

CWSP SYSTEM HARDENING FIELD SCOPING DOCUMENT

PM: [REDACTED]	Project Name: ECOP - SILVERADO 2102 - H01-LR58626	
Notification: [REDACTED]	Region: Bay Area	City: Saint Helena
Project Manager: [REDACTED]	Division: North Bay	County: Napa

Proposed Project Scope¹:

	Desktop Meeting Results			ADE Fielding Results		
	Miles	Unit Cost (\$M)	Total Cost (\$M)	Miles	Unit Cost (\$M)	Total Cost (\$M)
Harden in Place (OH only)	.89					
Convert OH to UG	0.00					
Relocation (OH to OH location)	0.34					
Reconfigure	Remove	0.00				
	Add	0.00				
Totals	1.23					

1. This table is to be filled out by Project Manager detailing the change in units and costs before and after the Field Scoping Process is completed.

A) Field Scoping Team - Desktop Meeting Notes

The following are required outputs to be discussed in the meeting:

- Main Route(s) of Egress
- Land and Environmental Risk(s)
- Vegetation density and risk assessment
- Construction review (area(s) of concern)

Additional Option(s) or Comment(s):

Bio Constraints

1. There is California red-legged frog BAHCP modeled habitat within the project area, no constraints as long as species-specific AMMs are implemented.

Could potentially require work during the dry season (May 15 - Oct 15) and/or biomonitoring. Mitigation expenses should be considered for undergrounding portions within modeled habitat. Roughly 23cents/sqft.

2. There is 1 intermitent creek crossing. **Potential Permitting***

Cultural Constraints

OH only: Potential cost constraint

Pre-activity survey of the entire distribution line and decommissioned line; If need for monitoring could last one week or more of fieldwork

UG only: Cost constraint

Pre-activity survey of the entire distribution line and decommissioned line. Following the survey, trenching activities along the entire line could require archaeological monitoring

EFS Constraints

No Constraints

PSS Review

History of PSPS events in the area

Public Safety Specialist Evaluation of Fuels, Fire History, Ingress and Egress within Project Area

Project:

- Silverado 2102 H01-LR58626

Phases:

- All Phases

CPUC Fire Threat Tier:

- All of Phases of the project are within Tier 3 of the High Fire Threat District map.

Location of project, fuel types, and population density:

- Silverado 2102 project is surrounded by grass oak woodland and some small pockets of brush. There is one small agricultural areas to the Southeast on the project
- The population density is considered low due to rural ranch/farm type setting of the area.

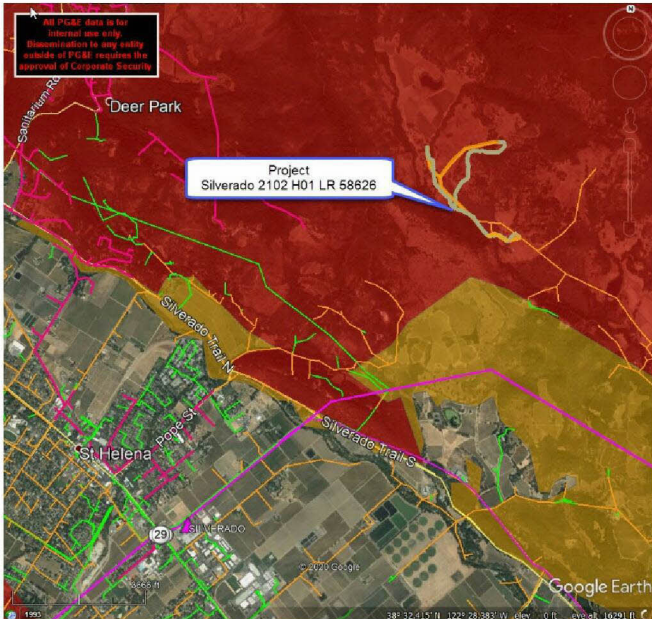
Fire History:

- This area has significant fire history directly impacting the project area. These fires include the Glass and LNU Complex of 2020, Kincade Fire of 2019, County Fire 2018, Atlas, Tubbs and Nuns Fires of 2017, Rocky, Valley, and Jerusalem of 2015.

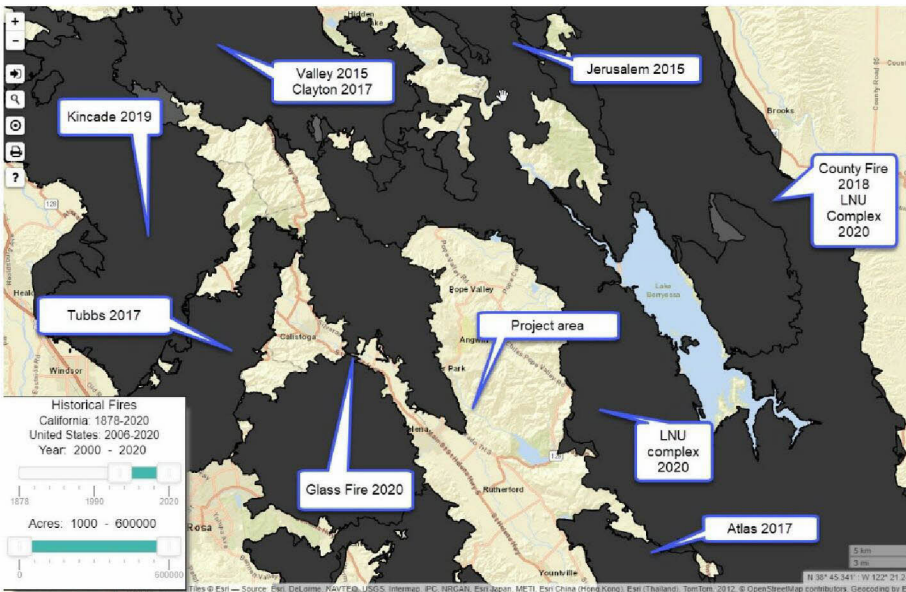
Routes of travel for first responders and evacuees if a fire happens:

- The area of the project is off of rural one to one and a half lane roads.
- These road dead end out by the project.
- Even though these roads are the only way in and out of the area, the population density is so limited, they will not be a major egress route for civilians.
- The roads will be the only ingress route for first responders.

Project area:



Fire History:



Northern Region

Public Safety Specialist Supervisor

Pacific Gas and Electric Company

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Desk-Top Review Results

Purpose: This checklist is to be used to methodically analyze the project to determine final scope to eliminate/mitigate the fire risk to the maximum extent.

Overhead Line Elimination:

Yes No **DER alternatives to consider** (these location(s) to be sent to [REDACTED])

Yes No **Idle facilities to remove** (These location(s) to be sent to [REDACTED])

Yes No **Redundant ties to remove** (These location(s) should be run through Distribution Reliability Planning)

SAP Equip. ID (Start)	SAP Equip. ID (Finish)	OH Elimination Type (DER, Idle, Tie Rem.)	Additional Notes:
1*****	1*****		
1*****	1*****		
1*****	1*****		
1*****	1*****		
1*****	1*****		

Overhead to Underground Conversion:

Yes No **Lines to be considered for UG** (These location(s) to be sent to [REDACTED])

SAP Equip. ID (Start)	SAP Equip. ID (Finish)	Trench, Bore, or Plow-in	Additional Notes:
1*****	1*****		
1*****	1*****		
1*****	1*****		
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There are several factors that should be considered in identifying these potential overhead to underground conversions:

- Is there a viable route available? Is there a dedicated street/easement available?
- What is the feasibility of new land rights? What is the soil condition?
- Are there a significant number of service drops, tap-lines, or other overhead equipment?

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Relocation of Facilities:

Yes No **Lines to be considered for relocation** (These location(s) to be sent to [REDACTED])

SAP Equip. ID (Start)	SAP Equip. ID (Finish)	OH, Trench, Bore, or Plow-in	Additional Notes:
[REDACTED]	[REDACTED]	OH	
1*****	1*****		
1*****	1*****		
1*****	1*****		
1*****	1*****		
1*****	1*****		
1*****	1*****		
1*****	1*****		

There are numerous other strategies that may be employed or prepared for in scoping a CWSP project. The following examples should be considered, and teams should be invited to participate:

- Rapid Earth Fault Current-Limiter (REFCL) – This system can detect phase-to-earth faults. They then cancel the voltage on the fault within milliseconds of detecting it and limit the voltage of the fault to below the point where it can start a fire. This is only applicable on 3 wire systems and it requires significant modifications to the circuits.
 - Yes No **Circuit being considered for REFCL?** (Please include [REDACTED])
 - If Yes, then System Automation will need to provide Planning support in adjusting necessary scope to support a future REFCL protection scheme.

- Resiliency Zones (RZ)- These are areas deemed critical in nature to support life and health in an area during significant outages and PSPS events. If in Tier 2/3 areas, underground is required. This needs to be considered when designing these zones.
 - Yes No **Circuit being considered for an RZ?** (Please include [REDACTED])
 - If Yes, additional UG and SCADA equipment may be required to support. Microgrid Strategy Implementation will need to provide Planning support in adjusting necessary scope to allow for future RZ's in the area.

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Post Field Check Results

This section filled out by Santa Rosa Estimating. Analysis based on Field Visit on 12/23/2020 – [REDACTED]

Overhead Line Elimination:

No line elimination identified/possible.

Overhead to Underground Conversion:

An ideal underground conversion not identified for this project.

Relocation of Facilities:

Existing line has limited tree exposure through mature pine & oak trees. Taller poles will move covered conductor above tree line.

SAP Equip. ID (Start)	SAP Equip. ID (Finish)	OH, Trench, Bore, Plow-in	OK to Proceed (Y,N, N/A)	Field or Engineering Notes*
[REDACTED]	[REDACTED]	OH	N	[REDACTED] This location was field checked on 12/23/20. Estimating as determined that it is possible for this line to be relocated but doesn't feel like it would be a benefit. Relocation would result in removal of 4 poles and installation of 4 poles removal of 1700' of oh line and installing 1200', 500' less. New route may cross 4 properties and require new easements. If relocation is chosen, project management would need to reach out to property owners prior to start of job.





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Additional Notes and attachment descriptions:

█ This location was field checked on 12/23/20. It is my recommendation that the entire line be hardened in place. I don't foresee any estimating hang-ups with this option.

Approval(s):

Project Manager -	█, Project Manager _____	Date:
Estimating -	█, <u>Manager, Internal Estimating & Design</u>	Date: EDRS
Asset Strategy -	█, <u>Manager, Grid Design</u>	Date: EDRS