EVERSOURCE

Project Approval Form

Project Title: ARKA – SCADA Backup	**Project Number:** CD02678
Date Prepared: 07/31/2025	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** SMART SWITCHES PROGRAM
Project Initiator: [redacted]	**Project Type:** Specific
Initiating Organization: Distribution	**Capital Investment part of original Op Plan:** No
Project Manager: [redacted]	**Emergency Related Request?** No
Project Sponsor: [redacted]	**Facility Type** (check all that apply): ☐ PTF ☐ non-PTF ☒ Distribution ☐ N/A (General Plant)
Required in service date: 12/31/2025	**NWS Excludable:** ☐ Yes ☒ No
Total Capital Request: $386K	**Authorization Type:** Full Funding

1. Executive Summary

This project was created to address electrical reliability and restoration concerns from ARKA; a satellite and space-based optics company at [redacted]

The partial funding capital request for this project was $230K and was approved during the 4/24/2025 CPAC meeting. The full funding capital request for this project is $386K. The capital difference of the full funding minus the partial funding is equal to +$156K, a 68% increase. There was a small increase in internal labor and material costs. As a result, there was an increase in indirect costs. No scope change incurred.

Division: Western
District: Newtown AWC
Town(s): Danbury

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	Year 2025	Year 2026	Year 2027+	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	45.9	0.0	0.0	45.9
Outside Services	0.0	0.0	0.0	0.0
Materials	122.1	0.0	0.0	122.1
Removals	4.6	0.0	0.0	4.6
Risk and Contingency	26.9	0.0	0.0	26.9
Other	0.0	0.0	0.0	0.0
Subtotal – Direct Costs	**199.5**	**0.0**	**0.0**	**199.5**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	186.4	0.0	0.0	186.4
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal – Indirect Costs	**186.4**	**0.0**	**0.0**	**186.4**
Total Gross Capital Costs	**386.0**	**0.0**	**0.0**	**386.0**
Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Total Net Capital Project Costs	**386.0**	**0.0**	**0.0**	**386.0**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

[redacted]

Date	Storm	Weather	Cause	Duration
[redacted]				

Figure 1: Outage Table

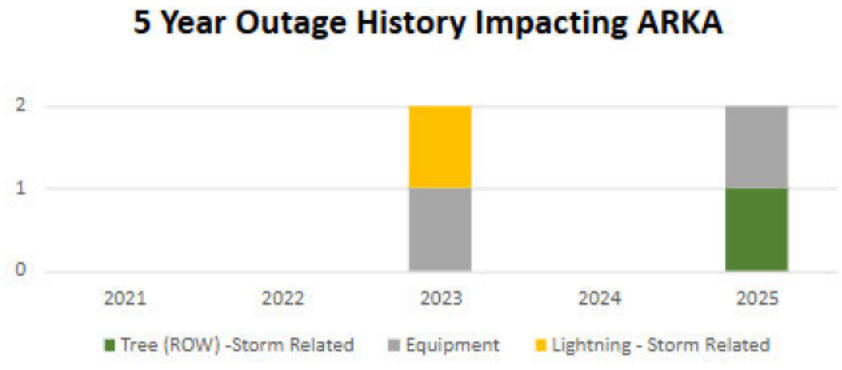


Figure 2: Outage Bar Chart

In response to the most recent outage, vegetation management has removed many trees in the ROW. The new tree line to pole line distance is 25’.

Before (2/27/25)	After (3/7/25)
	
Before (2/27/25)	**After (3/7/25)**
	

Figure 3: Before and After Vegetation

[redacted]

Projects that have been accounted for during this project include: CD01132 [redacted] CD02681 - ARKA Reconductor.

b. Project Need

The need for this project stems from ARKA's concerns about Eversource's ability to provide uninterrupted and reliable power. The most recent outage in February 2025 was caused by a fallen tree in their ROW which greatly affected their business. As shown in Figure 3, tree related outages localized to their ROW should be substantially mitigated due to the newly receded tree line.

[redacted]

[redacted]

Project CD01132 – [redacted]

Successful execution of this project can improve restoration time for ARKA.

c. Project Scope

This project proposes one option, Option 1, as the preferred option. [redacted] The scope of Option 1 is as follows:

[redacted]

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

[redacted]

[redacted]

Major Materials:

- 2 | Viper Reclosers (J-switches)

4. Alternatives Considered

[redacted]		
Authorization Type	Full	Full
Capital Cost	$385,960	$45,420,982
Expense Cost	$16,911	$2,579,018
Total Cost	$402,871	$48,000,000
Total Cost / MVA Added	N/A	N/A
Total Cost / CM Saved	N/A	N/A
Total Cost / CI Saved	N/A	N/A
Preferred Option	X	

Non-Wire Solution (NWS) (Option 2)

[redacted] This option was calculated at $2.0M per MWh based on the two lowest of the three contractor bids received in Connecticut.

5. Project Schedule

Milestone/Phase Name	Estimated Date
Partial Approval	April 2025
100% Detailed Engineering Completion	July 2025
Fully Funded	September 2025
Construction Start	October 2025
Project Completion	December 2025

6. Regulatory Decisions

N/A

7. Codes and Standards

Codes and Standards
1. DSEM 06.713 – Overhead System Protection & Design Philosophy

8. Risk and Contingencies

Contingencies: 20% contingency was added for 2025 work. This contingency accounts for any risks that are unknown and do not have 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.
Customer Permission / Siting Council / Municipal approvals	2025	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach.
Internal construction resources not available to perform the work.	2025	Low	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.	2025	Low	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Materials Shortage or long lead times	2025	Low	Pre-order long lead time material; minimize the use of non-standard and non-stocked material.
Storm delays	2025	Low	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2025	Medium	Schedule work to minimize system abnormal time. Install temporary bypasses/equipment if system will be abnormal for extended periods.
Wetlands / Environmentally sensitive area	2025	Low	Use of mats and specialty equipment, only work during certain times of the year.

9. References

References
1. CD01132 – Triangle Switchgear 11A52/53
2. CD02681 – ARKA Reconductor

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

Attachment	Included in Submittal?
A. Geographic Maps	*YES*
B. One-lines	*YES*
C. Load Sheets	*YES*
D. Partial Funding PAF	*YES*

Attachment - A: Geographic Maps



Figure 4: Circuit Map – Before (Overview)



Figure 5: Circuit Map – Option 1 (preferred)

Attachment - B: One-lines

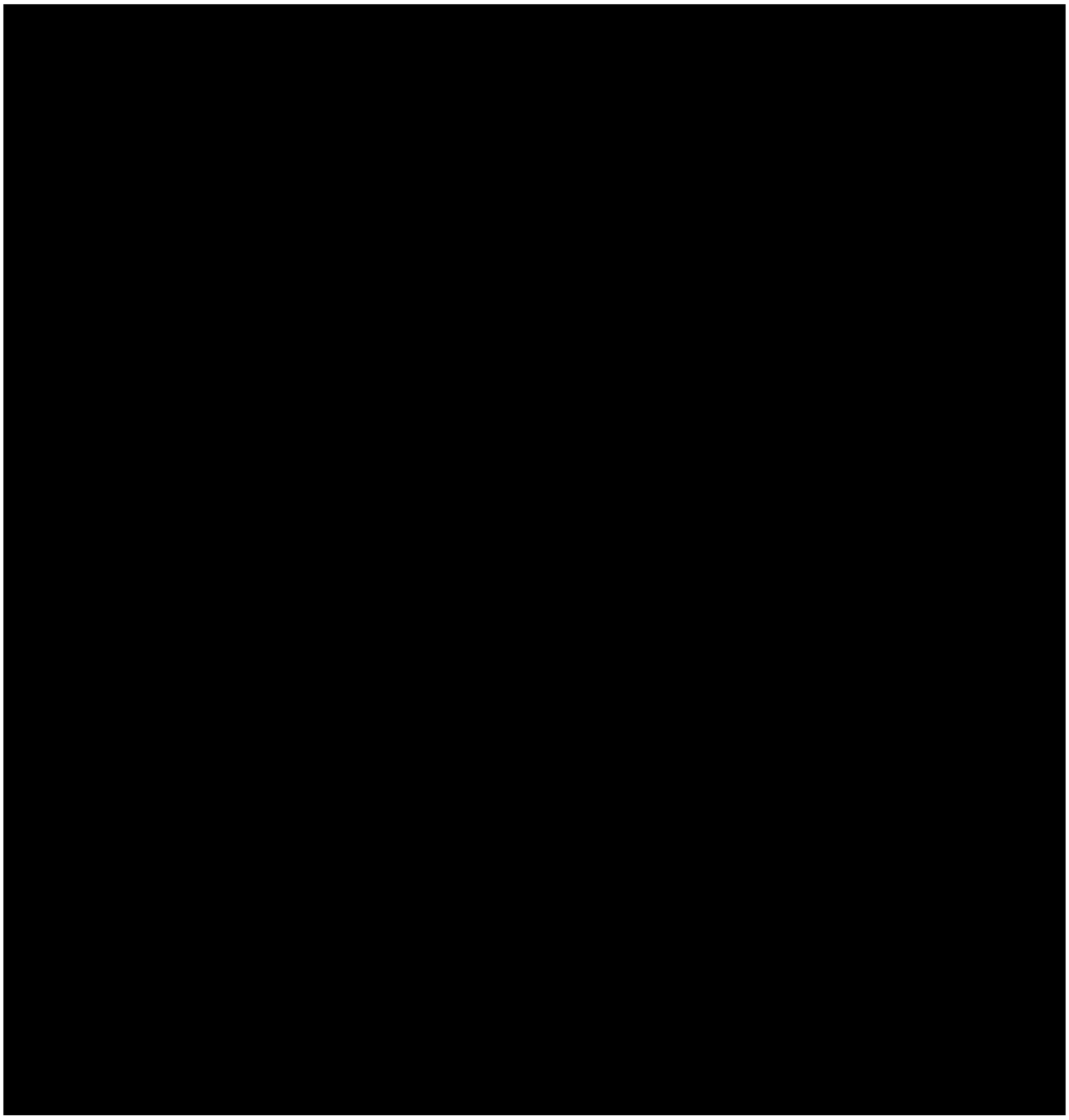


Figure 6: One-lines – Before

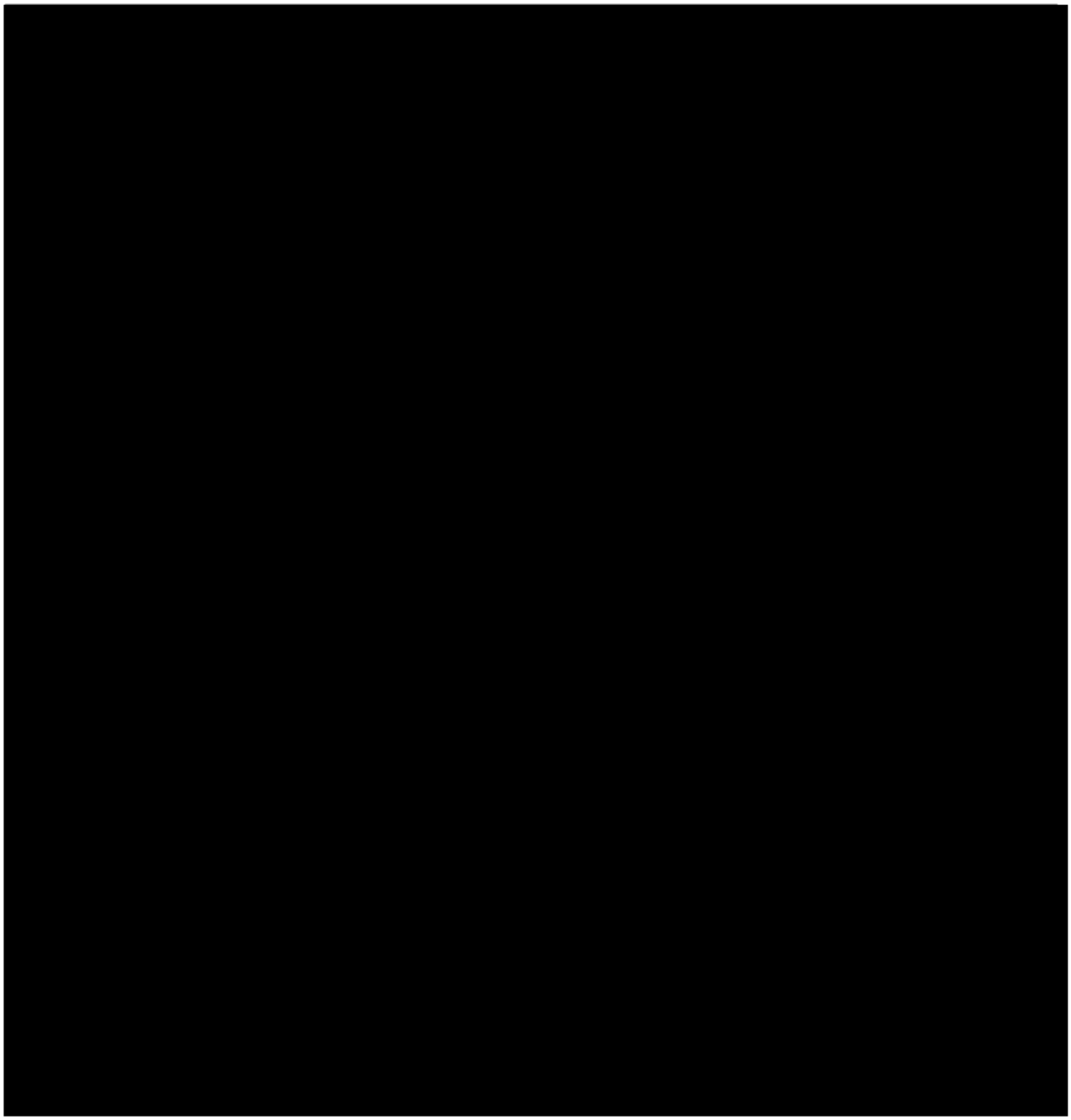
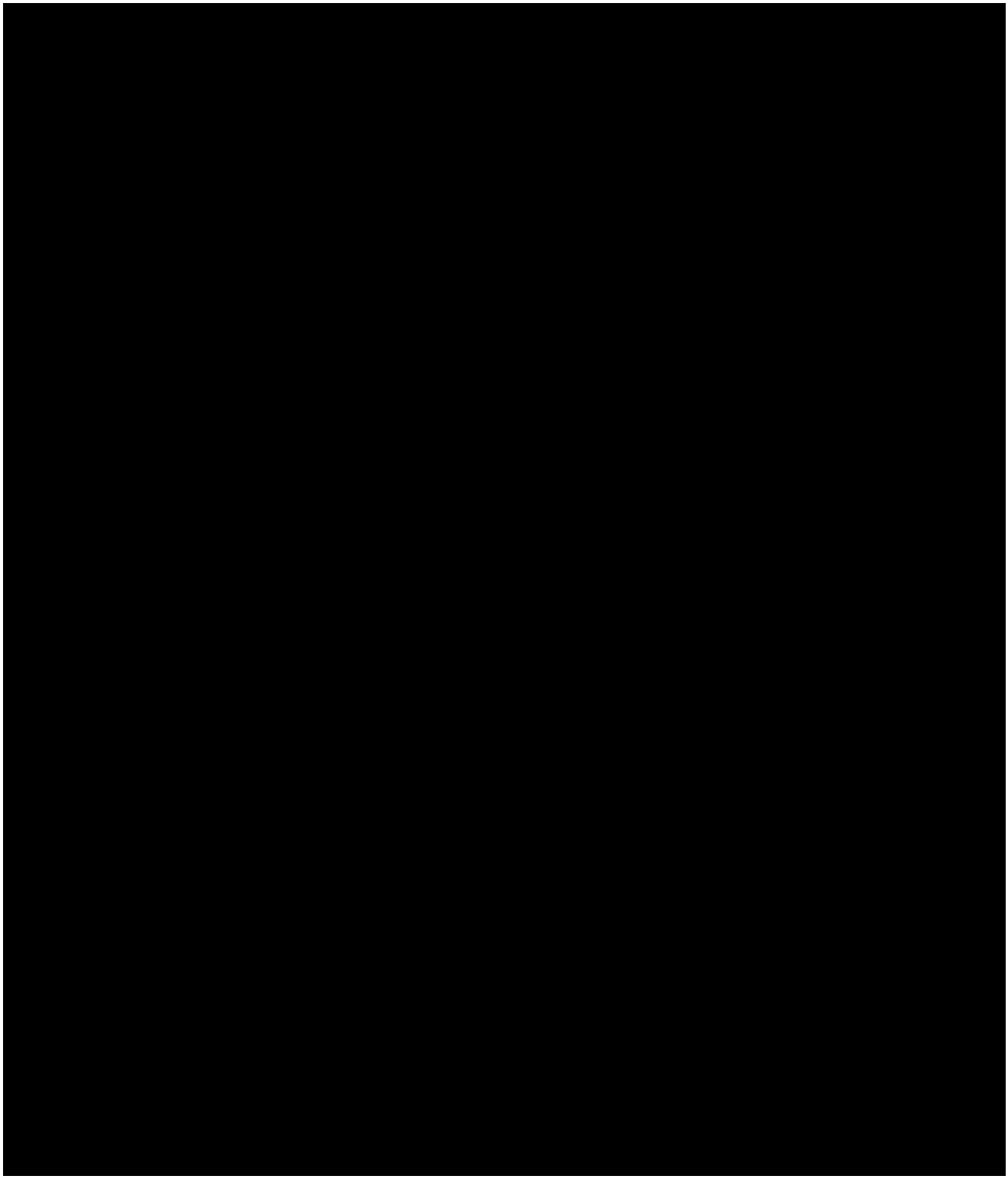


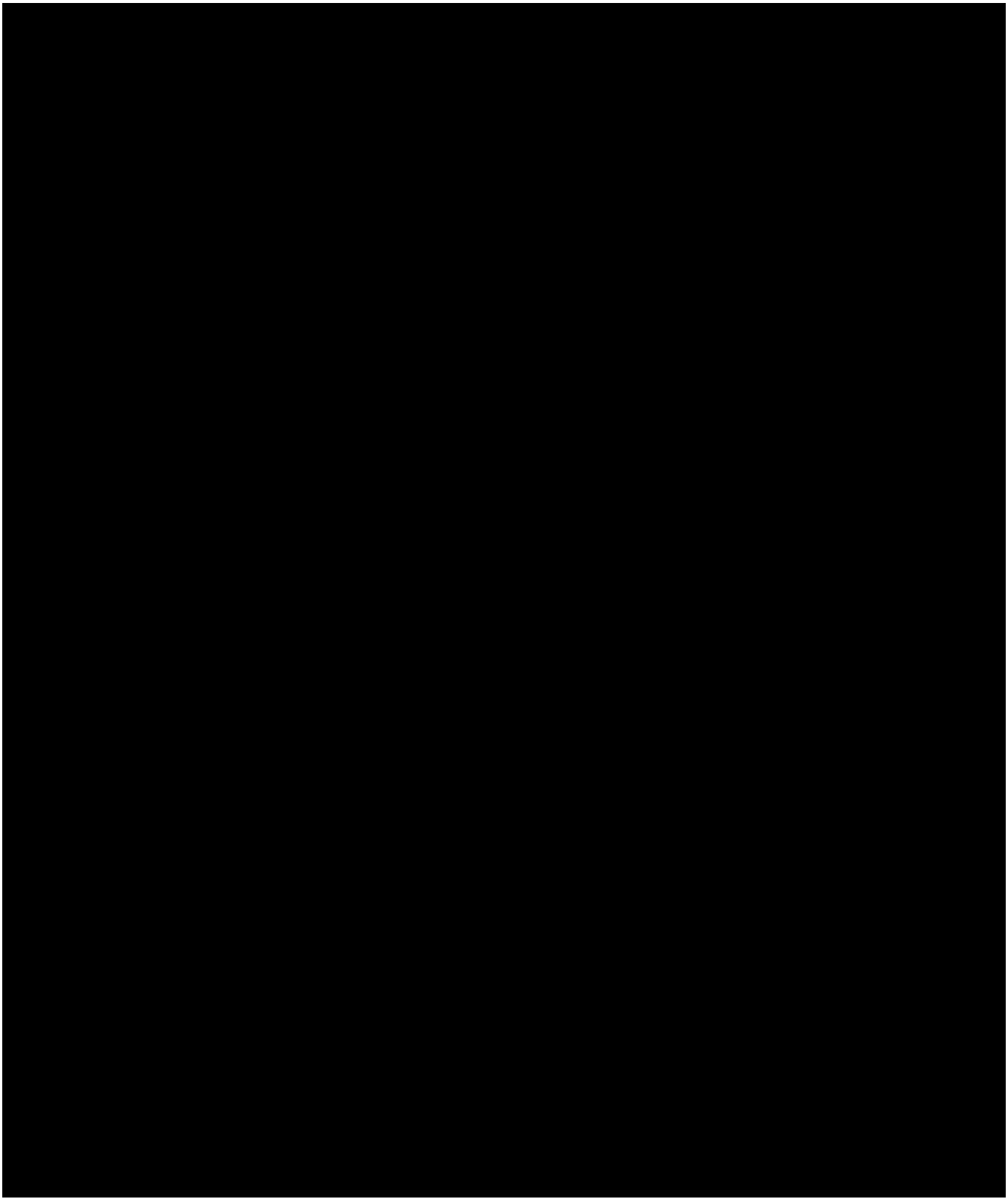
Figure 7: One-lines – Option 1 (preferred)

Attachment - C: Load Sheets









Attachment - D: Partial Funding PAF

Project Title: ARKA – SCADA Backup	**Project Number:** CD02678
Date Prepared: 04/24/2025	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** SMART SWITCHES PROGRAM
Project Initiator: [redacted]	**Project Type:** Specific
Initiating Organization: Distribution	**Capital Investment part of original Op Plan:** No
Project Manager: [redacted]	**Emergency Related Request?** No
Project Sponsor: [redacted]	**Facility Type** (check all that apply): ☐ PTF ☐ non-PTF ☒ Distribution ☐ N/A (General Plant)
Required in service date: 12/31/2025	**NWS Excludable:** ☒ Yes ☐ No
Total Capital Request: $230.0K	**Authorization Type:** Partial Funding

1. Executive Summary

This project was created to address electrical reliability and restoration concerns from ARKA; a satellite and space-based optics company at [redacted]

Division: Western
District: Newtown AWC
Town(s): Danbury

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	Year 2025	Year 2026	Year 2027+	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	12.5	0.0	0.0	12.5
Outside Services	25.7	0.0	0.0	25.7
Materials	119.4	0.0	0.0	119.4
Removals	13.7	0.0	0.0	13.7
Other	0.6	0.0	0.0	0.6
Risk and Contingency	0.0	0.0	0.0	0.0
Subtotal – Direct Costs	**172.0**	**0.0**	**0.0**	**172.0**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	55.3	0.0	0.0	55.3
Capitalized interest or AFUDC, if any	2.7	0.0	0.0	2.7
Subtotal – Indirect Costs	**58.0**	**0.0**	**0.0**	**58.0**
Total Gross Capital Costs	**230.0**	**0.0**	**0.0**	**230.0**
Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Total Net Capital Project Costs	**230.0**	**0.0**	**0.0**	**230.0**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

[redacted]

ARKA has experienced 4 outages in the last 5 years (2020-2025):

Date	Storm Event	Weather	Cause	Duration (min)
[redacted]				

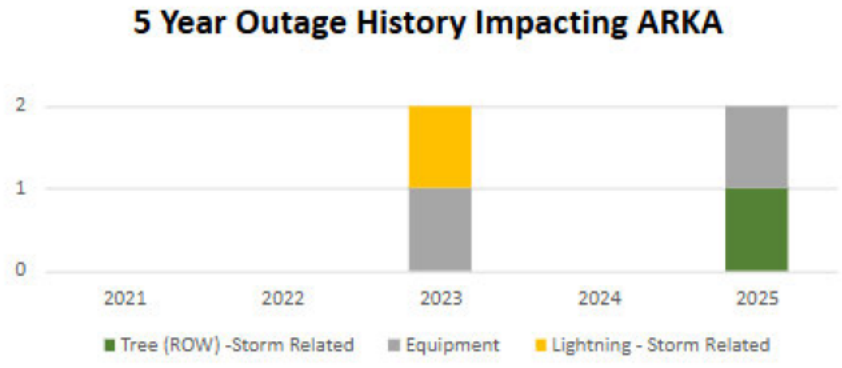


Figure 2: Outage Bar Chart

In response to the most recent outage, vegetation management has removed many trees in the ROW. The new tree line to pole line distance is 25’.

Before (2/27/25)	After (3/7/25)
	
Before (2/27/25)	**After (3/7/25)**
	

Figure 3: Before and After Vegetation

[redacted]

Projects that have been accounted for during this project include: CD01132 [redacted], CD02681 - ARKA Reconductor.

b. Project Need

The need for this project stems from ARKA's concerns about Eversource's ability to provide uninterrupted and reliable power. The most recent outage in February 2025 was caused by a fallen tree in their ROW which greatly affected their business. As shown in Figure 3, tree related outages localized to their ROW should be substantially mitigated due to the newly receded tree line.

[redacted]

[redacted]

Project CD01132 – [redacted]

Successful execution of this project can improve restoration time for ARKA.

c. Project Scope

This project proposes one option, Option 1, as the preferred option. [redacted] The scope of Option 1 is as follows:

[redacted]

Offload Plan:

[redacted]

Major Materials:

- 2 | Viper Reclosers (J-switches)

4. Alternatives Considered

NWS Exclusion Criteria (select all that apply)

☒ Project cost < $250k	☐ New Service
☐ CDOT Relocation	☐ Generator interconnection project
☐ Maintenance, Asset condition or safety related*	

Design Criteria	[redacted]
Required to meet project need	
Creates backup upon loss of [redacted]	
Additional Benefits (not required to meet scope of project)	
Potential to create autoloop scheme	
Does not require offload plan	
Different S/S buses after CD01132	
Minimizes double circuit exposure for same pole line for primary and backup circuits	
Authorization Type	Partial
Capital Cost	$230,004
Expense Cost	$10,078
Total Cost	$240,082
Total Cost / MVA Added	N/A
Total Cost / CM Saved	N/A
Total Cost / CI Saved	N/A
Preferred Option	X

Alternatives that were considered for this project did not offer cost effective solutions for the issue at hand. Additionally, the alternative options had much larger exposure to OH line outages compared to Option 1.

5. Project Schedule

Milestone/Phase Name	Estimated Date
Partial Approval	April 2025
100% Detailed Engineering Completion	July 2025
Fully Funded	September 2025
Construction Start	October 2025
Project Completion	December 2025

6. Regulatory Decisions

N/A

7. Codes and Standards

Codes and Standards
2. DSEM 06.713 – Overhead System Protection & Design Philosophy

8. Risk and Contingencies

Contingencies: 20% contingency was added for 2025 work. This contingency accounts for any risks that are unknown and do not have mitigation plans.

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Wetlands / Environmentally sensitive area	2025	Low	Use of mats and specialty equipment, only work during certain times of the year.

9. References

References
3. CD01132 – Triangle Switchgear [redacted]
4. CD02681 – ARKA Reconductor

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

Attachment	Included in Submittal?
A. Cost Estimates	*YES*
B. Geographic Maps	*YES*
C. One-lines	*YES*
D. Load Sheets	*YES*
E. Initial Funding PAF	*YES*

Attachment - A: Cost Estimates

Design Alternative CD02678-03

Estimate

Preliminary Estimate Summary

Revision Number:	0
Contingency:	20.00%
SubTotal:	$200,068
Contingency Amount:	$40,014
Estimate:	$240,082
Reimbursement:	$0
Net Amount:	**$240,082**

Description:

Item Description	CU	[redacted]	Amount
SECTIONALIZE OH - Recloser - 3ph 2 J-switches	23-OH38		$124,772.96
TRAFFIC OH/DB/UG - Traffic Control - Police Officer 2 officers @ $1,000 per day	23-ALL18		$20,000.00
OTHER OTHER 30% contractor adder ($153,898*0.3)	23-ALL14		$46,170.00
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average switching	23-ALL17		$9,124.96

Figure 4: Cost Estimates – Option 1 (preferred)

Attachment - B: Geographic Maps



Figure 5: Circuit Map – Before (Overview)



Figure 6: Circuit Map – Option 1 (preferred)

Attachment - C: One-lines

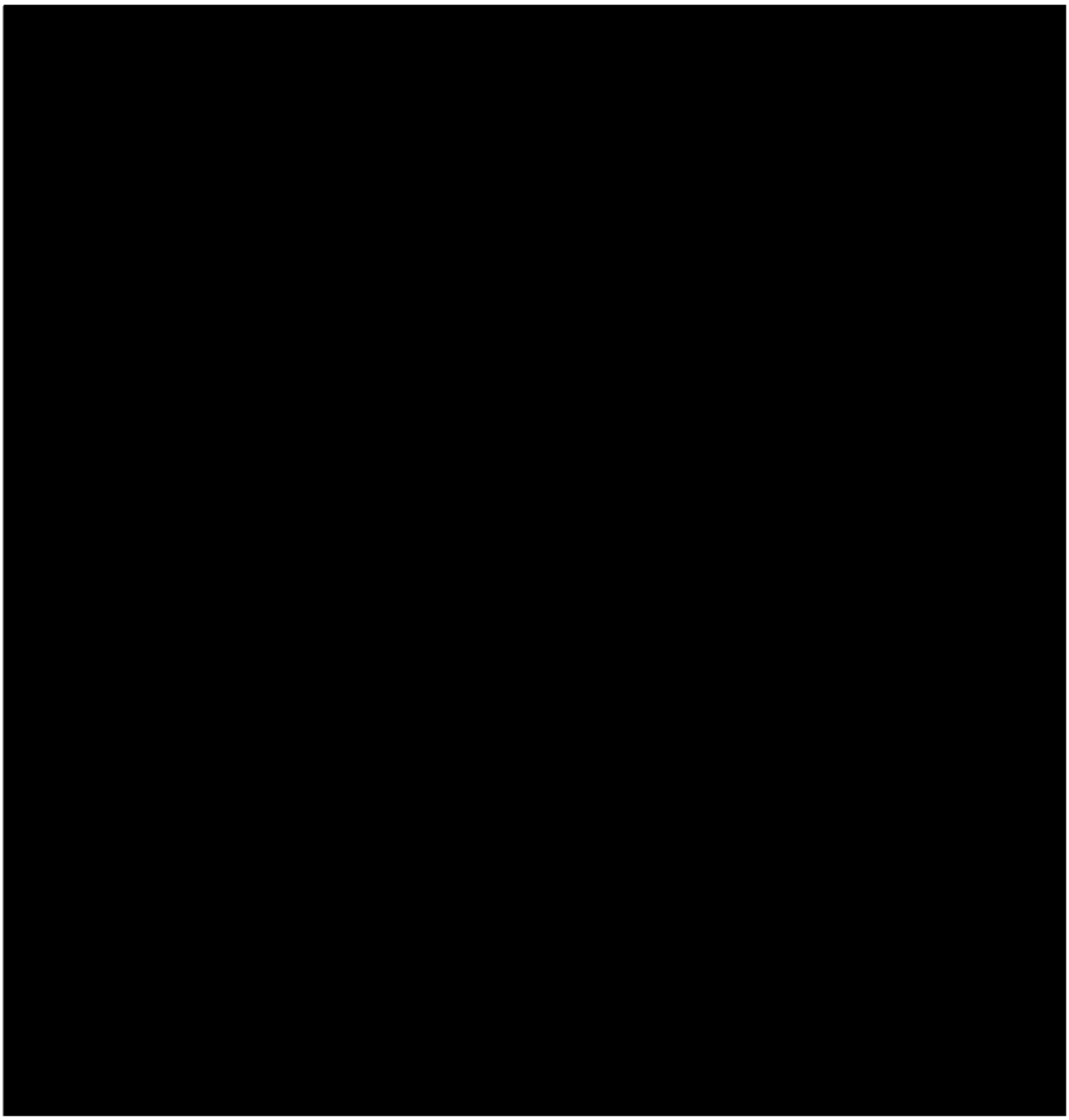


Figure 7: One-lines – Before

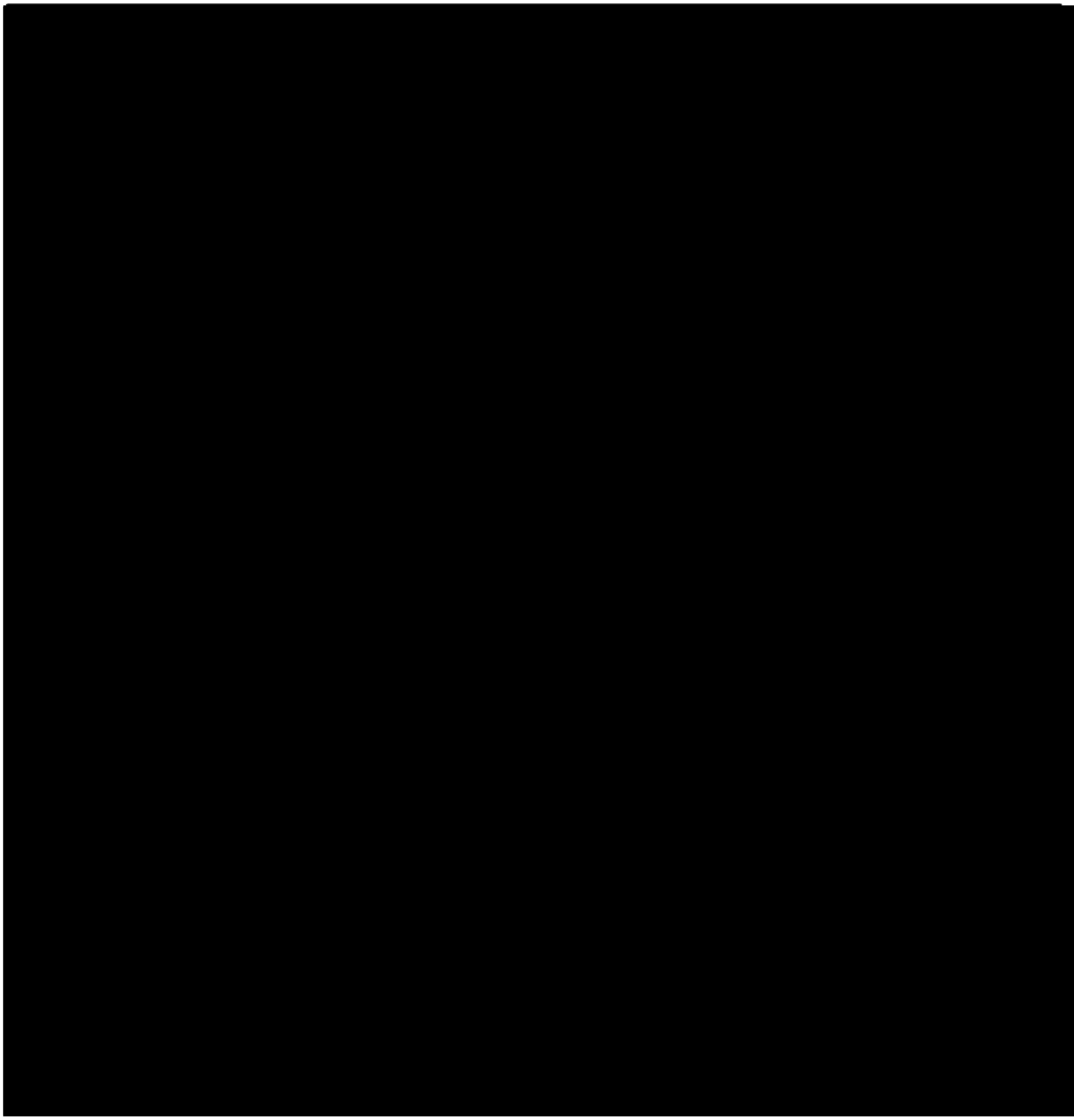
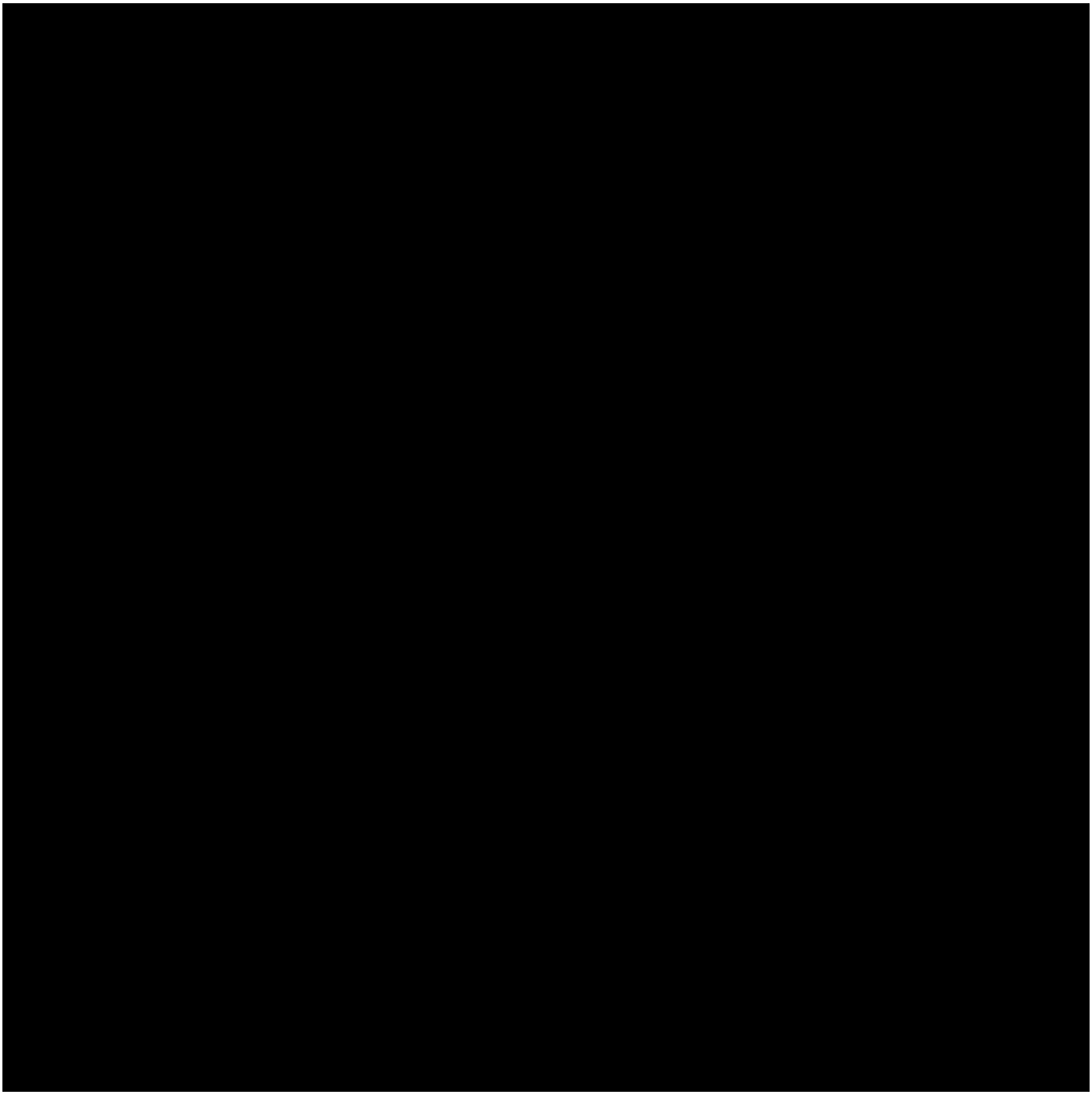
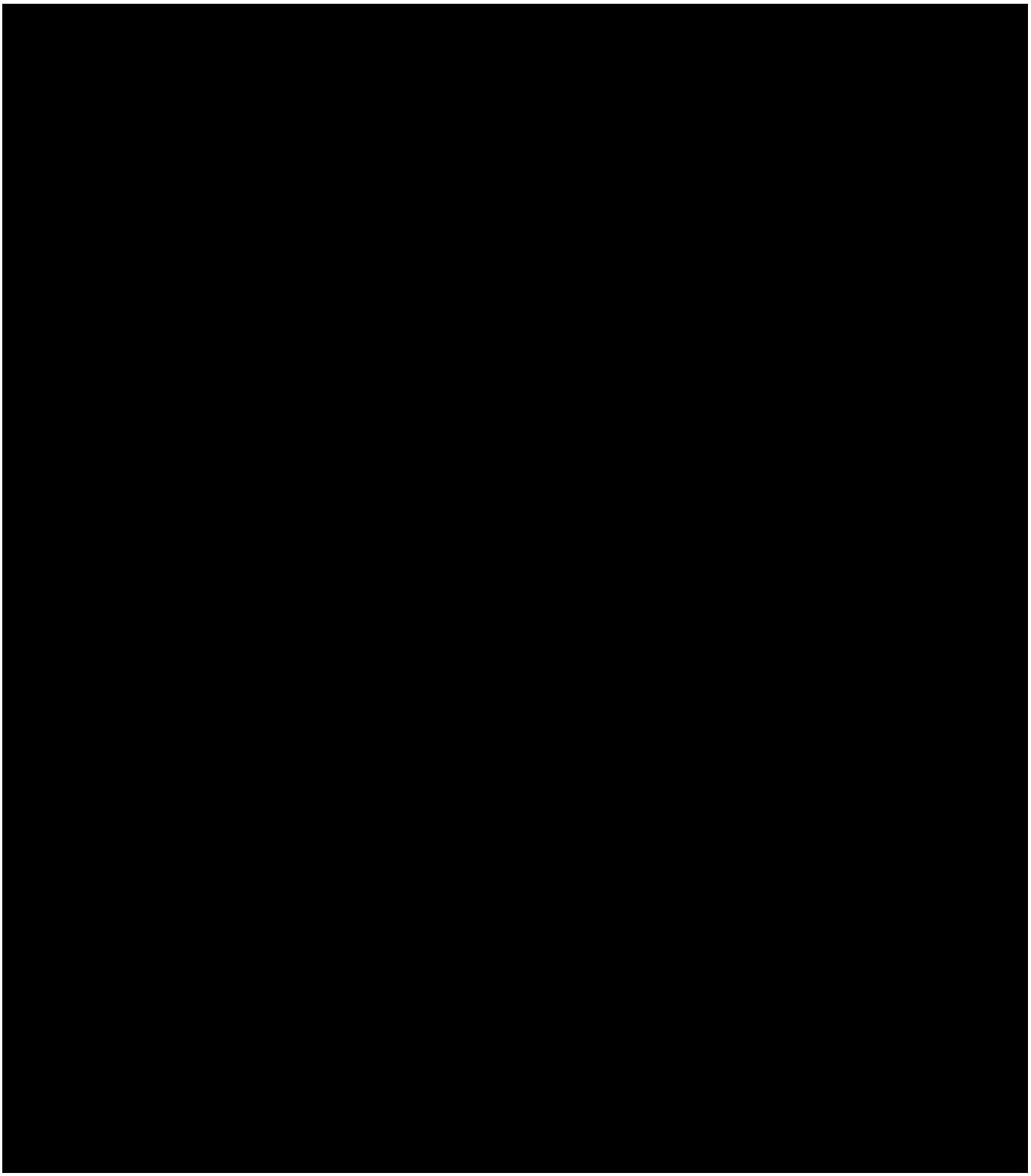
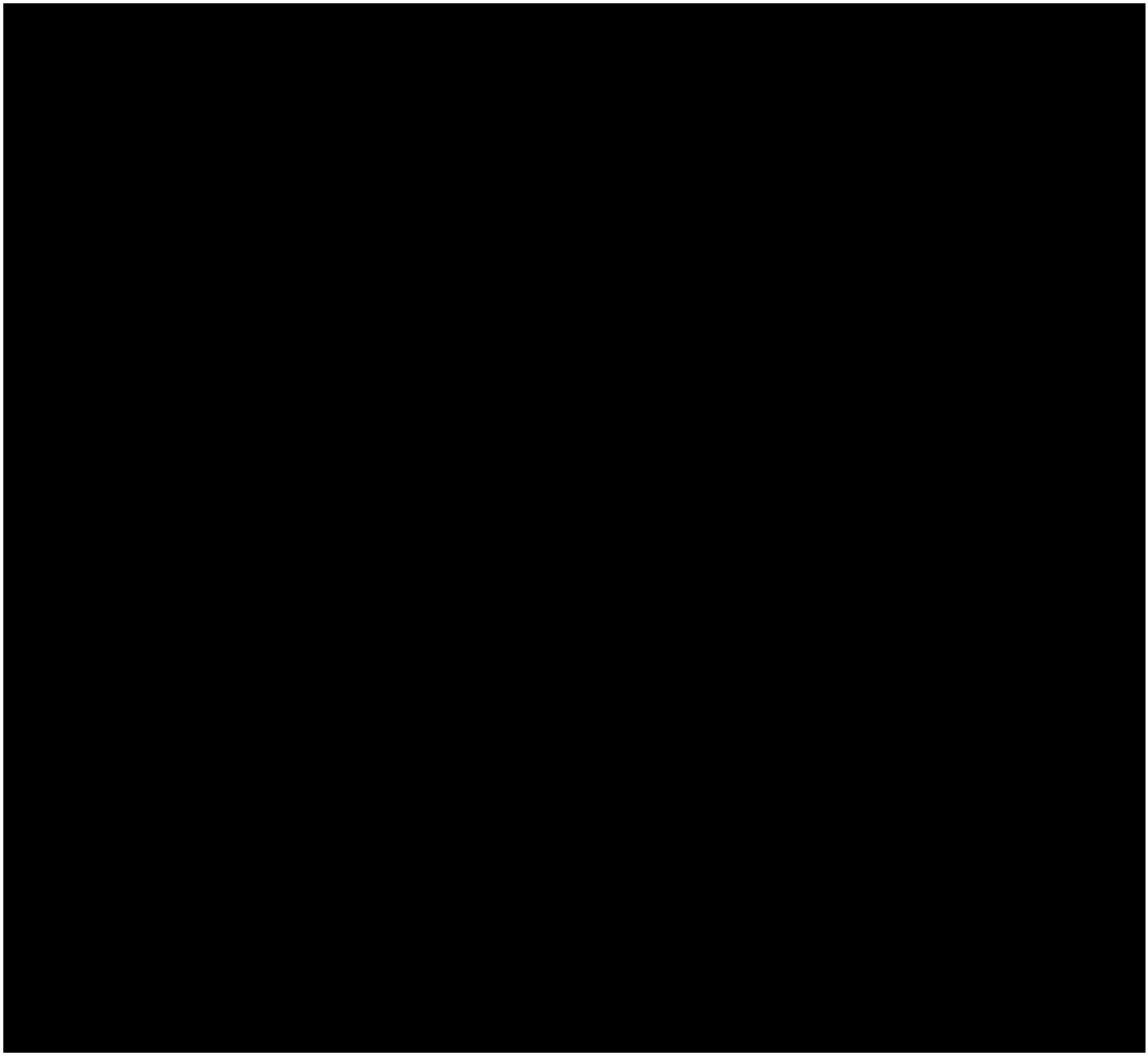


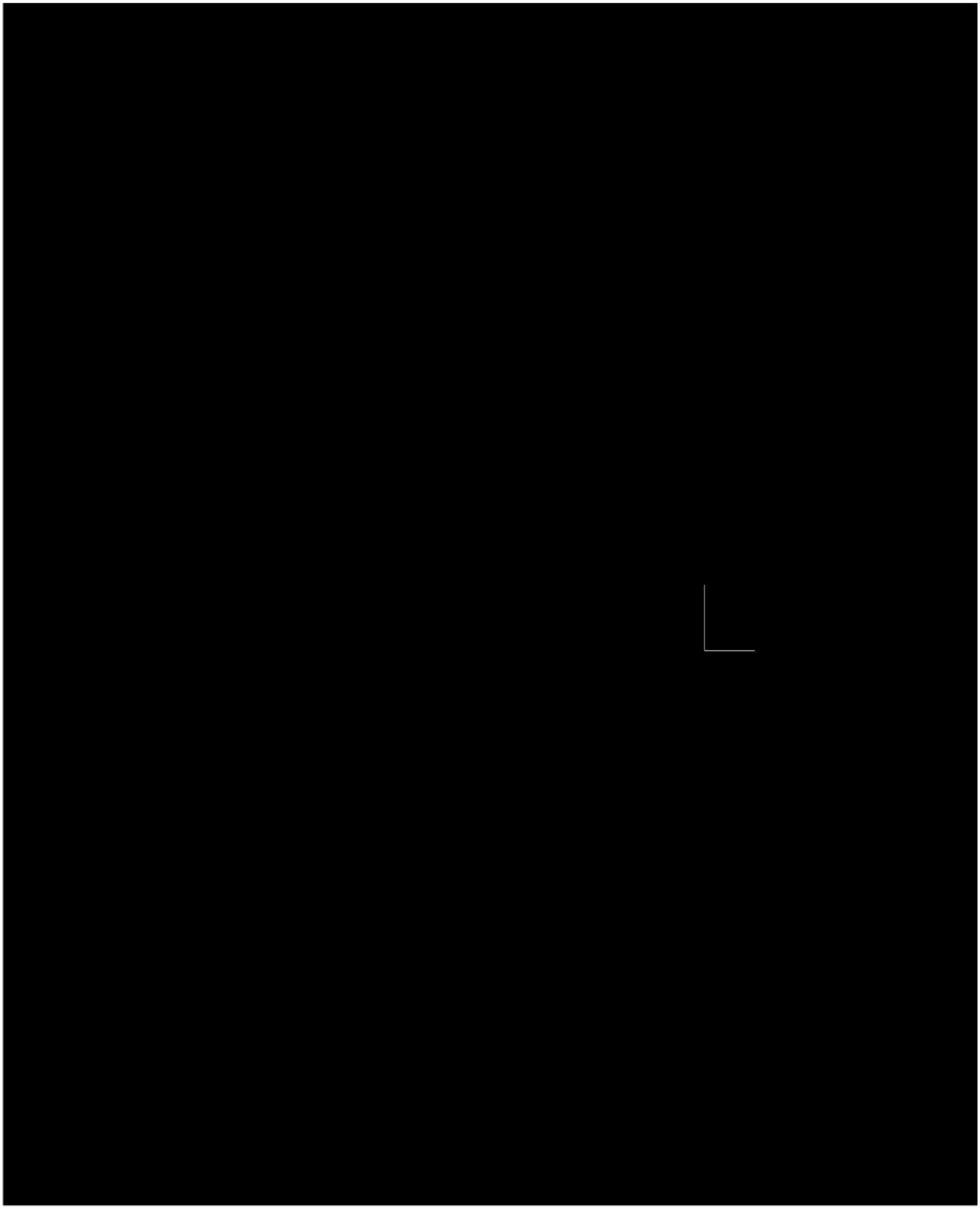
Figure 8: One-lines – Option 1 (preferred)

Attachment - D: Load Sheets









Attachment - E: Initial Funding PAF

EVERSOURCE

Project Approval Form

Project Title: ARKA – SCADA Backup	**Project Number: CD02678**
Date Prepared: 03/21/2025	**Company:** Eversource CT
Organization: Distribution Engineering	**Class(es) of Plant:** D Line
Project Initiator: [redacted]	**Project Category:** SMART SWITCHES PROGRAM
Project Manager [redacted]	**Project Type:** Specific
Project Sponsor: [redacted]	**Capital Investment part of 5-year plan?** No
	Emergency Related Request? No
Total Request ($): 30K	**Authorization Type:** Initial Funding

1. Project Need Statement

Project CD02678 was established to address the reliability and restoration concerns from ARKA; a satellite and space-based optics company at [redacted] The customer's concern stems from multiple outages in back-to-back months in 2025. [redacted]

Title: **ARKA – SCADA Backup**
Division: Western
District: Newtown AWC
Town: Danbury

2. Project Objectives

[redacted] This initial funding request is to investigate methods to perform and complete the objectives above. The initial requested amount is $30,000.

Project Initiator: [redacted]

Engineering Approval: _____

1

Refer to Distribution Capital Project Approval Process
JA-AM-2001-B, Rev.3