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Project Approval Form

Project Title: Back up for Upper Pattagansett Road	Project Number: CD02063
Date Prepared: 07/11/2024	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** RELIABILITY IMPROVE SPEC PROJ
Project Initiator: [redacted]	**Project Type:** Specific
Initiating Organization: Distribution	**Capital Investment part of original Op Plan:** Yes
Project Manager: [redacted]	**Emergency Related Request?** No
Project Sponsor: [redacted]	**Facility Type** (check all that apply)**:** ☐ PTF ☐ non-PTF ☒ Distribution ☐ N/A (General Plant)
Required in service date: 12/31/24	
Total Capital Request: $814.6K	**Authorization Type:** Full Funding

1. Executive Summary

[redacted]

[redacted]

7-18-24 – Full Funding request, change of scope: This Full Funding PAF includes a change of scope to relocate the stepdown transformer downstream to a point that will alleviate the contingency overload instead of the original job scope that called for relocating the stepdown downstream that included eliminating five step-up transformers. The Partial Funding estimate for the entire project as originally designed is $831K, approved on 8/31/22. Three workorders were written for the entire project as

designed, only the first workorder will be constructed for this change of scope. ACT for this first workorder is $814.6K.

This project is scheduled to be completed by December 31, 2024.

2. Project Cost Summary *(for first workorder only)*

Note: Dollar values are in thousands.

Capital Costs	Year 2024	Year 2025	Year 2026	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	92.5	0.0	0.0	92.5
Outside Services	247.5	0.0	0.0	247.5
Materials	29.0	0.0	0.0	29.0
Removals	26.7	0.0	0.0	26.7
Risk and Contingency	56.8	0.0	0.0	56.8
Other	0.0	0.0	0.0	0.0
Subtotal – Direct Costs	**452.5**	**0.0**	**0.0**	**452.5**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	362.1	0.0	0.0	362.1
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal – Indirect Costs	**362.1**	**0.0**	**0.0**	**362.1**
Total Gross Capital Costs	**814.6**	**0.0**	**0.0**	**814.6**
Customer Contribution	0.0	0.0	0.0	0.0
Total Net Capital Project Costs	**814.6**	**0.0**	**0.0**	**814.6**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

[redacted]

b. Project Need

- [redacted]

c. Project Scope

- [redacted]
- Tree trimming.

4. Alternatives Considered

1) [redacted]. **However, to resolve the issue of the overloaded step-down transformers, this option is no longer preferred due to excess cost.**

2) [redacted]

3) [redacted]. **Note: This is the new preferred option because it resolves the overload issue for the least amount of money.**

Project Option Comparison

Design Criteria	Option		
	Option 1	Option 2	Option 3
[redacted]			
Authorization Type	Partial	Partial	Full
Capital Cost	$786.4K	$716.3K	$814.6K
Expense Cost	$44.6K	$40.7K	$46.4K
Total Cost	$831K	$757K	$861K
Preferred option			X

5. Project Schedule

Add any additional milestones that are pertinent to the project

Milestone/Phase Name	Estimated Date
Partial Approval	8/31/22
100% Detailed Engineering Completion	6/30/23
Fully Funded	7/18/24
Construction Start	3/1/24
In Service Date	12/31/24

6. Regulatory Decisions

7. Codes and Standards

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.	2023	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.	2023	Low	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Materials Shortage or long lead times	2024	Medium	Pre-order long lead time material; minimize the use of non-standard and non-stocked material.
Storm delays	2024	Medium	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2024	Low	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

References

1.
2.
3.
4.
5.

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

Attachment	Included in Submittal?
A. Cost Estimate	*YES*
B. Geographic Map	*YES*
C. Load Sheet	*YES*

Attachment A – Cost Estimate of Preferred Option (Change of Scope)

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Specific Project Proposal - Project #: CD02063

Backup for Upper Pattagansett Road,

Project Option Summary

ID	Description	Segments	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)	Prfrd
O2	Relocate step-down past Kensington Dr, convert, reconductor	3	$779,005	$0	100%	$45.21	$23.89	☐

Segments

ID	Title	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)
1	Back up Upper Pattagansett Road, East Ly	$831,385			$54.27	$28.67
2	Back-up Upper Patagansett Covert 4 step	$756,620			$0.00	$0.00
3	Convert Upper Patagansett remove 2 step	$779,005			$45.20	$23.88
4	Reconductor and convert P-267	$83,214			$0.00	$0.00

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Specific Project Proposal - Project #: CD02063

Backup for Upper Pattagansett Road,

Design Alternative CD02063-03

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$608,598
Contingency Amount:	$170,407
Estimate:	$779,005
Reimbursement:	$0
Net Amount:	**$779,005**
Description:	

Item Description	CU	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17	$3,509.60
TRAFFIC OH/DB/UG - Traffic Control - Flagger	16-ALL19	$60,000.00
SECTIONALIZE OH - Cutouts or Arresters - 1ph	16-OH19	$13,712.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge)	16-OH25	$165,600.00
OH WIRE OH - Reconductor Open Wire Secondary w/ Triplex	16-OH30	$25,600.00
XF OH - OH XF - 1ph	16-OH45	$21,096.00
EQUIPMENT OH - Conversion Prep Work - 1ph	16-OH56	$32,136.00
POLE OH - POLE - 1ph (CL&P custodian) 31 poles need replacing per Wilkins	16-OH13	$46,144.00
TREE OH - Tree Trimming acual trim estimate is $233,000	23-OH61	$234,000.00

Asset & Investment Management System 7/16/2024 Page 11 of 14

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Specific Project Proposal - Project #: CD02063

Backup for Upper Pattagansett Road,

Design Alternative				CD02063-03
XF OH - Stepdown - 1ph - on POLE P-257	16-OH49	6800.00 / LOC	1	$6,800.00

Associated / Impacted Devices

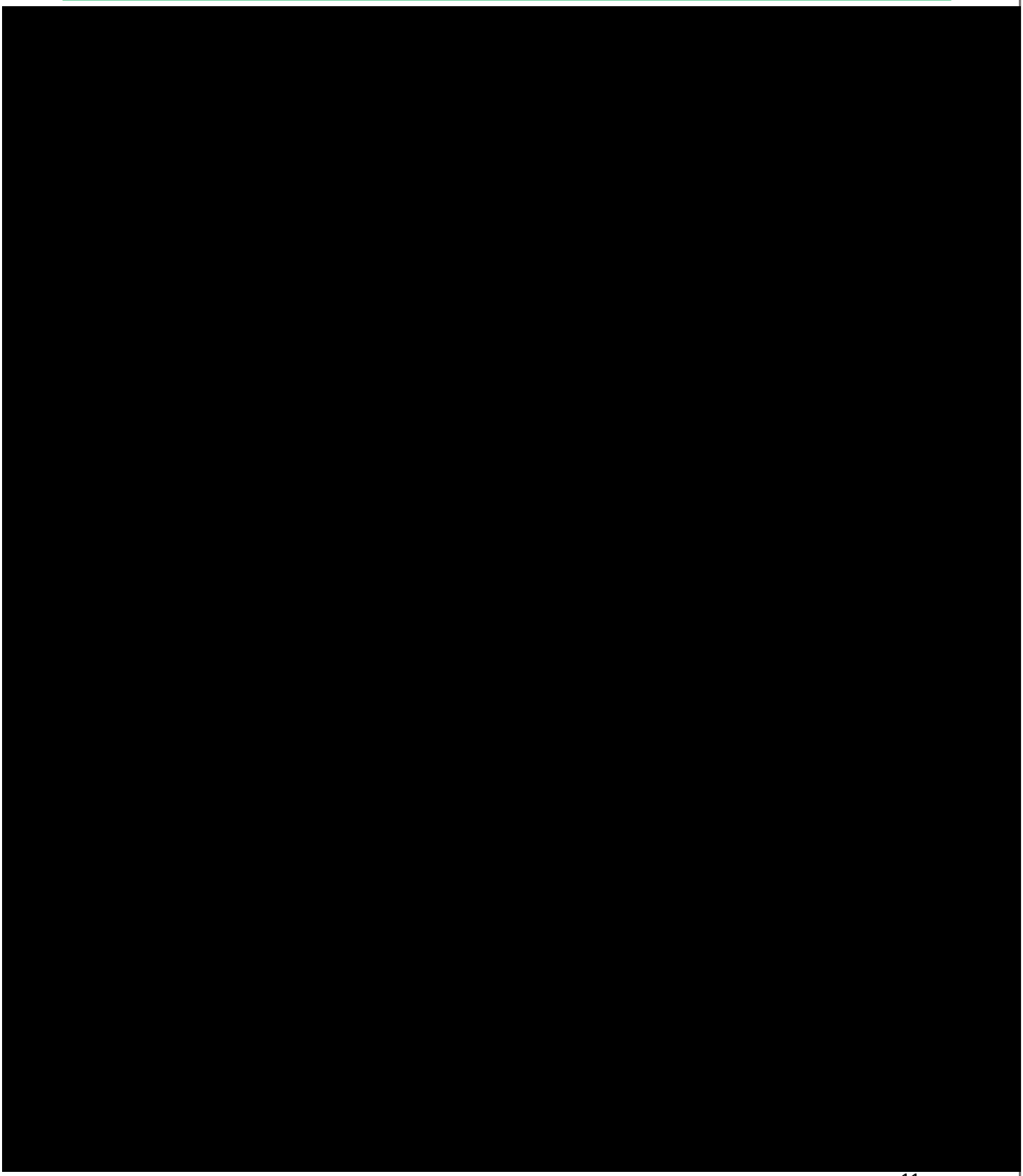
Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes
Existing	[redacted]						
Existing							

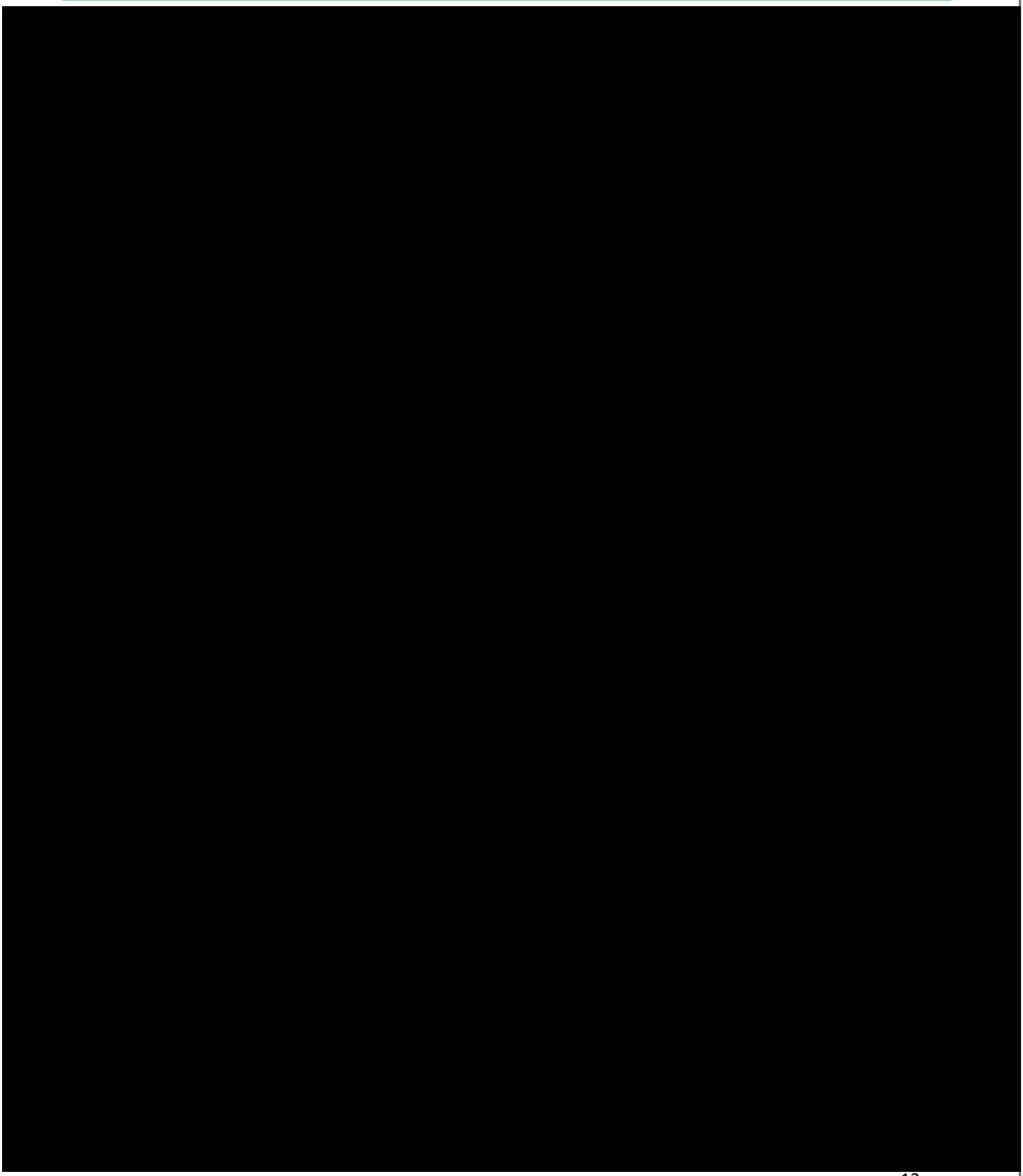
Reliability Projection

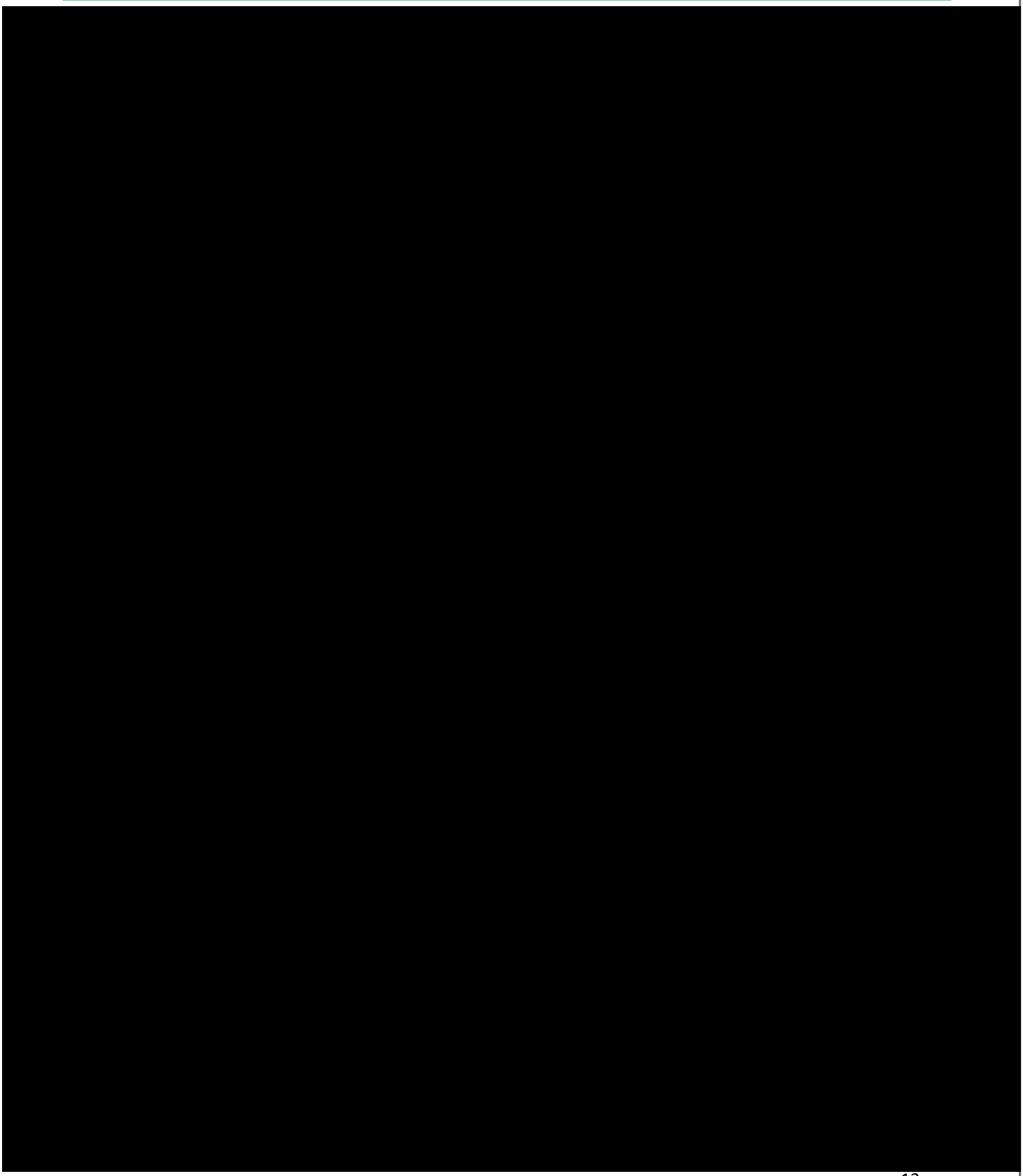
Title:

Outage Start Date: 1/1/2018 Outage End Date: 12/31/2021 Years History: 4

[redacted]







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Operations Project Authorization Form

Project Title: Back up for upper Pattagansett Road	**Project Number:** CD02063
Date Prepared: 08/31/2022	**Company:** Eversource CT
Organization: Electric Field Operations	**Class(es) of Plant:** D Line
Project Initiator: [redacted]	**Project Category:** RELIABILITY IMPROVE SPEC PROJ
Project Manager [redacted]	**Project Type:** Specific
Project Sponsor: [redacted]	**Capital Investment part of original Operating Plan:** Yes
Estimated in service date: 12/31/2023	**Emergency Related Request?** No
Eng./Constr. Resources Budgeted? Yes	**Facility Type** (check all that apply): ☐ PTF ☐ non-PTF ☒ Distribution
Total Gross Capital Request: $831K	**Authorization Type:** Partial Funding

Executive Summary

[redacted]

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Project Costs Summary

Note: Dollar values are in thousands

Capital Costs	2024	Year 2	Year 3+	Total
Internal Labor and Construction Equipment	$32	$0	$0	$32
Outside Services	$301	$0	$0	$301
Materials	$93	$0	$0	$93
Removals	$46	$0	$0	$46
Risk and Contingency	$41	$0	$0	$41
Other	$0	$0	$0	$0
Subtotal	**$514**	**$0**	**$0**	**$514**

Indirect Capital Costs	Year 1	Year 2	Year 3+	Total
Indirects/Overheads (including benefits)	$301	$0	$0	$301
Capitalized interest or AFUDC, if any	$16	$0	$0	$16
Subtotal	**$317**	**$0**	**$0**	**$317**
Total Capital Costs (Gross)	**$831**	**$0**	**$0**	**$831**
Less Total Customer Contribution	**$0**	**$0**	**$0**	**$0**
Total O&M Project Costs	**$18**	**$0**	**$0**	**$831**
Project Costs (Net)	**$831**	**$0**	**$0**	**$831**

Technical Justification:

Project Need, Objective and Justification:

[redacted]

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Project Scope:

[redacted]

Major Material:

- 333 kVA step-down transformer
- 58 Eversource poles
- 9,500 feet 336 tree wire
- 5,400 feet 1/0 Tpx
- 27 Overhead transformers
- 100 kVA step-down transformer

Background:

[redacted]

Four Year Outage History 2018-2021

	CEMI- 14	CEMI-9
Before	95 Customers	
After		95 customers

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Alternatives Considered:

Were alternative solutions considered/applicable? Include any cost/benefit analysis.

Alternatives were considered (please describe below)

[redacted]

Design Criteria	Alternative		
	1	2	3
[redacted]			
Cost	$831k	$757k	$520k
Cost / CM Saved	$28.67/CM	$23.20/CM	$15.95/CM
Cost / CI Saved	$4,669/CI	$4,673/CI	$3,214/CI
Preferred option	X		

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Regulatory Approvals:

Are Regulatory body approvals needed for the project?

No

Project Schedule

Milestone/Phase Name	Estimated Date
100% Engineering Completion	12/23
Construction Start	2/24
Testing/Commissioning	4/24
In Service Date	6/24

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Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
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