EVERSOURCE

Project Approval Form

| Project Title 11A56 Ringed Spacer Cable Replacement | Project Number: CD02036 |
|---|---|
| **Date Prepared:** 04/11/2023 | **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:** 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: 12/31/2023** | |
| **Total Capital Request: $2,040,052** | **Authorization Type:** Full Funding |

# 1. Executive Summary

The purpose of this project is to [redacted]

This project was detailed and designed for $1,327K but this ACT requests an amount of $2.040K. The additional costs primarily from the increased cost of contractor labor to complete this project. This area to be reconductored involves an area in Danbury feeding a large amount of commercial customers, so the additional labor costs include the overtime required to complete transitions and switching during off-hour daytimes. There is no change in scope to this project.

The total cost of the project will be $2,040.1 K:

- Project Location:
  - Division: Western
  - District Newtown AWC
  - Town: Danbury

## 2. Project Cost Summary

Note: Dollar values are in thousands.

| Capital Costs | Year 2023 | Year 2024 | Year 2025+ | Total |
|---|---|---|---|---|
| **Direct Capital Costs** | | | | |
| Internal Labor and Construction Equipment | $74.3 | $0 | $0 | $74.3 |
| Outside Services | $649.1 | $0 | $0 | $649.1 |
| Materials | $131.0 | $0 | $0 | $131.0 |
| Removals | $226.7 | $0 | $0 | $226.7 |
| Risk and Contingency | $185.5 | $0 | $0 | $185.5 |
| Other | 0.0 | $0 | $0 | 0.0 |
| Subtotal – Direct Costs | $1,266.6 | **$0** | **$0** | $1,266.6 |
| **Indirect Capital Costs** | | | | |
| Indirect/Overheads (including benefits) | $773.5 | $0 | $0 | $773.5 |
| Capitalized interest or AFUDC, if any | 0.0 | $0 | $0 | 0.0 |
| Subtotal – Indirect Costs | $773.5 | **$0** | **$0** | $773.5 |
| **Total Gross Capital Costs** | $2,040.1 | **$0** | **$0** | $2,040.1 |
| Customer Contribution | | **$0** | **$0** | |
| **Total Net Capital Project Costs** | $2,040.1 | **$0** | **$0** | $2,040.1 |

# 3. Technical Justification

## Background, Project Need/Justification, and Project Scope

### a. Background

[redacted]

### b. Project Need

[redacted]

**Major Material:**

- 5480’ of 556 spacer cable.
- 1x Radial Recloser (3ph)
- 24 Riser poles (class 2, 45’)

## c. Project Scope

In order to meet the above objectives, this project proposes the following:

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

# 4. Alternatives Considered

Option 1 replaces the defective spacer cable with open wire construction. Option 2, using spacer cable, was chosen over option 1 based on the field conditions.

**Project Option Comparison**

| | Option |
|---|---|
| [redacted] | |

| [redacted] | [redacted] | [redacted] |
|---|---|---|
| Estimate Type | Partial | Full |
| Capital Cost | $1.12M | $1.32M |
| Expense Cost | $0.02M | $0.03M |
| Total Cost | $1.14M | $1.33M |
| Cost / MVA added | N/A | N/A |
| Cost / CM Saved | $36.24/CM | $42.84/CM |
| Cost / CI Saved | $4,045.27/CI | $4,781.98/CI |
| Preferred option | | X |

## 5. Project Schedule

Add any additional milestones that are pertinent to the project

| Milestone/Phase Name | Estimated Date |
|---|---|
| 100% Detailed Engineering Completion | 7/2022 |
| Fully Funded | 4/11/2023 |
| Construction Start | 1/2023 |
| In Service Date | 4/2023 |

## 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. | 2022 | 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 | 2022 | Low | Design to minimize customer impact. Project Preplanning and customer/community outreach. |
| Internal construction 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. |
| Internal engineering resources not available to perform the work. | 2022 | Low | Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost. |
| Materials Shortage or long lead times | 2022 | High | Pre-order long lead time material; minimize the use of non-standard and non-stocked material. |
| Storm delays | 2022 | Low | If storm activity delays work, we may be forced to use external resources. |
| System abnormal configuration | 2022 | 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 | 2022 | 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 | 2022 | Low | Use of mats and specialty equipment, only work during certain times of the year. |

## 9. References

| References |
|---|
| 1. N/A |
| 2. |
| 3. |
| 4. |
| 5. |

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

| Attachment | Included in Submittal? |
|---|---|
| A. Cost Estimate | *YES* |
| B. Geographic Map | *YES* |
| C. System and Station One-Lines | *YES* |
| D. Load Sheet | *YES* |
| F. | |

**A. Cost Estimate**

Connecticut Light & Power
A Northeast Utilities Company

**Specific Project Proposal - Project #: CD02036**

[redacted]

Design Alternative CD02036-01

**Estimate**

Preliminary Estimate Summary

| | |
|---|---|
| Revision Number: | 0 |
| Contingency: | 24.00% |
| SubTotal: | $1,093,878 |
| Contingency Amount: | $262,531 |
| Estimate: | $1,356,409 |
| Reimbursement: | $0 |
| Net Amount: | **$1,356,409** |
| Description: | |

| Item Description | CU | [redacted] | Amount |
|---|---|---|---|
| SWITCHING<br>OH/DB/UG - SWITCHING NonNetwork - Average | 16-ALL17 | | $7,019.20 |
| OH WIRE<br>OH - Reconductor w/Spacer Cable - 556 kcmil | 16-OH29 | | $561,152.00 |
| OH WIRE<br>OH - Neutral | 16-OH31 | | $35,072.00 |
| OH WIRE<br>OH - Remove circuit wire (3 phase) | 16-OH37A | | $17,536.00 |
| SECTIONALIZE<br>OH - Recloser - 3ph | 16-OH38 | | $47,989.60 |
| POLE<br>DB/UG - Riser - 1ph | 16-UG145 | | $140,037.60 |
| POLE<br>DB/UG - Riser - 3ph | 16-UG146 | | $43,177.60 |
| TRAFFIC<br>OH/DB/UG - Traffic Control - Flagger<br>1 flagger | 16-ALL19 | | $10,000.00 |
| TRAFFIC<br>OH/DB/UG - Traffic Control - Police Officer<br>1 officer | 16-ALL18 | | $20,000.00 |

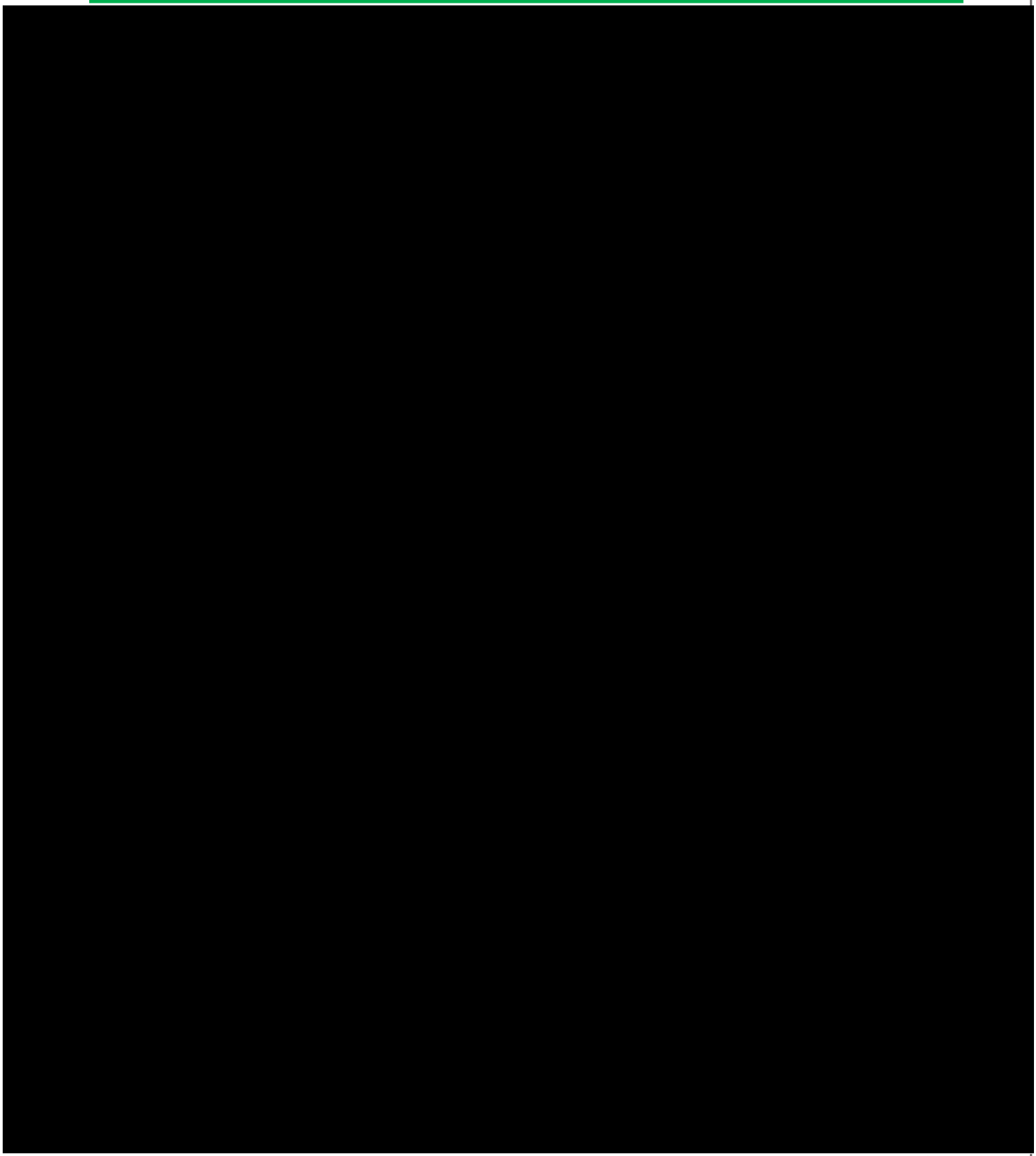
| Status | Type / SysID | Street / Cross St | Structure / Town | Circuit | Map | Cust | Notes |
|---|---|---|---|---|---|---|---|
| Existing | [redacted] | SOUTH ST | 4571 DANBURY | [redacted] | [redacted] | 135 | |
| Existing | [redacted] | ASSY PLAIN ST<br>ANSFIELD ST | 457 BETHEL | [redacted] | [redacted] | 0 | |
| Existing | [redacted] | HELTER ROCK RD<br>EE MAC AVE | 225 DANBURY | [redacted] | [redacted] | 1165 | |
| Existing | [redacted] | RIANGLE ST<br>TAYLOR ST | DANBURY | [redacted] | [redacted] | 151 | |
| Existing | [redacted] | w Street - TBD | | [redacted] | [redacted] | 0 | |

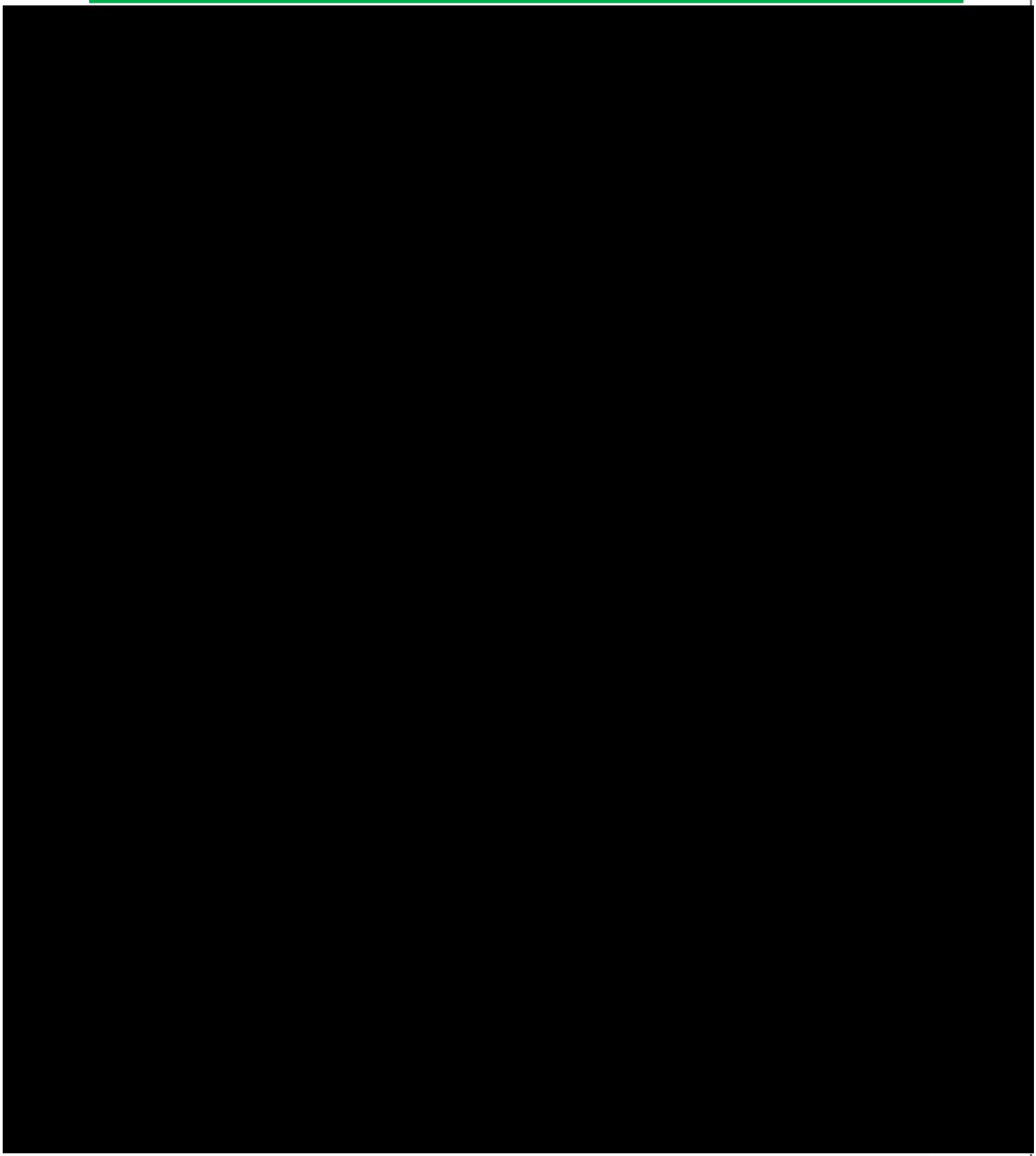
**B. Geographic Map**

[redacted]

[redacted]

[redacted]





EVERSOURCE

## Operations Project Authorization Form

| | |
|---|---|
| **Project Title:** 11A56 Ringed Spacer Cable Replacement | **Project Number:** CD02036 |
| **Date Prepared**: 04/11/2023 | **Company:** Eversource CT |
| **Organization:** Distribution Engineering | **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:** No |
| **Estimated in service date: 12/31/2023** | **Emergency Related Request?** Yes |
| **Eng./Constr. Resources Budgeted?** No | **Facility Type** (check all that apply): ☐ PTF ☐ non-PTF ☒ Distribution |
| **Total Gross Capital Request:** **$2,040,052** | **Authorization Type:** Full Funding |

### Executive Summary

[redacted]

This project was detailed and designed for $1,327K but this ACT requests an amount of $2.040K. The additional costs primarily from the increased cost of contractor labor to complete this project.
This area to be reconductored involves an area in Danbury feeding a large amount of commercial customers, so the additional labor costs include the overtime required to complete transitions and switching during off-hour daytimes. There is no change in scope to this project.

## Project Costs Summary

*Note: Dollar values are in thousands*

| Capital Costs | Prior Authorized | Year 2023 | Year 2024 | Year 2025+ | Total |
|---|---|---|---|---|---|
| **Direct Capital Costs** | | | | | |
| Internal Labor and Construction Equipment | $50 | 74.3 | 0.0 | 0.0 | 74.3 |
| Outside Services | $473 | 649.1 | 0.0 | 0.0 | 649.1 |
| Materials | $146 | 131.0 | 0.0 | 0.0 | 131.0 |
| Removals | $76 | 226.7 | 0.0 | 0.0 | 226.7 |
| Risk and Contingency | $65 | 185.5 | 0.0 | 0.0 | 185.5 |
| Other | $0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Subtotal – Direct Costs | $809 | 1,266.6 | 0.0 | 0.0 | 1,266.6 |
| **Indirect Capital Costs** | | | | | |
| Indirect/Overheads (including benefits) | $491 | 773.5 | 0.0 | 0.0 | 773.5 |
| Capitalized interest or AFUDC, if any | $27 | 0.0 | 0.0 | 0.0 | 0.0 |
| Subtotal – Indirect Costs | $518 | 773.5 | 0.0 | 0.0 | 773.5 |
| **Total Gross Capital Costs** | $1,327 | 2,040.1 | 0.0 | 0.0 | 2,040.1 |
| Customer Contribution | $0 | | | | |
| **Total Net Capital Project Costs** | $1,327 | 2,040.1 | 0.0 | 0.0 | 2,040.1 |

## Technical Justification:

**Project Need, Objective and Justification:**



**Project Scope:**

In order to meet the above objectives, this project proposes the following:

[redacted]

**Major Material:**

- 5480' of 556 spacer cable.
- 1x Radial Recloser (3ph)
- 24 Riser poles (class 2, 45')

**Background:**

[redacted]

## Alternatives Considered:

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

Alternatives were considered (please describe below)

**Project Option Comparison**

| | Option | |
|---|---|---|
| [redacted] | | |
| Cost | $1.12M | $1.32M |
| Cost / MVA added | N/A | N/A |
| Cost / CM Saved | $36.24/CM | $42.84/CM |
| Cost / CI Saved | $4,045.27/CI | $4,781.98/CI |
| Preferred option | | X |

## Regulatory Approvals:

*Are Regulatory body approvals needed for the project?*

No

If yes, provide detailed regulatory approvals

## Project Schedule

| Milestone/Phase Name | Estimated Date |
|---|---|
| 100% Engineering Completion | July 2022 |
| Construction Start | January 2023 |
| Testing/Commissioning | March 2023 |
| In Service Date | April 2023 |

## Risks and Risk Mitigation Plans

| Risk Event | Risk Horizon | Likelihood of Occurrence | Risk Mitigation |
|---|---|---|---|
| Actual cost higher than estimated due to scope changes. | 2022 | 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 | 2022 | Low | Design to minimize customer impact. Project Preplanning and customer/community outreach. |
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