EVERSOURCE

Project Approval Form

Project Title: CD02182 New Service [redacted] Newington	**Project Number:** CD02182
Date Prepared: 09/30/2024	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** SPECIFIC PROJECTS-NEW SRVCE
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: 12/31/2024	
Total Capital Request: 842.7K	**Authorization Type:** Full Funding

1. Executive Summary

This is a Full Funding request and includes a change in scope for a total of 842.7K. This is 111% if the partial funding estimate of $756.2K. CD02182 was partially approved on 3/28/2024.

The Act estimate is $817.5K + $25.2K for the scope change totaling $842.7K. The scope change is for the installation a new duct bank between manhole's #7072 and #7019 at the request of the UG operations supervisor. The purpose is to reduce duct congestion in manhole #7073.

The partial paf presentation is as follows:

This project has been established for high level engineering to address new customer loads [redacted] There are several new services at [redacted] Newington with substantial residential load and commercial loads. There is also a new large residential building on [redacted] also in Newington.

[redacted]

NB12 charges were reviewed, and the cost of the improvements is less than the calculated revenue.

Synergi load-flow study was performed and showed no voltage or power quality issues with the new circuit configurations.

2. Project Cost Summary

Note: Dollar values are in thousands.

Financial Evaluation ($000's)

Capital Costs	2024	2025	Year 3+	Total
Internal Labor and Construction Equipment	57.0	0.0	0.0	57.0
Outside Services	144.5	0.0	0.0	144.5
Materials	218.0	0.0	0.0	218.0
Removals	20.2	0.0	0.0	20.2
Risk and Contingency	57.0	0.0	0.0	57.0
Other	0.0	0.0	0.0	0.0
Subtotal	**496.9**	**0.0**	**0.0**	**496.9**

Indirect Capital Costs	2024	2025	Year 3+	Total
Indirects/Overheads (including benefits)	345.9	0.0	0.0	345.9
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal	**345.9**	**0.0**	**0.0**	**345.9**
Total Capital Costs (Gross)	**842.7**	**0.0**	**0.0**	**842.7**
Less Total Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Project Costs (Net of Reimbursement)	**842.7**	**0.0**	**0.0**	**842.7**

Explain unique payment provisions, if applicable:

3. Technical Justification

a. Background

[redacted]

b. Project Need

[redacted]

c. Project Scope

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

Major Material:

- 2-recloser's
- 850 ft 3-PH 1000 Cu cable
- 630 ft of 556 TW 3-PH
- 4-45ft C2 poles
- 200 ft 4/0 Al aerial cable

4. Alternatives Considered

Option 1 was chosen as the minimum cost solution. [redacted]

Project Option Comparison

	Option		
[redacted]			
Authorization Type	Full	NA	
Capital Cost	$842.7K	NA	
Expense Cost	$11.3K	NA	
Total Cost	$854.3 K	NA	
Total Cost / MVA added	$/MVA	NA	
Preferred option	X		

5. Project Schedule

Milestone/Phase Name	Estimated Date
Partial Approval	March 2024
100% Detailed Engineering Completion	April 2024
Fully Funded	November 2024
Construction Start	June 2024
In Service Date	December 2024

6. Regulatory Decisions

7. Codes and Standards

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.	2024	Medium	Included contingency costs in the funding request. Perform detailed Field Analysis and walk down in project development to avoid potential issues.
Customer Permission / Siting Council / Municipal approvals	2024	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach.
Internal construction resources not available to perform the work.	2024	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.	2024	Medium	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Materials Shortage or long lead times	2024	High	Pre-order long lead time material; minimize the use of non-standard and non-stocked material.
Storm delays	2024	Medium	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2024	Low	Schedule work to minimize system abnormal time. Install temporary bypasses/equipment if system will be abnormal for extended periods.

Technological risks involving integration of new technology	2024	Low	Before use of new technology ensure support of standards and manufacturer. Schedule project to accommodate for extra time or ensure new technology is not on the critical path.
Wetlands / Environmentally sensitive area	2024	Low	Use of mats and specialty equipment, only work during certain times of the year.

9. References

References
1.
2.
3.
4.
5.

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

Attachment	Included in Submittal?
A. Partial Funding PAF Form	*YES*
B. P6 Schedule	*NO*
C. Geographic Map	*YES*
D. System and Station One-Lines	*YES*
E. Load Summary	*YES*
F. New load assumptions	*YES*
G [redacted]esidential BLDG	*YES*
H. Synergi results	*YES*
I. Scope change sketch	*YES*
J. Scope change estimate	*YES*
K. Initial authorization	*YES*

Project Title: CD02182 New Service [redacted] Newington	**Project Number:** CD02182
Date Prepared: 08/25/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** SPECIFIC PROJECTS-NEW SRVCE
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: 12/31/2024	
Total Capital Request: 756.2K	**Authorization Type: Partial Funding**

1. Executive Summary

This project has been established for high level engineering to address new customer loads on the [redacted] There are several new services at [redacted] Newington with substantial residential load and commercial loads. There is also a new large residential building on [redacted] also in Newington.

[redacted]

NB12 charges were reviewed, and the cost of the improvements is less than the calculated revenue.

Synergi load-flow study was performed and showed no voltage or power quality issues with the new circuit configurations.

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	2024	2025	2025+	Total
Internal Labor and Construction Equipment	49.3	0.0	0.0	49.3
Outside Services	141.2	0.0	0.0	141.2
Materials	157.6	0.0	0.0	157.6
Removals	108.7	0.0	0.0	108.7
Other	0.0	0.0	0.0	0.0
Risk and Contingency	0.0	0.0	0.0	0.0
Subtotal	**456.9**	**0.0**	**0.0**	**456.9**

Indirect Capital Costs	2024	2025	2025+	Total
Indirects/Overheads (including benefits)	280.7	0.0	0.0	280.7
Capitalized interest or AFUDC, if any	18.6	0.0	0.0	18.6
Subtotal	**299.3**	**0.0**	**0.0**	**299.3**
Total Capital Costs (Gross)	**756.2**	**0.0**	**0.0**	**756.2**
Less Total Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Project Costs (Net)	**756.2**	**0.0**	**0.0**	**756.2**

Explain unique payment provisions, if applicable:

3. Technical Justification

a. Background

[redacted]

b. Project Need

[redacted]

c. Project Scope

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

Major Material:

- 2-recloser's
- 850 ft 3-PH 1000 Cu cable
- 630 ft of 556 TW 3-PH
- 4-45ft C2 poles
- 200 ft 4/0 Al aerial cable

4. Alternatives Considered

Option 1 was chosen as the minimum cost solution. [redacted]

Project Option Comparison

	Option		
[redacted]			
Authorization Type	Partial	NA	
Capital Cost	$756.2K	NA	
Expense Cost	$39.9K	NA	
Total Cost	$796.1K	NA	
Total Cost / MVA added	$/MVA	NA	
Preferred option	X		

5. Project Schedule

Milestone/Phase Name	Estimated Date
Partial Approval	9/30/2023
100% Detailed Engineering Completion	February 2023
Fully Funded	March 2023
Construction Start	April 2024
In Service Date	December 2024

6. Regulatory Decisions

7. Codes and Standards

8. Risk and Contingencies

Contingencies:

Risk Mitigation:

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
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System abnormal configuration	2024	Low	Schedule work to minimize system abnormal time. Install temporary bypasses/equipment if system will be abnormal for extended periods.

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9. References

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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. Load Summary	*YES*
F. New load assumptions	*YES*
G [redacted] residential BLDG	*YES*

H. Synergi results	Yes

Project Option Summary

ID	Description	Segments	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)	Prfrd
O1	[redacted]	1,2,3	$796,103	$0	100%	$0.00	$13.66	☑

Segments

ID	Title	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)
1	[redacted]	$221,335			$0.00	$0.68
2		$328,461			$0.00	$0.00
3		$246,308			$0.00	$0.00

Design Alternative CD02182-01

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00%
SubTotal:	$178,496
Contingency Amount:	$42,839
Estimate:	$221,335
Reimbursement:	$0
Net Amount:	**$221,335**

Description:

Item Description	CU	[redacted]	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	23-ALL17		$9,124.96
UG CABLE DB/UG - 750/1000 - 3-1/C (3ph) Cu	23-UG114B		$106,080.00
UG CABLE UG - Cable Removal - all cables	23-UG117		$22,100.00
ACT ACT Estimate for Contractor Crews contractor adder 30%	16-ALL12		$41,191.00

Design Alternative CD02182-02

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00%
SubTotal:	$264,888
Contingency Amount:	$63,573
Estimate:	$328,461
Reimbursement:	$0
Net Amount:	**$328,461**

Description:

Item Description	CU	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	23-ALL17	$9,124.96
TRAFFIC OH/DB/UG - Traffic Control - Police Officer 15% of precontingency subtotal	16-ALL18	$26,577.00
OTHER OTHER 30% contractor adder	16-ALL14	$61,128.00
OH WIRE OH - Line Extension - 3ph (556 kcmil) [redacted] pole 2514	23-OH34	$98,280.00
SECTIONALIZE OH - Recloser - 3ph install an SR on pole pole [redacted]	23-OH38	$62,386.48
SECTIONALIZE OH - Recloser Control - setting changes only make the [redacted]	23-OH39A	$6,351.28
OH WIRE OH - Remove circuit wire (3 phase) remove existing street crossing between poles 4263 and 4859	23-OH37A	$1,040.00

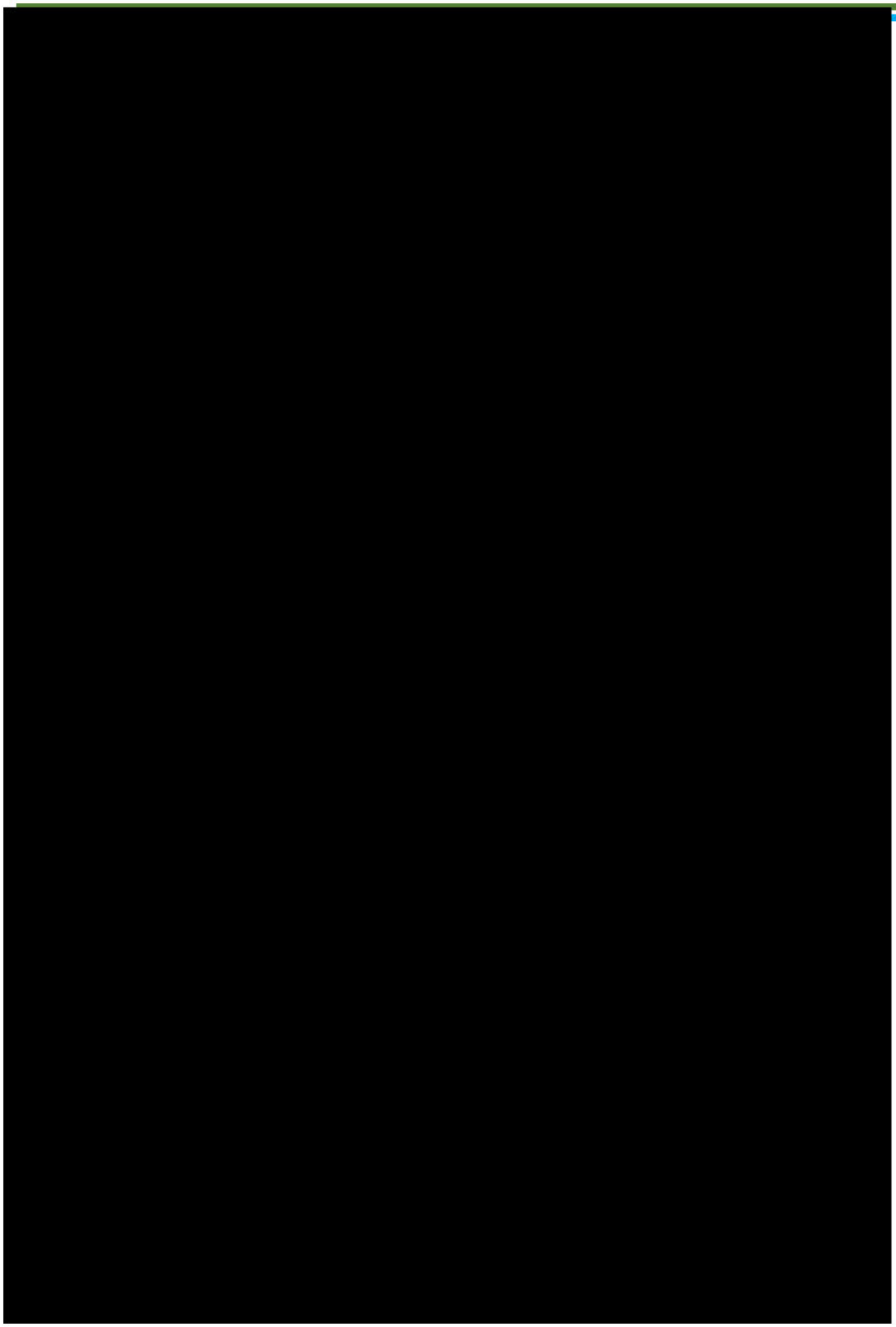
Project Approval Form

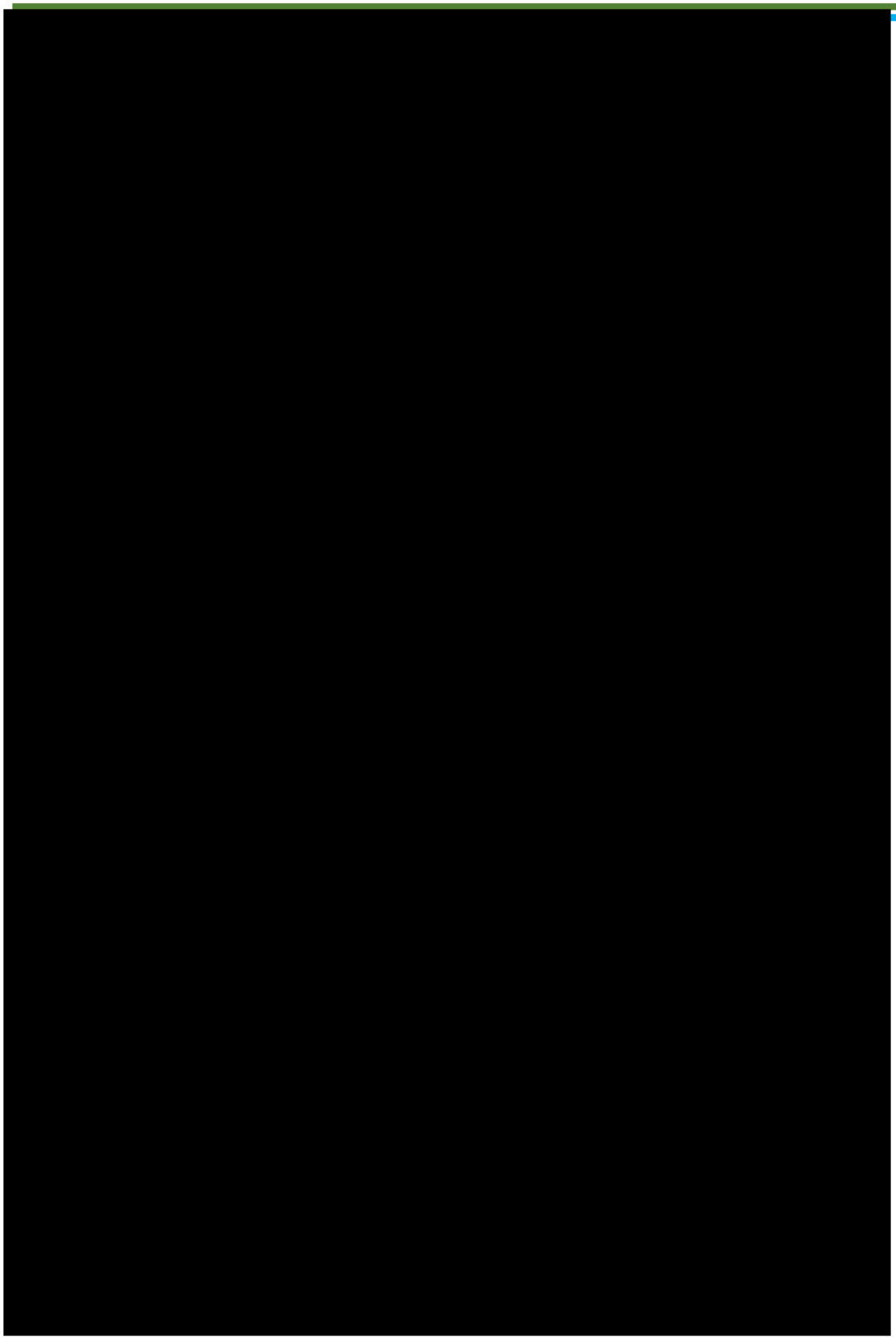
Design Alternative CD02182-03

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00%
SubTotal:	$198,635
Contingency Amount:	$47,672
Estimate:	$246,308
Reimbursement:	$0
Net Amount:	**$246,308**
Description:	

Item Description	CU	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	23-ALL17	$18,249.92
SECTIONALIZE OH - Recloser Control - setting changes only change settings on the [redacted] ge settings on	23-OH39A	$19,053.84
OTHER contractor adder 30%	16-ALL14	$45,839.00
OH WIRE OH-Install Aerial Cable-existing poles (any gauge) feed riser on pole 6597 with aerial cable from pole 6498, fuse with	23-OH36	$23,920.00
TRAFFIC OH/DB/UG - Traffic Control - Police Officer Police 15% of precontingency subtotal	16-ALL18	$19,930.00
SECTIONALIZE OH - Recloser - 3ph remove the goab on selden st pole 6596 and install an radial reclos	23-OH38	$62,386.48
POLE OH - POLE - 3ph (Telephone custodian) to replace 9303 and 6498	23-OH12	$9,256.00







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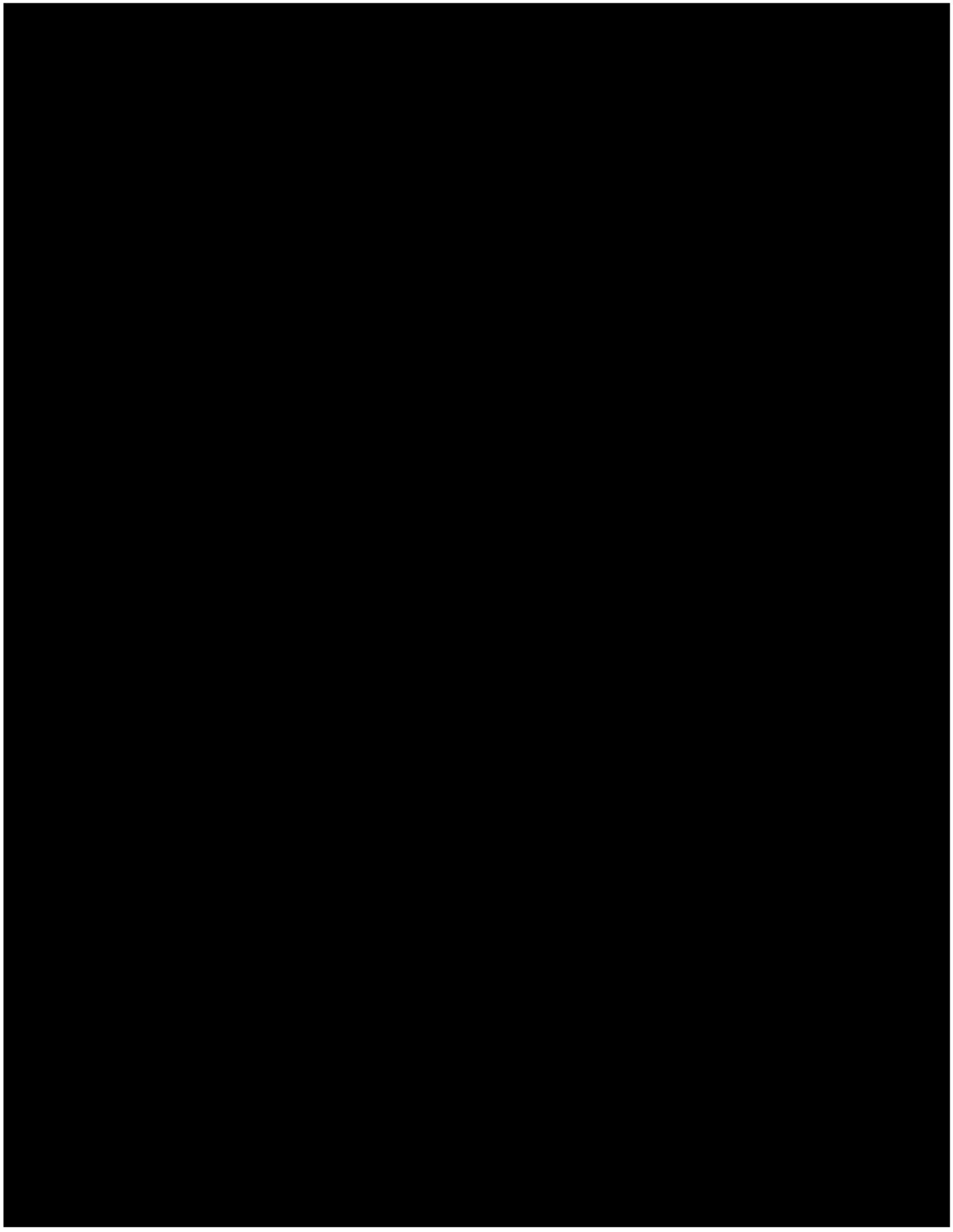
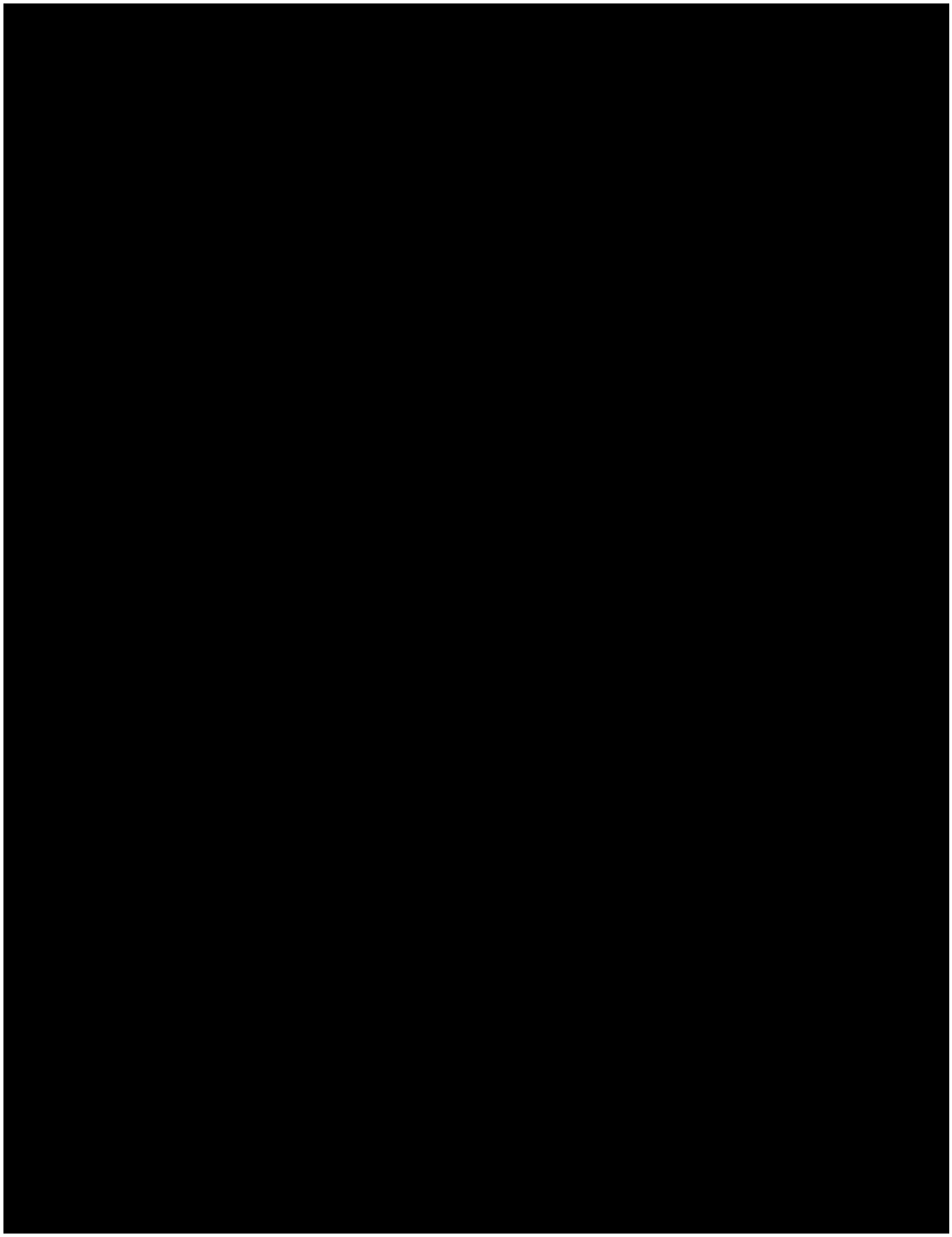
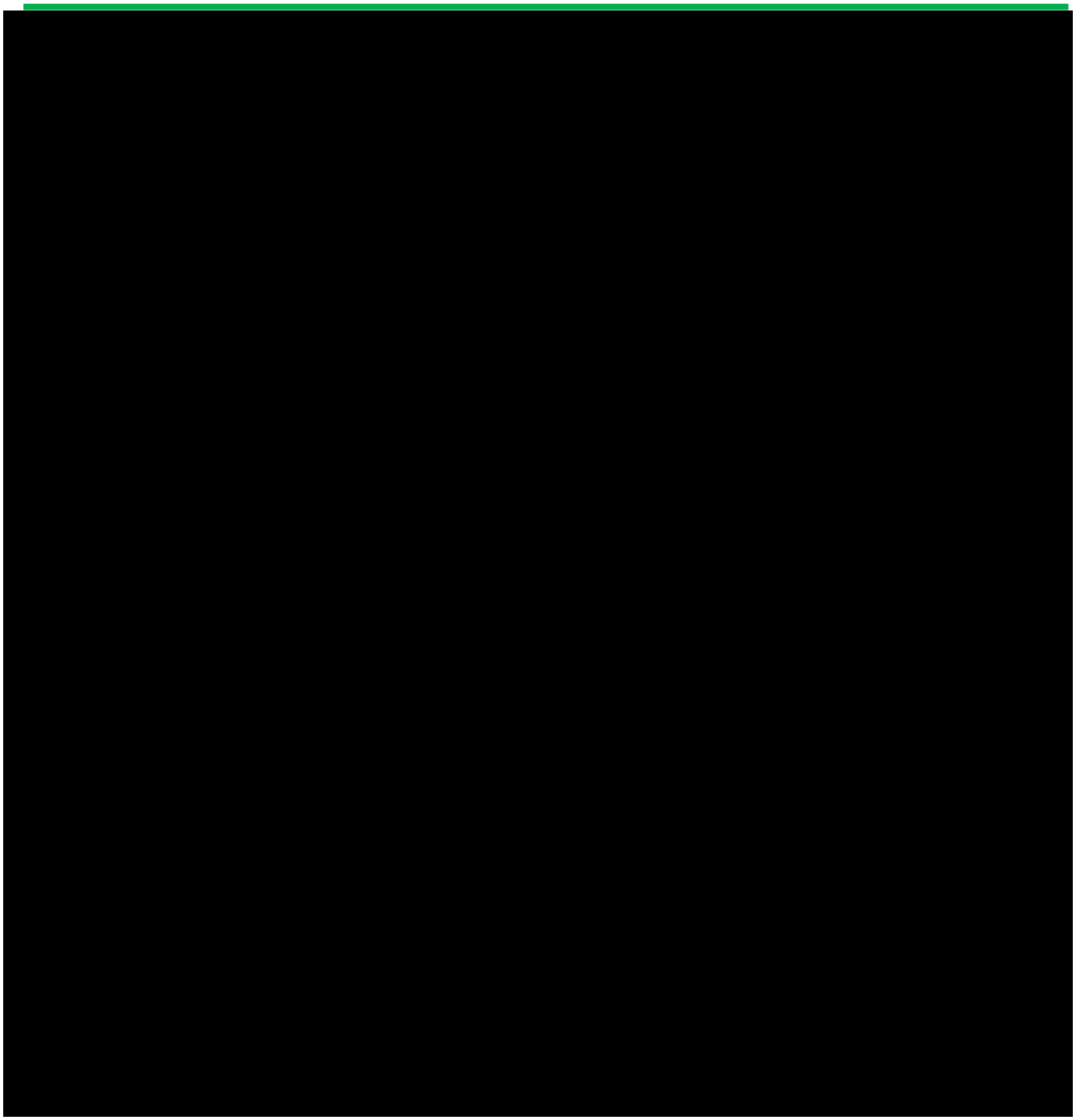
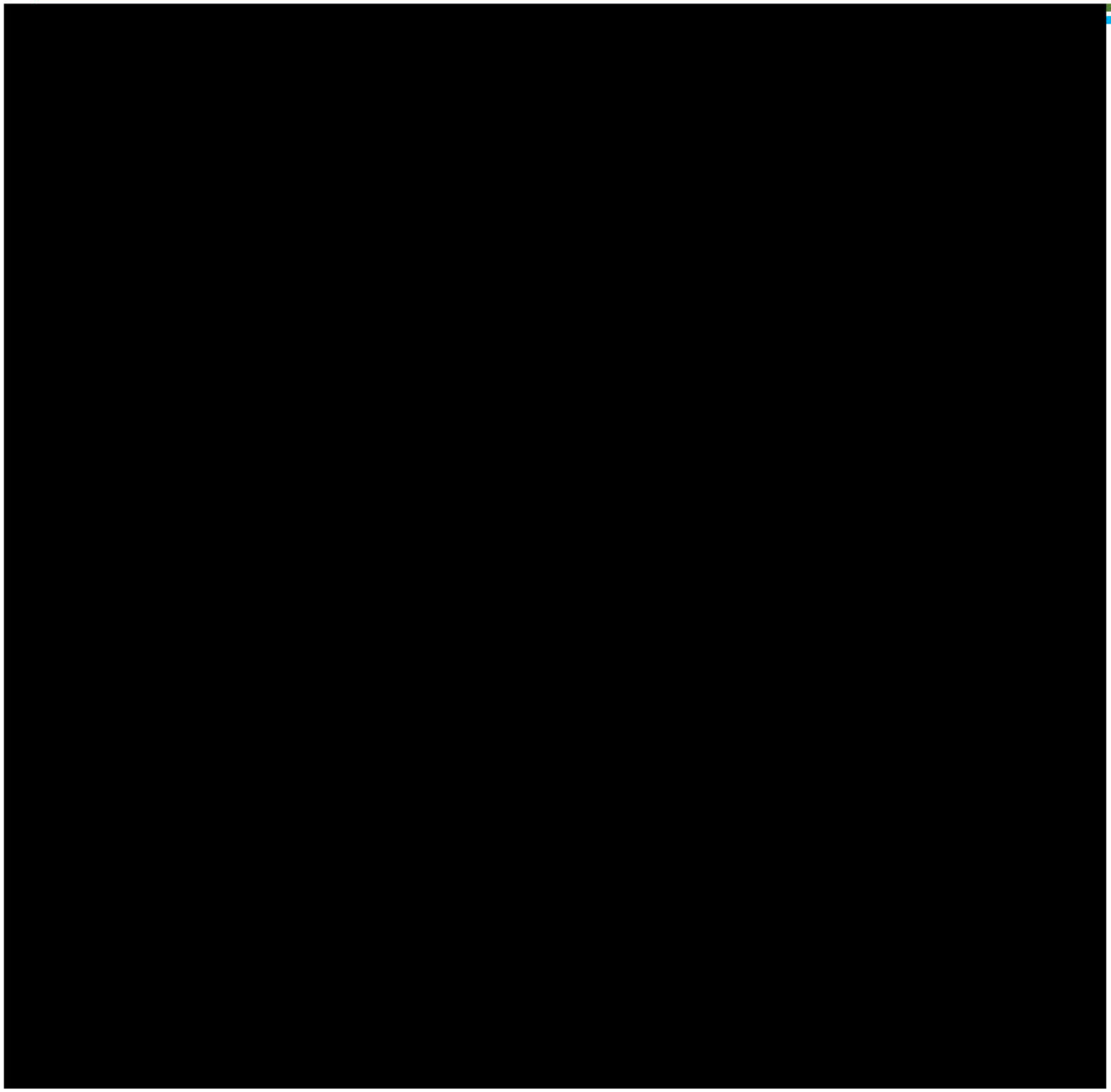
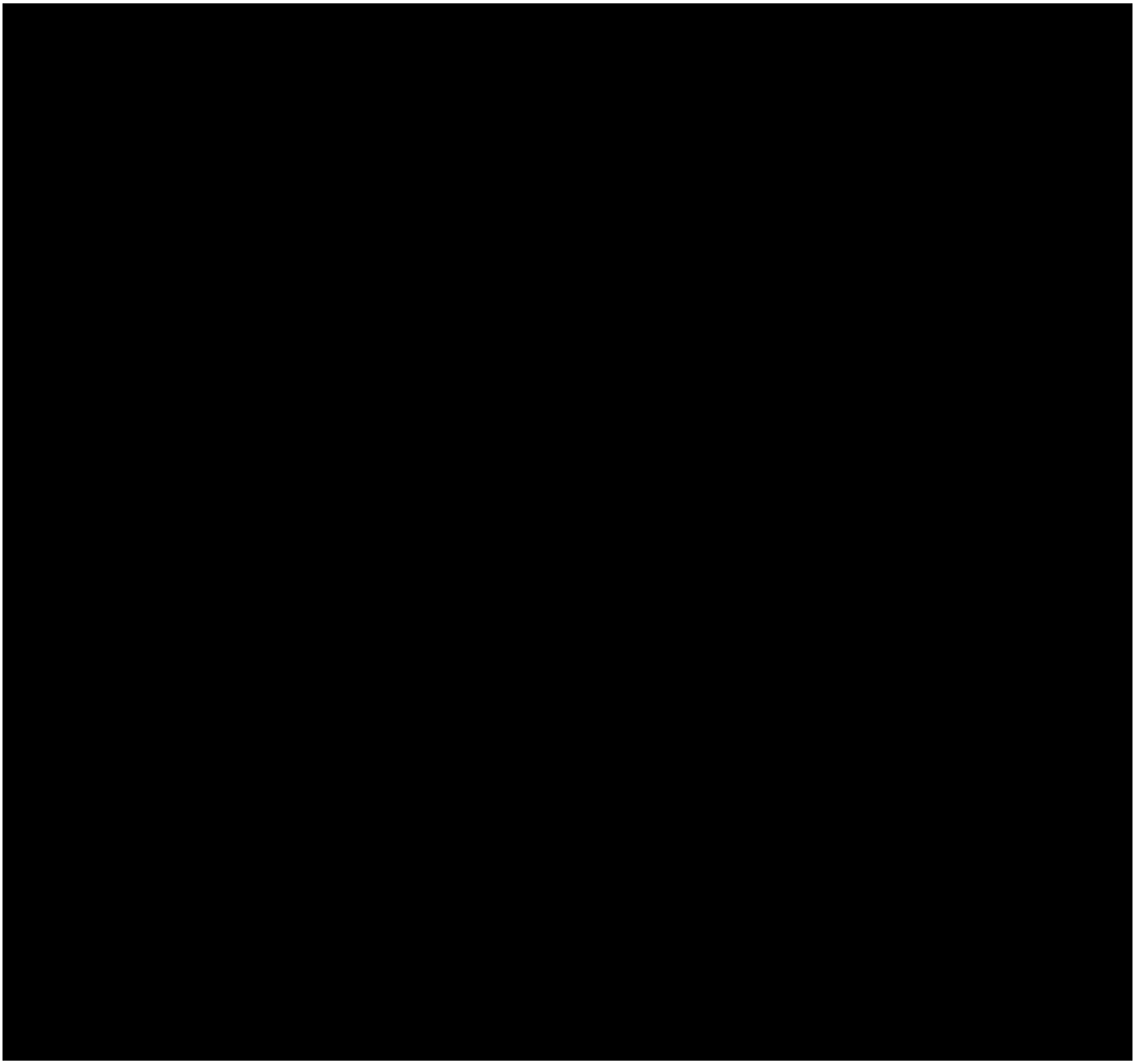
Project Approval Form

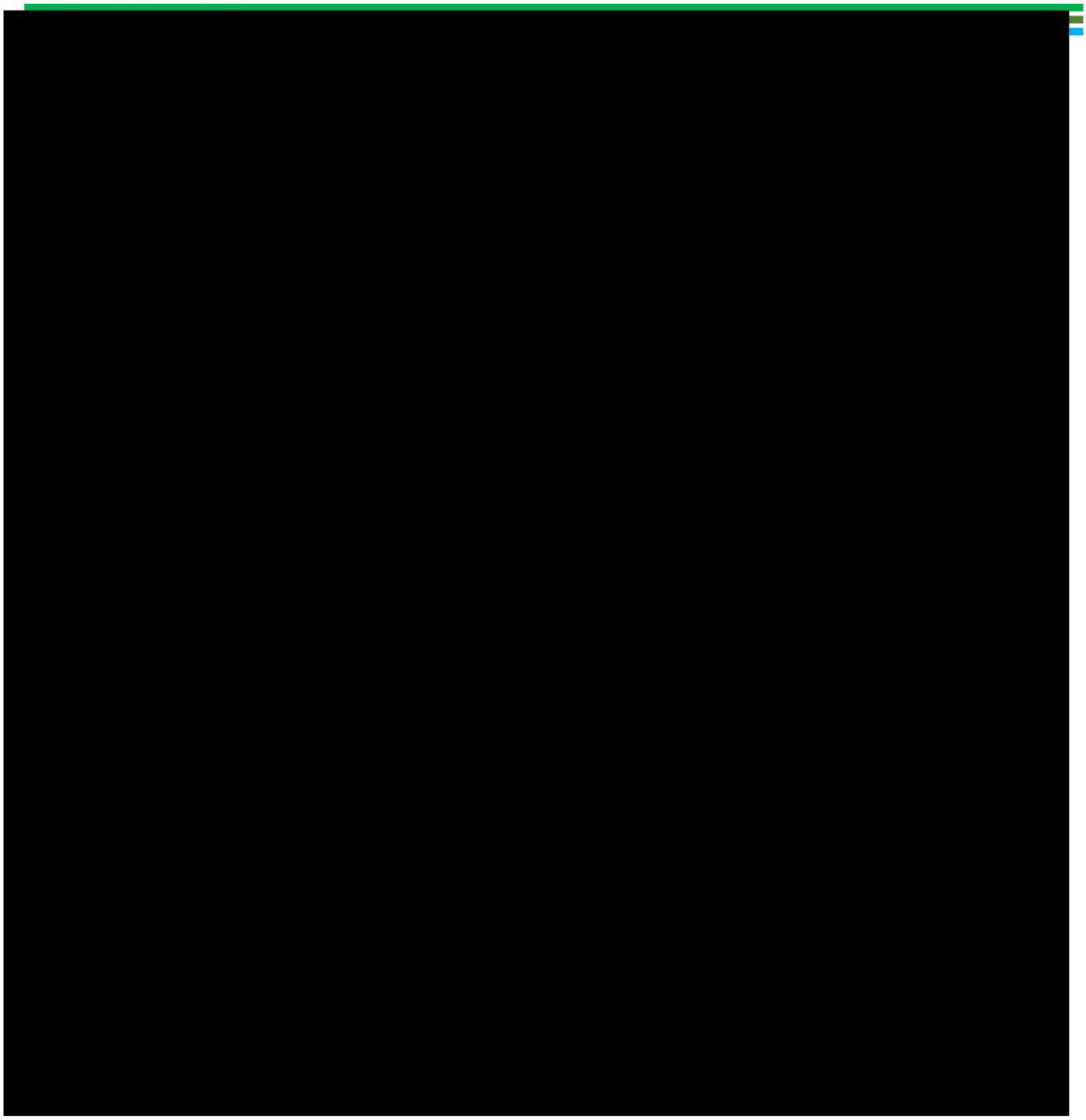










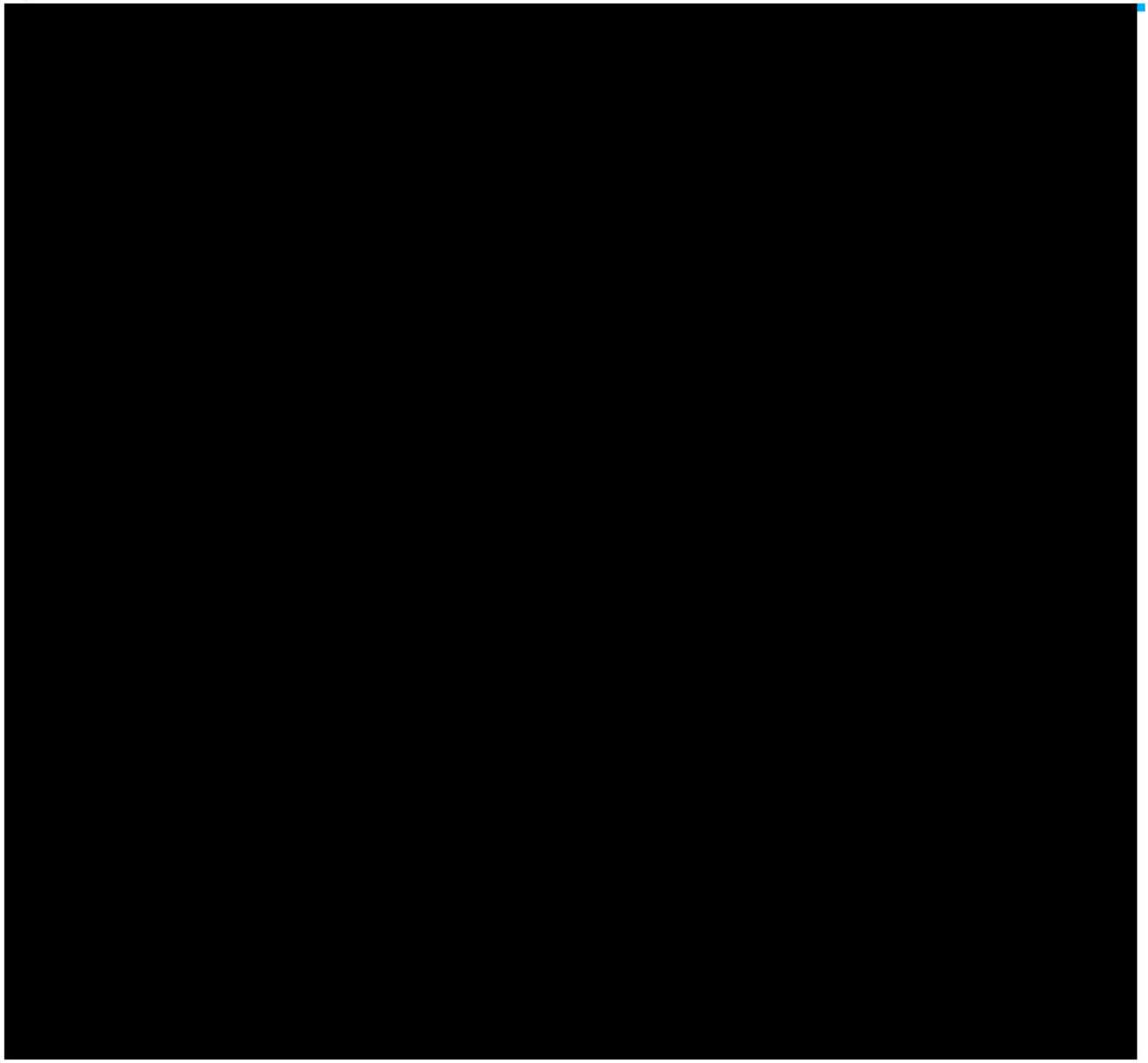












New load assumptions:

loads received from developer

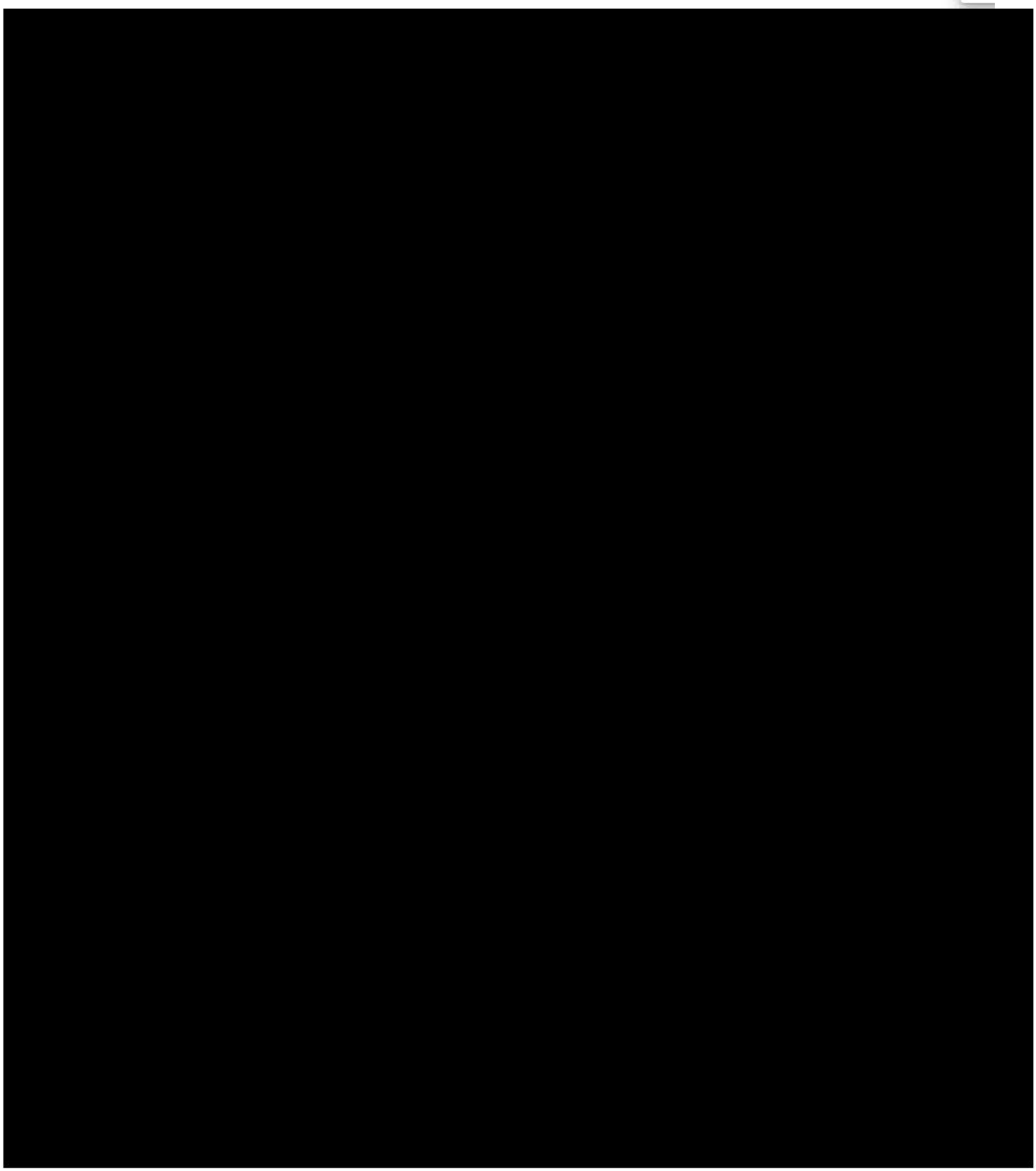
[redacted]

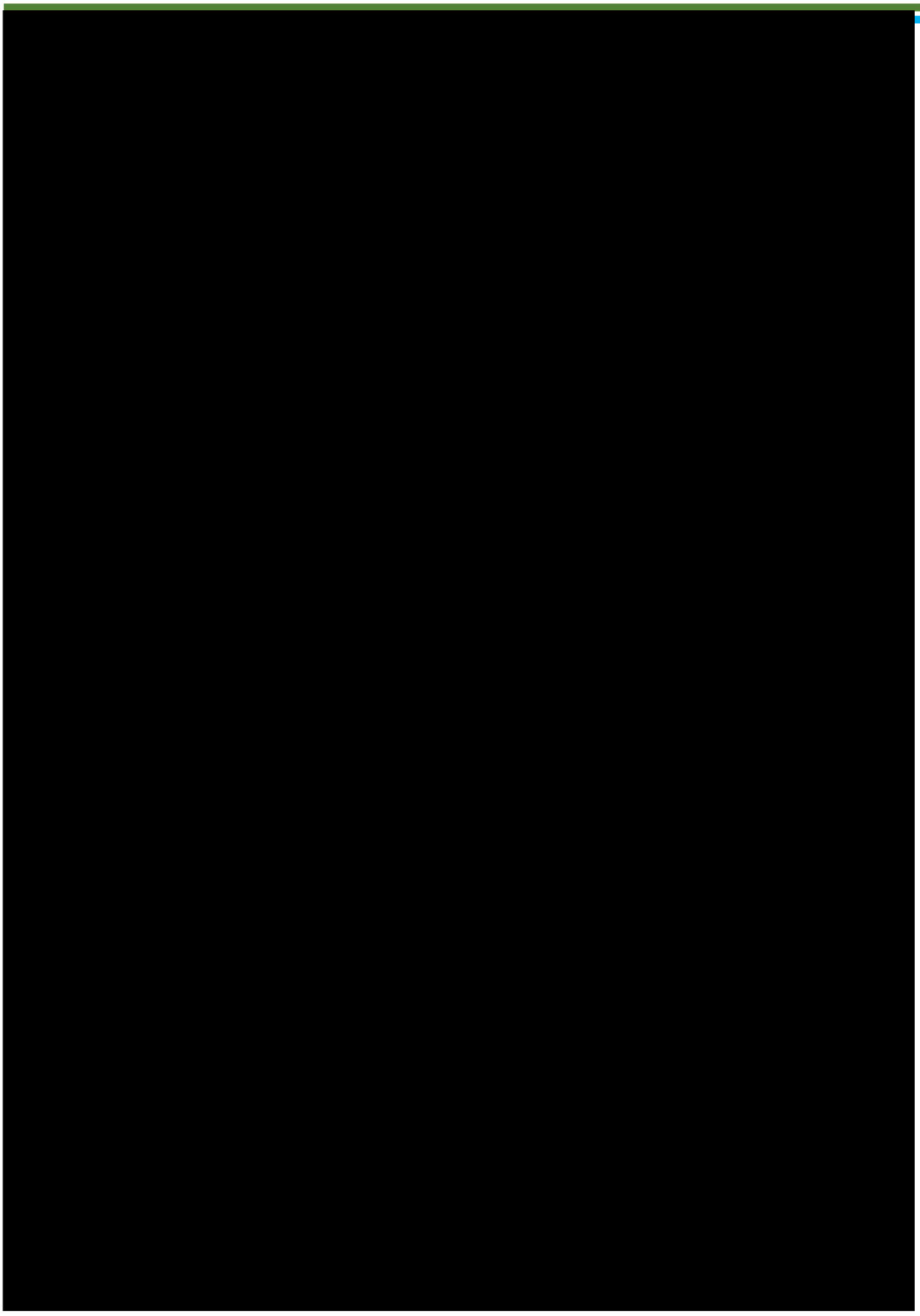


227 Pane Rd residential BLDG:



3333 development site: s

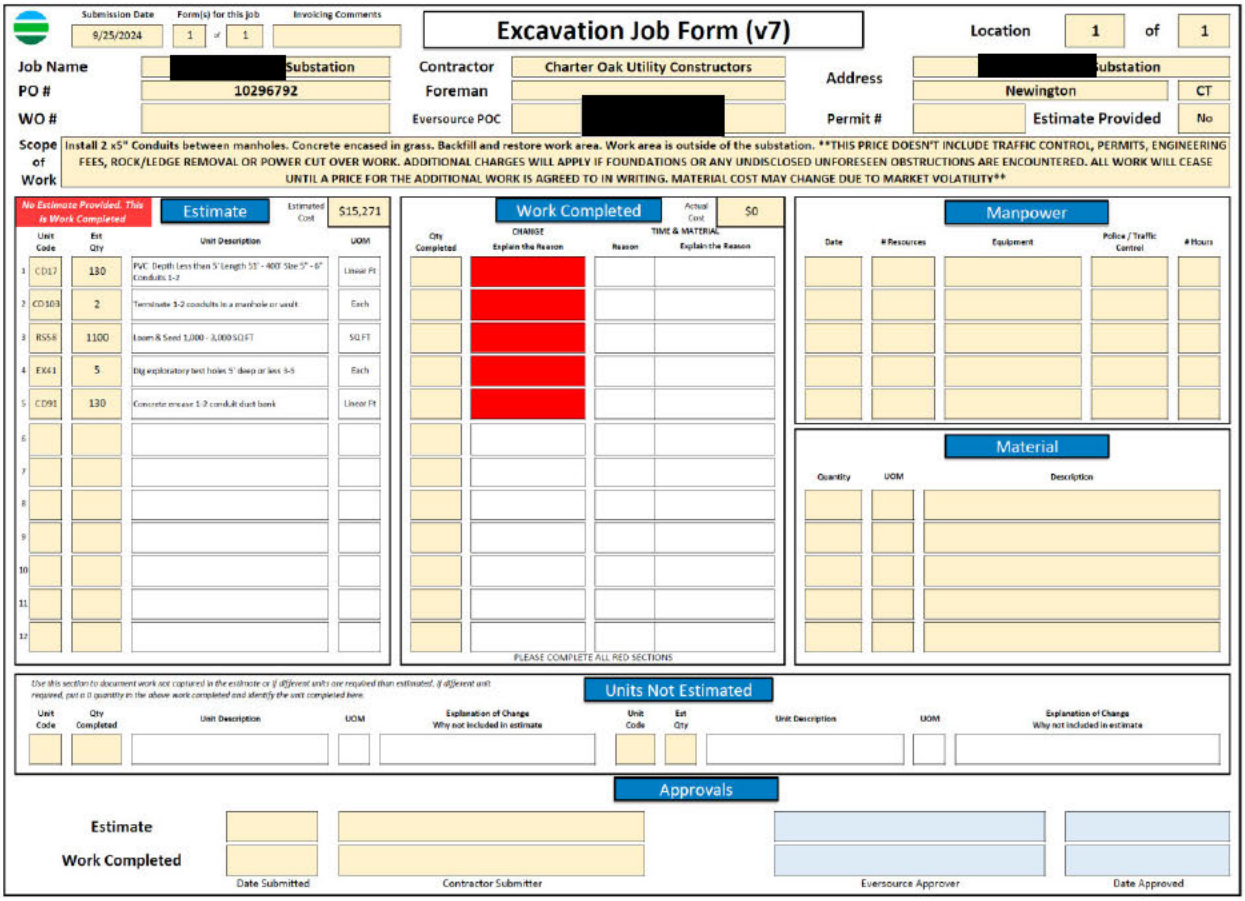








Direct cost estimate from contractor:



Submission Date: 9/25/2024 | Form(s) for this Job: 1 of 1 | Invoicing Comments:

Excavation Job Form (v7)

Location: 1 of 1

Job Name	[redacted] Substation	Contractor	Charter Oak Utility Constructors	Address	[redacted] Substation
PO #	10296792	Foreman			Newington CT
WO #		Eversource POC	[redacted]	Permit #	Estimate Provided: No

Scope of Work: Install 2 x5" Conduits between manholes. Concrete encased in grass. Backfill and restore work area. Work area is outside of the substation. **THIS PRICE DOESN'T INCLUDE TRAFFIC CONTROL, PERMITS, ENGINEERING FEES, ROCK/LEDGE REMOVAL OR POWER CUT OVER WORK. ADDITIONAL CHARGES WILL APPLY IF FOUNDATIONS OR ANY UNDISCLOSED UNFORESEEN OBSTRUCTIONS ARE ENCOUNTERED. ALL WORK WILL CEASE UNTIL A PRICE FOR THE ADDITIONAL WORK IS AGREED TO IN WRITING. MATERIAL COST MAY CHANGE DUE TO MARKET VOLATILITY**

No Estimate Provided. This is Work Completed

Estimate

Estimated Cost: $15,271

	Unit Code	Est Qty	Unit Description	UOM
1	CD17	130	PVC Depth Less then 5' Length 51' - 400' Size 5" - 6" Conduits 1-2	Linear Ft
2	CD103	2	Terminate 1-2 conduits in a manhole or vault	Each
3	RS58	1100	Loam & Seed 1,000 - 3,000 SQ FT	SQ FT
4	EX41	5	Dig exploratory test holes 5' deep or less 1-5	Each
5	CD91	130	Concrete encase 1-2 conduit duct bank	Linear Ft
6				
7				
8				
9				
10				
11				
12				

Work Completed

Actual Cost: $0

Qty Completed	CHANGE: Explain the Reason	TIME & MATERIAL: Reason	TIME & MATERIAL: Explain the Reason

PLEASE COMPLETE ALL RED SECTIONS

Manpower

Date	# Resources	Equipment	Police / Traffic Control	# Hours

Material

Quantity	UOM	Description

Units Not Estimated

Use this section to document work not captured in the estimate or if different units are required than estimated. If different unit required, put a 0 quantity in the above work completed and identify the unit completed here.

Unit Code	Qty Completed	Unit Description	UOM	Explanation of Change: Why not included in estimate	Unit Code	Est Qty	Unit Description	UOM	Explanation of Change: Why not included in estimate

Approvals

	Date Submitted	Contractor Submitter	Eversource Approver	Date Approved
Estimate				
Work Completed				

EVERSOURCE

Project Approval Form

Intial Authorization:

Operations Project Authorization Form

Project Title: [redacted] New Load	**Project Number:** CD02182
Date Prepared: 08/03/2023	**Company:** Eversource CT
Organization: Electric Field Operations	**Class(es) of Plant:** D Line
Project Initiator: [redacted]	**Project Category:** SPECIFIC PROJECTS-NEW SRVCE
Project Manager: [redacted]	**Project Type:** Specific
Project Sponsor: [redacted]	**Capital Investment part of original Operating Plan:** No
Estimated in service date:	**Emergency Related Request?** No
Eng./Constr. Resources Budgeted? No	**Facility Type** (check all that apply)**:** ☐ PTF ☐ non-PTF ☒ Distribution
Total Gross Capital Request: $30k	**Authorization Type:** Initial Funding

Project Need Statement:

[redacted]. There are several new services a[redacted]Newington. The development is a combination of residential and commercial. There is also a new large residential building on [redacted] also in Newington.

Project Objective:

[redacted]

[redacted]