

CWSP SYSTEM HARDENING FIELD SCOPING DOCUMENT

PM: [REDACTED]	Project Name: ECOP - SILVERADO 2104 - H05-LR726	
Notification: [REDACTED]	Region: Bay Area	City: Pope Valley
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)	3.18					
Convert OH to UG	2.87					
Relocation (OH to OH location)	0.00					
Reconfigure	Remove	0.46				
	Add	0.00				
Totals	6.51					

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. Potential suitable habitat for foothill yellow-legged frog and western pond turtles is also present. Could potentially require work during the dry season (May 15 - Oct 15) and/or biomonitoring.

3. Abundant stock ponds with potential suitable habitat for tricolored blackbird are found within the project vicinity. Many locations are within the standard buffer of 350 feet of suitable nesting habitat (nesting March 1 – August 15). Potential for nesting bird surveys depending on scope of work within areas adjacent to stock ponds.

4. There are 18 water crossings and 1 pond crossing. Potential Permitting*

Cultural Constraints

OH+UG (as designed): Cost constraint

Pre-activity survey and spot monitoring will be necessary, including full time monitoring of undergrounding activities. These efforts will take at least 2-3 weeks of field work.

OH only: Cost constraint (minor)

Pre-activity survey and spot monitoring will be necessary. These efforts will take at least 1-2 weeks of field work.

UG only: Cost constraint (major)

Pre-activity survey and full time monitoring of all undergrounding activities would be necessary. These efforts will take several months of fieldwork.

EFS Constraints

No Constraints

Three contaminated sites but they are all completed-case closed.

PSS Review

PSPS events occur regularly

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

Project:

- Silverado 2104 H05-LR726

Phases:

- All Phases

CPUC Fire Threat Tier:

- All of Phases of the project are within a Tier 2 and Tier 3 of the High Fire Threat District map. There is a tiny section of un-tiered area but it is traversed to get to more Tier 2 area.

Location of project, fuel types, and population density:

- Silverado 2104 project is surrounded by agriculture, grass oak woodland and some small pockets of brush.
- 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, Kincaide Fire of 2019, County Fire 2018, Atlas, Tubbs and Nuns Fires of 2017, Rocky, Valley, and Jerusalem of 2015.

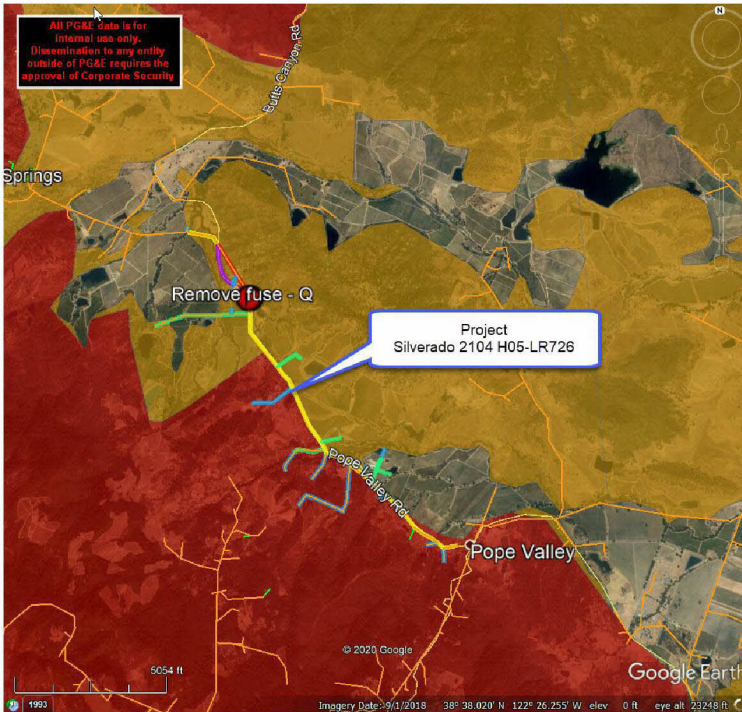
Routes of travel for first responders and evacuees if a fire happens:

- Pope Valley Road is the main road into and out of the area for both civilians and first responders. The road needs to stay open during an emergency incident due to the loss would stop all traffic in either direction.

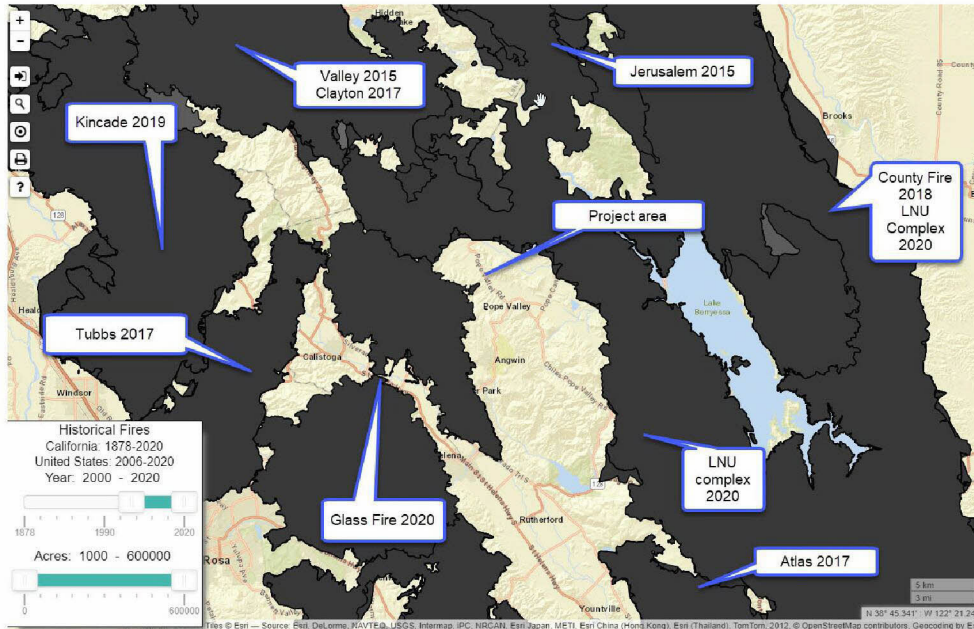
CWSP SYSTEM HARDENING FIELD SCOPING DOCUMENT

- Area of un-tiered area should remain hardened as recommended due to location of Tier 2 and Tier 3 around it.

Project area:



Fire History:



Northern Region

Public Safety Specialist Supervisor

CWSP SYSTEM HARDENING FIELD SCOPING DOCUMENT

Pacific Gas and Electric Company

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:
[REDACTED]	[REDACTED]	Idle / Remote	Potentially Idle .46 mile
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:
[REDACTED]	[REDACTED]	Trench / Bore	0.623 miles of OH to UG. Relocation from over fields to roadway
[REDACTED]	[REDACTED]	Trench / Bore	2.25 miles Pope Valley Road
1*****	1*****		
1*****	1*****		
1*****	1*****		
1*****	1*****		
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CWSP SYSTEM HARDENING FIELD SCOPING DOCUMENT

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?

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:
1*****	1*****		
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.

CWSP SYSTEM HARDENING FIELD SCOPING DOCUMENT

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 -see notes below.

SAP Equip. ID (Start)	SAP Equip. ID (Finish)	OH Elimination Type (DER, Idle, Tie Rem.)	OK to Proceed (Y,N, N/A)	Field or Engineering Notes*
[REDACTED]	[REDACTED]	Idle	N	Potentially Idle .46 mile [REDACTED] - This location was field checked on 12/23/20. This line was checked and is in use, line feeds vineyard pumps.
[REDACTED]	[REDACTED]	Idle	Y	3 pot bank at this location is idle and may be removed

Overhead to Underground Conversion:

SAP Equip. ID (Start)	SAP Equip. ID (Finish)	Trench, Bore, or Plow-in	OK to Proceed (Y,N, N/A)	Field Notes*
[REDACTED]	[REDACTED]	Trench & Bore	Y	0.623 miles of OH to UG. Relocation from over fields to roadway [REDACTED] This location was field checked on 12/23/20. Estimating foresees no real concern with this request. See comments at end.
[REDACTED]	[REDACTED]	Trench & Bore	Y	2.25 miles Pope Valley Road [REDACTED] This location was field checked on 12/23/20. Estimating foresees no real concern with this request depending on planning's design. See comments at end.

Relocation of Facilities:

Relocating overhead facilities to underground, and within franchise, will be beneficial. There is enough space to locate facilities out of the traveled way and allow for vehicle parking during inspection/restoration.

CWSP SYSTEM HARDENING FIELD SCOPING DOCUMENT

Additional Notes and attachment descriptions:

██████████ This location was field checked on 12/23/20. Estimating recommends hardening all tap lines in place and foresees no difficulties. Estimating feels even though there may be no significant issues with hardening in place for the main line (397al), that the underground option for this area may be a better option. During fielding estimating used fence lines to determine franchise/Private property. It is our recommendation that a base map is developed for the entire underground route. Estimating feels there is adequate space for subsurface facilities within franchise but pad mounted facilities may pose a challenge to install and maintain clearances away from road.

Additional notes about undergrounding:

There looks to be a few locations where underground land rights will be required to pick up an existing overhead tap line.

Will PT be a joint occupant in our trench?

Is PG&E willing to convert panels to omit the installation or replacement of service clearance poles? Example – SAP ID: ██████████ – one span (244') of 12kv primary – instead of primary riser, option to convert customer panel and feed with underground service. Support from local customer outreach specialist will be required to successfully pull this off, if this approached is agreed to.

It is also our recommendation that the departments that would have to access these locations on a regular basis for inspections and maintenance also be given the chance to comment.

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