EVERSOURCE

Project Approval Form

Project Title: CDOT #320-0016 Windsor Locks Railroad	Project Number: CD01931
Date Prepared: 10/02/2023	**Company:** Eversource CT
Organization: Electric System Operations	**Project Category:** Line Relocations/Act of Public Authority
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: $2,244K	**Authorization Type:** Full Funding

1. Executive Summary

- Project CD01931 was established to account for costs associated with a CDOT request to relocate Eversource electric facilities to accommodate upgrades to the Railroad station and track located along Main St in Windsor Locks. Since the project is a "Rail Facility Project" the cost of this project is non-reimbursable.

- The CDOT portion of this project includes approximately 600 ft of underground work and 1,600 ft of overhead work at a cost of $2,244K. [redacted].

- In addition to the CDOT portion of the project described above, the approved Partial Funding PAF included additional reconductoring work to address an [redacted] The cost of the additional work that was being proposed was $274K. This work has since been removed from this project and will be completed under a new project that will be created to accommodate future train infrastructure upgrades affecting Eversource's electrical facilities in the same area along Main St. where the reconductoring work was being proposed. The tentative date for this additional work is 2025.

- Project Location
  - Division: Central
  - District: Tolland AWC
  - City/Town: Windsor Locks

The Partial Funding estimate for this project was $1,099K and was approved at the 4/14/22 CTPAC. With the reduced scope of the project discussed above the Partial Funding has since been reduced to $825K. The full funding estimate with this reduced scope is $2,244K. The difference in cost equates to $1,419K, an increase of 172%.

There were no other scope changes in the project between the partial and full funding PAF documents. However, there was a significant increase in costs for the underground portion of the project due to the location of the work where two state roads intersect. The state severely restricted the work area each day due to traffic congestion. In addition, any trenching for the manholes and conduit had to repaired and filled in each day since metal plates were not allowed to be used by the state. Additionally, the Civil Contractor encountered unmarked utilities (drainage manhole) and were forced to reroute duct bank.

Other factors causing the increased cost are due to legacy estimating units used in the original estimate that did not account for increased costs related to both labor and material. The partial estimate did not assume contractor labor which would have increased the estimate by 30%. If 2023 estimating units were used along with a 30% contractor adder, the original estimate would have been $1,447K, or 64% of the full funding estimate.

2. Project Cost Summary

Note: Dollar values are in thousands.

Financial Evaluation ($000's)

Capital Costs	2023	Total
Internal Labor and Construction Equipment	154.5	154.5
Outside Services	842.5	842.5
Materials	132.0	132.0
Removals	105.7	105.7
Risk and Contingency	156.6	156.6
Other	0.0	0.0
Subtotal	**1,391.3**	**1,391.3**

Indirect Capital Costs	Year 1	Total
Indirects/Overheads (including benefits)	852.7	852.7
Capitalized interest or AFUDC, if any	0.0	0.0
Subtotal	**852.7**	**852.7**
Total Capital Costs (Gross)	**2,244.0**	**2,244.0**
Less Total Customer Contribution	**0.0**	**0.0**
Project Costs (Net of Reimbursement)	**2,244.0**	**2,244.0**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

- The work requested by the CDOT is on the backbone of the [redacted]

b. Project Need

- [redacted] at the request of the State to accommodate the expansion of the existing Train Station.
- Eversource has no choice but to accommodate this request but will upgrade the overhead and underground equipment in the process of meeting this request.

c. Project Scope

The scope of this project is as follows:

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

[redacted]

Major Material:

- 600 ft. of 1,000 Cu UG Cable
- 2 Precast Manholes
- 1,600 ft of 556 TW

4. Alternatives Considered

- [redacted]

[redacted]

[redacted]

5. Project Schedule

Milestone/Phase Name	Estimated Date
Partial Approval	April 2022
100% Detailed Engineering Completion	December 2022
Fully Funded	October 2023
Construction Start	June 2023
In Service Date	December 2023

6. Regulatory Decisions

No

7. Codes and Standards

N/A

8. Risk and Contingencies

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk / Mitigation
Actual cost higher than estimated due to scope changes.	2023	High	The Underground portion of this project has a higher risk of unknowns and overages.
Internal construction resources not available to perform the work.	2023	High	Plan external resources to complete this project. Use competitive bidding to ensure lowest outside labor cost.
Internal engineering resources not available to perform the work.	2022	Low	Internal resources tentatively planned to support this project, particularly within the areas of construction supervision, equipment settings.
Materials Shortage or long lead times	2023	Low	Pre-order material for the project; minimize the use of non-standard and non-stocked material. There should not be any long lead items in the project.
Storm delays	2023	Low	Contractors will manage weather delays as necessary.

System abnormal configuration	2023	Medium	Schedule work to minimize system abnormal time. Due to the work being constructed on the backbone, the cutovers to the new overhead and underground wires will need to be performed with planned switching.
Wetlands / Environmentally sensitive area	2023	Low	No wetlands or environmental sensitive areas have been identified in this project.

9. References

References
1. N/A

10. 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. Other: Load Summary Sheet	*YES*
F. Partial Funding PAF	*YES*

Attachment A. Cost Estimate

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD01931

CDOT #320-0016 Windsor Locks Railroad

Work Classification

Category: Line
Type: RBPR
Type Desc: LINE RELOCATIONS/ACT OF PUBLIC
Work Type:

Ownership / Management

AWC: Tolland
Statewide: No
Owner: [redacted]
Manager:

Project Information

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

Budget Summary - Preferred Option

CDOT Relocation and 336 TW and Getaway Cable Replacement

2022

ID	Title	Status	Rev #	Contingency	Expenditure Amount	Net Estimate
1	Main St UG Relocation	Draft	0	20%	$547,621	$547,621
2	Main St OH Relocation	Draft	0	20%	$277,812	$277,812
				2022 Total:	$825,433	$825,433

2023

ID	Title	Status	Rev #	Contingency	Expenditure Amount	Net Estimate
3	Reconductor 336 TW with 556 TW	Draft	0	24%	$157,963	$157,963
4	Replace Getaway Cable with 1,000 Cu	Draft	0	24%	$115,945	$115,945
				2023 Total:	$273,908	$273,908
				Total Project:	$1,099,341	$1,099,341

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD01931

CDOT #320-0016 Windsor Locks Railroad

Project Option Summary

ID	Description	Segments	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)	Prfrd
O1	CDOT OH and UG Relocation	1,2	$825,433	$0	100%	$0.00	$0.00	☐
O2	CDOT Relocation and 336 TW and Getaway Cable Replacement	1,2,3,4	$1,099,341	$0	100%	$0.00	$0.00	☑
O3	CDOT Relocation and Complete Reconductoring and Getaway Cable Replacement	1,2,3,4,5	$1,428,920	$0	100%	$0.00	$0.00	☐

Segments

ID	Title	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)
1	Main St UG Relocation	$547,621			$0.00	$0.00
2	Main St OH Relocation	$277,812			$0.00	$0.00
3	Reconductor 336 TW with 556 TW	$157,963			$0.00	$0.00
4	Replace Getaway Cable with 1,000 Cu	$115,945			$0.00	$0.00
5	Reconductor 336 AAC with 556 TW	$329,579			$0.00	$0.00

Asset & Investment Management System 4/5/2022 Page 2 of 13

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Specific Project Proposal - Project #: CD01931

CDOT #320-0016 Windsor Locks Railroad

Background / Scope

Issue:

The CDOT has requested Eversource to relocate our electrical facilities to accommodate upgrades to the train station located on Main St in Windsor Locks, CT.

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 #:

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Specific Project Proposal - Project #: CD01931

CDOT #320-0016 Windsor Locks Railroad

Design Alternative CD01931-01

General Information

Segment: 1 - Main St UG Relocation Status: Draft

Segment Type: RELOCATION - OH SPECIFIC Town: WINDSOR LOCKS Budget Year: 2022

Work Type: Other Trimming Required: ☐ In Service Date: 12/31/2022

Description: Install 600 ft of UG facilities including 6-6 inch conduits and 2 manholes with 2 riser poles and 2 sweeps to 2 other poles.

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Connecticut Light & Power
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Specific Project Proposal - Project #: CD01931

CDOT #320-0016 Windsor Locks Railroad

Design Alternative CD01931-01

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	20.00%
SubTotal:	$456,351
Contingency Amount:	$91,270
Estimate:	$547,621
Reimbursement:	$0
Net Amount:	**$547,621**
Description:	Install 600 ft manhole/duct system

Item Description	CU	[redacted]	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17		$3,509.60
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18		$60,000.00
CONDUIT UG-Ductline-up to 12 duct - Traveled Way / Paved	16-UG137		$187,680.00
ENCLOSURE UG - MANHOLE - Precast	16-UG139		$125,972.80
POLE DB/UG - Riser - 3ph	16-UG146		$21,588.80
UG CABLE DB/UG - 750/1000 - 3-1/C (3ph) Cu 1000 Cu	16-UG114B		$57,600.00

Associated / Impacted Devices

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

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Specific Project Proposal - Project #: CD01931

CDOT #320-0016 Windsor Locks Railroad

Design Alternative CD01931-02

General Information

Segment: 2 - Main St OH Relocation Status: Draft

Segment Type: RELOCATION - OH SPECIFIC Town: WINDSOR LOCKS Budget Year: 2022

Work Type: BB-Reconductoring Trimming Required: ☐ In Service Date: 12/31/2023

Description: Relocate and reconductor approximately 1,600 ft of OH facilites from pole #652 to pole #28029 and then from pole #11690 to pole #890.

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 #: CD01931

CDOT #320-0016 Windsor Locks Railroad

Design Alternative CD01931-02

Estimate

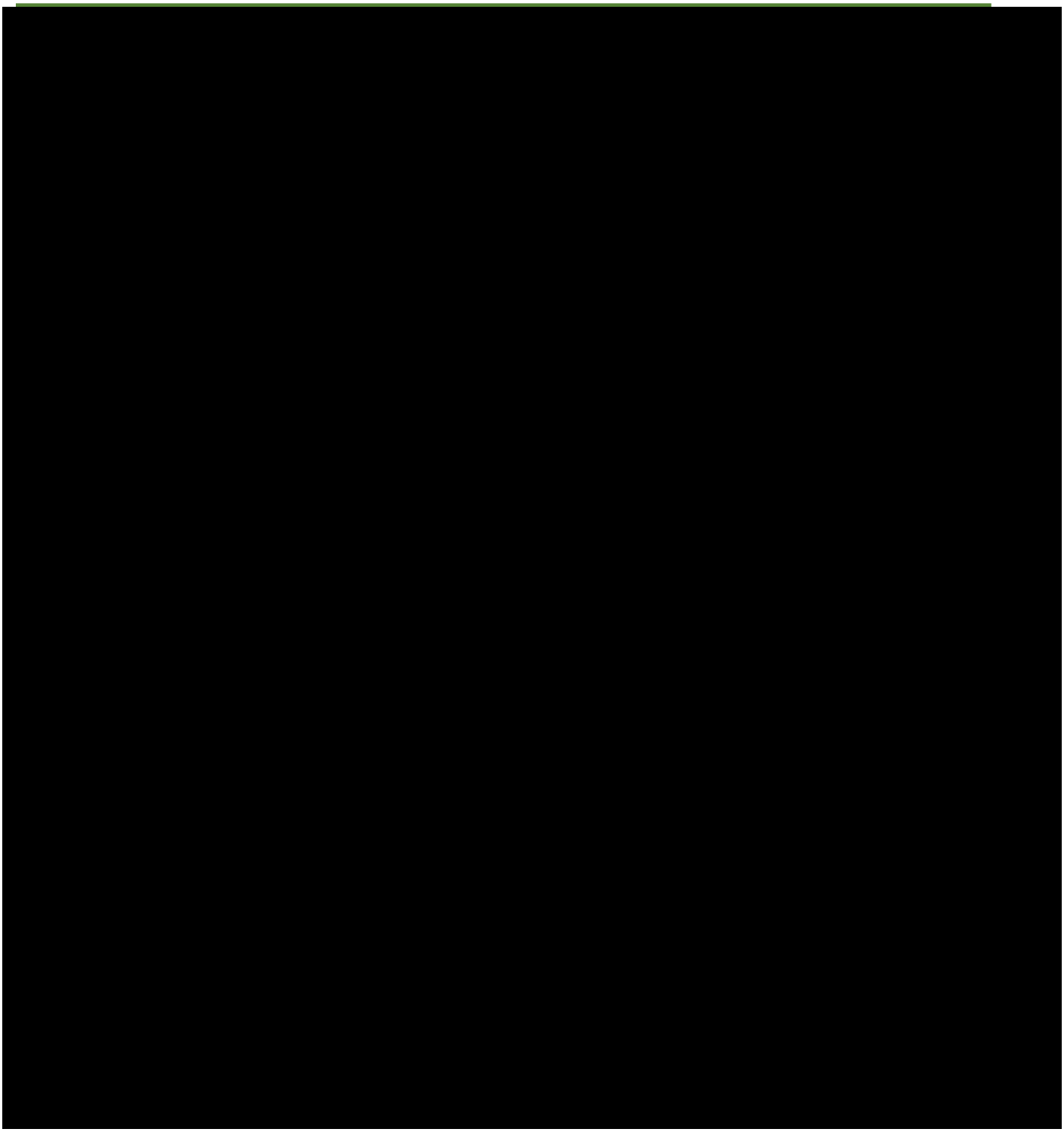
	Preliminary Estimate Summary
Revision Number:	0
Contingency:	20.00%
SubTotal:	$231,510
Contingency Amount:	$46,302
Estimate:	$277,812
Reimbursement:	$0
Net Amount:	$277,812

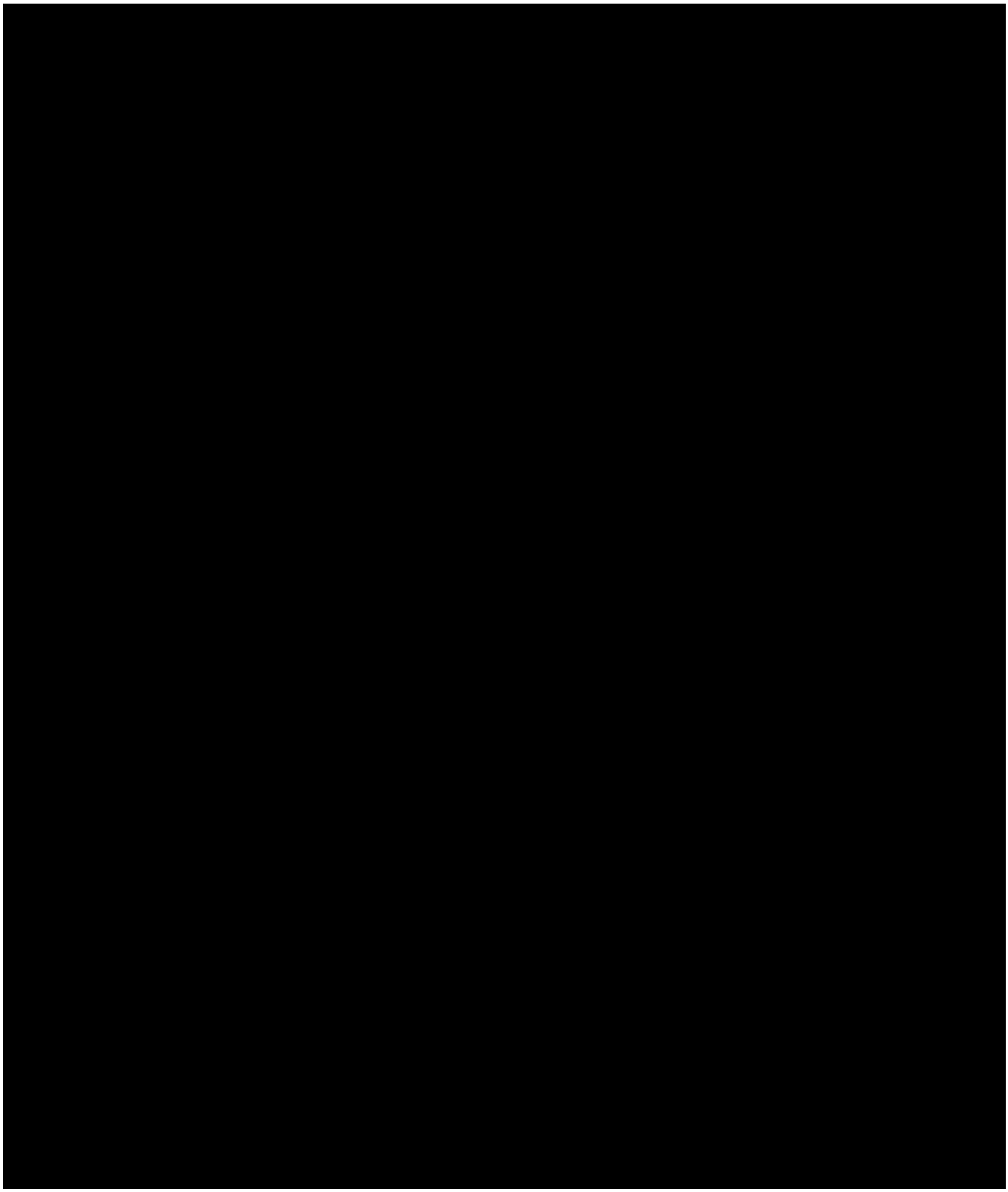
Description: Relocate and reconductor approximately 1,600 ft.

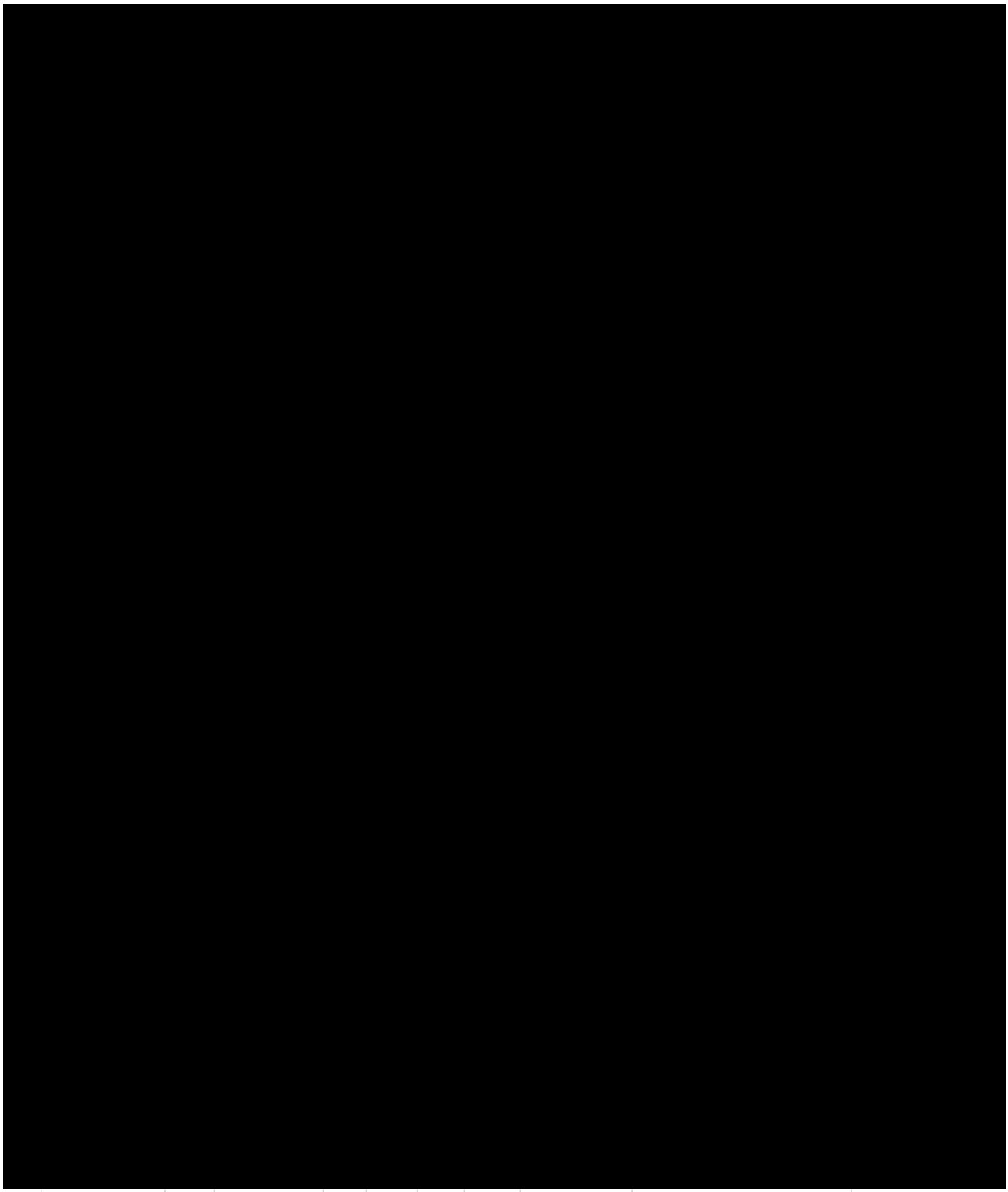
Item Description	CU	[redacted]	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17		$3,509.60
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18		$30,000.00
OH WIRE OH - Line Extension - 3ph (556 kcmil)	16-OH34		$192,000.00
OTHER OTHER 1 Transformer, 1 capacitor and 4 side tap shifts	16-ALL14		$6,000.00

Associated / Impacted Devices

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







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APS 1 - Project Authorization Policy

Appendix 2
Operations Project Authorization Form

Operations Project Authorization Form

Project Title: CDOT #320-0016 Windsor Locks Railroad	**Project Number: CD01931**
Date Prepared: 04/14/2022	**Company:** Eversource CT
Organization: EFO	**Class(es) of Plant:** D Line
Project Initiator [redacted]	**Project Category: Line**
Project Manager: [redacted]	**Project Type:** Specific
Project Sponsor [redacted]	**Capital Investment part of original Operating Plan:** No
Estimated in service date: 3/31/2023	**Emergency Related Request?** No
Eng./Constr. Resources Budgeted? No	**Facility Type** (check all that apply): ☐ PTF ☐ non-PTF ✓ Distribution
Total Gross Capital Request: $1,067,000	**Authorization Type:** Initial Funding

Executive Summary

The CDOT has requested Eversource to relocate our electric facilities to accommodate upgrades to the train station located on Main St in Windsor Locks. Due to the cost of the relocations, Project #CD01931 is being established. Since the project is a "Rail Facility Project" as described in the attached, the cost of this project is non-reimbursable.

CT Guidelines for Reimbursement for U

[redacted] This additional work is being proposed under this project at an additional cost of $274K.

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APS 1 - Project Authorization Policy

Appendix 2
Operations Project Authorization Form

Project Costs Summary

See APS3 and APS8 requirements and consult with Plant Accounting for capital/O&M determination. Use published loaders for benefits, materials, and invoices, maintained by the Director, Budget and Internal Reporting.
Note: Dollar values are in thousands

Capital Costs	Year 1	Year 2	Year 3+	Total
Internal Labor and Construction Equipment	$50	$17	$0	$67
Outside Services	$335	$111	$0	$447
Materials	$110	$37	$0	$147
Removals	$56	$19	$0	$74
Risk and Contingency	($135)	($45)	$0	($180)
Other	$0	$0	$0	$0
Subtotal	**$416**	**$138**	**$0**	**$554**

Indirect Capital Costs	Year 1	Year 2	Year 3+	Total
Indirects/Overheads (including benefits)	$355	$124	$0	$479
Capitalized interest or AFUDC, if any	$17	$6	$0	$22
Subtotal	**$372**	**$129**	**$0**	**$501**
Total Capital Costs (Gross)	**$788**	**$267**	**$0**	**$1,055**
Less Total Customer Contribution	**$0**	**$0**	**$0**	**$0**
Project Costs (Net)	**$788**	**$280**	**$0**	**$1,067**

Technical Justification:

Project Need, Objective and Justification

The purpose of this project is to relocate our overhead and underground facilities along Main St in Windsor Locks at the request of the State to accommodate the expansion of the existing Train Station.

Eversource has no choice but to accommodate this request but will upgrade our overhead and underground equipment in the process of meeting this request.

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APS 1 - Project Authorization Policy

Appendix 2
Operations Project Authorization Form

Project Scope

[redacted]

CDOT Railroad Work

The request to relocate our facilities encompasses approximately 600 ft of underground equipment and 1,600 ft of overhead equipment.

[redacted]

Contingency Overload Work

[redacted]

Background

[redacted]

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APS 1 - Project Authorization Policy

Appendix 2
Operations Project Authorization Form

Major Material:

1,300 ft. of 1,000 Cu UG Cable
2 Precast Manholes
2,900 ft of 556 TW

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

Project is a compliance obligation with alternatives considered (please describe below)

[redacted]

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	5/31/2022
Construction Start	7/1/2022
Testing/Commissioning	12/31/2022
In Service Date	3/31/2023

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APS 1 - Project Authorization Policy

Appendix 2
Operations Project Authorization Form

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	The Underground portion of this project has a higher risk of unknowns and overages.
Internal construction resources not available to perform the work.	2022	High	Plan external resources to complete this project. Use competitive bidding to ensure lowest outside labor cost.
Internal engineering resources not available to perform the work.	2022	Low	Internal resources tentatively planned to support this project, particularly within the areas of construction supervision, equipment settings.
Materials Shortage or long lead times	2022	Medium	Pre-order material for the project; minimize the use of non-standard and non-stocked material. There should not be any long lead items in the project.
Storm delays	2022	Low	Contractors will manage weather delays as necessary.
System abnormal configuration	2022	Medium	Schedule work to minimize system abnormal time. Install temporary bypasses/equipment if system will be abnormal for extended periods. Schedule the work outside of the summer peak season if possible.
Wetlands / Environmentally sensitive area	2022	Low	Use of mats and specialty equipment, only work during certain times of the year.

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APS 1 - Project Authorization Policy

Appendix 2
Operations Project Authorization Form

References

CD01931 Project Need Statement - CDI

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

Windsor Locks CDOT Project Area Diagram

CDOT 320-016 Pole and manhole relocatic

CD01931 Project Load summary.xlsx

Windsor Locks CDOT Project Area One Line

Policy Sponsor: EVP and CFO

Issued 12/31/21
Rev. 6