

Community Services Department

Planning and Development

**SPECIAL USE PERMIT**

(see page 5)

**SPECIAL USE PERMIT FOR GRADING**

(see page 11)

**SPECIAL USE PERMIT FOR STABLES**

(see page 16)

**APPLICATION**



Community Services Department  
Planning and Development  
1001 E. Ninth St., Bldg. A  
Reno, NV 89520

Telephone: 775.328.3600

## Washoe County Development Application

Your entire application is a public record. If you have a concern about releasing personal information, please contact Planning and Development staff at 775.328.3600.

<b>Project Information</b>		Staff Assigned Case No.: _____	
Project Name: <b>Verizon Wireless "Rolling Thunder"</b>			
Project Description: Verizon Wireless proposes a new unmanned wireless telecommunications facility serving valley residents along Hwy 445.			
Project Address: 5205 Wayside Road, Reno, NV 89510			
Project Area (acres or square feet): 2,500 square feet			
Project Location (with point of reference to major cross streets <b>AND</b> area locator): <small>Hillside above existing development on parcel, located at 5205 Wayside Road. Parcel located at east end of Wayside Road, past intersection with Stirrup Dr.</small>			
Assessor's Parcel No.(s):	Parcel Acreage:	Assessor's Parcel No.(s):	Parcel Acreage:
077-350-01	42.46		
Section(s)/Township/Range: 23-21-33			
<b>Indicate any previous Washoe County approvals associated with this application:</b>			
Case No.(s). DCA16-007			
<b>Applicant Information</b> (attach additional sheets if necessary)			
<b>Property Owner:</b>		<b>Professional Consultant:</b>	
Name: Brian Akre		Name: Complete Wireless Consulting, Inc.	
Address: PO Box 7710		Address: 2009 V Street	
Reno, NV	Zip: 89510-7710	Sacramento, CA	Zip: 95818
Phone: 775-475-1295	Fax:	Phone: 916-764-2454	Fax: 916-313-3730
Email: bakre@washoeschools.net		Email: MEllis@completewireless.net	
Cell: 775-475-1295	Other:	Cell: 916-764-2454	Other:
Contact Person: Brian Akre		Contact Person: Michelle Ellis, Planning Manager	
<b>Applicant/Developer:</b>		<b>Other Persons to be Contacted:</b>	
Name: Sacramento Valley LP d/b/a Verizon Wireless		Name:	
Address: Attn: CWC, 2009 V Street		Address:	
Sacramento, CA	Zip: 95818		Zip:
Phone: 916-764-2454	Fax: 916-313-3730	Phone:	Fax:
Email: MEllis@completewireless.net		Email:	
Cell: 916-764-2454	Other:	Cell:	Other:
Contact Person: Michelle Ellis		Contact Person:	
<b>For Office Use Only</b>			
Date Received:	Initial:	Planning Area:	
County Commission District:		Master Plan Designation(s):	
CAB(s):		Regulatory Zoning(s):	



# Special Use Permit Application Supplemental Information

(All required information may be separately attached)

Chapter 110 of the Washoe County Code is commonly known as the Development Code. Specific references to special use permits may be found in Article 810, Special Use Permits.

1. What is the type of project being requested?

Verizon Wireless unmanned telecommunications facility, 150' monopole

2. What currently developed portions of the property or existing structures are going to be used with this permit?

None, lease area is raw land

3. What improvements (e.g. new structures, roadway improvements, utilities, sanitation, water supply, drainage, parking, signs, etc.) will have to be constructed or installed and what is the projected time frame for the completion of each?

New 150' monopole, 2500 sq ft lease area, gravel access road.

4. What is the intended phasing schedule for the construction and completion of the project?

Construction will last approximately two months.

5. What physical characteristics of your location and/or premises are especially suited to deal with the impacts and the intensity of your proposed use?

Elevated hillside, clear view over Warm Springs Valley for excellent coverage.

6. What are the anticipated beneficial aspects or effects your project will have on adjacent properties and the community?

Improved Verizon 4G LTE coverage. Please see Project Support Statement.

7. What will you do to minimize the anticipated negative impacts or effects your project will have on adjacent properties?

No impacts on other properties anticipated.

8. Please describe operational parameters and/or voluntary conditions of approval to be imposed on the project special use permit to address community impacts:

Facility will be unmanned, technician visit 1-2 times per month.

9. How many improved parking spaces, both on-site and off-site, are available or will be provided? (Please indicate on site plan.)

No parking proposed. Facility will be unmanned.

10. What types of landscaping (e.g. shrubs, trees, fencing, painting scheme, etc.) are proposed? (Please indicate location on site plan.)

6' chain link fence with barbed wire at lease area perimeter.

11. What type of signs and lighting will be provided? On a separate sheet, show a depiction (height, width, construction materials, colors, illumination methods, lighting intensity, base landscaping, etc.) of each sign and the typical lighting standards. (Please indicate location of signs and lights on site plan.)

Down-tilted light at equipment cabinets, contact signage on fence. See site plans.

12. Are there any restrictive covenants, recorded conditions, or deed restrictions (CC&Rs) that apply to the area subject to the special use permit request? (If so, please attach a copy.)

<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
------------------------------	--



13. Utilities:

a. Sewer Service	N/A
b. Electrical Service	Yes, see site plans
c. Telephone Service	Yes, see site plans
d. LPG or Natural Gas Service	N/A
e. Solid Waste Disposal Service	N/A
f. Cable Television Service	N/A
g. Water Service	N/A

For most uses, the Washoe County Code, Chapter 110, Article 422, Water and Sewer Resource Requirements, requires the dedication of water rights to Washoe County. Please indicate the type and quantity of water rights you have available should dedication be required:

h. Permit #		acre-feet per year	
i. Certificate #		acre-feet per year	
j. Surface Claim #		acre-feet per year	
k. Other #		acre-feet per year	

- l. Title of those rights (as filed with the State Engineer in the Division of Water Resources of the Department of Conservation and Natural Resources):

<p>Not applicable.</p>
------------------------

14. Community Services (provided and nearest facility):

a. Fire Station	Scott Fire Protection
b. Health Care Facility	N/A
c. Elementary School	N/A
d. Middle School	N/A
e. High School	N/A
f. Parks	Palomino Valley Park Site
g. Library	N/A
h. Citifare Bus Stop	N/A



February 10, 2017  
Via Overnight Mail

Washoe County  
Planning and Development Division  
1001 E. Ninth Street  
Reno, NV 89512  
Attn: Chad Giesinger

**APPLICATION FOR SPECIAL USE PERMIT**

**RE: *Rolling Thunder* (5205 Wayside Road, Reno, NV 89510 / APN: 077-350-01)**

This package is intended as a formal Special Use Permit application for a new Verizon Wireless telecommunications facility at the above referenced location. All materials are included as required by the County's Development Application Submittal Requirements and Washoe County's Development Code, §110.324.00 *Communication Facilities*.

**This application is intended for submittal on February 15, 2017.**

1. Filing Fee: \$3,372.92, check #19692
2. Development Application (6 copies)
3. Owner Affidavit (6 copies)
4. Supplemental Information (6 copies)
5. Project Support Statement (6 copies)
6. Site Plans 24" x 36" (6 copies), 8.5" x 11" (6 copies)
7. Photosimulations (6 copies)
8. Coverage Maps (6 copies)
9. Radio Frequency Report (6 copies)
10. Title Report (6 copies)
11. Vesting Deed (6 copies)
12. Treasurer Statement (6 copies)
13. CD containing Application Materials

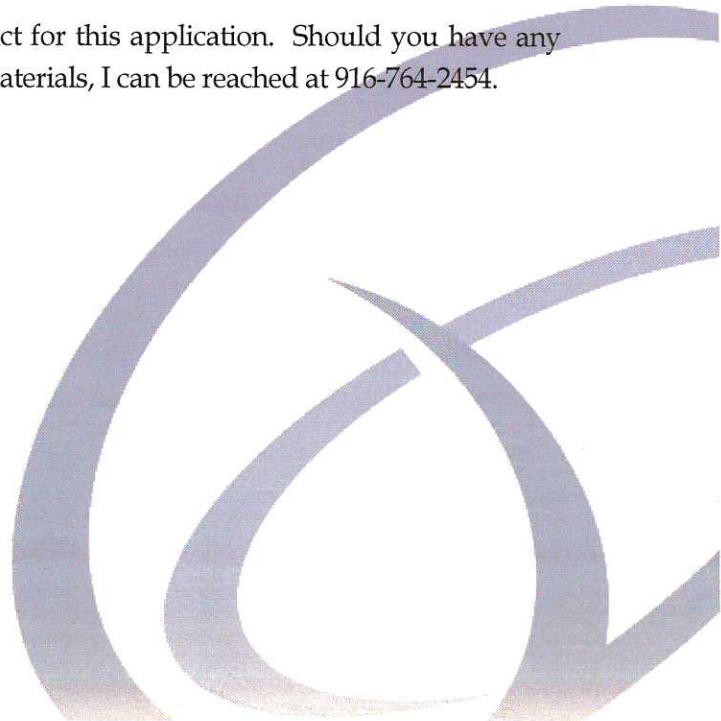
I am the project manager and the main point of contact for this application. Should you have any questions regarding the submittal or need additional materials, I can be reached at 916-764-2454.

Respectfully,

Michelle Ellis

Land Use Planning Manager  
[MEllis@completewireless.net](mailto:MEllis@completewireless.net)

Enclosures



# PROJECT SUPPORT STATEMENT

## VERIZON WIRELESS

**SITE NAME:** ROLLING THUNDER

**LOCATION:** 5205 Wayside Road, Reno, NV 89510

**APN:** 077-350-01

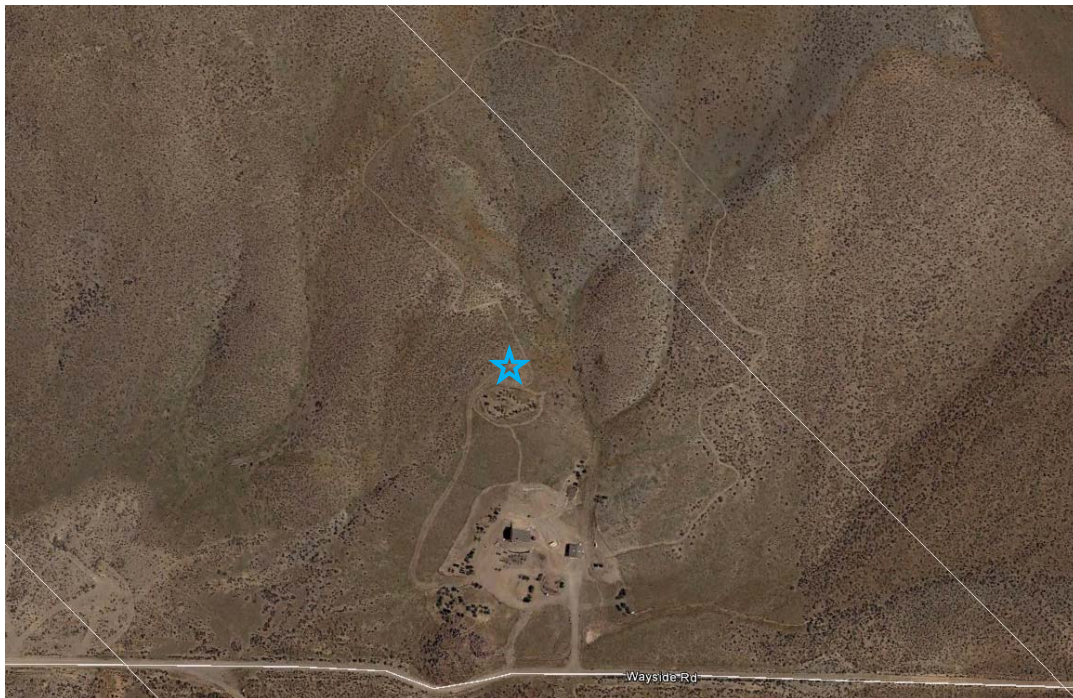
---

### **Introduction**

Verizon Wireless is seeking to improve communications service to residences, businesses, public services, and area travelers in the Warm Springs area of Washoe County. Verizon maintains a strong customer base in Washoe County and strives to improve coverage for both existing and potential customers. The proposed facility is needed to bring improved wireless communication coverage to Warm Springs Valley residents and along Hwy 445, south of Pyramid Lake. This project will expand Verizon's existing network and improve call quality, signal strength, and wireless connection services in Washoe County. The improved wireless service will benefit residents, local businesses, and public services, and roadway safety throughout the region.

### **Location/Design**

Verizon Wireless proposes a new wireless communications facility on a new 150' monopole on the property located at 5205 Wayside Road, in unincorporated Reno. The property is located in the General Rural Agricultural (GRA) zone and is largely undeveloped. Owner Brian Akre uses the property for a home and a small orchard. Surrounding parcels are zoned GRA and General Rural (GR). The nearest residentially zoned property is over 2,000' from the proposed facility.



### **Project Description**

The proposed facility consists of nine (9) Verizon Wireless panel antennas, to be installed on a proposed 150’ monopole. The 50’ by 50’ equipment area will be surrounded by a 6’ tall chain link fence with barbed wire. The lease area will contain outdoor equipment cabinets on a new concrete pad. Power and telecommunications cables will be installed underground from the point of connection to the lease area. The unmanned facility will provide enhanced wireless network coverage 24 hours a day, 7 days a week.

### **Public Benefits of Improved Wireless Service**

Modern life has become increasingly dependent upon wireless communications. Wireless access is critical to many facets of everyday life, such as safety, recreation, and commerce. This site will allow current and future Verizon Wireless customers to have access to wireless services in the areas shown on the Coverage Plots included in this application. Additionally, this site will serve as a backup to the existing landline service in the area and will provide improved wireless communication, which is essential to first responders, community safety, local businesses and area residents. As a backup system to traditional landline phone service, mobile phones have proven to be extremely important during natural disasters and other catastrophes.



### **Aesthetic Impacts**

Verizon is proposing a slim monopole, of similar height and character to other utility poles and structures in the area. The height of pole and size of lease area will provide other carriers with opportunities for future collocation. Verizon Wireless has carefully chosen a location that will minimize any visual impact to the surrounding area. The facility will be located on hillside in the middle of the parcel, set back significantly from Wayside Drive and Hwy 445. Ground equipment will be enclosed within outdoor equipment cabinets and screened from view, and the equipment area will be surrounded by a security fence.

The proposed facility height complies with the County’s development standards for wireless facilities in the General Rural Agricultural zoning designation. Because of the surrounding topography and development, the proposed facility needs to be a total of 150’ for the signal to reach the intended service area. The proposed facility has been designed at its minimum functional height.

### Alternative Site Analysis

The selection of a location for a wireless telecommunications facility that is needed to improve wireless coverage is dependent upon many factors, such as: topography, zoning regulations, existing structures, co-location opportunities, available utilities, access, and the existence of a willing landlord. Wireless communication utilizes line-of-sight technology that requires facilities to be in relative close proximity to the wireless handsets to be served. Each proposed site is unique and must be investigated and evaluated on its own terms.

The proposed coverage area consists of agricultural and residential uses in Washoe County. Verizon strives to minimize visual and acoustic impacts for each facility and seeks to incorporate ways to preserve the local community character to the greatest extent feasible at all stages of site selection and design process.

The proposed facility will consist of nine Verizon panel antennas mounted on a proposed 150’ monopole. Equipment cables will be run underground in order to minimize visual impacts and equipment will be screened by a chain link fence. The proposed location best serves the interest of Washoe County and the Warm Springs area because it is the least intrusive means available to improve service to the area. The process that Verizon implements to identify the least intrusive location is outlined below.

### Selection Process and Candidates Considered

In February 2015, Verizon Wireless determined that the service objectives discussed above must be met. After establishing the need for the proposed facility, Verizon set out to identify the least intrusive means of achieving the necessary service objective. A total of seven candidates were considered prior to selecting the proposed location. VZW begins its process by identifying a search area called a "search ring" (see image below) and a required centerline height.



## Project Support Statement – Verizon Wireless ‘Rolling Thunder’

The search ring represents the area within which a facility can be located to produce the desired coverage objective. The centerline height of 146’ represents the required height of the antennas to produce the desired coverage objective. After reviewing the County’s zoning regulations, the next step is to identify any existing towers within the search ring that could allow for collocation.

In this case, Verizon determined a new tower must be constructed to adequately meet its coverage goals in this search ring. Verizon identified several potential alternative sites prior to selecting the presently proposed location. Below is a list of the candidate properties that were considered for the proposed facility, as well as an explanation as to why each site was not selected:

**1. Clark** (5900 Grass Valley Rd / APN 077-350-06)

Verizon investigated this 68.20 acre parcel for a new monopole. The landlord was interested in leasing land on their property to Verizon for the development of a new wireless facility. There is no existing access to the proposed lease area location, and selecting this facility would require the construction of a new road. This candidate was presented to Verizon but was not preferred by Verizon’s radio frequency engineer. This candidate remains in a back-up position.

**2. Washoe County Treasurer** (100 Stirrup Dr / APN 076-430-01)

Verizon investigated this site for a new monopole. The property is privately owned, but is subject to so many liens it is now listed as a County-owned property. The County treasurer provided Verizon with the property owner’s mailing address. Verizon sent two interest letters to the address, but received no response from the owner.

**3. Sweitzer** (5915 Grass Valley Road / APN 077-350-08)

Verizon investigated this site for a new monopole. The candidate was presented to Verizon’s radio frequency engineer, who rejected the property due to its low elevation. This site was not selected because it would not meet Verizon’s coverage objects in the search ring.

**4. Murphy** (105 Stirrup Dr / APN 076-450-07)

Verizon investigated this site for a new monopole. The landlord did not respond to two interest letters sent to the address, and Verizon was unable to locate a phone number for the current owner.

**5. Maykovitch & Leonard** (Wayside Road / APN 077-550-11)

Verizon investigated this site for a new monopole. The property owners on title stated that they were in the process of selling the property. They were unwilling to provide updated contact information for the individuals purchasing the property. This candidate was not pursued further because a lease agreement was not feasible.

6. **Hafner** (Grass Valley Rd / APN 077-350-05)

Verizon investigated this site for a new monopole. The landlord did not respond to two interest letters sent to the address, and Verizon was unable to locate a phone number for the current owner.

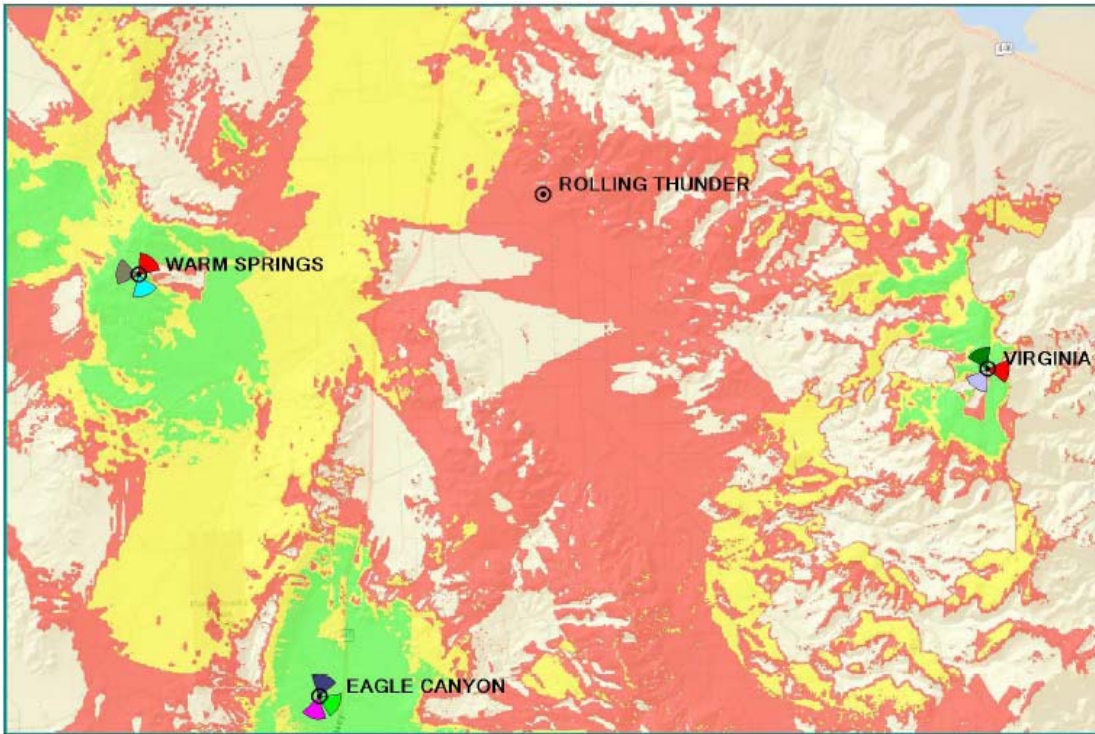
The map below shows the locations of each of the properties listed above.



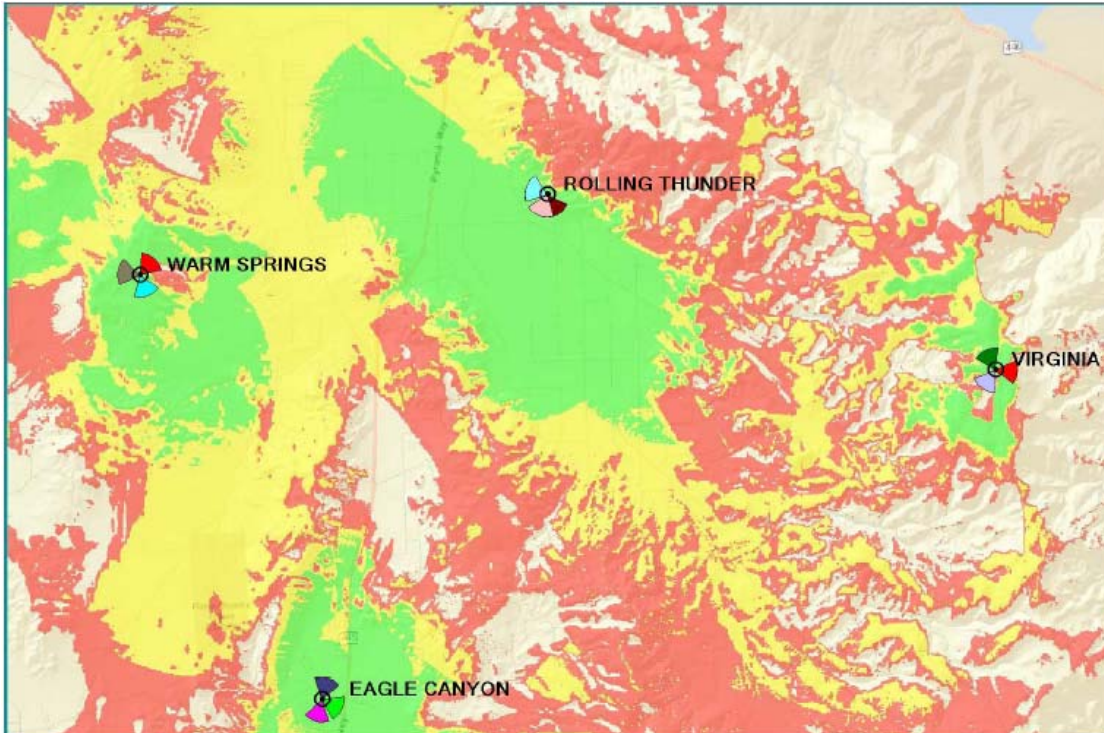
The proposed facility, labeled on the image above as “Akre,” was selected by Verizon’s radio frequency engineer as the best candidate in this search ring for achieving Verizon’s coverage objectives, and the least intrusive option. Akre offers a lease area significantly removed from Wayside Rd, and an elevated hillside location with excellent views over the Warm Springs Valley.

Coverage Area

Existing Coverage



Proposed Coverage





### **Statement of Commitment to Allow Collocation**

The proposed facility has been designed in a manner that will structurally accommodate additional antennas and future collocation. Verizon Wireless welcomes other carriers to collocate on their facilities whenever possible.

### **Safety Benefits of Improved Wireless Service**

Verizon Wireless offers its customers multiple services such as voice calls, text messaging, mobile email, picture/video messaging, mobile web, navigation, broadband access, V CAST, and E911 services. Mobile phone use has become an extremely important tool for first responders and serves as a back-up system in the event of a natural disaster.

### **Compliance with FCC and FAA Standards**

This project will not interfere with any TV, radio, telephone, satellite, or any other signals. Any interference would be against federal law and a violation of Verizon Wireless’s FCC License. Unless tower lighting is required by the FAA, the only lighting on the facility will be a hooded and down-titled security light near the equipment cabinets.

### **Maintenance and Battery Back-Up**

Verizon Wireless installs batteries at all of its cell sites. The batteries play a vital role in Verizon’s emergency and disaster preparedness plan. In the event of a power outage, Verizon Wireless communications equipment will transition to the back-up batteries. The batteries can run the site for a several hours depending on the demand placed on the equipment. Back-up batteries allow Verizon Wireless’s communications sites to continue providing valuable communications services in the event of a power outage, natural disaster or other emergency. Following construction, the security fence will include a small sign indicating the facility owner and a 24-hour emergency telephone number. The lease area will be surrounded by a 6’ chain link fence with barbed wire for additional security.

### **Construction Schedule**

The construction of the facility will be in compliance with all local rules and regulations. The crew size will range from two to ten individuals. The construction phase of the project will last approximately two months and will not exceed acceptable noise levels.

### **Landscaping**

No landscaping is proposed at the facility. The lease area is over 660’ from the nearest road, and is not visible to the public. In an attempt to conserve water and to reduce ongoing maintenance at unmanned facilities, Verizon avoids live landscaping whenever possible.

### **Notice of Actions Affecting Development Permit**

Verizon Wireless requests notice of any proposal to adopt or amend the: general plan, specific plan, zoning ordinance, ordinance(s) affecting building or grading permits that would in any manner affect this development permit. Any such notice may be sent to 2009 V Street, Sacramento, CA 95818.



**Existing**

Photosimulation of the view looking east from the nearest point along Pyramid Hwy.

**Rolling Thunder**

5205 Wayside Road  
Reno, NV 89510

**verizon**wireless



**Proposed**



**Existing**

Photosimulation of the view looking east from Grass Valley Road at Wayside.

**Rolling Thunder**

5205 Wayside Road  
Reno, NV 89510



**Proposed**



**Existing**

Photosimulation of the view looking northeast from Whiskey Springs Road.

**Rolling Thunder**

5205 Wayside Road  
Reno, NV 89510



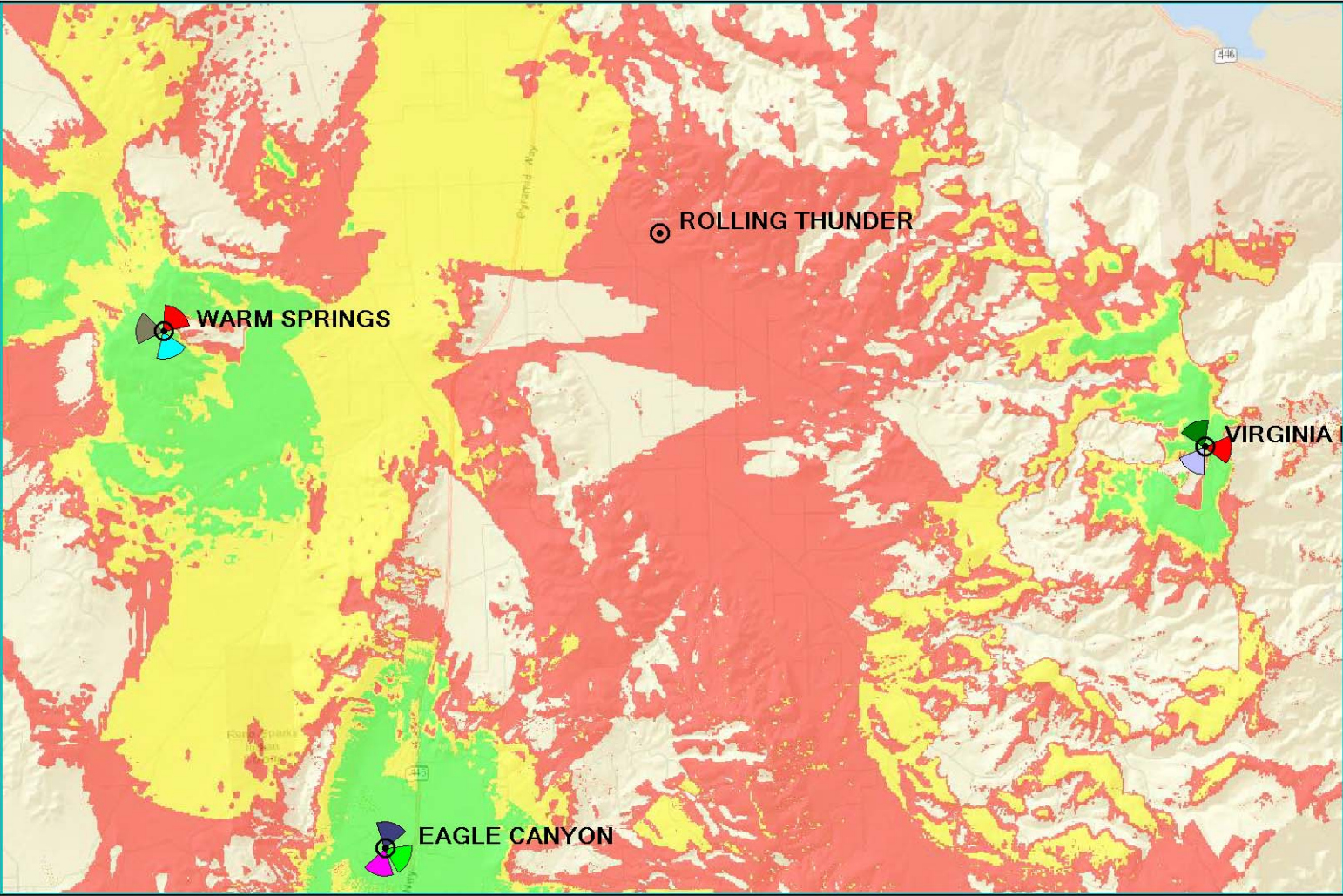
**Proposed**

Proposed 150 ft monopole

# ROLLING THUNDER Coverage Maps



BEFORE COVERAGE



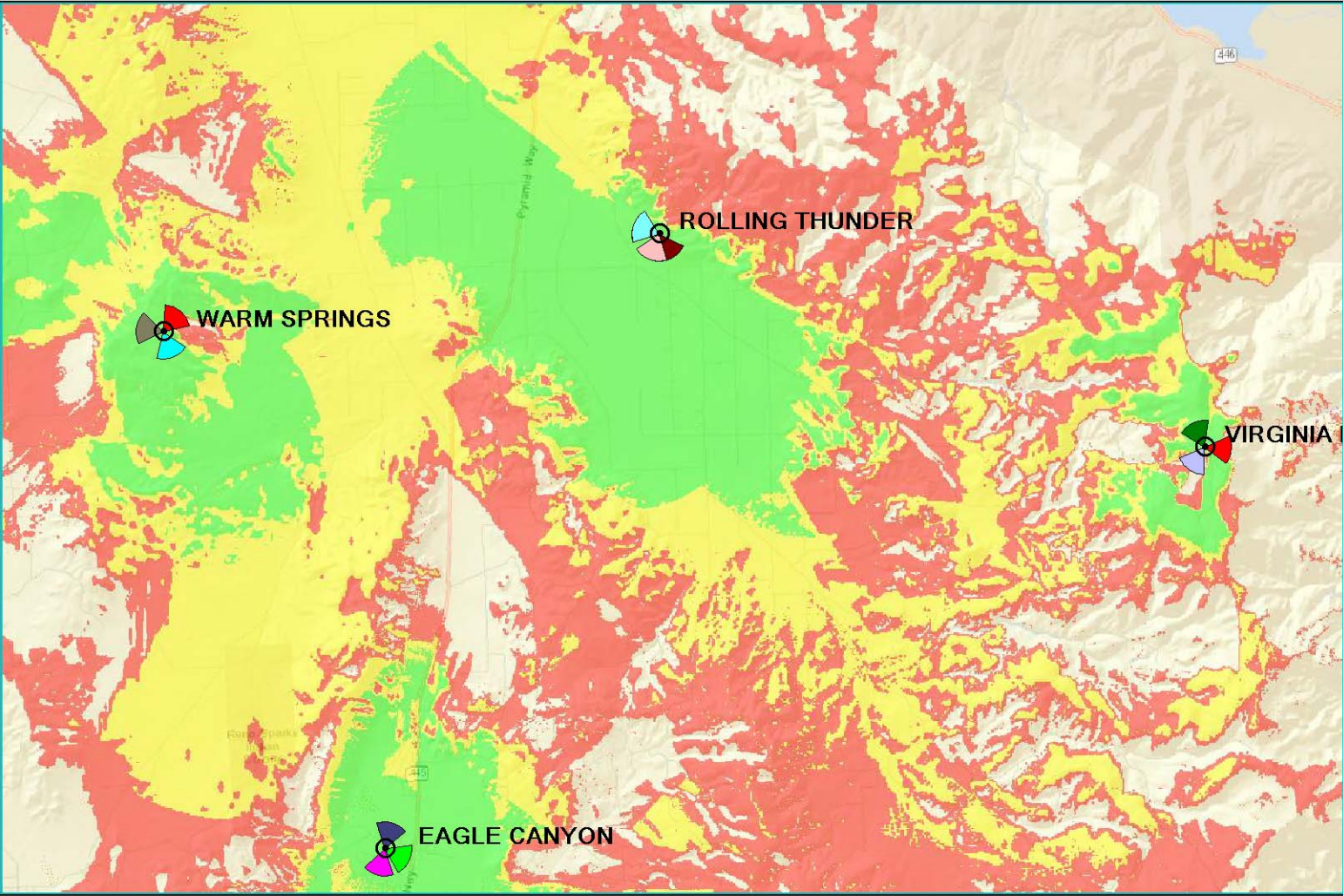
LTE: RSRP - Existing Coverage

- Best Signal Level (dBm)  $\geq -80$
- Best Signal Level (dBm)  $\geq -90$
- Best Signal Level (dBm)  $\geq -100$

# ROLLING THUNDER Coverage Maps

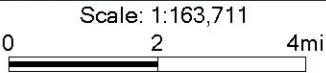


AFTER COVERAGE



LTE: RSRP - After Coverage

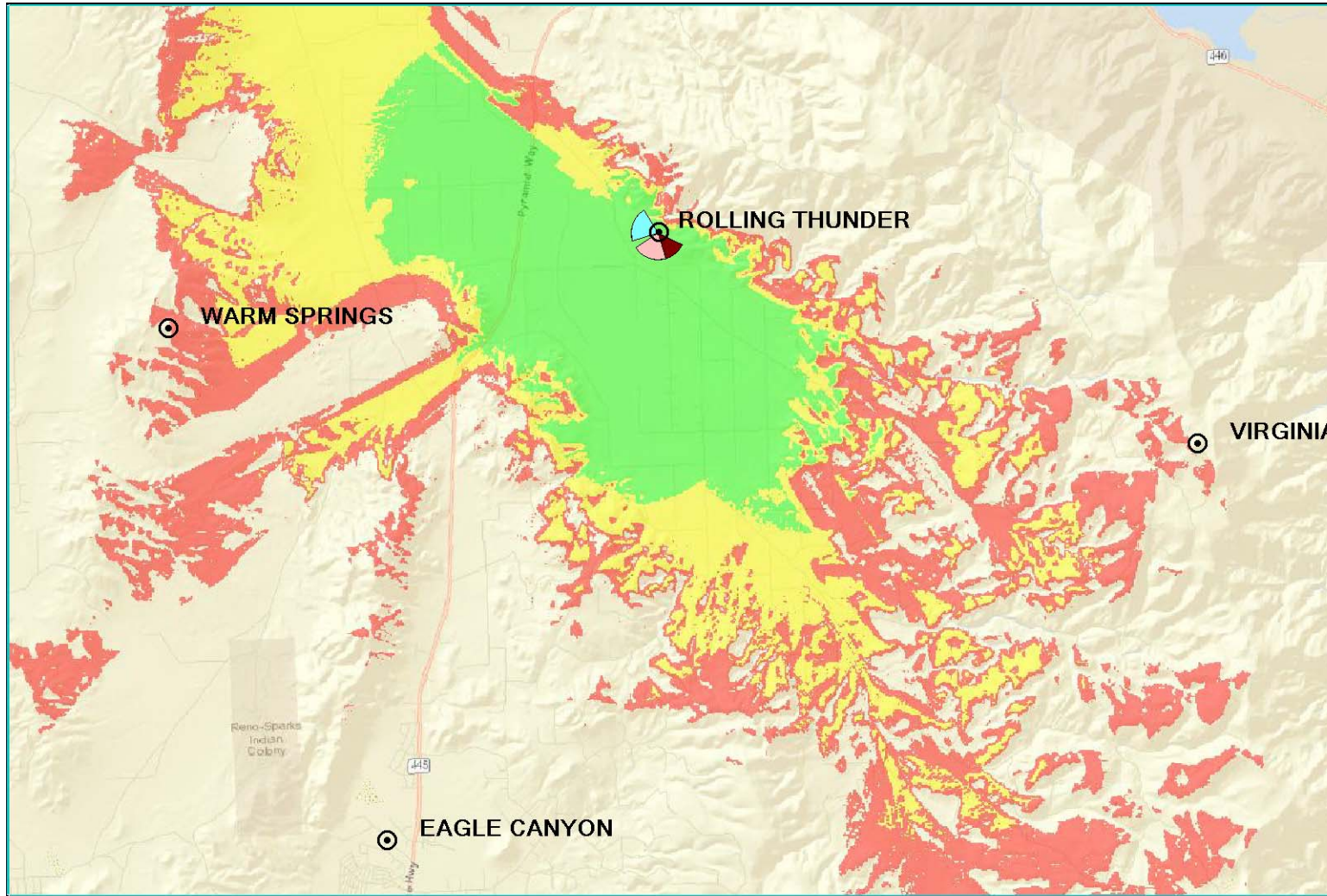
- Best Signal Level (dBm)  $\geq -80$
- Best Signal Level (dBm)  $\geq -90$
- Best Signal Level (dBm)  $\geq -100$



# ROLLING THUNDER Coverage Maps



## SITE COVERAGE



### LTE: RSRP - Site Coverage

- Best Signal Level (dBm)  $\geq -80$
- Best Signal Level (dBm)  $\geq -90$
- Best Signal Level (dBm)  $\geq -100$

Scale: 1:164,165



**Verizon Wireless • Proposed Base Station (Site No. 382432 “Rolling Thunder”)  
5205 Wayside Road • Washoe County, Nevada**

**Statement of Hammett & Edison, Inc., Consulting Engineers**

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of Verizon Wireless, a personal wireless telecommunications carrier, to evaluate the base station (Site No. 382432 “Rolling Thunder”) proposed to be located at 5205 Wayside Road in Washoe County, Nevada, for compliance with appropriate guidelines limiting human exposure to radio frequency (“RF”) electromagnetic fields.

**Executive Summary**

Verizon proposes to install directional panel antennas on a tall pole to be sited at 5205 Wayside Road in unincorporated Washoe County. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

**Prevailing Exposure Standards**

The U.S. Congress requires that the Federal Communications Commission (“FCC”) evaluate its actions for possible significant impact on the environment. A summary of the FCC’s exposure limits is shown in Figure 1. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. The most restrictive FCC limit for exposures of unlimited duration to radio frequency energy for several personal wireless services are as follows:

Wireless Service	Frequency Band	Occupational Limit	Public Limit
Microwave (Point-to-Point)	5–80 GHz	5.00 mW/cm <sup>2</sup>	1.00 mW/cm <sup>2</sup>
WiFi (and unlicensed uses)	2–6	5.00	1.00
BRS (Broadband Radio)	2,600 MHz	5.00	1.00
WCS (Wireless Communication)	2,300	5.00	1.00
AWS (Advanced Wireless)	2,100	5.00	1.00
PCS (Personal Communication)	1,950	5.00	1.00
Cellular	870	2.90	0.58
SMR (Specialized Mobile Radio)	855	2.85	0.57
700 MHz	700	2.40	0.48
[most restrictive frequency range]	30–300	1.00	0.20

**General Facility Requirements**

Base stations typically consist of two distinct parts: the electronic transceivers (also called “radios” or “channels”) that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The transceivers are often located at ground level and are connected to the antennas by coaxial cables. A small antenna for reception of GPS signals is also required, mounted with a clear view of the sky.





**Verizon Wireless • Proposed Base Station (Site No. 382432 “Rolling Thunder”)  
5205 Wayside Road • Washoe County, Nevada**

Because of the short wavelength of the frequencies assigned by the FCC for wireless services, the antennas require line-of-sight paths for their signals to propagate well and so are installed at some height above ground. The antennas are designed to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. This means that it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically very near the antennas.

**Computer Modeling Method**

The FCC provides direction for determining compliance in its Office of Engineering and Technology Bulletin No. 65, “Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radio Frequency Radiation,” dated August 1997. Figure 2 describes the calculation methodologies, reflecting the facts that a directional antenna’s radiation pattern is not fully formed at locations very close by (the “near-field” effect) and that at greater distances the power level from an energy source decreases with the square of the distance from it (the “inverse square law”). The conservative nature of this method for evaluating exposure conditions has been verified by numerous field tests.

**Site and Facility Description**

Based upon information provided by Verizon, including zoning drawings by MST Architects, Inc., dated June 20, 2016, it is proposed to install nine Andrew directional panel antennas – six Model SBNHH-1D65C and three Model SBNHH-1D45C – on a new 150-foot steel pole to be sited in the hills above the residence located at 5205 Wayside Road, about 8 miles southwest of Pyramid Lake in unincorporated Washoe County. The antennas would employ up to 4° downtilt, would be mounted at an effective height of about 146 feet above ground, and would be oriented in groups of three toward 140°T, 200°T, and 290°T. The maximum effective radiated power in any direction would be 16,340 watts, representing simultaneous operation at 6,570 watts for AWS, 6,760 watts for PCS, and 3,010 watts for 700 MHz service; no operation on cellular frequencies is presently proposed from this site. There are reported no other wireless telecommunications base stations at the site or nearby.

**Study Results**

For a person anywhere at ground, the maximum RF exposure level due to the proposed Verizon operation is calculated to be 0.0029 mW/cm<sup>2</sup>, which is 0.32% of the applicable public exposure limit. The maximum calculated level at the nearby residence is 0.032% of the public exposure limit. It should be noted that these results include several “worst-case” assumptions and therefore are expected to overstate actual power density levels from the proposed operation.

**Verizon Wireless • Proposed Base Station (Site No. 382432 “Rolling Thunder”)  
5205 Wayside Road • Washoe County, Nevada**

**No Recommended Mitigation Measures**

Due to their mounting location and height, the Verizon antennas would not be accessible to unauthorized persons, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. It is presumed that Verizon will, as an FCC licensee, take adequate steps to ensure that its employees or contractors receive appropriate training and comply with FCC occupational exposure guidelines whenever work is required near the antennas themselves.

**Conclusion**

Based on the information and analysis above, it is the undersigned’s professional opinion that operation of the base station proposed by Verizon Wireless at 5205 Wayside Road in Washoe County, Nevada, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations.

**Authorship**

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration Nos. E-13026 and M-20676, which expire on June 30, 2017. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.



*William F. Hammett*

William F. Hammett, P.E.

707/996-5200

July 28, 2016

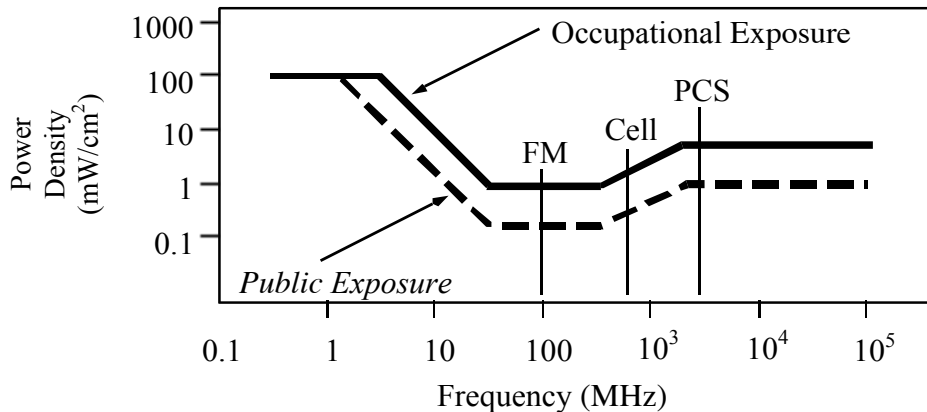


## FCC Radio Frequency Protection Guide

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission (“FCC”) to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The FCC adopted the limits from Report No. 86, “Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields,” published in 1986 by the Congressionally chartered National Council on Radiation Protection and Measurements (“NCRP”). Separate limits apply for occupational and public exposure conditions, with the latter limits generally five times more restrictive. The more recent standard, developed by the Institute of Electrical and Electronics Engineers and approved as American National Standard ANSI/IEEE C95.1-2006, “Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz,” includes similar limits. These limits apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

As shown in the table and chart below, separate limits apply for occupational and public exposure conditions, with the latter limits (in *italics* and/or dashed) up to five times more restrictive:

Frequency Applicable Range (MHz)	Electromagnetic Fields (f is frequency of emission in MHz)					
	Electric Field Strength (V/m)		Magnetic Field Strength (A/m)		Equivalent Far-Field Power Density (mW/cm <sup>2</sup> )	
0.3 – 1.34	614	<i>614</i>	1.63	<i>1.63</i>	100	<i>100</i>
1.34 – 3.0	614	<i>823.8/f</i>	1.63	<i>2.19/f</i>	100	<i>180/f<sup>2</sup></i>
3.0 – 30	1842/f	<i>823.8/f</i>	4.89/f	<i>2.19/f</i>	900/f <sup>2</sup>	<i>180/f<sup>2</sup></i>
30 – 300	61.4	<i>27.5</i>	0.163	<i>0.0729</i>	1.0	<i>0.2</i>
300 – 1,500	3.54√f	<i>1.59√f</i>	√f/106	<i>√f/238</i>	f/300	<i>f/1500</i>
1,500 – 100,000	137	<i>61.4</i>	0.364	<i>0.163</i>	5.0	<i>1.0</i>



Higher levels are allowed for short periods of time, such that total exposure levels averaged over six or thirty minutes, for occupational or public settings, respectively, do not exceed the limits, and higher levels also are allowed for exposures to small areas, such that the spatially averaged levels do not exceed the limits. However, neither of these allowances is incorporated in the conservative calculation formulas in the FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) for projecting field levels. Hammett & Edison has built those formulas into a proprietary program that calculates, at each location on an arbitrary rectangular grid, the total expected power density from any number of individual radio sources. The program allows for the description of buildings and uneven terrain, if required to obtain more accurate projections.



## RFR.CALC™ Calculation Methodology

### Assessment by Calculation of Compliance with FCC Exposure Guidelines

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission (“FCC”) to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The maximum permissible exposure limits adopted by the FCC (see Figure 1) apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. Higher levels are allowed for short periods of time, such that total exposure levels averaged over six or thirty minutes, for occupational or public settings, respectively, do not exceed the limits.

#### Near Field.

Prediction methods have been developed for the near field zone of panel (directional) and whip (omnidirectional) antennas, typical at wireless telecommunications base stations, as well as dish (aperture) antennas, typically used for microwave links. The antenna patterns are not fully formed in the near field at these antennas, and the FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) gives suitable formulas for calculating power density within such zones.

For a panel or whip antenna, power density  $S = \frac{180}{\theta_{BW}} \times \frac{0.1 \times P_{net}}{\pi \times D \times h}$ , in mW/cm<sup>2</sup>,

and for an aperture antenna, maximum power density  $S_{max} = \frac{0.1 \times 16 \times \eta \times P_{net}}{\pi \times h^2}$ , in mW/cm<sup>2</sup>,

where  $\theta_{BW}$  = half-power beamwidth of the antenna, in degrees, and  
 $P_{net}$  = net power input to the antenna, in watts,  
 $D$  = distance from antenna, in meters,  
 $h$  = aperture height of the antenna, in meters, and  
 $\eta$  = aperture efficiency (unitless, typically 0.5-0.8).

The factor of 0.1 in the numerators converts to the desired units of power density.

#### Far Field.

OET-65 gives this formula for calculating power density in the far field of an individual RF source:

power density  $S = \frac{2.56 \times 1.64 \times 100 \times RFF^2 \times ERP}{4 \times \pi \times D^2}$ , in mW/cm<sup>2</sup>,

where ERP = total ERP (all polarizations), in kilowatts,  
RFF = relative field factor at the direction to the actual point of calculation, and  
D = distance from the center of radiation to the point of calculation, in meters.

The factor of 2.56 accounts for the increase in power density due to ground reflection, assuming a reflection coefficient of 1.6 (1.6 x 1.6 = 2.56). The factor of 1.64 is the gain of a half-wave dipole relative to an isotropic radiator. The factor of 100 in the numerator converts to the desired units of power density. This formula has been built into a proprietary program that calculates, at each location on an arbitrary rectangular grid, the total expected power density from any number of individual radiation sources. The program also allows for the description of uneven terrain in the vicinity, to obtain more accurate projections.



## Account Detail

[Back to Search Results](#)

[Change of Address](#)

[Print this Page](#)

### Washoe County Parcel Information

Parcel ID	Status	Last Update
07735001	Active	2/10/2017 2:10:21 AM
<b>Current Owner:</b> AKRE, BRIAN M & MARIA M  PO BOX 7710 RENO, NV 89510		<b>SITUS:</b> 5205 WAYSIDE RD WCTY NV
<b>Taxing District</b> 9400		<b>Geo CD:</b>
<b>Legal Description</b>		
Range 21 Section 33 SubdivisionName _UNSPECIFIED Township 23		

### Tax Bill (Click on desired tax year for due dates and further details)

Tax Year	Net Tax	Total Paid	Penalty/Fees	Interest	Balance Due
<b>2016</b>	\$1,552.73	\$1,164.55	\$0.00	\$0.00	\$388.18
<b>2015</b>	\$1,549.63	\$1,549.63	\$0.00	\$0.00	\$0.00
<b>2014</b>	\$1,504.50	\$1,504.50	\$0.00	\$0.00	\$0.00
<b>2013</b>	\$1,460.68	\$1,460.68	\$0.00	\$0.00	\$0.00
<b>2012</b>	\$1,418.14	\$1,418.14	\$0.00	\$0.00	\$0.00
Total					\$388.18

### Important Payment Information

- ALERTS:** If your real property taxes are delinquent, the search results displayed may not reflect the correct amount owing. Please contact our office for the current amount due.
- For your convenience, online payment is available on this site. E-check payments are accepted without a fee. However, a service fee does apply for online credit card payments. See [Payment Information](#) for details.

### Pay Online

Payments will be applied to the oldest charge first.

Select a payment option:

- Total Due \$388.18  
 Partial

[ADD TO CART](#)

**\$0.00**

### Pay By Check

Please make checks payable to:  
**WASHOE COUNTY TREASURER**

**Mailing Address:**  
P.O. Box 30039  
Reno, NV 89520-3039

**Overnight Address:**  
1001 E. Ninth St., Ste D140  
Reno, NV 89512-2845

 **Payment Information**


 **Special Assessment District**

 **Installment Date Information**

 **Assessment Information**

Z D D R A W I N G S I G N - O F F

DATE: \_\_\_\_\_ TIME: \_\_\_\_\_ % CWC-PLEASE RETURN BY: \_\_\_\_\_


 SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

SITE ACQUISITION: \_\_\_\_\_

PLANNING: \_\_\_\_\_

CONSTRUCTION: \_\_\_\_\_

MANAGEMENT: \_\_\_\_\_

 SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

CONSTRUCTION: \_\_\_\_\_

REAL ESTATE: \_\_\_\_\_

RF ENGINEER: \_\_\_\_\_

EQUIPMENT ENGINEER: \_\_\_\_\_

MW ENG./TRANSPORT: \_\_\_\_\_

**OTHER** (IF APPLICABLE)

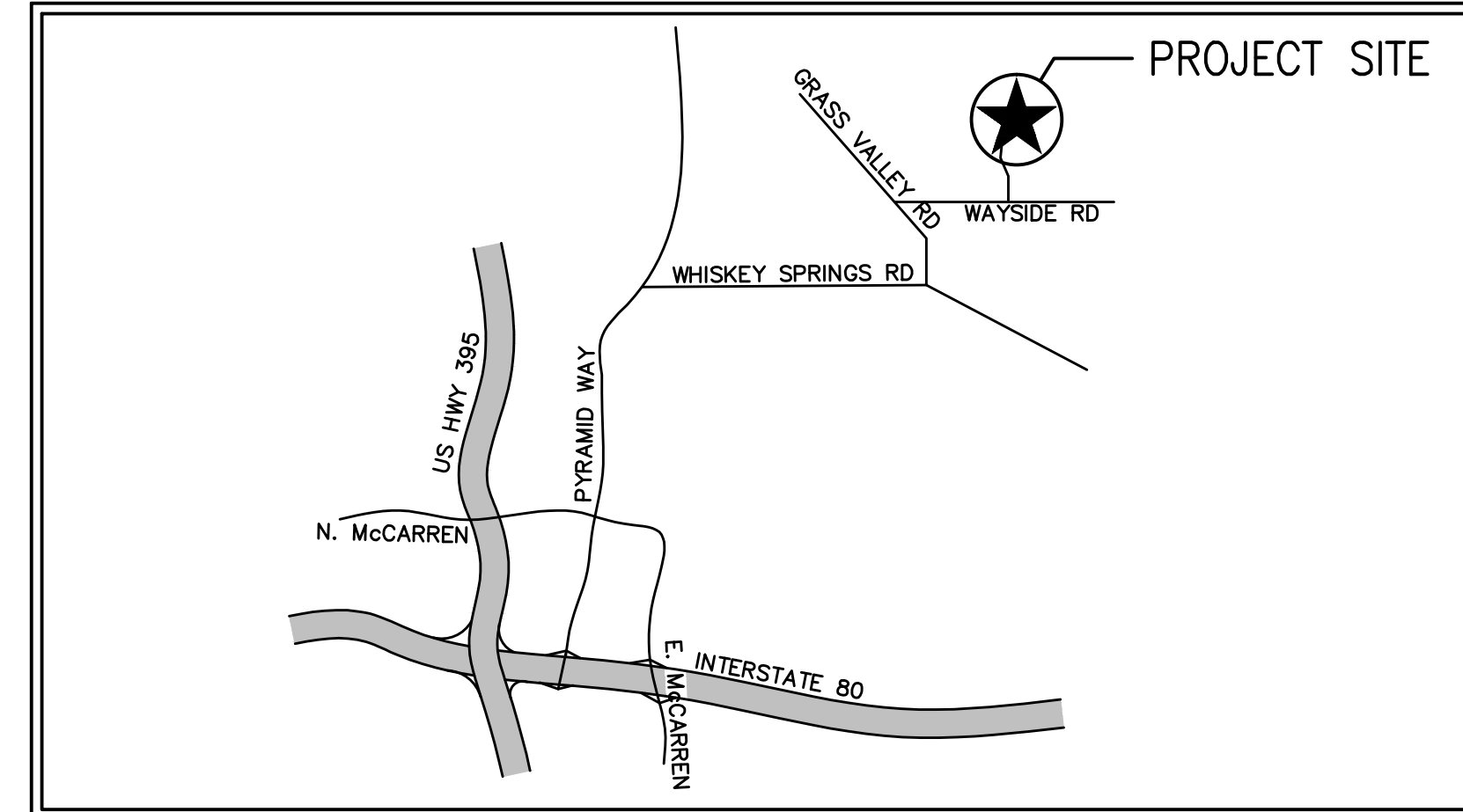
SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

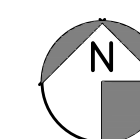
# verizon

295 Parkshore Drive, Folsom, CA 95630

## ROLLING THUNDER

5205 WAYSIDE ROAD  
RENO, NV 89510  
APN: 077-350-01  
LOCATION #: 382432



**LOCATION PLAN** 

### D I R E C T I O N S

FROM VERIZON OFFICE @ 255 PARKSHORE DR., FOLSOM, CA 95630:

1. HEAD NORTHEAST ON PARKSHORE DR.
2. TURN LEFT ONTO COOLIDGE DR.
3. TURN LEFT ONTO GLENN DR.
4. USE THE RIGHT 2 LANES TO TURN RIGHT ONTO FOLSOM BLVD.
5. CONTINUE ONTO FOLSOM-AUBURN RD.
6. CONTINUE ONTO AUBURN FOLSOM RD.
7. TURN LEFT ONTO CAVITT STALLMAN RD.
8. TURN RIGHT AT THE 1ST CROSS STREET ONTO LAIRD RD.
9. TURN RIGHT ONTO HORSESHOE BAR RD.
10. TURN LEFT TO STAY ON HORSESHOE BAR RD.
11. TURN RIGHT TO MERGE ONTO I-80 E.
12. MERGE ONTO I-80 E.
13. ENTERING NEVADA.
14. USE THE RIGHT 2 LANES TO TAKE EXIT 18 TO MERGE ONTO NV-445 N/PYRAMID WAY.
15. MERGE ONTO NV-445 N/PYRAMID WAY.
16. TURN RIGHT ONTO WHISKEY SPRINGS RD.
17. TURN LEFT ONTO GRASS VALLEY RD.
18. TURN RIGHT ONTO WAYSIDE RD.

### I N D E X O F D R A W I N G S

1. T1.1	TITLE SHEET, LOCATION PLAN, PROJECT DATA
2. C1	CIVIL SURVEY SHEET
3. C2	CIVIL SURVEY SHEET
4. A1.1	OVERALL SITE PLAN, ENLARGED ACCESS ROAD PLAN
5. A2.1	EQUIPMENT LAYOUT PLAN
6. A2.2	ANTENNA LAYOUT PLAN
7. A3.1	PROJECT ELEVATIONS

### P R O J E C T D I R E C T O R Y

<b>APPLICANT:</b> VERIZON WIRELESS 295 PARKSHORE DRIVE FOLSOM, CA 95630	<b>PROPERTY OWNER:</b> BRIAN M. & MARIA M. AKRE P.O. BOX 7710 RENO, NV 89510
<b>ARCHITECT:</b> MANUEL S TSIHLAS 1520 RIVER PARK DRIVE SACRAMENTO, CA 95815 916-505-3811 PH	<b>CONSTRUCTION MANAGER:</b> BOB SCHROEDER COMPLETE WIRELESS CONSULTING, INC. 2009 V STREET SACRAMENTO, CA 95818 916-217-7512 bschroeder@completewireless.net

### P R O J E C T S U M M A R Y

**ASSESSOR'S PARCEL NUMBER:** 077-350-01

**JURISDICTION:** WASHOE COUNTY

**OCCUPANCY:** U (UNMANNED TELECOMMUNICATIONS FACILITY)

**TYPE OF CONSTRUCTION:** V-B

**ZONING:** GRA - GENERAL RURAL AGRICULTURE

### C O D E C O M P L I A N C E

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. 2012 INTERNATIONAL BUILDING CODE
2. 2012 INTERNATIONAL RESIDENTIAL CODE
3. 2012 INTERNATIONAL MECHANICAL CODE
4. 2012 INTERNATIONAL FUEL GAS CODE
5. 2012 UNIFORM MECHANICAL CODE
6. 2012 UNIFORM PLUMBING CODE
7. 2011 NATIONAL ELECTRIC CODE
8. 2009 INTERNATIONAL ENERGY CONSERVATION CODE W/AMENDMENTS
9. 2003 INTERNATIONAL FIRE CODE W/AMENDMENTS
10. 2012 NORTHERN NEVADA AMENDMENTS

**ACCESSIBILITY REQUIREMENTS:**  
THIS FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS REQUIREMENTS ARE NOT REQUIRED IN ACCORDANCE WITH THE 2012 INTERNATIONAL BUILDING CODE.


### P R O J E C T D E S C R I P T I O N

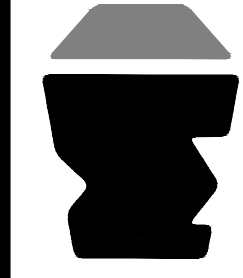
**PROPOSED VERIZON WIRELESS UNMANNED TELECOMMUNICATIONS FACILITY INCLUDING:**

- A 50'-0"x50'-0" LEASE AREA.
- A CHAIN LINK FENCE @ LEASE AREA PERIMETER.
- OUTDOOR EQUIPMENT CABINETS.
- UNDERGROUND POWER & TELCO UTILITIES BROUGHT TO FACILITY.
- A COAXIAL CABLE ICE BRIDGE.
- ANTENNAS W/ASSOCIATED TOWER MOUNTED EQUIPMENT MOUNTED ON A PROPOSED MONOPOLE.

### P R O J E C T M I L E S T O N E S

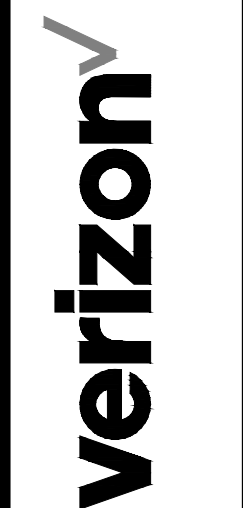
05/12/2016	90% ZONING DOCUMENTS
06/20/2016	100% ZONING DOCUMENTS
xx/xx/xxxx	90% CONSTRUCTION DOCUMENTS
xx/xx/xxxx	100% CONSTRUCTION DOCUMENTS

  
**Manuel S. Tsihlas, Architect**  
1520 River Park Drive, Sacramento, CA 95815  
916-505-3811



THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF MANUEL S. TSILAS ARCHITECT. NO PART OF THESE DRAWINGS OR SPECIFICATIONS SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT. COPYRIGHT, MANUEL S. TSILAS ARCHITECT. ALL RIGHTS RESERVED.

ROLLING THUNDER  
5205 WAYSIDE ROAD  
RENO, NV 89510



SHEET TITLE: TITLE SHEET, LOCATION PLAN, PROJECT DATA

Not valid unless signed in ink by licensee.

**Revisions:**

△	--
△	--
△	--
△	--
△	--

File:162.1800\_T11.dwg  
Drawn By: MWS  
Checked By: MST  
Scale: AS NOTED  
Date: 06/20/2016

Job No. 162.1800

# T1.1

**LEGEND**

- PARCEL BOUNDARY
- - - - - NEIGHBORING PARCEL BOUNDARY
- LEASE AREA BOUNDARY
- - - - - UTILITIES
- - - - - (E) EASEMENTS
- - - - - (P) EASEMENTS
- FENCE LINE
- JP JOINT UTILITY POLE
- TP TELEPHONE POLE
- EP ELECTRICAL POLE
- 6" OAK TREE WITH DIAMETER BREST HEIGHT (DBH)
- W WATER VALVE
- W WATER BOX
- SSMH SANITARY SEWER MANHOLE
- SDMH STORM DRAIN MANHOLE
- DI DROP INLET

DATE OF SURVEY: 05-04-16

SURVEYED BY OR UNDER DIRECTION OF: KENNETH D. GEIL, PLS 13385 LOCATED IN THE COUNTY OF WASHOE, STATE OF NEVADA

CONTRACTOR IS RESPONSIBLE TO VERIFY LEASE AREA PRIOR TO CONSTRUCTION.

BEARINGS SHOWN ARE BASED UPON MONUMENTS FOUND AND RECORD INFORMATION. THIS IS NOT A BOUNDARY SURVEY.

ELEVATIONS SHOWN ON THIS PLAN ARE BASED UPON U.S.G.S. N.A.V.D. 88 DATUM. ABOVE MEAN SEA LEVEL UNLESS OTHERWISE NOTED.

N.G.V.D. 1929 CORRECTION: SUBTRACT 3.39' FROM ELEVATIONS SHOWN.

CONTOUR INTERVAL: 1 FT.

ASSESSOR'S PARCEL NUMBER: 077-350-01

LANDLORD(S): BRIAN M. & MARIA M. AKRE  
P.O. BOX 7710  
RENO, NV 89510

Project Name: Rolling Thunder

Project Site Location: 5205 Wayside Road  
Reno, NV 89510  
Washoe County

Date of Observation: 05-04-16

Equipment/Procedure Used to Obtain Coordinates: Trimble GeoXT post processed with Pathfinder Office software.

Type of Antenna Mount: Proposed Monopole  
Coordinates:

Latitude: N 39°48'46.52" (NAD83) N 39°48'46.84" (NAD27)  
Longitude: W 119°37'22.92" (NAD83) W 119°37'19.25" (NAD27)

ELEVATION of Ground at Structure (NAVD88) 4540' AMSL

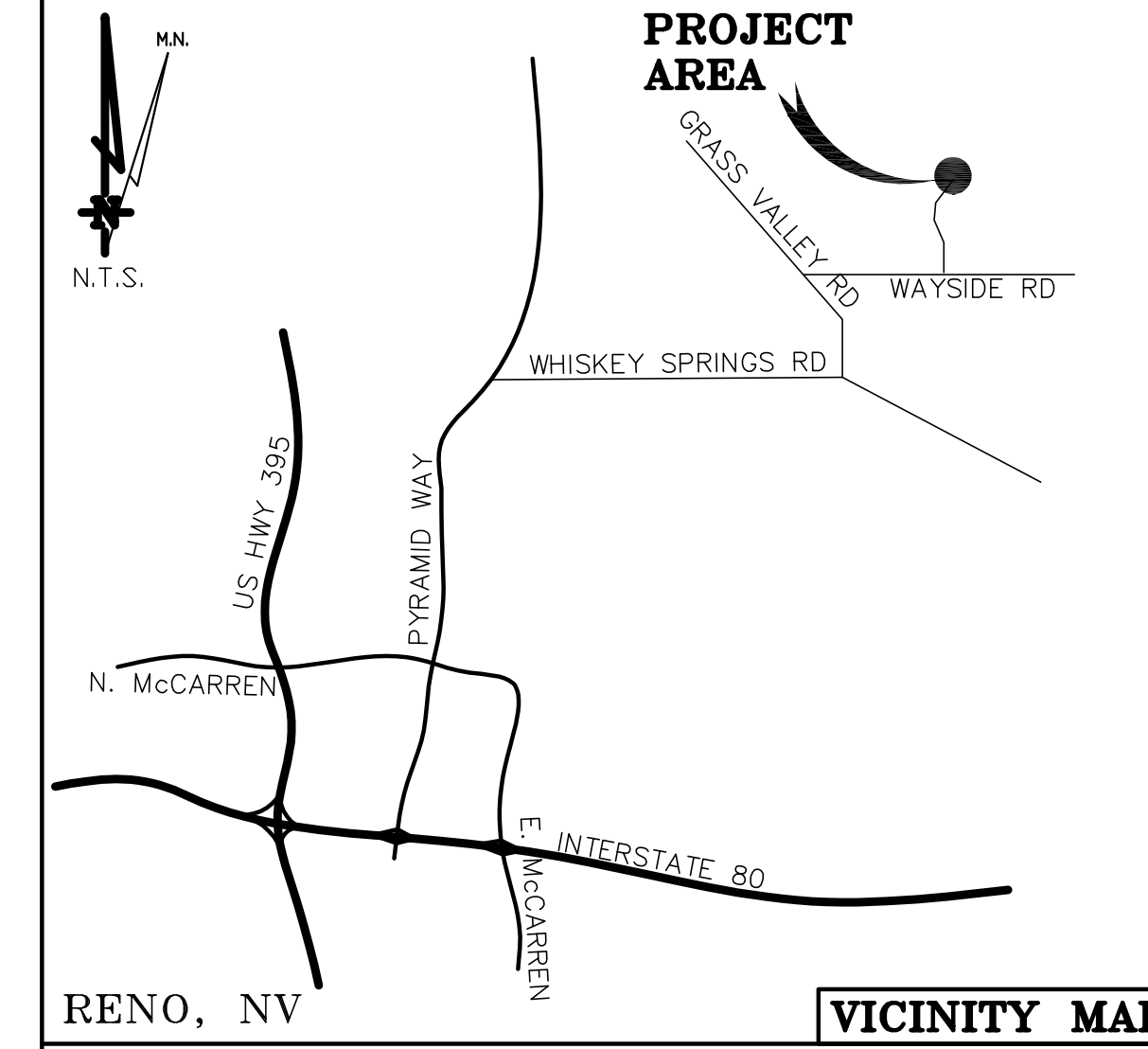
Rolling Thunder  
Lease Area Description

All that certain lease area being a portion of the Southeast quarter of the Southeast quarter of Section 33, Township 23 North, Range 21 East M.D.M. as delineated on Survey 1009 filed as Document No. 434698 Official Records of Washoe County, Nevada being more particularly described as follows:

Equipment Lease Area  
Commencing at a monument set for the Southeast corner of said parcel of land; thence along the East boundary thereof North 0°0'11" East 711.10 feet; thence leaving said East boundary North 89°49'49" West 587.85 feet to the True Point of Beginning; thence from said point of beginning South 07°46'30" West 50.00 feet; thence North 82°13'30" West 50.00 feet; thence North 07°46'30" East 50.00 feet; thence South 82°13'30" East 50.00 feet to the point of beginning.

Together with an easement for access purposes, twenty feet in width the centerline of which is described as follows: Beginning at a point on the South boundary of the above described lease area which bears North 82°13'30" West 25.00 feet from the Southeast corner thereof; thence from said point of beginning along a curve concave to the northwest, having a radius of 75.00 feet, a central angle of 48°03'49", and a chord of 61.09 feet bearing North 32°03'14" East to the point of curvature of a reverse curve, concave to the southeast, having a radius of 75.00 feet a central angle of 51°59'52", and a chord of 65.75 feet bearing South 30°05'12" West; thence along said curve a distance of 68.06 feet; thence South 4°05'16" West, 45.47 feet to the point of curvature of a tangent curve to the South, concave to the west, having a radius of 200.00 feet and a central angle of 33°36'06"; thence along said curve a distance of 117.29 feet; ; thence South 37°41'22" West, 35.15 feet to the point of curvature of a tangent curve to the Southwest, concave to the southeast, having a radius of 200.00 feet and a central angle of 12°09'23"; thence along said curve a distance of 42.43 feet; ; thence South 25°32'00" West, 83.94 feet to the point of curvature of a tangent curve to the Southwest, concave to the northeast, having a radius of 50.00 feet and a central angle of 125°39'30"; thence along said curve a distance of 109.66 feet; ; thence North 79°52'30" East, 53.58 feet to the point of curvature of a tangent curve to the East, concave to the south, having a radius of 50.00 feet and a central angle of 49°47'54"; thence along said curve a distance of 43.48 feet; ; thence South 50°19'36" East, 56.93 feet to the point of curvature of a tangent curve to the Southeast, concave to the north, having a radius of 50.00 feet and a central angle of 56°40'36"; thence along said curve a distance of 49.46 feet; ; thence North 72°59'47" East, 27.89 feet to the point of curvature of a tangent curve to the East, concave to the southwest, having a radius of 50.00 feet and a central angle of 109°12'26"; thence along said curve a distance of 95.30 feet; ; thence South 2°12'14" West, 67.37 feet more or less to the public right of way.

Also together with an easement for utility purposes, six feet in width, the centerline of which is described as follows: Beginning at a utility service pole which bears North 89°21'48" West 522.63 feet and South 0°38'12" West 26.7 feet from the Southeast corner of Section 33, Township 23 North, Range 21 East M.D.M.; thence from said point of beginning North 89°21'22" East 309.0 feet to an existing utility pole; thence North 02°40'24" East 250.0 feet more or less to the above described access and utility easement.



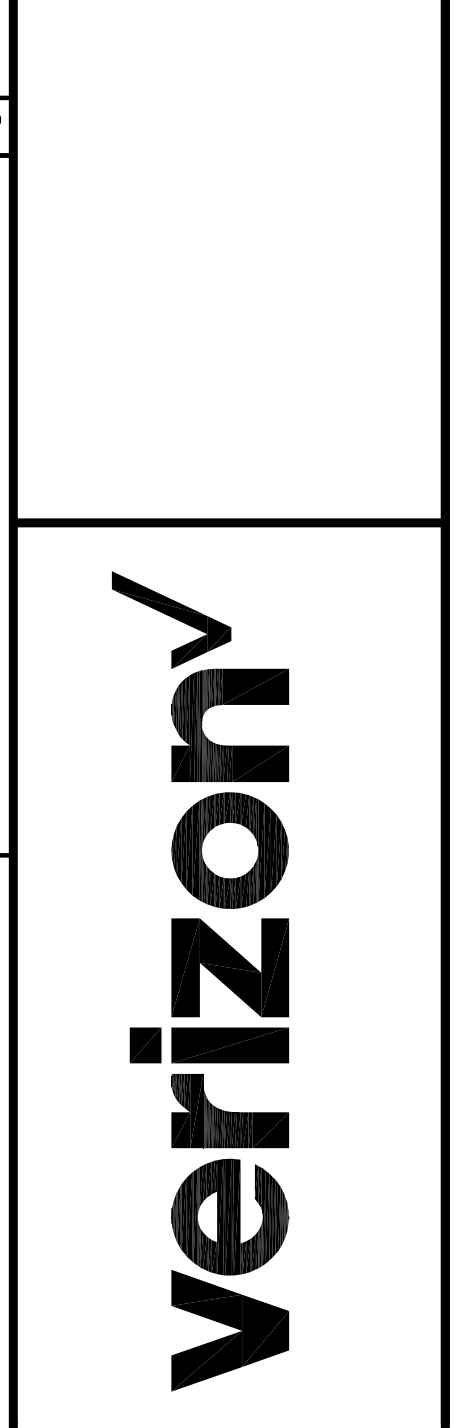
THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OF SERVICE, ARE THE EXCLUSIVE PROPERTY OF GEIL ENGINEERING AND THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE AND CARRIER FOR WHICH THEY ARE PREPARED. REUSE, REPRODUCTION OR PUBLICATION BY ANY METHOD, IN WHOLE OR IN PART, IS PROHIBITED EXCEPT BY WRITTEN PERMISSION FROM GEIL ENGINEERING.

TITLE TO THESE PLANS AND/OR SPECIFICATIONS SHALL REMAIN WITH GEIL ENGINEERING WITHOUT PREJUDICE AND VISUAL CONTACT WITH THEM SHALL CONSTITUTE PRIMA FACIE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS.

BOUNDARY SHOWN IS BASED ON MONUMENTATION FOUND AND RECORD INFORMATION. THIS IS NOT A BOUNDARY SURVEY. THIS IS A SPECIALIZED TOPOGRAPHIC MAP WITH PROPERTY LINES AND EASEMENTS BEING A GRAPHIC DEPICTION BASED ON INFORMATION GATHERED FROM VARIOUS SOURCES OF RECORD AND AVAILABLE MONUMENTATION FOUND DURING THE FIELD SURVEY. NO EASEMENTS WERE RESEARCHED OR PLOTTED. PROPERTY LINES AND LINES OF TITLE WERE NOT INVESTIGATED NOR SURVEYED. NO PROPERTY MONUMENTS WERE SET.

DEPT	APPROVED	DATE
A&C		
RE		
RF		
INT		
EE\IN		
OPS		
EE\OUT		

Surveyor  
**GEIL ENGINEERING**  
ENGINEERING • SURVEYING • PLANNING  
1526 HIGH STREET  
AUBURN, CALIFORNIA 96005  
Phone: (530) 885-0406  
Fax: (530) 885-0409

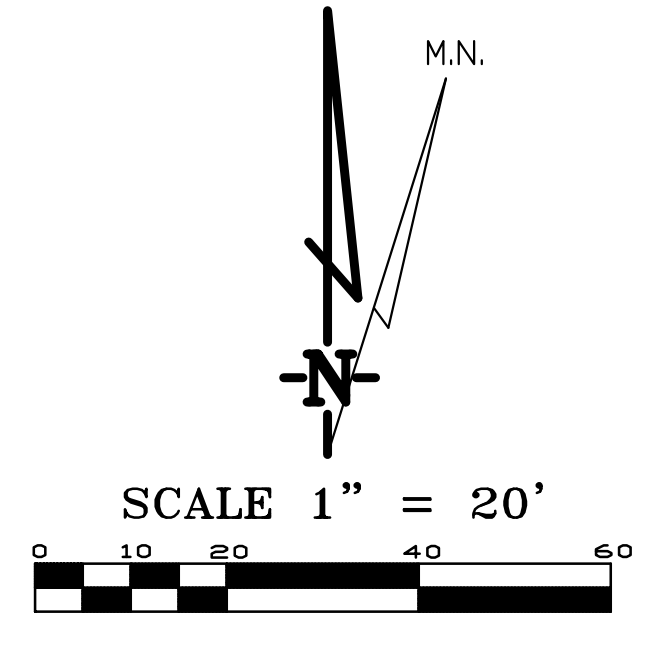
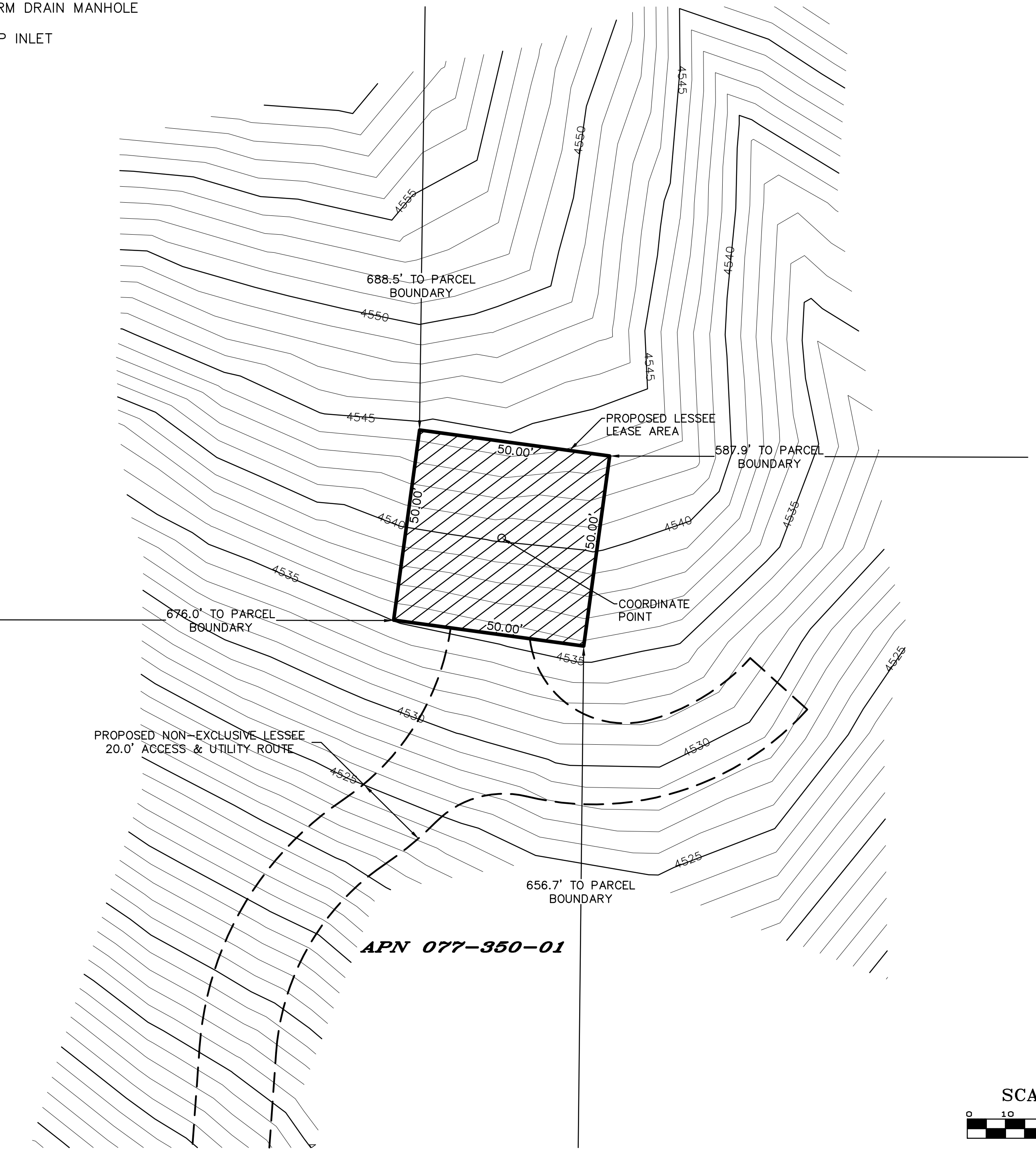


**Rolling Thunder**  
5205 Wayside Road  
Reno, NV 89510

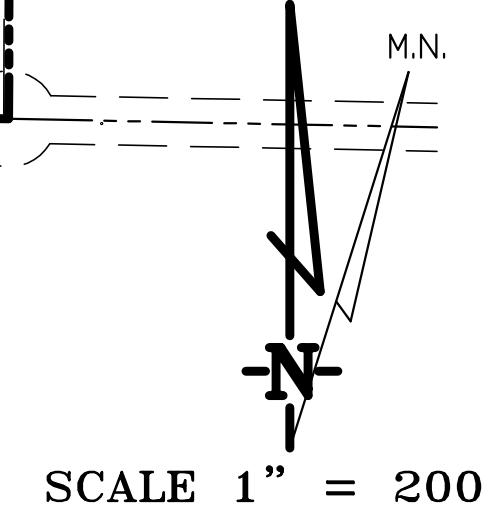
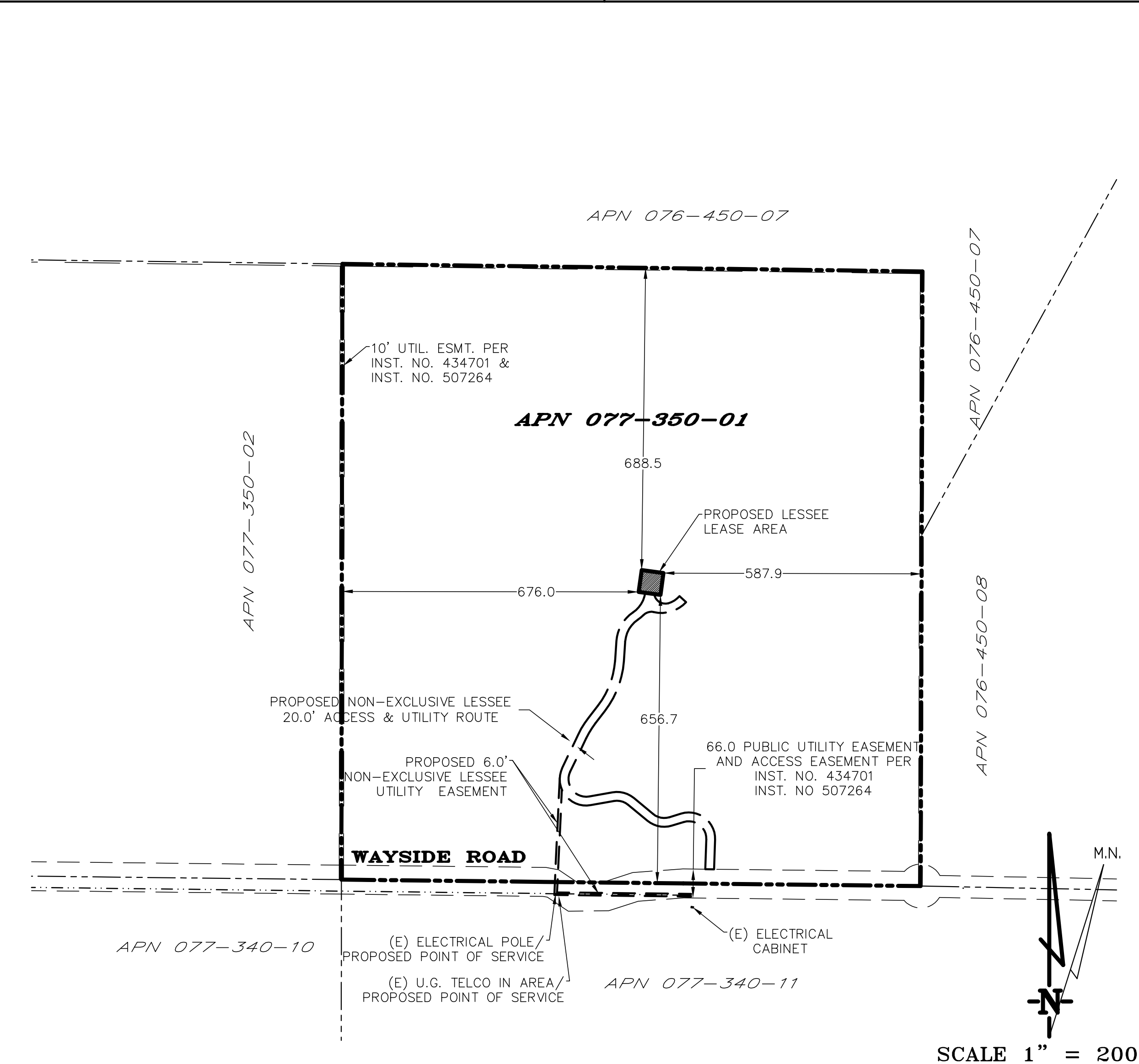
**PLOT PLAN AND SITE TOPOGRAPHY**

REV	DATE	DESCRIPTION
05-05-16		Preliminary Drawing
06-20-16		rev. esmt.
07-18-16		VZW to Lessee

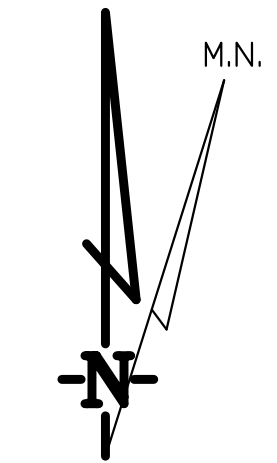
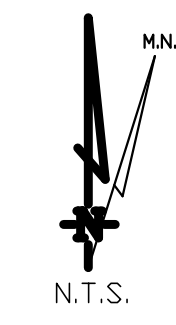
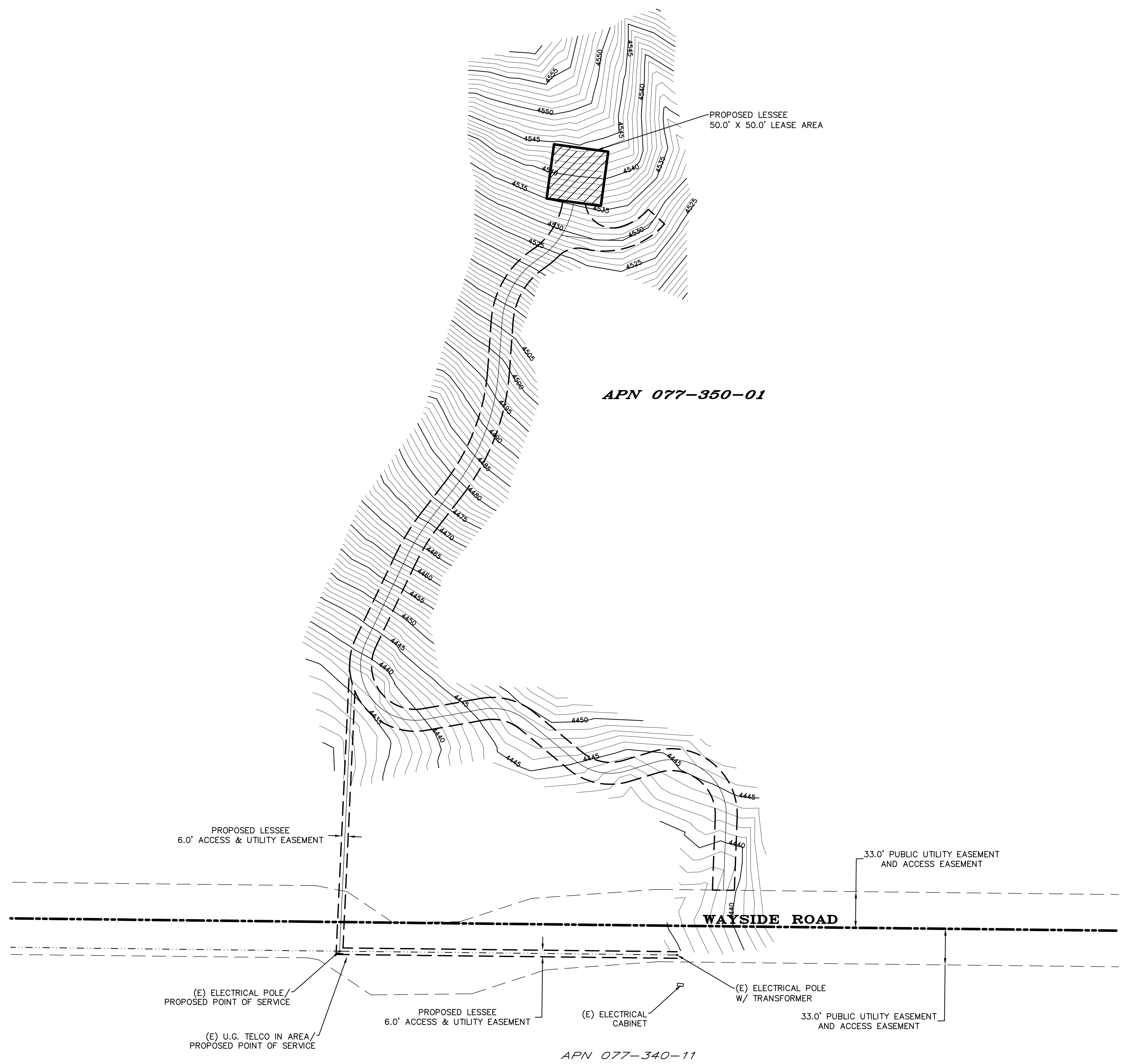
Sheet  
**C-1**



**LEASE AREA DETAIL**



**OVERALL PARCEL**

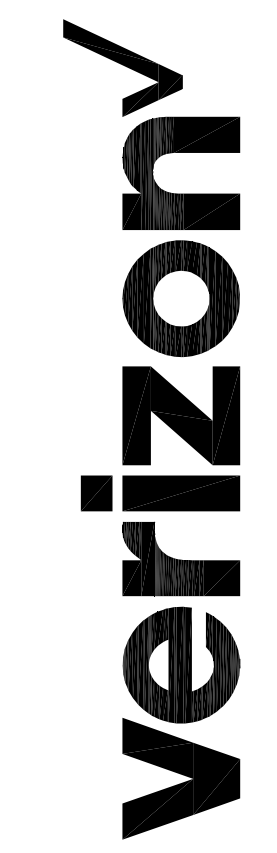


SCALE 1" = 50'

**ACCESS AREA DETAIL**

DEPT	APPROVED	DATE
A&C		
RE		
RF		
INT		
EE\IN		
OPS		
EE\OUT		

Surveyor  
**GEIL ENGINEERING**  
 ENGINEERING • SURVEYING • PLANNING  
 1226 HIGH STREET  
 OAKBURN, CALIFORNIA 96069  
 Phone: (916) 838-1100  
 Fax: (916) 838-1100

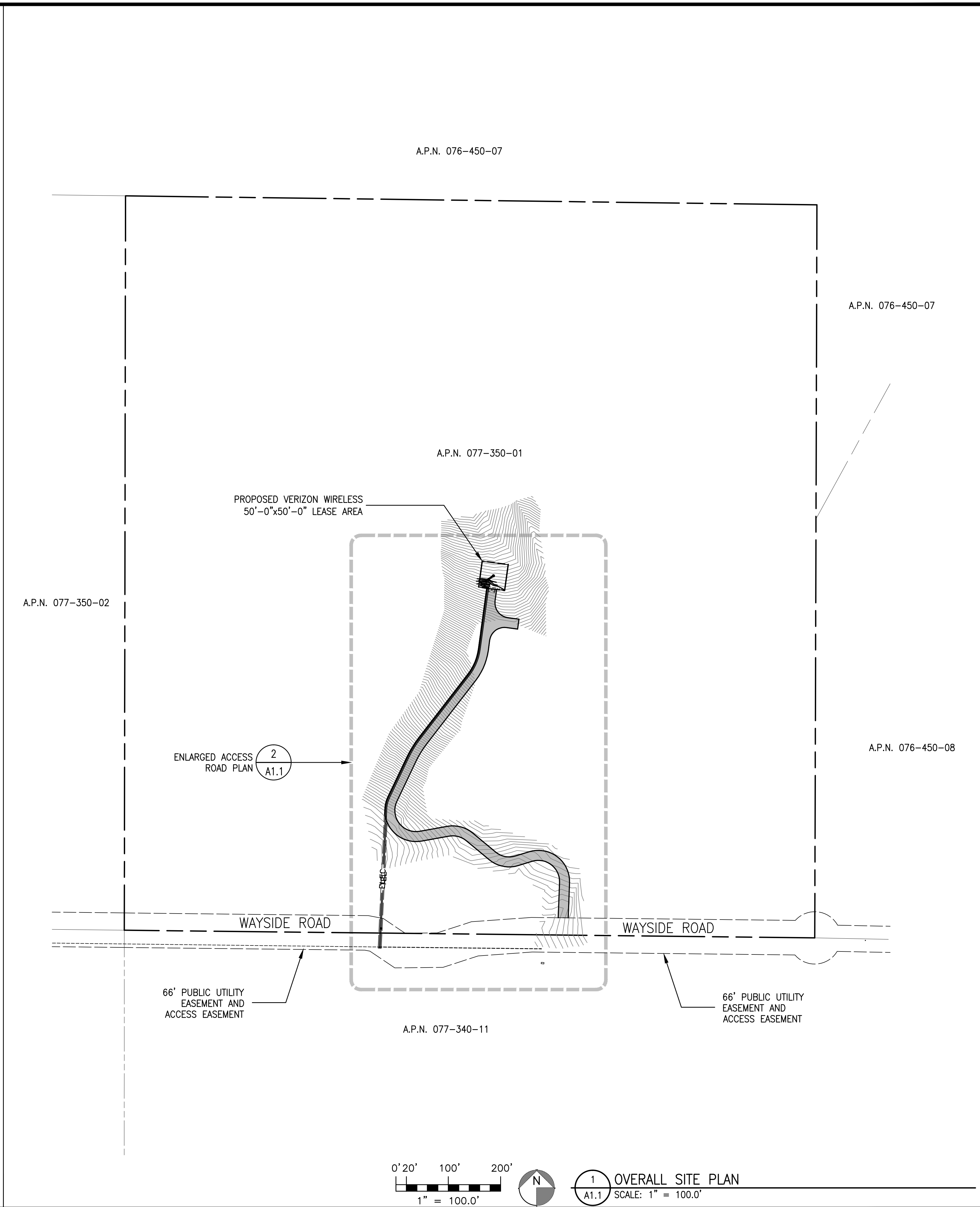
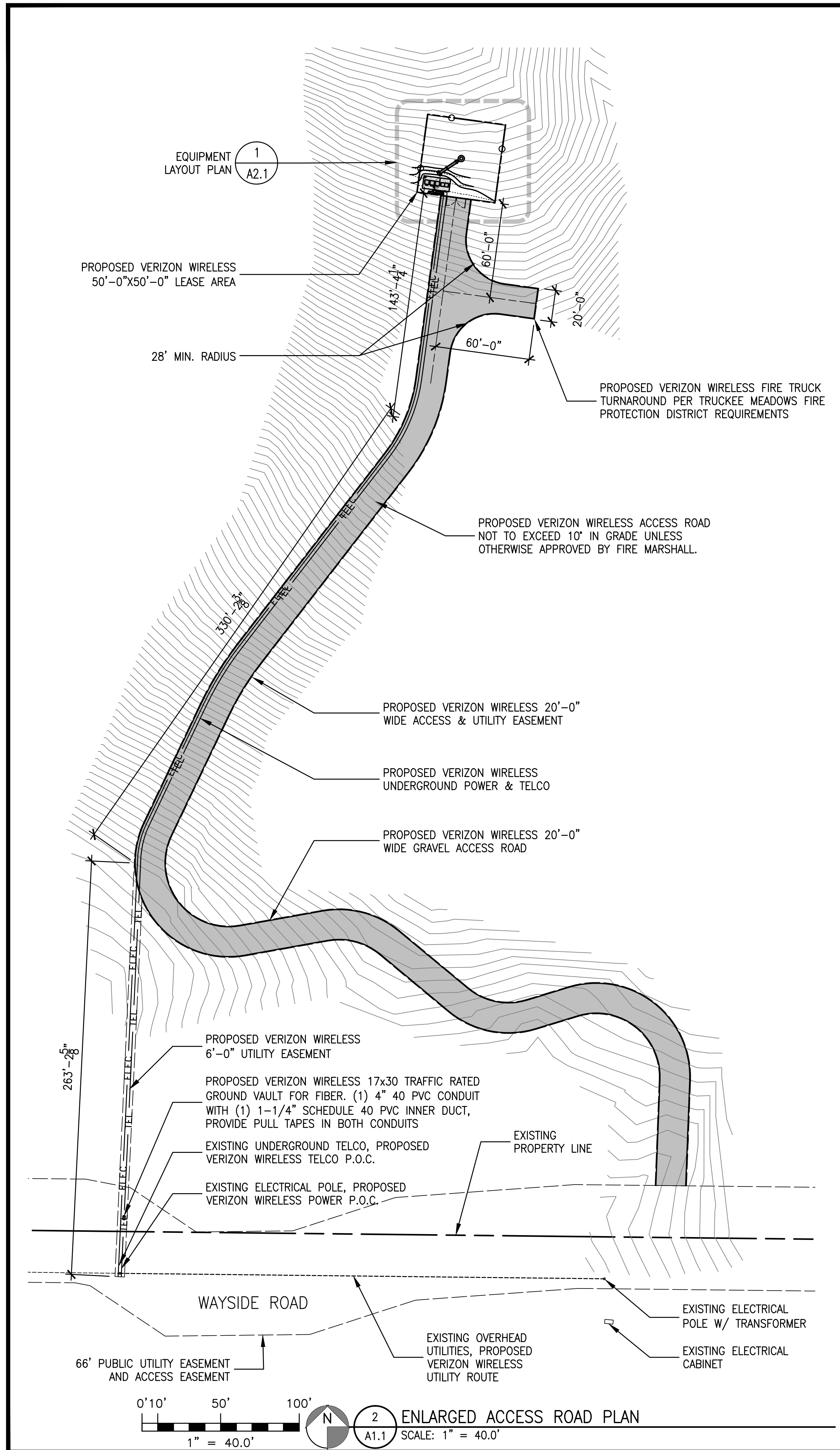


**Rolling Thunder**  
 5205 Wayside Road  
 Reno, NV 89510  
**PLOT PLAN AND  
 SITE TOPOGRAPHY**

REVISIONS	DATE	BY	DESCRIPTION
REV	09-06-15	DG	Preliminary Drawing
REV	07-18-16	DG	VZW To Lessee
REV			
REV			
REV			

Sheet  
**C-2**





**Manuel S. Tshilas, Architect**  
 1520 River Park Drive, Sacramento, CA 95815  
 916-505-8811

**COMPLETE**  
 Wireless Consulting, Inc.

THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF MANUEL S. TSHILAS, ARCHITECT. NO PART OF THESE DRAWINGS OR SPECIFICATIONS SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT. COPYRIGHT, MANUEL S. TSHILAS, ARCHITECT. ALL RIGHTS RESERVED.

**verizon**

ROLLING THUNDER  
 5205 WAYSIDE ROAD  
 RENO, NV 89510

SHEET TITLE:  
**OVERALL SITE PLAN, ENLARGED ACCESS ROAD PLAN**

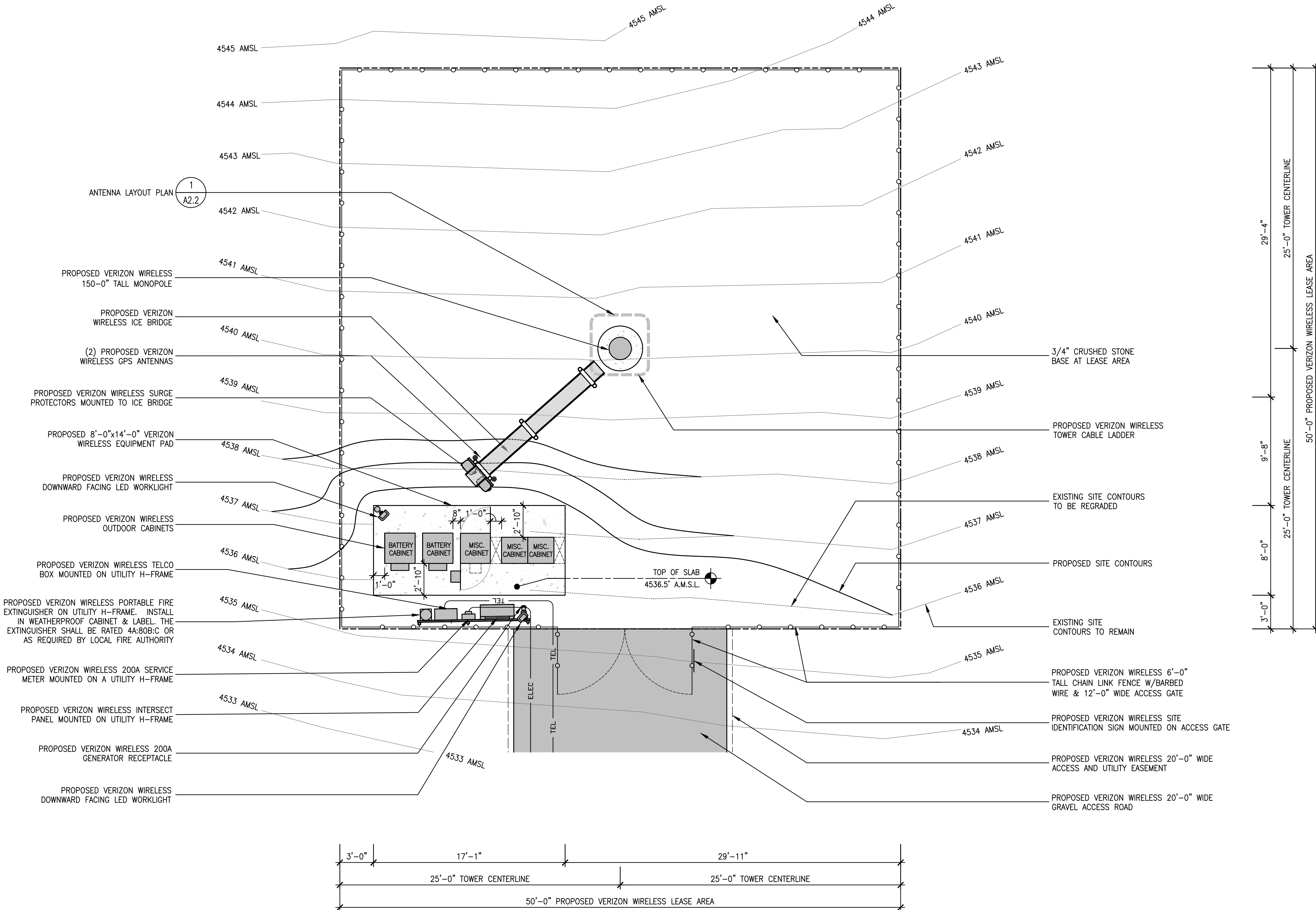
Not valid unless signed in ink by licensee.

Revisions:
△ --
△ --
△ --
△ --
△ --

File: 162.1800_A11.dwg
Drawn By: MWS
Checked By: MST
Scale: AS NOTED
Date: 06/20/2016

Job No. 162.1800

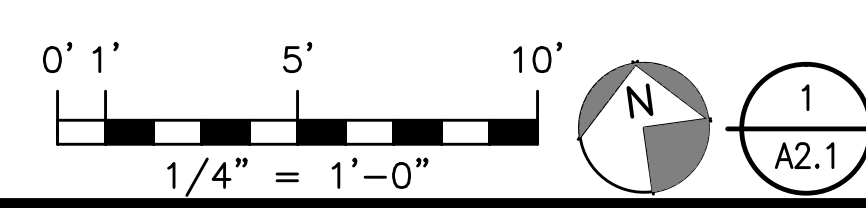
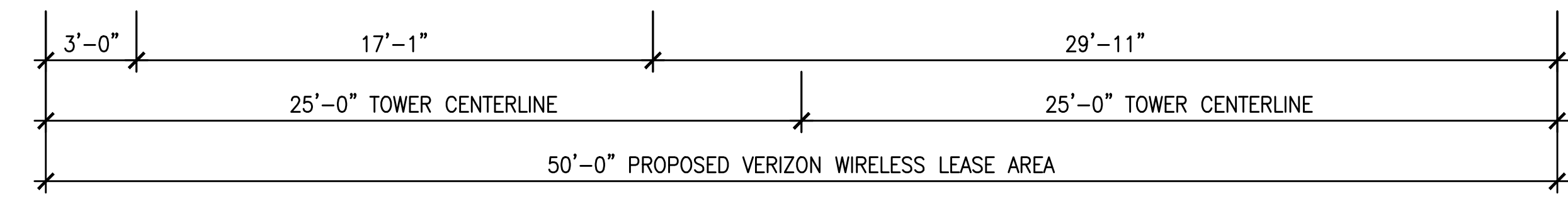
**A1.1**



ANTENNA LAYOUT PLAN  
1  
A2.2

- PROPOSED VERIZON WIRELESS 150'-0" TALL MONOPOLE
- PROPOSED VERIZON WIRELESS ICE BRIDGE
- (2) PROPOSED VERIZON WIRELESS GPS ANTENNAS
- PROPOSED VERIZON WIRELESS SURGE PROTECTORS MOUNTED TO ICE BRIDGE
- PROPOSED 8'-0"x14'-0" VERIZON WIRELESS EQUIPMENT PAD
- PROPOSED VERIZON WIRELESS DOWNWARD FACING LED WORKLIGHT
- PROPOSED VERIZON WIRELESS OUTDOOR CABINETS
- PROPOSED VERIZON WIRELESS TELCO BOX MOUNTED ON UTILITY H-FRAME
- PROPOSED VERIZON WIRELESS PORTABLE FIRE EXTINGUISHER ON UTILITY H-FRAME. INSTALL IN WEATHERPROOF CABINET & LABEL. THE EXTINGUISHER SHALL BE RATED 4A:80B:C OR AS REQUIRED BY LOCAL FIRE AUTHORITY
- PROPOSED VERIZON WIRELESS 200A SERVICE METER MOUNTED ON A UTILITY H-FRAME
- PROPOSED VERIZON WIRELESS INTERSECT PANEL MOUNTED ON UTILITY H-FRAME
- PROPOSED VERIZON WIRELESS 200A GENERATOR RECEPTACLE
- PROPOSED VERIZON WIRELESS DOWNWARD FACING LED WORKLIGHT

- 3/4" CRUSHED STONE BASE AT LEASE AREA
- PROPOSED VERIZON WIRELESS TOWER CABLE LADDER
- EXISTING SITE CONTOURS TO BE REGRADED
- PROPOSED SITE CONTOURS
- EXISTING SITE CONTOURS TO REMAIN
- PROPOSED VERIZON WIRELESS 6'-0" TALL CHAIN LINK FENCE W/BARBED WIRE & 12'-0" WIDE ACCESS GATE
- PROPOSED VERIZON WIRELESS SITE IDENTIFICATION SIGN MOUNTED ON ACCESS GATE
- PROPOSED VERIZON WIRELESS 20'-0" WIDE ACCESS AND UTILITY EASEMENT
- PROPOSED VERIZON WIRELESS 20'-0" WIDE GRAVEL ACCESS ROAD



EQUIPMENT LAYOUT PLAN

SCALE: 1/4" = 1'-0"

**Manuel S. Tshilas, Architect**  
1520 River Park Drive, Sacramento, CA 95815  
916-505-8811

**COMPLETE**  
Wireless Consulting, Inc.

THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF MANUEL S. TSHILAS, ARCHITECT. NO PART OF THESE DRAWINGS OR SPECIFICATIONS SHALL BE REPRODUCED OR USED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT. COPYRIGHT © 2016 MANUEL S. TSHILAS, ARCHITECT. ALL RIGHTS RESERVED.

**verizon**

ROLLING THUNDER  
5205 WAYSIDE ROAD  
RENO, NV 89510

EQUIPMENT LAYOUT PLAN

SHEET TITLE:

Not valid unless signed in ink by licensee.

Revisions:

△ --
△ --
△ --
△ --
△ --

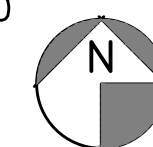
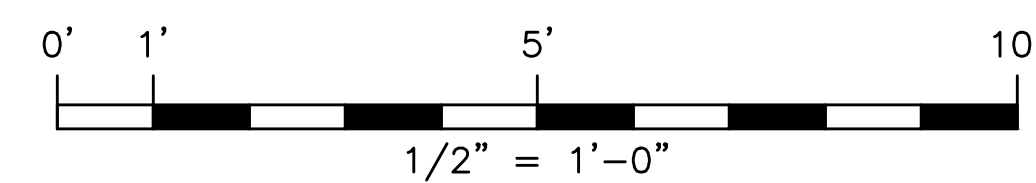
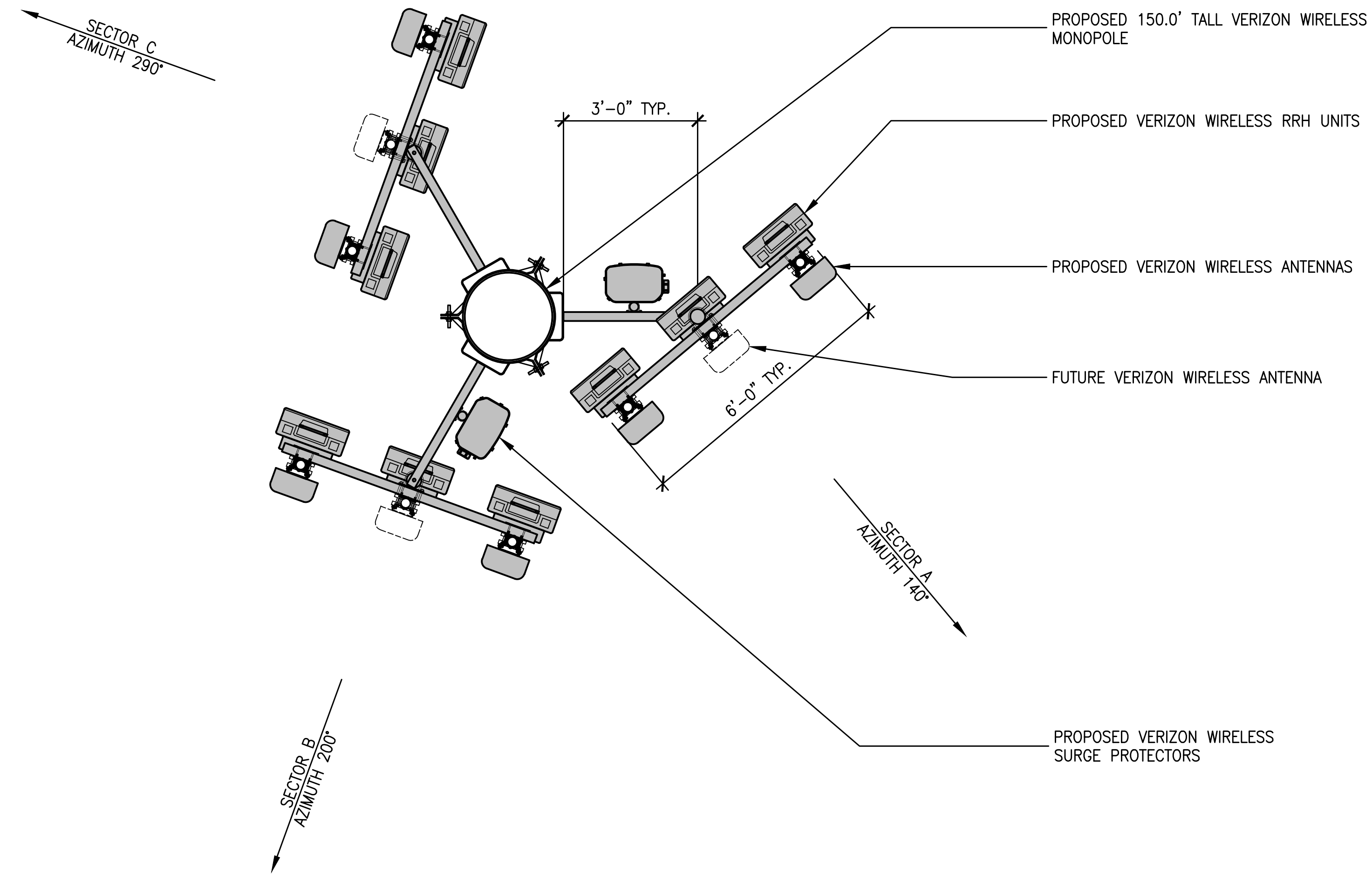
File:162.1800\_A21.dwg  
Drawn By: JCE  
Checked By: TST  
Scale: AS NOTED  
Date: 06/20/2016

Job No. 162.1800

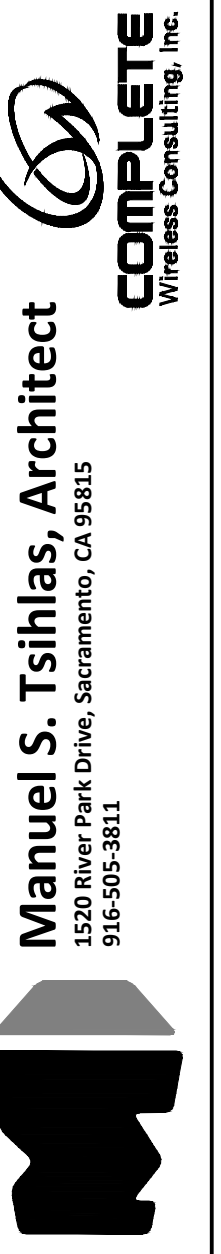
**A2.1**

PROPOSED EQUIPMENT SCHEDULE					
EQUIPMENT	DESCRIPTION	QUANTITY			TOTAL
		SECTOR A	SECTOR B	SECTOR C	
ANTENNA	TO BE DETERMINED	2	2	2	6
RRH	RRUS12 W/A2 OR EQUIVALENT	3	3	3	9
SURGE PROTECTOR/HYBRID	RAYCAP DC3315 / HYBRID TRUNK CABLE	2/2			2/2
RET CABLE	5/16" RET CABLE OR N/A	0			0

FUTURE EQUIPMENT SCHEDULE					
EQUIPMENT	DESCRIPTION	QUANTITY			TOTAL
		SECTOR A	SECTOR B	SECTOR C	
ANTENNA	TO BE DETERMINED	1	1	1	3



1 ANTENNA LAYOUT PLAN  
A2.2 SCALE: 1/2" = 1'-0"



Manuel S. Tsirlas, Architect  
1520 River Park Drive, Sacramento, CA 95815  
916-505-3811

**COMPLETE**  
Wireless Consulting, Inc.  
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF MANUEL S. TSIRLAS ARCHITECT. NO PARTS OF THESE DRAWINGS OR SPECIFICATIONS SHALL BE USED BY ANY PERSONS WITHOUT PRIOR WRITTEN CONSENT OF THE ARCHITECT. COPYRIGHT, MANUEL S. TSIRLAS ARCHITECT. ALL RIGHTS RESERVED.

ROLLING THUNDER  
5205 WAYSIDE ROAD  
RENO, NV 89510



ANTENNA LAYOUT PLAN

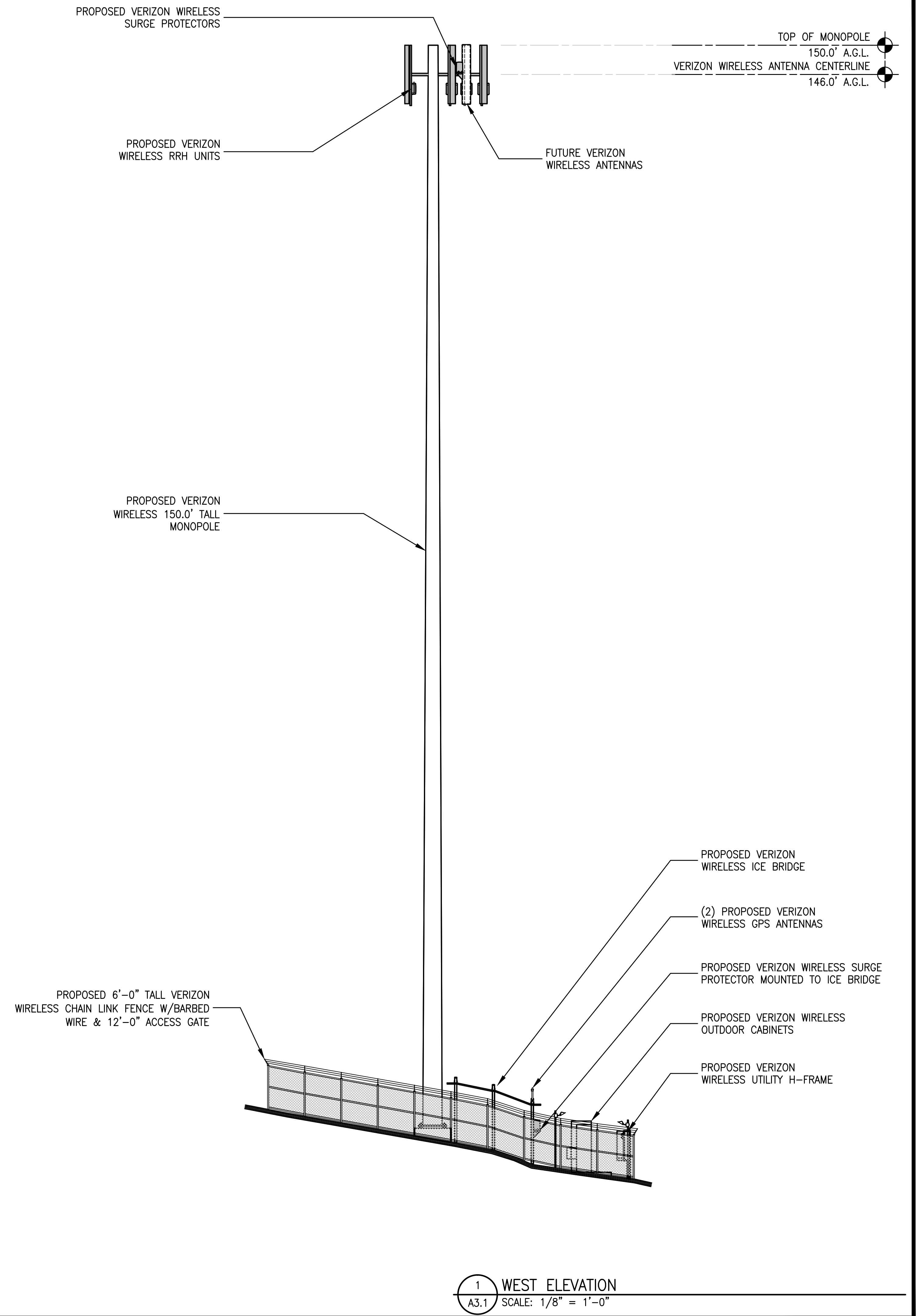
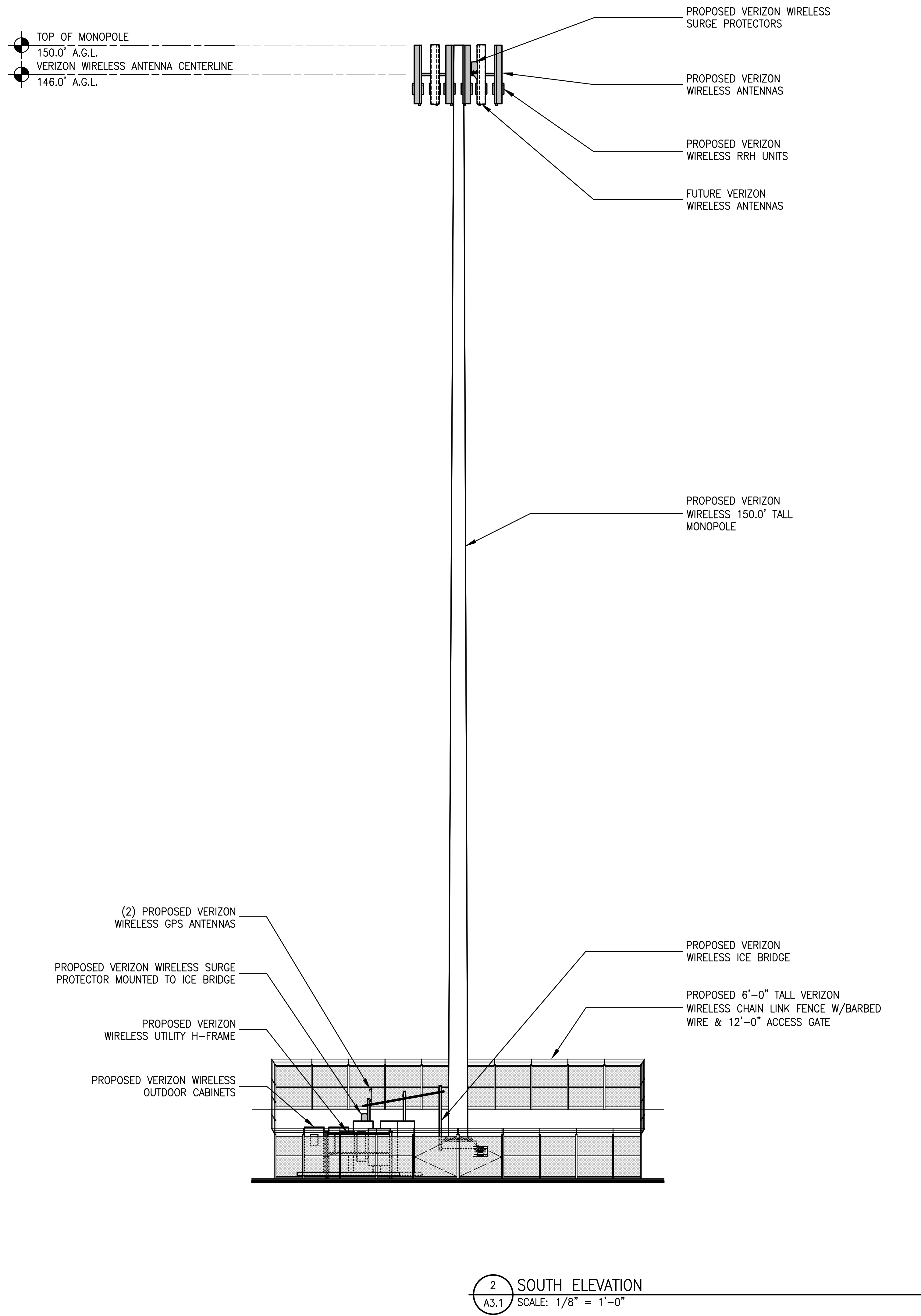
Not valid unless signed in ink by licensee.

Revisions:	
△	--
△	--
△	--
△	--

File:162.1800\_A22.dwg  
Drawn By: MWS  
Checked By: TST  
Scale: AS NOTED  
Date: 06/20/2016

Job No. 162.1800

**A2.2**



**Manuel S. Tshilas, Architect**  
1520 River Park Drive, Sacramento, CA 95815  
916-595-3811

**COMPLETE**  
Wireless Consulting, Inc.

THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF MANUEL S. TSHILAS, ARCHITECT. NO PART OF THESE DRAWINGS OR SPECIFICATIONS SHALL BE USED BY ANY PERSON OR ENTITY ON OTHER PROJECTS WITHOUT WRITTEN CONSENT OF THE ARCHITECT. COPYRIGHT © 2016 MANUEL S. TSHILAS ARCHITECT. ALL RIGHTS RESERVED.

**verizon**

ROLLING THUNDER  
5205 WAYSIDE ROAD  
RENO, NV 89510

PROJECT ELEVATIONS

SHEET TITLE:

Not valid unless signed in ink by licensee.

Revisions:

△	--
△	--
△	--
△	--
△	--

File:162.1800\_A31.dwg  
Drawn By: MWS  
Checked By: TST  
Scale: AS NOTED  
Date: 06/20/2016

Job No. 162.1800

**A3.1**