
**LIBERTY UTILITIES
650 LINE REBUILD PROJECT
HABITAT RESTORATION PLAN**

MAY 2015

PREPARED FOR:



PREPARED BY:



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1 – INTRODUCTION

This Habitat Restoration Plan (Plan) describes the measures that will be taken by Liberty Utilities (Liberty) and its contractors to ensure that temporary work areas used during construction of the 650 Line Rebuild Project (project) are restored to near pre-construction conditions to promote long-term stabilization of the right-of-way (ROW). The project involves the following components:

- rebuilding approximately 9.24 miles of the existing 650 Line between the Martis Valley and Kings Beach Substation,
- removal and realignment of an approximately 2.28-mile-long segment of the existing 650 Line,
- rebuilding the Northstar Tap into the Northstar Fold, and
- rebuilding all existing underbuild distribution and some portions of communication facilities to be transferred to the new structures.

2 – PROJECT OVERVIEW

The project is Phase 1 of the overall 625 and 650 Electrical Line Upgrade Project, which consists primarily of an upgrade of the existing 625 and 650 electrical power lines and associated substations from 60 kilovolt (kV) to 120 kV. The upgrade will ultimately allow the entire North Lake Tahoe Transmission System to operate at 120 kV.

The overall project includes the previously described components, as well as the rebuild of an approximately 1.6-mile section of the existing 132 Line; an upgrade, modification, and/or decommission of six substations; and the replacement of the existing 625 Line along a new route. A Project overview map is provided in Figure 1: Project Overview Map.

3 – OBJECTIVES

The purpose of this Plan is to prescribe restoration techniques for temporary work areas and identify Liberty's responsibilities in the restoration process. The Plan provides specific information for implementing the restoration, as well as the means of monitoring the effectiveness of restoration through established success criteria and will accomplish the following:

- address final cleanup, stabilization, and revegetation procedures for areas disturbed by the project;
- establish success criteria and monitoring specifications for revegetation of temporarily disturbed areas, long-term erosion and sediment control measures, and slope stabilization measures; and
- allow the Restoration Ecologist (RE) flexibility in prescribing long-term stabilization measures based on site-specific conditions at the time of construction.

4 – RESPONSIBILITIES

Liberty will be responsible for ensuring that the contractor working on the project meets the standards defined in this Plan to restore disturbed areas to pre-construction conditions and to monitor restoration success.

Liberty will employ an Environmental Monitor (EM) to be responsible for ensuring that the contractor performs all field activities in accordance with this Plan and remains in compliance with all other permits and authorizations. Liberty will also employ an RE who will be responsible for making site-specific field changes in certain restoration procedures within the guidelines of this Plan. The RE will take remedial actions, as necessary, to reestablish and maintain stable vegetation cover on reclaimed sites, and will provide the contractor with the appropriate seed mixes. The RE will also be responsible for assessing the success of control methods implemented to prevent the spread of weed species and to ensure that the restoration of temporarily impacted areas is successful. The RE will collect pertinent information regarding restoration success and weed-control methods through direct observation during annual site visits, including data on germination success, plant density, survivorship, and diversity.

The contractor will be responsible for post-construction grading, seedbed preparation, and seeding of all temporarily disturbed areas associated with the project immediately after construction is completed. All restoration activities will be conducted according to this Plan.

5 – SCHEDULE

5.0 CONSTRUCTION

Construction is anticipated to begin in July 2015 and will take approximately 5 months to complete. Construction is scheduled to take place in 2015 and 2016, and would be completed by October 2016.

5.1 RESTORATION

The restoration of all disturbed areas will commence within 14 days of construction completion.

5.2 SEEDING AND PLANTING

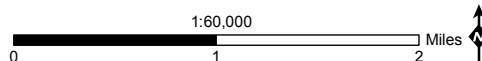
Seeding and planting of woody vegetation will take place following final grading and seedbed preparation—scheduled to occur by October 15 of the construction year—once soils are sufficiently moist. Specific methodology is detailed in Section 6.3 Restoration of Stream Environment Zones and Section 6.4 Restoration of Upland Vegetation. Maintenance—including irrigation, plant protection, and any remedial or supplemental work—will be conducted until the areas of disturbance meet the established success criteria, or for up to 5 years following the completion of construction, whichever is less.



Figure 1: Project Overview Map

650 Line Rebuild Project

- Proposed 650 Alignment
- - - Proposed 650 Line Removal
- Proposed Northstar Tap



6 – RESTORATION PROCEDURES

Habitat restoration will take place in all work areas disturbed by construction activities. Work areas include all staging areas, stringing areas, and access roads. Native vegetation communities that will be impacted include the following:

- Jeffrey pine forest,
- Jeffrey pine-white fir forest,
- Sierran mixed conifer forest,
- white fir-red fir forest,
- montane riparian,
- low sage scrub,
- sagebrush scrub,
- montane chaparral,
- dry montane meadow, and
- wet montane meadow.

This Plan incorporates the requirements and recommendations set forth in project plans, permits, and authorizations, including the following:

- Applicant-proposed measures (APMs) and mitigation measures (MMs) of the California Pacific Electricity Company (CalPeco) 625 and 650 Electrical Line Upgrade Project Final Environmental Impact Statement/Environmental Impact Statement/Environmental Impact Report (FEIS/EIS/EIR) (SCH# 2012032066) (Ascent Environmental [Ascent] 2014)
- Invasive Plant Risk Assessment for the CalPeco 625 and 650 Electrical Line Upgrade Project (Ascent 2013)
- United States (U.S.) Forest Service (USFS) Lake Tahoe Basin Management Unit (LTBMU) Preferred Invasive Plant Treatment Methods
- Tahoe Regional Planning Agency's (TRPA's) Best Management Practices Handbook (2014)
- California Tahoe Conservancy's (CTC's) Revegetation Guidance Document for Erosion Control Projects in the Tahoe Basin (AECOM 2010)

Relevant APMs and MMs from the project's Final EIS/EIS/EIR are listed in Attachment A: Relevant Applicant-Proposed Measures and Mitigation Measures.

6.0 PRE-CONSTRUCTION DOCUMENTATION

Any temporary work areas not subject to long-term use or ongoing vegetation management will be restored to near pre-construction conditions. Prior to ground-disturbing activities, Liberty will compile photographic documentation of temporary work areas, and determine the acreage that will be impacted. Liberty will also document the vegetation communities that will be impacted,

the presence/absence of invasive species, and any sensitive plant species present. In addition, Liberty will identify reference sites that will be used during the post-construction monitoring and reporting effort. The reference sites will be adjacent to the temporarily impacted areas that will be restored, will contain the same general plant species and densities as the work area, and will be approximately the same size (typically 50 feet by 100 feet) as the area to be restored.

The documentation will be submitted to the TRPA, USFS, U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) after completing temporary disturbance activities associated with permitted activities.

6.1 SITE PREPARATION

Site preparation includes surveying, staking, clearing, and grading, all of which are described further under the subheadings that follow.

6.1.0 Surveying and Staking

Right-of-Way Limits

Standard survey flags and stakes will be installed where necessary before the start of Project construction, in compliance with BIO-28. Specifically, in environmentally sensitive areas between structure 291040 and structure 291080, shown in Attachment B: Wetland Delineation Map, orange construction fencing will be installed to define the agreed upon 20 foot work area. Beginning at structure 291081, a 65-foot easement will be staked with survey lath at each angle structure on both sides of the 65 foot temporary ROW. Additional lath will be installed between angle points based on field determination to support line of sight judgment. Structure sites (e.g., tower locations, anchor points, reference points) will be marked by the construction contractor(s) and identified with both hubs and survey staking. Designated Project access roads, spur roads, parking areas, and pullout areas will be marked with survey lath and signage to facilitate flow of travel to and from the ROW, identify all vehicle clean out sites, and to also provide notification of no access by the public. Wire stringing/pulling sites and material yards will be demarcated, as necessary, to indicate the limits of the approved work area with either lath with ribbon or construction fencing, depending upon the environmental sensitivity of the site. The construction contractor(s) will stake the boundaries of the maximum area needed for work areas and will provide the dimensions to the onsite EM to include those boundaries in their final restoration report. If the delineated work areas exceed the approved dimensions for Project facilities, the construction contractor(s) will coordinate with the EM.

Staging areas and helicopter fly yards, wire stringing areas, and material yards will be demarcated to indicate the limits of the approved work area. These demarcations will be marked with survey lath and ribbon, or construction fencing, as determined appropriate by the contractor.

Work Areas

As required by APM BIO-26, limits of the work areas will be clearly marked similarly to the ROW limits described previously. In most cases, the work areas will be staked at each corner. Where thick vegetation exists, additional staking may be installed. All work areas that occur within vegetated areas will be staked prior to use.

Access Roads

To limit disturbance, construction access will follow existing paved and dirt roads when possible, and all temporary access roads used for construction will be re-graded to pre-construction conditions. Existing roads that have not been approved for project use will be marked with “No Project Access” signs to prevent workers from inadvertently utilizing these roads. As required by APM BIO-36, if existing, unpaved roads require modification to temporarily allow passage of construction equipment during the construction period, these roads will be temporarily stabilized during the break in construction in the winter of 2015 to 2016, and/or returned to their original footprint after construction has been completed, as appropriate.

6.1.1 Clearing and Grading

Clearing and grading activities will be limited to the area within the fenced, staked, or flagged work limits, as required by APM BIO-26. As required by APM BIO-28, Liberty will limit vegetation and tree removal to only the areas necessary for construction and to ensure full clearance compliance for the 120kV ROW, with particular attention given to minimizing effects on special-status plant species, riparian areas, and trees greater than 30 inches diameter at breast height. Wherever possible, vegetation will be left in place to avoid excessive root damage and to allow for natural recruitment following construction. As specified by APM BIO-21, qualified EMs will be present during all vegetation removal activities to help ensure that impacts to biological resources are minimized to the extent possible. It should be noted that the full permanent ROW will require tree removal to ensure electric clearances are met. This includes clearing of trees greater than 30 inches that are located within the necessary ROW.

6.2 AVOIDANCE AND MINIMIZATION MEASURES

6.2.0 Stream Environment Zones and Waters of the U.S. and State

A stream environment zone (SEZ) is defined by the TRPA as an area that owes its biological and physical characteristics to the presence of surface or groundwater. This definition includes waters of the U.S. and State. As required by MM 4.7-2b, prior to construction, each SEZ will be clearly marked. As described in 6.1.0 Surveying and Staking, where SEZs occupy the majority of the work area (e.g., in Martis Valley between structure 291040 and structure 29108), orange construction fencing will be installed to define the 20 foot work area and restrict access to offsite SEZs. Along the rest of the project site, perennial drainages will be flagged with a 300-foot buffer, and intermittent and ephemeral streams will be flagged with a 150-foot buffer, in accordance with USFS requirements (USFS 2004). Each buffer will be measured from top of bank. Wetlands, including seeps and meadows, will be flagged with a 300-foot buffer from the edge of the feature or riparian vegetation, whichever is greater. For each SEZ that is not impacted by the project, EMs will ensure that construction workers, vehicles, and equipment remain outside of SEZ limits to prevent negative impacts to vegetation.

As required by APM BIO-30, Insignia Environmental (Insignia) biologists conducted a delineation of waters of the U.S. in June 2014, in accordance with the USACE Wetlands Delineation Manual (Environmental Laboratories 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Environmental Laboratories 2010). The delineation mapped and quantified the acreage of all waters of the U.S. on the project site. A wetland delineation map of the project is provided

in Attachment B: Wetland Delineation Map. This information has been submitted to the USACE for verification. Based on the verified wetland delineation and the project design plan, Liberty will determine the acreage of impacts to waters of the U.S. and State that will result from project implementation. Impacts will be avoided to the extent practicable through the siting of poles and other facilities outside of delineated waters of the U.S. and State.

Work in wetlands or wet meadow habitats with saturated soil conditions will be scheduled when soils are dry to the extent possible. If soils become saturated, the EM will consult with the appropriate agencies to determine the appropriate method to minimize rutting along the necessary vehicle and equipment access routes. If necessary, timber or similar mats will be installed. As specified by APM BIO-21, qualified EMs will be present during all vegetation removal activities to help ensure that impacts to biological resources are minimized to the extent possible. Prior to disturbance of waters of the U.S. or State, the EM will document the pre-disturbance vegetation, topography, and hydrology of the water feature using photographs and field notes.

6.2.1 Special-Status Plant Species

As required by APM BIO-02, Insignia botanists conducted a complete floristic survey in July 2014. All occurrences of special-status plant species are depicted in Attachment C: Special-Status Plant Species Map. In accordance with APM BIO-09, exclusion zones will be established around all identified special-status botanical species that can be avoided by flagging or fencing these areas no more than 30 days prior to the start of construction. Flagging and fencing will be refreshed and maintained throughout construction.

6.3 RESTORATION OF STREAM ENVIRONMENT ZONES

As required by APM WQ-08, Liberty will obtain permits from the appropriate regulatory agencies—the TRPA, USACE, RWQCB, and/or CDFW—prior to commencing work in a SEZ. As specified by the USACE, RWQCB, and APM BIO-30, disturbed waters of the U.S. and State will be restored to pre-construction conditions and will be seeded with native species (to be consistent with the vegetation community present prior to disturbance) to stabilize the soils and minimize the introduction of invasive plants. As permanent impacts to USACE-jurisdictional waters are well below 0.1 acre, compensatory mitigation is not proposed for this project. The approximate location of vegetation communities within each SEZ in the project area are mapped in Attachment D: Vegetation Communities Map and include the following:

- montane riparian vegetation,
- dry montane meadow, and
- wet montane meadow.

In accordance with MM 4.7-2b, impacts to shrubs and trees within SEZ habitats will be restored at a ratio of 1.5:1. Restoration of montane riparian vegetation will include a combination of seeding and container planting. Seed mixes and plantings are detailed in the sections that follow. Final grading, topsoil salvage, seedbed preparation, and mulch application will follow the same procedures for all vegetation types.

6.3.0 Final Grade

As required by APM BIO-36, every SEZ that is temporarily disturbed by construction activities will be re-graded to blend with the natural topography and eliminate uneven areas resulting from rough-grading operations. Fine grading will be conducted manually around sensitive areas, vegetation to be preserved, and existing hardscape elements and structures. Planting and seeding areas will be fine-graded to finish grade to produce a surface suitable for planting and seeding. Prepared areas will be protected from compaction. A Storm Water Pollution Prevention Plan (SWPPP) will be implemented that will be consistent with this Habitat Restoration Plan.

6.3.1 Topsoil Salvage and Seedbed Preparation

In accordance with APM BIO-23, topsoil will be salvaged in areas that will be graded or excavated. Topsoil will be segregated during the grading phase, stockpiled, and covered along the edge of the work area for use during restoration. The topsoil will be replaced to the approximate location of its removal after project construction has been completed. In general, the top 2 to 4 inches or the entire A horizon—whichever is deeper—will be removed and salvaged.¹ However, the actual depth to be salvaged will be determined by Liberty in the field.² Topsoil will not be salvaged from areas infested with noxious or invasive species. Recommended topsoil salvage and storage methods are outlined in CTC's Revegetation Guidance Document for Erosion Control Projects in the Tahoe Basin (AECOM 2010).

As required by APM BIO-36, as part of normal equipment inspections during project operation, an evaluation of access routes will be conducted to confirm that use has not resulted in compaction. After construction has been completed at the access route location, compacted soil will be loosened or ripped to a depth of 6 to 12 inches. Where feasible in hydrologically sensitive sites, organic matter will be incorporated to a depth of at least 6 inches if topsoil is lacking.

Topsoil replacement will follow the recommendations in TRPA's Best Management Practices Handbook (TRPA 2014). Topsoil will be replaced in areas where it was removed before construction by distributing it at an even depth of 6 inches. Topsoil will be dry and replaced during dry weather. All debris, roots, weeds, and other materials in excess of 1 inch in diameter will be removed. Salvaged duff/mulch, pine needles, and/or aged wood chips will be applied to a depth of 1 inch on the surface of areas where soil has been loosened. The use of fertilizers and nutrient-containing amendments will be restricted to slow-release, organic fertilizers or compost applied to enhance the establishment of plantings on sites determined to have very little total soil nitrogen. Fertilizer will not be used in seeded areas, on plant cuttings, or within 25 feet of a SEZ.

Access to work areas within Martis Valley will be overland; therefore, no access routes will be built, and soil loosening and topsoil replacement will not be conducted at these locations.

¹ The A horizon is considered the uppermost layer of soil with physical and chemical characteristics that differ from the soil layers beneath.

² Arid soils are generally very shallow, but it can be advantageous to salvage slightly deeper than the A horizon when mechanically stripping topsoil to obtain more organic matter and seed base.

6.3.2 Revegetation

Seeding

Seeds will be planted after the site and soil have been prepared and graded and after other site improvements have been completed, and seeding should occur in late summer or early fall. Seeding will be uniformly broadcast using hand-held seeders and will be lightly raked to incorporate to a depth of 0.25 to 0.5 inch. As required by APM BIO-36, seed will be applied at the rate of 100 to 200 pure live seed per square foot, which is double the standard seeding rate. Seed will not be left uncovered for more than 24 hours, unless otherwise approved by the RE. Seeding will not occur when wind speeds exceed 5 miles per hour.

As required by MM 4.7-5, Liberty will utilize locally collected native seed sources for revegetation when possible. Plant and seed material will be collected from or near the project area, from within the same watershed, and at a similar elevation when possible and with approval of the USFS botanist. Seed mixes will conform to the TRPA-prescribed pure live seed rate of 90-percent purity and 80-percent germination, and will be 100-percent weed-free. The seed material will be state-certified seed from the most recent growing season and will be provided in original sealed bags bearing the supplier's guaranteed analysis. Persistent non-natives—such as cultivated timothy (*Phleum pretense*), orchard grass (*Dactylis glomerata*), or ryegrass (*Lolium* spp.)—will not be used. Further details on seeding requirements within each vegetation community in a project SEZ are provided in the sections that follow. In upland areas with full shade, seeding will not be required.

Planting

Should CDFW require mitigation for impacts to riparian vegetation as part of Streambed Alteration Agreement conditions, the following guidelines will be implemented. Container plants will be installed in impacted montane riparian vegetation following all site preparation procedures and seeding operations. The plant palette is provided in Attachment E: Montane Riparian Planting Plan. Plants installed from container stock will be propagated from either on-site materials or from sources in the region. Propagation material (e.g., seeds and rhizomes) will also be contained in the stockpiled topsoil and is expected to naturally colonize the restored wetlands.

Whenever feasible, plant containers will be small and deep to facilitate the development of large root systems in relation to the size of the aboveground portion of plants. If possible, contracts to procure plant materials should be established more than one growing season in advance to ensure availability of desired materials.

Planting will occur in late summer or fall to minimize plant stress. The planting layout will be irregular to avoid existing vegetation and to mimic a natural layout. Plants will not be removed from containers for more than 1 hour before planting. Planting holes will be excavated by hand, pry bar, hydraulic bar with spade or chisel point, or auger. The inside surfaces of all planting holes will be scarified before backfilling with soil. Any large rocks, sticks, or material measuring more than 2 inches will be removed from the backfill materials and discarded before backfilling holes.

Plants will not be held by the stem or branch, or in any way that damages the plant. Plants should be adequately “hardened off” and acclimatized to site conditions for 2 weeks before installation. During the holding period, plants must be carefully watered and refertilized if necessary. Plants must be thoroughly watered immediately before planting.

Plants will be removed from containers with the rootball intact and scarified to prevent the plant from becoming rootbound. Compost and organic slow-release will be placed between the bottom of the rootball, but not higher than one-third of the way up the rootball.

Plants will be thoroughly hand-watered immediately after installation. Plants will be checked within 24 hours of installation for settling, and corrections will be made as needed. If roots become exposed, additional soil will be placed around the root crown.

Within 5 days of completing the plant installation work at a specific location, the planting contractor will submit a written guaranty against defects resulting from poor installation or related materials to Liberty for a period of one full growing season after Liberty’s acceptance of plant installation. For the purposes of this contract, a full growing season will commence on October 16 of the plant installation year and end on October 15 of the next calendar year.

Site-Specific Revegetation Guidelines

Seed mixes for each vegetation community within a SEZ and the plant palette for montane riparian vegetation are detailed in the subsections that follow.

Montane Riparian

Montane riparian forest varies greatly in vegetative structure and species composition and includes both intermittent and perennial drainages. Within the project area, this vegetation type occurs along Martis, West Martis, and Middle Martis Creeks and their tributaries. Silver willow (*Salix geyeriana*) and Lemmon’s willow (*Salix lemmonii*) dominate the vegetative community and are surrounded by expansive wet meadows. Quaking aspen (*Populus tremuloides*) occurs at the outer limits of the riparian canopy along hillslope tributaries to Middle Martis Creek. Several montane riparian communities in the project area are associated with wet seeps or small ravines, rather than perennial flowing streams or seasonal channels.

Impacted riparian habitat areas will be reseeded to restore the habitat to near pre-existing conditions and to provide erosion control. The seed mix will be composed of native grasses and forbs and is provided in Table F-1: Seed Mix – Montane Riparian, Wet Montane Meadow, Dry Montane Meadow in Attachment F: Site-Specific Seed Mixes. The area of each disturbed channel bank will be hand-seeded following restoration of the banks to their original grades. Target species for container planting are shown in Attachment E: Montane Riparian Planting Plan.

Wet Montane Meadow

Wet montane meadow is comprised of a wide variety of grasses and perennial herbs adapted for growth in saturated soils. The dominant plant species documented in wet montane meadows within the project area include Baltic rush (*Juncus balticus*), narrow-leaved sedge (*Carex angustata*), Nebraska sedge (*Carex nebrascensis*), annual saltmarsh aster (*Symphyotrichum*

spatulatum), hairy arnica (*Arnica mollis*), slender cinquefoil (*Potentilla gracilis*), smooth scouring-rush (*Equisetum laevigatum*), and cup clover (*Trifolium cyathiferum*).

Wetlands that are inundated during most of the growing season will use seeding as the primary means of vegetation restoration. Propagation material (e.g., seeds and rhizomes) is also expected to naturally colonize the restored wetlands from the stockpiled topsoil and from adjacent, undisturbed portions of the each affected wetland. The seed mix is provided in Table F-1: Seed Mix – Montane Riparian, Wet Montane Meadow, Dry Montane Meadow in Attachment F: Site-Specific Seed Mixes.

Dry Montane Meadow

Dry montane meadows form in areas where water is concentrated near the soil surface and only early in the growing season, but the timing is generally sufficient to allow perennial herbs to reproduce. They are generally located adjacent to wet montane meadows supported by groundwater, on shady slopes, and where snowmelt is slow at higher elevations. Within the project area, the dominant plant species documented within dry montane meadows include narrow-leaved sedge, Baltic rush, annual saltmarsh aster, hairy arnica, agoseris (*Agoseris grandiflora*), Idaho bentgrass (*Agrostis idahoensis*), and blue-eyed Mary (*Collinsia parviflora*).

In dry montane meadows, seeding will be used as primary means of vegetation restoration. The seed mix will provide erosion control for disturbed surfaces. The seed mix will be composed of native grasses and forbs and is listed in Table F-1: Seed Mix – Montane Riparian, Wet Montane Meadow, Dry Montane Meadow in Attachment F: Site-Specific Seed Mixes.

6.3.3 Mulch

After seeding and planting procedures are complete, salvaged duff/mulch, pine needles, and/or aged wood chips will be applied to a depth of 1 inch on the surface of areas where soil has been loosened.

6.3.4 Maintenance

Irrigation of planted seeds will be limited to one season to support the reliable, timely establishment of healthy plants that are not dependent on irrigation for their persistence. Planted and seeded areas will either be watered by hand or truck. Seeded areas will be irrigated to facilitate plant establishment where erosion control depends primarily on rapid revegetation and where irrigation is practicable. Where erosion control does not depend primarily on rapid revegetation, the need for irrigation will be determined by the RE on a site-by-site basis.

In general, irrigation of seeded areas will only be conducted between June 1 and September 30 following plant installation. A recommended irrigation rate is once per week. The recommended irrigation strategy for seeded areas will be to apply an amount of water that is sufficient to wet the soil profile to a depth below the rooting zone, then wet the soil to progressively greater depths (from initially 3 to later 10 inches in depth), and allow a progressively greater depletion of soil water (i.e., longer intervals between applications) as plants increase in size. At planted and seeded sites, irrigation water will be applied at a rate that does not exceed the rate that water infiltrates the soil.

Container plants will be watered immediately after installation, and will be periodically irrigated (wetting to a depth below the rooting zone) more than once for two growing seasons to facilitate establishment. Where applicable, planting basins will be completely filled with water at each application. After each watering, the root zone around each plant will be saturated to a minimum depth of 1 foot across the entire width of the planting basin. The watering will not occur in excess of 1 hour at an individual planting site.

As part of the maintenance period, Liberty will be responsible for any replacement plantings that are needed. Replacement planting and seeding will utilize the same species and plant/seed size that was originally planted, unless it is determined by the RE that another species or size will be more successful. Tree and shrub material that has no easily observable, viable, aboveground living material will be considered dead and will be replaced. Herbaceous plants that fail to show new growth from their root systems after one dormant period and within the first 9 months after planting will be considered dead and will be replaced.

6.4 RESTORATION OF UPLAND VEGETATION

Upland vegetation communities (e.g., Jeffrey pine forest, Sierran mixed conifer forest, Jeffrey pine-white fir forest, white fir-red fir forest, low sage scrub, sagebrush scrub, montane chaparral, and ruderal) that are impacted by project construction will be restored to pre-construction conditions, and will be seeded with native species to stabilize the soils and minimize the introduction of invasive plants. Trees and shrubs are expected to naturally colonize the restored vegetation communities from adjacent, undisturbed sites. The approximate location of vegetation communities within the project area are mapped in Attachment D: Vegetation Communities Map.

Detailed seed mixes are detailed in each vegetation community section that follows. Final grading, topsoil salvage, seedbed preparation, and mulch application will follow the same procedures for all upland vegetation types.

6.4.0 Final Grade

Final grading will follow the procedures previously outlined for a SEZ in Section 6.3.0 Final Grade

6.4.1 Topsoil Salvage and Seedbed Preparation

Topsoil will be salvaged and prepared as previously outlined for a SEZ in Section 6.3.1 Topsoil Salvage and Seedbed Preparation.

6.4.2 Revegetation

Seeding

Seeding will follow broadcast seeding procedures described for a SEZ in Section 6.3.2 Revegetation. In steep areas, hydroseeding will replace broadcast seeding to increase soil stability and erosion control. In full sun or dry areas, a full sun seed mix will be used.

After seedbed preparation is complete, tackifier will be applied on the same working day and according to the manufacturer's specifications. The tackifier will be an organic, plant-derived

substance containing corn starch, psyllium, or guar gum—or a combination thereof (e.g., Fisch-Stick, PT-TAC, Reclamare 2400, Ecology M-Binder, Eco-tak, or Triple-Tac). The tackifier will form a transparent, three-dimensional, film-like crust that is permeable to water and air and will not contain any agents that are toxic to seed germination. The tackifier will be packed in clearly marked bags stating the contents of each package, and all ingredients will be biodegradable. The tackifier will require no curing time, will remain soft and rewettable, and will not inhibit seed germination.

Further details on seeding requirements within each upland vegetation community are provided in the sections that follow.

Site-Specific Revegetation Guidelines

Seed mixes for each upland vegetation community are detailed in the subsections that follow.

Jeffrey Pine Forest

Jeffrey pine forest is a tall, open forest dominated by Jeffrey pine (*Pinus jeffreyi*). The understory in this forest is typically sparse, and often includes montane chaparral or sagebrush scrub species. The forest in the project area intergrades with mixed montane chaparral, as well as sagebrush scrub, and includes the following understory shrub species:

- antelope brush (*Purshia tridentata* var. *glandulosa*),
- big sagebrush (*Artemisia tridentata*),
- ceanothus (*Ceanothus prostratus* var. *occidentalis*),
- greenleaf manzanita (*Arctostaphylos patula*),
- huckleberry oak (*Quercus vacciniifolia*),
- mountain snowberry (*Symphoricarpos rotundifolius* var. *rotundifolius*),
- mountain whitethorn (*C. cordulatus*),
- pinemat manzanita (*A. nevadensis* ssp. *nevadensis*), and
- tobacco brush (*C. velutinus*).

The understory in this forest is typically sparse, and often includes montane chaparral or sagebrush scrub species. A dry/full sun seed mix will be used, as detailed in Table F-2: Seed Mix – Upland, Full Sun/Dry in Attachment F: Site-Specific Seed Mixes.

Sierran Mixed Conifer Forest

Sierran mixed conifer forest is dominated by several species, typically with three or more codominant species. Codominant species in the project area are a mix of white fir (*Abies concolor*), Jeffrey pine, sugar pine (*Pinus lambertiana*), and incense cedar (*Calocedrus decurrens*). Canopy cover varies from nearly 100 percent to a more open canopy. In open areas, the understory consists of a variety of shrubs, grasses, and forbs, including ceanothus, mountain whitethorn, pinemat manzanita, greenleaf manzanita, bush chinquapin (*Chrysolepis sempervirens*), huckleberry oak, and Sierra gooseberry (*Ribes roezlii* var. *roezlii*). At higher elevations, the vegetation community transitions from a mixed conifer forest to a red fir forest.

A dry/full sun seed mix will be used, as detailed in Table F-2: Seed Mix – Upland, Full Sun/Dry in Attachment F: Site-Specific Seed Mixes.

Jeffrey Pine-White Fir Forest

Jeffrey pine-white fir forest is dominated by Jeffrey pine and white fir. The understory of this community tends to be open with scattered montane chaparral species and smaller trees, mountain snowberry, and blue wild rye (*Elymus glaucus* ssp. *glaucus*). A thick layer of duff is typical, which contributes to the low understory abundance. Common understory species observed include pinemat manzanita, huckleberry oak, mule ears (*Wyethia mollis*), western pennyroyal (*Monardella odoratissima* ssp. *glauca*), and rockcress (*Boechera* spp.).

A dry/full sun seed mix will be used, as detailed in Table F-2: Seed Mix – Upland, Full Sun/Dry in Attachment F: Site-Specific Seed Mixes.

White Fir-Red Fir Forest

In white fir-red fir forest, white fir and red fir (*Abies magnifica*) are co-dominant, with occasional occurrences of incense cedar and Jeffrey pine. The understory is dominated by pinemat manzanita. A heavy duff layer exists, which contributes to the lack of understory diversity. A few of the typical understory species observed include bush chinquapin, mountain whitethorn, and pinedrops (*Pterospora andromedea*).

A generic seed mix will be used, as detailed in Table F-3: Seed Mix – Upland, Generic in Attachment F: Site-Specific Seed Mixes.

Low Sage Scrub

Low sage scrub is a low-growing scrub community dominated by low sage (*Artemisia arbuscula* ssp. *arbuscula*) and is often associated with antelope brush, rubber rabbitbrush (*Chrysothamnus nauseosus*), or big sagebrush. Several herbaceous species are present in the low sage scrub community, including dwarf lupine (*Lupinus lepidus* var. *confertus*), Nevada sulfur flower (*Eriogonum umbellatum* var. *nevadense*), and slender phlox (*Microsteris gracilis*).

The seed mix that will be used for this type of restoration site is detailed in Table F-2: Seed Mix – Upland, Full Sun/Dry in Attachment F: Site-Specific Seed Mixes.

Sagebrush Scrub

Sagebrush scrub is comprised of soft-woody shrubs dominated by big sagebrush. Rubber rabbitbrush and antelope brush are the most common associates of this community in the project area. This community is found within Martis Valley, and integrates with Jeffrey pine forest.

The seed mix that will be used for sagebrush shrub is detailed in Table F-2: Seed Mix – Upland, Full Sun/Dry in Attachment F: Site-Specific Seed Mixes.

Montane Chaparral

Montane chaparral exists in small patches throughout the project area and is characterized by one or more of the following species: mountain whitethorn, tobacco brush, greenleaf manzanita,

pinemat manzanita, huckleberry oak, bush chinquapin, and bitter cherry (*Prunus emarginata*). Open areas in the Sierran mixed conifer forest are dominated by this vegetation community.

The seed mix that will be used for this type of restoration site is detailed in Table F-2: Seed Mix – Upland, Full Sun/Dry in Attachment F: Site-Specific Seed Mixes.

Ruderal

Ruderal (i.e., weedy) communities are assemblages of plants that thrive in waste areas, roadsides, and other sites that have been disturbed by human activity. This vegetation type is mostly found along roadsides or in small patches within the project area. Some of the common species observed include white sweetclover (*Melilotus albus*), cheatgrass (*Bromus tectorum*), bindweed (*Convolvulus arvensis*), red-stem filaree (*Erodium cicutarium*), Russian thistle (*Salsola tragus*), and common mullein (*Verbascum thapsus*). Ruderal vegetation is mostly found along roadsides or in small patches within the project area.

The seed mix that will be used for ruderal vegetation is detailed in Table F-4: Seed Mix – High Disturbance in Attachment F: Site-Specific Seed Mixes. Further details on noxious weed management are provided in Section 6.6 Noxious Weed Management.

6.4.3 Mulch

Mulching of seeded areas will occur as described for a SEZ in Section 6.3.3 Mulch.

6.4.4 Maintenance

Maintenance of seeded areas will occur as described for a SEZ in Section 6.3.4 Maintenance.

6.5 SPECIAL-STATUS PLANT SPECIES

One special-status plant species—Plumas ivesia (*Ivesia sericoleuca*)—was identified on the project site during Insignia’s 2014 floristic surveys. Plumas ivesia is a California Native Plant Society Rare Plant Rank 1B.2 species and a USFS Region 5 Regional Forester’s Sensitive Plant Species. This perennial species occurs within low sage scrub and wet montane meadow in the Martis Valley portion of the project site, as shown in Attachment C: Special-Status Plant Species Map. The flowering period for Plumas ivesia is May through October. In addition, parsnip-flower wild buckwheat (*Eriogonum heracleoides* var. *heracleoides*)—was identified during surveys. While this species is not a special-status species, it is a CNPS Rare Plant Rank 4.3 species; i.e., it is on a watch list as a species of limited distribution. The parsnip-flower wild buckwheat is a perennial herb and flowers from May through October. Populations of this species are shown in Attachment C: Special-Status Plant Species Map, and will be avoided to the extent possible.

In accordance with APM BIO-09, exclusion zones will be established around all Plumas ivesia populations that will be avoided. Insignia has consulted with USFS Tahoe National Forest (TNF) botanist Susan Urie to discuss appropriate protection measures to be implemented where Plumas ivesia cannot be avoided by project activities. This perennial tap-rooted plant can withstand moderate levels of trampling and vehicular traffic. In areas where the plant is impacted, it can naturally regenerate from adjacent populations, provided that the hydrology of the site is not altered by construction activities. Though Plumas ivesia has a competitive advantage in wetland

conditions, any reduction in hydrology can facilitate the introduction of upland species that can successfully outcompete *Plumas ivesia*.

Prior to affecting *Plumas ivesia*, the impact area will be photographed during the spring at established photographic documentation points to record existing conditions. Documentation will include percent vegetation cover of *Plumas ivesia* and percent soil saturation or ponding. Vegetation cover will be measured along established transects. Photographic points and transects will be mapped using a Global Positioning System unit.

Vehicle travel over *Plumas ivesia* will be minimized to the extent possible. As determined by the EM, timber mats will be installed where vehicle and equipment will drive over *Plumas ivesia* populations, to minimize rutting and impacts to the plant. Where impacts to *Plumas ivesia* are unavoidable, work will be conducted after soils have dried, generally between July and September. Upon completion of construction activities at each work area, the EM will ensure that the contours and hydrology of impacted *Plumas ivesia* sites are restored to near pre-construction conditions. No seeding or translocation will be required.

6.6 NOXIOUS WEED MANAGEMENT

Noxious weed management will adhere to methods specified in the Invasive Plant Risk Assessment CalPeco 625 and 650 Electrical Line Upgrade Project Lake Tahoe Basin Management Unit and Tahoe National Forest (Ascent 2013), which was prepared in consultation with the TNF and LTBMU. The following measures outline requirements for the monitoring and management of noxious weeds, including a description of monitoring and maintenance objectives to prevent the establishment of noxious weeds for a minimum of 3 years:

- APM BIO-02 through APM BIO-08,
- APM BIO-21,
- APM BIO-23,
- APM BIO-24,
- APM BIO-26,
- APM BIO-28,
- APM BIO-30,
- APM BIO-36, and
- MM 4.7-5.

6.6.0 Known Populations and Preconstruction Surveys

Reconnaissance-level surveys for invasive plants were completed for the Liberty 650 Electrical Line Upgrade Project in June 2012 by Ascent and POWER Engineering biologists. Survey results are detailed in the Invasive Plant Risk Assessment CalPeco 625 and 650 Electrical Line Upgrade Project (Ascent 2013). In July 2014, Insignia biologists mapped all noxious weeds occurrences on the project site, as shown in Attachment G: Noxious Weeds Map.

6.6.1 Control Measures

In addition to the project-specific APMs, the following measures will be implemented to minimize the risk of new weed introductions, and to minimize the spread of weeds within and between work areas:

- Liberty will utilize locally collected native seed sources for revegetation when possible. Plant and seed material will be collected from or near the project area, from within the same watershed, and at a similar elevation when possible and with approval of the Forest Service botanist. Persistent non-natives—such as cultivated timothy, orchard grass, ryegrass, and crested wheatgrass (*Agropyron cristatum*)—will not be used in revegetation.
- Before construction activities begin, Liberty will treat invasive plant infestations where feasible. Treatments will be selected based on each species' ecology and phenology. If areas infested with invasive plants are unavoidable, the plants will be cut (if feasible) and disposed of in a landfill in sealed bags, or they will be disposed of or destroyed in another manner that is acceptable to the USFS, USACE, TRPA, or other agency as appropriate. If cutting is not feasible, layers of mulch, degradable geotextiles, or similar materials will be placed over the infestation area to minimize the spread of propagules by equipment and vehicles during construction. These materials will be secured so they are not blown or washed away.
- All treatment methods—including the use of herbicides—will be conducted in accordance with the law, regulations, and policies governing the landowner (e.g., the TRPA in the Lake Tahoe Basin, and the LTBMU Forest Supervisor and the TNF Supervisor on USFS lands). Landowners will be notified prior to the use of herbicides.
- In areas where treatment is not feasible, Liberty will clearly flag or fence infested areas in order to clearly delineate work exclusion. Appropriate treatments will also be incorporated into tree removal and construction activities, such as a requirement that all cut, live conifer stumps that are larger than 6 inches in diameter will be treated with Sporax or a U.S. Environmental Protection Agency-registered borate compound to prevent the spread of Annosus root disease.
- Vehicles and equipment will arrive at the project area clean and weed-free, and will be inspected by the on-site EM for mud or other signs that weed seeds or propagules could be present prior to use in the project area. If the vehicles and equipment are not clean, the EM will deny entry to the ROW and other work areas. Vehicles and equipment will be cleaned using high-pressure water or air at designated weed-cleaning stations after exiting an infested area. Cleaning stations will be designated by the EM and located away from aquatic resources. Only certified weed-free construction materials (e.g., sand, fiber, gravel, seed, and fill) will be used throughout the project. If invasive plant infestations are later identified throughout the course of construction in staging areas, parking areas, or access routes, they will be treated as described in the previous bullets.

These measures are consistent with USFS policy and manual direction and the LTBMU Land Resource Management Plan as amended by the Sierra Nevada Forest Plan Amendment.

7 – CLEANUP

7.0 CONSTRUCTION MATERIALS AND EQUIPMENT

Cleanup of construction materials and equipment will occur on a daily basis and as each phase of the project concludes. All trash and excess dirt caused by project activities will be removed according to state and local regulations. Liberty will make arrangements for disposing of these materials outside of the project site and will pay all costs involved. All adjacent trails and paved areas will be swept on a weekly basis throughout the duration of the project.

All scars, ruts or other marks in the ground caused by the work will be repaired. Upon completion of construction activities at each work area, all ground surfaces will be smoothed, and excess dirt, materials, rubbish, and debris will be removed—in accordance with state and local regulations—and transported to an off-site location or as directed by the property owner's authorized representative. Adjacent streets, curbs, gutters and sidewalks will be swept, and construction equipment will be removed from the premises.

8 – MONITORING, ANNUAL PERFORMANCE STANDARDS, AND SUCCESS CRITERIA

Post-construction monitoring of all restored temporary work areas will be performed by Liberty to ensure that the restoration effort meets the satisfaction of the TRPA, USFS, USACE, RWQCB, and CDFW. The following subsections describe the monitoring methods, success criteria, and reporting for the post-construction monitoring of restored areas.

After the final inspection and establishment of vegetation, temporary best management practices implemented as part of the SWPPP can be removed. Revegetation signage will remain after the project is complete to ensure adequate protection of revegetation areas. Additionally, signage stating No Public Access will remain at paths and roadways that have been revegetated.

8.0 STREAM ENVIRONMENT ZONES

Restoration monitoring of wetlands, including wet and dry montane meadows, will focus on the percent vegetation cover of native wetland species and exposed soil, and the duration and percent soil saturation/ponding. Restoration monitoring of drainages will focus on percent cover of native vegetation and percent exposed soil. Both wetland and drainage monitoring will include a comparison of restoration sites to surrounding, undisturbed reference sites. Monitoring will occur during the growing season, at a time when a majority of the species to be monitored are in bloom or readily identifiable. All plant species within the restoration areas will be documented during the monitoring years. Photographic documentation of the restoration areas and the surrounding, undisturbed sites will also be collected. A summary of success criteria is presented in Table 1: Monitoring Standards for Drainages and Table 2: Monitoring Standards for Wetlands.

Table 1: Monitoring Standards for Drainages

Monitored Character	Monitoring Year(s)	Monitoring Frequency	Success Criteria
Individual Riparian Plant Survival – By Species	1-5	Once per year during the growing season	80 percent
Native Percent Vegetation Cover	1-5	Once per year during the growing season	80 percent relative to an adjacent reference site

Table 2: Monitoring Standards for Wetlands

Monitored Character	Monitoring Year(s)	Monitoring Frequency	Success Criteria
Hydrology – Percent Soil Saturation/ Ponding	1-5	Once per year during the growing season	Based on visual observations, the percentage of soil saturation or ponding is similar to undisturbed wetland areas
Vegetation – Percent Cover by Wetland Species	1-5	Once per year during the growing season	80 percent relative to an adjacent reference site

8.1 UPLAND VEGETATION

Restoration monitoring of upland vegetation will focus on the percent cover of native species and exposed soil, and signs of erosion. Monitoring will include a comparison of restoration sites to the surrounding, undisturbed reference sites. Monitoring will occur during the growing season, at a time when a majority of the species to be monitored are in bloom or are readily identifiable. All plant species within the restoration areas will be documented during monitoring years. Photographic documentation of the restoration areas and the surrounding, undisturbed sites will also be collected. A summary of performance standards and success criteria for upland vegetation is presented in Table 3: Monitoring Standards for Upland Vegetation.

8.2 SPECIAL-STATUS PLANT SPECIES

Restoration monitoring of Plumas ivesia will be conducted concurrently with wetland monitoring. Monitoring will include a comparison of restoration site conditions to pre-construction conditions along established transects, as further detailed in Section 6.5 Special-Status Plant Species. Photographic documentation of the site will be collected and compared to pre-construction photographs. A summary of performance standards and success criteria for Plumas ivesia restoration is provided in Table 4: Monitoring Standards for Plumas Ivesia.

Table 3: Monitoring Standards for Upland Vegetation

Monitored Character	Monitoring Year(s)	Monitoring Frequency	Success Criteria
Total Vegetation Cover	1-5	Once per year during the growing season	25 percent
Percent Vegetation Cover – Shrubs	1-5	Once per year during the growing season	3 percent or more
Relative Vegetation Cover	1-5	Once per year during the growing season	80 percent relative to adjacent reference site
Erosion	1-3	Once per year during the growing season	No visible evidence of excessive erosion ³

Table 4: Monitoring Standards for Plumas Ivesia

Monitored Character	Monitoring Year(s)	Monitoring Frequency	Success Criteria
Hydrology – Percent Soil Saturation/Ponding	Prior to impacts	Once during the growing season	Not Applicable (NA)
	1-5	Once per year during the growing season	The percentage of soil saturation or ponding is similar to pre-construction conditions
Vegetation – Percent Cover by Wetland Species	Prior to impacts	Once per year during the growing season	NA
	1-5	Once per year during the growing season	80 percent relative to pre-construction conditions

³ Examples of visible evidence of excessive erosion include multiple interconnected rills; rocks on pedestals taller than 0.2 inches; or mounds of soil piled against rocks, large roots, and bases of larger plants.

8.3 NOXIOUS WEEDS

After the project is completed, the project area will be monitored for 3 years for additional non-native invasive species establishment or spread of existing non-native invasive species populations in the areas affected by the project. Monitoring will occur during the growing season, at a time when a majority of the species to be monitored are in bloom or are readily identifiable. Noxious weed management will be considered successful when the percent of weed species remains at or below the populations within the adjacent reference sites. A summary of performance standards and success criteria for noxious weed restoration is provided in Table 5: Monitoring Standards for Noxious Weeds

Table 5: Monitoring Standards for Noxious Weeds

Monitored Character	Monitoring Year(s)	Monitoring Frequency	Success Criteria
Percent Cover – Noxious Weeds	1-3	Once per year during the growing season	Percent cover at or below that of adjacent reference site

8.4 REMEDIAL MEASURES

Remedial actions may be necessary and will be identified within the first 3 years following planting/seeding or replanting/reseeding. If the success criteria for the restored areas have not been met after 3 years, Liberty will consult with the TRPA, USFS, USACE, and CDFW to develop additional restoration measures. In general, an adaptive management approach should be taken to identify additional restoration and weed-control measures. This approach will focus on gathering information during the monitoring period, and adjusting management practices and remedial measures according to assessments made while monitoring. If a site fails to meet the established success criteria, Liberty and the RE will modify and/or add restoration and/or weed-control measures in coordination with the TRPA, USFS, USACE, and CDFW. It is noted that in areas where noxious weeds are prevalent well beyond the construction limits, noxious weed re-establishment is likely and Liberty will not be held to full eradication. Examples of modified or additional restoration or weed-control measures include the following:

- re-seeding a site that experienced significant seed loss during a major rain event
- implementing a watering program during a prolonged drought
- recontouring and reapplying hydromulch to a site damaged by unauthorized off-road vehicle use
- utilizing mechanical weed abatement methods, or the selective use of herbicides

If chemical or mechanical weed abatement methods are determined to be required, the application of these methods will be conducted in a manner that minimizes potential impacts to sensitive plant and wildlife species (e.g., the timing of implementation, the application rate for chemical controls, and the utilization of site-specific measures).

All remedial activities will follow requirements in APMs and MMs, as well as procedures used for the initial restoration.

9 – REPORTING

Liberty will submit a Restoration Monitoring Report to the TRPA, LTBMU, USACE, and CDFW by December each year, following the completion of project construction. This report will include the following:

- Introduction
- Monitoring methods summary
- Monitoring results
- Discussion
- Conclusion and recommendations

Monitoring and reporting of restoration progress will be conducted for up to 5 years. If the restoration success criteria have been met before year 5, monitoring and reporting will cease at that time.

10 – COMPLETION OF RESTORATION PROGRAM

The restoration of the project area will be considered complete when the monitoring period is over and the final success criteria are met. Liberty will notify the LTBMU, TRPA, USACE, and CDFW that the success standards have been met upon submitting the annual report for the final year, and will request acceptance that the success criteria have been met and acknowledgement that applicable APMs and MMs have been fulfilled.

11 – REFERENCES

AECOM. 2010. Revegetation Guidance Document for Erosion Control Projects in the Tahoe Basin.

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USFS. 2004. Sierra Nevada Forest Plan Amendment Final Supplemental Environmental Impact Statement.

**ATTACHMENT A: RELEVANT APPLICANT-PROPOSED MEASURES AND MITIGATION
MEASURES**

ATTACHMENT A: RELEVANT APPLICANT-PROPOSED MEASURES AND MITIGATION MEASURES

APM/MM Number ¹	Subject	Measure Text
BIO-02	Flagging and fencing – special status	CalPeco will conduct a complete floristic survey, including surveys for all special-status botanical species and invasive plants, during a time that coincides with the greatest number of blooming periods for target species. This survey will be conducted no more than one year prior to the start of construction. Occurrences of special-status botanical species and weed-infested areas will be flagged or fenced no more than 30 days prior to the start of construction. Flagging and fencing will be refreshed and maintained throughout construction. Implementation of this measure will occur in coordination with USFS.
BIO-03	Invasive Plant Risk Assessment	CalPeco will complete an invasive plant risk assessment for all ground-disturbing activities.
BIO-04	Noxious Weeds	Before construction activities begin, CalPeco will treat invasive plant infestations where feasible. Treatments will be selected based on each species ecology and phenology. All treatment methods—including the use of herbicides—will be conducted in accordance with the law, regulations, and policies governing the land owner (e.g., TRPA in the Lake Tahoe Basin; LTBMU Forest Supervisor and Tahoe National Forest Supervisor on NFS lands). Land owners will be notified prior to the use of herbicides. In areas where treatment is not feasible, CalPeco will clearly flag or fence infested areas in order to clearly delineate work exclusion. Appropriate treatments will also be incorporated into tree removal and construction activities, such as a requirement that all cut live conifer stumps greater than 6 inches in diameter be treated with Sporax or an EPA-registered borate compound to prevent the spread of Annosus root disease.
BIO-05	Noxious Weeds	Vehicles and equipment will arrive at the project area clean and weed-free and will be inspected by the on-site environmental monitor for mud or other signs that weed seeds or propagules could be present prior to use in the project area. If the vehicles and equipment are not clean, the monitor will deny entry to the ROW and other work areas.
BIO-06	Noxious Weeds	Vehicles and equipment will be cleaned using high-pressure water or air at designated weed-cleaning stations after exiting an infested area. Cleaning stations will be designated by a botanist or invasive plant specialist and located away from aquatic resources.
BIO-07	Noxious Weeds	Only certified weed-free construction materials, such as sand, straw, gravel, seed, and fill, will be used throughout the project.
BIO-08	Noxious Weeds	If invasive plant-infested areas are unavoidable, invasive plants will be cut, if feasible, and disposed of in a landfill in sealed bags or disposed of or destroyed in another manner acceptable to the USFS, TRPA, USACE, or other agency as appropriate. If cutting is not feasible, layers of mulch, degradable geotextiles, or similar materials will be placed over the infestation area to minimize the spread of propagules by equipment and vehicles during construction. These materials will be secured so they are not blown or washed away.
BIO-09	Special-Status Plants	Exclusion zones will be established around any identified special-status botanical species. In consultation with a qualified biologist, CalPeco will first attempt to avoid effects of project implementation on special-status plants and protect occurrences in situ. In the event that a special-status plant occurrence cannot be avoided by construction activities, CalPeco will notify CPUC, CDFW, TRPA, and/or USFS, as applicable depending on the species regulatory status. CalPeco will consult with CDFW, TRPA, and/or USFS in order to establish appropriate mitigation measures. If seed collection or transplantation are selected as appropriate mitigations, then the following measures will apply: a) CalPeco will collect any mature seeds from the affected plants and store them at an appropriate native plant nursery or comparable facility; b) upon the completion of work, CalPeco will redistribute the seeds within the original location of the occurrence; c) CalPeco will establish performance standards for survivorship and will also monitor and document the success rate of the transplanted individuals for three consecutive growing seasons; d) if performance standards are not met, corrective measures will be implemented and monitoring and adaptive management continued until success criteria are met. Specifically for Plumas ivesia: if, through consultation with an occurrence’s land manager, it is determined that Plumas ivesia plants cannot be avoided or protected in situ, then CalPeco will attempt to relocate all Plumas ivesia individuals. Plants that cannot be avoided during construction will be relocated to suitable habitat surrounding the 650 Line. If relocation is unsuccessful, CalPeco will consult with the CDFW and USFS in order to determine the cause of relocation failure and to establish appropriate corrective remedial measures.
BIO-21	Vegetation Removal	Qualified environmental monitors will be present with each crew during all vegetation-removal activities to help ensure that impacts to biological resources are minimized to the extent possible. For all other construction activities, monitors will be allowed to cover up to 5 miles of the project area at once to allow multiple crews to work in close proximity to each other at the same time. Environmental monitors will have the authority to stop work or direct work in order to help ensure the protection of resources and compliance with all permits.

¹ APM = applicant-proposed measures; MM = mitigation measure

APM/MM Number ¹	Subject	Measure Text
BIO-23	Topsoil Salvage	Topsoil, where present, will be salvaged in areas that will be graded or excavated. Topsoil will be segregated, stockpiled separately from subsoil, and covered. These soil stockpiles, as well as any others created by the proposed project, will have the proper erosion control measures applied until they are removed. The topsoil will then be replaced to the approximate location of its removal after project construction has been completed to facilitate revegetation of disturbed areas. Topsoil will not be salvaged from areas infested with invasive plants.
BIO-24	Noxious Weeds	If invasive plant infestations are later identified throughout the course of construction in staging areas, parking areas, or access routes, they will be treated according to APM BIO-4 & BIO-8.
BIO-26	Work Area Fencing	Work areas will be clearly marked with fencing, staking, flagging, or another appropriate material. All project personnel and equipment will be confined to delineated work areas. In the event that work must occur outside of the work area, approval from lead and other agencies with jurisdiction over the property will be obtained prior to the commencement of activities.
BIO-28	Vegetation Removal	CalPeco will minimize vegetation and tree removal to only the areas necessary for construction, with particular attention given to minimizing effects on riparian areas and preserve trees greater than 30 inches diameter at breast height (dbh).
BIO-30	Wetland Delineation	Prior to commencing construction in any area containing aquatic resources or potential wetlands, a qualified biologist will conduct a delineation of waters of the United States according to methods established in the USACE wetlands delineation manual (Environmental Laboratories 1987) and Western Mountains, Valleys, and Coast Region Supplement (Environmental Laboratories 2010). The delineation will map and quantify the acreage of all aquatic habitats on the project site and will be submitted to USACE for verification. CalPeco will determine, based on the verified wetland delineation and the project design plan, the acreage of impacts on waters of the United States and waters of the state that will result from project implementation. Impacts will be avoided to the extent practicable through the siting of poles and other facilities outside of delineated waters of the United States and waters of the state. Work in wetlands or wet meadow habitats with saturated soil conditions will be scheduled when soils are dry to the extent possible. If soils become saturated, timber mats will be installed along all vehicle and equipment access routes to minimize rutting. Prior to disturbance of waters of the United States or waters of the state, an environmental monitor will record via photographs and field notes the pre-disturbance condition of the water. Disturbed waters will be restored to preconstruction conditions and seeded with a native species, consistent with the vegetation community present prior to disturbance, to stabilize the soils and minimize the introduction of invasive plants, as specified by the USACE and RWQCB. In accordance with the USACE “no net loss” policy, all permanent wetland impacts will be mitigated at a minimum of a 1:1 ratio. This mitigation will come in the form of either contributions to a USACE-approved wetland mitigation bank or through the development of a Compensatory Mitigation and Monitoring Plan aimed at creating or restoring wetlands in the surrounding area (although creation is not authorized by TRPA in their jurisdiction)
BIO-36	Restoration Plan	Prior to construction, CalPeco will develop a Restoration Plan that will address final clean-up, stabilization, and revegetation procedures for areas disturbed by the project. The plan will be consistent with, and implement related commitments and requirements included in the EIS/EIS/EIR project description, other APMs, mitigation measures, and agency permit requirements. The Restoration Plan will address loosening of any compacted soil, restoration of surface residue, and reseedling. If existing unpaved roads require modification to temporarily allow passage of construction equipment during the construction period, these roads will be returned to their original footprint after construction is complete. On NFS lands, restoration activities will be designed and implemented to meet invasive plant management guidelines and Visual Quality Objectives (VQO) for the area. Areas temporarily disturbed by cut and fill activities would be re-graded to blend with the natural topography. On public land, CalPeco will coordinate with the land management agency to determine an appropriate seed mix or tree planting plan as well as other elements of the plan applicable to lands managed by the agency. On private land, CalPeco will coordinate with the landowner and/or provide the landowner with a suggested seed mix based on consultation with the agency of jurisdiction. The plan will include approved seed mixes, application rates, application methods, methods to record pre-disturbance conditions, success criteria for vegetation growth, monitoring and reporting protocols, and remedial measures if success criteria are not met. If broadcast seeding is determined to be the most feasible application method, seeding rates will be doubled relative to the standard seeding rate and the seeding method rationale will be explained. The plan will also include long-term erosion and sediment control measures, slope stabilization measures, criteria to determine the success of these measures, remedial actions if success criteria are not met, and monitoring and reporting procedures. As part of normal equipment inspections during project operation, an evaluation of access ways will be conducted to confirm that use has not resulted in compaction that will result in “coverage” per TRPA standards.
WQ-08	Water Quality	CalPeco will obtain permits from appropriate regulatory agencies prior to commencing work in waters of the United States or waters of the State. Following construction, CalPeco will restore any impacted waterbodies and wetlands to pre-project conditions and compensate for any permanent wetland impacts in accordance with the US Army Corps of Engineer’s “no net loss” policy.

APM/MM Number ¹	Subject	Measure Text
4.7-2b	Compensate for Unavoidable Loss of SEZ	The following measures would be implemented to ensure consistency with TRPA Code Section 61.3 and Fish and Game Code Section 1602 and further reduce potential adverse effects on SEZs, streams, and riparian habitat: • Within the Tahoe Basin, all reasonable alternatives, including bridge spans, pole spans, and facility relocation; shall be implemented to avoid or reduce the extent of encroachment into SEZs. • In instances where there is no feasible alternative to avoid an SEZ, CalPeco shall mitigate all impacts within the boundaries of SEZs by restoring SEZ habitat (land capability district 1b) in the surrounding area, or other appropriate area as determined by TRPA, at a minimum ratio of 1.5:1, consistent with TRPA Code. • CalPeco shall retain a qualified restoration ecologist to prepare a restoration plan (see APM BIO-36) that will address final clean-up, stabilization, and revegetation procedures for areas disturbed by the project. The restoration plan for SEZs shall include the following: - identification of compensatory mitigation sites and criteria for selecting these mitigation sites; - complete assessment of the existing biological resources in the restoration areas; - in kind reference habitats for comparison with compensatory SEZs (using performance and success criteria) to document success; - monitoring protocol, including schedule and annual report requirements (Compensatory habitat shall be monitored for a minimum of five years from completion of mitigation, or human intervention (including recontouring and grading), or until the success criteria identified in the approved mitigation plan have been met, whichever is longer); - ecological performance standards, based on the best available science and including specifications for native plant densities, species composition, amount of dead woody vegetation gaps and bare ground, and survivorship; at a minimum, compensatory mitigation planting sites must achieve 80 percent survival of planted vegetation by the end of the five-year maintenance and monitoring period or dead and dying plants shall be replaced and monitoring continued until 80 percent survivorship is achieved; - corrective measures if performance standards are not met; - responsible parties for monitoring and preparing reports; and - responsible parties for receiving and reviewing reports and for verifying success or prescribing implementation or corrective actions.
4.7-5	Utilize Local Native Seed and Notify Noxious Weed Coordinator	CalPeco shall utilize locally collected native seed sources for revegetation when possible. Plant and seed material shall be collected from or near the project area, from within the same watershed, and at a similar elevation when possible and with approval of the USFS botanist. Persistent nonnatives such as cultivated timothy (<i>Phleum pretense</i>), orchard grass (<i>Dactylis glomerata</i>), or ryegrass (<i>Lolium spp.</i>) shall not be used. After the project is completed, the USFS noxious weed coordinator shall be notified so that the project area can be monitored by the USFS if desired. Monitoring could be for up to three years (as funding allows) subsequent to project implementation to ensure additional nonnative invasive species do not become established in the areas affected by the project and to ensure that known nonnative invasive species do not spread.

Source: California Pacific Electricity Company (CalPeco) 625 and 650 Electrical Line Upgrade Project Final Environmental Impact Statement/Environmental Impact Statement/Environmental Impact Report (SCH# 2012032066) (Ascent Environmental 2014)

ATTACHMENT B: WETLAND DELINEATION MAP

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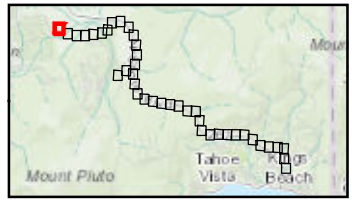


Attachment B: Wetland Delineation Map 1 of 40

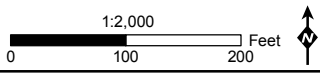
650 Line Rebuild Project

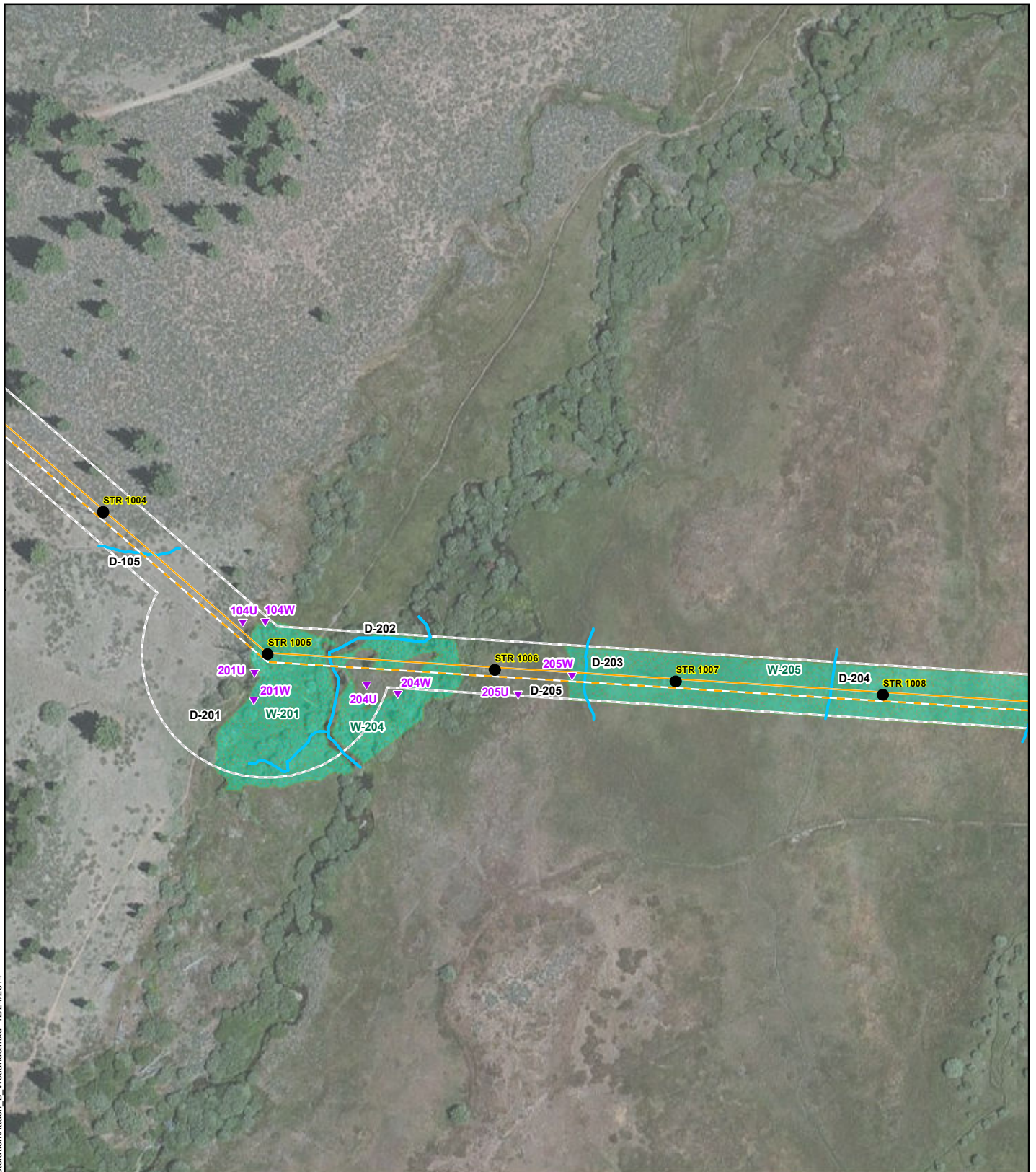
- | | | |
|--------------------------------------|-----------------|------------|
| --- Existing 650 Alignment | ● Existing Pole | — Drainage |
| — Proposed 650 Alignment | □ Survey Area* | ■ Wetland |
| - - - Proposed 650 Alignment Removal | ■ Culvert | |
| - - - Existing Northstar Tap | ▼ Soil Test Pit | |
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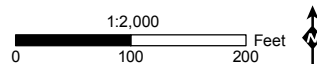
Attachment B: Wetland Delineation Map 2 of 40

650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- - - Proposed 650 Alignment Removal
- - - Existing Northstar Tap
- Proposed Northstar Tap
- Existing Pole
- Survey Area*
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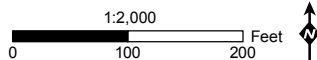
Attachment B: Wetland Delineation Map 3 of 40

650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- Proposed 650 Alignment Removal
- Existing Northstar Tap
- Proposed Northstar Tap
- Existing Pole
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Attachment B: Wetland Delineation Map 4 of 40

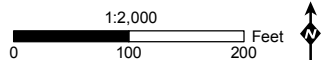
650 Line Rebuild Project

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|--------------------------------------|-----------------|------------|
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Attachment B: Wetland Delineation Map 5 of 40

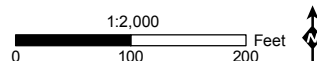
650 Line Rebuild Project

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- Proposed 650 Alignment
- Proposed 650 Alignment Removal
- Existing Northstar Tap
- Proposed Northstar Tap
- Existing Pole
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Attachment B: Wetland Delineation Map 6 of 40

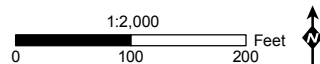
650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- Proposed 650 Alignment Removal
- Existing Northstar Tap
- Proposed Northstar Tap
- Existing Pole
- Survey Area*
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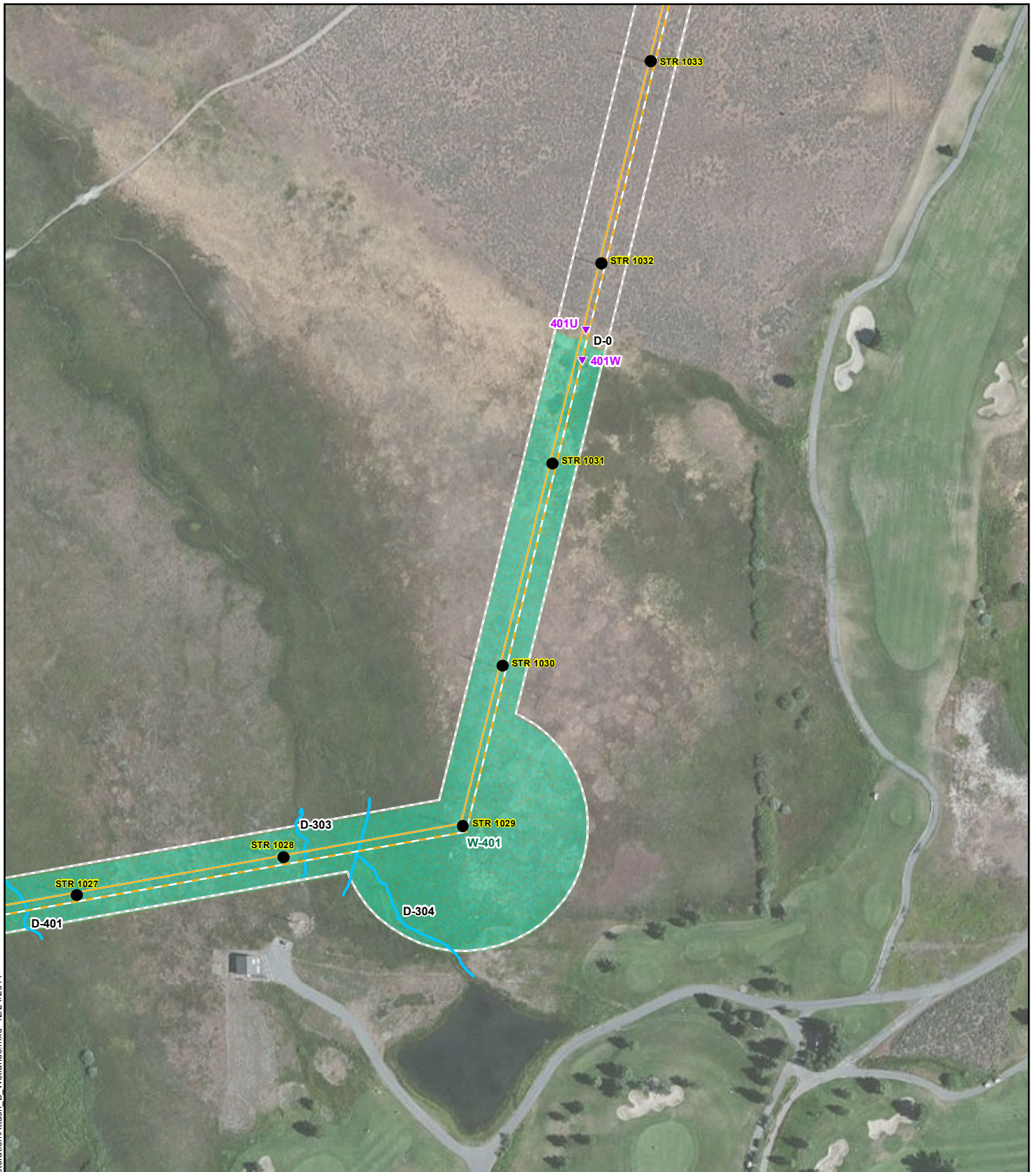


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Liberty Utilities





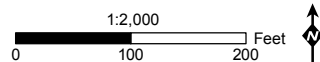
Attachment B: Wetland Delineation Map 7 of 40

650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- - - Proposed 650 Alignment Removal
- - - Existing Northstar Tap
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Attachment B: Wetland Delineation Map 8 of 40

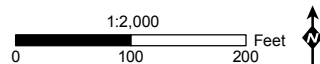
650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- Proposed 650 Alignment Removal
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Attachment B: Wetland Delineation Map 9 of 40

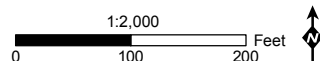
650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- Proposed 650 Alignment Removal
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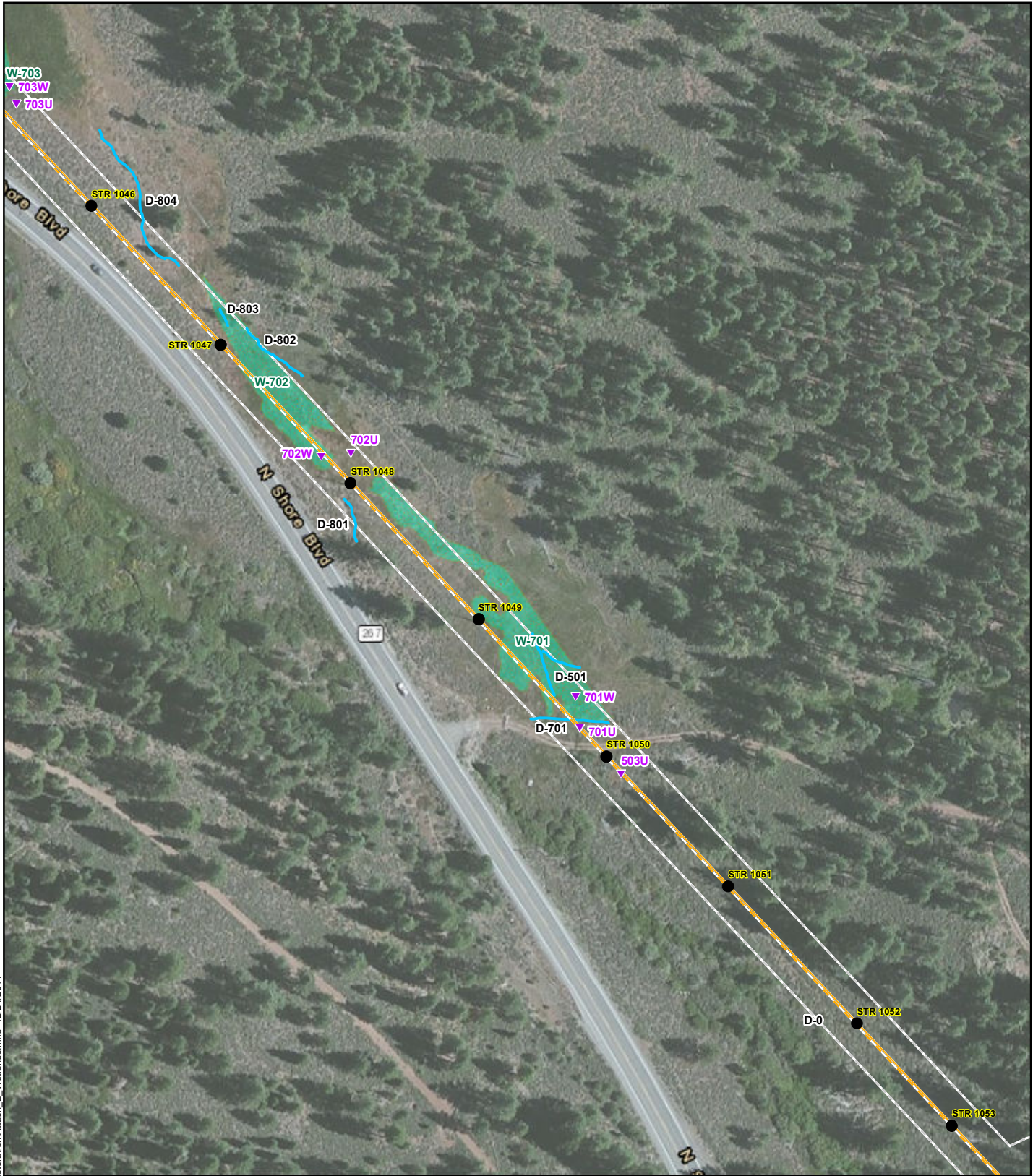
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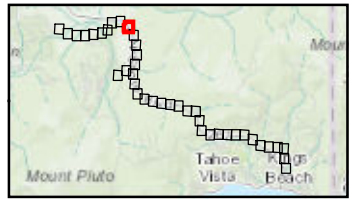
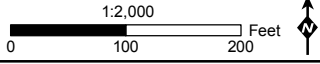
Attachment B: Wetland Delineation Map 10 of 40

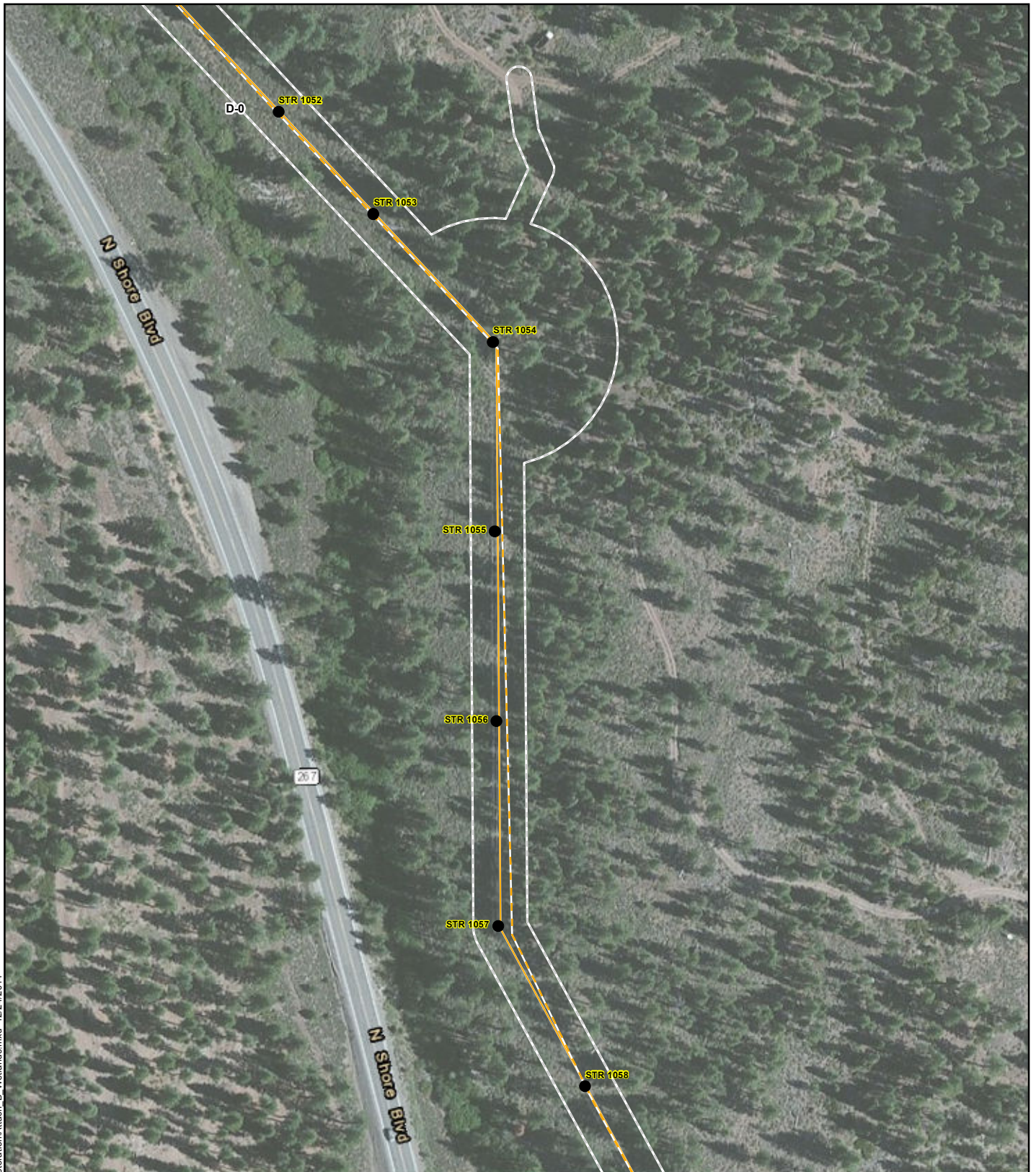
650 Line Rebuild Project

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| — Proposed 650 Alignment | □ Survey Area* | ■ Wetland |
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Attachment B: Wetland Delineation Map 11 of 40

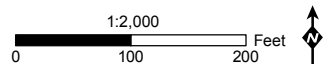
650 Line Rebuild Project

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|--------------------------------------|-----------------|------------|
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| — Proposed 650 Alignment | □ Survey Area* | ■ Wetland |
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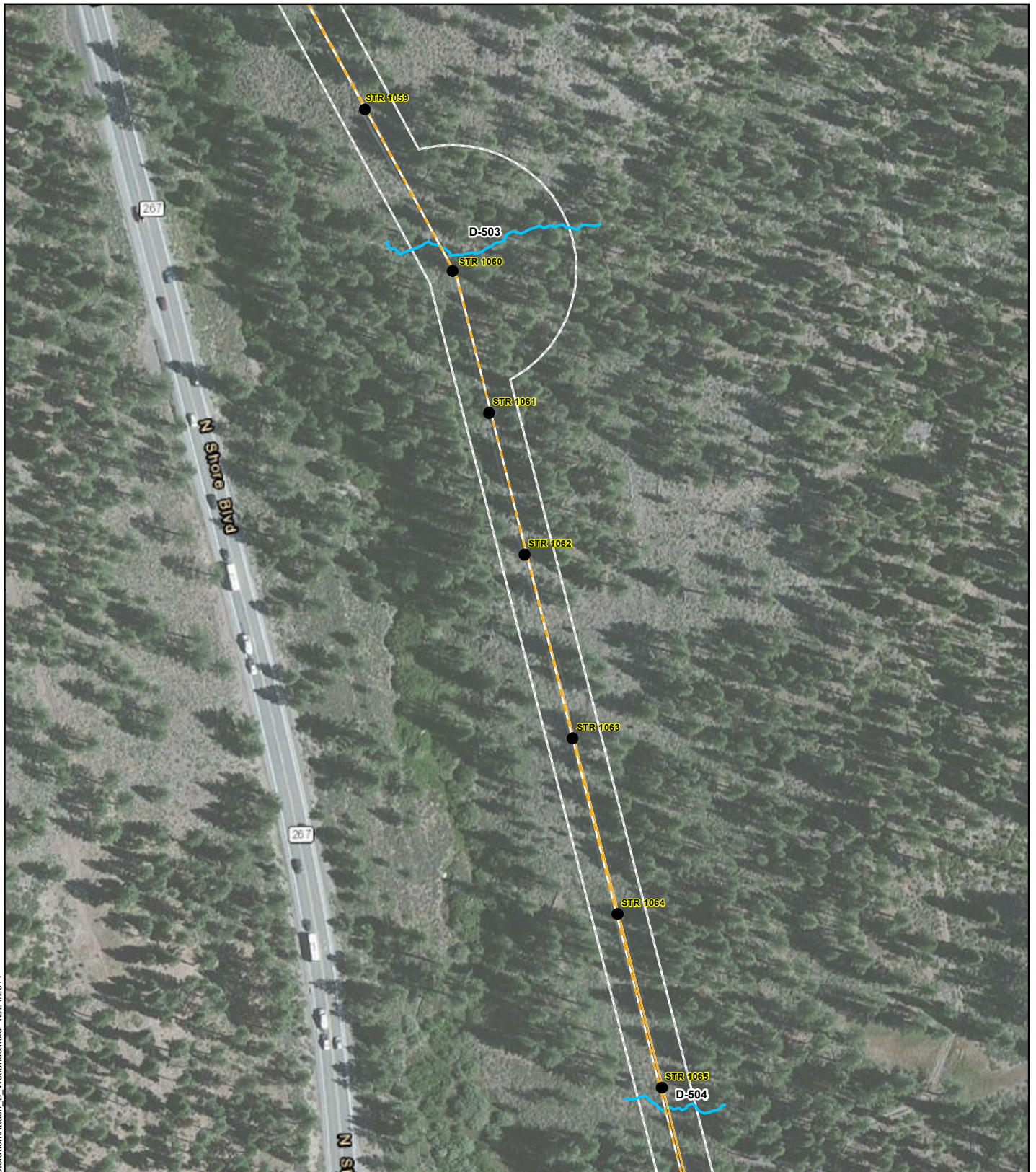


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Attachment B: Wetland Delineation Map 12 of 40

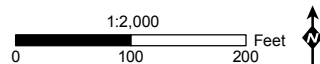
650 Line Rebuild Project

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| — Proposed 650 Alignment | --- Survey Area* | ■ Wetland |
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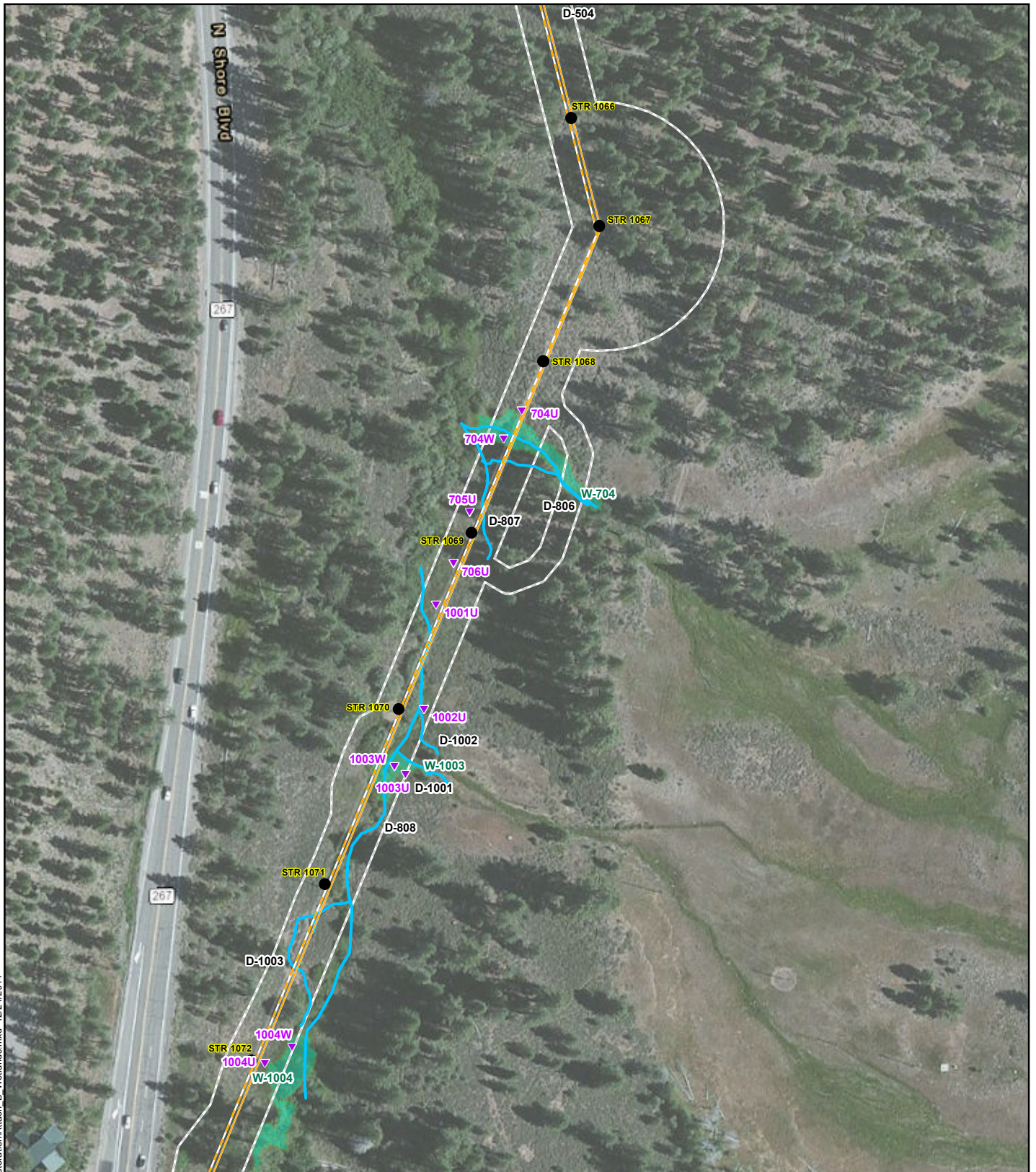


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Liberty Utilities



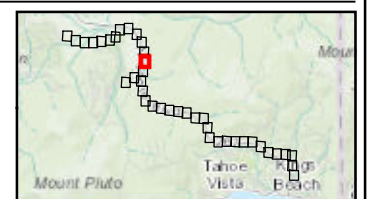


Attachment B: Wetland Delineation Map 13 of 40

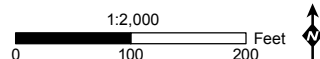
650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- Proposed 650 Alignment Removal
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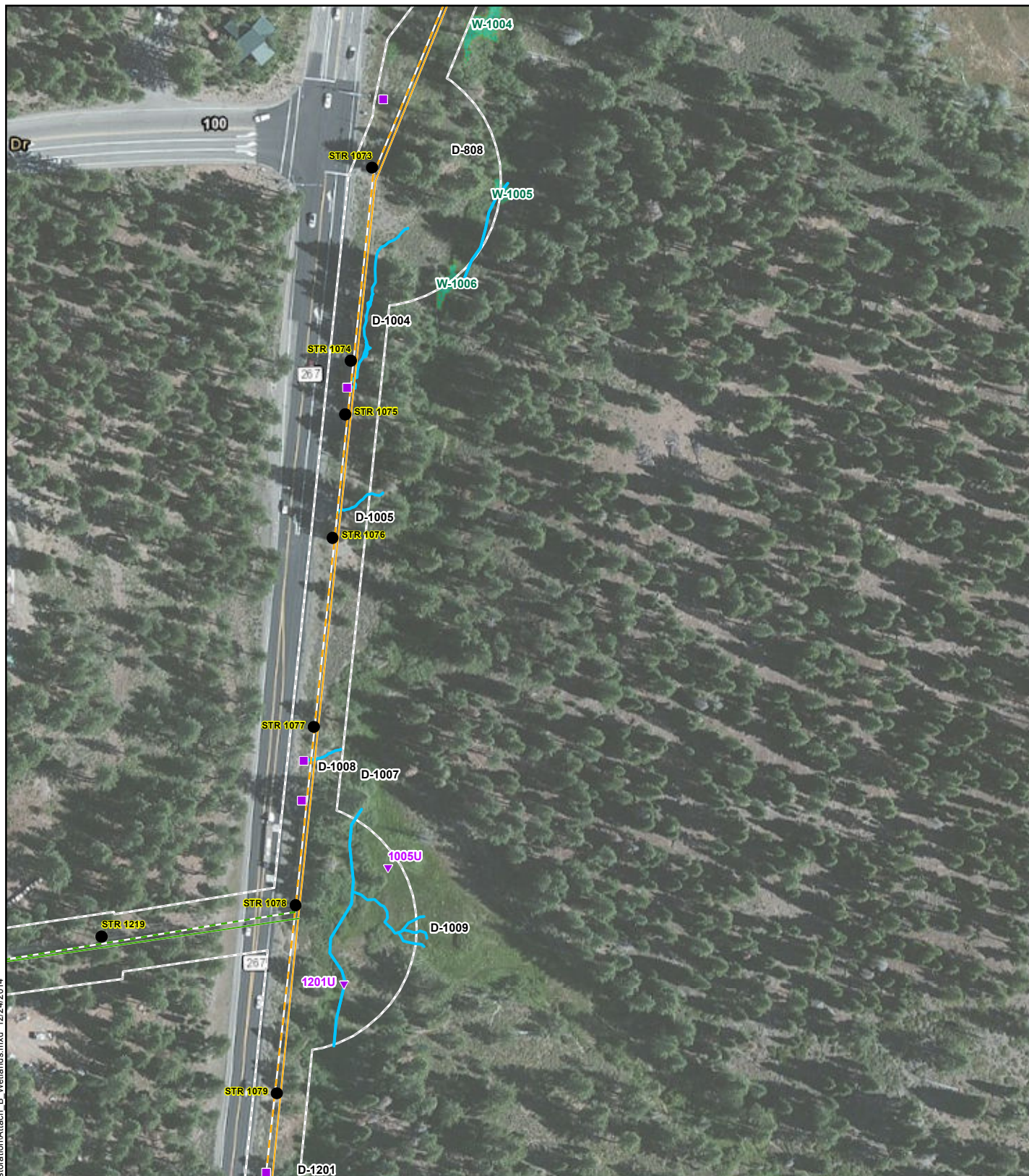


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Liberty Utilities





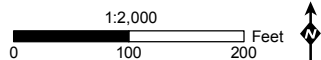
Attachment B: Wetland Delineation Map 14 of 40

650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- Proposed 650 Alignment Removal
- Existing Northstar Tap
- Proposed Northstar Tap
- Existing Pole
- Survey Area*
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- Wetland

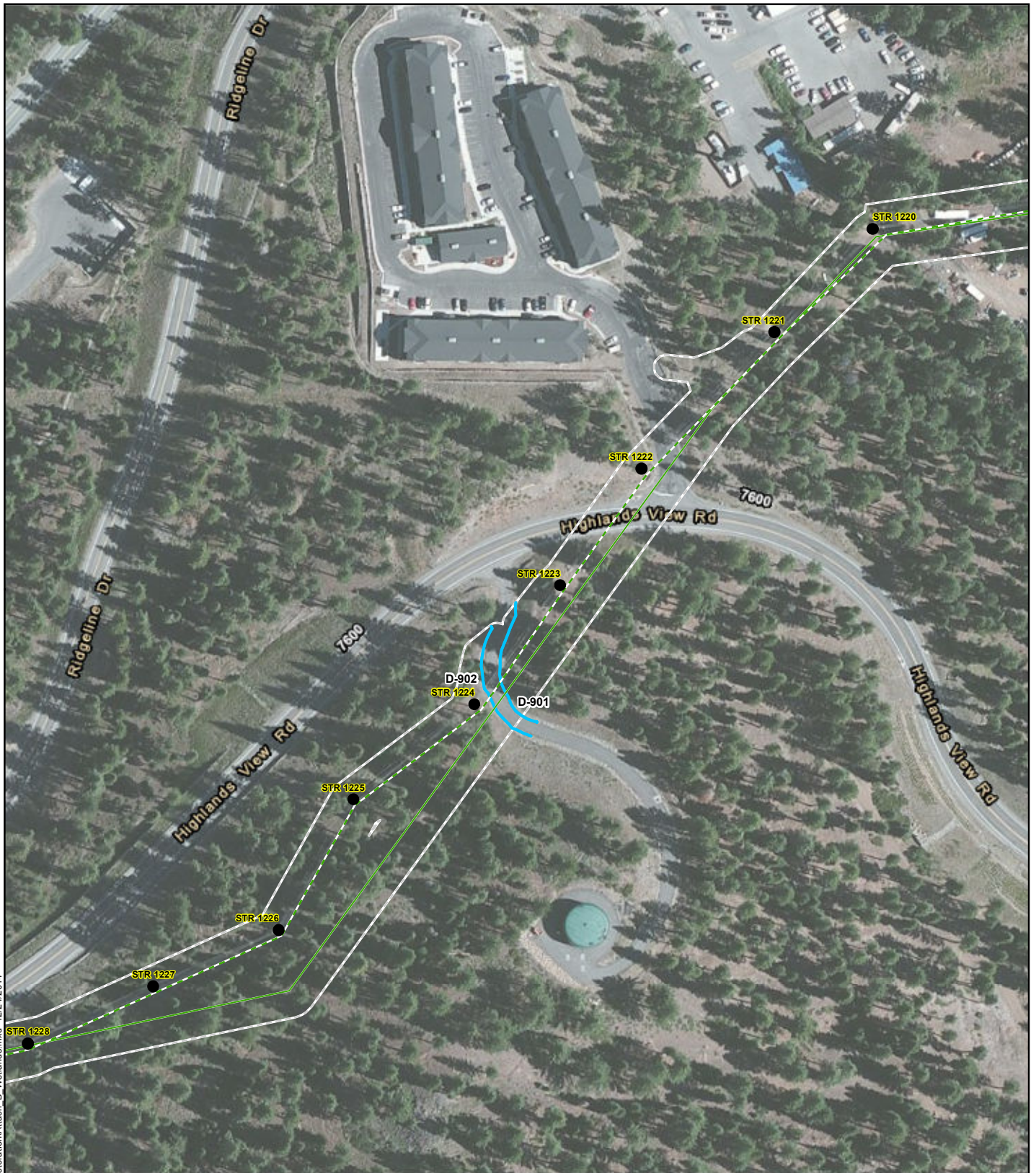
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Attachment B: Wetland Delineation Map 15 of 40

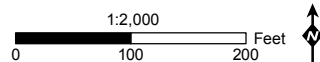
650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
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- Existing Pole
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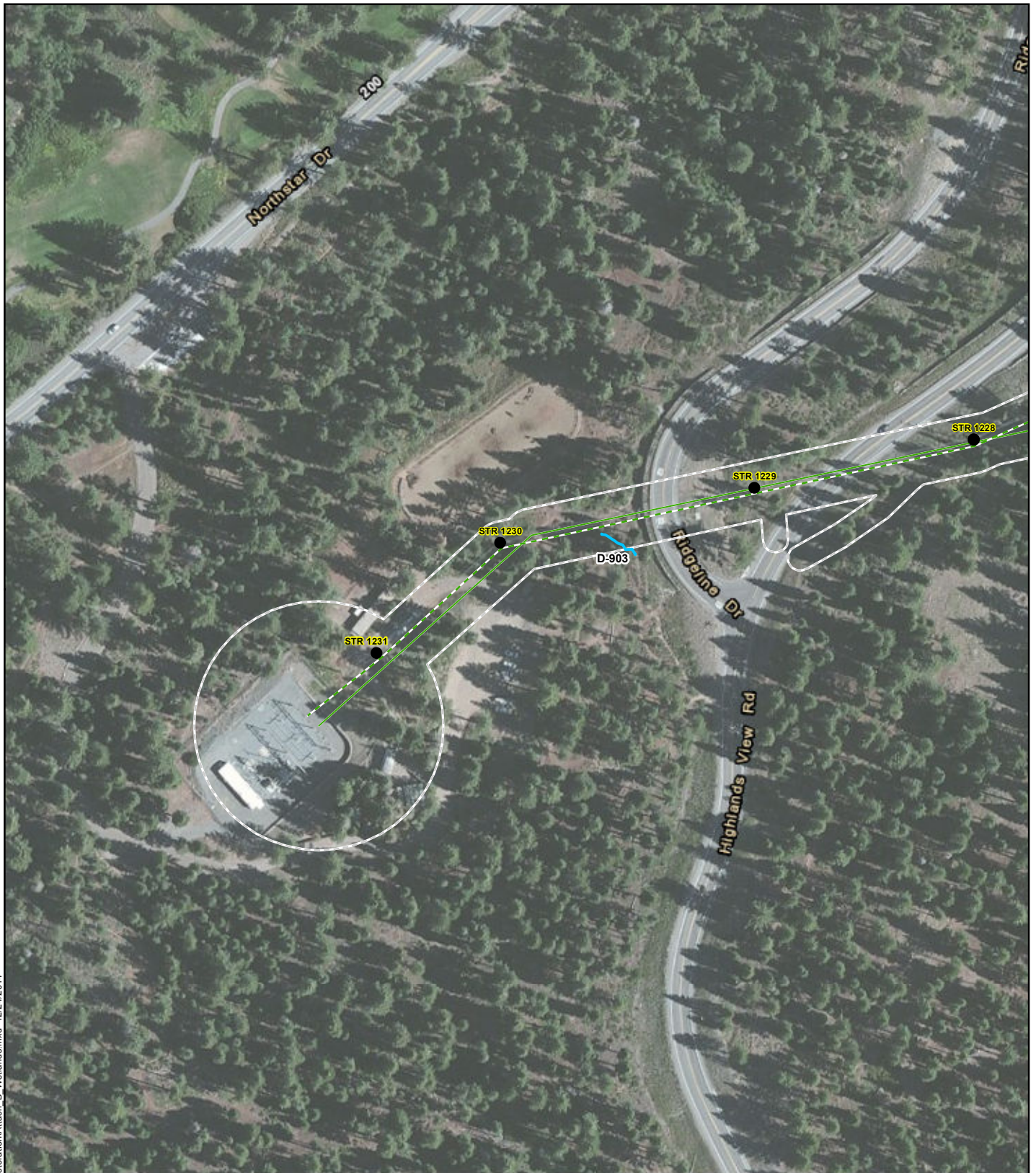


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Attachment B: Wetland Delineation Map 16 of 40

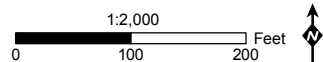
650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- Proposed 650 Alignment Removal
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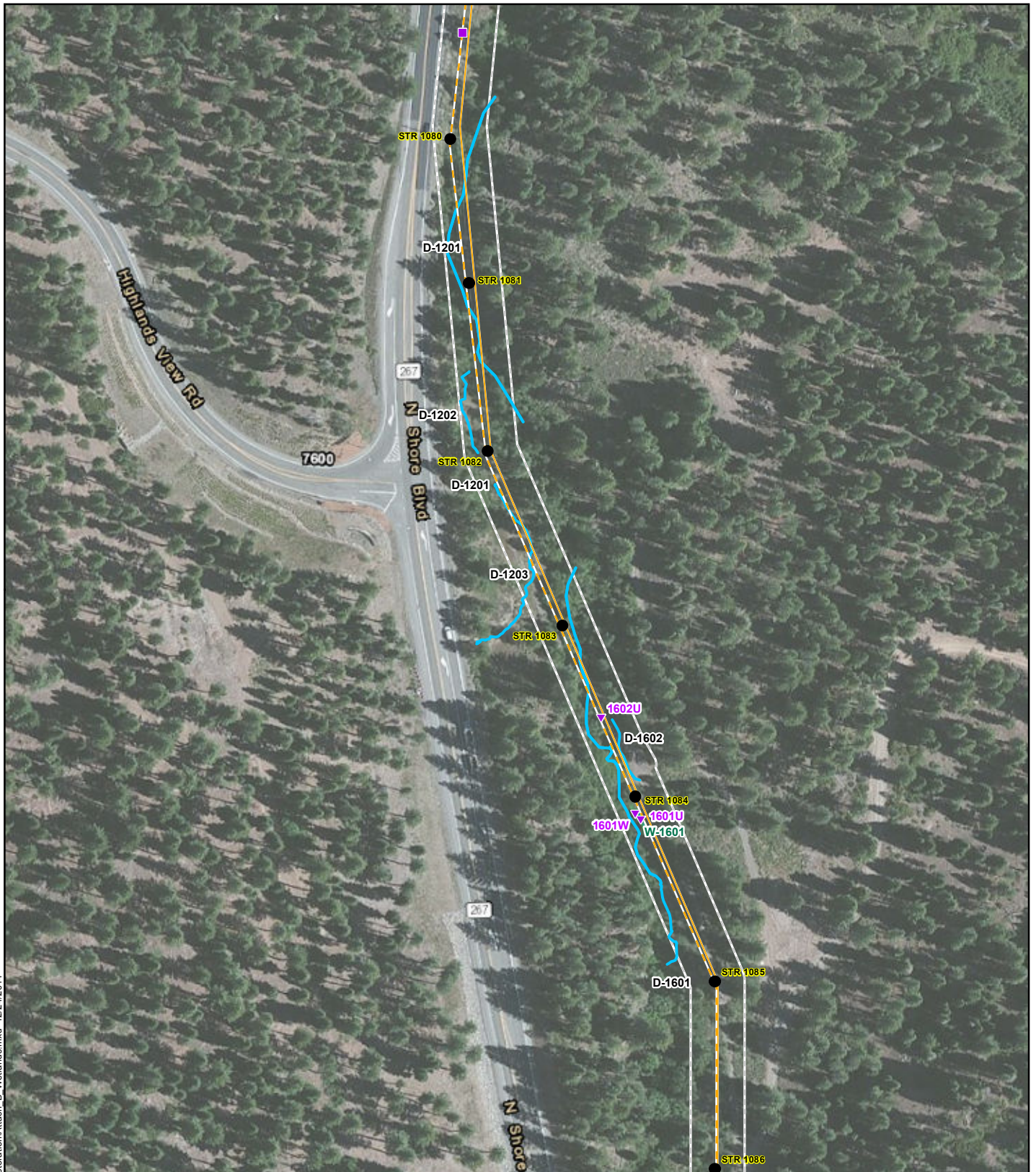


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Liberty Utilities





Attachment B: Wetland Delineation Map 17 of 40

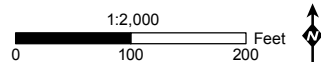
650 Line Rebuild Project

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- Proposed 650 Alignment
- - - Proposed 650 Alignment Removal
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- Proposed Northstar Tap
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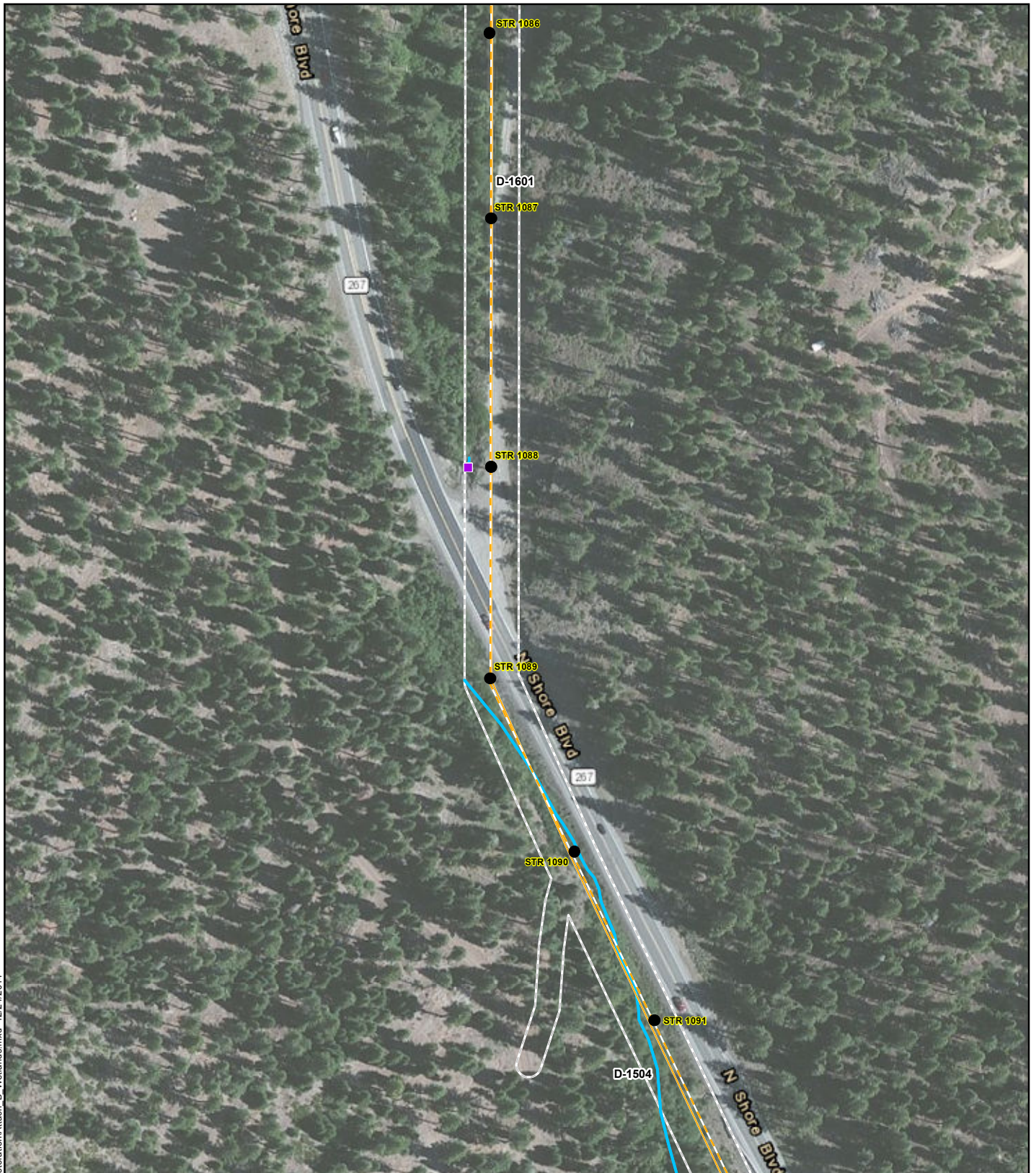


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Liberty Utilities





Attachment B: Wetland Delineation Map 18 of 40

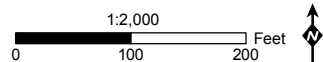
650 Line Rebuild Project

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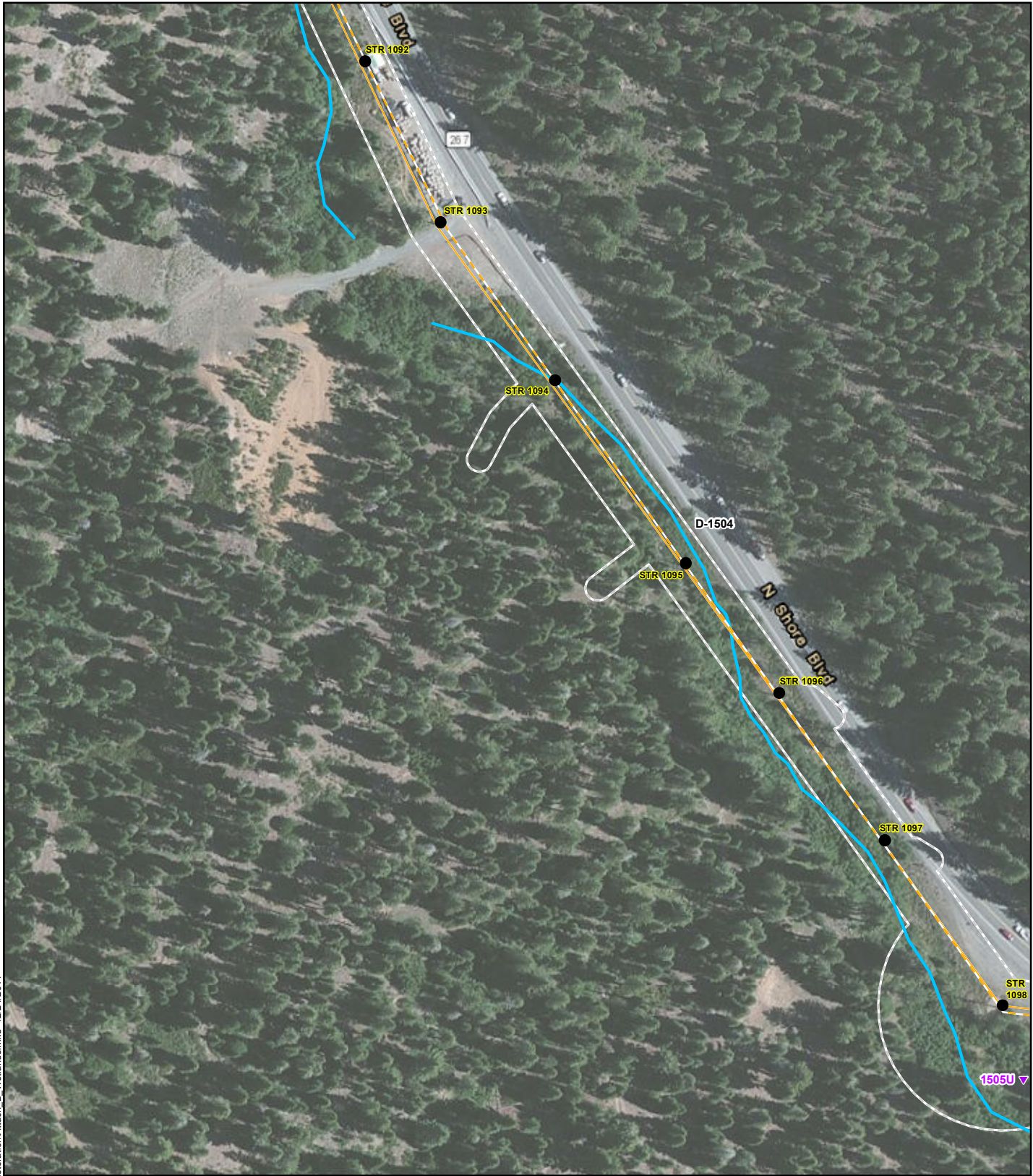
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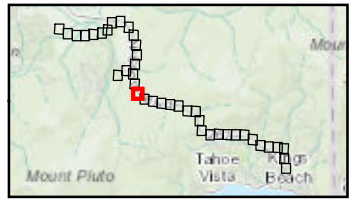


Attachment B: Wetland Delineation Map 19 of 40

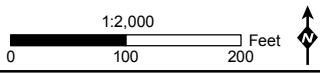
650 Line Rebuild Project

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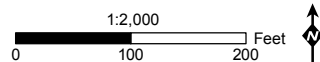
Attachment B: Wetland Delineation Map 20 of 40

650 Line Rebuild Project

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- Proposed 650 Alignment
- Proposed 650 Alignment Removal
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Liberty Utilities





Attachment B: Wetland Delineation Map 21 of 40

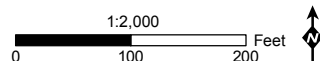
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- Drainage
- Wetland

*The Survey Area was created with a 65-foot proposed alignment corridor, stringing site area, and 30-foot corridor for access roads to be modified.



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, new construction), and all stringing sites



Liberty Utilities





Attachment B: Wetland Delineation Map 22 of 40

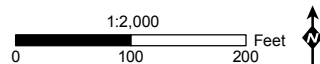
650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- Proposed 650 Alignment Removal
- Existing Northstar Tap
- Proposed Northstar Tap
- Existing Pole
- Survey Area*
- Culvert
- ▼ Soil Test Pit
- Drainage
- Wetland

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Liberty Utilities





Attachment B: Wetland Delineation Map 23 of 40

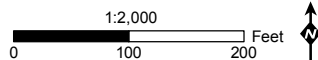
650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- - - Proposed 650 Alignment Removal
- - - Existing Northstar Tap
- Proposed Northstar Tap
- Existing Pole
- Survey Area*
- Culvert
- ▼ Soil Test Pit
- Drainage
- Wetland

*Survey area was created with a 65-foot proposed alignment corridor, stringing site area, and 30-foot corridor for access roads to be modified.

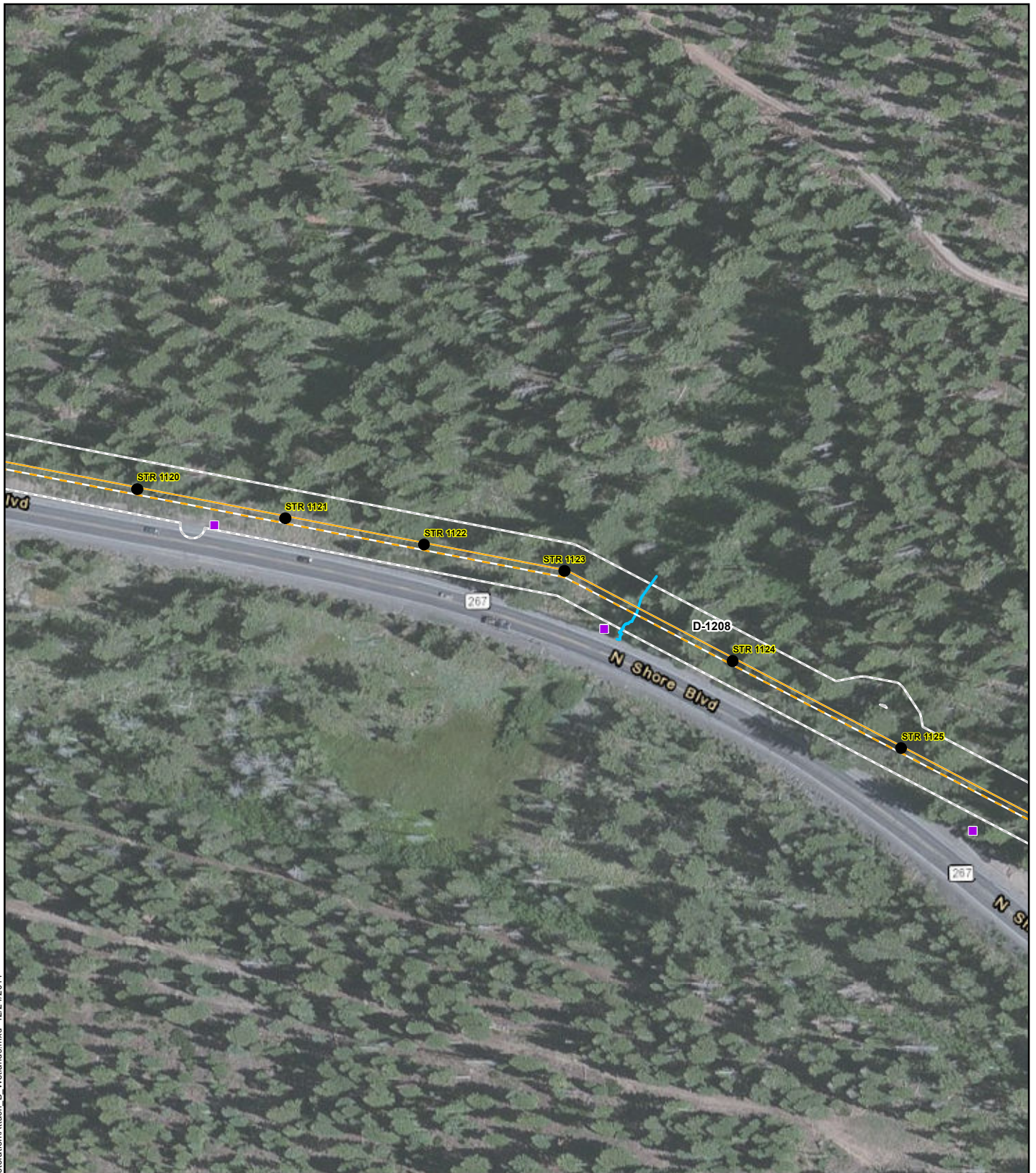


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Liberty Utilities





Attachment B: Wetland Delineation Map 24 of 40

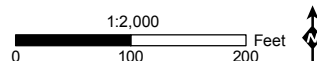
650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- Proposed 650 Alignment Removal
- Existing Northstar Tap
- Proposed Northstar Tap
- Existing Pole
- Survey Area*
- Culvert
- ▼ Soil Test Pit
- Drainage
- Wetland

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Attachment B: Wetland Delineation Map 25 of 40

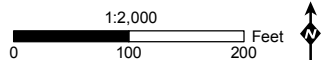
650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- - - Proposed 650 Alignment Removal
- - - Existing Northstar Tap
- Proposed Northstar Tap
- Existing Pole
- Survey Area*
- Culvert
- ▼ Soil Test Pit
- Drainage
- Wetland

*Survey area was created with a 65-foot proposed alignment corridor, stringing site area, and 30-foot corridor for access roads to be modified.

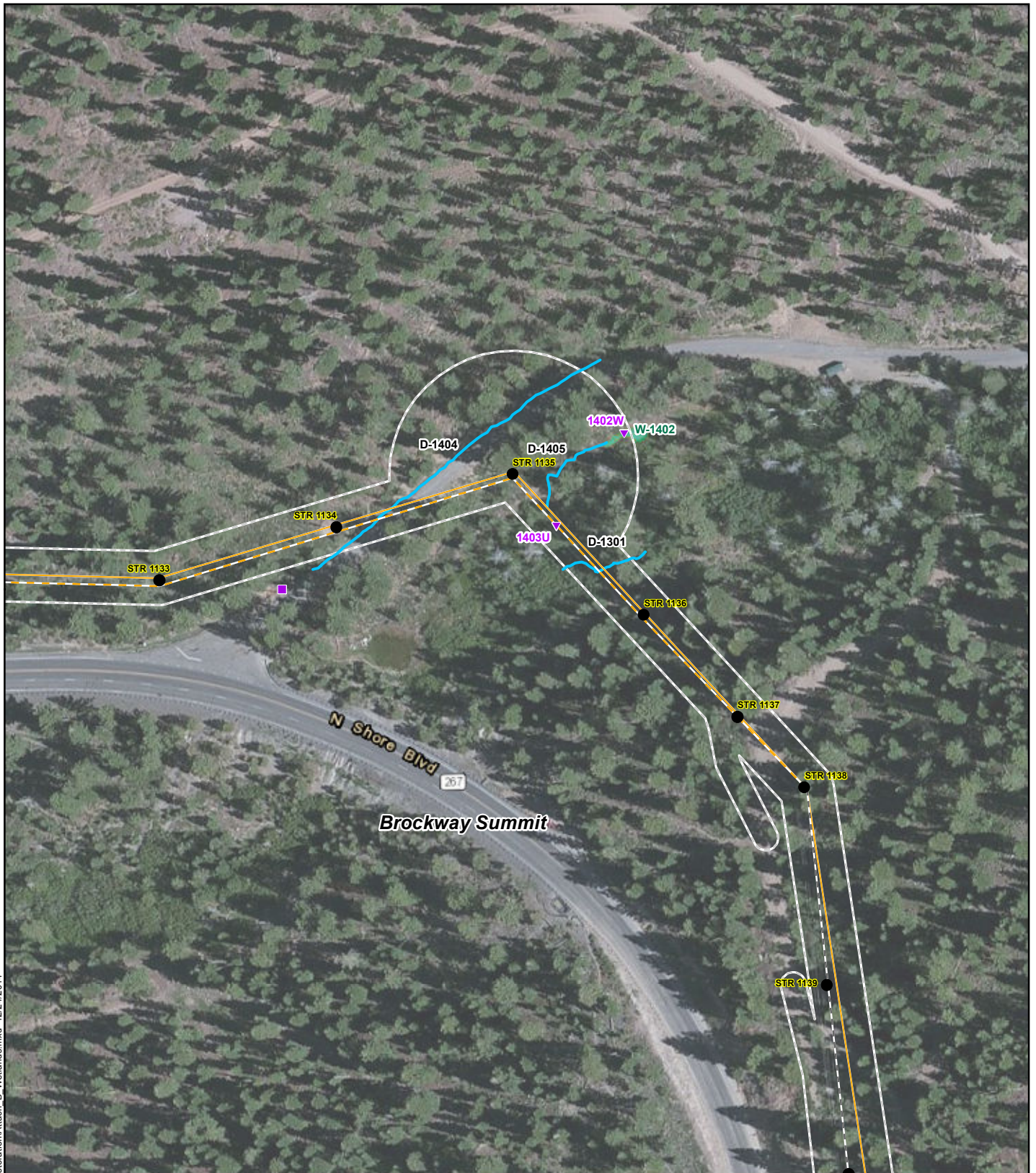


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Attachment B: Wetland Delineation Map 26 of 40

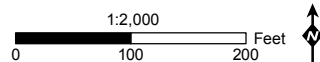
650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- - - Proposed 650 Alignment Removal
- - - Existing Northstar Tap
- Proposed Northstar Tap
- Existing Pole
- Survey Area*
- Culvert
- ▼ Soil Test Pit
- Drainage
- Wetland

*Survey area was created with a 65-foot proposed alignment corridor, stringing site area, and 30-foot corridor for access roads to be modified.



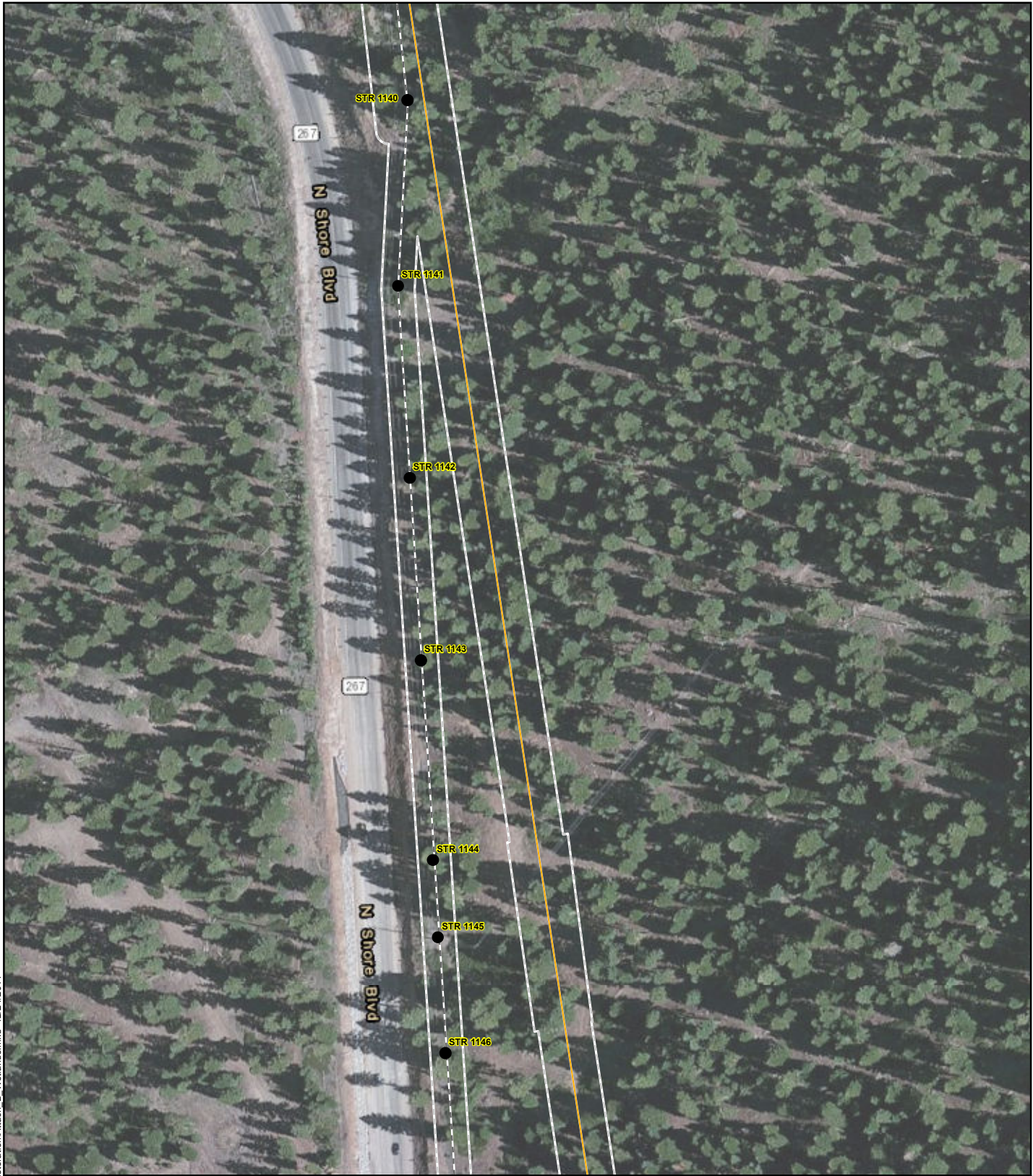
*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, new construction), and all stringing sites



Liberty Utilities



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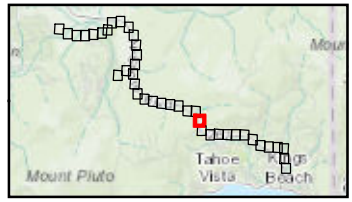


Attachment B: Wetland Delineation Map 27 of 40

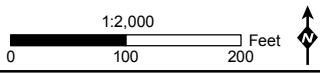
650 Line Rebuild Project

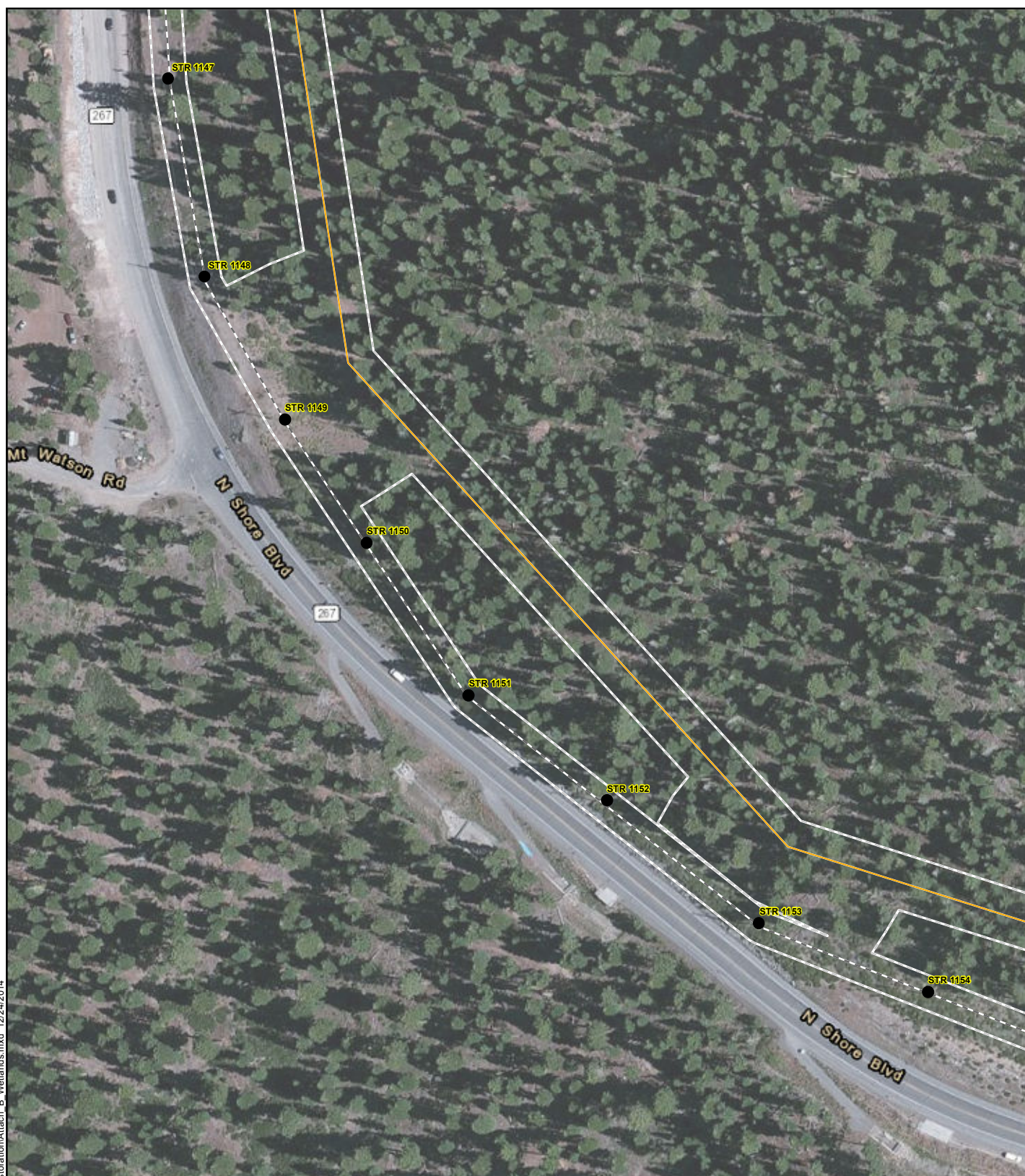
- | | | |
|--------------------------------------|-----------------|------------|
| --- Existing 650 Alignment | ● Existing Pole | — Drainage |
| — Proposed 650 Alignment | □ Survey Area* | ■ Wetland |
| - - - Proposed 650 Alignment Removal | ■ Culvert | |
| - - - Existing Northstar Tap | ▼ Soil Test Pit | |
| — Proposed Northstar Tap | | |

*Survey area was created with a 65-foot proposed alignment corridor, stringing site area, and 30-foot corridor for access roads to be modified.



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Attachment B: Wetland Delineation Map 28 of 40

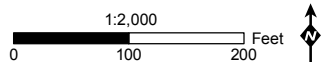
650 Line Rebuild Project

- Existing 650 Alignment ● Existing Pole — Drainage
— Proposed 650 Alignment Survey Area* Wetland
- - - Proposed 650 Alignment Removal ■ Culvert
- - - Existing Northstar Tap ▼ Soil Test Pit
— Proposed Northstar Tap

*Survey area was created with a 65-foot proposed alignment corridor, stringing site area, and 30-foot corridor for access roads to be modified.



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Attachment B: Wetland Delineation Map 29 of 40

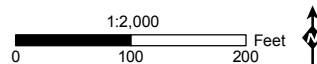
650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- - - Proposed 650 Alignment Removal
- - - Existing Northstar Tap
- Proposed Northstar Tap
- Existing Pole
- Survey Area*
- Culvert
- ▼ Soil Test Pit
- Drainage
- Wetland

*Survey area was created with a 65-foot proposed alignment corridor, stringing site area, and 30-foot corridor for access roads to be modified.

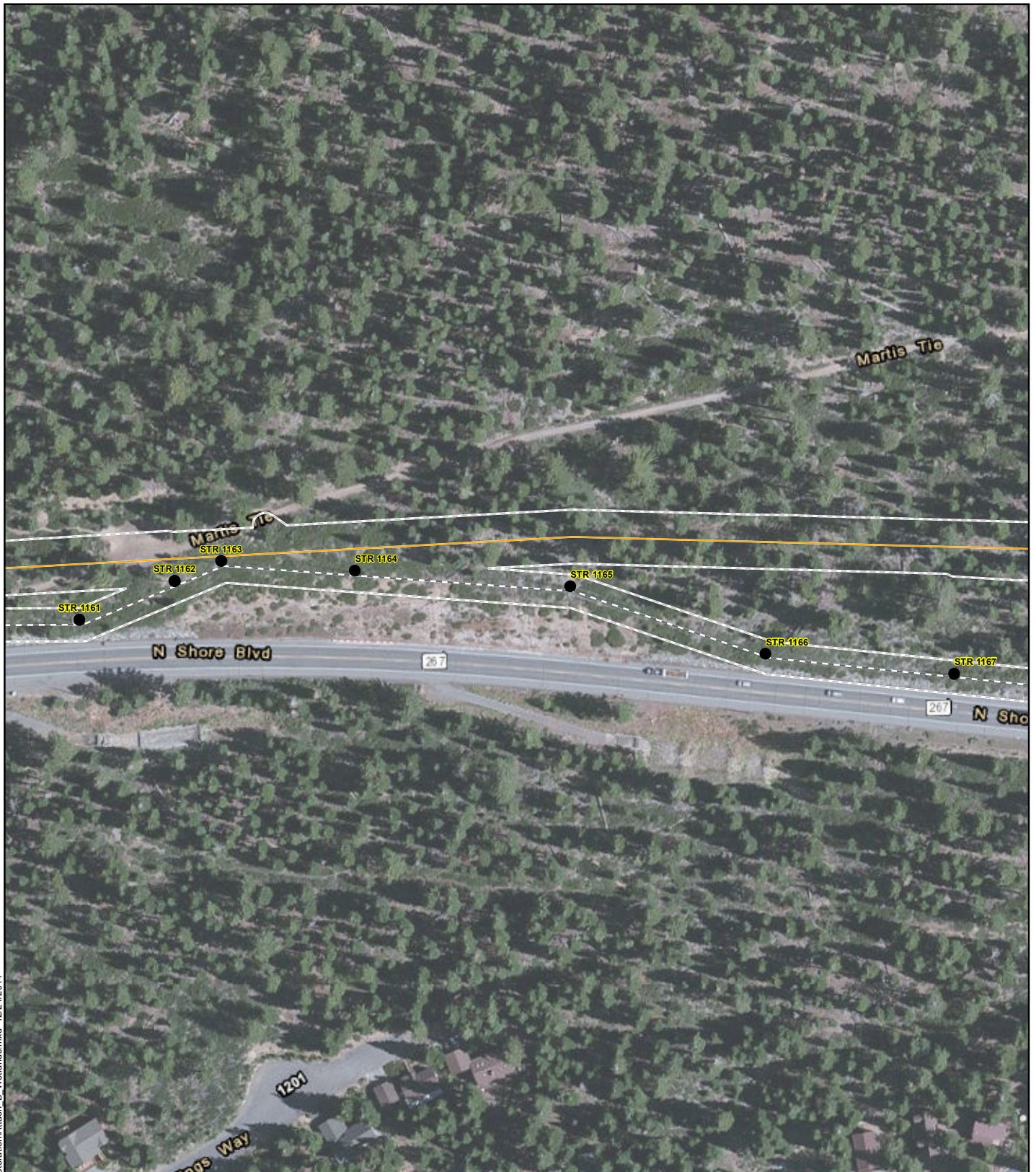


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Liberty Utilities





Attachment B: Wetland Delineation Map 30 of 40

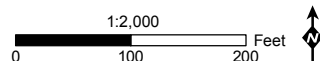
650 Line Rebuild Project

- | | | |
|--------------------------------------|-----------------|------------|
| — Existing 650 Alignment | ● Existing Pole | — Drainage |
| — Proposed 650 Alignment | □ Survey Area* | ■ Wetland |
| - - - Proposed 650 Alignment Removal | ■ Culvert | |
| - - - Existing Northstar Tap | ▼ Soil Test Pit | |
| — Proposed Northstar Tap | | |

*Survey area was created with a 65-foot proposed alignment corridor, stringing site area, and 30-foot corridor for access roads to be modified.

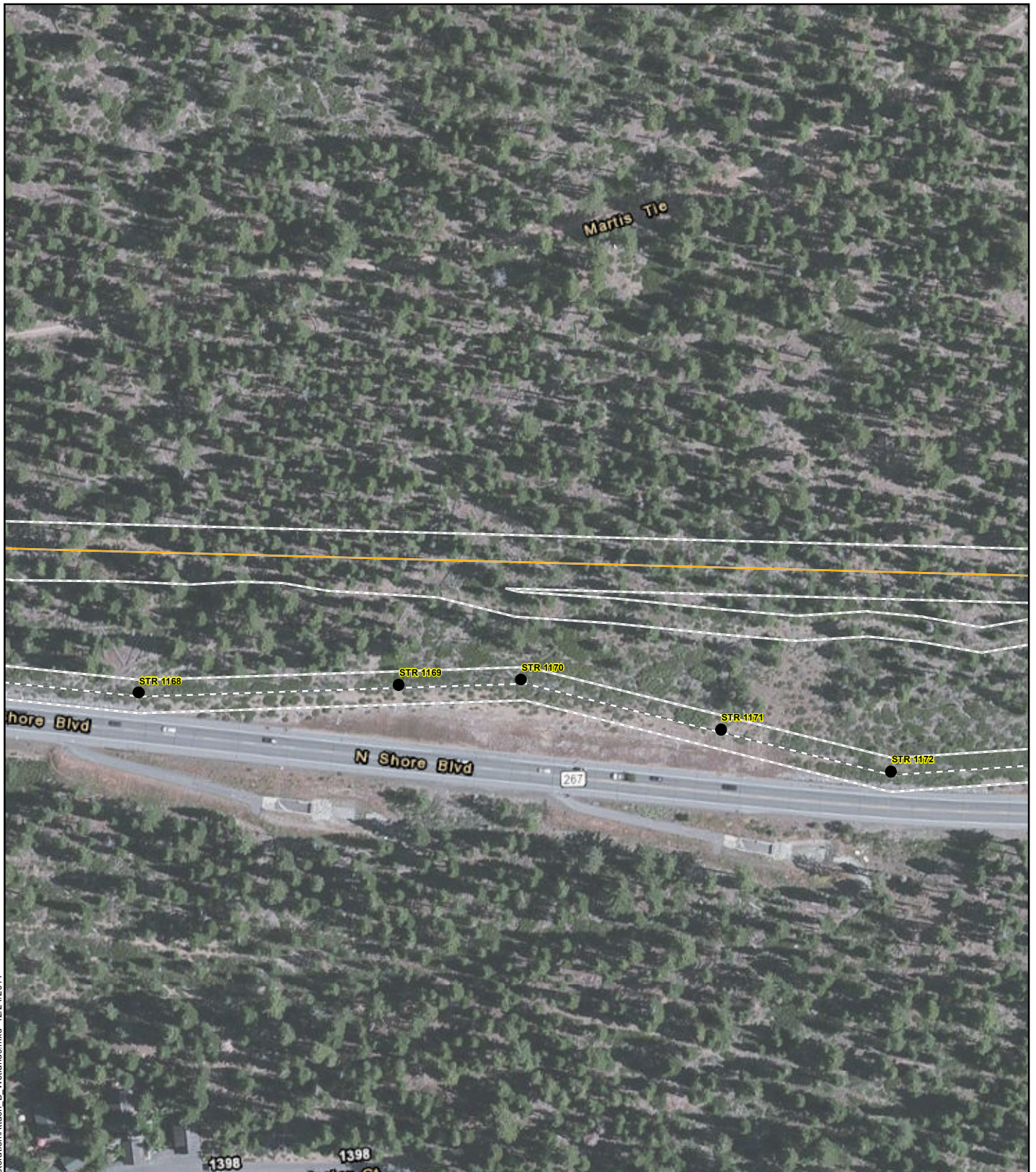


*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, new construction), and all stringing sites



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Attachment B: Wetland Delineation Map 31 of 40

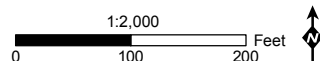
650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- - - Proposed 650 Alignment Removal
- - - Existing Northstar Tap
- Proposed Northstar Tap
- Existing Pole
- Survey Area*
- Culvert
- ▼ Soil Test Pit
- Drainage
- Wetland

*Survey area was created with a 65-foot proposed alignment corridor, stringing site area, and 30-foot corridor for access roads to be modified.

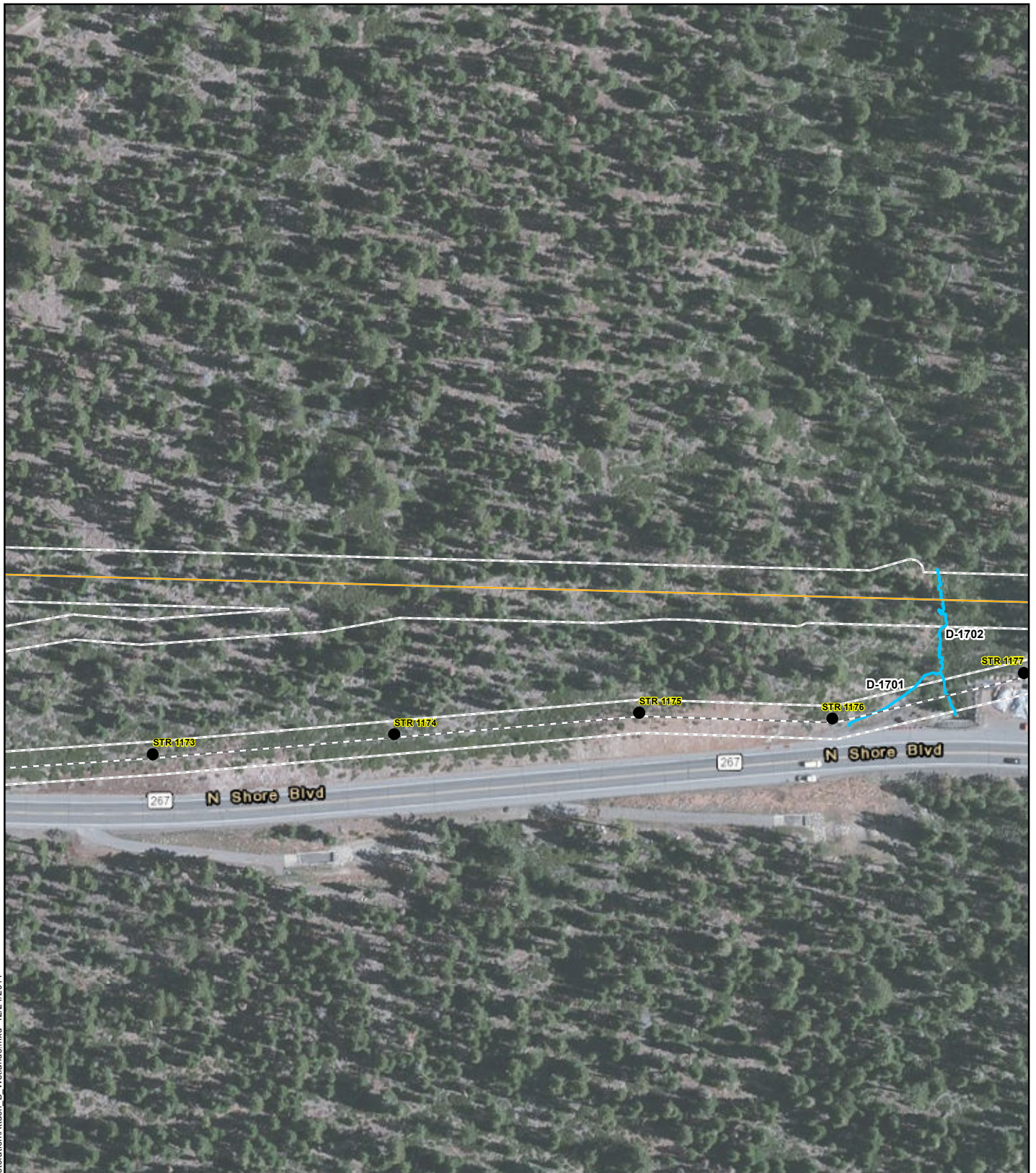


*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, new construction), and all stringing sites



Liberty Utilities





Attachment B: Wetland Delineation Map 32 of 40

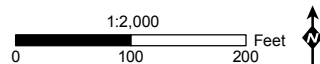
650 Line Rebuild Project

- | | | |
|--------------------------------------|-----------------|------------|
| — Existing 650 Alignment | ● Existing Pole | — Drainage |
| — Proposed 650 Alignment | □ Survey Area* | ■ Wetland |
| - - - Proposed 650 Alignment Removal | ■ Culvert | |
| - - - Existing Northstar Tap | ▼ Soil Test Pit | |
| — Proposed Northstar Tap | | |

*Survey area was created with a 65-foot proposed alignment corridor, stringing site area, and 30-foot corridor for access roads to be modified.

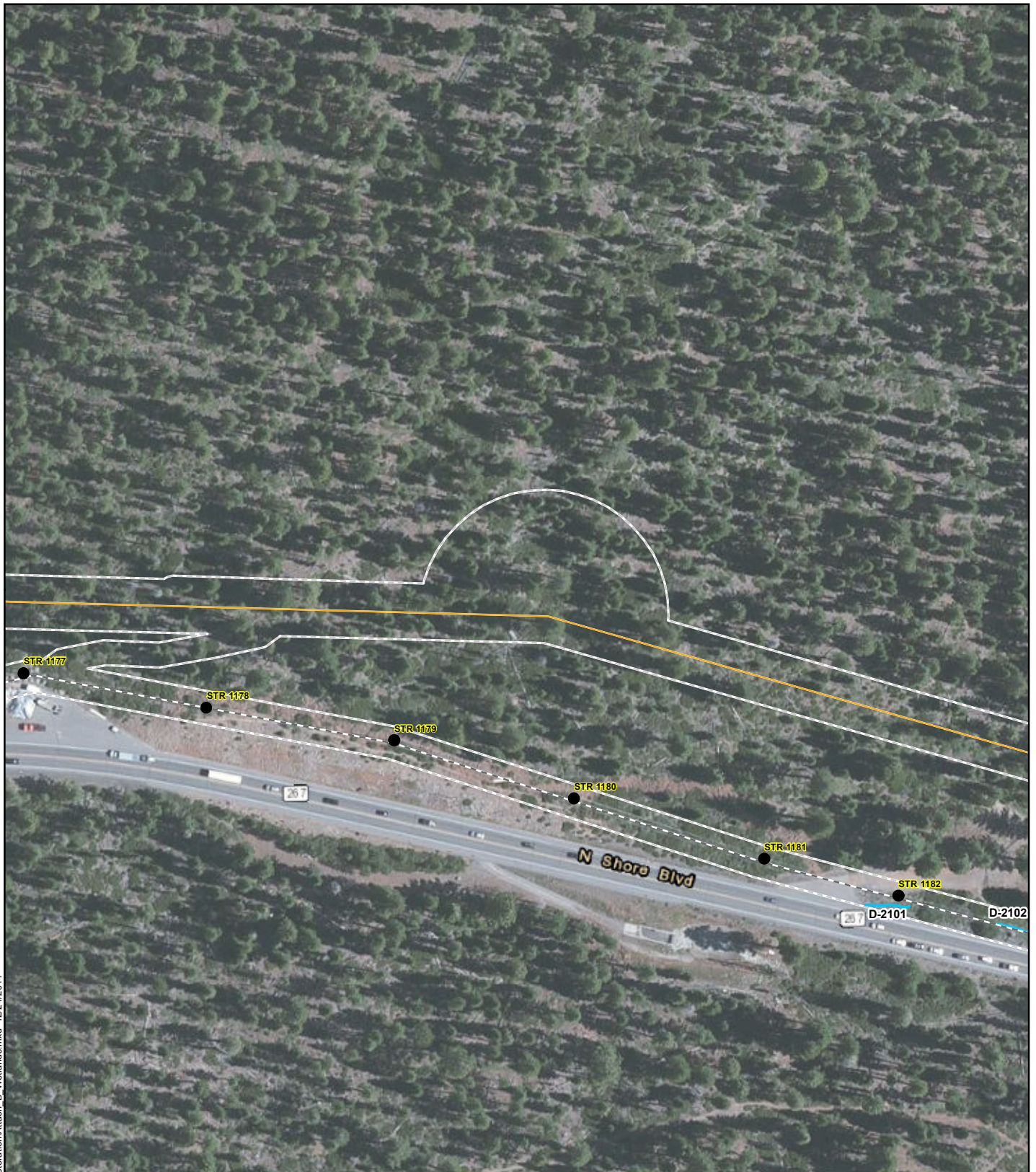


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Attachment B: Wetland Delineation Map 33 of 40

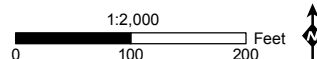
650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- Proposed 650 Alignment Removal
- Existing Northstar Tap
- Proposed Northstar Tap
- Existing Pole
- Survey Area*
- Culvert
- ▼ Soil Test Pit
- Drainage
- Wetland

*Survey area was created with a 65-foot proposed alignment corridor, stringing site area, and 30-foot corridor for access roads to be modified.



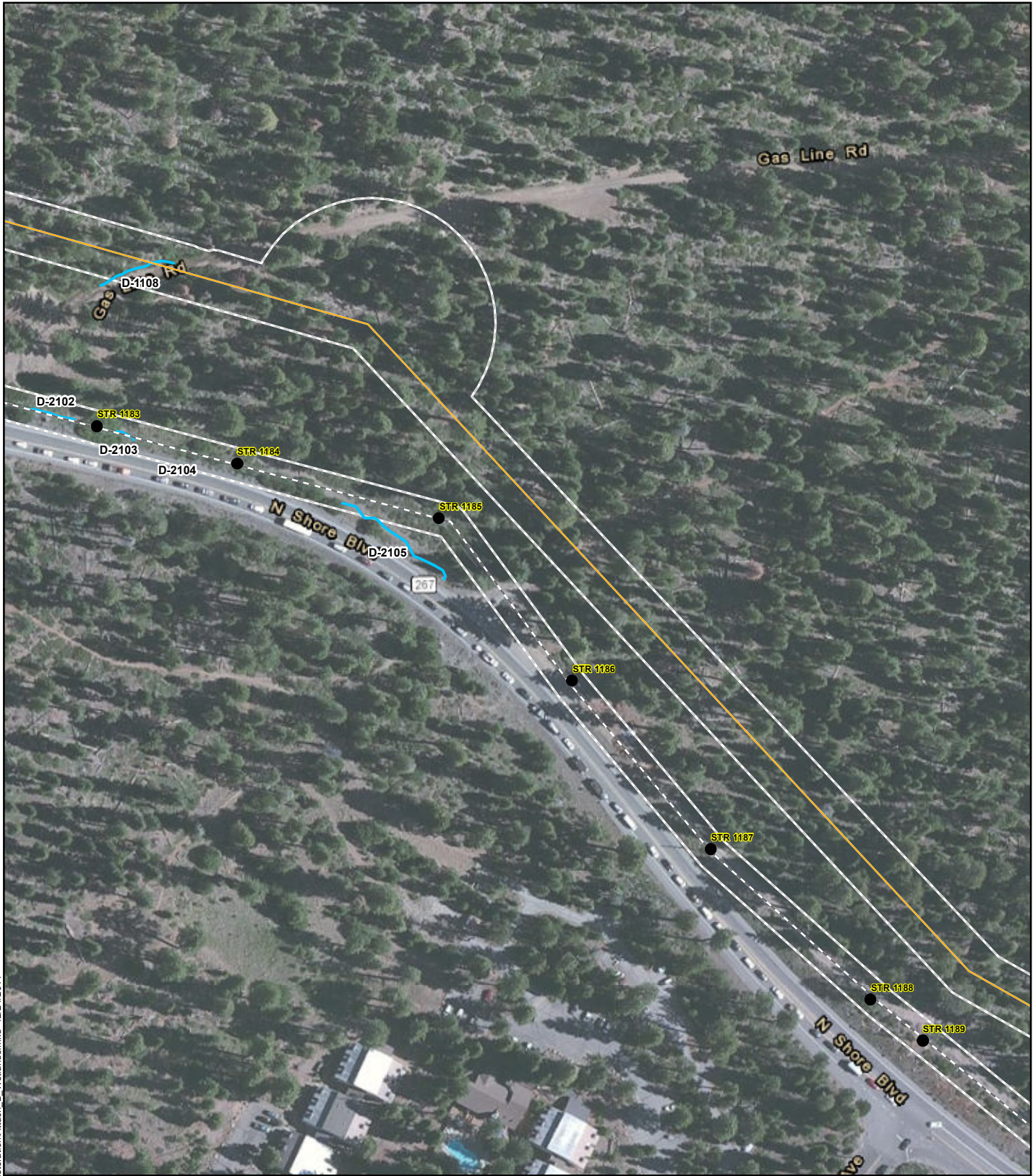
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Liberty Utilities



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Attachment B: Wetland Delineation Map 34 of 40

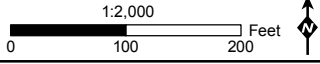
650 Line Rebuild Project

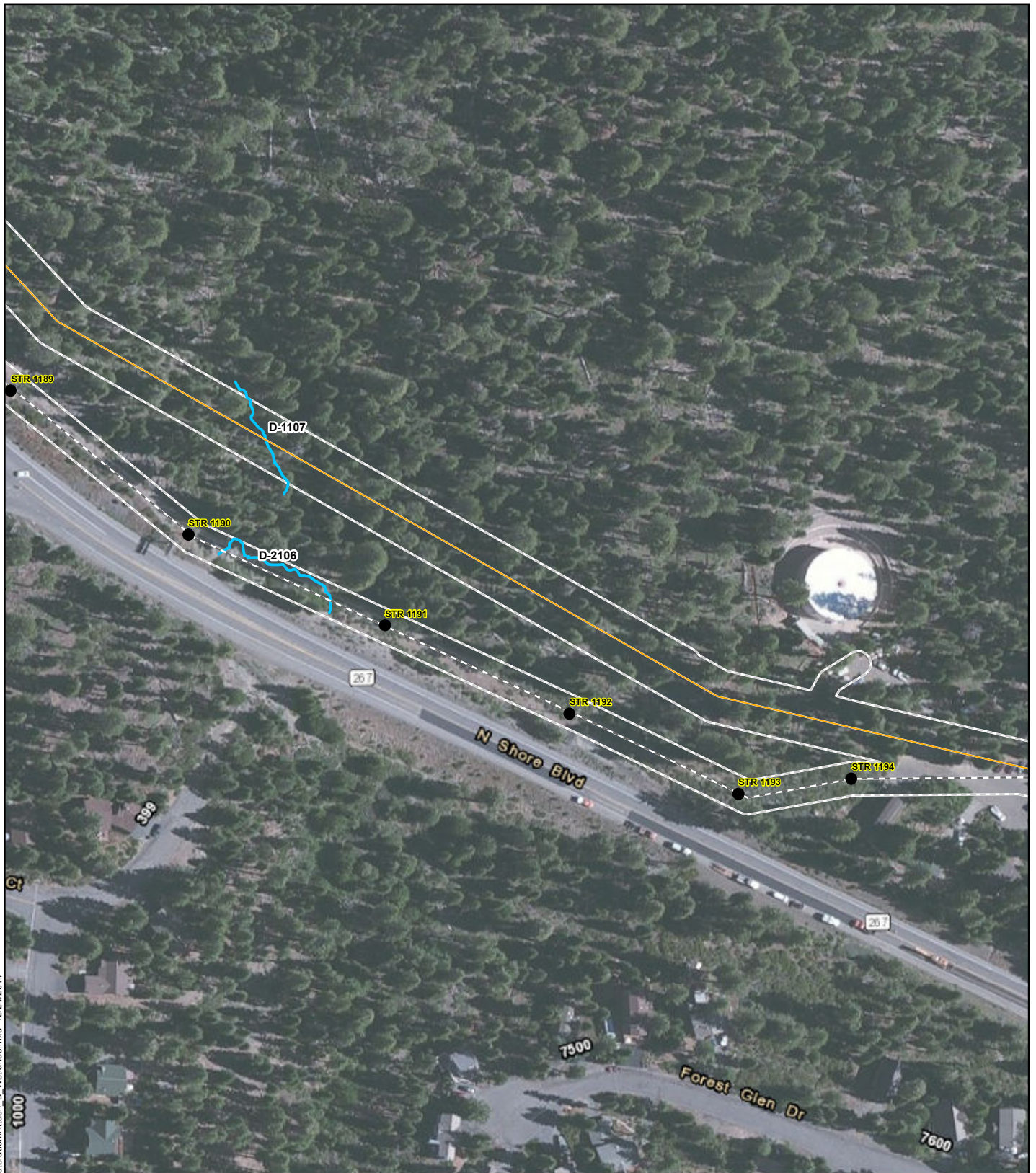
- | | | |
|--------------------------------------|-----------------|------------|
| --- Existing 650 Alignment | ● Existing Pole | — Drainage |
| — Proposed 650 Alignment | □ Survey Area* | ■ Wetland |
| - - - Proposed 650 Alignment Removal | ■ Culvert | |
| - - - Existing Northstar Tap | ▼ Soil Test Pit | |
| — Proposed Northstar Tap | | |

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Attachment B: Wetland Delineation Map 35 of 40

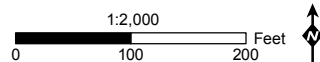
650 Line Rebuild Project

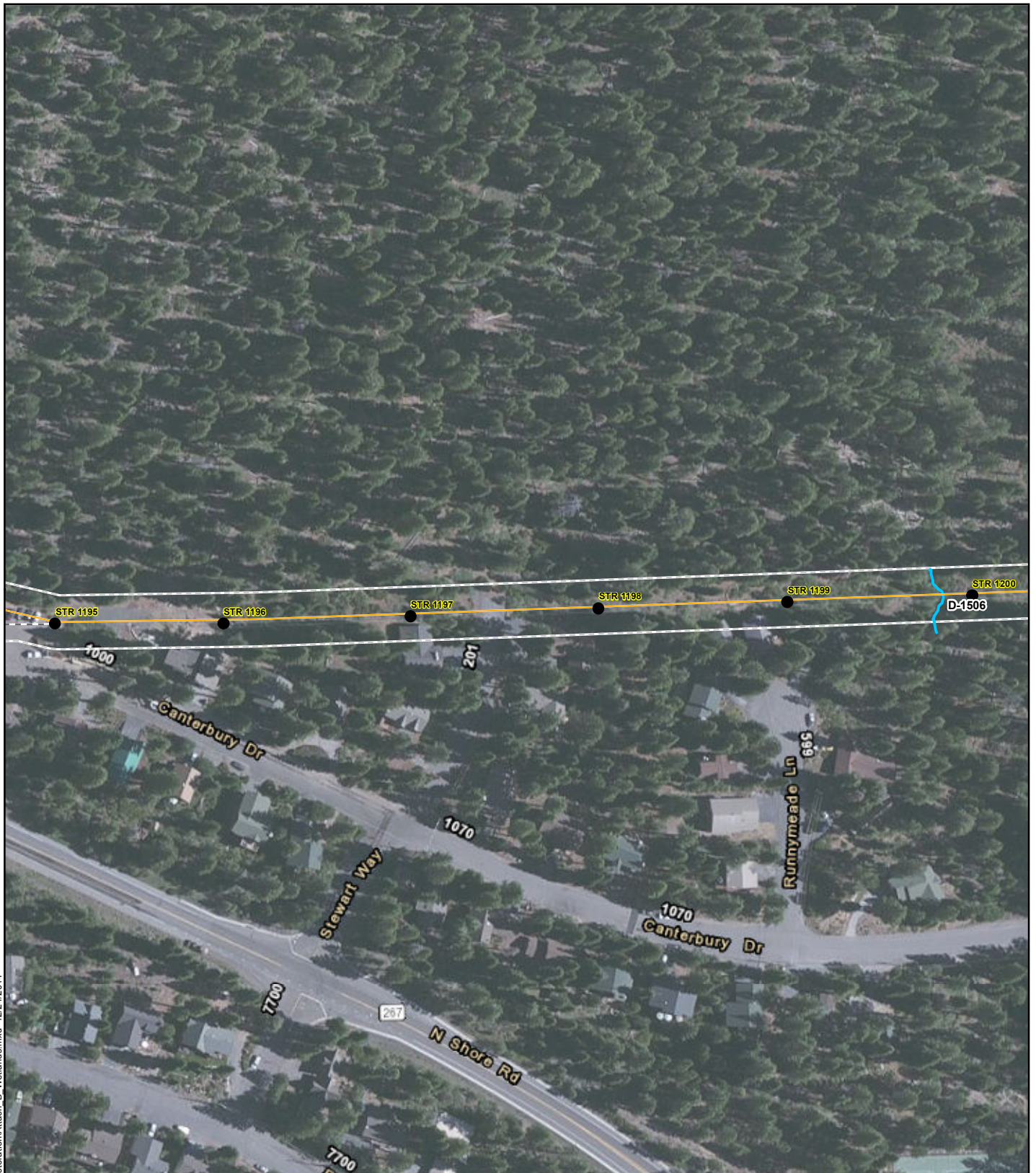
- | | | |
|------------------------------------|------------------|------------|
| --- Existing 650 Alignment | ● Existing Pole | — Drainage |
| — Proposed 650 Alignment | --- Survey Area* | ■ Wetland |
| --- Proposed 650 Alignment Removal | ■ Culvert | |
| --- Existing Northstar Tap | ▼ Soil Test Pit | |
| — Proposed Northstar Tap | | |

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Attachment B: Wetland Delineation Map 36 of 40

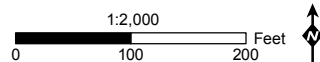
650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- Proposed 650 Alignment Removal
- Existing Northstar Tap
- Proposed Northstar Tap
- Existing Pole
- Survey Area*
- Culvert
- ▼ Soil Test Pit
- Drainage
- Wetland

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Attachment B: Wetland Delineation Map 37 of 40

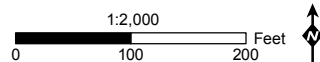
650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- Proposed 650 Alignment Removal
- Existing Northstar Tap
- Proposed Northstar Tap
- Existing Pole
- Survey Area*
- Culvert
- ▼ Soil Test Pit
- Drainage
- Wetland

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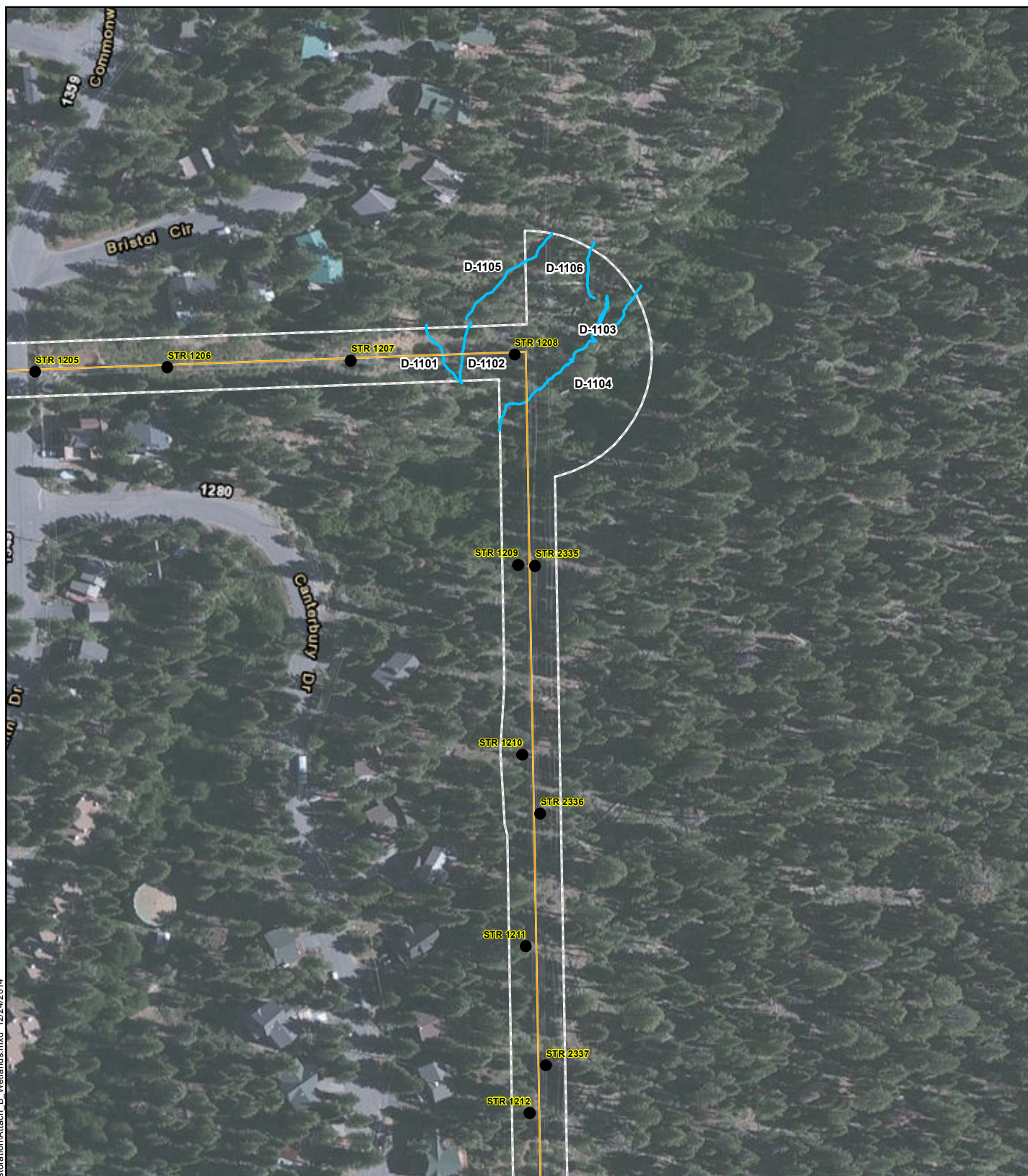


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Attachment B: Wetland Delineation Map 38 of 40

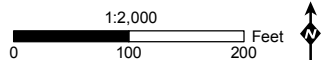
650 Line Rebuild Project

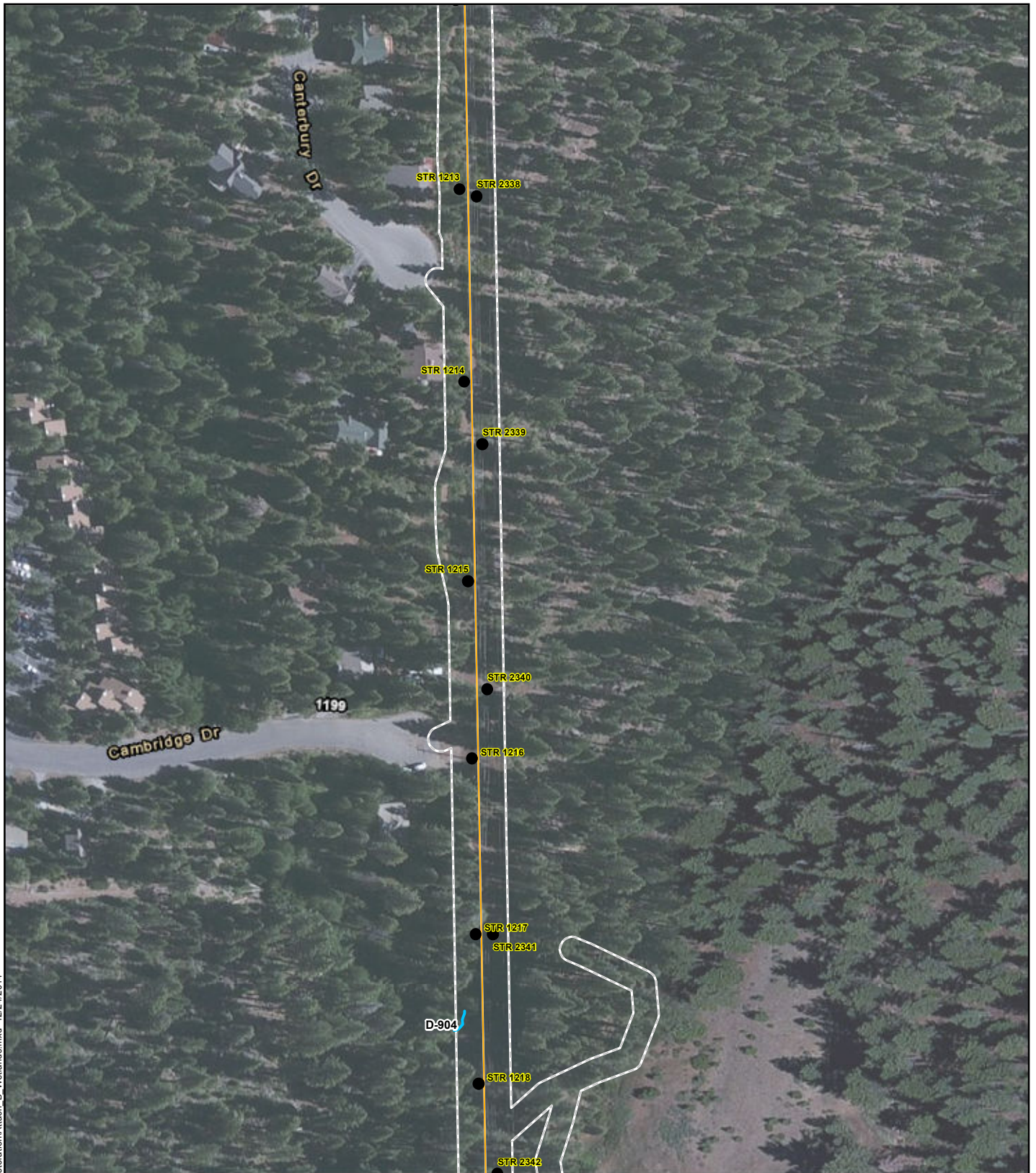
- Existing 650 Alignment ● Existing Pole — Drainage
— Proposed 650 Alignment Survey Area* Wetland
- - - Proposed 650 Alignment Removal ■ Culvert
- - - Existing Northstar Tap ▼ Soil Test Pit
— Proposed Northstar Tap

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Attachment B: Wetland Delineation Map 39 of 40

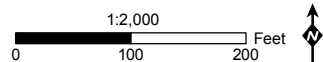
650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- Proposed 650 Alignment Removal
- Existing Northstar Tap
- Proposed Northstar Tap
- Existing Pole
- Survey Area*
- Culvert
- ▼ Soil Test Pit
- Drainage
- Wetland

*Survey area was created with a 65-foot proposed alignment corridor, stringing site area, and 30-foot corridor for access roads to be modified.

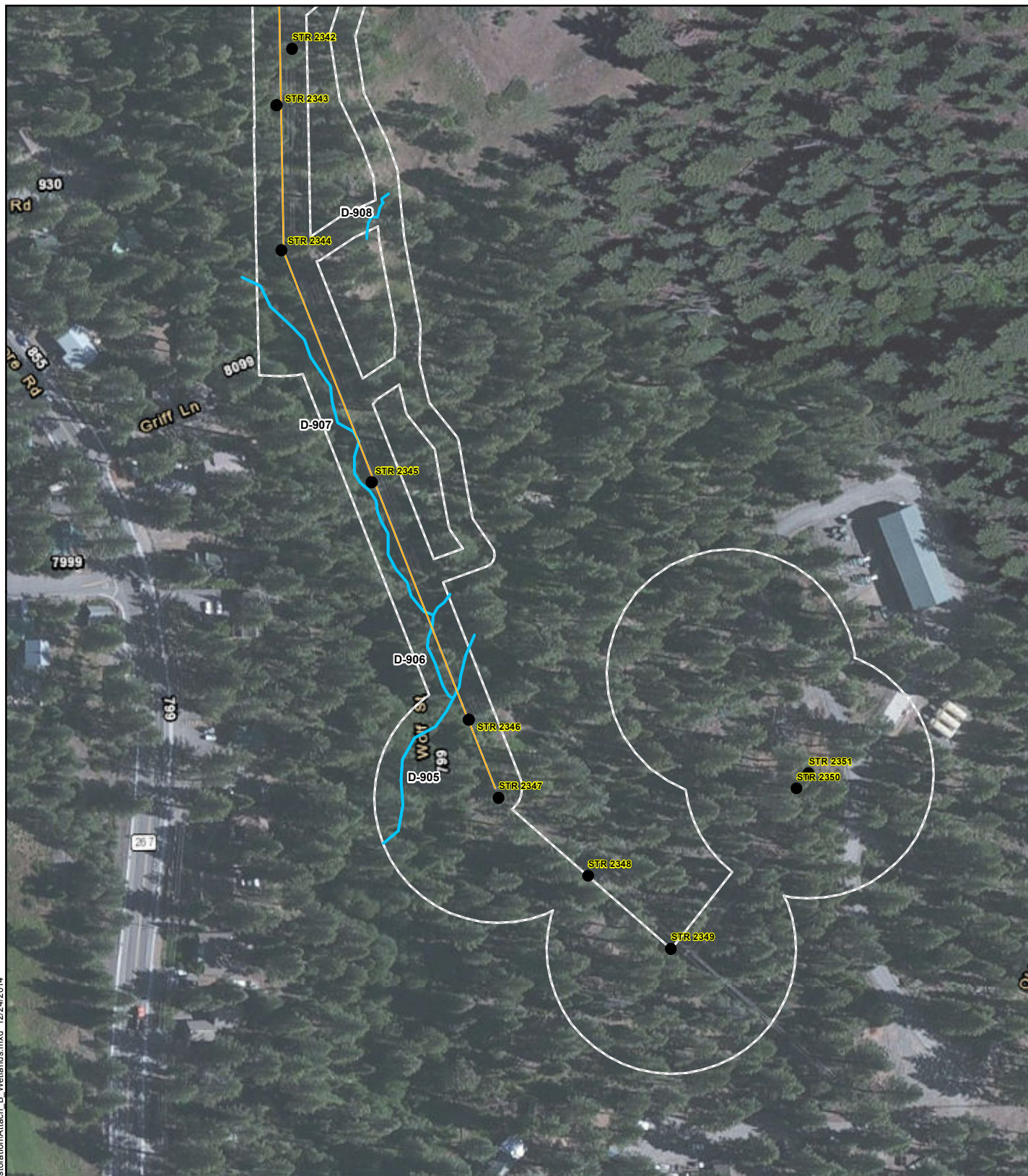


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Liberty Utilities





Attachment B: Wetland Delineation Map 40 of 40

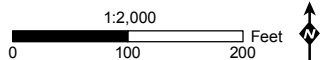
650 Line Rebuild Project

- | | | |
|--------------------------------------|-----------------|------------|
| — Existing 650 Alignment | ● Existing Pole | — Drainage |
| — Proposed 650 Alignment | □ Survey Area* | ■ Wetland |
| - - - Proposed 650 Alignment Removal | ■ Culvert | |
| - - - Existing Northstar Tap | ▼ Soil Test Pit | |
| — Proposed Northstar Tap | | |

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Liberty Utilities



ATTACHMENT C: SPECIAL-STATUS PLANT SPECIES MAP



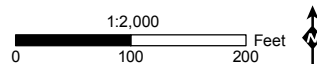
Attachment C: Special-Status Plant Species Map 1 of 7

650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- - - Proposed 650 Line Removal
- - - Existing Northstar Tap
- - - Proposed Northstar Tap
- Existing Pole
- ▲ Photo Location
- Survey Area*
- Plumas ivesia (*Ivesia sericoleuca*)
- Parsnip-flower wild buckwheat (*Eriogonum heracleoides* var. *heracleoides*)



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overlaid, and new construction), and all stringing sites



Liberty Utilities



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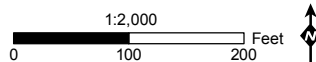
Attachment C: Special-Status Plant Species Map 2 of 7

650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- - - Proposed 650 Line Removal
- - - Existing Northstar Tap
- - - Proposed Northstar Tap
- Existing Pole
- ▲ Photo Location
- Survey Area*
- Plumas ivesia (*Ivesia sericoleuca*)
- Parsnip-flower wild buckwheat (*Eriogonum heracleioides* var. *heracleioides*)



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Liberty Utilities





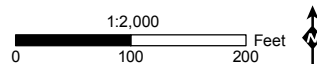
Attachment C: Special-Status Plant Species Map 3 of 7

650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- - - Proposed 650 Line Removal
- - - Existing Northstar Tap
- - - Proposed Northstar Tap
- Existing Pole
- ▲ Photo Location
- Survey Area*
- Plumas ivesia (*Ivesia sericoleuca*)
- Parsnip-flower wild buckwheat (*Eriogonum heracleoides* var. *heracleoides*)



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, and new construction), and all stringing sites



Liberty Utilities





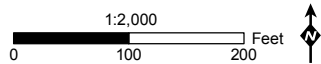
Attachment C: Special-Status Plant Species Map 4 of 7

650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- - - Proposed 650 Line Removal
- - - Existing Northstar Tap
- - - Proposed Northstar Tap
- Existing Pole
- ▲ Photo Location
- Survey Area*
- Plumas ivesia (*Ivesia sericoleuca*)
- Parsnip-flower wild buckwheat (*Eriogonum heracleoides* var. *heracleoides*)



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, and new construction), and all stringing sites





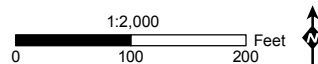
Attachment C: Special-Status Plant Species Map 5 of 7

650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- - - Proposed 650 Line Removal
- - - Existing Northstar Tap
- - - Proposed Northstar Tap
- Existing Pole
- ▲ Photo Location
- Survey Area*
- Plumas ivesia (*Ivesia sericoleuca*)
- Parsnip-flower wild buckwheat (*Eriogonum heracleoides* var. *heracleoides*)



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, and new construction), and all stringing sites



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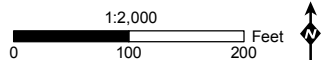
Attachment C: Special-Status Plant Species Map 6 of 7

650 Line Rebuild Project

- Existing 650 Alignment
 - Proposed 650 Alignment
 - - - Proposed 650 Line Removal
 - - - Existing Northstar Tap
 - Proposed Northstar Tap
 - Existing Pole
 - ▲ Photo Location
- Survey Area*
 - Plumas ivesia (*Ivesia sericoleuca*)
 - Parsnip-flower wild buckwheat (*Eriogonum heracleoides* var. *heracleoides*)



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overlaid, and new construction), and all stringing sites



Liberty Utilities



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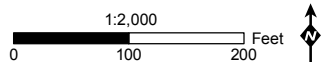
Attachment C: Special-Status Plant Species Map 7 of 7

650 Line Rebuild Project

- Existing 650 Alignment
- Proposed 650 Alignment
- - - Proposed 650 Line Removal
- - - Existing Northstar Tap
- Proposed Northstar Tap
- Existing Pole
- ▲ Photo Location
- Survey Area*
- Plumas ivesia (*Ivesia sericoleuca*)
- Parsnip-flower wild buckwheat (*Eriogonum heracleoides* var. *heracleoides*)



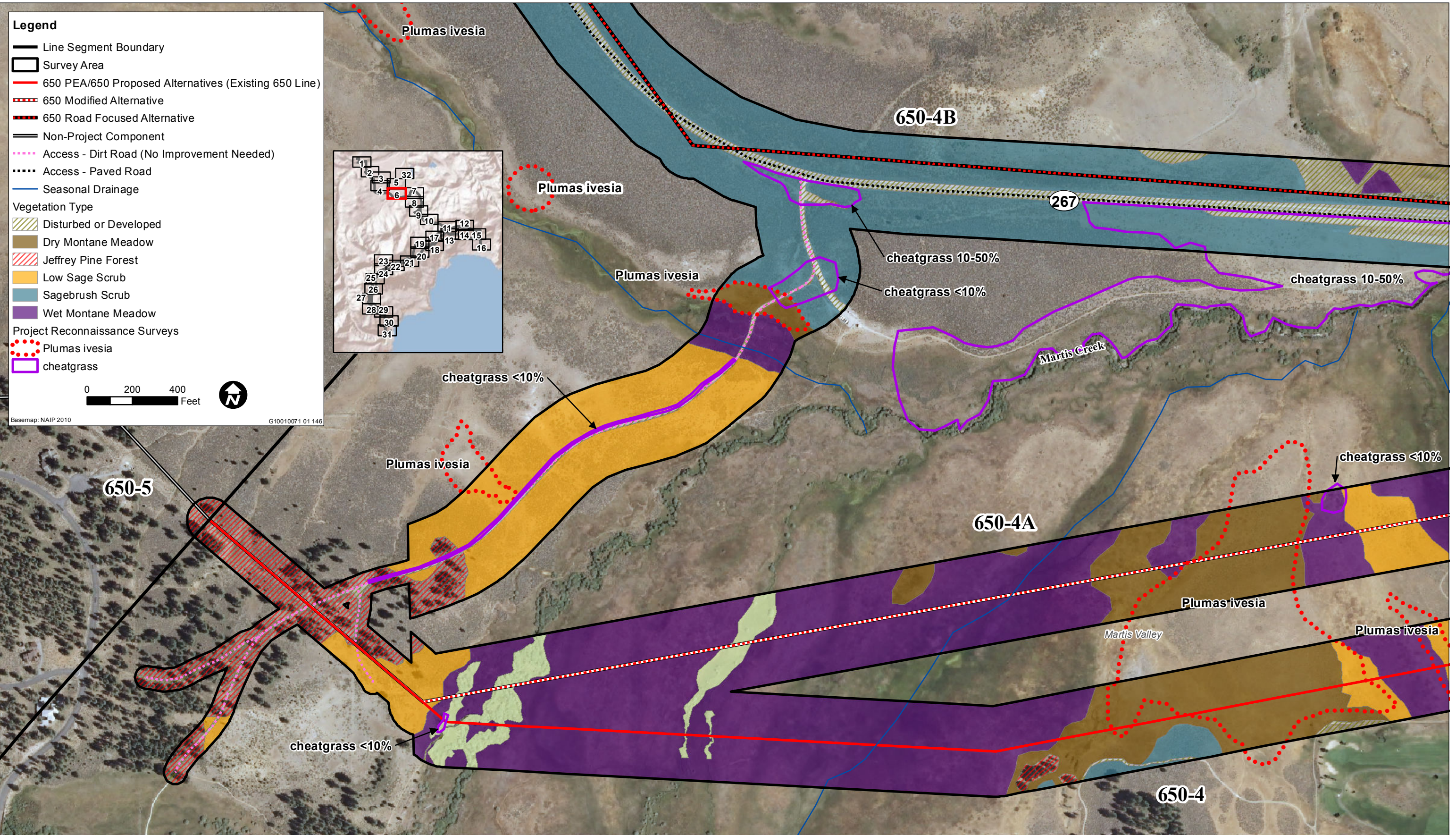
*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, and new construction), and all stringing sites



Liberty Utilities

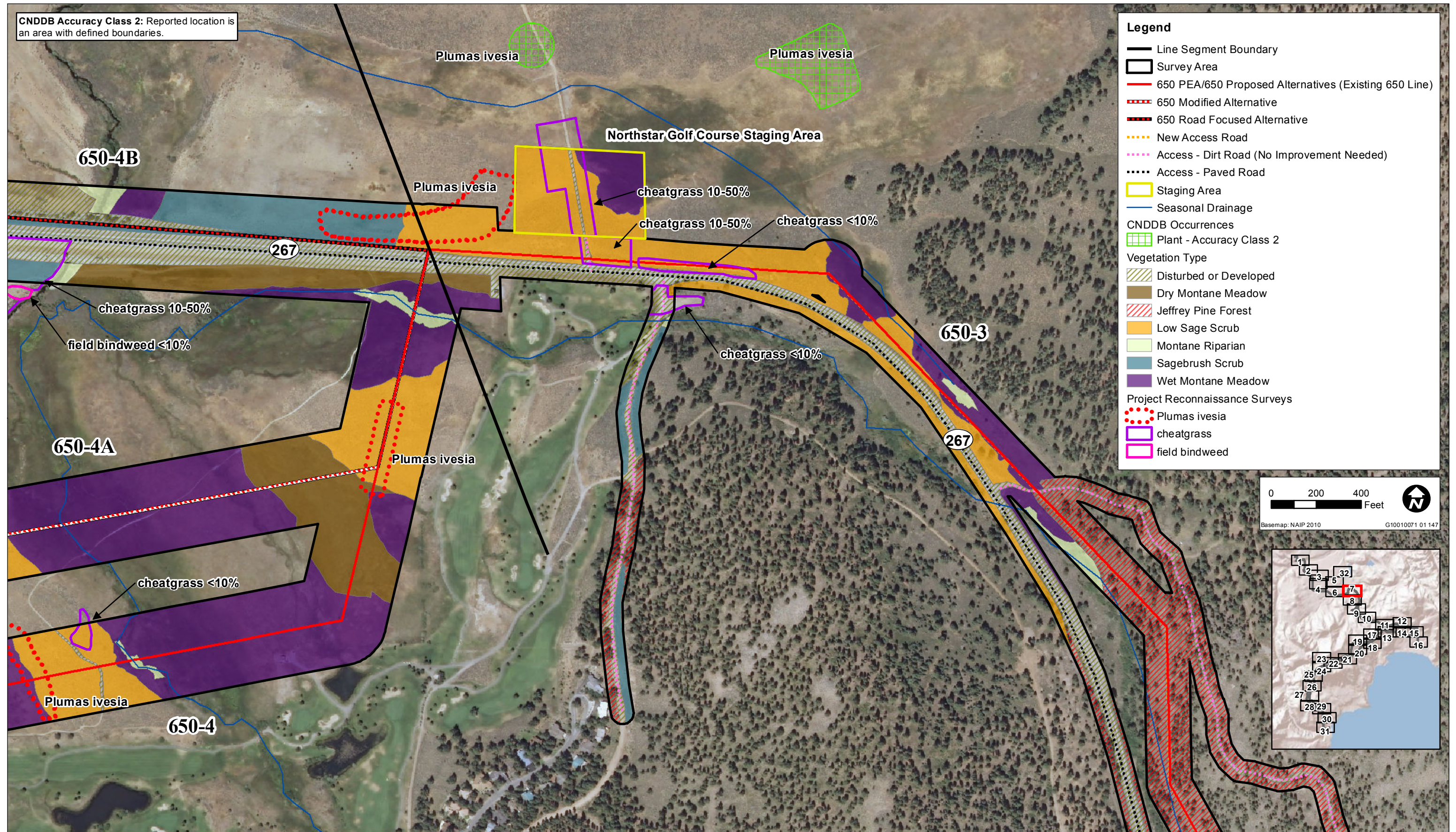


ATTACHMENT D: VEGETATION COMMUNITIES MAP

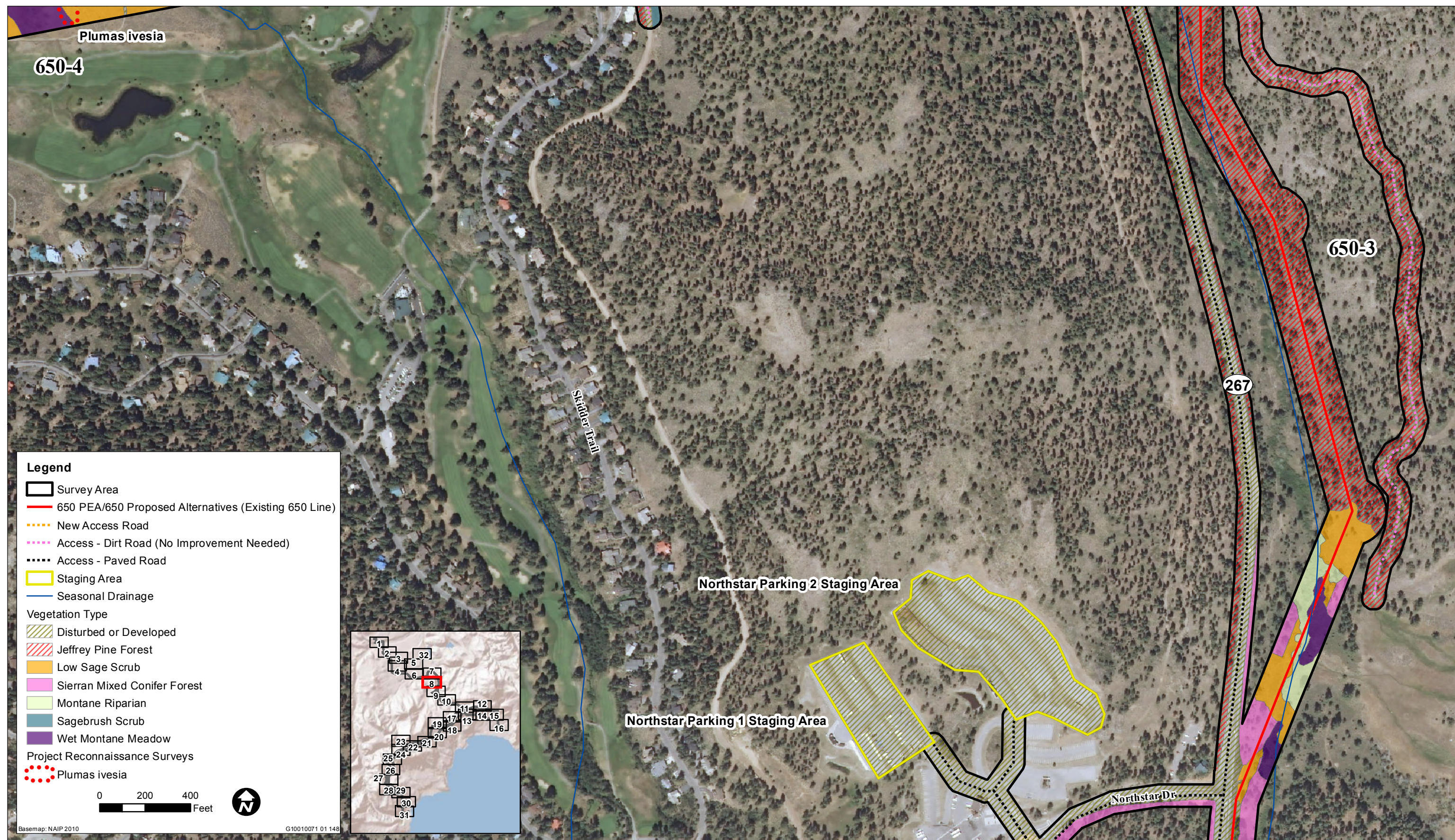


Source: Data provided by Ascent, CNDDB, POWER, TriSage, and TRPA in 2012; adapted by Ascent Environmental in 2013

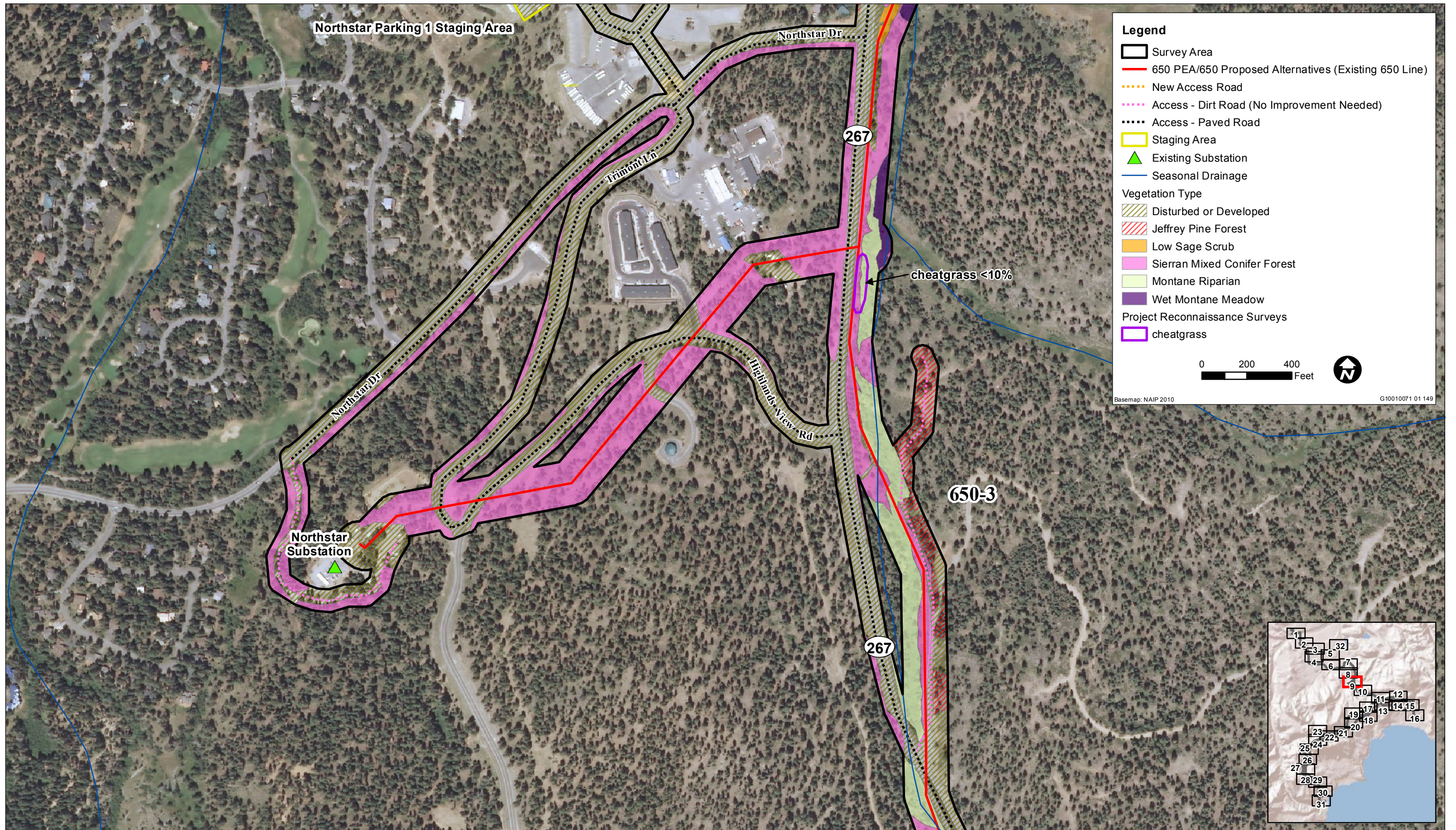
CNDDDB Accuracy Class 2: Reported location is an area with defined boundaries.



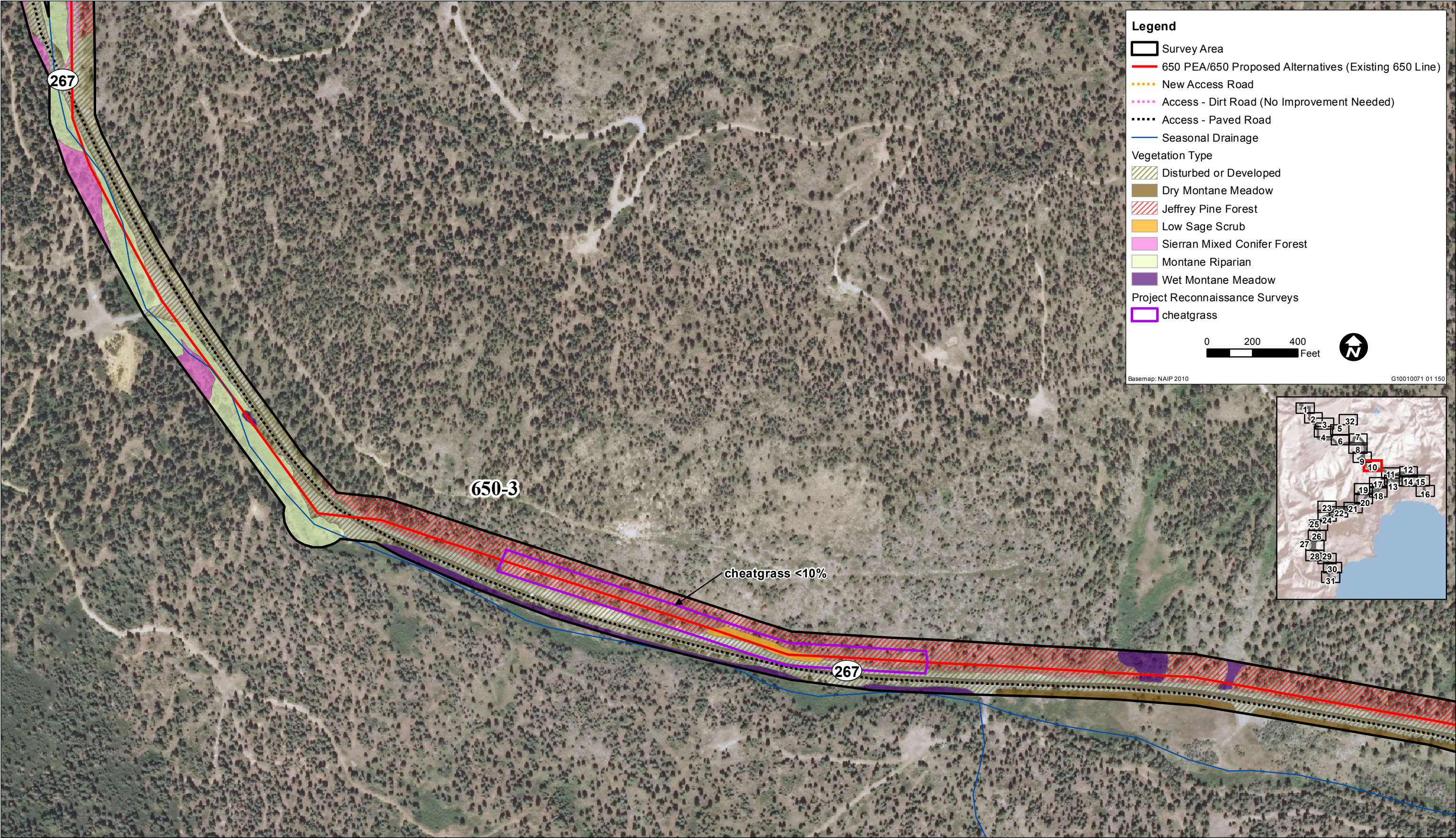
Source: Data provided by Ascent, CNDDDB, POWER, TriSage, and TRPA in 2012; adapted by Ascent Environmental in 2013



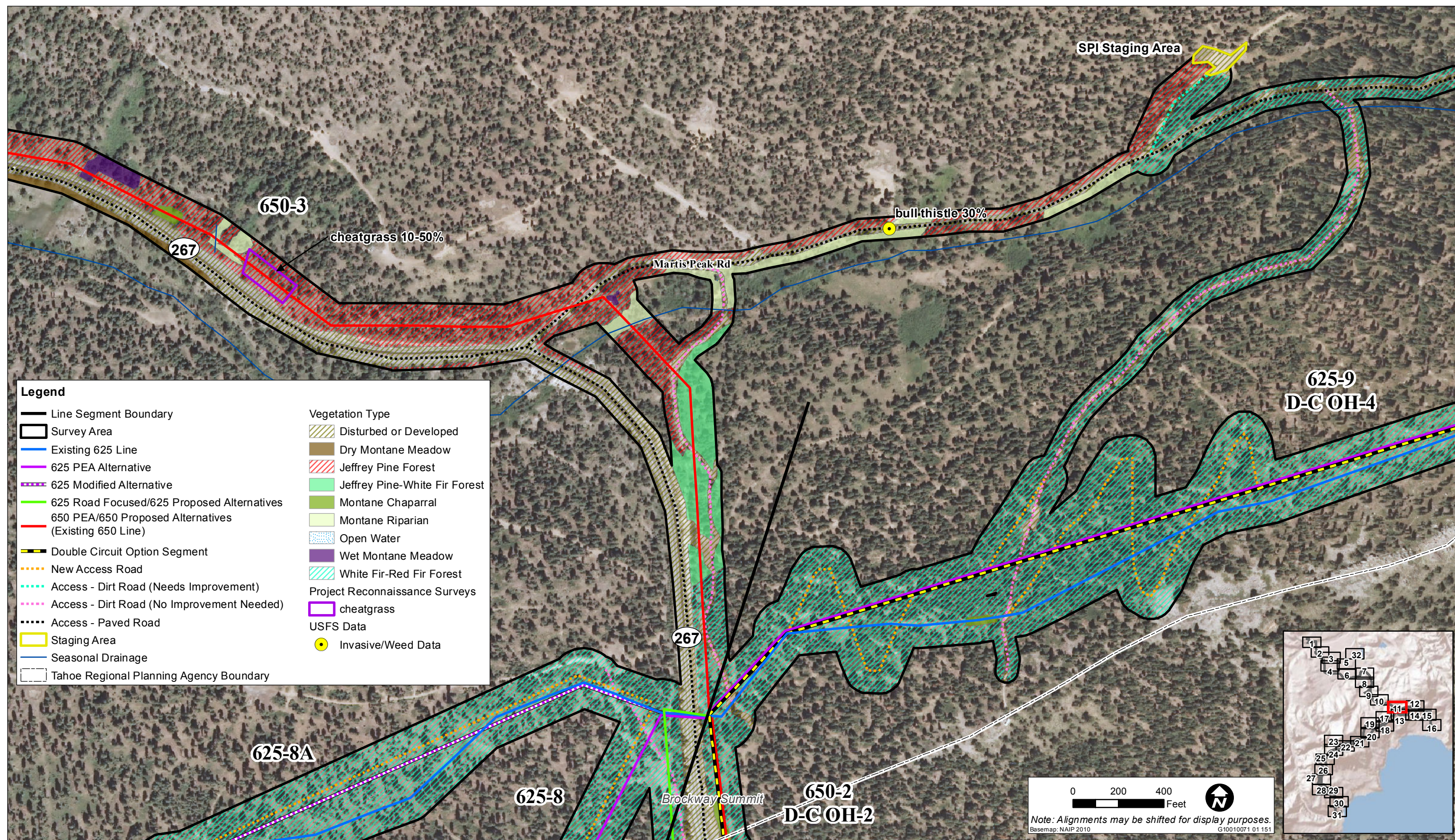
Source: Data provided by Ascent, CNDDB, POWER, TriSage, and TRPA in 2012; adapted by Ascent Environmental in 2013



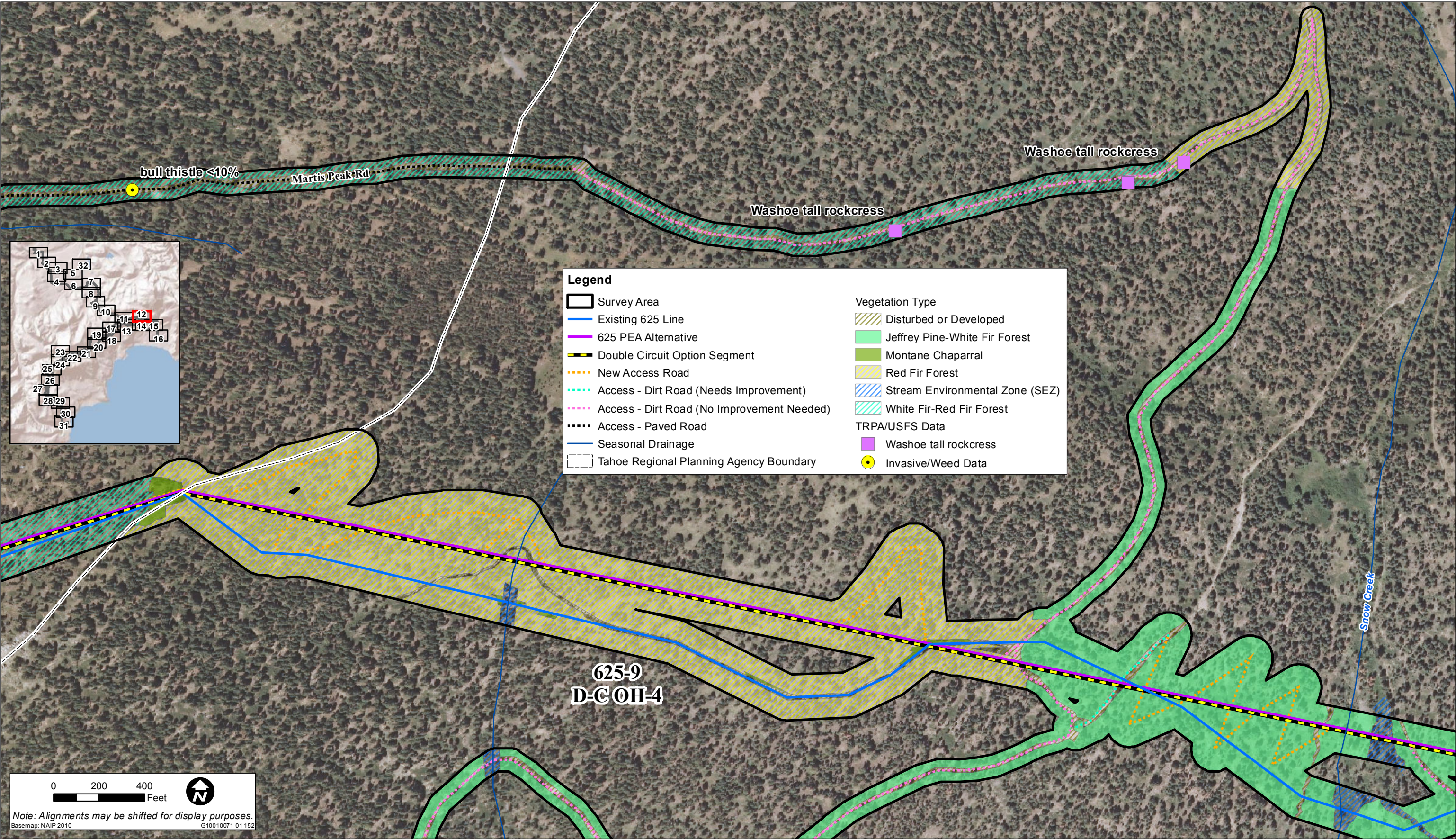
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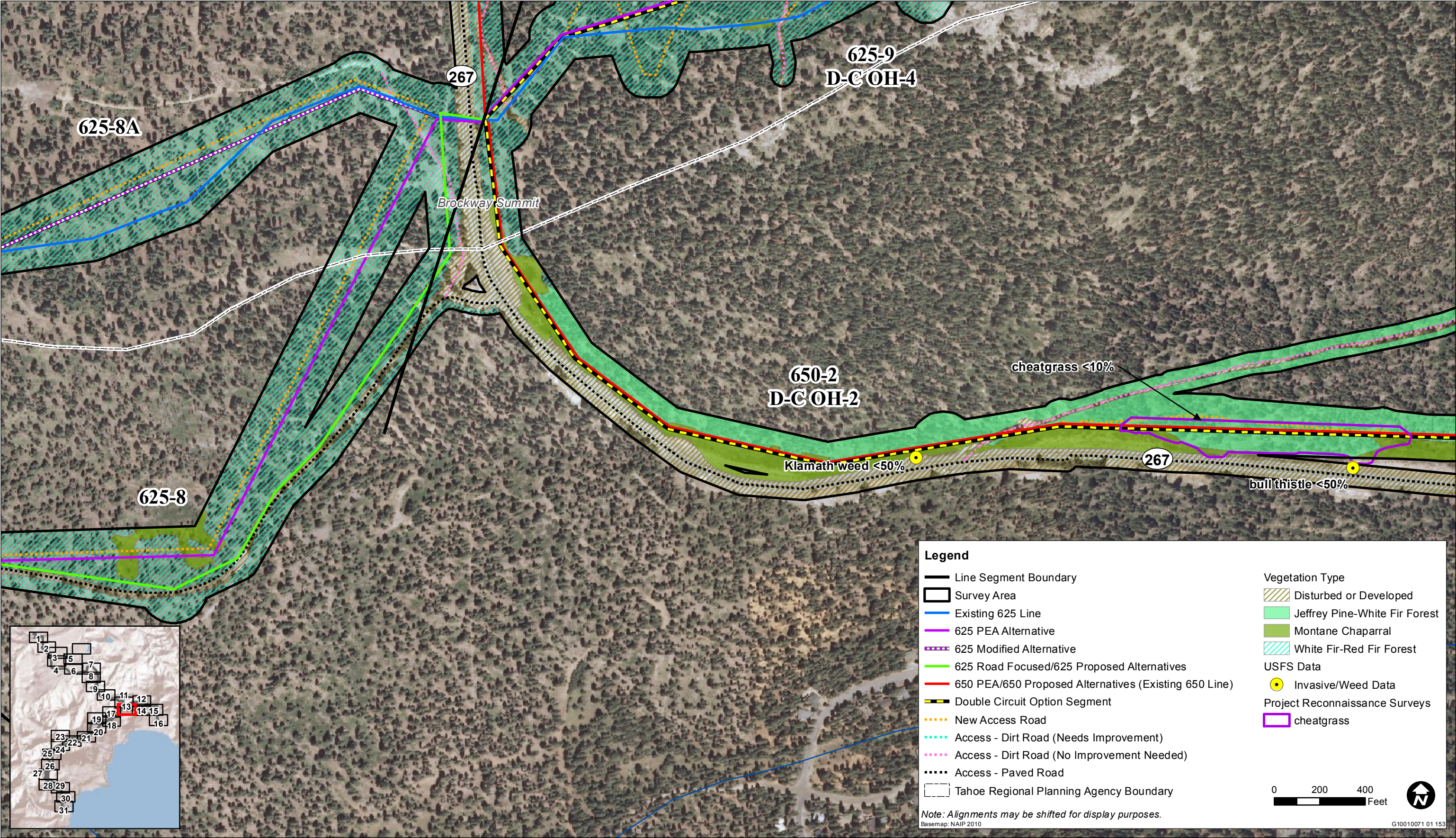
Source: Data provided by Ascent, CNDDB, POWER, TriSage, and TRPA in 2012; adapted by Ascent Environmental in 2013



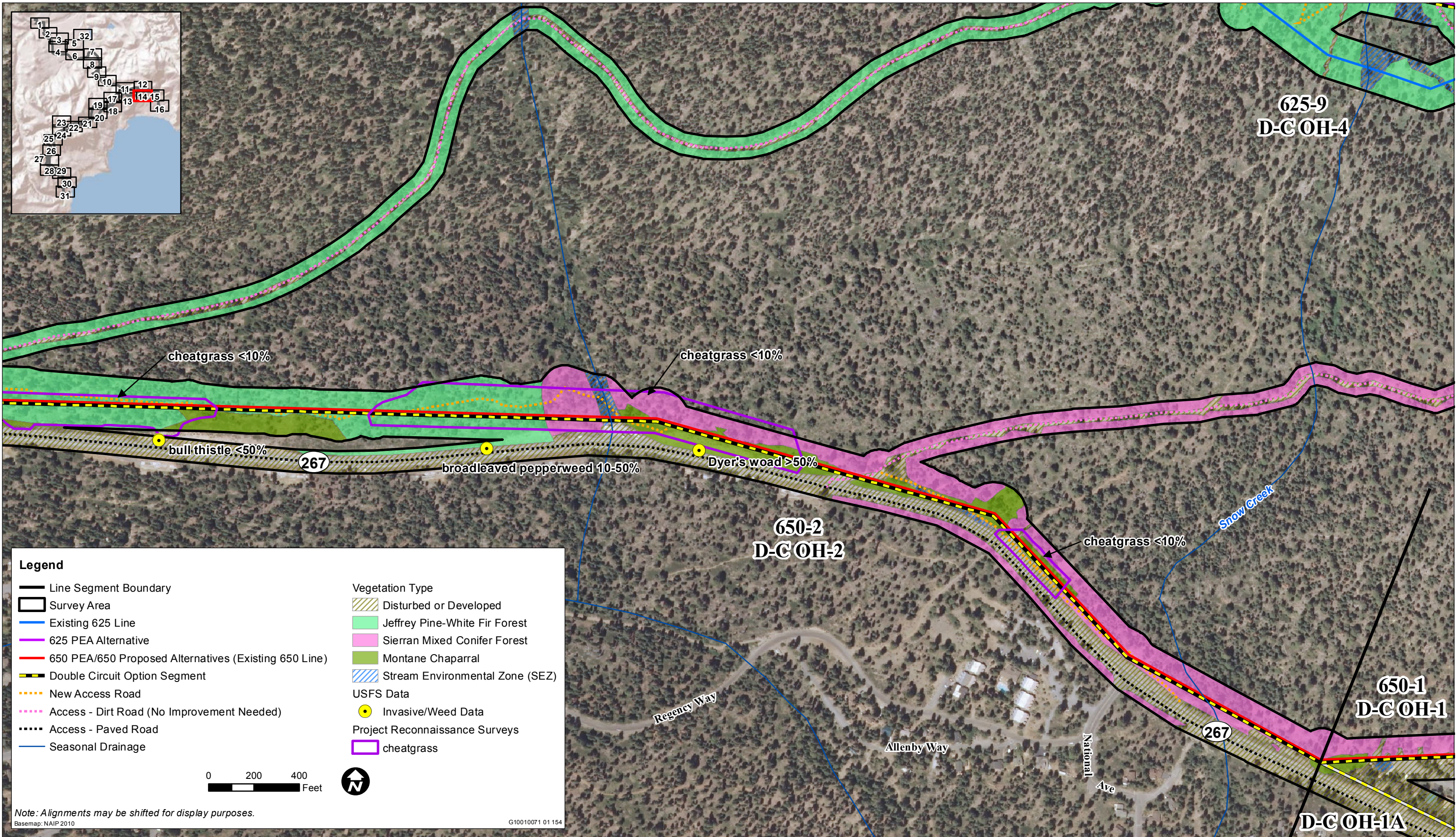
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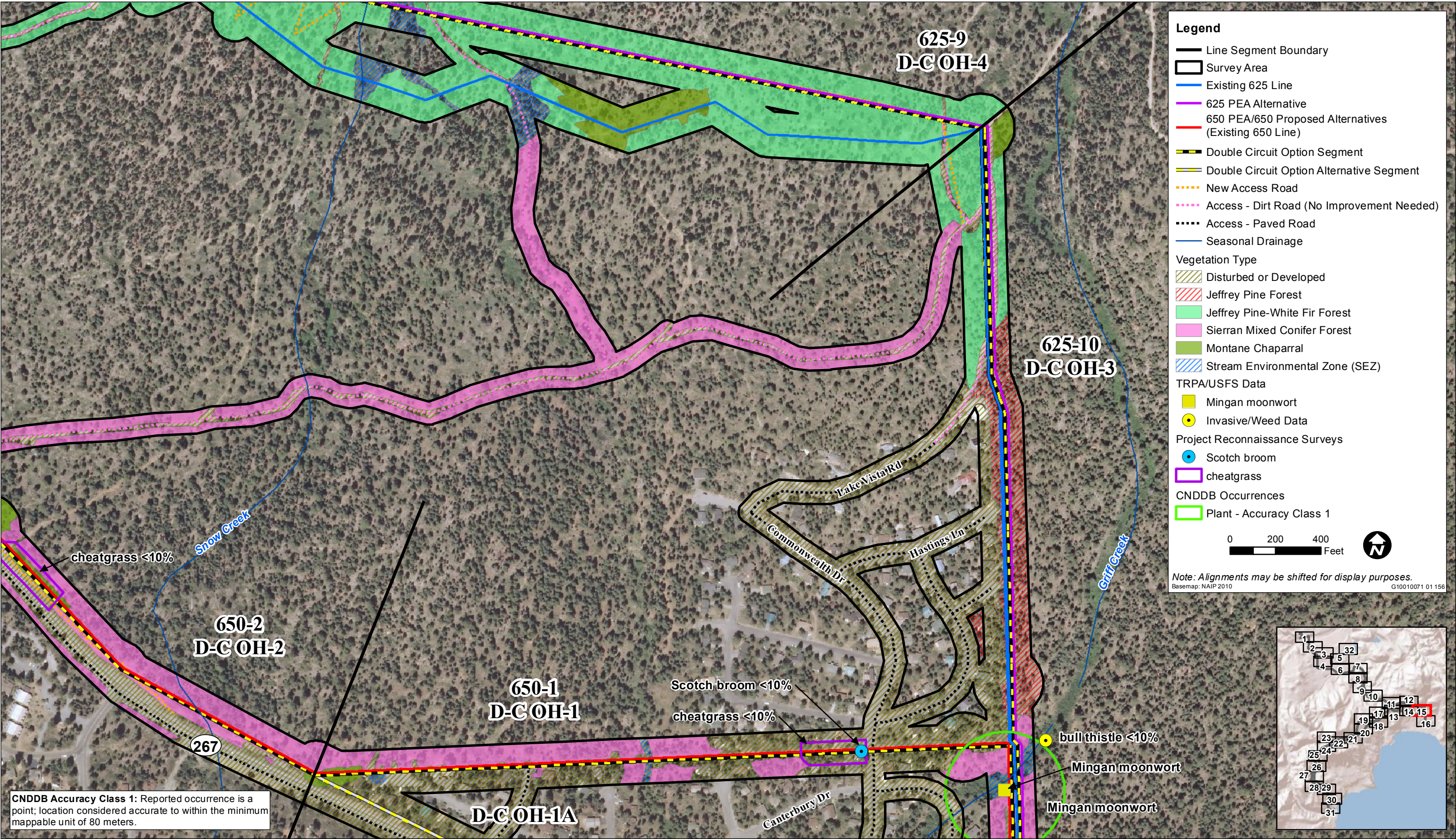
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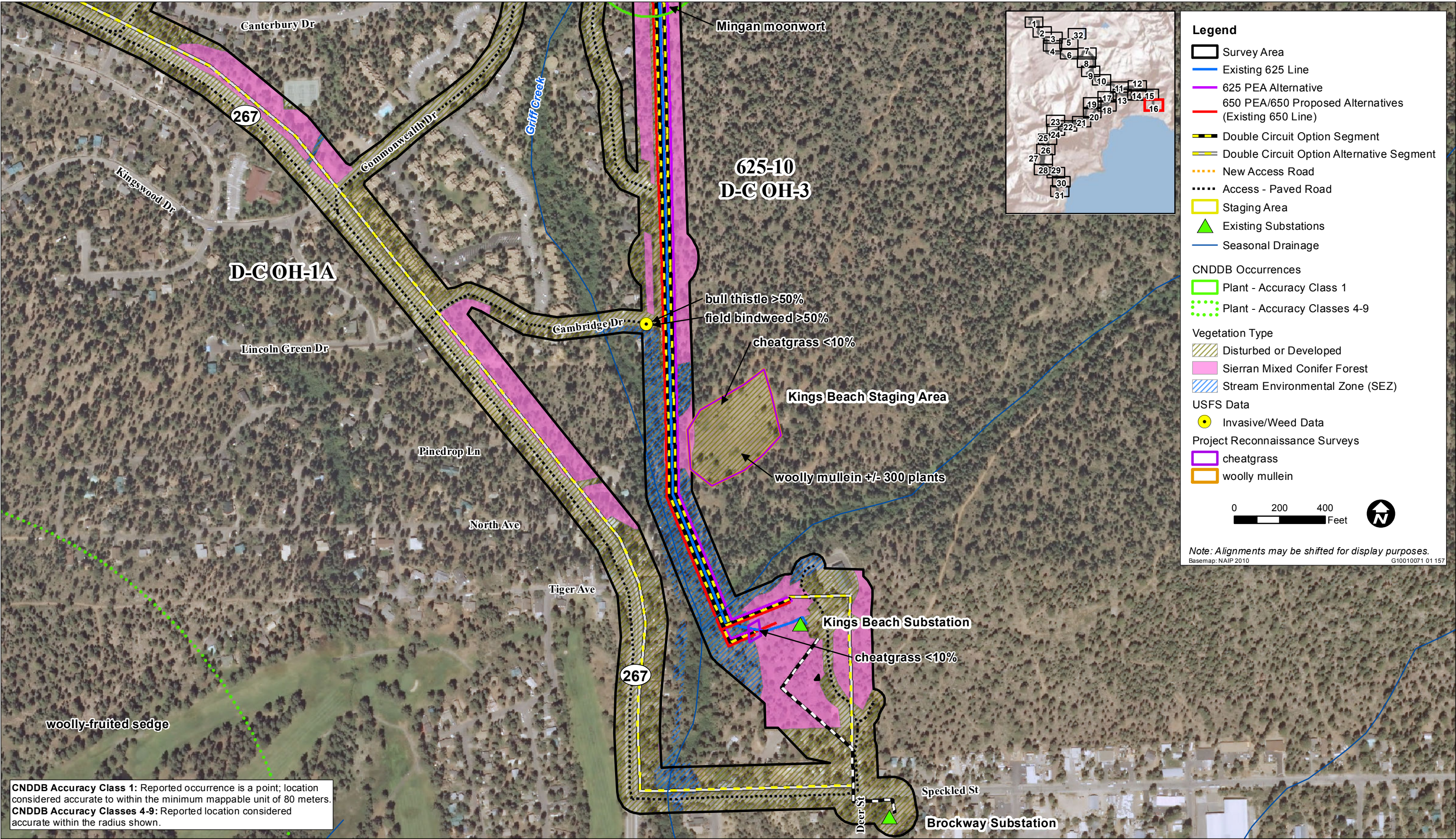
Source: Data provided by Ascent, CNDDb, POWER, TriSage, and TRPA in 2012; adapted by Ascent Environmental in 2013



Source: Data provided by Ascent, CNDDB, POWER, TriSage, and TRPA in 2012; adapted by Ascent Environmental in 2013



Source: Data provided by Ascent, CNDDB, POWER, TriSage, and TRPA in 2012; adapted by Ascent Environmental in 2013



CNDDDB Accuracy Class 1: Reported occurrence is a point; location considered accurate to within the minimum mappable unit of 80 meters.
CNDDDB Accuracy Classes 4-9: Reported location considered accurate within the radius shown.

Source: Data provided by Ascent, CNDDDB, POWER, TriSage, and TRPA in 2012; adapted by Ascent Environmental in 2013

ATTACHMENT E: MONTANE RIPARIAN PLANTING PLAN

ATTACHMENT E: MONTANE RIPARIAN PLANTING PLAN

Scientific Name	Quantity	Plant Spacing (feet on center)	Growth Form	Mature Height (feet)	Nitrogen Fixation	Drought Tolerance	Saturation Tolerance	Shade Tolerance	Plant Material Type	Notes
<i>Amelanchier alnifolia</i> (western serviceberry)	To be determined ¹ (TBD)	6	Tree/Shrub (multiple-stem)	15	No	Low	None	Intermediate	Bare root, container, cutting	
<i>Lonicera involucrata</i> (twinberry)	TBD	6	Shrub (single-stem)	10	No	Low	Low	Tolerant	Bare root, container, cutting	
<i>Penstemon newberryi</i> (mountain pride)	TBD	6	Subshrub/Herb (stoloniferous)	1	No	High	None	Intermediate	Bare root, container	
<i>Populus tremuloides</i> (quaking aspen)	TBD	6	Tree (single-stem)	65	No	Low	Low	Intolerant	Bare root, container, cutting	
<i>Rosa woodsii</i> (mountain rose)	TBD	6	Shrub (rhizomatous)	3	No	Medium	None	Intermediate	Bare root, container, sprigs	
<i>Rubus parviflorus</i> (thimbleberry)	TBD	6	Shrub (rhizomatous)	4	No	Medium	Low	Intermediate	Bare root, container, sprigs	
<i>Salix geyeriana</i> (Geyer's willow)	TBD	6	Tree/Shrub (thicket- forming)	15	No	None	Low	Tolerant	Bare root, container, cutting	
<i>Salix lemmonii</i> (Lemmon's willow)	TBD	6	Shrub (multiple-stem)	14	No	Low	Low	Intermediate	Bare root, container, cutting	
<i>Salix scouleriana</i> (Scouler's willow)	TBD	6	Tree/Shrub (multiple-stem)	50	No	Medium	Medium	Intermediate	Bare root, container, cutting	
<i>Sambucus nigra</i> ssp. <i>caerulea</i> (blue elderberry)	TBD	6	Shrub/Tree (multiple-stem)	23	No	High	Medium	Intermediate	Bare root, container	The name <i>Sambucus mexicana</i> has often been misapplied to this plant.

¹ Riparian tree quantities to be determined following consultation with the CDFW for a Lake and Streambed Alteration Agreement.

ATTACHMENT F: SITE-SPECIFIC SEED MIXES

ATTACHMENT F: SITE-SPECIFIC SEED MIXES¹

Table F-1: Seed Mix – Montane Riparian, Wet Montane Meadow, Dry Montane Meadow

Taxon ²	Application Rate ³ (PLS ⁴ in lbs/acre)	Growth Form	Mature Height (feet)	Nitrogen Fixation	Drought Tolerance	Saturation Tolerance	Shade Tolerance	Notes
<i>Bromus carinatus</i> (California brome)	3.00	Grass (bunch)	4	No	Medium	None	Intolerant	
<i>Carex praegracilis</i> (slender sedge)	0.25	Herb (rhizomatous)	2	No	Low	High	Intermediate	
<i>Deschampsia cespitosa</i> (tufted hairgrass)	0.50	Grass (bunch)	3.4	No	Low	High	Intolerant	
<i>Elymus glaucus</i> (blue wildrye)	3.00	Grass (bunch)	3.3	No	High	High	Tolerant	
<i>Elymus trachycaulus</i> (slender wheatgrass)	4.00	Grass (bunch)	3	No	High	Low	Intolerant	
<i>Elymus triticoides</i> (creeping wildrye)	2.00	Grass (rhizomatous)	3	No	High	High	Intolerant	
<i>Festuca rubra</i> ssp. <i>arenaria</i> (Boreal creeping red fescue)	0.50	Grass (bunch)	3	No	Medium	Low	Tolerant	
<i>Hordeum brachyantherum</i> (meadow barley)	5.00	Grass (bunch)	2	No	Medium	High	Intolerant	
<i>Juncus arcticus</i> ssp. <i>littoralis</i> (mountain rush)	0.05	Grass (bunch)	4	No	Low	High	Intermediate	Synonym: <i>Juncus balticus</i>
<i>Lupinus polyphyllus</i> (Tahoe lupine)	2.00	Herb (single-stem)	5	Yes	Low	High	Intermediate	
<i>Mimulus guttatus</i> (common monkeyflower)	0.10	Herb (rhizomatous)	2.5	No	None	Medium	Tolerant	Seed purity varies considerably.
<i>Potentilla gracilis</i> (slender cinquefoil)	0.50	Herb (multiple-stem)	2.4	No	Medium	None	Intolerant	
Total	20.90							

¹ Composition of mixes is based in part on commercial availability of plant cultivars, and because availability of cultivars frequently changes, cultivar substitutions may be necessary or desirable. Although noxious weeds are prohibited, seed material may contain other weeds (e.g., up to 1.5-percent weed seed in Nevada, which corresponds to a large number of weed seed).

² Names of non-native species are displayed in bold font.

³ Amounts assume broadcast (hand) application of seed, and have been designed for 80 to 100 PLS ft² because greater seed densities may result in densities of competing seedlings sufficient to reduce growth and inhibit establishment.

⁴ PLS = Pure live seed (percentage purity)(percentage germination)/100.

Table F-2: Seed Mix – Upland, Full Sun/Dry

Taxon ²	Application Rate (PLS in lbs/acre)	Growth Form	Mature Height (feet)	Nitrogen Fixation	Drought Tolerance	Saturation Tolerance	Shade Tolerance	Notes
<i>Achillea millefolium</i> (yarrow)	0.10	Herb (rhizomatous)	3	No	Medium	None	Intermediate	Small amounts of seed can be used (i.e., a low seeding rate).
<i>Artemisia tridentata ssp. vaseyana</i> (mountain sagebrush)	0.5	Tree/Shrub (multiple-stem)	7	No	Medium	None	Intolerant	Seed viability varies considerably.
<i>Bromus carinatus</i> (California brome)	4.00	Grass (bunch)	4	No	Medium	None	Intolerant	
<i>Elymus elymoides</i> (squirreltail)	4.00	Grass (bunch)	1.5	No	High	None	Intolerant	Seed lots often “weedy.”
<i>Elymus trachycaulus</i> (slender wheatgrass)	4.00	Grass (bunch)	3	No	High	Low	Intolerant	
<i>Ericameria nauseosa</i> (rabbitbrush)	1.00	Shrub/Subshrub (multiple-stem)	4	No	High	None	Intolerant	Seed viability varies considerably.
<i>Eriogonum umbellatum</i> (sulphur buckwheat)	1.00	Shrub/Subshrub (multiple-stem)	1	No	High	None	Intolerant	Seed viability varies considerably.
<i>Linum lewisii</i> (Lewis flax)	1.00	Herb (multiple-stem)	0.5	No	High	None	Intolerant	
<i>Lupinus argenteus</i> (silver lupine)	2.00	Herb (multiple-stem)	0.5	No	High	None	Intolerant	
<i>Poa secunda</i> (Sandberg bluegrass)	0.50	Grass (bunch)	2.5	No	Medium	None	Intolerant	
<i>Purshia tridentata</i> (antelope bitterbrush)	1.00	Shrub (multiple-stem)	1.5	Yes	Medium	None	Intolerant	
<i>Ribes cereum</i> (wax currant)	0.50	Shrub (multiple-stem)	1.4	No	High	None	Intermediate	<i>Ribes</i> species are alternate hosts for white pine blister rust, but are abundant in the Lake Tahoe Basin’s natural vegetation.
Total	19.6							

Table F-3: Seed Mix – Upland, Generic

Taxon ²	Application Rate (PLS in lbs/acre)	Growth Form	Mature Height (feet)	Nitrogen Fixation	Drought Tolerance	Saturation Tolerance	Shade Tolerance	Notes
<i>Achillea millefolium</i> (yarrow)	0.10	Herb (rhizomatous)	3	No	Medium	None	Intermediate	Small amounts of seed can be used (i.e., a low seeding rate).
<i>Elymus elymoides</i> (squirreltail)	2.00	Grass (bunch)	1.5	No	High	None	Intolerant	Seed lots often “weedy.”
<i>Elymus trachycaulus</i> (slender wheatgrass)	4.00	Grass (bunch)	3	No	High	Low	Intolerant	Attributes apply to the species, including <i>Elymus trachycaulus</i> “Revenue” and <i>Elymus trachycaulus</i> ssp. <i>trachycaulus</i> .
<i>Eriogonum umbellatum</i> (sulphur buckwheat)	1.00	Shrub/Subshrub (multiple-stem)	1	No	High	None	Intolerant	Seed viability varies considerably.
<i>Festuca brevipila</i> (hard fescue)	1.00	Grass (bunch)	0.5	No	High	None	Intolerant	
<i>Festuca ovina</i>, (sheep fescue, “Covar”)	1.00	Grass (bunch)	0.5	No	High	None	Intolerant	
<i>Linum lewisii</i> (Lewis flax)	1.00	Herb (bunch)	2.5	No	Medium	None	Intolerant	
<i>Lupinus argenteus</i> (silver lupine)	1.00	Herb (multiple-stem)	1.5	Yes	Medium	None	Intolerant	
<i>Poa ampla</i> (big bluegrass, “Sherman”)	1.00	Grass (bunch)	3	No	High	None	Intermediate	
<i>Purshia tridentata</i> (antelope bitterbrush)	1.00	Shrub (multiple-stem)	6	Yes	High	Low	Intermediate	
<i>Ribes cereum</i> (wax currant)	0.50	Shrub (multiple-stem)	3	No	High	None	Intolerant	<i>Ribes</i> species are alternate hosts for white pine blister rust, but are abundant in the Lake Tahoe Basin’s natural vegetation.
Total	13.60							

Table F-4: Seed Mix – High Disturbance

Taxon ²	Application Rate (PLS in lbs/acre)	Growth Form	Mature Height (feet)	Nitrogen Fixation	Drought Tolerance	Saturation Tolerance	Shade Tolerance	Notes
<i>Achillea millefolium</i> (yarrow)	0.10	Herb (rhizomatous)	3	No	Medium	None	Intermediate	Small amounts of seed can be used (i.e., a low seeding rate).
<i>Eriogonum umbellatum</i> (sulphur buckwheat)	2.00	Shrub/Subshrub (multiple-stem)	1	No	High	None	Intolerant	Seed viability varies considerably.
<i>Festuca brevipila</i> (hard fescue)	2.00	Grass (bunch)	0.5	No	High	None	Intolerant	
<i>Festuca ovina</i>, (sheep fescue, “Covar”)	2.00	Grass (bunch)	0.5	No	High	None	Intolerant	
<i>Linum lewisii</i> (Lewis flax)	1.00	Herb (bunch)	2.5	No	Medium	None	Intolerant	
<i>Lupinus argenteus</i> (silver lupine)	2.00	Herb (multiple-stem)	1.5	Yes	Medium	None	Intolerant	
<i>Poa ampla</i> (big bluegrass, “Sherman”)	1.00	Grass (bunch)	3	No	High	None	Intermediate	
Total	10.10							

Source: Table 5-3: TRPA 2014

ATTACHMENT G: NOXIOUS WEEDS MAP

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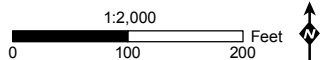
Attachment G: Noxious Weeds Map 1 of 40

650 Line Rebuild Project

— Existing 650 Alignment	Survey Area*	common mullein	(<i>Verbascum thapsus</i>)
— Proposed 650 Alignment	Canada thistle	field bindweed	(<i>Convolvulus arvensis</i>)
- - - Proposed 650 Line Removal	Dyer's woad	oxeye daisy	(<i>Leucanthemum vulgare</i>)
- - - Existing Northstar Tap	bull thistle	poison hemlock	(<i>Conium maculatum</i>)
- - - Proposed Northstar Tap	cheat grass	prickly Russian thistle	(<i>Salsola tragus</i>)
● Existing Pole	common St. Johnswort	teasel	(<i>Dipsacus fullonum</i>)
▲ Photo Location			



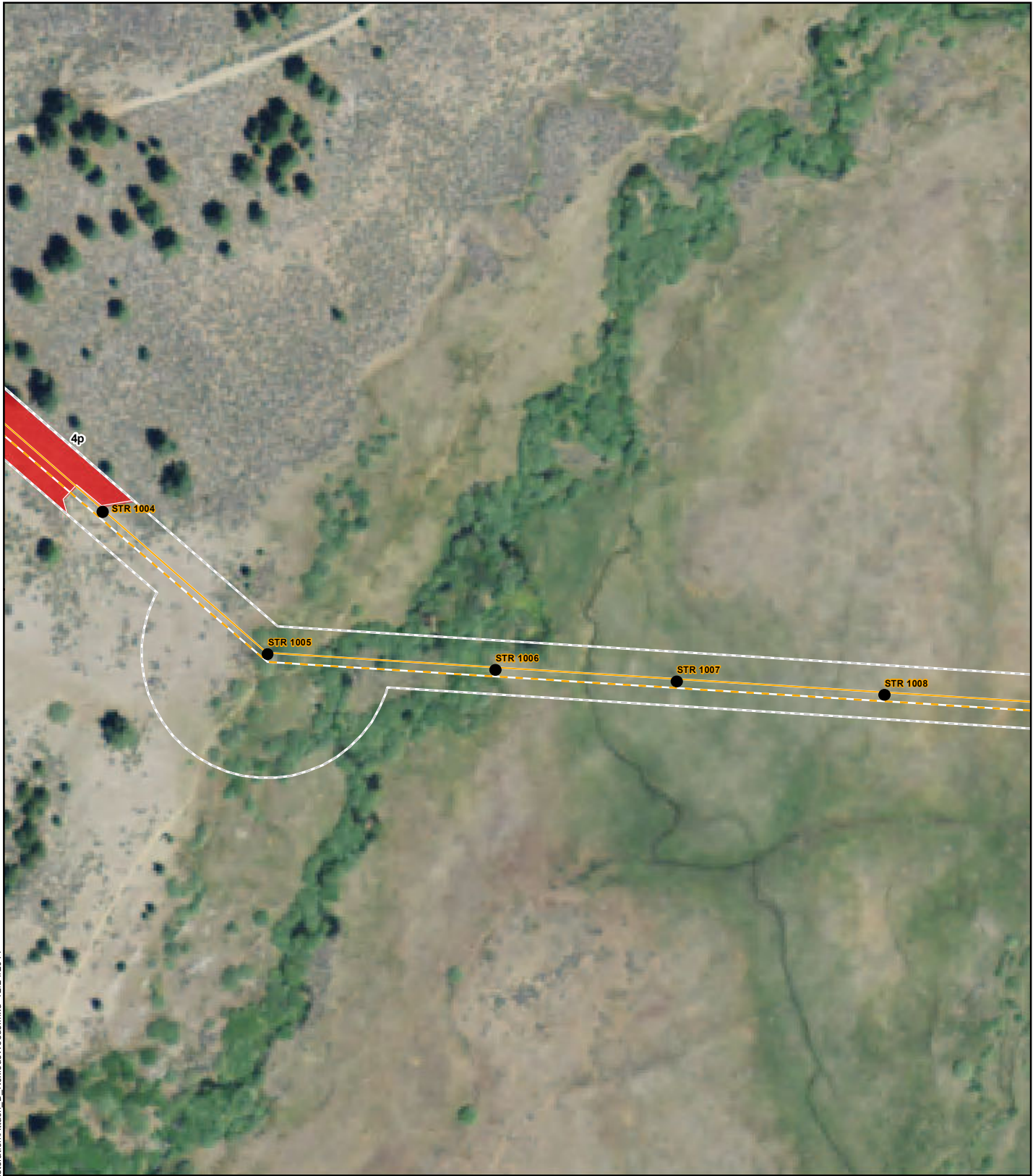
*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, new construction), and all stringing sites



Liberty Utilities



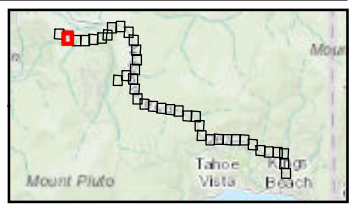
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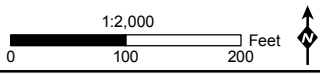
Attachment G: Noxious Weeds Map 2 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, new construction), and all stringing sites



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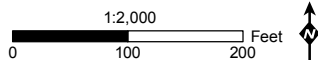
Attachment G: Noxious Weeds Map 3 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, new construction), and all stringing sites



Liberty Utilities



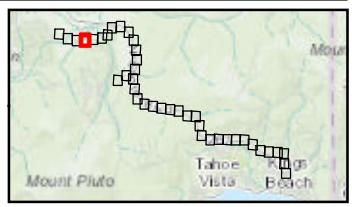
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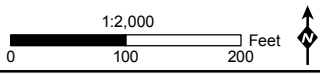
Attachment G: Noxious Weeds Map 4 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, new construction), and all stringing sites



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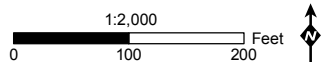
Attachment G: Noxious Weeds Map 5 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, new construction), and all stringing sites



Liberty Utilities



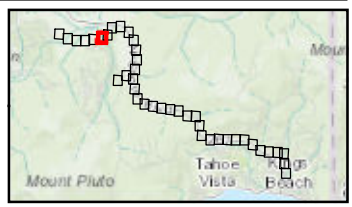
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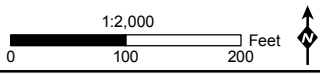
Attachment G: Noxious Weeds Map 6 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, new construction), and all stringing sites





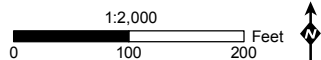
Attachment G: Noxious Weeds Map 7 of 40

650 Line Rebuild Project

— Existing 650 Alignment	Survey Area*	common mullein	(<i>Verbascum thapsus</i>)
— Proposed 650 Alignment	Canada thistle	field bindweed	(<i>Convolvulus arvensis</i>)
- - - Proposed 650 Line Removal	Dyer's woad	oxeye daisy	(<i>Leucanthemum vulgare</i>)
- - - Existing Northstar Tap	bull thistle	poison hemlock	(<i>Conium maculatum</i>)
- - - Proposed Northstar Tap	cheat grass	prickly Russian thistle	(<i>Salsola tragus</i>)
● Existing Pole	common St. Johnswort	teasel	(<i>Dipsacus fullonum</i>)
▲ Photo Location			
	(<i>Cirsium arvense</i>)		
	(<i>Isatis tinctoria</i>)		
	(<i>Cirsium vulgare</i>)		
	(<i>Bromus tectorum</i>)		
	(<i>Hypericum perforatum</i>)		



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, new construction), and all stringing sites



Liberty Utilities



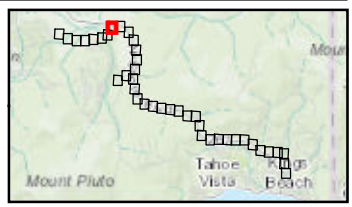
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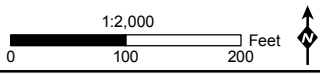
Attachment G: Noxious Weeds Map 8 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |



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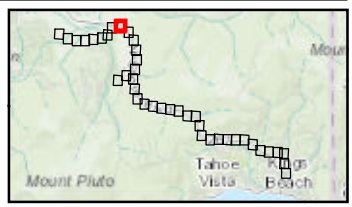
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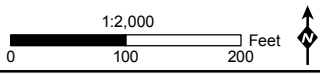
Attachment G: Noxious Weeds Map 9 of 40

650 Line Rebuild Project

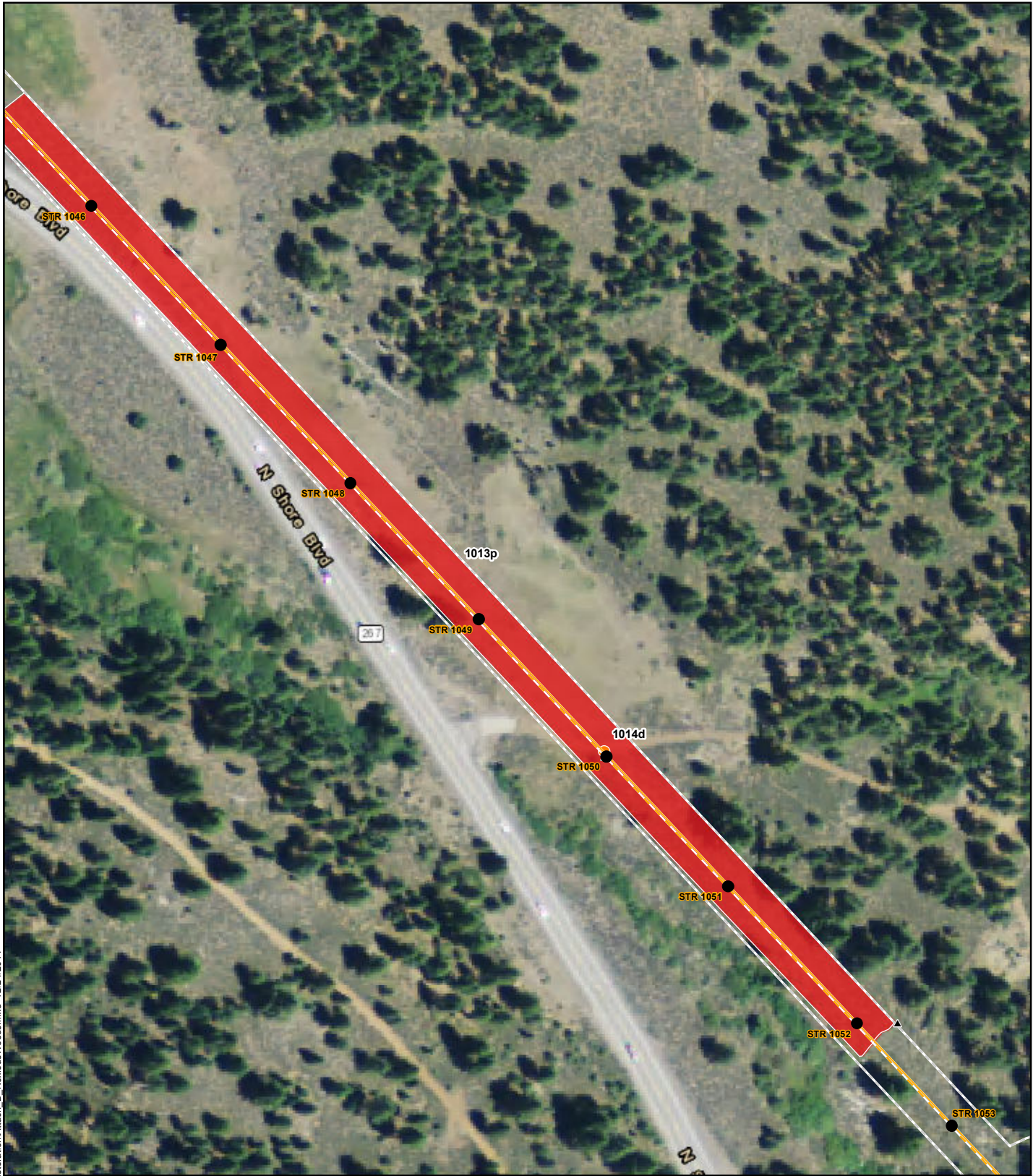
- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, new construction), and all stringing sites



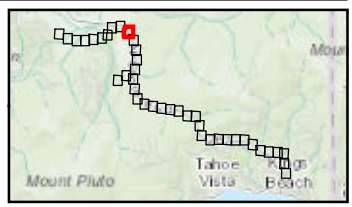
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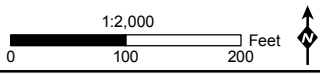
Attachment G: Noxious Weeds Map 10 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (Verbascum thapsus) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (Convolvulus arvensis) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (Leucanthemum vulgare) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (Conium maculatum) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (Salsola tragus) |
| ● Existing Pole | common St. Johnswort | teasel | (Dipsacus fullonum) |
| ▲ Photo Location | | | |



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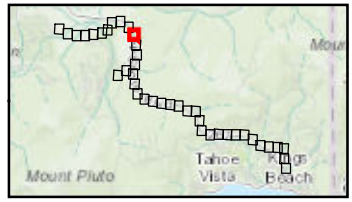
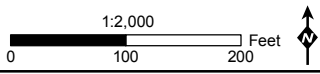


Attachment G: Noxious Weeds Map 11 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |

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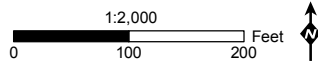


Attachment G: Noxious Weeds Map 12 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |

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Liberty Utilities



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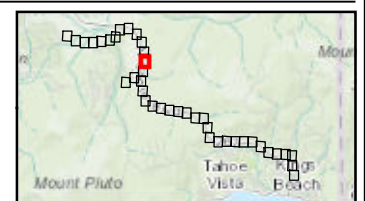
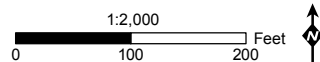


Attachment G: Noxious Weeds Map 13 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |

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Liberty Utilities

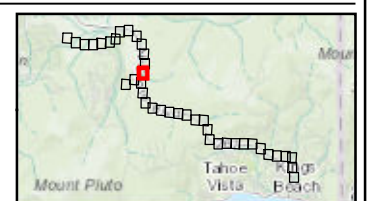




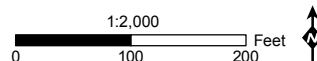
Attachment G: Noxious Weeds Map 14 of 40

650 Line Rebuild Project

- | | | |
|--|---|--|
| <ul style="list-style-type: none"> — Existing 650 Alignment — Proposed 650 Alignment - - - Proposed 650 Line Removal - - - Existing Northstar Tap - - - Proposed Northstar Tap ● Existing Pole ▲ Photo Location | <ul style="list-style-type: none"> Survey Area* Canada thistle (<i>Cirsium arvense</i>) Dyer's woad (<i>Isatis tinctoria</i>) bull thistle (<i>Cirsium vulgare</i>) cheat grass (<i>Bromus tectorum</i>) common St. Johnswort (<i>Hypericum perforatum</i>) | <ul style="list-style-type: none"> common mullein (<i>Verbascum thapsus</i>) field bindweed (<i>Convolvulus arvensis</i>) oxeye daisy (<i>Leucanthemum vulgare</i>) poison hemlock (<i>Conium maculatum</i>) prickly Russian thistle (<i>Salsola tragus</i>) teasel (<i>Dipsacus fullonum</i>) |
|--|---|--|



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Liberty Utilities





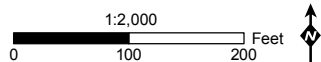
Attachment G: Noxious Weeds Map 15 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |



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Liberty Utilities





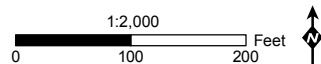
Attachment G: Noxious Weeds Map 16 of 40

650 Line Rebuild Project

— Existing 650 Alignment	Survey Area*	common mullein	(<i>Verbascum thapsus</i>)
— Proposed 650 Alignment	Canada thistle	field bindweed	(<i>Convolvulus arvensis</i>)
- - - Proposed 650 Line Removal	Dyer's woad	oxeye daisy	(<i>Leucanthemum vulgare</i>)
- - - Existing Northstar Tap	bull thistle	poison hemlock	(<i>Conium maculatum</i>)
- - - Proposed Northstar Tap	cheat grass	prickly Russian thistle	(<i>Salsola tragus</i>)
● Existing Pole	common St. Johnswort	teasel	(<i>Dipsacus fullonum</i>)
▲ Photo Location			



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Liberty Utilities



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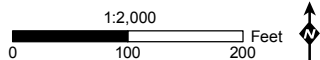


Attachment G: Noxious Weeds Map 17 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |

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Liberty Utilities



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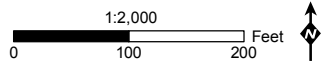
Attachment G: Noxious Weeds Map 18 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (Verbascum thapsus) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (Convolvulus arvensis) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (Leucanthemum vulgare) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (Conium maculatum) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (Salsola tragus) |
| ● Existing Pole | common St. Johnswort | teasel | (Dipsacus fullonum) |
| ▲ Photo Location | | | |



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Liberty Utilities



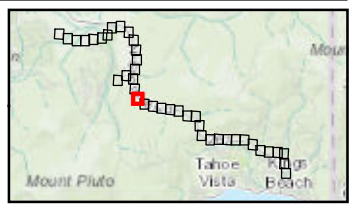
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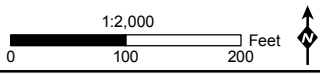
Attachment G: Noxious Weeds Map 19 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (Verbascum thapsus) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (Convolvulus arvensis) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (Leucanthemum vulgare) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (Conium maculatum) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (Salsola tragus) |
| ● Existing Pole | common St. Johnswort | teasel | (Dipsacus fullonum) |
| ▲ Photo Location | | | |



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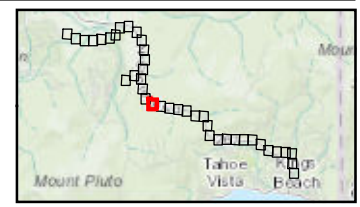
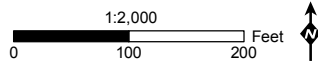


Attachment G: Noxious Weeds Map 20 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |

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Liberty Utilities



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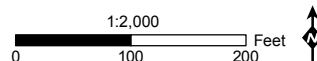
Attachment G: Noxious Weeds Map 21 of 40

650 Line Rebuild Project

— Existing 650 Alignment	Survey Area*	common mullein	(<i>Verbascum thapsus</i>)
— Proposed 650 Alignment	Canada thistle	field bindweed	(<i>Convolvulus arvensis</i>)
--- Proposed 650 Line Removal	Dyer's woad	oxeye daisy	(<i>Leucanthemum vulgare</i>)
--- Existing Northstar Tap	bull thistle	poison hemlock	(<i>Conium maculatum</i>)
--- Proposed Northstar Tap	cheat grass	prickly Russian thistle	(<i>Salsola tragus</i>)
● Existing Pole	common St. Johnswort	teasel	(<i>Dipsacus fullonum</i>)
▲ Photo Location			



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Liberty Utilities



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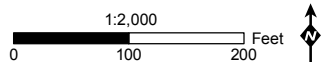
Attachment G: Noxious Weeds Map 22 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |



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Liberty Utilities





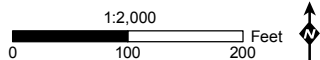
Attachment G: Noxious Weeds Map 23 of 40

650 Line Rebuild Project

— Existing 650 Alignment	Survey Area*	common mullein	(<i>Verbascum thapsus</i>)
— Proposed 650 Alignment	Canada thistle	field bindweed	(<i>Convolvulus arvensis</i>)
- - - Proposed 650 Line Removal	Dyer's woad	oxeye daisy	(<i>Leucanthemum vulgare</i>)
- - - Existing Northstar Tap	bull thistle	poison hemlock	(<i>Conium maculatum</i>)
- - - Proposed Northstar Tap	cheat grass	prickly Russian thistle	(<i>Salsola tragus</i>)
● Existing Pole	common St. Johnswort	teasel	(<i>Dipsacus fullonum</i>)
▲ Photo Location			
	(<i>Cirsium arvense</i>)		
	(<i>Isatis tinctoria</i>)		
	(<i>Cirsium vulgare</i>)		
	(<i>Bromus tectorum</i>)		
	(<i>Hypericum perforatum</i>)		



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, new construction), and all stringing sites



Liberty Utilities





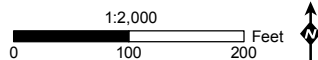
Attachment G: Noxious Weeds Map 24 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, new construction), and all stringing sites



Liberty Utilities





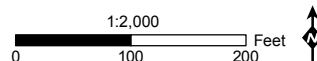
Attachment G: Noxious Weeds Map 25 of 40

650 Line Rebuild Project

- | | | |
|--|--|--|
| <ul style="list-style-type: none"> — Existing 650 Alignment — Proposed 650 Alignment - - - Proposed 650 Line Removal - - - Existing Northstar Tap - - - Proposed Northstar Tap ● Existing Pole ▲ Photo Location | <p>Survey Area*</p> <ul style="list-style-type: none"> Canada thistle (<i>Cirsium arvense</i>) Dyer's woad (<i>Isatis tinctoria</i>) bull thistle (<i>Cirsium vulgare</i>) cheat grass (<i>Bromus tectorum</i>) common St. Johnswort (<i>Hypericum perforatum</i>) | <ul style="list-style-type: none"> common mullein (<i>Verbascum thapsus</i>) field bindweed (<i>Convolvulus arvensis</i>) oxeye daisy (<i>Leucanthemum vulgare</i>) poison hemlock (<i>Conium maculatum</i>) prickly Russian thistle (<i>Salsola tragus</i>) teasel (<i>Dipsacus fullonum</i>) |
|--|--|--|



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, new construction), and all stringing sites





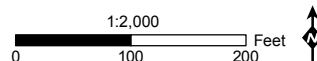
Attachment G: Noxious Weeds Map 26 of 40

650 Line Rebuild Project

— Existing 650 Alignment	Survey Area*	common mullein	(<i>Verbascum thapsus</i>)
— Proposed 650 Alignment	Canada thistle	field bindweed	(<i>Convolvulus arvensis</i>)
- - - Proposed 650 Line Removal	Dyer's woad	oxeye daisy	(<i>Leucanthemum vulgare</i>)
- - - Existing Northstar Tap	bull thistle	poison hemlock	(<i>Conium maculatum</i>)
- - - Proposed Northstar Tap	cheat grass	prickly Russian thistle	(<i>Salsola tragus</i>)
● Existing Pole	common St. Johnswort	teasel	(<i>Dipsacus fullonum</i>)
▲ Photo Location			



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, new construction), and all stringing sites



Liberty Utilities



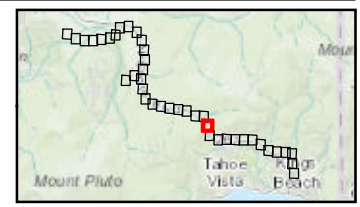
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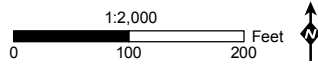
Attachment G: Noxious Weeds Map 27 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, new construction), and all stringing sites



Liberty Utilities



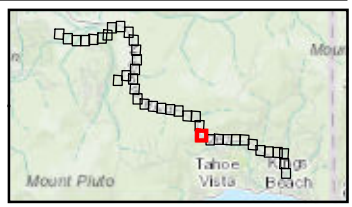
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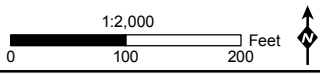
Attachment G: Noxious Weeds Map 28 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, new construction), and all stringing sites



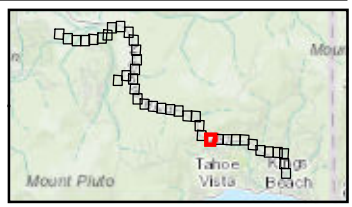
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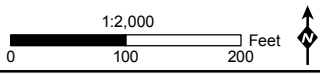
Attachment G: Noxious Weeds Map 29 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |



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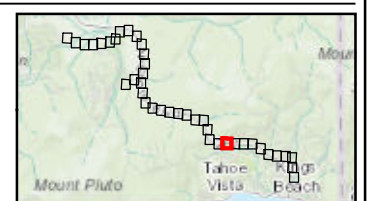




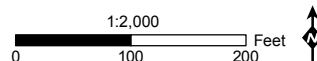
Attachment G: Noxious Weeds Map 30 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |



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Liberty Utilities





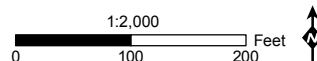
Attachment G: Noxious Weeds Map 31 of 40

650 Line Rebuild Project

— Existing 650 Alignment	Survey Area*	common mullein	(Verbascum thapsus)
— Proposed 650 Alignment	Canada thistle	field bindweed	(Convolvulus arvensis)
- - - Proposed 650 Line Removal	Dyer's woad	oxeye daisy	(Leucanthemum vulgare)
- - - Existing Northstar Tap	bull thistle	poison hemlock	(Conium maculatum)
- - - Proposed Northstar Tap	cheat grass	prickly Russian thistle	(Salsola tragus)
● Existing Pole	common St. Johnswort	teasel	(Dipsacus fullonum)
▲ Photo Location			



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Liberty Utilities





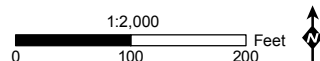
Attachment G: Noxious Weeds Map 32 of 40

650 Line Rebuild Project

— Existing 650 Alignment	Survey Area*	common mullein	(<i>Verbascum thapsus</i>)
— Proposed 650 Alignment	Canada thistle	field bindweed	(<i>Convolvulus arvensis</i>)
- - - Proposed 650 Line Removal	Dyer's woad	oxeye daisy	(<i>Leucanthemum vulgare</i>)
- - - Existing Northstar Tap	bull thistle	poison hemlock	(<i>Conium maculatum</i>)
- - - Proposed Northstar Tap	cheat grass	prickly Russian thistle	(<i>Salsola tragus</i>)
● Existing Pole	common St. Johnswort	teasel	(<i>Dipsacus fullonum</i>)
▲ Photo Location			



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Liberty Utilities





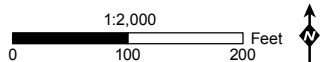
Attachment G: Noxious Weeds Map 33 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |



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Liberty Utilities



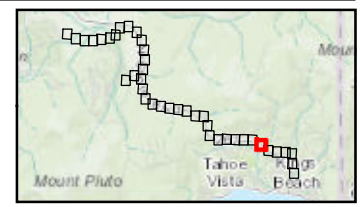
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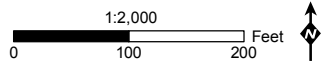
Attachment G: Noxious Weeds Map 34 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, new construction), and all stringing sites



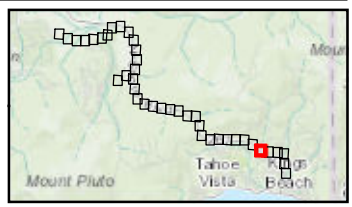
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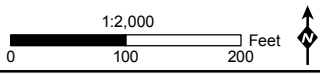
Attachment G: Noxious Weeds Map 35 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, new construction), and all stringing sites

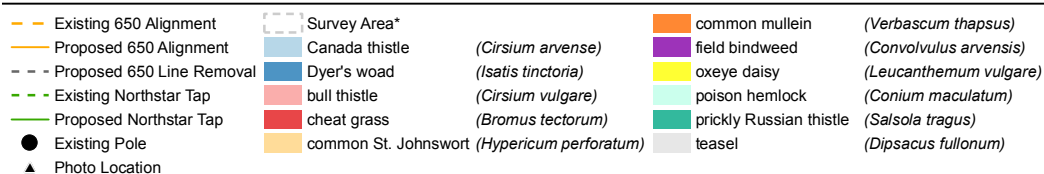


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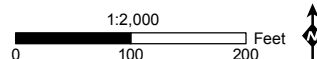


Attachment G: Noxious Weeds Map 36 of 40

650 Line Rebuild Project



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Liberty Utilities





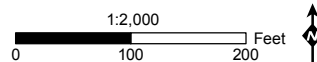
Attachment G: Noxious Weeds Map 37 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, new construction), and all stringing sites





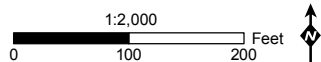
Attachment G: Noxious Weeds Map 38 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|---------------------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | (<i>Cirsium arvense</i>) | | |
| | (<i>Isatis tinctoria</i>) | | |
| | (<i>Cirsium vulgare</i>) | | |
| | (<i>Bromus tectorum</i>) | | |
| | (<i>Hypericum perforatum</i>) | | |



*The Survey Area includes a 65-foot corridor centered on the proposed alignment, a 20-foot corridor centered on the existing alignment, a 30-foot corridor centered on access roads (to be improved, overland, new construction), and all stringing sites



Liberty Utilities



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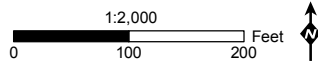


Attachment G: Noxious Weeds Map 39 of 40

650 Line Rebuild Project

- | | | |
|---------------------------------|--|---|
| — Existing 650 Alignment | Survey Area* | common mullein (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle (<i>Cirsium arvense</i>) | field bindweed (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad (<i>Isatis tinctoria</i>) | oxeye daisy (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle (<i>Cirsium vulgare</i>) | poison hemlock (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass (<i>Bromus tectorum</i>) | prickly Russian thistle (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort (<i>Hypericum perforatum</i>) | teasel |
| ▲ Photo Location | | |

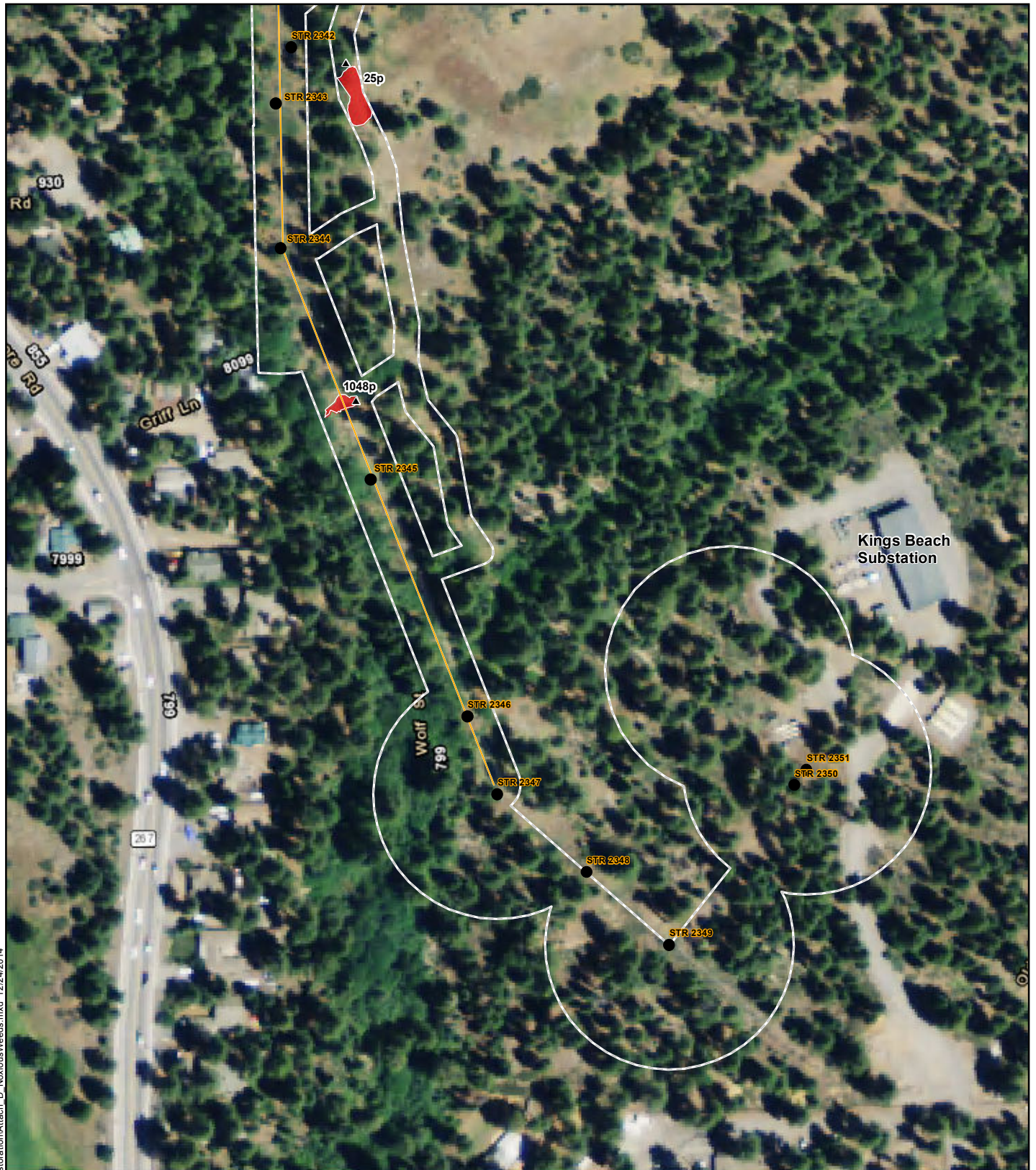
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Liberty Utilities



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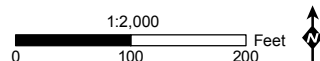
Attachment G: Noxious Weeds Map 40 of 40

650 Line Rebuild Project

- | | | | |
|---------------------------------|----------------------|-------------------------|---------------------------------|
| — Existing 650 Alignment | Survey Area* | common mullein | (<i>Verbascum thapsus</i>) |
| — Proposed 650 Alignment | Canada thistle | field bindweed | (<i>Convolvulus arvensis</i>) |
| - - - Proposed 650 Line Removal | Dyer's woad | oxeye daisy | (<i>Leucanthemum vulgare</i>) |
| - - - Existing Northstar Tap | bull thistle | poison hemlock | (<i>Conium maculatum</i>) |
| - - - Proposed Northstar Tap | cheat grass | prickly Russian thistle | (<i>Salsola tragus</i>) |
| ● Existing Pole | common St. Johnswort | teasel | (<i>Dipsacus fullonum</i>) |
| ▲ Photo Location | | | |



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Liberty Utilities

