

The Narragansett Electric Company
d/b/a Rhode Island Energy

**Proposed FY2025 Gas
Infrastructure, Safety, and
Reliability Plan**

**Responses to Division Data
Requests Set 1**

Book 2 of 2

December 21, 2023

Docket No. 23-49-NG

Submitted to:
Rhode Island Public Utilities Commission

Submitted by:



Rhode Island Energy™

a PPL company

December 21, 2023

VIA HAND DELIVERY AND ELECTRONIC MAIL

Luly E. Massaro, Commission Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

**RE: Docket No. 23-49-NG – The Narragansett Electric Company d/b/a
Rhode Island Energy’s Proposed FY 2025 Gas Infrastructure, Safety, and
Reliability Plan**

Dear Ms. Massaro:

In compliance with R.I. Gen. Laws § 39-1-27.7.1, I have enclosed 10 copies of Rhode Island Energy’s¹ proposed fiscal year (“FY”) 2025 Gas Infrastructure, Safety and Reliability (“ISR”) Plan (the “Gas ISR Plan” or “Plan”). The Gas ISR Plan is designed to enhance the safety and reliability of Rhode Island Energy’s natural gas distribution system.

On October 27, 2023, Rhode Island Energy submitted an earlier version of the proposed Plan to the Division of Public Utilities and Carriers (“Division”) for review as required by law. The Company consulted with the Division on a proposed plan to be filed with the Rhode Island Public Utilities Commission (“PUC”). Throughout these consultations the Division undertook a comprehensive review of the initial plan, which included issuing numerous informal and formal discovery requests to the Company, review of responses to those requests, discussions with Company representatives and outside consultant review. The Company is awaiting confirmation from the Division as to its general concurrence on the budget for the Plan.

The Gas ISR Plan is designed to maintain and upgrade the Company’s gas delivery system through proactively replacing leak-prone pipe; upgrading the gas delivery system’s custody transfer stations, pressure regulating facilities, and peak shaving plants; responding to emergency leak situations; and addressing infrastructure conflicts that arise out of state, municipal, and third-party construction projects. The Plan is intended to attain these safety and reliability goals through a cost-effective, coordinated work plan. The level of work that the Plan provides will sustain and enhance the safety and reliability of the Rhode Island gas distribution infrastructure, promote efficiency in the management and operation of the gas distribution system and directly benefit Rhode Island gas customers. The Plan also helps reduce the annual methane emissions released by the gas distribution system, primarily through the replacement and abandonment of leak-prone pipe with its Proactive Main Replacement programs, consistent with the 2021 Act on Climate.

¹ The Narragansett Electric Company d/b/a Rhode Island Energy (referred to herein as “Rhode Island Energy” or the “Company”).

The Plan and accompanying testimony of Company witnesses Nathan A. Kocon, Philip J. LaFond and Laeyeng H. Hunt explain certain changes to the categories and budget framework that have been employed in prior years' Gas ISR plans. These proposed changes to categorization and budgeting have been formulated by the Company consistent with the proposal the Company presented at the technical session conducted by the PUC in Docket No. 23-39-NG on November 29, 2023. The Plan also includes a description of the categories of work Rhode Island Energy proposes to perform in FY2025, the proposed targeted spending levels for each work category and the resulting plant additions. As explained in the Plan and accompanying testimony of Messrs. Kocon and LaFond and Mrs. Hunt, the Company is proposing spending of \$185.41 million for capital investment through the Plan and PHMSA Contingency Plan spending of up to \$10.79 million to account for the potential enactment of regulations during FY2025 that would significantly alter the Company's leak detection and repair obligations under federal regulations.²

In accordance with R.I. Gen. Laws § 39-1-27.7.1(c)(2), the enclosed Plan also addresses the revenue requirement, rate design, and bill impacts. The Company's FY2025 Gas ISR Plan revenue requirement is \$74,096,163 (which is an incremental \$6,875,828 over the amount in FY2024). The Company has included the joint pre-filed direct testimony of Stephanie A. Briggs, Jeffrey D. Oliveira, and Natalie Hawk that describes the calculation of the Company's revenue requirements for FY2025. Please note that, in this case, the calculation also includes an adjustment for the tax hold harmless impact on ISR rate base.

For the average residential heating customer using 845 therms annually, the proposed FY2025 ISR factors for the period of April 1, 2024 through March 31, 2025 will result in an annual bill increase of \$48.28 or 2.9 percent, as reflected in the proposed Gas ISR Plan at Section 4, Attachment 2. The Company has included the pre-filed direct testimony of Tyler G. Shields to describe the customer bill impacts of the proposed rate changes.

For the PUC's convenience, the Company has also included copies of its responses to Division Data Requests Set 1. In connection with the Data Requests, this filing contains a Motion for Protective Treatment of Confidential Information in accordance with 810-RICR-00-00-1-1.3(H)(3) (Rule 1.3(H)) of the PUC's Rules of Practice and Procedure and R.I. Gen. Laws § 38-2-2(4)(B) and (4)(F). Rhode Island Energy seeks protection from public disclosure of certain confidential and privileged information in its responses to data requests Division 1-12, Division 1-17 and Division 1-30 and Attachments DIV 1-2-2 through 1-2-5, Attachment DIV 1-5-2, Attachment DIV 1-16, and Attachment DIV 1-17. In compliance with Rule 1.3(H), the Company has provided the PUC with, unredacted copies of the confidential responses and attachments in an envelope marked, "**HIGHLY CONFIDENTIAL INFORMATION - DO NOT RELEASE!**"

² The proposed ISR Plan capital investments, and the forecasts of future years' capital investments contained within the ISR Plan, do not represent the total amount of capital investment anticipated by the Company in this and future years. In this ISR Plan the proposed capital investments and forecasts of future capital investments only include those amounts that the Company has proposed, or, with respect to future years, plans to propose, to recover through the ISR mechanism.

Luly E. Massaro, Commission Clerk
Docket No. 23-49-NG – FY2025 Gas ISR Plan
December 21, 2023
Page 3 of 3

The Gas ISR Plan presents an opportunity to facilitate and encourage investment in Rhode Island Energy's gas utility infrastructure and enhance Rhode Island Energy's ability to provide safe, reliable and efficient gas service to customers.

Thank you for your attention to this matter. If you have any questions, please contact me at 401-316-7429.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Jennifer Brooks Hutchinson", with a long horizontal line extending to the right.

Jennifer Brooks Hutchinson

Enclosure

cc: Docket No. 23-49-NG Service List
Leo Wold, Esq.
Al Mancini, Division (w/confidential versions)
John Bell, Division (w/confidential versions)
Jeremy Walker, Division Consultant (w/confidential versions)

STATE OF RHODE ISLAND
RHODE ISLAND PUBLIC UTILITIES COMMISSION

)	
)	Docket No. 23-49-NG
FY2025 Gas Infrastructure, Safety and)	
Reliability Plan)	
)	
)	

**MOTION OF THE NARRAGANSETT ELECTRIC
COMPANY D/B/A RHODE ISLAND ENERGY FOR PROTECTIVE
TREATMENT OF CONFIDENTIAL INFORMATION**

Rhode Island Energy¹ respectfully requests that the Rhode Island Public Utilities Commission (“PUC”) grant protection from public disclosure certain confidential, competitively sensitive, and proprietary information submitted in this proceeding, as well as certain critical energy infrastructure information as permitted by 810-RICR-00-00-1.3(H) (Rule 1.3(H)) of the PUC’s Rules of Practice and Procedure and R.I. Gen. Laws § 38-2-2(4)(B) and (4)(F). The Company also respectfully requests that, pending entry of that finding, the PUC preliminarily grant the Company’s request for confidential treatment pursuant to Rule 1.3(H)(2).

I. BACKGROUND

On December 21, 2023, the Company submitted its FY 2025 Gas Infrastructure, Safety and Reliability Plan (the “Plan” or “Gas ISR Plan”) filing in the above-captioned docket. The Gas ISR Plan filing includes the Company’s responses to fifty-six data requests propounded by the Division of Public Utilities and Carriers (the “Division”) in connection with its pre-filing review of the Plan. The Company’s responses to data requests Division 1-12, Division 1-17 and

¹ The Narragansett Electric Company d/b/a Rhode Island Energy (Rhode Island Energy or the Company).

Division 1-30 (“Confidential Responses”) and Attachments DIV 1-2-2 through 1-2-5, Attachment DIV 1-5-2, Attachment DIV 1-16, and Attachment DIV 1-17 (the “Confidential Attachments”) contain information that is not subject to disclosure under Rhode Island’s Access to Public Records Act. Specifically, the Confidential Attachments and the Company’s responses to data requests Division 1-12 and Division 1-30 contain critical energy infrastructure information (“CEII”) the disclosure of which could present a threat to public safety. The CEII contained in the Company’s Confidential Attachments and data request responses includes plans, descriptions, design standards and schematic drawings of natural gas transmission and distribution infrastructure. Additionally, the Company’s responses to data requests Division 1-12, Division 1-17, and Division 1-30 contain certain confidential and commercially sensitive cost estimates for future work. Disclosing these cost estimates may reduce the Company’s ability to secure competitive pricing for the work in the future.

Therefore, the Company requests that, pursuant to Rule 1.3(H), the PUC afford confidential treatment to the CEII and confidential commercial information contained in the Confidential Responses and Confidential Attachments.

II. LEGAL STANDARD

Rule 1.3(H) provides that access to public records shall be granted in accordance with the Access to Public Records Act (APRA), R.I. Gen. Laws § 38-2-1, *et seq.* Under the APRA, all documents and materials submitted in connection with the transaction of official business by an agency is deemed to be a “public record,” unless the information contained in such documents and materials falls within one of the exceptions specifically identified in R.I. Gen. Laws § 38-2-2(4). To the extent that information provided to the PUC falls within one of the designated exceptions to the public records law, the PUC has the authority under the terms of

APRA to deem such information as confidential and to protect that information from public disclosure.

In that regard, R.I. Gen. Laws § 38-2-2(4)(B) and (4)(F) provide that the following types of records shall not be deemed public:

(B) Trade secrets and commercial or financial information obtained from a person, firm, or corporation which is of a privileged or confidential nature...

(F) Scientific and technological secrets and the security plans of military and law enforcement agencies, the disclosure of which would endanger the public welfare and security.

With respect to the commercial information exception to the definition of “public record,” the Rhode Island Supreme Court has held that this confidential information exemption applies where the disclosure of information would be likely either (1) to impair the government’s ability to obtain necessary information in the future; or (2) to cause substantial harm to the competitive position of the person from whom the information was obtained. *Providence Journal v. Convention Ctr. Auth.*, 774 A.2d 40 (R.I. 2001). The first prong of the test is satisfied when information is provided to the governmental agency and that information is of a kind that would customarily not be released to the public by the person from whom it was obtained. *Providence Journal*, 774 A.2d at 47.

With respect to other exceptions to the definition of public record, the Rhode Island Supreme Court has held that the agencies making determinations as to the disclosure of information under APRA may apply the balancing test established by the Court in *Providence Journal v. Kane*, 577 A.2d 661 (R.I. 1990). Under this balancing test, the PUC may protect information from public disclosure if the benefit of such protection outweighs the public interest inherent in disclosure of information pending before regulatory agencies.

III. BASIS FOR CONFIDENTIALITY

The commercial information contained in the Company's Confidential Responses is privileged information and is the type of information that Rhode Island Energy would not ordinarily make public. The Confidential Responses includes estimate costs for certain work and disclosing such information could impair Rhode Island Energy's ability to negotiate advantageous pricing or other terms in the future, thereby causing substantial harm to the detriment of the Company and its customers. Additionally, disclosing these cost estimates may reduce the Company's ability to secure competitive pricing for the work in the future during an RFP process. For example, the disclosure of estimated costs to potential RFP bidders could be detrimental to the bidding process and to Rhode Island customers as it may effectually eliminate bids that are below the Company's estimated price. At a minimum, public disclosure would give potential bidders an advantage that is harmful and inconsistent to the RFP and bidding process. Accordingly, Rhode Island Energy respectfully requests that the PUC provide confidential treatment to the information.

With respect to the CEII contained in the Company's Confidential Attachments and its responses to data requests Division 1-12 and Division 1-30, CEII is defined by the Federal Energy Regulatory Commission ("FERC") as: [S]pecific engineering, vulnerability, or detailed design information about proposed or existing critical infrastructure that:

1. Relates details about the production, generation, transmission, or distribution of energy;
2. Could be useful to a person planning an attack on critical infrastructure;
3. Is exempt from mandatory disclosure under the [Federal] Freedom of Information Act, 5 U.S.C. § 552; and
4. Does not simply give the general location of the critical information.

18 CFR § 388.113(c)(2). In turn, "critical infrastructure" is defined as:

[E]xisting and proposed systems and assets, whether physical or virtual, the incapacity or destruction of which would negatively affect security, economic security, public health or safety, or any combination of those matters.

18 CFR § 388.113(c)(4). The design specifications and schematic drawings, maps and related information contained in the Company's Confidential Attachments and data request responses fall squarely within FERC's definition of CEII. Public dissemination of this information could pose a grave threat to public health and safety as it could be used to identify vulnerabilities in, and plan attacks against, natural gas transmission and distribution infrastructure. Under the Rhode Island Supreme Court's balancing test set forth in *Providence Journal v. Kane*, the public interest in access to this information is far outweighed by the threat to the public's health and safety that could result from public dissemination of these technical details concerning natural gas infrastructure.

IV. CONCLUSION

For the foregoing reasons, Rhode Island Energy respectfully requests that the PUC grant its Motion for Protective Treatment of the Company's Confidential Responses and Confidential Attachments. In accordance with Rule 1.3(H) the Company has submitted redacted versions of the Confidential Responses and Confidential Attachments for the public file in this matter and unredacted confidential versions subject to this motion for protective treatment.

Respectfully submitted,

**THE NARRAGANSETT ELECTRIC
COMPANY d/b/a RHODE ISLAND ENERGY**

By its attorney,



Jennifer Brooks Hutchinson (#6176)
Rhode Island Energy
280 Melrose Street
Providence, RI 02907
Tel. 401-316-7429
JHutchinson@pplweb.com



Steven J. Boyajian (#7263)
Robinson & Cole LLP
One Financial Plaza, 14th Floor
Providence, RI 02903
Tel. (401) 709-3300
Fax. (401) 709-3399
sboyajian@rc.com

Dated: December 21, 2023

December 7, 2023

VIA ELECTRONIC MAIL

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

RE: Rhode Island Energy's Proposed Fiscal Year 2025 Gas Infrastructure, Safety, and Reliability Plan
Responses to Data Requests – Division Set 1

Dear Ms. Massaro:

On behalf of The Narragansett Electric Company d/b/a Rhode Island Energy (“Rhode Island Energy” or the “Company”), enclosed are Rhode Island Energy’s responses to the Division of Public Utilities and Carriers’ (“Division”) First Set of Data Requests in the above-referenced matter.

Please be advised that the Company has identified the following responses in Division Set 1 as confidential: Attachments to DIV 1-2, which contain CEII, Division 1-12, Attachment DIV 1-16, which contains CEII, Division 1-17, Attachment DIV 1-17, which contains CEII, and Division 1-30. The Company is providing the confidential versions of these responses to the Division pursuant to the terms of the Standard Confidentiality and Non-disclosure Agreement between the Company and the Division, as amended November 14, 2023 by the Agreement to Amend Docket List to include the FY 2025 Gas Infrastructure, Safety and Reliability Plan.

The Company has an extension until December 11, 2023 for Division 1-5, Division 1-23, Division 1-26 and Division 1-35. Also, as requested, the Company will submit its response to Division 1-45 by February 15, 2024 in conjunction with its Quarterly Report Update ending December 31, 2023. Thus, those responses are pending. Please also note that there was a numbering issue with the data requests in this set and there was no question issued for Division 1-46 and Division 1-47. The Company has inserted slip pages in lieu of responses in this submission to maintain the same numerical order as issued.

Luly E. Massaro, Clerk
Gas ISR FY2025 – Responses to Division Set 1
December 7, 2023
Page 2 of 2

Thank you for your attention to this matter. If you have any questions, please contact me at 401-316-7429.

Very truly yours,



Jennifer Brooks Hutchinson

Enclosure

cc: Leo Wold, Esq.
John Bell, Division
Al Mancini, Division

December 11, 2023

VIA ELECTRONIC MAIL

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

RE: Rhode Island Energy's Proposed Fiscal Year 2025 Gas Infrastructure, Safety, and Reliability Plan
Responses to Data Requests – Division Set 1 - Second Submission

Dear Ms. Massaro:

On behalf of The Narragansett Electric Company d/b/a Rhode Island Energy (“Rhode Island Energy” or the “Company”), enclosed are Rhode Island Energy’s responses to the Division of Public Utilities and Carriers’ (“Division”) First Set of Data Requests in the above-referenced matter.

In this transmittal the Company is providing its responses to Division 1-5 and Division 1-23. Division 1-26 and Division 1-35 are still in progress and those responses are pending.

Please be advised that the Company has identified the following response as confidential: Attachment DIV 1-5-2, which contains CEII. Accordingly, the Company is providing the confidential version of this attachment to the Division pursuant to the terms of the Standard Confidentiality and Non-disclosure Agreement between the Company and the Division, as amended November 14, 2023 by the Agreement to Amend Docket List to include the FY 2025 Gas Infrastructure, Safety and Reliability Plan.

Thank you for your attention to this matter. If you have any questions, please contact me at 401-316-7429.

Very truly yours,



Jennifer Brooks Hutchinson

Enclosure

cc: Leo Wold, Esq.
John Bell, Division
Al Mancini, Division

Division 1-1

Request:

The Company will soon begin its proposed Automated Meter Functionality (AMF) program for its electric customers. Does the Company have any plans to initiate an AMF program for its gas customers? If so, will the gas meters that are being installed pending the implementation of the gas meter AMF plan be compatible with the new AMF technology? Please explain.

Response:

While the Company is awaiting the conclusion of the electric AMF deployment and the effects on the gas distribution business of the Future of Gas Docket before proposing a gas distribution AMF initiative, it has begun informal review and testing of technology upgrades such as ultrasonic meters and new models of ERT (“Encoder Receiver Transmitter”) compatible with a potential AMF program. Gas meters already in inventory as well as those planned for purchase prior to the implementation of such an AMF program could potentially be made compatible with AMF technology through the installation of new model ERTs and/or modifications to existing ERT models, which could then be implemented to preserve the useful life of these meters within an AMF environment. More review and testing are required to ascertain which advanced metering technologies will permit the adaptation of existing meters to an AMF environment, though the capabilities of the components reviewed thus far are promising.

Division 1-2

Request:

Please provide the following information for the Cumberland Hill Area Road Project (FY 2025 Gas ISR Plan Bates Page 22-23):

- a. A construction schedule for the Project;
- b. Project details including components of mains to be replaced;
- c. Itemize the major costs of the Project;
- d. Identify when the major costs for the Project have been and/or will be incurred relative to the construction schedule; and
- e. A site plan of the Project.

Response:

- a. The Cumberland Hill Road area is split into 3 separate projects:

wo#90000235961 – Cumberland Hill Road, WSO
wo#90000226114 – Park Place, WSO
wo#90000235779 – Hamlet Avenue Bridge, WSO

Work has commenced on the Park Place project and the Company plans to start work on the Cumberland Hill Road project prior to the end of FY2024. In FY2025, the Company plans to complete both work orders as well as the Hamlet Avenue Bridge project. Restoration and paving work will follow in FY2026.

- b. A summary of what will be installed and abandoned under all three projects combined by size and material can be found in Attachment DIV 1-2-1.
- c. The total project cost for the Cumberland Hill Road area (all three projects) is estimated to be \$7.86 million. The itemized breakdown of the cost estimates for the three projects is as follows:
wo#90000235961 – Cumberland Hill Road, WSO - \$3.22 million
wo#90000226114 – Park Place, WSO - \$2.80 million
wo#90000235779 – Hamlet Avenue Bridge, WSO - \$1.84 million
- d. The Company is planning to spend approximately \$1.0 million on the Cumberland Hill Road area in FY2024, approximately \$5.1 million in FY2025, and approximately \$1.7 million in FY2026 based on the construction schedule outlined in part a. of this response.

Division 1-2, page 2

- e. Please refer to Attachments DIV 1-2-2 through 1-2-5 for the overview maps of the three projects identified in part a. above.

Attachment DIV 1-2-1						
Installation		Abandonment				
	Material		Material			
Size (inches)	Plastic	Size (inches)	Bare Steel/Unprotected Coated Steel	Cast Iron	Protected Coated Steel	Plastic
2	3,470	2	1,115	0	160	500
3	-	3	330	970	0	25
4	1,735	4	0	1,065	0	1,340
6	0	6	1,130	2,040	0	0
8	2,535	8	1,065	2,345	540	790
12	9,835	12	9,510	175	0	0
Total	17,575	Total	13,150	6,595	700	2,655
		Total Abandonment	23,100			

Attachments DIV 1-2-2 through 1-2-5

REDACTED

Attachments DIV 1-2-2 through DIV 1-2-5 on Bates pages 6 through 9
contain Critical Energy Infrastructure Information ("CEII")

The Company's response to Division 1-3 begins on Bates page 10.

Division 1-3

Request:

Please explain how the Company differentiates between “Reactive Main Replacement – Leak Prone Pipe” projects and high priority “Proactive Main Replacement” projects.

Response:

Reactive Main Replacement projects are initiated in response to discovery of field conditions that warrant the immediate replacement of degraded leak prone pipe. These discoveries typically reveal conditions that are significantly worse than the risk score, if one has been calculated, for the pipe segments in question.

Proactive Main Replacement projects are initiated in response to leak activity on leak prone pipe segments. This leak activity, along with several other factors, is used to calculate a risk score for the segments in the scope of the project. The risk score for the project is a major factor in the prioritization of the project; however, these risk scores are not typically high enough on initial calculation to warrant immediate replacement. These projects are prioritized lower than Reactive Main Replacement projects.

Division 1-4

Request:

Please explain why the Low Pressure System Elimination (Proactive) Budget is denominated as a Mandated Program. Include in your discussion any risks associated with low-pressure systems?

Response:

The Low Pressure System Elimination (Proactive) budget is denominated as a mandated program due to its original purpose to replace low pressure areas prone to water intrusion. The associated budget was used for a proactive program targeting leak prone low pressure systems within flood planes that have been notorious for water intrusion in the past. In 2019, the name of the program was changed to Low Pressure System Elimination as a result of the Merrimac Valley incident, and the program was adapted to replace low pressure systems with high pressure systems, when feasible, to address safety concerns with no over pressure protection on low pressure systems.

In Docket No. PHMSA-2020-0025, PHMSA issued an alert to all low-pressure natural gas distribution system operators of the possibility of a failure of over pressure protection. *See Pipeline Safety: Overpressure Protection on Low-Pressure Natural Gas Distribution Systems*, 85 Fed. Reg. 61097 provided as Attachment DIV 1-4. The alert recommends that operators use a failure modes and effects analysis or **equivalent structured and systematic method to identify potential failures and take action to mitigate those identified failures**.

The Company scoped projects to be low pressure to high pressure replacements to eliminate low points or single feed low pressure systems as part of gas planning and reliability projects as well. This budget allows the Company to focus on the various concerns the legacy low pressure systems present, especially in an older system such as Rhode Island. Examples of these concerns are as follows:

- Majority of leak prone pipe is on the Low Pressure (LP) gas systems.
- More than half of the Company's regulator stations throughout the distribution system are for LP systems and require larger relief valves and three layer prefabricated stations for over pressure protection at the highest risk point of the system.
- There are no excessive flow valves on new plastic services on LP systems, nor are there service regulators as a second layer of over pressure protection to customers' houses.
- There is significantly lower line pack in LP systems (compared to high pressure systems) because it operates at 0.25 psig. Consequently, larger diameter mains are required to span

Division 1-4, page 2

longer distances and to serve lower use customers. This is a reason of concern and prompted recent analysis of electric outages during design winter conditions. When electric systems are restored after an outage, and gas appliances start simultaneously, for heat, water heat, cooking, drying, etc, there is a potential for LP system pressures to drop significantly. Extremities, low points, and unknown blockages in the older system could potentially lead to gas outages under these conditions.

- LP systems are susceptible to water intrusion which was the original driver for this program.
- There is minimal gas delivery pressure to customers that sometimes require a higher inlet pressure for more energy efficient appliances. These customers often need to install boosters to maintain a higher delivery pressure to these appliances including generators, tankless water heaters, combo units and similar equipment.
- The inefficiency of leak prone LP systems would be problematic for the distribution of alternative sources of energy, such as hydrogen blended gas, renewable gas, or others, because of the lower BTU content of these fuels. In order to deliver these fuels through the Company's distribution system as a potential pathway to address the mandates of the Act on Climate, the Company would need to advance LP system elimination.



on respondents, including the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Authority: The Paperwork Reduction Act of 1995; 44 U.S.C. Chapter 35, as amended; 49 CFR 1.49; and DOT Order 1351.29.

Chou-Lin Chou,

Associate Administrator, National Center for Statistics and Analysis.

[FR Doc. 2020–21417 Filed 9–28–20; 8:45 am]

BILLING CODE 4910–59–P

DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

[Docket No. PHMSA–2020–0025]

Pipeline Safety: Overpressure Protection on Low-Pressure Natural Gas Distribution Systems

AGENCY: Pipeline and Hazardous Materials Safety Administration (PHMSA), DOT.

ACTION: Notice; Issuance of advisory bulletin.

SUMMARY: The Pipeline and Hazardous Materials Safety Administration (PHMSA) is issuing this advisory bulletin to remind owners and operators of natural gas distribution pipelines of the possibility of failure due to an overpressurization on low-pressure distribution systems. PHMSA is also reminding such owners and operators of existing federal integrity management regulations for gas distribution systems.

ADDRESSES: PHMSA guidance, including the advisory bulletin, can be found on PHMSA’s website at <https://www.phmsa.dot.gov/guidance>.

FOR FURTHER INFORMATION CONTACT:

Technical Questions: Michael Thompson, Transportation Specialist, by phone at 503–883–3495 or by email at michael.thompson@dot.gov.

General Questions: Ashlin Bollacker, Technical Writer, by phone at 202–366–4203 or by email at ashlin.bollacker@dot.gov.

SUPPLEMENTARY INFORMATION:

I. Natural Gas Distribution Systems

Natural gas distribution systems deliver natural gas to customers for heating, cooking, and other domestic and industrial uses. A basic natural gas distribution system has four elements: (1) Mains that transport gas underground; (2) service lines that deliver natural gas from the main to the customer; (3) regulators that control the

pressure of gas to a designated value; and (4) meters that measure the quantity of natural gas used by each customer. Customer piping takes natural gas from the meter to the customer’s heating equipment and other appliances.

There are two types of natural gas distribution systems used to supply natural gas to the customer: High-pressure distribution systems and low-pressure distribution systems. In a high-pressure distribution system, the gas pressure in the main is higher than the pressure provided to the customer. A pressure regulator installed at each meter reduces the pressure from the main to a pressure that can be used by the customer’s equipment and appliances. These regulators incorporate an overpressure protection device to prevent overpressurization of the customer’s piping and appliances should the regulator fail. Additionally, as of April 14, 2017, all new or replaced service lines connected to a high-pressure distribution system must have excess flow valves. (§ 192.383).¹ Excess flow valves can reduce the risk of overpressurization in natural gas distribution pipelines by shutting off unplanned, excessive gas flows. Because each customer’s service line in a high-pressure distribution system is protected by an excess flow valve and a pressure regulator, it is highly unlikely that an overpressurization condition in the main would impact customers.

In a low-pressure natural gas distribution system, however, the natural gas in a distribution pipeline flows predominantly at the same pressure as the pressure contained within the customer’s service line piping. Natural gas is typically supplied to distribution pipeline mains from a high-pressure source that connects to, and flows through, a regulator station. The regulator station functions to reduce the pressure to a level that allows the gas to flow continuously at a low pressure all the way to premises of the customers where the gas is ultimately consumed. Since there are no regulators at the customer meter set in a low-pressure system, an overpressure condition occurring on the distribution system can affect all customers served by the system in the event that the regulator(s) that controls the pressure for the system fails. This scenario is

what happened in the September 13, 2018, accident in Merrimack Valley that prompted the subsequent National Transportation Safety Board (NTSB) report and recommendations.

II. CMA’s Accident in Merrimack Valley

A. Accident Synopsis

On September 13, 2018, a series of structure fires and explosions occurred after high-pressure natural gas entered a low-pressure natural gas distribution system operated by Columbia Gas of Massachusetts (CMA), a subsidiary of NiSource, Inc.² CMA delivers natural gas to about 325,000 customers in Massachusetts. According to an investigation of the accident conducted by the National Transportation Safety Board,³ the fires and explosions damaged 131 structures, including at least 5 homes that were destroyed in the city of Lawrence and the towns of Andover and North Andover. CMA shut down the low-pressure natural gas distribution system serving 10,894 customers, including some outside the affected area who had their service shut off as a precaution. An 18-year-old male was killed when a home exploded, and the house’s chimney fell onto the vehicle where he was sitting. Another person in the vehicle at the time of the explosion was seriously injured, as was someone on the second floor of the house. In total, 22 people, including 3 firefighters, were transported to hospitals for treatment of their injuries.

B. Background on CMA’s Natural Gas Main Replacement Project

The low-pressure natural gas distribution system in the Merrimack Valley was installed in the early 1900s and was constructed with cast iron mains. The system was designed with 14 regulator stations to control the pressure of natural gas entering the downstream distribution pipeline mains. Each regulator station contained two regulators in series—a “worker regulator” and a “monitor regulator”—each with a sensing line connected to a downstream section of main for the purpose of providing a pressure measurement back to the regulator station so that the system could be maintained at a specified pressure level of 0.5 pounds per square inch. The

¹ PHMSA published the final rule, “Pipeline Safety: Expanding the Use of Excess Flow Valves in Gas Distribution Systems to Applications Other Than Single-Family Residences,” on October 14, 2016, but delayed the effective date by six months to give operators time to comply with the new provisions. (81 FR 70987). A copy of this final rule is available in the docket PHMSA–2011–0009 at <https://www.regulations.gov>.

² CMA is expected to be officially transferred by NiSource, Inc., to Eversource Energy in November 2020.

³ “Pipeline Accident Report: Overpressurization of Natural Gas Distribution System, Explosions, and Fires in Merrimack Valley, Massachusetts; September 13, 2018.” The National Transportation Safety Board. Accident Report: NTSB/PAR–19/02. Adopted September 24, 2019.

“worker” regulator is the primary regulator that maintains the natural gas pressure, and the “monitor” regulator provides a redundant backup to the “worker” regulator. Each of the regulator stations reduced the natural gas pressure from about 75 pounds per square inch gauge (psig) to 12 inches of water column (w.c.), or about 0.5 psig, for distribution through the mains and delivery to customers.⁴

Beginning in 2016, CMA initiated an effort to replace 7,595 feet of low-pressure cast iron and bare steel mains with 4,845 feet of low-pressure and high-pressure polyethylene (plastic) mains. CMA contracted with Feeney Brothers, a pipeline services firm, to complete the replacement project. A work package, which included materials such as isometric drawings and procedural details for disconnecting and connecting pipes, was prepared for each of the planned construction activities. However, no package was prepared for the relocation of the Winthrop Avenue sensing lines serving the Winthrop Avenue regulator station.

The first stage of the project involved the installation of the plastic main, which was completed in late 2016. The regulator sensing lines at the Winthrop Avenue regulator station remained attached to the cast iron main that would ultimately be decommissioned.

CMA connected the plastic pipe to the distribution system, which allowed it to be monitored for pressure changes. The second stage of the project began in 2018 and involved the installation of tie-ins to the new plastic main, after which the legacy cast iron mains would be decommissioned and abandoned in their existing location. On the day of the accident, the sensing lines were still connected to the abandoned cast iron main.

At the Winthrop Avenue regulator station, about 0.5 mile south of the work area, the sensing lines connected to the abandoned cast iron mains continued providing data input to the two pressure regulators used to control the system pressure.⁵ Once the contractor crew isolated the cast iron main, the natural gas pressure began to drop in the cast iron main and the sensing lines continued to provide those readings to the regulator station. As the pressure dropped, the pressure regulators responded by opening further to inject more gas to into the downstream system to the newly installed plastic system.

⁴ In the pipeline industry, it is customary to measure anything less than 1 psig in inches of water column. A measurement of 1 inch w.c. equals 0.0361 psig.

⁵ Sensing lines are also called control lines or static lines.

Because there were no sensing lines connecting the regulator station to the newly installed plastic mains, the legacy sensing lines continued to provide “zero” pressure readings to Winthrop Avenue regulators, thereby causing them to fully open and provide a continuous flow of gas into the new low-pressure plastic system, resulting in an extreme overpressurization of the distribution system. This immediately resulted in multiple fires, explosions, and injuries.

C. National Transportation Safety Board (NTSB) Accident Investigation and Recommendations

Since the accident, the National Transportation Safety Board (NTSB) issued several safety recommendations. On November 14, 2018, NTSB recommended that the operator, NiSource Inc.:

- Revise the engineering plan and constructability review process across all of its subsidiaries to ensure that all applicable departments review construction documents for accuracy, completeness, and correctness, and that the documents or plans be sealed by a professional engineer prior to commencing work (P-18-6);
- Review and ensure that all records and documentation of its natural gas systems are traceable, reliable, and complete (P-18-7);
- Apply management of change process to all changes to adequately identify system threats that could result in a common mode failure (P-18-8); and
- Develop and implement control procedures during modifications to gas mains to mitigate the risks identified during management of change operations. Gas main pressures should be continually monitored during these modifications and assets should be placed at critical locations to immediately shut down the system if abnormal operations are detected (P-18-9).

In response, NiSource Inc. has taken actions that satisfied the NTSB’s recommendations, which are now classified as “Closed.”

On September 24, 2019, the National Transportation Safety Board (NTSB) issued its accident report and identified the probable cause of, and contributing factors to, CMA’s accident in Merrimack Valley. NTSB found that the probable cause of the accident was CMA’s weak engineering management that failed to adequately plan, review, sequence, and oversee the construction project that abandoned the cast iron main without first relocating the regulator sensing lines to the new plastic main. NTSB also

found that a contributing cause of the accident was a low-pressure natural gas distribution system that was designed and operated without adequate overpressure protection. As a result of its investigation, NTSB made several recommendations to NiSource, Inc., the Commonwealth of Massachusetts and several other States, and PHMSA. NTSB made two recommendations to PHMSA. The first (P-19-14) called for PHMSA to “revise Title 49 *Code of Federal Regulations* Part 192 to require overpressure protection for low-pressure natural gas distribution systems that cannot be defeated by a single operator error or equipment failure.” Having investigated multiple overpressurization accidents over the past 50 years, NTSB concluded that low-pressure natural gas distribution systems that use only sensing lines and regulators to detect and prevent overpressurization are not optimal to prevent overpressurization accidents.

NTSB’s second recommendation (P-19-15) called for PHMSA to “issue an alert to all low-pressure natural gas distribution system operators of the possibility of a failure of overpressure protection, and the alert should recommend that operators use a failure modes and effects analysis (FMEA) or equivalent structured and systematic method to identify potential failures and take action to mitigate those identified failures.” NTSB found that CMA’s constructability review⁶ process was not sufficiently robust to detect the omission of a work order to relocate the sensing lines; and that CMA’s engineering risk management processes were deficient. NTSB explained that for regulator sensing lines, CMA only considered excavation damage as a risk to be mitigated. NTSB concluded that a comprehensive and formal risk assessment, such as FMEA, would have identified the human error that caused the redundant regulators to open and over pressurize the low-pressure system.

In response to NTSB’s recommendation P-19-15, PHMSA is issuing this advisory bulletin to remind owners and operators of low-pressure natural gas distribution systems of the possibility of a failure of overpressure protection devices. Currently, there are Federal regulations in place that specify several minimum safety standards requiring operators to account for the possibility of overpressure events in the

⁶ “Constructability reviews” are a recognized and generally accepted good engineering practice commonly used for the execution of professional design services and are intended to provide an independent and structured review of construction plans and specifications to ensure there are no conflicts, errors, or omissions.

design and operation of their systems. Specifically, the Distribution Integrity Management Program (DIMP) regulations at 49 CFR 192.1005 require operators of natural gas distribution systems to develop and implement an integrity management program for pipelines they own, operate, or maintain. Under DIMP, operators must identify existing and potential threats to the integrity of their systems, and to rank the risks so that known issues can be evaluated by the risks they pose. PHMSA agrees with the NTSB that low-pressure distribution system operators need to be reminded of their obligation to identify all threats to their systems and take mitigative measures in accordance with the risks to their systems. The diversity of designs and operating conditions of those systems mean that the risks associated with overpressure conditions may be best managed by a combination of design elements and engineering practices tailored to the unique attributes and conditions of their specific systems that pipeline operators are best positioned to identify and implement. Therefore, PHMSA is reminding operators of low-pressure distribution systems of their existing obligations under the DIMP regulations to consider and implement such tailored approaches to mitigate or eliminate the risk of an overpressurization event.

D. Distribution Integrity Management Program Regulatory Provisions

PHMSA first adopted integrity management regulations for hazardous liquid pipelines in 2000, then for gas transmission pipelines in 2003. Subsequently, the Pipeline Integrity, Protection, Enforcement, and Safety Act of 2006 (PIPES Act of 2006; Pub. L. 109–468) mandated that PHMSA prescribe minimum safety standards to extend integrity management to gas distribution pipeline systems. The 2006 legislation directed PHMSA to require operators of distribution pipelines to identify and assess risks on their distribution lines, to remediate conditions that present a potential threat to pipeline integrity, and to monitor program effectiveness. In response to that mandate, PHMSA implemented new requirements in 49 CFR part 192, subpart P, that rely on operator-specific programs to improve the overall integrity of pipeline systems and reduce risk (74 FR 63905; December 4, 2009). PHMSA concluded that this performance-based approach was a more effective method for improving pipeline system safety—given the diversity of distribution systems and the particular threats to which different systems may each be exposed—than

imposing a “one-size-fits-all” prescriptive requirement.

The DIMP regulations require operators of natural gas distribution systems to develop, write, and implement an integrity management program for pipelines they own, operate, or maintain. An integrity management plan is a written set of policies and procedures that each operator must develop and implement to ensure compliance. Pursuant to § 192.1007,⁷ an integrity management plan must include procedures for implementing the following elements:

- Periodically assess and improve the integrity management program; and
- Report performance results to PHMSA and, where applicable, also to state public utility commissions.

a. *Knowledge (192.1007(a))*. This section requires an operator to develop an understanding of its distribution pipeline. An operator must identify the characteristics of its pipeline’s design and operations, and of the environment in which it operates, which are necessary to assess applicable threats and risks. This must include considering information gained from past design, operations, and maintenance. This section further requires that operators develop their understanding from reasonably available information. Operators have considerable knowledge of their pipeline to support routine operations and maintenance, but this information may be distributed throughout the company, in possession of groups responsible for individual functions. Operators must assemble this information to the extent necessary to support the development and implementation of their IM program.

PHMSA recognizes that there may be gaps in the knowledge an operator possesses when it develops its initial IM plan. Operators must identify these gaps and the additional information needed to improve their understanding. Operators are required to provide a plan for gaining that information over time through the normal activities of operating and maintaining pipeline systems (e.g., collecting information about underlying components when portions of the pipeline must be excavated for other reasons). Operators must also develop a process by which the program will be periodically reviewed and refined, as needed.

b. *Identify threats (§ 192.1007(b))*. Identification of the threats that affect, or could potentially affect, a distribution pipeline remains critical to ensuring integrity. Knowledge of applicable threats allows operators to evaluate the safety risks they pose and to rank those risks, allowing safety resources to be applied where they will be most effective. This section requires that operators consider the general categories of threats that must be reported on annual reports. Operators are required to consider reasonably available information to identify threats that affect their pipeline or that could potentially affect it (e.g., landslides in a hilly area with loose soils even if no landslide has been experienced). The section specifies that operators should minimally consider data sources resulting from normal operation and maintenance in evaluating threats.

c. *Evaluate and rank risk (192.1007(c))*. This section requires that an operator evaluate the identified threats to determine their relative importance and rank the risks associated with its pipeline. Operators must consider the likelihood of threats and the consequences of a failure that might result from each threat. Consideration of consequences is important to help ensure that risks are properly ranked. A potential accident of relatively low probability but that would produce significant consequences should be considered to be of higher risk than an accident with somewhat greater likelihood, but one that is not expected to produce major consequences.

d. *Identify and implement measures to address risks (§ 192.1007(d))*. This section requires operators to determine and implement measures designed to reduce the risk of failure of gas distribution pipeline systems.

e. *Measure performance, monitor results, and evaluate effectiveness (§ 192.1007(e))*. This section requires operators to develop performance measures, including some that are specified for use by all operators. Measuring performance periodically enables operators to determine whether actions being taken to address threats are effective, or whether different or additional actions are needed. An operator must also periodically re-evaluate the threats and risks to its gas distribution pipeline.

f. *Periodic evaluation and improvement (§ 192.1007(f))*. This section requires operators to re-evaluate risks across the entire pipeline system periodically and to consider the relevance of threats in one specific location as compared to other locations.

⁷ “Pipeline Safety: Integrity Management Program for Gas Distribution Pipelines.” Final Rule. (74 FR 63905; Dec. 4, 2009). <https://www.federalregister.gov/documents/2009/12/04/E9-28467/pipeline-safety-integrity-management-program-for-gas-distribution-pipelines#h-22>

Operators must consider the results of their performance monitoring in these evaluations, which must be performed at least once every five years. An operator must determine an appropriate period for conducting a complete program evaluation based on the complexity of its system. An operator should conduct a program evaluation any time there are changes in factors that would increase the risk associated with a failure.

While DIMP regulations have been in place since 2009, some operators may not be sufficiently aware of their pipeline attributes, nor adequately or consistently assessing threats as part of their DIMP programs. Early in the investigation, NTSB determined that several of NiSource's engineering processes were deficient. For example, the NTSB found that CMA's inadequate planning, documentation, and recordkeeping processes led to the omission of the relocation of sensing lines during a construction project. Further, NTSB found that CMA's constructability review process was not sufficiently robust to detect the omission of a work order to relocate sensing lines. It was the abandonment of the cast iron main without first relocating the sensing lines that led directly to the accident. Thus, it is necessary to identify and evaluate the physical and operational characteristics of each pipeline system to evaluate risks adequately. It is also important that an operator focus its DIMP on identifying the conditions that can cause failures and address them before a failure occurs. Therefore, PHMSA is reminding owners and operators of their continuing obligation to comply with DIMP regulations and is alerting operators that PHMSA considers the possibility of an overpressure protection failure to be a high-risk threat. PHMSA reminds operators of low-pressure systems that they must consider reasonably available information about possible threats to their gas distribution system, including such sources as the NTSB report, industry publications, and this advisory bulletin.

As part of the DIMP plans, PHMSA recommends that operators enhance their processes and procedures by including a failure modes and effects analysis, or equivalent structured and systematic method of risk analysis. Including a failure mode and effect analysis or equivalent methodology can help identify and mitigate the possibility of an overpressure failure event. PHMSA also urges operators to develop and implement procedures for construction-related work that are specific to low-pressure distribution

systems, such as repairs, uprates in pressure, or replacement of pipeline or pressure regulation facilities.

II. Advisory Bulletin (ADB-2020-02)

To: Owners and Operators of Natural Gas Distribution Systems

Subject: Overpressure Protection on Low-pressure Natural Gas Distribution Systems.

Advisory: PHMSA is reminding all owners and operators of low-pressure natural gas distribution systems of the risk of failure of overpressure protection systems. This advisory bulletin is intended to clarify for the public existing pipeline safety standards and highlight the importance of evaluating and implementing overpressure protection design elements and operational practices within their compliance programs. The contents of this advisory bulletin do not have the force and effect of law. They are not meant to bind the public in any way, even as pipeline owners and operators must comply with the underlying safety standards.

PHMSA encourages operators to review the NTSB's Pipeline Accident Report concerning Columbia Gas of Massachusetts' (CMA) overpressurization event in the Merrimack Valley on September 13, 2018. It may be instructive regarding a host of potential safety problems that operators of low-pressure natural gas distribution systems may need to address. A copy of NTSB's accident report is contained within Docket No. PHMSA-2020-0025 for this advisory bulletin.

PHMSA also reminds pipeline operators of their obligations to comply with the gas DIMP regulations at 49 CFR part 192, subpart P. Under DIMP, gas distribution operators must have knowledge of their pipeline systems; identify threats to their systems; evaluate and rank risks; and identify, evaluate, and implement measures to address those risks. CMA's accident in Massachusetts highlights the need for operators of low-pressure systems to review thoroughly their current DIMP for the threat of overpressurization and to make any necessary changes or modifications to become fully compliant with the Federal Pipeline Safety Regulations (§ 192.1007(f)).

Written Procedures (§ 192.1005)

Developing and implementing comprehensive written procedures with sufficient specificity is one of the most effective ways to prevent overpressurization of a low-pressure gas system. Therefore, PHMSA reminds operators of low-pressure systems to

review their written integrity management plans to help ensure that they comply with § 192.1005 and to ensure that they specifically address the risk of an overpressurization event. PHMSA further recommends, in addition to having procedures for operations, maintenance, and emergencies (§ 192.605), that operators develop written procedures for all activities involving new construction or pipe replacement projects for low-pressure distribution systems. PHMSA recommends that these procedures account for the additional precautions needed to protect those systems from an overpressurization event. These procedures should include:

- Clear roles and responsibilities across all departments involved in the planning and execution of construction or pipe replacement projects;
- Description and delineated scope of work to be conducted, with a materials list, necessary schematics, and maps of the location of the work;
- Requirements to review and ensure that all records and documentation of the affected gas system(s) are traceable, reliable, and complete;
- The sequential process of how the work is to be carried out and who or what group is responsible for each step;
- Application of a "management of change" process to identify all changes that could threaten system integrity, particularly where there is a risk emanating from a common mode of failure, including a list of individuals and groups necessary for review along with their comment and approval before work commences; and
- Implement a review process sufficiently robust to detect the omission of critical process and procedural steps that could prevent possible overpressurization events.

Knowledge of Distribution System (§ 192.1007(a))

PHMSA reminds operators that they are required to develop procedures in their DIMP that demonstrate an understanding of their gas distribution systems (§ 192.1007(a)). An operator must identify the characteristics of its pipeline design and operations, and of the environment in which it operates, in the process of assessing applicable threats and risks. Section 192.1007(a) requires that operators develop their understanding from reasonably available information. This must include information gained from past design, operations, and maintenance. If an operator acquires a pipeline and the historical records were not obtained or are not reasonably available, the records do not need to be re-created. However,

operators must assemble this information to the extent necessary to support the development and implementation of their integrity management programs. Underlying procedures must also identify additional information necessary to improve their understanding and provide a plan for gaining that information over time through the normal activities of operating and maintaining pipeline systems (e.g., collecting information about buried components when portions of the pipeline must be excavated for other reasons). Operators must also develop a process by which the program will be periodically reviewed and refined, as needed. The outcome of the process should be that all affected departments of an operator's organization are aware of any planned construction work, have had the opportunity to review and provide comments on potential failure modes and to adopt a process for providing final approval of construction procedures.

Identifying Threats and Ranking Risk (§ 192.1007(b)-(c))

PHMSA reminds operators of their obligation under DIMP regulations (part 192, subpart P) to consider available information when identifying all potential and existing threats to the integrity of their systems (§ 192.1007(b)). In accordance with § 192.1007(b), operators are required to consider seven specific threats, including equipment failure and incorrect operation. Further, PHMSA reminds operators to evaluate the risks associated with their distribution pipelines, determine the relative importance of each threat, and rank the risks posed to their pipeline systems (§ 192.1007(c)). PHMSA reminds operators that consideration of consequences is important to help ensure that risks are properly ranked. A potential accident of relatively low likelihood but one that would produce significant consequences may be a higher risk than an accident with somewhat greater likelihood, but one that is not expected to produce major consequences.

Given the catastrophic consequences of the Merrimack Valley accident, PHMSA considers the possibility of an overpressure protection system failure to be a high-risk threat for low-pressure distribution systems where there are not adequate provisions to protect such systems. Therefore, PHMSA recommends that operators consider the single point of failure that could lead to an overpressurization of a low-pressure system as a high-risk threat and to

review and adjust their DIMP plans accordingly. NTSB's Pipeline Accident Report sufficiently documents the occurrence of overpressurization of low-pressure distribution systems such that the threat of overpressurization should be considered a real and present threat. If the threat of overpressurization of low-pressure distribution systems is not considered an existing threat by an operator, justification for the elimination of this threat from consideration should be documented.

In performing a risk analysis required by DIMP (§ 192.1007), PHMSA recommends operators use a failure modes and effectiveness analysis (FMEA) model or an equivalent structured and systematic method to identify and mitigate risks. Failure modes and effects analysis (FMEA) is a generally accepted and recognized engineering practice used to identify and assess potential failures, including common mode failures. As NTSB concluded, a comprehensive and formal risk assessment, such as FMEA, would have identified the human error that caused the redundant regulators to open and over-pressurize the low-pressure system. Operators may already be leveraging FMEA or other similarly robust methodologies to perform the risk analysis and should continue to do so. PHMSA recommends that operators consider adopting FMEA or another qualitative tool that may help to identify possible failures or consequences of those failures that would not be identified otherwise.

Identify and Implement Measures To Address Risk (§ 192.1007(d))

PHMSA reminds operators that they must determine and implement measures designed to reduce the risk of failure on their pipeline systems (§ 192.1007(d)). If additional actions have not been taken to reduce risks, justification should be documented (e.g., current overpressure protection design was determined to be sufficient; risks were deemed to be low).

There are several ways that operators can protect low-pressure distribution systems from overpressure events. Some notable examples include:

- Installing a full-capacity relief valve downstream of the low-pressure regulator station, including in applications where there is only worker-monitor pressure control;
- Installing a "slam shut" device;
- Using telemetered pressure recordings at district regulator stations to signal failures immediately to operators at control centers; and

- Completely and accurately documenting the location for all control (i.e., sensing) lines on the system.

Measure Performance, Monitor Results, and Evaluate Effectiveness (§ 192.1007(e))

PHMSA reminds operators that they must monitor performance measures from an established baseline to evaluate the effectiveness of DIMP (§ 192.1007(e)). Section 192.1007(e)(vi) requires that these performance measures include any additional measures determined necessary to control identified threats. PHMSA reminds operators to modify their DIMP as appropriate, considering the potential failure of overpressure protection systems as a high-risk threat.

Issued in Washington, DC, on September 24, 2020, under authority delegated in 49 CFR 1.97.

Alan K. Mayberry,
Associate Administrator for Pipeline Safety.

[FR Doc. 2020-21508 Filed 9-28-20; 8:45 am]

BILLING CODE 4910-60-P

DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

[Docket No. PHMSA-2020-0115]

Pipeline Safety: Inside Meters and Regulators

AGENCY: Pipeline and Hazardous Materials Safety Administration (PHMSA); DOT.

ACTION: Notice; issuance of advisory bulletin.

SUMMARY: PHMSA is issuing this advisory bulletin to alert owners and operators of natural gas distribution pipelines to the consequences of failures of inside meters and regulators. PHMSA is also reminding operators of existing Federal regulations covering the installation and maintenance of inside meter and regulators, including the integrity management regulations for distribution systems to reduce the risks associated with failures of inside meter and regulator installations.

ADDRESSES: PHMSA guidance, including this advisory bulletin, can be found on PHMSA's website at <https://www.phmsa.dot.gov/guidance>. You may also view this advisory bulletin and related documents at <http://www.regulations.gov>.

FOR FURTHER INFORMATION CONTACT:

Technical Questions: Michael Thompson, Transportation Specialist, by phone at 503-883-3495.

Division 1-5

Request:

Please provide the following information regarding the Low Pressure System Elimination (Proactive) program:

- a. An explanation as to why the program budget increased from \$1.300 M in the FY 2024 budget to \$6.552 M in the FY 2025 budget;
- b. An update on current FY 2024 projects including construction progress and costs;
- c. Construction details and the estimated cost for each project proposed in the FY 2025 budget; and
- d. A site plan for each proposed project.

Response:

- a. The Low Pressure System Elimination (Proactive) budget increased from \$1.300 million in FY2024 to \$6.552 million in FY2025 because management for the asset group has changed from Main and Service Replacement (Integrity, LPP replacement program) to Planning & Ops Engineering (Reliability) and, with that change, the Company has begun to scope projects so that replacement of main (including through Proactive Main Replacement and Public Works) will occur in coordination with conversions of low pressure systems to high pressure. The projects within the Low Pressure System Elimination program are all related to other work scopes and allow an area to move from a low pressure system to a high pressure system without jeopardizing the integrity/reliability of either the low or high pressure system in that area. This coordination between main replacement and low pressure system elimination allows the Company to target high risk leak prone pipe while also achieving safety and reliability benefits from low pressure system elimination. Low pressure to high pressure conversion adds over pressure protection at all services, and also sheds load on the low pressure system which helps maintain healthier pressure to the existing customers on the low pressure system. There is no additional burden on the high pressure system from doing this because the high pressure system is already carrying the gas that is serving the low pressure system.
- b. The FY2024 Low Pressure System Elimination program targets the single feed Middletown Low Pressure system with the goal of eliminating the single feed and upgrading the area to the high pressure system by connecting to the high pressure main that fed the low pressure regulator station. There are three phases of projects associated with this single feed elimination. Phase 1 is complete and was sponsored under the Public Works budget due to encroachments and paving. Phase 2, "Tuckerman Ave," involves installing new high pressure gas main within the associated scope area to

Division 1-5, page 2

transfer or relay the low pressure services to the new high pressure main. This project was put on hold until after Labor Day per the request of the town, and then later required some redesigns of the temporary regulator station. These circumstances will cause the project to carryover into FY2025. Phase 3 will also be completed in FY2025 thus finalizing the overall project scope of abandoning the low pressure system in Middletown. Phase 3 consists of the remaining low pressure to high pressure main replacement required to transfer the rest of the low pressure customers off the low pressure system to allow for the final abandonment of the low pressure system and the low pressure regulator station that serves it.

- c. There are nine projects in the FY2025 proposal. One project (Tuckerman Ave, Middletown) is a carryover FY2024 project as explained above. Two projects (Social St WSO, Morton St JOH) are only provisionally part of the FY2025 plan and are included in case the Company is able to complete other projects planned ahead of them or needs to backfill work due to planned projects not being advanced. Please see Attachment DIV 1-5-1 for a project list and a description of the construction details and estimated costs.
- d. Please see Attachment DIV 1-5-2 for the requested site plans.

RI Energy LP Elimination– DIV 1-5-1

FY Project	WO #	Related WO#s	Town	Street	Installation Miles	Abandonment Miles	# of Services	FY24 Forecast	FY25 Proposed Budget	FY26 (Carryover from FY25)	Total Cost Estimate	
Carryover FY24	90000221104	90000239809	MDT	Tuckerman	1.6	1.6	112	\$0.80	\$0.76	N/A	\$1.56	
FY25	90000229980	90000221104	MDT	Wolcott	2.0	2.1	125	N/A	\$1.29	\$0.80	\$2.08	
FY25	90000239809	MSR 90000214976	PVD	Charles	0.9	0.6	207	N/A	\$0.80	\$0.20	\$1.00	
FY25	90000235353	Reliability 90000180671 (FY24),MSR 90000226113 (FY25),MSR 90000236076 (FY25),	WSO	Privilege St	2.0	2.0	175	N/A	\$1.60	\$0.40	\$2.00	
FY25	90000237699	MSR 90000236254, FY25	NPV	Tiffany	1.5	1.5	148	N/A	\$1.52	\$0.40	\$1.90	
FY25	90000234969	MSR 90000235508	WSO	East St	0.3	0.3	15	N/A	\$0.35	\$0.10	\$0.44	
FY25	90000235554	MSR 90000235508	WSO	Mitris	0.3	0.3	14	N/A	\$0.23	\$0.10	\$0.29	
FY25 Backup, FY26	90000238318	MSR 90000237914	JOH	Morton St	0.7	0.7	43	N/A	FY25 Backup Project Planned for FY26	\$0.62	\$1.01	
FY25 Backup, FY26	90000239843	MSR 90000226113	WSO	Social St	1.7	1.7	241	N/A	FY25 Backup Project Planned for FY26	\$1.86	\$3.00	
									FY25 Budget	\$6.56		

Attachments DIV 1-5-2

REDACTED

Attachments DIV 1-5-2 on Bates pages 22 through 31 contains Critical Energy Infrastructure Information ("CEII")

The Company's response to Division 1-6 begins on Bates page 32.

Division 1-6

Request:

Has the Company performed a Benefit Cost Analysis on any project where a low pressure system is eliminated and converted to a high pressure system as opposed to leaving the low pressure system in place and continue to replace the remaining leak prone pipe? If so, please provide that analysis or report.

Response:

The Company has not performed a benefit cost analysis on a specific project that has been converted to high pressure. The Company has been executing low pressure (“LP”) to high pressure (“HP”) projects for many years, and the Company intends to continue to do so at a pace that exceeds historical practice for reasons of cost, safety, and reliability.

Below is a high level, hypothetical scenario using a standard cost estimating tool:

- **Basis:** 1,000 feet of existing low pressure cast iron main to 25 customers.
- **Cost for low pressure relay:** 6” PL LP main – \$529,600
- **Cost for high pressure relay:** 2” PL 60 psig main - Approx \$348,500

In addition to the favorable cost differential for main installation, the main installation is easier and faster and, therefore, less taxing on Company resources. Additional cost savings are realized through conversion to high pressure due to abandonment of a low pressure regulator station(s) as the low pressure system is replaced with high pressure.

There are additional benefits in the form of avoided Operations and Maintenance (“O&M”) costs since low to high pressure conversion reduces the risks and potential costs of customer outages, reduces the number of poor pressure investigations, and eliminates the need to pump drips from water intrusion and adjust regulator station set pressure from summer to winter settings.

With respect to safety and reliability, the risk of over-pressurization, which is a worst case scenario for a low pressure system, is also eliminated. A low pressure gas system requires larger diameter main, more regulator stations within an area to feed customers, more telemetry points to monitor the system, and more operational oversight to change the regulator set pressure from winter to summer conditions. Despite these added complications, there is no over-pressure protection at individual customer services and over-pressure protection can only be found at relief valves installed in the system or at low pressure regulator stations. By way of example in East Providence, there is a 25 psig system from Riverside that runs to Barrington and is fed by

Division 1-6, page 2

three regulator stations. This portion of the system serves approximately 7,750 customers with an average size main of 2". The Bristol LP system has 3 regulator stations and feeds approximately 2,150 customers with the average size main of 6". A 25 psig system, such as that running from Riverside to Barrington, can have excess flow valves installed at all services up to 2", and have regulators as another layer of over pressure protection. The low pressure customers on the Bristol LP system only have over pressure protection at the 3 regulator stations.

Additional safety and reliability benefits of low pressure to high pressure conversion are discussed in the Company's response to data request Division 1-4.

Further, certain customer appliances have higher efficiency when equipment has proper inlet pressure, with a regulated service they have a standard 7" water column delivery. Customers served by the low pressure system will receive whatever pressure is present in the street with a minimum of 4" water column at the customer meter.

It is important to highlight that some low pressure to high pressure projects will require a larger diameter main installation to act as the trunk line to a low pressure area. Such a line is required to provide the necessary capacity to allow all laterals to convert to high pressure, and eventually be integrated with a larger network.

Division 1-7

Request:

Why is \$6.69 M in incremental funding forecasted for “Main Replacement (Mandated) – Leak Prone Pipe (PHMSA) for the PHMSA Rules Contingency Plan” (FY 2025 Gas ISR Plan Bates Page 24) but Table 1 (FY 2025 Gas ISR Plan Bates Page 52) reflects a forecast of \$6.589 M for the same category?

Response:

The dollar value of \$6.589 million on Table 1 (Bates Page 52) is correct. The dollar value on Bates Page 24 should have been \$6.59 million, not \$6.69 million. The full sentence on Bates Page 24 should have read as follows:

*“Additionally, the Company has forecasted **\$6.59** million of incremental funding for Mandated Reactive Main Replacement – Leak Prone Pipe (PHMSA) for the PHMSA Rules Contingency Plan, but this funding is not included in the revenue requirement for the FY2025 Plan.”*

Division 1-8

Request:

How many additional miles of leak prone main abandonment are associated with the additional funding (\$6.69 M or \$6.589 M) for the “Main Replacement (Mandated) – Leak Prone Pipe (PHMSA)”?

Response:

The \$6.589 million proposed for the Main Replacement (Mandated) – Leak Prone Pipe (PHMSA) category is estimated to produce an additional 4 miles of leak prone pipe abandonment.

Division 1-9

Request:

Regarding PHMSA’s NPRM Concerning Pipeline Leak Detection and Repair, kindly provide the basis for the Company’s statement that “It is expected that some version of these new rules will take effect within the FY 2025 ISR fiscal year” (FY 2025 Gas ISR Plan Pages 48).

Response:

As a member of the Northeast Gas Association and American Gas Association, the Company is actively engaged in industry discussions and formal workshops hosted by the trade associations focused on PHMSA’s Notice of Proposed Rulemaking: Gas Pipeline Leak Detection and Repair. The anticipated timeline has been discussed several times within those forums. As of October 2023, Rhode Island Energy’s understanding is that PHMSA has placed a high priority on getting a final version of the proposed rule published in the Federal Register by mid-May 2024 with a goal of having a final rule passed at least 60 congressional days prior to the November 2024 election to avoid later review or nullification due to political transitions.

Division 1-10

Request:

Please explain more specifically what the Company means by the statement that “it be authorized to recover any in-service costs incurred for this program in FY 2025 through the reconciliation process” (FY 2025 Gas ISR Plan Pages 48).

Response:

The Company anticipates that some version of the new rules in PHMSA’s Notice of Proposed Rulemaking (“NPRM”) Concerning Gas Pipeline Leak Detection and Repair (“LDAR”) will take effect within the FY2025 Gas ISR fiscal year. Although the actual extent and requirements of these new rules is unknown, the Company has begun modeling initial workplans to comply with the proposed rules as currently written and the FY2025 proposed funding for the Company’s PHMSA Rules Contingency Plan will enable the Company to begin implementing the contingency plan as soon as the PHMSA rules take effect during FY2025.

The Company has calculated a FY2025 budget of \$10.789 million to implement the Company’s PHMSA Rules Contingency Plan, which would result in FY2025 Projected Capital Additions Placed In-Service totaling \$7.443 million. The Company is seeking authorization to spend the budget of \$10.789 million if and when the new PHMSA LDAR rules take effect in FY2025. However, because the new rules are not yet in effect and thus, there is some level of uncertainty what the rule requirements and/or timelines will be, the Company is proposing to exclude the Projected Capital Additions Placed In-Service, totaling \$7.443 million, from the initial FY2025 ratemaking calculation. Instead, if the new PHMSA LDAR rules become final during FY2025, and the Company spends approximately \$10.789 million which results in capital additions placed in-service of approximately \$7.443 million, the Company would seek recovery of the \$7.443 million of capital additions during the FY2025 Gas ISR Reconciliation process.

In summary, the Company is not proposing to collect funding for the Company’s PHMSA Rules Contingency Plan in the initial FY2025 gas rates because the draft rules have not become final. However, the Company needs the flexibility to begin addressing the new rules as soon as they become final and having pre-authorization for the \$10.789 million will allow the Company to do that.

Division 1-11

Request:

Please explain how the Company arrived at the amounts the Company is budgeting for its PHMSA Gas Pipeline Leak Detection and Repair Contingency Plan, *i.e.*, \$4.00 M for Reactive Leaks, \$6.59 M for Proactive Main Replacement, and \$.20 M for Capital Tools and Equipment (FY 2025 Gas ISR Plan Bates Page 52).

Response:

The Company forecasts that PHMSA requirements would increase the work required to be performed starting in the third quarter of FY2025. The cost estimates are derived from the baseline of work for that same period (second half of FY2025), increased by the following factors:

1. Reactive Leaks – Cast Iron Joint Encapsulation - 100%
 - Assumes the volume of Leak Repairs will double.
2. Reactive Main Replacement – 25%
 - Assumes an additional 4 miles of Leak Prone Pipe replacement under Reactive Main Replacement.
3. Capital Tools and Equipment – 35%
 - To fund the purchase of any new tools or equipment requirements associated with PHMSA rules, assuming they are passed during FY2025 (*i.e.* enhanced capabilities from what the Company currently has or additional units of existing equipment that will be needed based on frequency of use). An example of an equipment or tool would be additional or enhanced Combustible Gas Indicators (“CGI’s”).

Redacted
Division 1-12

Request:

Please provide the following information for the Scott Road Take Station Project (FY 2025 Gas ISR Plan Bates Page 26):

- a. An updated construction schedule for the Project;
- b. A description of the Project;
- c. Itemize the major costs of the Project;
- d. Identify when the major costs for the Project that have been and/or will be incurred relative to the construction schedule; and
- e. A site plan of the Project.

Response:

- a. The Scott Road Gate Station design will be finished by December 2023. Materials will be ordered and delivered by May 2024; however, there is uncertainty around the fiscal year in which long lead time items will be received (some are forecasted to arrive in FY2024, others in FY2025). This timing uncertainty may result in budget variances if items arrive in a different year than forecasted. Construction of the new station will begin in May 2024 and be completed by December 2024 (FY2025). The demolition of the existing station as well as abandonment of the existing piping will begin in April 2025 and be completed by June 2025 (FY2026).
- b. The existing Scott Road Gate Station is located at 68 Scott Road in Cumberland, Rhode Island. The station was constructed in 1960 and is fed by Kinder Morgan. It has an inlet maximum allowable operating pressure of 912 PSIG and an outlet pressure of 99 PSIG. The existing station has two layers of over pressure protection and does not have traceable, verifiable, and complete records. The new station will be constructed by installing approximately 300 feet of new 12" inlet piping and 500 feet of new 16" outlet piping to feed the 99 PSIG distribution system. The new Gate Station will have a new regulator building with dual runs, three layers of overpressure protection, a new communications building, and a new hydronic heating system. This project will remediate the missing records concerns as well as asset health concerns including condition and performance.

The Narragansett Electric Company
d/b/a Rhode Island Energy

In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Redacted
Division 1-12, page 2

c. Cost Estimate

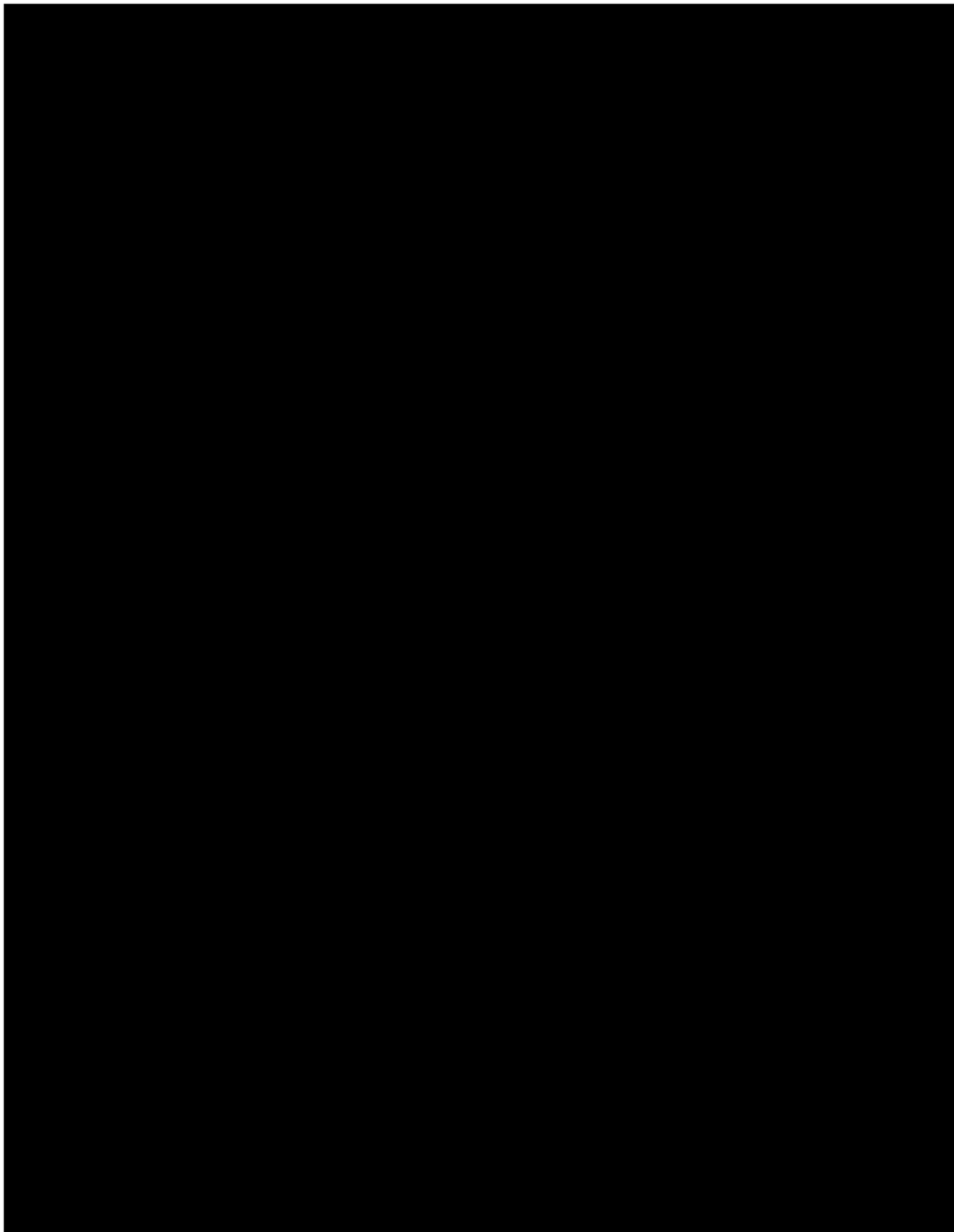
Cost Type	Estimated Cost (\$M)
[Redacted]	
Total	\$10.102

d. Cost vs Construction Schedule

\$(millions)	Pre-FY24	FY24 Incurred	FY24 Remaining	FY25 Projected	FY26	Total
[Redacted]						
	\$0.519	\$0.805	\$0.881	\$5.535	\$0.678	\$8.418
Contingency (20%)						\$1.684
Total						\$10.102

Redacted
Division 1-12, page 3

e. Site Plan
Existing Conditions with Proposed Overview



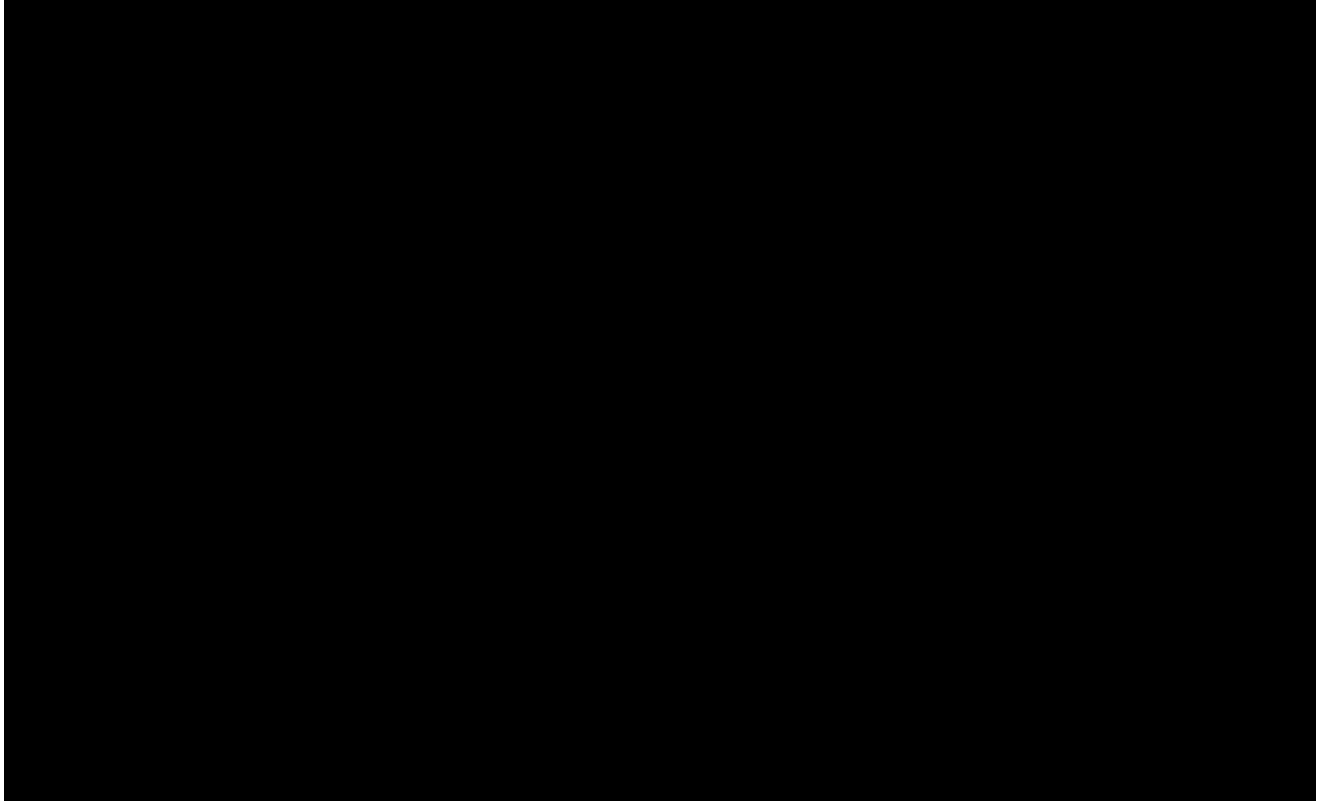
New Station (A)

New Outlet Piping (B)

New Inlet Piping (C)

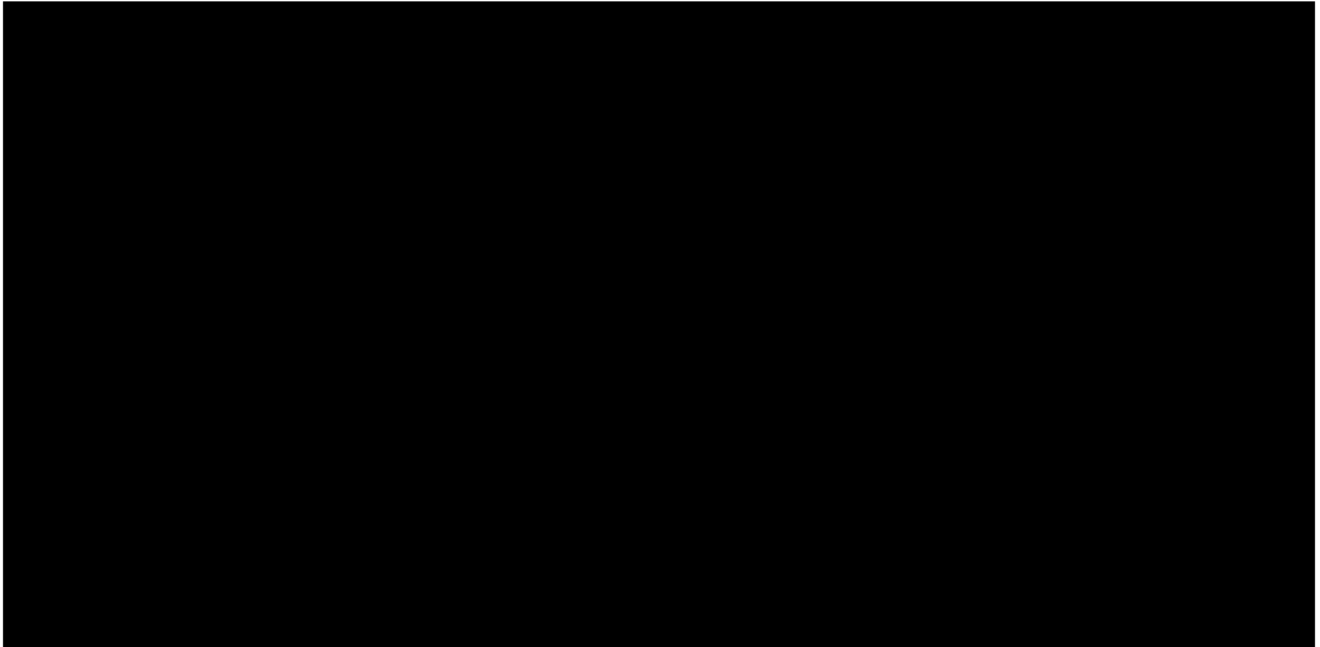
Redacted
Division 1-12, page 4

New Station

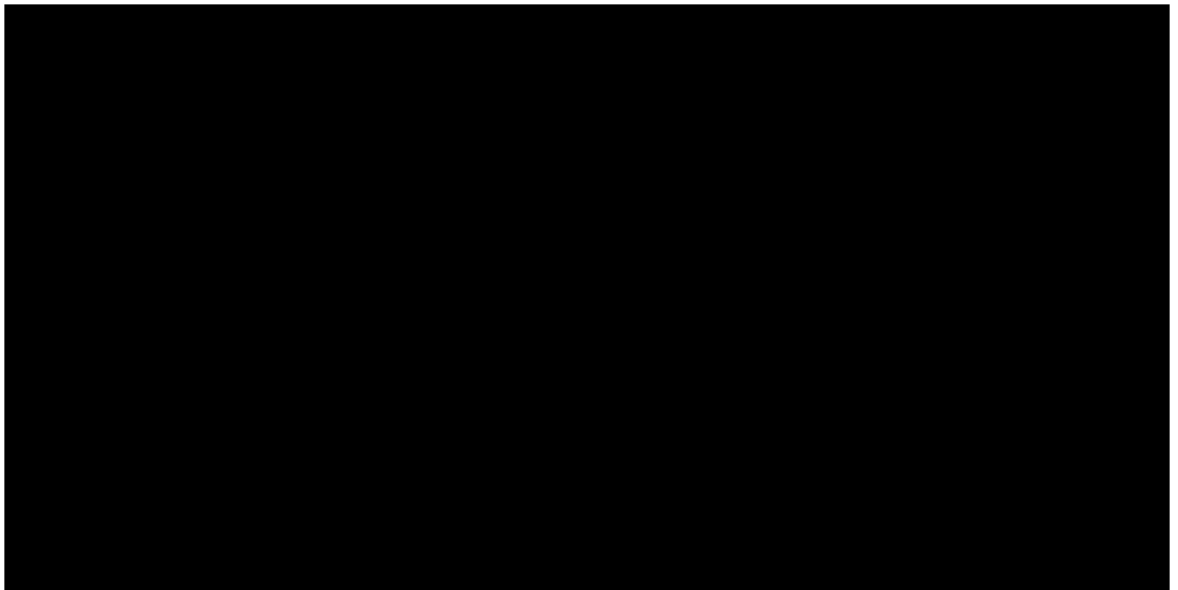


Redacted
Division 1-12, page 5

Inlet Tie In



Outlet Tie-in



Division 1-13

Request:

Please provide an explanation of the “criticality” of the Wampanoag Trail Gate Station to RIE’s distribution system (FY 2025 Gas ISR Plan Bates Page 26). In your discussion, kindly discuss why the age of this facility necessitates the replacement of the station.

Response:

“Criticality” describes the potential consequence of an asset failure and is based on the number of systems and, therefore, customers that are fed by the gate station. The Wampanoag Trail Gate Station is the only gate station upstream of the East Shore 99 PSIG system in Barrington, the East Providence 25 PSIG system, and the Providence 200 PSIG system. It is also a major contributor to the Rhode Island 99 PSIG system which is the major feeder line between several city gate stations and downstream pressure systems throughout the territory. In total, this accounts for gas for approximately 65,000 customers during peak flow. The age of the station at 36 years old as well as piping at the facility, without traceable, verifiable, and complete records, that is believed to be from 1953 do not by themselves necessitate replacement. However, there are additional project drivers including failure history, not having ownership of three layers of overpressure protection, and not having pressure control, when combined with the age, lack of records, and customer count, led to the Company’s decision to replace the station.

Division 1-14

Request:

Please provide an updated risk ranking of the 12 of 24 transmission stations discussed on Bates page 25-26 that are in the scope for retesting and/or replacement of equipment.

Response:

Below is a list of transmission stations in scope for retesting and/or replacement of equipment including the associated risk rankings. Crary Street and Tiverton are no longer in scope because they were replaced with brand new stations. Dey Street is no longer being replaced because the regulator runs have been reconstructed.

The remaining stations in scope are highlighted:

The Narragansett Electric Company
d/b/a Rhode Island Energy

In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-14, page 2

Town	Station Name	Station Address	Condition Based Risk Rank	Customer Based Risk Rank	Three Layers RIE
East Providence	Wampanoag Trail TS	259 Wampanoag Trail	2	1	N
Cumberland	El Paso (TGT1) 68 Scott Rd	1595 Mendon Rd (Scott Rd)	3	2	N
Portsmouth	135 Old Mill Ln TS	135 Old Mill Ln	12	3	Y
Cranston	67 Laten Knight Rd TS	67 Laten Knight Road	6	4	N
Lincoln	El Paso (TGT2 116) 600 George W	602 George Washington Hwy	10	5	Y
Westerly	Westerly TS	73 Canal St	1	6	N
Smithfield	374 Putnam Pike TS 99	374 Putnam Pike (RTE 44)	7	7	N
Smithfield	374 Putnam Pike TS 35	374 Putnam Pike (RTE 44)	8	8	N
Warren	Warren Take Station	28 Brown St	9	9	Y
Providence	30 Allens Ave (Manchester St TS)	30 Allens Ave	4	10	Y
East Providence	27 Dey St TS	27 Dey Street	11	11	Y
Burrillville	1084 Wallum Lake Rd TS	1085 Wallum Lake Rd. Burrillville	13	12	Y
Cumberland	Duke (AGT) 4317 Diamond Hill Rd	4425 Diamond Hill Rd	5	13	Y
Tiverton	Tiverton TS	401 Main Road	15	14	Y
Providence	30 Allens Ave (Crary St TS)	30 Allens Ave	14	15	Y

Division 1-14, page 3

The stations with pressure regulation that will be replaced and the order that they will likely be replaced by 2028 are:

1. Laten Knight – FY2025
2. Scott Rd – FY2025
3. Smithfield – FY2026
4. Wampanoag Trail – FY2026/FY2027
5. Westerly – FY2027/FY2028

This will put the Company on schedule to meet the PHMSA Mega Rule requirements as well as ensuring all Gate stations have three layers of Company-owned overpressure protection. The remaining seven stations will have their piping tested for material records verification by 2028 and all necessary compliance work will be completed by 2035.

Division 1-15

Request:

Please provide an explanation of the necessity of replacing approximately two miles of main in East Providence that runs from the Providence River Crossing to the Wampanoag Trail (FY 2025 Gas ISR Plan Bates Page 27).

Response:

After several leaks on the main, several suspect location excavations were performed during the Fall of 2020 on the 200 PSIG East Providence main due to the criticality of the system, its age, and its suspected condition. An integrity assessment of the main revealed wall loss in several locations. Based upon the deteriorated asset condition (wall loss) at the test excavation locations, the actual leak activity on the main, and the principal that the remaining steel pipe installed in the same year is likely in the same condition (as the excavation locations and/or locations that leaked) the Company determined that additional leak activity in the near future is likely and it is time to replace the main.

Division 1-16

Request:

Please provide the reports and/or studies conducted by the Company justifying the need for the Wampanoag Trail Replacement Project.

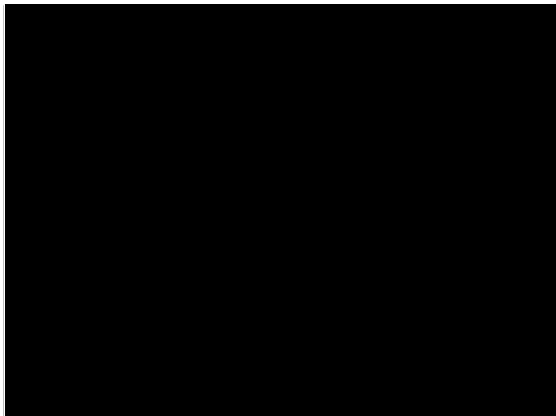
Response:

Please see Attachment DIV 1-16 for a copy of a report dated February 21, 2021 by Gas Transmission Engineering while under ownership of National Grid USA that supports the need for the Wampanoag Trail Replacement Project.



Womponoag Trail ECDA Report RI-014 to RI-028

Phase IV: RI-021 to RI-028



*Wanpanoag Trail to River crossing (connection to Header), 3115'

Phase III: RI-014 to RI-020



*Wanpanoag Trail to River Crossing (veterans Memorial), 7034'

Gas Transmission Engineering

Date: 2/1/21



Executive Summary

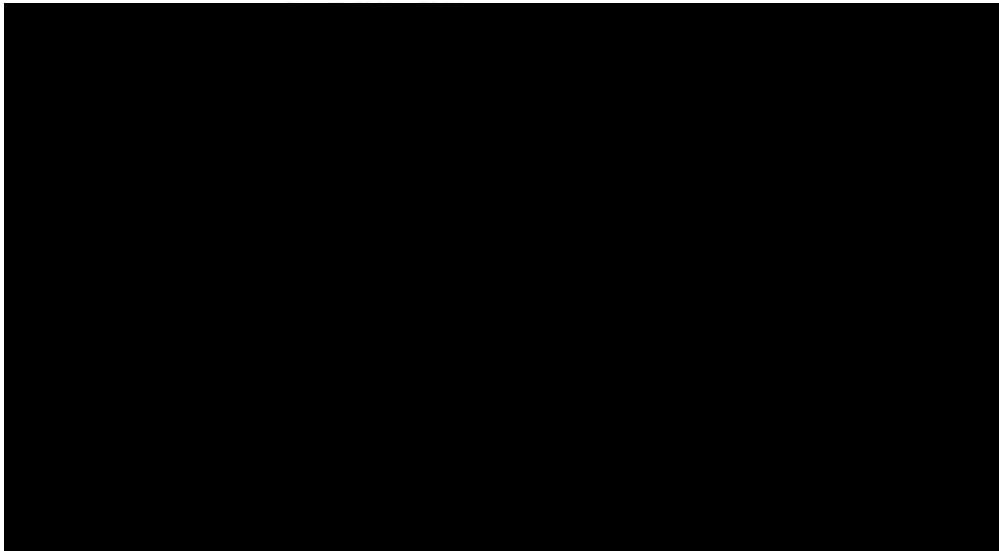
1. The Womponoag Trail External Corrosion Direct Assessment (ECDA) inspected Phase 3 and Phase 4 of the RI Voluntary Integrity Management Program (IMP), located in East Providence, RI. This inspection captured the 200# pipeline traveling from the Womponoag Trail Take Station to the East Providence River Crossing Vault.
2. Phase 3 is consisted of IMP Segments RI-014 to RI-020. This segment begins at the Womponoag Trail Take Station and ends at the Veterans Memorial Pkwy Rectifier.
3. Phase 4 is consisted of IMP segments RI-021 to RI-028. This segment begins at the Veterans Memorial Pkwy Rectifier and ends at the East Providence River Crossing Vault.
4. Both Phase 3 and 4 were inspected via ECDA in 2019.
5. Upon Reviewing the ECDA Data, GTE found a large percentage of both Phase 3 and Phase 4 to be below acceptable cathodic protection levels. GTE conducted additional tests which also provided information into the poor cathodic protection levels.
6. GTE chose three locations to conduct a Direct Assessment (DA) to investigate the condition of the pipeline.
7. Dig #1: Located at the corner of Hilop St and Dodge St, East Providence RI. The pipe-to-soil reads show a dip below the acceptable threshold, as well as the PCM readings showing a change in direction at this location. Additionally, this location does not meet the 100mV criterion,
8. Dig #2: Located on Norton St. East Providence, RI.
9. Dig #3: Located on Norton St. East Providence, RI.



Overview of Phase 3



This photo provides an overview of the pipeline within Phase 3. The entire length RI-014 to RI-020 is 7,034 Feet. RI-014 begins at the Wamponoag Trail Take Station and ends at the Veterans Memorial PKWY Rectifier



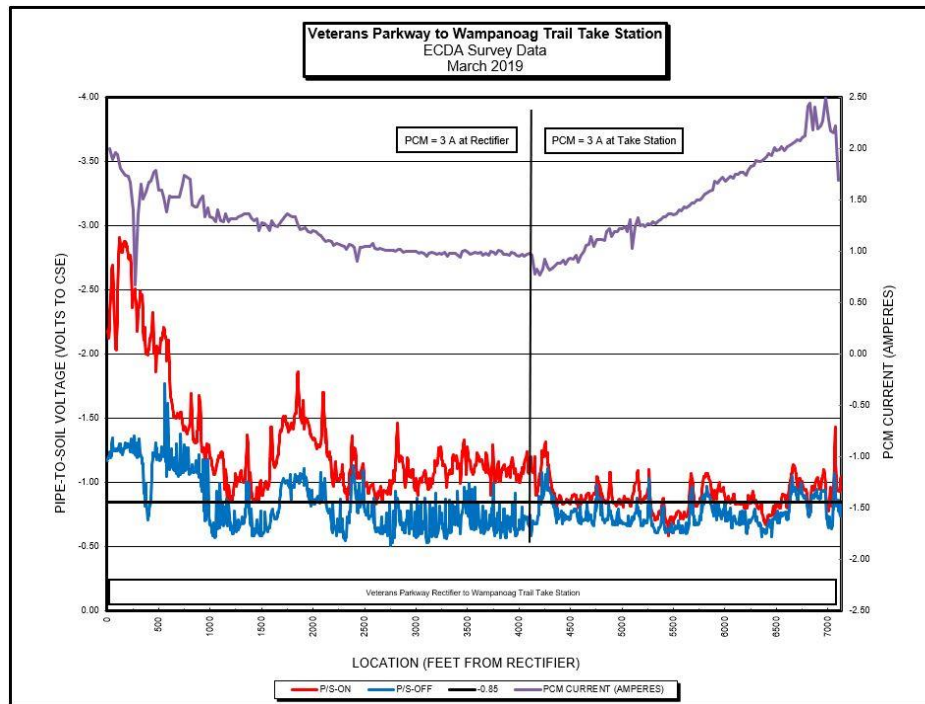
*Wanpanoag Trail to River Crossing (veterans Memorial), 7034'



Overview of Phase 3 Data



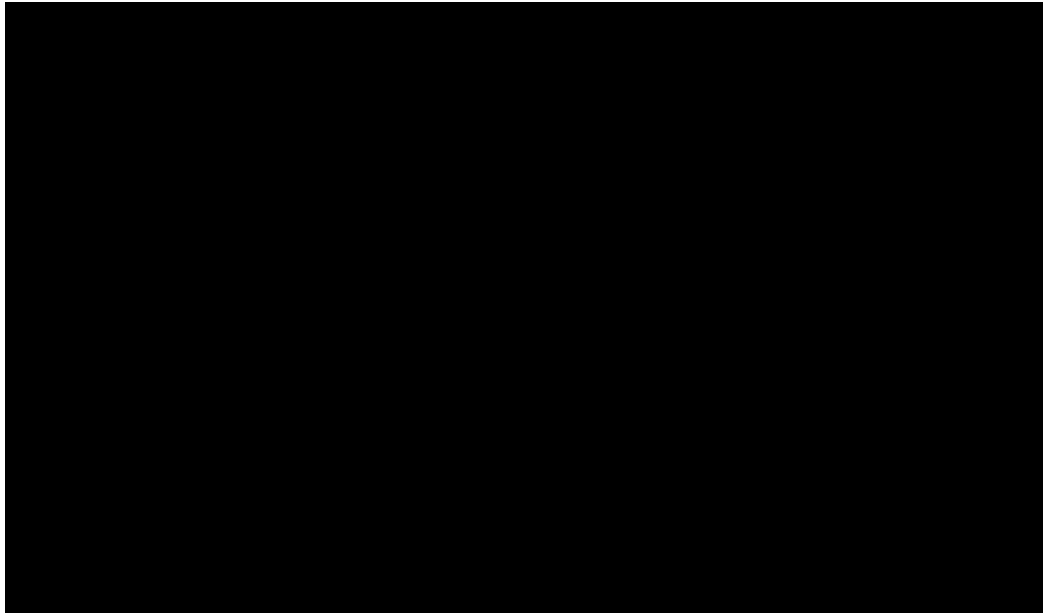
This photo provides an overview of the pipeline within Phase 3. The entire length RI-014 to RI-020 is 7,034 Feet. RI-014 begins at the Wampanoag Trail Take Station and ends at the Veterans Memorial PKWY Rectifier



Overview of Phase 4



This photo provides an overview of the pipeline within Phase 4. The entire length RI-021 to RI-028 is 3,115' Feet. RI-021 begins at the Veterans Memorial PKWY Rectifier and ends at the Ease Providence River Crossing Vault.



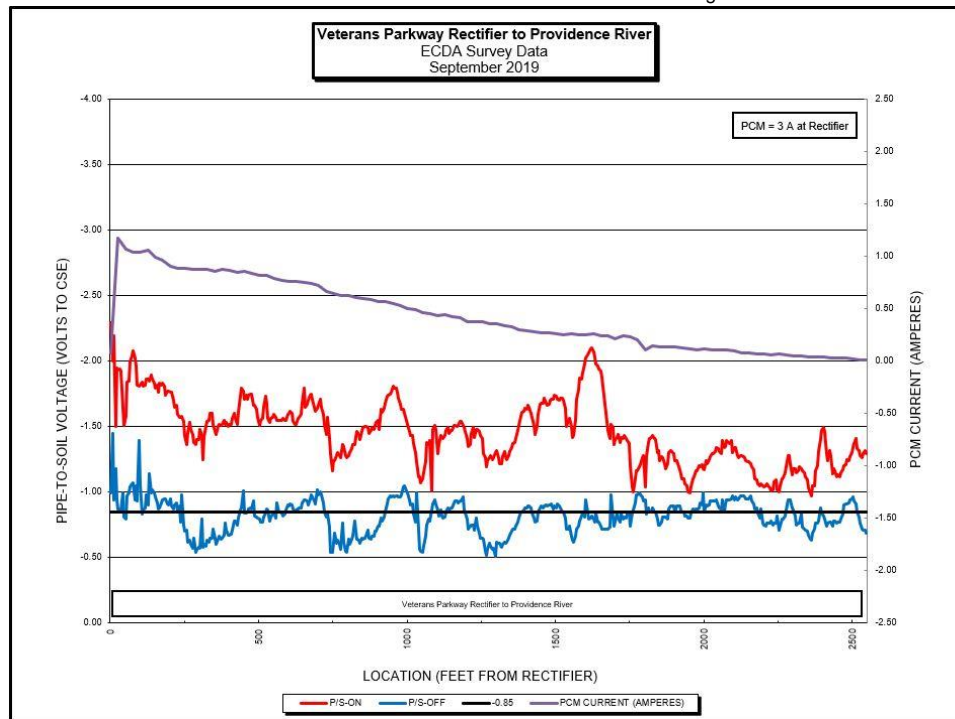
*Wanpanoag Trail to River crossing (connection to Header), 3115'



Overview of Phase 4 Data



This photo provides an overview of the pipeline within Phase 4. The entire length RI-021 to RI-028 is 3,115' Feet. RI-021 begins at the Veterans Memorial PKWY Rectifier and ends at the Ease Providence River Crossing Vault.



Dig #1 –Hiltop Road

nationalgrid
HERE WITH YOU. HERE FOR YOU.

- Poor ECDA data was the cause of this DA Dig, as the cathodic protection was below the -0.85 mV pipe-to-soil, and less than the 100mV criteria. Multiple convergences were detected at this location.
- Multiple large rocks found in the excavation pit.
- Coating found to be in terrible shape. Multiple bare spots, with the coating severely deteriorated.
- Coating seemed to be an orange, woven, paper like material.



Redacted
Division 1-17

Request:

Please provide the following information for the Wampanoag Trail Replacement Project (FY 2025 Gas ISR Plan Bates Page 27):

- a. A construction schedule for the Project;
- b. A description of the Project;
- c. Itemize the major costs of the Project;
- d. Identify when the major costs of the Project have been and/or will be incurred relative to the construction schedule; and
- e. A site plan of the Project.

Response:

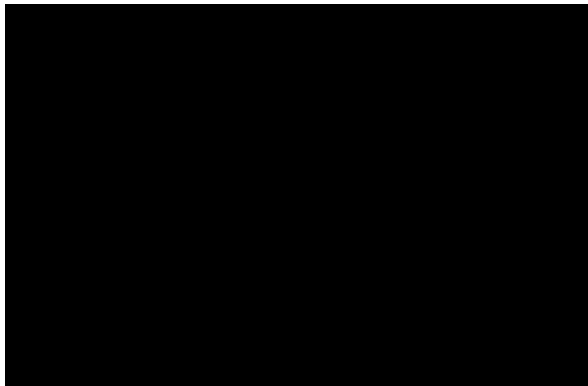
- a. The Company anticipates that construction would start in the spring 2024 with most of the piping completed by the end of calendar year 2024 (FY2025). Any remaining piping, gas tie ins and final restoration are expected to be completed in calendar year 2025 (FY2026).
- b. The Company currently contemplates the replacement of approximately 10,140 feet of 12-inch, 200 psig coated steel main (1953), starting at the Rhode Island Energy take station located at 259 Wampanoag Trail in East Providence (RIS-004) and terminating at the east bank of the Providence River at an existing valve cluster bunker vault.
- c. Please note that the Company's estimates for the project cost are preliminary as final designs are expected to be completed in December 2023. The Company anticipates that permits and easements will be executed by March 2024 and that construction bids will be received in March or April 2024. The material ordering is in progress and should be completed by March or April 2024. Subject to these outstanding items, the Company's preliminary cost estimates are as follows:
 - Engineering/Permits/Easements estimate: \$ [REDACTED] million
 - Material estimate: \$ [REDACTED] million
 - Construction estimate: \$ [REDACTED] million
 - Total Estimate \$20.20 million

Redacted

Division 1-17, page 2

- d. With respect to the major cost categories identified above in part c., the Company expects spending to occur as follows:
- Engineering/Permits/Easements:
 - Actual spend to date \$0.21 million
 - \$ [REDACTED] million estimated for calendar years 2024 and 2025
 - Materials estimate: \$ [REDACTED] million over calendar years 2024 and 2025
 - Construction estimate: \$ [REDACTED] million in calendar years 2024 and 2025
- e. See Attachment DIV 1-17.

PROPOSED GAS MAIN REPLACEMENT APPROXIMATELY 8,000' OF 12" & 2,200' OF 16" COATED STEEL - 200 PSIG WAMPANOAG TRAIL, EAST PROVIDENCE, RI W.O. NO. 90000232491

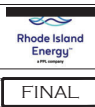


LOCUS
SCALE: NTS

INDEX OF SHEETS		
PAGE	DRAWING NO. SHEET	TITLE
1	DPL-EPR-079758-1000 G-001	COVER SHEET
2	DPL-EPR-079758-1000 G-002	CONSTRUCTION NOTES
3	DPL-EPR-079758-1000 G-003	BILL OF MATERIALS
4	DPL-EPR-079758-1000 G-004	SURVEY LEGEND AND NOTES
5	DPL-EPR-079758-1000 G-005	OVERALL SCOPE OF WORK
6	DPL-EPR-079758-1000 C-001	PROPOSED INSTALLATION PLAN
7	DPL-EPR-079758-1000 C-002	PROPOSED INSTALLATION PLAN
8	DPL-EPR-079758-1000 C-003	PROPOSED INSTALLATION PLAN
9	DPL-EPR-079758-1000 C-004	PROPOSED INSTALLATION PLAN
10	DPL-EPR-079758-1000 C-005	PROPOSED INSTALLATION PLAN
11	DPL-EPR-079758-1000 C-006	PROPOSED INSTALLATION PLAN
12	DPL-EPR-079758-1000 C-007	PROPOSED INSTALLATION PLAN
13	DPL-EPR-079758-1000 C-008	PROPOSED INSTALLATION PLAN
14	DPL-EPR-079758-1000 C-009	PROPOSED INSTALLATION PLAN
15	DPL-EPR-079758-1000 C-010	PROPOSED INSTALLATION PLAN
16	DPL-EPR-079758-1000 C-011	PROPOSED INSTALLATION PLAN
17	DPL-EPR-079758-1000 C-012	PROPOSED INSTALLATION PLAN
18	DPL-EPR-079758-1000 C-013	PROPOSED INSTALLATION PLAN
19	DPL-EPR-079758-1000 C-014	PROPOSED INSTALLATION PLAN
20	DPL-EPR-079758-1000 C-015	PROPOSED INSTALLATION PLAN
21	DPL-EPR-079758-1000 C-016	PROPOSED INSTALLATION PLAN
22	DPL-EPR-079758-1000 C-017	PROPOSED INSTALLATION PLAN
23	DPL-EPR-079758-1000 C-018	PROPOSED INSTALLATION PLAN
24	DPL-EPR-079758-1000 C-019	PROPOSED INSTALLATION PLAN
25	DPL-EPR-079758-1000 C-020	PROPOSED INSTALLATION PLAN
26	DPL-EPR-079758-1000 C-021	PROPOSED INSTALLATION PLAN
27	DPL-EPR-079758-1000 C-201	PROPOSED TIE-IN DETAILS
28	DPL-EPR-079758-1000 C-202	PROPOSED BRIDGE DETAILS
29	DPL-EPR-079758-1000 C-203	PROPOSED BRIDGE DETAILS
30	DPL-EPR-079758-1000 C-204	PROPOSED BRIDGE DETAILS
31	DPL-EPR-079758-1000 C-205	PROPOSED BRIDGE DETAILS
32	DPL-EPR-079758-1000 C-301	12-INCH VALVE SUPPORT DETAIL
33	DPL-EPR-079758-1000 C-302	16-INCH VALVE SUPPORT DETAIL



NO.	DESCRIPTION	DATE	DRY	CHK	APP
1	ISSUED FOR CONSTRUCTION	11/09/2023	CA	ED	



PROPOSED GAS MAIN REPLACEMENT WAMPANOAG TRAIL 200 PSIG COATED STEEL MAIN EAST PROVIDENCE, RI					
COVER SHEET					
DWG. SIZE	DESIGNER	ENGINEER	DATE:	ASSET I.D.	W.O. NO.:
22"x34"	C. LUTHER	J. O'DONNELL	11/09/2023	DISTRIBUTION	90000232491

PAGE 1 OF 33	
DRAWING NO.	SHEET NO.
DPL-EPR-079758-1000	G-001

FILE: V:\PROJECTS\WAMPANOAG\DESIGN\DRAWINGS\DIV 1-17\WAMPANOAG TRAIL - EASTERN PROVIDENCE - RI - 110524916.dwg
DATE: 11/09/2023 10:14:42 AM PLOTTED: 11/09/2023 8:23:37 AM C:\Users\jloftis\OneDrive - CH2M Hill\Desktop\CH2M Hill\110524916.dwg

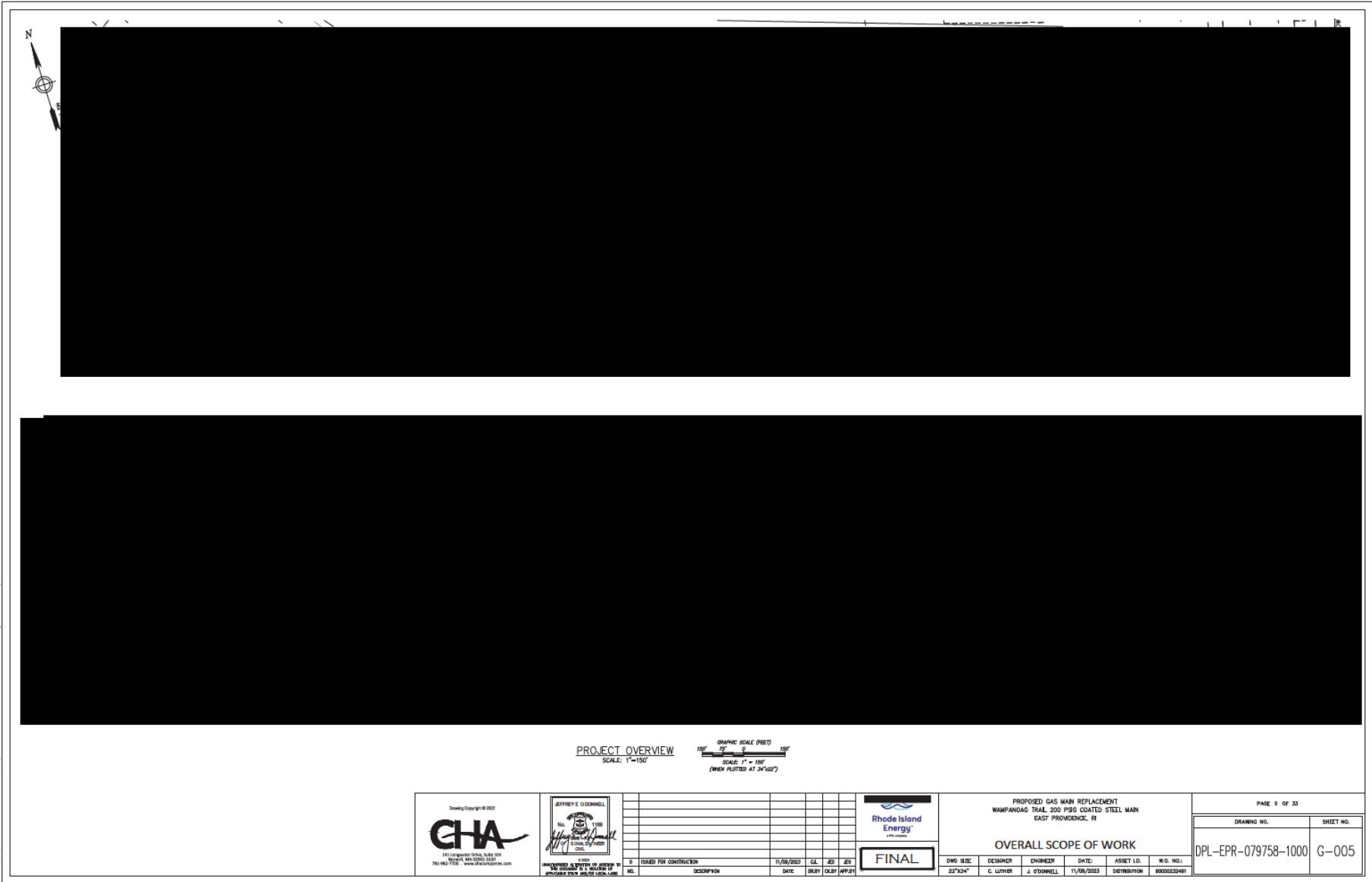
REDACTED

SURVEY NOTES

1. THE EXISTING CONDITIONS INFORMATION SHOWN HEREON IS THE RESULT OF AN AERIAL SURVEY BY AERIAL SERVICES AND SUPPLEMENTED BY AN ON-THE-GROUND SURVEY PERFORMED BY GHA CONSULTING, INC. IN APRIL OF 2023.
 2. TOPOGRAPHY, CONTOURS AND BENCHMARKS ARE BASED ON THE NORTH AMERICAN HORIZONTAL DATUM OF 1983 (NAD83). TEMPORARY BENCHMARKS, REFERENCED TO THE DATUM ARE INDICATED ON THE SURVEY.
- IN THE EVENT THAT BENCHMARKS (TINNS), ESTABLISHED FOR THIS PROJECT AND PROVIDED ON THIS SURVEY ARE DESTROYED, NOT RECOVERABLE OR A QUANTITY IS FOUND, THE USER SHOULD NOTIFY THE FIRM IN WRITING PRIOR TO COMMENCING OR CONTINUING ANY WORK.
3. LOCATION OF SUBSURFACE UTILITIES SHOWN HEREON ARE APPROXIMATE AND ADDITIONAL UTILITIES MAY EXIST THAT ARE NOT SHOWN ON THIS PLAN. LOCATIONS ARE COMPILED FROM UTILITY PLANS OF RECORD AND ON-SAFE FIELD MARKINGS. RW AND RIGHT-OF-WAY INFORMATION HAS BEEN COMPILED AND FIELD VERIFIED WHERE POSSIBLE. THIS INFORMATION IS NOT TO BE USED FOR CONSTRUCTION PRIOR TO ANY CONSTRUCTION. CONTACT ON-SAFE (801) TO FIELD VERIFY LOCATION OF ALL UTILITIES.
 4. WETLAND CLASS SHOWN HEREON ARE BASED ON FIELD LOCATIONS BY GHA CONSULTING, INC. IN APRIL OF 2023. WETLAND CLASS WERE DELINEATED BY GHA CONSULTING, INC. SCIENTIST IN APRIL OF 2023.

SURVEY SYMBOLS

- ▲ BENCHMARK POINT
- CONCRETE BOUND
- ▲ HOBNAIL BOUND
- STONE BOUND
- 1/4" FN WALL
- 1/2" FN WALL
- 3/4" FN WALL
- 1" FN WALL
- 1 1/2" FN WALL
- 2" FN WALL
- 3" FN WALL
- 4" FN WALL
- 6" FN WALL
- 8" FN WALL
- 12" FN WALL
- 18" FN WALL
- 24" FN WALL
- 36" FN WALL
- 48" FN WALL
- 60" FN WALL
- 72" FN WALL
- 84" FN WALL
- 96" FN WALL
- 108" FN WALL
- 120" FN WALL
- 144" FN WALL
- 168" FN WALL
- 192" FN WALL
- 216" FN WALL
- 240" FN WALL
- 270" FN WALL
- 300" FN WALL
- 324" FN WALL
- 348" FN WALL
- 372" FN WALL
- 396" FN WALL
- 420" FN WALL
- 444" FN WALL
- 468" FN WALL
- 492" FN WALL
- 516" FN WALL
- 540" FN WALL
- 564" FN WALL
- 588" FN WALL
- 612" FN WALL
- 636" FN WALL
- 660" FN WALL
- 684" FN WALL
- 708" FN WALL
- 732" FN WALL
- 756" FN WALL
- 780" FN WALL
- 804" FN WALL
- 828" FN WALL
- 852" FN WALL
- 876" FN WALL
- 900" FN WALL
- 924" FN WALL
- 948" FN WALL
- 972" FN WALL
- 996" FN WALL
- 1020" FN WALL
- 1044" FN WALL
- 1068" FN WALL
- 1092" FN WALL
- 1116" FN WALL
- 1140" FN WALL
- 1164" FN WALL
- 1188" FN WALL
- 1212" FN WALL
- 1236" FN WALL
- 1260" FN WALL
- 1284" FN WALL
- 1308" FN WALL
- 1332" FN WALL
- 1356" FN WALL
- 1380" FN WALL
- 1404" FN WALL
- 1428" FN WALL
- 1452" FN WALL
- 1476" FN WALL
- 1500" FN WALL
- 1524" FN WALL
- 1548" FN WALL
- 1572" FN WALL
- 1596" FN WALL
- 1620" FN WALL
- 1644" FN WALL
- 1668" FN WALL
- 1692" FN WALL
- 1716" FN WALL
- 1740" FN WALL
- 1764" FN WALL
- 1788" FN WALL
- 1812" FN WALL
- 1836" FN WALL
- 1860" FN WALL
- 1884" FN WALL
- 1908" FN WALL
- 1932" FN WALL
- 1956" FN WALL
- 1980" FN WALL
- 2004" FN WALL
- 2028" FN WALL
- 2052" FN WALL
- 2076" FN WALL
- 2100" FN WALL
- 2124" FN WALL
- 2148" FN WALL
- 2172" FN WALL
- 2196" FN WALL
- 2220" FN WALL
- 2244" FN WALL
- 2268" FN WALL
- 2292" FN WALL
- 2316" FN WALL
- 2340" FN WALL
- 2364" FN WALL
- 2388" FN WALL
- 2412" FN WALL
- 2436" FN WALL
- 2460" FN WALL
- 2484" FN WALL
- 2508" FN WALL
- 2532" FN WALL
- 2556" FN WALL
- 2580" FN WALL
- 2604" FN WALL
- 2628" FN WALL
- 2652" FN WALL
- 2676" FN WALL
- 2700" FN WALL
- 2724" FN WALL
- 2748" FN WALL
- 2772" FN WALL
- 2796" FN WALL
- 2820" FN WALL
- 2844" FN WALL
- 2868" FN WALL
- 2892" FN WALL
- 2916" FN WALL
- 2940" FN WALL
- 2964" FN WALL
- 2988" FN WALL
- 3012" FN WALL
- 3036" FN WALL
- 3060" FN WALL
- 3084" FN WALL
- 3108" FN WALL
- 3132" FN WALL
- 3156" FN WALL
- 3180" FN WALL
- 3204" FN WALL
- 3228" FN WALL
- 3252" FN WALL
- 3276" FN WALL
- 3300" FN WALL
- 3324" FN WALL
- 3348" FN WALL
- 3372" FN WALL
- 3396" FN WALL
- 3420" FN WALL
- 3444" FN WALL
- 3468" FN WALL
- 3492" FN WALL
- 3516" FN WALL
- 3540" FN WALL
- 3564" FN WALL
- 3588" FN WALL
- 3612" FN WALL
- 3636" FN WALL
- 3660" FN WALL
- 3684" FN WALL
- 3708" FN WALL
- 3732" FN WALL
- 3756" FN WALL
- 3780" FN WALL
- 3804" FN WALL
- 3828" FN WALL
- 3852" FN WALL
- 3876" FN WALL
- 3900" FN WALL
- 3924" FN WALL
- 3948" FN WALL
- 3972" FN WALL
- 3996" FN WALL
- 4020" FN WALL
- 4044" FN WALL
- 4068" FN WALL
- 4092" FN WALL
- 4116" FN WALL
- 4140" FN WALL
- 4164" FN WALL
- 4188" FN WALL
- 4212" FN WALL
- 4236" FN WALL
- 4260" FN WALL
- 4284" FN WALL
- 4308" FN WALL
- 4332" FN WALL
- 4356" FN WALL
- 4380" FN WALL
- 4404" FN WALL
- 4428" FN WALL
- 4452" FN WALL
- 4476" FN WALL
- 4500" FN WALL
- 4524" FN WALL
- 4548" FN WALL
- 4572" FN WALL
- 4596" FN WALL
- 4620" FN WALL
- 4644" FN WALL
- 4668" FN WALL
- 4692" FN WALL
- 4716" FN WALL
- 4740" FN WALL
- 4764" FN WALL
- 4788" FN WALL
- 4812" FN WALL
- 4836" FN WALL
- 4860" FN WALL
- 4884" FN WALL
- 4908" FN WALL
- 4932" FN WALL
- 4956" FN WALL
- 4980" FN WALL
- 5004" FN WALL
- 5028" FN WALL
- 5052" FN WALL
- 5076" FN WALL
- 5100" FN WALL
- 5124" FN WALL
- 5148" FN WALL
- 5172" FN WALL
- 5196" FN WALL
- 5220" FN WALL
- 5244" FN WALL
- 5268" FN WALL
- 5292" FN WALL
- 5316" FN WALL
- 5340" FN WALL
- 5364" FN WALL
- 5388" FN WALL
- 5412" FN WALL
- 5436" FN WALL
- 5460" FN WALL
- 5484" FN WALL
- 5508" FN WALL
- 5532" FN WALL
- 5556" FN WALL
- 5580" FN WALL
- 5604" FN WALL
- 5628" FN WALL
- 5652" FN WALL
- 5676" FN WALL
- 5700" FN WALL
- 5724" FN WALL
- 5748" FN WALL
- 5772" FN WALL
- 5796" FN WALL
- 5820" FN WALL
- 5844" FN WALL
- 5868" FN WALL
- 5892" FN WALL
- 5916" FN WALL
- 5940" FN WALL
- 5964" FN WALL
- 5988" FN WALL
- 6012" FN WALL
- 6036" FN WALL
- 6060" FN WALL
- 6084" FN WALL
- 6108" FN WALL
- 6132" FN WALL
- 6156" FN WALL
- 6180" FN WALL
- 6204" FN WALL
- 6228" FN WALL
- 6252" FN WALL
- 6276" FN WALL
- 6300" FN WALL
- 6324" FN WALL
- 6348" FN WALL
- 6372" FN WALL
- 6396" FN WALL
- 6420" FN WALL
- 6444" FN WALL
- 6468" FN WALL
- 6492" FN WALL
- 6516" FN WALL
- 6540" FN WALL
- 6564" FN WALL
- 6588" FN WALL
- 6612" FN WALL
- 6636" FN WALL
- 6660" FN WALL
- 6684" FN WALL
- 6708" FN WALL
- 6732" FN WALL
- 6756" FN WALL
- 6780" FN WALL
- 6804" FN WALL
- 6828" FN WALL
- 6852" FN WALL
- 6876" FN WALL
- 6900" FN WALL
- 6924" FN WALL
- 6948" FN WALL
- 6972" FN WALL
- 6996" FN WALL
- 7020" FN WALL
- 7044" FN WALL
- 7068" FN WALL
- 7092" FN WALL
- 7116" FN WALL
- 7140" FN WALL
- 7164" FN WALL
- 7188" FN WALL
- 7212" FN WALL
- 7236" FN WALL
- 7260" FN WALL
- 7284" FN WALL
- 7308" FN WALL
- 7332" FN WALL
- 7356" FN WALL
- 7380" FN WALL
- 7404" FN WALL
- 7428" FN WALL
- 7452" FN WALL
- 7476" FN WALL
- 7500" FN WALL
- 7524" FN WALL
- 7548" FN WALL
- 7572" FN WALL
- 7596" FN WALL
- 7620" FN WALL
- 7644" FN WALL
- 7668" FN WALL
- 7692" FN WALL
- 7716" FN WALL
- 7740" FN WALL
- 7764" FN WALL
- 7788" FN WALL
- 7812" FN WALL
- 7836" FN WALL
- 7860" FN WALL
- 7884" FN WALL
- 7908" FN WALL
- 7932" FN WALL
- 7956" FN WALL
- 7980" FN WALL
- 8004" FN WALL
- 8028" FN WALL
- 8052" FN WALL
- 8076" FN WALL
- 8100" FN WALL
- 8124" FN WALL
- 8148" FN WALL
- 8172" FN WALL
- 8196" FN WALL
- 8220" FN WALL
- 8244" FN WALL
- 8268" FN WALL
- 8292" FN WALL
- 8316" FN WALL
- 8340" FN WALL
- 8364" FN WALL
- 8388" FN WALL
- 8412" FN WALL
- 8436" FN WALL
- 8460" FN WALL
- 8484" FN WALL
- 8508" FN WALL
- 8532" FN WALL
- 8556" FN WALL
- 8580" FN WALL
- 8604" FN WALL
- 8628" FN WALL
- 8652" FN WALL
- 8676" FN WALL
- 8700" FN WALL
- 8724" FN WALL
- 8748" FN WALL
- 8772" FN WALL
- 8796" FN WALL
- 8820" FN WALL
- 8844" FN WALL
- 8868" FN WALL
- 8892" FN WALL
- 8916" FN WALL
- 8940" FN WALL
- 8964" FN WALL
- 8988" FN WALL
- 9012" FN WALL
- 9036" FN WALL
- 9060" FN WALL
- 9084" FN WALL
- 9108" FN WALL
- 9132" FN WALL
- 9156" FN WALL
- 9180" FN WALL
- 9204" FN WALL
- 9228" FN WALL
- 9252" FN WALL
- 9276" FN WALL
- 9300" FN WALL
- 9324" FN WALL
- 9348" FN WALL
- 9372" FN WALL
- 9396" FN WALL
- 9420" FN WALL
- 9444" FN WALL
- 9468" FN WALL
- 9492" FN WALL
- 9516" FN WALL
- 9540" FN WALL
- 9564" FN WALL
- 9588" FN WALL
- 9612" FN WALL
- 9636" FN WALL
- 9660" FN WALL
- 9684" FN WALL
- 9708" FN WALL
- 9732" FN WALL
- 9756" FN WALL
- 9780" FN WALL
- 9804" FN WALL
- 9828" FN WALL
- 9852" FN WALL
- 9876" FN WALL
- 9900" FN WALL
- 9924" FN WALL
- 9948" FN WALL
- 9972" FN WALL
- 9996" FN WALL
- 10020" FN WALL
- 10044" FN WALL
- 10068" FN WALL
- 10092" FN WALL
- 10116" FN WALL
- 10140" FN WALL
- 10164" FN WALL
- 10188" FN WALL
- 10212" FN WALL
- 10236" FN WALL
- 10260" FN WALL
- 10284" FN WALL
- 10308" FN WALL
- 10332" FN WALL
- 10356" FN WALL
- 10380" FN WALL
- 10404" FN WALL
- 10428" FN WALL
- 10452" FN WALL
- 10476" FN WALL
- 10500" FN WALL
- 10524" FN WALL
- 10548" FN WALL
- 10572" FN WALL
- 10596" FN WALL
- 10620" FN WALL
- 10644" FN WALL
- 10668" FN WALL
- 10692" FN WALL
- 10716" FN WALL
- 10740" FN WALL
- 10764" FN WALL
- 10788" FN WALL
- 10812" FN WALL
- 10836" FN WALL
- 10860" FN WALL
- 10884" FN WALL
- 10908" FN WALL
- 10932" FN WALL
- 10956" FN WALL
- 10980" FN WALL
- 11004" FN WALL
- 11028" FN WALL
- 11052" FN WALL
- 11076" FN WALL
- 11100" FN WALL
- 11124" FN WALL
- 11148" FN WALL
- 11172" FN WALL
- 11196" FN WALL
- 11220" FN WALL
- 11244" FN WALL
- 11268" FN WALL
- 11292" FN WALL
- 11316" FN WALL
- 11340" FN WALL
- 11364" FN WALL
- 11388" FN WALL
- 11412" FN WALL
- 11436" FN WALL
- 11460" FN WALL
- 11484" FN WALL
- 11508" FN WALL
- 11532" FN WALL
- 11556" FN WALL
- 11580" FN WALL
- 11604" FN WALL
- 11628" FN WALL
- 11652" FN WALL
- 11676" FN WALL
- 11700" FN WALL
- 11724" FN WALL
- 11748" FN WALL
- 11772" FN WALL
- 11796" FN WALL
- 11820" FN WALL
- 11844" FN WALL
- 11868" FN WALL
- 11892" FN WALL
- 11916" FN WALL
- 11940" FN WALL
- 11964" FN WALL
- 11988" FN WALL
- 12012" FN WALL
- 12036" FN WALL
- 12060" FN WALL
- 12084" FN WALL
- 12108" FN WALL
- 12132" FN WALL
- 12156" FN WALL
- 12180" FN WALL
- 12204" FN WALL
- 12228" FN WALL
- 12252" FN WALL
- 12276" FN WALL
- 12300" FN WALL
- 12324" FN WALL
- 12348" FN WALL
- 12372" FN WALL
- 12396" FN WALL
- 12420" FN WALL
- 12444" FN WALL
- 12468" FN WALL
- 12492" FN WALL
- 12516" FN WALL
- 12540" FN WALL
- 12564" FN WALL
- 12588" FN WALL
- 12612" FN WALL
- 12636" FN WALL
- 12660" FN WALL
- 12684" FN WALL
- 12708" FN WALL
- 12732" FN WALL
- 12756" FN WALL
- 12780" FN WALL
- 12804" FN WALL
- 12828" FN WALL
- 12852" FN WALL
- 12876" FN WALL
- 12900" FN WALL
- 12924" FN WALL
- 12948" FN WALL
- 12972" FN WALL
- 12996" FN WALL
- 13020" FN WALL
- 13044" FN WALL
- 13068" FN WALL
- 13092" FN WALL
- 13116" FN WALL
- 13140" FN WALL
- 13164" FN WALL
- 13188" FN WALL
- 13212" FN WALL
- 13236" FN WALL
- 13260" FN WALL
- 13284" FN WALL
- 13308" FN WALL
- 13332" FN WALL
- 13356" FN WALL
- 13380" FN WALL
- 13404" FN WALL
- 13428" FN WALL
- 13452" FN WALL
- 13476" FN WALL
- 13500" FN WALL
- 13524" FN WALL
- 13548" FN WALL
- 13572" FN WALL
- 13596" FN WALL
- 13620" FN WALL
- 13644" FN WALL
- 13668" FN WALL
- 13692" FN WALL
- 13716" FN WALL
- 13740" FN WALL
- 13764" FN WALL
- 13788" FN WALL
- 13812" FN WALL
- 13836" FN WALL
- 13860" FN WALL
- 13884" FN WALL
- 13908" FN WALL
- 13932" FN WALL
- 13956" FN WALL
- 13980" FN WALL
- 14004" FN WALL
- 14028" FN WALL
- 14052" FN WALL
- 14076" FN WALL
- 14100" FN WALL
- 14124" FN WALL
- 14148" FN WALL
- 14172" FN WALL
- 14196" FN WALL
- 14220" FN WALL
- 14244" FN WALL
- 14268" FN WALL
- 14292" FN WALL
- 14316" FN WALL
- 14340" FN WALL
- 14364" FN WALL
- 14388" FN WALL
- 14412" FN WALL
- 14436" FN WALL
- 14460" FN WALL
- 14484" FN WALL
- 14508" FN WALL
- 14532" FN WALL
- 14556" FN WALL
- 14580" FN WALL
- 14604" FN WALL
- 14628" FN WALL
- 14652" FN WALL
- 14676" FN WALL
- 14700" FN WALL
- 14724" FN WALL
- 14748" FN WALL
- 14772" FN WALL
- 14796" FN WALL
- 14820" FN WALL
- 14844" FN WALL
- 14868" FN WALL
- 14892" FN WALL
- 14916" FN WALL
- 14940" FN WALL
- 14964" FN WALL
- 14988" FN WALL
- 15012" FN WALL
- 15036" FN WALL
- 15060" FN WALL
- 15084" FN WALL
- 15108" FN WALL
- 15132" FN WALL
- 15156" FN WALL
- 15180" FN WALL
- 15204" FN WALL
- 15228" FN WALL
- 15252" FN WALL
- 15276" FN WALL
- 15300" FN WALL
- 15324" FN WALL
- 15348" FN WALL
- 15372" FN WALL
- 15396" FN WALL
- 15420" FN WALL
- 15444" FN WALL
- 15468" FN WALL
- 15492" FN WALL
- 15516" FN WALL
- 15540" FN WALL
- 15564" FN WALL
- 15588" FN WALL
- 15612" FN WALL
- 15636" FN WALL
- 15660" FN WALL
- 15684" FN WALL
- 15708" FN WALL
- 15732" FN WALL
- 15756" FN WALL
- 15780" FN WALL
- 15804" FN WALL
- 15828" FN WALL
- 15852" FN WALL
- 15876" FN WALL
- 15900" FN WALL
- 15924" FN WALL
- 15948" FN WALL
- 15972" FN WALL
- 15996" FN WALL
- 16020" FN WALL
- 16044" FN WALL
- 16068" FN WALL
- 16092" FN WALL
- 16116" FN WALL
- 16140" FN WALL
- 16164" FN WALL
- 16188" FN WALL
- 16212" FN WALL
- 16236" FN WALL
- 16260" FN WALL
- 16284" FN WALL
- 16308" FN WALL
- 16332" FN WALL
- 16356" FN WALL
- 16380" FN WALL
- 16404" FN WALL
- 16428" FN WALL
- 16452" FN WALL
- 16476" FN WALL
- 16500" FN WALL
- 16524" FN WALL
- 16548" FN WALL
- 16572" FN WALL
- 16596" FN WALL
- 16620" FN WALL
- 16644" FN WALL
- 16668" FN WALL
- 16692" FN WALL
- 16716" FN WALL
- 16740" FN WALL
- 16764" FN WALL
- 16788" FN WALL
- 16812" FN WALL
- 16836" FN WALL
- 16860" FN WALL
- 16884" FN WALL
- 16908" FN WALL
- 16932" FN WALL
- 16956" FN WALL
- 16980" FN WALL
- 17004" FN WALL
- 17028" FN WALL
- 17052" FN WALL
- 17076" FN WALL
- 17100" FN WALL
- 17124" FN WALL
- 17148" FN WALL
- 17172" FN WALL
- 17196" FN WALL
- 17220" FN WALL
- 17244" FN WALL
- 17268" FN WALL
- 17292" FN WALL
- 17316" FN WALL
- 17340" FN WALL
- 17364" FN WALL
- 17388" FN WALL
- 17412" FN WALL
- 17436" FN WALL
- 17460" FN WALL
- 17484" FN WALL
- 17508" FN WALL
- 17532" FN WALL
- 17556" FN WALL
- 17580" FN WALL
- 17604" FN WALL
- 17628" FN WALL
- 17652" FN WALL
- 17676" FN WALL
- 17700" FN WALL
- 17724" FN WALL
- 17748" FN WALL
- 17772" FN WALL
- 17796" FN WALL
- 17820" FN WALL
- 17844" FN WALL



PROJECT OVERVIEW
SCALE: 1"=150'



 141 Longwater Drive, Suite 100 Woonsocket, RI 02896-1300 781-962-7700 • www.chaonline.com	 01000 JEFFREY E. O'DONNELL PROFESSIONAL ENGINEER IN MECHANICAL ENGINEERING LICENSE NO. 1198-0001-0000	0 ISSUED FOR CONSTRUCTION DATE: 11/09/2023 DESIGNED BY: CLJ CHECKED BY: JED APPROVED BY: JED				 FINAL	PROPOSED GAS MAIN REPLACEMENT WAMPANOG TRAIL, 200 PSIG COATED STEEL MAIN EAST PROVIDENCE, RI OVERALL SCOPE OF WORK				PAGE 5 OF 33 DRAWING NO. SHEET NO. DPL-EPR-079758-1000 G-005	
		DWG. SIZE: 22"x34"	DESIGNER: C. LUTHER	ENGINEER: J. O'DONNELL	DATE: 11/09/2023		ASSET I.D.: DETRMB/RYON	W.O. NO.: 8000032481				

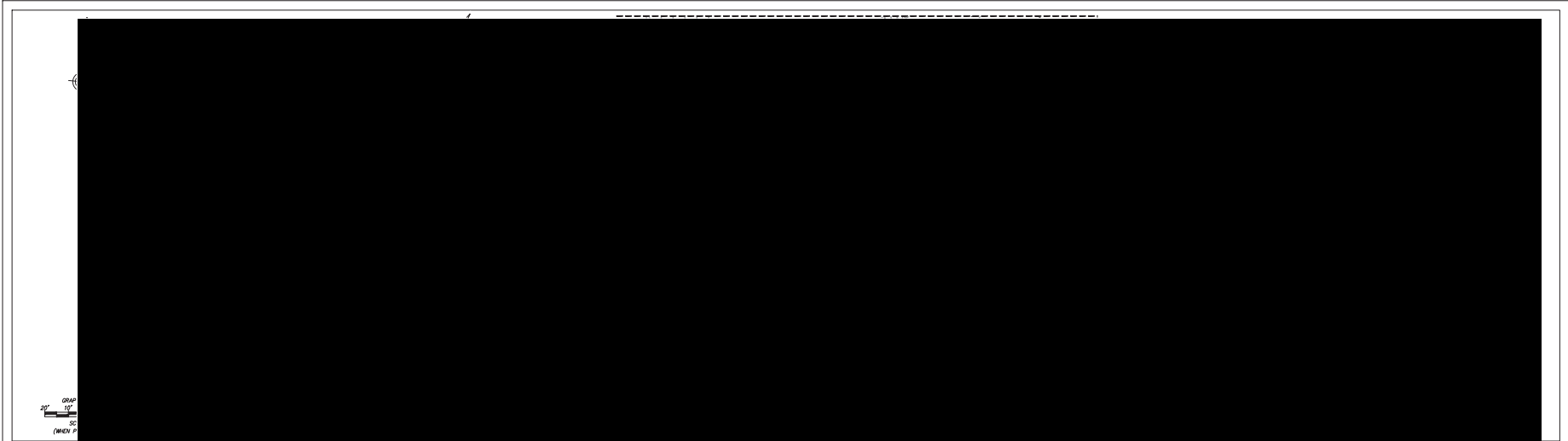
File: V:\PROJECTS\WV\079758-1000\G-005\DWG\WV\079758-1000\G-005.dwg WAMPANOG TRAIL, EASTERN PROVIDENCE, RI 100LW05
Saved: 11/07/2023 8:31:14 AM Printed: 11/07/2023 8:32:34 AM Current User: Luther, Christopher LastModifiedBy: 7787

FILE: V:\PROJECTS\WV\079758\000\DESIGN\04\079758_WAMPANOG TRAIL, EASTERN PROVIDENCE RI 1005298.DWG
DATE: 11/09/2023 10:14:41 AM PLOTDATE: 11/09/2023 8:23:17 AM C. O'DONNELL
PROJECT: WAMPANOG TRAIL, EASTERN PROVIDENCE RI

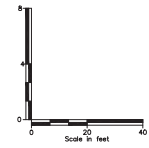
 Drawing Copyright © 2022 241 Longwater Drive, Suite 100 East Greenwich, RI 02818 781.982.5700 www.cha-engineers.com	 Jeffrey E. O'Donnell PROFESSIONAL ENGINEER	D ISSUED FOR CONSTRUCTION NO. DESCRIPTION DATE DATE DRY BY APP BY		 FINAL	PROPOSED GAS MAIN REPLACEMENT WAMPANOG TRAIL 200 PSIG COATED STEEL MAIN EAST PROVIDENCE, RI				PAGE 6 OF 33	
		PROPOSED INSTALLATION PLAN				DWG SIZE 22"x34"	DESIGNER C. LUTHER	ENGINEER J. O'DONNELL	DATE 11/09/2023	ASSET I.D. DISTRIBUTION
					DRAWING NO. DPL-EPR-079758-1000		SHEET NO. C-001			



FILE: V:\PROJECTS\WAMPANOG TRAIL\DESIGN\WAMPANOG TRAIL - EASTERN PROVIDENCE TRAIL - EASTERN PROVIDENCE RI - 1005EPR6
DATE: 11/09/2023 10:14:42 AM PLOTTER: 17/02/2023 8:33:42 AM C:\Users\joe.luthe\AppData\Local\Temp\17022023-1005EPR6-7102



FILE: V:\PROJECTS\WV\079758\000\04_DESIGN\04RMIN\02\04\079758_WAMPANOG TRAIL, EASTERN PROVIDENCE RI_1005298.DWG
DATE: 11/09/2023 10:14:47 AM PLOTTED: 11/09/2023 8:24:17 AM C. O'DONNELL PLOT: 01012.ctb, 01012.ctb, 01012.ctb, 01012.ctb, 01012.ctb



NO.	DESCRIPTION	DATE	DRY	CHK BY	APP BY
1	ISSUED FOR CONSTRUCTION	11/09/2023	CA	JEO	JEO

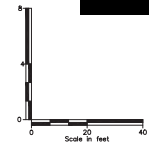


PROPOSED GAS MAIN REPLACEMENT WAMPANOG TRAIL 200 PSIG COATED STEEL MAIN EAST PROVIDENCE, RI					
PROPOSED INSTALLATION PLAN					
DWG SIZE	DESIGNER	ENGINEER	DATE	ASSET I.D.	W.O. NO.:
22"x34"	C. LUTHER	J. O'DONNELL	11/09/2023	DISTRIBUTION	9000232491

PAGE 8 OF 33	
DRAWING NO.	SHEET NO.
DPL-EPR-079758-1000	C-003



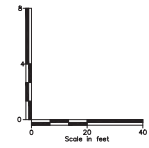
FILE: V:\PROJECTS\WV\079758\000\04 DESIGN\04RMS\02\04\079758 WAMPANOG TRAIL EASTERN PROVIDENCE RI 1005EPRB
DATE: 11/09/2023 10:14:47 AM PLOTTED: 11/09/2023 8:24:32 AM PLOTTER: HP-DesignJet 775D



 Drawing Copyright © 2022 241 Longwater Drive, Suite 100 East Greenwich, RI 02816 TEL: 952-5700 WWW.CHACORPORATION.COM		 FINAL				PROPOSED GAS MAIN REPLACEMENT WAMPANOG TRAIL 200 PSIG COATED STEEL MAIN EAST PROVIDENCE, RI				PAGE 9 OF 33				
		UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF APPLICABLE STATE AND/OR LOCAL LAWS				D NO.	ISSUED FOR CONSTRUCTION	11/09/2023	CA.	JEO	DWG. SIZE 22"x34"	DESIGNER C. LUTHER	ENGINEER J. O'DONNELL	DATE 11/09/2023
PROPOSED INSTALLATION PLAN										DRAWING NO. DPL-EPR-079758-1000	SHEET NO. C-004			



FILE: V:\PROJECTS\WV\079758\000\04 DESIGN\04\000\04\079758 WAMPANOG TRAIL, EASTERN PROVIDENCE RI 1005EPR0
DATE: 11/09/2023 10:14:41 AM PROJECT: 17/02/2022 8:25:02 AM CLIENT: RIPE, LEINAC, CHANGING CONTRACTORS 7787



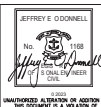
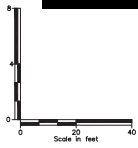
 Drawing Copyright © 2022 241 Longwood Drive, Suite 100 East Greenwich, RI 02816 TEL: 954-757-0000 www.chacorp.com						PROPOSED GAS MAIN REPLACEMENT WAMPANOG TRAIL 200 PSIG COATED STEEL MAIN EAST PROVIDENCE, RI				PAGE 10 OF 33			
		FINAL				PROPOSED INSTALLATION PLAN				DRAWING NO.	SHEET NO.		
UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF RHOISLAND STATE AND/OR LOCAL LAWS	D NO.	ISSUED FOR CONSTRUCTION	11/09/2023	CA.	JEO	DWG. SIZE 22"x34"	DESIGNER C. LUTHER	ENGINEER J. O'DONNELL	DATE 11/09/2023	ASSET I.D. DISTRIBUTION	W.O. NO.: 90000232491	DPL-EPR-079758-1000	C-005



SCALE: 1" = 20'
(WHEN PLOTTED AT 34"x22")



FILE: V:\PROJECTS\WV\079758\000\04 DESIGN\04RMS02\04\079758 WAMPANOG TRAIL EASTERN PROVIDENCE RI 1005EPR
DATE: 11/09/2023 10:14:41 AM PLOTTED: 11/09/2023 8:22:52 AM PLOTTER: HP DesignJet L11020-90

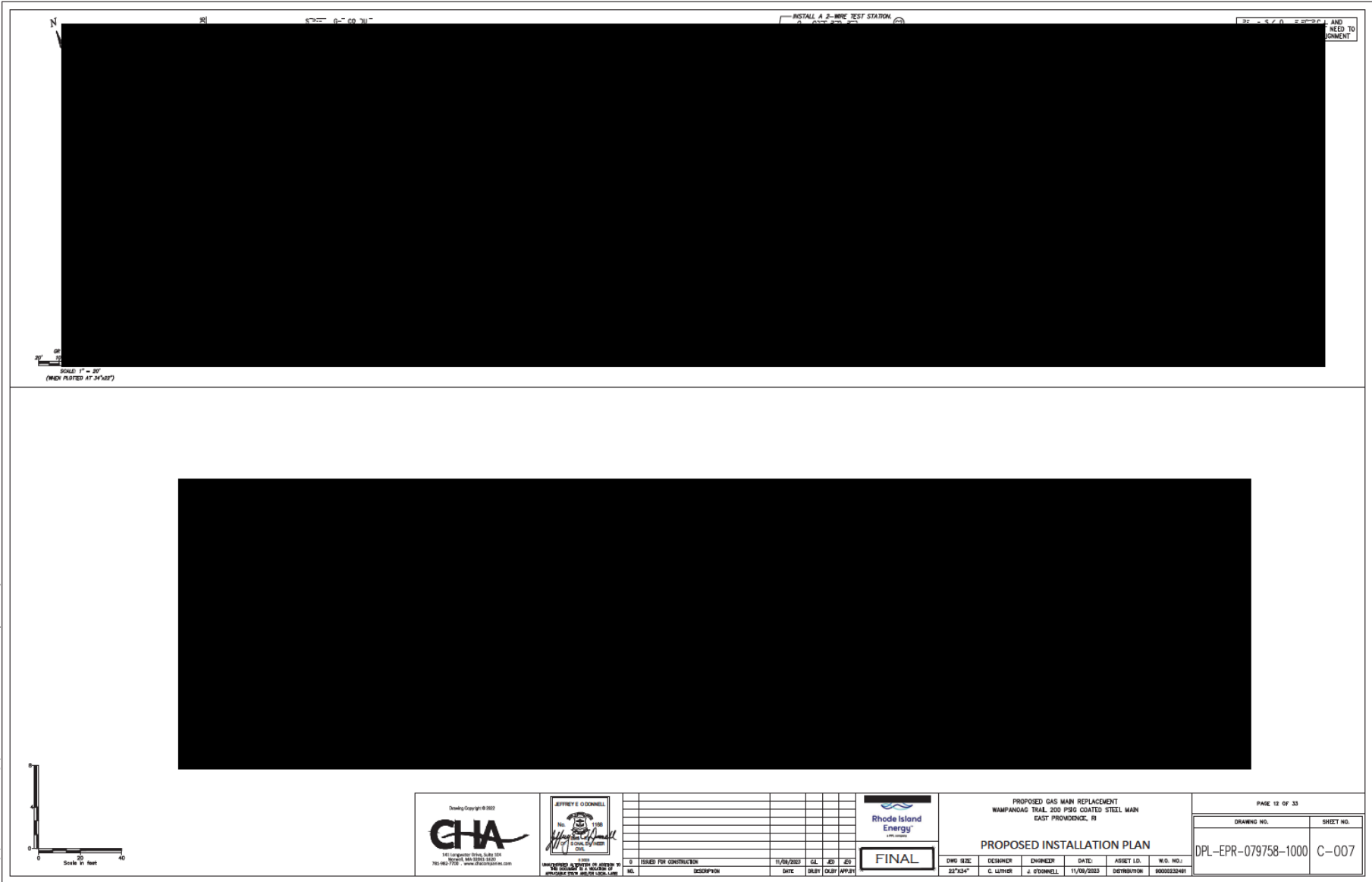


NO.	DESCRIPTION	DATE	DRY	CHK BY	APP BY
1	ISSUED FOR CONSTRUCTION	11/09/2023	CA	JEO	JEO



PROPOSED GAS MAIN REPLACEMENT WAMPANOG TRAIL 200 PSIG COATED STEEL MAIN EAST PROVIDENCE, RI					
PROPOSED INSTALLATION PLAN					
DWG. SIZE	DESIGNER	ENGINEER	DATE	ASSET I.D.	W.O. NO.:
22"x34"	C. LUTHER	J. O'DONNELL	11/09/2023	DISTRIBUTION	90000232491

PAGE 11 OF 33	
DRAWING NO.	SHEET NO.
DPL-EPR-079758-1000	C-006

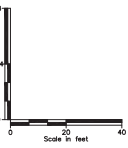


File: V:\PROJECTS\WV\079758\000\WV\DESIGN\WV\WV\079758 WAMPAUG TRAIL, EASTERN PROVIDENCE, RI 100LW.DWG
Sheet: 11/07/2023 8:31:14 AM Printed: 11/07/2023 8:35:49 AM Current User: Luther, Christopher LastSavedBy: 7787

UNLESS OTHERWISE NOTED

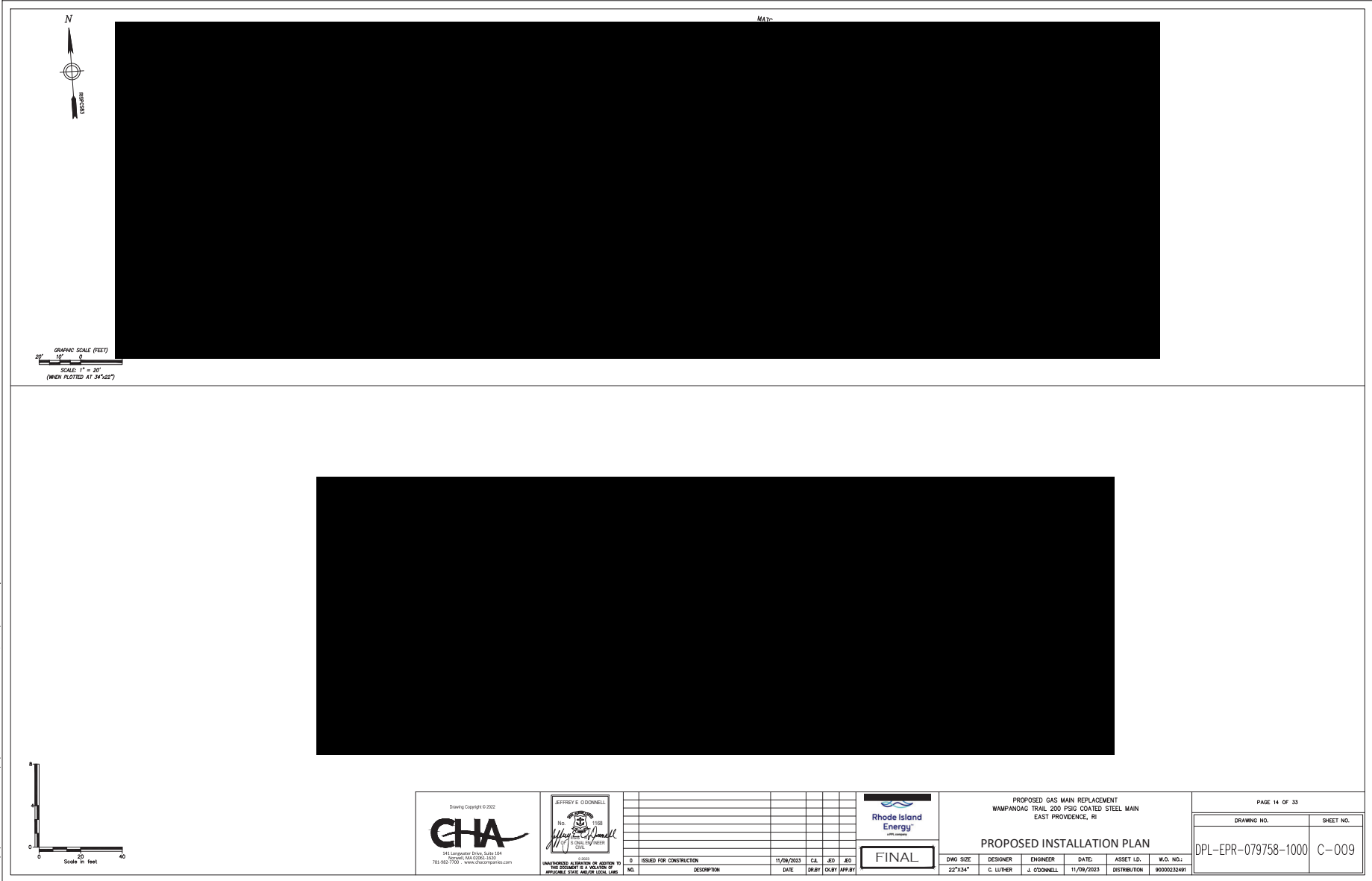


SCALE: 1" = 20'
(WHEN PLOTTED AT 34"x22")

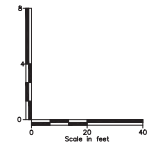






FILE: V:\PROJECTS\WAMPAG\079758\000\04 DESIGN\040002\04\079758 WAMPAGAG TRAIL, EASTERN PROVIDENCE RI 1005EPRB
DATE: 11/09/2023 10:14:47 AM PLOTTED: 11/09/2023 8:26:17 AM C:\COURT\TEMP\UNINT_C\040002\040002.dwg

 Drawing Copyright © 2022 241 Longwood Drive, Suite 100 East Greenwich, RI 02818 781.981.5700 www.cha-engineering.com						PROPOSED GAS MAIN REPLACEMENT WAMPAGAG TRAIL 200 PSIG COATED STEEL MAIN EAST PROVIDENCE, RI				PAGE 13 OF 33		
		PROPOSED INSTALLATION PLAN				DRAWING NO. DPL-EPR-079758-1000		SHEET NO. C-008				
UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF PROFESSIONAL ENGINEERING ETHICS.	NO.	DESCRIPTION	DATE	DRAWN BY	CHECKED BY	APPROVED BY	DWG. SIZE 22"x34"	DESIGNER C. LUTHER	ENGINEER J. O'DONNELL	DATE 11/09/2023	ASSET I.D. DISTRIBUTION	W.O. NO.: 9000232491

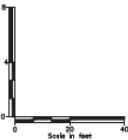


FILE: V:\PROJECTS\WV\079758\000\04_DESIGN\04RMINES\DWG\079758_WAMPANOG TRAIL EASTERN PROVIDENCE RI 1005EPRB
DATE: 11/09/2023 10:14:47 AM PLOTTED: 11/09/2023 8:28:52 AM PLOTTER: HP-DesignJet L11020-90




 <p>241 Longwood Drive, Suite 100 East Providence, RI 02912 781.982.5700 www.chaenergysolutions.com</p>						PROPOSED GAS MAIN REPLACEMENT WAMPANOG TRAIL 200 PSIG COATED STEEL MAIN EAST PROVIDENCE, RI				PAGE 14 OF 33	
						PROPOSED INSTALLATION PLAN				DRAWING NO. DPL-EPR-079758-1000	SHEET NO. C-009
D NO.	ISSUED FOR CONSTRUCTION	11/09/2023	CA	JEO	JEO	DWG. SIZE 22"x34"	DESIGNER C. LUTHER	ENGINEER J. O'DONNELL	DATE 11/09/2023	ASSET I.D. DISTRIBUTION	W.O. NO.: 9000232491
NO.	DESCRIPTION	DATE	DRY	OK	APP. BY						


(WEEK PLOTTED AT 11/16/2023)



Drawing Copyright © 2023




141 Longwater Street, Suite 100
Providence, RI 02903-1500
781-462-7700 • www.chaonline.com



01000
J. O'DONNELL
PROVIDENCE, RI 02903-1500

REV	DESCRIPTION	DATE	DESIGN	CHECK	APP'D
0	ISSUED FOR CONSTRUCTION	11/09/2023	CL	JEO	



WAMPANOG TRAIL, 200 PSIG COATED STEEL MAIN
EAST PROVIDENCE, RI

PROPOSED INSTALLATION PLAN

DWG SIZE	DESIGNER	ENGINEER	DATE	ASSET I.D.	W.O. NO.
22"x34"	C. LUTHER	J. O'DONNELL	11/09/2023	DET0001010H	8000032040

DRAWING NO.	SHEET NO.
DPL-EPR-079758-1000	C-011

File: V:\PROJETS\WAMPANOG TRAIL\DESIGN\WAMPANOG TRAIL EASTERN PROVIDENCE RI\100LWDG Sheet 11/09/2023 8:31:14 AM Plotted: 11/09/2023 8:31:14 AM Current User: Luther, Designer: Luther@ri.ee.com

GRAPHIC SCALE
20' 10'

SCALE: 1" = 20'
(WHEN PLOTTED AT 34"x22")

GRAPHIC SCALE
0 20 40

Scale in feet

341 LINGWOOD DRIVE, SUITE 100
EAST PROVIDENCE, RI 02912
TEL: 951-7100 WWW.RIENERGY.COM

CHA
Crawford Hill Associates, Inc.

JEFFREY E. O'DONNELL
No. 1188
Professional Engineer
State of Rhode Island

Jeffrey E. O'Donnell
Professional Engineer
State of Rhode Island

NO.	DESCRIPTION	DATE	DRY	CHK	APP	BY
1	ISSUED FOR CONSTRUCTION	11/09/2023	CA	JE		

Rhode Island Energy
A NARRAGANSETT COMPANY

PROPOSED GAS MAIN REPLACEMENT
WAMPANOG TRAIL 200 PSIG COATED STEEL MAIN
EAST PROVIDENCE, RI

FINAL

DWG. SIZE	DESIGNER	ENGINEER	DATE	ASSET I.D.	W.O. NO.
22"x34"	C. LUTHER	J. O'DONNELL	11/09/2023	DISTRIBUTION	9000232491

PROPOSED INSTALLATION PLAN

DRAWING NO.		PAGE 17 OF 33	
DPL-EPR-079758-1000		SHEET NO.	
		C-012	

Drawing Copyright © 2022

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF APPLICABLE STATE AND/OR LOCAL LAWS

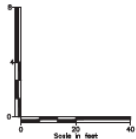
FILE: V:\PROJECTS\WAMPANOG TRAIL\2025\DESIGN\WAMPANOG TRAIL - EASTERN PROVIDENCE TRAIL - EASTERN PROVIDENCE RI - 1000EPR16.dwg
DATE: 11/09/2023 10:14 AM PLOTTED: 11/09/2023 8:21:52 AM
C:\Users\joe.luthe\AppData\Local\Temp\1\1000EPR16.ctb




ROSION WHEN THIS AREA

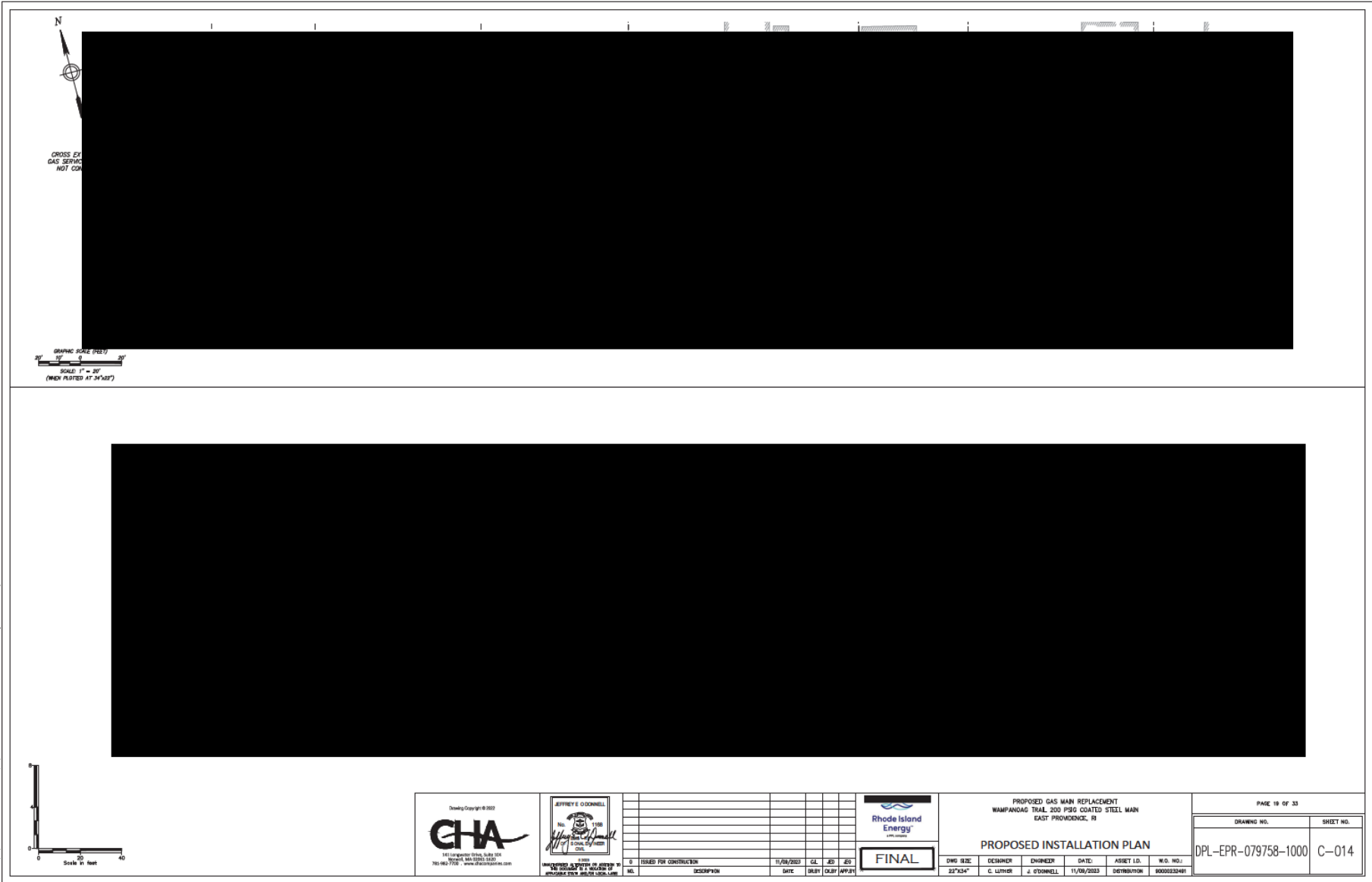
(WHD ADJUSTED AT 1/1/2023)

EXISTING 16" CI WATER
24" SOUTH (AS SHOWN)

FILE: V:\PROJECTS\WV\079758-000\GAS\DESIGN\WAMPANOGAS\WV\079758 WAMPANOGAS TRAIL EASTERN PROVIDENCE RI 100LW.DWG
Sheet: 11/07/2023 8:31:14 AM Printed: 11/07/2023 8:37:05 AM Current User: Luther, Designer: Luther, Designer: Luther, Designer: Luther



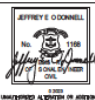
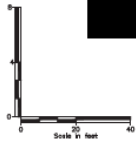
 Drawing Copyright © 2023 141 Longwater Drive, Suite 100 Woonsocket, RI 02896-1500 781-962-7700 www.cha-engineering.com	 01000 WAMPANOGAS TRAIL EASTERN PROVIDENCE RI 100LW.DWG 11/07/2023 8:31:14 AM	0 ISSUED FOR CONSTRUCTION DATE: 11/09/2023 DESIGNED BY: CLJ CHECKED BY: JED APPROVED BY:	11/09/2023 CLJ JED	 FINAL	PROPOSED GAS MAIN REPLACEMENT WAMPANOGAS TRAIL, 200 PSIG COATED STEEL MAIN EAST PROVIDENCE, RI PROPOSED INSTALLATION PLAN	DWG SIZE: 22"x34" DESIGNER: C. LUTHER ENGINEER: J. O'DONNELL DATE: 11/09/2023 ASSET I.D.: DSTRM010H W.O. NO.: 8000032481	PAGE 18 OF 33 DRAWING NO. DPL-EPR-079758-1000 SHEET NO. C-013
		01000 WAMPANOGAS TRAIL EASTERN PROVIDENCE RI 100LW.DWG 11/07/2023 8:31:14 AM					



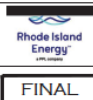
File: V:\PROJECTS\WV\079758-1000\079758-1000\DESIGN\WV\079758-1000\WAMPANOG TRAIL, EASTERN PROVIDENCE, RI 100LW19.dwg
Sheet: 11/09/2023 8:31:14 AM Printed: 11/09/2023 8:38:18 AM Current User: Luther, Designer: Luthers@ri.riep.com



File: V:\PROJECTS\WV\070758-000\06-DESIGN\WAMPANOGAS\WAMPANOGAS TRAIL EASTERN PROVIDENCE RI 100LW.DWG
Sheet: 11/07/2023 8:31:14 AM Printed: 11/07/2023 8:38:38 AM Current User: Luther, Christopher LastSavedBy: 7787

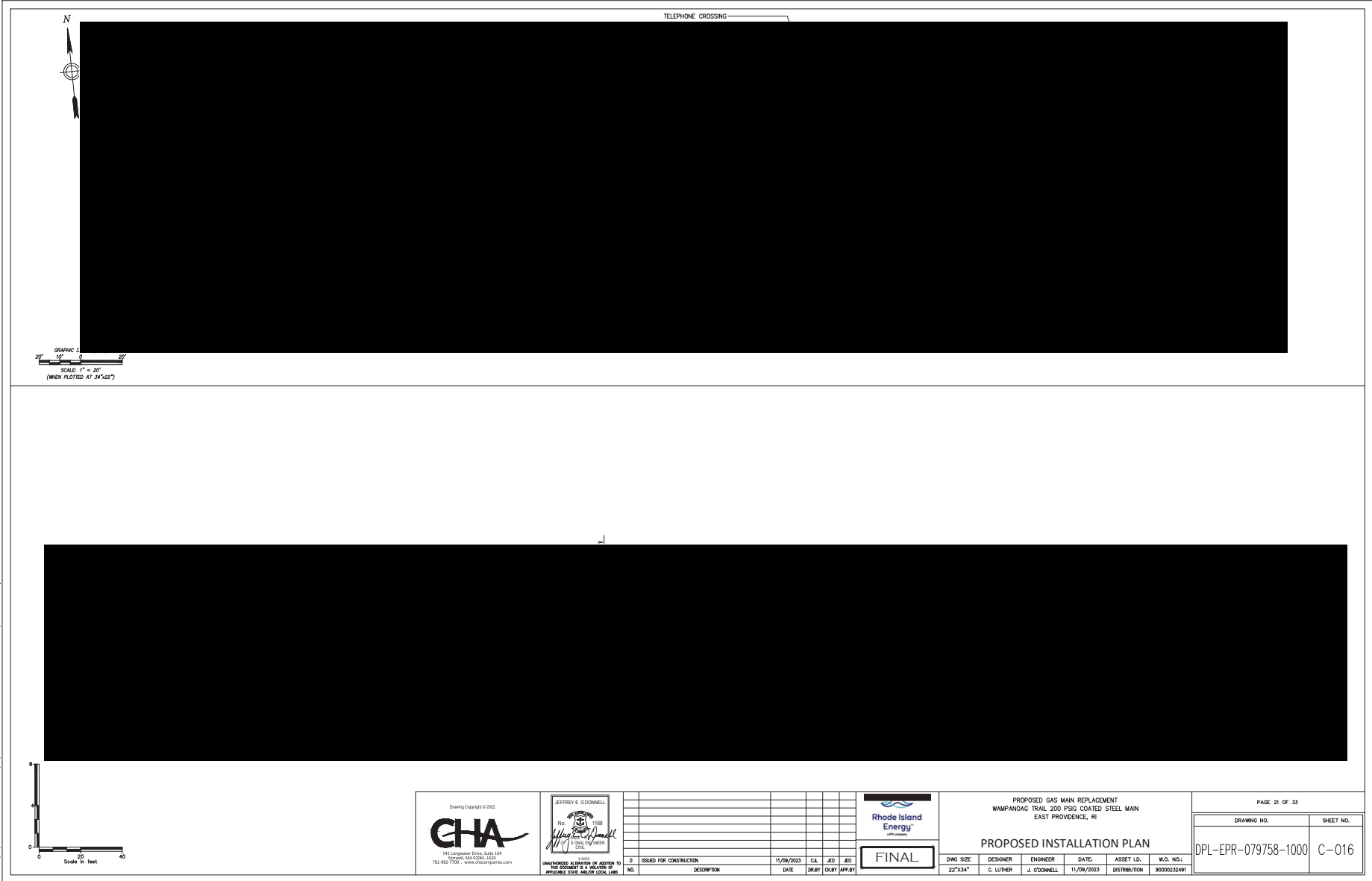


NO.	DESCRIPTION	DATE	DESIGN	CHECK	APP'D
0	ISSUED FOR CONSTRUCTION	11/09/2023	CL	JEO	

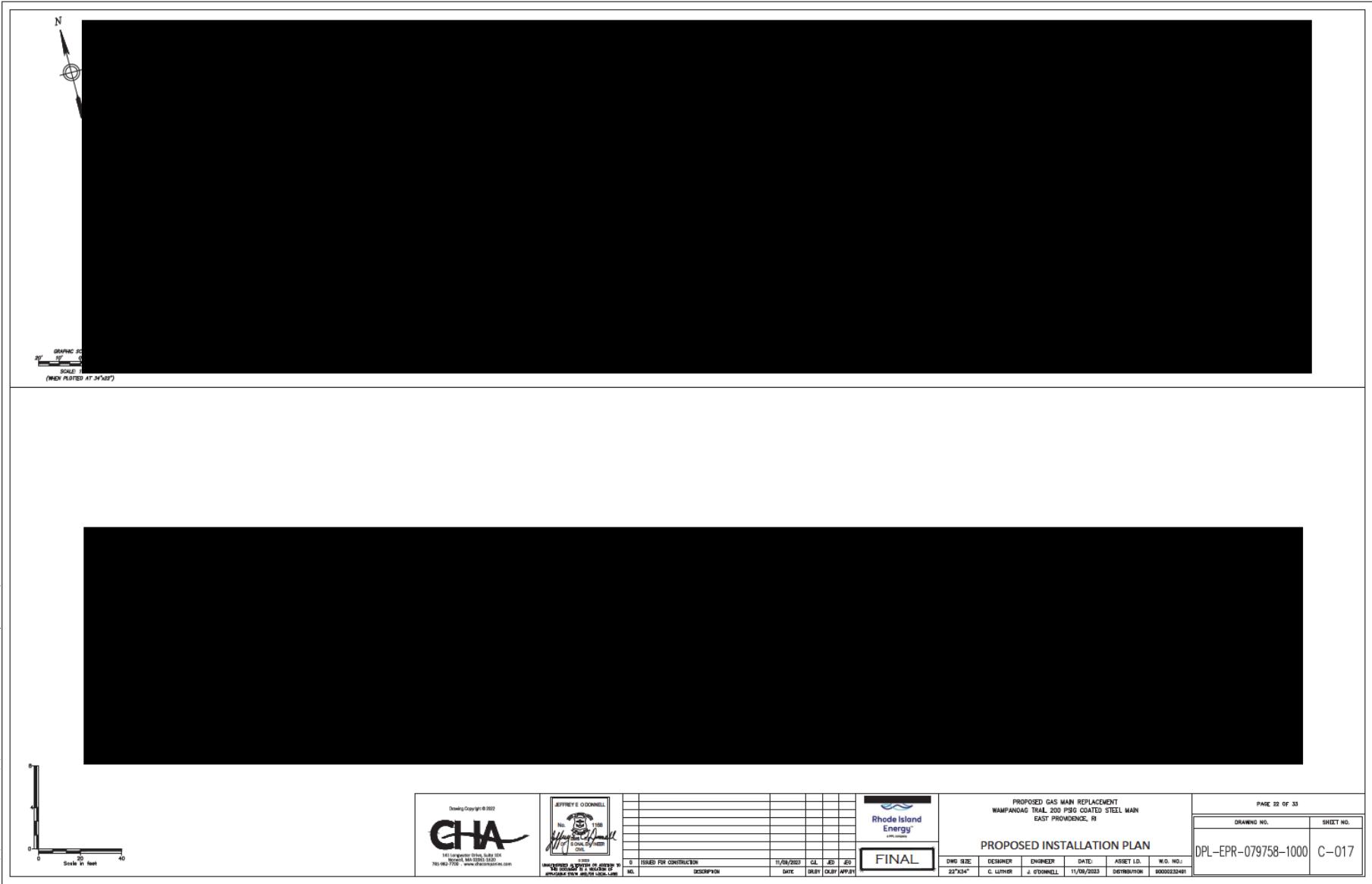


DWG SIZE	DESIGNER	ENGINEER	DATE	ASSET I.D.	W.O. NO.
22"x34"	C. LUTHER	J. O'DONNELL	11/09/2023	DETRM010H	8000032481

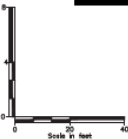
DRAWING NO.		SHEET NO.	
DPL-EPR-079758-1000		C-015	



FILE: V:\PROJECTS\WAMPANOG TRAIL\200 PSIG COATED STEEL MAIN REPLACEMENT\DWG\170719\WAMPANOG TRAIL - EASTERN PROVIDENCE RI - 1000EPR170719.DWG
DATE: 11/09/2023 10:14:42 AM
PLOTTER: HP DesignJet T1100PS
PLOT DATE: 11/09/2023 10:14:42 AM
PLOTTER: HP DesignJet T1100PS

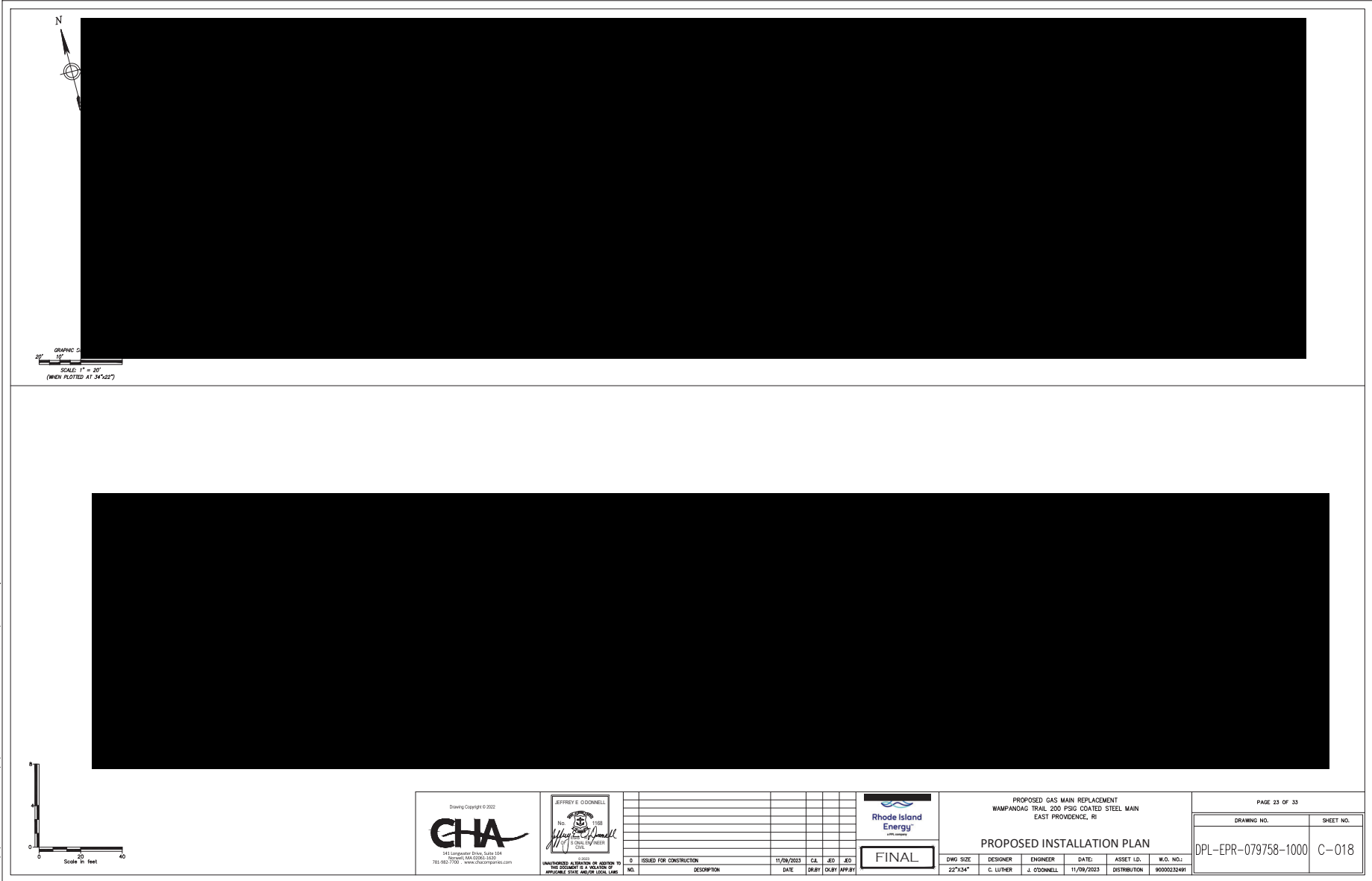


GRAPHIC SCALE
1" = 40'
SCALE
(WHEN PLOTTED AT 1/4"=10')



		<table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> <th>APP'D</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>				NO.	DATE	BY	APP'D						PROPOSED GAS MAIN REPLACEMENT WAMPANOG TRAIL, 200 PSIG COATED STEEL MAIN EAST PROVIDENCE, RI				PAGE 22 OF 33	
		NO.	DATE	BY	APP'D															
0 ISSUED FOR CONSTRUCTION 11/09/2023 CL JES JES					PROPOSED INSTALLATION PLAN				DRAWING NO. DPL-EPR-079758-1000	SHEET NO. C-017										
0 ISSUED FOR CONSTRUCTION 11/09/2023 CL JES JES		DESCRIPTION DATE DESIGNED BY APP'D			DWG SIZE 22"x34"	DESIGNER C. LUTHER	ENGINEER J. O'DONNELL	DATE 11/09/2023	ASSET I.D. DETR001010H	W.O. NO. 8000032040										

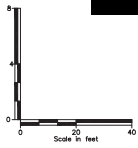
File: V:\PROJECTS\WV\079758-1000\DESIGN\WAMPANOG\WAMPANOG TRAIL EASTERN PROVIDENCE RI 100LWB
 Sheet: 11/09/2023 8:31:14 AM Printed: 11/09/2023 8:38:18 AM Current User: Luther, Designer: Lutherrb@ri.net



FILE: V:\PROJECTS\WV\079758\000\04 DESIGN\WAMPOAG\04\079758 WAMPAGAG TRAIL EASTERN PROVIDENCE RI 10052980.dwg
DATE: 11/29/2023 10:14:41 AM PLOTTER: 11/29/2023 8:29:57 AM C:\Users\jlp\OneDrive\Documents\10052980.dwg

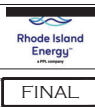


GRAPHIC SCALE
20'
10'
SCALE: 1" = 20'
(WHEN PLOTTED AT 34"x22")



JEFFREY E. O'DONNELL
No. 118
Professional Engineer
State of Rhode Island

NO.	DESCRIPTION	DATE	DRY	CHK BY	APP BY
1	ISSUED FOR CONSTRUCTION	11/29/2023	CA	JE	JE

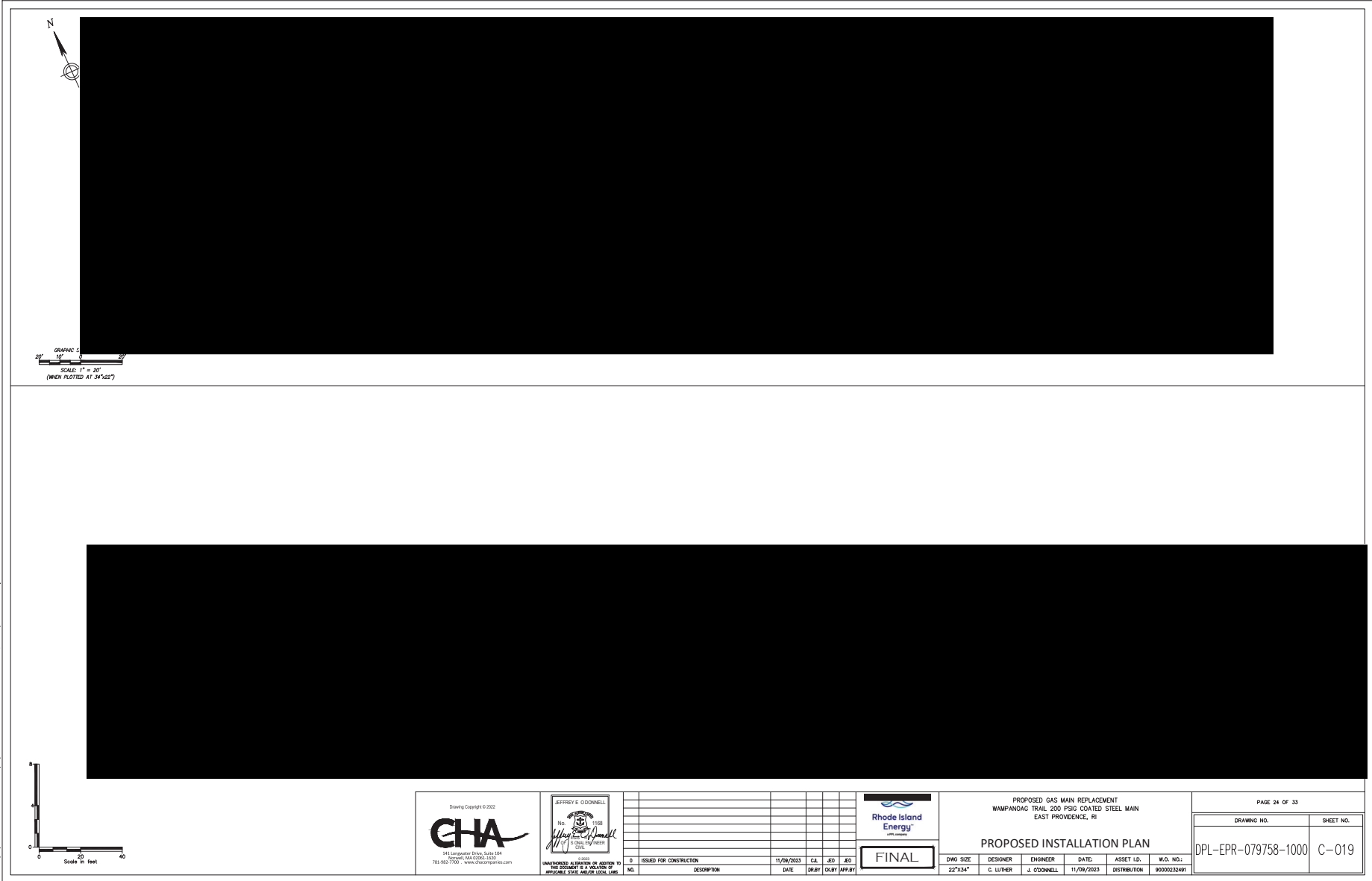


PROPOSED GAS MAIN REPLACEMENT
WAMPAGAG TRAIL 200 PSIG COATED STEEL MAIN
EAST PROVIDENCE, RI





PROPOSED INSTALLATION PLAN

DWG. SIZE	DESIGNER	ENGINEER	DATE	ASSET I.D.	W.O. NO.
22"x34"	C. LUTHER	J. O'DONNELL	11/29/2023	DISTRIBUTION	9000232491

PAGE 23 OF 33	
DRAWING NO.	SHEET NO.
DPL-EPR-079758-1000	C-018





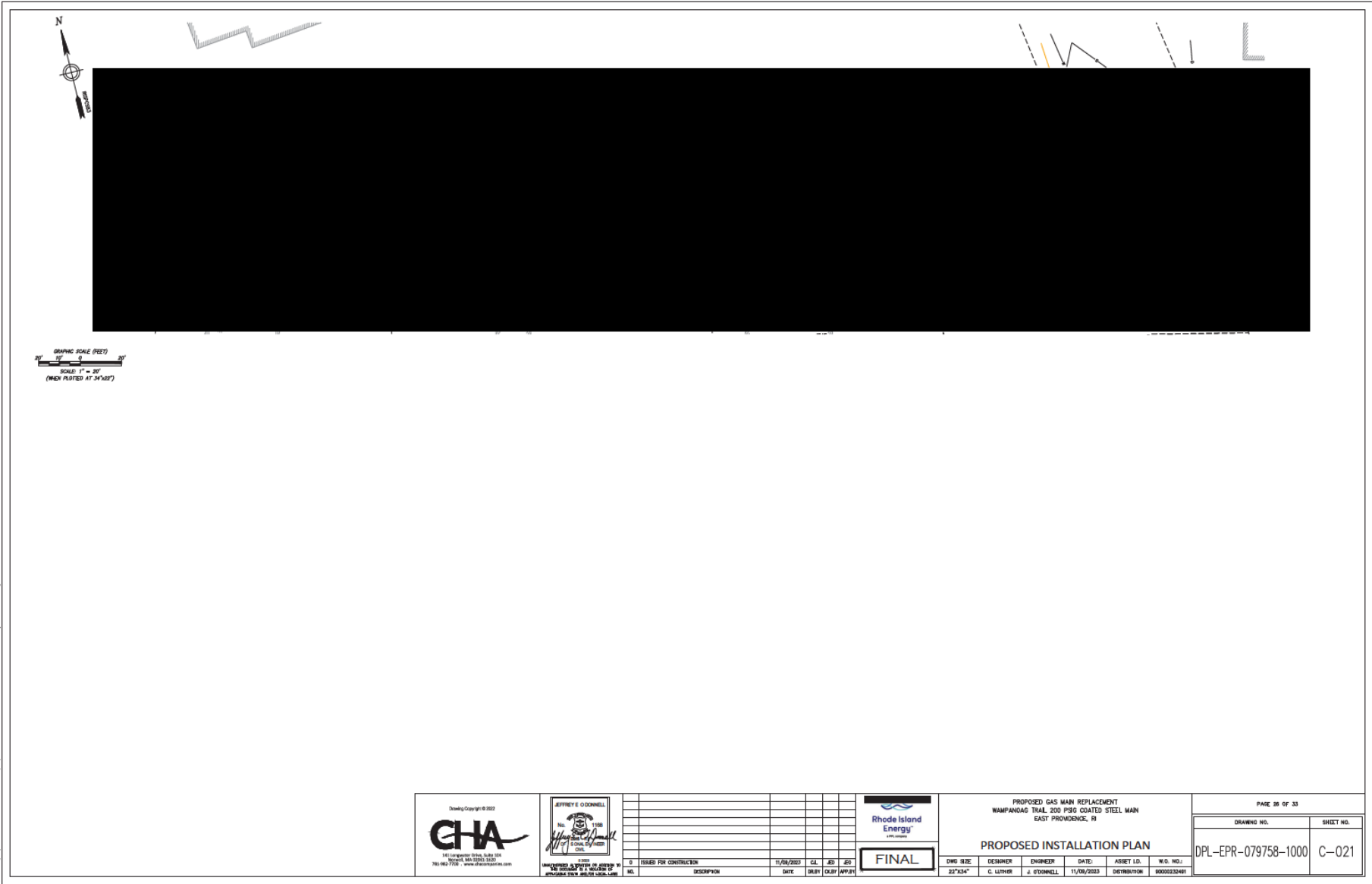
FILE: V:\PROJECTS\WV\079758\000\01 DESIGN\08\000\01\079758 WAMPANOG TRAIL EASTERN PROVIDENCE RI 1005EPRB
DATE: 11/09/2023 10:14:41 AM PLOTTER: 17/02/2023 8:23:52 AM E: General User: LEINAC, Christiane [1005EPRB_7757]

 <p>241 Longwood Drive, Suite 100 East Providence, RI 02912 781.983.5700 www.cha-engineering.com</p>						PROPOSED GAS MAIN REPLACEMENT WAMPANOG TRAIL 200 PSIG COATED STEEL MAIN EAST PROVIDENCE, RI				PAGE 24 OF 33					
						PROPOSED INSTALLATION PLAN				DRAWING NO.	SHEET NO.				
UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF APPLICABLE STATE AND FEDERAL LAWS		D NO.	ISSUED FOR CONSTRUCTION	11/09/2023	CA.	JEO	JEO	DWG. SIZE 22"x34"	DESIGNER C. LUTHER	ENGINEER J. O'DONNELL	DATE: 11/09/2023	ASSET I.D. DISTRIBUTION	W.O. NO.: 90000232491	DPL-EPR-079758-1000	C-019



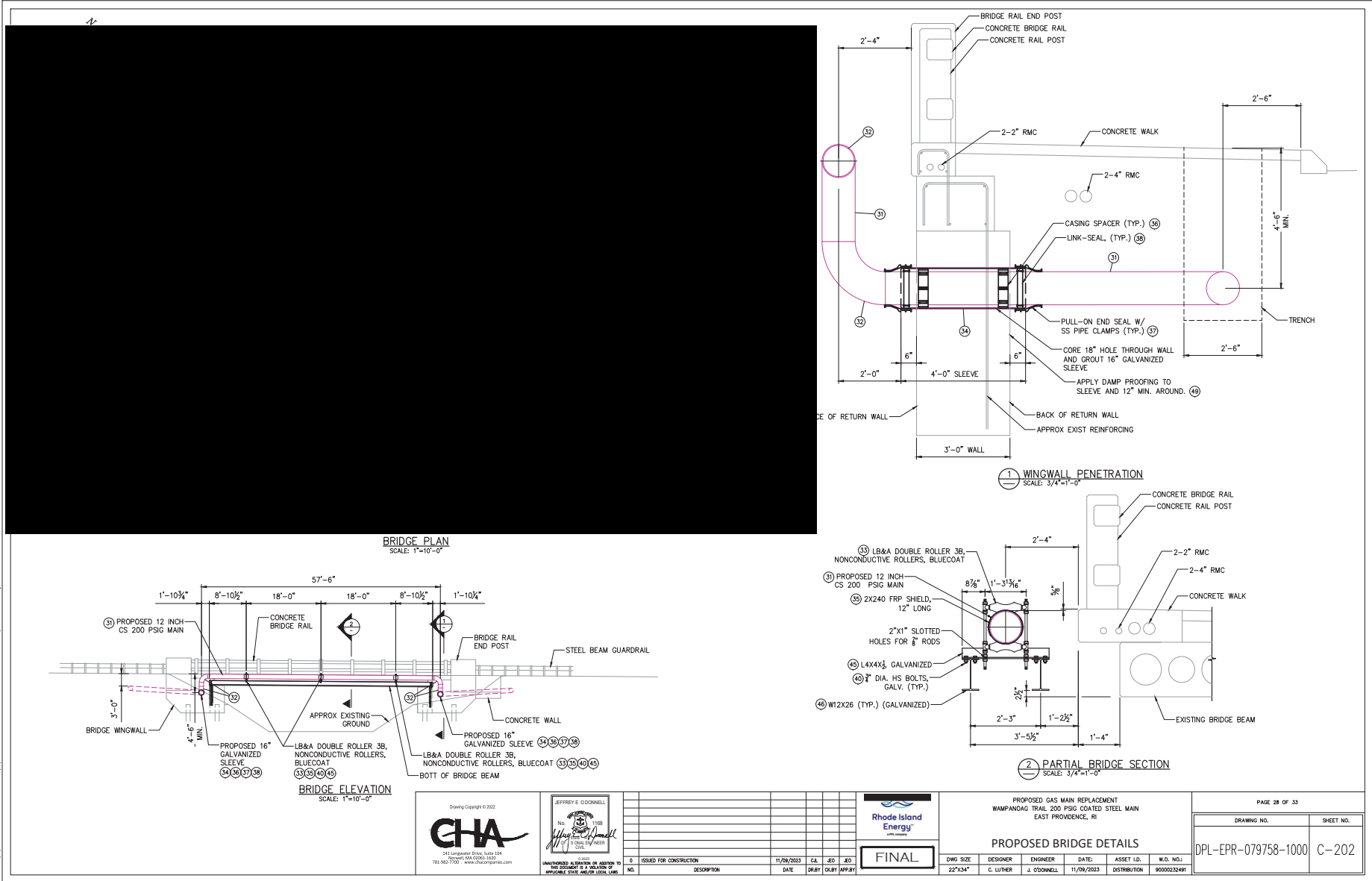
FILE: V:\PROJECTS\WV\079758\000\DESIGN\04\079758 WAMPANOG TRAIL, EASTERN PROVIDENCE, RI 1005EPRB
DATE: 11/09/2023 10:14:41 AM PLOTTED: 11/09/2023 8:42:52 AM C:\Users\lucy.LOUISE\OneDrive\Documents\7757

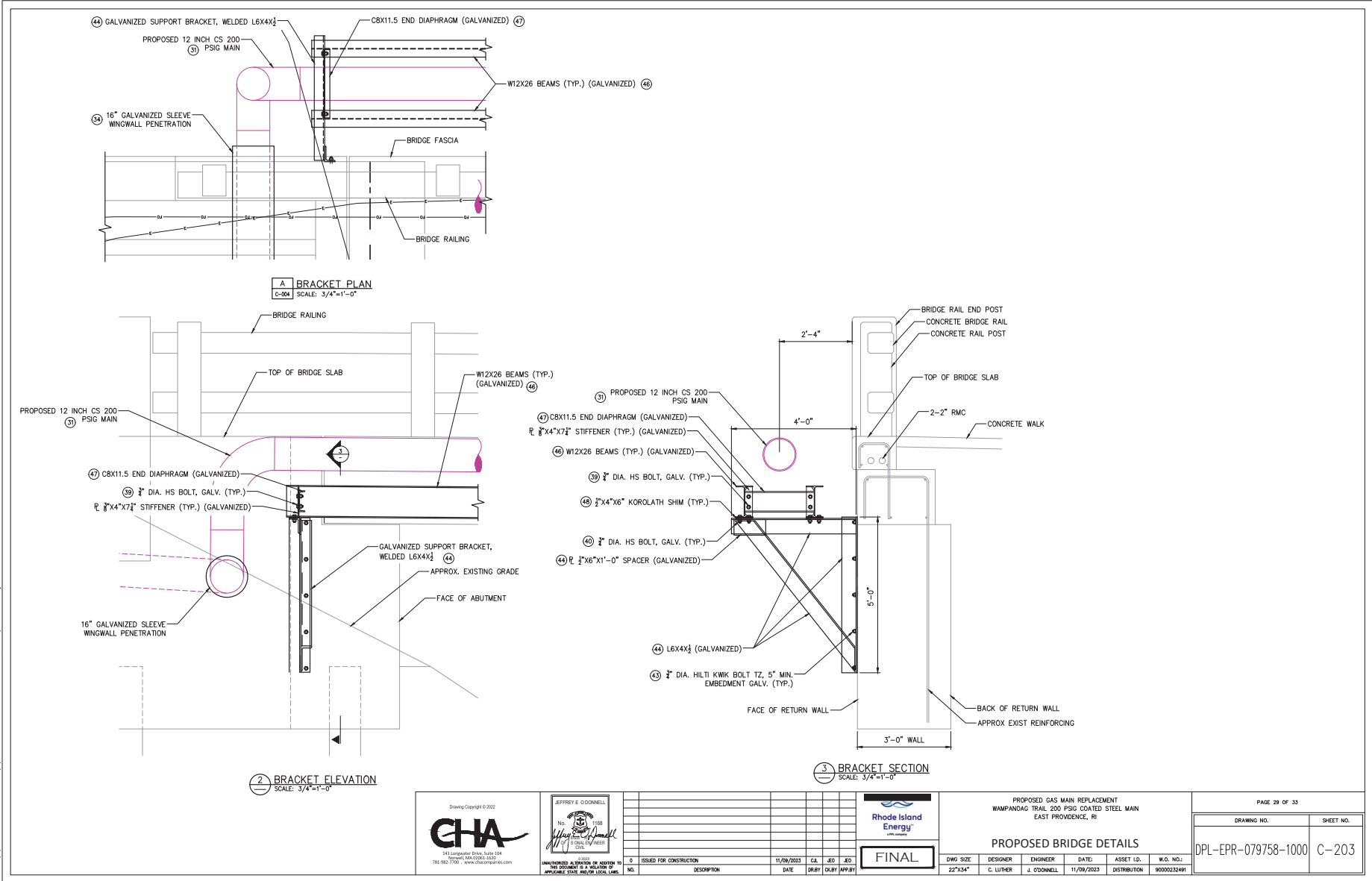
 Drawing Copyright © 2022 241 Longwood Drive, Suite 100 East Greenwich, RI 02818 781.981.5700 www.cha-engineering.com	 AUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF R.I. GENERAL LAWS, CHAPTER 56-28, SECTION 56-28-10.	PROPOSED GAS MAIN REPLACEMENT WAMPANOG TRAIL 200 PSIG COATED STEEL MAIN EAST PROVIDENCE, RI				PAGE 25 OF 33	
		PROPOSED INSTALLATION PLAN				DRAWING NO.	SHEET NO.
D NO.	ISSUED FOR CONSTRUCTION	11/09/2023	CA.	JEO	DPL-EPR-079758-1000		C-020
	DESCRIPTION	DATE	DRAWN	APP. BY	DWG. SIZE	DESIGNER	ENGINEER
					22"x34"	C. LUTHER	J. O'DONNELL
							DATE:
							11/09/2023
							ASSET I.D.
							DISTRIBUTION
							90000232491
							W.O. NO.:






File: V:\PROJECTS\WV\079758-000\WV\DESIGN\WV\WV\079758 WAMPANOGAS TRAIL EASTERN PROVIDENCE RI 100LW.DWG
Saved: 11/07/2023 8:31:14 AM Printed: 11/07/2023 8:46:30 AM Current User: Luther, Christopher LastSavedBy: 7787

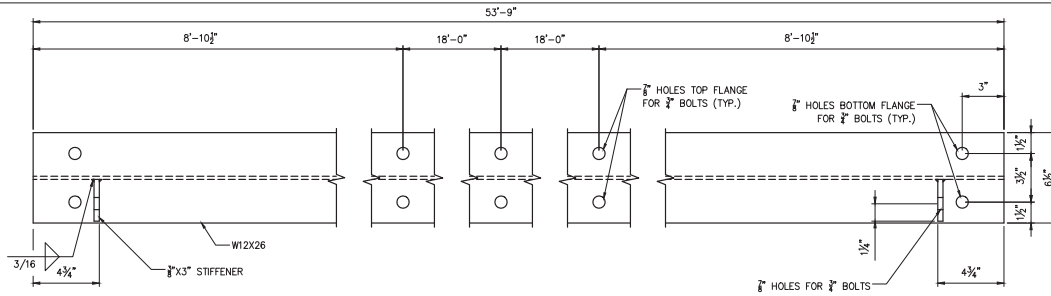
 141 Longwater Drive, Suite 100 Woonsocket, RI 02896-1500 781-962-7700 • www.chaonline.com	 01000 REGISTERED PROFESSIONAL ENGINEER IN MECHANICAL ENGINEERING EXPIRES 07/31/2024	PROPOSED GAS MAIN REPLACEMENT WAMPANOGAS TRAIL, 200 PSIG COATED STEEL MAIN EAST PROVIDENCE, RI				PAGE 26 OF 33			
		PROPOSED INSTALLATION PLAN				DRAWING NO. DPL-EPR-079758-1000	SHEET NO. C-021		
0 ISSUED FOR CONSTRUCTION DATE: 11/09/2023 DESIGNED BY: CLJ CHECKED BY: JFO	11/09/2023 DATE 11/09/2023 DATE	CL DESIGNED BY	JFO CHECKED BY	22"x34" DWG SIZE	C. LUTHER DESIGNER	J. O'DONNELL ENGINEER	11/09/2023 DATE	DSTR001010H ASSET I.D.	8000032040 W.O. NO.





FILE: V:\PROJECTS\WAMPONDAG\0000\04_25\CON\04RIM05\DWG\179718_WAMPONDAG TRAIL EASTERN PROVIDENCE_RIM05.DWG
DATE: 11/29/2023 12:52:59 PM USERNAME: 11/29/2023 12:52:59 PM C:\Users\luther\OneDrive\Documents\179718

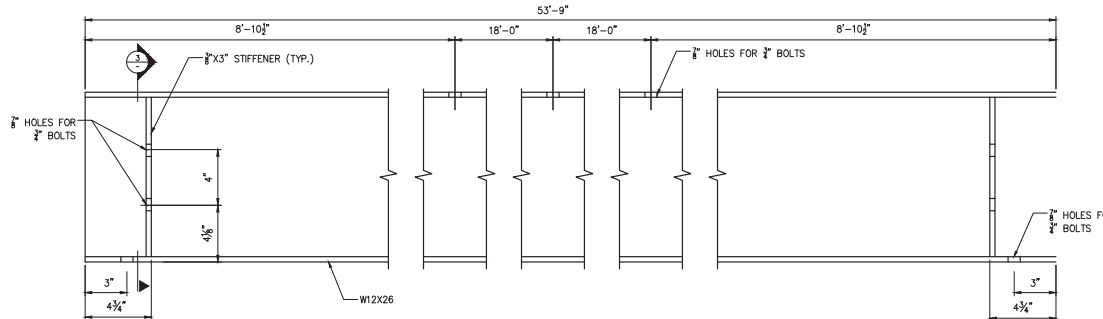
 <p>34 Longwater Blvd., Suite 100 781-882-5700 www.chainc.com</p>				PROPOSED GAS MAIN REPLACEMENT WAMPONDAG TRAIL 200 PSIG COATED STEEL MAIN EAST PROVIDENCE, RI				PAGE 29 OF 33																												
		FINAL		PROPOSED BRIDGE DETAILS				DRAWING NO. SHEET NO. DPL-EPR-079758-1000 C-203																												
UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF APPLICABLE STATE AND/OR LOCAL LAWS.		<table border="1"> <thead> <tr> <th>NO.</th> <th>ISSUED FOR CONSTRUCTION</th> <th>DATE</th> <th>CHK'D</th> <th>APP'D</th> </tr> </thead> <tbody> <tr> <td>0</td> <td></td> <td>11/29/2023</td> <td>CA</td> <td>ED</td> </tr> <tr> <td></td> <td>DESCRIPTION</td> <td>DATE</td> <td>DRY</td> <td>CHK BY</td> </tr> </tbody> </table>		NO.	ISSUED FOR CONSTRUCTION	DATE	CHK'D	APP'D	0		11/29/2023	CA	ED		DESCRIPTION	DATE	DRY	CHK BY	<table border="1"> <thead> <tr> <th>DWG. SIZE</th> <th>DESIGNER</th> <th>ENGINEER</th> <th>DATE</th> <th>ASSET I.D.</th> <th>W.O. NO.</th> </tr> </thead> <tbody> <tr> <td>22"X34"</td> <td>C. LUTHER</td> <td>J. O'DONNELL</td> <td>11/29/2023</td> <td>DISTRIBUTION</td> <td>90000232491</td> </tr> </tbody> </table>				DWG. SIZE	DESIGNER	ENGINEER	DATE	ASSET I.D.	W.O. NO.	22"X34"	C. LUTHER	J. O'DONNELL	11/29/2023	DISTRIBUTION	90000232491		
NO.	ISSUED FOR CONSTRUCTION	DATE	CHK'D	APP'D																																
0		11/29/2023	CA	ED																																
	DESCRIPTION	DATE	DRY	CHK BY																																
DWG. SIZE	DESIGNER	ENGINEER	DATE	ASSET I.D.	W.O. NO.																															
22"X34"	C. LUTHER	J. O'DONNELL	11/29/2023	DISTRIBUTION	90000232491																															



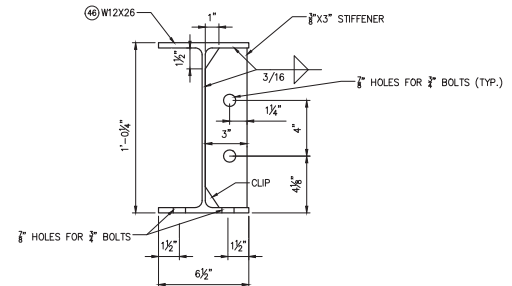
SUPPORT BEAM PLAN
SCALE: 3" = 1'-0"

NOTES:

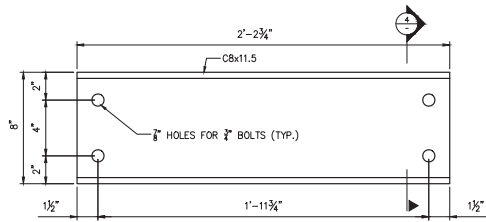
1. ALL STEEL AND HARDWARE SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A153/A123.
2. DAMAGED GALVANIZING SHALL BE REPAIRED IN ACCORDANCE WITH ASTM A780.
3. ALL STEEL, PLATES AND ANGLES SHALL BE ASTM A36, GALVANIZED.
4. BOLTS SHALL BE ASTM F3125, GR 325, GALVANIZED.
5. NUTS SHALL BE ASTM A563, GRADE A, WASHERS SHALL BE ASTM A436, TYPE 1. NUTS AND WASHERS SHALL BE GALVANIZED.
6. ALL WELDING SHALL USE E60 ELECTRODES.
7. STEEL SLEEVE SHALL BE ASTM A53, GRADE B AND SHALL BE GALVANIZED PER ASTM A123.
8. CONTRACTOR IS RESPONSIBLE FOR REPAIRING AND DAMAGE TO BRIDGE.



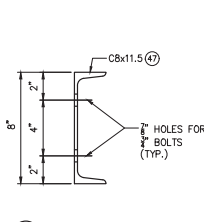
SUPPORT BEAM ELEVATION
SCALE: 3" = 1'-0"



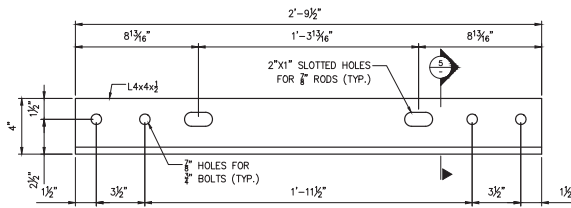
3 BEAM SECTION
SCALE: 3" = 1'-0"



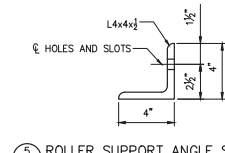
DIAPHRAGM ELEVATION
SCALE: 3" = 1'-0"



4 DIAPHRAGM SECTION
SCALE: 3" = 1'-0"



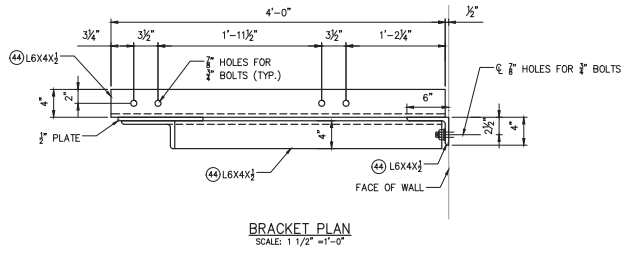
ROLLER SUPPORT ANGLE PLAN
SCALE: 3" = 1'-0"



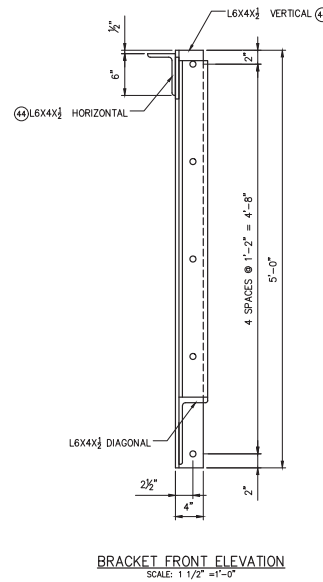
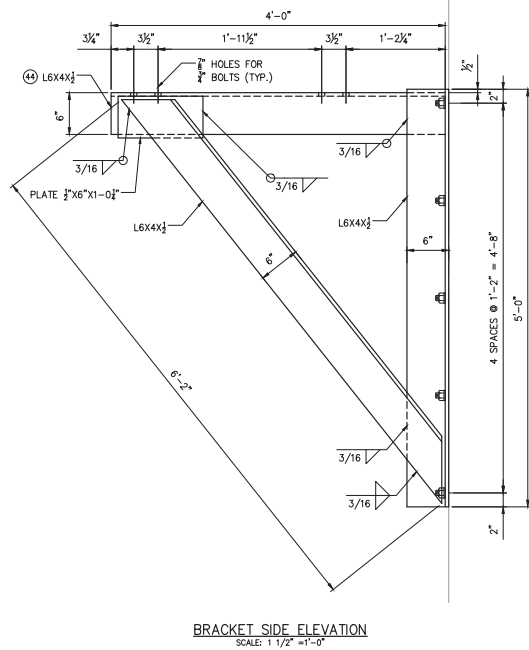
5 ROLLER SUPPORT ANGLE SECTION
SCALE: 3" = 1'-0"

FILE: V:\PROJECTS\WVMS\079758\000\04_25\CON\GASMAIN\DIV1\079758_WAMPANOG TRAIL EASTERN PROVIDENCE_RI_DRAWING.DWG
DATE: 11/29/2023 12:52:59 PM DRAWN: 11/29/2023 12:52:59 PM CHECK: User: Luther, Designer: C:\dodonnell

<p>341 Longwater Drive, Suite 100 East Greenwich, RI 02818 781.982.5700 www.cha-engineering.com</p>	<p>PROPOSED GAS MAIN REPLACEMENT WAMPANOG TRAIL 200 PSIG COATED STEEL MAIN EAST PROVIDENCE, RI</p>	PAGE 30 OF 33													
		DWG SIZE: 22"x34"	DESIGNER: C. LUTHER	ENGINEER: J. O'DONNELL	DATE: 11/29/2023	ASSET I.D.:	NO. NO.:								
<p>PROPOSED BRIDGE DETAILS</p>		DRAWING NO.:	SHEET NO.:												
<p>FINAL</p>		DPL-EPR-079758-1000	C-204												
<p>UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF APPLICABLE STATE AND FEDERAL LAWS.</p>		<table border="1"> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRY</th> <th>CHK</th> <th>APP</th> </tr> <tr> <td>0</td> <td>ISSUED FOR CONSTRUCTION</td> <td>11/29/2023</td> <td>CA</td> <td>ED</td> <td>ED</td> </tr> </table>		NO.	DESCRIPTION	DATE	DRY	CHK	APP	0	ISSUED FOR CONSTRUCTION	11/29/2023	CA	ED	ED
NO.	DESCRIPTION	DATE	DRY	CHK	APP										
0	ISSUED FOR CONSTRUCTION	11/29/2023	CA	ED	ED										



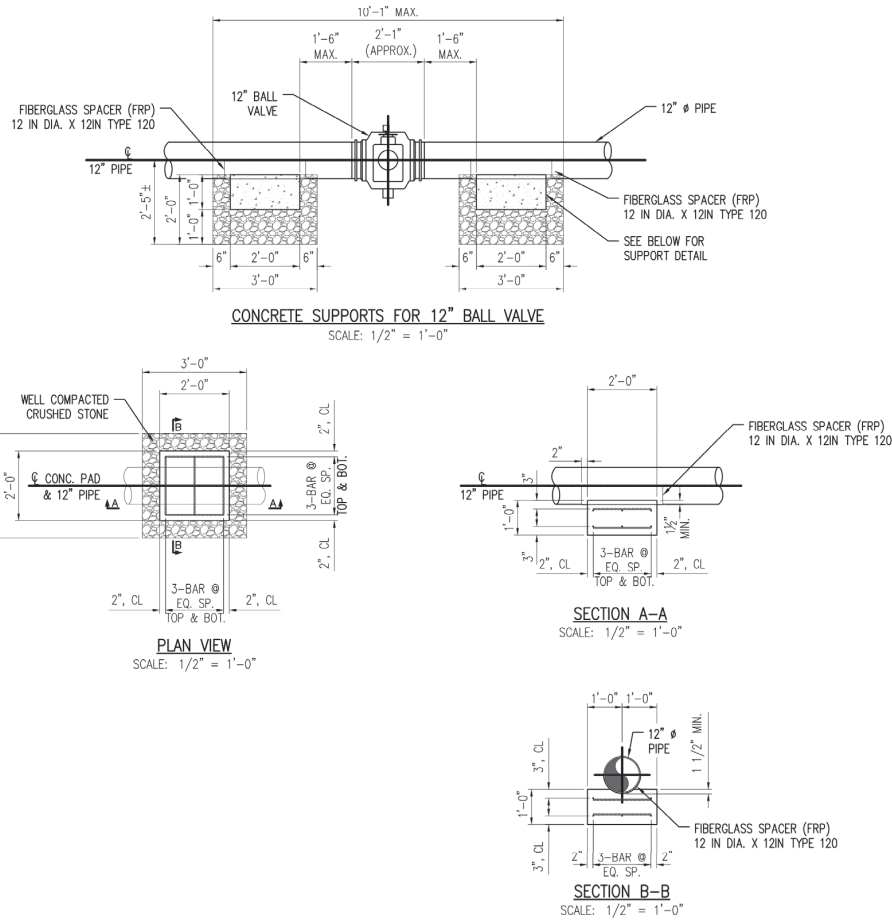
NOTES:
 1. FOR STEEL NOTES, SEE SHEET C-006



FILE: V:\PROJECTS\WVMS\079758\000\04_252024\WAMPANOGAG TRAIL EASTERN PROVIDENCE R_1700.DWG
 PLOT: 11/29/2023 12:52:59 PM PRINTED: 11/29/2023 4:58:49 PM Content User: Luther, Christopher Location: Providence, RI

<p>341 Water Street, Suite 100 East Providence, RI 02914 781.882.5700 www.cha.com</p>		D W O NO. DESCRIPTION DATE DATE DATE APP BY					PROPOSED GAS MAIN REPLACEMENT WAMPANOGAG TRAIL 200 PSIG COATED STEEL MAIN EAST PROVIDENCE, RI				PAGE 31 OF 33		
		ISSUED FOR CONSTRUCTION 11/29/2023 CA. JEO NO. DESCRIPTION DATE DATE DATE APP BY						PROPOSED BRIDGE DETAILS				DRAWING NO. SHEET NO. DPL-EPR-079758-1000 C-205	
		DWG SIZE 22"x34"		DESIGNER C. LUTHER		ENGINEER J. O'DONNELL		DATE 11/29/2023		ASSET I.D. DISTRIBUTION		W.O. NO.: 9000232491	

REDACTED



B/M FOR ONE PIPE SUPPORT (2 SUPPORTS REQUIRED)		
QTY	MK	DESCRIPTION
12		#4 BAR X 20", STRAIGHT, EPOXY COATED GRADE 60
0.15		CUBIC YARDS OF CONCRETE f'c = 4000 PSI
1.1		CUBIC YARDS OF CRUSHED STONE
3		SPACER, FIBERGLASS, 120 DEG, 12IN DIA.
		1/8" THICK (MIN.), SAP ITEM No 9341954

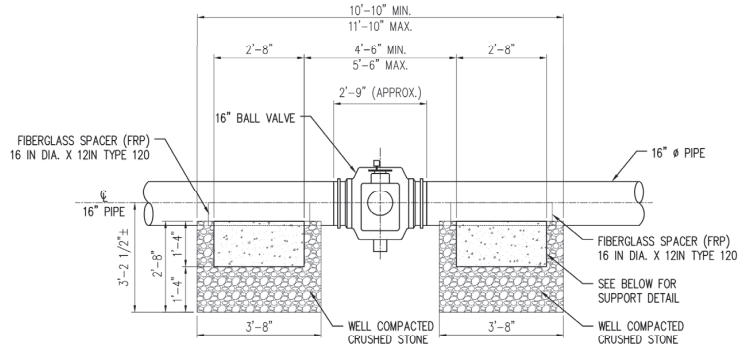
NOTES:

- FIELD SHALL VERIFY VALVE LOCATION BEFORE PLACING SLAB SUPPORTS.
- CONCRETE SHALL BE CURED IN ACCORDANCE WITH ACI 308. COLD WEATHER CURING PROVISIONS SHALL BE PROVIDED AS REQUIRED IN ACCORDANCE WITH ACI 306R.
- THE CONCRETE FOR THE SLAB FOUNDATION SHALL BE PLACED OVER WELL COMPACTED CRUSHED STONE AS SHOWN ON THIS DRAWING.
- CONCRETE SHALL BE f'c = 3000 PSI @ 1 DAY AS DETERMINED BY ASTM C-94 MADE WITH PORTLAND CEMENT (TYPE I/II PORTLAND CEMENT). SUGGESTED MIX:

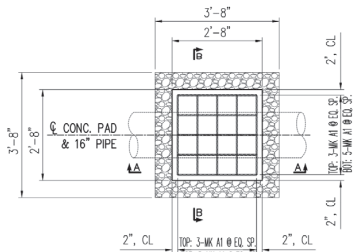
MIN. CEMENT CONTENT	8 SACKS/CY (750 LBS)
MAX. WATER/CEMENT RATIO	0.361
SLUMP IS	3" MAX
MAX. AGGREGATE SIZE	1"
AIR CONTENT	6% ± 1%
ADMITURES:	
SIKA AIR	1 OZ
SIKAMENT 686	60 OZ
- REINFORCING - ALL REBAR SHALL BE EPOXY COATED GRADE 60 BILLET STEEL IN ACCORDANCE WITH ASTM A-615.
- SIDES OF SLAB FOUNDATION SHALL BE FORMED.
- ALL FORM WORK AND PLACEMENT OF CONCRETE SHALL COMPLY WITH GOOD CONSTRUCTION PRACTICES AND BE IN ACCORDANCE WITH ALL LOCAL GOVERNING CODES AND REGULATIONS AS WELL AS THE ACI 301.
- TOP OF CONCRETE SHALL BE SCREENED LEVEL AND TRUE TO FINISH ELEVATION AND SHALL BE GIVEN A WOOD FLOAT FINISH WITH STEEL TOOLED EDGES.
- ALL REINFORCING SHALL BE NEW BILLET STEEL GRADE 60 IN ACCORDANCE WITH ASTM A-615 WITH DEFORMATION CONFORMING TO ASTM A-305. 3" CLEAR COVER TO TOP AND BOTTOM BARS.
- ALL BARS SHALL BE SECURELY HELD IN PROPER POSITION WHILE PLACING CONCRETE, ADDITIONAL BARS OR STIRRUPS SHALL BE PROVIDED TO THAT EFFECT.
- CONCRETE FINISH SHALL BE FREE OF HONEYCOMB, ROCK POCKETS AND UNEVEN SURFACES.
- PIPE SHALL BE TEMPORARILY SUPPORTED BY WOOD CRIBBING OR A SUITABLE PIPE SUPPORT FOR 3 DAYS, MIN. TO ALLOW ENOUGH TIME FOR CONCRETE TO CURE.

FILE: V:\PROJECTS\WV\071761000\04_DESIGN\DRAWINGS\DIV1\071761000_04_012125.dwg, EASTERN PROVIDENCE, RI, 10/26/2025
DATE: 11/09/2025 10:14:42 AM, DRAWN: J. LUTHER, 11/09/2025 10:14:42 AM, CHECKED: J. LUTHER, 11/09/2025 10:14:42 AM, APPROVED: J. LUTHER, 11/09/2025 10:14:42 AM

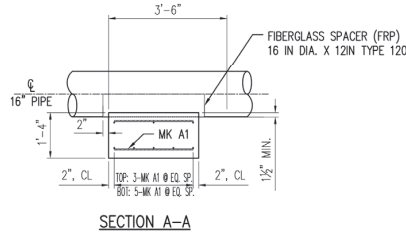
RHODE ISLAND ENERGY CONSTRUCTION DETAILS *THIS DRAWING DEPICTS TYPICAL RHODE ISLAND ENERGY STANDARDS AND IS PROVIDED FOR THIS PROJECT ONLY	Drawing Copyright © 2022 	241 Longwater Drive, Suite 100 East Providence, RI 02912 TEL: 401.882.5700 www.rienergy.com	EFFREY E O'DONNELL No. 1188 A PROFESSIONAL ENGINEER STATE OF RHODE ISLAND		PROPOSED GAS MAIN REPLACEMENT WAMPANOGAG TRAIL, 200 PSIG COATED STEEL MAIN EAST PROVIDENCE, RI 12-INCH VALVE SUPPORT DETAIL	PAGE 32 OF 33 <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: 8px;">DRAWING NO.</td> <td style="font-size: 8px;">SHEET NO.</td> </tr> <tr> <td style="text-align: center;">DPL-EPR-079758-1000</td> <td style="text-align: center;">C-301</td> </tr> </table>	DRAWING NO.	SHEET NO.	DPL-EPR-079758-1000	C-301																			
DRAWING NO.	SHEET NO.																												
DPL-EPR-079758-1000	C-301																												
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">NO.</th> <th style="width: 45%;">DESCRIPTION</th> <th style="width: 10%;">DATE</th> <th style="width: 10%;">DRAWN</th> <th style="width: 10%;">CHECKED</th> <th style="width: 10%;">APP'D</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>					NO.	DESCRIPTION	DATE	DRAWN	CHECKED	APP'D							<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; padding: 2px;">DWG. SIZE</td> <td style="width: 10%; padding: 2px;">DESIGNER</td> <td style="width: 10%; padding: 2px;">ENGINEER</td> <td style="width: 10%; padding: 2px;">DATE</td> <td style="width: 10%; padding: 2px;">ASSET I.D.</td> <td style="width: 10%; padding: 2px;">M.O. NO.:</td> </tr> <tr> <td style="font-size: 8px;">22"x34"</td> <td style="font-size: 8px;">C. LUTHER</td> <td style="font-size: 8px;">J. O'DONNELL</td> <td style="font-size: 8px;">11/09/2025</td> <td style="font-size: 8px;">DISTRIBUTION</td> <td style="font-size: 8px;">900020232491</td> </tr> </table>	DWG. SIZE	DESIGNER	ENGINEER	DATE	ASSET I.D.	M.O. NO.:	22"x34"	C. LUTHER	J. O'DONNELL	11/09/2025	DISTRIBUTION	900020232491
NO.	DESCRIPTION	DATE	DRAWN	CHECKED	APP'D																								
DWG. SIZE	DESIGNER	ENGINEER	DATE	ASSET I.D.	M.O. NO.:																								
22"x34"	C. LUTHER	J. O'DONNELL	11/09/2025	DISTRIBUTION	900020232491																								



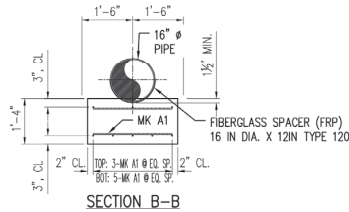
CONCRETE SUPPORTS FOR 16" BALL VALVE



PLAN VIEW



SECTION A-A



SECTION B-B

B/M FOR ONE PIPE SUPPORT (2 SUPPORTS REQUIRED)		
QTY	MK	DESCRIPTION
16	A1	#4 BAR X 2'-4", STRAIGHT, EPOXY COATED GRADE 60
0.25		CUBIC YARDS OF CONCRETE f'c = 4000 PSI
1.32		CUBIC YARDS OF CRUSHED STONE
5		SPACER, FIBERGLASS, 120 DEG, 16IN DIA.
		1/8" THICK (MIN.) SAP ITEM No 9341957

NOTES:

1. FIELD SHALL VERIFY VALVE LOCATION BEFORE PLACING SLAB SUPPORTS.
2. CONCRETE SHALL BE CURED IN ACCORDANCE WITH ACI 308. COLD WEATHER CURING PROVISIONS SHALL BE PROVIDED AS REQUIRED IN ACCORDANCE WITH ACI 308R.
3. THE CONCRETE FOR THE SLAB FOUNDATION SHALL BE PLACED OVER WELL COMPACTED CRUSHED STONE AS SHOWN ON THIS DRAWING.
4. CONCRETE SHALL BE f'c = 3000 PSI @ 1 DAY AS DETERMINED BY ASTM C-94 MADE WITH PORTLAND CEMENT (TYPE I/II PORTLAND CEMENT). SUGGESTED MIX:

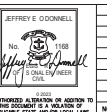
MIN. CEMENT CONTENT	8 SACKS/CY (750 LBS)
MAX. WATER/CEMENT RATIO	0.361
SLUMP IS	3" MAX
MAX. AGGREGATE SIZE	1"
AIR CONTENT	6% ± 1%
AD MIXTURES:	
SIKA AIR	1 OZ
SIKAMENT 686	60 OZ

SUBMIT PF STAMPED AND SIGNED CONCRETE MIX REPORT TO PROJECT ENGINEERING & DESIGN FOR APPROVAL.

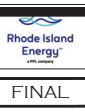
5. REINFORCING - ALL REBAR SHALL BE EPOXY COATED GRADE 60 BILLET STEEL IN ACCORDANCE WITH ASTM A-615.
6. SIDES OF SLAB FOUNDATION SHALL BE FORMED.
7. ALL FORM WORK AND PLACEMENT OF CONCRETE SHALL COMPLY WITH GOOD CONSTRUCTION PRACTICES AND BE IN ACCORDANCE WITH ALL LOCAL GOVERNING CODES AND REGULATIONS AS WELL AS THE ACI 301.
8. TOP OF CONCRETE SHALL BE SCREED LEVEL AND TRUE TO FINISH ELEVATION AND SHALL BE GIVEN A WOOD FLOAT FINISH WITH STEEL TOOLED EDGES.
9. ALL REINFORCING SHALL BE NEW BILLET STEEL GRADE 60 IN ACCORDANCE WITH ASTM A-615 WITH DEFORMATION CONFORMING TO ASTM A-305. 3" CLEAR COVER TO TOP AND BOTTOM BARS.
10. ALL BARS SHALL BE SECURELY HELD IN PROPER POSITION WHILE PLACING CONCRETE. ADDITIONAL BARS OR STIRRUPS SHALL BE PROVIDED TO THAT EFFECT.
11. CONCRETE FINISH SHALL BE FREE OF HONEYCOMB, ROCK POCKETS AND UNEVEN SURFACES.
12. PIPE SHALL BE TEMPORARILY SUPPORTED BY WOOD CRIBBING OR A SUITABLE PIPE SUPPORT FOR 3 DAYS, MIN. TO ALLOW ENOUGH TIME FOR CONCRETE TO CURE.

FILE: V:\PROJECTS\WV\071761000\04_DESIGN\04060000\04\071761000\WAMPANOG TRAIL, EASTERN PROVIDENCE, RI 1006196.dwg
 PLOT: 1/17/2023 8:10:47 AM PLOTTER: HP DesignJet 5000 Series PLOTTER: HP DesignJet 5000 Series PLOTTER: HP DesignJet 5000 Series

RHODE ISLAND ENERGY
 CONSTRUCTION DETAILS
 *THIS DRAWING DEPICTS
 TYPICAL RHODE ISLAND ENERGY
 STANDARDS AND IS PROVIDED
 FOR THIS PROJECT ONLY



NO.	DESCRIPTION	DATE	DRY	CHK	APP



PROPOSED GAS MAIN REPLACEMENT
 WAMPANOG TRAIL, 200 PSIG COATED STEEL MAIN
 EAST PROVIDENCE, RI
16-INCH VALVE SUPPORT DETAILS
 DWG SIZE: 22"x34" DESIGNER: C. LUTHER ENGINEER: J. O'DONNELL DATE: 11/09/2023 ASSET I.D.: DISTRIBUTION W.O. NO.: 90000232491

PAGE 33 OF 33	
DRAWING NO.	SHEET NO.
DPL-EPR-079758-1000	C-302

Division 1-18

Request:

For the FY 2025 Gas ISR Plan, the Company is proposing a total abandonment of approximately 61 miles and 0.0 miles of rehabilitation. (FY 2025 Gas ISR Plan Page 29-30). Please explain why the Company has reduced its goal of abandoning 65-70 miles of leak prone main and what effect this reduction will have, if any, on the integrity of the gas distribution system.

Response:

The Company has reduced its leak prone pipe abandonment target for FY2025 to approximately 61 miles as opposed to its previous targets in the 65-70 mile range in response to the Public Utility Commission's feedback to prioritize the replacement which targets the highest risk main segments. The nature of the current highest risk mains segments of leak prone pipe is such that it tends to be larger diameter, lower pressure, and located in congested, inner-city areas. These attributes make the pipe slower and more expensive to replace on a per mile basis as compared to the average unit cost to replace leak prone pipe. In the past, the Company has produced work plans that balanced risk and workability to achieve larger amounts of leak prone pipe abandonment in the course of a plan year.

The Company cannot predict what effect this change in prioritization will have on the integrity of the distribution system. It may seem plausible to think that reducing the number of miles replaced per year will necessarily extend the overall leak prone pipe replacement program beyond the initial 20-year scope; however, it may be possible in later years to execute more than 70 miles due to the relative ease and cost of the work that will remain. On the other hand, leaving greater quantities of leak prone pipe in service for longer periods of time represents a risk that could worsen in ways that are currently unpredictable.

The Company will continue to survey its existing leak prone pipe inventory and make the best risk-based decisions it can with the information it has available. It will also continue to track leak activity to ensure the continued effectiveness of the leak prone pipe abandonment program.

Division 1-19

Request:

In FY 2024, the Company has increased its workplan to include approximately 90% of high priority cast iron main replacement to incorporate the PUC's feedback to target the highest risk mains. The Company has also included approximately 90% cast iron main replacement in its FY 2025 Workplan. Please explain the advantages and disadvantages of this approach regarding the overall safety and reliability of the distribution system.

Response:

The disadvantage to this approach is that a portfolio mix so heavily focused on cast iron main ultimately results in a deceleration of the rate of leak-prone pipe abandonment the Company is able to achieve year-over-year. Cast iron work tends to be located in cities and towns where work is more difficult to complete, either due to the number of permits the Company can obtain in a given municipality on a yearly basis or due to the complexity of the main replacement work itself (or both). This translates into main replacement work both being more expensive and more time consuming, which in turn slows the rate of leak-prone pipe replacement.

While there are some segments of leak-prone pipe which the Company does not consider to be as high risk as others, all leak-prone pipe is treated as carrying some varying degree of risk based on its material composition and has been identified as requiring replacement for that reason. Slowing the rate of replacement year-over-year prolongs the in-service life (which is already 50 years on the low end to over 150 years in some cases) of the segments which would have otherwise been replaced in the final years of the overall leak-prone pipe replacement program, as 100% replacement will now take longer than previously anticipated. The Company's prioritization of projects based on risk is largely based on historical leak activity. While historical leak activity is a reliable indicator of deteriorating asset condition, all leak-prone pipe is prone to leak, and all leaks are potential safety concerns. Slowing the rate of leak-prone pipe replacement leaves a larger amount of leak-prone assets in the ground for a longer period of time and extends the amount of time currently low-risk assets are left in service with the potential to deteriorate and become medium or high-risk assets. Through prioritization of main replacement based on risk and constructability, the Company has been able to maintain a replacement level as high as possible with available construction resources. Also, while employing this approach the Company has observed a general downward trend over the past 10 years in leak receipts per total miles of pipe as well as leak repair rate on both mains and services.

The advantage to the focus on high risk cast iron is that, while the overall leak-prone pipe replacement rate year-over-year may not be as high as it has been in years prior, the replacement rate of mains in the high-risk category will be higher than it has been historically (to some degree) as all available budget dollars and resources will now be focused solely on these

Division 1-19, page 2

projects. Since these mains have been identified based off past leak activity, removing them from the system is a positive for both the safety and reliability of the distribution system, as these are assets which are confirmed to be deteriorating.

The Company is working to make cast iron replacement projects in urban areas easier, more efficient, and more cost effective by increasing project scopes and replacing low pressure mains with high pressure mains. Increasing project scopes minimizes repeated mobilization and demobilization as it keeps crews in project areas for longer periods of time. It also limits the number of main connections and cut offs required on projects, which eases the burden on the Company's in-house resources. By replacing leak-prone low pressure mains with high pressure mains, the Company is typically able to install smaller diameter mains (2" and 4") which are easier to install than larger, rather than installing 6", 8", and 12" mains.

The Narragansett Electric Company
d/b/a Rhode Island Energy
In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-20

Request:

Please provide an updated FY 2024 workplan of all completed projects, work in progress projects and planned projects in all categories associated with the abandonment of leak prone mains.

Response:

Please see Attachment DIV 1-20.

FY Work Started	Main WO#	Project Title	Town	Carry-Over? (started prior to 4/1/2023)	Project Status	Job Start Date	Job Completion Date	Program	ISR?	Total Svcs to be Completed in FY24	Services Remaining	Project Scope Est. Install Mileage	Full Year FY24-Est Install Miles (reduced by miles installed prior to FY24)	2" HD PE	4" HD PE	6" HD PE	8" HD PE	12" HD PE	Project Install Miles Remaining	LPP Abandonment Miles	Note	Estimated to Carry Over into FY 2025?
FY24	90000220931	Bradford St	BST	N	FCOMP	07/07/2023	10/02/2023	Integrity	Y	34	0	0.4	0.4	0	280	1740	0	0	0.4	0.5		N
FY24	90000217168	68-151 Bay View Ave	BST	N	INPRG	07/28/2023		Integrity	Y	74	74	0.6	0.6	3165	0	0	0	0	0.7	0.6		N
FY24	90000220936	Constitution St	BST	N	INPRG	09/29/2023		Integrity	Y	80	80	0.5	0.5	0	0	2850	0	0	0.6	0.5		Y
FY24	90000235502	Aaron Ave	BST	N	INPRG	11/14/2023		Integrity	Y	35	35	0.6	0.6	0	3340	0	0	0	0.0	0.6		N
FY23	90000227441	Rand St	CFL	Y	ABANDONED	03/08/2023	08/30/2023	CSC	Y	15	0	0.1	0.0	0	0	0	0	0	0.0	0.2		N
FY24	90000225867	Perry St	CFL	N	INPRG	10/16/2023		Integrity	Y	96	96	0.9	0.9	4630	0	0	0	0	0.5	0.8		Y
FY23	90000220861	Meadowbrook Dr	CLD	Y	INPRG	10/13/2022		Integrity	Y	11	4	0.2	0.0	0	0	0	0	0	0.0	0.2		Y
FY24	90000212432	Clark St	CLD	N	FCOMP	04/26/2023	10/23/2023	Integrity	Y	31	0	0.3	0.3	0	0	1730	0	0	0.3	0.3		N
FY23	90000219279	Mill St	CLD	Y	FCOMP	08/01/2022	08/15/2023	Integrity	Y	15	0	0.2	0.0	0	0	0	0	0	0.0	0.2		N
FY23	90000219663	127-250 Mendon Rd	CLD	Y	INPRG	11/28/2022		Integrity	Y	6	1	0.1	0.1	0	0	0	590	0	0.1	0.1		N
FY24	90000225808	1570-1802 Mendon Rd	CLD	N	INPRG	04/03/2023		Integrity	Y	6	6	0.8	0.8	0	40	0	1360	2805	0.6	0.8		N
FY23	90000225865	Geldard St	CLD	Y	FCOMP	10/19/2022	09/08/2023	Integrity	Y	21	0	0.2	0.2	0	0	835	0	0	0.2	0.2		N
FY24	90000232506	Cumberland Vapor Line Project	CLD	N	FCOMP	06/01/2023	07/18/2023	Reliability	Y	0	0	0.0	0.0	0	0	165	0	0.0	0.0		N	
FY24	90000232502	Cumberland Boil Off Line Project	CLD	N	FCOMP	06/01/2023	09/14/2023	Reliability	Y	0	0	0.2	0.2	0	1100	0	0	0	0.2	0.0		N
FY24	90000236093	Mendon @ Nate Whipple Bypass Elimination	CLD	N	FCOMP	09/25/2023	10/17/2023	Reliability	Y	0	0	0.0	0.0	0	0	0	0	0	0.0	0.0		N
FY24	90000232385	Mendon Rd @ Nate Whipple Hwy #1	CLD	N	INPRG	10/16/2023		Reliability	Y	0	0	0.0	0.0	0	0	0	0	0	0.0	0.0		N
FY24	90000240062	Johnson Blvd	COV	N	FCOMP	09/26/2023	11/03/2023	CSC	Y	0	0	0.0	0.0	0	85	0	0	0	0.0	0.0		N
FY23	90000215797	Oak St	CRA	Y	INPRG	07/23/2022		Integrity	Y	17	17	0.4	0.0	0	0	0	0	0	0.0	0.3		N
FY23	90000218032	696-786 Atwood Ave	CRA	Y	WSTOP	07/28/2022		Integrity	Y	35	35	0.5	0.3	385	0	1324	0	0	0.0	0.5		Y
FY24	90000220826	Bald Hill Rd	CRA	N	INPRG	04/03/2023		Integrity	Y	3	3	0.1	0.1	360	0	0	0	0	0.1	0.1		N
FY23	90000224128	660-1119 Reservoir Ave	CRA	Y	FCOMP	06/10/2022	04/05/2023	Integrity	Y	0	0	1.2	0.0	0	0	0	0	0	0.0	1.5		N
FY24	90000218059	1-94 Legion Way	CRA	N	FCOMP	06/26/2023	08/19/2023	Integrity	Y	0	0	0.0	0.0	0	0	0	0	0	0.0	0.0		N
FY24	90000220949	Broadmoor Rd	CRA	N	INPRG	10/24/2023		Integrity	Y	43	43	0.7	0.7	0	0	3590	0	0	0.3	0.7		N
FY24	90000219236	873-1010 Cranston St	CRA	N	INPRG	09/07/2023		Integrity	Y	33	33	0.5	0.5	0	0	595	105	1715	0.5	0.5		Y
FY24	90000217555	Mayfield Rd @ Oaklawn Ave	CRA	N	COMP	04/25/2023	04/26/2023	Reliability	Y	0	0	0.0	0.0	0	0	0	0	0	0.0	0.0		N
FY24	90000204089	Park @ Maple	CRA	N	INPRG	10/02/2023		Reliability	Y	0	0	0.0	0.0	0	0	0	0	0	0.0	0.0		N
FY23	90000092282	Eldridge St	CRA	Y	FCOMP	11/01/2022	04/25/2023	Integrity	Y	4	0	0.4	0.0	0	50	0	0	0	0.0	0.4		N
FY23	90000231158	1728-1847 Cranston St	CRA	Y	FCOMP	01/16/2023	06/27/2023	CSC	Y	42	0	0.7	0.1	0	36	185	0	193	0.1	0.7		N
FY24	90000225848	143-212 Greenwood St	CRA	N	INPRG	11/13/2023		Integrity	Y	68	68	0.6	0.6	0	0	3355	0	0	0.0	0.6		Y
FY23	90000229281	969-1030 Park Ave	CRA	Y	INPRG	01/04/2023		Integrity	Y	39	39	1.0	0.5	15	349	254	0	1967	0.6	1.0		N
FY24	90000234368	New London Ave	CRA	N	FCOMP	04/25/2023	06/29/2023	CSC	Y	4	0	0.4	0.4	0	0	0	2097	0	0.4	0.4		N
FY24	90000230194	88-153 Southern St	CRA	N	INPRG	09/08/2023		CSC	Y	96	83	1.1	1.1	0	5780	0	0	0	1.1	1.0		N
FY24	90000215166	Pierce St	EGW	N	COMP	05/09/2023	07/12/2023	Integrity	Y	4	0	0.0	0.0	170	0	0	0	0	0.0	0.0		N
FY23	90000223205	Central Ave	EPV	Y	FCOMP	10/20/2022	06/01/2023	Integrity	Y	34	0	0.7	0.0	0	0	0	0	0	0.0	0.6		N
FY24	90000224933	220-285 Wampanoag Trl	EPV	N	COMP	08/18/2023	09/15/2023	Reinforcement	N	0	0	0.1	0.1	0	0	0	0	330	0.1	0.0		N
FY24	90000225628	300-400 Wampanoag Trl	EPV	N	FCOMP	06/12/2023	07/19/2023	Reinforcement	N	1	0	0.2	0.2	0	0	0	900	0	0.2	0.0		N
FY23	90000204611	1970-2117 Pawtucket Ave	EPV	Y	FCOMP	07/31/2022	05/25/2023	Integrity	Y	0	0	0.7	0.2	0	860	0	0	0	0.0	0.7		N
FY24	90000218038	419-583 N Broadway	EPV	N	INPRG	05/16/2023		Integrity	Y	84	24	0.9	0.9	845	0	1785	2295	0	0.8	0.7		N
FY24	90000225872	Josephine Ave	EPV	N	FCOMP	04/03/2023	05/05/2023	Integrity	Y	10	0	0.1	0.1	580	0	0	0	0	0.1	0.1		N
FY24	90000230255	Bentley St	EPV	N	FCOMP	05/02/2023	06/28/2023	Integrity	Y	17	0	0.1	0.1	0	655	0	0	0	0.1	0.1		N
FY23	90000227092	E Knowlton St	EPV	Y	FCOMP	02/27/2023	05/25/2023	CSC	Y	33	0	0.1	0.0	0	0	0	0	0	0.0	0.0		N
FY24	90000232466	Ferris Ave	EPV	N	FCOMP	05/09/2023	05/11/2023	CSC	Y	9	0	0.0	0.0	0	0	0	0	0	0.0	0.4		N
FY24	90000231622	Summit St	EPV	N	INPRG	07/21/2023		CSC	Y	98	98	0.4	0.4	0	1081	0	0	2278	0.6	1.0		Y
FY24	90000209991	Dey St- Heater Replacement	EPV	N	FCOMP	05/20/2023	11/08/2023	Reliability	Y	0	0	0.0	0.0	0	0	0	0	0	0.0	0.0		N
FY24	90000220953	25-90 N Broadway	EPV	N	ABANDONED	08/07/2023	11/08/2023	Integrity	Y	12	9	0.2	0.2	0	0	0	0	1055	0.2	0.2		N
FY24	90000220953	25-90 N Broadway (header-outlet)	EPV	N	ABANDONED	08/07/2023	11/08/2023	Integrity	Y	0	0	0.0	0.0	0	0	0	0	0	0.0	0.0		N
FY24	90000210583	N Broadway	EPV	N	ABANDONED	07/24/2023	11/08/2023	Integrity	Y	3	0	0.1	0.1	0	0	605	0	0	0.1	0.1		N
FY24	90000207471	295 Wampanoag Trl 5 Psig @ Boyd Ave	EPV	N	INPRG	05/23/2023		Reliability	Y	0	0	0.0	0.0	0	0	0	0	0	0.0	0.0		N
FY24	90000236448	60-90 Newport Ave	EPV	N	INPRG	11/01/2023		Integrity	Y	13	13	0.3	0.3	340	980	0	0	0	0.0	0.3		N
FY23	90000212105	Plainfield @ Simmonsville	JOH	Y	FCOMP	07/06/2022	05/05/2023	Reinforcement	N	0	0	0.0	0.0	0	0	0	0	0	0.0	0.0		N
FY23	90000220828	Gesmond Dr	JOH	Y	COMP	03/23/2023	05/16/2023	Integrity	Y	22	0	0.2	0.1	341	0	0	0	0	0.1	0.2		N
FY24	90000218041	Osgood Ave	JOH	N	ABANDONED	05/17/2023	10/25/2023	Integrity	Y	14	0	0.2	0.2	860	0	0	0	0	0.2	0.1		N
FY24	90000219208	Ashby St	JOH	N	INPRG	05/19/2023		Integrity	Y	46	4	0.8	0.8	3975	0	0	0	0	0.7	0.6		N
FY24	90000220963	Harding Ave	JOH	N	INPRG	09/19/2023		Integrity	Y	87	87	0.8	0.8	0	0	2995	1295	0	0.7	0.8		Y
FY24	90000204103	Cabot St	LNC	N	FCOMP	05/08/2023	08/08/2023	CSC	Y	2	0	0.0	0.0	70	0	0	0	0	0.0	0.0		N
FY24	90000217370	George Washington Hwy	LNC	N	INPRG	08/01/2023		Integrity	Y	1	1	0.1	0.1	0	0	0	710	0	0.1	0.0		N
FY24	90000212041	Old Main St	LNC	N	INPRG	04/03/2023		Integrity	Y	75	3	1.2	1.2	6580	0	0	0	0	1.2	1.4		N
FY23	90000225846	Gardner Ave	LNC	Y	FCOMP	02/23/2023	07/13/2023	Integrity	Y	4	0	0.1	0.0	3	0	0	0	0	0.0	0.1		N
FY23	90000226150	Hazel St	LNC	Y	FCOMP	03/21/2023	09/12/2023	Integrity	Y	42	0	0.5	0.5	0	80	2310	0	0	0.5	0.5		N
FY23	90000219059	Old River Rd	LNC	Y	INPRG	03/27/2023		Integrity	Y	52	0	0.8	0.5	2535	1780	0	0	0	0.6	0.6		N
FY24	90000209541	Old River Rd	LNC	N	INPRG	05/30/2023		Reliability	Y	12	1	0.4	0.4	250	0	1700	0	0	0.4	0.4		N
FY24	90000234597	Chapel St	LNC	N	INPRG	08/09/2023		Integrity	Y	138	132	1.0	1.0	5245	0	0	0	0	1.1	1.2		Y
FY24	90000226102	218-310 River Rd	LNC	N	INPRG	09/07/2023		Reinforcement	N	8	8	0.2	0.2	210	890	0	0	0	0.2	0.1		Y
FY24	90000235080	Lincoln Ave	LNC	N	INPRG	10/06/2023		CSC	Y	10	10	0.1	0.1	534	0	0	0	0	0.1	0.1		N
FY24	90000235077	Roosevelt Ave	LNC	N	INPRG	09/26/2023		CSC	Y	5	5	0.1	0.1	340	0	0	0	0	0.1	0.1		N
F																						

FY Work Started	Main WO#	Project Title	Town	Carry-Over? (started prior to 4/1/2023)	Project Status	Job Start Date	Job Completion Date	Program	ISR?	Total Svcs to be Completed in FY24	Services Remaining	Project Scope Est. Install Mileage	Full Year FY24-Est Install Miles (reduced by miles installed prior to FY24)	2" HD PE	4" HD PE	6" HD PE	8" HD PE	12" HD PE	Project Install Miles Remaining	LPP Abandonment Miles	Note	Estimated to Carry Over into FY 2025?
FY24	90000214975	Main St	NSF	N	INPRG	04/10/2023		Integrity	Y	28	0	0.3	0.3	0	1605	0	0	0	0	0.3	0.3	N
FY23	90000212483	Oakdale Ave	PAW	Y	INPRG	03/13/2023		Integrity	Y	50	0	0.3	0.3	230	0	1210	0	0	0	0.4	0.4	N
FY23	90000211435	1-34 Central Ave	PAW	Y	FCOMP	10/17/2022	08/01/2023	Integrity	Y	17	0	0.5	0.1	686	0	0	0	0	0	0.0	0.5	N
FY24	90000180116	Central Ave	PAW	N	FCOMP	04/26/2023	10/10/2023	Reinforcement	N	0	0	0.4	0.4	0	0	0	0	2000	0.4	0.0		N
FY23	90000214953	Lincoln Ave	PAW	Y	INPRG	05/16/2022		Integrity	Y	43	0	0.0	0.0	0	0	0	0	0	0.0	0.3		N
FY23	90000214950	Progress St	PAW	Y	FCOMP	08/22/2022	08/16/2023	Integrity	Y	64	0	0.6	0.6	0	0	3185	0	0	0.6	0.6		N
FY23	90000211208	Harrison St	PAW	Y	ABANDONED	11/09/2022	10/25/2023	Integrity	Y	44	0	0.5	0.4	2285	0	0	0	0	0.4	0.5		N
FY23	90000224499	NBC - Portu Social Club Way	PAW	Y	FCOMP	09/02/2022	04/17/2023	CSC	Y	0	0	0.1	0.0	0	0	0	0	0	0.0	0.0		N
FY23	90000224505	NBC - Division St	PAW	Y	INPRG	08/03/2022		CSC	Y	1	0	0.1	0.0	0	0	0	0	100	0.1	0.1		N
FY24	90000224888	Hayward St	PAW	N	INPRG	05/04/2023		Reinforcement	N	27	11	0.1	0.1	450	0	0	0	0	0.1	0.1		N
FY24	90000227019	Appleton Ave	PAW	N	INPRG	05/12/2023		CSC	Y	22	0	0.1	0.1	0	0	550	0	0	0.1	0.1		N
FY24	90000231179	Suffolk Ave	PAW	N	ABANDONED	05/01/2023	11/02/2023	CSC	Y	38	0	0.2	0.2	0	0	1318	0	0	0.3	0.2		N
FY24	90000227088	Baldwin St	PAW	N	ABANDONED	05/15/2023	10/28/2023	CSC	Y	10	0	0.1	0.1	0	0	395	0	0	0.1	0.1		N
FY24	90000194335	George St	PAW	N	INPRG	09/20/2023		Integrity	Y	11	11	0.4	0.4	0	0	335	1905	20	0.0	0.6		Y
FY24	90000231868	Greene St & Central Ave (99)	PAW	N	INPRG	09/19/2023		Reinforcement	N	30	30	0.3	0.3	0	0	0	0	1805	0.4	0.1		Y
FY24	90000233241	Manton St @ 233 Newport Ave	PAW	N	COMP	05/17/2023	05/17/2023	CSC	Y	0	0	0.0	0.0	0	0	23	0	0	0.0	0.0		N
FY24	90000231157	Evergreen St	PAW	N	INPRG	06/22/2023		CSC	Y	40	0	0.4	0.4	153	1855	0	0	0	0.4	0.4		N
FY24	90000237596	Division St (Additional Work)	PAW	N	INPRG	08/03/2023		CSC	Y	1	1	0.0	0.0	0	0	0	0	245	0.0	0.0		N
FY24	90000239894	Bloomington Ave Area	PAW	N	INPRG	10/05/2023		CSC	Y	28	15	0.3	0.3	1349	0	0	0	0	0.3	0.3		Y
FY21	90000185689	Dover St	PVD	Y	FCOMP	11/10/2020	05/31/2023	Integrity	Y	57	0	0.3	0.0	0	0	0	0	0	0.0	0.4		N
FY23	90000194364	Linden Dr	PVD	Y	FCOMP	11/28/2022	04/27/2023	Integrity	Y	25	0	0.1	0.0	0	0	0	0	0	0.0	0.1		N
FY22	90000194351	Amy St	PVD	Y	ABANDONED	09/14/2021	09/14/2023	Integrity	Y	12	0	0.2	0.0	0	0	0	0	0	0.0	0.2		N
FY21	90000155230	Dean St	PVD	Y	COMP	08/06/2020	07/06/2023	Integrity	Y	10	0	0.7	0.0	0	0	0	0	0	0.0	0.8		N
FY21	90000209097	Althea St	PVD	Y	INPRG	12/11/2020		Integrity	Y	6	6	0.1	0.0	0	0	0	0	0	0.0	0.1		Y
FY23	90000211756	Hartford Ave	PVD	Y	INPRG	08/22/2022		Integrity	Y	47	2	0.7	0.0	0	0	0	0	0	0.0	0.6		Y
FY24	90000212419	531-590 Manton Ave	PVD	N	INPRG	05/30/2023		Integrity	Y	45	39	0.2	0.2	300	0	950	0	0	0.2	0.6		Y
FY24	90000187222	Reservoir Ave	PVD	N	INPRG	07/24/2023		Integrity	Y	13	13	0.5	0.5	120	245	1710	0	760	0.5	0.7		Y
FY23	90000210771	Winrooth Ave	PVD	Y	WSTOP	04/25/2022		Integrity	Y	12	10	0.5	0.0	2485	0	0	0	0	0.0	0.6		N
FY24	90000210499	Atwells Ave Phase 3	PVD	N	INPRG	08/24/2023		Integrity	Y	42	42	0.3	0.3	0	0	40	55	1335	0.1	0.5		Y
FY24	90000212129	Penn St	PVD	N	INPRG	10/17/2023		Integrity	Y	40	3	0.4	0.4	0	0	2135	0	0	0.3	0.4		N
FY22	90000207983	RIDOT Reservoir Ave Bridge	PVD	Y	FCOMP	06/07/2021	08/24/2023	CSC	Y	2	0	0.1	0.1	0	0	0	0	729	0.0	0.2		N
FY23	90000215452	1-118 Potters Ave	PVD	Y	INPRG	05/03/2022		Integrity	Y	3	3	0.8	0.2	0	0	983	0	0	0.0	0.6		N
FY24	90000155243	1016-1100 Hope St	PVD	N	ABANDONED	05/17/2023	11/07/2023	Integrity	Y	10	2	0.1	0.1	0	0	255	705	0	0.2	0.2		N
FY24	90000214966	Duncan Ave	PVD	N	INPRG	09/15/2023		Integrity	Y	45	19	0.3	0.3	1580	0	0	0	0	0.3	0.3		N
FY24	90000215374	Baltimore St	PVD	N	INPRG	09/29/2023		Integrity	Y	13	13	0.1	0.1	0	0	710	0	0	0.1	0.1		N
FY23	90000233446	180-380 Westminster St	PVD	Y	FCOMP	05/09/2022	08/03/2023	Integrity	Y	1	0	0.4	0.1	0	53	693	40	0	0.0	0.5		N
FY24	90000218021	Oxford St	PVD	N	INPRG	04/25/2023		Integrity	Y	96	26	1.2	1.2	0	2875	0	3600	0	1.2	1.7		Y
FY24	90000226925	Olney St	PVD	N	FCOMP	07/05/2023	10/05/2023	Integrity	Y	7	0	0.3	0.3	0	0	1390	0	0	0.3	0.3		N
FY23	90000228513	Sunbury St	PVD	Y	FCOMP	11/21/2022	11/03/2023	Reliability	Y	4	0	0.1	0.0	0	0	0	0	0	0.0	0.0		N
FY23	90000228757	Baker St	PVD	Y	INPRG	11/29/2022		CSC	Y	13	13	0.4	0.0	105	0	0	0	0	0.0	0.4		Y
FY24	90000225974	Herschel St	PVD	N	INPRG	07/27/2023		Integrity	Y	57	0	0.5	0.5	0	0	2410	0	0	0.5	0.4		N
FY24	90000187225	Burlington St	PVD	N	FCOMP	07/14/2023	08/29/2023	Integrity	Y	15	0	0.1	0.1	0	0	395	0	0	0.1	0.1		N
FY24	90000215445	578-776 Plainfield St	PVD	N	INPRG	08/24/2023		Integrity	Y	60	60	0.4	0.4	1315	600	90	320	0	0.5	0.8		N
FY24	90000233577	172-204 Chapin Ave	PVD	N	FCOMP	04/17/2023	05/30/2023	CSC	Y	14	0	0.1	0.1	550	0	0	0	0	0.1	0.1		N
FY24	90000218064	Early St - CISBOT	PVD	N	FCOMP	05/23/2023	06/26/2023	Integrity	Y	0	0	0.0	0.0	0	0	0	0	0	0.0	0.0		N
FY24	90000234168	170-296 Chad Brown St (Abandonment)	PVD	N	COMP	04/24/2023	05/04/2023	CSC	Y	6	0	0.0	0.0	0	0	0	0	0	0.0	0.5		N
FY24	90000230874	55-189 Canal St - CISBOT	PVD	N	INPRG	11/09/2023		Integrity	Y	0	0	0.0	0.0	0	0	0	0	0	0.0	0.0		N
FY24	90000230850	Sinclair Ave	PVD	N	INPRG	05/03/2023		CSC	Y	129	105	0.9	0.9	0	2200	2780	0	0	1.0	0.9		N
FY24	90000238956	Morton St @ 1309 Eddy St	PVD	N	COMP	08/03/2023	08/03/2023	CSC	Y	0	0	0.0	0.0	0	0	25	0	0	0.0	0.0		N
FY24	90000238462	Brook St @ George St	PVD	N	FCOMP	08/23/2023	10/25/2023	Reliability	Y	0	0	0.0	0.0	0	0	0	0	0	0.0	0.0		N
FY24	90000230689	Russell St - CISBOT	PVD	N	INPRG	08/31/2023		Integrity	Y	0	0	0.0	0.0	0	0	0	0	0	0.0	0.0		N
FY24	90000241290	47-88 Preston St	PVD	N	INPRG	11/07/2023		CSC	Y	21	21	0.1	0.1	0	0	0	0	0	0.0	0.0		N
FY24	90000199043	Hope Furnace Rd	SCT	N	WSTOP	10/15/2023		CSC	Y	0	0	0.0	0.0	0	0	60	0	0	0.0	0.0		Y
FY23	90000219678	Croade St	WAN	Y	WSTOP	04/21/2022		Integrity	Y	6	6	0.1	0.1	0	324	0	0	0	0.0	0.1		Y
FY24	90000236886	601 Metacom Ave	WAN	N	INPRG	09/11/2023		Integrity	Y	4	4	0.2	0.2	840	0	0	0	0	0.2	0.2		N
FY24	90000180102	Brown St	WAN	N	INPRG	10/30/2023		Reinforcement	N	6	6	0.1	0.1	0	0	0	0	485	0.0	0.1		N
FY22	90000209570	Franklin St	WLY	Y	COMP	08/18/2021	05/17/2023	Reinforcement	N	0	0	0.1	0.1	0	0	0	375	0	0.1	0.0		N
FY24	90000204638	Ward Ave	WLY	N	INPRG	04/25/2023		Integrity	Y	50	8	0.8	0.8	1765	30	2345	0	0	1.0	1.1		N
FY23	90000155334	Railroad Ave	WLY	Y	COMP	06/10/2022	06/21/2023	Integrity	Y	0	0	0.2	0.0	0	0	0	0	0	0.0	0.2		N
FY24	90000226507	Henry St	WLY	N	COMP	04/13/2023	06/15/2023	CSC	Y	10	0	0.2	0.2	0	0	813	0	0	0.2	0.2		N
FY24	90000234909	Vose St	WLY	N	FCOMP	06/15/2023	07/11/2023	CSC	Y	5	0	0.1	0.1	0	0	415	0	0	0.1	0.1		N
FY23	90000219276	Maple St	WSO	Y	INPRG	10/18/2022		Integrity	Y	9	0	0.1	0.0	0	0	0	0	0	0.0	0.1		Y
FY23	90000212431	Summer St	WSO	Y	WSTOP	06/09/2022		Integrity	Y	153	0	2.0	0.0	213	0	0	0	0	0.0	1.9		Y
FY24	90000217184	481-604 Blackstone St	WSO	N	INPRG	08/31/2023		Integrity	Y	16	16	0.3	0.3	0	0	310	930	0	0.0	0.3		N
FY23	90000180671	Rathbun St	WSO	Y	INPRG	02/06/2023		Reinforcement	N	43	0	0.3	0.0	0	0	0	0	0	0.0	0.0		N
FY24	90000225938	607-783 Mendon Rd	WSO	N	WSTOP	0																

FY Work Started	Main WO#	Project Title	Town	Carry-Over? (started prior to 4/1/2023)	Project Status	Job Start Date	Job Completion Date	Program	ISR?	Total Svcs to be Completed in FY24	Services Remaining	Project Scope Est. Install Mileage	Full Year FY24-Est Install Miles (reduced by miles installed prior to FY24)	2" HD PE	4" HD PE	6" HD PE	8" HD PE	12" HD PE	Project Install Miles Remaining	LPP Abandonment Miles	Note	Estimated to Carry Over into FY 2025?	
FY24	90000217235	Glenwood Dr	WWK	N	COMP	07/19/2023	08/24/2023	Integrity	Y	3	0	0.0	0.0	75	0	0	0	0	0.0	0.0		N	
FY24	90000220806	Bald Hill Rd-East Ave	WWK	N	FCOMP	06/26/2023	10/24/2023	Reliability	Y	11	0	0.7	0.7	3580	0	0	0	0	0.7	0.7		N	
FY24	90000232375	Chestnut St	WWK	N	FCOMP	04/17/2023	05/08/2023	Integrity	Y	2	0	0.0	0.0	125	0	0	0	0	0.0	0.0		N	
FY24	90000220850	Morris St	WWK	N	FCOMP	08/31/2023	10/18/2023	Integrity	Y	12	0	0.1	0.1	720	0	0	0	0	0.1	0.1		N	
FY23	90000215424	Moccasin Dr	WWK	Y	COMP	03/01/2023	09/05/2023	Integrity	Y	84	0	0.8	0.1	47	710	0	0	0	0.2	0.8		N	
FY24	90000220925	Tennyson Rd	WWK	N	FCOMP	07/12/2023	09/19/2023	Integrity	Y	31	0	0.4	0.4	1975	0	0	0	0	0.4	0.2		N	
FY24	90000211760	Governors Dr	WWK	N	FCOMP	07/31/2023	09/21/2023	Integrity	Y	22	0	0.4	0.4	2095	0	0	0	0	0.4	0.4		N	
FY24	90000215125	Parkside Dr	WWK	N	FCOMP	04/12/2023	11/08/2023	Integrity	Y	101	0	1.2	1.2	6205	0	0	0	0	1.2	1.1		N	
FY24	90000230322	250-1121 Centerville Rd	WWK	N	INPRG	08/24/2023		CSC	Y	37	37	1.8	1.8	465	530	0	0	8390	0.6	1.9	Cannot resume work until town provides approval. Work in area of Native American relics.	Y	
FY24	90000194417	Terrace Ave	WWK	N	WSTOP	08/01/2023		Integrity	Y	21	21	0.6	0.6	3360	0	0	0	0	0.5	0.5		Y	
FY22	90000221503	New London Ave	WWW	Y	COMP	10/14/2021	04/14/2023	CSC	Y	0	0	0.1	0.0	0	0	0	0	0	0.0	0.0		N	
FY23	90000209055	Cowesett @ Quaker	WWW	Y	FCOMP	05/15/2022	06/13/2023	Reliability	Y	0	0	0.0	0.0	0	0	0	0	0	0.0	0.0		N	
FY24	90000218701	Lonsdale Ave Bridge	PAW	N	WSTOP	08/04/2023		Pipe on Bridges	Y	0	0	0.0	0.0	0	0	0	0	0	0.0	0.0		Y	
FY24	90000224338	Atwells Ave Bridge	PVD	N	FCOMP	04/17/2023	06/15/2023	Pipe on Bridges	Y	0	0	0.0	0.0	0	0	0	0	0	0.0	0.1		N	
FY24	90000231132	Sylvan Dr Bridge	EGW	N	FCOMP	06/13/2023	07/08/2023	Pipe on Bridges	Y	0	0	0.1	0.0	515	0	0	0	0	0.1	0.0		N	
										TOTAL		67.4	49.0						TOTAL	39.2	65.7		

Division 1-21

Request:

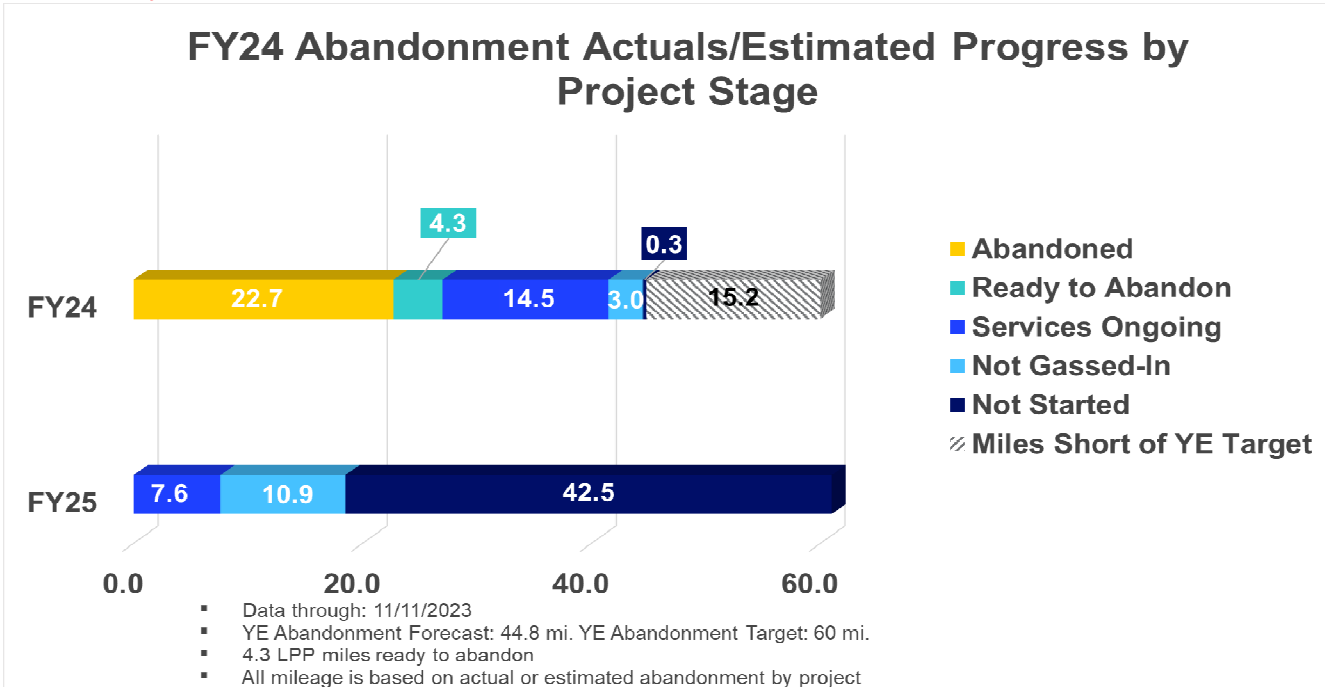
Please provide a bar chart listing the following regarding the FY 2024 overall workplan to date:

- a. Total "Abandonment" miles to date.
- b. Total "Ready to be abandoned" miles to date.
- c. Total "Work in progress" miles to date.
- d. Total "Installed but not gassed in" miles to date.
- e. Planned "Not started" miles to date.

Response:

Please see Attachment DIV 1-21.

Estimated carry-over into FY 2025: 18.5 miles



The Narragansett Electric Company
d/b/a Rhode Island Energy
In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-22

Request:

How many miles of “work in progress” does the Company estimate it will carry-over from FY 2024 into FY 2025?

Response:

Please refer to Attachment DIV 1-21 which provides the Company’s estimate of work anticipated to carry-over from FY2024 to FY2025.

Division 1-23

Request:

Please provide a FY 2025 workplan for all proposed projects within all categories associated with the abandonment of leak prone pipe. Please include installation miles, abandonment miles, number of services, size of mains installed, psig of new main, estimated costs, and identify the associated ISR program (*i.e.*, Public Works, Proactive Main Replacement, *etc.*)

Response:

Please refer to Attachment DIV 1-23 which provides the requested information, current as of November 27, 2023.

For the Public Works Program, some projects are only at the proposal stage and are in the process of being designed. In addition, the Company is still waiting for certain municipalities' capital plans for the 2024 construction season and these capital plans could impact the work that the Company will plan to complete.

ISR FY25 (Proposed Work)
List of Known Projects for Reliability Planning, Low Pressure Elimination, Main Replacement, Public Works
List updated as of 11/27/23

Attachment DIV 1-23

Line #	City/Town	Street(s)	Installation Miles	Abandonment Miles	Abandonment Material	Abandonment Size	# of Services	New Main Size	Existing Pressure	New Main Pressure	Estimate Cost	ISR Program
1	Johnson	Allandale	0.39	0.20	Coated Steel/Polybutylene/Polyethylene	2", 12"	0	4", 2"	35 psig	35 psig	\$489,327	Reliability Planning
2	North Providence	Waterman	0.75	0.00	Install only (integrate 2 systems)	N/A	0	12"	new main	35 psig	\$1,587,865	Reliability Planning
3	Lincoln	Beverly	0.87	0.90	Polyethylene/Coated Steel/Cast Iron/Ductile Iron/B	4", 6", 8"	56	4", 2"	LP	99 psig	\$1,146,498	Reliability Planning
4	North Providence	Borah	0.12	0.10	Polyethylene	6"	9	2"	LP	60 psig	\$193,223	Reliability Planning
5	Providence	Charles	0.94	0.63	Cast Iron/Polyethylene	4", 6"	207	6", 4", 2"	LP	99 psig	\$1,000,000	LP Elimination
6	Woonsocket	Privilege St	2.04	1.96	Cast Iron/Polyethylene	4", 6"	175	2"	LP	60 psig	\$2,000,000	LP Elimination
7	North Providence	Tiffany	1.48	1.47	Coated Steel/Bare Steel/Polyethylene	6"	148	2"	LP	60 psig	\$1,898,542	LP Elimination
8	Woonsocket	East St	0.28	0.28	Polyethylene	6"	15	2"	LP	60 psig	\$440,505	LP Elimination
9	Woonsocket	Mitris	0.26	0.26	Polyethylene	6"	14	2"	LP	60 psig	\$290,707	LP Elimination
10	Middletown	Wolcott	2.03	2.12	Polyethylene/Bare Steel/Cast Iron/Coated Steel	6"	125	2"	LP	99 psig	\$2,082,710	LP Elimination
11	Barrington	Bay Spring Av, BRG	0.21	0.19	Bare Steel/Coated Steel	4"	11	2", 4"	25#	25#	\$289,085	Proactive MRP
12	Bristol	573-744 Hope St, BST	0.43	0.43	Cast Iron	6"	48	6"	LP	LP	\$851,235	Proactive MRP
13	Coventry	Idaho St, COV	0.47	0.34	Bare Steel/Coated Steel	2"	33	2"	35#	35#	\$695,401	Proactive MRP
14	Cranston	Smith St, CRA	1.68	1.79	Bare Steel/Coated Steel	6", 12"	209	2", 8", 12"	LP / 35#	LP / 35# / 99#	\$2,864,000	Proactive MRP
15	Cranston	Wellington Av, CRA	0.16	0.16	Cast Iron	6", 12"	2	6", 12"	LP	LP	\$351,495	Proactive MRP
16	Cranston	364-420 Wellington Av, CRA	0.12	0.44	Cast Iron	6", 12"	28	2", 6", 12"	LP	LP / 7# / 99#	\$411,481	Proactive MRP
17	Cranston	845-970 Pontiac Av, CRA	0.45	0.80	Cast Iron	6"	49	2", 6"	LP / 99#	99#	\$742,614	Proactive MRP
18	Cranston	Plantation Dr - Phase 1, CRA	0.38	0.00	Install only (to allow for Phase 2)	N/A	3	2", 4"	LP	99#	\$368,740	Proactive MRP
19	Cranston	Plantation Dr - Phase 2, CRA	4.45	4.21	Bare Steel/Coated Steel	4", 6", 12"	316	2", 4"	LP	35# / 99#	\$5,772,750	Proactive MRP
20	Cumberland	Old Willis Rd, CLD	0.67	0.42	Cast Iron	4", 6"	31	2", 4"	LP	60#	\$812,389	Proactive MRP
21	East Providence	Waterman Av, EPV	1.82	1.33	Cast Iron	6", 12"	168	2", 4", 8"	LP	99#	\$3,096,700	Proactive MRP
22	East Providence	2464-2556 Pawtucket Av, EPV	1.09	0.98	Cast Iron	6"	93	2"	LP	99#	\$1,357,110	Proactive MRP
23	East Providence	575-585 Taunton Av, EPV	0.05	0.05	Bare Steel	4"	3	4"	99#	99#	\$66,620	Proactive MRP
24	Lincoln	Railroad Av, LNC	0.00	0.16	Coated Steel	6"	3	N/A	LP	60# / 99#	\$48,748	Proactive MRP
25	Lincoln	Sutcliffe Av, LNC	0.30	0.28	Cast Iron	4"	22	2"	LP / 99#	99#	\$349,050	Proactive MRP
26	Lincoln	Moshassuck Rd, LNC	0.33	0.30	Bare Steel	4"	7	4"	60#	60#	\$358,000	Proactive MRP
27	Newport	Broadway, NPR	0.31	0.32	Cast Iron	6", 8"	18	6", 8", 12"	LP	LP	\$669,719	Proactive MRP
28	Newport	Dearborn St, NPR	0.11	0.11	Cast Iron	6"	11	6"	LP	LP	\$221,040	Proactive MRP
29	Newport	Catherine St, NPR	0.34	0.34	Cast Iron	6"	25	6"	LP	LP	\$667,255	Proactive MRP
30	North Providence	Smith St, NPV	0.46	0.46	Cast Iron	6", 8"	25	2", 12"	LP	LP / 35#	\$859,438	Proactive MRP
31	North Providence	957-1074 Mineral Spring Av, NPV	0.68	0.78	Bare Steel/Coated Steel	4", 6"	29	8", 12"	LP / 60#	LP / 60#	\$1,500,293	Proactive MRP
32	North Smithfield	Morse Av, NSF	0.95	1.27	Bare Steel/Coated Steel	4", 6"	45	2", 4", 8"	LP / 60#	60#	\$1,330,122	Proactive MRP
33	Pawtucket	Seneca Av, PAW	1.51	1.14	Cast Iron	4", 6"	147	2", 8"	LP	99#	\$2,067,404	Proactive MRP
34	Pawtucket	Gorizia St, PAW	1.36	1.34	Cast Iron	4", 6"	123	2", 4", 8"	LP	99#	\$1,830,879	Proactive MRP
35	Providence	330-505 Silver Spring St, PVD	1.04	0.67	Cast Iron	6", 8"	55	2", 8"	LP	99#	\$2,282,507	Proactive MRP
36	Providence	Rt 10 S Offramp @ Union Av, PVD	0.07	0.07	Steel	12"	0	12"	10#	10#	\$216,915	Proactive MRP
37	Providence	Woodbine St, PVD	1.06	0.90	Cast Iron	4", 6"	131	2"	LP	99#	\$2,199,795	Proactive MRP
38	Providence	Abbott St, PVD	0.61	0.55	Cast Iron	4", 6"	74	2"	LP	99#	\$1,258,304	Proactive MRP
39	Providence	Ivy St, PVD	0.45	0.48	Cast Iron	4", 6"	57	2"	LP	99#	\$847,303	Proactive MRP
40	Providence	585-1000 Douglas Av, PVD	1.07	1.01	Cast Iron	6"	106	2", 6", 12"	LP / 35#	35#	\$2,371,750	Proactive MRP
41	Providence	Dudley St, PVD	0.33	0.41	Cast Iron	6", 12"	18	4", 6", 12"	LP	LP	\$883,495	Proactive MRP
42	Providence	Anthony Av, PVD	0.80	0.79	Cast Iron	6"	48	4"	LP	10#	\$1,302,014	Proactive MRP
43	Providence	Somersset St, PVD	0.50	0.51	Cast Iron	6", 12"	34	6", 12"	LP	LP	\$1,326,648	Proactive MRP
44	Providence	336-463 Benefit St, PVD	0.40	0.39	Cast Iron	6", 12"	30	6", 12"	LP	LP	\$1,350,662	Proactive MRP
45	Providence	Glenham St, PVD	0.18	0.42	Cast Iron	4", 6"	40	4", 6"	LP	LP	\$654,644	Proactive MRP
46	Providence	Narragansett Av, PVD	0.77	0.84	Cast Iron	6", 12"	40	6", 12"	LP	LP	\$2,382,368	Proactive MRP
47	Providence	Whittier Av, PVD	1.53	1.55	Cast Iron	4"	176	2", 4", 6"	LP	LP / 99#	\$3,132,500	Proactive MRP
48	Providence	168-340 Eaton St, PVD	1.46	1.55	Cast Iron	6"	122	2", 4"	LP	99#	\$2,616,622	Proactive MRP
49	Providence	1-168 Eaton St, PVD	1.60	1.63	Cast Iron	6"	221	2", 4", 6"	LP	LP / 99#	\$3,051,950	Proactive MRP
50	Providence	205-482 Broadway, PVD	0.60	1.01	Cast Iron	6", 8"	64	2", 4", 6", 8"	LP	LP	\$1,861,600	Proactive MRP
51	Warwick	Elmwood Av, WWK	2.11	1.72	Cast Iron	6"	149	2", 6"	LP / 35#	35#	\$2,316,275	Proactive MRP
52	Warwick	Milton Rd, WWK	1.68	1.34	Cast Iron	6"	171	2", 4"	LP	35#	\$1,846,761	Proactive MRP

Line #	City/Town	Street(s)	Installation Miles	Abandonment Miles	Abandonment Material	Abandonment Size	# of Services	New Main Size	Existing Pressure	New Main Pressure	Estimate Cost	ISR Program
53	Warwick	Harding Av, WWK	0.32	0.26	Cast Iron	6"	37	2"	LP	35#	\$423,248	Proactive MRP
54	Woonsocket	S Main St, WSO	0.38	0.54	Cast Iron	6", 8"	28	2", 4", 6"	LP	60#	\$580,699	Proactive MRP
55	Woonsocket	Lambert Av, WSO	0.07	0.07	Cast Iron	4"	1	2"	LP	60#	\$50,192	Proactive MRP
56	Woonsocket	West St, WSO	0.61	0.63	Cast Iron	4", 6"	54	2", 4"	LP	60#	\$817,378	Proactive MRP
57	Woonsocket	Mason St - LP Abandonment, WSO	0.00	0.43	Cast Iron	6"	30	N/A	LP	60#	\$138,620	Proactive MRP
58	Woonsocket	Nursery Av, WSO	0.71	0.70	Cast Iron	6"	45	2"	LP	60#	\$665,932	Proactive MRP
59	Coventry	Wood St	0.41	0.22	Coated Steel	2"	11	2"	35 psig	35 psig	\$434,881	PW - Non Reimb
60	Coventry	Prospect St Area	0.57	0.54	Coated Steel	2", 8"	25	2"/8"	35 psig	35 psig	\$948,316	PW - Non Reimb
61	Coventry	Overview Dr	0.11	0.10	Coated Steel	2"	8	2"	35 psig	35 psig	\$152,690	PW - Non Reimb
62	Coventry	Twin Lakes Ave	0.04	0.05	Coated Steel	2"	2	2"	35 psig	35 psig	\$76,445	PW - Non Reimb
63	Cranston	848-954 Park Av	0.28	0.28	Cast Iron	12"	21	12"	LP	LP	\$734,056	PW - Non Reimb
64	Cumberland	RIDOT Mendon Rd Brdg 60# CLD	0.08	0.07	Coated Steel	6"	0	6"	60 psig	60 psig	\$227,292	PW - 50% Reimb.
65	Cumberland	RIDOT Mendon Rd Brdg 99#	0.08	0.07	Coated Steel	12"	0	12"	99 psig	99 psig	\$370,540	PW - 50% Reimb.
66	East Providence	Wilmarth Ave	0.31	0.26	Cast Iron/Bare Steel/Coated Steel	2", 4", 6"	28	2"	LP	99 psig	tdb	PW - Non Reimb
67	East Providence	Summit St	0.43	0.97	Cast Iron/Coated Steel	4", 6", 12"	98	4"/12"	LP	5 psig	\$1,750,260	PW - Non Reimb
68	East Providence	Almeida Ave	0.06	0.07	Coated Steel	6"	3	2"	LP	99 psig	tdb	PW - Non Reimb
69	East Providence	Boston St	0.12	0.11	Cast Iron/Bare Steel	3", 4"	5	4"	LP	5 psig	tdb	PW - Non Reimb
70	East Providence	Follett & Bentley St	0.31	0.30	Cast Iron/Bare Steel	6", 12"	31	4"	LP	5 psig	tdb	PW - Non Reimb
71	East Providence	Sunset Ave	0.07	0.08	Cast Iron	6"	6	4"	LP	25 psig	tdb	PW - Non Reimb
72	Lincoln	Woodland St 99	1.35	1.33	Cast Iron/Ductile Iron/Bare Steel/Coated Steel	4", 6"	78	2"	LP	99 psig	\$1,574,777	PW - Non Reimb
73	Lincoln	Woodland St LP	0.39	0.00	Install Only	na	0	6"	NA	LP	\$640,754	PW - Non Reimb
74	Middletown	Navy Base Steam Line Gas Relays	0.02	0.00	Protected Coated Steel/Polyethylene	4", 12"	0	4", 12"	99 psig	99 psig	\$252,278	PWorks - 100% Reimb
75	North Kingstown	RIDOT Davisville Brdg	0.03	0.00	Protected Coated Steel	6"	0	6"	35 psig	35 psig	\$168,102	PWorks - 100% Reimb
76	North Kingstown	Austin Rd	0.30	0.30	Protected Coated Steel	2"	12	6"	35 psig	35 psig	tdb	PW - Non Reimb
77	North Providence	Douglas Ave	0.31	0.26	Coated Steel/Bare Steel	2", 3", 4"	4	2", 4"	35 psig	35 psig	\$385,519	PW - Non Reimb
78	Pawtucket	Pine St	0.18	0.52	Bare Steel/Cast Iron	3", 4", 6", 10"	10	8"	LP	60 psig	\$388,200	PW - Non Reimb
79	Pawtucket	Abbott St	0.03	0.08	Bare Steel/Cast Iron	2", 4"	7	2"	LP	99 psig	\$90,969	PW - Non Reimb
80	Pawtucket	Campbell St	0.07	0.12	Bare Steel/Cast Iron	4", 6"	4	2", 4"	LP	18 psig	tdb	PW - Non Reimb
81	Pawtucket	Dean St	0.12	0.14	Cast Iron	4", 6", 8"	18	2"	LP	18 psig	tdb	PW - Non Reimb
82	Pawtucket	Owen Ave	0.24	0.21	Cast Iron/Bare Steel	4"	36	2"	LP	60 psig	tdb	PW - Non Reimb
83	Pawtucket	Paris St	0.17	0.10	Bare Steel	4"	11	2"	LP	99 psig	tdb	PW - Non Reimb
84	Pawtucket	Pollard Ave	0.07	0.09	Cast Iron/Bare Steel	4", 6"	9	2"	LP	18 psig	tdb	PW - Non Reimb
85	Pawtucket	Saratoga Ave	0.05	0.05	Cast Iron	4"	5	2"	LP	18 psig	tdb	PW - Non Reimb
86	Providence	780-895 Elmwood Av 99# Install	0.36	0.00	Install only	n/a	0	12"	n/a	99 psig	\$860,347	PW - 50% Reimb.
87	Providence	RIDOT Cadillac Dr Bridge Abandonment	0.00	0.08	Coated Steel/Plastic	8", 12"	0	n/a	99 psig	n/a	\$76,003	PW - 50% Reimb.
88	Providence	RIDOT - West River St Bridge Relay	0.05	0.00	Coated Steel	6"	0	6"	99 psig	99 psig	\$149,381	PW - 50% Reimb.
89	Providence	Lockwood St	0.42	0.42	Cast Iron	6"	25	6", 12"	LP	LP	\$1,336,434	PW - Non Reimb
90	Providence	705-1045 Elmwood Av LP Relay	0.60	1.06	Cast Iron/Bare Steel	3", 4", 6", 12"	55	2", 4", 6"	LP	LP/99 psig	\$1,112,035	PW - Non Reimb
91	Providence	Pine St	0.86	1.05	Cast Iron/Bare Steel	4", 6"	63	2", 4"	LP	99 psig	\$1,541,451	PW - Non Reimb
92	Providence	Willard Av	1.54	1.57	Cast Iron	4", 6", 12"	144	6", 8", 12"	LP	LP	\$4,362,966	PW - Non Reimb
93	Providence	Access Rd at Elmwood Av 99# Install by PW	0.08	0.00	Install only	n/a	0	12"	n/a	99 psig	tdb	PW - Non Reimb
94	Providence	21-33 Candace St	0.31	0.31	Cast Iron	4"	34	6"	LP	LP	tdb	PW - Non Reimb
95	Warren	Market St	0.72	0.70	Coated Steel	4"	13	4"	60 psig	60 psig	\$764,507	PW - Non Reimb
96	Warwick	2199 Post Rd	0.03	0.03	Coated Steel	2"	1	2"	35 psig	35 psig	tdb	PW - Non Reimb
97	West Warwick	RIDOT Prov St Brdg	0.06	0.06	Protected Coated Steel	6"	0	6"	35 psig	35 psig	\$202,627	PWorks - 100% Reimb
98	Woonsocket	Mendon Rd	0.52	0.97	Cast Iron/Bare Steel/Coated Steel	2", 4"	24	6"	LP	60 psig	\$1,169,997	PW - Non Reimb
99	Woonsocket	Gaulin Ave	0.16	0.15	Cast Iron	4"	10	2"	LP	60 psig	\$190,159	PW - Non Reimb

Division 1-24

Request:

Please provide a list of all CISBOT projects completed since the Company began its Large Diameter LPCI Program. Please include the location, the total length and diameter of rehabilitated main, and the total costs for each project.

Response:

Please refer to Attachment DIV 1-24.

Please note that the following projects may continue to incur additional costs:

- Projects in progress that are expected to be completed by the end of FY2024:
 - wo#90000230689 – Russell St – CISBOT, PVD
- Projects completed in FY2024 for which additional paving and final restoration costs may be invoiced:
 - wo#90000218059 – 1-94 Legion Wy (CISBOT), CRA
 - wo#90000230676 – Thames St (Section 2) – CISBOT, NPR
 - wo#90000230868 – Thames St (Section 3) – CISBOT, NPR
 - wo#90000218064 – Early St – CISBOT, PVD

The costs provided for these projects in Attachment DIV 1-24 are those costs known to the Company as of November 1, 2023.

Attachment 1-24									
wo#	Project Title	City/Town	Street	From	To	Length (feet)	Diameter (inches)	Pressure	Cost \$(millions)
90000216379	Beckwith St - CISBOT, CRA	Cranston	Garden St	Beckwith St	Pond St	430	20	7#	\$1.394
			Beckwith St	Garden St	Doric Av	1365	20	7#	
90000216380	Commercial St - CISBOT, CRA	Cranston	Circuit Dr	Narragansett Blvd	Commercial St	160	16	LP	\$0.984
			Commercial St	Circuit Dr	Sheldon St	650	16	LP	
			Springwood St	Sheldon St	Aborn St	280	16	LP	
			Aborn St	Springwood St	Broad St	285	16	LP	
90000218059	1-94 Legion Wy - CISBOT, CRA	Cranston	Legion Wy	Elsie St	Pontiac Av	1025	20	7#	\$1.003
			Julia St	Legion Wy	Park Av	600	20	7#	
90000224271	94-188 Legion Wy - CISBOT, CRA	Cranston	Legion Wy	#183 Legion Wy	Elsie St	1090	20	7#	\$0.806
90000201453	Thames St (Section 1) - CISBOT, NPR	Newport	Thames St	#132 Thames St	#302 Thames St	1540	16	LP	\$1.172
90000230676	Thames St (Section 2) - CISBOT, NPR	Newport	Thames St	#302 Thames St	Howard St	1400	16	LP	\$0.898
90000230868	Thames St (Section 3) - CISBOT, NPR	Newport	Thames St	#435 Thames St	#550 Thames St	1400	16	LP	\$0.541
90000177419	Tobey St (1 of 2) - CISBOT, PVD	Providence	Tobey St	Ridge St	Broadway	770	16	LP	\$1.019
			Ridge St	Tobey St	Swiss St	900	16	LP	
90000201184	Tobey St (2 of 2) - CISBOT, PVD	Providence	Tobey St	Broadway	Meador St	310	16	LP	\$0.932
			Meador St	Tobey St	Harkness St	175	16	LP	
			Harkness St	Meador St	Westminster St	455	16	LP	
90000218064	Early St - CISBOT, PVD	Providence	Early St	Niagara St	#126 Early St	1185	20	7#	\$0.782
90000224287	1092-1247 Chalkstone Av - CISBOT, PVD	Providence	Chalkstone Av	Mt Pleasant Av	Academy Av	1395	20	LP	\$1.195
90000230689	Russell St - CISBOT, PVD	Providence	Melrose St	Russell St	#237-239 Melrose St	335	20	7#	\$0.772
			Russell St	Melrose St	Narragansett Av	1395	20	7#	

Division 1-25

Request:

Why has the Company reduced its budget for the Large Diameter LPCI program from a FY 2024 forecast of \$6.616 M to a proposed \$0.075 M in FY 2025?

Response:

Please note, the question above refers to “a proposed \$0.075 M [budget] in FY 2025”. This appears to be a typographical error. The Company is proposing a FY2025 budget of \$0.75 million or \$750,000. The Company has reduced the budget in the Large Diameter Cast Iron Rehabilitation program for a number of reasons.

First, the Company was able to complete more CISBOT work than was anticipated in FY2024. By advancing these projects forward, the Company was able to address the projects that would have been priorities under this program in FY2025. These projects were advanced due to the difficulty of scheduling the contractor resources for CISBOT work. For more detail on the reasoning behind this decision, please refer the Company’s response to data request PUC 8-8 in Docket No. 22-54-NG, filed on September, 12 2023.

Second, large diameter cast iron segments do not tend to have as high a risk associated with them as smaller diameter (12” and under) cast iron segments due to the fact that they are not as prone to main breaks. Large diameter cast iron tends to leak at the joints, which does not weigh as heavily in the Company’s risk scores as main breaks. Considering the PUC’s feedback that the Company focus on more high-risk work, the Company has increased focus on mains more at risk of breakage as opposed to those more susceptible to leaking joints. Also, the Company’s large diameter cast iron inventory is in the same municipalities as many of its highest-risk-ranked main segments (Providence and Cranston). There is a finite amount of work that can be done in these municipalities each year and by doing a CISBOT and/or lining project on a segment which may not be high priority, it is likely taking the place of a main relay which likely has a higher risk score associated with it.

While this budget reduction represents a temporary scaling back in the program, there are still large diameter cast iron segments the Company would like to target for rehabilitation over the coming years, mainly using lining rather than CISBOT. Lining projects involve a more in-depth design and planning process and also often involve service work which must be done in preparation for the lining process. The \$750,000 remaining in the budget in this category is for service transfers on Petteys Avenue in Providence. This project and associated budget will allow for the future lining of both the 16 inch 10# cast iron main and the 36 inch low pressure cast iron main on that street as well as design costs to develop other future lining projects.

Division 1-26

Request:

Please provide an updated list of isolated services (leak prone services on non-leak prone pipe) by location, material type, and date of installation in risk ranking order.

Response:

The Company's response to Division 1-26 is pending.

Division 1-27

Request:

Please provide a list of all remaining leak prone services on large diameter cast iron mains that the Company has rehabilitated through the Large Diameter LPCI program. Please include the location, material type, and the date of installation for each service.

Response:

Please refer to Attachment DIV 1-27 for the list of services that are on rehabilitated cast iron mains (48 total). All these services are on mains that have been rehabilitated using CISBOT. Any leak-prone services which were on mains that were lined had to be transferred off of the main prior to lining and would have been relayed with plastic in the process.

Attachment DIV 1-27							
City/Town	House #	Street Name	Suffix	Material	Diameter (in)	Pressure	Date of Installation
Cranston	48	Garden	St	Bare Steel	1 1/2	7#	Unknown
Cranston	55	Garden	St	Coated Steel	1 1/4	7#	7/7/1971
Cranston	161	Julia	St	Bare Steel	1 1/2	7#	4/7/1936
Cranston	179	Julia	St	Bare Steel	1 1/2	7#	6/6/1929
Cranston	181	Legion	Wy	Bare Steel	1 1/2	7#	10/7/1931
Cranston	183-185	Legion	Wy	Coated Steel	1 1/4	7#	3/3/1966
Cranston	845	Pontiac	Av	Bare Steel	2	7#	10/24/1963
Cranston	4	Springwood	St	Bare Steel	1 1/4	LP	9/9/1957
Cranston	12	Springwood	St	Bare Steel	1 1/4	LP	2/6/1969
Newport	142	Thames	St	Bare Steel	2 1/2	LP	9/29/1930
Newport	170	Thames	St	Bare Steel	Unknown	LP	Unknown
Newport	176	Thames	St	Bare Steel	Unknown	LP	Unknown
Newport	186	Thames	St	Bare Steel	1	LP	Unknown
Newport	400	Thames	St	Bare Steel	1 1/4	LP	1/1/1968
Newport	487	Thames	St	Bare Steel	1 1/4	LP	1/1/1977
Newport	501	Thames	St	Bare Steel	2	LP	1/1/1978
Newport	525	Thames	St	Bare Steel	1 1/4	LP	1/1/1934
Newport	182-184	Thames	St	Bare Steel	2	LP	Unknown
Newport	302-306	Thames	St	Bare Steel	1 1/4	LP	Unknown
Newport	421-423	Thames	St	Bare Steel	1 1/4	LP	2/24/1961
Newport	428-430	Thames	St	Bare Steel	1 1/4	LP	Unknown
Providence	1110	Chalkstone	Av	Bare Steel	1 1/2	LP	10/15/1948
Providence	1125	Chalkstone	Av	Bare Steel	1 1/4	LP	10/17/1910
Providence	1127	Chalkstone	Av	Bare Steel	1 1/2	LP	10/17/1948
Providence	1150	Chalkstone	Av	Bare Steel	1 1/4	LP	1/1/1910
Providence	1165	Chalkstone	Av	Bare Steel	1 1/2	LP	9/19/1945
Providence	1169	Chalkstone	Av	Bare Steel	1 1/2	LP	1/1/1938
Providence	1176	Chalkstone	Av	Bare Steel	1 1/4	LP	3/5/1959

Attachment DIV 1-27							
City/Town	House #	Street Name	Suffix	Material	Diameter (in)	Pressure	Date of Installation
Providence	1180	Chalkstone	Av	Bare Steel	1 1/4	LP	9/26/1962
Providence	1182	Chalkstone	Av	Bare Steel	1	LP	1/1/1915
Providence	1200	Chalkstone	Av	Bare Steel	1 1/4	LP	7/18/1957
Providence	1193-1195	Chalkstone	Av	Bare Steel	1 1/2	LP	1/1/1924
Providence	67	Ridge	St	Bare Steel	1 1/2	LP	2/24/1954
Providence	94	Ridge	St	Bare Steel	1 1/2	LP	1/1/1913
Providence	103-105	Ridge	St	Bare Steel	1 1/2	LP	1/1/1943
Providence	107-109	Ridge	St	Bare Steel	1 1/2	LP	1/1/1950
Providence	111-113	Ridge	St	Bare Steel	1	LP	Unknown
Providence	115-117	Ridge	St	Bare Steel	1	LP	Unknown
Providence	119-121	Ridge	St	Bare Steel	1 1/2	LP	1/1/1937
Providence	75-77	Ridge	St	Bare Steel	1 1/2	LP	Unknown
Providence	91-93	Ridge	St	Bare Steel	1 1/4	LP	1/1/1912
Providence	95-97	Ridge	St	Bare Steel	1 1/2	LP	1/1/1937
Providence	99-101	Ridge	St	Bare Steel	1 1/2	LP	1/1/1924
Providence	2	Tobey	St	Bare Steel	1 1/4	LP	1/1/1912
Providence	10	Tobey	St	Bare Steel	1 1/2	LP	1/1/1918
Providence	12	Tobey	St	Bare Steel	1 1/4	LP	Unknown
Providence	77	Tobey	St	Bare Steel	1 1/2	LP	1/1/1917
Providence	82	Tobey	St	Bare Steel	1 1/4	LP	1/1/1912

Division 1-28

Request:

The Company states that all pressure regulating stations in northern RI now have system telemetry. How many stations throughout the system still require the installation of telemetry? Please provide a schedule of when the Company plans to complete installing telemetry at all of its stations and explain the Company's plans for completion.

Response:

There are five stations in the system that still require the installation of telemetry. One of the stations at 200 Cannon Street in Cranston will be abandoned in three to five years so telemetry will not be installed. Telemetry will be installed at the remaining four stations over the next one to two years using internal operations personnel.

The Narragansett Electric Company
d/b/a Rhode Island Energy

In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-29

Request:

Regarding the Company's Heater Installation Program, please provide an updated list of all heaters on the Company's distribution system and their current status including ownership, age, risk ranking and replacement schedule.

Response:

Below is the list of heaters in the Company's service territory. Heaters owned by Enbridge are highlighted in Orange. Heaters replaced in the past two years are highlighted in green.

Reg Stations ID	Address	Station Number	Risk Rank	Heater Replacement Priority	Heater Replacement Year	Ownership	Age (years)
Cumberland (Scott Rd) - Heater 1 (2008)	1595 Mendon Rd (Scott Rd)	RIN-C046	2	1	2024	RIE	15
Cumberland (Scott Rd) - Heater 2 (2015)	1595 Mendon Rd	RIN-C046	13	2	2024	RIE	8
Cumberland (Diamond Hill)	4317 Diamond Hill Rd	RIN-C047	8	3	2025	RIE	33
Providence (Manchester St TS)	Manchester St (30 Allens Ave)	RIS-400	10	4	2025	RIE	17
Portsmouth	135 Old Mill Lane	RIS-N203	1	5	2027	RIE	24
Portsmouth	135 Old Mill Lane	RIS-N203	9	6	NA	RIE	11
Warren	28 Brown St	RIS-BW010	3	7	2026	Enbridge	20

The Narragansett Electric Company
d/b/a Rhode Island Energy

In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-29, page 2

Reg Stations ID	Address	Station Number	Risk Rank	Heater Replacement Priority	Heater Replacement Year	Ownership	Age (years)
Westerly	73 Canal St	RIS-OBL	4	8	2026	Enbridge	30
Lincoln	602 George Washington Hwy	RIN-C045	11	9	NA	RIE	10
Burrillville	1084 Wallum Lake Rd	RIS-340	15	10	NA	RIE	9
Providence (Crary St TS)	30 Allens Ave	RIS-343	17	11	NA	RIE	5
Cranston	67 Laten Knight Rd	RIS-334	14	12	NA	RIE	3
East Providence (Wampanoag)	259 Wampanoag Trail	RIS-004	5	13	2022	RIE	1
East Providence (Dey St)	27 Dey St	RIS-311	6	14	2023	RIE	0
Tiverton	401 Main Rd	RIS-TIV1	12	15	2022	RIE	0
Smithfield	374 Putnam Pike	RIS-125	7	16	2023	RIE	0
Smithfield	374 Putnam Pike	RIS-402	16	17	2023	RIE	0

Redacted
Division 1-30

Request:

Please provide the following information for the Smithfield Gate Station (Putnam Pike) Project (FY 2025 Gas ISR Plan Bates Page 36):

- a. A construction schedule for the Project;
- b. A description of the Project;
- c. Itemize the major costs of the Project;
- d. Identify when the major costs of the Project have been and/or will be incurred relative to the construction schedule; and
- e. A site plan of the Project.

Response:

- a. The design of the new 35 PSIG station is complete, and most materials have been ordered. The remainder of materials procurement will be completed prior to construction of the new 35 PSIG station which will occur in FY25. The timing will depend on the completion of other regulator stations. The design of the new 99 PSIG regulator runs and abandonment of the existing 975 PSIG to 35 PSIG station is ongoing and will be complete in the beginning of FY25. Long lead time items for the new station will be ordered in FY25. Procurement of all materials and abandonment of the existing 975 PSIG to 35 PSIG station will be completed in early FY26. The construction of the new 99 PSIG regulator runs will be completed by the end of FY26 with the potential of some costs carrying into FY27.
- b. The existing Smithfield Gate Station is a combination of two stations. One pressure reduction is from 975 PSIG to 99 PSIG and a second pressure reduction takes place in parallel from 975 PSIG to 35 PSIG. Currently, both pressure reductions have only two layers of overpressure protection and dual runs but these runs are stacked on top of each other leading to maintenance difficulties and the inability to retrofit the stations with a third layer of overpressure protection. In order to eliminate the 975 PSIG to 35 PSIG pressure reduction and prevent the potential of high pressure entering the 35 PSIG distribution system, a new prefabricated vault will be installed outside of the building that utilizes the existing 99 PSIG and 35 PSIG outlets. Once the existing 35 PSIG regulator runs are removed, the inside of the Gate Station will then be replaced with more traditional side-by-side dual runs, 975 PSIG to 99 PSIG, with three layers of overpressure protection. Since the station was only built in 1999, and a majority of records are traceable, verifiable, and complete, the existing inlet piping and building will be preserved as much as possible.

The Narragansett Electric Company
d/b/a Rhode Island Energy

In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Redacted
Division 1-30, page 2

c. Cost Estimate

Cost Type	Estimated Cost (\$M)
[Redacted]	
Total	\$5.538

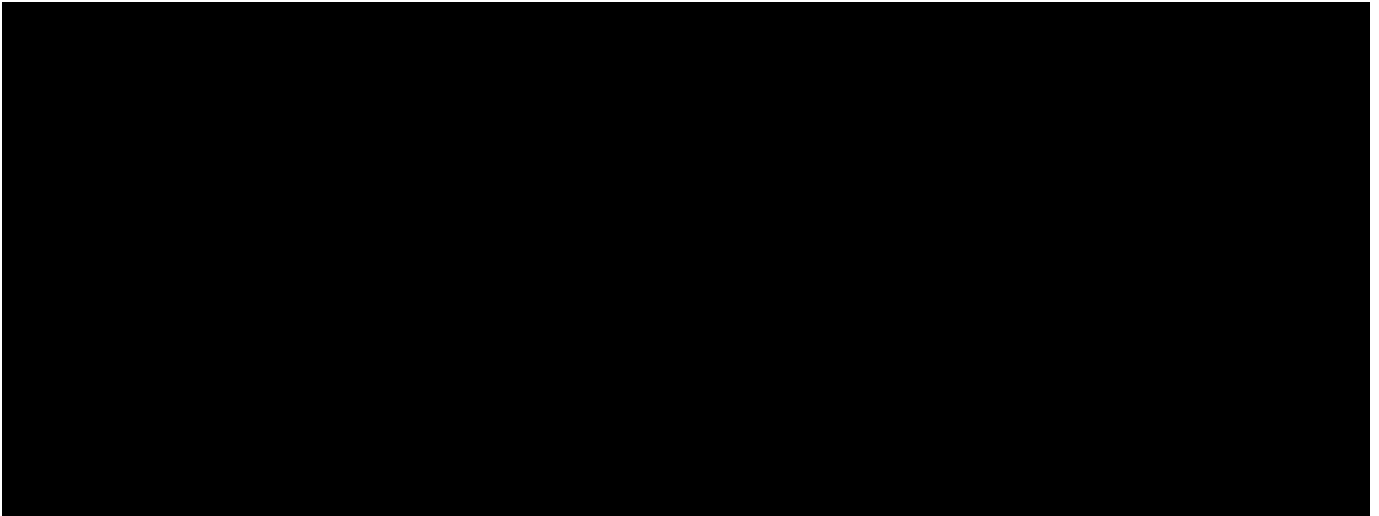
d. Cost vs Construction Schedule (Estimated Phase 1 and Phase 2 as two separate projects)

	Pre-FY24	FY24 Incurred	FY24 Remaining Projected	FY25 Projected	FY26 Projected++	Total
[Redacted]						
	\$0.215	\$0.138	\$0.264	\$1.326	\$2.775	\$4.718
Contingency			Phase 1	\$0.265		
			Phase 2		\$0.555	
Phase 1 Total				\$1.591		
Phase 2 Total					\$3.330	
Project Total						\$5.538

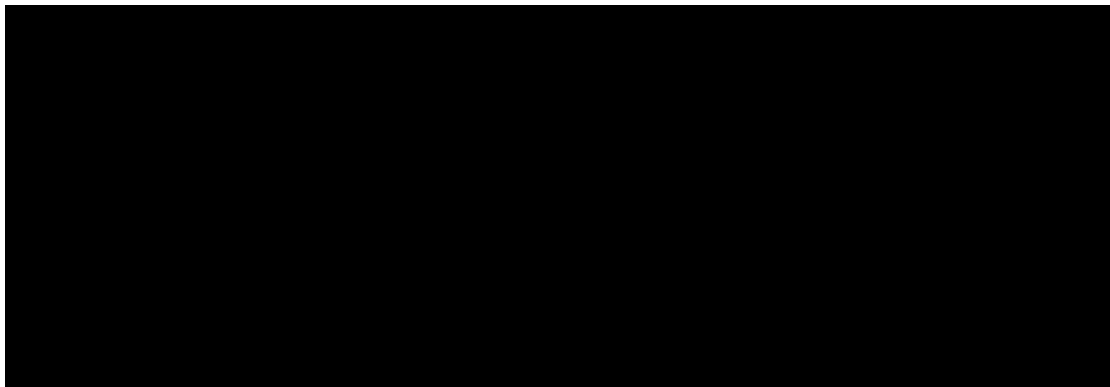
Redacted
Division 1-30, page 3

e. Site Plan

Existing Conditions Site Layout



Existing conditions-Regulator Runs Overhead



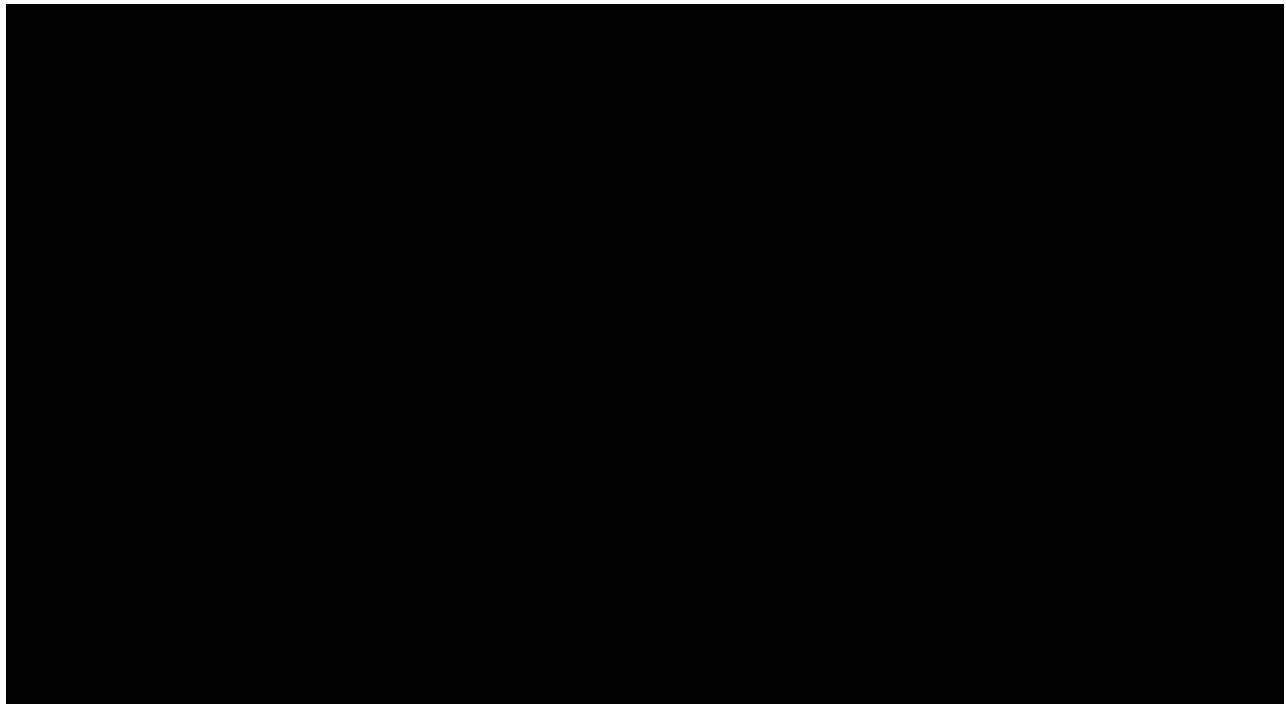
Redacted
Division 1-30, page 4

Existing conditions-Regulator Runs Side View



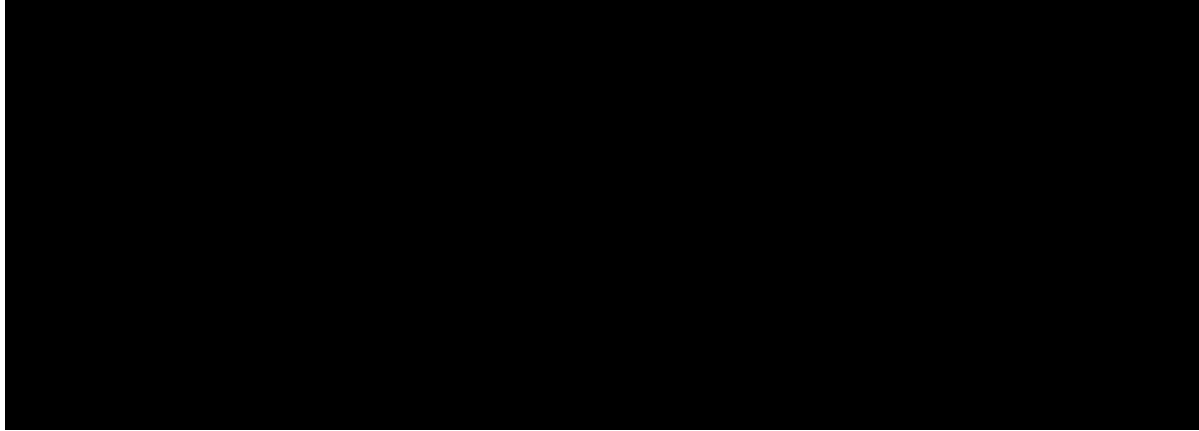
Site Proposal

New 99 PSIG to 35 PSIG vault Overview

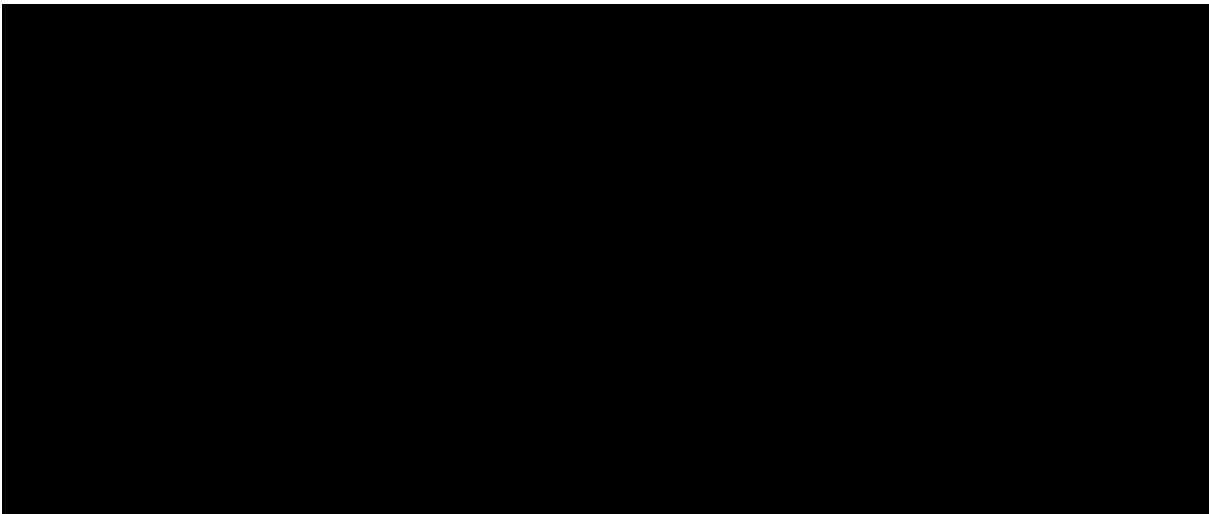


Redacted
Division 1-30, page 5

Abandon Existing 975 PSIG to 35 PSIG and 975 PSIG to 99 PSIG Regulator Runs



Install new 975 PSIG to 99 PSIG Regulator Runs



Division 1-31

Request:

Please provide the following information for the “Pressure Regulating Facilities” Work, *i.e.*, construction for 5 to 7 new stations, engineering for 5 future stations, and the installation of a second bypass valve at 3 stations (to prevent a failure of a single bypass valve resulting in over pressurization):

- a. A description and construction schedule for each station Project;
- b. The total costs of each Project; and
- c. Identify when the major costs for the various Projects have been and/or will be incurred relative to the construction schedule.

Response:

Please note that the Company has provided additional information verbally requested by the Division in subpart d. of this response. Subpart d. provides the Company’s condition based assessment of the listed regulator stations.

- a. Descriptions – See subpart c. for construction schedule
 - Station St @ Pond St (Cranston) - Installation of a three layer, dual-run prefabricated regulator station to replace the existing station. The inlet pressure is 99 PSIG and the outlet pressure is low pressure (“LP”).
 - 337 Lonsdale Av (Pawtucket) - Installation of a three-layer, dual-run prefabricated regulator station to replace the existing station. The inlet pressure is 99 PSIG and the outlet pressure is LP.
 - New River Rd @ Cottage St (Lincoln) - Installation of a three layer, dual-run prefabricated regulator station to replace the existing station. The inlet pressure is 99 PSIG and the outlet pressure is 60 PSIG.
 - Mendon Rd @ Nate Whipple Hwy (Cumberland) - Installation of a three layer, dual-run prefabricated regulator station to replace the existing station. The inlet pressure is 99 PSIG and the outlet pressure is 60 PSIG.
 - Weeden St @ Smithfield Av (Pawtucket) - Installation of a three layer, dual-run prefabricated regulator station to replace the existing station. The inlet pressure is 60 PSIG and the outlet pressure is LP.

Division 1-31, page 2

- 110 Atwood Av @ D St (Cranston) - Installation of a three layer, dual-run prefabricated regulator station to replace the existing station. The inlet pressure is 99 PSIG and the outlet pressure is LP.
- Hartford Av @ Petteys Av LP (Providence) - Installation of a three layer, dual-run prefabricated regulator station to replace the existing station. The inlet pressure of the existing station is 10 PSIG and the outlet pressure is LP. The new station will have an inlet pressure of 99 PSIG and an outlet pressure of LP.
- Hartford Av @ Petteys Av 10 (Providence) - Installation of a three layer, dual-run prefabricated regulator station to replace the existing station. The new station will have an inlet pressure of 99 PSIG and an outlet pressure of LP.
- Warwick Av @ West Shore Rd (Warwick) - Installation of a three layer, dual-run prefabricated regulator station to replace the existing station. The new station will have an inlet pressure of 99 PSIG and an outlet pressure of 35 PSIG.
- Atwood Av @ Plainfield St (Johnston) - Installation of a three layer, dual-run prefabricated regulator station to replace the existing station. The new station will have an inlet pressure of 99 PSIG and an outlet pressure of 35 PSIG.
- Wellington St @ Thames St 40 (Newport) - Installation of a three layer, dual-run prefabricated regulator station to replace the existing station. The new station will have an inlet pressure of 99 PSIG and an outlet pressure of 35 PSIG.
- Mayfield @ Oaklawn Av (Cranston) - Installation of a second bypass valve between the 99 PSIG and 35 PSIG system to prevent an over-pressurization from a single bypass valve failure.
- 71 Corina St @ Glasgow St (Providence) - Installation of a second bypass valve between the 99 PSIG and 35 PSIG system to prevent an over-pressurization from a single bypass valve failure.
- Carroll Av @ Ocean Drive (Newport) - Installation of a second bypass valve between the 35 PSIG and LP system to prevent, and over-pressurization from a single bypass valve failure.

The Narragansett Electric Company
d/b/a Rhode Island Energy

In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-31, page 3

b. Total Project Estimates

Project Name	Town	Project Type	Total Cost (\$M)
Station St @ Pond St	Cranston	Replace Station	\$1.300
337 Lonsdale Av	Pawtucket	Replace Station	\$1.600
New River Rd @ Cottage St	Lincoln	Replace Station	\$1.200
Mendon Rd @ Nate Whipple Hwy	Cumberland	Replace Station	\$1.300
Weeden St @ Smithfield Av	Pawtucket	Replace Station	\$1.300
110 Atwood Av @ D St	Cranston	Replace Station	\$1.200
Hartford Av @ Petteys Av LP	Providence	Replace Station	\$1.800
Hartford Av @ Petteys Av 10	Providence	Replace Station	\$1.400
Warwick Av @ West Shore Rd	Warwick	Replace Station	\$1.200
Atwood Av @ Plainfield St	Johnston	Replace Station	\$1.350
Wellington St @ Thames St 40	Newport	Replace Station	\$1.800
Mayfield Rd @ Oaklawn Av	Cranston	Install Bypass Valve	\$0.175
71 Corina St @ Glasgow St	Providence	Install Bypass Valve	\$0.200
Carroll Av @ Ocean Drive	Newport	Install Bypass Valve	\$0.200

The Narragansett Electric Company
d/b/a Rhode Island Energy

In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-31, page 4

c. Construction Schedule and Costs

Project Name	FY24 Activity	FY25 Activity	Total Cost (\$M)	Costs thru FY24	FY25 Cost
Station St @ Pond St	Order Materials	Construct New Station	\$1.300	\$0.495	\$0.805
337 Lonsdale Av	Order Materials	Construct New Station	\$1.600	\$0.925	\$0.675
New River Rd @ Cottage St	Order Materials	Construct New Station	\$1.200	\$0.450	\$0.750
Mendon Rd @ Nate Whipple Hwy	Redesign, Order Materials	Construct New Station	\$1.300	\$0.700	\$0.600
Weeden St @ Smithfield Av	Order Materials	Construct New Station	\$1.300	\$0.438	\$0.862
110 Atwood Av @ D St	Order Materials	Construct New Station	\$1.200	\$0.332	\$0.868
Hartford Av @ Petteys Av LP	Full Design	Order Materials for New Station	\$1.800	\$0.130	\$0.250
Hartford Av @ Petteys Av 10	Partial Design	Design, Order Materials for New Station	\$1.400	\$0.003	\$0.250
Warwick Av @ West Shore Rd	Partial Design	Design, Order Materials for New Station	\$1.200	\$0.002	\$0.125
Atwood Av @ Plainfield St	Partial Design	Design, Order Materials for New Station	\$1.350	\$0.009	\$0.150
Wellington St @ Thames St 40	Partial Design	Design, Order Materials for New Station	\$1.800	\$0.051	\$0.150
Mayfield Rd @ Oaklawn Av	Design, Order Materials	Construct Second Bypass Valve	\$0.175	\$0.088	\$0.087
71 Corina St @ Glasgow St	Design, Order Materials	Construct Second Bypass Valve	\$0.200	\$0.044	\$0.156
Carroll Av @ Ocean Drive	Design, Order Materials	Construct Second Bypass Valve	\$0.200	\$0.052	\$0.148

The Narragansett Electric Company
d/b/a Rhode Island Energy
In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-31, page 5

d. 3-Year Condition Assessment Scores

Station Name	Station St @ Pond St	337 Lonsdale Av	New River Rd @ Cottage St	Mendon Rd @ Nate Whipple Hwy	Weeden St @ Smithfield Av	Atwood Av @ D St	Hartford Av @ Petteys Av (Holder 19) LP	Hartford Av @ Petteys Av (Holder 19) 18"	Warwick Av @ W Shore	Atwood Av @ 1401 Plainfield St	Wellington St @ Thames St 40 PSIG	Mayfield Rd @ Oakland Av	Corina St @ Glasgow 35 PSIG	Carroll Av @ Ocean Dr
Total Condition Based Risk Score (2020 Average 19)	20	25	26	17	29	25	20	18	33	26	43	21	23	20
Health & Safety	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Environmental	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Reliability	6	4	5	6	4	6	6	7	6	5	4	6	7	4
Strategic, Competitive, Reputational	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Impact Score	4.3	3.8	4.0	4.3	3.8	4.3	4.3	4.5	4.3	4.0	3.8	4.3	4.5	3.8
Access Conditions	2	4	3	3	4	4	3	2	1	1	4	3	3	3
Vault/Building Condition	3	1	1	1	2	4	2	1	2	1	5	1	2	1
Access Ladder	5	3	3	3	3	2	3	3	3	5	5	5	3	1
Vault Penetrations: Control Lines	4	1	1	1	1	3	1	1	1	1	3	1	1	1
Vault Penetrations: Gas Main	2	1	1	1	1	4	1	1	1	1	3	1	1	1
Equipment Age (Monitor/Control Regulators)	2	3	3	2	3	3	3	1	4	3	5	3	2	2
Operational Factors - Ops. Performance Monitoring	2	1	1	1	1	2	1	1	1	1	3	5	1	1
Control Line Integrity	5	5	3	3	5	3	3	3	4	5	4	4	4	4

The Narragansett Electric Company
d/b/a Rhode Island Energy

In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-31, page 6

Station Name	Station St @ Pond St	337 Lonsdale Av	New River Rd @ Cottage St	Mendon Rd @ Nate Whipple Hwy	Weeden St @ Smithfield Av	Atwood Av @ D St	Hartford Av @ Petteys Av (Holder 19) 11P	Hartford Av @ Petteys Av (Holder 19) 18"	Warwick Av @ W Shore	Atwood Av @ 1401 Plainfield St	Wellington St @ Thames St 40 PSIG	Mayfield Rd @ Oakland Av	Corina St @ Glasgow 35 PSIG	Carroll Av @ Ocean Dr
By-Pass Operation	5	2	2	1	4	2	5	1	1	5	5	5	5	5
Atmospheric Corrosion: Pipe	1	1	1	1	1	2	1	1	1	1	3	1	1	1
Atmospheric Corrosion: Component	1	1	1	1	1	1	1	1	1	1	3	1	1	1
Regulator Separation: Over Pressurization	1	3	4	4	3	1	3	3	5	5	5	5	3	3
Venting	1	1	1	1	1	1	1	1	1	1	1	1	1	1
System Station Feeds (Dead End/ Multiple Feeds)	1	3	3	3	1	1	1	1	1	1	5	1	1	1
Station Security	1	1	1	1	1	1	1	1	1	1	3	3	1	1
Station Alarming	5	5	5	5	3	1	5	5	5	5	5	5	5	5
TOTAL MIT (Condition) Score (1-5)	2.4	2.2	2.1	1.9	2.2	2.1	2.1	1.6	2.0	2.4	3.8	2.9	2.2	1.8
Weather Related Impact	1	1	1	1	1	1	1	1	1	1	1	1	1	3
Flood Impact	1	1	1	1	1	1	1	1	3	1	3	1	1	3
Plant Location: Adjacency to Neighbors	3	3	3	3	5	3	4	4	4	2	5	2	5	3
TOTAL Location Score (1-5)	1.7	1.7	1.7	1.7	2.3	1.3	2.0	2.0	2.7	1.3	3.0	1.3	2.3	3.0
Operations Highlighted Concern	NO	YES	YES	NO	YES	YES	NO	NO	YES	YES	YES	NO	NO	NO

The Narragansett Electric Company
d/b/a Rhode Island Energy
In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-32

Request:

Regarding Pressure Regulating Facilities, please provide an updated overall risk ranked list of all stations including any abandonments and/or replacements over that past 10 years.

Response:

The table below shows the risk ranked list of pressure regulation stations. Those stations that were replaced within the last 10 years are highlighted in green, and stations that have been abandoned during that time are highlighted in red.

Town	Station Number	Station Name	Risk Rank	Station Age	System	Capacity	Estimated System Customers	Estimated Outage Risk
EAST PROVIDENCE	RIS-004	Wampanoag Trail TS	1	70	Providence 200#	NA	1	68000
CUMBERLAND	RIN-C046	68 Scott Rd TS	2	52	Upper Cumberland 99#	25%	15278	30067
PORTSMOUTH	RIS-N203	135 Old Mill Ln TS	3	22	Newport/Middletown 99#	41%	501	24906
CRANSTON	RIS-334	67 Laten Knight Road TS	4	31	Cranston 149#	14%	0	42866
LINCOLN	RIN-C045	600 George Washington Hwy (Rt 116) TS	5	29	Upper Cumberland 99#	44%	15278	27111
NORTH PROVIDENCE	RIS-082	Waterman @ Whitman St	6	50	Providence LP	7%	81002	0
WESTERLY	RIS-OOB-R	Westerly TS (Relief Only)	7	21	Westerly 75#	N/A	601	4076
CRANSTON	RIS-114	110 Atwood Av @ D St	8	34	Providence LP	63%	81002	2218
PAWTUCKET	RIN-C021	337 Lonsdale Av	9	45	Pawtucket LP	50%	35788	1628

The Narragansett Electric Company
d/b/a Rhode Island Energy
In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-32, page 2

Town	Station Number	Station Name	Risk Rank	Station Age	System	Capacity	Estimated System Customers	Estimated Outage Risk
CRANSTON	RIS-119	Wellington Av @ Well Av	10	29	Providence LP	34%	81002	1969
PROVIDENCE	RIS-078	Ives St @ Trenton St	11	53	Providence LP	61%	81002	0
LINCOLN	RIN-C018	Boulevard Av @ Front St	12	44	Pawtucket LP	22%	35788	893
PAWTUCKET	RIN-C022	Weeden St @ Smithfield Av	13	52	Pawtucket LP	56%	35788	2522
PROVIDENCE	RIS-121	Broad St @ Early St	14	28	Providence LP	30%	81002	0
CRANSTON	RIS-113	Depot Av @ Cranston St	15	35	Providence LP	67%	81002	1141
PROVIDENCE	RIS-065	Corina St @ Glasglow LP	16	49	Providence LP	58%	81002	2044
WARWICK	RIS-036	Post Rd @ Byron Blvd	17	32	Providence LP	20%	81002	0
CUMBERLAND	RIN-C017	West Highland Av @ High St	18	43	Pawtucket LP	46%	35788	440
CRANSTON	RIS-017	Station St @ Pond St	19	31	Providence LP	26%	81002	2374
PROVIDENCE	RIS-109	477 Dexter St	20	35	Providence LP	85%	81002	0
WEST WARWICK	RIS-133	Cowesett Av @ Quaker Ln	21	16	Rhode Island 99#	32%	15296	42844
JOHNSTON	RIS-100	Allendale Av @ Geo. Waterman	22	36	North Providence/ Johnston 35#	39%	2448	3962
WARWICK	RIS-035	186 N Country Club Dr	23	67	Providence LP	59%	81002	717

The Narragansett Electric Company
d/b/a Rhode Island Energy
In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-32, page 3

Town	Station Number	Station Name	Risk Rank	Station Age	System	Capacity	Estimated System Customers	Estimated Outage Risk
CRANSTON	RIS-016	Park Av @ Hayward Av	24	28	Providence LP	69%	81002	3414
WARWICK	RIS-107	Warwick Av @ W Shore	25	38	West Shore 35#	84%	50198	19258
JOHNSTON	RIS-034	Atwood Av @ 1401 Plainfield St	26	60	Johnston 35#	60%	521	3596
CRANSTON	RIS-077	Fountain Av @ Dyer Av	27	30	Providence LP	97%	81002	1530
PROVIDENCE	RIS-023	Westminster St @ Rt 10	28	28	Providence LP	68%	81002	3390
LINCOLN	RIN-C048	New River Rd @ Cottage St	29	33	South Cumberland 60#	100%	10352	7882
NORTH PROVIDENCE	RIS-129	David St @ Mineral Spring Av	30	19	Providence LP	48%	81002	372
PROVIDENCE	RIS-116	Silver Spring St @ Metcalf St	31	26	Providence LP	43%	81002	1236
PAWTUCKET	RIN-C026	Downes Av @ Robinson Av	32	33	Pawtucket LP	77%	35788	2223
CRANSTON	RIS-096	Broad St @ Columbia Av	33	42	Providence LP	75%	81002	3617
WEST WARWICK	RIS-104	E Greenwich St @ Quaker Ln	34	39	West Shore 35#	21%	50198	1305
PAWTUCKET	RIN-C024	Senate St @ Daggett Av	35	30	Pawtucket LP	80%	35788	1543
NORTH PROVIDENCE	RIS-088	Corina St @ Glasgow 35 PSIG	36	46	North Providence/ Johnston 35#	100%	2448	8403

The Narragansett Electric Company
d/b/a Rhode Island Energy
In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-32, page 4

Town	Station Number	Station Name	Risk Rank	Station Age	System	Capacity	Estimated System Customers	Estimated Outage Risk
PAWTUCKET	RIN-C028	Oregon Av @ Manistee St	37	30	Pawtucket LP	31%	35788	1011
SMITHFIELD	RIS-402	347 Putnam Pike TS (Rt 44) 99 PSIG	38	24	Rhode Island 99#	17%	15278	28091
EAST GREENWICH	RIS-068	337 Cowesett Rd	39	41	West Shore 35#	42%	50198	7310
WOONSOCKET	RIN-C004	Harris Av @ Blackstone St	40	41	Woonsocket LP	41%	9744	938
CRANSTON	RIS-049	1584 Plainfield St @ Plainfield Pk	41	48	Providence LP	26%	81002	679
WOONSOCKET	RIN-C007	Kendrick Av @ Gaulin Av	42	46	Woonsocket LP	36%	9744	1784
PROVIDENCE	RIS-024.1	Hartford Av @ Petteys Av (Holder 19) LP	43	40	Providence LP	100%	81002	14871
CENTRAL FALLS	RIN-C050	Broad St @ Hunt St	44	15	Pawtucket LP	30%	35788	2314
WOONSOCKET	RIN-C005	Bailey St @ Ballou St	45	36	Woonsocket LP	28%	9744	1174
NORTH PROVIDENCE	RIN-132	Waterman Av @ Greystone	46	17	Providence LP	61%	81000	1488
PAWTUCKET	RIN-C027	Bloomfield St @ Armistice Blvd	47	38	Pawtucket LP	100%	35788	2016
JOHNSTON	RIS-029	20 Serrel Sweet Rd	48	54	Providence LP	58%	81002	1969

The Narragansett Electric Company
d/b/a Rhode Island Energy
In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-32, page 5

Town	Station Number	Station Name	Risk Rank	Station Age	System	Capacity	Estimated System Customers	Estimated Outage Risk
PAWTUCKET	RIN-C036	Dora St @ Vincent Av	49	21	Pawtucket LP	46%	35788	2194
PROVIDENCE	RIS-128	Allens Av @ Blackstone St	50	12	Providence LP	69%	81002	7114
PAWTUCKET	RIN-C033	Kepler St @ Divison St	51	23	Pawtucket LP	57%	35788	1586
SMITHFIELD	RIS-125	347 Putnam Pike TS (Rt 44) 35 PSIG	52	24	Johnston 35#	11%	5234	6321
PAWTUCKET	RIN-C032	Bacon St @ Columbus Av	53	25	Pawtucket LP	58%	35788	1964
PAWTUCKET	RIN-C030	North Bend St @ Cottage St	54	36	Pawtucket LP	52%	35788	2332
PROVIDENCE	RIS-048	Hyacinth St @ Shiloh St	55	13	Providence LP	91%	81002	1381
PROVIDENCE	RIS-103	Promenade St @ Kingsley Av (121 Providence Place)	56	40	Providence LP	9%	7857	918
PROVIDENCE	RIS-098	Chalkstone St @ Rosebank Av	57	42	Providence LP	100%	81002	6991
NORTH KINGSTOWN	RIS-081	Ten Rod Rd (Pole 110)	58	51	West Shore 35#	40%	50198	6212
WEST WARWICK	RIS-120	Providence St @ Toll Gate Rd	59	28	West Shore 35#	22%	50198	6942
WARREN	RIS-BW010	Warren TS	60	11	Bristol Warren 60#	54%	2918	15601
EAST PROVIDENCE	RIS-006	Pawtucket Av @ Sprague St	61	54	Riverside LP	56%	1410	786

The Narragansett Electric Company
d/b/a Rhode Island Energy

In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-32, page 6

Town	Station Number	Station Name	Risk Rank	Station Age	System	Capacity	Estimated System Customers	Estimated Outage Risk
WOONSOCKET	RIN-C012	Bourdon Blvd @ Asylum St	62	44	Woonsocket Int. 8#	6%	202	202
EAST PROVIDENCE	RIS-315	Wampanoag Trail @ Tripps Ln	63	14	East Shore 99#	31%	8463	13419
PROVIDENCE	RIS-024.3	Hartford Av @ Petteys Av (Holder 19) 18" Line	64	20	Providence 10#	80%	352	9777
PROVIDENCE	RIS-024.5	Hartford Av @ Petteys Av (Holder 19) Dey St Line	65	20	Providence 10#	100%	352	9675
WOONSOCKET	RIN-C006	Kenwood St @ Cass Av	66	31	Woonsocket LP	22%	9744	501
CRANSTON	RIS-073	Mayfield Rd @ Oakland Av	67	30	West Shore 35#	67%	50198	13178
CUMBERLAND	RIN-C049	Mendon Rd @ Nate Whipple Hwy	68	23	South Cumberland 60#	91%	10352	16136
WARREN	RIS-BW014	Market St @ Kickemuit Rd	69	19	Warren LP	8%	512	512
PROVIDENCE	RIS-094	Dyer St @ Pine St	70	18	Providence 35#	15%	129	2762
NORTH PROVIDENCE	RIS-026	Eliot Av @ Barrett Av	71	11	Providence LP	66%	81002	1913
NEWPORT	RIS-N220	Memorial Blvd @ Anna Dr	72	27	Newport 10#	19%	1849	1069
NEWPORT	RIS-N216	Bliss Rd @ Broadway	73	37	Newport LP	39%	6080	2626

The Narragansett Electric Company
d/b/a Rhode Island Energy

In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-32, page 7

Town	Station Number	Station Name	Risk Rank	Station Age	System	Capacity	Estimated System Customers	Estimated Outage Risk
EAST PROVIDENCE	RIS-014	N Broadway @ Greenwood St	74	64	East Providence LP	21%	7855	1149
JOHNSTON	RIS-063	Hartford Av @ Dale Av	75	10	Providence LP	27%	81002	508
EAST PROVIDENCE	RIS-015	Pawtucket Av @ Waterman Av	76	12	East Providence LP	24%	7855	1780
NEWPORT	RIS-N213-HP	Wellington St @ Thames St 40 PSIG	77	13	Newport 35#	100%	169	1203
JOHNSTON	RIS-057	915 Atwood Av @ Plainfield St (St Rocco's)	78	48	Providence LP	83%	81002	1334
EAST PROVIDENCE	RIS-130	Village Green N @ Pawtucket Av	79	18	East Providence 5#	37%	1557	2180
NORTH KINGSTOWN	RIS-118	3362 Kingstown Rd (Waites Corner)	80	31	West Shore 35#	29%	50198	9359
PAWTUCKET	RIN-C025	290 Daggett Av	81	33	Pawtucket LP	31%	35788	748
PROVIDENCE	RIS-115	Doyle Av @ Tabor Av	82	35	Providence LP	45%	81002	6971
EAST PROVIDENCE	RIS-046	Centre St @ Castro St	83	61	East Providence LP	28%	7855	857
BRISTOL	RIS-BW005	213 Mt Hope Av	84	39	Bristol LP	41%	2339	183
CRANSTON	RIS-108	11 Lawnacre Dr @ Wayside Dr	85	38	Providence LP	32%	81002	2033

The Narragansett Electric Company
d/b/a Rhode Island Energy
In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-32, page 8

Town	Station Number	Station Name	Risk Rank	Station Age	System	Capacity	Estimated System Customers	Estimated Outage Risk
WARWICK	RIS-038	East Av @ 650 Bald Hill Rd	86	7	Warwick/Bald Hill 25#	NA		4677
PROVIDENCE	RIS-022	Niantic Av @ Pawnee St	87	15	Providence LP	69%	81002	474
WOONSOCKET	RIN-C009	Asylum St @ Mason St	88	55	Woonsocket LP	48%	9744	570
CENTRAL FALLS	RIN-C019	Liberty St @ Hunt St	89	50	Pawtucket LP	73%	35788	2650
EAST PROVIDENCE	RIS-047	747 Bullocks Point Av	90	38	Riverside LP	24%	1403	352
WESTERLY	RIS-OOC	53 Ward Av	91	28	Westerly LP	15%	2316	294
MIDDLETOWN	RIS-N209	Walcott Av @ St Georges	92	16	Middleton LP	22%	468	468
PAWTUCKET	RIN-C031	Tidewater St @ Taft St City Reg	93	13	Pawtucket LP	91%	35788	6657
WOONSOCKET	RIN-C003	High St @ Fountain St	94	20	Woonsocket LP	1%	9744	599
EAST PROVIDENCE	RIS-123	Fort St @ S Broadway	95	25	East Providence LP	48%	7857	715
CENTRAL FALLS	RIN-C020	550 High St	96	11	Pawtucket LP	36%	35788	4220
EAST PROVIDENCE	RIS-117	County Rd @ Old County Rd	97	12	East Shore 25#	100%	6579	4085
PROVIDENCE	RIS-008	Brook St @ George St LP	98	9	Providence LP	39%	81002	1359
COVENTRY	RIS-126	433 Hopkins Hill Rd	99	24	West Shore 35#	38%	50198	5180

The Narragansett Electric Company
d/b/a Rhode Island Energy
In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-32, page 9

Town	Station Number	Station Name	Risk Rank	Station Age	System	Capacity	Estimated System Customers	Estimated Outage Risk
PAWTUCKET	RIN-C051	Bernon St @ Front St	100	15	Woonsocket LP	36%	9744	2702
CUMBERLAND	RIN-C016	Ann & Hope Way	101	11	Pawtucket LP	45%	35788	1341
WOONSOCKET	RIN-C002	Rockland Av @ Morse Av	102	22	Woonsocket LP	25%	9744	494
JOHNSTON	RIS-124	Scenery Ln	103	25	Johnston Scenery Ln. 35#	4%	147	147
LINCOLN	RIN-C037	Woodland St @ Smithfield Av	104	10	Pawtucket LP	19%	35788	731
PAWTUCKET	RIN-C029	Maryland Av @ School St	105	13	Pawtucket LP	33%	35788	1214
EAST PROVIDENCE	RIS-099	860 Waterman Av	106	42	S. East Providence 35#	19%	247	757
NORTH PROVIDENCE	RIS-027	Smithfield Rd @ Cushing St	107	10	Providence LP	18%	81002	519
WESTERLY	RIS-OOF	14A Perkins Av	108	32	Westerly LP	16%	2316	127
PAWTUCKET	RIN-C023	Moshassuck St @ Main St	109	15	Pawtucket LP	51%	35788	2187
PROVIDENCE	RIS-127	Point St @ Beacon Av	110	23	Providence LP	6%	81002	1984
PROVIDENCE	RIS-111	Canal St @ Washington St	111	13	Providence LP	78%	81002	6116
MIDDLETOWN	RIS-N221	Maple Av @ Yarnell Av	112	20	Newport 10#	19%	1849	1514
WARREN	RIS-310	28 Brown St TS (Barrington Bldg)	113	11	East Shore 25#	58%	6570	3073

The Narragansett Electric Company
d/b/a Rhode Island Energy
In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-32, page 10

Town	Station Number	Station Name	Risk Rank	Station Age	System	Capacity	Estimated System Customers	Estimated Outage Risk
PROVIDENCE	RIS-122	30 Virginia Av	114	27	Providence LP	77%	81002	4009
PROVIDENCE	RIS-400	30 Allens Av (Manchester St) TS Power Plant	115	19	VPEM 350#	0%	1	160
PROVIDENCE	RIS-087	Silver Spring St @ Charles St	116	8	Providence LP	24%	81002	2906
PORTSMOUTH	RIS-N204	135 Old Mill Ln	117	9	Portsmouth 55#	28%	2116	6548
JOHNSTON	RIS-092	Traver Av @ Killingly St	118	5	Providence LP	53%	81002	1256
BRISTOL	RIS-BW015	8 Gooding Av	119	20	Bristol Warren 8#	26%	1938	1379
CUMBERLAND	RIN-C044	1595 Mendon Rd	120	10	South Cumberland 60#	64%	10352	5359
WESTERLY	RIS-OOD	54 East Av	121	11	Westerly LP	9%	2316	472
MIDDLETOWN	RIS-N212	W Main Rd @ Dudley Av	122	11	Newport LP	13%	6080	421
WEST WARWICK	RIS-134	565 Quaker Ln	123	13	Greenwich 35#	8%	136	136
MIDDLETOWN	RIS-N205	305 Corey Ln	124	13	Corey Lane 25#	3%	131	131
EAST PROVIDENCE	RIS-001	500 Veterans Mem Pkwy (Bentley St)	125	7	East Providence 25#	21%	4	4964
CRANSTON	RIS-020	Cannon St	126	13	Cannon St. 35#	2%	65	65
WESTERLY	RIS-OOA	10 White Rock Rd	127	12	Westerly 21#	33%	601	991
EAST PROVIDENCE	RIS-311	27 Dey St TS	128	42	Rhode Island 99#	89%	15278	46661

The Narragansett Electric Company
d/b/a Rhode Island Energy
In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-32, page 11

Town	Station Number	Station Name	Risk Rank	Station Age	System	Capacity	Estimated System Customers	Estimated Outage Risk
LINCOLN	RIN-C043	Cobble Hill Rd @ Louisquisset Pk	129	35	South Cumberland 60#	100%	10352	2490
PAWTUCKET	RIN-C035	Tidewater St @ Taft St B Run	130	13	Pawtucket Intermediate 18#	49%	151	9412
MIDDLETOWN	RIS-N202	W Main Rd @ Oliphant Ln	131	13	Newport 10#	100%	1849	1154
WESTERLY	RIS-OOE	Beach St @ 11 Watch Hill Rd	132	11	Westerly LP	14%	2316	218
BURRILLVILLE	RIS-340	1084 Wallum Lake Rd TS	133	12	Burrillville 35#	4%	62	710
WESTERLY	RIS-OBL	12 Canal St	134	10	Westerly LP	54%	2316	1316
MIDDLETOWN	RIS-N215	E Main Rd @ Turner Rd	135	42	Newport 10#	74%	1849	363
LINCOLN	RIN-C014	Railroad Av @ Winter St LP	136	9	Lincoln/Mannville LP	24%	751	751
EAST PROVIDENCE	RIS-131	Amaral St @ Wampanoag Trail	137	17	S. East Providence 35#	9%	247	566
NORTH KINGSTOWN	RIS-084	Stony Ln @ Rt 2	138	11	N. Kingston Stony Ln. 35#	3%	17	17
PAWTUCKET	RIN-C042	Smithfield Av @ Weeden St	139	52	South Cumberland 60#	50%	10352	3951
NORTH PROVIDENCE	RIN-C038	Charles St @ Mineral Spring Av	140	6	Pawtucket LP	100%	35788	1572

The Narragansett Electric Company
d/b/a Rhode Island Energy
In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-32, page 12

Town	Station Number	Station Name	Risk Rank	Station Age	System	Capacity	Estimated System Customers	Estimated Outage Risk
TIVERTON	RIS-TIV2	Evans Av @ Pierce Av	141	9	Tiverton 5#	21%	621	621
NEWPORT	RIS-N219	Carroll Av @ Ocean Dr	142	13	Newport LP	9%	6080	283
PROVIDENCE	RIS-091	Adelaide Ave @ Hamilton St	143	8	Providence LP	50%	81002	800
EAST PROVIDENCE	RIS-003	First St @ Mauran Av (Holder 20) LP	144	11	East Providence LP	40%	7857	592
WOONSOCKET	RIN-C001	St James Way @ Mendon Rd	145	9	Woonsocket LP	4%	9744	265
WOONSOCKET	RIN-C010	E School St @ Pond St	146	8	Woonsocket LP	52%	9744	1067
MIDDLETOWN	RIS-N201	Newman Rd @ Aquidneck Av	147	13	Newport 10#	8%	1849	886
NEWPORT	RIS-N217	Boulevard St @ Miantonomi	148	13	Newport 10#	9%	1849	829
PROVIDENCE	RIS-079	Ship St @ Chestnut St	149	20	Providence 35#	9%	129	3301
EAST PROVIDENCE	RIS-064	Wampanoag Trail @ Boyd Av 5 PSIG	150	14	East Providence 5#	27%	1557	1045
EAST PROVIDENCE	RIS-013	Summit St @ Taunton Av	151	9	East Providence LP	92%	7855	2800
WESTERLY	RIS-OOG	Friendship St - Yankee Line	152	9	Westerly 60#	68%	1225	3797

The Narragansett Electric Company
d/b/a Rhode Island Energy

In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-32, page 13

Town	Station Number	Station Name	Risk Rank	Station Age	System	Capacity	Estimated System Customers	Estimated Outage Risk
BRISTOL	RIS-BW001	Franklin @ Wood 8 PSIG	153	17	Bristol Warren 8#	28%	1931	552
PROVIDENCE	RIS-105	Brook St @ George St 35 PSIG	154	9	South Providence 35#	82%	76	4688
PAWTUCKET	RIN-C039	Tidewater St @ Taft St Primaries	155	13	South Cumberland 60#	50%	10352	3089
WARREN	RIS-309	22 Brown St Basement 25 PSIG	156	11	East Shore 25#	65%	6570	3292
EAST PROVIDENCE	RIS-056	Roger Williams Av @ Puritan	157	6	East Providence LP	19%	7855	1138
EAST PROVIDENCE	RIS-002	First St @ Mauran Av (Holder 20) 5 PSIG	158	11	East Providence 5#	52%	1557	4167
WESTERLY	RIS-OBH	Friendship St - Spectra Line	159	9	Westerley 60#	16%	1225	2004
NORTH KINGSTOWN	RIS-097	6 Long Av	160	12	West Shore 35#	14%	50198	361
WARREN	RIS-BW013	22 Brown St Basement 8 PSIG	161	13	Bristol Warren 8#	18%	1938	1042
PAWTUCKET	RIN-C040	Sanford St @ Myrtle St	162	3	Pawtucket Intermediate 18#	100%	151	7942
CUMBERLAND	RIN-C047	4425 Diamond Hill Rd TS	163	31	South Cumberland 60#	4%	15278	1069
NEWPORT	RIS-N211	Americas Cup @ Poplar	164	3	Newport LP	7%	6080	265

The Narragansett Electric Company
d/b/a Rhode Island Energy
In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-32, page 14

Town	Station Number	Station Name	Risk Rank	Station Age	System	Capacity	Estimated System Customers	Estimated Outage Risk
BRISTOL	RIS-BW002	Wood St @ Shaws Ln LP	165	3	Bristol LP	48%	2339	1276
NORTH KINGSTOWN	RIS-066	Namcook Rd @ Devils Foot Rd	166	7	West Shore 35#	23%	50198	5700
PROVIDENCE	RIS-320	Allens Av/LNG Fuel	167	13	LNG Fuel 70#	0%	1	0
PROVIDENCE	RIS-086	Fountain St @ Eddy St	168	3	Providence LP	17%	81002	962
BRISTOL	RIS-BW007	Woodlawn Av @ Wood St	169	3	Bristol LP	41%	2339	432
EAST GREENWICH	RIS-106	Frenchtown Rd @ S County Trail	170	2	N. Kingstown Frenchtown Rd. 35#	35%	421	1065
CRANSTON	RIS-032	Park Av @ Old Park Av	171	2	Cranston Providence 7#	91%	528	6045
JOHNSTON	RIS-102	Greenville @ George Waterman	172	5	Johnston 35#	10%	5227	1158
EAST PROVIDENCE	RIS-067	Roger Williams Av @ Whitaker	173	5	East Providence 35#	16%	128	2430
PROVIDENCE	RIS-308	Melrose @ Thackery	174	2	Cranston Providence 7#	10%	521	6385
JOHNSTON	RIS-101	1 Cottage St	175	2	Johnston 35#	38%	5227	4846
NEWPORT	RIS-N213-LP	Wellington St @ Thames St LP	176	1	Newport LP	69%	6080	5385
PROVIDENCE	RIS-306	Ontario @ Niagara	177	2	Providence 10#	22%	352	6356

The Narragansett Electric Company
d/b/a Rhode Island Energy
In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-32, page 15

Town	Station Number	Station Name	Risk Rank	Station Age	System	Capacity	Estimated System Customers	Estimated Outage Risk
EAST GREENWICH	RIS-093	Division Rd @ Quaker Ln	178	10	West Shore 35#	58%	158	2140
TIVERTON	RIS-TIV1	401 Main Rd TS	179	1	Tiverton 55#	N/A	158	1448
PROVIDENCE	RIS-083	Pettis St @ N Main St	180	1	Providence LP	7%	81002	1978
NORTH PROVIDENCE	RIS-110	Smith St @ Sunset Av	181	1	Providence LP	78%	81002	1664
WARWICK	RIS-061	Maple St @ Albany	182	2	West Shore 35#	30%	50198	6051
EAST PROVIDENCE	RIS-071	Willet Av @ Forbes St 5 PSIG	183	1	East Providence 5#	26%	1557	815
CRANSTON	RIS-018	Park Av @ Maple Av	184	1	Providence LP	33%	81002	1180
PROVIDENCE	RIS-343	30 Allens Av (Crary St) TS 99 PSIG	185	6	Rhode Island 99#	25%	15278	0
WEST WARWICK	RIS-133S	Cowesett Av @ Quaker Ln	186	1	Rhode Island 99#	132%	15296	42844
EAST PROVIDENCE	RIS-089	Willet Av @ Forbes St 25 PSIG	187	1	East Shore 25#	59%	6579	4169
PROVIDENCE	RIS-300	Allens Av/Becker Cabinet 18" Line New 200 to 99 Building	188	2	Rhode Island 99#	10%	15296	162540
PROVIDENCE	RIS-305	Allens Ave @ Georgia	189	2	West Shore 35#	42%	50198	8314
JOHNSTON	RIS-090	1827 Plainfield Pk @ Simonsville	190	1	West Shore 35#	100%	50198	3940

The Narragansett Electric Company
d/b/a Rhode Island Energy

In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-32, page 16

Town	Station Number	Station Name	Risk Rank	Station Age	System	Capacity	Estimated System Customers	Estimated Outage Risk
EAST GREENWICH	RIS-069	816 Middle Rd	191	1	West Shore 35#	26%	50198	5637
EAST PROVIDENCE	RIS-005	Dodge St @ Martin Lp						
EAST PROVIDENCE	RIS-045	Harris Ave. @ Hoppin St. Lp						
WARWICK	RIS-037	Pettaconsett Ave. @ Outlet Ave. Lp						
PROVIDENCE	RIS-274	Allens Ave 8In Becker Cabinet 99 Psig						
PROVIDENCE	RIS-307	Summers Allens Ave. - Plant 99 Psig - Disabled						
PROVIDENCE	RIS-327	Allens Ave. - West Shore 99 Psig						
NEWPORT	RIS-N211	Admiral Kalbfus @ Third St. Lp						
PROVIDENCE	RIS-091	Sackett St @ Niagara St						
BRISTOL	RIS-BW003	142 Gibson Rd						

Division 1-33

Request:

Explain the differences between projects associated with “Gas System Reliability” vs. projects associated with the mandated “Low Pressure System Elimination” categories.

Response:

Gas System Reliability projects can span from maintaining adequate pressure at extremities, integrating separate systems with the same maximum operating pressure (“MAOP”), eliminating single feed systems/regulator stations, to integrating city-gate feeds to balance supply portfolios and reducing on-system reliance of LNG to maintain system pressure thereby designated exclusively for peak load shaving during design conditions. (Crary Street gate station, and the Southern Rhode Island Gas Expansion Project are examples of these types of LNG pressure “need” reduction projects).

Low Pressure System Elimination projects are scoped based on multiple parameters. The FY2024 projects within this program were focused on single feed low pressure system elimination (Middletown low pressure is an example of this, one regulator station feeding a low pressure system), water intrusion issues and elimination of low pressure extremities with potential poor pressure on a design day. FY2025 projects are focused on eliminating low pressure extremities that would be created as the Company strategically targets more proactive, high risk, leak prone pipe main replacement projects to be low to high pressure replacement in FY2025 and beyond. This low to high pressure work also aligns with the goal of abandoning low pressure regulator stations as low pressure systems are eliminated.

In some respects, the Low Pressure System Elimination program is comprised of more specific kinds of “Gas System Reliability” projects. The Company can now designate certain kinds of “reliability” projects to this program to allow the strategic replacement of high risk leak prone pipe with new high pressure gas and target high risk areas that will lead to abandonment, instead of replacement, of low pressure regulator stations. This strategy helps incentivize all asset owners in the Company to collaborate more often to understand their high risk asset locations and use the budget dollars more efficiently to accomplish the overall goals of the ISR. Targeting high risk leak prone pipe, high risk low pressure regulator stations, low pressure extremities, system integration, anticipated poor pressure areas, water intrusion/flood prone areas, encroachments/paving, pipes on bridges, corrosion, moving meters outside, and installing proper safety equipment at service risers are goals from various asset owners that should be pursued in concert.

Division 1-33, page 2

The Greenwich Avenue East Providence area/project is an example of a project that achieves a variety of the types of goals listed above, through a single project. This is a FY2024 “Gas System Reliability” project, although it is also a low to high pressure project. The project eliminates a low point/extremity of a low pressure system, that was created after a previous low pressure to high pressure elimination project was completed to abandon a low pressure regulator station at Dodge @ Martin Street in order (to avoid replacement of the old regulator station with a new three layer vault with relief valve). This project is the first phase to loop a single feed 99 psig regulator station in Wampanoag Trail with the 99 psig system fed by Dey Street citygate. The single feed 99 psig station is just outside the Wampanoag Trail gate station that serves multiple downstream regulator stations to a large area spanning from East Providence (south of Route 195) down to Barrington/Warren. It also decreases the Company’s reliance on back feeding from the 99 psig system at Allens Avenue in Providence through the 200 psig system across the river to East Providence when maintenance work is undertaken on the 200 psig city gate station at Wampanoag Trail. Intregating these systems is critical from a reliability perspective because of the significance of the 99 psig single feed station in East Providence.

The Narragansett Electric Company
d/b/a Rhode Island Energy

In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-34

Request:

Please provide an update for planned FY 2024 Gas System Reliability projects including construction progress and estimated costs.

Response:

Please see the table below for the requested information.

WO #	Town	Street	FY2024 Cost Original ISR \$(millions)	Total Cost Estimate \$(millions)	Construction Status
90000231875	EPV	Greenwich Ave	Walked in Post ISR	\$3.946	Start February, carryover to FY25
90000234946	WSO	Mason St	Walked in Post ISR	\$0.655	In Progress
90000209541	LNC	Old River Rd	\$0.667	\$0.663	Complete
90000228513	PVD	Sunbury St	\$0.136	\$0.136	Complete
90000233804	PVD	Allens Ave	Walked in Post ISR	\$0.647	In Progress
90000220806	WWK	Bald Hill Rd	\$0.700	\$0.693	Complete
90000231076	NPV	Borah	\$0.015	\$0.193	Deferred to FY25
90000231856	LNC	Beverly Dr	\$0.318	\$1.146	Deferred to FY25 (MSR project)
90000220913	CRA	Cannon St	\$0.654	\$0.654	Deferred to later year
90000218149	NPR	Beacon Hill Rd	\$0.010	\$0.594	Deferred to later year

Division 1-35

Request:

Please update each project under the category “Gas System Reliability” in East Providence, Providence, North Providence, Lincoln and Johnston (FY 2025 Gas ISR Plan Pages 38-39). In your update, please include the following information:

- a. A description and construction schedule for each project;
- b. The total costs of each project;
- c. Identify when the costs for the various Projects have been and/or will be incurred relative to the construction schedule; and
- d. A site plan for each project.

Response:

The Company’s response to Division 1-35 is pending.

The Narragansett Electric Company
d/b/a Rhode Island Energy

In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-36

Request:

The Company plans to install 4 outlet control line headers (FY2025 Gas ISR Plan pages 39-40). Please provide the location and cost estimates for each project.

Response:

The locations and cost estimates for the four outlet control line headers are as follows:

Project Name	Town	Project Type	Total Cost (\$M)	Remaining Cost (\$M)
888 Wellington Ave @ Well Ave	Cranston	Install Control Line Header	\$0.494	\$0.350
22 Depot Ave @ Cranston St	Cranston	Install Control Line Header	\$0.467	\$0.392
Charles St @ Mineral Spring Ave	North Providence	Install Control Line Header	\$0.501	\$0.487
Moshassuck St @ Main St	Pawtucket	Install Control Line Header	\$0.450	\$0.420

Division 1-37

Request:

Please update each project under the category “LNG” (FY 2025 Gas ISR Plan Pages 40-44). In your update please include the following information:

- a. A description and construction schedule for each project;
- b. The total costs of each project; and
- c. Identify when the costs for the various Projects have been and/or will be incurred relative to the construction schedule.

Response:

Exeter LNG

1. Boil-off Gas “BOG” Compressor Project.

- a. The BOG Compressor project is adding two new BOG Compressors to Exeter LNG that will be more efficient and feature modern safety features to replace the original plant BOG compressors. Construction commenced in July FY2024 but could not be completed in the same fiscal year due to long lead time items. The installation of the new compressors will be completed in the end of FY2024, but plant tie-in and commissioning (in-service date) will not commence until FY2025 and after the calendar 2023/2024 winter heating season.
- b. Total cost of the BOG Compressor Project is forecasted to be \$8.8 million.
- c. The BOG Compressor Project lifetime spend through the end of FY2024 will be \$7.8 million. \$1 million is forecasted for FY2025 when the project is commissioned and placed into service.

2. Switchback Staircase Tower Project.

- a. The Switchback Staircase Tower will provide increased safety when ascending and descending the Exeter LNG Tank. The Staircase Tower will allow for easier first responder access and the use of a stretcher if needed. Maintenance activities will also be safer with the installation of a davit arm jib crane to lift and lower heavy, or awkward items. The current spiral staircase does not meet OSHA standards and presents a safety risk to the Company employees and contractors.

Division 1-37, page 2

- b. The total cost of the Switchback Staircase Tower Project is forecasted to be \$3.0 million.
- c. \$150K will be spent in FY2024 to complete engineering and design, with construction costs estimated at \$2.8 million in FY2025.

3. New Control Room Building Project.

- a. The New Control Room Building Project will provide a modern and safe space for workers to operate the plant, train, and include working spaces for management employees. The current control room has operators adjacent to the electrical room that does not provide adequate protection during an arc flash event. There is no room in the existing control room to move the electrical room or the operator's station. The new control room will feature modern and best practices for control room design and layout and can be constructed without affecting operations.
- b. The total cost of the New Control Room Project is forecasted to be \$10.1 million dollars.
- c. \$500K will be spent in FY2024 to complete engineering and design, with construction costs at approximately \$9.6 million dollars through FY2025/26.

4. Truck Station Project.

- a. The Truck Station is original to the plant and will benefit from being upgraded with a new station that features modern safety features and an automated emergency shutdown system ("AESD"). During an emergency this will provide swift isolation of the plant from the LNG delivery trailer. The Company is planning to have the design completed in FY2025 with construction starting in FY2026.
- b. The total cost of the Truck Station Project is forecasted to be \$12.65 million.
- c. \$150K will be spent in FY2024 to commence engineering and design, with another \$500K spent in FY2025 to complete design. Construction costs will be approximately \$12.0 million dollars and is scheduled for FY2026.

Division 1-37, page 3

Cumberland LNG

1. Supplemental Storage Project.

- a. The Supplemental Storage project will add four more LNG storage Queen trailers to Cumberland LNG that will double the LNG storage capacity. This will provide two days of peak hour shaving during design day conditions without requiring refilling. Refilling activities during vaporization will still be possible.
- b. The total cost of the Supplemental Storage Project is forecasted to be \$5.2 million.
- c. \$1.3 million will be spent in FY2024 for a downpayment, with the remaining \$3.9 million being spent in FY2025 after the equipment is completed.

2. Boil-off Gas “BOG” Recovery Manifold Project.

- a. The BOG Recovery Manifold is being constructed to recapture BOG from the portable LNG equipment in Cumberland and inject it into the distribution system. This supports the Act on Climate and will eliminate most tank venting to atmosphere.
- b. The total cost of the Boil-off Gas “BOG” Recovery Manifold is forecasted to be \$675K.
- c. \$500K will be spent in FY2024 for design and gas piping tie-in, with \$175K for construction in FY2025.

Old Mill Lane “OML” LNG

1. Portable LNG Equipment.

- a. Subject to the approval of the Energy Facility Siting Board (“EFSB”), Portable LNG Equipment will be purchased to use at OML in order to provide the best equipment for the Company’s customers. The equipment that the Company intends to purchase is quieter, more efficient, has greater vaporization rate, and is more cost effective than continuing to lease equipment for operation at the site. Portable LNG Equipment is scalable to adapt to the potential changing needs of customer demand and the Act on Climate.

Division 1-37, page 4

- b. The total cost of the Portable LNG Equipment is forecasted to be \$11.7 million based on a recent quotation. However, pricing is subject to change.
- c. If approved by the EFSB, the Company will place a 25% down payment for Portable LNG Equipment, or \$2.8 million, in FY2024. The remaining \$9.1 million will be spent when equipment is completed throughout FY2025 and FY2026. The actual payment milestones will be dependent upon the timing of any EFSB approval and the manufacturer's production schedule. Lead time can vary from approximately 8-12 months.

2. Site work at 111 Old Mill Lane.

- a. The Site work at OML is being conducted to move the Portable LNG Operation further south into the property to reduce noise for abutters and provide a more efficient and safer layout of the equipment. The equipment will be oriented in a more efficient layout for operating, provide better access for first responders, and permit removal of any piece of equipment without breaking down and moving multiple units.
- b. The total cost of the site work is forecasted to be \$15.0 million.
- c. \$6.0 million of spending is forecasted for FY2025, with the remaining \$9.0 million in FY2026. Construction and sitework will be completed in phases to keep the site operational during the winter heating season.

Newport Navy Yard LNG

1. Newport Navy Yard LNG.

- a. The decommissioning of the Newport Navy Yard LNG facility is required to return the site to its prior conditions in accordance with the terms of the expiring lease.
- b. The total cost of the Newport Navy Yard decommissioning and restoration is forecasted to be \$1.1 million.
- c. The engineering costs to develop a scope for the decommissioning are \$280K for FY2024. The forecasted decommissioning and restoration costs are \$770K to be incurred in FY2025.

Division 1-38

Request:

Please state the basis for the Company's need for 10 hours of run time for the Cumberland Portables including in your response any legal and/or industry requirements/standards for the 10 hour period and the need for such additional time in view of the operating history of the Cumberland portable facilities.

Response:

The 10 hours of run time associated with the Cumberland LNG facility provides gas supplies to meet hourly demands during Design Day and near Design Day conditions. Specifically, this level of storage increases the overall reliability of the gas supply portfolio by mitigating the Company's reliance on same day or next day LNG refill and allows a more flexible LNG refill plan. This more flexible LNG refill plan allows the Company to better manage LNG refill and trucking logistics during Design Day conditions when most of the regional LDCs are similarly relying on their on-system LNG facilities and trucking firms for LNG refill. In addition, the 10 hours of run time allows the Company more time and flexibility to manage inclement weather and associated impacts on trucking logistics thus increasing the ability of the gas supply portfolio to meet demand during Design Day and near Design Day conditions.

Additionally, increasing Cumberland's storage capacity will provide some redundancy to Exeter LNG in the event of an operational issue. This is only effective when Cumberland has LNG onsite and is not already running at maximum capacity.

Division 1-39

Request:

Please explain the basis for budgeting “\$6.0 M for site upgrades” in the context that the expenditures are to be made “pending Rhode Island Energy Facility Siting Board (“EFSB”) approval, anticipated in Q4 FY 2024” (FY 2025 Gas ISR Plan Pages 43). Please include in your response, an update of the current status of the EFSB proceedings and an explanation of why the Company believes approval will be granted.

Response:

The proposed site upgrades at 111 Old Mill Lane, Portsmouth, Rhode Island are expected to take approximately nine months to construct; however, the work would not be able to be completed in a single construction season. Therefore, if approved, the site upgrades would be split into two construction seasons (two fiscal years). It is expected that approximately \$6.0 million would be spent during FY2025, between July and the fall of calendar 2024, after which the site improvements would end to allow for mobilization of the annual winter operation. Construction may have to end early to allow for the mobile LNG equipment to be mobilized in advance of the annual winter operation if the facility is needed to serve as the sole supply to Aquidneck Island during transmission pipeline outages tentatively scheduled for late Fall of calendar year 2024. The remainder of the site improvement work would then resume the following year (FY2026 or calendar year 2025) after the winter operation is demobilized.

The EFSB proceedings in Docket No. SB-2021-04 are currently underway. The public comment hearings and the final hearings are expected to be completed in early calendar year 2024 (Q4 of FY2024), which should be near in time to the Public Utilities Commission’s ruling regarding the FY2025 Gas ISR Plan. The public comment hearing is currently being coordinated and is scheduled tentatively for January 24, 2024. Once the hearings are completed, the EFSB will then take all material, testimony, and opinions submitted into consideration to render a decision to approve or deny the project. The Company hopes for project approval and has submitted evidence in RIPUC Docket No. 22-42-NG and EFSB Docket No. SB-2021-04 that the project is needed, is cost justified, and will not cause unacceptable harm to the environment and will enhance the socio-economic fabric of the state. The Company, however, does not automatically assume that the project will be approved. The Company therefore awaits a decision from the EFSB.

Division 1-40

Request:

If the EFSB approval is delayed and/or the Company's request for moving the facility further back into the property is denied, will the Company still plan on purchasing portable LNG equipment for the Old Mill Lane site? Please explain. If so, when will the equipment be purchased and when will it be placed into service?

Response:

The Company is waiting for the EFSB decision on the future operation of portable LNG equipment at the Old Mill Lane ("OML") site before purchasing any portable LNG equipment for use at OML. The Company sees value in using new and owned equipment over continuing to lease equipment. If the OML operation is approved by the EFSB, the Company will place an order with the manufacturer immediately afterwards to secure pricing and scheduling.

There are limited manufacturers of portable LNG equipment, and the Company has discussed production schedules with the manufacturer that is cost effective and produces the best equipment for the Company's customers. The two gas fired portable vaporizers and six LNG pumping storage queens will not be ordered, manufactured, delivered, and tested before the Winter 2024/2025 heating season in full. Without a downpayment, production slots in the manufacturer's schedule cannot be confirmed, but it is possible that half the order, one vaporizer and three queens can be completed, delivered, tested, and placed into service before the 2024/2025 heating season. The remaining equipment would be completed and placed into service in FY2026.

The Company must have the equipment placed into service or have a contract in place for the needed equipment before the start of the winter heating season. Given the advanced time required to secure equipment availability and to sign a contract for leasing, the Company may opt to sign a contract for some of the equipment currently used at Old Mill Lane (one vaporizer and two to four storage trailers), while using some of the newly purchased equipment (one vaporizer and two to three storage trailers). This will address two concerns at Old Mill Lane.

1. The quietest and most efficient equipment will be used at Old Mill Lane for consideration to the nearest neighbors.
2. Minimize cost to customers by not purchasing equipment and leasing similar equipment concurrently.

This strategy is not certain, and the Company will need more information before solidifying Winter 2024/2025 operations at OML.

Division 1-41

Request:

Please provide a construction schedule with cost estimates for the remaining work that needs to be done on the “Southern RI Gas Expansion Project.” Also, include the total overall cost for the entire project.

Response:

The Southern RI Gas Expansion Project is nearing completion with projects at two regulator stations remaining.

During FY2024 Company completed civil work and is purchasing materials for the Cranston Take Station Rebuild. In FY2025, take station gas piping will be taken out of service and removed, part of the building will be removed, and a building extension will be installed, new regulator runs with 3 layers of protection installed and the regulators and main will be sized appropriately to carry the Southern RI Growth load. The estimated cost in FY2025 is \$4.06 million.

In FY2025, the Company will undertake engineering activities for the design of the new regulator station. The estimated cost of this design work is \$0.50 million. Installation of a new regulator station in FY2026 or FY2027 is expected to cost \$1.27 million. Note an easement may be needed and could affect the timeframe.

The total estimated cost of the Southern RI Gas Expansion Project is currently \$113.23 million.

Division 1-42

Request:

Please explain how the Latent Knight and Cowesett regulator work (FY 2025 Gas ISR Plan Pages 46) is related to the Southern Rhode Island Gas Expansion Project category.

Response:

Latent Knight is a take station where Rhode Island Energy receives gas from Kinder Morgan. The inlet pressure at the take station is 975 PSIG and the outlet pressure is 200 PSIG. The 200 PSIG main feeds Rhode Island Energy regulator stations. The Cowesett regulator station reduces the gas pressure from 200 PSIG to 99 PSIG. The 99 PSIG main feeds other Regulator Stations and customers directly. This work was required to supply Southern Rhode Island with additional gas.

Division 1-43

Request:

Please explain the Company's proposal to include the Southern RI Gas Expansion Project category spend in the Reliability Categor(ies) of the Company's Gas FY 2025 ISR Plan, including in your explanation why the proposal is appropriate.

Response:

During the initial review and approval of the Southern RI Gas Expansion project in the FY2020 Gas ISR proceeding (Docket No. 4916), the Division and its consultant requested that the costs for the Southern RI Gas Expansion project costs be tracked separately from the Gas ISR Plan budget to ensure there was sufficient visibility of the overall project costs.

The primary component of project costs that the Division sought to track closely was main installation, which incurred significant costs between FY2020 and FY2022. The total cost of the main installation was \$97.18 million or approximately 86% of the \$113.23 million overall project costs.

Now that the Southern RI Gas Expansion main is installed, the associated main is part of the overall Rhode Island Gas Distribution System. The remaining work for the overall project is related to regulator station investments and those type of investments are typically categorized under the Reliability programs (unless the work is being completed as a Transmission Station Integrity project). The Company is prioritizing the Southern RI Gas Expansion regulator station work in concert with all of the other (non-Southern RI Gas Expansion) regulator station work across the entire Rhode Island Gas Distribution System.

The Company would continue tracking the Southern RI Gas Expansion project costs as separate budget line items in the Gas ISR (in order to maintain visibility), but the Company proposes to manage the remaining project costs in the "same bucket" of budget categories with other reliability categories, so that common work and budgets can be managed together in a fiscal year.

Division 1-44

Request:

Please provide Table 3 in the form of Table 1 with all of Table 1 categories.

Response:

Please see Attachment DIV 1-44 for Table 3 with details by category.

Attachment DIV 1-44 - Table 3 Detail						
The Narragansett Electric Company d/b/a Rhode Island Energy - RI Gas Capital Spending by Investment Categories - Detail FY 2019 through FY 2023 (\$000)						
Categories	FY19 Actuals	FY20 Actuals	FY21 Actuals	FY22 Actuals	FY23 Actuals	
NON-DISCRETIONARY						
Public Works						
<i>CSC/Public Works - Non-Reimbursable</i>	\$14,290	\$16,290	\$14,000	\$18,948	\$15,277	
<i>CSC/Public Works - Reimbursable</i>	\$540	\$1,042	\$693	\$3,903	\$2,068	
<i>CSC/Public Works - Reimbursements</i>	(\$1,250)	(\$809)	(\$1,695)	(\$595)	(\$3,936)	
Public Works Total	\$13,580	\$16,523	\$12,997	\$22,257	\$13,410	
Mandated Programs						
<i>Corrosion</i>	\$270	\$938	\$2,141	\$2,284	\$1,295	
<i>Purchase Meter (Replacement)</i>	\$4,150	\$5,125	\$5,129	\$3,265	\$5,466	
<i>Reactive Leaks (CI Joint Encapsulation/Service Replacement)</i>	\$11,400	\$9,457	\$7,751	\$9,006	\$7,311	
<i>Service Replacement (Reactive) - Non-Leaks/Other</i>	\$1,690	\$1,832	\$1,327	\$1,145	\$1,952	
<i>Main Replacement (Reactive) - Maintenance (incl Water Intrusion)</i>	\$1,260	\$1,478	\$1,119	\$1,550	\$1,427	
<i>Low Pressure System Elimination (Proactive)</i>	\$0	\$0	\$0	\$652	\$91	
<i>Pipeline Integrity IVP (Integrity Verification Program)</i>	\$6,100	\$180	\$0	\$0	\$0	
<i>Transmission Station Integrity</i>	\$0	\$0	\$43	\$257	\$262	
<i>Other Mandated (including Cross Bore Remediation)</i>	\$100	\$33	\$9	\$0	\$124	
Mandated Total	\$24,970	\$19,043	\$17,518	\$18,160	\$17,927	
Damage / Failure (Reactive)						
<i>Damage / Failure (Reactive)</i>	\$0	\$0	\$0	\$0	\$0	
NON-DISCRETIONARY TOTAL						
	\$38,550	\$35,566	\$30,516	\$40,417	\$31,337	
DISCRETIONARY						
Proactive Main Replacement						
<i>Main Replacement (Proactive) - Leak Prone Pipe</i>	\$52,630	\$58,032	\$60,896	\$72,261	\$84,673	
<i>Main Replacement (Proactive) - Large Diameter LPCI Program</i>		\$1,115	\$1,419	\$3,265	\$4,803	
<i>Atwells Avenue</i>		\$906	\$5,612	\$1,240	\$2,754	
Proactive Main Replacement Total	\$52,630	\$60,053	\$67,927	\$76,766	\$92,230	
Proactive Service Replacement						
Proactive Service Replacement Total	\$0	\$0	\$0	\$396	\$158	
Reliability						
<i>Gas System Control</i>	\$230	\$362	\$19	\$0	\$0	
<i>System Automation</i>	\$900	\$967	\$966	\$1,058	\$830	
<i>Heater Installation Program</i>	\$360	\$887	\$2,616	\$869	\$1,094	
<i>Wampanoag Trail & Tiverton GS - Heaters Replacement and Ownership Transfer</i>	\$0	\$0	\$0	\$1,281	\$10,437	
<i>Pressure Regulating Facilities</i>	\$3,990	\$1,516	\$4,345	\$7,510	\$4,972	
<i>Allens Ave Multi Station Rebuild</i>	\$1,610	\$8,311	\$9,664	\$4,522	\$951	
<i>Take Station Refurbishment</i>	\$340	\$186	\$411	\$722	\$1,063	
<i>Valve Installation/Replacement - Primary Valve Program & Aquidneck Island Low Pressure Valves</i>	\$0	\$1	\$156	\$47	\$31	
<i>Gas System Reliability</i>	\$310	\$475	\$556	\$413	\$296	
<i>I&R - Reactive</i>	\$1,170	\$1,187	\$1,546	\$2,099	\$2,052	
<i>Distribution Station Over Pressure Protection</i>	\$0	\$102	\$1,379	\$2,644	\$2,745	
<i>LNG</i>	\$650	\$560	\$2,638	\$4,920	\$16,229	
<i>Replace Pipe on Bridges</i>	\$0	\$697	(\$13)	\$155	\$206	
<i>Access Protection Remediation</i>	\$10	\$17	\$71	\$189	\$154	
<i>Tools & Equipment</i>	\$720	\$666	\$482	\$2,456	\$2,241	
Reliability Total	\$10,290	\$15,934	\$24,836	\$28,886	\$43,302	
SUBTOTAL DISCRETIONARY (Without Gas Expansion)						
	\$62,920	\$75,987	\$92,763	\$106,048	\$135,691	
Southern RI Gas Expansion Project						
<i>Pipeline</i>	\$2,390	\$40,179	\$40,568	\$13,531	\$516	
<i>Other Upgrades/Investments/Existing Facilities</i>	\$0	\$2,550	\$725	\$161	\$2	
<i>Regulator Station Investment</i>	\$0	\$0	\$462	\$1,260	\$3,541	
Southern RI Gas Expansion Project Total	\$2,390	\$42,729	\$41,755	\$14,952	\$4,058	
DISCRETIONARY TOTAL (With Gas Expansion)						
	\$65,310	\$118,716	\$134,518	\$121,000	\$139,749	
CAPITAL ISR TOTAL (Base Capital - Without Gas Expansion)						
	\$101,470	\$111,553	\$123,279	\$146,464	\$167,028	
CAPITAL ISR TOTAL (With Gas Expansion)						
Includes incremental paving associated with new RI Paving Law	\$103,860	\$154,282	\$165,034	\$161,416	\$171,086	
O&M						
	\$180	\$0	\$0	\$0	\$0	
Additional Capital Investments (Not included in the ISR during FY19-FY23)						
<i>Aquidneck Island Long Term Capacity Options</i>	\$0	\$0	\$0	\$461	\$8	
<i>LNG - Cumberland Tank Replacement</i>	\$0	\$0	\$17	\$141	\$53	

The Narragansett Electric Company
d/b/a Rhode Island Energy
In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-45

Request:

Please provide the Company's Gas ISR Plan Quarterly Report Update ending December 31, 2023 no later than February 15, 2023.

Response:

The Company will provide the above referenced report on February 15, 2024.

The Narragansett Electric Company
d/b/a Rhode Island Energy
In Re: Proposed FY 2025 Gas Infrastructure, Safety and Reliability Plan
Responses to the Division's First Set of Data Requests
Issued on November 16, 2023

Division 1-46

**DIVISION 1-46 WAS OMITTED IN THE NUMERICAL ORDERING OF
DIVISION SET 1 ISSUED ON NOVEMBER 16, 2023**

Division 1-47

**DIVISION 1-47 WAS OMITTED IN THE NUMERICAL ORDERING OF
DIVISION SET 1 ISSUED ON NOVEMBER 16, 2023**

Division 1-48
System Integrity Report

Request:

Please provide an updated inventory by decade of installation of leak prone main by material type including cast iron, ductile iron, wrought iron, bare steel and unprotected coated steel.

Response:

Please refer to Attachment DIV 1-48. This data is accurate as of January 1, 2023 and represents the same dataset which was used to prepare the 2022 System Integrity Report. The Company does have a subset of mains with unknown installation dates due to incomplete records. These are included as their own line item in the table.

Attachment DIV 1-48

Decade of Installation	Material				
	Cast/Wrought Iron	Ductile Iron	Bare Steel	Unprotected Coated Steel	Unknown
1850-1859	3.03	0.00	0.00	0.00	0.00
1860-1869	2.21	0.00	0.00	0.00	0.00
1870-1879	24.82	0.00	0.00	0.00	0.00
1880-1889	16.64	0.00	0.00	0.00	0.00
1890-1899	44.13	0.00	0.00	0.00	0.00
1900-1909	47.19	0.00	0.28	0.00	0.00
1910-1919	70.46	0.00	2.14	0.00	0.00
1920-1929	87.43	0.00	13.74	0.00	0.00
1930-1939	42.53	0.00	8.22	0.00	0.00
1940-1949	36.39	0.00	9.71	0.00	0.00
1950-1959	33.14	0.10	38.80	14.00	0.00
1960-1969	3.50	5.22	32.86	102.20	0.00
1970-1979	0.00	2.06	0.87	13.09	0.00
Unknown	178.66	4.92	34.16	5.85	0.02
Total	590.13	12.30	140.78	135.14	0.02

Division 1-49
System Integrity Report

Request:

Please provide a low/med/high risk ranking by material of all remaining leak prone main inventory to date by City/Town within the gas distribution system including cast iron, bare steel, unprotected coated steel and ductile iron mains.

Response:

Please refer to Attachment DIV 1-49.

The Company does not currently have priority scores calculated for its entire LPP inventory. The totals included here represent the portion of the inventory which has been analyzed and assigned a priority score to date as of November 27, 2023 (separated into low – scored 0 to 10, medium – scored 10 to 15, and high – scored 15 and above groupings).

Analyzed projects are tracked until they are abandoned, so in progress projects are included in Attachment DIV 1-49. In addition to this data, the total amount of leak-prone pipe by city/town separated by material has been included in the table. This portion of the table was compiled using the same dataset that was used to prepare the 2022 System Integrity Report, which is accurate as of January 1, 2023. Since January 1, 2023, the Company has abandoned an additional approximate 46 miles of leak-prone pipe. The level of data detail required to update the totals by city/town and material will not be available until data collection and verification is completed for the 2023 System Integrity Report. Please note, the Company has a subset of its mains for which the city/town is labeled as “Unknown” due to data quality issues. This subset is summarized in the last row of the table in Attachment DIV 1-49.

Attachment 1-49																				
City/Town	Material																			
	Cast/Wrought Iron				Ductile Iron				Bare Steel				Unprotected Coated Steel				Unknown			
	Low	Medium	High	Total	Low	Medium	High	Total	Low	Medium	High	Total	Low	Medium	High	Total	Low	Medium	High	Total
Barrington	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.48	0.99	0.00	0.00	0.99	0.00	0.00	0.00	0.00
Bristol	0.62	1.82	0.70	7.34	0.00	0.00	0.44	0.58	0.21	0.16	0.52	1.18	0.77	0.60	0.21	1.76	0.00	0.00	0.00	0.00
Burrillville	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Central Falls	6.58	3.55	0.00	16.64	0.12	0.02	0.00	0.16	0.42	0.40	0.00	2.31	0.39	0.00	0.00	0.98	0.00	0.00	0.00	0.00
Coventry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.68	5.78	0.00	0.00	9.47	0.00	0.00	0.00	0.00
Cranston	24.73	11.99	8.42	84.78	0.00	0.00	0.00	0.00	3.89	2.36	0.51	13.67	0.65	2.62	0.29	9.30	0.00	0.00	0.00	0.00
Cumberland	1.50	0.88	0.25	10.21	0.15	0.02	0.00	1.02	3.04	1.54	0.19	13.96	0.22	0.00	0.00	1.19	0.00	0.00	0.00	0.00
East Greenwich	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.59	1.26	0.00	0.00	5.08	0.00	0.00	0.00	0.00
East Providence	8.02	3.94	4.22	33.73	0.00	0.00	0.00	0.00	2.41	0.40	0.45	4.88	1.42	0.43	0.33	6.07	0.00	0.00	0.00	0.00
Exeter	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00
Hopkinton	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Johnston	8.54	0.66	1.25	15.76	0.00	0.00	0.00	0.00	3.86	1.24	0.40	7.23	4.42	0.16	1.12	8.50	0.00	0.00	0.00	0.00
Lincoln	1.29	1.92	0.00	9.18	0.06	1.03	0.00	2.11	1.25	0.12	0.00	2.33	0.16	0.00	0.00	1.06	0.00	0.00	0.00	0.00
Middletown	0.63	0.41	0.00	1.23	0.00	0.00	0.00	0.00	0.21	0.04	0.00	0.43	0.19	0.00	0.00	2.65	0.00	0.00	0.00	0.00
Narragansett	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.52	0.00	0.00	0.00	0.00
Newport	3.10	0.86	1.22	11.62	0.00	0.00	0.00	0.00	0.23	0.19	0.15	2.00	0.63	0.66	0.01	3.75	0.00	0.00	0.00	0.00
North Kingstown	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.35	2.23	0.00	0.00	6.14	0.00	0.00	0.00	0.00
North Providence	6.13	3.78	1.90	24.50	1.38	0.00	0.00	1.90	2.92	1.82	0.42	11.29	0.45	0.99	0.26	7.46	0.00	0.00	0.00	0.01
North Smithfield	0.00	0.00	0.78	2.40	0.00	0.00	0.07	0.21	1.47	0.00	0.34	4.19	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00
Pawtucket	12.14	11.76	2.86	119.97	0.09	0.29	0.75	5.00	2.29	1.44	0.71	15.49	0.03	0.10	0.00	0.81	0.00	0.00	0.00	0.00
Portsmouth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00
Providence	23.96	17.24	44.26	190.18	0.00	0.00	0.00	0.00	0.61	1.16	1.69	9.90	1.68	0.22	1.55	11.49	0.00	0.00	0.00	0.01
Scituate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Smithfield	0.00	0.00	0.00	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.57	1.03	0.00	0.32	3.93	0.00	0.00	0.00	0.00
South Kingstown	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.10	0.00	0.00	8.70	0.00	0.00	0.00	0.00
Tiverton	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren	0.25	0.70	0.00	1.04	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.32	0.00	0.00	0.00	0.64	0.00	0.00	0.00	0.00
Warwick	0.55	2.90	4.18	10.86	0.00	0.00	0.00	0.00	15.84	0.44	1.57	33.27	4.81	0.08	0.16	23.90	0.00	0.00	0.00	0.00
West Greenwich	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
West Warwick	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.79	4.02	0.00	0.00	16.94	0.00	0.00	0.00	0.00
Westerly	1.38	1.24	0.00	2.62	0.00	0.00	0.00	0.00	2.75	1.21	0.00	4.34	1.17	0.00	0.00	1.17	0.00	0.00	0.00	0.00
Woonsocket	8.95	9.32	2.33	35.34	0.32	0.02	0.00	0.96	4.21	1.42	0.11	10.09	1.82	0.00	0.00	2.04	0.00	0.00	0.00	0.00
Unknown	0.00	0.00	0.00	10.50	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.43	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00
Total	108.37	72.97	72.37	590.12	2.12	1.38	1.26	12.30	47.90	13.94	7.16	140.78	39.74	5.86	4.25	135.14	0.00	0.00	0.00	0.02

Division 1-50
System Integrity Report

Request:

Provide an updated inventory by decade of installation of all leak-prone services by material type including bare steel, unprotected coated steel, copper and cast iron.

Response:

Please refer to Attachment 1-50.

This data is accurate as of January 1, 2023 and represents the same dataset which was used to prepare the 2022 System Integrity Report. The Company does have a subset of services with unknown installation dates due to incomplete records. These are included as their own line item in the table.

Attachment 1-50					
Decade of Installation	Material				
	Cast/Wrought Iron	Copper	Bare Steel	Unprotected Coated Steel	Unknown
1880-1889	0	0	1	0	0
1890-1899	0	0	7	0	0
1900-1909	1	0	70	0	0
1910-1919	1	0	2,881	0	0
1920-1929	7	0	8,279	0	0
1930-1939	4	0	4,289	0	0
1940-1949	2	0	4,427	0	0
1950-1959	3	2	5,966	39	0
1960-1969	0	7	5,325	4,400	0
1970-1979	0	2	756	1,130	0
Unknown	7	38	4,386	254	916
Total	25	49	36,387	5,823	916

Division 1-51
System Integrity Report

Request:

Please provide an overall risk ranking for each material type of leak prone services and explain the reason, if any, why one material type may have a higher risk score than another. Is the age of the service also considered when identifying risk? Please explain.

Response:

As a part of its Gas Distribution Integrity Management Program (“DIMP”) program, the Company assesses the risk to its service inventory using subsets of the entire inventory grouped together by various combinations of material type, pressure, inside or outside meter set, and leak cause (For example, Bare Steel/Low Pressure/Outside Set/Corrosion would be one of the various subsets.).

A risk score is calculated for each subset of services based on a formula using leak rates for each material (leak repairs on a given material per number of services of that material), input from the Company’s Subject Matter Experts , and factors which vary based on variables such as expected failure mode (from unlikely ignition to catastrophic failure) and potential consequences (including but not limited to Regulatory and Reputation, Customer Interruption, and Health and Safety). Age of the service is not a factor in the risk scoring of services.

Of the leak-prone service materials in the Company’s gas distribution system, subsets of copper services saw the highest risk scores, followed next by bare steel, unprotected coated steel, and finally cast iron.

Division 1-52
System Integrity Report

Request:

Does the Company consider any group (material type or age) of leak prone services high risk? Please explain.

Response:

The Company considers copper services and high pressure unprotected bare steel services to be high risk.

As mentioned in the Company's response to data request Division 1-51, a significant factor in how services are risk scored is the leak repair rate on the service material.

The inventory of copper services in Rhode Island is very small, yet leaks are still being seen resulting in a high leak rate, which in turn elevates the risk score. In response, the Company has completed several copper service replacements in recent years, mainly in Cumberland. The remaining copper services in the system are mostly located in Warren, within streets which have been under paving moratorium but should be available to be worked within the next few years.

Regarding high pressure unprotected bare steel services, and as explained in the Company's response to data request Division 1-51, subsets of main are risk scored in similar fashion to subsets of services based on material, diameter, and pressure. Over the past several years, high pressure unprotected bare steel services have been assigned a risk score higher than any subset of mains (while not as highly scored as copper services). These services are not being specifically targeted as a part of the service replacement program. However, many leak-prone services are replaced yearly as a part of the Proactive Main Replacement program, as any leak-prone service which falls within a main relay is replaced with plastic at the time of the relay.

Division 1-53
System Integrity Report

Request:

The Company estimates that there are approximately 173 miles of plastic main and 12,925 plastic services installed prior to 1985 (SIR Bates page 81 and 109). Please explain why these are classified separately from post 1985 plastic mains and services and what risks are associated with pre-1985 plastic mains and services.

Response:

The Company considers Aldyl-A plastic, the use of which was discontinued in 1985, to be leak-prone. Company records, however, are unable to discern between different types of plastic mains installed prior to the discontinuation of Aldyl-A. As such, the Company does not know the exact amount of Aldyl-A plastic present within its system. Strides have been made recently to better discern what portion of the 173 miles of plastic installed prior to 1985 is Aldyl-A, as well as determining the locations of these main segments within the Company's gas distribution system. However, in the absence of an exact number, the decision was made to highlight the entire population of plastic mains installed prior to 1985. While entire inventory of pre-1985 plastic mains and services does not pose a risk concern, the Company has highlighted the vintage of these mains and services to provide awareness of the maximum extent of this issue. The 1985 cutoff was selected to capture any mains which could possibly be Aldyl-A.

The risk associated with Aldyl-A pipe is that the material is brittle and prone to cracking. The Company has executed targeted main replacement projects in the past in areas where leaks of this nature have occurred. When segments of pre-1985 plastic are present in areas where the Company is undertaking main replacement projects targeting other materials, the pre-1985 plastic segments are typically bundled into the project scope. In addition, if Aldyl-A is ever discovered at tie-in locations in the field, project scopes are extended to capture the additional leak-prone pipe footage.

Division 1-54
System Integrity Report

Request:

The Company estimates that there are approximately 324 miles of pre-DOT protected coated steel installed prior to 8/1/1971 (SIR Bates page 81). Please explain why these mains are classified separately from post 8/1/1971 protected coated steel mains and what risks are associated with pre-DOT protected coated steel mains installed prior to 8/1/1971.

Response:

All underground steel gas distribution mains which were installed after July 31, 1971 are required by federal regulations (49 CFR 192, Subpart I) to be installed with a protective external coating as well as have a cathodic protection system in place to protect them. The Company has a significant population of cathodically protected, coated steel mains which were installed prior to this federal regulation. This is the subset of mains being highlighted here.

Although these mains are classified as coated and protected, in many cases the coating which was used prior to 1971 is not of the same quality as the coating which has been used since. Without complete and proper coating, cathodic protection systems do not perform effectively. This lack of effectiveness is often observed by the Company's Corrosion Control team when performing required routine testing on the cathodic protections of these pre-code coated steel mains. When these issues are present (inadequate and/or inferior coating and subsequent low cathodic protection readings), this subset of mains is subject to the same corrosion related leak and degradation risks as bare and unprotected coated steel mains.

While the Company does not yet consider this subset of mains to be part of its leak-prone pipe inventory, given the noted issues with these systems and the potential need for action in the future, the Company has highlighted the difference between its pre-code and post-code protected coated steel inventories.

Division 1-55
System Integrity Report

Request:

The SIR reveals that there were 60 service leaks on plastic services excluding excavation damage (SIR Bates page 121). Please provide a list identifying the cause of each leak and the type of plastic material (*i.e.*, pre 1985 plastic or post 1985 plastic) associated with each leak.

Response:

Please refer to Attachment DIV 1-55.

Attachment DIV 1-55			
Leak ID	Leak Cause	Type of Plastic	Install Year
1477269	Leaking at service tee connection	Polybutylene	1977
1478219	Leaking at service tee connection	Polybutylene	1978
1479099	Material failure of the service tee	Polyethylene	1981
5005570	Amp fitting leaking directly after service tee	Polyethylene	1980
5008830	Cap on service tee was loose - tightened	Polyethylene	2021
5026391	Leaking service valve	Polyethylene	2001
5026935	Leaking coupling at plastic to steel transition - service is partial steel/partial bare steel	Polyethylene	1986
5026941	Leaking coupling	Polyethylene	2015
5027204	Tightened service tee cap	Polyethylene	2022
5027781	Incorrectly marked as "Other Outside Force Damage". Service was damaged by a wooden stake - Third party damage.	Polyethylene	2021
5028081	Leaking mechanical couplings (2)	Polyethylene	1986
5028315	Leaking mechanical coupling	Polyethylene	1980
5028410	Leaking service tee	Polybutylene	1979
5028891	Amp fitting leaking on service tee	Polybutylene	1977
5029081	Leaking on service riser	Polyethylene	1981
5029106	Leaking at service tee	Polyethylene	2020
5029334	Service valve leaking	Polyethylene	2021
5029339	Tightened coupling on service riser	Polyethylene	1986
5029776	Top of service tee leaking	Polyethylene	1984
5030013	Service riser leaking	Polyethylene	1999
5030665	Mechanical service tee pulled off of 2" PE service	Polyethylene	1999
5031053	2" stab coupling leaking	Polyethylene	2009
5031153	Service riser leaking	Polyethylene	1979
5031307	Amp fitting leaking near service tee	Polyethylene	2019
5031407	Service tee, compression coupling, and amp fitting near service tee leaking	Polyethylene	1979
5031541	Riser coupling leaking	Polyethylene	1985
5031912	Service riser leaking	Polyethylene	1995
5032424	Riser and amp fitting leaking	Polybutylene	1977
5033245	Riser rotted	Polyethylene	1994
5033839	End cap leaking	Polyethylene	2012
5033968	Riser rotted	Polyethylene	1995
5034716	Riser cock leaking	Polyethylene	1986
5039977	Riser leaking	Polyethylene	2004
5040597	Riser leaking	Polyethylene	1981
5041750	Leaking riser coupling	Polyethylene	1993
5043313	Riser cock leaking	Polyethylene	1993

Attachment DIV 1-55			
Leak ID	Leak Cause	Type of Plastic	Install Year
5043957	Actually a Third Part Damage leak - improperly classified as equipment failure	Polyethylene	2019
5044127	Leaking amp fitting	Polyethylene	1978
5044525	Riser cock leaking	Polyethylene	2012
5045764	Replaced curb valve	Polyethylene	1977
5050055	Leaking stab coupling	Polyethylene	1994
5051238	Riser leaking	Polyethylene	1992
5055308	Coupling leaking	Polyethylene	2014
5055642	Tightened riser cock	Polyethylene	2013
5056024	Cap from retired service leaking	Polyethylene	2005
5056219	Service valve leaking	Polyethylene	1980
5056410	Leaking riser	Polyethylene	2002
5056411	Service tee leaking	Polybutylene	Unknown
5084198	Service valve leaking	Polyethylene	1984
5085824	Leaking riser	Polyethylene	1981
5092282	End cap on abandoned service leaking - improper install	Polyethylene	1989
5093490	Service valve leaking	Polyethylene	2017
5094230	Coupling leaking	Polybutylene	1977
5094477	Coupling leaking	Polybutylene	1977
5094481	Riser leaking	Polyethylene	1984
5094851	Riser leaking	Polyethylene	1993
5094878	Riser leaking	Polyethylene	1975
5095840	Amp fitting leaking on riser	Polyethylene	1980
5098951	Riser leaking	Polyethylene	1986
5102937	Service valve leaking	Polyethylene	1991

Division 1-56
System Integrity Report

Request:

The SIR reveals that there were 17 main leaks on plastic mains excluding excavation damage (SIR Bates page 90). Please provide a list identifying the cause of each leak and the type of plastic material (*i.e.*, pre 1985 plastic or post 1985 plastic) associated with each leak.

Response:

Please refer to Attachment DIV 1-56.

Attachment DIV 1-56			
Leak ID	Leak Cause	Type of Plastic	Install Year
1479315	Dresser coupling leaking - tightened bolts	Polyethylene	1986
2102474	Leaking purge riser	Polyethylene	2014
5027677	Corroded bolts on dresser coupling connecting PE to coated steel	Polyethylene	1985
5028171	Tightened bolts on dresser coupling connecting PE to cast iron	Polyethylene	2022
5028396	Leaking blowoff - amp style tee, cut off and capped	Polyethylene	1995
5028891	Dress coupling failed - 4" PE pulled out at coated steel/plastic transition	Polyethylene	1987
5029428	Tightened bolts on CI to PE dresser	Polyethylene	2019
5029532	Corroded bolts on mechanical dresser coupling	Polyethylene	1997
5030655	Leaking amp fitting	Polybutylene	1977
5033845	Split in tee	Polyethylene	1984
5039976	Leak actually an Excavation Damage. Incorrectly marked by crew's as "Operator Error". Was a First Party Damage excavation leak - hit main.	Polyethylene	1995
5044510	Loose cap on service tee - tightened	Polyethylene	2022
5090292	Leaking tee, cut off and end capped	Polyethylene	1982
5092563	Material Failure	Polybutylene	1977
5093409	Rock impingement - split on bottom of main	Polyethylene	1980
5100841	Leak actually on bare steel drip at end of PE main	Polyethylene	1982
5105937	Butt fusion failure	Polyethylene	1988