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Project Approval Form

Project Title: Repl Net Xfmr [redacted]	Project Number: CD02351
Date Prepared: 08/19/2024	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** NETWORK XFMR + PROTECTOR REPL
Project Initiator: [redacted]	**Project Type:** Specific
Initiating Organization: Distribution	**Capital Investment part of original Op Plan:** No
Project Manager: [redacted]	**Emergency Related Request?** Yes
Project Sponsor: [redacted]	**Facility Type** (check all that apply): ☐ PTF ☐ non-PTF ☒ Distribution ☐ N/A (General Plant)
Required in service date: 10/1/2024	
Total Capital Request: $387.5K	**Authorization Type:** Full Funding

1. Executive Summary

Full funding is being requested for this project at a cost of $387.5K which is 126.4% of the partial funding capital estimate of $306.6K. This project was originally approved in February 2024. There is no scope change on the project. The variance between the full funding and partial funding estimate is due to an underestimation of the direct costs, outside services (due to contractor costs repairing the vault) and contingency costs:

- The direct costs reflected in the partial funding estimate were for $178.6K, while the full funding estimate totaled to $221.2K, for an increase of $42.6K.
    - Outside Services was the main driver in the increase in cost, with the partial funding estimate initially at $35.6K, while the full funding estimate came in at $114.3K, for an increase of $78.7K. The driver for the outside services cost is based on the bid from the civil contractor to repair vault 394. This work included rebuilding the walls, manufacturing a new vault top and restoring the decorative bricks once the vault top was replaced.
- The Contingency on the project was $35.2K for the full funding estimate versus $1.2k for the partial estimate, which is a $34K increase. This was due to how the PAF Calculator develops the table.
- The cost increase in these two areas were offset by a decrease in internal labor. Internal labor in the partial funding estimate was for $103K versus $45.8K for the full funding estimate, for a total decrease of $57.2K.

These cost elements combined with the indirect costs are the sources of the total overage.

The original project was presented follows:

This project is being established for the replacement of the network transformer & protector located in [redacted] This network unit requires replacement since it failed inspection during the recent Network Transformer Inspection on 10/12/2023. As a result of a visual inspection of the vault that the transformer is located in, it has been determined that the vault itself will require extensive repair or possible replacement. A follow-up evaluation will be performed by Civil Engineering to determine the extent of vault reparations needed.

- Partial Funding Authorization Requested: $306.6K
- Project Location:
  - Division: Western
  - District: Waterbury AWC
  - Town: Waterbury

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	2024	Total
Direct Capital Costs		
Internal Labor and Construction Equipment	14.2	14.2
Outside Services	114.3	114.3
Materials	25.9	25.9
Removals	31.6	31.6
Risk and Contingency	35.2	35.2
Other	0.0	0.0
Subtotal – Direct Costs	**221.2**	**221.2**
Indirect Capital Costs		
Indirect/Overheads (including benefits)	166.3	166.3
Capitalized interest or AFUDC, if any	0.0	0.0
Subtotal – Indirect Costs	**166.3**	**166.3**
Total Gross Capital Costs	**387.5**	**387.5**
Customer Contribution	0.0	0.0
Total Net Capital Project Costs	**387.5**	**387.5**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

[redacted] was installed in 1996. [redacted]

b. Project Need

The network transformer in [redacted] requires replacement as a result of failing inspection during the 2023 network transformer inspection. The vault itself also has to be replaced as a result of a follow-up inspection.

c. Project Scope

[redacted]

4. Alternatives Considered

No alternatives considered.

5. Project Schedule

Add any additional milestones that are pertinent to the project.

Milestone/Phase Name	Estimated Date
Partial Approval	February 2024
100% Detailed Engineering Completion	March 2024
Construction Start	April 2024
In Service Date	October 2024

6. Regulatory Decisions

N/A

7. Codes and Standards

N/A

8. Risk and Contingencies

Contingencies:

Risk Mitigation:

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2024	Low	Included contingency costs in the funding request. Perform detailed Field Analysis and walk down in project development to avoid potential issues.
Customer Permission / Siting Council / Municipal approvals	2024	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach.
Internal construction resources not available to perform the work.	2024	Low	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Internal engineering resources not available to perform the work.	2024	Low	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Materials Shortage or long lead times	2024	Low	Pre-order long lead time material; minimize the use of non-standard and non-stocked material.
Storm delays	2024	Low	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2024	Medium	Schedule work to minimize system abnormal time. Install temporary bypasses/equipment if system will be abnormal for extended periods.

Technological risks involving integration of new technology	2024	Low	Before use of new technology ensure support of standards and manufacturer. Schedule project to accommodate for extra time or ensure new technology is not on the critical path.
Wetlands / Environmentally sensitive area	2024	Low	Use of mats and specialty equipment, only work during certain times of the year.

9. References

N/A

10. Attachments (One Line Diagrams, Images, etc.)

Attachment	Included in Submittal?
A. Partial Funding PAF Form	*YES*
B. Cost Estimate	*YES*
C. Geographic Map	*YES*
D. Vault 394 Inspection Email	*YES*

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Project Approval Form

Attachment A: Partial Funding PAF Form

Project Title: Repl Net Xfmr Vault 394 Wtby	Project Number: CD02351
Date Prepared: 02/16/2024	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** NETWORK XFMR + PROTECTOR REPL
Project Initiator: [redacted]	**Project Type:** Specific
Initiating Organization: Distribution	**Capital Investment part of original Op Plan:** No
Project Manager: [redacted]	**Emergency Related Request?** Yes
Project Sponsor: [redacted]	**Facility Type** (check all that apply)**:** ☐ PTF ☐ non-PTF ☒ Distribution ☐ N/A (General Plant)
Required in service date: 10/1/2024	
Total Capital Request: $306.6K	**Authorization Type:** Partial Funding

1. Executive Summary

This project is being established for the replacement of the network transformer & protector located in [redacted] A follow-up evaluation will be performed by Civil Engineering to determine the extent of vault reparations needed.

- Partial Funding Authorization Requested: $306.6K
- Project Location:
  - Division: Western
  - District: Waterbury AWC
  - Town: Waterbury

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	Year 2024	Year 2025	Year 2026+	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	59.7	0.0	0.0	59.7
Outside Services	35.6	0.0	0.0	35.6
Materials	38.9	0.0	0.0	38.9
Removals	43.3	0.0	0.0	43.3
Risk and Contingency	1.2	0.0	0.0	1.2
Other	0.0	0.0	0.0	0.0
Subtotal – Direct Costs	**178.6**	**0.0**	**0.0**	**178.6**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	126.8	0.0	0.0	126.8
Capitalized interest or AFUDC, if any	1.2	0.0	0.0	1.2
Subtotal – Indirect Costs	**128.0**	**0.0**	**0.0**	**128.0**
Total Gross Capital Costs	**306.6**	**0.0**	**0.0**	**306.6**
Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Total Net Capital Project Costs	**306.6**	**0.0**	**0.0**	**306.6**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

[redacted] A follow-up inspection for constructability review indicated that the vault itself has to be replaced as well.

b. Project Need

[redacted]

c. Project Scope

- [redacted]
- [redacted]
- [redacted]

4. Alternatives Considered

Due to the nature of this work, there are no alternatives to this project.

5. Project Schedule

Milestone/Phase Name	Estimated Date
Partial Approval	February 2024
100% Detailed Engineering Completion	March 2024
Fully Funded	March 2024
Construction Start	April 2024
In Service Date	October 2024

6. Regulatory Decisions

- N/A

7. Codes and Standards

- N/A

8. Risk and Contingencies

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2024	Low	Included contingency costs in the funding request. Perform detailed Field Analysis and walk down in project development to avoid potential issues.
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Wetlands / Environmentally sensitive area	2024	Low	Use of mats and specialty equipment, only work during certain times of the year.

9. References

References
1. None

10. Attachments (One Line Diagrams, Images, etc.)

Attachment	Included in Submittal?
B. Cost Estimate	*YES*
C. Geographic Map	*YES*
D. Vault 394 Inspection Email	*YES*

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Project Approval Form

Attachment B – Cost Estimate

Work Classification

Category: Line

Type: REL1

Type Desc: NETWORK XFMR + PROTECTOR REPL

Work Type:

Ownership / Management

AWC: Waterbury

Statewide: No

Owner: [redacted]

Manager: [redacted]

Project Information

Status: Draft

SPS #:

AIS Score:

Associated Projects:

Assignment ID:

Patrol Find ID:

Budget Summary - Preferred Option

Repl Net Xfmr vault 384 Wtby

2024

ID	Title	Status	Rev #	Contingency	Expenditure Amount	Net Estimate
1	[redacted] Repl Net Xfmr	Prelim	0	20%	$320,798	$320,798
				2024 Total:	**$320,798**	**$320,798**
				Total Project:	**$320,798**	**$320,798**

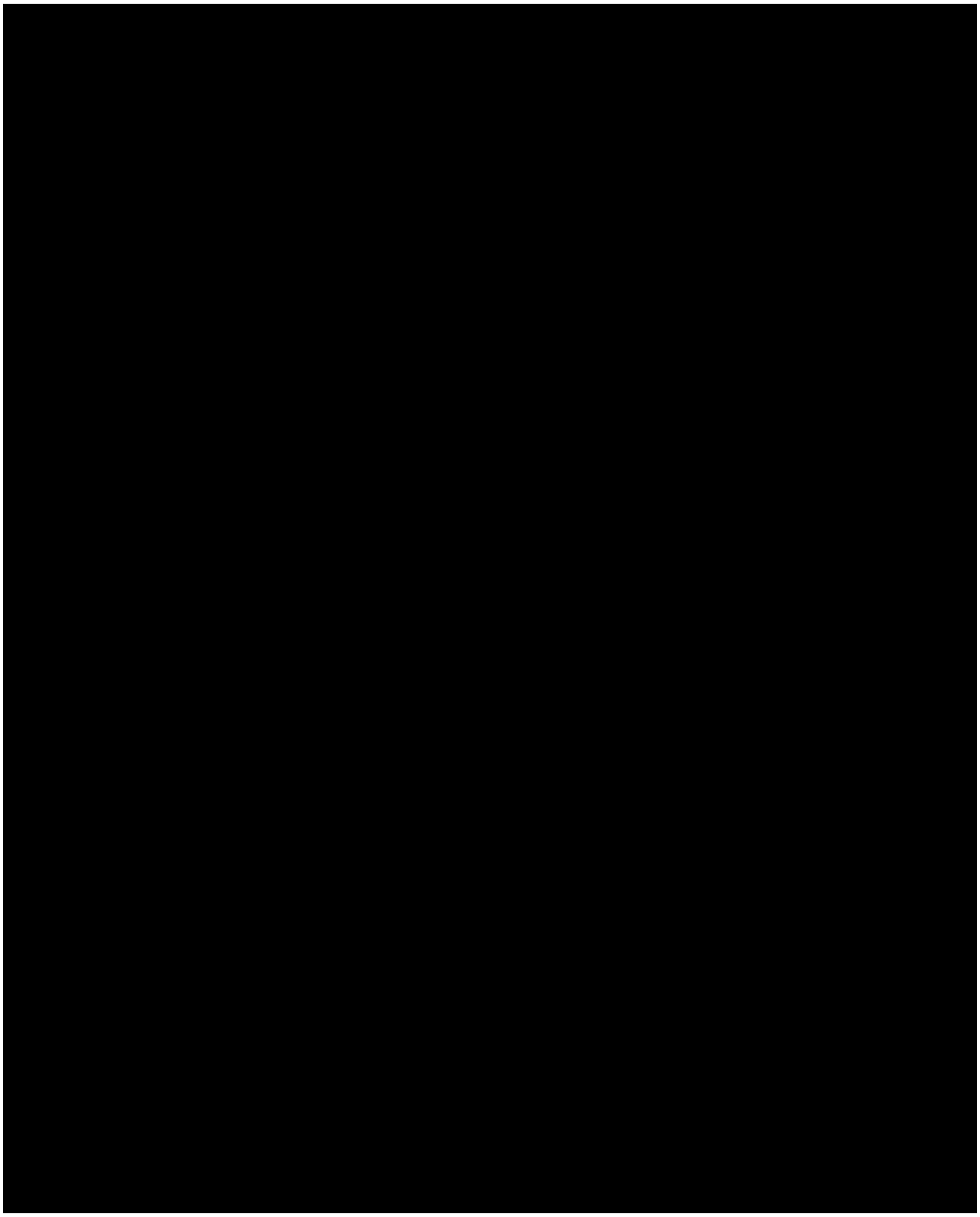
Design Alternative CD02351-01

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	20.00%
SubTotal:	$267,332
Contingency Amount:	$53,466
Estimate:	$320,798
Reimbursement:	$0
Net Amount:	**$320,798**
Description:	

Item Description	CU	$ / Per	Qty	Amount
SWITCHING OH/DB/UG - SWITCHING Network	23-ALL15	[redacted]		$18,263.44
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	23-ALL18			$2,000.00
ENCLOSURE UG - Network Vault or Switch Vault	23-UG144			$193,008.40
XF UG - Network XF Item # 534528	23-UG134			$53,560.00
OTHER OTHER Pump & Clean vault	23-ALL14			$500.00

Attachment C – Project Map



Attachment D – Vault 394 Inspection Email

[redacted]

From: [redacted]
Sent: Friday, October 13, 2023 9:05 AM
To: [redacted]
Cc: [redacted]
Subject: URGENT MATTER THAT NEEDS ATTEN[redacted]

Importance: High

Follow Up Flag: Follow up
Flag Status: Flagged

[redacted]

Please see [redacted] comments below [redacted] Please let us know how you would like to proceed as we will be at stand still with any switching that involves this unit.

Thanks

[redacted]

EVERSOURCE
Manager
Electric Field Operations
250 FRIEGHT STREET
WATERBURY CT
[redacted]

From: [redacted]
Sent: Thursday, October 12, 2023 8:53 PM
To: [redacted]
Cc: [redacted]
Subject: Vault 394/11W43

EVERSOURCE IT NOTICE – EXTERNAL EMAIL SENDER ** Don't be quick to click! ******

Do not click on links or attachments if sender is unknown or if the email is unexpected from someone you know, and never provide a user ID or password. Report suspicious emails by selecting 'Report Phish' or forwarding to SPAMFEEDBACK@EVERSOURCE.COM for analysis by our cyber security team.

Hello [redacted]

[redacted]