Staff Report to the Zoning Administrator

Application Number: 08-0204

Applicant: AT&T
Owner: Rodney Martin Parsons
APN: 067-202-64

Agenda Date: 5/01/09
Agenda Item #: 7
Time: After 10:00 a.m.

Project Description: Proposal to mount three panel antennas onto an existing monopine and install one outdoor equipment cabinet at an existing lease area for wireless communication facilities. Requires an amendment to Commercial Development Permits 96-0566, 99-0171, 02-0411, 05-0287, and 05-0353.

Location: Property located at the end of Firehouse Lane, about 300 feet south from the intersection of Sims Road and La Madrona Road (155 Firehouse Lane)

Supervisoral District: 1st District (District Supervisor: John Leopold)

Permits Required: Commercial Development Permit Amendment
Technical Reviews: None

Staff Recommendation:

- Certification that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- Approval of Application 08-0204, based on the attached findings and conditions.

Exhibits

A.	Project plans	H.	Biotic Report, prepared by Jodi McGraw, dated September 26, 2008
B.	Findings	I.	Board of Supervisors Letter, dated October 21, 2008 (containing only the ordinance and exempted projects list)
C.	Conditions	J.	Comments & Correspondence
D.	Categorical Exemption (CEQA determination)		
E.	Assessor's, Location, Zoning and General Plan Maps		
F.	NIER Report, dated May 30, 2008		
G.	Photo Simulations		

Parcel Information

Parcel Size:	2 acres
Existing Land Use - Parcel:	Residential
Existing Land Use - Surrounding:	Residential
Project Access:	Firehouse Lane, 30' right-of-way, site also fronts on La Madrona Drive, minimum 40 foot right-of-way
Planning Area:	Carbonera
Land Use Designation:	RR (Rural Residential)
Zone District:	RA (Residential Agriculture)
Coastal Zone:	__ Inside x Outside
Appealable to Calif. Coastal Comm.	__ Yes x No

Environmental Information

Geologic Hazards:	Not mapped/no physical evidence on site
Soils:	N/A
Fire Hazard:	Not a mapped constraint
Slopes:	Site is flat
Env. Sen. Habitat:	The site is mapped as containing Zayante band-winged grasshoppers and Marsh Microseris. The applicant provided a biotic report (Exhibit H) evaluating site conditions. This report concluded that the site will not affect any sensitive habitat for rare species because work is proposed within existing facility. However, the site may support the Mount Herman June Beetle. The project includes recommended construction practices to ensure that the area surrounding the facility is not impacted by construction. These have been accepted by Environmental Planning and included in the conditions of approval.
Grading:	No grading proposed
Tree Removal:	No trees proposed to be removed
Scenic:	Highway 17 Scenic Resource
Drainage:	Existing drainage adequate
Archeology:	Yes, though original archaeological resource evaluation did not identify physical evidence on site prior to development of cellular facility. No additional review required for antennas on existing monopine or the proposed cabinet within the existing enclosure.

Services Information

Urban/Rural Services Line:	__ Inside x Outside
Water Supply:	N/A
Sewage Disposal:	N/A
Fire District:	Scotts Valley Fire District
Drainage District:	None, natural

History

Project Permits

96-0566	Proposal to construct a 60 foot high monopole with two panel antennas as well as an equipment cabinet on site with a single family dwelling.
99-0171	Proposal to construct a Personal Communications Services Facility to include a 645 square foot enclosure including seven equipment cabinets and a 90 foot high tree pole. Requires an amendment to 96-0566.
02-0411	Proposal to mount six additional antennas onto an existing tree monopole and construct equipment cabinets and fence enclosure. Requires an amendment to Commercial Development Permits 96-0566 and 99-0171.
05-0287	Permit to co-location a wireless communications facility including three pole mounted antennas on an existing monopine, and construct equipment cabinets and a fence enclosure. Requires an amendment to 96-0566, 99-0171 and 02-0411.
05-0353	Proposal to install six panel antennas on an existing monopine, seven associated ground equipment cabinets, two GPS antennas, and one generator enclosed by a 6 foot redwood fence. Project requires an amendment to Commercial Development permits 96-0566, 02-0411, 05-0287, a biotic pre-site and an archaeological pre-site.

In total, one 60-foot monopole (approved under 96-0566) and one 90 foot monopine (approved under 99-0171) are currently located on the subject property, Subsequently, two additional providers installed antennas that are co-located on the monopine under permits 02-0411 and 05-0287. The property now contains in excess of 9 antennas and a total of 3 equipment enclosures.

Project Setting

The property is approximately 2 acres in size located in the RA (Residential Agriculture) zone district and has a R-R (Rural Residential) General Plan designation. The applicant proposes to add three panel antennas onto an existing 90-foot monopine tree and an associated equipment cabinet within an existing fenced enclosure lease area. The existing monopine contains 4 existing wireless carriers on the monopine tree. The site is relatively flat, though gently sloping to the east.

The existing wireless facility is located approximately 800 feet to the southeast from the nearest property line of Brook Knoll Elementary School. The project site is physically separated by two hills and stepped down topographically approximately 30 feet in elevation from the school site overall.

The parcel is a mapped area for Marsh Microseris and Zayante Band-Winged Grasshoppers. A current biotic resource evaluation was prepared for this site. These species were not identified. However, potential habitat for the June Beetle was identified. Thus, Environmental Planning staff has included conditions of approval addressing construction practices to ensure compliance with the recommendations of this report as noted in Exhibit H.
The parcel is also mapped as potentially containing archaeological resources. Previous permits have required an archaeological resource evaluation, which did not identify any resources. A review has not been required for this project because the improvements are located on the existing monopine and within the equipment enclosure.

Zoning & General Plan Consistency

The subject property is located in the RA (Residential Agriculture) zone district, a designation that is consistent with the site's (RR) Rural Residential General Plan designation. Cell facilities and cell facility co-locations are allowed uses within the Residential Agriculture zone district provided that the proposed project complies with the development standards of the wireless communications ordinance, sections 13.10.660 to 13.10.668.

On October 21, 2008 the Board of Supervisors' adopted revised wireless communication regulations amending sections 13.10.661 and 13.10.663 to limit the number of antennas to nine antennas regardless of the number of wireless carriers, and the number of equipment shelters to three aboveground shelters. This ordinance revision exempted cellular facility applications that were deemed complete before the revised regulations went into effect. See Exhibit I, which contains an excerpt from the ordinance and list of exempt projects. The proposed project was deemed complete on November 5, 2008 before the effective date of November 20, 2008 and is therefore not subject to the revised regulations.

The existing wireless facility is located approximately 800 feet southeast of the property line of Brook Knoll School. The site is topographically separated from the school by two hills, is approximately 30 feet lower in elevation than the school site, and is physically separated by mature trees, all of which reduce the visibility of the site from the school grounds. For these reasons the project has not been required to be reviewed by the Planning Commission at this time.

Cell Facility on a Residentially Zoned Parcel

Pursuant to County Code Section 13.10.661(c), parcels zoned Residential Agriculture is subject to the Restricted Area requirements. These code sections, 13.10.661(c) (3), allow co-located facilities within the Residential Agriculture zone district that do not result in a significant increase in visual impact of the facility. As described by the ordinance section 13.10.660 (d) co-location is defined to mean "where more than one wireless facilities share a single wireless facility." Code Section 13.10.661 (g) also states that "where one or more wireless communication facilities already existing on the proposed site location, co-location shall be required if it will not significantly increase the visual impact of the existing facility." Furthermore, the design review criteria under Code Section 13.10.663 (b) (5) encourage co-location over construction of a new tower.

The proposed project complies with these regulations in that the applicant proposes to install three

new antennas on an existing monopine tree that contains four separate carriers and one proposed cabinet within one of two fenced equipment shelters.

Alternatives Analysis

Pursuant to County Code Section 13.10.662(c), co-located facilities located within a restricted zone district are not required to provide an alternative site analysis.

Visual Impacts

Public Road Scenic Corridors

Pursuant to County Code Section 13.10.663(a) (3), projects are required to be "sited and designed to be least visually obtrusive as possible and the "top of tower required to be below any ridgeline when viewed from public roads. If the tower must extend above the ridgeline the applicant must camouflage the tower by using stealth techniques."

As noted in the Environmental Information Section of the staff report, the subject property is located within the Highway 17 Scenic Corridor. The existing monopine tree and existing antennas are not visible from Highway 17 because existing vegetation screens the site from view. The area surrounding the existing monopine tree and equipment shelter is vegetated with similar tall conifers and other vegetation and physically separated from view by this vegetation. Photo-simulations are attached as Exhibit H.

Surrounding Residential Development

Pursuant to County Code Section 13.10.663 (a) (1), visual impacts to surrounding land uses shall be minimized to the greatest extent feasible and utilization of camouflaging techniques shall be encouraged where appropriate. The proposed equipment shelter is screened from other properties by the existing fenced enclosure and will not create any additional visual intrusion. The proposed antennas and equipment cabinet do not extend beyond the canopy of the existing monopine tree and will not significantly increase the visual impact of the facility either.

Radiofrequency (RF) Exposure

An RF report, as required by the Wireless Communications Ordinance, is attached as Exhibit F. This report evaluates the existing facility and evaluates projected emission levels. The existing and proposed levels are within FCC prescribed limits as shown on Table 5 and 6 of the report. The maximum level does not exceed .26 percent of the most restrictive public limit at ground level. The maximum exposure, which is at buildings approximately 300 feet from the monopine, is projected to be approximately .40 percent of the most restrictive limit established by the Federal Communications Commission.

Section 47 USC 332(c)(7)(iv) of the Telecommunications Act of 1996 prohibits jurisdictions from regulating the placement, construction, or modification of Wireless Communications Facilities based on the environmental effects of RF emissions if these emissions comply with FCC standards.

Setbacks

The following setbacks apply to this property based on the Residential Agriculture zone district. The existing facility complies with the required setbacks as originally approved. The site is considered a double frontage parcel as two sides of the parcel front right-of-way.

	Front	Front	Side
Required	40' (Firehouse Lane)	40'(La Madrona Drive)	20'
Proposed	86'	105'	31' (south side) and 250' (north side)

The existing and proposed improvements comply with all required setbacks.

Design Review

The proposed facility will comply with the requirements of the County Design Review Ordinance, in that the proposed cabinet will be located within an existing equipment fenced enclosure and monopine tree antennas will be camouflaged within the existing tree vegetation as noted in the visual simulations attached as Exhibit G. No visual mitigations are necessary for the proposed site. Please see attached Design Review, Exhibit H.

Environmental Review

Environmental review has not been required for the proposed project per the requirements of the California Environmental Quality Act (CEQA). The project was determined to be exempt from CEQA. The project qualifies for a class 1 exemption since the proposed project involves improvements to the existing facility without expansion of the improvement area

Conclusion

As proposed and conditioned, the project is consistent with all applicable codes and policies of the Zoning Ordinance and General Plan. Please see Exhibit "B" ("Findings") for a complete listing of findings and evidence related to the above discussion.

Staff Recommendation

- Certification that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- **APPROVAL** of Application Number **08-0204,** based on the attached findings and conditions.

Supplementary reports and information referred to in this report are on file and available for viewing at the Santa Cruz County Planning Department, and are hereby made a part of the administrative record for the proposed project.

The County Code and General Plan, as well as hearing agendas and additional information are available online at: www.co.santa-cruz.ca.us

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at&t

CROWN CASTLE INTERNATIONAL

CNU3487/FIREHOUSE LANE
155 FIREHOUSE LANE
SCOTTS VALLEY, CALIFORNIA 95060

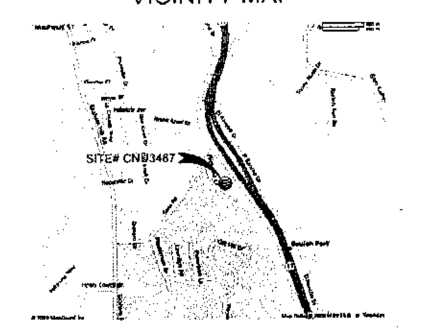
#877227/MILLER RESIDENCE
155 FIREHOUSE LANE
SCOTTS VALLEY, CALIFORNIA 95060

SPECIAL INSPECTIONS

1 CONCRETE
2 BOLTS INSTALLED IN CONCRETE
3 CONCRETE MOMENT-RESISTING SPACE FRAME
4 REINFORCING STEEL AND PRESTRESSING STEEL
5.1 ALL STRUCTURAL WELDING
5.2 WELD TESTING DUCTILE MOMENT-RESISTING STEEL FRAME
5.3 WELDING REINFORCING STEEL
6 HIGH-STRENGTH BOLTING
7 STRUCTURAL MASONRY
8 REINFORCED GYPSUM CONCRETE
9 INSULATING CONCRETE FILL
10 SPRAY-APPLIED FIREPROOFING
11 DEEP FOUNDATIONS (PILING, DRILLED & CAISSONS)
12 SHOTCRETE
13.1 VERIFY SOIL CONDITIONS ARE SUBSTANTIALLY IN CONFORMANCE WITH THE SOIL INVESTIGATION REPORT
13.2 VERIFY THAT FOUNDATION EXCAVATIONS EXTEND TO PROPER DEPTH AND BEARING STRATA
13.3 PROVIDE SOIL COMPACTION TEST RESULTS, DEPTH OF FILL, RELATIVE DENSITY, BEARING VALUES
13.4 PROVIDE SOIL EXPANSION TEST RESULTS, EXPANSION INDEX, RECOMMENDATIONS FOR FOUNDATIONS, ON-GRADE FLOOR SLAB DESIGN FOR EACH BUILDING SITE
14 SMOKE CONTROL SYSTEM
15 SPECIAL CASES (DESCRIBE)
16 OFF-SITE FABRICATION OF BUILDING COMPONENTS
17 OTHER SPECIAL INSPECTIONS AS REQUIRED BY DESIGNER

NO.	DESCRIPTION OF TYPE OF INSPECTION REQUIRED, LOCATION, REMARKS.

VICINITY MAP



CITY OF SCOTTS VALLEY

CONSULTANT TEAM

CLIENTS REPRESENTATIVE:

BLACK DOT WIRELESS
320 COMMERCE
IRVINE, CALIFORNIA 92602
PHONE: (949) 502-3800
FAX: (949) 271-7940

SITE ACQUISITION:
JAMES COSGROVE
PHONE: (415) 233-3836

CONSTRUCTION MANAGER:
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PHONE: (925) 737-5857

ARCHITECT:

JEFFREY ROME & ASSOCIATES
3 SAN JOAQUIN PLAZA
SUITE: 155
NEWPORT BEACH, CALIFORNIA 92660
PHONE: (949) 760-3929
CELLULAR: (760) 777-2958
FAX: (949) 760-3931
CONTACT: ALEX FIGUEROA

DEVELOPMENT SUMMARY

APPLICANT:	AT&T MOBILITY 4420 ROSEWOOD DRIVE PLEASANTON, CALIFORNIA 94588
OWNER:	RODNEY M. PARSONS SITE CONTACT: RODNEY M. PARSONS 155 FIREHOUSE LANE SANTA CRUZ, CALIFORNIA 95060 PHONE: (831) 818-1355
TOWER OWNER:	CROWN CASTLE INTERNATIONAL CROWN CASTLE PROPERTY MANAGER: VICTORIA PETERS PHONE: (925) 737-1005 CRWON CASTLE CONSTRUCTION MANAGER: TED COMBER PHONE: (925) 860-0098
OTHER ON-SITE TELECOM FACILITIES:	YES
PROJECT ADDRESS:	155 FIREHOUSE LANE SCOTTS VALLEY, CALIFORNIA 95060
ASSESSORS PARCEL NUMBER:	067-202-64-000
LATITUDE:	37.01520
LONGITUDE:	-122.02660
LAT/LONG TYPE:	NAD-83
EXISTING ZONING:	TBD
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:	COUNTY OF SANTA CRUZ

PROJECT DESCRIPTION

AT&T MOBILITY PROPOSES TO CONSTRUCT, OPERATE AND MAINTAIN AN UNMANNED WIRELESS COMMUNICATIONS FACILITY. THIS FACILITY WILL CONSIST OF THE FOLLOWING:

- INSTALL (1) (N) OUTDOOR EQUIPMENT CABINET ON (N) CONCRETE PAD.
- INSTALL (3) (N) ANTENNAS.

SHEET INDEX

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

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 ONLY 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.
Arizona • California • Nevada
Arizona: (602) 296-5578
California: (949) 760-3929
Nevada: (702) 795-0059

PROPRIETARY INFORMATION
THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AT&T MOBILITY IS STRICTLY PROHIBITED.

REGISTERED ARCHITECT
JEFFREY L. ROME
C-020876
EXP. 2.28.09
STATE OF CALIFORNIA

PREPARED FOR
at&t
4430 Rosewood Drive
Pleasanton, California 94588

CROWN CASTLE INTERNATIONAL
shaping the wireless world™
510 CASTILLO STREET, SUITE 303
SANTA BARBARA, CALIFORNIA 93101

APPROVALS

R.F.	
ZONING	
CONSTRUCTION	
SITE ACQUISITION	
OWNER APPROVAL	

PROJECT NAME
AT&T UMTS OVERLAY
SITE NAME
FIREHOUSE LANE
SITE NUMBER
CNU3487
155 FIREHOUSE LANE
SCOTTS VALLEY, CALIFORNIA 95060

DRAWING DATES

04/14/08	90% CD REVIEW (P1-B1)
05/08/08	100% CD REVIEW (P1-B2)
05/12/08	CROWN CASTLE CMTS (P1-B3)
08/04/08	PLANNER COMMENTS (P1-B4)

A.P.N: 067-202-64-000

SHEET TITLE
TITLE SHEET

T-1

JRA PROJECT NUMBER: 381019

EXHIBIT A

GENERAL SPECIFICATIONS

1. THE LATEST EDITION OF THE AMERICAN INSTITUTE OF ARCHITECTS DOCUMENT A201 "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION" ARE INCLUDED IN THESE SPECIFICATIONS AS IF COMPLETELY REPRODUCED HEREIN.

2. THIS FACILITY IS AN UNOCCUPIED PCS TELECOMMUNICATIONS SITE AND IS EXEMPT FROM DISABLED ACCESS REQUIREMENTS.

3. PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTORS PARTICIPATING SHALL VISIT THE JOB SITE AND FAMILIARIZE THEMSELVES WITH ALL FIELD CONDITIONS AFFECTING THE PROPOSED PROJECT INCLUDING DEMOLITION, ELECTRICAL, MECHANICAL AND STRUCTURAL INSTALLATIONS, AS WELL AS WITH THE CONSTRUCTION AND CONTRACT DOCUMENTS AND SHALL CONFIRM THAT THE PROJECT CAN BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. SHOULD ANY ERRORS, OMISSION, OR DISCREPANCIES BE FOUND, THE GENERAL CONTRACTOR SHALL IMMEDIATELY NOTIFY AT&T MOBILITY CONSTRUCTION MANAGER AND THE ARCHITECT IN WRITING. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL INCLUDE THE MORE COSTLY OR EXTENSIVE WORK IN THE BID, UNLESS SPECIFICALLY DIRECTED OTHERWISE. IF A DISCREPANCY EXISTS AND THE PROJECT MANAGER AND ARCHITECT ARE NOT NOTIFIED, THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL COSTS INCURRED TO REPAIR OR CORRECT ALL PROBLEMS THAT RESULT.

4. DRAWINGS SHALL NOT BE SCALED. THESE DRAWINGS ARE INTENDED TO BE DIAGRAMMATIC ONLY. FIGURED DIMENSIONS HAVE PRECEDENCE OVER DRAWING SCALE AND DETAIL DRAWINGS HAVE PRECEDENCE OVER SMALL SCALE DRAWINGS. CONTRACTOR SHALL CHECK ACCURACY OF ALL DIMENSIONS IN THE FIELD. UNLESS SPECIFICALLY NOTED, DO NOT FABRICATE ANY MATERIALS, OR BEGIN ANY CONSTRUCTION UNTIL THE ACCURACY OF DRAWING DIMENSIONS HAS BEEN VERIFIED AGAINST ACTUAL FIELD DIMENSIONS.

5. THE CONTRACTOR SHALL INCLUDE IN HIS OR HER BID ALL MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE THE WORK AS INDICATED OR IMPLIED BY THESE DRAWINGS.

6. CONTRACTOR SHALL NOTIFY THE AT&T MOBILITY CONSTRUCTION MANAGER, THE PROPERTY OWNER AND THE ARCHITECT IF ANY DETAILS ARE CONSIDERED IMPRACTICAL, UNSUITABLE, UNSAFE, NOT WATERPROOF, OR NOT WITHIN CUSTOMARY TRADE PRACTICE. IF WORK IS PERFORMED, IT WILL BE ASSUMED THAT THERE IS NO OBJECTION TO ANY DETAIL. DETAILS ARE INTENDED TO SHOW THE END RESULT OF THE DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB CONDITIONS, AND SHALL BE INCLUDED AS PART OF THE WORK.

7. EXISTING ELEVATIONS AND LOCATIONS TO BE JOINED SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION. IF THEY DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE AT&T MOBILITY CONSTRUCTION MANAGER AND THE ARCHITECT SO THAT MODIFICATIONS CAN BE MADE BEFORE PROCEEDING WITH THE WORK.

8. THE CONTRACTOR SHALL VERIFY ALL TELEPHONE & RADIO EQUIPMENT LAYOUTS, SPECIFICATIONS, PERFORMANCE, INSTALLATION AND FINAL LOCATIONS WITH AT&T MOBILITY CONSTRUCTION MANAGER PRIOR TO BEGINNING WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH ERICSSON RADIO SYSTEMS.

9. ALL SYMBOLS & ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED CONSTRUCTION STANDARDS. IF THE CONTRACTOR HAS QUESTIONS REGARDING THEIR EXACT MEANING, THE AT&T MOBILITY CONSTRUCTION MANAGER AND THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION BEFORE THE CONTRACTOR PROCEEDS WITH THE WORK.

10. THE CONTRACTOR SHALL OBTAIN AND PAY FOR PERMITS, LICENSES AND INSPECTIONS NECESSARY FOR PERFORMANCE OF THE WORK AND INCLUDE THOSE IN THE COST OF THE WORK TO AT&T MOBILITY.

11. THE CONTRACTOR SHALL PROVIDE CONTINUOUS SUPERVISION WHILE ANY SUBCONTRACTORS OR WORKMEN ARE IN THE SITE AND SHALL SUPERVISE AND DIRECT ALL WORK, USING HIS BEST SKILL AND ATTENTION. HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES AND SEQUENCES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.

12. WORKMANSHIP THROUGHOUT SHALL BE OF THE BEST QUALITY OF THE TRADE INVOLVED, AND SHALL MEET OR EXCEED THE FOLLOWING MINIMUM REFERENCE STANDARDS FOR QUALITY AND PROFESSIONAL CONSTRUCTION PRACTICE:

    NRCA — NATIONAL ROOFING CONTRACTORS ASSOCIATION
    O'HARE INTERNATIONAL CENTER
    10255 W. HIGGENS ROAD, SUITE 600
    ROSEMONT, IL 60018

    SMACNA — SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
    4201 LAFAYETTE CENTER DRIVE
    CHATILLY, VA 22021-1209

    IILP — INTERNATIONAL INSTITUTE FOR LATH AND PLASTER
    820 TRANSFER ROAD
    ST. PAUL, MN 55114-1406

13. INSTALL ALL EQUIPMENT AND MATERIALS PER THE LATEST EDITION OF THE MANUFACTURER'S INSTALLATION SPECIFICATIONS UNLESS SPECIFICALLY OTHERWISE INDICATED, OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.

14. THE CONTRACTOR SHALL VERIFY, COORDINATE, AND PROVIDE ALL NECESSARY BLOCKING, BACKING, FRAMING, HANGARS OR OTHER SUPPORTS FOR ALL ITEMS REQUIRING THE SAME.

15. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL GIVE ALL NOTICES AND SHALL COMPLY WITH ALL APPLICABLE LOCAL CODES, REGULATIONS, LAWS AND ORDINANCES AS WELL AS STATE DEPARTMENT OF INDUSTRIAL REGULATIONS AND DIVISION OF INDUSTRIAL SAFETY (OSHA) REQUIREMENTS.

16. THE CONTRACTOR SHALL PROTECT THE PROPERTY OWNERS, AND AT&T MOBILITY PROPERTY FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO NEW AND EXISTING FINISHES, CONSTRUCTION, STRUCTURE, LANDSCAPING, CURBS, STAIRS, OR EQUIPMENT, ETC. SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF AT&T MOBILITY, AND THE PROPERTY OWNER'S REPRESENTATIVE, AT THE EXPENSE OF THE CONTRACTOR.

17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR, AND SHALL REPLACE OR REMEDY, ANY FAULTY, IMPROPER, OR INFERIOR MATERIALS OR WORKMANSHIP OR ANY DAMAGE WHICH SHALL APPEAR WITHIN ONE YEAR AFTER THE COMPLETION AND ACCEPTANCE OF THE WORK BY AT&T MOBILITY UNDER THIS CONTRACT.

18. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO LOCATE ALL EXISTING UTILITIES, OR CONTACT AN OUTSIDE AGENCY TO LOCATE ALL EXISTING UTILITIES, WHETHER SHOWN HEREIN OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSES FOR THE REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED IN CONJUNCTION WITH THE EXECUTION OF WORK.

19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE PROJECT SITE WHILE THE JOB IS IN PROGRESS AND UNTIL THE JOB IS COMPLETED AND ACCEPTED BY AT&T MOBILITY.

20. THE CONTRACTOR SHALL PROVIDE TEMPORARY WATER, POWER AND TOILET FACILITIES AS REQUIRED BY THE PROPERTY OWNER, AT&T MOBILITY, AND THE CITY OR GOVERNING AGENCY.

21. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REDLINING THE CONSTRUCTION DOCUMENTS TO ILLUSTRATE THE AS-BUILT CONDITION OF THE SITE. THIS SHALL BE DONE AFTER THE SITE HAS BEEN AWARDED FINAL INSPECTION BY THE RESPONSIBLE BUILDING AGENCY. ONE SET OF REDLINED DRAWINGS SHALL BE PROVIDED TO THE AT&T MOBILITY CONSTRUCTION MANAGER.

22. THE LATEST EDITION OF ALL PERMITTED AND APPROVED PLANS PERTAINING TO THIS PROJECT SHALL BE KEPT IN A PLAN BOX AND SHALL NOT BE USED BY WORKERS. ALL CONSTRUCTION SETS SHALL REFLECT THE SAME INFORMATION. THE CONTRACTOR SHALL ALSO MAINTAIN IN GOOD CONDITION, ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES. THESE ARE TO BE UNDER THE CARE OF THE JOB SUPERINTENDENT.

23. THE CONTRACTOR SHALL REMOVE ALL RUBBISH AND WASTE MATERIALS ON A DAILEY BASIS, EXCEPT FOR THAT SPECIFIED AS REMAINING THE PROPERTY OF THE BUILDING OR PROPERTY OWNER AND SHALL EXERCISE STRICT CONTROL OVER JOB CLEANING THROUGHOUT CONSTRUCTION, INCLUDING FINAL CLEAN-UP UPON COMPLETION OF WORK. ALL AREAS ARE TO BE LEFT IN A BROOM CLEAN CONDITION AT THE END OF EACH DAY AND VACUUM CLEAN CONDITION, FREE FROM PAINT SPOTS, DUST OR SMUDGES OF ANY NATURE AT COMPLETION OF WORK.

24. THE GENERAL CONTRACTOR MUST PERFORM WORK DURING PROPERTY OWNER'S PREFERRED HOURS TO AVOID DISRUPTION OF NORMAL ACTIVITY.

25. ALL EXPOSED METAL SHALL BE HOT-DIPPED GALVANIZED.

26. SEAL ALL PENETRATIONS THROUGH FIRE-RATED AREAS WITH U.L. LISTED OR FIRE MARSHALL APPROVED MATERIALS IF AND WHERE APPLICABLE TO THIS FACILITY AND PROJECT SITE.

27. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A10BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF THE PROJECT AREA CONSTRUCTION.

28. ELECTRICAL POWER SYSTEM SHALL BE GROUNDED PER NEC ARTICLES 250 AND 810.

29. ALL NEW OPENINGS IN THE EXTERIOR ENVELOPE OF CONDITIONED SPACES SUCH AS AT WALL AND ROOF PENETRATIONS SHALL BE CAULKED OR SEALED TO LIMIT INFILTRATION OF AIR AND MOISTURE.

30. UPON COMPLETION OF CONSTRUCTION, AT&T MOBILITY CONSTRUCTION MANAGER SHALL CONDUCT A WALK-THRU WITH PROPERTY OWNER OR REPRESENTATIVE OF PROPERTY OWNER.

31. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SYSTEM EQUIPMENT IN A CLEAN WORKING ORDER UNTIL ACCEPTANCE OF THE PROJECT BY AT&T MOBILITY.

32. INSTALL ALL EQUIPMENT AND MATERIALS PER THE LATEST EDITION OF THE MANUFACTURER'S INSTALLATION SPECIFICATIONS UNLESS SPECIFICALLY OTHERWISE INDICATED, OR WHERE LOCAL CODES OR REGULATION TAKE PRECEDENCE.

ROOFING & WATERPROOFING NOTES

1. CONTRACTOR SHALL CONTACT BUILDING OWNER TO DETERMINE IF ROOF IS UNDER WARRANTY. CONTRACTOR SHALL GUARANTEE THAT ANY AND ALL NEW ROOFING WORK MEETS THE SPECIFICATION OF ANY EXISTING ROOFING WARRANTIES SUCH THAT THE WARRANTY IS NOT MADE INVALID AS A RESULT OF THIS WORK. IF IT IS DETERMINED THAT THE ARCHITECT'S DETAILING IS INADEQUATE OR IMPROPER OR IF ANY OTHER DISCREPANCY IS FOUND, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT AND THE AT&T MOBILITY PROJECT MANAGER IN WRITING. ULTIMATELY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH THE ORIGINAL ROOF MANUFACTURER'S SPECIFICATIONS.

2. CONTRACTOR SHALL USE METHODS AND MATERIALS SIMILIAR AND COMPATIBLE WITH EXISTING MATERIALS & CONDITIONS FOR ROOF PATCHING, NEW PENETRATIONS, ETC.

3. THE CONTRACTOR SHALL PROPERLY SEAL ALL NEW ROOF & BUILDING ENVELOPE PENETRATIONS SUCH THAT THE INTEGRITY OF THE ORIGINAL BUILDING ASSEMBLY AND ALL APPLICABLE WARRANTIES ARE MAINTAINED.

4. IF IT DEEMED NECESSARY TO REMOVE EXISTING FINISHES AND/OR MATERIALS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECONSTRUCTING FINISHES AND MATERIALS TO LIKE-NEW CONDITION. CONTRACTOR SHALL MAINTAIN THE ORIGINAL COLORS, TEXTURES & FINISHES UNLESS SPECIFICALLY NOTED TO THE CONTRARY OR APPROVED BY THE AT&T MOBILITY CONSTRUCTION MANAGER IN ADVANCE.

5. AT THE AT&T MOBILITY CONSTRUCTION MANAGER'S DIRECTION, THE CONTRACTOR SHALL PROVIDE ROOFTOP WALKPADS TO ALL NEW EQUIPMENT INCLUDING ANTENNAS AND BTS UNITS AND ALONG COAX CABLE ROUTING. ON CONVENTIONAL ROOFING, THE WALK PADS SHALL BE "DUCK BOARDS" AS MANUFACTURED BY APC OR EQUAL. ON SPECIAL ROOFING SYSTEMS SUCH AS SINGLE MEMBRANE ROOFS WILL REQUIRE A SPECIFIC PRODUCT AS NOTED ON PLANS OR AS REQUIRED BY NOTES 1 & 2 ABOVE.

PENETRATION AT FIRE RATED ASSEMBLIES

1. AT THE AT&T MOBILITY PROJECT MANAGER'S DIRECTION, THE CONTRACTOR SHALL PROVIDE "HILTI" HIGH PERFORMANCE FIRESTOP SYSTEM #FS601 AT ALL FIRE RATED PENETRATIONS INSTALLED PER MANUFACTURER'S LATEST INSTALLATION SPECIFICATIONS.

2. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE CONSTRUCTED SO AS TO MAINTAIN AN EQUAL OR GREATER FIRE RATING.

PAINTING NOTES & SPECIFICATIONS

A. GENERAL

1. ALL PAINT PRODUCT LINES SHALL BE SHERWIN WILLIAMS UNLESS SPECIFICALLY NOTED OTHERWISE.
2. CONTRACTOR SHALL PREPARE ALL SURFACES AND APPLY ALL FINISHES PER LATEST EDITION OF MANUFACTURER'S SPECIFICATIONS.
3. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS REGARDING SUFFICIENT DRYING TIME BETWEEN COATS WITH PROVISIONS AS RECOMMENDED BY MANUFACTURER FOR EXISTING WEATHER CONDITIONS.
4. FINISH COLOR AND TEXTURE OF ALL PAINTED SURFACES SHALL MATCH EXISTING ADJACENT SURFACES UNLESS OTHERWISE NOTED.
5. ALL PAINT MATERIAL DATA SHEETS SHALL BE PROVIDED TO THE AT&T MOBILITY CONSTRUCTION MANAGER.
6. PREPARE PREVIOUSLY PAINTED SURFACE BY LIGHT SANDING WITH 400 GRIT SANDPAPER AND NON-HYDROCARBON WASH. PREPARE GALVANIZED SURFACES BY ACID ETCH OR SOLVENT CLEANING IN ACCORDANCE WITH SSPC-SP1.
7. FURNISH DROP CLOTHES, SHIELDS, MASKING AND PROTECTIVE METHODS TO PREVENT SPRAY OR DROPPINGS FROM DAMAGING ADJACENT SURFACES AND FACILITIES.
8. APPLY PAINT BY AIRLESS SPRAY, SANDING LIGHTLY BETWEEN EACH SUCCEEDING ENAMEL COAT ON FLAT SURFACES. APPLY MATERIAL TO ACHIEVE A COATING NO THINNER THAN THE DRY FILM THICKNESS INDICATED.
9. APPLY BLOCK FILTER TO CONCRETE BLOCK CONSTRUCTION AT A RATE TO ENSURE COMPLETE COVERAGE WITH PORES COMPLETELY FILLED.
10. CONTRACTOR SHALL CORRECT RUNS, SAGS, MISSES AND OTHER DEFECTS INCLUDING INADEQUATE COVERAGE AS DIRECTED BY THE AT&T MOBILITY CONSTRUCTION MANAGER. REPAINT AS NECESSARY TO ACHIEVE SURFACES WHICH ARE SMOOTH, EVENLY COATED WITH UNIFORM SHEEN AND FREE FROM BLEMISHES.

B. PAINTING SCOPE

1. PAINT THE FOLLOWING MATERIALS AND SYSTEMS CHECKED BELOW WITH THE COATING SYSTEM INDICATED.

PAINTING SCOPE				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

C. COATING SYSTEM SPECIFICATIONS

1. DTM ACRYLIC COATING (SERIES B66) BY SHERWIN WILLIAMS CO. 1MIL DFT PER COAT APPLIED IN TWO COATS OVER DTM BONDING PRIMER (B66A50).
2. 100% ACRYLIC, LATEX COATING EQUIVALENT TO A-100 (SERIES A-82) BY SHERWIN WILLIAMS CO. 1 MIL DFT PER COAT APPLIED IN TWO COATS OVER SPECIFIED PRIMER.

PAINT & PRIMER

D. ANTENNAS
PRIMER – KEM AQUA E61-W528
TOPCOAT – COROTHANE II B65W200/B60V22

BTS CABINET
PRIMER – KEM AQUA E61-W528
TOPCOAT – COROTHANE II B65W200/B60V22

COAXIAL JUMPER CABLES
PRIMER – AS REQUIRED FOR ADHESION, APPLYE ONE COAT OF KEM AQUA WATER REDUCIBLE PRIMER E61W25 REDUCED 25%
TOPCOAT – 2 COATS COROTHANE II POLYURETHANE B65W200/B60V2

RAW STEEL
PRIMER – KEM BOND HS B50W24, DMT ACRYLIC PRIMER
TOPCOAT – 2 COATS COROTHANE II POLYURETHANE B65W200/B60V2

GALVANIZED METAL
ACID ETCH WITH COMMERCIAL ETCH OR VINEGAR PRIMER COAT AND FINISH COAT (GALVITE HIGH SOLIDS OR DTM PRIMER/FINISH)

STAINLESS STEEL
PRIMER – DTM WASH PRIMER, B71Y1
TOPCOAT – 2 COATS COROTHANE II POLYURETHANE B65W200/B60V2

PRE-PRIMED STEEL
TOUCH UP ANY RUST OR UN-PRIMED STEEL WITH KEM BOND HS, S50W24

ALUMINUM & COPPER
PRIMER – DTM WASH PRIMER, B71Y1
TOPCOAT – 2 COATS COROTHANE II POLYURETHANE B65W200/B60V2

CONCRETE MASONRY
PRIMER – PRO MAR EXTERIOR BLOCK FILLER
TOPCOAT – 2 COATS A-100 LATEX HOUSE & TRIM, SHEEN TO MATCH

CONCRETE STUCCO(EXISTING)
2 COATS A-100 LATEX HOUSE & TRIM, SHEEN TO MATCH

STUCCO
PRIMER – PRO MAR MASONRY CONDITONER B-46-W21000
TOPCOAT – SUPERPAINT A-80 SERIES A-89 SATIN A-84 GLOSS

WOOD
PRIMER – A-100 EXTERIOR ALKYD WOOD PRIMER Y-24W20
TOPCOAT – 2 COATS A-100 LATEX HOUSE & TRIM SHEEN TO MATCH ADJACENT SURFACES

GLU-LAM BEAMS
PRIMER – A-100 EXTERIOR ALKYD WOOD PRIMER Y-24W20
TWO COATS SHOP APPLIED PER GLU-LAM MANUFACTURER'S SPECIFICATIONS
TOPCOAT – SUPERPAINT A-80 SERIES A-89 SATIN A-84 GLOSS
TWO COATS SHOP OR FIELD APPLIED AT CONTRACTOR'S OPTION

FIELD CUTS/DAMAGE(PRIOR TO PRIME & PAINT)
FIRST & SECOND COAT – CUPRINOL CLEAR WOOD PRESERVATIVE #158-0368
ALL PENETRATIONS INTO FINISHED GLU-LAMS SHALL BE CAULKED WITH "SIKAFLEX" SEALANT

STEEL TOUCH UP
STEEL THAT HAS BEEN WELDED, CUT OR SCRATCHED IN THE FIELD SHALL BE TOUCHED UP WITH COLD GALVANIZED PAINT

STRUCTURAL SPECIFICATIONS

A. GENERAL

PRECEDENCE: UNLESS OTHERWISE SHOWN OR SPECIFIED, THE FOLLOWING GENERAL NOTES SHALL APPLY. INFORMATION ON THESE DRAWINGS SHALL HAVE THE FOLLOWING PRECEDENCE.

A. ALL DIMENSIONS TO TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS AND DETAILS.
B. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
C. MATERIAL NOTES AND SPECIFICATIONS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER THE SPECIFICATIONS.

2. OTHER TRADES: SEE THE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN.
3. GENERAL DETAILS AND NOTES ON THESE SHEETS SHALL APPLY UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE. CONSTRUCTION DETAILS NOT FULLY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS.
4. SHORING: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL ALL TEMPORARY BRACING AND SHORING TO INSURE THE SAFETY OF THE WORK UNTIL IT IS IN IT'S COMPLETED FORM. THIS INCLUDES UNDERPINNING EXISTING FOOTINGS WHERE APPLICABLE.
5. SAFETY: THESE STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE INDICATED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION.
6. WATERPROOFING: WATERPROOFING AND DRAINAGE, DETAILS AND SPECIFICATIONS, ALTHOUGH SOMETIMES SHOWN ON STRUCTURAL DRAWING ARE OF GENERAL INFORMATION PURPOSES ONLY. WATERPROOFING AND DRAINAGE ARE SOLELY THE DESIGN RESPONSIBILITY OF THE ARCHITECT.

B. STEEL

1. ALL STRUCTURAL STEEL SECTIONS AND WELDED PLATE MEMBERS SHALL CONFORM TO ASTM A-36 AND BE FABRICATED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE AISC.
2. ALL BOLTS SHALL CONFORM TO ASTM A-307 UNLESS OTHERWISE NOTED ON PLANS. HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM A-325
3. STEEL PIPE COLUMNS SHALL BE GRADE "B" CONFORMING TO ASTM A53.
4. STEEL TUBING SHALL BE GRADE "B" CONFORMING TO ASTM A500.
5. ALL WELDING SHALL BE DONE BY THE SHIELDED ARC METHOD. ALL WELDERS SHALL BE PROPERLY QUALIFIED AND BE PRE-APPROVED. SURPLUS METAL SHALL BE DRESSED OFF TO SMOOTH, EVEN SURFACES WHERE WELDS ARE NOT EXPOSED TO VIEW. ALL WELDING SHALL COMPLY WITH THE LATEST A.W.S. SPECIFICATIONS.
6. THE FOLLOWING WELDING EQUIPMENT MUST BE USED:
   A. 250 AMP WELDERS.
   B. ROD OVENS.
   C. GRINDERS.
7. NO BUZZ BOXES SHALL BE USED.
8. ALL STRUCTURAL STEEL SHALL MILL CERTIFICATION. MILL CERTIFICATION SHALL BE KEPT ON THE JOB SITE FOR EXAMINATION BY THE DESIGN ENGINEER AND THE CITY INSPECTOR.
9. ALL HIGH STRENGTH BOLTS SHALL HAVE MILL CERTIFICATION. MILL CERTIFICATION SHALL BE KEPT ON THE JOB SITE FOR EXAMINATION BY THE INSPECTOR.
10. STEEL THAT HAD BEEN WELDED, CUT OR SCRATCHED IN THE FIELD SHALL BE TOUCHED UP WITH COLD GALVANIZING PAINT.
11. WELDING INDICATED IN THESE DRAWINGS IS DESIGNED FOR ONE HALF OF ALLOWABLE CODE STRESSES UNLESS SPECIFICALL NOTED "FULL STRESS" AT END OF WELD SYMBOL.

C. CONCRETE

1. STRENGTH: CONCRETE FOR THE PROJECT SHALL HAVE THE FOLLOWING ULTIMATE COMPRESSIVE STRENGTH AT AGE OF 28 DAYS:

LOCATION	STRENGTH	WT.	SLUMP	ADMIXTURE
A. SLAB&FOOTING	3000psi	150pcf	4"	NONE

2. INSPECTION: CONCRETE WITH SPECIFIED STRENGTH GREATER THAN 2500psi SHALL BE CONTINUOUSLY INSPECTED DURING PLACEMENT BY A DEPUTY INSPECTOR EMPLOYED BY A TESTING LABORATORY APPROVED BY THE BUILDING DEPT.
3. REBAR GRADES: REINFORCING STEEL SHALL BE CLEAN PREFORMED BARS CONFORMING TO ASTM A615 AS FOLLOWS:
   #4 & SMALLER BARS..................GRADE 40
   #5 & LARGER BARS....................GRADE 60
   ALL BARS AT CAISSON FOOTING...GRADE 60
4. CEMENT: FOUNDATIONS & SLABS: TYPE V, LOW ALKALI, CONFORMING TO ASTM C-150.
   PIER/CAISSON FOOTINGS: TYPE V, LOW ALKALI, CONFORMING TO ASTM C-150.
5. AGGREGATE: USED IN THE CONCRETE SHALL CONFORM TO ASTM C-33. USE ONLY AGGREGATES KNOWN NOT TO CAUSE EXCESSIVE SHRINKAGE. THE MAXIMUM SIZE AGGREGATE IN CONCRETE WORK SHALL BE THE FOLLOWING:
   A. FOUNDATIONS & SLABS 8" OR LESS: 3/4" GRAVEL
   B. PIER/CAISSON FOOTING: 1" GRAVEL
6. WATER: SHALL BE CLEAN AND FREE FROM DELETERIOUS AMOUNT OF ACIDS, ALKALIS, ORGANIC MATERIALS AND SHALL BE SUITABLE FOR HUMAN CONSUMPTION.
7. MIXING: PREPARATION OF CONCRETE SHALL CONFORM TO ASTM C-94. NO MORE THAN 90 MINUTES SHALL ELAPSE BETWEEN CONCRETE BATCHING AND CONCRETE PLACEMENT UNLESS APPROVED BY A TESTING AGENCY.
8. SEGREGATION OF AGGREGATES: CONCRETE SHALL NOT BE FLOPPED THROUGH REINFORCING STEEL (AS IN WALLS, COLUMNS, CAISSON, AND DROP CAPITALS) SO AS TO CAUSE SEGREGATION OF AGGREGATES. USE HOPPERS, CHUTES, TRUNKS OR PUMP HOSE SO THAT THE FREE UNCONFINED FALL OF CONCRETE SHALL NOT EXCEED 5 FT.
9. SPLICES OF REINFORCING STEEL SHALL BE LAPPED A MINIMUM OF [illegible] DIAMETERS AND SECURELY WIRED TOGETHER. SPLICES OF ADJACENT REINFORCING BARS SHALL BE STAGGERED WHEREVER POSSIBLE.
10. REAR CLEARANCE: MINIMUM COVERAGE FOR JOISTS, BEAMS, GIRDERS AND COLUMNS SHALL BE TO FACE OF STIRRUPS OR TIES. UNLESS OTHERWISE NOTED, CONCRETE COVERAGE FOR REINFORCING BARS TO FACE OF BAR SHALL BE AS FOLLOWS:

A. CONCRETE IN CONTACT WITH EARTH, UNFORMED	3"
B. CONCRETE IN CONTACT WITH EARTH, FORMED	2"
C. WALL, EXTERIOR FACE	1-1/2"
D. WALL, INTERIOR FACE	1"
E. STRUCTURAL SLABS	3/4"
F. JOISTS	3/4"
G. BEAMS, GIRDERS & COLUMNS	1-1/2"

11. PENETRATIONS: NO SLEEVES OR CHASES SHALL BE PLACED IN BEAMS, SLABS, WALLS AND COLUMNS, EXCEPT THOSE SHOWN ON THE PLANS. CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATIONS OF ANY ADDITIONAL SLEEVES OR CHASES. ALL PLUMBING, ELECTRICAL AND MECHANICAL OPENINGS SHALL BE SLEEVES. CORING IS NOT ALLOWED UNLESS PRIOR APPROVAL IS OBTAINED FROM THE STRUCTURAL ENGINEER.
12. EMBEDDED ITEMS: CONDUIT PLACED IN A CONCRETE SLAB SHALL NOT HAVE AN OUTSIDE DIAMETER GREATER THAN 1/4 THE THICKNESS OF THE SLAB. CONDUIT SHALL NOT BE EMBEDDED IN A SLAB THAT IS LESS THAN 3-1/2" THICK, UNLESS SLAB IS LOCALLY THICKENED. MINIMUM CLEAR DISTANCE BETWEEN COUNDUITS SHALL BE SIX INCHES.
13. ANCHORING: ALL ANCHOR BOLTS, REINFORCING STEEL, DOWELS, INSERTS, ETC., SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE. NO REPOSITIONING DURING CONCRETE POUR IS ALLOWED.
14. CURING: SLABS SHALL BE SPRAYED WITH A CURING COMPOUND IMMEDIATELY AFTER FINISHING. CURING COMPOUNDS USED ON CONCRETE WHERE TILE OR FLOOR COVERING IS TO BE BONDED TO THE CONCRETE SURFACE SHALL BE APPROVED BY THE TILE OR FLOOR COVERING MANUFACTURER. KEEP SLAB WET FOR 7 DAY MINIMUM PERIOD.
15. CONSOLIDATION: ALL CONCRETE SHALL BE VIBRATED AS IT IS BEING PLACED WITH ELECTRICALLY OPERATED VIBRATING EQUIPMENT.

D. TIMBER

1. ALL FRAMING LUMBER FOR 4X AND LARGER BEAMS SHALL BE NO. 1 GRADE DOUGLAS FIR., S4S. UNLESS NOTED OTHERWISE ON THE DRAWINGS.
2. ALL FRAMING LUMBER FOR 2X RAFTERS AND JOISTS SHALL BE NO.2 GRADE DOUGLAS FIR, S4S, UNLESS NOTED OTHERWISE ON DRAWINGS
3. STRIPPING, BLOCKING, BACKING AND OTHER NON-STRUCTURAL LUMBER SHALL BE NO. 2 OR STD & BTR GRADE DOUGLAS FIR, S4S. 2X4 STUD WALLS SHALL BE D.F. STANDARD & BTR
4. ALL BEAMS, JOISTS AND RAFTERS SHALL BE INSTALLED WITH CROWN SIDE UP.
5. ROOF PLYWOOD SHALL MATCH EXISTING PLYWOOD SHEATHING WITH A SPAN INDEX RATIO 32/16. EDGE NAIL WITH8d AT 6" O.C. UNLESS NOTED OTHERWISE ON PLANS. FGIELD NAIL WITH 8d AT 12" O.C.
6. PLYWOOD SHEETS SHALL BE LAID WITH THE FACE GRAIN PERPENDICULAR TO SUPPORTS AND WITH THE EDGES STAGGERED, UNLESS NOTED OTHERWISE ON THE PLANS.
7. PLYWOOD SHALL BE GRADE MARKED BY DFPA, TECO, OR PTL AND SHALL CONFORM TO PS 1-83.
8. THE MAXIMUM MOISTURE CONTENT OF ALL LUMBER SHALL NOT EXCEED 24% AT THE TIME OF INSTALLATION.
9. MINIMUM NAILING SHALL COMPLY WITH TABLE 23-1-Q OF BUILDING CODE. ALL NAILS SHALL BE COMMON WIRE NAILS.
10. ALL BOLTS SHALL HAVE STANDARD CUT WASHERS UNDER HEADS AND/OR NUTS WHERE IN CONTACT WITH WOOD.
11. LAG BOLTS SHALL BE SCREWED INTO PLACE, NOT DRIVEN. LAG BOLTS SHALL BE INSTALLED IN PRE-DRILLED HOLES WITH A DIAMETER EQUAL TO 75% DIAMETER OF BOLT.
12. CONNECTORS: ALL SHEET METAL FRAMING CONNECTORS SHOWN IN THE PLANS SHALL BE STRONG CONNECTORS AS MANUFACTURED BY THE SAMSON COMPANY. SUBSTITUTIONS MAY BE MADE WHEN APPROVED BY THE STRUCTURAL ENGINEER.
13. ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH MASONRY OR CONCRETE SHALL BE WOLMANIZED PRESSURE TREATED LUMBER OR A NATURALLY DECAY RESISTANT LUMBER SUCH AS REDWOOD OR CEDAR.
14. ALASKAN YELLOW CEDAR GLUE-LAMINATED BEAMS
    A. LUMBER SPECIES: ALASKAN YELLOW CEDAR (A.C.) CONFORMING TO 20F-V12
    B. STRENGTH PROPERTIES:
       Fb BOTTOM FIBER BENDING STRESS 2000psi MIN.
       Fb TOP FIBER BENDING STRESS 1000psi MIN.
       Fv SHEAR STRESS 190psi MIN.
       Fc COMPRESSION STRESS PERPENDICULAR TO GRAIN 560psi MIN.
       E MODULUS ELASTICITY 1400ksi MIN.
    C. CAMBER TO RADIUS OF 1800' U.O.N.
    D. ALL GLB'S SHALL BE FABRICATED WITH EXTERIOR GLUE.
    E. MANUFACTURE OF GLB'S SHALL CONFORM TO THE UBC.
    F. GLU-LAM MATERIAL SHALL BE IN ACCORDANCE WITH ANSI/AITC A190.1 AND ASTM D3737

JRA
Jeffrey Rome & Associates, Inc.
Arizona • California • Nevada

PROPRIETARY INFORMATION — THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AT&T MOBILITY IS STRICTLY PROHIBITED.

REGISTERED ARCHITECT — JEFFREY L. ROME — C-020876 — EXP. 2-28-09 — STATE OF CALIFORNIA

PREPARED FOR
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Pleasanton, California 94588

CROWN CASTLE INTERNATIONAL
shaping the wireless world
510 CASTILLO STREET, SUITE 303
SANTA BARBARA, CALIFORNIA 93101

APPROVALS
R.F.
ZONING
CONSTRUCTION
SITE ACQUISITION
OWNER APPROVAL

PROJECT NAME: AT&T UMTS OVERLAY
SITE NAME: FIREHOUSE LANE
SITE NUMBER: CNU3487
155 FIREHOUSE LANE
SCOTTS VALLEY, CALIFORNIA 95066

DRAWING DATES

04/14/08	90% CD REVIEW (P1-01)
05/08/08	100% CD REVIEW (P1-02)
05/12/08	CROWN CASTLE CMTS (P1-03)
06/04/08	PLANNER COMMENTS (P1-04)

A.P.N: 067-202-64-000

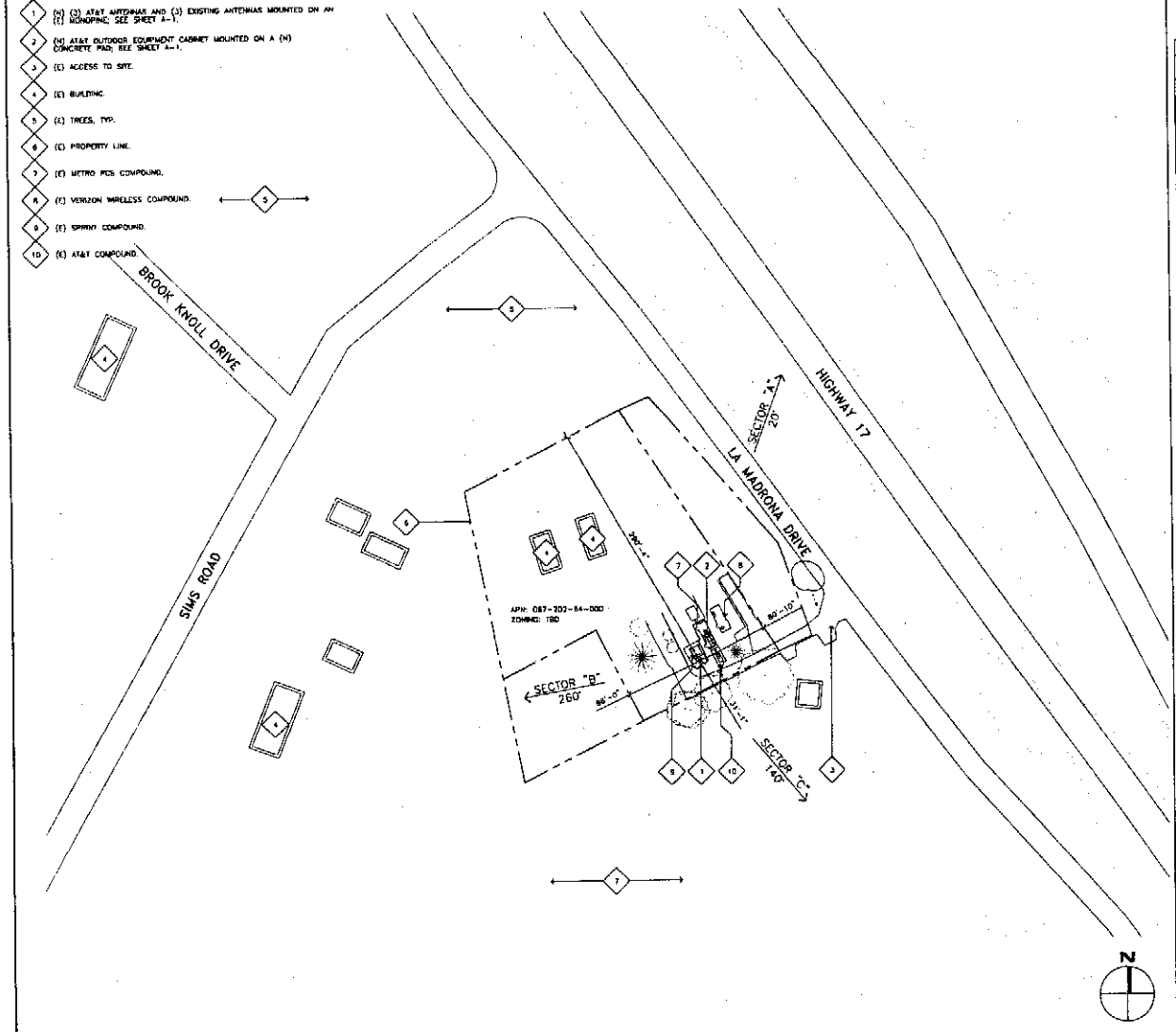
SHEET TITLE: SPECIFICATIONS AND NOTES

T-2

EXHIBIT A

SITE PLAN KEYNOTES

1. (N) (3) AT&T ANTENNAS AND (3) EXISTING ANTENNAS MOUNTED ON AN (E) MONOPINE; SEE SHEET A-1.
2. (N) AT&T OUTDOOR EQUIPMENT CABINET MOUNTED ON A (N) CONCRETE PAD; SEE SHEET A-1.
3. (E) ACCESS TO SITE.
4. (E) BUILDING.
5. (E) TREES, TYP.
6. (E) PROPERTY LINE.
7. (E) METRO PCS COMPOUND.
8. (E) VERIZON WIRELESS COMPOUND.
9. (E) SPRINT COMPOUND.
10. (E) AT&T COMPOUND.



SITE PLAN

SCALE: 1"=60'

0 30' 60'

2

1. CONTRACTOR TO PROVIDE ALL LABOR TO INSTALL COAX, RETS AND ANTENNAS AS SPECIFIED ON SHEETS RF-1 THROUGH RF-5.
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 TRANSMIT GROUP AS FOLLOWS ON ALL COAX MODIFIED OR INSTALLED ONLY.

SECTOR "A"

	RX 1	TX 1	RX 2	TX 2		
TDMA	1 WHITE	1 ORANGE	1 WHITE	1 GREEN		
GSM 1900	TX 1/RX 1	TX 2/RX 2	TX 3/RX 3	TX 4 /RX 4	TX 5	TX 6
	2 BROWN	2 ORANGE	2BRWN/1RED	2ORG/1RED	2BRWN/2RED	2ORG/2RED
GSM 850	TX 1/RX 1	TX 2/RX 2	TX 3/RX 3	TX 4/RX 4	TX 5	TX 6
	3 BROWN	3 ORANGE	3BRWN/1RED	3ORG/1RED	3BRWN/2RED	3ORG/2RED
UMTS 1900	TX 1/RX 1		TX 2/RX 2			
	4 BROWN		4 ORANGE			
UMTS 850	TX 1/RX 1		TX 2/RX 2			
	5 BROWN		5 ORANGE			

SECTOR "B"

	RX 1	TX 1	RX 2	TX 2		
TDMA	1 RED	1 ORANGE	1 RED	1 GREEN		
GSM 1900	TX 1/RX 1	TX 2/RX 3	TX 3/RX 3	TX 4/RX 4	TX 5	TX 6
	2 YELLOW	2 BLUE	2YEL/1RED	2BLUE/1RED	2YEL/2RED	2BLUE/2RED
GSM 850	TX 1/RX 1	TX 2/RX 2	TX 3/RX 3	TX 4/RX 4	TX 5	TX 6
	3 YELLOW	3 BLUE	3YEL/1RED	3BLUE/1RED	3YEL/2RED	3BLUE/2RED
UMTS 1900	TX 1/RX 1		TX 2/RX 2			
	4 YELLOW		4 BLUE			
UMTS 850	TX 1/RX 1		TX 2/RX 3			
	5 YELLOW		5 BLUE			

SECTOR "C"

	RX 1	TX 1	RX 2	TX 2		
TDMA	1 YELLOW	1 ORANGE	1 YELLOW	1 GREEN		
GSM 1900	TX 1/RX 1	TX 2/RX 2	TX 3/RX 3	TX 4	TX 5	TX 6
	2 VIOLET	2 WHITE	2VIO/1RED	2WHT/1RED	2VIO/2RED	2WHT/2RED
GSM 850	TX 1/RX 1	TX 2/RX 2	TX 2/RX 2	TX 4	TX 5	TX 6
	3 VIOLET	3 WHITE	3VIO/1RED	3WHT/1RED	3VIO/2RED	3WHT/2RED
UMTS 1900	TX 1/RX 1		TX 2/RX 2			
	4 VIOLET		4 WHITE			
UMTS 850	TX 1/RX 1		TX 2/RX 2			
	5 VIOLET		5 WHITE			

4. WHEN ANTENNA LINES ARE DIPLEXED, THE COLOR CODE OF THE HIGHEST FREQUENCY PREVAILS (I.E. UMTS DIPLEXED WITH TDMA 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 = ±5°; 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 36" 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 IMC 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 UNISTRUT 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 190'-0". MAXIMUM LENGTH OF 1-5/8" COAX CABLE SHALL BE 235'-0".
14. VERIFY MODEL NUMBERS OF ANTENNAS WITH ERICSSON INC. SCHACES.
15. THE CONTRACTOR SHALL PROVIDE TESTING OF ANTENNAS AND SHALL PROVIDE DOCUMENTATION TO THE ERICSSON INC. PROJECT MANAGER.
16. GENERAL CONTRACTOR TO VERIFY ALL TORQUE TOLERANCES PER THE MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS.

GENERAL ANTENNA & CABLE NOTES

1

JRA

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APPROVALS

R.F.

ZONING

CONSTRUCTION

SITE ACQUISITION

OWNER APPROVAL

PROJECT NAME
AT&T UMTS OVERLAY

SITE NAME
FIREHOUSE LANE

SITE NUMBER
CNU3487

155 FIREHOUSE LANE
SCOTTS VALLEY, CALIFORNIA 95060

DRAWING DATES

04/14/08	90% CD REVIEW (P1-B1)
05/06/08	100% CD REVIEW (P1-B2)
05/12/08	CROWN CASTLE CMTS (P1-B3)
06/04/08	PLANNER COMMENTS (P1-B4)

A.P.N: 067-202-54-000

SHEET TITLE
SITE PLAN

A-0

JRA PROJECT NUMBER: 081019

- 10 -

EXHIBIT A

ENLARGED SITE PLAN KEYNOTES

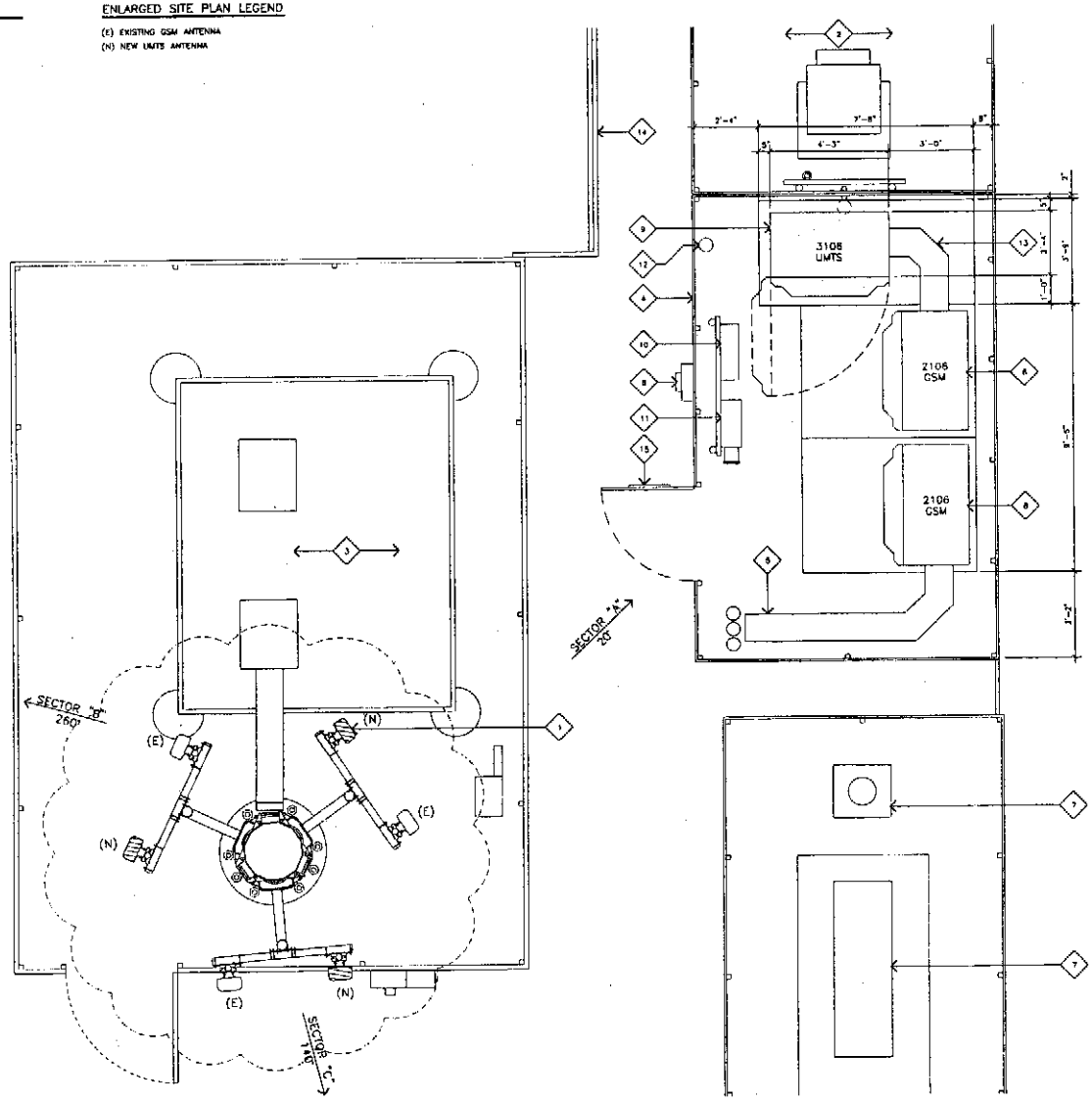
1. (N) (3) AT&T 101.8" x 10.3" x 5.5" ANTENNAS AND (E) (3) ANTENNAS. TOTAL ANTENNAS AFTER MODIFICATIONS (N): SEE DETAIL 3/A-4. PAINT TO MATCH (E) ANTENNAS.
2. (E) METRO PCS COMPOUND.
3. (E) SPRINT COMPOUND.
4. (E) AT&T 6'-0" HIGH WOOD FENCE ENCLOSURE.
5. (E) AT&T CABLE TRAY WITH (E) AND (N) COAX.
6. (E) ELECTRICAL PANEL.
7. (E) AT&T MONOPOLE AND EQUIPMENT COMPOUND.
8. (E) AT&T EQUIPMENT CABINETS MOUNTED ON AN (E) CONCRETE PAD.
9. (N) 3106 UMTS CABINET. ANCHOR TO (N) SLAB PER DETAIL 6/A-3. PROVIDE ADDITIONAL 6" CONCRETE PAD AS REQUIRED: SEE DETAIL 1/A-4.1.
10. (E) AT&T TELCO CABINET. INSTALL (N) 2" FLEX CONDUIT TO (N) UMTS CABINET. RUN TELCO CONDUIT AS REQUIRED.
11. (E) AT&T UTS & ELECTRICAL PANEL. INSTALL (N) 2 POLE 30 AMP BREAKER IN PANEL. RUN (N) CONDUIT TO (N) UMTS CABINET.
12. (E) FIRE EXTINGUISHER TO BE RELOCATED.
13. (N) AT&T CABLE TRAY TO MATCH (E).
14. (E) RETAINING WALL.
15. (N) AT&T SIGNAGE MOUNTED ON EXISTING ACCESS GATE. SIGNAGE TO BE IN COMPLIANCE WITH COUNTY CODE 13.10.682 (10) TO ENSURE BILINGUAL WARNING SIGNS, EMERGENCY SHUTOFF SWITCHES, ETC.

ENLARGED SITE PLAN GENERAL NOTES

A. (E) ANTENNAS ABOVE AND BELOW NOT SHOWN FOR CLARITY.

ENLARGED SITE PLAN LEGEND

(E) EXISTING GSM ANTENNA
(N) NEW UMTS ANTENNA



ENLARGED SITE PLAN

SCALE: 1/2"=1'-0" | 0 1' 2' | 1

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APPROVALS
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ZONING
CONSTRUCTION
SITE ACQUISITION
OWNER APPROVAL

PROJECT NAME
AT&T UMTS OVERLAY
SITE NAME
FIREHOUSE LANE
SITE NUMBER
CNU3487
155 FIREHOUSE LANE
SCOTTS VALLEY, CALIFORNIA 95066

DRAWING DATES
04/14/08 90% CD REVIEW (P1-B1)
05/06/08 100% CD REVIEW (P1-B2)
05/13/08 CROWN CASTLE DATA (P1-B3)
06/04/08 PLANNER COMMENTS (P1-B4)

A.P.N: 067-202-64-000

SHEET TITLE
ENLARGED SITE PLAN

A-1

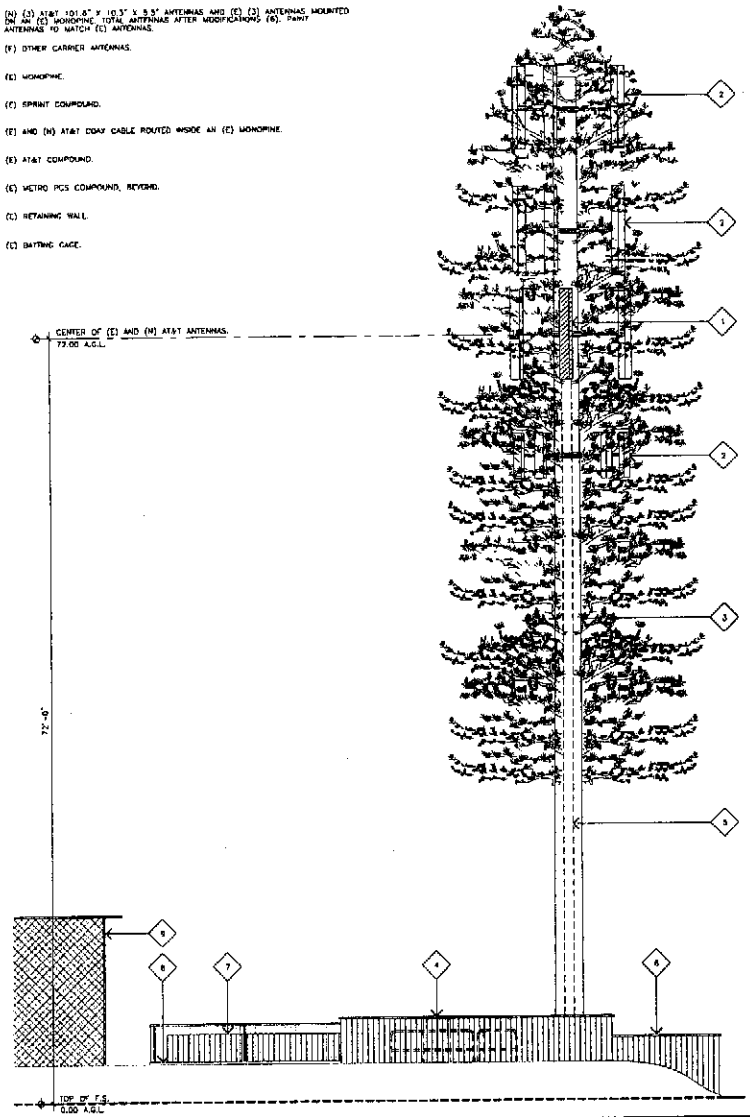
JRA PROJECT NUMBER: 381019

EXHIBIT A

EXHIBIT A

ELEVATION KEYNOTES

1. (N) (3) AT&T 101.6" X 10.3" X 5.5" ANTENNAS AND (E) (3) ANTENNAS MOUNTED ON AN (E) MONOPINE. TOTAL ANTENNAS AFTER MODIFICATIONS (6). PAINT ANTENNAS TO MATCH (E) ANTENNAS.
2. (E) OTHER CARRIER ANTENNAS.
3. (E) MONOPINE.
4. (E) SPRINT COMPOUND.
5. (E) AND (N) AT&T COAX CABLE ROUTED INSIDE AN (E) MONOPINE.
6. (E) AT&T COMPOUND.
7. (E) METRO PCS COMPOUND, BEYOND.
8. (E) RETAINING WALL.
9. (E) BATTING CAGE.



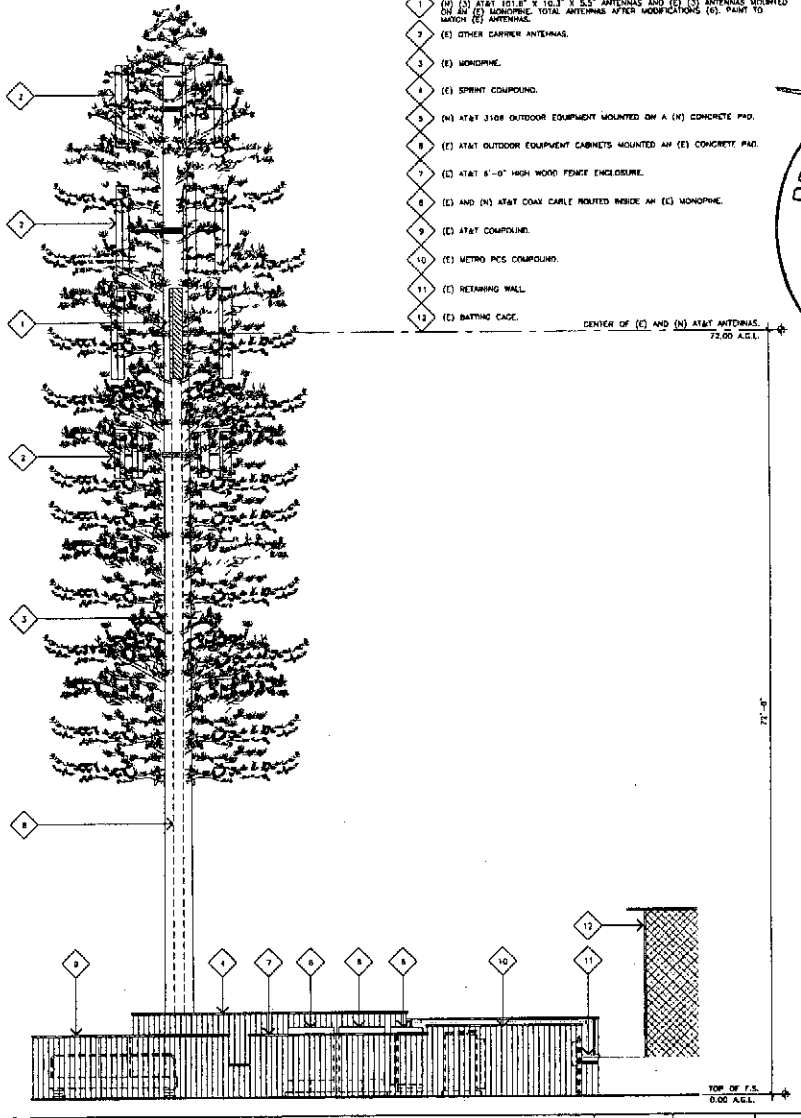
WEST ELEVATION

SCALE: 3/16"=1'-0" 0 3' 6'

2

ELEVATION KEYNOTES

1. (N) (3) AT&T 101.6" X 10.3" X 5.5" ANTENNAS AND (E) (3) ANTENNAS MOUNTED ON AN (E) MONOPINE. TOTAL ANTENNAS AFTER MODIFICATIONS (6). PAINT TO MATCH (E) ANTENNAS.
2. (E) OTHER CARRIER ANTENNAS.
3. (E) MONOPINE.
4. (E) SPRINT COMPOUND.
5. (N) AT&T 3108 OUTDOOR EQUIPMENT MOUNTED ON A (N) CONCRETE PAD.
6. (E) AT&T OUTDOOR EQUIPMENT CABINETS MOUNTED ON (E) CONCRETE PAD.
7. (E) AT&T 6'-0" HIGH WOOD FENCE ENCLOSURE.
8. (E) AND (N) AT&T COAX CABLE ROUTED INSIDE AN (E) MONOPINE.
9. (E) AT&T COMPOUND.
10. (E) METRO PCS COMPOUND.
11. (E) RETAINING WALL.
12. (E) BATTING CAGE.



EAST ELEVATION

SCALE: 3/16"=1'-0" 0 3' 6'

1

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APPROVALS

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CONSTRUCTION

SITE ACQUISITION

OWNER APPROVAL

PROJECT NAME
AT&T UMTS OVERLAY
SITE NAME
FIREHOUSE LANE
SITE NUMBER
CNU3487
155 FIREHOUSE LANE
SCOTTS VALLEY, CALIFORNIA 95060

DRAWING DATES

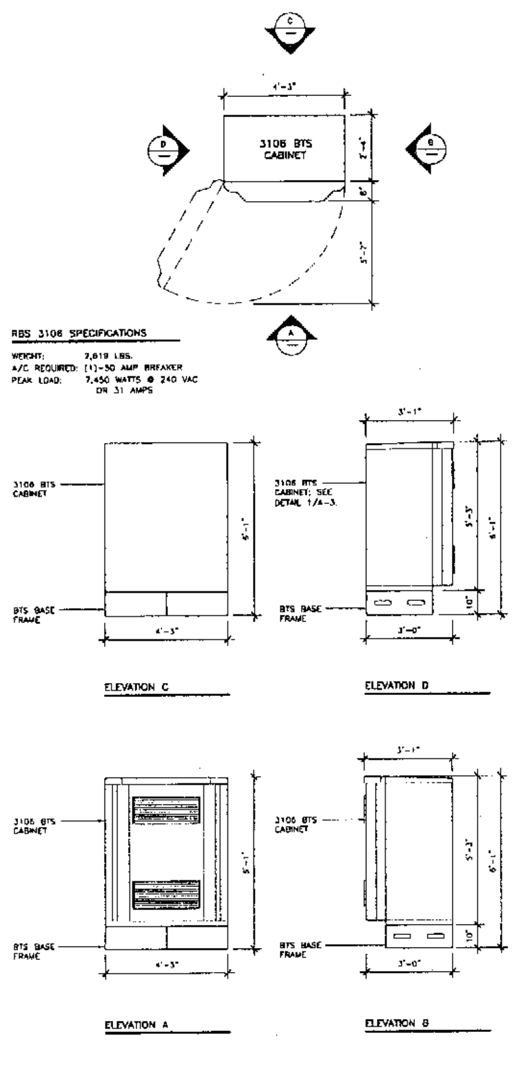
04/14/08	90% CD REVIEW (P1-B1)
05/06/08	100% CD REVIEW (P1-B2)
05/12/08	CROWN CASTLE CUTS (P1-B3)
08/04/08	PLANNER COMMENTS (P1-B4)

A.P.N: 067-202-64-000

SHEET TITLE
EAST AND WEST ELEVATIONS

A-2

JRA PROJECT NUMBER: 06.0813

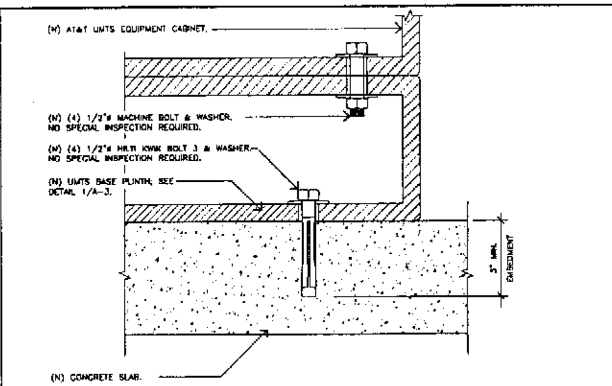


RBS 3106 SPECIFICATIONS

WEIGHT: 2,619 LBS.
A/C REQUIRED: (1)-50 AMP BREAKER
PEAK LOAD: 7,450 WATTS @ 240 VAC OR 31 AMPS

ANCHOR BTS TO (E) CONCRETE SLAB PER DETAIL 3/A-3.

RBS 3106 OUTDOOR CABINET — SCALE: NONE — 4

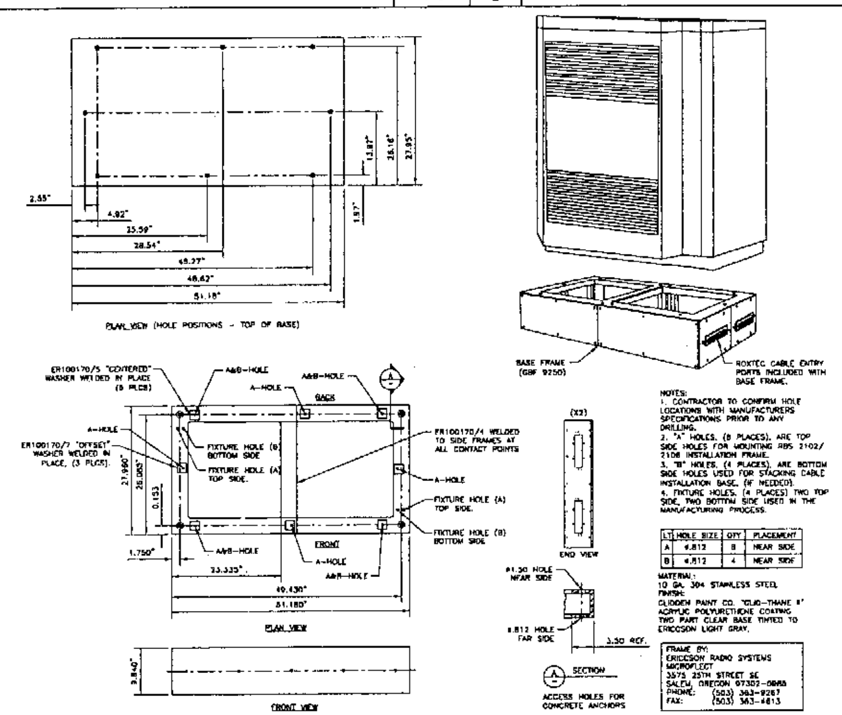


EQUIPMENT ANCHORAGE — SCALE: NONE — 3

EQUIPMENT FLOOR PLAN GENERAL NOTES

- (A) CONTRACTOR TO PROVIDE ALL COAX CABLE AND JUMPERS WHERE REQUIRED AND CONNECT TO (N) UMTS CABINET.
- (B) CONTRACTOR TO RUN ALL CABLES AND LINES IN (E) CABLE TRAY. (C) 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 IN SLAB.
- (E) AT&T TO ORDER AND TEST ALL (N) T-1'S, RF TO DETERMINE HOW MANY (N) T-1'S REQUIRED. CONTRACTOR TO PULL (N) T-1'S FROM (E) OMARC TO OSX PANEL.
- (F) CONTRACTOR TO CONNECT TO (N) UMTS 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 UMTS CABINET ARE SHOWN DIAGRAMATICALLY. CONTRACTOR TO RUN LINES IN CABLE LADDER NOT SHOWN FOR CLARITY.

GENERAL NOTES — SCALE: NONE — 2



NOTES:
1. CONTRACTOR TO CONFIRM HOLE LOCATIONS WITH MANUFACTURERS SPECIFICATIONS PRIOR TO ANY DRILLING.
2. "A" HOLES, (8 PLACES), ARE TOP SIDE HOLES FOR MOUNTING RBS 2102/2106 INSTALLATION FRAME.
3. "B" HOLES, (4 PLACES), ARE BOTTOM SIDE HOLES USED FOR STACKING CABLE INSTALLATION BASE. (IF NEEDED).
4. FIXTURE HOLES, (4 PLACES) TWO TOP SIDE, TWO BOTTOM SIDE USED IN THE MANUFACTURING PROCESS.

LT	HOLE SIZE	QTY	PLACEMENT
A	ø.812	8	NEAR SIDE
B	ø.812	4	NEAR SIDE

MATERIAL:
10 GA. 304 STAINLESS STEEL
FINISH:
GLIDDEN PAINT CO. "GLID-THANE II" ACRYLIC POLYURETHONE COATING TWO PART CLEAR BASE TINTED TO ERICSSON LIGHT GRAY.

FRAME BY:
ERICSSON RADIO SYSTEMS
MICROFLECT
3575 25TH STREET SE
SALEM, OREGON 97302-0885
PHONE: (503) 363-9267
FAX: (503) 363-4613

BTS BASE FRAME — SCALE: NONE — 1

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STATE OF CALIFORNIA

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APPROVALS
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ZONING
CONSTRUCTION
SITE ACQUISITION
OWNER APPROVAL

PROJECT NAME
AT&T UMTS OVERLAY
SITE NAME
FIREHOUSE LANE
SITE NUMBER
CNU3487
155 FIREHOUSE LANE
SCOTTS VALLEY, CALIFORNIA 95060

DRAWING DATES
04/14/08 90% CD REVIEW (P1-B1)
05/08/08 100% CD REVIEW (P1-B2)
05/12/08 CROWN CASTLE CMTS (P1-B3)
06/04/08 PLANNER COMMENTS (P1-B4)

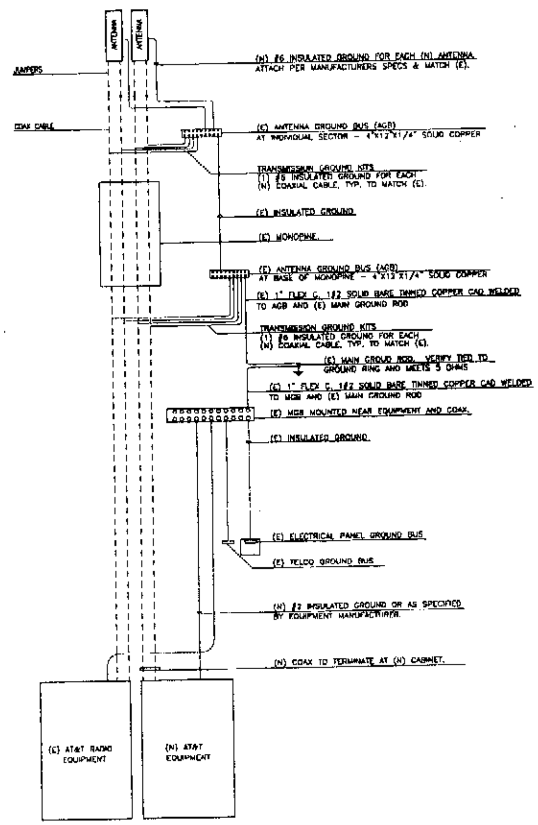
A.P.N: 067-202-64-000

SHEET TITLE
EQUIPMENT DETAILS

A-3

JRA PROJECT NUMBER: 081019

EXHIBIT A



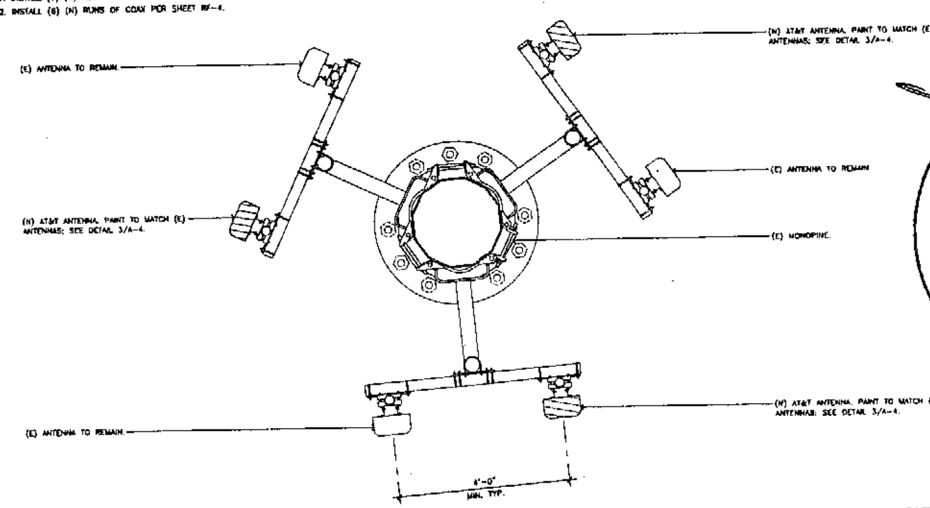
GENERAL NOTES:

1. SPLICE GROUND CONNECTIONS.
2. FOLLOW COAXIAL CABLE MANUFACTURES RECOMMENDATIONS (TYPICAL)
3. ALL INSULATED GROUND WIRES TO BE STRANDED, AND WIRE UNLESS NOTED OTHERWISE.
4. THIS IS TYPICAL FOR ONE SECTOR OF ANTENNAS. SEE PLANS FOR NUMBER OF SECTORS.

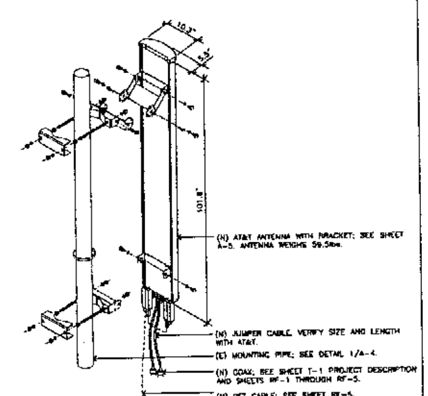
COAX & GROUNDING SYSTEM SCHEMATIC — SCALE: NONE — 4

NOTES:

1. INSTALL (1) (N) RET CABLE PER SHEET RF-5.
2. INSTALL (6) (N) RUNS OF COAX PER SHEET RF-4.



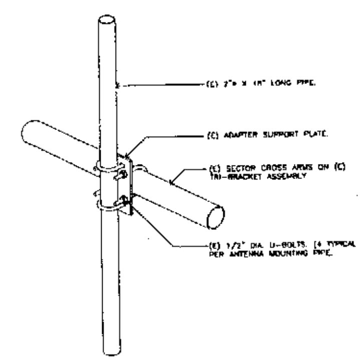
ANTENNA PLAN — SCALE: NONE — 2



NOTES:

1. SEE ANTENNA MANUFACTURER SPECS. FOR COMPLETE ANTENNA AND BRACKET SPECIFICATIONS.

ANTENNA MOUNT — SCALE: NONE — 3



ANTENNA MOUNTING PIPE (TYP.) — SCALE: NONE — 1

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APPROVALS
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CONSTRUCTION
SITE ACQUISITION
OWNER APPROVAL

PROJECT NAME
AT&T UMTS OVERLAY
SITE NAME
FIREHOUSE LANE
SITE NUMBER
CNU3487
155 FIREHOUSE LANE
SCOTTS VALLEY, CALIFORNIA 95066

DRAWING DATES
04/14/08 90% CD REVIEW (P1-01)
05/08/08 100% CD REVIEW (P1-02)
05/12/08 CROWN CASTLE CMTS (P1-03)
06/04/08 PLANNER COMMENTS (P1-04)

A.P.N: 067-202-64-000

SHEET TITLE
ANTENNA DETAILS

A-4

EXHIBIT

NOT USED	SCALE: NONE	5
NOT USED	SCALE: NONE	4
NOT USED	SCALE: NONE	3

STANDARD CONCRETE NOTES.

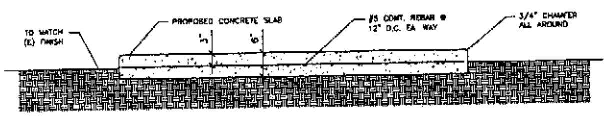
1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301-88, ACI 318-95 AND THE SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES CLASS "B" AND ALL HOOKS SHALL BE STANDARD UNLESS NOTED OTHERWISE.
3. 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.

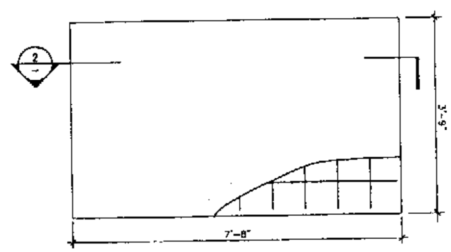
4. A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE U.N.O. IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
5. HOLES TO RECEIVE EXPANSION/WEDGE ANCHORS SHALL BE 1/8" LARGER IN DIAMETER THAN THE ANCHOR BOLT, DOWEL OR ROD AND SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. LOCATE AND AVOID CUTTING EXISTING REBAR WHEN DRILLING HOLES IN ELEVATED CONCRETE SLABS.
6. USE AND INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER ICBO & MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURES.



CONCRETE PAD PLAN	SCALE: N.T.S.	2

NOTES:

1. SLAB TO BE LEVEL ±1/4" AND FLOAT SURFACE.
2. FINAL SITE DESIGN IS THE RESPONSIBILITY OF THE SITE CONTRACTOR.
3. CONCRETE STRENGTH SHALL BE A MINIMUM OF 4,000 PSI. BUT MIN. COMPRESSIVE STRENGTH 2,500 PSI WITH NO SPECIAL INSPECTION.
4. VERIFY (E) SOIL COMPACTION. PROVIDE NON-ORGANIC FILL AS REQUIRED TO BRING SITE UP TO 90% COMPACTION.
5. CHAMFER ALL EXPOSED CONCRETE EDGES 3/4".



CONCRETE PAD PLAN	SCALE: N.T.S.	1

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APPROVALS
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SITE ACQUISITION
OWNER APPROVAL

PROJECT NAME
AT&T UMTS OVERLAY
SITE NAME
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SITE NUMBER
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155 FIREHOUSE LANE
SCOTTS VALLEY, CALIFORNIA 95060

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08/04/08 PLANNER COMMENTS (P1-B4)

A.P.N: 067-202-64-000

SHEET TITLE
CONCRETE PAD DETAIL

A-4.1

JRA PROJECT NUMBER: 361019

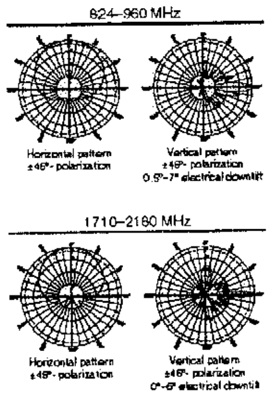
EXHIBIT A

KATHREIN
SCALA DIVISION

742 266
65° Dualband Directional Antenna

Kathrein's dual band antennas are ready for 3G applications, covering all existing wireless bands as well as all spectrum under consideration for future systems, AMPS, PCS and 3G/UMTS. These cross-polarized antennas offer diversity operation in the same space as a conventional 800 MHz antenna, and are mountable on our compact sector brackets.

- Wide band operation.
- Exceptional intermodulation characteristics.
- Remote control ready.
- Various gain, beamwidth and downtilt ranges.
- AISG compatible.
- High strength pultruded fiberglass radome.



General specifications:

Frequency range	824–960 MHz 1710–2180 MHz
VSWR	<1.5:1
Impedance	50 ohms
Intermodulation (2x20w)	IM3: <-150dBc
Polarization	+45° and -45°
Connector	4 x 7-16 DIN female (long neck)
Isolation intrasystem intersystem	>30 dB >50 dB (824–960 // 1710–2180 MHz)
Weight	59.5 lb (27 kg)
Dimensions	99.1 x 10.3 x 5.5 inches (2516 x 262 x 139 mm)
Equivalent flat plate area	8.27 ft² (0.768 m²)
Wind survival rating*	120 mph (200 kph)
Shipping dimensions	110.8 x 11.9 x 7.6 inches (2815 x 302 x 192 mm)
Shipping weight	76 lb (34 kg)
Mounting	Fixed and tilt mount options are available for 2 to 4.6 inch (60 to 116 mm) OD masts.

See reverse for order information.

Specifications:	824–894 MHz	880–960 MHz	1710–1880 MHz	1850–1990 MHz	1900–2180 MHz
Gain	16.5 dBi	17 dBi	17.8 dBi	18.2 dBi	18.3 dBi
Front-to-back ratio	>28 dB (co-polar)	>28 dB (co-polar)	>25 dB (co-polar)	>25 dB (co-polar)	>26 dB (co-polar)
Maximum input power per input total power	500 watts (at 50°C) 1000 watts (at 50°C)	500 watts (at 50°C)	250 watts (at 50°C)	250 watts (at 50°C) 500 watts (at 50°C)	250 watts (at 50°C)
+45° and -45° polarization horizontal beamwidth	68° (half-power)	65° (half-power)	67° (half-power)	66° (half-power)	62° (half-power)
+45° and -45° polarization vertical beamwidth	7.3° (half-power)	7° (half-power)	5.2° (half-power)	5° (half-power)	4.7° (half-power)
Electrical downtilt continuously adjustable	0.5°–7°	0.5°–7°	0°–6°	0°–6°	0°–6°
Sidelobe suppression for first sidelobe above horizon	0.5° 4° 7° T 14 14 14 dB	0.5° 4° 7° T 16 16 16 dB	0° 3° 6° T 13 13 13 dB	0° 3° 6° T 16 16 14 dB	0° 3° 6° T 15 15 15 dB
Cross polar ratio Main direction 0° Sector ±60°	20 dB (typical) >10 dB	20 dB (typical) >10 dB	17 dB (typical) >10 dB	18 dB (typical) >10 dB	18 dB (typical) >10 dB

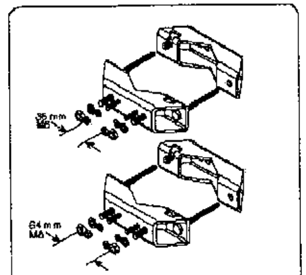
*Mechanical design is based on environmental conditions as stipulated in EIA-222-F (June 1996) and/or ETS 300019-1-4 which include the static mechanical load imposed on an antenna by wind at maximum velocity. See the Engineering Section of the catalog for further details.

RoHS
10635-J
936.3219/a

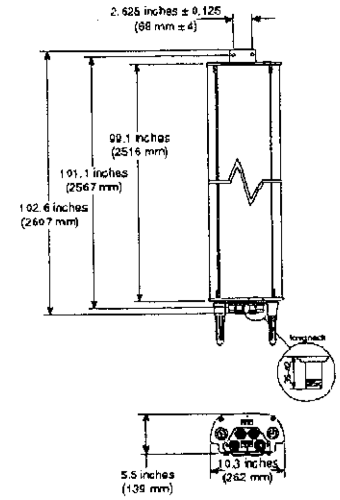
Kathrein Inc., Scala Division Post Office Box 4580 Medford, OR 97501 (USA) Phone: (541) 779-6500 Fax: (541) 779-3991
Email: communications@kathrein.com Internet: www.kathrein-scala.com

KATHREIN
SCALA DIVISION

742 266
65° Dualband Directional Antenna

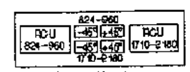


2 x 738 546 Mounting Kit



Mounting Options:

Model	Description
2 x 738 546	Mounting Kit for 2 to 4.6 inch (60 to 116 mm) OD mast.
742 033	Three-panel Sector Mounting Kit (120 deg. sep.) for 4.5 inch (114.3 mm mm) OD steel mast.
742 034	Three-panel Sector Mounting Kit (120 deg. sep.) for 5.5 inch (139.7 mm mm) OD steel mast.
850 10013	Tilt Mount Kit 0–8 Degrees downtilt angle.



Layout of interface

Order Information:

Model	Description
742 266	Antenna with 7/16 DIN connectors

All specifications are subject to change without notice. The latest specifications are available at www.kathrein-scala.com.

Kathrein Inc., Scala Division Post Office Box 4580 Medford, OR 97501 (USA) Phone: (541) 779-6500 Fax: (541) 779-3991
Email: communications@kathrein.com Internet: www.kathrein-scala.com

ANTENNA SPECS

1

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California: (949) 760-3839
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C-020876
EXP. 2.28.09
STATE OF CALIFORNIA

PREPARED FOR
at&t
2730 Rosewood Drive
Pleasanton, California 94588

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510 CASTILLO STREET, SUITE 303
SANTA BARBARA, CALIFORNIA 93101

APPROVALS
R.F.
ZONING
CONSTRUCTION
SITE ACQUISITION
OWNER APPROVAL

PROJECT NAME
AT&T UMTS OVERLAY
SITE NAME
FIREHOUSE LANE
SITE NUMBER
CNU3487
155 FIREHOUSE LANE
SCOTTS VALLEY, CALIFORNIA 95066

DRAWING DATES
04/14/08 90% CD REVIEW (P1-B1)
05/08/08 100% CD REVIEW (P1-B2)
05/12/08 CROWN CASTLE CMTS (P1-B3)
08/04/08 PLANNER COMMENTS (P1-B4)

A.P.N: 067-202-64-000

SHEET TITLE
ANTENNA SPECS

A-5

JRA PROJECT NUMBER: 08-315

EXHIBIT A

Cingular RF-Site Design Form

* Market	SAN FRANCISCO	Date	February 19, 2008
* Site Name	17 & FIREWOOD LN	Revision Level	3.2
* Market Type	Dual Band 850/1900 MHz	RF Engineer	Kamtorn Ausavapattanakun
* UMTS Site ID	CNU3487	Contact Number	925 227 3198
* GSM Site ID	SF1423	Company	A T & T
* USID	24223	Completion Date	
* Structure Type	MONOPINE	* Source of Existing Configuration Data	1423_v1.1 and Redline RFDS
* Shelter Type		* Project Type	Ericsson UMTS Overlay
* Latitude (decimal) NAD83	37.01520	* Technology	UMTS
* Longitude (decimal) NAD83	-122.02680	* Frequency Band	850
* Street Address	155 Fire House Lane	Approved By	Sinan Akkaya
* County	Santa Cruz		
* City	Scotts Valley * State		
* Zip Code	95066		

EXISTING Configuration		PLANNED Configuration	
BTS #1		BTS #1	
* BTS Vendor		BTS Vendor	Ericsson
* BTS Technology		BTS Technology	UMTS
* Frequency Band		Frequency Band	850
* BTS Model		BTS Model	3106 Outdoor
* Number of Cabinets		Number of Cabinets	1
* Number of Sectors		Number of Sectors	3
BTS #2		BTS #2	
* BTS Vendor	Ericsson	BTS Vendor	Ericsson
* BTS Technology	GSM	BTS Technology	GSM
* Frequency Band	850	Frequency Band	850
* BTS Model	2106	BTS Model	2106
* Number of Cabinets	1	Number of Cabinets	1
* Number of Sectors	3	Number of Sectors	3
BTS #3		BTS #3	
* BTS Vendor	Ericsson	BTS Vendor	Ericsson
* BTS Technology	GSM	BTS Technology	GSM
* Frequency Band	1900	Frequency Band	1900
* BTS Model	2106	BTS Model	2106
* Number of Cabinets	1	Number of Cabinets	1
* Number of Sectors	3	Number of Sectors	3

EXISTING Configuration	Sector A	Sector B	Sector C	PLANNED Configuration	Sector A	Sector B	Sector C
BAND				BAND			
* Manufacturer				Manufacturer			
* Part Number				Part Number			
* Amplifier Count				Amplifier Count			
BAND				BAND			
* Manufacturer				Manufacturer			
* Part Number				Part Number			
* Amplifier Count				Amplifier Count			

Antenna System

Antenna Type 1 (Existing)	Sector A	Sector B	Sector C	Antenna Type 1 UMTS	Sector A	Sector B	Sector C
* Radiation Height				Radiation Height	70 ft	70 ft	70 ft
* Azimuth				Azimuth	20°	260°	140°
* Antenna Model				Antenna Model	742-266 AP16/18-880/1940/065D/AD T/XXP	742-266 AP16/18-880/1940/065D/AD T/XXP	742-266 AP16/18-880/1940/065D/AD T/XXP
* Quantity				Quantity	1	1	1
* Type				Type	DBDP	DBDP	DBDP
* Manufacturer				Manufacturer	Kathrein	Kathrein	Kathrein
* Dimensions				Dimensions	101.6 x 10.3 x 5.5	101.6 x 10.3 x 5.5	101.6 x 10.3 x 5.5
* Horizontal Beamwidth				Horizontal Beamwidth	65°	65°	65°
* Vertical Beamwidth				Vertical Beamwidth	7.3/5	7.3/5	7.3/5
* Gain				Gain	17/18.5	17/18.5	17/18.5
* 850 ports				850 Ports	2	2	2
* 1900 ports				1900 Ports	2	2	2
* 850/1900 ports				850/1900 Ports	0	0	0
850 Downtilt Elec.				850 Downtilt Elec.	TBD	TBD	TBD
1900 Downtilt Elec.				1900 Downtilt Elec.	TBD	TBD	TBD
850/1900 downtilt Elec.				850/1900 downtilt Elec.			
* Downtilt (Mechanical)				Downtilt (Mechanical)	TBD	TBD	TBD
* Mast Head Amplifier				* Mast Head Amplifier	None	None	None
* MHA Bandwidth				* MHA Bandwidth			
# of MHAs				# of MHAs			
MHA Vendor/Model				MHA Vendor/Model			
# of BIAS-T				# of BIAS-T			
Bias-T Vendor/Model				Bias-T Vendor/Model			
# of PDU				# of PDU			
PDU Vendor/Model				PDU Vendor/Model			
# of RET				# of RET	2	2	2
RET Vendor/Model				RET Vendor/Model	Kathrein 860-10025	Kathrein 860-10025	Kathrein 860-10025
# of RCS-splitters(RET)				# of RCS-splitters(RET)	0	0	0
# of RC Top Jumpers				# of RC Top Jumpers	1	2	2
# of RC Bottom Jumpers				# of RC Bottom Jumpers	0	0	0
# of RC Feeder Cables				# of RC Feeder Cables	1	0	0
RC Feeder Cable Model				RC Feeder Cable Model	860.100xx	860.100xx	860.100xx
# of CCU's (RET) / Model				# of CCU's (RET) / Model		1/860-10006	

Antenna Type 2 GSM (Existing)	Sector A	Sector B	Sector C	Antenna Type 2 GSM	Sector A	Sector B	Sector C
* Radiation Height	70 ft	70 ft	70 ft	Radiation Height	70 ft	70 ft	70 ft
* Azimuth	20°	260°	140°	Azimuth	20°	260°	140°
* Antenna Model	742-266 AP16/18-880/1940/065D/AD T/XXP	742-266 AP16/18-880/1940/065D/ADT/XXP	742-266 AP16/18-880/1940/065D/AD T/XXP	Antenna Model	742-266 AP16/18-880/1940/065D/AD T/XXP	742-266 AP16/18-880/1940/065D/AD T/XXP	742-266 AP16/18-880/1940/065D/AD T/XXP
* Quantity	1	1	1	Quantity	1	1	1
* Type	DBDP	DBDP	DBDP	Type	DBDP	DBDP	DBDP
* Manufacturer	Kathrein	Kathrein	Kathrein	Manufacturer	Kathrein	Kathrein	Kathrein
* Dimensions	101.6 x 10.3 x 5.5	101.6 x 10.3 x 5.5	101.6 x 10.3 x 5.5	Dimensions	101.6 x 10.3 x 5.5	101.6 x 10.3 x 5.5	101.6 x 10.3 x 5.5
* Horizontal Beamwidth	65°	65°	65°	Horizontal Beamwidth	65°	65°	65°
* Vertical Beamwidth	7.3/5	7.3/5	7.3/5	Vertical Beamwidth	7.3/5	7.3/5	7.3/5
* Gain	17/18.5	17/18.5	17/18.5	Gain	17/18.5	17/18.5	17/18.5
* 850 ports	2	2	2	850 Ports	2	2	2
* 1900 ports	2	2	2	1900 Ports	2	2	2
* 850/1900 ports	0	0	0	850/1900 Ports	0	0	0
850 Downtilt Elec.	4	4	4	850 Downtilt Elec.	4°	4°	4°
1900 Downtilt Elec.	2	2	2	1900 Downtilt Elec.	2°	2°	2°
850/1900 downtilt Elec.				850/1900 downtilt Elec.			
* Downtilt (Mechanical)				Downtilt (Mechanical)			
* Mast Head Amplifier	No	No	No	* Mast Head Amplifier	No	No	No
* MHA Bandwidth	N/A	N/A	N/A	* MHA Bandwidth	N/A	N/A	N/A
# of MHAs				# of MHAs			
MHA Vendor/Model				MHA Vendor/Model			
# of BIAS-T				# of BIAS-T			
Bias-T Vendor/Model				Bias-T Vendor/Model			
# of PDU				# of PDU			
PDU Vendor/Model				PDU Vendor/Model			
# of RET				# of RET			
RET Vendor/Model				RET Vendor/Model			
# of RCS-splitters(RET)				# of RCS-splitters(RET)			
# of RC Top Jumpers				# of RC Top Jumpers			
# of RC Bottom Jumpers				# of RC Bottom Jumpers			
# of RC Feeder Cables				# of RC Feeder Cables			
RC Feeder Cable Model				RC Feeder Cable Model			
# of CCU's (RET) / Model				# of CCU's (RET) / Model			

RF-SITE DESIGN

1

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Jeffrey Rome & Associates, Inc.
Arizona • California • Nevada
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California: (949) 760-3929
Nevada: (702) 795-0059

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C-020876
EXP. 2-28-09
STATE OF CALIFORNIA

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CROWN CASTLE INTERNATIONAL
shaping the wireless world™
310 CASTILLO STREET, SUITE 303
SANTA BARBARA, CALIFORNIA 93101

APPROVALS

R.F.

ZONING

CONSTRUCTION

SITE ACQUISITION

OWNER APPROVAL

PROJECT NAME
AT&T UMTS OVERLAY
SITE NAME
FIREHOUSE LANE
SITE NUMBER
CNU3487
155 FIREHOUSE LANE
SCOTTS VALLEY, CALIFORNIA 95066

DRAWING DATES
04/14/08 90% CD REVIEW (P1-B1)
05/08/08 100% CD REVIEW (P1-B2)
06/12/08 CROWN CASTLE CMTS (P1-B3)
08/04/08 PLANNER COMMENTS (P1-B4)

A.P.N: 067-202-64-000

SHEET TITLE
RF-SITE DESIGN

RF-1

JRA PROJECT NUMBER: 08103

EXHIBIT A

Antenna Type - TDMA			
* Radiation Height			
* Azimuth			
* Antenna Model			
* Quantity			
* Type			
* Manufacturer			
* Dimensions			
* Horizontal Beamwidth			
* Vertical Beamwidth			
* Gain			
* 850 ports			
* 1900 ports			
* 850/1900 ports			
850 Downtilt Elec			
1900 Downtilt Elec			
850/1900 downtilt Elec			
* Downtilt (Mechanical)			
* Mast Head Amplifier			
* MHA Bandwidth			
# of MHAs			
MHA Vendor/Model			
# of BIAS-T			
Bias-T Vendor/Model			
# of PDU			
PDU Vendor/Model			
# of RET			
RET Vendor/Model			
# of RCS-splitters(RET)			
# of RC Top Jumpers			
# of RC Bottom Jumpers			
# of RC Feeder Cables			
RC Feeder Cable Model			
# of CCU's (RET) / Model			

Antenna Type - TDMA			
Radiation Height			
Azimuth			
Antenna Model			
Quantity			
Type			
Manufacturer			
Dimensions			
Horizontal Beamwidth			
Vertical Beamwidth			
Gain			
850 Ports			
1900 Ports			
850/1900 Ports			
850 Downtilt Elec			
1900 Downtilt Elec			
850/1900 downtilt Elec			
Downtilt (Mechanical)			
* Mast Head Amplifier			
* MHA Bandwidth			
# of MHAs			
MHA Vendor/Model			
# of BIAS-T			
Bias-T Vendor/Model			
# of PDU			
PDU Vendor/Model			
# of RET			
RET Vendor/Model			
# of RCS-splitters(RET)			
# of RC Top Jumpers			
# of RC Bottom Jumpers			
# of RC Feeder Cables			
RC Feeder Cable Model			
# of CCU's (RET) / Model			

* TX Radio Count	* Combiner Type	* Antenna Share	* Antenna Ports	* Power Amplifier	* Input	* Feedline	* Length	Feedline Loss	* Output	* MHA	* Antenna Type	* Antenna #
2	N/A	None	GSM 850 TX/RX	NC	Diplexer #1&2	7/8"	100 ft		Diplexer #3&4	No	742-266 AP16/18-880/1940/065DA DT/0XP	1
2	N/A	None	GSM 1900 TX/RX	NC	Diplexer #1&2	7/8"	100 ft		Diplexer #3&4	No	742-266 AP16/18-880/1940/065DA DT/0XP	1
# of Diplexers GSM/UMTS	Diplexer Vendor/Model	# of Jumpers (tot) GSM/UMTS	Jumper Type	Jumper Vendor		# of Feedlines	Feedline Vendor			# MHA	# of BIAS-T	
4/0	None/None	12/0				2	Andrew LDF5-50A			0	0	

TX Radio Count	Combiner Type	Antenna Share	Antenna Ports	Power Amplifier	Input	Feedline	* Length	Feedline Loss	Output	MHA	Antenna Type	* Antenna #
1	N/A	None	UMTS 850 TX/RX	No	Direct	7/8" AVA	100 ft		Direct	No	742-266 AP16/18-880/1940/065DA DT/0XP	2
2	N/A	None	GSM 850 TX/RX	NC	Diplexer #1&2	7/8"	100 ft		Diplexer #3&4	No	742-266 AP16/18-880/1940/065DA DT/0XP	1
2	N/A	None	GSM 1900 TX/RX	NC	Diplexer #1&2	7/8"	100 ft		Diplexer #3&4	No	742-266 AP16/18-880/1940/065DA DT/0XP	1
# of Diplexers GSM/UMTS	Diplexer Vendor/Model	# of Jumpers (tot) GSM/UMTS	Jumper Type	Jumper Vendor		# of Feedlines	Feedline #			# MHA	# of BIAS-T	
1/0	None/None	12/4				4	Andrew AVA-5			0	0	

* TX Radio Count	* Combiner Type	* Antenna Share	* Antenna Ports	* Power Amplifier	* Input	* Feedline	* Length	Feedline Loss	* Output	* MHA	* Antenna Type	* Antenna #
2	N/A	None	GSM 850 TX/RX	NC	Diplexer #1&2	7/8"	100 ft		Diplexer #3&4	No	742-266 AP16/18-880/1940/065DA DT/0XP	1
2	N/A	None	GSM 1900 TX/RX	NC	Diplexer #1&2	7/8"	100 ft		Diplexer #3&4	No	742-266 AP16/18-880/1940/065DA DT/0XP	1
# of Diplexers GSM/UMTS	Diplexer Vendor/Model	# of Jumpers (tot) GSM/UMTS	Jumper Type	Jumper Vendor		# of Feedlines	Feedline Vendor			# MHA	# of BIAS-T	
4/0	None/None	12/0				2	Andrew LDF5-50A			0	0	

TX Radio Count	Combiner Type	Antenna Share	Antenna Ports	Power Amplifier	Input	Feedline	* Length	Feedline Loss	Output	MHA	Antenna Type	* Antenna #
1	N/A	None	UMTS 850 TX/RX	No	Direct	7/8" AVA	100 ft		Direct	No	742-266 AP16/18-880/1940/065DA DT/0XP	2
2	N/A	None	GSM 850 TX/RX	NC	Diplexer #1&2	7/8"	100 ft		Diplexer #3&4	No	742-266 AP16/18-880/1940/065DA DT/0XP	1
2	N/A	None	GSM 1900 TX/RX	NC	Diplexer #1&2	7/8"	100 ft		Diplexer #3&4	No	742-266 AP16/18-880/1940/065DA DT/0XP	1
# of Diplexers GSM/UMTS	Diplexer Vendor/Model	# of Jumpers (tot) GSM/UMTS	Jumper Type	Jumper Vendor		# of Feedlines	Feedline #			# MHA	# of BIAS-T	
1/0	None/None	12/4				4	Andrew AVA-5			0	0	

* TX Radio Count	* Combiner Type	* Antenna Share	* Antenna Ports	* Power Amplifier	* Input	* Feedline	* Length	Feedline Loss	* Output	* MHA	* Antenna Type	* Antenna #
2	N/A	None	GSM 850 TX/RX	NC	Diplexer #1&2	7/8"	100 ft		Diplexer #3&4	No	742-266 AP16/18-880/1940/065DA DT/0XP	1
2	N/A	None	GSM 1900 TX/RX	NC	Diplexer #1&2	7/8"	100 ft		Diplexer #3&4	No	742-266 AP16/18-880/1940/065DA DT/0XP	1
# of Diplexers GSM/UMTS	Diplexer Vendor/Model	# of Jumpers (tot) GSM/UMTS	Jumper Type	Jumper Vendor		# of Feedlines	Feedline Vendor			# MHA	# of BIAS-T	
4/0	None/None	12/0				2	Andrew LDF5-50A			0	0	

TX Radio Count	Combiner Type	Antenna Share	Antenna Ports	Power Amplifier	Input	Feedline	* Length	Feedline Loss	Output	MHA	Antenna Type	* Antenna #
1	N/A	None	UMTS 850 TX/RX	No	Direct	7/8" AVA	100 ft		Direct	No	742-266 AP16/18-880/1940/065DA DT/0XP	2
2	N/A	None	GSM 850 TX/RX	NC	Diplexer #1&2	7/8"	100 ft		Diplexer #3&4	No	742-266 AP16/18-880/1940/065DA DT/0XP	1
2	N/A	None	GSM 1900 TX/RX	NC	Diplexer #1&2	7/8"	100 ft		Diplexer #3&4	No	742-266 AP16/18-880/1940/065DA DT/0XP	1
# of Diplexers GSM/UMTS	Diplexer Vendor/Model	# of Jumpers (tot) GSM/UMTS	Jumper Type	Jumper Vendor		# of Feedlines	Feedline #			# MHA	# of BIAS-T	
1/0	None/None	12/4				4	Andrew AVA-5			0	0	

RF-SITE DESIGN

1

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EXP. 2.28.09
STATE OF CALIFORNIA

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CONSTRUCTION

SITE ACQUISITION

OWNER APPROVAL

PROJECT NAME
AT&T UMTS OVERLAY

SITE NAME
FIREHOUSE LANE

SITE NUMBER
CNU3487

155 FIREHOUSE LANE
SCOTTS VALLEY, CALIFORNIA 95060

DRAWING DATES

04/14/08 90% CD REVIEW (P1-B1)
05/08/08 100% CD REVIEW (P1-B2)
05/12/08 CROWN CASTLE CMTS (P1-B3)
08/04/08 PLANNER COMMENTS (P1-B4)

A.P.N: 067-202-64-000

SHEET TITLE
RF-SITE DESIGN

RF-2

JRA PROJECT NUMBER: 081219

EXHIBIT A

Sector A	Add a 4-port antenna for UMTS at antenna POS.2. Ensure at least 4ft. horizontal separation between antennas. Add 2 new coax for UMTS at antenna POS.2. Install UMTS 850 Cabinet. Connect UMTS850 cabinet to UMTS lines and then to antenna at POS.2. Install RET as shown in RET section. Install RET on the UMTS antenna. And install CAT5 from UMTS nodeB to the CCU. Connect CCU to Node B with CAT-5 cable for IP connection. Do not change existing tilt configuration on active GSM antennas if it is different than RFDS. Redline tilt section of GSM in RFDS.
Sector B	Add a 4-port antenna for UMTS at antenna POS.2. Ensure at least 4ft. horizontal separation between antennas. Add 2 new coax for UMTS at antenna POS.2. Install UMTS 850 Cabinet. Connect UMTS850 cabinet to UMTS lines and then to antenna at POS.2. Install RET as shown in RET section. Install RET on the UMTS antenna. And install CAT5 from UMTS nodeB to the CCU. Connect CCU to Node B with CAT-5 cable for IP connection. Do not change existing tilt configuration on active GSM antennas if it is different than RFDS. Redline tilt section of GSM in RFDS.
Sector C	Add a 4-port antenna for UMTS at antenna POS.2. Ensure at least 4ft. horizontal separation between antennas. Add 2 new coax for UMTS at antenna POS.2. Install UMTS 850 Cabinet. Connect UMTS850 cabinet to UMTS lines and then to antenna at POS.2. Install RET as shown in RET section. Install RET on the UMTS antenna. And install CAT5 from UMTS nodeB to the CCU. Connect CCU to Node B with CAT-5 cable for IP connection. Do not change existing tilt configuration on active GSM antennas if it is different than RFDS. Redline tilt section of GSM in RFDS.
Revision History	Ver 3.2 UMTS Overlay

1

RF-SITE DESIGN

JRA

Jeffrey Rome & Associates, Inc.
Arizona • California • Nevada
Arizona: (602) 256-5579
California: (949) 760-5929
Nevada: (702) 795-0059

PROPRIETARY INFORMATION

THE INFORMATION CONTAINED IN THE SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH IS SPECIFICALLY AUTHORIZED BY THE ARCHITECT IS STRICTLY PROHIBITED.

REGISTERED ARCHITECT
JEFFREY L. ROME
C-020876
EXP. 2-28-09
STATE OF CALIFORNIA

PREPARED FOR
at&t
1430 Rosewood Drive
Pleasanton, California 94566

CROWN CASTLE INTERNATIONAL
shaping the wireless world™
510 CASTILLO STREET, SUITE 303
SANTA BARBARA, CALIFORNIA 93101

APPROVALS
R.F.
ZONING
CONSTRUCTION
SITE ACQUISITION
OWNER APPROVAL

PROJECT NAME
AT&T UMTS OVERLAY
SITE NAME
FIREHOUSE LANE
SITE NUMBER
CNU3487
155 FIREHOUSE LANE
SCOTTS VALLEY, CALIFORNIA 95060

DRAWING DATES
04/14/08 90% CD REVIEW (P1-81)
05/08/08 100% CD REVIEW (P1-82)
05/12/08 CROWN CASTLE CMTS (P1-83)
08/04/08 PLANNER COMMENTS (P1-84)

A.P.N: 067-202-64-000

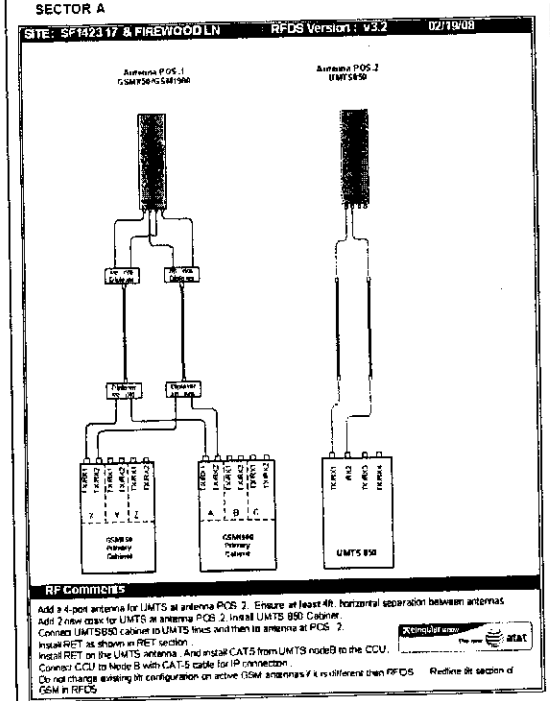
SHEET TITLE
RF-SITE DESIGN

RF-3

EXHIBIT A

EXHIBIT A

SECTOR A



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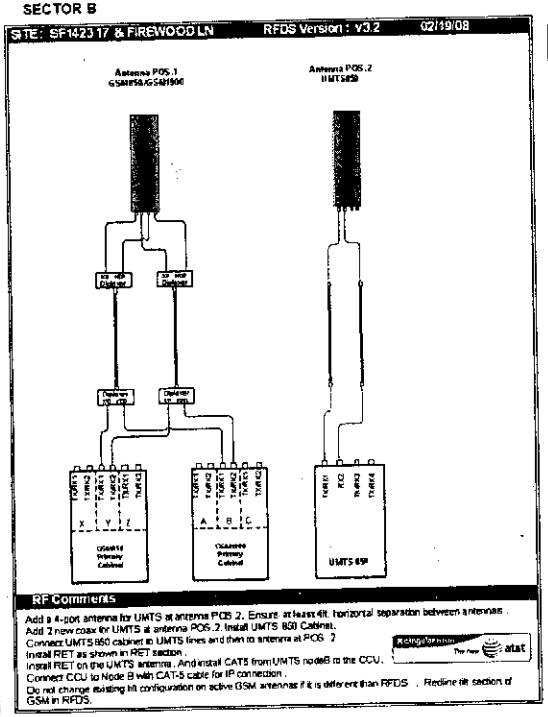

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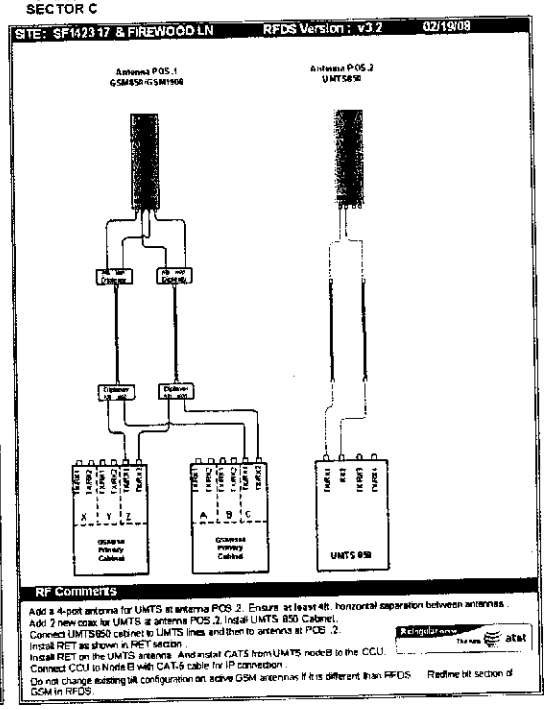

RF–SITE DESIGN

1

JRA
Jeffrey Rome & Associates, Inc.
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REGISTERED ARCHITECT
JEFFREY L. ROME
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EXP. 2-28-09
STATE OF CALIFORNIA

PREPARED FOR
at&t
4430 Rosewood Drive
Pleasanton, California 94588

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APPROVALS

R.F.

ZONING

CONSTRUCTION

SITE ACQUISITION

OWNER APPROVAL

PROJECT NAME
AT&T UMTS OVERLAY
SITE NAME
FIREHOUSE LANE
SITE NUMBER
CNU3487
155 FIREHOUSE LANE
SCOTTS VALLEY, CALIFORNIA 95060

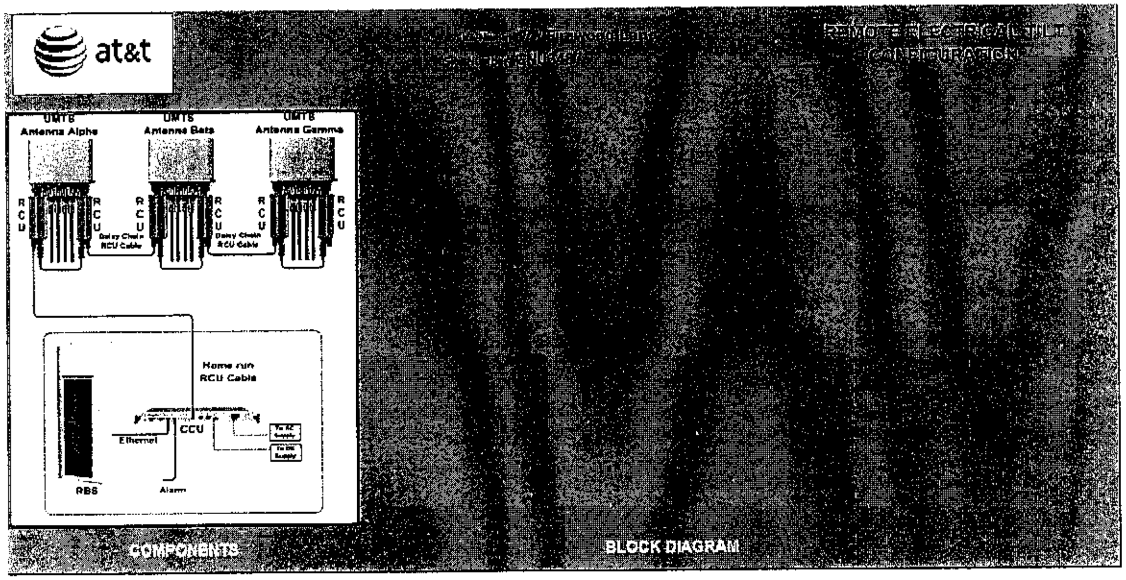
DRAWING DATES
04/14/08 90% CD REVIEW (P1-B1)
05/08/08 100% CD REVIEW (P1-B2)
05/12/08 CROWN CASTLE CMTS (P1-B3)
08/04/08 PLANNER COMMENTS (P1-B4)

A.P.N: 067-202-64-000

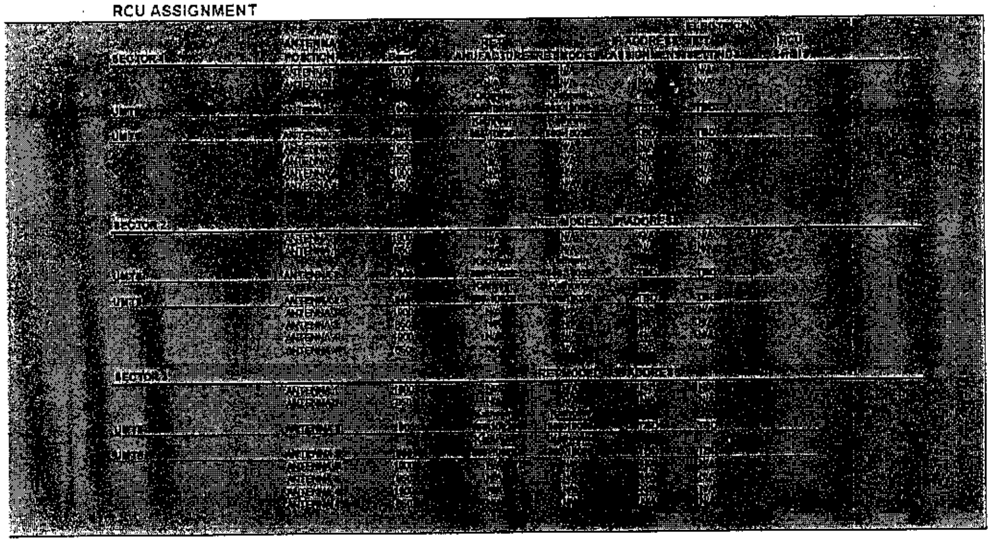
SHEET TITLE
RF–SITE DESIGN

RF-4

JRA PROJECT NUMBER: 08101



RCU ASSIGNMENT



RF-SITE DESIGN

1

JRA
Jeffrey Rome & Associates, Inc.
Arizona • California • Nevada
Arizona: (602) 296-5579
California: (949) 760-3929
Nevada: (702) 795-0059

PROPRIETARY INFORMATION
THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AT&T MOBILITY IS STRICTLY PROHIBITED.

REGISTERED ARCHITECT
JEFFREY L. ROME
C-020876
EXP. 2.28.09
STATE OF CALIFORNIA

PREPARED FOR
at&t
Pleasanton, California 94588

CROWN CASTLE INTERNATIONAL
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SANTA BARBARA, CALIFORNIA 93101

APPROVALS
R.F.
ZONING
CONSTRUCTION
SITE ACQUISITION
OWNER APPROVAL

PROJECT NAME
AT&T UMTS OVERLAY
SITE NAME
FIREHOUSE LANE
SITE NUMBER
CNU3487
155 FIREHOUSE LANE
SCOTTS VALLEY, CALIFORNIA 95066

DRAWING DATES
04/14/08 90% CD REVIEW (P1-B1)
05/08/08 100% CD REVIEW (P1-B2)
05/12/08 CROWN CASTLE CMTS (P1-B3)
08/04/08 PLANNER COMMENTS (P1-B4)

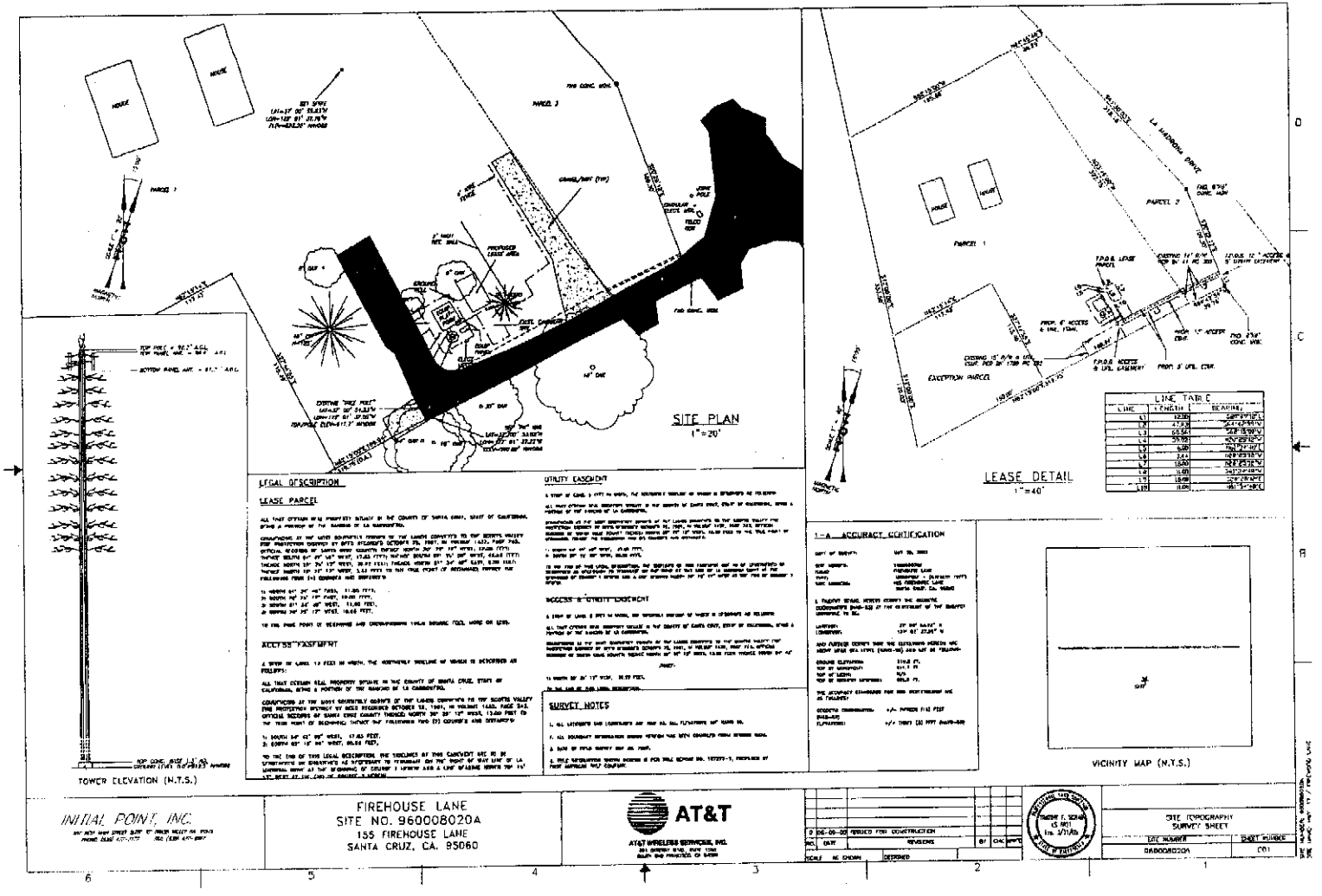
A.P.N: 067-202-64-000

SHEET TITLE
RF-SITE DESIGN

RF-5

JRA PROJECT NUMBER: 081013

EXHIBIT A



INITIAL POINT, INC.

FIREHOUSE LANE
SITE NO. 960008020A
155 FIREHOUSE LANE
SANTA CRUZ, CA. 95060

AT&T
AT&T WIRELESS SERVICES, INC.

REV. NO.	DATE	REVISIONS	BY	CHK. APVD.
9	06-06-08	ISSUED FOR CONSTRUCTION		

SCALE: AS SHOWN | DESIGNED

SITE TOPOGRAPHY
SURVEY SHEET

DATE SURVEYED	SHEET NUMBER
960008020A	C01

1

SITE SURVEY

JRA
Jeffrey Rome & Associates, Inc.
Arizona • California • Nevada
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California: (949) 780-3878
Nevada: (702) 793-0056

PROPRIETARY INFORMATION
THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AT&T MOBILITY IS STRICTLY PROHIBITED.

PREPARED FOR
at&t
4430 Rosewood Drive
Pleasanton, California 94588

CROWN CASTLE INTERNATIONAL
shaping the wireless world™
510 CASTILLO STREET, SUITE 303
SANTA BARBARA, CALIFORNIA 93101

APPROVALS
R.F.
ZONING
CONSTRUCTION
SITE ACQUISITION
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PROJECT NAME
AT&T UMTS OVERLAY
SITE NAME
FIREHOUSE LANE
SITE NUMBER
CNU3487
155 FIREHOUSE LANE
SCOTTS VALLEY, CALIFORNIA 95060

DRAWING DATES
04/14/08 90% CD REVIEW (P1-B1)
05/06/08 100% CD REVIEW (P1-B2)
06/12/08 CROWN CASTLE CMTS (P1-B3)
08/04/08 PLANNER COMMENTS (P1-B4)

A.P.N: 067-202-64-000

SHEET TITLE
SITE SURVEY

C-1

JRA PROJECT NUMBER: 08.10.1

- 22 -

EXHIBIT A

Wireless Communication Facility Use Permit Findings

1. The development of the proposed wireless communications facility as conditioned will not significantly affect any designated visual resources, environmentally sensitive habitat resources (as defined in the Santa Cruz County General Plan/LCP Sections 5.1, 5.10, and 8.6.6.), and/or other significant County resources, including agricultural, open space, and community character resources; or there are no other environmentally equivalent and/or superior and technically feasible alternatives to the proposed wireless communications facility as conditioned (including alternative locations and/or designs) with less visual and/or other resource impacts and the proposed facility has been modified by condition and/or project design to minimize and mitigate its visual and other resource impacts.

This finding can be made in that the proposed co-location will not result in a significant increase in visual impacts as the new antennas will be located below the existing antennas on the monopine tree, and the antennas will not protrude beyond the existing "branches." Existing vegetation will camouflage the facility from Highway 17, a County designated scenic corridor. The proposed cabinet will be located within the existing equipment enclosure, which is surrounded by fencing and not visible to other properties in the vicinity.

2. The site is adequate for the development of the proposed wireless communications facility and, for sites located in one of the prohibited and/or restricted areas set forth in Sections 13.10.661(b) and 13.10.661 (c), that the applicant has demonstrated that there are not environmentally equivalent or superior and technically feasible: (1) alternative sites outside the prohibited and restricted areas; and/or (2) alternative designs for the proposed facility as conditioned.

This finding can be made, in that the project Pursuant to County Code Section 13.10.662(c), co-located facilities located within a restricted zone district are not required to provide an alternatives site analysis. However, the additional antennas will be camouflaged within the canopy of the existing monopine tree. The visual impacts of additional antennas will be less than the construction of a new tower/facility nearby as the site is shielded from Highway 17 by existing vegetation.

3. The subject property upon which the wireless communications facility is to be built is in compliance with all rules and regulations pertaining to zoning uses, subdivisions and any other applicable provisions of this title (County Code 13.10.660) and that all zoning violation abatement costs, if any, have been paid.

This finding can be made, in that the existing residential and commercial use of the subject property are in compliance with the requirements of the zone district and General Plan designation, in which it is located. No zoning violation abatement fees are applicable to the subject property.

The subject application was determined to be "complete" prior to adoption of the recently revised wireless communication facilities, which restrict facilities to nine antennas and three equipment enclosures. The Board of Supervisors excluded complete applications from current wireless facility regulations. Thus, the proposed project complies with the wireless regulations in effect at the time of completeness.

EXHIBIT B

Pursuant to County Code Section 13.10.661(c), parcels zoned Residential Agriculture is subject to the Restricted Area requirements. These code sections, 13.10.661(c) (3), allow co-located facilities within the Residential Agriculture zone district that do not result in a significant increase in visual impact of the facility. As described by the ordinance section 13.10.660 (d) co-location is defined to mean "where more than one wireless facilities share a single wireless facility." Code Section 13.10.661 (g) also states that "where one or more wireless communication facilities already existing on the proposed site location, co-location shall be required if it will not significantly increase the visual impact of the existing facility." Furthermore, the design review criteria under Code Section 13.10.663 (b) (5) encourage co-location over construction of a new tower.

No zoning violation abatement fees are applicable to the subject property even though this site is currently operating without a permit.

4. The proposed wireless communication facility as conditioned will not create a hazard for aircraft in flight.

This finding can be made, in that the proposed antennas will be located below the aircraft travel path.

5. The proposed wireless communication facility as conditioned is in compliance with all FCC and California PUC standards and requirements.

This finding can be made, in that the radio frequency exposure levels were evaluated based on the power densities resulting from the operation of the existing as well as the proposed antennae array. The analysis was conducted by TRK Engineering. The result shown on Exhibit H, indicate that the maximum ambient RF levels at ground level due to the existing wireless communications facilities and the proposed operation are calculated to be .26 percent of the most restrictive applicable limit and the maximum exposure on nearby buildings is .40 percent of the most restrictive applicable limit.

6. For wireless communication facilities in the coastal zone, the proposed wireless communication facility as conditioned is consistent with the applicable requirements of the Local Coastal Program.

The proposed project site is not located within the coastal zone.

EXHIBIT B

Development Permit Findings

1. That the proposed location of the project and the conditions under which it would be operated or maintained will not be detrimental to the health, safety, or welfare of persons residing or working in the neighborhood or the general public, and will not result in inefficient or wasteful use of energy, and will not be materially injurious to properties or improvements in the vicinity.

This finding can be made, in that the project is located in an area designated for Wireless uses and is not encumbered by physical constraints to development. Construction will comply with prevailing building technology, the California Building Code, and the County Building ordinance to insure the optimum in safety and the conservation of energy and resources. The proposed wireless use will not deprive adjacent properties or the neighborhood of light, air, or open space, in that the structure meets all current setbacks that ensure access to light, air, and open space in the neighborhood. In addition, the project will not be materially injurious to properties or improvements in the vicinity in that the radio frequency exposure levels were evaluated based on the power densities resulting from the operation of the existing as well as the proposed antennae array. The analysis was conducted by TRK Engineering. The result shown on Exhibit F indicate that the maximum ambient RF levels at ground level due to the existing wireless communications facilities and the proposed operation are calculated to be .26 percent of the most restrictive applicable limit and the maximum exposure on nearby buildings is .40 percent of the most restrictive applicable limit.

2. That the proposed location of the project and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the zone district in which the site is located.

This finding can be made, in that the proposed location of the cell facility and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the RA (Residential Agriculture) zone district in that the primary use of the property will be residential with wireless facilities meeting the application standards of the zone district.

In particular, pursuant to County Code Section 13.10.661(c), parcels zoned Residential Agriculture are subject to the Restricted Area requirements. These code sections, 13.10.661(c) (3), allow co-located facilities within the Residential Agriculture zone district that do not result in a significant increase in visual impact of the facility. As described by ordinance section 13.10.660 (d) co-location is defined to mean "where more than one wireless facilities share a single wireless facility." Code Section 13.10.661 (g) also states that "where one or more wireless communication facilities already existing on the proposed site location, co-location shall be required if it will not significantly increase the visual impact of the existing facility." Furthermore, the design review criteria under Code Section 13.10.663 (b) (5) encourage co-location over construction of a new tower.

The proposed antennas will be camouflaged within the existing canopy of the stealth monopine tree branches and the proposed equipment cabinet will be screened by the existing fenced enclosure. Therefore, the proposed project will minimize visual intrusion to surrounding property in the vicinity and not result in a significant visual impact.

3. That the proposed use is consistent with all elements of the County General Plan and with any

EXHIBIT B

specific plan which has been adopted for the area.

This finding can be made, in that the proposed antennas and equipment cabinet will be co-located with existing wireless facilities, which are an environmentally superior alternative to the creation of new wireless communication facility installations and their associated visual and environmental impacts.

The proposed commercial use is consistent with the use and density requirements specified for the Rural Residential (RR) land use designation in the County General Plan.

The subject property is located within the Highway 17 scenic corridor. The existing ground mounted monopine is camouflaged from view from Highway 17 scenic corridor. The proposed antennas and equipment cabinet will be co-located on the existing tower that is camouflaged to appear as a natural pine tree. The proposed project complies with the General Plan Policy 5.10.3 (Protection of public vistas) in that no views of the beach, ocean, or other significant vistas can be viewed past or across the subject property. The existing views from Highway 17 scenic corridor will remain unchanged as a result of this project.

The proposed antennas and cabinet will not adversely impact the light, solar opportunities, air, and/or open space available to other structures or properties, and meets all current site and development standards for the zone district as specified in Policy 8.1.3 (Residential Site and Development Standards Ordinance), in that the commercial will not adversely shade adjacent properties, and will currently meets setbacks for the zone district that ensure access to light, air, and open space in the neighborhood.

A specific plan has not been adopted for this portion of the County.

4. That the proposed use will not overload utilities and will not generate more than the acceptable level of traffic on the streets in the vicinity.

This finding can be made, in that the proposed antennas and cabinet is to be constructed on an existing developed lot. The expected level of traffic generated by the proposed project is not anticipated to be affected by the proposed antennas with exception of construction related vehicles during installation of the equipment. The project will not affect utilities.

5. That the proposed project will complement and harmonize with the existing and proposed land uses in the vicinity and will be compatible with the physical design aspects, land use intensities, and dwelling unit densities of the neighborhood.

This finding can be made, in that the proposed antennas and cabinet will be co-located on an existing ground mounted tower that is camouflaged to appear as a natural pine tree. The antennas will be located within the canopy of the existing monopine and the proposed equipment cabinet will be located within the existing equipment enclosure minimizing the potential visual impacts of the proposed project on surrounding residential uses. In addition, the stealth monopine design camouflages within the existing natural vegetation surrounding the property and significantly limits the visibility of the structure from view. This proposal will adequately mitigate any potential visual impacts to the surrounding neighborhood.

6. The proposed development project is consistent with the Design Standards and Guidelines

EXHIBIT B

(sections 13.11.070 through 13.11.076), and any other applicable requirements of this chapter.

This finding can be made, in that the proposed antennas will be co-located on an existing ground mounted antenna that is camouflaged to reduce potential visual impacts to surrounding neighborhood. The County's Urban Designer reviewed the proposed project and the project was found to be consistent with 13.11. The additional antennas and equipment cabinet will not result in design review conflicts provided that the proposed antennas match the existing non-reflective green color of the monopine. The project will have no effect on the Highway 17 scenic corridor because it is screened from view by existing vegetation.

EXHIBIT B

Conditions of Approval

Development Permit No. 08-0204
Property Owner: Rodney Martin Parsons
Assessor's Parcel No.: 067-202-64

Exhibit A: Project plans prepared by Jeffrey Rome and Associates, dated 8/04/08 containing sheets T-1, T-2, A-O, A-1, A-2, A-3,.A-4, A-4.1, A-5, RF-1, RF-2, RF-3, RF-4, RF-5, C-1

I. This permit authorizes installation of three panel antennas onto an existing monopine and installation of one outdoor equipment cabinet at an existing lease area for a wireless communication facility. This approval does not confer legal status on any existing structure(s) or existing use(s) on the subject property that are not specifically authorized by this permit. Prior to exercising any rights granted by this permit including, without limitation, any construction or site disturbance, the applicant/owner shall:

A. Sign, date, and return to the Planning Department one copy of the approval to indicate acceptance and agreement with the conditions thereof.

B. Obtain a Building Permit from the Santa Cruz County Building Official.

C. Any outstanding balance due to the Planning Department must be paid prior to making a Building Permit application. Applications for Building Permits will not be accepted or processed while there is an outstanding balance due.

II. Prior to issuance of a Building Permit the applicant/owner shall:

A. Submit proof that these conditions have been recorded in the official records of the County of Santa Cruz (Office of the County Recorder).

B. Submit final architectural plans for review and approval by the Planning Department. The final plans shall be in substantial compliance with the plans marked Exhibit "A" on file with the Planning Department. Any changes from the approved Exhibit "A" for this development permit on the plans submitted for the Building Permit must be clearly called out and labeled by standard architectural methods to indicate such changes. Any changes that are not properly called out and labeled will not be authorized by any Building Permit that is issued for the proposed development. The final plans shall include the following additional information:

1. One elevation shall indicate materials and colors as they were approved by this Discretionary Application. If specific materials and colors have not been approved with this Discretionary Application, in addition to showing the materials and colors on the elevation, the applicant shall supply a color and material board in 8 ½" x 11" format for Planning Department review and approval.

2. Details showing compliance with fire department requirements, including all

EXHIBIT C

requirements of the Urban Wildland Intermix Code, if applicable.

C. Submit four copies of the approved Discretionary Permit with the Conditions of Approval attached. The Conditions of Approval shall be recorded prior to submittal, if applicable.

D. Meet all requirements and pay any applicable plan check fee of the Scotts Valley Fire District.

E. Submit a written statement signed by an authorized representative of the school district in which the project is located confirming payment in full of all applicable developer fees and other requirements lawfully imposed by the school district.

F. Submit a contract and scope of services by a qualified biologist with knowledge of Sandhills habitat to discuss construction practices with the project contractor, consistent with the Biotic Report by Jodi M. McGraw, dated September 26, 2008. Required construction practices shall include a requirement for a boom truck to lower the equipment cabinet from the existing roads and footpaths. In addition, the construction crew shall be confined to the project area, which consists of the existing Metro PCS compound, the adjacent fenced antenna area, and the existing road and footpaths used to access the compounds. The contract and scope of services shall be reviewed and approved by Environmental Planning staff.

III. All construction shall be performed according to the approved plans for the Building Permit. Prior to final building inspection, the applicant/owner must meet the following conditions:

A. All site improvements shown on the final approved Building Permit plans shall be installed.

B. All inspections required by the building permit shall be completed to the satisfaction of the County Building Official.

C. Pursuant to Sections 16.40.040 and 16.42.100 of the County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this development, any artifact or other evidence of an historic archaeological resource or a Native American cultural site is discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner if the discovery contains human remains, or the Planning Director if the discovery contains no human remains. The procedures established in Sections 16.40.040 and 16.42.100, shall be observed.

D. Construction shall be performed in accordance with the approved construction practices contained in the approved contract and scope of services with project biologist.

IV. Operational Conditions

A. The wireless communication facility may not be connected to a power source or

EXHIBIT C

operated until a final inspection and clearance from the Santa Cruz County Planning Department has been received.

B. The use of temporary generators to power the wireless communication facility are not allowed.

C. All noise generated from the approved use shall be contained on the property.

D. The exterior finish and materials of the wireless communication facility must be maintained on an annual basis to continue to blend with the existing utilities infrastructure. Additional paint and/or replacement materials shall be installed as necessary to blend the wireless communication facility with the existing utilities infrastructure.

E. Any existing vegetative screening of the project site and facilities must be maintained throughout the duration of the approved use. Tree removals or excessive pruning which reduce the visual screening of the project site are not allowed. If visual screening is reduced due to natural causes, replacement trees will be required which provide adequate visual screening of the project site and facilities.

F. The operator of the wireless communication facility must submit within 90 days of commencement of normal operations (or within 90 days of any major modification of power output of the facility) a written report to the Santa Cruz County Planning Department documenting the measurements and findings with respect to compliance with the established Federal Communications Commission (FCC) Non-Ionizing Electromagnetic Radiation (NEIR) exposure standard. The wireless communication facility must remain in continued compliance with the NEIR standard established by the FCC at all times. Failure to submit required reports or to remain in continued compliance with the NEIR standard established by the FCC will be a violation of the terms of this permit.

G. If, in the future, the pole based utilities are relocated underground at this location, the operator of the wireless communication facility must abandon the facility and be responsible for the removal of all permanent structures and the restoration of the site as needed to re-establish the area consistent with the character of the surrounding natural landscape.

H. If, as a result of future scientific studies and alterations of industry-wide standards resulting from those studies, substantial evidence is presented to Santa Cruz County that radio frequency transmissions may pose a hazard to human health and/or safety, the Santa Cruz County Planning Department shall set a public hearing and in its sole discretion, may revoke or modify the conditions of this permit.

I. If future technological advances would allow for reduced visual impacts resulting from the proposed telecommunication facility, the operator of the wireless communication facility must make those modifications which would allow for reduced visual impact of the proposed facility as part of the normal replacement schedule. If, in the future, the

EXHIBIT C

facility is no longer needed, the operator of the wireless communication facility must abandon the facility and be responsible for the removal of all permanent structures and the restoration of the site as needed to re-establish the area consistent with the character of the surrounding natural landscape.

J. Any modification in the type of equipment shall be reviewed and acted on by the Planning Department staff. The County may deny the modification or amend the approved conditions at that time, or the Planning Director may refer it for public hearing before the Zoning Administrator.

K. The equipment cabinet area must be locked at all times except when authorized personnel are present. The antennas must not be accessible to the public.

L. All site, building, security and landscape lighting shall be directed onto the lease site and away from adjacent properties. Light sources shall not be visible from adjacent properties. Building and security lighting shall be integrated into the building design and shall be operated with a manual on/off switch. The site shall be unlit except when authorized personnel are present at night.

M. Transfer of Ownership: In the event that the original permittee sells its interest in the permitted wireless communications facility, the succeeding carrier shall assume all responsibilities concerning the project and shall be held responsible to the County for maintaining consistency with all project conditions of approval, including proof of liability insurance. Within 30-days of a transfer of ownership, the succeeding carrier shall provide a new contact name to the Planning Department.

V. As a condition of this development approval, the holder of this development approval ("Development Approval Holder"), is required to defend, indemnify, and hold harmless the COUNTY, its officers, employees, and agents, from and against any claim (including attorneys' fees), against the COUNTY, it officers, employees, and agents to attack, set aside, void, or annul this development approval of the COUNTY or any subsequent amendment of this development approval which is requested by the Development Approval Holder.

A. COUNTY shall promptly notify the Development Approval Holder of any claim, action, or proceeding against which the COUNTY seeks to be defended, indemnified, or held harmless. COUNTY shall cooperate fully in such defense. If COUNTY fails to notify the Development Approval Holder within sixty (60) days of any such claim, action, or proceeding, or fails to cooperate fully in the defense thereof, the Development Approval Holder shall not thereafter be responsible to defend, indemnify, or hold harmless the COUNTY if such failure to notify or cooperate was significantly prejudicial to the Development Approval Holder.

B. Nothing contained herein shall prohibit the COUNTY from participating in the defense of any claim, action, or proceeding if both of the following occur:

1. COUNTY bears its own attorney's fees and costs; and

EXHIBIT C

2. COUNTY defends the action in good faith.

C. Settlement. The Development Approval Holder shall not be required to pay or perform any settlement unless such Development Approval Holder has approved the settlement. When representing the County, the Development Approval Holder shall not enter into any stipulation or settlement modifying or affecting the interpretation or validity of any of the terms or conditions of the development approval without the prior written consent of the County.

D. Successors Bound. "Development Approval Holder" shall include the applicant and the successor'(s) in interest, transferee(s), and assign(s) of the applicant.

Minor variations to this permit, which do not affect the overall concept or density, may be approved by the Planning Director at the request of the applicant or staff in accordance with Chapter 18.10 of the County Code.

Please note: This permit expires three years from the effective date listed below unless a building permit (or permits) is obtained for the primary structure described in the development permit (does not include demolition, temporary power pole or other site preparation permits, or accessory structures unless these are the primary subject of the development permit). Failure to exercise the building permit and to complete all of the construction under the building permit, resulting in the expiration of the building permit, will void the development permit, unless there are special circumstances as determined by the Planning Director.

Approval Date: _____

Effective Date: _____

Expiration Date: _____

Don Bussey	Sheila McDaniel
Deputy Zoning Administrator	Project Planner

Appeals: Any property owner, or other person aggrieved, or any other person whose interests are adversely affected by any act or determination of the Zoning Administrator, may appeal the act or determination to the Planning Commission in accordance with chapter 18.10 of the Santa Cruz County Code.

EXHIBIT C

Application #: 08-0204
APN: 067-202-64
Owner: Rodney Martin Parsons

CALIFORNIA ENVIRONMENTAL QUALITY ACT
NOTICE OF EXEMPTION

The Santa Cruz County Planning Department has reviewed the project described below and has determined that it is exempt from the provisions of CEQA as specified in Sections 15061 - 15332 of CEQA for the reason(s) which have been specified in this document.

Application Number: 08-0204
Assessor Parcel Number: 067-202-64
Project Location: 155 Firehouse Lane, Santa Cruz, CA 95060

Project Description: Proposal to install three panel antennas onto an existing monpine and install one outdoor equipment cabinet at an existing lease area for wireless communication facilities. Requires an amendment to Commercial Development Permits 99-0171, 02-0411, and 05-0287.

Person or Agency Proposing Project: AT&T

Contact Phone Number: (415) 233-3838

A. _____ The proposed activity is not a project under CEQA Guidelines Section 15378.
B. _____ The proposed activity is not subject to CEQA as specified under CEQA Guidelines Section 15060 (c).
C. _____ **Ministerial Project** involving only the use of fixed standards or objective measurements without personal judgment.
D. _____ **Statutory Exemption** other than a Ministerial Project (CEQA Guidelines Section 15260 to 15285).

Specify type:

E. __X__ **Categorical Exemption**

Specify type: Class 1 - Existing Facilities (Section 15301)

F. **Reasons why the project is exempt:**

Proposal to construct minor improvements to existing cell facility

In addition, none of the conditions described in Section 15300.2 apply to this project.

_____ Date: _____
Sheila McDaniel, Project Planner

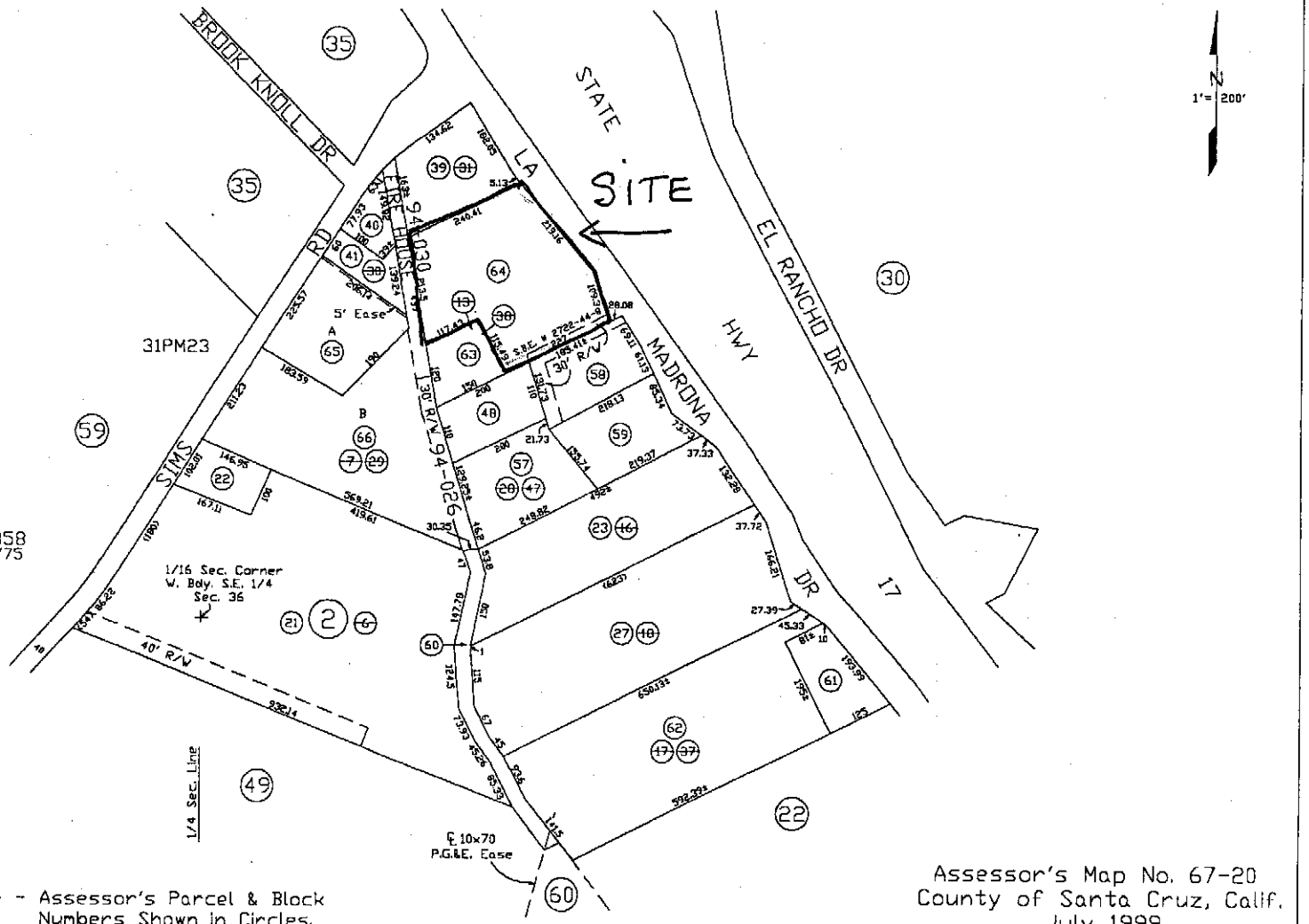
EXHIBIT D

FOR TAX PURPOSES ONLY

POR. CARBONERO RANCHO
POR. S. 1/2 SEC. 36, T.10S., R.2W., MD.B. & M.

Tax Area Code
94-030 94-026

67-20



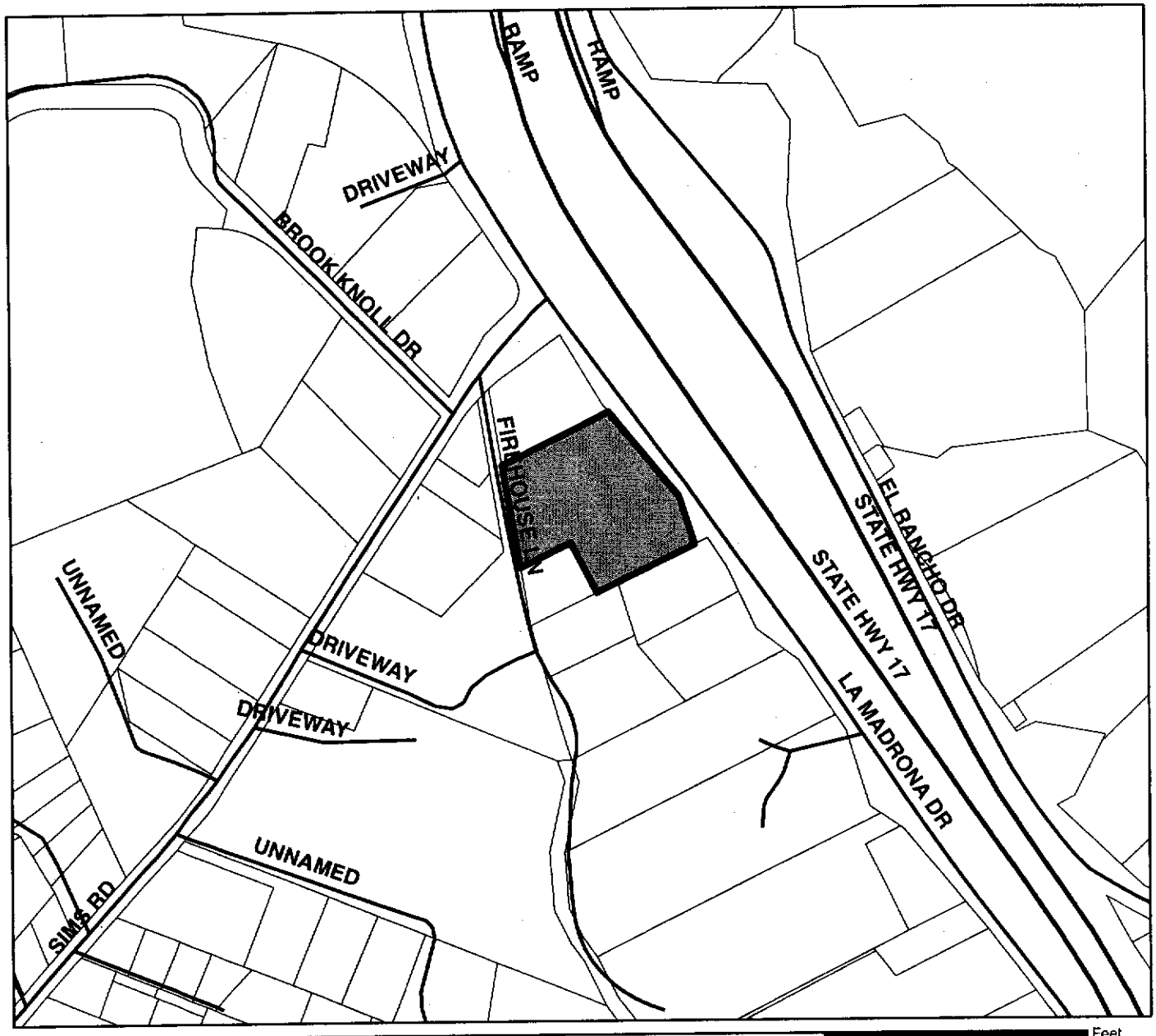
Note - Assessor's Parcel & Block Numbers Shown in Circles.

Assessor's Map No. 67-20
County of Santa Cruz, Calif.
July 1999

Rev. 7/23/99 KSA
Rev. 8/7/01 mm (changed page ref's)
Rev. 6/24/02 DD (added st. name and S.B.E. #)

EXHIBIT E

Location Map



LEGEND

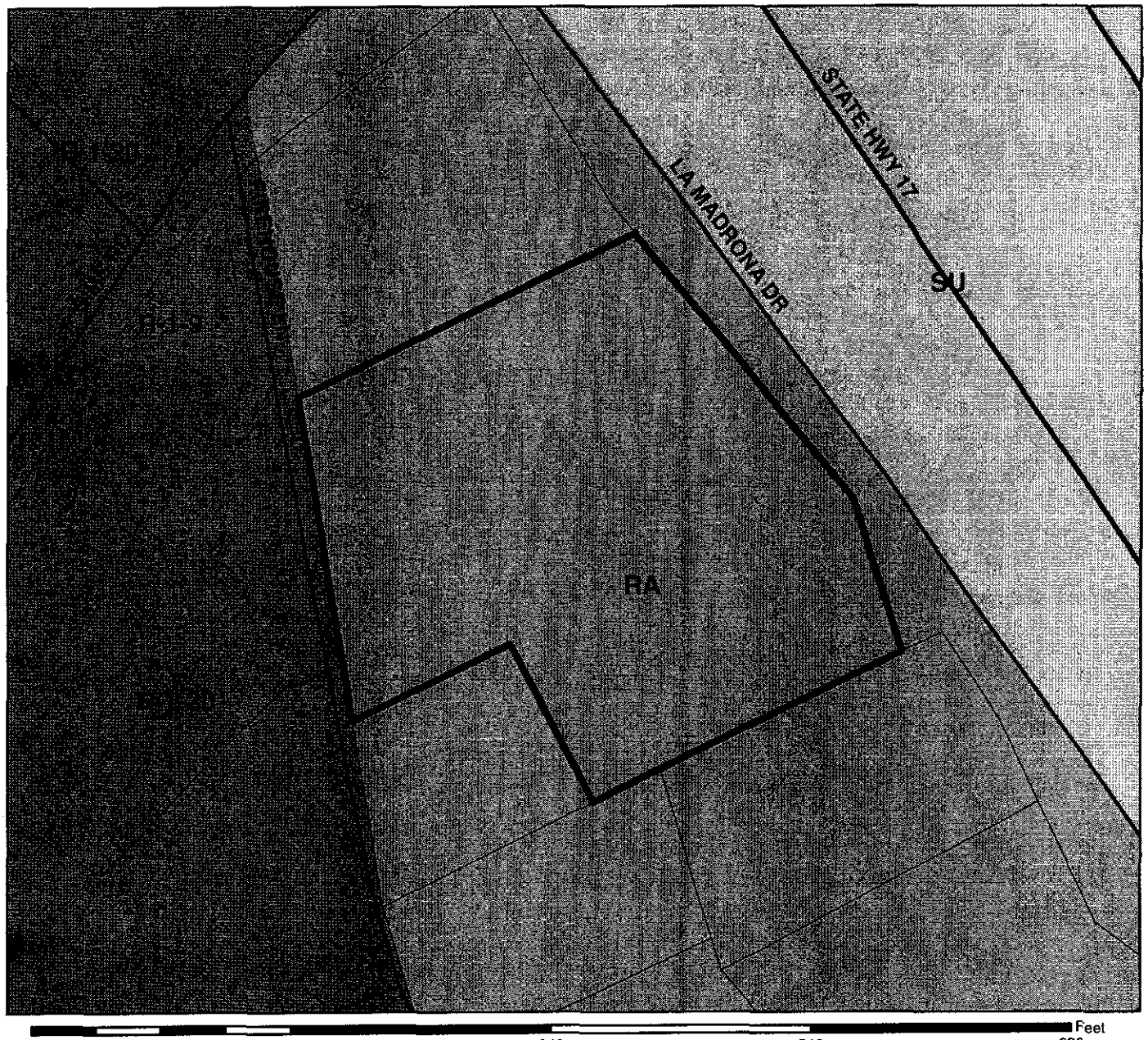
- APN: 067-202-64
- Assessors Parcels
- Streets
- State Highways

N
W E
S

Map Created by
County of Santa Cruz
Planning Department
July 2008

EXHIBIT E

Zoning Map



LEGEND

- APN: 067-202-64
- Assessors Parcels
- Streets
- AGRICULTURE RESIDENTIAL
- RESIDENTIAL-SINGLE FAMILY
- SPECIAL USE

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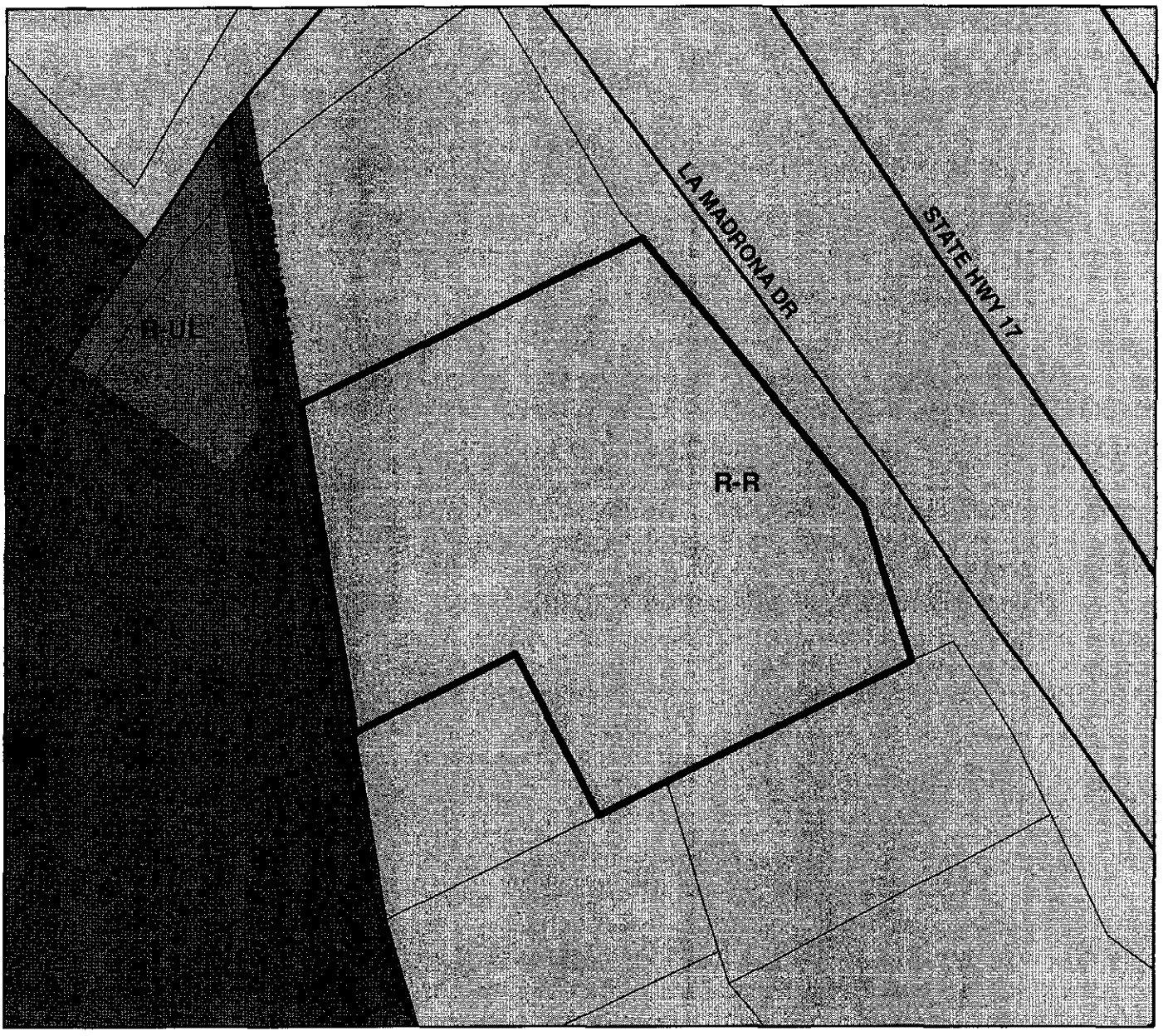
Map Created by
County of Santa Cruz
Planning Department
July 2008

EXHIBIT E

General Plan Designation Map



LEGEND

- APN: 067-202-64
- Assessors Parcels
- Streets
- Residential-Rural
- Residential - Urban Low Density
- Residential - Urban Very Low Density

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W E
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Map Created by
County of Santa Cruz
Planning Department
July 2008

EXHIBIT E

TRK ENGINEERING

FEDERAL COMMUNICATIONS COMMISSION (FCC) COMPLIANCE STUDY ON NON-IONIZING ELECTROMAGNETIC RADIATION (NIER) EXPOSURE

Prepared for:

at&t

CNU3487
FIREHOUSE LANE
155 FIREHOUSE LANE
SCOTTS VALLEY, CA
95060

MAY 16/08, REV. 0

EXHIBIT F

SITE DESCRIPTION:

Carrier:	AT&T
Address:	155 Firehouse Lane, Scotts Valley, CA 95060
Type of Service:	1. UMTS, 2. GSM (*1900 MHz and 850 MHz Broadband PCS*)
Sectors:	3 (20°, 260°, 140°)
Antenna Type:	Kathrein 742 266
Number of Antennas:	6 (2 per sector)
Maximum Power:	500 W *(Maximum ERP per technology per sector)*
Antenna Height:	70'± *(Radiation center AGL)*

Table 1. AT&T RF summary

AT&T is proposing to deploy new UMTS services in addition to the existing GSM services at its wireless communications facility located at the above address (Figure 1). The facility consists of a monopine with a total of six directional antennas (3 existing, 3 new) for both services. One new outdoor equipment cabinet will be installed beside the existing cabinets. The compound is enclosed with 6' high wood fence and gates. Access to the facility is restricted to authorized personnel.

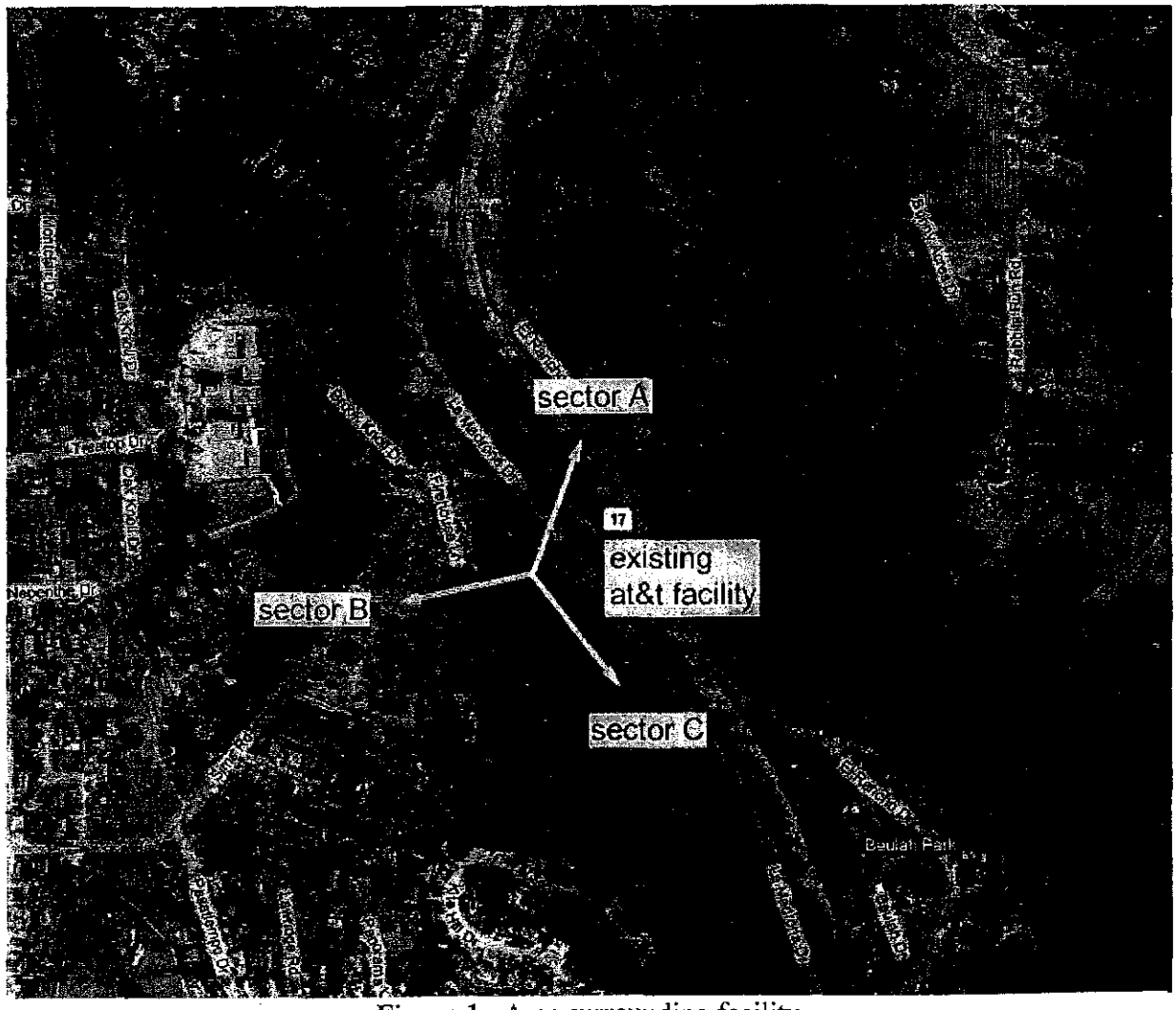


Figure 1. Area surrounding facility

EXHIBIT F

There are three existing wireless communications facilities with directional antennas co-locating on the same monopole. The RF summaries for the existing facilities are shown in the following Tables.

Carrier:	Verizon Wireless	
Type of Service:	i. Cellular CDMA	ii. PCS EVDO
Antenna Type:	i. Antel BXA-80063/4CF *(typical)*	ii. Antel BXA-185063/8 *(typical)*
Number of Antennas:	6 (2 per sector)	
Maximum Power:	500 W *(Maximum ERP per sector)*	
Antenna Height:	60'± *(Radiation center AGL)*	

Table 2. Verizon Wireless RF summary

Carrier:	Metro PCS
Type of Service:	1900MHz CDMA *(Broadband PCS)*
Antenna Type:	EMS RR65-18-XXDPL2 *(typical)*
Number of Antennas:	3 (1 per sector)
Maximum Power:	500 W *(Maximum ERP per sector)*
Antenna Height:	80'± *(Radiation center AGL)*

Table 3. Metro PCS RF summary

Carrier:	Sprint
Type of Service:	1900MHz CDMA *(Broadband PCS)*
Antenna Type:	EMS RR65-18-XXDPL2 *(typical)*
Number of Antennas:	3 (1 per sector)
Maximum Power:	500 W *(Maximum ERP per sector)*
Antenna Height:	90'± *(Radiation center AGL)*

Table 4. Sprint RF summary

PROTOCOL:

This study, and the calculations performed therein, is based on OET Bulletin 65[1] which adopts ANSI C95.1-1992 and NCRP standards. In particular, equation 10 from section 2 of the guideline is used as a model (in conjunction with known antenna radiation patterns) for calculating the power density at different points of interest. This information will be used to judge the RF exposure level incident upon the general population, and any employee present in the area. It should be noted that ground reflection of RF waves has been taken into account.

FCC'S MAXIMUM PERMISSIBLE EXPOSURE (MPE) LIMIT:

In order to evaluate the RF exposure level, the power densities at different locations of interest have been examined. Equation 10 from Bulletin 65 is reproduced here as equation 1:

$$S = \frac{33.4 F^2 ERP}{R^2} \qquad (1)$$

[1] Cleveland, Robert F, et al. Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields. OET Bulletin 65, Edition 97-01, August 1997.

EXHIBIT F

Where: S = *Power density [$\mu W/cm^2$]*
ERP = *Effective radiated power [W]*
R = *Distance [m]*
F = *Relative field factor (relative numeric gain)*

Scenario 1: *Maximum Exposure near facility*

The RF exposure level of a six-foot tall person standing close to the facilities is evaluated. For the worst-case scenario, we assume that the antennas of all carriers are transmitting the maximum number of channels at the same time, with each channel at its maximum power level. In addition, the azimuths of the antennas of all carriers are assumed to be in the direction of the studied location. Please refer to scenario 1 in appendix A for the complete geometry and analysis. The highest exposure location is found to be approximately 17' from the monopine. The calculations of maximum power density are summarized in Table 5.

Service	Max. ERP	F^2	R (m)	S ($\mu W/cm^2$)	MPE %
AT&T UMTS 850	500 W	-25 dB (0.0032)	20.2	0.1310	0.0226
AT&T UMTS 1900	500 W	-18 dB (0.0158)	20.2	0.6467	0.0647
AT&T GSM 850	500 W	-25 dB (0.0032)	20.2	0.1310	0.0226
AT&T GSM 1900	500 W	-18 dB (0.0158)	20.2	0.6467	0.0647
Verizon EVDO	500 W	-22 dB (0.0063)	17.3	0.3528	0.0353
Verizon CDMA	500 W	-25 dB (0.0032)	17.3	0.1792	0.0309
Metro PCS	500 W	-25 dB (0.0032)	23.2	0.0996	0.0100
Sprint	500 W	-25 dB (0.0032)	26.1	0.0782	0.0078
Total					0.2586

Table 5. Worst-case predicted power density values for scenario 1.

The Maximum Permissible Exposure (MPE) limit for 1900 MHz PCS facility for general population/uncontrolled exposure is 1000 $\mu W/cm^2$, and 580 $\mu W/cm^2$ for 850 MHz facility[2]. At this location, the power density from the facility is calculated to be 0.26% of the MPE limit.

Scenario 2: *Maximum Exposure on nearby buildings*

There are low density residential housing in the surrounding area. The RF exposure levels on the nearby buildings are evaluated. Again, we assume all antennas are transmitting with maximum power level at the same time. Please refer to scenario 2 in appendix A for the complete geometry and analysis. The highest exposure location is found to be approximately 300' from the monopine. The calculations for the maximum possible power density are shown in Table 6.

[2] Ibid., page 67.

EXHIBIT F

Service	Max. ERP	F2	R (m)	S (μW/cm²)	MPE %
AT&T UMTS 850	500 W	-10 dB (0.1000)	92.6	0.1946	0.0336
AT&T UMTS 1900	500 W	-17dB (0.0200)	92.6	0.0389	0.0039
AT&T GSM 850	500 W	-10 dB (0.1000)	92.6	0.1946	0.0336
AT&T GSM 1900	500 W	-17 dB (0.0200)	92.6	0.0389	0.003
Verizon EVDO	500 W	-5 dB (0.3162)	92.2	0.6213	0.0621
Verizon CDMA	500 W	-1 dB (0.7943)	92.2	1.5608	0.2691
Metro PCS	500 W	-10 dB (0.1000)	93.2	0.1924	0.0192
Sprint	500 W	-10 dB (0.1000)	93.8	0.1899	0.0190
Total					0.4062

Table 6. Worst-case predicted power density values for scenario 2.

The maximum cumulative power density for the AT&T antennas and the existing antennas is calculated to be 0.41% of the MPE limit. There is a relatively low level of RF energy directed either above or below the horizontal plane of the antennas, and there are no locations in the surrounding areas near the compound that will have RF exposure levels close to the MPE limit.

Conclusion:

Under "worst-case" conditions, the calculations shown above predict that the maximum possible RF exposure is 0.41% of the MPE limit. There will be less RF exposure on the ground level or nearby buildings as a person moves away from the site. Therefore, the proposed modifications to AT&T facility in co-location with existing wireless communications facilities will comply with the general population/uncontrolled limit.

FCC COMPLIANCE:

Only trained persons will be permitted to access the facility and the antennas. They will be made fully aware of the potential for RF exposure and can choose to exercise control over their exposure that is within the occupational/controlled limits which is 5 times higher than the uncontrolled limits.

The general population/uncontrolled exposure near the facility, including persons on the ground level, in nearby open areas, and inside or on existing nearby buildings will have RF exposure much lower than the "worst-case" scenario, which is only a small percentage of the MPE limit.

REGISTERED PROFESSIONAL ENGINEER
SEI YUEN SYLVAN WONG
16850
EXP. 12/31/08
ELECTRICAL
STATE OF CALIFORNIA

May 16, 2008

Sei Yuen Sylvan Wong, PE
California PE Reg. No. E 16850

EXHIBIT F

APPENDIX A

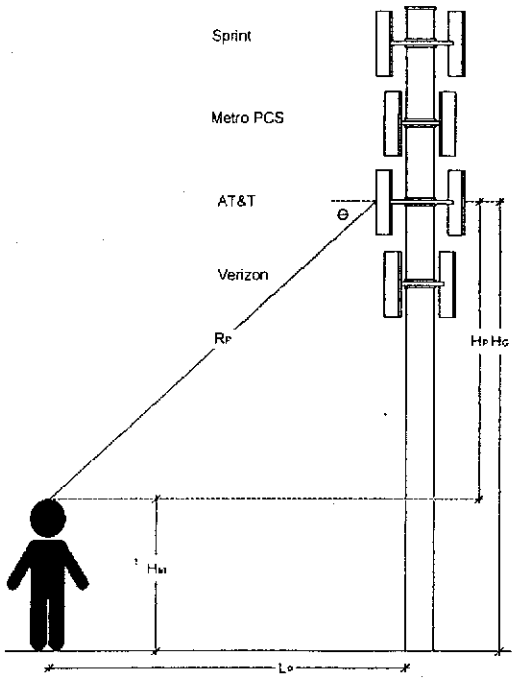
FCC'S MAXIMUM PERMISSIBLE EXPOSURE (MPE) LIMIT:

Equation 10 from Bulletin 65 is reproduced here as equation 1:

$$S = \frac{33.4F^2ERP}{R^2}$$

Where:

S = Power density [$\mu W/cm^2$]
ERP = Effective radiated power [W]
R = Distance [m]
F = Relative field factor (relative numeric gain)



Scenario 1: Standing Near The Facility

The highest exposure location at ground from the antenna

$L_P = H_P \times \tan^{-1}(\Theta)$

$R_P = \sqrt{H_P^2 + L_P^2}$

Relative Field Factor at Θ

$F^2 = 10^{\frac{F^2}{10}}$ (in term of power density)

person's height (H_M) = 6 ft

At Θ = 75 °, the exposure location at ground from the monopole L_P = 17 ft

Service Provider	Height H_G, ft	Height H_P, ft	Max. ERP	Angle Θ	F^2	R_P(m)	S (μW/cm2)	MPE%
AT&T GSM 850	70.00	64.00	500.0	Θ = 75 °	-25 dB (0.0032)	20.2	0.1310	0.0226
AT&T GSM 1900	70.00	64.00	500.0	Θ = 75 °	-18 dB (0.0158)	20.2	0.6467	0.0647
AT&T UMTS 850	70.00	64.00	500.0	Θ = 75 °	-25 dB (0.0032)	20.2	0.1310	0.0226
AT&T UMTS 1900	70.00	64.00	500.0	Θ = 75 °	-18 dB (0.0158)	20.2	0.6467	0.0647
Verizon EVDO	60.00	54.00	500.0	Θ = 72 °	-22 dB (0.0063)	17.3	0.3528	0.0353
Verizon CDMA	60.00	54.00	500.0	Θ = 72 °	-25 dB (0.0032)	17.3	0.1792	0.0309
Metro PCS	80.00	74.00	500.0	Θ = 77 °	-25 dB (0.0032)	23.2	0.0996	0.0100
Sprint	90.00	84.00	500.0	Θ = 78 °	-25 dB (0.0032)	26.1	0.0782	0.0078
						Total		0.2586

At Θ = 60 °, the exposure location at ground from the monopole L_P = 37 ft

Service Provider	Height H_G, ft	Height H_P, ft	Max. ERP	Angle Θ	F^2	R_P(m)	S (μW/cm2)	MPE%
AT&T GSM 850	70.00	64.00	500.0	Θ = 60 °	-22 dB (0.0063)	22.5	0.2073	0.0357
AT&T GSM 1900	70.00	64.00	500.0	Θ = 60 °	-22 dB (0.0063)	22.5	0.2073	0.0207
AT&T UMTS 850	70.00	64.00	500.0	Θ = 60 °	-22 dB (0.0063)	22.5	0.2073	0.0357
AT&T UMTS 1900	70.00	64.00	500.0	Θ = 60 °	-22 dB (0.0063)	22.5	0.2073	0.0207
Verizon EVDO	60.00	54.00	500.0	Θ = 56 °	-25 dB (0.0032)	20.0	0.1343	0.0134
Verizon CDMA	60.00	54.00	500.0	Θ = 56 °	-25 dB (0.0032)	20.0	0.1343	0.0232
Metro PCS	80.00	74.00	500.0	Θ = 63 °	-25 dB (0.0032)	25.2	0.0840	0.0084
Sprint	90.00	84.00	500.0	Θ = 66 °	-25 dB (0.0032)	28.0	0.0683	0.0068
						Total		0.1646

At Θ = 45 °, the exposure location at ground from the monopole L_P = 64 ft

Service Provider	Height H_G, ft	Height H_P, ft	Max. ERP	Angle Θ	F^2	R_P(m)	S (μW/cm2)	MPE%
AT&T GSM 850	70.00	64.00	500.0	Θ = 45 °	-20 dB (0.0100)	27.6	0.2194	0.0378
AT&T GSM 1900	70.00	64.00	500.0	Θ = 45 °	-25 dB (0.0032)	27.6	0.0702	0.0070
AT&T UMTS 850	70.00	64.00	500.0	Θ = 45 °	-20 dB (0.0100)	27.6	0.2194	0.0378
AT&T UMTS 1900	70.00	64.00	500.0	Θ = 45 °	-25 dB (0.0032)	27.6	0.0702	0.0070
Verizon EVDO	60.00	54.00	500.0	Θ = 40 °	-25 dB (0.0032)	25.5	0.0820	0.0082
Verizon CDMA	60.00	54.00	500.0	Θ = 40 °	-22 dB (0.0063)	25.5	0.1614	0.0278
Metro PCS	80.00	74.00	500.0	Θ = 49 °	-25 dB (0.0032)	29.8	0.0601	0.0060
Sprint	90.00	84.00	500.0	Θ = 53 °	-25 dB (0.0032)	32.2	0.0515	0.0052
						Total		0.1368

EXHIBIT F

At Θ = 30 ° , the exposure location at ground from the monopole L_P = 111 ft

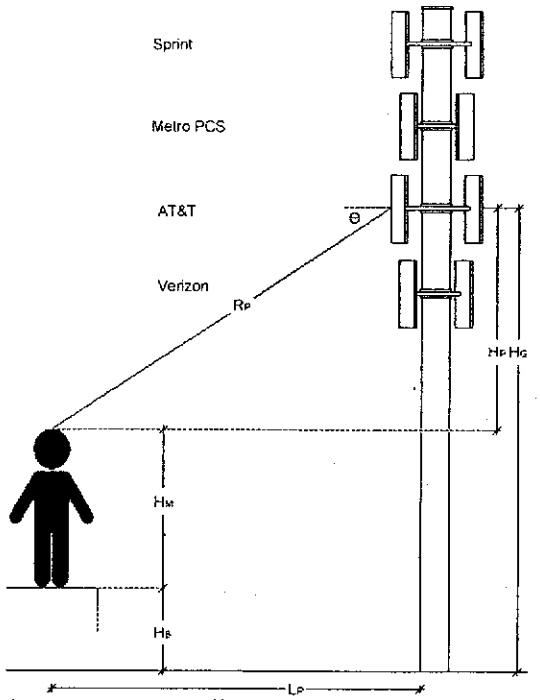
Service Provider	Height H_G, ft	Height H_P, ft	Max. ERP	Angle Θ	F^2	R_P(m)	S (μW/cm2)	MPE%
AT&T GSM 850	70.00	64.00	500.0	Θ = 30	-20 dB (0.0100)	39.0	0.1097	0.0189
AT&T GSM 1900	70.00	64.00	500.0	Θ = 30	-19 dB (0.0126)	39.0	0.1382	0.0138
AT&T UMTS 850	70.00	64.00	500.0	Θ = 30	-20 dB (0.0100)	39.0	0.1097	0.0189
AT&T UMTS 1900	70.00	64.00	500.0	Θ = 30	-19 dB (0.0126)	39.0	0.1382	0.0138
Verizon EVDO	60.00	54.00	500.0	Θ = 26 °	-20 dB (0.0100)	37.6	0.1182	0.0118
Verizon CDMA	60.00	54.00	500.0	Θ = 26 °	-20 dB (0.0100)	37.6	0.1182	0.0204
Metro PCS	80.00	74.00	500.0	Θ = 34 °	-22 dB (0.0063)	40.6	0.0637	0.0064
Sprint	90.00	84.00	500.0	Θ = 37 °	-22 dB (0.0063)	42.4	0.0585	0.0059
						Total		0.1099

At Θ = 15 ° , the exposure location at ground from the monopole L_P = 239 ft

Service Provider	Height H_G, ft	Height H_P, ft	Max. ERP	Angle Θ	F^2	R_P(m)	S (μW/cm2)	MPE%
AT&T GSM 850	70.00	64.00	500.0	Θ = 15	-12 dB (0.0631)	75.4	0.1854	0.0320
AT&T GSM 1900	70.00	64.00	500.0	Θ = 15	-20 dB (0.0100)	75.4	0.0294	0.0029
AT&T UMTS 850	70.00	64.00	500.0	Θ = 15	-12 dB (0.0631)	75.4	0.1854	0.0320
AT&T UMTS 1900	70.00	64.00	500.0	Θ = 15	-20 dB (0.0100)	75.4	0.0294	0.0029
Verizon EVDO	60.00	54.00	500.0	Θ = 13 °	-15 dB (0.0316)	74.7	0.0947	0.0095
Verizon CDMA	60.00	54.00	500.0	Θ = 13 °	-5 dB (0.3162)	74.7	0.9473	0.1633
Metro PCS	80.00	74.00	500.0	Θ = 17 °	-18 dB (0.0158)	76.2	0.0454	0.0045
Sprint	90.00	84.00	500.0	Θ = 19 °	-15 dB (0.0316)	77.2	0.0886	0.0089
						Total		0.2560

EXHIBIT F

Scenario 2: Nearest Mountain Top



$L_P = H_P \times \tan^{-1}(\Theta)$

$R_P = \sqrt{H_P^2 + L_P^2}$

Relative Field Factor at Θ

$F^2 = 10^{\frac{F^2}{10}}$ (in term of power density)

person's height (H_M) = 6 ft

Building within sector A, L_P = 730 ft at Θ = 4 ° H_B = 16 ft

Service Provider	Height H_G, ft	Height H_P, ft	Max. ERP	Angle Θ	F^2	R_P(m)	S (μW/cm2)	MPE%
AT&T GSM 850	70.00	48.00	500.0	Θ = 4 °	-3 dB (0.5012)	223.0	0.1683	0.0290
AT&T GSM 1900	70.00	48.00	500.0	Θ = 4 °	-5 dB (0.3162)	223.0	0.1061	0.0106
AT&T UMTS 850	70.00	48.00	500.0	Θ = 4 °	-3 dB (0.5012)	223.0	0.1683	0.0290
AT&T UMTS 1900	70.00	48.00	500.0	Θ = 4 °	-5 dB (0.3162)	223.0	0.1061	0.0106
Verizon EVDO	60.00	38.00	500.0	Θ = 3 °	0 dB (1.0000)	222.9	0.3362	0.0336
Verizon CDMA	60.00	38.00	500.0	Θ = 3 °	0 dB (1.0000)	222.9	0.3362	0.0580
Metro PCS	80.00	58.00	500.0	Θ = 5 °	-3 dB (0.5012)	223.3	0.1679	0.0168
Sprint	90.00	68.00	500.0	Θ = 5 °	-3 dB (0.5012)	223.5	0.1675	0.0168
						Total		0.1708

Building within sector B, L_P = 100 ft at Θ = 26 ° H_B = 16 ft

Service Provider	Height H_G, ft	Height H_P, ft	Max. ERP	Angle Θ	F^2	R_P(m)	S (μW/cm2)	MPE%
AT&T GSM 850	70.00	48.00	500.0	Θ = 26 °	-20 dB (0.0100)	33.8	0.1460	0.0252
AT&T GSM 1900	70.00	48.00	500.0	Θ = 26 °	-18 dB (0.0158)	33.8	0.2307	0.0231
AT&T UMTS 850	70.00	48.00	500.0	Θ = 26 °	-20 dB (0.0100)	33.8	0.1460	0.0252
AT&T UMTS 1900	70.00	48.00	500.0	Θ = 26 °	-18 dB (0.0158)	33.8	0.2307	0.0231
Verizon EVDO	60.00	38.00	500.0	Θ = 21 °	-18 dB (0.0158)	32.6	0.2481	0.0248
Verizon CDMA	60.00	38.00	500.0	Θ = 21 °	-20 dB (0.0100)	32.6	0.1570	0.0271
Metro PCS	80.00	58.00	500.0	Θ = 30 °	-22 dB (0.0063)	35.2	0.0847	0.0085
Sprint	90.00	68.00	500.0	Θ = 34 °	-22 dB (0.0063)	36.9	0.0774	0.0077
						Total		0.1485

Building within sector B, L_P = 200 ft at Θ = 13 ° H_B = 16 ft

Service Provider	Height H_G, ft	Height H_P, ft	Max. ERP	Angle Θ	F^2	R_P(m)	S (μW/cm2)	MPE%
AT&T GSM 850	70.00	48.00	500.0	Θ = 13 °	-12 dB (0.0631)	62.7	0.2680	0.0462
AT&T GSM 1900	70.00	48.00	500.0	Θ = 13 °	-20 dB (0.0100)	62.7	0.0425	0.0043
AT&T UMTS 850	70.00	48.00	500.0	Θ = 13 °	-12 dB (0.0631)	62.7	0.2680	0.0462
AT&T UMTS 1900	70.00	48.00	500.0	Θ = 13 °	-20 dB (0.0100)	62.7	0.0425	0.0043
Verizon EVDO	60.00	38.00	500.0	Θ = 11 °	-15 dB (0.0316)	62.1	0.1370	0.0137
Verizon CDMA	60.00	38.00	500.0	Θ = 11 °	-5 dB (0.3162)	62.1	1.3706	0.2363
Metro PCS	80.00	58.00	500.0	Θ = 16 °	-15 dB (0.0316)	63.5	0.1309	0.0131
Sprint	90.00	68.00	500.0	Θ = 19 °	-15 dB (0.0316)	64.4	0.1272	0.0127
						Total		0.3510

EXHIBIT F

Building within sector B, L_P = 300 ft at Θ = 9 ° H_B = 16 ft

Service Provider	Height H_G, ft	Height H_P, ft	Max. ERP	Angle Θ	F^2	R_P(m)	S (μW/cm2)	MPE%
AT&T GSM 850	70.00	48.00	500.0	Θ = 9 °	-10 dB (0.1000)	92.6	0.1946	0.0336
AT&T GSM 1900	70.00	48.00	500.0	Θ = 9 °	-17 dB (0.0200)	92.6	0.0389	0.0039
AT&T UMTS 850	70.00	48.00	500.0	Θ = 9 °	-10 dB (0.1000)	92.6	0.1946	0.0336
AT&T UMTS 1900	70.00	48.00	500.0	Θ = 9 °	-17 dB (0.0200)	92.6	0.0389	0.0039
Verizon EVDO	60.00	38.00	500.0	Θ = 7 °	-5 dB (0.3162)	92.2	0.6213	0.0621
Verizon CDMA	60.00	38.00	500.0	Θ = 7 °	-1 dB (0.7943)	92.2	1.5608	0.2691
Metro PCS	80.00	58.00	500.0	Θ = 11 °	-10 dB (0.1000)	93.2	0.1924	0.0192
Sprint	90.00	68.00	500.0	Θ = 13 °	-10 dB (0.1000)	93.8	0.1899	0.0190
						Total		0.4062

Building within sector B, L_P = 420 ft at Θ = 7 ° H_B = 16 ft

Service Provider	Height H_G, ft	Height H_P, ft	Max. ERP	Angle Θ	F^2	R_P(m)	S (μW/cm2)	MPE%
AT&T GSM 850	70.00	48.00	500.0	Θ = 7 °	-5 dB (0.3162)	128.9	0.3179	0.0548
AT&T GSM 1900	70.00	48.00	500.0	Θ = 7 °	-10 dB (0.1000)	128.9	0.1005	0.0101
AT&T UMTS 850	70.00	48.00	500.0	Θ = 7 °	-5 dB (0.3162)	128.9	0.3179	0.0548
AT&T UMTS 1900	70.00	48.00	500.0	Θ = 7 °	-10 dB (0.1000)	128.9	0.1005	0.0101
Verizon EVDO	60.00	38.00	500.0	Θ = 5 °	-3 dB (0.5012)	128.6	0.5063	0.0506
Verizon CDMA	60.00	38.00	500.0	Θ = 5 °	0 dB (1.0000)	128.6	1.0103	0.1742
Metro PCS	80.00	58.00	500.0	Θ = 8 °	-12 dB (0.0631)	129.3	0.0631	0.0063
Sprint	90.00	68.00	500.0	Θ = 9 °	-12 dB (0.0631)	129.7	0.0626	0.0063
						Total		0.3546

EXHIBIT F

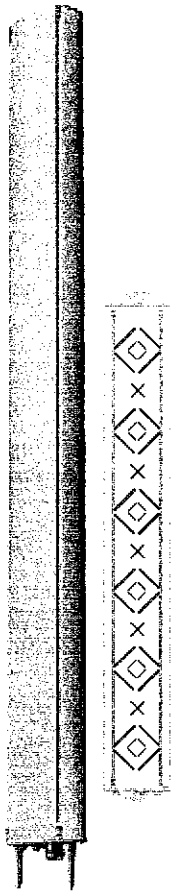
KATHREIN
SCALA DIVISION

AP16/18-880/1940/065D/ADT/XXP **742-266**

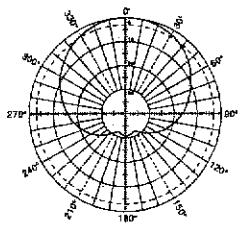
65° Multiband Directional Antenna

Kathrein's dual band antennas are ready for 3G applications, covering all existing wireless bands as well as all spectrum under consideration for future systems, AMPS, PCS and 3G/UMTS. These cross-polarized antennas offer diversity operation in the same space as a conventional 800 MHz antenna, and are mountable on our compact sector brackets.

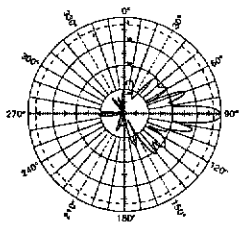
- Wide band operation.
- Exceptional intermodulation characteristics.
- Remote control ready.
- Various gain, beamwidth and downtilt ranges.
- AISG compatible.
- High strength pultruded fiberglass radome.



824–960 MHz

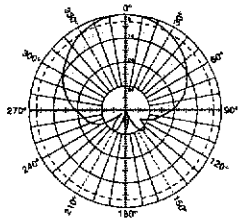


Horizontal pattern
±45°- polarization

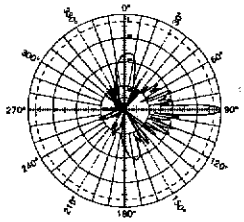


Vertical pattern
±45°- polarization
0.5°–7° electrical downtilt

1710–2180 MHz



Horizontal pattern
±45°- polarization



Vertical pattern
±45°- polarization
0°–6° electrical downtilt

General specifications:

Frequency range	824–960 MHz 1710–2180 MHz
VSWR	<1.5:1
Impedance	50 ohms
Intermodulation (2x20w)	IM3: <-150dBc
Polarization	+45° and -45°
Connector	4 x 7/16 DIN female
Isolation intrasystem intersystem	>30 dB >50 dB (824–960 // 1710–2180 MHz)
Weight	57.3 lb (26 kg)
Dimensions	99.1 x 10.3 x 5.5 inches (2516 x 262 x 139 mm)
Equivalent flat plate area	8.27 ft² (0.768 m²)
Wind survival rating*	120 mph (200 kph)
Shipping dimensions	110.8 x 11.9 x 7.8 inches (2815 x 302 x 192 mm)
Shipping weight	72.8 lb (33 kg)
Mounting	Fixed and tilt mount options are available for 2 to 4.6 inch (50 to 115 mm) OD masts.

See reverse for order information.

Specifications:	**824–894 MHz**	**880–960 MHz**	**1710–1880 MHz**	**1850–1990 MHz**	**1900–2180 MHz**
Gain	14.5 dBd/16.5 dBi	15 dBd/17 dBi	15.8 dBd/17.8 dBi	16.2 dBd/18.2 dBi	16.5 dBd/18.5 dBi
Front-to-back ratio	>28 dB (co-polar)	>28 dB (co-polar)	>25 dB (co-polar)	>25 dB (co-polar)	>25 dB (co-polar)
Maximum input power per input	400 watts (at 50°C)	400 watts (at 50°C)	250 watts (at 50°C)	250 watts (at 50°C)	250 watts (at 50°C)
+45° and -45° polarization horizontal beamwidth	68° (half-power)	65° (half-power)	66° (half-power)	65° (half-power)	63° (half-power)
+45° and -45° polarization vertical beamwidth	8.1° (half-power)	7.5° (half-power)	5.2° (half-power)	5° (half-power)	4.7° (half-power)
Electrical downtilt continuously adjustable	0.5°–7°	0.5°–7°	0°–6°	0°–6°	0°–6°
Sidelobe suppression for first sidelobe above horizon	0° 4° 7° T 16 16 14 dB	0° 4° 7° T 16 16 14 dB	0° 3° 6° T 13 13 13 dB	0° 3° 6° T 16 15 14 dB	0° 3° 6° T 15 15 15 dB
Cross polar ratio Main direction 0° Sector ±60°	 20 dB (typical) >10 dB	 20 dB (typical) >10 dB	 16 dB (typical) >10 dB	 18 dB (typical) >10 dB	 20 dB (typical) >10 dB

*Mechanical design is based on environmental conditions as stipulated in EIA-222-F (June 1996) and/or ETS 300 019-1-4 which include the static mechanical load imposed on an antenna by wind at maximum velocity. See the Engineering Section of the catalog for further details.

10635-H
936.2702/a

Kathrein Inc., Scala Division Post Office Box 4580 Med - 47 - 97501 (USA) Phone: (541) 779-6500 Fax: (541) 779-3991
Email: communications@kathrein.com Internet: www.kathrein-scala.com

EXHIBIT F

Slant +/- 45° Dual Polarized, Panel 63° / 18.5 dBi

BXA-185063/8 ___

When ordering, replace "___" with connector type.

Mechanical specifications

	Length	1240 mm	48.8 in
	Width	195 mm	7.7 in
	Depth	125 mm	4.9 in
[4]	Weight	5 kg	11 lbs
	Wind Area		
	Fore/Aft	0.242 m^2	2.60 ft^2
	Side	0.155 m^2	1.67 ft^2
	Rated Wind Velocity (Safety factor 2.0)		
		>274 km/hr	>170 mph
	Wind load @ 100 mph (161 km/hr)		
	Fore/Aft	354 N	80 lbs
	Side	242 N	55 lbs

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome.

Mounting & Downtilting:

Wall mounted or pole tower mount with mounting brackets.

Mounting bracket kit #26799997

Downtilt bracket kit #26799999
The downtilt bracket kit includes the mounting bracket kit.

Electrical specifications

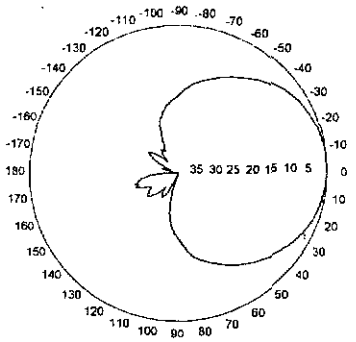
	Frequency Range	1850-1990 MHz
	Impedance	50Ω
[3]	Connector(s)	NE, E-DIN 2 ports / bottom
[1]	VSWR	≤1.4:1
	Polarization	Slant ± 45°
[1]	Isolation Between Ports	< -30 dB
[1]	Gain	18.5 dBi
[2]	Power Rating	250 W
[1]	Half Power Angle	
	H-Plane	63°
	E-Plane	7°
[1]	Electrical Downtilt	0°
[1]	Null Fill	5%
	Lightning Protection	Direct Ground

Patented Dipole Design: U.S. Patent No. 6,597,324 B2

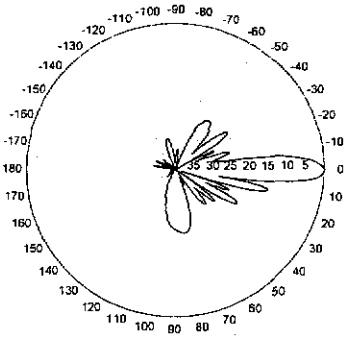
[1] Typical Values
[2] Power Rating limited by connector only.
[3] NE indicates an elongated N Connector.
E-DIN indicates an elongated DIN Connector.
[4] The antenna weight listed above does not include the bracket weight.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

Radiation-pattern[1]



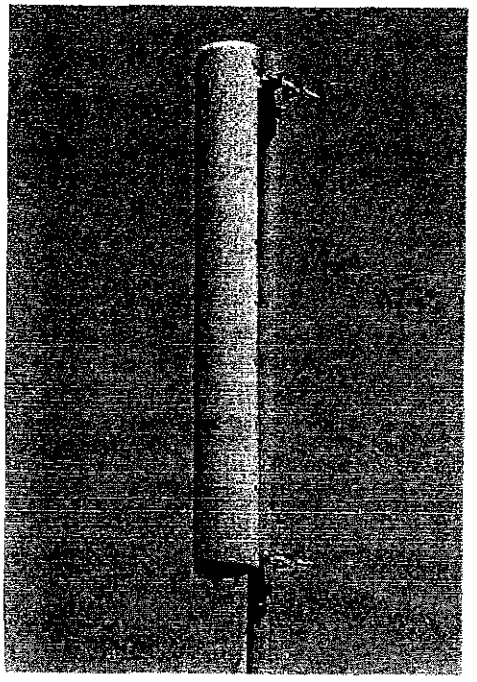
Horizontal



Vertical

Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back Ratio.



Amphenol Antel's Exclusive 3T (True Transmission Line Technology) Antenna Design:

- Watercut brass feedline assembly for consistent performance.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad bandwidth and superior performance.
- Air as insulation for virtually no internal signal loss.

This Amphenol Antel antenna is under a five-year limited warranty for repair or replacement.

Antenna can be ordered with bottom-fed or center-fed connector. For center-fed connector, order model number BXA-185063/8CF + connector (NE, E-DIN)

Example: BXA-185063/8CF E-DIN

1850-1990 MHz

1300 Capital Drive Rockford, IL 61109 Toll-Free (888) 417-9562 Tel. (815) 399-0001
Fax. (815) 399-0156 Email: antel@antelinc.com www.antelinc.com

Amphenol Antel, Inc.
The Antenna Technology Company

Revision Date: 6/19/06

EXHIBIT F

Slant +/- 45° Dual Polarized, Panel 63° / 13 dBd

BXA-80063/4CF ___

When ordering replace "___" with connector type.

Mechanical specifications

	Length	1205 mm	47.4 in
	Width	285 mm	11.2 in
	Depth	126 mm	5.0 in
	Depth with z-bracket	166 mm	6.5 in
4)	Weight	4.5 kg	9.9 lbs
	Wind Area		
	Fore/Aft	0.36 m^2	3.9 ft^2
	Side	0.15 m^2	1.7 ft^2
	Rated Wind Velocity (Safety factor 2.0)	>653 km/hr	>406 mph
	Wind Load @ 100 mph (161 km/hr)		
	Fore/Aft	522 N	117 lbs
	Side	244 N	54.5 lbs

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome.

Mounting and Downtilting

Mounting brackets attach to a pipe diameter of Ø50-160 mm (2.0-6.3 in).

Mounting bracket kit #36210002
Downtilt bracket kit #36114003

Electrical specifications

	Frequency Range	806-900 MHz*
	Impedance	50Ω
3)	Connector(s)	NE or E-DIN 2 ports / center
1)	VSWR	≤ 1.4:1
	Polarization	Slant ± 45°
1)	Isolation Between Ports	< -30 dB
1)	Gain	13 dBd
2)	Power Rating	500 W
1)	Half Power Angle	
	H-Plane	63°
	E-Plane	15°
1)	Electrical Downtilt	0°
1)	Null Fill	5%
	Lightning Protection	Direct Ground

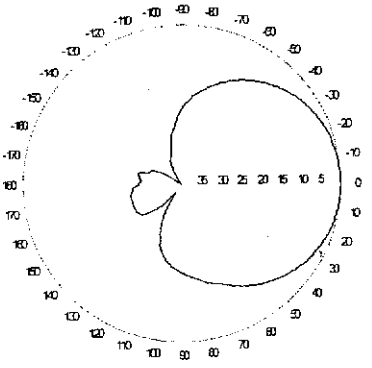
*Also available for 870-960 MHz. Refer to model BXA-87063/4CF _.

Patented Dipole Design: U.S. Patent No. 6,608,600 B2

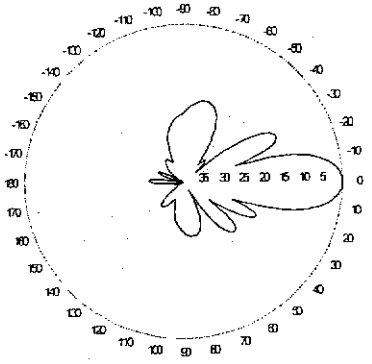
1) Typical values.
2) Power rating limited by connector only.
3) NE indicates an elongated N connector. E-DIN indicates an elongated DIN connector.
4) The antenna weight listed above does not include the bracket weight.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

Radiation pattern[1)]



Horizontal



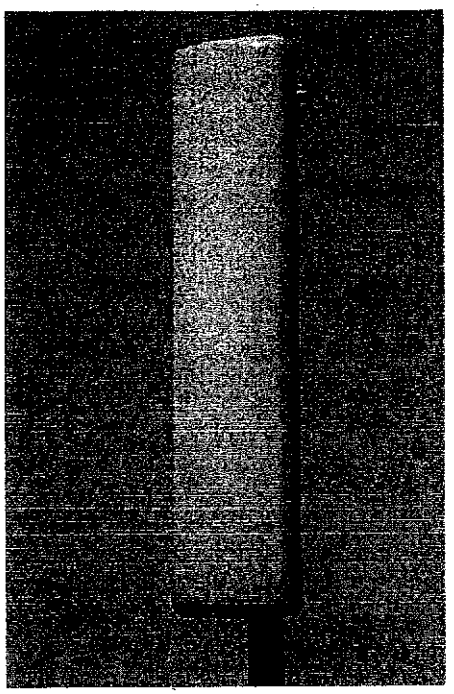
Vertical

Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back ratio.

CF Denotes a Center-Fed Connector.

806-900 MHz



Amphenol Antel's Exclusive 3T (True Transmission Line Technology) Antenna Design:

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- A non-collinear system with access to every radiating element for broad bandwidth and superior performance.
- Air as insulation for virtually no internal signal loss.

This Amphenol Antel antenna is under a five-year limited warranty for repair or replacement.

Antenna available with center-fed connectors only.

Amphenol Antel, Inc. 1300 Capital Drive Rockford, Illinois 61109 USA Tel. (815) 399-0001
Toll-Free (888) 417-9562 Fax. (815) 399-0156 antel@-49-c.com www.antelinc.com

Amphenol Antel, Inc.
The Antenna Technology Company

Revision Date: 7/3/07

EXHIBIT F

EMS Wireless

RR65-18-XXDPL2

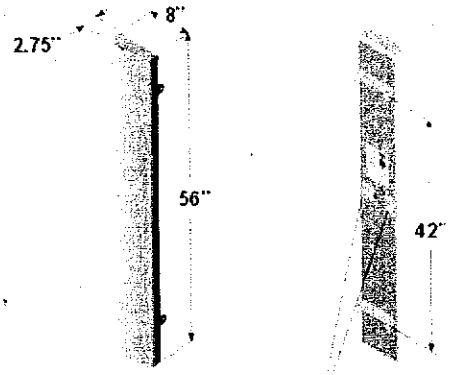
DualPol® Polarization

1850 MHz - 1990 MHz

OptiRange™ Suppressor™

Electrical Specifications

Azimuth Beamwidth (-3 dB)	65°
Elevation Beamwidth(-3 dB)	6°
Elevation Sidelobes (Upper)	≥ 18 dB
Gain	17.5 dBi (15.4 dBd)
Polarization	Dual Linear Slant (± 45°)
Port-to-Port Isolation	≥ 30 dB
Front-to-Back Ratio	≥ 30 dB
Electrical Downtilt Options	0°, 2°, 4°, 6°
VSWR	1.35:1 Max
Connectors	2; 7-16 DIN (female)
Power Handling	250 Watts CW
Passive Intermodulation	≤ -150 dBc [2 x 20 W (+ 43 dBm)]
Lightning Protection	Chassis Ground



Mechanical Specifications

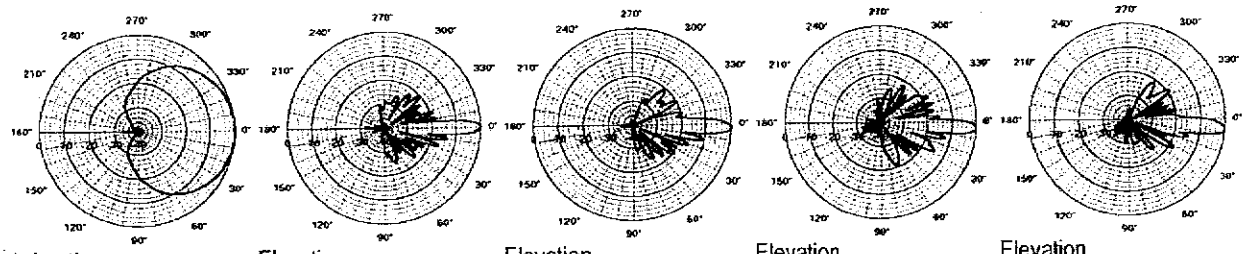
Dimensions (L x W x D)	56 in x 8 in x 2.75 in (142 cm x 20.3 cm x 7.0 cm)
Rated Wind Velocity	150 mph (241 km/hr)
Equivalent Flat Plate Area	3.1ft² (.29 m²)
Front Wind Load @ 100 mph (161 kph)	90 lbs (400 N)
Side Wind Load @ 100 mph (161 kph)	31 lbs (139 N)
Weight	18 lbs (8.2 kg)

Mounting Options

MTG-P00-10, MTG-S02-10, MTG-DXX-20*, MTG-CXX-10*, MTG-C02-10, MTG-TXX-10*

*Note: *Model number shown represents a series of products. See Mounting Options section for specific model number.*

Patterns

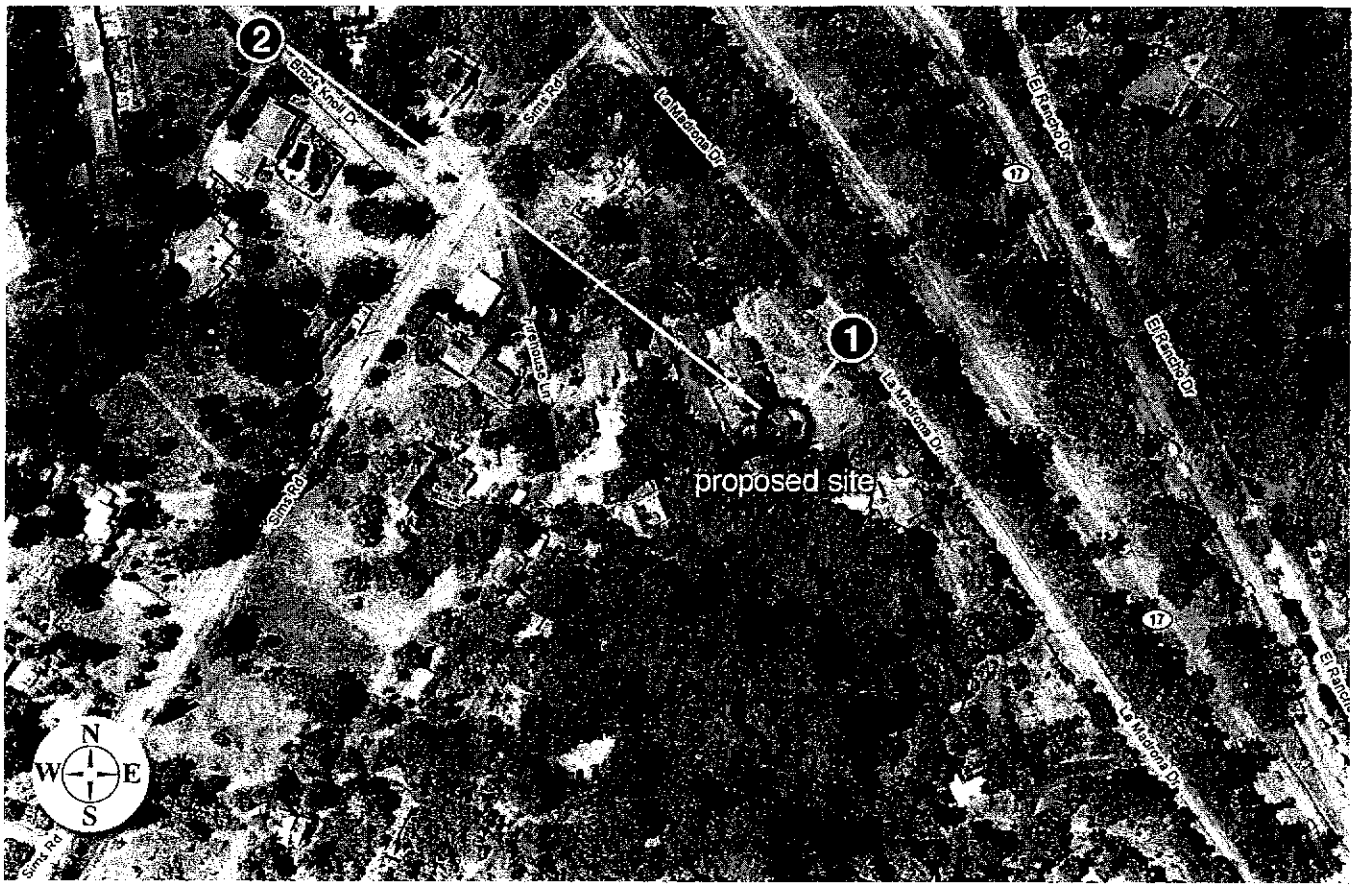


Azimuth | Elevation 0° Downtilt | Elevation 2° Downtilt | Elevation 4° Downtilt | Elevation 6° Downtilt

Revised 04/05/02

+1 770.582.0555 ext. 5310 • Fax +1 770.729.0036
www.emswireless.com

EXHIBIT F



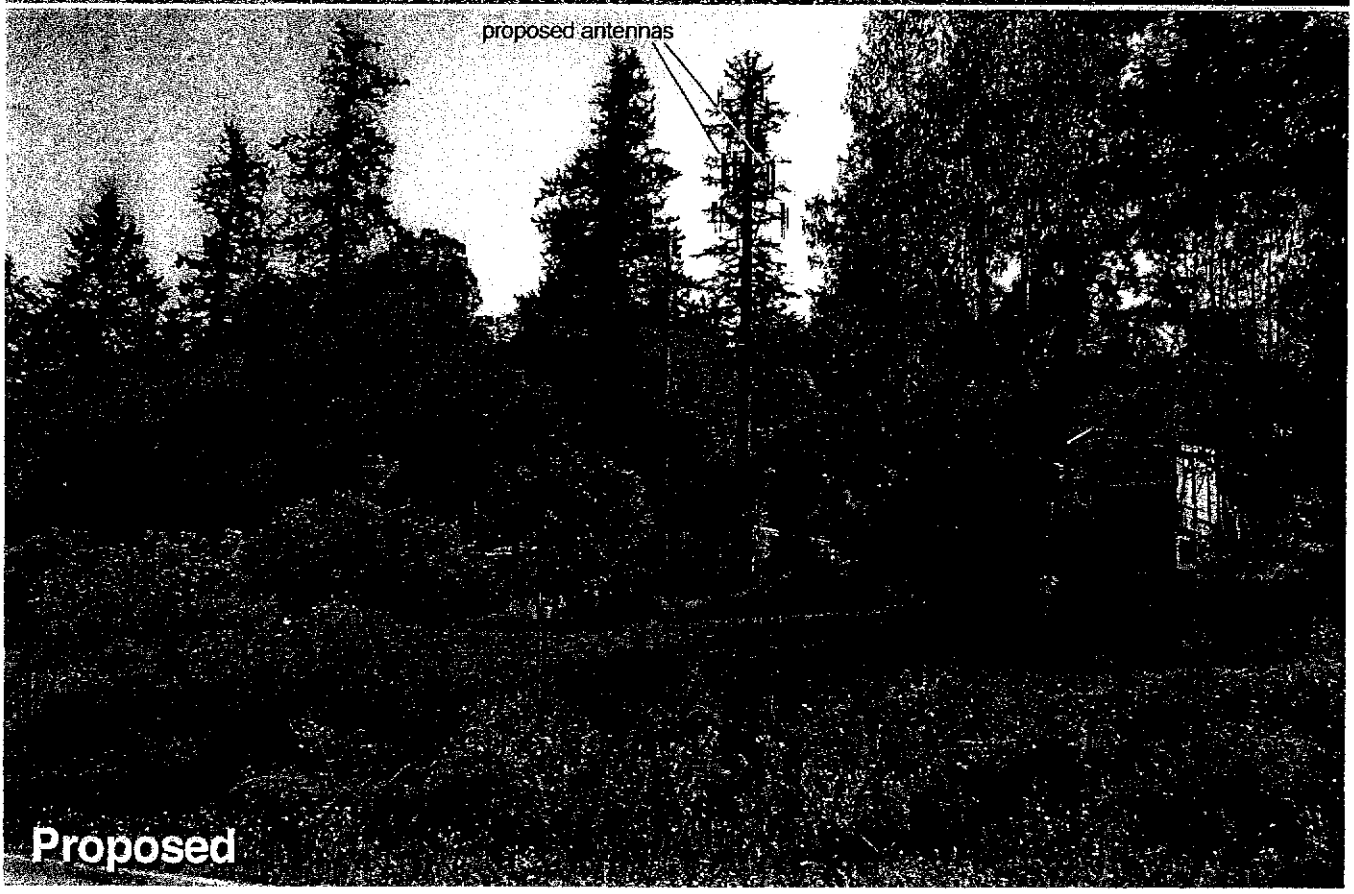
at&t **Firehouse Lane** **Site # CNU3487** **Aerial Map**

155 Firehouse Lane
Scotts Valley, CA 95060

5/14/08

Applied Imagination 510 914-0500

EXHIBIT G



at&t

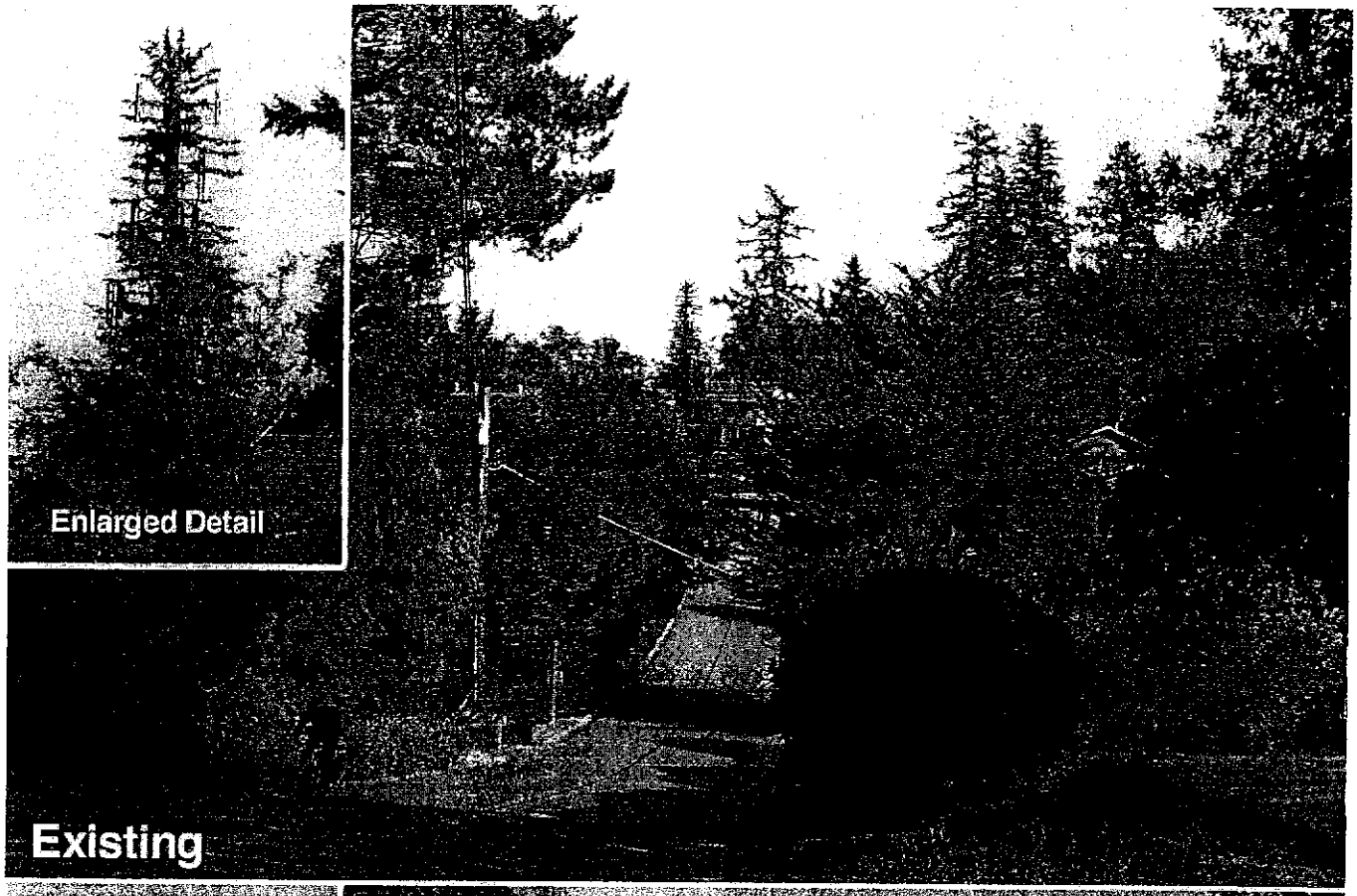
Firehouse Lane **Site # CNU3487** **Looking West from La Madrona Drive**

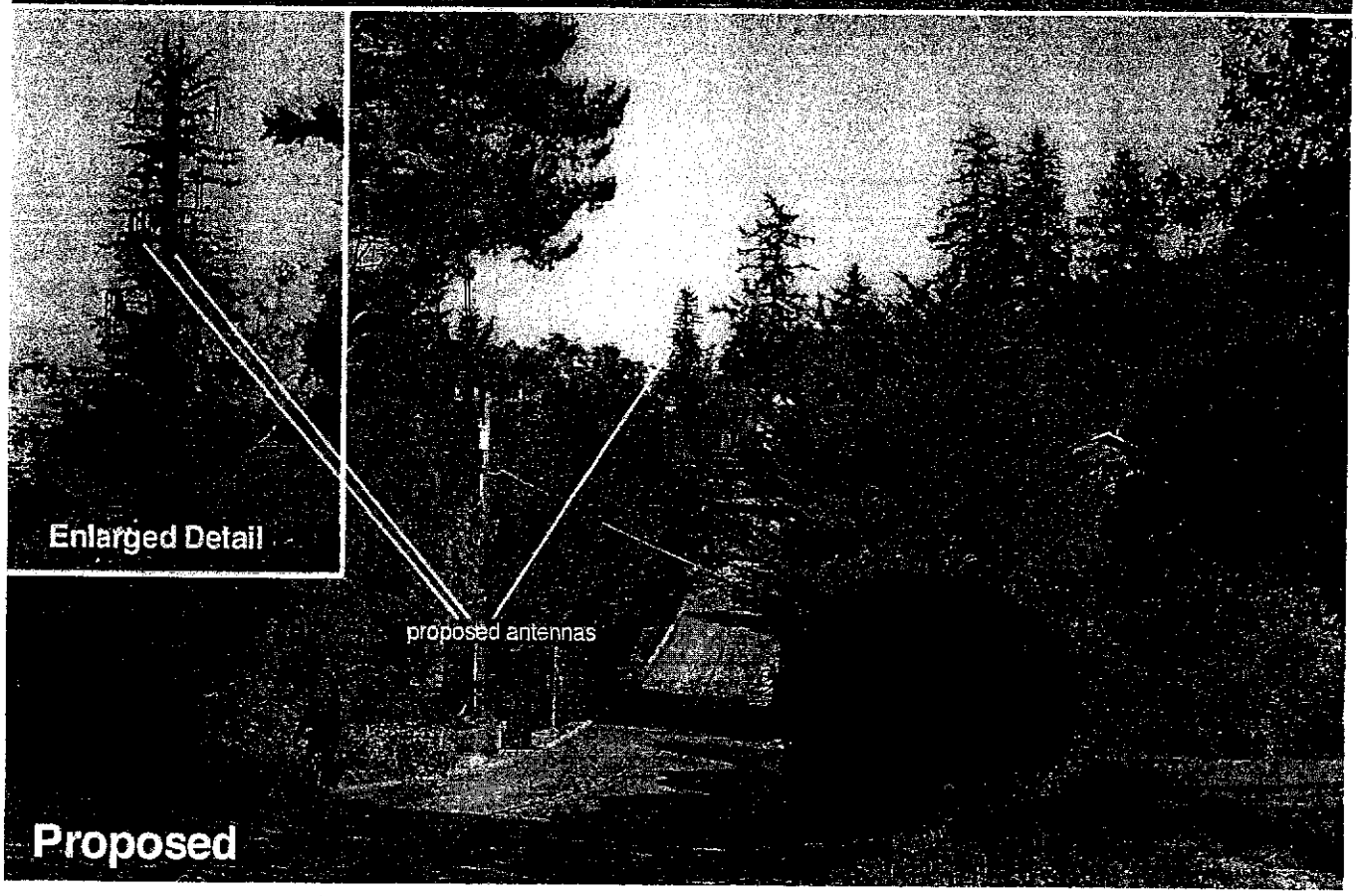
155 Firehouse Lane
Scotts Valley, CA 95060

5/14/08

Applied Imagination 510 914-0500

EXHIBIT G





at&t

Firehouse Lane | Site # CNU3487 | Looking Southeast from Brook Knoll Drive

155 Firehouse Lane
Scotts Valley, CA 95060

5/14/08

Applied Imagination 510 914-0500

EXHIBIT G

Jodi M. McGraw, Ph.D.
Population and Community Ecologist
PO Box 883 Boulder Creek, CA 95006
phone/fax: 831-338-1990 • jodimcgraw@sbcglobal.net

September 26, 2008

Ms. Robin Bolster-Grant
Planner
Santa Cruz County
701 Ocean Street, 4th Floor
Santa Cruz, CA 95060

RE: Review of AT&T Mobility's Proposed Installation and Maintenance of New Cellular Antenna Equipment on Firehouse Lane, Santa Cruz County, California (CNU3487)

Dear Ms. Bolster-Grant:

On behalf of AT&T Mobility and Black Dot Wireless, I have reviewed AT&T Mobility's plans to install new cellular telephone communication equipment at the antenna facility located at 155 Firehouse Lane in Santa Cruz County (APN: 067-202-64). This letter describes my evaluation of the habitat conditions within the site, to determine whether the AT&T Mobility's proposed project will impact any special status species or sensitive habitat.

This letter report contains four sections:

1. Project Review Methods: Outlines the steps I took to review the proposed project;
2. Site Description: Describes the existing site conditions, including facilities, habitat, and occurrences of rare species;
3. Project Description: Outlines the proposed equipment installation and maintenance methods; and
4. Recommended Measures to Avoid Impacts: Identifies the work crew training and monitoring measures designed to ensure impacts to special status species and sensitive habitats are successfully avoided.

Project Review Methods

In order to evaluate the potential effects of AT&T Mobility's proposed equipment installation on the sensitive biotic resources, I conducted the following:

1. I reviewed the project design (zoning) plans provided by AT&T Mobility on August 27, 2008 and dated August 4, 2008;

EXHIBIT H

2. I met with AT&T Mobility's Construction Project Manager William Mike Besecker at the project site on September 25, 2008, to examine the habitat conditions within the project area, and to discuss the steps involved in installing and maintaining the equipment, in order to evaluate potential impacts on the special status species and sensitive habitat.

Site Description

Existing Facilities

The antenna site is located on the southeastern boundary of the approximately 2 acre parcel located at 155 Firehouse Lane, which is within the unincorporated portion of Santa Cruz County (APN: 067-202-64) near the Pasatiempo neighborhood. The site is accessed from El Rancho Road via an asphalt driveway, from which narrow, unpaved footpaths provide pedestrian access to site. The antenna site features two monopoles and three compounds: adjacent, fenced enclosures, each of which contains an array of telecommunications equipment including cabinets and cable trays. The approximately 16' x 9' northeastern compound ("Metro PCS compound") where this project is to take place currently features two equipment cabinets on individual cement slabs and a single cable tray. The area not covered by cement is completely covered by 6" deep granite drain rock.

Habitat Conditions and Species Occurrences

The parcel on which the antenna site is located occurs at a transition zone between two mapped soil types (USDA 1980):

1. Zayante soil on 5-30% slopes covers the northern approximately 85% of the parcel
2. Ben Lomond-Felton Complex covers 15% of the parcel, including the antenna site.

In central Santa Cruz County, the Zayante sand soil supports special status plants and animals endemic to the Santa Cruz Sandhills (Table 1). Searches of existing records reveal that the Mount Hermon June beetle has been observed in two locations within 1,000 feet of the site (BUGGY 2004, J. McGraw, unpublished data), while the antenna site is near a historic reported Zayante band-winged grasshopper observation (CNDDB 2008).

My examination of the exposed soil within the area surrounding the antenna facility revealed the occurrence of a medium gray-brown sand soil characteristic of the Zayante sand soil on the north side of the antenna facility. The area south of the antenna facility supported a gray-brown sandy loam with higher organic matter, which is characteristic of soils in the Ben Lomond-Felton Complex (USDA 1980). These observations confirm that the parcel is on a soil transition area.

The vegetation surrounding the antenna site has been altered by the land use, including construction and maintenance of the facility as well as residential activities on the larger parcel. Remnant native plant species are characteristic of Mixed Evergreen Forest and include coast live oak (*Quercus agrifolia*), coast redwood (*Sequoia sempervirens*), and Douglas fir (*Psendotsuga menziessii*). I did not observe any native plants that are indicators of the native Sandhills communities or rare Sandhills plants (Table 1, McGraw 2004). Instead, the open, disturbed areas feature primarily non-

EXHIBIT H

Table 1: Special status species and habitats occurring on Zayante soils in central Santa Cruz County (McGraw 2004).

Common Name	Scientific Name	Status
Zayante band-winged grasshopper	*Trimerotropis infantilis*	Federally Endangered
Mount Hermon June beetle	*Polyphylla barbata*	Federally Endangered
Ben Lomond spineflower	*Chorizanthe pungens* var. *hartwegiana*	Federally Endangered; CNPS 1B (rare or endangered)
Santa Cruz wallflower	*Erysimum teretifolium*	Federally Endangered; California Endangered; CNPS 1B
silverleaf manzanita	*Arctostaphylos silvicola*	CNPS 1B
Ben Lomond buckwheat	*Eriogonum nudum* var. *decurrens*	CNPS 1B
maritime coast range ponderosa pine forest	na	California Natural Diversity Database Sensitive Community
northern maritime chaparral	na	California Natural Diversity Database Sensitive Community

native plants characteristic of Mixed Evergreen Forest where the tree canopy has been removed. As noted above, the compound within which the project is proposed does not feature any vegetation.

Equipment Installation and Maintenance

To enhance the personal cellular telephone service that it provides its customers, AT&T Mobility is seeking to install the following new equipment within the Metro PCS compound at the 155 Firehouse Land antenna facility:

1. A new equipment cabinet on a new concrete slab
2. Three (3) new antennas on the existing monopole

Coaxial cable linking the cabinet to the antenna will be routed through the existing cable trays, conduit, and mounting pipe. More information about the proposed project can be found in the site plans.

Methods to Avoid Impacts

Based on my evaluation of the habitat conditions within the project site, and the proposed construction activities, it is my assessment that the new equipment can be installed and maintained without impacting special status species or sensitive habitat. The project compound does not support sensitive habitat or appropriate habitat for rare species, including the two endangered

EXHIBIT H

insects listed above, due to the absence of vegetation and thick layer of pre-existing drain rock. Therefore, activities proposed to take place within the compound, including the installation of the new cabinet, are not likely to impact special status species.

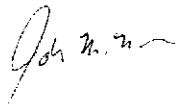
The area surrounding the fenced compounds may support habitat for the Mount Hermon June beetle—a fossorial insect that inhabits loose, sandy soils in the region. The following steps should be taken during project construction and maintenance to avoid impacts to the Mount Hermon June beetle when working *outside* of the compound.

1. Prior to inception of the project, a biologist with expertise in the ecology of the special status species and communities of the Sandhills should meet with the project work crew to discuss the following steps to avoid impacts to the Mount Hermon June beetle:
    a. A boom truck will be used to lower the cabinet from the existing roads into the Metro PCS compound for installation.
    b. Work crews will travel to the Metro PCS compound and the fenced antenna compound using existing roads and foot paths.
    c. Work crew access will be confined to the project area, which will consist of the Metro PCS Compound, the adjacent fenced antenna area, and the existing roads and foot paths used to access the compounds.
2. The qualified biologist should inspect the project site periodically during project construction, to ensure that the avoidance techniques are being implemented.
3. The qualified biologist should evaluate site conditions following completion of project construction to evaluate whether inadvertent impacts to the special status species habitat have been avoided.

In conclusion, it is my assessment that AT&T Mobility's proposed methods to install and maintain equipment at the existing antenna facility at 155 Firehouse Lane in Santa Cruz County, when conducted with the recommended pre-construction training and monitoring, will allow AT&T Mobility to implement their project while avoiding impacts to the special status species that may occur within the project site. To provide assurance that their project complies with the federal Endangered Species Act, AT&T Mobility might wish to request a letter from the US Fish and Wildlife Service concurring that the proposed project will not result in impacts to endangered species, prior to commencing with project construction.

Please do not hesitate to contact me if you have any questions about my review or if I can assist you further.

Sincerely,



Jodi M. McGraw

cc: Mr. James Cosgrove, Black Dot Wireless

EXHIBIT H

References

BUGGY. 2004. Report of Occurrences for the Mount Hermon June beetle from the BUGGY Data Base. Entomological Consulting Services, Ltd., Pleasant Hill, CA. May 2004.

CNDDB. 2008. California Natural Diversity Database. Electronic database of rare species and habitat occurrences updated as of September 1, 2008.

McGraw, J. M. 2004b. Sandhills conservation and management plan: a strategy for preserving native biodiversity in the Santa Cruz sandhills. Report submitted to the Land Trust of Santa Cruz County, Santa Cruz, CA.

U.S. Department of Agriculture. 1980. Soil Survey of Santa Cruz County. Soil Conservation Service, United States Department of Agriculture and University of California Agriculture.

EXHIBIT H

COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT
701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123
TOM BURNS, PLANNING DIRECTOR

September 29, 2008

AGENDA DATE: October 21,2008

Board of Supervisors
County of Santa Cruz
701 Ocean Street
Santa Cruz, CA 95060

SUBJECT: Proposed County Code Amendments to Reduce the Visual Impacts of Wireless Communication Facilities

Members of the Board:

As you recall, on December 4, 2007, your Board considered, and heard testimony on, various issues related to the County's regulations regarding wireless communication facilities (WCFs), of which cell towers are one type. Among the concerns expressed were concerns about the visual impacts of some WCFs. As a result of that hearing, your Board directed that several amendments be made to the County's WCF Ordinance (County Code Sections 13.10.660-668) to reduce the visual impacts of WCFs at co-location/multi-carrier sites and near residences or schools. On March 4, 2008, your Board gave conceptual approval to these ordinance amendments. On September 10, 2008, this item was considered by the Planning Commission and was recommended for approval by your Board. This item is now being returned to your Board for your consideration of final approval.

Visual Impacts From WCFs

As WCFs have proliferated throughout the County in recent years it has become apparent that, despite the numerous visual impact avoidance protections contained in the current WCF Ordinance, there are numerous examples of significant visual blight that have resulted from the placement of WCFs over the years (see Attachments 3 and 4 for photographic examples). This has been a particular problem at certain co-location/multi-carrier sites throughout the County, where two or more wireless communication carriers concentrate their antennas and related equipment onto one tower, or onto multiple towers all located on a single site/parcel. Unsightly WCFs (including both cell towers and roof-mounted WCFs) have also become a problem in populated and/or high traffic areas, such as areas near homes and schools. To remedy these visual impact issues, your Board directed staff to amend the County's WCF Ordinance to put a limit on the number of antennas and equipment that can be located in one place. Your Board also directed that the WCF Ordinance's current 300-foot (or 5 times the height of the tower) visual impact buffer between cell towers and residences be expanded in scope to include other types of WCFs (i.e., roof-mounts), and that the County enforce a similar buffer in another high traffic/visibility area – namely the areas surrounding public schools.

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EXHIBIT I

Proposed WCF Ordinance Amendments

To address visual impacts from WCFs, this staff report presents proposed ordinance amendments to: (1) apply a 300-foot visual impact buffer between roof-mounted wireless communication facilities (WCFs) and residential areas, unless it can be shown there will not be a visual impact; (2) apply a 300-foot visual impact buffer between WCFs and public schools, unless it can be shown there will not be a visual impact; and (3) limit the number of antennas at co-location/multi-carrier WCF sites to no more than nine antennas, with no more than three separate equipment cabinets/shelters, on any single parcel unless it can be shown there will not be a visual impact. Proposed approaches for accomplishing these goals and a discussion of related issues are presented below.

1. Application of Visual Impact Buffer Between Roof-Mounted WCFs and Residential Areas

   Currently the County's WCF Ordinance contains a limited prohibition against the placement of new WCF towers (but not roof-mounted WCFs) within 300-feet (or 5 times the height of the tower, whichever is greater) of residentially-zoned parcels, on the basis of the potential negative visual impacts such towers would have on nearby residences. This visual impact buffer can be reduced or eliminated, through a waiver, if it can be shown that the WCF will not be readily visible from nearby residences, or if the applicant can prove that the proposed location is necessary for their coverage needs and is the environmentally superior alternative.

   On March 4, 2008, your Board directed staff amend the WCF Ordinance to apply the same visual impact buffer to new roof-mounted WCFs, as well as to new cell towers. This change was made because, even though these types of WCFs are confined to rooftops, they can still create a visual clutter that detrimentally affects the views from surrounding residences, particularly if such residences are located even with or above the roof-level of the WCF site (see last two photos in Attachment 3 for local examples, and Attachment 4 for non-local examples, since there are few examples of local un-camouflaged roof-mounted WCFs). To implement such a change, staff proposes that the WCF be amended to add roof-mounted WCFs as a type of WCF that is subject to the residential visual impact buffer (see Exhibit I-A of Attachment 1). The proposed amendment contains a waiver for reducing/eliminating the 300-foot setback in situations where there will be no visual impact.

2. Limiting the Number of Antennas/Equipment at Any Single Site

   Currently the County's WCF Ordinance tends to encourage the co-location of multiple WCFs on a single tower, so as to minimize the proliferation of potentially unsightly cell towers throughout the community. In several locations throughout the unincorporated area multiple cell towers exist on the same parcel. These co-location and multi-carrier sites can have between two and five carriers and up to 25 or more antennas each. However, it has become apparent that such concentrations of WCFs can have detrimental visual impacts if too many WCF antennas and their associated equipment are crowded together in one place (see Attachment 3 for photos of over-cluttered co-

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EXHIBIT I

location/multi-user sites). Therefore, your Board directed that the WCF Ordinance be amended to place a limit on the number of WCF antennas and equipment shelters that can be located at any single site. By implementing this change, your Board is still encouraging co-locations, but only up to a certain point. The proposed amendments to the WCF Ordinance would limit the number of WCF antennaslequipment allowed at any one location (i.e., on the same parcel) to no more than nine WCF antennas and three equipment shelters/enclosures, limits which staff believes would allow for a reasonable concentration of WCFs at a single site without creating a significant visual blight. Staff recommends that an exception to this requirement be possible if the applicant can show that there would be no (or minimal) additional visual impacts from a proposed co-location or multi-user site with more than nine panel antennas or three equipment shelters/enclosures. This would place a reasonable limit, generally allowing a single tower/pole with multiple carriers, which would result in a reduced visual impact at multi-carrier sites. It is proposed that existing co-location/multi-carrier sites would be "grandfathered-in" so that such sites would not be rendered non-conforming, so as not to overly burden the WCF carriers currently using such sites.

3. Requiring a Buffer Between WCFs and Public Schools

The County WCF Ordinance currently prohibits WCFs from being located on school grounds, but does not prohibit them from being located near or adjacent to schools. Since children in public schools are involuntarily subjected to the visual blight that WCFs near public schools can create, it is reasonable to restrict WCFs near public schools. To further reduce visual impacts from WCFs in the well populated/high traffic areas near schools, on March 4, 2008, your Board directed that the WCF Ordinance be amended to prohibit new WCF towers and visible roof-mounted WCFs within 300-feet (or five times the height of the tower, whichever is greater) of public schools, unless it can be shown that there will be no visual impact. To implement such a change, staff proposes that the WCF Ordinance be amended to require a visual impact buffer between WCFs and schools as well as residences (see Exhibit I-A of Attachment I).

Environmental Review

The proposed WCF Ordinance amendments have undergone environmental review and have been found to have no significant negative environmental impacts and to be consistent with the California Environmental Quality Act (CEQA). Staff has prepared a CEQA Initial Study (Attachment 6), which has undergone its 28-day review period, and a CEQA Negative Declaration has been proposed for your Board's approval.

Local Coastal Program Consistency

The proposed amendments will not result in any loss of agricultural land, any loss of coastal access, or any negative impacts to public viewsheds within the Coastal Zone. The amendments therefore meet the requirements of, and are consistent with, the County's certified Local Coastal Program (LCP) and the California Coastal Act.

Planning Commission Recommendation

At a duly noticed public hearing on September 10, 2008, the Planning Commission considered the proposed amendments to the WCF Ordinance and voted unanimously to recommend their approval by your Board (see Attachments 7 and 8)for Planning Commission Resolution and meeting minutes).

Pending Applications that May be Impacted By Proposed Ordinance Changes

There are several pending applications for WCF co-locations that may be impacted by the proposed WCF Ordinance amendments (see Attachment 10 for list). Staff recommends that the new regulations apply to all new applicable WCF applications that have not yet been deemed complete on the effective date of the proposed ordinance change, but that any application deemed complete prior to that date be reviewed under the existing code language.

Recommendation

On March 4, 2008, your Board directed that several amendments be made to the County's Wireless Communication Facilities (WCF) Ordinance (County Code Sections 13.10.660-668) to reduce the visual impacts of WCFs at multi-carrier sites and near residences and schools. Staff has proposed recommended amendments to the WCF Ordinance that would implement your Board's direction, proposed to go into effect outside the Coastal Zone 31-days after your Board's approval, and within the Coastal Zone after certification by the Coastal Commission.

It is therefore RECOMMENDED that your Board take the following actions:

1. Conduct a Public Hearing;

2. Adopt the attached Resolution (Attachment 1) approving the proposed amendments to the County's Wireless Communication Facilities (WCF) Ordinance, as a Local Coastal Program amendment, to reduce the visual impacts of WCFs at co-location/multi-carrier sites, and near residences and schools;

3. Approve the proposed ordinance (Attachment 2) amending the County's Wireless Communication Facilities (WCF) Ordinance to reduce the visual impacts of WCFs at co-location/multi-carrier sites, and near residences and schools; to be effective outside the Coastal Zone on the 31st day after adoption, and effective inside the Coastal Zone upon Coastal Commission certification;

4. Certify the proposed CEQA Negative Declaration (Attachment 6);

5. Direct staff to submit the proposed ordinance amendments to the Coastal Commission, as part of the next Coastal "Rounds" package; and

6. Direct staff to apply the new regulations only to applicable WCF applications that have not yet been deemed complete by the effective date of the ordinance amendment.

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EXHIBIT 1

Sincerely,

Tom Burns
Planning Director

RECOMMENDED:

SUSAN A. MAURIELLO
County Administrative Officer

Attachments:

1. Resolution Approving Proposed County Code Amendments

   Exhibit 1-A: Proposed Amendments to County's Wireless Communication Facilities (WCF) Ordinance (Strike-through/Underlined Version)

2. Ordinance Approving Proposed Amendments to County's Wireless Communication Facilities (WCF) Ordinance (Clean Copy)
3. Local Photographic Examples of Unsightly Co-location/Multi-Carrier and Roof-Mount WCF Sites
4. Non-Local Photographic Examples of Unsightly Roof-Mounted WCFs
5. CEQA Initial Study
6. Proposed CEQA Negative Declaration
7. Planning Commission Resolution
8. Planning Commission Meeting Minutes from September 10, 2008
9. Planning Commission Staff Report (on file with Clerk of the Board)
10. List of pending WCF co-location applications that may be affected by ordinance changes

cc: County Counsel
California Coastal Commission
Robert Smith, Crown Castle, Inc.

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EXHIBIT 1

EXHIBIT 1-A

ORDINANCE NO. _____

AN ORDINANCE AMENDING CHAPTER 13.10 OF THE SANTA CRUZ COUNTY CODE TO REDUCE THE VISUAL IMPACT OF WIRELESS COMMUNICATION FACILITIES (Strike-Through/Underline Version)

The Board of Supervisors of the County of Santa Cruz ordains as follows:

SECTION I

Subsection (3) of Subdivision (c) of Section 13.10.661 of the Santa Cruz County Code is hereby amended, to read as follows:

(3) Exceptions to Restricted Area Prohibition. Wireless communication facilities ***(WCFs)*** that are co-located upon existing wireless communication facilities/towers or other utility towers/poles (e.g., P.G.&E. poles), and which do not significantly increase the visual impact of the existing facility/tower/pole, are allowed in the restricted zoning districts listed ***in (c)(1)*** above. ***Proposed new wireless communication facilities at co-location/multi-carrier sites that would result in more than nine (9) total individual antennas, and/or more than three (3) above-ground equipment enclosuredshelters, located on the same parcel are considered to result in significant visual impacts and are prohibited, unless the applicant can prove that the proposed additional antennas/equipment will be camouflaged or otherwise made inconspicuous such that additional visual impacts are not created. Existing legal co-location/multi-carrier WCF sites that exceed these limits are allowed to retain their current number of antennas and equipment shelters/enclosures.*** Applicants proposing new non-collocated wireless communication facilities in the Restricted Areas must submit as part of their application an Alternatives Analysis, as described in Section 13.10.662(c) below. In addition to complying with the remainder of Sections 13.10.660 through 13.10.668 inclusive, non-collocated wireless communication facilities may be sited in the restricted zoning districts listed above only in situations where the applicant can prove that:

(A) The proposed wireless communication facility would eliminate or substantially reduce one or more significant gaps in the applicant carrier's network; and

(B) There are no viable, technically feasible, and environmentally (e.g., visually) equivalent or superior potential alternatives (i.e., sites and/or facility types and/or designs) outside the prohibited and restricted areas identified in Sections 13.10.661(b) and 13.10.661(c)) that could eliminate or substantially reduce said significant gap(s).

SECTION II

Subdivision (g) of Section 13.10.661 of the Santa Cruz County Code is hereby amended, to read as follows:

(g) Co-Location. Co-location of new wireless communication facilities into/onto existing wireless communication facilities and/or existing telecommunication

towers is generally encouraged *if it does not create significant visual impacts. Proposed new wireless communication facilities at co-location/multi-carrier sites that would result in more than nine (9) total individual antennas, and/or more than three (3) above-ground equipment enclosures/shelters, located on the same parcel are considered to result in significant visual impacts and are prohibited, unless the applicant can prove that the proposed additional antennas/equipment will be camouflaged or otherwise made inconspicuous such that additional visual impacts are not created. Existing legal co-location/multi-carrier WCF sites that exceed these limits are allowed to retain their current number of antennas and equipment shelters/enclosures.* Co-location may require that height extensions be made to existing towers to accommodate additional users, or may involve constructing new multi-user capacity towers that replace existing single-user capacity towers. Where the visual impact of an existing towedfacility must be increased to allow for co-location, the potential increased visual impact shall be weighed against the potential visual impact of constructing a new separate towedfacility nearby. Where one or more wireless communication towedfacilities already exist on the proposed site location, co-location shall be required if it will not significantly increase the visual impact of the existing facilities? *or result in more than nine total individual antenna panels and/or three above-ground equipment enclosures/shelters located on the same parcel, unless the applicant can prove that the proposed additional antennas/equipment will be camouflaged or otherwise made inconspicuous such that additional visual impacts are not created.* This may require that the existing tower(s) on the site be dismantled and its antennas be mounted upon the new tower, particularly if the new tower would be less visually obtrusive than the existing tower(s). If a co-location agreement cannot be obtained, or if co-location is determined to be technically infeasible, documentation of the effort and the reasons why co-location was not possible shall be submitted.

SECTION III

Subsection (2) of Subdivision (a) of Section 13.10.663 of the Santa Cruz County Code is hereby amended, to read as follows:

(2) Co-location. Co-location is generally encouraged in situations where it is the least visually obtrusive option, such as when increasing the height/bulk of an existing tower would result in less visual impact than constructing a new separate tower in a nearby location. *However, proposed new wireless communication facilities at co-location/multi-carrier sites that would result in more than nine (9) total individual antennas, and/or more than three (3) above-ground equipment enclosures/shelters, located on the same parcel are considered to result in significant visual impacts and are prohibited, unless the applicant can prove that the proposed additional antennas/equipment will be camouflaged or otherwise made inconspicuous such that additional visual impacts are not created. Existing legal co-location/multi-carrier WCF sites that exceed these limits are allowed to retain their current number of antennas and equipment shelters/enclosures.*

SECTION IV

Subdivision (9) of Subdivision (a) of Section 13.10.663 of the Santa Cruz County Code is hereby amended, to read as follows:

(9) Visual Impacts to Neighboring Parcels *and Public Schools*. *To* minimize visual impacts to surrounding residential uses *and public primary or secondary schools*, the base of any new freestanding telecommunications tower *or building/roof-mounted wireless communication facility* shall be set back from *the property line of* any residentially zoned parcel*, or the property line for any public primary or secondary school,* a distance equal to five times the height of the tower *if mounted upon a telecommunications tower*, or a minimum of 300 feet, whichever is greater. This requirement may be waived by the decision making body if the applicant can prove that the ~~tower~~ *wireless communication facility* will *be camouflaged or otherwise made inconspicuous such that visual impacts are not created,* ~~not be readily visible from neighboring residential structures~~ or if the applicant can prove that a significant area proposed to be served would otherwise not be provided personal wireless services by the subject carrier, including proving that there are no viable, technically feasible, environmentally equivalent or superior alternative sites outside the prohibited and restricted areas designated in Section 13.10.661(b) and 13.10.661(c)

SECTION V

Subsection (12) of Subdivision (b) of Section 13.10.663 of the Santa Cruz County Code is hereby amended, to read as follows:

(12) Facility and Site Sharing (Co-Location). New wireless communication towers should be designed to accommodate multiple carriers, and/or to be readily modified to accommodate multiple carriers, so as to facilitate future co-locations and thus minimize the need to construct additional towers, *if it will not create significant visual impacts. Proposed new wireless communication facilities at* ***co-location/multi-carrier*** *sites that would result* ~~in~~ *more than nine (9) total individual antennas, and/or more than three (3) above-ground equipment enclosures/shelters, located on the same parcel are considered to result* ~~in~~ *significant visual impacts and are prohibited, unless the applicant can prove that the proposed additional antennas/equipment will be* ***t or othe made inconspicuous such at additional visi impacts*** *are not created. Existing legal* ***co-location/m****ulti-carrier WCF sites that exceed these limits are allowed to retain their current number* ***of*** *antennas and equipment shelters/enclosures.* New telecommunications towers should be designed and constructed to accommodate *up to no more than nine (9) total individual* ~~future additional~~ antennas, *unless the applicant can prove that the additional antennas/equipment will be camouflaged or otherwise made inconspicuous such that additional visual impacts are not created*~~and/or height extensions, as technically feasible~~. New wireless communication facility components, including but not limited to parking areas, access roads, and utilities should also be designed so as not to preclude site sharing by multiple users, as technically feasible, in order to remove potential obstacles to future co-location opportunities. The decision making body may require the facility and site sharing (co-location) measures specified in this section if necessary to comply with the purpose, goals, objectives, policies, standards, and/or requirements of the General Plan/Local Coastal Program, including Sections 13.10.660 through 13.10.668 inclusive and the applicable zoning district standards in any particular case. However, a wireless service provider will not be required to lease more land than is necessary for the proposed use. If room for potential future additional users cannot, for technical reasons,

be accommodated on a new wireless communication tower/facility, written justification stating the reasons why shall be submitted by the applicant. Approvals of wireless communication facilities shall include a requirement that the owner/operator agrees to the following co-location parameters:

(A) To respond in a timely, comprehensive manner to a request for information from a potential co-location applicant, in exchange for a reasonable fee not in excess of the actual cost of preparing a response;

(B) To negotiate in good faith for shared use of the wireless communication facility by third parties; and

(C) To allow shared use of the wireless communication facility if an applicant agrees in writing to pay reasonable charges for co-location.

SECTION VI

This ordinance shall become effective in areas outside the Coastal Zone on the 31st day following adoption, and upon certification by the Coastal Commission for areas inside the Coastal Zone.

PASSED AND ADOPTED this ___ day of _____ 2008, by the Board of Supervisors of the County of Santa **Cruz** by the following vote:

AYES: SUPERVISORS
NOES: SUPERVISORS
ABSENT: SUPERVISORS
ABSTAIN: SUPERVISORS

_____
Chairman of the Board of Supervisors

Attest: _____
Clerk of the Board

APPROVED AS TO FORM: _____
Deputy County Counsel

DISTRIBUTION: County Counsel, CAO, Planning Department

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EXHIBIT 1

ATTACHMENT 10

PENDING CO-LOCATION WCF APPLICATIONS 10-03-08

APP # / DATE	BRIEF DESCRIPTION/ LOCATION	STATUS
1. 07-0211 May 2007	On bldg roof near Rio Del Mar Blvd. at Highway 1.	Incomplete, due for abandonment warning letter
2. 08-0205 Mav 20.2008	Hwy. 17 at Pasatiempo overpass	Incomplete
3. 08-0204 June 26,2008	Near Brooknoll school. Unclear scope: swapping 3 for 3 or adding 3 antenna? New cab.	Incomplete
4. 08-0293 Julv 9.2008	On roof of Dominican Hospital	Incomplete
5. 08-0437 Sept 30,2008	Co-location on existing treepole, 2 other non-stealth monopoles on site, rear of Cabrillo	Incomplete
6. 08-0437 Sept. 29,2008	Cabrillo College, 3 new panels and cabinet	Within 30 day review
7. 08-0255 June 17,2008	Pasatiempo, Kite Hill (Firehouse Lane/Simms Rd.).	Incomplete but prob. can be deemed complete in the next week
8. 08-0232	Trabing Rd. off Hwy. 1 near Mar Monte exit, swap out existing antenna	Complete
9. 08-0207 May 20,2008	East side Highway 17	Pending approval
10. 08-0236 June 4,2008	Rose Acres, Felton	Pending approval
11. 08-0260 June 17.2008	Mt. Roberta, near Scotts Valley	Pending approval

EXHIBIT I

ATTACHMENT 10

PENDING CO-LOCATION WCF APPLICATIONS 10-03-08

APP # / DATE	BRIEF DESCRIPTION/ LOCATION	STATUS
1. 07-0211 May 2007	On bldg roof near Rio Del Mar Blvd. at Highway 1.	Incomplete, due for abandonment warning letter
2. 08-0205 May 20, 2008	Hwy. 17 at Pasatiempo overpass	Incomplete
3. 08-0204 June 26,2008	Near Brooknoll school. Unclear scope: swapping 3 for 3 or adding 3 antenna? New cab.	Incomplete
4. 08-0293 July 9,2008	On roof of Dominican Hospital	Incomplete
5. 08-0437 Sept 30,2008	Co-location on existing treepole, 2 other non-stealth monopoles on site. rear of Cabrillo	Incomplete
6. 08-0437 Sept. 29,2008	Cabrillo College, 3 new panels and cabinet	Within 30 day review
7. 08-0255 June 17.2008	Pasatiempo, Kite Hill (Firehouse Lane/Simms Rd.).	Incomplete but prob. can be deemed complete in the next week
8. 08-0232	Trabing Rd. off Hwy. 1 near Mar Monte exit, swap out existing antenna	Complete
9. 08-0207 May 20,2008	East side Highway 17	Pending approval
10. 08-0236 June 4.2008	Rose Acres, Felton	Pending approval
11. 08-0260 June 17,2008	Mt. Roberta, near Scotts Valley	Pending approval

EXHIBIT I

COUNTY OF SANTA CRUZ | Planning Department

INTEROFFICE MEMO

APPLICATION NO: ~~08-0270~~ 08-0204

Date: July 17, 2008

To: Sheila McDaniel, Project Planner

From: Larry Kasparowitz, Urban Designer

Re: cellular antennae installation at Firehouse Lane, Scotts Valley

COMPLETENESS ITEMS

- *None*

COMPLIANCE ISSUES

Design Review Authority

13.10.663 *General development performance standards for wireless communication facilities.*

Evaluation Criteria	Meets criteria In code(✔)	Does not meet criteria (✔)	Urban Designer's Evaluation
SITE LOCATION			
Visual character of site			
Site location and development of wireless communications facilities shall preserve the visual character, native vegetation and aesthetic values of the parcel on which such facilities are proposed, the *surrounding parcels and road right-of-ways, and the* surrounding land uses to the greatest extent that is technically feasible, and shall minimize visual impacts on surrounding land and land uses to the greatest extent feasible	✔		
Facilities shall be integrated to the maximum extent feasible to the existing characteristics of the site, and every effort shall be made to avoid, or minimize to the maximum extent feasible, visibility of a wireless communication facility within significant public viewsheds.	✔		
Utilization of camouflaging and/or stealth techniques shall be encouraged where appropriate.	✔		
Support facilities shall be integrated to the existing characteristics of the site, so as to minimize visual impact.	✔		

EXHIBIT J

Colocation			
Co-location is generally encouraged in situations where it is the least visually obtrusive option, such as when increasing the height/bulk of an existing tower would result in less visual impact than constructing a new separate tower in a nearby location.	✔		
Site Disturbance			
Disturbance of existing topography and on-site vegetation shall be minimized, unless such disturbance would substantially reduce the visual impacts of the facility.	✔		

Evaluation Criteria	Meets criteria In code (✔)	Does not meet criteria (✔)	Urban Designer's Evaluation
DESIGN REVIEW CRITERIA			
Non-flammable Materials			
All wireless communication facilities shall be constructed of non-flammable material, unless specifically approved and conditioned by the County to be otherwise (e.g., when a wooden structure may be necessary to minimize visual impact).	✔		
Tower Type			
All telecommunication towers shall be self-supporting monopoles except where satisfactory evidence is submitted to the appropriate decision-making body that a non-monopole (such as a guyed or lattice tower) is required or environmentally superior.	✔		
Exterior Finish			
Components of a wireless communication facility which will be viewed against soils, trees, or grasslands, shall be of a color or colors consistent with these landscapes.	✔		
All proposed stealth tree poles (e.g., "monopines") must use bark screening that approximates natural bark for the entire height and circumference of the monopole visible to the public, as technically feasible.	✔		
Visual Impact Mitigation			
Special design of wireless communication facilities may be required to mitigate potentially significant adverse visual impacts, including appropriate camouflaging or utilization of stealth techniques.	✔		

EXHIBIT J

Telecommunication towers designed to look like trees (e.g., "monopines") may be favored on wooded sites with existing similar looking trees where they can be designed to adequately blend with and/or mimic the existing trees. In other cases, stealth-type structures that mimic structures typically found in the built environment where the facility is located may be appropriate (e.g., small scale water towers, barns, and other typical farm-related structures on or near agricultural areas).	✔		
Co-location of a new wireless communication facility onto an existing telecommunication tower shall generally be favored over construction of a new tower.	✔		
Owners/operators of wireless communication towers/facilities are required to maintain the appearance of the tower/facility, as approved, throughout its operational life.	✔		
Public vistas from scenic roads, as designated in General Plan/LCP Section 5.10.10, shall be afforded the highest level of protection.	✔		

PERMIT CONDITIONS / ADDITIONAL INFORMATION

- *None*

EXHIBIT J

COUNTY OF SANTA CRUZ
DISCRETIONARY APPLICATION COMMENTS

Project Planner: Sheila Mcdaniel
Application No.: 08-0204
APN: 067-202-64

Date: April 20, 2009
Time: 09:00:11
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Environmental Planning Completeness Comments

========= UPDATED ON OCTOBER 31, 2008 BY JESSICA L DEGRASSI =========
Previous comment regarding the location of the concrete pad in relation to the existing building onsite has been addressed.

Previous comment regarding the location of this project within Sandhills habitat has not been addressed. Please submit a site assessment from one of the consultants approved for work in Sandhills, either Jodi McGraw or Richard Arnold. This assessment shall determine whether the area contains Sandhills. If Sandhills are present, the biotic consultant will need to prepare recommendations for mitigation of any disturbed areas. ========= UPDATED ON NOVEMBER 4, 2008 BY JESSICA L DEGRASSI =========
Comments addressed, project complete see misc comments for conditions.

Environmental Planning Miscellaneous Comments

========= REVIEW ON OCTOBER 31, 2008 BY JESSICA L DEGRASSI =========
========= UPDATED ON NOVEMBER 4, 2008 BY JESSICA L DEGRASSI =========
The following conditions from the letter by Jodi McGraw dated 9/26/08.

The following steps shall be taken to avoid impacts to the MHJB outside the project compound:

1. Prior to begin of construction, a biologist with knowledge in Sandhills habitat shall meet with project contractor to discuss the following: a. boom truck will lower the cabinet from the existing road into the compound. b. crew will access the compound via existing access roads and paths c. crew will be confined to the project area.

2. The qualified biologist shall inspect the site during construction to ensure avoidance measures have been implemented.

3. The qualified biologist should evaluate the site after project completion to evaluate whether impacts to the sensitive habitat have been avoided.

EXHIBIT J