EVERSOURCE

Project Approval Form

Project Title: [redacted]	**Project Number: CD02343**
Date Prepared: 06/21/2024	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** OVERLOADS-SPECIFIC PROJECTS
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: 07/31/24	
Total Capital Request: $405.7K	**Authorization Type:** Full Funding

1. Executive Summary

Full funding is being requested for this project at a cost of $**405.7K**, which is 157% of the partial funding capital estimate of **$257.0K.** Partial funding was approved on 10/18/2023. There is no scope change on the project. The variance between the full funding and partial funding estimate is due to use of external crews for construction, and increased material costs. Initially, Eversource crews were lined up to complete the work, but work moved to contractors, for an approximate 20% increase in cost.

The original project was presented as follows:

[redacted]. *The total cost for this option is $257k.*

Location Details:

Division: Western

District: Newtown AWC

Town(s): Morris, Warren, Washington

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	2024 Actual	2024 Estimate	Total
Internal Labor and Construction Equipment	3.1	0.3	3.4
Outside Services	79.3	6.3	85.6
Materials	137.2	11.0	148.1
Removals	13.8	1.7	15.5
Risk and Contingency	0.0	9.9	9.9
Other	0.0	0.0	0.0
Subtotal	**233.4**	**29.2**	**262.6**

Indirect Capital Costs	2024 Actual	2024 Estimate	Total
Indirects/Overheads (including benefits)	122.0	16.7	138.7
Capitalized interest or AFUDC, if any	4.5	0.0	4.5
Subtotal	**126.5**	**16.7**	**143.2**
Total Capital Costs (Gross)	**359.9**	**45.9**	**405.7**
Less Total Customer Contribution			
Project Costs (Net of Reimbursement)	**359.9**	**45.9**	**405.7**

Explain unique payment provisions, if applicable:

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

[redacted]

b. Project Need

[redacted]

c. Project Scope

[redacted]

[redacted]

Major Material:

3 – 25kV Reclosers

4 – Recloser Settings (2 SS, 2 TR)

4. Alternatives Considered

The following alternatives were considered:

Option 1 consists of project work associated with the [redacted]

Option 3 includes [redacted]

Project Option Comparison

	Option
[redacted]	

[redacted]

Authorization Type	Partial	Full	Partial
Capital Cost	$94,832.22	$405,712.00	$1,821,518.52
Expense Cost	$2,957.78	$16,228,48	$56,812.48
Total Cost	$97,790.00	$421,940.48	$1,878,331.00
Total Cost / MVA added	$83,297/MVA	$149,624/MVA	$149,612/MVA
Total Cost / CM Saved	$1,294.84/CM	$5,588.61/CM	$2.90/CM
Total Cost / CI Saved	$0/CI	$0/CI	$3,420.84/CI
Preferred option		X	

5. Project Schedule

Add any additional milestones that are pertinent to the project

Milestone/Phase Name	Estimated Date
Partial Approval	10/5/23
100% Detailed Engineering Completion	2/1/24
Construction Start	6/1/24
In Service Date	07/31/24

6. Regulatory Decisions

N/A

7. Codes and Standards

Per DSEM 14.213 the generic rating for non-bulk substation transformers defines a 10/12.5MVA to have normal load limit of 100% and an emergency load limit of 128% for both summer and winter loads. This equates to 312 amps and 400 amps at 23kV respectively. Refer to Table 1 below for reference.



8. Risk and 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	High	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	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. N/A

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

Attachment	Included in Submittal?
A. Partial Funding PAF	*YES*
B. Cost Estimate	*YES*
C. Load Summary	*YES*
D. Initial Funding PAF	*YES*

EVERSOURCE

Project Approval Form

A – Partial Funding PAF:

Project Title: [redacted]	**Project Number: CD02343**
Date Prepared: 10/05/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** OVERLOADS-SPECIFIC PROJECTS
Project Initiator: [redacted]	**Project Type:** Specific
Initiating Organization: Distribution	**Capital Investment part of original Op Plan:** No
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: $257k	**Authorization Type:** Partial Funding

1. Executive Summary

[redacted] The total cost for this option is $257k.

Location Details:

Division: Western

District: Newtown AWC

Town(s): Morris, Warren, Washington

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	10.8	0.0	0.0	10.8
Outside Services	87.5	0.0	0.0	87.5
Materials	43.9	0.0	0.0	43.9
Removals	19.4	0.0	0.0	19.4
Other	1.7	0.0	0.0	1.7
Risk and Contingency	0.0	0.0	0.0	0.0
Subtotal	**163.3**	**0.0**	**0.0**	**163.3**
Indirect Capital Costs				
Indirects/Overheads (including benefits)	87.9	0.0	0.0	87.9
Capitalized interest or AFUDC, if any	5.8	0.0	0.0	5.8
Subtotal	**93.8**	**0.0**	**0.0**	**93.8**
Total Capital Costs (Gross)	**257.0**	**0.0**	**0.0**	**257.0**
Less Total Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Project Costs (Net)	**257.0**	**0.0**	**0.0**	**257.0**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

[redacted]

b. Project Need

[redacted]

c. Project Scope

[redacted]

[redacted]

Major Material:

3 – 25kV Reclosers

4 – Recloser Settings (2 SS, 2 TR)

4. Alternatives Considered

The following alternatives were considered:

Option 1 consists of project work associated with the [redacted]

Project Option Comparison

[redacted]			
Authorization Type	Partial	Partial	Partial
Capital Cost	$94,832.22	$257,045.84	$1,821,518.52
Expense Cost	$2,957.78	$8,017.16	$56,812.48
Total Cost	$97,790.00	$265,063.00	$1,878,331.00

Total Cost / MVA added	$83,297/MVA	$93,816/MVA	$149,612/MVA
Total Cost / CM Saved	$1,294.84/CM	$3,509.71/CM	$2.90/CM
Total Cost / CI Saved	$0/CI	$0/CI	$3,420.84/CI
Preferred option		X	

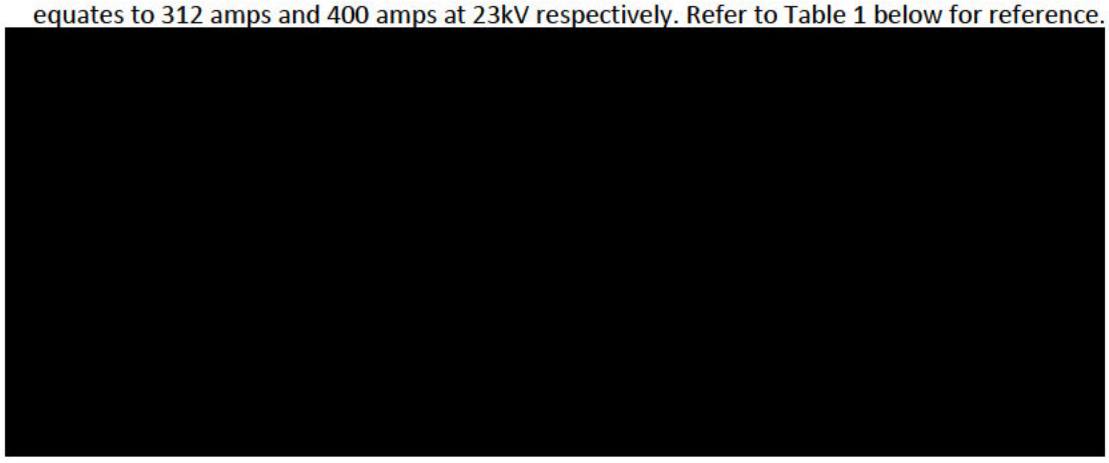
5. Project Schedule

Add any additional milestones that are pertinent to the project

Milestone/Phase Name	Estimated Date
Partial Approval	10/5/23
100% Detailed Engineering Completion	2/1/24
Construction Start	6/1/24
In Service Date	12/31/24

6. Codes and Standards

Per DSEM 14.213 the generic rating for non-bulk substation transformers defines a 10/12.5MVA to have normal load limit of 100% and an emergency load limit of 128% for both summer and winter loads. This equates to 312 amps and 400 amps at 23kV respectively. Refer to Table 1 below for reference.



7. 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	High	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	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.

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

Attachment	Included in Submittal?
B. Cost Estimate	*YES*
C. Load Summary	*YES*
D. Initial Funding PAF	*YES*

E. Cost Summary

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02343 [redacted]

Work Classification		Ownership / Management	
Category:	Line	AWC:	Newtown
Type:	BLG1	Statewide:	No
Type Desc:	OVERLOADS-SPECIFIC PROJECTS	Owner:	[redacted]
Work Type:		Manager:	[redacted]

Project Information

Status:	Draft	Associated Projects:	
SPS #:		Assignment ID:	
AIS Score:		Patrol Find ID:	

Budget Summary - Preferred Option — Option 2 - [redacted] Load Transfer

2024

ID	Title	Status	Rev #	Contingency	Expenditure Amount	Net Estimate
1	[redacted]	Draft	0	24%	$97,790	$97,790
2		Draft	0	24%	$167,273	$167,273
				2024 Total:	$265,063	$265,063
				Total Project:	$265,063	$265,063

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02343 [redacted]

Project Option Summary

ID	Description	Segments	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)	Prfrd
O1	[redacted]	1	$97,790	$0	100%	$1,294.84	$1,294.84	☐
O2		1,2	$265,063	$0	100%	$3,509.71	$3,509.71	☑
O3		1,2,3	$1,878,331	$0	100%	$63.87	$2.90	☐

Segments

ID	Title	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)
1	[redacted]	$97,790			$1,293.52	$1,293.52
2		$167,273			$0.00	$0.00
3		$1,613,268			$54.94	$2.45

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02343

[redacted]

Background / Scope

Issue:

Project Description:

Other Considerations:

Revision / ACT Comments:

If we don't do this project, what will happen?

Environmental

Water Pollution: No Change Soil Contamination: No Change Natural Habitats: No Change

Alternatives considered based on Environmental Impact or Description of Aspects Oil Spill Risks Considered? ☐

Safety Concerns With This Project? ☐

Explain:

External Stakeholders

Customer Impact / Involvement

Cust. Impacted: Approx. Pole Count (NU):

Crit. Cust. Impacted: Approx. Pole Count (Other):

Adjoining Property Owner Consent Required: ☐ Town Hearing Required: ☐

Other Utility Pole Custodian Area: ☐ Easement Required: ☐

State Highway Permit Required: ☐

Relocation / New Service

New Srvc. Contact: Requestor Type:

Customer Type: State Highway Project #:

Request Number: Route #:

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02343 [redacted]

Design Alternative CD02343-01

General Information

Segment: 1 - [redacted] Load Transfer | Status: Draft

Segment Type: RECLOSERS | Town: MORRIS | Budget Year: 2024

Work Type: BB-Sctnlzng-Reclosers | Trimming Required: ☐ | In Service Date: 12/31/2024

Description: [redacted]

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02343 [redacted]

Design Alternative

CD02343-01

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00%
SubTotal:	$78,863
Contingency Amount:	$18,927
Estimate:	$97,790
Reimbursement:	$0
Net Amount:	**$97,790**

Description:

Item Description	CU	[redacted]	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	23-ALL17		$9,124.96
SECTIONALIZE OH - Recloser - 3ph	23-OH38		$62,386.48
SECTIONALIZE OH - Recloser Control - setting changes only	23-OH39A		$6,351.28
TRAFFIC OH/DB/UG - Traffic Control - Police Officer 1 officer, 1 day	23-ALL18		$1,000.00

Associated / Impacted Devices

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

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02343 [redacted]

Design Alternative CD02343-01

Reliability Projection

Title:

Outage Start Date: 9/21/2019 Outage End Date: 9/21/2023 Years History: 4.00

[redacted]

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02343 [redacted]

Design Alternative CD02343-02

General Information

Segment: 2 - [redacted] Reclosers
Status: Draft
Segment Type: RECLOSERS
Town: WARREN
Budget Year: 2024
Work Type: BB-Sctnlzng-Reclosers
Trimming Required: ☐
In Service Date: 12/31/2024
Description: [redacted]

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02343 [redacted]

Design Alternative CD02343-02

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00%
SubTotal:	$134,898
Contingency Amount:	$32,376
Estimate:	$167,273
Reimbursement:	$0
Net Amount:	**$167,273**
Description:	

Item Description	CU	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	23-ALL17	$9,124.96
SECTIONALIZE OH - Recloser - 3ph	23-OH38	$124,772.96
TRAFFIC OH/DB/UG - Traffic Control - Police Officer 1 Officer, 1 Day	23-ALL18	$1,000.00

Associated / Impacted Devices

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

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02343 [redacted]

Design Alternative CD02343-02

Reliability Projection

Title:

Outage Start Date: 9/21/2019 Outage End Date: 9/21/2023 Years History: 4.00

[redacted]

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02343 [redacted]

Design Alternative CD02343-03

General Information

Segment: 3 [redacted] Replacement Status: Draft

Segment Type: LOAD/CAPACITY Town: MORRIS Budget Year: 2025

Work Type: BB-Sctnlzng-Rclsrs+Recond Trimming Required: ☑ In Service Date: 12/31/2024

Description: Scope of Work:

[redacted]

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02343 [redacted]

Design Alternative

CD02343-03

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$1,260,366
Contingency Amount:	$352,902
Estimate:	$1,613,268
Reimbursement:	$0
Net Amount:	**$1,613,268**
Description:	

Item Description	CU	[redacted]	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	23-ALL17		$36,499.84
SECTIONALIZE OH - Cutouts or Arresters - 1ph	23-OH19		$3,565.12
XF OH - OH XF - 1ph	23-OH45		$68,562.00
SECTIONALIZE OH - Remove Recloser (any) *Cost for removing single phase regulator or [redacted]	23-OH42		$7,352.80
OTHER OTHER 2 23kV Pad XFMRs - $2,000 per	23-ALL14		$4,000.00
TRAFFIC OH/DB/UG - Traffic Control - Police Officer 2 Officers, 7 Days	23-ALL18		$14,000.00
OTHER OTHER 25 OH XFMR - $1,787 per	23-ALL14		$45,000.00
OTHER OTHER 3 - 3000kVA 27.6/23kV AutoXFMRS (S.C.534989)	23-ALL14		$51,000.00
OTHER OTHER 3 - 576kVA 23kV Voltage Regulators (S.C.590226)	23-ALL14		$57,000.00

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02343

Chrsitian Stree[redacted]ormal Overload

Design Alternative		[redacted]	CD02343-03
OH WIRE OH - Neutral Install 4,000' 1/0 ACSR N[redacted]	23-OH31		$33,280.00
SECTIONALIZE OH - Recloser - 3ph Install 5 reclosers (1 - RR, 1 - SR, 1 - MR, 1 - SS, & 1 - TR)	23-OH38		$249,545.92
OH WIRE OH - Neutral Install 500' 1/0 ACSR N between[redacted]	23-OH31		$4,160.00
OH WIRE OH - Line Extension - 3ph (556 kcmil) Install 500' 3-PH Line extension between[redacted]	23-OH34		$78,000.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-3ph- 556 kcmil install 5850' 556 TW between[redacted]	23-OH27		$590,148.00
OH WIRE OH - Remove circuit wire (1 phase) Remove 5850' 1-PH 4/0 ACSR[redacted]	23-OH37		$18,252.00

Associated / Impacted Devices

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

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02343 [redacted]

Design Alternative CD02343-03

Reliability Projection

Title:

Outage Start Date: 9/1/2019 Outage End Date: 9/1/2023 Years History: 4.00

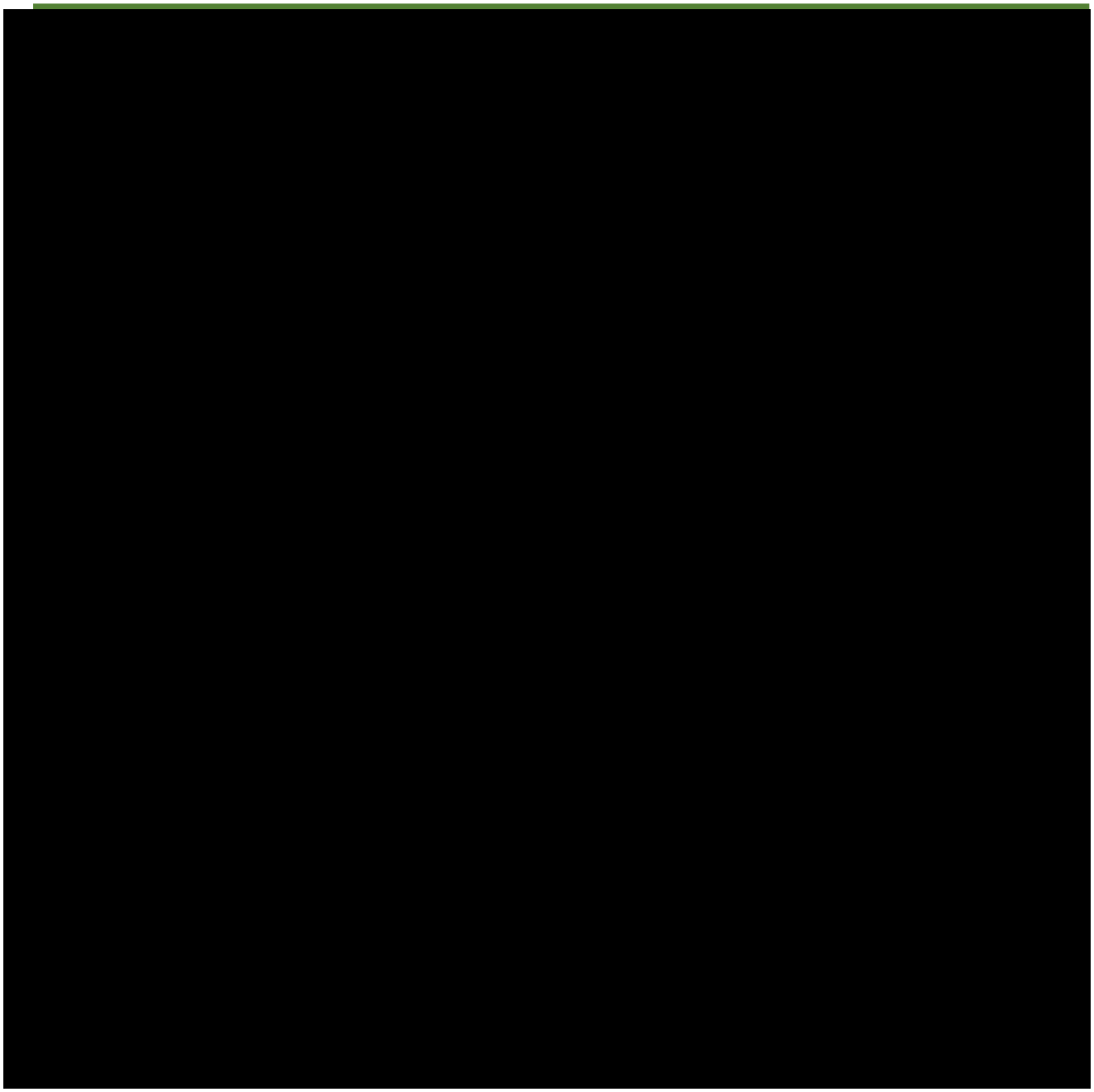
[redacted]

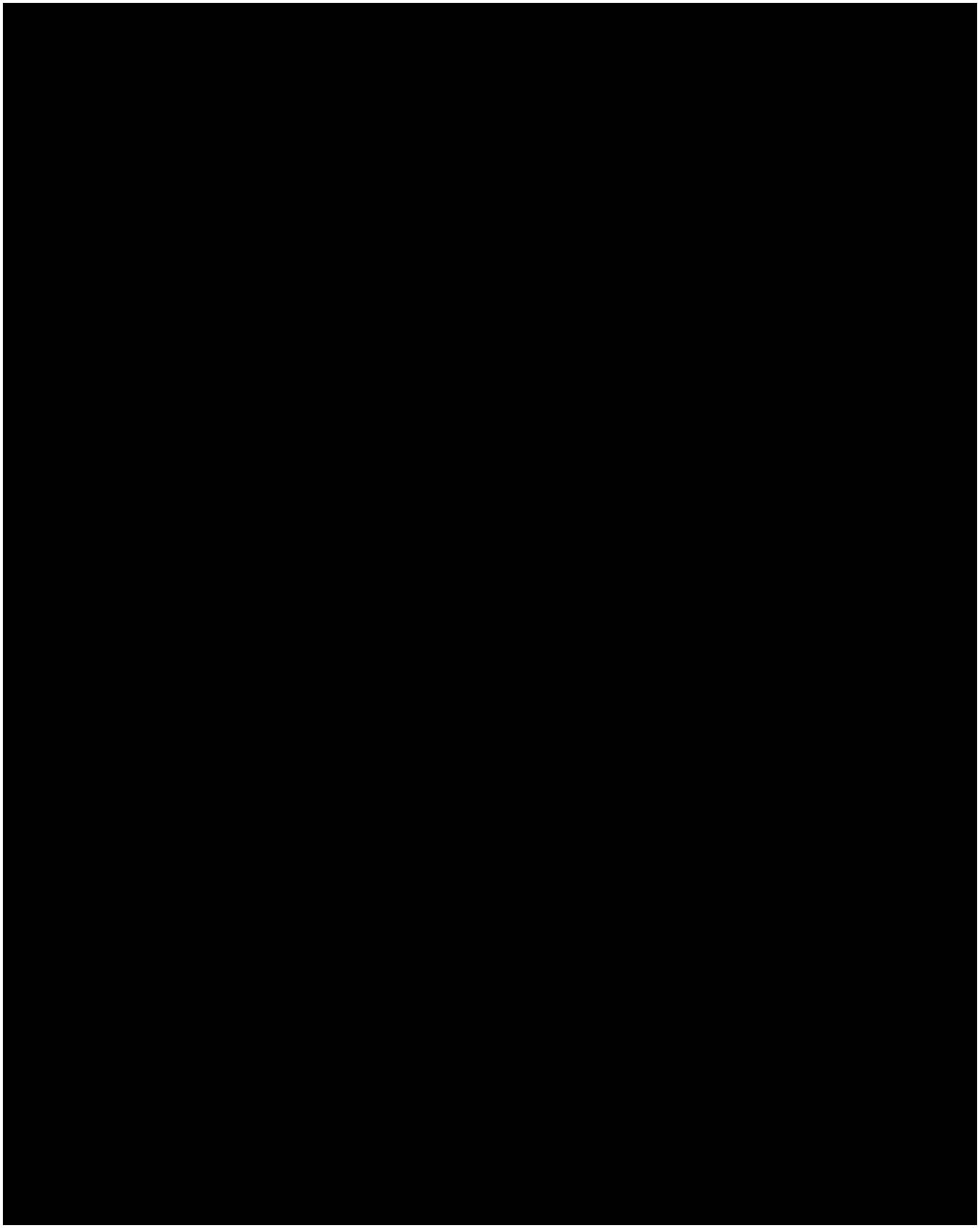
C. Load Summary

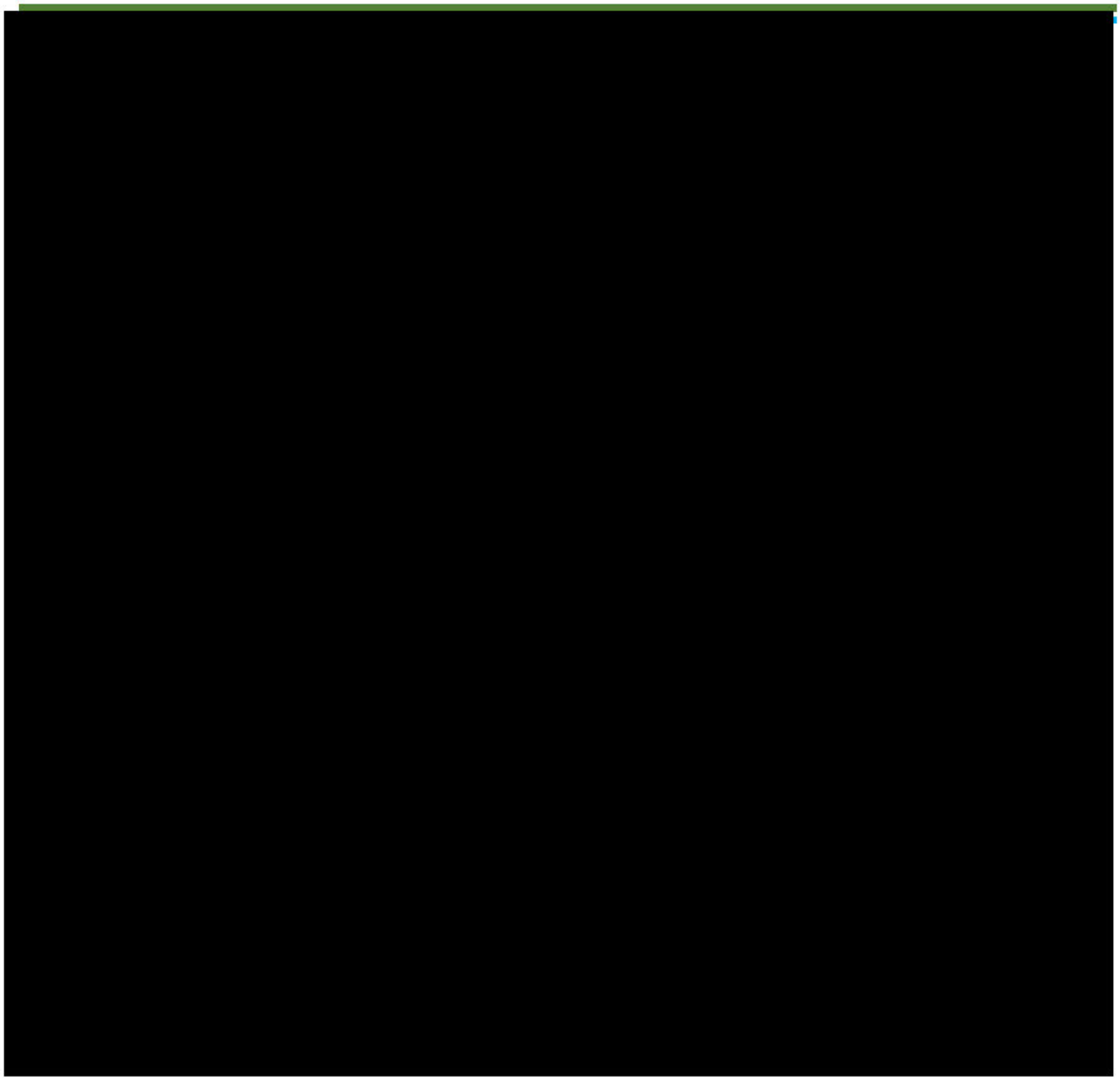














D. Initial Funding PAF:

Project Title: [redacted]	**Project Number: CD02343**
Date Prepared: 10/05/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Class(es) of Plant:** D Line
Project Initiator: [redacted]	**Project Category:** OVERLOADS-SPECIFIC PROJECTS
Project Manager: [redacted]	**Project Type:** OVERLOADS-SPECIFIC PROJECTS
Project Sponsor: [redacted]	**Capital Investment part of 5-year plan?** No
	Emergency Related Request? No
Total Request ($): $30k	**Authorization Type:** Initial Funding

1. Project Need Statement

[redacted]

[redacted]

Division: Western

District: Newtown

Town(s): Morris, Washington, Warren

2. Project Objectives

[redacted]. The initial requested amount is $30k.

Project Initiator:_____

Engineering Approval:_____