Application for Zoning/Planning/Subdivision Action

THE CITY OF NOVATO CALIFORNIA

Type of Application – Please Check

- ☐ General Plan Amendment
- ☐ Prezoning
- ☐ Rezoning
- ☐ Master Plan
- ☐ Precise Development Plan
- ☐ Tree Permit
- ☐ Subdivision Tentative Map (5 or more lots)
- ☐ Land Division Tentative Map (4 or fewer lots)
- ☐ Lot Line Adjustment (no new lots)
- ☐ Design Review
- ☐ Use Permit
- ☐ Variance
- ☐ Accessory Dwelling Unit
- ☐ Sign Review
- ☐ Certificate of Compliance
- ☑ Other WIRELESS FACILITY MODIFICATION

Applicant Required Information

1. Assessor's Parcel No(s).: 155-020-42 Existing Zoning: _____
2. Property Address: 5480A NAVE DR NOVATO, CA 94949
3. Property Owner a) Name: MELVIN DAGOVITZ & ANGELA DAGOVITZ C/O LOSK COMMERCIAL REAL ESTATE Phone: _____
   b) Address: 100 GALLI DR., STE 2 NOVATO, CA 94949
   c) Email address: _____
4. Applicant (If Different than Owner)
   a) Name: AT&T MOBILITY - GENESIS ALBAN AUTHORIZED AGENT Phone: 925.490.4788
   b) Address: 2552 WALNUT AVE SUITE 200 TUSTIN CA 92780
   c) Email address: GENESIS.ALBAN@PRAMIRA.COM
5. Name of Project (If Applicable): AT&T MODIFICATION
6. Property Size: _____
7. Type of Use Proposed (Office, Residential, Etc.): NO CHANGE TO EXISTING USE
8. Square Footage of Each Use or Number of Units if Residential: _____
9. Purpose of Application (Brief Statement of What You Want to Accomplish): ELIGIBLE FACILITY REQUEST UNDER SPECTRUM ACT SECTION 6409 REMOVAL/REPLACEMENT OF EXISTING ANTENNAS/RRUS/UPDATES TO CABINETS WITHIN EXISTING LEASE AREA

(Attach Separate Sheets If Needed)

10. Signature Genesis Alban
    - ☐ Owner ☑ Applicant (Note: If applicant signs, an authorization signed by the owner must be attached.)

Important: Please complete Agreement for Payment of Full Cost Recovery Fees for Application Processing.

Note: Information sheets describing the review process and the additional information required for a specific type of application are available at the Novato Department of Community Development, 922 Machin Avenue, (415) 899-8989, www.novato.org

Do Not Write Below This Line

DEPARTMENTAL INFORMATION

Application Number(s):_____

Received by:_____ Date:_____ Planning ☐ Fee ☐ Deposit: $_____

Deemed Complete by:_____ Date:_____ Plan Storage $_____

Application Acted On By:_____ Date:_____ PW/Engineering Fee ☐ No ☐ Yes: $_____

Receipt #_____

Date_____

C.R.#_____ Initials_____

Action:_____

5/24/22

City of Novato Planning Department
922 Machin Ave. Novato, CA 94945

Re: New Cingular Wireless PCS, LLC (*"*AT&T*"*) building permit application ("Application") for collocation at the existing wireless telecommunications facility located at 5480A NAVE DR ("NOVATO").

Dear City of Novato Planning Department:

AT&T is seeking to modify the exiting wireless site at the above-referenced address. We are submitting this application as an eligible facilities request under Section 6409, referenced below. Please find enclosed the following documents in support of our application to obtain the building permit:

1. Planning Application
2. Excerpt from the FCC Order regarding 6409
3. Signed and Stamped Construction Drawings
4. RF Report
5. Photosimulations
6. Project Narrative

Section 6409 of the Federal Middle Class Tax Relief and Job Creation Act ("Section 6409") was adopted in 2012. Under Section 6409, your city retains discretionary zoning review over the construction of *new* towers, but simple collocations and/or equipment upgrades at existing telecommunications facilities must be approved. The new law provides that:

> "**a State or local government** may not deny, and **shall approve**, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station." (Emphasis added.)

The federal law defines an "eligible facilities request" as "(A) **collocation of new transmission equipment**; (B) **removal of transmission equipment;** or (C) **replacement of transmission equipment."** (Emphasis added.)

Also, the Federal Communications Commission issued a Wireless Infrastructure Report and Order on October 17, 2014 ("FCC Order") which established regulations that clarify and streamline the municipal approval process for eligible facilities requests under Section 6409. A copy of the FCC Order is enclosed herewith.

The FCC Order clarifies that municipal review of an eligible facilities request is **limited to determining whether the request falls within Section 6409:**

> "a State or local government may require the applicant to provide documentation or information **only to the extent reasonably related to determining whether the request meets the requirements of this section** [Section 6409]. A State or local government **may not require an applicant to submit any other documentation**, including but not limited to documentation intended to illustrate the need for such wireless facilities or to justify the business decision to modify such wireless facilities."47 C.F.R. 1.40001(c)(1) (Emphasis added).

AT&T's Application is an Eligible Facilities Request under Section 6409

AT&T's application qualifies as an eligible facilities request under Section 6409 because the proposed installation involves "a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station."

As shown on the plans prepared by Pramira AT&T's proposed installation consist principally of the following elements:

AT ANTENNA LEVEL:
· REMOVE (4) (E) KATHREIN PANEL ANTENNA, (2) PER SECTOR (4) TOTAL.
· REMOVE (2) (E) KATHREIN PANEL ANTENNA, (1) PER SECTOR (2) TOTAL.
· REMOVE (2) (E) RRUS-11 B12 (1) PER SECTOR (2) TOTAL.
· REMOVE (2) (E) RRUS-12 B2 (1) PER SECTOR (2) TOTAL.
· INSTALL (2) (N) COMMSCOPE PANEL ANTENNA, (1) PER SECTOR, (2) TOTAL.
· INSTALL (2) (N) QUINTEL PANEL ANTENNA, (1) PER SECTOR, (2) TOTAL.
· INSTALL (2) (N) ERICSSON PANEL ANTENNA,(1) PER SECTOR (2) TOTAL
· INSTALL (2) (N) ERICSSON CBAND AIR PANEL ANTENNA, (1) PER SECTOR (2) TOTAL
· INSTALL (2) (N) RRUS-4478 B14, (1) PER SECTOR (2) TOTAL.
· INSTALL (2) (N) RRUS-4449 B5/B12, (1) PER SECTOR (2) TOTAL.
· INSTALL (2) (N) RRUS-4415 B25, (1) PER SECTOR (2) TOTAL.
· INSTALL (1) (N) DC9 SQUID SURGE SUPPRESSOR, (1) TOTAL.
AT EQUIPMENT LEVEL:
· INSTALL (1) (N) STRING OF 165AH BATTERIES WITHIN (E) BATTERY RACK.
· INSTALL (2) (N) RECTIFIERS WITHIN DC POWER PLANT.
· INSTALL (1) (N) DC POWER SHELF.
· INSTALL (1) (N) POWER AND (1) (N) FIBER TRUNK.
· INSTALL CAUTION SIGNS AS REQUIRED

Accordingly, AT&T's installation involves **the replacement of transmission equipment/removal of transmission equipment.** As a result, the installation "does not substantially change the physical dimensions of such tower or base station." Therefore, these proposed equipment upgrades constitute an "eligible facilities request" under Section 6409, and must be approved.

Timeline for Review and Approval

We would like to highlight an important timing requirement for processing this application. The FCC Order determined that **a municipality must act on an eligible facilities request within sixty (60) days of receiving the application**. 47 C.F.R. 1.40001(c)(2) (Emphasis added).

(Note, the sixty (60)-day period is also known as the "Shot Clock"). Thus, the city must approve this application within sixty (60) days of its receipt. The FCC Order provides that upon a municipality's failure to act prior to expiration of the Shot Clock, the **"request shall be deemed granted"** and AT&T will be legally entitled to proceed with construction. 47 C.F.R. 1.40001(c)(4) (Emphasis added).

Note that the FCC Order does allow the Shot Clock to be tolled if an application is incomplete. However, in order to do so, a municipality must provide written notice that the application is incomplete within thirty (30) days of the submittal. 47 C.F.R. 1.40001(c)(3)(i). The notice must "clearly and specifically" describe the missing documents or information, 47 C.F.R. 1.40001(c)(3)(i), and, as previously mentioned, such documentation must be necessary to the determination of whether the application qualifies as an eligible facilities request. If the municipality requests additional information after the first thirty (30) days have passed, we will still provide any "reasonably related" information allowed under the FCC Order, but the Shot Clock will not be tolled.

In light of the foregoing, AT&T respectfully requests that its proposed wireless site modification be approved pursuant to Section 6409.

If the City of Novato believes that AT&T's application does not qualify as an eligible facilities request under Section 6409, please let me know immediately. Otherwise, if you have any questions, please feel free to call or email me. Thank you for your cooperation.

Sincerely,

Genesis Alban
Site Acquisition Specialist
Office: 800.678.1169 ext. 2128
Cell: 925.490.4788
Genesis.Alban@Pramira.com

Pramira

Eligibility Justification & Project Narrative

Explain how the existing tower or base station is to be modified, including addressing the following items:

a) Does the modification increase the overall height of the tower or base station? If so, describe the proposed height increase;
The current height= 45' this project does not propose additional height to the monopole.

b) Does the modification increase the width and/or protrusions of appurtenances and/or transmission equipment from the tower or base station? If so, describe the increases in width and/or protrusions;
No additional width will be added to the existing monopole.

c) Does the modification involve the installation of new ground-mounted equipment cabinets where no such equipment cabinets were previously permitted? If so, describe all new ground-mounted equipment cabinets, including the number of such cabinets;
No new cabinets are proposed to be installed.

d) Does the modification involve the installation of any new ground-mounted equipment cabinets that are larger in height and/or volume than any existing ground-mounted equipment cabinets? If so, describe the increases in height and/or volume versus existing ground-mounted equipment cabinets;
Not applicable

e) Does the modification involve any excavations and/or deployment of wireless equipment outside the boundaries of the existing permitted facility, including any physical, wireline, and/or interconnections to other locations? If so, describe such modifications;
Not applicable

f) Explain how the requested modification of the tower or base station does not defeat any previously proposed, observed, or required concealment (stealth) elements from the prior permit(s) authorizing the existing facility; and

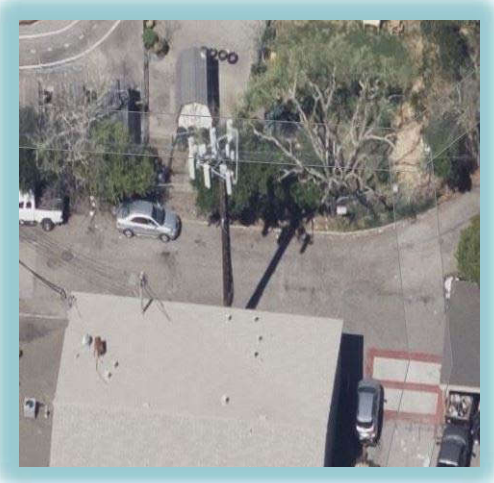
f) Explain how the requested modification(s) to the tower or base station complies with any proposed improvements, circumstances, and/or required conditions of approval from the prior permit(s) authorizing the existing facility, including proposed means of maintaining concealment elements of the existing facility.
The proposed project complies with previous approval concealment elements.

Radio Frequency – Electromagnetic Energy (RF-EME) Compliance Report

Site No. CCL00339
MRSFR087349/MRSFR087290/MRSFR087352/
MRSFR087291/MRSFR087282/MRSFR085594/ MRSFR087288
South Novato 1 - Nave Dr
5480A Nave Drive
Novato, California 94949
Marin County
38.05172810; -122.52973690 NAD83
Monopole

The proposed AT&T installation will be in compliance with FCC regulations upon proper installation of recommended signage.

EBI Project No. 6222002195
April 7, 2022



Prepared for:

AT&T Mobility, LLC
c/o Ericsson, Inc.
340 Commerce, Suite 250
Irvine, CA 92602

Prepared by:

EBI Consulting
environmental | engineering | due diligence

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APPENDICES

EXECUTIVE SUMMARY

Purpose of Report

EnviroBusiness Inc. (dba EBI Consulting) has been contracted by AT&T Mobility, LLC to conduct radio frequency electromagnetic (RF-EME) modeling for AT&T Site CCL00339 located at 5480A Nave Drive in Novato, California to determine RF-EME exposure levels from proposed AT&T wireless communications equipment at this site. As described in greater detail in Section 1.0 of this report, the Federal Communications Commission (FCC) has developed Maximum Permissible Exposure (MPE) Limits for general public exposures and occupational exposures. This report summarizes the results of RF-EME modeling in relation to relevant FCC RF-EME compliance standards for limiting human exposure to RF-EME fields.

This report contains the RF EME analysis for the site, including the following:

- Site Plan with antenna locations
- Graphical representation of theoretical MPE fields based on modeling
- Graphical representation of recommended signage and/or barriers

This document addresses the compliance of AT&T's transmitting facilities independently and in relation to all collocated facilities at the site.

Statement of Compliance

A site is considered out of compliance with FCC regulations if there are areas that exceed the FCC exposure limits and there are no RF hazard mitigation measures in place. Any carrier which has an installation that contributes more than 5% of the applicable MPE must participate in mitigating these RF hazards.

As presented in the sections below, based on worst-case predictive modeling, there are no modeled exposures on any accessible rooftop or ground walking/working surface related to ATT's proposed antennas that exceed the FCC's occupational and/or general public exposure limits at this site.

As such, the proposed AT&T installation is in compliance with FCC regulations upon proper installation of recommended signage and/or barriers.

AT&T Recommended Signage/Compliance Plan

AT&T's RF Exposure: Responsibilities, Procedures & Guidelines document, dated October 28, 2014, requires that:

1. All sites must be analyzed for RF exposure compliance;
2. All sites must have that analysis documented; and
3. All sites must have any necessary signage and barriers installed.

Site compliance recommendations have been developed based upon protocols presented in AT&T's RF Exposure: Responsibilities, Procedures & Guidelines document, dated October 28, 2014, additional guidance provided by AT&T, EBI's understanding of FCC and OSHA requirements, and common industry practice. Barrier locations have been identified (when required) based on guidance presented in AT&T's RF Exposure: Responsibilities, Procedures & Guidelines document, dated October 28, 2014.

The following signage is recommended at this site:

- Yellow CAUTION 2B sign posted at the base of the monopole.

The signage proposed for installation at this site complies with AT&T's RF Exposure: Responsibilities, Procedures & Guidelines document and therefore complies with FCC and OSHA requirements. Barriers are not recommended on this site. To reduce the risk of exposure and/or injury, EBI recommends that access to the monopole or areas associated with the active antenna installation be restricted and secured where possible. More detailed information concerning site compliance recommendations is presented in Section 4.0 and Appendix B of this report.

1.0 FEDERAL COMMUNICATIONS COMMISSION (FCC) REQUIREMENTS

The FCC has established Maximum Permissible Exposure (MPE) limits for human exposure to Radiofrequency Electromagnetic (RF-EME) energy fields, based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP) and, over a wide range of frequencies, the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc. (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC guidelines incorporate two separate tiers of exposure limits that are based upon occupational/controlled exposure limits (for workers) and general public/uncontrolled exposure limits for members of the general public.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/ controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general public/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

General public/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment-related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Table 1 and Figure 1 (below), which are included within the FCC's OET Bulletin 65, summarize the MPE limits for RF emissions. These limits are designed to provide a substantial margin of safety. They vary by frequency to take into account the different types of equipment that may be in operation at a particular facility and are "time-averaged" limits to reflect different durations resulting from controlled and uncontrolled exposures.

The FCC's MPEs are measured in terms of power (mW) over a unit surface area (cm^2). Known as the power density, the FCC has established an occupational MPE of 5 milliwatts per square centimeter (mW/cm^2) and an uncontrolled MPE of 1 mW/cm2 for equipment operating in the 1900 MHz frequency range. For the AT&T equipment operating at 850 MHz, the FCC's occupational MPE is 2.83 mW/cm^2 and an uncontrolled MPE of 0.57 mW/cm^2. For the AT&T equipment operating at 700 MHz, the FCC's occupational MPE is 2.33 mW/cm^2 and an uncontrolled MPE of 0.47 mW/cm^2. These limits are considered protective of these populations.

Table 1: Limits for Maximum Permissible Exposure (MPE)

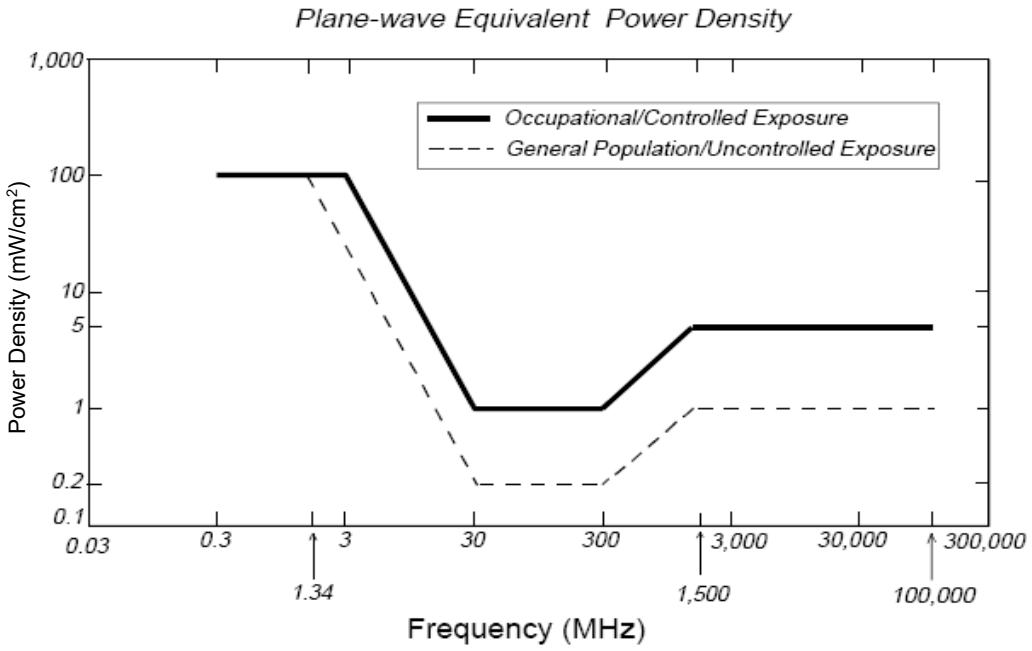
(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $[E]^2$, $[H]^2$, or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1,500	--	--	f/300	6
1,500-100,000	--	--	5	6

(B) Limits for General Public/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (E) (V/m)**	**Magnetic Field Strength (H) (A/m)**	**Power Density (S) (mW/cm^2)**	**Averaging Time $[E]^2$, $[H]^2$, or S (minutes)**
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1,500	--	--	f/1,500	30
1,500-100,000	--	--	1.0	30

f = Frequency in (MHz)
* Plane-wave equivalent power density

Figure 1. FCC Limits for Maximum Permissible Exposure (MPE)



Based on the above, the most restrictive thresholds for exposures of unlimited duration to RF energy for several personal wireless services are summarized below:

Personal Wireless Service	Approximate Frequency	Occupational MPE	Public MPE
Microwave (Point-to-Point)	5,000 - 80,000 MHz	5.00 mW/cm^2	1.00 mW/cm^2
Broadband Radio (BRS)	2,600 MHz	5.00 mW/cm^2	1.00 mW/cm^2
Wireless Communication (WCS)	2,300 MHz	5.00 mW/cm^2	1.00 mW/cm^2
Advanced Wireless (AWS)	2,100 MHz	5.00 mW/cm^2	1.00 mW/cm^2
Personal Communication (PCS)	1,950 MHz	5.00 mW/cm^2	1.00 mW/cm^2
Cellular Telephone	870 MHz	2.90 mW/cm^2	0.58 mW/cm^2
Specialized Mobile Radio (SMR)	855 MHz	2.85 mW/cm^2	0.57 mW/cm^2
Long Term Evolution (LTE)	700 MHz	2.33 mW/cm^2	0.47 mW/cm^2
Most Restrictive Frequency Range	30-300 MHz	1.00 mW/cm^2	0.20 mW/cm^2

MPE limits are designed to provide a substantial margin of safety. 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.

Personal Communication (PCS) facilities used by AT&T in this area operate within a frequency range of 700-1900 MHz. Facilities typically consist of: 1) electronic transceivers (the radios or cabinets) connected to wired telephone lines; and 2) antennas that send the wireless signals created by the transceivers to be received by individual subscriber units (PCS telephones). Transceivers are typically connected to antennas by coaxial cables.

Because of the short wavelength of PCS services, the antennas require line-of-site paths for good propagation, and are typically installed above ground level. Antennas are constructed to concentrate energy towards the horizon, with as little energy as possible scattered towards the ground or the sky. This design, combined with the low power of PCS facilities, generally results in no possibility for exposure to approach Maximum Permissible Exposure (MPE) levels, with the exception of areas directly in front of the antennas.

2.0 AT&T RF EXPOSURE POLICY REQUIREMENTS

AT&T's RF Exposure: Responsibilities, Procedures & Guidelines document, dated October 28, 2014, requires that:

1. All sites must be analyzed for RF exposure compliance;
2. All sites must have that analysis documented; and
3. All sites must have any necessary signage and barriers installed.

Pursuant to this guidance, worst-case predictive modeling was performed for the site. This modeling is described below in Section 3.0. Lastly, based on the modeling and survey data, EBI has produced a Compliance Plan for this site that outlines the recommended signage and barriers. The recommended Compliance Plan for this site is described in Section 4.0.

3.0 WORST-CASE PREDICTIVE MODELING

In accordance with AT&T's RF Exposure policy, EBI performed theoretical modeling using RoofMaster™ software to estimate the worst-case power density at the site rooftop and ground-level and/or nearby rooftops resulting from operation of the antennas. RoofMaster™ is a widely-used predictive modeling program that has been developed to predict RF power density values for rooftop and tower telecommunications sites produced by vertical collinear antennas that are typically used in the cellular, PCS, paging and other communications services. Using the computational methods set forth in Federal Communications (FCC) Office of Engineering & Technology (OET) Bulletin 65, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields" (OET-65), RoofMaster™ calculates predicted power density in a scalable grid based on the contributions of all RF sources characterized in the study scenario. At each grid location, the cumulative power density is expressed as a percentage of the FCC limits. Manufacturer antenna pattern data is utilized in these calculations. RoofMaster™ models consist of the Far Field model as specified in OET-65 and an implementation of the OET-65 Cylindrical Model (Sula9). The models utilize several operational specifications for different types of antennas to produce a plot of spatially-averaged power densities that can be expressed as a percentage of the applicable exposure limit. A statistical power factor may be applied to the antenna system based on guidance from the carrier and system manufacturers.

For this report, EBI utilized antenna and power data provided by AT&T and compared the resultant worst-case MPE levels to the FCC's occupational/controlled exposure limits outlined in OET Bulletin 65.

The assumptions used in the modeling are based upon information provided by AT&T and information gathered from other sources. There are no other wireless carriers with equipment installed at this site.

Based on worst-case predictive modeling, there are no modeled exposures on any accessible rooftop or ground walking/working surface related to ATT's proposed antennas that exceed the FCC's occupational and/or general public exposure limits at this site.

At the nearest walking/working surfaces to the AT&T antennas on the main roof level, the maximum power density generated by the AT&T antennas is approximately 98.68 percent of the FCC's general public limit (19.74 percent of the FCC's occupational limit). The composite exposure level from all carriers on this site is approximately 98.68 percent of the FCC's general public limit (19.74 percent of the FCC's occupational limit) at the nearest walking/working surface to each antenna. Based on worst-case predictive modeling, there are no areas at ground/street level related to the proposed AT&T antennas that exceed the FCC's occupational or general public exposure limits at this site. At ground/street level, the maximum power density generated by the antennas is approximately 41.65 percent of the FCC's general public limit (8.33 percent of the FCC's occupational limit).

A graphical representation of the RoofMaster™ modeling results is presented in Appendix B.

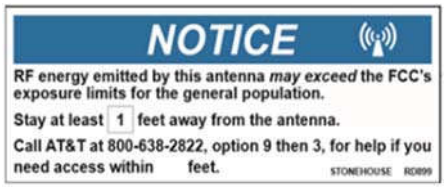
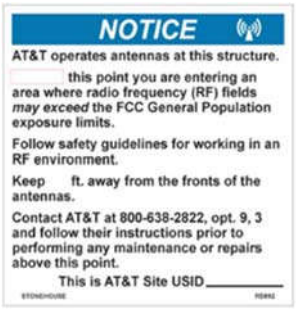
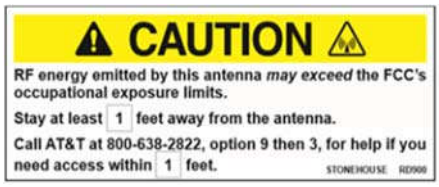
Microwave dish antennas are designed for point-to-point operations at the elevations of the installed equipment rather than ground-level coverage. Based on AT&T's RF Exposure: Responsibilities, Procedures & Guidelines document, dated October 28, 2014, microwave antennas are considered compliant if they are higher than 20 feet above any accessible walking/working surface. There are no microwaves installed at this site.

4.0 RECOMMENDED SIGNAGE/COMPLIANCE PLAN

Signs are the primary means for control of access to areas where RF exposure levels may potentially exceed the MPE. As presented in the AT&T guidance document, the signs must:

- Be posted at a conspicuous point;
- Be posted at the appropriate locations;
- Be readily visible; and
- Make the reader aware of the potential risks prior to entering the affected area.

The table below presents the signs that may be used for AT&T installations.

CRAN / HETNET Small Cell Decals / Signs		Alerting Signs	
	**NOTICE DECAL**	 **TRILINGUAL NOTICE**	 **NOTICE 2**
	**NOTICE SIGN**	 **CAUTION 2 – ROOFTOP**	 **CAUTION 2A**
	**CAUTION DECAL**	 **CAUTION 2B - TOWER**	 **CAUTION 2C - PARAPETS**
	**CAUTION SIGN**	 **WARNING 1B**	 **WARNING 2A**

Based upon protocols presented in AT&T's RF Exposure: Responsibilities, Procedures & Guidelines document, dated October 28, 2014, and additional guidance provided by AT&T, the following signage is recommended on the site:

- Yellow CAUTION 2B sign posted at the base of the monopole.

No barriers are required for this site. Barriers should be constructed of weather-resistant plastic or wood fencing. Barriers may consist of railing, rope, chain, or weather-resistant plastic if no other types are permitted or are feasible. Painted stripes should only be used as a last resort and only in regions where there is little chance of snowfall. If painted stripes are selected as barriers, it is recommended that the stripes and signage be illuminated. The signage and any barriers are graphically represented in the Signage Plan presented in Appendix B.

5.0 SUMMARY AND CONCLUSIONS

EBI has prepared this Radiofrequency Emissions Compliance Report for the proposed AT&T telecommunications equipment at the site located at 5480A Nave Drive in Novato, California.

EBI has conducted theoretical modeling to estimate the worst-case power density from AT&T antennas to document potential MPE levels at this location and ensure that site control measures are adequate to meet FCC and OSHA requirements, as well as AT&T's corporate RF safety policies. As presented in the preceding sections, based on worst-case predictive modeling, there are no modeled exposures on any accessible rooftop or ground walking/working surface related to ATT's proposed antennas that exceed the FCC's occupational and/or general public exposure limits at this site.

To reduce the risk of exposure and/or injury, EBI recommends that access to the monopole or areas associated with the active antenna installation be restricted and secured where possible. Signage is recommended at the site as presented in Section 4.0 and Appendix B. Posting of the signage brings the site into compliance with FCC rules and regulations and AT&T's corporate RF safety policies.

6.0 LIMITATIONS

This report was prepared for the use of AT&T Mobility, LLC to meet requirements outlined in AT&T's corporate RF safety guidelines. It was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same locale under like circumstances. The conclusions provided by EBI and its partners are based solely on information supplied by AT&T, including modeling instructions, inputs, parameters and methods. Calculations, data, and modeling methodologies for C Band equipment Include a statistical factor reducing the power to 32% of maximum theoretical power to account for spatial distribution of users, network utilization, time division duplexing, and scheduling time. AT&T recommends the use of this factor based on a combination of guidance from its antenna system manufacturers, supporting international industry standards, industry publications, and its extensive experience. The observations in this report are valid on the date of the investigation. Any additional information that becomes available concerning the site should be provided to EBI so that our conclusions may be revised and modified, if necessary. This report has been prepared in accordance with Standard Conditions for Engagement and authorized proposal, both of which are integral parts of this report. No other warranty, expressed or implied, is made.

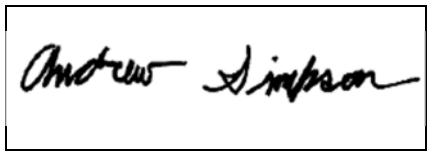
Appendix A

Personnel Certifications

Preparer Certification

I, Andrew Simpson, state that:

- I am an employee of EnviroBusiness Inc. (d/b/a EBI Consulting), which provides RF-EME safety and compliance services to the wireless communications industry.
- I have successfully completed RF-EME safety training, and I am aware of the potential hazards from RF-EME and would be classified "occupational" under the FCC regulations.
- I am fully aware of and familiar with the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation.
- I have been trained in on the procedures outlined in AT&T's RF Exposure: Responsibilities, Procedures & Guidelines document (dated October 28, 2014) and on RF-EME modeling using RoofMaster™ modeling software.
- I have reviewed the data provided by the client and incorporated it into this Site Compliance Report such that the information contained in this report is true and accurate to the best of my knowledge.



Reviewed and Approved by:

sealed 07apr2022

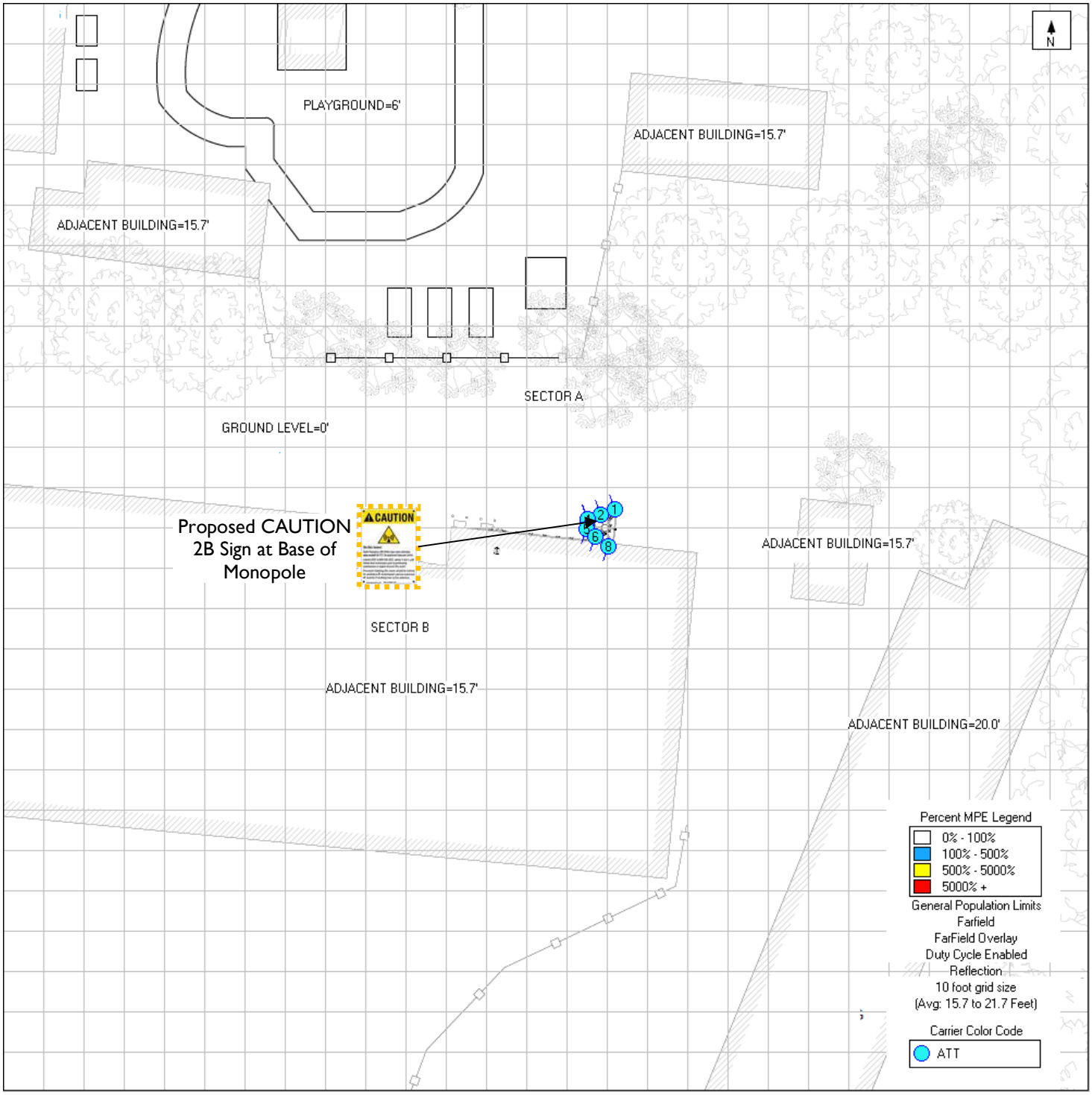
Michael McGuire
Electrical Engineer
mike@h2dc.com

Note that EBI's scope of work is limited to an evaluation of the Radio Frequency – Electromagnetic Energy (RF-EME) field generated by the antennas and broadcast equipment noted in this report. The engineering and design of the building and related structures, as well as the impact of the antennas and broadcast equipment on the structural integrity of the building, are specifically excluded from EBI's scope of work.

Appendix B

Compliance/Signage Plan

Nearest Walking Surface Simulation



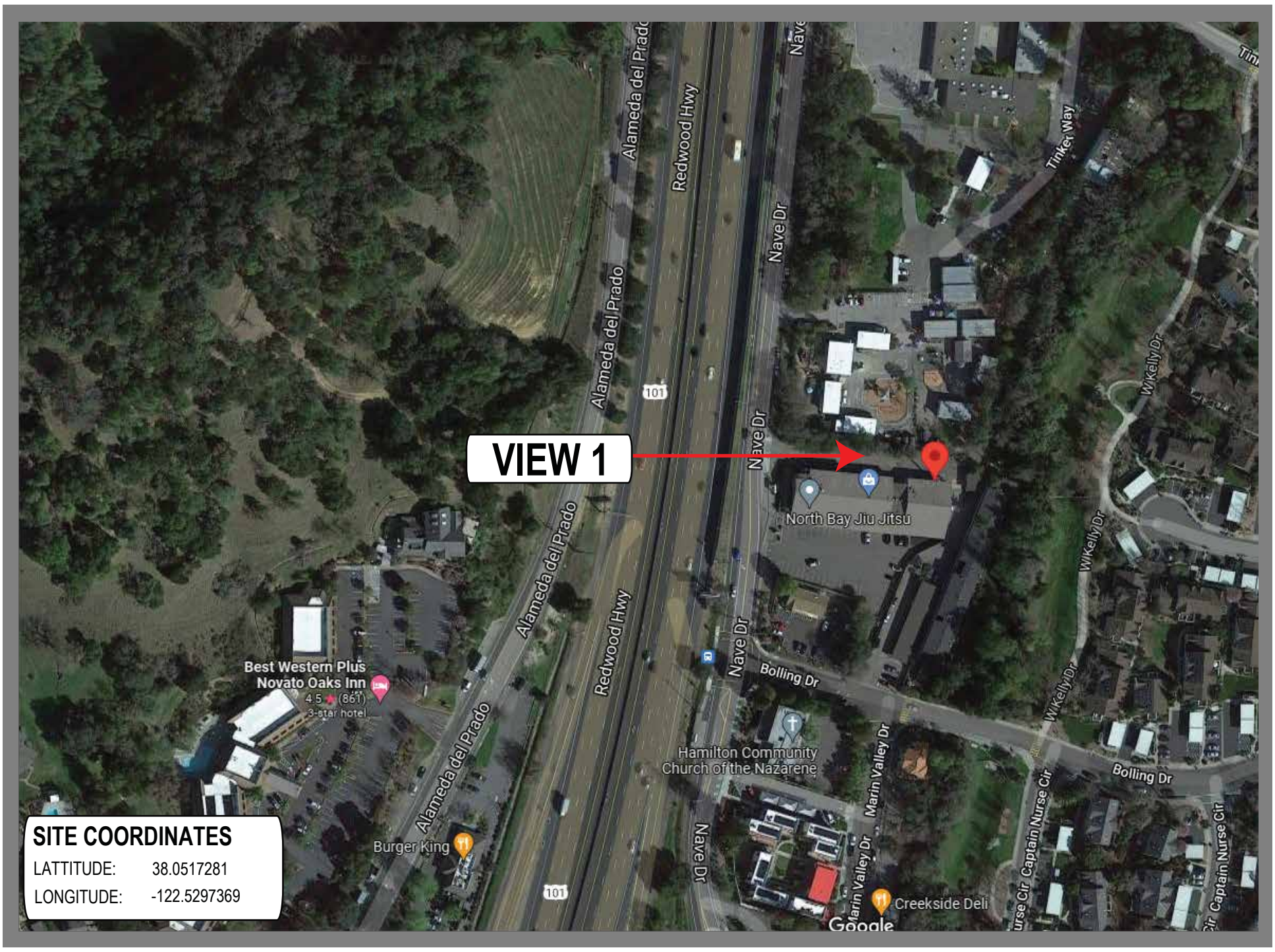
Existing Sign	
Proposed Sign	
Installed Sign	

SIGN IDENTIFICATION LEGEND			
	AT&T NOTICE 2 Sign		AT&T CAUTION 2 – Rooftop Sign
	AT&T WARNING 1B and 2A Signs		AT&T CAUTION 2B – Tower Sign
	AT&T NOTICE Small Cell Signs		AT&T CAUTION 2C – Parapet Sign
	AT&T CAUTION Small Cell Signs		AT&T TRILINGUAL NOTICE Sign

SHOT MAP

SPRINT NODE: CCL00339

PROJECT NAME: SOUTH NOVATO 1 - NAVE DR



SITE COORDINATES

LATTITUDE: 38.0517281

LONGITUDE: -122.5297369

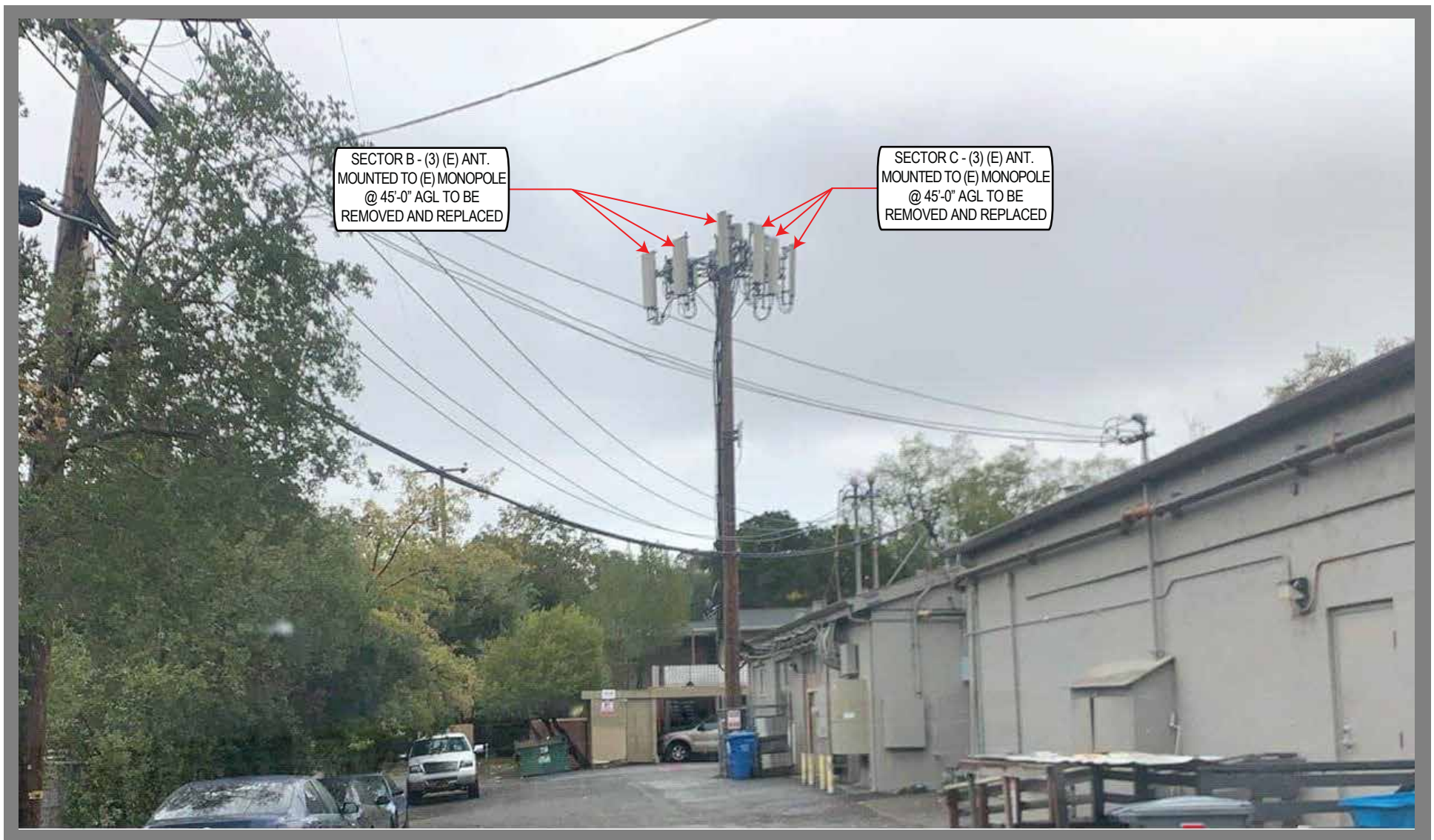
VIEW 1

CCL00339

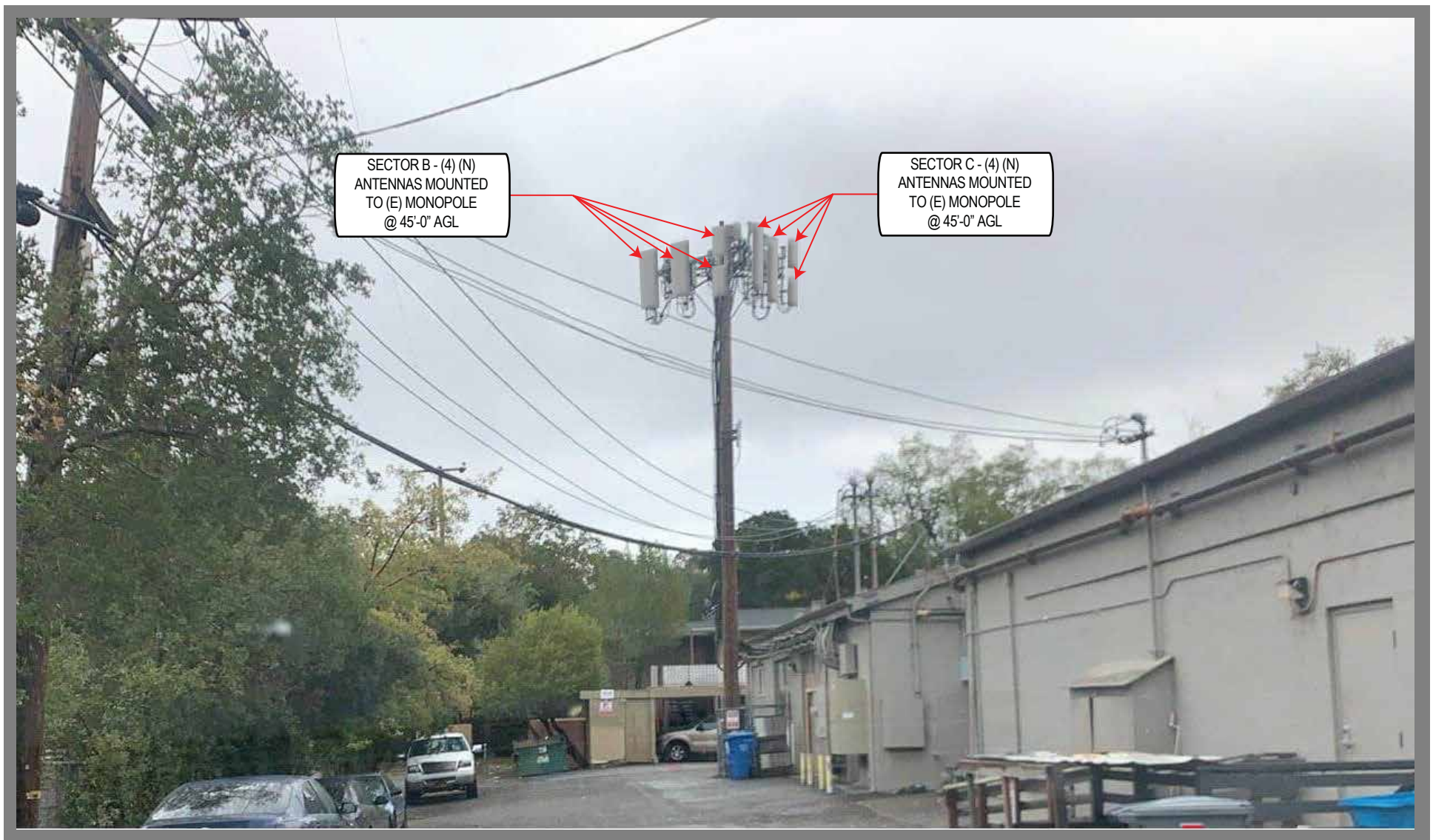
SOUTH NOVATO 1 - NAVE DR

5480A NAVE DR
NOVATO, CA 94949

2552 WALNUT AVE, SUITE 200A
TUSTIN, CA 92780



EXISTING



PROPOSED

CCL00339
SOUTH NOVATO 1 - NAVE DR
5480A NAVE DR
NOVATO, CA 94949

VIEW 1: LOOKING EAST INSIDE SITE PREMISES

Pramira
NETWORK EVOLUTION SIMPLIFIED

2552 WALNUT AVE, SUITE 200A
TUSTIN, CA 92780

ENGINEERING

2019 CALIFORNIA BUILDING CODE
2019 CALIFORNIA FIRE CODE
2019 CALIFORNIA MEP CODE
2019 CALIFORNIA MECHANICAL CODE
2019 CALIFORNIA PLUMBING CODE
2019 CALIFORNIA ELECTRICAL CODE
2019 CALIFORNIA ENERGY CODE
2019 CALIFORNIA GREEN BUILDING STANDARDS CODE
TIA-222-H

GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

SITE INFORMATION

SITE NAME:	SOUTH NOVATO 1 - NAVE DR
SITE #:	CCL00339
SITE ADDRESS:	5480A NAVE DR NOVATO, CA 94949
COUNTY:	MARIN
JURISDICTION:	CITY OF NOVATO
PROPOSED USE:	UNMANNED TELECOMMUNICATION FACILITY
APN:	155-020-42
CURRENT ZONING:	-
STRUCTURE HEIGHT:	45'-0"
CONSTRUCTION TYPE:	-
PROPERTY OWNER:	MELVIN DAGOVITZ & ANGELA DAGOVITZ C/O LOSK COMMERCIAL REAL ESTATE 100 GALLI DR., STE 2 NOVATO, CA 94949
APPLICANT:	AT&T 5001 EXECUTIVE PARKWAY, SAN RAMON, CA 94583
UTILITY POWER:	PG&E
UTILITY TELEPHONE:	AT&T
LATITUDE:	38.0517281
LONGITUDE:	-122.5297369
LAT/LONG TYPE:	NAD 83
GROUND ELEVATION:	±60.8'

PROJECT TEAM

RF ENGINEER:
CONTACT: TARUN SETHI
PHONE: -
EMAIL: TS458V@ATT.COM

CONSTRUCTION MANAGER:
CONTACT: ERIC WILLIAMS
PHONE: 949-648-3131
EMAIL: ERIC.A.WILLIAMS@ERICSSON.COM

A&E:
CONTACT: MARIA MORRIS
PHONE: 800-678-1169 EXT. 2063; 714-292-4636
EMAIL: MARIA.MORRIS@PRAMIRA.COM

PERMITTING:
PRAMIRA
ADDRESS: 2552 WALNUT AVE, SUITE 200, TUSTIN, CA 92780
CONTACT: GENESIS ALBAN
PHONE: 800-678-1169 EXT. 2128; 925-490-4788
EMAIL: GENESIS.ALBAN@PRAMIRA.COM

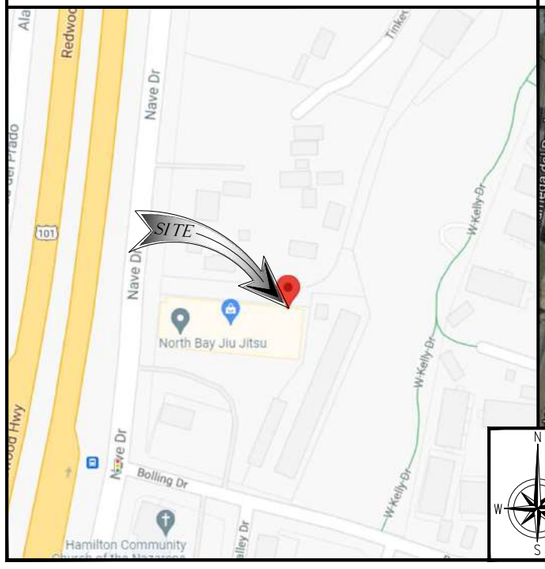
LEASING:
PRAMIRA
ADDRESS: 2552 WALNUT AVE, SUITE 200, TUSTIN, CA 92780
CONTACT: GLORIA SHIN
PHONE: 213-392-4003
EMAIL: GLORIA.SHIN@PRAMIRA.COM

FA CODE: 10088149 SITE ID: CCL00339
USID:13002
SITE NAME: SOUTH NOVATO 1 - NAVE DR
5480A NAVE DR
NOVATO, CA 94949
SITE TYPE: 45'-0" MONOPOLE/ INDOOR EQUIP.

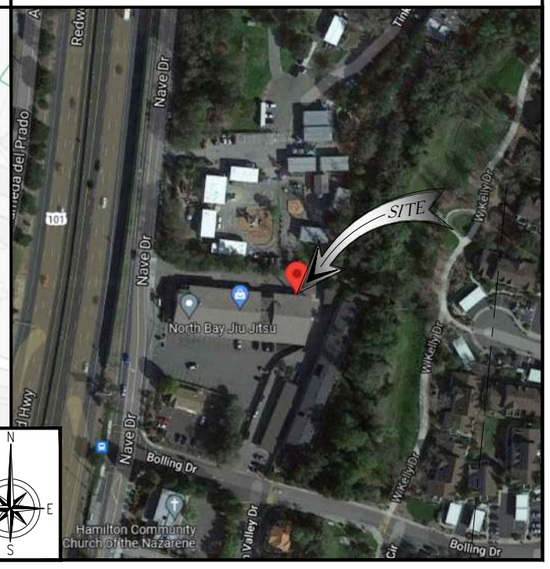
PACE ID	TECHNOLOGIES	PTN
MRSFR087349	5G NR UPGRADE	3701A113TB
MRSFR087290	LTE 5C	3701A11371
MRSFR087352	4TXRX ANTENNA RETROFIT	3701A1134Q
MRSFR087291	5G NR 1DR-2	3701A112LD
MRSFR087282	5G NR 1SR CBAND	3701A112RS
MRSFR087288	5G NR 1SR CBAND	3701A11110

RFDS VER. #3.00 / DATE: 1/18/2022

VICINITY MAP



LOCAL MAP



CD DRAWING

IF USING 11"X17" PLOT, DRAWINGS WILL BE HALF SCALE

PROJECT DESCRIPTION

AT&T MOBILITY PROPOSES TO MODIFY AN (E) WIRELESS INSTALLATION. THE SCOPE WILL CONSIST OF THE FOLLOWING:

AT ANTENNA LEVEL:

- REMOVE (4) (E) KATHREIN PANEL ANTENNA, (2) PER SECTOR (4) TOTAL.
- REMOVE (2) (E) KATHREIN PANEL ANTENNA, (1) PER SECTOR (2) TOTAL.
- REMOVE (2) (E) RRUS-11 B12 (1) PER SECTOR (2) TOTAL.
- REMOVE (2) (E) RRUS-12 B2 (1) PER SECTOR (2) TOTAL.
- INSTALL (2) (N) COMMSCOPE PANEL ANTENNA, (1) PER SECTOR, (2) TOTAL.
- INSTALL (2) (N) QUINTEL PANEL ANTENNA, (1) PER SECTOR, (2) TOTAL.
- INSTALL (2) (N) ERICSSON PANEL ANTENNA,(1) PER SECTOR (2) TOTAL
- INSTALL (2) (N) ERICSSON CBAND AIR PANEL ANTENNA, (1) PER SECTOR (2) TOTAL
- INSTALL (2) (N) RRUS-4478 B14, (1) PER SECTOR (2) TOTAL.
- INSTALL (2) (N) RRUS-4449 B5/B12, (1) PER SECTOR (2) TOTAL.
- INSTALL (2) (N) RRUS-4415 B25, (1) PER SECTOR (2) TOTAL.
- INSTALL (1) (N) DC9 SQUID SURGE SUPPRESSOR, (1) TOTAL.

AT EQUIPMENT LEVEL:

- INSTALL (1) (N) STRING OF 165AH BATTERIES WITHIN (E) BATTERY RACK.
- INSTALL (2) (N) RECTIFIERS WITHIN DC POWER PLANT.
- INSTALL (1) (N) DC POWER SHELF.
- INSTALL (1) (N) POWER AND (1) (N) FIBER TRUNK.
- INSTALL CAUTION SIGNS AS REQUIRED

DRAWING INDEX

DO NOT SCALE DRAWINGS

SUBCONTRACTOR SHALL VERIFY ALL PLANS & EXISTING DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

UNDERGROUND SERVICE ALERT OF CALIFORNIA 811

CALL 48 HOURS BEFORE YOU DIG

CCL00339
SOUTH NOVATO 1 – NAVE DR
5480A NAVE DR
NOVATO,CA 94949
45'–0" MONOPOLE

at&t

5001 EXECUTIVE PKWY.
SAN RAMON, CA 94583

ERICSSON

4120 DUBLIN BLVD STE
450 DUBLIN
CALIFORNIA 94568

PLANS PREPARED BY:

Pramira
ARCHITECTURAL & ENGINEERING SERVICES

REV	DATE	DESCRIPTION	INT
1	06/28/2022	PLAN CHECK COMMENTS	GCA
0	04/13/2022	100% CDS	GCA
B	04/11/2022	95% CDS	RAR
A	01/05/2022	90% CDS	KD

LICENSED PROFESSIONAL ENGINEER
AMER ALKLOUB
C 90995
CIVIL
STATE OF CALIFORNIA

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

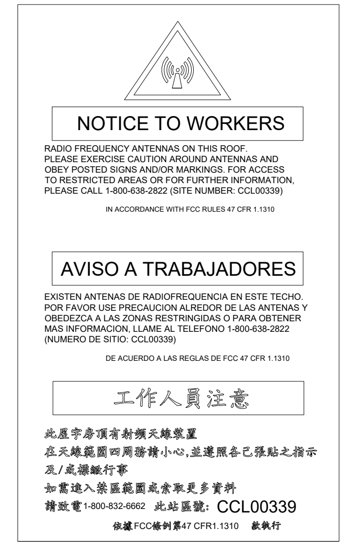
SIGNAGE AND STRIPING INFORMATION

1. THE FOLLOWING INFORMATION IS A GUIDELINE WITH RESPECT TO PREVAILING STANDARDS LIMITING HUMAN EXPOSURE TO RADIO FREQUENCY ENERGY AND SHOULD BE USED AS SUCH. IF THE SITE'S EMF REPORT OR ANY LOCAL, STATE OR FEDERAL GUIDELINES OR REGULATION SHOULD BE IN CONFLICT WITH ANY PART OF THESE NOTES OR PLANS, THE MORE RESTRICTIVE GUIDELINE OR REGULATION SHALL BE FOLLOWED AND OVERRIDE THE LESSER.
2. THE PUBLIC LIMIT OF RF EXPOSURE ALLOWED BY AT&T IS 1mWcm^2 AND THE OCCUPATIONAL LIMIT OF RF EXPOSURE ALLOWED BY AT&T IS 5mWcm^2
3. IF THE BOTTOM OF THE ANTENNA IS MOUNTED (8) EIGHT FEET ABOVE THE GROUND OR ROOF LINE OF THE PERSONAL COMMUNICATION SYSTEM (PCS) AND DOES NOT EXCEED THE PUBLIC LIMIT OF RF EXPOSURE LIMIT THEN NO STRIPING OR BARRICADES SHOULD BE NEEDED.
4. IF THE PUBLIC LIMIT OF RF EXPOSURE ON THE SITE IS EXCEEDED AND THE AREA IS PUBLICLY ACCESSIBLE (e.g. ROOF ACCESS DOOR CANNOT BE LOCKED OR THERE IS AN EXISTING FIRE EGRESS), THEN BOTH BARRICADES AND STRIPING WILL BE NEEDED AROUND THE ANTENNAS. THE EXACT EXTENT OF THE BARRICADES AND STRIPING WILL BE DETERMINED BY THE EMF REPORT FOR THE SITE DONE BEFORE OR SHORTLY AFTER THE CONSTRUCTION OF THE SITE. USE THE PLANS AS A GUIDELINE FOR PLACEMENT OF SUCH BARRICADES AND STRIPING.
5. IF THE PUBLIC LIMIT OF RF EXPOSURE ON THE SITE IS NOT EXCEEDED AND THE AREA IS NOT PUBLICLY ACCESSIBLE (e.g. ROOF ACCESS DOOR IS LOCKED), THEN JUST STRIPING OUT TO THE PUBLIC LIMIT WILL BE NEEDED AROUND THE ANTENNAS. THE EXACT EXTENT OF THE STRIPING WILL BE DETERMINED BY THE EMF REPORT FOR THE SITE DONE BEFORE OR SHORTLY AFTER THE CONSTRUCTION OF THE SITE. USE THE PLANS AS A GUIDELINE FOR PLACEMENT OF SUCH STRIPING.
6. ALL TRANSMIT ANTENNAS REQUIRE A (3) THREE LANGUAGE WARNING SIGN WRITTEN IN ENGLISH, SPANISH, AND CHINESE. THIS SIGN WILL BE PROVIDED TO THE CONTRACTOR BY THE AT&T CONSTRUCTION MANAGER AT THE TIME OF CONSTRUCTION. THE LARGER SIGN SHALL BE PLACED AT ALL ROOF ACCESS LOCATIONS AND ON ALL BARRICADES IN PLAIN SIGHT AND THE SMALLER SIGN SHALL BE PLACED ON THE ANTENNAS THEMSELVES OR ON THE OUTSIDE OF THE ANTENNA ENCLOSURES IN A MANNER THAT IS EASILY SEEN BY ANY PERSON ON THE ROOF. WARNING SIGNS SHALL COMPLY WITH ANSI C95.2 COLOR, SYMBOL, AND CONTENT CONVENTIONS. ALL SIGNS WILL HAVE AT&T'S NAME AND THE COMPANY CONTACT INFORMATION (e.g. TELEPHONE NUMBER) TO ARRANGE FOR ACCESS TO THE RESTRICTED AREAS. THIS TELEPHONE NUMBER WILL BE PROVIDED TO THE CONTRACTOR BY THE AT&T CONSTRUCTION PROJECT MANAGER AT THE TIME OF CONSTRUCTION.
7. PHOTOS OF ALL STRIPING, BARRICADES, AND SIGNAGE WILL BE PART OF THE CONTRACTORS CLOSE OUT PACKAGE AND WILL BE TURNED INTO THE AT&T CONSTRUCTION PROJECT MANAGER AT THE END OF CONSTRUCTION. STRIPING SHALL BE DONE WITH FADE RESISTANT YELLOW SAFETY PAINT IN A CROSS HATCH PATTERN. ALL BARRICADES SHALL BE MADE OF AN RF FRIENDLY MATERIAL SO THAT THEY DO NOT BLOCK OR INTERFERE WITH THE OPERATION OF THE SITE AND SHALL BE PAINTED WITH FADE RESISTANT YELLOW SAFETY PAINT. THE CONTRACTOR SHALL PROVIDE ALL RF FRIENDLY BARRICADES NEEDED AND SHALL PROVIDE THE AT&T CONSTRUCTION PROJECT MANAGER WITH A DETAILED SHOP DRAWING OF EACH BARRICADE.
8. ALL REQUIRED SIGNAGE WILL BE INSTALLED AS NEEDED AND FIELD VERIFIED.

SIGNAGE AND STRIPING INFORMATION 7

NOTES:

1. WARNING SIGN TO BE MOUNTED AT ANTENNA LOCATIONS.
2. SIGN SHALL COMPLY WITH ANSI C95.2 COLOR, SYMBOL, AND CONTENT CONVENTIONS.
3. SIGNAGE SHALL BE CLEARLY LABELED IN A PHENOLIC LABEL WITH A WHITE BACKGROUND AND BLACK LETTERING, AND SHALL BE READABLE FROM AT LEAST (15) FEET FROM THE SIGN.
4. PROPOSED 12"X20" PLASTIC SIGN.

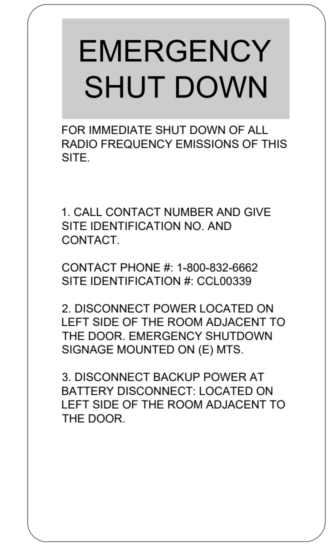


TYPICAL MULTI-LANGUAGE SIGN 4

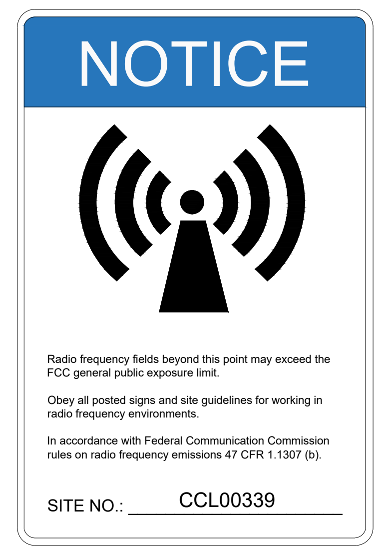
SIGN SHALL BE A PHENOLIC LABEL WITH WHITE BACKGROUND AND BLACK LETTERING. THE TITLE BLOCK SHALL BE A RED BACKGROUND AND 1" HIGH WHITE LETTERING.

NOTE:
SIGN TO BE PERMANENTLY MOUNTED AT THE FOLLOWING LOCATIONS:

1. CELL SITE EQUIPMENT ROOM DOOR
2. BATTERY LOCATION WITHIN PROXIMITY OF BATTERY DISCONNECT
3. FCC (FIRE CONTROL CENTER) ROOM WITHIN PROXIMITY OF THE FIRE ALARM PANEL
4. BUILDING'S MAIN ELECTRICAL ROOM WITHIN PROXIMITY OF THE MAIN SHUTOFF
5. THE CELL SITE MAIN ELECTRICAL DISCONNECT

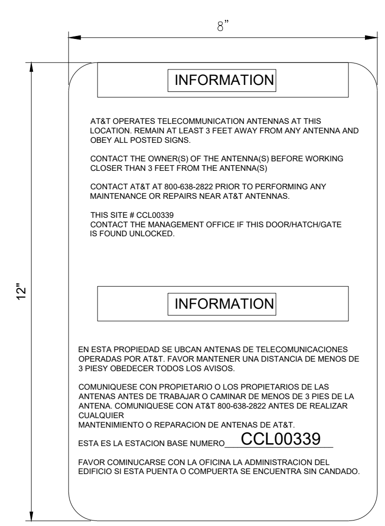


EMERGENCY SHUT DOWN SIGNAGE 1

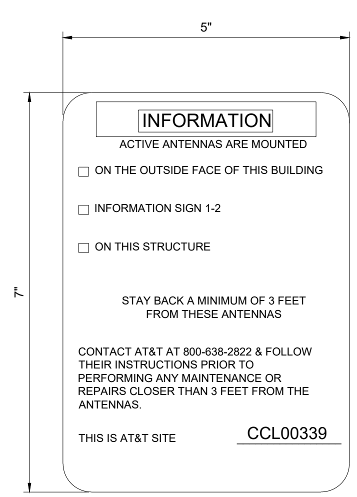


NOTICE SIGN 5

CAUTION SIGN 2



A INFORMATION SIGN 1-1
N.T.S



B INFORMATION SIGN 1-2
N.T.S

INFORMATION SIGN 6

NOTES:

MULTIPLE SIGNS INSTALLED AT EACH RF STRIPING ZONE.

CAUTION SIGN - RF STRIPING AREA 3

CCL00339
SOUTH NOVATO 1 – NAVE DR
5480A NAVE DR
NOVATO,CA 94949
45'-0" MONOPOLE

at&t
5001 EXECUTIVE PKWY.
SAN RAMON, CA 94583

ERICSSON
4120 DUBLIN BLVD STE
450 DUBLIN
CALIFORNIA 94568

PLANS PREPARED BY:

Pramira
ARCHITECTURAL & ENGINEERING SERVICES

REV	DATE	DESCRIPTION	INT
1	06/28/2022	PLAN CHECK COMMENTS	GCA
0	04/13/2022	100% CDS	GCA
B	04/11/2022	95% CDS	RAR
A	01/05/2022	90% CDS	KD

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

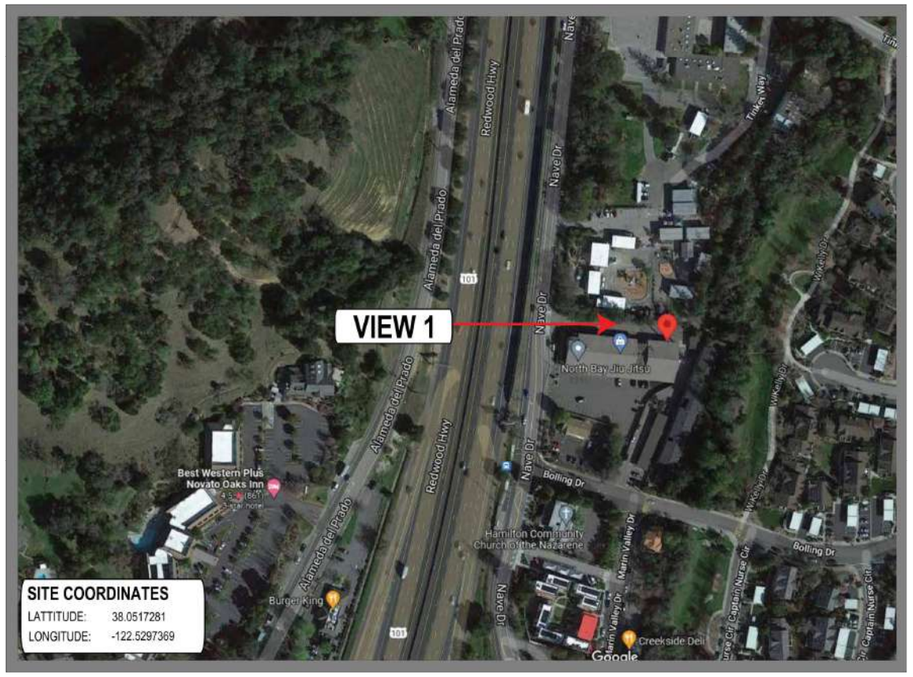
SHEET TITLE
RF SIGNAGE

SHEET NUMBER
T-2

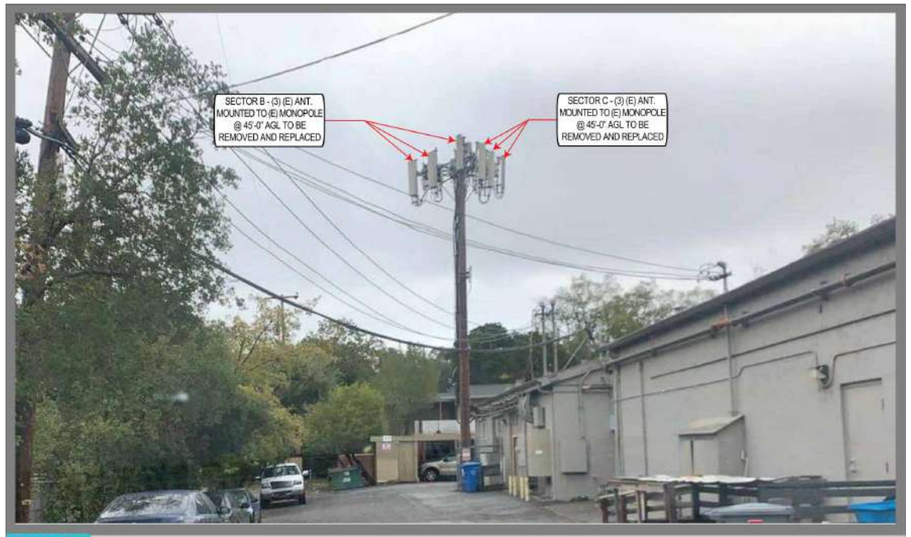
SHOT MAP

AT&T NODE: CCL00339

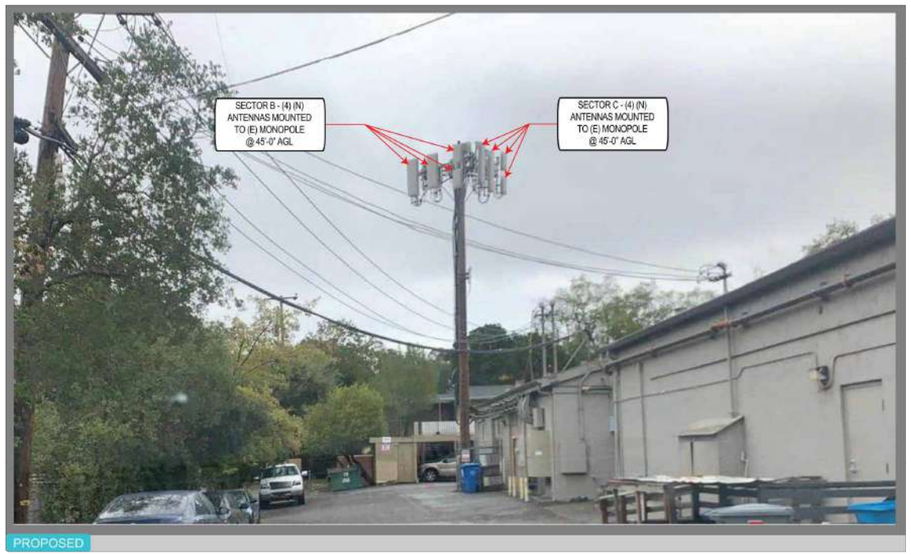
PROJECT NAME: SOUTH NOVATO 1 - NAVE DR




VIEW 1



EXISTING



PROPOSED

CCL00339
SOUTH NOVATO 1 - NAVE DR
5480A NAVE DR
NOVATO, CA 94949

Pramira
NETWORK EVOLUTION SIMPLIFIED
2552 WALNUT AVE, SUITE 200A
TUSTIN, CA 92780

CCL00339
SOUTH NOVATO 1 - NAVE DR
5480A NAVE DR
NOVATO, CA 94949

VIEW 1: LOOKING EAST INSIDE SITE PREMISES

Pramira
NETWORK EVOLUTION SIMPLIFIED
2552 WALNUT AVE, SUITE 200A
TUSTIN, CA 92780

PHOTOSIMS

CCL00339
SOUTH NOVATO 1 – NAVE DR
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45'–0" MONOPOLE

at&t
5001 EXECUTIVE PKWY.
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REV	DATE	DESCRIPTION	INT
1	06/28/2022	PLAN CHECK COMMENTS	GCA
0	04/13/2022	100% CDS	GCA
B	04/11/2022	95% CDS	RAR
A	01/05/2022	90% CDS	KD

SHEET TITLE
PHOTOSIMS

SHEET NUMBER
T-3

GENERAL CONSTRUCTION NOTES

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL BUILDING CODE, THE LATEST EDITION AND ALL OTHER APPLICABLE CODES AND ORDINANCES.
2. CONTRACTOR SHALL CONSTRUCT SITE IN ACCORDANCE WITH THESE DRAWINGS AND CONSTRUCTION SPECIFICATIONS 80-T1196-1 REV H. THE SPECIFICATION IS THE RULING DOCUMENT AND ANY DISCREPANCIES BETWEEN THE SPECIFICATION AND THESE DRAWINGS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION
3. CONTRACTOR SHALL VISIT THE JOB SITE AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK. NO COMPENSATION WILL BE AWARDED BASED ON CLAIM OF LACK OF KNOWLEDGE OF FIELD CONDITIONS
4. PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT AND APPURTENANCES, AND LABOR NECESSARY TO EFFECT ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS. OWNER PROVIDED MATERIALS WILL INCLUDE THE FOLLOWING, UNLESS NOTED OTHERWISE:
   A) TRANSMITTER
   B) RF FILTER
   C) MFTS RACK
   D) AUXILIARY EQUIPMENT IN MFTS RACK
   E) PUMP ASSEMBLY
   F) HEAT EXCHANGER
   G) HOSE AND HOSE MANIFOLDS (ANY COPPER OR STEEL SECTIONS PROVIDE BY CONTRACTOR)
   H) UHF ANTENNA AND MOUNTING BRACKETS, GPS ANTENNAS AND KU ANTENNAS
   I) UHF COAX AND HANGERS
   K) 480-208 & 208-400 ELECTRICAL TRANSFORMERS (RE: E-2 FOR SPECIALIZED TRANSFORMERS PROVIDED BY CONTRACTOR)
   L) AUTOMATIC TRANSFER SWITCH AND GENERATOR
   M) EQUIPMENT SHELTER (SHELTERS FURNISHED IN FACTORY W/ HVAC EQUIPMENT AND ELECTRICAL DISTRIBUTION PANEL)
   N) INTEGRATED LOAD CENTER
5. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS, SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS AND/OR DESIGN INTENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE WORK.
6. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
7. CONTRACTOR SHALL RECEIVE CLARIFICATION IN WRITING, AND SHALL RECEIVE IN WRITING AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEMS NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
8. CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING THE BEST CONSTRUCTION SKILLS AND ATTENTION. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER CONTRACT, UNLESS OTHERWISE NOTED.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS.
10. CONTRACTOR SHALL COORDINATE HIS WORK WITH THE SUPERINTENDENT OF BUILDINGS & GROUNDS AND SCHEDULE HIS ACTIVITIES AND WORKING HOURS IN ACCORDANCE WITH THE REQUIREMENTS.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH THE WORK OF OTHERS AS IT MAY RELATE TO RADIO EQUIPMENT, ANTENNAS AND ANY OTHER PORTIONS OF THE WORK.
12. INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
13. MAKE NECESSARY PROVISIONS TO PROTECT EXISTING SURFACES, EQUIPMENT, IMPROVEMENTS, PIPING ETC. AND IMMEDIATELY REPAIR ANY DAMAGE THAT OCCURS DURING CONSTRUCTION.
14. IN DRILLING HOLES INTO CONCRETE WHETHER FOR FASTENING OR ANCHORING PURPOSES, OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, PIPE RUNS, ETC., MUST BE CLEARLY UNDERSTOOD THAT REINFORCING STEEL SHALL NOT BE DRILLED INTO, CUT OR DAMAGED UNDER ANY CIRCUMSTANCES (UNLESS NOTED OTHERWISE). LOCATIONS OF REINFORCING STEEL ARE NOT DEFINITELY KNOWN AND THEREFORE MUST BE SEARCHED FOR BY APPROPRIATE METHODS AND EQUIPMENT.
15. REPAIR ALL EXISTING WALL SURFACES DAMAGED DURING CONSTRUCTION SUCH THAT THEY MATCH AND BLEND IN WITH ADJACENT SURFACES.
16. SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH U.L. LISTED AND FIRE CODE APPROVED MATERIALS.
17. KEEP CONTRACT AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DIRT, DEBRIS, AND RUBBISH. EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY OF THE OWNER SHALL BE REMOVED. LEAVE PREMISES IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ITEMS UNTIL COMPLETION OF CONSTRUCTION.
18. MINIMUM BEND RADIUS OF ANTENNA CABLES SHALL BE IN ACCORDANCE WITH CABLE MANUFACTURERS RECOMMENDATIONS.
19. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO APPLICABLE REGULATORY AUTHORITIES
20. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION SHALL BE IN CONFORMANCE WITH JURISDICTIONAL OR STATE AND LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL AND COORDINATED WITH LOCAL REGULATORY AUTHORITIES.
21. ALL CONSTRUCTION IS TO ADHERE TO AT&T'S INTEGRATED CONSTRUCTION STANDARDS UNLESS CALIFORNIA CODE IS MORE STRINGENT.
22. THE INTENT OF THE PLANS AND SPECIFICATIONS IS TO PERFORM THE CONSTRUCTION IN ACCORDANCE WITH THE CALIFORNIA BUILDING STANDARDS CODE, TITLES 19 AND 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE APPROVED PLANS AND SPECIFICATIONS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CHANGE ORDER DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY THE JURISDICTION BEFORE PROCEEDING WITH THE WORK.

ELECTRICAL NOTES

1. ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ANY/ALL ELECTRICAL WORK INDICATED. ANY/ALL CONSTRUCTION SHALL BE IN ACCORDANCE W/DRAWINGS AND ANY/ALL APPLICABLE SPECIFICATIONS. IF ANY PROBLEMS ARE ENCOUNTERED BY COMPLYING WITH THESE REQUIREMENTS, CONTRACTOR SHALL NOTIFY 'CONSTRUCTION MANAGER' AS SOON AS POSSIBLE, AFTER THE DISCOVERY OF THE PROBLEMS, AND SHALL NOT PROCEED WITH THAT PORTION OF WORK, UNTIL THE 'CONSTRUCTION MANAGER' HAS DIRECTED THE CORRECTIVE ACTIONS TO BE TAKEN.
2. ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE HIMSELF WITH ANY/ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATION INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. ALL EXISTING CONDITIONS OF ELECTRICAL EQUIP., LIGHT FIXTURES, ETC., THAT ARE PART OF THE FINAL SYSTEM, SHALL BE VERIFIED BY THE CONTRACTOR, PRIOR TO THE SUBMITTING OF HIS BID. FAILURE TO COMPLY WITH THIS PARAGRAPH WILL IN NO WAY RELIEVE CONTRACTOR OF PERFORMING ALL WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM.
3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC AND ALL CODES AND LOCAL ORDINANCES OF THE LOCAL POWER & TELEPHONE COMPANIES HAVING JURISDICTION AND SHALL INCLUDE BUT NOT BE LIMITED TO:
   A. UL - UNDERWRITERS LABORATORIES
   B. NEC - NATIONAL ELECTRICAL CODE
   C. NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
   D. OSHA - OCCUPATIONAL SAFETY AND HEALTH ACT
   E. SBC - STANDARD BUILDING CODE
   F. NATIONAL FIRE CODES
4. DO NOT SCALE ELECTRICAL DRAWINGS, REFER TO SITE PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, AND CONFIRM WITH 'CONSTRUCTION MANAGER' ANY SIZES AND LOCATIONS WHEN NEEDED.
5. EXISTING SERVICES: CONTRACTOR SHALL NOT INTERRUPT EXISTING SERVICES WITHOUT WRITTEN PERMISSION OF THE OWNER.
6. CONTRACTOR SHALL PAY FOR ANY/ALL PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR IS TO OBTAIN PERMITS AND APPROVED SUBMITTALS PRIOR TO THE WORK BEGINNING OR ORDERING EQUIPMENT.
7. THE TERM "PROVIDE" USED IN CONSTRUCTION DOCUMENTS AND SPECIFICATIONS, INDICATES THAT THE CONTRACTOR SHALL FURNISH AND INSTALL.
8. CONTRACTOR SHALL CONFIRM WITH LOCAL UTILITY COMPANY ANY/ALL REQUIREMENTS SUCH AS THE: LUG SIZE RESTRICTIONS, CONDUIT ENTRY, SIZE OF TRANSFORMERS, SCHEDULED DOWNTIME FOR THE OWNERS' CONFIRMATION, ETC... ANY/ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER, PRIOR TO BEGINNING ANY WORK.
9. MINIMUM WIRE SIZE SHALL BE #12 AWG, NOT INCLUDING CONTROL WIRING, UNLESS NOTED OTHERWISE. ALL CONDUCTORS SHALL BE COPPER WITH THWN INSULATION.
10. OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET/DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
11. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF THE CONSTRUCTION. CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
12. ELECTRICAL SYSTEM SHALL BE AS COMPLETELY AND EFFECTIVELY GROUNDED, AS REQUIRED BY SPECIFICATIONS, SET FORTH BY AT&T.
13. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS, WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND SUBJECT TO REGULATORY INSPECTION AND APPROVAL BY CONSTRUCTION MANAGER.
14. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
15. CONTRACTOR SHALL GUARANTEE ANY/ALL MATERIALS AND WORK FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE.
16. THE CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ANY ADDITIONAL CHARGE AND SHALL INCLUDE THE REPLACEMENT OR THE REPAIR OF ANY OTHER PHASE OF THE INSTALLATION, WHICH MAY HAVE BEEN DAMAGED THEREIN.
17. ADEQUATE AND REQUIRED LIABILITY INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LOSS AND ANY/ALL PROPERTY DAMAGE FOR THE DURATION OF WORK.
18. PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES AND DEVICES FOR ALL OUTLETS AS INDICATED.
19. DITCHING AND BACK FILL: CONTRACTOR SHALL PROVIDE FOR ALL UNDERGROUND INSTALLED CONDUIT AND/OR CABLES INCLUDING EXCAVATION AND BACKFILLING AND COMPACTION. REFER TO NOTES AND REQUIREMENTS 'EXCAVATION, AND BACKFILLING.
20. MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SHALL APPEAR ON THE LIST OF U.L. APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF THE NEC, NEMA AND IECE.
21. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR MANUFACTURES CATALOG INFORMATION OF ANY/ALL LIGHTING FIXTURES, SWITCHES AND ALL OTHER ELECTRICAL ITEMS FOR APPROVAL BY THE CONSTRUCTION MANAGER PRIOR TO INSTALLATION.
22. ANY CUTTING OR PATCHING DEEMED NECESSARY FOR ELECTRICAL WORK IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY AND SHALL BE INCLUDED IN THE COST FOR WORK AND PERFORMED TO THE SATISFACTION OF THE 'CONSTRUCTION MANAGER' UPON FINAL ACCEPTANCE.
23. THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS WITH ONLY TYPEWRITTEN DIRECTORIES. ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
24. DISCONNECT SWITCHES SHALL BE H.P. RATED HEAVY-DUTY, QUICK-MAKE AND QUICK-BREAK ENCLOSURES, AS REQUIRED BY EXPOSURE TYPE.
25. ALL CONNECTIONS SHALL BE MADE WITH A PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND SUCH AS "NO-OXIDE A" BY DEARBORNE CHEMICAL CO. COAT ALL WIRE SURFACES BEFORE CONNECTING. EXPOSED COPPER SURFACES, INCLUDING GROUND BARS, SHALL BE TREATED - NO SUBSTITUTIONS.
26. RACEWAYS: CONDUIT SHALL BE SCHEDULE 40 PVC MEETING OR EXCEEDING NEMA TC2 - 1990. CONTRACTOR SHALL PLUG AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS - 200 LBS TEST POLYETHYLENE CORD. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 2 FT. RADIUS. RGS CONDUITS WHEN SPECIFIED, SHALL MEET UL-6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT. COAT ALL THREADS WITH 'BRITE ZINC' OR 'GOLD GALV'.
27. SUPPORT OF ALL ELECTRICAL WORK SHALL BE AS REQUIRED BY NEC.
28. CONDUCTORS: CONTRACTOR SHALL USE 98% CONDUCTIVITY COPPER WITH TYPE THWN INSULATION, 800 VOLT, COLOR CODED. USE SOLID CONDUCTORS FOR WIRE UP TO AND INCLUDING NO. 8 AWG. USE STRANDED CONDUCTORS FOR WIRE ABOVE NO. 8 AWG.
29. CONNECTORS FOR POWER CONDUCTORS: CONTRACTOR SHALL USE PRESSURE TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER. USE SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER.
30. SERVICE: 240/120V, SINGLE PHASE, 3 WIRE CONNECTION AVAILABLE FROM UTILITY COMPANY. OWNER OR OWNERS AGENT WILL APPLY FOR POWER.
31. TELEPHONE SERVICE: CONTRACTOR SHALL PROVIDE EMPTY CONDUITS WITH PULL STRINGS AS INDICATED ON DRAWINGS.
32. ELECTRICAL AND TELCO RACEWAYS TO BE BURIED A MINIMUM OF 2' DEPTH.
33. CONTRACTOR SHALL PLACE TWO LENGTHS OF WARNING TAPE AT A DEPTH OF 12" BELOW GROUND AND DIRECTLY ABOVE ELECTRICAL AND TELCO SERVICE CONDUITS. CAUTIONS TAPE TO READ "CAUTION BURIED ELECTRIC" OR "BURIED TELECOMM".
34. ALL BOLTS SHALL BE STAINLESS STEEL

GROUNDING NOTES

1. COMPRESSION CONNECTIONS (2), 2 AWG BARE TINNED SOLID COPPER CONDUCTORS TO GROUNDING BAR. ROUTE CONDUCTORS TO BURIED GROUNDING RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
2. EC SHALL USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION ("P", "A", "N", "I") WITH 1" HIGH LETTERS.
3. ALL HARDWARE 18-8 STAINLESS STEEL, INCLUDING LOCK WASHERS, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING. ALL HARDWARE SHALL BE STAINLESS STEEL 3/8 INCH DIAMETER OR LARGER.
4. FOR GROUND BOND TO STEEL ONLY: INSERT A CADMIUM FLAT WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
5. NUT & WASHER SHALL BE PLACED ON THE FRONT SIDE OF THE GROUNDING BAR AND BOLTED ON THE BACK SIDE.
6. NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATION, AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.
7. WHEN THE SCOPE OF WORK REQUIRES THE ADDITION OF A GROUNDING BAR TO AN EXISTING TOWER,THE SUBCONTRACTOR SHALL OBTAIN APPROVAL FROM THE TOWER OWNER PRIOR TO MOUNTING THE GROUNDING BAR TO THE TOWER.
8. ALL ELECTRICAL AND GROUNDING AT THE CELL SITE SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 780 (LATEST EDITION), AND MANUFACTURER.

ADDITIONAL NOTES:

9. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.
10. GROUND ALL ANTENNA BASES, FRAMES, CABLE RUNS, AND OTHER METALLIC COMPONENTS USING #2 GROUND WIRES AND CONNECT TO SURFACE MOUNTED GROUND BUS BARS AS SHOWN. FOLLOW ANTENNA AND BTS MANUFACTURER'S PRACTICES FOR GROUNDING REQUIREMENTS. GROUND COAX SHIELD AT BOTH ENDS USING MANUFACTURERS PRACTICES. ALL UNDERGROUND WATER PIPES, METAL CONDUITS AND GROUNDS THAT ARE A PART OF THIS SYSTEM SHALL BE BONDED TOGETHER.
11. ALL GROUND CONNECTIONS SHALL BE #2 AWG U.N.O. ALL WIRES SHALL BE COPPER THHN/THWN. ALL GROUND WIRE SHALL BE SOLID TIN COATED OR STRANDED GREEN INSULATED WIRE.
12. CONTRACTOR TO VERIFY AND TEST GROUND TO SOURCE, 5 OHMS MAXIMUM. PROVIDE SUPPLEMENT GROUNDING RODS AS REQUIRED TO ACHIEVE SPECIFIED OHMS READING. GROUNDING AND OTHER OPTIONAL TESTING WILL BE WITNESSED BY THE AT&T REPRESENTATIVE.
13. NOTIFY ARCHITECT/ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.
14. BARE GROUNDING CONDUCTOR SHALL BE HARD DRAWN TINNED COPPER SIZES AS NOTED ON PLAN.
15. ALL HORIZONTALLY RUN GROUNDING CONDUCTORS SHALL BE INSTALLED MINIMUM 12" BELOW GRADE/FROST-LINE IN TRENCH, U.N.O., AND BACK FILL SHALL BE COMPACTED AS REQUIRED BY ARCHITECT.
16. ALL GROUND CONDUCTORS SHALL BE RUN AS STRAIGHT AND SHORT AS POSSIBLE, WITH A MINIMUM 12" BENDING RADIUS NOT LESS THAN 90 DEGREES.
17. ALL SUPPORT STRUCTURES, CABLE CHANNEL WAYS OR WIRE GUIDES SHALL BE BONDED TO GROUND SYSTEM AT A POINT NEAREST THE MAIN GROUNDING BUS "MGB" (OR DIRECTLY TO GROUND-RING).
18. ACCEPTABLE CONNECTIONS FOR GROUNDING SYSTEM SHALL BE:
   A. BURNDY, HY-GRADE U.L. LISTED CONNECTORS FOR INDOOR USE OR AS APPROVED BY AT&T PROJECT MANAGER.
   B. CADWELD, EXOTHERMIC WELDS (WELDED CONNECTIONS).
   C. TWO -(2) HOLE TINNED COPPER COMPRESSION (LONG BARREL) FITTINGS (BUS BAR CONNECTIONS).
   D. ALL CRIMPED CONNECTIONS SHALL HAVE EMBOSSED MANUFACTURER'S DIEMARK VISIBLE AT THE CRIMP (RESULTING FROM USE OF PROPER CRIMPING DEVICES).
   E. PRIOR TO ANY LUG-BUSSBAR CONNECTIONS, THE BUSSBAR SHALL BE CLEANED BY USE OF "SCOTCH-BRITE' OR PLAIN STEEL WOOL AS TO REMOVE ALL SURFACE OXIDATION AND CONTAMINANTS. A COATING OF "NO-OX-ID" SHALL BE APPLIED TO THE CONNECTION SURFACES.
   F. ALL CONNECTION HARDWARE SHALL BE TYPE 316 SS (NOT ATTRACTED TO MAGNETS).
   G. THE GROUND RING SHALL BE INSTALLED 24" MINIMUM BEYOND ANY BUILDING DRIP LINE.
   H. ELECTRICAL SERVICE EQUIPMENT GROUNDING SHALL COMPLY WITH NEC, ARTICLE 250-82 AND SHALL BOND ALL EXISTING AND NEW GROUNDING ELECTRODES. NEW GROUNDING ELECTRODE SHALL INCLUDE BUT NOT LIMITED TO GROUND RODS, GROUND RING IF SERVICE IS WITHIN THE RADIO EQUIPMENT LOCATION, BUILDING STEEL IF APPLICABLE, COLD WATER CONNECTIONS MUST BE MADE ON THE STREET SIDE OF MAIN SHUT-OFF VALVE.

CCL00339
SOUTH NOVATO 1 – NAVE DR
5480A NAVE DR
NOVATO,CA 94949
45'-0" MONOPOLE

at&t
5001 EXECUTIVE PKWY.
SAN RAMON, CA 94583

ERICSSON
4120 DUBLIN BLVD STE
450 DUBLIN
CALIFORNIA 94568

PLANS PREPARED BY:
Pramira
ARCHITECTURAL & ENGINEERING SERVICES

REV	DATE	DESCRIPTION	INT
1	06/28/2022	PLAN CHECK COMMENTS	GCA
0	04/13/2022	100% CDS	GCA
B	04/11/2022	95% CDS	RAR
A	01/05/2022	90% CDS	KD

LICENSED PROFESSIONAL ENGINEER
AMER ALKLOUB
C 90995
CIVIL
STATE OF CALIFORNIA

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-1

SITE WORK NOTES

1. DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHERWISE NOTED.
2. DO NOT SCALE BUILDING DIMENSIONS FROM DRAWING.
3. SIZE, LOCATION AND TYPE OF ANY UNDERGROUND UTILITIES OR IMPROVEMENTS SHALL BE ACCURATELY NOTED AND PLACED ON AS-BUILT DRAWINGS BY GENERAL CONTRACTOR AND ISSUED TO ARCHITECT/ENGINEER AT COMPLETION OF PROJECT.
4. ALL EXISTING UTILITIES, FACILITIES, CONDITIONS AND THEIR DIMENSIONS SHOWN ON PLANS HAVE. BEEN PLOTTED FROM AVAILABLE RECORDS. THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY WHATSOEVER AS TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL EXISTING UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING EXISTING UTILITIES.
5. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES BOTH HORIZONTALLY AND VERTICALLY PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES OR DOUBTS AS TO THE INTERPRETATION OF PLANS SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT/ENGINEER FOR RESOLUTION AND INSTRUCTION, AND NO FURTHER WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS CHECKED AND CORRECTED BY THE ARCHITECT/ENGINEER. FAILURE TO SECURE SUCH INSTRUCTION MEANS CONTRACTOR WILL HAVE WORKED AT HIS/HER OWN RISK AND EXPENSE. CONTRACTOR SHALL CALL LOCAL DIGGER HOT LINE FOR UTILITY LOCATIONS 48 HOURS PRIOR TO START OF CONSTRUCTION.
6. ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS TO BE DISTURBED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISH ELEVATIONS PRIOR TO FINAL INSPECTION OF WORK.
7. GRADING OF THE SITE WORK AREA IS TO BE SMOOTH AND CONTINUOUS IN SLOPE AND IS TO FEATHER INTO EXISTING GRADES AT THE GRADING LIMITS.
8. ALL TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS, UTILITIES, ETC., SHALL BE PROPERLY LAID BACK OR BRACED IN ACCORDANCE WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.
9. STRUCTURAL FILLS SUPPORTING PAVEMENTS SHALL BE COMPACTED TO 95% OF MAXIMUM STANDARD PROCTOR DRY DENSITY.
10. NEW GRADES NOT IN BUILDING AND DRIVEWAY IMPROVEMENT AREA TO BE ACHIEVED BY FILLING WITH APPROVED CLEAN FILL AND COMPACTED TO 95% OF STANDARD PROCTOR DENSITY.
11. ALL FILL SHALL BE PLACED IN UNIFORM LIFTS. THE LIFTS THICKNESS SHOULD NOT EXCEED THAT WHICH CAN BE PROPERLY COMPACTED THROUGHOUT ITS ENTIRE DEPTH WITH THE EQUIPMENT AVAILABLE.
12. ANY FILLS PLACED ON EXISTING SLOPES THAT ARE STEEPER THAN 10 HORIZONTAL TO 1 VERTICAL SHALL BE PROPERLY BENCHED INTO THE EXISTING SLOPE AS DIRECTED BY A GEOTECHNICAL ENGINEER.
13. CONTRACTOR SHALL CLEAN ENTIRE SITE AFTER CONSTRUCTION SUCH THAT NO PAPERS, TRASH, WEEDS, BRUSH OR ANY OTHER DEPOSITS WILL REMAIN. ALL MATERIALS COLLECTED DURING CLEANING OPERATIONS SHALL BE DISPOSED OF OFF-SITE BY THE GENERAL CONTRACTOR.
14. ALL TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH THE IMPROVEMENTS SHALL BE PROTECTED BY THE GENERAL CONTRACTOR.
15. ALL SITE WORK SHALL BE CAREFULLY COORDINATED BY GENERAL CONTRACTOR WITH LOCAL UTILITY COMPANY, TELEPHONE COMPANY, AND ANY OTHER UTILITY COMPANIES HAVING JURISDICTION OVER THIS LOCATION.

ENVIRONMENTAL NOTES

1. ALL WORK PERFORMED SHALL BE DONE IN ACCORDANCE WITH ISSUED PERMITS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF FINES AND PROPER CLEAN UP FOR AREAS IN VIOLATION.
2. CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION FOR PROTECTION OF ADJACENT PROPERTIES, ROADWAYS AND WATERWAYS AND SHALL BE MAINTAINED IN PLACE THROUGH FINAL JURISDICTIONAL INSPECTION & RELEASE OF SITE.
3. CONTRACTOR SHALL INSTALL/CONSTRUCT ALL NECESSARY SEDIMENT/SILT CONTROL FENCING AND PROTECTIVE MEASURES WITHIN THE LIMITS OF SITE DISTURBANCE PRIOR TO CONSTRUCTION.
4. NO SEDIMENT SHALL BE ALLOWED TO EXIT THE PROPERTY. THE CONTRACTOR IS RESPONSIBLE FOR TAKING ADEQUATE MEASURES FOR CONTROLLING EROSION. ADDITIONAL SEDIMENT CONTROL FENCING MAY BE REQUIRED IN ANY AREAS SUBJECT TO EROSION.
5. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE ON THE SITE AT ALL TIMES WITH SILT AND EROSION CONTROL MEASURES MAINTAINED ON THE DOWNSTREAM SIDE OF SITE DRAINAGE. ANY DAMAGE TO ADJACENT PROPERTY AS A RESULT OF EROSION WILL BE CORRECTED AT THE CONTRACTORS EXPENSE.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY INSPECTIONS AND ANY REPAIRS OF ALL SEDIMENT CONTROL MEASURES INCLUDING SEDIMENT REMOVAL AS NECESSARY.
7. CLEARING OF VEGETATION AND TREE REMOVAL SHALL BE ONLY AS PERMITTED AND BE HELD TO A MINIMUM. ONLY TREES NECESSARY FOR CONSTRUCTION OF THE FACILITIES SHALL BE REMOVED.
8. SEEDING AND MULCHING AND/OR SODDING OF THE SITE WILL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER COMPLETION OF THE PROJECT FACILITIES AFFECTING LAND DISTURBANCE.
9. CONTRACTOR SHALL PROVIDE ALL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY LOCAL, COUNTY AND STATE CODES AND ORDINANCES TO PROTECT EMBANKMENTS FROM SOIL LOSS AND TO PREVENT ACCUMULATION OF SOIL AND SILT IN STREAMS AND DRAINAGE PATHS LEAVING THE CONSTRUCTION AREA. THIS MAY INCLUDE SUCH MEASURES AS SILT FENCES, STRAW BALE SEDIMENT BARRIERS, AND CHECK DAMS.
10. RIP RAP OF SIZES INDICATED SHALL CONSIST OF CLEAN, HARD, SOUND, DURABLE, UNIFORM IN QUALITY STONE FREE OF ANY DETRIMENTAL QUANTITY OF SOFT, FRIABLE, THIN, ELONGATED OR LAMINATED PIECES, DISINTEGRATED MATERIAL, ORGANIC MATTER, OIL, ALKALI, OR OTHER DELETERIOUS SUBSTANCES

FOUNDATION, EXCAVATION AND BACKFILL NOTES

1. ALL FINAL GRADED SLOPES SHALL BE A MAXIMUM OF 3 HORIZONTAL TO 1 VERTICAL.
2. ALL EXCAVATIONS PREPARED FOR PLACEMENT OF CONCRETE SHALL BE OF UNDISTURBED SOILS, SUBSTANTIALLY HORIZONTAL AND FREE FROM ANY LOOSE, UNSUITABLE MATERIAL OR FROZEN SOILS, AND WITHOUT THE PRESENCE OF POUNDING WATER. DEWATERING FOR EXCESS GROUND WATER SHALL BE PROVIDED WHEN REQUIRED. COMPACTION OF SOILS UNDER CONCRETE PAD FOUNDATIONS SHALL NOT BE LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR THE SOIL IN ACCORDANCE WITH ASTM D1557.
3. CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC OR UNSUITABLE MATERIAL. IF INADEQUATE BEARING CAPACITY IS REACHED AT THE DESIGNED EXCAVATION DEPTH, THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND EITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION SHALL BE FILLED WITH CONCRETE OF THE SAME TYPE SPECIFIED FOR THE FOUNDATION. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. ANY STONE SUB BASE MATERIAL, IF USED, SHALL NOT SUBSTITUTE FOR REQUIRED THICKNESS OF CONCRETE.
4. ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH, DEBRIS, AND SO FORTH PRIOR TO BACK FILLING. BACK FILL SHALL CONSIST OF APPROVED MATERIALS SUCH AS EARTH, LOAM, SANDY CLAY, SAND AND GRAVEL, OR SOFT SHALE, FREE FROM CLODS OR LARGE STONES OVER 2 1/2" MAX DIMENSIONS. ALL BACK FILL SHALL BE PLACED IN COMPACTED LAYERS.
5. ALL FILL MATERIALS AND FOUNDATION BACK FILL SHALL BE PLACED IN MAXIMUM 6"THICK LIFTS BEFORE COMPACTION. EACH LIFT SHALL BE WETTED IF REQUIRED AND COMPACTED TO NOT LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR SOIL IN ACCORDANCE WITH ASTM D1557.
6. NEWLY PLACED CONCRETE FOUNDATIONS SHALL CURE A MINIMUM OF 72 HRS PRIOR TO BACK FILLING.
7. FINISHED GRADING SHALL BE SLOPED TO PROVIDE POSITIVE DRAINAGE AND PREVENT STANDING WATER. THE FINAL (FINISH) ELEVATION OF SLAB FOUNDATIONS SHALL SLOPE AWAY IN ALL DIRECTIONS FROM THE CENTER. FINISH GRADE OF CONCRETE PADS SHALL BE A MAXIMUM OF 4 INCHES ABOVE FINAL FINISH GRADE ELEVATIONS. PROVIDE SURFACE FILL GRAVEL TO ESTABLISH SPECIFIED ELEVATIONS WHERE REQUIRED.
8. NEWLY GRADED SURFACE AREAS TO RECEIVE GRAVEL SHALL BE COVERED WITH GEOTEXTILE FABRIC TYPE: TYPAR-3401 AS MANUFACTURED BY "CONSTRUCTION MATERIAL 1-800-239-3841" OR AN APPROVED EQUIVALENT, SHOWN ON PLANS. THE GEOTEXTILE FABRIC SHALL BE BLACK IN COLOR TO CONTROL THE RECURRENCE OF VEGETATIVE GROWTH AND EXTEND TO WITHIN 1 FOOT OUTSIDE THE SITE FENCING OR ELECTRICAL GROUNDING SYSTEM PERIMETER WHICH EVER IS GREATER. ALL FABRIC SHALL BE COVERED WITH A MINIMUM OF 4" DEEP COMPACTED STONE OR GRAVEL AS SPECIFIED. I.E. FDOT TYPE No. 57 FOR FENCED COMPOUND; FDOT TYPE No. 67 FOR ACCESS DRIVE AREA.
9. IN ALL AREAS TO RECEIVE FILL, REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE. PLOW STRIP OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SUCH THAT FILL MATERIAL WILL BIND WITH EXISTING/PREPARED SOIL SURFACE.
10. WHEN SUB GRADE OR PREPARED GROUND SURFACE HAS A DENSITY LESS THAN THAT REQUIRED FOR THE FILL MATERIAL, SCARIFY THE GROUND SURFACE TO DEPTH REQUIRED, PULVERIZE, MOISTURE-CONDITION AND/OR AERATE THE SOILS AND RECOMPACT TO THE REQUIRED DENSITY PRIOR TO PLACEMENT OF FILLS.
11. IN AREAS WHICH EXISTING GRAVEL SURFACING IS REMOVED OR DISTURBED DURING CONSTRUCTION OPERATIONS, REPLACE GRAVEL SURFACING TO MATCH ADJACENT GRAVEL SURFACING AND RESTORED TO THE SAME THICKNESS AND COMPACTION AS SPECIFIED. ALL RESTORED GRAVEL SURFACING SHALL BE FREE FROM CORRUGATIONS AND WAVES.
12. EXISTING GRAVEL SURFACING MAY BE EXCAVATED SEPARATELY AND REUSED WITH THE CONDITION THAT ANY UNFAVORABLE AMOUNTS OF ORGANIC MATTER, OR OTHER DELETERIOUS MATERIALS ARE REMOVED PRIOR TO REUSE. FURNISH ANY ADDITIONAL GRAVEL RESURFACING MATERIAL AS NEEDED TO PROVIDE A FULL DEPTH COMPACTED SURFACE THROUGHOUT SITE.
13. GRAVEL SUB SURFACE SHALL BE PREPARED TO REQUIRED COMPACTION AND SUB GRADE ELEVATIONS BEFORE GRAVEL SURFACING IS PLACED AND/OR RESTORED. ANY LOOSE OR DISTURBED MATERIALS SHALL BE THOROUGHLY COMPACTED AND ANY DEPRESSIONS IN THE SUB GRADE SHALL BE FILLED AND COMPACTED WITH APPROVED SELECTED MATERIAL. GRAVEL SURFACING MATERIAL SHALL NOT BE USED FOR FILLING DEPRESSIONS IN THE SUB GRADE.
14. PROTECT EXISTING GRAVEL SURFACING AND SUB GRADE IN AREAS WHERE EQUIPMENT LOADS WILL OPERATE. USE PLANKING 'MATTS' OR OTHER SUITABLE PROTECTION DESIGNED TO SPREAD EQUIPMENT LOADS AS MAY BE NECESSARY. REPAIR ANY DAMAGE TO EXISTING GRAVEL SURFACING OR SUB GRADE WHERE SUCH DAMAGE IS DUE TO THE CONTRACTORS OPERATIONS.
15. DAMAGE TO EXISTING STRUCTURES AND/OR UTILITIES RESULTING FROM CONTRACTORS NEGLIGENCE SHALL BE REPAIRED AND/ OR REPLACED TO THE OWNERS SATISFACTION AT NO ADDITIONAL COST TO THE CONTRACT.
16. ALL SUITABLE BORROW MATERIAL FOR BACK FILL OF THE SITE SHALL BE INCLUDED IN THE BID. EXCESS TOPSOIL AND UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF SITE AT LOCATIONS APPROVED BY GOVERNING AGENCIES AT NO ADDITIONAL COST TO THE CONTRACT.

STRUCTURAL STEEL NOTES

1. ALL STEEL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION. STEEL SECTIONS SHALL BE IN ACCORDANCE WITH ASTM AS INDICATED BELOW:
   W-SHAPES: ASTM A992, 50 KSI
   ANGLES, BARS CHANNELS: ASTM A36, 36 KSI
   HSS SECTIONS: ASTM 500, 46 KSI
   PIPE SECTIONS: ASTM A53-E, 35 KSI
2. ALL EXTERIOR EXPOSED STEEL AND HARDWARE SHALL BE HOT DIPPED GALVANIZED.
3. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC.WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION". PAINTED SURFACES SHALL BE TOUCHED UP.
4. BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE 3/4"Ø CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
5. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. ASTM A307 BOLTS UNLESS NOTED OTHERWISE.
6. FIELD MODIFICATIONS ARE TO BE COATED WITH ZINC ENRICHED PAINT.

CONCRETE MASONRY NOTES

1. CONCRETE MASONRY UNITS SHALL BE MEDIUM WEIGHT UNITS CONFORMING TO ASTM C90, GRADE N-1, (F'M=1,500 PS). MEDIUM WEIGHT (115 PCF).
2. MORTAR SHALL BE TYPE "S" (MINIMUM 1,800 PSI AT 28 DAYS).
3. GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI AT 28 DAYS.
4. ALL CELLS CONTAINING REINFORCING STEEL OR EMBEDDED ITEMS AND ALL CELLS IN RETAINING WALLS AND WALLS BELOW GRADE SHALL BE SOLID GROUTED.
5. ALL HORIZONTAL REINFORCEMENT SHALL BE PLACED IN BOND BEAM OR LINTEL BEAM UNITS.
6. WHEN GROUTING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE GROUT POUR 1-1/2" BELOW TOP OF THE UPPERMOST UNIT.
7. ALL BOND BEAM BLOCK SHALL BE "DEEP CUT" UNITS.
8. PROVIDE INSPECTION AND CLEAN-OUT HOLES AT BASE OF VERTICAL CELLS HAVING GROUT LIFTS IN EXCESS OF 4'-0" OF HEIGHT.
9. ALL GROUT SHALL BE CONSOLIDATED WITH A MECHANICAL VIBRATOR.
10. CEMENT SHALL BE AS SPECIFIED FOR CONCRETE.
11. REINFORCING BARS - SEE NOTES UNDER "REINFORCING STEEL" FOR REQUIREMENTS.
12. PROVIDE ONE BAR DIAMETER (A MINIMUM OF 1/2") GROUT BETWEEN MAIN REINFORCING AND MASONRY UNITS.
13. LOW LIFT CONSTRUCTION, MAXIMUM GROUT POUR HEIGHT IS 4 FEET.
14. NOT USED.
15. ALL CELLS IN CONCRETE BLOCKS SHALL BE FILLED SOLID WITH GROUT, EXCEPT AS NOTED IN THE DRAWINGS OR SPECIFICATIONS.
16. CELLS SHALL BE IN VERTICAL ALIGNMENT, DOWELS IN FOOTINGS SHALL BE SET TO ALIGN WITH CORES CONTAINING REINFORCING STEEL.
17. REFER TO ARCHITECTURAL DRAWINGS FOR SURFACE AND HEIGHT OF UNITS, LAYING PATTERN AND JOINT TYPE.
18. SAND SHALL BE CLEAN, SHARP AND WELL GRADED, FREE FROM INJURIOUS AMOUNTS OF DUST, LUMPS, SHALE, ALKAU OR ORGANIC MATERIAL.
19. BRICK SHALL CONFORM TO ASTM C-62 AND SHALL BE GRADE MW OR BETTER.

STRUCTURAL CONCRETE NOTES

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301-16, ACI 318-14 AND THE SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH fc'=2,500 PSI AT 28 DAYS UNLESS NOTED OTHERWISE.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES CLASS "B" AND ALL HOOKS SHALL BE STANDARD UNLESS NOTED OTHERWISE.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
   CONCRETE CAST AGAINST EARTH.....3 IN.

   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 AND LARGER.....2 IN.
   #5 AND SMALLER & WWF .....1-1/2 IN.

   CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
   SLAB AND WALL .....3/4 IN.
   BEAMS AND COLUMNS.....1-1/2 IN.
5. A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE U.N.O. IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
6. HOLES TO RECEIVE EXPANSION/WEDGE ANCHORS SHALL BE 1/8" LARGER IN DIAMETER THAN THE ANCHOR BOLT, DOWEL OR ROD AND SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. LOCATE AND AVOID CUTTING EXISTING REBAR WHEN DRILLING HOLES IN ELEVATED CONCRETE SLABS.
7. USE AND INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER ICC ER# & MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURES.

FIRE DEPARTMENT NOTES

1. THE AT&T PROJECT MANAGER'S DIRECTION, THE CONTRACTOR SHALL PROVIDE "HILTI" HIGH PERFORMANCE FIRE STOP SYSTEM # CP601S AT ALL FIRE RATED PENETRATION INSTALLED PER MANUFACTURE'S LATEST INSTALLATION SPECIFICATION.
2. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE CONSTRUCTED SO AS TO MAINTAIN AN EQUAL OR GREATER FIRE RATING.
3. BUILDINGS UNDERGOING CONSTRUCTION, ALTERATION OR DEMOLITION SHALL BE IN ACCORDANCE WITH CFC ARTICLE 87. [CFC 8701]
4. ADDRESS SHALL BE PROVIDED FOR ALL NEW AND EXISTING BUILDINGS IN A POSITION AS TO BE PLAINLY SEEN VISIBLE AND LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY [CFC 901.4.4, FHPS POLICY P-00-6]
5. DECORATIVE MATERIALS SHALL BE MAINTAINED IN A FLAME-RETARDANT CONDITION. [CALIF. CODE OF REGS., TITLE 19, 3.08, 3.21, CEC 2501.5]
6. ALL VALVES CONTROLLING THE WATER SUPPLY FOR AUTOMATIC SPRINKLER SYSTEM AND WATER-FLOW SWITCHES ON AL SPRINKLER SYSTEMS SHALL BE ELECTRICALLY MONITORED WHERE THE NUMBER OF SPRINKLERS IS A 100 OR MORE. [CBC 904.3.1, CFC 1003.3.1]
7. INSTALLATION OF FIRE ALARM SYSTEMS SHALL BE IN ACCORDANCE WITH CFC 1007.
8. AT LEAST ONE FIRE EXTINGUISHER WITH A MINIMUM RATING OF 2A-10BC SHALL BE PROVIDED WITHIN 75 FT. MAXIMUM TRAVEL DISTANCE FOR EACH 6,000 SQ. FT. OR PORTION THEREOF ON EACH FLOOR [CFC 1002, UFC STANDARD 10-1, CALIF. CODE OF REGS., TITLE 19, 3.29]
9. CONTRACTOR SHALL VERIFY IN FIELD THE EXISTENCE OR INSTALLATION OF A FIRE EXTINGUISHER WITH A MINIMUM RATING OF 2A-10BC, WITH A CHARGE STATUS ACCEPTABLE TO THE LOCAL FIRE AUTHORITY HAVING JURISDICTION (SAN DIEGO FIRE DEPARTMENT).
10. COMPLETE PLANS AND SPECIFICATIONS FOR ALARM SYSTEMS: FIRE-EXTINGUISHING SYSTEMS, INCLUDING AUTOMATIC SPRINKLERS AND OTHER FIRE-PROTECTION SYSTEMS SHALL BE SUBMITTED TO FIRE AND LIFE SAFETY FOR REVIEW AND APPROVAL TO INSTALLATION. [CFC 100.3]

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5480A NAVE DR
NOVATO,CA 94949
45'-0" MONOPOLE

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5001 EXECUTIVE PKWY.
SAN RAMON, CA 94583

ERICSSON
4120 DUBLIN BLVD STE
450 DUBLIN
CALIFORNIA 94568

PLANS PREPARED BY:
Pramira
ARCHITECTURAL & ENGINEERING SERVICES

REV	DATE	DESCRIPTION	INT
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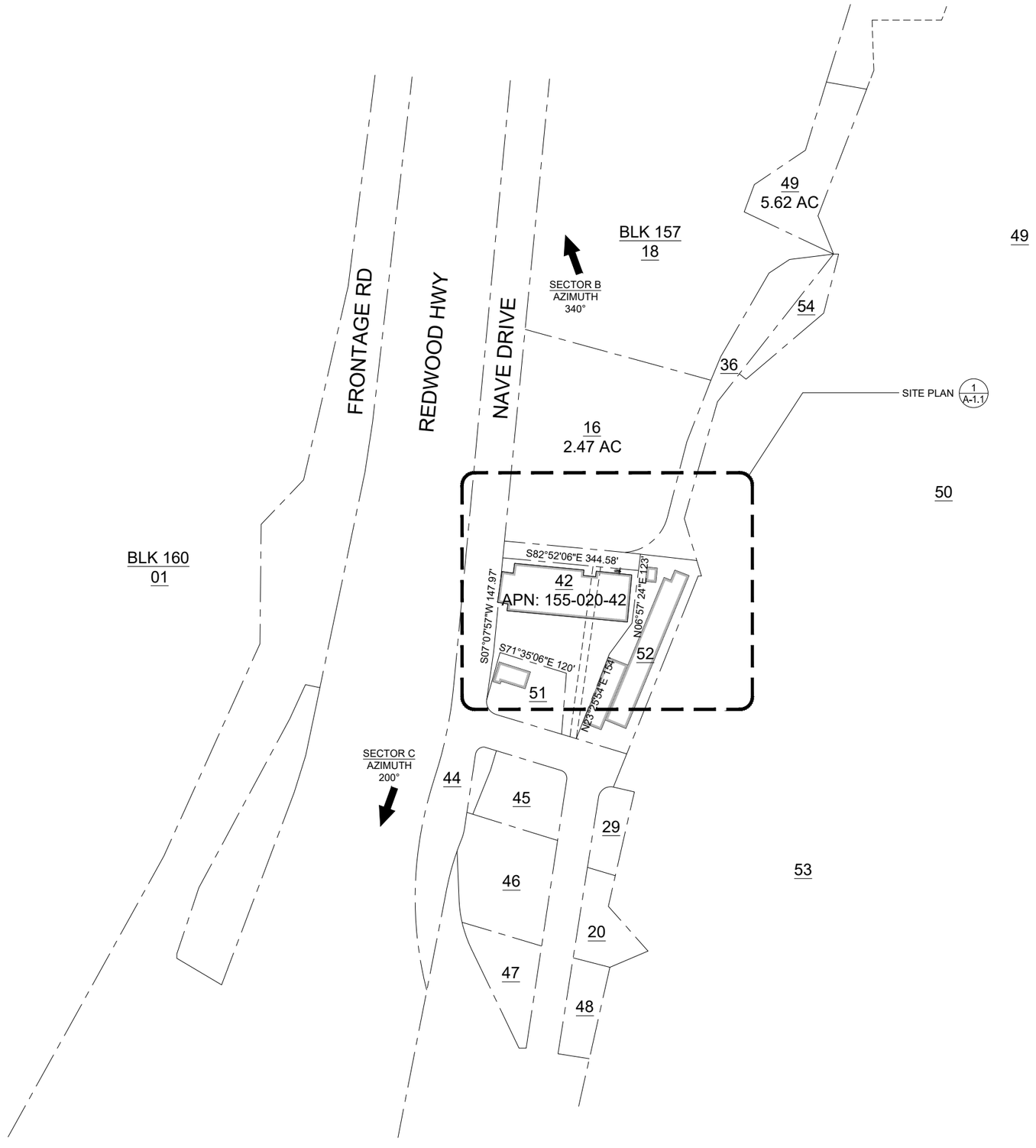
A	01/05/2022	90% CDS	KD

LICENSED PROFESSIONAL ENGINEER
AMER ALKLOUB
C 90995
CIVIL
STATE OF CALIFORNIA

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-2



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C 90995
CIVIL
STATE OF CALIFORNIA

SHEET TITLE
OVERALL SITE PLAN

SHEET NUMBER
A-1

N
W E
S

OVERALL SITE PLAN

24"x36" SCALE: 1" = 100'-0"
11"x17" SCALE: 1" = 200'-0"
100' 50' 0' 100'

NOTE:
1. ALL EXISTING GROUNDING TO BE RECONNECTED PRIOR TO CONSTRUCTION COMPLETE.

BATTERY STORAGE SYSTEM CAPACITY

BATTERY TECHNOLOGY	LEAD ACID
QUANTITY OF (E) BATTERIES	16
QUANTITY OF (N) BATTERIES	4
QUANTITY OF TOTAL BATTERIES	20
(E) BATTERY STORAGE SYSTEM CAPACITY	145AH PER BATTERY
(N) BATTERY STORAGE SYSTEM CAPACITY	165AH PER BATTERY
TOTAL BATTERY STORAGE SYSTEM CAPACITY	35.76 kWh

TOTAL STORAGE SYSTEM CAPACITY IS LESS THAN 70kWh.

REDWOOD HWY

NAVE DRIVE

(E) BUILDING

(E) BUILDING

(E) BUILDING

(E) BUILDING

SECTOR B
AZIMUTH
340°

(E) TREES

(E) ACCESS ROAD

(E) PROPERTY LINE
± 120'-3"

± 17'-1"

± 53'-10"

± 11'-11"

F.H.

(E) BUILDING

(E) BUILDING

APN: 155-020-42

ENLARGED SITE PLAN
1
A-2

(E) PROPERTY LINE

± 81'-9"

(E) PROPERTY LINE

± 209'

SECTOR C
AZIMUTH
200°

(E) PARKING LOT

(E) PROPERTY LINE

(E) PROPERTY LINE

(E) BUILDING

(E) TREES

(E) BUILDING

(E) PROPERTY LINE

(E) BUILDING

(E) PARKING LOT

N
W E
S

24"x36" SCALE: 1" = 20'-0"
11"x17" SCALE: 1" = 40'-0"

20' 10' 0" 20'

SITE PLAN 1

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5480A NAVE DR
NOVATO,CA 94949
45'-0" MONOPOLE

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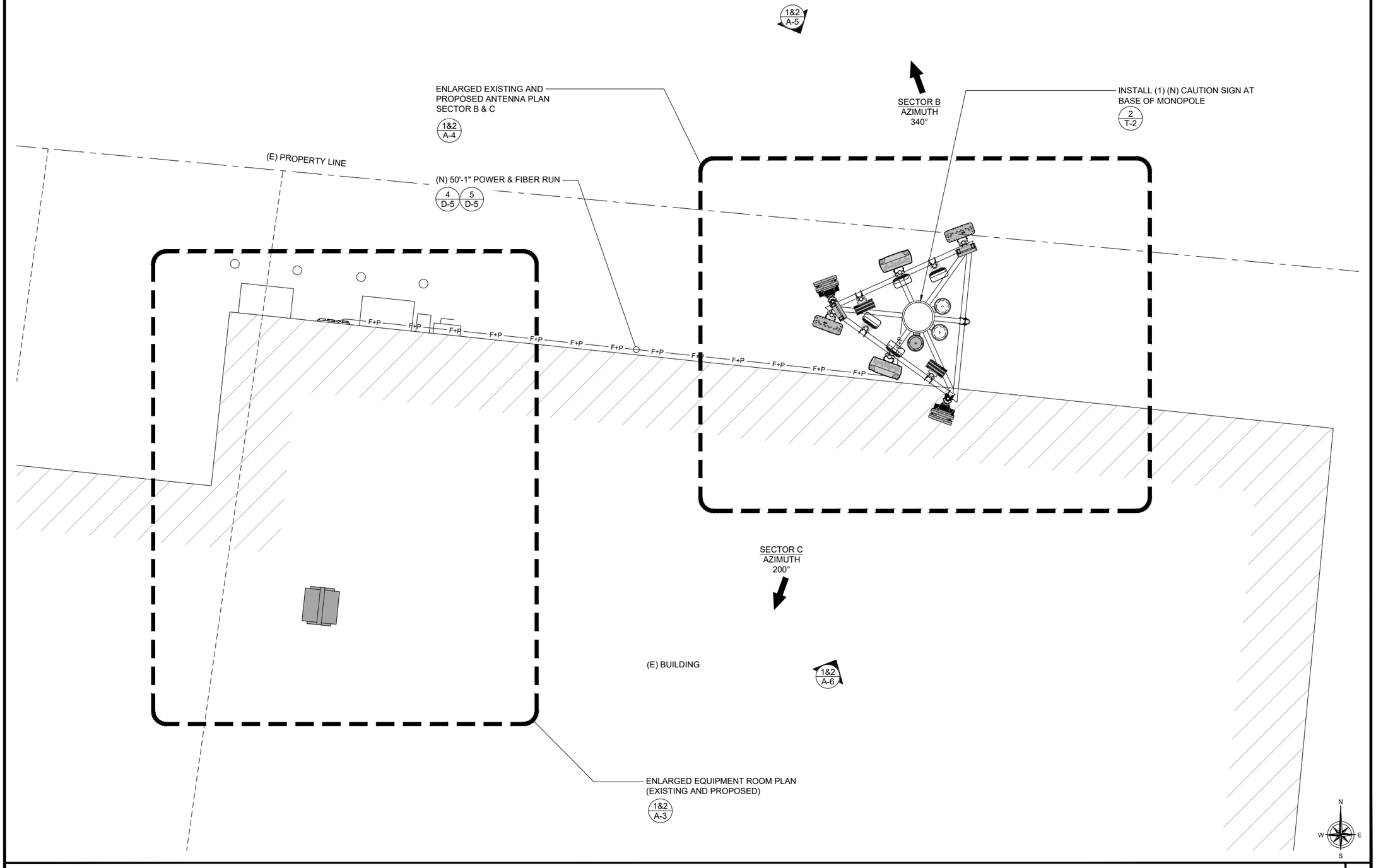
CIVIL
STATE OF CALIFORNIA

SHEET TITLE
SITE PLAN

SHEET NUMBER
A-1.1

NOTE:
1. ALL EXISTING GROUNDING TO BE RECONNECTED PRIOR TO CONSTRUCTION COMPLETE.



ENLARGED SITE PLAN

24"x36" SCALE: 3/8" = 1'-0"
11"x17" SCALE: 3/16" = 1'-0"

2' 1' 0" 2'

1

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5480A NAVE DR
NOVATO,CA 94949
45'-0" MONOPOLE

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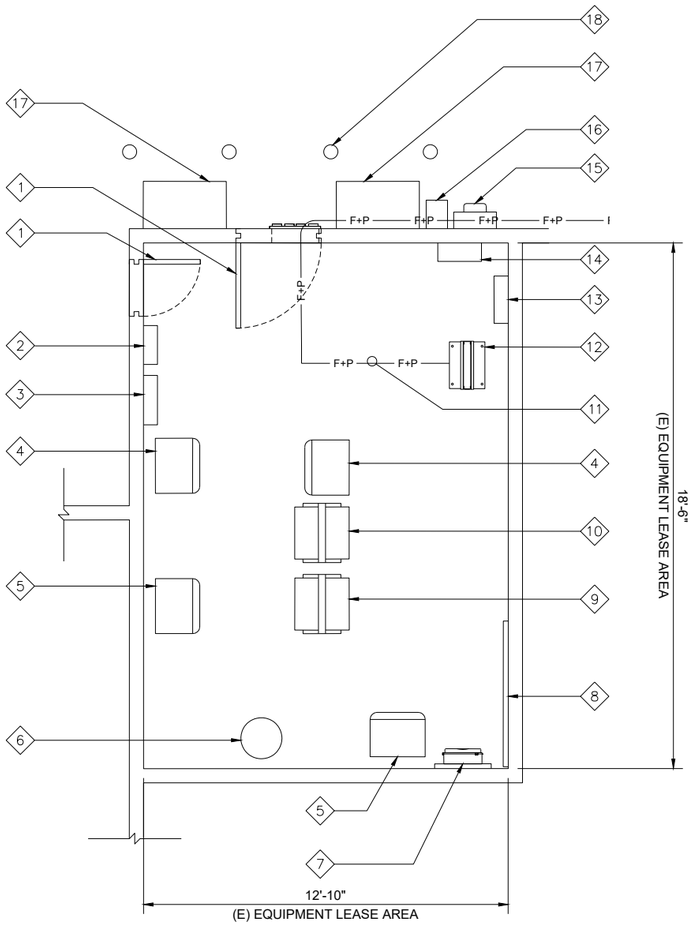
SHEET TITLE
ENLARGED SITE PLAN

SHEET NUMBER
A-2

EXISTING EQUIPMENT LAYOUT KEY NOTES

1. (E) ACCESS DOOR
2. (E) FIRE SUPPRESSION PANEL
3. (E) AC PANEL
4. (E) 3206 RBS CABINET — 2 / D-3
5. (E) 2206 RBS CABINET — 4 / D-3
6. (E) HALON TANK
7. (E) CIENA UNIT — 6 / D-2
8. (E) TELCO BACKBOARD
9. (E) BATTERY RACK — 8 / D-2, 1 / D-3
10. (E) DC POWER PLANT RACK — 4 / D-2, 5 / D-2, 3 / D-3
11. (E) 2" INTERDUCT W/ (2) DC POWER TRUNK & (1) FIBER TRUNK
12. (E) DUL UNIT WITHIN (E) 6601 CHASSIS W/ (E) 5216 UNIT & (E) XMU UNIT WITHIN (E) V2 CHASSIS & DC12 SURGE SUPPRESSOR INSIDE (E) 19" RACK — 1 / D-2, 2 / D-2, 3 / D-2, 4 / D-2, 5 / D-3
13. (E) ELECTRICAL PANEL
14. (E) MANUAL TRANSFER SWITCH
15. (E) METER
16. (E) CAM-LOC LUG BOX
17. (E) HVAC UNIT, TYP. OF 2
18. (E) BOLLARD, TYP. OF 4



EXISTING EQUIPMENT LAYOUT

24"x36" SCALE: 3/8" = 1'-0"
11"x17" SCALE: 3/16" = 1'-0"

2' 1' 0" 2'

2

PROPOSED EQUIPMENT LAYOUT KEY NOTES

1. INSTALL (1) (N) STRING OF 165 AH BATTERIES IN (E) RACK — 3 / D-5
2. INSTALL (2) (N) RECTIFIERS IN (E) DC POWER PLANT — 5 / D-2
3. INSTALL (1) (N) DC POWER SHELF WITH (1) (N) BASEBAND 6648 — 8 / D-4, 9 / D-4, 1 / D-5
4. CONNECT ALL POWER TO (N) DC POWER SHELF
5. RELOCATE ALL (E) DC12 SURGE SUPPRESSOR TO (N) DC POWER SHELF — 4 / D-2

NOTE:
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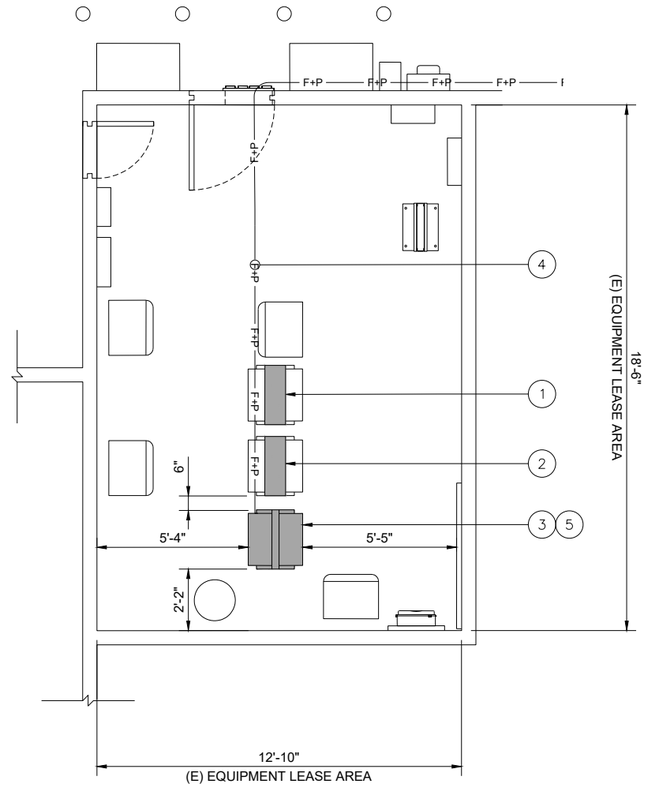

PROPOSED EQUIPMENT LAYOUT

24"x36" SCALE: 3/8" = 1'-0"
11"x17" SCALE: 3/16" = 1'-0"

2' 1' 0" 2'

1

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45'-0" MONOPOLE

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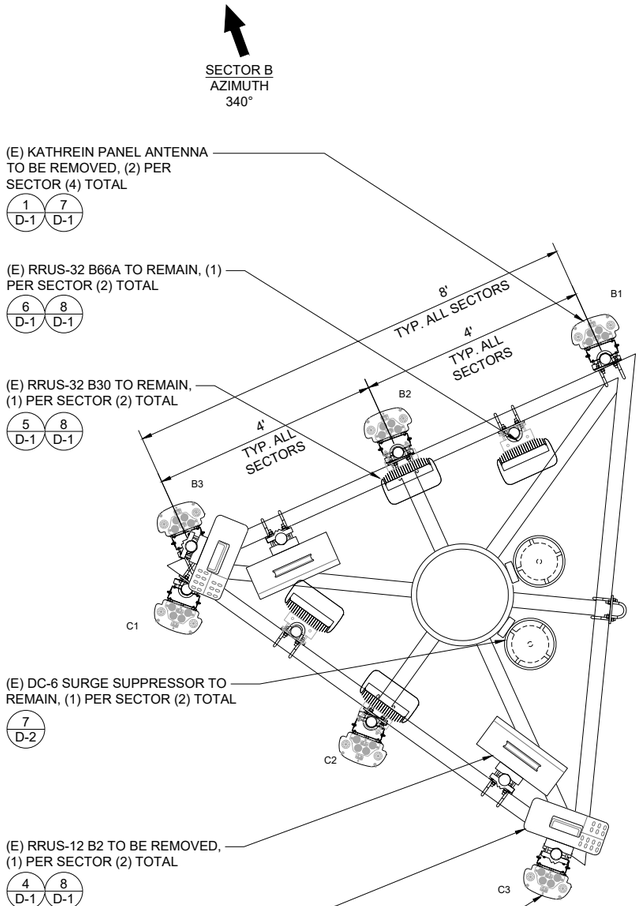
STATE OF CALIFORNIA

SHEET TITLE
EQUIPMENT LAYOUT

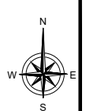
SHEET NUMBER
A-3

NOTE:
1. ALL EXISTING GROUNDING TO BE RECONNECTED PRIOR TO CONSTRUCTION COMPLETE.

SECTOR B
AZIMUTH
340°



SECTOR C
AZIMUTH
200°



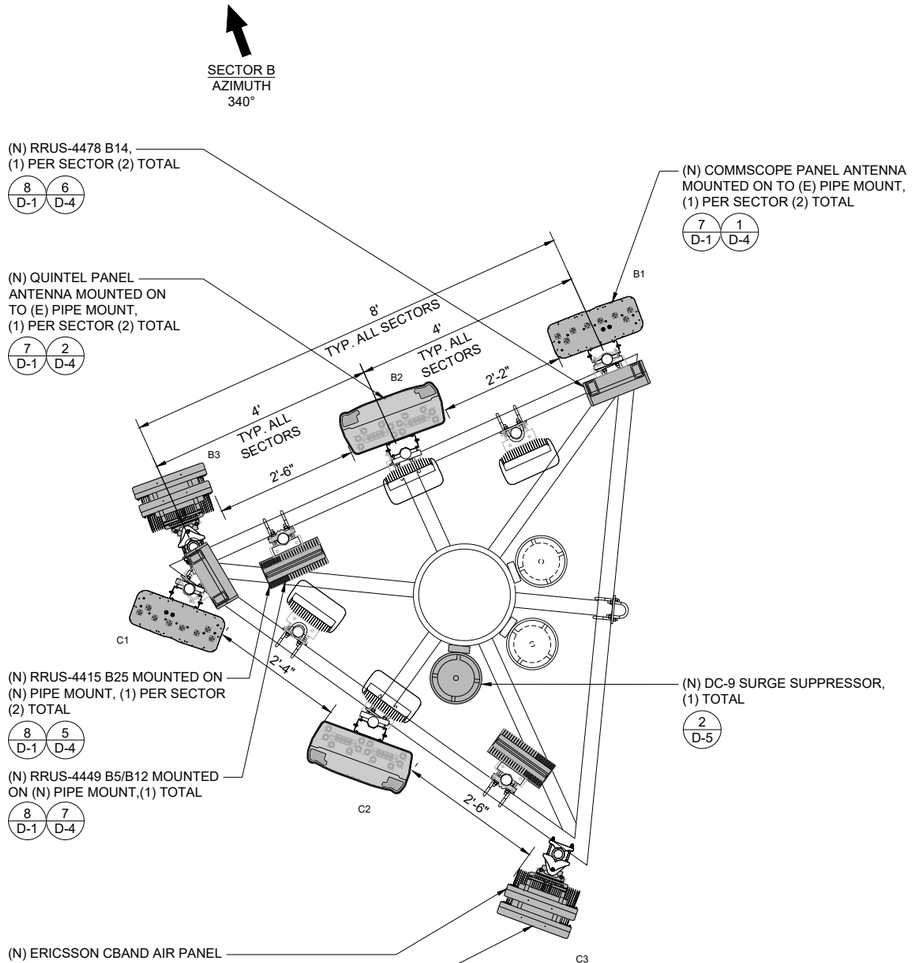
EXISTING ANTENNA LAYOUT

24"x36" SCALE: 3/4" = 1'-0"
11"x17" SCALE: 3/8" = 1'-0"

1' 6" 0" 1'

2

SECTOR B
AZIMUTH
340°



SECTOR C
AZIMUTH
200°

PROPOSED ANTENNA LAYOUT

24"x36" SCALE: 3/4" = 1'-0"
11"x17" SCALE: 3/8" = 1'-0"

1' 6" 0" 1'

1

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45'-0" MONOPOLE

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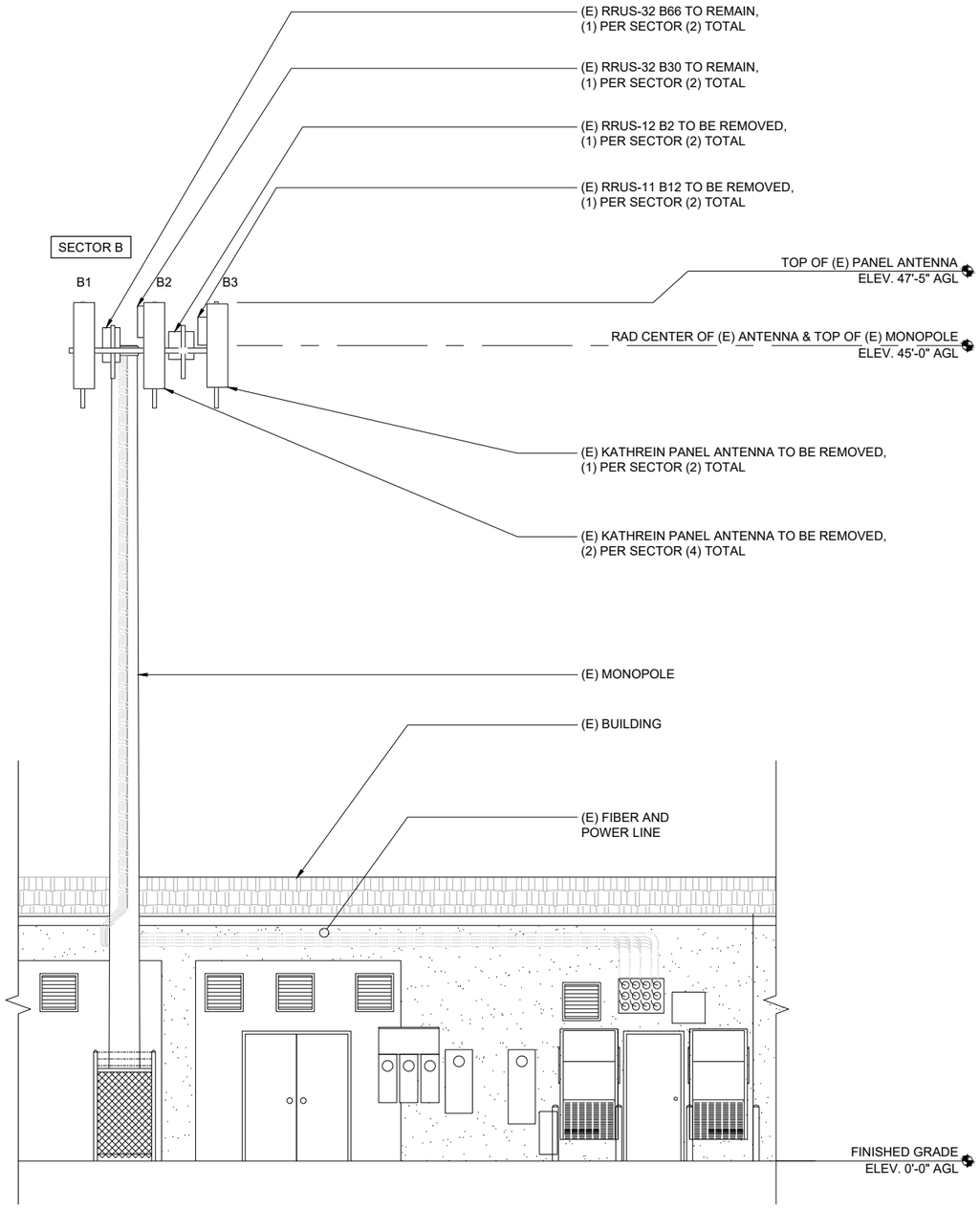
SHEET TITLE
ANTENNA LAYOUT

SHEET NUMBER
A-4



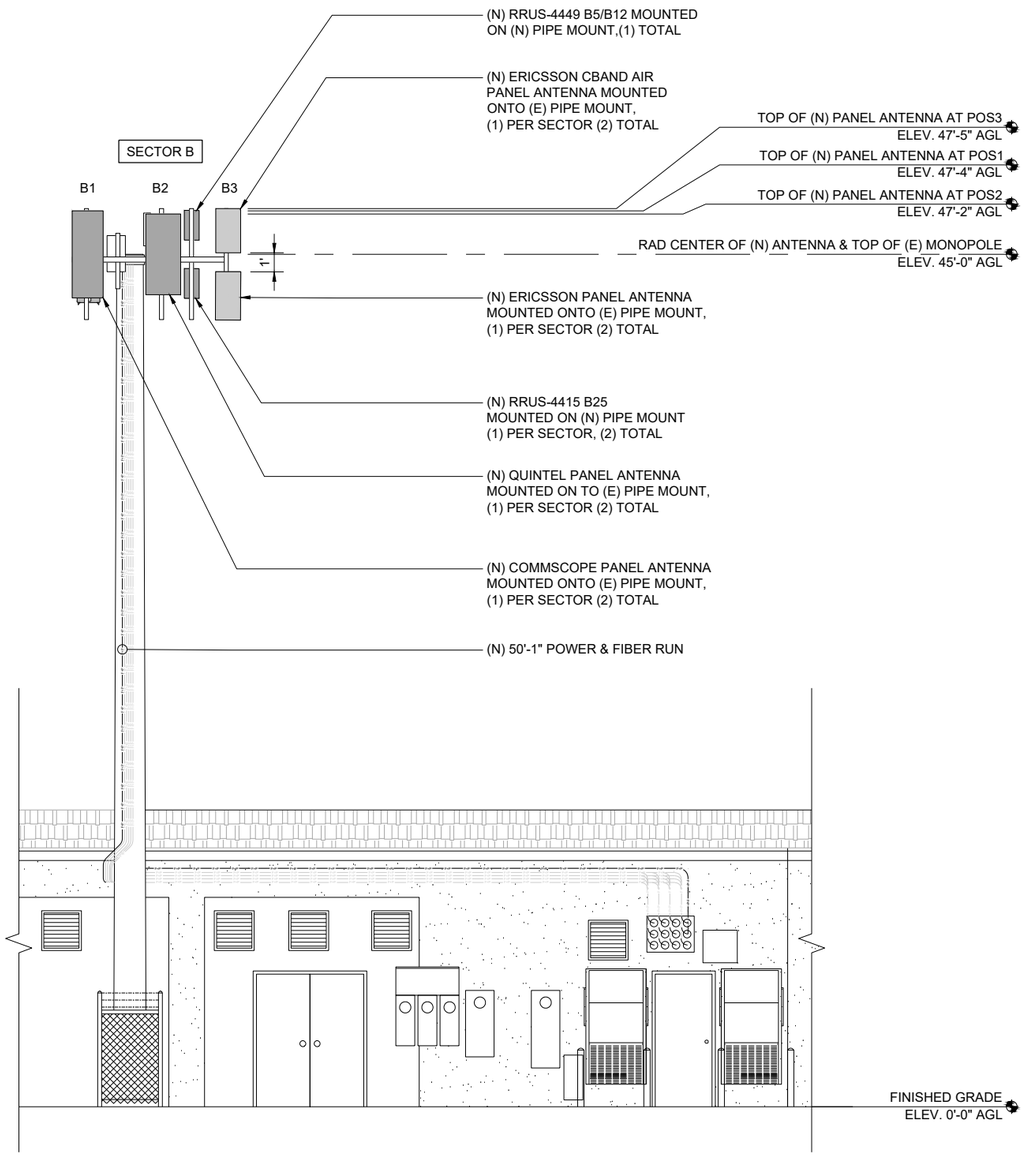
EXISTING NORTHWEST ELEVATION

24"x36" SCALE: 1/4" = 1'-0"
11"x17" SCALE: 1/8" = 1'-0"

4' 3' 2' 1' 0" 4'

1

NOTE:
1. ALL EXISTING GROUNDING TO BE RECONNECTED PRIOR TO CONSTRUCTION COMPLETE.



PROPOSED NORTHWEST ELEVATION

24"x36" SCALE: 1/4" = 1'-0"
11"x17" SCALE: 1/8" = 1'-0"

4' 3' 2' 1' 0" 4'

2

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45'-0" MONOPOLE

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SAN RAMON, CA 94583

ERICSSON
4120 DUBLIN BLVD STE
450 DUBLIN
CALIFORNIA 94568

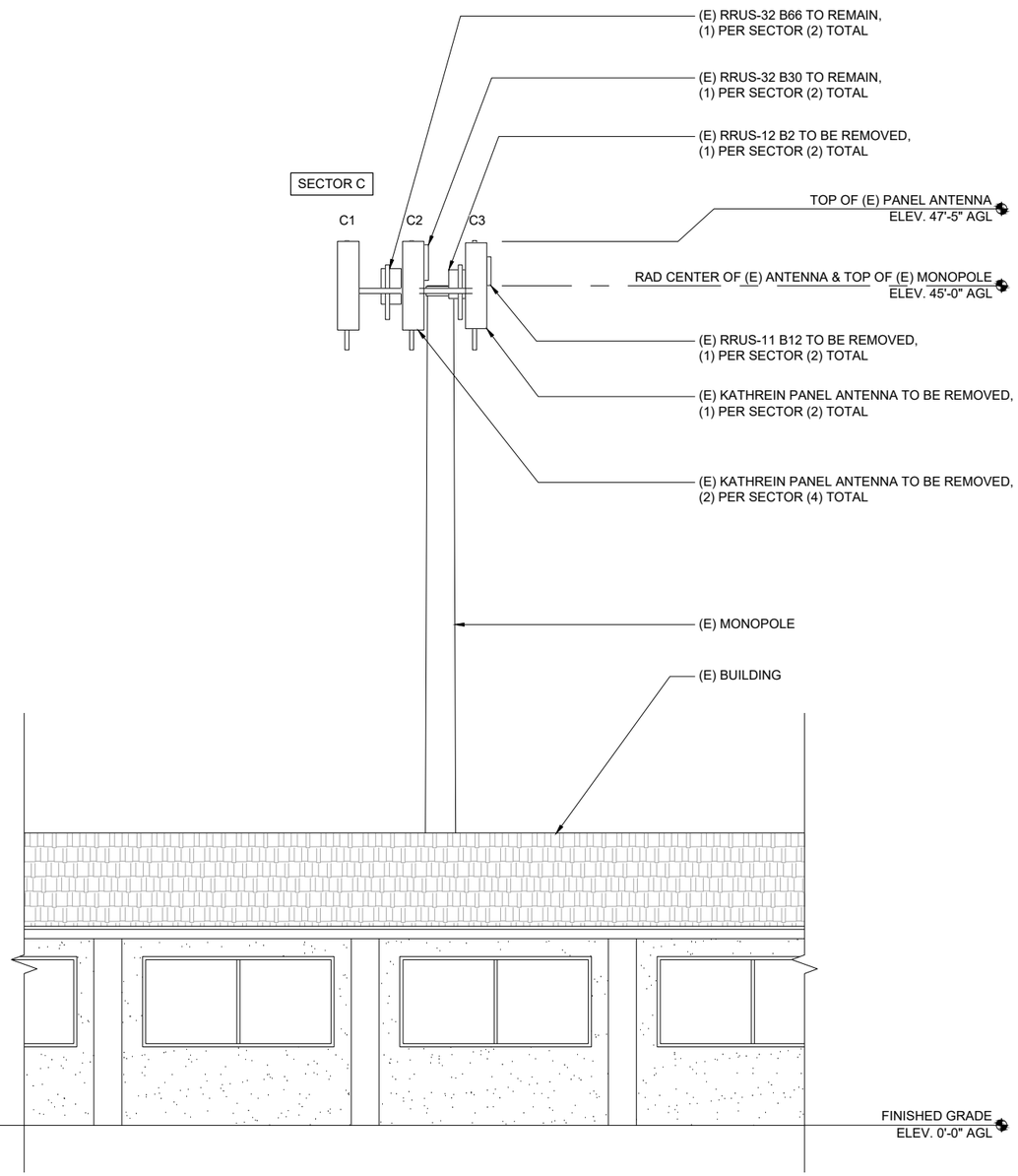
PLANS PREPARED BY:
Pramira
ARCHITECTURAL & ENGINEERING SERVICES

REV	DATE	DESCRIPTION	INT
1	06/28/2022	PLAN CHECK COMMENTS	GCA
0	04/13/2022	100% CDS	GCA
B	04/11/2022	95% CDS	RAR
A	01/05/2022	90% CDS	KD

LICENSED PROFESSIONAL ENGINEER
AMER ALKLOUB
C 90995
CIVIL
STATE OF CALIFORNIA

SHEET TITLE
ELEVATIONS

SHEET NUMBER
A-5



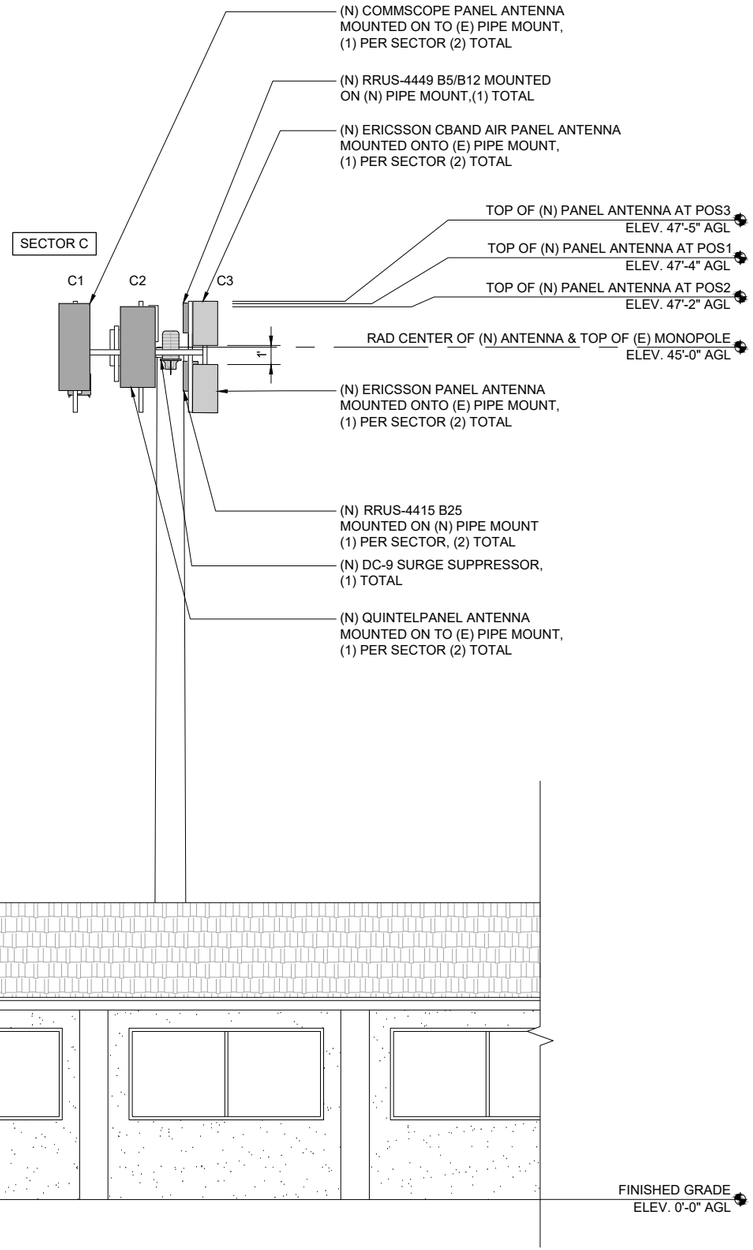
EXISTING SOUTHWEST ELEVATION

24"x36" SCALE: 1/4" = 1'-0"
11"x17" SCALE: 1/8" = 1'-0"

4' 3' 2' 1' 0" 4'

1

NOTE:
1. ALL EXISTING GROUNDING TO BE RECONNECTED PRIOR TO CONSTRUCTION COMPLETE.



PROPOSED SOUTHWEST ELEVATION

24"x36" SCALE: 1/4" = 1'-0"
11"x17" SCALE: 1/8" = 1'-0"

4' 3' 2' 1' 0" 4'

2

CCL00339
SOUTH NOVATO 1 – NAVE DR
5480A NAVE DR
NOVATO,CA 94949
45'-0" MONOPOLE

at&t
5001 EXECUTIVE PKWY.
SAN RAMON, CA 94583

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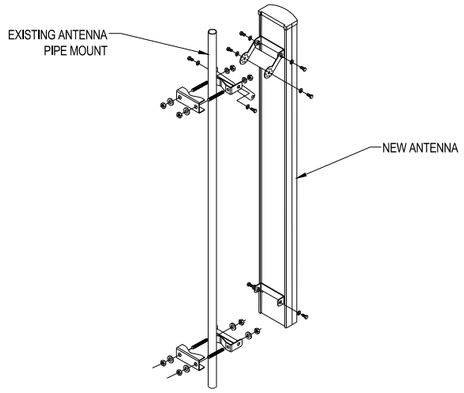
LICENSED PROFESSIONAL ENGINEER
AMER ALKLOUB
C 90995
CIVIL
STATE OF CALIFORNIA

SHEET TITLE
ELEVATIONS

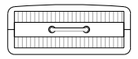
SHEET NUMBER
A-6

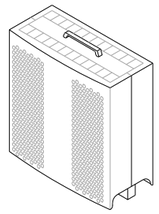


(E) ANTENNA MOUNT DETAIL | 7

ERICSSON: RRUS-12 B2

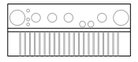
MANUFACTURER:	ERICSSON
MODEL NUMBER:	12 B2
DIMENSIONS (HxWxD):	20.4"X18.5"X7.5"
TOTAL WEIGHT:	50 LBS
TEMPERATURE:	-40° TO 55° C


PLAN VIEW


ISOMETRIC VIEW


FRONT VIEW


SIDE VIEW


BOTTOM VIEW

(E) RRUS-12 B2 SPECIFICATIONS | 4

KATHREIN 800-10767

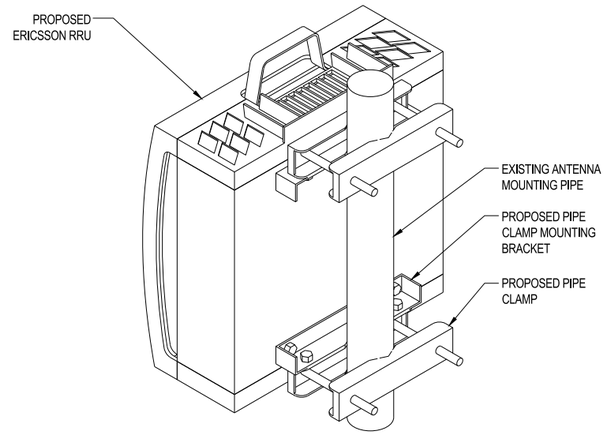
DIMENSIONS, HxWxD:	57.0"X14.8"X6.7"
WEIGHT:	63.9 LBS.


PLAN VIEW


FRONT VIEW


SIDE VIEW

(E) KATHREIN 800-10767 ANTENNA | 1

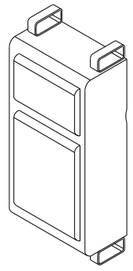


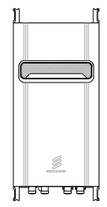
(E) TYPICAL RRU PIPE MOUNTING DETAIL | 8

ERICSSON: RRUS-32 B30

MANUFACTURER:	ERICSSON
MODEL NUMBER:	32 B30
DIMENSIONS (HxWxD):	27.2"X12.1"X7.0"
TOTAL WEIGHT:	53 LBS


PLAN VIEW


ISOMETRIC VIEW


FRONT VIEW


SIDE VIEW

(E) RRUS-32 B30 SPECIFICATIONS | 5

KATHREIN 800-10764

DIMENSIONS, HxWxD:	55.2"X11.8"X6"
WEIGHT:	40.8 LBS.


PLAN VIEW


FRONT VIEW

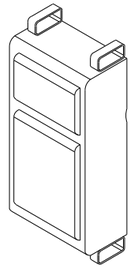

SIDE VIEW

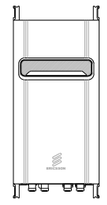
(E) KATHREIN 800-10764 ANTENNA | 2

ERICSSON: RRUS-32 B66A

MANUFACTURER:	ERICSSON
MODEL NUMBER:	32 B66A
POWER CONSUMPTION:	910 WATTS
DIMENSIONS (HxWxD):	27.2"X12.1"X7.0"
TOTAL WEIGHT:	53 LBS


PLAN VIEW


ISOMETRIC VIEW

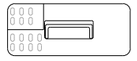

FRONT VIEW

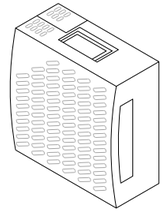

SIDE VIEW

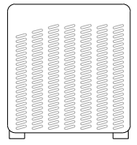
(E) RRUS-32 B66A SPECIFICATIONS | 6

ERICSSON: RRUS-11 B12

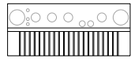
MANUFACTURER:	ERICSSON
MODEL NUMBER:	11 B12
DIMENSIONS (HxWxD):	19.68"X16.96"X7.2"
TOTAL WEIGHT:	55.11 LBS


PLAN VIEW


ISOMETRIC VIEW


FRONT VIEW


SIDE VIEW


BOTTOM VIEW

(E) RRUS-11 B12 SPECIFICATIONS | 3

NOT USED | 9

CCL00339
SOUTH NOVATO 1 – NAVE DR
5480A NAVE DR
NOVATO,CA 94949
45'-0" MONOPOLE

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C 90995
CIVIL
STATE OF CALIFORNIA

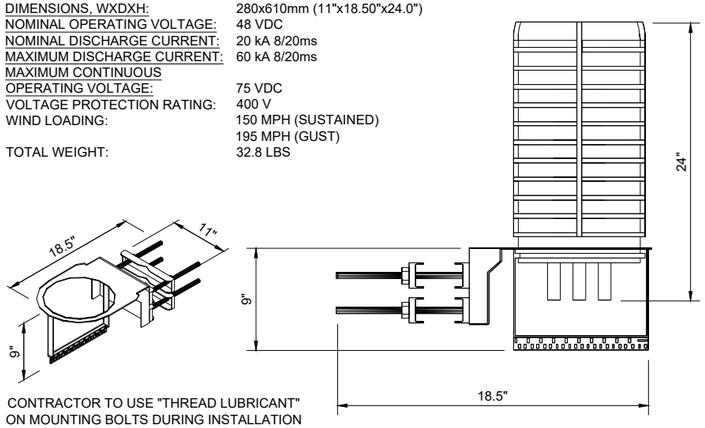
SHEET TITLE
DETAILS

SHEET NUMBER
D-1

(E) DC-6 SURGE SUPPRESSOR — 7

RAYCAP DC6-48-60-18-8F

DIMENSIONS, WXDXH:	280x610mm (11"x18.50"x24.0")
NOMINAL OPERATING VOLTAGE:	48 VDC
NOMINAL DISCHARGE CURRENT:	20 kA 8/20ms
MAXIMUM DISCHARGE CURRENT:	60 kA 8/20ms
MAXIMUM CONTINUOUS OPERATING VOLTAGE:	75 VDC
VOLTAGE PROTECTION RATING:	400 V
WIND LOADING:	150 MPH (SUSTAINED) 195 MPH (GUST)
TOTAL WEIGHT:	32.8 LBS

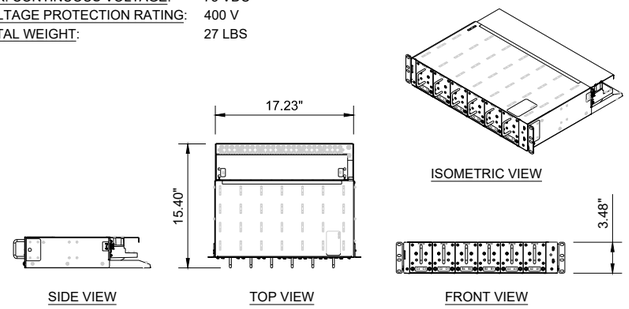


CONTRACTOR TO USE "THREAD LUBRICANT" ON MOUNTING BOLTS DURING INSTALLATION

(E) DC12-48-60-RM SPECIFICATIONS — 4

RAYCAP DC12-48-60-RM

MANUFACTURER:	RAYCAP
MODEL NUMBER:	DC12-48-60-RM
DIMENSIONS (HxWxD):	3.48"x17.23"x15.40"
NOMINAL OPERATING VOLTAGE:	48 VDC
MAX. CONTINUOUS VOLTAGE:	75 VDC
VOLTAGE PROTECTION RATING:	400 V
TOTAL WEIGHT:	27 LBS



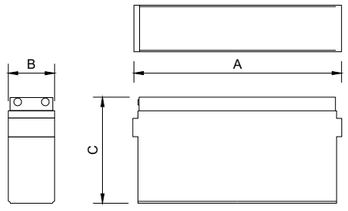
(E) ERICSSON - 6601 V2 CHASSIS — 1

ERICSSON 6601 V2 CHASSIS

MANUFACTURER:	ERICSSON
MODEL NUMBER:	6601 V2 CHASSIS
DIMENSIONS (HxWxD):	2.59"x19"x13.77"
POWER CONSUMPTION:	250 W
BREAKER SIZE:	MIN.15A, MAX 20A
TOTAL WEIGHT:	<22.04 LBS
NOMINAL VOLTAGE:	-48VDC
OPERATING VOLTAGE RANGE:	-40.0 TO -57.6VDC
NON-DESTRUCTIVE VOLTAGE RANGE:	0 TO -60VDC

DEKA FAHRENHEIT HT150ET

Model Number	Voltage	Capacity (AH) 8 Hr To 1.75 VPC @ 25°C	Nominal Dimensions Inches A	B	C	Millimeters A	B	C	Nominal Weight lbs.	Kg
HT150ET	12	145 AH	22.17	4.97	11.63	563	126.3	295.5	103	47



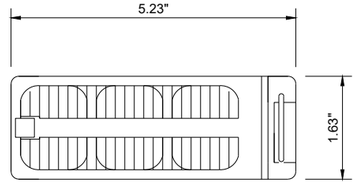
BATTERY STORAGE SYSTEM CAPACITY	
BATTERY TECHNOLOGY	LEAD ACID
QUANTITY OF (E) BATTERIES	16
QUANTITY OF (N) BATTERIES	4
QUANTITY OF TOTAL BATTERIES	20
(E) BATTERY STORAGE SYSTEM CAPACITY	145AH PER BATTERY
(N) BATTERY STORAGE SYSTEM CAPACITY	165AH PER BATTERY
TOTAL BATTERY STORAGE SYSTEM CAPACITY	35.76 kWh

TOTAL STORAGE SYSTEM CAPACITY IS LESS THAN 70kWh.

(E) & (N) GE RECTIFIER — 5

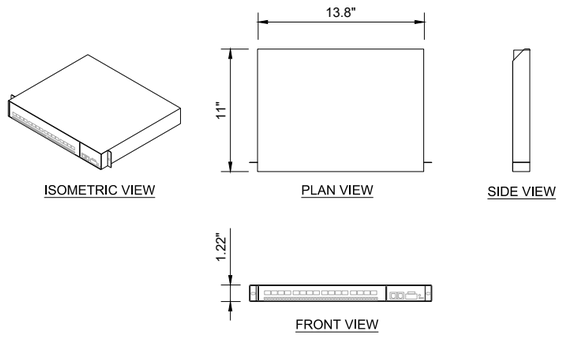
MANUFACTURER:	GE
LENGTH:	13.58 INCHES
WIDTH:	5.23 INCHES
HEIGHT:	1.63 INCHES
WEIGHT:	5.05 LBS

VOLTAGE RANGE: 42-60VDC
INPUT CURRENT: 41A @ 54.5VDC/54A @ 42VDC
OUTPUT CURRENT: 75A @ 27.2V
VOLTAGE ADJUST RANGE: 23-28VDC



(E) ERICSSON - 5216 BASEBAND — 2

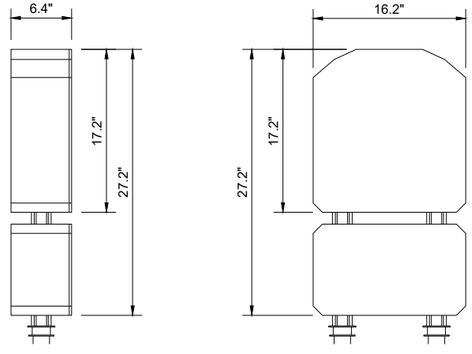
MANUFACTURER:	ERICSSON
MODEL NUMBER:	5216
DIMENSIONS (WxDxH):	13.8"x11"x1.22"
MAX POWER CONSUMPTION:	80 WATTS
BREAKER SIZE:	MIN 15 A, MAX 20 A
TOTAL WEIGHT:	8.8 LBS



(E) CIENA CABINET SPECIFICATIONS — 6

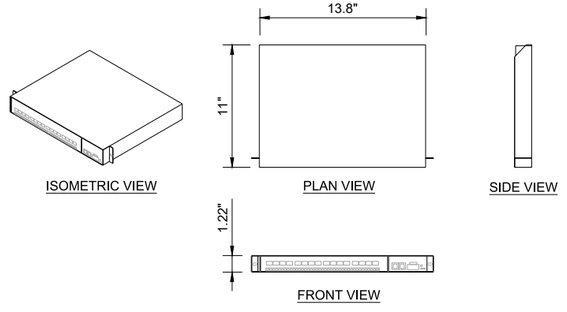
CIENA CABINET

MANUFACTURER:	CIENA
MODEL NUMBER:	CIENA 3931
DIMENSIONS (HxWxD):	17.2"X16.2"X6.4"
TOTAL WEIGHT:	33 LBS



(E) XMU 03 SPECIFICATIONS — 3

MANUFACTURER:	ERICSSON
MODEL NUMBER:	XMU 03
DIMENSIONS (WxDxH):	13.8"x11"x1.22"
MAX POWER CONSUMPTION:	80 W
BREAKER SIZE:	MIN. 15A, MAX 20A
TOTAL WEIGHT:	<5 LBS



CCL00339
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45'–0" MONOPOLE

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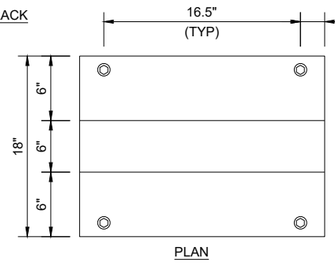
C 90995
CIVIL
STATE OF CALIFORNIA

SHEET TITLE
DETAILS

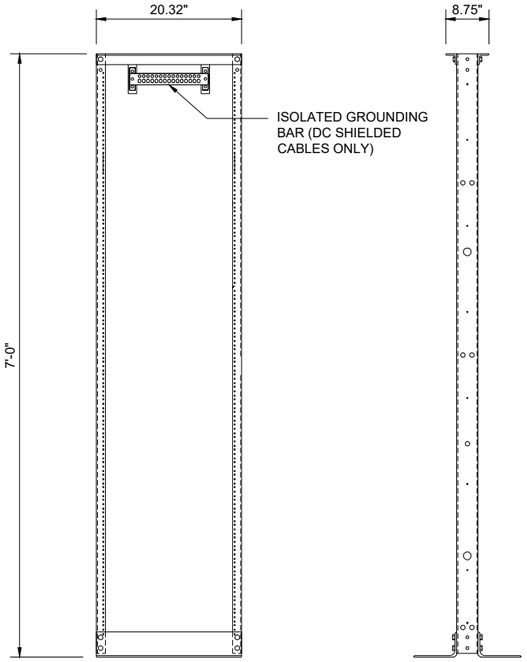
SHEET NUMBER
D-2

COMMSCOPE: 2-POST, 6" CHANNEL X 7' H - 19" RACK

CODE: 760082495 | RK6-45A
DIMENSIONS, (HxWxD): 84"x20.32"x18"
STATIC LOAD RATING: 1000.016 LBS



PLAN

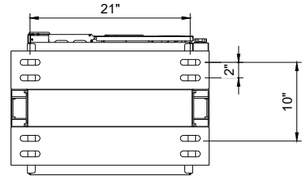


FRONT VIEW SIDE VIEW

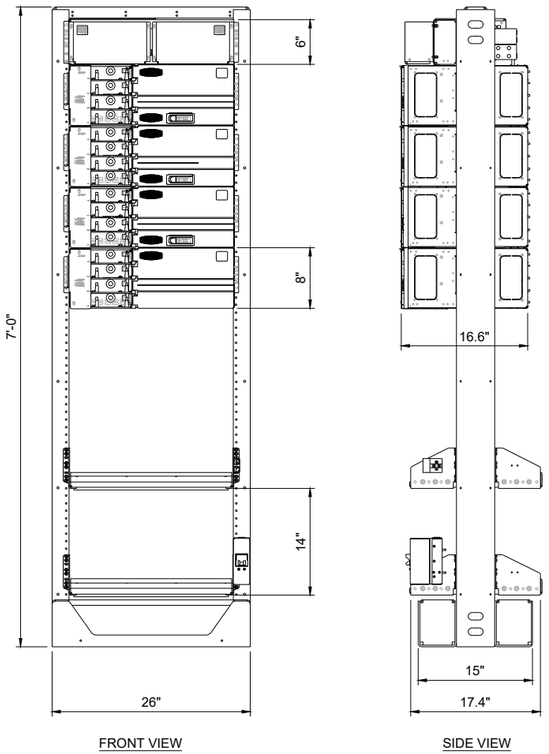
(E) & (N) FIF RACK | 5

GE INFINITY D: POWER SHELF

CODE: CC848828938
DIMENSIONS, (WxDxH): 84"x26"x24.4"x17.4"



PLAN

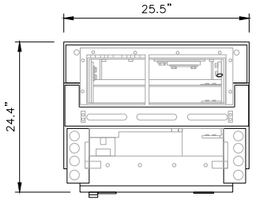


FRONT VIEW SIDE VIEW

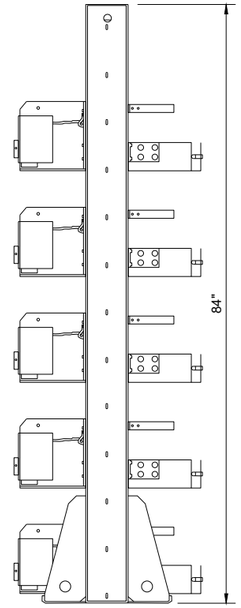
(E) DC POWER PLANT | 3

NETSURE: BATTERY RACK

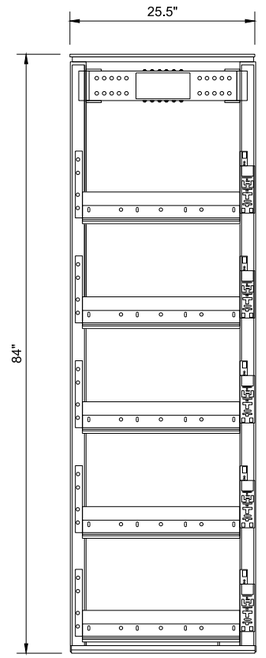
EMERSON NUMBER: 48BA1200
DIMENSIONS, HxWxD: 84"x25.5"x24.4"
BREAKER DISCONNECT: 100A BREAKER PER STRING
OUTPUT CAPACITY: 1200 AMPS PER BAY



PLAN



SIDE VIEW



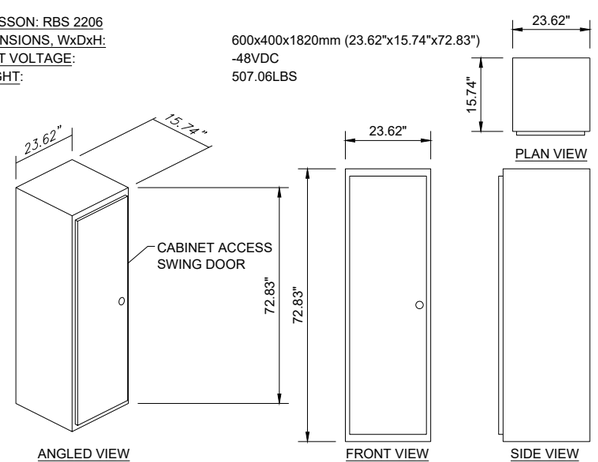
FRONT VIEW

(E) BATTERY RACK | 1

NOT USED | 6

ERICSSON: RBS 2206

DIMENSIONS, WxDxH: 600x400x1820mm (23.62"x15.74"x72.83")
INPUT VOLTAGE: -48VDC
WEIGHT: 507.06LBS

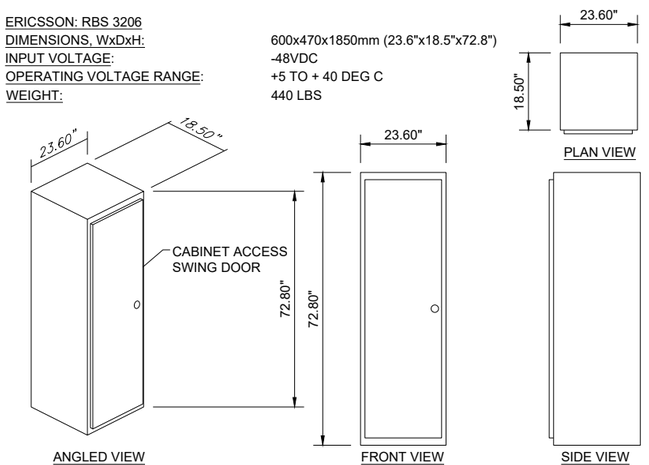


ANGLED VIEW FRONT VIEW SIDE VIEW

(E) RBS 2206 CABINET | 4

ERICSSON: RBS 3206

DIMENSIONS, WxDxH: 600x470x1850mm (23.6"x18.5"x72.8")
INPUT VOLTAGE: -48VDC
OPERATING VOLTAGE RANGE: +5 TO + 40 DEG C
WEIGHT: 440 LBS



ANGLED VIEW FRONT VIEW SIDE VIEW

(E) RBS 3206 CABINET | 2

CCL00339
SOUTH NOVATO 1 – NAVE DR
5480A NAVE DR
NOVATO,CA 94949
45'–0" MONOPOLE

at&t
5001 EXECUTIVE PKWY.
SAN RAMON, CA 94583

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CALIFORNIA 94568

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CIVIL
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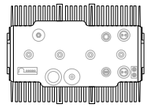
SHEET TITLE
DETAILS

SHEET NUMBER
D-3

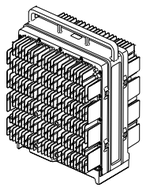
(N) RRUS-4449 B5/B12 SPECIFICATIONS | 7

ERICSSON: RRUS-4449 B5/B12

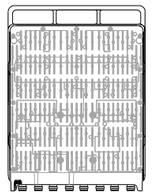
MANUFACTURER:	ERICSSON
MODEL NUMBER:	4449 B5/B12
DIMENSIONS (HxWxD):	17.9"X13.19"X9.44"
TOTAL WEIGHT:	70.55 LBS



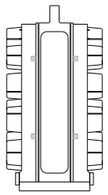
PLAN VIEW



ISOMETRIC VIEW



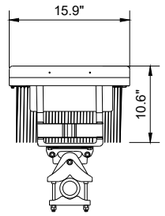
FRONT VIEW



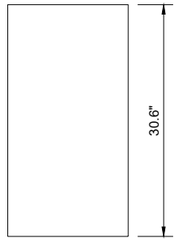
SIDE VIEW

(N) ERICSSON AIR6449 B77D ANTENNA | 4

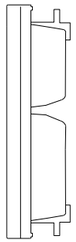
MANUFACTURER:	ERICSSON
MODEL NUMBER:	AIR6449 B77D
DIMENSIONS (HxWxD):	30.60"x15.9"x10.6"
TOTAL WEIGHT:	83.8 LBS (WITHOUT RET OR MOUNTING HARDWARE)



PLAN VIEW



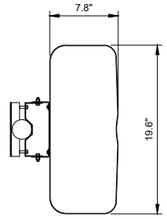
FRONT VIEW



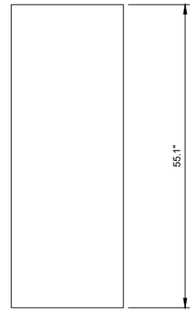
SIDE VIEW

(N) COMMSCOPE NNHH-65A-R4 ANTENNA | 1

MANUFACTURER:	COMMSCOPE
MODEL NUMBER:	NNHH-65A-R4
DIMENSIONS (HxWxD):	55.1"x19.6"x7.8"
TOTAL WEIGHT:	68.3 LBS



TOP VIEW



FRONT VIEW

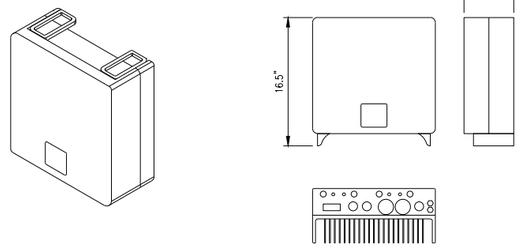
(N) ERICSSON BASEBAND 6648 | 8

ERICSSON BASEBAND 6648

MANUFACTURER:	ERICSSON
MODEL NUMBER:	6648
DIMENSIONS (WxDxH):	1.75"x19.00"x13.86"
TOTAL WEIGHT	16.53 LBS

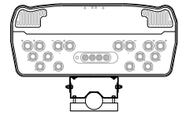
(N) RRUS-4415 B25 SPECIFICATIONS | 5

MANUFACTURER:	ERICSSON
MODEL NUMBER:	RRUS-4415 B25
DIMENSIONS (HxWxD):	16.5"x13.4"x5.9"
TOTAL WEIGHT:	46 lbs

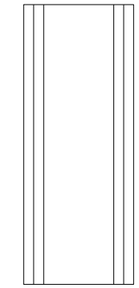


(N) QUINTEL QD4612-3D ANTENNA | 2

BAND:	MULTIBAND
OP. FREQ BAND:	698-894 MHZ AND 1695-2400 MHZ
DIMENSIONS, HxWxD:	51.5"×22"×9.6"
WEIGHT:	96.0 lbs.
RET INTERFACE:	12X 4.3-10.0 DIN FEMALE LONG NECK



PLAN VIEW



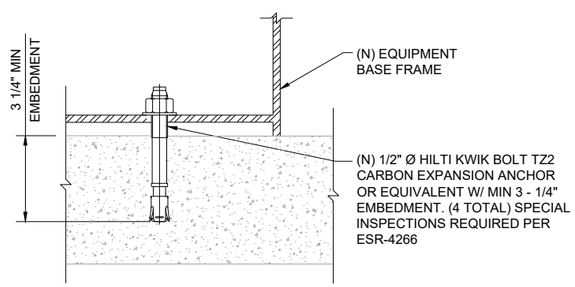
FRONT VIEW

SIDE VIEW

(N) CONCRETE ANCHOR DETAIL | 9

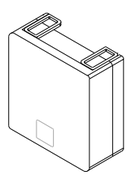
NOTE:

1. EXISTING CONCRETE SLAB IS 6" MINIMUM (FIELD VERIFY).

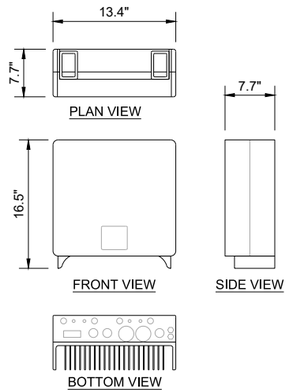


(N) RRUS-4478 B14 | 6

MANUFACTURER:	ERICSSON
MODEL NUMBER:	RRUS-4478 B14
DIMENSIONS (HxWxD):	15.0"X13.2"X7.3"
POWER CONSUMPTION:	4x40 WATTS
WEIGHT:	59.4 LBS
TEMPERATURE:	-40° TO 55° C



ISOMETRIC VIEW



PLAN VIEW

FRONT VIEW

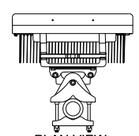
SIDE VIEW

BOTTOM VIEW

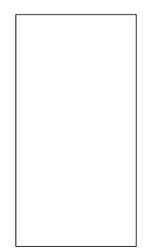
(N) ERICSSON AIR6419 B77G ANTENNA | 3

ERICSSON: CBAND AIR ANTENNA

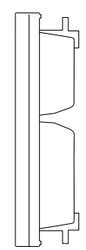
DIMENSIONS, HxWxD:	28" ×15.7" ×6.7"
WEIGHT:	66.1 lbs.



PLAN VIEW



FRONT VIEW



SIDE VIEW

CCL00339
SOUTH NOVATO 1 – NAVE DR
5480A NAVE DR
NOVATO,CA 94949
45'-0" MONOPOLE

at&t
5001 EXECUTIVE PKWY.
SAN RAMON, CA 94583

ERICSSON
4120 DUBLIN BLVD STE
450 DUBLIN
CALIFORNIA 94568

PLANS PREPARED BY:

Pramira
ARCHITECTURAL & ENGINEERING SERVICES

REV	DATE	DESCRIPTION	INT
1	06/28/2022	PLAN CHECK COMMENTS	GCA
0	04/13/2022	100% CDS	GCA
B	04/11/2022	95% CDS	RAR
A	01/05/2022	90% CDS	KD

SHEET TITLE

DETAILS

SHEET NUMBER

D-4

Construction

- Utilizes TPPL technology. Thin positive grids are produced from high purity lead using a unique manufacturing process to maximize corrosion resistance and service life while increasing energy density
- Separators are AGM made from high purity, superior quality fibers. The electrolyte is absorbed within the AGM, preventing acid spills in case of accidental damage
- Electrolyte is produced from extremely high purity acid to reduce self-discharge rates and float currents
- Container and cover made from flame retardant UL94-V0 material, highly resistant to shock and vibration
- Front terminal batteries use tin-plated copper terminals.
- Self-regulating one way pressure relief valves prevent ingress of atmospheric oxygen

Installation and Operation

- Space efficient footprint
- VRLA design, reduces maintenance requirements
- Lifting handles for easy handling
- Greater than 10 year life expectancy in float service at 77°F (25°C)
- TPPL technology provides increased active material surface area which yields increased energy density
- Operating temperature:
  -40°F (-40°C) to 122°F (50°C)
  Recommended temperature:
  68°F (20°C) to 86°F (30°C)

Standards

- Approved as non-hazardous cargo for ground, sea and air transportation in accordance with US DOT Regulation 49 and ICAO & IATA Packing Instruction 806. Please see our SDS for complete details at www.enersys.com
- Complies with Telcordia® SR-4228, Network Equipment Building System (NEBS™) Criteria Levels
- The management systems governing the manufacture of this product are ISO 9001:2008 and ISO 14001:2004 certified

General Specifications

			Nominal Capacity		Nominal Dimensions										Electrolyte (1.300 S.G.)				Pure Acid (H_2SO_4) Acid					
PowerSafe® SBS Battery	Number of Cells	Nominal Voltage (V)	8hr. Rate 1.75Vpc @77°F	10hr. Rate 1.80Vpc @20°F	Length		Width		Height		Typical Weight		Short Circuit Current (Amps)	Internal** Resistance Milli-Ohms	Terminals	Volume (per bloc)		Weight (per bloc)		Volume (per bloc)		Weight (per bloc)		Lead Weight (per bloc)	
					in	mm	in	mm	in	mm	lbs	kg				gal	L	lbs	kg	gal	L	gal	L	lbs	kg
SBS B8F	6	12	31	31	11.9	303	3.80	97.0	6.26	159	22.7	10.3	1270	10.0	M6 M	0.37	1.42	4.05	1.84	0.11	0.40	1.61	0.73	15.6	7.08
SBS B10F	6	12	38	38	11.9	303	3.80	97.0	7.24	184	28.2	12.8	1390	9.00	M6 M	0.48	1.80	5.1	52.34	0.13	0.51	2.04	0.93	17.7	8.03
SBS B14F	6	12	62	62	11.9	303	3.80	97.0	10.4	264	42.0	19.1	1800	7.00	M6 M	0.78	2.95	8.4	53.83	0.22	0.83	3.35	1.52	29.6	13.4
SBS C11F	6	12	92	91	16.4	417	4.10	105	10.1	256	61.6	27.9	2300	5.50	M6 M	1.28	4.85	13.9	5.50	0.36	1.36	5.50	2.49	43.4	19.7
SBS 100F	6	12	100	100	15.6	395	4.30	108	11.3	287	71.9	32.6	2210	5.60	M6 M	1.34	5.09	14.6	6.60	0.38	1.43	5.77	2.62	48.7	22.5
SBS 112F	6	12	112	112	22.1	561	4.90	125	8.98	228	90.4	41.0	2500	5.00	M6 M	1.71	6.48	18.5	8.41	0.48	1.82	7.35	3.34	56.8	25.8
SBS 145F	6	12	145	145	17.8	452	6.80	172	9.37	238	105	47.6	4100	3.00	M6 M	2.25	8.51	24.3	11.0	0.63	2.38	9.66	4.38	72.4	32.8
SBS 165F	6	12	165	165	17.8	452	6.77	172	10.8	274	117	52.8	3700	2.30	M6 M	2.45	9.27	26.5	12.0	0.64	2.42	9.72	4.41	82.7	37.5
SBS 170F	6	12	170	170	22.1	561	4.90	125	11.1	283	116	52.5	3400	4.00	M6 M	2.09	7.92	22.7	10.3	0.59	2.23	8.99	4.08	82.0	37.2
SBS 190F	6	12	190	190	22.1	561	4.90	125	12.4	316	132	60.0	3800	3.30	M6 M	2.34	8.86	25.3	11.5	0.66	2.49	10.1	4.56	95.8	43.4

**Resistance values are for reference only and not intended to represent an Ohmic Value or Baseline measurement

SBS B8F - B14F
SBS C11F

SBS 100F - 112F

SBS 145F, 165F - 190F

BATTERY STORAGE SYSTEM CAPACITY

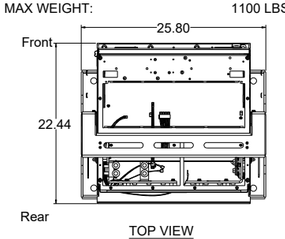
BATTERY TECHNOLOGY	LEAD ACID
QUANTITY OF (E) BATTERIES	16
QUANTITY OF (N) BATTERIES	4
QUANTITY OF TOTAL BATTERIES	20
(E) BATTERY STORAGE SYSTEM CAPACITY	145AH PER BATTERY
(N) BATTERY STORAGE SYSTEM CAPACITY	165AH PER BATTERY
TOTAL BATTERY STORAGE SYSTEM CAPACITY	35.76 kWh

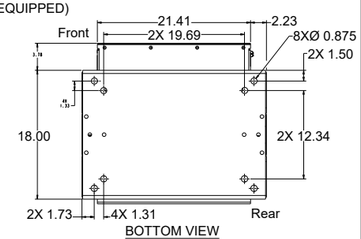
TOTAL STORAGE SYSTEM CAPACITY IS LESS THAN 70kWh.

(N) SBS BATTERY SPECIFICATION 3

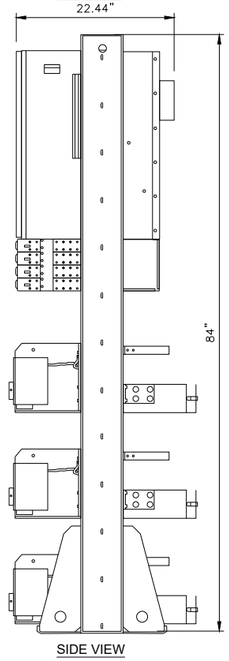
NETSURE 7100 DC POWER SYSTEM

AT&T NUMBER:	NEQ.19735
VERTIV NUMBER:	582127000103
PRODUCT NAME:	NETSURE 7100 POWER SYSTEM (MODEL WITH 3 BATTERY TRAYS)
DIMENSIONS, HxWxD:	84"x25.5"x22"
MAX WEIGHT:	1100 LBS (FULLY EQUIPPED)



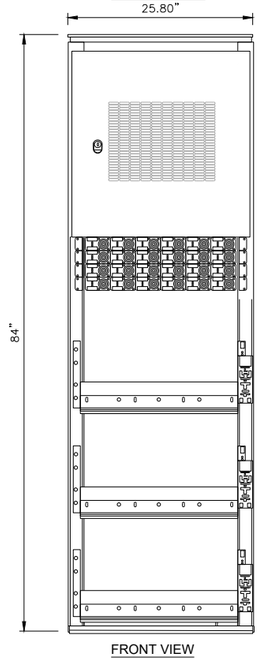


TOP VIEW



SIDE VIEW

BOTTOM VIEW



FRONT VIEW

(N) DC POWER SHELF 1

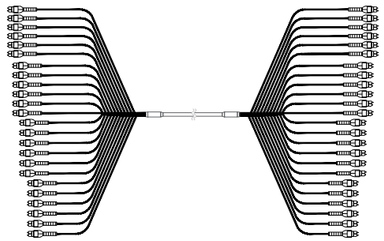
POWER CABLE: PWRT-606-S

CABLE TYPE:	POWER
TOTAL CONDUCTORS:	6
JACKET COLOR:	BLACK
DIAM. OVER CONDUCTOR:	0.1790 in per 19 strands
DIAM. OVER DIELECTRIC:	6.325 mm | 0.249 in
DIAM. OVER DRAIN WIRE:	2.5700 in per 7 strands
CABLE WEIGHT:	1324.466 kg/km | 890 lb/kft

(N) POWER CABLE - PWRT-606-S 5

FIBER CABLE ASSEMBLY: RFFT-48SM-001-50M

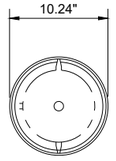
FIBER TYPE:	G.657.A2
TOTAL FIBERS:	48
JACKET COLOR:	BLACK
CORD LENGTH:	50.00 m | 164.04 ft
CABLE WEIGHT:	91.0 kg/km
DIAM. OVER JACKET:	10.28 mm | 0.40 in
CONSTRUCTION TYPE:	DISCRETE FIBER TRUNK
MIN. BEND RADIUS:	10.3 cm | 4.0 in
MIN. BEND RADIUS, FURCATION:	30.0 mm | 1.2 in



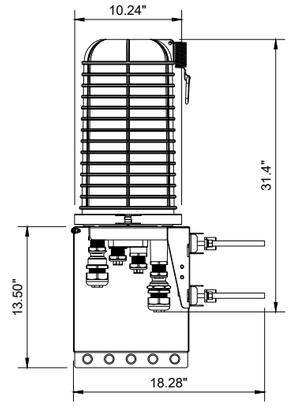
(N) FIBER CABLE ASSEMBLY - RFFT-48SM-001-50M 4

RAYCAP DC9-48-60-24-8C-EV

DIMENSIONS, WXDXH:	31.4"x10.24"x18.28"
NOMINAL OPERATING VOLTAGE:	48 VDC
NOMINAL DISCHARGE CURRENT:	20 kA 8/20ms
MAXIMUM DISCHARGE CURRENT:	12.5 kA 10/350ms
MAXIMUM CONTINUOUS OPERATING VOLTAGE:	60 VDC
VOLTAGE PROTECTION RATING:	330 V
WIND LOADING:	150 MPH (SUSTAINED) 195 MPH (GUST)
TOTAL WEIGHT:	28.7 LBS



PLAN VIEW



SIDE VIEW

(N) DC9 SURGE PROTECTION 2

CCL00339
SOUTH NOVATO 1 – NAVE DR
5480A NAVE DR
NOVATO,CA 94949
45'-0" MONOPOLE

at&t
5001 EXECUTIVE PKWY.
SAN RAMON, CA 94583

ERICSSON
4120 DUBLIN BLVD STE
450 DUBLIN
CALIFORNIA 94568

PLANS PREPARED BY:
Pramira
ARCHITECTURAL & ENGINEERING SERVICES

REV	DATE	DESCRIPTION	INT
1	06/28/2022	PLAN CHECK COMMENTS	GCA
0	04/13/2022	100% CDS	GCA
B	04/11/2022	95% CDS	RAR
A	01/05/2022	90% CDS	KD

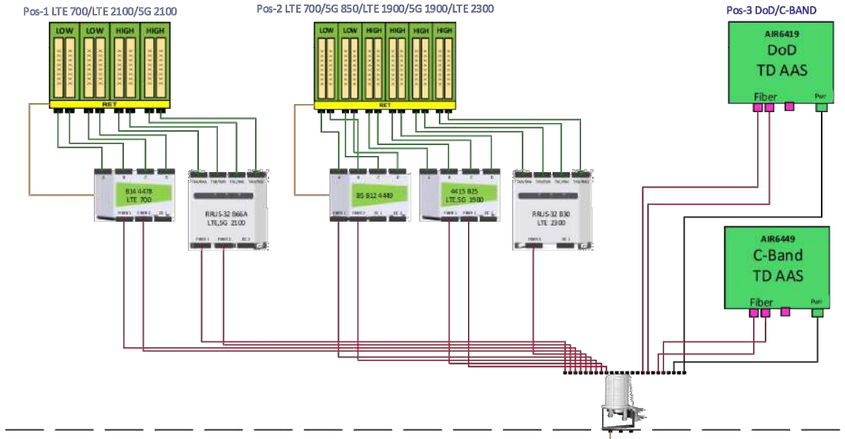
LICENSED PROFESSIONAL ENGINEER
AMER ALKLOUB
C 90995
CIVIL
STATE OF CALIFORNIA

SHEET TITLE
DETAILS

SHEET NUMBER
D-5

Diagram - Sector	A	Diagram File Name - CNU0339_V3.vsdx					
Atoll Site Name -	CNU0339	Location Name -	SOUTH NOVATO 1 - NAVE DR	Market -	SAN FRANCISCO	Market Cluster -	SAN FRANCISCO/SACRAMENTO
Comments:							

BETA



Hatch Line

1x6648 at Hub/site for C-Band/DoD

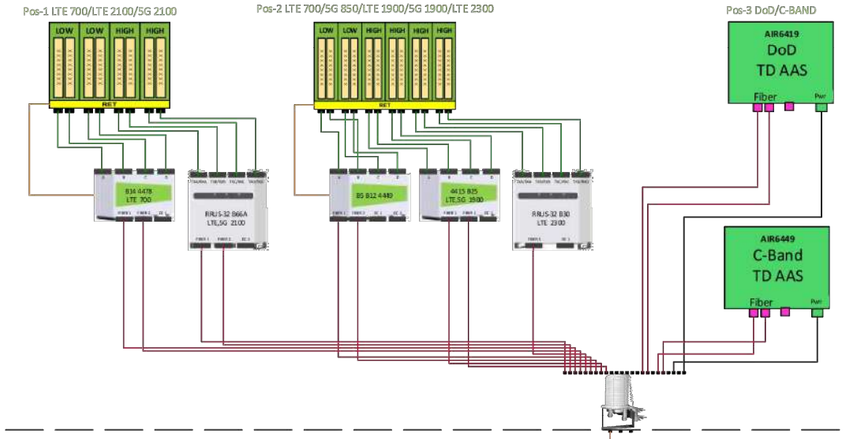
2x6601 / 1x5216 / 1x6630 Mixed-Mode / 2xXMU03 IDLe (shared)

Important Text:
For detailed radio to antenna wiring refer to the latest 4T4R Antenna/Radio Port Connections Field Notice (RF-HW-2016-265) and the 4T Wiring Playbook.

RET Contoller

Diagram - Sector	A	Diagram File Name - CNU0339_V3.vsdx					
Atoll Site Name -	CNU0339	Location Name -	SOUTH NOVATO 1 - NAVE DR	Market -	SAN FRANCISCO	Market Cluster -	SAN FRANCISCO/SACRAMENTO
Comments:							

GAMMA



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1x6648 at Hub/site for C-Band/DoD

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RET Contoller

CCL00339
SOUTH NOVATO 1 – NAVE DR
5480A NAVE DR
NOVATO,CA 94949
45'–0" MONOPOLE

at&t
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4120 DUBLIN BLVD STE
450 DUBLIN
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PLANS PREPARED BY:

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LICENSED PROFESSIONAL ENGINEER
AMER ALKLOUB
C 90995
CIVIL
STATE OF CALIFORNIA

SHEET TITLE

RFDS

SHEET NUMBER

RF-1