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Supplement Authorization Form

Project Title: New Service [redacted]	**Project Number: CD01986**
Date Prepared: 11/15/2024	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** SPECIFIC PROJECTS-NEW SRVCE
Initiating Organization: Distribution	**Project Type:** Specific
Project DDE: [redacted]	**Capital Investment part of 5-year 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)
Current Authorized Amount: $557.2K	**Approved In-Service Date:** 6/30/2024
Supplement Request: $306.4K	**Estimated In-Service Date:** 10/28/2024
Total Capital Request: $863.6K ($507.2K reimbursable)	**Authorization Type:** Supplement Request
	Reason: Cost Overage

1. Project Background

Supplemental funding of $306.4K is being requested for this project. CD01986 is currently authorized for $557.2K, which brings this total funding request to $863.5K or 155% of the full funding authorized amount.

- *This project proposes to supply an additional service to* [redacted] *CT.* [redacted] *requested* [redacted]
- [redacted] *is responsible for the installation of the new 4,000' manhole duct system to their property which is not included in the scope of this project since it will be constructed by the customer.*
- *Project Location*
  - *Division: Central*
  - *District: Hartford AWC*
  - *City/Town: Bloomfield*

2. Supplement Justification Overview

CD01986 requires a supplemental PAF due to additional charges occurring in the month of October 2024. The existing supplemental estimate (10/29/2024) was only based on charges through September 2024, which omits the roughly $87.5K of charges that occurred in October. This supplemental reflects all charges to date, with an updated estimate that captures all completed work.

3. Supplement Justification Detail

This project requires supplemental funds because of variances in the following categories:

- **Internal Labor**
  - The full funding estimate was $52.1K and actuals were $72.9K for an increase of $20.8K.
  - The main driver of this increase is the cost of setting up and testing the PME9 switchgear.

- **Material**
  - The full funding estimate was $300.9K and the actuals were $455.5k for an increase of $154.6k.
  - The full funding estimate called for installing 4/0 CU cable through the new manhole duct system. The availability of 1000 CU cable caused us to downgrade the cable size to 4/0 CU. With the deferral of several PILC projects in April freed up enough 500 CU cable to complete this project. The cost difference between 4/0 CU and 500 CU was about $85k.
  - The PME9 switchgear actual cost was also higher than the estimate in the full funding.

- **Customer Reimbursement**
  - The full funding estimate included a $557K customer reimbursement for this project and the actual billed cost was $507K for a decrease in $50k.
  - The reason in the difference was reducing the cable size from 1000 CU at the partial funding to 4/0 CU at the full funding. The full funding PAF was never updated for the lower reimbursement.

4. Supplement Cost Summary (Project Total)

Capital Costs	To Date Spend	Prior Authorized	Supplemental Request	Total Request
Internal Labor and Construction Equipment	89.0	41.5	47.6	89.0
Outside Services	0.5	0.0	0.5	0.5
Materials	436.6	350.4	86.2	436.6
Removals	24.9	0.0	24.9	24.9
Risk and Contingency	0.0	0.0	41.1	41.1
Other	0.0	0.0	0.0	0.0
Subtotal	**550.9**	**391.9**	**200.2**	**592.0**

Indirect Capital Costs	To Date Spend	Prior Authorized	Supplemental Request	Total Request
Indirects/Overheads (including benefits)	270.3	165.4	105.0	270.3
Capitalized interest or AFUDC, if any	1.2	0.0	1.2	1.2
Subtotal	**271.5**	**165.4**	**106.2**	**271.5**
Total Capital Costs (Gross)	**822.4**	**557.2**	**306.4**	**863.6**
Less Total Customer Contribution	**-507.2**	**-557.2**	**50.0**	**-507.2**
Project Costs (Net of Reimbursement)	**315.3**	**0.0**	**356.4**	**356.4**

New Total Request by Year (if applicable)

Note: If multi-year project, include actuals for current and years past, and then show forecasted spend for upcoming years.

Capital Costs	2022	2023	2024	TOTAL
Internal Labor & Equipment	0.0	0.1	89.0	89.1
Outside Services	0.0	0.0	0.5	0.5
Materials	0.0	0.0	436.5	436.5
Removals	0.0	0.0	24.9	24.9
Risk and Contingency	0.0	0.0	41.1	41.1
Other	0.0	0.0	0.0	0.0
SUBTOTAL Direct Cost	**0.0**	**0.1**	**591.9**	**592.0**
Indirects / Overheads	0.0	6.7	263.6	270.3
AFUDC	0.0	0.0	1.2	1.2
SUBTOTAL Indirect Cost	**0.0**	**6.7**	**264.9**	**271.5**
TOTAL Capital Request	**0.0**	**6.8**	**856.8**	**863.6**
Less Total Customer Contribution	-199.7	0.0	-307.4	**-507.2**
TOTAL Project Cost	**-199.7**	**6.8**	**549.3**	**356.4**

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Supplement Authorization Form

Full Funding PAF Form

Project Title: New Service [redacted]	**Project Number: CD01986**
Date Prepared: 10/30/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** SPECIFIC PROJECTS-NEW SRVCE
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: 6/30/2024	
Total Capital Request: $557.2K ($557.2)	**Authorization Type:** Full Funding

5. Executive Summary

- This project proposes to supply an additional service to [redacted] requested [redacted]

- The capital cost associated with this project is approximately $557K and is 100% reimbursable. Additionally, [redacted] is responsible for the installation of the new 4,000' manhole duct system to their property which is not included in the scope of this project since it will be constructed by the customer.

- Project Location
  - Division: Central
  - District: Hartford AWC
  - City/Town: Bloomfield

- The Partial Funding estimate for this project was $888K capital dollars and was approved at the 4/14/22 CTPAC. The full funding estimate for this project is $557K, a reduction of $331K, or 37%. Due to material shortages, the original design for 1,000 kcmil Cu cable was reduced to 4/0 Cu cable to meet the customer's in-service date. This accounts for the cost difference between the Partial Funding Estimate and the Full Funding Estimate.

6. Project Cost Summary

Note: Dollar values are in thousands.

Financial Evaluation ($000's)

Capital Costs	2024	Year2	Year 3+	Total
Internal Labor and Construction Equipment	35.6	0.0	0.0	35.6
Outside Services	0.0	0.0	0.0	0.0
Materials	300.9	0.0	0.0	300.9
Removals	16.5	0.0	0.0	16.5
Risk and Contingency	38.9	0.0	0.0	38.9
Other	0.0	0.0	0.0	0.0
Subtotal	**391.9**	**0.0**	**0.0**	**391.9**

Indirect Capital Costs	2024	Year2	Year 3+	Total
Indirects/Overheads (including benefits)	165.4	0.0	0.0	165.4
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal	**165.4**	**0.0**	**0.0**	**165.4**
Total Capital Costs (Gross)	**557.2**	**0.0**	**0.0**	**557.2**
Less Total Customer Contribution	**557.2**	**0.0**	**0.0**	**557.2**
Project Costs (Net of Reimbursement)	**0.0**	**0.0**	**0.0**	**0.0**

7. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

- [redacted] of new load to its facility. [redacted]
- [redacted]
- [redacted]

b. Project Need

- This project is a New Service request requiring Eversource to supply power to the customer.
- [redacted]
- [redacted]

c. Project Scope

[redacted]

Major Material:

- PME 9 Pair Automatic Switchgear
- 4,200 ft of 4/0 Cu underground cable
- 2-1,500 kVA transformers

8. Alternatives Considered

	Option	
[redacted]		
Authorization Type	Partial	Full
Capital Cost	$	$557K
Expense Cost	$	$
Total Cost	$2,975K	$
Preferred option		X

Option 1 estimate calculated using updated estimating units and was not selected due to the increased cost.

9. Project Schedule

Milestone/Phase Name	Estimated Date
Partial Approval	4/14/22
100% Detailed Engineering Completion	12/31/22
Fully Funded	10/31/23
Construction Start	1/1/24
In Service Date	6/30/24

10. Regulatory Decisions

N/A

11. Codes and Standards

N/A

12. Risk and Contingencies

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2024	Medium	Included contingency costs are in the funding request. Detailed Field Analysis and walk down for project development were performed to avoid potential issues.
Customer Permission / Siting Council / Municipal approvals	2024	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach will help to avoid conflicts.
Internal construction resources not available to perform the work.	2024	High	External resources are planned to perform the work. Competitive bidding will be used to ensure lowest outside labor cost.
Internal engineering resources not available to perform the work.	2023	Medium	Internal resources are planned to perform the work. If external resources are required, competitive bidding will be used to ensure lowest outside labor cost.
Materials Shortage or long lead times	2024	High	A large amount of cable is required to complete this project. PMH 9/12 switchgear is a long lead time material and will be pre-ordered to 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	Some circuit backbone reconfigurations will be required to complete the work. Work will be scheduled to minimize system abnormal time.

			Temporary bypasses/equipment will be used if the system will be abnormal for extended periods.
Wetlands / Environmentally sensitive area	2024	Low	No wetlands or environmentally sensitive areas are expected to impact this project.

13. References

References
1.

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

Attachment	Included in Submittal?
A. Cost Estimate	*YES*
B. P6 Schedule	*NO*
C. Geographic Map	*YES*
D. Load Sheet (Before and After)	*YES*
E. Initial Funding PAF	*YES*
F. System One-line (Before and After)	*NO*

Attachment A: Cost Estimate

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD01986
[redacted] Bloomfield

Design Alternative CD01986-01

Estimate

Preliminary Estimate Summary

Revision Number:	0
Contingency:	24.00%
SubTotal:	$458,304
Contingency Amount:	$109,993
Estimate:	$568,297
Reimbursement:	$568,297
Net Amount:	$0

Description: 24J5 UG - Option 1

Item Description	CU	[redacted]	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17		$3,509.60
POLE DB/UG - Riser - 3ph	16-UG146		$10,794.40
TRAFFIC OH/DB/UG - Traffic Control - Police Officer 15% of Sub total	16-ALL18		$60,000.00
UG CABLE DB/UG - 750/1000 - 3-1/C (3ph) Cu UG Cable	16-UG114B		$384,000.00

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD01986 [redacted]

Design Alternative CD01986-03

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00%
SubTotal:	$266,038
Contingency Amount:	$63,849
Estimate:	$329,888
Reimbursement:	$329,888
Net Amount:	$0
Description:	

Item Description	CU	Amount
XF DB/UG - Padmount XF - 3ph 1500 KVA	16-UG131	$12,598.40
SWITCHGEAR DB/UG-Switchgear up to 25kV-Auto Type 9/12 (pair) Main Tie Main	16-UG126	$197,760.00
UG CABLE DB/UG - 350/500 - 3-1/C (3ph) Cu UG Cable	16-UG114	$55,680.00

[redacted]

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

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Supplement Authorization Form

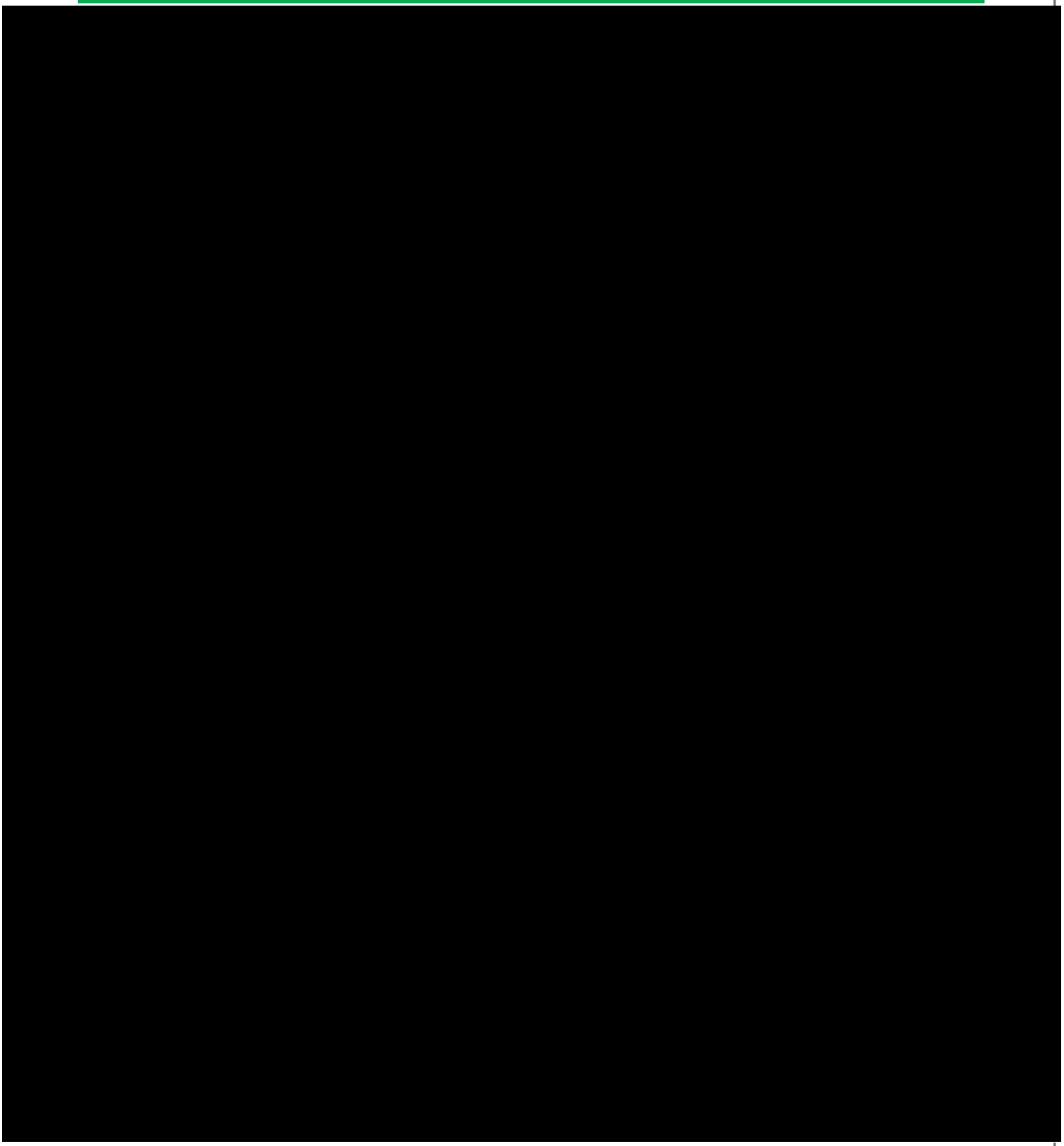
Design Alternative CD01986-02

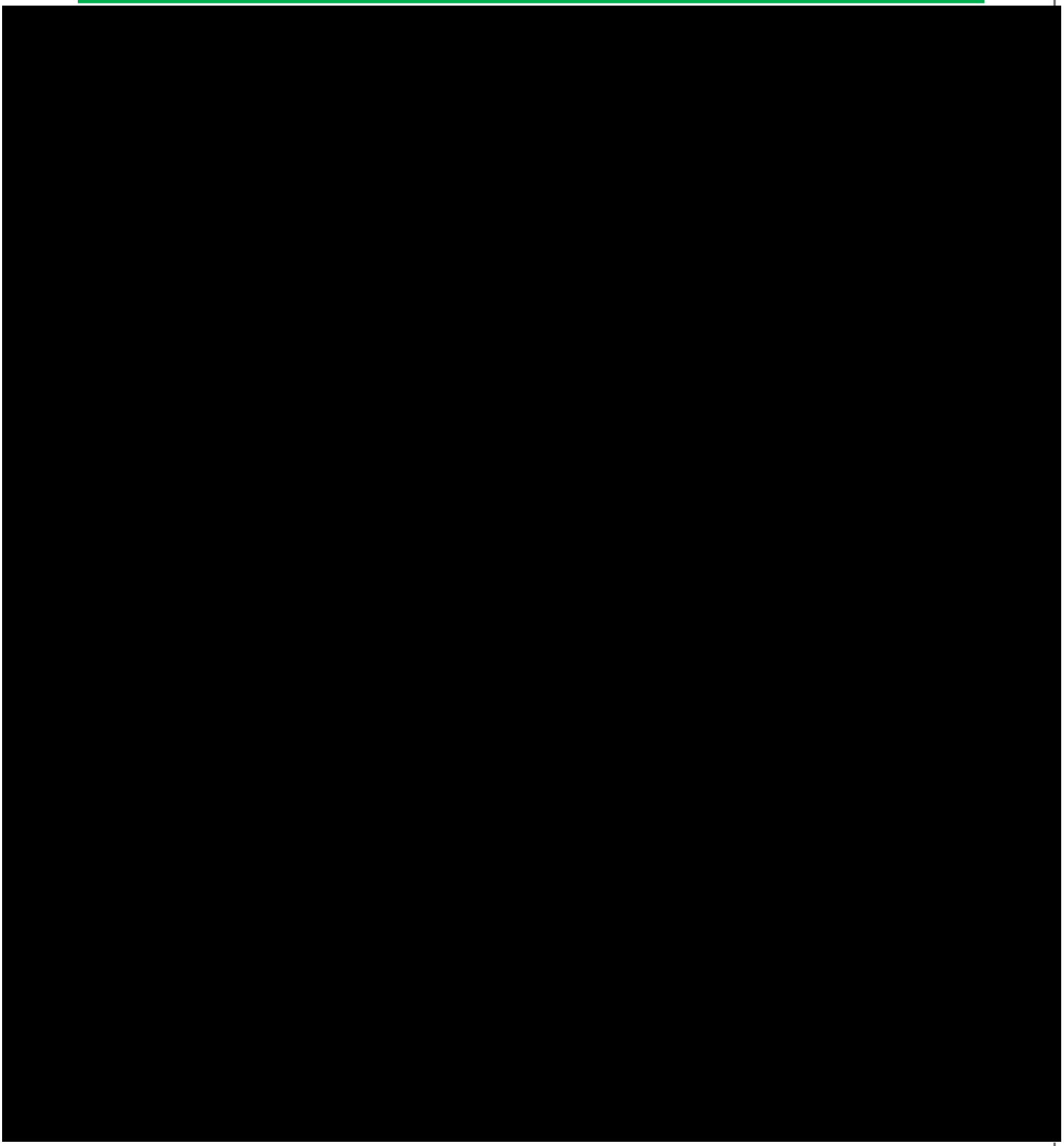
Estimate

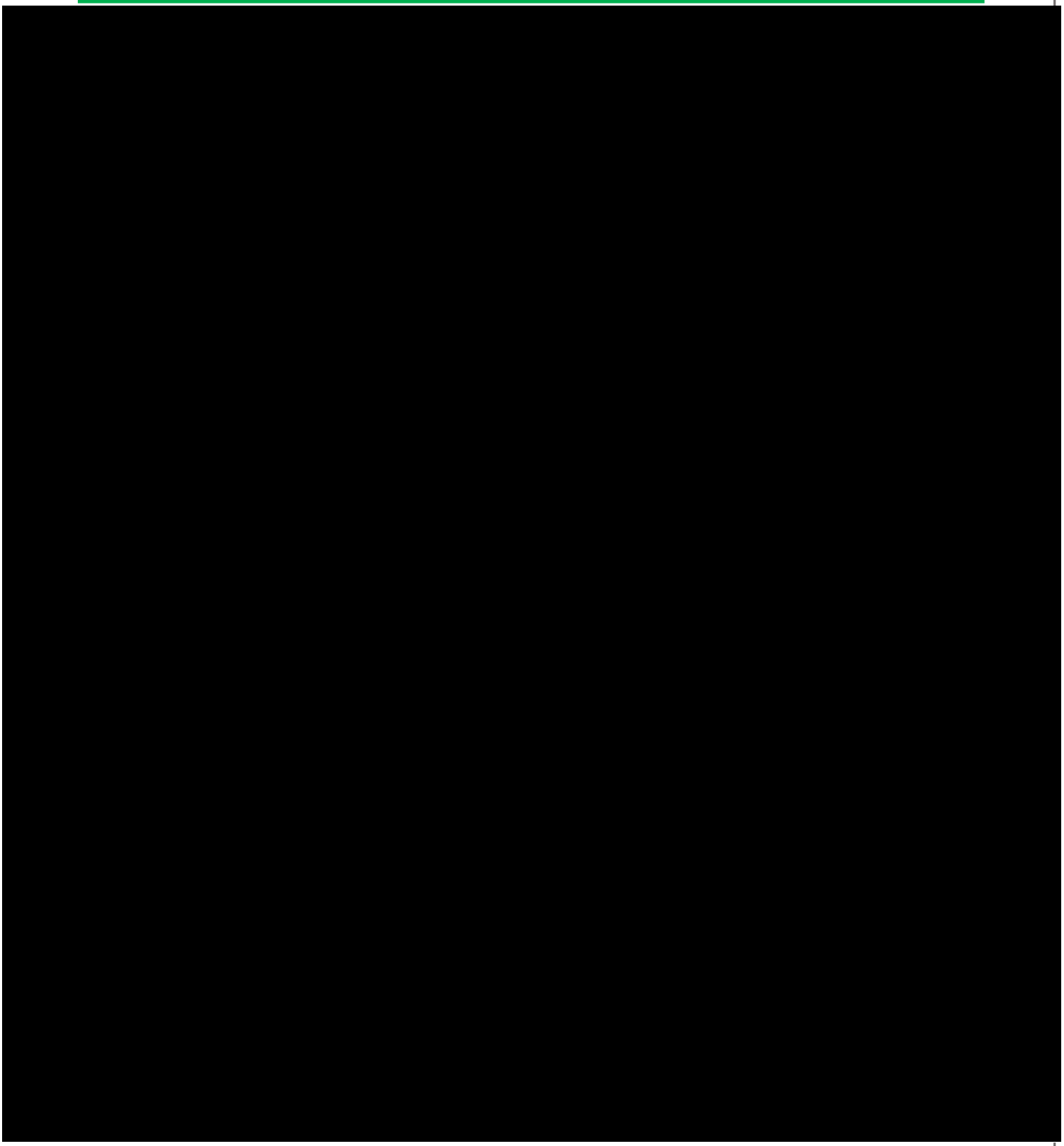
	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00%
SubTotal:	$1,153,604
Contingency Amount:	$276,865
Estimate:	$1,430,469
Reimbursement:	$1,430,469
Net Amount:	$0
Description:	

Item Description	CU	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17	$3,509.60
UG CABLE DB/UG - 750/1000 - 3-1/C (3ph) Cu	16-UG114B	$988,800.00
POLE DB/UG - Riser - 3ph	16-UG146	$10,794.40
TRAFFIC OH/DB/UG - Traffic Control - Police Officer 15% of Sub-total	16-ALL18	$150,500.00

[redacted]







Attachment E: Initial Funding PAF

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Operations Project Authorization Form

Project Title: [redacted]	**Project Number:** CD01986
Date Prepared: 04/08/2022	**Company:** Eversource CT
Organization: Electric Field Operations	**Class(es) of Plant:** D Line
Project Initiator: [redacted]	**Project Category:** SPECIFIC PROJECTS-NEW SRVCE
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: $888K (100%)	**Authorization Type:** Initial Funding

Executive Summary

Project CD01986 proposes to supply an additional service to [redacted] CT [redacted] has requested [redacted]

The total cost associated with this project is approximately $888K which is 100% reimbursable. Additionally, [redacted] is responsible for the installation of the new 4,000' manhole duct system to their property which is not included in the scope of this project since it will be constructed by the customer.

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Project Costs Summary
Note: Dollar values are in thousands

Capital Costs	2022	2023	2024+	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	$37	$37	$0	$74
Outside Services	$125	$124	$0	$249
Materials	$101	$101	$0	$203
Removals	$15	$15	$0	$30
Risk and Contingency	($40)	($40)	$0	($79)
Other	$0	$0	$0	$0
Subtotal – Direct Costs	**$238**	**$238**	**$0**	**$476**
Indirect Capital Costs	**2022**	**2023**	**2024+**	**Total**
Indirect/Overheads (including benefits)	$194	$202	$0	$396
Capitalized interest or AFUDC, if any	$8	$8	$0	$16
Subtotal – Indirect Costs	**$202**	**$210**	**$0**	**$412**
Total Gross Capital Costs	**$441**	**$448**	**$0**	**$888**
Customer Contribution	**($450)**	**($450)**	**$0**	**($899)**
Total Net Capital Project Costs	**($9)**	**$8**	**$0**	**($1)**

Technical Justification:

[redacted]

[redacted] will be responsible for the purchase and installation of the extended manhole-duct system from the current [redacted] zone to their facility. T-Mobile will also be responsible for the purchase and installation of the conduit installation from the riser poles to the switchgear.

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Major Material

The scope of this project is as follows:

- Install a new PMH 9/12 Pair Switchgear
- 4000 ft of 1000 MCM CU
- 200 ft of 500 MCM CU
- 2 – 1500 KVA Padmount transformers

Background



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Alternatives Considered:

Option 1 – Current Design

[redacted]

Project Option Comparison

Design Criteria	Option	
[redacted]		
Preferred option	X	

Regulatory Approvals:

Are Regulatory body approvals needed for the project?
No

Project Schedule

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

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Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2022	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	2022	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach
Internal construction resources not available to perform the work.	2022/2023	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	Low	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2023	Medium	Schedule work to minimize system abnormal time. Most of this work will require system to be abnormal for any extended period.

References
Appendices (One-Line Diagrams, Images, etc.)

