EVERSOURCE

Project Approval Form

Project Title: [redacted]	**Project Number: CD01933**
Date Prepared: 09/28/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** SMART SWITCHES PROGRAM
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: 12/31/23	
Total Capital Request: $1,556.9K	**Authorization Type:** Full Funding

1. Executive Summary

Project CD01933 was established to address [redacted]

- [redacted]
- [redacted]
- [redacted]
- Project Location
  - Division: Central
  - District: Hartford AWC
  - City/Town: East Hartford, CT

Project completed October 2023. The partial funding estimate for this project was $949K and was approved on 4/07/2022. The full funding estimate is $1,556.9K; an increase of $607.9K or 64%.

The overspend is due to:

- legacy estimating units used in the partial funding estimate. Using updated estimating units, the partial funding estimate would have been $1,187.5K

- [redacted] This accounts for an additional $80K.
- [redacted] This accounts for an additional $250K.

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	2023	Total
Direct Capital Costs		
Internal Labor and Construction Equipment	343.6	343.6
Outside Services	0.0	0.0
Materials	497.1	497.1
Removals	20.9	20.9
Risk and Contingency	28.3	28.3
Other	19.9	19.9
Subtotal – Direct Costs	**909.8**	**909.8**
Indirect Capital Costs		
Indirect/Overheads (including benefits)	631.4	631.4
Capitalized interest or AFUDC, if any	15.7	15.7
Subtotal – Indirect Costs	**647.1**	**647.1**
Total Gross Capital Costs	**1,556.9**	**1,556.9**
Customer Contribution	**0.0**	**0.0**
Total Net Capital Project Costs	**1,556.9**	**1,556.9**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

The project was created as part of an initiative to improve circuit reliability by adding automatic sectionalizing devices on overhead distribution circuits to reduce customer zones to less than 500 customers.

b. Project Need

This project was established to address a [redacted]

c. Project Scope

The scope of this project is as follows:

- [redacted]

Major Material:

- 7 Reclosers
- 7 Disconnect Switches

4. Alternatives Considered

There was one alternative. Instead of the conversion, there would only be [redacted] Therefore, this option was not selected.

	Option	
[redacted]		
Estimate Type:	Partial	Full
Capital Cost	$342K	$1556.9K
Expense Cost	$15K	$27.2K
Total Cost	$357K	$1584.1K
Preferred option		X

Note – All estimates were calculated using updated estimating units.

5. Project Schedule

Milestone/Phase Name	Estimated Date
Partial Approval	April 2022
100% Detailed Engineering Completion	July 2022
Construction Start	March 2023
In Service Date	October 2023

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

Attachment	Included in Submittal?
A. Cost Estimate	*YES*
B. P6 Schedule	*NO*
C. Geographic Map	*YES*
D. System and Station One-Lines	*YES*
E. Partial Funding PAF	*YES*

Attachment A: Cost Estimate:

Recloser Work Only (Option 1)

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00%
SubTotal:	$264,143
Contingency Amount:	$63,394
Estimate:	$327,538
Reimbursement:	$0
Net Amount:	**$327,538**

Description:

Item Description	CU	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17	$3,509.60
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18	$8,000.00
SECTIONALIZE OH - Recloser Control - setting changes only Change the setting on the [redacted] to an MR.	16-OH39A	$19,542.40
SECTIONALIZE OH - Recloser - 3ph Install 4 new reclosers on the [redacted] One SR on Tolland St. p two reclosers will be installed on School St. A SS on pole 1019 and	16-OH38	$191,958.40 1732. Lastly,
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph One disconnect switch for each recloser	16-OH43	$41,132.80

Option 1 + Conversion Work (option 2):

Estimate

Preliminary Estimate Summary	
Revision Number:	0
Contingency:	24.00%
SubTotal:	$511,833
Contingency Amount:	$122,840
Estimate:	$634,673
Reimbursement:	$0
Net Amount:	$634,673
Description:	

Item Description	CU	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17	$3,509.60
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18	$45,000.00
POLE OH - POLE - 3ph (CL&P custodian)	16-OH14	$51,436.00
EQUIPMENT OH - Conversion Prep Work - 3ph	16-OH57	$51,500.00
EQUIPMENT OH - Conversion - CUTOVER	16-OH58	$13,380.00
POLE DB/UG - Riser - 3ph	16-UG146	$10,794.40
SECTIONALIZE OH - Recloser Control - setting changes only Change the setting on the [redacted] to a two-way tie relcoser on Burr[redacted] settings on the [redacted]	16-OH39A	$9,771.20
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Install 1/0 TW from Wind Rd. to Terry Rd. pole 1184 to 1242.	16-OH25	$26,400.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Install 1/0 TW on Hanmer St. from pole 1199 to 728.	16-OH25	$24,000.00

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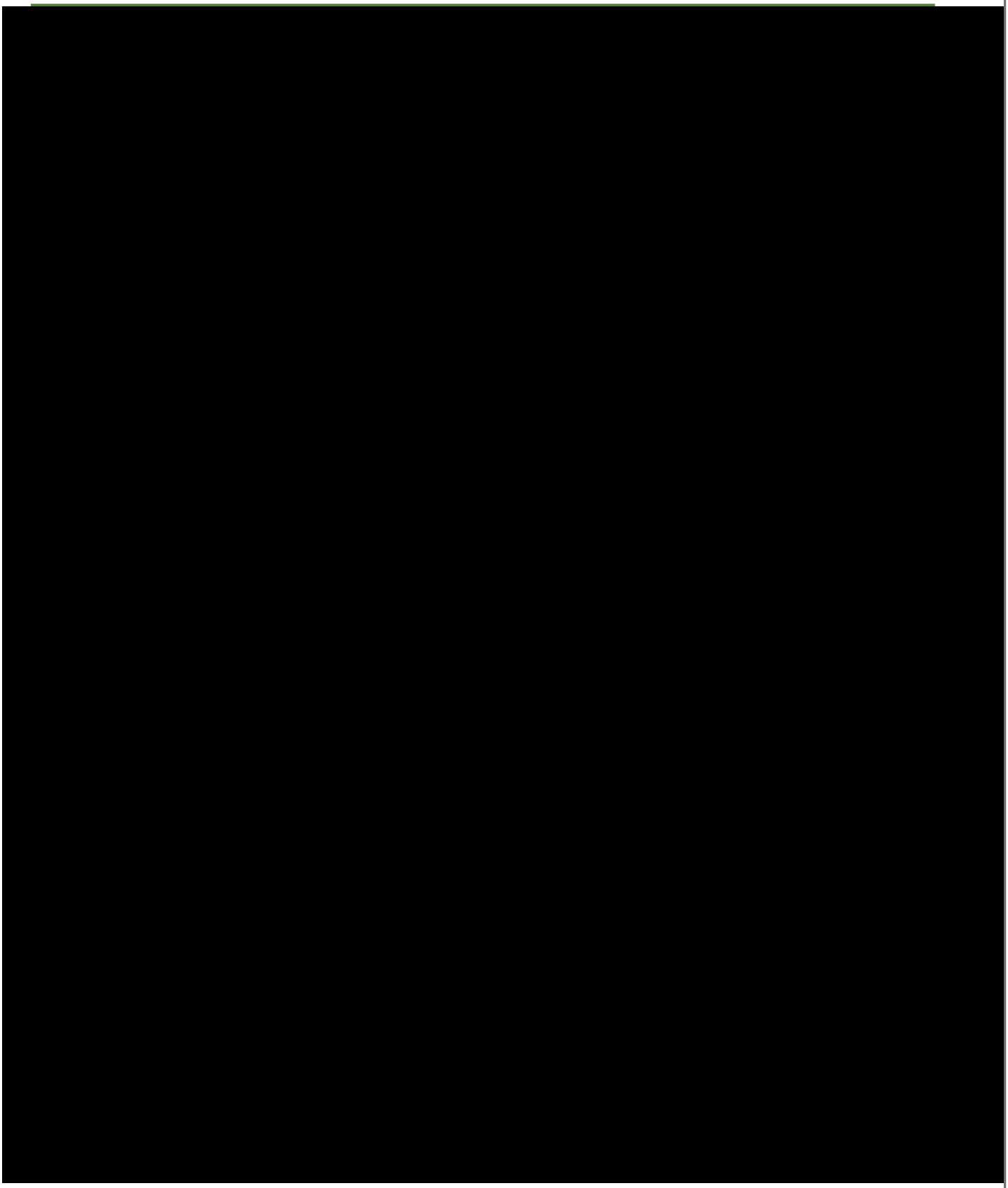
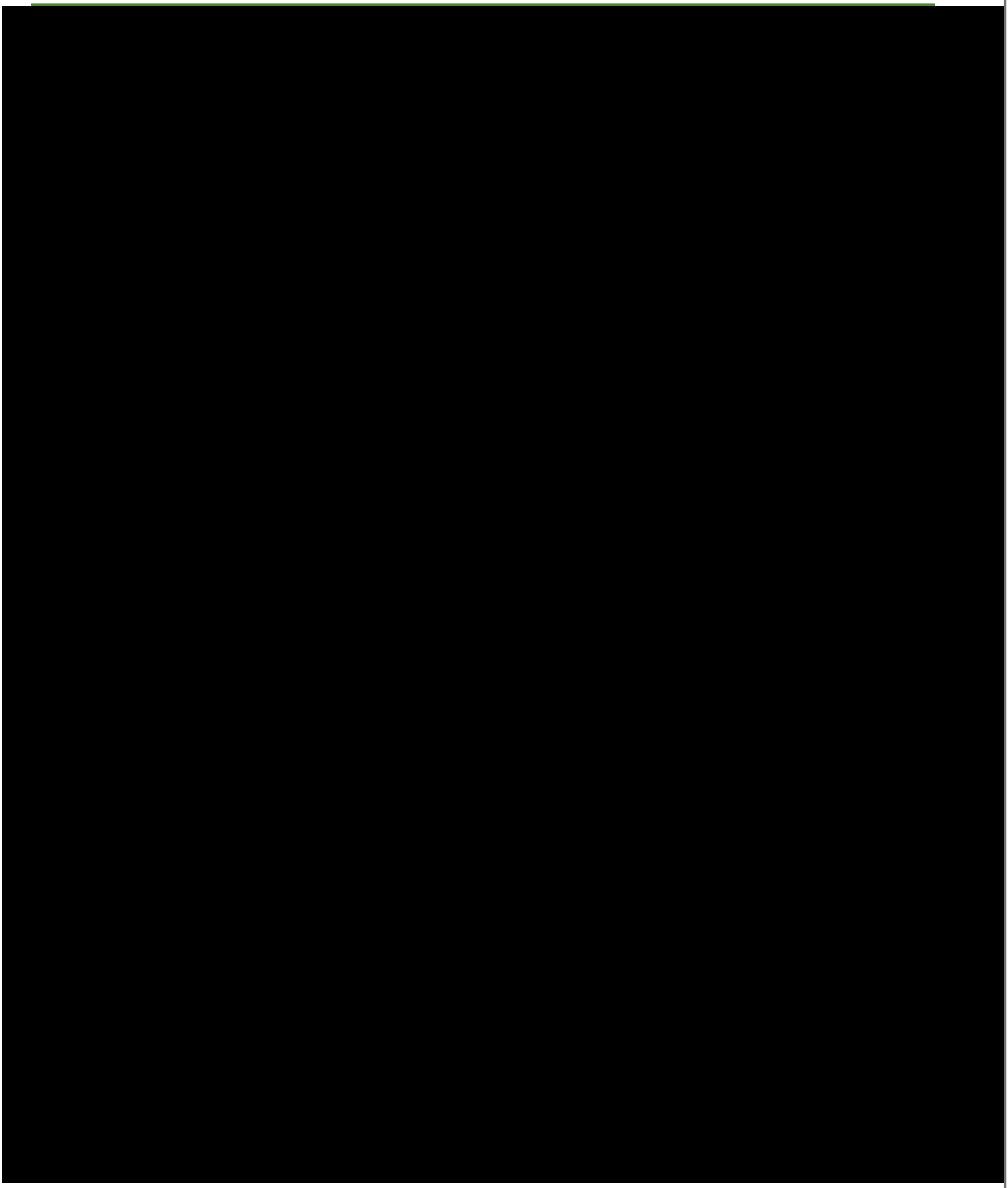
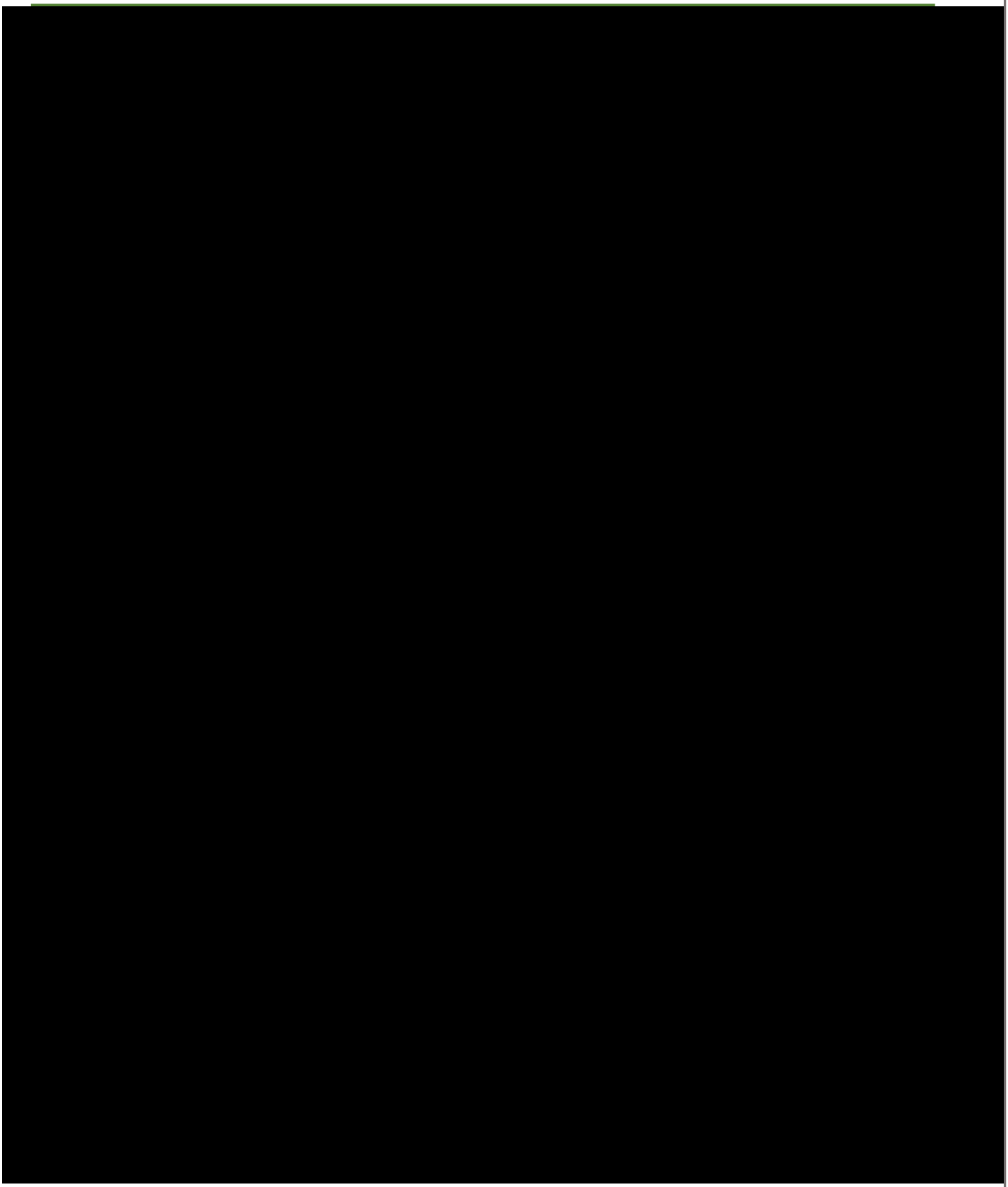
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph Install 600A disconnect on pole 1195 on Burnside Ave.	16-OH43	$10,283.20
POLETOP OH - Change Armless poletop to Xarm poletop - 3ph Install insulators and crossarms on any armless poles on Wind Rd. to	16-OH17	$6,856.00
POLETOP OH - Change Armless poletop to Xarm poletop - 3ph Install insulators and crossarms on any armless poles south of Churc	16-OH17	$10,969.60
OH WIRE OH - Neutral Install Neutral from Wind Rd. to Terry Rd. pole 1184 to 1242.	16-OH31	$7,040.00
OH WIRE OH - Neutral Install neutral on Hanmer St. from pole 1199 to 728.	16-OH31	$6,400.00
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph Install one disconnect for each new recloser.	16-OH43	$20,566.40
SECTIONALIZE OH - Recloser - 3ph Install two reclosers on Burnside Ave. One MR on pole 6353 to repla	16-OH38	$95,979.20
UG CABLE DB - Cable Replacement - 3ph Reconductor about 150 ft. of UG cable with #1 AL.	16-UG151A	$8,760.00
OTHER OTHER Removal of circuit wire and equipment on Elmer St.	16-ALL14	$5,000.00
OTHER OTHER Remove three fuses.	16-ALL14	$1,000.00
XF OH - OH XF - 1ph Replace 19 single-phase transformers on [redacted] past pole 6353 on Bu	16-OH45	$37,972.80
OH WIRE OH - Reconductor Open Wire Secondary w/ Triplex Replace all open wire on Hanmer St., from Wind. Rd. to Terry Rd. an	16-OH30	$28,800.00
XF OH - OH XF's - bank of 3-1ph Replace bank of transformers on pole 1066, 1074, 2150, 1197, 1250, and 4738.	16-OH46	$30,115.20







Operations Project Authorization Form

Project Title: [redacted]	**Project Number: CD01933**
Date Prepared: 03/17/2022	**Company:** Eversource CT
Organization: EFO	**Class(es) of Plant:** D Line
Project Initiator: [redacted]	**Project Category: Reliability**
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?** Yes
Eng./Constr. Resources Budgeted? Yes	**Facility Type** (check all that apply): ☐ PTF ☐ non-PTF ☑ Distribution
Total Gross Capital Request: $949K	**Authorization Type:** Initial Funding

Executive Summary

This project is being established to address the [redacted]

Project Costs Summary

Capital Costs	2022	2023	2024+	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	$0	$81	$0	$81
Outside Services	$0	$107	$0	$107
Materials	$0	$343	$0	$343
Removals	$0	$22	$0	$22
Risk and Contingency	$0	$3	$0	$3
Other	$0	$0	$0	$0
Subtotal	**$0**	**$557**	**$0**	**$557**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	$0	$381	$0	$381
Capitalized interest or AFUDC, if any	$0	$12	$0	$12
Subtotal	**$0**	**$392**	**$0**	**$392**
Total Customer Contribution	$0	$0	$0	$0
Total Capital Project Costs	**$0**	**$949**	**$0**	**$949**

Technical Justification:

Project Need, Objective and Justification

[redacted]

Project Scope

The scope of this project is as follows:

- [redacted]

[redacted]

Major Material:

- 7 Reclosers
- 150 ft. #1 AL UG cable
- 11 CL&P owned poles 45-2
- 3,600 ft. Triplex Secondary

Background

Outage History

[redacted]

Alternatives Considered:

Alternatives were considered (please describe below)

Instead of the conversion, there would only be [redacted] Therefore, this option was not selected.

Regulatory Approvals:

No

Project Schedule

Milestone/Phase Name	Estimated Date
100% Engineering Completion	June 2022
Construction Start	April 2023
Testing/Commissioning	December 2023
In Service Date	December 2023

Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2023	Medium	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	2023	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach
Internal construction resources not available to perform the work.	2023	High	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.	2022	Medium	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Storm delays	2023	Medium	If storm activity delays work, we may be forced to use external resources.