TAHOE REGIONAL PLANNING AGENCY

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PO Box 5310
Stateline, NV 89449-5310

Location
128 Market Street
Stateline, NV 89449

Contact
Phone: 775-588-4547
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www.trpa.org

STAFF REPORT

Date: February 6, 2020

To: TRPA Hearings Officer

From: TRPA Staff

Subject: Cascade Creek Overhead Powerline Project, State Route 89 at Cascade Creek, El Dorado County, California; Assessor's Parcel No: 018-330-008, et.al; TRPA File No: ERSP2019-1616

Proposed Action:
Hearings Officer action on the proposed project and related findings (Attachment A) based on this staff summary and the attached draft permit (Attachment B).

Staff Recommendation:
Staff recommends the Hearings Officer make the required findings and approve the project subject to the conditions in the draft permit.

Project Description:
This project is the replacement and realignment of deteriorating power poles and associated overhead wire near State Route 89 at Cascade Creek. Thirteen existing poles will be cut by hand crews and then airlifted out by helicopter, as the area is steep and inaccessible to vehicles and equipment. Approximately 2,500 linear feet of overhead wire will be removed, including three overhead crossings of State Route 89 (near the first switchback headed north toward Emerald Bay). To make maintenance easier in the future, it is proposed to relocate the powerline slightly to the south along an existing access road that serves a water tank and residences at Cascade Lake. The proposed realignment will run adjacent to the unpaved road, will cross State Route 89 near the bridge at Cascade Creek, and will then tie into an existing line along Cascade Road. This relocated section of line requires installation of seven new power poles and two switch boxes. Approximately 550 linear feet of line on the northeast side of the highway (near Cascade Road) will be underground, with the remainder overhead. Undergrounding the line near the crossing of the highway was determined to be infeasible due to the proximity to Cascade Creek as well as easement restrictions. Spanning the creek overhead will prevent disturbance to the Stream Environment Zone.

Site Description:
The project area includes both publicly and privately owned land (parcels 018-060-003, 018-330-008, 018-090-055, and 018-281-009); access will be granted to Liberty Utilities via easement. This area is mapped as Class 1a and Class 3 (Attachment D). There is an unmapped area of Stream Environmental Zone (SEZ) where Cascade Creek meets State Route 89, but the project will not create any temporary or permanent disturbance in the SEZ.

Issues/Concerns: The proposed project involves a special use determination and therefore requires Hearing Officer review in accordance with Chapter 2, Subsection 2.2.2.a of the TRPA Code. All other issues are discussed in the following staff analysis:

Staff Analysis:

A. Environmental Review: TRPA staff completed the Article V(g) Findings and the applicant prepared an Initial Environmental Checklist in accordance with Chapter 4, Subsection 4.3, of the TRPA Code of Ordinances. All responses contained on said checklists indicate compliance with the environmental thresholds and supports a mitigated finding of no significant effect. A copy of the completed checklists will be made available at the Hearings Officer hearing and at TRPA.

B. Local Plan: The proposed use (linear public facilities) is identified as a Special Use in Plan Area Statement 146- Emerald Bay.

C. Land Coverage: The project will result in the creation of 28 square feet of Class 3 land coverage for installation of two switch boxes on parcel 018-090-055. To mitigate for this permanent disturbance on sensitive land, restoration credits will be transferred in at a rate of 1.5:1 (42 square feet) pursuant to TRPA Code Section 30.5.1.C for Public Service Facilities.

D. Scenic Quality: The project area is visible from Scenic Roadway Unit #3- Emerald Bay, which is currently in attainment with TRPA scenic thresholds. This project will improve the scenic quality of the area because it reduces infrastructure visible from the scenic roadway. The project will result in a net reduction of approximately 2,400 linear feet of visible wire (including three aerial crossings of the highway) as well as a net reduction of 6 visible power poles (Attachment E).

E. Cultural Resources: A cultural resources report was prepared by Natural Investigations Company, and the existing and proposed alignment surveyed on foot. Several cultural sites within the vicinity of the project area were identified in prior cultural resource studies, but no additional sites were found during the field survey. Due to the proximity of identified indigenous archeological sites to the project area, the draft permit requires that a representative from the Washoe Tribe be present to monitor project-related ground disturbance.

F. Biological Resources: A thorough survey of special status plants and animals was completed by Ascent Environmental. No special status plants or animals were found within the project area. Although Osprey nests have been identified in the area around Emerald Bay, this project will not disturb any areas within the quarter mile buffer around the nests. Additionally, no suitable Osprey habitat is being disturbed or removed as part of the project.

Required Actions:
Staff recommends the Hearings Officer take the following actions, based on this staff summary and evidence in the record:

1) Approve the findings (Attachment A) contained in this staff summary, and a mitigated finding of no significant environmental effect.

2) Approve the project, based on the staff summary, and record evidence, subject to the conditions contained in the attached Draft TRPA Permit (Attachment B).

Contact Information:
If you have any questions, please contact Julie Roll, Senior Planner at jroll@trpa.org or (775) 589-5247.

Attachments:

A. Required Findings/Rationale
B. Draft Permit
C. Site Plans
D. Mapped Land Capability
E. Existing Scenic Conditions

Attachment A

Required Findings/Rationale

Required Findings: The following is a list of the required findings as set forth in Chapters 4, 21, and 30 of the TRPA Code of Ordinances. Following each finding, agency staff has briefly summarized the evidence on which the finding can be made.

1. Chapter 4 – Required Findings:

    a. The project is consistent with and will not adversely affect implementation of the Regional Plan, including all applicable Goals and Policies, Plan Area Statements and maps, the Code and other TRPA plans and programs.

    All evidence in the file and public record demonstrates that the proposed project will not adversely impact the Regional Plan, is consistent with Plan Area Statement 146-Emerald Bay, complies with the TRPA Code of Ordinances, and will not adversely impact other TRPA plans and programs.

    b. The project will not cause the environmental threshold carrying capacities to be exceeded.

    The basis for this finding is provided on the checklists entitled "TRPA Initial Environmental Checklist" and "Project Review Conformance Checklist and Article V(g) Findings," in accordance with Chapter 6, Subsection 6.3.B of the TRPA Code of Ordinances. All responses contained on said checklists indicate compliance with the environmental threshold carrying capacities. A copy of the completed checklists will be made available at the Hearings Officer public hearing and at TRPA.

    c. Wherever federal, state or local air and water quality standards applicable for the Region, whichever are strictest, must be attained and maintained pursuant to Article V(g) of the TPRA Compact, the project meets or exceeds such standards.

    The project, as conditioned, will not have an adverse impact on applicable air and water quality standards for the Region. Temporary water quality Best Management Practices will be used during construction to prevent sediment discharge. Specific measures will be taken to protect the Cascade Creek stream environment zone, including use of erosion control barriers. No staging and storage of materials or heavy equipment will enter the creek or drainage area.

2. Chapter 21 – Special Use Findings:

    a. The project, to which the use pertains, is of such a nature, scale, density, intensity and type to be an appropriate use for the parcel on which, and surrounding area in which, it will be located.

    Plan Area Statement 146- Emerald Bay is mostly vacant, high hazard land extending from Cascade Lake to Rubicon Point. The land use classification is recreation, which includes several campgrounds and hiking trailheads. There are several residences on Cascade Lake and along the shore of Lake Tahoe on Cascade Road. The existing Meyers 3400 distribution line runs through this area. The proposed project would keep the existing line but change the alignment and reduce the number of power poles and

amount of overhead wire. Therefore, the existing public service use will not change or be intensified in any way.

b. The project to which the use pertains, will not be injurious or disturbing to the health, safety, enjoyment of property, or general welfare of persons or property in the neighborhood, or general welfare of the region, and the applicant has taken reasonable steps to protect against any such injury and to protect the land, water, and air resources of both the applicant's property and that of surrounding property owners.

The project as conditioned in the draft permit will not cause adverse impacts to health, safety and general welfare of the region. Temporary BMPs will be used to protect water quality and disturbed areas will be restored upon completion of the project.

c. The project, to which the use pertains, will not change the character of the neighborhood detrimentally affect or alter the purpose of the applicable planning area statement, community plan and specific or master plan, as the case may be.

The proposed project as conditioned will not change the character of the area as the proposed project will not add additional capacity. The project is intended to enhance performance and reliability of existing power lines.

3. **Chapter 30- Land Coverage**

a. Land coverage and disturbance for public service facilities may be permitted in Land Capability Districts 1a, 1c, 2, and 3 if TRPA finds that:

1. The project is necessary for public health, safety, or environmental protection;

Replacement of the existing deteriorating electrical distribution line is essential for continuing reliable service and to reduce fire hazards associated with aging infrastructure. This project will therefore benefit residents in the area and help preserve the exceptional natural areas surrounding Emerald Bay.

2. There is no reasonable alternative, including relocation, that avoids or reduces the extent of encroachment in Land Capability Districts 1a, 1c, 2, or 3; and

The entire project area is comprised of high hazard land, so there is no option for placement of coverage on high capability land. The amount of coverage created will be the minimum to accomplish the project.

3. The impacts of the coverage and disturbance are fully mitigated in the manner prescribed by subparagraph 30.5.1.B.5.

Mitigation will occur in accordance with Section 30.53.1.B.5, which requires restoration credits at a rate of 1.5:1.

Attachment B

Draft Permit

February 13, 2020

Liz Lawton
Liberty Utilities
933 Eloise Ave.
South Lake Tahoe, CA 96150

CASCADE CREEK OVERHEAD POWERLINE PROJECT, STATE ROUTE 89 AT CASCADE CREEK, EL DORADO COUNTY, CALIFORNIA, ASSESSOR'S PARCEL NUMBER (APN) 018-330-008, 018-060-003, 018-090-055, 018-281-009, TRPA FILE NUMBER ERSP2019-1616

Dear Ms. Lawton:

Enclosed please find the Tahoe Regional Planning Agency (TRPA) permit and attachments for the project referenced above. If you accept and agree to comply with the Permit conditions as stated, please make a copy of the permit, sign the "Permittee's Acceptance" block on the first page the Permit, and return the signed copy to TRPA within twenty-one (21) calendar days of issuance. Should the permittee fail to return the signed permit within twenty-one (21) calendar days of issuance, the permit will be subject to nullification. Please note that signing the permit does not of itself constitute acknowledgement of the permit, but rather acceptance of the conditions of the permit.

TRPA will acknowledge the original permit only after all standard and special conditions of approval have been satisfied. Please schedule an appointment with me to finalize your project. Due to time demands, TRPA cannot accept drop-in or unannounced arrivals to finalize plans

Pursuant to Rule 11.2 of the TRPA Rules of Procedure, this permit may be appealed within twenty-one (21) days of the date of this correspondence.

If you have any questions, please contact me by phone at (775) 589-5247 or by email at jroll@trpa.org.

Sincerely,

Julie Roll
Senior Planner
Current Planning Department

DRAFT PERMIT

PROJECT DESCRIPTION: Linear Public Service/Powerline Upgrades

Assessor Parcel Number: 018-330-008, 018-060-003, 018-090-055, 018-281-009

PERMITTEE(S): Liberty Utilities FILE# ERSP2019-1616

CITY/LOCATION: El Dorado County/State Route 89 at Cascade Creek

Having made the findings required by Agency ordinances and rules, the TRPA Hearings Officer approved the project on February 13, 2020, subject to the standard conditions of approval attached hereto (Attachment Q) and the special conditions found in this permit.

This permit shall expire on February 13, 2023, without further notice unless the construction has commenced prior to this date and diligently pursued thereafter. Commencement of construction consists of pouring concrete for a foundation and does not include grading, installation of utilities or landscaping. Diligent pursuit is defined as completion of the project within the approved construction schedule. The expiration date shall not be extended unless the project is determined by TRPA to be the subject of legal action which delayed or rendered impossible the diligent pursuit of the permit.

NO TREE REMOVAL, CONSTRUCTION OR GRADING SHALL COMMENCE UNTIL:

(1) TRPA RECEIVES A COPY OF THIS PERMIT UPON WHICH THE PERMITTEE(S) HAS ACKNOWLEDGED RECEIPT OF THE PERMIT AND ACCEPTANCE OF THE CONTENTS OF THE PERMIT;
(2) ALL PRE-CONSTRUCTION CONDITIONS OF APPROVAL ARE SATISFIED AS EVIDENCED BY TRPA'S ACKNOWLEDGEMENT OF THIS PERMIT;
(3) THE PERMITTEE OBTAINS A COUNTY BUILDING PERMIT. TRPA'S ACKNOWLEDGEMENT IS NECESSARY TO OBTAIN A COUNTY BUILDING PERMIT. THE COUNTY PERMIT AND THE TRPA PERMIT ARE INDEPENDENT OF EACH OTHER AND MAY HAVE DIFFERENT EXPIRATION DATES AND RULES REGARDING EXTENSIONS; AND
(4) A TRPA PRE-GRADING INSPECTION HAS BEEN CONDUCTED WITH THE PROPERTY OWNER AND/OR THE CONTRACTOR.

TRPA Executive Director/Designee Date

PERMITTEE'S ACCEPTANCE: I have read the permit and the conditions of approval and understand and accept them. I also understand that I am responsible for compliance with all the conditions of the permit and am responsible for my agents' and employees' compliance with the permit conditions. I also understand that if the property is sold, I remain liable for the permit conditions until or unless the new owner acknowledges the transfer of the permit and notifies TRPA in writing of such acceptance. I also understand that certain mitigation fees associated with this permit are non-refundable once paid to TRPA. I understand that it is my sole responsibility to obtain any and all required approvals from any other state, local or federal agencies that may have jurisdiction over this project whether or not they are listed in this permit.

Signature of Permittee(s) Date

PERMIT CONTINUED ON NEXT PAGE

APN 018-330-08, ET. AL.
FILE NO. ERSP2019-1616

Security Posted (1): Amount $5,000 Type _____ Paid _____ Receipt No. _____

Security Administrative Fee (2): Amount _____ Paid _____ Receipt No. _____

Notes:

(1) See Special Condition 3.C

(2) Consult the TRPA filing fee schedule for the current security administration fee

Required plans determined to be in conformance with approval: Date: _____

TRPA ACKNOWLEDGEMENT: The permittee has complied with all pre-construction conditions of approval as of this date and is eligible for a county building permit:

_____ _____

TRPA Executive Director/Designee Date

SPECIAL CONDITIONS

1. This permit specifically authorizes the replacement and realignment of deteriorating power poles and associated overhead wire near State Route 89 at Cascade Creek. Thirteen existing poles will be cut by hand crews and then airlifted out by helicopter. Approximately 2,500 linear feet of overhead wire will also be removed, including three overhead crossings of State Route 89. The powerline will be relocated slightly to the south adjacent to an existing access road that serves a water tank and residences at Cascade Lake. The new alignment requires seven new power poles, approximately 120 feet of new overhead wire crossing State Route 89, and approximately 208 cubic yards of excavation for undergrounding 550 linear feet of line on the northeast side of the highway. A total of 42 square feet of restoration credits will be transferred to parcel 018-090-055 to mitigate for the creation of 28 square feet of coverage created in Class 3 for the installation of two switch boxes.

2. The Standard Conditions of Approval listed in Attachment Q shall apply to this permit.

3. Prior to permit acknowledgement, the following conditions of approval must be satisfied.

   A. Revise the site plans as follows:

      (1) Include land capability classifications on the site plan

      (2) Show all trees to be removed

      (3) Include parcels numbers within the project area (018-060-003, 018-330-008, 018-090-055, and 018-281-009)

(4) Indicate the location of the construction staging area(s)

(5) Include a note that no temporary or permanent disturbance to the riparian area around Cascade Creek is permitted.

(6) Identify the location of temporary erosion control measures and provide a detail for installation.

B. The permittee shall submit a project construction schedule to TRPA prior to permit acknowledgement or at the TRPA pre-grade inspection. Said schedule shall include completion dates for each item of construction, as well as temporary BMP installation.

C. The security for this project shall be $5,000. The security shall be released upon completion of the project and satisfaction of all permit conditions.

D. Provide evidence that 42 square feet of restoration credits has been transferred to parcel 018-090-055.

E. The permittee shall submit three sets of final construction drawings and site plans to TRPA.

4. Prior to release of the security, provide photo documentation that the area where the power poles are removed has been stabilized and restored back to a natural state.

5. A representative from the Washoe Tribe shall be present during all ground-disturbing activities to monitor for cultural resources.

6. If any cultural resources are discovered during construction, construction must immediately cease, and an archeologist consulted for an assessment and possible mitigation. TRPA shall be notified immediately of such discovery.

7. Any discovery of a TRPA sensitive species or species of interest shall immediately be reported to the TRPA Compliance Inspector and all construction activity shall cease. Any discovered nests, dens or plant locations shall be protected in accordance with TRPA guidelines.

8. In the event that human remains are discovered, the El Dorado Coroner's offices shall be contacted and, if the remains are determined to be Native American, the respective California Office of Historic Preservation shall also be notified in accordance with Section 5020 of the California State Law & Historic Preservation Statutes Native American Heritage Commission.

9. Temporary BMPs may be field fit by the Environmental Compliance Inspector where appropriate.

10. Maximum excavation depth shall not exceed five feet.

11. All areas disturbed during construction shall be restored prior to release of the security.

12. Any normal construction activities creating noise in excess of the TRPA noise standards shall be considered exempt from said standards provided all such work is conducted between the hours of 8:00 A.M. and 6:30 P.M.

13. All waste resulting from the saw-cutting of pavement shall be removed using a vacuum (or other TRPA approved method) during the cutting process or immediately thereafter. Discharge of waste material to surface drainage features is prohibited and constitutes a violation of this permit.

14. All excess spoil material from excavation work shall be removed from the project area and disposed of at a site approved by TRPA.

15. TRPA reserves the right to amend any portion of this permit or construction operation while in progress if it is determined that the project construction is causing significant adverse effects.

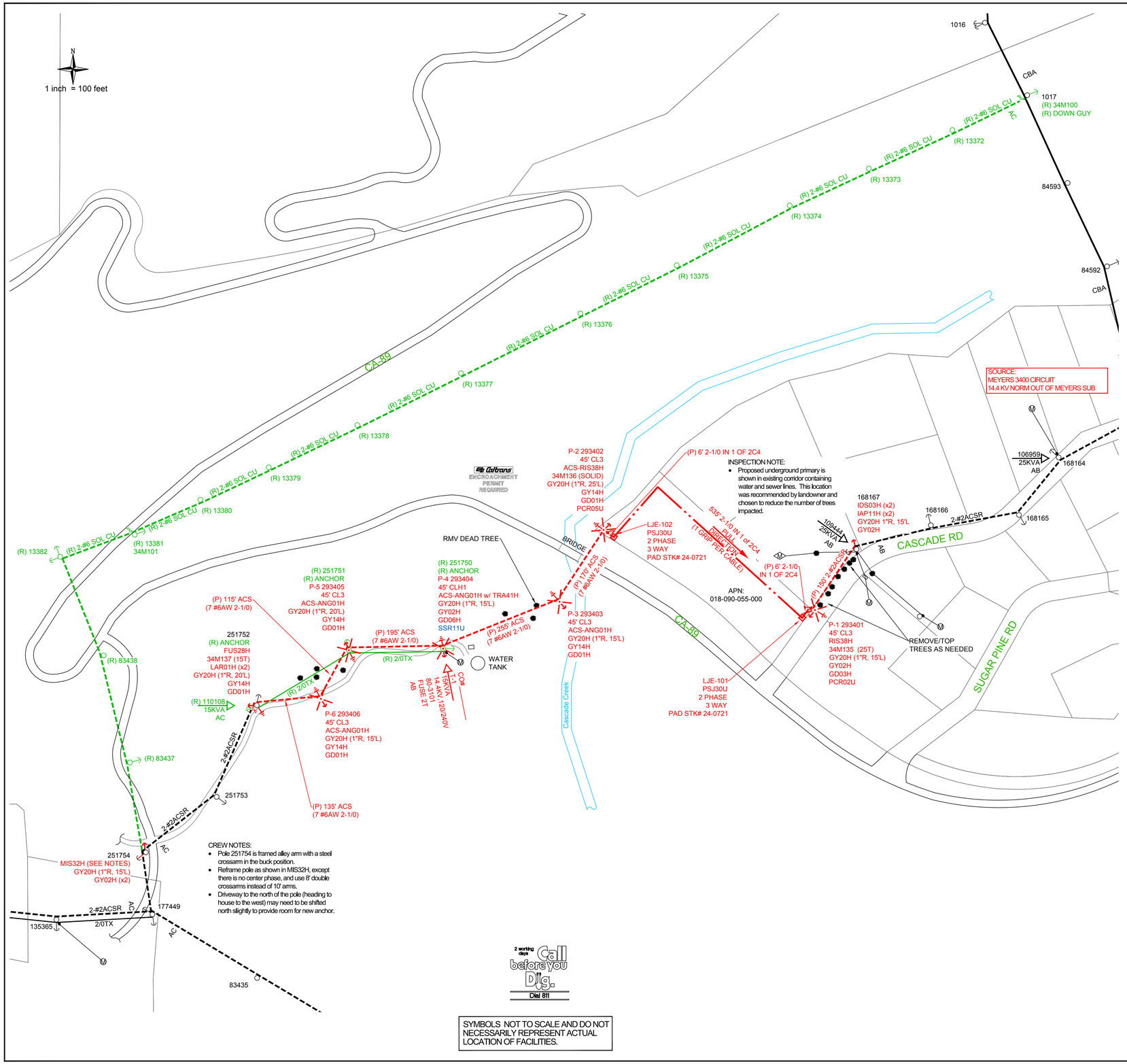
16. To the maximum extent allowable by law, the Permittee agrees to indemnify, defend, and hold harmless TRPA, its Governing Board, its Planning Commission, its agents, and its employees (collectively, TRPA) from and against any and all suits, losses, damages, injuries, liabilities, and claims by any person (a) for any injury (including death) or damage to person or property or (b) to set aside, attack, void, modify, amend, or annul any actions of TRPA. The foregoing indemnity obligation applies, without limitation, to any and all suits, losses, damages, injuries, liabilities, and claims by any person from any cause whatsoever arising out of or in connection with either directly or indirectly, and in whole or in part (1) the processing, conditioning, issuance, or implementation of this permit; (2) any failure to comply with all applicable laws and regulations; or (3) the design, installation, or operation of any improvements, regardless of whether the actions or omissions are alleged to be caused by TRPA or Permittee.

    Included within the Permittee's indemnity obligation set forth herein, the Permittee agrees to pay all fees of TRPA's attorneys and all other costs and expenses of defenses as they are incurred, including reimbursement of TRPA as necessary for any and all costs and/or fees incurred by TRPA for actions arising directly or indirectly from issuance or implementation of this permit. TRPA will have the sole and exclusive control (including the right to be represented by attorneys of TRPA's choosing) over the defense of any claims against TRPA and over their settlement, compromise or other disposition. Permittee shall also pay all costs, including attorneys' fees, incurred by TRPA to enforce this indemnification agreement. If any judgment is rendered against TRPA in any action subject to this indemnification, the Permittee shall, at its expense, satisfy and discharge the same.

END OF PERMIT

Attachment C

Site Plans



CREW NOTES:

- Pole 251754 is framed alley arm with a steel crossarm in the buck position.
- Reframe pole as shown in MIS32H, except there is no center phase, and use 8' double crossarms instead of 10' arms.
- Driveway to the north of the pole (heading to house to the west) may need to be shifted north slightly to provide room for new anchor.

2 working days Call before you Dig. Dial 811

SYMBOLS NOT TO SCALE AND DO NOT NECESSARILY REPRESENT ACTUAL LOCATION OF FACILITIES.

LIBERTY UTILITIES TO FURNISH & INSTALL:

- Approx. 150 ckt. ft. (330 cbl. ft.) of 2 phase o/h primary conductor c/o 2-#2 ACSR
- Approx. 547 ckt. ft. (1,302 cbl. ft.) of 15kV 2 phase u/g primary conductor c/o 2-1/0 in 1C4" w/ 1C4" spare (conduit by contractor)
- One (1) 1 phase 15 kVA o/h transformer, 14.4/24.9kV, 120/240V, stk. # 80-3101
- One (1) 45 ft CLH1 wood pole (55' CLH1 ordered, cut down to 45')
- Five (5) 45 ft CL3 wood poles
- Four (4) anchors c/o 20" plate, 1" rod, and 3/8" E.H.S. down guy (lead lengths as shown)
- Five (5) anchors c/o 20" plate, 1" rod, and 1/2" E.H.S. down guy (lead lengths as shown)
- One (1) E.H.S. down guy to an existing anchor
- Six (6) Fused cutouts (fuse sizes as shown)
- Stand-off brackets and lag screws for risers
- Eight (8) 8' x 5/8" ground rods, one at each ACS pole location, and two at each transformer pole location

All excavation work in excess of 3 cubic yards must be done between May 1 and October 15 per TRPA grading season regulations

HENDRIX TO FURNISH:

- Approx. 870 ckt. ft. of 2 phase Aerial Spacer Cable System (messenger, conductor, grips, brackets, spacer and proprietary components)

LIBERTY UTILITIES TO INSTALL:

- Approx. 870 ckt. ft. of 2 phase Aerial Spacer Cable System (messenger, conductor, grips, brackets, spacer and proprietary components)

LIBERTY UTILITIES TO REMOVE:

- Approx. 2,545 ckt. ft. of 2 phase o/h primary conductor c/o 2-#6 copper
- Thirteen (13) wood poles, 35ft and 40 ft
- Four (4) single anchors, rods, and down guys

CONTRACTOR TO FURNISH AND INSTALL:

- Approx. 1,174 ft. 4" pvc conduit for underground primary and spare conduit

Unless otherwise noted on the map or by the Liberty Utilities inspector, all conduits to be DB120 pvc, gray, and mandrilled by the contractor - see Liberty Utilities standards CD0001U and CD0004

Install in all conduit 1/4" polyester pull line with sequential footage markings and a minimum breaking strength of 400 lbs.; pull line shall extend a min. of 5 ft from each end of the conduit

All conduits to use 3 ft radius sweeps, unless otherwise noted on the map or by the Liberty Utilities inspector; sweeps are not to be cut

Two (2) 1 phase junction enclosure pads 34"x60"x12" stk# 24-0721, per Liberty Utilities std. PE0025U

8' x 5/8" ground rods at junction enclosure locations

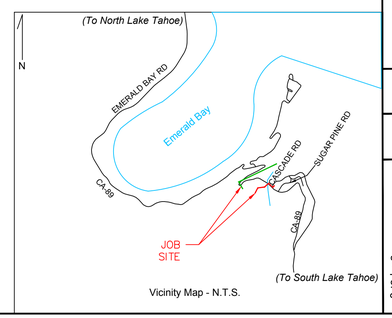
- All primary riser material in traffic areas to c/o 4" galvanized steel sweep, 10 ft of 4" galvanized steel conduit, coupling adapter and 30 ft of sch 40 pvc conduit (Liberty Utilities to provide stand-off brackets and lag screws, and to install sch 40 conduit on pole)
- All primary riser material in non-traffic areas to c/o 4" sch 80 sweep, 10 ft of 4" sch 80 conduit, coupling adapter and 30 ft of sch 40 pvc conduit (Liberty Utilities to provide stand-off brackets and lag screws, and to install sch 40 conduit on pole)

All trenching and backfill per applicable Liberty Utilities stds. TE0001, TE0003, TE0005, TE0020, and SUB01X (backfill per Liberty Utilities std RU0005U)

All street cut permits, pavement and concrete cutting, and replacement as required

All fencing, block wall, pavers, and landscaping removal and replacement as required

LIBERTY	11'
NEUTRAL	6'
PHONE/CABLE	22'
POLE TREE	45'



Vicinity Map - N.T.S.

Liberty Utilities
933 Elloet Ave.
South Lake Tahoe
California 96150
Phone: (530) 543-5235
Fax: (530) 544-4811

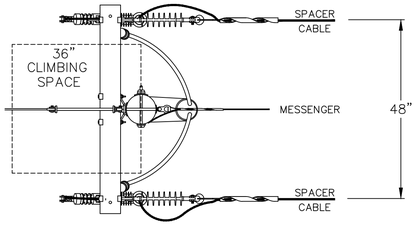
WMP - Cascade Pole Repl - Alternate Design
Liberty Utilities

Job Number: 8800-0118-0117
Service Number: n/a

Planner: John Perra (775) 870-0949
Customer: Liberty Utilities

No.	Revision	Date	Drawn	Designer	Review	Engineer
1	BASE	6/18/18	JJP			
2	ELECTRIC	9/25/19	JJP			
3						
4						
5						
6						

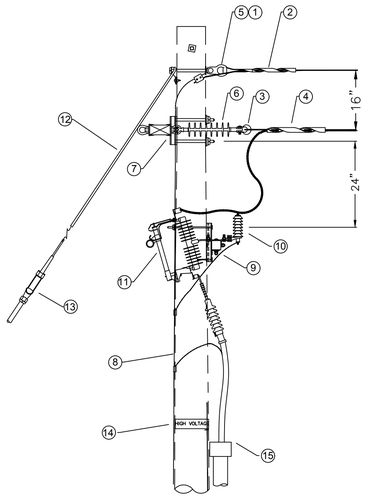
9/25/19
Page 1 of 6



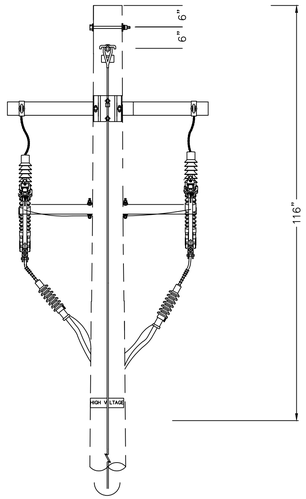
TOP VIEW

P-2 293402

2Ø FUSED UPFEED RISER
ACS-RIS38H
3 WIRE SYSTEM



SIDE VIEW



ELEVATION

FAVORITE		MATERIAL LIST	
ITEM	ACS - RIS38H	DESCRIPTION	NUMBER
1*	1	HEAVY DUTY THIMBLE CLEVIS, HENDRIX	HDTC
2*	1	PRESHAPED MESSENGER GRIP, HENDRIXTIRRUP, HENDRIX	-
3*	2	THIMBLE CLEVIS, HENDRIX	TC
4*	2	PRESHAPED CONDUCTOR GRIP, COATED, HENDRIX	-
5	1	NUT, EYE: OVAL, 3/4" DIA, GALV, SPEC MN-1	8800-131465
6	2	INSULATOR DEADEND SUSPENSION	IDS04H
7	1	APITONG PRIMARY DEADEND CROSSARM	XAW25H
8	1	GROUND ROD, CLAMP, COVERED #4CU WIRE, STAPLES, AND PG	GD_01H
9	1	EQUIPMENT BRACKET DELTA SINGLE PHASE APPLICATION	EB_08H
10	2	LIGHTNING ARRESTOR, DISTRIBUTION EQUIPMENT	LAR01H
11	2	CUTOUT, POLYMER, 100A	CON01H
12	1	1/2" GUY WITHOUT ANCHOR AND ROD	GY_14H
13	1	20" DIAGONAL CROSS PLATE ANCHOR W/ 1"X8' ROD	GY_20H
14	2	SIGN, ELEC SAFETY: "HIGH VOLTAGE", 3-1/2" X 14", YELLOW	8800-951020
15	1	PRIMARY CABLE RISER, TWO PHASE, NON-TRAFFIC APPLICATION	PCR05U
L	3.0	JOURNEYMAN LABOR	9100

NOTES:

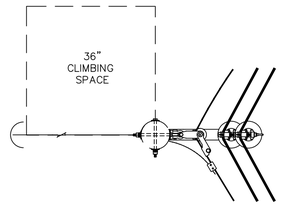
A. Item numbers marked with * to be provided by Hendrix.

B. Messenger cable and spacer cable to be provided by Hendrix.

C. Climbing and working space shall be provided on all structures. Refer to GO-95 rules 54.7 A1/A2/B, 84.7 and 93.

D. High Voltage signs required per GO-95, rule 51.6A.

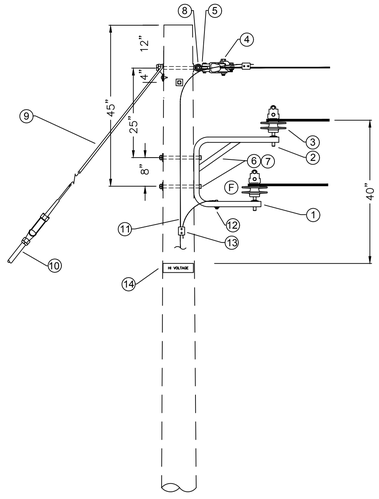
E. 25kV Hendrix components used on 15kV system to meet GO 95 clearance requirements.



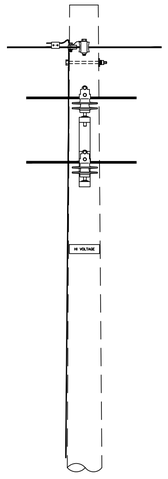
TOP VIEW

ACS-ANG01H

7°-60° ACS STRUCTURE
3 WIRE SYSTEM - 2Ø



SIDE VIEW



ELEVATION

FAVORITE		MATERIAL LIST	
ITEM	ACS - ANG01H	DESCRIPTION	NUMBER
1*	1	ANGLE BRACKET, HENDRIX	BA3-35
2*	2	INSULATOR PIN, HENDRIX	SSP-2
3*	2	INSULATOR, PIN TYPE, HENDRIX	HPI-25VTP
4*	1	PERMANENT STRINGING ANGLE CLAMP, HENDRIX	PSAC-01
5*	2	SHACKLE CLEVIS, HENDRIX	SC
6	2	BOLT, MACHINE: SQ HD, 5/8" DIA X 14", GALV	8800-130910
7	2	WASHER: SQUARE CURVED, 5/8", 2-1/2" SQ, HDG	8800-131780
8	1	NUT, EYE: OVAL, 3/4" DIA, GALV, SPEC MN-1	8800-131465
9	1	3/8" GUY WITHOUT ANCHOR AND ROD or 1/2" GUY WITHOUT ANCHOR AND ROD	GY_02H GY_14H
10	1	20" DIAGONAL CROSS PLATE ANCHOR W/ 1"X8' ROD	GY_20H
11	1	GROUND ROD, CLAMP, COVERED #4CU WIRE, STAPLES, AND PG	GD_01H
12	1	CONN, ELEC, POST: #10 SOLID CU-#1 STR CU, 1/2"	8800-253060
13	1	CLAMP, PARALLEL GROOVE: #6-2/0ACSR LINE, #6-2/0ACSR TAP, 2 BOLT	8800-191110
14	2	SIGN, ELEC SAFETY: "HIGH VOLTAGE", 3-1/2" X 14", YELLOW	8800-951020
L	3.0	JOURNEYMAN LABOR	9100

NOTES:

A. Structure for use in angle applications for line angles of 7°-60°.

B. Item numbers marked with * to be provided by Hendrix.

C. Messenger cable and spacer cable to be provided by Hendrix.

D. Climbing and working space shall be provided on all structures. Refer to GO-95 rules 54.7 A1/A2/B, 84.7 and 93.

E. High Voltage signs required per GO-95, rule 51.6A.

F. Insulator shown in lower position to maintain conductor clearance of 15" from pole centerline per GO-95, section III,Table 1. Insulator may be installed at upper inside position provided the required clearance can be achieved.

G. 25kV Hendrix components used on 15kV system to meet GO 95 clearance requirements.

Liberty Utilities
933 Eloise Ave
South Lake Tahoe
California 96150-5235
Phone: (530) 543-5235
Fax: (530) 544-4811

WMP - Cascade Pole Repl - Alternate Design

Liberty Utilities

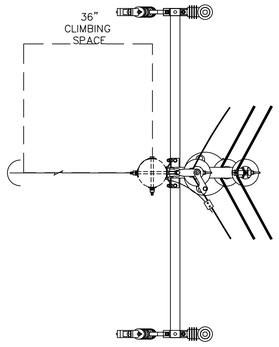
Job Number: 8800-0118-0117
Service Number: n/a

Customer:
Liberty Utilities

Planner:
John Perra (775) 870-0949

No.	Revision	Date	Drawn	Designer	Review	Engineer
1	BASE	6/18/18	JJP			
2	ELECTRIC	9/23/19	JJP			
3						
4						
5						
6						

9/25/19

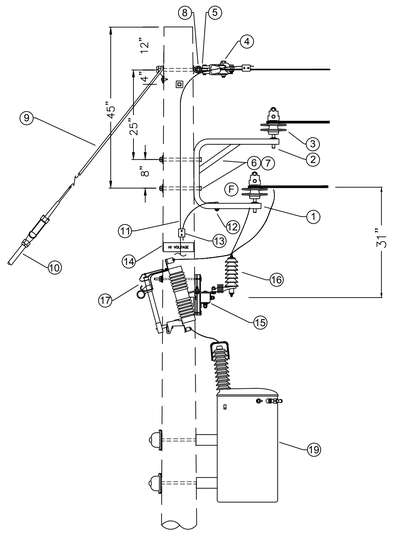


NOTE: JUMPERS
NOT SHOWN

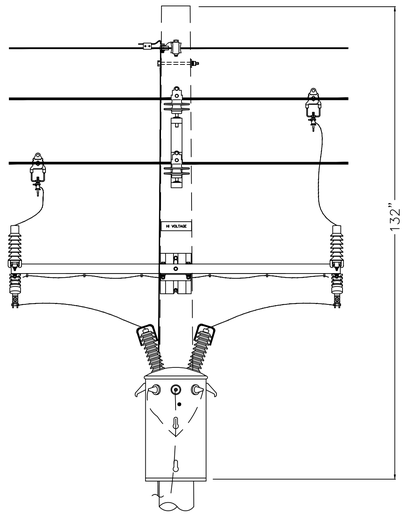
ACS-ANG01H w/TRA41H

7°-60° ACS STRUCTURE
3 WIRE SYSTEM - 2ø

TOP VIEW



SIDE VIEW



ELEVATION

FAVORITE		MATERIAL LIST	
ITEM	ANG01H TRA41H	DESCRIPTION	NUMBER
1*	1	ANGLE BRACKET, HENDRIX	BA3-35
2*	2	INSULATOR PIN, HENDRIX	SSP-2
3*	2	INSULATOR, PIN TYPE, HENDRIX	HPI-25VTP
4*	1	PERMANENT STRINGING ANGLE CLAMP, HENDRIX	PSAC-01
5*	2	SHACKLE CLEVIS, HENDRIX	SC
6	2	BOLT, MACHINE: SQ HD, 5/8" DIA X 14", GALV	8800-130910
7	2	WASHER: SQUARE CURVED, 5/8", 2-1/2" SQ, HDG	8800-131780
8	1	NUT, EYE: OVAL, 3/4" DIA, GALV, SPEC MN-1	8800-131465
9	1	3/8" GUY WITHOUT ANCHOR AND ROD	GY_02H
10	1	20" DIAGONAL CROSS PLATE ANCHOR W/ 1"X8' ROD	GY_20H
11	1	GROUND ROD, CLAMP, COVERED #4CU WIRE, STAPLES, AND PG	GD_06H
12	1	CONN, ELEC, POST: #10 SOLID CU-#1 STR CU, 1/2"	8800-253060
13	1	CLAMP, PARALLEL GROOVE: #6-2/0ACSR LINE, #6-2/0ACSR TAP, 2 BOLT	8800-191110
14	2	SIGN, ELEC SAFETY: "HIGH VOLTAGE", 3-1/2" X 14", YELLOW	8800-951020
15	1	THREE PHASE EQUIPMENT BRACKET WITH GROUND	EB06H
16	2	LIGHTNING ARRESTOR, DISTRIBUTION EQUIPMENT	LAR01H
17	2	CUTOUT, POLYMER, 100A	CON01H
18	2	HOT TAP STIRRUP CLAMP ASSEMBLY	SCA01H
19	1	SINGLE PHASE TRANSFORMER, 3 WIRE SYSTEM	TSC27H
L	3.0	JOURNEYMAN LABOR	9100

NOTES:

A. Structure for use in angle applications for line angles of 7°-60°.

B. Item numbers marked with * to be provided by Hendrix.

C. Messenger cable and spacer cable to be provided by Hendrix.

D. Climbing and working space shall be provided on all structures. Refer to GO-95 rules 54.7 A1/A2/B, 84.7 and 93.

E. High Voltage signs required per GO-95, rule 51.6A.

F. Insulator shown in lower position to maintain conductor clearance of 15" from pole centerline per GO-95, section III,Table 1. Insulator may be installed at upper inside position provided the required clearance can be achieved.

G. 25kV Hendrix components used on 15kV system to meet GO 95 clearance requirements.

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933 Eloise Ave
South Lake Tahoe
California 96150
Phone: (530) 543-5235
Fax: (530) 544-4811

WMP - Cascade Pole Repl - Alternate Design
Liberty Utilities

Job Number: 8800-0118-0117
Service Number: n/a

Customer: Liberty Utilities

Planner: John Perra (775) 870-0949

No.	Revision	Date	Drawn	Designer	Review	Engineer
1	BASE	6/18/18	JJP			
2	ELECTRIC	9/23/19	JJP			
3						
4						
5						
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9/25/19

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No.	Revision	Date	Drawn
1	BASE	6/18/18	JJP
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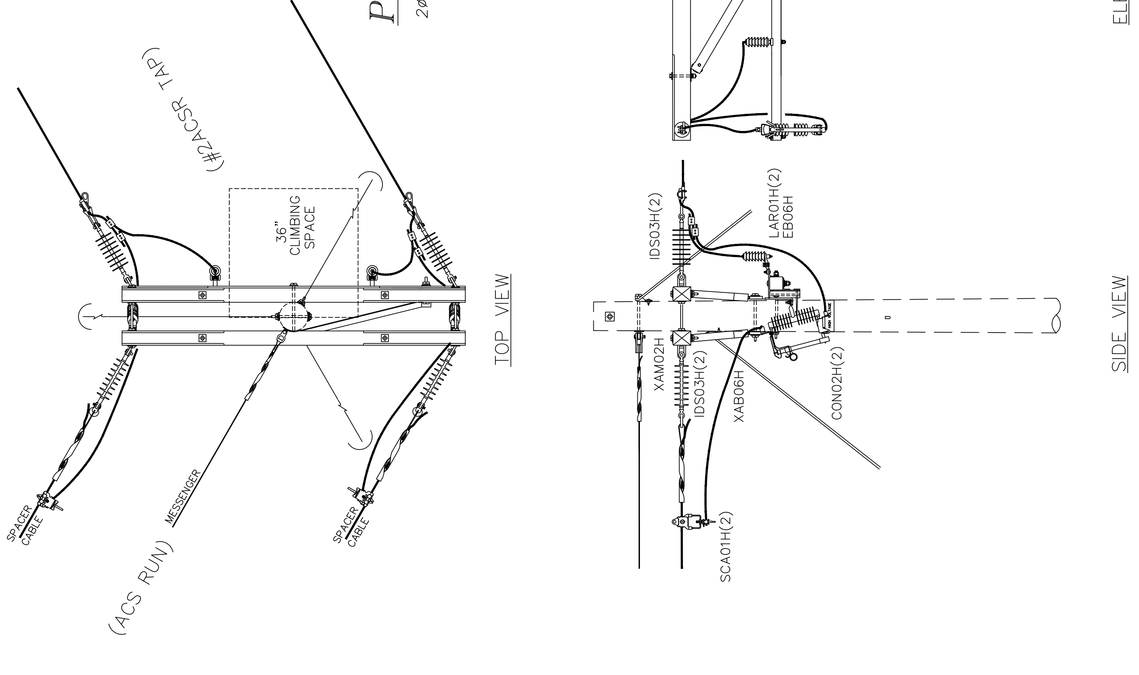
3			
4			
5			
6			

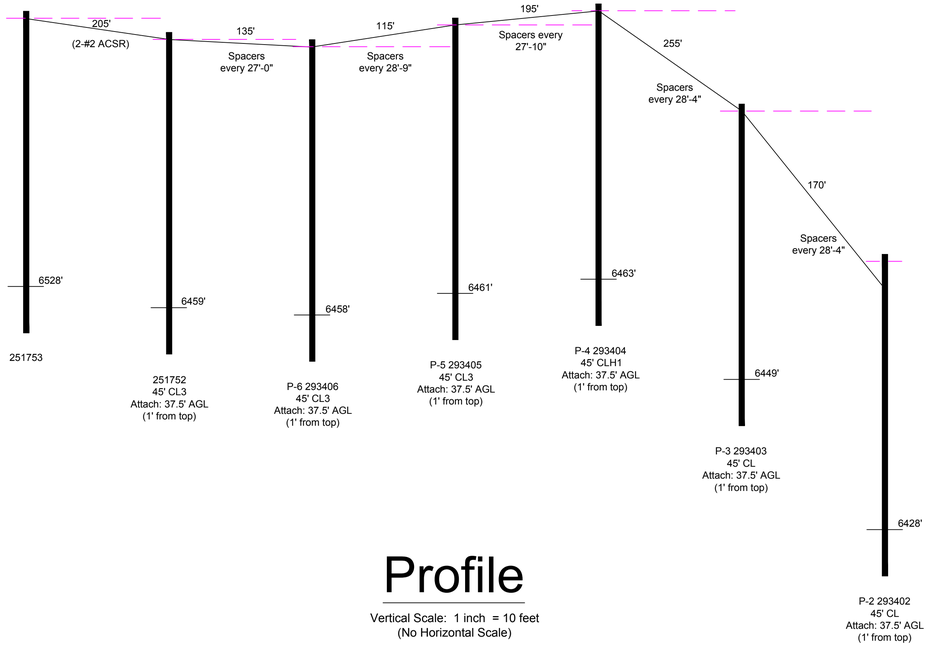
Designer	Review	Engineer

9/25/19

AGENDA ITEM NO. V.A.

POLE 251752
CUTOUT ARM – FUSED
2ø TO 2ø DOUBLE DEADEND
3 WIRE SYSTEM



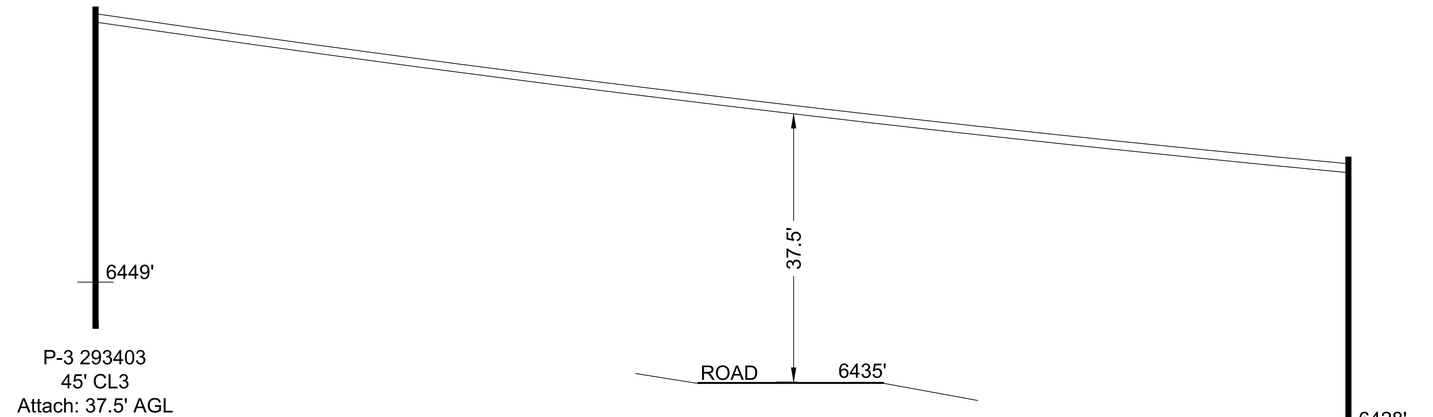


Profile

Vertical Scale: 1 inch = 10 feet
(No Horizontal Scale)

Mid-span Spacers

Install spacers at no more than 30 foot intervals along each span. Calculated intervals are shown on the profile detail above. Anticipate installing 26 mid-span spacers. Refer to page 2.12 of the Hendrix Aerial Cable Systems catalog for additional details.



Caltrans Crossing

Scale: 1 inch = 10 feet
(calculated heights - actual constructed dimensions may vary)

Liberty Utilities
933 Eloise Ave
South Lake Tahoe
California 96150
Phone: (530) 543-5235
Fax: (530) 544-4811

WMP - Cascade Pole Repl - Alternate Design
Liberty Utilities

Job Number: 8800-0118-01117
Service Number: n/a

Planner:
John Perra (775) 870-0949

Customer:
Liberty Utilities

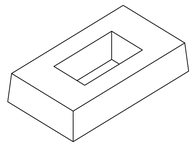
No.	Revision	Date	Drawn
1	BASE	6/18/19	JJP
2	ELECTRIC	9/23/19	JJP
3			
4			
5			
6			

Designer
Review
Engineer

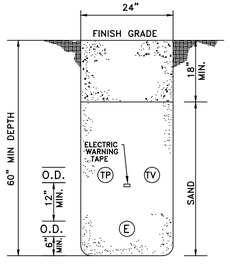
9/25/19

EROSION CONTROL PLAN:

1. All excess excavated materials shall be hauled away from the project site.
2. Storm water shall be controlled by the contractor to the satisfaction of Liberty Utilities and the TRPA. The contractor shall implement construction site best management practices (BMPs) in accordance with the notes included in this plan set or as directed by Liberty Utilities or the TRPA in the field.
3. Grading, excavation, filling, and clearing of vegetation or other disturbance of soil shall not occur between October 15 and May 1.
4. All construction sites shall be winterized by October 15 to reduce the water quality impacts associated with winter weather per TRPA code, and to the satisfaction of the TRPA inspector.
5. The project site and all temporary BMPs shall be inspected by qualified personnel before and after each storm event and a minimum of once every seven calendar days.
6. The contractor shall maintain all temporary BMPs at all times.
7. Dust control:
   a. Contractor is responsible for preventing controllable fugitive dust from the project's disturbed areas from becoming airborne on a 7-day/week 24-hour/day basis, from commencement of the project to final completion.
   b. Water shall be applied to the roadway and exposed dirt areas by water truck or water hose to control fugitive dust so long as no discharge of waste material to surface drainage occurs.
   c. Stockpiles and loose soil mounds shall be protected from wind or water erosion by being appropriately protected or covered when construction is not actively in progress or when required by the TRPA.
   d. Regular vacuum or sweeping of roads where construction is occuring shall be performed at least daily and more often if necessary to remove dirt or waste resulting from construction.
   e. Hand sweeping and disposal of all waste resulting from saw cutting of pavement via hauling outside of the Tahoe basin may be allowed so long as no discharge of waste material to surface drainage occurs. If it appears hand sweeping does not remove all waste resulting from saw cutting, vacuuming will be required.
   f. All trucks importing or exporting dirt, rock, or other materials shall prevent spillage or loss of bulk material from holes or other openings in the cargo compartment floor, sides, and/or tailgate. All haul trucks must be covered with a tarp or other suitable closure, or bulk materials must contain enough moisture and/or dust suppressant to prevent fugitive dust emissions during transport, or load all trucks such that the freeboard is not less than six (6) inches. All materials not to be incorporated into the work shall be hauled outside the Tahoe basin.
   g. All project related vehicles shall park on existing paved surfaces or existing compacted road shoulders. Contractor shall minimize construction related vehicle and equipment emissions during construction by shutting off equipment and vehicles not in use. Idling of diesel engines shall be kept to a minimum so far as practical.
   h. The contractor shall implement additional dust control measures, such as extra water trucks, revegetation, environmentally safe dust palliatives (as approved by the TRPA), and/or cessation of operations should the aforementioned measures fail to control fugitive dust emissions from the project.
   i. All areas disturbed by construction shall be mulched with a 2 to 3 inch layer of pine needles or wood chips. This mulch shall be maintained from completion of the initial grading through the completion of the project.
8. Vegetation Protection:
   a. All trees and natural vegetation shall not be disturbed, injured, or removed except as specifically called out for in this plan set and TRPA code.
   b. Trees shall not be used for the purpose of sign posts, telephone wires, or temporary power, bracing for forms, or other similar types of uses per TRPA code.
   c. Vegetation protection fencing shall be constructed with metal posts, industry standard orange mesh fencing, and at least 4 feet tall, unless an alternative method is approved by the TRPA.
9. Erosion Control:
   a. Minimize disturbed area and protect natural features and soil.
   b. Phase construction actively when feasible.
   c. Control storm water flowing onto and through the project site.
   d. Disturbed areas should be stabilized as soon as practicable after construction activities at that location have been completed.
   e. If rolled erosion control products are used for soil stabilization, installation and staking shall be done according to the manufacturer's specifications.
   f. No vehicle or heavy equipment shall be allowed in a stream environment zone or wet area except as authorized by the TRPA.
   g. Only equipment of a size and type that will do the least amount of damage, under prevailing site conditions, and considering the nature of the work to be performed, will be used.
10. Sediment Control:
    a. Storm drain inlets should be protected at all times utilizing silt fence, fiber rolls, and/or gravel filled bags.
    b. Excavated material shall be stored upgrade from the excavated area whenever possible. No material shall be stored in any stream environment zone or wet area.
    c. Contractor shall provide crushed rock or rumble boards in areas of construction site access and exists. Soil and construction material shall not be tracked off the construction site. Grading operations shall cease n the event that a danger of violating this condition exists.
11. Pollution Control:
    a. No washing of vehicles or heavy equipment, including cement mixers, shall be permitted anywhere on the subject property unless authorized by the TRPA in writing.
    b. Disposal of any excavated or waste material (liquid or solid) shall be to a site outside the Tahoe basin or a location approved by the TRPA in writing.
    c. Staging areas should be clearly delineated and approved by the TRPA prior to beginning construction activities.
    d. The contractor shall develop and have on site at all times a spill prevention and response plan.
12. All construction shall be winterized by October 15 to reduce the water quality impacts associated with winter weather as follows:
    A. For the sites that will be inactive between October 15 and May 1 of the following year:
       1) Temporary erosion controls shall be installed.
       2) Temporary vegetation protection fencing shall be installed.
       3) Disturbed areas shall be restabilized.
       4) Onsite construction slash and debris shall be cleaned and removed.
       5) Where feasible, mechanical stabilization and drainage improvements shall be installed.
       6) Spoil piles shall be removed from the site
    B. For the sites that will be active between October 15 and May 1, in addition to the above requirements:
       1) Permanent mechanical erosion control devices shall be installed, including paving of any driveways and parking areas.
       2) Parking of vehicles and storage of building materials shall be restricted to paved areas.
13. Construction staging area(s) shall be on existing coverage and shall be protected with temporary Best Management Practices.



1 PHASE LJE PAD DETAIL
Standard PE0025U
Pad stk. #24-0721



TYP. SECONDARY OR PRIMARY TRENCH
Standard TE0003U

Utility Trenching	Length (ft)	Depth (ft)	Width (ft)	Volume (cu ft)	Volume (cu yd)
Liberty Only Trench	547	5	2	5,470	203
			Project Totals	**5,470**	**203**

Utility Boxes and Pads	Vault/Pad Type	Impervious Coverage (sq ft/item)	Depth (ft)	Volume (cu ft)	Volume (cu yd)	Quantity	Total Volume (cu ft)	Total Volume (cu yd)	Total Coverage (sq ft)	APN	Land Capabilty District
Liberty Utilities	Junction enclosure	14.17	n/a	n/a	n/a	2	n/a	na/	28.34	018-090-055-000	
						Project Totals	**0.0**	**0**	**28.34**		

REVEGETATION PLAN:

All areas disturbed by construction shall be revegetated in accordance with the TRPA Handbook of Best Management Practices and Living with Fire, Lake Tahoe Basin, Second Edition.

Areas to receive revegetation treatment shall include all areas disturbed during construction of the project and are outside the road pavement and constructed shoulder. The revegetation work shall consist of all site preparation associated with the revegetation treatments, and shall include site preparation, seeding, and application of a pine needle/duff mulch, and temporary irrigation. Revegetation shall progress in the order outlined below. No work shall be performed without prior approval by the Liberty Utilities.

- Grading and Excavation: Some areas will require reshaping of terrain prior to revegetation as noted on the construction drawings or in the field by Liberty Utilities.
- Soil Tilling: All disturbed soil will be loosened or decompacted. Soil will be tilled to a depth of six (6) inches.
- Soil Amendment: Compost will be applied to a depth of four inches. Compost used will be Full Circle 25% integrated Tahoe blend, or equivalent.
- Surface Preparation: Prior to seed application, tilled areas will be lightly smoothed by rake in such a way that some surface roughness is attained. The result will be a soil surface that mimics natural conditions, with relief between three and six inches (3"-6") over a twenty-four (24") distance.
- Seed Application to Depth of 1/4": Seeding shall be conducted in the fall prior to snow accumulation and ground freeze unless otherwise approved by the TRPA. Soils shall be moist to two inches unless otherwise approved by the TRPA. Seed mix will be applied by hand or hand applicator at the rates listed in the table below, and will be spread in a uniform manner.
- Raking: Following seed application, the soil surface will be very lightly raked so the seeds are tilled in to a depth of one quarter to one half inch (1/4"-1/2")
- Pine Needle/Duff Mulch: All areas disturbed by construction and outside the road pavement and constructed shoulder will be treated with mulch consisting of pine needles and related duff material. Much may be applied by hand or blower and must be applied in such a way as to achieve an even layer. If applied by hand, mulch depth will be equal to approximately two inches (2"), and if applied by blower, mulch depth will equal approximately one inch (1"). Mulch will cover ninety-eight percent (98%) of all bare areas.
- Irrigation: A quantity of water will be applied to penetrate to a depth of six inches (6"), but not to fully saturate the soil. Frequency of irrigation will depend on air and soil temperatures, but is expected to occur every three to four (3-4) days for the first four (4) weeks, and every seven (7) days for the reminder of the growing season.

COMMON NAME	SCIENTIFIC NAME	PLS POUNDS PER ACRE
Squirreltail (high elevation collection)	Elymus Elymoides SSP. Elymoides	30
Blue Wildrye (Stanislaus 5000 or high elevation collection)	Elymus Glaucus	28
Mokelumne or El Dorado Brome (or other high elevation collection)	Bromus Carinatus	27
Lupine (species depends on availability - must use species native or adapted to Lake Tahoe basin)	Lupinus Spp.	2
Blue Flax	Linum Perenne	3.5
California Poppy	Eschscholzia Californica	0.5
		Total: 80 PLS LBS/AC

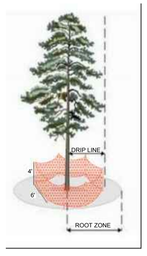
TREE PROTECTION PLAN:

Tree Protection Measures
Lowering of the grade shall not occur within the drip line. Protection of a trees root system is critical during construction activities. Stripping or compaction of the soil can cause significant root damage. Generally, trees' roots extend well beyond the drip line, sometimes as far as 2-3 times the diameter of the crown, making it almost impossible to perform grading and trenching activities to a site without damaging some portion of a tree's root system. While working within the tree's root zone, care must be taken to ensure that:

- Tree roots are not ripped with equipment.
- Root pruning, if necessary, must be done with a clean, sharp tool such as a sharp saw, axe or shovel. Final tree root cuts should be clean with no jagged ends.
- The maximum amount of root pruning to occur shall not exceed 25% of the overall root zone and shall occur only on one side of a tree.
- Per TRPA Code of Ordinances 33.6.6, tree roots four inches in diameter and larger encountered during excavation of utility trenches should not be severed, if avoidable.

Mechanical excavation shall not occur within the protected fenced area within a tree's drip line. Fill material shall not be placed and compaction shall not occur within a tree's drip line. Tree roots that are severed by equipment within the tree's root zone shall be pruned with a sharp tool, flush with the sides of the trench. Stripping of soil or organic materials, mechanical excavations, or storage of mechanical equipment shall not take place within a tree's drip line. Consultation with an ISA Certified Arborist is recommended if excavation within the tree's drip line is unavoidable or root pruning is necessary.

Tree Protection Required for Roadway Grading and Trench Excavations



1. The perimeter of the drip line has been identified per tree. To estimate the radial distance of the drip line from the base of the tree, use DBH X 3 = approximate location of drip line

Example: if the tree is 20" DBH, the drip line is approximately 60" (5 feet) from the base of the tree.

2. Install construction fencing around the perimeter of the drip line. Fencing must be a minimum of four feet high with staking a maximum of four feet apart. Monitor fencing daily. Protective fencing may also be incorporated into construction fencing utilized to delineate project boundaries, where appropriate.

3. Trench excavation should be avoided within the drip line of the tree. If excavation must encroach within the dripline, the trench must be hand-dug so that root damage will not occur.

4. Identify the approximate location of the Root Zone. Minimize compaction within the Root Zone by limiting equipment travel over the site or spreading mulch

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Liberty Utilities

Job Number: 8800-0118-0117
Service Number: n/a

Customer: Liberty Utilities

Planer: John Perra (775) 870-0949

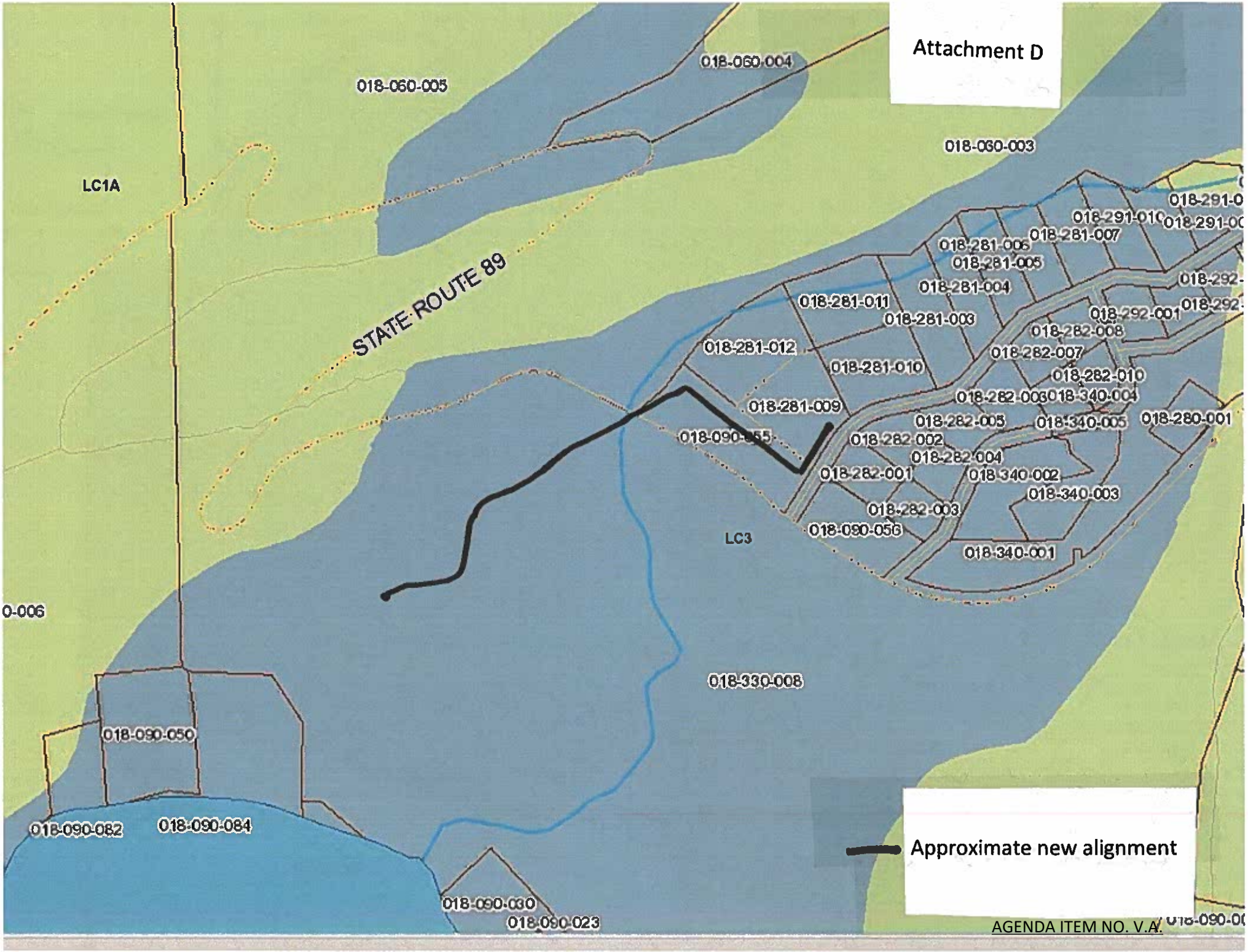
No.	Revision	Date	Drawn	Designer	Review	Engineer
1	BASE	6/18/18	JJP			
2	ELECTRIC	9/23/19	JJP			
3						
4						
5						
6						

9/25/19

AGENDA ITEM NO. V.A.

Attachment D

Mapped Land Capability


Attachment D
018-060-004
018-060-005
018-060-003
LC1A
STATE ROUTE 89
018-291-010
018-291-007
018-281-006
018-281-005
018-281-004
018-281-011
018-281-003
018-292-001
018-282-008
018-281-012
018-282-007
018-281-010
018-282-010
018-281-009
018-282-006
018-340-004
018-282-005
018-340-005
018-280-001
018-090-055
018-282-002
018-282-004
018-282-001
018-340-002
018-340-003
018-282-003
018-090-056
LC3
018-340-001
018-330-008
018-090-050
018-090-082
018-090-084
018-090-030
018-090-023
Approximate new alignment

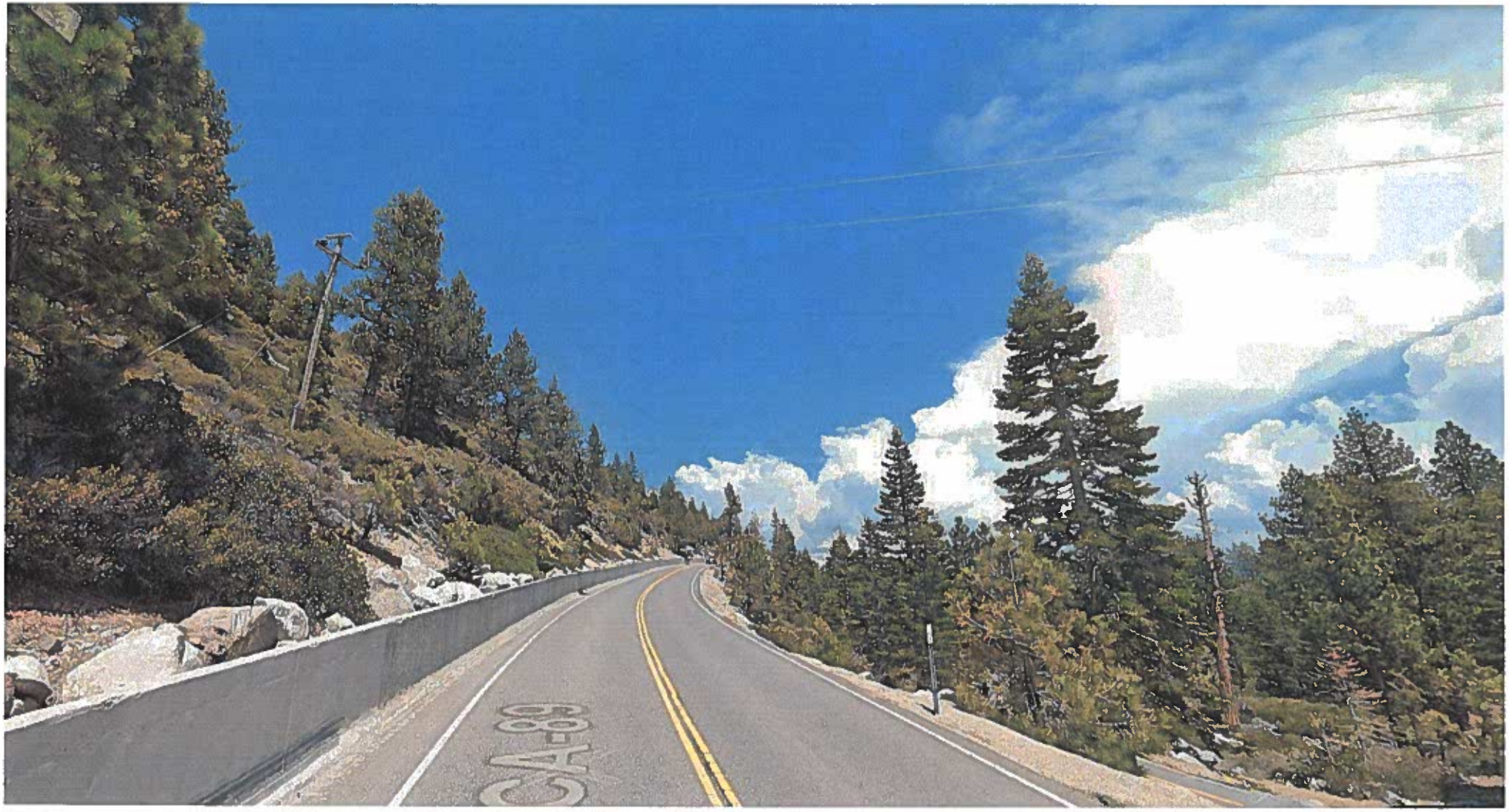
Attachment E

Existing Scenic Conditions

Attachment E

Example of overhead line and power pole to be removed

AGENDA ITEM NO. V.A.



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