

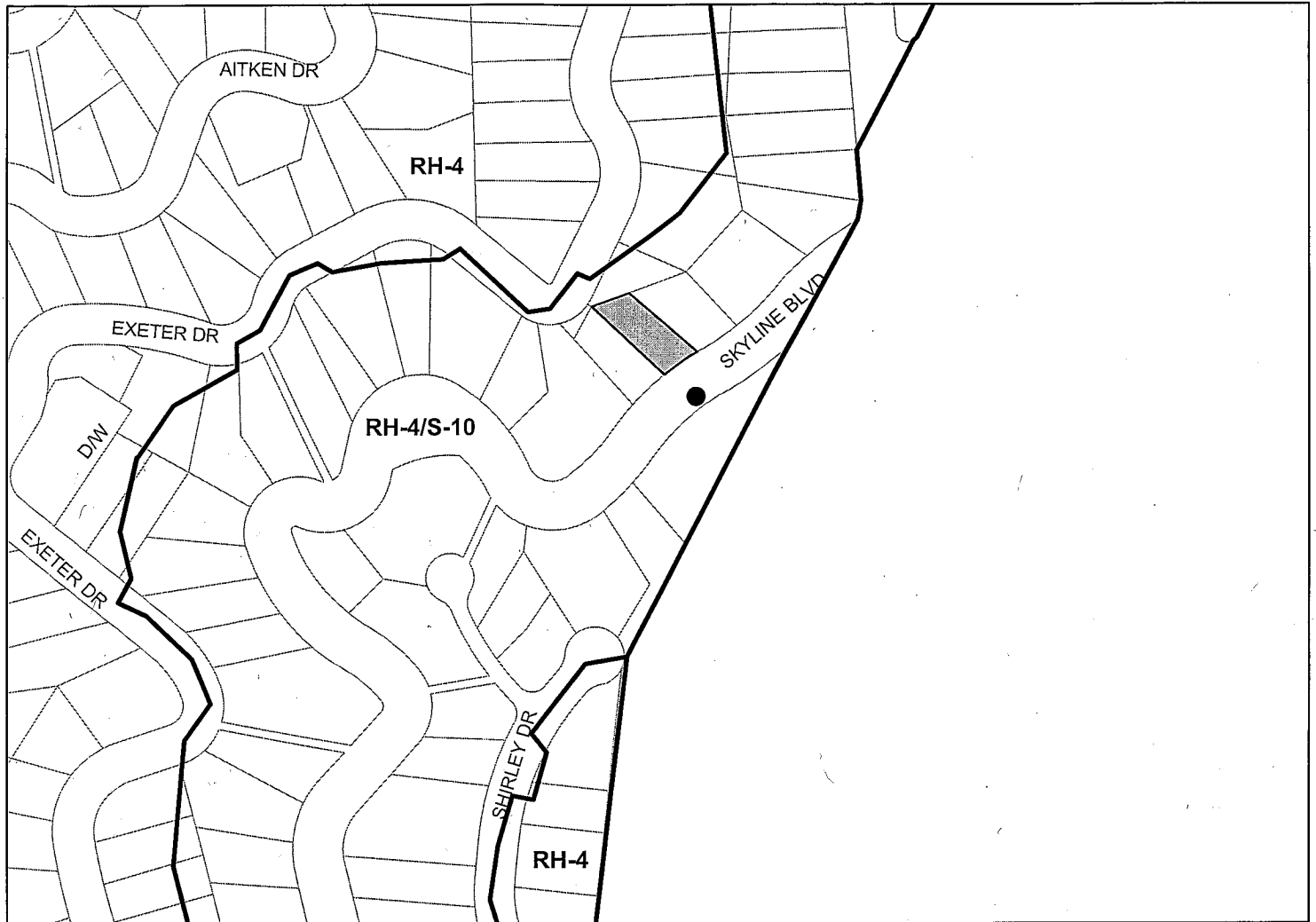
Location:	Public right-of-way opposite 8601 Skyline Boulevard (see reverse for map)
Assessor's Parcel Numbers:	Adjacent to: 048D-7296-003-1 (East Bay Regional Parks District); Opposite: 048D-7297-021-01 (residence)
Proposal:	To install one (1) 2-ft. tall telecommunications antenna and a 6-ft. tall extension on top of a 47-ft. tall wooden utility pole and attach equipment at 7-ft. to 17'-9" in height. The pole is located on the shoulder of the road adjacent to a wooded slope on the east side of the street.
Applicant / Phone Number:	Rick Hirsch (415) 377-7826
Owners:	City of Oakland (Public right-of-way); PG&E (utility pole)
Planning Permits Required:	Regular Design Review to attach a Telecommunications Facility to a Joint Pole Authority utility pole located within Residential and Scenic Route Combining Zones (OMC Sec. 17.16.030, 17.90.030, 17.136.040(C)(1))
General Plan:	Hillside Residential
Zoning:	RH-4 Hillside Residential Zone – 4 (project was submitted and deemed complete when the property was in the R-30 One-Family Residential Zone)/ S-10 Scenic Route Combining Zone
Environmental Determination:	Exempt, Section 15301 of the State CEQA Guidelines: Existing Facilities; Section 15183 of the State CEQA Guidelines: Project consistent with a Community Plan, General Plan or Zoning
Historic Status:	None
Service Delivery District:	II
City Council District:	4
Date Filed:	December 14, 2010
Staff Recommendation:	Decision based on staff report
Finality of Decision:	<i>Appealable to City Council within 10 days</i>
For Further Information:	Contact case planner Aubrey Rose, Planner II at (510) 238-2071 or arose@oaklandnet.com

SUMMARY

The applicant Mr. Rick Hirsch (for Extenet) requests Planning Commission approval to attach one antenna and various related equipment to an existing wooden utility pole for wireless telecommunications purposes. The project is subject to Regular Design Review as an attachment to a utility pole located in a residential zone. The Zoning Manager has referred the application to the Planning Commission for review.

Staff recommends approval of the requested permit, as conditioned, subject to the attached Findings and Conditions of Approval.

CITY OF OAKLAND PLANNING COMMISSION



0 125 250 500 750 1,000 Feet



Case File: DR10-332
Applicant: Rick Hirsch (for Extenet)
Address: Existing wooden utility pole in public right-of-way
opposite 8601 Skyline Boulevard
Zone: RH-4/S-10 (formerly R-30/S-10)

BACKGROUND

Recent State case law (Sprint v. Palos Verdes Estates) has enabled the City to require Design Review for telecommunications facilities attached to existing utility poles located within the right-of-way. The Planning & Zoning Department has determined that such Design Reviews be decided at the equivalent level as telecommunications projects located on private property located in the same zone.

Under the Telecommunications Act of 1996, the Federal Communications Commission (FCC) preempted cities' zoning jurisdiction over wireless telecommunications facilities, limiting their authority to aesthetic review and confirmation of satisfactory radio frequency (RF) emissions reports. For further information the FCC can be contacted at 1-888-225-5322 or www.fcc.gov

SITE DESCRIPTION

The site is a section of public right-of-way along the east side of Skyline Boulevard. This section of road contains no sidewalk. There are no homes along the east side of the street. To the rear is a wooded hillside, mainly Pines, along the County limits. To the west are single-family homes and views occluded by trees. To the north is the East Bay Regional Park District's Skyline Gate Staging Area (park trails parking lot).

PROJECT DESCRIPTION

The proposal is to attach one (1) two feet tall telecommunications antenna and a six feet tall extension on top of a forty-seven feet tall wooden utility pole and equipment at seven feet to 17'-9" in height for wireless telecommunications purposes. The antenna would be flared out towards the top. The pole mounted equipment cabinets would be contained in a singular sheath painted brown to match the color of the wooden pole. The extension on top of the pole is required for antenna clearance above overhead utility lines.

GENERAL PLAN ANALYSIS

The site is located in a Hillside Residential area under the General Plan. The intent of the Hillside Residential area is: *"to create, maintain, and enhance residential areas characterized by detached, single unit structures."* The General Plan is silent on telecommunications activities (which are now classified as Essential Service Civic Activity under the Planning Code). The proposal would enhance service to residents and park users from a highly effective location with a relatively unobtrusive design. Staff finds the proposal to be in conformance with the General Plan.

ZONING ANALYSIS

The site is located within the RH-4 Hillside Residential Zone - 4. The intent of the RH-4 zone is: *"to create, maintain, and enhance areas for single-family dwellings on lots of 6,500 to 8,000 square feet and is typically appropriate in already developed areas of the Oakland Hills."* At the time the project was submitted and deemed complete, the property was located within the R-30 One-Family Residential and S-10 Scenic Route Combining Zones. The intent of the R-30 Zone is: *"to create, preserve, and enhance areas for single-family dwellings in desirable settings for urban living, and is typically appropriate to*

already developed lower density dwelling areas of the city.” The intent of the S-10 Scenic Route Combining Zone is: “to create, preserve, and enhance areas where hillside terrain, wooded canyons and ridges, and fine vistas or panoramas of Oakland, neighboring areas, or the Bay can be seen from the road, and is typically appropriate to roads along or near ridges, or through canyons, of the Oakland Hills which roads have good continuity and relatively infrequent vehicular access from abutting properties.” The change in Zoning does not affect the project.

As described in the Background section of this report, telecommunications facilities located on JPA poles are now subject to Design Review. Additional findings for Macro facilities apply to all JPA cases. Additional findings for the S-10 Scenic Route Combining Zone apply to this case. Findings required to approve the project ensure the location and design are inconspicuous and concealed to the extent practicable. Authority for review and approval is to be equivalent to Zoning for private property. Therefore, the subject proposal requires Planning Commission review. The Planning Commission has approved a JPA case that was located in front of trees and not residences and has continued another case for relocation and/or redesign that was located fronting a residence. Given advancing technologies, enhanced service at this location would assist users in the residential zone and area parks. The antenna would generally maintain the shape of the JPA pole and pole mounted equipment cabinets would be contained in a singular sheath painted brown to match the color of the wooden pole. The proposal meets the Telecommunications Regulations for Site Location Preferences for locating on City property on a quasi-public facility and a site alternatives analysis is not required. A site design preference analysis has been submitted. A satisfactory emissions (RF) report has also been submitted. Staff finds the proposal to be consistent with the Planning Code.

ENVIRONMENTAL DETERMINATION

The California Environmental Quality Act (CEQA) Guidelines categorically exempts specific types of projects from environmental review. Section 15301 of the State CEQA Guidelines exempts projects involving “...the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use...” The proposal to attach wireless telecommunications antennas and related equipment to an existing wooden utility pole meets this description. The project is therefore exempt from further Environmental Review.

KEY ISSUES AND IMPACTS

In consideration of the proposal, site surroundings, and discussions regarding recent cases under this relatively new type of review, staff recommends Planning Commission approval of this application for the following reasons:

The site does not front:

- a residence
- a scenic vista

The proposal features:

- an existing structure (JPA pole) in an area lacking other non-residential structures
- a facility not appreciably taller than adjacent structures (that is, trees)
- no ground mounted equipment cabinets
- pole mounted equipment cabinets to be encased in a single, continuous shroud painted brown to match the color of the wooden utility pole

Staff recommends the following condition:

- the antenna and connecting apparatus and all equipment be painted brown to match the color of the wooden pole

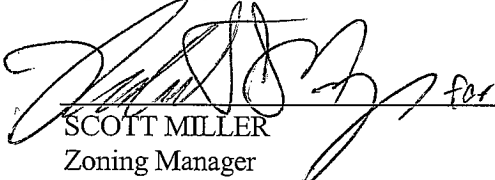
- RECOMMENDATIONS:**
1. Affirm staff's environmental determination.
 2. Approve the Regular Design Review subject to the attached Findings, Additional Findings, and Conditions.

Prepared by:



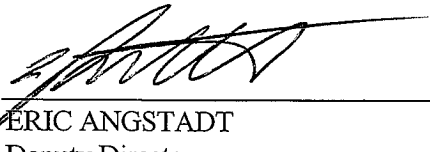
AUBREY ROSE
Planner II

Approved by:



SCOTT MILLER
Zoning Manager
Community and Economic Development Agency

Approved for forwarding to the
City Planning Commission:



ERIC ANGSTADT
Deputy Director
Community and Economic Development Agency

ATTACHMENTS:

- A. Findings for Approval
- B. Conditions of Approval
- C. Plans
- D. Applicant's Photo-Simulations
- E. Site Design Preference Analysis

Attachment A: Findings for Approval

This proposal meets the required findings under Regular Design Review Criteria (OMC Sec. 17.136.040(B)), Design Review Criteria for Macro Facilities (OMC Sec. 17.128.070(B)), and S-10 Scenic Route Combining Zone/Design Review Criteria (OMC Sec. 17.90.050) as set forth below. Required findings are shown in bold type; explanations as to why these findings can be made are in normal type.

REGULAR DESIGN REVIEW CRITERIA FOR NONRESIDENTIAL FACILITIES(OMC SEC. 17.136.040(B))

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 proposal is to attach one (1) two feet tall telecommunications antenna and a six feet tall extension on top of a forty-seven feet tall wooden utility pole and equipment at seven feet to 17'-9" in height for wireless telecommunications purposes. The antenna will be flared out towards the top; the pole mounted equipment cabinets would be contained in a singular sheath painted brown to match the color of the wooden pole.

The site is a section of public right-of-way along the east side of Skyline Boulevard. This section of road contains no sidewalk. There are no homes along the east side of the street. To the rear is a wooded hillside, mainly Pines. To the west are single-family homes and views occluded by trees. To the north is the East Bay Regional Park District's Skyline Gate Staging Area (park trails parking lot). The site is located within the RH-4 Hillside Residential Zone - 4. The intent of the RH-4 zone is: *"to create, maintain, and enhance areas for single-family dwellings on lots of 6,500 to 8,000 square feet and is typically appropriate in already developed areas of the Oakland Hills."* At the time the project was submitted and deemed complete, the property was located within the R-30 One-Family Residential and S-10 Scenic Route Combining Zones. The intent of the R-30 Zone is: *"to create, preserve, and enhance areas for single-family dwellings in desirable settings for urban living, and is typically appropriate to already developed lower density dwelling areas of the city."* The intent of the S-10 Scenic Route Combining Zone is: *"to create, preserve, and enhance areas where hillside terrain, wooded canyons and ridges, and fine vistas or panoramas of Oakland, neighboring areas, or the Bay can be seen from the road, and is typically appropriate to roads along or near ridges, or through canyons, of the Oakland Hills which roads have good continuity and relatively infrequent vehicular access from abutting properties."* The change in Zoning does not affect the project.

Given advancing technologies, enhanced service at this location would assist users in the residential and open space zones. The antenna would generally maintain the shape of the JPA pole and pole mounted equipment cabinets would be contained in a singular sheath painted brown to match the color of the wooden pole. Staff finds the proposal to be consistent with the Planning Code.

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;

This finding is met for the following reasons:

The site does not front:

Conditions of Approval

- a residence
- a scenic vista

The proposal features:

- an existing structure (JPA pole) in an area lacking other non-residential structures
- a facility not appreciably taller than adjacent structures (that is, trees)
- no ground mounted equipment cabinets
- pole mounted equipment cabinets to be encased in a single, continuous shroud painted brown to match the color of the wooden utility pole

The project is subject to the following condition:

- the antenna and connecting apparatus and all equipment be painted brown to match the color of the wooden pole

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 site is located in a Hillside Residential area under the General Plan. The intent of the Hillside Residential area is: *"to create, maintain, and enhance residential areas characterized by detached, single unit structures."* The General Plan is silent on telecommunications activities (which are now classified as Essential Service Civic Activity under the Planning Code). The proposal would enhance service to residents and park users from a highly effective location with a relatively unobtrusive design. Staff finds the proposal to be in conformance with the General Plan.

DESIGN REVIEW CRITERIA FOR MACRO FACILITIES (OMC SEC. 17.128.070(B)):

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

The antenna will be painted brown to match the color of the wooden pole.

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

The antenna will be attached to an existing wooden utility pole.

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

The antenna will be mounted directly on top of the existing wooden utility pole.

4. Equipment shelters or cabinets shall be screened from the public view by using landscaping, or materials and colors consistent with surrounding backdrop or placed underground or inside existing facilities or behind screening fences.

Equipment cabinets will be mounted to the pole in a singular shroud that is significantly smaller than typical ground mounted cabinets and shelters and the exterior will be painted brown to match the color of the wooden pole.

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

Equipment cabinets will be housed in a singular shroud attached to an existing structure (wooden utility pole) and painted to match its color.

6. For antennas attached to the roof, maintain a 1:1 ratio (example: ten feet high antenna requires ten feet setback from facade) 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.

This finding is inapplicable; the proposal does not involve a roofed structure.

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.

Equipment will be pole mounted a minimum of seven feet above grade and will be encased in a shroud; the antenna will be located at fifty-three feet above grade.

S-10 SCENIC ROUTE COMBINING ZONE REGULATIONS/DESIGN REVIEW CRITERIA
(OMC SEC. 17.90.050)

A. That the siting, grading, and design will, to the maximum extent feasible, preserve existing live trees and other desirable natural features;

The proposal does not include tree removal or grading.

B. That the proposed development will, as far as practicable, maintain existing vistas or panoramas which can be seen from the abutting public road and maintain the visual value of the total setting or character of the surrounding area.

The site is located on the east side of Skyline Boulevard and does not front a vista.

Attachment B: Conditions of Approval

1. Approved Use

Ongoing

- a) The project shall be constructed and operated in accordance with the authorized use as described in the application materials and the **revised plans dated April 1, 2011 and resubmitted to the City on April 4, 2011**, 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 require prior written approval from the Director of City Planning or designee.
- b) This action by the **Planning Commission** ("this Approval") includes the approvals set forth below. This Approval includes **establishment of a wireless telecommunications facility on a utility pole including one antenna attached to the top of the pole and a singular shroud containing pole mounted equipment, all painted brown**

2. Effective Date, Expiration, Extensions and Extinguishment

Ongoing

Unless a different termination date is prescribed, this Approval shall expire **two (2) 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 **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 laws/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. Compliance with other applicable requirements may require changes to the approved use and/or plans. These changes shall be processed in accordance with the procedures contained in Condition of Approval #3.
- 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, elevated walking pathways, safety railings, emergency access and lighting.

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) Violation of any term, **Conditions of Approval** or **project description** relating to the **Conditions of Approval** 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 of Approval** if it is found that there is violation of any of the **Conditions of Approval** 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. The project applicant shall be responsible for paying fees in accordance with the City's Master Fee Schedule for inspections conducted by the City or a City-designated third-party to investigate alleged violations of the Conditions of Approval.

6. Signed Copy of the Conditions of Approval

A copy of the approval letter and **Conditions of Approval** 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

Ongoing

- a. To the maximum extent permitted by law, the applicant shall defend (with counsel 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 its respective agents, officers, and employees (hereafter collectively called City) from any liability, damages, claim, judgment, loss (direct or indirect) action, causes of action, or proceeding (including legal costs, attorneys' fees, expert witness or consultant fees, City Attorney or staff time, expenses or costs) (collectively called "Action") against the City to attack, set aside, void or annul, (1) an approval by the City relating to a development-related application or subdivision or (2) implementation of an approved development-related project. The City may elect, in its sole discretion, to participate in the defense of said Action and the applicant shall reimburse the City for its reasonable legal costs and attorneys' fees.
- b. Within ten (10) calendar days of the filing of any Action as specified in subsection A above, the applicant shall execute a Letter of Agreement with the City, acceptable to the Office of the City Attorney, which memorializes the above obligations. These obligations and the Letter of Agreement shall survive termination, extinguishment or invalidation of the approval. Failure to timely execute the Letter of Agreement does not relieve the applicant of any of the obligations contained in this condition or other requirements or Conditions of Approval that may be imposed by the City.

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.

Conditions of Approval

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 of Approval**, and if one or more of such **Conditions of Approval** is found to be invalid by a court of competent jurisdiction, this Approval would not have been granted without requiring other valid **Conditions of Approval** consistent with achieving the same purpose and intent of such Approval.

10. Landscape Maintenance.

Ongoing

All new landscaping shall be permanently maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with applicable landscaping requirements.

11. Operational Noise-General

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 (*see also condition #30*).

SPECIFIC CONDITIONS FOR TELECOMMUNICATIONS FACILITIES

12. Sinking Fund For Facility Removal Or Abandonment

Prior to the issuance of 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 or 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 determined by the Office of Budget and Finance and shall be adequate to defray expenses associated with the removal of the telecommunication facility.

13. Emissions Report

Prior to a final inspection

The applicant shall provide an RF emissions report to the City of Oakland Zoning Division indicating that the site is actually operating within the acceptable thresholds as established by the Federal government or any such agency that may be subsequently authorized to establish such standards.

14. Camouflaging

Prior to a final inspection

All apparatus (including but not limited to antenna and equipment) shall be painted brown to match the existing wooden utility pole.

APPROVED BY:

City Planning Commission: _____ (date) _____ (vote)

Conditions of Approval



REV.	DATE	DESCRIPTION
1	2/18/11	CONSTRUCTION DRAWINGS
2	4/1/11	REVISION PER CITY REQUEST

CURRENT ISSUE DATE:

4/1/11

PLANS PREPARED BY:



Maximize Comm

 **Maximize
Group, Inc.**

351 POMONA ROAD
SUITE 100
POMONA, CA 92882
OFFICE: (909) 786-2170
FAX: (909) 992-3113

— **RENTAL** —

SIZE NO.:

MCP-006B

SITE NAME & ADDRESS:

MONTECLAIR NETWORK-00613
ACQUISITION OF ONLINE MAP
DATA AND COAST

91:11 100:1

1995

2	5	7A
NAME	DATE	PERIOD

[illegible]

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:

POLE OWNER

KLIENTEN SYSTEMS, INC.
030 WARRENVILLE RD.
SUITE 340
NILES, IL 60532
CONTACT JIM SULLIVAN
PHONE (510) 270-0054

ENGINEERING FIRM/SURVEYING

RAYMOND COMMUNICATION GROUP INC.

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

COORDINATES

DATE: 37.81067

LONG: -122.18643

MAP

ATTACHMENT C

[illegible]

1850

extenel

SYSTEMS

3030 WARRENVILLE RD.

LYONS, IL 60532

www.extenel.com

REV.

DATE

DESCRIPTION

1

2/18/11

CONSTRUCTION

2

4/1/11

REVISIONS

CURRENT USE DATE:

4/1/11

PLANS PREPARED BY:

Maximize Comm.

Group, Inc.

1351 POMONA ROAD

SUITE 100

CORONA, CA 92882

TEL: (909) 882-2170

FAX: (909) 882-3113

LICENSE:

SITE NO:

MCR-0063

SITE NAME & ADDRESS:

MONTECLAIR NETWORK-0063

ADDRESS: 10000 MONTECLAIR BLVD

ONTARIO, CA 91764

SHEET TITLE:

SITE PLAN

PREPARED BY:

DATE:

APPROVED BY:

DATE:

DATE:

DATE:

A12

The diagram is a site plan for a proposed equipment area. It features a main road, Skyline Blvd, running diagonally from the bottom left towards the top right. To the right of Skyline Blvd is Contra Costa County. To the left of Skyline Blvd are several utility lines and easements, including a 10' Easement, a 10' Easement, and a 10' Easement. A proposed equipment area is indicated by a dashed line and labeled 'PROPOSED EQUIPMENT AREA SEE 42'. A 'WOOD UTILITY POLE' is shown near the equipment area, with a note '(E) WOOD UTILITY POLE' and a reference to 'SEE 42'. The plan also shows 'PUBLIC RIGHT OF WAY' lines and 'Easement' lines. The plan is titled 'SITE PLAN' and includes a north arrow pointing towards the top right. The plan is prepared by Maximize Comm. Group, Inc. and is dated 4/1/11.

CONSTRUCTION WARNING:
THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITY PIPES OR
STRUCTURES SHOWN ON THE PLANS WERE MADE BY SEARCHING AVAILABLE
RECORDS AND FIELD SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR
THEIR LOCATION AND DEPTH. THE CONTRACTOR SHALL TAKE DUE
CAUTION TO AVOID DAMAGE TO ANY UTILITIES. THE CONTRACTOR SHALL
BE RESPONSIBLE FOR THE LOCATION AND DEPTH OF ALL UTILITIES. THE
CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND DEPTH OF ALL
UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION
AND DEPTH OF ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE
FOR THE LOCATION AND DEPTH OF ALL UTILITIES.

USA North
COMMERCIAL REAL ESTATE

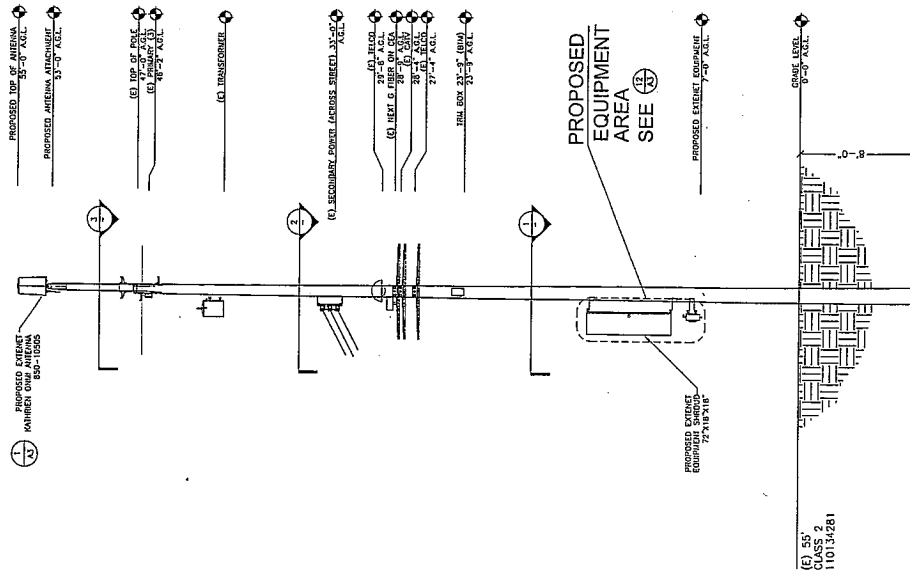
SITE PLAN

MAKE-READY NOTES

1. INSTALL EXTERNET RADIOS, 8RU 4" OFF OF POLE (USING UNISTRUTS) AT 9'00 POSITION.
2. INSTALL EXTERNET 4" CONDUIT SOL. 40 AT 10'00 POSITION.
3. INSTALL 1" CONDUIT SOL. 80 AT 10'00 POSITION.
4. POSITION 150/240 3-WIRE SINGLE PHASE TRANSFORMER 1" FROM POLE AT 10'00 POSITION TO EXTERNET METER/BREAKER CABINET FROM SECONDARY 33'-0" GAGE.

POWER MAKE-READY

1. INSTALL 6" POLE TOP EXTENSION ABOVE PGE PRIMARY FACILITIES.
2. INSTALL (TYPICAL) ANTENNA ON TOP OF POLE (SEE POWER DESIGN).
3. INSTALL 1" CONDUIT SOL. 40 AT 10'00 POSITION.
4. POSITION 150/240 3-WIRE SINGLE PHASE TRANSFORMER 1" FROM POLE AT 10'00 POSITION TO EXTERNET METER/BREAKER CABINET FROM SECONDARY 33'-0" GAGE.



PROPOSED EQUIPMENT AREA SEE 13

(E) 55' CLASS 2 110134281

PROPOSED ELEVATION NORTHWEST

SCALE 1/2\"/>

EXISTING ELEVATION NORTHWEST

SCALE 1/2\"/>

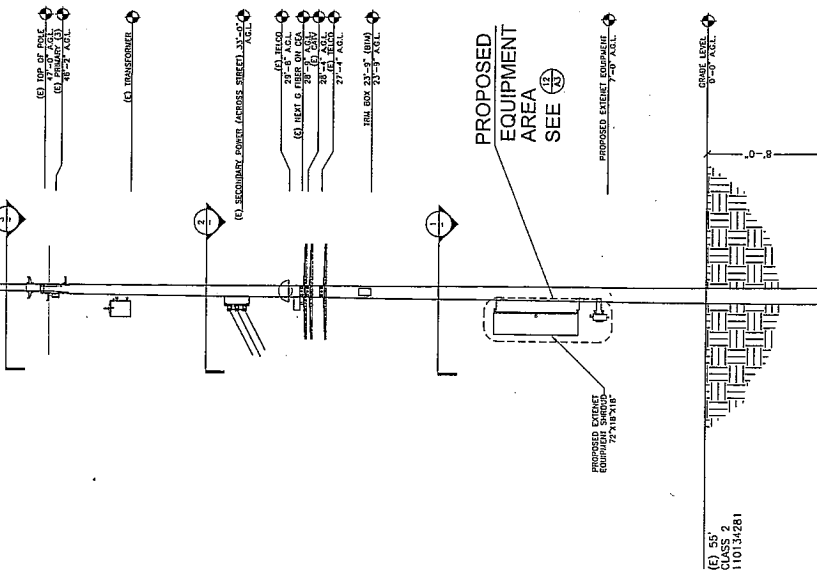
EQUIP. SPACE PLAN VIEW SCALE 1/2\"/>

MAKE-READY NOTES

1. INSTALL EXTERNET RADIOS, 8RU 4" OFF OF POLE (USING UNISTRUTS) AT 9'00 POSITION.
2. INSTALL EXTERNET 4" CONDUIT SOL. 40 AT 10'00 POSITION.
3. INSTALL 1" CONDUIT SOL. 80 AT 10'00 POSITION.
4. POSITION 150/240 3-WIRE SINGLE PHASE TRANSFORMER 1" FROM POLE AT 10'00 POSITION TO EXTERNET METER/BREAKER CABINET FROM SECONDARY 33'-0" GAGE.

POWER MAKE-READY

1. INSTALL 6" POLE TOP EXTENSION ABOVE PGE PRIMARY FACILITIES.
2. INSTALL (TYPICAL) ANTENNA ON TOP OF POLE (SEE POWER DESIGN).
3. INSTALL 1" CONDUIT SOL. 40 AT 10'00 POSITION.
4. POSITION 150/240 3-WIRE SINGLE PHASE TRANSFORMER 1" FROM POLE AT 10'00 POSITION TO EXTERNET METER/BREAKER CABINET FROM SECONDARY 33'-0" GAGE.



PROPOSED EQUIPMENT AREA SEE 13

(E) 55' CLASS 2 110134281

PROPOSED ELEVATION NORTHWEST

SCALE 1/2\"/>

EXISTING ELEVATION NORTHWEST

SCALE 1/2\"/>

EQUIP. SPACE PLAN VIEW SCALE 1/2\"/>

extenetSM
SYSTEMS
3030 WARRENVILLE RD.
Lisle, IL 60532
www.extenet.com

REV.	DATE	DESCRIPTION
1	2/18/11	CONSTRUCTION COMMENTS
2	4/1/11	REWORK PER CITY RECORDS

CURRENT ISSUE DATE:

4/1/11

PLANS PREPARED BY:

Maximize Comm.
Group, Inc.
1351 POMONA ROAD
SUITE 100
CORONA, CA 92882
TEL: (949) 892-3170
FAX: (949) 892-3113
© 2008 BY THE MAXIMIZE COMMUNICATIONS GROUP, INC.

LICENSE:

SHEET NO.:

MCR-006B

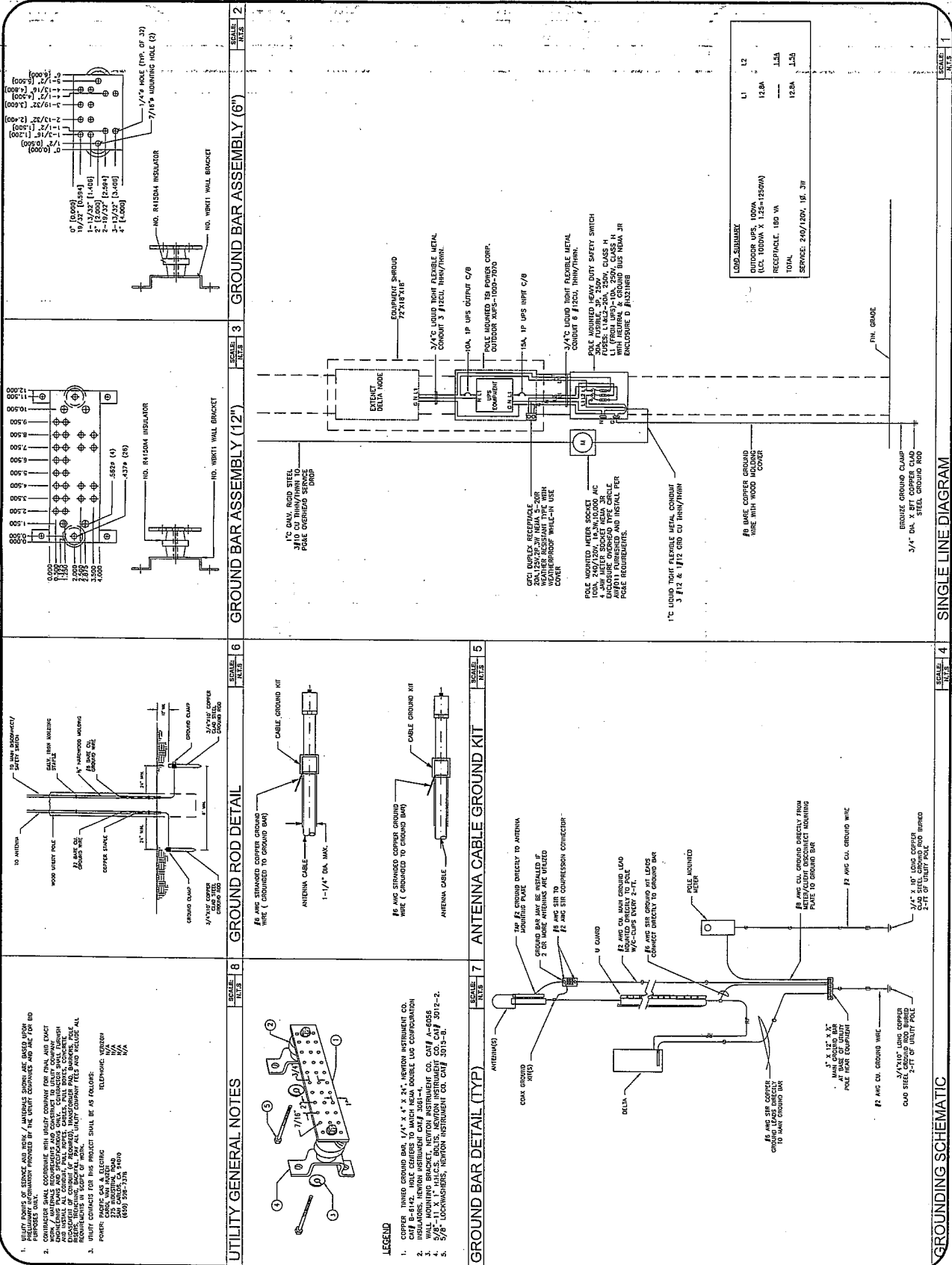
SITE NAME & ADDRESS:

MONTECLAIR NETWORK-006B
ANTENNA/POLE/SCALE/RAMP
UNLASH/CANVAS

SHEET TITLE:

ELEVATIONS & RISER DETAILS

PROJECT NO.	006B
CITY/STATE	IL
DATE	4/1/11
SCALE	A2
SHEET NO.	2



MCR-006B

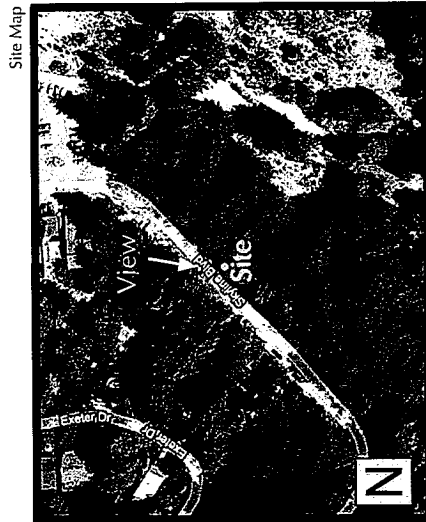
View One

Across From 8601 Skyline Blvd. Oakland, Ca 94611

Date of Final: 04/01/2011



extenSM
net
SYSTEMS



Proposing



Existing



ATTACHMENT D



DAS Network Fundamentals

A Distributed Antenna System (DAS) network is a group of multiple transceivers all interconnected to provide wireless service into a target area. In effect, a DAS network is a much smaller of a traditional (macro) cellular network.

A DAS network has three major components:

- Node – a transceiver serving a small (0.25 mile radius) typically located on electrical poles, light poles, or other outside plant (OSP)
- Hub – a centralized location that interfaces with the node and Wireless Service Provider (WSP – e.g. AT&T, Sprint, Verizon, etc) equipment to deliver functioning wireless signals
- Interconnection – a medium, typically fiber optics, that interconnects the node equipment with the hub equipment

Design Process for Skyline

Similar to the design of a macro cellular network, a WSP will provide requirements that a Distributed Antenna System (DAS) network must fulfill. There are three general classifications of requirements:

- Coverage – delivering adequate wireless signal in an area where signal is either not present or not usable (e.g. interference)
- Capacity – providing additional wireless signal and bandwidth resources from many sources (versus one source) to segment traffic and increase the overall capacity of the area being served
- Performance – providing both coverage and capacity to reduce congestion, better facilitate mobility, and improve the overall network performance in that specific area

The requirements for a DAS design could be either any one of the classifications or could be a combination of any or all of them.

In the case of the Skyline network, the primary requirement was to provide coverage in the specified area.

In a coverage design, there are three major goals:

- Contiguous coverage – design a network that provides seamless coverage throughout the area of interest
- Interface with the macro network – ensure coverage and performance continuity between the DAS and the macro network
- Aesthetics – minimizing the number of nodes and equipment per node location required to serve the area of interest

Because the goals can somewhat conflict (e.g. providing seamless coverage while minimizing the number of nodes within the design), combined with the small effective coverage radius of each individual node, the design process is very iterative. It is not uncommon to modify designs three to four

times before reaching an optimal balance between the three goals. Likewise, the designs become rather rigid, in that modifications to them after the design can produce unwanted outcomes that negate the initial goals. As an example, Figure 1 represents a prediction of the coverage the Skyline DAS network.



Figure 1 – Predicted Coverage for Designed Skyline Network

Figure 2 shows the same prediction with three of the nodes moved approximately 100 feet from their originally designed location, producing a coverage “hole,” or unserved area of wireless coverage.

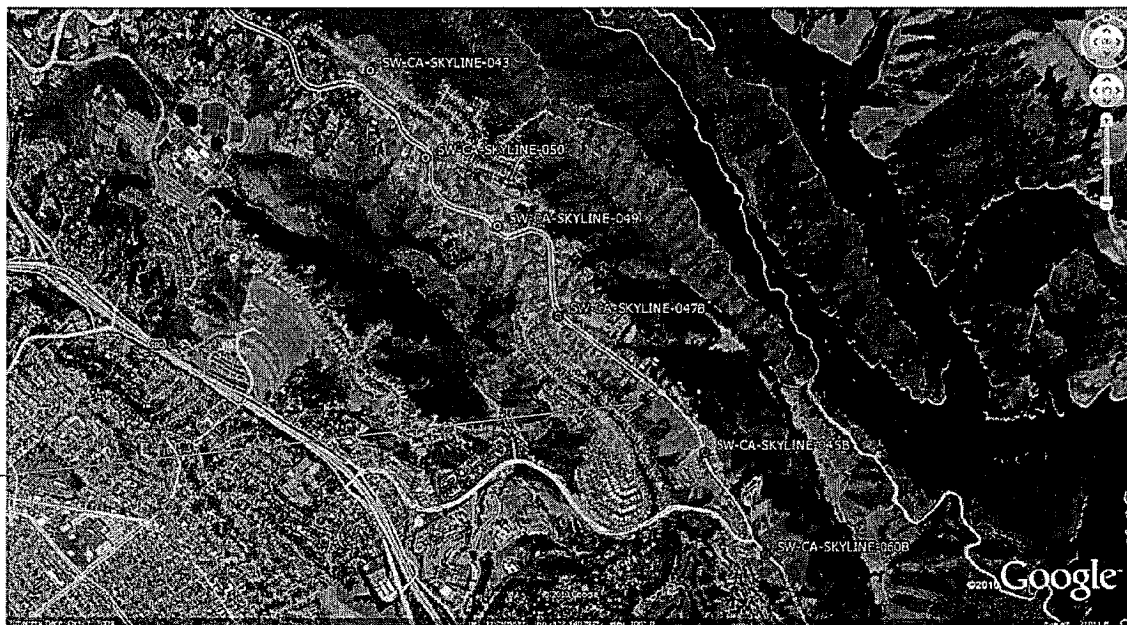


Figure 2 – Predicted Coverage for Skyline Network with Node Locations Moved ~ 100 feet

The result of this situation would negate the initial goals. Specifically, the network would not provide contiguous coverage within the designed area, so additional node and head end equipment would be necessary, impacting aesthetics and/or node counts.



Summary

The designed node placement for the Skyline network is the optimal balance among the three main goals for a coverage-based DAS network. Even the slightest deviation in node locations, distance between nodes, antenna heights, etc. would have adverse effects for both the WSP and for the community.