EVERSOURCE

Project Approval Form

Project Title: [redacted] Elimination	Project Number: CD01261
Date Prepared: 10/11/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** S/S ELIMINATION-LINE WORK
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: 12/31/2025	
Total Capital Request: $12,937.3K	**Authorization Type:** Full Funding

1. Executive Summary

[redacted]

- Approved Partial Funding Authorization: $11,766K at the 1/26/2023 CT-PAC meeting.
- Requesting Full Funding authorization: $12,937.3K or 110% of the Partial Funding authorization.
- Project Location:
  - Division: Western
  - District: Waterbury AWC
  - Town: Waterbury

The variance is due to the following:

- Change in scope: [redacted] This is a ROW that is difficult to access and gets overgrown with vegetation very quickly. The additional total cost to the project is $276K.
- The remainder of the variance is due to increased labor and material charges. The legacy estimating units used to produce the Initial Funding estimate are about 30% lower than the estimates used today, which were updated to reflect increased labor & material costs.

2. Project Cost Summary

Financial Evaluation ($000's)

Capital Costs	2022 Actual	2023 Estimate	2024 Estimate	2025 Estimate	Total
Internal Labor and Construction Equipment	15.5	161.3	203.8	367.1	747.6
Outside Services	57.1	595.3	752.3	1,355.2	2,759.9
Materials	43.3	452.1	571.2	1,029.1	2,095.7
Removals	25.3	264.5	334.2	854.5	1,478.5
Risk and Contingency	0.0	0.0	0.0	1,157.6	1,157.6
Other	0.4	4.4	5.6	10.0	20.4
Subtotal	**141.6**	**1,477.5**	**1,867.0**	**4,773.5**	**8,259.6**

Indirect Capital Costs	2022 Actual	2023 Estimate	2024 Estimate	2025 Estimate	Total
Indirects/Overheads (including benefits)	107.8	1,033.9	1,288.5	2,241.9	4,672.0
Capitalized interest or AFUDC, if any	5.7	0.0	0.0	0.0	5.7
Subtotal	**113.5**	**1,033.9**	**1,288.5**	**2,241.9**	**4,677.7**
Total Capital Costs (Gross)	**255.1**	**2,511.4**	**3,155.5**	**7,015.3**	**12,937.3**
Less Total Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Project Costs (Net of Reimbursement)	**255.1**	**2,511.4**	**3,155.5**	**7,015.3**	**12,937.3**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

[redacted]

b. Project Need

[redacted]

c. Project Scope

The scope of this project is as follows:

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

[redacted]

4. Alternatives Considered

[redacted]

Project Option Comparison



Authorization Type	Partial	Full	Partial	Partial
Capital Cost	$12,704K	$12,937K	$12,636K	$11,185K
Expense Cost	$529K	$539K	$526K	$466K
Total Cost	$13,233K	$13,476K	$13,162K	$11,651K
Total Cost / CM Saved	$78.53/CM	$80.36/CM	$41.57/CM	$425.10/CM
Total Cost / CI Saved	$11,167K/CI	$11,428K/CI	$11,998K/CI	$33,576K/CI
Preferred option		**X**		

5. Project Schedule

Milestone/Phase Name	Estimated Date
Partial Approval	1/26/2023
100% Detailed Engineering Completion	6/1/2024
Fully Funded	10/18/2023
Construction Start	1/1/2023
In Service Date	12/31/2025

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.	2023-2025	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	2023	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach.
Internal construction resources not available to perform the work.	2023-2025	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.	2023	Medium	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Materials Shortage or long lead times	2023	Medium	Pre-order long lead time material; minimize the use of non-standard and non-stocked material.
Storm delays	2023-2025	Low	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2023-2025	Medium	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	2023-2025	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	2023-2025	Low	Use of mats and specialty equipment, only work during certain times of the year.

9. References

References

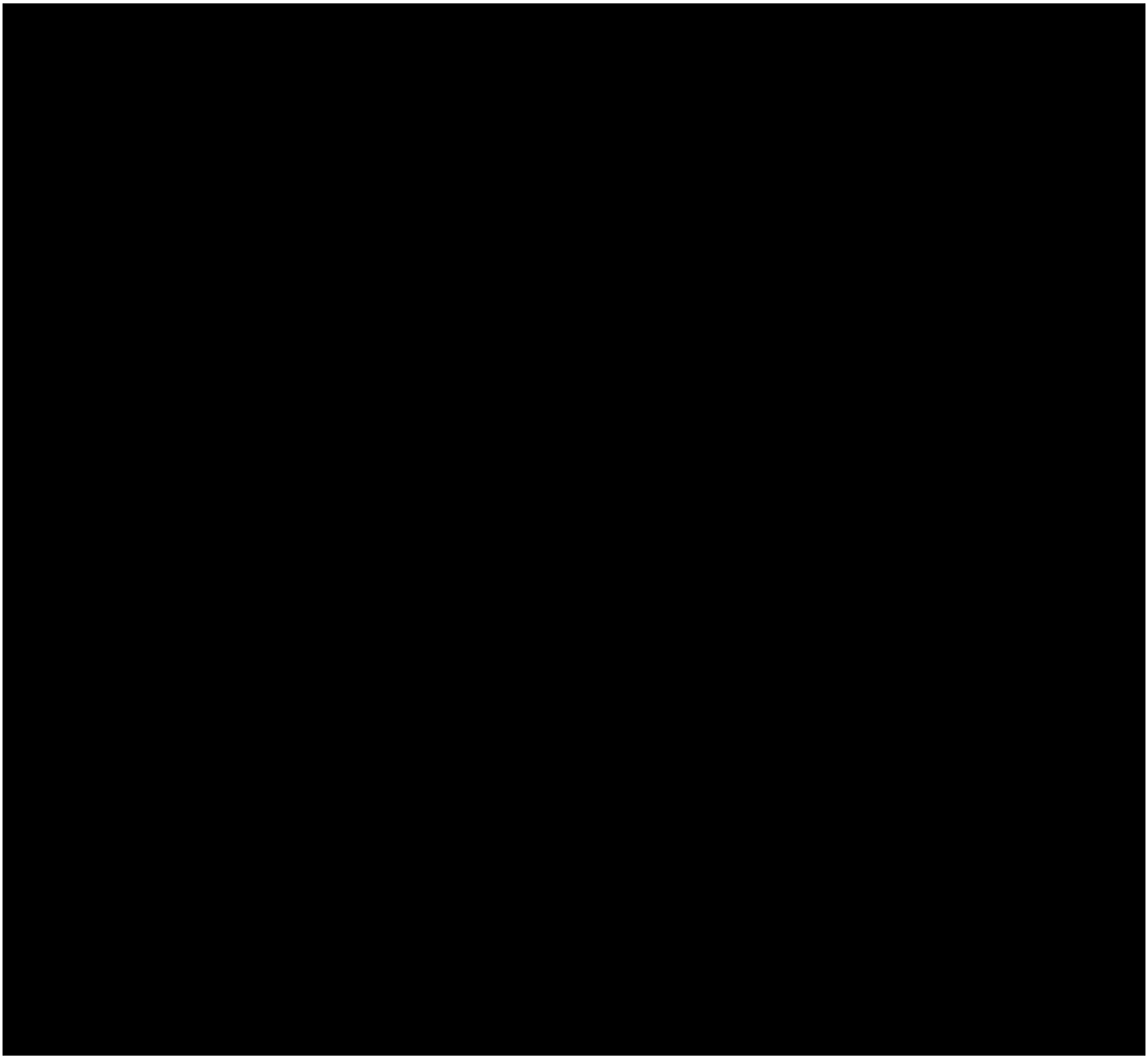
1. DSEM 02-301– Automatic Sectionalizing Device Guideline

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

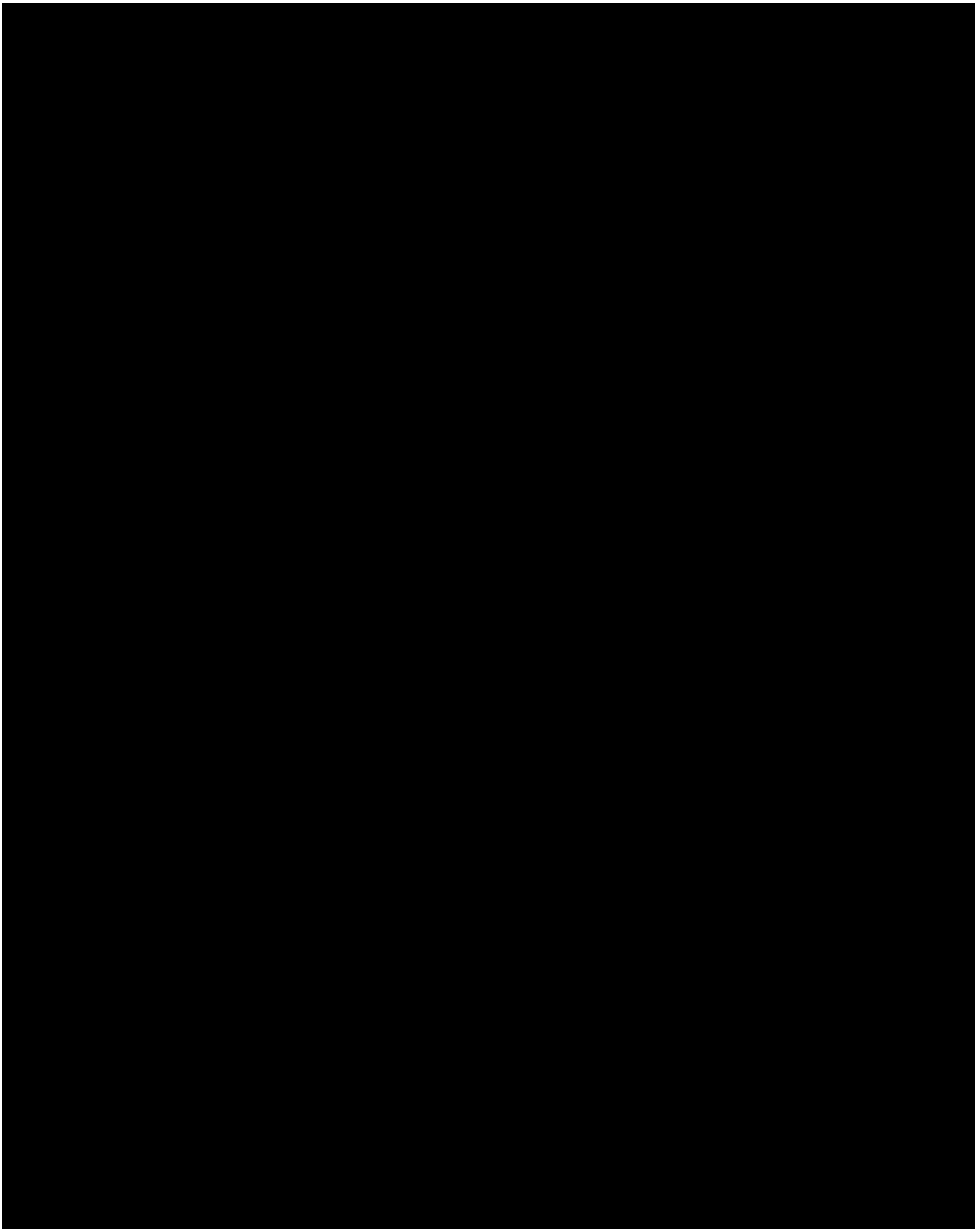
Attachment	Included in Submittal?
A. Geographic Map	*YES*
B. System and Station One-Lines	*YES*
C. Load Summary	*YES*
D. Partial Funding PAF	*YES*

Attachment A - Maps





Attachment B – One-Lines



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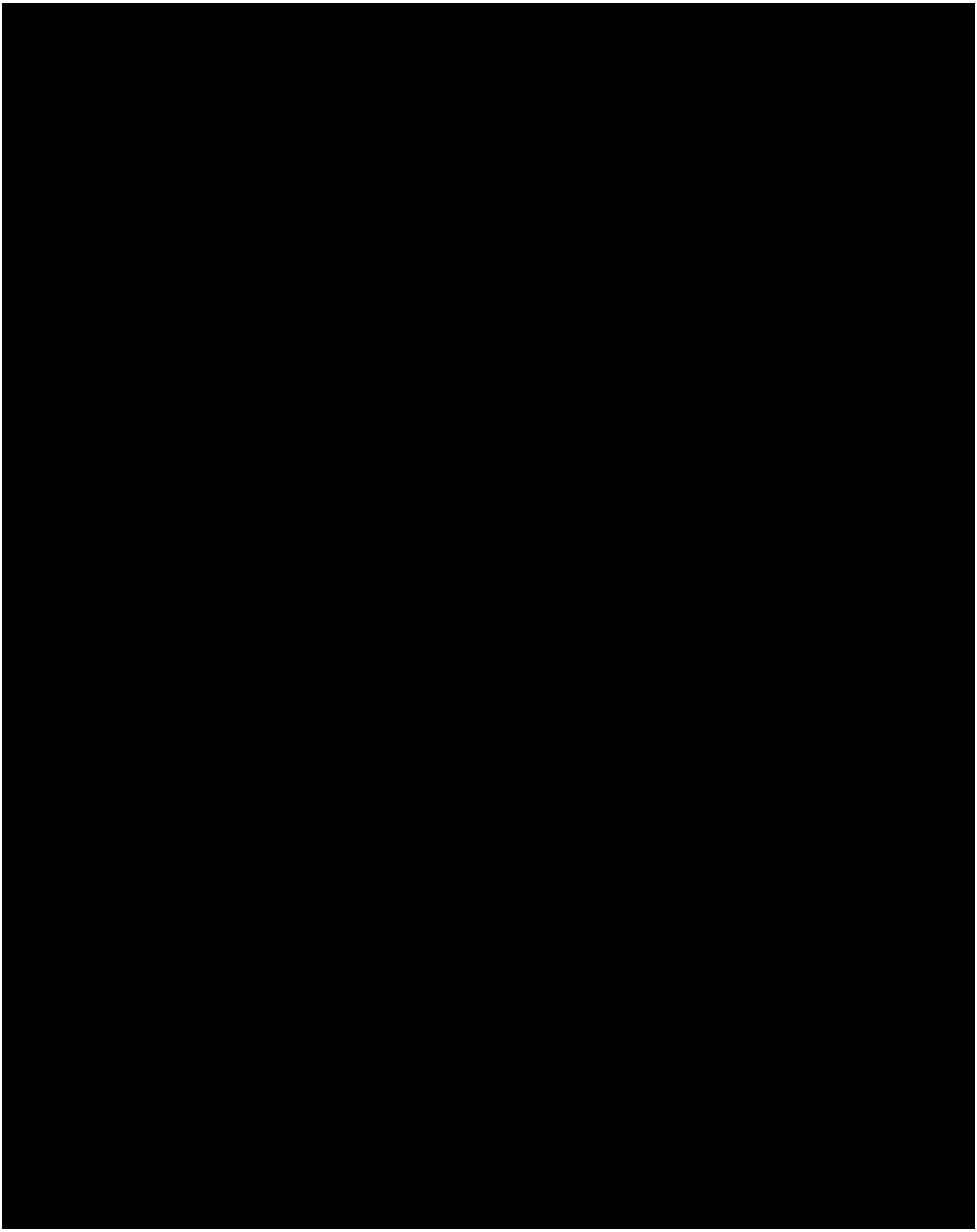

Refer to Distribution Capital Project Approval Process
JA-AM-2001-B, Rev.1

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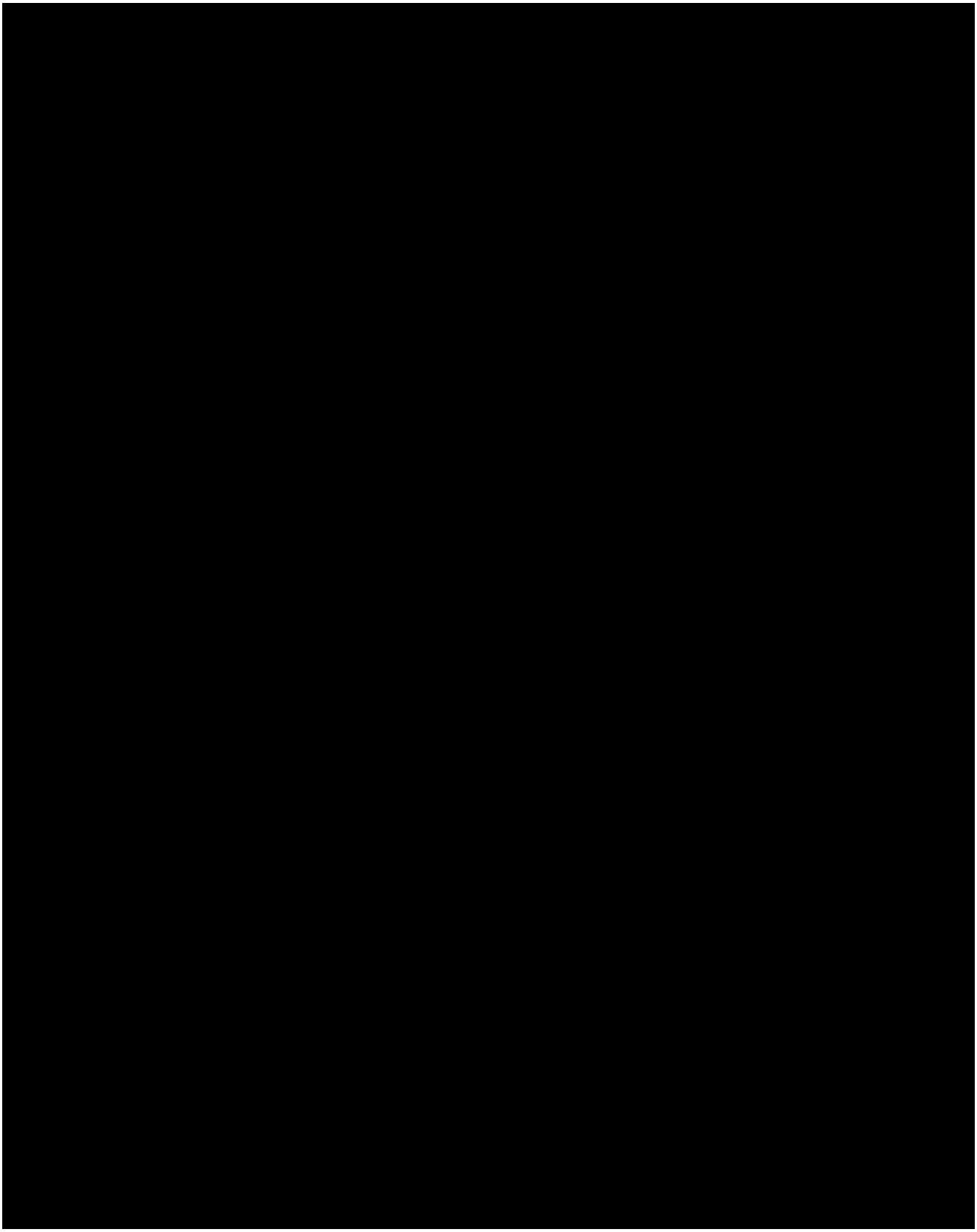

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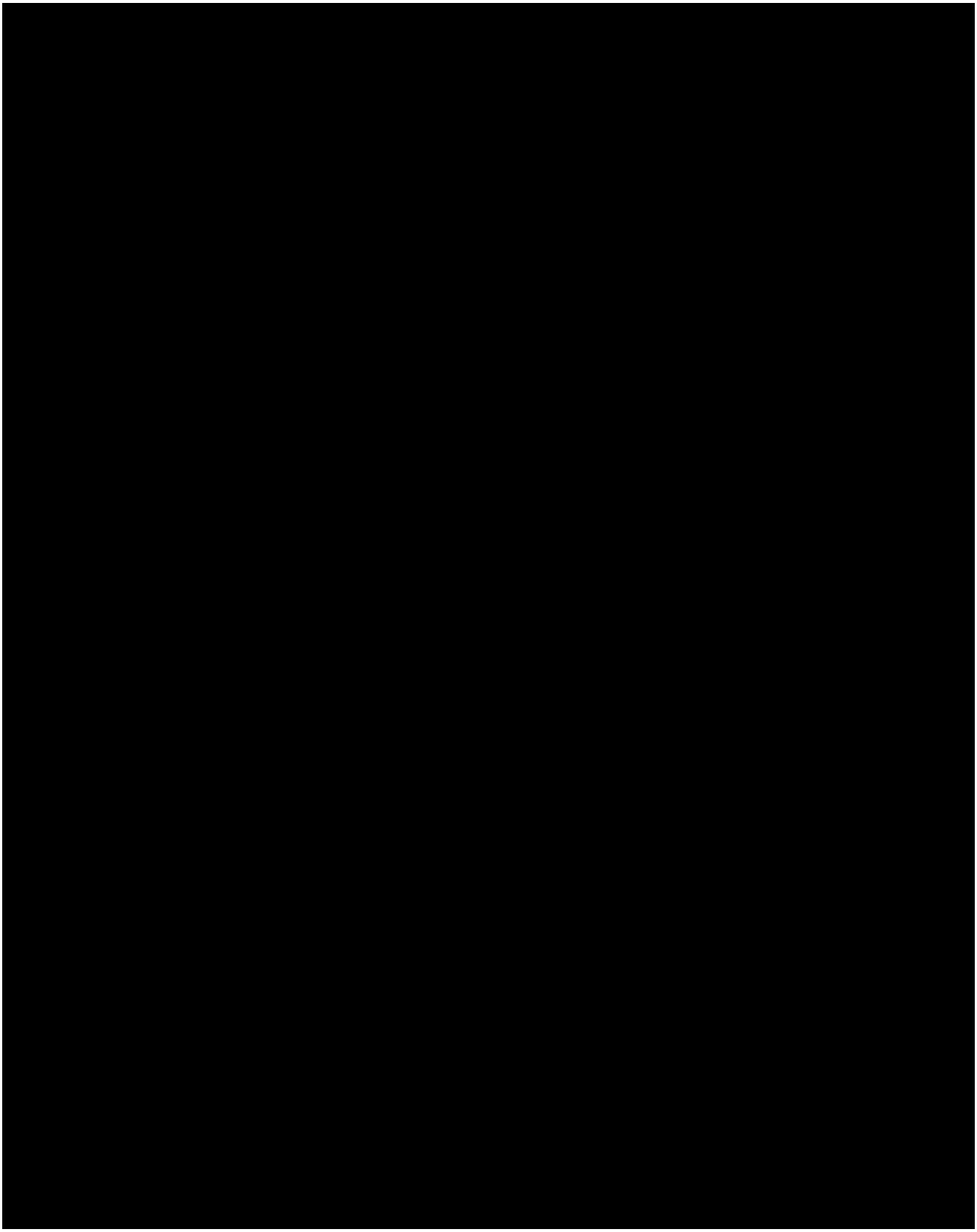
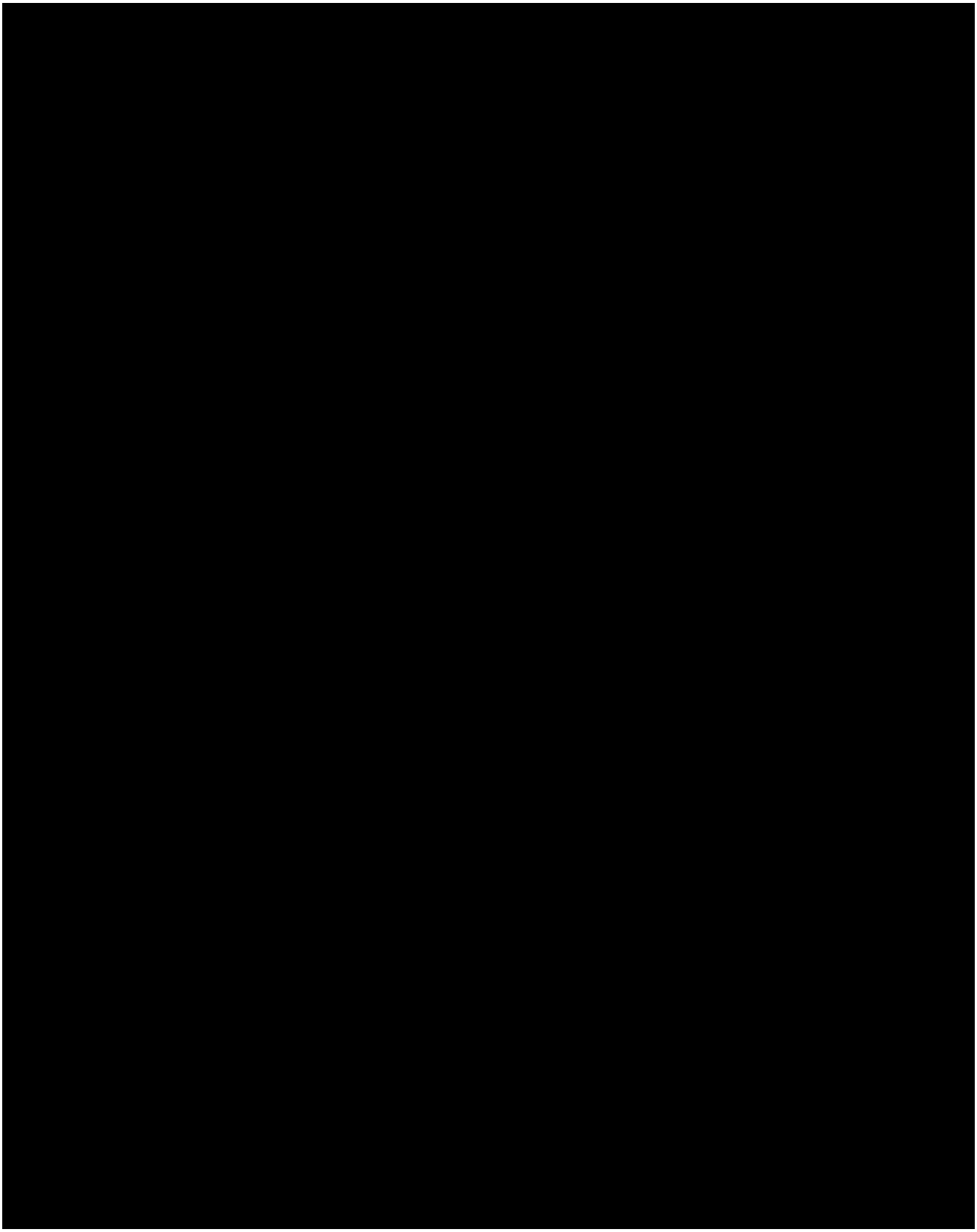
Project Approval Form



Refer to Distribution Capital Project Approval Process
JA-AM-2001-B, Rev.1

Attachment C – Load Summary



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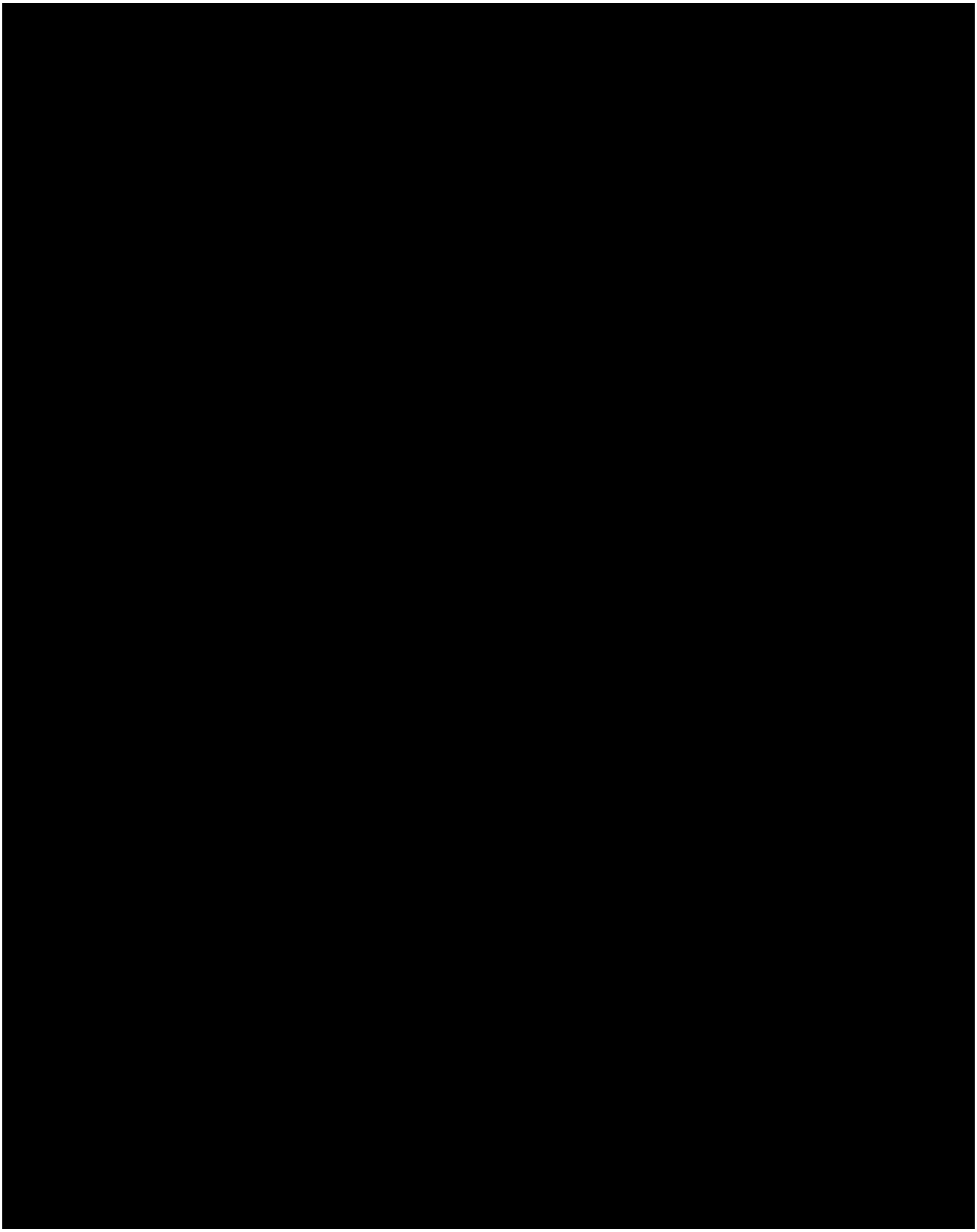
Project Approval Form



Refer to Distribution Capital Project Approval Process
JA-AM-2001-B, Rev.1

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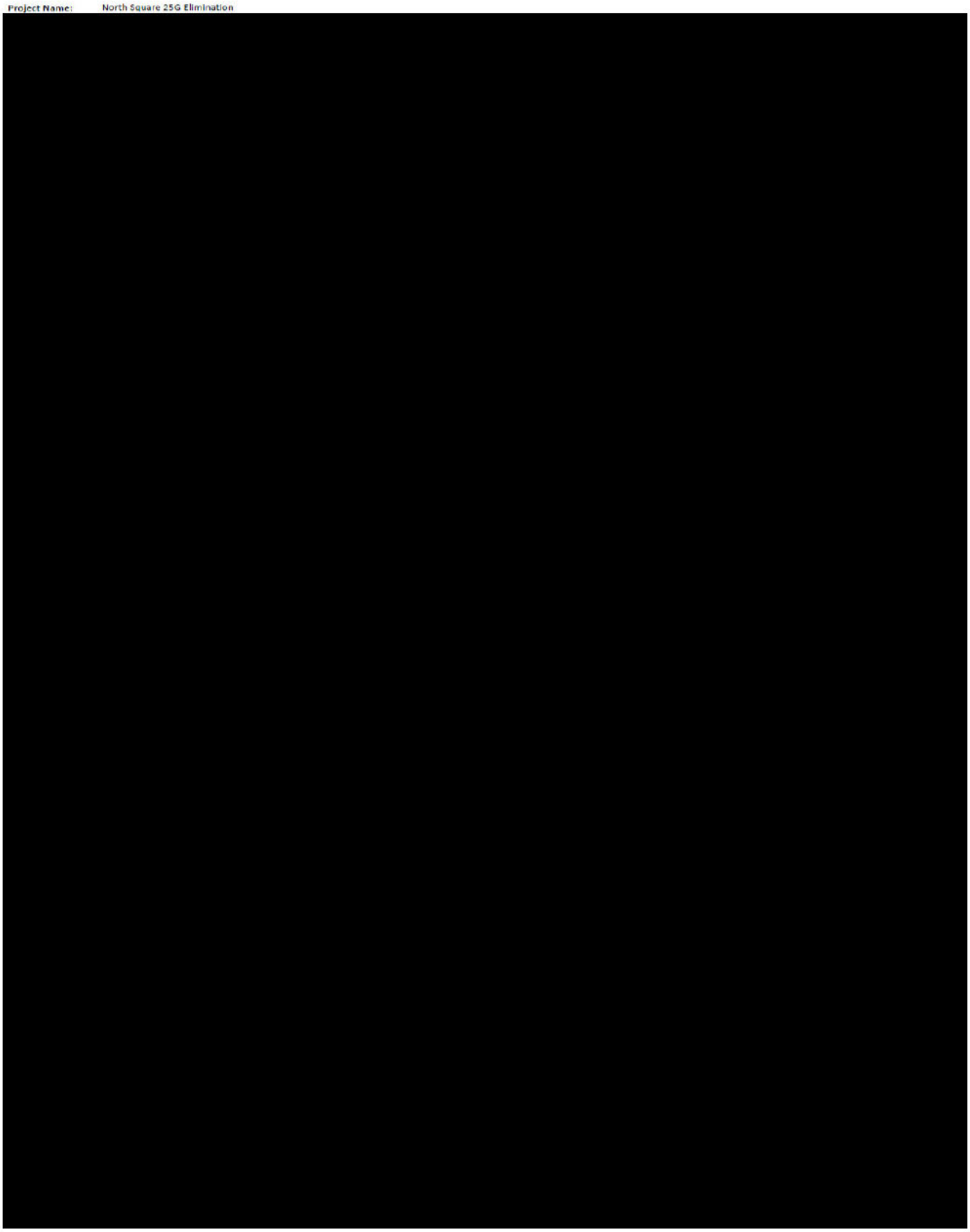
Project Approval Form

Project Number: CD01261

Project Name: North Square 25G Elimination



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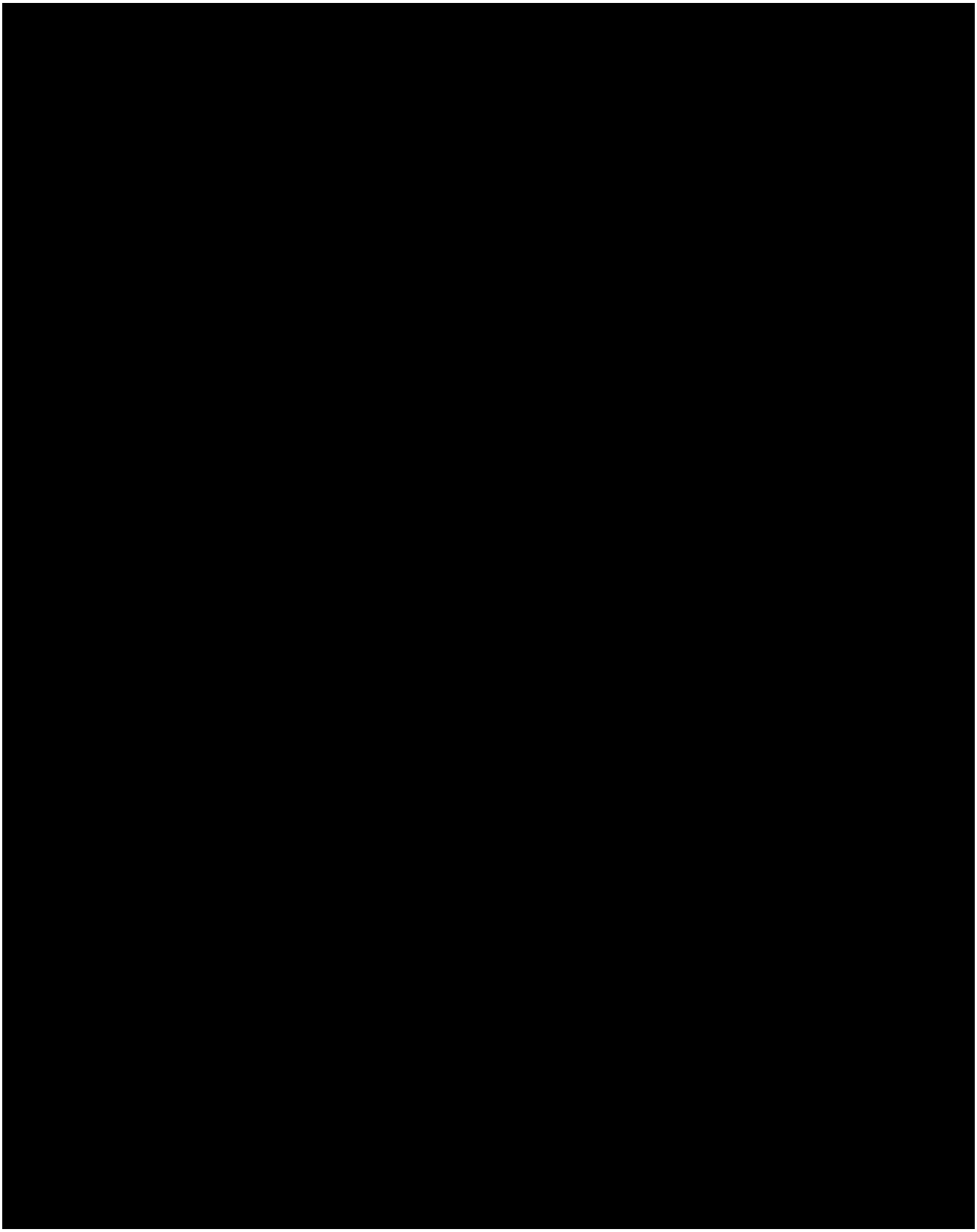
Project Approval Form



Refer to Distribution Capital Project Approval Process
JA-AM-2001-B, Rev.1

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Operations Project Authorization Form

Project Title: North Square [redacted] Elimination	**Project Number: CD01261**
Date Prepared: 01/24/2023	**Company:** Eversource CT
Organization: Electric Field Operations	**Class(es) of Plant:** D Line
Project Initiator: [redacted]	**Project Category:** S/S ELIMINATION-LINE WORK
Project Manager: [redacted]	**Project Type:** Specific
Project Sponsor: [redacted]	**Capital Investment part of original Operating Plan:** Yes
Estimated in service date: 12/31/2025	**Emergency Related Request?** No
Eng./Constr. Resources Budgeted? Yes	**Facility Type** (check all that apply): ☐ PTF ☐ non-PTF ☒ Distribution
Total Gross Capital Request: $11,766K	**Authorization Type:** Partial Funding

Executive Summary

[redacted]

Project Costs Summary

Note: Dollar values are in thousands

Capital Costs	Year 2023	Year 2024	Year 2025+	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	$339	$267	$351	$958
Outside Services	$1,246	$983	$1,291	$3,520
Materials	$495	$390	$512	$1,397
Removals	$287	$227	$298	$811
Risk and Contingency	$30	$23	$31	$84
Other	$0	$0	$0	$0
Subtotal – Direct Costs	**$2,397**	**$1,891**	**$2,483**	**$6,770**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	$1,689	$1,332	$1,750	$4,770
Capitalized interest or AFUDC, if any	$80	$63	$82	$225
Subtotal – Indirect Costs	**$1,768**	**$1,395**	**$1,832**	**$4,995**
Total Gross Capital Costs	**$4,165**	**$3,286**	**$4,315**	**$11,766**
Customer Contribution	$0	$0	$0	$0
Total Net Capital Project Costs	**$4,165**	**$3,286**	**$4,315**	**$11,766**

Technical Justification:

Project Need, Objective and Justification:



Project Scope:

The scope of this project is as follows:



[redacted]

Major Material:

- 1/0 ACSR 175 MIL – 40,155'
- 556 AAC Spacer Cable – 18,385'
- Cooper Nova Recloser for 13.2/13.8kV – 20
- Cooper Nova Recloser for 4.8kV – 3
- Cooper Form 6 Recloser Control – 23
- 900 Amp GOAB – 4
- 600kVAR Capacitor Bank for 13.8kV - 3

Background:

[redacted]

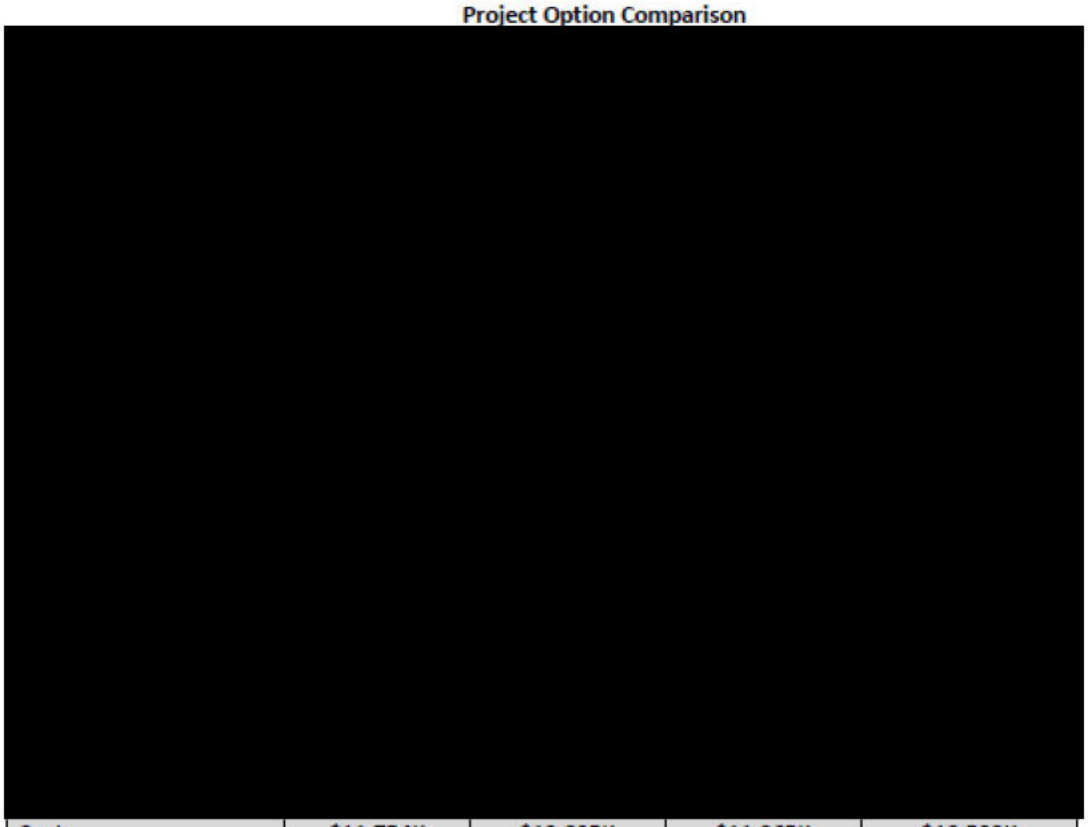
Alternatives Considered:

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

Alternatives were considered (please describe below)

[redacted]

Project Option Comparison



Cost	$11,754K	$12,035K	$11,965K	$10,592K
Cost / CM Saved	$69.75/CM	$71.42/CM	$37.79/CM	$386.45/CM
Cost / CI Saved	$9,919K/CI	$10,157K/CI	$10,907K/CI	$30,524K/CI
Preferred option		**X**		

Regulatory Approvals:

Are Regulatory body approvals needed for the project?
No

Project Schedule

Milestone/Phase Name	Estimated Date
Construction Start Date	March 1, 2023
Construction End Date, Phase 1	December 31, 2023
Construction End Date, Phase 2	December 31, 2024
Construction End Date, Phase 3	December 31, 2025

Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2023-2025	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	2023	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach.
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Materials Shortage or long lead times	2023	Medium	Pre-order long lead time material; minimize the use of non-standard and non-stocked material.
Storm delays	2023-2025	Low	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2023-2025	Medium	Schedule work to minimize system abnormal time. Install temporary bypasses/equipment if system will be abnormal for extended periods.

References

DSEM – Automatic Sectionalizing Device Guideline

Reliability Section 02.30

Automatic Sectionalizing Device Guidelines

02.301

GENERAL CONSIDERATION – The purpose of this guideline is to provide instructions for the use of automatic sectionalizing devices (ASDs). Table 1 establishes the number of reclosers and sectionalizers that may typically be applied. The user of this guideline should remember that all ASDs should be considered, along with other techniques, to improve reliability in a cost-effective manner. The number of ASDs applied will vary by circuit depending on reliability history, physical construction, the proximity of other circuits, and circuit exposure.

Eversource Energy is entering a multi-year program to install reclosers and sectionalizers on its system to improve reliability. Since all circuits cannot be addressed simultaneously, circuits with the poorest reliability indices are considered the highest priority and should receive attention first. The secondary priority is the number of customers on a circuit. If two circuits have equal reliability indices the circuit with the highest customer count should be the first to receive attention.

Sensitive backup ground fault protection is used on multigrounded wye distribution circuits. The characteristics of these protective devices requires that the Company establish criteria for maximum load to be allowed beyond a single phase protective device. Section "GENERAL SYSTEM DESIGN" E.2. details this restriction. A glossary of terminology used in this guideline is provided on **DSEM Page 02.304.**

GENERAL SYSTEM DESIGN

1. **Automatic Sectionalizing Devices**





[redacted]

AUTOLOOPS

[redacted]

Reliability Section 02.30	Automatic Sectionalizing Device Guidelines	02.303

[redacted]

SETTINGS

[redacted]

GLOSSARY

ASD: A device that automatically sectionalizes a line section (e.g. recloser, sectionalizer, or fuse).

Autoloop: A scheme where two or more distribution circuits are tied together with a normally–open–tie recloser capable of automatically restoring service to portions of feeders that were de–energized due to an outage.

Autoloop Backbone: An autoloop involves two circuits. The autoloop backbone is the three phase electrical connection that can be traced from the origin of one circuit to the origin of the other circuit. in line with this electrical connection are the reclosers and sectionalizers that make up the autoloop scheme.

Branch: A single, two or three phase portion of a circuit. The origin of a branch is a junction pole or an ASD and the termination is the end of the electrical circuit. A branch may have multiple termination points.

Circuit Backbone: The portion of the three phase overhead distribution circuit beginning at the source and ending at transitions to single or multiphase circuitry protected by single phase devices.

Load Side: The customer side of the device under normal operating conditions.

Source Side: The side of the device closest to the substation supplying the circuit under normal operating conditions.

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Project Approval Form

Work Classification

Category: Line
Type: SELN
Type Desc: S/S ELIMINATION-LINE WORK
Work Type:

Ownership / Management

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

Project Information

Status: Prelim Design Approved
SPS #:
AIS Score:
Associated Projects:
Assignment ID:
Patrol Find ID:

Budget Summary - Preferred Option

Conv 25G using 13H93, 94 & 11W46

2023

ID	Title	Status	Rev #	Contingency	Expenditure Amount	Net Estimate
1	[redacted]	Prelim	1	32%	$1,668,466	$1,668,466
8		Prelim	0	28%	$2,591,754	$2,591,754
				2023 Total:	$4,260,221	$4,260,221

2024

ID	Title	Status	Rev #	Contingency	Expenditure Amount	Net Estimate
6	[redacted]	Prelim	1	32%	$1,357,541	$1,357,541
9		Prelim	0	32%	$2,003,170	$2,003,170
				2024 Total:	$3,360,711	$3,360,711

2025

ID	Title	Status	Rev #	Contingency	Expenditure Amount	Net Estimate
2	[redacted]	Prelim	0	32%	$309,770	$309,770
3		Prelim	0	28%	$716,545	$716,545
4		Prelim	0	28%	$1,427,192	$1,427,192
5		Prelim	0	32%	$1,763,481	$1,763,481
12		Prelim	0	28%	$196,581	$196,581
				2025 Total:	$4,413,569	$4,413,569
				Total Project:	$12,034,500	$12,034,500

Project Approval Form

Design Alternative CD01261-01

Estimate

Preliminary Estimate Summary

Revision Number:	1
Contingency:	32.00%
SubTotal:	$1,263,990
Contingency Amount:	$404,477
Estimate:	$1,668,466
Reimbursement:	$0
Net Amount:	**$1,668,466**
Description:	

Item Description	CU	[redacted]	Amount
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18		$171,000.00
OH WIRE OH - Neutral	16-OH31		$15,360.00
OH WIRE OH - Remove circuit wire (1 phase)	16-OH37		$600.00
SECTIONALIZE OH - Recloser - 3ph	16-OH38		$143,968.80
EQUIPMENT OH - Conversion Prep Work - 1ph	16-OH56		$6,180.00
EQUIPMENT OH - Conversion Prep Work - 3ph	16-OH57		$37,080.00
EQUIPMENT OH - Conversion - CUTOVER	16-OH58		$29,436.00
OTHER OTHER 20% adder for contract labor	16-ALL14		$228,000.00
POLE OH - POLE - 1ph (CL&P custodian) additional pole replacements for reconductoring	16-OH13		$25,956.00

Project Approval Form

Design Alternative			CD01261-01
POLE OH - POLE - 3ph (CL&P custodian) additional pole replacements for reconductoring	16-OH14	[redacted]	$28,056.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Beacon St area	16-OH25		$23,640.00
OH WIRE OH - Remove circuit wire (1 phase) Beacon St area	16-OH37		$4,728.00
OH WIRE OH - Remove circuit wire (3 phase) Bishop St	16-OH37A		$1,520.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Bishop St N of Burton St	16-OH25		$20,160.00
OH WIRE OH - Remove circuit wire (1 phase) Bishop St N of Burton St	16-OH37		$4,032.00
OH WIRE OH - Reconductor w/ 175 Mil Tree Wire - 3ph -1/0 Bishop St Pole 7643 to pole B7646	16-OH26a		$20,328.00
OH WIRE OH - Reconductor w/Spacer Cable - 556 kcmil Bronson St	16-OH29		$67,072.00
OH WIRE OH - Remove circuit wire (3 phase) Bronson St	16-OH37A		$2,080.00
OH WIRE OH - Reconductor w/Spacer Cable - 556 kcmil Cooke St	16-OH29		$204,288.00
OH WIRE OH - Remove circuit wire (3 phase) Cooke St	16-OH37A		$6,384.00
EQUIPMENT OH - Capacitor, any kVAR, any voltage Cooke St Pole 17232	16-OH52		$20,694.40
OTHER OTHER Cooke St Pole 21170: re-fuse 100K	16-ALL14		$500.00

Project Approval Form

Design Alternative			CD01261-01
SECTIONALIZE OH - Cutouts or Arresters - 3ph Cooke St Pole F3829	16-OH20	[redacted]	$2,315.20
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Hawkins St	16-OH25		$18,120.00
OH WIRE OH - Remove circuit wire (1 phase) Hawkins St	16-OH37		$5,040.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Hopkins St:	16-OH25		$3,000.00
OTHER OTHER In-line switches for new recloser installations	16-ALL14		$15,000.00
INSULATOR OH - Install Wrap on skinned wire - 1ph or 3ph Inst wrap to conver resulting bare spot on TW for conversion from L-L	16-OH24		$7,416.00
OTHER OTHER Install in-line switches for reclosers per new recloser standard	16-ALL14		$15,000.00
OH WIRE OH - Remove circuit wire (3 phase) Pearl St N of Bromson st	16-OH37A		$3,760.00
OH WIRE OH - Reconductor w/Spacer Cable - 556 kcmil Pearl St N of Bronson St	16-OH29		$120,320.00
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph Pole 371 at riser, 13H93-110	16-OH43		$10,283.20
OTHER OTHER Pole 61292: remove cutouts	16-ALL14		$2,000.00
OH WIRE OH - Remove circuit wire (1 phase) various	16-OH37		$672.00

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Project Approval Form

Segment CD01261-02

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	32.00%
SubTotal:	$234,674
Contingency Amount:	$75,096
Estimate:	$309,770
Reimbursement:	$0
Net Amount:	**$309,770**
Description:	

Item Description	CU	$ / Per	Qty	Amount
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18	[redacted]		$32,000.00
OH WIRE OH - Neutral	16-OH31			$2,880.00
EQUIPMENT OH - Conversion Prep Work - 3ph	16-OH57			$14,420.00
EQUIPMENT OH - Conversion - CUTOVER	16-OH58			$1,605.60
SECTIONALIZE OH - Recloser - 3ph 13H4-70S	16-OH38			$47,989.60
SECTIONALIZE OH - Recloser - 3ph 13H94-71S	16-OH38			$47,989.60
OTHER OTHER 20% adder for contract labor	16-ALL14			$42,000.00
SECTIONALIZE OH - Recloser Control - setting changes only 25G3-90T -> 13H4-90T	16-OH39A			$4,885.60
OTHER OTHER Install in-line swtches for new recloser installation	16-ALL14			$5,000.00

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Project Approval Form

Segment			CD01261-02
UG CABLE UG - Cable Removal - all cables N Elm St pole 2253: remove reverse riser	16-UG117	[redacted]	$3,000.00
OH WIRE OH - Ampact Connectors - 3ph (6 Ampacts) N Elm St Pole 2255: close in gap to refeed area	16-OH22		$2,884.00
SECTIONALIZE OH - Cutouts or Arresters - 3ph N Elm St Pole G1504	16-OH20		$2,315.20
UG CABLE UG - Transition Splice [redacted]	16-UG120		$2,636.80
OTHER OTHER N Main St Pole B8437 to B8438: create dead section	16-ALL14		$2,000.00
OTHER OTHER N Main St Pole F4581: create temporary dead section (future reclose	16-ALL14		$2,000.00
SWITCHING OH/DB/UG - SWITCHING Network switching for 13H94	16-ALL15		$14,048.80
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average switching for 25G3	16-ALL17		$3,509.60
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average [redacted]	16-ALL17		$3,509.60

Project Approval Form

Segment CD01261-03

Estimate

Preliminary Estimate Summary	
Revision Number:	0
Contingency:	28.00%
SubTotal:	$559,801
Contingency Amount:	$156,744
Estimate:	$716,545
Reimbursement:	$0
Net Amount:	**$716,545**
Description:	

Item Description	CU	Amount
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18	$75,000.00
POLE OH - POLE - 1ph (CL&P custodian)	16-OH13	$34,608.00
POLE OH - POLE - 3ph (CL&P custodian)	16-OH14	$93,520.00
INSULATOR OH - Install Wrap on skinned wire - 1ph or 3ph	16-OH24	$4,120.00
OH WIRE OH - Neutral	16-OH31	$17,280.00
EQUIPMENT OH - Conversion Prep Work - 1ph	16-OH56	$4,944.00
EQUIPMENT OH - Conversion Prep Work - 3ph	16-OH57	$109,180.00
EQUIPMENT OH - Conversion - CUTOVER	16-OH58	$20,872.80
OH WIRE OH - Remove circuit wire (1 phase)	16-OH37	$2,328.00

Project Approval Form

Segment			CD01261-03
OTHER OTHER 20% adder for contract labor	16-ALL14	[redacted]	$100,000.00
SECTIONALIZE OH - Recloser - 3ph Cherry St Pole 2561	16-OH38		$47,989.60
OTHER OTHER [redacted]	16-ALL14		$2,000.00
EQUIPMENT OH - Capacitor, any kVAR, any voltage Cherry St Pole 8644	16-OH52		$20,694.40
OH WIRE OH - Ampact Connectors - 3ph (6 Ampacts) Cherry St Pole 9586	16-OH22		$2,884.00
OTHER OTHER Cherry St Pole 9586: rem cutouts	16-ALL14		$500.00
OTHER OTHER Install in-line switches for new recloser per new recloser standard	16-ALL14		$5,000.00
UG CABLE UG - Cable Removal - all cables [redacted]	16-UG117		$4,000.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Vine St: 1 # 1/0 TW	16-OH25		$14,880.00

Project Approval Form

Segment CD01261-04

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$1,114,994
Contingency Amount:	$312,198
Estimate:	$1,427,192
Reimbursement:	$0
Net Amount:	**$1,427,192**
Description:	

Item Description	CU	Amount
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18	$147,900.00
OH WIRE OH - Neutral	16-OH31	$33,600.00
OH WIRE OH - Remove circuit wire (1 phase)	16-OH37	$720.00
OH WIRE OH - Remove circuit wire (1 phase)	16-OH37	$1,920.00
EQUIPMENT OH - Conversion Prep Work - 1ph	16-OH56	$16,068.00
EQUIPMENT OH - Conversion Prep Work - 3ph	16-OH57	$55,620.00
EQUIPMENT OH - Conversion - CUTOVER	16-OH58	$26,760.00
SECTIONALIZE OH - Recloser Control - setting changes only 13H1-80M ->13H94-60R	16-OH39A	$4,885.60
SECTIONALIZE OH - Recloser - 3ph 13H94-4000, 13H94-80M & 13F66-92T	16-OH38	$143,968.80

[redacted]

Project Approval Form

Segment			CD01261-04
SECTIONALIZE OH - Recloser Control - setting changes only 13H94-90T -> 13H94-30T	16-OH39A	[redacted]	$4,885.60
OTHER OTHER 20% adder for contract labor	16-ALL14		$197,200.00
POLE OH - POLE - 1ph (CL&P custodian) additional pole replacements for reconductoring	16-OH13		$51,912.00
POLE OH - POLE - 3ph (CL&P custodian) additional pole replacements for reconductoring	16-OH14		$37,408.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Ashley St	16-OH25		$9,600.00
OH WIRE OH - Remove circuit wire (1 phase) Ashley St	16-OH37		$1,920.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Coe St	16-OH25		$3,600.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Cossett St	16-OH25		$9,600.00
OH WIRE OH - Remove circuit wire (3 phase) Dikeman St	16-OH37A		$1,776.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Dikeman St area	16-OH25		$25,560.00
OH WIRE OH - Remove circuit wire (1 phase) Dikeman St area	16-OH37		$5,112.00
SECTIONALIZE OH - Cutouts or Arresters - 1ph Dikeman St Pole 1718	16-OH19		$1,371.20
OH WIRE OH - Reconductor w/ 175 Mil Tree Wire - 3ph -1/0 Dikeman St to pole 1718	16-OH26a		$34,188.00

Project Approval Form

Segment		[redacted]	CD01261-04
OTHER OTHER E Main St Pole 89140: Replace c/o's with switches	16-ALL14		$5,000.00
OTHER OTHER Install in-line switches for reclosers per new recloser standard	16-ALL14		$15,000.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Laurel St	16-OH25		$5,880.00
OH WIRE OH - Remove circuit wire (1 phase) Laurel St	16-OH37		$1,176.00
OH WIRE OH - Remove circuit wire (1 phase) Rose St area	16-OH37		$6,204.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Rose St area: 1 #1/0 TW	16-OH25		$26,760.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Walnut Ave area	16-OH25		$20,400.00
OH WIRE OH - Remove circuit wire (1 phase) Walnut Ave area	16-OH37		$6,096.00
SECTIONALIZE OH - GOAB Switch Walnut St Pole 7395	16-OH44		$20,566.40
OH WIRE OH - Reconductor w/Spacer Cable - 556 kcmil Walnut St to Orange St to E Main St	16-OH29		$138,752.00
OH WIRE OH - Remove circuit wire (3 phase) Walnut St to Orange St to E Main St	16-OH37A		$4,336.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Webb St	16-OH25		$9,720.00
OH WIRE OH - Remove circuit wire (1 phase) Webb St	16-OH37		$1,944.00
OH WIRE	16-OH26a		$35,728.00

Project Approval Form

Segment			CD01261-04
OH - Reconductor w/ 175 Mil Tree Wire - 3ph -1/0 Welton St			
OH WIRE	16-OH37A	[redacted]	$1,856.00
OH - Remove circuit wire (3 phase) Welton St			

Project Approval Form

Segment CD01261-05

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	32.00%
SubTotal:	$1,335,970
Contingency Amount:	$427,511
Estimate:	$1,763,481
Reimbursement:	$0
Net Amount:	**$1,763,481**
Description:	

Item Description	CU	[redacted]	Amount
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18		$181,000.00
POLE OH - POLE - 3ph (CL&P custodian)	16-OH14		$93,520.00
INSULATOR OH - Install Wrap on skinned wire - 1ph or 3ph	16-OH24		$3,296.00
OH WIRE OH - Neutral	16-OH31		$18,560.00
EQUIPMENT OH - Capacitor, any kVAR, any voltage	16-OH52		$20,694.40
EQUIPMENT OH - Conversion Prep Work - 3ph	16-OH57		$88,580.00
EQUIPMENT OH - Conversion - CUTOVER	16-OH58		$33,717.60
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Complex	16-ALL16		$7,024.00
POLE OH - POLE - 1ph (CL&P custodian)	16-OH13		$14,420.00

Project Approval Form

Segment			CD01261-05
OTHER OTHER 20% adder for contract labor	16-ALL14	[redacted]	$241,000.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) First Ave	16-OH25		$8,400.00
OH WIRE OH - Remove circuit wire (1 phase) First Ave	16-OH37		$1,680.00
EQUIPMENT OH - Remove Capacitor, any kVAR Groce St Pole 8890: rem 4.8kV cap bank	16-OH54		$1,800.00
OH WIRE OH - Remove circuit wire (3 phase) Grove St	16-OH37A		$10,000.00
SECTIONALIZE OH - Cutouts or Arresters - 3ph Grove St @ Prospect St, to separate N & S taps. Fuse 100K	16-OH20		$2,315.20
SECTIONALIZE OH - GOAB Switch Grove St Pole 62525	16-OH44		$20,566.40
OH WIRE OH - Reconductor w/Spacer Cable - 556 kcmil Grove St to N Main St to pole B8429	16-OH29		$320,000.00
OH WIRE OH - Reconductor w/ 175 Mil Tree Wire - 3ph -1/0 Holmes Ave	16-OH26a		$9,856.00
OH WIRE OH - Remove circuit wire (3 phase) Holmes Ave	16-OH37A		$512.00
OTHER OTHER Install in-line switches for reclosers per new recloser standard	16-ALL14		$15,000.00
OH WIRE OH - Reconductor w/ 175 Mil Tree Wire - 3ph -1/0 Linden St	16-OH26a		$31,724.00
OH WIRE OH - Remove circuit wire (3 phase) Linden St	16-OH37A		$1,648.00

Project Approval Form

Segment		[redacted]	CD01261-05
SECTIONALIZE OH - Recloser - 3ph Poles F4581, 62523 & 8888	16-OH38		$143,968.80
OH WIRE OH - Reconductor w/ 175 Mil Tree Wire - 3ph -1/0 Prospect St	16-OH26a		$45,584.00
OH WIRE OH - Remove circuit wire (3 phase) Prospect St	16-OH37A		$2,368.00
UG CABLE UG - Cable Removal - all cables Remove [redacted] cable. Cap cable in MH.	16-UG117		$3,000.00
SECTIONALIZE OH - Remove Recloser (any) Remove [redacted]	16-OH42		$5,656.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Second Ave	16-OH25		$8,400.00
OH WIRE OH - Remove circuit wire (1 phase) Second Ave	16-OH37		$1,680.00

Design Alternative CD01261-06

Estimate

Preliminary Estimate Summary

Revision Number:	1
Contingency:	32.00%
SubTotal:	$1,028,440
Contingency Amount:	$329,101
Estimate:	$1,357,541
Reimbursement:	$0
Net Amount:	**$1,357,541**
Description:	

Item Description	CU	[redacted]	Amount
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18		$139,000.00
INSULATOR OH - Install Wrap on skinned wire - 1ph or 3ph	16-OH24		$1,648.00
EQUIPMENT OH - Conversion Prep Work - 3ph	16-OH57		$30,900.00
EQUIPMENT OH - Conversion - CUTOVER	16-OH58		$24,619.20
SECTIONALIZE OH - Remove Recloser (any)	16-OH42		$11,312.00
OTHER OTHER 20% adder for contract labor	16-ALL14		$186,000.00
OH WIRE OH - Neutral Add 1/0 ACSR bare neutral as required for conversion to 13.8kV MGY	16-OH31		$22,176.00
POLE OH - POLE - 1ph (CL&P custodian) Additional pole replacements for reconductoring	16-OH13		$28,840.00
POLE OH - POLE - 3ph (CL&P custodian) Additional pole replacements for reconductoring	16-OH14		$37,408.00

Project Approval Form

Design Alternative			CD01261-06
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Arch St	16-OH25	[redacted]	$7,440.00
OH WIRE OH - Remove circuit wire (1 phase) Arch St	16-OH37		$1,488.00
SECTIONALIZE OH - Cutouts or Arresters - 3ph Buckingham St., pole C5257 (100K)	16-OH20		$2,315.20
XF OH - Stepdowns, 3-1ph - on one POLE Buckinghom St., pole C5258: 3-167 kVA	16-OH50		$10,000.00
OH WIRE OH - Remove circuit wire (1 phase) Frederick St: remove for conversion	16-OH37		$648.00
OH WIRE OH - Reconductor w/ 175 Mil Tree Wire - 3ph -1/0 Hillside Ave Pole C1818 to pole C25203	16-OH26a		$11,704.00
OH WIRE OH - Remove circuit wire (3 phase) Hillside Ave Pole C1818 to pole C25203	16-OH37A		$608.00
OTHER OTHER Install in-line switches for reclosers per new recloser standard	16-ALL14		$10,000.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Pine St beyond pole 62492	16-OH25		$48,960.00
OH WIRE OH - Remove circuit wire (1 phase) Pine St beyond pole 62492	16-OH37		$9,792.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Pine St Pole 8600 to F4804	16-OH25		$3,960.00
OH WIRE OH - Remove circuit wire (3 phase) Pine St Pole 8600 to F4804	16-OH37A		$528.00
OH WIRE OH - Reconductor w/ 175 Mil Tree Wire - 3ph -1/0 Pine St to pole 8486	16-OH26a		$25,256.00

Project Approval Form

Design Alternative			CD01261-06
OH WIRE OH - Remove circuit wire (3 phase) Pine St to pole 8486	16-OH37A	[redacted]	$1,312.00
OH WIRE OH - Reconductor w/ 175 Mil Tree Wire - 3ph -1/0 Pine St., pole 8600 to pole 8623	16-OH26a		$25,872.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Pine St., pole 8623 to pole F597	16-OH25		$4,680.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Ridgewood St	16-OH25		$8,160.00
OH WIRE OH - Remove circuit wire (1 phase) Ridgewood St	16-OH37		$1,632.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Willow Ct	16-OH25		$6,720.00
OH WIRE OH - Remove circuit wire (1 phase) Willow Ct	16-OH37		$1,344.00
OH WIRE OH - Reconductor w/Spacer Cable - 556 kcmil Willow St	16-OH29		$248,832.00
OH WIRE OH - Remove circuit wire (3 phase) Willow St	16-OH37A		$7,776.00
OTHER OTHER Willow St Pole 60251: reconfigure cutouts taps so that only Pine St is c backbone)	16-ALL14		$1,500.00
EQUIPMENT OH - Remove Capacitor, any kVAR Willow St Pole C1820	16-OH54		$1,800.00
SECTIONALIZE OH - Recloser - 3ph Willow St Poles 60255 & 63492	16-OH38		$95,979.20
OTHER OTHER Woodlawn terr: rem regulators	16-ALL14		$3,600.00
SECTIONALIZE	16-OH20		$4,630.40

EVERSOURCE

Project Approval Form

Segment CD01261-08

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$2,024,808
Contingency Amount:	$566,946
Estimate:	$2,591,754
Reimbursement:	$0
Net Amount:	**$2,591,754**
Description:	

Item Description	CU	Amount
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18	$270,000.00
OH WIRE OH - Neutral	16-OH31	$16,320.00
EQUIPMENT OH - Conversion Prep Work - 1ph	16-OH56	$16,068.00
EQUIPMENT OH - Conversion Prep Work - 3ph	16-OH57	$49,440.00
EQUIPMENT OH - Conversion - CUTOVER	16-OH58	$16,591.20
SECTIONALIZE OH - Recloser - 3ph	16-OH38	$239,948.00
SECTIONALIZE OH - GOAB Switch	16-OH44	$20,566.40
UG CABLE DB/UG - 750/1000 - 3-1/C (3ph) Cu 11W46, 750 CU EPR 15kV	16-UG114B	$138,720.00
OTHER OTHER 20% adder for contract labor	16-ALL14	$361,000.00

[redacted]

Project Approval Form

Segment		[redacted]	CD01261-08
OH WIRE OH - Remove circuit wire (1 phase) Chapman Ave	16-OH37		$432.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Chapman Ave Pole 63449 to pole 8539	16-OH25		$2,160.00
XF OH - Stepdown - 1ph - on POLE Chapman Ave Pole 8539: 1-500 kVA 13.8/7.97 - 4.8kV	16-OH49		$6,800.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Fairview St area	16-OH25		$22,560.00
OH WIRE OH - Remove circuit wire (1 phase) Fairview St area	16-OH37		$4,512.00
OTHER OTHER Install in-line switches for new reclsoers per updated recloser stand	16-ALL14		$30,000.00
OH WIRE OH - Remove circuit wire (3 phase) Johnson St	16-OH37A		$8,256.00
POLE DB/UG - Riser - 3ph Johnson St Pole 8416: rebuild riser for new 11W46 feeder riser.	16-UG146		$10,794.40
SECTIONALIZE OH - Cutouts or Arresters - 3ph Johnson St pole 8418: 140K	16-OH20		$2,315.20
OH WIRE OH - Reconductor w/Spacer Cable - 556 kcmil Johnson St: pole 60251 to pole 8418	16-OH29		$132,096.00
OH WIRE OH - Remove circuit wire (3 phase) Manhan St	16-OH37A		$1,664.00
OH WIRE OH - Reconductor w/ 175 Mil Tree Wire - 3ph -1/0 Manhan St.	16-OH26a		$32,032.00
UG CABLE UG - Cable Removal - all cables Remove old 11W76 cable on Speery St to Johnson St pole 8416	16-UG117		$14,900.00

Project Approval Form

Segment		[redacted]	CD01261-08
XF OH - Stepdowns, 3-1ph - on one POLE Sperry St & Waterville St	16-OH50		$20,000.00
OH WIRE OH - Reconductor w/Spacer Cable - 556 kcmil Waterville St	16-OH29		$550,400.00
OH WIRE OH - Remove circuit wire (3 phase) Waterville St	16-OH37A		$17,200.00
SECTIONALIZE OH - Cutouts or Arresters - 3ph Waterville St Pole 63449: Repl 3-100A with 3-200A C/O's & Fuse 1	16-OH20		$2,315.20
XF OH - OH XF - 1ph Waterville St Pole 63805 (to replace the one on Chapman Ave Pole	16-OH45		$2,109.60
EQUIPMENT OH - Remove Capacitor, any kVAR Waterville St Pole 63808: Rem 4.8kV Cap Bank	16-OH54		$1,800.00
OTHER OTHER Waterville St: rem setps from pole F2645 & rem c/o's from poles F2	16-ALL14		$4,000.00
OH WIRE OH - Reconductor w/ 175 Mil Tree Wire - 3ph -1/0 Wyman St	16-OH26a		$28,336.00
OH WIRE OH - Remove circuit wire (3 phase) Wyman St	16-OH37A		$1,472.00

Project Approval Form

Segment CD01261-09

Estimate

Preliminary Estimate Summary

Revision Number:	0
Contingency:	32.00%
SubTotal:	$1,517,553
Contingency Amount:	$485,617
Estimate:	$2,003,170
Reimbursement:	$0
Net Amount:	**$2,003,170**
Description:	

Item Description	CU	Amount
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18	$206,000.00
POLE OH - POLE - 1ph (CL&P custodian)	16-OH13	$72,100.00
POLE OH - POLE - 3ph (CL&P custodian)	16-OH14	$74,816.00
EQUIPMENT OH - Conversion Prep Work - 1ph	16-OH56	$46,968.00
EQUIPMENT OH - Conversion Prep Work - 3ph	16-OH57	$150,380.00
EQUIPMENT OH - Conversion - CUTOVER	16-OH58	$48,168.00
SECTIONALIZE OH - GOAB Switch [redacted]	16-OH44	$20,566.40
SECTIONALIZE OH - Recloser - 3ph [redacted]	16-OH38	$95,979.20
SECTIONALIZE OH - Recloser Control - setting changes only [redacted]	16-OH39A	$4,885.60

[redacted]

Project Approval Form

Segment		[redacted]	CD01261-09
SECTIONALIZE OH - Remove Recloser (any) 11W47-62R	16-OH42		$5,656.00
SECTIONALIZE OH - Recloser Control - setting changes only 11W47-90T	16-OH39A		$4,885.60
OTHER OTHER 20% adder for contract labor	16-ALL14		$274,000.00
OH WIRE OH - Neutral add neutral as necessary for conversion to 13.8kV MGY	16-OH31		$53,760.00
OH WIRE OH - Remove circuit wire (1 phase) Bidwell St	16-OH37		$1,224.00
OH WIRE OH - Remove circuit wire (3 phase) Bidwell St	16-OH37A		$336.00
OH WIRE OH - Reconductor w/ 175 Mil Tree Wire - 3ph -1/0 Bidwell St 3 phase portion	16-OH26a		$6,468.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Bidwell St, 1 phase portion	16-OH25		$6,120.00
INSULATOR OH - Install Wrap on skinned wire - 1ph or 3ph cover resulting bare spot on covered conductor following conversic	16-OH24		$3,708.00
OH WIRE OH - Reconductor w/ 175 Mil Tree Wire - 3ph -1/0 Farmington Ave	16-OH26a		$74,536.00
OH WIRE OH - Remove circuit wire (3 phase) Farmington Ave	16-OH37A		$3,872.00
OH WIRE OH - Reconductor w/ 175 Mil Tree Wire - 3ph -1/0 Hawley St	16-OH26a		$50,820.00
OH WIRE OH - Remove circuit wire (1 phase) Hawley St.	16-OH37		$3,960.00

Project Approval Form

Segment			CD01261-09
OTHER OTHER Install in-line switches for new reclosers per updated recloser standar	16-ALL14	[redacted]	$10,000.00
OH WIRE OH - Remove circuit wire (1 phase) Kenilworth St	16-OH37		$3,024.00
OH WIRE OH - Reconductor w/ 175 Mil Tree Wire - 3ph -1/0 Kenilworth St.	16-OH26a		$38,808.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Leffingwell Ave	16-OH25		$16,800.00
OH WIRE OH - Remove circuit wire (1 phase) Leffingwell Ave	16-OH37		$3,360.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Lexington Ave	16-OH25		$24,000.00
OH WIRE OH - Remove circuit wire (1 phase) Lexington Ave	16-OH37		$4,800.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Melbourne Ter	16-OH25		$29,400.00
OH WIRE OH - Remove circuit wire (1 phase) Melbourne Ter	16-OH37		$5,880.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Oakland Ave	16-OH25		$19,200.00
OH WIRE OH - Remove circuit wire (1 phase) Oakland Ave	16-OH37		$3,840.00
OTHER [redacted]	16-ALL14		$4,500.00
OTHER [redacted]	16-ALL14		$4,500.00
OH WIRE	16-OH37A		$640.00

Project Approval Form

Segment CD01261-09

OH - Remove circuit wire (3 phase) ROW off Willow St: remove 4.8kV underbuild following conversion		[redacted]	
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Willow St N of Chapman Ave	16-OH25		$22,800.00
OH WIRE OH - Remove circuit wire (3 phase) Willow St N of Chapman Ave	16-OH37A		$6,080.00
OH WIRE OH - Reconductor w/Spacer Cable - 556 kcmil Willow St Pole 63629 to pole 63656	16-OH29		$104,448.00
OH WIRE OH - Remove circuit wire (3 phase) Willow St Pole 63629 to pole 63656	16-OH37A		$3,264.00
OTHER OTHER Willow St pole 63653: rem solids & install taps	16-ALL14		$3,000.00

Segment CD01261-12

Estimate

Preliminary Estimate Summary

Revision Number:	0
Contingency:	28.00%
SubTotal:	$153,579
Contingency Amount:	$43,002
Estimate:	$196,581
Reimbursement:	$0
Net Amount:	**$196,581**
Description:	

Item Description	CU		Amount
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18	[redacted]	$20,400.00
OTHER OTHER 20% adder for contract labor	16-ALL14		$27,200.00
SECTIONALIZE OH - Recloser - 3ph Inst 2 Cooper recloser & form 6 control for [redacted]	16-OH38		$95,979.20
OTHER OTHER Install in-line switches for new recloser installations	16-ALL14		$10,000.00

Project Approval Form

Segment CD01261-08

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$2,024,808
Contingency Amount:	$566,946
Estimate:	$2,591,754
Reimbursement:	$0
Net Amount:	**$2,591,754**
Description:	

Item Description	CU	[redacted]	Amount
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18		$270,000.00
OH WIRE OH - Neutral	16-OH31		$16,320.00
EQUIPMENT OH - Conversion Prep Work - 1ph	16-OH56		$16,068.00
EQUIPMENT OH - Conversion Prep Work - 3ph	16-OH57		$49,440.00
EQUIPMENT OH - Conversion - CUTOVER	16-OH58		$16,591.20
SECTIONALIZE OH - Recloser - 3ph	16-OH38		$239,948.00
SECTIONALIZE OH - GOAB Switch	16-OH44		$20,566.40
UG CABLE DB/UG - 750/1000 - 3-1/C (3ph) Cu 11W46, 750 CU EPR 15kV	16-UG114		$138,720.00
OTHER OTHER 20% adder for contract labor	16-ALL14		$361,000.00

Segment		[redacted]	CD01261-08
OH WIRE OH - Remove circuit wire (1 phase) Chapman Ave	16-OH37		$432.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Chapman Ave Pole 63449 to pole 8539	16-OH25		$2,160.00
XF OH - Stepdown - 1ph - on POLE Chapman Ave Pole 8539: 1-500 kVA 13.8/7.97 - 4.8kV	16-OH49		$6,800.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Fairview St area	16-OH25		$22,560.00
OH WIRE OH - Remove circuit wire (1 phase) Fairview St area	16-OH37		$4,512.00
OTHER OTHER Install in-line switches for new reclsoers per updated recloser stand	16-ALL14		$30,000.00
OH WIRE OH - Remove circuit wire (3 phase) Johnson St	16-OH37A		$8,256.00
POLE DB/UG - Riser - 3ph Johnson St Pole 8416: rebuild riser for new [redacted]	16-UG146		$10,794.40
SECTIONALIZE OH - Cutouts or Arresters - 3ph Johnson St pole 8418: 140K	16-OH20		$2,315.20
OH WIRE OH - Reconductor w/Spacer Cable - 556 kcmil Johnson St: pole 60251 to pole 8418	16-OH29		$132,096.00
OH WIRE OH - Remove circuit wire (3 phase) Manhan St	16-OH37A		$1,664.00
OH WIRE OH - Reconductor w/ 175 Mil Tree Wire - 3ph -1/0 Manhan St.	16-OH26a		$32,032.00
UG CABLE UG - Cable Removal - all cables Remove [redacted] cable on Speery St to Johnson St pole 8416	16-UG117		$14,900.00

Project Approval Form

Segment		[redacted]	CD01261-08
XF OH - Stepdowns, 3-1ph - on one POLE Sperry St & Waterville St	16-OH50		$20,000.00
OH WIRE OH - Reconductor w/Spacer Cable - 556 kcmil Waterville St	16-OH29		550,400.00
OH WIRE OH - Remove circuit wire (3 phase) Waterville St	16-OH37A		$17,200.00
SECTIONALIZE OH - Cutouts or Arresters - 3ph Waterville St Pole 63449: Repl 3-100A with 3-200A C/O's & Fuse	16-OH20		$2,315.20
XF OH - OH XF - 1ph Waterville St Pole 63805 (to replace the one on Chapman Ave Pc	16-OH45		$2,109.60
EQUIPMENT OH - Remove Capacitor, any kVAR Waterville St Pole 63808: Rem 4.8kV Cap Bank	16-OH54		$1,800.00
OTHER OTHER Waterville St: rem setps from pole F2645 & rem c/o's from poles F	16-ALL14		$4,000.00
OH WIRE OH - Reconductor w/ 175 Mil Tree Wire - 3ph -1/0 Wyman St	16-OH26a		$28,336.00
OH WIRE OH - Remove circuit wire (3 phase) Wyman St	16-OH37A		$1,472.00

EVERSOURCE

Project Approval Form

Design Alternative CD01261-10

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$2,084,662
Contingency Amount:	$583,705
Estimate:	$2,668,368
Reimbursement:	$0
Net Amount:	**$2,668,368**
Description:	

Item Description	CU	[redacted]	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17		$7,019.20
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18		$276,000.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge)	16-OH25		$222,360.00
OH WIRE OH - Reconductor w/Spacer Cable - 556 kcmil	16-OH29		$240,128.00
OH WIRE OH - Neutral	16-OH31		$54,080.00
OH WIRE OH - Remove circuit wire (1 phase)	16-OH37		$46,200.00
OH WIRE OH - Remove circuit wire (3 phase)	16-OH37A		$9,104.00
EQUIPMENT OH - Conversion Prep Work - 1ph	16-OH56		$33,372.00
EQUIPMENT OH - Conversion Prep Work - 3ph	16-OH57		$183,340.00

EVERSOURCE

Project Approval Form

Design Alternative			CD01261-10
EQUIPMENT OH - Conversion - CUTOVER	16-OH58	[redacted]	$63,153.60
OTHER OTHER 20% adder for contract labor	16-ALL14		$369,000.00
UG CABLE DB/UG - 750/1000 - 3-1/C (3ph) Cu Cable for new 13H92 to Griggs St: 1000 CU EPR 3-1/C 15kV	16-UG114B		$67,200.00
OTHER OTHER E Farm St Pole 9447: Remove cutouts & step transformers	16-ALL14		$10,000.00
OTHER OTHER E Farm St Pole 9448: rem cutouts & install 4/0 CU EPR taps.	16-ALL14		$1,500.00
SECTIONALIZE OH - Recloser - 3ph E Farms St Pole 9447: Install Cooper Nova recloser as a TR. Nome	16-OH38		$47,989.60
SECTIONALIZE OH - Recloser - 3ph Griggs St Pole 1828: Install recloser on riser per DTR 12.593, as an	16-OH38		$47,989.60
POLE DB/UG - Riser - 3ph Griggs St Pole 1828: [redacted]	16-UG146		$10,794.40
SECTIONALIZE OH - Recloser Control - setting changes only High St Pole 6339: modify recloser for operation at 13.8kV and to m	16-OH39A		$4,885.60 91T
OTHER OTHER Install in-line switches for new recloser installations.	16-ALL14		$25,000.00
INSULATOR OH - Install Wrap on skinned wire - 1ph or 3ph Install wrap on resulting bare spot on covered conductor due to con	16-OH24		$2,060.00
SECTIONALIZE OH - Recloser - 3ph N Walnut St., pole 1803 Nomenclate [redacted] (remove GOAB).	16-OH38		$47,989.60
CONDUIT UG-Ductline-up to 12 duct - Traveled Way / Paved [redacted]	16-UG137		$203,320.00

EVERSOURCE

Project Approval Form

Design Alternative		CD01261-10
SECTIONALIZE	16-OH42	$11,312.00
OH - Remove Recloser (any) [redacted]o be replaced with Sma		
SECTIONALIZE	16-OH38	$47,989.60
OH - Recloser - 3ph Walnut St Pole 64541: Install Cooper Nova/Form 6 recloser as a Sr		
SECTIONALIZE	16-OH39A	$4,885.60
OH - Recloser Control - setting changes only Walnut St Pole 7408: Modify recloser for operation at 13.8kV and tc		S
SECTIONALIZE	16-OH38	$47,989.60
OH - Recloser - 3ph Walnut St Pole 8677: Install Cooper Nova/Form 6 recloser as a Sm		

[redacted]

Design Alternative CD01261-11

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	32.00%
SubTotal:	$885,927
Contingency Amount:	$283,497
Estimate:	$1,169,424
Reimbursement:	$0
Net Amount:	**$1,169,424**
Description:	

Item Description	CU	Amount
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18	$120,000.00
INSULATOR OH - Install Wrap on skinned wire - 1ph or 3ph	16-OH24	$412.00
OH WIRE OH - Neutral	16-OH31	$15,360.00
OH WIRE OH - Remove circuit wire (1 phase)	16-OH37	$2,508.00
OH WIRE OH - Remove circuit wire (3 phase)	16-OH37A	$17,382.40
EQUIPMENT OH - Conversion Prep Work - 1ph	16-OH56	$8,652.00
EQUIPMENT OH - Conversion Prep Work - 3ph	16-OH57	$6,180.00
[redacted]	16-OH44	$20,566.40
	16-OH38	$47,989.60

EVERSOURCE

Project Approval Form

Design Alternative		[redacted]	CD01261-11
OTHER OTHER 20% adder for contract labor	16-ALL14		$160,000.00
OH WIRE OH - Reconductor w/ 175 Mil Tree Wire - 3ph -1/0 Buckingham St	16-OH26a		$64,064.00
OH WIRE OH - Reconductor w/Spacer Cable - 556 kcmil Cooke St	16-OH29		$126,976.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Murray St	16-OH25		$3,120.00
OH WIRE OH - Reconductor w/ 175 Mil Tree Wire - 3ph -1/0 Pine St	16-OH26a		$49,896.00
OTHER OTHER Remove regulators: 2 @ $1,500 each	16-ALL14		$3,000.00
OH WIRE OH - Reconductor w/Spacer Cable - 556 kcmil Woodlawn Ter	16-OH29		$239,820.80

Design Alternative CD01261-13

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	0.00%
SubTotal:	$8,000,000
Contingency Amount:	$0
Estimate:	$8,000,000
Reimbursement:	$0
Net Amount:	**$8,000,000**
Description:	Estimate for substation work

Item Description	CU	[redacted]	Amount
OTHER	16-ALL14		$8,000,000.00
OTHER			