Date Prepared: 2/6/17	Project Title: Waterbury Highway Crossings
Company/Companies: Eversource CT	Project ID Number: CD00641 – Segment 1, 2
Organization: Distribution	Plant Class/(F.P.Type): Distribution
Project Initiator:	Project Type: *Specific*
Project Owner/Manager: [redacted]	Capital Investment Part of Original Operating Plan? Y
Project Sponsor: [redacted]	O&M Expenses Part of the Original Operating Plan? Y
Current Authorized Amount: $986,850	Estimated in service date(s): February 2017
Supplement Request: $120,690	Other:
Total Request: $1,107,540	

Project Authorization Supplement Justification

Project approval history:

This request has been prepared to ask for additional funding for the System Resiliency Waterbury Highway crossings project. The ACT estimate was presented at CPAC and approved on 12/5/16 for $837,424.

A supplemental request for $149,426 for cable re-conductoring was presented and approved at CPAC on 1/26/17, bringing the total CPAC authorized amount to $986,850.

Supplement Request:

During the engineering phase of the highway and ramp crossings, it was decided that the need for cable re-conductoring was to be evaluated during construction in the field and added onto the scope on a case-by-case basis.

Work Request 2870270 included pole upgrades along the I-84 overpass crossing on Benson Road in Middlebury, CT. [redacted]

The total of this supplemental request is $120,690 which includes the estimate for new wire, re-conductoring costs and additional contractor labor. This scope of work was presented and approved at TRC on 2/23/17.

Total project request: $1,107,540

Project Authorization Supplement Cost Summary

Supplemental Request Cost Breakdown:

	Prior Authorized*	Supplement Request**	Total
Capital Additions - Direct	$ -	$ 75,674	$ -
Less Customer Contribution	-	$ -	-
Removals net of Salvage ____%	-	$ 13,465	-
Total Direct Spending	$ -	$ 89,139	$ -
Capital Additions - Indirect	-	$ 29,582	-
AFUDC	-	$ 421	-
Total Capital Request	$ -	$ 119,142	$ -
O&M	-	$ 1,548	-
Total Request	**$ 986,850**	**$ 120,690**	**$ 1,107,540**

Note: Supplemental request amount breakdown based on total construction estimate from Detail Design (STORMS).

*** Total amount approved by CPAC on 1/26/17. Currently, PowerPlan is in the process of being updated with the new CPAC approved cost.**

**** Additional Change in scope request – see Justification and Total Supplemental Request by year view.**

Total Supplemental Request by year view:

	2017	2018+	Totals
Capital Additions - Direct	$ 75,674	$ -	$ 75,674
Less Customer Contribution	$ -	$ -	$ -
Removals net of Salvage	$ 13,465	$ -	$ 13,465
Total - Direct Spending	$ 89,139	$ -	$ 89,139
Capital Additions - Indirect	$ 29,582	$ -	$ 29,582
Subtotal Request	$ 118,721	$ -	$ 118,721
AFUDC	$ 421	$ -	$ 421
Total Capital Request	$ 119,142	$ -	$ 119,142
O&M	$ 1,548	$ -	$ 1,548
Total Request	$ 120,690	$ -	$ 120,690

ACT Snapshot

		Total Project [A]	WR 2870270
CURRENT ENG ESTIMATE	=		
Eversource Direct Eng/Supv	=	$3,972	$3,972
Eversource Labor	=	$0	$0
Eversource Labor Overtime	=	$0	$0
Per Diem [B]	=	$0	$0
Eversource Equipment	=	$0	$0
Material	=	$15,990	$15,990
Contractor Labor	=	$40,139	$40,139
Tree Trimming	=	$0	$0
Traffic Control	=	$22,909	$22,909
Contractor Additional [C]	=	$0	$0
Contractor Other [D]	=	$0	$0
Other Costs	=	$0	$0
E&S	=	$17,901	$17,901
MDEC	=	$1,442	$1,442
AS&E	=	$1,268	$1,268
AFUDC	=	$421	$421
Sub-Total	=	$104,043	$104,043
Contingency [E]	=	$16,647	$16,647
TOTAL PROJECT COST	=	**$120,690**	**$120,690**
Reimbursable Costs	=	$0	$0
CL&P PROJECT BUDGET	=	**$120,690**	

Technical Authorization Form

Date Prepared: 02/6/17	Project Title: Waterbury Highway Crossings
Company/ies: Eversource Connecticut	Project ID Number: CD00641
Organization: Distribution Design	Class(es) of Plant: Distribution
Project Initiator:	Project Category: System Resiliency - Line
Project Owner/Manager: [redacted]	Project Type: Specific
Project Sponsor: [redacted]	Project Purpose: System Resiliency
Estimated in service date: March 2017	If Transmission Project: NA

Project / Change Order Need Statement

To structurally upgrade distribution overhead lines along critical highways, one Highway Crossing project was created per Area Work Center and included pole replacements, double-deadend construction, and additional pole guying.

During the engineering phase of the highway and ramp crossings, it was decided that the need for cable re-conductoring was to be evaluated during construction in the field and added onto the scope on a case-by-case basis. The project team has identified a crossing nearby Benson Road in Middlebury, CT that requires re-conductoring and replacement.

[redacted]

Project / Change Order Objectives

[redacted]

Project / Change Order Scope

The change order includes new wire, reconductoring, additional labor and traffic control to replace the existing wire.

Background /Justification

Due to the importance of maintaining access over major highways, the company agreed to evaluate and structurally upgrade, if necessary, these crossings to withstand category 3 hurricane force winds. In compliance with Docket No. 12-07-06 and Docket 12-07-06RE01, the most critical highway crossings along I-84, I-91, I-95, I-291, I-384, I-395, I-684, I-691, Route 9 and Route 15 were evaluated, prioritized and designed to be structurally upgraded. In addition, highway ramp crossings were reviewed and were upgraded to withstand wind speeds of 95 MPH and ¾" of radial ice with 40 MPH wind (System Resiliency Standards). Structural upgrades will comply with Grade B Construction requirements stated in DSEM 06.22 and Resiliency guidelines in DSEM 2.50.

Business Process and/or Technical Improvements:

This circuit zone will be less likely to experience an outage once it is built to resiliency standards under both normal and extreme weather conditions.

Change Order Cost Estimate and Assumptions

The cost increase of $120,690 includes the estimate for new wire, re-conductoring costs, additional labor and traffic control.

Alternatives Considered with Cost Estimates

The other alternative to consider is to not replace or reconductor the wire, and to add [redacted] from the current pole location.

Project Schedule

Milestone/Phase Name	Estimated Completion Date
Detailed Engineering Design	January 2017
Change Order Approval	February 2017
Permitting / CTDOT Coordination	February 2017
Complete construction	March 2017

Regulatory Approvals

System Resiliency Docket 12-07-06RE01 & 12-07-06.

Risks and Risk Mitigation Plans:

Contractors cannot safely move this cable without possibility of breakage.

References

None

One-Line Diagrams, Attachments, and Images

See next page or STORMS WR 2870270.

Appendix 5
Subsidiary Board Approval Package Template

