



CITY OF SUNNYVALE REPORT ZONING ADMINISTRATOR HEARING

February 16, 2011

File Number: 2010-7757

Permit Type: Special Development Permit

Location: 1111 W. El Camino Real (near Bernardo Ave.) (APN: 161-23-001)

Applicant/Owner: Trillium Consulting / Marie and Vincent Cala Et Al

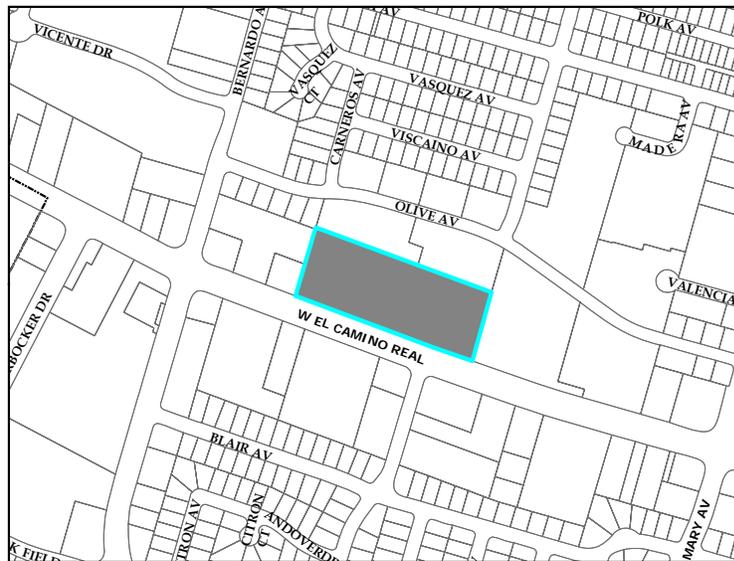
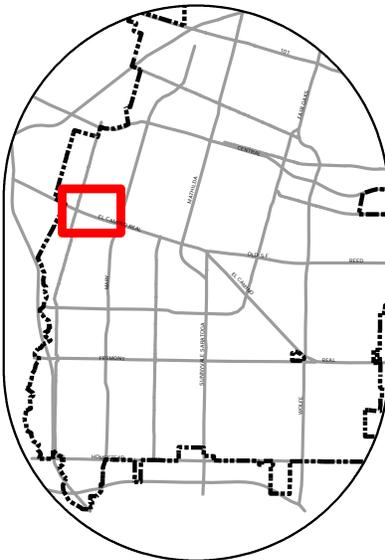
Staff Contact: Noren Caliva, Associate Planner, (408) 730-7637

Project Description: To allow three additional rooftop wireless telecommunications antennas (AT&T) on an existing shopping center building.

Reason for Permit: A Special Development Permit is required for the modification to an existing facility that would enable additional antennas.

Issues: Visual impacts.

Recommendation: Approve with Conditions



500

Feet

PROJECT DESCRIPTION

	Existing	Proposed
General Plan:	Commercial General Business	Same
Zoning District:	C-2/ECR	Same
Lot Size:	238,709 s.f.	Same
Number of Stories:	1	Same
Height of Building:	28 ft.	Same
Height of Antennas Above Rooftop:	7 ft.	Same

Previous Planning Projects related to Subject Application: SDP 2004-0711 was approved at a Zoning Administrator Hearing on November 10, 2004. The approved project included nine panel antennas placed inside three separate mock chimneys, known as radomes, at three different locations on the roof of the building. The existing radomes are made of fiberglass material and are textured to match the wall of the existing building.	Yes
Neighborhood Preservation Complaints	No
Deviations from Standard Zoning Requirements	No
Adjacent to Residential or Non-Commercial/Industrial Uses: There is an existing apartment complex just north of the project site. The telecommunications facility is more than 70 feet away from the nearest apartment building.	Yes

Use Description & Site Layout: The site is currently developed as a shopping center made up of four buildings, with a mix of commercial and office uses. The subject building is one-story and is located along the northeast corner of the center. The building has a zero lot line along the north property line (adjacent to apartments) and is set back approximately 223 feet along the south property line (El Camino Real).

AT&T proposes to add three additional panel antennas to the existing rooftop facility, by adding one antenna to each of the three radomes. Each radome will be extended horizontally by approximately 8 feet and will retain the existing height of 7 feet. Supporting equipment, including radio transceiver units and surge suppressors, will be mounted on the roof next to each radome. Additional ancillary equipment will be added to the existing equipment shelter located towards the middle of the building. All new roof-mounted equipment will be fully screened behind the existing building parapet. With the exception of the roof mounts, no additional modifications will be made to the building or site. In addition, no permanent generators are proposed as a part of this project.

Design: Although the design intent of the original 2004 approval was for each of the radomes to appear as mock chimney features, the construction was not well-executed. Staff recommends that the radomes be modified to match the color and texture of the existing building, with decorative caps added along the top of each radome. As conditioned, the wireless telecommunications facility will be architecturally-compatible with the existing building and will have minimal visual impacts to the surrounding neighborhood.

Radio Frequency (RF) Emissions Exposure: The FCC is the final authority on safety of telecommunications facilities. If the FCC has determined the facility to be in compliance with federal standards, the City is not permitted to make additional judgments on health and safety issues. The application can be reviewed by the City for compliance with design and location criteria only. The attached RF Emissions report (Attachment E) provides information about the proposed RF emissions of the facility. These results indicate the RF emissions are considered safe for inhabited areas.

Public Contact: 118 notices were sent to surrounding property owners and residents adjacent to subject site in addition to standard noticing practice. No letters were received.

Environmental Determination: A Categorical Exemption Class 1 (minor additions to existing facilities) relieves this project from CEQA provisions.

FINDINGS

In order to approve the Special Development Permit the following findings must be made:

1. The proposed use attains the objectives and purposes of the General Plan of the City of Sunnyvale.

The following policies and action statements relate to the proposed application.

- **Council Policy Manual: Telecommunications** - The City of Sunnyvale's Council Policy Manual (CPM) is a compendium of policies established by City Council resolution or motion which provide guidelines for current or future City action. Such policies, when implemented, assist in achieving General Plan goals.
 - **Policy Statement 1.A.5** - Support retention of local zoning authority for cellular towers, satellite dish antennas, and other telecommunications equipment, facilities and structures.
 - **Policy Statement 2** - Promote universal access to telecommunications services for all Sunnyvale residents.

The Council Policies promotes retention of local zoning authority when reviewing telecommunications facilities. The zoning code requires that the location of telecommunication facilities be designed with sensitivity to the surrounding areas. The proposed facility is compliant with all wireless telecommunication development standards:

- *The project, in addition to existing antennas, meets all FCC RF emissions standards.*
- *The existing radomes that house the antennas will be modified to better match the building architecture.*
- *Associated equipment is fully screened behind an existing roof parapet.*

Staff was able to make the findings as the design meets the objectives of the General Plan and Council Policy.

2. The proposed use ensures that the general appearance of proposed structures, or the uses to be made of the property to which the application refers, will not impair the orderly development of, or the existing uses being made of, adjacent properties.

Staff finds that the addition of three antennas to the existing facility will have a minimal visual impact on El Camino Real and the surrounding neighborhood. The proposed project meets the visual standards established by the City for telecommunication facilities as it is designed to create the least possible aesthetic impact while using existing infrastructure.

The project is expected to have minimal impacts on surrounding properties.

ALTERNATIVES

1. Approve the Special Development Permit with recommended Conditions in Attachment A.
2. Approve the Special Development Permit with modifications.
3. Deny the Special Development Permit.

RECOMMENDATION

Alternative 1. Approve the Special Development Permit with recommended Conditions in Attachment A.

Reviewed by:

Shaunn Mendrin
Senior Planner

Prepared By: Noren Caliva

Attachments:

- A. Standard Requirements and Recommended Conditions of Approval
- B. Site and Architectural Plans
- C. Photosimulations
- D. Letter from the Applicant
- E. RF Emissions Report

**RECOMMENDED
CONDITIONS OF APPROVAL AND
STANDARD DEVELOPMENT REQUIREMENTS
FEBRUARY 16, 2011**

Planning Application 2011-7757

1111 W. El Camino Real

Special Development Permit to allow three additional rooftop wireless telecommunications antennas (AT&T) on an existing shopping center building.

The following Conditions of Approval [COA] and Standard Development Requirements [SDR] apply to the project referenced above. The COAs are specific conditions applicable to the proposed project. The SDRs are items which are codified or adopted by resolution and have been included for ease of reference, they may not be appealed or changed. The COAs and SDRs are grouped under specific headings that relate to the timing of required compliance. Additional language within a condition may further define the timing of required compliance. Applicable mitigation measures are noted with "Mitigation Measure" and placed in the applicable phase of the project.

In addition to complying with all applicable City, County, State and Federal Statutes, Codes, Ordinances, Resolutions and Regulations, Permittee expressly accepts and agrees to comply with the following Conditions of Approval and Standard Development Requirements of this Permit:

GC: THE FOLLOWING GENERAL CONDITIONS AND STANDARD DEVELOPMENT REQUIREMENTS SHALL APPLY TO THE APPROVED PROJECT.

GC-1. CONFORMANCE WITH APPROVED PLANNING APPLICATION:

All building permit drawings and subsequent construction and operation shall substantially conform with the approved planning application, including: drawings/plans, materials samples, building colors, and other items submitted as part of the approved application. Any proposed amendments to the approved plans or Conditions of Approval are subject to review and approval by the City. The Director of Community Development shall determine whether revisions are considered major or minor. Minor changes are subject to review and approval by the Director of Community Development. Major changes are subject to review at a public hearing. [COA] [PLANNING]

GC-2. COMPLY WITH APPLICABLE REGULATIONS:

The facility must comply with any and all applicable regulations and standards promulgated or imposed by any state or federal agency, including but not limited to the Federal Communications Commission and Federal Aviation Agency.[SDR] [PLANNING]

GC-3. PERMIT EXPIRATION:

The permit shall be null and void two years from the date of approval by the final review authority at a public hearing if the approval is not exercised, unless a written request for an extension is received prior to expiration date and is approved by the Director of Community Development. [SDR] (PLANNING)

GC-4. TESTING WITHIN 15 DAYS:

The applicant shall test any wireless telecommunications site installed in the City of Sunnyvale within 15 days of operating the tower. The test shall confirm that any Emergency 911 wireless call made through the wireless telecommunications site shall provide Enhanced 911 capability (including phase 2 information when available from the caller's device) and direct the call to the City of Sunnyvale Department of Public Safety dispatcher, ensuring phase 2 information is transferred. If the call is to be directed elsewhere pursuant to State and Federal law the applicant shall ensure that the Enhanced 911 information transfers to that dispatch center. This capability shall be routinely tested to ensure compliance as long as the approved wireless telecommunications site is in service. [SDR] [PLANNING]

GC-5. HOLD HARMLESS:

The wireless telecommunication facility provider shall defend, indemnify, and hold harmless the city or any of its boards, commissions, agents, officers, and employees from any claim, action or proceeding against the city, its boards, commission, agents, officers, or employees to attack, set aside, void, or annul, the approval of the project when such claim or action is brought within the time period provided for in applicable state and/or local statutes. The city shall promptly notify the provider(s) of any such claim, action or proceeding. The city shall have the option of coordinating in the defense. Nothing contained in this stipulation shall prohibit the city from participating in a defense of any claim, action, or proceeding if the city bears its own attorney's fees and costs, and the city defends the action in good faith. [SDR] [PLANNING]

GC-6. LIABILITY:

Facility lessors shall be strictly liable for any and all sudden and accidental pollution and gradual pollution resulting from their use

within the city. This liability shall include cleanup, intentional injury or damage to persons or property. Additionally, lessors shall be responsible for any sanctions, fines, or other monetary costs imposed as a result of the release of pollutants from their operations. Pollutants include any solid, liquid, gaseous or thermal irritant or contaminant, including smoke, vapor, soot, fumes, acids, alkalis, chemicals, and waste. Waste includes materials to be recycled, reconditioned or reclaimed. [SDR] [PLANNING]

GC-7. NO THREAT TO PUBLIC HEALTH:

The facility shall not be sited or operated in such a manner that it poses, either by itself or in combination with other such facilities, a potential threat to public health. To that end, the subject facility and the combination of on-site facilities shall not produce at any time power densities in any inhabited area that exceed the FCC's Maximum Permissible Exposure (MPE) limits for electric and magnetic field strength and power density for transmitters or any more restrictive standard subsequently adopted or promulgated by the federal government. [SDR] [PLANNING]

PS: THE FOLLOWING CONDITIONS SHALL BE MET PRIOR TO SUBMITTAL OF BUILDING PERMIT, AND/OR GRADING PERMIT.

PS-1. REQUIRED REVISIONS TO PROJECT PLANS:

The plans shall be revised to address comments from the Zoning Administrator for review and approval by the Director of Community Development prior to submittal of a building permit, including the following:

- a) Radomes shall be painted and textured to match the color of the existing building.
- b) Decorate caps shall be installed along the top of each radome. [COA] [PLANNING]

BP: THE FOLLOWING CONDITIONS SHALL BE ADDRESSED ON THE CONSTRUCTION PLANS SUBMITTED FOR ANY DEMOLITION PERMIT, BUILDING PERMIT, GRADING PERMIT, AND/OR ENCROACHMENT PERMIT AND SHALL BE MET PRIOR TO THE ISSUANCE OF SAID PERMIT(S).

BP-1. CONDITIONS OF APPROVAL:

Final plans shall include all Conditions of Approval included as part of the approved application starting on sheet 2 of the plans. [COA] [PLANNING]

BP-2. NOTICE OF CONDITIONS OF APPROVAL:

A Notice of Conditions of Approval shall be filed in the official records of the County of Santa Clara and provide proof of such recordation to the City prior to issuance of any City permit, allowed use of the property, or Final Map, as applicable. The Notice of Conditions of Approval shall prepared by the Planning Division and shall include a description of the subject property, the Planning Application number, attached conditions of approval and any accompanying subdivision or parcel map, including book and page and recorded document number, if any, and be signed and notarized by each property owner of record.

For purposes of determining the record owner of the property, the applicant shall provide the City with evidence in the form of a report from a title insurance company indicating that the record owner(s) are the person(s) who have signed the Notice of Conditions of Approval. [COA] [PLANNING]

BP-3. BLUEPRINT FOR A CLEAN BAY:

The building permit plans shall include a "Blueprint for a Clean Bay" on one full sized sheet of the plans. [SDR] [PLANNING]

PF: THE FOLLOWING CONDITIONS SHALL BE ADDRESSED ON THE CONSTRUCTION PLANS AND/OR SHALL BE MET PRIOR TO RELEASE OF UTILITIES OR ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

PF-1. RF EMISSIONS STUDIES:

The applicant shall submit to the Director of Community Development Radio Frequency Emissions at least two reports of field measurements showing: 1.) The ambient level of RF emissions before construction of the facility and 2.) The actual level of emissions after the facility is in place and operating at or near full capacity. [COA] [PLANNING]

AT: THE FOLLOWING CONDITIONS SHALL BE COMPLIED WITH AT ALL TIMES THAT THE USE PERMITTED BY THIS PLANNING APPLICATION OCCUPIES THE PREMISES.

AT-1. CERTIFICATION:

Before January 31 of each even numbered year following the issuance of any authorizing establishment of a wireless telecommunication facility, an authorized representative for each wireless carrier providing service in the City of Sunnyvale shall

provide written certification to the City executed under penalty of perjury that (i) each facility is being operated in accordance with the approved local and federal permits and includes test results that confirm the facility meets city noise requirements and federal RF emissions standards; (ii) each facility complies with the then-current general and design standards and is in compliance with the approved plans; (iii) whether the facility is currently being used by the owner or operator; and (iv) the basic contact and site information supplied by the owner or operator is current.. [SDR] [PLANNING]

AT-2. 10 YEAR RENEWAL:

Every owner or operator of a wireless telecommunication facility shall renew the facility permit at least every ten (10) years from the date of initial approval. If a permit or other entitlement for use is not renewed, it shall automatically become null and void without notice or hearing ten (10) years after it is issued, or upon cessation of use for more than a year and a day, whichever comes first. Unless a new use permit or entitlement of use is issued, within one hundred twenty (120) days after a permit becomes null and void all improvements, including foundations and appurtenant ground wires, shall be removed from the property and the site restored to its original pre-installation condition within one hundred eighty (180) days of nonrenewal or abandonment. [SDR] [PLANNING]

AT-3. MINIMIZE NOISE:

The facility shall be operated in such a manner so as to minimize any possible disruption caused by noise. Backup generators shall only be operated during periods of power outages, and shall not be tested on weekends or holidays, or between the hours of 10:00 p.m. and 7:00 a.m. on weekday nights. At no time shall equipment noise from any source exceed an exterior noise level of 60 dB at the property line. [SDR] [PLANNING]

AT-4. RF EMISSIONS:

Certification must be provided that the proposed facility will at all times comply with all applicable health requirements and standards pertaining to RF emissions. [SDR] [PLANNING]

AT-5. MAINTAIN CURRENT INFORMATION:

The owner or operator shall maintain, at all times, a sign mounted on the outside fence showing the operator name, site number and emergency contact telephone number. The owner or operator of the facility shall also submit and maintain current at all times basic contact and site information on a form to be supplied by the city. The

applicant shall notify city of any changes to the information submitted within thirty (30) days of any change, including change of the name or legal status of the owner or operator. This information shall include, but is not limited to the following:

- c) Identity, including name, address and telephone number, and legal status of the owner of the facility including official identification numbers and FCC certification, and if different from the owner, the identity and legal status of the person or entity responsible for operating the facility.
- d) Name, address and telephone number of a local contact person for emergencies.
- e) Type of service provided. [SDR] [PLANNING]

AT-6. GOOD REPAIR:

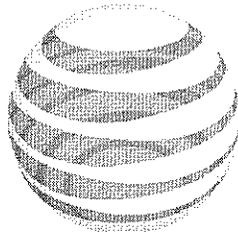
All facilities and related equipment, including lighting, fences, shields, cabinets, and poles, shall be maintained in good repair, free from trash, debris, litter and graffiti and other forms of vandalism, and any damage from any cause shall be repaired as soon as reasonably possible so as to minimize occurrences of dangerous conditions or visual blight. Graffiti shall be removed from any facility or equipment as soon as practicable, and in no instance more than forty-eight (48) hours from the time of notification by the city. [SDR] [PLANNING]

AT-7. RESPONSIBILITY TO MAINTAIN:

The owner or operator of the facility shall routinely and regularly inspect each site to ensure compliance with the standards set forth in the Telecommunications Ordinance. [SDR] [PLANNING]

AT-8. NO INTERFERENCE WITH CITY COMMUNICATION SYSTEMS:

The facility operator shall be strictly liable for interference caused by the facility with city communication systems. The operator shall be responsible for all labor and equipment costs for determining the source of the interference, all costs associated with eliminating the interference, (including but not limited to filtering, installing cavities, installing directional antennas, powering down systems, and engineering analysis), and all costs arising from third party claims against the city attributable to the interference. [SDR] [PLANNING]



at&t

CCL01818 / CNU1818 / SF1818 / CNU3519 EVELYN & BERNARDO 1111 WEST EL CAMINO REAL SUNNYVALE, CALIFORNIA 94087

SPECIAL INSPECTIONS	
1. CONCRETE	12.1 VERIFY SOIL CONDITIONS ARE SUBSTANTIALLY IN CONFORMANCE WITH THE SOIL INVESTIGATION REPORT
2. REINFORCING STEEL AND PRESTRESSING STEEL	13.2 VERIFY THAT FOUNDATION EXCAVATIONS EXTEND TO PROPER DEPTH AND BEARING STRATA
3. ALL STRUCTURAL WELDING	13.3 PROVIDE SOIL COMPACTION TEST RESULTS, DEPTH OF FULL RELAXED BOLT(S) BEARING WELD(S)
3.1 HIGH STRENGTH BOLTING	13.4 PROVIDE SOIL EXPANSION TEST RESULTS, EXPANSION INDEX, RECOMMENDATIONS FOR FOUNDATIONS, ON-EDGE FLOOR SLAB DESIGN FOR EACH BUILDING SITE
4. WELDING REINFORCING STEEL	14. SHOCK CONTROL SYSTEM
5. HIGH-STRENGTH BOLTING	15. SPECIAL CASES OCCURRENCE
6. STRUCTURAL MASONRY	16. OFF-SITE FABRICATION OF BUILDING COMPONENTS
7. REINFORCED CYCLOPS CONCRETE	17. OTHER SPECIAL INSPECTIONS AS REQUIRED BY DESIGNER
8. INSULATING CONCRETE FILL	
9. SPIRKY-APPLIED FIREPROOFING	
10. SHEET PILING (PILING, DRILLED & CAISSONS)	
11. SHEET-PILE	
NO. DESCRIPTION OF TYPE OF INSPECTION REQUIRED, LOCATION, REMARKS:	

CONSULTANT TEAM

CLIENTS REPRESENTATIVE:
TRILLIUM CONSULTING
7801 STONERIDGE DRIVE #903
PLEASANTON, CALIFORNIA 94588
PHONE: (714) 206-2879
FAX: (714) 799-2020

SITE ACQUISITION:
TOM JOHNSON
PHONE: (714) 206-2879

CONSTRUCTION MANAGER:
PAUL MOLEN
PHONE: (925) 737-5800

ARCHITECT:
JEFFREY ROME & ASSOCIATES
3 SAN JOAQUIN PLAZA
SUITE 155
NEWPORT BEACH, CALIFORNIA 92660
PHONE: (949) 760-3929
CELLULAR: (949) 965-8626
FAX: (949) 750-3931
CONTACT: JESSE JAMES VALERIO

DEVELOPMENT SUMMARY

APPLICANT: AT&T MOBILITY
4430 ROSEWOOD DRIVE
PLEASANTON, CALIFORNIA 94588

PROPERTY OWNER: TRUSTEES OF THE VINCENT W. CALA & MARIE ANN CALA TRUST, U/D/T/ & TRUSTEES OF THE JOSEPH F. CALA AND HELEN J. CALA TRUST, U/D/T
1111 WEST EL CAMINO REAL, SUITE 211
SUNNYVALE, CALIFORNIA 94087

OTHER ON-SITE TELECOM FACILITIES: NO

PROJECT ADDRESS: 1111 WEST EL CAMINO REAL
SUNNYVALE, CALIFORNIA 94088

ASSESSORS PARCEL NUMBER: 161-23-001

LATITUDE: 37.37280

LONGITUDE: -120.05189

LAT/LONG TYPE: NAD-83

EXISTING ZONING: C-2

PROPOSED PROJECT AREA: NO INCREASE IN S.F.

EXISTING TYPE OF CONSTRUCTION: TYPE V-B

PROPOSED TYPE OF CONSTRUCTION: TYPE V-B

EXISTING OCCUPANCY: U-2

PROPOSED OCCUPANCY: U-2

JURISDICTION: CITY OF SUNNYVALE

SHEET INDEX

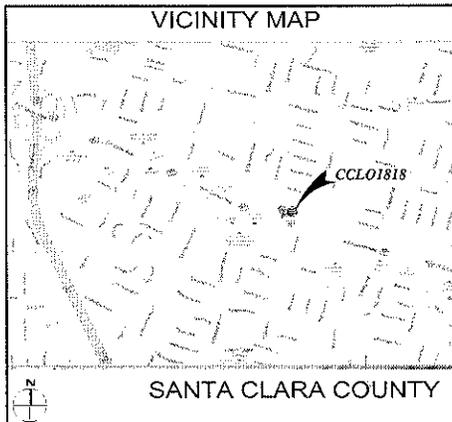
T-1	TITLE SHEET
T-2	SPECIFICATIONS AND NOTES
A-0	SITE PLAN
A-1	ENLARGED ROOF PLAN
A-2	ELEVATIONS
A-3	EQUIPMENT DETAILS
A-4	ANTENNA DETAILS
A-4.1	WOOD & METAL BLOCKING DETAILS
A-5	LTE EQUIPMENT DETAILS

APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

- 2007 CALIFORNIA BUILDING CODE AND LOCAL AMENDMENTS
- 2007 CALIFORNIA MECHANICAL CODE AND LOCAL AMENDMENTS
- 2007 NATIONAL ELECTRIC CODE AND LOCAL AMENDMENTS
- 2007 UNIFORM PLUMBING CODE AND LOCAL AMENDMENTS

IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL.



PROJECT DESCRIPTION

AT&T MOBILITY PROPOSES TO MODIFY AN EXISTING UNMANNED WIRELESS COMMUNICATIONS FACILITY. THESE MODIFICATIONS WILL CONSIST OF THE FOLLOWING:

- INSTALL (3) (N) LTE EQUIPMENT CABINETS.
- INSTALL (3) (N) FRP SCREEN BOXES TO MATCH (E).
- INSTALL (3) (N) ANTENNAS.
- INSTALL (1) (N) GPS ANTENNA.
- INSTALL (6) (N) RRUS.
- INSTALL (3) (N) DC SURGE SUPPRESSORS.
- INSTALL (N) FIBER RUNS.
- INSTALL (N) DC RUNS.
- INSTALL (6) (N) RCTS.

ACCESSIBILITY DISCLAIMER

THIS PROJECT IS AN UNOCCUPIED WIRELESS PCS TELECOMMUNICATIONS FACILITY AND IS EXEMPT FROM DISABLED ACCESS REQUIREMENTS.

SCALE

THE DRAWING SCALES SHOWN IN THIS SET REPRESENT THE CORRECT SCALE UNLESS WHEN THESE DRAWINGS ARE PRINTED IN A 24"X36" FORMAT, IF THIS DRAWING SET IS NOT 24"X36", THIS SET IS NOT TO SCALE.

JRA
Jeffrey Rome & Associates, Inc.
Architecture & Telecommunications
1 San Joaquin Plaza, Suite 105
Newport Beach, California 92660
Phone: (949) 760-3929
Fax: (949) 760-3931

PROPRIETARY INFORMATION
THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH IS RELATED TO THIS PROJECT IS STRICTLY PROHIBITED.

STAMP

PREPARED FOR

4430 Rosewood Drive
Pleasanton, California 94588

APPROVALS

RF	DATE
ZONING	DATE
CONSTRUCTION	DATE
SITE ACQUISITION	DATE
OWNER APPROVAL	DATE

PROJECT NAME
UMTS 3RD CARRIER OVERLAY

SITE NAME
EVELYN & BERNARDO

SITE NUMBER
CCL01818/CNU1818/
SF1818/CNU3519

1111 W. EL CAMINO REAL
SUNNYVALE, CALIFORNIA 94088

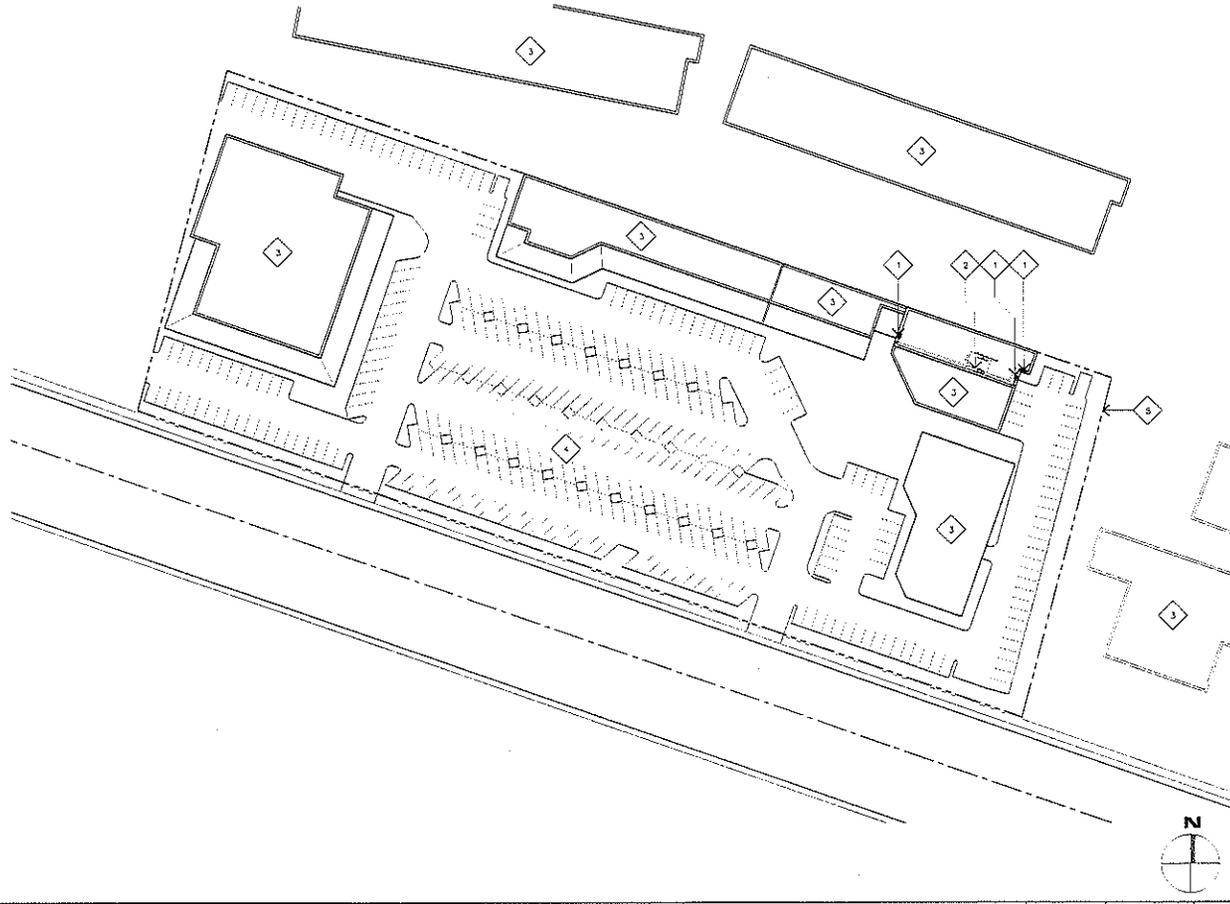
08/23/10
09/23/10

RFDS

ATTACHMENT B
Page 1 of 9

SITE PLAN KEYNOTES

- 1 (S) AND (N) AT&T LTE ANTENNAS MOUNTED TO (E) BUILDING BEHIND (E) & (N) PER SCREENING, SEE SHEET A-1.
- 2 (E) AT&T EQUIPMENT AREA ON (E) BUILDING; SEE SHEET A-1.
- 3 (E) BUILDING.
- 4 (E) PARKING LOT.
- 5 (E) PROPERTY LINE.



1. CONTRACTOR TO PROVIDE ALL LABOR TO INSTALL COAX, RETS AND ANTENNAS.
2. ERICSSON TO PROVIDE ALL COAX, CONNECTORS, ANCILLARY EQUIPMENT (INCLUDING WEATHER STRIPPING, GROUND KITS, ETC.).
3. CONTRACTOR TO COLOR CODE ALL COAX. COLORED BANDS OF TAPE ON COAX IDENTIFY SECTOR, FREQUENCY, TECHNOLOGY, AND TRUNKING GROUP PER EXISTING STANDARDS ON ALL COAX MODIFIED OR INSTALLED ONLY.
4. WHEN ANTENNA LINES ARE DPLEXED, THE COLOR CODE OF THE HIGHEST FREQUENCY CHANNELS (I.E. UMTS OR LTE) SHOULD HAVE COLOR 4 BANDS.
5. ALL ANTENNAS AND ANTENNA CABLE SHALL BE FURNISHED BY ERICSSON INC AND INSTALLED BY ANTENNA INSTALLATION CONTRACTOR.
6. PRIOR TO PLACEMENT OF ANTENNA POLE MOUNTS, THE CONTRACTOR SHALL VERIFY THAT THE AZIMUTH AND DIMENSIONS SHOWN ON THE PLANS MATCH ACTUAL FIELD CONDITIONS. ALLOWABLE TOLERANCE: HORIZONTAL ALIGNMENT = ±2°; VERTICAL ALIGNMENT = ±1°.
7. ANTENNA INSTALLATION CONTRACTOR SHALL PROVIDE ALL CONDUIT, CABLE TRAY, GROUNDS, ETC. FOR COMPLETE INSTALLATION OF ANTENNAS AND CABLES SHOWN AND INTENDED AS REQUIRED FOR A COMPLETE OPERATING SYSTEM IN ACCORDANCE WITH ERICSSON INC. STANDARDS.
8. IN NO CASE SHALL THERE BE ANY MORE THAN TWO (2) 90° TURNS (OR EQUIVALENT) IN ANY CONTINUOUS LENGTH OF CONDUIT BETWEEN PULL BOXES OR SIMILAR FEATURES.
9. ANTENNA CONDUIT SHALL ONLY INCLUDE FACTORY-MADE LARGE RADIUS SWEEPS AT ALL CHANGES IN DIRECTION. SWEEP RADIUS SHALL BE 18" MINIMUM ABOVE GROUND AND 30" MINIMUM BELOW GROUND.
10. CONDUIT SHALL BE 3/4" MINIMUM. ALL UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC. ALL EXPOSED CONDUIT ABOVE GRADE LEVEL SHALL BE WC OR RIGID GALVANIZED. ALL EXPOSED CONDUIT PROTECTED IN A BUILDING OR ON A ROOF SHALL BE EMT OR UV STABILIZED PAINTED SCHEDULE 80 PVC.
11. IN HIGH TRAFFIC AREAS OR WHERE SUSCEPTIBLE TO DAMAGE CONTRACTOR SHALL PROVIDE FORMED 14 GA. GALVANIZED SHEET METAL COVER OVER COAXIAL CABLE ROUTES. WHERE CABLE IS RUN ON THE WALL, ATTACH UNSTRUT TO WALL AND COVER WITH 14 GA. GALVANIZED FORMED SHEET METAL COVER OR MATERIAL AS DIRECTED BY ERICSSON INC. CONSTRUCTION MANAGER.
12. VERIFY ROUTE AND LENGTH OF CABLE PRIOR TO CUTTING. ADJUST INDICATED ROUTE AS REQUIRED TO CLEAR (E) EQUIPMENT AT FACILITIES.
13. MAXIMUM LENGTH OF 7/8" COAX CABLE SHALL BE 140'-0". MAXIMUM LENGTH OF 1-1/4" COAX CABLE SHALL BE 180'-0". MAXIMUM LENGTH OF 1-5/8" COAX CABLE SHALL BE 235'-0".
14. VERIFY MODEL NUMBERS OF ANTENNAS WITH ERICSSON INC SERVICES.
15. THE CONTRACTOR SHALL PROVIDE TESTING OF ANTENNAS AND SHALL PROVIDE DOCUMENTATION TO THE ERICSSON INC. PROJECT MANAGER.
16. GENERAL CONTRACTOR TO VERIFY ALL TORSION TOLERANCES PER THE MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS.

JRA
Jeffrey Roma & Associates, Inc.

Architects & Telecommunications
3 San Jacinto Plaza, Suite 150
Newport Beach, California 92660
Phone: (949) 760-3829
Fax: (949) 760-9361

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at&t
4420 Rosewood Drive
Fresno, California 93688

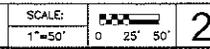
APPROVALS

RF	DATE
ZONING	DATE
CONSTRUCTION	DATE
SITE ACQUISITION	DATE
OWNER APPROVAL	DATE

PROJECT NAME
UMTS 3RD CARRIER OVERLAY
SITE NAME
EVELYN & BERNARDO
SITE NUMBER
**CCL01818/CNU1818/
SF1818/CNU3519**
1111 W. G. DAMING REAL
SUNNVALE, CALIFORNIA 94088

DRAWING DATES
08/23/10 90% CD REVIEW (P1-01)
09/23/10

SITE PLAN



2 GENERAL ANTENNA & CABLE NOTES **1**

ATTACHMENT 15
Page 3 of 9

ROOF PLAN KEYNOTES

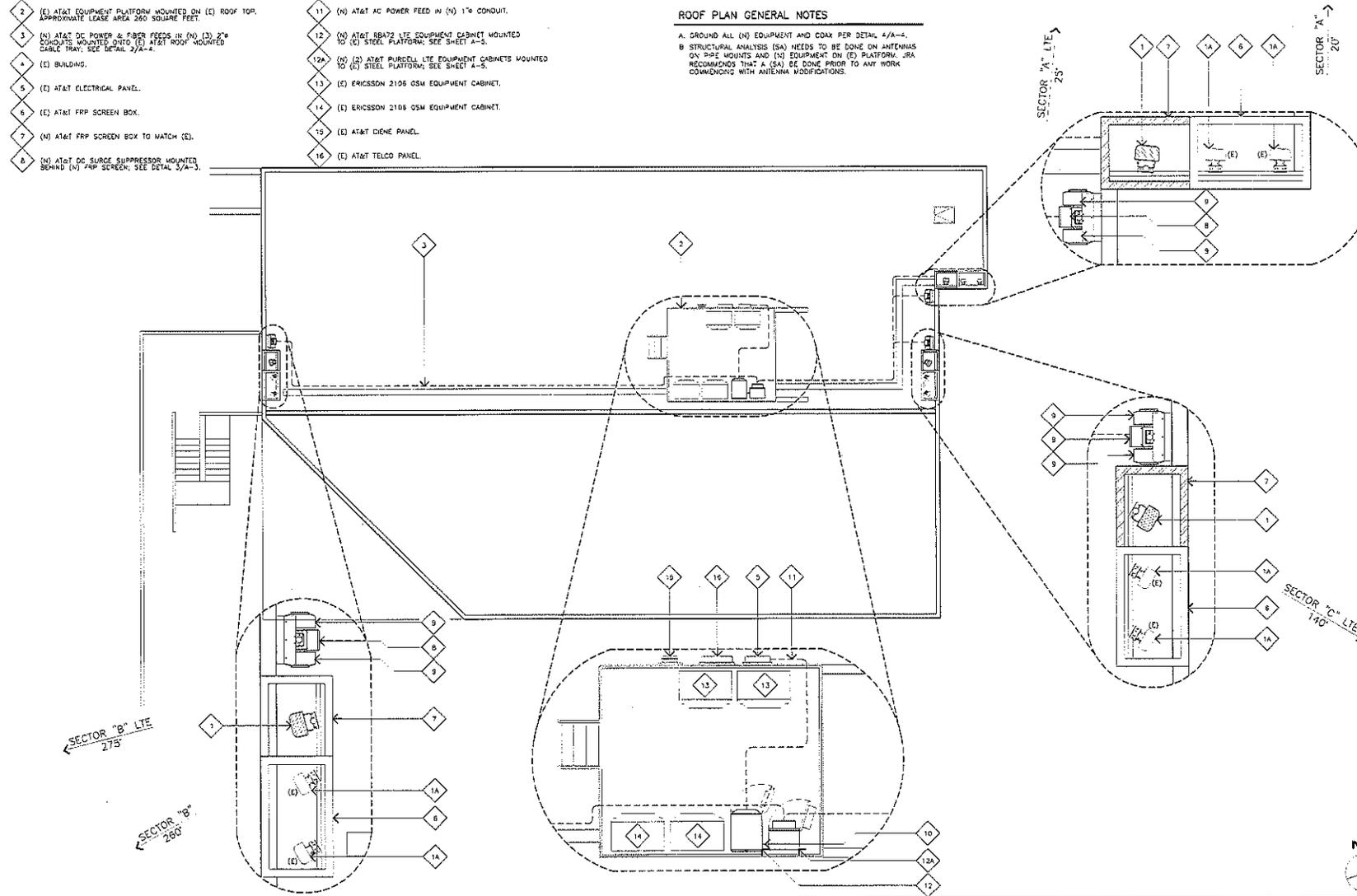
- | | |
|---|---|
| 1 (N) AT&T LTE ANTENNAS MOUNTED TO (E) ROOFTOP BEHIND (N) FRP SCREENING; SEE DETAIL 1/A-4. | 9 (N) AT&T RRU MOUNTED BEHIND (N) FRP SCREEN; SEE DETAIL 2/A-3. |
| 1A (E) AT&T ANTENNA MOUNTED TO (E) ROOFTOP. | 10 (N) AT&T OPS ANTENNA MOUNTED TO (N) EQUIPMENT CABINET; SEE DETAIL 3/A-4. |
| 2 (E) AT&T EQUIPMENT PLATFORM MOUNTED ON (E) ROOF TOP. APPROXIMATE LEASE AREA 260 SQUARE FEET. | 11 (N) AT&T AC POWER FEED IN (N) 1" CONDUIT. |
| 3 (N) AT&T DC POWER & FIBER FEEDS IN (N) (3) 2" CONDUITS MOUNTED ONTO (E) AT&T ROOF MOUNTED CABLE TRAY; SEE DETAIL 2/A-2. | 12 (N) AT&T RBA72 LTE EQUIPMENT CABINET MOUNTED TO (E) STEEL PLATFORM; SEE SHEET A-5. |
| 4 (E) BUILDING. | 12A (N) (2) AT&T PURCELL LTE EQUIPMENT CABINETS MOUNTED TO (E) STEEL PLATFORM; SEE SHEET A-5. |
| 5 (E) AT&T ELECTRICAL PANEL. | 13 (E) ERICSSON 2108 GSM EQUIPMENT CABINET. |
| 6 (E) AT&T FRP SCREEN BOX. | 14 (E) ERICSSON 2108 GSM EQUIPMENT CABINET. |
| 7 (N) AT&T FRP SCREEN BOX TO MATCH (E). | 15 (E) AT&T CIENE PANEL. |
| 8 (N) AT&T DC SURGE SUPPRESSOR MOUNTED BEHIND (N) FRP SCREEN; SEE DETAIL 3/A-3. | 16 (E) AT&T TELCO PANEL. |

ROOF PLAN LEGEND

- (E) EXISTING ANTENNA.
(N) NEW AT&T LTE ANTENNA.

ROOF PLAN GENERAL NOTES

- A. GROUND ALL (N) EQUIPMENT AND COAX PER DETAIL 4/A-4.
B. STRUCTURAL ANALYSIS (SA) NEEDS TO BE DONE ON ANTENNAS ON PIPE MOUNTS AND (N) EQUIPMENT ON (E) PLATFORM. JRA RECOMMENDS THAT A (SA) BE DONE PRIOR TO ANY WORK COMMENCING WITH ANTENNA MODIFICATIONS.



ROOF PLAN

SCALE: 1"=20'
0 10' 20'

JRA
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APPROVALS

RF	DATE
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CONSTRUCTION	DATE
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OWNER APPROVAL	DATE

PROJECT NAME
UMTS 3RD CARRIER OVERLAY

SITE NAME
EVELYN & BERNARDO

SITE NUMBER
**CCL01818/CNU1818/
SF1818/CNU3519**

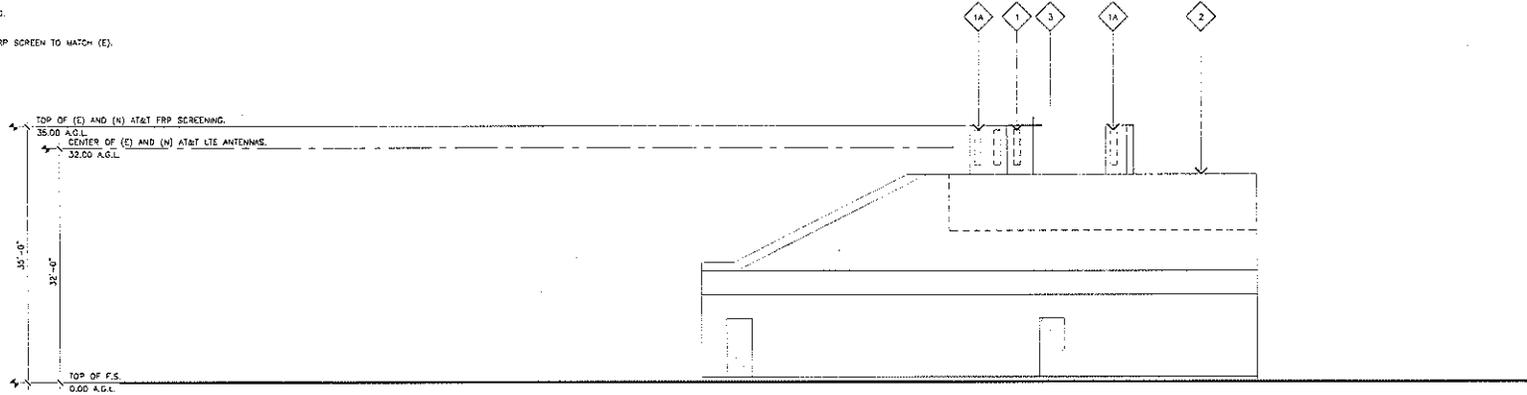
1111 W. EL CAMINO REAL
SUNNYVALE, CALIFORNIA 94088

DRAWING DATES
08/23/10 - 90% CD REVIEW (PT-81)
09/23/10

ATTACHMENT B
Page 4 of 9

ELEVATION KEYNOTES

- 1 (N) AT&T LTE ANTENNAS MOUNTED TO (E) ROOFTOP BEHIND (N) FRP SCREENING TO MATCH (E).
- 1A (E) AT&T ANTENNAS MOUNTED TO (E) ROOFTOP BEHIND (E) FRP SCREENING.
- 2 (E) BUILDING.
- 3 (N) AT&T FRP SCREEN TO MATCH (E).

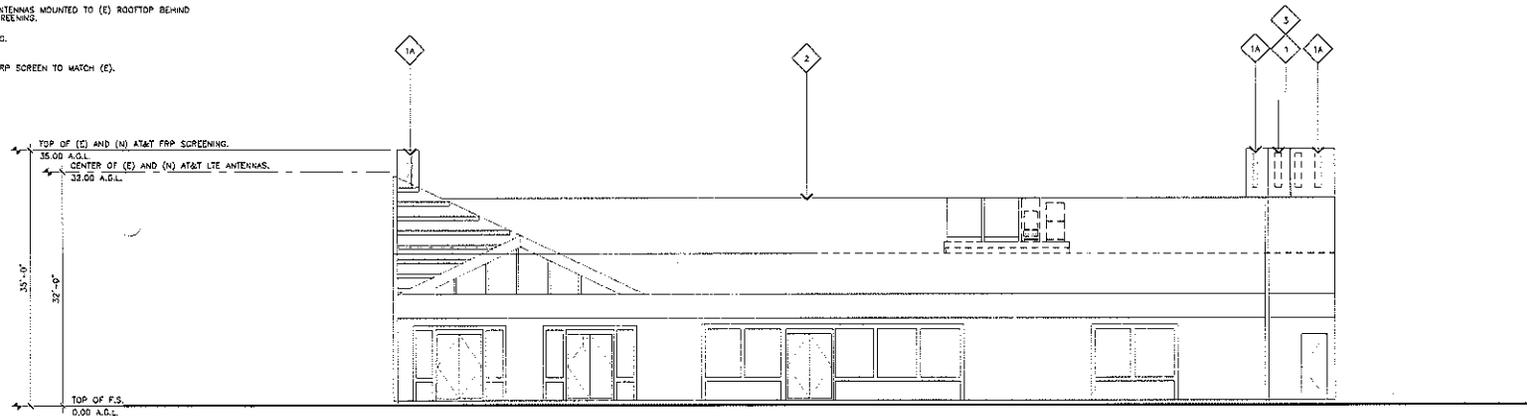


NORTHEAST ELEVATION

SCALE: 1/16"=1'-0" 0' 4' 8' 16' 1

ELEVATION KEYNOTES

- 1 (N) AT&T LTE ANTENNAS MOUNTED TO (E) ROOFTOP BEHIND (N) FRP SCREENING TO MATCH (E).
- 1A (E) AT&T ANTENNAS MOUNTED TO (E) ROOFTOP BEHIND (E) FRP SCREENING.
- 2 (E) BUILDING.
- 3 (N) AT&T FRP SCREEN TO MATCH (E).



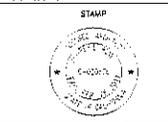
SOUTHEAST ELEVATION

SCALE: 1/16"=1'-0" 0' 4' 8' 16' 1

JRA
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Pleasanton, California 94588

APPROVALS

RF	DATE
ZONING	DATE
CONSTRUCTION	DATE
SITE ACQUISITION	DATE
OWNER APPROVAL	DATE

PROJECT NAME
UMTS 3RD CARRIER OVERLAY

SITE NAME
EVELYN & BERNARDO

SITE NUMBER
**CCL01818/CNU1818/
SF1818/CNU3519**

5131 W. EL CAMINO REAL
SUNNYVALE, CALIFORNIA 95085

DRAWING DATES

08/23/10 90% CD REVIEW (P1-81)
09/23/10 100% FINAL CD'S (P1-82)

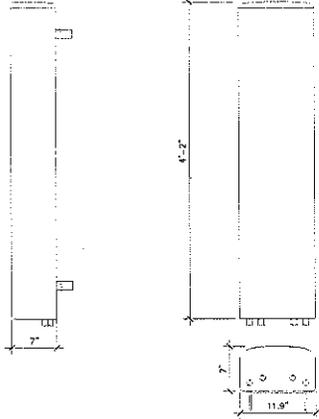
RFDS

EL

ATTACHMENT
Page 5 of 9
B

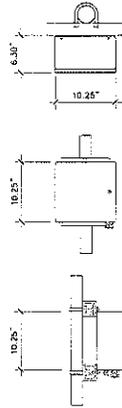
ANDREW ANTENNA DBXNH-6565A-VTM

ANTENNA COLOR: LIGHT GRAY
 DIMENSIONS, HxWxD: 1291x301x181mm (4'-2"x11.9"x7.1")
 WEIGHT, WITH PRE-MOUNTED BRACKETS: 34.2 lbs
 WIND LOAD, FRONTAL/LATERAL/REAR SIDE 149.8 mph, Cd=1:
 106.4 lbs
 CONNECTOR: (4) 7/16 DIN FEMALE



RAYCAP DC2-48-60-0-9E DC SURGE SUPPRESSION SOLUTION

SURGE SUPPRESSOR COLOR: LIGHT GRAY
 DIMENSIONS, HxWxD: (10.25"x10.25"x6.30")
 WEIGHT, WITH PRE-MOUNTED BRACKETS: 16 lbs
 WIND LOAD, FRONTAL/LATERAL/REAR SIDE 149.8 mph, Cd=1:
 N/A lbs



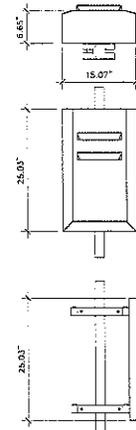
TOP VIEW

FRONT VIEW

SIDE VIEW

ERICSSON RRUS11- DUAL PA RRU

RRUS11 COLOR: GRAY
 DIMENSIONS, HxWxD: (25.03"x15.07"x6.65")
 WEIGHT, WITH PRE-MOUNTED BRACKETS: 44.09lbs
 WIND LOAD, FRONTAL/LATERAL/REAR SIDE 149.8 mph, Cd=1:
 N/A lbs



TOP VIEW

FRONT VIEW

SIDE VIEW

ANTENNA SPECIFICATION

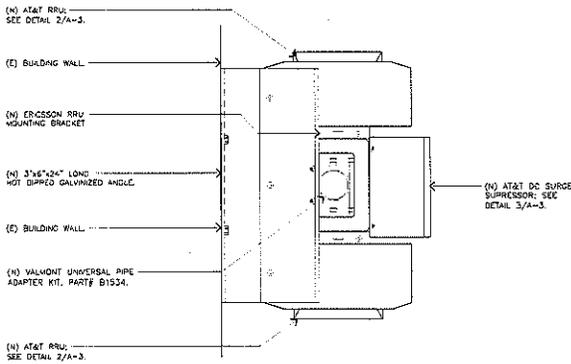
SCALE: 5
 NONE

DC SURGE SUPPRESSION BOX

SCALE: 3
 NONE

RRU CABINET

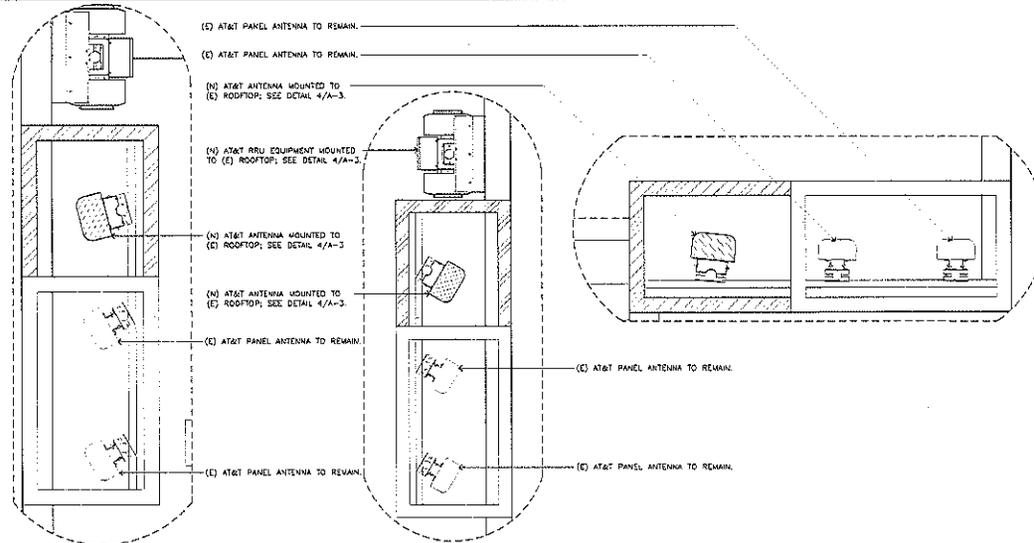
SCALE: 2
 NONE



ANTENNA WITH EQUIPMENT DETAIL

SCALE: 4
 2"=1'-0" 0.25"=5" 1"

ANTENNA PLAN VIEW

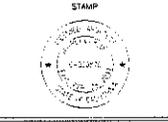


SCALE: 1
 NONE

JRA
 Jeffrey Remo & Associates, Inc.

Architecture & Telecommunications
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 Newport Beach, California 92660
 Phone: (949) 750-3300
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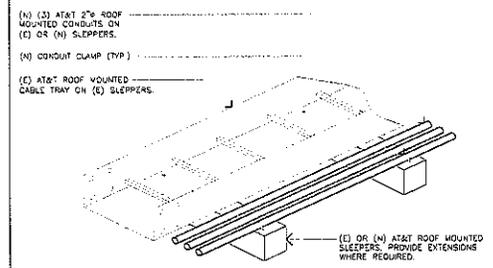
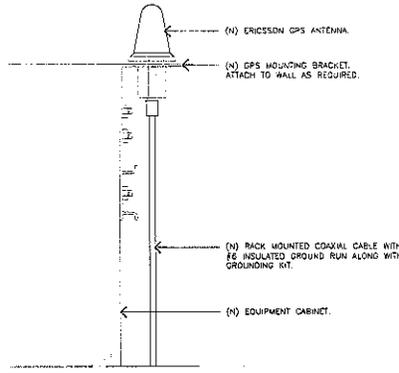
APPROVALS

RF	DATE
DRAWING	DATE
CONSTRUCTION	DATE
SITE ACQUISITION	DATE
OWNER APPROVAL	DATE

PROJECT NAME
UMTS 3RD CARRIER OVERLAY
 SITE NAME
EVELYN & BERNARDO
 SITE NUMBER
**CCL01818/CNU1818/
 SF1818/CNU3519**
 1511 W. EL CAMINO REAL
 SUITE 100, CALIFORNIA 94508

DRAWING DATES
 09/23/10 FOR CD REVIEW (P1-B1)
 09/23/10 100% FINAL CD'S (P1-B2)

ATTACHMENT
 Page 6 of 9
 B

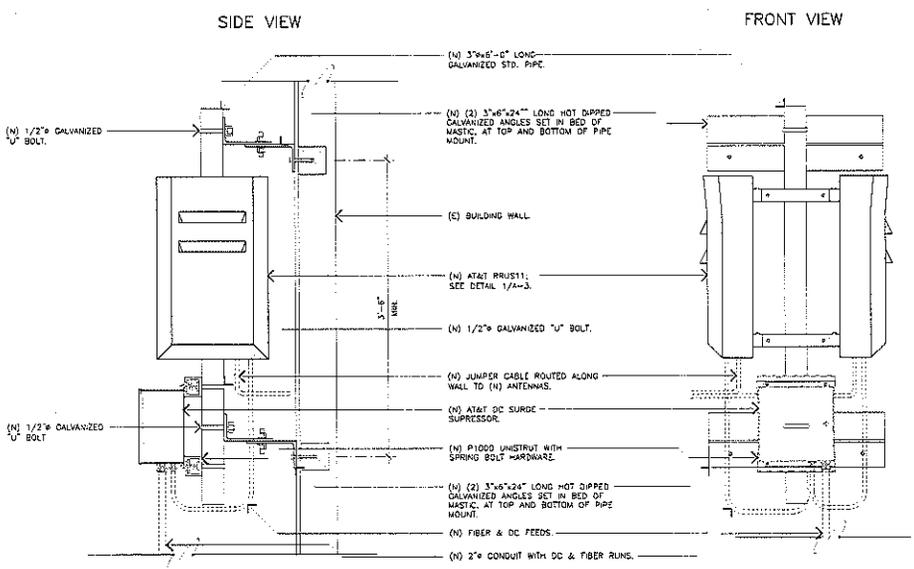


GPS ANTENNA DETAIL

SCALE: NTS 3

ROOF MOUNTED CONDUITS

SCALE: NTS 2



4 ANTENNA ELEVATION

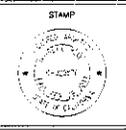
SCALE: NTS

SCALE: NTS 1

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 Jeffrey Rowe & Associates, Inc.
 Architecture & Telecommunications
 1 San Josephe Plaza, Suite 153
 Newport Beach, California 92660
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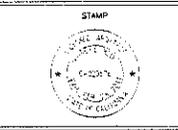
RF	DATE
ZONING	DATE
CONSTRUCTION	DATE
SITE ACQUISITION	DATE
DIVNER APPROVAL	DATE

PROJECT NAME
UMTS 3RD CARRIER OVERLAY
 SITE NAME
EVELYN & BERNARDO
 SITE NUMBER
**CCL01818/CNU1818/
 SF1818/CNU3519**
 1111 N. EL CAMINO REAL
 SUNNYVALE, CALIFORNIA 94088

DRAWING DATES
 08/23/00 90% CD REVIEW (P1-B1)
 09/23/00 100% CD REVIEW (P1-B1)

ATTACHMENT
 Page 7 of 9

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Pasadena, California 91108

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ZONING	DATE
CONSTRUCTION	DATE
SITE ACQUISITION	DATE
OWNER APPROVAL	DATE

PROJECT NAME
UMTS 3RD CARRIER OVERLAY

SITE NAME
EVELYN & BERNARDO

SITE NUMBER
**CCL01818/CNU1818/
SF1818/CNU3519**

1111 W. EL CAMINO REAL
SUNNYVALE, CALIFORNIA 94088

DRAWING DATES

08/23/10	DATE
09/23/10	DATE

RFDS

WOO BL	DATE
--------	------

ATTACHMENT B
Page 8 of 9

NOTE:
WALL SHEATHING AND FINISH NOT SHOWN (WHERE OCCURS).
REMOVE AND REPLACE (E) EXTERIOR FINISH. REPAIR TO MATCH.
(E) MAINTAIN WEATHER PROOF CONDITIONS WHERE OCCUR.

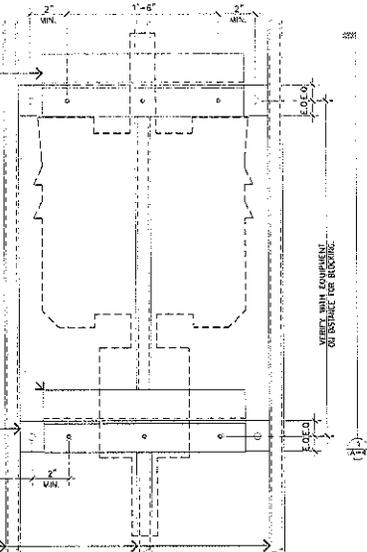
(N) 3"x6"x24" LONG HOT DIPPED GALVANIZED ANGLE SET IN BED OF MASTIC WITH (N) 1/2" GALVANIZED MACHINE BOLT WITH WASHERS. TYPICAL EACH END OF ANGLE.

(N) 3"x6"x24" LONG HOT DIPPED GALVANIZED ANGLE SET IN BED OF MASTIC WITH (N) 1/2" GALVANIZED MACHINE BOLT WITH WASHERS. TYPICAL EACH END OF ANGLE.

(N) 3B25182-54 GALVANIZED METAL STUD BLOCK TYPICAL ATTACH TO (E) STUD PER DETAIL 3/A-3.1.

(N) 2" MIN. CENTER OF BOLT TO STUD CUTOUT, TYPICAL.

(E) METAL STUD.



METAL STUD WALL

SCALE: NONE 2

NOTE:
WALL SHEATHING AND FINISH NOT SHOWN (WHERE OCCURS).
REMOVE AND REPLACE (E) EXTERIOR FINISH. REPAIR TO MATCH.
(E) MAINTAIN WEATHER PROOF CONDITIONS WHERE OCCUR.

(N) 3"x6"x24" LONG HOT DIPPED GALVANIZED ANGLE SET IN BED OF MASTIC WITH (N) 1/2" GALVANIZED MACHINE BOLT WITH WASHERS. TYPICAL EACH END OF ANGLE.

(N) WOOD BLOCKING TYPICAL ATTACH TO (E) STUD PER DETAIL 3/A-3.1.

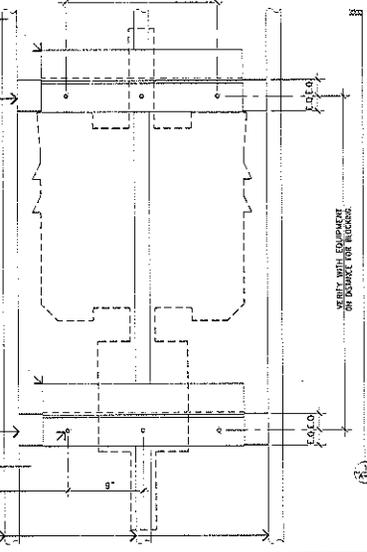
(N) 3"x6"x24" LONG HOT DIPPED GALVANIZED ANGLE SET IN BED OF MASTIC WITH (N) 1/2" GALVANIZED MACHINE BOLT WITH WASHERS. TYPICAL EACH END OF ANGLE.

(N) WOOD BLOCKING TYPICAL ATTACH TO (E) STUD PER DETAIL 3/A-3.1.

(N) LAG BOLTS (TYP. TOP/BOTTOM).

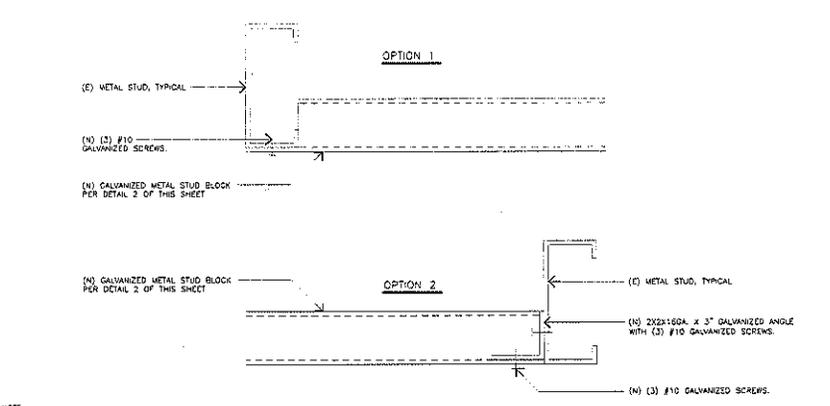
(N) 2" MIN. CENTER OF LAG BOLT TO LAG BOLT, TYPICAL.

(E) WOOD STUD.



WOOD STUD WALL

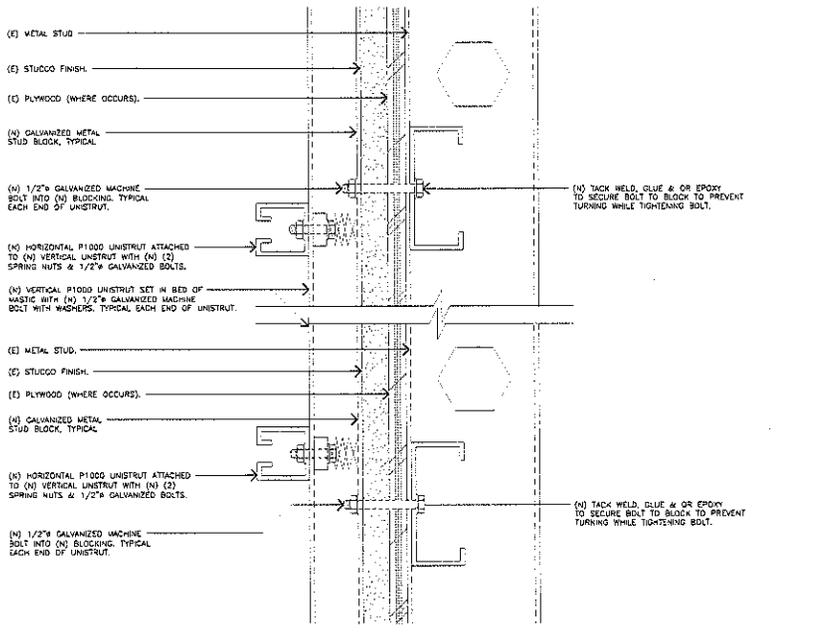
SCALE: NONE 1



NOTE:
EITHER OPTION MAY BE USED AT BLOCK ENDS. LAP BLOCK WEBS WHERE BLOCKS OVERLAP FOR OPTION 1.

BLOCKING ATTACHMENT

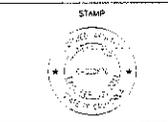
SCALE: NONE 3



METAL STUD BLOCKING

SCALE: NONE 4

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APPROVALS

RF	DATE
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CONSTRUCTION	DATE
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OWNER APPROVAL	DATE

PROJECT NAME
UMTS 3RD CARRIER OVERLAY
 SITE NAME
EVELYN & BERNARDO
 SITE NUMBER
**CCL01818/CNU1818/
 SF1818/CNU3519**
 1111 N. 55. CAMINO REAL
 SUNNYSIDE, CALIFORNIA 94088

08/23/10
 08/23/10

RFDG
 EQU

ATTACHMENT
 Page 9 of 13

EQUIPMENT FLOOR PLAN GENERAL NOTES

- A CONTRACTOR TO PROVIDE ALL COAX CABLE AND JUMPEERS WHERE REQUIRED AND CONNECT TO (N) UNITS CABINET.
- B CONTRACTOR TO RUN ALL CABLES AND LINES IN (E) CABLE TRAY. (E) TRAY NOT SHOWN FOR CLARITY OF PLAN VIEW.
- C CONTRACTOR TO PICK-UP AND DELIVER CABINET TO SITE INSIDE EQUIPMENT ROOM OR OUTSIDE AS SHOWN.
- D CONTRACTOR TO USE BASE PLINTH AS TEMPLATE FOR DRILLING (N) ANCHOR HOLES.
- E AT&T TO ORDER AND TEST ALL (N) T-1'S. RF TO DETERMINE HOW MANY (U) T-1'S REQUIRED. CONTRACTOR TO RULL (N) T-1'S FROM (E) DWG. TO DSK PANEL.
- F CONTRACTOR TO PROVIDE AND CONNECT TO (N) UNITS CABINET GROUNDING CABLES AND INTEGRATE INTO THE (E) NETWORK. UPON COMPLETION OF INTEGRATION CONTRACTOR SHALL OPTIMIZE THE (N) EQUIPMENT.
- G (N) AND OR (E) LINES CONNECTING TO UNITS CABINET ARE SHOWN DIAGRAMMATICALLY. CONTRACTOR TO RUN LINES IN CABLE LADDER NOT SHOWN FOR CLARITY.

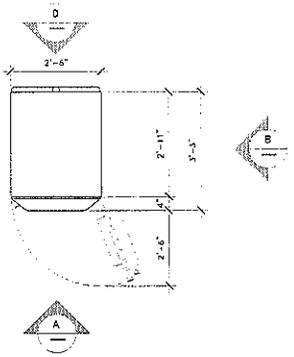
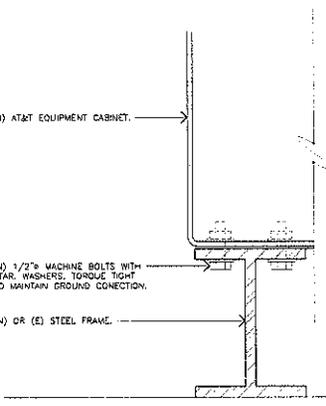
GENERAL NOTES

SCALE: NONE 2

(N) AT&T EQUIPMENT CABINET.

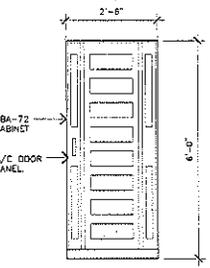
(N) 1/2" MACHINE BOLTS WITH STAR WASHERS. TORQUE TIGHT TO MAINTAIN GROUND CONNECTION.

(N) OR (E) STEEL FRAME.

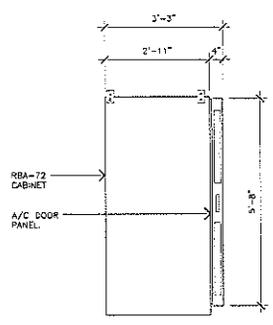


RBA-72 SPECIFICATIONS

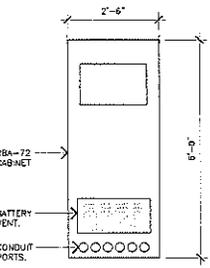
WEIGHT: 1,893 LBS.
 A/C REQUIRED: (1) 2 POLE 20 AMP BREAKER &
 (2) 2 POLE 40 AMP BREAKERS
 PEAK LOAD: 8,600 WATTS @ 120/240 VDC
 OR 80 AMPS



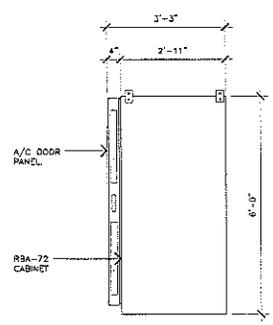
ELEVATION A



ELEVATION C



ELEVATION D

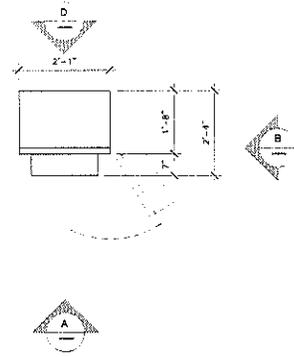


ELEVATION B

ANCHOR RBA72 TO PLATFORM PER DETAIL 1/A-5.

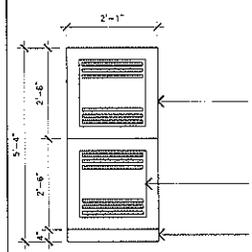
RBA72 OUTDOOR POWER & BATTERY CABINET

SCALE: NONE 4

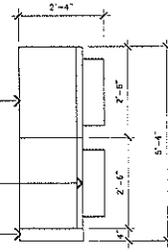


PURCELL TE SPECIFICATIONS

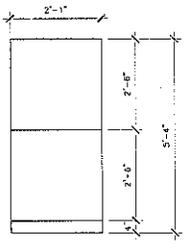
WEIGHT: 1,893 LBS.
 A/C REQUIRED: NONE - DC ONLY
 PEAK LOAD: TBD WATTS @ TBD VDC
 OR TBD AMPS



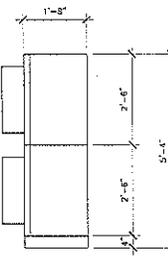
ELEVATION A



ELEVATION C



ELEVATION D



ELEVATION B

PURCELL TE RADIO CABINET

SCALE: NONE 3

EQUIPMENT ANCHORAGE

SCALE: NONE 1



CNU1818

EVELYN & BERNARDO

1111 WEST EL CAMINO REAL SUNNYVALE CA 94087



VIEW 2



LOCATION

©2010 Google Maps



EXISTING



PROPOSED LOOKING EAST FROM PARKING LOT

ACCURACY OF PHOTO SIMULATION BASED UPON INFORMATION PROVIDED BY

ATTACHMENT
Page 1 of 2

C



CNU1818

EVELYN & BERNARDO

1111 WEST EL CAMINO REAL SUNNYVALE CA 94087

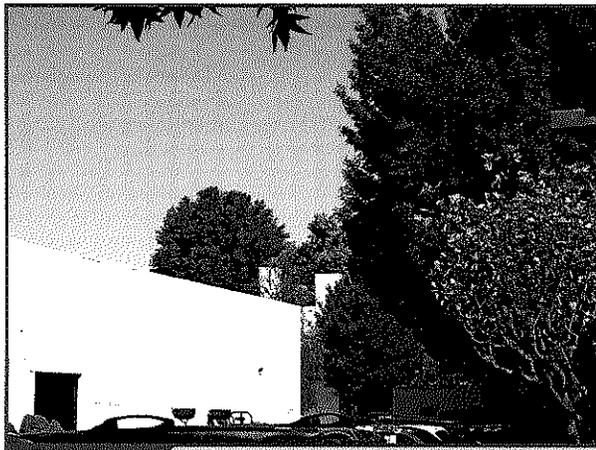


VIEW 1



LOCATION

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EXISTING



PROPOSED ANTENNA SCREEN EXTENSIONS

PROPOSED

LOOKING NORTH FROM EL CAMINO REAL

ACCURACY OF PHOTO SIMULATION BASED UPON INFORMATION PROVIDED BY PR

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Page 2 of 2

CNU1818

Project Description

The subject site is located at 1111 West El Camino Real in Sunnyvale. The property is approximately 5.48 acres and is developed with retail commercial uses and an existing AT&T wireless telecommunications facility. The existing facility is roof mounted.

AT&T is proposing modifications to this existing facility. The proposed project will include installing three additional antennas, bringing the total number of antennas to nine. The three new antennas will also be screened within FRP screen enclosures, as the existing antennas are. The screened boxes will be expanded to accommodate the new antennas and related equipment. The facility will be screened and will not be visible from adjacent properties or the street right-of-way. The stealth structure expansion will be mounted to the roof and blended with the existing architectural design of the building.

CNU1818

Use Permit Justification

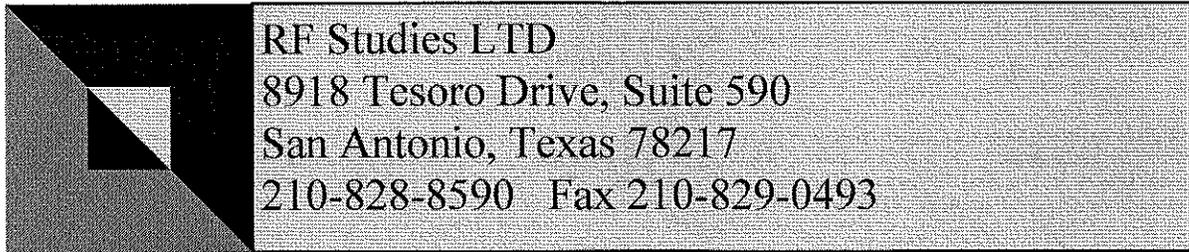
The proposed use attains the objectives and purposes of the General Plan of the City of Sunnyvale as the project:

The project is to modify an existing wireless facility. The project meets the following objectives.

1. Promotes universal access to wireless telecommunications services.
2. Enhances the economic vitality of Sunnyvale.
3. Provides additional wireless services to citizens, businesses, and industries.
4. The project location is consistent with the City's policy of co-locating on existing buildings.
5. The project location is consistent with the City's policy to locate in non-residential areas.
6. The project location is compatible with adjacent land uses, which are retail commercial uses.

The proposed use ensures that the general appearance of proposed structures, or the uses to be made of the property to which the application refers, will not impair either the orderly development of, or the existing uses being made of, adjacent properties as the proposed modifications to the existing AT&T wireless facility is:

1. The proposed project is to for the addition of three antennas to provide for network upgrades.
2. The location is in a commercially developed area and compatible with surrounding land uses.
3. The project utilizes the rooftop of an existing building and the antennas are screened with an architectural element that is being expanded to accommodate additional antennas. The new screening will be designed to match the existing architectural feature screening on site in both design and materials. The proposed antennas and equipment cabinets will not be visible to adjacent properties or street right-of-way.
4. The location is consistent with the City's policies for locating wireless facilities.



RF Studies LTD has conducted an "Evaluation of Human Exposure to Radio Frequency Emissions" for the following site:

Site number (AT&T): CNU1818
Site Name: Evelyn & Bernardo
Address: 1111 West El Camino Real
City/Town: Sunnyvale, CA, 90487

Conclusions and Recommendations

The additional antennas proposed by AT&T show an increase in exposure levels of 3.9% overall.

Fields in publicly accessible areas at the site are calculated to be below 0.1% at ground level.

No additional Mitigation Measures are required for this site.

This site meets all FCC and OSHA requirements for this proposed installation.

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**RF Studies LTD
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**Evaluation of Human Exposure to
Radio Frequency Emissions -
AT&T CNU1818
Site: Evelyn & Bernardo**



**1111 West El Camino Real
Sunnyvale, CA 94087**

November 16, 2010

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Limited Warranty

RF Studies Ltd warrants that this analysis was performed substantially using the methods that are referenced and described in this report using the information on the antenna site that was provided to RF Studies. RF Studies disclaims all other warranties, either express or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose. This limited warranty gives you specific legal rights. You may have others, which vary from state to state.

RF Studies Ltd' entire liability and your exclusive remedy shall be return of the price paid to RF Studies Ltd for the analysis.

In no event will RF Studies Ltd be liable to you for damages, including any loss of profits, lost savings, or other incidental or consequential damages arising out of your use or inability to use the analysis. Because some states do not allow the exclusion or limitation of liability for consequential or incidental damages, the above limitation may not apply to you.

1. Introduction

This study analyzes the radio power emitted from the proposed antenna attachments to determine whether human exposure limits would be exceeded at locations accessible to workers. The predicted exposure has been compared to FCC Occupational Exposure guidelines. The predicted results show that the radiated power on the rooftop will not exceed the human exposure limits on regions readily accessible to occupational workers. AT&T has antennas involved in RF transmitting operations at the 1111 West El Camino Real location, which has wireless antenna devices located on the rooftop of the building. These devices include panel antennas and are licensed by the Federal Communications Commission ("FCC") to operate in the Sunnyvale, CA metropolitan statistical area. The purpose of this study is to evaluate the environmental effects of these operations at the transmitting site.

The FCC has published the Office of Science & Technology ("OET") Bulletin No. 65: Evaluating Compliance with FCC Specified Guidelines for Human Exposure to Radio Frequency Radiation, October 1985. This publication is the standard for estimating power densities in the vicinity of transmitter antenna arrays. These estimates are based on a computer model developed by the Environmental Protection Agency ("EPA"). The FCC has a new standard that became effective October 15, 1997, published in OET 65A. The calculations used in this study follow the procedures outlined in OET 65A.

This study analyzes the radio frequency power emitted from the existing antenna attachments to determine whether human exposure limits would be exceeded at locations accessible to occupational workers. The predicted exposure has been compared to OET #65 guidelines. The predicted results show that the radiated power on the rooftop does not exceed the human exposure limits on the rooftop. _

This study does demonstrate that there are NO rooftop areas in excess of the controlled exposure standard that may be accessible to lighting, maintenance personnel or other individuals working on the building structure locations specified in the following coverage drawings. Possible hazardous areas exist only within close proximity to the antennas, and are not readily accessible due to the layout of the building. Refer to the attached supplement regarding procedures for working near these areas. Service personnel should avoid these areas while the systems are operating at maximum, unless the exposure time restriction is carefully observed.

2. Site Description

A plan view of the rooftop is shown below.

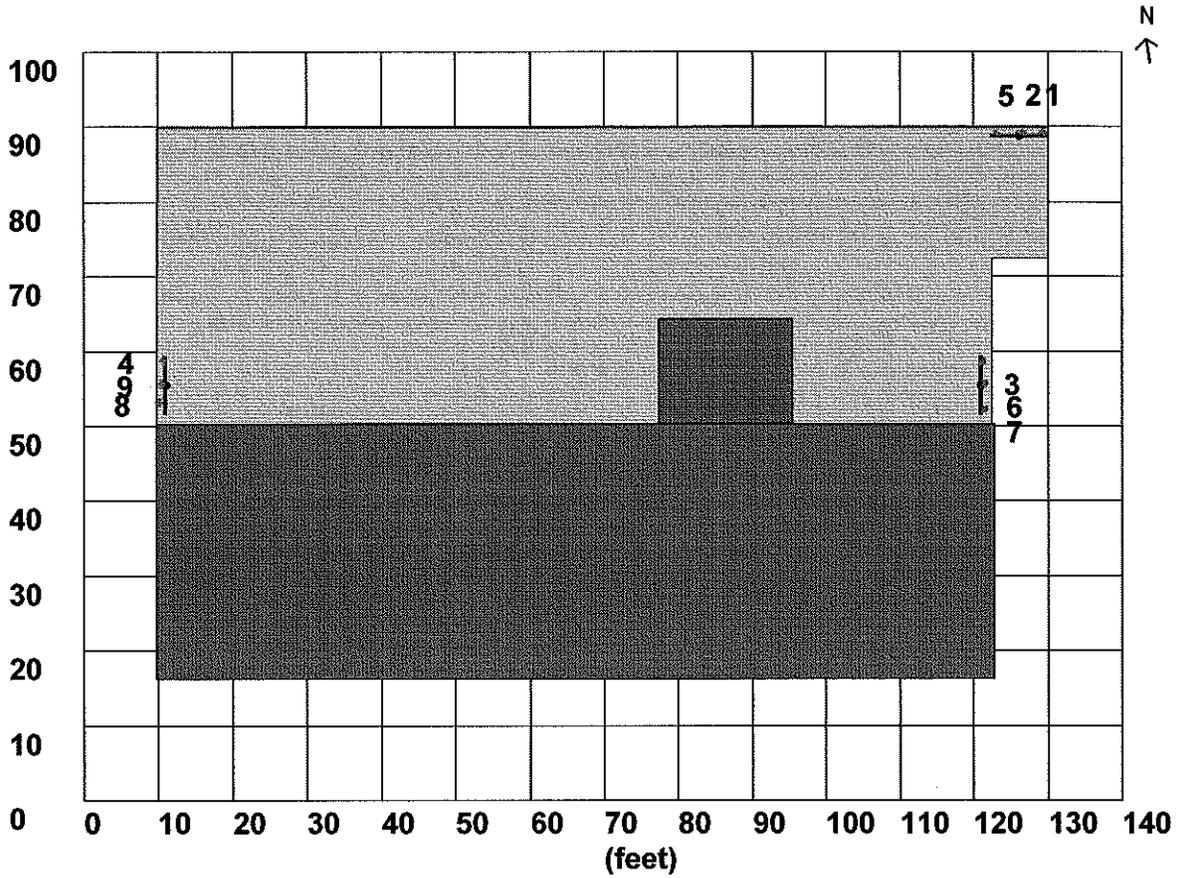


Figure 1 - Rooftop Drawing

The antennas are designed to focus energy forward and in a horizontal plane as shown in the diagram below. Thus, the majority of the power is focused above and away from the rooftop and surrounding area where the general public and workers have access. Nevertheless, some power is radiated outside of the main beam thus requiring an analysis to be performed.

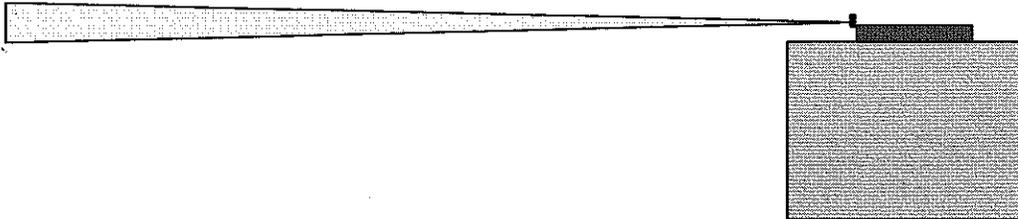


Figure 2 - Main Beam of an Antenna

Here is a summary of the analysis options:

Power Radiation Density Parameters	Values
Bin Resolution	2.0 (ft)
Reflection Factor	2.56
Line of Sight Blockage Factor	20.0 dB
Exposure Guidelines	FCC Occupational Exposure Limits

The following table summarizes the antenna parameters. The active antennas in the power density coverage drawing shown in Figure 3, include operator(s): ATT.

Operator	Service (Title 47 CFR Rule Part)	Antenna Type	ACL Above Ground Elevation(ft)	Pointing Azimuth (°N)	Maximum Power (Watts ERP)	Frequency (MHz)
ATT	Part 24	742-264	32.0	25.0	300	1900
ATT	Part 24	742-264	32.0	275.0	300	1900
ATT*	Part 22	DBXNH-6565-R2M	32.0	25.0	200	700
ATT*	Part 22	DBXNH-6565-R2M	32.0	275.0	200	700
ATT*	Part 22	DBXNH-6565-R2M	32.0	140.0	200	700
ATT	Part 22	TBXHLB-6565A-VTM	32.0	25.0	300	850
ATT	Part 24	TBXHLB-6565A-VTM	32.0	140.0	300	1900
ATT	Part 22	742-264	32.0	140.0	300	850
ATT	Part 22	TBXHLB-6565A-VTM	32.0	25.0	300	850
ATT	Part 22	TBXHLB-6565A-VTM	32.0	140.0	300	850
ATT	Part 22	TBXHLB-6565A-VTM	32.0	275.0	300	850
ATT	Part 22	TBXHLB-6565A-VTM	32.0	275.0	300	850

* Denotes additional antennas to be added and shown on diagram 4a.

3. Analysis

The radiated power density was predicted across the roof surface in increments of two feet using guidelines specified by the FCC Occupational Exposure and techniques developed by RF Studies^{1,2}. The power density in a two feet by two feet area was averaged over the height of 6 feet above the surface. The cumulative radiated power from all the antennas was calculated as a percentage of the FCC Occupational Exposure limits

Power density radiated from the microwave dish antennas is calculated using the techniques described in the Office of Engineering and Technology (OET) Bulletin No. 65 guidelines for Aperture antennas¹. The OET 65 guideline provides estimates for calculating the magnitude of the power density in the near and far field of the dish antennas as well as inside and outside the main beam of the antenna.

The following approach is used by RF Studies to estimate power density from directional panel arrays¹. Panel antennas are modeled as an array of gain elements spaced a half wavelength apart. The gain of each element is modeled as having a gain of G/N where G is the antenna gain and N is the number of array elements. The vertical polar pattern of each element is simulated with a maximum gain of G/N and with a front-to-back ratio of 20 dB. The composite power density from a panel array is then predicted by calculating the power density from each of the elements in the array and adding each contribution. Ground reflection is also considered by multiplying the power density by a factor of 2.56.

The following approach is used by RF Studies to estimate power density from collinear arrays². Collinear antennas are modeled as an array of gain elements spaced a half wavelength apart. The gain of each element is modeled as having a gain of G/N where G is the antenna gain and N is the number of array elements. The vertical polar pattern of each element is simulated with a maximum gain of G/N and with a front-to-back ratio of 20 dB. The composite power density from a collinear array is then predicted by calculating the power density from each of the elements in the array and adding each contribution. Ground reflection is also considered by multiplying the power density by a factor of 2.56.

¹ Robert Mawrey, Terry Riley, James Higgins, and Steven Slayden, "Predicting power density near antennas to meet FCC RF safety regulations", Mobile Radio Technology, September 1997.
Proprietary and Confidential

4. Results

The following diagram displays the results of the radiated power density analysis. This diagram shows the spatially averaged power density level predicted on the rooftop for FCC Occupational Exposure limits. The highest levels are 38.4% of the exposure limit. This diagram shows the rooftop before the installation on the proposed additional antennas.

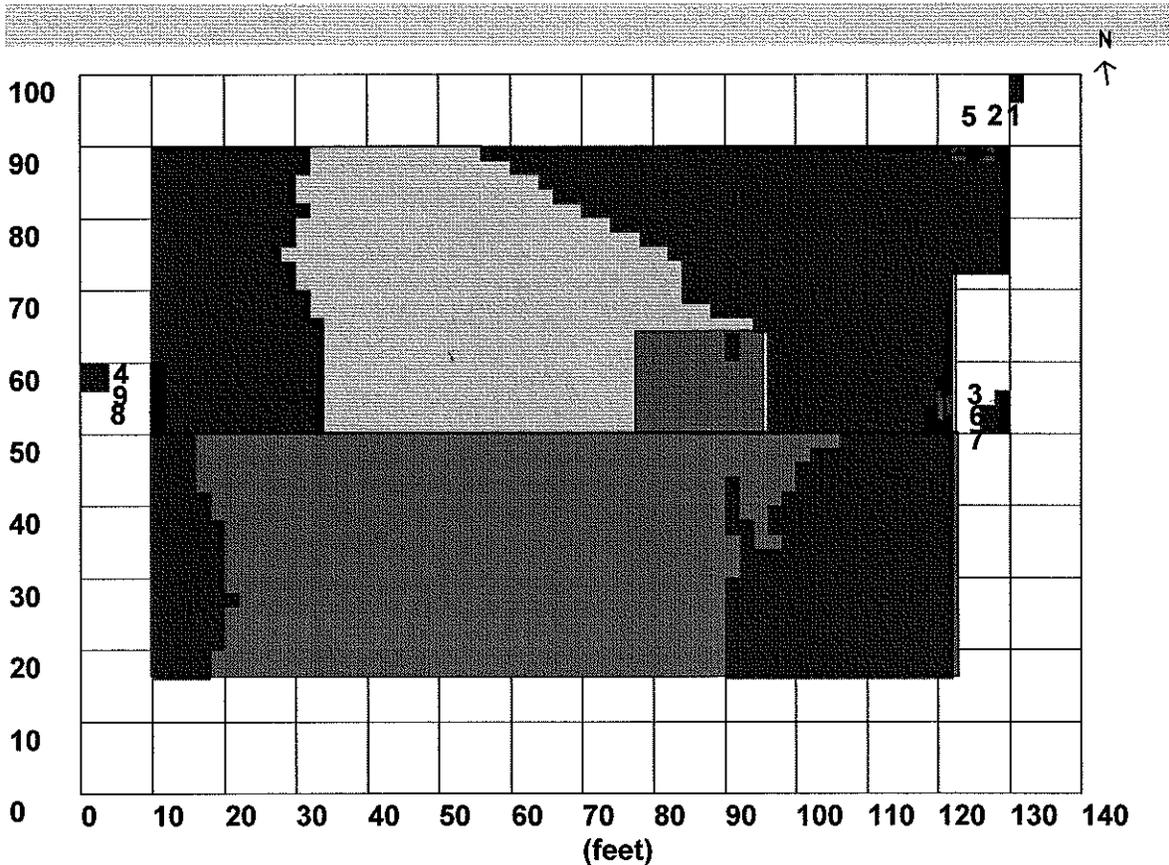
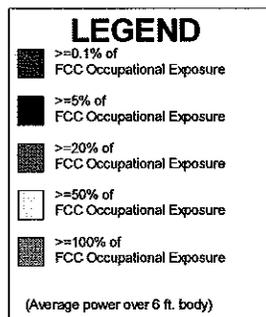


Figure 3 - Power Density Coverage Drawing



4a. Results

The following diagram displays the results of the radiated power density analysis. This diagram shows the spatially averaged power density level predicted on the rooftop for FCC Occupational Exposure limits. The highest levels are 42.3% of the exposure limit. This diagram shows the rooftop AFTER the installation on the proposed additional antennas.

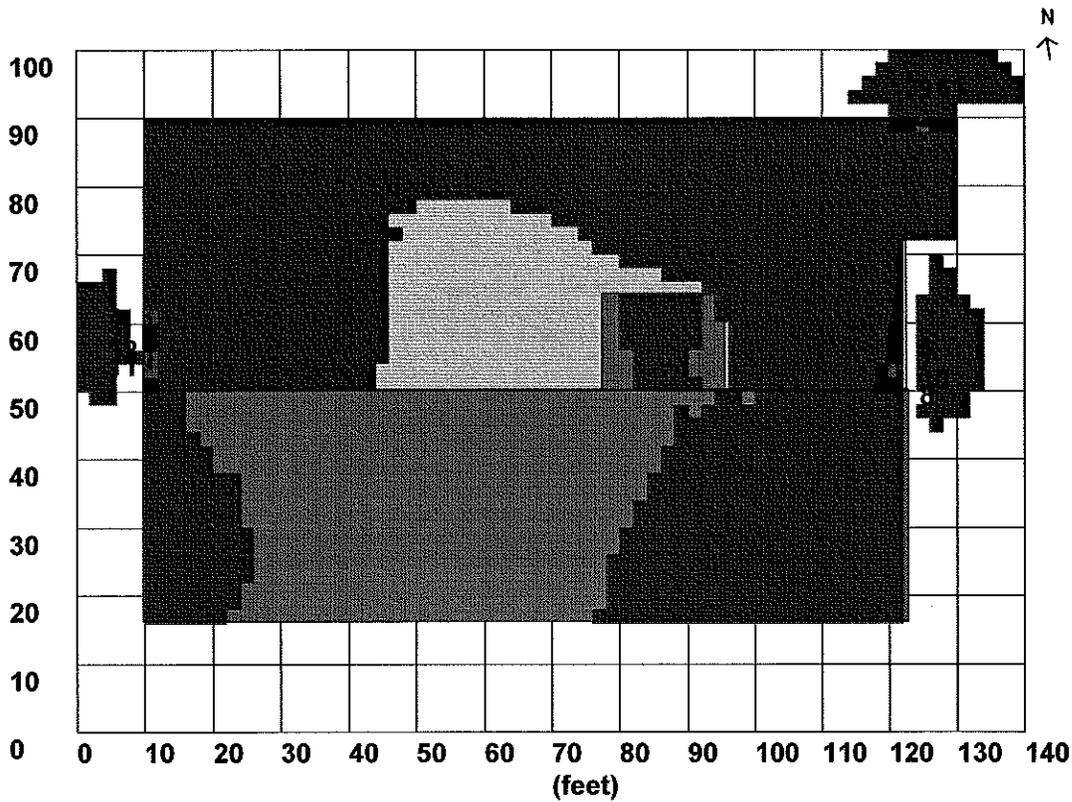


Figure 3 - Power Density Coverage Drawing

5. Conclusions and Recommendations

The predictions show that the maximum power density on this rooftop never exceeds FCC Occupational Exposure limits.

Fields in publicly accessible areas at the site are calculated to be well below the applicable limits.

No Recommended Mitigation Measures (or Mitigation Required)

Due to their mounting locations, the AT&T antennas are not accessible to the general public. It is presumed that AT&T will, as an FCC licensee, take adequate steps to ensure that its employees or contractors comply with FCC occupational exposure guidelines whenever work is required near the antennas.

The additional antennas proposed by AT&T show an increase in exposure levels of 3.9% overall.

Appendix A - Limits for Maximum Permissible Exposure (MPE)

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(A) Limits for FCC Occupational Exposure

Frequency Range (MHz)	Power Density (mW/cm ²)	Averaging Time (minutes)
30 - 300	1	6
300 - 1500	f / 300	6
1500 - 100000	5	6

f = frequency in MHz