EVERSOURCE

Project Approval Form

Project Title: [redacted]	**Project Number: CD01893**
Date Prepared: 12/08/2023	**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:** 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: 12/31/24	
Total Capital Request: $282.4K	**Authorization Type:** Full Funding

1. Executive Summary

Project CD01893 was established to address the [redacted]

- [redacted]
- Project Location
  - Division: Central
  - District: Tolland AWC
  - City/Town: South Windsor, CT

Project scheduled for completion in 2024. The partial funding estimate for this project was $242.7K and was approved on 4/26/2022. The full funding estimate is $282.4K; an increase of $39.7K or ~16.4%.

The overspend is due to:

- Legacy Estimating Units were used to estimate partial costs which did not include an additional 30% due to increased labor and material cost which accounted for $50K.

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	Year 2023	Year 2024	Year 2025+	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	0.0	21.4	0.0	21.4
Outside Services	0.0	0.0	0.0	0.0
Materials	0.0	145.8	0.0	145.8
Removals	0.0	4.4	0.0	4.4
3625.88	0.0	19.7	0.0	19.7
Other	0.0	0.0	0.0	0.0
Subtotal – Direct Costs	0.0	191.3	0.0	191.3
Indirect Capital Costs				
Indirect/Overheads (including benefits)	0.0	0.0	0.0	91.1
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal – Indirect Costs	0.0	91.1	0.0	91.1
Total Gross Capital Costs	**0.0**	**282.4**	**0.0**	**282.4**
Customer Contribution	0.0	0.0	0.0	0.0
Total Net Capital Project Costs	**0.0**	**282.4**	**0.0**	**282.4**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

[redacted]

b. Project Need

This project was established to address the [redacted]

Therefore, the focus of this project is to install sectionalizing devices to break up this zone further. With these changes, it will greatly improve reliability and reduce the number of customers that will experience an outage in this area.

c. Project Scope

The scope of this project is as follows:

[redacted]

Major Material:

- 3 Reclosers
- 3 Disconnect Switches

4. Alternatives Considered

Another solution was to keep the first zone just over 500 customers without installing another recloser. This would mean that not every zone will be under 500 when compared to the preferred solution. Option 1 was selected for the efficiency in configuring the reclosers once while reducing all large zones on the circuit.

Capital Cost	$282.4K	$242.7K
Expense Cost	$8.2K	$7K
Total Cost	$290.6K	$249.7K
Preferred option	X	

5. Project Schedule

Milestone/Phase Name	Estimated Date
100% Detailed Engineering Completion	June 2022
Testing/Commissioning	August 2024
Construction Start	June 2024
In Service Date	December 2024

6. Risk and Contingencies

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.
Internal construction resources not available to perform the work.	2024	High	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.
Storm delays	2024	Medium	If storm activity delays work, we may be forced to use external resources.

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

Attachment	Included in Submittal?
A. Project Needs Statement	*YES*
B. 23J1 Load Summary	*YES*
C. Geographic Map	*YES*
D. System One-lines	*YES*

E. Partial Funding PAF	*YES*

Attachment A: Project Needs Statement

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD01893 [redacted]

Work Classification

Category: Line
Type: SRSS
Type Desc: SMART SWITCHES PROGRAM
Work Type:

Ownership / Management

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

Project Information

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

Budget Summary - Preferred Option

Eliminate all Large Customer Zones

2023

ID	Title	Status	Rev #	Contingency	Expenditure Amount	Net Estimate
1	Install 1 Recloser and change settings	Draft	0	24%	$165,945	$165,945
2	Relocate [redacted]	Draft	0	24%	$79,556	$79,556
				2023 Total:	$245,501	$245,501
				Total Project:	$245,501	$245,501

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD01893 [redacted]

Project Option Summary

ID	Description	Segments	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)	Prfrd
O1	23J1-72S zone Only	1	$165,945	$0	100%	$112.22	$1.91	☐
O2	Eliminate all Large Customer Zones	1,2	$245,501	$0	100%	$166.02	$2.83	☑

Segments

ID	Title	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)
1	Install 1 Recloser and change settings	$165,945			$112.10	$1.52
2	Relocate 23J1-72S	$79,556			$80.82	$1.19

Connecticut Light & Power
A Northeast Utilities Company

Specifi[redacted] Project #: CD01893

Design Alternative CD01893-01

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00%
SubTotal:	$133,826
Contingency Amount:	$32,118
Estimate:	$165,945
Reimbursement:	$0
Net Amount:	**$165,945**
Description:	

Item Description	CU	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17	$3,509.60
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18	$4,000.00
SECTIONALIZE OH - Recloser Control - setting changes only Changing the settingson the [redacted]o an MR.	16-OH39A	$9,771.20
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph Install disconnects with reclosers	16-OH43	$20,566.40
SECTIONALIZE OH - Recloser - 3ph MR on pole 515 on Avery St. Replace RR with new SR on pole 2563 on Kelly Rd.	16-OH38	$95,979.20

Associated / Impacted Devices

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

Connecticut Light & Power
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Specific Project Proposal - Project #: CD01893 [redacted]

Design Alternative CD01893-02

General Information

Segment: 2 - Relocate [redacted] Status: Draft
Segment Type: SECTIONALIZING - OH Town: SOUTH WINDSOR Budget Year: 2023
Work Type: BB-Sctnlzng-Reclosers Trimming Required: ☐ In Service Date: 12/31/2023
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 #: CD01893 [redacted]

Design Alternative CD01893-02

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00%
SubTotal:	$64,158
Contingency Amount:	$15,398
Estimate:	$79,556
Reimbursement:	$0
Net Amount:	$79,556

Description:

Item Description	CU	Amount
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18	$1,000.00
SECTIONALIZE OH - Recloser Control - setting changes only	16-OH39A	$4,885.60
SECTIONALIZE OH - Recloser - 3ph Install a SR on Avery St. on pole 5153.	16-OH38	$47,989.60
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph Install disconnect with new recloser	16-OH43	$10,283.20

Associated / Impacted Devices

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

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD01893 [redacted]

Design Alternative CD01893-02

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00%
SubTotal:	$64,158
Contingency Amount:	$15,398
Estimate:	$79,556
Reimbursement:	$0
Net Amount:	$79,556

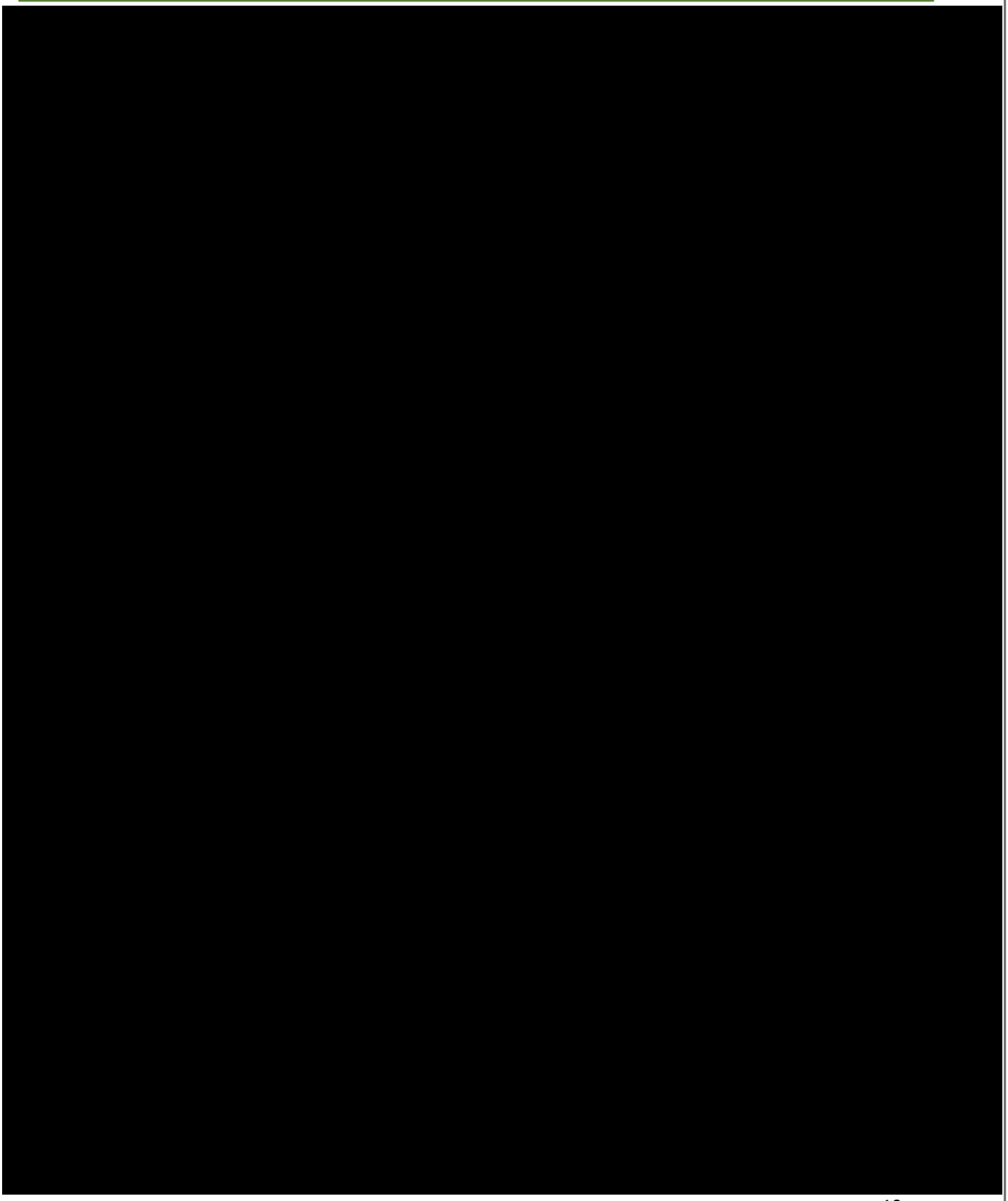
Description:

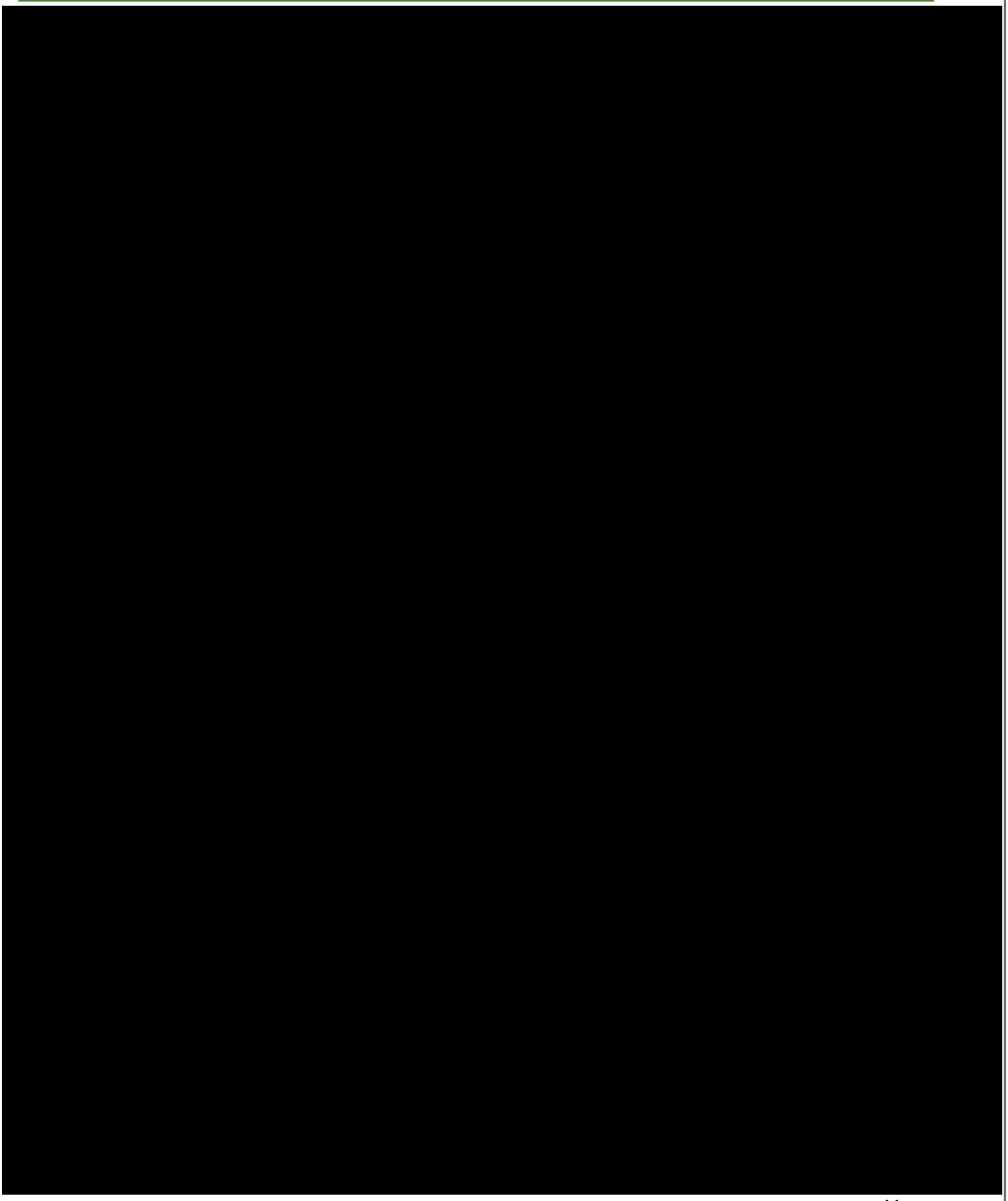
Item Description	CU	Amount
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18	$1,000.00
SECTIONALIZE OH - Recloser Control - setting changes only	16-OH39A	$4,885.60
SECTIONALIZE OH - Recloser - 3ph Install a SR on Avery St. on pole 5153.	16-OH38	$47,989.60
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph Install disconnect with new recloser	16-OH43	$10,283.20

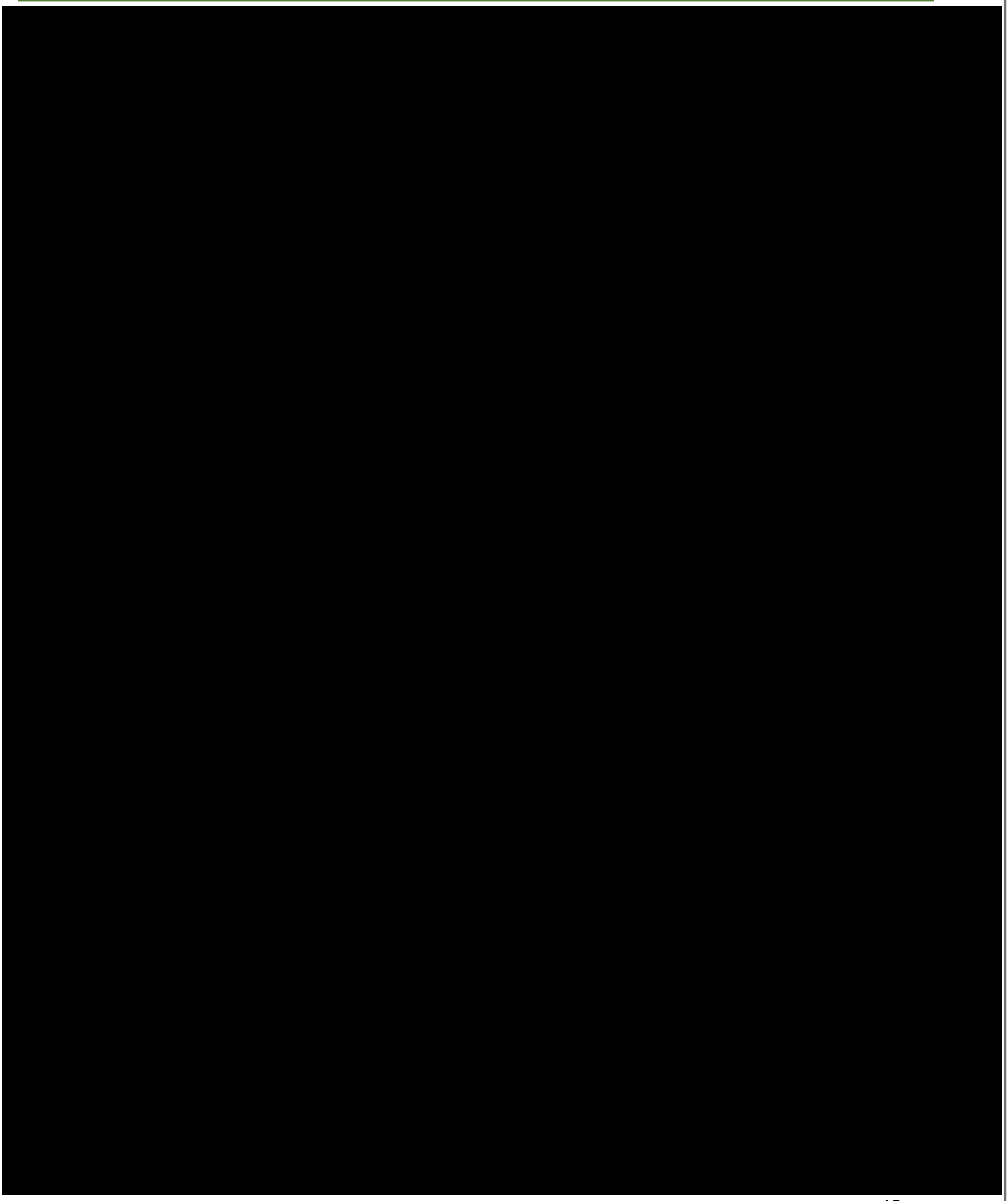
[redacted]

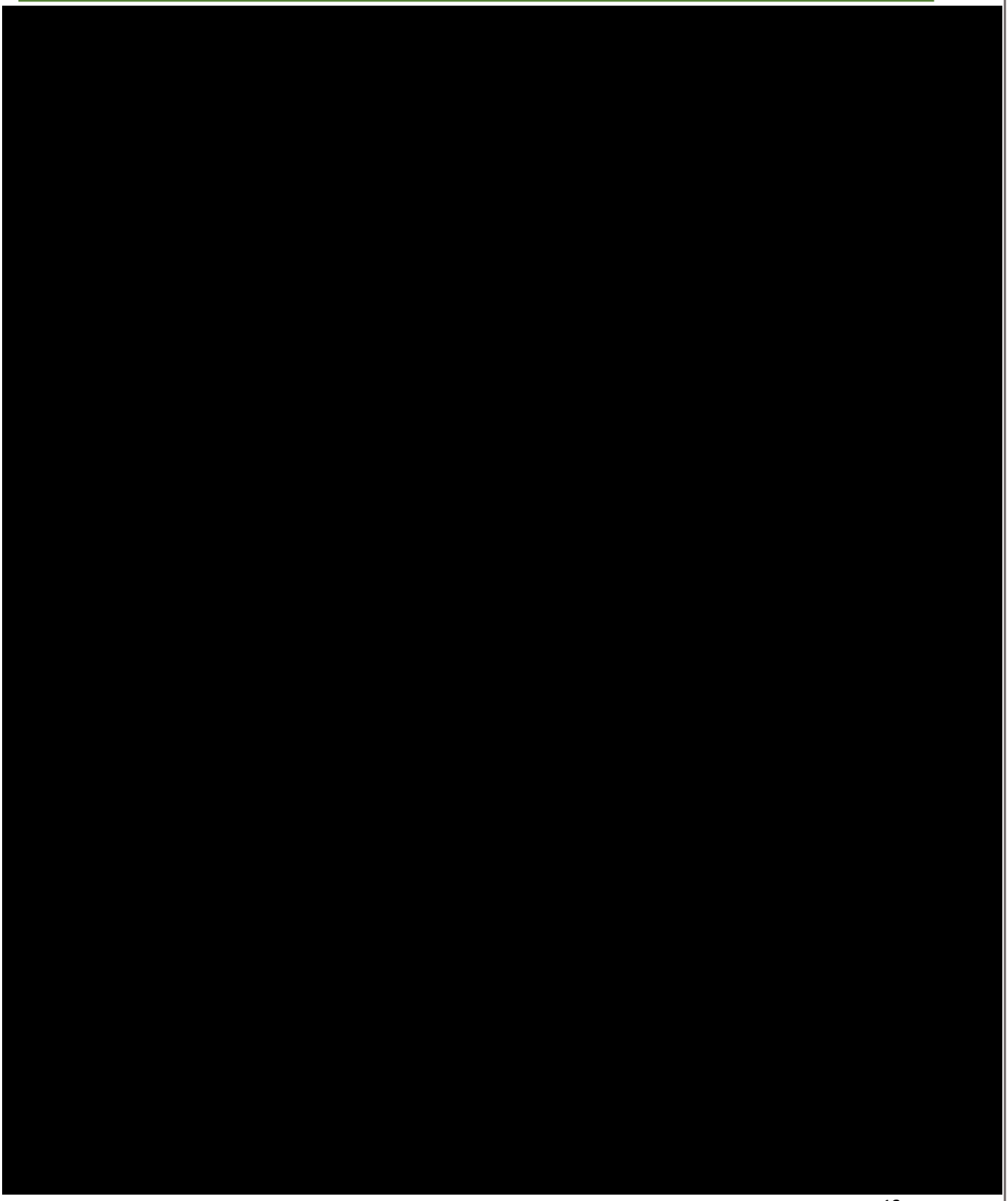
Associated / Impacted Devices

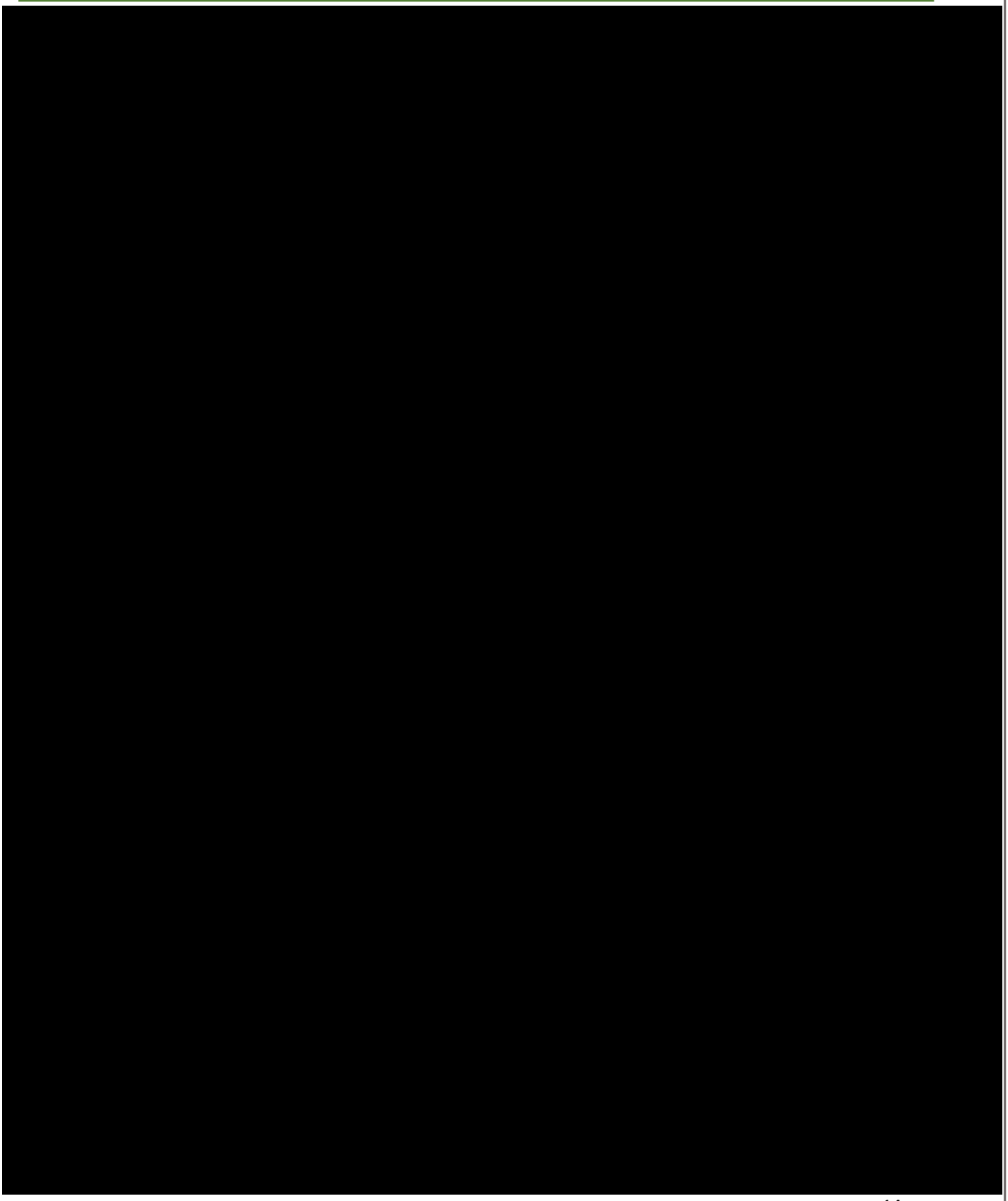
Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes
Existing	[redacted]						

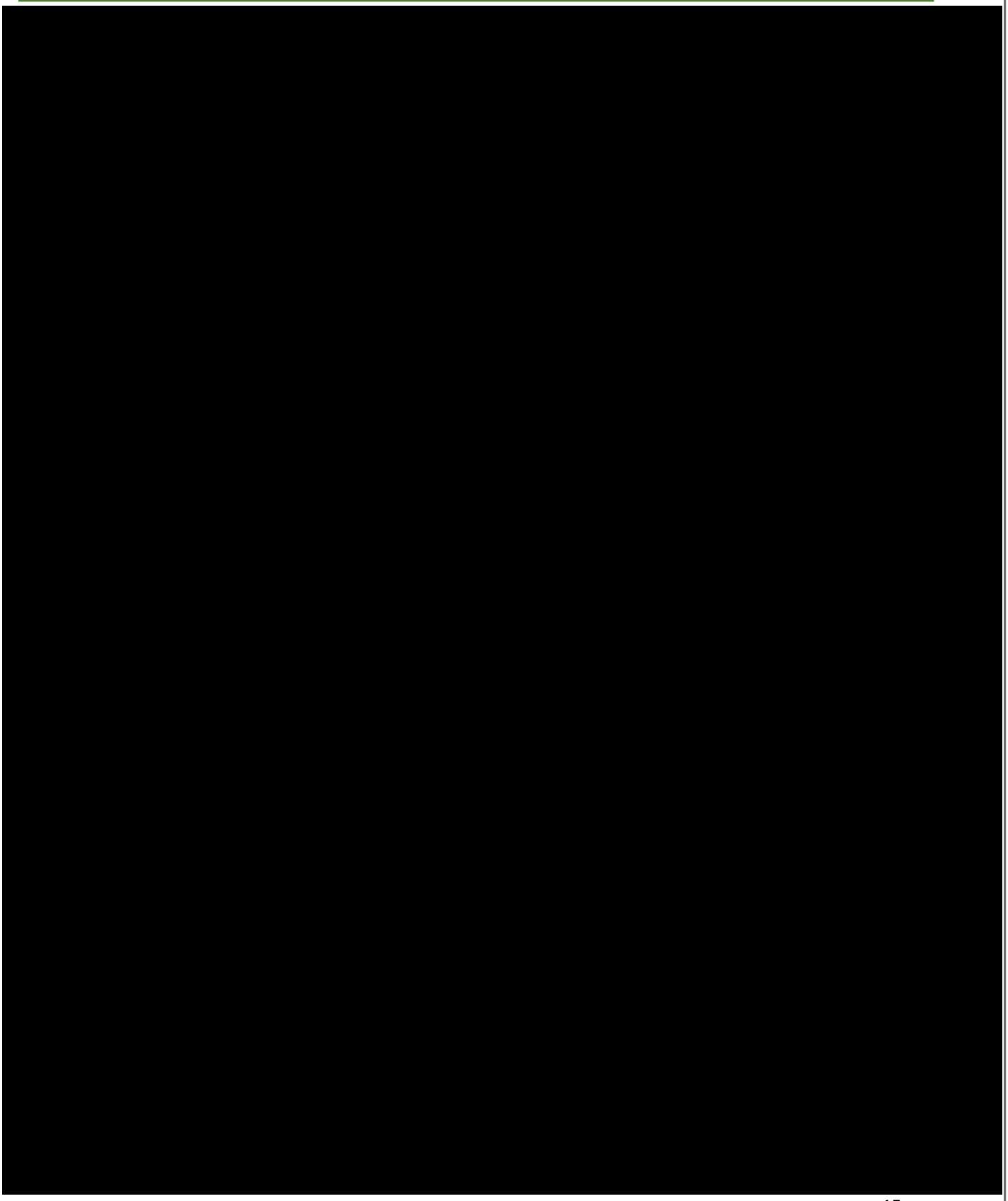












Attachment E: Partial Funding PAF

Operations Project Authorization Form

Project Title: [redacted]	**Project Number: CD01893**
Date Prepared: 03/17/2022	**Company:** Eversource CT
Organization: EFO	**Class(es) of Plant:** D Line
Project Initiator: [redacted]	**Project Category: Smart Switch**
Project Manager: [redacted]	**Project Type:** Specific
Project Sponsor: [redacted]	**Capital Investment part of original Operating Plan:** Yes
Estimated in service date: 12/31/2023	**Emergency Related Request?** Yes
Eng./Constr. Resources Budgeted? Yes	**Facility Type** (check all that apply): ☐ PTF ☐ non-PTF ☑ Distribution
Total Gross Capital Request: $246K	**Authorization Type:** Initial Funding

Executive Summary

This project is being established to address the [redacted]

There have been five outages in this zone in the last four years.

[redacted]

The purpose of project CD01893 is to install [redacted]

Project Costs Summary

Capital Costs	2022	2023	2024+	Total
Direct Capital Costs				

Internal Labor and Construction Equipment	$0.0	$20.8	$0.0	$20.8
Outside Services	$0.0	$27.4	$0.0	$27.4
Materials	$0.0	$87.6	$0.0	$87.6
Removals	$0.0	$5.7	$0.0	$5.7
Risk and Contingency	$0.0	$0.8	$0.0	$0.8
Other	$0.0	$0.0	$0.0	$0.0
Subtotal	**$0.0**	**$142.4**	**$0.0**	**$142.4**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	$0.0	$97.3	$0.0	$97.3
Capitalized interest or AFUDC, if any	$0.0	$3.0	$0.0	$3.0
Subtotal	**$0.0**	**$100.3**	**$0.0**	**$100.3**
Total Customer Contribution	$0	$0	$0	$0
Total Capital Project Costs	**$0.0**	**$242.7**	**$0.0**	**$242.7**

Technical Justification:

Project Need, Objective and Justification

This project was established to address the [redacted] there has been five outages in the last four years.

Therefore, this project is to install sectionalizing devices to break-up this zone further. With these changes, it will greatly increase reliability and reduce the number of customers that will experience an outage in this area.

Project Scope

The scope of this project is as follows:

- [redacted]

Major Material:

- 3 Reclosers
- 3 Disconnect Switches

Background

Outage History

[redacted]

Alternatives Considered:

Alternatives were considered (please describe below)

Another solution was to not install [redacted]

Regulatory Approvals:

No

Project Schedule

Milestone/Phase Name	Estimated Date
100% Engineering Completion	June 2022
Construction Start	April 2023
Testing/Commissioning	N/A
In Service Date	December 2023

Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2023	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	2023	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach
Internal construction resources not available to perform the work.	2023	High	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.	2022	Medium	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Storm delays	2023	Medium	If storm activity delays work, we may be forced to use external resources.

References

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

CD01893_Project_Needs_Statement.pdf

[redacted] Load summary.xlsx

[redacted] Map.pdf

[redacted] Oneline.pdf