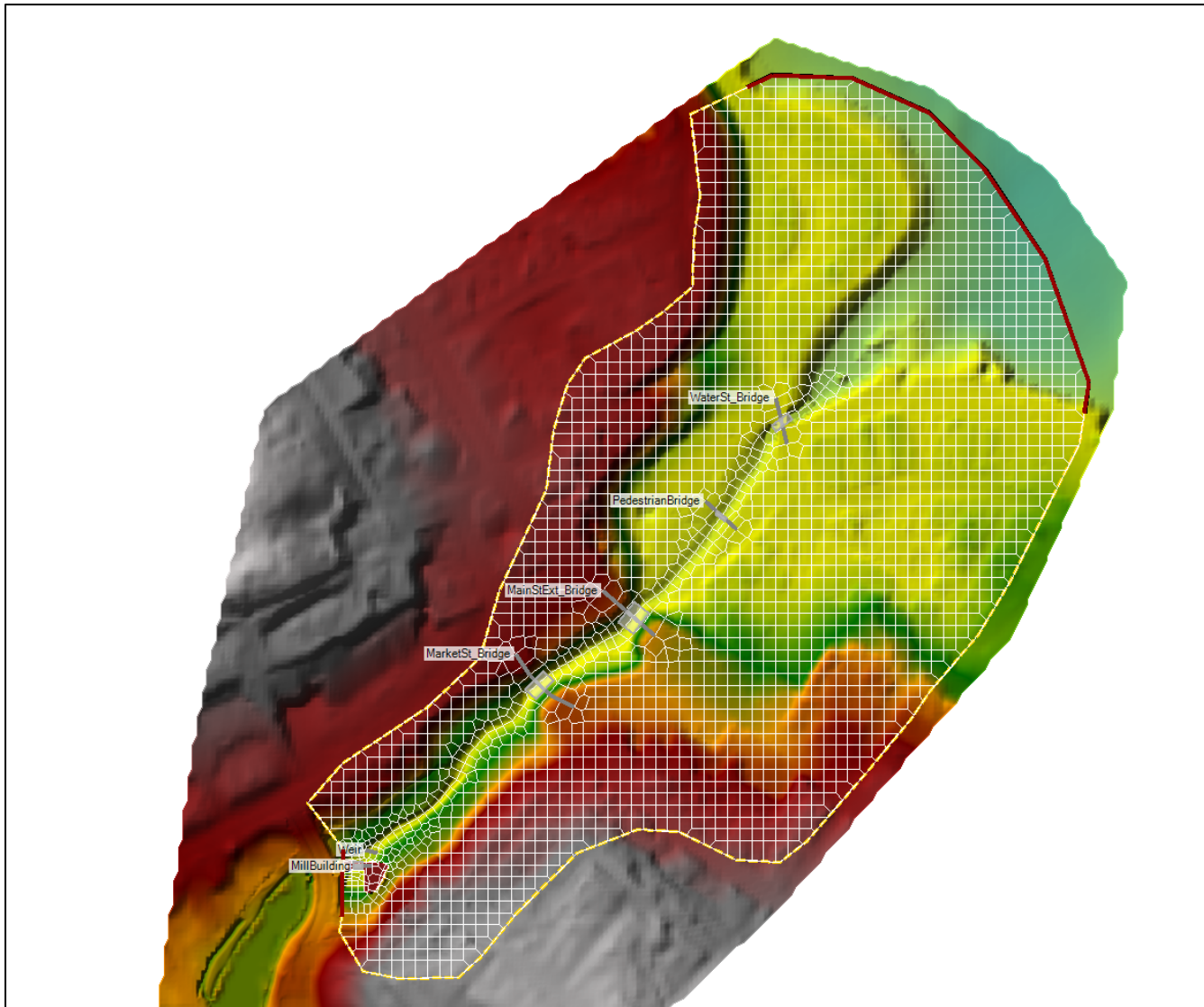




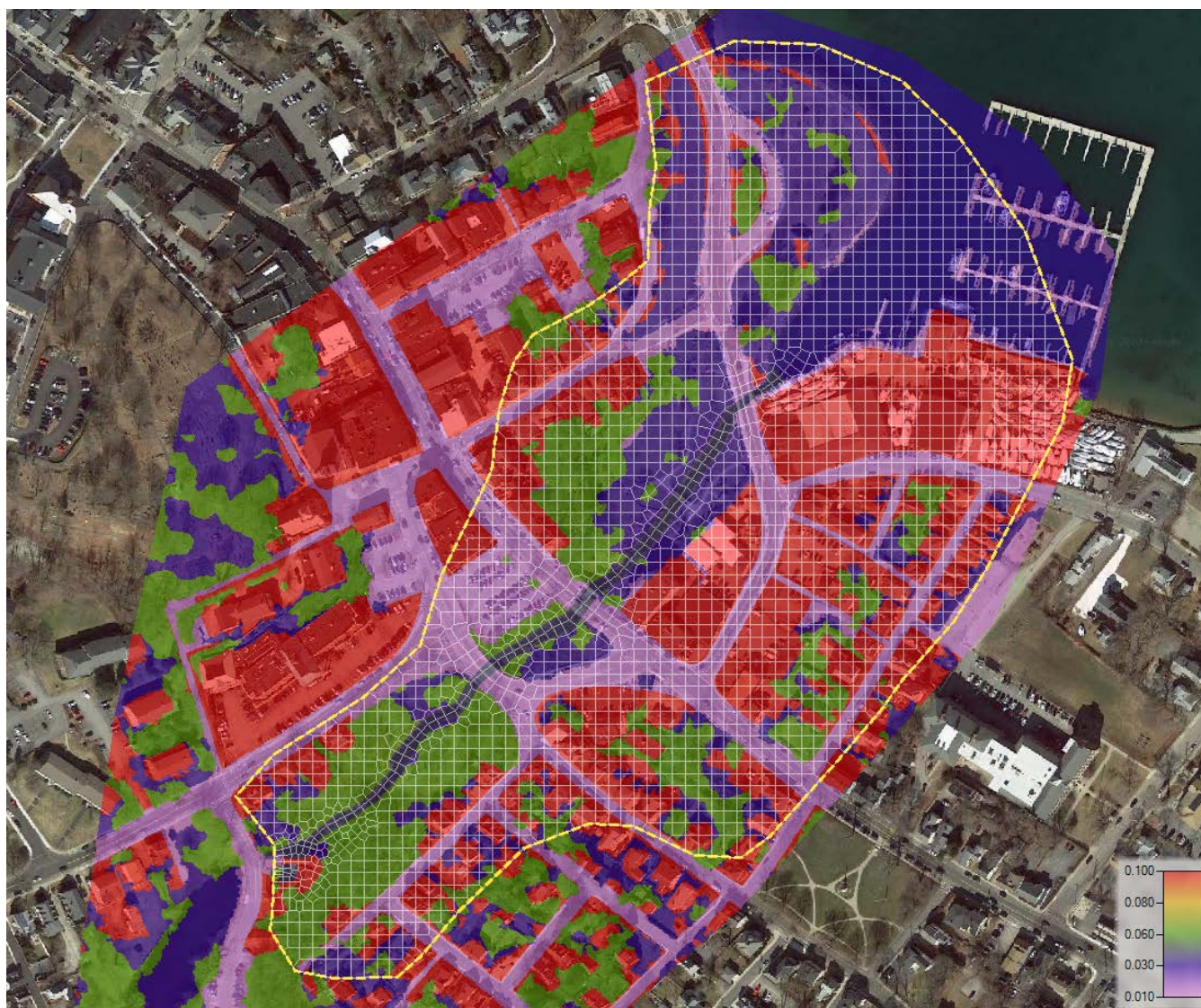
Perimeter of Two-Dimensional Hydraulic Model



Model Terrain Developed from 3-Meter Resolution LiDAR and Topographic Survey



Two-Dimensional Model Mesh with Boundary Conditions and In-Stream Structures



Manning's Roughness Coefficient Based on Landcover

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Energy and Environment	Priority #:	2 - Special
Project Title and Description: Morton Park Culvert Replacements	Total Project Cost:	5,383,500

Department/Division Head: David Gould, Director

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:

\$2,000,000 in Federal Highway Adminsitration (Aquatic Organism Passage) Funding

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>FY27</i>		
<i>Labor and Materials</i>	5,383,500		<i>FY28</i>		
<i>Administration</i>			<i>FY29</i>		
<i>Land Acquisition</i>			<i>FY30</i>		
<i>Equipment</i>			<i>FY31</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$5,383,500				

Project Justification and Objective:

The project proposes the replacement of two culverts along the rear entrance to Morton Park, one on the mainstem of Town Brook and one over an unnamed tributary. Both have weight restrictions and the smaller culvert has a steel plate over it. Both are undersized and pose safety concerns.

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: 50 years

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



Town of Plymouth
Department of Energy & Environment
26 Court Street, Plymouth, MA 02360



MEMO

To: Derek Brindisi, Town Manager
Lynne Barrett, Finance Director

From: David Gould, Director of Energy and Environment

Re: Capital Request – Morton Park Culverts

Date: November 6, 2024

The proposed replacement of the Morton Park culverts would replace two undersized culverts, both of which have weight limits and one which currently has a steel plate over it to allow for vehicular traffic to pass. These two culverts allow residents to access their homes on either side of Morton Park as well as visitors into the park. Approximately, two years ago the main access to the park during the summer months was relocated from Summer Street to the back entrance resulting in an increase in vehicular traffic over the two structures.

Since one of the culverts passes over Town Brook the Town applied for and received a grant from the Federal Highway Administration Aquatic Organism Passage (AOP) Program in the amount of \$2,000,000 since diadromous fish migrate upstream and downstream in Town Brook. The second culvert is on an unnamed tributary and does not pass diadromous fish.

The project would involve the demolition of both structures and replace each with pre-cast concrete culverts – one an arch and one a box culvert. Due to geotechnical limitations of the glacial outwash sediment that predominates in this area there is a need for micro-piles to ensure an adequate base and footings for each structure. In addition, the projects fall within the Town Brook Historic District which is recognized as a National Historic Register District so additional work including stone facades and timber guard rail will be utilized. The construction is limited to the winter months based upon the summer season in the park and the spring and fall time-of-year restrictions for the migration of diadromous fish. This further increases the cost of the project.

Should you have any questions regarding this project or capital request please contact me at your earliest convenience. Thanks.



Summary of Project Estimate

August 7, 2024

Morton Park Road Culverts – Plymouth, Massachusetts

Item 1 – Design and Engineering (In Progress).....\$288,500

Eastern 3-Sided Culvert Construction\$1,800,000

Western Arch Culvert & Stream Restoration Construction.....\$2,800,000

Item 2 – Total Construction Estimate\$4,600,000

Item 3 – Construction Administration (Based on 6 Month Construction).....\$350,000

Additional Design and Engineering Services

NEPA Assistance (Per FHWA).....\$35,000

Section 106 Coordination w/ PAL (Including MOA Development).....\$75,000

Coordination w/ FHWA Grant\$35,000

Item 4 – Total Additional Design and Engineering Services\$145,000

Total Items 1 Thru 4.....\$5,383,500

OPINION OF PROBABLE CONSTRUCTION COSTS
Based Upon Semi Final Drawings
Morton Park Culvert Replacement - Eastern 3-Sided Culvert
District 5
Plymouth, Massachusetts
#11982.00023
July 30, 2024

Item No	Description	Unit of Measure	Unit Price	Total Quantity	Total
1	SITE PREPARATION	LUMP SUM	\$23,000.00	1	\$23,000.00
2	INCIDENTIALS	LUMP SUM	\$35,000.00	1	\$35,000.00
2	TRAFFIC MANAGEMENT	LUMP SUM	\$18,000.00	1	\$18,000.00
4	SITE IMPROVEMENTS AND RESTORATION	LUMP SUM	\$29,000.00	1	\$29,000.00
115.1	DEMOLITION OF BRIDGE NO. P-13-XXX	LUMP SUM	\$ 30,000.00	1	\$30,000.00
120	EARTH EXCAVATION	LUMP SUM	\$ 35,000.00	1	\$35,000.00
140	BRIDGE EXCAVATION	CUBIC YARD	\$ 70.00	615	\$43,050.00
151	GRAVEL BORROW	CUBIC YARD	\$ 60.00	225	\$13,500.00
151.2	GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES	CUBIC YARD	\$ 65.00	130	\$8,450.00
156.1	CRUSHED STONE FOR BRIDGE FOUNDATIONS	TON	\$ 75.00	15	\$1,125.00
170	FINE GRADING AND COMPACTING	SQUARE YARD	\$ 10.00	305	\$3,050.00
402.	DENSE GRADED CRUSHED STONE FOR SUB-BASE	CUBIC YARD	\$ 90.00	105	\$9,450.00
443	WATER FOR DUST CONTROL	M GAL	\$ 80.00	25	\$2,000.00
620.3	STEEL BACKED TIMBER GUIDERAIL END ANCHORAGE	EACH	\$ 4,500.00	4	\$18,000.00
628.1	STEEL BACKED TIMBER GUIDERAIL BRIDGE ATTACHMENT	EACH	\$ 4,500.00	4	\$18,000.00
748.	MOBILIZATION	LUMP SUM	\$86,000.00	1	\$86,000.00
901	4000 PSI, 1.5 IN., 565 CEMENT CONCRETE	CUBIC YARD	\$ 1,500.00	80	\$120,000.00
904.3	5000 PSI, 3/4 IN., 685 HP CEMENT CONCRETE	CUBIC YARD	\$ 1,800.00	30	\$54,000.00
910.1	STEEL REINFORCEMENT FOR STRUCTURES - EPOXY COATED	POUND	\$ 3.50	18000	\$63,000.00
965	MEMBRANE WATERPROOFING FOR BRIDGE DECKS	SQUARE YARD	\$ 35.00	55	\$1,925.00
970.	DAMP-PROOFING	SQUARE FOOT	\$ 3.00	750	\$2,250.00
991.1	CONTROL OF WATER	LUMP SUM	\$ 100,000.00	1	\$100,000.00

OPINION OF PROBABLE CONSTRUCTION COSTS
Based Upon Semi Final Drawings
Morton Park Culvert Replacement - Eastern 3-Sided Culvert
District 5
Plymouth, Massachusetts
#11982.00023
July 30, 2024

Item No	Description	Unit of Measure	Unit Price	Total Quantity	Total
995.011	CULVERT STRUCTURE, CULVERT NO. XXXXX	LUMP SUM	\$ 80,000.00	1	\$80,000.00
	BANK TREATMENT	TON	\$ 120.00	460	\$55,200.00
	3/4" CRUSHED STONE	CUBIC YARD	\$ 75.00	55	\$4,125.00
	9.625" MICROPILE	EACH	\$ 8,000.00	40	\$320,000.00
	MICROPILE TEST PILE	EACH	\$ 20,000.00	1	\$20,000.00
	MICROPILE LOAD TEST	EACH	\$ 15,000.00	2	\$30,000.00
	4" NATURAL STONE VENEER	SY	\$ 500.00	115	\$57,500.00
	BLUESTONE CAP	LF	\$ 550.00	100	\$55,000.00

PROJECT COST SUBTOTAL =	\$1,335,625.00
CONTINGENCIES 10% =	\$ 133,562.50
INCEDENTIALS 10% =	\$ 133,562.50
MARKET UNCERTAINTY 15% =	\$ 200,343.75

TOTAL PROJECT COST (ROUNDED) = \$1,803,000.00

OPINION OF PROBABLE CONSTRUCTION COSTS
Based Upon Semi Final Drawings
Morton Park Culvert Replacement - Western Arch Culvert
District 5
Plymouth, Massachusetts
#11982.00023
July 30, 2024

Item No	Description	Unit of Measure	Unit Price	Total Quantity	Total
1	SITE PREPARATION	LUMP SUM	\$43,000.00	1	\$43,000.00
2	INCIDENTIALS	LUMP SUM	\$52,000.00	1	\$52,000.00
2	TRAFFIC MANAGEMENT	LUMP SUM	\$26,000.00	1	\$26,000.00
4	SITE IMPROVEMENTS AND RESTORATION	LUMP SUM	\$69,000.00	1	\$69,000.00
5	DEMOLITION OF STRUCTURES	LUMP SUM	\$60,000.00	1	\$60,000.00
115.1	DEMOLITION OF BRIDGE NO. P-13-XXX	LUMP SUM	\$ 100,000.00	1	\$100,000.00
120	EARTH EXCAVATION	LUMP SUM	\$ 70,000.00	1	\$70,000.00
140	BRIDGE EXCAVATION	CUBIC YARD	\$ 70.00	700	\$49,000.00
151	GRAVEL BORROW	CUBIC YARD	\$ 60.00	200	\$12,000.00
151.2	GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES	CUBIC YARD	\$ 65.00	155	\$10,075.00
156.1	CRUSHED STONE FOR BRIDGE FOUNDATIONS	TON	\$ 75.00	20	\$1,500.00
170	FINE GRADING AND COMPACTING	SQUARE YARD	\$ 10.00	485	\$4,850.00
402.	DENSE GRADED CRUSHED STONE FOR SUB-BASE	CUBIC YARD	\$ 90.00	165	\$14,850.00
443	WATER FOR DUST CONTROL	M GAL	\$ 80.00	35	\$2,800.00
620.3	STEEL BACKED TIMBER GUIDERAIL END ANCHORAGE	EACH	\$ 4,500.00	4	\$18,000.00
628.1	STEEL BACKED TIMBER GUIDERAIL BRIDGE ATTACHMENT	EACH	\$ 4,500.00	4	\$18,000.00
748.	MOBILIZATION	LUMP SUM	\$111,000.00	1	\$111,000.00
901	4000 PSI, 1.5 IN., 565 CEMENT CONCRETE	CUBIC YARD	\$ 1,500.00	95	\$142,500.00
904.3	5000 PSI, 3/4 IN., 685 HP CEMENT CONCRETE	CUBIC YARD	\$ 1,800.00	45	\$81,000.00
910.1	STEEL REINFORCEMENT FOR STRUCTURES - EPOXY COATED	POUND	\$ 3.50	23500	\$82,250.00
965	MEMBRANE WATERPROOFING FOR BRIDGE DECKS	SQUARE YARD	\$ 35.00	100	\$3,500.00
970.	DAMP-PROOFING	SQUARE FOOT	\$ 3.00	480	\$1,440.00

OPINION OF PROBABLE CONSTRUCTION COSTS
Based Upon Semi Final Drawings
Morton Park Culvert Replacement - Western Arch Culvert
District 5
Plymouth, Massachusetts
#11982.00023
July 30, 2024

Item No	Description	Unit of Measure	Unit Price	Total Quantity	Total
991.1	CONTROL OF WATER	LUMP SUM	\$ 200,000.00	1	\$200,000.00
995.011	CULVERT STRUCTURE, CULVERT NO. XXXXX	LUMP SUM	\$ 105,000.00	1	\$105,000.00
	BANK TREATMENT	LUMP SUM	\$ 150,000.00	1	\$150,000.00
	3/4" CRUSHED STONE	CUBIC YARD	\$ 75.00	85	\$6,375.00
	9.625" MICROPILE	EACH	\$ 8,000.00	56	\$448,000.00
	MICROPILE TEST PILE	EACH	\$ 20,000.00	1	\$20,000.00
	MICROPILE LOAD TEST	EACH	\$ 15,000.00	2	\$30,000.00
	4" NATURAL STONE VENEER	SY	\$ 500.00	130	\$65,000.00
	BLUESTONE CAP	LF	\$ 550.00	130	\$71,500.00

PROJECT COST SUBTOTAL =	\$2,068,640.00
CONTINGENCIES 10% =	\$ 206,864.00
INCEDENTIALS 10% =	\$ 206,864.00
MARKET UNCERTAINTY 15% =	\$ 310,296.00

TOTAL PROJECT COST (ROUNDED) = \$2,793,000.00

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Energy and Environment	Priority #:	3 - Special
Project Title and Description: Engineering for Black Cat Bog Restoration	Total Project Cost:	98,243

Department/Division Head: David Gould

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: Environmental Affairs Funds would be used for this work.

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
Planning and Design	98,243		FY27		
Labor and Materials			FY28		
Administration			FY29		
Land Acquisition			FY30		
Equipment			FY31		
Other					
Contingency					
Total Capital	98,243				

Project Justification and Objective: The Town received \$1,035,000 in state funds along with \$115,000 in CPA funds to acquire this property.

Restoration of the site will improve water quality at Billington Sea, Town Brook and Plymouth Harbor and improve habitat for fish and wildlife. Once the project engineering and permitting is underway we become eligible for state and federal restoration funds.

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.

Black Cat Bog Restoration

Design Cost Estimate Worksheet - PART 1



ESTIMATED HOURS

BY RESOURCE

		Principal	Technical Principal	Senior Staff	Staff	Technical Staff	Admin. Support	Total
		\$307	\$230	\$212	\$177	\$138	\$96	
		per hour	per hour	per hour	per hour	per hour	per hour	
1.1	Project Management	-	-	48	-	-	4	\$ 10,560
1.2	Kickoff Meeting	-	2	2	2	-	-	\$ 1,238
1.3	Concept Design Charrettes	-	2	2	4	-	-	\$ 1,592
1.4	Design Review Meetings (3)	-	6	6	6	-	-	\$ 3,714
		-	-	-	-	-	-	\$ -
	SUB TOTAL	-	10	58	12	-	4	

TASK 1 TOTAL ESTIMATE		\$ 24,849	Hours Total		84	Labor Total		\$ 17,104
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Task 2: Data Collection

2.1	Desktop analysis	-	4	2	8	2	-	\$ 3,036
2.2	Site Reconnaissance/Topo/Bathy survey	-	24	8	40	40	6	\$ 20,392
2.3	Flow measurements	-	1	-	2	2	-	\$ 860
2.4	Piezometer installation	-	2	-	8	16	-	\$ 4,084
2.5	Sand depth probing	-	2	-	24	24	-	\$ 8,020
		-	-	-	-	-	-	\$ -
	SUB TOTAL	-	33	10	82	84	6	

TASK 2 TOTAL ESTIMATE		\$ 47,172	Hours Total		215	Labor Total		\$ 36,392
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Task 3: Conceptual Design

3.1	Concept Design Development	-	24	8	16	48	2	\$ 16,864
3.2	EOPCC	-	2	1	2	4	-	\$ 1,578
	SUB TOTAL	-	26	9	18	52	2	

TASK 3 TOTAL ESTIMATE		\$ 26,222	Hours Total		107	Labor Total		\$ 18,442
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TOTAL ESTIMATE		\$98,243	LABOR TOTAL		\$ 71,938
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Budget Detail Sheet

DIRECT COSTS

BY ITEM

POV Mileage	Per diem
\$0.625	\$155
per mile	per person/day
-	-
-	-
-	-
-	2
-	-
-	2

BY COST

POV Mileage	Per diem	Airfare	Supplies	Total
incl. 10% markup	incl. 10% markup	incl. 10% markup	incl. 10% markup	
\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ 341	\$ 900	\$ -	\$ 1,241
\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ 341	\$ 900	\$ -	

Direct Cost Total		\$ 1,241
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-	-	\$ -	\$ -	\$ -	\$ -	\$ -
120	12	\$ 83	\$ 2,046	\$ 900	\$ 1,200	\$ 4,229
-	-	\$ -	\$ -	\$ -	\$ 50	\$ 50
-	-	\$ -	\$ -	\$ -	\$ 600	\$ 600
-	2	\$ -	\$ 341	\$ -	\$ 100	\$ 441
120	4	\$ 83	\$ 682	\$ -		\$ 765
240	18	\$ 165	\$ 3,069	\$ 900	\$ 1,950	

Direct Cost Total		\$ 6,084
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-	-	\$ -	\$ -	\$ -	\$ -	\$ -
-	-	\$ -	\$ -	\$ -	\$ -	\$ -
-	-	\$ -	\$ -	\$ -	\$ -	

Direct Cost Total		\$ -
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DIRECT COST TOTAL		\$ 7,325
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LINE TOTALS

Cost	Hours
\$ 10,560	52
\$ 1,238	6
\$ 1,592	8
\$ 4,955	18
\$ -	-

\$ 18,345	84
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\$ 3,036	16
\$ 24,621	118
\$ 910	5
\$ 4,684	26
\$ 8,461	50
\$ 765	-

\$ 42,476	215
-----------	-----

\$ 16,864	98
\$ 1,578	9

\$ 18,442	107
-----------	-----

HOURS TOTAL	406
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**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Energy and Enviroment	Priority #:	4 - Special
Project Title and Description: Replacement of Vehicle	Total Project Cost:	52,805

Department/Division Head: David Gould/Michael Cahill

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:

Environmental Affairs Fund would cover the cost along with \$7,500 available in reimbursement from MA DEP.

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>FY27</i>		
<i>Labor and Materials</i>			<i>FY28</i>		
<i>Administration</i>			<i>FY29</i>		
<i>Land Acquisition</i>			<i>FY30</i>		
<i>Equipment</i>	52,805		<i>FY31</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	52,805				

Project Justification and Objective:

DEE seeks to replace ME6 (2010), a GMC Sierra truck with a salvage title (poor condition) by allocating ME9, a truck formerly used by Natural Resources Wardens for use at the beach. ME9 would be replaced with the new EV SUV for use by the Sustainability and Resiliency Coordinator.

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

2010 GMC Sierra, 55,123 miles (Salvage Title)

What is the expected lifespan of this new/replacement equipment: 10 years

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



Estimate

Date: 9/23/2024

Estimate#

Customer ID:

To: Plymouth DPW
Rick Ragazzini

rragazzini@plymouth-ma.gov

Salesperson: Jay Matisko

774-556-2531

jmatisko@buycmg.com

Budget

Qty	Item #	Description	Unit Price	Line Total
1.00	1MB48	Chevy Equinox EV AWD		\$47,805.00
1.00		Color: TBD		included
1.00		Dual Level Charge cord		included
1.00		2LT Preferred Equipment		included
1.00		Forward Collision Alert		included
1.00		Lane keep assist		Included
1.00		2025 Estimated model increase		\$5,000.00

Special Instructions:

Custom or Special Orders are Non-Refundable

This Estimate is for Budgetary Purposes and is Not a Guarantee of Cost for Services.

Estimate is Based on Current Information From Client About the Project Requirements

Actual Cost May Change Once Project Elements are Finalized

Subtotal \$ 52,805.00

Sales Tax

Grand Total \$ 52,805.00

Thank You For Choosing The Colonial Way!

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Information Technology	Priority #:	1
Project Title and Description: Fiber Over Lash Phase 3	Total Project Cost:	250,000

Department/Division Head: Joseph Young

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>FY27</i>		
<i>Labor and Materials</i>			<i>FY28</i>		
<i>Administration</i>			<i>FY29</i>		
<i>Land Acquisition</i>			<i>FY30</i>		
<i>Equipment</i>			<i>FY31</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	250,000				

Project Justification and Objective: This project will be phased over several years, total project cost is \$1,517,316.13. We have reached capacity with our current Infrastructure.

The increasing demands for building-to-building connectivity, especially for public safety radio and security, requires us to add to our Municipal Network

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.

Information Technology Capital FY 2026

Fiber Network Expansion Year 3

This project will be phased over several years, total project cost is \$1,517,316.13. We have reached capacity with our current Infrastructure. The increasing demand for building-to-building connectivity, especially for public safety radio and security, requires us to add to our Municipal Network

Strategic Plan

In 2019 we created a Strategic Plan for IT. This essential tool that produces the roadmap for the IT department; ensures that the org structure, IT projects and spending are properly aligned with the strategic vision of Town leadership. In order to deliver on all, the Plan must be an evergreen document that is reviewed and refreshed on a regular basis.

Laserfiche Upgrade and Expansion and Records Digitization Year 3

This project will be phased over several years, total project cost is \$ 1,892,993.36. Digitization and indexing of permanent Town records will promote social distancing and remote access which will protect town employees, residents, and businesses. It will also strengthen local businesses' ability to conduct business transactions during any health and emergency issues such as pandemics.

To date we have configured Laserfiche software to connect with Open Gov and will be finishing up with Inspectional records this year. Year 3 we will start with Planning, Fire and Engineering Very satisfied with the results.



Town of Plymouth
Budgetary Scope of Work ITC 68
Fiber Optic Municipal Area Network
Addition of Ring Topology Fiber Capacity

Prepared by:	Comm-Tract 235 Summer Road Bldg. 4 Boxborough, MA 01719	Contact: Telephone: Email:	Bryan Hopkins (781) 890-5070 x6952 bhopskins@comm-tract.com
Date:	September 8 th 2021		

Bid No.	Plymouth FMAN – Addition of Fiber Capacity V.01
SPIN:	143008129
ITC 54:	VC 6000166632
FCC Registration:	0024175408

Bill To:		Ship To:	
Company:	Town of Plymouth	Company:	Town of Plymouth
Address:	26 Court Street Plymouth, MA 02360	Address:	26 Court Street Plymouth, MA 02360
Contact Name:	Joe Young	Contact Name:	Joe Young
Phone:	(508) 747-1620 x190	Phone:	(508) 747-1620 x190
Fax:		Fax:	
Email:	jyoung@townhall.plymouth.ma.us	Email:	jyoung@townhall.plymouth.ma.us

Description of Work

This budgetary Scope of Work (SOW) that follows was developed in with information as provided by the Town of Plymouth personnel and has been supplemented by field site surveys and subsequent engineering as performed by Comm-Tract engineers.

Comm-Tract will provide and install the following fiber optic municipal area network (FMAN) addition for the 192 count increase in fiber capacity in the ring topology of the network.

A. Overview of the Project:

1. The existing network ring topology will be over-lashed with (1) new 192 count Single Mode Fiber (SMF) and (1) new 144 count SMF ring will be added to the north side of the network.
2. All work will be fully complete including all fiber backbone splicing at the pole locations on the rings, the fiber laterals into the Network Hub building, the fiber entrance cable, the fiber termination panels, the connectors, and all other materials for a complete and fully functional fiber termination in the communications room of the Network Hub.
3. The fiber optic municipal area network's passive optical design will accommodate all types of wireless, and/or Ethernet connectivity for future additional requirements on the core network.
4. The Town Hall Network Hub Communications Room will have (2) new high-density housings and associated coupler panels installed in the existing Customer rack or cabinet.
5. Both the backbone and lateral fiber cables will be field terminated using LC/PC single-mode connectors.



Town of Plymouth
Budgetary Scope of Work ITC 68
Fiber Optic Municipal Area Network
Addition of Ring Topology Fiber Capacity

6. All backbone fibers throughout the network will be fusion spliced.
7. All optical testing will conform to industry standards.
8. The customer shall receive OTDR traces and Power Meter Test results at both 1310nm and 1550nm.
9. All test data will be compiled in electronic copy.

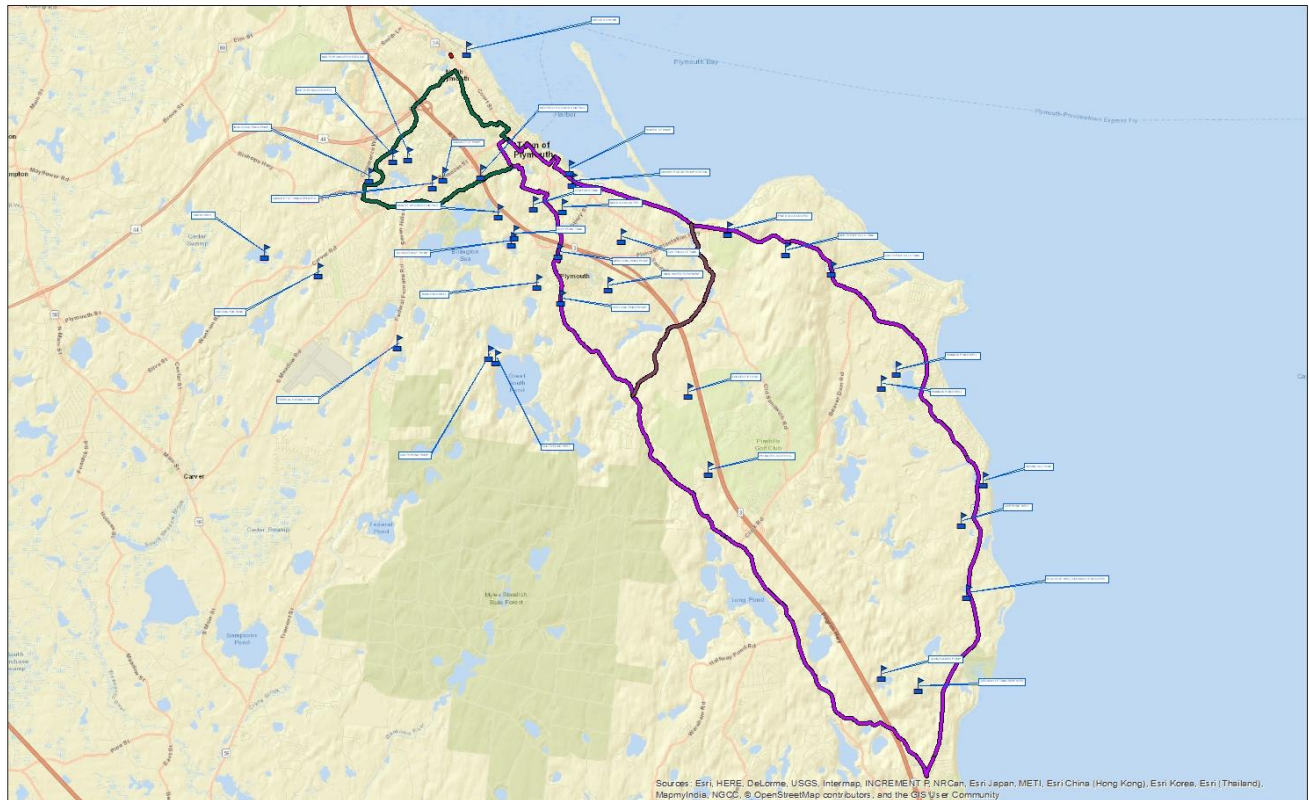
B. Notes:

1. Pricing is budgetary until such time as final engineering for the network addition is completed, and final SOW issued for contract purposes.
2. The design of this network mirrors the existing physical ring configuration and adds an additional ring to the north side of the network.
3. Pricing assumes access to the aerial routes, and/or conduit systems is not restricted in any way, and Comm-Tract will have free and clear access for installation purposes.
4. Pricing assumes the Customer would utilize existing location agreements with the carrier and/or utility for rights to the municipal space on the poles for the route(s).
5. Fiber strand assignments would have to be re-assigned in accordance with direction from Plymouth IT personnel.
6. Customer is responsible for providing trash container(s) for the disposal of non-hazardous waste such as fiber cable scrap, wooden fiber reels, and shipping boxes at the staging site for the project.



Town of Plymouth
Budgetary Scope of Work ITC 68
Fiber Optic Municipal Area Network
Addition of Ring Topology Fiber Capacity

C. Overview Map of Project:



TOWN OF PLYMOUTH, MA
MUNICIPAL FIBER OPTIC NETWORK
BACKBONE OVERBUILD FOR WATER/RF

PREPARED BY: C. AUCOIN
DATE: SEPTEMBER 1, 2021
PROPRIETARY AND CONFIDENTIAL



Town of Plymouth
Budgetary Scope of Work ITC 68
Fiber Optic Municipal Area Network
Addition of Ring Topology Fiber Capacity

Quantity	Bill of Materials Description
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To be provided with submittals on the project



Town of Plymouth
Budgetary Scope of Work ITC 68
Fiber Optic Municipal Area Network
Addition of Ring Topology Fiber Capacity

Warranty Information - Technical and Compliance Notes:

The Comm-Tract provided warranty and technical compliance with design and installation standards information is provided below as associated with this scope of work.

- Comm-Tract is a certified provider and partner for the Manufacturer and provides a 25 Year Warranty.
- The 25 Year Warranty commencing on the date of an accepted installation by the Customer covers all Manufacturer's products and materials, and covers the repair, and/or replacement of all installed components including, but not limited to fiber cable, fiber connectors, fiber patch panels, fiber jumpers and patch cords, and other materials as installed.
- The repair and/or replacement of any component in the certified and approved network solution as provided and installed by Comm-Tract under the 25 Year Warranty is provided at no cost to the Customer over the period of the 25 Year Warranty.

- Comm-Tract adheres to the following design and installation standards relative to the scope of work as provided.
- BICSI Design and Installation Applicable Standards
- Telecommunications Industry Association (TIA) Applicable Standards
- Electronics Industry Association (EIA) Applicable Standards
- ANSI/TIA/EIA – 568 Standards
- ANSI/TIA/EIA – 569 Standards
- TIA/EIA 604 Fiber Optic Standards
- TIA-492 Fiber Optic Installation Standards
- TSB-149 Fiber Optic Workmanship Standards
- IEEE 802.3 Standards



Town of Plymouth
 Budgetary Scope of Work ITC 68
 Fiber Optic Municipal Area Network
 Addition of Ring Topology Fiber Capacity

Pricing and Terms	
Customer agrees to the following payment schedule:	
30% Initial Payment upon Delivery of Materials:	\$ 455,194.84
65% Payment upon actual Project Progress:	\$ 986,255.48
5% Final Balance upon Completion:	\$ 75,865.81

- The Project Price shall be subject to adjustment in the event of any mutually agreed upon written changes made to the Scope of Work.
- Prices are valid for 90-days.
- The Project Price does not include licensing of pole or underground facilities.
- The Project Price does not include police details.
- The Project Price does not include permitting if applicable.
- The Project Price does not include any new underground construction.
- The Project Price does not include any applicable taxes as the project is tax exempt.
- The Project Price includes shipping charges.
- The Project Price assumes access to each location is free and clear for installation and all sites are ready for installation under a single deployment. Should a site not be ready, and return trip(s) are required, additional charges will apply.
- Comm-Tract will perform during normal business hours – Monday through Friday, 7am to 3pm unless otherwise specified in the Description of Work.
- Customer hereby agrees to the terms and conditions set forth in the Scope of Work by signing below or issuing a Purchase order referencing this Scope of Work.
- This Scope of Work is governed by the terms and conditions of the Commonwealth of Massachusetts ITC 68 blanket contract.

Site Surveys, Design and Engineering:	Included
Materials:	Included
Labor:	Included
Certification and Warranty:	Included
Total	\$ 1,517,316.13

Customer Name:	
Authorized Signature:	
Name:	
Date:	

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Information Technology	Priority #:	2
Project Title and Description: Strategic Plan Refresh	Total Project Cost:	50,000

Department/Division Head: Joseph Young

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>FY27</i>		
<i>Labor and Materials</i>			<i>FY28</i>		
<i>Administration</i>			<i>FY29</i>		
<i>Land Acquisition</i>			<i>FY30</i>		
<i>Equipment</i>			<i>FY31</i>	50,000	
<i>Other</i>					
<i>Contingency</i>					
Total Capital	50,000				

Project Justification and Objective: Every 5 years we have consultants come in and refresh our Strategic Plan.

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.

Information Technology Capital FY 2026

Fiber Network Expansion Year 3

This project will be phased over several years, total project cost is \$1,517,316.13. We have reached capacity with our current Infrastructure. The increasing demand for building-to-building connectivity, especially for public safety radio and security, requires us to add to our Municipal Network

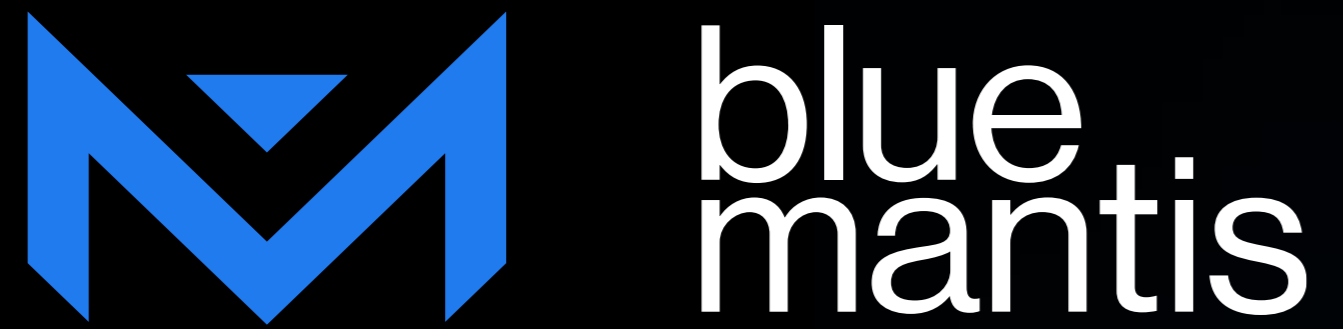
Strategic Plan

In 2019 we created a Strategic Plan for IT. This essential tool that produces the roadmap for the IT department; ensures that the org structure, IT projects and spending are properly aligned with the strategic vision of Town leadership. In order to deliver on all, the Plan must be an evergreen document that is reviewed and refreshed on a regular basis.

Laserfiche Upgrade and Expansion and Records Digitization Year 3

This project will be phased over several years, total project cost is \$ 1,892,993.36. Digitization and indexing of permanent Town records will promote social distancing and remote access which will protect town employees, residents, and businesses. It will also strengthen local businesses' ability to conduct business transactions during any health and emergency issues such as pandemics.

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IT Assessment and Strategy Discussion

Town of Plymouth
December 2024

Let's meet the **future.**

Agenda

- Summary
- Proposed Services and Deliverables
 - IT Assessment and Strategy Discussion
- Project Management
- Future Services
- Investment

What We Heard

- Plymouth, Massachusetts, often referred to as "America's Hometown," holds a significant place in American history. It was the site of the colony founded in 1620 by the Mayflower Pilgrims, marking the establishment of New England
- Town of Plymouth has engaged Blue Mantis to complete a comprehensive review of the Town of Plymouth's technology systems, infrastructure, risk mitigation, and processes by analyzing and evaluating their Information Technology (IT) operation and internal control environment to identify and document strengths and deficiencies in alignment with the latest IT industry standards in order to improve and mature the existing IT operations.

Challenges

- Seeking a trusted cyber security partner & advisor to review and recommend enhancements to harden the security maturity and security resilience of the town
- To address needs conveyed by Town of Plymouth, Blue Mantis will conduct a comprehensive IT Assessment ("assessment") intended to independently identify current deficiencies and document recommendations that will advance existing processes, safeguard information assets, and accelerate its municipal security capabilities.

Proposal

Blue Mantis will conduct a comprehensive **Information Technology Assessment** of current IT methodologies, standards, technologies, resources, policies, and processes following an established industry framework.

- Identify Deficiencies

Report gaps, weaknesses, and improvement needs

- Recommend Solutions

Provide guidance to remediate critical findings

- Establish A Baseline

Build reference point to track maturity and growth

- Drive Future Direction

Establish an IT strategy and initial Roadmap

Framework

This assessment will be conducted following the Control Objectives for Information and Related Technologies - **COBIT**.

COBIT is an industry-recognized **IT governance framework** for businesses wanting to implement, monitor and improve IT management best practices. The framework was created by ISACA to bridge crucial gaps between technical issues, business risks, and control requirements while integrating related standards from the International Organization for Standardization (ISO), including the IT Infrastructure Library (ITIL).

In the United States, COBIT is the most commonly used framework for achieving compliance with the Sarbanes-Oxley Act (SOX), but COBIT also has a high position within other frameworks and supports various international standards including **ITIL**, **CMMI**, **COSO**, **PRINCE2**, **TOGAF**, **PMBOK**, and **ISO 27001**.


Key IT categories to be assessed following the **COBIT** framework.

Strategy & Governance




**EDM01
APO02**

IT Strategy & Governance




**EDM05
APO08**

Stakeholder Management



ITRG01


People & Resource Mgmt



BAI01


Project Management

Technology Operations




APO10

Vendor Management



DSS02


Service Desk



BAI02

Requirements Gathering

Infrastructure Management




DSS03

Incident, Prob. Mgmt



BAI09

Asset Management



BAI04

Availability, Capacity Mgmt



BAI07


Change & Release Mgmt

Security & Risk Management




APO13

Security Strategy



DSS04


Disaster Recovery Planning



DSS04


Bus. Continuity Planning

Application Management




BAI03

App Selection, Rollout



ITRG04

Application Portfolio



ITRG07

Data Arch & Gov



ITRG09

Analytics & Reporting

IT Assessment

- During the assessment, Blue Mantis will coordinate with key stakeholders to conduct information gathering interviews as well as review existing policies and procedures.
- The assessment conducted by Blue Mantis in close collaboration with Town of Plymouth, will provide an accurate and complete accounting of overall IT effectiveness. Further, the assessment will evaluate current IT methodologies, policies, and practices against an established benchmark and industry framework.
- Specific work efforts and project activities to be executed during the Blue Mantis assessment includes:
 - 1. Performing an independent analysis (people, process, technology)
 - 2. Discovering the most critical operations requiring evaluation
 - 3. Determining overall technology and security maturity
 - 4. Analyzing processes, governance, and existing culture
 - 5. Identifying IT and cybersecurity deficiencies and risks
 - 6. Spotting deficiencies and current security weaknesses
 - 7. Documenting a prioritized roadmap for gap remediation

IT Assessment - Continued

- The assessment will be aligned with COBIT standards and 18 separate IT areas grouped into 5 fundamental information technology categories allowing the execution and completion of a comprehensive IT analysis. In addition, key strategic improvement recommendations regarding IT organizational structure, governance and alignment of spending initiatives with Town of Plymouth.
- The assessment report provided by Blue Mantis will provide critical recommendations for senior management, enabling better alignment of IT operations, services, resources, and solutions with organizational strategies and objectives.
- Information in the assessment report will also frame, drive, and support future IT and cybersecurity improvement plans, roadmaps, and budgets.

Deliverables

- During the assessment, Blue Mantis will coordinate with key stakeholders to conduct information gathering interviews as well as review existing policies and procedures.
- After the assessment, Blue Mantis will report gaps and deficiencies as well as provide remediation guidance for your consideration, recommendations intended to defend your organization from the rising number and sophistication of cybersecurity threats.

Information Technology Assessment (COBIT Framework)

- Blue Mantis will provide the following:
 - Executive Summary
 - Metrics, Charts, Gap analysis
 - Prioritized Recommendations
 - Executive Readout and Presentation
- Execution and output of this Assessment will serve as input to future roadmaps, organizational planning and budgeting and remediation.

Deliverables - Continued

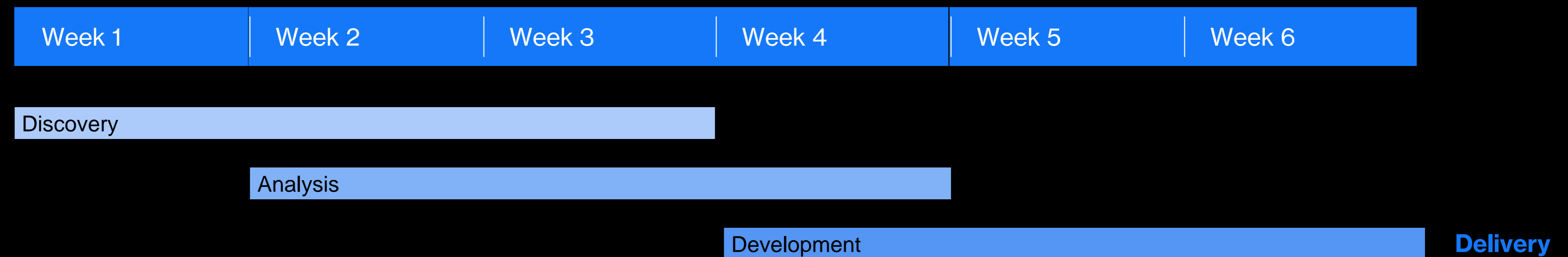
Deliverable Benefits

- By engaging Blue Mantis for a strategic assessment, the Town of Plymouth IT department can expect the following benefits:
 1. Improved Efficiency: Streamlined processes and optimized resource utilization.
 2. Enhanced Security: Implementation of robust cybersecurity measures.
 3. Better Alignment: Alignment of IT strategy with municipal goals.
 4. Informed Decision-Making: Data-driven insights for informed decision-making.
 5. Future-Ready: Preparation for future technological advancements and challenges.

Conclusion

- Blue Mantis is committed to delivering high-quality strategic assessment services that drive positive outcomes for Town of Plymouth's IT departments. Our comprehensive approach ensures that all aspects of the IT department are thoroughly evaluated and that actionable recommendations are provided to support continuous improvement.

The assessment will be conducted as quickly as possible over an estimated 6-week period but may vary for holidays, your availability, intervening priorities, or unplanned events. We can work at your pace.



Project Management

A Project Manager (PM) will be assigned to be the single point of contact (SPOC) for the project implementation. Activities include but are not limited to the following.

- Developing and maintains the project schedule
- Conducting the project kickoff and review objectives, scope and requirements
- Developing and maintain a work breakdown structure and schedule
- Coordinating and scheduling discovery sessions and manage escalations (if necessary)
- Conducting weekly project status meetings and issue status reports
- Identifying and communicating any project issues, impacts, and resolutions
- Directing the change management process (changes of scope if needed)
- Managing project financials and tracking planned efforts against actuals
- Overseeing the issuance and maintenance of issue/action reports

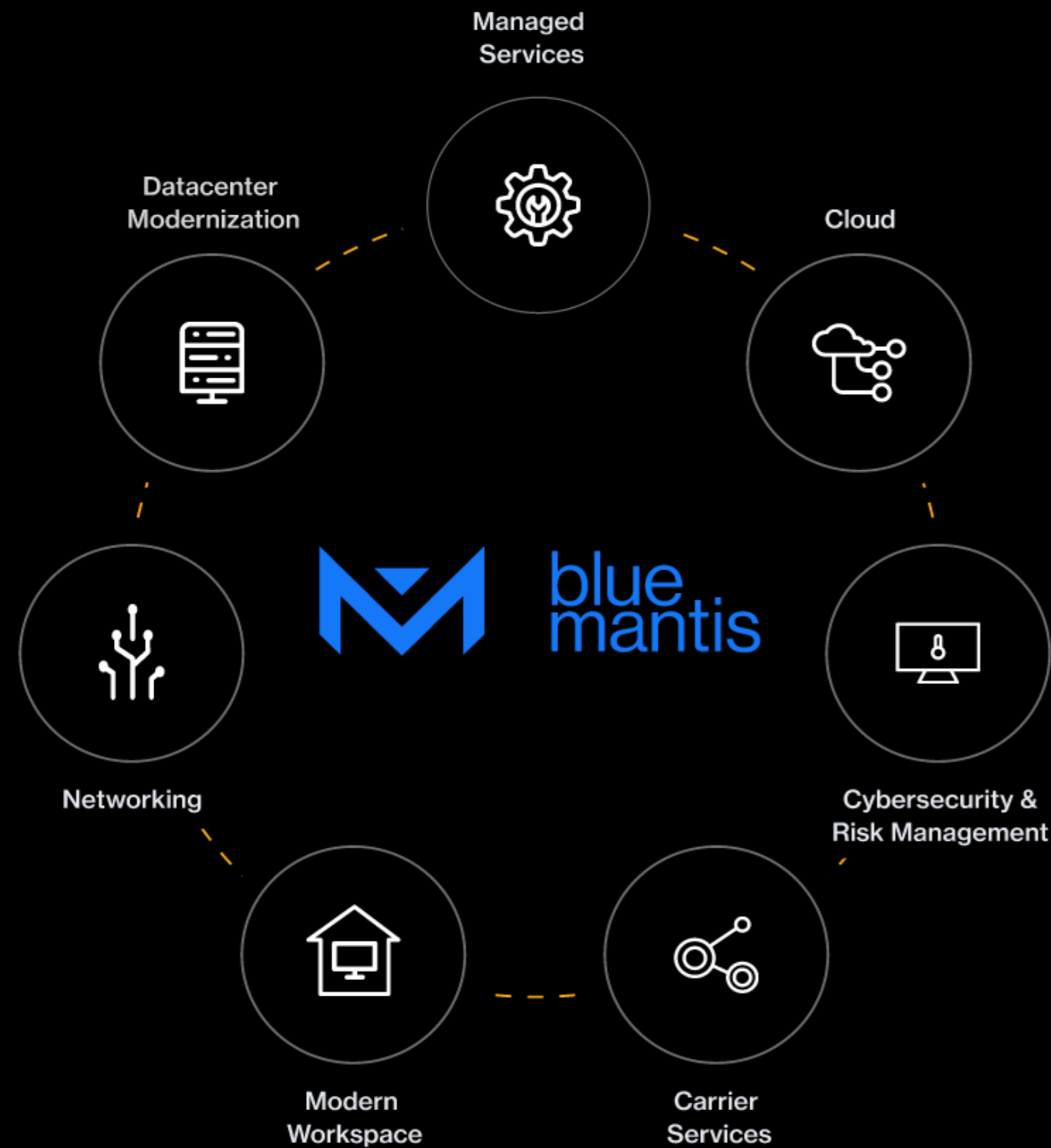
Additional recommended security services for consideration:

- BCP/DR Planning and Tabletop Testing
- Business Impact Analysis (BIA)
- Cloud security remediation
- Data Security Governance
- eMail Compromise Response & Remediation
- Emergency Incident Response Retainer Services
- Incident Response Planning and Tabletop Testing
- M365 Critical Controls Assessment
- NIST, CIS CSAT, CMMC, SOC-2, HIPAA, PCI Assessments, gap analysis and roadmaps
- Security Policy Assessment and Development
- Penetration Testing (annual, one-time, custom)
 - Active Directory Health Check & Password Audit
 - Firewall Configuration Review
 - Wireless Penetration Testing
- Purple Team Exercise
- Ransomware Readiness Simulation
- Security Awareness Training
- Social and Physical Engineering Testing
- vCISO / vCIO On-Demand Services
- Web Application Security Testing
- Zero Trust Development

Investment Details

Services	Cost
IT Assessment – Professional Services	\$33,000.00
GRC Security Strategy – Professional Services	\$13,500.00
Project Management	\$3,500.00
Services Total:	\$50,000.00

Thank you



Locations

Headquarters

Two International Drive
Suite 260
Portsmouth, NH 03801

Boston Office

One First Avenue
Building 34, Suite 201
Boston, MA 02109

Norwell Office

167 Washington Street
Norwell, MA 02061

Tampa Office

5680 W. Cypress Street
Suite 5680-I
Tampa, FL 33607

MA Tech Innovation Center

79 Walton Street
Attleboro, MA 02703

RI Tech Innovation Center

670 Narragansett Park Drive
Pawtucket, RI 02861

Toronto Office

2010 Winston Park Drive
Suite 200
Oakville, Ontario
Canada L6H 5R7

Global Delivery Centre

12th Floor Crescent 3 Prestige
Shantinikentan ITPL Main Road
Whitefield, Bangalore South
Karnataka 560066 India

Contact

Phone: (800) 989-2989

Email: contact-us@bluemantis.com

Online



**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Information Technology	Priority #:	3
Project Title and Description: Document Digitization Phase 3	Total Project Cost:	398,500

Department/Division Head: Joseph Young

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>FY27</i>	364,200	
<i>Labor and Materials</i>			<i>FY28</i>		
<i>Administration</i>			<i>FY29</i>		
<i>Land Acquisition</i>			<i>FY30</i>		
<i>Equipment</i>			<i>FY31</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	398,500				

Project Justification and Objective: This is Phase 3 of Document Digitization Project. We are scanning all paper documents and storing them electronically.

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.

Information Technology Capital FY 2026

Fiber Network Expansion Year 3

This project will be phased over several years, total project cost is \$1,517,316.13. We have reached capacity with our current Infrastructure. The increasing demand for building-to-building connectivity, especially for public safety radio and security, requires us to add to our Municipal Network

Strategic Plan

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Laserfiche Upgrade and Expansion and Records Digitization Year 3

This project will be phased over several years, total project cost is \$ 1,892,993.36. Digitization and indexing of permanent Town records will promote social distancing and remote access which will protect town employees, residents, and businesses. It will also strengthen local businesses' ability to conduct business transactions during any health and emergency issues such as pandemics.

To date we have configured Laserfiche software to connect with Open Gov and will be finishing up with Inspectional records this year. Year 3 we will start with Planning, Fire and Engineering Very satisfied with the results.

FY24 (Building Dept)	Price	FY25 (Building Dept)	Price
Closed Certs	\$ 2,419.20	Up to 11"x17" scans @\$0.105 (560,000 pages)	\$ 58,800.00
Rolled Plans	\$ 186,513.12	Large Format scans @\$2.45 (54,000 pages)	\$ 132,300.00
Permits 1941-1972 (13,544 permits)	\$ 19,811.17	Pick-Up	\$ 4,000.00
Permits 1997-2022 (54,772 permits)	\$ 240,538.71	Boxes Held Over 60 Days	\$ 26.52
Laserfiche Upgrade	\$ 68,742.45	Destruction	\$ 2,325.00
One-Time Set-Up	\$ 12,185.56	Keying/Indexing	\$ 6,059.48
Pick-Up	\$ 2,127.64	Processing/Upload	\$ 68,800.00
Return	\$ 2,127.64	Document Retrieval	\$ 9,792.00
Boxes Held Over 30 Days	\$ 26.52	Document Prep	\$ 18,740.00
Destruction	\$ 3,647.37	Special Handling	\$ 10,850.00
Keying/Indexing	\$ 5,123.92	Post Scanning Processing	\$ 9,920.00
Processing/Upload	\$ 57,307.89	Project Management	\$ 72,200.00
Delivery Fee	\$ 1,243.42	Microfilm Conversion	\$ 11,285.00
Project Management	\$ 2,865.40	Total	\$ 405,098.00
Total	\$ 604,680.01		
FY24	\$ 604,680.01		
FY25	\$ 405,098.00		
FY26	\$ 439,442.22		
FY27	\$ 402,782.26		
Total	\$ 1,852,002.49		
	Total		

[illegible]

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY26 SPRING ANNUAL TOWN MEETING**

Department: Town Manager	Priority #:	1
Project Title and Description: 1749 Courthouse	Total Project Cost:	\$39,433.50

Department/Division Head: Derek Brindisi

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>FY27</i>		
<i>Labor and Materials</i>	\$38,333.50		<i>FY28</i>		
<i>Administration</i>			<i>FY29</i>		
<i>Land Acquisition</i>			<i>FY30</i>		
<i>Equipment</i>			<i>FY31</i>		
<i>Other</i>	\$1,100	Shipping			
<i>Contingency</i>					
Total Capital					

Project Justification and Objective: Upgrade the display cases at the 1749 Courthouse Museum.

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.



TOWN OF PLYMOUTH

TOWN MANAGER'S OFFICE

26 COURT STREET, PLYMOUTH, MA 02360

PHONE: (508) 747-1620 X 10213

WWW.PLYMOUTH-MA.GOV

MEMORANDUM

TO: CAPITAL IMPROVEMENTS COMMITTEE

CC: SANDRA STRASSEL, PROCUREMENT OFFICER

LYNNE BARRETT, FINANCE DIRECTOR

DEREK BRINDISI, TOWN MANAGER

SILVIO GENAO, ASSISTANT TOWN MANAGER

FROM: CONNOR ANDERSON, ARCHIVIST/RECORDS ACCESS OFFICER

SUBJECT: FY2026 CAPITAL REQUESTS

DATE: OCTOBER 10, 2024

Dear Members of the Capital Improvements Committee,

Please see the attached FY2026 Capital request and supporting documentation for the Town Manager's Office. The Town Manager's Office seeks funding for the acquisition of 10 museum-grade display cases to replace our current display cases at the 1749 Courthouse Museum, which date back to the 1970s. These outdated cases do not provide adequate protection for our valuable artifacts, posing a risk to their preservation and longevity.

Our existing display cases lack modern protective features, exposing artifacts to potential damage from environmental factors such as UV light, humidity, dust, and physical handling. As a result, many of the artifacts in the 1749 Courthouse Museum's collection have begun to deteriorate. The continued deterioration of these artifacts could lead to significant loss, both culturally and financially, as well as negatively impact our institution's reputation.

This funding will be used to purchase 10 state-of-the-art museum-grade display cases designed to ensure optimal preservation and presentation of our artifacts. These cases will offer the following benefits:

Enhanced Protection: These cases are built with materials that block UV light and regulate humidity, ensuring artifacts are shielded from environmental damage.

Improved Visibility: These cases are designed for clear visibility, these cases will enhance the aesthetic presentation of our collections, allowing visitors to appreciate the artifacts more fully.

Visitor Engagement: Features such as integrated lighting and interactive elements will create a more engaging experience for our visitors, potentially increasing attendance and community interest.

Replacing our outdated display cases is an essential step in safeguarding our artifacts for future generations while enhancing the overall visitor experience. I strongly encourage your support for this capital improvement request, as it will significantly benefit our museum and community.

Please feel free to contact me with any questions or concerns.

Thank you

Connor Anderson
Archivist/Records Access Officer




Estimated Total

\$39,433.50

[Review Order](#)

PO


Shipping Instructions



Payment Method

☐ Purchase Order

☐ Credit Card

Apply Discount Code 

Order Summary

Cart Subtotal	\$38,333.50
Shipping	\$1,100.00
Shipping - Freight	

Order Total**\$39,433.50**

17 Items in Cart



Four Leg Display Case - HingedTop Natural 60x30

Qty: 10

\$25,458.00



Traditional Display Case - extra half shelf w/ brackets

Qty: 2

\$159.50



Traditional Display Case - White Back, Walnut

Qty: 5

\$12,716.00

Ship To:

Connor Anderson

26 Court Street

Plymouth, Massachusetts 02360

United States

508-322-3388

Shipping Method:

Shipping - Freight



SSL Certificate

Preserving our heritage since 1968 with Museum Quality Archival Products © University Products, Inc. 2024