EVERSOURCE

Operations Project Authorization Form

Approved on May 12, 2022 EPAC

Link to Meeting Minutes

Project Title: [redacted] 2nd Xfmr, Switchgear, & 115kV Circuit Breaker Addition	**Project Number: 404940, CS00261**
Date Prepared: 06/02/2022	**Company: Eversource CT**
Organization: System Planning	**Class(es) of Plant: T SS, D SS**
Project Initiator: [redacted]	**Project Category: Stations – Transformers / Circuit Breakers**
Managing Organization: Transmission / Major Projects	**Schedule ID#: 80053152 (D); 40494001 (T)**
Project Manager: [redacted]	**Project Type: Specific**
Project Sponsor: [redacted]	**Capital Investment part of original Op Plan: Yes**
Estimated in service date: 12/31/2023	**Emergency Related Request? No**
Eng./Constr. Resources Budgeted? Yes	**Facility Type (check all that apply):** ☒ **PTF non-regional** ☐ **non-PTF** ☒ **Distribution** ☐ **N/A (General Plant)**
Total Capital Request: $14,439K (D - $10,672K; T - $3,767K)	**Authorization Type: Full Funding**

[1] Executive Summary

This project is seeking full funding approval of $14,439K ($3,767K for 404940 and $10,672K for CS00261) to support material procurement, construction, and test services for upgrades to the [redacted].

Currently, [redacted].

Initial funding of $70K for 404940 was approved in PowerPlan on 05/21/2019. The project was presented to and approved at the Solution Design Committee (SDC) on 02/19/2020. Partial funding of $478K for 404940 was approved in PowerPlan on 03/22/2021 and $1,612.9K for CS00261 was approved in PowerPlan on 03/23/2021. As of 04/14/2022, $393K for 404940 and

$283K for CS00261 has been spent to complete preliminary design, associated planning grade estimates, a constructability review, single contingency load loss (SCLL) considerations, and full funding Project Authorization Form (PAF) development.

EVERSOURCE

[2] Project Costs Summary

Project Total Cost

Note: Dollar values are in thousands

Line item Category	Prior Authorized	Actuals to Date	2022 to Go	2023	2024	2025	2026	2027	Total
1. ROW / Easements / Land Acquisition	$								
2. Environmental Approvals / Permits	$14		$3	$3					$5
3. Outreach	$38	$0	$35	$36					$71
4. Siting Approvals / Permits	$6	$3	$16	$2					$21
5. Engineering / Design	$622	$224	$271	$276					$771
6. Materials (Eversource purchased)	$418		$2,552	$1,860					$4,413
7. Construction (incl matl's by contractors)	$18	$5	$841	$1,210					$2,056
8. Testing / Commissioning	$69		$224	$297					$521
9. Project Mgmt. Team	$103	$118	$73	$89					$280
10. Removals	$	$24	$8	$19					$51
11. Other	$								
12. Risks	$		$491	$579					$1,070
SUBTOTAL DIRECTS W/ RISKS	**$1,287**	$373	$4,514	$4,372					$9,260
13. Indirects/Overhead	$728	$279	$1,632	$2,333					$4,244
14. AFUDC	$76	$24	$252	$235					$511
PROJECT TOTAL – BASELINE BUDGET	**$2,090**	$676	$6,398	$6,940					$14,014
15. Contingency	$		$227	$198					$425
TOTAL CAPITAL REQUEST	**$2,090**	$676	$6,625	$7,138					$14,439
16. Reimbursables/Customer Contribution	$								
PROJECT TOTAL (LESS REIMBURSABLES)	**$2,090**	$676	$6,625	$7,138					$14,439
O&M	$								
TOTAL REQUEST	**$2,090**	$676	$6,625	$7,138					$14,439

EVERSOURCE

Distribution CS00261

Note: Dollar values are in thousands

Line item Category	Prior Authorized	Actuals to Date	2022 to Go	2023	2024	2025	2026	2027	Total
1. ROW / Easements / Land Acquisition	$								
2. Environmental Approvals / Permits	$12		$1	$2					$3
3. Outreach	$38		$18	$18					$36
4. Siting Approvals / Permits	$5								
5. Engineering / Design	$546	$87	$216	$225					$528
6. Materials (Eversource purchased)	$305		$1,825	$1,859					$3,684
7. Construction (incl matl's by contractors)	$9	$1	$296	$1,075					$1,371
8. Testing / Commissioning	$34		$62	$255					$317
9. Project Mgmt. Team	$58	$42	$33	$81					$156
10. Removals	$	$24		$17					$41
11. Other	$								
12. Risks	$		$318	$488					$806
SUBTOTAL DIRECTS W/ RISKS	**$1,006**	$153	$2,768	$4,021					$6,942
13. Indirects/Overhead	$561	$124	$888	$2,109					$3,120
14. AFUDC	$45	$6	$137	$156					$299
PROJECT TOTAL – BASELINE BUDGET	**$1,612**	$283	$3,793	$6,286					$10,361
15. Contingency	$		$135	$177					$311
TOTAL CAPITAL REQUEST	**$1,612**	$283	$3,928	$6,462					$10,672
16. Reimbursables/Customer Contribution	$								
PROJECT TOTAL (LESS REIMBURSABLES)	**$1,612**	$283	$3,928	$6,462					$10,672
O&M	$								
TOTAL REQUEST	**$1,612**	$283	$3,928	$6,462					$10,672

Detail other costs, project risk items and their allocations: Distribution

Risk	Allocation
1. Potential UG Obstructions	$100,000
2. Severe Weather, Delays, OT	$90,000
3. Design Development	$150,000
4. Environmental - potential soil contamination	$165,000
5. Wetland Impact	$75,000
6. Permits Delay	$55,000
7. Local Impact, outreach	$155,000
8. Connecticut Siting Council (CSC) Outreach	$15,500
Total	$805,500

EVERSOURCE

Transmission 404940

Note: Dollar values are in thousands

Line item Category	Prior Authorized	Actuals to Date	2022 to Go	2023	2024	2025	2026	2027	Total
1. ROW / Easements / Land Acquisition	$								
2. Environmental Approvals / Permits	$3		$2	$1					$3
3. Outreach	$	$0	$17	$18					$36
4. Siting Approvals / Permits	$1	$3	$16	$2					$21
5. Engineering / Design	$76	$136	$55	$51					$243
6. Materials (Eversource purchased)	$113		$727	$1					$728
7. Construction (incl matl's by contractors)	$9	$4	$545	$135					$685
8. Testing / Commissioning	$34		$162	$42					$204
9. Project Mgmt. Team	$45	$76	$40	$8					$124
10. Removals	$		$8	$2					$10
11. Other	$								
12. Risks	$		$174	$91					$265
SUBTOTAL DIRECTS W/ RISKS	**$281**	$220	$1,746	$352					$2,318
13. Indirects/Overhead	$167	$155	$744	$224					$1,123
14. AFUDC	$30	$18	$115	$79					$212
PROJECT TOTAL – BASELINE BUDGET	**$478**	$393	$2,605	$655					$3,653
15. Contingency			$92	$21					$114
TOTAL CAPITAL REQUEST	**$478**	$393	$2,697	$676					$3,767
16. Reimbursables/Customer Contribution	$								
PROJECT TOTAL (LESS REIMBURSABLES)	**$478**	$393	$2,697	$676					$3,767
O&M	$								
TOTAL REQUEST	**$478**	$393	$2,697	$676					$3,767

Refer to Attachments A1, A2, and A3 for detailed cost estimate sheets.

Detail other costs, project risk items and their allocations: Transmission

Risk	Allocation
1. Potential UG Obstructions	$80,000
2. Severe Weather, Delays, OT	$56,000
3. Design Development	$59,900
4. Environmental - potential soil contamination	$42,000
5. Wetland Impact	$19,500
6. SCS Outreach	$7,500
Total	$264,900

Explain unique payment provisions, if applicable:

Not Applicable

Identify and detail any unique O&M impacts resulting from this project:

Not applicable

[3] Technical Justification

Project Need, Objective and Justification

Distribution Needs:

with one (1) unit of switchgear that has [redacted] are required to improve reliability by [redacted]

[redacted]

[redacted]

The [redacted] provides [redacted]

Transmission Needs:

As previously stated, [redacted] and to adhere to the

Distribution System Planning Guide, Transmission Planning proposes adding [redacted]

Project Objectives

The main project objectives are to address [redacted] by implementing the following system upgrades:

- [redacted]

Project Scope

The scope of work is provided below. See Attachments D and F for nomenclature and substation layout removals, respectively. See Attachments E and G for nomenclature and substation layout additions, respectively.

1. Above Grade Electrical Modifications/Additions:

Transmission (404940)

Substation layout is affected with the [redacted] as listed below:

a. [redacted]

[redacted]

e. Install one lightning mast and foundation.
   i. Lightning mast is to be designed by steel pole vendor per the most current Eversource standards.
   ii. Spread footer foundation will be used for the lightning mast foundation.
   iii. Foundation design will include the required calculations.

Distribution (CS00261)

[redacted]

h. Pre-project noise study, AC/DC load analysis, and battery capacity analysis has been completed.
i. [redacted]

2. Above Grade Structural Modifications/Additions:

Transmission

a. [redacted]

b. [redacted]

Distribution

a. [redacted]

II. Below Grade

Transmission

a. [redacted]

iii. New foundation will be required for the new lightning mast.

b. Ground Grid Modifications/Expansion:

i. [redacted]

c. Raceway Additions/Modifications

i. [redacted]

Note: [redacted]

Distribution

a. Foundation Addition/Modifications:

i. [redacted]

ii. [redacted]

2. Ground Grid Modifications/Expansion:

a. [redacted]

3. Raceway Additions/Modifications

a. [redacted]

III. Control Enclosure Evaluation

1. Control Enclosure physical space evaluation –
   a. The existing control enclosure has sufficient space for new equipment and existing raceways are adequate to maintain separation per Eversource SUB013.
2. AC Station Service loading and evaluation of existing AC panel boards –
   a. Existing drawings indicate that the [redacted]
3. DC Battery/Charger Impacts and evaluation of existing DC panel boards –
   a. [redacted]
   b. [redacted]
   c. Existing drawings indicate that the [redacted]

4. HVAC addition/modifications –

   HVAC, ventilation and H2 sensing upgrades are not required within the control enclosure as part of this scope of work.

IV. Construction, Outage and Energization Considerations

1. [redacted]
2. The new mobile position will be relocated and established prior to removal of the existing mobile position.
3. Transmission scope of work shall be constructed first, followed by Distribution scope of work.

V. Protection & Controls Scope of Work

1. [redacted]

   f. Program primary System 1 line relays at [redacted] for Directional Comparison [redacted]

o. [redacted]

2. The new Distribution Switchgear Enclosure will include the following:

[redacted]

3. [redacted].

b. [redacted]

A constructability review was performed on March 16, 2022 (see Attachment C).

Substation Equipment

Station	Device Position / Nomenclature	Device Removals *include manufacturer*	Device Additions *include manufacturer*
[redacted]			

Background

The [redacted]

The [redacted]

The [redacted]

[4] Alternatives Considered

This project was presented to the Solution Design Committee on February 19, 2020 and Alternative #1 was chosen as the approved solution.

The costs in the Alternatives section below for the [redacted] project reflect estimates presented at the SDC meeting in 2020. Since then, an updated estimate has been developed for the Preferred option which has experienced an increase in costs of approximately 32%. The other alternatives would have experienced a similar order of magnitude increase as did the Preferred solution.

Alternative #1 (This is the Preferred solution):

This alternative [redacted] Figure 1 below shows the one-line diagram for this alternative.

[redacted] further protection scope for this alternative is provided in the Scope section of this document. This is the preferred alternative because it follows the DSPG planning criteria, provides better protection than Alternative 3 and costs significantly less than Alternative 2.

All work for this alternative is expected to take place within the existing substation fence. Customer impacts should be minimal with this alternative since an expansion of the fence line is not required, the new equipment will not be taller than the tallest existing piece of equipment and the sound levels are expected to be below the maximum property line sound pressure levels allowed by State Regulations. A Notice of Exemption to the Connecticut Siting Council will be needed. There are no current Asset Management projects that would conflict with this project. [redacted]



Figure 1: Transmission Alternative 1, [redacted]

Planning grade cost estimate for the Transmission portion of this alternative is $3.76M.
Planning grade cost estimate for the Distribution portion of this alternative is $10.67M.

Alternative 2 (This Alternative is Not Recommended):

This alternative consists of the [redacted]

he figure below shows the one-line diagram for this alternative.

[redacted]

[redacted]

[redacted] Also, the transmission cost for this alternative is over 3 times greater than the preferred.

Work required for this alternative will require a [redacted]; a Petition submitted to the Connecticut Siting Council will be needed. [redacted]. There are no current Asset Management projects that would conflict with this project. [redacted].

[redacted]

Figure 2: Transmission Alternative 2, [redacted]

Conceptual grade cost estimate for the Transmission portion of this alternative is $10.9M.

Planning grade cost estimate for the Distribution portion of this alternative is $7.3M.

Alternative 3 (This Alternative is Not Recommended):

This alternative consists of the [redacted]

The figure below shows the one-line diagram for this alternative.

The [redacted] The cost of this alternative compared to the preferred is marginal and provides less protection; therefore, this is not the preferred alternative.

All work for this alternative is expected to take place within the [redacted] the new equipment will not be taller than the tallest existing piece of equipment and the sound levels are expected to be below the maximum property line sound pressure levels allowed by State Regulators. A Notice of Exemption to the Connecticut Siting Council will be needed. There are no current Asset Management projects that would conflict with this project. [redacted]



Figure 3: Transmission Alternative 3, [redacted]

Conceptual grade cost estimate for the Transmission portion of this alternative is $2.1M.

Planning grade cost estimate for the Distribution portion of this alternative is $7.3M.

[5] Project Schedule

Milestone	Scheduled Completion Date
Project Need by Date	12/31/2021
Date of IFR Approval	May 2019
Complete Conceptual design of Alternative(s)	12/30/2019
Initiator complete SSF form	02/10/2020
SDC Presentation Date(s)	02/19/2020
Conversion of Tx development costs, 183 to 107 (applicable to projects that require SSF approval but do not require ISO alternative selection)	N/A
Preliminary Design Complete	11/18/2021
Preliminary Design Constructability review complete	06/02/2021
Full funding estimate complete	05/02/2022
Full funding estimate review	05/02/2022
Initiator complete PAF form	05/02/2022
EPAC Funding Dates (Partial)	01/20/2021
EPAC Funding Dates (Full)	05/11/2022
Detail Design Complete	05/03/2022
Final Constructability Review Complete	03/16/2022
Targeted Milestone Dates:	
· Siting Approval (if applicable)	08/15/2022
· Env. Approvals (if applicable)	N/A
· Outage & Energization Plan Issued	TBD
· All Material on Site	08/06/2023
· Outage Permit(s) Approved	TBD based on material delivery
IFC Design Complete	05/31/2022
Start of Construction	09/06/2022
Project ISD	10/30/2023 (D), 12/30/2023 (T)
Relay Settings Issued (*Required for Full Funding requests)	06/28/2022
ISO Related Milestones (for applicable projects)	
· ISO Preferred Alternative Selected	N/A
· Conversion of Tx development costs, 183 to 107 · (following ISO preferred alternative selection)	N/A
· PAC Presentation	N/A
· TCA Submittal	N/A
PPA Approval	10/27/2021

Refer to Attachment B1 for the Distribution schedule and Attachment B2 for the Transmission schedule.

[6] Regulatory Approvals

An Exempt Modification is required to be submitted to the Connecticut Siting Council.

A [redacted] was approved on 10/27/2021.

[7] Risk and Risk Mitigation Plans

Contingency:

A contingency amount of $425K has been included in the total project estimate to account for any unknowns. The table below shows the individual contingency contributions per work order number.

Project Number/Work Order #	Contingency Amount
404940/40494001	$113,600
CS00261/CS002611	$311,400
Total	**$425,000**

[redacted]

Risk Mitigation:

Risk	Mitigation
1. Potential UG Obstructions	UG obstructions may be observed during Civil excavations and will be taken care of at that time. Have alternative paths for conduit. Risk is allocated in the project budget for unexpected UG obstructions
2. Severe Weather, Delays, OT	Construction delays caused by weather and storm duty are possible; try to be flexible with construction schedule. Risk is allocated in the project budget for delays.
3. Design Development	The design and review process will be done in detail as the project IFC design is being completed. Risk is allocated to the project budget for any changes in detailed design.
4. Environmental	As civil construction starts there could be contaminated soil that would require to be dealt with. Risk is allocated to the project budget for removal of any possible contaminated soil.
5. Wetland Impact	It is not expected that wetlands will be impacted during the construction of this project since all work will be completed within the existing fence line. Risk has been allocated to the project budget to account for any wetland impacts.

Risk	Mitigation
6. Permits Delay	Permit delays could cause delays in construction start or material delivery. Risk is allocated to the project budget for these delays.
7. Local Impact	Abutters have shown some resistance to projects in the area in the past. There has been some outreach already and thus far there has been no resistance for this upcoming project. Risk has been allocated to the project budget for any delays that may be caused from abutters during the CSC approval process.
8. SCS Outreach	Since the project will be constructed [redacted] an Exempt Modification will be submitted to the SCS for approval; no issues are expected for this approval process. Risk has been allocated to the project budget for any issues that may arise during the approval process.

[8] References

References
1. Distribution System Planning Guide
2. [redacted] dated 04/12/2019
3. [redacted] dated 04/08/2020
4. [redacted] partial funding PAF, dated 02/05/2021

[9] Attachments (One-Line Diagrams, Images, etc.)

Attachment	Included in Submittal?
A1. Cost Estimate for Distribution	*YES*
A2. Cost Estimate for Transmission	*YES*
A3. Cost Estimate – Total Project	*YES*
B1. P6 Schedule for Distribution	*YES*
B2. P6 Schedule for Transmission	*YES*
C. Constructability Review	*YES*
D. 19703-91001-REV AG2 AH2 Nomenclature Removals	*YES*
E. 19703-91001-REV AG2 AH2 Nomenclature Additions	*YES*
F. 19703-33001-REV AH AG Layout Removals	*YES*
G. 19703-33001-REV AH AG Layout Additions	*YES*

INSTRUCTIONS:
It is the responsibility of the initiator to contact the subject matter experts in the listed area disciplines to determine if the project considerations contained in this list are applicable to their project. They should fill out the checklist and determine a transition plan for the purpose of project execution. See the PAF Guide for additional instruction.

Project Checklist - Transmission & Substation Capital Project			
Project Name: [redacted]		**Project Number: 404940, CS00261**	
Facility Type: ☐BPS ☐BES ☐PTF ☒PTF non-regional ☐non-PTF ☐CIP ☒Distribution ☐General Plant			
PLANNING			
Is a NX-9 required?		Yes	
Is an ISO-NE PAC presentation required?		No	
ISO-NE Presentation Date (if completed):		Enter Date	
Cost in ISO-NE Presentation ($M) (if completed):		Enter Cost ($M)	
Is a PPA required?		Yes	
ISO-NE Approval Date (if completed):		10/27/2021	
Is a TCA Application Required?		No	
TCA Submittal Date (if submitted):		Enter Date	
Cost in TCA Submittal ($M) (if submitted):		Enter Cost ($M)	
Enter ISO-NE RSP / Asset Condition ID, if assigned:		Enter ISO-NE ID	
PLANNING/PROTECTION & CONTROLS			
Are RAS/SPS/UVLs affected?		No	
OPERATIONS			
Outage Required?	☒ Primary Equipment (Power Transfer)	☐ Secondary Equipment (P&C only)	☐ Outage Not Required
Do SCLL Conditions Exist?		Yes	
Has an outage schedule been approved?		No	
Are Operations & Maintenance procedures/training required?		No	
STANDARDS			
Does the project include standard equipment and designs?		Yes	
SUBSTATION ENGINEERING			
Does this impact Revenue Metering		No	
Is preliminary short circuit/ breaker duty analysis required?		Yes	
Are there any changes to the baseline audible noise?		TBD	
Is there an impact to the existing ground grid?		Yes	
Is a Transient Over Voltage (TOV) analysis required?		No	

Project Checklist - Transmission & Substation Capital Project	
Project Name: [redacted] – 2nd Xfmr, Switchgear, & 115kV Circuit Breaker	**Project Number: 404940, CS00261**

P&C ENGINEERING	
OP-22 - Are PMUs and DDR required?	No
If BPS, is an NPCC Directory #4 presentation required?	No
Are ISO-NE OP-24 Appendix B updates necessary?	Yes, for [redacted] remote work
TRANSMISSION LINE ENGINEERING	
Are there any changes that affect the baseline EMF?	No
Are there any changes that affect the baseline EMI?	No
SITING	
Is a Siting filing required? *(If yes, list in regulatory approvals section)*	Yes
PERMITTING	
Is there any permitting required? *(If yes, list in regulatory approvals section)*	No
PROJECT SERVICES (OUTREACH) and ROW WORK COORDINATION	
What is the level of outreach expected?	Medium
Is any part of this project in an Environmental Justice Community?	No
Has ROW Coordination reviewed this project?	No
Is this project coordinating with other existing scheduled work?	No
INITIATOR	
Has a field constructability review been completed?	Yes
INVESTMENT RECOVERY	
Does the project require development of an Investment Recovery plan?	No
COST ESTIMATING	
What team/firm prepared the cost estimate?	Estimate was prepared by the Eversource Estimating Team
Name of the person who prepared the estimate:	[redacted]
Was the estimate reviewed by Eversource Estimating?	Yes - Full Review

ESTIMATE SUMMARY

Project Title: [redacted] Assets
Project Number: CS00261
WO & Task #: 80053152
Estimate revision #: 00
Estimate Type - Station work

Estimate #: C-22-124 (D)
Date of Estimate 04/29/2022
Estimate done by [redacted]
In Service date (ISD): 12/31/2023

Template Revision # 01.705

All Estimate Summary for PP4 Calc (escalation separate)

Estimate #: C-22-124 (D)
Date of Estimate:04/29/2022

Project Number: CS00261
WO & Task #: 80053152

ESTIMATE SUMMARY

Estimate Type: Planning

WBS	Description	TOTAL	% of Directs	% of Total	Priors	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL w/ escal broken out
1	ROW / Easements / Land purchases															$ -
2	Environmental Approvals / Permits	$2,600	0.0%	0.0%		$500	$2,100									$ 2,600
3	Outreach	$35 500	0.5%	0.3%		$17 500	$18 000									$ 35 000
4	Siting Approvals / Permits															$ -
5	Engineering / Design	$528,500	7.6%	5.0%	$87,200	$216,200	$225,100									$ 521,900
6	Materials (Eversource purchased)	$3 684 400	53.1%	34.5%		$1 825 100	$1 859 300									$ 3,748,584
7	Construction (Incl matl's by contractors)	$1,370,800	19.7%	12.8%	$500	$295 600	$1 074 700									$ 1,248,416
8	Testing / Commissioning	$317,200	4.6%	3.0%		$62,000	$255,200									$ 309,800
9	PMT Project Mgmt Team	$156,100	2.2%	1.5%	$41,600	$33,300	$81,200									$ 153,700
10	Removals	$41 000	0.6%	0.4%	$24 200		$16 800									$ 40 500
11	Other															$ -
12	Risks	$805,500	11.6%	7.5%		$317,500	$488,000									$ 805,500
13																
	Project Directs Total w/Risks	**$6,541,600**	100 0%	65.0%	**$153,500**	**$2,767,700**	**$4,020,400**									**$6,866,000**
13	Indirects/Overhead	$3 120 300		29.2%	$123 500	$888 000	$2 108 800									$ 3 058 900
14	AFUDC	$298,900		2.8%	$5,600	$137,200	$156,100									$ 298,900
15																$ -
	Project Total - Baseline Budget	**$10,360,800**		97.1%	**$282,600**	**$3,792,900**	**$6,285,300**									**$10,223,800**
15	Contingency	$311 400		2.9%		$134 700	$176 700									$ 311 400
	Project Total - Funding Approval Level	**$10,672,200**		100.0%	**$282,600**	**$3,927,600**	**$6,462,000**									**$10,535,200**
16	Reimbursables/Customer Contribution															$ -
																$ -
	Project Total (less reimbursables)	**$10,672,200**			**$282,600**	**$3,927,600**	**$6,462,000**									**$10,535,200**
	Cost per key qty (if appl)	[redacted]														
	Amount of Escalation included above	$137,100					$137,100									$ 137,100
8	Total materials - Eversource	$3 684 400				$1 825 100	$1 859 300									
	Total materials - Contractor	$92,500				$45,900	$46,600									
	Total materials	$3 776 900				$1 871 000	$1 905 900									

NOTE: Risk / Contingency is 11.7% of Project Total Costs (Incl escal/Indirects/AFUDC but excl reimb.)

Estimate Range	**-25%**	**25%**	
	$8,004,000	**$13,340,000**	

Excel total	**$10,672,300**
Check total	5100

COMMENTS:

Project Scope [redacted] **Distribution Asset Upgrade**
Key qty's and UOM on est sheets)

[redacted]

Assumptions/Clarifications:
Indirect rates based on: 11 - OT - Station work

This is a Substation Distribution Asset Estimate only
Sc[redacted] transmission estimate C-22-124 (T)
Estimate is based on 20% engineering drawings only, actual quantities may vary during detailed engineering.
PE schedule was not provided - PP4 dates by estimator
[redacted] - see Engineering RFP: Scope of Work dated 10/04/2018
[redacted] - see Engineering RFP: Scope of Work dated 10/4/2018
[redacted] - see Engineering RFP: Scope of Work dated 10/4/2018
[redacted] Installed by other projects and not included in this estimate - see Engineering RFP: Scope of Work dated 10/4/2018
Construction schedule is 3 days a week, 9 hr. days per PM - per PM e-mail dated 3/28/2022
Engineering - P&C, SS Eng., Civil, SCADA - internal for oversight only - per PM e-mail dated 3/28/2022
Engineering - P&C, SS Eng., Civil, SCADA - outsourced for design work - per PM e-mail dated 3/28/2022
LCE and testing - Internal - per PM e-mail dated 3/28/2022
Switching - Internal - per PM e-mail dated 3/28/2022
Construction representative - outsourced - per PM e-mail dated 3/28/2022
In house construction representative part time per PM
Electrical Construction Inhouse per Estimate Request Form dated 6/3/2021
Civil Construction outsourced per Estimate Request Form dated 6/3/2021
Environmental and Wetlands unknown at this time - risk item is added - per PM e-mail dated 3/28/2022
[redacted] see Engineering RFP: Scope of Work dated 10/4/2018
Concrete waste and excavated material not to be disposed of by normal means. Risk contains cost for potential contaminated soil.

RISKS

Potential UG Obstructions	$ 100,000
Severe Weather. Delays. OT	$ 90.000
Design development	$ 150.000
Environmental	$ 165.000
Wetland Impact	$ 75.000
Permits Delay	$ 55.000
Local Impact	$ 155.000
SCS Outreach	$ 15,500

UNESCALATED LINE ITEM DOLLARS

Project Number CS00201
Date of Estimate 04/25/2022
Estimate revision # 00

Escalation Rate — E Rate $ 55 — 1

CSTXX-CONSTRUCTION	R	Prior Mhrs	Prior DOLLARS	2022 Mhrs	2022 DOLLARS	2023 Mhrs	2023 DOLLARS	TOTAL Mhrs	TOTAL DOLLARS
Electrical Construction	LT		$510		$77,838		$310,551		$388,899
General Construction	LT	$							
SCADA / Automation	LT	$							
Telecom - Field	LT	$							
Construction Reps (Internal)	LT	$			$1,890		$7,455		$9,345
Support Switch/Tag	LT	$			$4,709		$18,776		$23,485
Other (specify)	LT	$ -							
Other (specify)	LT	$ -							
Other (specify)	LT	$ -							
LT Total			$510		$84,237		$336,782		$421,529
Employee Expenses	AE				$4,212		$16,839		$21,051
Construction Purchased Material	AM				$2,213		$9,851		$11,064
Outside Construction Vendor	AO				$143,645		$574,582		$718,227
Sales Tax on Owner Vendor									
Vehicles (now in Indirects section)	AV								
Inspection services (Outside Vendor)	AO	$							
Construction Rep (Outside vendor)	AO	$			$17,612		$70,004		$87,616
Rents and Leases	BR								
CSTXX Subtotal			$510		$251,919		$1,007,056		$1,259,487
Escalation									
CSTXX Total			$510		$251,919	5864	$1,007,056		$1,259,487
ENGXX-TG ENGINEERING/DESIGN									
Project Services/Drafting	LT	$			$3,672		$3,672		$7,344
T- Line Engineering/Design	LT	$							
D- Street Engineering/Design	LT	$							
Civil Engineering/Design	LT	$	$7,531		$3,672		$3,672		$15,375
Substation (T) Engineering/Design	LT	$							
Substation (D) engineering/Design	LT	$	$10,640		$6,300		$6,300		$22,642
Protection & Controls Engineering	LT	$	$6,260		$6,804		$6,804		$19,890
Survey Engineering	LT								
SCADA / Automation Engineering	LT	$	$1,250				$2,224		$3,474
Telecom Engineering	LT	$							
Other - specify	LT	$							
Other - specify	LT	$ -							
LT Total			$25,126		$20,448		$23,072		$69,025
Employee Expenses	AE				$1,043		$1,154		$2,196
Contractor Engineering - T-Lines	AQ	$							
Contractor Engineering - D-Street	AQ	$							
Contractor Engineering - T -Station	AQ	$							
Contractor Engineering - D-Station	AQ	$	$24,825		$65,940		$65,940		$156,705
Contractor Engineering - PEC	AQ		$12,410		$66,360		$66,360		$145,133
Contractor Engineering - Survey	AQ								
Contractor Engineering - SCADA / Automation	AQ		$6,585		$24,800		$24,800		$56,185
Contractor Engineering - Telecom	AQ								
Contractor Engineering - Civil	AQ		$18,241		$37,200		$37,200		$92,641
Contractor Engineering - Specify	AQ								
Contractor Engineering - Specify	AQ								
Vehicles (now in Indirects section)	AV								
ENGXX Subtotal			$87,169		$215,190		$218,526		$521,885
Escalation									
ENGXX Total			$87,169		$215,190		$218,526		$521,885
LNDXX-TG LAND									
Real Estate	LT	$							
Employee Expenses	AE								
Purchase Land	AM								
Vehicles (now in Indirects section)	AV								
Fees and Payments	BF								
LNDXX Subtotal									
Escalation									
LNDXX Total									
MATXX-TG MATERIAL									
Eversource	AM				$1,753,751		$1,753,751		$3,505,502
Outside Services	AM				$45,992		$45,992		$91,984
Freight	AM								
Sales Tax Eversource/outside services	3.9%	3.9%			$70,100		$70,100		$140,200
Other									
MATXX Subtotal					$1,869,743		$1,869,743		$3,737,486
Escalation									
MATXX Total					$1,869,743		$1,869,743		$3,737,486
PSMXX-PROJECT MANAGER & SUPPORT									
Project Management (PM)	LT	$	$5,448		$4,368		$17,472		$27,288
Project Planning/Cost (IP)	LT	$							
Contracts/Purchasing (CIP)	LT	$	$1,362		$6,432				$7,794
System Planning	LT	$							
Environmental	LT				$512		$2,048		$2,560
SCS - Campaign	LT				$17,500		$17,500		$35,000
Legal	LT	$							
Estimating	LT	$							
Billing - None	LT								
Asset Management	LT	$							
Other -	LT	$							
Other -	LT	$							
Other -	LT	$ -							
Other -	LT	$ -							
LT Total			$6,809		$28,812		$37,020		$72,640
Employee Expenses	AE				$1,441		$1,851		$3,292
Project Support Vendor - PM	AQ	$ 55.00	$34,777		$14,880		$59,520		$109,177
Project Support Vendor - IP	AQ	$							
Project Support Vendor - CIP	AQ	$							
Project Support Vendor - Station Planning	AQ	$							
Project Support Vendor - Environmental	AQ								
Project Support Vendor - SCS - Campaign	AQ								
Project Support Vendor - Legal	AQ	$							
Project Support Vendor - Estimating	AQ	$			$6,200				$6,200
Project Support Vendor - Billing - None	AQ								
Project Support Vendor - Asset Management	AQ	$							
Project Support Vendor - Other	AQ	$							
Project Support Vendor - Other	AQ	$							
Project Support Vendor - Other	AQ	$							
Project Support Vendor - Other	AQ	$							
Vehicles (now in Indirects section)	AV								
Property or CWIP tax large proj. allowance	BR								
Builder All risk insurance excluding deductibles(if project	BR								
Bonds (BBM)	BR								
Fees and Payments - Environmental	BF								
Fees and Payments - Billing	BF								
Fees and Payments - Other	BF								
PSMXX Subtotal			$41,585		$51,333		$98,391		$191,309
Escalation									
PSMXX Total			$41,585		$51,333		$98,391		$191,309
REMXX-TG REMOVAL									
Engineering/Design	LT	$							
Internal Construction	LT						$6,643		$6,643
LT Total							$6,643		$6,643
Employee Expenses	AE						$996		$996
Outside Services	AO		$24,210						$24,210
Contractor Labor	AQ						$8,700		$8,700
Vehicles (now in Indirects section)	AV								
Rents and Leases	BR								
REMXX Subtotal			$24,210				$16,339		$40,549
Escalation									
REMXX Total			$24,210				$16,339		$40,549
TSTXX-TG TEST									
Test / Field Engr. Labor (In House)	LT				$45,056		$180,224		$225,280
Lead Commissioning Engr (LCE) (Internal)	LT				$11,264		$45,056		$56,320
Employee Expense	AE				$5,632		$22,528		$28,160
Test / Field Engr. Labor (contractor)	AQ								
Lead Commissioning Engr. (LCE) (contractor)	AQ								
Vehicles (now in Indirects section)	AV								
TSTXX Subtotal					$61,952		$247,808		$309,760
Escalation									
TSTXX Total					$61,952		$247,808		$309,760
SUBTOTAL PROJECT DIRECT COST		-	$153,474		$2,450,137		$3,436,865		$6,040,476
Risk									
Risk					$217,500		$488,000		$805,500
					$ -		$ -		
					$ -		$ -		
Risk Total					$217,500		$488,000		$805,500
TOTAL PROJECT DIRECT COST (w risk)		-	$153,474		$2,767,637		$3,944,865		$6,845,976
INDIRECTS									
Non-Productive Time Allocation (ZNP)	17.0%		$4,612		$32,337		$106,896		$143,846
Payroll Benefits Allocation (ZPB) incl NPT	44.0%				$72,359		$292,769		$365,128
Gen SVC CO Overhead (ZMA) incl NPT	80.0%		$23,298		$46,482		$56,246		$126,026
G&A Allocations (ZBN,ZBH,ZBS)	50.0%		$60,314		$354,016		$995,907		$1,437,237
AS&E Allocations (ZAB)	1.3%		$3,782		$37,004		$61,359		$102,145
Stores Expense Allocation (ZST)	6.0%				$140,220		$140,220		$280,440
Lobby Stock									
MD&C (ZMH)	6.0%		$18,396		$147,339		$217,951		$373,686
Vehicles (ZVE)	28.0%		$248		$53,261		$176,063		$229,572
Indirects Subtotal			$110,510		$888,018		$1,547,411		$3,058,938
TOTAL PROJECT COST - Direct & Indirect (excl AFUDC)			$276,984		$3,655,655		$5,492,276		$9,904,915
AFUDC									
AFUDC (ZA)			$5,828	6.50%	$137,179	6.50%	$156,135	1	$299,142
In Service Dollars					-		-		
Cumulative ISS									
AFUDC Subtotal			$5,828		$137,179		$156,135		$299,142
TOTAL PROJECT COST - Baseline Budget			$282,812		$3,792,834		$5,148,411		$10,223,057
Contingency									
Contingency					$134,669		$176,730		$311,399
Other		$ -		$ -		$ -			
Contingency SubTotal					$134,669		$176,730		$311,399
TOTAL PROJECT COST - Approved Funding			$282,812		$3,927,502		$5,325,111		$10,535,226
Reimbursables / Customer Contribution									
Reimbursables / Customer Contribution (enter as negative)		$ -		$ -		$ -			

ESTIMATE SUMMARY

Project Title: [redacted] Transmission Asset
Project Number: 404940
WO & Task #: 4049401
Estimate revision #: 00
Estimate Type - Station work

Estimate #: C-22-124 (T)
Date of Estimate 04/29/2022
Estimate done by: [redacted]
In Service date (ISD): 12/31/2023

Template Revision # 01.705

ESTIMATE SUMMARY

Estimate Type: Planning

WBS	Description	TOTAL	% of Directs	% of Total	Priors	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
1	ROW / Easements / Land purchases														
2	Environmental Approvals / Permits	$2,500	0.1%	0.1%		$2,000	$500								
3	Outreach	$35,500	1.5%	0.9%	$300	$17,200	$18,000								
4	Siting Approvals / Permits	$20,700	0.9%	0.5%	$2,600	$15,700	$2,400								
5	Engineering / Design	$243,000	10.5%	6.5%	$136,500	$55,200	$51,300								
6	Materials (Eversource purchased)	$728,300	31.4%	19.3%		$727,100	$1,200								
7	Construction (Incl matl's by contractors)	$685,100	29.6%	18.2%	$4,400	$545,500	$135,200								
8	Testing / Commissioning	$204,000	8.8%	5.4%		$162,200	$41,800								
9	PMT Project Mgmt Team	$124,200	5.4%	3.3%	$76,200	$40,100	$7,900								
10	Removals	$9,800	0.4%	0.3%		$7,800	$2,000								
11	Other														
12	Risks	$264,900	11.4%	7.0%		$173,500	$91,400								
135	**Project Directs Total w/Risks**	**$2,318,000**	100.0%	61.5%	**$220,000**	**$1,746,300**	**$351,700**								
13	Indirects/Overhead	$1,123,200		29.8%	$155,200	$743,600	$224,400								
14	AFUDC	$211,800		5.6%	$18,400	$114,700	$78,700								
135	**Project Total - Baseline Budget**	**$3,653,000**		97.0%	**$393,600**	**$2,604,600**	**$654,800**								
15	Contingency	$113,600		3.0%		$92,300	$21,300								
	Project Total - Funding Approval Level	**$3,766,600**		100.0%	**$393,600**	**$2,696,900**	**$676,100**								
16	Reimbursables/Customer Contribution														
	Project Total (less reimbursables)	**$3,766,600**			**$393,600**	**$2,696,900**	**$676,100**								
	Cost per key qty (if appl)	[redacted]													
	Amount of Escalation included above	$14,100					$14,100								
8	Total materials - Eversource	$728,300				$727,100	$1,200								
	Total materials - Contractor	$20,700				$20,700									
	Total materials	$749,000				$747,800	$1,200								

NOTE: Risk / Contingency is 11.2% of Project Total Costs (Incl escal/Indirects/AFUDC but excl reimb.)

Estimate Range	-25%	25%
	$2,825,000	$4,708,000

All Estimate Summary for PP4 Calc (escalation separate)

Estimate #: C-22-124 (T)
Date of Estimate: 04/29/2022

Project Number: 404940
WO & Task #: 4049401

		TOTAL w/ escal broken out
ROW / Easements / Land purchas	$	-
Environmental Approvals / Permi	$	2,600
Outreach	$	35,000
Siting Approvals / Permits	$	20,600
Engineering / Design	$	241,400
Materials (Eversource purchased	$	748,915
Construction (Incl matl's by cont	$	660,485
Testing / Commissioning	$	202,800
PMT Project Mgmt Team	$	124,000
Removals	$	9,800
Other	$	-
Risks	$	264,900
		$2,310,500
Indirects/Overhead	$	1,116,700
AFUDC	$	211,700
	$	-
		$3,638,900
	$	-
Contingency	$	113,600
		$3,752,500
	$	-
	$	-
		$3,752,500
	$	14,100
Excel total		**$3,766,600**
Check total		

COMMENTS:

Project Scope [redacted] Transmission Asset Upgrade
Key qty's and UOM on est sheets)

[redacted]

Assumptions/Clarifications:
Indirect rates based on: 1T - OT Station work

This is a [redacted] Transmission Asset Estimate only
Scope [redacted] estimate C-22-124 (D)
Estimate is based on 30% engineering drawings only, actual quantities may vary during detailed engineering.
PS schedule was not provided - PP4 dates by estimator
[redacted] see Engineering RFP: Scope of Work dated 10/04/2018
[redacted] per Engineering RFP - rev 1B dated 10/4/2018 and e-mail dated 4/12/2022
[redacted] see Engineering RFP: Scope of Work dated 10/4/2018
"Grow" project has been completed and not part of this scope of costs included this estimate - see Engineering RFP: Scope of Work dated 10/4/2018
[redacted] Installed by other projects and not included in this estimate - see Engineering RFP: Scope of Work dated 10/4/2018
[redacted] In separate project, not included in this estimate - see Engineering RFP: Scope of Work dated 10/4/2018
[redacted] see Engineering RFP: Scope of Work dated 10/4/2018
[redacted] see Engineering RFP: Scope of Work dated 10/4/2018
[redacted] - see Engineering RFP: Scope of Work dated 10/4/2018
[redacted] see Engineering RFP: Scope of Work dated 10/4/2018
[redacted] see Engineering RFP: Scope of Work dated 10/4/2018
Construction location is 3 days a week, 8 hr days per PM - per PM e-mail dated 3/28/2022
Engineering - P&C, SS Eng., Civil, SCADA - internal for oversight only - per PM e-mail dated 3/28/2022
Engineering - P&C, SS Eng., Civil, SCADA - outsourced for design work - per PM e-mail dated 3/28/2022
LCE and testing - Internal - per PM e-mail dated 3/28/2022
Switching - Internal - per PM e-mail dated 3/28/2022
Construction representative - Internal for oversight only - per PM e-mail dated 3/28/2022
Construction representative - outsourced - per PM e-mail dated 3/28/2022
Electrical Construction Internal per Estimate Request Form dated 6/3/2021
Civil Construction outsourced per Estimate Request Form dated 6/3/2021
Environmental and Wetlands unknown at this time - risk item is added - per PM e-mail dated 3/28/2022
Contaminated ground water and excavated material not included in this estimate. Risk contains cost for potential contaminated soil.

Potential UG Obstructions	$	80,000
Severe Weather, Delays, OT	$	56,000
Design development	$	59,900
Environmental	$	42,000
Wetland Impact	$	19,500
SCS Outreach	$	7,500

UNESCALATED LINE ITEM DOLLARS

Project Number 404040
Date of Estimate 04/25/2022
Estimate revision # 00

Escalation Rate — E Rate $ 55 — 1

CSTXX-CONSTRUCTION	R	Prior Mhrs	Prior DOLLARS	2022 Mhrs	2022 DOLLARS	2023 Mhrs	2023 DOLLARS	TOTAL Mhrs	TOTAL DOLLARS
Electrical Construction	LT		$1,505		$182,971		$48,243		$242,719
General Construction	LT	$							
SCADA / Automation	LT	$							
Telecom - Field	LT	$							
Construction Reps (internal)	LT	$			$5,660		$1,470		$7,350
Support Switch/Tag	LT	$			$18,776		$4,709		$23,485
Other (specify)	LT	$ -							
Other (specify)	LT	$ -							
Other (specify)	LT	$ -							
LT Total			$1,505		$217,627		$54,422		$273,554
Employee Expenses	AE				$10,891		$2,721		$13,602
Construction Purchased Material	AM				$4,485		$1,121		$5,606
Outside Construction Vendor	AQ				$255,559		$63,890		$319,449
Sales tax on Constr. Vendor									
Vehicles (now in Indirects section)	AV								
Inspection services (Outside Vendor)	AQ	$							
Construction Rep (Outside vendor)	AQ	$	$2,939		$40,700		$10,212		$53,851
Rents and Leases	BR								
CSTXX Subtotal			$4,444		$529,252		$132,366		$666,062
Escalation									
CSTXX Total			$4,444		$529,252		$132,366		$666,062
ENRXX-TO ENGINEERING/DESIGN									
Project Services/Drafting	LT	$			$3,672		$3,672		$7,344
T- Line Engineering/Design	LT	$							
D- Street Engineering/Design	LT	$							
Civil Engineering/Design	LT	$	$15,426		$1,938		$1,938		$19,298
Substation (T) Engineering/Design	LT	$	$9,538		$4,200		$4,200		$17,938
Substation (D) Engineering/Design	LT	$							
Protection & Controls Engineering	LT	$	$11,448		$4,536		$4,536		$20,519
Survey Engineering	LT								
SCADA / Automation Engineering	LT	$	$1,745		$2,224				$3,969
Telecom Engineering	LT	$							
Other - specify	LT	$ -							
Other - specify	LT	$ -							
LT Total			$38,158		$16,798		$14,544		$69,487
Employee Expenses	AE				$638		$727		$1,365
Contractor Engineering - T-Lines	AQ	$							
Contractor Engineering - D-Street	AQ	$							
Contractor Engineering - T -Station	AQ	$	$37,864		$12,560		$12,560		$62,784
Contractor Engineering - D-Station	AQ	$							
Contractor Engineering - PEC	AQ	$	$24,578		$12,640		$12,640		$49,858
Contractor Engineering - Survey	AQ								
Contractor Engineering - SCADA / Automation	AQ	$	$6,575		$6,200		$3,100		$15,875
Contractor Engineering - Telecom	AQ	$							
Contractor Engineering - Civil	AQ	$	$29,492		$6,200		$6,200		$41,892
Contractor Engineering - Specify	AQ	$							
Contractor Engineering - Specify	AQ	$							
Vehicles (now in Indirects section)	AV								
ENRXX Subtotal			$136,482		$55,306		$49,771		$241,439
Escalation									
ENRXX Total			$136,482		$55,306		$49,771		$241,439
LNDXX-TO LAND									
Real Estate	LT	$							
Employee Expenses	AE								
Purchase Land	AM								
Vehicles (now in Indirects section)	AV								
Fees and Payments	BF								
LNDXX Subtotal									
Escalation									
LNDXX Total									
MATXX-TO MATERIAL									
Svensource	AM				$694,701				$694,701
Outside Services	AM				$22,715				$22,715
Freight	AM								
Sales Tax Svensource/outside services	3.4%	3.4%			$27,900				$27,900
Other									
MATXX Subtotal					$743,316				$743,316
Escalation									
MATXX Total					$743,316				$743,316
PMXX-PROJECT MANAGER & SUPPORT									
Project Management (PM)	LT	$	$7,713		$6,959		$1,747		$16,449
Project Planning/Cost (SP)	LT	$	$1,841		$1,186				$3,027
Contracts/Purchasing (CP)	LT	$			$4,288				$4,288
System Planning	LT	$	$25,084						$25,084
Environmental	LT				$2,048		$512		$2,560
SCS - Campaign	LT		$299		$17,231		$17,500		$35,030
Legal	LT	$							
Estimating	LT	$	$7,589						$7,589
Siting - Exempt Modification	LT		$2,364		$800		$100		$3,464
Asset Management	LT	$							
Other - Scheduler	LT	$	$6,225						$6,225
Other -	LT	$ -							
Other -	LT	$ -							
Other -	LT	$ -							
LT Total			$51,265		$32,540		$19,859		$103,666
Employee Expenses	AE				$1,607		$993		$2,600
Project Support Vendor - PM	AQ	$	$27,727		$19,840		$4,960		$52,527
Project Support Vendor - SP	AQ	$							
Project Support Vendor - CP	AQ	$							
Project Support Vendor - System Planning	AQ	$							
Project Support Vendor - Environmental	AQ								
Project Support Vendor - SCS - Campaign	AQ								
Project Support Vendor - Legal	AQ	$							
Project Support Vendor - Estimating	AQ	$			$6,200			40	$6,200
Project Support Vendor - Siting - Exempt Modification	AQ				$14,900		$2,200		$17,100
Project Support Vendor - Asset Management	AQ	$							
Project Support Vendor - Other	AQ	$							
Project Support Vendor - Other	AQ	$							
Project Support Vendor - Other	AQ	$							
Project Support Vendor - Other	AQ	$							
Vehicles (now in Indirects section)	AV								
Property or CWIP tax large proj. allowance	BR								
Builder All risk insurance excluding deductibles(if project is over $50M)	BR								
Fees and Payments - Environmental	BF								
Fees and Payments - Siting	BF								
Fees and Payments - Other	BF								
PMXX Subtotal			$79,992		$75,109		$28,012		$183,113
Escalation									
PMXX Total			$79,992		$75,109		$28,012		$183,113
REMXX-TO REMOVAL									
Engineering/Design	LT	$							
Internal Construction	LT				$4,620		$1,155		$5,775
LT Total					$4,620		$1,155		$5,775
Employee Expenses	AE				$693		$173		$866
Outside Services	AQ								
Contractor Labor	AQ				$2,502		$626		$3,128
Vehicles (now in Indirects section)	AV								
Rents and Leases	BR								
REMXX Subtotal					$7,815		$1,954		$9,769
Escalation									
REMXX Total				80	$7,815		$1,954		$9,769
TSTXX-TO TEST									
Test / Field Engr. Labor (In House)	LT	$			$98,304		$24,576		$122,880
Lead Commissioning Engr (LCE) (internal)	LT	$			$49,152		$12,288		$61,440
Employee Expense	AE				$14,746		$3,686		$18,432
Test / Field Engr. Labor (contractor)	AQ	$							
Lead Commissioning Engr (LCE) (contractor)	AQ	$							
Vehicles (now in Indirects section)	AV								
TSTXX Subtotal					$162,202		$40,550		$202,752
Escalation									
TSTXX Total					$162,202		$40,550		$202,752
SUBTOTAL PROJECT DIRECT COST		-	$219,888		$1,572,991		$352,652		$2,045,531
Risk									
Risk					$173,500		$91,400		$264,900
					$ -		$ -		
					$ -		$ -		
Risk Total					$173,500		$91,400		$264,900
TOTAL PROJECT DIRECT COST (w/ risk)		-	$219,888		$1,746,491		$344,052		$2,310,431
INDIRECTS									
Non-Productive Time Allocation (ZNP)	17.0%		$14,632		$71,232		$21,563		$107,427
Payroll Benefits Allocation (ZPB) Incl NPT	44.0%				$190,323		$47,589		$237,912
Gen SVC CO Overhead (ZSM) Incl NPT	80.0%		$75,635		$46,154		$32,201		$153,990
G&A Allocations (ZG0,ZG1,ZG2)	80.0%		$62,467		$321,357		$103,375		$487,049
AM&E Allocations (ZAM)	0.8%		$2,050		$17,895		$3,659		$23,604
Stores Expense Allocation (ZST)	8.0%				$55,576				$55,576
Lobby Stock									
MSSC (ZMI)									
Vehicles (ZVE)	7.5%		$426		$31,426		$9,513		$41,365
Indirects Subtotal			$155,210		$743,613		$217,900		$1,116,723
TOTAL PROJECT COST - Direct & Indirect (excl AFUDC)			$375,098		$2,490,914		$561,952		$3,427,974
AFUDC									
AFUDC (ZK)			$18,354	7.00%	$114,693	7.00%	$78,668	1	$211,715
In Service Dollars					-		-		
Cumulative ISD									
AFUDC Subtotal			$18,354		$114,693		$78,668		$211,715
TOTAL PROJECT COST - Baseline Budget			$393,452		$2,604,707		$640,620		$3,639,759
Contingency									
Contingency					$90,322		$21,308		$111,630
Other		-	$ -		$ -		$ -		
Contingency Sub/Total					$90,322		$21,308		$111,630
TOTAL PROJECT COST - Approved Funding			$393,452		$2,697,029		$661,928		$3,751,419
Reimbursables / Customer Contribution									
Reimbursables / Customer Contribution (enter as negative)		-	$ -		$ -		$ -		

EVERSOURCE

Activity ID	Activity Flag	Activity Name	At ompletion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
80053152 [redacted] - Add Second Transformer and Switchgear (CS00261)			739	739	10-May-21 A	0	18-Apr-24	26-Apr-23				
80053152.01 INITIALIZATION AND SCOPE DEVELOPEMENT			310	310	12-May-22 A	-138	06-Aug-23	02-Jun-22				
80053152.01.09 Project Initiation			26	26	12-May-22 A	-106	17-Jun-22	02-Jun-22				
80053152.01.09.3 EPAC Full Funding			26	26	12-May-22 A	-106	17-Jun-22	02-Jun-22				
PAFF2200		Incorporate EPAC Full Funding PAF Review Comments	15	3	12-May-22 A	-111	02-Jun-22	02-Jun-22		Fnish 18 May	[redacted]	
FF1000	EPAC-F	EPAC Full Funding Approval	1	1	03-Jun-22	-111	03-Jun-22					
FF1010	PPA-FF	Full Funding PowerPlan Approval	10	10	06-Jun-22	-106	17-Jun-22					
80053152.01.12 T-Minus Milestones			294	294	03-Jun-22	-138	06-Aug-23					
80053152.01.12.01 Civil T-Minus Milestones			132	132	13-Jun-22	-74	21-Dec-22					
AT0805C	BG-IFC	Civil IFC - Civil (BG) w/BOM	0	0		81	13-Jun-22					
AT0814		ALL CONSTRUCTION CONTRACTS IN PLACE	0	0		45	19-Jul-22					
AT0203		CAN COMPLETE (CONSTRUCTION AUTHORIZATION NOTICE)	0	0		44	20-Jul-22					
AT0813		SITING PETITION AND APPLICATION FILED	0	0		18	15-Aug-22					
AT00	SOC	A-T-00 - START OF CONSTRUCTION - Civil	0	0	06-Sep-22*	0			Mandatory Start			
AT0401		ALL MATERIAL RECEIVED, STAGED, INVENTORIED, REVIEWED	0	0		-110	21-Dec-22					
80053152.01.12.02 [redacted] T-Milestones			429	429	03-Jun-22	-199	06-Aug-23					
BT1811	ENG-DT	Detail Elect Detail Design/Engineering Completed	0	0		230	03-Jun-22					
BT0901		[redacted]	0	0		202	01-Jul-22					
BT0805E	AG-IFC	Elect & P&C IFC - Electrical (AG) w/Final BOM	0	0		188	15-Jul-22					
BT1801		BT-18 ALL FIRM TOA APPLICATIONS DUE TO LCC	0	0		57	20-Jul-22*		Finish On or Before			
BT0203		CAN COMPLETE (CONSTRUCTION AUTHORIZATION NOTICE)	0	0		182	21-Jul-22					
BT1202		P/C DESCRIPTION / DRAFT OPERATING INSTRUCTIONS ISSUED	0	0		181	22-Jul-22					
BT0404		[redacted]	0	0		178	25-Jul-22					
BT2404		DETERMINE / ASSIGN LCE (LEAD COMMISSIONING ENGINEER)	0	0		169	03-Aug-22					

2022 023

Incorporate
EPAC Full F
Full Fundin
Civil IFC - C
ALL CON
CAN CO
SITING
A-T-00
AL
Detail Elect
Relay Sett
Elect & P
BT-18 ALL
CAN CO
P/C DES
ALL FINA
DETERM

Remaining Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
◆ Mile...

TASK filter: Not Complete.

© Oracle Corporation

EVERSOURCE

Activity ID	Activity Flag	Activity Name	At ompletion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
BT0301		[redacted]	0	0		148	03-Aug-22			tie to vendor 70% activity		
BT1301		COMMISSIONING PLAN COMPLETE	0	0		139	02-Sep-22					
BT00	SOC	T-00 START OF CONSTRUCTION - Transformer	0	0	20-Jan-23*	0			Mandatory Start			
BT0401		ALL MATERIAL RECEIVED, STAGED, INVENTORIED, REVIEWED	0	0		-199	06-Aug-23					
80053152.01.12.4 [redacted] T-Milestones			305	305	03-Jun-22	-92	04-Apr-23					
CT1811	ENG-DT	Detail Elect Detail Design/Engineering Completed	0	0		213	03-Jun-22					
CT0901		[redacted]	0	0		185	01-Jul-22					
CT0805E	AG-IFC	Elect & P&C IFC - Electrical (AG) w/Final BOM	0	0		171	15-Jul-22					
CT0203		CAN COMPLETE (CONSTRUCTION AUTHORIZATION NOTICE)	0	0		165	21-Jul-22					
CT1202		P/C DESCRIPTION / DRAFT OPERATING INSTRUCTIONS ISSUED	0	0		164	22-Jul-22					
CT0404		[redacted]	0	0		161	25-Jul-22					
CT2404		DETERMINE / ASSIGN LCE (LEAD COMMISSIONING ENGINEER)	0	0		152	03-Aug-22					
CT0301		[redacted]	0	0		131	03-Aug-22			tie to vendor 70% activity		
CT1805		[redacted]	0	0		152	03-Aug-22					
CT1301		COMMISSIONING PLAN COMPLETE	0	0		122	02-Sep-22					
CT00	SOC	T-00 START OF CONSTRUCTION - Electrical	0	0	03-Jan-23*	0			Mandatory Start			
CT0401		ALL MATERIAL RECEIVED, STAGED, INVENTORIED, REVIEWED	0	0		-92	04-Apr-23					
80053152.04 SITING APPROVALS AND PERMITS			319	319	10-May-21 A	14	15-Aug-22	15-Aug-22				
3570		Permitting - Siting Team Review Scope to Determine Siting Requirements (e.g. zoning)	272	10	10-May-21 A	14	08-Jun-22	08-Jun-22				
3575		Permitting - Review and Approve	47	47	09-Jun-22	14	15-Aug-22	15-Aug-22				
80053152.05 ENGINEERING & DESIGN			389	389	18-Apr-22 A	115	01-Nov-23	24-Jun-22				
80053152.05.1 Civil Engineering			30	30	02-May-22 A	-78	13-Jun-22	20-May-22				
80053152.05.1.03 Civil Engineering IFC Design			30	30	02-May-22 A	-78	13-Jun-22	20-May-22				
CE1300	V-IFC	Vendor Engineer Develop Civil Substation IFC	25	15	02-May-22 A	-78	06-Jun-22	20-May-22				

© Oracle Corporation

EVERSOURCE

Activity ID	Activity Flag	Activity Name	At ompletion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
CE1310	ES-IFC	ES Engineering Review Civil Substation IFC	5	5	07-Jun-22*	-78	13-Jun-22		Start On or After			
80053152.05.02 Electrical Engineering			66	66	20-Apr-22 A	436	22-Jul-22	10-Jun-22				
EE920		Operating Instructions - SSED Review Draft Convex OI	5	5	18-Jul-22	110	22-Jul-22					
EE460		Operating Instructions - SSED Review Draft Distribution OI	5	5	18-Jul-22	110	22-Jul-22					
CSD1000	CASCAI	PE Initiate CASCADE Forms (Appendix A) for Construction Package	5	5	18-Jul-22	436	22-Jul-22					
80053152.05.02.4 Electrical Engineering IFC Design			61	61	20-Apr-22 A	-140	15-Jul-22	10-Jun-22				
EE1300	V-IFC	Vendor Engineer Develop [redacted]	57	9	20-Apr-22 A	-140	11-Jul-22	24-May-22		HDR Running Late Due to Dwg		
EE1540	V-IFC	Vendor Engineer Develop [redacted]	57	9	20-Apr-22 A	-140	11-Jul-22	24-May-22		HDR Running Late Due to Dwg		
EE1310	ES-IFC	ES Engineering Review [redacted]	4	4	12-Jul-22*	-140	15-Jul-22	10-Jun-22	Start On or After	HDR Running Late Due to Dwg		
80053152.05.02.7 [redacted]			5	5	05-Jul-22	-140	11-Jul-22					
SWG1220		[redacted]	5	5	05-Jul-22*	-140	11-Jul-22		Start On or After			
80053152.05.03 [redacted]			340	340	27-Jun-22	115	01-Nov-23					
80053152.05.03.01 Thermal Ratings - Substation - Preliminary Thermal Data			27	27	27-Jun-22	102	03-Aug-22					
NX9A-NC79		P&C Develops and Provides LTRC with P&C Checklist (M7-EN-3006.1)	5	5	27-Jun-22	102	01-Jul-22			Process Box 4		
NX9A-NC139		LTRC Reviews and Sends Thermal Rating Data for TRC Review	5	5	05-Jul-22	102	11-Jul-22			Process Box 5		
NX9A-NC129		TRC Reviews and Approves Thermal Rating Data	5	5	12-Jul-22	102	18-Jul-22			Process Box 6		
NX9A-NC119		LTRC Sends Thermal Rating Data for Approval & Submit to NURS	5	5	19-Jul-22	102	25-Jul-22			Process Box 7		
NX9A-NC109		Scheduler @ NURS email "Submitted for PP Review" - Updates NURS with DOE	1	1	26-Jul-22	102	26-Jul-22			Process Box 8		
NX9A-NC89	NX-9	TRC Review and Submit NX-9 Data to LCC + ISO-NE for S/S Thermal Rating	5	5	27-Jul-22	102	02-Aug-22			Process Box 9		
NX9A-NC149		Scheduler @ NURS email "Submitted for DOE Monitoring" - Updates T-18, EquipDOE, Revs DOE per M7-EN-3006	1	1	03-Aug-22	102	03-Aug-22			Process Box 8		
80053152.05.03.02 Thermal Ratings - Substation - Verify Thermal Data			27	27	27-Jun-22	428	03-Aug-22					
NX9A-NC37		P&C Develops and Provides LTRC with P&C Checklist (M7-EN-3006.1)	5	5	27-Jun-22	89	01-Jul-22			Process Box 4		
NX9A-NC31		PE to Verify Thermal Data Review PE Checklist (M7-EN-3006.2)	5	5	27-Jun-22*	450	01-Jul-22		Start On or After	Process Box 1 Ask Criss Cas		
NX9A-NC39		LTRC Reviews and Sends Thermal Rating Data for TRC Review	5	5	05-Jul-22	89	11-Jul-22			Process Box 5		

2022 2023

ES Enginee
Operating
Operating
PE Initiate
Vendor En
Vendor En
ES Engine
SWG Man
P&C Deve
LTRC Rev
TRC Revi
LTRC Sel
Schedule
TRC Rev
Schedule
P&C Deve
PE to Veri
LTRC Rev

Remaining Level of Effort | Remaining Work | Mile...
Actual Work | Critical Remaining Work

TASK filter: Not Complete.

© Oracle Corporation

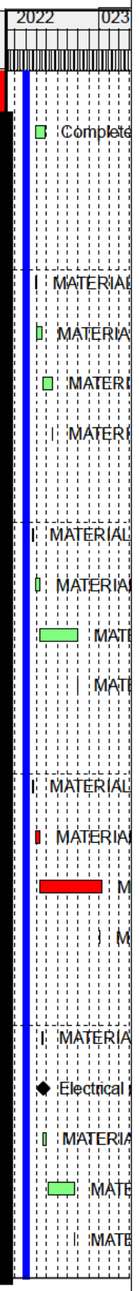
EVERSOURCE

Activity ID	Activity Flag	Activity Name	At completion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
NX9A-NC41		TRC Reviews and Approves Thermal Rating Data	5	5	12-Jul-22	89	18-Jul-22			Process Box 6		
NX9A-NC43		LTRC Sends Thermal Rating Data for Approval & Submit to NURS	5	5	19-Jul-22	89	25-Jul-22			Process Box 7		
NX9A-NC45		Scheduler @ NURS email "Submitted for PP Review" - Updates NURS with DOE	1	1	26-Jul-22	89	26-Jul-22			Process Box 8		
NX9A-NC47	NX-9	TRC Review and Submit NX-9 Data to LCC + ISO-NE for S/S Thermal Rating	5	5	27-Jul-22	89	02-Aug-22			Process Box 9		
NX9A-NC49		Scheduler @ NURS email "Submitted for DOE Monitoring" - Updates T-3, EquipDOE, Revs DOE per M7-EN-3006	1	1	03-Aug-22	89	03-Aug-22			Process Box 8		
80053152.05.03.03 Thermal Ratings - Substation - NX-9 Pre NX9-DOE			1	1	19-Oct-23	124	19-Oct-23					
NX9500		Scheduler - Send Email for 48Hrs Notification before DOE.	1	1	19-Oct-23	124	19-Oct-23					
80053152.05.03.04 Thermal Ratings - Substation - NX-9 Post NX9-DOE/ISD			8	8	23-Oct-23	115	01-Nov-23					
NX9FINAL50		Review + Affirm Accuracy of NX-9 for ISO Submission (Tie after Equip DOE or CFM/ISD)	3	3	23-Oct-23	115	25-Oct-23					
NX9FINAL60		[If Required] Receive + Issue Final Affirmed NX-9 Data to NURS	5	5	26-Oct-23	115	01-Nov-23					
80053152.05.03.05 Thermal Ratings - NX-9 Thermal Ratings			20	20	26-Jul-22	292	22-Aug-22					
NX9A-EM44		Thermal Rating - P&C Develops and Provides LTRC with P&C Checklist & Thermal Ratings Data	5	5	26-Jul-22*	292	01-Aug-22		Start On or After	Process Box 4		
NX9A-EM54	NX-9	Thermal Rating - LTRC Prepares and Sends Thermal Rating Data for TRC Review	5	5	02-Aug-22	292	08-Aug-22			Process Box 5		
NX9A-EM64		Thermal Rating - TRC Reviews and Approves Thermal Rating Data	5	5	09-Aug-22	292	15-Aug-22			Process Box 6		
NX9A-EM74		Thermal Rating - LTRC Files Capability Sheets	5	5	16-Aug-22	292	22-Aug-22			Process Box 7		
80053152.05.06 P&C Engineering			69	69	18-Apr-22 A	109	25-Jul-22	24-Jun-22				
OP1020		P&C Updates OP-24 Appendix B	49	4	18-Apr-22 A	124	24-Jun-22	24-Jun-22				
OP1030	OP-24	P&C Submits OP-24 Appendix B to ISO-NE	5	5	27-Jun-22	124	01-Jul-22					
80053152.05.06.02 P&C Engineering Detail Design			22	27	04-May-22 A	-1	03-Jun-22	03-Jun-22				
PC1110	ES-DTL	ES Engineering Review P&C Detail Design	22	27	04-May-22 A	-1	03-Jun-22	03-Jun-22				
80053152.05.06.04 P&C Engineering IFC Design			35	35	06-Jun-22	109	25-Jul-22					
80053152.05.06.04.03 P&C Design Package			15	15	06-Jun-22	-1	24-Jun-22					
PC1320	V-IFC	Vendor Engineer Develop P&C IFC	10	10	06-Jun-22	-1	17-Jun-22					
PC1330		ES Engineering Review P&C IFC	5	5	20-Jun-22	-1	24-Jun-22					

© Oracle Corporation

EVERSOURCE

Activity ID	Activity Flag	Activity Name	At completion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
80053152.05.06.04.01 Relay Settings			20	20	27-Jun-22	109	25-Jul-22					
PC1400	ES-RSE	Complete P&C Relay Settings	20	20	27-Jun-22	109	25-Jul-22					
80053152.06 MATERIAL PROCUREMENT			294	294	06-Jun-22	176	06-Aug-23	30-Dec-22				
80053152.06.01 MATERIAL FOR P&C			139	139	20-Jun-22	-1	09-Jan-23					
PC510	DR-RM	MATERIAL - P&C - Prepare & Issue DR	5	5	27-Jun-22	95	01-Jul-22					
PC980		MATERIAL - P&C - Procurement Issue PO	10	10	05-Jul-22	95	18-Jul-22					
PC1000		MATERIAL - P&C - Material Vendor Delivery Leadtime	30	30	19-Jul-22	137	17-Aug-22					
PC1010	M-DELI\	MATERIAL - P&C - Confirm Material Delivery to Site	1	1	18-Aug-22	137	18-Aug-22					
80053152.06.01.01 MATERIAL FOR RELAY PANELS			94	94	20-Jun-22	40	01-Nov-22					
PC8530	DR-RM	MATERIAL - RELAY PANELS - Prepare & Issue DR	5	5	20-Jun-22	43	24-Jun-22					
PC8540		MATERIAL - RELAY PANELS - Procurement Issue PO	10	10	27-Jun-22	43	11-Jul-22					
PC8560		MATERIAL - RELAY PANELS - Material Vendor Delivery Leadtime	112	112	12-Jul-22	62	31-Oct-22					
PC8550	M-DELI\	MATERIAL - RELAY PANELS - Confirm Material Delivery to Site	1	1	01-Nov-22	62	01-Nov-22					
80053152.06.01.02 MATERIAL FOR CONTROL CABLES			139	139	20-Jun-22	-1	09-Jan-23					
PC8570	DR-RM	MATERIAL - CONTROL CABLES - Prepare & Issue DR	5	5	20-Jun-22	-1	24-Jun-22					
PC8580		MATERIAL - CONTROL CABLES - Procurement Issue PO	10	10	27-Jun-22	-1	11-Jul-22					
PC8600		MATERIAL - CONTROL CABLES - Material Vendor Delivery Leadtime	182	182	12-Jul-22	-1	09-Jan-23					
PC8590	M-DELI\	MATERIAL - CONTROL CABLES - Confirm Material Delivery to Site	1	1	03-Jan-23	-1	03-Jan-23					
80053152.06.02 MATERIAL FOR ELECTRICAL			128	128	18-Jul-22	-1	21-Jan-23					
EE520	DR-RM	MATERIAL - Electrical - Prepare & Issue DR	5	5	18-Jul-22	51	22-Jul-22					
EE590	DR-AGM	Electrical (AG) Material Ordered	0	0		51	22-Jul-22					
EE1020		MATERIAL - Electrical - Procurement Issue PO	10	10	23-Jul-22	74	01-Aug-22					
EE1030		MATERIAL - Electrical - Material Vendor Delivery Leadtime	79	79	02-Aug-22	74	19-Oct-22					
EE550	M-DELI\	MATERIAL - Electrical - Confirm Material Delivery to Site	1	1	20-Oct-22	74	20-Oct-22					



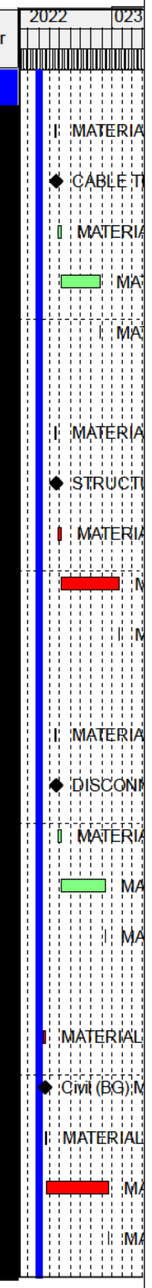
Remaining Level of Effort | Remaining Work | ◆ Mile...
Actual Work | Critical Remaining Work

TASK filter: Not Complete.

© Oracle Corporation

EVERSOURCE

Activity ID	Activity Flag	Activity Name	At completion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
80053152.06.02.01 MATERIAL FOR CABLE TRENCH			91	91	18-Jul-22	24	26-Nov-22					
EE1400	DR-RM	MATERIAL - CABLE TRENCH - Prepare & Issue DR	5	5	18-Jul-22	24	22-Jul-22					
EE1430	DR-AGM	CABLE TRENCH (AG) Material Ordered	0	0		24	22-Jul-22					
EE1410		MATERIAL - CABLE TRENCH - Procurement Issue PO	10	10	25-Jul-22	24	05-Aug-22					
EE1420		MATERIAL - CABLE TRENCH - Material Vendor Delivery Leadtime	112	112	06-Aug-22	37	25-Nov-22					
EE1390	M-DELIV	MATERIAL - CABLE TRENCH - Confirm Material Delivery to Site	1	1	26-Nov-22	37	26-Nov-22					
80053152.06.02.02 MATERIAL FOR STRUCTURAL STEEL			128	128	18-Jul-22	-1	21-Jan-23					
EE1450	DR-RM	MATERIAL - STRUCTURAL STEEL - Prepare & Issue DR	5	5	18-Jul-22	-2	22-Jul-22					
EE1480	DR-AGM	STRUCTURAL STEEL (AG) Material Ordered	0	0		-2	22-Jul-22					
EE1460		MATERIAL - STRUCTURAL STEEL - Procurement Issue PO	10	10	25-Jul-22	-2	05-Aug-22					
EE1470		MATERIAL - STRUCTURAL STEEL - Material Vendor Delivery Leadtime	168	168	06-Aug-22	-2	20-Jan-23					
EE1440	M-DELIV	MATERIAL - STRUCTURAL STEEL - Confirm Material Delivery to Site	1	1	21-Jan-23	-2	21-Jan-23					
80053152.06.02.03 MATERIAL FOR [redacted]			101	101	18-Jul-22	26	10-Dec-22					
EE1500	DR-RM	MATERIAL - [redacted] Prepare & Issue DR	5	5	18-Jul-22	27	22-Jul-22					
EE1530	DR-AGM	[redacted] (AG) Material Ordered	0	0		27	22-Jul-22					
EE1510		MATERIAL - [redacted] - Procurement Issue PO	10	10	25-Jul-22	27	05-Aug-22					
EE1520		MATERIAL - [redacted] Material Vendor Delivery Leadtime	126	126	06-Aug-22	40	09-Dec-22					
EE1490	M-DELIV	MATERIAL - [redacted] Confirm Material Delivery to Site	1	1	10-Dec-22	40	10-Dec-22					
80053152.06.03 MATERIAL FOR CIVIL			132	132	14-Jun-22	-74	21-Dec-22					
CE500	DR-RM	MATERIAL - CIVIL - Prepare & Issue DR	5	5	14-Jun-22	-78	20-Jun-22					
CE600	DR-BGM	Civil (BG) Material Ordered	0	0		-78	20-Jun-22					
CE1040		MATERIAL - CIVIL - Procurement Issue PO	3	3	21-Jun-22	-78	23-Jun-22					
CE1050		MATERIAL - CIVIL - Material Vendor Delivery Leadtime	180	180	24-Jun-22	-110	20-Dec-22					
CE560	M-DELIV	MATERIAL - CIVIL - Confirm Material Delivery to Site	1	1	21-Dec-22	-110	21-Dec-22					



Remaining Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
◆ Mile...

TASK filter: Not Complete.

© Oracle Corporation

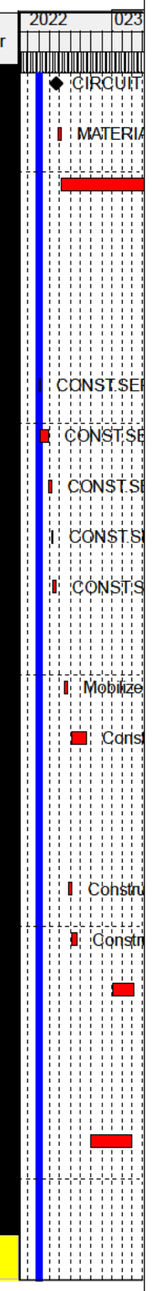
EVERSOURCE

Activity ID	Activity Flag	Activity Name	At ompletion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
80053152.06.03.01 MATERIAL FOR REBAR			67	67	14-Jun-22	-9	17-Sep-22					
CE1780	DR-RM	MATERIAL - REBARS - Prepare & Issue DR	5	5	14-Jun-22	-11	20-Jun-22					
CE1810	DR-BGM	REBARS Ordered	0	0		-11	20-Jun-22					
CE1790		MATERIAL - REBARS - Procurement Issue PO	3	3	21-Jun-22	-11	23-Jun-22					
CE1800		MATERIAL - REBARS - Material Vendor Delivery Leadtime	85	85	24-Jun-22	-15	16-Sep-22					
CE1770	M-DELI\	MATERIAL - REBARS - Confirm Material Delivery to Site	1	1	17-Sep-22	-15	17-Sep-22					
80053152.06.03.02 MATERIAL FOR ANCHOR BOLTS			67	67	14-Jun-22	-9	16-Sep-22					
CE1730	DR-RM	MATERIAL - ANCHOR BOLTS - Prepare & Issue DR	5	5	14-Jun-22	-10	20-Jun-22					
CE1760	DR-BGM	ANCHOR BOLTS Ordered	0	0		-10	20-Jun-22					
CE1740		MATERIAL - ANCHOR BOLTS - Procurement Issue PO	3	3	21-Jun-22	-10	23-Jun-22					
CE1750		MATERIAL - ANCHOR BOLTS - Material Vendor Delivery Leadtime	84	84	24-Jun-22	-14	15-Sep-22					
CE1720	M-DELI\	MATERIAL - ANCHOR BOLTS - Confirm Material Delivery to Site	1	1	16-Sep-22	-14	16-Sep-22					
80053152.06.04 MATERIAL FOR TRANSFORMER			144	144	06-Jun-22	326	30-Dec-22	30-Dec-22				
DSSE-530	DR-MM	MATERIAL - Transformer - Prepare & Issue DR	5	5	06-Jun-22	1	10-Jun-22			To be ordered right after Epac approval no		
DSSE-1180	DR-AGM	Transformer Material Ordered	0	0		465	10-Jun-22					
DSSE-1060		MATERIAL - Transformer - Procurement Issue PO	10	10	13-Jun-22	1	24-Jun-22					
DSSE-1070		MATERIAL - Transformer - Material Vendor Delivery Leadtime	189	189	25-Jun-22	3	30-Dec-22	30-Dec-22		LOA - Dec 2022 delivery		
80053152.06.05 MATERIAL FOR SWITCHGEAR			183	183	12-Jul-22	-64	04-Apr-23					
SWG1110	DR-MM	SWG-MATERIAL - SWITCHGEAR - Prepare & Issue DR	5	5	12-Jul-22	-64	18-Jul-22					
SWG1120		SWG-MATERIAL - SWITCHGEAR - Procurement Issue PO	5	5	19-Jul-22	-64	25-Jul-22					
SWG1090		SWG-MATERIAL - SWITCHGEAR - Material Vendor Delivery Leadtime	252	252	26-Jul-22	-92	03-Apr-23					
SWG580	M-DELI\	SWG-MATERIAL - SWITCHGEAR - Confirm Material Delivery to Site	1	1	04-Apr-23	-92	04-Apr-23					
80053152.06.06 MATERIAL FOR CIRCUITSWITCHER			265	265	18-Jul-22	-138	06-Aug-23					
EE1350	DR-RM	MATERIAL - CIRCUIT SWITCHER - Prepare & Issue DR	5	5	18-Jul-22	-140	22-Jul-22					

© Oracle Corporation

EVERSOURCE

Activity ID	Activity Flag	Activity Name	At ompletion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
EE1380	DR-AGM	CIRCUIT SWITCHER Material Ordered	0	0		-140	22-Jul-22					
EE1360		MATERIAL - CIRCUIT SWITCHER - Procurement Issue PO	10	10	25-Jul-22	-140	05-Aug-22					
EE1370		MATERIAL - CIRCUIT SWITCHER - Material Vendor Delivery Leadtime	365	365	06-Aug-22	-199	05-Aug-23					
EE1340	M-DELI\	MATERIAL - CIRCUIT SWITCHER - Confirm Material Delivery to Site	1	1	06-Aug-23	-199	06-Aug-23					
80053152.07 CONSTRUCTION			357	357	31-May-22	117	30-Oct-23	26-Apr-23				
80053152.07.1 CONSTRUCTION SERVICES - BID PROCESS			35	35	31-May-22	-10	19-Jul-22					
3430		CONST.SERVICES - BID - Eversource provide Spec / RFP	5	5	31-May-22	-10	06-Jun-22			YES BID		
3440		CONST.SERVICES - BID - Contractors Evaluate RFP and Provide Proposal	15	15	07-Jun-22	-10	27-Jun-22					
3450		CONST.SERVICES - BID - Eversource reviews contractor proposals	5	5	28-Jun-22	-10	05-Jul-22					
3620		CONST.SERVICES - BID - Contract is Awarded - DR Prepared Issued	5	5	06-Jul-22	-10	12-Jul-22					
3460		CONST.SERVICES - BID - Contract is Awarded - PO Issued	5	5	13-Jul-22	-10	19-Jul-22					
80053152.07.01 CONSTRUCTION - CIVIL			45	45	15-Aug-22	-36	18-Oct-22					
3630		Mobilize and Prep	5	5	15-Aug-22*	-28	22-Aug-22		Start On or After			
1120		Construction - Civil - Foundations	43	43	06-Sep-22*	-54	18-Oct-22		Start On or After			
80053152.07.02 CONSTRUCTION - ELECTRICAL			244	244	26-Aug-22	0	26-Apr-23					
80053152.07.02.01 TRANSFORMER			244	244	26-Aug-22	0	26-Apr-23					
1130		Construction - Electrical - Non-Outage XFRMR Structural steel & 115 Mobile XFRMR Connection	10	10	26-Aug-22*	0	04-Sep-22		Mandatory Start			
3640		Construction - Electrical - Outage XFRMR work - (Transmission Work) Mobile Sub	13	13	06-Sep-22*	0	18-Sep-22		Mandatory Start			
3650		Construction - Electrial - Non-Outage XFRMR Work	60	60	03-Jan-23*	0	03-Mar-23		Mandatory Start			
3660		Construction - Electrial - Outage - To put XFRMR In-Service	10	10	17-Apr-23*	0	26-Apr-23		Mandatory Start			
80053152.07.02.02 SWITCHGEAR			177	177	01-Nov-22	0	26-Apr-23					
3670		Construction - Electrial - Non-Outage SWG construction	120	120	01-Nov-22*	0	28-Feb-23		Mandatory Start			
3680		Construction - Electrial - Outage - To put SWG In-Service	10	10	17-Apr-23*	0	26-Apr-23		Mandatory Start			
80053152.07.05 CONSTRUCTION - P&C			244	244	26-Aug-22	179	26-Apr-23	26-Apr-23				



© Oracle Corporation

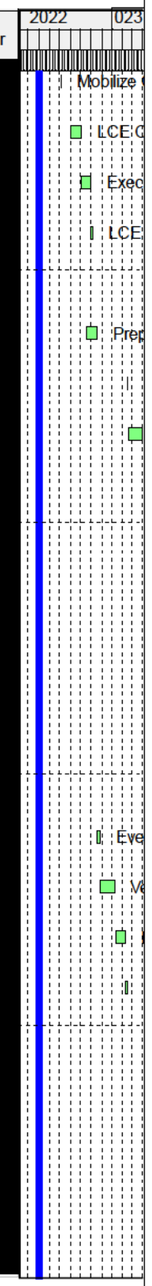
EVERSOURCE

Activity ID	Activity Flag	Activity Name	At ompletion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
1140		Construction - P&C Implement Relay Settings	244	244	26-Aug-22*	179	26-Apr-23	26-Apr-23	Mandatory Start			
80053152.07.06 CONSTRUCTION - COMMUNICATIONS			244	244	26-Aug-22	179	26-Apr-23	26-Apr-23				
1150		Construction - Field Communications	244	244	26-Aug-22*	179	26-Apr-23	26-Apr-23	Mandatory Start			
80053152.07.92 CONSTRUCTION - CONST.REP TASKS			472	472	16-Jul-22	129	30-Oct-23					
1280		[redacted]	5	5	16-Jul-22	162	20-Jul-22		As Late As Possible			
1250		[redacted]	5	5	16-Jul-22	57	20-Jul-22		As Late As Possible			
1290		[redacted]	5	5	21-Aug-23	58	25-Aug-23					
1260		[redacted]	10	10	21-Oct-23	129	30-Oct-23					
80053152.07.94 CONSTRUCTION RESOURCE TRACKING			274	274	20-Jan-23	2	20-Oct-23					
1070		RESOURCE ONLY ACTIVITY - CONSTRUCTION - SWITCH OUT	1	1	20-Jan-23*	275	20-Jan-23		Start On or After			
ConRep-S		RESOURCE ONLY ACTIVITY - CONSTRUCTION - CONSTRUCTION REP	177	177	27-Apr-23	2	20-Oct-23					
CONSTelec		RESOURCE ONLY ACTIVITY - CONSTRUCTION - ELECTRICIAN	177	177	27-Apr-23	2	20-Oct-23					
1080		RESOURCE ONLY ACTIVITY - CONSTRUCTION - SWITCH IN	1	1	20-Oct-23*	2	20-Oct-23		Start On or After			
80053152.07.96 CONSTRUCTION OUTAGES			274	274	20-Jan-23	181	20-Oct-23					
TOA-Const	OUT	OUTAGE / General Construction Work	274	274	20-Jan-23*	2	20-Oct-23		Start On or After			
CSM	CRH	Construction Start Milestone	0	0	27-Apr-23*	358			Start On or After			
CFM		Construction Finish Milestone	0	0		2	20-Oct-23			FIX Reasouce only activities		
ISD	ISD	EQUIPMENT IN SERVICE DATE (requires FOOB constraint)	0	0		2	20-Oct-23*		Finish On or Before			
80053152.09 TEST AND COMMISSION			65	65	02-Aug-22	242	02-Nov-22					
80053152.09.02 LCE PLANNING			24	24	02-Aug-22	80	02-Sep-22					
LCE200		Assign Lead Commissioning Engineer	2	2	02-Aug-22*	80	03-Aug-22		Start On or After	In house but we need an LCE, LCE - TBD		
LCE400	V-COMF	Develop Test and Commissioning Plan	10	10	08-Aug-22	80	19-Aug-22					
LCE500	ES-COM	LCE Review and Approve Vendor's Test and Commissioning Plan	10	10	22-Aug-22	80	02-Sep-22			N/R		
80053152.09.04 TEST ACTIVITIES			91	91	04-Aug-22	354	02-Nov-22					

© Oracle Corporation

EVERSOURCE

Activity ID	Activity Flag	Activity Name	At ompletion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
LCE310		Mobilize Commissioning Engineer Prior to Construction	2	2	04-Aug-22	118	05-Aug-22					
LCE610		LCE Oversee Execution of Test and Commissioning Plan	30	30	03-Sep-22	354	02-Oct-22					
LCE620		Execute Test and Commissioning Plan	30	30	03-Oct-22	354	01-Nov-22					
LCE700		LCE Ensure Test Group Prepare Electrical Field Mark Ups	1	1	02-Nov-22	354	02-Nov-22					
80053152.10 PROJECT CLOSE OUT			376	376	19-Oct-22	0	18-Apr-24					
CV1000	V-FLDA:	Prepare Civil Field Mark Ups (Tie after Last Civil Construction Activity)	21	21	19-Oct-22	264	17-Nov-22					
PM1000	PM	PM to Document Civil As-Built Drawings Complete	1	1	16-Feb-23	264	16-Feb-23					
CV1500	ES-FLS/	FE Files Civil Design Drawings at Station	30	30	17-Feb-23	264	31-Mar-23					
TD1100		Complete TD-707 Turnover Document / Forward to SOC & Mailing List	5	5	23-Oct-23	6	27-Oct-23					
EV1000	V-FLDA:	Prepare Electrical Field Mark Ups	21	21	07-Nov-23	0	07-Dec-23					
PC8000	V-FLDA:	Prepare P&C Field Mark Ups	21	21	07-Nov-23	0	07-Dec-23					
PM1100	PM	PM to Document Electrical As-Built Drawings Complete (Electrical & P&C)	1	1	07-Mar-24	0	07-Mar-24					
EV1500	ES-FLS/	FE Files Substation Design Drawings at Station	30	30	08-Mar-24	0	18-Apr-24					
PC8500	ES-FLS/	FE Files P&C Design Drawings at Station	30	30	08-Mar-24	0	18-Apr-24					
80053152.10.01 Civil As-Builts			60	60	18-Nov-22	264	15-Feb-23					
CV1100	ES-ASB	Eversource Engineering Prepares & Sends Civil Field Mark Up Packge to Vendor	5	5	18-Nov-22	264	25-Nov-22					
CV1200	V-ASB	Vendor Engineering Verifies Civil Mark Ups and Updates As-Built Drawing Package. Submits Final Package to ES	30	30	28-Nov-22	264	10-Jan-23					
CV1300	ES-ASB	Eversource Engineering Verifies Quality of Submitted Civil Drawings	20	20	11-Jan-23	264	08-Feb-23					
CV1400	ES-ASB	ES Create Civil Transmittal, Approve Final As-Built Package, and EDC Files and Issue Drawings to Field	5	5	09-Feb-23	264	15-Feb-23					
80053152.10.02 Electrical As-Builts			60	60	08-Dec-23	0	06-Mar-24					
EV1100	ES-ASB	Eversource Engineering Prepares & Sends Electrical Field Mark Up Packge to Vendor	5	5	08-Dec-23	0	14-Dec-23					
EV1200	V-ASB	Vendor Engineering Verifies Electrical Mark Ups and Updates As-Built Drawing Package. Submits Final Package to ES	30	30	15-Dec-23	0	30-Jan-24					
EV1300	ES-ASB	Eversource Engineering Verifies Quality of Submitted Electrical Drawings	20	20	31-Jan-24	0	28-Feb-24					
EV1400	ES-ASB	Electrical Transmittal, Approve Final As-Built Package, and EDC Files and Issue Drawings to Field	5	5	29-Feb-24	0	06-Mar-24					



© Oracle Corporation

EVERSOURCE

Activity ID	Activity Flag	Activity Name	At ompletion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
80053152.10.03 P&C As-Builts			60	60	08-Dec-23	0	06-Mar-24					
PC1111	ES-ASB	Eversource Engineering Prepares & Sends Electrical Field Mark Up Packge to Vendor	5	5	08-Dec-23	0	14-Dec-23					
PC1200	V-ASB	Vendor Engineering Verifies P&C Mark Ups and Updates As-Built Drawing Package. Submits Final Package to ES	30	30	15-Dec-23	0	30-Jan-24					
PC1300	ES-ASB	Eversource Engineering Verifies Quality of Submitted P&C Drawings	20	20	31-Jan-24	0	28-Feb-24					
PC1411	ES-ASB	P&C Transmittal, Approve Final As-Built Package, and EDC Files and Issue Drawings to Field	5	5	29-Feb-24	0	06-Mar-24					
80053152.10.04 Test Closout			11	11	23-Oct-23	0	06-Nov-23					
LCE800		LCE Ensures Marked up Prints Ready for Pick-up	1	1	23-Oct-23	0	23-Oct-23					
LCE900		LCE Review Test Data and Issue Commissioning Report	10	10	24-Oct-23	0	06-Nov-23					
80053152.10.05 SITE RESTORATION CLOSEOUT			10	10	23-Oct-23	113	03-Nov-23					
1110		Restore / Remediate Site	10	10	23-Oct-23	113	03-Nov-23					
80053152.10.06 MATERIAL, EQUIPMENT, COST, AND ASSET MANAGEMENT CLOSEOUT			36	36	23-Oct-23	87	13-Dec-23					
1020		Cost Analyst Prepares FINAL Units of Property	30	30	23-Oct-23	93	05-Dec-23					
1030		Asset Management Complete Asset Update(s) in CASCADE	30	30	31-Oct-23	87	13-Dec-23					
80053152.10.07 PROJECT MANAGEMENT CLOSEOUT			123	123	23-Oct-23	0	18-Apr-24					
1040		PM Prepares Closeout Documentation, Lessons Learned Meeting, etc.	30	30	23-Oct-23	92	05-Dec-23					
1270		Prepare TD-707 Document	30	30	23-Oct-23	92	05-Dec-23					
FINISH		Project / Work Order Complete (FINAL SCHEDULE TASK/MILESTONE)	0	0		0	18-Apr-24					
80053152.13 OVERHEAD / INDIRECTS			2	2	20-Jul-22	111	21-Jul-22					
80053152.13.01 PROJECT MANAGEMENT			2	2	20-Jul-22	111	21-Jul-22					
1170		Prepare CAN (Construction Authorization Notice)	1	1	20-Jul-22	-10	20-Jul-22					
3690		Prepare CAN (Construction Authorization Notice)	1	1	21-Jul-22	111	21-Jul-22					

2022 023

Prepare C

Prepare C

Remaining Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
◆ Mile...

TASK filter: Not Complete.

© Oracle Corporation

EVERSOURCE

Activity ID	Activity Flag	Activity Name	At ompletion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
40494001 [redacted] [redacted] (404940)			1303	979	19-Apr-19 A	0	25-Jun-24	15-Aug-22				
40494001.01 INITIALIZATION AND SCOPE DEVELOPEMENT			1095	771	19-Apr-19 A	0	26-Aug-23	06-Jun-22				
START		SCHEDULE START MILESTONE	0	0	19-Apr-19 A							
40494001.01.01 Initial Funding			120	30	19-Apr-19 A		09-Oct-19 A					
PI1200		Project Initiator Develop Intitial Funding Request	10	10	19-Apr-19 A		03-May-19 A					
PI1000		Submit Initial Funding Request	0	0			03-May-19 A					
PI1300	EPAC-I	Initial Funding Request Approved	0	10	06-May-19 A		06-May-19 A					
PI1400	PM-AM	Assign Project Manager	0	10	18-Sep-19 A		18-Sep-19 A					
PI1500		Assign Scheduler	0	5	09-Oct-19 A		09-Oct-19 A					
PI1600		Assign Cost Analyst	0	5	09-Oct-19 A		09-Oct-19 A					
40494001.01.02 SDC Approval			443	200	17-Mar-20 A		16-Dec-21 A					
SSF1000		Develop Solutions Selection Form (SSF)	20	20	17-Mar-20 A		14-Apr-20 A					
SDC1000	SDC	Solution Design Committee(SDC) Approval	5	10	08-Mar-21 A		12-Mar-21 A					
CE1600		Conduct Project Team Kickoff Meeting	1	1	08-Mar-21 A		08-Mar-21 A					
CE1710		Conduct Conceptual Constructability Walk Down	1	1	15-Nov-21 A		15-Nov-21 A					
CGE1000	EST-SD(	Develop Conceptual Grade Estimate (-25%+50%)	1	10	18-Nov-21 A		18-Nov-21 A					
CE1700		Review Conceptual Siting & Permitting (If Required)	6	10	09-Dec-21 A		16-Dec-21 A					
40494001.01.09 Project Initiation			345	325	22-Jan-21 A	-26	06-Jun-22	06-Jun-22				
40494001.01.09.00 Engineering Scope Development			43	72	30-Aug-21 A		29-Oct-21 A					
PE1400	V-CONC	Vendor Develops P&C Conceptual Scope Design in Accordance with Deliverables Checklist	25	20	30-Aug-21 A		04-Oct-21 A					
PE1740	ES-CON	ES Reviews P&C Conceptual Scope Design in Accordance with Deliverables Checklist	9	10	22-Sep-21 A		04-Oct-21 A					
PE1100	V-CONC	Vendor Develops Electrical Substation Conceptual Engineering Scope Design in Accordance with Deliverables Checklist	10	20	01-Oct-21 A		15-Oct-21 A					
PE1000	V-CONC	Vendor Develops Civil Substation Conceptual Engineering Scope Design in Accordance with Deliverables Checklist	9	20	01-Oct-21 A		15-Oct-21 A					
PE1750	ES-CON	ES Reviews Electrical Substation Conceptual Engineering Scope Design in Accordance with Deliverables Checklist	10	10	18-Oct-21 A		29-Oct-21 A					

© Oracle Corporation

EVERSOURCE

Activity ID	Activity Flag	Activity Name	At ompletion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
PE1730	ES-CON	ES Reviews Civil Substation Conceptual Engineering Scope Design in Accordance with Deliverables Checklist	9	10	18-Oct-21 A		29-Oct-21 A					
40494001.01.09.01 Civil Engineering Preliminary Design			30	26	01-Nov-21 A		14-Dec-21 A					
DE2010	V-PRELI	Vendor Engineer Develop Civil Substation Preliminary Design	13	25	01-Nov-21 A		18-Nov-21 A					
DE2020	ES-PRE	ES Engineering Review Civil Substation Preliminary Design	16	10	22-Nov-21 A		14-Dec-21 A					
40494001.01.09.02 Electrical Engineering Preliminary Design			31	26	01-Nov-21 A		15-Dec-21 A					
DE2030	V-PRELI	Vendor Engineer Develop Electrical Substation Preliminary Design	13	25	01-Nov-21 A		18-Nov-21 A					
DE2040	ES-PRE	ES Engineering Review Electrical Substation Preliminary Design	17	10	22-Nov-21 A		15-Dec-21 A					
40494001.01.09.06 P&C Engineering Preliminary Design			31	26	01-Nov-21 A		15-Dec-21 A					
DE2090	V-PRELI	Vendor Engineer Develop P&C Preliminary Design	12	25	01-Nov-21 A		18-Nov-21 A					
DE2100	ES-PRE	ES Engineering Review P&C Preliminary Design	17	10	22-Nov-21 A		15-Dec-21 A					
40494001.01.09.2 EPAC Partial Funding			228	208	22-Jan-21 A		16-Dec-21 A					
ATCGE1010	EST-PAF	Develop At Least Conceptual Grade Estimate (-25%+50%)	10	10	22-Jan-21 A		05-Feb-21 A					
PAFP1000		Submit Partial Funding PAF for Internal Review	5	10	05-Feb-21 A		12-Feb-21 A					
PAFP1100		Incorporate Internal Review Comments & Submit Partial Funding PAF to EPAC for Review	4	5	08-Feb-21 A		12-Feb-21 A					
PAFP1200		Incorporate EPAC Partial Funding PAF Review Comments	3	5	15-Feb-21 A		19-Feb-21 A					
PF1000	EPAC-P	EPAC Partial Funding Approval	1	1	22-Feb-21 A		22-Feb-21 A					
PE1710		Create Engineering Scope Document	124	10	05-Mar-21 A		27-Aug-21 A					
PE1720	Scope Comp	Engineering Scope Document Complete	0	0			27-Aug-21 A					
PE1700		Conduct Preliminary Constructability Walk Down	1	1	16-Dec-21 A		16-Dec-21 A					
40494001.01.09.3 EPAC Full Funding			103	103	10-Jan-22 A	-26	06-Jun-22	06-Jun-22				
DE1700		Conduct Initial Risk Management & SCLL Review (Project Initiator & PM)	4	4	10-Jan-22 A		13-Jan-22 A					
DE1710	Construc	Project Constructability Review Complete	5	5	10-Mar-22 A		16-Mar-22 A					
DE1600	EST-FUL	Create Planning Grade Estimate (+/-25% Full Funding)	36	10	14-Mar-22 A		02-May-22 A			Ask Braden		
DE1900		Conduct Detail Constructability Walk Down	1	1	16-Mar-22 A		16-Mar-22 A					

© Oracle Corporation

EVERSOURCE

Activity ID	Activity Flag	Activity Name	At ompletion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
DE1800		Review Detail Siting & Permitting (If Required)	1	1	30-Mar-22 A		30-Mar-22 A					
PAFF2000		Submit Full Funding PAF for Internal Review	6	6	07-Apr-22 A		14-Apr-22 A					
PAFF2100	PAF Submit	Incorporate Internal Review Comments & Submit Full Funding PAF to EPAC for Review	1	4	02-May-22 A		02-May-22 A					
PAFF2110		EPAC Full Funding Meeting	0	0			12-May-22 A					
PAFF2200		Incorporate EPAC Full Funding PAF Review Comments	15	11	13-May-22 A	-26	03-Jun-22	03-Jun-22				
FF1000	EPAC-F	EPAC Full Funding Approval	1	1	06-Jun-22	-26	06-Jun-22	06-Jun-22				
40494001.01.12 T-Minus Milestones			618	616	15-Dec-21 A	0	26-Aug-23					
40494001.01.12.01 Civil T-Minus Milestones			211	211	28-Feb-22 A	-36	26-Sep-22					
AT2605	ENG-SC	Eng. Project Scoping Document Issued (Scope Lockdown)	0	0			28-Feb-22 A					
AT0805C	BG-IFC	Civil IFC Civil	0	0		69	13-Jun-22					
AT1801		T-18 All Firm TOA Applications due to LCC	0	0		-120	15-Aug-22*		Finish On or Before			
AT0801		Permits Approved / Received (Environmental, Local)	0	0		6	15-Aug-22					
AT0814		Construction Contracts / PSA In-Place	0	0		4	17-Aug-22					
AT00	SOC	T-00 Civil Construction Start	0	0	22-Aug-22*	0			Mandatory Start	Spring of 22		
AT0203		Go / No-Go [CAN] Const. Author. Notice Form Completed for Civil	0	0		-17	07-Sep-22					
AT0401		Final Material Receipt Review Complete (delivered on site)	0	0		-36	26-Sep-22					
40494001.01.12.02 Electrical T-Milestones			381	379	15-Dec-21 A	-2	31-Dec-22					
BT2605	ENG-PR	Preliminary Design / Engineering Completed	0	0			15-Dec-21 A					
BT0805E	AG-IFC	Elect IFC - Electrical (AG) w/Final BOM	0	0		202	10-Jun-22			s		
BT1805		B-T-18.05 NX-9 Rating to LCC + ISO for New 'T' Equipment (NC=Per Procedure/120 calendar days before DOE)	0	0		22	03-Aug-22*		Finish On or Before			
BT0301		B-T-03.01 NX-9 Ratings to LCC & ISO for Existing Equipment (EM=Per Procedure/15 business days before DOE)	0	0		-6	10-Aug-22*		Finish On or Before			
BT0203		Go / No-Go [CAN] Const. Author. Notice Form Completed for Electrical	0	0		127	24-Aug-22					
BT1811	ENG-DT	Detail Design/Engineering Completed	0	0			25-Aug-22 A					
BT1801		T-18 All Firm TOA Applications due to LCC	0	0			29-Aug-22 A		Finish On or Before			

© Oracle Corporation

EVERSOURCE

Activity ID	Activity Flag	Activity Name	At ompletion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
BT00	SOC	T-00 Electrical Construction Start	0	0	30-Dec-22*	0			Mandatory Start	late spring 22		
BT0401		Final Material Receipt Review Complete (delivered on site)	0	0		-2	31-Dec-22					
40494001.01.12.06 P&C T-Minus Milestones			427	427	24-Jun-22	0	26-Aug-23					
CT0805P	P&C-IFC	P&C IFC - P&C w/BOM	0	0		427	24-Jun-22					
CT2404		Determine / Assign Lead Commissioning Engineer	0	0		45	11-Jul-23					
CT1301		Commission Plan Complete	0	0		14	11-Aug-23					
CT00	SOC	T-00 P&C Construction Start	0	0	26-Aug-23*	0			Mandatory Start	late spring 22		
40494001.04 SITING APPROVALS AND PERMITS			295	295	14-Jun-21 A	4	15-Aug-22	15-Aug-22				
40494001.04.01 PERMITTING - Local - Short Form			295	295	14-Jun-21 A	4	15-Aug-22	15-Aug-22				
A3590		Permitting - PM Send Scope to Siting Team	1	1	14-Jun-21 A		14-Jun-21 A					
A3600		Permitting - Siting Team Review Scope to Determine Siting Requirements (e.g. zoning)	247	10	15-Jun-21 A	4	08-Jun-22*	08-Jun-22	Finish On or Before			
A3610		Permitting - If Requirements Exist, Pursue Appropriate Actions, Permits, etc.	222	10	19-Jul-21 A	6	06-Jun-22*	06-Jun-22	Finish On or Before	CSC, Exempt Mod needed		
A3640		Permitting - Permit Approval ,	47	47	09-Jun-22*	4	15-Aug-22	15-Aug-22	Start On or After	CSC, Exempt Mod needed		
40494001.05 ENGINEERING & DESIGN			716	716	08-Mar-21 A	115	11-Jan-24	24-Jun-22				
A3370		Decision Required Regarding Engineering Staffing (ES, COC, BID)	1	5	08-Mar-21 A		08-Mar-21 A					
40494001.05.01 Civil Engineering			320	320	08-Mar-21 A	-25	13-Jun-22					
40494001.05.01.01 Civil Engineering Detail Design			86	78	15-Dec-21 A		19-Apr-22 A					
CE1200	V-DTL	Vendor Engineer Develop Civil Substation Detail Design	75	25	15-Dec-21 A		04-Apr-22 A			Expected by 28th March		
CE1210	ES-DTL	ES Engineering Review Civil Substation Detail Design	10	10	06-Apr-22 A		19-Apr-22 A					
40494001.05.01.02 Civil Engineering IFC Design			30	30	02-May-22 A	-25	13-Jun-22					
CE1300	V-IFC	Vendor Engineer Develop Civil Substation IFC	19	4	02-May-22 A		26-May-22 A					
CE1310	ES-IFC	ES Engineering Review Civil Substation IFC	10	10	31-May-22 A	-25	13-Jun-22			sync w other proj		
40494001.05.01.03 Civil Engineering Service/Contracts			94	100	08-Mar-21 A		19-Jul-21 A					
40494001.05.01.03.01 Bid Process			94	100	08-Mar-21 A		19-Jul-21 A					

© Oracle Corporation

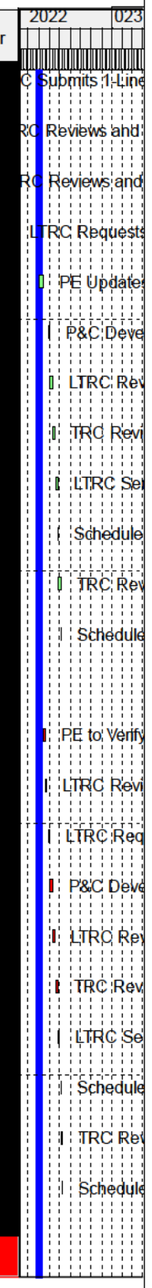
EVERSOURCE

Activity ID	Activity Flag	Activity Name	At ompletion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
TMP1310		Contractor Selection (Bid) - Engineering- Prepare / Issue RFP for Engineering Contractor	46	10	08-Mar-21 A		10-May-21 A					
TMP1320		Contractor Selection (Bid) - Engineering - Issue RFP Out to Bid to Engineering Contractor	9	10	11-May-21 A		24-May-21 A					
TMP1330		Contractor Selection (Bid) - Engineering - Bid Period	14	10	25-May-21 A		14-Jun-21 A					
TMP1350		Contractor Selection (Bid) - Engineering - Bid Review / Score Bids/ Negotiations	6	5	15-Jun-21 A		22-Jun-21 A					
TMP1360		Contractor Selection (Bid) - Engineering - Award Contractor	5	5	23-Jun-21 A		29-Jun-21 A					
TMP1370		Contractor Selection (Bid) - Engineering - Issue DR	1	1	30-Jun-21 A		30-Jun-21 A					
TMP1380		Contractor Selection (Bid) - Engineering - Issue PO	11	18	01-Jul-21 A		16-Jul-21 A					
TMP1390		Contractor Selection (Bid) - Engineering - Notice to Proceed	1	1	19-Jul-21 A		19-Jul-21 A		Start On or After			
40494001.05.01.03.02 EOC - Engineer of Choice Process			1	1	12-Mar-21 A		12-Mar-21 A					
TMP1180		N/R Engineering of Choice (EOC) - EOC Committee Reviews at Monthly Meeting & Approves (?)	1	1	12-Mar-21 A		12-Mar-21 A					
TMP1140		N/R Engineering of Choice (EOC) - Provide RFP to Single Vendor	1	1	12-Mar-21 A		12-Mar-21 A					
TMP1200		N/R Engineering of Choice (EOC) - DR Prepared by Project Engineer & Project Controls	1	1	12-Mar-21 A		12-Mar-21 A					
TMP1220		N/R Engineering of Choice (EOC) - PO Issued for Vendor -Preliminary Design Effort	1	1	12-Mar-21 A		12-Mar-21 A					
TMP1150		N/R Engineering of Choice (EOC) - Vendor Responds with Proposal	1	1	12-Mar-21 A		12-Mar-21 A					
40494001.05.02 Electrical Engineering			536	522	22-Nov-21 A	115	11-Jan-24	10-Jun-22				
CSD1000	CASCAI	PE Initiate CASCADE Forms (Appendix A) for Construction Package	5	5	06-Jun-22	49	10-Jun-22					
40494001.05.02.01 Electrical Engineering Detail Design			56	56	31-Jan-22 A		19-Apr-22 A					
EE1200	V-DTL	Vendor Engineer Develop Electrical Substation Detail Design	45	25	31-Jan-22 A		04-Apr-22 A					
EE1210	ES-DTL	ES Engineering Review Electrical Substation Detail Design	11	11	05-Apr-22 A		19-Apr-22 A					
40494001.05.02.02 Electrical Engineering IFC Design			37	37	20-Apr-22 A	-4	10-Jun-22	10-Jun-22				
EE1300	V-IFC	Vendor Engineer Develop Electrical Substation IFC	26	20	20-Apr-22 A		26-May-22 A			Runing Late Due to Drawings from Eversource		
EE1310	ES-IFC	ES Engineering Review Electrical Substation IFC	9	9	31-May-22*	-4	10-Jun-22	10-Jun-22	Start On or After	Runing Late Due to Drawings from Eversource		
40494001.05.02.1 Substation NX9			536	522	22-Nov-21 A	115	11-Jan-24					
40494001.05.02.1.01 Substation - Preliminary Thermal Data			176	162	22-Nov-21 A	475	03-Aug-22					

© Oracle Corporation

EVERSOURCE

Activity ID	Activity Flag	Activity Name	At completion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
NX9A-NC05		LTRC Submits 1-Line Nomenclature to TRC	2	5	22-Nov-21 A		23-Nov-21 A			Process Box 1		
NX9A-NC03		LTRC Reviews and Makes "GO / NO-GO" Decision for 1-Line Nomenclature	5	5	13-Dec-21 A		17-Dec-21 A			Process Box 2		
NX9A-NC07		LTRC Reviews and Makes "GO / NO-GO" Decision for Thermal Ratings	4	5	20-Dec-21 A		23-Dec-21 A			Process Box 2		
NX9A-NC09		LTRC Requests P&C Checklist - Line 1043	10	5	07-Mar-22 A		21-Mar-22 A			Process Box 1		
NX9A-NC01		PE Updates 1-Line Nomenclature Dwgs & Complete PE Checklist M7-EN-3006.2 - e-mail link to project team & CONVEX	10	10	01-Jun-22*	510	14-Jun-22		Start On or After	Process Box 3		
NX9A-NC11		P&C Develops and Provides LTRC with P&C Checklist (M7-EN-3006.1)	5	5	27-Jun-22	16	01-Jul-22			Process Box 4		
NX9A-NC13		LTRC Reviews and Sends Thermal Rating Data for TRC Review	5	5	05-Jul-22	16	11-Jul-22			Process Box 5		
NX9A-NC15		TRC Reviews and Approves Thermal Rating Data	5	5	12-Jul-22	16	18-Jul-22			Process Box 6		
NX9A-NC17		LTRC Sends Thermal Rating Data for Approval & Submit to NURS	5	5	19-Jul-22	16	25-Jul-22			Process Box 7		
NX9A-NC19		Scheduler @ NURS email "Submitted for PP Review" - Updates NURS with DOE	1	1	26-Jul-22	16	26-Jul-22			Process Box 8		
NX9A-NC21	NX-9	TRC Review and Submit NX-9 Data to LCC + ISO-NE for S/S Thermal Rating	5	5	27-Jul-22	16	02-Aug-22			Process Box 9		
NX9A-NC23		Scheduler @ NURS email "Submitted for DOE Monitoring" - Updates T-18, EquipDOE, Revs DOE per M7-EN-3006	1	1	03-Aug-22	16	03-Aug-22			Process Box 8		
40494001.05.02.1.02 Substation - Verify Thermal Data			42	42	13-Jun-22	-4	10-Aug-22					
NX9A-NC31		PE to Verify Thermal Data Review PE Chectlist (M7-EN-3006.2)	5	5	13-Jun-22	-4	17-Jun-22			Process Box 1		
NX9A-NC33		LTRC Reviews and Makes "GO / NO-GO" Decision	5	5	20-Jun-22	-4	24-Jun-22			Process Box 2		
NX9A-NC35		LTRC Requests P&C Checklist	5	5	27-Jun-22	-4	01-Jul-22			Process Box 2		
NX9A-NC37		P&C Develops and Provides LTRC with P&C Checklist (M7-EN-3006.1)	5	5	05-Jul-22	-4	11-Jul-22			Process Box 4		
NX9A-NC39		LTRC Reviews and Sends Thermal Rating Data for TRC Review	5	5	12-Jul-22	-4	18-Jul-22			Process Box 5		
NX9A-NC41		TRC Reviews and Approves Thermal Rating Data	5	5	19-Jul-22	-4	25-Jul-22			Process Box 6		
NX9A-NC43		LTRC Sends Thermal Rating Data for Approval & Submit to NURS	5	5	26-Jul-22	-4	01-Aug-22			Process Box 7		
NX9A-NC45		Scheduler @ NURS email "Submitted for PP Review" - Updates NURS with DOE	1	1	02-Aug-22	-4	02-Aug-22			Process Box 8		
NX9A-NC47	NX-9	TRC Review and Submit NX-9 Data to LCC + ISO-NE for S/S Thermal Rating	5	5	03-Aug-22	-4	09-Aug-22			Process Box 9		
NX9A-NC49		Scheduler @ NURS email "Submitted for DOE Monitoring" - Updates T-3, EquipDOE, Revs DOE per M7-EN-3006	1	1	10-Aug-22	-4	10-Aug-22			Process Box 8		
40494001.05.02.1.03 Substation - NX-9 Pre NX9-DOE			1	1	28-Dec-23	116	28-Dec-23					



Remaining Level of Effort | Remaining Work | Mile...
Actual Work | Critical Remaining Work

TASK filter: All Activities

© Oracle Corporation

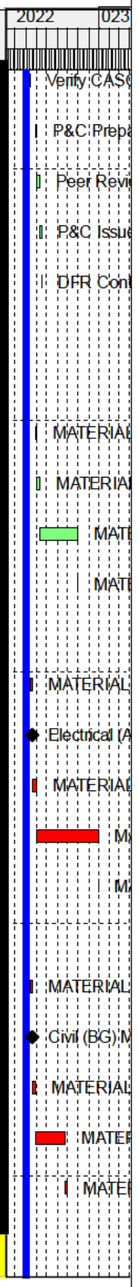
EVERSOURCE

Activity ID	Activity Flag	Activity Name	At ompletion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
NX9500		Scheduler - Send Email for 48Hrs Notification before DOE.	1	1	28-Dec-23	116	28-Dec-23					
40494001.05.02.1.04 Substation - NX-9 Post NX9-DOE/ISD			8	8	02-Jan-24	115	11-Jan-24					
NX9FINAL50		Review + Affirm Accuracy of NX-9 for ISO Submission (Tie after Equip DOE or ISD)	3	3	02-Jan-24	115	04-Jan-24					
NX9A600		Scheduler - 72 Hrs to Put in Service the NX-9 and Send to TOP Director in NURS after DOE/PM Note of Complition.	1	1	04-Jan-24	115	04-Jan-24					
NX9FINAL60		[If Required] Receive + Issue Final Affirmed NX-9 Data to NURS	5	5	05-Jan-24	115	11-Jan-24					
40494001.05.06 P&C Engineering			161	332	27-Dec-21 A	467	15-Aug-22	24-Jun-22				
OP1020		P&C Updates OP-24 Appendix B	49	4	18-Apr-22 A	497	24-Jun-22	24-Jun-22	Start On or After			
OP1010		P&C Validation of PAF's Initial Assessment Go/No-Go	2	2	20-Apr-22 A		21-Apr-22 A					
CSD1030	CASCAI	PE Initiate CASCADE Forms (Appendix A) for Construction Package	5	5	20-Jun-22	39	24-Jun-22					
OP1030	OP-24	P&C Submits OP-24 Appendix B to ISO-NE	5	5	27-Jun-22	497	01-Jul-22					
40494001.05.06.01 P&C Engineering Detail Design			111	99	27-Dec-21 A	16	03-Jun-22	03-Jun-22				
PC1100	V-DTL	Vendor Engineer Develop P&C Detail Design	90	25	27-Dec-21 A		04-May-22 A			Finish 4 May		
PC1110	ES-DTL	ES Engineering Review P&C Detail Design	22	10	04-May-22 A	16	03-Jun-22	03-Jun-22	Start On or After			
40494001.05.06.02 P&C Engineering IFC Design			125	124	17-Feb-22 A	4	15-Aug-22	17-Jun-22				
40494001.05.06.02.03 P&C Design Package			50	50	06-Jun-22	-19	15-Aug-22	17-Jun-22				
PC1320	V-IFC	Vendor Engineer Develop P&C IFC	10	10	06-Jun-22	16	17-Jun-22	17-Jun-22				
PC1330		ES Engineering Review P&C IFC	5	5	20-Jun-22	16	24-Jun-22					
40494001.05.06.02.03.1 Outage Permit Process			1	1	15-Aug-22	-84	15-Aug-22					
OPERM1000		[redacted]	1	1	15-Aug-22*	-84	15-Aug-22		Start On or After			
40494001.05.06.02.01 Relay Settings			20	20	27-Jun-22	19	25-Jul-22					
PC1400	ES-RSE	Complete P&C Relay Settings	20	20	27-Jun-22	19	25-Jul-22					
40494001.05.06.02.02 P&C DFR Design			104	103	17-Feb-22 A	25	15-Jul-22					
A-DFR1060		DFR Pts Identified	0	0			17-Feb-22 A					
A-DFR1000		Verify DFR Calibration is Required	0	1	17-Feb-22 A		17-Feb-22 A					

© Oracle Corporation

EVERSOURCE

Activity ID	Activity Flag	Activity Name	At ompletion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
A-DFR1040	CASCAI	Verify CASCADE Forms Exists for S/S DFR, if not then Initiate Form	3	3	13-Jun-22	45	15-Jun-22					
A-DFR1010		P&C Prepare Configuration for DFRs	5	5	27-Jun-22	25	01-Jul-22					
A-DFR1020		Peer Review and Comment DFR Configuration	5	5	05-Jul-22	25	11-Jul-22					
A-DFR1030		P&C Issue Configuration For DFR	3	3	12-Jul-22	25	14-Jul-22					
A-DFR1050		DFR Config Complete	1	1	15-Jul-22	25	15-Jul-22					
40494001.06 MATERIAL PROCUREMENT			428	428	19-Apr-21 A	-1	31-Dec-22					
40494001.06.1 MATERIAL FOR P&C			89	89	27-Jun-22	39	01-Nov-22					
DSSE-510	DR-RM	MATERIAL - P&C - Prepare & Issue DR	5	5	27-Jun-22	41	01-Jul-22					
DSSE-980		MATERIAL - P&C - Procurement Issue PO	5	5	05-Jul-22	41	11-Jul-22					
DSSE-1000		MATERIAL - P&C - Material Vendor Delivery Leadtime	112	112	12-Jul-22	58	31-Oct-22					
DSSE-1010	M-DELI\	MATERIAL - P&C - Material Handler Confirm Material Delivery to Site	1	1	01-Nov-22	58	01-Nov-22					
40494001.06.2 MATERIAL FOR ELECTRICAL			139	139	13-Jun-22	-1	31-Dec-22					
DSSE-520	DR-RM	MATERIAL - Electrical - Prepare & Issue DR	5	5	13-Jun-22	-2	17-Jun-22					
DSSE-530	DR-AGM	Electrical (AG) Material Ordered	0	0		-2	17-Jun-22					
DSSE-1020		MATERIAL - ELectrical - Procurement Issue PO	10	10	20-Jun-22	-2	01-Jul-22					
DSSE-1030		MATERIAL - Electrical - Material Vendor Delivery Leadtime	182	182	02-Jul-22	-2	30-Dec-22					
DSSE-550	M-DELI\	MATERIAL - Electrical - Material Handler Confirm Material Delivery to Site	1	1	31-Dec-22	-2	31-Dec-22					
40494001.06.3 MATERIAL FOR CIVIL			73	73	14-Jun-22	-25	26-Sep-22					
DSSE-500	DR-RM	MATERIAL - CIVIL - Prepare & Issue DR	5	5	14-Jun-22	-25	20-Jun-22					
DSSE-540	DR-BGM	Civil (BG) Material Ordered	0	0		-25	20-Jun-22					
DSSE-1040		MATERIAL - CIVIL - Procurement Issue PO	5	5	21-Jun-22	-25	27-Jun-22					
DSSE-1050		MATERIAL - CIVIL - Material Vendor Delivery Leadtime	90	90	28-Jun-22	-36	25-Sep-22					
DSSE-560	M-DELI\	MATERIAL - CIVIL - Material Handler Confirm Material Delivery to Site	1	1	26-Sep-22	-36	26-Sep-22					
40494001.06.6 MATERIAL FOR BREAKERS			274	274	19-Apr-21 A		19-May-22 A					



© Oracle Corporation

EVERSOURCE

Activity ID	Activity Flag	Activity Name	At ompletion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
DSSE-1150	DR-MM	MATERIAL - BREAKER - Prepare & Issue DR (breakers)	5	5	19-Apr-21 A		23-Apr-21 A					
DSSE-1180	DR-AGM	Breaker (AG) Material Ordered	0	0			23-Apr-21 A					
DSSE-1160		MATERIAL - BREAKER - Procurement Issue PO	30	10	03-May-21 A		14-Jun-21 A					
DSSE-1140		MATERIAL - BREAKER - Material Vendor Delivery Leadtime	115	120	11-Jan-22 A		05-May-22 A					
DSSE-1155		BREAKER - Material transportation from wharehouse to site	25	25	25-Apr-22 A		19-May-22 A		Start On or After	Status 19 May		
DSSE-1130	M-DELI	MATERIAL - BREAKER - Material Handler Confirm Material Delivery to Site	0	0			19-May-22 A					
40494001.07 CONSTRUCTION			703	826	15-Mar-21 A	0	30-Dec-23					
CSM	CRH	Construction Start Milestone	0	0	22-Aug-22*	0			Mandatory Start			
TOA-Const	OUT	OUTAGE / General Construction Work	116	116	23-Aug-22	379	16-Dec-22					
CFM		Construction Finish Milestone	0	0		0	30-Dec-23					
ISD	ISD	EQUIPMENT IN SERVICE DATE (requires FOOB constraint)	0	0		0	30-Dec-23*		Finish On or Before			
40494001.07.SEG-404940-02 SEGMENT 404940-02 - Construction			30	586	28-Feb-22 A		11-Apr-22 A					
404940-02-8-10CV		Segment - Civil - 404940-02 - Remote End work for [redacted]	0	0	28-Feb-22 A		28-Feb-22 A					
404940-02-8-20OH		Segment - OH - 404940-02 - Remote End work for [redacted]	0	0	28-Feb-22 A		28-Feb-22 A					
404940-02-8-30UG		Segment - UG - 404940-02 - Remote End work for [redacted]	0	0	28-Feb-22 A		28-Feb-22 A					
404940-02-0		N/R SEGMENT - SUMMARY - 404940-02 - Remote End work for [redacted]	30	586	28-Feb-22 A		11-Apr-22 A					
404940-02-8-30PE		Segment - Permitting - 404940-02 - Remote End work for [redacted]	0	0	28-Feb-22 A		28-Feb-22 A					
404940-02-8-40FE		Segment - ST Field Eng - 404940-02 - Remote End work for [redacted]	0	0	28-Feb-22 A		28-Feb-22 A					
404940-02-8-50EL		Segment - ST Electricians - 404940-02 - Remote End work for [redacted]	0	0	28-Feb-22 A		28-Feb-22 A					
404940-02-8-60FC		Segment - ST Communications- 404940-02 - Remote End work for [redacted]	0	0	28-Feb-22 A		28-Feb-22 A					
404940-02-0-SM		SEGMENT - SM - 404940-02 - Remote End work for [redacted]	0	0	28-Feb-22 A							
404940-02-9-FM		SEGMENT - FM - 404940-02 - Remote End work for [redacted]	0	0			28-Feb-22 A					
40494001.07.SEG-404940-02.WO-6771160 WO 6771160 - D Support			42	849	28-Feb-22 A		11-Apr-22 A					
40494001.07.SEG-404940-02.WO-6771160.0 WO 6771160 - D-Support Milestones			0	0	28-Feb-22 A		28-Feb-22 A					

2022 2023

BREAKER - Prep
Material Ordered
BREAKER - Pr
MATERIAL -
BREAKER -
MATERIAL -
Construc
OU
Segment - Civil
Segment - OH
Segment - UG
N/R SEGMEN
Segment - Permi
Segment - ST F
Segment - ST E
Segment - ST C
SEGMENT - SM
SEGMENT - FM

Remaining Level of Effort | Remaining Work | Mile...
Actual Work | Critical Remaining Work

TASK filter: All Activities

© Oracle Corporation

EVERSOURCE

Activity ID	Activity Flag	Activity Name	At ompletion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
WO-6771160-0-SM		6771160 - Remote End work for [redacted] - D-Support - SM	0	0	28-Feb-22 A							
WO-6771160-99-FM		6771160 - Remote End work for [redacted] - D-Support - FM	0	0			28-Feb-22 A					
40494001.07.SEG-404940-02.WO-6771160.00 WO 6771160 - Summary Milestones			0	0	28-Feb-22 A		28-Feb-22 A					
WO-6771160-00-SM		6771160 - Remote End work for [redacted] - SM	0	0	28-Feb-22 A							
WO-6771160-9-FM		6771160 - Remote End work for [redacted] - FM	0	0			28-Feb-22 A					
40494001.07.SEG-404940-02.WO-6771160.10 WO 6771160 - Pre-Construction			0	807	04-Apr-22 A		04-Apr-22 A					
6771160-0-280		N/R 280 - Prereq - Deliverables Complete - Work Order Ready to Close	0	0			04-Apr-22 A		As Late As Possible			
6771160-0-310		N/R 310 - Prereq - Financial Close Out	0	0			04-Apr-22 A					
40494001.07.SEG-404940-02.WO-6771160.30 WO 6771160 - Construction			42	42	28-Feb-22 A		11-Apr-22 A					
WO-6771160-UG-10		6771160 - Underground - TSupport	0	0	28-Feb-22 A		28-Feb-22 A					
WO-6771160-OH-10		6771160 - Overhead - TSupport	0	0	28-Feb-22 A		28-Feb-22 A					
WO-6771160-ST-EL-10		6771160 - Station - Electrician - TSupport	0	0	28-Feb-22 A		28-Feb-22 A					
WO-6771160-ST-FC-10		6771160 - Station - Field Comm - TSupport	0	0	28-Feb-22 A		28-Feb-22 A					
WO-6771160-ST-FE-10		6771160 - Station - Field Engineer - TSupport	0	0	28-Feb-22 A		28-Feb-22 A					
6771160-10		N/R N/R 10 - GENERAL CONSTRUCTION	7	0	04-Apr-22 A		11-Apr-22 A					
40494001.07.SEG-404940-02.WO-6771160.40 WO 6771160 - Post-Construction			0	0	04-Apr-22 A		04-Apr-22 A					
6771160-9-300		N/R 300 - Postreq - Send Equipment Details to CASCADE	0	0			04-Apr-22 A					
40494001.07.SEG-404940-03 SEGMENT 404940-03 - Construction			30	586	28-Feb-22 A		11-Apr-22 A					
404940-03-8-10CV		Segment - Civil - 404940-03 - Remote End work for [redacted]	0	0	28-Feb-22 A		28-Feb-22 A					
404940-03-8-20OH		Segment - OH - 404940-03 - Remote End work for [redacted]	0	0	28-Feb-22 A		28-Feb-22 A					
404940-03-8-30UG		Segment - UG - 404940-03 - Remote End work for [redacted]	0	0	28-Feb-22 A		28-Feb-22 A					
404940-03-0		SEGMENT - SUMMARY -404940-03 - Remote End work for [redacted]	30	586	28-Feb-22 A		11-Apr-22 A					
404940-03-8-30PE		Segment - Permitting - 404940-03 - Remote End work for [redacted]	0	0	28-Feb-22 A		28-Feb-22 A					
404940-03-8-40FE		Segment - ST Field Eng - 404940-03 - Remote End work for [redacted]	0	0	28-Feb-22 A		28-Feb-22 A					

2022 1023

Remaining Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
◆ Mile...

TASK filter: All Activities

© Oracle Corporation

EVERSOURCE

Activity ID	Activity Flag	Activity Name	At ompletion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
404940-03-8-50EL		Segment - ST Electricians - 404940-03 - Remote End work for [redacted]	0	0	28-Feb-22 A		28-Feb-22 A				[redacted]	
404940-03-8-60FC		Segment - ST Communications- 404940-03 - Remote End work for [redacted]	0	0	28-Feb-22 A		28-Feb-22 A					
404940-03-0-SM		SEGMENT - SM - 404940-03 - Remote End work for [redacted]	0	0	28-Feb-22 A							
404940-03-9-FM		SEGMENT - FM - 404940-03 - Remote End work for [redacted]	0	0			28-Feb-22 A					
40494001.07.SEG-404940-03.WO-6771727 WO 6771727 - D Support			30	586	28-Feb-22 A		11-Apr-22 A					
40494001.07.SEG-404940-03.WO-6771727.0 WO 6771727 - D-Support Milestones			0	0	28-Feb-22 A		28-Feb-22 A					
WO-6771727-0-SM		6771727 - Remote End work for [redacted] - D-Support - SM	0	0	28-Feb-22 A							
WO-6771727-99-FM		6771727 - Remote End work for [redacted] - D-Support - FM	0	0			28-Feb-22 A					
40494001.07.SEG-404940-03.WO-6771727.00 WO 6771727 - Summary Milestones			0	0	28-Feb-22 A		28-Feb-22 A					
WO-6771727-00-SM		6771727 - Remote End work for [redacted] - SM	0	0	28-Feb-22 A							
WO-6771727-9-FM		6771727 - Remote End work for [redacted] - FM	0	0			28-Feb-22 A					
40494001.07.SEG-404940-03.WO-6771727.10 WO 6771727 - Pre-Construction			0	807	04-Apr-22 A		04-Apr-22 A					
6771727-0-280		N/R 280 - Prereq - Deliverables Complete - Work Order Ready to Close	0	0			04-Apr-22 A		As Late As Possible			
6771727-0-310		N/R 310 - Prereq - Financial Close Out	0	0			04-Apr-22 A					
40494001.07.SEG-404940-03.WO-6771727.30 WO 6771727 - Construction			42	42	28-Feb-22 A		11-Apr-22 A					
WO-6771727-UG-10		6771727 - Underground - TSupport	0	0	28-Feb-22 A		28-Feb-22 A					
WO-6771727-OH-10		6771727 - Overhead - TSupport	0	0	28-Feb-22 A		28-Feb-22 A					
WO-6771727-ST-EL-10		6771727 - Station - Electrician - TSupport	0	0	28-Feb-22 A		28-Feb-22 A					
WO-6771727-ST-FC-10		6771727 - Station - Field Comm - TSupport	0	0	28-Feb-22 A		28-Feb-22 A					
WO-6771727-ST-FE-10		6771727 - Station - Field Engineer - TSupport	0	0	28-Feb-22 A		28-Feb-22 A					
6771727-10		N/R N/R 10 - GENERAL CONSTRUCTION	7	0	04-Apr-22 A		11-Apr-22 A					
40494001.07.SEG-404940-03.WO-6771727.40 WO 6771727 - Post-Construction			0	0	04-Apr-22 A		04-Apr-22 A					
6771727-9-300		N/R 300 - Postreq - Send Equipment Details to CASCADE	0	0			04-Apr-22 A					
40494001.07.01 CONSTRUCTION - CIVIL			403	403	15-Mar-21 A	0	18-Oct-22					

2022 2023

Segment - ST E
Segment - ST C
SEGMENT - SM
SEGMENT - FM
6771727 - Remo
6771727 - Remo
6771727 - Remo
6771727 - Remo
N/R 280 - Prer
N/R 310 - Prer
6771727 - Unde
6771727 - Overl
6771727 - Static
6771727 - Static
6771727 - Static
N/R N/R 10 - (
N/R 300 - Post

Remaining Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
◆ Mile...

TASK filter: All Activities

© Oracle Corporation

EVERSOURCE

Activity ID	Activity Flag	Activity Name	At completion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
ACC1100		Construction - Civil	40	40	22-Aug-22*	0	18-Oct-22		Mandatory Start			
40494001.07.01.2 CONSTRUCTION SERVICES - BID PROCESS			361	361	15-Mar-21 A	-26	17-Aug-22					
A3550		STAFFING DECISION: EVERSOURCE OR OUTSOURCE BID/COC CONSTRUCTION	10	5	15-Mar-21 A		26-Mar-21 A					
A3430		CONST.SERVICES - BID - Eversource provide Spec / RFP	10	10	07-Jun-22	-26	20-Jun-22					
A3440		CONST.SERVICES - BID - Contractors Evaluate RFP and Provide Proposal	20	20	21-Jun-22	-26	19-Jul-22					
A3450		CONST.SERVICES - BID - Eversource reviews contractor proposals	10	10	20-Jul-22	-26	02-Aug-22					
A3620		CONST.SERVICES - BID - Contract is Awarded - DR Preparing Issued	10	10	03-Aug-22	-26	16-Aug-22					
A3460		CONST.SERVICES - BID - Contract is Awarded - PO Issued	1	1	17-Aug-22	-26	17-Aug-22					
40494001.07.01.1 CONSTRUCTION SERVICES - CONTRACTOR OF CHOICE			1	5	04-May-21 A		04-May-21 A					
A3390		N/R - CONST.SERVICES - COC - Eversource Provides Spec / RFQ to COC	1	1	04-May-21 A		04-May-21 A					
A3400		N/R - CONST.SERVICES - COC - COC Evaluates Spec and Provides Quote	1	1	04-May-21 A		04-May-21 A					
A3410		N/R - CONST.SERVICES - COC - Eversource Reviews Quote from COC	1	5	04-May-21 A		04-May-21 A					
A3420		N/R - CONST.SERVICES - COC - Eversource Awards Contract - PO Issued	1	5	04-May-21 A		04-May-21 A					
40494001.07.02 CONSTRUCTION - ELECTRICAL			117	117	05-Sep-23	0	30-Dec-23					
A1130		Construction - Electrical	117	117	05-Sep-23*	0	30-Dec-23		Mandatory Start			
40494001.07.94 CONSTRUCTION RESOURCE TRACKING			496	496	22-Aug-22	0	30-Dec-23					
ConRep-S		RESOURCE ONLY ACTIVITY - CONSTRUCTION - CONSTRUCTION REP	496	496	22-Aug-22	0	30-Dec-23					
CONSTelec		RESOURCE ONLY ACTIVITY - CONSTRUCTION - ELECTRICIAN	496	496	22-Aug-22	0	30-Dec-23					
A1070		RESOURCE ONLY ACTIVITY - CONSTRUCTION - SWITCH OUT	1	1	23-Aug-22	494	23-Aug-22					
A1080		RESOURCE ONLY ACTIVITY - CONSTRUCTION - SWITCH IN	1	1	16-Dec-22	379	16-Dec-22					
40494001.09 TEST AND COMMISSION			684	684	15-Mar-21 A	142	03-Dec-23					
40494001.09.01 TEST - SERVICES STAFFING DECISION			70	79	15-Mar-21 A		21-Jun-21 A					
A1010		STAFFING DECISION: EVERSOURCE OR OUTSOURCE BID/COC TESTING	40	5	15-Mar-21 A		07-May-21 A					
40494001.09.01.01 TEST SERVICES - CONTRACTOR OF CHOICE			1	39	21-Jun-21 A		21-Jun-21 A					

© Oracle Corporation

EVERSOURCE

Activity ID	Activity Flag	Activity Name	At ompletion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
TSCOC100		N/R - TEST SERVICES - COC - Eversource Provides Spec / RFQ to COC	1	5	21-Jun-21 A		21-Jun-21 A					
TSCOC200		N/R - TEST SERVICES - COC - COC Evaluates Spec and Provides Quote	1	10	21-Jun-21 A		21-Jun-21 A					
TSCOC300		N/R - TEST SERVICES - COC - Eversource Reviews Quote from COC	1	10	21-Jun-21 A		21-Jun-21 A					
TSCOC400		N/R - TEST SERVICES - COC - Eversource Awards Contract - PO Issued	1	10	21-Jun-21 A		21-Jun-21 A					
40494001.09.01.02 TEST SERVICES - BID PROCESS			1	39	21-Jun-21 A		21-Jun-21 A					
TSBID100		TEST SERVICES - BID - Eversource provide Spec / RFP	1	5	21-Jun-21 A		21-Jun-21 A					
TSBID200		TEST SERVICES - BID - Contractors Evaluate RFP and Provide Proposal	1	10	21-Jun-21 A		21-Jun-21 A					
TSBID300		TEST SERVICES - BID - Eversource reviews contractor proposals	1	10	21-Jun-21 A		21-Jun-21 A					
TSBID400		TEST SERVICES - BID - Eversource awards contract - PO Issued	1	10	21-Jun-21 A		21-Jun-21 A					
40494001.09.02 LCE PLANNING			440	440	13-Dec-21 A	140	12-Sep-23					
LCE100		PM to Request Lead Commissioning Engineer GO/NO-GO {Preliminary design is often the predecessor}	2	2	13-Dec-21 A		14-Dec-21 A					
LCE200		Assign Lead Commissioning Engineer	26	26	05-Jun-23*	10	11-Jul-23		Start On or After			
LCE400	V-COMF	Develop Test and Commissioning Plan	21	21	14-Jul-23	10	11-Aug-23					
LCE500	ES-COM	LCE Review and Approve Vendor's Test and Commissioning Plan	21	21	14-Aug-23	140	12-Sep-23					
40494001.09.04 TEST ACTIVITIES			145	145	12-Jul-23	205	03-Dec-23					
LCE310		Mobilize LCE Prior to Construction	2	2	12-Jul-23	14	13-Jul-23					
LCE320		Mobilize Testing Vendor Prior to Construction	2	2	12-Jul-23	14	13-Jul-23					
LCE610		LCE Oversee Execution of Test and Commissioning Plan	81	81	13-Sep-23	206	02-Dec-23					
LCE620		Execute Test and Commissioning Plan	81	81	13-Sep-23	205	02-Dec-23					
LCE700		LCE Ensure Test Group Prepare Electrical Field Mark Ups	1	1	03-Dec-23	205	03-Dec-23					
40494001.10 PROJECT CLOSE OUT			423	423	19-Oct-22	0	25-Jun-24					
CV1000	V-FLDA	Prepare Civil Field Mark Ups (Tie after Last Civil Construction Activity)	21	21	19-Oct-22	311	17-Nov-22					
PM1000	PM	PM to Document Civil As-Built Drawings Complete	1	1	16-Feb-23	311	16-Feb-23					
CV1500	ES-FLS	FE Files Civil Design Drawings at Station	30	30	17-Feb-23	311	31-Mar-23					

© Oracle Corporation

EVERSOURCE

Activity ID	Activity Flag	Activity Name	At ompletion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
A1260		Construction Rep Finalize CASCADE Forms (within 14 days folloiwng ISD)	10	10	02-Jan-24	83	16-Jan-24					
EV1000	V-FLDAS	Prepare Electrical Field Mark Ups	21	21	18-Jan-24	0	15-Feb-24					
PC1000	V-FLDAS	Prepare P&C Field Mark Ups	21	21	18-Jan-24	0	15-Feb-24					
PM1100	PM	PM to Document Electrical As-Built Drawings Complete (Electrical & P&C)	1	1	13-May-24	0	13-May-24					
EV1500	ES-FLS/	FE Files Substation Design Drawings at Station	30	30	14-May-24	0	25-Jun-24					
PC1500	ES-FLS/	FE Files P&C Design Drawings at Station	30	30	14-May-24	0	25-Jun-24					
40494001.10.01 Civil As-Builts			60	60	18-Nov-22	311	15-Feb-23					
CV1100	ES-ASB	Eversource Engineering Prepares & Sends Civil Field Mark Up Packge to Vendor	5	5	18-Nov-22	311	25-Nov-22					
CV1200	V-ASB	Vendor Engineering Verifies Civil Mark Ups and Updates As-Built Drawing Package. Submits Final Package to ES	30	30	28-Nov-22	311	10-Jan-23					
CV1300	ES-ASB	Eversource Engineering Verifies Quality of Submitted Civil Drawings	20	20	11-Jan-23	311	08-Feb-23					
CV1400	ES-ASB	ES Create Civil Transmittal, Approve Final As-Built Package, and EDC Files and Issue Drawings to Field	5	5	09-Feb-23	311	15-Feb-23					
40494001.10.02 Electrical As-Builts			60	60	16-Feb-24	0	10-May-24					
EV1100	ES-ASB	Eversource Engineering Prepares & Sends Electrical Field Mark Up Packge to Vendor	5	5	16-Feb-24	0	23-Feb-24					
EV1200	V-ASB	Vendor Engineering Verifies Electrical Mark Ups and Updates As-Built Drawing Package. Submits Final Package to ES	30	30	26-Feb-24	0	05-Apr-24					
EV1300	ES-ASB	Eversource Engineering Verifies Quality of Submitted Electrical Drawings	20	20	08-Apr-24	0	03-May-24					
EV1400	ES-ASB	Electrical Transmittal, Approve Final As-Built Package, and EDC Files and Issue Drawings to Field	5	5	06-May-24	0	10-May-24					
40494001.10.03 P&C As-Builts			60	60	16-Feb-24	0	10-May-24					
PC1340	ES-ASB	Eversource Engineering Prepares & Sends Electrical Field Mark Up Packge to Vendor	5	5	16-Feb-24	0	23-Feb-24					
PC1200	V-ASB	Vendor Engineering Verifies P&C Mark Ups and Updates As-Built Drawing Package. Submits Final Package to ES	30	30	26-Feb-24	0	05-Apr-24					
PC1300	ES-ASB	Eversource Engineering Verifies Quality of Submitted P&C Drawings	20	20	08-Apr-24	0	03-May-24					
PC1310	ES-ASB	P&C Transmittal, Approve Final As-Built Package, and EDC Files and Issue Drawings to Field	5	5	06-May-24	0	10-May-24					
40494001.10.04 Test Closout			11	11	02-Jan-24	0	17-Jan-24					
LCE800		LCE Ensures Marked up Prints Ready for Pick-up	1	1	02-Jan-24	0	02-Jan-24					
LCE900		LCE Review Test Data and Issue Commissioning Report	10	10	03-Jan-24	0	17-Jan-24					

© Oracle Corporation

EVERSOURCE

Activity ID	Activity Flag	Activity Name	At ompletion Duration	Original Duration	Start	Total Float	Finish	Expected Finish	Primary Constraint	Comments	Resources	Activity Scheduler
40494001.10.05 SITE RESTORATION CLOSEOUT			10	10	02-Jan-24	113	16-Jan-24					
A1110		Restore / Remediate Site	10	10	02-Jan-24	113	16-Jan-24					
40494001.10.06 MATERIAL, EQUIPMENT, COST, AND ASSET MANAGEMENT CLOSEOUT			40	40	02-Jan-24	83	28-Feb-24					
A1020		Cost Analyst Prepares FINAL Units of Property	30	30	02-Jan-24	93	13-Feb-24					
A1030		Asset Management Complete Asset Update(s) in CASCADE	30	30	17-Jan-24	83	28-Feb-24					
40494001.10.07 PROJECT MANAGEMENT CLOSEOUT			123	123	02-Jan-24	0	25-Jun-24					
DSSE-1100		Complete TD-707 Turnover Document / Forward to SOC & Mailing List	5	5	02-Jan-24	118	08-Jan-24					
A1040		PM Prepares Closeout Documentation, Lessons Learned Meeting, etc.	30	30	02-Jan-24	92	13-Feb-24					
FINISH		Project / Work Order Complete (FINAL SCHEDULE TASK/MILESTONE)	0	0		0	25-Jun-24					
40494001.13 OVERHEAD / INDIRECTS			5	5	18-Aug-22	86	24-Aug-22					
40494001.13.01 PROJECT MANAGEMENT			5	5	18-Aug-22	86	24-Aug-22					
A1170		Prepare CAN for Civil (Construction Authorization Notice)	5	5	18-Aug-22	-26	24-Aug-22*		Finish On or Before			Prepare
A3630		Prepare CAN for Electrical (Construction Authorization Notice)	5	5	18-Aug-22	86	24-Aug-22					Prepare

© Oracle Corporation

EVERSOURCE

Constructability Review Form: [redacted]

Project Title: [redacted]	☐	Prior Constructability Review Performed?
	☐	Program Related Site Specific Review?
Project Numbers(s): CS00261 404940	**Project Constructability Phase:**	
Date(s) of Constructability Review: 03/16/2022	☐ Conceptual Engineering Design	
Click to enter a date	☒ Preliminary Engineering Design	
	☐ Detailed Engineering Design	
Project Scope Statement: [redacted]		

Department Review/Walkdown Attendees*:

Required [X]	Attended [X]	Department	Name	Required [X]	Attended [X]	Department	Name
☐	☐	Project Management	[redacted]	☐	☐	S/S Engineering	[redacted]
☐	☐	Asset Management		☐	☐	P&C Engineering	
☐	☐	Constr. Management		☐	☐	Civil Engineering	
☐	☐	S/S Technical / LCE		☐	☐	Telecom	
☐	☐	S/S Operations**		☐	☐	Environmental	
☐	☐	Field Engineering		☐	☐	Real Estate	
☐	☐	Line Engineering		☐	☐	T&D ROW	
☐	☐	Vegetation Management		☐	☐	Survey Engineering	
☐	☐	Siting		☐	☐	Cost Estimating	
☐	☐	Safety		☐	☐	Outreach (SCS)	
☐	☐	SCADA		☐	☐	Material Procurement	
☐	☐	HDR		☐	☐	Construction Rep	
☐	☐	HDR		☐	☐	Construction Rep	
☐	☐	HDR		☐	☐		
☐	☐			☐	☐		
☐	☐			☐	☐		

EVERSOURCE
Constructability Review Form: **Substation**

* Sign-off in the table above for the Detailed Engineering Design Constructability Review indicates that all Action Items/Concerns from prior Constructability Reviews have been mitigated/resolved as documented in this form. Not every department is required to attend walkdowns for every project but should be consulted for project impact considerations

** Internal Eversource Substation Operations must be included in the review even if external construction resources are planned

[Project Manager] certifies that this review was performed to completeness, that all applicable departments were informed of the project and have had opportunity to provide input to this review:

[redacted] 3/16/22

Name / Signature *Date*

Documents available for use prior to Constructability Review					
[X]	Document	[X]	Document	[X]	Document
☐	Initial Scope -Birdseye site plan -General Arrangement	☒	Preliminary Drawings -Civil Site Drawing -Electrical Drawing -Section Drawings	☐	Prints in hand for marking up -Panel Front/Read View -Control Enclosure Layout -Floor / Wall Plans
☒	Detailed Scope Document	☒	Proposed Schedule	☒	Construction Sequence/Timeline
☐	Previous Notes / Comments / Observations	☒	Major Material / Equipment List	☐	Replace / Reuse of equipment

Action Items and Resolutions:

Item No.	Const. Review Action Item/Concern	Design Resolution/Mitigation:
1		
2		
3		
4		
5		

EVERSOURCE

Constructability Review Form: **Substation**

	Key Review Item Description	N/A or No Concern	Review Notes, Concerns, or Additional Info Needed
A	**Engineering & Asset Management**		
1	**Scope of Work** - Is scope adequately developed and sufficiently detailed for intended deliverable? - Any complimentary projects or other adjacent obsolete equipment for inclusion? - Any overlapping projects that could impact work/outages? - Consider Physical Installation, P&C Scope, Civil Scope, Engineering studies, Design standard adherence - Any remote station impacts? - Engineering Estimates for Design and Technical Support? (EE and EOC) Total Project	☐	[redacted]
2	**Materials Identified/Ordered** -Any concerns with BOM/Major Materials? Review BOM lead times and project need dates -Specialty Major Materials: Identify Specialty Equipment & Materials potentials - temporary/replacement - long lead items? -Any Materials needed to facilitate construction access?	☐	
3	**Control House** - Review Unmapped equipment interferences, Control/Battery Enclosure Layout, HVAC System (if equipment added), space for new or modified equipment, AC / DC station breaker availability and service loading, Panel Space, Expansion, one-line and/or riser type panelboard drawings, other..	☐	
4	**Ratings & Dimensions** for Major Equipment. Any concerns upon field review? Equipment Rating One Line (and/or equipment thermal ratings tables) - Review for any errors in field	☐	[redacted]

EVERSOURCE

Constructability Review Form: **Substation**

	Key Review Item Description	N/A or No Concern	Review Notes, Concerns, or Additional Info Needed
5	**Wall, Fence, Gate, and Foundation Considerations** -Any permanent / temporary alterations or relocations required? -Pre-Project Sound Measurements Needed? Sound Walls? -Take measurements for Foundation quantities, dimensions and concrete volumes -CIP Review/Ballistic needs. Any Physical Security Requirement Consideration? -Assess condition of existing yard equipment foundations and viability for reuse (if proposed) -Review station expansion areas (if needed) for structures, old foundations, etc. -Any Steel Structural Plan Considerations? -Any impacts to construction plan?	☐	GATE 16' → 20' SOUND STUDY ✓ DRIVE WAY
6	**Below Grade / Enclosure Raceway** - If possible, evaluate existing raceway and review spacing requirements. Review for any subsurface investigation needs or potential below grade obstructions. GPR/test pits needed? Geotechnical Investigation - is soil boring or resistivity investigation needed?	☐	TEST PITS NEEDED
7	**Underground Obstructions** -Drawing review concerns? -Is preconstruction or test excavation needed? -Is reuse of underground control cables / Conduits /replace Non-Shielded Cable feasible (if applicable) -Are spare conduits available? Are they useable? -Review if any areas will need to be plated for increased load bearing for equipment access (i.e. large Xfmr, etc.)	☐	TEST PITS FOR TRENCH & MAJOR FOUNDATIONS FEEDERS TO MH IN ROW MOBILE ACCESS NEEDED AT ALL TIMES
8	**Grounding Plan (Ground Grid)** - Will footprint impact layout or other equipment? Identify locations to improve grounding. Impacts to foundations and ground grid plans. Observations on wetlands or ability to perform tests	☐	[redacted]

EVERSOURCE

Constructability Review Form: **Substation**

	Key Review Item Description	N/A or No Concern	Review Notes, Concerns, or Additional Info Needed
9	Nomenclature / Switching One-Line Diagram -Any obvious deviations from diagrams provided?	☑	
10	BPS Separation Requirements - Is this BPS Substation? Y/N (part of PAF) - Changes to pre-existing BPS standards?	☐	NO
11	IEC 61850 Substation Automation and Communication Requirements - Any Impacts/Retrofit needed?	☐	NO
12	Any Upgrades to ES Standards - Is retrofit needed to bring up to ES standards? Can that be done?	☐	[redacted]
B	**Construction**		
1	**Any safety hazards specific to the facility? i.e. Low Bus, Deterioration, etc.**	☐	[redacted]
2	**Prior known Site Specific Conditions** -Common or Obvious station Issues -Missing scope items that could impact costs?	☒	
3	**Identify/Consider Required Depts for Construction?** -Who is constructor: Internal vs External Resources -S/S Ops, GO, Test, Field Engineering, etc -Specialty Contractors Required? -Required Oversite Needed - Estimated level of CR and LCE support needed	☐	EXTERNAL CIVIL INTERNAL ELECTRICAL & TEST LCE NEEDED

EVERSOURCE

Constructability Review Form: **Substation**

	Key Review Item Description	N/A or No Concern	Review Notes, Concerns, or Additional Info Needed
4	**Site Plan, Access, and Temporary Construction Facilities:** -Confirm maintenance access for proposed new or replaced equipment -Verify clear footprint for yard equipment / Property Plan -General access to site, can areas outside substation be utilized? -Substation Entry Plan (driveway and drive path modifications) - Identification of Unique Requirements, i.e. (access bridges, station service, etc.) -Site Development Plan (grading and drainage) with Cut/Fill -Existing Rock Conditions? Potential Impacts (rock quantity)? -Any police details needed for deliveries, restricted hours, and/or need for extended hour approvals -Any Sanitary Civil Requirements? (Septic tanks, etc) -Review turning radius for delivery trucks (if critical) -Any Substation Access and site/yard access Limitations? -Office Trailer Needs: Facilities, Utilities, Restroom, Container, Dumpster Space -Weather impacts to Site (Snow Placement) -Identify Material Laydown and Security -Where will new vs removed equipment go? -Construction permit for trailers outside substation fence?	☐	[redacted]
5	Unique Equipment Considerations: Gas insulated substation, Gas insulated line, Gas insulated bus, Pass Breaker, Statcom, Sync Condenser		[redacted]

EVERSOURCE

Constructability Review Form: **Substation**

	Key Review Item Description	N/A or No Concern	Review Notes, Concerns, or Additional Info Needed
6	**Outage & Energization Plan and Construction Sequence:** *Review electrical working clearances for equipment during construction, Detailed look at protection zone changes, Locked sequence or random outages, Outage durations minimized.* ***Considerations:*** -Approach Distances – Outage Requirements to maintain electrical clearances throughout proposed installation -Distribution Clearances -Clearance Holder Assignments -Drawings vs Field Conditions -Outage boundaries and interconnections -Phased approach needs for additional mobilizations -Verify outage sequence supports the planned construction sequence and timeline. (Lead Commissioning Engineer "LCE", Substation Operations, and Outage Planner input) -Any design alterations or considerations to Eliminate SCLL Conditions, Reduce Recall Time, Reduce Outage durations, Special Conditions -Additional outage requirements: Railroad Catenaries, Fiber outage, SCADA outage, Relay permissions -Seasonal or weather conditions impacts	☐	[redacted] [redacted]
7	**Equipment Testing & Acceptance** -Grounding plans / Resources? Will we need grounds hung? -Hi-pot testing and where will the equipment be set up?	☒	
8	Need for mobile generator and where connected (if needed)	☒	
9	Need for mobile battery and where connected (if needed)	☒	
10	OT work required or Notable Permit Conditions (special hours)?	☒	
11	Coordination of boundaries/seams (Identification of point of demarcation for connection to existing equipment and/or for coordination with other municipalities)	☒	

EVERSOURCE

Constructability Review Form: **Substation**

	Key Review Item Description	N/A or No Concern	Review Notes, Concerns, or Additional Info Needed
C	**Environmental**		
1	Soil Pre-Characterization or Grab Sampling Completed/Planned	☐	
2	**Desktop investigation and EAD Review** -Required Permits -Stormwater Considerations -Dewatering requirements -Wetland and buffer review	☐	
3	Risk or presence of PCB's/Asbestos/Lead/SF6	☐	
4	Transformer Spill Containment Recommended?	☐	
5	Expanding Footprint / New Buildings or future Expansion Plans? (Enviro Impact)	☐	
6	Environmental oversight considerations? (Inspection type/Interval)	☐	
7	Environmental mitigations - Any matting or seasonal needs? Review D&M Plan with CR.	☐	
D	**Siting, S&CS, and T&D Real Estate**		
1	**Any regulatory concerns or approvals needed?** - Consider scope/design alterations to mitigate concerns - Consider Visual screening considerations (feasibility or location) -Zoning Relief and Permits required	☐	
2	**Neighbor/Abutter impacts:** - Any noise, visual impacts, or sensitive abutters - Any changes to lighting or additional lighting needed?	☐	
3	Review for roadway, gate access, trailers, equip height, noise, weekend/night work, or any potential public disturbance related to work	☐	
4	Installation within Eversource Rights - Is Rights and Restrictions Review required?	☐	
5	Expanding Footprint / New Buildings or future Expansion Plans?	☐	
6	Proposed Equipment on same property? - Any Encroachments	☐	

EVERSOURCE

Constructability Review Form: **Substation**

	Key Review Item Description	N/A or No Concern	Review Notes, Concerns, or Additional Info Needed
F	**Protection & Controls**		
1	Panel Graphic additions and/or Modifications	☒	
2	Space on existing panels for new equipment? (front & rear of panel fronts)	☐	[redacted]
3	Panel fronts conform to drawings	☑	
4	Access to bring new panels into control enclosure	☑	
5	Nameplate list and location of nameplates	☒	
6	Verifies that relays and meters that will be an interconnected project work are as shown on the drawings.	☒	
7	Temporary protection, relays, control cable needed? How long will they be required?	☐	NOT NEEDED
8	Will relay setting changes be needed? Any additional outage requirements for changes?		YES
G	**Telecom Engineering**		
1	Review telecom equipment in existing control enclosure	☒	
2	Review path to get telecom circuits into the station and paths within the control house. Determine whether new underground duct or overhead tray work is needed.	☒	
3	Review current or proposed Telecom equipment power connections and validate with P&C any need for system 1 and system 2 separation.	☒	
4	Review current Telecom fiber diversity and validate with P&C any fiber diversity requirements.	☒	
5	Review and list any remote station impacts/updates	☒	
6	Confirm whether correct interface equipment is available (i.e.) for fiber termination or multiplexor termination	☒	
7	Confirm whether existing communications cabinets are enough to support additional telecommunications equipment installed	☒	

EVERSOURCE

Constructability Review Form: **Substation**

	Key Review Item Description	N/A or No Concern	Review Notes, Concerns, or Additional Info Needed
8	Review space for any required additional communications cabinets which may be required to support additional telecommunications equipment installed	X	
9	Review third party Telecommunications at substation and confirm whether additional capacity or Ground Potential Rise protection is required	X	

Photos

(Ex. Equipment control cabinet, Breakers, MODs, CCVTs, PTs, Transformers)

EVERSOURCE

Constructability Review Form: **Substation**

	Key Review Item Description	N/A or No Concern	Review Notes, Concerns, or Additional Info Needed
6	**Outage & Energization Plan and Construction Sequence:** *Review electrical working clearances for equipment during construction, Detailed look at protection zone changes, Locked sequence or random outages, Outage durations minimized.* ***Considerations:*** -Approach Distances – Outage Requirements to maintain electrical clearances throughout proposed installation -Distribution Clearances -Clearance Holder Assignments -Drawings vs Field Conditions -Outage boundaries and interconnections -Phased approach needs for additional mobilizations -Verify outage sequence supports the planned construction sequence and timeline. (Lead Commissioning Engineer "LCE", Substation Operations, and Outage Planner input) -Any design alterations or considerations to Eliminate SCLL Conditions, Reduce Recall Time, Reduce Outage durations, Special Conditions -Additional outage requirements: Railroad Catenaries, Fiber outage, SCADA outage, Relay permissions -Seasonal or weather conditions impacts	☐	[redacted]
7	**Equipment Testing & Acceptance** -Grounding plans / Resources? Will we need grounds hung? -Hi-pot testing and where will the equipment be set up?	☒	
8	Need for mobile generator and where connected (if needed)	☒	
9	Need for mobile battery and where connected (if needed)	☒	
10	OT work required or Notable Permit Conditions (special hours)?	☒	
11	Coordination of boundaries/seams (Identification of point of demarcation for connection to existing equipment and/or for coordination with other municipalities)	☒	

[redacted]

[redacted]