

- The original alternative site analysis included a quick bullet points list of the proposed site and two other locations analyzed. This document also included various coverage maps for these locations. See **Exhibit A**.
- The updated supplemental alternative site analysis provided an analysis of the project site and four alternative sites, including two from the original analysis, and includes a multi-site alternative using four towers in the surrounding community. This document includes coverage maps, areas of significant gaps in coverage, photographs of the sites and other towers in Lake Tahoe, and a conclusion. See **Exhibit B**.

The documents are being provided for public disclosure. Staff will analyze the documents and the revised site plans if the Planning Commission approves the applicant's request for a continuance.

Attachments

- Exhibit A.....Site Analysis, dated August 1, 2014
- Exhibit B.....Supplemental Alternative Site Analysis, dated January 14, 2015

Analysis

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Skyline Drive and Crown Colo are located on a small hill with 360 degrees views at elev. (6540ft).

The site located at Skyline Drive would cover the houses on Skyline Drive as well N Upper Truckee Rd and Lake Tahoe Blvd elev. (6550ft) and the valley below. This site will also provide congestion relief for existing site CNU6295B.

The site located at Crown Colo would cover the houses on Skyline Drive but fail to provide indoor coverage to N Upper Truckee Rd and Lake Tahoe Blvd elev. (6550ft) because of losses cause by the trees. This issue is shown on slide 3. Because of the losses it would limit congestion relief for existing site CNU6295B.

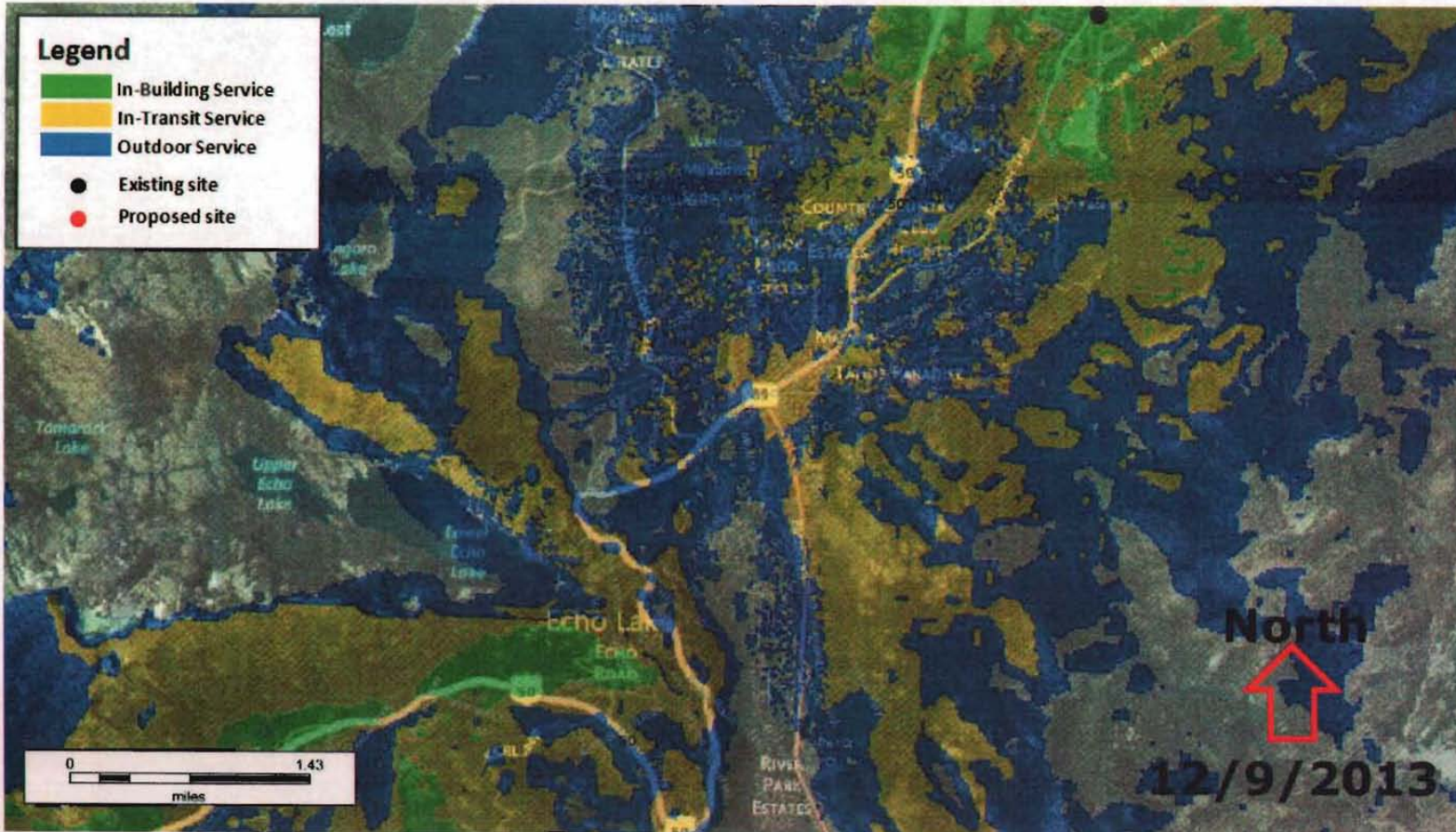
The Fire Station elev. (6368ft) which is 182ft below the options Skyline Drive and Crown Colo and would provide worst coverage. And would fail to cover the housing on N Upper Truckee Rd and Lake Tahoe Blvd (6550ft). It would also provide limited relief to CNU6295B.

Because of the limitation of the other two options the preferred option would be at Skyline Drive.

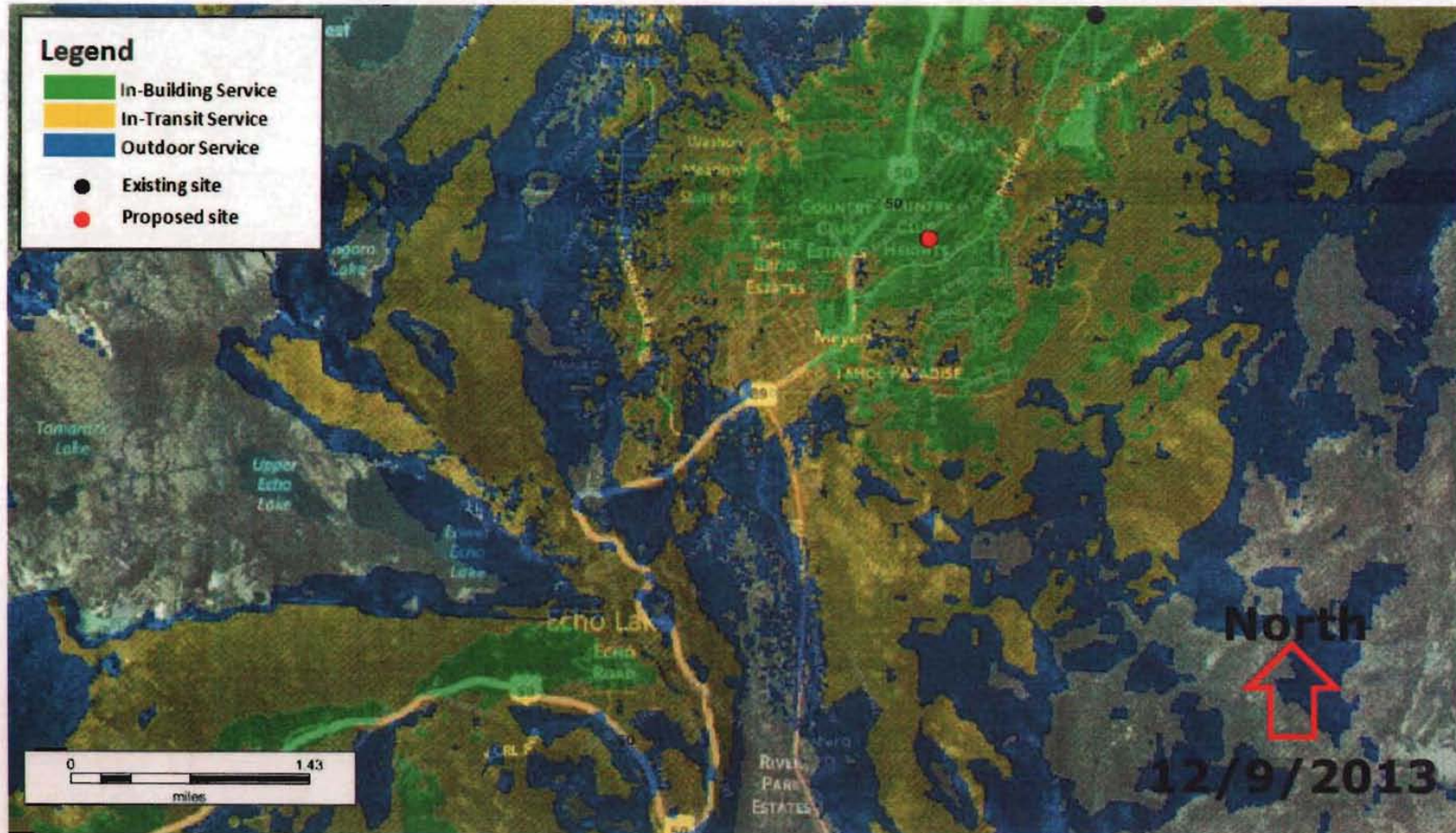
EXHIBIT A

Baseline Signal Level

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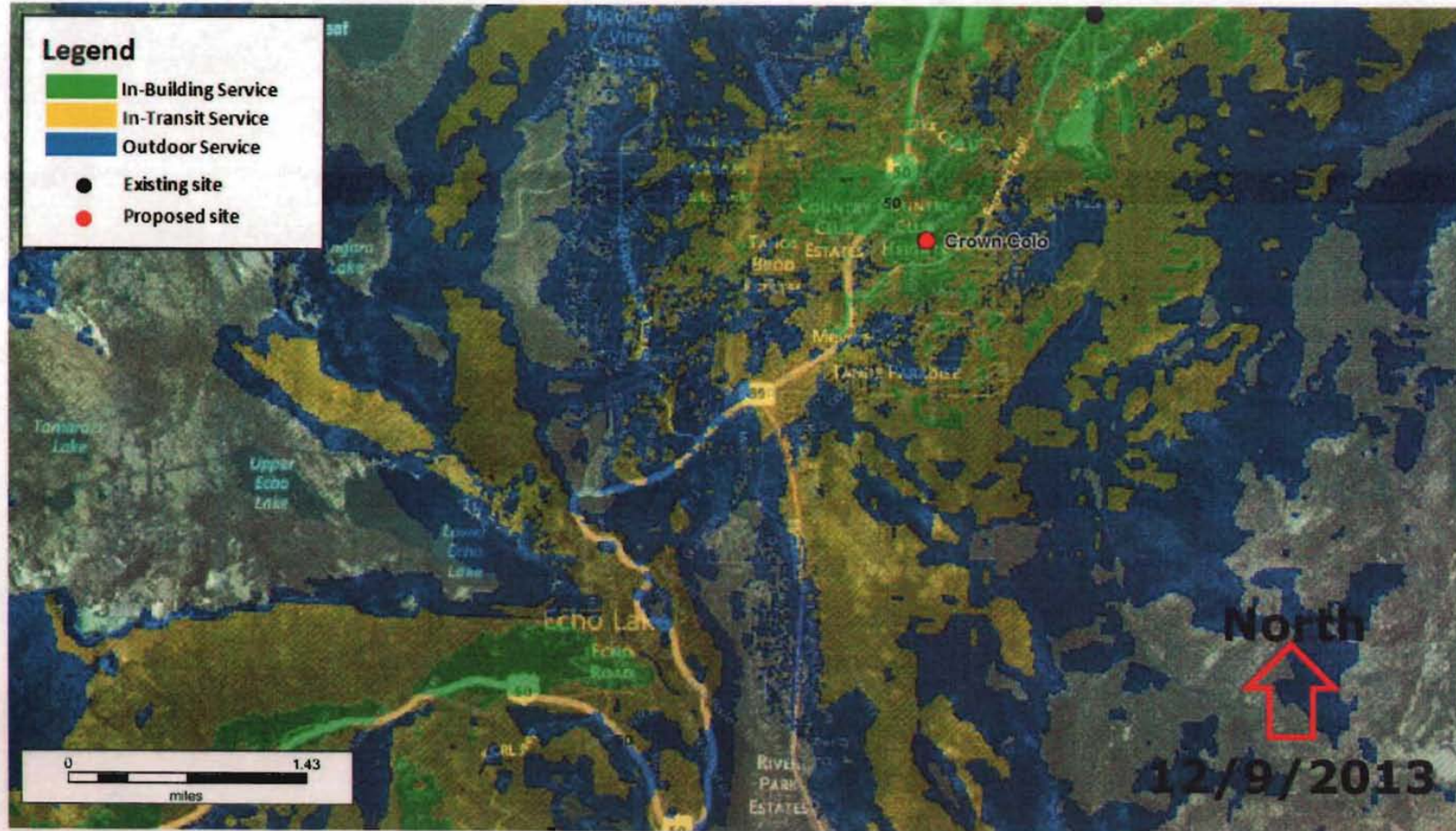


Signal Level Skyline Drive @ 80ft



14-1588 2C 5 of 27

Signal Level Crown Colo @ 58ft



14-1588 2C 6 of 27

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EXHIBIT B

CNU6214 – Skyline Dr. & Crystal Air Dr. 1697 Skyline Dr. South Lake Tahoe, CA 96150

Supplemental Alternative Site Analysis

As approved by AT&T RF Engineer James Temple
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AT&T RESTRICTED CONFIDENTIAL AND PRIVILEGED ATTORNEY CLIENT COMMUNICATION

Rev.2 - 01-06-15 - Page 1

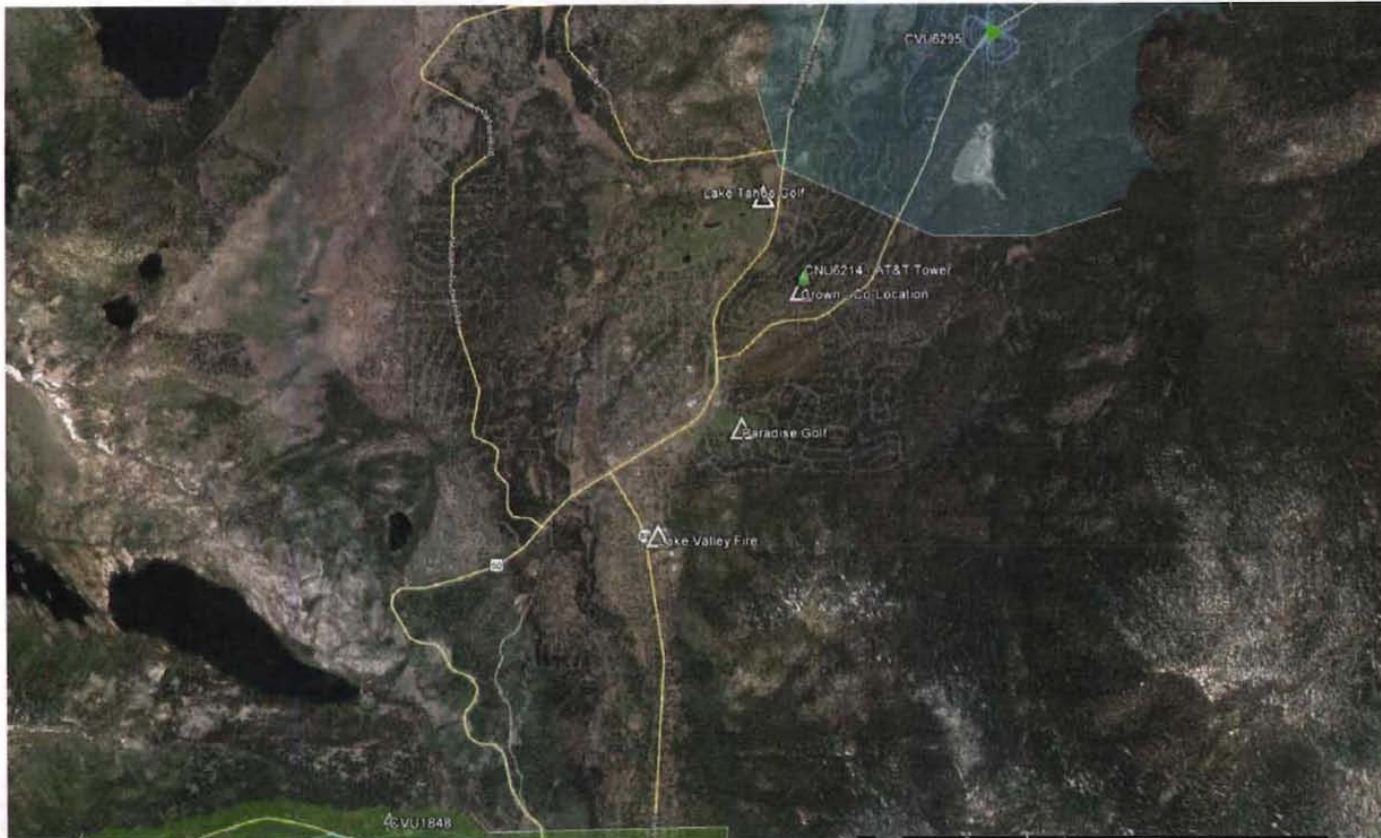
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CNU6214 – Overview Map



On the map above, the Primary site location located at 1697 Skyline Dr. is marked with a green tree. 4 alternative sites that AT&T analyzed are marked with triangle pins. Existing sites are marked with green triangles and existing primary coverage is marked with blue shading. Other AT&T projects and coverage are marked with green shading.

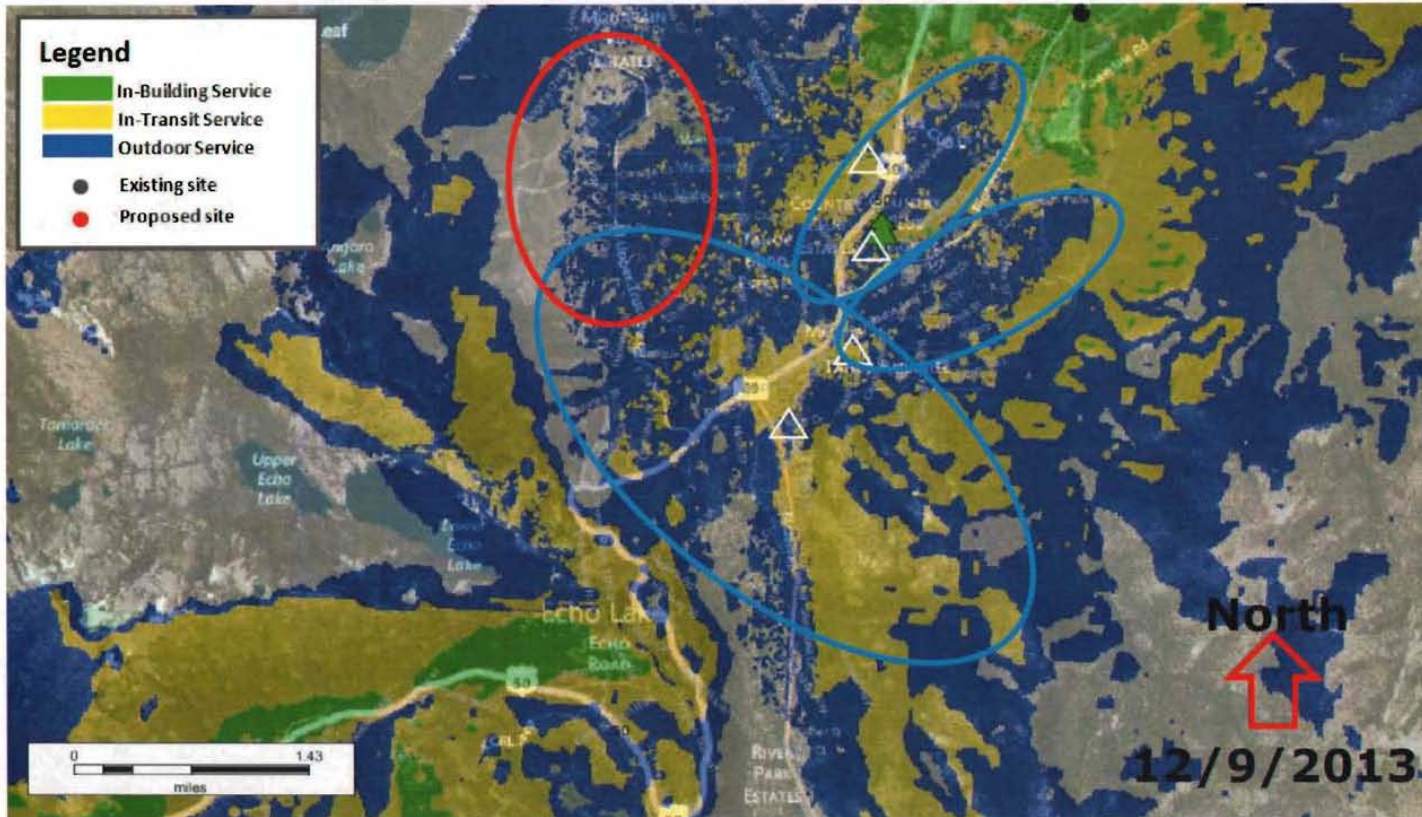
CNU6214 – Area Map



Locations Analyzed:

1. CVU6214 - Proposed New 110' Stealth Pine Tree Tower
2. Crown Co-Location: Proposed Co-Location at 58' on Existing Crown Castle FAA Tower
3. Lake Valley Fire: Proposed New 110' Stealth Pine Tree Tower
4. Paradise Golf: Proposed New 110' Stealth Pine Tree Tower
5. Lake Tahoe Golf: Proposed New 110' Stealth Pine Tree Tower

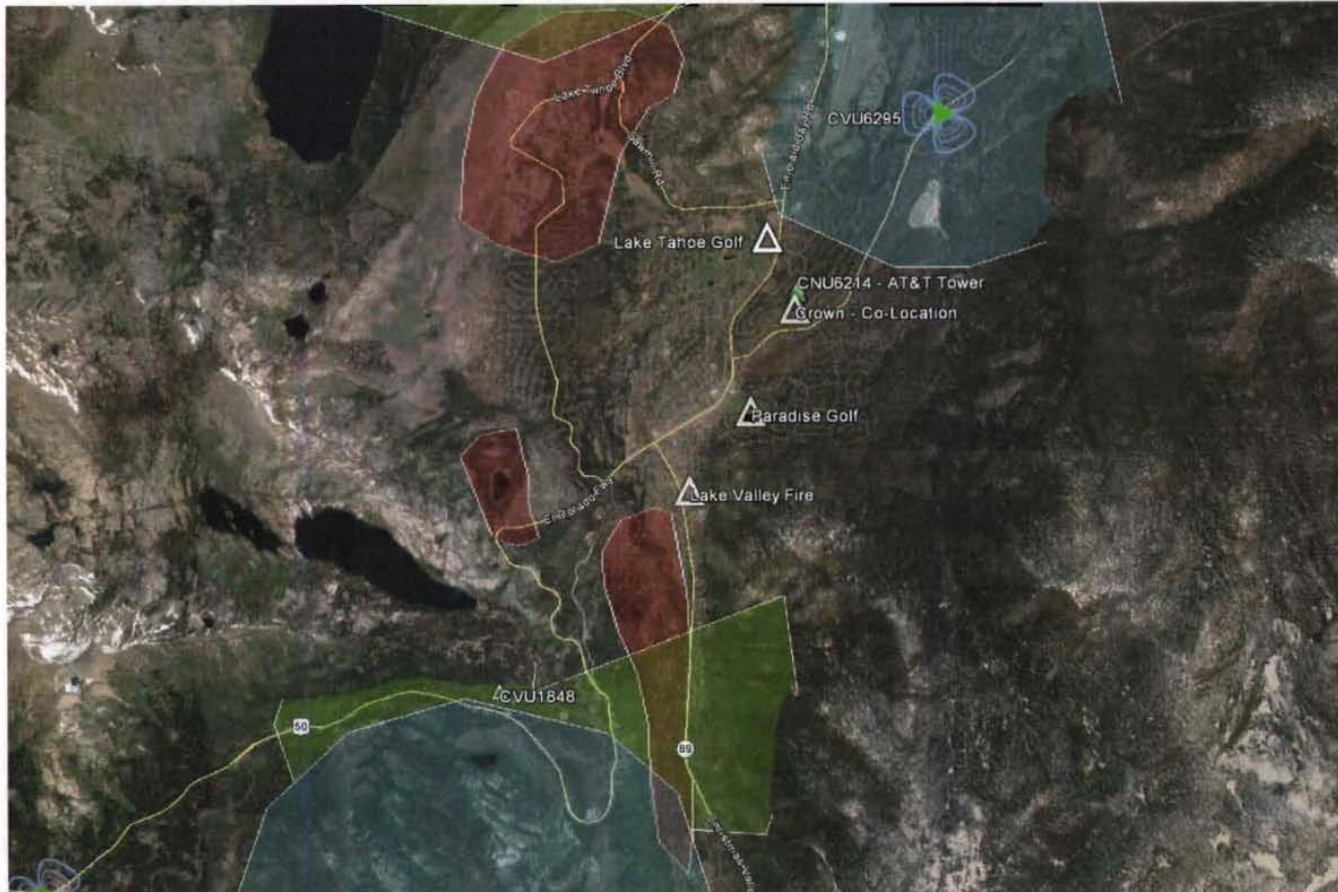
CNU6214 – Existing Coverage Map



Existing AT&T coverage in the area surrounding the intersections of Hwy-50 & Hwy-89 is shown in the image above. Areas represented in Green have good indoor coverage. Areas of yellow represent gaps in the in-building service, and areas of blue tend to only support calls while outside away from obstructions. Areas with no color represent gaps where AT&T service does not exist in the area.

Areas within the red oval represents an area with no, or severely limited AT&T wireless service, the area within the blue ovals have congested service, which represents a lack of or limitation of service during peak usage hours. All of which are specific objectives of the proposed AT&T wireless installation presented.

CNU6214 – Existing Coverage Map



Areas of significant gaps in AT&T coverage are highlighted on the above map in red. Existing effective coverage from AT&T sites surrounding the area are shown in blue, and coverage from new AT&T facilities in the area currently approved or in the permitting process with the California Forest Service and or El Dorado County are shown in green.

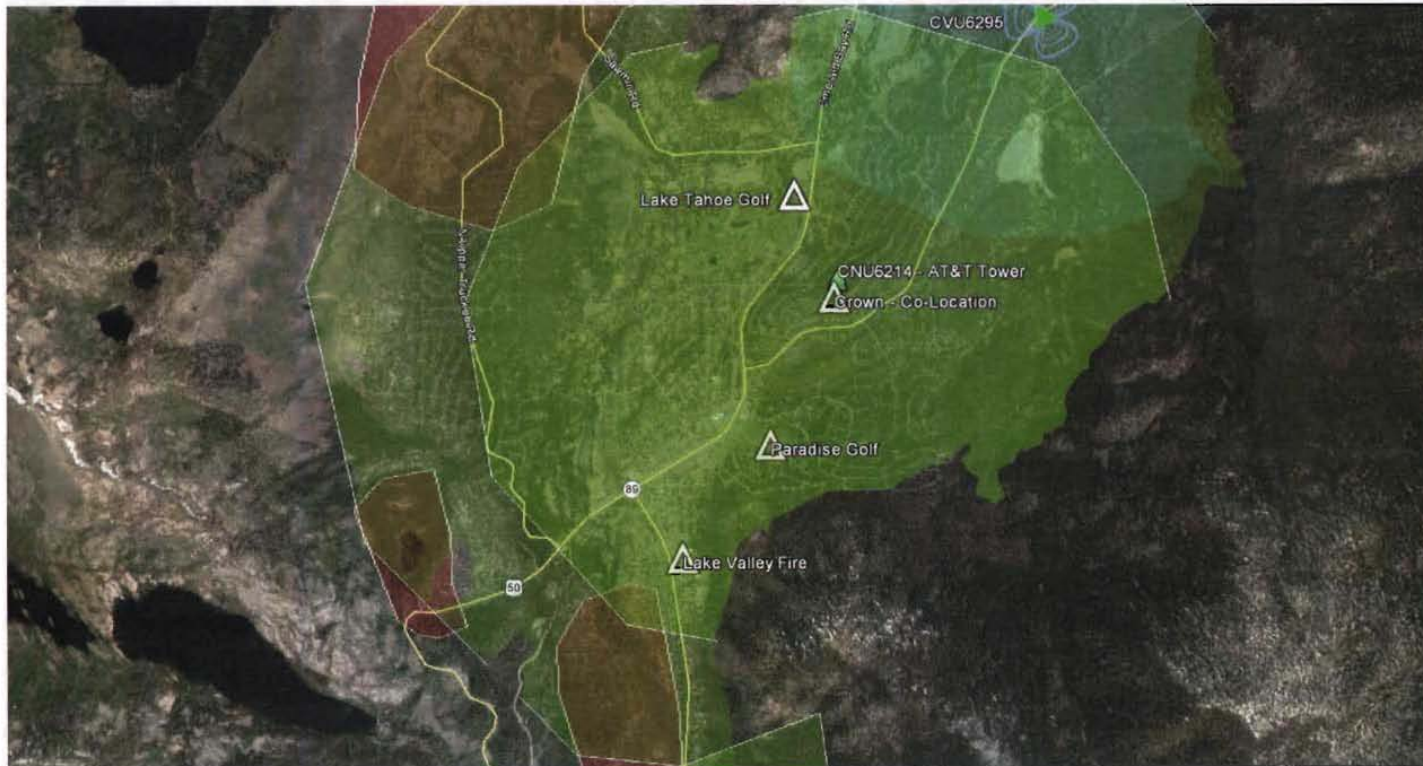
Note: Topography in the area limits the coverage of AT&T site CVU1848 in the south.

CNU6214 – Primary Site Location



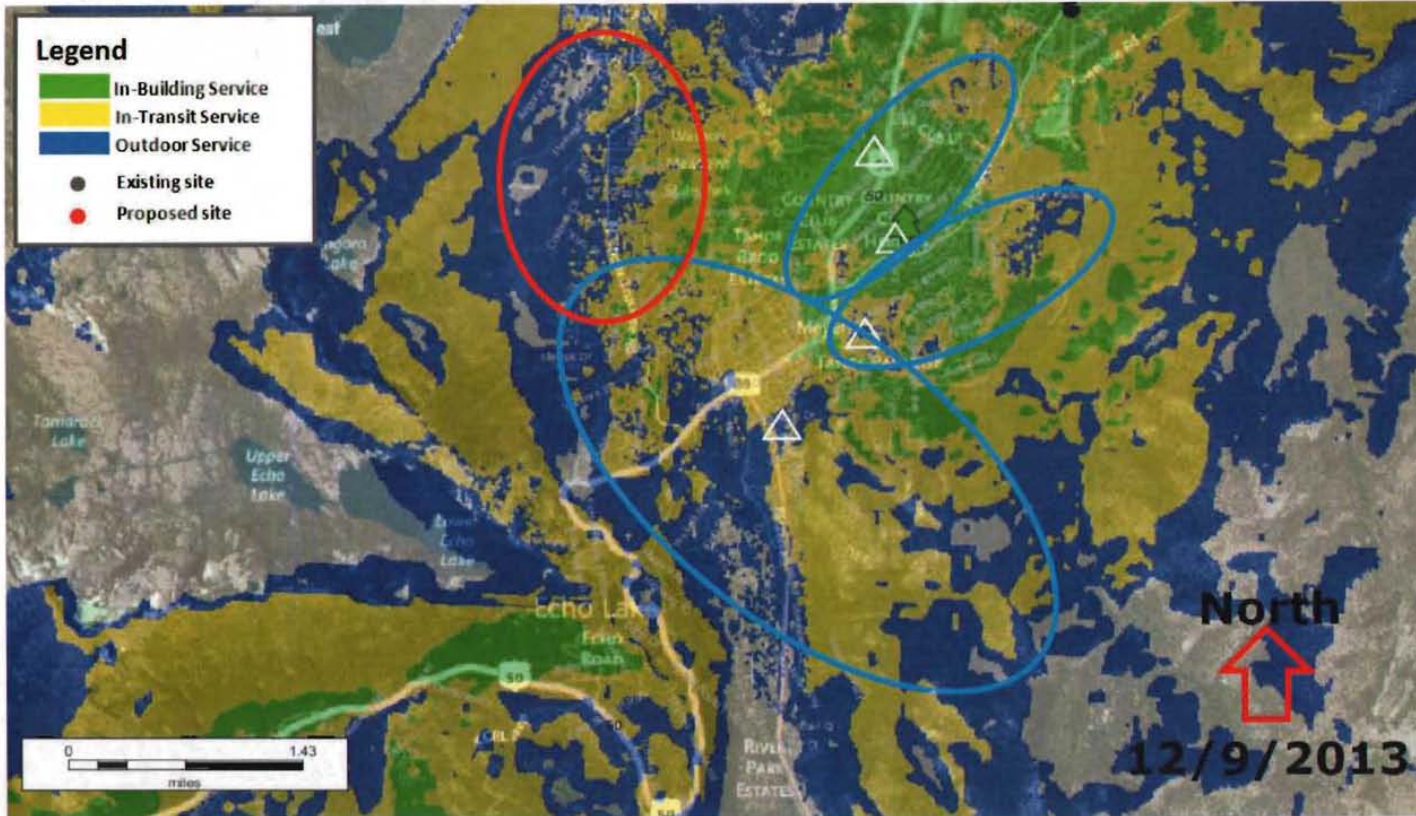
- The Primary site is located at 1697 Skyline Dr. South Lake Tahoe
- The photo above is a view taken of the front of the property.
- AT&T evaluated this site and nearby alternatives in order to evaluate whether it is the least intrusive means to close AT&T's significant service coverage gap in the area. AT&T's analysis considered the county and TRPA codes, input from county staff, planning council, and the concerns of the residents who live nearby. As a result of this analysis below, this location is the least intrusive means to fill AT&T's coverage gaps.

CNU6214 – Primary Site Location



- The proposed 110' tower at 1697 Skyline Dr. would be located off of an existing water department access road on the rear of the parcel adjacent to and concealed by existing 100' pine trees.
- The elevation above the existing trees and surrounding topography makes this location unique in the area and well suited for wireless coverage of the immediate and surrounding community. Thus the reason for the existing wireless installations on the neighboring residential property.
- The primary coverage area is represented above with the 1.8 mile central green ring, referencing the RF coverage map below it can be confirmed that the primary coverage area fills the significant gaps in In-building, and in-transit coverage in the immediate area.
- The secondary coverage area is represented above with a 2.5 mile outer green ring, and can be confirmed to fill significant gaps in AT&T coverage in the 3 surrounding areas with no, or limited AT&T coverage.

CNU6214 – Proposed Coverage from Primary Site Location



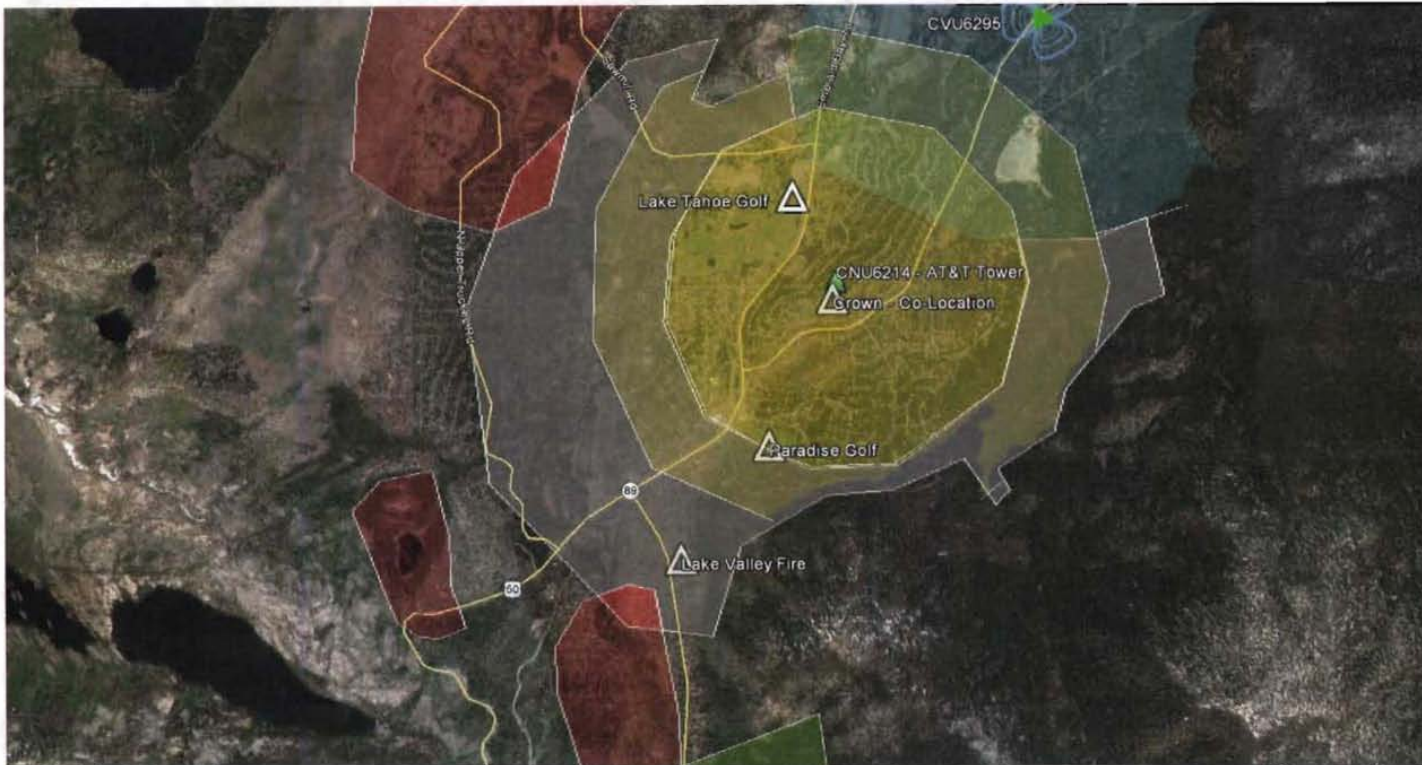
RF modeling of the proposed installation of a 110' stealth tree tower at 1697 Skyline Dr. provides a significant coverage increase in the immediate and surrounding community, including the intersections of Hwy-50 & Hwy-89, and the area in red above where a significant gap in coverage currently exists.

Alternative 1 — Crown Co-Location Site Location



- **Alternative 1 is located at 1705 Skyline Dr. South Lake Tahoe, directly adjacent to the primary proposed location.**
- **The photo above is a view taken of the front of the property.**
- **AT&T evaluated this alternative in order to evaluate whether it is the least intrusive means to close AT&T's significant service coverage gap in the area. AT&T's analysis considered the tower owner and landlord's wishes and space availability. As a result of this analysis below, this location was determined to be incapable of filling the significant gaps in coverage that exist in the area, and structurally inviable.**

Alternative 1 — Crown Co-Location Site Location



- The proposed co-location on the existing FAA tower at 1705 Skyline Dr. would be located off of an existing water department access road on the rear of the parcel adjacent to and concealed by existing 100' pine trees.
- The available 58' elevation is well below the existing trees which makes this location incompatible with optimal wireless coverage during winter months. Snow load in the trees reflects and obscures wireless signals which would reduce signal strength below the levels represented below. During normal operation the proximity to the trees and low elevation will limit coverage of the immediate and surrounding community.
- The primary coverage area is represented above with the 1 mile central yellow ring (due to reduction in signal propagation), and referencing the RF coverage map below, the secondary coverage area is represented above with a 1.2 mile outer yellow ring, which represents the severely diminished coverage from this elevation and location.
- The gray ring represents the overall reduction in primary coverage between the proposed AT&T facility and this alternative.

Alternative 1 – Crown Co-Location Site Location



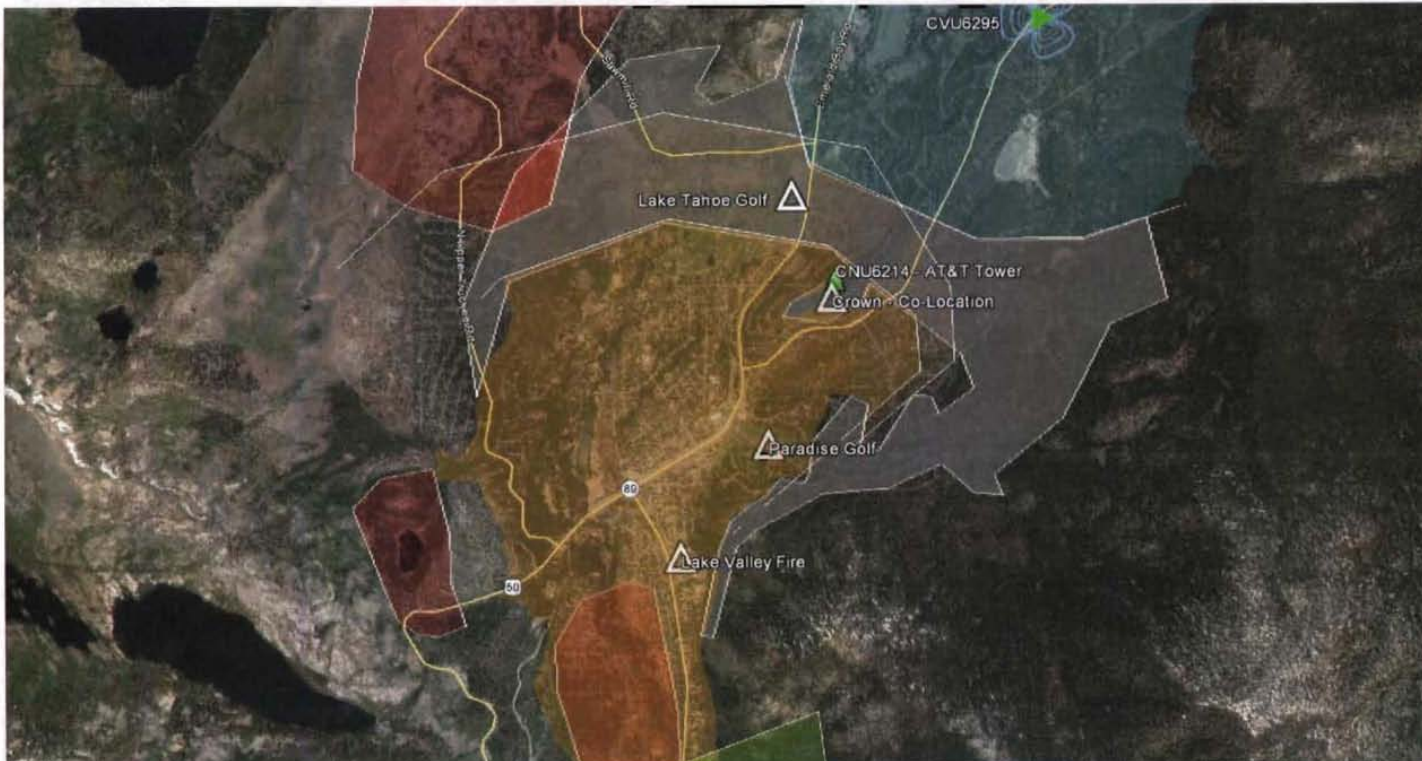
RF modeling of the proposed installation of antennas at 65' on an existing Crown Castle owned tower at 1705 Skyline Dr. provides a coverage increase in the immediate area, but none in the surrounding community or at the intersections of Hwy-50 & Hwy-89, and the area in red above where a significant gap in coverage currently exists.

Alternative 2 — Lake Valley Fire District Location



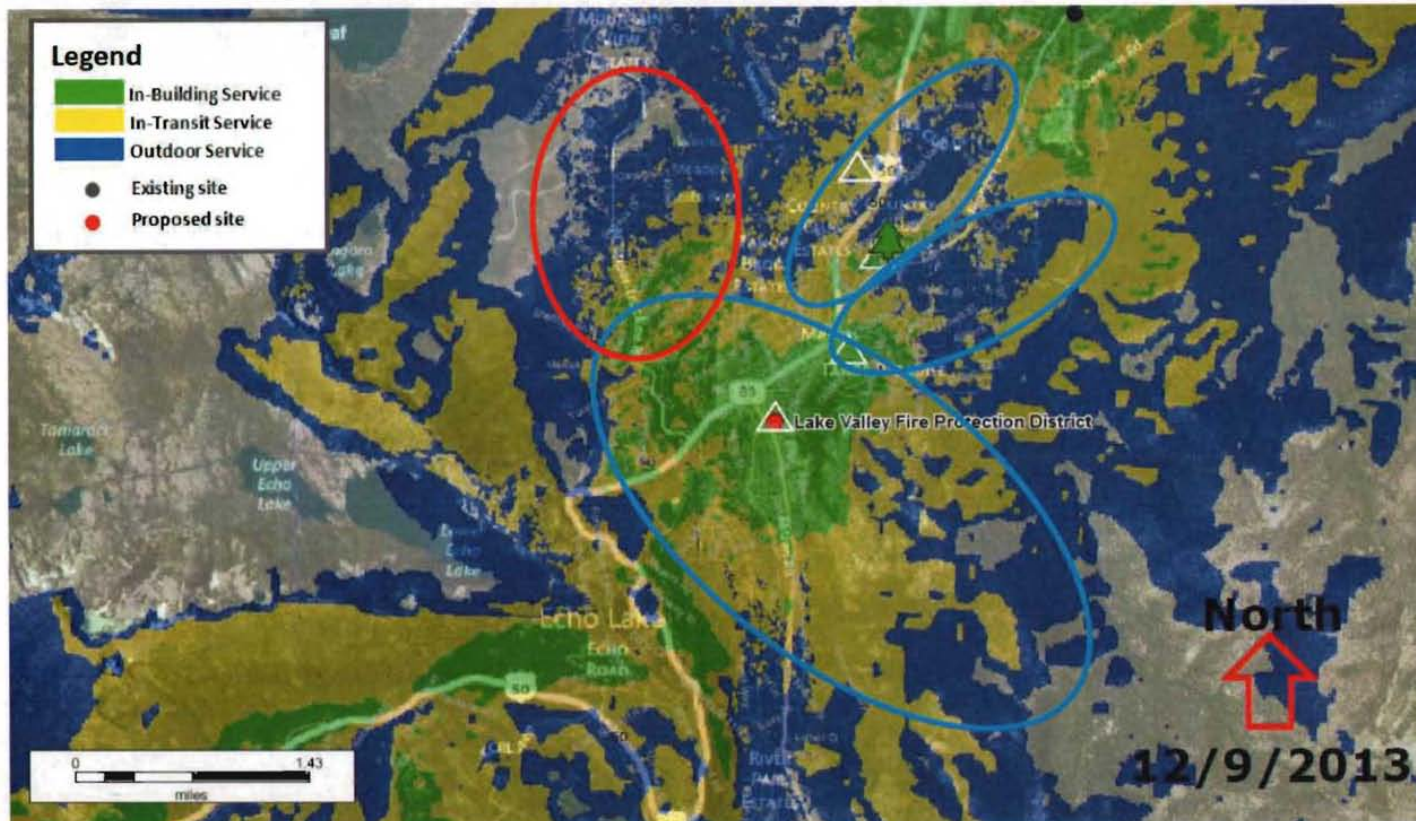
- Alternative 2 is located at the end of Keetak St. in South Lake Tahoe, at the Lake Valley Fire District vehicle yard.
- The photo above is a view taken of the front of the property.
- AT&T evaluated this alternative in order to evaluate whether it is the least intrusive means to close AT&T's significant service coverage gap in the area. AT&T's analysis considered the landlord and California Forest Service's wishes and space availability. As a result of this analysis below, this location was determined to be incapable of filling the significant gaps in coverage that exist in the area due to the lower elevation at this location and the surrounding elevated topography.

Alternative 2 — Lake Valley Fire District Location



- The proposed 110' tower at the Lake Valley Fire District property would be located behind existing service buildings and concealed by existing 100' pine trees.
- The available elevation above the surrounding trees allows the site to perform well and fill some portions of the gaps that exist, but the proximity to the existing mountainside makes this location incompatible with optimal wireless coverage as half the site is blocked by the nearby mountain. low elevation at the project location also works to limit the overall coverage of the surrounding community.
- The primary coverage area is represented above with the 1.8 mile central orange ring, and referencing the RF coverage map below, the secondary coverage area is represented above with a 2.5 mile outer orange ring, which represents the severely diminished coverage from this elevation and location.
- The gray ring represents the overall reduction in primary coverage between the proposed AT&T facility and this alternative.

Alternative 2 — Lake Valley Fire District Location



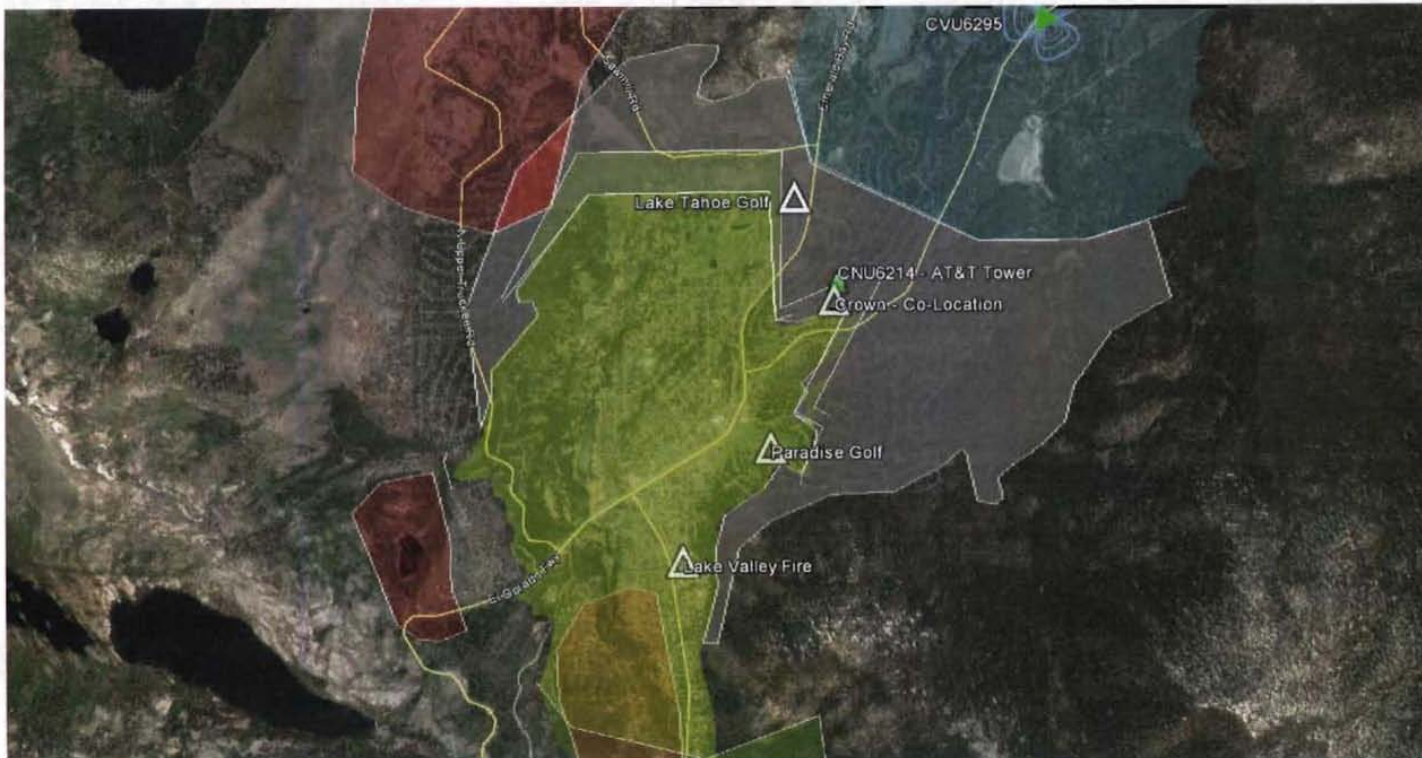
RF modeling of the proposed installation of a 110' stealth tree tower at the Lake Valley Fire District yard provides a coverage increase in the immediate area, but leaves the areas to the North and South of Skyline Blvd. with no improvement in the existing congested service. and is limited in or ineffective in increasing coverage in the surrounding community and the North and West areas In red above where a significant gap in coverage currently exists.

Alternative 3 — Tahoe Paradise Golf



- **Alternative 3 is located at 3021 Hwy-50 in South Lake Tahoe, at the Tahoe Paradise Golf Course.**
- **The photo above is a view taken of the front of the property.**
- **AT&T evaluated this alternative in order to evaluate whether it is the least intrusive means to close AT&T's significant service coverage gap in the area. . AT&T's analysis considered the county and TRPA codes and space availability. As a result of this analysis below, this location was determined to be incapable of filling the significant gaps in coverage that exist in the area due to the lower elevation at this location and the surrounding elevated topography.**

Alternative 3 — Tahoe Paradise Golf



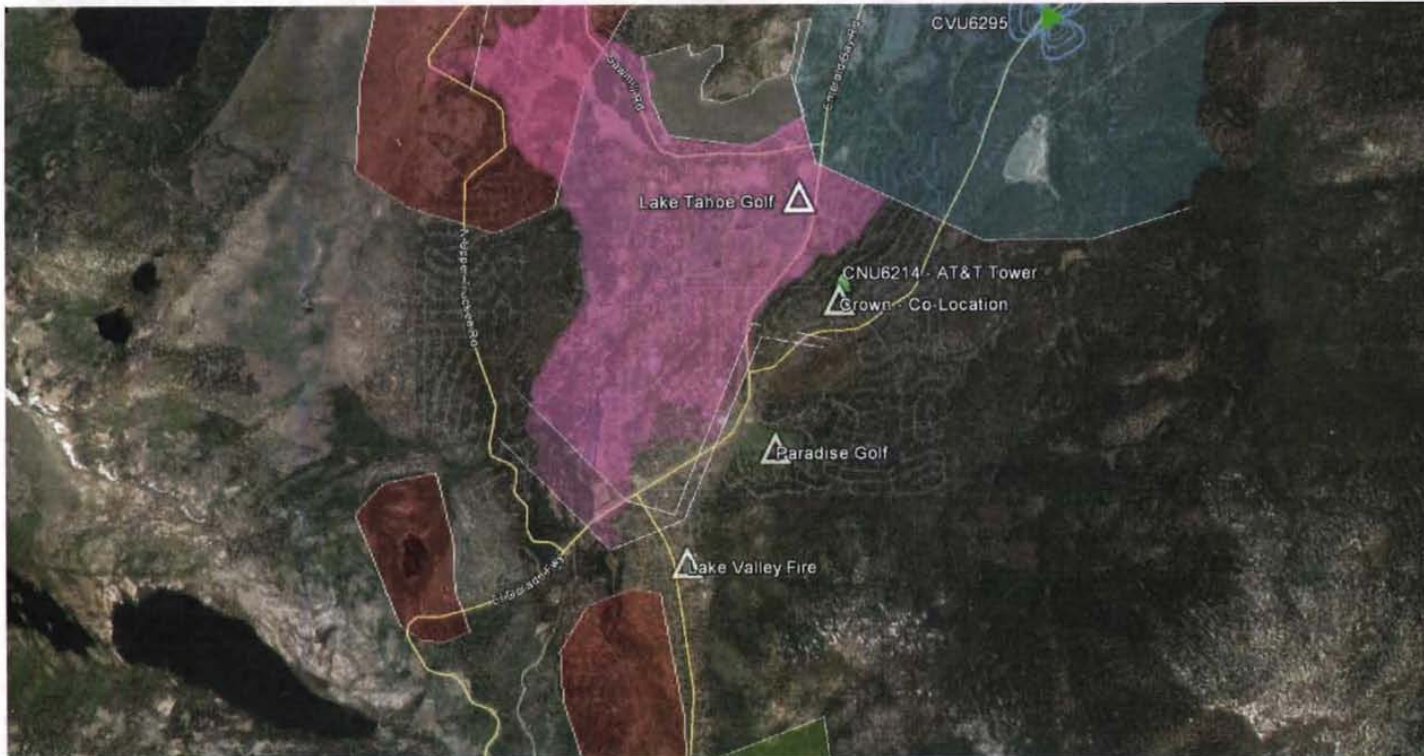
- The proposed 110' tower at the Tahoe Paradise golf course would be located behind existing service buildings and concealed by existing 100' pine trees.
- The available elevation above the surrounding trees allows the site to perform well and fill some portions of the gaps that exist, but the proximity to the existing mountainside makes this location incompatible with optimal wireless coverage as half the site is blocked by the nearby mountain. Low elevation at the project location also works to limit the overall coverage of the surrounding community.
- The primary coverage area is represented above with the 1.8 mile central yellow ring, and referencing the RF coverage map below, the secondary coverage area is represented above with a 2.5 mile outer yellow ring, which represents the severely diminished coverage from this elevation and location.
- The gray ring represents the overall reduction in primary coverage between the proposed AT&T facility and this alternative.

Alternative 4 — Lake Tahoe Golf



- **Alternative 3 is located at 3021 Hwy-50 in South Lake Tahoe, at the Tahoe Paradise Golf Course.**
- **The photo above is a view taken of the front of the property.**
- **AT&T evaluated this alternative in order to evaluate whether it is the least intrusive means to close AT&T's significant service coverage gap in the area. . AT&T's analysis considered the county and TRPA codes and space availability. As a result of this analysis below, this location was determined to be incapable of filling the significant gaps in coverage that exist in the area due to the lower elevation at this location and the surrounding elevated topography.**

Alternative 4 — Lake Tahoe Golf



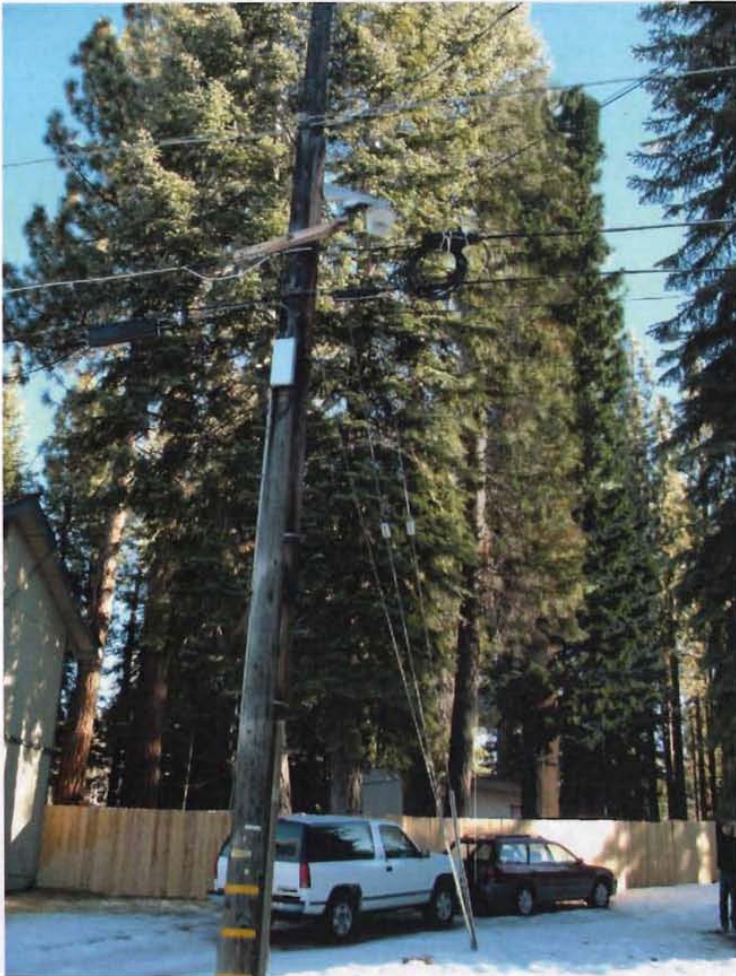
- The proposed 110' tower at the Lake Tahoe golf course would be located behind existing service buildings and concealed by existing 100' pine trees.
- The available elevation above the surrounding trees allows the site to perform well and fill some portions of the gaps that exist, but the low elevation in the valley makes this location incompatible with optimal wireless coverage as the site coverage is constrained by the surrounding mountains which works to limit the overall coverage of the surrounding community.
- The primary coverage area is represented above with the 1.8 mile central violet ring, and referencing the RF coverage map below, the secondary coverage area is represented above with a 2.0 mile outer violet ring, which represents the severely diminished coverage from this elevation and location.
- The gray ring represents the overall reduction in primary coverage between the proposed AT&T facility and this alternative.

Multi Site Alternative — 80% Coverage Match



- In order to match the gap coverage offered by the proposed AT&T tower at Skyline Dr., AT&T would require (4) New towers in the surrounding community. With our best approximation of available build locations and elevations in the surrounding community (red pins), and were able to emulate the coverage they would provide (white) overlaid on the coverage provided by the proposed tower at Skyline Dr. (green).
- The (4) proposed towers would ideally be located at Lake Valley Fire (Alt Site 2), US Forest Land off of Fountain Place Rd., another US Forest Service Property at the end of Winton Dr., and Lake Valley Fire Station #5 on Boulder Mountain Ct.
- These (4) proposed towers would supply 80% of the coverage that would be otherwise be supplied by the single AT&T tower on Skyline Dr., This is 20% less coverage, with 400% more cell towers. Thus verifying the project proposed as the least intrusive means to supply coverage to the area.
- Referencing the inset photo on the right, the unique topography of the Skyline Dr. property provides little to no coverage to the Skyline property from these (4) tower locations. Moving any of the towers from the locations provided decreases the overall coverage dramatically.

Conclusion



Based on AT&T's supplemental analysis of alternative sites, AT&T confirms that the Primary site location at 1697 Skyline Dr. South Lake Tahoe remains the least intrusive means to close AT&T's significant service coverage gap in the area.

Supplemental



CVU6293

Existing AT&T facility located at 2082 Eloise Ave. in South Lake Tahoe



CVU6295

Existing AT&T facility located at 1857 Hekpa Dr. in South Lake Tahoe

