

November 29, 2022

Luly Massaro,
Clerk of the Division of Public Utilities and Carriers
89 Jefferson Boulevard
Warwick, RI 02888

The Hon. Jorge O. Elorza
Mayor

Ricky Caruolo
General Manager

RE: Providence Water Responses to Docket D-22-16, Data Request AS-1

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William E. O'Gara, Esq.
Legal Advisor

Dear Ms. Massaro:

Enclosed for filing are an original and four copies of Providence Water's responses to Data Request AS-1 under Docket D-22-16.

If you have any questions, contact me at 521-6300 ext.7238, or our Attorney, Leah Donaldson, Esq., at 351-4100.

Providence Water Supply Board


Nancy E. Parrillo
Senior Manager of Finance

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Rhode Island Water Works Assn.
New England Water Works Assn.
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An EPA WaterSense Partner

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125 Dupont Drive
Providence, RI 02907

www.provwater.com

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cc: R. Caruolo
G. Giasson
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Providence Water Docket D-22-16

**Data Requests of the
Division of Public Utilities and Carriers
Set 1**

AS 1-1. Identify the projects and anticipated costs for which PWSB seeks to use all the amounts borrowing.

RESPONSE:

Project	Anticipated Costs of the Project
1985 (1000 kW) diesel generator	\$ 2,000,000
6 roof top HVAC units	\$ 200,000
Emergency Generator – Fruit Hill Pumping Station	\$ 500,000
Dehumidification units	\$ 2,500,000
LED Efficient lighting systems encompassing	\$ 300,000

Providence Water Docket D-22-16

**Data Requests of the
Division of Public Utilities and Carriers
Set 1**

AS 1-2. Provide documentation of the project costs identified in AS 1-1.

RESPONSE:

- a. See attached COF Generator Replacement planning level estimate from E.W. Audet & Sons, Inc. dated 11-30-21. (Exhibit AS 1-2a).
- b. See attached HVAC Units planning level estimate from Dimeo Construction Corporation dated 10-18-2022. (Exhibit AS 1-2b).
- c. See attached dehumidification planning level estimates prepared by Tighe & Bond dated 9-29-22. (Exhibit AS 1-2c).
- d. See attached Fruit Hill Generator Replacement planning level estimates from Pare Corporation dated 7-21-22 and Milton CAT dated 1-4-22. (Exhibit AS 1-2d).
- e. For the LED efficient light systems, the planning level estimates provided were established internally from in-house inspections of Providence Water's various facilities.



November 30, 2021

Providence Water Supply Board

Attn: Gary Marino

RE: Budget Proposal – Dupont Drive Electrical Work

Gary;

We are pleased to provide you with our budget proposal to replace generator, substation transformer & service equipment at PWSB's Dupont Drive facility. Also included within this proposal is costs associated with the provision of temporary power for required service cutover:

\$1,979,988.00

Included within this price is:

1. All required labor
2. New generator
3. New electrical service
4. Transformer substation – 750kVA
5. Meter
6. Temporary generator & cable
7. Fuel required for cutover
8. Removal & disposal of existing equipment
9. Electrical permit fee

Excluded is:

1. Any hazardous material disposal
2. Mechanical work, gas lines, ductwork
3. Engineering
4. Concrete pads
5. Any/all building modifications
6. Sales taxes
7. Bond premiums

Should the above meet with your approval please sign in the space provided below & return via email, to kate@ewaudet.com so that we can schedule work.

We appreciate the opportunity to be of service & encourage you to call with any questions or comments.

Respectfully submitted,

E.W. AUDET & SONS, INC.

Jeff Audet
Vice President & Project Manager

cc: Proposals - 2021

You are authorized to proceed with work as described above.

Authorized by: _____ Date: _____



**E.W. Audet
& Sons, Inc.**

169 Bay Street
Tel: 401.467.3510

Providence, RI 02905
Fax: 401.781.8822

Itemized Breakdown

Generator - \$950,000.00

Rigging - \$35,000.00

New Service - \$395,000.00

Transformer Substation (750kVA) - \$98,800.00

Meter for service - \$20,000.00

Temporary generator & cables - \$55,000.00

Fuel (for temporary generator) - \$30,000.00

Labor - \$110,000.00

Overhead/profit - \$226,188.00

Permit fee - \$40,000.00

Removal/disposal of existing equipment - \$20,000.00

Spreadsheet Report
Providence Water Dupont Street Air Handler Renovation

Dimeo Construction Co

Project name	Providence Water Dupont Street Air Handler Renovation
Estimator	Steve Angell, Mike Babbit
Labor rate table	Dimeo - RI
Equipment rate table	Equipment
Report format	Sorted by 'Group phase/Phase' 'Detail' summary Combine items

Group	Phase	Description	Takeoff Quantity	Total Cost/Unit	Total Amount
1	15500.0	HVAC SYSTEMS			
2	0				
3	15500.01	HVAC			
4		Units	5.00 e	14,156.80 /e	70,784
5		Labor To Install	80.00 hrs	119.00 /hrs	9,520
6		Rigging	1.00 ls	7,500.00 /ls	7,500
7		Project Manager	80.00 hrs	150.00 /hrs	12,000
8		Permit	1.00 ls	2,900.00 /ls	2,900
9		GC's	1.00 ls	15,720.00 /ls	15,720
10		Testing and Balancing	1.00 ls	4,800.00 /ls	4,800
11		Electrical	1.00 ls	2,000.00 /ls	2,000
		Controls	1.00 ls	5,000.00 /ls	5,000
		HVAC			130,224
		HVAC SYSTEMS		/SF	130,224

Estimate Totals

Description	Amount	Totals	Rate
Subtotal	130,224	130,224	
Subguard Insurance			
Preconstruction Services			
General Conditions-Staff			
General Requirements			
Contingency - Design			
Contingency - Construction		130,224	
Subtotal			
Building Permit- Excluded			
General Liability Insurance	1,237		9,500 \$/
Builder's Risk (By Owner)			1,000
Fee			
Subtotal	1,237	131,461	
Total		131,461	

Project name	Providence Water Dupont Street Air Handler Renovation
Estimator	Steve Angell, Mike Babbitt
Labor rate table	Dimeo - RI
Equipment rate table	Equipment
Report format	Sorted by 'Group phase/Phase' 'Detail' summary

Group	Phase	Description	Takeoff Quantity	Total Cost/Unit	Total Amount
1	1100.00	GENERAL REQUIREMENTS			
2	1100.10	General Requirements			
3		Project Manager - Super	80.00 hrs	140.00 /hrs	11,200
4		Safety - Flagging, Tie-offs	80.00 hrs	90.00 /hrs	7,200
5		Purchasing/Accountant/Secretary	16.00 hrs	90.00 /hrs	1,440
6		Safety Manager	16.00 hrs	105.00 /hrs	1,680
7		Safety - Flagging, Tie-offs Materials	1.00 ls	20,000.00 /ls	20,000
8		Removal and disposal of units including Freon Recovery	1.00 ls	7,500.00 /ls	7,500
		General Requirements			49,020
		GENERAL REQUIREMENTS			49,020

Estimate Totals

Description	Amount	Totals	Rate
Subtotal	49,020	49,020	
Subguard Insurance			
Preconstruction Services			
General Conditions-Staff			
General Requirements			
Contingency - Design			
Contingency - Construction			
Subtotal	48,020		
Building Permit- Excluded			
General Liability Insurance	466		
Builder's Risk (By Owner)			
Fee			1,000
Subtotal	486		
Total		49,486	

Proposed Plant Dehumidification Unit Options

Water to Water Heat Pump (Using Plant Water as Heat Sink)				
	Building Area	HVAC \$/S.F.	Electrical \$/S.F.	Cost
Heating Only	15,000	\$30	\$15	\$675,000
Heating & Dehumidification	45,000	\$40	\$15	\$2,475,000
AC, Heating, & Dehumidification	26,000	\$55	\$15	\$1,820,000
Conversion of Heating System, whole building (Water to Water)	87,000	\$12	\$20	\$2,784,000
Structural Allowance				\$300,000
Architectural Allowance				\$100,000
Total Project Cost				\$7.5 million

Air to Water Heat Pump				
	Building Area	HVAC \$/S.F.	Electrical \$/S.F.	Cost
Heating Only	15,000	\$30	\$15	\$675,000
Heating & Dehumidification	45,000	\$40	\$15	\$2,475,000
AC, Heating, & Dehumidification	26,000	\$55	\$15	\$1,820,000
Conversion of Heating System, whole building (Air to Water)	87,000	\$25	\$20	\$3,915,000
Structural Allowance				\$450,000
Architectural Allowance				\$100,000
Total Project Cost				\$8.8 million

Note: Planning level costs prepared by Tighe & Bond Engineers/Environmental Specialist, dated 9-29-22.



July 21, 2022

Mr. Gary Marino
Principal Engineer – Project Manager
Providence Water Supply Board
125 Dupont Drive
Providence, Rhode Island 02908

Re: **Engineering and Architectural Services for Generator Replacement
Fruit Hill Pump Station
Providence Water Supply Board
North Providence, Rhode Island
(Pare Proposal No.: EP239.22)**

Dear Mr. Marino:

Pare Corporation (Pare) is pleased to have the opportunity to submit this Proposal to the Providence Water Supply Board (Providence Water). Outlined herein is a Description of the Project, our Scope of Services, and the Method and Basis of Compensation for our services. The services provided under this Proposal shall be conducted in accordance with the Terms, Conditions, and Billing Rates established under the Blanket Architectural/Engineering Services Contract submitted on February 24, 2020 to Providence Water.

PROJECT DESCRIPTION/SCOPE OF SERVICES

Pare understands that Providence Water would like to renovate the existing Fruit Hill Pump Station. The renovations are anticipated to include a new generator and generator room, removal and disposal of existing orthophosphate pilot study equipment and caustic chemical injection equipment, the installation of a new set of double doors, HVAC upgrades (including air conditioning) in the pump room, and a new PLC cabinet. Pare will utilize Vision 3 Architects for architectural services and Frank Zaino and Associates for electrical and mechanical engineering. In general, our team's services shall include:

- A review of original as-built drawings to evaluate if it is feasible to install a wall to separate the station generator from the pumps;
- Development of a plan to remove and dispose of all orthophosphate pilot equipment and caustic injection equipment and materials that are currently housed in the pump room;
- Assistance with the layout of the relocation of the existing MCC panel. We understand that the existing MCC can be removed and replaced with a distribution panel. We also understand that EW Audet will be providing all electrical labor and material through their existing blanket contract;
- A new PLC cabinet, to be designed and programmed by RE Erickson, but shown on the drawings for this project;
- Design of HVAC upgrades in the pump room, including air conditioning;
- Design of new double doors for access to the station pump room from the north side of the building;
- The design of a new interior wall between the pump station and the generator room, including insulation and sound attenuation;



8 BLACKSTONE VALLEY PLACE
LINCOLN, RI 02865
401.334.4100

10 LINCOLN ROAD, SUITE 210
FOXBORO, MA 02035
508.543.1755

14 BOBALA ROAD, SUITE 28
HOLYOKE, MA 01040
413.507.3448



Mr. Gary Marino, Providence Water

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July 21, 2022

- Assistance with the evaluation and design of a new generator and ATS, and generator inlet air and exhaust. We understand that Providence Water will be purchasing a new 250 kw generator through EW Audet; and
- Preparation of an overall opinion of the probable construction cost for these building improvements.

Basic Services

Pare and its subconsultants will perform the following Basic Services for the project.

Task 1 – Design Development Phase

1. **Project Administration/Coordination/Meetings:** Pare will coordinate with Providence Water to review and discuss goals, objectives, and design issues related to this project. Pare has included attendance at one (1) meeting during this phase. Vision 3 Architects has included attendance at one (1) meeting during this phase.
2. **Field Review:** Vision 3 and FZA will perform a field visit during this phase to measure and observe existing conditions. Pare will also provide up to one (1) field visit during this phase, if required, to evaluate existing conditions for structural engineering consultation related to the wall and door design, as well as modifications that may be required to modify one exterior wall to accommodate generator intake air. At this time, Pare will take an inventory of the orthophosphate pilot test equipment that will require disposal.
3. **Structural Consultation:** Pare will provide consultation services related to structural work for the wall and door design, as well as modifications that may be required to an exterior wall to accommodate generator intake air.
4. **Schematic Design Documents:** The team will prepare Schematic Design documents for Providence Water's approval. The documents will illustrate and describe the development of the approved Schematic Design Documents and shall consist of drawings and other documents including plans, sections, elevations, and typical construction details to describe the Scope of the Project.

Task 2 – Construction Documents Phase

1. **Project Administration/Coordination/Meetings:** Pare will coordinate with Providence Water to review and discuss goals, objectives, and design issues related to this project. Pare has included attendance at up to two (2) meetings during this phase. Vision 3 Architects has included attendance at up to two (2) meetings during this phase.
2. **Additional Consultation:** Pare will provide additional consultation services related to structural work and ortho equipment disposal to supplement that which was provided during the Schematic Design Phase.
3. **Construction Documents:** The team will prepare Construction Documents for the project based upon the Design Development documents approved by Providence Water. The documents will be prepared to communicate the desired results of the Project and, in sufficient detail, to allow Providence Water and their Construction Manager to receive competitive bids for the Work described. Documents will be suitable for permitting.



Task 3 – Bid & Construction Phase

1. **Project Administration and Coordination:** Pare and its subconsultants will coordinate with Providence Water throughout this phase to discuss construction issues related to this project. **Regular attendance (e.g., weekly) at meetings during construction has not been included in this proposal.** If attendance at a meeting during construction is required, it shall be concurrent with a site visit.
2. **Construction Observation:** Pare and its subconsultants will visit the site at appropriate intervals as the construction proceeds to observe and report on the progress and quality of the executed work and prepare an opinion of whether the work is proceeding in accordance with the design concept. Five (5) field reviews are included in this proposal and are broken down as follows:
 - Pare Corporation: 3 site visits
 - Vision 3 Architects: 2 site visits plus one final punch list walkthrough
 - Frank Zaino and Associates: 2 site visits
3. **Consultation During Construction:** Pare and its sub-consultants will be available to provide consultation during construction to interpret and make clarifications to contract plans and specifications and resolve changes brought about by field conditions encountered. **Construction changes based upon Owner or Contractor requests or substitutions will be considered an Additional Service.**
4. **Shop Drawing Review:** The contractor's submittals will be reviewed by Pare and its sub-consultants for compliance with the plans, specifications, and contract documents and for conformance with the design concept. Review of submittals shall be limited to twice. **Additional reviews will be considered an Additional Service.**

Assumptions and Exclusions

Based upon discussions with Providence Water and our understanding of the project, the following assumptions and exclusions are identified for this proposal. Pare and its sub-consultants are available to provide Additional Services related to exclusions, but at this time they are not included in this proposal.

- **Hazardous Materials:** Investigation and consultation for the presence of hazardous materials are not included.
- **Additional Meetings and Site Visits:** The number of meetings and site visits during the design and construction phases are as identified above. Regular attendance at meetings during construction is not included in this proposal. If additional meetings or site visits are required, they will be handled in a supplemental agreement.
- **Special Meetings & Hearings:** Attendance at Planning, Zoning, Historic District Commission, or other special meetings/hearings; and preparation of any supplemental documentation for same are not included.
- Existing building assessment for compliance with current codes outside of the area of renovation is not included, nor are any services related to "non-work" areas that are or may be required to be brought up to current Building Code standards.
- Code-mandated special inspections, testing, and administration services shall be made by the Owner.
- All technical specifications will be prepared in the form of plan notes.



Mr. Gary Marino, Providence Water

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- Services related to the specification of furnishings and equipment as well as LEED design and certification are not included.
- Revisions to completed Construction Documents for the purpose of reducing construction costs are not included.
- Preparation of multiple drawing packages (i.e., separate “permit,” “pricing,” “phasing,” etc. sets) and architectural renderings are not included.

OUTSIDE SERVICES

Pare will engage Vision 3 Architects to perform architectural design services for the project. Vision 3 Architects will further engage Frank Zaino and Associates to provide mechanical and electrical engineering services.

SERVICES PROVIDED BY OTHERS

Providence Water shall provide the following services and information for this project:

- Existing information, including but not limited to as-built drawings; previous condition surveys; and previous records where appropriate and available.
- Preparation of contract specifications and documents for procurement of the Construction Manager services.
- Access to the site for Pare personnel and our sub-consultants.
- Investigation for the presence of hazardous materials, if required.

BASIS OF COMPENSATION AND METHOD OF PAYMENT

For Design Development Phase and Construction Phase Services, Providence Water shall pay Pare Corporation a Lump Sum Fee of **Ninety-Two Thousand Five Hundred Dollars and Zero Cents (\$92,500.00)**. This fee is broken down as follows:

Basic Services – Design Phase

<u>Task 1 – Schematic Design Phase</u>	
Pare Corporation	\$ 16,700.00
Vision 3/FZA	<u>\$ 13,900.00</u>
Task 1 Subtotal	\$ 30,600.00
 <u>Task 2 – Construction Documents Phase</u>	
Pare Corporation	\$ 12,200.00
Vision 3/FZA	<u>\$ 21,100.00</u>
Task 2 Subtotal	\$ 33,300.00
 <u>Task 3 – Bid and Construction Phase</u>	
Pare Corporation	\$ 22,400.00
Vision 3/FZA	<u>\$ 6,200.00</u>
Task 1 Subtotal	\$ 28,600.00
 Design Phase Lump Sum Fee Total	 \$ 92,500.00



Mr. Gary Marino, Providence Water

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July 21, 2022

ADDITIONAL SERVICES

Services required by Providence Water that are not part of the Scope of Services, as described herein, shall be considered Additional Services. Additional Services shall be furnished by Pare or obtained from others by Pare if requested in writing by Providence Water. Providence Water shall pay Pare for Additional Services in accordance with rates and charges agreed to in writing prior to authorization by Providence Water.

This represents our best judgment at this time as to the effort required to achieve the stated objectives. It should be recognized that should the Scope of Services or corresponding level of effort upon which this Proposal is based change, an increase or decrease in charges may result. You will be notified of any change regarding an increase in charges, and we will not exceed the recommended budget without your approval, nor will we be required to work beyond the approved budget. Pare Corporation reserves the right to renegotiate or adjust the fee accordingly if its Proposal for Service is not accepted within a sixty (60) day period.

Thank you for the opportunity to submit this Proposal. If you have any questions, please contact us at your convenience.

Sincerely,

Timothy P. Thies, P.E.
Senior Vice President

TPT/kji



ISO9001:2015 Certified

Milford, MA
Batavia, NY
North Reading, MA

Londonderry, NH
Binghamton, NY
Richmond, VT

Clifton Park, NY
Brewer, ME
Wareham, MA

Syracuse, NY
Scarborough, ME
Cranston, RI

TO: Providence Water Supply Board
ATTN: Gary Marino

QUOTE NO: 20-18172
DATE: 1/4/2021

PROJECT

Fruit Hill Pump Station

We are pleased to offer the following equipment for consideration:

One (1) New Outdoor Caterpillar Model DG250-2, Natural Gas, Emergency Packaged Generator Set. This unit is rated 250 KW, Standby power, 277/480 volt, 60 hertz, 1800 rpm, Three phase, 0.8 pf. The following equipment/services are included:

- UL 2200 Listed and Labeled
- EPA Certified for Stationary Emergency Application
- Permanent Magnet Generator
- Generator Heater
- Electronic Governor
- Unit Mounted Radiator
- Jacket Water Heater
- Vibration Isolators
- Starting Batteries with Rack and Cables
- 20 amp Battery Charger
- Charging Alternator
- Engine/Generator Unit Mounted Control Panel
- One Remote Annunciator Panel, 16 Light NFPA 110 – ships loose
- Remote Emergency Stop Station (EPO Station) – ships loose
- Remote communications via RS485 port (interface to BMS or SCADA by others)
- 400 Amp Unit Mounted Circuit Breaker
- Exhaust Silencer
- Enclosure - Painted Steel Factory installed Sound Attenuated, Color- White
 - 72.3 dBA @ 23'
 - Structural steel base
 - Thermal/acoustic insulation
 - Interior muffler with rain cap
 - Interior 120 VAC GFI receptacle(s)
 - Battery Heater
- Automatic transfer switch(es): NOT INCLUDED, ASSUMES RE-USE OF EXISTING
- Standard factory & production testing
- Start-up and Test With Milton Cat supplied Load Bank
- Customer Training
- 2 Year Warranty from Date of Start-Up
- Operation and maintenance manuals

Net Price, F.O.B. Job Site/Tailgate.....\$103,925.00

Payment Terms:

With Credit Department Approval – Net 30 Days and 100% Paid Prior To Start Up.
Sales tax is not included.
Credit card payments are not accepted.

This is a quotation on the goods named above and subject to the conditions noted herein:

Scope:

1. This proposal is offered in accordance with specification sections NO SPEC PROVIDED.
2. The equipment, services and testing defined in this proposal constitute the entire offer. No other items are included or implied.



3. Any changes to the scope of work contained herein and/or additional terms and conditions added by the Purchaser may void pricing and terms of this agreement. If such a situation arises, Seller may provide a revised agreement to reflect pricing and terms as changed or as required by the Purchaser.

System Check Test and Start up:

1. All customer connections must be completed prior to start up.
2. Block heaters, battery chargers, exhaust systems, exhaust lagging, vibration isolators, breaker connections, fuel tanks filled, etc. must be performed by the installing contractor.

Gaseous Fuel System Requirements:

1. It is the contractor's responsibility to ensure that adequate pressure and volume are available at the generator set inlet per Caterpillar installation guidelines (Model specific data available upon request).

Testing – Load Testing:

1. Milton Cat will provide a service technician to perform load bank testing. Load banks will be provided by Milton Cat.
2. Milton Cat Temporary Low Voltage Cables will be delivered to site by Milton Cat to connect the load banks to the generators. All off loading/rigging required to lay the cables and all loading/rigging required to return the cables to the original delivery point will be the responsibility of the installing contractor.
3. Any medium voltage cables to be provided and installed by the electrical contractor.

Clarifications:

1. If a WCR rating other than that proposed is required because of a system coordination study (by others), a revised quotation will be provided.
2. In order to meet NEC requirements to monitor life safety start circuits, redundant start wiring to each ATS may be required. This should be reviewed by the Electrical Engineer of record and confirmed before installation.
3. All NETA testing is excluded.
4. All Third-Party testing and commissioning are excluded.
5. All Coordination Studies are excluded.
6. All programming, settings, and testing of relays and protective devices is excluded.
7. All Ground Fault testing is excluded.
8. All Arc Flash Studies are excluded.
9. All fuel is excluded.
10. All installation of equipment is by others.
11. Items marked as ships loose on the Bill of Material to be installed by others.
12. Assembly of enclosure (if applicable) is not included in this proposal (i.e. exterior lighting, exhaust elbow, hoods, vents, etc.).
13. If any disassembly and reassembly of the generator set or enclosure is required for rigging purposes, please contact Milton CAT for revised pricing.
14. All permits, registrations, inspections, etc. are excluded.
15. Milton Cat reserves the right to correct errors and omissions
16. Videotaping of training performed by Milton CAT Technicians is strictly prohibited.
17. Federal, State, and local code compliance is strictly the responsibility of the owner and/or the owner's representatives.
18. Title and risk of loss will pass to Buyer upon delivery of the equipment to project site or designated delivery address.
19. Buyer may not cancel a purchase order or return equipment without Milton Cat's written consent. Any cancellation or return is subject to additional charges.

This price is firm for sixty days. Please see attached Terms and Conditions. Please note sales tax, if applicable, is not included in our price. We appreciate this opportunity to quote you on your equipment requirements and hope to be favored with your valued order.

We look forward to serving your future purchase and/or rental needs.

Sincerely,

Gary Rudman / Sales Representative / Cell: (508) 717-5221 / Email: gary_rudman@miltoncat.com



MILTON CAT POWER SYSTEMS STANDARD TERMS & CONDITIONS

- A. Customer is responsible for all installation of the equipment supplied by **Milton Cat Power Systems**, unless otherwise specified in writing.
- B. All equipment needed to perform any loading or unloading of the equipment supplied by **Milton Cat Power Systems** is the responsibility of the buyer.
- C. All permits, fees and regulatory requirements are the responsibility of the buyer.
- D. **Milton Cat Power Systems** limits the scope of supply for this quotation to the equipment and services listed in our bill of material. Unless specifically listed in our bill of material, equipment not indicated is assumed to be supplied by others. We have detailed the equipment proposed in the bill of material. Please check it to be certain that it meets your requirements.
- E. **Milton Cat Power Systems** reserves the right to correct any errors or omissions.
- F. **Milton Cat Power Systems** offers no warranty as part of this agreement other than that which is passed on to the owner by the original equipment manufacturer.
- G. **Milton Cat Power Systems** assumes no liability of losses or delays arising from Acts of God, fires, weather conditions, labor controversies, delays in supplies, or other causes beyond the control of **Milton Cat Power Systems**.
- H. Any changes to the scope of work contained herein and/or additional terms and conditions added by the customer may void pricing and terms of this agreement. If such a situation arises, **Milton Cat Power Systems** may provide a revised agreement to reflect pricing and terms as changed or required by the customer.
- I. The Price of any equipment scheduled for shipment on a date beyond a period of twelve (12) months from date of purchase order is subject to increase by seller, unless otherwise agreed to in writing.
- J. Contracts which include penalty or liquidated damage clauses, waivers of subrogation, or naming a third party additionally insured are not acceptable or binding on **Milton Cat Power Systems**, unless accepted and confirmed in writing by an officer of **Milton Cat Power Systems**.
- K. **Successors and Assigns.** Customer shall not assign or transfer any of its obligations, responsibilities, rights or interests under this Agreement without the advance written consent of **Milton Cat Power Systems**. Any assignment or transfer by the customer in violation hereof shall be void and without force or effect.
- L. There will be a cancellation fee for any orders cancelled, once placed and accepted by **Milton Cat Power Systems**. Cancellation fees will be addressed and negotiated at time of cancellation.
- M. **Milton Cat Power Systems** will not be responsible for any labor or material charges by others associated with the start-up and installation of this equipment unless previously agreed upon, in writing by **Milton Cat Power Systems**.
- N. **Customer Acceptance:** This proposal is accepted at the price and per the terms indicated. (Please provide the entire proposal form to **Milton Cat Power Systems** with signature). **Milton Cat Power Systems** requires a purchase order to proceed with the order.

Name (print)

Signature

Title

Date

Providence Water Docket D-22-16

**Data Requests of the
Division of Public Utilities and Carriers
Set 1**

AS 1-3. Provide studies, reports and/or analyses regarding the projects identified in AS 1-1.

RESPONSE:

There were no studies/reports for these proposed projects. All projects require that old antiquated or inefficient equipment be replaced. Some equipment is so old that acquiring replacement parts is becoming more and more difficult and extremely expensive.

Providence Water Docket D-22-16

**Data Requests of the
Division of Public Utilities and Carriers
Set 1**

AS 1-4. Provide the calculation for the anticipated energy savings of \$30,000 over the “expected lifetime of the HVAC unit replacement and the LED lighting system upgrade.”

RESPONSE:

See attached CADMUS Memorandum dated October 13, 2022
(Exhibit AS 1-4a)

CADMUS

Memorandum

To: Gary Marino; Providence Water
 From: Edward Galvin; Cadmus
 Subject: High Level Energy Savings Estimates for Proposed Energy Conservation Measures
 Date: October 13, 2022

Summary

Providence Water requested energy savings estimates to inform its request to the Rhode Island Public Utilities Commission to incur debt to finance proposed energy efficiency measures through the Rhode Island Infrastructure Bank. The Cadmus Group used available information provided by Providence Water related to the proposed measures and deferred to Technical Reference Manuals in making assumptions where necessary. Savings estimates are relative to the previously installed equipment, and are calculated on an annual basis and then multiplied by the expected useful life of the new appliance. There were two measures in which Cadmus was able to estimate these savings for, LED lighting upgrades across Providence Water's facilities and the replacement of HVAC units at the Central Operations Facility. The below tables detail the estimated savings buildup, which equates to \$26,159 over the lifetime of these two measures combined.

LED Lighting Upgrades

This project encompasses various facilities within the Providence Water system to replace the current lighting systems consisting of a mix of fluorescent and halogen lighting with LED fixtures.

Step	Unit	Calculations	Value
Estimated Fixtures Replaced [1]	Quantity of fixtures	A Given	40
Annual Savings per Fixture [2]	kwh reduced /fixture/yr	B Given	43
Annual Savings	kwh	C = A x B	1,720
Useful Life [3]	Years	D Given	15
Calculated Lifetime Energy Savings	Total kWh	E = C x D	25,800
Electricity Rate [4]	\$/kWh	F Given	\$0.225
Calculated Lifetime Dollar Savings	Total \$	G = E x F	\$5,804

Notes:

1. Providence Water has not surveyed these remote facilities yet and the number is approximate
2. WI Focus on Energy TRM 2022. pg M-682. LED Replacement of 4-Foot T8 Lamps, Direct Wire
3. MA TRM 2022. pg 591. Lighting - Performance Lighting
4. Assuming the 2022-2023 price per kWh for RI Energy's G-02

HVAC Unit Replacement

Project consists of removing six roof top HVAC units and replacing with more efficient HVAC units. Existing units are at the end of their useful life and are not energy efficient.

Step	Unit	Calculations	Value
Capacity	Tons	A Given	46
Cooling Savings			
New Efficiency [1]	EER	B Assumed	15
Efficiency of Replaced Appliances [2]	EER	C Given	12
Equivalent Full Load Cooling Hours [3]	Hours	D Assumed	855
Useful Life [4]	Years	E Assumed	12
Calculated Annual Savings [5]	kwh	$F = A \times (12 \text{ kBtu/hr per ton}) \times (1/C - 1/B) \times D$	7,158
Calculated Lifetime Cooling Savings	kWh	$G = F \times E$	85,901
Electricity Rate [6]	\$/kWh	H Given	\$0.225
Heating Savings			
Heating Efficiency of Replaced Appliance	%	I Given	82%
New Efficiency	%	J Assumed	94%
Equivalent Full Load Heating Hours [7]		K Given	1,137
Calculated Annual Savings [8]	therms	$L = A \times (J / I - 1) \times K$	76
Calculated Lifetime Heating Savings	therms	$M = L \times E$	910
Natural Gas Rate [9]	\$/therm	N Assumed	\$1.13
Calculated Lifetime Dollar Savings	Total \$	$O = (G \times H) + (M \times N)$	\$20,354
1. Matched to MA TRM Efficiency Baseline: Equipment type = Air conditioners, air cooled. Size category = $\geq 65,000$ Btu/h and $< 135,000$ Btu/h. Rating condition = Split System and Single Package 2. Installed units manufacturer link: https://www.carrier.com/commercial/en/us/products/packaged-outdoor/outdoor-packaged-units/48h 3. RI TRM 2019. Pg A-32. Cooling and Heating Equivalent Full Load Hour 4. MA TRM 2022. pg 639. 5. RI TRM 2019. Air Cooled AC 20 to 63 tons. 12 kBtu/hr per ton = Conversion factor. $\text{Gross kWh} = \text{Tons} \times (\text{kBtu/hr per ton}) \times (1/\text{SEER}_{\text{base}} - 1/\text{SEER}_{\text{ee}}) \times \text{Hours}_C$ 6. Assuming the 2022-2023 price per kWh for RI Energy's G-02 7. RI TRM 2019. Pg A-32. Cooling and Heating Equivalent Full Load Hour 8. WI Focus on Energy pg 399. Therm SAVED = $\text{Cap} \times (\text{AFUEEE} / \text{AFUEBASE} - 1) \times \text{EFLHHEAT} / \text{ConvF}$ (100 MBtu per therm) 9. Assuming RI Gas Price per therm effective May 2022.			

Providence Water Docket D-22-16

**Data Requests of the
Division of Public Utilities and Carriers
Set 1**

AS 1-5. Provide documentation for the anticipated energy savings figure of \$30,000 identified in AS 1-4.

RESPONSE:

See response to AS 1-4.

Providence Water Docket D-22-16

**Data Requests of the
Division of Public Utilities and Carriers
Set 1**

AS 1-6. Explain why Exhibit V states that “The Bank shall provide financial aid in the form of a loan on terms stated below in an amount up to \$5,500,000 for a term not to exceed twenty years...” when the principal amount of the loan is for an amount not to exceed \$10,000,000.

RESPONSE :

The Rhode Island Infrastructure Bank (RIIB) had informed us that we eligible for \$10,000,000 from the Efficient Building fund for any projects that qualified under that program. We intend to borrow the \$10,000,000, however, we only have \$5,500,000.00 in projects ready to go at this time. We will borrow the remaining \$4,500,000.00 in the near future.

Our intention is to request permission to borrow the entire amount up front so that we would be able to proceed immediately once the next group of projects became ready.

In addition, given the amount of volatility in the cost of materials, Providence Water is concerned that the current project estimates may be too low once the projects are actually bid and constructed.

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**Data Requests of the
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AS 1-7. Ms. Parrillo' states on Page 2 of her testimony, "This borrowing will not impact customers at this time." That is, explain what is meant by the qualifying clause "...at this time."

RESPONSE :

Because Providence Water anticipated borrowings through RIIB in each year of the 3 years as defined in Docket 4994, we had anticipated the associated debt service for those borrowings as well. As a result of that financial pre-planning, the debt service has already been included in the rates that were approved in steps 1 and 2 of Docket 4994.

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**Data Requests of the
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AS 1-8. Explain the statement “Any impact to the customer base has been anticipated and included in the three-step rate increase approved in Docket No. 4994.” Include in your explanation identification of those parts and schedules of Order No. 23928 that support the statement.

RESPONSE :

Because Providence Water anticipated borrowings through RIIB in each year of the 3 years as defined in Docket 4994, we had anticipated the associated debt service for those borrowings as well. As a result of that financial pre-planning, the debt service has already been included in the rates that were approved in steps 1 and 2 of Docket 4994.

See Attached (AS 1-8a) Schedule HJS-10c: Restricted Funds – IFR Fund from the Compliance Filing filed on August 25, 2020. Under the section labeled “**Less Obligated Uses of Funds**”, there are 2 lines labeled “**Est. New Debt Service Series 2021A**” and “**Est. New Debt Service Series 2022A**”. The amounts estimated there will cover the estimated debt service for this loan.

Schedule HJS Amended Settlement-10c: Restricted Funds - IFR Fund

Providence Water Supply Board
 Docket # 4994
 Request for General Rate Relief
 Amended Settlement Proposal
 Test Year Ending June 30, 2019
 Rate Years Ending June 30, 2021 through 2023

Description	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Source of Funds					
D4618 (effective 2/17/2017)	\$ 30,712,500	\$ 27,300,000	\$ 27,300,000	\$ 27,300,000	\$ 27,300,000
New Rate Funding			\$ 2,000,000	\$ 4,000,000	\$ 5,000,000
Miscellaneous Revenue (incl. Transfer for ESWD DS)	\$ 64,142	\$ 52,853	\$ 52,802	\$ 52,689	\$ 52,513
Interest Income ¹	\$ (38,113)	\$ 42,000	\$ 25,000	\$ 10,000	\$ 1,000
Carryover funds from prior year estimated	\$ 10,714,127	\$ 9,702,126	\$ 3,364,587	\$ 12,788,089	\$ 793,456
Total Sources	\$ 41,452,656	\$ 37,096,978	\$ 32,742,389	\$ 44,150,768	\$ 33,146,968
Less obligated uses of funds:					
RIIB (Arra) \$9.3M 2009 (P&I)	\$ 491,080	\$ 491,005	\$ 491,074	\$ 490,542	\$ 490,220
RIIB \$35M 2008 (P&I)	\$ 2,374,237	\$ 2,339,550	\$ 2,371,550	\$ 2,369,540	\$ 2,367,832
RIIB \$25M 2013 (P&I)	\$ 1,545,394	\$ 1,545,575	\$ 1,544,360	\$ 1,542,870	\$ 1,542,106
RIIB \$8M 2014 (P&I)	\$ 501,911	\$ 500,873	\$ 500,850	\$ 500,896	\$ 500,127
RIIB \$16.3M 2017 (P&I)	\$ 1,035,775	\$ 1,036,028	\$ 1,036,743	\$ 1,035,388	\$ 1,034,854
RIIB \$14.7M 2019 (P&I)	\$ 176,864	\$ 176,864	\$ 934,390	\$ 935,151	\$ 935,636
East Smithfield RIIB 2013 (P&I)	\$ 39,775	\$ 39,177	\$ 39,477	\$ 39,714	\$ 39,888
East Smithfield RIIB 2008 (P&I)	\$ 14,025	\$ 13,675	\$ 13,325	\$ 12,975	\$ 12,625
Est. New Debt Service Series 2020A				\$ 1,251,662	\$ 1,251,545
Est. New Debt Service Series 2021A				\$ 344,414	\$ 344,414
Est. New Debt Service Series 2022A					
Sub-total Debt Service	\$ 6,002,197	\$ 6,142,748	\$ 7,245,112	\$ 8,523,151	\$ 9,895,068

Cash Funded Projects	\$ 25,748,333	\$ 27,589,644	\$ 12,709,208	\$ 34,334,151	\$ 17,724,246
Total Uses	\$ 31,750,530	\$ 33,732,392	\$ 19,954,320	\$ 43,357,302	\$ 27,619,314
End of Year Balance - Cash Balance Carry Fwd.	\$ 9,702,126	\$ 3,364,587	\$ 12,788,069	\$ 793,456	\$ 5,527,854

Bond Funding Activity					
Bond Proceeds	\$ 1,840,830	\$ 16,224,208	\$ 19,245,038	\$ 21,000,000	\$ 21,000,000
Cost of Issuance	\$ 1,082,095	\$ 2,685,757	\$ 1,669,246	\$ 1,669,246	\$ 1,669,246
Bond Funded Projects	\$ 758,735	\$ 13,538,451	\$ 17,575,792	\$ 19,330,754	\$ 19,330,754
Net Bond funding	\$ -	\$ -	\$ -	\$ -	\$ -

Note 1: Negative interest income in FY2019 is reflective of actual interest earned of \$54,636.32 less a market adjustment of -\$92,7749.32 adjusted by the auditors at year end.

Providence Water Docket D-22-16

**Data Requests of the
Division of Public Utilities and Carriers
Set 1**

AS 1-9 Please provide Schedule MG-1.

RESPONSE : Schedule MG-1 is attached

MG-1

Rhode Island Infrastructure Bank
 Providence Water Supply Board
 Efficient Buildings Fund Loan, 2022
 Rates as of October 20, 2022 + 75bps

Date	Principal	Coupon	Interest	Total Debt Service	RIIB Fee (0.30%)	Debt Service Reserve Fund	Net Debt Service	Annual Net D/S
03/01/2023			70,016.63	70,016.63	6,416.67		76,433.30	
06/30/2023								76,433.30
09/01/2023	528,000.00	2.950%	163,675.25	691,675.25	15,000.00		706,675.25	
03/01/2024			155,887.25	155,887.25	14,208.00		170,095.25	
06/30/2024								876,770.50
09/01/2024	544,000.00	3.020%	155,887.25	699,887.25	14,208.00		714,095.25	
03/01/2025			147,672.85	147,672.85	13,392.00		161,064.85	
06/30/2025								875,160.10
09/01/2025	561,000.00	3.060%	147,672.85	708,672.85	13,392.00		722,064.85	
03/01/2026			139,089.55	139,089.55	12,550.50		151,640.05	
06/30/2026								873,704.90
09/01/2026	579,000.00	3.110%	139,089.55	718,089.55	12,550.50		730,640.05	
03/01/2027			130,086.10	130,086.10	11,682.00		141,768.10	
06/30/2027								872,408.15
09/01/2027	597,000.00	3.190%	130,086.10	727,086.10	11,682.00		738,768.10	
03/01/2028			120,563.95	120,563.95	10,786.50		131,350.45	
06/30/2028								870,118.55
09/01/2028	616,000.00	3.220%	120,563.95	736,563.95	10,786.50		747,350.45	
03/01/2029			110,646.35	110,646.35	9,862.50		120,508.85	
06/30/2029								867,859.30
09/01/2029	637,000.00	3.280%	110,646.35	747,646.35	9,862.50		757,508.85	
03/01/2030			100,199.55	100,199.55	8,907.00		109,106.55	
06/30/2030								866,615.40
09/01/2030	658,000.00	3.350%	100,199.55	758,199.55	8,907.00		767,106.55	
03/01/2031			89,178.05	89,178.05	7,920.00		97,098.05	
06/30/2031								864,204.60
09/01/2031	681,000.00	3.300%	89,178.05	770,178.05	7,920.00		778,098.05	
03/01/2032			77,941.55	77,941.55	6,898.50		84,840.05	
06/30/2032								862,938.10
09/01/2032	704,000.00	3.330%	77,941.55	781,941.55	6,898.50		788,840.05	
03/01/2033			66,219.95	66,219.95	5,842.50		72,062.45	
06/30/2033								860,902.50
09/01/2033	727,000.00	3.330%	66,219.95	793,219.95	5,842.50		799,062.45	
03/01/2034			54,115.40	54,115.40	4,752.00		58,867.40	
06/30/2034								857,929.85
09/01/2034	752,000.00	3.380%	54,115.40	806,115.40	4,752.00		810,867.40	
03/01/2035			41,406.60	41,406.60	3,624.00		45,030.60	
06/30/2035								855,898.00
09/01/2035	778,000.00	3.400%	41,406.60	819,406.60	3,624.00		823,030.60	
03/01/2036			28,180.60	28,180.60	2,457.00		30,637.60	
06/30/2036								853,668.20
09/01/2036	805,000.00	3.390%	28,180.60	833,180.60	2,457.00		835,637.60	
03/01/2037			14,535.85	14,535.85	1,249.50		15,785.35	
06/30/2037								851,422.95
09/01/2037	833,000.00	3.490%	14,535.85	847,535.85	1,249.50	848,175.65	609.70	
06/30/2038								609.70
	10,000,000.00		2,785,139.08	12,785,139.08	249,680.67	848,175.65	12,186,644.10	12,186,644.10

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**Data Requests of the
Division of Public Utilities and Carriers
Set 1**

AS 1-10. Identify the date when the next RIIB bond issue will take place in December of 2022.

RESPONSE :

The new anticipated date for this RIIB bond issue is early-January, 2023. An exact date is not available.

Providence Water Docket D-22-16

**Data Requests of the
Division of Public Utilities and Carriers
Set 1**

AS 1-11. Identify and explain the interest rate considerations that require “approval be granted as soon as possible.”

RESPONSE : Interest rates have risen considerably over the past several months. In addition, the municipal market has been volatile. Since August 1 (through November 18), the 10-year Municipal Market Data (MMD) tax-exempt benchmark interest rate has increased by 72 basis points (0.72%). The Fed funds rate has been a driver of market interest rates and the market expects increases to continue to increase in the near term. To the extent borrowers have approvals in place, RIIB has more flexibility to price their bonds as efficiently as possible. While RIIB was expected to price their bonds in December, it is now possible that the RIIB bonds will price in early January. Further, there is a time period before a Division Order is effective which was also part of the consideration to request approval “as soon as possible”.

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Data Requests of the
Division of Public Utilities and Carriers
Set 1

AS 1-12. What PUC restricted account will be charged with the debt service payments?

RESPONSE :

The debt service payments for this loan will come from the Infrastructure Replacement Fund.

Data Requests of the
Division of Public Utilities and Carriers
Set 1

AS 1-13. Are the proposed projects considered to be infrastructure replacement projects? If so, please provide a copy of the section of the Company's approved infrastructure plan that discusses the projects.

RESPONSE:

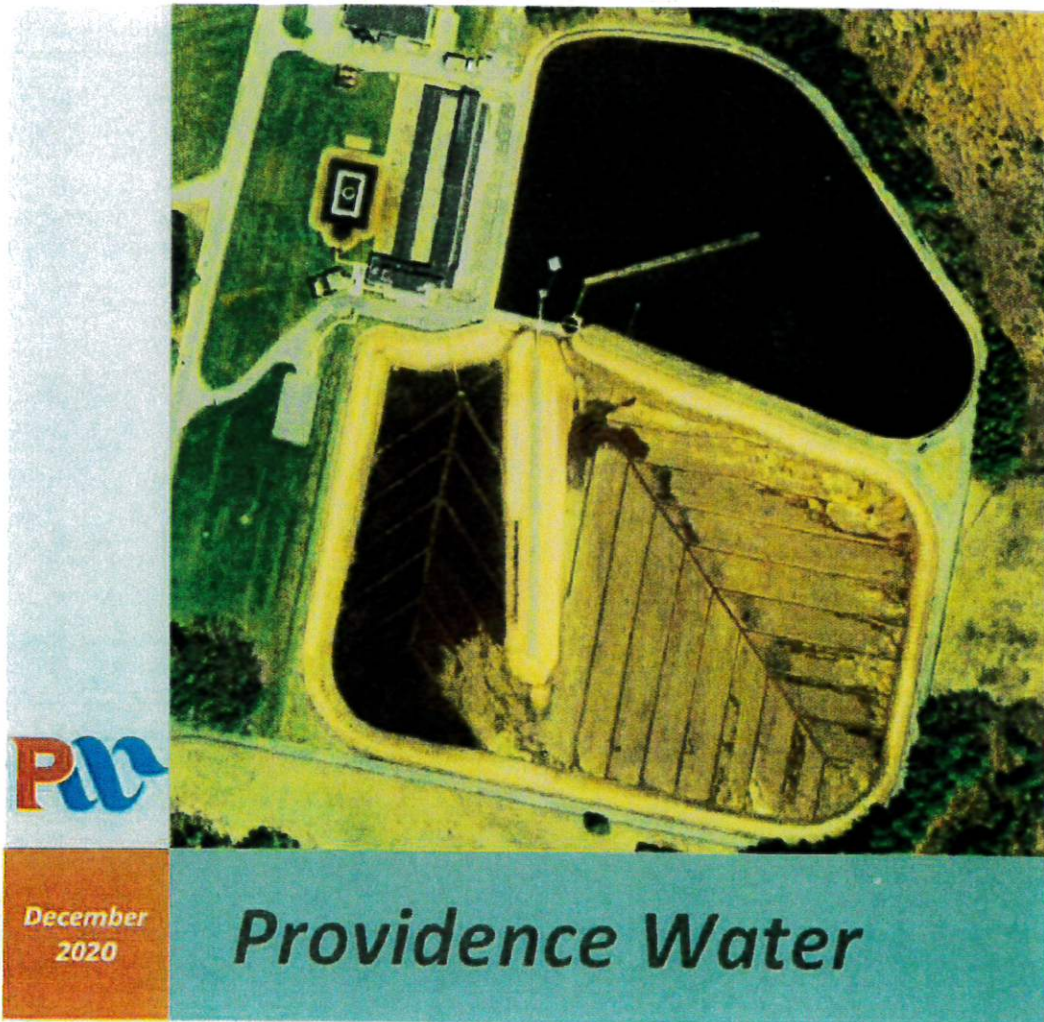
Three of the proposed projects are in the current 5 Year IRF plan. These proposed projects are:

- Emergency Generator – Fruit Hill Pumping Station (see IFR Expenditure Plan - 5 Year Plan – Fruit Hill Pump Station) (Pages 86 and 98) (Exhibit AS 1-14a)
- Roof top HVAC Units (see IFR Expenditure Plan - 5 Year Plan – Support System Facilities) (Pages 87 and 105) (Exhibit AS 1-14a)
- LED Efficient Lighting Systems Encompassing (see IFR Expenditure Plan - 5 Year Plan – Support System Facilities) (Pages 87 and 105) (Exhibit AS 1-14a)

Two of the proposed projects are not on the current IFR 5 Year Plan. These proposed projects came to light after the current IFR Plan was submitted in 2020. These two proposed projects are:

- 1985 (1000 kW) diesel generator at the COF. Replacement parts for this antiquated equipment are becoming more and more scarce. The majority of parts for this 1985 equipment are no longer being held in-stock. At times we have had to order special parts manufactured to fix the generator at a significant high cost.
- Dehumidification units at the Plant. We are currently utilizing inefficient portable dehumidification units in various locations throughout the plant. These portable units are undersized and cannot maintain a controlled internal environment, relative to humidity, which causes equipment to corrode from high humidity. Installing right size dehumidification units throughout the Plant will protect and provide longevity of the equipment and reduce the need for early replacement.

20-YEAR INFRASTRUCTURE REPLACEMENT PLAN 2021-2040



December
2020

Providence Water

STORAGE							
24	Storage Facilities						
24A	Various Storage Facilities Projects	480,000	280,000	50,000	50,000	50,000	50,000
25	Aqueduct Reservoir and Gatehouse						
	<i>There are no projects in the 5 year plan at this location</i>						
26	Greenville Ave Tank						
	<i>There are no projects in the 5 year plan at this location</i>						
27	Lawton Hill Reservoir and Gatehouse						
	<i>There are no projects in the 5 year plan at this location</i>						
28	Longview Reservoir and Gatehouse						
	<i>There are no projects in the 5 year plan at this location</i>						
29	Neutaconkanut Reservoir and Gatehouse						
	<i>There are no projects in the 5 year plan at this location</i>						
30	Ridge Road Tank						
	<i>There are no projects in the 5 year plan at this location</i>						
	Storage Total	\$480,000	\$280,000	\$50,000	\$50,000	\$50,000	\$50,000
PUMPING							
31	Pumping Facilities						
31A	Various Pumping Facilities Projects	320,000	120,000	50,000	50,000	50,000	50,000
32	Raw Water Booster Pump Station						
32A	Raw Water Booster Pump Station Building Improvements	600,000			600,000		
33	Aqueduct Pump Station						
	<i>There are no projects in the 5 year plan at this location</i>						
34	Ashby St. Pump Station						
34A	Ashby St Pump Station Replacement	600,000	600,000				
35	Bath St. Pump Station						
	<i>There are no projects in the 5 year plan at this location</i>						
36	Cranston Commons Pump Station						
36A	Cranston Commons Pump Station Replacement	4,000,000		1,000,000	2,000,000	1,000,000	
37	Dean Estates Pump Station						
37A	Dean Estates Pump Upgrades	780,000	30,000	750,000			
38	Fruit Hill Pump Station						
38A	Fruit Hill Pump Station Generator Replacement	350,000	350,000				
39	Greenville Ave Pump Station						
39A	Greenville Ave Pump Station Replacement	350,000	350,000				
40	Neutaconkanut Pump Station						
	<i>There are no projects in the 5 year plan at this location</i>						
41	Waltham St. Pump Station						
	<i>There are no projects in the 5 year plan at this location</i>						
	Pumping Total	\$7,000,000	\$1,450,000	\$1,800,000	\$2,650,000	\$1,050,000	\$50,000

TRANSMISSION							
42	Scituate Aqueduct and Tunnel (90")						
42A	Scituate Aqueduct and Tunnel (90") Inspection	5,000,000			5,000,000		
42B	Scituate Aqueduct and Tunnel (90") Rehabilitation	2,000,000			2,000,000		
43	Supplemental Tunnel and Aqueduct (78" & 102")						
43A	102" Aqueduct fiber optic monitoring	625,000	125,000	125,000	125,000	125,000	125,000
43B	78" Aqueduct Inspection	3,000,000		3,000,000			
43C	78" Aqueduct Rehabilitation	7,000,000		7,000,000			
43D	102" Aqueduct Inspection	3,000,000				3,000,000	
43E	102" Aqueduct Rehabilitation	9,100,000	2,100,000			7,000,000	
43F	Supplemental Tunnel and Aqueduct Rehabilitation Plan	300,000			300,000		
44	Raw Water Conduits and Valves						
44A	Raw Water Conduits Inspection	200,000	200,000				
44B	60" Raw Water Valve Replacement	400,000	400,000				
45	Transmission System Facilities						
45A	Various Transmission System (16" - 66") Facilities Projects	2,500,000	500,000	500,000	500,000	500,000	500,000
45B	12" Blowoff Valve Replacement	100,000	100,000				
	Transmission Total	\$33,225,000	\$3,425,000	\$10,625,000	\$7,925,000	\$10,625,000	\$625,000
DISTRIBUTION							
46	Distribution Water Mains						
46A	Water Main Rehabilitation	98,875,000	26,975,000	17,975,000	17,975,000	17,975,000	17,975,000
47	Distribution System Facilities						
47A	Various Distribution System Facilities Projects	3,750,000	750,000	750,000	750,000	750,000	750,000
47B	Lead Service Replacements	5,625,000	1,125,000	1,125,000	1,125,000	1,125,000	1,125,000
	Distribution Total	\$108,250,000	\$28,850,000	\$19,850,000	\$19,850,000	\$19,850,000	\$19,850,000
SUPPORT							
48	Support System Facilities						
48A	Various Support System Facilities Projects	1,000,000	200,000	200,000	200,000	200,000	200,000
48B	Arc Flash Study	1,000,000		1,000,000			
49	Central Operations Facility						
	<i>There are no projects in the 5 year plan at this location</i>						
50	Forestry Garage						
	<i>There are no projects in the 5 year plan at this location</i>						
51	Watershed Storage Facility						
	<i>There are no projects in the 5 year plan at this location</i>						
52	Records Management System (GIS/AM)						
52A	Records Management System (GIS/AM) Improvements	500,000	100,000	100,000	100,000	100,000	100,000
53	Billing System						
53A	Billing System Replacement	5,000,000	500,000	2,500,000	2,000,000		
	Support Total	\$7,500,000	\$800,000	\$3,800,000	\$2,300,000	\$300,000	\$300,000
	TOTAL	\$206,030,000	\$39,815,000	\$52,955,000	\$36,495,000	\$43,865,000	\$32,900,000

36. Cranston Commons Pump Station**36A. Cranston Commons Pump Station Replacement**

Due to age and increased demand, the Cranston Commons Pump Station will be replaced during the 5-year plan. An evaluation of whether to replace the pump station on-site or build at a newly identified site is currently in process.

37. Dean Estates Pump Station**37A. Dean Estates Pump Station Upgrades**

A project to evaluate Dean Estate Pump Stations' performance during the high demand times has begun. Funds have been allocated for the anticipated upgrades of the pumps, generator and associated equipment.

38. Fruit Hill Pump Station**38A. Fruit Hill Pump Station Replace Generator**

The 150kW generator at Fruit Hill Pump Station was originally installed in 1988 and nearing the end of its useful life. Plans are to replace the generator.

39. Greenville Ave Pump Station**39A. Greenville Ave Pump Station Replacement**

The replacement of the Greenville Ave Pump Station is ongoing and scheduled to be complete in 2021.

40. Neutaconkanut Pump Station

There are no projects in the 5-year plan at this location.

41. Waltham St Pump Station

There are no projects in the 5-year plan at this location.

SUPPORT**48. Support System Facilities****48A. Various Support System Facilities Projects**

The various components of each support system facility are inspected regularly throughout each year. Funds are budgeted to cover any improvements identified during these inspections. These funds will also cover any damaged fencing and rehabilitate deteriorated roads at these support service facilities. The fencing and road improvement projects are determined through condition assessments and priority.

48B. Arc Flash Study

Providence Water is conducting an Arc Flash analysis of all its facilities to help define and establish safety protocols required to minimize the risk of electrical injuries. The analysis will produce a report of all existing deficiencies and other recommendations for Providence Water to include with their procedures. Upgrades will designed and implemented to address those deficiencies.

49 Central Operations Facility

There are no projects in the 5-year plan at this location.

50. Forestry Garage

There are no projects in the 5-year plan at this location.

51. Watershed Storage Facility

There are no projects in the 5-year plan at this location.