

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY24 FALL ANNUAL TOWN MEETING**

Department: Schools Facilities	Priority #:	1
Project Title and Description: South Elementary School 5/6 RTUs replacement	Total Project Cost:	\$1,450,000.00

Department/Division Head: 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>			FY24		
<i>Administration</i>			FY25		
<i>Land Acquisition</i>			FY26		
<i>Equipment</i>	\$1,450,000.00		FY27		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$1,450,000.00				

Project Justification and Objective: All the roof tops are over 20 years old. Original manufacturer is out of business and parts are no longer available. They have outlived the ASHRAE expected lifespan for a roof top unit. The roof top units have significant areas of rust and structural breakdowns

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

1999 Jackson & Church HVAC Global, Natural Gas

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

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

Plymouth Public Schools



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

South Elementary School

1 message

Bob Joost <bob@nobleassociates.net>
To: Matthew Durkee <mdurkee@plymouth.k12.ma.us>
Cc: July Chen <july@nobleassociates.net>

Thu, Oct 26, 2023 at 10:01 AM

Good morning Matthew,
Hope you are well
Here is your budget pricing as requested

Scope of work:

Existing (10) Jackson Church Gas heating 500 MBH and DX cooling 8250 CFM unit 460/3ph
Multizone Rooftops.Including qty(1) Gas heating only Rooftop for the Gym.

The replacement (11) units would be Seasons 4 Gas/Electric Multi Zone units
"No curb" adapter required. New units would fit on the same curb. Pending the approval
the structural Engineer.

Budget Price**\$2,900,000 for all (11) units**

Sincerely,

Robert Joost
Technical Sales Engineer
Noble Associates, Inc.
317 Libbey Industrial Pkwy
Weymouth, MA 02189
C: 401-744-2707

O: 781-337-1630

www.nobleassociates.net





**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY24 FALL ANNUAL TOWN MEETING**

Department: Plymouth Public Schools	Priority #:	2
Project Title and Description: Redesign and construction of South Elementary School well	Total Project Cost:	\$240,000.00

Department/Division Head: Matthew 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>	\$175,000.00		FY24		
<i>Administration</i>	\$65,000.00		FY25		
<i>Land Acquisition</i>			FY26		
<i>Equipment</i>			FY27		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$240,000.00				

Project Justification and Objective: South Elementary School well holding tank is located in a cement bunker. There have been numerous times when the school was without water. The MASSDEP has cited the district due to water system issues and have requested a redesign of the water system. This will bring the holding tanks into the building

and add a new treatment system. This redesign will abandon the underground water tank and bunker. _____

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.



Design Basis Summary - South Elementary School Water System

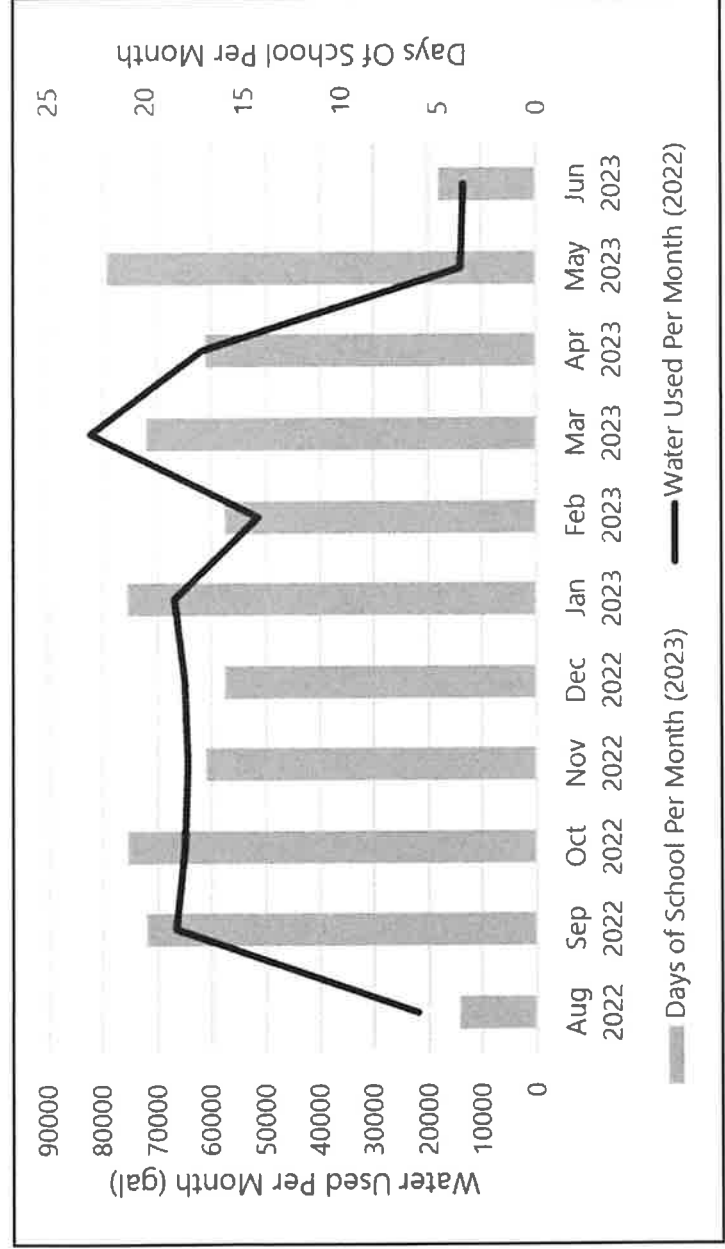
Plymouth Public Schools
October 2nd, 2023



Presentation Outline

1. Water Usage
2. Design Flow Rates & Fire Service Requirements
3. Pump Performance
4. Existing Conditions
 1. Basement
 2. Underground Storage Tank Vault
5. Proposed Conditions
 1. Cartridge Filter
 2. Control Valve
 3. Hydropneumatic Tank
 4. Soda Ash Injector and Chemical Feed Rates
 5. Sketch of System
6. Cost Analysis
 - A. Underground Vault Abandonment
 - B. Construction Costs
 - C. Procurement

Water Usage



Design Flow Rates & Fire Service Requirements

Month	Meter Readings				Days of School Per Month (2023)
	Left Hand Dial (CF, Flows Above 10 GPM)	Right Hand Dial (CF, Flows Below 10 GPM)	Sum of Meter Readings (CF)	Chemical Addition Report Water Usage (gal)	
Jul 2022				23250	0
Aug 2022				22010	4
Sep 2022				66700	20
Oct 2022				65100	21
Nov 2022				64500	17
Dec 2022				65100	16
Jan 2023	6711	2240	8951	66958	21
Feb 2023	1600	5265	6865	51354	16
Mar 2023	2470	8528	10998	82271	20
Apr 2023	1420	6850	8270	61864	17
May 2023	20	1837	1857	13891	22
Jun 2023	1364	420	1784	13345	5
Jul 2023	318	40	358	2678	0

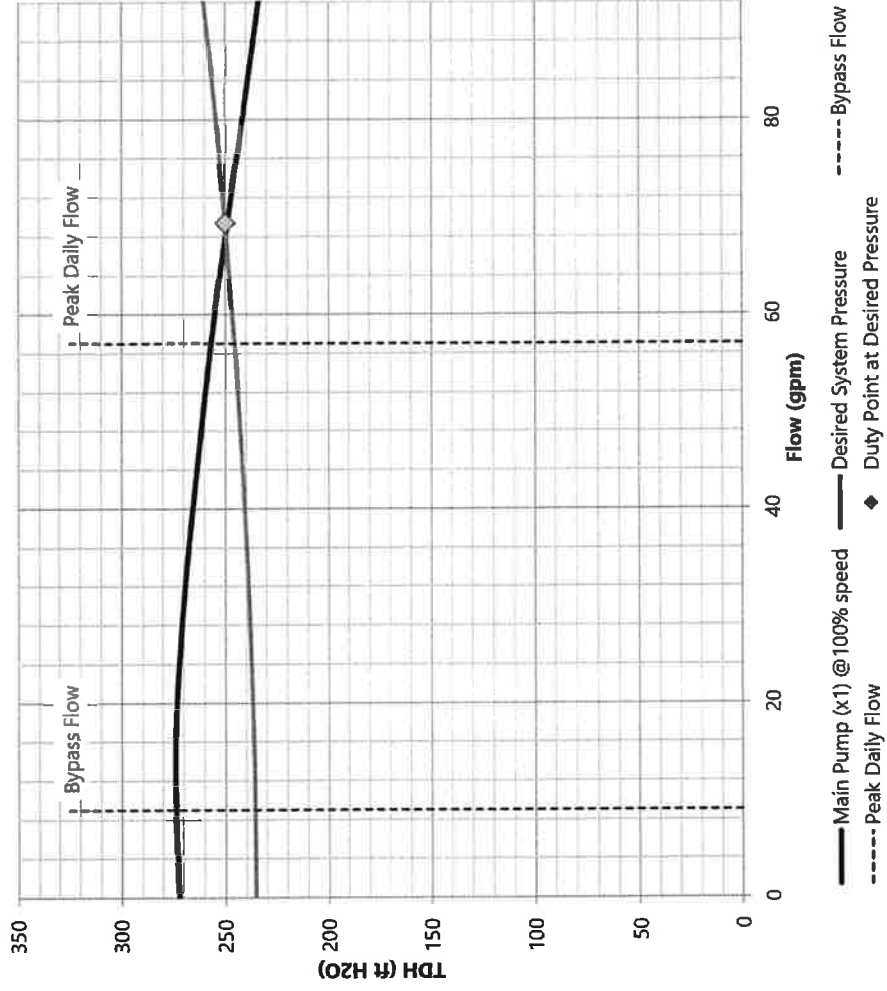
► Design Flow Rates

2023 Max Day Demand (March 2023, gal)	12-Hour Period Flow Rate at Max Day Demand (GPM)	Peaking Factor	Design Peak Flow Rate (gpm)
4113.5	5.71	10	57.1

- ## ► Fire Service Flow Requirements:
- Water supply system must provide minimum 34 GPM for 8 hours
 - NEPA 22 Standard

Pump Performance

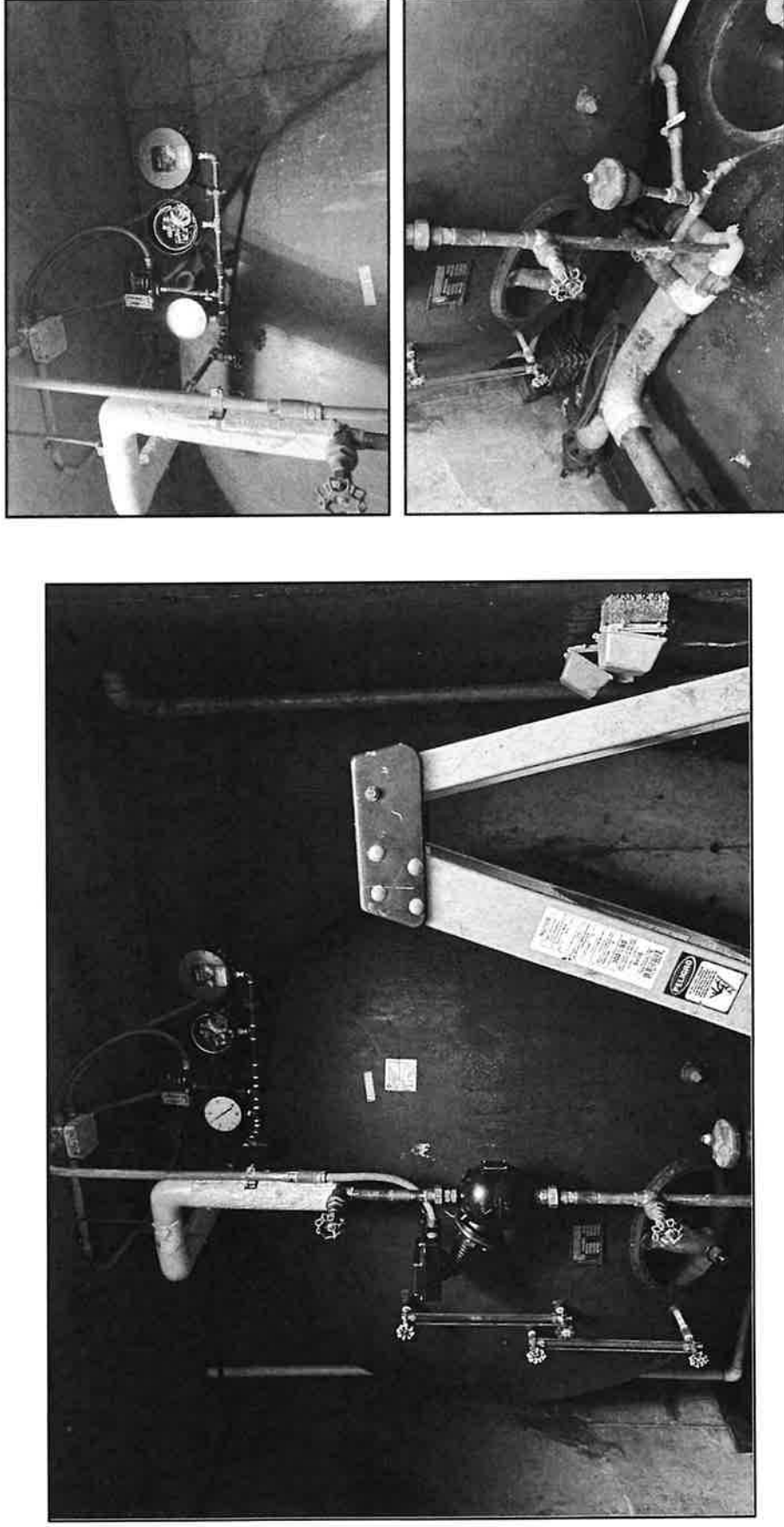
Operating Points



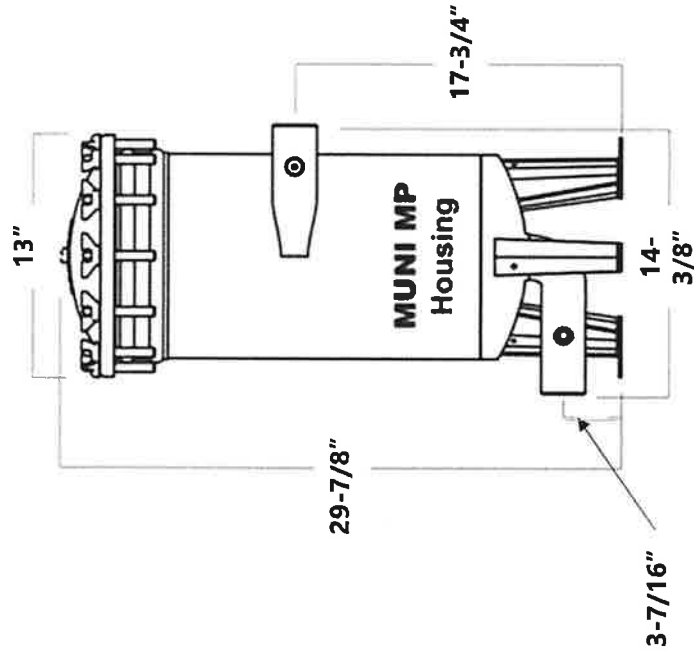
Existing Conditions - Basement



Existing Conditions – Underground Storage Tank Vault



Proposed Conditions - Cartridge Filter



Harmsco MUNI 90 MP

Proposed Conditions – Control Valve

R4

MANUAL C

Installation Instructions

Model CIN101 FLOMATIC[®]

Floematic Corporation

CYCLE GARD CYCLING SCHEMATIC

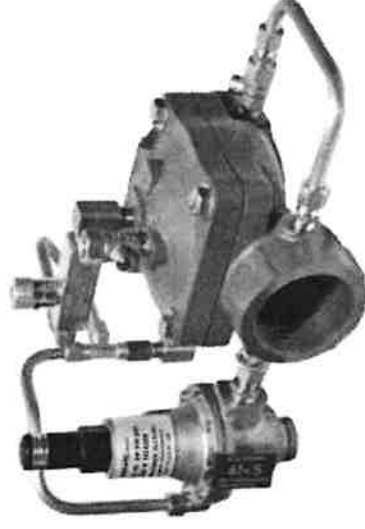
PART #	DESCRIPTION	QUANT
1	MAN-PAK VALVE	2
2	TS-STEAMER	1
3	ORFEE	1
4	PC20 - FLOM CORP.	1
5	PRP - FLOM CORP.	1
6	SHUT-OFF VALVE	2

NOTE: All Cycle Gard® type of valves need to be located within close proximity to the tank and pressure switch

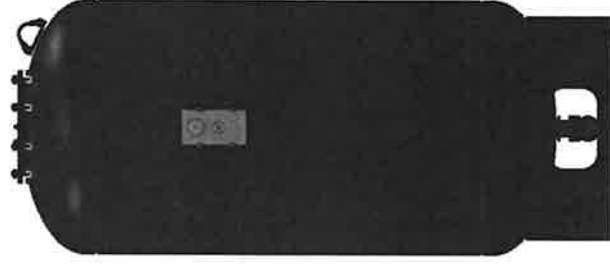
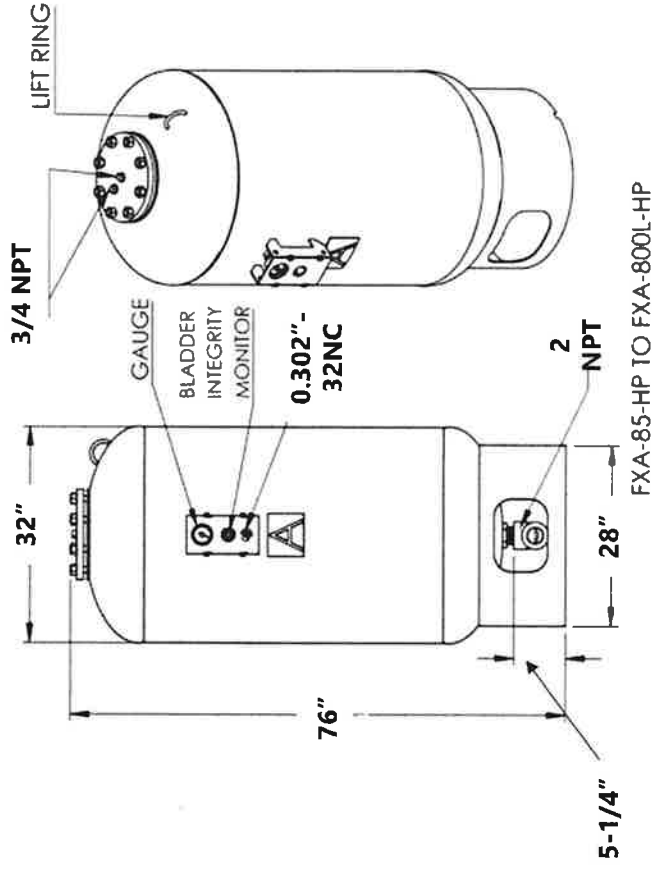
WARNING INSTALL PRESSURE RELIEF VALVE IN SYSTEM PIPING

*NOT SHOWN THE SHUT-OFF VALVE LOCATED ON BACK OF VALVE (ADJUSTABLE BY-PASS LINE)

Cycle Guard CI CIN101

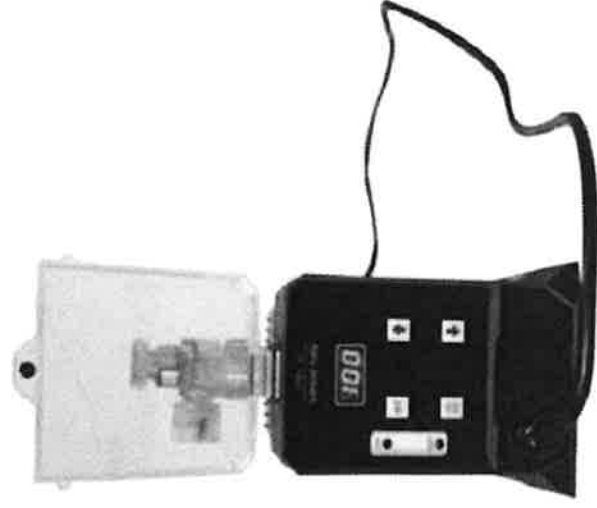


Proposed Conditions – Hydropneumatic Tank



Wessels Co. FXA-800L-HP

Proposed Conditions – Soda Ash Injector & Chemical Feed Rates



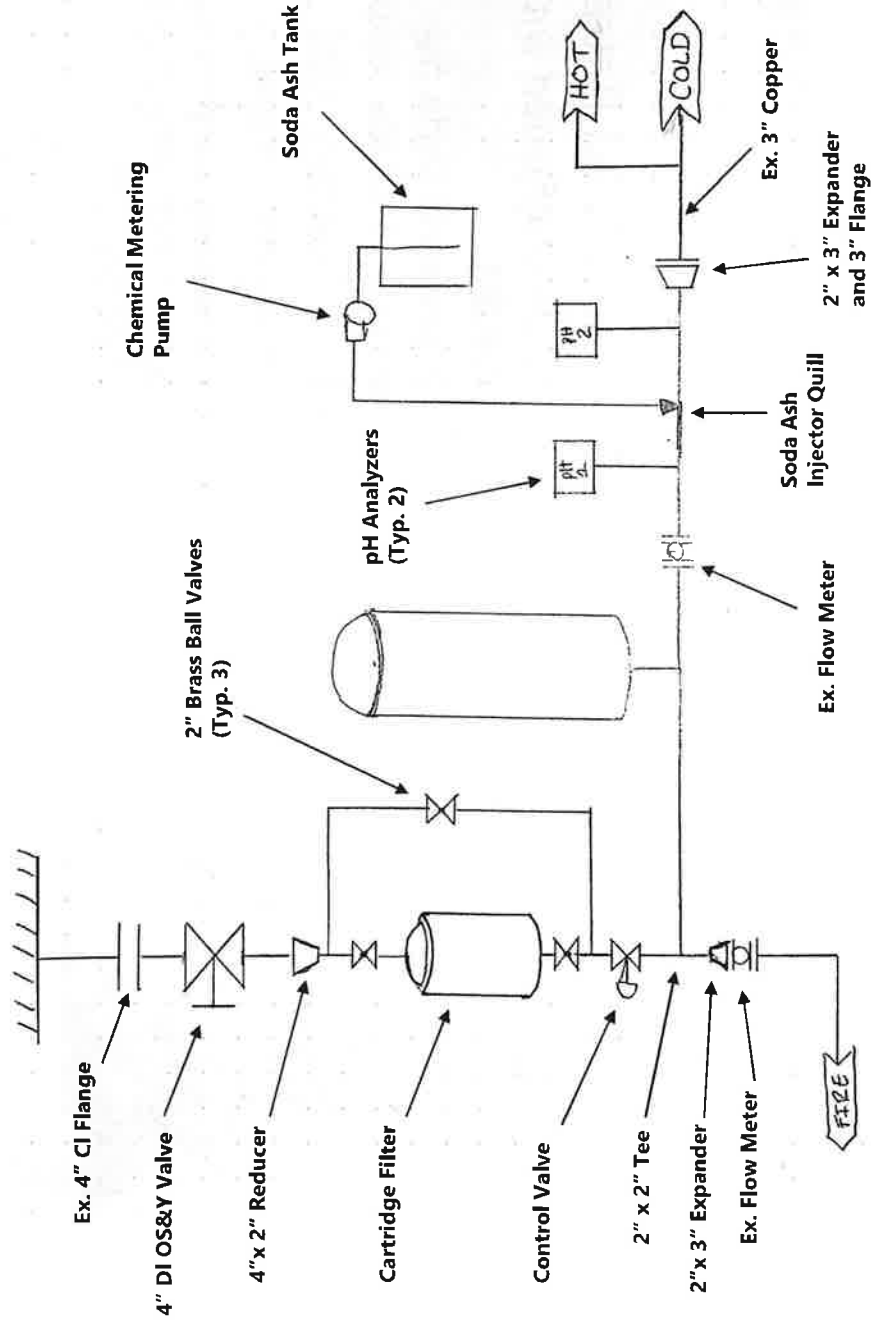
J-PRO-22 Metering Pump

► Chemical Feed Rates

- To be confirmed with water sampling results
- Estimated soda ash powder usage per month: 112 lbs (approx. 2 bags)
- Chemical tank size: 100 gallons
- Estimated chemical cost: \$1350/year
- Estimated current spend on limestone: \$2175 not including labor for changeouts
- Could add approx. 100 mg/L sodium to the water - > 4 8-oz. glasses of water = 1 bag of chips



Proposed Conditions – System Diagram



Cost Analysis – Underground Vault Abandonment

Keep the Vault: New Electrical Line From Service to Transformer in the Vault, New Sump Pump, Lights, Cables and Conduits	Abandon the Vault: Extend Well Casing to Ground Surface, Install Pitless Adapter, Extend Water Main to Well, Fill Vault with Lightweight Fill
Base Price: \$16,507	Base Price: \$9,800
General Conditions (15%): \$2,476	General Conditions (15%): \$1,470
Contingency (20%): \$3,797	Contingency (20%): \$2,254
Contractor Overhead (15%): \$3,417	Contractor Overhead (15%): \$2,029
Contractor Profit (20%): \$4,556	Contractor Profit (20%): \$2,705
TOTAL: \$30,753	TOTAL: \$18,257

Cost Analysis – Construction Costs

Item	Cost
School Basement – Water	\$30,707
School Basement – Electrical	\$14,350
Well Vault Abandonment	\$9,800
Hydropneumatic Tank Abandonment	\$2,400
General Conditions (15%)	\$8,589
Contingency (20%)	\$13,169
Contractor Overhead (15%)	\$11,852
Contractor Profit (20%)	\$15,803
TOTAL:	\$106,670

Procurement

- ▶ Ch 30 S39M
 - Construction contracts \$10,000 to \$50,000: written scope-of-work statement to solicit 3 quotes
 - Over \$50,000: sealed bids required.
 - Over \$150,000: DCAMM certification required.
- ▶ Ch 30B
 - Does not apply to contracts governed by Ch 30 S39M
 - Applies for purchase of "supplies" up to \$100,000 for schools.
 - Definition of "supplies" includes equipment and materials.
- ▶ Without Contingency, General Conditions, O&P (86.3%)
 - Electrical Materials: \$8,167
 - Electrical Labor: \$6,182
 - Water Materials: \$28,800 excluding fill material
 - Water Labor: \$9,507
 - Water Fill Materials: \$4,600



**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY24 FALL ANNUAL TOWN MEETING**

Department: Schools Facilities	Priority #:	3
Project Title and Description: Indian Brook Ele Intercom Replacement	Total Project Cost:	\$63,645.00

Department/Division Head: 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>	\$63,645.00		FY24		
<i>Administration</i>			FY25		
<i>Land Acquisition</i>			FY26		
<i>Equipment</i>			FY27		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$63,645.00				

Project Justification and Objective: The current intercom system does not function in all spaces.
The Main Office controller for the intercom no longer works. Safety issue.

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

Telecore XL 230 years old

What is the expected lifespan of this new/replacement equipment: 25+years

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



NOREL
Service Co., Inc.

230 2nd Avenue , Suite 2,
Waltham, MA 02451-1123

Phone: 781-768-5500
Fax: 781-768-5502

QUOTE #: NORQ18761
DATE: Oct 19, 2023



Prepared For:
Matt Durkee
Indian Brook Elementary School
1181 State Road
Plymouth, MA 02360

Site Address:
Matt Durkee
Indian Brook Elementary School
1181 State Road
Plymouth, MA 02360

Prepared By:
Jay Cohen
jcohen@norelservice.com
800-828-FIRE ext.

Bldg/Job: Director of Facilities

Phone: (508) 830-4370

Mobile: (781) 217-8460

Email: mdurkee@plymouth.k12.ma.us

Site Phone: (508) 830-4370

P.O. Number

Payment Terms

Valid Through

Please see attached Terms & Conditions

Nov 3, 2023

Norel Service Company is pleased to offer the following proposal to the Plymouth Public Schools - Indian Brook Elementary School.

The existing intercom-public address system is a Telecor XL older vintage Integrated Communication System. Field devices include a 25/70v speaker with a separate transformer. Norel Service Company proposes to furnish and install a new Rauland Telecenter U Critical Communication System reusing the existing field wiring. Norel will replace all the existing classroom speakers. Norel will provide (2) Telecenter U Campus IP Consoles for easy access to Emergency and Non-Emergency recorded announcements as well as All Page. The TCU will provide the ability to initiate the prerecorded emergency and non-emergency announcements from a workstation, tablet, panic button, or smart phone. The TCU provides easy web-based bell scheduling from on or off campus. Norel will provide (2) 24 Port Gateway's to provide two way communication over the classroom speaker. TCU software needs to be installed on a customer provided server or virtual server running Windows Server 2022 and SQL Server 2019. The system will require 9 PoE switch ports and IP addresses. A new rack mount Ashly 4 channel amplifier will be provide. Norel will provide and install (55) 12" classroom clocks and (2) 16" clocks for the gym and cafe.

Qty	Description	Manufacturer
1	Telecenter Campus Controller	Rauland Ametek
1	TCU License Controller	Rauland Ametek
1	Telecenter Campus Prog Module (Audio Input)	Rauland Ametek
1	Universal Mounting Kit	Rauland Ametek
2	Telecenter Campus IP Console	Rauland Ametek
2	Telecenter Campus 24 Port IP Gateway	Rauland
2	TCU Zone Page Module	Rauland Ametek
55	8" Spkr 25/70v Mtap Xfmr 5oz	Rauland

Qty	Description	Manufacturer
1	Ashly 4 Channel 150 Amplifier	Ashly
1	Patton Gateway SN4141	Patton
1	SMA 2000 Series Master Clock with 900 MHz Transmitter, Rack Mount & Wall Mount Antenna	Sapling
1	Installation Equipment	Norel
	Labor - Terminations/Connections/ Field Mounting	Norel
	Labor - Testing/Troubleshooting	Norel
	Labor - Terminations/Setup within Head End	Norel
	Labor - Replace Classroom Speakers/Clocks	Norel
	Labor - Programming	Norel
55	Sapling Analog, Wireless Slim Line, 900 MHz, 12" Round, Battery-Operated, Surface Wall Mount, Black Case	Sapling
2	Sapling Analog, Wireless Slim Line, 900 MHz, 16" Round, Battery-Operated, Surface Wall Mount, Black Case	Sapling
63	Slim Line Mounting Bracket with Tab for retrofit, Bracket only no wires	Sapling
114	Duracell ProCell Alkaline Battery (1)	Sapling
	Labor - Setup Master Clock	Norel Service Co.

Please contact me if I can be of further assistance.

Jay Cohen
 NOREL Service Co., Inc.
 Veteran-Owned Small Business VOSB
 230 Second Ave
 Waltham, MA 02451
www.norelservice.com
jcohen@norelservice.com

SubTotal	\$63,644.19
Tax	\$0.00
Shipping	\$0.00
TOTAL	\$63,644.19

Indian Brook Elementary School

Signature

Date:

Name (Print)

Plymouth Public Schools



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

Indian Brook ES - New School Intercom & Speakers

1 message

Jay Cohen <jcohen@norelservice.com>

Mon, Oct 23, 2023 at 12:55 PM

To: "mdurkee@plymouth.k12.ma.us" <mdurkee@plymouth.k12.ma.us>

Hi Matt,

The attached proposal includes replacing all the classroom speakers and includes the IP Gateways.

The Gateways provide the two-way communication between the office and the classroom

it's a feature they use today. If you remove the new clocks system, please deduct \$ 12,660.00.

Please let me know if you have any questions, PCIS to follow shortly.

Thanks,

Jay

Jay Cohen

Senior Sales Engineer

Norel Service Co., Inc.

323 Manley Street

West Bridgewater, MA 02379

Cell: 617-799-3162

Office: (800) 828-FIRE

www.norelservice.com

jcohen@norelservice.com



Plymouth Public Schools Indian Brook ES NORO18761.pdf

428K

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY24 FALL ANNUAL TOWN MEETING**

Department: Schools Facilities	Priority #:	4
Project Title and Description: Nathaniel Morton 3rd Floor ceiling replacement	Total Project Cost:	\$267,500.00

Department/Division Head: 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>	\$267,500.00		<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	\$267,500.00				

Project Justification and Objective: _____

The ceiling plaster is falling in many areas. Phase 1 of these repairs. 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
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: 30+years

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

ESTIMATE

EST-2555



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

#	Item & Description	Qty	Rate	Amount
1	Ceiling Repairs Location : Nathaniel Morton School Rms 30, 31, 32, 39, 301, 302,303a, 303b, 304, 305, 306, 310, 311, hallway along the 300's, hallway along gym, stairwell ceiling 1-5 -Scrape/sand any loose paint -Remove any damaged cement board and replace with 1/2 sheetrock -Tape, skim coat to match existing texture as close as possible -Prime and paint * Quote based on room information provided by customer. * Due to the current ceiling condition, if any ceiling areas become worse prior to the project starting or during the repair process, an additional cost/change order would apply.	1.00	267,500.0 0	267,500.00
Sub Total				267,500.00
Total				\$267,500.00

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.









We will not give up on you!
...because you are worth it.
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**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY24 FALL ANNUAL TOWN MEETING**

Department: Plymouth Public Schools	Priority #:	3 5
Project Title and Description: Replace Dump Truck	Total Project Cost:	\$108741

Department/Division Head: Matthew 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>			FY24		
<i>Administration</i>			FY25		
<i>Land Acquisition</i>			FY26		
<i>Equipment</i>	\$103563		FY27		
<i>Other</i>					
<i>Contingency</i>	\$5178	5% contingency			
Total Capital	\$108741				

Project Justification and Objective: Current dump truck is a 2011 F350 requiring regular maintenance to keep the truck on the road. Truck has extensive rot.

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

2011 Ford F350 Dump truck, 1FDRF3H61BEC16716 - needing consistent repairs, has rot

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

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



Commercial
Vehicle Center

Finding the Right Work Truck in Lowell
McGovern Ford: (978) 319-6587
1212 Westford St Lowell MA 01851



Return to McGovern Ford

Truck Search

About

My Garage

Map



2023 Ford F-350 Regular Cab DRW 4x4, Crysteel Dump Truck (Stock #FN4412)



WWW.MCGOVERNFORDOFLOWELL.COM

1212 WESTFORD ST. LOWELL, MA



How many photos do you want to see?

See All 27 Photos



Vehicle Notes

2023 Ford F-350 DRW Power Stroke 6.7L V8 DI 32V OHV Turbo Diesel 10-Speed Automatic 4WD At McGovern Ford we are your Premier Ford Dealer for Lowell

Next Step



Photo may be your image



Share



Save



Print

MSRP

\$88,385

Dealer Discount

- \$1,999

Price

\$86,386

Total Savings

\$1,999

*MSRP does not reflect options

I'm Interested!

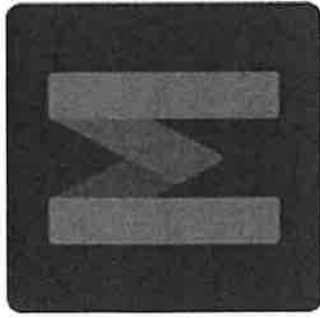
Contact McGovern Ford for more info.
(978) 319-6587

Vehicle available NOW in Lowell, MA



PRO™

**Commercial
Vehicle Center**



MCGOVERN
FORD AT DRUM HILL

Finding the Right Work Truck in Lowell

McGovern Ford: (978) 319-6587 (tel: +1-978-319-6587)

1212 Westford St, Lowell, MA 01851

**2023 Ford F-350 Regular Cab DRW 4x4, Crysteel Dump
Truck (Stock #FN4412)**



MSRP	\$88,385
Dealer Discount	- \$1,999
Price	\$86,386
Total Savings	\$1,999

Price may not reflect Upfit

Photos may be stock images.

Photos may be stock images.

Vehicle Notes

2023 Ford F-350SD DRW Power Stroke 6.7L V8 DI 32V OHV Turbodiesel 10-Speed Automatic 4WD At McGovern Ford, we are your Premier Ford Dealer for Lowell, ...

Chassis Details

Stock Number	FN4412
Stock Type	New
Year	2023
Make	Ford
Model	F-350
Class	3

Body Details

Manufacturer

CRAYSTEEL

Contact McGovern Ford for more info.

(978) 319-6587 (tel: +1-978-319-6587)

Vehicle available NOW in Lowell, MA

Drive Train	4x4
Cab Type	Regular
Interior Color	Dark Slate
Exterior Color Description	Oxford White
Engine Cylinder Count	8
Engine	Power Stroke 6.7L V8 DI 32V OHV Turbodiesel
Transmission Type	Automatic
Rear Wheels	Dual
Fuel Type	Diesel
Engine Make	Ford
Engine Size (L)	6.7
Brake Type	Hydraulic

Disclaimer: Although every reasonable effort has been made to ensure the accuracy of the information contained on this site, absolute accuracy cannot be guaranteed. This site, and all information and materials appearing on it, are presented to the user "as is" without warranty of any kind, either express or implied. All vehicles are subject to prior sale. Price does not include applicable tax, title, license, processing and/or documentation fees, and destination charges. ‡Vehicles shown at different locations are not currently in our inventory (Not in Stock) but can be made available to you at our location within a reasonable date from the time of your request, not to exceed one week.

Vehicle Options

Air Conditioning, Tachometer, 3.73 Axle Ratio, GVWR: 14000 lb Payload Package, 17" Argent Painted Steel Wheels, AM/FM Stereo w/MP3 Player, SYNC 4 Communications & Entertainment System, 4 Speakers, 4-Wheel Disc Brakes, ABS brakes, AM/FM radio, Brake assist, Delay-off headlights, Dual front impact airbags, Dual front side impact airbags, Front anti-roll bar, Front reading lights, Fully automatic headlights, Heated Power Mirrors, Illuminated entry, Outside temperature display, Overhead airbag, Overhead console, Panic alarm, Passenger cancellable airbag, Passenger vanity mirror, Power mirrors, Power steering, Power windows, Rear anti-roll bar, Remote keyless entry, Speed control, Steering wheel mounted audio controls, Telescoping steering wheel, Tilt steering wheel, Traction control, Trip computer, Turn signal indicator mirrors, Variably intermittent wipers, Compass, Dual rear wheels, Front Center Armrest w/Storage, Configurable, AppLink/Apple CarPlay and Android Auto, Emergency communication system: SYNC 4 911 Assist .



Estimate

Date: 10-5-23

Customer ID: PlymouthSCHOOL

To: Plymouth Public Schools
Attn : Adam Blaisdell

Salesperson: Chris Analetto
781-706-8033

Price Per GBPC/BAPERN

Qty	Item #	Description	Unit Price	Line Total
1.00	7214	Light Plug Only	\$ 155.00	\$155.00
1.00	7674	(2) 4" Flood Light Heated LED	\$ 1,000.00	\$1,000.00
1.00	7113	Rhino Bumper	\$ 285.00	\$285.00
1.00	7063	Remount OEM Supplied Back Up Camera	\$ 310.00	\$310.00
1.00	7085	(2) Whelen IONS Single Color Amber	\$ 879.00	\$879.00
1.00	7076	(1) Whelen Light Bar : Mini	\$ 1,395.00	\$1,395.00
1.00	7200	Surface Mounted LED S/T	\$ 362.00	\$362.00
1.00	7215	JCM Aluminum Headache Rack -Utility	\$ 879.00	\$879.00
1.00	7216	Upgrade: Add LightBar Bracket For Headache Rack	\$ 155.00	\$155.00
1.00	7126	Fisher 9' Snow Plow Package HD2	\$ 8,784.00	\$8,784.00
1.00	7144	Rubber Deflector	\$ 569.00	\$569.00
1.00	7003	Weather Teach Floormats Digital Fit	\$ 155.00	\$155.00
1.00	Graphics	Plymouth School Graphics on Doors	\$ 250.00	\$250.00
				\$-
				\$-
				\$-

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 Requirments

Actual Cost May Change Once Project Elements are Finalized

Vehicle Subtotal

Upfit Subtotal

Grand Total

\$15,178.00

\$15,178.00

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY24 FALL ANNUAL TOWN MEETING**

Department: Schools Facilities	Priority #:	8 6
Project Title and Description: PCIS Flooring Replacement in main hallways	Total Project Cost:	\$121,272.00

Department/Division Head: 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			FY24		
Administration			FY25		
Land Acquisition			FY26		
Equipment			FY27		
Other					
Contingency					
Total Capital	\$121,272.00				

Project Justification and Objective: The original VCT tile in the PCIS main hallways is breaking down.

We propose replacing the current tile with Luxury Vinyl Plank Tile. There is no floor wax and stripper used on this flooring material

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.

Flooring Designs Inc
707 Centre Street
Brockton, MA 02302

Estimate

Date 10/20/2023
Estimate # 13707

Name / Address

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

Project Name/Location

Plymouth/Carver
Intermediate school

Rep:

P.O. #

Description	Qty	Units	Rate	Total
All common hallways				
Indestructible 28 plank color TBD	14,182	sf	2.83	40,135.06
Installation	14,182	sf	2.75	39,000.50
Existing rip up of vct and disposal	14,182	sf	1.50	21,273.00
Adhesive taylor	18	ea	144.00	2,592.00
Silpro floor prep	14,182	sf	1.10	15,600.20
Subtotal				\$118,600.76
Sales Tax (6.25%)				\$2,670.44
Total				\$121,271.20

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

Flooring Designs Inc
707 Centre Street
Brockton, MA 02302

Estimate

Date 10/20/2023
Estimate # 13708

Name / Address

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

Project Name/Location

Plymouth/Carver
Intermediate school

Rep:

P.O. #

Description	Qty	Units	Rate	Total
All common hallways except for Apollo and Gemini Halls				
Indestructible 28 plank color TBD	11,582	sf	2.83	32,777.06
Installation	11,582	sf	2.75	31,850.50
Existing rip up of vct and disposal	11,582	sf	1.50	17,373.00
Adhesive taylor	15	ea	144.00	2,160.00
Silpro floor prep	11,582	sf	1.10	12,740.20
Subtotal				\$96,900.76
Sales Tax (6.25%)				\$2,183.57
Total				\$99,084.33

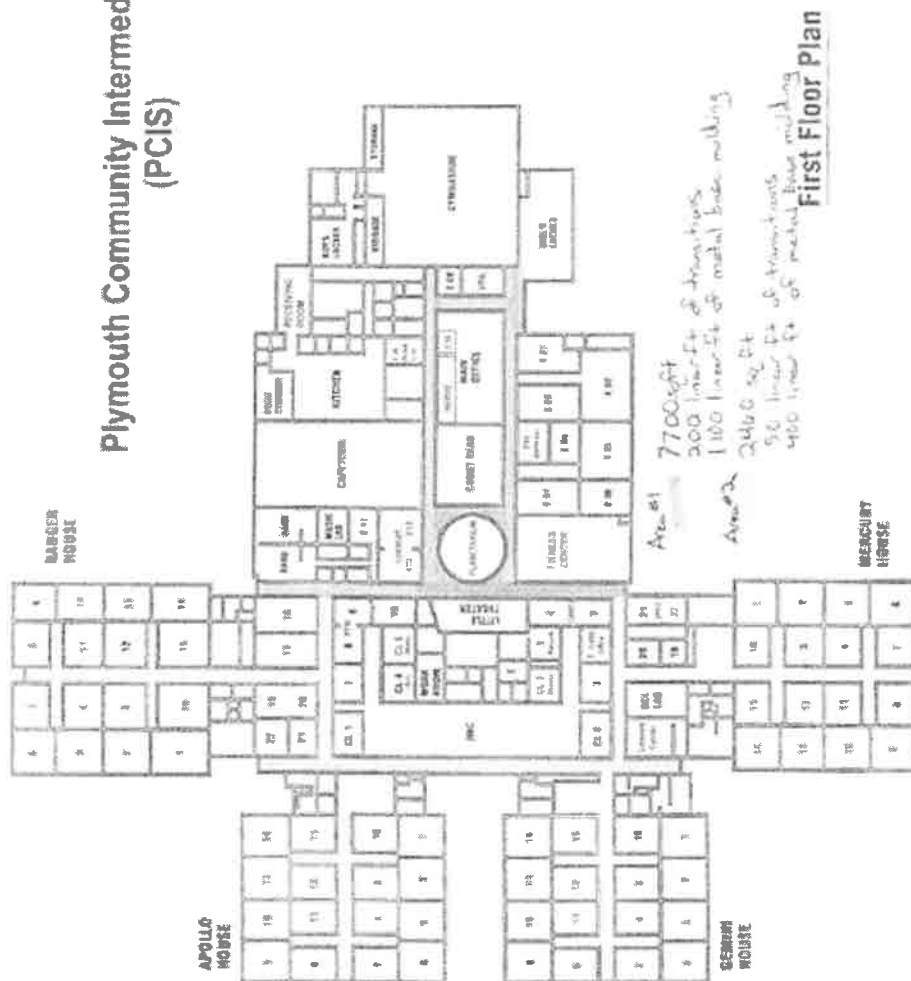
flooringdesign@verizon.net

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

**Plymouth Community Intermediate School
(PCIS)**











**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY24 FALL ANNUAL TOWN MEETING**

Department: Plymouth Public Schools	Priority #:	1 7
Project Title and Description: Purchase School Bus	Total Project Cost:	\$125,692.00

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>			FY23		
<i>Labor and Materials</i>			FY24		
<i>Administration</i>			FY25		
<i>Land Acquisition</i>			FY26		
<i>Equipment</i>	\$114,262.00		FY27		
<i>Other</i>					
<i>Contingency</i>	\$11,430.00	Prior increase was 7% in 8 months			
Total Capital	\$125,692.00				

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 (98000-120000 miles), 1 is a 2015 (147000 miles). Higher mileage buses are spending more time and costs being repaired.

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

Additional bus to allow a bus to be used when other buses are being repaired and when a bus needs to be removed from fleet due to increased repair costs

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

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
Nathan Martin
978-748-3336
nmartin@newenglandtransit.com

Quote Number:

390413

Quote Date:

10/17/2023

Customer Order No:

230465 – Sourcewell Pricing Quote

Model Profile: Saf-T-Liner C2 311TS

Product Type:	School Transportation
Year:	2025
Chassis Model:	B2 106
Chassis MFG:	FLNER
GVWR:	GVWR
Passenger Capacity:	71
Headroom:	78
Wheelbase:	259
Brake Type:	HYDRAULIC
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:	HANKOOK AH37 10R22.5 14 PLY FRONT TIRES
Tires, Rear:	REAR HANKOOK DH37 10R22.5 14 PLY TIRE

Total for 1 complete unit(s):

\$114,262.00

Delivery Cost:

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 HEATED STAINLESS STEEL BRACKET
- 1 MIRROR-SYSTEM B EXTERIOR CROSSVIEW STAINLESS STEEL BRACKET
- 1 MIRROR-INTERIOR 6"X30" WITH RUBBER EDGE
- 1 FRONT X-ING ARM
- 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 PWR SYST.-AG2 ELECTRIC ENTRANCE DOOR
- 1 ELEC-AG2 ELECTRICAL OPERATED ENTRANCE DOOR
- 1 OPER-DOOR ELEC.ENT.EXT.CNTRL.& BAT.
- 1 RELEASE-ALUM.ELEC.ENT DR.ELEC.OP.EXT.W/SW.
- 1 PULL-ENTRANCE DOOR, EXTERNAL ALUMINUM
- 1 SWITCH-PAD. ENT.DOOR ELEC. 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 RADIO-AM/FM DEA510 W/PAGE
- 1 ELEC-VIDEO CAMERA POWER SUPPLY ONLY
- 1 ELEC-ZONAR STANDARD MONITORING
- 1 ELEC-PWR CELL PHONE OUTLET LS
- 1 MONITOR-LAMPS WARNING/STOP/TAIL/TURN
- 1 LAMPS-DOME OVER DRIVER
- 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 HALOGEN (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-ELECTRIC STOP SIGN 1ST WINDOW POSITION
- 1 SPEAKERS-INT. 30 WAT.(6) 311T
- 1 ELEC- (6) INT SPEAKERS 311T
- 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 - 311T, 700
- 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.ELEC.OP.
- 1 LINE - STANDEE 4" WHITE
- 1 FLR-BLK VINYL W/13" CTR AISLE 311T
- 1 FLR-BLK WHEELHOUSE AND HEATER
- 1 FLR-PLYWOOD 5/8" 311T
- 1 LINING-SIDE INT.
- 1 H/L-1ST WDO SEC ACOUS GRY 311T
- 1 TUBE-FILL BTR & OVERFLOW HOSE
- 1 CAP-FUEL FILL BTR NON-LOCKING
- 1 IN DASH STORAGE BIN

MISC

- 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.ELEC.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 DRVR'S ST. RS
- 1 UPH DR.ST.FABRIC BLK NATIONAL
- 1 PEDASTAL-DR ST MECH TYPE
- 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
- 12 S3B 39"RS WALL MT RESTRAINING/NO BELT
- 1 S3B 26" LS WALL MT RESTRAINING/NO BELT
- 11 S3B 39"LS WALL MT RESTRAINING/NO BELT
- 24 42 OZ SPANISH GREEN UPHOLSTERY - S3B SEAT
- 24 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
- 14 FRAME-WDO SPLIT 30"W
- 2 FRAME-WDO SPLIT 40"W
- 2 FRAME-WDO P/O VERT TEMP TNT LS
- 2 WDO P/O VERT TEMP TNT RS
- 14 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 ELECTRICAL-ROOF ESCAPE HATCH POSITION 8
- 1 ARM ASSEMBLY-WINDSHIELD WIPER (2)
- 1 ELECTRICAL-ROOF HATCH OR P/O WINDOW (DASH)
- 1 OPER-FAN W/S 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 311T30_N
- 1 TRIM-A POST
- 1 WHEELHOUSES-REAR L&R
- 1 STRINGER-ROOF 311T
- 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 10TH 311T
- 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-EMERGENCY/EXIT 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 OPERATION-MONITOR WARNING/STOP/TAIL/TURN
- 1 ELEC-DRIVER'S DOME LPS
- 1 LPS-DOME PASS MIN (6) 311T
- 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 311T
- 1 OPER-PASS ADV IGN/WARN/BUZZER
- 1 BUZZER-SWITCH PANEL 1 TONE
- 1 ELECTRICAL-LAMPS WARNING,8 LAMPS 311T
- 1 OPER-LPS, DOME STANDARD
- 1 OPER-LPS BODY TAIL W/PARK SW.
- 1 LAMPS-LICENSE PLATE ILLUMINATION
- 1 ELECTRICAL-LAMPS SIDE DIRECTIONAL 311T
- 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 311T
- 1 ELEC-ELECTRONIC COMP ASM
- 1 OPER-LPS DIR./HAZ.
- 1 SWITCH-RKR MIRROR HTR.
- 1 ELEC-MIR A HTD
- 1 SIGN-STOP, ELEC FRT #SC2-600-10C-CP
- 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 311T
- 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 - 311T
- 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 311T
- 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 311T
- 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 ASSEMBLY
- 1 INSULATION-INT LONG REAR WDO
- 1 LUGGAGE RACK ALERT - NONE
- 1 PLATE-ACCELERATOR
- 1 LABEL-QR CODE
- 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 (2) DTNA 2000CCA FLOODED STARTING, 370RC THREADED STUD BATTE
- 1 INTEGRAL ELECTRONIC TURN SIGNAL FLASHER
- 1 BATT ENABLED 3 AMBER INBOARD ID LAMPS, 2 AMBER OUTBOARD MARKE
- 1 HALOGEN 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 WABCO NG HYDRAULIC ABS/ATC W/SHUTOFF SWITCH
- 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 3675MM (145") 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 21K TAPERLEAF SPRING REAR SUSPENSION
- 1 CAB MOUNTING FOR HOOD AND COWL CHASSIS
- 1 RH FRONT ENTRANCE DOOR, BATTERY CONTROLLED, ELECTRICALLY OPER
- 1 KEYED 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 AUXILIARY BODY HEATER, UNDER SEAT, AFT
- 1 GRAY INSTRUMENT PANEL-DRIVER

- 1 BODY SUPPLIED HEATED MIRRORS
- 1 ROOF MOUNTED VENT/ESCAPE HATCH
- 1 PUSH OUT BODY SIDE WINDOWS, BUZZER WITH WINDOW UNLATCHED
- 1 PROVISION FOR EVIR ZONAR
- 1 WARNING/REAR LAMP MONITOR
- 1 STANDARD PANEL LAMP DIMMER
- 1 CHASSIS COWL AND HOOD ONLY
- 1 FUEL SENSE PLUS
- 1 STANDARD BRAKE WIRING
- 1 NO DETROIT CONNECT SERVICES SELECTED
- 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 311T

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 CHICAGO RAWHIDE 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 CHICAGO RAWHIDE (SCOT) REAR OIL SEALS
- 1 GUNITE IRON REAR HUBS
- 1 10,000 LB. TAPERLEAF FRONT SUSPENSION
- 1 COMFORT-TEC SUSPENSION

BRAKES

- 1 ALERT-ENHANCED STABILITY CONTROL
- 1 BOSCH HYDRAULIC BRAKE PACKAGE
- 1 BOSCH HYDRAULIC PIN-SLIDE DISC FRONT
- 1 FRONT DISC BRAKE ROTORS W/SEPARATE TONE RINGS
- 1 BOSCH HYDRAULIC PIN-SLIDE DISC REAR
- 1 REAR BRAKE DUST SHIELDS
- 1 FRONT BRAKE DUST SHIELDS
- 1 TRANSMISSION-MOUNTED PARK BRAKE
- 1 REAR DISC BRAKE ROTORS W/SEPARATE TONE RINGS
- 1 NYCLAD HYDRAULIC CHASSIS TUBING
- 1 FT OPER PARK BRAKE W/SERVICE BRAKE INTERLOCK W/INDICATOR

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 TILT ONLY STEERING COLUMN
- 1 TRW THP-60 POWER STEERING
- 1 450MM(18") LK FOUR-SPOKE CHARCOAL STEERING WHEEL
- 1 6575MM (259") WHEELBASE
- 1 5/16" X 3.00" X 10 1/8" STEEL FRAME (7.94 X 76.5 X 257.2")
- 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

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 IGNITION SWITCH CONTROLLED ENGINE STOP
- 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 @ 85%
- 1 INTEGRAL HEADLIGHT/MARKER ASSEMBLY
- 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 BAT PWD 2-POS INT DOOR CONTROL RS 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 DRIVER MESSAGE CENTER WITH LCD DISPLAY
- 1 ELECTRONIC 3500 RPM TACHOMETER
- 1 PRE/POST TRIP SYSTEM TEST
- 1 ENGINE AND HOUR METERS INTEGRAL WITH DRIVER DISPLAY
- 1 DIGITAL VOLTAGE DISPLAY INTEGRAL WITH DRIVER DISPLAY
- 1 ELECTRIC FUEL GAUGE
- 1 AMMETER
- 1 ELECTRIC ENGINE OIL PRESSURE GAUGE
- 1 ELECTRICAL ENGINE COOLANT TEMPERATURE GAUGE

ENGINE AND EQUIPMENT

- 1 CUM B6.7 200 HP @ 2400 RPM, 2600 GOV, 520 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 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 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 NO IDLE SHUTDOWN CONFIGURATION
- 1 DIGITAL TRANS OIL TEMP IN DRIVER DISPLAY

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 HANKOOK AH37 10R22.5 14 PLY FRONT TIRES
- 1 REAR HANKOOK DH37 10R22.5 14 PLY TIRE
- 1 NO TIRE PRESSURE CONTROL/SENSOR
- 1 ACCURIDE 29001 22.5X7.50, 10-HOLE HUB-PILOTED, 5-HAND
- 1 R WH, ACCURIDE 29001 22.5X7.50, 10-HOLE HUB-PILOTED,5-HAND
- 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 & letter

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

Total for 1 complete unit(s):

\$114,262.00

Delivery Cost:

Delivery Included

Terms and Conditions:

Quote Expires:

Customer Signature: _____

Date: _____

Dealer Signature: _____

Date: _____

AttachedDetail

Optional Equipment - Body:

1 DECAL-UNITED AUTO WORKERS
1 ALIGNMENT-4-WHEEL SAF-T-LINER C2
1 ALERT-ENHANCED STABILITY CONTROL
1 2019 CUMMINS ENGINE TARIFF
1 SURCHARGE-RAW MATERIAL (STEEL)
1 PDI IDENTIFIER-DEALER PERFORMED
1 2014 SEATING ALERT
1 BELT-ELR SHOULDER/PUSH BUTTON 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 LOGO-FRT RS & RR
1 LOGO-THOMAS DECALS YELLOW
4 LABEL-P/O WDO EMER EXIT 2" BLACK
1 LABEL-ENGLISH AG2.ELEC.ENT DR
4 REFLECTTAPE-P/O WDO YEL
1 REFLECTIVE TAPE-EMERGENCY DOOR REAR YELLOW
1 REFLECTTAPE-@ ROOF HATCH YEL
1 FIRE EXTINGUISHER-5 3A-40BC
1 FAN-CIRC MID W/S HDR BLACK
1 ELEC-FAN MID W/S HDR
1 VISOR-WINDSHIELD SUN 6"X30" TINTED
1 RADIO-AM/FM DEA700 W/PAGE
1 REFLECTORS-AMBER(2) MID BDY 3"
1 REFLECTORS-RED (4) RR/RR SI 3"
1 HATCH-RF ESC SPEC ADVANTAGE H1975-015-131 ENGLISH (2)
1 ELECTRICAL-ROOF ESCAPE HATCH POS 3
1 ELECTRICAL-ROOF ESCAPE HATCH POSITION 8
1 HANDLES-W/S SERVICE, BLACK
1 FLAPS-MUD, REAR 22.5"W
1 FLAPS-MUD, FRONT 16"W X 12"H
1 ARM ASSEMBLY-WINDSHIELD WIPER (2)
1 ELECTRICAL-ROOF HATCH OR P/O WINDOW (DASH)
1 STEPS-EXT W/S SERVICE
1 LABEL-PASS ADVISOR INSTRUCTION
1 OPER-FAN W/S HDR
1 OPER-ALARM BACKING W/REV.
1 AIR COND - NONE
1 OPER-RF HATCH BUZZER
1 LOC-VEST.FLR.PLT.LEFT 5LB F.E. & FRICTION BRACKET
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 TRIANGLES-REFL. 3 W/BOX
1 DOOR-STORAGE BOX W/O GLASS
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 MANUAL-DRVR'S/MAINT.ENGLISH
1 ELEC-VIDEO CAMERA POWER SUPPLY ONLY
1 DECAL-BACKING ALARM
1 DECAL-LOW SULFUR FUEL
1 ELEC-ZONAR STANDARD MONITORING
1 LABEL-RR DR EMERGENCY DOOR DO NOT BLOCK
1 TRIM-LOWER REAR HEATER NO A/C
1 LABEL-RR EMERGENCY DOOR INSTRUCTION
1 LABEL-"DEF ONLY"
1 LABEL-REGENERATION WARNING 2010/2013 EPA ENGLISH
1 ALERT-CONDENSER NONE
1 311T30_N
1 TRIM-A POST
1 FENDER-QUARTER 24" BATTERY BOX DOOR
1 STEP-RS ALUM.ENT.DR W/HTR 8.75"RISER
1 BODY ADJUSTMENT-FREIGHTLINER, BTR RS FUEL FILL LOCATION
1 WHEELHOUSES-REAR L&R

1 STRINGER-ROOF 311T
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 10TH 311T
1 RS TANK ALERT - NONE
1 APPLICATION - SCHOOL
1 REINFORCEMENT-FRAME STD 24" BATTERY BOX DOOR
1 CAP-ENTRANCE DOOR STANDARD
1 FLOOR-NON ADA
1 HANDLE-INT RR DR BLACK
1 HANDLE-EXTERIOR REAR DOOR WITH RECESS
1 DOOR-ACC SOLID PANEL
1 DOOR ALERT - LS ENT NONE
1 LATCH-DOOR INTERIOR STORAGE OVER WINDSHIELD
1 ELEC-PWR CELL PHONE OUTLET LS
1 TRIM-REAR DOOR
1 VANDALOCK-NONE REQUIRED
1 DOOR-ENT AG2 TINT TEMP LO. STEP
1 PWR SYST.-AG2 ELECTRIC ENTRANCE DOOR
1 ELEC-AG2 ELECTRICAL OPERATED ENTRANCE DOOR
1 HINGES-REAR DOOR PIN TYPE
1 LATCH-SINGLE-POINT, REAR EMERGENCY DOOR
1 STOP-DOOR REAR EMERGENCY, 1-POS
1 OPER-DOOR ELEC.ENT.EXT.CNTRL.& BAT.
1 RELEASE-ALUM.ELEC.ENT DR.ELEC.OP.EXT.W/SW.
1 PULL-ENTRANCE DOOR, EXTERNAL ALUMINUM
1 OPER-DR.RR.EMG.W/BUZ
1 ELEC-EMERGENCY/EXIT 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 SWITCH-PAD. ENT.DOOR ELEC. RS
1 LATCH-DR INT STOR OVR DRVRSHDR
1 DOOR, REAR EMERGENCY
1 THRESHOLD REAR EMERGENCY DOOR
1 KEY-VANDALOCK REAR DOOR NONE
1 TRIM-ENTRANCE DOOR INTERIOR
1 MONITOR-LAMPS WARNING/STOP/TAIL/TURN
1 OPERATION-MONITOR WARNING/STOP/TAIL/TURN
1 LAMPS-DOME OVER DRIVER
1 ELEC-DRIVER'S DOME LPS
1 LPS-DOME PASS MIN (6) 311T
1 ELEC-PASS DOME LPS MIN (6)
1 SWITCH-RKR DOME LPS ALL
1 MODULE-PWR.DIST.ELEC.SYS.
1 LPS-INT RED LED OVER RR EMG DR
1 ELEC-LPS-INT RED O/H RR EMG DR
1 LPS-EXT AFT OF ENT DOOR
1 ELEC-LPS EXT AFT OF ENT DOOR
1 OPERATION-STEPWELL LAMPS WITH IGNITION & ENTRANCE DOOR
1 LPS-STPWLL LED (1)
1 LPS-STP/TAIL/DIR AMBER/REV LED
1 ELEC-LPS STOP/TAIL/TURN/REV
1 ADVISORY-PASSENGER BUZZER ACTIVATION, WITH SWITCH
1 ELEC-PASSENGER ADVISORY 311T
1 OPER-PASS ADV IGN/WARN/BUZZER
1 BUZZER-SWITCH PANEL 1 TONE
1 ELEC-PWR, GND, NETWORK, BUZZ
1 ELECTRICAL-LAMPS WARNING,8 LAMPS 311T
1 OPER-LPS, DOME STANDARD
1 LAMPS-PILOT POST TRIP INSPECTION RED
1 OPER-LPS BODY TAIL W/PARK SW.
1 LAMPS-LICENSE PLATE ILLUMINATION
1 LAMPS-SIDE DIRECTIONAL AMBER FRONT 2 CP LED
1 ELECTRICAL-LAMPS SIDE DIRECTIONAL 311T

1 LPS-WARNING HALOGEN (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 SWITCH-ROCKER DOME LAMPS DRIVER ON/OFF
 1 LPS- STOP/TAIL 4" FLS.MT L.E.D.
 1 SWITCH-ROCKER FAN DEFROST WINDSHIELD
 1 OPER-DRVR'S DOME LPS ON/OFF
 1 OPERATION-LAMPS INTERIOR/EXTERIOR RIGHT FRONT ENTRANCE DOOR
 1 OPER-LPS SERVICE BRAKE
 1 LPS-SI DIR AMB LED GRD RR.AXLE
 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 LAMPS-PILOT WARNING LIGHTS RED
 1 LAMPS-PILOT WARNING LIGHTS AMBER
 1 SWITCH-WARN.LPS ON/AMB ACT.
 1 SWITCH-ROCKER WARNING LAMPS OVERRIDE MOMENTARY ACTIVATION
 1 LAMPS-PILOT WARNING LIGHTS MASTER GREEN
 1 ELEC-HARNESS COMP ASM 311T
 1 ELEC-ELECTRONIC COMP ASM
 1 ELEC-CABLE PRIM PWR & GND-CUSTOMER ACCESS
 1 OPER-LPS DIR./HAZ.
 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 MIR-A OPEN-VIEW HTD STAINLESS STEEL BRACKET
 1 SWITCH-RKR MIRROR HTR.
 1 ELEC-MIR A HTD
 1 MIRROR-SYSTEM B EXTERIOR CROSSVIEW STAINLESS STEEL BRACKET
 1 SIGN-STOP, ELEC FRT #SC2-600-10C-CP
 1 ELEC-ELECTRIC STOP SIGN 1ST WINDOW POSITION
 1 RAIL-EXTERIOR GUARD @ WINDOW,SEAT,FLOOR,SKIRT
 1 RAIL-EXT GRD @ SEAT FRT END LS
 1 RAIL-EXT GRD@ FLOOR, NONE
 1 PAINT-EXT HNDLE(S) BLACK
 1 BUMPER-RR 2 BRACES LS EXH HOLE
 1 TRIM-FRT CAP RS/LS
 1 SKT.FWD.STPWLL LO DEF
 1 DECAL-REFL FRT CAP "SCHOOL BUS"
 1 DECAL-REFL RR CAP "SCHOOL BUS"
 1 CAP-FRT ROOF VENT W/WARN.LPS.
 1 CAP-REAR ROOF W/WARN.LPS.
 1 PANELS-EXTERIOR REAR
 1 SHEET-DRIVERS EXTERIOR 20 GA.
 1 SHEET-UPPER SIDE EXTERIOR
 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 OPER-MIRRORS EXT HTD.
 1 UNDERCOATING-ASPHALT EMULSION
 1 DECAL-"DIESEL"
 1 DOOR-FUEL FILL ACCESS BTR
 1 FENDERETTE-STL 21" SKIRT
 1 HEADERS-WINDOW INTERIOR 311T
 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-EXT ENT DOOR NONE
 1 PAINT-BLACK TRIM-FRONT/REAR ROOF CAPS
 1 PANELS-EXTERIOR REAR SIDE LONG W/STATIONARY GLASS
 1 LS STORAGE BOX 1 - NONE
 1 LS STORAGE BOX 2 - NONE
 1 LATCH-BATT DOOR NON-LOCKING
 1 LATCH-FUEL FILL ACCESS (THUMB)
 1 ROOF SHEETS-(2)HATCH - 311T
 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 PAINT-SOLID COLOR YELLOW
 1 BTR FUEL FILL RECESS, W/DOOR
 1 VENT-STATIC PRESENT
 1 PILASTER - 311T, 700
 1 LATCH-NON-LOCKING DEF ACCESS DOOR
 1 RAIL-SNOW RAIL PRESENT
 1 HARDWARE-MOUNTING CLIPS STANDARD
 1 DECAL-APPROVED FUEL TYPE
 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 COVER-TRIM DRVS HDR W/STORAGE
 1 COVER-TRIM FRT END W/S HEADER
 1 COVER-TRIM FRT ENT.ALUM.DR HDR.ELEC.OP.
 1 HEADLINING-VESTIBULE ACOUSTIC, GRAY, DRIVER LAMP
 1 HEADLINING-REAR LONG SMOOTH, GRAY
 1 LINE - STANDEE 4" WHITE
 1 STRIPS - AISLE, SNAP-IN BLACK
 1 FLR-BLK VINYL W/13" CTR AISLE 311T
 1 FLR-BLK WHEELHOUSE AND HEATER
 1 FLR-PLYWOOD 5/8" 311T
 1 COVER-FUEL SENDING INSPECTION
 1 MOLDING-SHOE 311T
 1 SPEAKERS-INT. 30 WAT.(6) 311T
 1 ELEC- (6) INT SPEAKERS 311T
 1 MIRROR-INTERIOR 6"X30" WITH RUBBER EDGE
 1 LABEL(S)-SPECIAL DATA, MA
 1 LABEL-VEHICLE CERTIFICATION
 1 PAD-DR HEADER, RR EMER 36"W
 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 SWITCH-ROCKER HEATER STEPWELL
 1 CLAMPS-PLUMBING HEATER CONSTANT TORQUE
 1 CLAMPS-UNDERSEAT HEATER CONSTANT TORQUE
 1 LUGGAGE RACK ALERT - NONE
 1 SWITCH-ROCKER HEATER LEFT 2ND
 1 ELECTRICAL-HEATER UNDERSEAT POSITION 9
 1 HOLDER-CERTIFICATE 4"X 6"
 1 RAIL-SEAT
 1 LAYOUT-SEAT RAIL HOLES RS
 1 LAYOUT-SEAT RAIL HOLES LS
 1 LINING-SIDE INT.
 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 TRIM-STEPWELL HORIZONTAL WITH RIBBED NOSE
 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 RAIL-ASSIST FRT ENT DR 39"W
1 H/L-1ST WDO SEC ACOUS GRY 311T
1 HEADERS-WINDOW EXTERIOR 311T
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 ASSEMBLY
1 INSULATION-INT LONG REAR WDO
1 LUGGAGE RACK ALERT - NONE
1 PLATE-ACCELERATOR
1 ELEC-HTR ENT DOOR STEPWELL
1 LABEL-QR CODE
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 STAT TINTED TEMP
1 GLASS-RR SIDE STAT TINTED TEMP
1 FRAME-WDO SPLIT
14 FRAME-WDO SPLIT 30"W
2 FRAME-WDO SPLIT 40"W
2 FRAME-WDO P/O VERT TEMP TNT LS
2 WDO P/O VERT TEMP TNT RS
14 GLASS-WDO TINT TEMP 30"
2 GLASS-WDO TINT TEMP 40"
1 STOPS-WDO 12"
1 GLS-LWR RR DR TEMP TNT BONDED
1 GLS-UPR RR DR TEMP TNT BONDED
1 OPER-WDO P/O
1 WDO-DRIVER'S TEMP TINT
1 EXHAUST-LS, THRU REAR BUMPER
1 ANTI-FREEZE, OAT -34 DEGREE
1 WINTERFRONT-CHASSIS GRILLE YELLOW
1 TUBE-FILL BTR & OVERFLOW HOSE
1 CAP-FUEL FILL BTR NON-LOCKING
1 SHIELD-EXHAUST PIPE
1 SEAT-DRIVER NATIONAL W/HEAT
1 ARMREST NATIONAL DRVR'S ST. RS
1 UPH DR.ST.FABRIC BLK NATIONAL
1 PEDASTAL-DR ST MECH TYPE
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 ELEC-PEDESTAL, HEATED SEAT
1 Haptics-Not Present
12 S3B 39"RS WALL MT RESTRAINING/NO BELT
1 S3B 26" LS WALL MT RESTRAINING/NO BELT
11 S3B 39"LS WALL MT RESTRAINING/NO BELT
24 42 OZ SPANISH GREEN UPHOLSTERY - S3B SEAT
24 S3B WALL MT HARDWARE-RESTRAINT

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY24 FALL ANNUAL TOWN MEETING**

Department: Schools Facilities	Priority #:	5 ⁸
Project Title and Description: Manomet Ele rubber roof replacement 6300 s.f.	Total Project Cost:	\$388,500.00

Department/Division Head: 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	\$388,500.00		FY24		
Administration			FY25		
Land Acquisition			FY26		
Equipment			FY27		
Other					
Contingency					
Total Capital	\$388,500.00				

Project Justification and Objective: The rubber roof is breaking down at all seam and needs to be replaced to prevent any more interior building leaks

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 (warranty)

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



THE GARLAND COMPANY, INC.

High Performance Roofing And Building Envelope Systems

3800 EAST 91ST STREET • CLEVELAND, OHIO 44105-2197

Brian Kender (bkender@garlandind.com)

617-755-4655

[illegible]

*Issues with project include no manufacturer jobsite observations, poor to negative slope resulting in ponding water, flashing heights not raised, low performance low cost rubber membrane roof will result in high life cycle costs.

*Prices are budgets, based on 2023 materials and labor markets, and are subject to change









**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Department of Public Works	Priority #:	1
Project Title and Description: Roadway Preservation	Total Project Cost:	\$3,000,000.00

Department/Division Head: William Coyle, 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: _____

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>FY26</i>		
<i>Labor and Materials</i>	\$3,000,000.00		<i>FY27</i>		
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>		
<i>Equipment</i>			<i>FY30</i>		
<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 preserve and improve roads identified in the pavement management program as prepared by BETA Engineering along with DPW.

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

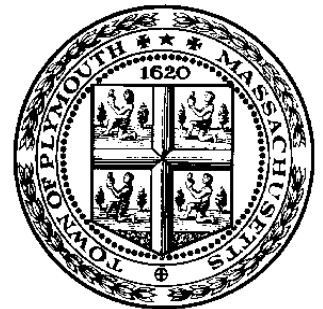
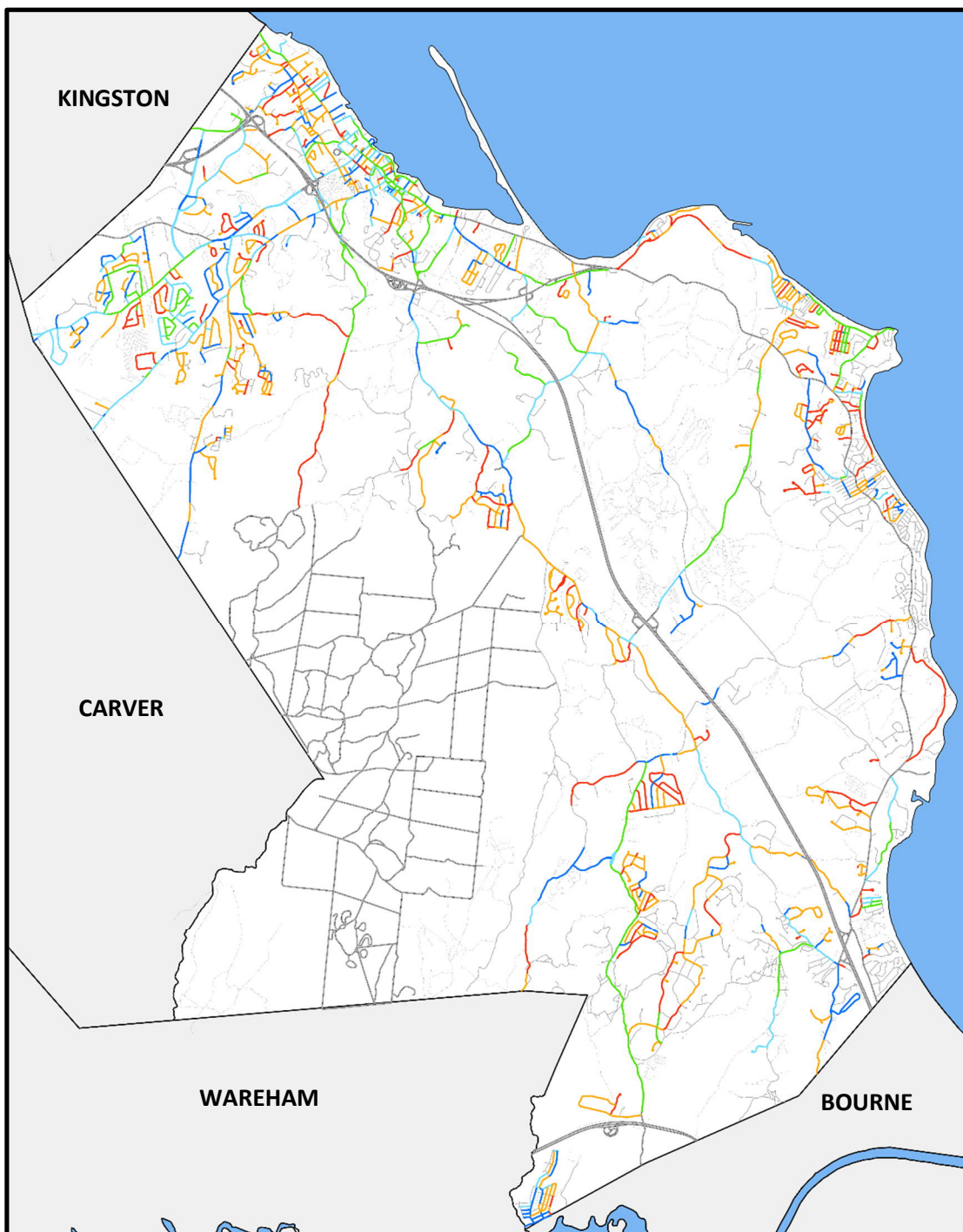
What is the expected lifespan of this new/replacement equipment: _____

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

Pavement Management Summary of Findings

Date: June 27, 2023

Date of Inspections: Winter 2022 - 2023



**Town of
Plymouth,
Massachusetts**

Introduction

Background

The Town of Plymouth retained BETA Group, Inc. (BETA) to conduct a reassessment of its Town maintained roadway network as well as to continue providing pavement management services. BETA was originally hired by the Town in 2011 to develop its Pavement Management Program (PMP) which included a field evaluation of pavement conditions and has provided support services since. This comprehensive study was undertaken with the goal of establishing an extensive database of roadway surface conditions to produce a prioritized list of improvements. The Pavement Management Program (PMP) is a planning tool intended to provide the foundation to manage the Town's roadway resources in conjunction with local institutional knowledge. These efforts will result in the creation of a dynamic Capital Improvement Plan for the Town's roadway network.



Pavement Management Approach

Pavement management is based on the theory of predicting roadway deterioration over time. This theory allows pavement managers to perform timely maintenance designed to extend the roadway's life and avoid more costly and extensive structural repairs. A key aspect of pavement management, as illustrated by the Pavement Deterioration Curve, is the recognition that roadways deteriorate in an accelerated fashion at specific times in the roadway lifecycle. Understanding this concept allows opportune decisions that yield the most cost-effective results.

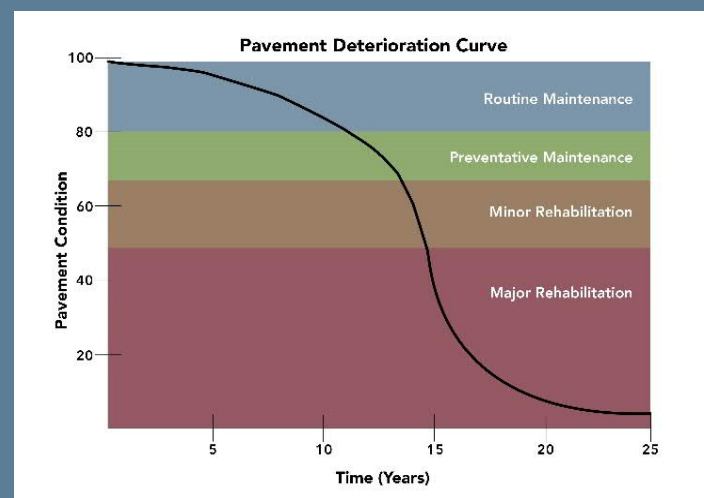
Implementing a PMP involves identification of the road network, evaluation of its surface conditions, and specification of its maintenance practices and associated repair costs. Roadway condition data is compiled to facilitate the calculation of a **Road Surface Rating (RSR)** for each street segment. This range includes a possible low value of 0 for a road characterized by a high severity of distress, and a possible maximum value of 100 for a road with no visible defects. Ultimately, the RSR value allows each roadway segment to be placed into a planning level repair category.



Roadway Survey

The roadway survey in Plymouth, consisting of paved, Town accepted and unaccepted roadways, was completed in the Winter of 2022-2023. A total of **228.89 accepted and 73.72 unaccepted centerline miles (303.30 total)** were inspected for condition, serving as the new baseline for this project. The required field inspections were performed autonomously utilizing a LiDAR sensor mounted on a vehicle. As the vehicle traveled each roadway, a 3D digital point cloud was developed and all roadway assets within a 50' radius of the Lidar sensor were scanned and populated. As part of the data collection, images were captured, georeferenced and timestamped every 20' section of roadway. Upon completion of the field data collection, proprietary algorithms and Ai machine learning technology were run to identify pavement surface distresses such as cracks, potholes, seals, patches, and pavement oxidation to generate RSRs at the segment level. BETA then conducted a thorough review to ensure the quality of the data for analysis and reporting. Additionally, as part of the survey, approximately 74.5 miles of accepted and unaccepted gravel roads were identified and had 20' imagery captured.

Pavement Deterioration Curve





Summary of Findings

Based on the update completed in June 2023, the **overall Road Surface Rating for Plymouth's Town accepted roadway network was 68.54 and 65.47 for its unaccepted network**, resulting in an **overall average of 67.75**. The overall RSR represents a benchmark for performance measuring of the Town's pavement management program moving forward. If the overall RSR were to drop in the years to come, this would be a sign that the program may need to be adjusted or funding for the program may need to be reevaluated.

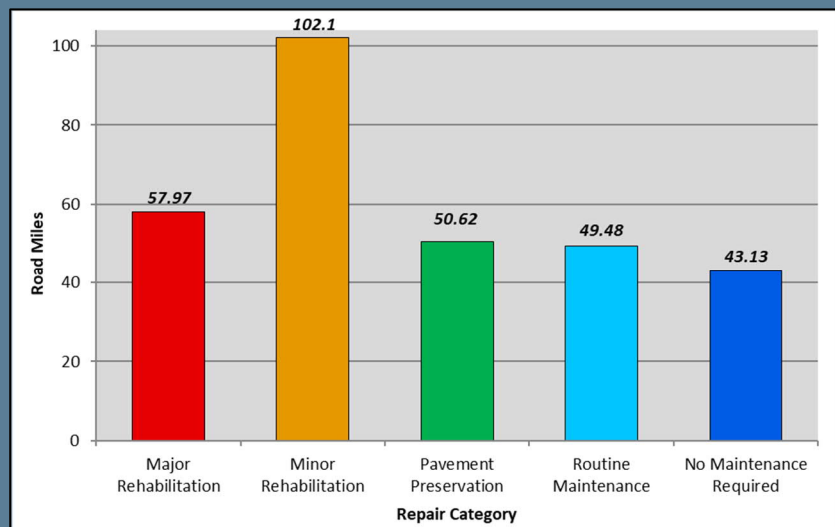
As part of the pavement management process, repair strategies and associated unit costs were defined (as shown below) to develop the Town's Backlog Summary. This analysis summarizes the mileage of roadway that fall within each suggested repair category as well as the estimated cost based to complete the recommended maintenance or repair. **The current backlog summary for the Town's roadway network is approximately \$135.52 Million based on current market trends**. This budgetary dollar figure represents a snapshot of the funding it would take to perform all outstanding maintenance for the Town's road network within the next year. While this is not typically feasible, this analysis acts as another benchmark for the magnitude of work necessary at the time of inspections.

67.75

**CURRENT TOWN NETWORK
ROADWAY SURFACE RATING (RSR)
(June 2023)**

Repair Method	RSR Range	Unit Price* (sy)
Major Rehabilitation	0-50	\$100.00
Minor Rehabilitation	50-70	\$25.00
Pavement Preservation	70-80	\$15.00
Routine Maintenance	80-90	\$1.00
No Maintenance Required	90-100	\$0.00

RSR Breakdown by Mileage



Backlog Summary

Repair Method	Length (Miles)	Square Yards	Percent Repair	Estimated Cost
Major Rehabilitation	57.97	833,442.66	19.11%	\$83,344,266.19
Minor Rehabilitation	102.10	1,568,215.95	33.66%	\$39,205,398.74
Pavement Preservation	50.62	809,183.95	16.69%	\$12,137,759.21
Routine Maintenance	49.48	834,573.39	16.31%	\$834,573.39
No Maintenance Required	43.13	675,048.37	14.22%	\$0.00
Total	303.30	4,720,464.32	100%	\$135,521,997.53
AVERAGE RSR by Segment:	67.75			





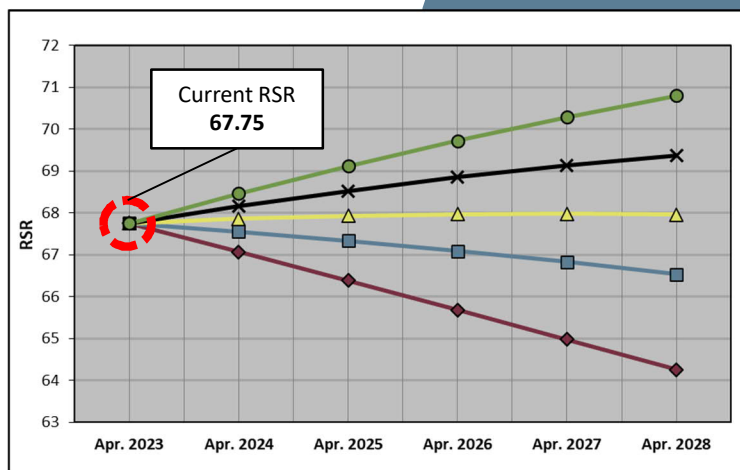
Capital Planning & Concluding Remarks

A series of **Cost Benefit Value (CBV)** analyses were generated to serve as a tool to prioritize potential roadway projects for inclusion in a multi-year **Capital Improvement Plan (CIP)**. The CBV considers traffic volumes, repair types and RSR to serve as a guide in the planning process. The development of a CIP will assist the Town in improving its network rating over time.

A 5-year forecast model (right) was developed to demonstrate how the network-level RSR would potentially adjust based on different funding scenarios and repair strategies. Utilizing unit prices established in the program, the model suggests that the Town allocate approximately \$5.50M annually to maintain the current rating. However, if the Town were to allocate \$8.50M annually, the Network RSR is projected to approach a 69 in 5 years. This model can be customized based on repair treatments the Town plans to implement. The current model accounts for 3% annual inflation

Forecast Model

Projected RSR By Year



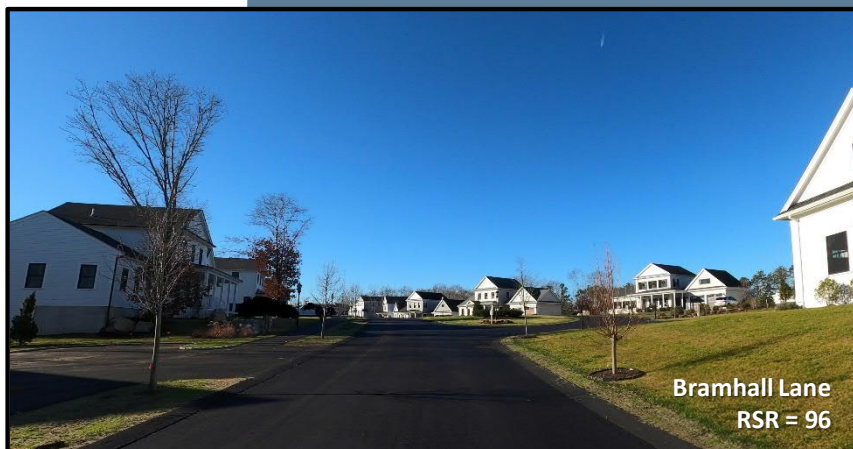
*Denotes FY2024 Ch. 90 Allotment

Program Maintenance

To best manage and update the Town's PMP database, the following practices are suggested:

- Post all annual roadway improvements into the database. Both the pavement condition rating and repair history information should be entered.
- Add any new roadway network descriptions to the database as soon as the Town accepts the roadways.
- Update repair method unit costs annually to provide accurate work plan forecasts.
- Assign one or more individuals to oversee system upkeep and to request annual pavement condition updates.
- Review developments in pavement technology that might offer a more cost-effective alternative to pavement maintenance or rehabilitation over the pavement's life cycle.
- Re-inspect the roadway network every 3-4 years to keep the system and imagery current

The Pavement Management Program will serve as a valuable instrument to the Town and facilitate a progressive approach to managing roadway infrastructure.



Plymouth, MA

Roadway Status Summary

Roadway Type		Length (Miles)
Town Classification: Accepted		
BC		228.89
GR		14.43
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		70.93
GR		62.73
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

Estimated Roadway Improvement Costs - Overall

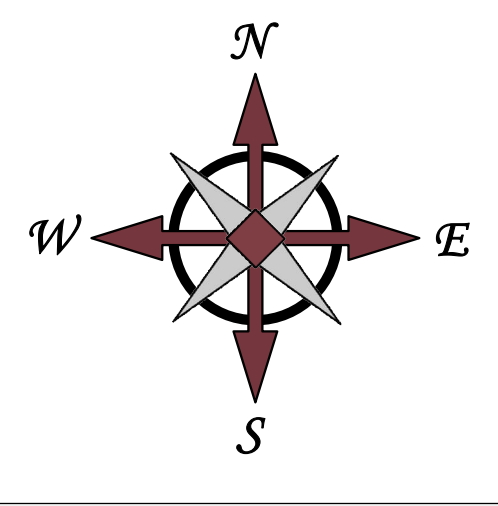
Repair Method	Length (Miles)	Square Yards	Percent Repair	Estimated Cost
Major Rehabilitation	57.97	833,442.66	19.11%	\$83,344,266.19
Minor Rehabilitation	102.10	1,568,215.95	33.66%	\$39,205,398.74
Pavement Preservation	50.62	809,183.95	16.69%	\$12,137,759.21
Routine Maintenance	49.48	834,573.39	16.31%	\$834,573.39
No Maintenance Required	43.13	675,048.37	14.22%	\$0.00

Total:	303.30	4,720,464.32	100.00%	\$135,521,997.53
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Average RSR By Segment:	67.67
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*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.

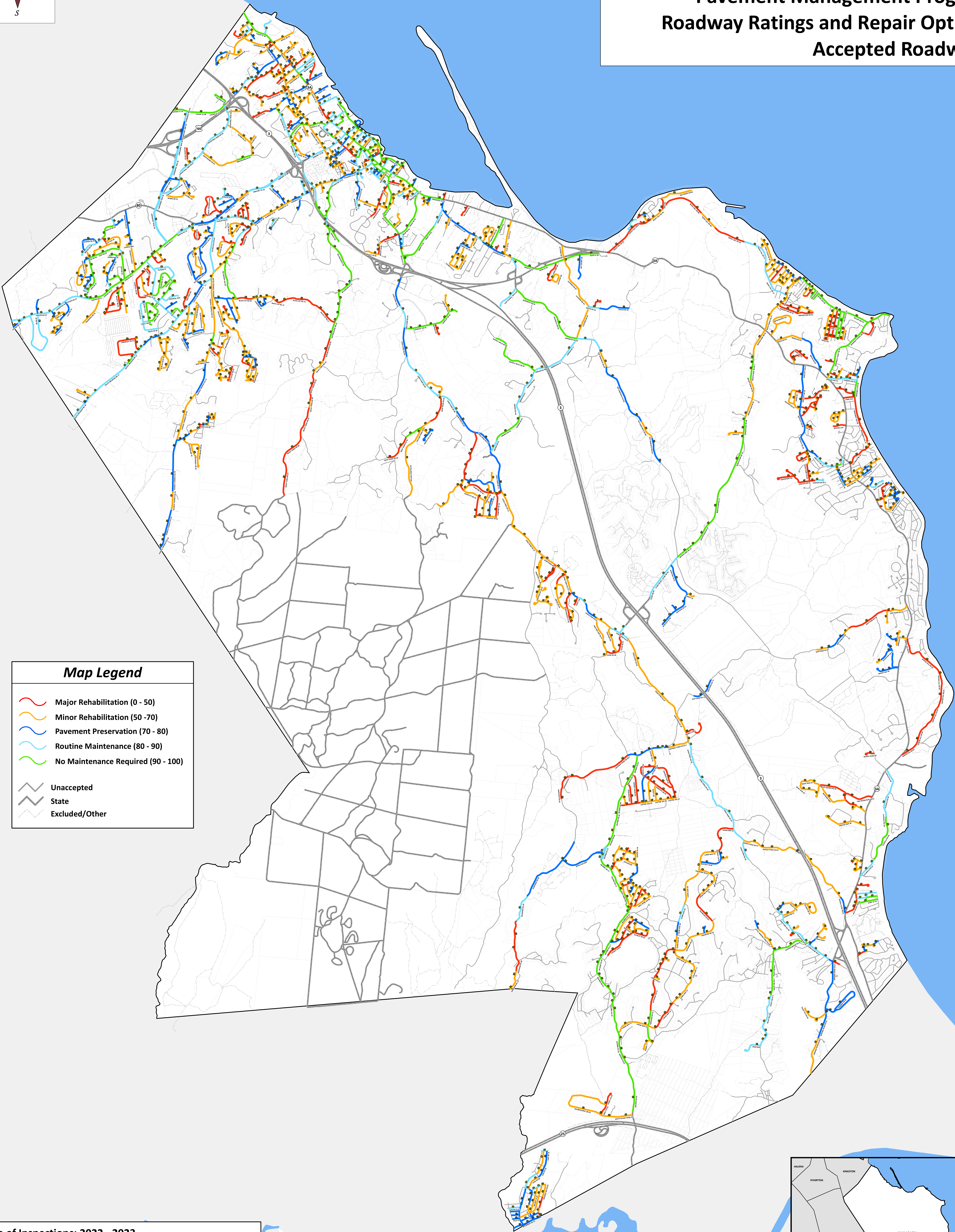


Town of Plymouth, Massachusetts

Pavement Management Program

Roadway Ratings and Repair Options

Accepted Roadways

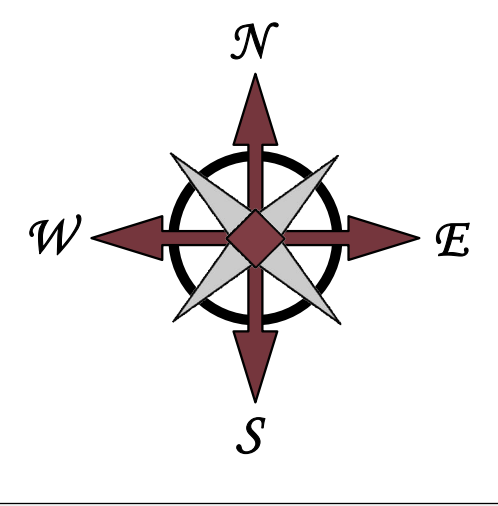


Map Legend

- Major Rehabilitation (0 - 50)
- Minor Rehabilitation (50 - 70)
- Pavement Preservation (70 - 80)
- Routine Maintenance (80 - 90)
- No Maintenance Required (90 - 100)
- Unaccepted
- State
- Excluded/Other

Date of Inspections: 2022 - 2023
Data Sources: Town of Plymouth, MassDOT, MassGIS
RSR Snapshot: July 12, 2023



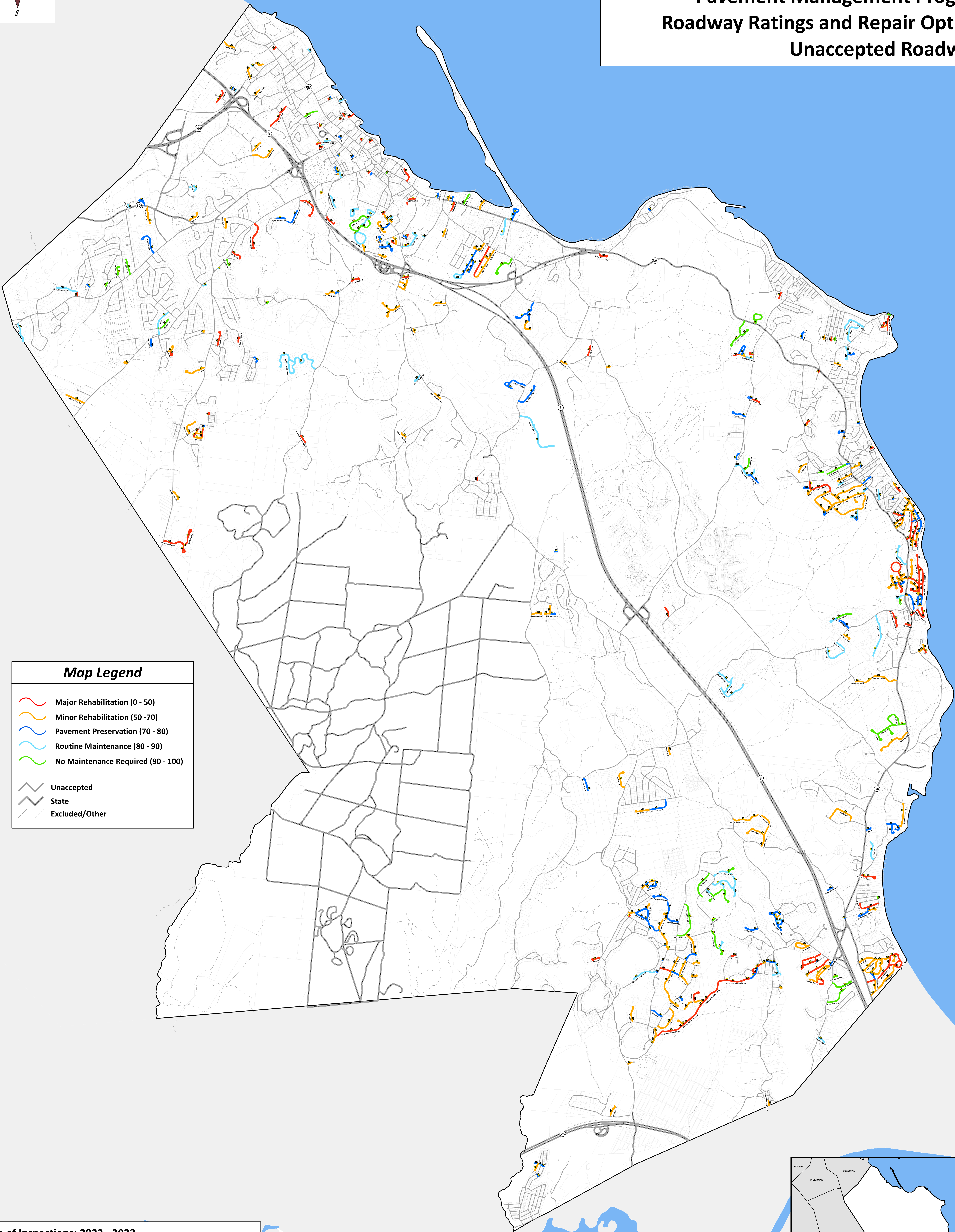


Town of Plymouth, Massachusetts

Pavement Management Program

Roadway Ratings and Repair Options

Unaccepted Roadways



Map Legend

- Major Rehabilitation (0 - 50)
- Minor Rehabilitation (50 - 70)
- Pavement Preservation (70 - 80)
- Routine Maintenance (80 - 90)
- No Maintenance Required (90 - 100)
- Unaccepted
- State
- Excluded/Other

Date of Inspections: 2022 - 2023
Data Sources: Town of Plymouth, MassDOT, MassGIS
RSR Snapshot: July 12, 2023



**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Department of Public Works	Priority #:	2
Project Title and Description: DPW Administration Building Property Acquisition	Total Project Cost:	\$2,500,000.00

Department/Division Head: William Coyle, 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: _____

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>FY26</i>		
<i>Labor and Materials</i>			<i>FY27</i>		
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>	\$2,500,000.00		<i>FY29</i>		
<i>Equipment</i>			<i>FY30</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital					

Project Justification and Objective: These funds will be used to purchase property located at 22 Mary B Lane. This building will serve as the DPW Headquarters. An appraisal will be performed over the next couple of months to determine the actual value of the property.

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
FY25 SPRING ANNUAL TOWN MEETING**

Department: Department of Public Works	Priority #:	3
Project Title and Description: DPW Administration Building Design Services	Total Project Cost:	\$900,000.00

Department/Division Head: William Coyle, 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: _____

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>	\$250,000.00		<i>FY26</i>		
<i>Labor and Materials</i>			<i>FY27</i>		
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>		
<i>Equipment</i>			<i>FY30</i>		
<i>Other</i>					
<i>Contingency</i>	\$50,000.00				
Total Capital	\$300,000.00				

Project Justification and Objective: These funds will be used to perform design services to renovate the existing structure at 22 Mary B Lane
which will include Engineering and architecture services. Upon completion of the planned construction the building will serve as the DPW Headquarters.

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.

MEMORANDUM

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

FROM: Tony Wespiser

DATE: 12/14/2023

SUBJECT: Mary B Lane Renovations – Design Cost Estimate

On November 6, 2023 Weston & Sampson provided a ball park estimate for a budget number of \$650,000 for A&E Services for design renovations at the Mary B Lane facility, and \$250,000 for corresponding OPM services. The information below outlines how we arrived at those numbers.

We started with the construction cost from the 10/22/2022 update of our 6/10/2022 Report. More specifically, the construction cost for the "Administration -Offices/ Office Support" portion of the building (see following page for excerpted page from report) – that cost was \$8,174,205. We also included the cost for the "Elevator / Egress Stair", which was \$450,956. So, the Total 2022 Construction Cost was \$8,625,161. Note that we assume the square footage in the renovated Mary B Lane space will be similar the square footage for the admin/offices included in the 10/22/2022 report update.

From there we added an 8% Design Contingency, then we escalated the cost to 2023 with an 8% escalation factor to arrive at a 2023 Total Construction Cost of \$10,060,388. Note that the preceding construction costs assume new building construction. So, we adjusted for renovation work by using a factor of 80% to get an adjusted Total Construction Cost of \$8,048,310. Then, to get the estimated A&E Design Fee, we used a percentage of 8% of the Total Construction Cost. For OPM fees, we used 3%.

All of the above calculations are outlined in the table below.

Admin - Offices/Office Support		8,174,205
Elevator / Egress Stair		450,956
2022 Total Costruction Cost		8,625,161
Design Contingency	8%	690,013
	subtotal	9,315,174
Escalation to 2023	8%	745,214
2023 Total Construction Cost		10,060,388
<u>Adjust for Renovations:</u>		
(assume 80% of new)	80%	8,048,310
A&E Fees (design)	8.08%	650,000
OPM Fees (design)	3.11%	250,000

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department:	DPW, Engineering Division	Priority #:	1
Project Title and Description:	Implementation of MS4 Stormwater Discharge Compliance Program and Annual Reporting	Total Project Cost:	\$190,000.00

Department/Division Head: James Downey, Acting Town Engineer

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>FY26</i>		
<i>Labor and Materials</i>			<i>FY27</i>	\$230,000.00	
<i>Administration</i>	\$190,000.00		<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>	\$250,000.00	
<i>Equipment</i>			<i>FY30</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$190,000.00				

Project Justification and Objective: The Town of Plymouth will continue its MS4 Stormwater Discharge Compliance and Annual Reporting Program that went into effect on July 1, 2018 as required by the Environmental Protection Agency (EPA) and Massachusetts Department of Environmental Protection (Mass DEP).

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.

MS4 Stormwater Discharge Compliance and Annual Reporting Program

Year 1	\$ 92,600
Year 2	\$ 94,000
Year 3	\$ 100,000
Year 4	\$ 66,500
Year 5	\$ 74,000
\$ 427,100	

Year 6	\$ 88,200
Year 7	\$ 101,800
\$ 190,000 FY25 Spring Town Meeting	

Year 8	\$ 111,980
Year 9	\$ 118,020
\$ 230,000 FY27	

Year 10	\$ 123,921
Year 11	\$ 126,079
\$ 250,000 FY29	

SENT VIA EMAIL TO: jdowney@plymouth-ma.gov

November 1, 2023

James Downey
Acting Town Engineer
Town of Plymouth Engineering Department
26 Court Street
Plymouth, MA 02360
United States

**Proposal: Site Civil Consulting Services
Town of Plymouth MS4 – Year 6
Town of Plymouth, Massachusetts**

Dear Mr. Downey,

On behalf of EnviroBusiness, Inc. (dba EBI Consulting, hereinafter "EBI"), I am pleased to submit this proposal and information defining the scope of services for consulting services to aid in the Town of Plymouth MS4 Program. Thank you for the opportunity to be of continued assistance to the Town of Plymouth (the "Client").

1.0 PROJECT UNDERSTANDING

The Town of Plymouth is continuing its MS4 reporting as required by the Environmental Protection Agency within the limits of the Town of Plymouth (the "Site"). The below Scope of work will detail the anticipated work to be completed as part of the year six of the MS4 program.

2.0 SCOPE OF WORK

A. MS4 Year 6 Annual Report

The EBI team will prepare the annual report for year six. The permit year closes on June 30, 2024, with the annual report due by September 30, 2024, of the same calendar year. The sixth year's annual report period is July 2023 to June 2024. The EBI team will collect and summarize required information. It is expected that the US EPA will provide a template for the annual report. The EBI team will submit a Draft Annual Report to the Town thirty (30) days prior to the required submittal date. Following review, the EBI team will finalize the report and provide it to the Town for submittal to US EPA and MADEP. The following tasks are examples of tasks completed for previous annual reports:

- Create public education and outreach program.
- Create annual training program for employees.
- Update inventory of all known locations where SSOs discharged to the MS4.
- Keep records and summarize catch basins cleaned or inspected.
- Continue investigations of catchments associated with Problem Outfalls.
- Review O&M programs for all permittee owned facilities, update if necessary.

B. MS4 YEAR 6 Outfall catchment investigation report

Investigating outfall catchment area for all flagged outfalls during year 3 and 4. This includes:

- Mapping of catchment areas for each problematic outfall.
- Sampling of effluent at drainage structures upstream of said outfalls. To determine the source of the problem.
- Report summarizing findings and recommendations.

Note: This task will be multi-year and needs to be completed by year 7.

C. Record Keeping for Town Tasks

The below information is required to complete the annual report using Annual Requirements (by Town).

- Annual opportunity for public participation in review and implementation of SWMP
 - Annual Employee Training
 - Update any SSOs discharge to the MS4
 - Review site plans of construction sites as part of the construction stormwater runoff control program
 - Conduct site inspection of construction sites as necessary
 - Log catch basins cleaned or inspected
 - Sweep all curbed street at least annually
 - Continue investigations of catchments associate with problem outfalls
 - Review inventory of all permittee owned facilities in categories of parks and open space, buildings and facilities, and vehicles and equipment
 - Implement program for MS4 infrastructure maintenance to reduce the discharge of pollutants
 - Enclose all road salt storage piles or facilities and implements winter road maintenance procedures to minimize the use of road salt
 - Review as-built drawings for new and redevelopment to ensure compliance with post construction by laws, regulations, or regulatory mechanism consistent with permit requirements
 - Inspect all permittee owed treatment structures (excluding catch basins)
- EBI assumes that coordination and record keeping will be approximately 8 hours a month for the 6-month work period for a total of 48 hours. Any time above and beyond this number will be billed at \$225 /hr.

D. Meeting and Coordination

- Monthly coordination calls (May -October- 6 calls@ 1 hours per call)
- Onsite meetings as necessary (assume 4 meetings @ 4 hours per meeting for the year)

EBI assumes a total of 22 hours for meetings and coordination.

E. Reimbursable Expenses

Reimbursable expenses including but not limited to travel, laboratory sampling, police details and field materials will be including in the lump sum milestone amounts.

3.0 FEE ESTIMATE AND ASSUMPTIONS

Unless otherwise noted, the Scope of Work in this proposal will be billed on a percentage complete basis for a total lump sum fee as identified in the Fee Estimate below.

FEE ESTIMATE

A. MS4 Year 6 Annual Report	\$8,000.00
B. MS4 Year 6 Outfall catchment investigation report.....	\$64,700.00
C. Record Keeping for Town Tasks.....	\$10,550.00
D. Meetings and Coordination.....	\$4,950.00

TOTAL FEE **\$88,200.00**

Billing Rates:

The Fee Estimate for this proposal was prepared with the following billing rates for EBI personnel:

- Director: \$225.00/ hour
- Project Engineer: \$200.00/ hour

ASSUMPTIONS

The Scope of Work and Fee Estimate for this proposal were prepared with the following assumptions:

1. Site Civil Engineering design and permitting are not included in this proposal. A contract amendment can be provided in the event that the Project moves forward to the design and permitting phases.
2. For changes in design or scope by the Client, or modification requests by representatives of the Plymouth EBI will notify the Client and provide an estimated time-and-materials fee for their approval.
3. Reimbursable expenses including but not limited to travel, laboratory sampling, police details and field materials will be including in the lump sum milestone amounts.

4.0 SCHEDULE AND TERMS

If a job is to be cancelled or is placed on hold, the Client must notify EBI immediately so we can suspend all work. Jobs cancelled or placed on hold for more than one month will be invoiced for the charges incurred to date, billed on a time and materials basis.

Significant Scope of Work or schedule alterations requested by the Client after authorization to proceed will be considered an additional service.

EBI proposes to perform the work outlined above in accordance with our Standard Terms & Conditions for Consulting Services. No work other than the above-mentioned Scope of Work will be undertaken, or costs charged other than the cost quoted above, without written approval from Town of Plymouth. This contract is based upon the knowledge EBI has to date of the above referenced property. If additional information becomes available, EBI will discuss this with you and refine our contract accordingly.

EBI looks forward to the opportunity to continue to work with you on this important assignment. EBI is prepared to commence preparation necessary to initiate work upon receipt of this authorization. **Please note that all pages of this contract must be initialed and returned with the signed authorization prior to the start of work on this project.**

Should you have questions, please contact me at (978) 835-8619.

Sincerely,
EBI Consulting,

Authorization and acceptance of terms:
Town of Plymouth



Kevin Sanders
Director of Civil Engineering

Signature

Date

Name

STANDARD TERMS AND CONDITIONS FOR CONSULTING SERVICES

The Client and EnviroBusiness, Inc. (dba EBI Consulting, hereinafter "EBI") hereby agree as follows:

1. **CONTRACT-** The Contract is the Proposal or Contract document that is signed and dated by EBI and the Client including these Standard Terms and Conditions for Consulting Services which are appended and incorporated by reference. The Client is defined as the entity that signs the Proposal or Contract.
2. **COMPENSATION FOR SERVICES AND PAYMENT TERMS-** The Client agrees to pay EBI in accordance with the payment terms provided in the Contract.

Invoices will be submitted monthly or as described in the Proposal.

Invoices are due and payable upon receipt. If payments are not made as agreed, the Client agrees to pay reasonable collection costs and a handling charge of one and one-half percent (1 1/2 %) per month.

3. **RIGHT OF ENTRY-** The Client agrees to furnish EBI with the right-of-entry on the land and into any structures or represents and warrants, if the site is not owned by the Client, that permission has been granted to make site reconnaissance and observations pursuant to the scope of services in the Contract.

EBI will take reasonable precautions to minimize damage to the land and structures from activities related to its services but has not included in the fee the cost for restoration of damage that may result from EBI's operations, unless specifically stated in the Contract.

4. **DOCUMENTS-** All reports, drawings, field data and notes, laboratory test data, calculations, estimates, and other documents that EBI prepares as instruments of service as part of this Agreement shall remain EBI's property. The Client agrees that EBI's services are on behalf of and for the exclusive use of the Client and that all reports and other documents furnished to the Client or its agents shall be utilized solely for this project. Client shall indemnify and hold harmless EBI, its officers, directors, employees and subconsultants (collectively, EBI) against any damages, liabilities, including reasonable attorneys' fees and defense costs, arising from or alleging arising from or in any way connected with the unauthorized use of EBI's documents or instruments of services by the Client or any person or entity that acquires or obtains EBI's instruments of service from or through the client without the written authorization of EBI. EBI will retain pertinent records relating to the services performed for a period of three (3) years following submission of our report or other documents.

5. **STANDARD OF CARE-** EBI's services will be performed in accordance with generally accepted practices of members of the same profession providing similar services at the same time, in the same locale, and under like circumstances. EBI makes no other representations or warranties, whether express or implied, with respect to the services rendered hereunder.

6. **CONSTRUCTION SERVICES-** If EBI's construction observations services are included as part of the scope of services in the Contract, EBI will provide personnel to observe construction to ascertain that it is being performed, in general, in accordance with the plans and specifications.

EBI cannot provide its opinion on the suitability of any part of the work performed unless measurements and observations of that part of the construction are made by EBI personnel.

EBI's services do not make EBI a guarantor of the contractor's work, and the contractor will continue to be responsible for the accuracy and adequacy of all construction or other activities performed by the contractor. The contractor will be solely responsible for the methods of construction; supervision of personnel and construction; control, of machinery; false work, scaffolding, or other temporary construction aids; safety in, on, or about the job site; and compliance with OSHA regulations.

In consideration of EBI's performance of its obligations to review and evaluate the various bidders and bid submissions and to make recommendations to the Owner regarding the award of the construction contract, the Owner agrees to hold harmless and indemnify EBI for all costs, expenses, damages, and attorneys' fees which are incurred by EBI as a result of any claims, allegations, administrative or court proceedings, arising out of or relating to any bid protest or such other action taken by any person or entity with respect to the review and evaluation of bidders and bid submissions and/ or recommendations concerning the award of the construction contract. Although this paragraph shall not apply in circumstances in which EBI is finally adjudicated by a court to have actually engaged in intentional and willful conduct without any legitimate justification, privilege or immunity, the Owner shall be obligated to indemnify EBI for all such indemnification obligations incurred by EBI until any such final adjudication has been made by a court of competent jurisdiction.

7. **DISPUTE RESOLUTION-** Prior to the initiation of any legal proceedings, the parties to this Agreement agree to submit all claims, disputes or controversies arising out of or in relation to the interpretation, application or enforcement of this Agreement to non-binding mediation. Such mediation shall be conducted under the auspices of the American Arbitration Association or such other mediation service or mediator upon which the parties agree. The Party seeking to initiate mediation shall do so by submitting a formal, written request to the other party to this Agreement. This section shall survive completion or termination of this Agreement, but under no circumstances shall either party call for mediation of any claim or dispute arising out of this Agreement after such period of time as would normally bar the initiation of legal proceedings to litigate such claim or dispute under the laws of the Commonwealth of Massachusetts.

8. **INSURANCE-** EBI is protected by Worker's Compensation Insurance, Professional Liability and General Commercial Liability Insurance. EBI will furnish certification upon written request. The Client agrees that EBI will not be liable or responsible to the Client for any loss, damage, or liability beyond the amounts, limits, exclusions, and conditions of such insurance.

9. **LIMITS OF LIABILITY-** The Client agrees to limit liability to an amount of \$50,000 or EBI's fee, whichever is less and to indemnify EBI for any claims or costs from any construction contractor or subcontractor who performs work for which EBI has provided reports, plans, and specifications. The Client shall not be liable to EBI and EBI shall not be liable to the Client for any special, indirect or consequential damages whatsoever, incurred by either due to the fault of the other, regardless of the nature of this fault, or whether it was committed by the Client or EBI, their employees, agents or subcontractors. Consequential damages include, but are not limited to, loss of use and loss of profit. The Client



agrees to extend any and all limitations, indemnifications, and waivers provided by the Client to EBI to those individuals and organizations EBI retains for proper execution of the work. These shall be deemed to include but not necessarily limited to EBI's officers and employees and their heirs and assigns, as well as EBI's agents, subconsultants, and subcontractors and their officers, employees, heirs, and assigns.

10. **INDEMNIFICATION FOR HAZARDOUS MATERIALS-** The Client agrees that EBI has not contributed to the presence of hazardous wastes, oils, asbestos or other hazardous materials that may exist or be discovered in the future at the site and that EBI does not assume any liability for the known or unknown presence of such materials. The Client further agrees that EBI is not responsible for the disposal of any hazardous wastes generated in the course of work covered by this agreement, and that all such wastes are the sole property and responsibility of the Client. Client recognizes that EBI is working as a bailee and at no time assumes title to waste or samples or any responsibility as generator of said waste or samples.

Therefore, the Client shall defend, indemnify, and hold harmless EBI, its consultants, subcontractors, agents, and employees from and against all claims, damages, losses, and expenses including defense costs and lawyer's fees including those that result from the failure to detect or from the actual, alleged, or threatened discharge, dispersal, release, or escape of any solid, liquid, gaseous or thermal irritant, asbestos in any form, or contaminants including smoke, vapor, soot, fumes, acids, alkalies, chemicals, waste, oil or other hazardous material. The Client shall be liable under this paragraph for claims, damages, losses, and expenses including defense costs and attorney's fees, unless such claims, damages and losses and expenses are caused by EBI's gross negligence.

11. **PUBLIC RESPONSIBILITY-** The Client acknowledges that the Client or the Site Owner, as the case may be, is now and shall remain in control of the Site for all purposes at all times. Except as required by law, EBI does not undertake to report to any federal, state, county, or local public agencies having jurisdiction over the subject matter any conditions existing at the Site from time to time that may present a potential danger to public health, safety, or the environment. The Client agrees to notify each appropriate federal, state, county, and local public agency, as they each may require, of the existence of any condition at the Site that may present a potential danger to public health, safety, or the environment.

Notwithstanding the provisions of the foregoing, EBI will comply with subpoenas, judicial orders or government directives, and federal, state, county and local laws, regulations and ordinances, and applicable codes regarding the reporting to the appropriate public agencies of findings with respect to potential dangers to public health, safety, or the environment. EBI shall have no liability or responsibility to the Client or to any other person or entity for reports or disclosures made in accordance with such statutory or other lawful requirements. The Client shall defend, indemnify, and hold EBI harmless from and against any and all claims, demands, liabilities and expenses, including reasonable attorneys' fees incurred by EBI and arising directly or indirectly out of EBI's reporting such information under a bona fide belief or upon advice of counsel that such reporting or disclosure is required by law.

12. **CLIENT INFORMATION-** The Client accepts the liability for the accuracy and completeness of information, including, but not limited to, specifications, drawings, maps, laboratory analyses, surveys, reports, historical land usage and operations, results of previous site investigations and surface or subsurface conditions affecting the site, supplied by it or its agents to EBI. Client acknowledges that EBI is relying upon such information or data in the preparation of this proposal without further verification by EBI as to its accuracy or completeness.

13. **SUSPENSION OF WORK-** The Client may, at any time, by a ten (10) day written notice, suspend further work for EBI as defined by this Agreement. The Client shall remain fully liable for and shall promptly pay EBI the full amount for all services rendered by EBI to the date of suspension of services plus suspension charges. Suspension charges shall include the cost of putting documents and analyses in order, personnel and equipment rescheduling or reassignment adjustments, and all other related costs and charges directly attributable to suspension. If payment of invoices by the Client is not maintained on a thirty (30) day current basis, EBI may, by providing a ten (10) day written notice to the Client, suspend further work until payments are restored to a current basis. In the event EBI engages counsel to enforce overdue payments, the Client shall reimburse EBI for all reasonable attorney's fees and court costs related to enforcement of overdue payments. The Client shall indemnify and save harmless EBI from any claim or liability resulting from suspension of the work due to non-current payments.

14. **INSTRUMENTS OF SERVICE-** The Client agrees to waive any claim against EBI and defend, indemnify, and hold harmless from any claim or liability for injury or loss allegedly arising from unauthorized re-use of EBI's instruments of service. The Client further agrees to compensate EBI for any time spent or expenses incurred by EBI in defense of such claim, in accordance with EBI's prevailing fee schedule and expense reimbursement policy. Notwithstanding any other provision to the contrary, EBI retains the rights of ownership of any patentable or copyrightable concepts arising from EBI services.

15. **TERMINATION-** Either party may terminate this Agreement for cause upon giving the other party not less than seven (7) calendar days written notice for any of the following reasons: substantial failure by the other party to perform in accordance with the terms of this agreement and through no fault of the terminating party and/or material changes in the conditions under which this Agreement was entered into, the scope of services or the nature of the project or the failure of the parties to reach agreement on the compensation and schedule adjustments necessitated by such changes.

16. **GOVERNING LAW-** This Agreement shall be deemed executed and delivered within the Commonwealth of Massachusetts, and all rights and obligations of the parties under this Agreement, and any disputes hereunder, shall be governed by the law of the Commonwealth of Massachusetts.

17. **DRAFTING NOT TO BE CONSTRUED AGAINST ANY PARTY-** The parties acknowledge and agree that each has had a full opportunity to review and have input into this Contract and that any ambiguity found shall not be construed against any party as drafter.

18. **INFORMATION-** Client will use reasonable efforts to provide to EBI information in Client's possession that EBI deems necessary to EBI's completion of the Scope of Work.

19. **INDEPENDENT CONTRACTOR-** EBI is being retained by Client pursuant to this Contract as an independent contractor, and nothing herein or otherwise shall be construed to make EBI an employee of Client. EBI shall not represent to third parties that it represents

Client or is the agent of Client, unless specifically requested by Client in writing. EBI is responsible for and shall have complete control over all necessary labor, equipment, insurance and materials to perform the Services, and for determining the best means to perform the Services subject to, and in order to satisfy, the requirements of this Contract.

20. ASSIGNMENT- This Contract may not be assigned by either party hereto without the prior written consent of the other party.

21. SURVIVAL- The provisions of this Contract shall survive the completion of the Services and the Scope of Work for each Project or the earlier termination of this Contract and/or the Scope of Work.

22. FORCE MAJEURE- A delay in or failure of performance of either party hereto shall not constitute default hereunder or give rise to any claim for damages if and to the extent such delay or failure is caused by occurrences beyond the control of the party affected, including but not limited to: acts of God or the public enemy; compliance with any order, action, or request of a governmental authority affecting to a degree, not presently existing, the supply, availability, or use of information, materials or labor; acts of war; public disorders; rebellion or sabotage; floods; riots; strikes; labor or employment difficulties whether direct or indirect; or any causes, whether or not the class or kind of those specifically named above, not within the control of the party affected and which, by the exercise of a reasonable diligence, said party is unable to prevent.

A party which is prevented from performing, for any reason, shall immediately notify the other party in writing of the cause for such non-performance and within a reasonable time set forth the anticipated extent of the delay. Should either party's performance hereunder be delayed beyond the control of or without the fault or negligence of such party, the parties to this Contract shall confer to reach an agreement on the conditions upon which the work shall be continued, or otherwise terminated.

23. SEVERABILITY. Any article or provision of this contract which may be deemed in violation of law shall not affect in any manner the remaining provisions of this contract.

24. ENTIRE AGREEMENT - This Contract constitutes the entire agreement between Client and EBI with respect to the Scope of Work and supersedes all prior negotiations, representations and agreements. This Contract may only be amended by a written instrument signed by the parties hereto.

Last Reviewed 7.1.2022 MMcC

Compliance process underway for MS4 permits

By Ariela Lovett

After a one-year postponement, the new five-year permit for Municipal Separate Storm Sewer Systems, issued jointly by the U.S. Environmental Protection Agency and Massachusetts Department of Environment Protection, went into effect on July 1.

The first required action by municipalities covered under the new MS4 permit is the submission of a Notice of Intent for coverage, due by Oct. 1.

More than 250 municipalities in urbanized areas are covered under the permit and must comply with federal and state laws and regulations regarding the proper discharge of stormwater to waterways. Municipalities must develop,

implement and enforce a stormwater management program that controls pollutants to the maximum extent practicable, protects water quality, and satisfies appropriate requirements of the federal Clean Water Act.

The new permit, which replaces the 2003 permit, adheres to the same six minimum control measures: pollution prevention for municipal operations; illicit discharge detection and elimination; construction site runoff control; post-construction runoff control; public education and outreach; and public participation and involvement.

By next June 30, permitted municipalities must develop a Stormwater Management Program that details the

activities and measures that will be implemented to meet the requirements of the permit. Municipalities must also produce annual reports that document their permit compliance; the first report will cover a 14-month period from May 1, 2018 through June 30, 2019.

The MassDBP provides low-interest loans to help municipalities comply with federal and state water quality requirements through the Clean Water State Revolving Loan Fund. Eligible uses include stormwater management, watershed management, and green infrastructure projects. The application deadline for the next round of funding is Oct. 15. ●

MMA to offer first-time Annual Meeting attendee orientation

The MMA will hold a special orientation session for first-time attendees of its Annual Meeting & Trade Show on Friday morning, Jan. 18.

The session will provide an opportunity to learn from seasoned association members about the best strategies for making the most of the Annual Meeting experience as well as MMA membership. This includes best practices for workshop attendance, how to take advantage of the Trade Show, valuable networking opportunities, and more.

The orientation, to be held from 8 to 9 a.m. in the Hall C Foyer on the second floor of the Hynes Convention Center, will include breakfast and networking.

MMA members and staff will give a presentation on the history and value of MMA membership. A group of selectmen, councillors, mayors and town managers will explain how they take advantage of resources provided by the MMA, and they will connect the first-



North Adams Mayor Thomas Bernard (right), elected in November 2017, speaks with Lynnfield Town Administrator Rob Dolan, a 15-year former mayor of Melrose, at the first-time attendee orientation session before the start of the 2018 MMA Annual Meeting & Trade Show.

time attendees to appropriate MMA staff for more information.

If you are planning to attend the MMA Annual Meeting for the first time, or

have any questions about the event or the first-time attendee session, contact Devon Elizabeth Williams at dwilliams@mma.org or 617-426-7272, ext. 104. ●

MMPA to cover OSHA rules at holiday meeting on Dec. 6

At its holiday meeting on Dec. 6 in Wrentham, the Massachusetts Municipal Personnel Association will host a panel presentation on Occupational Health and Safety Administration best practices.

Panelists will include certified trainers, human resources professionals, and experts from MIIA to prepare members with

training, policies and procedures ahead of the changing workplace safety regulations.

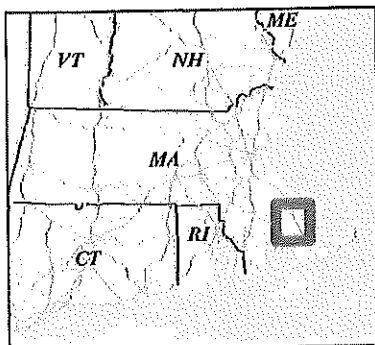
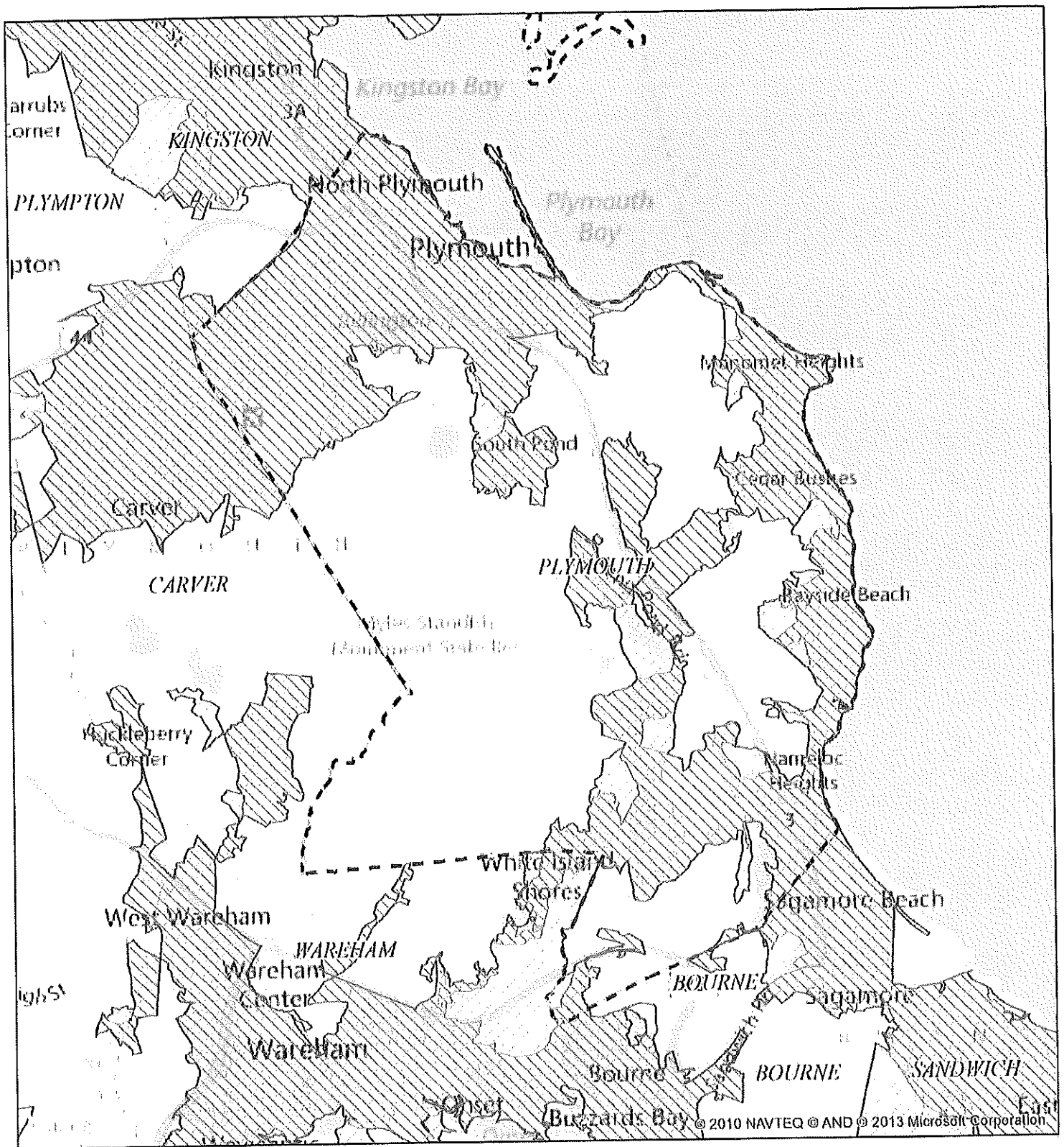
Registration and a networking breakfast will begin at 8:30 a.m., with the program starting at 9:30 a.m. and concluding at 1 p.m. with lunch.

At the conclusion of lunch, there will be an optional holiday swap for MMPA members

and meeting attendees. The swap gift limit is \$15.

The meeting will be held at Lake Pearl, 299 Creek St. in Wrentham. To register, visit www.mma.org.

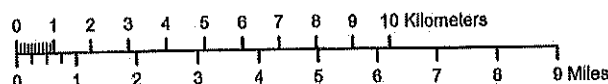
Contact: MMA Member Services Coordinator Devon Elizabeth Williams at dwilliams@mma.org or 617-426-7272, ext. 104



NPDES Phase II Stormwater Program Automatically Designated MS4 Areas **Plymouth MA**

Regulated Area:

UA Based on 2000 Census	UA Based on 2010 Census
----------------------------	----------------------------

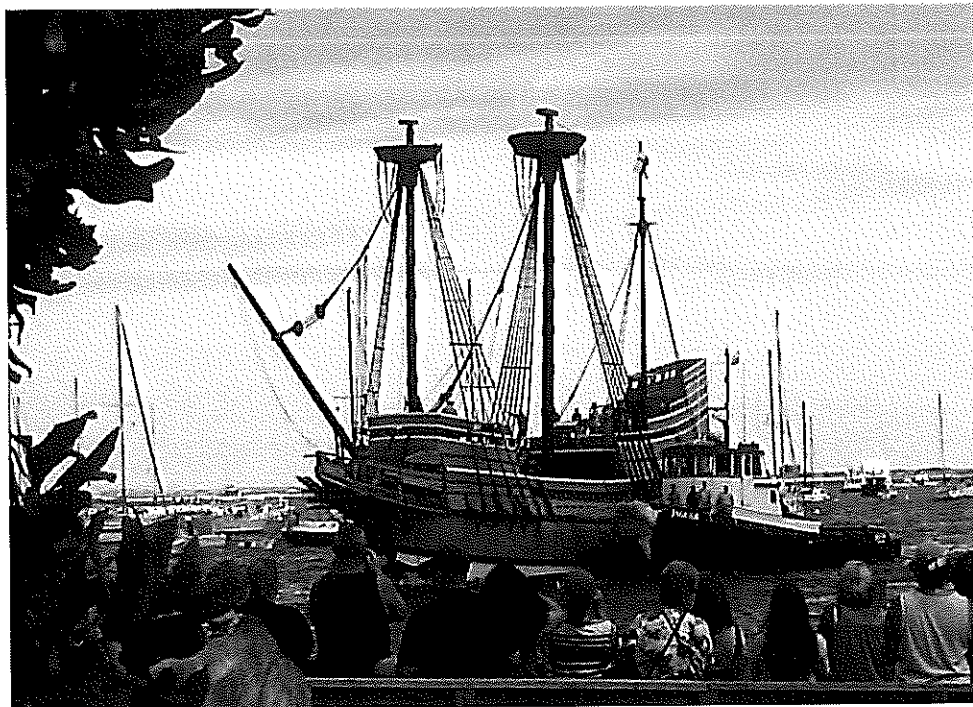


Town Population: **56463**
Regulated Population: **51365**
(Populations estimated from 2010 Census)



Urbanized Areas, Town Boundaries:
US Census (2000, 2010)
Base map © 2013 Microsoft Corporation
and its data suppliers

US EPA Region 1 GIS Center Map #8824, 8/9/2013



HELP KEEP OUR
LOCAL WATERS
CLEAN AND
HEALTHY

– POLLUTION
PREVENTION FOR
CONSTRUCTION
SITES

*Plymouth Stormwater
Management Team*

*[Following include excerpts from a
MassDOR fact sheet]*

Stormwater Pollution Prevention

Contaminated stormwater is a source of pollutants in many of our ponds, lakes, rivers and harbors. Storm drains carry runoff from streets, businesses, homes, industrial uses, and construction sites into freshwater and marine waterbodies.

Construction activities are only one contributor to this problem, but they are known to be a source of sediments, oily wastes, and other substances.

Reducing or eliminating the exposure of construction operations to rainfall and runoff is a proven way to reduce pollution that damages our local waters.

What Is a Stormwater Pollution Prevention Plan?

The EPA Construction General Permit is needed if more than one acre of disturbance is proposed and stormwater may runoff from construction site. This permit requires a Stormwater Pollution Prevention Plan (SWPPP) before any work begins.

A SWPPP is a plan to control stormwater discharges from the site. It is broader and more complicated than a typical sediment and erosion control plan. A SWPPP needs to be updated as work progresses, and the plan must be available on site. For detail refer to: www.epa.gov/npdes/npdes-stormwater-program.

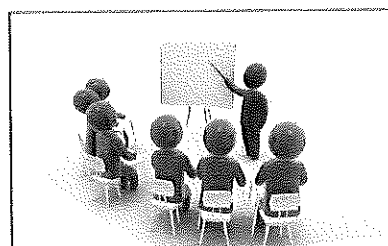
Plan in Advance to Prevent Pollution

Legally, the only thing that should leave the project site and enter a storm drain is clean, unpolluted rain runoff. Effective stormwater management requires that all potential pollutants are recognized, and a plan is designed to protect the health of local waters.

- ☐ Remove existing vegetation only as needed.
- ☐ Schedule excavation, grading and paving work for dry weather periods.
- ☐ Designate specific areas of site, well away from storm drains or waterways, for material storage and equipment maintenance.
- ☐ Have extra erosion controls (such as hay bales and silt fence/silt sock) on site for emergency.
- ☐ Develop and implement a combination of effective erosion and sediment controls for site.

Employee training program

Train employees and subcontractors about their responsibilities for pollution prevention.



Good housekeeping and Best Management Practices will prevent and reduce pollutant discharges from construction sites.

Spill prevention and response procedures enable a rapid response to spills that may occur. Typical spill prevention and response procedures include:

- ☐ Identifying potential discharge locations.
- ☐ Training employees in proper spill prevention and response techniques.
- ☐ Respond to small spills immediately using dry clean-up methods and sweep as soon as possible.
- ☐ Posting contact information for all individuals who need to be notified in the event of a spill.
- ☐ Promptly reporting and documenting any spills or leaks to appropriate individuals.

Erosion and sediment control management

Where soils are exposed to water, wind, or ice, erosion can result. Typical non-structural BMPs that can be implemented to control sediment include:

- ☐ Protecting all storm drain inlets and any streams, ponds and wetlands near the construction site.
- ☐ Limiting access to and from the site and stabilize construction entrances and exits.
- ☐ Minimizing the length of time bare soil is exposed
- ☐ Diverting or preventing runoff from flowing across exposed areas.
- ☐ Stabilizing disturbed soils as soon as possible.
- ☐ Maintaining all haybales and silt fence to ensure no materials escape and replace if necessary.

Dust control

Dust comes from stockpiles, cleared ground, gravel roads, and open areas. Non-structural methods to control dust include:

- ☐ Protect stockpiles by storing under a roof, tarp or plastic sheeting.
- ☐ Spraying controlled amounts of uncontaminated stormwater to dampen dust-generating areas.
- ☐ Sweep frequently.

Equipment and Materials Management

- ☐ Wash out concrete mixers only in designated washout areas away from brooks or ponds, and setup small mixers on tarps.
- ☐ Perform major maintenance and repairs of vehicles off the site.
- ☐ Remove trash, debris and wastes on frequent basis and ensure that dumpsters are covered.

Fertilizing grass to stabilize construction site

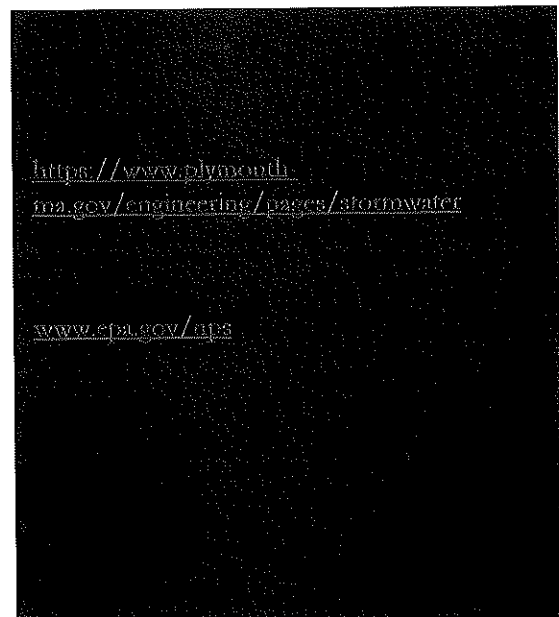
Grass clippings contain high amounts of nitrogen, a key ingredient in fertilizer. Use grass clippings by mulching in place. It may be all the fertilizer you need, and it will save time and money.

If you do apply fertilizer:

- ☐ Use organic or slow-release fertilizers that are less likely to runoff than fast-release fertilizers.
- ☐ Fertilize in the fall but beware of weather patterns. Although light rainfall is helpful in distributing fertilizer, a heavy downpour will wash the fertilizer into nearby waters.
- ☐ Be careful not to apply more than recommended amount of fertilizer. Too much fertilizer can burn the grass, damage the soil, and attract pests.

For a more comprehensive listing of Best Management Practices for the construction industry, go to EPA's website www.epa.gov and search construction stormwater.

Allowing stormwater sediment or other pollutants to runoff the construction site and enter a storm drain or waterway is a violation of federal, state and local water quality regulations.



The U.S. Environmental Protection Agency estimates that contaminants in stormwater runoff cause over half of the pollution in our nation's waterways.

Stormwater pollution begins when rain or snowmelt washes over pavement and other impervious surfaces, picks up contaminants, and flows down storm drains to the waterways we rely on for drinking and recreation.

Common pollutants include antifreeze, detergents, fertilizers, gasoline, household chemicals, motor oil, paints, pesticides, pet waste, road salt, solvents, and yard waste.



Help Keep Our Waterways Clean!

To learn more visit:

www.minkbluenmassachusetts.org/for-residents



Storm Water Pollution Prevention Guide

For Homeowners

EBI Consulting
2 Batterymarch Park, Suite 10
Quincy, MA 02169
Tel: (781) 273-2500
www.ebiconsulting.com

EBI Consulting
environmental | engineering | due diligence

Adapted from materials provided by
Department of Environmental Protection and
used by permission

Stormwater Pollution is the toxic mix of bacteria, chemical, metals, nutrients and other contaminants that washes over pavement and other impervious surfaces and flows down storm drains to the waterways we rely on for drinking and recreation.

PICK-UP AFTER YOUR DOG

Dog waste carries high levels of harmful *E. coli* bacteria and other pathogens and is a major contributor to local water pollution.

- Pick up the poop! Always carry a **plastic bag** when you walk your dog and dispose of pet waste in a **trash can**.

LAWN & GARDEN

- Choose **organic lawn chemicals** whenever possible
Use lawn chemicals sparingly and never use more than the directions call for
- Sweep up **dry chemical spills** and dispose in trash.
- Don't pile **yard waste** near streams, wetlands, or storm drains.
- Start a **compost pile**.
- Don't allow irrigation to **spray onto pavement**. Water that ends up on the pavement contributes to polluted runoff and is wasted.
- Make sure that your **landscaper/ irrigation contractor** follows rules for preventing stormwater runoff.
- Redirect **downspouts** toward grassy areas, trees, and shrubs, so that runoff from your roof can soak in the ground.

- Use **pervious materials** in landscape designs. Bricks, pavers, and stones allow water to slowly filter into the ground.
- Set the **rain barrel** under your downspout to capture water for another use.
- Plant **rain gardens** to help filter and soak up water before it runs onto the street.

HOME / BUSINESS

- Use the **least toxic** products available for cleaning, etc.
- Avoid **liquid chemical spills** such as oil, gasoline, antifreeze, paint, etc. on paved areas.

*If liquid chemical spill occurs, clean with rags and absorbent material such as **sand** or **kitty litter**. Sweep up absorbents and dispose in the trash.*

- Never use a **hose** to wash down the driveway or sidewalk. This washes pollutants into storm drains and is a waste of water.
- Dispose of household hazardous waste through your local **DPW/ Household Hazardous Waste Program**.
- Never pour **wash water** or chemicals down storm drains.
- Store chemicals in **leak proof containers** inside a building or shed, or under cover way from rainwater.
- Avoid **oversalting** walkways and driveways in the winter and use non-toxic products whenever possible.
- Sweep up all **construction areas** on a regular basis and dispose of debris in the trash.

WASHING CARS AND BOATS

- Park your vehicle in a spot where the soap will run off onto **grass**, rather than into the street and down the storm drain. If practical, park your vehicle on your lawn when washing it.
- Use **organic or mild soaps** and detergents
- Never clean or pressure wash the **undercarriage** of a car at home. The oil, grease and other pollutants from this activity can contaminate shallow ground water.
- Always use a **hose nozzle with a trigger**, and shut it off when you're not using to conserve water
- Skip the home treatment and **wash your car professionally** but use a car wash that recycles water!

AUTOMATIVE REPAIR

- Store automotive parts, such as batteries engines, transmissions and parts that may have oily or greasy residue on them, under cover and off the ground, to **minimize rainwater contact**. Rainwater can wash pollutants off these parts and into storm drains.
- Collect all used oil, antifreeze, and other vehicle fluids in containers with tight fitting lids and **recycle** at a local service station.

SWIMMING POOLS AND HOT TUBS

- Never **discharge pool water** directly into a storm drain.
- Dechlorinated pool, hot tub, or spa water with **neutralizing chemicals**, if water is to be discharged into the ground. If water cannot be dechlorinated, it must be collected by a pool maintenance company.

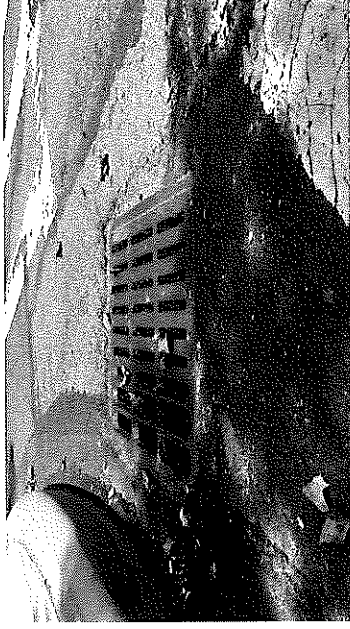
MS4 Stormwater Compliance Training

TOWN OF PLYMOUTH, MA
IDDE PROGRAM



Key Words

Catch Basin - A catch basin is a curbside drain with the sole function of collecting rainwater from properties and streets and transporting it to local waterways through a system of underground piping, culverts and/or drainage ditches. Catch basins can also be found in parking lots and serve the same purpose.



Example of a Catch Basin

Image source: https://live.staticflickr.com/4319/35835256210_5476a106ac_b.jpg

Best Management Practices (BMPs) – schedules of activities, practices (and prohibitions of practices), structures, vegetation, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants into bodies of water in the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Total Maximum Daily Loads (TMDLs) - A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources.

What is Stormwater Runoff?

Stormwater runoff is what is generated when precipitation from rain and snowmelt flows over land and does not soak into the ground. As runoff flows over impervious surfaces (paved streets, parking lots, and building rooftops), it accumulates debris, oil, pet waste, chemicals, sediment or other pollutants that could adversely affect the quality of nearby waterways if untreated.

Pollutants in stormwater is a major cause of :

1. Impairment of water quality and flow in local waters
2. Contamination of drinking water supplies
3. Alteration or destruction of aquatic and wildlife habitat



Image: <https://www.townofmaysfield-ma.gov/wp-content/uploads/2013/05/stormwater-diagram.jpg>

What is MS4?

Municipal Separate Storm Sewer System Regulation (**MS4**) is a conveyance or system of conveyances that is

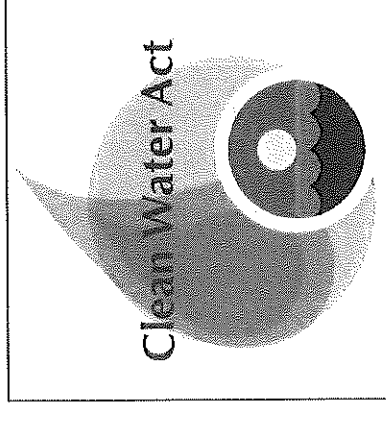
- Owned by a state, city, town, village or other public entity
- Designed to collect and convey stormwater (e.g., storm drains, catch basins, pipes, outfalls, culverts)
- Not a combined sewer
- Not part of a sewage treatment plant, or publicly owned treatment works

Massachusetts MS4 Permit:

Regulates the discharges of stormwater to protect water resources. The MS4 Program is administered by the USEPA in Massachusetts

History of Stormwater Regulation

- 1948 - Federal Water Pollution Act
- 1972 - Clean Water Act
- 2003 - EPA issued Final General Permit for Stormwater Discharges From Small MS4 to focus on water quality with the goal to reduce erosion, sedimentation, and scour as well as eliminate cross connections
 - Covers - “traditional” (cities and towns) and non-traditional (Federal and State agencies) MS4 Operators
- 2018 - EPA issues 2016 MS4 General Permit (Effective in 2018)



Storm Water Management Plan (SWMP)

The SWMP details the activities and measures that will be implemented to meet the terms and conditions of the permit.

The main elements of the Storm Water Management Program are

1. 6 Minimum Control Measures (MCMs) -Specific actions to reduce pollutant loading

- i. MCM1: Public Education and Outreach
- ii. MCM2: Public Involvement and Participation
- iii. MCM3: Illicit Discharge Detection and Elimination
- iv. MCM4: Construction Site Runoff Control
- v. MCM5: Post Construction Stormwater Management
- vi. MCM6: Pollution Prevention and Good Housekeeping for Municipal Operations

2. Water Quality Based Effluent Limitations -Specifies the requirements to achieve approved Total Maximum Daily

Loads (TMDL's)

- i. Nitrogen
- ii. Phosphorous
- iii. Metals
- iv. Solids
- v. Bacteria or pathogens
- vi. Chloride
- vii. Oil and Grease

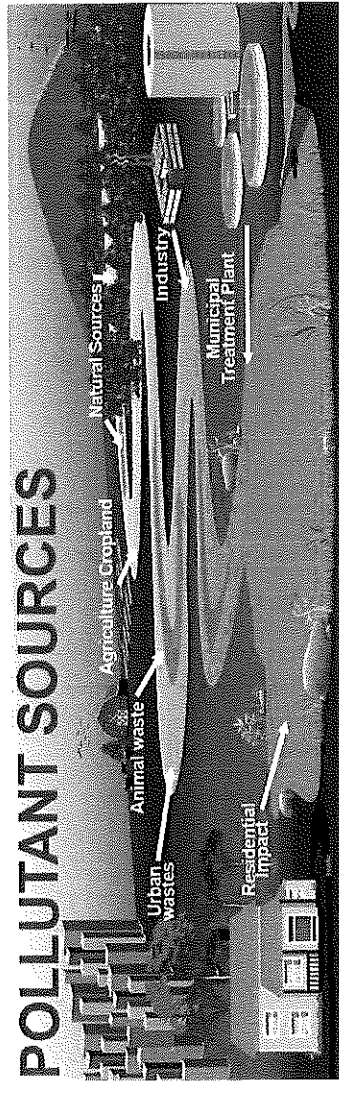


Image source: <https://www.state.nj.us/dep/wms/bears/images/tmdl-main.png>

1. MCM1 : Public Outreach

Focused messages aimed at different audiences.

1. Residential

- Do not dump oil in catch basins;
- Wash cars on grass and
- Pick up after your dog

2. Commercial

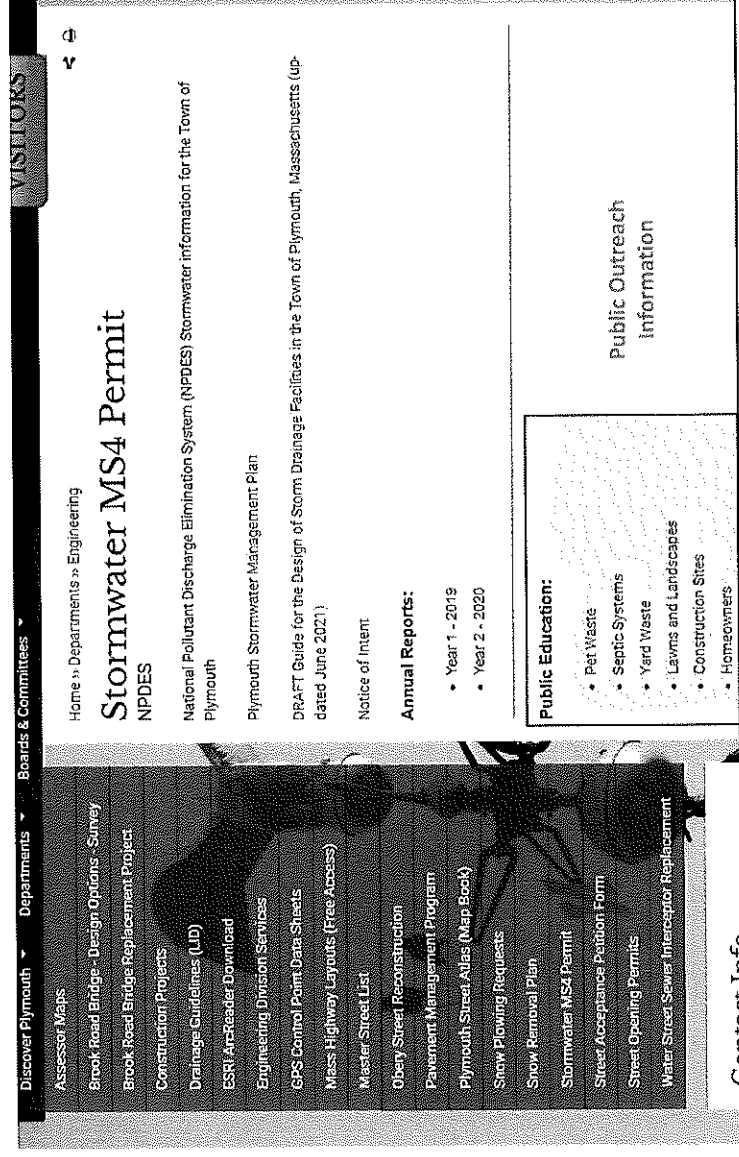
- Salt Application
- Catch Basin Maintenance
- Materials Storage

3. Construction

- Parking Lot Maintenance
- IDDE
- Materials Storage

4. Industrial

- Regulated under MS General Permit
- Materials storage



2. MCM2 : Public Improvement/Participation

The public are stakeholders in the community's water quality, this measure facilitates a forum for the public to participate in the review and implementation of the SWMP

You can find the information on the Town Of Plymouth Webpage under Engineering — Stormwater MS4 Permit <https://www.plymouth-ma.gov/engineering/pages/stormwater-ms4-permit>

Public Involvement includes:

- Public Review of SWMP
- All reports made available for public for review and comment

The screenshot displays the 'Stormwater MS4 Permit' page on the Town of Plymouth website. The page is organized into several sections: 'Assessment Maps' (listing various bridge and road projects), 'Construction Projects' (including drainage guidelines and ESDI attachments), 'Engineering Division Services' (covering GPS data sheets, master street lists, and street reconstruction), 'Permit Management Program' (detailing various permits like stormwater MS4, street opening, and water street sewer), and 'Public Education' (providing links for permit applications and public input). A prominent 'Stormwater MS4 Permit' banner at the top right highlights the 'National Pollutant Discharge Elimination System (NPDES) Stormwater Information for the Town of Plymouth' and includes a link to the 'SWMP Report'. The 'Contact Info' section at the bottom right provides a phone number for further inquiries.

3. MCM 3 – ILLICIT DISCHARGE DETECTION AND ELIMINATION

An illicit discharge is any discharge to a municipal separate sewer that is not composed entirely of stormwater, except discharges pursuant to a NPDES Permit and discharges resulting from firefighting activities

- Direct:- Sewage, Industrial, Commercial cross-connection, Direct pipe
- Indirect:- Groundwater seepage, Spills, Dumping, Outdoor washing activities

Municipalities are required to find and eliminate sources of non-stormwater from their storm sewer system.



Illicit Discharges are:

- Sand, Salt, and soils
- Garbage, litter and floatable
- Sewage, fecal coliform, pathogens
- Animal waste
- Paints, varnishes, and solvents
- Oil and automotive fluids
- Nonhazardous liquid, solid waste and yard waste
- Pesticides, herbicides and fertilizers
- Hazardous materials and waste
- Dissolved and particulate metals
- Noxious or offensive matter or any kind

What is not an Illicit Discharge:

- Diverted stream flows
- Air conditioning condensation
- Individual resident car washing
- De-chlorinated swimming pool water
- Uncontaminated ground water infiltration
- Residential building wash centers without detergents
- Water line flushing
- Fire fighting
- Landscape irrigation
- Foundation drains
- Irrigation water
- Lawn watering
- Street wash centers



Plymouth Receiving Waters

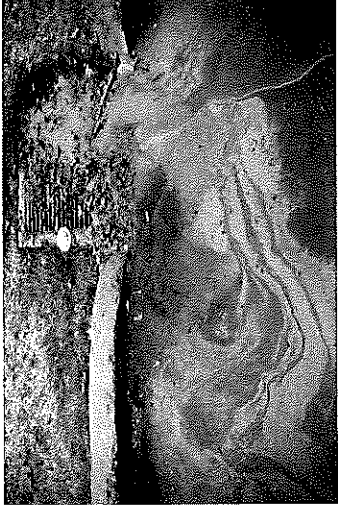
PLYMOUTH WATERSHED'S

South Coastal, Buzzards Bay and Taunton River

Waterway	Impairment
Plymouth Harbor And Tributaries	Nitrogen, Fecal Coliform, Non-native aquatics (Smelt Pond)
Cape Cod Bay and Tributaries	Fecal Coliform
Beaver Dam Brook and Tributaries	Non-native aquatics Brigs Reservoir & Long Island Pond
Billington Sea and Tributaries	Turbidity



ILLCIT DISCHARGES INDICATORS



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- Dog waste bags
- Staining
- Soap suds
- Grease
- Suspicious connections
- Odors at manholes
- Broken sewer pipes



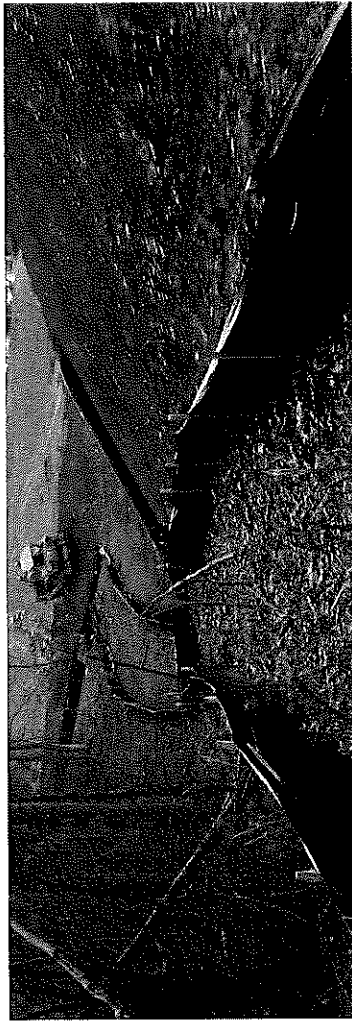
This photo by htasci/www.treehugger.com

IF YOU SEE IT, REPORT IT!



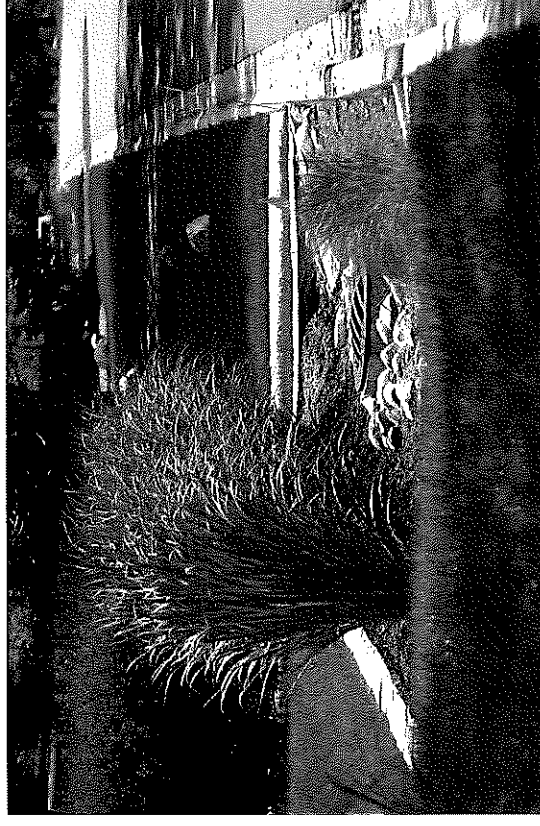
4. MCM 4 : Construction Site Stormwater Runoff

- Measures or actions taken to minimize/eliminate erosion and maintain sediment on construction sites that disturb one or more acres of land.
- Updated bylaws/rule and regulations to include:
 - Requirements for Erosion and Sediment Control BMPs
 - Requirements for Waste Control on Construction Sites
- Created written procedures for:
 - Site Plan Review
 - Site Inspection And Enforcement



5. MCM 5 : Post Construction Site Stormwater Management

- This program addresses stormwater runoff from new development and redevelopments in order to reduce the discharge of pollutants found in stormwater through the retention or treatment of stormwater on site after construction is completed.
- This was addressed by creating updates to bylaws/rules and regulations to include:
 - Requirements for Low-Impact Development (LID) practices
 - Pollutant removal requirements for stormwater treatment BMPs
 - Requirements for long-term operation and maintenance of stormwater
 - Requirements for the submission of as-built plans



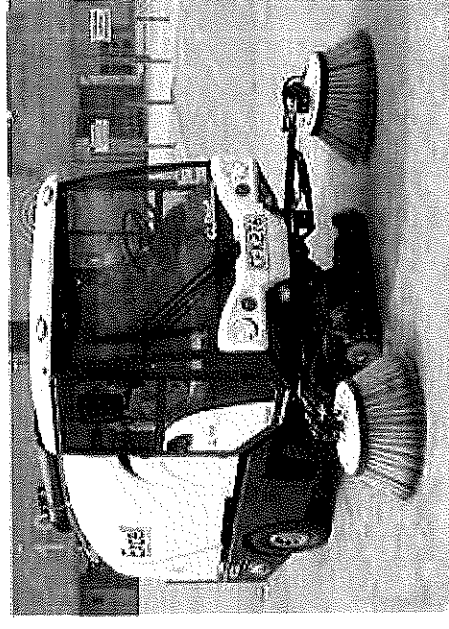
This Photo by Unknown Author is licensed under [CC BY-SA](#)

6. MCM 6: Good Housekeeping and Pollution Prevention for Permittee Owned Operations

Implement good housekeeping practices in municipal operation such as vehicle maintenance, open space, buildings and infrastructure. The permit requires at least annual street sweeping and optimization of catch basin cleaning with the goal of preventing or reducing pollutant runoff and protecting water quality

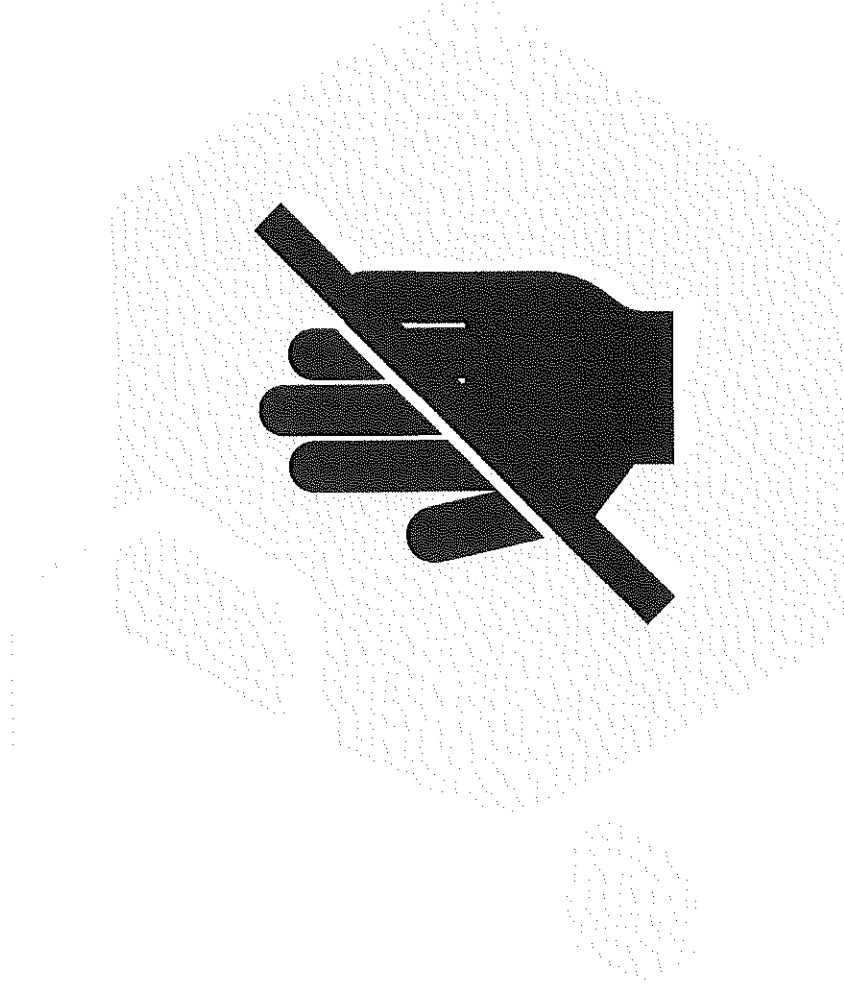
Requirements

- O&M Procedures
- Catch Basin Cleaning
- Street Sweeping
- SWPPP (Storm Water Pollution Prevention Plan)



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IF YOU SEE AN ILLICIT
DISCHARGE, REPORT IT!



**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department:	DPW, Engineering Division	Priority #:	2
Project Title and Description:	Engineering Services for Sandwich Street Culvert Replacement	Total Project Cost:	\$342,000.00

Department/Division Head: James Downey, Acting Town Engineer

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>	\$312,000.00		FY26	\$3,845,000.00	
<i>Labor and Materials</i>			FY27		
<i>Administration</i>			FY28		
<i>Land Acquisition</i>			FY29		
<i>Equipment</i>			FY30		
<i>Other</i>	\$30,000.00				
<i>Contingency</i>					
Total Capital	\$342,000.00				

Project Justification and Objective: The existing corrugated arch metal pipe culvert under Sandwich Street (Route 3A) by Nook Road, is in poor shape and requires replacement and widening for hydraulic capacity. The upstream side of Sandwich Street requires channel realignment and during construction one lane must be kept open on Sandwich Street, this will make the construction slow and time consuming compounded with all the underground and overhead utilities within the project area.

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.

Preconstruction Design	\$ 312,000.00
Direct Expenses	\$ 30,000.00
Engineering Services Total	\$ 342,000.00

Estimated Construction Costs	\$ 3,610,000.00
Construction Admin & Project Representation	\$ 235,000.00
Future Capital Request Total	\$ 3,845,000.00



October 26, 2023

Mr. James Downey
Acting Town Engineer
Town of Plymouth
26 Court Street
Plymouth, MA 02360

SLR Project No.: 141.11982.P0025

**RE: Engineering Services for Sandwich Street over Brook Culvert Replacement
Plymouth, Massachusetts**

Dear James

SLR International Corporation (SLR) is pleased to provide you with this scope of services and fee proposal to provide design-phase engineering services for the Sandwich Street over Brook Culvert Replacement project.

SLR visited the site to perform a visual inspection of the existing culvert. The existing corrugated arch metal pipe culvert over Brook is in poor shape and requires replacement and widening for hydraulic capacity. The upstream side of Sandwich Street requires channel realignment. The existing culvert runs below a driveway along Nook Road which seems like an add on.

During construction one lane must be kept open on Sandwich Street, which will make the construction slow and time consuming with all the underground and overhead utilities within the project area.

Our proposal is predicated on the following assumptions:

- The Town will be conducting its own technical plan reviews.
- The design work shall begin in 2024.
- Milestone submissions shall include two hard copies of the submission (one full-size and one half-size copy of the plan set) to the Town for review along with PDF files; final printing for bidding is excluded as we would encourage the Town to make bid documents available to prospective bidders electronically.
- The proposed bridge structures will have a span less than 20 feet.

Scope of Work

Task 1.0 – Kickoff and Coordination Meetings

Throughout the course of this project, the project manager will coordinate project tasks; perform project-related managerial tasks; receive and execute directions from the Town and project partners; schedule work; maintain project records, technical data, drawings, reports, and financial records; and coordinate with the Town and project partners. The following specific tasks are proposed:

- 3.4 Geotechnical Engineering – Conduct a subsurface exploration program at the bridge crossings to establish subgrade conditions. The principal objective is to provide soils data necessary for bridge foundation, including soil type and consistency, frost susceptibility characteristics, and ledge and/or groundwater depth. The program will include the following:
- 3.4.1 A boring program to undertake four Type B drilled borings at the bridge.
 - 3.4.2 Coordination of the services of the boring contractor to execute the program.
 - 3.4.3 Collection of continuous split-spoon samples from the borings, extending to bedrock or firm grade 3 times the depth below the bottom of footing.
 - 3.4.4 Laboratory testing of the samples for grain size in order to establish frost susceptibility.
 - 3.4.5 If bedrock is encountered, coring to a depth of 10 feet and establishing rock quality designation (RQD)
 - 3.4.6 Geotechnical analyses and recommendations for bridge support and subgrade drainage
 - 3.4.7 Preparation of a geotechnical report summarizing the results of the subsurface exploration, lab testing, and design recommendations for bridge per Massachusetts Department of Transportation (MassDOT) format and criteria
- 3.5 Contact local utility providers and request available mapping of existing facilities in the vicinity of the structures. Utilities will be depicted on the survey base map based on best available information.
- 3.6 Sensitive Species Review – A review of the Massachusetts Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program (NHESP) mapping indicates that the project site is not located within mapped Estimated and Priority Habitat for state-listed species. This mapping is updated annually, and SLR will review the mapping during the permitting process to reconfirm our initial findings. This scope of services assumes that the proposed project will not require any Massachusetts Endangered Species Act (MESA) filings and will have no impact to listed species or their habitat. If this is not the case and additional level of effort is required (e.g., MESA applications, surveys, mitigation), an amendment will be provided for these services.
- 3.7 Sensitive Historical/Archaeological Resources (Section 106) – As the project will require state and federal permits, coordination with the Massachusetts Historical Commission (MHC) and the Tribal Historic Preservation Officer (THPO) will be undertaken to determine potential project impacts to sensitive historical or archaeological sites. A Project Notification Form (PNF) will be submitted to the MHC along with the required accompanying materials, and notification letters will be submitted to the THPOs. It is assumed that each entity will issue a finding of no significant impact to historical/archaeological resources and that no additional coordination, surveys, or mitigation will be required. If review by any of these entities determines that an additional level of effort is required, an amendment will be provided for these services.



Task 5.0 – Conceptual Design

Under this task, existing and new data will be summarized, and conceptual alternatives will be developed for the bridge replacement.

- 5.1 Prepare a Bridge Type Study memorandum that will evaluate two cost-effective bridge structure alternatives for the bridge, with options for parapets and railing systems.
 - 5.1.1 Prepare a brief memorandum summarizing the project alternatives, impacts, and costs. Embedded within the report will be a structure type study evaluating the design alternatives. The memorandum shall include the following:
 - 5.1.1.1 Schematic plan, elevation, and typical section for each alternative, including railing and parapet treatments
 - 5.1.1.2 Construction cost opinions for each alternative studied
 - 5.1.1.3 Summary of project requirements and impacts for each alternative to address construction cost, constructability, impacts to utilities/necessary relocations, ROW needs, maintenance requirements, regulatory permit requirements, staged construction, and public concerns
 - 5.1.1.4 Recommendation for a preferred alternative
- 5.2 **Recommendations** – Recommend a preferred alternative based on considerations of existing conditions, hydraulic assessment, construction feasibility, benefits and impacts, and input from project stakeholders.
- 5.3 Submit a memorandum to the Town for review and comment. Meet with Town staff to discuss the report and recommendations and solicit design direction.

Task 6.0 – Preliminary Design

- 6.1 Prepare preliminary design plans of the preferred alternative to approximate 60% completion, including bridge replacement and roadway, channel work, area regrading, and landscaping. The plans will depict the site location; plan view of existing conditions showing elevations, physical features, and the extents of regulated areas (i.e., onsite wetlands, ordinary high water, etc.); plan view of proposed conditions in areas to be altered; preliminary planting plan; profile of proposed conditions in the channel; section views of the channel; and typical details. The bridge design will include preliminary horizontal and vertical roadway geometry, storm drainage improvements, utility relocations, and treatment of properties along Sandwich Street and Nook Road. A typical roadway cross section and sections at critical locations will be provided. SLR will evaluate project interface with existing site facilities and operations and conformance to Town, MassDOT, and American Association of State Highway and Transportation Officials guidelines. Develop preliminary design plans to include the following:
 - 6.1.1 Title sheet
 - 6.1.2 Beginning and end of project and project limit lines
 - 6.1.3 Existing conditions, including titles of adjacent roadways and watercourses; location of utilities, drainage facilities, and associated appurtenances; designated wetlands; and property lines and related information compiled from existing maps and records
 - 6.1.4 Plan view and longitudinal profile of existing channel and crossings in the project area



history research will be required under this scope of work. This scope of work also assumes that no public hearing will be requested by the municipality or MA DEP.

- Section 404 Permit – USACE – Prepare and submit a Self-Verification Notification Form General Permit No. 10 Linear Transportation Projects and Stream Crossings. For this permit application, the design plan format will be modified as required to meet USACE plan submittal guidelines.

Filing fees and local advertising fee will be required for multiple permit applications, and these fees will be billed directly to the Town. If during design development it is determined by the regulatory agencies that additional permitting other than listed above is required these permit applications will be prepared under a separate contract amendment.

This scope of services assumes that the contractor will prepare and submit a National Pollutant Discharge Elimination System Stormwater Pollution Prevention Plan, Construction Dewatering Permit, and any other construction-related permits that may be required.

- 7.2 Application Review – Provide application review assistance as necessary based on comments and questions from the regulatory review agencies.

Task 8.0 – Final Design

- 8.1 Based upon the approved Preliminary Design and agreed revisions, incorporate the review comments and prepare final design (90% Completion) plans and specifications to include the following:
- 8.1.1 Roadway plan and profile indicating drainage improvements and roadside barriers and utility plans indicating municipal relocation, construction details, and details for treatment of affected properties within the work areas. Incorporate utility relocation plans prepared by private utilities.
 - 8.1.2 Signage plans
 - 8.1.3 Maintenance and protection of traffic plans
 - 8.1.4 Sedimentation and erosion control plans
 - 8.1.5 Structure plans for the bridge, including structure layout plan, elevation, typical cross section, foundation plans, and structure details
 - 8.1.6 Boring logs
 - 8.1.7 Details for stream bank/channel restoration and scour countermeasure
 - 8.1.8 Title Sheet and Miscellaneous Details
- 8.2 Perform structural calculations.
- 8.3 Prepare technical specifications suitable for public bidding purposes. The Town will provide front end.
- 8.4 Prepare final quantity estimate, cost opinion, and calendar day chart.
- 8.5 Submit 90% Completion plans, special provisions, estimate, and calculations for review by the Town.
- 8.6 Meet with the Town to discuss the final design. Respond to review comments in writing.



- 11.4 Respond to the selected contractor's questions concerning clarification of the contract drawings and specifications. Issue clarifications, interpretations, and field orders to the contractor.
- 11.5 Review special inspection and test results for conformance with the contract documents.
- 11.6 Render opinions and interpret the Contract Documents relative to disagreements between the Town and the contractor.
- 11.7 Review contractor's application for payment for conformity to work actually completed and determine if the quality of work is in accordance with the Contract Documents.
- 11.8 Record changes made during the period of construction, as furnished and recorded by the general contractor, and provide one set of reproducible prints to the client, which will reflect such changes.
- 11.9 Receive, review, and transmit to the Town inspection and test results, marked-up shop drawings, and other materials that are required to be collected by the contractor prior to final payment.
- 11.10 Prepare a punch list of required work items. Review the work when notified that the punch list items have been completed.

Task 12.0 – Project Representation

The consultant team will provide full-time project representative services during the construction of this project. The project representative will be present at the project site on a full-time basis (anticipated at approximately 40 hours per week) while active construction is in progress in order to provide guidance and determine whether there appear to be any defects or deficiencies in the construction work or materials. Specifically, the project representative will provide the following services:

- 12.1 Observe progress and review construction work for general compliance with the Contract Documents.
- 12.2 Record any observed deviations from the materials specified and the methods of construction authorized. Recommend rejection of defective work.
- 12.3 Report any health or safety concerns or observed violations of Occupational Safety and Health Administration regulations and notify the Town immediately if any are observed during site visits.
- 12.4 Accompany inspectors of regulatory agencies having jurisdiction and report results to the Town.
- 12.5 Verify that required tests are conducted and maintain a record thereof.
- 12.6 Verbally report observations at progress meetings as required.
- 12.7 Prepare special reports and recommendations during construction whenever the project representative believes that the contractor's work is unsatisfactory, faulty, defective, or does not conform to the Contract Documents.
- 12.8 After inspection by the project representative and the Town, and if appropriate, issue a Certificate of Substantial Completion in a form suitable to the Town.
- 12.9 Conduct a final review of the project and prepare a punch list of items to be corrected and/or completed by the contractor prior to acceptance by the Town. The project representative will conduct additional site visits as necessary to review and update the



Direct expenses will be invoiced at cost with no markup or based on the attached rate schedule. Any such reimbursable or out-of-pocket costs shall be substantiated by receipt, vendor invoice, or other form of supporting detail. We recommend the Town budget the following amount for direct expenses:

13.0 Direct Expenses.....	<u>\$30,000</u>
ESTIMATED PROJECT TOTAL	<u>\$577,000</u>

Standard Terms and Conditions

This proposal is subject to our Standard Terms and Conditions, which are attached hereto and incorporated herein.

Exclusions and Limitations

In submitting this proposal, we make no representation that the project will receive all necessary regulatory approvals.

The following work items are not included in this scope of work at this time:

1. Payment of permit application fees
2. Historic and/or archaeological surveys
3. Hazardous waste testing, studies, or abatement plans
4. Boundary or ROW survey and easement maps
5. Utility design, other than water and drainage
6. Traffic studies or preparation of traffic control plans
7. Natural Diversity Data Base studies

Should any of the above items or any additional services be required, they can be provided under supplemental agreement.

Note that on the basis of site observations performed SLR will keep the Town informed as to the progress and quality of the work and shall endeavor to guard the Town against defects and deficiencies in the work and confirm that the work is proceeding in accordance with the contract documents. It is understood that SLR shall not have control over or charge of and shall not be responsible for construction means, methods, techniques, sequences, or procedures or have safety precautions and programs in connection with the work since these are the contractor's responsibility.



OPINION OF PROBABLE CONSTRUCTION COSTS
Based Upon Field Visit
Replacement Of Sandwich Strret Culvert Over Unnamed Brook
District 5
Plymouth, Massachusetts
#11982.00025
October 26, 2023

Item No	Description	Unit of Measure	Unit Price	Total Quantity	Total
1	SITE PREPARATION	LUMP SUM	\$83,000.00	1	\$83,000.00
2	TRAFFIC MANAGEMENT	LUMP SUM	\$247,000.00	1	\$247,000.00
3	DEMOLITION AND REMOVALS	LUMP SUM	\$165,000.00	1	\$165,000.00
4	SITE IMPROVEMENTS AND RESTORATION	LUMP SUM	\$140,000.00	1	\$140,000.00
5	CHANNEL AND BANK SLOPE TREATMENTS	LUMP SUM	\$66,000.00	1	\$66,000.00
6	CHANNEL BED MATERIAL	TON	\$250.00	85	\$21,250.00
115.1	DEMOLITION OF EXISTING BRIDGE	LUMP SUM	\$ 25,000.00	1	\$25,000.00
120	EARTH EXCAVATION	LUMP SUM	\$ 25,000.00	1	\$25,000.00
140	BRIDGE EXCAVATION	CUBIC YARD	\$ 67.00	400	\$26,800.00
141.1	TEST PIT FOR EXPLORATION	CUBIC YARD	\$ 250.00	10	\$2,500.00
151	GRAVEL BORROW	CUBIC YARD	\$ 63.00	100	\$6,300.00
151.01	GRAVEL BORROW - TYPE C	CUBIC YARD	\$ 65.00	100	\$6,500.00
151.2	GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES	CUBIC YARD	\$ 65.00	200	\$13,000.00
156.1	CRUSHED STONE FOR BRIDGE FOUNDATIONS	TON	\$ 65.00	105	\$6,825.00
170	FINE GRADING AND COMPACTING	SQUARE YARD	\$ 20.00	1100	\$22,000.00
201.5	CATCH BASIN - MUNICIPAL STANDARD w/ 4' SUMP	EACH	\$ 5,500.00	2	\$11,000.00
222.3	FRAME AND GRATE (OR COVER) MUNICIPAL STANDARD	EACH	\$ 1,250.00	2	\$2,500.00
241.15	15 INCH REINFORCED CONCRETE PIPE	LINEAR FEET	\$ 200.00	50	\$10,000.00
402.	DENSE GRADED CRUSHED STONE FOR SUB-BASE	CUBIC YARD	\$ 90.00	105	\$9,450.00
460.23	SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5)	TON	\$ 230.00	200	\$46,000.00
460.42	SUPERPAVE BASE COURSE - 37.5 (SBC - 37.5)	TON	\$ 300.00	200	\$60,000.00
482.3	SAWING ASPHALT PAVEMENT	FOOT	\$ 10.00	60	\$600.00

OPINION OF PROBABLE CONSTRUCTION COSTS
Based Upon Field Visit
Replacement Of Sandwich Strret Culvert Over Unnamed Brook
District 5
Plymouth, Massachusetts
#11982.00025
October 26, 2023

Item No	Description	Unit of Measure	Unit Price	Total Quantity	Total
570.1	HOT MIX ASPHALT CURB - TYPE 1	FOOT	\$ 25.00	50	\$1,250.00
701.	CEMENT CONCRETE SIDEWALK	SQUARE YARD	\$ 130.00	60	\$7,800.00
701.1	CEMENT CONCRETE SIDEWALK AT DRIVEWAYS	SQUARE YARD	\$ 140.00	10	\$1,400.00
702	HOT MIX ASPHALT SIDEWALK OR DRIVEWAY	TON	\$ 385.00	10	\$3,850.00
748.	MOBILIZATION	LUMP SUM	\$165,000.00	1	\$165,000.00
	TEMPORARY EARTH RETAINING SYSTEM	LUMP SUM	\$ 150,000.00	1	\$150,000.00
	RIPRAP	CUBIC YARD	\$ 100.00	50	\$5,000.00
991.1	CONTROL OF WATER	LUMP SUM	\$ 100,000.00	1	\$100,000.00
995.011	CULVERT STRUCTURE	LUMP SUM	\$900,000.00	1	\$900,000.00
1000.1	PERMANENT GAS MAIN RELOCATION	LUMP SUM	\$ 40,000.00	1	\$40,000.00
1000.2	TEMPORARY GAS MAIN RELOCATION	LUMP SUM	\$ 25,000.00	1	\$25,000.00
1000.1	PERMANENT SEWER MAIN RELOCATION	LUMP SUM	\$ 15,000.00	1	\$15,000.00
1000.2	TEMPORARY SEWER MAIN RELOCATION	LUMP SUM	\$ 35,000.00	1	\$35,000.00
1000.1	PERMANENT WATER MAIN RELOCATION	LUMP SUM	\$ 15,000.00	1	\$15,000.00
1000.2	TEMPORARY WATER MAIN RELOCATION	LUMP SUM	\$ 50,000.00	1	\$50,000.00
1000.2	Minor Items (10%)	LUMP SUM	\$165,000.00	1	\$165,000.00

OPINION OF PROBABLE CONSTRUCTION COSTS
Based Upon Field Visit
Replacement Of Sandwich Strret Culvert Over Unnamed Brook
District 5
Plymouth, Massachusetts
#11982.00025
October 26, 2023

Item No	Description	Unit of Measure	Unit Price	Total Quantity	Total
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PROJECT COST SUBTOTAL =	\$2,675,025.00
CONTINGENCIES 10% =	\$ 267,502.50
INCEDENTIALS 10% =	\$ 267,502.50
MARKET UNCERTAINTY (inflation) 15% =	\$ 401,253.75
TOTAL PROJECT COST (ROUNDED) =	\$3,610,000.00

Critical Culvert Structure C-041

Address: 171 Sandwich Street

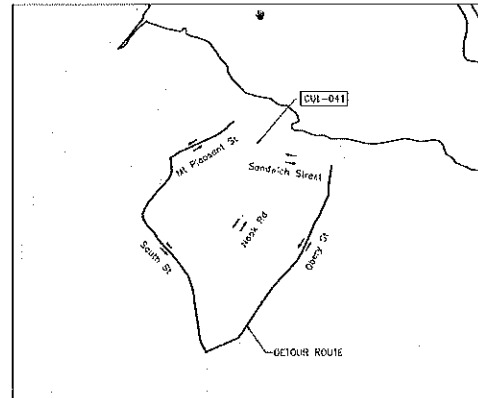
Length: ± 105'

Materials:

60" Elliptical Corrugated Metal Pipe, concrete headwall with stacked stone wingwall (inlet), mortared stone headwall (outlet)

Waterway:

Wellingsley Brook



Detour Route

Summary

Culvert C-041 carries an unnamed tributary parallel with Nook Road and under Sandwich Street (3A), through a 60-inch Elliptical Corrugated Metal Pipe. The inlet is located on private property and continues under the abutters driveway adjacent to the building before rung below Sandwich Street. According to stream stats, this crossing has a drainage area of 0.75 miles. Structure C-041 has an RPS score of 3 and is considered a Critical Culvert due to the pipe and inlet wingwall condition, and the high risk it poses to town via roadway undermining and traffic disruption, as well as abutting property damage if a failure would occur.



Existing Conditions

Inlet (Poor): The inlet is located on private property and was observed to be a 60-inch corrugated metal pipe. The pipe appeared to have been previously rehabilitated with a lining, and was separating from the headwall. A dry laid stone wing wall retaining the abutting property was noted to be in failing condition, with severe bank erosion and overturning stones. A drainage outlet was observed immediately up gradient of the inlet.

Outlet (Poor): The culvert's outlet was located below a 5' wide sidewalk running along Sandwich Street, with a chain-link fence at the top of the embankment. The headwall was noted to have cracking between the mortar and stones, and a drainage outlet adjacent to the culvert in the headwall. Evidence of a previous rehabilitation lining was also observed at the outlet.



Additional Notes, Recommendations, and Cost

Overhead wires, a water line and drainage structures were observed near the culvert. The estimated remaining service life for this culvert is 5 to 10 years, however it is recommended the inlet side embankment should be reinforced as soon as possible, as further erosion may damage the abutting property at 171 Sandwich Street. Ownership should also be confirmed for the inlet especially. TEC recommends a full culvert replacement with a 10' 3 sided box culvert, with engineering controls along the shoulder of both Sandwich Street and Nook Road for roadway runoff. The estimated 2023 construction cost of a full replacement is approximately \$2.2 to \$2.6 Million, depending on the results of the field survey, hydraulic study, and geotechnical investigations. This number is largely due to the impacts construction would have to both Sandwich Street and Nook Road, as well as the abutting property.





















**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: DPW, Engineering Division	Priority #:	3
Project Title and Description: Townwide Drainage Repairs	Total Project Cost:	\$500,000.00

Department/Division Head: James Downey, Acting Town Engineer

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>FY26</i>		
<i>Labor and Materials</i>	\$500,000.00		<i>FY27</i>	500,000.00	
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>	500,000.00	
<i>Equipment</i>			<i>FY30</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$500,000.00				

Project Justification and Objective: The Department of Public Works (DPW) receives calls on drainage issues across town on a regular basis, some of those complaints can be addressed with little capital funding and others require extensive work and larger amounts of money. We currently have a list of future projects that we would like to work towards completing. Out of those that have been identified, we are asking for capital funding in order to move forward with some of those improvements.

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

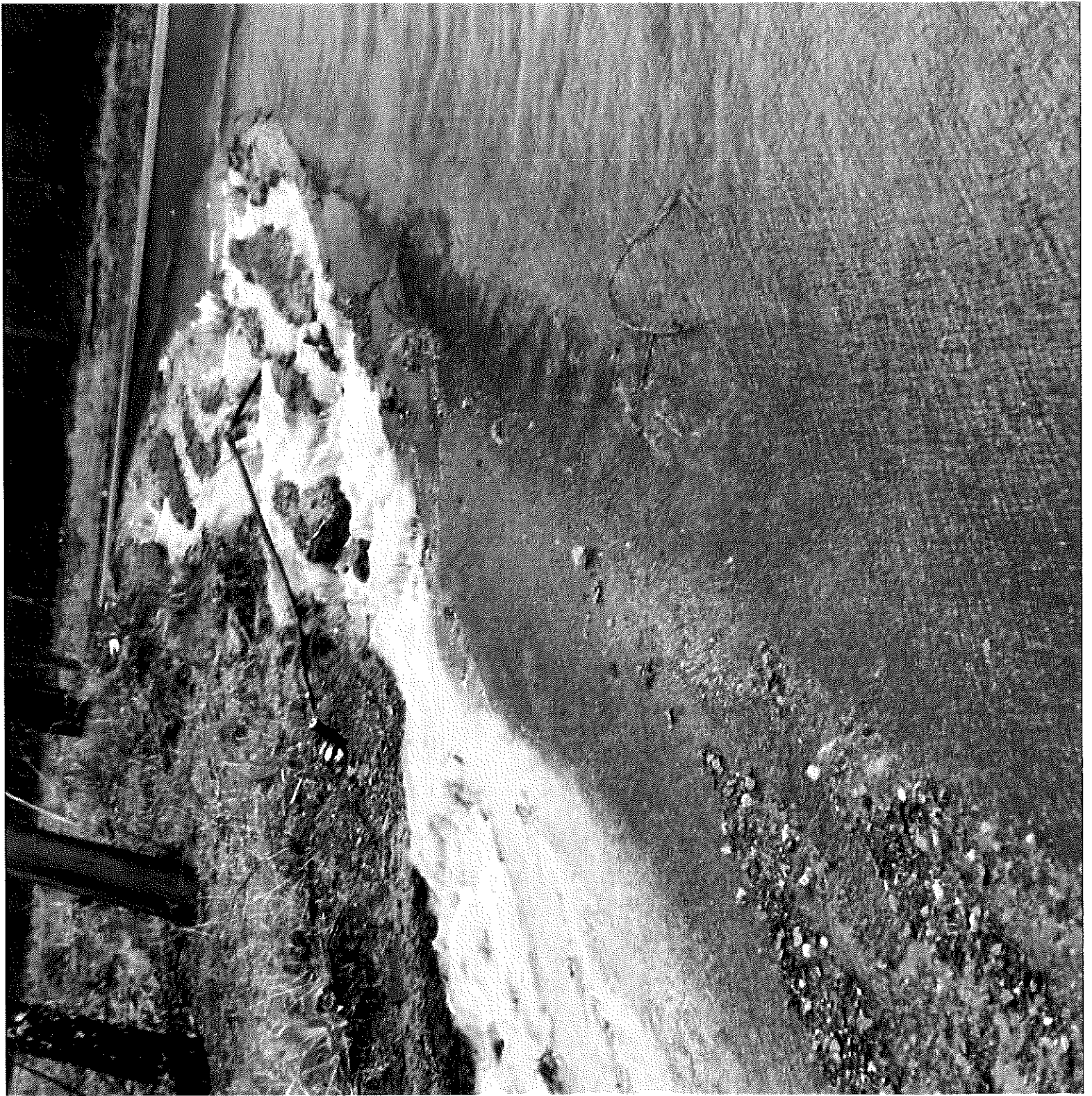
What is the expected lifespan of this new/replacement equipment: _____
Attach backup information, estimates, or justification to support this request.

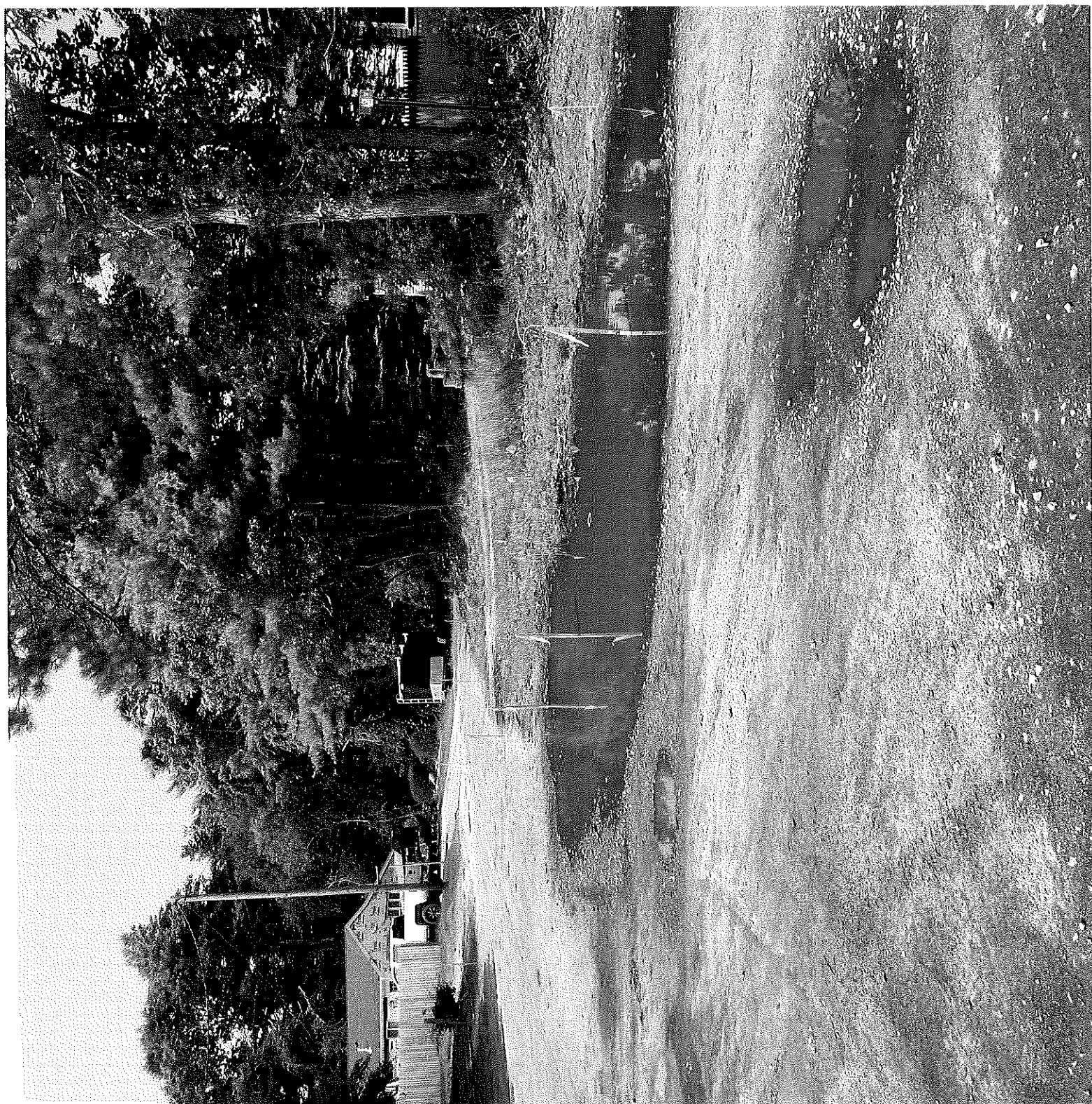
11/1/2023	PROJECT:	SURVEY:	PLANS:	ROAD STATUS:	PROJECT STATUS:	ESTIMATED COST:
1	PROVINCETOWN VIEW ROAD	COMPLETED	COMPLETED	PRIVATE	NOT STARTED	\$95,000
2	WORRALL ROAD #15	COMPLETED	STARTED - 90% DONE	PUBLIC	NOT STARTED	\$120,000
3	WORRALL ROAD #35	COMPLETED	STARTED - 60% DONE	PUBLIC	NOT STARTED	\$170,000
4	MILFORD STREET	COMPLETED	STARTED - 70% DONE	PUBLIC	NOT STARTED	\$195,000
5	CHANDLER STREET	COMPLETED	STARTED - 60% DONE	PUBLIC	NOT STARTED - DUG TEST PITS 8-2023 - NEED TO FINISH PLANS AT LOW POINT	\$330,000
6	HALFWAY POND ROAD - FROM BOURNE RD TO LONG POND	COMPLETED	COMPLETED	PUBLIC	NOT STARTED - NEED TO LOCATE A FEW MORE PRIVATE WELLS	\$322,000
7	OLD SCHOOL HOUSE ROAD	NOT STARTED	NOT STARTED	PRIVATE - NO EASEMENTS	STARTED - HIGHWAY TRIED TO JET ROD PIPE - SCHEDULING OUR CAMERA CREW TO COME & INSPECT	\$40,000
8	ALDEN STREET @ COLD SPRING SDCHOOL	COMPLETED	STARTED 75% DONE	PUBLIC	EX. INFILTRATION SYSTEM FAILED - REPLACE EX. SYSTEM	\$630,000
9	DUCK PLAIN ROAD	COMPLETED	STARTED - 60% DONE	PRIVATE	NOT STARTED	\$83,000
10	#502 BOURNE ROAD	COMPLETED	STARTED - 60% DONE	PUBLIC - USED & MAINTAINED	NOT STARTED	\$225,000
11	LIBERTY STREET @ PET CEMETARY	NOT STARTED	NOT STARTED	PUBLIC	NOT STARTED	\$74,000
12	OAR & LINE ROAD	COMPLETED	STARTED - 50% DONE	PUBLIC	CANNOT INFILTRATE DUE TO PRIVATE WELLS DIVERT WATER TO WATER QUALITY STRUCTURE PRIOR TO	\$100,000
13	SAMOSET STREET #45 TO #31	NOT COMPLETED	PRELIMINARY DESIGNS	PUBLIC	PIPE AT STANDISH HAS BE PLUGGED, REDUCING DISCHARGE TO EXISTING BROOK - EVALUATING SYSTEM,	\$1,700,000
14	FEDERAL FURNACE @ DIANE AVE	TBD	TBD	PUBLIC	NOT STARTED - EXISTING LEACHING SYSTEM FAILED? OR NEED TO BE CLEANED?	\$70,000
15	SAMOSET AVE	SURVEY STARTED	STARTING DESIGN	PUBLIC	NOT STARTED - NEED TO DIG SOME TEST PITS	\$250,000
16	HILL DALE ROAD	COMPLETED	COMPLETED	PUBLIC	NOT STARTED	\$20,000
17	PRESIDENTS LANE - DRAINAGE AT BEACON / BIRCHWOOD / FITZGERALD	NOT STARTED	NOT STARTED	PUBLIC	NOT STARTED	\$200,000
18	NICKS ROCK ROAD	NOT STARTED	NOT STARTED	PUBLIC	NOT STARTED	\$100,000
19	SANDWICH STREET - NO CURBING SIDEWALK ISSUES	NOT STARTED	NOT STARTED	PUBLIC	NOT STARTED	\$100,000
20	LITTLE SANDY POND ROAD	NOT STARTED	NOT STARTED	PRIVATE	NOT STARTED	\$250,000
21	LINCOLN STREET	TBD	TBD	PUBLIC	NOT STARTED	\$20,000
22	JACOBS LADDER	COMPLETED	STARTED	PRIVATE / PUBLIC ?	NOT STARTED - NEED TO DIG TEST PIT FOR SOILS	\$100,000
23	ELLISVILLE ROAD @ LOOKOUT POINT ROAD	COMPLETED	STARTED	PUBLIC	NOT STARTED	\$71,000
24	HALFWAY POND ROAD - FROM BOURNE RD TO WAREHAM RD	EVALUATED EX ROADWAY	PREPARED DRAINAGE ISSUE MAPS	PUBLIC / USED & MAINTAINED	CURRENTLY ON SCHEDULE TO BE SHIMMED, THEN EVALUATE DRAINAGE UPGRADES NEEDED	\$200,000
25	MANOMET AVE	NOT STARTED	NOT STARTED	PUBLIC	NOT STARTED	\$350,000
26	MONTGOMERY DRIVE	STAKED EASEMENTS - NO TOPO DONE	PRELIMINARY CALCS TO SEE HOW MANY PITS WILL BE NEEDED - NO PLANS DONE	PUBLIC	NOT STARTED	\$250,000
27	EDES STREET	TBD	TBD	PUBLIC?	PUTTING TOGETHER INFORMATION	\$60,000
28	HEDGE ROAD - CULVERT UNDER BUILDING	COMPLETED	COMPLETED - ENVIRONMENTAL PARTNERS	PUBLIC	NOT STARTED	\$1,000,000
29	TAYLOR AVE	OUTFALL SURVEY COMPLETED	STARTED	PUBLIC	NOT STARTED	\$921,000

30	#1 CAYUGA CIRCLE	COMPLETED	COMPLETED		PUBLIC	NOT STARTED	\$60,000
31	MARKET STREET	COMPLETED	NOT STARTED		PUBLIC	NOT STARTED	\$75,000
32	#76 JORDAN ROAD	TBD	TBD		PUBLIC	NOT STARTED	\$50,000
33	ROBBINS HILL ROAD	NOT STARTED	NOT STARTED		PUBLIC	REMEDIAL SYSTEM AND CLEAN - POSSIBLE REMOVAL OF BUBBLER CATCH BASIN IN YARD	\$100,000
34	BLACK CAT ROAD	EVALUATED EX ROADWAY	PREPARED DRAINAGE ISSUE MAPS		PUBLIC	CURRENTLY ON SCHEDULE TO BE SHIMMED, THEN EVALUATE DRAINAGE UPGRADES NEEDED	\$150,000
35	#2 COD ROAD	NOT STARTED	NOT STARTED		PRIVATE	ADD BERMS & DRIVEWAY APRON	\$15,000
TOTAL							\$8,446,000





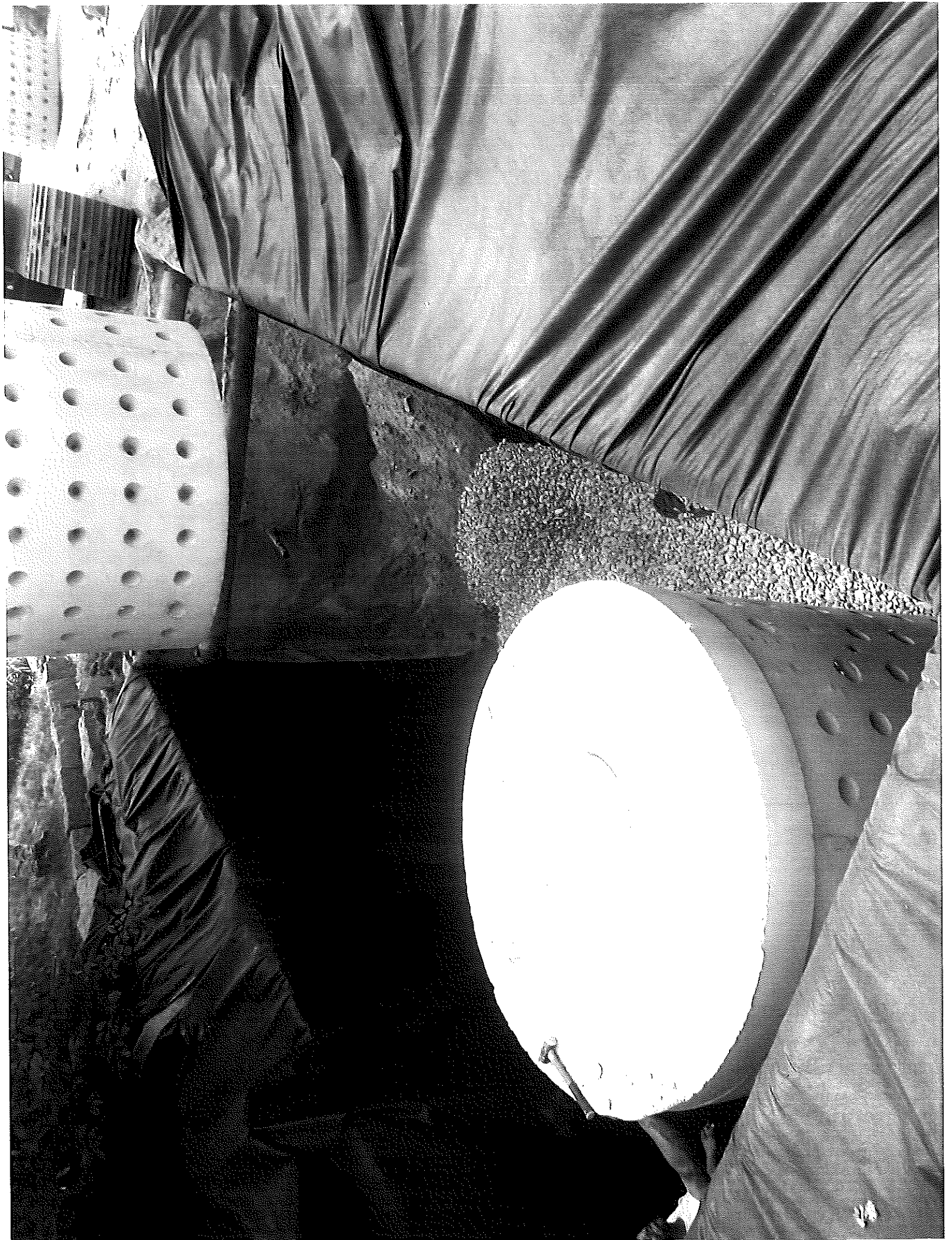


















A GUIDE FOR THE DESIGN OF STORM DRAINAGE FACILITIES IN THE TOWN OF PLYMOUTH, MASSACHUSETTS

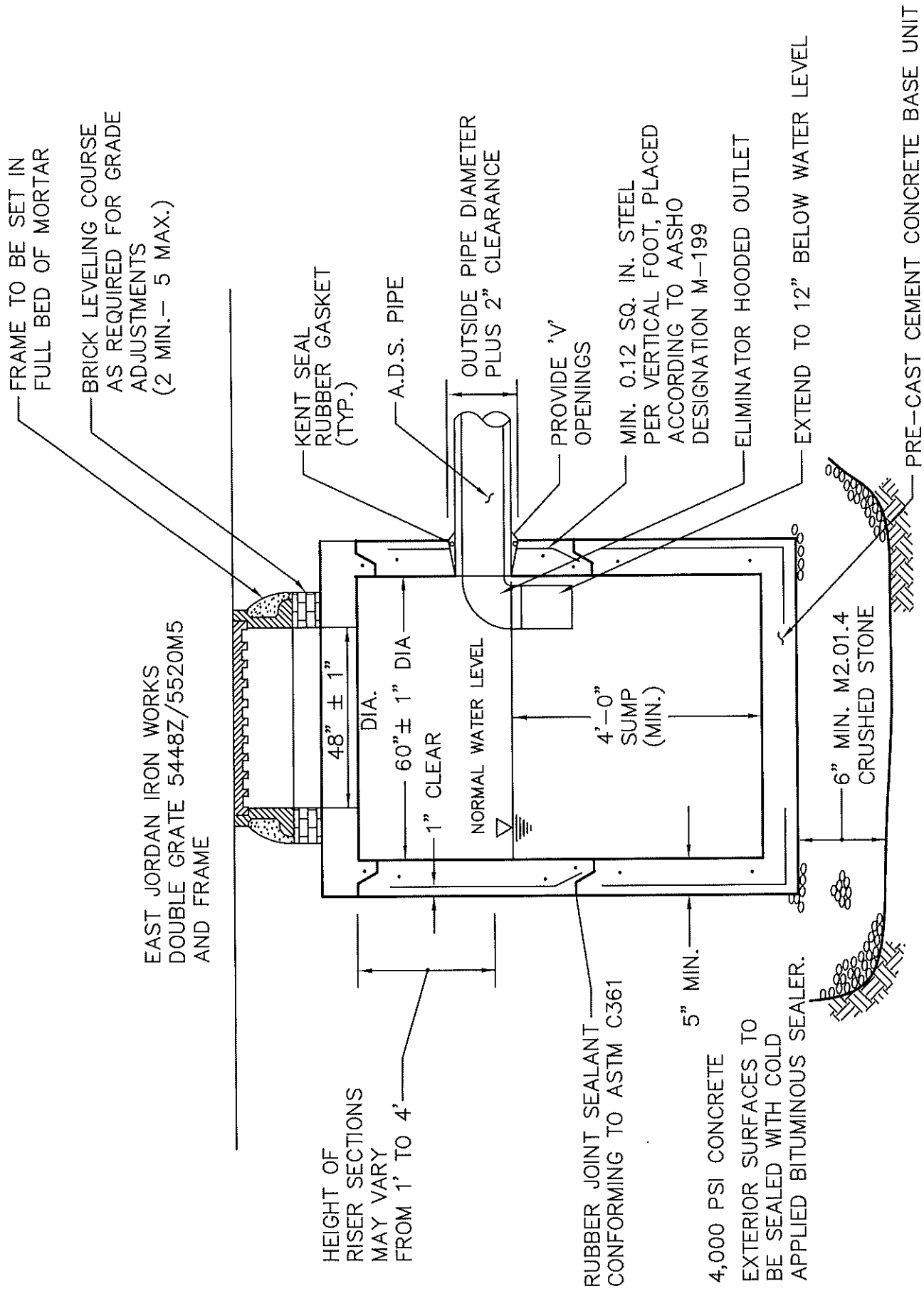
**INCLUDING
LOW IMPACT DEVELOPMENT (LID)
STANDARDS**

**AS AMENDED THROUGH
June 2021**

**PREPARED WITH SUPPORT FROM THE COMMONWEALTH OF
MASSACHUSETTS EXECUTIVE OFFICE OF ENERGY AND
ENVIRONMENTAL AFFAIRS, SMART GROWTH GRANT FUNDING**

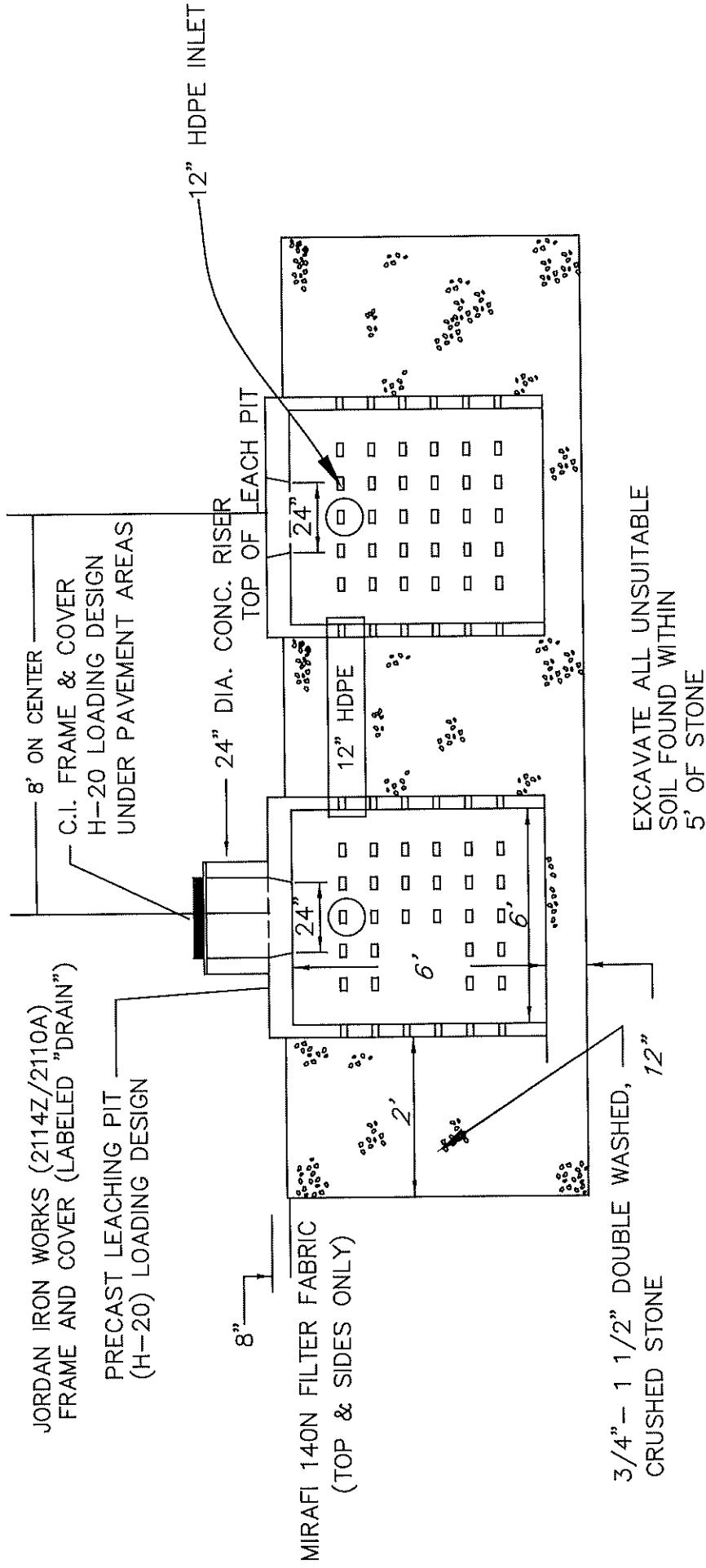
AND

**IN COOPERATION WITH COMPREHENSIVE ENVIRONMENTAL
INCORPORATED OF MARLBOROUGH, MASSACHUSETTS**



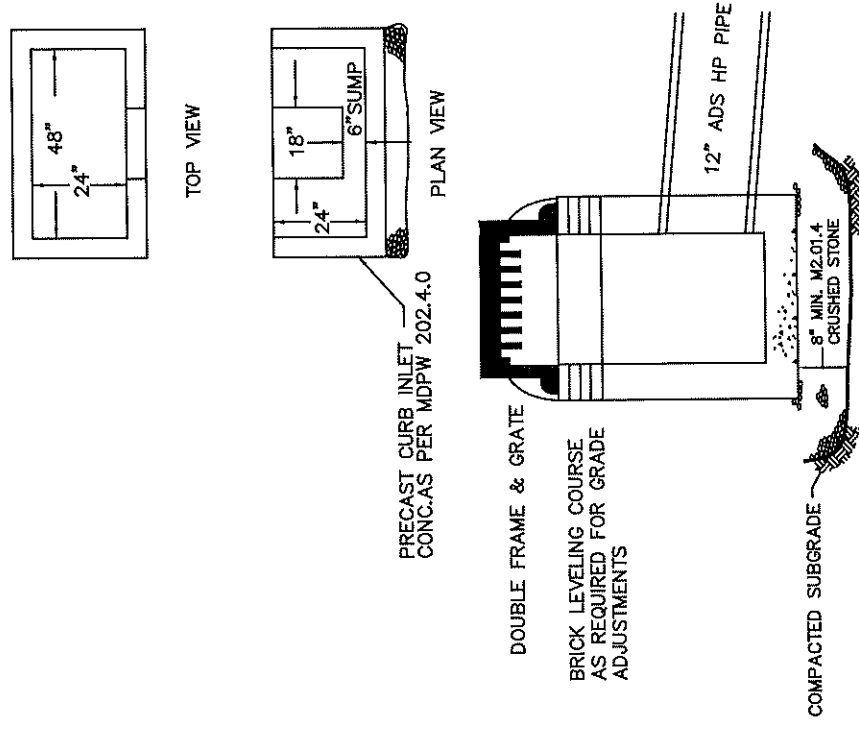
DOUBLE GRATE PRE-CAST CONCRETE CATCH BASIN

NOT TO SCALE

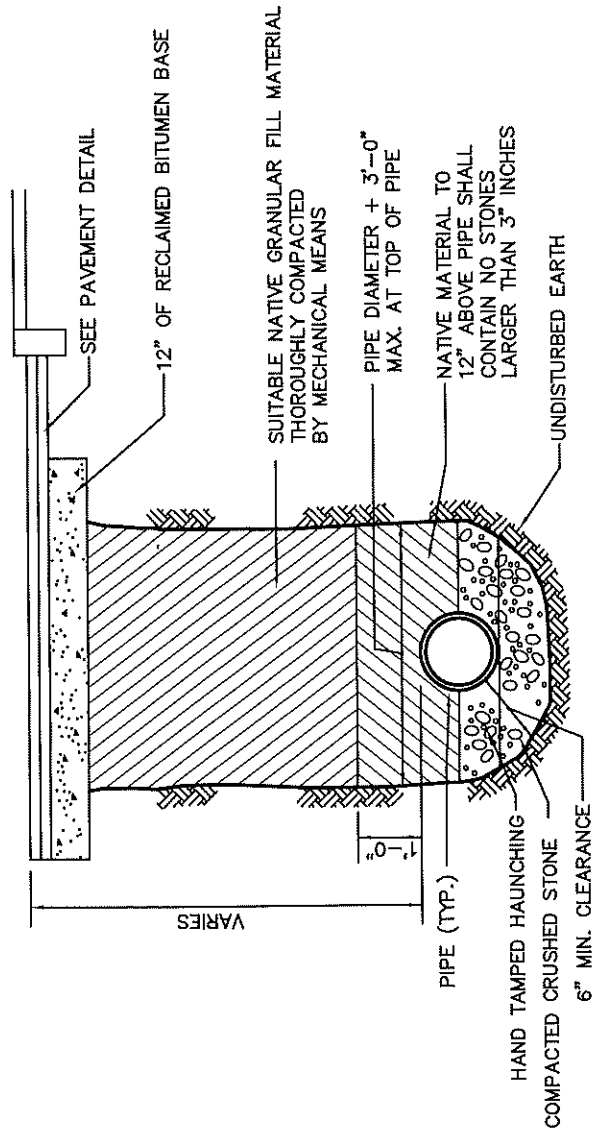


DRAINAGE LEACHING SYSTEM DETAIL

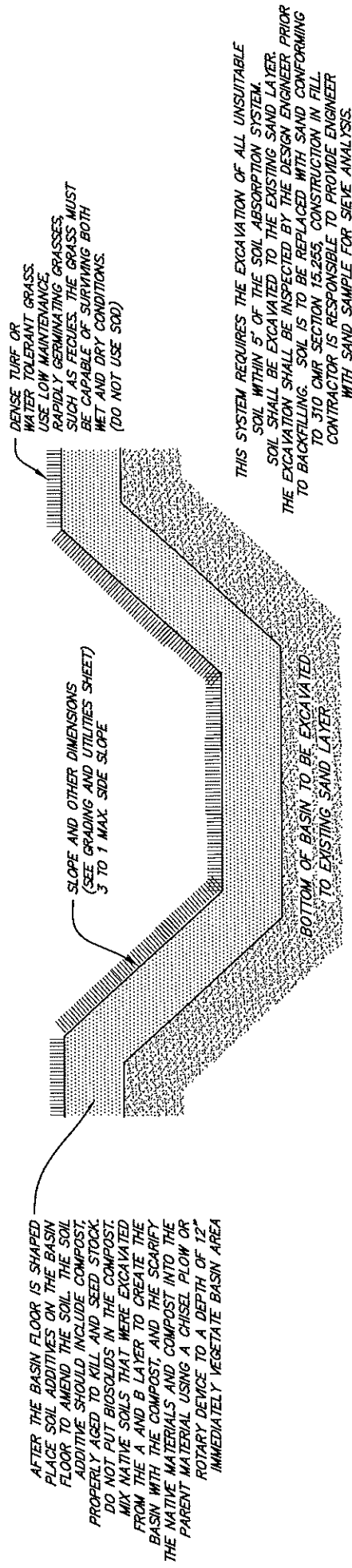
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TYPICAL DOUBLE GRATE DROP BOX

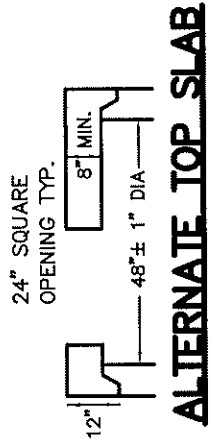


TYPICAL DRAIN PIPE DETAIL
NOT TO SCALE

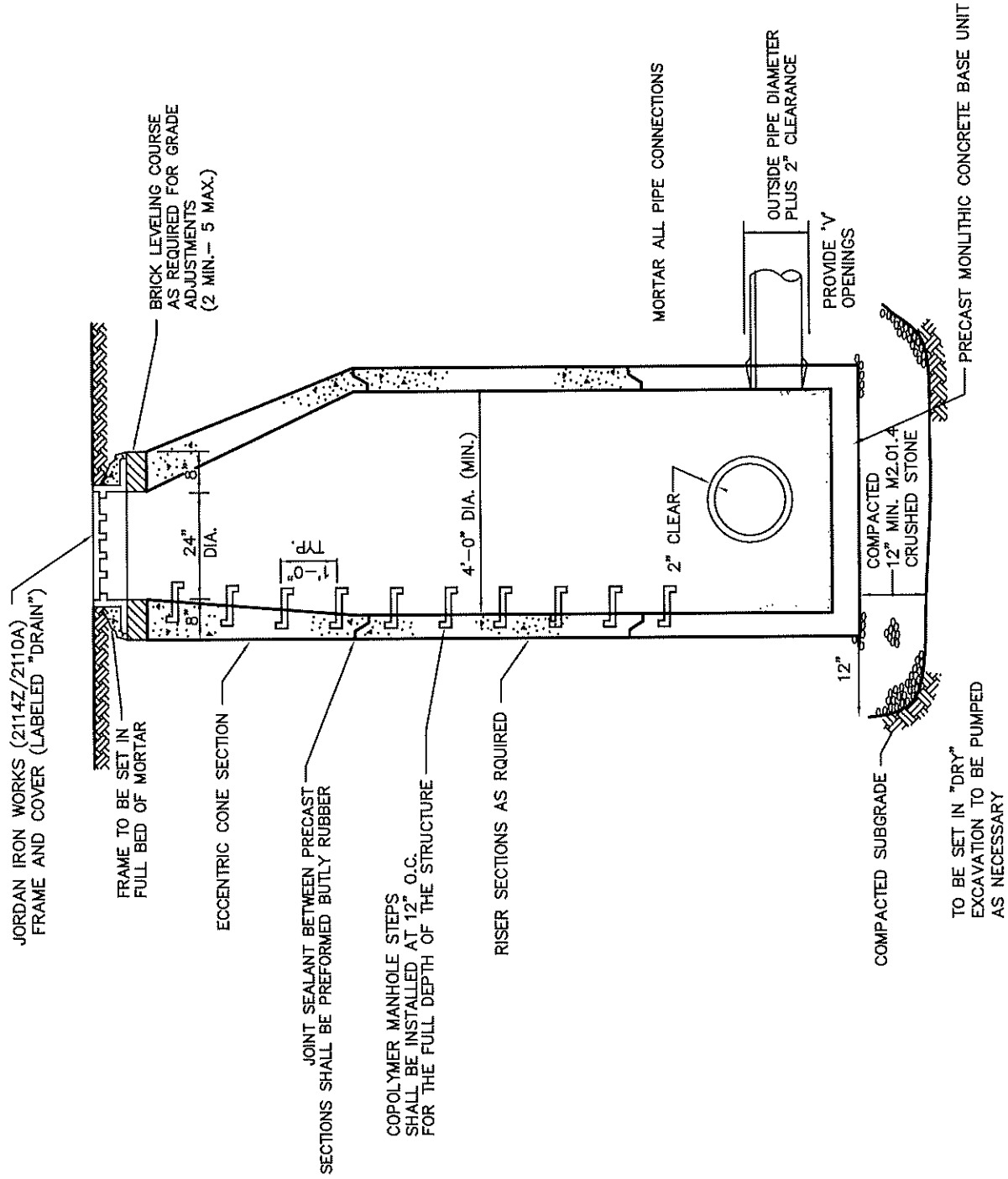


INFILTRATION BASIN CROSS-SECTION

NOT TO SCALE



ALTERNATE TOP SLAB



PRECAST CONCRETE DRAIN MANHOLE

NOT TO SCALE

A Guide for the Design of Storm Drainage Facilities in the Town of Plymouth, Massachusetts

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Appendices

Appendix A Pre-Application Cover Sheet

Appendix B Closed System Detention Worksheet

1.0 Introduction

Plymouth has developed this update to *A Guide for the Design of Storm Drainage Facilities in the Town of Plymouth, Massachusetts* (the “Stormwater Management Manual”) to provide design guidelines and criteria that will help implement better drainage design and Low Impact Development in Plymouth. The original document was created in 1983, and many new stormwater management techniques have been developed since that time which can enhance water quality both in the ground and at the surface. These updates have been coordinated through the Department of Public Works Engineering and Environmental Management Divisions, Health Department, Conservation Commission and Planning Departments to facilitate a coordinated and comprehensive approach to stormwater design.

This manual is not intended to provide detailed design guidelines for every BMP imaginable, as this information can be found within numerous other sources. Instead, this manual lays out design criteria that establish a foundation for good design, promotes consistent submittals, and provides references to other sources for more detailed information. Nothing in this document relieves the designer of the responsibility to exercise professional judgment, prudent stormwater design principles, and accurate assessments of the existing condition. Included within this manual are:

Section 2. Submittal Requirements – This section outlines submittal requirements for a pre-application and application submittal, including a Stormwater Management Plan and an Operation and Maintenance Strategy. The pre-application submittal was created to encourage discussions with the Town throughout the design process to better direct the use of LID on developments.

Section 3. Design Performance Criteria – This section outlines the stormwater design criteria that must be met for regulated development and redevelopment projects.

Section 4. Closed System Design Criteria – This section outlines design criteria that must be met for closed drainage systems.

Section 5. Stormwater Best Management Practices – This section includes a BMP selection matrix that identifies the applicability of specific BMPs to various site conditions, such as soils and high groundwater, as well as their applicable uses (e.g., peak control, recharge, water quality control, etc.). The matrix also includes as available typical pollutant removal rates for total suspended solids (TSS), total nitrogen, total phosphorus and bacteria, to aid in the selection of BMPs for discharges to waters with listed impairments for these pollutants. Setbacks are also provided for certain BMPs. References for further design information are provided for each of the BMPs listed.

In addition to the BMP selection matrix, Section 5 includes a table of specific design considerations for certain BMPs. These design considerations highlight key design components, where they may differ from the listed references. Also included is a table outlining Plymouth's preferences for BMP design and selection.

Massachusetts has recently promulgated regulations that include Stormwater Management Standards (formerly the Massachusetts Stormwater Policy), through amendments to 310 CMR 10.00: Wetlands Protection Regulations and 314 CMR 9.00: 401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters Within the Commonwealth. Recognizing that the Massachusetts Stormwater Management Standards shall be met for all projects within the jurisdiction of these regulations, and that the Massachusetts Stormwater Handbook, which includes additional guidance to these regulations, may change over time, all stormwater management designs must meet the design criteria or standards in the Massachusetts Wetland Protection Regulations and 401 Water Quality Certification Regulations or within this manual, whichever is more stringent in the protection of the town's environmental and infrastructure resources and as authorized through any permitting agencies under whose purview the project falls.

The Town of Plymouth will not implement the proposed requirement for Aggregation 314 CMR 21, at the local level should they be adopted at the state level.

2.0 Submittal Requirements

Projects involving development of new land uses and alteration or redevelopment of existing land uses must meet storm water management requirements and are subject to review under various bylaws, rules, and regulations in the Town of Plymouth.

The Town in each case may request such additional information as is necessary to enable determination of whether the proposed land disturbance activity will protect water resources and meet the objectives of the applicable regulations.

Any uses not involving land disturbance and individual Single-Family, Two-Family and 3-Family projects shall be exempt from Submittal Requirements (Section 2.0).

2.1 Pre-Application Submittal Requirements

Plymouth requires the use of Low Impact Development (LID) techniques in site design. This requires a multi-step process that begins with site planning and layout. To standardize the information provided for review, the Town has developed the following submittal policy for applicants who will be requesting a Zoning Permit. The Town's review of this pre-submittal application in no way changes the applicant's sole responsibility for the successful design of stormwater management components as well as any other aspect for the site.

The Pre-Application review is a key factor in the process of LID design, and is intended to create a working dialogue and understanding with the Town and the applicant regarding the goals of the stormwater design. Unlike conventional development and stormwater controls, an LID approach to design begins with an assessment of environmental and hydrologic conditions on the site and how to best work around these. The upfront planning for the site is as critical as the ultimate stormwater controls chosen for the site. As such, Plymouth requires a pre-application submittal for all projects incorporating LID. Any uses not involving land disturbance and individual Single-Family, Two-Family and 3-Family projects shall be exempt from Submittal Requirements (Section 2.0).

Throughout the pre-submittal process, the comments and information provided by the Town with respect to the site and the stormwater design are advisory in nature. The applicant is solely responsible for the successful design of the stormwater management systems for the site.

The objective is to:

- Develop a site plan that reflects natural hydrology.
- Minimize impervious surfaces.
- Treat stormwater in numerous small, decentralized structures.
- Use natural topography for drainageways and storage areas.

- Preserve portions of the site in undisturbed, natural conditions.
- Lengthen travel paths to increase time of concentration and attenuate peak rates.
- Advise the designer and applicant of the Town's goals with respect to stormwater management at the site, and, to the extent practical, of any known concerns or issues regarding stormwater management at the subject property.
- Advise the designer and applicant of anticipated constraints affecting the Application Submittal Requirements (Section 2.2) or of additional information needed in the Application Submittal Requirements at the time of filing.

The Pre-Application Submittal shall contain sufficient information to describe the nature and purpose of the proposed development, pertinent conditions of the site and the adjacent areas, and proposed development options considered. The applicant shall submit such material as is necessary to show that the proposed development will comply with the Stormwater Design Guidelines.

The Pre-Application Cover Sheet (Appendix A), shall be submitted by the Applicant prior to filing the application (see Section 2.2) to the Town Engineering Department, with copies to the Environmental Management Division of DPW, Planning Department, Conservation Commission and Health Department. A response from the Town will be transmitted to the Applicant within 30 days. The response may provide comments; request additional information; request a coordination meeting with the applicant; or may note that the Town has no comments based on the Pre-Application Cover Sheet.

a. **Contents.** The Pre-Application Submittal shall contain the following information:

1. Pre-Application Cover Sheet (Appendix A), completed, including names, addresses, and telephone numbers of the owner, applicant, and person(s) or firm(s) preparing the submittal.
2. A concise, well-thought-out narrative describing the conceptual stormwater design, the proposed or anticipated impacts and constraints, and the proposed measures to minimize or mitigate those impacts based on the design chosen. A group meeting with representatives of DPW, Planning and Conservation staff as may be appropriate, scheduled with the applicant's engineer who is prepared to discuss same is strongly encouraged. The narrative should include:
 - a. Be as concise and project-specific as possible. The narrative does not need to include extensive discussion of standard hydrologic concepts and LID principles. Instead, it should focus on how the project proposes to address environmental conditions, integrate development with natural drainage features, and minimize or mitigate for impacts. Please refer to Table 3 BMP Selection Table in these Guidelines.
 - b. Clearly identify if the project is a redevelopment of a property, describing the changes in stormwater flows and describing the constraints of the site with respect to stormwater design system choices.
 - c. Outline the proposed LID Concepts, including the LID techniques that will be used on the site which affect hydrologic calculations.

- d. Hydrologic calculations shall be performed and included. The level of detail shall be appropriate to support the conceptual project strategy for integration of Low Impact Development elements into the project.
 - e. Identify the Town of Plymouth permits or review procedures understood to be applicable to the project, along with other state and federal permits that may affect the site design or drainage design for the project.
 - f. Identify the worst-case future condition that can reasonably be anticipated should a particular BMP/stormwater design component fail. The goal is to identify what potential impacts to Public Safety (such as flooding of a public roadway) could occur in the event of a failure in order to assess when a LID design component may need additional safety features, such as provisions for additional overflow capacity.
 - g. Identify any known conditions or features, either on or off-site (e.g., existing stormwater discharges, infiltration systems, flood control structures, or other feature), that could affect the performance of the proposed stormwater system or that could result in cumulative impacts to listed resources of concern (please refer to section 3.0 #7) when considered in conjunction with the new stormwater system.
3. A conceptual plan, and the following, if available, although not required, clearly showing:
- a. Scale of conceptual plan at 1"=20' or 1"=40' is preferable.
 - b. General location and description of significant natural features as obtained from Massachusetts Geographic Information System (MA GIS), soil surveys, aerial photographs, flood maps, quadrangle maps or other available sources¹ including:
 - i. Watercourses and water bodies (such as streams, ponds, vernal pools), wetland resource areas and lands within 100 feet of these resources, riparian (river) zones, recharge groundwater protection areas, high-permeability soils, and erosion-prone soils, woodland conservation areas, farmland, meadows and floodplain information, including the 100-year flood elevation and/or boundaries of coastal flooding. Many of these maps may be viewed in the Conservation/Planning Office.
 - ii. Topographical features including contours.
 - iii. Approximate tree and shrub lines.
 - iv. Approximate direction of groundwater flow from groundwater flow map (Conservation/Planning office).
 - v. Critical areas as defined under Section 3.0, number 7 and Certified Vernal Pools and Potential Vernal Pools, These maps are available on line and in the Conservation/Planning office.
 - vi. Existing abutting streets.

¹ If guidance is needed on locating this information, please see the Planning or Town Engineer's office for assistance. Internet resources are listed on the Pre-Application Cover Sheet in Appendix A for many of these maps.

- c. Preferred site development layout that minimizes total impervious area; reflects the existing topography; and maximizes the continued use of existing drainageways, swales, depressions, and storage areas in their natural state, consistent with applicable wetland resource regulations. The layout plan shall include the estimated total proposed area of disturbance and total proposed impervious area.
- d. Conceptual locations and types of stormwater management controls.

2.2 Application Submittal Requirements

A. Stormwater Management Plan

The Stormwater Management Plan shall be submitted with either a Building Permit, Site Plan Approval request, Subdivision, Conservation Permit, Health Department Permit or Special Permit Application, whichever is applicable,² and shall contain sufficient information to describe the nature and purpose of the proposed development, pertinent conditions of the site and the adjacent areas, and proposed best management practices for the permanent management and treatment of stormwater. The Stormwater Management Plan shall contain sufficient information for the Town to evaluate the environmental impact, effectiveness, and acceptability of the measures proposed by the applicant for reducing adverse impacts from stormwater. The Stormwater Management Plan shall fully describe the project in drawings, and narrative. The applicant shall submit the following information, unless otherwise authorized in writing by the reviewing authority:

1. A narrative providing responses to Town comments resulting from review of the Pre-Application Submittal.
2. A plan showing title, date, north arrow, names of abutters, scale (1"=20' or 1"=40'), legend, and locus map (1"=800'). Other standard scales are acceptable if approved by the reviewing authority.
3. The existing zoning and land use at the site.
4. The location(s) of existing and proposed easements that would affect the proposed use/stormwater management plan and that would be necessary to provide access for maintenance of any stormwater management facilities.
5. The location of existing and proposed utilities.
6. The site's existing & proposed topography with contours at 2 foot intervals.
7. The existing site hydrology.
8. A description & delineation of existing stormwater conveyances, impoundments, wetlands, and critical areas of interest (please refer to Section 3.0 #7) on or adjacent to the site or which receives stormwater flows from the site.

² If a project is subject to Special Permit, Conservation, Subdivision or other regulatory permitting, this Stormwater Management Plan Application will be submitted with the application for these permits which will be in advance of the building permit application.

9. A delineation of any flood hazard areas (including but not limited to 100-year flood boundaries, floodway boundaries, velocity zones, and other areas subject to flooding or coastal storm flowage) as shown on the FEMA maps or as surveyed at the site. Where detailed Flood Insurance Studies (FIS) have been prepared by FEMA, flood elevation and/or coastal storm flowage data must be obtained from these studies.
10. Soils data pertaining to the design of each area to be used for stormwater retention, detention, or infiltration, including:
 - a. An estimate made by a qualified individual, such as a Licensed Soil Evaluator, certified Soil Scientist, hydrogeologist, or geotechnical engineer, of seasonal high groundwater elevation at each such facility;
 - b. A classification of the Hydrologic Soil Groups (HSG) soils on site using classification methodologies developed by U.S. Natural Resources Conservation Service (NRCS), based on observations by a qualified individual, such as a Licensed Soil Evaluator, certified Soil Scientist, hydrogeologist, or geotechnical engineer in accordance with the Massachusetts Stormwater Handbook;
 - c. Identification of depth to restrictive layer and/or bedrock observed within 4 feet of the bottom of any such proposed facility, and deeper if required to evaluate potential impacts of the proposed design;
 - d. Corroborating soil textural analysis or field tested saturated hydraulic conductivity rates at each facility in accordance with procedures identified in the Massachusetts Stormwater Handbook.
11. The existing and proposed vegetation or other cover types, with area and runoff coefficient for each.
12. A drainage area map clearly showing pre and post construction watershed boundaries, drainage areas and stormwater flow paths. Proposed analysis points and corresponding sub-catchment boundaries shall be identified. Off-site areas contributing to the proposed drainage system shall be identified. Analysis points shall be the same for both pre-development and post-development analyses.
13. A description, drawings, and detailed calculations of all components of the proposed drainage system including:
 - a. A narrative describing what elements of design are considered by the applicant to be subject to revision (e.g., houses in a subdivision, driveways, landscape areas, locations of rain gardens). The hydrologic calculations must conservatively account for any design components that might be altered by subsequent lot development, unless the applicant documents that legal restrictions on such design modifications have been provided (e.g., gravel driveways that can be paved by the

ultimate owner must be considered paved in the hydrologic calculations).

- b. The narrative should clearly identify if the project is a redevelopment of a property, describing the changes in stormwater flows and describing the constraints of the site with respect to stormwater design system choices.
 - c. Identify the worst-case future condition should a particular BMP/stormwater design component fail. The goal is to identify what potential impacts to Public Safety (such as flooding of a public roadway) could occur in the event of a failure in order to assess when a LID design component may need a safety feature, such as an overflow outlet.
 - d. Identify any known conditions or features, either on or off-site (e.g., existing stormwater discharges, infiltration systems, flood control structures, or other feature), that could affect the performance of the proposed stormwater system or that could result in cumulative impacts to listed resources of concern (please refer to section 3.0 #7) when considered in conjunction with the new stormwater system.
 - e. If requested, locations, typical sections and profiles of specific brooks or streams,
 - f. Locations, typical sections and profiles of drainage swales and their method of stabilization. All designed drainage channels should be supported by calculations demonstrating capacity and stability under design flow conditions.
 - g. Locations of all conveyance, storage, and treatment systems.
 - h. Profile at true vertical scale showing the water surface elevation throughout the proposed closed drainage system for the 2 and 10-year storm, including the estimated tailwater at the system outlet. Basis for tailwater estimate shall be documented.
 - i. All measures for the detention, retention or infiltration of water,
 - j. All measures for the treatment and protection of water quality,
 - k. The details for all components of the proposed drainage systems and stormwater management facilities,
 - l. Notes on drawings specifying materials to be used and construction specifications,
 - m. Expected hydrology with detailed supporting calculations. If appropriate computer output should include graphic hydrographs to facilitate review.
14. The proposed improvements including location of buildings or other structures, impervious surfaces, and drainage facilities, if applicable.
 15. General notes concerning timing, schedules, and sequence of development including clearing, stripping, rough grading, construction, final grading, and

- vegetative stabilization. If the proponent is required to have a NPDES permit,³ a copy of the SWPPP must be filed prior to the start of construction.
16. A maintenance schedule for the period of construction, if known.
 17. Any other information requested by the Town.

B. Erosion and Sediment Control

Please refer to the Town of Plymouth Zoning Bylaw, Section 205-18 Natural Features Conservation Requirements with respect to erosion and sediment controls. Please submit a narrative addressing these requirements (a copy of the SWPPP, if available, may be attached as an alternative.)

Section 2.3.5 Construction Site Stormwater Runoff Control of the Massachusetts MS4 General Permit requires that the operator of a construction site eliminate erosion and maintain sediment on site so it is not transported in stormwater and allowed to discharge to a water of the US through the Town's MS4. The construction site stormwater runoff control program required by the MS4 General Permit is separate and distinct program from EPA's stormwater construction permit. Not only does this requirement pertain to stormwater, but includes, and is not limited to discarded building materials, concrete truck wash out, litter and sanitary wastes.

The MS4 Permit requires site inspections and enforcement of sedimentation control measures by the Town. As such the Town has developed the following site inspection requirements to meet the goals of MS4 General Permit.

- The Owner of the Site shall submit to the Town's Engineering Department the resume of the individual (ESC Inspector) that will perform the required inspections.
- The ESC Inspector shall be a Massachusetts Registered Civil Professional Engineer, a Certified Professional in Erosion and Sedimentation Control (CPESC), Certified Erosion, Sediment & StormWater Inspectors (CESSWI), or Certified Inspector of Sediment and Erosion Control (CISEC).
- This ESC Inspector is separate from personal conducting inspections under the Construction General Permit's inspection requirements.
- The ESC Inspector shall be retained by the Site Owner.
- The ESC Inspector shall inspect the Site on a monthly basis for evidence of sedimentation or other pollutant discharge to the MS4.
- The ESC Inspector shall issue a report that identifies erosion on site, the condition of ESC Best Management Practices, and sedimentation or other pollutant discharge to the MS4.
- The report shall include a Drawing, at appropriate scale, that identifies erosion on site, the condition of ESC Best Management Practices, and sedimentation or other pollutant discharge to the MS4.
- In the event there is a discharge to or a threat of a discharge to the MS4, all ESC Inspector shall be empowered to shut the project down until appropriate corrective action is taken. If a discharge has occurred, at a minimum, the

C. Operation and Maintenance Strategy

An Operation and Maintenance Strategy (O&M Strategy) for the permanent storm water management system is required at the time of application for all projects. The maintenance strategy should be designed to ensure that the Massachusetts Surface Water Quality Standards contained in 314 CMR 4.00 are met in all seasons and throughout the life of the system, and should identify the responsible party and contact information for the maintenance of the stormwater system.

Where a failure of the stormwater design could lead to a flooding hazard, the Responsible Parties must submit annual reports regarding the inspection and maintenance of the BMPs for which they are responsible. The annual reports must include: (1) descriptions of the condition of the BMPs, (2) descriptions of maintenance performed and (3) receipts for maintenance performed. Any changes to the owner/Responsible Party identified in this section should be provided in writing to the Town Engineer within 15 working days of the effective date of the change, including an outline of any changes to the maintenance schedule or O&M Strategy.

³ See Pre-Application Cover Sheet (Appendix A).

3.0 Design Performance Criteria

The design criteria summarized in Table 1 and presented below shall be used to design stormwater management controls:

1. No Untreated Discharges

All new stormwater discharges to wetlands, local water bodies, municipal drainage systems, or abutting property, must be treated in compliance with these criteria.

2. Site Planning

Low impact development (LID) techniques must be incorporated into redevelopment projects in the Town.⁴ Applicants must use decentralized systems that involve the placement of a number of small treatment and infiltration devices located close to the various impervious surfaces that generate stormwater runoff in place of a centralized system comprised of closed pipes that direct all drainage from the entire site into one large detention basin. Exceptions may be made for incidences where a demonstrated public purpose (such as preserving a historic resource or a significant natural feature) is found to be served by the permitting board or agency which would necessitate the use of underground recharge systems.

The site planning process shall be documented and include the following steps:

- (a) Perform Site Analysis – Identify and map important natural features such as streams and drainageways, floodplains, wetlands, recharge groundwater protection areas, high-permeability soils, steep slopes and erosion-prone soils, woodland conservation areas, farmland, and meadows.
- (b) Layout Preferred Development Scenario – Prepare preferred site development layout that minimizes total impervious area, reflects the existing topography, and uses existing hydrologic features. Potential layout may consider cluster development, parking garages, taller buildings, reduced road widths, smaller parking areas, permeable paving, and green roofs. Roadway layouts shall minimize disturbance of natural drainage patterns by following existing grades.
- (c) Create a Decentralized Stormwater System – Manage runoff at the source to the extent practical through the use of small decentralized structures, such as swales, bioretention areas, infiltration structures, filter strips, rain barrels, cisterns, dry wells, and vegetated areas. Increase the time of concentration (average time for rainfall to reach a point) by using open, vegetated drainage systems and maximizing overland or sheet flow.

⁴ Unless the criteria within these Guidelines which allows for alternative design as described herein is shown to be met.

Where unpaved roads are proposed, the designer must consider the implications of the unpaved surface with respect to the sustainability of LID Best Management Practices (BMPs). The basis for the engineering design of BMPs for projects with unpaved roadways shall include proven techniques for addressing erosion and sedimentation concerns. The Massachusetts Unpaved Roads BMP Manual by Berkshire Regional Planning Commission, 2001⁵ is cited as a source of relevant information.

Table 1. Summary of Design Criteria

Issue Being Addressed	Design Criteria	Important Considerations
Discharges	All new discharges to wetlands, local water bodies, municipal drainage systems, or abutting property must be treated.	
Site Planning	Low impact development (LID) site design techniques must be incorporated into all projects in the Town (the use of LID structural BMPs is encouraged, but such use does not by itself constitute a “site design technique”).	Site planning and layout must undergo pre-application review before final design. Pre-filing submittals shall contain DEP attributes, town critical areas of interest on and near the site, goals of the stormwater design, proposed changes to the site, proposed impacts or minimization of impacts based on the design, and list of any waivers.
Peak Control	<p>Post-development peak discharge rates can not exceed pre-development peak discharge rates for the 2-, 10- & 25-yr, 24-hr storm events.</p> <p>Evaluate the 100-yr storm event for offsite flooding impacts.</p>	<p>Control of peak discharge rates may be waived for areas within the 100-year coastal flood zone or subject to coastal tidal flow, if no detrimental impacts to downgradient infrastructure or neighboring properties can be demonstrated.</p> <p>Emergency spill ways shall be designed to safely pass the 100-year storm assuming the primary outlet structure is not functioning.</p>

⁵ Berkshire Regional Planning Commission. (Winter 2001). *The Massachusetts Unpaved Roads BMP Manual: A Guidebook on How to Improve Water Quality While Addressing Common Problems*. (Project 98-06/319). Pittsfield, MA: Berkshire Regional Planning Commission.

Table 1. Summary of Design Criteria

Stormwater Recharge	$Re_v = [(S)(IA)]/12$ <p>where</p> <p>Re_v = recharge volume IA = total impervious area S = Soil Specific Recharge Factor (inch)*</p> <p>A soils = 0.60 B soils = 0.35 C soils = 0.25 D soils = 0.10</p> <p>In C and D soils and where bedrock is at the land surface, proponents are required to infiltrate the required volume only to the maximum extent practicable.</p> <p>*Note: The Soil Specific Recharge Factors were obtained from the Stormwater Management Standards contained within the Massachusetts Wetland Protection Regulations and 401 Water Quality Certification Regulations for recharge. Refer to these regulations for the most up to date recharge factors.</p>	<p>The recharge volume represents the volume per storm event. Annual recharge requirements must also be calculated using these criteria.</p> <p>Infiltration rates of soils for sizing recharge structures shall be calculated in accordance with the methods outlined in the Massachusetts Stormwater Handbook.</p> <p>Static infiltration sizing is required for any infiltration BMP used for treatment. Dynamic infiltration sizing may be used for recharge of clean roof runoff and for recharge following a treatment BMP.</p> <p>Consistent with the intent of the Stormwater Management Manual to implement LID Stormwater Management design, underground stormwater recharge systems may be allowed as follows:</p> <ol style="list-style-type: none"> Underground recharge systems may be allowed for rooftop runoff. Underground recharge systems may be allowed for redevelopment projects and retrofits, where it is demonstrated that surface recharge systems or bioretention systems are not feasible. Exceptions may be made for incidences where a demonstrated public purpose (such as preserving a historic resource or a significant natural feature is found to be served by the permitting board or agency which would necessitate the use of underground recharge systems. Underground detention units may be used to accommodate peak storage control.
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Table 1. Summary of Design Criteria		
Water Quality Volume (WQV)	$WQV = [(1'')(IA)]$	For any BMP that discharges to a cold water fishery, treatment must consist of infiltration, use of a gravel underdrain outlet, or other approved method for mitigation of temperature increases associated with surface water ponding.
Pollutant Removal	TSS – 90% T. Phos. – 60% T. Nitrogen – 30%	
Critical Areas	Only approved BMPs are allowed for discharges to critical areas. Shut down & containment required near critical resources.	Approved Treatment BMPs: <ul style="list-style-type: none"> • Filtering bioretention areas • Constructed stormwater wetlands • Gravel wetlands • Proprietary media filter • Sand/organic filters • Wet basins (lined & sealed if 44% pretreatment not attained) • Exfiltrating bioretention areas • Dry wells • Infiltration basins • Infiltration trenches • Subsurface structures
Redevelopment	Must meet the same standards as new development, unless it is proven to be infeasible and is otherwise consistent with the Guidelines herein. At a minimum, Water Quality Volume $WQV = [(0.8'')(IA)]$ or Pollutant Removal TSS-80%; T.Phos.-50%	Pre-development refers to the site as it was before it was developed. It does not refer to existing conditions. Infeasible means not technologically possible, or not economically practicable and achievable in light of best industry practices.
Erosion and Sedimentation Controls	Develop and implement an erosion and sedimentation control plan.	Plan should satisfy SWPPP requirements if required and Zoning Bylaw.
Illicit Discharges	Submit an Illicit Discharge Compliance Statement verifying no illicit discharges exist on the site.	Applies to both new and redevelopment. For redevelopment, provide summary of steps taken to verify no illicit discharges.

Table 1. Summary of Design Criteria

Pretreatment	<p>Provide pretreatment for all treatment and recharge BMPs. Pre-treatment shall be designed for hydraulic capacity, and in addition to hold 1-year worth of sediment. To obtain an annual sediment volume, perform the following calculation.</p> <p>For impervious areas: Area to be sanded (acres x 500 pounds/acre-storm ÷ 90 lbs/ft³ x 10 storms/yr = ft³ of sediments/yr</p> <p>For pervious areas: Use the Revised Universal Soil Loss Equation (RUSLE)</p>	
O&M	All applicants must develop an O&M strategy.	Must cover responsible party, funding, routing O&M practices, major repair/replacement items, and records retention and reporting.

3. Peak Control

The following criteria shall be followed to control peak discharge rates and improve the overall effectiveness of the stormwater treatment systems. These are minimum design criteria.

- (a) The post-development peak discharge rate shall be equal to or less than the pre-development peak discharge rate (based on a 2-year, 10-year, and 25-year, 24-hour storm); *and*
- (b) The 100-year, 24-hour storm event must be evaluated to demonstrate that there will not be increased flooding impacts off-site.
- (c) The site shall be designed to ensure that all runoff from the site up to the maximum design storm for the particular structure will actually enter the control structure. For example, the control structure may be designed for the 25-year storm, while the drainage system may only be sized to handle a ten-year storm, with larger storms flooding the distribution system and traveling overland. This overland flow, or overflow, must be directed into the peak control structure; *and*
- (d) For each design storm, the applicant shall account for all run-on and run-off (including off-site impacts) in both pre- and post-development conditions; *and*
- (e) Emergency spill ways shall be designed to safely pass the 100-year storm assuming the primary outlet structure is not functioning; *and*
- (f) Use SCS methods (TR-20 or TR-55) to develop hydrographs and peak flow rates for the proposed development site. The hydrograph time interval (dT) in TR-20 shall be no greater than 0.1 hours. All areas shall be accounted for in the pre/post runoff calculations. The total tributary area that contributes flow from the proposed site, including runoff entering the site through piped drainage or surface runoff from off-site sources, shall be included even if a portion does not contribute flow to the BMP. The objective is for the development's storm drain design to account for total runoff leaving the site; *and*
- (g) Use Curve Numbers (CN) values as provided in Table 2 to calculate stormwater runoff rates for pre/post construction ground surface conditions; *and*
- (h) Any site that was wooded within the last five years shall be considered undisturbed woods for all pre-construction runoff

- (i) Off-site areas should be modeled as “present land use condition” in good hydrologic condition for the 2 and 10-year storm events for both pre and post development calculations; *and*
- (j) The length of overland sheet flow used in time of concentration (t_c) calculations shall be limited to no more than 50 feet for pre- and post-development conditions.

Table 2. Approved CN Values for the SCS Methods (TR-20, TR-55)				
	Hydrologic Soil Group			
Pre-Construction Runoff Curve Number (CN Values)	A	B	C	D
Open space such as lawns, parks, and cemeteries ²	68	79	86	89
Woods and forest ³	30	55	70	77
Impervious areas such as paved parking lots, driveways and roofs	98	98	98	98
Gravel roads (processed, dense graded)	76	85	89	91
Dirt roads	72	82	87	89
Newly graded pervious areas (no vegetation)	77	86	91	94
Post-Construction Runoff-Curve Number (CN Value)	A	B	C	D
Open space such as lawns, parks, and cemeteries ²	68	79	86	89
Woods and forest that is selectively cleared ³	43	65	76	82
Impervious areas such as paved parking lots, driveways and roofs	98	98	98	98
Gravel roads (processed, dense graded)	76	85	89	91
Dirt roads	72	82	87	89
Newly graded pervious areas (no vegetation)	77	86	91	94

Source: TR-55, 1986

Notes:

1. The runoff curve numbers are for use in calculating runoff with SCS methods or other approved models.
2. The open space CN values for lawns, parks, and cemeteries assumes a “poor” condition for grass cover since the post-construction amount of grass cover cannot be predicted or guaranteed.
3. The pre-construction CN value for woods and forest is based on a “good” condition where the woods are undisturbed and brush adequately covers the soil. The post-construction CN value for woods and forest is based on a “fair” condition if any selective cutting is conducted since the soils typically become compacted due to the equipment used to remove the large white pines and there may be post-cutting wind damage to the remaining unsupported canopy. If the applicant can demonstrate that no disturbance will occur during construction, then the pre-construction CN value for woods may be used for the post-construction runoff calculations. A note should be placed on the plan indicating where selective cutting will occur.

4. Stormwater Recharge

The volume of water to be recharged shall be based on the site soils. The volume of water to be retained from the developed site shall be calculated using the following equation:

$$Re_v = [(S)(IA)]/12, \text{ where}$$

Re_v = recharge volume
 IA = total impervious area
 S = Soil Specific Recharge Factor (inch)

<u>Hydrologic Group</u>	<u>Soil Specific Recharge Factor*</u>
A	0.60
B	0.35
C	0.25
D	0.10

*Note: The Soil Specific Recharge Factors were obtained from the Stormwater Management Standards contained within the Massachusetts Wetland Protection Regulations and 401 Water Quality Certification Regulations for recharge. Refer to these regulations for the most up to date recharge factors.

The following criteria shall also apply:

- (a) In C and D soils and where bedrock is at the land surface, proponents are required to infiltrate the required volume only to the maximum extent practicable.
- (b) All recharge systems must receive pre-treatment prior to recharge. All pretreatment devices must meet the criteria outlined under Design Criteria 4.
- (c) Compaction of soils in designated recharge areas must be minimized during or after construction.
- (d) If more than one soil type is present at the site, a composite soil specific recharge factor shall be computed based on the proportion of total site area within each soil type. To the extent practical, the recharge volume provided at the site shall be directed to the most permeable soils available.
- (e) The Town may alter or eliminate the recharge volume requirement if the site is situated on unsuitable soils (i.e., marine clays), karst or in an urban redevelopment area. In this situation, non-structural practices (filter strips that treat rooftop or parking lot runoff, sheet flow discharge to stream buffers, and grass channels that treat roadway runoff) shall be implemented to the maximum extent

practicable and the remaining or untreated volume included in the water quality volume.

- (f) The system shall be designed based on calculated infiltration rates using the methods outlined in the Massachusetts Stormwater Handbook.
- (g) All units/devices shall be designed to drain within 72 hours from the end of the storm.
- (h) Consistent with the intent of the Stormwater Management Manual to implement Low Impact Development (LID) Stormwater Management design, underground stormwater recharge systems may be allowed as follows:
 - i. Underground recharge systems may be allowed for rooftop runoff.
 - ii. Underground recharge systems may be allowed for re-development projects and retro-fits, where it is demonstrated that surface recharge systems or bioretention systems are not feasible.
 - iii. Exceptions may be made for incidences where a demonstrated public purpose (such as preserving a historic resource or a significant natural feature) is found to be served by the permitting board or agency which would necessitate the use of underground recharge systems.
 - iv. Underground detention units may be used to accommodate peak storage control

5. **Water Quality Volume**

The water quality volume required to be treated shall be calculated as:

$$WQV = [(1 \text{ inch})(IA)]/12, \text{ where}$$

WQV = water quality volume
 IA = total impervious area
 12 = conversion factor (inches per foot)

If infeasible for redevelopment, Town may decrease $WQV = [(0.8'')(IA)]/12$.
 For any BMP that discharges to a cold water fishery, treatment must consist of infiltration, use of a gravel underdrain outlet, or other approved method for mitigation of temperature increases associated with surface water ponding.

6. Pollutant Removal

All treatment devices should remove the following percentages:

Total Suspended Solids – 90%

If requested by the Town:

Total Phosphorus – 60%

Total Nitrogen – 30%

If infeasible for redevelopment, treatment devices should remove following percentages: TSS-80%; Total Phosphorus-50%

7. Critical Areas

Critical areas include all waters listed on the most recent version of the *Massachusetts Integrated List of Water, Final Listing of the Condition of Massachusetts' Waters Pursuant to Sections 303(d) and 305(b) of the Clean Water Act*. In Plymouth, Critical Areas of Interest also include, if not contained within the listings noted in the preceding sentence: Zone II of public water supplies,⁵ coastal waters, eelgrass beds, shellfish beds, anadromous fish runs, cold water fisheries, aquatic rare and endangered species habitat⁶ including coastal plain ponds, and headwaters and tributaries to streams and surface waters.

- (a) Only approved BMPs are allowed for discharges to critical areas. Approved treatment BMPs are listed in Table 1.
- (b) Provisions for shut down and containment are required near critical resources.

8. Redevelopment

Redevelopment projects must meet the same criteria as new development to the maximum extent practicable, unless infeasible to attain pollutant removal or water quality volume. Redevelopment provisions allow Town to decrease WQV and pollutant removal standards per s.5 and s.6 above.

For the purposes of the redevelopment projects, pre-development refers to the site as it was before it was developed. It does not refer to existing conditions.

9. Erosion and Sedimentation Controls

Please refer to the Town of Plymouth Zoning Bylaw, Section 205-18 Natural Features Conservation Requirements with respect to erosion and sediment controls.

⁵ In a Zone II of a public water supply, with respect to the Town of Plymouth Zoning Bylaw Section 205-57, the more restrictive of the water quality requirements shall govern where there is a discrepancy with these Guidelines.

⁶ AND where said rare or endangered species is dependent on a resource which may be impacted by the proposed design (such as an 'upland' salamander depending on a vernal pool for reproduction).

10. Illicit Discharges

The applicant shall submit an Illicit Discharge Compliance Statement verifying no illicit discharges exist on the site. For redevelopment projects, the applicant must provide a summary of the steps taken to verify no illicit discharges.

11. Pretreatment

Pretreatment devices must be designed as follows:

- (a) Pre-treatment devices shall be provided for each Stormwater Treatment System (STS); *and*
- (b) Pre-treatment devices shall be designed to capture anticipated pollutants, such as oil and grease; *and*
- (c) The Revised Universal Soil Loss Equation (RUSLE)⁸ shall be used to calculate sediment deposits that occur from pervious areas adjacent to the BMP; *and*
- (d) Pretreatment structures shall be sized to hold an annual sediment loading. An annual sediment load shall be calculated by adding the sediment loading from pervious areas to the sediment loading from impervious areas. The sediment loading from impervious areas should be calculated using a sand application rate of 500 lbs/acre for sanding of roadways, parking areas and access drives within the subcatchment area, a sand density of 90 lbs per cubic foot and assuming a minimum frequency of ten sandings per year. To obtain an annual sediment volume, perform the following calculation:

Sanding Load from Impervious Areas:

Impervious area (acres) x 500 $\frac{\text{pounds}}{\text{Acre-storm}}$ + 90 $\frac{\text{pounds}}{\text{ft}^3}$ x 10 $\frac{\text{storms}}{\text{year}}$ = cubic feet of
to be sanded

Annual sediment volume = $\frac{\text{Sediment Load}}{\text{From Impervious Areas}}$ + $\frac{\text{Sediment Load}}{\text{from Pervious Areas}}$

- (e) The developer shall maintain any STSs used to trap sediment during construction to prevent sediment from leaving the site, and shall remove all sediment from all STSs when construction is finished and the site is stabilized.

12. O&M

All applicants must develop an O&M Strategy containing the information outlined in Section 2.0.

⁸ Developed by the Natural Resources Conservation Service, USDA to predict soil erosion due to water.

4.0 Closed Drainage Systems

The following criteria shall be used to design closed drainage systems that collect and convey runoff from roadways. The requirements in this section shall not be interpreted to in any way reduce the requirement that stormwater systems must be decentralized to the extent practical. Except as amended herein, all other relevant provisions within this document apply to closed drainage systems.

1. Basis of Design

Closed systems shall be designed in accordance with the relevant provisions of the latest edition of the Massachusetts Highway Department Project Development and Design Guide, as amended herein.

- (a) Rational Method – The Rational Method shall be used to size closed drainage system components and the following runoff coefficient values shall be applied:

• Heavily wooded:	0.20
• Grassed:	0.30
• Bare Ground and Gravel:	0.50
• Roads (paved and unpaved):	0.90
• All other pavement:	0.90
• Roofs:	0.90

2. Drainage Structures

- (a) Catchbasin frames and grates shall be LeBaron LF 248-2, three flange or acceptable equivalent.
- (b) Manhole frames and covers shall be LeBaron LF 110A or acceptable equivalent.
- (c) A single grate catchbasin shall be considered to have a maximum inlet capacity of 2.5 CFS. Inlets of greater capacity shall be subject to individual analysis and approval.
- (d) Systems with more than four catch basins shall have a gas/oil separator provided in the last structure prior to outlet.

3. Pipe

- (a) Drain pipes shall be a minimum of 12 inches in diameter.
- (b) Minimum cover for concrete pipe shall be 2.5 feet.
- (c) Corrugated metal pipe shall not be used.

- (d) High density polyethylene pipe (HDPE) may be used. Minimum cover shall comply with manufacturer requirements. In no case shall cover be less than 18 inches for HDPE pipe.
- (e) In cases where 18 inches cover can not be provided, ductile iron pipe may be considered. Use of ductile iron pipe must be in accordance with manufacturer's requirements.

4. Leaching Drainage Structures

The following requirements apply specifically to roadway leaching drainage structures within roadways.

- (a) Roadway leaching drainage structures are manholes or other subsurface structures that collect roadway drainage and provide infiltration capacity in lieu of an outlet to a swale or surface basin.
- (b) Use of leaching drainage structures for peak control as described herein shall only be considered if it can be demonstrated that there is no practical means to outlet the stormwater to other Best Management Practices as described in Section 3.0 Design Performance Criteria.
- (c) Leaching catch basins or drop inlets will not be allowed. All catch basins, including catch basins upstream of roadway leaching drainage structures, shall be provided with deep sumps.
- (d) Roadway leaching drainage structures shall be sized using the Static Method specified in the Massachusetts Stormwater Handbook and the criteria contained herein. A percolation test shall be performed at the location of each roadway leaching drainage structure. An actual percolation rate of greater than ten minutes per inch will not be considered adequate for this type of design.
- (e) Roadway leaching drainage structures shall be sized to provide a minimum of three feet of freeboard to the roadway surface above the maximum water elevation for the design storm event.
- (f) A minimum design rate of four times the actual rate (measured by percolation test) will be used to size roadway leaching drainage structures.

5. Closed System Outlets

In order to verify that sufficient capacity will be provided in detention facilities downstream of closed system outlets collecting and conveying stormwater runoff from roadways, the Closed System Detention Worksheet in Appendix B shall be completed and submitted.

The worksheet is not intended in any way to replace or supercede other sizing criteria contained in these guidelines. The intention of this worksheet is to provide supplemental verification that adequate capacity exists to avoid roadway flooding during the design storm event.

Where it can be demonstrated that there is no risk of roadway flooding, the worksheet will not be required.

5.0 Stormwater Best Management Practices

5.1 BMP Selection

Not all BMPs are created equal. Some are suitable for controlling peak flows, but provide little to no water quality treatment. Some are suitable for permeable soils, but don't work well with tighter, clay soils. Some BMPs will remove a significant amount of sediment, but do little to treat phosphorus or nitrogen. In order to provide comprehensive stormwater management, BMPs must be selected to fit the site and ultimate treatment goals.

Plymouth has prepared a BMP selection matrix (Table 3) to aid in the selection and siting of BMPs based on specific site conditions. The applicability of various BMPs based on site specific information is summarized in the table through the use of a shaded circle and an outline of a circle. A shaded circle indicates that the BMP is applicable under that site criteria, while an outline of a circle indicates that it may be applied with careful site design. The absence of a circle indicates that the BMP is not appropriate for the particular site criteria. The site criteria evaluated for suitability includes:

- **Drainage Area** – The size of the drainage area going to the BMP will have some influence on the selection of BMPs, as some BMPs are well suited to large drainage areas, while others work best collecting stormwater from smaller areas. Plymouth encourages breaking the site up into smaller drainage areas for treatment.
- **Soil Hydrologic Group** – The soil hydrologic group influences the type of BMP that can be used on the site, particularly, infiltration type BMPs. Applicability is defined based on the four soil classifications A, B, C and D.
- **Land Area** – The amount of land required for each BMP was defined simply as 'Requires Large Land Area' and 'Requires Small Land Area'.
- **Applicability** – Defines the applicable uses of each BMP including peak control, recharge, water quality control, oil/grease and floatable removal, pretreatment, conveyance and distribution.
- **Pollutant Removal** – General pollutant removal efficiencies for each BMP were listed as available for total suspended solids, bacteria, total nitrogen and total phosphorus. These removal efficiencies are provided to aid in the selection of BMPs to address stormwater discharges to impaired waters. For example, if a water body is listed as impaired due to excess bacteria levels, a BMP targeted for bacteria removal should be selected.

New development and redevelopment BMPs located in the Plymouth Harbor drainage area shall be optimized for nitrogen removal (see Table 3 for nitrogen removal ratings).

- Setbacks – Setbacks to several features are listed for certain BMPs. These setbacks are based on septic system setbacks outlined in 310 CMR 15.000.
- References – References are provided for further information on BMP design.

In addition to the references provided in the BMP Matrix table, Plymouth has outlined important design considerations for some BMPs. These are included in Table 4. In some cases, these design considerations include refinement taking into account local conditions and preferences and should take precedence.

Plymouth has also outlined its preferences for the types of BMPs used to achieve Low Impact Development Goals. These preferences are included in Table 5.

5.2 Other Design Considerations

Landscape features also play an important role to the hydrologic cycle. Soil preparation and plant selection can impact the amount of runoff leaving a site and influence watering requirements. Plymouth recommends that an experienced landscape designer be involved in the selection of plants for the landscape and for stormwater treatment BMPs such as bioretention devices to promote an appropriate selection that is attractive and functional for the available site conditions.

5.3 As-built Drawings Requirement

The permittee shall submit as-built drawings prior to Town's issuance of certificate of occupancy. The as-built drawings must depict all on-site controls, both structural and non-structural, designed to manage the stormwater associated with the completed site.

Table 4. Important Design Considerations	
BMP Type	Important Design Considerations
Low Impact Development (LID)	
Site Management Practices	Projects must undergo pre-file for review before final design. Pre-filing submittal requirements are outlined in Section 2.0.
Interception or Recharge Practices (constructed BMPs)	
Green Roof	
Rain Barrel/Cisterns (with on-site re-use)	
Rain Garden/Bioretenention	<ol style="list-style-type: none"> 1. Soil mix must contain <5% silt/clay passing the #200 sieve; 2. Filter fabric shall not be placed beneath the soil mix; 3. Underdrain required in C, D soils and where groundwater levels exceed allowable clearance for infiltration.
Pervious Pavers/Pervious Pavement	<ol style="list-style-type: none"> 1. If unit pavers are used, joints must be at least 3/8" wide or consist of units with a pattern of open areas that allow for infiltration of runoff. 2. Pavers must be placed over an open-graded aggregate base that filters, stores, and infiltrates runoff.
Runoff Management BMPs	<ol style="list-style-type: none"> 1. Emergency spill ways shall be designed to safely pass the 100-year storm assuming the primary outlet structure is not functioning.
Basins	
Detention	
Dry Extended Detention	
Wet Extended Detention	
Wet Pond	<ol style="list-style-type: none"> 1. An underdrain gravel outlet must be used to cool discharges to cold water fisheries. 2. The permanent pool must be sized with a minimum pool to runoff ratio of 4:1.
Created Wetland	
Buffers	
Vegetated Filter Strip	
Infiltration Systems	<ol style="list-style-type: none"> 1. Pretreatment to remove sediments is required for all infiltration systems and must be sized to hold one year worth of sediment; 2. When used as treatment, infiltration rate may not exceed 2.4 inches/hour; 3. Soil infiltration rates shall be calculated in accordance with the Massachusetts Stormwater Handbook; 4. Minimum 3 foot separation between bottom of BMP and seasonal high groundwater; 5. Infiltration systems must drain completely within 72 hours; 6. Avoid compaction of soils in infiltration area. 7. Closed roadway infiltration systems shall provide three feet of freeboard.
Infiltration Basin (Recharge Basin)	
Infiltration (Recharge) Trenches and Beds	
Dry Wells and Galleys	

Table 4. Important Design Considerations

Leaching Catch Basins/Leaching Basins	
Filter Systems	
Organic/Sand Filter	
Bioretention (includes rain gardens)	<ol style="list-style-type: none"> 1. Soil mix must contain <5% silt/clay passing the #200 sieve; 2. No filter fabric is allowed beneath the soil mix; 3. Underdrain required in C, D soils and where groundwater levels exceed allowable clearance for infiltration.
Water Quality Swales	
Dry Swale	Conform to design criteria in MassHighway (2004), except delete the "Hydraulic Residence Time" criterion and instead size the swale to retain and infiltrate the Water Quality Volume
Wet Swale	Size for WQV (MassHighway, 2004)
Bioretention Swale	Size for WQV (MassHighway, 2004)
Vault Structures	
Deep Sump Catch Basins	
Water Quality Inlet/Oil/Water Separator	
Hydrodynamic Separators	Performance criteria must be documented, based on credible study (as categorized by MASTEP) - see Note 1
Proprietary Systems (some proprietary systems may be covered in the above categories)	
Other "Vault" Structures	Performance criteria must be documented, based on credible study (as categorized by MASTEP) - see Note 1
Catch Basin Inserts	Performance criteria must be documented, based on credible study (as categorized by MASTEP) - see Note 1
Outlet Adaptations	Performance criteria must be documented, based on credible study (as categorized by MASTEP) - see Note 1
Conveyance Practices	
Vegetated Channel	Vegetated channels shall be designed for both <u>capacity</u> (ability to carry design flows without overtopping) and <u>stability</u> (resistance to erosion under the full range of design flows)
Level Spreader	Level spreaders must be sited and constructed, so as not to result in the re-establishment of concentrated flow down-slope of the device.
Flow Splitter	

Notes:

1. The Massachusetts Stormwater Technology Evaluation Project (MASTEP) provides a web site at <http://www.mastep.net/> to provide verified technical information on innovative technologies for stormwater Best Management Practices (BMPs). The program does not rate the technologies, but provides information on whether the technologies have been evaluated according to accepted protocols and/or credible scientific evaluation procedures. Vendors' claims regarding removal efficiencies for particular products should be evaluated only after consulting the MASTEP database, to determine whether appropriate studies have been conducted to verify the claims.

Table 5. Preferred BMPs for LID			
	Preferred BMPs Based on Soil Types and Groundwater		
	A or B Soils	C or D Soils	High Groundwater
1. Always begin with Site Management Practices to minimize runoff <ol style="list-style-type: none"> Minimize disturbance area Preserve natural depression areas Preserved infiltratable soils Minimize site imperviousness Disconnect impervious area 	<ol style="list-style-type: none"> Dry wells/ leaching catch basins Pervious pavement Greenroof Filter strips Rain barrel/ cistern 	<ol style="list-style-type: none"> Filter strips Rain barrel/ cistern 	<ol style="list-style-type: none"> Filter strips Greenroof Rain barrel/ cistern
2. Implement water quality BMPs for remaining runoff. Control the stormwater runoff where it is generated rather than an "end of pipe" solution. Consider the pollutant of concern based on the type of development and known impairments to receiving waters. All BMPs require pretreatment.	<ol style="list-style-type: none"> Raingardens/ bioretention that infiltrates Surface infiltration system Organic/ sand filter Dry treatment swale Vegetated filter strip Extended detention 	<ol style="list-style-type: none"> Raingardens/ bioretention to underdrain discharge Organic/ sand filter to underdrain discharge Wetlands Wet pond Wet or dry treatment swale Vegetated filter strip Extended detention 	<ol style="list-style-type: none"> Raingardens/ bioretention to underdrain discharge Organic/ sand filter to underdrain discharge Wetlands Wet pond Wet or dry treatment swale Vegetated filter strip Extended detention
3. Provide peak flow control for remaining runoff.	<ol style="list-style-type: none"> Extended detention Detention basin Underground peak control 	<ol style="list-style-type: none"> Extended detention Detention basin Wet pond Underground peak control 	<ol style="list-style-type: none"> Extended detention Detention basin Wet pond Underground peak control
4. The following may not be used as a stand alone treatment device, rather can be used as pretreatment in combination with other treatment devices. <ol style="list-style-type: none"> Water quality inlet/oil/water separator Hydrodynamic separators Other "vault" structures Catch basin inserts 			

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Department of Public Works - Highway Division	Priority #:	1
Project Title and Description: Replace Sweeper - H304	Total Project Cost:	\$456,000.00

Department/Division Head: Tim Balboni, Highway Manager

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

For project re-submittals, list prior year(s): FY19,FY20,FY21,FY22,FY23

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>			FY26		
<i>Labor and Materials</i>			FY27		
<i>Administration</i>			FY28		
<i>Land Acquisition</i>			FY29		
<i>Equipment</i>	\$380,000.00		FY30		
<i>Other</i>					
<i>Contingency</i>	\$76,000.00	20%			
Total Capital	\$456,000.00				

Project Justification and Objective: This sweeper runs daily during the season, The sweeper currently has high mileage, chassis is rotting out and the engine needs very frequent 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 ☒

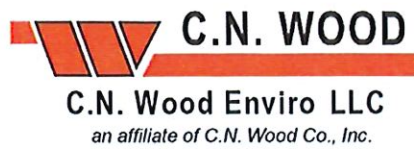
For Capital Equipment Requests:

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

2007 Freightliner Broom Bear - 1FACXDC57HM76903 - Very poor condition

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

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



Presents a Proposal Summary

of the



Broom Bear

Broom Bear Single Engine Street Sweeper with Dual Side Brooms

for

Town of Plymouth

October 25, 2023

PRODUCT DESCRIPTION

· Conveyor belt, variable height, right side dumping, 4.5 cubic yard hopper, with dual, hydraulically driven, trailing arm side brooms, sweeper is powder coated White with powder coated gray undercarriage.

STANDARD FEATURES

- Broom side, 46" steel vertical digger 4 or 5 segment
- Broom side, air floating suspension with adjustable reach, air deploy
- Broom, main, 34" diameter, 60" wide prefab disposable
- Broom Measurement Ruler
- Conveyor chain, hardened with polyurethane sprockets
- Conveyor, belt type with 13 molded-in full width cleats
- Conveyor, lift independent from main broom
- Conveyor, three-piece replaceable wear plates
- Conveyor flush out system
- Conveyor raise in reverse
- Conveyor stall alarm
- Dirt shoes, spring assisted, heavy duty single row carbide steel (rubber isolated)
- Electric backup alarm
- Hopper inspection door
- Hopper, 4.5 cu yd with window and skylight
- Hopper up indicator and beep
- Hopper, variable high dump; 9' 6", 4.5 yard
- Hose, hydrant fill, 16' 8" with coupling
- Hydraulic oil level gauge w/ external thermometer and in-cab level light
- Hydraulic system, load sensing with selectable transmission driven PTO pump
- Lights, automatic backup
- Lights, combination tail/stop, separate amber signal
- Lights, flood light, one per broom (3)
- Manuals, operator and parts
- Mirrors, West Coast type with 8" convex inserts, one each side
- Rear broom cover and anti-carryover wrap
- Rear broom spray bar
- Rear right hand flood light
- Reflectors, set of 6
- Sidebroom speed control, external to cab
- Sweep resume/raise in reverse
- Tactile controls for all sweep functions
- Tool storage
- Water fill, anti-siphon
- Water level indicator in-cab
- Water Pump, electric diaphragm
- Water tank, molded polyethylene, 360-gallon total nominal capacity
- AM/FM/CD Radio
- Left Hand Fender Mounted Mirror
- Steel Bristles with Polyethylene Segments
- Sweeper Painted Standard White
- Chassis Painted Standard White
- Red Logo
- Sweeper - Operator Manual
- Sweeper Parts Manual

ADDITIONAL FEATURES

- 2024 Freightliner M2 Chassis – Dual Drive
- Standard Electric Horn
- Sidebroom Tilt Option Right Hand Including Indicator
- In-Cab Function Control for Sidebroom Water
- Lifeliner Hopper System
- Hopper Full Indicator (volumetric)
- Autolube System - Sweeper Only
- Package 2: Single Rear/Single Hopper Beacon; LED with Guard
- Package A: LED Stop/Tail/Turn Lights
- Package B: Rear Mounted Arrowstick
- Warranty through 5th Year (Parts/Labor)
- Sweeper Service Manual
- Chassis Operators Manual
- Chassis Parts Manual
- Chassis Service Manual

Budget Price: **\$380,000.00**

Due to current market conditions and on-going supply chain issues, pricing is subject to change.

Thank you for considering C.N. Wood Enviro, LLC for your equipment needs.

LIMITED WARRANTY

ELGIN SWEEPER COMPANY warrants each new machine manufactured by it against defects in material and workmanship provided the machine is used in a normal and reasonable manner. This warranty is extended only to the original user-purchaser for a period of twelve (12) months from the date of delivery to the original user-purchaser.

ELGIN SWEEPER COMPANY will cause to be repaired or replaced, as the Company, may elect, any part or part of such machine which the Company's examination discloses to be defective in material or workmanship.

Repairs or replacements are to be made at the selling Elgin distributor's location or at other locations approved by ELGIN SWEEPER COMPANY.

The ELGIN SWEEPER COMPANY warranty shall not apply to:

1. Major components or trade accessories such as but not limited to, trucks, engines, tires or batteries that have a separate warranty by the original manufacturer.
2. Normal adjustments and maintenance services.
3. Normal wear parts such as but not limited to, broom filters, broom wire, shoe runners and rubber deflectors.
4. Failures resulting from the machine being operated in a manner or for a purpose not recommended by ELGIN SWEEPER COMPANY.
5. Repairs, modifications or alterations without the consent of ELGIN SWEEPER COMPANY which, in the Company's sole judgment, have adversely affected the machine's stability or reliability.
6. Items subjected to misuse, negligence, accident or improper maintenance.

The use in the product of any part other than parts approved by ELGIN SWEEPER COMPANY may invalidate this warranty. ELGIN SWEEPER COMPANY reserves the right to determine, in its sole discretion, if the use of non-approved parts operates to invalidate the warranty.

Nothing contained in this warranty shall make ELGIN SWEEPER COMPANY liable for loss, injury, or damage of any kind to any person or entity resulting from any defect or failure in the machine.

TO THE EXTENT LIMITED BY LAW, THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

This warranty is also in lieu of all other obligations or liabilities on the part of ELGIN SWEEPER COMPANY, including but not limited to, liability for incidental and consequential damages on the part of the Company or the seller.

ELGIN SWEEPER COMPANY makes no representation that the machine has the capacity to perform any functions other than as contained in the Company's written literature, catalogs or specifications accompanying delivery of the machine.

No person or affiliated company representative is authorized to give any other warranties or to assume any other liability on behalf of ELGIN SWEEPER COMPANY in connection with the sale, servicing or repair of any machine manufactured by the Company.

ELGIN SWEEPER COMPANY reserves the right to make design changes or improvements in its products without imposing any obligation upon itself to change or improve previously manufactured products.



10/26/20



10/26/20



10/26/20



10 / 26 / 20



304

M76905

10/26/20



10/26/20

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Department of Public Works - Highway Division	Priority #:	2
Project Title and Description: Replace 10 Wheel Dump Truck (2)	Total Project Cost:	\$378,000.00

Department/Division Head: Tim Balboni, Highway Manager \$756,000.00

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>			FY26		
<i>Labor and Materials</i>			FY27		
<i>Administration</i>			FY28		
<i>Land Acquisition</i>			FY29		
<i>Equipment</i>	\$315,000.00		FY30		
<i>Other</i>					
<i>Contingency</i>	\$63,000.00	20%			
Total Capital	\$378,000.000	X 2			

Project Justification and Objective: Frame and Dump body has rotted out. The truck had to be taken out of service.

Frame is no longer repairable.

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

2003 Volvo 10 Wheeler - 4V5KC9GF93N347526-Very poor condition

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

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

#34

MACK®



Mack Trucks
www.macktrucks.com

PRICING SUMMARY

GRANITE 64FR

10 wheeler

VEHICLE PRICE

\$192,097.00

EXTERNAL LOCALS

VEH111	\$0.00
ALLISON 5 YEAR WARRANTY	\$863.00
CHASSIS PLAN 2 60/250,000	\$4,630.00
CHASSIS TOWING 60 MO.	\$1,105.00
J C MADIGAN QUOTE	\$106,825.00

TOTAL VEHICLE PRICE \$305,520.00

SOFT OFFERS AND WARRANTY

CARB - ENGINE PLAN 2, 84 MO/250K MILES, MP7/MP8 <460HP	\$4,145.00
CARB - EATS: 84 MO/250K MI-ENGINE AFTERTREATMENT MP7/MP8 <460HP	\$815.00
ENGINE TOWING 84 MO/250K MILES	\$1,020.00
CARB + EPA for Mack MP7 / MP8 Diesel	\$3,500.00

TOTAL SOFT OFFERS AND WARRANTY \$9,480.00

TAX SUMMARY

	AMT. SUBJECT TO TAX	
FET	\$305,520.00	\$0.00
Tire Tax Credit	N/A	\$0.00

TOTAL TAX \$0.00

TOTAL SELLING PRICE (PER UNIT) USD \$315,000.00

TOWN OF PLYMOUTH

DATE

Rocky Fournier
BALLARD MACK SALES & SERVICE, INC.

10/27/23
DATE

H. Pick,

This is based on 2nd half of next year production.
If it is 2025 there is another emissions For the
State of MA Carb (CARB). The amount is unknown at
this point. However I did put the CARB Warranty on
this as precautionary. Please look over spec and let me
I'll go over that with you Know how it looks.

Thank You
Rocky

J.C. MADIGAN INC.
450 OLD UNION TURNPIKE
LANCASTER, MA.

SALES DEPT.
TEL. (978)847-2900
FAX (978)847-0068

QUOTE: TOWN OF PLYMOUTH HIGHWAY DEPT

TO ROCKY L. @ BALLARD MACK

FROM JOHN DWYER

1) 14 FT (14 TO 16 CUYD) AR450 HARDOX STEEL MONOSHELL
DUMP BODY BiBEAU MODEL BMT WITH A MAILHOT TELESCOPIC
HOIST AND 1/4" AR450 FLOOR INSTALLED ON A CITY SUPPLIED
CHASSIS UNDERCOATED AND PAINTED ONE SINGLE STAGE
COLOR

- A) 36" STEEL CABSHIELD W/ (4) RECESSED LED FLASHERS (2) FRONT (2)
SIDE
- B) REAR CORNER POST RECESSED LED FLASHERS & ST/TL/BU'S
- C) 1/4" AR450 HARDOX STEEL FLOOR / AIR TAILGATE
- D) 1" PINTLE PLATE WITH 45t PINTLE, D-RINGS, & TRAILER PLUG
- E) AERO AUTOMATIC TARPING SYSTEM W/ ALUM. ARMS
- F) BACKUP AND LIFT ALARMS WITH LED REQUIRED LIGHTING
- G) BODY SAFETY PROPS / SANDER MOUNTING PLATES
- H) POLY TANDEM FENDERS & REAR WHEEL MUDFLAPS
- I) (3) TAILGATE MTD. BiBEAU COAL DOORS
- J) DRIVER'S SIDE ACCESS LADDER W/ HANDLE
- K) WOOD SIDEBORDS 2" X 10" / SHOVEL HOLDER
- L) (2) FRONT GRILL RECESSED LED FLASHERS W/ SEPARATE SWITCH
- M) (2) REAR MOUNTED LED WORKLIGHTS

2) TRANSMISSION MOUNTED CENTRAL HYDRAULIC SYSTEM
WITH HOTSHIFT PTO, IN-CAB MOUNTED LEVER CONTROLS TO
OPERATE DUMP, 4-WAY PLOW, AND POWER BEYOND (CIRUS EZ-
SPREAD CONTROLS).

- A) 40 GALLON STAINLESS HYDRAULIC TANK WITH VENTED CAP, SIGHT
GLASS, GATE VALVE SHUTOFF, AND SPIN-ON FILTER SYSTEM.
- B) 3-LINE SANDER QUIK DISCONNECTS PIPED TO THE REAR WITH
STAINLESS LINES
- C) LOWER THE HEIGHT OF THE DUMP HANDLE

3) CUSTOM LO-MOUNT PLOW FRAME MODEL JCM INSTALLED W/
HOOD MOUNTED ABL LED PLOWLIGHTS & 30.5" ON CENTER
PLOW EARS

4) 11' 36" INTAKE 54" DISCHARGE TRIP EDGE VORTEX STYLE
STEEL MOLDBOARD SNOW PLOW EVEREST MODEL
R132TEL3654SH-(V) WITH HYDRAULIC REVERSING MODE, CURB
AND WEAR SHOES, GUIDEPOLES, AND STANDARD CUTTING
EDGE

PRICE \$106,825.00

NOTE!! / NEED 108"CT, FRONT FRAME EXT, PLOW LIGHT PREP, (6) AUX SWITCHES, BODY
BUILDERS WIRING HARNESS, PTO PROV.

OPTIONS:

A) THERMOSTATIC CONTROLLED EXHAUST VALVE FOR HEATED BODY
ADD \$6750.00

B) PAINTED STEEL ASPHALT APRON ADD \$1400.00

APPROVAL _____ DATE _____

PO# _____ 10/26/2023

TECHNICAL SPECIFICATION

GRANITE 64FR



APPLICATION PACKAGES	DESCRIPTION
CHASSIS CONFIGURATION PACKAGE	ONEBOX EATS, LH BATTERY BOX, 6.6 GALLON (25L) SLEEVED DEF, 22" SLEEVED LH FUEL TANK

CUSTOMER/VEHICLE INFO	DESCRIPTION
S CHASSIS (BASE MODEL)	GRANITE 64FR
S ASSEMBLY PLANT	Made in Macungie, PA USA
CUSTOMER FLEET SIZE	DEALER FLEET WITH LESS THAN 25 VEHICLES IN OWN FLEET OF ANY VEHICLE BRAND
TYPE OF SERVICE	MUNICIPAL
S WARRANTY REGISTRATION LOCATION	USA - WARRANTY REGISTRATION LOCATION
EMISSION WARRANTY CERTIFICATION	CARB + EPA for Mack MP7 / MP8 Diesel
INTENDED REGISTRATION LOCATION	MASSACHUSETTS
S INITIAL REGISTRATION LOCATION	USA REGISTRATION
BRAND ORNAMENT	BULLDOG BRAND ORNAMENT, CHROME
S LANGUAGE-PUBS/DECAL/SIGNS	ENGLISH
S ROAD CONDITION	WELL MAINTAINED SURFACED ROADS >95% DRIVING DISTANCE
VEHICLE USE & BODY/TRAILER TYPE	SNOW PLOW FRONT MOUNTED
TRAILER TYPE	FIXED DRAWBAR TRAILER AND CENTERED AXLES
GROSS COMBINATION WEIGHT (CA in PC29 only)	80,000 LB (36 TONNES) GROSS COMBINATION WEIGHT
S BRAKE REGULATION	BRAKE REGULATION, STOPPING DISTANCE 94M (310FT)
TOPOGRAPHY	GRADES <3% GREATER THAN 98% OF DRIVING DISTANCE MAX GRADE 8%
S AMBIENT TEMP UPPER LIMIT (GTA)	AMBIENT TEMPERATURE HOT. WARMER THAN 104 F (40 C) ALLOWED UP TO 25 HOURS PER YEAR
S OPERATING TERRAIN GRADE CONDITIONS	ON-OFF HIGHWAY, STARTING GRADES<18%
S LOADING SURFACE FACTOR	CONCRETE LOADING AND / OR UNLOADING SURFACE
VEHICLE VOCATION	CONSTRUCTION SERVICE

ENGINE/TRANSMISSIONS	DESCRIPTION
ENGINE PACKAGE, COMBUSTION	MP8-425C MACK 425HP @ 1500-1700 RPM (PEAK) 2100 RPM (GOV) 1550 LB-FT, US'21
S GHG APPLICATION, VEHICLE	GREEN HOUSE GAS VOCATIONAL APPLICATION
TRANSMISSION	4500 RDS 6 SPEED ALLISON GEN 6 W/PROGNOSTICS, WITH PTO PROVISION
S GEARBOX 12TH GEAR LOCK-OUT	WITHOUT 12TH GEARBOX GEAR LOCK-OUT

EXHAUST/EMISSIONS	DESCRIPTION
NOX LIMITS	CARB LEGACY / EPA (200MG/HP/HR), 50 State Idle Compliance
S IDLE EMISSION LABEL LOCATION (CA in PC29 only)	IDLE EMISSION LABEL LOCATION, LOWER LH CORNER OF DRIVER DOOR
S DPF DIESEL PARTICULATE FILTER	CLEARTECH ONE BOX E.A.T.S. RH SIDE UNDER CAB US17 / US21
S CHASSIS MOUNTED EMISSIONS FINISH	W/O DEF COVER & PAINTED DPF COVER
S DIESEL EXHAUST FLUID TANK	6.6 GALLON (25 L) 22" LEFT SIDE FUEL TANK MTD
EXHAUST	SINGLE VERTICAL RIGHT SIDE CAB MOUNTED, LOWER VENTURI DIFFUSER, TURNED END
EXHAUST STACK HEIGHT	9' 6" FROM GROUND
EXHAUST SYSTEM MATERIAL FINISH	SINGLE, BRIGHT FINISH HEAT SHIELD, STACK
EMISSION ON BOARD DIAG CONTROL	EMISSION OBD, DISPLAY ONLY, USA2024

TECHNICAL SPECIFICATION (cont.)



ENGINE EQUIPMENT		DESCRIPTION
S	AIR CLEANER	UNDER HOOD SINGLE ELEMENT DRY TYPE W/AIR INTAKE FROM BOTH SIDES OF HOOD
S	BUG SCREEN	BLACK ALUMINUM BUG SCREEN MOUNTED BEHIND GRILLE, WITHOUT WINTER FRONT COVER
	AIR COMPRESSOR/DRYER	WABCO AIR HEATED SS-HP AIR DRYER W/ WABCO 318 (18.7 CFM) AIR COMPRESSOR
S	AIR DRYER POSITION (CA)	AIR DRYER POSITION STANDARD
S	ALTERNATOR	DELCO 12V 160A (28SI) BRUSH-TYPE
S	BATTERIES	(3) MACK 12V 760/2280 CCA THREADED STUD TYPE
S	BATTERY BOX - MOUNTING (x)	LH RAIL UNDER CAB FORWARD OF FUEL TANK (3 BATTERY MAX)
S	BATTERY BOX COVER	MOLDED PLASTIC
	BATTERY DISCONNECT SWITCH	FLAMING RIVER BIG SWITCH WIRED TO POSITIVE SIDE
	STARTER MOTOR	12 VOLT MELCO STARTER (MITSUBISHI ELECTRIC)
	ENGINE BRAKE	MACK MP8 POWERLEASH
S	ENGINE BRAKE LIGHTING (CA)	VEHICLE AND TRAILER (IF APPLICABLE) STOP LAMPS ACTIVATE UPON SERVICE BRAKE APPLICATION ONLY(3899000)
S	FAN DRIVE	BEHR FAN AND ELECTRONIC MODULATING VISCOUS FAN DRIVE
S	COOLANT PROTECTION	ETHYLENE GLYCOL FULLY FORMULATED COOLANT (50/50 MIX DYED PINK) TO -34DEG, W/ FILTER
	HOSES - RADIATOR/HEATER	SILICONE RADIATOR AND HEATER HOSES
S	FUEL-WATER SEPARATOR	MACK W/MANUAL DRAIN VALVE V2 (INTEGRAL W/ PRIMARY FUEL FILTER)
S	PRIMARY FUEL FILTER POSITION (CA)	STANDARD FUEL FILTER POSITION
S	ENGINE HEATERS	120v 1500w BLOCK HEATER ONLY (120V-15A PLUG)
	OIL SUMP	CORROSION RESISTANT OIL PAN
S	ENGINE STOP, EMERGENCY (CA in PC29 only)	WITHOUT ENGINE STOP, EMERGENCY

CLUTCH/TRANS EQUIPMENT		DESCRIPTION
	GEAR SHIFTER	ALLISON DASH MOUNTED SHIFTER W/NEUTRAL TO RANGE INHIBIT (HD SERIES)
S	CLUTCH ACTUATION SYSTEM & PEDAL PAD	WITHOUT CLUTCH CABLE SYSTEM
	MINIMUM REQUIRED PROP SHAFT SIZE	MINIMUM REQUIRED FOR KAX PROP SHAFT, PROPS-L
	DRIVELINE - MAIN	SPICER 1810 HD W/COATED SPLINES (PROPS-L)
	DRIVELINE - INTERAXLE	SPICER 1810 W/COATED SPLINES
	PROPELLR SHAFT MAIN, UNVSL JNT	UNIVERSAL JOINT HALF-ROUND TYPE
S	PROP SHAFT INTERAXL UNIV JOINT	HALF-ROUND UNIVERSAL JOINT
S	TRANSMISSION OUTPUT TORQUE	TRANSMISSION OUTPUT TORQUE BASIC
	LUBRICANTS, TRANSMISSION	TRANSYND SYNTHETIC LUBE FOR ALLISON TRANS
	TRANSMISSION OIL COOLER	ALLISON 4xxx SERIES TRANSMISSION W/DIRECT MOUNT COOLER & SS COOLANT TUBES

FRONT AXLE EQUIPMENT		DESCRIPTION
	FRONT AXLE	20000# (9100 KG) MACK FXL20 STRAIGHT SPINDLE/UNITIZED BEARINGS
	SPRINGS - FRONT	MACK TAPERLEAF HD 20000# (9100 KG) GROUND LOAD RATING, EQUAL BIAS
S	FRONT AXLE BRAKES	MERITOR "S" CAM TYPE 16.5" x 6" Q+
S	BRAKE, FRONT	CAST IRON
	FRONT AXLE BRAKE DUST SHIELD	DUST SHIELDS FOR FRONT AXLE
S	FRONT BRAKE ADJ. MANUFACTURE	HALDEX - AUTOMATIC
S	FRONT BRAKE CHAMBER MFG.	FRONT BRAKE CHAMBER MANUFACTURER, HALDEX
S	HUB MATERIAL, FRONT	FERROUS
S	FRONT AXLE LUBRICANT	FRONT AXLE LUBE, FAG NLGI2 GREASE

TECHNICAL SPECIFICATION (cont.)



FRONT AXLE EQUIPMENT		DESCRIPTION
S	SHOCK ABSORBER, FRONT STEERING	DOUBLE ACTING TYPE SHEPPARD SD110 + HD94

REAR AXLE EQUIPMENT		DESCRIPTION
	REAR AXLE	58000# (26300kg) MACK S582 CAST DUCTILE IRON HOUSING.
S	REAR AXLE CASING WIDTH	W/O WIDE TRACK AXLE
S	DRIVE AXLE LUBRICANT	DRIVE AXLE LUBE, SHELL 75W90 SYNTHETIC OIL
S	CARRIER - REAR AXLE	150/151 SERIES (Tandem Mack Rear Axles up to 150,000lb GCW)
S	POWER DIVIDER LOCKOUT	INTERAXLE POWER DIVIDER LOCKOUT, W/BUZZER & LIGHT
	REAR AXLE RATIO	4.50 RATIO
	REAR SUSPENSION	SS58 MACK CAMELBACK MULTILEAF 58,000 lb, HEAVY DUTY
	BOGIE SPREAD, REAR	54" AXLE SPACING (BOGIE WHEELBASE)
S	AUX.SPRING BRAKE QTY	AUX SPRING BRAKE QTY, 4 CHAMBERS
	BRAKES - REAR	MERITOR "S" CAM 18"x7.0 P (Total for QTY = 2)
S	BRAKE, DRIVE, REAR	CAST IRON
S	REAR BRAKE ADJ MANUFACTURE	HALDEX - AUTOMATIC (Total for QTY = 2)
	DRIVE AXLE BRAKE DUST SHIELD	DUST SHIELDS FOR REAR AXLE
	REAR BRAKE CHAMBER SIZE	REAR SPRING BRAKE CHAMBERS 30/30 TYPE
	BRAKE ORI REAR-MOST DRIVE AXLE	DRUM BRAKE CHAMBER ORIENTATION: High Mount - Rear of Axle - Chamber Down
	PARKING BRAKE CHAMBER	HALDEX "LIFE SEAL PLUS" (3" STROKE) BRAKE CHAMBERS (Total for QTY = 2)
	HUB MATERIAL, DRIVE	FERROUS
S	ANTILOCK BRAKE SYSTEM	BENDIX WITH TRACTION CONTROL 4S4M
S	BRAKE VALVE VERSION	BENDIX SWITCHES AND VALVES WHERE POSSIBLE
S	TRACTION CONTROL DISABLE (CA in PC29 only)	AUTOMATIC TRACTION CONTROL (ATC) FULL DISABLE SWITCH

FRAME EQUIPMENT/FUEL TANKS		DESCRIPTION
	WHEELBASE	197"
	AF (OVERHANG)	67"
	FRAME RAILS & LINERS	11.1 x 90 x 300mm - (0.437" x 3.54" x 11.81")W/ Partial Liner; RBM 3,920,000 LB-IN
	RUST PROTECTION (for frame), ADDITIONAL	RUST PROTECTION BETWEEN FRAME RAILS AND LINERS
	FRONT FRAME LENGTH	BUMPER POSITION EXTENDED 20" (SNOW)
	CROSSMEMBERS	BOC AND INTERMEDIATE CROSSMEMBERS, HD I-BEAM
S	REAR CROSSMEMBER OPTIONS	STEEL CLOSING REAR CROSSMEMBER
S	REAR FRAME TREATMENT	WITHOUT TAPERED FRAME RAIL ENDS
S	FRONT BUMPER	EXTENDED-SWEPT BACK-STEEL
S	CROSSMEMBER, BOGIE TYPE	BASIC SOLUTION TRUNNION BRACKET, STD HEIGHT
S	TOWING DEVICE, FRONT	HOOKS
S	FUEL LEVEL SENDER UNIT, LIQUID	BASIC FUEL LEVEL SENDER MOUNTED ON L.H TANK
	FUEL TANK - LH	88 GALLON (335 L) 22" ALUMINUM, SLEEVED D-SHAPED
S	FUEL TANK - RH	W/O RH FUEL TANK
S	FUEL HOSES, LIQUID	BRAIDED HOSE
S	FUEL FILLER NECK OPTIONS	WITHOUT FILLER NECK SCREEN, WITH NON-LOCKABLE FUEL TANK CAP
	FUEL LINE OPTIONS, LIQUID	W/O FUEL LINE OPTION
S	CAB INSTEP VERSION	STANDARD 2 STEP CAB ACCESS
S	STEPS (BRIGHT) - FUEL TANK	STANDARD FINISH STEPS AND BRIGHT FINISH STRAPS

TECHNICAL SPECIFICATION *(cont.)*



AIR/BRAKE		DESCRIPTION
S	AIRTANK DRAIN VALVE	MANUAL (PETCOCK) DRAIN VALVES ON ALL TANKS
	AIRTANK MATERIAL	ALUMINUM AIR TANK PAINTED CHASSIS COLOR
S	RELOCATE AIR RESERVOIRS	W/O RELOCATED AIR TANKS
	PARKING BRAKE VALVE	TWO (2) VALVE DUAL BRAKE SYSTEM - TRAILER SUPPLY AND TRACTOR-TRAILER PARK

ELECTRICAL		DESCRIPTION
	BACK-UP ALARM	ECCO BACK-UP ALARM 575 CONSTANT SOUND LEVEL 107 dB
	DASH MOUNTED SWITCHES	(4) 15A, IGNITION POWERED, (2) 15A BATTERY POWERED, ALL LATCHING ON/OFF
S	ROOF & SIDE MARKER LIGHTS	(5) TRUCKLITE CHROME BULLET ROOF MARKER & STANDARD MARKER / DIRECTIONAL SIGNAL
	AUXILIARY LAMPS (CA in PC29 only)	DASH CONTROL & POWER SUPPLY FOR LOCAL INSTALL OF AUX SNOWPLOW LAMPS OVERRIDE DAYTIME RUNNING LIGHTS
S	HEADLAMP BULB TYPE	HEADLAMP BULB TYPE, LED, HEATED
S	DAYTIME RUNNING LIGHTS	W/OVERRIDE SWITCH, PARK BRAKE & ENGINE RUNNING ACTIVATED
S	DRL OVERRIDE SPEED THRESHOLD	DRL OVERRIDE SPEED THRESHOLD 8 KMPH (5 MPH)
S	TAIL LAMPS	INCANDESCENT TAIL LAMPS

TRAILER CONNECTIONS		DESCRIPTION
	TRAILER BRAKE VALVE	HAND CONTROL VALVE FOR TRAILER OR REAR SERVICE BRAKES - DUAL FUNCTION
	TRAILER CONNECTION POSITION	TRAILER AIR BRAKE CONNECTIONS, END OF FRAME
	TRAILER ELECTRICAL RECEPT	SINGLE 7 PINS STD SAE TYPE, END OF FRAME

PTO		DESCRIPTION
	POWER TAKE OFF CONTROL	TRANSMISSION PTO SWITCH AND LIGHT WITH WIRING AND PIPING FOR LOCAL INSTALLATION
S	BODY BUILDER INTERFACE	BODY LINK III W/CAB PASS-THRU

SPECIALTY EQUIPMENT		DESCRIPTION
S	LANE SUPPORT SYSTEM (LSS)	WITHOUT LANE SUPPORT SYSTEM
S	DATA CAPTURE	WITHOUT DATA CAPTURE
S	CAMERA, SURVEILLANCE	WITHOUT CAMERA

CAB INTERIOR (A THRU G)		DESCRIPTION
S	SPEEDOMETER &- GAUGES - UNIT(s) OF MEASURE	U.S. UNITS (PREDOMINANT)
	GAUGE - PACKAGE, SECONDARY	2ND GA PKG W/ENG OIL TEMP, TRANS OIL TEMP, PYRO, BOOST PRESS
	GAUGE OIL TEMP-REAR AXLE	REAR AXLE OIL TEMP GAUGE IN DID (DRIVER INFORMATION DISPLAY)
	AUXILIARY PNEUMATIC OUTLET CAB (CA family in PC29 only)	AUX. INCAB PNEUMATIC LINE CLEANOUT
S	AIR CONDITIONING/HEATER	BLEND AIR HVAC W/"ATC" TEMP REGULATION
S	CUPHOLDER	CUPHOLDER
S	DOME LAMP, INTERIOR	(4) DOME LAMPS - DOOR AND SWITCH ACTIVATED
S	DASH INDICATOR - LAMP BODY OUT OF POS	DASH MTD, INDICATOR BODY/HOIST UP "BODYBUILDER LAMP"
	FIRE EXTINGUISHER	5LB (ABC RATED) MOUNTED BETWEEN DRIVER SEAT BASE AND DOOR VALVE AIMED REARWARD
S	FLOOR COVERING	POLYURETHANE FLOOR MAT WITHOUT REMOVABLE INSERTS

TECHNICAL SPECIFICATION (cont.)



CAB INTERIOR (H THRU R)		DESCRIPTION
S	INSTMT CLUSTER LANGUAGE	DEFAULT: ENGLISH, SPANISH, FRENCH
S	KEY TYPES FOR DOORS	ALL CHASSIS KEYED AT RANDOM
S	DOOR OPENING OPTIONS	W/O ELECTRONIC KEYLESS ENTRY
S	FORWARD OVERHEAD STORAGE	(2) STORAGE COMPARTMENTS AND NET RETAINERS W/CENTER MOUNTING FOR CB PROVISIONS
S	AUDIO ACCOMMODATION	PREMIUM STEREO, AM/FM, MP3, WEATHER BAND, BLUETOOTH
S	ANTENNA - RADIO	RADIO ANTENNA, CAB MOUNTED BEHIND LH DOOR
	ANTENNA - CB RADIO	PREP KIT FOR MOUNTING ON LT SIDE MIRROR (W/O ANTENNA)
S	AUDIO SHUTOFF	AUTO SHUTOFF FOR RADIO ENTERTAINMENT SYSTEM WHEN VEHICLE IS ENGAGED IN REVERSE
S	POWER LEADS	POWER LEADS (5-WAY BINDING POSTS FOR CB RADIO) IN HEADER CONSOLE
S	AUDIO SPEAKER LOCATION	SPEAKER LOCATION, IN DOORS, MIDDLE HIGH SIDE PANEL
S	COM.RADIO PREP KIT (CB)	CB RADIO MOUNTING REINFORCEMENT IN HEADER CONSOLE
S	REAR WALL STORAGE COMPARTMENT	STORAGE POUCH REAR
	REFLECTOR KIT	EMERGENCY REFLECTOR KIT MOUNTED PARALLEL & CENTERED AGAINST BOC

CAB INTERIOR (S THRU Z)		DESCRIPTION
	INTERIOR TRIM LEVELS	COMFORT TRIM PACKAGE, SIERRA TAN (Package 11B)
S	SEAT - DRIVER'S	MACK-AIR, HIGH BACK, 1 CHAMBER AIR LUMBAR
	SEAT COVERING - DRIVER'S	DRIVER'S SEAT - SIERRA TAN VINYL
	SEAT - PASSENGER'S	MACK-FIXED, HIGH BACK, W/ STORAGE BOX
	SEAT COVERING - PASSENGER'S	PASSENGER'S SEAT - SIERRA TAN VINYL
	SEAT ARMREST	INBOARD MOUNTED ARM REST, DRIVER'S & RIDER'S SEAT
S	SEAT BELT(S)	LAP & SHOULDER (BOTH SEATS) CAB MOUNTED SHOULDER BELT ADJUSTMENT
S	SEAT BELT REMINDER	SEAT BELT REMINDER IN INSTRUMENT, WITH AUDIO
S	IGNITION TYPE	KEY TYPE
S	STEERING WHEEL	2 SPOKE URETHANE GRIP, SATIN ALUMINUM SPOKES, WITH SWITCHES
S	WINDSHIELD TYPE	TWO PIECE WINDSHIELD
	CAB GLASS	HEATED TINTED WINDSHIELD, GUARDIAN ENHANCED PROTECTIVE REAR GLASS W/SAFEFLEX; 50% TRANSMITTANCE
S	WASHER RESERVOIR POSITION	W/O WINDSHIELD WASHER OPTION
S	WINDSHIELD WIPERS	2 SPEED ELECTRIC MOTOR W/INTERMITTENT FEATURE

CAB EXTERIOR		DESCRIPTION
S	HOOD LATCH TYPE & FINISH	STRAP TYPE HOOD LATCH WITH BLACK FINISH
S	EXTERIOR TRIM FINISH AND PACKAGES	GRANITE BRIGHT AIR INTAKE
	GRILLE	BRIGHT FINISH BARS W/BRIGHT FINISH SURROUND GRILL MOUNTED
S	PASSENGER SIDE VISIBILITY OPTIONS	AUXILIARY WINDOW IN RH DOOR
	GRAB HANDLES	BF EXTERIOR CAB GRAB HANDLES, BLACK GRAB HANDLE RH INTERIOR WINDSHIELD POST
	HOOD HATCH	WITH INSPECTION HATCH FOR SNOWPLOW HOOD
	HORN - AIR	(2) MACK RECTANGULAR SINGLE TRUMPET, BRIGHT FINISH ALUMINUM W/SNOW SHIELDS
S	HORN - ELECTRICAL	DUAL TONE
	MIRRORS - EXTERIOR	FLAT MIRROR - POLISHED ALUMINUM FINSH, HEATED, W/O LAMPS
	MIRRORS - CONVEX TYPE CAB DOORS	BRIGHT FINISH, LH & RH, 8" DIAMETER HEATED CONVEX
	SUN VISOR - EXTERIOR	SUN VISOR, EXTERIOR, FIBERGLASS (PAINTED)

TECHNICAL SPECIFICATION (cont.)



AERODYNAMIC DEVICES		DESCRIPTION
S	CAB AERODYNAMIC PACKAGES	WITHOUT CAB AERODYNAMIC DEVICES
S	FRONT CHASSIS AERODYNAMIC PACKAGE	WITHOUT FRONT AERODYNAMIC FAIRINGS

WHEELS & TIRES		DESCRIPTION
	TIRES BRAND/TYPE - FRONT	315/80R22.5 L CONTINENTAL HAU3 WT (20000 lbs) (Total for QTY = 2)
	WHEELS - FRONT	22.5x9.00 ALCOA 89U64x CLEAN BUFFED ALUMINUM, 6.94" OFFSET, 10 HAND HOLE (Total for QTY = 2)
	TIRES BRAND/TYPE - REAR	11R24.5 H BRIDGESTONE M799 (26440 lbs) (DRIVE ONLY) (Total for QTY = 8)
	WHEELS - REAR	24.5x8.25 ALCOA 98565x SEVERE SERVICE, CLEAN BUFFED ALUMINUM, 6.60" OFFSET, 10 HAND HOLE (Total for QTY = 8)
S	TIRE INFLATION VALVE	STANDARD VALVE STEMS AND CAPS
S	FRONT HUB/WHEEL TRIM	WITHOUT FRONT HUB/WHEEL TRIM
S	REAR HUB/WHEEL TRIM	WITHOUT REAR HUB/WHEEL TRIM (Total for QTY = 2)
S	WHEEL NUT & FINISH, FRONT	WHEEL NUT BASIC FINISH, FRONT
S	WHEEL NUT FINISH, REAR (CA)	WHEEL NUT BASIC FINISH, REAR

COMMUNICATION SYSTEMS		DESCRIPTION
S	CO-PILOT - DISPLAY FEATURES ACCESS LEVEL	CO-PILOT DISPLAY, DRIVER ACCESS LEVEL 1
S	TELEMATIC GATEWAY	TELEMATICS GATEWAY, 4G/LTE AND WLAN SYSTEM WITH DIAGNOSTIC SERVICES

ENGINE ELECTRONICS		DESCRIPTION
S	OIL PRESSURE, ENGINE SHUTDOWN	OIL PRESSURE, ENGINE SHUTDOWN
S	COOLANT TEMP, ENGINE SHUTDOWN	COOLANT TEMP, ENGINE SHUTDOWN
S	ENGINE PROTECTION SYSTEM	ENGINE PROTECTION (SHUTDOWN)
	ENG FAN CNTL, A/C ON, TIME SET	ENG FAN CONTROL, A/C ON, TIME SETTING, 60 SEC
S	ENGINE IDLE CONTROL	IDLE CONTROL, 600 RPM
S	SMART IDLE ELEVATED IDLE RPM TIME	INCREASE 10 MINUTE MAXIMUM TIME
S	IDLE S/D ABS TAMPER CHECK	IDLE SHUTDOWN ABS TAMPER CHECK, ENABLED
S	IDLE S/D WARNING TIME	30 SEC IDLE S/D WARNING TIME
S	IDLE S/D IF WARM-UP TEMP	38C DEG (100F), WARM UP TEMP DELAY
S	IDLE S/D WARM-UP TIMER	5 MIN. WARM UP TIME DELAY
S	IDLE S/D IF PTO ACTIVE	ENGINE IDLE SHUTDOWN TIME OVERRIDDEN IF PTO ACTIVE
S	IDLE SHUTDOWN IF POWER > LIMIT	ENG IDLE SHUTDOWN TIME OVERRIDDEN IF TORQUE > THAN LIMIT
S	IDLE S/D OVERRIDE %ENGINE LOAD	IDLE SHUTDOWN OVERRIDE UPTO 20% ENGINE LOAD THRESHOLD
S	AMBIENT TEMP MIN TRESHOLD	AMBIENT TEMP MIN TRESHOLD, 16 DEG C, (60 DEG F)
S	AMBIENT TEMP MAX TRESHOLD	AMBIENT TEMP MAX TRESHOLD, 27 DEG C, (80 DEG F)
S	EL HD THROTTLE,MAX ROAD SPEED	ELECTRONIC HAND THROTTLE, MAX ROAD SPEED, 16 KM/H (10 MPH)
S	EL HAND THROTTLE,MAX ENG SPEED	ELECTRONIC HAND THROTTLE, MAX ENGINE SPEED, 1000 RPM
S	EL HAND THROTTLE,MIN ENG SPEED	ELECTRONIC HAND THROTTLE, MIN ENGINE SPEED, 700 RPM
S	EL HD THROTTLE,SPEED RAMP RATE	ELECTRONIC HAND THROTTLE, SPEED RAMP RATE, 100 RPM/SEC

TRANSMISSION ELECTRONICS		DESCRIPTION
	TRANSMISSION ELECTRONICS PACKAGE	DUMP/VOC/PLOW(223) - ALLOWS TRUCK TO BE PUT IN GEAR W/O SERVICE BRAKE (FOR PAVING) (4TH GEAR LIMIT S
	TRANSM AUTO NEUTRAL ON P-BRAKE	ALLISON PARK BRAKE AUTO NEUTRAL-ALLOWS THE DRIVER TO ENGAGE GEAR PRIOR TO DISENGAGING THE PARK BRAKE
	TRANSMISSION ELECTRONIC SHIFTING PROPERTIES	FUELSENSE, FULL NEUTRAL AT STOP

PRICELIST DATE
20230717

QUOTATION
PICK2023000671A458

DATE
10/27/2023

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TECHNICAL SPECIFICATION *(cont.)*



VEHICLE ELECTRONICS		DESCRIPTION
S	ROAD SPEED LIMITER SETTING	105 KM/H ROAD SPEED LIMITER (65MPH)
S	PEDAL RSL SETTING	101 KM/H PEDAL ROAD SPEED LIMITER (63MPH)
S	CRUISE CONTROL	CRUISE CONTROL
S	CRUISE CONTROL, MAX SPEED	MAX CRUISE, 105 KPH (65 MPH)
S	CRUISE CONTROL MIN SPEED	MIN CRUISE, 32 KPH (20 MPH)
S	ENG BRK ENGAGE IN CRUISE	ENG BRK ENGAGE IN CRUISE, 3 MPH, ABOVE SET SPEED
	PDLO ENGAGED VLS	POWER DIVIDER LOCK OUT (PDLO) ROAD SPEED LIMIT 24KMH (15MPH)
	DIFF LOCK SPEED LIMIT	WITHOUT DIFFERENTIAL LOCK ROAD SPEED LIMIT
S	MAXIMUM ENG SPEED AT 0 MPH	1000 MAXIMUM ENGINE SPEED AT 0 MPH
S	DETECTION SPEED SENSR TMRNG	DETECTION OF SPEED SENSOR TAMPERING, ENABLE
S	ENG TORQUE LIMIT, SPEED SENSOR	ENG TORQUE LIMITED TO 50%, IF SPEED SENSOR TAMPER DETECTED
S	DRIVER ID FUNCTION	DRIVER ID FUNCTION, DISABLED
S	DR PERFORMANCE PARAMETERS	WITHOUT DRIVER PERFORMANCE PARAMETERS
S	ENGINE OVERSPEED, ALL COND, LOG	ENGINE OVERSPEED, ALL CONDITIONS, TIME LOG IF ABOVE 2200 RPM
S	ENGINE OVERSPEED, FUELED, LOG	ENGINE OVERSPEED, FUELED, TIME LOG IF ABOVE 2100 RPM
S	VEHICLE OVERSPEED, ALL COND, LOG	VEHICLE OVERSPEED, ALL COND, TIME LOG IF ABOVE 75MPH (121KMH)
S	VEHICLE OVERSPEED, FUELED, LOG	VEHICLE OVERSPEED, FUELED, TIME LOG IF ABOVE 70MPH (113KMH)
S	ENGINE IDLE DELAY TO LOG	ENGINE IDLE DELAY TO START LOG, 2 MIN
S	PERIODIC TRIP LOG DAY OF MONTH	PERIODIC TRIP LOG, DAY 1 OF THE MONTH

PTO ELECTRONICS		DESCRIPTION
S	PTO1 SINGLE SPEED CONTROL RPM.	PTO 1ST, SINGLE SPEED SETTING, 1000 RPM
S	PTO 1ST, MAX ROAD SPEED	1ST PTO, MAX ROAD SPEED, 10 MPH (16 KPH)
S	PTO 1ST, SPEED RAMP RATE	PTO 1ST, SPEED RAMP RATE 100 RPM/SEC
S	PTO 1ST, MAX ENGINE SPEED	PTO 1ST, MAX ENGINE SPEED, 2100 RPM
S	PTO 1ST, ROAD SPEED LIMIT	PTO 1ST, ROAD SPEED LIMIT, 97 KMH (60 MPH)
S	PTO 1ST, MINIMUM ENGINE SPEED	PTO 1ST, MINIMUM ENGINE SPEED, 600 RPM
S	PTO 2ND, SINGLE SPEED SETTING	PTO 2ND, SINGLE SPEED SETTING, 1000 RPM
S	PTO 2ND, MAX ROAD SPEED	2ND PTO, MAX ROAD SPEED, 10 MPH (16 KPH)
S	PTO 2ND, SPEED RAMP RATE	PTO 2ND, SPEED RAMP RATE 100 RPM/SEC
S	PTO 2ND, MAX ENGINE SPEED	PTO 2ND, MAX ENGINE SPEED, 2100 RPM
S	PTO 2ND, ROAD SPEED LIMIT	PTO 2ND, ROAD SPEED LIMIT, 97 KMH (60 MPH)
S	PTO 2ND, MINIMUM ENGINE SPEED	PTO 2ND, MINIMUM ENGINE SPEED, 600 RPM

PAINT		DESCRIPTION
S	PAINT DESIGN	SINGLE COLOR
S	PAINT TYPE	SOLID PAINT
	PAINT COLOR - FIRST COLOR	MACK GREEN; P9014
S	PAINT COLOR - SECOND COLOR	NO SECOND TRUCK COLOR PROVIDED; NO COLOR
S	PAINT COLOR - THIRD COLOR	NO THIRD TRUCK COLOR PROVIDED; NO COLOR
S	PAINT - CAB PAINT SYSTEM	PAINT - CAB, URETHANE CLEAR COAT
S	CAB COLOR	SAME AS FIRST COLOR - CAB
S	HOOD COLOR	SAME AS FIRST COLOR - HOOD
	SUN VISOR COLOR	SAME AS FIRST COLOR - SUN VISOR
S	SLEEPER ROOF COLOR	WITHOUT SLEEPER ROOF COLOR

TECHNICAL SPECIFICATION (cont.)



PAINT	DESCRIPTION
S	ROOF FAIRING COLOR WITHOUT ROOF FAIRING
S	CHASSIS RUNNING GEAR MACK BLACK (URETHANE); P3036
S	BUMPER PAINT BUMPER SAME COLOR AS CHASSIS RUNNING GEAR
S	FUEL TANK - ***NO INVENTED VARIANTS ALLOWED In the FUEL TANK PAINT FAMILY*** W/O OPTIONAL FUEL TANK PAINT
S	HUBS & DRUMS-FRONT SAME AS CHASSIS RUNNING GEAR
S	HUBS & DRUMS-REAR SAME AS CHASSIS RUNNING GEAR

CALCULATED CODES - KAX	DESCRIPTION
S	PROPCALC SELECTION YES, THE ORDER MUST BE CALCULATED
	AUTO ROUTING & CLIPPING, CENTER AUTOMATIC ROUTING & CLIPPING PLACEMENT, CENTER SECTION

BASE WARRANTY & PURCHASED COVERAGES	DESCRIPTION
	VEHICLE WARRANTY TYPE SEVERE DUTY WARRANTY CLASSIFICATION
	BASIC CHASSIS COVERAGE SEVERE DUTY STANDARD BASE COVERAGE 12 MONTHS/100,000 MILES (161,000 KM)
	EMISSION - SURCHARGE CARB + EPA for Mack MP7 / MP8 Diesel
	ENGINE WARRANTY CARB - ENGINE PLAN 2, 84 MO/250K MILES, MP7/MP8 <460HP
	EMISSION COMPONENT COVERAGE US and CANADA CARB EQUIPPED VEHICLE EMISSION COMPONENTS COVERAGE 60 MONTHS/350,000 MILES
	TRANSMISSION WARRANTY ALLISON TRANSMISSIONS (Contact Allison Transmission for standard warranty and extended coverage data)
	CARRIER & AXLE HOUSING WARRANTY STANDARD MACK SEVERE DUTY COVERAGE 24 MONTHS / 100,000 (160,934 KM)
S	AIR CONDITIONING WARRANTY AIR CONDITIONING STANDARD COVERAGE (Sealed System Only) 12 MONTHS UNLIMITED MILEAGE
	CHASSIS TOWING WARRANTY STANDARD SEVERE DUTY CHASSIS TOWING - NOT APPLICABLE
	ENGINE TOWING WARRANTY ENGINE TOWING 84 MO/250K MILES
S	GUARDDOG CONNECT BUNDLE NO GUARDDOG CONNECT (ASIST & MACK ONECALL)

SERVICES	DESCRIPTION
	MACK INTEGRATED UPTIME MACK INTEGRATED UPTIME - 84 MONTHS
S	FLEET INTEGRATION WITHOUT FLEET INTEGRATION
S	PARTNERED SERVICES NO PARTNERED SERVICES PROVIDED

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Department of Public Works - Highway Division	Priority #:	3
Project Title and Description: Replace 2007 6 Wheel Dump Truck	Total Project Cost:	\$341,670.00

Department/Division Head: Tim Balboni, Highway Manager \$1,025,010.00

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>			FY26		
<i>Labor and Materials</i>			FY27		
<i>Administration</i>			FY28		
<i>Land Acquisition</i>			FY29		
<i>Equipment</i>	\$284,725.00		FY30		
<i>Other</i>					
<i>Contingency</i>	\$56,945.00	20%			
Total Capital	\$341,670.00	X 3			

Project Justification and Objective: Truck is in poor condition. Engine issues, rot, and rust Dump body is no longer operable

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 International 6-Wheel Dump Truck - 1HTW0AAR77J464332

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

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

#38

MACK®



Mack Trucks
www.macktrucks.com

PRICING SUMMARY

GRANITE 42FR

6 Wheeler

VEHICLE PRICE

	\$172,522.00
EXTERNAL LOCALS	
VEH111	\$0.00
ALLISON 5 YEAR WARRANTY	\$863.00
J C MADIGAN QUOTE	\$96,125.00

TOTAL VEHICLE PRICE	\$269,510.00
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SOFT OFFERS AND WARRANTY

CHASSIS PLAN 2 60/250K MI NORMAL/HEAVY DUTY, GRANITE/TERRAPRO/LR MODELS PROTECTION PLAN	\$4,630.00
CARB - ENGINE PLAN 2, 84 MO/250K MILES, MP7/MP8 <460HP	\$4,145.00
CARB - EATS: 84 MO/250K MI-ENGINE AFTERTREATMENT MP7/MP8 <460HP	\$815.00
CHASSIS TOWING 60 MO/250K MILES	\$1,105.00
ENGINE TOWING 84 MO/250K MILES	\$1,020.00
CARB + EPA for Mack MP7 / MP8 Diesel	\$3,500.00

TOTAL SOFT OFFERS AND WARRANTY	\$15,215.00
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TAX SUMMARY

AMT. SUBJECT TO TAX

FET	\$269,510.00	\$0.00
Tire Tax Credit	N/A	\$0.00

TOTAL TAX	\$0.00
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TOTAL SELLING PRICE (PER UNIT) USD	\$284,725.00
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TOWN OF PLYMOUTH

DATE

BALLARD MACK SALES & SERVICE, INC.

DATE

Rocky Lavin

10/27/23

Hi Rick

This is based on 2nd half of 2024 production.
If it is 2025 there is another emissions and
is subject to the emissions surcharge.

I'll go over that w/you. However I did
put the CARB Warranty on the quote. Please look
over the spec and let me know how it looks.

Rocky

J.C. MADIGAN INC.
450 OLD UNION TURNPIKE
LANCASTER, MA.

SALES DEPT.
TEL. (978)847-2900
FAX (978)847-0068

QUOTE: TOWN OF PLYMOUTH HIGHWAY DEPT

TO ROCKY L. @ BALLARD MACK

FROM JOHN DWYER

1) 11 FT (6 TO 8 CU YD) AR450 HARDOX STEEL MONOSHELL DUMP BODY BiBEAU MODEL BBMT WITH A MAILHOT TELESCOPIC HOIST AND 1/4" AR450 FLOOR INSTALLED ON A TOWN SUPPLIED CHASSIS UNDERCOATED AND PAINTED ONE SINGLE STAGE COLOR

- A) 30" STEEL CABSHIELD W/ (4) RECESSED LED FLASHERS (2) FRONT (2) SIDE
- B) REAR CORNER POST RECESSED LED FLASHERS & ST/TL/BU'S
- C) 1/4" AR450 HARDOX STEEL FLOOR / AIR TAILGATE
- D) 3/4" PINTLE PLATE WITH 20t PINTLE, D-RINGS, & TRAILER PLUG
- E) AERO AUTOMATIC TARPING SYSTEM W/ ALUM. ARMS
- F) BACKUP AND LIFT ALARMS WITH LED REQUIRED LIGHTING
- G) BODY SAFETY PROPS / SANDER MOUNTING PLATES
- H) POLY REAR FENDERS & REAR WHEEL MUDFLAPS
- I) (3) TAILGATE MTD. BiBEAU COAL DOORS
- J) DRIVER'S SIDE ACCESS LADDER W/ HANDLE
- K) WOOD SIDEBORDS 2" X 8" / SHOVEL HOLDER
- L) FRONT GRILL RECESSED LED FLASHERS W/ SEPARATE SWITCH
- M) (2) REAR MOUNTED LED WORKLIGHTS

2) TRANSMISSION MOUNTED CENTRAL HYDRAULIC SYSTEM WITH HOTSHIFT PTO, IN-CAB MOUNTED LEVER CONTROLS TO OPERATE DUMP, 4-WAY PLOW, AND POWER BEYOND (CIRUS EZ-3-KNOB SPREAD CONTROLS).

- A) 40 GALLON STAINLESS HYDRAULIC TANK WITH VENTED CAP, SIGHT GLASS, GATE VALVE SHUTOFF, AND SPIN-ON FILTER SYSTEM.
- B) 3-LINE SANDER QUIK DISCONNECTS PIPED TO THE REAR WITH STAINLESS LINES
- C) LOWER THE HEIGHT OF THE DUMP HANDLE

3) CUSTOM LO-MOUNT PLOW FRAME MODEL JCM INSTALLED W/ HITCH MOUNTED ABL LED PLOWLIGHTS & 30.5" ON CENTER PLOW EARS

4) 11' 36" INTAKE 54" DISCHARGE TRIP EDGE VORTEX STYLE
STEEL MOLDBOARD SNOW PLOW EVEREST MODEL
R132TEL3654SH-(V) WITH HYDRAULIC REVERSING MODE, CURB
AND WEAR SHOES, GUIDEPOLES, AND STANDARD CUTTING
EDGE

PRICE \$96,125.00

NOTE!! / NEED 90"CA, FRONT FRAME EXT, PLOW LIGHT PREP, (6) AUX SWITCHES, BODY
BUILDERS WIRING HARNESS, PTO PROV.

OPTIONS:

A) THERMOSTATIC CONTROLLED EXHAUST VALVE FOR HEATED BODY
ADD \$ 6750.00

B) PAINTED STEEL ASPHALT APRON ADD \$1400.00

APPROVAL _____ DATE _____

PO# _____ 10/26/2023

TECHNICAL SPECIFICATION

GRANITE 42FR



APPLICATION PACKAGES	DESCRIPTION
CHASSIS CONFIGURATION PACKAGE	ONEBOX EATS, LH BATTERY BOX, 6.6 GALLON (25L) SLEEVED DEF, 22" SLEEVED LH FUEL TANK

CUSTOMER/VEHICLE INFO	DESCRIPTION
S CHASSIS (BASE MODEL)	GRANITE 42FR
S ASSEMBLY PLANT	Made in Macungie, PA USA
CUSTOMER FLEET SIZE	DEALER FLEET WITH LESS THAN 25 VEHICLES IN OWN FLEET OF ANY VEHICLE BRAND
TYPE OF SERVICE	MUNICIPAL
S WARRANTY REGISTRATION LOCATION	USA - WARRANTY REGISTRATION LOCATION
EMISSION WARRANTY CERTIFICATION	CARB + EPA for Mack MP7 / MP8 Diesel
INTENDED REGISTRATION LOCATION	MASSACHUSETTS
S INITIAL REGISTRATION LOCATION	USA REGISTRATION
BRAND ORNAMENT	BULLDOG BRAND ORNAMENT, CHROME
S LANGUAGE-PUBS/DECAL/SIGNS	ENGLISH
S ROAD CONDITION	WELL MAINTAINED SURFACED ROADS >95% DRIVING DISTANCE
VEHICLE USE & BODY/TRAILER TYPE	SNOW PLOW FRONT MOUNTED
TRAILER TYPE	FIXED DRAWBAR TRAILER AND CENTERED AXLES
GROSS COMBINATION WEIGHT (CA in PC29 only)	60,000 LB (27.5 TONNES) GROSS COMBINATION WEIGHT
S BRAKE REGULATION	BRAKE REGULATION, STOPPING DISTANCE 94M (310FT)
TOPOGRAPHY	GRADES <3% GREATER THAN 98% OF DRIVING DISTANCE MAX GRADE 8%
S AMBIENT TEMP UPPER LIMIT (GTA)	AMBIENT TEMPERATURE HOT. WARMER THAN 104 F (40 C) ALLOWED UP TO 25 HOURS PER YEAR
S OPERATING TERRAIN GRADE CONDITIONS	ON-OFF HIGHWAY, STARTING GRADES<18%
S LOADING SURFACE FACTOR	CONCRETE LOADING AND / OR UNLOADING SURFACE
VEHICLE VOCATION	CONSTRUCTION SERVICE

ENGINE/TRANSMISSIONS	DESCRIPTION
ENGINE PACKAGE, COMBUSTION	MP7-355C MACK 355HP @ 1600-1800 RPM (PEAK) 2100 RPM (GOV) 1250 LB-FT, US'21
S GHG APPLICATION, VEHICLE	GREEN HOUSE GAS VOCATIONAL APPLICATION
TRANSMISSION	4500 RDS 6 SPEED ALLISON GEN 6 W/PROGNOSTICS, WITH PTO PROVISION
S GEARBOX 12TH GEAR LOCK-OUT	WITHOUT 12TH GEARBOX GEAR LOCK-OUT

EXHAUST/EMISSIONS	DESCRIPTION
NOX LIMITS	CARB LEGACY / EPA (200MG/HP/HR), 50 State Idle Compliance
S IDLE EMISSION LABEL LOCATION (CA in PC29 only)	IDLE EMISSION LABEL LOCATION, LOWER LH CORNER OF DRIVER DOOR
S DPF DIESEL PARTICULATE FILTER	CLEARTECH ONE BOX E.A.T.S. RH SIDE UNDER CAB US17 / US21
S CHASSIS MOUNTED EMISSIONS FINISH	W/O DEF COVER & PAINTED DPF COVER
S DIESEL EXHAUST FLUID TANK	6.6 GALLON (25 L) 22" LEFT SIDE FUEL TANK MTD
EXHAUST	SINGLE VERTICAL RIGHT SIDE CAB MOUNTED, LOWER VENTURI DIFFUSER, TURNED END
EXHAUST STACK HEIGHT	9' 6" FROM GROUND
EXHAUST SYSTEM MATERIAL FINISH	SINGLE, BRIGHT FINISH HEAT SHIELD, STACK
EMISSION ON BOARD DIAG CONTROL	EMISSION OBD, DISPLAY ONLY, USA2024

TECHNICAL SPECIFICATION (cont.)



ENGINE EQUIPMENT		DESCRIPTION
S	AIR CLEANER	UNDER HOOD SINGLE ELEMENT DRY TYPE W/AIR INTAKE FROM BOTH SIDES OF HOOD
S	BUG SCREEN	BLACK ALUMINUM BUG SCREEN MOUNTED BEHIND GRILLE, WITHOUT WINTER FRONT COVER
	AIR COMPRESSOR/DRYER	WABCO AIR HEATED SS-HP AIR DRYER W/ WABCO 318 (18.7 CFM) AIR COMPRESSOR
S	AIR DRYER POSITION (CA)	AIR DRYER POSITION STANDARD
S	ALTERNATOR	DELCO 12V 160A (28SI) BRUSH-TYPE
S	BATTERIES	(3) MACK 12V 760/2280 CCA THREADED STUD TYPE
S	BATTERY BOX - MOUNTING (x)	LH RAIL UNDER CAB FORWARD OF FUEL TANK (3 BATTERY MAX)
S	BATTERY BOX COVER	MOLDED PLASTIC
	BATTERY DISCONNECT SWITCH	FLAMING RIVER BIG SWITCH WIRED TO POSITIVE SIDE
S	STARTER MOTOR	12 VOLT DELCO 39MT-MXT
	ENGINE BRAKE	MACK MP7 POWERLEASH
S	FAN DRIVE	BEHR FAN AND ELECTRONIC MODULATING VISCOUS FAN DRIVE
S	COOLANT PROTECTION	ETHYLENE GLYCOL FULLY FORMULATED COOLANT (50/50 MIX DYED PINK) TO -34DEG, W/ FILTER
	HOSES - RADIATOR/HEATER	SILICONE RADIATOR AND HEATER HOSES
S	FUEL-WATER SEPARATOR	MACK W/MANUAL DRAIN VALVE V2 (INTEGRAL W/ PRIMARY FUEL FILTER)
S	PRIMARY FUEL FILTER POSITION (CA)	STANDARD FUEL FILTER POSITION
S	ENGINE HEATERS	120v 1500w BLOCK HEATER ONLY (120V-15A PLUG)
	OIL SUMP	CORROSION RESISTANT OIL PAN
S	ENGINE STOP, EMERGENCY (CA in PC29 only)	WITHOUT ENGINE STOP, EMERGENCY

CLUTCH/TRANS EQUIPMENT		DESCRIPTION
	GEAR SHIFTER	ALLISON DASH MOUNTED SHIFTER W/NEUTRAL TO RANGE INHIBIT (HD SERIES)
S	CLUTCH ACTUATION SYSTEM & PEDAL PAD	WITHOUT CLUTCH CABLE SYSTEM
	MINIMUM REQUIRED PROP SHAFT SIZE	MINIMUM REQUIRED FOR KAX PROP SHAFT, PROPS-L
	DRIVELINE - MAIN	SPICER 1810 HD W/COATED SPLINES (PROPS-L)
	PROPELLR SHAFT MAIN, UNVSL JNT	UNIVERSAL JOINT HALF-ROUND TYPE
S	TRANSMISSION OUTPUT TORQUE	TRANSMISSION OUTPUT TORQUE BASIC
	LUBRICANTS, TRANSMISSION	TRANSYND SYNTHETIC LUBE FOR ALLISON TRANS
	TRANSMISSION OIL COOLER	ALLISON 4xxx SERIES TRANSMISSION W/DIRECT MOUNT COOLER & SS COOLANT TUBES

FRONT AXLE EQUIPMENT		DESCRIPTION
	FRONT AXLE	20000# (9100 KG) MACK FXL20 STRAIGHT SPINDLE/UNITIZED BEARINGS
	SPRINGS - FRONT	MACK TAPERLEAF HD 20000# (9100 KG) GROUND LOAD RATING, EQUAL BIAS
S	FRONT AXLE BRAKES	MERITOR "S" CAM TYPE 16.5" x 6" Q+
S	BRAKE, FRONT	CAST IRON
	FRONT AXLE BRAKE DUST SHIELD	DUST SHIELDS FOR FRONT AXLE
S	FRONT BRAKE ADJ. MANUFACTURE	HALDEX - AUTOMATIC
S	FRONT BRAKE CHAMBER MFG.	FRONT BRAKE CHAMBER MANUFACTURER, HALDEX
S	HUB MATERIAL, FRONT	FERROUS
S	FRONT AXLE LUBRICANT	FRONT AXLE LUBE, FAG NLGI2 GREASE
S	SHOCK ABSORBER, FRONT	DOUBLE ACTING TYPE
	STEERING	SHEPPARD SD110 + HD94

TECHNICAL SPECIFICATION (cont.)



REAR AXLE EQUIPMENT		DESCRIPTION
	REAR AXLE - SINGLE	30000# (13600kg) MERITOR RS-30-185 SINGLE REDUCTION
S	REAR AXLE CASING WIDTH	W/O WIDE TRACK AXLE
S	DRIVE AXLE LUBRICANT	DRIVE AXLE LUBE, SHELL 75W90 SYNTHETIC OIL
	CARRIER - REAR AXLE	VENDOR AXLES
	TRACTION DIFFERENTIAL	INTERWHEEL DIFFERENTIAL LOCK, FRONT-REAR AXLE ONLY
	REAR AXLE RATIO	4.56 RATIO
	REAR SUSPENSION - SINGLE	30000# MULTILEAF W/HELPER NO ANTI-SWAY
	BRAKES - REAR	MERITOR CAM 16.5"x7" P BRAKES
S	BRAKE, DRIVE, REAR	CAST IRON
S	REAR BRAKE ADJ MANUFACTURE	HALDEX - AUTOMATIC
	DRIVE AXLE BRAKE DUST SHIELD	DUST SHIELDS FOR REAR AXLE
	REAR BRAKE CHAMBER SIZE	REAR SPRING BRAKE CHAMBERS 30/36 TYPE
	BRAKE ORI REAR-MOST DRIVE AXLE	DRUM BRAKE CHAMBER ORIENTATION: Middle Mount - Forward of Axle - Chamber Up
S	PARKING BRAKE CHAMBER	HALDEX "GOLD SEAL PLUS" (3" STROKE) BRAKE CHAMBERS
	HUB MATERIAL, DRIVE	FERROUS
S	ANTILOCK BRAKE SYSTEM	BENDIX WITH TRACTION CONTROL 4S4M
S	BRAKE VALVE VERSION	BENDIX SWITCHES AND VALVES WHERE POSSIBLE
S	TRACTION CONTROL DISABLE (CA in PC29 only)	AUTOMATIC TRACTION CONTROL (ATC) FULL DISABLE SWITCH

FRAME EQUIPMENT/FUEL TANKS		DESCRIPTION
	WHEELBASE	180"
	AF (OVERHANG)	63"
	FRAME RAILS & LINERS	11.1 x 90 x 300mm - (0.437" x 3.54" x 11.81"); RBM 2,820,000 LB-IN
	FRONT FRAME LENGTH	BUMPER POSITION EXTENDED 20" (SNOW)
S	CROSSMEMBERS	BOC AND INTERMEDIATE(S) STEEL HD BACK-TO-BACK CHANNEL
S	REAR CROSSMEMBER OPTIONS	STEEL CLOSING REAR CROSSMEMBER
S	REAR FRAME TREATMENT	WITHOUT TAPERED FRAME RAIL ENDS
S	FRONT BUMPER	EXTENDED-SWEPT BACK-STEEL
S	TOWING DEVICE, FRONT	HOOKS
S	FUEL LEVEL SENDER UNIT, LIQUID	BASIC FUEL LEVEL SENDER MOUNTED ON L.H TANK
S	FUEL TANK - LH	66 GALLON (250 L) 22" ALUMINUM, SLEEVED D-SHAPED
S	FUEL TANK - RH	W/O RH FUEL TANK
S	FUEL HOSES, LIQUID	BRAIDED HOSE
S	FUEL FILLER NECK OPTIONS	WITHOUT FILLER NECK SCREEN, WITH NON-LOCKABLE FUEL TANK CAP
	FUEL LINE OPTIONS, LIQUID	W/O FUEL LINE OPTION
S	CAB INSTEP VERSION	STANDARD 2 STEP CAB ACCESS
S	STEPS (BRIGHT) - FUEL TANK	STANDARD FINISH STEPS AND BRIGHT FINISH STRAPS

AIR/BRAKE		DESCRIPTION
S	AIRTANK DRAIN VALVE	MANUAL (PETCOCK) DRAIN VALVES ON ALL TANKS
	AIRTANK MATERIAL	ALUMINUM AIR TANK PAINTED CHASSIS COLOR
S	RELOCATE AIR RESERVOIRS	W/O RELOCATED AIR TANKS
	PARKING BRAKE VALVE	TWO (2) VALVE DUAL BRAKE SYSTEM - TRAILER SUPPLY AND TRACTOR-TRAILER PARK

TECHNICAL SPECIFICATION *(cont.)*



ELECTRICAL		DESCRIPTION
	BACK-UP ALARM	ECCO BACK-UP ALARM 575 CONSTANT SOUND LEVEL 107 dB
	DASH MOUNTED SWITCHES	(4) 15A, IGNITION POWERED, (2) 15A BATTERY POWERED, ALL LATCHING ON/OFF
S	ROOF & SIDE MARKER LIGHTS	(5) TRUCKLITE CHROME BULLET ROOF MARKER & STANDARD MARKER / DIRECTIONAL SIGNAL
	AUXILIARY LAMPS (CA in PC29 only)	DASH CONTROL & POWER SUPPLY FOR LOCAL INSTALL OF AUX SNOWPLOW LAMPS OVERRIDE DAYTIME RUNNING LIGHTS
S	HEADLAMP BULB TYPE	HEADLAMP BULB TYPE, LED, HEATED
S	DAYTIME RUNNING LIGHTS	W/OVERRIDE SWITCH, PARK BRAKE & ENGINE RUNNING ACTIVATED
S	DRL OVERRIDE SPEED THRESHOLD	DRL OVERRIDE SPEED THRESHOLD 8 KMPH (5 MPH)
S	TAIL LAMPS	INCANDESCENT TAIL LAMPS
	WORK LIGHTS - CHASSIS MOUNTED	RH/LH LED WORK LIGHT (STEPS & GROUND) ON BOTH SIDES TRUCK

TRAILER CONNECTIONS		DESCRIPTION
	TRAILER BRAKE VALVE	HAND CONTROL VALVE FOR TRAILER OR REAR SERVICE BRAKES - DUAL FUNCTION
	TRAILER CONNECTION POSITION	TRAILER AIR BRAKE CONNECTIONS, END OF FRAME
	TRAILER ELECTRICAL RECEPT	SINGLE 7 PINS STD SAE TYPE, END OF FRAME

PTO		DESCRIPTION
	POWER TAKE OFF CONTROL	TRANSMISSION PTO SWITCH AND LIGHT WITH WIRING AND PIPING FOR LOCAL INSTALLATION
S	BODY BUILDER INTERFACE	BODY LINK III W/CAB PASS-THRU

SPECIALTY EQUIPMENT		DESCRIPTION
S	LANE SUPPORT SYSTEM (LSS)	WITHOUT LANE SUPPORT SYSTEM
S	DATA CAPTURE	WITHOUT DATA CAPTURE
S	CAMERA, SURVEILLANCE	WITHOUT CAMERA

CAB INTERIOR (A THRU G)		DESCRIPTION
S	SPEEDOMETER &- GAUGES - UNIT(s) OF MEASURE	U.S. UNITS (PREDOMINANT)
	GAUGE - PACKAGE, SECONDARY	2ND GA PKG W/ENG OIL TEMP, TRANS OIL TEMP, PYRO, BOOST PRESS
	GAUGE OIL TEMP-REAR AXLE	REAR AXLE OIL TEMP GAUGE IN DID (DRIVER INFORMATION DISPLAY)
	AUXILIARY PNEUMATIC OUTLET CAB (CA family in PC29 only)	AUX. INCAB PNEUMATIC LINE CLEANOUT
S	AIR CONDITIONING/HEATER	BLEND AIR HVAC W/"ATC" TEMP REGULATION
S	CUPHOLDER	CUPHOLDER
S	DOME LAMP, INTERIOR	(4) DOME LAMPS - DOOR AND SWITCH ACTIVATED
S	DASH INDICATOR - LAMP BODY OUT OF POS	DASH MTD, INDICATOR BODY/HOIST UP "BODYBUILDER LAMP"
	FIRE EXTINGUISHER	5LB (ABC RATED) MOUNTED BETWEEN DRIVER SEAT BASE AND DOOR VALVE AIMED REARWARD
S	FLOOR COVERING	POLYURETHANE FLOOR MAT WITHOUT REMOVABLE INSERTS

CAB INTERIOR (H THRU R)		DESCRIPTION
S	INSTMT CLUSTER LANGUAGE	DEFAULT: ENGLISH, SPANISH, FRENCH
S	KEY TYPES FOR DOORS	ALL CHASSIS KEYED AT RANDOM
S	DOOR OPENING OPTIONS	W/O ELECTRONIC KEYLESS ENTRY
S	FORWARD OVERHEAD STORAGE	(2) STORAGE COMPARTMENTS AND NET RETAINERS W/CENTER MOUNTING FOR CB PROVISIONS
S	AUDIO ACCOMMODATION	PREMIUM STEREO, AM/FM, MP3, WEATHER BAND, BLUETOOTH

TECHNICAL SPECIFICATION *(cont.)*



CAB INTERIOR (H THRU R)		DESCRIPTION
S	ANTENNA - RADIO	RADIO ANTENNA, CAB MOUNTED BEHIND LH DOOR
	ANTENNA - CB RADIO	PREP KIT FOR MOUNTING ON LT SIDE MIRROR (W/O ANTENNA)
S	AUDIO SHUTOFF	AUTO SHUTOFF FOR RADIO ENTERTAINMENT SYSTEM WHEN VEHICLE IS ENGAGED IN REVERSE
S	POWER LEADS	POWER LEADS (5-WAY BINDING POSTS FOR CB RADIO) IN HEADER CONSOLE
S	AUDIO SPEAKER LOCATION	SPEAKER LOCATION, IN DOORS, MIDDLE HIGH SIDE PANEL
S	COM.RADIO PREP KIT (CB)	CB RADIO MOUNTING REINFORCEMENT IN HEADER CONSOLE
S	REAR WALL STORAGE COMPARTMENT	STORAGE POUCH REAR
	REFLECTOR KIT	EMERGENCY REFLECTOR KIT MOUNTED PARALLEL & CENTERED AGAINST BOC

CAB INTERIOR (S THRU Z)		DESCRIPTION
	INTERIOR TRIM LEVELS	COMFORT TRIM PACKAGE, SIERRA TAN (Package 11B)
S	SEAT - DRIVER'S	MACK-AIR, HIGH BACK, 1 CHAMBER AIR LUMBAR
	SEAT COVERING - DRIVER'S	DRIVER'S SEAT - SIERRA TAN VINYL
	SEAT - PASSENGER'S	MACK-FIXED, HIGH BACK, W/ STORAGE BOX
	SEAT COVERING - PASSENGER'S	PASSENGER'S SEAT - SIERRA TAN VINYL
	SEAT ARMREST	INBOARD MOUNTED ARM REST, DRIVER'S & RIDER'S SEAT
S	SEAT BELT(S)	LAP & SHOULDER (BOTH SEATS) CAB MOUNTED SHOULDER BELT ADJUSTMENT
S	SEAT BELT REMINDER	SEAT BELT REMINDER IN INSTRUMENT, WITH AUDIO
S	IGNITION TYPE	KEY TYPE
S	STEERING WHEEL	2 SPOKE URETHANE GRIP, SATIN ALUMINUM SPOKES, WITH SWITCHES
S	WINDSHIELD TYPE	TWO PIECE WINDSHIELD
	CAB GLASS	HEATED TINTED WINDSHIELD, GUARDIAN ENHANCED PROTECTIVE REAR GLASS W/SAFEFLEX; 50% TRANSMITTANCE
S	WASHER RESERVOIR POSITION	W/O WINDSHIELD WASHER OPTION
S	WINDSHIELD WIPERS	2 SPEED ELECTRIC MOTOR W/INTERMITTENT FEATURE

CAB EXTERIOR		DESCRIPTION
S	HOOD LATCH TYPE & FINISH	STRAP TYPE HOOD LATCH WITH BLACK FINISH
S	EXTERIOR TRIM FINISH AND PACKAGES	GRANITE BRIGHT AIR INTAKE
	GRILLE	BRIGHT FINISH BARS W/BRIGHT FINISH SURROUND GRILL MOUNTED
S	PASSENGER SIDE VISIBILITY OPTIONS	AUXILIARY WINDOW IN RH DOOR
	GRAB HANDLES	BF EXTERIOR CAB GRAB HANDLES, BLACK GRAB HANDLE RH INTERIOR WINDSHIELD POST
	HOOD HATCH	WITH INSPECTION HATCH FOR SNOWPLOW HOOD
	HORN - AIR	(2) MACK RECTANGULAR SINGLE TRUMPET, BRIGHT FINISH ALUMINUM W/SNOW SHIELDS
S	HORN - ELECTRICAL	DUAL TONE
	MIRRORS - EXTERIOR	FLAT MIRROR - POLISHED ALUMINUM FINSH, HEATED, W/O LAMPS
	MIRRORS - CONVEX TYPE CAB DOORS	BRIGHT FINISH, LH & RH, 8" DIAMETER HEATED CONVEX
	SUN VISOR - EXTERIOR	SUN VISOR, EXTERIOR, FIBERGLASS (PAINTED)

AERODYNAMIC DEVICES		DESCRIPTION
S	CAB AERODYNAMIC PACKAGES	WITHOUT CAB AERODYNAMIC DEVICES
S	FRONT CHASSIS AERODYNAMIC PACKAGE	WITHOUT FRONT AERODYNAMIC FAIRINGS

TECHNICAL SPECIFICATION *(cont.)*



WHEELS & TIRES		DESCRIPTION
	TIRES BRAND/TYPE - FRONT	315/80R22.5 L CONTINENTAL HAU3 WT (20000 lbs) (Total for QTY = 2)
	WHEELS - FRONT	22.5x9.00 ALCOA 89U64x CLEAN BUFFED ALUMINUM, 6.94" OFFSET, 10 HAND HOLE (Total for QTY = 2)
	TIRES BRAND/TYPE - REAR	11R24.5 H BRIDGESTONE M799 (26440 lbs) (DRIVE ONLY) (Total for QTY = 4)
	WHEELS - REAR	24.5x8.25 ALCOA 98565x SEVERE SERVICE, CLEAN BUFFED ALUMINUM, 6.60" OFFSET, 10 HAND HOLE (Total for QTY = 4)
S	TIRE INFLATION VALVE	STANDARD VALVE STEMS AND CAPS
S	FRONT HUB/WHEEL TRIM	WITHOUT FRONT HUB/WHEEL TRIM
S	REAR HUB/WHEEL TRIM	WITHOUT REAR HUB/WHEEL TRIM
S	WHEEL NUT & FINISH, FRONT	WHEEL NUT BASIC FINISH, FRONT
S	WHEEL NUT FINISH, REAR (CA)	WHEEL NUT BASIC FINISH, REAR

COMMUNICATION SYSTEMS		DESCRIPTION
S	CO-PILOT - DISPLAY FEATURES ACCESS LEVEL	CO-PILOT DISPLAY, DRIVER ACCESS LEVEL 1
S	TELEMATIC GATEWAY	TELEMATICS GATEWAY, 4G/LTE AND WLAN SYSTEM WITH DIAGNOSTIC SERVICES

ENGINE ELECTRONICS		DESCRIPTION
S	OIL PRESSURE, ENGINE SHUTDOWN	OIL PRESSURE, ENGINE SHUTDOWN
S	COOLANT TEMP, ENGINE SHUTDOWN	COOLANT TEMP, ENGINE SHUTDOWN
S	ENGINE PROTECTION SYSTEM	ENGINE PROTECTION (SHUTDOWN)
	ENG FAN CNTL, A/C ON, TIME SET	ENG FAN CONTROL, A/C ON, TIME SETTING, 60 SEC
S	ENGINE IDLE CONTROL	IDLE CONTROL, 600 RPM
S	SMART IDLE ELEVATED IDLE RPM TIME	INCREASE 10 MINUTE MAXIMUM TIME
S	IDLE S/D ABS TAMPER CHECK	IDLE SHUTDOWN ABS TAMPER CHECK, ENABLED
S	IDLE S/D WARNING TIME	30 SEC IDLE S/D WARNING TIME
S	IDLE S/D IF WARM-UP TEMP	38C DEG (100F), WARM UP TEMP DELAY
S	IDLE S/D WARM-UP TIMER	5 MIN. WARM UP TIME DELAY
S	IDLE S/D IF PTO ACTIVE	ENGINE IDLE SHUTDOWN TIME OVERRIDDEN IF PTO ACTIVE
S	IDLE SHUTDOWN IF POWER > LIMIT	ENG IDLE SHUTDOWN TIME OVERRIDDEN IF TORQUE > THAN LIMIT
S	IDLE S/D OVERRIDE %ENGINE LOAD	IDLE SHUTDOWN OVERRIDE UPTO 20% ENGINE LOAD THRESHOLD
S	AMBIENT TEMP MIN TRESHOLD	AMBIENT TEMP MIN TRESHOLD, 16 DEG C, (60 DEG F)
S	AMBIENT TEMP MAX TRESHOLD	AMBIENT TEMP MAX TRESHOLD, 27 DEG C, (80 DEG F)
S	EL HD THROTTLE,MAX ROAD SPEED	ELECTRONIC HAND THROTTLE, MAX ROAD SPEED, 16 KM/H (10 MPH)
S	EL HAND THROTTLE,MAX ENG SPEED	ELECTRONIC HAND THROTTLE, MAX ENGINE SPEED, 1000 RPM
S	EL HAND THROTTLE,MIN ENG SPEED	ELECTRONIC HAND THROTTLE, MIN ENGINE SPEED, 700 RPM
S	EL HD THROTTLE,SPEED RAMP RATE	ELECTRONIC HAND THROTTLE, SPEED RAMP RATE, 100 RPM/SEC

TRANSMISSION ELECTRONICS		DESCRIPTION
	TRANSMISSION ELECTRONICS PACKAGE	DUMP/VOC/PLOW(223) - ALLOWS TRUCK TO BE PUT IN GEAR W/O SERVICE BRAKE (FOR PAVING) (4TH GEAR LIMIT S
	TRANSM AUTO NEUTRAL ON P-BRAKE	ALLISON PARK BRAKE AUTO NEUTRAL-ALLOWS THE DRIVER TO ENGAGE GEAR PRIOR TO DISENGAGING THE PARK BRAKE
	TRANSMISSION ELECTRONIC SHIFTING PROPERTIES	FUELSENSE, FULL NEUTRAL AT STOP

VEHICLE ELECTRONICS		DESCRIPTION
S	ROAD SPEED LIMITER SETTING	105 KM/H ROAD SPEED LIMITER (65MPH)
S	PEDAL RSL SETTING	101 KM/H PEDAL ROAD SPEED LIMITER (63MPH)

TECHNICAL SPECIFICATION (cont.)



VEHICLE ELECTRONICS		DESCRIPTION
S	CRUISE CONTROL	CRUISE CONTROL
S	CRUISE CONTROL, MAX SPEED	MAX CRUISE, 105 KPH (65 MPH)
S	CRUISE CONTROL MIN SPEED	MIN CRUISE, 32 KPH (20 MPH)
S	ENG BRK ENGAGE IN CRUISE	ENG BRK ENGAGE IN CRUISE, 3 MPH, ABOVE SET SPEED
	DIFF LOCK SPEED LIMIT	DIFFERENTIAL LOCK ROAD SPEED LIMIT 24KMH (15MPH)
S	MAXIMUM ENG SPEED AT 0 MPH	1000 MAXIMUM ENGINE SPEED AT 0 MPH
S	DETECTION SPEED SENSR TMRNG	DETECTION OF SPEED SENSOR TAMPERING, ENABLE
S	ENG TORQUE LIMIT,SPEED SENSOR	ENG TORQUE LIMITED TO 50%, IF SPEED SENSOR TAMPER DETECTED
S	DRIVER ID FUNCTION	DRIVER ID FUNCTION, DISABLED
S	DR PERFORMANCE PARAMETERS	WITHOUT DRIVER PERFORMANCE PARAMETERS
S	ENGINE OVERSPEED,ALL COND, LOG	ENGINE OVERSPEED, ALL CONDITIONS, TIME LOG IF ABOVE 2200 RPM
S	ENGINE OVERSPEED,FUELED, LOG	ENGINE OVERSPEED, FUELED, TIME LOG IF ABOVE 2100 RPM
S	VEHICLE OVERSPEED,ALL COND,LOG	VEHICLE OVERSPEED,ALL COND, TIME LOG IF ABOVE 75MPH (121KMH)
S	VEHICLE OVERSPEED, FUELED, LOG	VEHICLE OVERSPEED, FUELED, TIME LOG IF ABOVE 70MPH (113KMH)
S	ENGINE IDLE DELAY TO LOG	ENGINE IDLE DELAY TO START LOG, 2 MIN
S	PERIODIC TRIP LOG DAY OF MONTH	PERIODIC TRIP LOG, DAY 1 OF THE MONTH

PTO ELECTRONICS		DESCRIPTION
S	PTO1 SINGLE SPEED CONTROL RPM.	PTO 1ST, SINGLE SPEED SETTING, 1000 RPM
S	PTO 1ST, MAX ROAD SPEED	1ST PTO, MAX ROAD SPEED, 10 MPH (16 KPH)
S	PTO 1ST, SPEED RAMP RATE	PTO 1ST, SPEED RAMP RATE 100 RPM/SEC
S	PTO 1ST, MAX ENGINE SPEED	PTO 1ST, MAX ENGINE SPEED, 2100 RPM
S	PTO 1ST, ROAD SPEED LIMIT	PTO 1ST, ROAD SPEED LIMIT, 97 KMH (60 MPH)
S	PTO 1ST, MINIMUM ENGINE SPEED	PTO 1ST, MINIMUM ENGINE SPEED, 600 RPM
S	PTO 2ND, SINGLE SPEED SETTING	PTO 2ND, SINGLE SPEED SETTING, 1000 RPM
S	PTO 2ND, MAX ROAD SPEED	2ND PTO, MAX ROAD SPEED, 10 MPH (16 KPH)
S	PTO 2ND, SPEED RAMP RATE	PTO 2ND, SPEED RAMP RATE 100 RPM/SEC
S	PTO 2ND, MAX ENGINE SPEED	PTO 2ND, MAX ENGINE SPEED, 2100 RPM
S	PTO 2ND, ROAD SPEED LIMIT	PTO 2ND, ROAD SPEED LIMIT, 97 KMH (60 MPH)
S	PTO 2ND, MINIMUM ENGINE SPEED	PTO 2ND, MINIMUM ENGINE SPEED, 600 RPM

PAINT		DESCRIPTION
S	PAINT DESIGN	SINGLE COLOR
S	PAINT TYPE	SOLID PAINT
	PAINT COLOR - FIRST COLOR	MACK GREEN; P9014
S	PAINT COLOR - SECOND COLOR	NO SECOND TRUCK COLOR PROVIDED; NO COLOR
S	PAINT COLOR - THIRD COLOR	NO THIRD TRUCK COLOR PROVIDED; NO COLOR
S	PAINT - CAB PAINT SYSTEM	PAINT - CAB, URETHANE CLEAR COAT
S	CAB COLOR	SAME AS FIRST COLOR - CAB
S	HOOD COLOR	SAME AS FIRST COLOR - HOOD
	SUN VISOR COLOR	SAME AS FIRST COLOR - SUN VISOR
S	SLEEPER ROOF COLOR	WITHOUT SLEEPER ROOF COLOR
S	ROOF FAIRING COLOR	WITHOUT ROOF FAIRING
S	CHASSIS RUNNING GEAR	MACK BLACK (URETHANE); P3036
S	BUMPER	PAINT BUMPER SAME COLOR AS CHASSIS RUNNING GEAR

TECHNICAL SPECIFICATION (cont.)



PAINT	DESCRIPTION	
S	FUEL TANK - ***NO INVENTED VARIANTS ALLOWED in the FUEL TANK PAINT FAMILY***	W/O OPTIONAL FUEL TANK PAINT
S	HUBS & DRUMS-FRONT	SAME AS CHASSIS RUNNING GEAR
S	HUBS & DRUMS-REAR	SAME AS CHASSIS RUNNING GEAR

BASE WARRANTY & PURCHASED COVERAGES	DESCRIPTION	
S	VEHICLE WARRANTY TYPE	HEAVY DUTY WARRANTY CLASSIFICATION
	BASIC CHASSIS COVERAGE	CHASSIS PLAN 2 60/250K MI NORMAL/HEAVY DUTY, GRANITE/TERRAPRO/LR MODELS PROTECTION PLAN
	EMISSION - SURCHARGE	CARB + EPA for Mack MP7 / MP8 Diesel
	ENGINE WARRANTY	CARB - ENGINE PLAN 2, 84 MO/250K MILES, MP7/MP8 <460HP
	EMISSION COMPONENT COVERAGE	US and CANADA CARB EQUIPPED VEHICLE EMISSION COMPONENTS COVERAGE 60 MONTHS/350,000 MILES
	TRANSMISSION WARRANTY	ALLISON TRANSMISSIONS (Contact Allison Transmission for standard warranty and extended coverage data)
	CARRIER & AXLE HOUSING WARRANTY	STANDARD VENDOR NORMAL / HEAVY DUTY COVERAGE 36 MONTHS/350,000 (563,00 KM)
S	AIR CONDITIONING WARRANTY	AIR CONDITIONING STANDARD COVERAGE (Sealed System Only) 12 MONTHS UNLIMITED MILEAGE
	CHASSIS TOWING WARRANTY	CHASSIS TOWING 60 MO/250K MILES
	ENGINE TOWING WARRANTY	ENGINE TOWING 84 MO/250K MILES
S	GUARDDOG CONNECT BUNDLE	NO GUARDDOG CONNECT (ASIST & MACK ONECALL)

SERVICES	DESCRIPTION	
	MACK INTEGRATED UPTIME	MACK INTEGRATED UPTIME - 84 MONTHS
S	FLEET INTEGRATION	WITHOUT FLEET INTEGRATION
S	PARTNERED SERVICES	NO PARTNERED SERVICES PROVIDED

ADDITIONAL ENGINEERING (Non Approved)	DESCRIPTION
CA	

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Department of Public Works - Highway Division	Priority #:	4
Project Title and Description: Replace F350 Dump Truck	Total Project Cost:	\$140,400.00

Department/Division Head: Tim Balboni, Highway Manager

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

For project re-submittals, list prior year(s): FY18,FY19,FY20,FY21FY22,FY23

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>FY26</i>		
<i>Labor and Materials</i>			<i>FY27</i>		
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>		
<i>Equipment</i>	\$117,000.00		<i>FY30</i>		
<i>Other</i>					
<i>Contingency</i>	\$23,400.00	20%			
Total Capital	\$140,400.00				

Project Justification and Objective: This truck was in such poor condition it was taken out of service and auctioned.

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 Ford F350 - 1FDWF37Y06EA66609

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

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



Preview Order D002 - F3H 4x4 Reg Chas Cab DRW: Order Summary Time of Preview: 10/26/2023 10:41:02 Receipt: 10/24/2023

Dealership Name: Colonial Ford, Inc.

Sales Code : F11647

Dealer Rep.	Dell Roderick	Type	Fleet	Vehicle Line	Superduty	Order Code	D002
Customer Name	COLONIAL FORD	Priority Code	A1	Model Year	2024	Price Level	420

DESCRIPTION

F350 4X4 CHASSIS CAB DRW/145
145 INCH WHEELBASE
GREEN GEM
VINYL 40/20/40 SEATS
MEDIUM DARK SLATE
PREFERRED EQUIPMENT PKG.640A
.XL TRIM
.AIR CONDITIONING -- CFC FREE
.AM/FM STEREO MP3/CLK
6.7L POWER STROKE V8 DIESEL
10-SPEED AUTO TORQSHIFT
.LT245/75R17E BSW ALL-SEASON
4.10 RATIO LIMITED SLIP AXLE
RAPID HEAT SUPPLEMENTAL HEATER
CV LOT MANAGEMENT
FRONT LICENSE PLATE BRACKET
PLATFORM RUNNING BOARDS

TOTAL BASE AND OPTIONS
DISCOUNTS
TOTAL

ORDERING FIN: ST999 END USER FIN: ST999

PRICE DESCRIPTION

728 14000# GVWR PACKAGE
\$0 ENGINE BLOCK HEATER
600 50 STATE EMISSIONS
\$0 PRO POWER ONBOARD - 2KW
\$0 SNOW PLOW PREP PACKAGE
\$0 JOB #1 ORDER
\$0 WHEEL WELL LINERS - FRONT
\$0 40 GAL AFT OF AXLE FUEL TNK
\$0 DUAL BATTERY
096 REAR VIEW CAMERA & PREP KIT
\$0 XL CHROME PACKAGE
\$0 .FOG LAMPS
360 .REMOTE START SYSTEM
228 FUEL CHARGE
\$10 PRICED DORA
\$0 DESTINATION & DELIVERY
291

P.T.O. Dump &
9ft Fisher Plow
4 Strobes
Drivers side tool Box

Customer Name:
Customer Address:

Customer Email:
Customer Phone:

Plymouth OPW



Preview Order D002 - F3H 4x4 Reg Chas Cab DRW: Order Summary Time of Preview: 10/26/2023 10:41:02 Receipt: 10/24/2023

Dealership Name: Colonial Ford, Inc.

Sales Code : F1164

Dealer Rep.	Dell Roderick	Type	Fleet	Vehicle Line	Superduty	Order Code	D002
Customer Name	COLONIAL FORD	Priority Code	A1	Model Year	2024	Price Level	420

DESCRIPTION

MSRP

INVOICE DESCRIPTION

F350 4X4 CHASSIS CAB DRW/145

14000# GVWR PACKAGE

145 INCH WHEELBASE

ENGINE BLOCK HEATER

GREEN GEM

50 STATE EMISSIONS

VINYL 40/20/40 SEATS

PRO POWER ONBOARD - 2KW

MEDIUM DARK SLATE

SNOW PLOW PREP PACKAGE

PREFERRED EQUIPMENT PKG.640A

JOB #1 ORDER

.XL TRIM

WHEEL WELL LINERS - FRONT

.AIR CONDITIONING -- CFC FREE

40 GAL AFT OF AXLE FUEL TNK

.AM/FM STEREO MP3/CLK

DUAL BATTERY

6.7L POWER STROKE V8 DIESEL

REAR VIEW CAMERA & PREP KIT

10-SPEED AUTO TORQSHIFT

XL CHROME PACKAGE

.LT245/75R17E BSW ALL-SEASON

.FOG LAMPS

4.10 RATIO LIMITED SLIP AXLE

.REMOTE START SYSTEM

RAPID HEAT SUPPLEMENTAL HEATER

FUEL CHARGE

CV LOT MANAGEMENT

PRICED DORA

FRONT LICENSE PLATE BRACKET

DESTINATION & DELIVERY

PLATFORM RUNNING BOARDS

TOTAL BASE AND OPTIONS

DISCOUNTS

TOTAL

> P.T.O. Pump
> P.T.O. Plumbed for
Down easter Sander
3 hose Yr

ORDERING FIN: ST999 END USER FIN: ST999

Customer Name:

Customer Email:

Customer Address:

Customer Phone:

Plymouth

etalbot.jcmadigan.com <etalbot@jcmadigan.com>

Thu 10/26/2023 2:00 PM

To: Dell Roderick <droderick@buycolonialford.com>

Hi Dell, this is what they want...2 like this and one with no spreader plumbing or control which is \$4000.00 less.
So, two at \$42,500.00 and one at \$38,500.00.

356

Plymouth	Price \$42,500.00
EASTERNEER 9' STEEL 2 TO 3 YARD DUMP BODY WITH ELECTRIC HOIST	
STANDARD 24" CABSHIELD WITH SCREEN WINDOW	
DOUBLE ACTING PISTON	
LED RECESSED LIGHTS, DUMP & B/U ALARM, REAR MUD FLAPS	
UNDERCOATED AND PAINTED black	
SMITH STYLE TIE DOWNS	
CANVAS COVER - MANUAL	
FRONT FLAPS ON REAR TIRES	
UPGRADE DUMP TO CENTRAL HYDRAULIC - DUMP & SANDER	
STAINLESS VALVE COVER FOR HYDRAULIC VALVE	
UPGRADE TO A 1-TON STAINLESS STEEL HYDRAULIC TANK	
1/2" REINFORCED PLATE W/ D RINGS AND LIGHT PLUG - RECEIVER	
(2) CODE 3 MEGA THINS DUAL COLOR	cabshield front
(2) CODE 3 MEGA THINS DUAL COLOR	cabshield side
(2) WHELEN VERTEX LED FLASHERS	snaplatch
(2) WORK LIGHTS - LED	
REMOUNT OEM SUPPLIED BACK UP CAMERA	
FISHER 9' HC HEAVY DUTY Model: HC	
FISH STICK - CUTTING EDGE - ABL halogen lights	
SNOW FOIL ATTACHMENT	

1

42,500

74,100

\$ 117,000

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Department of Public Works - Highway Division	Priority #:	5
Project Title and Description: Replace F350 Dump Truck	Total Project Cost:	\$140,400.00

Department/Division Head: Tim Balboni, Highway Manager

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

For project re-submittals, list prior year(s): FY18,FY19,FY20,FY21FY22,FY23

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>FY26</i>		
<i>Labor and Materials</i>			<i>FY27</i>		
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>		
<i>Equipment</i>	\$117,000.00		<i>FY30</i>		
<i>Other</i>					
<i>Contingency</i>	\$23,400.00	20%			
Total Capital	\$140,400.00				

Project Justification and Objective: This truck was in such poor condition it was taken out of service and auctioned.

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 Ford F350 - 1FDWF37PX6EB81565

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

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



Preview Order D002 - F3H 4x4 Reg Chas Cab DRW: Order Summary Time of Preview: 10/26/2023 10:41:02 Receipt: 10/24/2023

Dealership Name: Colonial Ford, Inc.

Sales Code : F11647

Dealer Rep.	Dell Roderick	Type	Fleet	Vehicle Line	Superduty	Order Code	D002
Customer Name	COLONIAL FORD	Priority Code	A1	Model Year	2024	Price Level	420

DESCRIPTION

F350 4X4 CHASSIS CAB DRW/145
145 INCH WHEELBASE
GREEN GEM
VINYL 40/20/40 SEATS
MEDIUM DARK SLATE
PREFERRED EQUIPMENT PKG.640A
.XL TRIM
.AIR CONDITIONING -- CFC FREE
.AM/FM STEREO MP3/CLK
6.7L POWER STROKE V8 DIESEL
10-SPEED AUTO TORQSHIFT
.LT245/75R17E BSW ALL-SEASON
4.10 RATIO LIMITED SLIP AXLE
RAPID HEAT SUPPLEMENTAL HEATER
CV LOT MANAGEMENT
FRONT LICENSE PLATE BRACKET
PLATFORM RUNNING BOARDS

PRICE DESCRIPTION

728 14000# GVWR PACKAGE
\$0 ENGINE BLOCK HEATER
600 50 STATE EMISSIONS
\$0 PRO POWER ONBOARD - 2KW
\$0 SNOW PLOW PREP PACKAGE
\$0 JOB #1 ORDER
\$0 WHEEL WELL LINERS - FRONT
\$0 40 GAL AFT OF AXLE FUEL TNK
\$0 DUAL BATTERY
096 REAR VIEW CAMERA & PREP KIT
\$0 XL CHROME PACKAGE
\$0 .FOG LAMPS
360 .REMOTE START SYSTEM
228 FUEL CHARGE
\$10 PRICED DORA
\$0 DESTINATION & DELIVERY
291

TOTAL BASE AND OPTIONS
DISCOUNTS
TOTAL

ORDERING FIN: ST999 END USER FIN: ST999

P.T.O. Dump
9ft Fisher Plow
4 Strobes
Drivers side tool Box

Customer Name:
Customer Address:

Customer Email:
Customer Phone:

Plymouth OPW



Preview Order D002 - F3H 4x4 Reg Chas Cab DRW: Order Summary Time of Preview: 10/26/2023 10:41:02 Receipt: 10/24/2023

Dealership Name: Colonial Ford, Inc.

Sales Code : F1164

Dealer Rep.	Dell Roderick	Type	Fleet	Vehicle Line	Superduty	Order Code	D002
Customer Name	COLONIAL FORD	Priority Code	A1	Model Year	2024	Price Level	420

DESCRIPTION

MSRP

INVOICE DESCRIPTION

F350 4X4 CHASSIS CAB DRW/145

14000# GVWR PACKAGE

145 INCH WHEELBASE

ENGINE BLOCK HEATER

GREEN GEM

50 STATE EMISSIONS

VINYL 40/20/40 SEATS

PRO POWER ONBOARD - 2KW

MEDIUM DARK SLATE

SNOW PLOW PREP PACKAGE

PREFERRED EQUIPMENT PKG.640A

JOB #1 ORDER

.XL TRIM

WHEEL WELL LINERS - FRONT

.AIR CONDITIONING -- CFC FREE

40 GAL AFT OF AXLE FUEL TNK

.AM/FM STEREO MP3/CLK

DUAL BATTERY

6.7L POWER STROKE V8 DIESEL

REAR VIEW CAMERA & PREP KIT

10-SPEED AUTO TORQSHIFT

XL CHROME PACKAGE

.LT245/75R17E BSW ALL-SEASON

.FOG LAMPS

4.10 RATIO LIMITED SLIP AXLE

.REMOTE START SYSTEM

RAPID HEAT SUPPLEMENTAL HEATER

FUEL CHARGE

CV LOT MANAGEMENT

PRICED DORA

FRONT LICENSE PLATE BRACKET

DESTINATION & DELIVERY

PLATFORM RUNNING BOARDS

TOTAL BASE AND OPTIONS

DISCOUNTS

TOTAL

> P.T.O. Pump
> P.T.O. Plumped for
Down easter Sander
3 Hose Yr

ORDERING FIN: ST999 END USER FIN: ST999

Customer Name:

Customer Email:

Customer Address:

Customer Phone:

Plymouth

etalbot.jcmadigan.com <etalbot@jcmadigan.com>

Thu 10/26/2023 2:00 PM

To: Dell Roderick <droderick@buycolonialford.com>

Hi Dell, this is what they want...2 like this and one with no spreader plumbing or control which is \$4000.00 less.
So, two at \$42,500.00 and one at \$38,500.00.

#356

Plymouth	Price \$42,500.00		
EASTERNEER 9' STEEL 2 TO 3 YARD DUMP BODY WITH ELECTRIC HOIST			
STANDARD 24" CABSHIELD WITH SCREEN WINDOW			
DOUBLE ACTING PISTON			
LED RECESSED LIGHTS, DUMP & B/U ALARM, REAR MUD FLAPS			
UNDERCOATED AND PAINTED black			
SMITH STYLE TIE DOWNS			
CANVAS COVER - MANUAL			
FRONT FLAPS ON REAR TIRES			
UPGRADE DUMP TO CENTRAL HYDRAULIC - DUMP & SANDER			
STAINLESS VALVE COVER FOR HYDRAULIC VALVE			
UPGRADE TO A 1-TON STAINLESS STEEL HYDRAULIC TANK			
1/2" REINFORCED PLATE W/ D RINGS AND LIGHT PLUG - RECEIVER			
(2) CODE 3 MEGA THINS DUAL COLOR		cabshield front	
(2) CODE 3 MEGA THINS DUAL COLOR		cabshield side	
(2) WHELEN VERTEX LED FLASHERS		snaplatch	
(2) WORK LIGHTS - LED			
REMOUNT OEM SUPPLIED BACK UP CAMERA			
FISHER 9' HC HEAVY DUTY Model: HC			
FISH STICK - CUTTING EDGE - ABL halogen lights			
SNOW FOIL ATTACHMENT			

1

42,500

74,100

\$ 117,000

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Department of Public Works - Facility Division	Priority #:	1
Project Title and Description: Main Library Window Replacement	Total Project Cost:	\$101,545.00

Department/Division Head: Facility Maintenance

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>FY26</i>		
<i>Labor and Materials</i>	\$88,300.00		<i>FY27</i>		
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>		
<i>Equipment</i>			<i>FY30</i>		
<i>Other</i>					
<i>Contingency</i>	\$13,245.00				
Total Capital	\$101,545.00				

Project Justification and Objective: To replace single pain windows that are leaking and in need of replacement with energy efficient windows.

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.

Main Library Window Replacements



The cost to remove 8 sets of hollow metal frames and blind doors 2, 72" x 144" 6 @ 64" x 104" and 1 operable man door with hardware to match existing.

All doors to be Kawneer medium stile doors and frames, bone white finish, 10" bottom rails, same number of cross rails as existing, glass to be 1" tempered low e insulating glass.

Includes disposal, demo and installation, interior drywall patching and painting by others. Includes shop drawings. Building permit by others.

All work @ prevailing wage, and normal working hours M-F 7-4.

The cost excluding sales tax would be \$88,300.00

John P. Albanese

Hanover Glass Inc.

35 Corporate Park Dr.

Pembroke, MA 02359

781-829-4242





**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Department of Public Works - Fleet Division	Priority #:	1
Project Title and Description: Replace 2 Vehicle Lifts	Total Project Cost:	\$59,685.90

Department/Division Head:

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

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

List any funding sources and amounts already granted: _____

Basis of Estimated Costs (attach additional information if available)			If project has impact on 5 Year Plan and future operating budgets, insert estimated amounts.		
Capital:	Cost	Comments	Fiscal Year:	Capital	Operations & Maintenance
<i>Planning and Design</i>			<i>FY26</i>		
<i>Labor and Materials</i>			<i>FY27</i>		
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>		
<i>Equipment</i>	\$49,738.25		<i>FY30</i>		
<i>Other</i>					
<i>Contingency</i>	\$9,947.65	20%			
Total Capital	\$59,685.90				

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.

Rotary Lift HGAC Equipment Quotation

Quote # : 2023631
 Date: 11/3/2023
 Requested By: R Ragazzini
 Quote Expires: 3/2/2024
 Payment Terms: 1/2%-15th,NET 30
 Warranty: 1yr. Parts & Labor

Prepared By: Kathy Brown

*If completion of installation is delayed more than one month due to governmental entity delays (i.e. electrical, etc.), Rotary can request partial payment for work completed. (both equipment and installation).



Note: Quote for equipment and installation.

Project Name: Town of Plymouth - Public Works Dept

Model No.	Description	Per Unit Price	Qty.	Extended Price
SPO16N0A0BL	2-post above ground lift w/ 3-stage arms w/ TA adapters; 80" rise	\$ 22,428.48	1	\$ 22,428.48
	16,000lb capacity - standard height			
FJ71015-1KIT	Passenger car adapter kit for SPO16, CAPACITY 2,750 lbs. each	\$ 558.15	1	\$ 558.15
SPO12N7W7BL	2-post above ground lift w/ 3-stage arms and TA adapters, 75.75" rise	\$ 12,017.00	1	\$ 12,017.00
	12,000lb capacity - 2' extended height			
FJ6225	Adapter kit, (4) FJ6202, 3-stage arms	\$ 448.96	1	\$ 448.96
XXX82	Freight	\$ 3,545.26	1	\$ 3,545.26
XXX01CTT	Installation	\$ 10,740.40	1	\$ 10,740.40
	Includes removal and disposal of (2) lifts, installation of (2) new Rotary Lifts			
	including labor and travel. Includes prevailing wage.			
	*Does not include electrical, air or concrete work			\$ -
	*Direct shipment of equipment to customer			\$ -
	*Does not include any applicable sales tax			\$ -
				\$ -
				\$ -

Total Price: \$ 49,738.25

ADDITIONAL TERMS AND CONDITIONS: By submitting a purchase order to Vehicle Service Group, LLC. (VSG), customer accepts and agrees to these terms and conditions as additional terms to the existing agreement between the parties referenced on the face of this quotation (Existing Agreement), notwithstanding anything to the contrary contained therein. All additional or different terms and conditions contained in Customer's purchase order are hereby rejected. No additional or different terms or conditions, or any modifications, changes, or amendments to these terms of the existing agreement shall be binding on VSG, unless expressly accepted by VSG in writing.

DISCLAIMER: Notwithstanding anything to the contrary in the Existing Agreement, VSG shall not be liable for any loss, damage or additional costs arising from unforeseen conditions affecting installation, including but not limited to contaminated soil, bed rock, in-floor heating system, high water conditions, or any othertype of in-ground conditions. Customer acknowledges and agrees that Customer shall be responsible for any additional costs due to such conditions, in addition to the installation price set forth herein.

DELAY: Notwithstanding anything to the contrary in the Existing Agreement, if delivery of the equipment or completion of the work is delayed by more than thirty (30) days due to the acts or omission of Customer or any third party other than VSG or its sub-contractors, VSG may require Customer to render payment for equipment manufactured or delivered, and portions of the work completed, within thirty (30) days from the date of VSG's invoice, in the amounts set forth in such invoice.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Department of Public Works - Fleet Division	Priority #:	2
Project Title and Description: Fuel Efficiency Vehicle	Total Project Cost:	\$35,000.00

Department/Division Head:

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

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

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>FY26</i>		
<i>Labor and Materials</i>			<i>FY27</i>		
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>		
<i>Equipment</i>	\$35,000.00		<i>FY30</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$35,000.00				

Project Justification and Objective: Purchase 1 energy efficient vehicle

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
FY25 SPRING ANNUAL TOWN MEETING**

Department: Crematory	Priority #:	1
Project Title and Description: Rebuild of Retort #3	Total Project Cost:	\$110400.00

Department/Division Head: Diane Maguire, Acting Superintendent

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>			FY26		
<i>Labor and Materials</i>			FY27		
<i>Administration</i>			FY28		
<i>Land Acquisition</i>			FY29		
<i>Equipment</i>			FY30		
<i>Other</i>	92,000.00				
<i>Contingency</i>	20%				
Total Capital	\$110,4000.00				

Project Justification and Objective: Rebuild of U.S. Cremation retort including a complete refractory rebuild.

Rebuilds are necessary approximately every 8 years or 1000 cremations. Unit 3 has cracks on sides and ceiling.

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.



Alpha Crematory Repair

Service Quote

1742 S Woodland Blvd. #416
 Deland, FL, 32720
 Phone: (813) 333-2654

Created Date 10/26/2023

Quote Number 00000214

Contact Name Diane Maguire

Mailing Address 102 Samoset Street
 Plymouth, MA 02360
 United States

Bill To Name Town of Plymouth-Vine Hills Crematory

Bill To 102 Samoset Street
 Plymouth, MA 02360
 United States

Ship To Name Town of Plymouth-Vine Hills Crematory

Ship To 102 Samoset Street
 Plymouth, MA 02360
 United States

Expiration Date 12/10/2023

Product	Product Description	List Price	Sales Price	Quantity	Total Price
Classic Pro - Complete Rebuild	Complete Refractory Rebuild				
	Remove & replace all refractory and insulation				
	Cure new refractory				
	2 Technicians				
	Travel, rentals, and accommodations	\$92,000.00	\$92,000.00	1.00	\$92,000.00
	Does not include refractory lining of stack sections, dumpster and/or crane rentals				

Subtotal \$92,000.00

Discount 0.00%

Total Price \$92,000.00

Grand Total \$92,000.00

Sign/Date: _____

Print/Date: _____

This quotation is subjected to the following terms & conditions.

We can not move forward with any project prior to receiving this quote signed and approved.

**PAYMENT TERMS: %50 DEPOSIT REQUIRED FOR SCHEDULING AND
 FINAL PAYMENT DUE AT INVOIVING.**

All quotes are subject to 50% deposit. Unless explicitly discussed and documented.

Any additional services performed outside of the project details are subject to L&E rates.

PMI (Preventive Maintenance Inspection)

The purpose of a PMI is to reduce the potential for equipment failure and downtime.

A PMI is for preventive purposes only, not emergency services or repairs.

If requested. Client must have operator present for the duration of a verified cremation.

Dedicated PMI are available, however to reduce travel costs most trips are scheduled in groups.

Any additional services performed outside of the project details are subject to L&E rates.

L&E (Labor & Expenses)

The purpose of a PLE is for emergencies and dedicated site visits.

Once complete we will invoice you based on our PLE rate (rate based on priority).

If requested. Client must have operator present for the duration of a verified cremation.

Refractory Repairs

We will not proceed with any project prior to receiving both this quote signed and deposit.

We will schedule your project in the order that its received. Once we receive the project deposit.

Client will be responsible for receiving, storing/covering and protecting material until arrival.

Typical material ETA is one week prior to project start date.

If requested. Client must have operator present for the duration of a verified cremation.

Warranty

Refractory is considered a consumable material and is not covered under any warranty.

Warranty does not apply to consumables including but not limited to igniters, thermocouples etc.

We offer 90 day warranty on workmanship, installation and satisfaction.

Initials Required

_____ **IMPORTANT:** Equipment must be shut down 48-72 hours prior to tech arrival.
If the equipment is not cool to touch we can not enter. You will still be responsible for trip charges.

_____ Client must provide access to running water for any repair work.

_____ Confirm: Project equipment is currently functioning properly and operational?

_____ Client responsibility to hire crane for stack removal when needed. (If needed)

_____ Client responsibility to provide means of debris disposal. Must have convenient access.

Typically a 20 yard roll off dumpster for complete rebuilds and 10 yard for most all other repairs.

Your signature below acknowledges that you fully understand and agree with the terms and conditions in this form.

Sign/Date: _____

Print/Date: _____

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Cemetery	Priority #:	1
Project Title and Description: Replace Pickup Truck #73 with 2024 Ford F350 One Ton	Total Project Cost:	\$135,534.00

Department/Division Head: Diane Maguire, Acting Superintendent

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

For project re-submittals, list prior year(s): Fall 2021

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>			FY26		
<i>Labor and Materials</i>			FY27		
<i>Administration</i>			FY28		
<i>Land Acquisition</i>			FY29		
<i>Equipment</i>	\$117,855.00		FY30		
<i>Other</i>					
<i>Contingency</i>	\$17679.00				
Total Capital	\$135,534.00				

Project Justification and Objective: This one ton pickup will replace the division's 2012 Ford F350 pick up which is over 11 years old with over 100,000 miles and body decay.

This new truck will help with towing equipment while maintaining over twenty cemeteries and coordinating burials. This truck will use be using leaf and chip boxes already owned.

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

2021 Ford -F350 series, Serial #1FTRF3B6XCEC96094

What is the expected lifespan of this new/replacement equipment: 10-12 years

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

MOTOR VEHICLE PURCHASE CONTRACT

Colonial Ford of Plymouth, MA
11 Pilgrim Hill Road
Plymouth, MA 02360
(508) 746-3400
http://colonialford.com

FOR CONSUMER
USE ONLY

DATE 10/31/2023		ORDER No.		STOCK NO. ORDER 1		SALESPERSON George Andruk		DMS EMPLOYEE # 974	
PURCHASER'S NAME(S) Town Of Plymouth				EMAIL chunter@plymouth-ma.gov		STREET ADDRESS 26 COURT ST			
CITY/STATE/ZIP PLYMOUTH MA 02360				CELL PHONE		HOME PHONE (774) 836-0374		BUSINESS PHONE (774) 836-0374	
ENTER MY ORDER FOR (QUANTITY)		NEW <input type="checkbox"/> USED <input type="checkbox"/>		FORMER USE (if applicable)		DEMONSTRATOR <input type="checkbox"/>		POLICE CAR <input type="checkbox"/>	
				FORMER LEASED CAR <input type="checkbox"/>		FORMER DAILY RENTAL <input type="checkbox"/>		REBUILT INSURANCE TOTAL <input type="checkbox"/>	
Year 2024		Make FORD		Model F350		Body Style/Type REG		Model No.	
						Transmission Standard <input type="checkbox"/> Automatic <input checked="" type="checkbox"/>		(Speeds)	
Vehicle Identification No. TBI FACTORY ORDER		Color 1st 2nd GREEN 3rd		Interior 1st 2nd GRAY 3rd		Top		Odometer mi. <input type="checkbox"/> km. <input type="checkbox"/>	
TRADE-IN		Year		Make					
Model		Type		Color					
VIN									
Odometer		(mi. <input type="checkbox"/> km. <input type="checkbox"/>							
Transmission		Standard (Speeds) <input type="checkbox"/> Auto <input type="checkbox"/>							
No of Cyl.		Pass.		Doors					
Salvage Title		Yes <input type="checkbox"/> No <input type="checkbox"/>							
PREVIOUS OWNER									
City/State/Zip									
LIENHOLDER									
Address									
City/State/Zip									
Acct. No.		Check No.							
Balance Due									
Additional Information - Vehicle Purchased									
LIENHOLDER									
Address									
City/State/Zip									
INSURANCE CO.									
Agent/Branch									
Address/City									
<p>In the event I fail to take delivery of the vehicle purchased by me within forty-eight (48) hours after I have been notified by you that it is ready for delivery and pay the total contract price in the manner indicated, my deposit in the amount of _____ may, at your option, be retained by you to compensate you in whole or in part for any losses sustained by you. Your right to retain my deposit shall be in addition to and not instead of any other right or remedy provided by applicable law including, without limiting the generality of the foregoing, the sale of the car or truck I agree to purchase. If the amount of my deposit exceeds actual damages sustained by you, you will promptly refund the difference to me.</p> <p>Purchaser's Initials []</p>									
<p>ALL REBATES AND SALES INCENTIVES OFFERED BY THE MANUFACTURER OR DISTRIBUTOR ARE HEREBY ASSIGNED TO THE DEALER</p> <p>Purchaser's Initials []</p>									
<p>This contract is not binding upon either dealer or purchaser until the following conditions are met:</p> <p>(1) The contract is signed by dealer or his/her authorized representative;</p> <p>(2) Other: _____</p> <p>(3) Other: _____</p>									
<p>PURCHASER MAY CANCEL THIS CONTRACT AND RECEIVE A FULL REFUND AT ANY TIME UNTIL SHE RECEIVES A COPY OF THIS CONTRACT SIGNED BY AN AUTHORIZED DEALER REPRESENTATIVE. PURCHASER MUST GIVE WRITTEN NOTICE OF CANCELLATION TO THE DEALER.</p>									
<p>The front and back of this order comprise the entire agreement between the dealer and purchaser and no other agreement or understanding has been made or entered into.</p>				<p>X _____ Purchaser Signature</p> <p>_____ Co-Purchaser Signature</p> <p>_____ Approved Authorized Dealer Representative</p>					
<p>Dealer Installed Accessories</p> <p>23 YARD DUMP BODY PTO</p> <p>9 FT FISHER YELLOW STEEL \$42,500.00</p> <p>STROBES INSTALL</p> <p>DRIVER SD TOOL BOX</p> <p>SANDER CONTROLS ONLY 3</p>						<p>1. Total Price</p> <p>2. Discount</p> <p>3. Trade-In Allowance</p> <p>4. Rebate</p> <p>5. Trade Difference (line 1 minus lines 2, 3, & 4)</p> <p>6. Documentary Preparation \$495.00</p> <p>7. Title Preparation \$360.00</p> <p>8. *Mass. Sales Tax (0.000 % of line 5, 6 & 7)</p> <p>9. Other</p> <p>10. TOTAL CONTRACT PRICE (Total of lines 5, 6, 7, 8, & 9)</p> <p>11. Balance Due on Trade-In</p> <p>12. Subtotal (Total of lines 10 & 11)</p> <p>13. Deposit</p> <p>14. Amount to be Financed</p> <p>15. Cash Due on Delivery</p> <p>16. TOTAL PAYMENT (Total of lines 13, 14, & 15) (line 16 must equal line 12) \$117,855.00</p>			

6843: EntId: 147516 / EvtId: 3285550

Generated by DealerSocket®

10/31/2023 8:35:27 AM

ADDITIONAL PROVISIONS

(a) I agree to accept delivery of the vehicle purchased by me within forty-eight (48) hours after I have been notified by you that it is ready for delivery and to pay the cash due on delivery simultaneously with its delivery.

Plymouth

etalbot@jcmadigan.com <etalbot@jcmadigan.com>

Thu 10/26/2023 8:00 PM

To: Dell Roderick <droderick@buycolonialford.com>

Hi Dell, this is what they want...2 like this and one with no spreader plumbing or control which is \$4000.00 less.
So, two at \$42,500.00 and one at \$38,500.00.

Plymouth	Price \$42,500.00
EASTERNER 9' STEEL 2 TO 3 YARD DUMP BODY WITH ELECTRIC HOIST	
STANDARD 24" CABSHIELD WITH SCREEN WINDOW	
DOUBLE ACTING PISTON	
LED RECESSED LIGHTS, DUMP & B/U ALARM, REAR MUD FLAPS	
UNDERCOATED AND PAINTED black	
SMITH STYLE TIE DOWNS	
CANVAS COVER - MANUAL	
FRONT FLAPS ON REAR TIRES	
UPGRADE DUMP TO CENTRAL HYDRAULIC - DUMP & SANDER	
STAINLESS VALVE COVER FOR HYDRAULIC VALVE	
UPGRADE TO A 1-TON STAINLESS STEEL HYDRAULIC TANK	
1/2" REINFORCED PLATE W/ D RINGS AND LIGHT PLUG - RECEIVER	
(2) CODE 3 MEGA THINS DUAL COLOR	cabshield front
(2) CODE 3 MEGA THINS DUAL COLOR	cabshield side
(2) WHELEN VERTEX LED FLASHERS	snaplatch
(2) WORK LIGHTS - LED	
REMOUNT OEM SUPPLIED BACK UP CAMERA	
FISHER 9' HC HEAVY DUTY Model: HC	
FISH STICK - CUTTING EDGE - ABL halogen lights	
SNOW FOIL ATTACHMENT	

1
42,500
74,500

\$ 117,000

11
38,500
74,500

113,000



Preview Order D002 - F3H 4x4 Reg Chas Cab DRW: Order Summary Time of Preview: 10/26/2023 10:41:02 Receipt: 10/24/2023

Dealership Name: Colonial Ford, Inc.

Sales Code : F11647

Dealer Rep.	Dell Roderick	Type	Fleet	Vehicle Line	Superduty	Order Code	D002
Customer Name	COLONIAL FORD	Priority Code	A1	Model Year	2024	Price Level	420

DESCRIPTION

F350 4X4 CHASSIS CAB DRW/145
145 INCH WHEELBASE
GREEN GEM
VINYL 40/20/40 SEATS
MEDIUM DARK SLATE
PREFERRED EQUIPMENT PKG.640A
.XL TRIM
.AIR CONDITIONING -- CFC FREE
.AM/FM STEREO MP3/CLK
6.7L POWER STROKE V8 DIESEL
10-SPEED AUTO TORQSHIFT
.LT245/75R17E BSW ALL-SEASON
4.10 RATIO LIMITED SLIP AXLE
RAPID HEAT SUPPLEMENTAL HEATER
CV LOT MANAGEMENT
FRONT LICENSE PLATE BRACKET
PLATFORM RUNNING BOARDS

TOTAL BASE AND OPTIONS
DISCOUNTS
TOTAL

ORDERING FIN: ST999 END USER FIN: ST999

PRICE DESCRIPTION

728 14000# GVWR PACKAGE
\$0 ENGINE BLOCK HEATER
600 50-STATE EMISSIONS
\$0 PRO POWER ONBOARD - 2KW
\$0 SNOW PLOW PREP PACKAGE
\$0 JOB #1 ORDER
\$0 WHEEL WELL LINERS - FRONT
\$0 40 GAL AFT OF AXLE FUEL TNK
\$0 DUAL BATTERY
096 REAR VIEW CAMERA & PREP KIT
\$0 XL CHROME PACKAGE
\$0 .FOG LAMPS
360 .REMOTE START SYSTEM
228 FUEL CHARGE
\$10 PRICED DORA
\$0 DESTINATION & DELIVERY
291

P.T.O. Dump E
9ft Fisher Plow
4 strobes
Drivers side tool Box

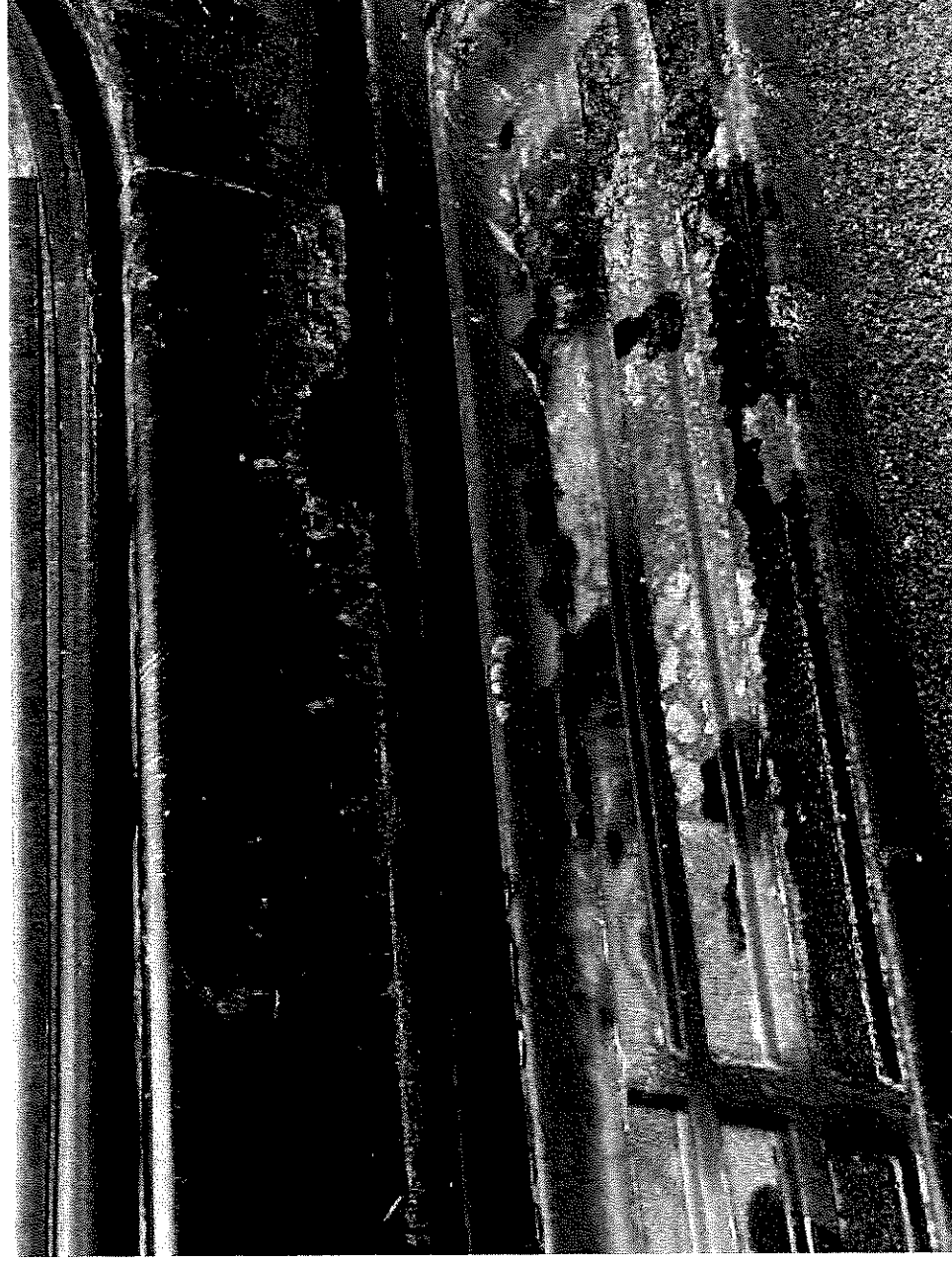
Customer Name:
Customer Address:

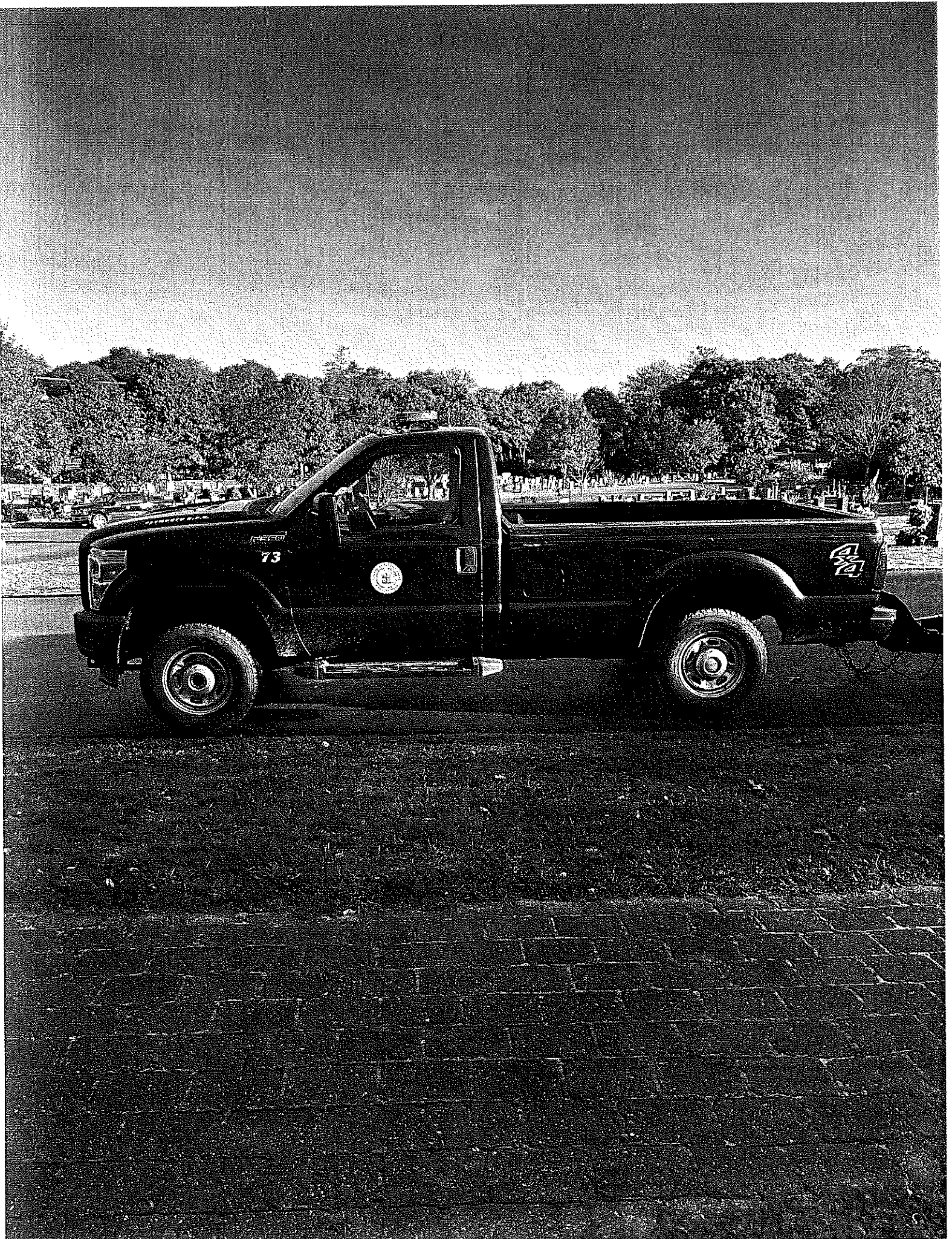
Customer Email:
Customer Phone:

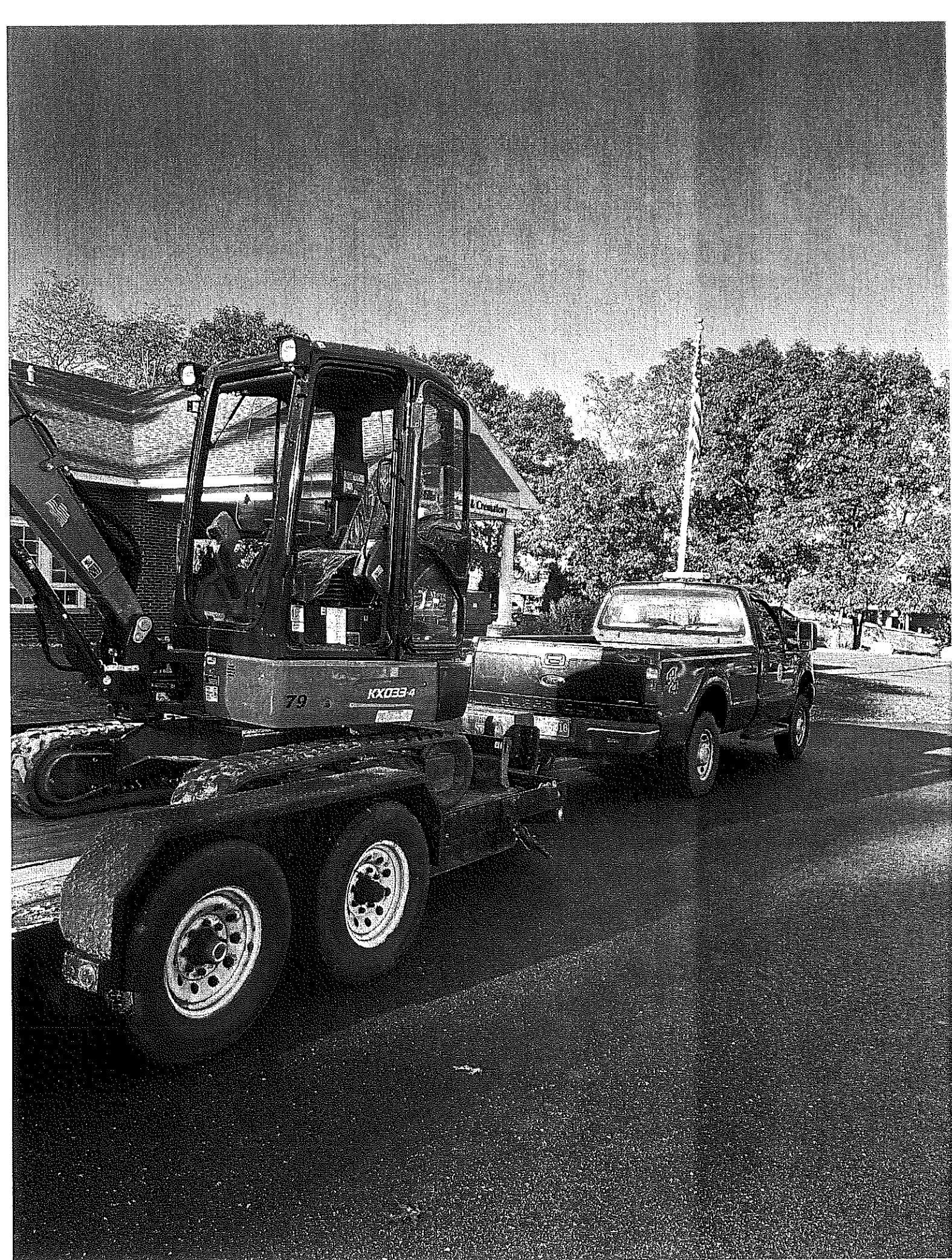
Diane Maguire

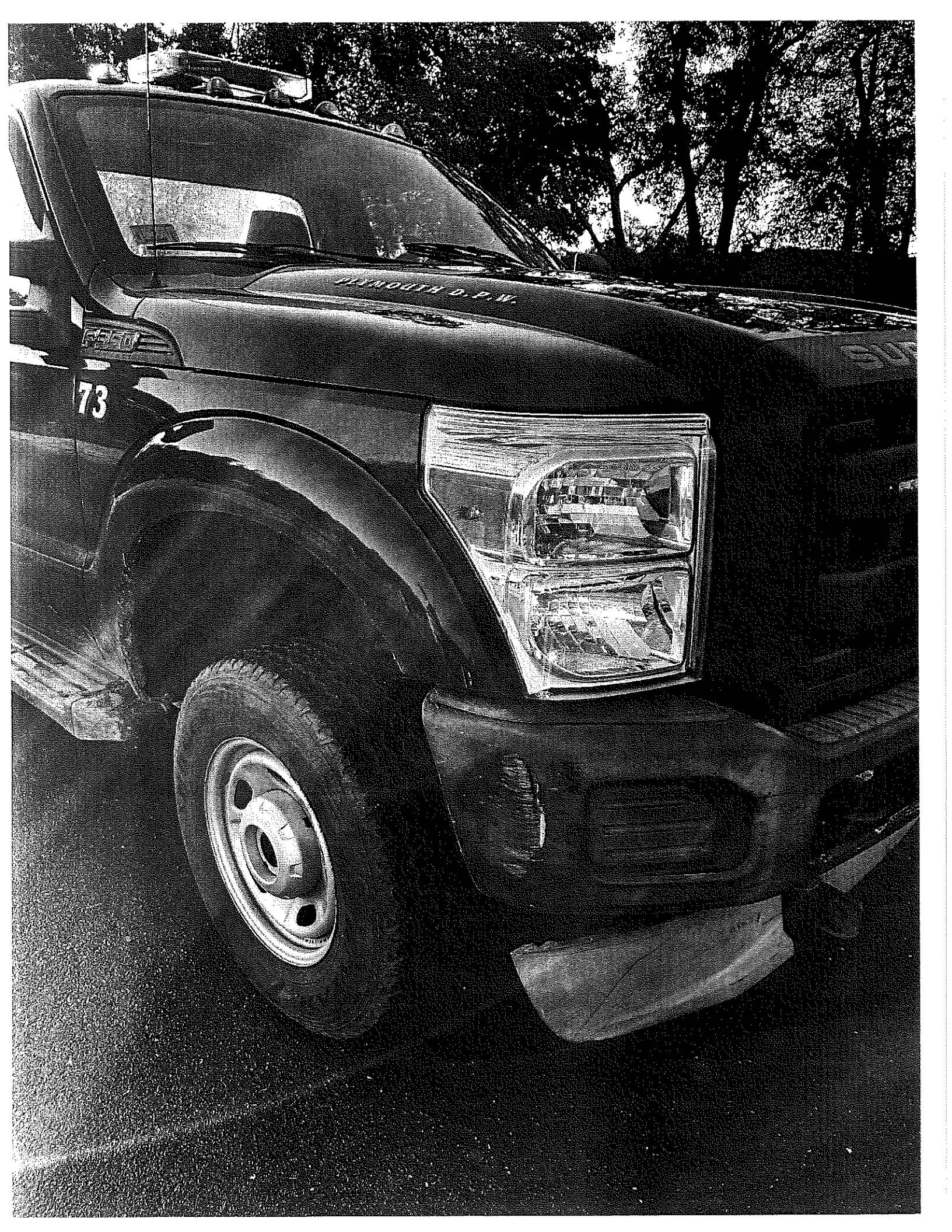
From: Diane <skippyok@comcast.net>
Sent: Tuesday, October 31, 2023 11:00 AM
To: Diane Maguire

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









**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Cemetery	Priority #:	2
Project Title and Description: Vine Hills Cemetery Fence	Total Project Cost:	\$57259.75

Department/Division Head: Diane Maguire, Acting Superintendent \$57,200.00

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>			FY26		
<i>Labor and Materials</i>			FY27		
<i>Administration</i>			FY28		
<i>Land Acquisition</i>			FY29		
<i>Equipment</i>			FY30		
<i>Other</i>	47716.75				
<i>Contingency</i>	20%				
Total Capital	57259.75				

Project Justification and Objective: Replacement of 655 feet of black chain link fence in Vine Hills C section.

This will replace fence that is broken and unable to be repaired. This new section would connect to section previously done along Samoset Street.

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.



1010 Turnpike St.
Canton, MA 02021
Tel: 781-821-5900
Fax: 781-562-1645

Proposal

To: Town of Plymouth - Cemetery Division
102 Samoset Street
Plymouth MA *02360

Att: Estimating

Q10032023-AS	
Phone	Date
508 830-4078	10/03/23
Job Name / Location	
Plymouth Vine Hills Cemetery fencing project	
Job Number	Job Phone
REMOVE & REPLACE FENCING	

We hereby submit specifications and estimates for:

Item No.	Quantity	Description	Bid /Unit	Extended
1.000	655 FT	5' black chain link fence	\$ 73.85	\$ 47,716.75
		** NOTES		
		* 60" 9GA black KK fusion bond chain link fabric		
		* 1-5/8" black PolyKote MG-40 top rail		
		* 2-7/8" black PolyKote MG-40 terminal post in cement footings		
		* 2-3/8" black PolyKote MG-40 line post in cement footings		
		* Post 10' on center in cement footings; 12" wide x 36" deep		
		* Color plus fusion bond black coil spring tension wire		
		* Removal of existing & clearing brush attached to existing fence		
		** Excludes sonotubes and rebar cages		
		*** OPEN SHOP / PREVAILING WAGE RATES APPLY ***		

*Exclusions (even if noted on specs and drawing): permits, all engineering, PE stamps, testing, ledge excavation, railroad insurance, winter conditions, Guardrail Hand Digging, clearing & grubbing, flaggers, night lighting, damage to utilities not identified by Dig Safe, contractor, owner or owner's representative. GC responsible for estimated quantities

*Price is subject to change prior to award due to the volatility in the steel market. Customer is responsible for carrying provision for steel escalation.

We Propose hereby to furnish material and labor - complete in accordance with the above specifications, for the sum of:

\$ 47,716.75

Payment to be made as follows:

Progress Payments - Net 10 days from release of payment by owner.

All material is guaranteed to be as specified. All work to be completed in a professional manner according to standard practices. Any alteration or deviation from 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

Authorized

Signature:

Anthony Santagati

Note: This proposal may be withdrawn
by us if not accepted within

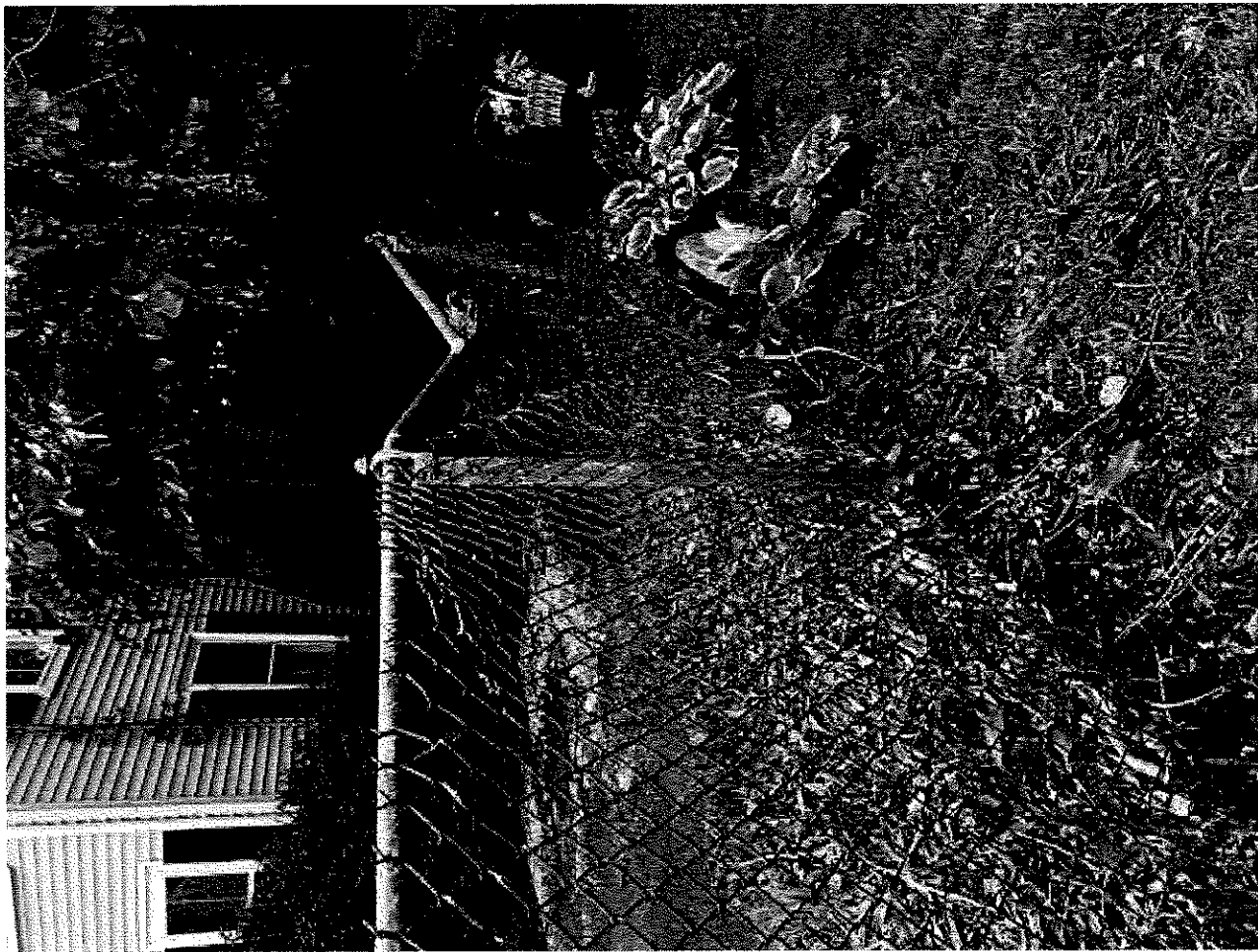
7 days.

Acceptance of Proposal -The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified.

Date of Acceptance: _____

Signature: _____

Signature: _____



Sent from my iPhone

Diane Maguire

From: Diane <skippyok@comcast.net>
Sent: Friday, October 27, 2023 11:36 AM
To: Diane Maguire

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





**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 ANNUAL TOWN MEETING**

Department: Parks and Forestry	Priority #: 1
Project Title and Description: Replace fencing at Sirrico Memorial Playground	Total Project Cost: \$96,085.08

Department/Division Head: Nick Faiella

Check if project is: New **Cost estimate was developed:** 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>	\$80,070.90		<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>	\$16,014.18	20% increase for material increase and unknowns			
Total Capital	\$96,085.08	Estimate plus contingency			

Project Justification and Objective:

This fence is fabricated by using a combination of post and rail fence and chain link fabric. Over the past decade, the Parks Division has repaired and replaced sections of this fence on a regular basis, including posts, rails, fabric, gates, and hardware. At this time, it has become a challenge to continue to repair sections as the wooden posts can no longer hold the sections of rails, as the posts are becoming dilapidated, due to age and rot. The rebuilding of the new fence would be made up of new black vinyl posts, vinyl coated chain link fabric, and hardware.

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

What is the expected lifespan of this new/replacement equipment: XXX years for the posts and hardware. XXX years for the recycled fabric.



1010 Turnpike St.
Canton, MA 02021
Tel: 781-821-5900
Fax: 781-562-1645

Proposal

To: **TOWN OF PLYMOUTH**
26 Court Street
Plymouth MA *02360

Att: Nick Faiella

Q10252023-AS	
Phone	Date
508-322-3407	10/25/23
Job Name / Location	
76 South Street Plymouth, MA / Remove & Replace existing fences and gates	
Job Number	Job Phone
FENCING & GATES	

We hereby submit specifications and estimates for:

Item No.	Quantity	Description	Bid /Unit	Extended
1.000	1246 LF	Existing Fencing Removed & Disposed	\$ 7.00	\$ 8,722.00
2.000	8 EA	48" Chain Link Fence Corner & Intermediate Posts	\$ 248.00	\$ 1,984.00
3.000	1234 LF	48" Chain Link Fence (PTR & BTW) Black Vinyl Coated	\$ 54.85	\$ 67,684.90
4.000	12 LF	48" Chain Link Fence Gate with gate Posts Black Vinyl Coated	\$ 140.00	\$ 1,680.00
		Per Town of Plymouth Fence Installation Contract Bid #22152		
		*** OPEN SHOP / PREVAILING WAGE RATES APPLY ***		

*Exclusions (even if noted on specs and drawing): permits, all engineering, PE stamps, testing, ledge excavation, railroad insurance, winter conditions, Guardrail Hand Digging, clearing & grubbing, flaggers, night lighting, damage to utilities not identified by Dig Safe, contractor, owner or owner's representative. GC responsible for estimated quantities

**Price is subject to change prior to award due to the volatility in the steel market. Customer is responsible for carrying provision for steel escalation.*

We Propose hereby to furnish material and labor - complete in accordance with the above specifications, for the sum of:

\$ 80,070.90

Payment to be made as follows:

Progress Payments - Net 10 days from release of payment by owner.

All material is guaranteed to be as specified. All work to be completed in a professional manner according to standard practices. Any alteration or deviation from 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

Acceptance of Proposal -The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified.

Date of Acceptance: _____

Authorized
Signature:

Anthony Santagati

Note: This proposal may be withdrawn
by us if not accepted within

7 days.

Signature: _____

Signature: _____

FABRIC: 48" 9 G' ACK (2" Mesh)
 KK FUSION BOI

TOP RAIL: 1 5/8" O.D. BLACK PolyKote MG-40 PIPE, 1.83 lbs. per foot. Top rail 21' in length, joined with 1 5/8" COLOR PLUS BLACK SLEEVE.

LINE POST: 1 7/8" O.D. BLACK PolyKote MG-40 PIPE, 2.28 lbs. per foot. Line posts set 10' on center maximum spacing. Concrete footing: 8" diameter, 24" depth.

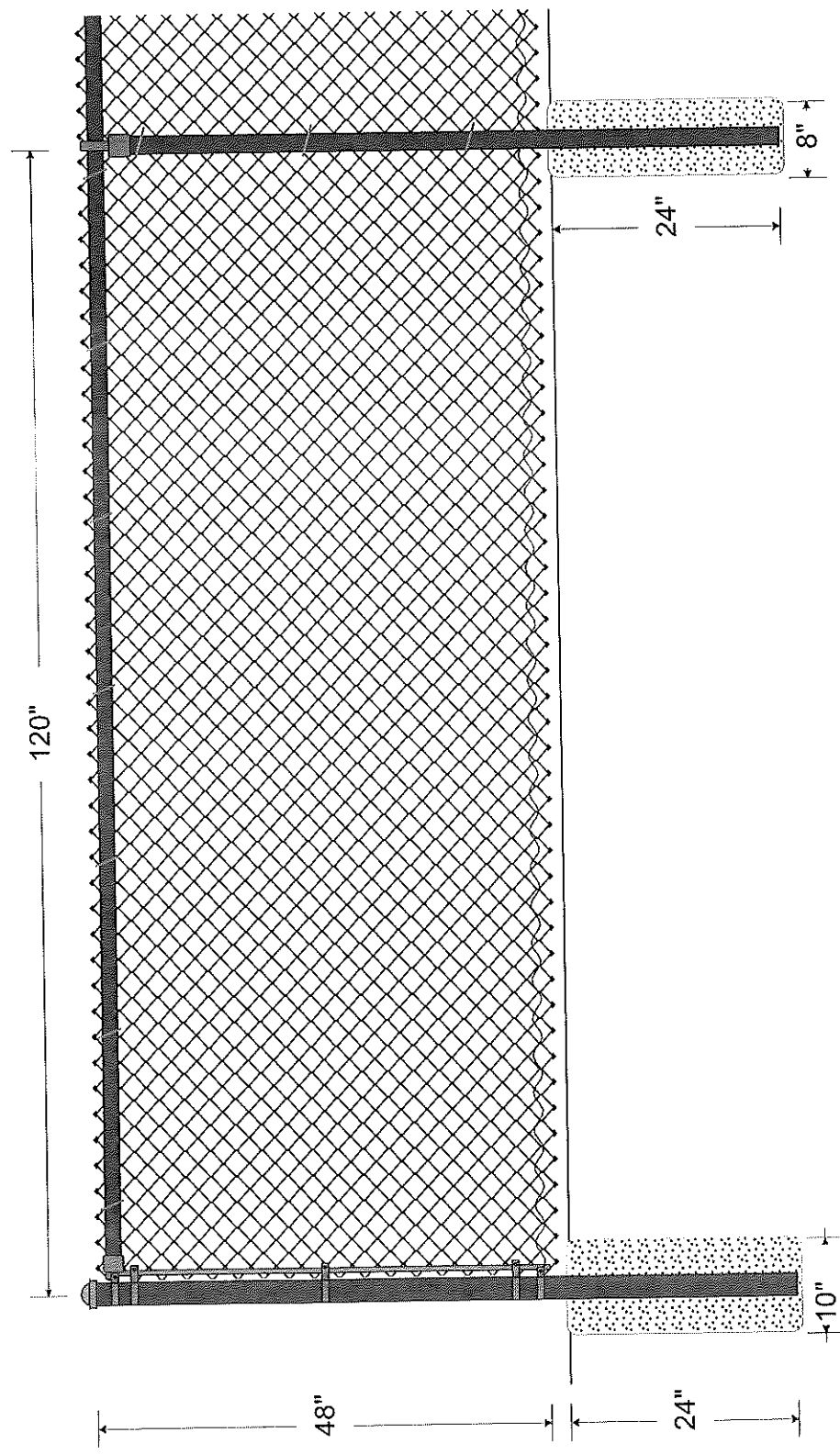
TERMINAL POST: 2 3/8" O.D. BLACK PolyKote MG-40 PIPE, 3.12 lbs. per foot. Concrete footing: 10" diameter, 24" depth.

TENSION WIRE: 7C/6F Color Plus Fusion Bonded Black Coil Spring (1000' / coil) TENSION WIRE attached to bottom of fence fabric with 9 GA. (12.5 Core) COLOR PLUS BLACK STEEL (132 per lb / 10 lbs. Case) (per pound) HOG RING spaced 18" on center.

FITTINGS: COLOR PLUS BLACK BEVELED BRACE BAND & CARRIAGE BOLT w/ Nut, COLOR PLUS BLACK COMBO RAIL-END, COLOR PLUS BLACK STEEL EYE-TOP, COLOR PLUS BLACK STEEL CAP, 3/16" X 3/4" COLOR PLUS BLACK STEEL TENSION BAR, COLOR PLUS BLACK BEVELED TENSION BAND & CARRIAGE BOLT w/ Nut.

TIE WIRE: 6 1/2" 9 GA. ALUMINUM BLACK TIE WIRE spaced 15" on center for line posts & 18" on center for rails.

POST FOOTING: HAND MIXED CONCRETE.



Premier Fence™

LLC

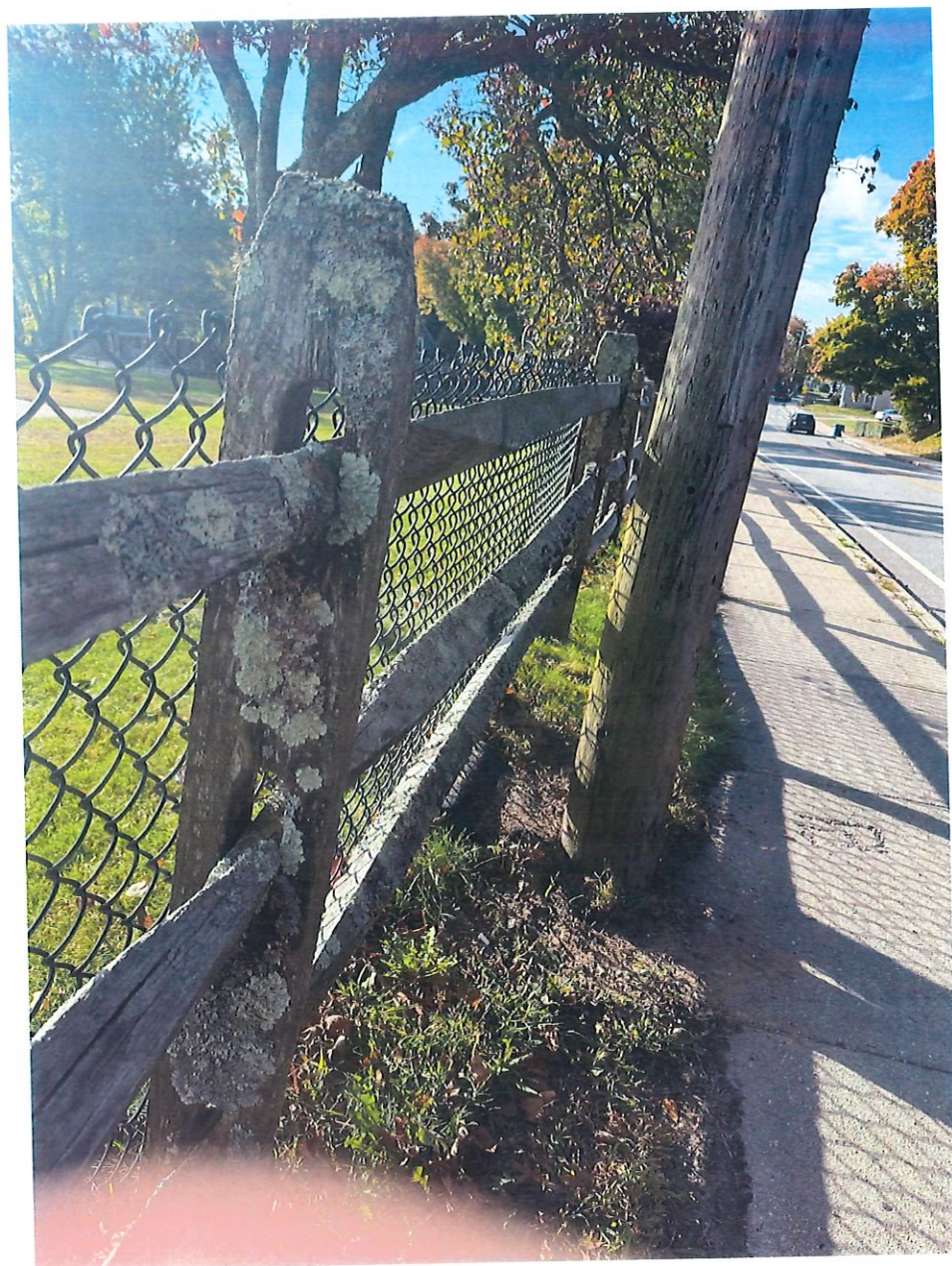
Premier Fence, LLC
 1010 Turnpike Street
 Canton, MA 02021
 781-821-5900

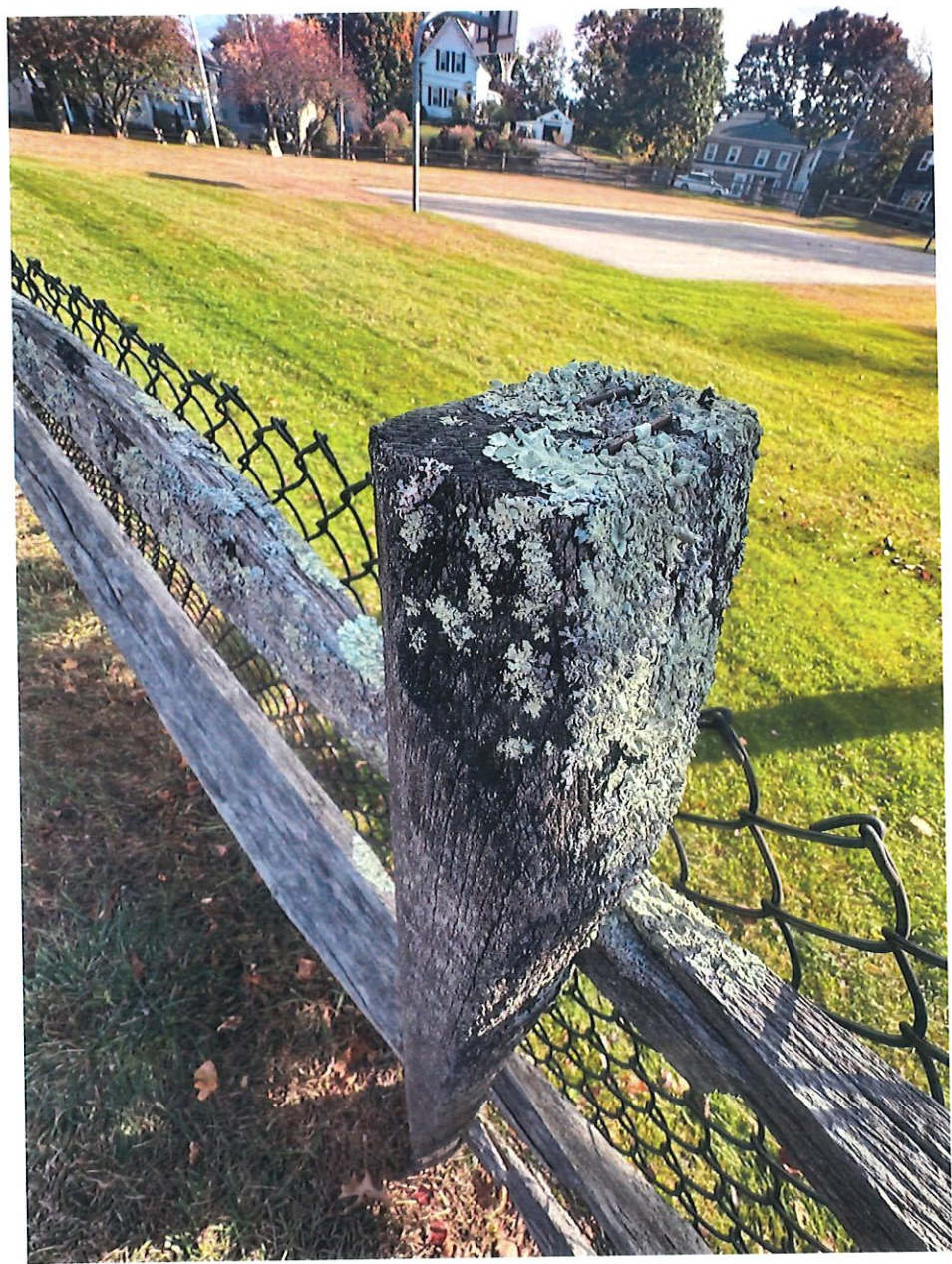
Town of Plymouth
 Plymouth, MA 02360

Drawn: 10/25/2023
 File:

LINE OF FENCE













**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 ANNUAL TOWN MEETING**

Department: Parks and Forestry	Priority #:	3- 2
Project Title and Description: (2) Commercial Mowers	Total Project Cost:	\$37,347

Department/Division Head: Nick Faiella

Check if project is: Resubmitted **Cost estimate was developed:** 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>			FY24		
<i>Administration</i>			FY25		
<i>Land Acquisition</i>			FY26		
<i>Equipment</i>	\$32,476 (\$16,238 Each)		FY27		
<i>Other</i>					
<i>Contingency</i>	\$4,871 (\$2,435 Each)	15% increase for availability and unknowns			
Total Capital	\$37,347 (\$18,673 Each)				

Project Justification and Objective:

These two mowers would be replacing old mowers that have been used for over twenty years. Life expectancy is normally ten years; however, we have been able to keep these mowers alive by performing routine maintenance and only using them as a last resort. These mowers no longer work. With parts being difficult to obtain due to the age of the machines, these two mowers cannot be repaired. Including full-time and seasonal staff, the Parks Division has up to sixteen employees during the summer season, and currently nine functioning commercial mowers. It is essential to replace these mowers so that the Parks crews can perform their seasonal daily routine maintenance tasks.

For Capital Equipment Requests:

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

1) 2001, SCAG, sthm23cv, 9220192 2) 1992, SCAG, sthm20kh, S1073

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

**Morrison's Power Equipment**

80 Long Pond Road
Plymouth, MA 02360
Phone: (508) 747-9747 Fax: (508) 747-4417

Order Number**528135**

Morrison's Power Equipment has been happily serving the south shore for over 35 years. We thank you for your business.

Bill To				Ship To		
PLYMOUTH TREE & PARK DEPT. 169 CAMELOT DRIVE PLYMOUTH, MA 02360						
Customer	Contact	Customer Tax Number	Phone	Cell Phone	Transaction	PO Number
5844		046-001-271	(508) 747-1620	(508) 830-4162	Estimate	mower quote 1&2
Counter Person	Sales Person	Date Printed	Reference	Email Address		Department
Cody Morrison	Cody Morrison	10/19/23	528135	nfaiella@plymouth-ma.gov		Counter Sales

Section 1 List is mower is \$19,699. List on 923g is \$494. List on 923H is \$105.
Bid price is listed below

Part Number	Line	Description	Ordered	B/O'd	Shipped	List	Net Each	Amount
923G	SCAA	STC/STCII/STT/STTII STR ASSY	2		2	\$434.50	\$395.00	\$790.00
923H	SCAA	INSTALL KIT STRIPER CAT II/ TURF TIGER	2		2	\$92.40	\$84.00	\$168.00
Model	Line	Description	Ordered	B/O'd	Shipped	List	Net	Amount
STTII61V-31DFI	SCAW	61" - 31HP Kawi DFILiquid Cooled	2		2		\$15,759.00	\$31,518.00

Invoice Total \$32,476.00

Sales Tax \$0.00

Grand Total \$32,476.00

Quotes are good for 30 days and apply to in stock items only unless otherwise stated. Quoted pricing excludes third party payments.

Notes:



Customer acknowledges receipt thereof:

TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST FORM
FY25 ANNUAL TOWN MEETING REQUEST FORM

Department: SEWER DIVISION		ONE
Project Title and Description: CMOM	Total Project Cost:	\$500,000.00

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>FY26</i>	\$600,000.00	
<i>Labor and Materials</i>	\$500,000.00		<i>FY27</i>	\$600,000.00	
<i>Administration</i>			<i>FY28</i>	\$600,000.00	
<i>Land Acquisition</i>			<i>FY29</i>	\$1000,000.00	
<i>Equipment</i>			<i>FY30</i>	\$1,000,000.00	
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$500,000.00				

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.

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

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Attach additional information, estimates, or justification.



TOWN OF PLYMOUTH

Department of Public Works
Sewer Division
131 Camelot Drive
Plymouth, Massachusetts 02360
Office: (508) 830-4159

William Coyle, PE
Director of Public Works

Doug Pinard
Wastewater Superintendent

FY-25 Capital Improvement Plan Request Priority # 1

Capacity, Management, Operational, Maintenance program (CMOM)

Background:

The Town of Plymouth entered into an agreement with the EPA in 2014 to implement a Corrective Action Plan for its sewer system. The system contains approximately 285,000 feet of gravity sewers, resulting in approximately 57,000 feet needing to be cleaned annually as part of its CMOM program. In accordance with the EPA Clean Water Act Administrative Order Docket No. 13-006, The Town of Plymouth has developed and implemented a Capacity, Management, Operation and Maintenance (CMOM) corrective action plan. Since 2015, Environmental Partners has been involved in collecting data through routine cleaning and inspection of the Town's sewer system and developing a plan for long-term improvements. The Town of Plymouth has retained Environmental Partners (EP) since 2015 to implement and coordinate the completion of a five-year Corrective Action Plan as required by the EPA through its CMOM Program. The objective of the Corrective Action Plan is to develop a Collection System Maintenance Plan after five years of data collection and plan development. Given the Town's limited cleaning capabilities and staffing, the Town has retained EP annually since 2015 to implement this plan, which is broken down into two Phases:

- Phase 1 encompasses data collection for the sewer collection system including routine cleaning and inspection of all gravity sewer and manholes in the system, EP retained the services of National Water Main Cleaning Company for the gravity sewer main work and Duke's Root Control (formerly Midwest Water Group) for the manhole work,
- Phase 2 encompasses plan development for the sewer collection system, which will identify the needs to develop a long-term plan for future sewer system improvements.

Project Justification:

The attached cost table outlines the estimated repair costs projected during CMOM investigations. The sewer division is requesting \$500,000 for FY-25 and will continue to seek funding in the amount of \$500,000 each subsequent fiscal year to continue the rehabilitation of our aging gravity sewer collection and conveyance system. As we move forward with this comprehensive rehabilitation plan of the Town's sewer collection system and pumping stations, we seek to mitigate environmental risk to the Town associated with sewer system overflows and comply with the EPA Clean Water Act Administrative Order Docket No. 13-006. This request will not address all the issues in the system; however, the most severe defects will be addressed first.

- Pipeline and manhole inspections were performed annually (between 2015-2019 and 2021-2022) in accordance with National Association of Sewer Service Companies (NASSCO) standards. These NASSCO standards were used in developing a priority list of pipelines and manholes to be rehabilitated and a list of identified pipeline deficiencies within the Town's sewer system. 2019* 2020: Sewer CMOM Collection System Rehabilitation (#6531000) — Clean, CCTV, and CIPP lining of 5,200 ft of gravity sewer main. Miscellaneous manhole and pipeline repairs because of CMOM findings.
- 2021-2022: Sewer CMOM Collection System Rehabilitation (\$435,000) Clean, CCTV, and CIPP lining of 1,850 ft of gravity sewer main, Cementitious and epoxy lining of 200 vertical feet of sewer manholes. Miscellaneous manhole and pipeline repairs because of CMOM findings.

The Sewer Division appreciates your support for this article.

TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST FORM
FY25 ANNUAL FALL TOWN MEETING REQUEST FORM

Department: SEWER DIVISION			TWO
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>FY25</i>		
<i>Labor and Materials</i>	\$200,000.00		<i>FY26</i>		
<i>Administration</i>			<i>FY27</i>		
<i>Land Acquisition</i>			<i>FY28</i>		
<i>Equipment</i>			<i>FY29</i>		
<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

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Attach additional information, estimates, or justification.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST FORM
FY25 ANNUAL TOWN MEETING REQUEST FORM**

Department: SEWER DIVISION		THREE TWO
Project Title and Description: #53 MAC Tank Truck Replacement	Total Project Cost:	\$579,000.00

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>			FY26		
<i>Labor and Materials</i>			FY27		
<i>Administration</i>			FY28		
<i>Land Acquisition</i>			FY29		
<i>Equipment</i>	\$445,000.00		FY30		
<i>Other</i>					
<i>Contingency</i>	\$134,000.00				
Total Capital	\$579,000.00				

Possible sources and amounts of funding, if known: _____

Project Justification and Objective: This request is to replace a 1995 pump truck to be operated by sewer department staff. This important piece of equipment is responsible for preventing SSO's and septic tank pump outs of various town buildings including schools.

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

1995, MAC, Model 1RD688SX, VIN#1M2P268C6SM022988 This is an important part of equipment for the sewer department and is vital to daily operations. This truck is a 1995 MAC and has become costly to maintain due to part accessibility and frequency of continuous breakdowns. Safety has also become an issue with deterioration of the frame and none functioning instrumentation. See attached back up for exciting equipment condition.

Attach additional information, estimates, or justification.

MACK®



Mack Trucks
www.macktrucks.com

TECHNICAL SPECIFICATION

GRANITE 64FR



APPLICATION PACKAGES	DESCRIPTION
CHASSIS CONFIGURATION PACKAGE	ONEBOX EATS, LH BATTERY BOX, 8.7 GALLON (33L) SLEEVED DEF, SINGLE 26" LH FUEL TANK

CUSTOMER/VEHICLE INFO	DESCRIPTION
S CHASSIS (BASE MODEL)	GRANITE 64FR
S ASSEMBLY PLANT	Made in Macungie, PA USA
CUSTOMER FLEET SIZE	DEALER FLEET WITH LESS THAN 25 VEHICLES IN OWN FLEET OF ANY VEHICLE BRAND
TYPE OF SERVICE	MUNICIPAL
S WARRANTY REGISTRATION LOCATION	USA - WARRANTY REGISTRATION LOCATION
EMISSION WARRANTY CERTIFICATION	CARB + EPA for Mack MP7 / MP8 Diesel
INTENDED REGISTRATION LOCATION	MASSACHUSETTS
S INITIAL REGISTRATION LOCATION	USA REGISTRATION
BRAND ORNAMENT	BULLDOG BRAND ORNAMENT, CHROME
S LANGUAGE-PUBS/DECAL/SIGNS	ENGLISH
S ROAD CONDITION	WELL MAINTAINED SURFACED ROADS >95% DRIVING DISTANCE
VEHICLE USE & BODY/TRAILER TYPE	TANKER or PUMPER TRUCK
TRAILER TYPE	WITHOUT TRAILER TYPE
S GROSS COMBINATION WEIGHT (CA in PC29 only)	TRUCK ONLY - NO TRAILER TOWING PROVISIONS PROVIDED
S BRAKE REGULATION	BRAKE REGULATION, STOPPING DISTANCE 94M (310FT)
TOPOGRAPHY	GRADES <3% GREATER THAN 98% OF DRIVING DISTANCE MAX GRADE 8%
S AMBIENT TEMP UPPER LIMIT (GTA)	AMBIENT TEMPERATURE HOT. WARMER THAN 104 F (40 C) ALLOWED UP TO 25 HOURS PER YEAR
S OPERATING TERRAIN GRADE CONDITIONS	ON-OFF HIGHWAY, STARTING GRADES<18%
S LOADING SURFACE FACTOR	CONCRETE LOADING AND / OR UNLOADING SURFACE
VEHICLE VOCATION	PICKUP & DELIVERY / SHORT HAUL SERVICE

ENGINE/TRANSMISSIONS	DESCRIPTION
ENGINE PACKAGE, COMBUSTION	MP8-425C MACK 425HP @ 1500-1700 RPM (PEAK) 2100 RPM (GOV) 1550 LB-FT, US'21
S GHG APPLICATION, VEHICLE	GREEN HOUSE GAS VOCATIONAL APPLICATION
TRANSMISSION	4500 RDS 6 SPEED ALLISON GEN 6 W/PROGNOSTICS, WITH PTO PROVISION
S GEARBOX 12TH GEAR LOCK-OUT	WITHOUT 12TH GEARBOX GEAR LOCK-OUT

EXHAUST/EMISSIONS	DESCRIPTION
NOX LIMITS	CARB LEGACY / EPA (200MG/HP/HR), 50 State Idle Compliance
S IDLE EMISSION LABEL LOCATION (CA in PC29 only)	IDLE EMISSION LABEL LOCATION, LOWER LH CORNER OF DRIVER DOOR
S DPF DIESEL PARTICULATE FILTER	CLEARTECH ONE BOX E.A.T.S. RH SIDE UNDER CAB US17 / US21
S CHASSIS MOUNTED EMISSIONS FINISH	W/O DEF COVER & PAINTED DPF COVER
DIESEL EXHAUST FLUID TANK	8.7 GALLON (33 L) 26" LEFT SIDE FUEL TANK MTD
EXHAUST	SINGLE VERTICAL RIGHT SIDE CAB MOUNTED, LOWER VENTURI DIFFUSER, TURNED END
EXHAUST STACK HEIGHT	9' 6" FROM GROUND
EXHAUST SYSTEM MATERIAL FINISH	SINGLE, BRIGHT FINISH HEAT SHIELD, STACK
EMISSION ON BOARD DIAG CONTROL	EMISSION OBD, DISPLAY ONLY, USA2024

TECHNICAL SPECIFICATION (cont.)



ENGINE EQUIPMENT		DESCRIPTION
S	AIR CLEANER	UNDER HOOD SINGLE ELEMENT DRY TYPE W/AIR INTAKE FROM BOTH SIDES OF HOOD
S	BUG SCREEN	BLACK ALUMINUM BUG SCREEN MOUNTED BEHIND GRILLE, WITHOUT WINTER FRONT COVER
S	AIR COMPRESSOR/DRYER	WABCO HEATED SS-HP AIR DRYER W/ WABCO 636 (37.4 CFM) AIR COMPRESSOR
S	AIR DRYER POSITION (CA)	AIR DRYER POSITION STANDARD
S	ALTERNATOR	DELCO 12V 160A (28SI) BRUSH-TYPE
S	BATTERIES	(3) MACK 12V 760/2280 CCA THREADED STUD TYPE
S	BATTERY BOX - MOUNTING (x)	LH RAIL UNDER CAB FORWARD OF FUEL TANK (3 BATTERY MAX)
S	BATTERY BOX COVER	MOLDED PLASTIC
	BATTERY DISCONNECT SWITCH	FLAMING RIVER BIG SWITCH WIRED TO POSITIVE SIDE
	STARTER MOTOR	12 VOLT MELCO STARTER (MITSUBISHI ELECTRIC)
	ENGINE BRAKE	MACK MP8 POWERLEASH
S	ENGINE BRAKE LIGHTING (CA)	VEHICLE AND TRAILER (IF APPLICABLE) STOP LAMPS ACTIVATE UPON SERVICE BRAKE APPLICATION ONLY(3899000)
S	FAN DRIVE	BEHR FAN AND ELECTRONIC MODULATING VISCOUS FAN DRIVE
S	COOLANT PROTECTION	ETHYLENE GLYCOL FULLY FORMULATED COOLANT (50/50 MIX DYED PINK) TO -34DEG, W/ FILTER
	HOSES - RADIATOR/HEATER	SILICONE RADIATOR AND HEATER HOSES
S	FUEL-WATER SEPARATOR	MACK W/MANUAL DRAIN VALVE V2 (INTEGRAL W/ PRIMARY FUEL FILTER)
S	PRIMARY FUEL FILTER POSITION (CA)	STANDARD FUEL FILTER POSITION
S	ENGINE HEATERS	120v 1500w BLOCK HEATER ONLY (120V-15A PLUG)
	OIL SUMP	CORROSION RESISTANT OIL PAN
S	ENGINE STOP, EMERGENCY (CA in PC29 only)	WITHOUT ENGINE STOP, EMERGENCY

CLUTCH/TRANS EQUIPMENT		DESCRIPTION
	GEAR SHIFTER	ALLISON DASH MOUNTED SHIFTER W/NEUTRAL TO RANGE INHIBIT (HD SERIES)
S	CLUTCH ACTUATION SYSTEM & PEDAL PAD	WITHOUT CLUTCH CABLE SYSTEM
	MINIMUM REQUIRED PROP SHAFT SIZE	MINIMUM REQUIRED FOR KAX PROP SHAFT, PROPS-L
	DRIVELINE - MAIN	SPICER 1810 HD W/COATED SPLINES (PROPS-L)
	DRIVELINE - INTERAXLE	SPICER 1710 HD W/COATED SPLINES
	PROPELLR SHAFT MAIN, UNVSL JNT	UNIVERSAL JOINT HALF-ROUND TYPE
S	PROP SHAFT INTERAXL UNIV JOINT	HALF-ROUND UNIVERSAL JOINT
S	TRANSMISSION OUTPUT TORQUE	TRANSMISSION OUTPUT TORQUE BASIC
	LUBRICANTS, TRANSMISSION	TRANSYND SYNTHETIC LUBE FOR ALLISON TRANS
	TRANSMISSION OIL COOLER	ALLISON 4xxx SERIES TRANSMISSION W/DIRECT MOUNT COOLER & SS COOLANT TUBES

FRONT AXLE EQUIPMENT		DESCRIPTION
	FRONT AXLE	20000# (9100 KG) MACK FXL20 STRAIGHT SPINDLE/UNITIZED BEARINGS
	SPRINGS - FRONT	MACK TAPERLEAF HD 20000# (9100 KG) GROUND LOAD RATING, EQUAL BIAS
S	FRONT AXLE BRAKES	MERITOR "S" CAM TYPE 16.5" x 6" Q+
S	BRAKE, FRONT	CAST IRON
	FRONT AXLE BRAKE DUST SHIELD	DUST SHIELDS FOR FRONT AXLE
S	FRONT BRAKE ADJ. MANUFACTURE	HALDEX - AUTOMATIC
S	FRONT BRAKE CHAMBER MFG.	FRONT BRAKE CHAMBER MANUFACTURER, HALDEX
S	HUB MATERIAL, FRONT	FERROUS
S	FRONT AXLE LUBRICANT	FRONT AXLE LUBE, FAG NLGI2 GREASE

TECHNICAL SPECIFICATION *(cont.)*



FRONT AXLE EQUIPMENT		DESCRIPTION
S	SHOCK ABSORBER, FRONT STEERING	DOUBLE ACTING TYPE SHEPPARD SD110 + HD94

REAR AXLE EQUIPMENT		DESCRIPTION
	REAR AXLE	52000# (23600kg) MACK S522R CAST DUCTILE IRON HOUSING
S	REAR AXLE CASING WIDTH	W/O WIDE TRACK AXLE
S	DRIVE AXLE LUBRICANT	DRIVE AXLE LUBE, SHELL 75W90 SYNTHETIC OIL
S	CARRIER - REAR AXLE	150/151 SERIES (Tandem Mack Rear Axles up to 150,000lb GCW)
	TRACTION DIFFERENTIAL	INTERWHEEL DIFFERENTIAL LOCK, ALL REAR AXLES
S	POWER DIVIDER LOCKOUT	INTERAXLE POWER DIVIDER LOCKOUT, W/BUZZER & LIGHT
	REAR AXLE RATIO	4.19 RATIO
	REAR SUSPENSION	AIR ADZ-252 NEWAY 52,000 lb
	BOGIE SPREAD, REAR	52" AXLE SPACING (BOGIE WHEELBASE)
	SUSPENSION LEVELLING DEVICE (CA in PC29 only)	ELECTRICAL REGULATION LEVELING DEVICE
	AIR SUSPENSION DUMP WARNING	AIR SUSPENSION DUMP, SPEED LIMITED, WARNING INDICATOR & BUZZER
	REAR SHOCK ABSORBER	REAR SHOCK ABSORBER
	TRANSVERSE TORQUE RODS, R SUSP	TRANSVERSE TORQUE ROD - ALL AXLES
S	AUX.SPRING BRAKE QTY	AUX SPRING BRAKE QTY, 4 CHAMBERS
	BRAKES - REAR	MERITOR HEAVY DUTY "S" CAM 16.5"x7" Q+ (Total for QTY = 2)
S	BRAKE, DRIVE, REAR	CAST IRON
S	REAR BRAKE ADJ MANUFACTURE	HALDEX - AUTOMATIC (Total for QTY = 2)
	DRIVE AXLE BRAKE DUST SHIELD	DUST SHIELDS FOR REAR AXLE
	REAR BRAKE CHAMBER SIZE	REAR SPRING BRAKE CHAMBERS 30/30 TYPE
	BRAKE ORI REAR-MOST DRIVE AXLE	DRUM BRAKE CHAMBER ORIENTATION: Middle Mount - Forward of Axle - Chamber Up
	PARKING BRAKE CHAMBER	HALDEX "LIFE SEAL PLUS" BRAKE CHAMBERS (Total for QTY = 2)
S	HUB MATERIAL, DRIVE	IRON PRESET REAR HUB W/INTEGRATED SPINDLE NUT
S	ANTILOCK BRAKE SYSTEM	BENDIX WITH TRACTION CONTROL 4S4M
S	BRAKE VALVE VERSION	BENDIX SWITCHES AND VALVES WHERE POSSIBLE
S	TRACTION CONTROL DISABLE (CA in PC29 only)	AUTOMATIC TRACTION CONTROL (ATC) FULL DISABLE SWITCH

FRAME EQUIPMENT/FUEL TANKS		DESCRIPTION
	WHEELBASE	255"
	AF (OVERHANG)	74"
	FRAME RAILS & LINERS	11.1 x 90 x 300mm - (0.437" x 3.54" x 11.81")W/ Partial Liner; RBM 3,920,000 LB-IN
S	FRONT FRAME EXT. (BOLTED ON)	6" BOLT ON FRAME EXTENSION
S	FRONT FRAME LENGTH	FRONT FRAME LENGTH 725MM
	CROSSMEMBERS	BOC AND INTERMEDIATE CROSSMEMBERS, HD I-BEAM
S	REAR CROSSMEMBER OPTIONS	STEEL CLOSING REAR CROSSMEMBER
S	REAR FRAME TREATMENT	WITHOUT TAPERED FRAME RAIL ENDS
	FRONT BUMPER	EXTENDED-SWEPT BACK-STEEL BRIGHT FINISH
	CAB GUARD, FRONT	PLATE TYPE BRIGHT FINISH
S	CROSSMEMBER, BOGIE TYPE	BASIC SOLUTION TRUNNION BRACKET, STD HEIGHT
S	TOWING DEVICE, FRONT	HOOKS
S	FUEL LEVEL SENDER UNIT, LIQUID	BASIC FUEL LEVEL SENDER MOUNTED ON L.H TANK
	FUEL TANK - LH	72 GALLON (275 L) 26" ALUMINUM, SLEEVED D-SHAPED

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TECHNICAL SPECIFICATION (cont.)



FRAME EQUIPMENT/FUEL TANKS		DESCRIPTION
S	FUEL TANK - RH	W/O RH FUEL TANK
S	FUEL HOSES, LIQUID	BRAIDED HOSE
S	FUEL FILLER NECK OPTIONS	WITHOUT FILLER NECK SCREEN, WITH NON-LOCKABLE FUEL TANK CAP
	FUEL LINE OPTIONS, LIQUID	W/O FUEL LINE OPTION
S	CAB INSTEP VERSION	STANDARD 2 STEP CAB ACCESS
S	STEPS (BRIGHT) - FUEL TANK	STANDARD FINISH STEPS AND BRIGHT FINISH STRAPS

AIR/BRAKE		DESCRIPTION
S	AIRTANK DRAIN VALVE	MANUAL (PETCOCK) DRAIN VALVES ON ALL TANKS
	AIRTANK MATERIAL	ALUMINUM AIR TANK PAINTED CHASSIS COLOR
	RELOCATE AIR RESERVOIRS	UNDER BATTERY BOX, REMAINING BETWEEN FRAME RAILS
S	PARKING BRAKE VALVE	SINGLE VALVE SYSTEM

ELECTRICAL		DESCRIPTION
	BACK-UP ALARM	ECCO BACK-UP ALARM 575 CONSTANT SOUND LEVEL 107 dB
	DASH MOUNTED SWITCHES	TWO (2) EXTRA DASH MOUNTED ILLUMINATED SWITCHES
S	ROOF & SIDE MARKER LIGHTS	(5) TRUCKLITE CHROME BULLET ROOF MARKER & STANDARD MARKER / DIRECTIONAL SIGNAL
S	HEADLAMP BULB TYPE	HEADLAMP BULB TYPE, LED, HEATED
S	DAYTIME RUNNING LIGHTS	W/OVERRIDE SWITCH, PARK BRAKE & ENGINE RUNNING ACTIVATED
S	DRL OVERRIDE SPEED THRESHOLD	DRL OVERRIDE SPEED THRESHOLD 8 KMPH (5 MPH)
S	TAIL LAMPS	INCANDESCENT TAIL LAMPS
	WORK LIGHTS - CHASSIS MOUNTED	RH/LH LED WORK LIGHT (STEPS & GROUND) ON BOTH SIDES TRUCK

TRAILER CONNECTIONS		DESCRIPTION
	TRAILER BRAKE VALVE	HAND CONTROL VALVE FOR TRAILER BRAKES W/ AIR CONNECTIONS OR SERVICE BRAKES W/O AIR CONNECTIONS

PTO		DESCRIPTION
	POWER TAKE OFF CONTROL	TRANSMISSION PTO SWITCH AND LIGHT WITH WIRING AND PIPING FOR LOCAL INSTALLATION
S	BODY BUILDER INTERFACE	BODY LINK III W/CAB PASS-THRU

SPECIALTY EQUIPMENT		DESCRIPTION
S	LANE SUPPORT SYSTEM (LSS)	WITHOUT LANE SUPPORT SYSTEM
S	DATA CAPTURE	WITHOUT DATA CAPTURE
S	CAMERA, SURVEILLANCE	WITHOUT CAMERA

CAB INTERIOR (A THRU G)		DESCRIPTION
S	SPEEDOMETER -&- GAUGES - UNIT(S) OF MEASURE	U.S. UNITS (PREDOMINANT)
	GAUGE - PACKAGE, SECONDARY	2ND GA PKG W/ENG OIL TEMP,TRANS OIL TEMP,PYRO,APP AIR PRESS
	GAUGE OIL TEMP-REAR AXLE	REAR AXLE OIL TEMP GAUGE IN DID (DRIVER INFORMATION DISPLAY)
	AUXILIARY PNEUMATIC OUTLET CAB (CA family in PC29 only)	AUX. INCAB PNEUMATIC LINE CLEANOUT
S	AIR CONDITIONING/HEATER	BLEND AIR HVAC W/"ATC" TEMP REGULATION
S	CUPHOLDER	CUPHOLDER
S	DOME LAMP, INTERIOR	(4) DOME LAMPS - DOOR AND SWITCH ACTIVATED

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CAB INTERIOR (A THRU G)		DESCRIPTION
S	DASH INDICATOR - LAMP BODY OUT OF POS	DASH MTD, INDICATOR BODY/HOIST UP "BODYBUILDER LAMP"
	FIRE EXTINGUISHER	5LB (ABC RATED) MOUNTED BETWEEN DRIVER SEAT BASE AND DOOR VALVE AIMED REARWARD
S	FLOOR COVERING	POLYURETHANE FLOOR MAT WITHOUT REMOVABLE INSERTS

CAB INTERIOR (H THRU R)		DESCRIPTION
S	INSTMNT CLUSTER LANGUAGE	DEFAULT: ENGLISH, SPANISH, FRENCH
S	KEY TYPES FOR DOORS	ALL CHASSIS KEYED AT RANDOM
S	DOOR OPENING OPTIONS	W/O ELECTRONIC KEYLESS ENTRY
S	FORWARD OVERHEAD STORAGE	(2) STORAGE COMPARTMENTS AND NET RETAINERS W/CENTER MOUNTING FOR CB PROVISIONS
S	AUDIO ACCOMMODATION	PREMIUM STEREO, AM/FM, MP3, WEATHER BAND, BLUETOOTH
S	ANTENNA - RADIO	RADIO ANTENNA, CAB MOUNTED BEHIND LH DOOR
	ANTENNA - CB RADIO	PREP KIT FOR MOUNTING ON LT SIDE MIRROR (W/O ANTENNA)
S	AUDIO SHUTOFF	AUTO SHUTOFF FOR RADIO ENTERTAINMENT SYSTEM WHEN VEHICLE IS ENGAGED IN REVERSE
S	POWER LEADS	POWER LEADS (5-WAY BINDING POSTS FOR CB RADIO) IN HEADER CONSOLE
S	AUDIO SPEAKER LOCATION	SPEAKER LOCATION, IN DOORS, MIDDLE HIGH SIDE PANEL
S	COM.RADIO PREP KIT (CB)	CB RADIO MOUNTING REINFORCEMENT IN HEADER CONSOLE
S	REAR WALL STORAGE COMPARTMENT	STORAGE POUCH REAR
	REFLECTOR KIT	EMERGENCY REFLECTOR KIT MOUNTED PARALLEL & CENTERED AGAINST BOC

CAB INTERIOR (S THRU Z)		DESCRIPTION
S	INTERIOR TRIM LEVELS	COMFORT TRIM PACKAGE, STEEL GRAY (Package 11A)
S	SEAT - DRIVER'S	MACK-AIR, HIGH BACK, 1 CHAMBER AIR LUMBAR
S	SEAT COVERING - DRIVER'S	DRIVER'S SEAT - STEEL GREY VINYL
S	SEAT - PASSENGER'S	MACK-FIXED, HIGH BACK
S	SEAT COVERING - PASSENGER'S	PASSENGER'S SEAT - STEEL GREY VINYL
	SEAT ARMREST	INBOARD MOUNTED ARM REST, DRIVER'S & RIDER'S SEAT
S	SEAT BELT(S)	LAP & SHOULDER (BOTH SEATS) CAB MOUNTED SHOULDER BELT ADJUSTMENT
S	SEAT BELT REMINDER	SEAT BELT REMINDER IN INSTRUMENT, WITH AUDIO
S	IGNITION TYPE	KEY TYPE
S	STEERING WHEEL	2 SPOKE URETHANE GRIP, SATIN ALUMINUM SPOKES, WITH SWITCHES
S	WINDSHIELD TYPE	TWO PIECE WINDSHIELD
	CAB GLASS	HEATED TINTED WINDSHIELD, GUARDIAN ENHANCED PROTECTIVE REAR GLASS W/SAFEFLEX; 50% TRANSMITTANCE
S	WASHER RESERVOIR POSITION	W/O WINDSHIELD WASHER OPTION
S	WINDSHIELD WIPERS	2 SPEED ELECTRIC MOTOR W/INTERMITTENT FEATURE

CAB EXTERIOR		DESCRIPTION
S	HOOD LATCH TYPE & FINISH	STRAP TYPE HOOD LATCH WITH BLACK FINISH
S	EXTERIOR TRIM FINISH AND PACKAGES	GRANITE BRIGHT AIR INTAKE
	GRILLE	BRIGHT FINISH BARS W/BRIGHT FINISH SURROUND GRILL MOUNTED
S	PASSENGER SIDE VISIBILITY OPTIONS	AUXILIARY WINDOW IN RH DOOR
	GRAB HANDLES	BF EXTERIOR CAB GRAB HANDLES, BLACK GRAB HANDLE RH INTERIOR WINDSHIELD POST
S	HORN - AIR	(2) MACK RECTANGULAR SINGLE TRUMPET, BRIGHT FINISH ALUMINUM W/SNOW SHIELDS
	HORN - ELECTRICAL	DUAL TONE

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CAB EXTERIOR		DESCRIPTION
	MIRRORS - EXTERIOR	FLAT MIRROR - POLISHED ALUMINUM FINSH, HEATED, W/O LAMPS
	MIRRORS - CONVEX TYPE CAB DOORS	BRIGHT FINISH, LH & RH, 8" DIAMETER HEATED CONVEX
	SUN VISOR - EXTERIOR	SUN VISOR, EXTERIOR, STAINLESS STEEL (UNPAINTED)

AERODYNAMIC DEVICES		DESCRIPTION
S	CAB AERODYNAMIC PACKAGES	WITHOUT CAB AERODYNAMIC DEVICES
S	FRONT CHASSIS AERODYNAMIC PACKAGE	WITHOUT FRONT AERODYNAMIC FAIRINGS

WHEELS & TIRES		DESCRIPTION
	TIRES BRAND/TYPE - FRONT	315/80R22.5 L CONTINENTAL HAU3 WT (20000 lbs) (Total for QTY = 2)
	WHEELS - FRONT	22.5x9.00 ALCOA 89U64x CLEAN BUFFED ALUMINUM, 6.94" OFFSET, 10 HAND HOLE (Total for QTY = 2)
	TIRES BRAND/TYPE - REAR	11R24.5 H BRIDGESTONE M799 (26440 lbs) (DRIVE ONLY) (Total for QTY = 8)
	WHEELS - REAR	24.5x8.25 ALCOA 98565x SEVERE SERVICE, CLEAN BUFFED ALUMINUM, 6.60" OFFSET, 10 HAND HOLE (Total for QTY = 8)
S	TIRE INFLATION VALVE	STANDARD VALVE STEMS AND CAPS
S	FRONT HUB/WHEEL TRIM	WITHOUT FRONT HUB/WHEEL TRIM
S	REAR HUB/WHEEL TRIM	WITHOUT REAR HUB/WHEEL TRIM (Total for QTY = 2)
S	WHEEL NUT & FINISH, FRONT	WHEEL NUT BASIC FINISH, FRONT
S	WHEEL NUT FINISH, REAR (CA)	WHEEL NUT BASIC FINISH, REAR

COMMUNICATION SYSTEMS		DESCRIPTION
S	CO-PILOT - DISPLAY FEATURES ACCESS LEVEL	CO-PILOT DISPLAY, DRIVER ACCESS LEVEL 1
S	TELEMATIC GATEWAY	TELEMATICS GATEWAY, 4G/LTE AND WLAN SYSTEM WITH DIAGNOSTIC SERVICES

ENGINE ELECTRONICS		DESCRIPTION
S	OIL PRESSURE, ENGINE SHUTDOWN	OIL PRESSURE, ENGINE SHUTDOWN
S	COOLANT TEMP, ENGINE SHUTDOWN	COOLANT TEMP, ENGINE SHUTDOWN
S	ENGINE PROTECTION SYSTEM	ENGINE PROTECTION (SHUTDOWN)
	ENG FAN CNTL, A/C ON, TIME SET	ENG FAN CONTROL, A/C ON, TIME SETTING, 60 SEC
S	ENGINE IDLE CONTROL	IDLE CONTROL, 600 RPM
S	SMART IDLE ELEVATED IDLE RPM TIME	INCREASE 10 MINUTE MAXIMUM TIME
S	IDLE S/D ABS TAMPER CHECK	IDLE SHUTDOWN ABS TAMPER CHECK, ENABLED
S	IDLE S/D WARNING TIME	30 SEC IDLE S/D WARNING TIME
S	IDLE S/D IF WARM-UP TEMP	38C DEG (100F), WARM UP TEMP DELAY
S	IDLE S/D WARM-UP TIMER	5 MIN. WARM UP TIME DELAY
S	IDLE S/D IF PTO ACTIVE	ENGINE IDLE SHUTDOWN TIME OVERRIDDEN IF PTO ACTIVE
S	IDLE SHUTDOWN IF POWER > LIMIT	ENG IDLE SHUTDOWN TIME OVERRIDDEN IF TORQUE > THAN LIMIT
S	IDLE S/D OVERRIDE %ENGINE LOAD	IDLE SHUTDOWN OVERRIDE UPTO 20% ENGINE LOAD THRESHOLD
S	AMBIENT TEMP MIN TRESHOLD	AMBIENT TEMP MIN TRESHOLD, 16 DEG C, (60 DEG F)
S	AMBIENT TEMP MAX TRESHOLD	AMBIENT TEMP MAX TRESHOLD, 27 DEG C, (80 DEG F)
S	EL HD THROTTLE,MAX ROAD SPEED	ELECTRONIC HAND THROTTLE, MAX ROAD SPEED, 16 KMH (10 MPH)
S	EL HAND THROTTLE,MAX ENG SPEED	ELECTRONIC HAND THROTTLE, MAX ENGINE SPEED, 1000 RPM
S	EL HAND THROTTLE,MIN ENG SPEED	ELECTRONIC HAND THROTTLE, MIN ENGINE SPEED, 700 RPM
S	EL HD THROTTLE,SPEED RAMP RATE	ELECTRONIC HAND THROTTLE, SPEED RAMP RATE, 100 RPM/SEC

TECHNICAL SPECIFICATION (cont.)



TRANSMISSION ELECTRONICS	DESCRIPTION
TRANSMISSION ELECTRONICS PACKAGE	SPECIALTY USE (150) - SPLIT SHAFT FOR LOW INERTIA PUMPS (ex. CONCRETE PUMPS)
TRANSM AUTO NEUTRAL ON P-BRAKE	ALLISON PARK BRAKE AUTO NEUTRAL-ALLOWS THE DRIVER TO ENGAGE GEAR PRIOR TO DISENGAGING THE PARK BRAKE
TRANSMISSION ELECTRONIC SHIFTING PROPERTIES	FUELSense, FULL NEUTRAL AT STOP

VEHICLE ELECTRONICS	DESCRIPTION
S ROAD SPEED LIMITER SETTING	105 KM/H ROAD SPEED LIMITER (65MPH)
S PEDAL RSL SETTING	101 KM/H PEDAL ROAD SPEED LIMITER (63MPH)
S CRUISE CONTROL	CRUISE CONTROL
S CRUISE CONTROL, MAX SPEED	MAX CRUISE, 105 KPH (65 MPH)
S CRUISE CONTROL MIN SPEED	MIN CRUISE, 32 KPH (20 MPH)
S ENG BRK ENGAGE IN CRUISE	ENG BRK ENGAGE IN CRUISE, 3 MPH, ABOVE SET SPEED
PDLO ENGAGED VLS	POWER DIVIDER LOCK OUT (PDLO) ROAD SPEED LIMIT 24KMH (15MPH)
DIFF LOCK SPEED LIMIT	DIFFERENTIAL LOCK ROAD SPEED LIMIT 24KMH (15MPH)
S MAXIMUM ENG SPEED AT 0 MPH	1000 MAXIMUM ENGINE SPEED AT 0 MPH
S DETECTION SPEED SENSR TMRNG	DETECTION OF SPEED SENSOR TAMPERING, ENABLE
S ENG TORQUE LIMIT,SPEED SENSOR	ENG TORQUE LIMITED TO 50%, IF SPEED SENSOR TAMPER DETECTED
S DRIVER ID FUNCTION	DRIVER ID FUNCTION, DISABLED
S DR PERFORMANCE PARAMETERS	WITHOUT DRIVER PERFORMANCE PARAMETERS
S ENGINE OVERSPEED,ALL COND, LOG	ENGINE OVERSPEED, ALL CONDITIONS, TIME LOG IF ABOVE 2200 RPM
S ENGINE OVERSPEED,FUELED, LOG	ENGINE OVERSPEED, FUELED, TIME LOG IF ABOVE 2100 RPM
S VEHICLE OVERSPEED,ALL COND,LOG	VEHICLE OVERSPEED,ALL COND, TIME LOG IF ABOVE 75MPH (121KMH)
S VEHICLE OVERSPEED, FUELED, LOG	VEHICLE OVERSPEED, FUELED, TIME LOG IF ABOVE 70MPH (113KMH)
S ENGINE IDLE DELAY TO LOG	ENGINE IDLE DELAY TO START LOG, 2 MIN
S PERIODIC TRIP LOG DAY OF MONTH	PERIODIC TRIP LOG, DAY 1 OF THE MONTH

PTO ELECTRONICS	DESCRIPTION
S PTO1 SINGLE SPEED CONTROL RPM.	PTO 1ST, SINGLE SPEED SETTING, 1000 RPM
S PTO 1ST, MAX ROAD SPEED	1ST PTO, MAX ROAD SPEED, 10 MPH (16 KPH)
S PTO 1ST, SPEED RAMP RATE	PTO 1ST, SPEED RAMP RATE 100 RPM/SEC
S PTO 1ST, MAX ENGINE SPEED	PTO 1ST, MAX ENGINE SPEED, 2100 RPM
S PTO 1ST, ROAD SPEED LIMIT	PTO 1ST, ROAD SPEED LIMIT, 97 KMH (60 MPH)
S PTO 1ST, MINIMUM ENGINE SPEED	PTO 1ST, MINIMUM ENGINE SPEED, 600 RPM
S PTO 2ND, SINGLE SPEED SETTING	PTO 2ND, SINGLE SPEED SETTING, 1000 RPM
S PTO 2ND, MAX ROAD SPEED	2ND PTO, MAX ROAD SPEED, 10 MPH (16 KPH)
S PTO 2ND, SPEED RAMP RATE	PTO 2ND, SPEED RAMP RATE 100 RPM/SEC
S PTO 2ND, MAX ENGINE SPEED	PTO 2ND, MAX ENGINE SPEED, 2100 RPM
S PTO 2ND, ROAD SPEED LIMIT	PTO 2ND, ROAD SPEED LIMIT, 97 KMH (60 MPH)
S PTO 2ND, MINIMUM ENGINE SPEED	PTO 2ND, MINIMUM ENGINE SPEED, 600 RPM

PAINT	DESCRIPTION
S PAINT DESIGN	SINGLE COLOR
S PAINT TYPE	SOLID PAINT
PAINT COLOR - FIRST COLOR	MACK GREEN; P9014
S PAINT COLOR - SECOND COLOR	NO SECOND TRUCK COLOR PROVIDED; NO COLOR

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TECHNICAL SPECIFICATION (cont.)



PAINT	DESCRIPTION
S PAINT COLOR - THIRD COLOR	NO THIRD TRUCK COLOR PROVIDED; NO COLOR
S PAINT - CAB PAINT SYSTEM	PAINT - CAB, URETHANE CLEAR COAT
S CAB COLOR	SAME AS FIRST COLOR - CAB
S HOOD COLOR	SAME AS FIRST COLOR - HOOD
S SLEEPER ROOF COLOR	WITHOUT SLEEPER ROOF COLOR
S ROOF FAIRING COLOR	WITHOUT ROOF FAIRING
S CHASSIS RUNNING GEAR	MACK BLACK (URETHANE); P3036
BUMPER	W/O OPTIONAL BUMPER PAINT
S FUEL TANK - ***NO INVENTED VARIANTS ALLOWED in the FUEL TANK PAINT FAMILY***	W/O OPTIONAL FUEL TANK PAINT
S HUBS & DRUMS-FRONT	SAME AS CHASSIS RUNNING GEAR
S HUBS & DRUMS-REAR	SAME AS CHASSIS RUNNING GEAR

CALCULATED CODES - KAX	DESCRIPTION
S PROPCALC SELECTION	YES, THE ORDER MUST BE CALCULATED

BASE WARRANTY & PURCHASED COVERAGES	DESCRIPTION
S VEHICLE WARRANTY TYPE	HEAVY DUTY WARRANTY CLASSIFICATION
BASIC CHASSIS COVERAGE	CHASSIS PLAN 2 60/250K MI NORMAL/HEAVY DUTY, GRANITE/TERRAPRO/LR MODELS PROTECTION PLAN
EMISSION - SURCHARGE	CARB + EPA for Mack MP7 / MP8 Diesel
ENGINE WARRANTY	CARB - ENGINE PLAN 2, 84 MO/250K MILES, MP7/MP8 <460HP
EMISSION COMPONENT COVERAGE	US and CANADA CARB EQUIPPED VEHICLE EMISSION COMPONENTS COVERAGE 60 MONTHS/350,000 MILES
ENGINE AFTERTREATMENT SYSTEM	CARB - EATS: 84 MO/250K MI-ENGINE AFTERTREATMENT MP7/MP8 <460HP
TRANSMISSION WARRANTY	ALLISON TRANSMISSIONS (Contact Allison Transmission for standard warranty and extended coverage data)
S CARRIER & AXLE HOUSING WARRANTY	STANDARD MACK HEAVY DUTY COVERAGE 60 MONTHS / 500,000 (804,672 KM)
S AIR CONDITIONING WARRANTY	AIR CONDITIONING STANDARD COVERAGE (Sealed System Only) 12 MONTHS UNLIMITED MILEAGE
CHASSIS TOWING WARRANTY	CHASSIS TOWING 60 MO/250K MILES
ENGINE TOWING WARRANTY	ENGINE TOWING 60 MO/250K MILES
S GUARDDOG CONNECT BUNDLE	NO GUARDDOG CONNECT (ASIST & MACK ONECALL)

SERVICES	DESCRIPTION
MACK INTEGRATED UPTIME	MACK INTEGRATED UPTIME - 84 MONTHS
S FLEET INTEGRATION	WITHOUT FLEET INTEGRATION
S PARTNERED SERVICES	NO PARTNERED SERVICES PROVIDED

PRICING SUMMARY

GRANITE 64FR

Pumper

VEHICLE PRICE

	\$188,287.00
EXTERNAL LOCALS	
4800 gallon Vacuum Tank	\$120,250.00
VEH111	\$0.00

TOTAL VEHICLE PRICE	\$308,537.00
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SOFT OFFERS AND WARRANTY

CHASSIS PLAN 2 60/250K MI NORMAL/HEAVY DUTY, GRANITE/TERRAPRO/LR MODELS PROTECTION PLAN	\$4,630.00
CARB - ENGINE PLAN 2, 84 MO/250K MILES, MP7/MP8 <460HP	\$4,145.00
CARB - EATS: 84 MO/250K MI-ENGINE AFTERTREATMENT MP7/MP8 <460HP	\$815.00
CHASSIS TOWING 60 MO/250K MILES	\$1,105.00
ENGINE TOWING 60 MO/250K MILES	\$905.00
CARB + EPA for Mack MP7 / MP8 Diesel	\$3,500.00

TOTAL SOFT OFFERS AND WARRANTY	\$15,100.00
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FET EXEMPT ITEMS

ALLISON 5 YEAR WARRANTY	\$863.00
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TOTAL FET EXEMPT ITEMS	\$863.00
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TAX SUMMARY

	AMT. SUBJECT TO TAX	
FET	\$308,537.00	\$0.00
Tire Tax Credit	N/A	\$0.00

TOTAL TAX	\$0.00
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TOTAL SELLING PRICE (PER UNIT) USD	\$324,500.00
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TOWN OF PLYMOUTH

DATE

Rick Lavin
BALLARD MACK SALES & SERVICE, INC.

10/27/23
DATE

Hi Rick,

*Here is the Pumper quote and is based on
2nd half of 2024 production.*

*Thank You
Rock*

Town of Plymouth
131 Camelot Drive
Plymouth, MA 02360

10/25/23

Attention: Rick Ragazzini

4800g Truck Mount Vacuum System Estimate

Work to be performed to (1) customer supplied chassis. Please find below a list of components for a complete 4800g vacuum truck build.

- Furnish and install (1) new 4800g Robinson Vacuum Tank barrel on new chassis, using new hardened mounting kits and new sill plates.
- Mount aluminum tray assemblies on barrel.
- Attach hose tray guards to protect vessel.
- Furnish and install new steel bumper assembly, fabricating brackets as necessary to attach to truck frame.
- Prime and paint all steel bracketry and truck mount components black.
- Furnish and install (1) new aluminum 36-48" double door Heil style cabinet (size dictated by clean frame rail availability on curbside of new chassis). Fabricate custom brackets as necessary to work around existing barrel mounts and bracketry if needed.
- Furnish and install new (1) National Vacuum Equipment 887 Max Pak system with built-in secondary scrubber, oil catch, and muffler assembly, fabricating/modifying bracket/pump stand as necessary.
- Furnish and install/attach new Chelsea power take off and driveshaft assembly to power vacuum pump, driveshaft assembly to include Sureflex style coupling.
- Wire all lighting on barrel as necessary and test for proper operation.
- Furnish and install (1) new 4", and (1) 6" HEATED gate valve assembly on both load line and outlet discharge piping.
- Furnish and install all new dust caps and adapters on valve assemblies, include plastic coated cables to attach dust caps to part A adapter plates.
- Furnish and install brass fittings and plugs as needed plumbing lines for heated valves.
- Furnish and install circulation pump for heat collars, wiring as needed for proper operation.
- Attach all vacuum components with reinforced rubber hose as necessary for proper operation.
- Test all vacuum and heat collar systems to ensure proper working order.
- Wash completed unit and ready for pick-up.

NOTE * Pricing below does NOT include tax or incoming freight on parts used. Price does not include any unforeseen issues found during installation of pump and barrel or chassis modifications if necessary.

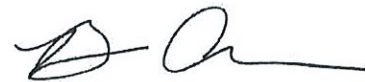
Estimated Cost of Investments:

Robinson Vacuum Tank 4800g Barrel w/ NVE 887 Pump \$120,250

- Robinson Vacuum Tank has an approximate build date of March 2024 -
90 days before production barrel is subject to price change per Robinson Vacuum Tank policy

Parts and Labor ONLY – Federal Excise Tax NOT Included

Sincerely,



Brian Arruda
Sales Representative

If you have any questions regarding anything pertained in this estimate or need modifications to the above spec, please feel free to contact me via phone (508) 801-9348 or email brian@baystatett.com. Thank you for the opportunity to earn your business, I look forward to hearing back either way.

This document and all information contained herein pertains to the terms of agreement between Bay State Truck & Trailer, Inc., 527 Winthrop Street, Rehoboth, MA 02769 and Town of Plymouth, 131 Camelot Drive, Plymouth, MA 02360.

- 1.) The above listed quote is valid for (15) days
- 2.) The quote listed above is for (1) unit.
- 3.) Bay State Truck & Trailer, Inc. requires a 10% security deposit on all vacuum barrels/systems at time of order.
- 4.) Bay State Truck & Trailer, Inc. requires all major service invoices to be paid in full at time of completion and prior to release.
- 5.) Any unpaid equipment left on Bay State property is subject to a per day storage fee.
- 6.) To place this order Bay State Truck & Trailer, Inc. requires an authorized signature from an officer of Town of Plymouth agreeing to specifications, and terms of sale.

By signing below I agree to the terms and specifications designated on this form, which I have read and understood completely. Bay State Truck & Trailer, Inc. is hereby authorized to enter this order for the equipment designated in the specifications above.

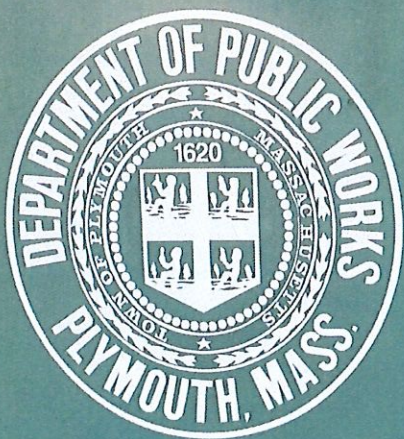
Authorized Signature – Town of Plymouth

Date

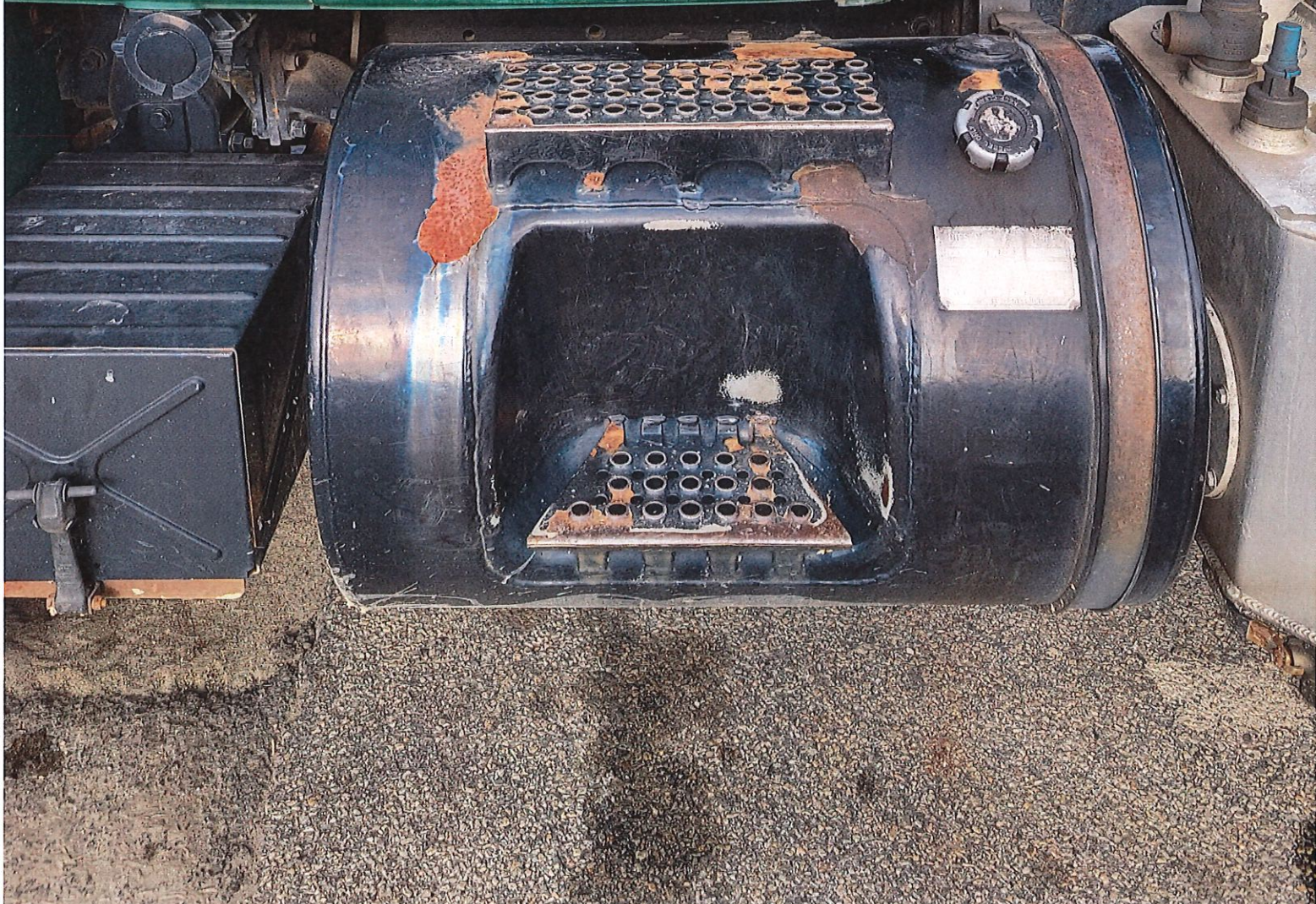
Printed Name and Title



53



Sewer Dept.













**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST FORM
FY25 ANNUAL TOWN MEETING REQUEST FORM**

Department: SEWER DIVISION		FOUR THREE
Project Title and Description: Security cameras Water Street Pump Station (WSPS)	Total Project Cost:	\$104,000.00

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>FY26</i>		
<i>Labor and Materials</i>	\$83,000.00		<i>FY27</i>		
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>		
<i>Equipment</i>			<i>FY30</i>		
<i>Other</i>					
<i>Contingency</i>	25%				
Total Capital	\$104,000.00				

Possible sources and amounts of funding, if known: _____

Project Justification and Objective: __ Town of Plymouth community has witnessed a concerning increase in the destruction of property, posing significant threats to public safety, security, and the overall quality of life for our residents. Vandalism, theft, acts of violence and criminal activity have become more prevalent, causing substantial financial and emotional burdens for both individuals, state entities and local businesses. To address these growing challenges, there is an urgent need to implement a comprehensive Video Surveillance Security System utilizing Avigilon Security Cameras. _____

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.



Video Surveillance - Waste Water Building - 197 Water Street

Proposal # 8632-1-0

Proposal Issued: 10/12/2023

Proposal Valid To: 11/11/2023

To:

Ryan Ruggiero

Town Of Plymouth

From:

Tom Lennon

Account Executive

ENE SECURITY Inc.

(617) 546-8804

tlennon@enesecurity.com



Client Information

Customer Name: Town Of Plymouth

Site:

Town Of Plymouth
197 Water Street
Plymouth, MA 02360

Billing:

Town Of Plymouth
26 Court Street
Plymouth, MA 02360

Contact:

Ryan Ruggiero
(508) 830-4210 Ext. 310
ruggiero@plymouthpolice.com

Scope of Work

Executive Summary:

Town of Plymouth community has witnessed a concerning increase in the destruction of property, posing significant threats to public safety, security, and the overall quality of life for our residents. Vandalism, theft, acts of violence and criminal activity have become more prevalent, causing substantial financial and emotional burdens for both individuals, state entities and local businesses. To address these growing challenges, there is an urgent need to implement a comprehensive Video Surveillance Security System utilizing Avigilon Security Cameras.

SCOPE OF WORK - Video Surveillance System - 197 Water Street:

ENE to provide install and program (4) Multisensor Avigilon Cameras. Each camera provides a 360-degree view from final installation position. Each camera will be located on the surrounding light poles. ENE assumes a cabling path from each light pole is available underground to the Waste Management Facility on 197 Water Street. ENE will provide install label and terminate direct burial cabling from the facilities network IT room to each of the respective light poles. ENE will provide mount and program Network enclosures on each Pole. ENE will then Provide install label and terminate typical network cabling to each of the Multisensor cameras which will be mounted 15-20 FT above ground depending on best location for views.

In Addition to above ENE will also provide a Dome Fixed Camera for back side of the waste management facility where its deemed will have a major blind spot due to the location of the light poles and planned design of the camera system. ENE will provide, install and program Cat6 Cabling from this camera back to the main IT Network closet. A POE switch will be provided by the Town IT group for ENE to connect its devices too.

ENE will Provide install and program an additional Network Video Recorder capable of recording 90 days continuous recording for these cameras. This will be added to the Town Network.

ENE has included a Bucket truck for the installation of equipment on the light poles.



Investment

Video Surveillance System - 197 Water Street \$60,012.00

QTY	Manufacture	Part #	Description
4	Avigilon	32C-H5A-4MH	4X8MP; WDR; 360 degree max field of view; Lightcatcher; 3.3-5.7MM; Camera Only
1	Avigilon	4.0C-H5A-DO1-IR	4.0 MP WDR; LightCatcher; Day/Night; Outdoor Dome; 3.3-9mm f/1.3 P-iris lens; Integrated IR; Next-Generation Analytics
4	Avigilon	H5AMH-AD-DOME1	Outdoor surface mount adapter. For use with the Avigilon H5A Multisensor
4	Avigilon	POE60U-1BTE	Gigabit 802.3bt 60 W PoE Injector; Indoor; single port
4	Avigilon	H5AMH-AD-PEND1	Outdoor pendant mount adapter. For use with the Avigilon H5A Multisensor
4	Avigilon	H4AMH-AD-IRIL1	Optional IR illuminator ring; up to 30m (100ft); for use with H4AMH-DO-COVR1.
4	Avigilon	PLMT-1001	POLE MOUNT FOR LRGE PENDT WLMT-1001
5	Avigilon	ACC7-ENT	ACC 7 Enterprise camera channel
4	CSC / Southwest	258330804-366	Wire, Game Changer, OSP, Black, Per Thousand Feet
4	MISC	PIPE	PIPE
4	Altronix Corporation	NETWAYS4BTWP-474	4PT FB MD CONV/2SFP/BT/PS
4	Altronix Corporation	PMK1-474	POLE MOUNT KIT OUTDOOR
4	Altronix Corporation	P1MM-474	MULTIMODE SFP 1.25GBPS

Equipment Subtotal \$36,032.00

Labor Subtotal \$23,980.00

Video Surveillance System - 197 Water Street SubTotal \$60,012.00

NVR 90 Days Recording Raid 5 \$22,436.00

QTY	Manufacture	Part #	Description
1	Seneca	ASC1264T8SPANNA	SI03V3 KIT Powerededge R540, Avigilon

Equipment Subtotal \$13,356.00

Labor Subtotal \$9,080.00

NVR 90 Days Recording Raid 5 SubTotal \$22,436.00



Financial Summary

Total Proposal Amount

\$82,448.00

Note: This proposal is valid for 30 days

Acceptance of Quote / Proposal

Name: _____

Name: _____

Title: _____

Title: _____

Signature: _____

Signature: _____

Date: _____

Date: _____

* Standard payment terms will apply unless noted above. Invoicing will be net 30 with 30% down followed by additional monthly progress billing.



Terms & Conditions

Version 2.00 May 2022

This quotation and any exhibits and attachments hereto (collectively, "Agreement") and any information contained herein, is the property of ENE SYSTEMS Inc. ("ENE") and shall constitute proprietary and confidential information unless given to a public entity and required by law to be public information. The party to whom this quotation is addressed ("Buyer") acknowledges the confidential nature of this Agreement and agrees to take all commercially reasonable and necessary precautions to ensure the confidential treatment of this Agreement and all information contained herein. This Agreement will not be used, copied, reproduced, disclosed or otherwise disseminated or made available, directly or indirectly, to any third party for any purpose whatsoever without the prior written consent of ENE. The parties agree to be bound by the following terms and conditions.

Section 1. Quotations & Acceptance: Buyer may accept the quotation by signing and returning a copy to ENE or by returning Buyer's own written instrument or order expressly acknowledging the quotation and terms set forth herein, provided, however, ENE hereby gives notice of its objection to any different or additional terms or conditions contained or referenced in Buyer's order, which will be of no force or effect except as may be expressly agreed to by ENE in writing. It is the intent of the parties that these Terms and Conditions of Sale shall govern the sale of goods delivered and services performed. Upon acceptance, this Agreement constitutes the entire understanding between the parties respecting the goods or services delineated herein and supersedes all prior oral or written understandings or representations relating to such goods or services. This Agreement may not be discharged, extended, amended or modified in any way except by a written instrument signed by a duly authorized representative of each party. ENE assumes that the Subcontract Agreement offered will contain terms that are substantively similar to the AIA provisions that are in accordance with the provisions of the prime contract, including any supplements. Upon award, ENE assumes that contract provisions will be reviewed and negotiated in good faith to reach a mutual acceptance of both parties.

Section 2. Pricing & Payment: The price of this Agreement does not include sales, use, excise, duties or other similar taxes, unless otherwise expressly provided herein. Any taxes (other than taxes due on ENE's net income) that are payable hereunder shall be the responsibility of Buyer. If applicable, Buyer shall provide ENE a copy of any appropriate tax exemption certificate for the state(s) into which the goods are to be shipped.

Invoicing will be 30% prepayment followed by monthly progress billing. All invoices will be due net 30. If Customer is overdue in any payment, ENE shall be entitled to suspend the Work until paid, and charge Customer an interest rate 1 and 1/2% percent per month, (or the maximum rate permitted by law), and may avail itself of any other legal or equitable remedy. Customer shall reimburse ENE costs incurred in collecting any amounts that become overdue, including attorney fees, court costs and any other reasonable expenditure.

ENE reserves a security interest in any goods sold to the extent of the invoiced amount to secure payment of Buyer's obligation. In event of payment default, ENE may repossess such goods and a copy of the invoice may be filed with appropriate authorities as a financing statement to event or perfect ENE's security interest in the goods. At ENE's request, Buyer will execute any necessary instrument to perfect ENE's security interest. A 3% processing fee will be assessed to any credit card payment. Annual contract agreements automatically renew after the first year and may be terminated after its initial term or any subsequent anniversary by either party by giving written notice to the other party a minimum of 30 days prior to the anniversary date.

Section 3. Access and Overtime: This Agreement is based upon the use of straight time labor only during regular working hours (7:00 a.m. to 3:30 p.m., Monday through Friday, excluding ENE's holidays). If Buyer requests ENE to perform any work outside of regular working hours, overtime and other additional expense occasioned thereby will be charged to and paid by Buyer. If ENE's work is to be performed on the project site, Buyer will afford unrestricted access to ENE and its employees and agents to all work areas.

Section 4. Damage or Loss to Equipment: In the case of equipment not to be installed by or under supervision of ENE, ENE shall not be liable for damage to or loss of equipment after delivery of such equipment to the point of shipment. In the case of equipment to be installed by or under supervision of ENE, ENE shall not be liable for damage or loss after delivery by the carrier to the site of installation; if thereafter, pending installation or completion of installation or full performance by ENE, any such equipment is damaged or destroyed by any cause whatsoever, other than by the fault of ENE, Buyer agrees to promptly pay or reimburse ENE an amount equal to the damage or loss which ENE incurs as a result thereof, in addition to or apart from, any and all other sums due or to become due hereunder.

Section 5. Delays: Buyer shall prepare all work areas so as to be acceptable for ENE's work required hereunder. Buyer acknowledges that the contract sum is based upon ENE being able to perform the work in an orderly and sequential manner, as ENE so determines. If ENE's performance is delayed, interfered with, suspended, or otherwise interrupted, in whole or in part, by Buyer, other contractors on the project site, or by any other third party or by any act within the power and/or duty of Buyer to control, then Buyer agrees that it will be liable to ENE for all increased costs and damages which ENE incurs as a result thereof. Furthermore, if ENE is delayed at any time in the progress of the work by any act or neglect of Buyer, or by any separate contractor employed by Buyer, or by changes ordered in the work or by labor disputes, fire, delay in transportation, adverse weather conditions, casualties, or any other causes beyond ENE's control, then the time for completion of the work shall be extended for a period equal to the time lost by reason of such delay.

Section 6. Warranty & Coverage. Warranty for new equipment ENE Systems provides the following warranty to the Customer: For the period of one (1) year, commencing at the earlier of substantial completion of the Work, or first beneficial use, ("Warranty Period"):

- a. That Work performed under this Agreement will be of good quality;
- b. That all equipment will be new unless otherwise required or permitted by this Agreement;
- c. That the Work will be free from defects not inherent in the quality required or permitted;



d. That the Work will conform to the requirements of this Agreement.

The Customer's sole remedy for any breach of this warranty is that ENE shall remove, replace and/or repair at its own expense any defective or improper Work, discovered within the Warranty Period, provided ENE is notified in writing of any defect within the Warranty Period. Any equipment or products installed by ENE in the course of performing the work hereunder shall only carry such warranty as is provided by the manufacturer thereof, which ENE hereby assigns to Customer without recourse to ENE. Upon request of Customer, ENE will use all reasonable efforts to assist Customer in enforcing any such third-party warranties. This warranty excludes remedy for damage or defect caused by abuse, modifications not executed by ENE, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage.

Equipment Coverage in the event ENE Systems, Inc. is required to make any repairs and/or replacement and/or emergency calls occasioned by improper operation or misuse of equipment covered by this agreement or any cause beyond the control of ENE Systems, Inc., the customer shall reimburse ENE Systems, Inc. for reasonable expenses incurred in making repairs and/or replacements and/or emergency calls in accordance with the contracted rates for performing such service. If equipment becomes non-repairable due to unavailability of replacement parts, ENE Systems, Inc., at its discretion, may remove the equipment from the contract and will not be required to maintain or service such equipment as a part of this agreement. However, ENE Systems, Inc. will assist the owner in replacing the equipment at an additional cost.

Section 7. Limitation of Liability:

In no event will ENE's total aggregate liability in warranty or contract exceed the contract price paid for the specific product or service that gives rise to the claim excluding third party claims for personal injury, death or property damage or as may be required by law. IN NO EVENT SHALL ENE BE LIABLE FOR ANY LOST PROFITS, LOSS OF USE, LOSS OF GOODWILL, BUSINESS INTERRUPTION OR ANY OTHER SPECIAL, INDIRECT, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES OF ANY KIND EVEN IF ENE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Section 8. Laws and Permits: ENE shall comply with all applicable federal, state, and local laws and regulation and shall obtain all temporary licenses and permits required for the prosecution of the work. Licenses and permits of a permanent nature shall be procured and paid for by the Buyer. This contract shall be interpreted and governed under and in accordance with the laws of the jurisdiction in which the goods are delivered or services are performed without regard to its choice of law provisions.

Section 9. Disputes: Any controversy or claim arising out of or relating to this Contract, or the breach thereof, shall be settled by good faith consultation and negotiation. If those attempts fail, either party shall provide written notice within thirty (30) days to the other to mutually agree on an arbitration process. If a process is not agreed upon within thirty (30) days, final and binding arbitration in accordance with the then current Construction Industry Arbitration Rules of the American Arbitration Association shall commence and judgment upon the award rendered may be entered in any court having jurisdiction thereof. The arbitration shall be held in the federal, state or municipal courts serving the county in which the project is located unless the parties mutually agree otherwise. The prevailing party shall recover all reasonable legal costs and attorney's fees incurred as a result, which shall be promptly paid by the non-prevailing party. Any dispute or demand for arbitration must be commenced within one (1) year after the cause of action has accrued. Nothing herein shall limit any rights ENE may have under construction mechanic or materialmen lien laws. ENE shall have the right to suspend affected services pending resolution of disputes.

Section 10. Insurance: The parties shall each maintain insurance coverage including without limitation, Workers' Compensation and Employer's Liability at statutory limits, Automobile Liability covering all owned, hired and other non-owned vehicles, and Commercial General Liability covering public liability and property damage with limits generally required for its respective industry with not less than \$1,000,000 minimum coverage per occurrence. Such insurance shall be with reputable and financially responsible carriers authorized to transact business in the state in which the project and services are being performed. No credit will be given or premium paid by ENE for insurance afforded by others.

Section 11. Clean Up: ENE agrees to keep the job site clean of debris arising out of its operations. Buyer shall not back charge ENE for any costs or expenses for clean up or otherwise without prior written notice and ENE's written consent.

Section 12 Changes: Move Add Change Delete (MACD) - If the system or software is modified, changed or altered, or if any equipment is added or removed within the premises or to other premises, ENE Systems, Inc., at its sole option, reserves the right to terminate or re-negotiate this agreement based on the condition of the system after the changes have been made.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST FORM
FY25 ANNUAL TOWN MEETING REQUEST FORM**

Department: SEWER DIVISION		FIVE
Project Title and Description: WWTP Effluent Tertiary Filter	Total Project Cost:	\$9,492,000.00

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>FY26</i>		
<i>Labor and Materials</i>			<i>FY27</i>		
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>		
<i>Equipment</i>			<i>FY30</i>		
<i>Other</i>					
<i>Contingency</i>	30%				
Total Capital	\$9,492,000.00				

Possible sources and amounts of funding, if known: _____

Project Justification and Objective: ___ The proposed project will add a tertiary filter which will allow the facility to meet more stringent permit limits and to ensure greater protection to the harbor, ELL river and these sensitive resource areas. This includes lower discharge pollutant targets for TSS, BOD, Nitrogen, Phosphorus, and pathogens amongst other pollutants. The WWTF will be more reliable and resilient with the added filter.

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.



TECHNICAL MEMORANDUM

TO: Doug Pinard, Wastewater Manager
CC:
FROM: Jack Troidl, P.E.
DATE: November 14, 2023
RE: **Plymouth WWTF – Tertiary Filter Project**

Introduction

The proposed tertiary filter will provide an additional layer of protection prior to the Plymouth WWTF effluent discharging into Plymouth Harbor or the Eel River. The proposed filter will remove suspended solids, and the design of the system also includes provisions for chemical addition to precipitate phosphorus for removal by the filter.

Tertiary Filter

The proposed tertiary filter will treat decant from the SBRs, and the filtered effluent will discharge to the Chlorine Contact Tanks (CCTs). While there is a substantial height difference between the decanting water level in the Sequencing Batch Reactor (SBR) tanks and the water level in the CCTs, the height is not sufficient to allow the tertiary filter to process the SBR decant ahead of disinfection without additional pumping. Therefore, the planning costs, which were revised to reflect recent cost inflation spurred by the pandemic, also now include a pumping station downstream of the new filter but part of the new filter building.

The updated Opinion of Probable Costs is presented in Table 1, including the anticipated HUD federal earmark in the amount of \$2,750,000. Based on this updated OPC, the Town should seek to secure \$7 million to fund the project. It is recommended that the total project costs be inflated 5% per year for each additional year if the project does not proceed in 2024.

Table 1. Opinion of Probable Cost³

Item	Tertiary Filter	Pumping Station ²	Total Project
Construction	\$4,700,000	\$900,000	\$5,600,000
Construction Contingency (30%)	\$1,400,000	\$270,000	\$1,680,000
Engineering, Permitting & Bidding (10%)	\$470,000	\$90,000	\$560,000
Construction Administration & Observation (15%)	\$705,000	\$135,000	\$840,000
Escalation ¹	\$681,500	\$130,500	\$812,000
Total Project Cost	\$7,966,500	\$1,525,500	\$9,492,000
Available Funding (Community Grant)			\$2,750,000
Project Contingency			-\$258,000
Additional Funding Needed			\$7,000,000

¹ Escalation to midpoint of construction in 2024 based on COVID/current market conditions.

² Assumes pumping station is constructed with tertiary filter project.

³ Costs prepared as of August 2023.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST FORM
FY25 ANNUAL TOWN MEETING REQUEST FORM**

Department: SEWER DIVISION		SIX FIVE
Project Title and Description: Vehicle #52 Ford F250 replacement	Total Project Cost:	\$88,000.00

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>FY26</i>		
<i>Labor and Materials</i>			<i>FY27</i>		
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>		
<i>Equipment</i>	\$73,000.00		<i>FY30</i>		
<i>Other</i>					
<i>Contingency</i>	\$15,000.00				
Total Capital	\$88,000.00				

Possible sources and amounts of funding, if known: _____

Project Justification and Objective: This request is to replace service Truck #52 and will be operated by sewer department staff. The object of this replacement is to provide a quick response vehicle for emergencies, such as sewer repairs and SSO prevention.

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 ☒

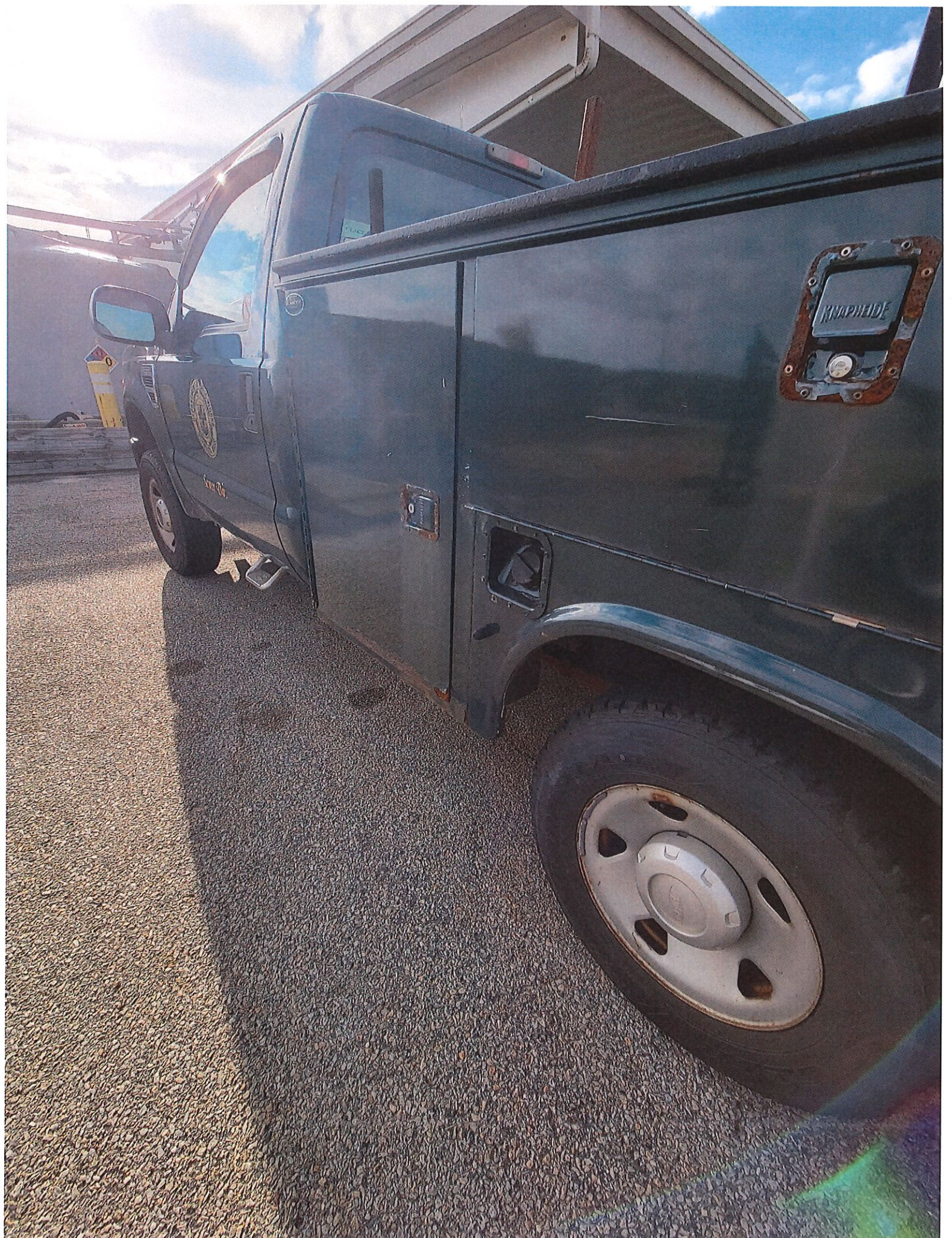
For Capital Equipment Requests:

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

2008 Ford F250 VIN# 1FDNF21548EC87430 Currently this vehicle is rotted and has mechanical issues. The utility body floor is rotted, cabinet doors and rocker panels on both cab doors are rotted through. The exhaust manifolds are warped and need to be replaced. The cost of maintaining this vehicle, fixing mechanical issues and safety concerns are not worth the age and condition of this vehicle.

Attach additional information, estimates, or justification.





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hydraulic lift
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1-800-LIFTGATE

WARNING
Read and understand all instructions before using this equipment.
Do not use this equipment if you are under the influence of alcohol or drugs.
Do not use this equipment if you are fatigued or distracted.
Do not use this equipment if you are not properly trained.
Do not use this equipment if you are not wearing your seat belt.
Do not use this equipment if you are not wearing your safety glasses.
Do not use this equipment if you are not wearing your hard hat.
Do not use this equipment if you are not wearing your safety harness.
Do not use this equipment if you are not wearing your safety shoes.
Do not use this equipment if you are not wearing your safety gloves.
Do not use this equipment if you are not wearing your safety helmet.
Do not use this equipment if you are not wearing your safety vest.
Do not use this equipment if you are not wearing your safety harness.
Do not use this equipment if you are not wearing your safety shoes.
Do not use this equipment if you are not wearing your safety gloves.
Do not use this equipment if you are not wearing your safety helmet.
Do not use this equipment if you are not wearing your safety vest.

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OFFICIAL





E-450 Cutaway Super Duty 8

 **On The Lot** at Colonial Ford of Plymouth

	MSRP	\$ / 4,995
	Colonial Discount	-\$2,000
	Colonial Price	\$72,995
	Colonial Price Detailed Pricing	\$72,995

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Exterior Color	Drivetrain
<input type="radio"/> Oxford White	RWD
Interior Color	Engine
<input type="radio"/> MEDIUM FLINT VINYL	8
Seating	VIN
2 seats	1FDXE4FN5RDD22063
Transmission	Stock Number
Automatic	N11451




Dealer Notes

Don't miss this great Ford!

It comes equipped with all the standard amenities for your driving enjoyment. Ford infused the interior with top shelf amenities, such as: variably intermittent wipers, air conditioning, and more. It features an automatic transmission, rear-wheel drive, and a powerful 8 cylinder engine.

Our sales reps are knowledgeable and professional. We'd be happy to answer any questions that you may have. Call now to schedule a test drive.

Highlighted Features

-  Wireless phone connectivity
-  Fully automatic headlights
-  Dual rear wheels

Detailed Specifications

Convenience Features

 **Suspension/Handling**

 **Entertainment Features**

 **Warranty**

 **Seats And Trim**

 **Powertrain**

 **Specs And Dimensions**

 **Lighting, Visibility And Instrumentation**

 **Safety And Security**

KBB.com Consumer Reviews



Overall

3.8

Out of 5

A Reasonably Comfortable, Nice Performance Vehicle

4.0

By GL | Wednesday, March 27, 2019

This transit with the 3.7 L engine drives great with plenty of power for driving the hills

and mountains of east tennessee. It handles curves and street driving ok...

[Read More](#)

Fantastic In So Many Ways

5.0

By cgs | Sunday, January 02, 2022

I bought the Transit 250 high roof cargo van, 148" wheel base, medium length.

I

absolutely LOVE it in every way. I use it as a daily driver. Mileage is about...

[Read More](#)

It's Been A Great Family Van For Us!

5.0

By John M | Monday, September 06, 2021

Driven this van for 125k miles with virtually no problems. A couple recall items that

were fully paid by Ford. Great for long distance road trips and drives very...

[Read More](#)

Based on 40 consumer ratings for 2015-2023 models. | Privacy

(<https://www.kbb.com/company/privacy-policy/>)



Searches could display vehicles that have already been sold or that may no longer be available. The pricing shown is believed to be accurate, but we do not warrant or guarantee such accuracy. The prices shown above may vary from region to region, as



**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Water Division	Priority #:	1
Project Title and Description: Water System Improvements	Total Project Cost:	\$1,790,800

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>	\$275,000	Engineering, plans,	FY26		
<i>Labor and Materials</i>	\$1,140,000	Construction, Paving, Details	FY27		
<i>Administration</i>	\$213,000	construction oversight, Permitting, Inspector	FY28		
<i>Land Acquisition</i>			FY29		
<i>Equipment</i>			FY30		
<i>Other</i>					
<i>Contingency</i>	\$162,800	10%			
Total Capital	\$1,790,800				

Project Justification and Objective: Restore critical system hydraulics by repairing water main on the bridge over Rt. 3 access road.

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: 100yrs

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



TOWN OF PLYMOUTH

Water Division
169 Camelot Drive
Plymouth, Massachusetts 02360

Sandwich Rd. Bridge: Priority 1

The Sandwich Road bridge over the Rt 3 access road carries an 8" cast iron water main. In late February of 2023 the water main failed. The failure occurred in the middle of the bridge where the water main is encased in a void underneath the sidewalk of the north bound travel lane. The Water Division was unable to repair the break due to the main being encased in the bridge structure, however it was possible to isolate the bridge crossing without losing any service connections. Currently, the pipe remains isolated, no water flows across the bridge. This leaves the residents of Chiltonville vulnerable to loss of service should there be another failure in the area. The River St. and Clifford Rd. water mains that service residents of Chiltonville are made of cast iron and were installed in the early 1930's. These water mains also carry water from the Forges Field Well to the Chiltonville storage tank. Repairing this main is a priority, necessary to restore some resilience to the system hydraulics in that area.

We are working with the engineering firm Environmental Partners to develop a strategy for cleaning and structurally lining the pipe and restoring it to service. We are also working to develop a plan to add a bypass for this pipe by thereby increasing system resiliency. The long-term plan for this area is to upgrade the water mains on Sandwich Rd as well as Jordan and Clifford Rd. This was a recommendation from the 2019 Water System Master Plan.



November 2, 2023

Peter Gordon, Water Superintendent
Department of Public Works
159 Camelot Drive
Plymouth, MA 02360

**RE: Project Description and Budgetary Cost Estimate
Sandwich Road Water Main Replacement**

Dear Peter,

Environmental Partners is pleased to submit budgetary information for the Sandwich Road Water Main Replacement project in Plymouth, MA. This budgetary information is intended to support obtaining funding for the project at Special Town Meeting.

Project Description

The existing 8-inch cast iron water main crossing the Route 3A bridge on Sandwich Road was installed as part of the original bridge construction work in 1950. The water main has experienced several breaks over the years and therefore has been taken out of service, creating two dead ends on either side of the bridge. This water main serves an important purpose for water conveyance and fire protection within the Town and must be replaced.

The proposed project includes replacing the existing water main on Sandwich Road from East Russell Mills Road to River Street (approximately 2,100 linear feet). EP performed a cursory review of available information and participated in a conversation with MassDOT representatives on October 31, 2023. During this meeting, it was determined that 1) replacing the existing water main on top of the concrete safety walk spanning the bridge and 2) hanging a new water main on the side of the bridge are not viable options for pipe replacement. Demolishing the existing water main within the bridge and replacing in kind was also considered but found to be problematic because of the structural implications to the bridge deck.

There are two feasible options to install pipe under the state highway that are acceptable to MassDOT: Horizontal Directional Drilling (HDD) or pipe jacking. The pipe jacking approach was not considered in this submission because of significant cost implications and extensive time required to permit the work through MassDOT. HDD was deemed a feasible option due to cost and to the fact that a gas main is currently under consideration to be drilled within the same limits under the state highway.

There are two approaches to consider to replace the existing water main in this area:

1. Clean and structurally line the existing 8" cast iron water main within the limits of the Route 3A bridge and install new 12" ductile iron water main via open cut excavation methods to East Russell Mills Road and River Street.
2. Horizontally directionally drill a new 12" HDPE pipe under Route 3A and install new 12" ductile iron water main via open cut excavation methods to East Russell Mills Road and River Street.

The above options will be evaluated in detail during the preliminary design phase of the project, at which time a design approach will be selected. Budgetary cost estimates for each option are included below. The existing 8" water main crossing the bridge will need to be inspected and evaluated to confirm feasibility of Option 1.

Budgetary Cost Estimates

Option 1 - Combination of clean and structurally line existing water main and open cut installation

Construction Cost Estimate	\$615,000
Full Width Mill and Overlay	\$150,000
Planning Level Construction Contingency (25%)	\$192,000
Police Details	\$40,000
Engineering (20%)*	\$155,000
MassDOT Permitting and Coordination	\$20,000
Resident Project Representative	\$38,000
Subtotal	\$1,210,000

*Includes construction phase services.

Option 2 - Combination of horizontal directional drilling and open cut installation

Construction Cost Estimate	\$950,000
Full Width Mill and Overlay	\$150,000
Planning Level Construction Contingency (25%)	\$275,000
Police Details	\$40,000
Engineering*	\$155,000
MassDOT Permitting and Coordination	\$20,000
Resident Project Representative	\$38,000
Subtotal	\$1,628,000

*Includes construction phase services.

Assumptions

EP made the following assumptions when preparing the above budgetary estimates:

- 6 week construction duration including final paving
- Construction will be complete before April 1, 2025
- 2 police details per day at 8 hours per day. Budgetary estimates assume that GC will pay for police details. Police detail rates are higher if Town pays directly
- Temporary bypass piping not required

- Project will require two MassDOT permit submissions – one for subsurface exploration during design and one for construction
- Disturbed roadway will be mill and overlaid from curb to curb (feasibility to be confirmed during design)
 - o Bridge will not be re-paved

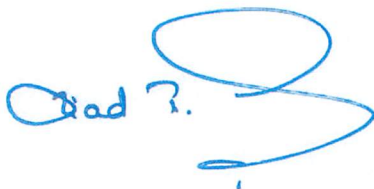
Schedule

EP anticipates funding for this project to be available in mid-April 2024. EP will prepare a proposal inclusive of scope of services to perform the work upon the Town's request. EP expects to commence engineering services no sooner than April 2024, upon receipt of an executed contract from the Town. Construction schedule may be impacted by Contractor availability.

Please feel free to contact us with any questions or concerns.

Very truly yours,

Environmental Partners Group, LLC



Ziad F. Kary, P.E.
Principal
O: 617.657.0283
E: zfk@envpartners.com



Lauren E. Underwood, P.E.
Project Manager
O: 617.657.0252
E: leu@envpartners.com



Google Earth

500 ft



Sandwich St. Bridge

Bridge crossing over Rt. 3 access road between Rt. 3 and Rt. 3A

Legend
Feature 1



INFORMATIONAL ONLY



**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST FORM
FY24 SPRING ANNUAL TOWN MEETING REQUEST FORM**

Department: Water Division	Priority #:	2
Project Title and Description: W443 1Ton Dump Replacement	Total Project Cost:	\$123,389.00

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): FY24

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			FY24		
Administration			FY25		
Land Acquisition			FY26		
Equipment	\$107,289.00		FY27		
Other					
Contingency	16,094.00	15%			
Total Capital	\$123,389.00				

Project Justification and Objective: This vehicle was decommissioned in the spring of 2022. A replacement was requested for the STM 2023 but did not go forward because of other request priorities. This vehicle is crucial to our maintenance staff for removal, transport, and delivery of materials and trailering of equipment.

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 Ford 350 1FDWF37P66EB81660 DECOMMISSIONED SEE PHOTOS

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

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

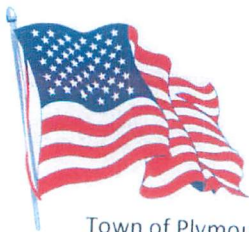


TOWN OF PLYMOUTH

Water Division
169 Camelot Drive
Plymouth, Massachusetts 02360

Replacement W443: Priority 2

The Water Division is requesting to replace a 2006 Ford F-350 one-ton dump truck that was taken out of service and decommissioned in the spring of 2022. This truck is a key component of the Water Division's Maintenance Staff fleet. This vehicle is versatile in that it is not as large as a 6- or 10-wheel dump truck. It sees heavy use in the transporting of equipment such as pumps, hydrant assemblies, gate valves, and large heavy sections of ductile iron pipe. It is used frequently to bring loads of stone, loam and fill to repair trenches and excavations. This truck is also useful for the removal of pruned trees and brush generated annually through the maintenance of the areas around Pump and Booster stations as well as water storage tanks. Since this truck was decommissioned, the Maintenance Staff has had to improvise the transportation of heavy materials and equipment, often having to use a trailer or much larger dump truck than should be needed, costing them time, and reducing efficiency.



Liberty Chevrolet



Town of Plymouth

Attn: Rick Ragazzini

159 Camelot Drive

Plymouth, MA 02360

October 24, 2023

One Ton Dump

Dear Sir,

Liberty Chevrolet has a bid with Greater Boston Police Council for various vehicles and equipment. All vehicles offered under this contract come with a 5 year/100,000-mile powertrain warranty. We are pleased to quote you the following:

No. 125	Chevrolet CK31003 Silverado Reg Cab 4WD	\$46,874.00
Factory Options		
LSP	6.6 Liter Duramax Diesel Engine	\$9,890.00
QZT	(6) Tires LT235/80R/17E All Terrain	\$200.00
ZZT	(1) Spare Tire & Wheel	\$380.00
VYU	Snowplow Prep Package	\$300.00
ZLQ	WT Convenience Package Includes: Keyless Entry, Cruise Control, Power Heated Trailering Mirrors, Power Windows & Locks	\$1,400.00
JL1	Trailer Brake Controller	\$275.00
5N5	Rear Camera Kit Shipped Loose for Body Co Installed	\$73.00
	Special Paint – Unripened Green Metallic	\$450.00
Total Truck		\$59,842.00

Liberty Chevrolet, Inc.

90 Bay State Road • Wakefield, MA 01880 • Main 781-246-1919 • Fax 781-245-8987 • www.libertychevy.com

Body Company Installed Equipment

5316	Easterner 9' S.S. 2/3 Yard Dump Body with Electric Hoist	\$23,450.00
5345	Canvas Cover Manual	\$950.00
5126	Fisher 9' Snowplow Package HD2	\$9,717.00
5143	Snow Foil Attachment	\$1,200.00
5144	5/8" Steel Cutting Edge for Plow	\$950.00
5352	1/2" Reinforced Plate with D-Rings & Light Plug Combo	\$1,350.00
5032	Temperature Sensor Road Watch	\$1,350.00
5060	ECCO Electric BUA	\$295.00
5356	Smith Style Tie Downs	\$225.00
5351	Bawer 30" Frame Mounted SS Underbody Toolbox	\$1,450.00
5353	Front Flaps on Rear Tires	\$200.00
5002	Westin Black Tube Steps	\$970.00
5063	Remount OEM Supplied Backup Camera	\$395.00
5089	Two Front Whelen Vertex LED Flashers	\$900.00
5087	Two (2) Buyers 6 LED Flashers Cab Shield Side	\$900.00
5087	Two (2) Buyers 6 LED Flashers Cab Shield Front	\$900.00
5089	Two (2) Whelen Vertex Led Flashers Snap Latch	\$900.00
5217	Two (2) Work Light LED	\$950.00
5063	Remount OEM Supplied Backup Camera	\$395.00
Total Truck & Equipment		\$107,289.00

Thank you for your consideration of Liberty Chevrolet. If you have any questions concerning our proposal, please do not hesitate to contact me at 781-287-7539.

Sincerely,

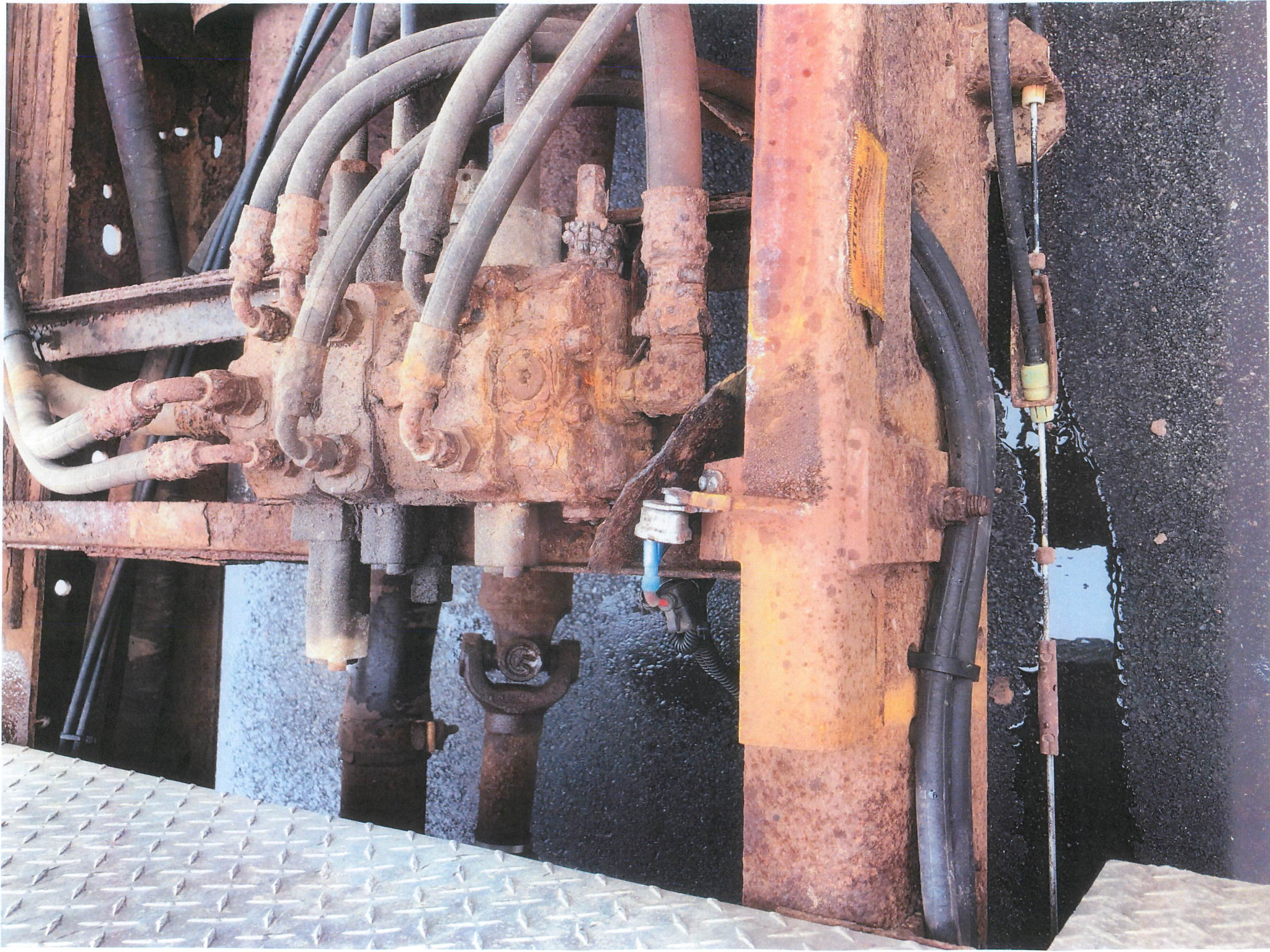
A handwritten signature in blue ink, reading "Donna M. Clemente". The signature is written in a cursive style with a large, stylized initial 'D'.

Donna M. Clemente

Fleet Office Manager









**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Information Technology	Priority #:	1
Project Title and Description: VM Upgrade	Total Project Cost:	\$300,000

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>FY26</i>		
<i>Labor and Materials</i>			<i>FY27</i>		
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>		
<i>Equipment</i>			<i>FY30</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$300,000				

Project Justification and Objective: The current VM infrastructure is 5 years old with server hosts that are end of life and storage array that is close to capacity.

This upgrade will improve the high availability of critical applications and increase the overall reliability and expandability of the VM infrastructure.

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

Dell VMotion servers, Virtual machines and storage array.

What is the expected lifespan of this new/replacement equipment: 5 Years

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

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Information Technology	Priority #:	2
Project Title and Description: Network Switch Upgrade	Total Project Cost:	\$445,070.33

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>FY26</i>		
<i>Labor and Materials</i>	\$638,45.00		<i>FY27</i>		
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>		
<i>Equipment</i>	\$381,225.33		<i>FY30</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$445,070.33				

Project Justification and Objective: This project will allow for a more robust switching network to accommodate the added data requirements of data and voice on the town network systems.

Current Network Switches will be at end of support and become security risks if not replaced.

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 ☒

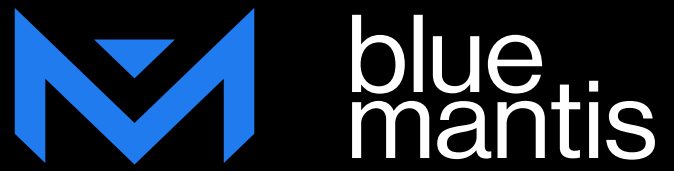
For Capital Equipment Requests:

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

Dell Network Switches.

What is the expected lifespan of this new/replacement equipment: 5 Years

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



Proposal



TOWN OF
PLYMOUTH
MASSACHUSETTS

Switch Replacements

Let's meet the **future.**

Agenda

- Introduction to Team
- Executive Summary
- What We Heard
- Your Business Outcomes and Expectations
- Our Proposal Aligned to Your Business Outcome
- The Overall Investment to Achieve Your Business Outcome
- A Little Bit About Blue Mantis

Town of Plymouth “TOP” has aging hardware that they desire to upgrade before end of support is reached. This will help ensure hardware is replaced before any major issues occur in addition to increasing performance and security on the network devices.

As part of this project TOP also desires to add in redundancy and failover at various areas of the network that have caused them issues up to this point.

As all traffic traverses the fiber core switch, they desire the ability to perform software upgrades on the fiber core switches without bringing all traffic to a halt.

Currently data traffic traverse the Town Hall firewall, but voice traffic traverses the DR emergency operations center (DR) firewall, but failover functionality is not believed to be in place. Blue Mantis will have to work with TPX which manages the firewalls to develop a design and implement routing in a way that supports this failover.

The switches will be shipped to the Blue Mantis Technology Innovation Center (TIC) for staging.

What We Heard

Clear a path for **your vision.**

- No daily performance issues but many devices reaching end of support soon, desires to be ahead of any issues
- Functioning well today on 1G fiber network interconnects
- Desires the ability to upgrade core fiber switch without impacting all remote site traffic
- Desires failover for data and voice traffic

Your Business Outcomes

Clear a path for **your vision.**

- Network infrastructure able to support business operations and technology innovations
- Provide optimal experience to end users and guests on the network
- Enhanced redundancy and resiliency to improve uptime of resources on the network
- Reduce admin IT overhead

- Devices in scope:
 - 30 x Aruba Switches
 - 1 x Aruba Central Cloud
- Devices managed by 3rd party (TPX):
 - Firewalls

- Discovery
 - Gather current documentation (if available)
 - Discover existing IP subnet schemes
 - Discover current VLAN schemes
 - Spanning-tree configuration
 - Discover L3 routing
 - Discover device interconnectivity
 - Gather device data: configs, logs, events etc...
 - Gather management practices

- Design
 - Routing changes to support failover of data and voice traffic
 - (May require TPX for firewall support)
 - Core changes to support VSX/FHRP design
 - Configuration templates
 - Visio Diagrams
 - Current & Future state
 - High level implementation plan
 - Inventory

- Staging
 - 30 Switches (at TIC)
 - Firmware Updates & Licensing
 - VLANs & STP
 - Interfaces
 - Routing
 - Management & Logging
 - Aruba Central Cloud
 - Baseline configuration
 - Sites and templates

- Implementation
 - 30 Switches
 - Follow high level implementation plan from design phase
 - Install switches into rack and migrate physical connections
 - Perform network functionality testing
 - Perform failover tests for fiber core
 - Perform failover tests for voice and data outbound traffic
 - TOP to perform business critical testing
 - Ensure integration to Aruba Central

- Day-2 & As-Built
 - Provide day-2 support following cutovers
 - Update documentation to reflect as-built

- Deliverables:
 - High Level Implementation Plan
 - As-Built Visio Diagrams
 - Network Inventory
 - New Switches

One-time Investment		
Professional Services	Fixed Price	\$63,845.00
Procurement	Aruba HW and SW	\$381,225.33
Total One-time Investment		\$445,070.33

**Travel & Expenses Billed actual*

*** Procurement price does not include optional support*

Background & Certifications

- Founded - 1992
- 150+ experienced technologists
- 20 yrs. average experience across teams
- Former CIOs and CISOs
- 1000s of client successes
- Valued Advisor, Trust, Transparency & Responsiveness - commonly cited attributes. *Client Survey

- National Institute of Standards & Technology (NIST)
- HITRUST
- Data Security Standards
- Information Technology Infrastructure Library (ITIL)
- GDPR / CCPA / SHIELD
- CISSP, CISM, CEH, Security+, ISO 27000, ITIL, others

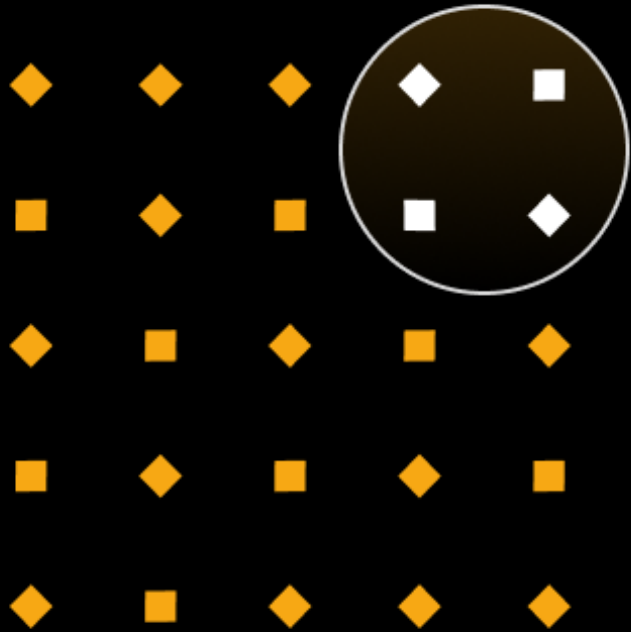
- SOC 2 Accredited for security and confidentiality
- ISO 9001:2015 Certified Technical Innovation Center
- Payment Card Industry (PCI) Data Security Standards (DSS) Guided
- Health Insurance Portability and Accountability Act (HIPAA)

Digital Technology Services

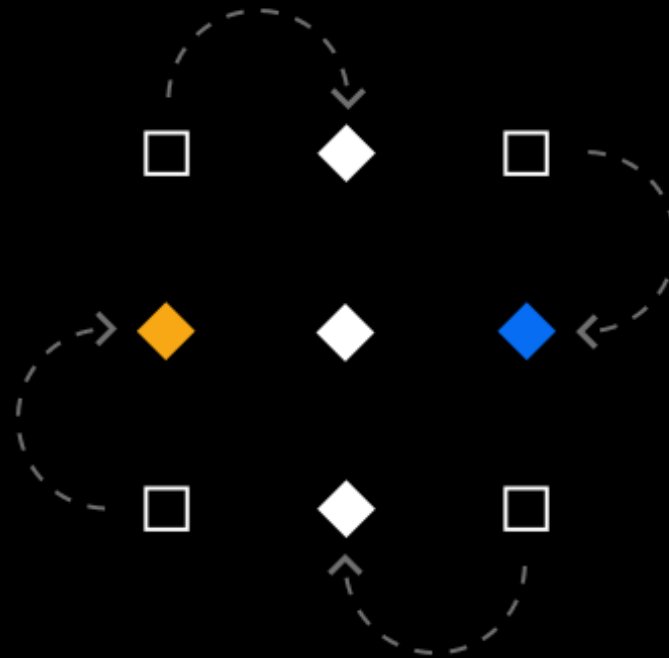
- Gain business agility
- Optimize employee productivity
- Reduce time to value
- Enhance data security



Our Process



Assess



Modernize



Manage

Technology



Financial



Insurance / Legal



Healthcare & Life Sciences



Public Sector



Retail / Entertainment

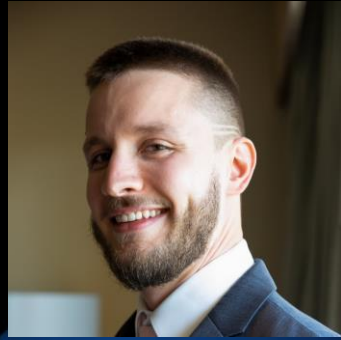


Utilities / Manufacturing





Michael Watford
Solutions Architect - Network



Michael's entire career has been directly engaging with customers to provide solutions that meet or exceed expectations. He has worked in various positions starting in the NOC, moving into delivery consulting, then into a solutions architect role. This has given him first-hand experience within different areas of customer support. Throughout his 12+ year career he has consistently added new skills to his toolset. Communication, detail, clarity, organization, and presentation have always been of the utmost importance. He is certified in Cisco, Meraki, Fortinet, and Zscaler. His areas of expertise involve: Networking, Wireless, Data Center, Cloud, and Security.

Michael has a unique background in that he was homeschooled throughout his childhood and lived on a sailboat in the Caribbean as part of his teenage years. He believes connections and how we treat others are one of the most important aspects of life. His hobbies include hiking, camping, woodworking, and running the tech at his local church. He is married to a wonderful woman and wouldn't have it any other way. He has a baby boy named Luke. He is thankful and blessed for the opportunities to serve others.

Let's meet the **future.**

Next Steps

- Any edits or revisions to scope
- Support TOP decision making process

At the core of everything
we do is human contact –
just one person talking to
another.

Give us a call or send an
email and **let's meet
the future together.**

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
FY25 SPRING ANNUAL TOWN MEETING**

Department: Information Technology	Priority #:	3
Project Title and Description: Fiber Network Expansion	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: \$250,000 for FY '24

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>FY26</i>		
<i>Labor and Materials</i>			<i>FY27</i>		
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>		
<i>Equipment</i>			<i>FY30</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.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Information Technology	Priority #:	4
Project Title and Description: Laserfiche Upgrade	Total Project Cost:	\$407,000

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: \$540,800 for FY '24

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>FY26</i>		
<i>Labor and Materials</i>			<i>FY27</i>		
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>		
<i>Equipment</i>			<i>FY30</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$407,000				

Project Justification and Objective: This is year two for the 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

It will also strengthen local businesses' ability to conduct business transactions during any health and emergency issues such as pandemics.

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
FY25 SPRING ANNUAL TOWN MEETING**

Department: Police	Priority #:	1
Project Title and Description: Firearms Replacement	Total Project Cost:	\$154,000.

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
Planning and Design			FY26		
Labor and Materials			FY27		
Administration			FY28		
Land Acquisition			FY29		
Equipment	\$139,377.		FY30		
Other					
Contingency	\$14,623.	10.5%			
Total Capital	\$154,000.				

Project Justification and Objective: See attached memo.

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

Cost includes trade in of current issued Smith and Wesson firearms.

What is the expected lifespan of this new/replacement equipment: 8-10 years

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



Plymouth Police Department

Memo

To: Derek Brindisi, Town Manager
From: Dana Flynn, Chief of Police
CC: Brad Brothers, Assistant Town Manager; Lynne Barrett, Finance Director
Date: 10/30/23
Re: FY25 Spring Town Meeting Capital Request – Firearms Replacement

I am requesting \$154,000 for the replacement of the department's issued sidearms. This replacement was previously listed on the department's 10-year improvement plan scheduled for FY-29, however in consideration of enhanced officer safety and advancements in technology and I seek to replace them sooner with the addition of red-dot sights.

On Friday October 21, 2022, I attended the funeral services for Bristol CT Police Lieutenant Dustin DeMonte and Sergeant Alex Hamzy who were shot and killed in an ambush at approximately 11:00PM on October 13, 2022. Also in attendance was Bristol CT Police Officer Alec Iurato, who despite being injured in the attack was able to stop the subject with a single shot from a distance with his pistol that was equipped with a red-dot sight. It has been reported to suspect fired more than 80 rounds at the officers from a semi-automatic rifle.

On March 27, 2023, a mass school shooting occurred at The Covenant School in Nashville, Tennessee. The suspect in that incident was armed with two rifles and a pistol and fired 152 rounds. One of the Officers that stopped the attack was only armed with a sidearm equipped with a red-dot sight.

The red-dot sight is an invaluable option that has become commonplace on police pistols. It is an attachment that provides:

- Faster target acquisition
- Improved accuracy
- Enhanced sight picture
- Better visibility in low light conditions
- Accurate long-distance shots
- Increased "hit" percentages

Outfitting our currently issued firearms with red-dot optics is not a feasible option. The retrofit process would require each handgun to be sent to a third-party vendor to be altered. The alteration would void any and all safety and warranty protections provided by the manufacturer, as the process would include cutting into the "slide" and removal of the iron sights. This alteration process, along with the cost of the red-dot optic makes this option fiscally irresponsible.

In addition, there are no police duty holsters available for our current weapon with a red-dot sight. I have reached out to our long-time vendor, who advised that with the police "industry" currently shifting to a 9mm cartridge, many manufacturers are no longer supporting our .45 caliber platform. Our current holster could be modified by cutting into the body, but this would also void any safety and warranty protections.

In consultation with the department armorer, I learned due to environmental exposure and being in a constant state of readiness, the average life expectancy of a police firearm is 8 years. Our current firearms have been in service for 5 years and during the last annual qualification he noticed an increase in failures, including "light strikes" wherein the firing pin did not strike the primer hard enough to start the firing action, failure to lock back upon empty indicating weakening of magazine springs, and the tritium "night" sights that allow for sight alignment in low light situations are wearing. All of these issues can be rectified but are costly, time consuming, and labor intensive.

The request of \$154,000 includes the purchase of:

- (140) Glock G45MOS 9mm with Holosun 509T Optic and (3) magazines
- (140) Nightstick TCM10 Weapon Light 650 Lumens
- (40) Glock G43XMOS 9mm with Holosun EPS Optic and (2) magazines
- (40) Nightstick NITTCM5B Weapon Light 650 Lumen
- (140) Safariland Duty Holster for G45
- (40) Safariland Duty Holster for G43X
- (35) G45 Magazines
- (15) G43X Magazines

Our current duty sidearms, (177) Smith and Wesson 2.0 .45 caliber, will be traded (\$46,905) and are included in the \$154,000 purchase price.

It is worthy to note, that by changing from the current .45 caliber platform to the 9mm, there will be a projected \$5,730 per year cost savings in annual ammunition costs.

Thank you for your consideration.

GLOCK 45MOS

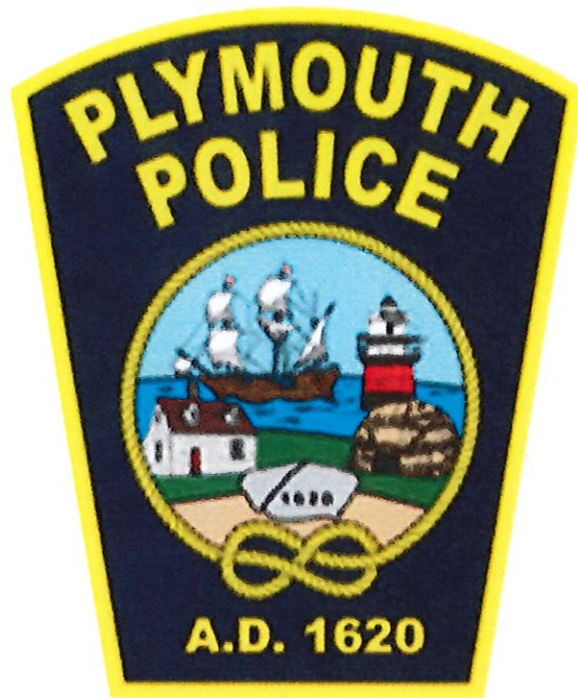


GLOCK 43XMOS



SPECIFICATIONS

	Glock 45	Glock 43X
Caliber:	9×19	9x19
Length:	7.44"	6.5"
Slide Length:	6.85"	6.06"
Height:	5.47"	5.04"
Width:	1.34"	1.10"
Slide Width:	1"	0.87"
Barrel:	4.02"	3.41"
Weight:	24.98 oz.	16.26 oz.



Plymouth Police Department

Training Unit

Pistol Replacement Proposal

Sergeant Donald Reddington

Contents

- **Proposal**
- **Ammunition Overview**
- **Training Overview**
- **Timeline & Cost**
- **Cost Breakdown**
- **Conclusion**
- **Attachments & Documents**

PLYMOUTH POLICE

The current issued sidearm for the Plymouth Police Department is the Smith & Wesson M&P 2.0 .45 Caliber. We are currently in our 5th year deploying this weapon. The M&P has served this department well, however, has not been problem free. We are currently at the point where we need to explore our inventory of pistols we have, to trade them for newer ones. The average life expectancy for police service weapons is on average 8-10 years. The average Plymouth Police Officer fires 200-300 rounds annually from their handgun. Some are shot substantially more.

These weapons are out every day on officer's belts exposed to changing weather conditions, dirt, as well as other external influences.

Additionally, we possess Smith & Wesson M&P 2.0 Shield .45 Caliber firearms for officers in special assignments. These pose the same issues as our other pistol.

This proposal is three-fold. The first is to trade-in our current Smith & Wesson M&P service pistols towards Glock pistols. The second is to change from our current caliber of .45acp to 9mm. The third is to equip our officers with red-dot optics to reduce vicarious liability to the department and town from errant rounds due to the statistical low percentage of accurate hits in police shootings.

Current Pistols

As previously stated, we are entering our 5th year deploying these firearms, more than halfway through the average service life of 8 years. This is the point in their service life where armorer level maintenance will be necessary to ensure the functionality of the firearm to include; spring replacements, sight replacements, and full armorer-level disassembly of the weapons. This level of maintenance is costly, timely, and extremely labor-intensive.

We are also in our 5th year of our magazines service life. Due to the fact our officers' magazines are always loaded with ammunition and exposed to the changing elements to include various changes in weather, along with the constant pressure on the magazine spring significantly reducing the service life of the magazines, a factor that causes issues with proper ammunition feeding and functioning.

We are currently at a point where magazine spring replacement will become necessary in the near future. This is also very costly, timely, and extremely labor-intensive.

Over the last few range sessions, we have noticed a few different issues begin to develop. There have been a larger number of "light strikes". This means that the trigger was pressed/pulled on a loaded weapon, and it did not fire. There are a few reasons this could occur. The first being defective ammunition. We purchase high-quality ammunition manufactured for law enforcement. The second reason this could be occurring is a weakening striker spring. This has been occurring intermittently and when it occurs, instructors will make every attempt to inspect the round that did not fire. In a majority of these rounds, primers were struck by the firing pin but not hard or deep enough to ignite it. This would indicate that the striker spring is becoming weak. It should be noted that this occurs with both types of ammunition we utilize, training and duty ammunition.

Another very common issue that occurs regularly with these firearms is they fail to lock back on an empty magazine. These firearms are designed to have the slide lock to the rear when the firearm has expended all of its ammunition. This is an indication for the officer to reload the weapon. Absent the weapon locking back, it is extremely difficult for an officer to determine if their weapon is loaded or not.

Initially, it was thought that an officer's incorrect grip on the pistol was affecting the weapon from properly cycling, however, upon further investigation it was

determined to not be the cause of the weapon's failure, as it appeared the magazine springs and weakened slide stop were to blame. The only remedy to this would be to purchase three new magazines on a yearly basis for each officer, purchase replacement springs at almost identical cost. This would be extremely costly and not have a one hundred percent rating of fixing the explained issue.

Another issue officers have complained about recently is their tritium sights wearing off. Tritium sights are affixed to both the front and rear sight of the pistol, typically these sights would glow in the dark and allow officers to take sight in low lighting, however, when they are worn off, they are very hard to utilize. These do typically wear over time and are currently at over half of their life expectancy.

Our current pistol magazines have a max capacity of 10 rounds, limiting the officers to only carrying 31 rounds while on duty. Comparatively, this is extremely lower than most police agencies and counter-product options.

Our M&P Shield's have a very low magazine capacity, a mere 7 rounds maximum, allowing officers to only carry 14 rounds at best. Comparatively, this is very low compared to counter-product options.

Retrofitting Current Handguns

Outfitting our current Smith and Wesson M&P weapons with red-dot optics is not a feasible option. This would require each handgun to be sent out individually to a third-party vendor to be altered. Doing so will void any and all safety and warranty protections provided by Smith & Wesson. The altering of our current handguns would include cutting into our "slide" of the weapon, replacing the iron sights, and adding red dot optics.

There are currently no police duty gun holsters available for this weapon outfitted with a red dot optic.

The standard in the industry is shifting to the 9mm cartridge. As such, manufacturers are no longer supporting the .45 caliber platform, to include our current holster manufacturer, Safariland. Additionally, accessories and parts are becoming less readily available.

Holsters

Our current holster brand, the leading and most common brand in law enforcement, Safariland, has advised they will not be creating holsters for our duty guns with red dot optics due to lack of mass production caused by low request. Additionally, I have been advised via telephone by a second major brand, Alien Gear Holsters, that they will not be making holsters to outfit our handgun either. Due to the reputation and reliability of the above holster brands, it would be remiss to utilize a far less-tested third party brand holster.

Footnote: Please see attached e-mail from Safariland in relation to this matter.

Proposal

Weapon

Glock has been in existence since 1963 and has earned an unmatched reputation amongst the Military, Law Enforcement, and responsible gun owners for providing a proven, easy to use, high quality firearm. Glock historically supplies duty pistols to 65% of this nations Law Enforcement agencies as well as numerous US military units. Due to Glocks being the most commonly issued pistol, accessories are much more widely available and attainable. Glock pistols are more ergonomically friendly and sit lower in the hand which allows the shooter to have less muzzle rise and better accuracy. Glocks come equipped with numerous different weapon backstraps, allowing the firearm to better fit any users hand, to include our smaller-handed officers who regularly have a more difficult time passing firearms qualifications.

The weapons we are recommending are the:

Glock G45 MOS equipped with Holosun 509T Optic and NightStick Mounted Light

Glock 43x MOS equipped with Holosun EPS Optic and NightStick NITTCM5B Mounted Light.

The Glock G45 is considered a full-size pistol which has night sights and three 17 round magazines. The Glock 43x is considered a sub-compact pistol which has night sights and two 10 round magazines. Both come equipped with a mounting rail to affix lights and a pre-cut slide to accept weapon optics.

With adding no extra weight, we would be increasing each officer's ammunition load from 31 rounds to 52 rounds (Glock 45). In replacing the M&P Shields to the Glock 43x, we would be increasing each officer's ammunition load from 14 rounds to 21 rounds. I have spoken to several local department armorers who have expressed they have had no reliability issues with Glock and highly recommend them as their duty weapons.

Red Dot Optics greatly increase an officer's accuracy, ultimately improving firearms qualification scores and reducing the possibility and likelihood of rounds hitting unintended targets. By this fact, it improves the levels of comfortability and confidence in an officer's utilization of their firearm, ultimately increasing the safety of the members of our community.

A Red Dot Optic is becoming a standard in the industry, with the Massachusetts State Police and many other large departments in the country recently adopting red dot optics.

Red Dot Optics

As stated before Red Dot Optics increase an officers accuracy. Additionally, they provide many other benefits such as;

- Allowing officers to keep their threat in clear focus, rather than focusing on their weapon sights
- Increased threat identification
- Increased accuracy
- Increased Field of View - Allows for both eyes to be open when shooting, opposed to one eye with iron sights
- Corrects for diminished eyesight

By fact of the above mentioned benefits, the department and town liability is significantly reduced by these improvements.

Light Replacements

Our current weapon mounted light is the Streamlight TLR-1 300 Lumen, costing approximately \$140 per unit. We are in the 5th year of its life expectancy of 8 years. We have had several issues with these lights, such as the battery compartments breaking and switches snapping.

Multiple lights have been sent back to the manufacturer for repair or replacement. Per the manufacturer, there is no true fix to this defect, and all of our lights will likely need to be sent back to them at some point of their expected life span.

The new proposed lights, the Nightstick TCM-10, are not only less-expensive, costing approximately \$99.00, but also have a proven reputation for reliability. I have spoken to numerous other agency's armorers who have no complaints on these lights.

These lights are 650 Lumens, opposed to the Streamlight TLR-1 which is only 300 Lumens. Adding this greater level of brightness will increase officer safety, as well as allow for easier suspect identification.

Approximately two-thirds of our department works at night, therefore it is imperative officers have functioning, reliable weapon mounted lights.

Ammunition

Ammunition size has been a long-term debate in law enforcement. It has been proven that size of round does not matter as long as it's of high quality with effective results. The FBI has made available to Law Enforcement their ballistic testing findings which cover an assortment of calibers and types of ammunition. In May of 2014, a memo, released by the FBI ultimately concluded that the 9mm round could now be considered the best option for Law Enforcement officers.

There are many advantages of the 9mm round over the .45 caliber round;

- Higher Capacity Magazines
- Less Recoil
- Annual Ammunition Cost Savings
- Lower cost per round allowing more ammunition for training
- Little to no difference, sometimes more, in Penetration Testing
- Most shooters are both faster and more accurate
- Less wear on firearms resulting in longer life and lower operating cost
- Able to sustain a fight longer due to increased round count
- Much more comfortable round for a broader range of shooters to handle

As previously stated, it is imperative that we supply each officer of the Plymouth Police Department with high quality ammunition with superior ballistic capabilities. The last point mentioned above is a large driving force in the recommendation of this caliber. Both the Glock 45 and Glock 43x in 9mm shoot very softly with much less felt recoil than the currently issued Smith & Wesson M&P 2.0 .45 caliber and M&P Shield .45 caliber. This would absolutely benefit the confidence in shooters, allowing them to be more comfortable and proficient when handling and shooting their duty handguns.

There are numerous agencies nationwide transitioning from the .45 caliber to the 9mm. Some of the larger agencies are: FBI, DEA, LASD, Texas DPS, Chicago PD, NYPD, GA & MI State Police, Massachusetts State Police, to name a few. Locally, Glocks are the predominant choice of duty weapon for local law enforcement agencies.

Another significant by-product that cannot be overlooked is the cost-savings between the .45 caliber and 9mm ammunition. The current ammunition cost breakdown is below:

<u>.45</u>	<u>9mm</u>	<u>Savings</u>
Training: \$166.00 per 500rd case	\$119.00 per 500 rd case	\$47.00 per case
Duty: \$219.00 per 500rd case	\$166.00 per 500 rd case	\$53.00 per case

Yearly

<u>.45</u>	<u>9mm</u>	<u>Savings</u>
Training: \$16,600.00	\$11,900.00	\$4,700.00
Duty: \$2,190.00	\$1,160.00	\$1,030.00

Average Yearly Savings: \$5,730.00

Average expected ammunition cost savings over the service life (8-10 years) of a new 9mm pistol is:

\$45,840.00 - \$57,300.00.

Our current ammunition vendor, Jurek Brothers Inc., will allow ammunition trade-ins on all currently sealed boxed of ammunition owned by the department. A credit for each box will be provided based on the market value at the time of trade in towards the new 9mm ammunition purchase. There are currently no supply chain issues with either .45 caliber or 9mm.

Training

The only training required for this weapon system would be a familiarization and qualification day at the training range, along with an instructional portion on disassembly/reassembly. This can be conducted during a regularly scheduled range session by our Training Unit.

Timeline

I am requesting Test & Evaluation (T&E) handguns from Glock as well as T&E Holsters from Safariland. These would be utilized by the Plymouth Police Department's Training Unit Members as well as the SWAT officers who attend regular monthly firearms training. These officers will be able to fire a high number of rounds through these weapons for field testing. Additionally, a live test fire may be scheduled with Glock and members of the Department staff. Provided this project moves forward, it is anticipated to be completed and firearms to be received within 120 days of approval. Completion will be pending issuance and qualifications once received.

Costs

It is estimated this project will cost **\$139,376.90** after trading in our current firearms for a credit towards our purchase. This figure is dependent on when final purchase approval is given as the value of our current weapons could change depending on the market at the that time.

As previously stated, 9mm ammunition is much cheaper than .45 caliber, therefore the department could spend less for the same amount of ammunition we order every year, or, the department could spend the same amount it spends now on ammunition, however, acquire thousands of more rounds for training at the same current expenditure.

The total cost breakdown is listed below.

Cost Breakdown

Attached I have provided a quotation from AmChar Wholesale Inc., a local company many agencies have used to purchase Glocks and trade-in their current firearms. The following is the cost approximation:

Handguns and Attachments

(140) Glock G45MOS with Holosun 509T Optic and 3 Magazines - \$117,051.20

(140) NightStick TCM10 Weapon Light 650 Lumen for G45 - \$13,904.80

(40) Glock G43XMOS with 2 Magazines - \$17,659.60

(40) Holosun EPS Weapon Optic - \$11,991.60

(40) NightStick NITTCM5B Weapon Light 650 Lumen for G43X - \$3,972.80

Magazines

(35) G45 Magazines for Training - \$699.65

(15) G43X Magazines for Training - \$299.85

(177) Smith & Wesson M&P 2.0, M&P Shield.45 Caliber Handguns Trade In Value + \$46,905.00

Handgun, Optics, and Weapon Light Total Cost: \$118,794.50

Footnote: Please see attached quotation from AmChar Wholesale Inc.

Operational Additional Items

(140) Safariland Duty Holsters for G45 - \$18,435.20

(40) Safariland Duty Holsters for G43X - \$2,147.20

Our currently issued Safariland double magazine holsters are compatible with the G45 magazines, therefore they will be utilized, an approximate \$7,000.00 savings.

Footnote: Please see attached quotation from AAA Supply Company

Total Project Cost: \$139,376.90

Conclusion

Attached is the above mentioned quotations and documents utilized in this proposal.

We thank you for your time and consideration in this matter and are looking forward to speaking further on this matter.



Quotation

100 Airpark Dr
 Rochester, NY 14624
 Phone: (800) 333-0695
 Fax: (585) 328-4406

DATE: 10/18/2023

Quotation For Plymouth Police Dept
 Attention Donald Reddington III
 sgtrreddington@plymouthpolice.com
 20 Long Pond Rd
 Plymouth, MA 02360
 Phone: (508) 830-4220

Quote is Valid For 90 Days

Prepared by Jason Johnson Mobile - (603)213-1342 - Email - jason.johnson@amchar.com

SALES REP	CUSTOMER ID	SHIP DATE	SHIP VIA	TERMS
JRJ		TBD	FedEx	Net 30
QUANTITY	DESCRIPTION	UNIT PRICE		AMOUNT
140	GLOGLAWPA455S302MOS6H1 GLOCK 45 G45 GEN 5 MOS6 DIRECT CUT HGA 9MM 4.0IN BBL HOLOSUN 509T RD AMG BOF/NTR BLK 3 17RD	\$ 836.08		\$ 117,051.20
35	GLOM39328 GLOCK MAGAZINE 9MM 17RD G17 GEN 5 ORANGE FOLLOWER BULK	\$ 19.99		\$ 699.65
140	NITTCM10 NIGHTSTICK METAL COMPACT WEAPON-MOUNTED LIGHT650 LUMENS	\$ 99.32		\$ 13,904.80
40	GLOGLAWPX4350702FRMOS GLOCK 43X G43X MOS HGA 9MM 3.6 IN BBL GNS 5LB BLACK 2 10RD MAGS MOS W FRONT RAIL	\$ 441.49		\$ 17,659.60
15	GLOM47575 GLOCK MAGAZINE 9MM 10RD G43X G48 BULK	\$ 19.99		\$ 299.85
40	HOLLAWEPSCARRYRD6LEM HOLOSUN LAW ONLY RED 6MOA DOT 7075 ALUMINUM ENCLOSED SHAKE AWAKE SLIMLINE PISTOL	\$ 299.79		\$ 11,991.60
40	NITTCM5B NIGHTSTICK METAL SUB COMPACT WEAPON-MOUNTED LIGHT 650 LUMENS	\$ 99.32		\$ 3,972.80

TRADE-INS.....UPON RECEIPT OF (177) ANTICIPATED USED S&W .45 cal HANDGUNS THE DEPARTMENT WILL BE ISSUED A CREDIT OF \$275 per M&P45 2.0, \$300 per Optic Ready, \$220 per Shield FOR EACH WEAPON TRADED. TOTAL CREDIT AMOUNT WILL BE DETERMINED BY THE FINAL NUMBER OF TRADES RECEIVED. ESTIMATED TRADE IN CREDIT \$46,905

\$ (46,905.00)

ALL GUNS MUST COME WITH 3 MAGAZINES AND BE IN WORKING ORDER AND RUST FREE UNLESS PRIOR AGREEMENT HAS BEEN MADE \$10.00 CHARGE FOR EACH MISSING MAGAZINE

We may need a exemption certificate so we can send you this product federal excise tax exempt.

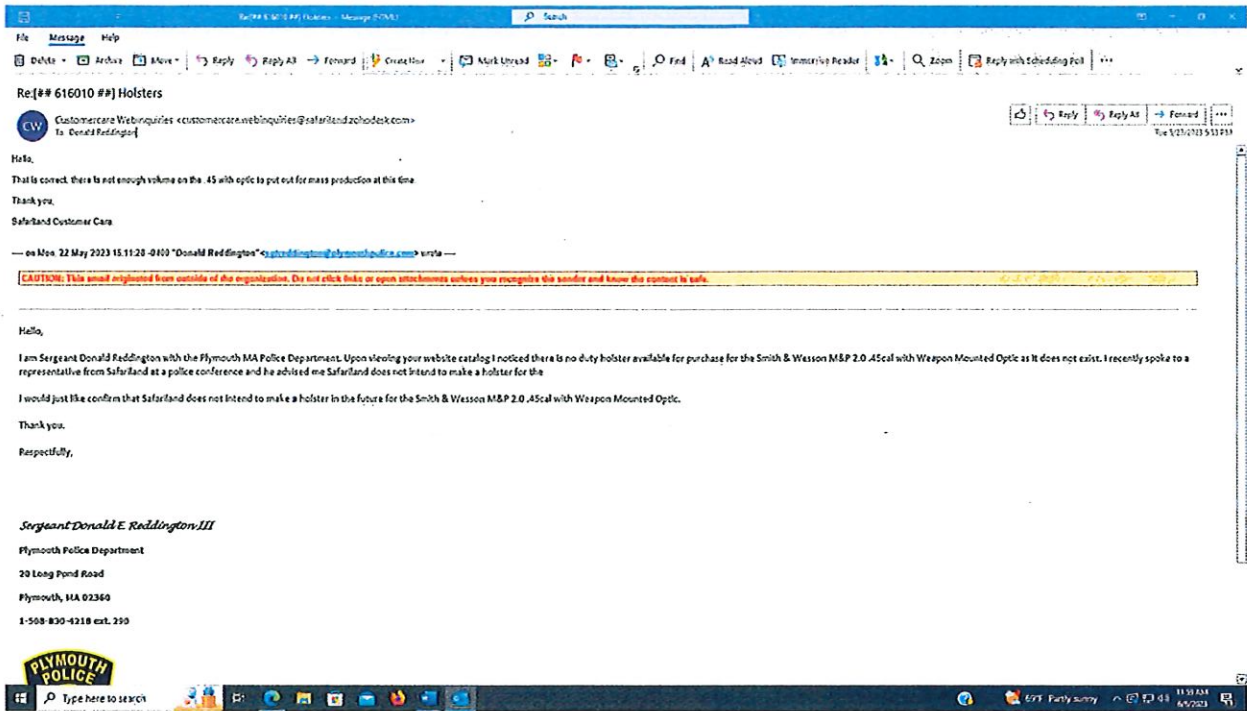
SUBTOTAL	\$ 118,674.50
SHIPPING	120.00
Total	118,794.50

All Quotes subject to factory price stability and may change without notice. Prices quoted are contingent to signed acceptance of this quotation

To accept this quotation, sign below and return with a PURCHASE ORDER to sharon@amchar.com

X

THANK YOU FOR YOUR BUSINESS



AAA POLICE SUPPLY

940 PROVIDENCE HIGHWAY
DEDHAM, MA 02026

P (781) 326 8845
F (781) 326 3963



QUOTE:

DATE: 10/23/2023

AGENCY:	Plymouth Police Department
ADDRESS:	
CONTACT:	Sgt. Donald Reddington
PHONE:	
FAX:	
EMAIL:	

QUANTITY		ITEM	PRICE	EXTENSION
140	ea	Safariland # 7360RDS-28327-411/412 Duty Holsters	\$131.68	\$18,435.20
40		Safariland # SOLIS-1-895-2-7-C3-411/412 Glock 43X MOS w/ HS EPS Optic Nightstick TCM-5B Weapon Light w/ Paddle and Belt Loop Options	\$53.68	\$2,147.20
Quote Valid For 30 Days			SUB TOTAL	\$20,582.40
Email: contact@aaapolicesupply.com			TAX	\$0.00
Quote Created By: Riley			SHIPPING	\$0.00
			TOTAL	\$20,582.40

CREDIT CARD PAYMENT NOT ACCEPTED FOR BODY ARMOR / AMMUNITION / OR ANY SPECIALLY PRICED PRODUCTS
CONTACT AAA WITH ANY QUESTIONS

JUREK BROTHERS INC.

EST. 1928

LAW ENFORCEMENT DISTRIBUTORS
OF QUALITY POLICE EQUIPMENT

59 SCHOOL STREET - P.O. BOX 408

GREENFIELD, MA. 01301

PHONE: (800) 628-8498

(413) 774-2784

FAX: (413) 772-2988

E-MAIL: info@jurekbros.com

Web: www.jurekbros.com

(2023)

DEAR PURCHASING AGENT/ARMORER,

JUREK BROTHERS INC. HAS BEEN AWARDED THE **WALTHAM MULTI-CITY CONTRACT** FOR **WINCHESTER AMMUNITION** AS LISTED BELOW.

THE PRICING IS NET AND SHIPPING IS FREE ON ALL AMMUNITION ORDERS.

CENTERFIRE HANDGUN AMMUNITION

TRAINING AMMUNITION

Q4206	380 AUTO 95GR. FMJ (500/CASE)	\$128.00 PER CASE	
Q4172	9MM 115GR. FMJ (500/CASE)	\$119.00 PER CASE	
USA9MM	9MM 124GR. FMJ (500/CASE)	(\$121.00/CASE) \$242.00 PER 1,000	(SUB FOR SPEER #53651)
WC92	9MM 124GR. BEB, WINCLEAN (500/CASE)	(\$132.50/CASE) \$265.00 PER 1,000	(SUB FOR FED. #AE9N1)
WC93	9MM 147GR. BEB, WINCLEAN (500/CASE)	(\$140.50/CASE) \$281.00 PER 1,000	(SUB FOR FED. #AE9N2)
USA40SW	40S&W 165GR. FMJ (500/CASE)	(\$139.00/CASE) \$278.00 PER 1,000	(SUB FOR SPEER #53955)
WC401	40S&W 165GR. BEB, WINCLEAN (500/CASE)	(\$152.00/CASE) \$304.00 PER 1,000	(SUB FOR SPEER #53954)
Q4238	40S&W 180GR. FMJ (500/CASE)	(\$148.00/CASE) \$296.00 PER 1,000	(SUB FOR FED. #AE40R1)
WC402	40S&W 180GR. BEB, WINCLEAN (500/CASE)	(\$152.00/CASE) \$304.00 PER 1,000	(SUB FOR FED. #AE40N1)
Q4170	45 AUTO 230GR. FMJ (500/CASE)	(\$166.00/CASE) \$332.00 PER 1,000	(SUB FOR FED. #AE45A)
WC452	45 AUTO 230GR. BEB, WINCLEAN (500/CASE)	(\$181.00/CASE) \$362.00 PER 1,000	(SUB FOR FED. #AE45N1)

PAGE 1

JUREK BROTHERS INC.

EST. 1928

LAW ENFORCEMENT DISTRIBUTORS
OF QUALITY POLICE EQUIPMENT

59 SCHOOL STREET - P.O. BOX 408

GREENFIELD, MA. 01301

PHONE: (800) 628-8498

(413) 774-2784

FAX: (413) 772-2988

E-MAIL: info@jurekbrothers.com

Web: www.jurekbrothers.com

(2023)

DUTY AMMUNITION

RA38B	38 SPEC. +P 130GR. JHP BONDED (500/CASE)	(\$222.00/CASE)	\$444.00 PER 1,000	(SUB FOR SPEER #53921)
RA380T	380 AUTO 95GR. JHP, "T" SERIES (500/CASE)		\$188.00 PER CASE	
RA9124TP	9MM 124GR. JHP +P, "T" SERIES (500/CASE)		\$168.00 PER CASE	
RA9T	9MM 147GR. JHP, "T" SERIES (500/CASE)	(\$166.00/CASE)	\$332.00.00 PER 1,000	(SUB FOR FED. #P9HST2) (WIN
#USA9JHP)				
RA40TA	40S&W 165GR. JHP, "T" SERIES (500/CASE)	(\$193.00/CASE)	\$386.00 PER 1,000	(SUB FOR FED. #P40HST3)
RA40T	40S&W 180GR. JHP, "T" SERIES (500/CASE)	(\$193.00/CASE)	\$386.00 PER 1,000	(SUB FOR FED. #P40HST1)
RA45T	45 AUTO 230GR. JHP, "T" SERIES (500/CASE)		\$219.00 PER CASE	
RA45TP	45 AUTO 230GR. JHP +P, "T" SERIES (500/CASE)	(\$232.00/CASE)	\$464.00 PER 1,000	(SUB FOR FED. #P45HST1)

RANGER FRANGIBLE AMMUNITION

RA9SF	9MM 100GR. FRANGIBLE (500/CASE)	(\$234.00/CASE)	\$468.00 PER 1,000	(SUB FOR SPEER #53365)
RA40SF	40S&W 135GR. FRANGIBLE (500/CASE)	(\$301.00/CASE)	\$602.00 PER 1,000	(SUB FOR SPEER #53375)
RA45SF	45 AUTO +P 175GR. FRANGIBLE (500/CASE)		\$379.00 PER CASE	
RA223SF	223 55GR. FRANGIBLE (1000/CASE)		\$799.00 PER 1,000	(SUB FOR INT'L #22304SHVPNTM)
RA1200SF	12GA. 00 BUCKSHOT FRANGIBLE (250/CASE)		\$375.00 PER CASE	
RA12RSSF	12GA. SLUG FRANGIBLE (250/CASE)		\$482.00 PER CASE	

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Police	Priority #:	2
Project Title and Description: Replacement of Security Gate	Total Project Cost:	\$20,975.00

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
Planning and Design			FY26		
Labor and Materials			FY27		
Administration			FY28		
Land Acquisition			FY29		
Equipment	\$12,775.	Equipment/Installation	FY30		
Other	\$5,000.	Electrical, Trenching			
Contingency	\$3,200.	18%			
Total Capital	\$20,975.				

Project Justification and Objective: See attached memo

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 to building. Parts no longer available.

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

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



Plymouth Police Department

Memo

To: Derek Brindisi, Town Manager
From: Dana Flynn, Chief of Police
CC: Brad Brother, Ass't. Town Manager; Lynn Barrett, Finance Director
Date: 10/25/23
Re: FY-25 Capital Request – Replacement of Security Access Gate

I am requesting \$20,975 to replace the rear parking lot security gate for police headquarters.

The current security gate, which is activated via keypad or transponder attached to a vehicle, is original to the building and over time had become unreliable and is currently inoperable. It has been repaired numerous times and parts are difficult to obtain.

The security gate is needed to allow only authorized vehicles access to the parking area and keep unauthorized vehicles out. As we often use our parking lot for the secure storage of seized vehicles it is imperative that we take every step to maintain a clear chain of custody, protect the property, and shield the department and town from liability.

CITIWORKS, Corp.

"Serving New England Since 1876
with
Security and Construction Specialty Products"

20 Rutledge Drive, P.O. Box 3025
Attleboro, MA 02703
MA 508-761-7400
RI 401-273-7400
FAX: 508-761-7170
www.citiworks.com

Attn: Gary Goulski
Plymouth Police Dept
20 Long Pond Road
Plymouth, MA

Phone: 781-771-8447
garygoulski@plymouth-ma.gov

PROJECT: Replacement
LOCATION: Parking area

Quote: 23-597
October 5, 2023

We are pleased to present the following quotation on the above-referenced project for your review. We will:

- A. Service the existing linear barriers. Minimally they need (3) new loop detectors, (2) new photo beams and test & evaluate the gates **For- \$2,570.00**
This may or may not be the total cost to repair both gates.
- B. Replace both wit (2) HySecurity strong arm park DC14 barrier gates with 14' aluminum arms LED lighted with 2-year warranty **For- \$12,775.00**

Due to extreme volatility in the fencing marketplace, price quotations can be honored for 15 days only.

Notes:

1. All permits or fees are not included.
2. Power and communication supply, trenching, conduit, and cabling are not included.

Est. Delivery: _____ Labor: _____ Payment terms _____

If payment is via credit card add 3%.

The Purchaser agrees that work area will be clear of obstructions and properly marked.

-----Thank you for the opportunity to submit this quotation. -----

By _____ Accepted By _____

Russ Enos (Ext. 122)

- Security Fences/Gates/Guard Rail • Gate Operators/ Access Controls • Wire Mesh Partitions
- Bathroom Partitions & Accessories • Lockers/ Storage Racks/ Shelving • Custom Metal Fabrication

StrongArmPark™ DC





**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Police	Priority #:	3
Project Title and Description: Street Lighting	Total Project Cost:	\$40,000.

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: _____

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			FY26		
Labor and Materials			FY27		
Administration			FY28		
Land Acquisition			FY29		
Equipment	\$32,000.	Equipment/Labor	FY30		
Other					
Contingency	\$8,000.				
Total Capital	\$40,000.				

Project Justification and Objective: See attached memo

For Capital Project Requests:

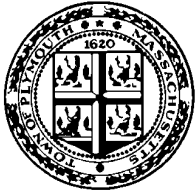
Will this project be phased over more than one fiscal year? If yes, enter it on the 5 Year Plan Yes ☐ No ☒
Can this project be phased over more than one fiscal year? Yes ☐ No ☒

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.



Plymouth Police Department

Memo

To: Derek Brindisi, Town Manager
From: Dana Flynn, Chief of Police
CC: Brad Brother, Ass't. Town Manager; Lynn Barrett, Finance Director
Date: 10/31/23
Re: FY-25 Capital Request – Installation of Street Lighting

I am requesting funding in the amount of \$40,000 to install street lighting along the entrance to police headquarters.

Several years ago, the public entrance to police headquarters located at 20 Long Pond Road was closed to access to and from Long Pond Road. This was due to the construction of All-Town Fresh, the number of "curb cuts" in close proximity, and public safety. At this time all vehicle access to police headquarters requires entering from the former Transfer Station Access Road off the Plymouth County Sheriff's Department property.

For many years this access road was only used during daylight hours for transfer station customers and around the clock for police employees. It was not meant to be the main access for a 24/7 public safety facility, and as such has never been improved in any fashion, including lighting. It is extremely dark during the nighttime hours and during inclement weather.

We have recently added signage with small garden-type solar lights for citizens to easily find us and there is residual lighting from the All-Town Fresh parking lot, but it is not sufficient enough for safe travel, especially for one who not familiar with the location of our facility, especially in an emergency.

MTV Solutions DBA D.A.D. Line Construction

300 Tremont Street Suite 8
Carver, MA 02330 US
508-465-1406
gary6999@comcast.net
<https://www.mtvnsolutions.com/dad>



Estimate

ADDRESS
James Downey
Town of Plymouth - Dept of Public Works
28 Court Street
Plymouth, MA 02360

ESTIMATE 1177
DATE 11/06/2023

DATE		DESCRIPTION	QTY	RATE	AMOUNT
11/06/2023	Labor, Equipment & Material	Job Site: Plymouth Police Station Long Pond Rd -Install 7 - 35 ft wood poles with LED lights on them. -Running 2 Str ALU triplex between poles. -Tapping into Eversource secondary with meter to energize secondary. 3 men/1 bucket truck/1 digger derrick 7 - 35ft poles	1	32,000.00	32,000.00
TOTAL					\$32,000.00

Accepted By

Accepted Date

Note: IF AWARDED JOB, PLEASE SIGN ESTIMATE AND RETURN.
This estimate is only valid for 120 days, thereafter price subject to change.
Any questions, contact Gary D'Ambra at 508-922-6469
Page 1 of 1

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Harbormaster - Police	Priority #:	1
Project Title and Description: Town Wharf Rehabilitation	Total Project Cost:	\$900,000

Department/Division Head: Chad Hunter - Harbormaster

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: _____
Will seek grant funds to offset costs. Without grant award, this project would be funded by the waterways 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>			FY26		
<i>Labor and Materials</i>	\$743,900	Phase 1	FY27		
<i>Administration</i>			FY28		
<i>Land Acquisition</i>			FY29		
<i>Equipment</i>			FY30		
<i>Other</i>	\$80,000	Engineering oversight			
<i>Contingency</i>	\$74,390	10%			
Total Capital	\$900,000	(rounded up from \$898,290)			

Project Justification and Objective: Town Wharf is a hub for commercial activity in Plymouth Harbor. Based on the most recent inspection, we were provided with a phased approach to protect and preserve our investment. This maintenance is critical to the Blue economy in Plymouth.

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 – TOWN WHARF MAINTENANCE

DATE: OCTOBER 31, 2023

Sandra,

We would like to respectfully request \$900,000 from the waterway uses account to perform much needed maintenance to Town Wharf. This project is being phased, and we are looking to complete phase one of three at this time (inspection report attached).

This maintenance request was based on a routine five-year inspection of Town Wharf performed by GEI Engineering in 2022-23. Some critical items were completed in the spring of 2023 to prevent disruptions and keep access to the pier open.

For this phase, we will be submitting the project to the Seaport Economic Council (SEC) for consideration. If there is an award, a portion of the project could be funded by SEC offsetting the costs to the Town. If the award is not successful, we would like to utilize the waterways fund to move forward with this phase.

Town Wharf is the economic hub in Plymouth Harbor providing critical ship to shore access and supporting many different uses, such as whale watches, charter boats, lobster fishery, shellfish landings, tuna landings, tall ships and recently cruise ships. The Town Wharf supports local tourism and fisheries landings in excess of \$10m dollars in value each year.

We would look to minimize impacts to any user groups and conduct the work over the winter (24/25) when many of the uses are done for the season.

Respectfully submitted,
Chad Hunter – Plymouth Harbormaster

Cc. Police Chief -Dana Flynn, DMEA Director -David Gould

Memo

To: David Gould
From: Russell Titmuss
C:
Date: October 31, 2023
Re: 2023 Inspection Repair Options
 Plymouth Town Wharf Repairs
 Plymouth, MA
 GEI Project No. 2203521

This memo is a supplement to GEI memo dated February 15, 2023 (attached) to update the cost estimates for repair of the Town Wharf. It is assumed that all of the repairs would be completed in phases over the course of approximately three years. Costs have been escalated 5% each year.

SHORT TERM (First Year)	TOTAL QTY	Unit	2023-Unit \$	Item Total \$
Pile Caps & Piles				
Remove Existing Pile Cap Timbers - Main Pier	3,024	BFM	\$10.50	\$31,800
NEW Pile Cap (12x12)	3,024	BFM	\$24.36	\$73,700
Post Piles	23	EA	\$6,090.00	\$140,100
Patch/Replace Deck Panels	2	EA	\$6,090.00	\$12,200
Remove & Reinstall Concrete Deck Panels	65	EA	\$1,260.00	\$81,900
Concrete Panel Connection Hardware	134	EA	\$1,218.00	\$163,300
General Repairs For ALL Options				
Cross Bracing & Long Bracing	684	BFM	\$27.41	\$18,800
Hardware	30	EA	\$913.50	\$27,500
Batter Pile Hardware (If not prev. repaired)	19	EA	\$913.50	\$17,400
Replace All Ladders (4?)	4		\$609.00	\$2,500
Wave Fence Slats (3x10)	15		\$974.40	\$14,700
Mobilization	1	LS	\$80,000.00	\$80,000
Site Preparation	1	LS	\$80,000.00	\$80,000
SUB-TOTAL				\$743,900
Contingency			10.00%	\$74,390
TOTAL FOR CONSTRUCTION				\$818,290
Allowance for Engineering				\$80,000
TOTAL				\$900,000

MID TERM (Year 2)	NET QTY	Unit	2024-Unit \$	Item Total \$
Pile Caps & Piles				
Remove Existing Pile Cap Timbers - Main Pier	4,452	BFM	\$11.03	\$49,100
NEW Pile Cap (12x12)	4,452	BFM	\$25.58	\$113,900
Post Piles	23	EA	\$6,394.50	\$147,100
Patch/Replace Deck Panels	-	EA	\$6,394.50	\$0
Remove & Reinstall Concrete Deck Panels	163	EA	\$1,323.00	\$215,700
Concrete Panel Connection Hardware	326	EA	\$1,278.90	\$417,000
General Repairs For ALL Options				
Cross Bracing & Long Bracing	684	BFM	\$28.78	\$19,700
Hardware	30	EA	\$959.18	\$28,800
Batter Pile Hardware (If not prev. repaired)	19	EA	\$959.18	\$18,300
Replace All Ladders (4?)	-		\$639.45	\$0
Wave Fence Slats (3x10)	15		\$1,023.12	\$15,400
Mobilization		LS	\$130,000.00	\$130,000
Site Preparation		LS	\$130,000.00	\$130,000
SUB-TOTAL				\$1,285,000
Contingency			10.00%	\$128,500
TOTAL			TOTAL =	\$1,413,500
Allowance for Engineering				\$85,000
TOTAL				\$1,498,500

LONGER TERM	NET QTY	Unit	2025-Unit \$	Item Total \$
Pile Caps & Piles				
Remove Existing Pile Cap Timbers	18,564	BFM	\$11.58	\$215,000
Split Pile Cap Timbers - Main Pier & Edge Caps	18,564	BFM	\$26.86	\$498,600
Post Piles	23	EA	\$6,714.23	\$154,500
Patch/Replace Deck Panels	-	EA	\$6,714.23	\$0
Remove & Reinstall Concrete Deck Panels	82	EA	\$1,389.15	\$114,000
Concrete Panel Connection Hardware	164	EA	\$1,342.85	\$220,300
General Repairs For ALL Options				
Cross Bracing & Long Bracing	684	BFM	\$30.21	\$20,700
Hardware	30	EA	\$1,007.13	\$30,300
Batter Pile Hardware (If not prev. repaired)	19	EA	\$1,007.13	\$19,200
Replace All Ladders (4?)	-		\$671.42	\$0
Wave Fence Slats (3x10)	15		\$1,074.28	\$16,200
Mobilization		LS	\$130,000.00	\$130,000
Site Preparation		LS	\$130,000.00	\$130,000
SUB-TOTAL				\$1,548,800
Contingency			10.00%	\$154,900
TOTAL			TOTAL =	\$1,703,700
Allowance for Engineering				\$90,000
TOTAL				\$1,793,700

[RJT : admin initials]

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Memo

To: David Gould
From: Steve Hennessy
c: Russell Titmuss
Date: February 15, 2023
Re: 2023 Inspection Repair Options
Plymouth Town Wharf Repairs
Plymouth, MA
GEI Project No. 2203521

This memo sets out an initial finding's summary for Town Wharf Pier in Plymouth Harbor. It is an update of our January 17, 2023, memo with added detail and estimated repair costs.

GEI Consultants (GEI) recently inspected the pier on December 13 and 19, 2022 on behalf of the Town. The purpose of this inspection by GEI was to document the existing conditions at the Town Wharf and provide recommendations for any necessary repairs. The last inspection of this pier was in 2012 by GEI (as Bourne Consulting Engineering). The inspection was not 100% completed on the two days above but some items of concern were noted and brought to the Town's attention. The inspection has since been completed (on January 12, 2023) but the final report is still in progress. This memo provides initial estimates for the number of repairs and potential costs pending completion of the final report.

This memo includes a summary of conditions observed in order of importance, and assessment of alternative repair options based on the future intended use of the Plymouth Town Wharf. It also includes a discussion of potential longer term repair options with estimated costs.

Inspection Findings Summary:

General Description

The Town Wharf facility comprises the Main Wharf and the Southern Extension (Finger Pier).

The Main Wharf has a total of 31 bents. Each bent comprises:

- 11 vertical timber bearing piles – Rows A to L (I is not used)
- Odd numbered bents have a single batter pile at Row A
- Even numbered bents have two batter piles at Rows A and L
- 2 timber fender piles at Rows A and L
- 12" x 12" timber pile cap running across all bearing piles with a ship lap joint at Row F
- Timber cross bracing

The Southern Extension has a total of 9 bents. Each bent comprises:

- Two timber batter piles
- Two 6" x 12" timbers as a split pile cap
- Timber cross bracing

Areas of Immediate Concern for Safety

Areas marked on the attached plan shall be blocked off immediately with lightweight jersey barriers or by other means. See Attachment 1 for locations.

- 1. Main Wharf - Timber Pile Cap in Bent 4 between Piles E and F to the ship lap joint is significantly hollowed out and the side faces of the pile cap are deformed.**
- 2. Southern Extension - Split pile cap on Bent 9 is broken due to impact damage.**

Timber Pile Caps:

Pile caps were sounded with a hammer as well as visually inspected. A number of pile caps were noted as hollow. These areas were noted as “visually” or “acoustically” hollow. Areas that were visually confirmed to be hollow, through excessive cracks, end deterioration, and organic growth, were also tested acoustically for comparison to other areas identified to be “acoustically hollow”. Further investigation of the acoustically hollow pile caps was performed by taking timber cores with a ¼ inch increment borer. There were eight (8) areas that had severe deterioration as determined visually (see red areas on Attachment 2). Many of the bents had end rot/deterioration ranging from 4” to 18” in from the end. The end rot deterioration becomes critical when it reaches approximately 8 inches in from the end of the pile cap. These locations are noted in the table below but additional locations are likely to need repair over the coming years.

Defect	Actual Number of defects found by inspection ¹
Hollow	19 to 23
End Rot/Deterioration	17

¹ – Count is number of pile cap spans

Timber Piles:

Piles were inspected above and below water. Pile inspection included vertical bearing piles, fender piles and batter piles, with associated hardware connections to the piles. The 2012 inspection found evidence of deterioration due to marine borers and the affected piles were repaired. This marine borer activity has continued to deteriorate the piles below MHW and piles with severe marine borer activity and those noted to be visually and/or acoustically hollow above MLW are listed in the table below. Batter pile hardware was severely impacted at many locations, with severe marine borer activity hollowing the tops of the batter piles where they are connected to the bearing piles.

Defect	Actual Number of defects found by inspection
Piles with severe marine borer activity	23
Batter pile hardware	19

Cross Bracing:

Cross bracing was inspected at low tide when the majority of the bracing was exposed. Deterioration of lower bracing members, hardware and connections to the piles were the main areas of concern for affected bracing. Upper bracing and hardware was in fair condition.

Defect	Actual Number of defects found by inspection
Lower bracing connection	30
Bracing members	684 BFM

Concrete Deck Panels:

Concrete panels were inspected from below deck and topside of the deck. Topside conditions included moderate wear and chipping of the panels, without structural implications. Areas were observed to have growth between the panels, along the pile cap which suggests organic matter on top of or entering the timber pile cap below. The southeast most corner panel was observed to have a crack, as well as extended gaps between the surrounding panels, similar to that observed by impact damage.

Wave Fence:

The wave fence was generally in good condition. Fifteen (15) wave fence slats were missing or disconnected from the three wales present at the time of survey.

Defect	Actual Number of defects found by inspection
Missing slats	15

Estimated Immediate Repair Cost

Two defects of major concern were identified as described above under the inspection findings:

- 1. Main Wharf - Timber Pile Cap in Bent 4 between Piles E and F to the ship lap joint is significantly hollowed out and the side faces of the pile cap are deformed.***

The proposed immediate repair to this area would be to “sister” new 6”x 12” pile caps on each side of the existing 12”x 12” pile cap. The new timber would need to run for at least one span and would require blocking pieces to transfer the load into the existing piles.

Estimated cost of this repair is \$36,000.

- 2. Southern Extension - Split pile cap on Bent 9 is broken due to impact damage.***

The proposed immediate repair is replacement of the damaged timber.

Estimated cost of this repair is \$9,000.

Repair Options

Repair Options for the Town Wharf need to be considered in the context of remaining life of the timber piles and the total replacement cost of the structure:

Timber Pile Life

The existing timber piles were installed around 1952 and are now approximately 70 years old. This is well beyond the projected life of timber piles installed today. However, there are a total of approximately 400 piles supporting the existing pier and only 23 piles have been identified as requiring repair. Other relevant information comes from the replacement of the T Wharf 5 years ago. The piles supporting the T Wharf were in fair condition and dated from 1935 making them 83 years

old. Based on this information, it is not unreasonable to project a remaining life for the piles of around 15 years with the expectation that some repairs will be needed periodically.

At the time of the last inspection (10 years ago), 31 piles were identified for repair. This inspection identified 23 piles for repair. Assuming 25 to 30 piles will require repair every 5 years over the next 15 years provides a basis for continued maintenance.

Total Replacement Cost

If the existing pier is replaced in kind with similar materials, the total replacement cost is estimated to be approximately \$12 million. This cost does not include engineering and permitting which would add another \$1.5 million. If the pier were to be replaced, alternative layouts could be investigated which might reduce the footprint and therefore the cost. However, the existing pier provides much needed working space on the tightly constrained waterfront and a major reduction in footprint is considered unlikely.

If the materials are restricted to treated timber piles, timber framing and precast concrete deck, the estimated projected life of a new pier is approximately 40 years. This projected life could be extended by considering other materials but at higher cost.

Short Term Repairs (within one to two years)

The defects identified in this inspection should be repaired within the next 1 to 2 years. If the repairs are not performed within the next year, periodic inspections should be performed to ensure that conditions do not change sufficiently to cause a safety hazard. Some load limitation should also be considered if repairs are not performed in the short term.

Pile Cap Repairs

The deterioration of the pile caps as noted above is the biggest cause for concern and this deterioration will continue to worsen rapidly. Once the center of the pile cap starts to rot, the core remains damp and rot spreads quickly. It is likely that repeated repairs will be necessary until most of the pile caps have been repaired. The time between inspection and repair cycles should be planned to be not more than every 5 years.

Two options have been considered for repair of the pile caps:

Sistering Pile Caps

“Sistering” consists of fastening new 6”x 12” pile caps on each side of the existing 12”x 12” pile caps. This will allow repairs to be completed without removing the existing concrete deck panels. The lifespan of the repaired pile caps is somewhat difficult to predict because the rotten existing 12” x 12” pile cap will remain sandwiched between the new pile caps and the new timber is likely to have a shorter life as a result. The likely lifespan of this repair is not more than 15 years.

Replacing Pile Caps

A better repair would replace the existing 12”x 12” pile caps but this would require removal of the concrete deck panels. This approach would cause more disruption to pier users while the repairs are performed but it would allow for complete replacement of deteriorated piles. This approach would provide a longer lasting repair and should be investigated as a potential phased approach for pier repair/replacement. GEI will provide review of this option and others in our report which is currently in preparation.

Pile Repairs

The pile repairs included in the estimates assume that piles will be posted as performed for the last round of pier repairs in 2017.

Other Miscellaneous Repairs

Replacement of hardware, bracing members and reconnection of the batter piles by blocking would all be performed similar to the last round of pier repairs.

Short Term Repairs are assumed to be limited to only those defects clearly visible at the time of the inspection.

Estimated cost of these short term repairs is \$750,000 to \$800,000. A breakdown is provided in the attached tables.

Mid Term Repairs (within the next 5 years)

Mid Term repairs are assumed to be similar to the repairs listed under Short Term Repair above. Mid Term Repairs would repair visible and “acoustically” hollow members together with similar quantities of pile, batter pile, bracing and wave fence repairs as performed for the short term repairs. The estimated cost of this work is \$1.2 million in 2023 costs. A breakdown is provided in the attached tables. It should be noted that the breakdown shows all repairs up to this point (short term and mid term) and the work required in this year is the difference between the total cost of short term repairs and the total cost of mid term repairs.

Longer Term Repairs (10 years +/-)

Longer Term Repairs are assumed to consist of completing the repair or replacement of all remaining pile caps together with similar quantities of pile, batter pile, bracing and wave fence repairs as performed for the short term repairs. The estimated cost of this work is \$1.6 million. A breakdown is provided in the attached tables. It should be noted that the breakdown shows all repairs up to this point (short term, mid term and longer term) and the work required in this year is the difference between the total cost of mid term repairs and the total cost of longer term repairs.

Total cost up to this stage is estimated to be approximately \$3.5 million.

Phased Repairs

With the understanding that most of the pile caps in the deck will require replacement over the next approximately 10 years a further strategy of performing a phased replacement over the next approximately 6 years has been considered. The total cost of this work would be approximately \$3.5 million and it could be phased over two to three contracts.

Some prioritization of the phasing should be directed to providing continued heavy load access to the newly reconstructed T Wharf and to repair the worst areas of deterioration. However, the major benefit of this approach should be economies for the contractor in performing complete repairs over a contiguous area.

[RJT : admin initials]

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IMMEDIATE REPAIRS	TOTAL QTY	2022-Unit \$	Item Total \$
Mobilization			\$5,000
Demo			\$5,000
Split Pile Cap Timbers - Main Pier	3	\$6,525.00	\$19,600
Split cap repair	120	\$25.38	\$3,100
Decking replacement	150	\$25.38	\$3,900
SUB-TOTAL			\$36,600
Contingency		20.00%	\$7,400
TOTAL		TOTAL =	\$44,000

SHORT TERM	TOTAL QTY	2022-Unit \$	Item Total \$
Pile Caps & Piles			
Remove Existing Pile Cap Timbers - Main Pier	3,024	\$10.00	\$30,300
NEW Pile Cap (12x12)	3,024	\$23.20	\$70,200
Post Piles	23	\$5,800.00	\$133,400
Patch/Replace Deck Panels	2	\$5,800.00	\$11,600
Remove & Reinstall Concrete Deck Panels	65	\$1,200.00	\$78,000
Concrete Panel Connection Hardware	134	\$1,160.00	\$155,500
General Repairs For ALL Options			
Cross Bracing & Long Bracing	684	\$26.10	\$17,900
Hardware	30	\$870.00	\$26,100
Batter Pile Hardware (If not prev. repaired)	19	\$870.00	\$16,600
Replace All Ladders (4?)	4	\$580.00	\$2,400
Wave Fence Slats (3x10)	15	\$928.00	\$14,000
Mobilization	1	\$75,000.00	\$75,000
Site Preparation	1	\$75,000.00	\$75,000
SUB-TOTAL			\$706,000
Contingency		10.00%	\$70,600
TOTAL		TOTAL =	\$776,600

MID TERM	TOTAL QTY	2022-Unit \$	Item Total \$
Pile Caps & Piles			
Remove Existing Pile Cap Timbers - Main Pier	7,476	\$10.00	\$74,800
NEW Pile Cap (12x12)	7,476	\$23.20	\$173,500
Post Piles	46	\$5,800.00	\$266,800
Patch/Replace Deck Panels	2	\$5,800.00	\$11,600
Remove & Reinstall Concrete Deck Panels	228	\$1,200.00	\$273,600
Concrete Panel Connection Hardware	460	\$1,160.00	\$533,600
General Repairs For ALL Options			
Cross Bracing & Long Bracing	1,368	\$23.20	\$31,800
Hardware	60	\$870.00	\$52,200
Batter Pile Hardware (If not prev. repaired)	38	\$870.00	\$33,100
Replace All Ladders (4?)	4	\$580.00	\$2,400
Wave Fence Slats (3x10)	30	\$928.00	\$27,900
Mobilization	1	\$130,000.00	\$130,000
Site Preparation	1	\$130,000.00	\$130,000
SUB-TOTAL			\$1,741,300
Contingency		10.00%	\$174,200
TOTAL		TOTAL =	\$1,915,500
DIFFERENCE TOTAL MID TERM - TOTAL SHORT TERM			\$1,138,900

LONGER TERM	TOTAL QTY	2022-Unit \$	Item Total \$
Pile Caps & Piles			
Remove Existing Pile Cap Timbers	26,040	\$10.00	\$260,400
Split Pile Cap Timbers - Main Pier & Edge Caps	26,040	\$23.20	\$604,200
Post Piles	69	\$5,800.00	\$400,200
Patch/Replace Deck Panels	2	\$5,800.00	\$11,600
Remove & Reinstall Concrete Deck Panels	310	\$1,200.00	\$372,000
Concrete Panel Connection Hardware	624	\$1,160.00	\$723,900
General Repairs For ALL Options			
Cross Bracing & Long Bracing	2,052	\$23.20	\$47,700
Hardware	90	\$870.00	\$78,300
Batter Pile Hardware (If not prev. repaired)	57	\$870.00	\$49,600
Replace All Ladders (4?)	4	\$580.00	\$2,400
Wave Fence Slats (3x10)	45	\$928.00	\$41,800
Mobilization	1	\$300,000.00	\$300,000
Site Preparation	1	\$300,000.00	\$300,000
SUB-TOTAL			\$3,192,100
Contingency		10.00%	\$319,300
TOTAL		TOTAL =	\$3,511,400
DIFFERENCE TOT LONG TERM - TOT MID TERM - TOT SHORT TERM			\$1,595,900

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Harbormaster - Police	Priority #:	2
Project Title and Description: State Pier Float Maintenance	Total Project Cost:	\$25,000

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: Waterways fund

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>FY26</i>		
<i>Labor and Materials</i>	\$25000		<i>FY27</i>		
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>		
<i>Equipment</i>			<i>FY30</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$25000				

Project Justification and Objective: Protect and Preserve the Town's 16'x40' floating dock adjacent to the Mayflower II. Need to replace the two main timbers (40' long) and associated galvanized hardware. This float is approx 13 years old and has timber and hardware rot.

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 – STATE PIER FLOAT MAINTENANCE

DATE: OCTOBER 31, 2023

Sandra,

We would like to respectfully request \$25,000 from the waterway uses account to perform needed maintenance on the State Pier Floating dock (adjacent to the Mayflower II). This floating dock needs both large timber skids and associated galvanized hardware replaced due to rotting timbers and hardware. This maintenance will protect the Town's investment and preserve boater access at this location.

This floating dock is approx. 13 years old and supports many skiffs and provides a 15-minute tie up area. Skiffs secured at this float generate between \$7,500 and \$10,000 each year.

Respectfully submitted,

Chad Hunter – Plymouth Harbormaster

Cc. Police Chief -Dana Flynn

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Harbormaster - Police	Priority #:	3
Project Title and Description: Skiff dock replacement	Total Project Cost:	\$110,000

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: Waterways fund

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>FY26</i>		
<i>Labor and Materials</i>	\$110,000		<i>FY27</i>		
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>		
<i>Equipment</i>			<i>FY30</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$110,000				

Project Justification and Objective: Replacement of two timber floating dock more than 35 years old. One timber dock is 16'x40' and supports a gangway and the other is a smaller 8"x20' timber dock. Looking to replace with possibly low maintenance concrete or HD timber floats.

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 – SKIFF DOCK REPLACEMENT

DATE: OCTOBER 31, 2023

Sandra,

We would like to respectfully request \$110,000 from the waterway uses account to replace two floating docks in the vicinity of the charter boat floats. The floats to be replaced include one large timber floating dock approx. 16'x40' that supports the gangway and a smaller attached 8' x 20' timber floating dock.

Both floating docks are more than 35 years old and have extensive wood and hardware rot making them cost prohibitive to repair at this point. A temporary repair completed to the large float in 2019 uncovered severe structural damage and extensive rot. We are looking to replace these floats with low maintenance concrete or HD timber floating docks.

These floats support boating access, a charter boat landing area, and over 50 skiffs that generate approximately \$15k - \$20k per year.

Respectfully submitted,

Chad Hunter – Plymouth Harbormaster

Cc. Police Chief -Dana Flynn

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Fire Department	Priority #:	1
Project Title and Description: Rehabilitate Pumping Engine #7	Total Project Cost:	\$176,748.00

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>			FY26		
<i>Labor and Materials</i>	\$176,748.00		FY27		
<i>Administration</i>			FY28		
<i>Land Acquisition</i>			FY29		
<i>Equipment</i>			FY30		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$176,748.00				

Project Justification and Objective: This project is in line with the Department's fire apparatus replacement program as recommended by the 2022 Fire Department Analysis, which outlines a goal of 15 years of frontline service with an additional 5 years in reserve. If this work is unable to be performed, full replacement will likely be needed within 5 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: 10 + 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

To: Capital Improvement Committee
cc: Sandra Strassel, Procurement Officer
Lynne Barrett, Finance Director
Derek Brindisi, Town Manager
Brad Brothers, Asst. Town Manager

From: Neil J. Foley, Chief of Department

Date: November 1, 2023

RE: Rehabilitate 2013 E-One Cyclone 1500GPM Pumping Engine \$176,748.00

The Department is requesting \$176,748.00 to perform a comprehensive refurbishment of Engine 7, a 2013 Pumping Engine stationed at the North Plymouth Station. Engine 7 has accumulated 6,142 engine hours, equivalent to 251,822 road miles. All regular and recommended preventive maintenance has been performed by our repair shop or the factory-authorized dealer. According to the Repair Division's April 2023 Apparatus Report, Engine 7 is currently rated to be in good condition, but it is showing signs of its age and use.

Engine 7 has responded to over 15,000 emergencies since being placed in service in 2013. As a result, it is showing signs of expected wear and tear for a 10-year-old truck that has been exposed to road salt and other corrosive substances used in the Northeast. This work will involve nearly all major components, including engine, transmission, fire pump, chassis, cab, body, electric, and paint. A delay in this project will likely necessitate complete replacement sooner than anticipated. The current estimated replacement cost of a pumping engine is roughly \$970,576.00, a figure that has historically increased by 4% annually but recently has increased up to 11%. Therefore, it is imperative to stay on course with the Department's fire apparatus rehabilitation schedule and maximize the service life of our apparatus.

This project is in line with the Department's fire apparatus replacement program as recommended by the 2022 Fire Department Analysis, which outlines a goal of 15 years of frontline service with an additional 5 years in reserve. If this work is unable to be performed, full replacement will likely be needed within 5 years.

This pumping engine was manufactured to meet all National Fire Protection Association (NFPA) safety standards required at the time. However, new safety standards have been adopted to enhance the safety of our firefighters and the public. With the requested funding, all necessary repairs and preventive work will be carried out, and components will be updated to meet as many current NFPA safety standards as possible.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Fire Department	Priority #:	2
Project Title and Description: Rehabilitate and Re-power 33' Safeboat	Total Project Cost:	\$179,746.15

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: \$89,873.07 Fire Prevention Revolving Org, 26242206 Obj. 540000

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>FY26</i>		
<i>Labor and Materials</i>	\$171,186.81		<i>FY27</i>		
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>		
<i>Equipment</i>			<i>FY30</i>		
<i>Other</i>					
<i>Contingency</i>	\$8,559.34	5% Contingency			
Total Capital	\$179,746.15				

Project Justification and Objective: This Project will ensure the Department's ability to maintain an effective maritime response capability in Plymouth and the surrounding area.

The Plymouth Fireboat was purchased through the FEMA Port Security Grant Program in a partnership with the United States Coast Guard Sector Southeast New England.

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.



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

To: Capital Improvement Committee
cc: Sandra Strassel, Procurement Officer
Lynne Barrett, Finance Director
Derek Brindisi, Town Manager
Brad Brothers, Asst. Town Manager

From: Neil J. Foley, Chief of Department

Date: November 1, 2023

RE: Rehabilitate and Repower 2012 33' SafeBoat Defender \$179,746.15

The Department is seeking funding of \$179,746.15 to carry out a comprehensive refurbishment of the Plymouth Fireboat. The refurbishment will involve repowering the three 300hp outboard motors, rehabilitating or replacing the boat's dedicated 1,200 gallons per minute fire pump and repairing or replacing any other worn or corroded components of the deck, hull, or wheelhouse. The Fire Safety and Prevention Revolving account (Org. 2624226 Obj. 540000) will provide a funding source of up to fifty percent of the cost of this project up to \$89,873.07.

This refurbishment is crucial to ensure the reliability of the community's only marine firefighting vehicle. The Plymouth Fireboat has a primary response area of 37 miles of Plymouth coastline that extends over ten nautical miles east to the shipping lanes. It is an integral part of the Boston metropolitan maritime response plan and has been activated on several occasions to respond to emergencies such as fires on board small personnel watercraft and large commercial passenger vessels, explosions, water vehicle crashes, water rescues, and investigations.

The Plymouth Fireboat was originally purchased through the FEMA Port Security Grant Program in partnership with the United States Coast Guard Sector Southeast New England by providing shipboard firefighting capabilities and a monitoring platform for chemical, biological, radiological, and nuclear (CBRN) mitigation missions beyond the Massachusetts shoreline.

● Page 2

Since being placed in service in 2012, the Fireboat has responded to dozens of marine emergencies. In addition, it has been involved in many marine environmental operations with various agencies such as the Department of Environmental Protection and the United States Coast Guard. The Fireboat also participated in Urban Shield Boston, the largest first responder exercise conducted in New England, which involved approximately 2,000 emergency response personnel from more than 50 local, state, and federal agencies.

Last year, the department replaced and upgraded the Fireboat's marine electronics, which significantly increased the functionality and safety of the vessel. The \$37,000 project was largely funded through a \$31,790 award from the Emergency Preparedness Grant program. The department is committed to leveraging any grant opportunity available to us.

With a full replacement cost nearing \$800,000, the repower and rehabilitation project can extend the service life of the Fireboat by another ten years with regular preventative maintenance. The department's Chief Master Mechanic has recommended this project, and not performing this work could result in the need for full replacement soon.

Overall, the Plymouth Fireboat is an essential resource for the community, and this refurbishment project will ensure that it remains dependable and effective in responding to emergencies in the future.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Marine and Environmental Affairs	Priority #:	1
Project Title and Description: Replacement of Animal Control Vehicle	Total Project Cost:	\$60,000

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:

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>FY26</i>		
<i>Labor and Materials</i>			<i>FY27</i>		
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>		
<i>Equipment</i>	\$60,000		<i>FY30</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$60,000				

Project Justification and Objective:

The current Animal Control Van is 13 year's old and has over 182,000 miles. It has no 4WD capabilities and is therefore challenging to drive in the winter and on gravel roads. With an ever increasing call volume having only one vehicle for 3 Animal Control Officers does not allow staff to respond appropriately or complete their work accordingly.

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

2011 ME5 Ford Van. 1FTNE1EW1BDB11226. 182,064 miles.

What is the expected lifespan of this new/replacement equipment: 8-10 years.

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

Plymouth, MA

Contact Name: Mark Brulport

Company/Dept: Animal Control

Street Address:

City, State, Zip:

Phone: (781) 626-0642(c.)

 E-Mail: mbrulport@plymouthma.gov
A.C.O.

Date: 9.13.2023

Valid through : 60 Days

Customer #:

Contract: PCC 2023-2026

Sales Rep: Steven Anderson

CONTRACT LINE REFERENCE	LINE DESCRIPTION	UNIT PRICE	QTY.	EXTENDED PRICE
W1P/150A	[Fleet] 2023 Ford F-150 Police Responder (W1P) XL 4WD SuperCrew 5.5' Box	\$ 44,665.00	1	\$ 44,665.00
998	Engine: 3.5L V6 EcoBoost	\$ -	1	\$ -
44G	Transmission: Electronic 10-Speed Automatic	\$ -	1	\$ -
YZ	Exterior 1:Oxford White	\$ -	1	\$ -
PB	Black, Cloth 40/Blank/40 Front-Seats	\$ -	1	\$ -
18B	Black Platform Running Boards	\$ 245.00	1	\$ 245.00
67P	Remote Keyless-Entry Key Fob w/o Key Pad	\$ 333.20	1	\$ 333.20
85H	Backup Alarm System	\$ 142.10	1	\$ 142.10
524	SYNC 4 w/Enhanced Voice Recognition	\$ 318.50	1	\$ 318.50
	Remainder of Factory Equipment for this Trimline		1	\$ -
	PCC Ford Contract Total :			\$ 45,703.80
SERVICES	VentVisor 4 piece VentShades	\$ 160.00	1	\$ 160.00
SERVICES	Tint Vehicle - Complete - K9	\$ 525.00	1	\$ 525.00
SERVICES	Aftermarket Remote Starter (2 FOBs) also provides Keyless Entry START2	\$ 395.00	1	\$ 395.00
SERVICES	MHQ Graphics Package "B"	\$ 550.00	1	\$ 550.00
SERVICES	MHQ Graphics - Full Chevron on Utility Vehicle	\$ 450.00	1	\$ 450.00
CY76	Whelen ION DUO LED Lights (each) - inner grille 12" A/W	\$ 181.62	2	\$ 363.24
2978	Whelen Mini Liberty 20" LED light bar model IT9AAAAP	\$ 816.00	1	\$ 816.00
CY52	Whelen CORE-R Controller C399R	\$ 762.00	1	\$ 762.00
CY57	Whelen CORE 2020+ Ford F150 Gateway Kit C399K7	\$ 70.00	1	\$ 70.00
CY54	Whelen CORE CCTL7 3 Section Control Head and 21 Push-Buttons, 4-Position Slide Switch.	\$ 325.00	1	\$ 325.00
CY63	Whelen WeCanX Expansion Module CEM16	\$ 195.00	2	\$ 390.00
PES81	Whelen "Photo-Cell" (needed on "Slicktop" with CanTrol) - CANLITEB	\$ 92.50	1	\$ 92.50
CY97/98	Whelen LED Under Mirror System LINSV2* / LSVBKT50 Amber	\$ 240.00	2	\$ 480.00
CY115	Whelen Strip Lite DUO w/BKT (1/side) Under Rear Gate R/A - A/W PS*02FCR	\$ 186.65	4	\$ 746.60
PES46	Whelen Vertex LED Hide-a-ways VTX609-4 tail lights VTX609* 2 Red 2White	\$ 515.00	1	\$ 515.00
PES87	Magnetic Mic Clip(s) #MMSU1	\$ 45.00	2	\$ 90.00
CY104	Whelen DUO LED Dome Lights (ea.) - front seats/Pass Toolbox 3SRCCDCR / PLSW30	\$ 97.92	2	\$ 195.84
BO64	Pro-Gard "SafeStop" Anti-Theft Device S0009	\$ 285.00	1	\$ 285.00
PES66	Havis #C-2410 & C-TMW-24, 24" console with 24" track mount F150-550/Exped	\$ 525.00	1	\$ 525.00
AL288	Dual 12v outlets w/dual USB CLP2PS1USB	\$ 127.11	1	\$ 127.11
AL241	Havis 6" accessory pocket, 4.5" deep	\$ 79.66	1	\$ 79.66
AL278	Havis Adjustable Dual Internal Cup Holder CUP21001	\$ 73.49	1	\$ 73.49

TAB3	A.R.E MX MODEL Rear Cap This is 4 in above roof (fiberglass cap) Yz white Solid front glass Windows both sides w/screens Standard rear door (tinted one handle) Third brake light .	\$ 3,118.80	1	\$ 3,118.80
TAB3	Decked rear box drawers	\$ 1,529.49	1	\$ 1,529.49
PES89	Install / Transfer Cust. Supplied 2-way Radio(s) EACH	\$ 275.00	1	\$ 275.00
	PCC AfterMarket Equipment Contract Total :			\$ 12,939.73
Cost per Unit :				\$ 58,643.53
Qty. :				1.00
Trade :				\$ -
TOTAL:				\$ 58,643.53

TERMS AND CONDITIONS

Deferrals and Cancellations of Sales Orders

In all cases where vehicles, products, and labor are purchased against government and public contracts, the terms and conditions of that contract shall prevail and bind MHQ. In cases where contract terms on deferral and/or cancellation are not defined, and for non-contract sales, the following MHQ policy shall prevail.

Deferrals

For this discussion, "deferral" refers to a customer-initiated action to delay the delivery of purchased items* beyond the delivery date confirmed to the customer in writing (Purchase Order confirmation). All deferral requests must be communicated to MHQ in writing. MHQ, at their sole discretion, reserves the right to accept or reject deferral requests. Once the subject item has started the production / fabrication process, delivery deferrals are not allowed – the item will be built, shipped, and billed upon completion. For deferral requests on items not yet in production, MHQ shall negotiate deferral terms with the customer's purchasing or sourcing authority (not the requisitioner). Consequences of order deferrals may include, but not be limited to, loss of scheduled production timeslot and reallocation of vehicles and/or materials to other active jobs or other customers.

Special Order and Non-Cancellable/Non-Returnable Items (NCNR)

Certain items and material are categorized as "Special Order" or "NCNR." Attempts to cancel shall be handled on an individual basis. Depending on the stage of production of a special-order item, and the suppliers involved, special order items may incur cancellation charges based on supplier purchase liabilities. MHQ shall always act in the interest of our customers to minimize or eliminate cancellation charges whenever possible. Special Order items will be identified as such at the time of quoting and order acceptance to assure an understanding of risk to the customer.

NCNR items are not cancellable with our suppliers. MHQ will make a reasonable attempt to minimize the financial impact of cancelling NCNR items, but no assurance is offered that the customer's purchase liability for these item types can be reduced in any way. NCNR items will be identified as such at the time of quoting and order acceptance to assure an understanding of risk to the customer.]

Cancellations

For this discussion, "cancellation" refers to a customer-initiated action to cancel a customer committed order* or any part thereof. All cancellation requests must be communicated to MHQ in writing. Cancellations will be accepted, without penalty, until the point in time where material has been ordered to support production of the ordered item(s). Once components or material is ordered against a committed customer order, cancellation charges may apply based on supplier purchase liabilities. MHQ shall always act in the interest of our customers to minimize or eliminate cancellation charges whenever possible. Depending on the type of material/components and the suppliers involved, the range of customer purchase liability can range from complete release of purchase liability, up to and including full liability of the original material cost.

Supplier Failure to Perform

MHQ shall be held harmless in cases where their suppliers fail to source, build, or deliver quoted or ordered products required to satisfy customer committed orders. MHQ shall also be held harmless in cases where a supplier discontinues availability of a product, places a product on allocation, or delivery times extend beyond their normal quoted delivery times such that the subject product becomes unavailable, or experiences extended delivery times. In these cases, MHQ shall offer alternatives, where commercially available, to the customer for consideration as acceptable substitutes.

*Purchased Items

"Purchased Items" is defined as any item, component, or material required to fulfill a committed customer order.

*Customer Committed Order

"Customer Committed Order" is defined as any acceptable form of communication that directs MHQ to produce and sell an item to their customer. Acceptable forms of communication are customer Purchase Orders, quotes that are signed and dated by a customer purchasing authority, Letters of Intent or Letters of Commitment that are signed and dated by a customer purchasing authority, or similar instruments that communicate an intent to purchase.

ORDER ACKNOWLEDGEMENT

By signing this document you are agreeing to the above terms and conditions of this order from MHQ, Inc.

x

PRINT NAME

x

TITLE

x

SIGNATURE

x

DATE

Quote provided by Steven Anderson, Account Manager at MHQ - Public Safety Team
(508) 573-2677 or sanderson@mhq.com

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Marine and Environmental Affairs	Priority #:	2
Project Title and Description: Town Brook Trail Improvements	Total Project Cost:	\$3,000,000

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: _____

Funding is being sought from multiple sources to supplement this project including NOAA, MA Da +

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>FY26</i>		
<i>Labor and Materials</i>	\$3,000,000		<i>FY27</i>		
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>		
<i>Equipment</i>			<i>FY30</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$3,000,000				

Project Justification and Objective: _____

The project would reconstruct the walkways between the Grist Mill and Brewster Gardens and bring them up to ADA compliance. It would address the ongoing drainage problems that cause the path to be wet and freeze in the winter months. It would replace electrical wiring, conduit and lighting and fix the sections of broken wall along the brook. It would add new railings to the walks under both bridges and create safer approaches to both of them. The project would also replace the footbridge over Jenney Pond and add a new ADA compliant walkway to it thereby making Brewster Gardens to Holmes Park completely accessible.

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 Community Preservation Committee

FISCAL YEAR 2022-2023 APPLICATION



THANK YOU FOR YOUR INTEREST IN PLYMOUTH'S COMMUNITY PRESERVATION ACT (CPA)

Attached is the Fiscal Year 2022-2023 Application for CPA funding. Please check with the Clerk's office at Town Hall or the Town web site for Town Meeting dates. The deadline for submission of applications to the Community Preservation Committee (CPC) is the last Friday in January for Spring Town Meeting and last Friday in June for Fall Town Meeting.

These deadlines are designed to provide the CPC and Town Departments sufficient time to review and discuss applications and supporting documentation, and to vote on recommendations for Town Meeting prior to the deadlines required under the Town's warrant process. The CPC reserves the right to accept or refuse an application submitted after the above deadlines.

IN THIS PACKET YOU WILL FIND THE FOLLOWING:

1. The one-page application form with instructions.
2. A Memorandum of Understanding describing the funding process and the responsibilities of those who receive CPA funding. Please read this document carefully, sign, and return with your application to confirm that you understand the process, and what your responsibilities will be if your application is approved by Town Meeting.
3. Information on eligibility for CPA funding, the proposal review and award process, and the CPC's goals and criteria for each of the three application categories—Open Space, Community Housing, and Historic Preservation.
4. Flowcharts showing the steps involved for each application category are found starting on page 10.
5. The appraisal process. If application is for consideration of an interest in real estate, an appraisal is required. Please review appraisal process.

Applications are accepted throughout the year. The CPC carefully reviews all applications before voting on which projects to recommend to Town Meeting. Any application not recommended to or approved at Town Meeting may be re-filed by the applicant to be considered for a future funding cycle.

IT IS IMPORTANT TO NOTE THAT WHILE THE CPC IS AN INDEPENDENT FUNDING ENTITY, ALL FUNDING DECISIONS ARE ULTIMATELY DECIDED BY VOTE OF TOWN MEETING.

- Application materials are revised annually by the CPC and presented to the citizens of Plymouth for review at an open forum.
- The application provides all necessary information about the CPA and the application process.
- The CPC may or may not choose to interview applicants.
- Applicants may be notified if questions arise before the CPC can vote on whether or not to present a project to Town Meeting.
- Once an application has been submitted to the CPC for consideration, all communication from the applicant, including questions, status inquiries, and addenda must be made in writing to the CPC.
- The CPC attempts to clearly outline the scope of the project at Town Meeting in order to define the project and educate Town Meeting members about benefits to the Town.
- After the Town Meeting vote, the applicant will be required to adhere to the language of the Article, as well as the presentation and supporting documents presented to Town Meeting.
- CPC oversight thereafter is only to approve invoices to ensure that expenses for a project are disbursed in accordance with the vote of Town Meeting.
- Applicants for CPA funding should include a financial and operational budget, and a preventive maintenance plan to ensure that future burdens will not be placed upon the taxpayers for a CPA funded project.
- The CPC reserves the right to rescind funding for projects.




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- To ensure progress on CPA funded projects, the CPC requires a signed grant agreement prior to release of any CPA funds.
- The grant agreement may include provisions for a liaison to be added to the directors and/or management team for the project. The term of the liaison will end when the CPA appropriation has been expended.
- On certain projects the CPC may require the applicant to accept a designee appointed by the Town to the applicant's governing body. Third party oversight is beneficial for long term projects where changes in management can lead to shifting objectives and stalled progress.
- Applicants must demonstrate how the project will be fully funded prior to approval of the application, or demonstrate that other funding sources are immediately available to complete the project.
- The CPC strongly encourages applicants to seek other funding sources through grants from government agencies and private foundations, and as well as contributions from advocacy groups and public organizations.
- The CPA should be recognized in any property signs, media coverage, or interviews involving funded projects. Suggested acknowledgment may be as follows: *This project was made possible by the residents of the Town of Plymouth, through their contribution of CPA funds and vote of Town Meeting.*
- An application for a project that will require alterations to a building for adaptive reuse must include a report from a licensed architect regarding state and local building codes, ADA and safety issues, fire department inspection, and expected costs for any changes that must be made to the building.

In 2012 an addendum was attached to the Community Preservation Act legislation that allows towns to use CPA funds for renewal of existing town-owned parks and open spaces. The CPC is careful in its deliberations with this new potential use of funds to ensure that the Town does not depend upon CPA funding for projects that were previously in a Town budget. As the CPA changes and evolves at the state level, the Plymouth CPC works to respond to the changes. The CPC therefore is reaching out to residents to involve them in the decision making process. For example, the steering committees for village centers where the projects are located can provide valuable input into the design of a project.

In 2020 the Town of Plymouth celebrated the 400th Anniversary of the arrival of the Pilgrims. The CPC will continue to look favorably, as it has since its inception, on applications that enhance Plymouth's economic viability and historic significance. It is important to note that since 2002, CPA funds have generated more than \$10-million dollars for some of the most significant historic restoration projects in the Town.

Your questions are welcomed. The Plymouth Community Preservation Committee meets at 7 pm on the 2nd and 4th Thursday of each month at Plymouth Town Hall, 26 Court Street, Plymouth. If you prefer, you can reach the CPC at 508 789-5012.

COMMUNITY PRESERVATION COMMITTEE

Bill Keohan, *Chair* – Member at large
Joan Bartlett, *Vice Chair* – Member at large
Allen Hemberger, *Clerk* – Member at large
Russ Appleyard – Representative from Planning Board
Betty Cavacco – Representative from the Select Board
Frank Drollett – Representative from Conservation Commission
Russ Shirley – Representative from Housing Authority
Michael Tubin – Representative from Historic District Commission
Christine Pratt – Member at large





FISCAL YEAR 2022-2023 APPLICATION

Project Name: Town Brook Trail Improvements

CPA Funding requested: \$ 3,000,000 If the amount is unknown, will an appraisal be needed?

☐ Y ☒ N (If yes see page 14 of the appraisal process)

Total project cost: \$ 21,800,000

Category—check all that apply: ☒ Open Space/Recreation ☒ Historic ☐ Housing

Lot and Plot: 6 and 8A

Assessors Map #: 19C

Number of acres in parcel: 1.329 acres

Number of proposed housing units: N/A

Are there any existing deed restrictions on this property? ☐ No ☐ Don't know ☒ Yes/DESCRIBE

Describe restrictions below:

As park land there is Article 97 protection under state ensuring that the land remain as park land and not be developed.

Project Sponsor/Organization: Department of Marine and Environmental Affairs

Contact Name: David Gould

Address: 26 Court Street

Phone #: 508-747-1620 x10134 E-mail: dgould@plymouth-ma.gov

David Gould
Applicant Signature

10/31/23
Date submitted

APPLICATION REQUIREMENTS:

A complete application consists of this application page (the specific amount of CPA funding is required), along with the following:

- A detailed description of the project explaining how your proposal benefits the Town of Plymouth and how it meets CPA goals and selection criteria outlined at the end of this application packet.
- Are there any special permit, variance or other approvals required? Are there any legal ramifications or impediments to this project?
- A detailed project budget including any additional revenue sources. Will there be any annual costs to the town once the project is operational?
- A project timeline.
- Additional supporting information such as photographs, plot plans, and maps (if applicable).
- Applicant must provide all title information for the property.
- Applicant must initial each page in the space provided.



David Gould
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PLEASE SEND 11 COPIES (DOUBLE-SIDED) OF YOUR APPLICATION TO:

The Community Preservation Committee, Plymouth Town Hall
26 Court Street, Plymouth, MA 02360

Applications may also be dropped off at the Town Clerk's office.
or in the CPC mailbox at Plymouth Town Hall.

The deadline for submitting an application is last Friday in February for Spring Town Meeting,
and last Friday in June for Fall Town Meeting.

MEMORANDUM OF UNDERSTANDING

Project Name: Town Brook Trail Improvements

Applicant Name: David Gould

Address: 26 Court Street

Phone #: 508-747-1620 x10134

E-mail: dgould@plymouth-ma.gov

I understand that there are certain conditions and responsibilities involved in receiving CPA funding.
My signature below indicates that I have read the following conditions and agree to follow them if my
application is recommended to and approved by Town Meeting:

1. I understand that the funding process follows procedures described in the Community Preservation Act, M.G.L. Ch. 44B and that this places certain restrictions on how payments may be made.
2. In order to acknowledge the Community Preservation Act, and thus the contributions of the Plymouth taxpayers, I will:
 - Order, pay for and place a temporary "Community Preservation Works" sign or banner in front of the project. The Community Preservation Committee will provide the approved design. Approximate cost for the banner is generally \$250-\$300.
 - Acknowledge the contributions of the Community Preservation Act in all press releases, newsletters, and other publicity.
 - Include recognition of the Community Preservation Act if a permanent plaque or sign is placed on the project.
3. If requested I will supply the Community Preservation Committee with quarterly financial up-dates the project.
4. As needed, I will assist in the process of obtaining the required deed restriction to help protect the property in perpetuity.
5. The Applicant agrees to adhere to the intent and the spirit of the presentation made to Town Meeting.

David Gould

Print Name

Signature

10/31/23

Date



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ELIGIBILITY FOR FUNDING

The Town of Plymouth is pleased to be able to offer Community Preservation Act (CPA) funds to applicants who propose projects that will benefit the Town and include one or more of the following:

1. The acquisition, creation and preservation of open space/recreational use;
2. The acquisition and preservation of historic resources;
3. The creation, preservation and support of community housing.

The Community Preservation Committee (CPC) encourages applicants to propose projects that encompass more than one of the above categories. Use of Community Preservation Act funds may not include maintenance of real or personal property or use of land for a stadium, gymnasium or similar structures.

It is important to understand that a deed restriction on CPA funded projects is a mandatory requirement by State law. A grant agreement may be required prior to funding of certain projects.

All proposed projects must meet the requirements described in the Community Preservation Act M.G.L. 44 B, Chapter 267 of the Acts of 2000 and Chapter 165 of the Acts of 2002.

Copies are available at Clerks Office in Plymouth Town Hall, the main branch of the Plymouth Library Reference Desk, and on line at www.massachusettslaws.com.

PROPOSAL REVIEW PROCESS

The Community Preservation Act (CPA) proposal review process is described below:

1. Upon receipt of eleven copies of a proposal, copies are distributed to all Community Preservation Committee (CPC) members. A copy also will be sent to legal counsel for opinion on eligibility. The entire CPC reviews each application to determine if the application is qualified for funding under the Act.
2. If the application qualifies, it is forwarded to the appropriate subcommittee (Community Housing, Historic or Open Space) for further review. Recreation proposals are reviewed by the entire committee.
3. The subcommittee reviews each proposal according to stated goals and ranking criteria (see later sections of this application). The CPC subcommittee may request input or recommendations from other town committees or boards.
4. At the request of the applicant or of a CPC member, the subcommittee will schedule an interview and/or site visit with the applicant, which may be attended by any CPC member. Site visits are for information only. Due to open meeting laws, applications will not be discussed until the next scheduled CPC meeting.
5. The subcommittee presents a favorable or non-favorable recommendation to the entire CPC.
6. The CPC shall next evaluate all applications using the following General Selection Criteria:
 - Feasibility
 - Efficient use of funds (multiple bids are encouraged)
 - Serves multiple needs and populations
 - Consistent with recent planning documents or other identified needs
 - Multiple sources of funding
 - Assists an under-served population
 - Addresses multiple categories of the Act
 - Requires urgent attention
 - Has means of financial support for future maintenance
 - Enhances town assets
7. The CPC will then vote on which applications to recommend to Town Meeting. Please note that satisfying all criteria does not guarantee that the CPC will recommend a proposal to Town Meeting.
8. Town Meeting votes to approve or not approve a project for funding.




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9. Proposals approved by Town Meeting shall be funded by the CPC and implemented by the applicant.
10. At any stage in which an application is rejected, the committee will notify the applicant.

AWARD PROCESS

Before submitting your application please be aware of the following:

- Funds are paid out according to the guidelines of the Massachusetts Procurement Law (MGL 41). This means payment will be made for bills submitted for services rendered. In order to receive funds, the applicant must submit original invoices showing the organization's Tax ID number (no statements or copies) with a completed and signed W-9 Federal Tax Form for each invoice submitted.
- Also required is a memo from the applicant summarizing the services covered by each invoice. These documents are reviewed and approved by CPC and then submitted to the Town for payment.
- The CPC will provide successful applicants with a detailed memo describing the complete award process, which adheres to the guidelines of Massachusetts Procurement Law.
- Funds may be spent only on items listed on the budget submitted with the application. Any changes to budgets which involve use of CPA funds must be approved by the CPC. Funding from the CPC may not be used to replace, or free up for any other use, alternate funds or revenue sources.
- It is a requirement of the Community Preservation Act that projects have a deed restriction or confirmation that the Department of Revenue is satisfied with the status of the restriction.
- Applicants agree to note the CPA as a funding source for their project. This acknowledgment must appear on any materials involving the project (i.e. press releases, brochures, etc.). In order for Plymouth's citizens to see the result of their tax funding, a CPC designed banner or sign will be purchased by the applicant and displayed on the property for up to six months after receipt of the award and recognition of the Town of Plymouth's CPA contribution must be included in any signage on the property.
- Signature on the application indicates that the applicant has the right to enter into contracts for the organization seeking funding and has read and understands all regulations in this packet.

OPEN SPACE GOALS AND CRITERIA

Because of increased and ongoing development pressure in Plymouth, the preservation of Open Space is becoming increasingly important. With property values rising in recent years, the acquisition of Open Space has become increasingly difficult and urgent. The CPA is a proactive tool for the community to preserve our quality of life, the purity of our water, control property taxes and find a balance between economic development and preservation. Note that all Chapter 61 notifications to the Town are considered standing CPA applications.

Changes in the 2012 Massachusetts General Laws, Chapter 44 B, allow CPA funds to be used for certain restoration projects that were not originally purchased using CPA funds. The Community Preservation Committee reserves the right to carefully consider such projects to ensure that they are in compliance with the wishes of the Plymouth citizens who voted to adopt the original CPA in 2002, and who may not agree with the new provisions for such uses. Demonstration of 70% match is encouraged and expected for projects at sites that were not initially purchased using CPA funds.

The Community Preservation Committee solicits input from the Town's Open Space Committee, Conservation Commission, as well as other town boards, committees and the public, in identifying goals for open space protection, which include:

- Goal 1: Preserve Plymouth's rural character.
- Goal 2: Protect rare, unique and endangered plant and wildlife habitat.
- Goal 3: Protect aquifer and aquifer recharge areas to preserve quality and quantity of future water supply.




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- Goal 4: Ensure adequate size and connection of protected natural areas to maximize environmental and habitat benefits.
- Goal 5: Balance open space with development demand to reduce service demands and tax burden on town.
- Goal 6: Increase the town's ability to protect environmentally sensitive, historic and culturally significant properties.
- Goal 7: Improve public access and trail linkages to existing conservation, recreational and other land uses.
- Goal 8: Enhance the quality and variety of passive and active recreational opportunities for all age groups and for people with disabilities.
- Goal 9: Utilize open space protection strategies (purchasing development rights as an option to outright purchases of property) that maximize protection at the lowest public cost.

The following are examples of the types of Open Space (and Recreation) projects that the CPC might consider funding:

- Purchasing land or interest in land (development rights) to protect public drinking water supply, preserve natural resources, maintain scenic views, build greenbelts and trail systems, and enhance passive recreational opportunities.
- Purchasing community-enhancing green space outright or purchasing development rights through mechanisms such as permanent conservation restrictions or agricultural preservation restrictions.
- Matching or augmenting funds available under various land trust or conservation programs.
- Exercising rights of first refusal when lands are removed from agricultural, forest and recreational restrictions (e.g., Chapter 61, 61A, 61B).
- Purchasing land for public active recreation facilities such as community gardens, play grounds, trail networks and ball fields.
- Parcels of land that, when preserved, are deemed to have a significantly positive net fiscal impact on town finances.

HISTORIC PRESERVATION GOALS AND CRITERIA

The Town of Plymouth has a rich diversity of historic resources; the Community Preservation Act goals for preserving these historic resources include:

- Goal 1: Protect historic resources with preservation restrictions.
- Goal 2: Optimize the use and enjoyment of the Town's historic resources for residents and visitors
- Goal 3: Maximize the economic benefits of Plymouth's heritage and historic character for the town and region.
- Goal 4: Recognize, preserve and enhance the historic heritage and character of the Town of Plymouth for current and future generations.

In order for a historic resource to be eligible for CPA funding, it must first be determined to be not just "old" but of historic significance. The burden of proving historic significance is the responsibility of the applicant. In order to be of historic significance, a property must have retained its physical character and integrity and must:

1. be associated with historically significant persons
2. be architecturally significant or
3. have potential to yield important historic or archaeological information.

According to the CPA, there are 3 ways a resource can qualify as historically significant:

1. Listing on the Federal, State, or Local Register of Historic Places,





2. A written determination by the Massachusetts Historical Commission that a resource is eligible for listing on the State Register of Historic Places, or
3. A written determination by the Plymouth Historic District Commission that a resource is significant for its history, archeology, architecture, or cultural value.

If a property is not already listed on the State Register of Historic Places, and does not have written determination of eligibility by the Massachusetts Historical Commission, a request for written determination may be made through the Plymouth Historic District Commission. Application forms are available at the Plymouth Historic District Commission Office at Town Hall.

In deciding whether or not to recommend funding for specific historic resource projects, the CPC will consider:

- Level of historic significance
- Public benefit
- Public support
- Appropriateness & professionalism of proposed work (rehabilitation work is expected to comply with Standards for Rehabilitation stated in the United States Secretary of the Interior's Standards for the Treatment of Historic Properties)
- Level of additional financial or in-kind services, beyond CPA funds, committed to the project
- Administrative and financial management capabilities of the applicant in order to ensure that the project is carried out in a timely manner, and that the historic resource can be maintained with existing funds for continued public benefit.

PLEASE NOTE: The CPA specifically excludes funding for maintenance. The Act does allow for the remodeling, reconstruction and making of extraordinary repairs to historic resources for the purpose of making such historic resources functional for their intended use, including but not limited to improvements to comply with Americans with Disabilities Act and other federal, state or local building or access codes.

COMMUNITY HOUSING GOALS AND CRITERIA

CPA funds may be used to create and preserve community housing defined as housing for low and moderate income individuals and families, including low or moderate income senior housing. The Act requires the CPC to recommend, wherever possible, the adaptive reuse of existing buildings or construction of new buildings on previously developed sites.

Individual and family incomes shall be based on the area wide median income as determined by the United States Department of Housing and Urban Development. Low income is defined as an annual income of less than 80% of the area wide median income. Moderate income is defined as less than 100% of the area wide median income. Low or moderate senior income is defined as low or moderate income for persons over 60.

At present, 4.5% of Plymouth's housing units are classified as affordable "subsidized housing" by the State's Department of Housing and Community Development (for the purposes of M.G.L. Chapter 40B). As long as Plymouth does not meet the State's standard of 10% of its available housing stock deemed affordable, the town will continue to be subject to the punitive impacts of Chapter 40B developments that, by state law, fall outside local zoning control.

The complexity of housing issues requires thoughtful consideration to the many options available to the Town of Plymouth. We acknowledge that funding of the housing needs of our town is a complex issue. The CPC will try to address these pressing needs with practical and fundable solutions that provide affordable housing alternatives. The Community Preservation Committee looks forward to working with developers in finding creative alternatives to conventional Chapter 40B housing.

The CPC's goals for community housing are as follows:

Goal 1: The Act requires the Committee to recommend, wherever possible, the adaptive reuse of existing buildings or construction of new building on previously developed sites.





- Goal 2: Meet local housing needs for eligible low and moderate-income individuals and families. The preservation and creation of community housing is a proven method for promoting diversity, allowing individuals and families with more limited means to afford to live in town. The town can utilize CPA funds to offer current and future residents a wide range of housing options in renovated, converted and existing residential building, mixed-use developments, and senior residential developments, supportive housing alternative and live-work spaces.
- Goal 3: Ensure the new community housing meets or exceeds surrounding community standards with regard to density, architectural character, landscaping, pedestrian and other amenities, while conserving, as much as possible, the natural landscape.
- Goal 4: Work toward meeting the 10% State standard for community housing. In order to ensure future community housing development is consistent with the needs and character of the town, Plymouth must work toward the state's 10% community housing standard. Until that milestone is achieved, the town will be considered deficient in this area and will continue to be vulnerable to Chapter 40B applications.
- Goal 5: Leverage other public and private resources to the greatest extent possible: Plymouth does not receive federal or state funding for community housing on an entitlement basis. We need to be creative in leveraging public and private resources to make community housing development possible. Combining CPA Funds with the various private, state, and federal resources that are available on a non-entitlement "competitive" basis will demonstrate creativity. This will include Federal Home Loan Bank Funds, State HOME funds, Housing Stabilization funds, and Housing Innovations funds, and Federal Low Income Housing Tax Credits.

The Community Preservation Committee will work with the Plymouth Affordable Housing Committee, Plymouth Housing Incorporated, Plymouth Housing Authority, Plymouth Bay Housing Corporation, Department of Planning & Development, Plymouth Community Development, Plymouth Redevelopment Authority and all interested organizations, groups and citizens to meet the above stated goals.

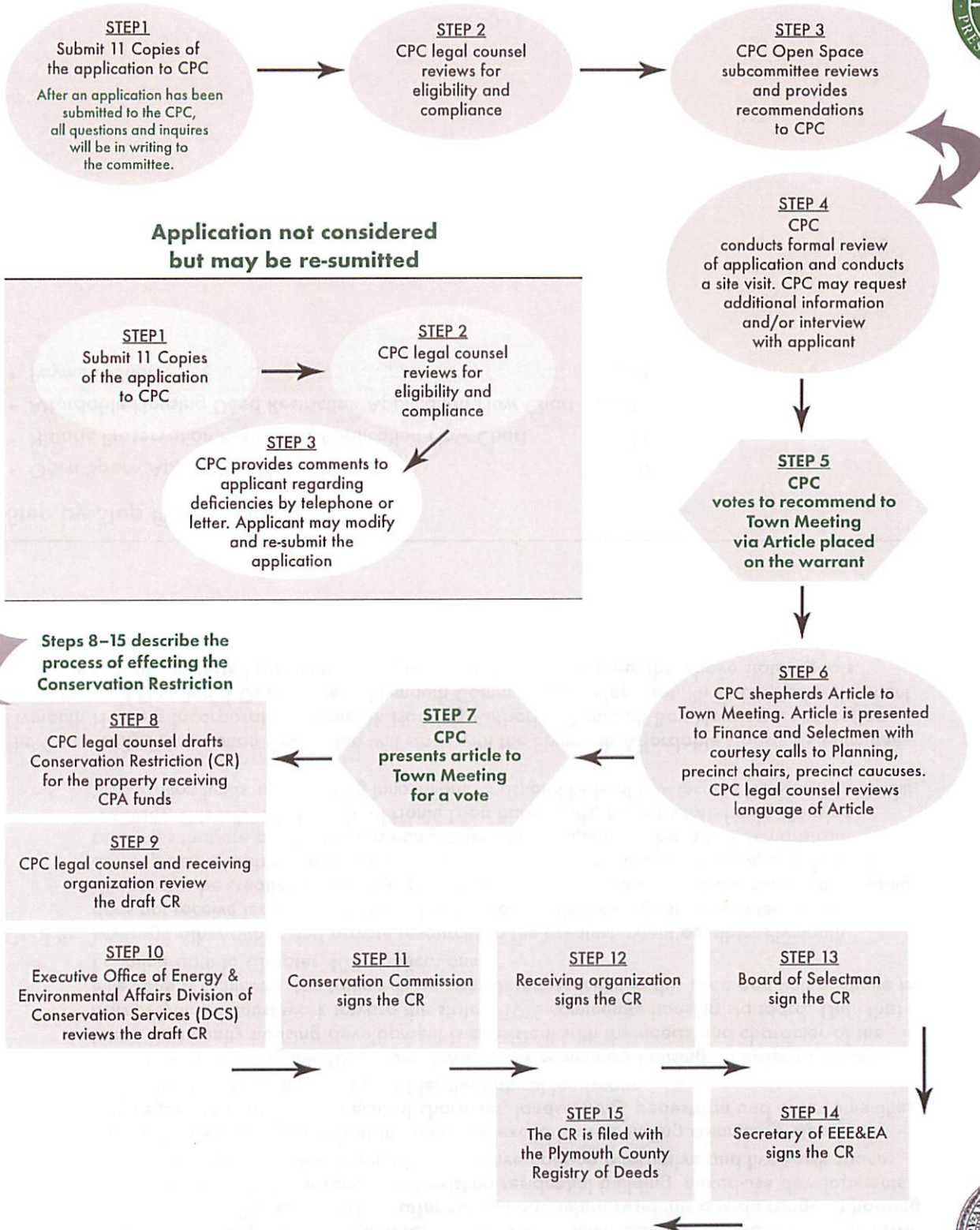
Step by Step Flow Charts:

- Open Space Application Flow Chart 10
- Historic Preservation Restriction Application Flow Chart 11
- Affordable Housing Deed Restriction Application Flow Chart 12
- Payment Chart 13




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OPEN SPACE APPLICATION FLOW CHART

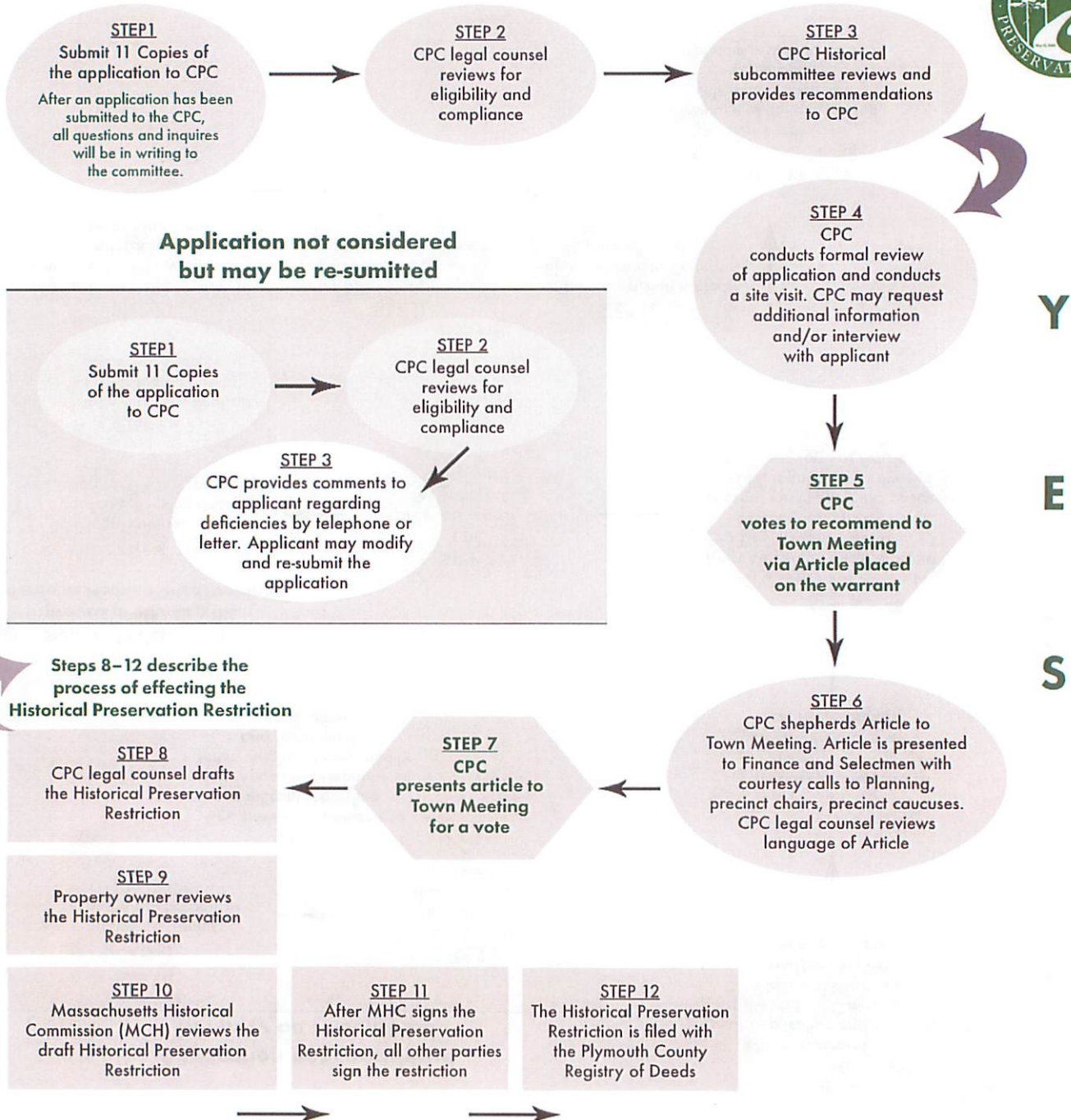


YES



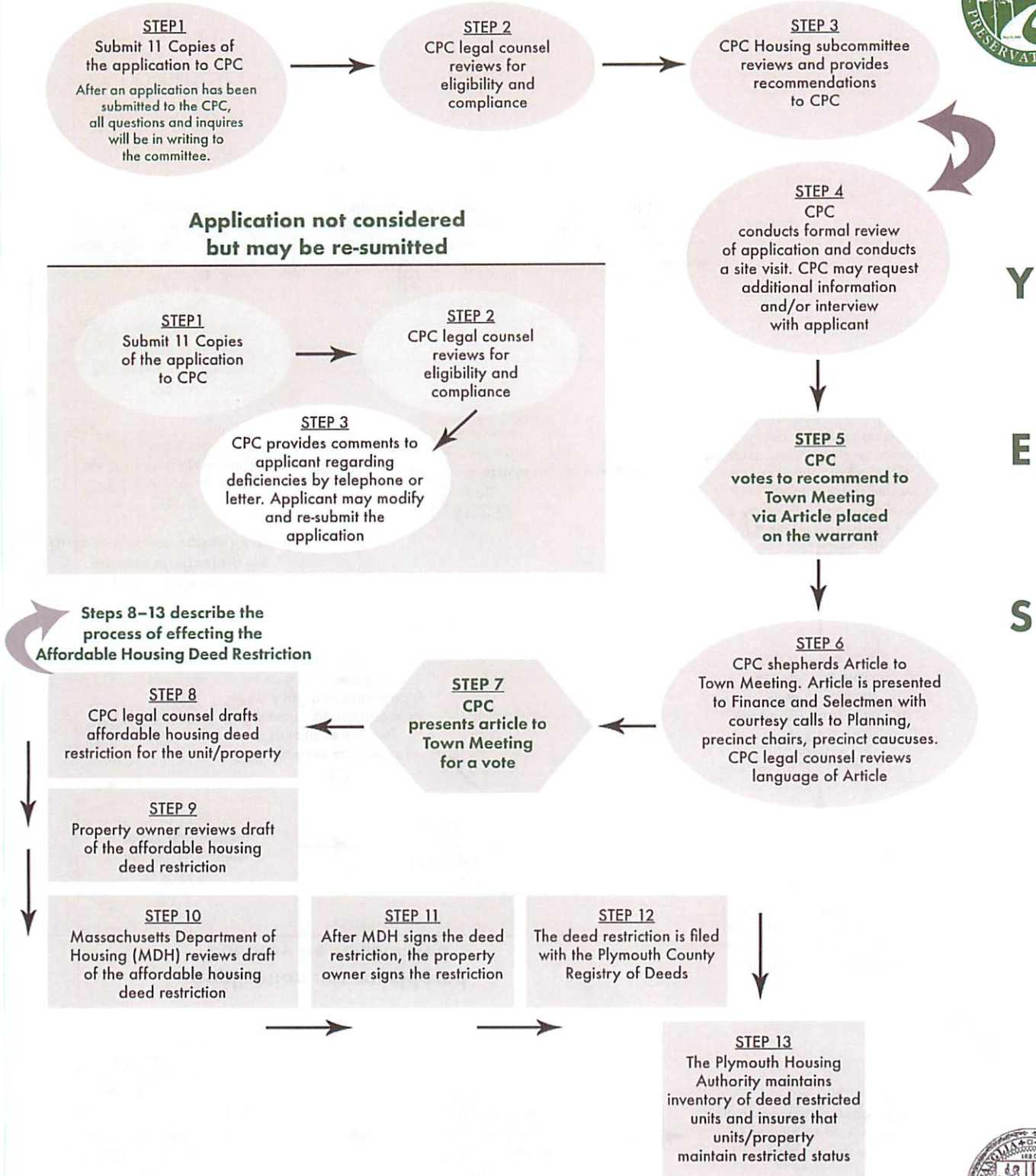
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HISTORICAL PRESERVATION RESTRICTION APPLICATION FLOW CHART



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AFFORDABLE HOUSING DEED RESTRICTION APPLICATION FLOW CHART



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PAYMENT CHART



STEP 1
Project Liaison submits invoice to CPC
at Town Hall on 26 Court Street
A signed original W-9 Form is re-
quired with the invoice for each new
vendor not on file with the Town
Submission must be at least
3 days before CPC meeting

STEP 2
CPC Chair prepares cover memo
for CPC to sign
5 of 9 signatures are required

STEP 3
CPC delivers approved invoice to
Finance Department mailbox

STEP 4
Finance Department date-stamps and
reviews the invoice and prepares a
draft warrant

STEP 5
Finance Department forwards the
invoice and draft warrant to
Accounts Payable

STEP 6
Accounts Payable writes the
final warrant
Final warrant is signed the Town
Manager and Finance Director
Payment requests are processed on
Thursdays and checks are mailed
within a week

STEP 7
Accounts Payable provides CPC with
monthly reports summarizing
payments from the previous month

NOTE:
Prior to distribution of CPC
funds, applicant meets with
CPC and Town Finance
Department to review
payment procedures and
designate a Project Liaison

Although every effort is
made to pay within 30 days,
there are a number of steps,
anyone of which can delay
the process. As a result
payments are not always
made within 30 days.



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APPRAISAL PROCESS

Applicants who are proposing a sale of interest in real estate must agree to follow the Community Preservation Committee's (CPC) appraisal process as outlined below:

1. Both the applicant and the CPC will suggest two appraisers each.
2. Each party (the applicant and the CPC) will call the other party's appraisers to get:
 - a) an estimate of cost
 - b) a description of the scope of work
 - c) the date when work will be complete.
3. After interviewing each other's choices, both parties will agree to hire one of the four appraisers.
4. The cost will be shared by both parties. If the application is approved and the sale goes through, the CPC will reimburse the seller for their share of the appraisal process.
5. The chosen appraiser will meet with the applicant, the CPC, and appropriate Town staff pertaining to housing, historical, or open space. The purpose of this meeting is in order that all will understand and be in agreement.
6. Any communication among the applicant, the CPC, and staff must be cc'd to all, so that there is confidence and agreement in the results of the work.

NOTE:

The CPC has found that the practice of appointing a mutually agreed upon appraiser is effective in defining a range of values to allow a discussion of possible sale.

Plymouth Town Hall
1820 Courthouse, 1st floor
26 Court Street
Plymouth, MA 02360

CPC office: 508 789-5012



[Signature]
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Project Context

The proposed Town Brook Trail Improvements is part of a larger project that involves the dredging of Jenney Pond, repairs to Jenney Pond Dam and the construction of a nature-like fishway at Town Brook. Engineering for this work is complete and all permits have been submitted and will be received by the fall of 2024. The project is shovel ready.

The dredging component of the project has been partially funded by the CPC in the amount of \$1,101,000. The other half of the project costs are being sought through a grant application to NOAA. The dam repair work in the amount of \$5,100,000 will be sought at Spring Town Meeting and through the MA Dam and Seawall Program. The nature-like fishway (which will also provide increased spillway capacity for the dam to comply with Dam Safety regulations) and all associated utility and landscaping improvements is being sought via a NOAA grant for fish passage restoration for diadromous fish. This component is estimated at \$10,000,000.

Project Request

The funds being requested (**\$3,000,00**) from CPC are intended to upgrade the existing paths, electrical wiring and conduit, lighting, landscaping, drainage, stone walls, and aesthetics of the Town Brook Trail from Main Street Extension Bridge to Brewster Gardens and replace the footbridge at Jenney Pond along with associated ADA sidewalks and lighting. The CPC previously provided funding in the amount of \$414,230 for the Jenney Pond Footbridge replacement. Portions of that funding were utilized to complete engineering and permitting. \$383,828 remains in the account. This project was one of the few projects negatively impacted by the Covid-19 pandemic. Due to delays in holding a Town Meeting we were unable to meet the deadline for the state grant and returned the \$400,000 in PARC grant funds that had been received for this project. We re-applied and received funding a second time and put the project out to bid and the costs had increased nearly 40% beyond the available budget. As a result, we once again returned the \$400,000 in PARC Grant funds. We are now requesting funds to complete this project.

The replacement of the Jenney Pond Footbridge and the other proposed trail improvements would ensure that all the paths associated with the larger project are ADA compliant and connect to similar proposed work from Main Street Extension to Jenney Park which will be undertaken as part of the Jenney Pond Dam and Nature-Like Fishway Project. Due to its location beyond the geographic extent and scope of the fishway and dam work these improvements are not eligible for the NOAA or state grant funds. However, it makes little sense to leave the portion of the park between Main Street Extension and Brewster Gardens in poor condition with unimproved paths, lighting, and drainage.

Currently, the existing asphalt paths are uneven and broken due to drainage problems and freeze and thaw issues during the winter months. After twenty years (the pavement was placed in 2004) that has resulted in the current poor condition of the walkways. The approaches at

both the Main Street Extension and Market Street bridges are uneven, broken and in the case of Market Street frequently inundated and without railings. Drainage improvements, new conduit and lighting, new paths and landscaping would serve to connect Jenney Park to Brewster Gardens. This would benefit residents of the community that use this greenway and park space but also enhance the experience for tourists along this busy path to the waterfront along the Town Brook National Historic District.

Plans, specifications, and permits are all in-hand. Overall, the nature like fishway and dam repair work is \$15,000,000. We are submitting this request because the geographic extent of the proposed work area that is the subject of this application cannot be covered by dam repair or fishway funding. This work is clearly the responsibility of the Town. To date all engineering, landscape design and permitting work has been covered by the Environmental Affairs Fund.

Open Space Goals

Goal 1: Preserve Plymouth's rural character. The Town Brook corridor is one of the most prominent remaining natural areas in downtown Plymouth. This greenway helps maintain the historic feel and character of the downtown, especially walking along the brook.

Goal 2: Protect rare, unique, and endangered plant and wildlife habitat. The improved drainage, native plantings and removal of accumulated stormwater sediment and placement of natural wood and boulder clusters in the brook improve water quality and habitat for local fish and wildlife that use Town Brook.

Goal 3: Protect aquifer and aquifer recharge areas to preserve quality and quantity of future water supply. The drainage improvements help to improve water quality and recharge the aquifer which in this location also helps to maintain the groundwater baseflow of the brook.

Goal 6: Increase the town's ability to protect environmentally sensitive, historic, and culturally significant properties. Proper maintenance and upgrades of public space and historic properties downtown help to ensure the longevity of these sites and reduce the impact of visitors.

Goal 7: Improve public access and trail linkages to existing conservation, recreational and other land uses. This project not only improves the existing trail but makes it ADA compliant and helps connect it with Jenney Park, Brewster Gardens and downtown businesses and restaurants and homes at Spring Lane, Summer Street and Market Street. Improvements to the Town Brook path help connect folks all the way from the harbor to Morton Park.

Historic Preservation Goals

The location of the proposed work falls within the local Historic District as well as the federal Town Brook Historic District. Like all previous projects the Town (DMEA) has been working with Public Archaeology Laboratory (PAL), NOAA (as the lead federal agency) in the Section 106 Historic and Archaeological process along with the Massachusetts Historical Commission and the local Historic District Commission. In addition, to the requirements for a local Certificate of

Appropriateness we will also secure a Section 106 Memorandum of Understanding with MHC and NOAA to ensure protect and mitigate our work and impacts to historic and archaeological resources.

Goal 2: Optimize the use and enjoyment of the Town's historic resources for residents and visitors. Improved pathways, lighting, drainage, landscaping, benches, and overall beautification of the public space makes the park a more enjoyable overall experience for both residents and visitors. Repairing the crumbling walls, creating drier paths (and reducing ice in the winter), improved lighting of the walkways and providing a more cohesive and aesthetically pleasing landscape design makes it a much more comfortable and enjoyable place to visit.

Goal 3: Maximize the economic benefits of Plymouth's heritage and historic character for the Town and region. The waterfront and downtown area are the lifeblood of Plymouth's heritage and historic character. The Town Brook Historic District is part of that. Ensuring that this area remains a beautiful place not only for people but for fish and wildlife ensures that the historic nature of the site continues. The trail provides a critical link between downtown Jenney Park and the waterfront and allows residents and visitors to visit shops, museums, restaurants, and other businesses along the way.

Goal 4: Recognize, preserve, and enhance the historic heritage and character of the Town of Plymouth for current and future generations. The Town and the CPC have long recognized the historic heritage and character of the Town of Plymouth, especially along Town Brook. As a result, DMEA and the CPC have partnered on numerous projects over decades to improve and enhance this district. This project builds upon those previous projects and leverages state and federal funds in the same manner. Completion of the project will ensure that the condition of the park land is improved now and for decades to come.

Project Budget

The estimated cost of the proposed landscaping improvements is \$1,673,100. The remaining funds, \$1,326,900 would go towards the Jenney Pond Footbridge. Projects costs from 2021 have been provided. However, the parking lot lights originally included in the scope have been completed. Budget spreadsheets developed by the consulting engineer for both project components have been provided to the Committee for your review to provide good backup to the request. Thank you.

Opinion of Estimated Construction Costs
 Jenney Grist Mill Bypass - Town Brook Trail Improvements
 Plymouth, Massachusetts
 Preliminary Design
 11982.00018
 Prepared on: 10/11/2023 by SLR

ITEM NO.	ITEM/DESCRIPTION	UNIT	QTY	UNIT COST	AMOUNT IN FIGURES
1.0	Site Preparation, Removals & Mobilization				
	Mobilization	LS	1	\$ 176,000	\$100,000
	Construction Staking	LS	1	\$ 20,000	\$20,000
	Chainlink Safety Fencing	LF	300	\$ 10	\$3,000
	Temporary Signage and Vehicular and Pedestrian Traffic Control	LS	1	\$ 35,000	\$35,000
	Removal of Concrete	SF	45	\$ 20	\$900
	Removal of Bituminous Paving	SF	800	\$ 5	\$4,000
	Removal of Curb (along sidewalk)	LF	210	\$ 35	\$7,350
	Removal of Two Existing Railings (Under Bridges)	LF	110	\$ 20	\$2,200
	Removal of Existing Light Poles and Foundations	EA	3	\$ 700	\$2,100
	Removal of Existing Trees	EA	10	\$ 1,000	\$10,000
	Tree Protection	EA	6	\$ 500	\$3,000
	Topsoil-strip and Stockpile (6" Depth)	CY	50	\$ 8	\$400
	Clearing and Grubbing	LS	1	\$ 15,000	\$15,000
				Total Site Prep	\$203,000
2.0	Sediment and Erosion Controls & Water Control				
	Construction Entrance Pad	EA	1	\$ 2,000	\$2,000
	Temporary Road & E&S Measures	LS	1	\$ 20,000	\$20,000
	Silt Fence & Haybales	LF	250	\$ 8	\$2,000
	Turbidity Curtains	LS	1	\$ 10,000	\$10,000
	Water Control (Cofferdamming, Bypass, Pumping, Etc.)	LS	1	\$ 120,000	\$120,000
				Total S&E	\$154,000
3.0	Earthwork and Grading				
	Formation of Subgrade for Paving	SY	100	\$ 65	\$6,500
	Formation of Subgrade for Rain Gardens	EA	3	\$ 3,000	\$9,000
	Reconstruct Existing Seeps	EA	4	\$ 4,000	\$16,000
	Subgrade Material to be Excavated/Reused	CY	20	\$ 40	\$800
	Subgrade Material to be Imported	CY	20	\$ 70	\$1,400
	Subgrade Material to be Exported	CY	180	\$ 85	\$15,300
				Total Earthwork and Grading	\$49,000
4.0	Site Features				
	Colored Concrete Paving (4" depth)	SY	100	\$ 85	\$8,500
	Gravel Subbase for concrete (6" depth)	CY	20	\$ 40	\$800
	Steel edging (landscape beds)	LF	200	\$ 12	\$2,400
	Porcelain Pavers	SF	530	\$ 35	\$18,550
	Stone Slab Crossings	EA	3	\$ 1,200	\$3,600
	Boulders	TON	100	\$ 130	\$13,000
	Sitting Boulders (4'x3'x3')	TON	120	\$ 130	\$15,600
	Decorative Railing (Under Bridges)	LS	2	\$ 30,000	\$60,000
	ADA Ramp Handrails	LF	90	\$ 75	\$6,750
				Total Site Features	\$130,000
5.0	Park-Site Furniture				
	Salvaged Granite Block Benches (setting only)	EA	2	\$ 500	\$1,000
	Upright Adirondack Chair (Product & Install)	EA	8	\$ 300	\$2,400
	Pole Mounted Site Light (Product & Install)	EA	5	\$ 12,000	\$60,000
				Total Park Site Furniture	\$64,000
6.0	Topsoil				
	Furnish and Place Topsoil (Planting Areas) 12" Depth	CY	100	\$ 55	\$5,500
	Furnish and Place Topsoil (Lawn) 6" Depth	CY	130	\$ 55	\$7,150
				Total Topsoil	\$13,000

Opinion of Estimated Construction Costs
Jenney Grist Mill Bypass - Town Brook Trail Improvements
Plymouth, Massachusetts
Preliminary Design
11982.00018
Prepared on: 10/11/2023 by SLR

ITEM NO.	ITEM/DESCRIPTION	UNIT	QTY	UNIT COST	AMOUNT IN FIGURES
7.0	Plantings				
	Shrubs	EA	30	\$ 80	\$2,400
	Perennials	EA	400	\$ 35	\$14,000
	Seed Mix	LB	1	\$ 100	\$100
	Pine Bark Mulch (4" Depth)	SY	1100	\$ 10	\$11,000
	Lawn (seed)	SF	10000	\$ 1	\$10,000
	Temporary Irrigation	SF	10000	\$ 1	\$5,000
				Total Plantings	\$43,000
8.0	Structural				
	Main St Ext Underpass Repairs	LS	1	\$ 150,000	\$150,000
	Market St Underpass Repairs	LS	1	\$ 55,000	\$55,000
	Stone Masonry Headwall	LS	1	\$ 10,000	\$10,000
	Boardwalks	LS	1	\$ 160,000	\$160,000
	Temporary Shoring, Supports and Specialty Equipment	LS	1	\$ 37,500	\$37,500
				Total Structural	\$413,000
9.0	Utilities				
	Drainage Improvements	LS	1	\$ 30,000	\$30,000
	Town Brook Trail Electrical Work	LS	1	\$ 26,000	\$26,000
				Total Utilities	\$56,000
10.0	Construction Incidentals (±5%)				\$ 50,000.0
11.0	Project Closeout (±2%)				\$ 20,000.0

CONTRACT ITEMS SUBTOTAL = \$1,195,000

12.0 CONTINGENCY (±25%) =

\$298,800

TOTAL

\$1,493,800

13.0 CONSTRUCTION PHASE ENGINEERING AND CONSULTING (±15%)

\$179,300

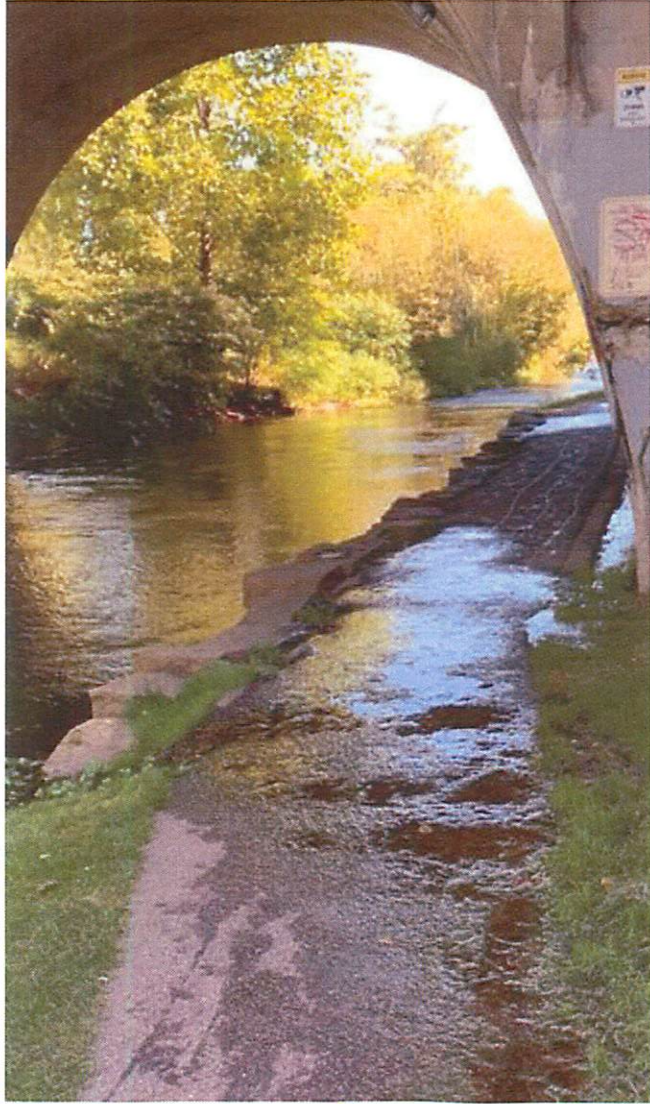
TOTAL CONSTRUCTION PHASE

\$1,673,100

Jenney Pond Park Pedestrian Bridge Replacement Project
Low Bid Review
Plymouth, Massachusetts
SLR No. 1982-08
December 09, 2021

ITEM NO.	ITEM DESCRIPTION	Unit	Quantity	D'Allessandro Corp.		Construction Dynamics		E.T.&L. Corp.		SLR Estimate	
				Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Total Cost	Difference
Bid Items											
	1 Site Preparation	LS	1	\$60,000.00	\$60,000.00	\$90,000.00	\$90,000.00	\$90,000.00	\$90,000.00		\$80,000.00
	2 Traffic Management	LS	1	\$9,000.00	\$9,000.00	\$5,000.00	\$5,000.00	\$16,000.00	\$16,000.00		\$10,000.00
	3 Demolitions and Removals	LS	1	\$135,000.00	\$135,000.00	\$125,000.00	\$125,000.00	\$150,000.00	\$150,000.00		\$136,666.67
	4 Site Improvements	LS	1	\$95,000.00	\$95,000.00	\$160,000.00	\$160,000.00	\$95,000.00	\$95,000.00	\$30,000.00	\$86,666.67
	5 Site Restoration	LS	1	\$32,000.00	\$32,000.00	\$60,000.00	\$60,000.00	\$35,000.00	\$35,000.00		\$42,333.33
	120. Earth Excavation	LS	1	\$65,000.00	\$65,000.00	\$38,000.00	\$38,000.00	\$85,000.00	\$85,000.00	\$15,000.00	\$47,666.67
	151.01 Gravel Borrow - Type C	CY	600	\$0.01	\$6.00	\$40.00	\$24,000.00	\$10.00	\$6,000.00		\$10,002.00
	151.2 Gravel Borrow for Backfilling Structures and Pipes	CY	300	\$0.01	\$3.00	\$60.00	\$18,000.00	\$65.00	\$19,500.00	\$15,600.00	-\$3,099.00
	156.1 Crushed Stone for Bridge Foundations	TON	80	\$0.01	\$0.80	\$60.00	\$4,800.00	\$55.00	\$4,400.00	\$4,675.00	-\$1,608.07
	748. Mobilization	LS	1	\$63,000.00	\$63,000.00	\$20,000.00	\$20,000.00	\$47,000.00	\$47,000.00	\$30,000.00	\$13,333.33
	750. Construction Staking & Survey	LS	1	\$9,000.00	\$9,000.00	\$6,000.00	\$6,000.00	\$15,000.00	\$15,000.00	\$3,000.00	\$7,000.00
	801.60 Trenching & Backfill	LF	1,000	\$21.00	\$21,000.00	\$20.00	\$20,000.00	\$23.00	\$23,000.00		
	804.2 2-inch Electrical Conduit Type NM – Plastic – (UL)	LF	1,000	\$21.00	\$21,000.00	\$11.00	\$11,000.00	\$14.00	\$14,000.00		
	811.3 Pull Box	EA	10	\$1,500.00	\$15,000.00	\$700.00	\$7,000.00	\$1,500.00	\$15,000.00		
	812.10 Light Pole Foundations	EA	11	\$800.00	\$8,800.00	\$2,000.00	\$22,000.00	\$1,800.00	\$19,800.00		
	813.30 Wire Type 7 No. 10 General Purpose	LF	5,500	\$2.00	\$11,000.00	\$1.20	\$6,600.00	\$1.60	\$8,800.00		
	813.31 Wire Type 7 No. 8 Ground Wire	LF	1,500	\$2.50	\$3,750.00	\$1.70	\$2,550.00	\$1.60	\$2,400.00		
	813.32 Wire Type 7 No. 10 Ground Wire	LF	3,000	\$2.00	\$6,000.00	\$1.40	\$4,200.00	\$1.10	\$3,300.00		
	813.33 Wire Type 7 No. 6 Ground Wire	LF	3,500	\$4.00	\$14,000.00	\$2.00	\$7,000.00	\$1.60	\$5,600.00		
	823.53 Time Clock	EA	1	\$1,200.00	\$1,200.00	\$1,000.00	\$1,000.00	\$500.00	\$500.00		
	823.60 Highway Lighting Load Center	LS	1	\$24,000.00	\$24,000.00	\$18,000.00	\$18,000.00	\$20,000.00	\$20,000.00		
	823.7 Area Lighting Luminaire 90.43 Watt	EA	8	\$12,000.00	\$96,000.00	\$7,800.00	\$62,400.00	\$7,400.00	\$59,200.00		
	823.72 Light Pole & Luminaire Removed & Disposed	EA	15	\$430.00	\$6,450.00	\$900.00	\$13,500.00	\$950.00	\$14,250.00		
	823.8 Area Lighting Luminaire 88.96 Watt	EA	21	\$12,000.00	\$252,000.00	\$7,800.00	\$163,800.00	\$7,300.00	\$153,300.00		
	823.9 Area Lighting Luminaire 80 Watt	EA	3	\$12,000.00	\$36,000.00	\$7,700.00	\$23,100.00	\$7,200.00	\$21,600.00	\$50,000.00	\$1,189,100.00
	901. 4000 PSI, 1.5-inch, 565 Cement Concrete	CY	45	\$0.01	\$0.45	\$140.00	\$6,300.00	\$1,400.00	\$63,000.00	\$77,000.00	-\$53,899.85
	902. 3500 PSI, 1.5-inch, 520 Cement Concrete	CY	80	\$0.01	\$0.80	\$140.00	\$11,200.00	\$600.00	\$48,000.00	\$74,250.00	-\$54,516.40
	904.3 5000 PSI, 3/4-inch, 685 HP Cement Concrete	CY	70	\$0.01	\$0.70	\$300.00	\$21,000.00	\$650.00	\$45,500.00	\$78,750.00	-\$56,583.10
	910.1 Steel Reinforcement for Structures - Epoxy Coated	LB	25,000	\$0.01	\$250.00	\$1.60	\$40,000.00	\$0.50	\$12,500.00	\$60,500.00	-\$42,916.67
	970. Bituminous Damp-Proofing	SF	1,300	\$0.01	\$13.00	\$2.00	\$2,600.00	\$4.00	\$5,200.00	\$11,600.00	-\$8,995.67
	991.1 Control Of Water	LS	1	\$43,000.00	\$43,000.00	\$56,000.00	\$56,000.00	\$100,000.00	\$100,000.00	\$15,000.00	\$51,333.33
	995. Pedestrian Bridge	LS	1	\$332,000.00	\$332,000.00	\$355,000.00	\$355,000.00	\$350,000.00	\$350,000.00	\$275,000.00	\$70,666.67
	997.2 Stone Masonry Veneer	SY	200	\$0.01	\$2.00	\$550.00	\$110,000.00	\$250.00	\$50,000.00	\$126,000.00	-\$72,666.00
	997.3 Stone Masonry Granite Wall Cap	LF	180	\$150.00	\$27,000.00	\$120.00	\$21,600.00	\$150.00	\$27,000.00	\$18,000.00	\$7,200.00
TOTAL BID				Calculated Bid	\$1,386,476.75		\$1,536,650.00		\$1,624,850.00	\$1,061,250.00	\$1,457,683.92
Front End Costs					\$319,000.00		\$302,000.00		\$418,000.00	\$48,000.00	\$298,333.33
Site & Restoration Work					\$127,000.00		\$220,000.00		\$130,000.00	\$30,000.00	\$129,000.00
Earthwork & Bridge Work					\$92,276.75		\$297,500.00		\$366,100.00	\$481,375.00	-\$229,416.08
Pedestrian Bridge					\$332,000.00		\$355,000.00		\$350,000.00	\$275,000.00	\$70,666.67
Electrical Work					\$516,200.00		\$362,150.00		\$360,750.00	\$50,000.00	\$363,033.33





**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Recreation	Priority #:	1
Project Title and Description: Master Plan for Forges Field	Total Project Cost:	\$250,000

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: _____
Will apply for CPC funding and will also contribute \$100,000 of Recreation Revolving Funds

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>	250,000		FY26		
<i>Labor and Materials</i>			FY27		
<i>Administration</i>			FY28		
<i>Land Acquisition</i>			FY29		
<i>Equipment</i>			FY30		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	250,000				

Project Justification and Objective: The mater plan for Forges will help us develop a plan for the park.

This will help us maximize the space in the park and to utilize community input on what they would like to see in Forges Field.

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.



RAY DUNETZ
LANDSCAPE
ARCHITECTURE

179 Green Street
Boston MA 02130
T 617.524.6265
F 617.522.5029
rd@raydunetz.com
RAYDUNETZ.COM

January 11, 2024

Anne Slusser-Huff
Recreation Director
Town of Plymouth
26 Court St
Plymouth, MA 02360

Dear Anne:

Ray Dunetz Landscape Architecture, Inc. [**RDLA**] is extremely pleased to provide you with this proposal for Landscape Architectural Design Services for the Forges Field Master Plan project in Plymouth. We are excited to be working for the Town of Plymouth and look forward to a successful outcome for its citizens.

THE TEAM

RDLA will serve as the direct contact for the Town. Our team of consultants will be available to meet with the Town as required. The following subconsultants will be assisting us in this project:

Civil Engineers - Pare Corporation
Electrical, Mechanical and Plumbing Engineers – GGD Consulting Engineers
Environmental Consultants – LEC Consultants
Arborists – Davey Tree
Sports Consultants – Vision Design Group
Cost Consultants - PM&C

ASSUMPTIONS

We have based our proposal on the following assumptions:

- The Town of Plymouth [The Town] will provide Existing Conditions and Property Line survey in AutoCAD GIS or PDF format;
- The Town will provide As Built Drawings for previous projects related to the park;
- The Town will establish a Working Group of Stakeholders for this project and provide RDLA with a communications distribution list.
- RDLA will facilitate a biweekly check in with the Town during the Master Plan process to review project progress.

SCOPE OF WORK

RDLA will provide the following Scope of Work:

Task One - Kickoff Meeting

RDLA will meet with the Town's Working Group for a site walk and meeting to discuss project goals, schedule, milestones, community process and photograph existing conditions. RDLA will collect all relevant information from the Town regarding Forges Field including previously commissioned Existing Conditions Plans, Design Documents and As Built drawings from previous improvements. RDLA will provide meeting notes from the Kickoff meeting and distribute to the Working Group and RDLA consultants. RDLA will prepare a project schedule to the Town.

Meetings: Kickoff Meeting with the Working Group.
Deliverables: Meeting notes and project schedule.

Task Two - Analysis

RDLA will prepare a GIS base map of the park and distribute to our subconsultants and the Town. RDLA and our subconsultants will review the as built documentation, visit the site, photograph, measure and assess the existing conditions of the landscape, accessibility, vehicular circulation and parking, structures, sports fields and courts, playground, furnishings, lighting, trees, vegetation, invasives, fountain, memorials, wayfinding signage and utilities. RDLA will prepare a short history narrative of the park. RDLA will compile all subconsultants assessments and provide a draft report to the Town for Review. RDLA will update the analysis based on any comments received from the Town.

Meetings: Bi-weekly meetings
Deliverables: Draft Analysis for Town review.

Task Three – Community Engagement

RDLA will meet with the Town prior to each Community Engagement event to review the presentations and collect input. RDLA will adjust presentations as required based on the Town's feedback. RDLA will facilitate a second community meeting at another event to be determined to collect input. RDLA will prepare and facilitate up to two online surveys to collect citizen input. RDLA will provide surveys in hard copy format as well. RDLA will review the online surveys with the Town prior to posting online. The Town will send out hard copy surveys and will incorporate responses in Google Forms. RDLA will share results of the survey with the Town and include in our Final Report. RDLA will meet with the Town prior to and following each Community meeting. RDLA will meet with the Parks staff to discuss space and maintenance needs.

Meetings: Two event-based booths or Community Meetings to collect input on community needs and concept development. Two meetings with the Town prior to the Community Meetings to discuss objectives and presentation materials, etc.
Deliverables: Presentation materials for two community engagement events, online survey and results presentation.

Task Four – Concept Development

RDLA and several of our subconsultants will meet in Plymouth for a Design Workshop. The Town will provide us with a meeting space close to the park. RDLA will facilitate a design workshop from 9am to around 3pm. The Town Working Group will attend a presentation of the concepts developed during the workshop and will provide input to the designers. As an option, the Town Working Group can work with our design team to help prepare the Concepts. RDLA will scan the concepts we prepared during the Workshop and prepare meeting notes from the Working Group's input. RDLA will graphically refine two concepts for presentation to the Community. RDLA will meet with the Town biweekly to check in on progress.

Meetings: Biweekly check in meetings.
Workshop with Working Group.
Deliverables: Concepts, Workshop output and meeting notes.

Task Five – Draft Master Plan

Based on the preferred Master Plan Concept selected by the Town and Community, RDLA and our consultants will prepare draft recommendations for park improvements. RDLA will compile all the information generated in previous phases and the recommendations into a Draft Master Plan document with associated graphics. RDLA will provide the Draft to the Town for review.

Meetings: Biweekly check-in meetings

Deliverables: Draft Master Plan

Task Six – Cost Estimate

RDLA will prepare an overall Master Plan level estimate for the park. RDLA will work with the Town to identify all phases based on the estimate. RDLA will provide the Estimate to the Town for review and comment. RDLA will update the Estimate based on comments received from the Town.

Meetings: Biweekly check-in meetings

Deliverables: Master Plan level Cost Estimate

Task Seven – Final Master Plan

RDLA will finalize Master Plan based on Town's comments.

Meetings: RDLA will meet with the Town as required to Finalize the Master Plan.

Deliverables: Final Master Plan in PDF format and two hard copies.

SUPPLEMENTAL SERVICES

A supplementary service fee is provided under this contract for services or goods that are deemed to be outside the normal scope and services of the basic designer contract. The Town of Plymouth Project Manager must approve all supplementary service items in writing, through a contract amendment.

Typical supplementary service items include, but are not limited to:

- Topography and property line surveys.
- Soil testing, borings, or underground exploration.
- Archeological research.
- Architectural presentation models.
- Post-construction photography.
- Printing fees for as-built drawings.
- Attendance at more meetings than required per the specifics of this contract.
- High-level detail items that could not have been anticipated at the time of contract. Purchase of project management tools and equipment to assist project managers and/or designers make the design and implementation process more efficient.

Compensation

RDLA will invoice the percentage of completed work at the end of each month.

Task One	Kickoff Meeting	\$6,000.00
Task Two	Analysis	\$76,000.00
Task Three	Community Engagement	\$24,000.00
Task Four	Concept Development	\$54,000.00
Task Five	Master Plan Draft	\$50,000.00
Task Six	Cost Estimate	\$12,500.00
Task Seven	Final Master Plan	<u>\$24,500.00</u>
	Subtotal	\$247,000.00
	Expenses	<u>\$3,000.00</u>
	Grand Total	\$250,000.00

We appreciate the opportunity to present our proposal of services and are looking forward to working with you on this project. If you require additional information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ray Dunetz', with a stylized, flowing script.

Ray Dunetz, ASLA, PLA Principal
Ray Dunetz Landscape Architecture, Inc.

Appendix A

Appended to and part of the Agreement for Professional Services between Ray Dunetz Landscape Architecture, Inc. (RDLA) and the Town of Plymouth, dated January 15, 2024.

Accounts

Invoices for the above-outlined services and associated fees will be submitted at the end of each month and will be based on the actual hours spent to the date of the invoice. RDLA invoices will be paid within 30 days of receipt.

Reimbursable Expenses

Reimbursable expenses are included in the fee compensation outlined above except for the following:

- A. Fees for special consultants beyond those outlined in this proposal, found to be necessary for the proper completion of the Landscape Architect's work, retained with the approval of the Client.
- B. Cost of copies of drawings, documents, and reports beyond those specified above; xerography and photographic reproduction of drawings and other documents furnished or prepared in connection with the work of this project.
- C. Cost of postage and shipping expenses other than first class mail.
- D. Costs related to models, special renderings, promotional photography, special process printing, special equipment, special printed reports or publications, maps and documents approved in advance by the Client.

Additional Services

Should any work in the interest of the project beyond the outlined scope of services be required, written approval would be requested with an appropriate fee adjustment. Approved Additional Services shall be invoiced hourly at the rates stated below:

2024 Hourly Rates

\$215 per hour for Principal
\$165 per hour for Senior Landscape Architect
\$135 per hour for Landscape Architect
\$95 per hour for Landscape Designer

2025 Hourly Rates

\$225 per hour for Principal
\$175 per hour for Senior Landscape Architect
\$145 per hour for Landscape Architect
\$105 per hour for Landscape Designer

Force Majeure

Ray Dunetz Landscape Architecture, Inc. shall not be responsible for any delay in the performance or progress of the work, or liable for any costs or damages sustained by the Client resulting from such delay to the extent they are caused by any act or neglect of the Client or Client's designated representatives, or by any third person acting as the designated agent, servant or employee of the Client, or by changes ordered in the work, or as a result of compliance with any order or request of any federal, state or municipal government authority or any person purporting to act therefore, or by acts of declared or undeclared war or by public disorder, riot or civil commotion, or by any other cause beyond the control and without the fault or negligence of Ray Dunetz Landscape Architecture, Inc.

In the event of any such delay, Ray Dunetz Landscape Architecture, Inc. shall proceed with due diligence to alleviate such delay and continue the performance of all obligations under this Agreement. The time during which Ray Dunetz Landscape Architecture, Inc. is delayed in the performance of the work and for which Ray Dunetz Landscape Architecture, Inc. is not responsible as provided above, shall be added to

the time for completion of its services to the extent such time is specified in this Proposal. All additional costs or damages resulting from any delay in the performance or progress of the work to the extent that they are caused by any act or neglect of Client, its designated agents or representatives shall be borne by the Client.

Ownership of Documents

Original drawings and other documents, as instruments of services, are the property of Ray Dunetz Landscape Architecture, Inc. None of them are to be used on other projects except by written agreement between parties. Documents supplied will be as herein before specified.

Credits/Acknowledgments

Ray Dunetz Landscape Architecture, Inc. shall be given proper credit and acknowledgment for all services including, but not limited to planning, design and implementation. Proper credit shall be defined as being named by the Client or their agent in such circumstances as project identification boards, published articles or promotional publications.

Arbitration

Any controversy or claim arising out of or relating to the formation, interpretation, application, enforceability or breach of this Agreement, including disputes as to which persons or entities which may be liable hereunder, shall be settled by arbitration at Boston, Massachusetts, in accordance with the rules of the American Arbitration Association, and judgment upon any award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof. The prevailing party in any such arbitration shall be permitted to recover arbitration costs and reasonable attorney's fees, as determined by the arbitrator(s), in addition to any other relief available.

Law

This Agreement shall be interpreted and enforced according to the laws of the Commonwealth of Massachusetts.

Successors and Assigns

It is mutually understood and agreed that this Agreement shall be binding upon the Client and its successors and assigns and upon Ray Dunetz Landscape Architecture, Inc. its successors and assigns. Neither party shall assign nor transfer its interest in this Agreement or any part thereof without the written consent of the other party.

Termination

It is understood that these services may be terminated upon ten (10) days written notice for good reason by either party. In this event, Ray Dunetz Landscape Architecture, Inc. shall be compensated for all work performed prior to the date of termination at the rates set forth herein.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: 541 Center for Active Living	Priority #:	1
Project Title and Description: Facility Intercom System	Total Project Cost:	\$35,000

Department/Division Head: Michelle Bratti

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>FY26</i>		
<i>Labor and Materials</i>			<i>FY27</i>		
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>		
<i>Equipment</i>			<i>FY30</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	35,000				

Project Justification and Objective: The Intercom system at CAL is 12+ years old, has defaulted several times, and replacement parts are now obsolete.

This system is critical in the senior center, as it is used for both emergency and non-emergency announcements and allows notification throughout the building at one time.

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

See attached, system is obsolete (Signet company)

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

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

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY25 SPRING ANNUAL TOWN MEETING**

Department: Airport	Priority #:	1
Project Title and Description: Runway 6/24 and Taxiway E Extension (351'x75')	Total Project Cost:	7,600,000 TOTAL \$380,000 Airport

Department/Division Head: Matthew Cardillo

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: _____
Federal Funding 90% \$6,840,000, MassDOT Aeronautics 5% \$380,000, Local Airport free cash 5% \$380,000

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>	\$900,000		<i>FY26</i>		
<i>Labor and Materials</i>	\$6,700,000		<i>FY27</i>		
<i>Administration</i>			<i>FY28</i>		
<i>Land Acquisition</i>			<i>FY29</i>		
<i>Equipment</i>			<i>FY30</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$7,600,000				

Project Justification and Objective: The goal of an extension of this length is to increase safety of the aircraft currently using Plymouth.

Many aircraft currently utilizing the airport (Plymouth Airport businesses) are operating with moderate to significant limitations due to the current runway length.

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.

MEMO



To: **Plymouth Selectboard**

From: **Matthew Cardillo, Airport Manager**

RE: **FY25 Runway 6/24 and Taxiway E Extension**

Date: **November 3, 2023**

Dear Selectboard Members,

The Plymouth Airport Commission is requesting the support of the Selectboard with their Runway 6/24 and Taxiway E Extension Project.

Project

This project would add 351 feet for runway and 700ft of taxiway to the West end of Runway 6/24 and Taxiway E. This extension would be extending into the Town of Carver and not the Town of Plymouth. The goal of an extension of this length is to increase the safety of the aircraft currently using Plymouth. Many aircraft currently utilizing the airport (Plymouth Airport businesses) are operating with moderate to significant limitations due to the current runway length. These limitations are exacerbated when the runway is contaminated with rain or snow. This runway extension does not allow for larger aircraft to use the airport. Larger, heavier aircraft require wider runways, taxiways, and thicker pavement. This increase in length gives the current operators better safety margins than they have currently. This extra length would also allow aircraft to take more fuel, therefore boosting the sale of fuel for the airport. Being an enterprise account, fuel is one of the airport's largest sources of revenue. The increased revenue would help sustain the airport and make sure that the airport can sustain itself going into the future.

Funding:

Like most of the airport's projects this project will be 95% funded by the Federal Aviation Administration (FAA), 5% funded by MassDOT Aeronautics, and 5% funded by Airport Enterprise free cash. The breakdown of that funding is below:

FAA:	\$6,840,000
MassDOT:	\$380,000
Airport:	\$380,000
Total	\$7,600,000