# Operations Project Authorization Form

| | |
|---|---|
| **Project Title: 2021 ROW P1 and P2 Pole Replacements** | **Project Number: CD01678** |
| **Date Prepared:** 03/07/2022 | **Company:** Eversource CT |
| **Organization: EFO** | **Class(es) of Plant:** D Line |
| **Project Initiator:** [redacted] | **Project Category: Line** |
| **Project Manager:** [redacted] | **Project Type:** Specific |
| **Project Sponsor:** [redacted] | **Capital Investment part of original Operating Plan:** Yes |
| **Estimated in service date: 04/01/22** | **Emergency Related Request?** No |
| **Eng./Constr. Resources Budgeted?** Yes | **Facility Type** (check all that apply):<br>☐ PTF ☐ non-PTF X Distribution |
| **Total Gross Capital Request: $9,667,035** | **Authorization Type:** Full Funding |

## Executive Summary

Approximately 500 linear miles of Distribution ROW have been inspected by drones in Connecticut. The damage found has been recorded and prioritized. This project is being presented to address Priority 1 and Priority 2 locations.

The drone inspections produced 4,765 findings at 2,769 locations mostly associated with broken / rotted poles and crossarms. Of all these locations, 15 were deemed priority 1 and 167 were priority 2. These priority 1 and priority 2 locations are to be addressed in 2021.

Priority 3, 4 or 5 locations were also addressed if they were located near a priority 1 or 2 location that required a significant cost to access such as wetland matting.

In total, 330 locations will be addressed in 2021 as follows:

### Drone Inspection Damage Results Prioritized

| District | Priority Rating | | | | | Total |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | |
| Cheshire | 3 | 38 | 17 | 5 | | 63 |
| Danielson | 8 | 33 | 15 | 4 | 4 | 64 |
| East Hampton | 1 | 6 | 4 | | 1 | 12 |
| Hartford | 1 | 33 | 38 | 19 | 21 | 112 |
| Madison | 1 | 5 | | | | 6 |
| New London | | 7 | | 4 | 2 | 13 |
| Newtown | | 3 | | | | 3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Norwalk | 1 | 3 | 6 | | | 10 |
| Stamford | | 2 | 1 | | | 3 |
| Tolland | | 17 | 1 | 3 | 1 | 22 |
| Torrington | | 20 | | 1 | 1 | 22 |
| Total | 15 | 167 | 82 | 36 | 30 | 330 |

Note: Year 1 = 2021

## Financial Evaluation

| Capital Costs | Year 1 (Prior) | Year 2 | Year 3+ | Total |
|---|---|---|---|---|
| Internal Labor and Construction Equipment | $317,509 | $260,102 | $0 | $577,610 |
| Outside Services | $3,480,126 | $350,761 | $0 | $3,830,887 |
| Materials | $211,757 | $272,588 | $0 | $484,345 |
| Removals | $0 | $0 | $0 | $0 |
| Risk and Contingency | $0 | $115,189 | $0 | $115,189 |
| Other | $14,195 | $0 | $0 | $14,195 |
| **Subtotal** | **$4,023,586** | **$998,640** | **$0** | **$5,022,226** |

| Indirect Capital Costs | Year 1 | Year 2 | Year 3+ | Total |
|---|---|---|---|---|
| Indirects/Overheads (including benefits) | $3,959,007 | $652,406 | $0 | $4,611,413 |
| Capitalized interest or AFUDC, if any | $33,396 | $0 | $0 | $33,396 |
| **Subtotal** | **$3,992,403** | **$652,406** | **$0** | **$4,644,808** |
| | | | | |
| **Total Capital Costs (Gross)** | **$8,015,989** | **$1,651,045** | **$0** | **$9,667,035** |
| | | | | |
| Less Total Customer Contribution | $ - | $ - | $ - | $ - |
| | | | | |
| **Project Costs (Net of Reimbursement)** | **$8,015,989** | **$1,651,045** | **$0** | **$9,667,035** |

## Technical Justification:

### Project Need Statement
The priority 1 and priority 2 locations from the Drone Inspection need to be addressed this year. This project seeks to obtain financial approval so that work can begin to correct these Priority 1 and Priority 2 issues.

### Project Objectives
This project is being presented to gain approval to begin to correct the defects along the inspected ROWs.

### Project Scope
ROW inspection data collected by the 2020 inspection yielded the scope of work for this 2021 project. WRs have been written to correct 15 Priority 1 and 167 Priority 2 defects across the state.

### Background / Justification
Due to accessibility issues at times, ROW line faults usually take quite a while to be repaired. ROW faults at the very least usually place a lot of customers in 'single contingency' – if not causing a complete outage. These drone inspections are capturing defects that often times are not easily seen from the ground. The priority 1 and priority 2 defects pose a high threat to the affected circuit's reliability.

### Business Process and / or Technical Improvements:
Being proactive and addressing these imminent dangers to Eversource's ROW circuits will result in improved reliability for these circuits, and the distribution system as a whole.

### Alternatives Considered with Cost Estimates
Doing nothing may prove more costly in the future should these circuits fail in the ROW.

### Project Schedule

| Milestone/Phase Name | Estimated Completion Date |
|---|---|
| Design | March, 2021 |
| Final Estimate | April, 2021 |
| Award & Construction Start | April, 2021 |
| Construction Completion | June 2022 |

### Regulatory Approvals
None

## Risks and Risk Mitigation Plans

| Risk Event | Risk Horizon | Likelihood of Occurrence | Risk Mitigation |
|---|---|---|---|
| Actual cost higher than estimated due to scope changes. | 2021 | High | Included higher number of defective pole replacements in estimate to reduce changes during design. All designs reviewed by Engineering and Operations. |
| Construction resources / storm delays | 2021 | Medium | Use competitive bidding to ensure lowest outside labor cost. Bid early in the year to allow long construction period. |
| Materials shortage or long lead times | 2021 | Low | Pre-order long lead time material; minimize the use of non-standard and non-stocked material. |

## References
None

## Attachments (One-Line Diagrams, Images, etc.)

Priority%202%20Photos.pptx