EVERSOURCE

Project Approval Form

Project Title: [redacted]	**Project Number: CD02253**
Date Prepared: 02/01/2024	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** URD/DB Cable Improvements
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: 6/1/2024	
Total Capital Request: $1,219.6K (Reimbursed)	**Authorization Type:** Full Funding

1. Executive Summary:

[redacted]. This project will allow the scope of work defined under project CS00544 to proceed and to allow for the installation of a mobile transformer during the construction period for a year under this project. [redacted] A copy of the P/N CS00544 Initial Funding Request document and the project schedule is attached for additional information.

[redacted] under its associated project CD01536 and the reliability of this area for a transmission event. The total cost of this proposal is $1,219,625.00; however, this project cost will be allocated to the associate substation project CS00544 and has an in-service date of 6/1/2024.

- Division: Western
- District: Falls Village
- City: North Canaan, Norfolk

Initial Funding Estimate vs. Bid Document:

The bid amount of $1,219,625 was 1% higher in cost as compared to the partial funding estimate amount of $1,209,000 for the North Canaan 5L Feeder Relocation Project. The overall difference between partial funding estimate as compared to the bid document equates to an under expenditure of $10,625 with no change in scope. To summarize this difference between the partial funding estimate as compared to the bid document equates to the difference in the cost of labor for this project. The cost of this distribution project CD02253 is to be reimbursed by the substation project CS00544 which results in a zero overall net effect in capital expenditures.

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	74.4	0.0	0.0	74.4
Outside Services	278.2	0.0	0.0	278.2
Materials	170.0	0.0	0.0	170.0
Removals	140.9	0.0	0.0	140.9
Risk and Contingency	110.9	0.0	0.0	110.9
Other	0.0	0.0	0.0	0.0
Subtotal – Direct Costs	774.4	0.0	0.0	774.4
Indirect Capital Costs				
Indirect/Overheads (including benefits)	445.2	0.0	0.0	445.2
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal – Indirect Costs	445.2	0.0	0.0	445.2
Total Gross Capital Cost (Gross)	**1,219.6**	0.0	0.0	**1,219.6**
Project Cost (Net of Reimbursement by Project CS00544)	**-1,219.6**	0.0	0.0	**-1,219.6**
Total Gross Capital Cost (Net)	**0.0**	0.0	0.0	**0.0**

The cost of this distribution project CD02253 is to be reimbursed by the substation project CS00544 which results in a zero overall net effect in capital expenditures.

3. Technical Justification:

Background, Project Need/Justification, and Project Scope

a. Background

[redacted]

b. Project Need

[redacted]

t.

c. Project Scope

[redacted]

Tree and brush removal was also requested in this area east of the existing fence line for approximately 10'-15' in an eastern direction to allow for the necessary trenching, the installation of new conduits and riser pole locations near the parking area. A recommendation was made for the removal of several decayed branches on the eastern side of the substation yard along the fenced area to alleviate any possibility of a tree related occurrence that would affect the substation or its equipment.

Major Material:

2 – 50' Eversource Poles
4 – 45' Eversource Poles
4 – 15 kV Nova Reclosers
400' – 556 AAC Tree Wire
400' – 1/0 ACSR Neutral
12 – Fault Indicators
12 – 900Amp. Vert. Disc. Switch
650' – 6" PVC Conduit Schedule 40
1,200' – 1000 MCM CU EPR UG Cable

4. Alternatives Considered:

There was one alternative that was considered for this project. [redacted]

Project Option Comparison

	Option		
[redacted]			
Authorization Type	Full	Partial	
Capital Cost	$1.220M	$0	
Expense Cost	$0.038M	$0	
Total Cost	$1.258M	$0	
Total Cost / CM Saved	$16.92/CM	$0/CM	
Total Cost / CI Saved	$98,976.19/CI	$0/CI	
Preferred option	X		X

5. Project Schedule:

Milestone/Phase Name	Estimated Date
Partial Approval	5/18/2023
100% Detailed Engineering Completion	10/30/23
Fully Funded	1/18/2024
Construction Start	11/29/2023
In Service Date	6/1/2024

6. Regulatory Decisions:

7. Codes and Standards:

8. Risk and Contingencies:

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2024	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	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	Medium	Pre-order long lead time material; minimize the use of non-standard and non-stocked material.
Storm delays	2024	Low	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.

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

Attachment	Included in Submittal?

A. Partial PAF Document	*YES*
B. Cost Estimate	*YES*
C. Feeder Relocation One-Line	*YES*
D. Feeder Positions Sketch	*YES*
E. Project Alternate One-Line	*NO*
F. Load Summary	*YES*

A. Partial PAF Document:

Project Title: North Canaan 5L – Temporary Feeder Relocation	**Project Number: CD02253**
Date Prepared: 05/18/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** UG CABLE & EQUIPMNT REPLACEMNT
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: 6/1/2024	
Total Capital Request: $1.209M	**Authorization Type: Partial Funding**

1. Executive Summary

[redacted]. This project will allow the scope of work defined under project CS00544 to proceed and to allow for the installation of a mobile transformer during the construction period for a year under this project. [redacted]. A copy of the P/N CS00544 Initial Funding Request document and the project schedule is attached for additional information.

[redacted]

[redacted]

[redacted] The total cost of this proposal is $1,246,371.00; however, this project cost will be allocated to the associate substation project CS00544 and has an in-service date of 6/1/2024.

- Division: Western
- District: Falls Village
- City: North Canaan, Norfolk

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	Year 2024	Year 2025	Year 2026+	Total
Direct Capital Costs	62.5	0.0	0.0	62.5
Internal Labor and Construction Equipment	296.2	0.0	0.0	296.2
Outside Services	281.3	0.0	0.0	281.3
Materials	203.4	0.0	0.0	203.4
Removals	5.3	0.0	0.0	5.3
Risk and Contingency	0.0	0.0	0.0	0.0
Other	**848.7**	**0.0**	**0.0**	**848.7**
Subtotal – Direct Costs	62.5	0.0	0.0	62.5
Indirect Capital Costs	**2024**	**2025**	**2026+**	**Total**
Indirect/Overheads (including benefits)	322.4	0.0	0.0	322.4
Capitalized interest or AFUDC, if any	37.4	0.0	0.0	37.4
Subtotal – Indirect Costs	**359.8**	**0.0**	**0.0**	**359.8**
Total Gross Capital Costs	**1,208.5**	**0.0**	**0.0**	**1,208.5**
Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Total Net Capital Project Costs	**1,208.5**	**0.0**	**0.0**	**1,208.5**

Explain unique payment provisions, if applicable:

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

[redacted]

b. Project Need

[redacted]

[redacted]

c. Project Scope

[redacted]

[redacted]

[redacted]

Tree and brush removal was also requested in this area east of the existing fence line for approximately 10'-15' in an eastern direction to allow for the necessary trenching, the installation of new conduits and riser pole locations near the parking area. A recommendation was made for the removal of several decayed branches on the eastern side of the substation yard along the fenced area to alleviate any possibility of a tree related occurrence that would affect the substation or its equipment.

Major Material:

2 – 50' Eversource Poles
4 – 45' Eversource Poles
4 – 15 kV Nova Reclosers
400' – 556 AAC Tree Wire
400' – 1/0 ACSR Neutral
12 – Fault Indicators
12 – 900Amp. Vert. Disc. Switch
650' – 6" PVC Conduit Schedule 40
1,200' – 1000 MCM CU EPR UG Cable

4. Alternatives Considered

Project Option Comparison

	Option
[redacted]	

[redacted]

Capital Cost	$1,209k	$0
Expense Cost	$37.9K	$0
Total Cost	$1,246	$0
Total Cost / CM Saved	$16.77/CM	$0/CM
Total Cost / CI Saved	$52,692.74/CI	$0/CI
Preferred option	X	

There was one alternative that was considered for this project. [redacted]

[redacted]

The first and second options of this project are the preferred options which allows [redacted]

5. Project Schedule

Add any additional milestones that are pertinent to the project

Milestone/Phase Name	Estimated Date
Partial Approval	5/18/2023
100% Detailed Engineering Completion	6/1/2023
Fully Funded	12/31/2023
Construction Start	1/1/2024
In Service Date	6/1/2024

6. Regulatory Decisions

7. Codes and Standards

8. Risk and Contingencies:

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2024	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	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	Medium	Pre-order long lead time material; minimize the use of non-standard and non-stocked material.
Storm delays	2024	Low	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. CS00544-[redacted]XFMR Replacement – Initial Funding PAF
2. CD02253[redacted] Temporary Feeder Relocation
3.
4.
5.

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

Attachment	Included in Submittal?
A. Cost Estimate	*YES*
B. Geographic Map	*NO*
C. Temporary Feeder Relocation One-Line	*YES*
D. Temporary Feeder Positions Sketch	*YES*
E. Project Alternate One-Line	*NO*
F. Load Summary	*YES*

A.) Cost Estimate:

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02253 [redacted]

Work Classification

Category: Line
Type: REL1
Type Desc: UG CABLE & EQUIPMNT REPLACEMNT
Work Type:

Ownership / Management

AWC: Falls Village
Statewide: No
Owner: [redacted]
Manager: [redacted]

Project Information

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

Budget Summary - Preferred Option

Preferred Option

2024

ID	Title	Status	Rev #	Contingency	Expenditure Amount	Net Estimate
1	[redacted] Temporary Feeder Relocatio	Prelim	0	24%	$656,110	$656,110
2	[redacted] Temporary Feeder Relocation	Prelim	0	24%	$590,260	$590,260
				2024 Total:	$1,246,371	$1,246,371
				Total Project:	$1,246,371	$1,246,371

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Specific Project Proposal - Project #: CD02253

[redacted]

Project Option Summary

ID	Description	Segments	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)	Prfrd
O1	Preferred Option	1,2	$1,246,371	$0	100%	$957.22	$16.77	☑

Segments

ID	Title	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)
1	[redacted]	$656,110			$1,142.21	$35.05
2		$590,260			$809.68	$10.60

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Specific Project Proposal - Project #: CD02253 [redacted]

Background / Scope

Issue:

[redacted]

Project Description:

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Specific Project Proposal - Project #: CD02253 [redacted]

[redacted]

Other Considerations:

Revision / ACT Comments:

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Specific Project Proposal - Project #: CD02253 [redacted]

If we don't do this project, what will happen?

[redacted]

Environmental

Water Pollution: No Change Soil Contamination: No Change Natural Habitats: No Change

Alternatives considered based on Environmental Impact or Description of Aspects Oil Spill Risks Considered? ☐

Safety Concerns With This Project? ☐

Explain:

External Stakeholders

Customer Impact / Involvement

Cust. Impacted [redacted] Approx. Pole Count (NU): 7

Crit. Cust. Impacted Approx. Pole Count (Other):

Adjoining Property Owner Consent Required: ☐ Town Hearing Required: ☐

Other Utility Pole Custodian Area: ☐ Easement Required: ☐

State Highway Permit Required: ☐

Relocation / New Service

New Srvc. Contact: Requestor Type:

Customer Type: State Highway Project #:

Request Number: Route #:

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Specific Project Proposal - Project #: CD02253 [redacted]

Design Alternative CD02253-01

General Information

Segment: [redacted] Status: Prelim Design Submitted

Segment Type: OTHER Town: NORTH CANAAN Budget Year: 2024

Work Type: BB-Reconductoring Trimming Required: ☑ In Service Date: 6/1/2024

Description: [redacted]

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Connecticut Light & Power
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Specific Project Proposal - Project #: CD02253 [redacted]

Design Alternative CD02253-01

Estimate

Preliminary Estimate Summary

Revision Number:	0
Contingency:	24.00%
SubTotal:	$529,121
Contingency Amount:	$126,989
Estimate:	$656,110
Reimbursement:	$0
Net Amount:	**$656,110**

Description: Eng Estimate fo[redacted] [redacted]Temporary Feeder Positions

Item Description	CU	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17	$7,019.20
POLE OH - JUNCTION POLE - 3ph (CL&P custodian)	16-OH14A	$23,380.80
POLE OH - Install/Replace Anchor and Guy	16-OH14B	$2,636.80
OH WIRE OH-Reconductor w/175 Mil Tree Wire-3ph- 556 kcmil	16-OH27	$15,520.00
OH WIRE OH - Neutral	16-OH31	$1,280.00
OH WIRE OH - Remove circuit wire (3 phase)	16-OH37A	$960.00
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph	16-OH43	$20,566.40
UG CABLE UG - Cable Removal - all cables	16-UG117	$11,000.00
POLE DB/UG - Riser - 3ph	16-UG146	$21,588.80

[redacted]

Asset & Investment Management System 5/25/2023 Page 7 of 13

Connecticut Light & Power
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Specific Project Proposal - Project #: CD02253 [redacted]

Design Alternative CD02253-01

UG CABLE DB/UG - 750/1000 - 3-1/C (3ph) Cu 15+30+120+15+45=250'/ea	16-UG114B	[redacted]	$52,800.00
OTHER OTHER 30% Adjustment Adder	16-ALL14		$93,927.00
OTHER OTHER 30% Contractor Adder	16-ALL14		$122,105.00
OTHER OTHER 4" x 24" Copper Bus Extension @ $750/ea	16-ALL14		$2,250.00
SECTIONALIZE OH - Recloser - 3ph [redacted]	16-OH38		$95,979.20
OTHER OTHER 6 - Fault Indicators	16-ALL14		$2,000.00
CONDUIT DB - Conduit Installation 6" PVC Conduit Shedule 40, Total Length[redacted]= 135' 5L03= 135'	16-UG152		$12,096.00
OTHER OTHER 60' - 6" PVC Conduit above Grade	16-ALL14		$600.00
OTHER OTHER Repair to Road on West Side of Substation	16-ALL14		$20,000.00
SECTIONALIZE OH - Remove Recloser (any) Rmv. [redacted]	16-OH42		$11,312.00
TREE OH - Tree Trimming Tree & Brush Removal	16-OH61		$8,000.00
OTHER OTHER Trench Differential= $15.20/FT. 270 x $15.20= $4100	16-ALL14		$4,100.00

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Specific Project Proposal - Project #: CD02253 [redacted]

Design Alternative CD02253-01

Associated / Impacted Devices

Status	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes
Existing	[redacted]					
Existing						

Reliability Projection

Title:

Outage Start Date: 5/10/2019 Outage End Date: 5/10/2023 Years History: 4.00

[redacted]

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02253 [redacted]

Design Alternative CD02253-02

General Information

Segment: [redacted] Status: Prelim Design Submitted

Segment Type: OTHER Town: NORTH CANAAN Budget Year: 2024

Work Type: BB-Reconductoring Trimming Required: ☑ In Service Date: 6/1/2024

Description: [redacted]

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: [redacted]

Design Alternative CD02253-02

Estimate

Preliminary Estimate Summary

Revision Number:	0
Contingency:	24.00%
SubTotal:	$476,016
Contingency Amount:	$114,244
Estimate:	$590,260
Reimbursement:	$0
Net Amount:	**$590,260**
Description:	Eng Estimate for 5L02 & 5L04 Temporary Feeder Positions

Item Description	CU	[redacted]	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17		$7,019.20
POLE OH - Install/Replace Anchor and Guy	16-OH14B		$1,318.40
OH WIRE OH-Reconductor w/175 Mil Tree Wire-3ph- 556 kcmil	16-OH27		$15,520.00
OH WIRE OH - Neutral	16-OH31		$1,280.00
OH WIRE OH - Remove circuit wire (3 phase)	16-OH37A		$960.00
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph	16-OH43		$20,566.40
UG CABLE UG - Cable Removal - all cables	16-UG117		$12,000.00
POLE DB/UG - Riser - 3ph	16-UG146		$21,588.80
UG CABLE DB/UG - 750/1000 - 3-1/C (3ph) Cu	16-UG114B		$57,600.00

Asset & Investment Management System 5/25/2023 Page 11 of 13

Connecticut Light & Power
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Specific Project Proposal - Project #: CD02253 [redacted]

Design Alternative — CD02253-02

15+45+120+50+45= 275'/ea			
CONDUIT DB - Conduit Installation 2 @ 6" PVC Conduit Schedule 40 = 170'/ea'	16-UG152	[redacted]	$15,232.00
OTHER OTHER 30% Adjustment Adder	16-ALL14		$84,500.00
OTHER OTHER 30% Contractor Adder	16-ALL14		$109,850.00
SECTIONALIZE OH - Recloser - 3ph [redacted]	16-OH38		$95,979.20
OTHER OTHER 6 - Fault Indicators	16-ALL14		$2,000.00
OTHER OTHER 90' - 6" PVC Conduit above Grade	16-ALL14		$900.00
POLE OH - JUNCTION POLE - 3ph (CL&P custodian) P# 2626	16-OH14A		$11,690.40
SECTIONALIZE OH - Remove Recloser (any) [redacted]	16-OH42		$11,312.00
TREE OH - Tree Trimming Tree & Brush Removal	16-OH61		$1,500.00
OTHER OTHER Trench Differential= $15.20/FT. 340 x $15.20= $5200	16-ALL14		$5,200.00

Associated / Impacted Devices

Status	Type / SysID	[redacted]	Notes
Existing	[redacted]	[redacted]	
Existing			

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02253

[redacted]

Design Alternative

CD02253-02

Reliability Projection

Title:

Outage Start Date: 5/10/2019 Outage End Date: 5/10/2023 Years History: 4.00

[redacted]

C.) Temporary Feeder Relocation One-Line:



Temporary Feeder Relocation One-Line: (Continued)



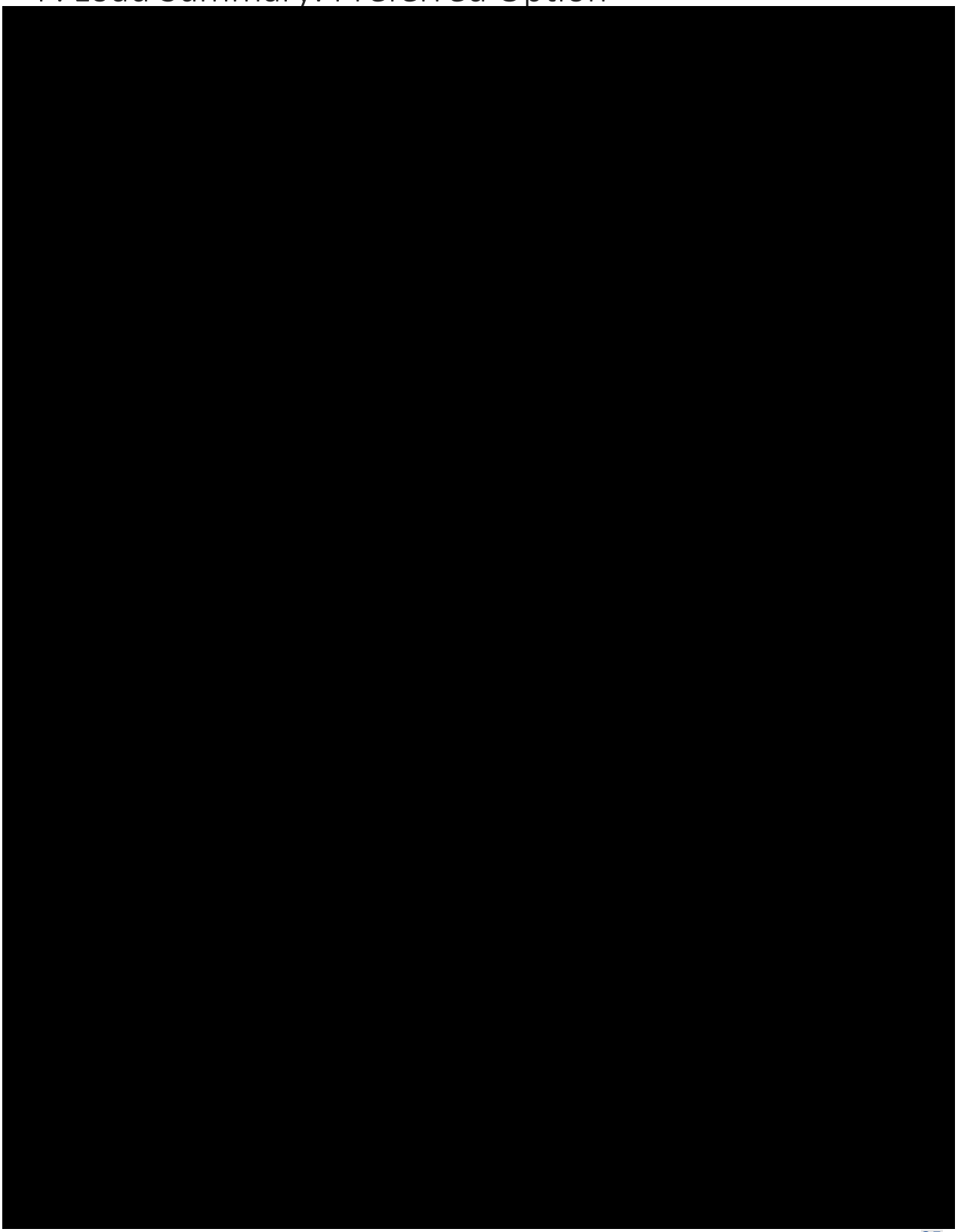
Temporary Feeder Relocation One-Line: (Continued)

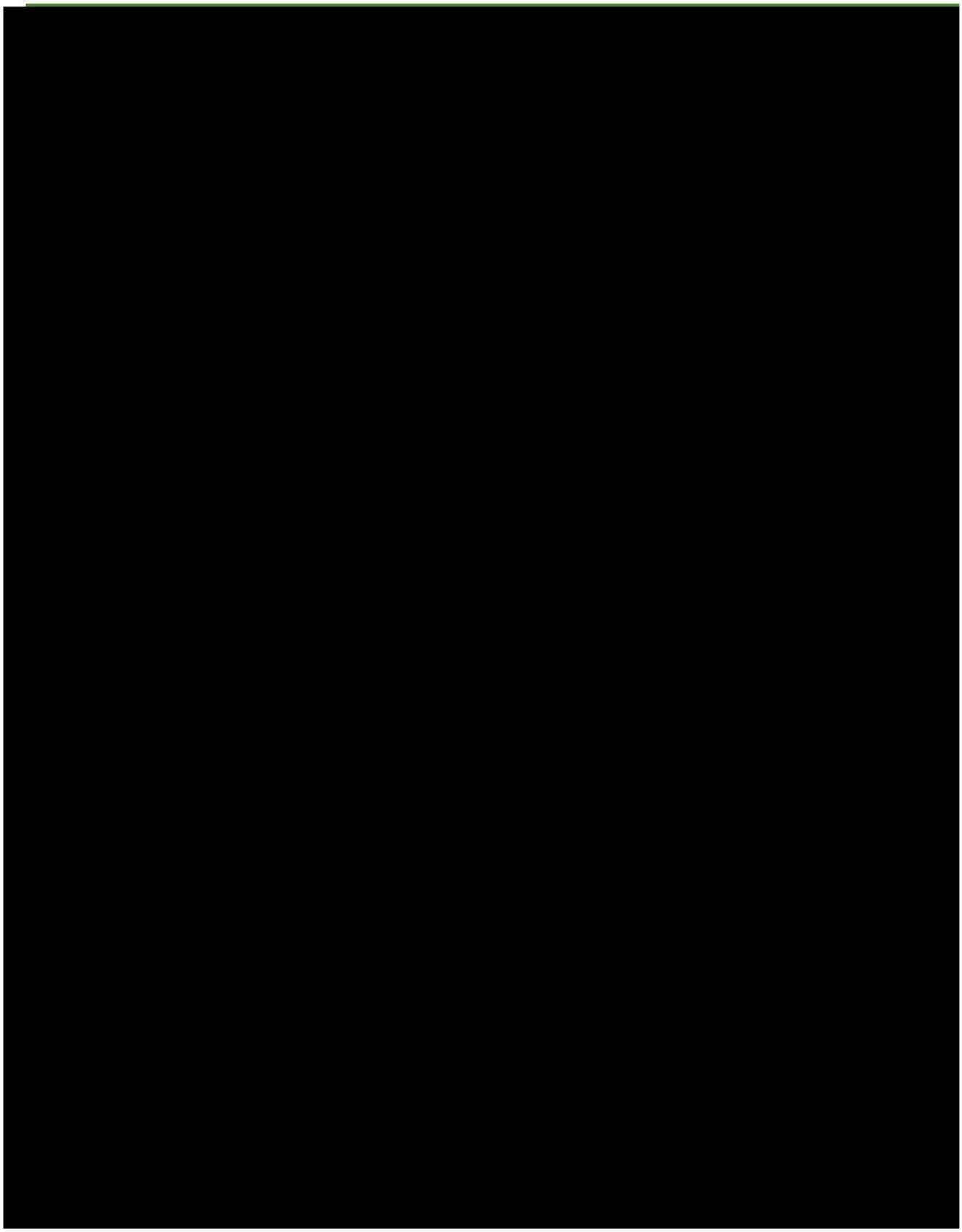


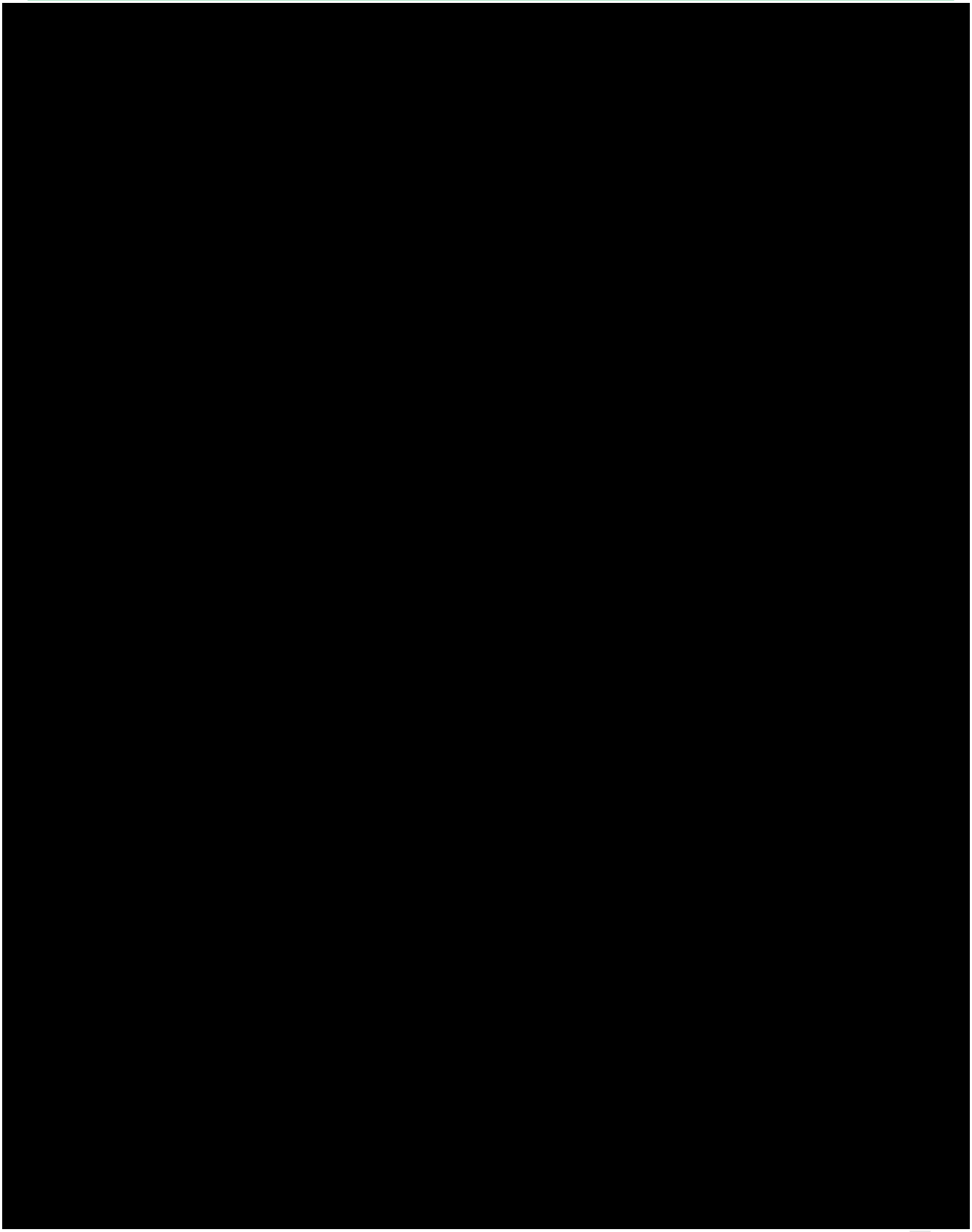
D. Temporary Feeder Positions Sketch:



F. Load Summary: Preferred Option









Load Summary: Alternative Option

