Case File Number: DR10-290 **April 20, 2011**

Location:	**Skyline Boulevard (located in the Public Right of Way adjacent to 13175 Skyline Boulevard). (See map on reverse)**
Assessors Parcel Numbers:	**(037A-3142-035-00)**
Proposal:	To install a wireless telecommunications facility on an existing PG&E pole; to increase the height of an existing PG&E pole 25' to 39' and install a wireless telecommunication facility consisting of 2 panel antennas mounted at approximately at 31'- 6" pole height; an associated equipment box (6' tall by 18" wide); one battery backup and meter box attached at 7' to 9'-6" height above ground located in public right of way
Applicant:	Extenet Systems.
Contact Person/ Phone Number:	Rick Hirsch (415)377-7826
Owner:	Pacific Gas & Electric.
Case File Number:	**DR10-290**
Planning Permits Required:	Major Regular Design Review to install a wireless Telecommunications Macro Facility to an existing PG&E pole located in the public right of way within a residential zone.
General Plan:	Hillside Residential
Zoning:	RH-1 Hillside Residential (project submitted and deemed complete when the property was in the R-1 One Acre Estate Residential Zone).
Environmental Determination:	Exempt, Section 15301 of the State CEQA Guidelines; minor additions and alterations to an existing facility Exempt, Section 15183 of the State CEQA Guidelines; projects consistent with a community plan, general Plan or zoning.
Historic Status:	Not a Potential Designated Historic Property; Survey rating: n/a
Service Delivery District:	4
City Council District:	6
Date Filed:	3/9/2011
Finality of Decision:	Appealable to City Council within 10 Days
For Further Information:	Contact case planner Jason Madani at **(510) 238-4790** or jsmadani@oaklandnet.com

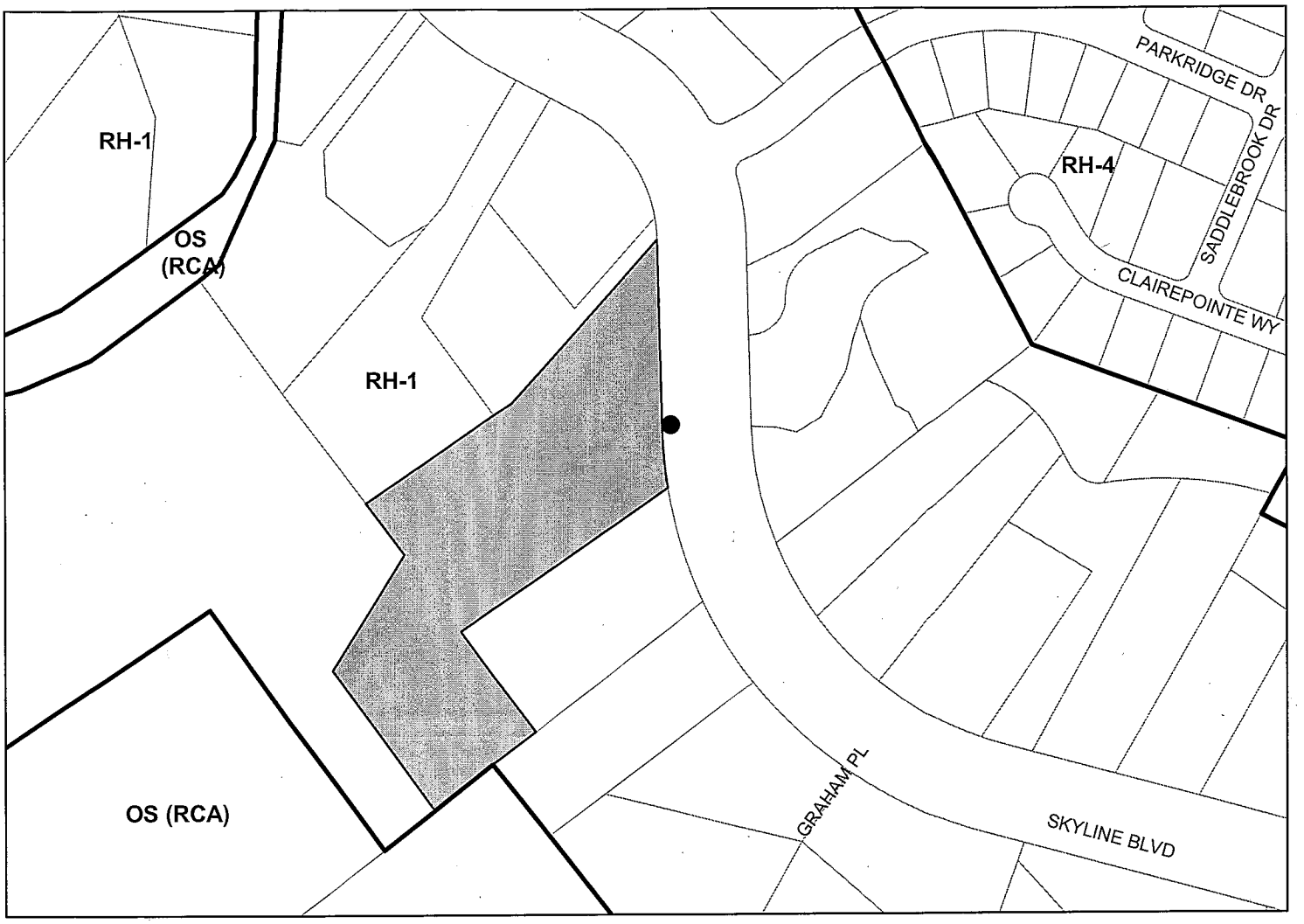
SUMMARY

The following staff report addresses the proposal to install a wireless Telecommunications Macro Facility on top of an existing PG&E utility pole located in the public right – of – way. ExteNet Systems wireless is proposing to increase the existing PG&E pole height from 25' to 39' and attach two sets of panel antennas and associate equipment . The site is in the RH-1 Zone. The General Plan designation for the site is Hillside Residential.

PROJECT DESCRIPTION

ExteNet Systems (California) LLC proposes to install a Distributed Antenna System (DAS) telecommunications network. A DAS network consists of series of radio access nodes,

CITY OF OAKLAND PLANNING COMMISSION



Case File:	DR10-290
Applicant:	Extenet Systems
Address:	Skyline Boulevard (located in Public Right of the Way adjacent to 13175 Skyline Boulevard)
Zone:	RH-1 (formerly R-1)

connected to small telecommunications antennas. The applicant (ExteNet Systems) is proposing to increase an existing PG&E utility pole height from 25' to 39' in order to install (6' tall by 18" wide) associated equipment box attached to the existing pole at a height of between 7' to 9'-6" above ground and two set of panel antennas (1'-11" x 10.6") mounted at 31'-6" high on the existing PG & E pole located in public right of way. No portion of the telecommunication facilities will be located on the ground floor. The proposed antennas and associated equipment will not be accessible to the public. (See Attachment A).

PROPERTY DESCRIPTION

The existing 25' high PG&E utility pole is located adjacent to 13175 Skyline Boulevard in the City of Oakland public right of a way. The area has a number of mature pine trees. The closest residential building is located approximately 60' away from the PG&E utility pole. The site is located in a residential zone.

GENERAL PLAN ANALYSIS

Note, this application was submitted when the property was zoned R-1. The project was deemed complete under the R-1 zone although the standards for review are the same. The subject property is located within the Hillside Residential General Plan designation. The Hillside Residential land use classification is intended "to identify, create, maintain and enhance neighborhood residential areas that are characterized by detached, single unit structures on hillside lots. The General Plan Conformity Guidelines are silent on Telecommunications Facilities in the Hillside Residential areas". The proposed telecommunication facilities will be mounted on the existing PG&E utility pole within the City of Oakland public right – of – way, and visual impacts will be mitigated since the antennas will be camouflage and blend in with the existing mature trees and the equipment cabinet box will be painted to match the existing utility pole. Therefore, the proposed unmanned wireless telecommunication facility will not adversely affect and detract from the residential characteristics of the neighborhood.

ZONING ANALYSIS

The project site is located in RH-1 Estate Residential Zone. The intent of the RH-1 Zone is: "to create, preserve, and enhance areas for single-family estate living at very low densities in spacious environments and is typically appropriate to portions of the Oakland hill area. The proposed antennas is located approximately 60' away from nearest residential building. The project requires a Regular Design, with special findings, to allow the installation of telecommunication facilities on an existing PG&E pole expansion located in the public right of away in the Residential Zone. Special findings required to approve the Design Review ensure the facility are concealed to the extent possible. These findings are met by this proposal; because the antennas will be camouflage with the existing mature trees and the equipment cabinets will be painted to match existing utility pole. Staff finds that the proposed application meets applicable the R-1 and future RH-1 Zoning City of Oakland Telecommunication Regulations.

ENVIRONMENTAL DETERMINATION

The California Environmental Quality Act (CEQA) Guidelines lists the projects that qualify as categorical exemptions from environmental review. The proposed project is categorically exempt from the environmental review requirements pursuant to Section 15301, additions and alterations to existing facilities, and Section 15183, projects consistent with a community plan, general plan or zoning.

KEY ISSUES AND IMPACTS

1. Regular Design Review

Section 17.136.040 and 17.128.070 of the City of Oakland Planning Code requires a Major Design Review to install or to expand a Macro Telecommunication facility fully attached to the utility pole in the R-1 zone or within one hundred (100) feet of the boundary of any residential zone. The required findings for Major Regular Design Review findings are listed and included in staff's evaluation as part of this report.

2. Project Site

Section 17.128.110 of the City of Oakland Telecommunication Regulations indicate that new wireless facilities shall generally be located on designated properties or facilities in the following order of preference:

A. Co-located on an existing structure or facility with existing wireless antennas.
B. City owned properties or other public or quasi-public facilities.
C. Existing commercial or industrial structures in non-residential zones.
D. Existing commercial or industrial structures in residential zones.
E. Other non-residential uses in residential zones.
F. Residential uses in non-residential zones.
G. Residential uses in residential zones.

*Facilities locating on an A, B or C ranked preference do not require a site alternatives analysis.

Since the proposed project involves co-locating the installation of new antennas and associated equipment cabinets on an existing utility pole, the proposed project meets: (B) quasi-public facilities on an existing PG&E utility pole within public right- of - way.

3. Project Design

Section 17.128.120 of the City of Oakland Telecommunications Regulations indicates that new wireless facilities shall generally be designed in the following order of preference:

A. Building or structure mounted antennas completely concealed from view.
B. Building or structure mounted antennas set back from roof edge, not visible from public right-of way.

C. Building or structure mounted antennas below roof line (facade mount, pole mount) visible from public right-of-way, painted to match existing structure.
D. Building or structure mounted antennas above roof line visible from public right of-way.
E. Monopoles.
F. Towers.

* Facilities designed to meet an A & B ranked preference does not require a site design alternatives analysis. Facilities designed to meet a C through F ranked preference, inclusive, must submit a site design alternatives analysis as part of the required application materials. (c) site design alternatives analysis shall, at a minimum, consist of:

a. Written evidence indicating why each higher preference design alternative can not be used. Such evidence shall be in sufficient detail that independent verification could be obtained if required by the City of Oakland Zoning Manager. Evidence should indicate if the reason an alternative was rejected was technical (e.g. incorrect height, interference from existing RF sources, inability to cover required area) or for other concerns (e.g. inability to provide utilities, construction or structural impediments).

City of Oakland Planning staff have reviewed (see attachment A alternative site analysis letter) and determined that the site selected is conforming to all other telecommunication regulation requirements. The project has met design criteria (C) since the antennas will be mounted on existing PG&E pole expansion and will be camouflage with the existing mature trees and equipment cabinet box and battery backup box will be attached to the utility pole painted to match color of an existing PG&E utility pole to minimize potential visual impacts from public view.

4. Project Radio Frequency Emissions Standards

Section 17.128.130 of the City of Oakland Telecommunication Regulations require that the applicant submit the following verifications including requests for modifications to existing facilities:

a. The telecommunications regulations require that the applicant submit written documentation demonstrating that the emission from the proposed project are within the limits set by the Federal Communications Commission. In the document (attachment B) prepared by Sitesafe RF Compliance Experts, Inc. Matthew J. Butcher Registered Professional Engineer, the proposed project was evaluated for compliance with appropriate guidelines limiting human exposure to radio frequency electromagnetic fields. According to the report on the proposal, the project will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, the proposed site will operate within the current acceptable thresholds as established by the Federal government or any such agency that may be subsequently authorized to establish such standards.
b. Prior to final building permit sign off, an RF emissions report indicating that the site is actually operating within the acceptable thresholds as established by the Federal government or any such agency who may be subsequently authorized to establish such standards.

The information submitted with the initial application was an RF emissions report, **prepared by Matthew J Butcher, Site safe Inc. RF compliance experts, Consulting Engineers**

(**attachment B**). The report states that the proposed project will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not cause a significant impact on the environment. Additionally, staff recommends that prior to the final building permit sign off; the applicant submits certified RF emissions report stating that the facility is operating within acceptable thresholds established by the regulatory federal agency.

CONCLUSION

City of Oakland planning staff believes that the proposed project and subject property can be developed to meet the established zoning and telecommunication regulations that were created and adopted to set certain criteria minimums and maximums for similar types of developments. Staff believes that the findings for approval can be made to support the Design Review.

RECOMMENDATIONS:

1. Affirm staff's environmental determination
2. Approve Design Review application DR10-290 subject to the attached findings and conditions of approval

Prepared by:

Jason Madani
Planner II

Approved by:

for
Scott Miller
Zoning Manager

Approved for forwarding to the
City Planning Commission

Eric Angstadt, Deputy Director
Community & Economic Development Agency

ATTACHMENTS:

A. Project Plans & Photo simulations & Alternative Site Analysis
B. Site safe, Matthew J. Butcher, Inc., Consulting Engineering RF Emissions Report

FINDINGS FOR APPROVAL

FINDINGS FOR APPROVAL:
This proposal meets all the required findings under Section 17.136.050.(B), of the Non-Residential Design Review criteria; all the required findings under Section 17.128.070(B), of the telecommunication facilities (Macro) Design Review criteria; and as set forth below and which are required to approve your application. Required findings are shown in **bold** type; reasons your proposal satisfies them are shown in normal type.

17.136.050(B) – NONRESIDENTIAL DESIGN REVIEW CRITERIA:

1. That the proposal will help achieve or maintain a group of facilities which are well related to one another and which, when taken together, will result in a well-composed design, with consideration given to site, landscape, bulk, height, arrangement, texture, materials, colors, and appurtenances; the relation of these factors to other facilities in the vicinity; and the relation of the proposal to the total setting as seen from key points in the surrounding area. Only elements of design which have some significant relationship to outside appearance shall be considered, except as otherwise provided in Section 17.136.060;

The ExteNet wireless is proposing to increase the existing PG&E pole height from 25' to 39'. The project consists of associated equipment cabinets box (6'tall by 18" wide) attached to the existing pole at 7' to 9'-6"elevation height of the existing utility pole. The proposed two panel antennas will be mounted on the existing PG & E pole at approximately 31'-6" high elevation point. The proposed antennas and equipment cabinet attached to the utility pole are camouflaged to blend in with the existing surrounding tall pine trees. Therefore, the proposal will have minimized visual impacts from public view.

2. That the proposed design will be of a quality and character which harmonizes with, and serves to protect the value of, private and public investments in the area;

The design will be appropriate and compatible with current zoning and general plan land use designations. The proposal protects and preserves the surrounding neighborhood context by adding wireless telecommunication antennas to an existing PG&E utility pole in the residential area. The proposed antennas, and equipment cabinets, box attached to the utility pole are camouflaged to blend in with the existing surrounding tall pine trees. Therefore, the proposal will have minimal visual impacts on public view in the residential zone.

3. That the proposed design conforms in all significant respects with the Oakland General Plan and with any applicable design review guidelines or criteria, district plan, or development control map which have been adopted by the Planning Commission or City Council.

The proposal conforms with the City of Oakland General Plan meeting specific General Plan policies and the Supplemental Report and Recommendations on Revisions to the Citywide Telecommunications Regulations. The proposal will conform to performance standards for noise set forth in Section 17.120.050 for decibels levels in residential areas for both day and nighttime

use. The Project conforms to all macro-facility definitions set forth in Section 17.128.070B and meets all design review criteria to minimize all impacts throughout the neighborhood

17.128.070(B) DESIGN REVIEW CRITERIA FOR MACRO FACILITIES

1. Antennas should be painted and/or textured to match the existing structure:

The proposed antennas will be painted to match the existing PG&E pole.

2. Antennas mounted on architecturally significant structures or significant architectural details of the building should be covered by appropriate casings which are manufactured to match existing architectural features found on the building:

The proposed antennas will not be mounted on an architecturally significant structures and will be mounted on the PG&E utility pole and painted to match the existing pole. Therefore is consistent and well related to the surrounding area.

3. Where feasible, antennas can be placed directly above, below or incorporated with vertical design elements of a building to help in camouflaging:

The proposed antennas will be mounted on existing PG&E utility pole and painted to match the utility pole which will be camouflaged to blend in with existing surrounding pine trees.

4. Equipment shelters or cabinets shall be screened from the public view by using landscaping, or materials and colors consistent with surrounding backdrop:

The associated equipment will be attached to the existing utility pole and painted to match existing pole.

5. Equipment shelters or cabinets shall be consistent with the general character of the area.

The proposed equipment cabinets will be compatible with the existing PG &E related equipments.

6. For antennas attached to the roof, maintain a 1:1 ratio for equipment setback; screen the antennas to match existing air conditioning units, stairs, or elevator towers; avoid placing roof mounted antennas in direct line with significant view corridors.

N/A

7. That all reasonable means of reducing public access to the antennas and equipment has been made, including, but not limited to, placement in or on buildings or structures, fencing, anti-climbing measures and anti-tampering devices.

The antennas will be mounted at 31'-6" high elevation of the existing PG&E pole and will not be accessible to the public due to its location. The equipment shelter box and battery backup box will also be located at 7' to 9'-6" high elevations of the utility pole.

CONDITIONS OF APPROVAL
DR10-290

STANDARD CONDITIONS:

1. Approved Use
Ongoing

a) The project shall be constructed and operated in accordance with the authorized use as described in the application materials for case number **DR10-290**, and the plans dated **March 3, 2011** and submitted on **March 9th, 2010** and as amended by the following conditions. Any additional uses or facilities other than those approved with this permit, as described in the project description and the approved plans, will require a separate application and approval. Any deviation from the approved drawings, Conditions of Approval or use shall required prior written approval from the Director of City Planning or designee.

b) This action by the City Planning Commission ("this Approval") includes the approvals set forth below. This Approval includes: **To install a wireless telecommunications facility on an existing PG&E pole; to increase the height of an existing PG&E pole 25' to 39' and install a wireless telecommunication facility consisting of 2 panel antennas mounted at approximately at 31'- 6" pole height; an associated equipment box (6' tall by 18" wide); and one battery backup and meter box attached at 7' to 9'-6" height above ground located in public right of way.**

2. Effective Date, Expiration, Extensions and Extinguishment
Ongoing

Unless a different termination date is prescribed, this Approval shall expire **two calendar years** from the approval date, unless within such period all necessary permits for construction or alteration have been issued, or the authorized activities have commenced in the case of a permit not involving construction or alteration. Upon written request and payment of appropriate fees submitted no later than the expiration date of this permit, the Director of City Planning or designee may grant a one-year extension of this date, with additional extensions subject to approval by the approving body. Expiration of any necessary building permit for this project may invalidate this Approval if the said extension period has also expired.

3. Scope of This Approval; Major and Minor Changes
Ongoing

The project is approved pursuant to the **Oakland Planning Code** only. Minor changes to approved plans may be approved administratively by the Director of City Planning or designee. Major changes to the approved plans shall be reviewed by the Director of City Planning or designee to determine whether such changes require submittal and approval of a revision to the approved project by the approving body or a new, completely independent permit.

4. Conformance with other Requirements
Prior to issuance of a demolition, grading, P-job, or other construction related permit

a) The project applicant shall comply with all other applicable federal, state, regional and/or local codes, requirements, regulations, and guidelines, including but not limited to those imposed by the City's Building Services Division, the City's Fire Marshal, and the City's Public Works Agency.

b) The applicant shall submit approved building plans for project-specific needs related to fire protection to the Fire Services Division for review and approval, including, but not limited to automatic extinguishing systems, water supply improvements and hydrants, fire department access, and vegetation management for preventing fires and soil erosion.

5. Conformance to Approved Plans; Modification of Conditions or Revocation

Ongoing

a) Site shall be kept in a blight/nuisance-free condition. Any existing blight or nuisance shall be abated within 60-90 days of approval, unless an earlier date is specified elsewhere.

b) The City of Oakland reserves the right at any time during construction to require certification by a licensed professional that the as-built project conforms to all applicable zoning requirements, including but not limited to approved maximum heights and minimum setbacks. Failure to construct the project in accordance with approved plans may result in remedial reconstruction, permit revocation, permit modification, stop work, permit suspension or other corrective action.

c) Violation of any term, conditions or project description relating to the Approvals is unlawful, prohibited, and a violation of the Oakland Municipal Code. The City of Oakland reserves the right to initiate civil and/or criminal enforcement and/or abatement proceedings, or after notice and public hearing, to revoke the Approvals or alter these conditions if it is found that there is violation of any of the conditions or the provisions of the Planning Code or Municipal Code, or the project operates as or causes a public nuisance. This provision is not intended to, nor does it; limit in any manner whatsoever the ability of the City to take appropriate enforcement actions.

6. Signed Copy of the Conditions

With submittal of a demolition, grading, and building permit

A copy of the approval letter and conditions shall be signed by the property owner, notarized, and submitted with each set of permit plans to the appropriate City agency for this project.

7. Indemnification

a) ***Ongoing*** The project applicant shall defend (with counsel reasonably acceptable to the City), indemnify, and hold harmless the City of Oakland, the Oakland City Council, the City of Oakland Redevelopment Agency, the Oakland City Planning Commission and their respective agents, officers, and employees (hereafter collectively called the City) from any claim, action, or proceeding (including legal costs and attorney's fees) against the City to attack, set aside, void or annul this Approval, or any related approval by the City. The City shall promptly notify the project applicant of any claim, action or proceeding and the City shall cooperate fully in such defense. The City may elect, in its sole discretion, to participate in the defense of said claim, action, or proceeding. The project applicant shall reimburse the City for its reasonable legal costs and attorney's fees.

b) Within ten (10) calendar days of the filing of a claim, action or proceeding to attack, set aside, void, or annul this Approval, or any related approval by the City, the project applicant shall execute a Letter Agreement with the City, acceptable to the Office of the City Attorney,

which memorializes the above obligations and this condition of approval. This condition/obligation shall survive termination, extinguishment, or invalidation of this, or any related approval. Failure to timely execute the Letter Agreement does not relieve the project applicant of any of the obligations contained in 7(a) above, or other conditions of approval.

8. Compliance with Conditions of Approval
Ongoing
The project applicant shall be responsible for compliance with the recommendations in any submitted and approved technical report and all the Conditions of Approval set forth below at its sole cost and expense, and subject to review and approval of the City of Oakland.

9. Severability
Ongoing
Approval of the project would not have been granted but for the applicability and validity of each and every one of the specified conditions, and if any one or more of such conditions is found to be invalid by a court of competent jurisdiction this Approval would not have been granted without requiring other valid conditions consistent with achieving the same purpose and intent of such Approval.

10. Job Site Plans
Ongoing throughout demolition, grading, and/or construction
At least one (1) copy of the stamped approved plans, along with the Approval Letter and Conditions of Approval, shall be available for review at the job site at all times.

11. Special Inspector/Inspections, Independent Technical Review, Project Coordination and Management
Prior to issuance of a demolition, grading, and/or construction permit
The project applicant may be required to pay for on-call special inspector(s)/inspections as needed during the times of extensive or specialized plan check review, or construction. The project applicant may also be required to cover the full costs of independent technical and other types of peer review, monitoring and inspection, including without limitation, third party plan check fees, including inspections of violations of Conditions of Approval. The project applicant shall establish a deposit with the Building Services Division, as directed by the Building Official, Director of City Planning or designee.

12. Days/Hours of Construction Operation
Ongoing throughout demolition, grading, and/or construction
The project applicant shall require construction contractors to limit standard construction activities as follows:

a) Construction activities are limited to between 7:00 AM and 7:00 PM Monday through Friday, except that pile driving and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m. Monday through Friday.

b) Any construction activity proposed to occur outside of the standard hours of 7:00 am to 7:00 pm Monday through Friday for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case by case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the overall duration of construction is shortened and such construction activities shall

only be allowed with the prior written authorization of the Building Services Division.

c) Construction activity shall not occur on Saturdays, with the following possible exceptions:

i. Prior to the building being enclosed, requests for Saturday construction for special activities (such as concrete pouring which may require more continuous amounts of time), shall be evaluated on a case by case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the overall duration of construction is shortened. Such construction activities shall only be allowed on Saturdays with the prior written authorization of the Building Services Division.

ii. After the building is enclosed, requests for Saturday construction activities shall only be allowed on Saturdays with the prior written authorization of the Building Services Division, and only then within the interior of the building with the doors and windows closed.

d) No extreme noise generating activities (greater than 90 dBA) shall be allowed on Saturdays, with no exceptions.

e) No construction activity shall take place on Sundays or Federal holidays.

f) Construction activities include but are not limited to: truck idling, moving equipment (including trucks, elevators, etc) or materials, deliveries, and construction meetings held on-site in a non-enclosed area.

PROJECT SPECIFIC CONDTIONS:

12. Radio Frequency Emissions
Prior to the final building permit sign off.
The applicant shall submit a certified RF emissions report stating the facility is operating within the acceptable standards established by the regulatory Federal Communications Commission.

13. Sinking Fund for Facility Removal or Abandonment.
Prior to issuance of a building permit
The applicant shall provide proof of the establishment of a sinking fund to cover the cost of removing the facility if it is abandoned within a prescribed period. The word "abandoned" shall mean a facility that has not been operational for a six (6) month period, except where non-operation is the result of maintenance of renovation activity pursuant to valid City permits. The sinking fund shall be established to cover a two year period, at a financial institution approved by the City's Office of Budget and Finance. The sinking fund payment shall be adequate to determined by the office of Budget and Finance and shall be adequate to defray expenses associated with the removal of the telecommunication facility.

14. Operational
Ongoing.
Noise levels from the activity, property, or any mechanical equipment on site shall comply with the performance standards of Section 17.120 of the Oakland Planning Code and Section 8.18 of

the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the Planning and Zoning Division and Building Services.

Sky 50A
View One
13175 Skyline Blvd. Oakland, Ca 94619
Date of Final: 3/06/2011

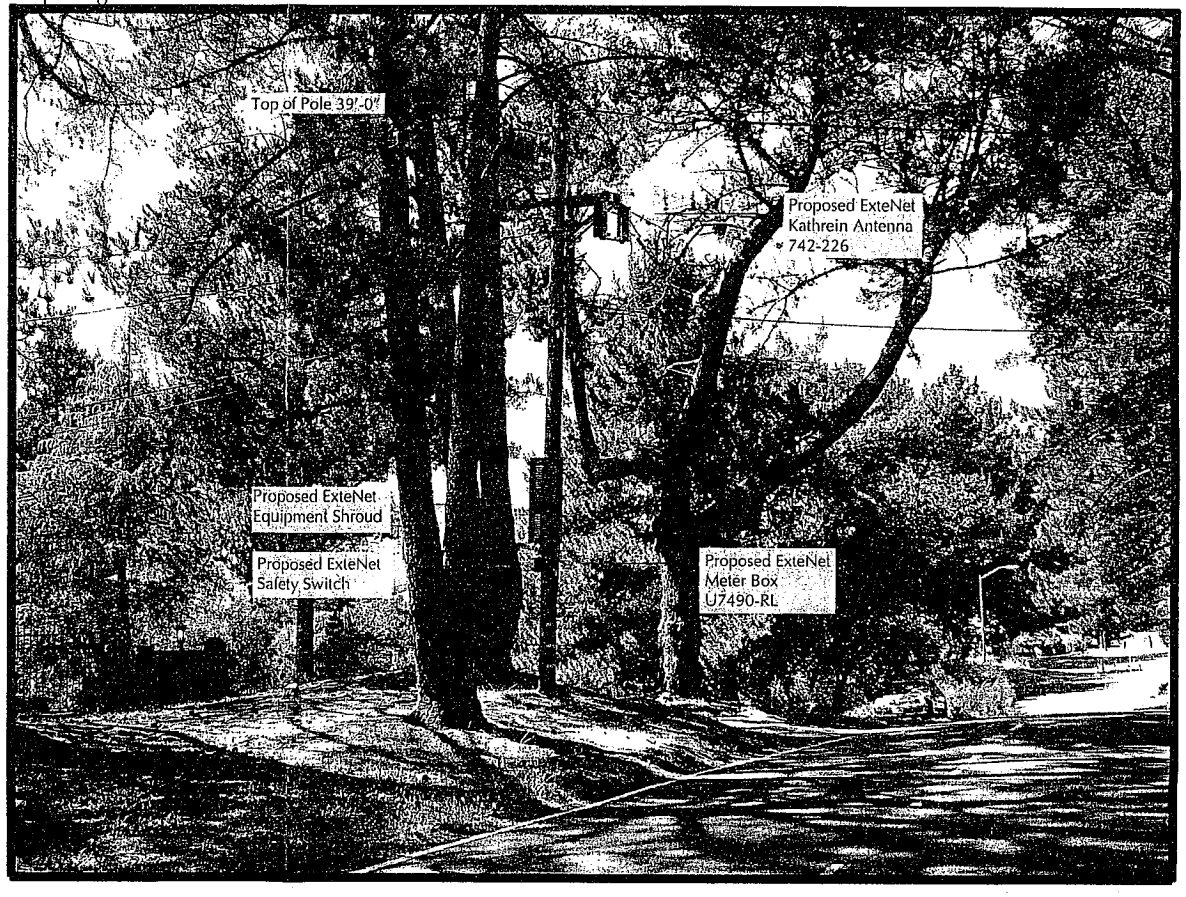
extenet SM SYSTEMS

MAXIMIZE

Site Map

Existing

Proposing



ATTACHMENT A

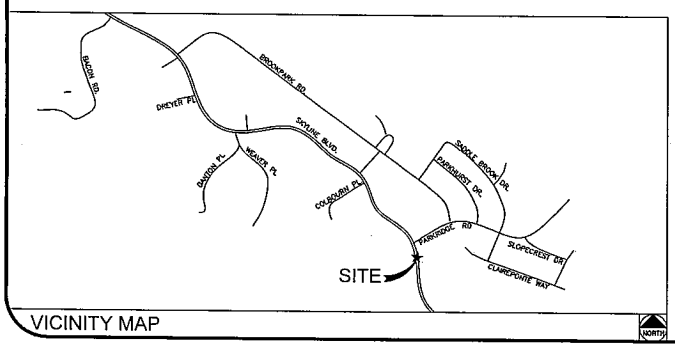
extenet SM
SYSTEMS

SKY-050A

SKYLINE NETWORK - 050A

13175 SKYLINE BLVD

OAKLAND, CA 94619



VICINITY MAP

CLIENT

EXTENET SYSTEMS, INC.
3030 WARRENVILLE RD.
SUITE 340
LISLE, IL 60532
CONTACT JEFF FRYE
PHONE 480-828-1271
FAX 504-285-1603

POLE OWNER

NORTHERN CALIFORNIA
JOINT POLE ASSOCIATION
1800 SUTTER STREET
SUITE 830
CONCORD, CA 94520
PHONE 925-681-0378
FAX 925-681-0384

ENGINEERING FIRM/SURVEYING

MAXIMIZE COMMUNICATION GROUP, INC.
1351 POMONA ROAD
SUITE 100
CORONA, CA 92882
CONTACT ERIC MENDOZA
PHONE 909-435-0433
FAX 909-992-3113

COORDINATES

LAT: 37.78545
LONG: -122.15004

CODE COMPLIANCE:

ALL WORK AND MATERIALS SHALL BE PERFORMED & INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY LOCAL GOVERNING AUTHORITIES AND LOCAL/CITY/COUNTY ORDINANCES:

1. CALIFORNIA ADMINISTRATIVE CODE (INCLUDING TITLE 24 & 25).
2. 2007 CALIFORNIA BUILDING CODE.
3. 2007 CALIFORNIA ELECTRICAL CODE.
3. BUILDING OFFICIALS AND CODE ADMINISTRATORS (BOCA).
4. UNIFORM PLUMBING & MECHANICAL CODES.
5. ANSI/EIA-222-F LIFE SAFETY CODE.
6. CALIFORNIA GENERAL ORDER 95 & 128.

PROJECT DESCRIPTION

PROJECT IS A DAS(DISTRIBUTED ANTENNA SYSTEM), UTILIZING UTILITY POLES IN THE PUBLIC RIGHT OF WAY, UNDER CPUC GENERAL ORDER 170, AND AUTHORIZED AS A PUBLIC UTILITY UNDER EXTENET SYSTEMS CPCN: U-6959-C.

SHEET INDEX

SHEET	DESCRIPTION
T1	TITLE SHEET
T2	GENERAL CONSTRUCTION NOTE & ANTENNA CABLE SCHEDULE
A1	SITE PLAN
A2	UTILITY POLE ELEVATIONS/RISER DETAILS
A3	EQUIPMENT DETAILS
E1	ELECTRICAL DETAILS

extenet SM
SYSTEMS
3030 WARRENVILLE RD.
SUITE 340
LISLE, IL 60532
www.extenet.com

REV.	DATE	DESCRIPTION
1	1/31/11	CONSTRUCTION DRAWINGS
2	2/17/11	CONSTRUCTION DRAWINGS
3	3/3/11	REVISION PER JURISDICTION
4	3/15/11	REVISION PER CITY COMMENTS

CURRENT ISSUE DATE:

3/15/11

PLANS PREPARED BY:

Maximize Comm. Group, Inc.
1351 POMONA ROAD
SUITE 100
CORONA, CA 92882
OFFICE: (909) 786-2170
FAX: (909) 992-3113

LICENSURE:

SITE NO.:

SKY-050A

SITE NAME & ADDRESS:

SKYLINE NETWORK-050A
13175 SKYLINE BLVD
OAKLAND, CA 94619

SHEET TITLE:

TITLE SHEET

DRAWN BY:	CHECKED BY:	APPROVED BY:
VG	EM	EM

SHEET NUMBER: T1 REVISION: 4

A.B.	ANCHOR BOLT
ABV.	ABOVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AGL	ABOVE GROUND LEVEL
ALUM	ALUMINUM
ALT	ALTERNATE
ANT	ANTENNA
APPROX	APPROXIMATE(LY)
ARCH	ARCHITECT(URAL)
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
B.N.	BOUNDARY NAILING
B.O.F.	BOTTOM OF FOOTING
B/U	BACK-UP CABINET
CAB	CABINET
CANT	CANTILEVER(ED)
C.I.P.	CAST IN PLACE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT(S)
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION(OR)
CONST	CONSTRUCTION
CONT	CONTINUOUS
¢	PENNY (NAILS)
DBL	DOUBLE
DEPT	DEPARTMENT
DF	DOUGLAS FIR
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DWG	DRAWING(S)
DWL	DOWEL(S)
EA	EACH
ECR	EMERGENCY GENERATOR RECEPTACLE
ELEC	ELECTRICAL
ELEV(EL.)	ELEVATION
EMT	ELECTRICAL METALLIC TUBING
E.N.	EDGE NAIL
ENG	ENGINEER
EQ	EQUAL
EXP	EXPANSION
EXIST(E)	(E)
EXT	EXTERIOR
FAB	FABRICATION(OR)
F.F.	FINISH FLOOR
F.G.	FINISH GRADE
FIN	FINISH(ED)
FLR	FLOOR
FDN	FOUNDATION
F.O.C.	FACE OF CONCRETE
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD
F.O.W.	FACE OF WALL
F.S.	FINISH SURFACE
FT(')	FOOT(FEET)
FTG	FOOTING
GA	GAUGE
GI	GALVANIZE(D)
G.F.I.	GROUND FAULT CIRCUIT INTERRUPTER
GLB(GLU-LAM)	GLUE LAMINATED BEAM
GPS	GLOBAL POSITIONING SYSTEM
GRND	GROUND
HDR	HEADER
HGR	HANGER
HT.	HEIGHT
IGSB	ISOLATED COPPER GROUND BUS
IN(")	INCH(ES)
INT	INTERIOR
lb(#)	POUND(S)
L.B.	LAG BOLTS
L.F.	LINEAR FEET (FOOT)
L	LONG(ITUDINAL)
MAX	MAXIMUM
M.B.	MACHINE BOLT
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MTL	METAL
(N)	NEW
NO.(#)	NUMBER
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
OPNG	OPENING
P/C	PRECAST CONCRETE
PCS	PERSONAL COMMUNICATION SERVICES
PLYWD(PLY)	PLYWOOD
PPC	POWER PROTECTION CABINET
PRC	PRIMARY RADIO CABINET
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
P.T.D.F.	PRESSURE TREATED DOUGLAS FUR
PWR	POWER (CABINET)
QTY	QUANTITY
RAD(R)	RADIUS
REF	REFERENCE
REINF	REINFORCEMENT(ING)
REQ'D	REQUIRED
RGS	RIGID GALVANIZED STEEL
SCH	SCHEDULE
SHT	SHEET
SIM.	SIMILAR
SPEC	SPECIFICATION(S)
SQ	SQUARE
S.S.	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STRUC	STRUCTURAL
TEMP	TEMPORARY
THK	THICK(NESS)
T.N.	TOE NAIL
T.O.A.	TOP OF ANTENNA
T.O.C.	TOP OF CURB (CONCRETE)
T.O.F.	TOP OF FOOTING
T.O.P.	TOP OF PLATE (PARAPET)
T.O.S.	TOP OF STEEL (SLAB)
T.O.W.	TOP OF WALL
TYP	TYPICAL
UG	UNDER GROUND
UL	UNDERWRITERS LABORATORY
U.N.O.	UNLESS NOTED OTHERWISE
V.I.F.	VERIFY IN FIELD
W	WIDE(WIDTH)
W/	WITH
WD	WOOD

NEW ANTENNA

(E) ANTENNA

UTILITY POLE

GROUND BUS BAR

MECHANICAL GRND. CONN. CADWELD

CHRISTY BOX

ELECTRIC BOX

LIGHT POLE

FND. MONUMENT

SPOT ELEVATION

SET POINT

REVISION

GRID REFERENCE

DETAIL REFERENCE

ELEVATION REFERENCE

SECTION REFERENCE

GROUT OR PLASTER

(E) BRICK

(E) MASONRY

CONCRETE

EARTH

GRAVEL

PLYWOOD

SAND

WOOD CONT.

WOOD BLOCKING

STEEL

CENTERLINE

PROPERTY/LEASE LINE

MATCH LINE

WORK POINT

GROUND CONDUCTOR

T TELEPHONE CONDUIT

T TELEPHONE CONDUIT U.G.

E ELECTRICAL CONDUIT

E ELECTRICAL CONDUIT U.G.

COAX COAXIAL CABLE

COAX COAXIAL CABLE U.G.

E/T OVERHEAD SERVICE CONDUCTORS

E/T U.G. SERVICE CONDUCTORS

X CHAIN LINK FENCING

ABBREVIATION AND LEGEND 4

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR TO ANY EARTHWORK. IF DESTROYED, SUCH MONUMENTS SHALL BE REPLACED WITH APPROPRIATE MONUMENTS BY A LAND SURVEYOR. A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT.

2. IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TOLL FREE 1-800-422-4133, TWO DAYS BEFORE YOU DIG.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE POT HOLE AND LOCATING OF ALL (E) UTILITIES THAT CROSS THE PROPOSED TRENCH LINE AND MUST MAINTAIN A 1' MINIMUM VERTICAL CLEARANCE.

4. IF ANY (E) HARDSCAPE OR LANDSCAPE INDICATED ON THE APPROVE PLANS IS DAMAGED OR REMOVED DURING DEMOLITION OR CONSTRUCTION, IT SHALL BE REPAIRED AND/OR REPLACED IN KIND PER THE APPROVED PLANS.

5. CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUIT, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.

6. THIS PROJECT WILL BE INSPECTED BY ENGINEERING AND FIELD ENGINEERING DIVISION.

7. MANHOLES OR COVERS SHALL BE LABELED EXTENET.

8. CONTRACTOR SHALL IMPLEMENT AN EROSION CONTROL PROGRAM DURING THE PROJECT CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL MEET THE APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD.

9. THE CONTRACTOR SHALL HAVE EMERGENCY MATERIALS AND EQUIPMENT ON HAND FOR UNFORESEEN SITUATIONS, SUCH AS DAMAGE TO UNDERGROUND WATER, SEWER, AND STORM DRAIN FACILITIES WHEREBY FLOWS MAY GENERATE EROSION AND SEDIMENT POLLUTION.

SPECIAL NOTE

1. PAINT ALL EQUIPMENT TO MATCH POLE.

USA North

of Central Northern California and Nevada

Call Before you Dig! 1-800-227-2600

SPECIAL NOTES

1. INDEMNIFICATION CLAUSE: THE CONTRACTOR AGREES AND SHALL:
ASSUME SOLE AND COMPLETE RESPONSIBILITY OF THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTIES. THAT THESE REQUIREMENTS SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONDITIONS. THE CONTRACTOR FURTHER AGREES TO DEFEND INDEMNITY AND HOLD EXTENET, REPRESENTATIVES, AND ENGINEERS HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT.

2. PRIOR TO THE BEGINNING OF ANY CONSTRUCTION AND THROUGHOUT THE COURSE OF CONSTRUCTION WORK, THE CONTRACTOR SHALL FULLY COMPLY WITH "CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH" ACT OF 1973 INCLUDING ALL REVISIONS AND AMENDMENTS THERETO.

3. ALL WORK SHALL CONFORM TO THE LATEST EDITIONS OF GO95,128 AND THE STANDARD "SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" AS ADOPTED BY THE CITY, COUNTY OR STATE AS MODIFIED BY STANDARD PLANS AND ADDENDUMS.

4. THE EXISTENCE AND LOCATION OF UTILITIES AND OTHER AGENCY'S FACILITIES AS SHOWN HEREON ARE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. OTHER FACILITIES MAY EXIST. THE CONTRACTOR SHALL VERIFY PRIOR TO THE START OF CONSTRUCTION AND SHALL USE EXTREME CARE AND PROTECTIVE MEASURES TO PREVENT DAMAGE TO THESE FACILITIES. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITY OR AGENCY FACILITIES WITHIN THE LIMITS OF WORK, WHETHER THEY ARE SHOWN ON THIS PLAN OR NOT.

5. THE CONTRACTOR SHALL NOTIFY THE CITY, COUNTY OR STATE ENGINEER INSPECTION DEPARTMENT, AT LEAST TWO DAYS BEFORE START OF ANY WORK REQUIRING THEIR INVOLVEMENT.

6. THE CITY, COUNTY OR STATE SHALL SPECIFY THE EXPIRATION PERIOD OF THE PERMIT FOR THIS CONSTRUCTION PROJECT.

7. THE MINIMUM COVER FOR ALL CONDUITS PLACED UNDERGROUND SHALL BE 36 INCHES TO THE FINISHED GRADE AT ALL TIMES.

8. THE CONTRACTOR SHALL TUNNEL ALL CURB AND GUTTERS AND BORE ALL CONCRETE DRIVEWAYS AND WALKWAYS AT THE DIRECTION OF THE CITY, COUNTY OR STATE ENGINEER.

9. ALL A.C AND/OR CONCRETE PAVEMENT SHALL BE REPLACED AT THE DIRECTION OF THE CITY, COUNTY OR STATE ENGINEERS.

10. ALL SHRUBS, PLANTS OR TREES THAT HAVE BEEN DAMAGED OR DISTURBED DURING THE COURSE OF THE WORK, SHALL BE REPLANTED AND/OR REPLACED SO AS TO RESTORE THE WORK SITE TO ITS ORIGINAL CONDITION.

11. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROCESSING OF ALL APPLICANT PERMIT FORMS ALONG WITH THE REQUIRED LIABILITY INSURANCE FORMS. CLEARLY DEMONSTRATING THAT EXTENET, THE CITY, COUNTY OR STATE IS ALSO INSURED WITH THE REQUIRED LIABILITY INSURANCE IN THE AMOUNT OF $1,000,000.00 FOR THIS CONSTRUCTION PROJECT.

12. VAULTS, PEDESTALS, CONDUITS AND OTHER TYPES OF SUBSTRUCTURE ARE EITHER SPECIFIED ON THIS PLAN OR WILL BE SPECIFIED BY THE CONSTRUCTION ENGINEER. ANY AND ALL DEVIATIONS FROM THE SPECIFIED TYPES OF MATERIAL MUST BE APPROVED BY THE SYSTEM ENGINEER, IN WRITING BEFORE INSTALLATION THEREOF.

13. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL (E) UTILITIES IN INCLUDING SEWER LATERALS & WATER SERVICES TO INDIVIDUAL LOTS BOTH VERTICAL AND HORIZONTAL PRIOR TO COMMENCING IMPROVEMENT OPERATIONS.

14. CONTRACTOR SHALL HAVE EXPLORATION EXCAVATIONS AND LOCATE (E) FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISION IS NECESSARY BECAUSE OF LOCATION OF (E) UTILITIES.

15. THE LOCATIONS OF ALL (E) UTILITIES SHOWN ON THESE PLANS ARE FROM (E) RECORDS AND CORROBORATED, WHERE POSSIBLE, WITH FIELD TIES. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE LOCATIONS SHOWN, BOTH HORIZONTAL AND VERTICALLY, PRIOR TO CONSTRUCTION, IF (E) LOCATIONS VARY SUBSTANTIALLY FROM THE PLANS, THE ENGINEER SHOULD BE NOTIFIED TO MAKE ANY CONSTRUCTION CHANGES REQUIRED.

EROSION AND SEDIMENT CONTROL NOTES

TEMPORARY EROSION/SEDIMENT CONTROL PRIOR TO COMPLETION OF FINAL IMPROVEMENTS, SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

1. ALL REQUIREMENTS OF THE CITY, COUNTY AND STATE "STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING/APPROVENTS CONSISTENT WITH THE APPROVED STORM WATER POLLUTION PREVENTION PLAN (SWPPP), WATER QUALITY TECHNICAL REPORT (WQTR), AND/OR WATER POLLUTION CONTROL PLAN (WPCP).

2. FOR STORM DRAIN INLETS, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF INLET AS INDICATED ON DETAILS.

3. FOR INLETS LOCATED AT SUMPS ADJACENT TO TOP OF SLOPES, THE CONTRACTOR SHALL ENSURE THAT WATER DRAINING TO THE SUMP IS DIRECTED INTO THE INLET AND THAT A MINIMUM OF 1.00' FREEBOARD EXISTS AND IS MAINTAINED ABOVE THE TOP OF THE INLET. IF FREEBOARD IS NOT PROVIDED BY GRADING SHOWN ON THESE PLANS THE CONTRACTOR SHALL PROVIDE IT VIA TEMPORARY MEASURES, I.E. GRAVEL BAGS OR DIKES.

4. THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.

5. THE CONTRACTOR OR QUALIFIED PERSON SHALL CHECK AND MAINTAIN ALL LINED AND UNLINED DITCHES AFTER EACH RAINFALL.

6. THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL.

7. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON. ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.

8. THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL DEVICES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OF RESIDENT ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.

9. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION/SEDIMENT CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.

10. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.

11. ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED GRADING PLAN SHALL BE INCORPORATED HEREIN. ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.

12. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.

13. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.

14. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING FOR THE AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION/SEDIMENT CONTROL MEASURES.

15. THE CONTRACTOR SHALL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF AN, ENGINEER OF WORK, OWNER/DEVELOPER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION/SEDIMENT CONTROL MEASURE AND OTHER RELATED CONSTRUCTION ACTIVITIES.

GENERAL NOTES 2

ROW GROUND CONSTRUCTION NOTES:

1. 120/240 POWER REQUIRED FOR 3-WIRE SERVICE.
2. CC TO REMOVE/CLEAN ALL DEBRIS, NAILS, STAPLES, OR NON-USED VERTICALS OFF THE POLE.
3. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH MUNICIPAL, COUNTY, STATE, FEDERAL, GO95 AND GO128 STANDARDS AND REGULATIONS.
4. CALL USA 48 HOURS PRIOR TO EXCAVATING AT (800) 422-4133.
5. ALL LANDSCAPING TO BE RESTORED TO ORIGINAL CONDITION OR BETTER.
6. ALL EQUIPMENT TO BE BONDED.
7. METERING CABINET REQUIRES 3'[.914M] CLEARANCE AT DOOR OPENING.
8. CAULK CABINET BASE AT PAD.

STANDARD GROUNDING NOTES:

1. GROUND TESTED AT 5 OHMS OR LESS.
2. 5/8"Ø[.015x2.44M] ROD, CAD WELD BELOW GRADE
3. #6 GROUND AND BOND WIRE.
4. WOOD MOLDING, STAPLED EVERY 3'[.914M] AND AT EACH END
5. GROUNDS 3'[.914M] FROM POLE.
6. PLACE 3 #10GA WIRES FROM BREAKER TO METER BOX.

STANDARD CONDUIT NOTES:

1. FOR UNDERGROUND USE SCHEDULE 40.
2. FOR RISERS USE SCHEDULE 80.
3. PLACE 2"[.051M] GALVANIZED STEEL CONDUIT FOR ANY CONDUIT UNDER 3"[.076M], STUB UP TO 3.04M] THEN CONVERT TO SCHEDULE 80.
4. CONVERT 4"[.102M] CARRIER CONDUIT TO 3"[.076M] AT BASE OF POLE.
5. GC TO STUB UP POLE 10'[3.04M] w/3" POWER CONDUIT, POWER CO. TO CONVERT FROM 3"[.076M] SCH. 80 TO 2"[.051M] SCH. 80 FROM TOP OF STUB UP.
6. ALL CONDUIT WILL BE MAN DRILLED AND EQUIPPED WITH 3/8"[.010M] PULL ROPE.

STANDARD TRENCHING NOTES:

1. MAINTAIN 40"[1.02M] MINIMUM COVER FOR ELECTRICAL CONDUIT.
2. MAINTAIN 30"[.762M] MINIMUM COVER FOR COMMUNICATIONS CONDUIT.
3. SAND SHADING MINIMUM 1"[.025M] UNDER CONDUITS, AND 6"[.152M] COVERING ON TOP REQUIRED.
4. ALL ELECTRICAL SERVICE CONDUITS FROM POWER COMPANY, WHETHER FROM POLES, TRANSFORMERS, OR OTHER LOCATIONS; WILL BE SLURRY BACKFILLED.
5. IN STREET SLURRY TO GRADE AND WILL DOWN 1-1/2"[.038M] FOR AC CAP.
6. IN DIRT SLURRY 18"[.457M] FROM GRADE, AND FILL WITH 95% COMPACTION NATIVE SOIL FOR BALANCE.
7. PLACE WARNING TAPE IN TRENCH 12"[.305M] ABOVE ALL CONDUITS AND #18 WARNING TAPE ABOVE GROUND RING.

ROW UTILITY POLE CONSTRUCTION NOTES:

1. NO BOLT THREADS TO PROTRUDE MORE THAN 1-1/2"[.038M].
2. FILL ALL HOLES LEFT IN POLE FROM REARRANGEMENT OF CLIMBERS.
3. ALL CLIMB STEPS NEXT TO CONDUIT SHALL HAVE EXTENDED STEPS.
4. CABLE NOT TO IMPEDE 15"[.381M] CLEAR SPACE OFF POLE FACE (12:00).
5. 90° SHORT SWEEPS UNDER ANTENNA ARM. ALL CABLES MUST ONLY TRANSITION ON THE INSIDE OR BOTTOM OF ARMS (NO CABLE ON TOP OF ARMS).
6. USE CABLE CLAMPS TO SECURE CABLE TO ARMS; PLACE 2'[.051M] CARRIER CABLE ID TAGS ON BOTH SIDES OF ARMS.
7. USE 90° CONNECTOR AT CABLE CONNECTION TO ANTENNAS.
8. PLACE GPS ON ARM WITH SOUTHERN SKY EXPOSURE AT MINIMUM 6'[1.83M] FROM TRANSMIT ANTENNA, WHICH IS 24"[.61M] AWAY FROM CENTER OF POLE.
9. USE 1/2"[.013M] CABLE ON ANTENNAS UNLESS OTHERWISE SPECIFIED.
10. FILL VOID AROUND CABLES AT CONDUIT OPENING WITH FOAM SEALANT TO PREVENT WATER INTRUSION.

ROW CONSTRUCTION GENERAL NOTES 3

WIND LOADING INFORMATION

ANTENNA/MOUNT ARM AREA TOTAL	77.48 SQ. FT.
TOP GRADE	31'-9"
BOTTOM GRADE	28'-4"
METER/BREAKER AREA TOTAL	4.33 SQ. FT.
TOP GRADE	8'-0"
BOTTOM GRADE	7'-0"
BATTERY BACK-UP AREA TOTAL	16.25 SQ. FT.
TOP GRADE	11'-8"
BOTTOM GRADE	9'-6"
DELTA DECK AREA TOTAL	10.74 SQ. FT.
TOP GRADE	14'-9"
BOTTOM GRADE	12'-5"
DELTA DECK (PUT.) AREA TOTAL	10.74 SQ. FT.
TOP GRADE	17'-9"
BOTTOM GRADE	15'-5"
EXT. RISER SIZE	4"ø
EXT. RISER LENGTH	18'-0"
EXT. RISER BTM GRADE	16'-10"
PWR RISER SIZE	1"ø
PWR RISER LENGTH	29'-6"
PWR RISER BTM GRADE	8'-6"

ANTENNA & CABLE SCHEDULE

ANTENNA SECTOR	AZIMUTH	ANTENNA MAKE / MODEL	COAXIAL CABLE LENGTH	CABLES PER SECTOR	CABLE SIZE
SECTOR ALPHA	315°	KATHREIN 742 226	26'	2	1/2"
SECTOR BETA	150°	KATHREIN 742 226	26"	2	1/2"
SECTOR GAMMA					

NOTE: CONTRACTOR TO FIELD VERIFY CABLE LENGTHS PRIOR TO ORDERING, FABRICATION, OR INSTALLATION OF CABLES.

LOADING AND ANTENNA CABLE SCHEDULES 1

extenet SM SYSTEMS
3030 WARRENVILLE RD.
SUITE 340
LISLE, IL 60532
www.extenet.com

REV.	DATE	DESCRIPTION
1	1/31/11	CONSTRUCTION DRAWINGS
2	2/17/11	CONSTRUCTION DRAWINGS
3	3/3/11	REVISION PER JURISDICTION
4	3/15/11	REVISION PER CITY COMMENTS

CURRENT ISSUE DATE:

3/15/11

PLANS PREPARED BY:

Maximize Comm. Group, Inc.
1351 POMONA ROAD
SUITE 100
CORONA, CA 92882
OFFICE: (909) 786-2170
FAX: (909) 992-3113

LICENSURE:

SITE NO.:

SKY-OSOA

SITE NAME & ADDRESS:

SKYLINE NETWORK-OSOA

13175 SKYLINE BLVD
OAKLAND, CA 94619

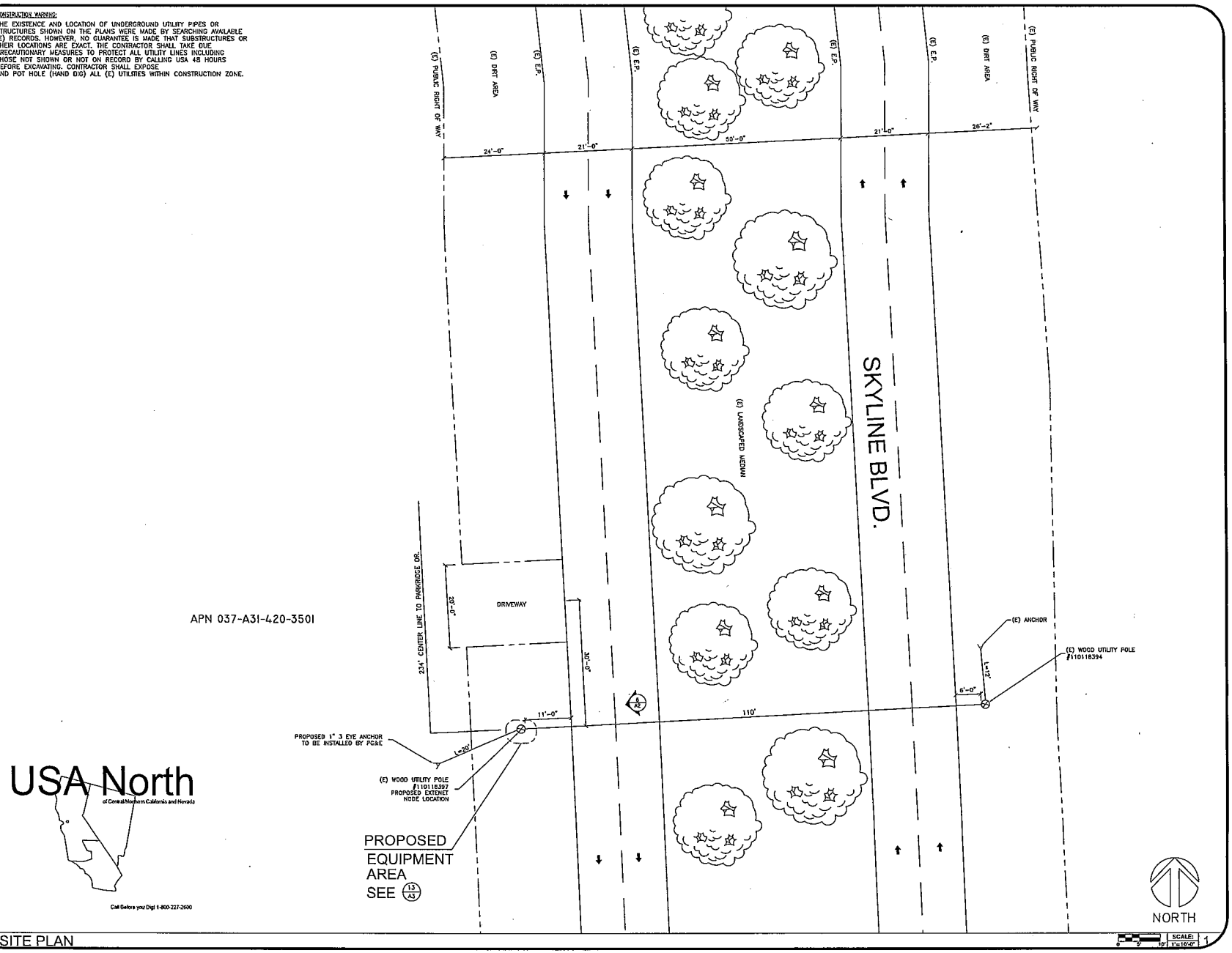
SHEET TITLE:

GENERAL NOTES & SCHEDULES

DRAWN BY:	CHECKED BY:	APPROVED BY:
VG	BM	BM

SHEET NUMBER: T2 REVISION: 4

CONSTRUCTION WARNING:
THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THE PLANS WERE MADE BY SEARCHING AVAILABLE (E) RECORDS. HOWEVER, NO GUARANTEE IS MADE THAT SUBSTRUCTURES OR THEIR LOCATIONS ARE EXACT. THE CONTRACTOR SHALL TAKE DUE PRECAUTIONARY MEASURES TO PROTECT ALL UTILITY LINES INCLUDING THOSE NOT SHOWN OR NOT ON RECORD BY CALLING USA 48 HOURS BEFORE EXCAVATING. CONTRACTOR SHALL EXPOSE AND POT HOLE (HAND DIG) ALL (E) UTILITIES WITHIN CONSTRUCTION ZONE.



APN 037-A31-420-3501

USA North
of Central/Northern California and Nevada

Call Before you Dig! 1-800-227-2600

SITE PLAN

extenet SM SYSTEMS
3030 WARRENVILLE RD.
SUITE 340
LISLE, IL 60532
www.extenet.com

REV.	DATE	DESCRIPTION
1	1/31/11	CONSTRUCTION DRAWINGS
2	2/17/11	CONSTRUCTION DRAWINGS
3	3/3/11	REVISION PER JURISDICTION
4	3/15/11	REVISION PER CITY COMMENTS

CURRENT ISSUE DATE:
3/15/11

PLANS PREPARED BY:

Maximize Comm. Group, Inc.
1351 POMONA ROAD
SUITE 100
CORONA, CA 92882
OFFICE: (909) 786-2170
FAX: (909) 992-3113

LICENSURE:

SITE NO.:
SKY-OSOA

SITE NAME & ADDRESS:
SKYLINE NETWORK-OSOA
18175 SKYLINE BLVD
OAKLAND, CA 94619

SHEET TITLE:
SITE PLAN

DRAWN BY	CHECKED BY	APPROVED BY
VG	SM	SM
SHEET NUMBER: A1		REVISION: 4

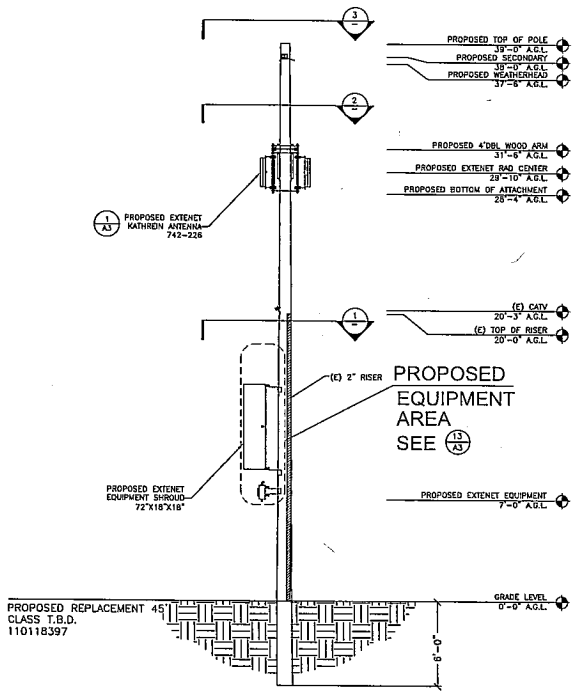
EXTENET MAKE-READY

1. INSTALL 4' DBL WOOD ANTENNA ARMS AND ATTACH (2) PANEL ANTENNAS AT 31'-6" GRADE.(KATHREIN 742226-1900)
2. INSTALL EXTENET RADIO'S, 6BU 4" OFF OF POLE (USING UNISTRUTS) AT 9:00 POSITION.
3. INSTALL WEATHER HEAD AT 37'-6".
4. INSTALL EXTENET 4" CONDUIT SCH. 40 AT 10:50 POSITION.
5. INSTALL EXTENET 1" CONDUIT SCH. 80 AT 11:00 POSITION.
6. TRANSFER CATV AND RISER TO REPLACEMENT POLE FROM 20'-3" GRADE TO 20'-3" GRADE.
7. PTD (E) 30' POLE.
8. PAINT ALL EQUIPMENT TO MATCH POLE

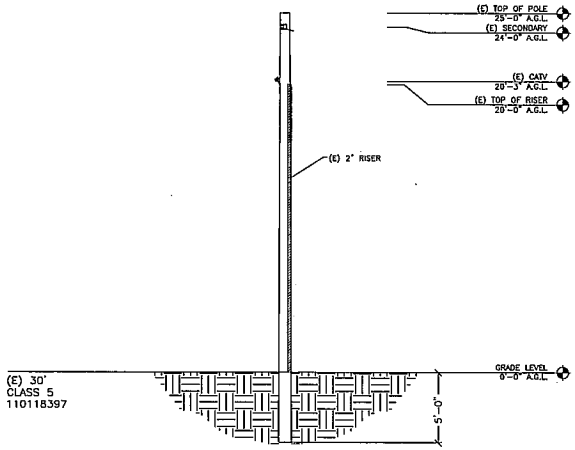
POWER MAKE-READY

1. REPLACE EXISTING 30' POLE WITH A 45' POLE.(SET PER PG&E's POWER DESIGN)
2. TRANSFER SECONDARY POWER TO REPLACEMENT POLE FROM 24'-0" GRADE TO 38'-0" GRADE.
3. INSTALL 1" CONDUIT SCH. 80 AT 11:00 POSITION.
4. PROVIDE 120/240 3-WIRE SINGLE PHASE, 100 AMP SERVICE TO 1" PG&E CONDUIT AT 11:00 POSITION TO EXTENET METER/BREAKER CABINET FROM SECONDARY 37'-6" (WEATHERHEAD).

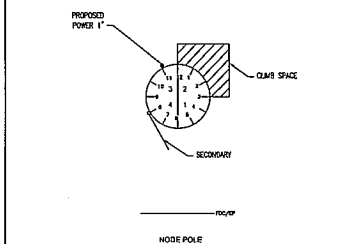
MAKE-READY NOTES 4



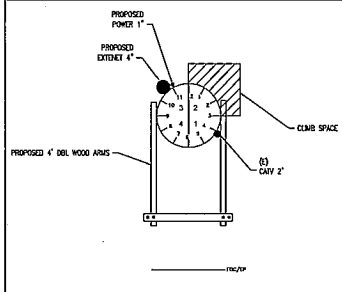
PROPOSED ELEVATION EAST — SCALE: 1/4"=1'-0" — 6



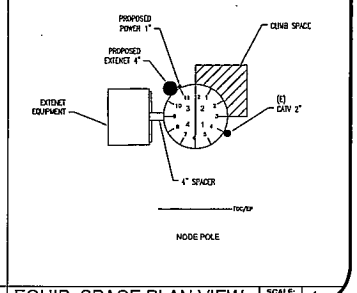
EXISTING ELEVATION EAST — SCALE: 1/4"=1'-0" — 5



POWER PLAN SPACE VIEW — SCALE: NONE — 3



COMMUNICATION PLAN SPACE VIEW — SCALE: NONE — 2



EQUIP. SPACE PLAN VIEW — SCALE: NONE — 1

extenet SM SYSTEMS
3030 WARRENVILLE RD.
SUITE 340
LISLE, IL 60532
www.extenet.com

REV.	DATE	DESCRIPTION
1	1/31/11	CONSTRUCTION DRAWINGS
2	2/17/11	CONSTRUCTION DRAWINGS
3	3/3/11	REVISION PER JURISDICTION
4	3/15/11	REVISION PER CITY COMMENTS

CURRENT ISSUE DATE:

3/15/11

PLANS PREPARED BY:

Maximize Comm. Group, Inc.
1351 POMONA ROAD
SUITE 100
CORONA, CA 92882
OFFICE: (909) 786-2170
FAX: (909) 992-3113

LICENSURE:

SITE NO.:

SKY-OSOA

SITE NAME & ADDRESS:

SKYLINE NETWORK-OSOA

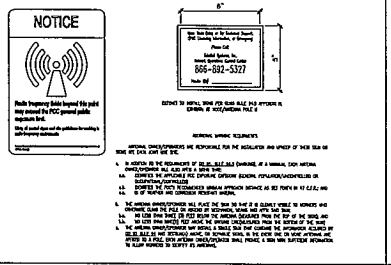
18175 SKYLINE BLVD
ONLAND CA 94589

SHEET NO.:

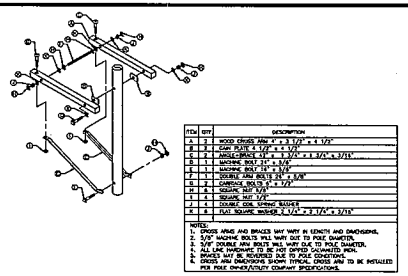
ELEVATIONS & RISER DETAILS

DRAWN BY	CHECKED BY	APPROVED BY
VS	BM	SM

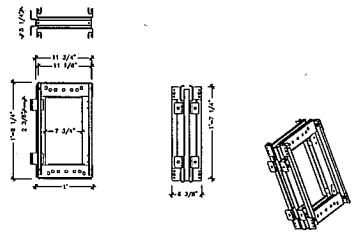
SHEET NUMBER: A2 — REVISION: 4



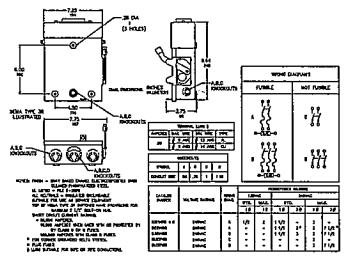
RULE GO95 SIGNAGE | SCALE: NO SCALE | 15



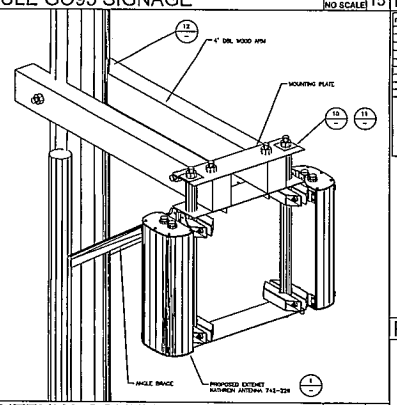
DBL WOOD ARM ASSEMBLY | SCALE: 1 1/2"=1' | 12



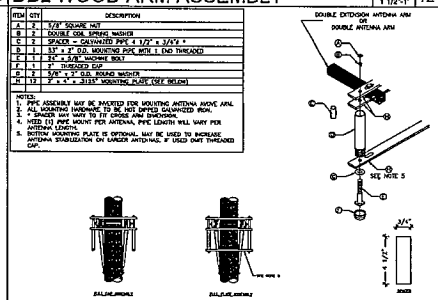
DELTA NODE MOUNTING BRACKET | SCALE: 1"=1' | 8



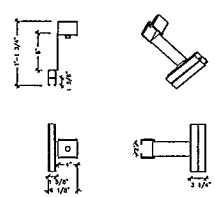
1852 SAFETY SWITCH | SCALE: 1"=1' | 4



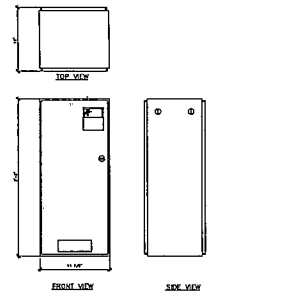
ANTENNA CONFIGURATION | SCALE: 1 1/2"=1' | 14



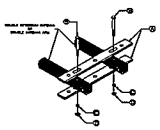
PIPE ASSEMBLY | SCALE: 1 1/2"=1' | 11



LADDER BRACKET | SCALE: 1"=1' | 7

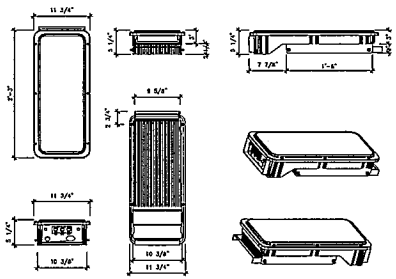


BATTERY BACK-UP XUPs 600-6969 | SCALE: 1"=1' | 3

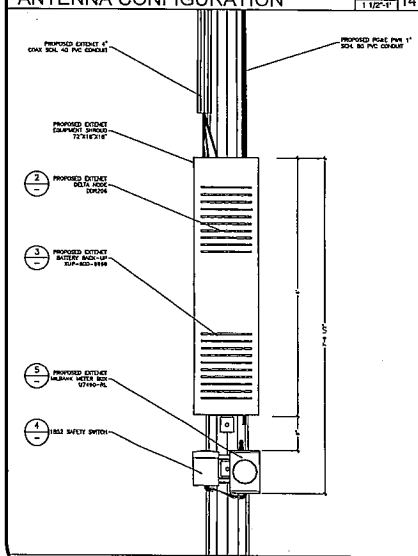


MOUNTING PLATE ASSEMBLY | SCALE: 1"=1' | 10

NOT USED | SCALE: 1"=1' | 6

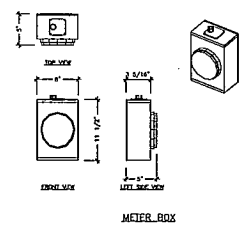


DELTA NODE DDR206 | SCALE: 1"=1' | 2



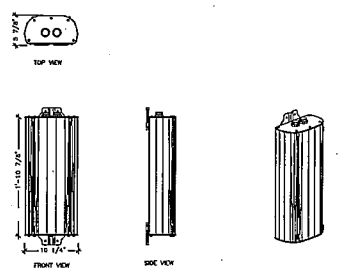
EQUIPMENT CONFIGURATION | SCALE: 1"=1' | 13

NOT USED | SCALE: 1"=1' | 9



METER BOX

MILBANK METER BOX U74190-RL | SCALE: 1"=1'-0" | 5



KATHREIN ANTENNA 742-226 | SCALE: 1"=1' | 1

extenet SM SYSTEMS
3030 WARRENVILLE RD.
SUITE 340
LISLE, IL 60532
www.extenet.com

REV.	DATE	DESCRIPTION
1	1/31/11	CONSTRUCTION DRAWINGS
2	2/17/11	CONSTRUCTION DRAWINGS
3	3/3/11	REVISION PER JURISDICTION
4	3/15/11	REVISION PER CITY COMMENTS

CURRENT ISSUE DATE:

3/15/11

PLANS PREPARED BY:

Maximize Comm. Group, Inc.
1351 POMONA ROAD
SUITE 100
CORONA, CA 92882
OFFICE: (909) 786-2170
FAX: (909) 992-3113

LICENSURE:

SITE NO.:

SKY-050A

SITE NAME & ADDRESS:

SKYLINE NETWORK-050A

1517 SOUTH BLVD
OAKLAND, CA 94619

SHEET TITLE:

EQUIPMENT DETAILS

DRAWN BY:	CHECKED BY:	APPROVED BY:
VS	BM	BM
SHEET NUMBER: A3		REVISION: 4

UTILITY GENERAL NOTES

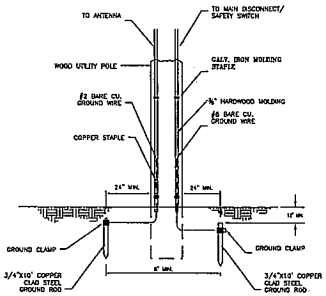
SCALE: N.T.S | 8

1. UTILITY POINTS OF SERVICE AND WORK / MATERIALS SHOWN ARE BASED UPON PRELIMINARY INFORMATION PROVIDED BY THE UTILITY COMPANIES AND ARE FOR BID PURPOSES ONLY.
2. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY FOR FINAL AND EXACT WORK / MATERIALS REQUIREMENTS AND CONSTRUCT TO UTILITY COMPANY ENGINEERING PLANS AND SPECIFICATIONS ONLY. CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUIT, PULL ROPES, CABLES, PULL BOXES, CONCRETE ENCASEMENT OF CONDUIT (IF REQUIRED), TRANSFORMER PAD, BARRIERS, POLE RISERS, TRENCHING, BACKFILL, PAY ALL UTILITY COMPANY FEES AND INCLUDE ALL REQUIREMENTS IN SCOPE OF WORK.
3. UTILITY CONTACTS FOR THIS PROJECT SHALL BE AS FOLLOWS:

POWER: PACIFIC GAS & ELECTRIC	TELEPHONE: VERIZON
CAROL VAN HUIZEN	N/A
275 INDUSTRIAL ROAD	N/A
SAN CARLOS, CA 94070	N/A
(650) 598-7378	N/A

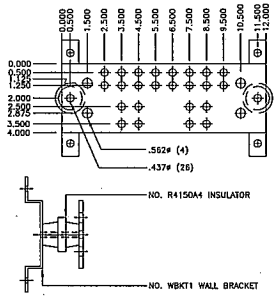
GROUND ROD DETAIL

SCALE: N.T.S | 6



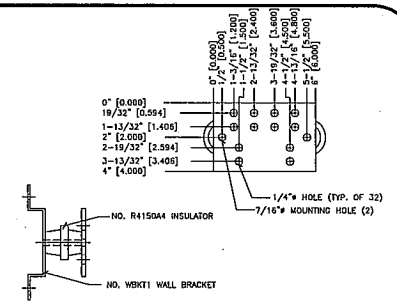
GROUND BAR ASSEMBLY (12")

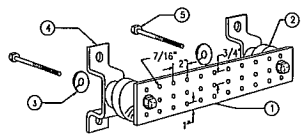
SCALE: N.T.S | 3



GROUND BAR ASSEMBLY (6")

SCALE: N.T.S | 2





LEGEND

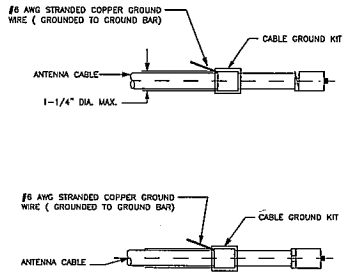
1. COPPER TINNED GROUND BAR, 1/4" X 4" X 24", NEWTON INSTRUMENT CO. CAT# B-6142. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION
2. INSULATORS, NEWTON INSTRUMENT CAT.# 3081-4.
3. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT# A-6056
4. 5/8"-11 X 1" H.H.C.S. BOLTS, NEWTON INSTRUMENT CO. CAT# 3012-2.
5. 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT# 3015-8.

GROUND BAR DETAIL (TYP)

SCALE: N.T.S | 7

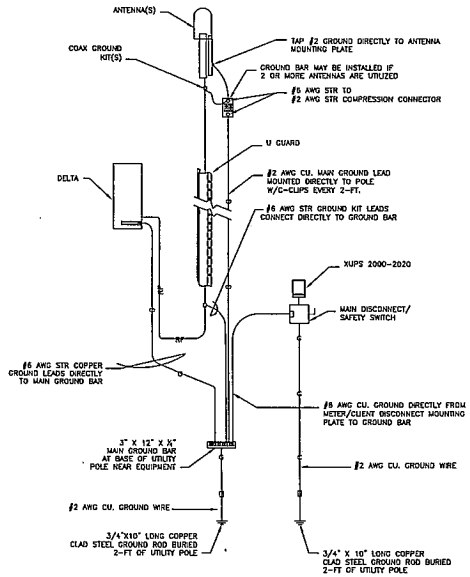
ANTENNA CABLE GROUND KIT

SCALE: N.T.S | 5



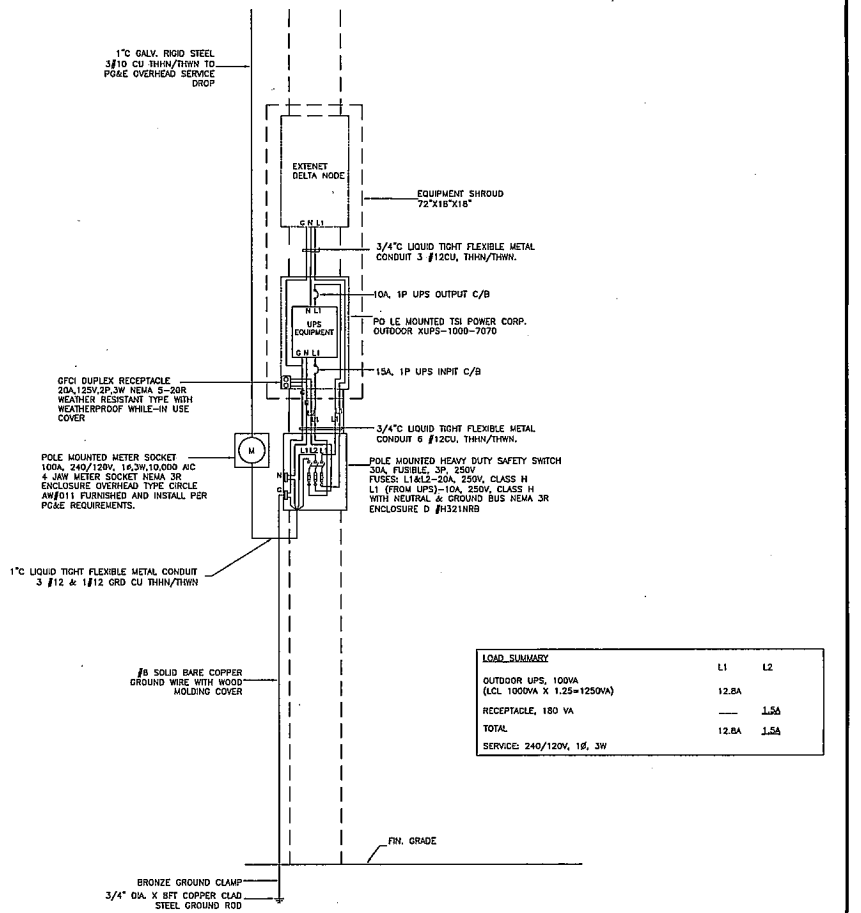
GROUNDING SCHEMATIC

SCALE: N.T.S | 4



SINGLE LINE DIAGRAM

SCALE: N.T.S | 1



LOAD SUMMARY	L1	L2
OUTDOOR UPS, 100VA (LCL 1000VA X 1.25=1250VA)	12.5A	
RECEPTACLE, 180 VA	___	1.5A
TOTAL	12.5A	1.5A

SERVICE: 240/120V, 1ø, 3W

extenet SM SYSTEMS
3030 WARRENVILLE RD.
SUITE 340
LISLE, IL 60532
www.extenet.com

REV.	DATE	DESCRIPTION
1	1/31/11	CONSTRUCTION DRAWINGS
2	2/17/11	CONSTRUCTION DRAWINGS
3	3/3/11	REVISION PER JURISDICTION
4	3/15/11	REVISION PER CITY COMMENTS

CURRENT ISSUE DATE:

3/15/11

PLANS PREPARED BY:

Maximize Comm. Group, Inc.
1351 POMONA ROAD
SUITE 100
CORONA, CA 92882
OFFICE: (909) 786-2170
FAX: (909) 992-3113

LICENSURE:

SITE NO.:

SKY-050A

SITE NAME & ADDRESS:

SKYLINE NETWORK-050A

1875 SKYLINE BLVD
DALY CITY, CA 94015

SHEET NO.:

ELECTRICAL DETAILS

DRAWN BY:	CHECKED BY:	APPROVED BY:
VS	EM	EM
SHEET NUMBER: E1		REVISION: 4

ATTACHMENT A

xtenet SYSTEMS YOUR NETWORK. EVERYWHERE.

Jason Madani
CITY OF OAKLAND
PLANNING & ZONING DIVISION
250 Frank H. Ogawa Plaza
Suite 2114
Oakland, CA 94612-2031

March 21, 2011

RE: CASE FILE NOS.
DR10-290; Public right-of-way adj: 13175 Skyline Blvd.

(ExteNet Systems Project SW-CA-SKYLINE, Node number SKY-050)

Dear Mr. Madani,

Thank you for taking the time to speak with Rick Hirsch of Permit Me and me this week. ExteNet Systems and our client are anxious to bring the Skyline DAS network on-air and your follow up with us to get us on the calendar as soon as possible is most appreciated.

As I understand our conversation, you would like to take our previously submitted RF Summary Report on the Skyline DAS network and convert that information into more succinct format that will serve as a site alternative analysis. I believe you want to address only node SKY-050A for this purpose. I will do so, but am compelled to remind you that a DAS network is not a stand-alone macro or micro cell such as you may be familiar with. DAS nodes, as described in our RF Summary Report, are designed in concert with the other nodes in the network and are all interdependent.

In the case of SKY-050, this node is in a typically windy portion of Skyline Blvd. The node is flanked by nodes SKY-049 and SKY-043, each slightly less than a mile apart. As we have discussed, DAS networks are designed for the optimum performance with the least amount of equipment necessary to be deployed. Nodes are generally spaced anywhere from one-quarter (¼) of a mile to one (1) mile apart, depending upon the topography and coverage objective.

Due to the low-power profile of the equipment used in this network, moving nodes while maintaining the network integrity is very difficult. The further apart nodes are spaced, the more critical this concept is. By moving node SKY-050 even one or two poles in either direction, it opens up a coverage gap that will likely result in dropped calls for callers.

Node engineering also plays a part in the selection of poles. As you are aware, ExteNet Systems is regulated by the California Public Utilities Commission ("CPUC) as a telecommunications carrier as opposed to a wireless carrier, which allows us to be in the public ROW and on utility poles as a joint owner. It also obligates us to follow CPUC-generated General Order 95 ("GO-95"). GO-95 is the ruling that dictates utility pole safety standards.

Jason Madani – City of Oakland, CA
RE: ExteNet Systems Skyline Project,
SKY-050

In the Skyline network, each pole was evaluated by our engineering team for viability and safety. It was then reevaluated by PG&E for viability and safety. Many poles are unusable for a variety of reasons that include transformers being on the pole, no way to meet separations between communications and power, disconnect switches being housed on the pole, pole type not compatible with planned use, etc. Poles close to SKY-050 were evaluated during the engineering process and it was jointly determined by ExteNet Systems, our client's RF Engineering team and PG&E that the pole selected was indeed the best pole in the area to meet all system requirements while maintaining the critical safety standards for all pole owners.

The primary reason for this pole being chosen was that all other poles within the distances necessary to maintain system performance were located outside of the public right-of-way, on private property.

I trust that this more detailed response and our RF Summary Report combined should be enough information for you to understand the basics of location selection in the Skyline DAS network. Of course, should you need further information or points of clarification, please contact me and I will be happy to assist.

I thank you in advance for your immediate attention to this matter.

Respectfully,

Patti Ringo
Director, Municipal Relations/West Region

sitesafe
rf compliance experts

200 North Glebe Road, Suite 1000, Arlington, VA 22203-3728
703.276.1100 • 703.276.1169 fax
info@sitesafe.com • www.sitesafe.com

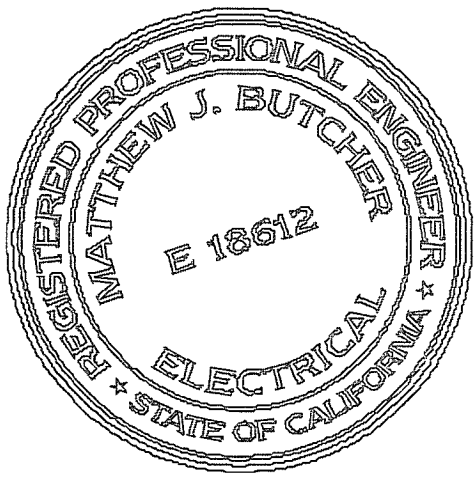
ATTACHMENT B

Extenet Systems, LLC
Site Name – DAS Configuration 2A
Site Compliance Report

Structure Type: Existing or New Above Ground Facilities in Public Right-of-Way

Report generated date: December 2, 2010
Report by: Jerry Audi
Customer Contact: Michael Chow

Extenet Systems, LLC Will Be Compliant based on FCC Rules and Regulations.



Registration Expires December 31, 2010

Matthew J Butcher
Registered Professional Engineer
State of California License E 18612

sitesafe
rf compliance experts

Table of Contents

1 Executive Summary

Extenet Systems, LLC has contracted with Sitesafe, Inc. (Sitesafe), an independent Radio Frequency (RF) regulatory and engineering consulting firm, to determine whether the proposed communications site is in compliance with FCC Rules and Regulations for RF emissions.

This report contains a detailed summary of the RF environment at the site including:

- diagram of the site;
- inventory of the make / model of all transmitting;
- theoretical MPE based on modeling.

This report addresses exposure to radio frequency electromagnetic fields in accordance with the FCC Rules and Regulations for all individuals, classified in two groups, "Occupational or Controlled" and "General Public or Uncontrolled." This **site will be compliant** with FCC Rules and Regulations. The corrective actions needed to make this site compliant are located in Section 3.2.

The theoretical modeling of the RF electromagnetic fields on this site has been performed in accordance with the FCC's Office of Engineering and Technology Bulletin 65 ("OET Bulletin 65"), *Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields*, Edition 97-01, published August 1997.

This document and the conclusions herein are based on the information provided by Extenet Systems, LLC

If you have any questions regarding RF safety and regulatory compliance, please do not hesitate to contact Sitesafe's Customer Support Department at (703) 276-1100.

2 Regulatory Basis

2.1 FCC Rules and Regulations

In 1996, the Federal Communication Commission (FCC) adopted regulations for the evaluating of the effects of RF emissions in 47 CFR § 1.1307 and 1.1310. The guideline from the FCC Office of Engineering and Technology is Bulletin 65 ("OET Bulletin 65"), *Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields*, Edition 97-01, published August 1997. Since 1996 the FCC periodically reviews these rules and regulations as per their congressional mandate.

FCC regulations define two separate tiers of exposure limits: Occupational or "Controlled environment" and General Public or "Uncontrolled environment". The General Public limits are generally five times more conservative or restrictive than the Occupational limit. These limits apply to *accessible* areas where workers or the general public may be exposed to Radio Frequency (RF) electromagnetic fields.

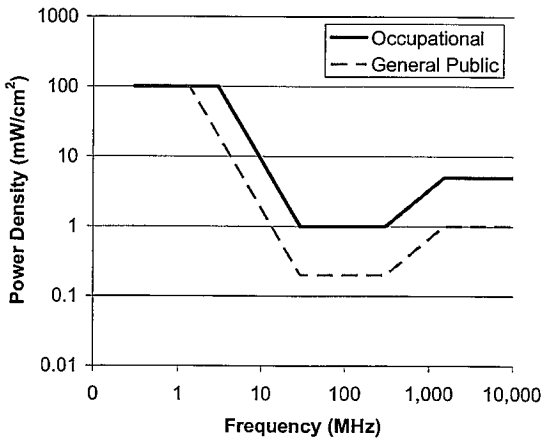
Occupational or Controlled limits apply in situations in which persons are exposed as a consequence of their employment and where those persons exposed have been made fully aware of the potential for exposure and can exercise control over their exposure.

An area is considered a Controlled environment when access is limited to these aware personnel. Typical criteria are restricted access (i.e. locked or alarmed doors, barriers, etc.) to the areas where antennas are located coupled with proper RF warning signage. A site with Controlled environments is evaluated with Occupational limits.

All other areas are considered Uncontrolled environments. If a site has no access controls or no RF warning signage it is evaluated with General Public limits.

The theoretical modeling of the RF electromagnetic fields has been performed in accordance with OET Bulletin 65. The Maximum Permissible Exposure (MPE) limits utilized in this analysis are outlined in the following diagram:

FCC Limits for Maximum Permissible Exposure (MPE)
Plane-wave Equivalent Power Density



Limits for Occupational/Controlled Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $|E|^2$, $|H|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

Limits for General Population/Uncontrolled Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $|E|^2$, $|H|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz *Plane-wave equivalent power density

2.2 OSHA Statement

The General Duty clause of the OSHA Act (Section 5) outlines the occupational safety and health responsibilities of the employer and employee. The General Duty clause in Section 5 states:

(a) Each employer –

(1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;

(2) shall comply with occupational safety and health standards promulgated under this Act.

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.

OSHA has defined Radiofrequency and Microwave Radiation safety standards for workers who may enter hazardous RF areas. Regulation Standards 29 CFR § 1910.147 identify a generic Lock Out Tag Out procedure aimed to control the unexpected energization or start up of machines when maintenance or service is being performed.

3 Site Compliance

3.1 Site Compliance Statement

Upon evaluation of the cumulative RF emission levels from all operators at this site, Sitesafe has determined that:

Extenet Systems, LLC is predicted to contribute **greater than 5%** of the maximum permissible exposure (MPE) at the antenna level based on theoretical modeling using parameters supplied by the client. Extenet Systems, LLC is predicted to contribute **less than 5%** on the ground level. A detailed explanation of the 5% rule can be found in the Definition section of Appendix B.

The compliance determination is based on General Public MPE levels based on theoretical modeling, RF signage recommendations, information provided by customer and the level of restricted access to the antennas at the site. Any deviation from the proposed deployment plans my render the site in to non compliance.

3.2 Actions for Site Compliance

Based on common industry practice and our understanding of FCC and OSHA requirements, this section provides a statement of recommendations for site compliance. RF alert signage recommendations have been proposed based on theoretical analysis of MPE levels.

This site will be compliant with FCC Rules and Regulations. Extenet Systems, LLC contributes greater than 5% of the maximum permissible exposure (MPE); therefore, additional action is required by Extenet Systems, LLC to attain compliance. It is recommended that Extenet Systems, LLC review Appendix D in order to maintain a current RF Safety Awareness program.

Sitesafe found one or more issues that led to our determination. The site will be made compliant if the following changes are implemented:

- Posting RF signs that a person could read and understand the signs prior to accessing the site;

Site Access Location

Blue notice sign required. (Above the Extenet equipment, below the telco cable)

<u>Note</u>: Sitesafe recommends installing a Blue Notice Sign above the street lamp and underneath the antenna to alert tower climbers when performing services on site.

Extenet Systems, LLC Proposed Omni Location

No action required.

4 Safety Plan and Procedures

The following items are general safety recommendations that should be administered on a site by site basis as needed by the carrier.

General Maintenance Work: Any maintenance personnel required to work immediately in front of antennas and / or in areas indicated as above 100% of the Occupational MPE limits should coordinate with the wireless operators to disable transmitters during their work activities.

Training and Qualification Verification: All personnel accessing areas indicated as exceeding the General Population MPE limits should have a basic understanding of EME awareness and RF Safety procedures when working around transmitting antennas. Awareness training increases a workers understanding to potential RF exposure scenarios. Awareness can be achieved in a number of ways (e.g. videos, formal classroom lecture or internet based courses).

RF Signage: Everyone should obey all posted signs at all times. RF signs play an important role in properly warning a worker prior to entering into a potential RF Exposure area.

Assume all antennas are active: Due to the nature of telecommunications transmissions, an antenna transmits intermittently. Always assume an antenna is transmitting. Never stop in front of an antenna. If you have to pass by an antenna, move through as quickly and safely as possible thereby reducing any exposure to a minimum.

Maintain a 3 foot clearance from all antennas: There is a direct correlation between the strength of an EME field and the distance from the transmitting antenna. The further away from an antenna, the lower the corresponding EME field is.

Site RF Emissions Diagram: Section 5 of this report contains an RF Diagram that outlines various theoretical Maximum Permissible Exposure (MPE) areas at the site. The modeling is a worst case scenario assuming a duty cycle of 100% for each transmitting antenna at full power. This analysis is based on one of two access control criteria: General Public criteria means the access to the site is uncontrolled and anyone can gain access. Occupational criteria means the access is restricted and only properly trained individuals can gain access to the antenna locations.

5 Analysis

5.1 RF Emissions Diagram

The RF diagram(s) below display theoretical spatially averaged percentage of the Maximum Permissible Exposure for all systems at the site unless otherwise noted. These diagrams use modeling as proscribed in OET Bulletin 65 and assumptions detailed in Appendix B.

The key at the bottom of each diagram indicates if percentages displayed are referenced to FCC Occupational or General Public Maximum Permissible Exposure (MPE) limits. Color coding on the diagram is as follows:

- Areas indicated as Gray are below 5% of the MPE limits.
- Green represents areas predicted to be between 5% and 20% of the MPE limits.
- Yellow represents areas predicted to be between 20% and 100% of the MPE limits.
- Red areas indicated predicted levels greater than 100% of the MPE limits.

General Population diagrams are specified when an area is accessible to the public; i.e. personnel that do not meet Occupational or RF Safety trained criteria, could gain access.

If trained occupational personnel require access to areas that are delineated as Red or above 100% of the limit, Sitesafe recommends that they utilize the proper personal protection equipment (RF monitors), coordinate with the carriers to reduce or shutdown power, or make real-time power density measurements with the appropriate power density meter to determine real-time MPE levels. This will allow the personnel to ensure that their work area is within exposure limits.

The key at the bottom also indicates the level or height of the modeling with respect to the main level. The origin is typically referenced to the main rooftop level, or ground level for a structure without access to the antenna level. For example:

Average from 0 feet above to 6 feet above origin

and

Average from 20 feet above to 26 feet above origin

The first indicates modeling at the main rooftop (or ground) level averaged over 6 feet. The second indicates modeling at a higher level (possibly a penthouse level) of 20 feet averaged over 6 feet.

Abbreviations used in the RF Emissions Diagrams

PH=##'	Penthouse at ## feet above main roof

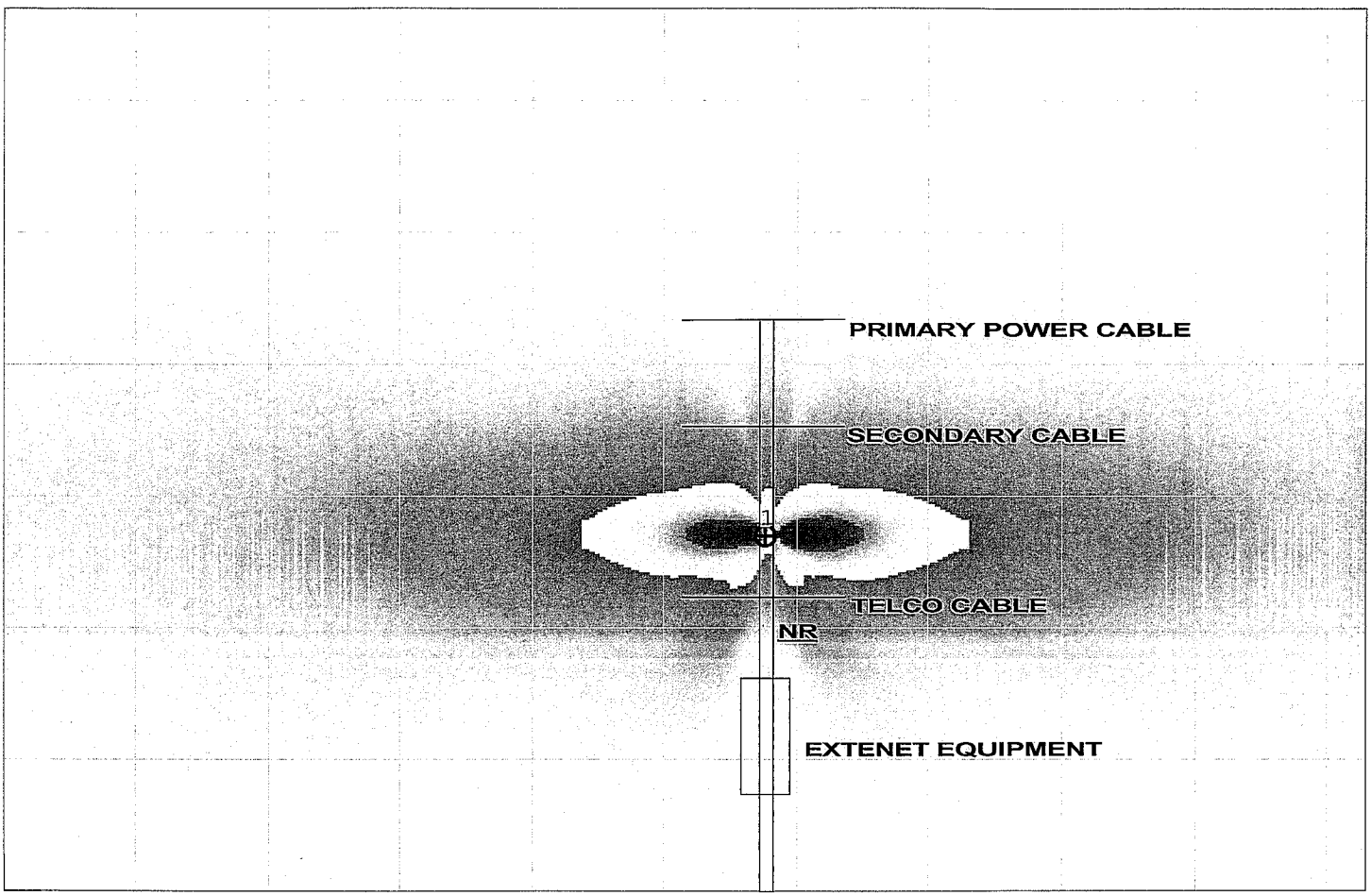
Additional Information in the RF Emissions Diagrams Key

The RF emissions diagram provides recommendations of RF signage, barriers and locked doors. The table below lists the abbreviations:

The RF emissions diagram includes recommendations for RF signage, barriers and locked doors. The table below lists the abbreviations:

Table 1: RF Signage and Barrier Key					
RF Signage			**Barriers**		
Type	**Existing Location**	**Recommended Location**	**Type**	**Existing Location**	**Recommended Location**
Notice	**NE**	**NR**	Locked Door	**LE**	**LR**
Caution	**CE**	**CR**	Fencing	**RE**	**RR**
Warning	**WE**	**WR**	Rope Chain		
Info Sign	**IE**		Paint Stripes		

RF Emissions Diagram for: DAS Configuration 2A
Elevation View



% of FCC Public Exposure Limit
Individual Points

	100 <= X
	20 <= X < 100
	5 <= X < 20
	X <= 5

sitesafe
www.sitesafe.com
Sitesafe ID# 63939
Site Name: DAS Configuration 2A

Feet
5 0 5 10
Grid Size is 10.0

6 Antenna Inventory

6.1 Transmitting Antenna Inventory

The Antenna Inventory shows all transmitting antennas at the site. The antenna inventory was provided by the customer, and was utilized by Sitesafe to perform theoretical modeling of RF emissions. The inventory coincides with the site diagrams in this report, identifying each antenna's location at DAS Configuration 2A. The antenna information collected includes the following information:

- Licensee or wireless operator name
- Frequency or frequency band
- Transmitter power – Effective Radiated Power ("ERP"), or Equivalent Isotropic Radiated Power ("EIRP") in Watts
- Antenna manufacturer make, model, and gain

For other carriers at this site, the use of "Generic" as an antenna model, or "Unknown" for an operator means the information with regard to carrier, their FCC license and/or antenna information was not available. Equipment, antenna models and nominal transmit power were used for modeling, based on past experience with radio service providers.

The following antenna inventory was obtained from the customer and was utilized to create the RF Emission diagrams in Section 5:

Table 3: Antenna Inventory

Ant #	Operated By	TX Freq (MHz)	ERP (Watts)	Antenna Gain (dBd)	Az (Deg)	Antenna Model	Ant Type	Length (ft)	Horizontal Half Power Beamwidth (Deg)	Location		
										X	Y	Z (ft)
1	T-Mobile (Proposed)	1972	104	11.24	90	Kathrein-Scala 742226 or like	Panel	2	65	101	3	27
1	T-Mobile (Proposed)	2140	111	11.61	90	Kathrein-Scala 742226 or like	Panel	2	65	101	3	27
2	T-Mobile (Proposed)	1972	104	11.24	270	Kathrein-Scala 742226 or like	Panel	2	65	101	3	27
2	T-Mobile (Proposed)	2140	111	11.61	270	Kathrein-Scala 742226 or like	Panel	2	65	101	3	27

NOTE: X, Y and Z indicate relative position of the antenna to the origin location on the site, displayed in the model results diagram. Specifically, the Z reference indicates antenna height above the main site level unless otherwise indicated. ERP values provided by the client and used in the modeling may be greater than are currently deployed. For other carriers at this site the use of "Generic" as an antenna model or "Unknown" for a wireless operator means the information with regard to carrier, their FCC license and/or antenna information was not available nor could it be secured while on site. Equipment, antenna models and nominal transmit power were used for modeling, based on past experience with radio service providers.

7 Engineer Certification

The professional engineer whose seal appears on the cover of this document hereby certifies and affirms that:

I am registered as a Professional Engineer in the jurisdiction indicated in the professional engineering stamp on the cover of this document; and

That I am an employee of Sitesafe, Inc., in Arlington, Virginia, at which place the staff and I provide RF compliance services to clients in the wireless communications industry; and

That I am thoroughly familiar with the Rules and Regulations of the Federal Communications Commission (FCC) as well as the regulations of the Occupational Safety and Health Administration (OSHA), both in general and specifically as they apply to the FCC Guidelines for Human Exposure to Radio-frequency Radiation; and

That survey measurements of the site environment of the site identified as DAS Configuration 2A have been performed in order to determine where there might be electromagnetic energy that is in excess of both the Controlled Environment and Uncontrolled Environment levels; and

That I have thoroughly reviewed this Site Compliance Report and believe it to be true and accurate to the best of my knowledge as assembled by and attested to by Jerry Audi

November 29, 2010

Appendix A – Statement of Limiting Conditions

Due to the complexity of some wireless sites, Sitesafe performed this analysis and created this report utilizing supplied and collected information. Sitesafe cannot be held accountable or responsible for anomalies or discrepancies due to actual site conditions (i.e., mislabeling of antennas or equipment, undocumented cable runs, undocumented antennas or equipment, etc.) or information or data supplied by Extenet Systems LLC, the site manager, or their affiliates, subcontractors or assignees.

Sitesafe has provided computer generated model(s) in this Site Compliance Report to show approximate dimensions of the site, and the model is included to assist the reader of the compliance report to visualize the site area, and to provide supporting documentation for Sitesafe's recommendations.

Sitesafe may note in the Site Compliance Report any adverse physical conditions, such as needed repairs, observed during the survey of the subject property or that Sitesafe became aware of during the normal research involved in performing this survey. Sitesafe will not be responsible for any such conditions that do exist or for any engineering or testing that might be required to discover whether such conditions exist. Because Sitesafe is not an expert in the field of mechanical engineering or building maintenance, the Site Compliance Report must not be considered a structural or physical engineering report.

Sitesafe obtained information used in this Site Compliance Report from sources that Sitesafe considers reliable and believes them to be true and correct. Sitesafe does not assume any responsibility for the accuracy of such items that were furnished by other parties. When conflicts in information occur between data provided by a second party and physical data collected by Sitesafe, the physical data will be used.

Appendix B – Assumptions and Definitions

General Model Assumptions

In this site compliance report, it is assumed that all antennas are operating at **full power at all times**. Software modeling was performed for all transmitting antennas located on the site. Sitesafe has further assumed a 100% duty cycle and maximum radiated power.

The site has been modeled with these assumptions to show the maximum RF energy density. Sitesafe believes this to be a *worst-case* analysis, based on best available data. Areas modeled to predict emissions greater than 100% of the applicable MPE level may not actually occur, but are shown as a *worst-case* prediction that could be realized real time. Sitesafe believes these areas to be safe for entry by occupationally trained personnel utilizing appropriate personal protective equipment (in most cases, a personal monitor).

Thus, at any time, if power density measurements were made, we believe the real-time measurements would indicate levels below those depicted in the RF emission diagram(s) in this report. By modeling in this way, Sitesafe has conservatively shown exclusion areas – areas that should not be entered without the use of a personal monitor, carriers reducing power, or performing real-time measurements to indicate real-time exposure levels.

Use of Generic Antennas

For the purposes of this report, the use of "Generic" as an antenna model, or "Unknown" for an operator means the information about a carrier, their FCC license and/or antenna information was not provided and could not be obtained while on site. In the event of unknown information, Sitesafe will use our industry specific knowledge of equipment, antenna models, and transmit power to model the site. If more specific information can be obtained for the unknown measurement criteria, Sitesafe recommends remodeling of the site utilizing the more complete and accurate data. Information about similar facilities is used when the service is identified and associated with a particular antenna. If no information is available regarding the transmitting service associated with an unidentified antenna, using the antenna manufacturer's published data regarding the antenna's physical characteristics makes more conservative assumptions.

Where the frequency is unknown, Sitesafe uses the closest frequency in the antenna's range that corresponds to the highest Maximum Permissible Exposure (MPE), resulting in a conservative analysis.

Definitions

5% Rule – The rules adopted by the FCC specify that, in general, at multiple transmitter sites actions necessary to bring the area into compliance with the guidelines are the shared responsibility of all licensees whose transmitters produce field strengths or power density levels at the area in question in excess of 5% of the exposure limits. In other words, any wireless operator that contributes 5% or greater of the MPE limit in an area that is identified to be greater than 100% of the MPE limit is responsible taking corrective actions to bring the site into compliance.

Compliance – The determination of whether a site is safe or not with regards to Human Exposure to Radio Frequency Radiation from transmitting antennas.

Decibel (dB) – A unit for measuring power or strength of a signal.

Duty Cycle – The percent of pulse duration to the pulse period of a periodic pulse train. Also, may be a measure of the temporal transmission characteristic of an intermittently transmitting RF source such as a paging antenna by dividing average transmission duration by the average period for transmission. A duty cycle of 100% corresponds to continuous operation.

Effective (or Equivalent) Isotropic Radiated Power (EIRP) – The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna.

Effective Radiated Power (ERP) – In a given direction, the relative gain of a transmitting antenna with respect to the maximum directivity of a half wave dipole multiplied by the net power accepted by the antenna from the connecting transmitter.

Gain (of an antenna) – The ratio of the maximum intensity in a given direction to the maximum radiation in the same direction from an isotropic radiator. Gain is a measure of the relative efficiency of a directional antennas as compared to an omni directional antenna.

General Population/Uncontrolled Environment – Defined by the FCC, as an area where RFR exposure may occur to persons who are **unaware** of the potential for exposure and who have no control of their exposure. General Population is also referenced as General Public.

Generic Antenna – For the purposes of this report, the use of "Generic" as an antenna model means the antenna information was not provided and could not be obtained while on site. In the event of unknown information, Sitesafe will use our industry specific knowledge of antenna models to select a worst case scenario antenna to model the site.

Isotropic Antenna – An antenna that is completely non-directional. In other words, an antenna that radiates energy equally in all directions.

Maximum Measurement – This measurement represents the single largest measurement recorded when performing a spatial average measurement.

Maximum Permissible Exposure (MPE) – The rms and peak electric and magnetic field strength, their squares, or the plane-wave equivalent power densities associated with these fields to which a person may be exposed without harmful effect and with acceptable safety factor.

Occupational/Controlled Environment – Defined by the FCC, as an area where Radio Frequency Radiation (RFR) exposure may occur to persons who are **aware** of the potential for exposure as a condition of employment or specific activity and can exercise control over their exposure.

OET Bulletin 65 – Technical guideline developed by the FCC's Office of Engineering and Technology to determine the impact of Radio Frequency radiation on Humans. The guideline was published in August 1997.

***OSHA* (Occupational Safety and Health Administration)** – Under the Occupational Safety and Health Act of 1970, employers are responsible for providing a safe and healthy workplace for their employees. OSHA's role is to promote the safety and health of America's working men and women by setting and enforcing standards; providing training, outreach and education; establishing partnerships; and encouraging continual process improvement in workplace safety and health. For more information, visit www.osha.gov.

Radio Frequency Radiation – Electromagnetic waves that are propagated from antennas through space.

Spatial Average Measurement – A technique used to average a minimum of ten (10) measurements taken in a ten (10) second interval from zero (0) to six (6) feet. This measurement is intended to model the average energy an average sized human body will absorb while present in an electromagnetic field of energy.

Transmitter Power Output (TPO) – The radio frequency output power of a transmitter's final radio frequency stage as measured at the output terminal while connected to a load.

Appendix C – Rules & Regulations

Explanation of Applicable Rules and Regulations

The FCC has set forth guidelines in OET Bulletin 65 for human exposure to radio frequency electromagnetic fields. Specific regulations regarding this topic are listed in Part 1, Subpart I, of Title 47 in the Code of Federal Regulations. Currently, there are two different levels of MPE - General Public MPE and Occupational MPE. An individual classified as Occupational can be defined as an individual who has received appropriate RF training and meets the conditions outlined below. General Public is defined as anyone who does not meet the conditions of being Occupational. FCC and OSHA Rules and Regulations define compliance in terms of total exposure to total RF energy, regardless of location of or proximity to the sources of energy.

It is the responsibility of all licensees to ensure these guidelines are maintained at all times. It is the ongoing responsibility of all licensees composing the site to maintain ongoing compliance with FCC rules and regulations. Individual licensees that contribute less than 5% MPE to any total area out of compliance are not responsible for corrective actions.

OSHA has adopted and enforces the FCC's exposure guidelines. A building owner or site manager can use this report as part of an overall RF Health and Safety Policy. It is important for building owners/site managers to identify areas in excess of the General Population MPE and ensure that only persons qualified as Occupational are granted access to those areas.

Occupational Environment Explained

The FCC definition of Occupational exposure limits apply to persons who:

- are exposed to RF energy as a consequence of their employment;
- have been made aware of the possibility of exposure; and
- can exercise control over their exposure.

OSHA guidelines go further to state that persons must complete RF Safety Awareness training and must be trained in the use of appropriate personal protective equipment.

In order to consider this site an Occupational Environment, the site must be controlled to prevent access by any individuals classified as the General Public. Compliance is also maintained when any non-occupational individuals (the General Public) are prevented from accessing areas indicated as Red or Yellow in the attached RF Emissions diagram. In addition, a person must be aware of the RF environment into which they are entering. This can be accomplished by an RF Safety Awareness class, and by appropriate written documentation such as this Site Compliance Report.

All [Company_Name] employees who require access to this site must complete RF Safety Awareness training and must be trained in the use of appropriate personal protective equipment.

Appendix D – General Safety Recommendations

The following are *general recommendations* appropriate for any site with accessible areas in excess of 100% General Public MPE. These recommendations are not specific to this site. These are safety recommendations appropriate for typical site management, building management, and other tenant operations.

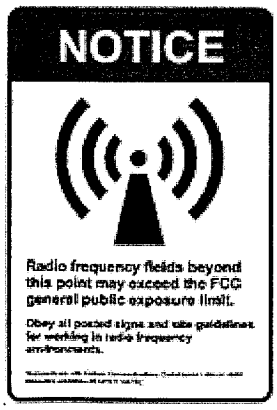
1. All individuals needing access to the main site (or the area indicated to be in excess of General Public MPE) should wear a personal RF Exposure monitor, successfully complete proper RF Safety Awareness training, and have and be trained in the use of appropriate personal protective equipment.

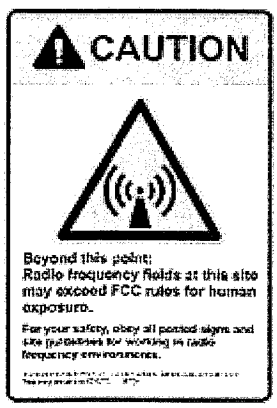
2. All individuals needing access to the main site should be instructed to read and obey all posted placards and signs.

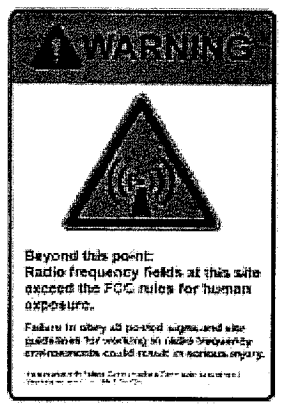
3. The site should be routinely inspected and this or similar report updated with the addition of any antennas or upon any changes to the RF environment including:

- adding new antennas that may have been located on the site
- removing of any existing antennas
- changes in the radiating power or number of RF emitters

4. Post the appropriate **NOTICE**, **CAUTION**, or **WARNING** sign at the main site access point(s) and other locations as required. Note: Please refer to RF Exposure Diagrams in Appendix B, to inform <u>everyone</u> who has access to this site that beyond posted signs there may be levels in excess of the limits prescribed by the FCC. The signs below are examples of signs meeting FCC guidelines.







5. Ensure that the site door remains locked (or appropriately controlled) to deny access to the general public if deemed as policy by the building/site owner.

6. For a General Public environment the four color levels identified in this analysis can be interpreted in the following manner:

- Areas indicated as Gray are at 5% of the General Public MPE limits. This level is safe for a worker to be in at any time.
- Green represents areas predicted to be between 5% and 20% of the General Public MPE limits. This level is safe for a worker to be in at any time.

- Yellow represents areas predicted to be between 20% and 100% of the General Public MPE limits. This level is safe for a worker to be in at any time.
- Red areas indicated predicted levels greater than 100% of the General Public MPE limits. This level is not safe for the General Public to be in.

7. For an Occupational environment the four color levels identified in this analysis can be interpreted in the following manner:

- Areas indicated as Gray are at 5% of the Occupational MPE limits. This level is safe for a worker to be in at any time.
- Green represents areas predicted to be between 5% and 20% of the Occupational MPE limits. This level is safe for a worker to be in at any time.
- Yellow represents areas predicted to be between 20% and 100% of the Occupational MPE limits. Only individuals that have been properly trained in RF Health and Safety should be allowed to work in this area. This is not an area that is suitable for the General Public to be in.
- Red areas indicated predicted levels greater than 100% of the Occupational MPE limits. This level is not safe for the Occupational worker to be in for prolonged periods of time. Special procedures must be adhered to such as lock out tag out procedures to minimize the workers exposure to EME.

8. Use of a Personal Protective Monitor: When working around antennas, Sitesafe strong recommends the use of a Personal Protective Monitor (PPM). Wearing a PPM will properly forewarn the individual prior to entering an RF exposure area.

7. Use of a Personal Protective Monitor: When working around antennas, Sitesafe strong recommends the use of a Personal Protective Monitor (PPM). Wearing a PPM will properly forewarn the individual prior to entering an RF exposure area.

Keep a copy of this report available for all persons who must access the site. They should read this report and be aware of the potential hazards with regards to RF and MPE limits.

Additional Information

Additional RF information is available by visiting both www.Sitesafe.com and www.fcc.gov/oet/rfsafety. OSHA has additional information available at: http://www.osha-slc.gov/SLTC/radiofrequencyradiation.