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Project Approval Form

Project Title [redacted] Contingency Overload	**Project Number:** CD01451
Date Prepared: 01/24/2024	**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: 06/01/25	
Total Capital Request: $8,780K	**Authorization Type:** Full Funding

1. Executive Summary

Full funding is now being requested for this project at a cost of $8,780K, which is 110% of the approved partial funding of $8,010K. There is no scope change in the project.

[redacted] will be done as outlined in the Project Scope.

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	12.9	307.0		319.8
Outside Services	97.9	2,337.9		2,435.8
Materials	74.3	1,775.0		1,849.3
Removals	13.5	325.3		338.8
Risk and Contingency	31.0	767.2		798.2
Other	0.0	0.0		0.0
Subtotal – Direct Costs	**229.6**	**5,512.3**		**5,741.9**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	111.3	2,926.7		3,038.0
Capitalized interest or AFUDC, if any	0.0	0.0		0.0
Subtotal – Indirect Costs	**111.3**	**2,926.7**		**3,038.0**
Total Gross Capital Costs	**340.9**	**8,439.0**		**8,780**
Customer Contribution				
Total Net Capital Project Costs	**340.9**	**8,439.0**		**8,780**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

[redacted]

b. Project Need

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

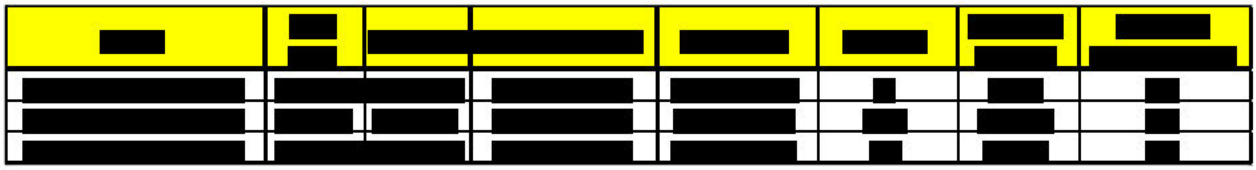
[redacted]

[redacted]



[redacted]

[redacted]



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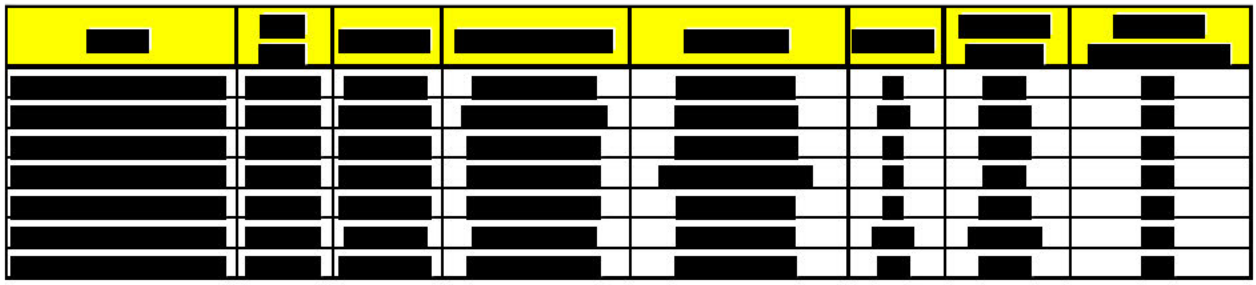


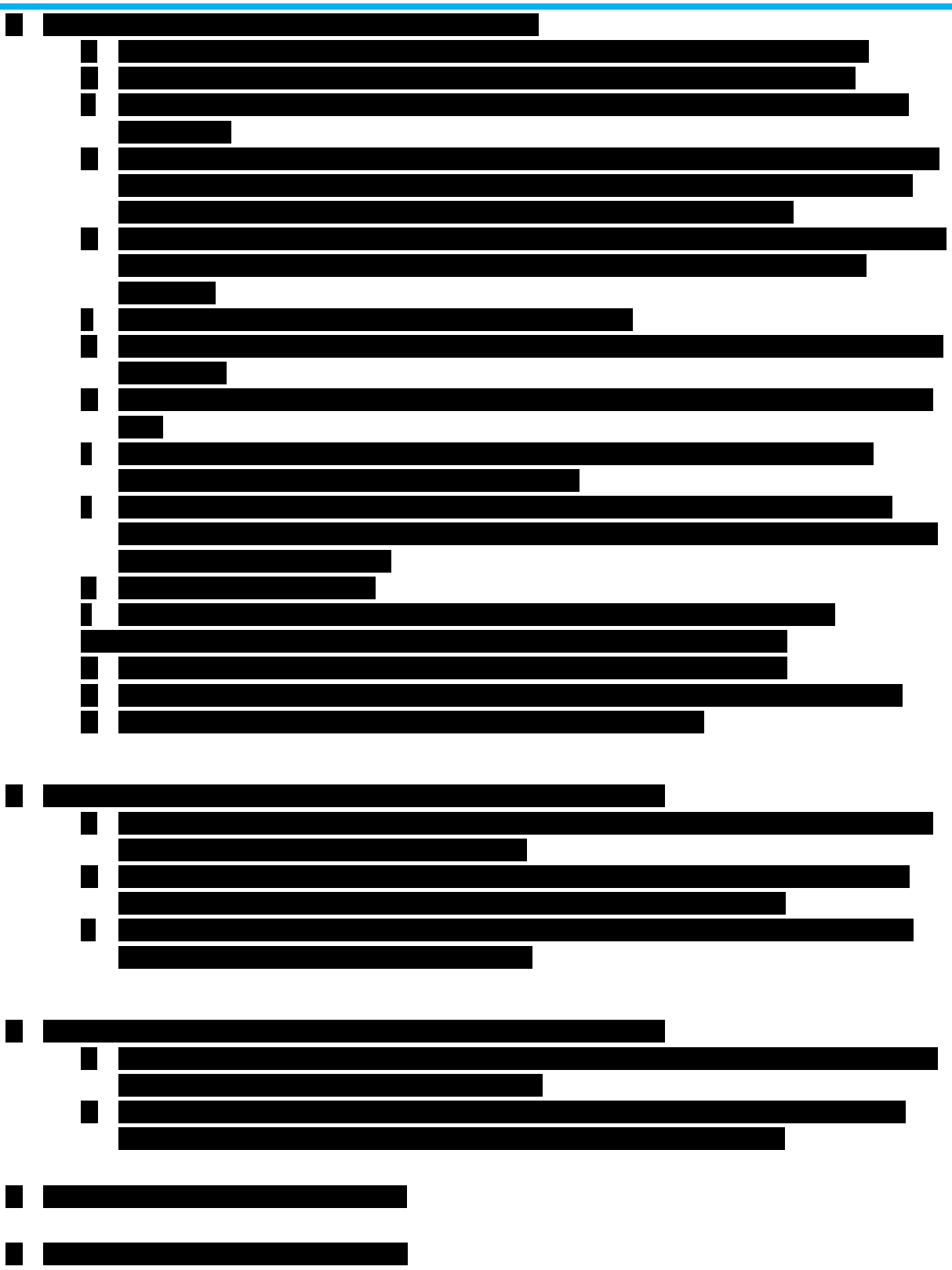
c. Project Scope

The main objectives of this project are as follows:

- [redacted]

The scope is as follows:

- [redacted]



4. Alternatives Considered

Project Option Comparison

[redacted]

Authorization Type	Full	Partial*	Partial*	Partial*
Capital Cost	$8,780K	$11,735K	$8,616K	$6,510K

Total Cost / MVA added	$182,917/MVA	$244,479/MVA	$179,500/MVA	$233,848/MVA
Preferred option	X			

*Partial Estimate Options were presented to the SDC committee.

[redacted]

[redacted]

5. Project Schedule

Add any additional milestones that are pertinent to the project

Milestone/Phase Name	Estimated Date
Partial Approval	September 2022
100% Detailed Engineering Completion	October 2023
Fully Funded	January 2024
Construction Start	March 2024
In Service Date	June 2025

6. Regulatory Decisions

N/A

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.	2025	Medium	Included contingency costs in the funding request. Perform detailed Field Analysis and walk down in project development to avoid potential issues.
Internal construction resources not available to perform the work.	2025	High	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
System abnormal configuration	2025	Low	Schedule work to minimize system abnormal time. Most of this work will require system to be abnormal for any extended period of time.

9. References

References
1. N/A

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

Attachment	Included in Submittal?
A. Cost Estimate	*YES*
B. Geographic Map	*YES*
C. One-Line Diagram	*YES*
D. Substation Layout	*YES*
E. Load Sheet	*YES*
F. Partial Funding PAF	*YES*

Attachment A: Cost Estimate

Segment 2 – Create Loop Scheme between the 22N5 and 22N2

Design Alternative CD01451-02

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$180,317
Contingency Amount:	$50,489
Estimate:	$230,806
Reimbursement:	$0
Net Amount:	**$230,806**
Description:	

Item Description	CU	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17	$7,019.20
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18	$20,000.00
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph	16-OH43	$20,566.40
OTHER OTHER 20% Contingency	16-ALL14	$36,752.00
SECTIONALIZE OH - Recloser - 3ph Install new one-way TR on pole 550-42. Nomenclate [redacted]	16-OH38	$47,989.60
SECTIONALIZE OH - Recloser - 3ph Install new SR on pole 569-12 on Grove St. Nomenclate [redacted]	16-OH38	$47,989.60

Segment 12 – Create [redacted]

Design Alternative CD01451-12

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$167,758
Contingency Amount:	$46,972
Estimate:	$214,730
Reimbursement:	$0
Net Amount:	**$214,730**
Description:	

Item Description	CU	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17	$7,019.20
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18	$10,000.00
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph	16-OH43	$20,566.40
OTHER OTHER 20% Contractor Contingency	16-ALL14	$34,193.00
SECTIONALIZE OH - Recloser - 3ph Install SR on pole 569-12 on Grove St. Nomenclate [redacted]	16-OH38	$47,989.60
SECTIONALIZE OH - Recloser - 3ph Install TR on pole 600 on Danbury Rd. Nomenclate [redacted]	16-OH38	$47,989.60

Segment 22 – [redacted]

Design Alternative CD01451-22

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	32.00%
SubTotal:	$3,595,074
Contingency Amount:	$1,150,424
Estimate:	$4,745,497
Reimbursement:	$0
Net Amount:	**$4,745,497**

Description:

Item Description	CU	Amount
POLE OH - POLE - 3ph (Telephone custodian)	16-OH12	$195,800.00
POLE OH - POLE - 3ph (CL&P custodian)	16-OH14	$289,912.00
POLE OH - JUNCTION POLE - 3ph (CL&P custodian)	16-OH14A	$58,452.00
OH WIRE OH-Install Aerial Cable-existing poles (any gauge)	16-OH36	$1,840,000.00
SECTIONALIZE OH - Recloser - 3ph	16-OH38	$95,979.20
SECTIONALIZE OH - Recloser Control - setting changes only	16-OH39A	$4,885.60
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph	16-OH43	$41,132.80
UG CABLE DB/UG - 750/1000 - 3-1/C (3ph) Cu	16-UG114B	$28,800.00
OTHER OTHER 20% Contractor Contigency	16-ALL14	$582,512.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Reconductor 7,400' of 1/0 & 336 AL TW with 556 AL TW - [redacted]	16-OH25	$177,600.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Reconductor 7,500' of 1/0 AL TW with 556 AL TW - [redacted]	16-OH25	$180,000.00
OTHER OTHER Tree Trimming	16-ALL14	$100,000.00

Project Approval Form

Segment 23 – [redacted]

Design Alternative CD01451-23

Estimate

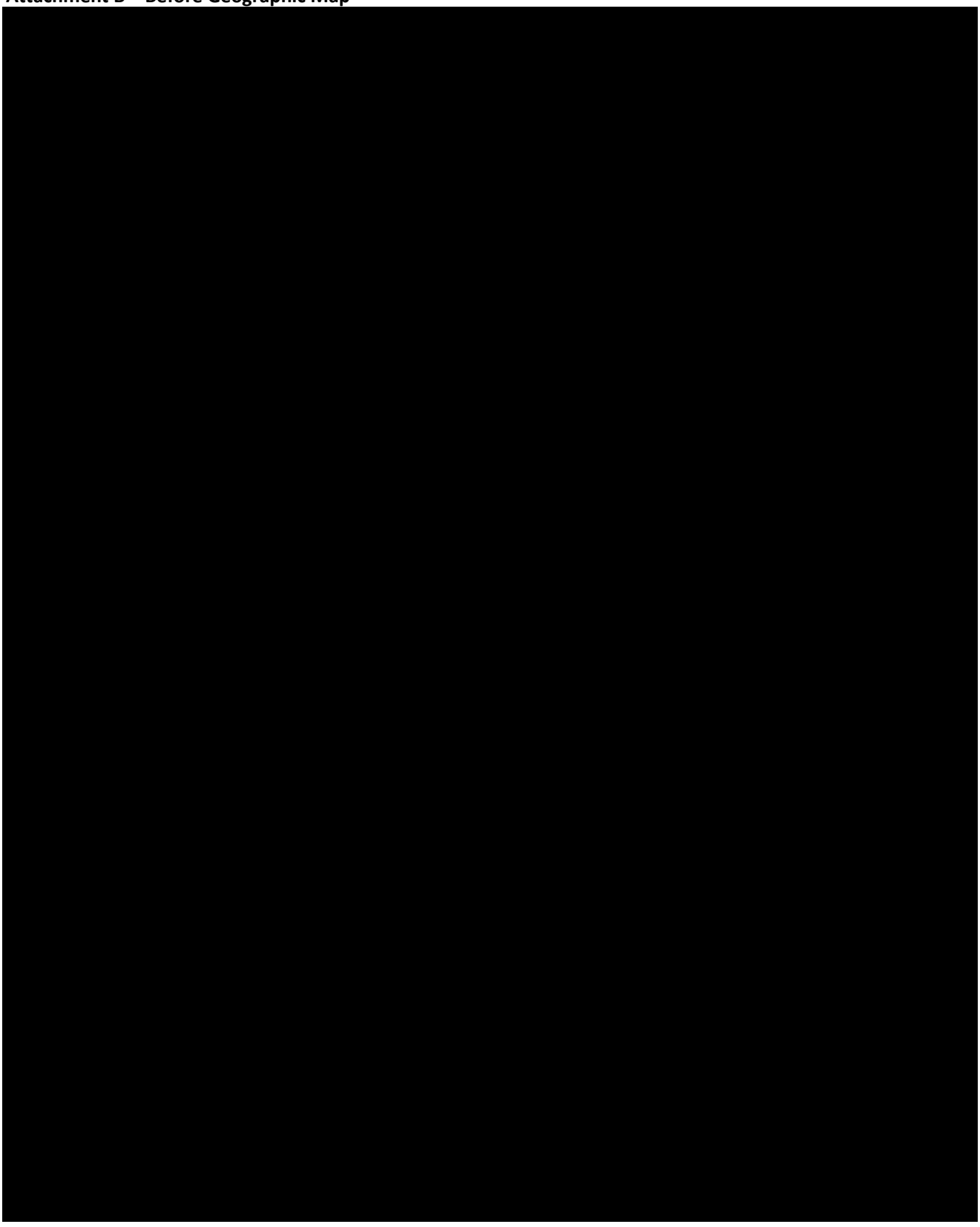
	Preliminary Estimate Summary
Revision Number:	0
Contingency:	32.00%
SubTotal:	$2,338,652
Contingency Amount:	$748,369
Estimate:	$3,087,021
Reimbursement:	$0
Net Amount:	**$3,087,021**
Description:	

Item Description	CU	Amount
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18	$50,000.00
POLE OH - POLE - 3ph (CL&P custodian)	16-OH14	$121,576.00
POLE OH - JUNCTION POLE - 3ph (CL&P custodian)	16-OH14A	$58,452.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-3ph- 556 kcmil	16-OH27	$473,360.00
OH WIRE OH - Remove circuit wire (3 phase)	16-OH37A	$19,520.00
SECTIONALIZE OH - Recloser - 3ph	16-OH38	$143,968.80
SECTIONALIZE OH - Recloser Control - setting changes only	16-OH39A	$9,771.20
SECTIONALIZE OH - Remove Recloser (any)	16-OH42	$5,656.00
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph	16-OH43	$41,132.80

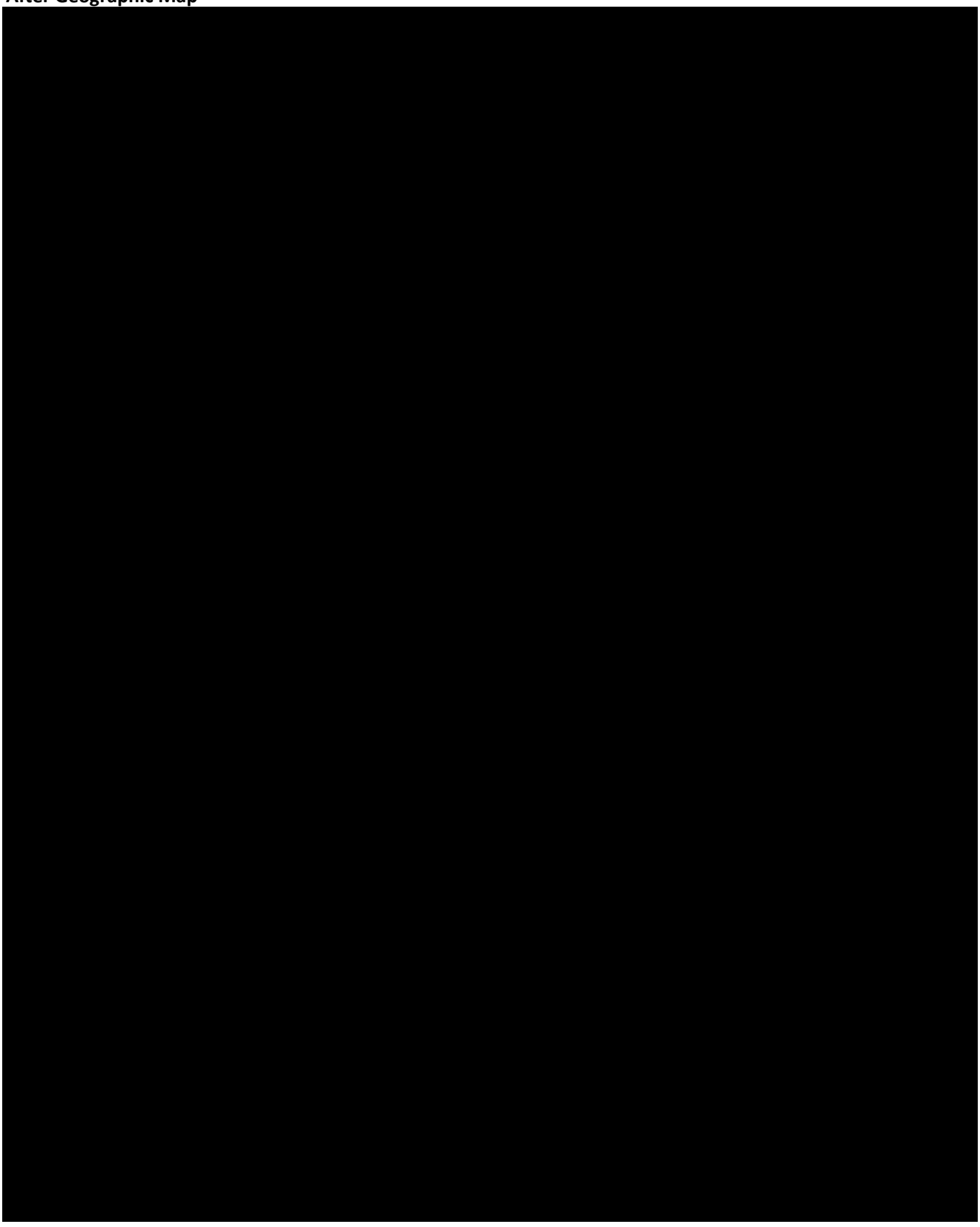
[redacted]

SECTIONALIZE OH - GOAB Switch	16-OH44	[redacted]	$20,566.40
TREE OH - Tree Trimming	16-OH61		$66,000.00
UG CABLE DB/UG - 750/1000 - 3-1/C (3ph) Cu	16-UG114B		$163,200.00
CONDUIT UG-Ductline-up to 12 duct - Traveled Way / Paved	16-UG137		$500,480.00
ENCLOSURE UG - MANHOLE - Precast	16-UG139		$188,959.20
OTHER OTHER 20% Contractor Contingency	16-ALL14		$476,010.00

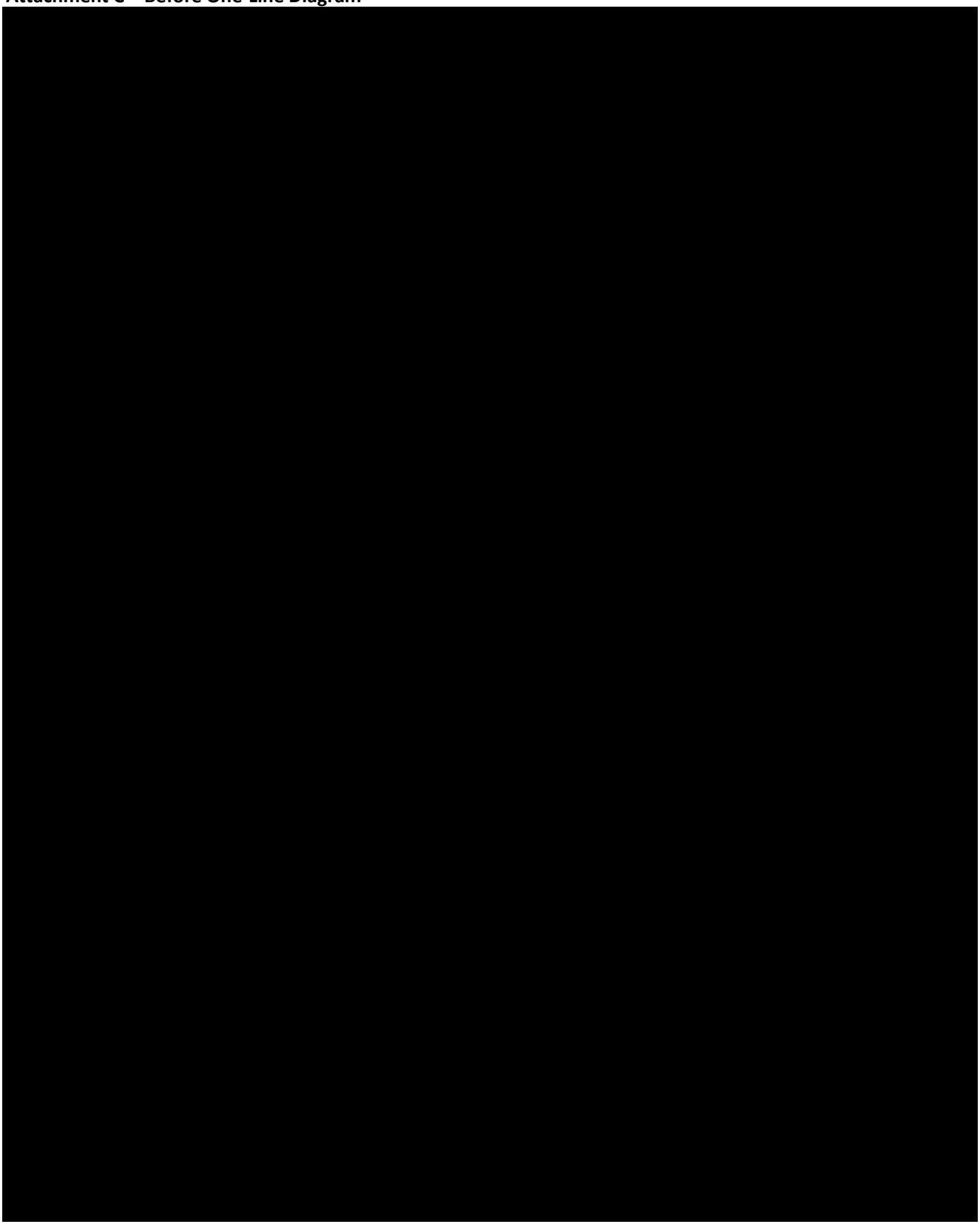
Attachment B – Before Geographic Map



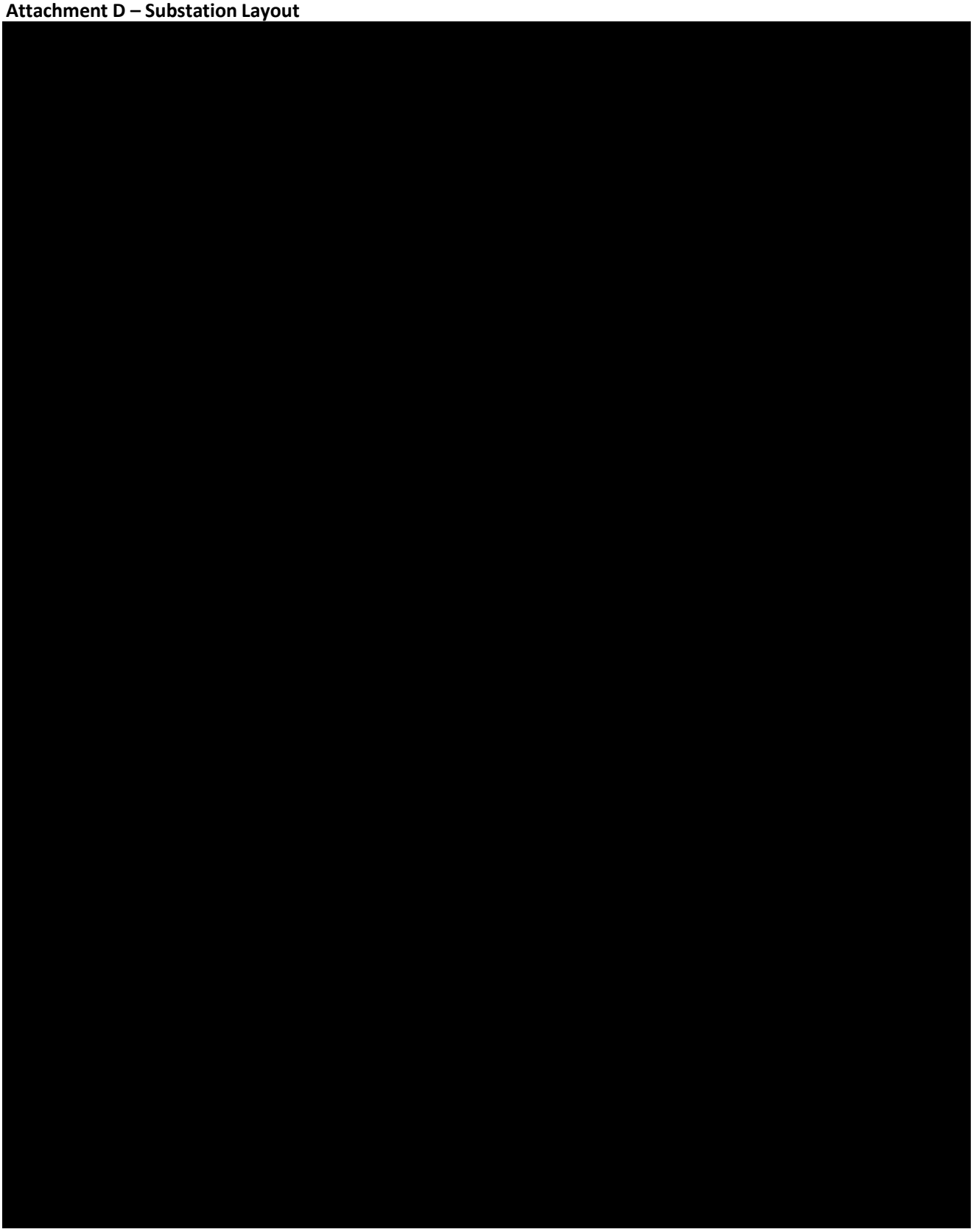
After Geographic Map



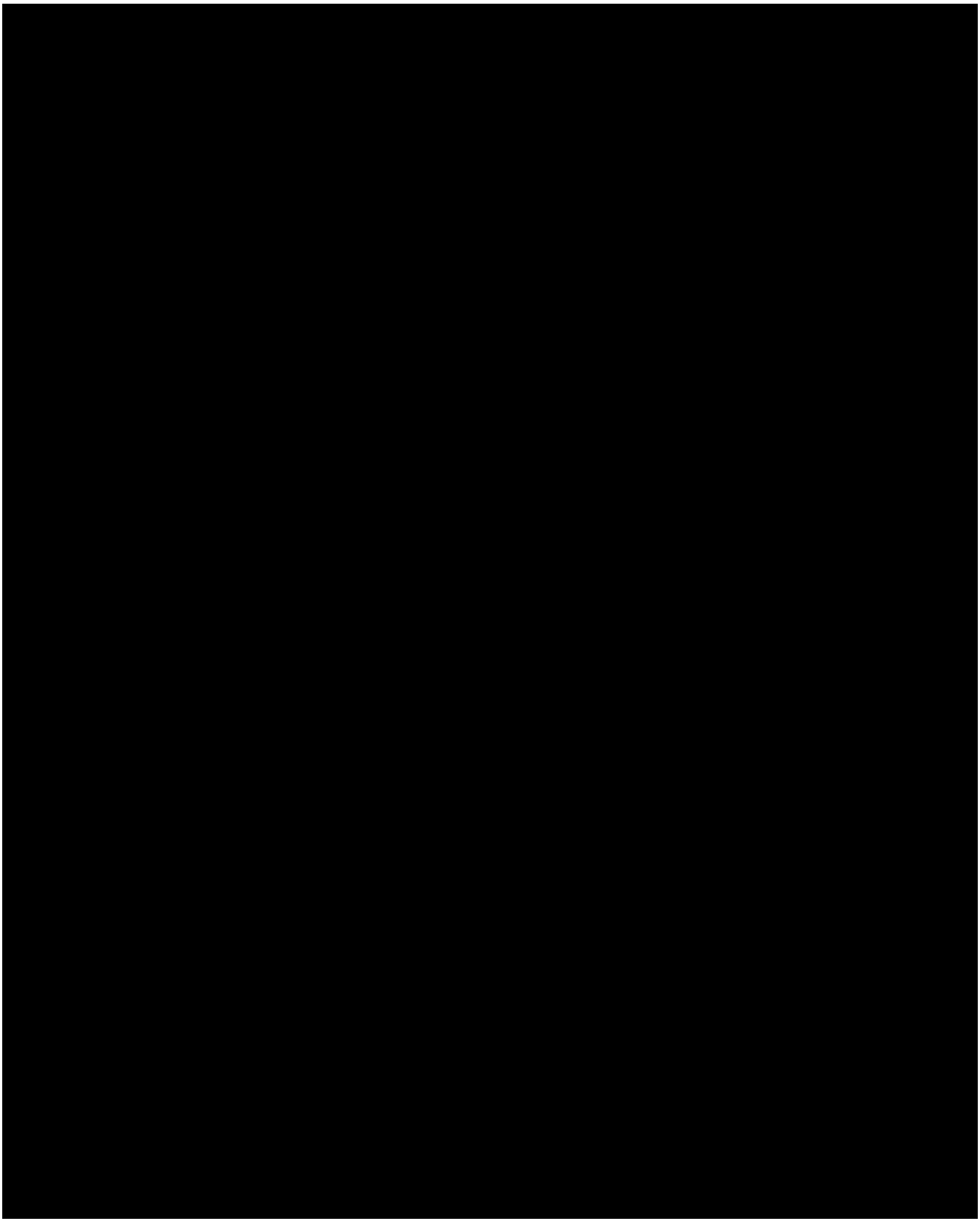
Attachment C – Before One-Line Diagram



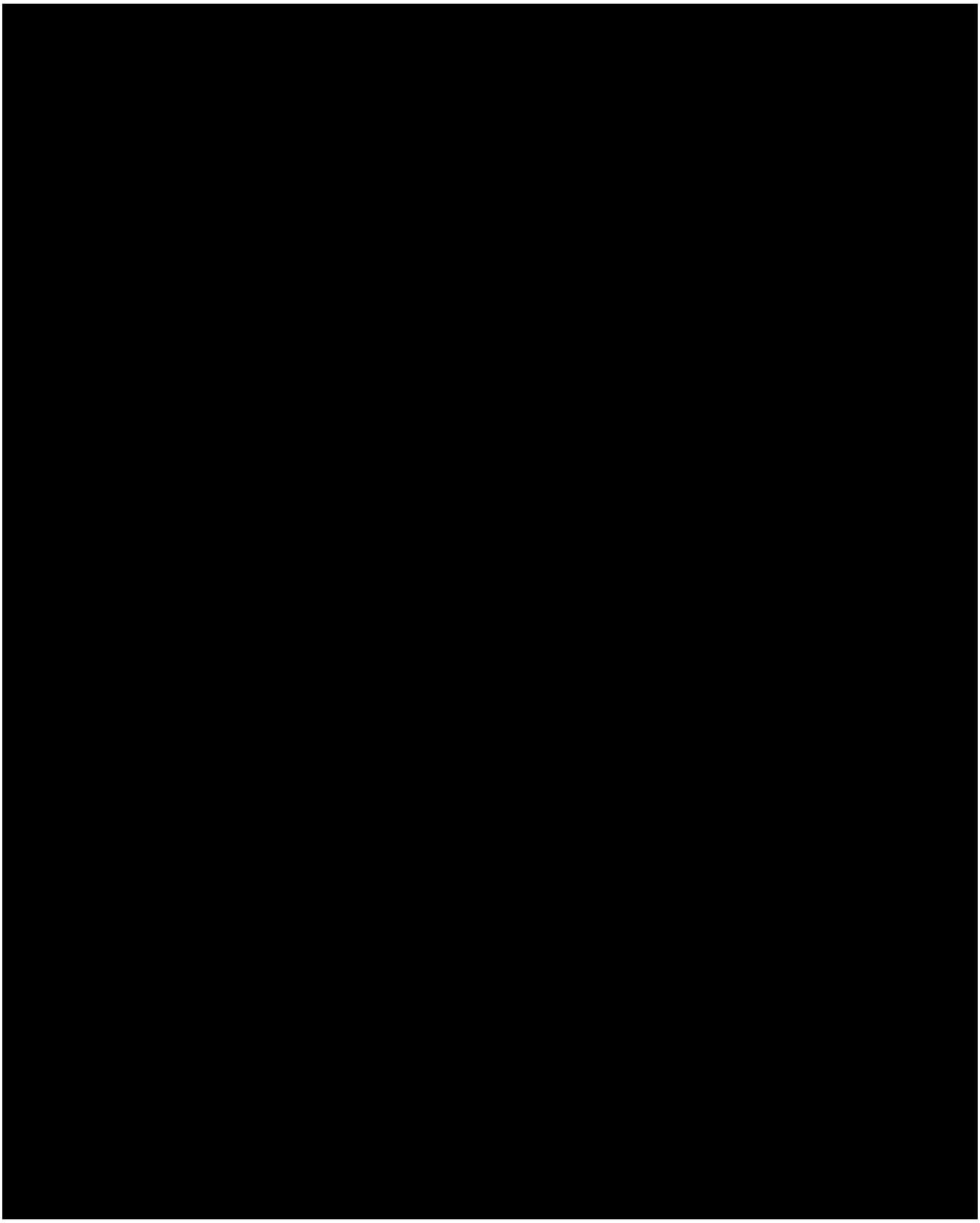
Attachment D – Substation Layout



Attachment E – Before Load Sheet



After Load Sheet



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Operations Project Authorization Form

Project Title: [redacted]ontingency Overloads	**Project Number: CD01451**
Date Prepared: 08/23/2022	**Company:** Eversource CT
Organization: Electric Field Operations	**Class(es) of Plant:** D Line
Project Initiator: [redacted]	**Project Category:** OVERLOADS-SPECIFIC PROJECTS
Project Manager: [redacted]	**Project Type:** Specific
Project Sponsor: [redacted]	**Capital Investment part of original Operating Plan:** No
Estimated in service date: 12/31/2025	**Emergency Related Request?** No
Eng./Constr. Resources Budgeted? No	**Facility Type** (check all that apply)**:** ☐ PTF ☐ non-PTF X Distribution
Total Gross Capital Request: $8,109K	**Authorization Type:** Initial Funding

Executive Summary

[redacted]

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[redacted]

Project Costs Summary

Note: Dollar values are in thousands

Capital Costs	Year 2024	Year 2025	Year 2026+	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	$18	$312	$0	$330
Outside Services	$149	$2,615	$0	$2,764
Materials	$85	$1,499	$0	$1,584
Removals	$18	$323	$0	$341
Risk and Contingency	($0.221)	($3.878)	$0	($4.01)
Other	$0	$0	$0	$0
Subtotal	**$270**	**$4,745**	**$0**	**$5,015**
Indirect Capital Costs				
Indirects/Overheads (including benefits)	$155	$2,730	$0	$2,885
Capitalized interest or AFUDC, if any	$11	$197	$0	$208
Subtotal – Indirect Costs	**$166**	**$2,927**	**$0**	**$3,093**
Total Gross Capital Costs	**$436**	**$7,673**	**$0**	**$8,109**
Customer Contribution	**$0**	**$0**	**$0**	**$0**
Total Net Capital Project Costs	**$436**	**$7,673**	**$0**	**$8,109**

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Technical Justification:

[redacted]

Project Objectives

The main objectives of this project are as follows.

- [redacted]

Project Scope

To meet the above objectives, the scope of the project proposes the following:

- [redacted]

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[redacted]

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Background

[redacted]

[redacted]

[redacted]

[redacted]

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Device	Start Time	Start Date	Restoration Time	Cause Type	Duration	Customer Minutes	Customer [redacted]
[redacted]	[redacted]:06 AM	3/30/2018	3/30/2018 8:31	Veh Accident	25	10000	[redacted]
	[redacted]:04 AM	8/4/2020	8/9/2020 12:36	Tree Related	7112	6123432	
	[redacted]:11 AM	6/30/2021	6/30/2021 4:14	Equip Failure	123	113775	

[redacted]

[redacted]

[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
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Alternatives Considered:

Alternatives were considered (please describe below)

Option 2: Install new duct system for the 22N9

[redacted]

- [redacted]

[redacted]

[redacted]

- [redacted]

[redacted]

Option 4 – Upgrade OH and UG Conductors and Install new loop schemes

[redacted]

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Option Chart

[redacted]

Cost/MVA Added	$268,417/MVA	$347,916/MVA	$281,067/MVA	$241,007/MVA	$256,250/MVA
Substaion Cost	$4.6M	$4.6M	$4.6M	-	-
Distribution Cost	$8.3M	$12.1M	$8.9M	-	-
Total Cost	$12.9 Million	$16.7 Million	$13.5 Million	$6.7 Million	$8.2 Million
Preferred option	**X**				

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Regulatory Approvals:

Are Regulatory body approvals needed for the project?

No

Project Schedule

Milestone/Phase Name	Estimated Date
100% Engineering Completion	May 2023
Construction Start – Part 1	January 2024
In Service Date – Part 1	June 2024
Construction Start – Part 2	January 2025
In Service Date	December 2025

Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2025	Medium	Included contingency costs in the funding request. Perform detailed Field Analysis and walk down in project development to avoid potential issues.
Internal construction resources not available to perform the work.	2025	High	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
System abnormal configuration	2025	Low	Schedule work to minimize system abnormal time. Most of this work will require system to be abnormal for any extended period of time.

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References

CD01451_Project_Needs_Statement 8-2!

CD01451 - [redacted]

CD01810 Vault#9 Prospect St UCT Inst

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

CD01451 - [redacted] Over

CD01451 - [redacted] Subs

CD01451 - [redacted]