EVERSOURCE
Project Authorization Form

Operations Project Authorization Form

Project Title: [redacted] **New Service** [redacted].	**Project Number: CD01514**
Date Prepared: 08/10/2022	**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: Yes**
Estimated in service date: 12/31/2021	**Emergency Related Request? No**
Eng./Constr. Resources Budgeted? Yes	**Facility Type** (check all that apply)**:** ☐ PTF ☐ non-PTF ☒ Distribution
Total Request: $7,372.6K	**Authorization Type: Full Funding**

Financial Requirements:

Project Authorization

ERM: _____

FP&A: _____

Executive Summary

CD01514 received initial funding of $5,948K at the May 20, 2021 CT-PAC meeting. This project is complete and this full funding PAF is requesting $7,372.6K an increase of 1,424.6K or 24%. The increase in cost was due to multiple issues that arose during the construction phase of this project. The customer's energization schedule coupled with multiple storm responses and a small construction window resulted in extra overtime needed to meet deadlines. Crews experienced numerous issues with getaway cables getting stuck in conduit or failed phases in aerial cable and underground cable resulting in over $100K in additional labor and material. In addition, crews had issues energizing the new vista switchgear and additional material in the switchgear needed to be replaced. This resulted in project delays and additional labor, switching and indirect costs.

[redacted] is installing a 252,115 square-foot, 14-story, fully automated, refrigeration distribution center on [redacted], Connecticut. [redacted] has named the p[redacted] The refrigeration distribution center is the first of its kind. The project's diversified calculated load is [redacted] as shown in the Background/Justification section, and [redacted] will meet [redacted]. The ordering of the project's long lead material funding of $985K was previously funded.

[redacted]

Based on the NB12 calculation for a customer load of 8.5 MVA, [redacted] anticipated revenue multiplied by 6.7 is $6,067K. Even though the actual cost of this project is now $7,372K (overage of approximately $1,300K) the customer will not be responsible to contribute to any of the difference. As part of this project,

ROW 036 was rebuilt at a cost that exceeded $1,400K. After this project was established, ROW 036 identified 26 of 31 poles in need of replacement during the ROW priority pole identification program. With the defects identified and the conductor size of both circuits, the work performed in this project would've been completed under a reliability project in future years. Since the perceived benefit to Eversource exceeded $1,400K, the customer is not responsible to contribute to this project.

Project Costs Summary

Note: Dollar values are in thousands

	Year			Grand Total
	2020	2021	2022	
Capital Directs	11.1	3,431.2	100.4	3,542.7
Reimbursables	-	-	(0.7)	(0.7)
Removal	0.2	498.5	7.6	506.3
Salvage	-	(13.2)	(12.0)	(25.3)
Capital Indirects	21.0	2,726.3	144.9	2,892.1
AFUDC	0.1	111.1	119.6	230.8
O&M/Expense	0.3	233.0	(6.6)	226.7
Grand Total	**32.6**	**6,986.9**	**353.1**	**7,372.6**

Financial Evaluation

Note: Dollar values are in thousands

	Year			Grand Total
	2020	2021	2022	
Straight Time Labor	11.3	197.8	52.8	261.9
Overtime	-	46.1	26.2	72.4
Outside Services	-	1,694.6	421.8	2,116.5
Materials	-	1,602.7	(51.3)	1,551.4
Other	-	375.2	(354.2)	21.0
Overheads	21.0	2,726.3	144.9	2,892.1
AFUDC	0.1	111.1	119.6	230.8
O&M/Expense	0.3	233.0	(6.6)	226.7
Grand Total	**32.6**	**6,986.9**	**353.1**	**7,372.6**

Technical Justification:

Project Need Statement

[redacted] is installing a cold storage warehouse distribution center on [redacted], Connecticut. The customer is estimating the distribution center load to be [redacted]. In 2021, under this project, the [redacted] will be extended and upgraded to supply the customer. If the customer's [redacted]

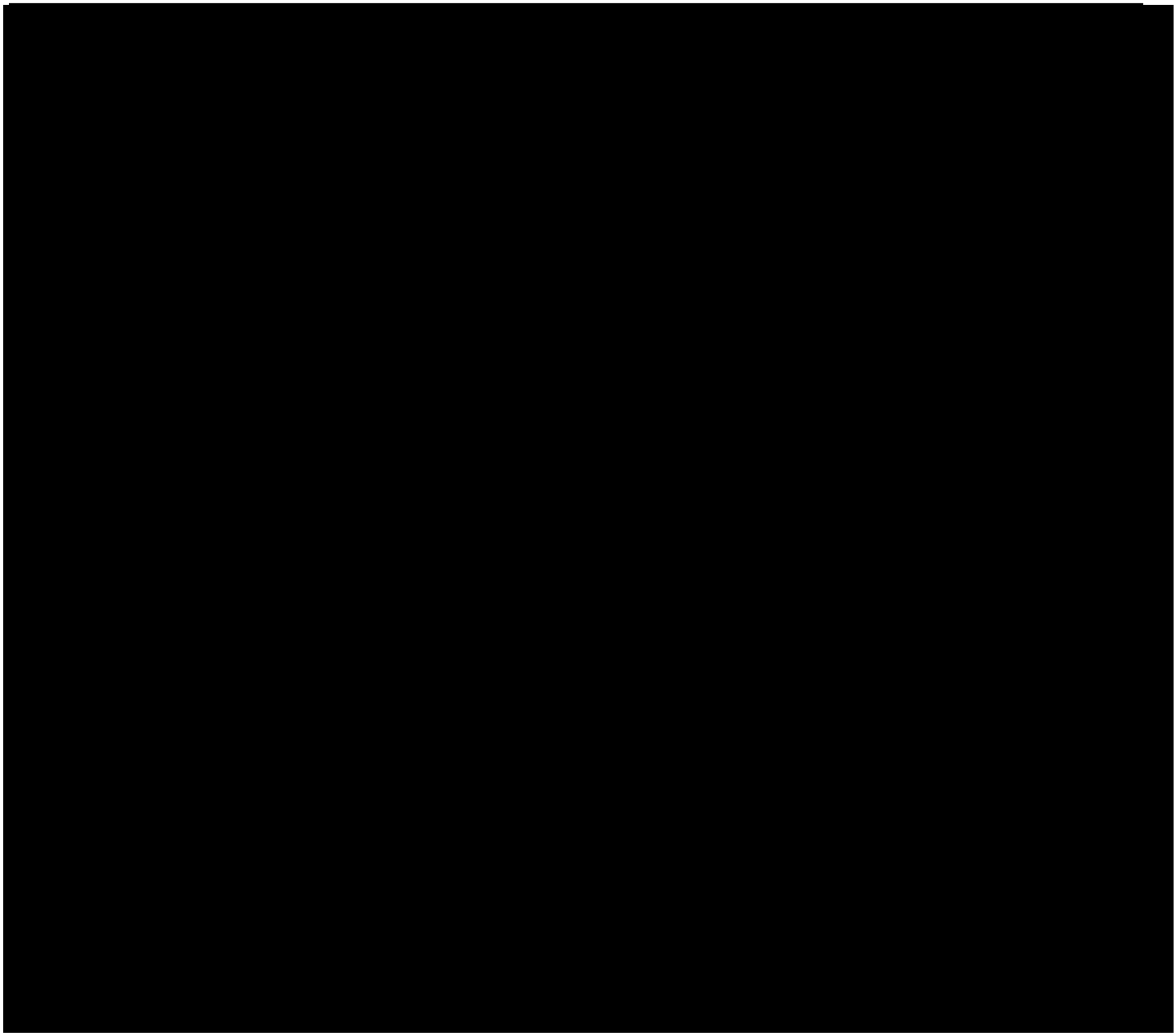
Project Objectives

Serve [redacted] service request via the [redacted] has three in service dates for various loads of April 1, June 1, and December 1, 2021 that will be met with varying stages of construction.

Project Scope

[redacted]

[redacted]



Major Material:

Description	Average of Stock Code	Sum of Total Ea. or Ft
1,000 kcmil Cu EPR Cable	514048	4552
556 kcmil AAC Bare.	513357	24600
556 kcmil AAC tree wire.	513413	42900
750 kcmil Al Aerial Cable	513974	7875
Capacitor 1,200 KVAR	514343	2
Capacitor Controls	503696	2
Cooper Form 6 Control	518938	2
Cooper Nova Recloser	528739	2
Cooper Recloser Control	518938	1
ENCLOSUREELECTRICAL, HIGH VOLTAGE, EXTRA LARGE, PAD MOUNTED, SS, FOR S&C VISTA SWITCHGEAR	505006	4
Regulators 400-ampere	590226	9
SWITCHGEAR, DISTRIBUTION, 25 KA SYM, 29 KV, 1-600 A (3) VACUUM SWITCH, SF6 GAS, 125 KV BIL, BRAND: COMPANION, MODEL 413	532138	2
SWITCHGEAR, DISTRIBUTION, MASTER, 25 KA SYM, 29 KV, 2-600 A (2) VACUUM SWITCH, SF6 GAS, 125 KV BIL, MODEL 422	532137	2

Background / Justification

The following table is the latest load submittal for the [redacted] project

[redacted]

The [redacted] loads are shown in the table below. However, the [redacted] is not fully operational or has as much automation that is designed in [redacted].

[redacted]

[redacted] is totally automated with 1,000,000 square-foot footprint. The 2020 peak load at this site was approximately [redacted]

Since this is the first refrigeration distribution center of its kind there is no way of knowing if the customer's [redacted] project will be met So, this project will [redacted]

Switchgear Design.

[redacted]

From the DSEM11.624, [redacted]

[redacted] as shown the following picture.





[redacted]

Option 2. For [redacted] load up to [redacted] ($5,574K) (Segment)

[redacted]

[redacted]

Business Process and / or Technical Improvements:

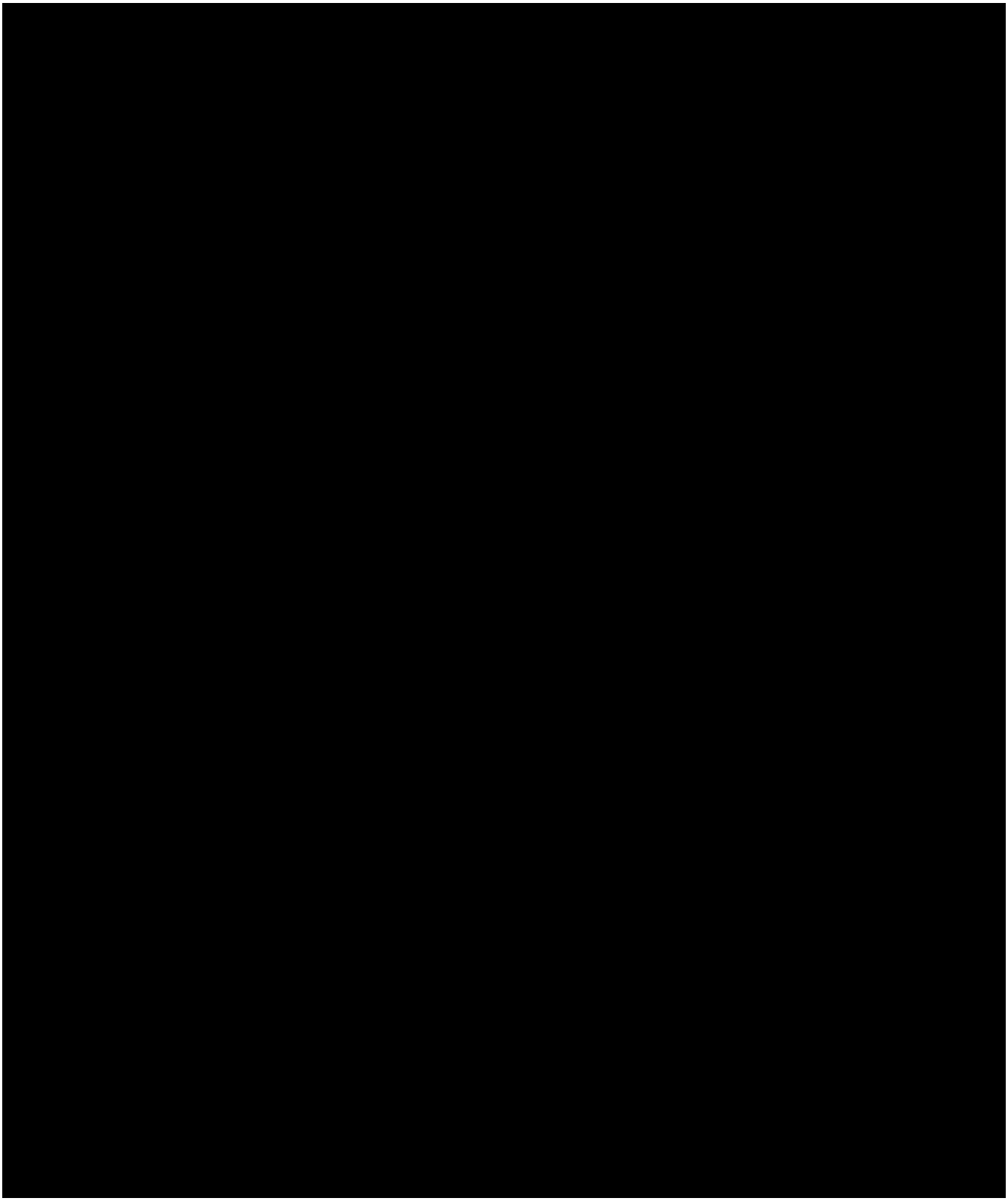
This project resolves the [redacted].

Improve the voltage on the [redacted]

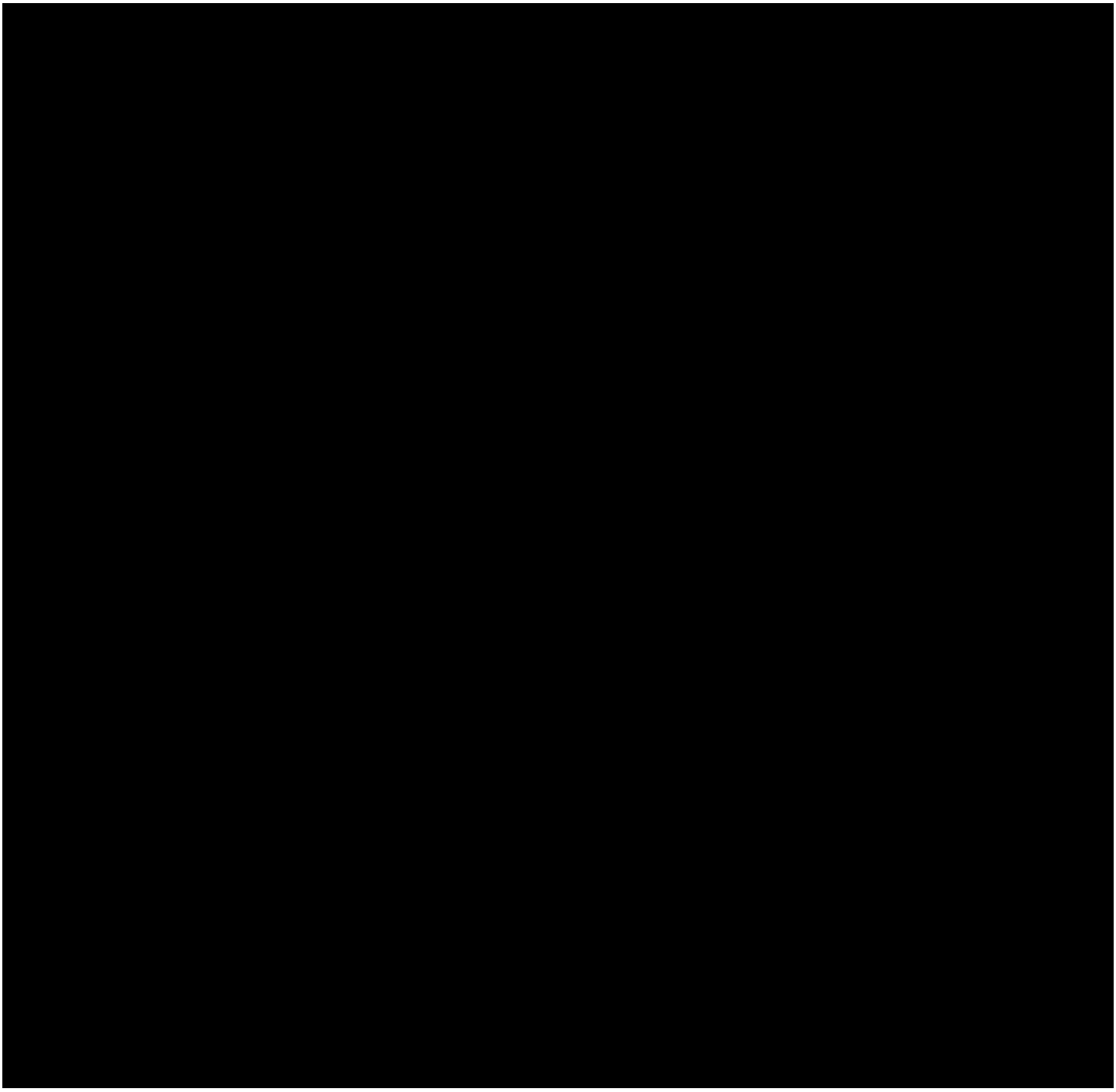
Upgrade the [redacted] ROW ranked 142.

Alternatives Considered with Cost Estimates.

Option 2 is the preferred option. Option 2A was used to calculate the NB-12 contribution.



Option Three ($18,741K)



Project Schedule

Milestone/Phase Name	Estimated Completion Date
Preliminary Approval	September 2020
Detailed Design	March 31, 2021
Material Long Lead Order	Completed
Settings Requested	Completed
Construction Start Date	January 1, 2021
Construction End Date	December 1, 2021

Regulatory Approvals

None.

Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2021	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	2021	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach
Internal construction resources not available to perform the work.	2021	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.	2021	Medium	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Storm delays	2021	Low	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2021	Low	Schedule work to minimize system abnormal time. Most of this work will require system to be abnormal for any extended period.

Maps and before load sheets are located at the folder path below.

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Need Statement.

PDF Map of Option Two.

PDF Map of Option Three.

PDF Map of Option Five.

PDF Map of Option Six.

PDF Map of Option Eight.

Before circuit and substation load sheets.

Option 2 Load Sheets.

The load sheets for the alternative options are located at the folder path below.

\\nu.com\data\SharedData\UG Energy Delivery Shared\Specific Projects\Project Documentation\Central\Operations PAF\CD01514 [redacted]'s New Service\Alternative Attachments