City of Santa Barbara
California

PLANNING COMMISSION
STAFF REPORT

REPORT DATE: March 5, 2015

AGENDA DATE: March 12, 2015

PROJECT ADDRESS: Right-Of-Way Adjacent to 3139 Cliff Drive (MST2013-00117)

TO: Planning Commission

FROM: Planning Division, (805) 564-5470, extension 4539
Renee Brooke, AICP, Senior Planner RLB
Tony Boughman, Assistant Planner TB

I. PROJECT DESCRIPTION

The project consists of the replacement of an existing microcell site with a full cellular antenna site for AT&T. The existing two small (approximately 12-inch) panel antennas located on six-foot cross arms on an existing wood utility pole in the public right-of-way will be replaced with four larger 4-foot high by 15-inch wide panel antennas on new eight-foot cross arms. The project also includes new equipment in an existing underground vault in the right-of-way.

II. REQUIRED APPLICATION

The discretionary application required for this project is a Conditional Use Permit to allow the installation of cellular telephone antennas (SBMC §28.94.030.DD).

APPLICATION DEEMED COMPLETE: December 23, 2014
DATE ACTION REQUIRED: May 20, 2015*
*Applicant granted an extension

III. RECOMMENDATION

If approved as proposed, the project would conform to the City's Zoning Ordinance and is generally consistent with applicable General Plan Policies. The Zoning Ordinance provides the avenue of a Conditional Use Permit for cellular antenna applications in cases where the design review body cannot recommend to the Community Development Director a finding of "No Visual Impacts." The proposed facility will provide a service that is deemed essential or desirable to the public convenience. The size and appearance of the proposed installation are consistent with other visible utility infrastructure in the right-of-way. Therefore, Staff recommends that the Planning Commission approve the project, making the findings outlined in Section IX of this report, and subject to the conditions of approval in Exhibit A.

Vicinity map for City right of way adjacent to 3139 Cliff Drive

IV. BACKGROUND

The City's "Design Review Guidelines for Wireless Communication Facilities/Antennas" state that these facilities should be appropriately sited, and screened or hidden from the public view. Most cellular antenna sites within the City are concealed on rooftops and/or made to appear to be integral with buildings. In addition, there are two large collocation sites with antenna towers on Mesa hilltops that are situated away from public view. There are also four "monopoles" in the City within public view; however the antennas are concealed within the simple cylindrical pole structure. Some cellular service providers in the City use "microcell" sites, with a greater number of smaller sites, and each site covering a smaller area. A microcell site typically consists of a single small antenna mounted on an existing utility pole or line, and an equipment box is mounted directly on the side of the pole or in a ground vault in the City right-of-way. Their small size in proportion to the utility infrastructure they are mounted on is generally not considered to pose a visual impact. The subject application is the first in the City to propose a full-size cellular site on a utility pole in the public right-of-way.

The project was reviewed by the Architectural Board of Review (ABR) twice in 2013, and a smaller project was reviewed by them on February 2, 2015 (Exhibits B & C). Pursuant to SBMC §28.94.030.DD, because the ABR was unable to recommend to the Community

Development Director a finding of No Visual Impacts, the project is not exempt from the requirement for a Conditional Use Permit (CUP).

The project is located within the Appealable Jurisdiction of the Coastal Zone; however, it qualifies for a Coastal Exemption for "other construction" because it involves no risk of adverse environmental effect; does not adversely affect public access; or result in any change in use contrary to any policy of the Coastal Act (SBMC §28.44.070.E).

V. SITE INFORMATION AND PROJECT STATISTICS

A. SITE INFORMATION

Applicant:	Peter Hilger, Cable Engineering Services	
Property Owner:	City of Santa Barbara	
Street Segment Number: ROW-002-9441		**Existing Use**: Public road/Utility right-of-way
Adjacent Land Uses		
North – Single-family Residential **South** – Single-family Residential		**East** – Single-family Residential **West** – Single-family Residential

VI. POLICY AND ZONING CONSISTENCY ANALYSIS

A. ZONING ORDINANCE CONSISTENCY

The project is deemed consistent with the Zoning Ordinance upon approval of a Conditional Use Permit. General CUP findings found in SBMC §28.94.020 and specific findings for cellular antennas are provided in SBMC §28.94.030.DD.2 are discussed in Section IX of this report.

B. GENERAL PLAN CONSISTENCY

Staff recommends that the Planning Commission focus on the issues of the project's provision of a use that is essential or desirable to the public, and the visual impacts of the project, which are described in detail in this report.

A project requiring a CUP must be consistent with the policies of the City's General Plan. The site is City-owned public road right-of-way, and utilities right-of-way. The area surrounding the project is designated as Low Density Residential, One Unit Per Acre and is located in the Campanil neighborhood. The General Plan policies relevant to this project address issues of provision of essential services and visual resources (Exhibit D).

1. PROVISION OF SERVICES

Cell phones and internet service have become additional essential utilities over the last twenty years. Reliance on cellular communication and internet access continues to increase the demand for increased carrying capacity and bandwidth. The project would provide an important improvement to this utility infrastructure by filling a significant gap in cellular coverage and provide fourth generation (4G) internet access in the vicinity, and for visitors to Arroyo Burro Beach. Circulation Element Policy 16.6, Communication Facilities, is particularly relevant to this project in ensuring adequate telecommunication facilities are

provided to meet the future demands of residents and businesses for new technologies with higher speed and greater bandwidth, and promote telecommunication infrastructure to potentially reduce automobile trips from this outlying area to commercial areas with the goal of facilitating automobile use as a choice, not a necessity for some interactions.

AT&T proposes to replace their existing microcell equipment on this utility pole with four, four-foot tall antennas mounted on two parallel eight-foot cross arms. As a member of the Southern California Joint Pole Committee, AT&T has the right to occupy the public right-of-way to deliver service. This location is currently occupied by AT&T and was selected because it can be modified to provide coverage to the target area (Exhibits E & F). The City's Wireless Communication Facility Guidelines encourage collocation when feasible and the project proposes collocation of equipment on the existing above-ground utility pole. While the project is not consistent with General Plan Policy ER30, Underground Utilities, because mounting the antennas on the above ground utilities does not help facilitate undergrounding in the future, there currently are no plans to underground the utilities along this part of Cliff Drive.

The project is compatible with surrounding uses because this site is adequately separated and buffered from the nearby residences. No existing trees or other vegetation will be removed to accommodate the project. It would not be visible from the beach and waterfront areas, and is an unmanned facility providing essential infrastructure.

2. VISUAL RESOURCES.

A central goal of the Environmental Resources Element is to protect, maintain, and enhance the scenic character of the City. Cliff Drive is not a designated scenic road and the project site is not visible from major public viewing areas. This portion of the road has a somewhat natural and rural appearance in that private structures are not generally visible, the roadway curves and undulates, and the steep embankments alongside the road are heavily vegetated. The existing above ground utilities infrastructure is in view all along this portion of Cliff Drive. The proposed antennas on the existing utility pole would be in view of the passing public along Cliff Drive, but would not be visible from public viewpoints such as Arroyo Burro Beach due to the topography. The utility pole is used by other utility providers who must have access by climbing the pole. The required clearance between the antennas and the pole and separation from other utilities means that the antennas are offset from the centerline of the utility pole and utility lines. This makes them more visually apparent when approaching the site along Cliff Drive. Any attempt to construct a visual screen around the antennas would result in a larger visual imposition. The location of the project in the road right-of-way does not accommodate screening plantings on the ground. The applicant asserts that the proposal is the minimum size feasible to fill the gap in coverage given existing technology and engineering constraints. The proposed brown color of the installation is intended to blend into the existing infrastructure.

General Plan Policy ER29, Visual Resources Protection, addresses important public views and viewpoints for public enjoyment; however, these are not present at the project site. Examples of important public views in the general vicinity are Arroyo Burro Beach and the overlook above Sea Ledge Lane. One may consider the proposed antennas and mountings to be additional visual clutter inconsistent with the character of this area. Alternatively, the project could be considered an insignificant alteration to the existing large and fully visible utility pole,

cross arms, wires, transformer and equipment vault along the road right-of-way. The existing pole and related equipment would not block public views of the ocean or the mountains.

In balancing the General Plan policies for the provision of services and protection of visual resources, staff can recommend approval of the project with the inclusion of ABR comments that the pole-mounted equipment and conduits be painted brown to match the existing pole and the existing ground-mounted cabinets at the site be painted green to further minimize the visual impacts of the proposal.

VII. ENVIRONMENTAL REVIEW

Staff has determined that the proposed cellular communication facility consisting of cellular antennas and in-ground equipment is Categorically Exempt from the California Environmental Quality Act (CEQA) per Guidelines Section 15303 for New Construction or Conversion of Small Structures. The project is mounted on an existing wooden utility pole and uses an existing in-ground vault and, once installed, would not produce significant noise or create a significant hazard, or increase activity other than occasional maintenance visits by AT&T personnel. The firm of Hammett & Edison, Consulting Engineers evaluated the proposal for compliance with Federal Communications Commission guidelines for human exposure to radiofrequency electromagnetic fields (Exhibit G). Their calculations, using several worst case assumptions, found that the project's emissions would be 20% of the applicable public exposure limit, and well within the guidelines. The proposal poses no significant environmental effects, including visual impacts. The footprint of the project on the site would not be expanded beyond the existing below grade equipment vault and existing utility pole.

VIII. DESIGN REVIEW

This project was reviewed by the ABR on three separate occasions. At two concept reviews in 2013 a proposal involving six panel antennas was presented and the ABR could not recommend making the finding of No Visual Impacts. They directed the applicant to study alternative locations, or to conceal the project to be more in conformance with the City's Wireless Communication Facility Guidelines. The project returned to the ABR on February 2, 2015 (Exhibit H). During the interim, better antenna technology became available. The project was able to be reduced from six antennas to four slightly smaller antennas and the cross arms were reduced from ten feet to eight feet. The ABR was satisfied that the antennas and supporting structure had been reduced to be as visually unobtrusive as feasible however they were unable to find No Visual Impact for an unscreened installation at this location. The applicant continued to explain that alternative sites would not achieve the desired coverage improvement. The applicant responded to questions from ABR and a member of the public that the project could not be collocated at the existing ground-mounted cell site on top of the hill in Elings Park because the topography would not allow the desired coverage. The ABR found that the project is not visually compatible with the area; however their role is to review the application terms of aesthetics and in the context of the City's Wireless Communication Facility Guidelines. They are not asked to weigh the visual impact against the project's provision of a desirable and essential service.

IX. FINDINGS

The Planning Commission finds the following:

General Findings for the Conditional Use Permit (SBMC §28.94.020)

1. *Any such use is deemed essential or desirable to the public convenience or welfare and is in harmony with the various elements or objectives of the Comprehensive General Plan.*

The cellular antenna installation is essential and desirable to the public convenience for both residents and visitors to Santa Barbara and, as discussed in Section VI.B.1, is consistent with applicable policies of the Santa Barbara General Plan.

2. *Such uses will not be materially detrimental to the public peace, health, safety, comfort and general welfare and will not materially affect property values in the particular neighborhood involved.*

As discussed in Section VI.B.1 and 2, and Section VII above, the cell site will not be materially detrimental; the equipment in the underground vault will not emit significant noise and the antennas will not emit radiofrequency radiation above levels established by the Federal Communications Commission.

3. The total area of the site and the setbacks of all facilities from property and street lines are of sufficient magnitude in view of the character of the land and of the proposed development that significant detrimental impact on surrounding properties is avoided.

The proposed project will remain in the small area of right-of-way occupied by the existing utility pole and vault. The site is buffered adequately from the surrounding properties by distance and topography.

4. *Adequate access and off-street parking including parking for guests is provided in a manner and amount so that the demands of the development for such facilities are adequately met without altering the character of the public streets in the area at any time.*

The cellular antenna site is an unmanned facility and does not generate any on-site parking demand other than occasional maintenance visits by AT&T personnel. There is adequate room to park at the site in a turnout on the south side of Cliff Drive.

5. *The appearance of the developed site in terms of the arrangement, height, scale and architectural style of the buildings, location of parking areas, landscaping and other features is compatible with the character of the area. The Planning Commission shall have the authority to approve the design of open space. Design shall mean size, shape, location and usability for proposed private, public, or quasi-public purposes and development. Approval of such open spaces may be expressly conditioned upon an offer of conveyance by the owner to the City of Santa Barbara of the development rights, the right to prohibit the construction of additional buildings, or other property rights, necessary to achieve the purposes set forth in this title.*

The proposed antennas mounted on the existing utility pole represent an increase in the visible utility infrastructure. Utility poles are not unique to this area and, as discussed in Section VI.B.2, the proposed antenna installation is the minimum size feasible to fill the gap in coverage given existing technology and engineering constraints. The project is consistent with the applicable General Plan policy to protect important public views. The project is generally compatible with the character of the area because it will become a part of the existing utilities which are unscreened and unadorned. The size of the antennas and equipment are not significant in proportion to the existing utilities, and the project has no effect on open space.

6. ***Compliance with any additional specific requirements for a conditional use permit.*** *The Planning Commission may impose such other conditions and restrictions upon the proposed use consistent with the Comprehensive General Plan and may require security to assure satisfactory performance of all conditions and restrictions.*

Additional Specific Findings for Antennas (SBMC §28.94.030.DD.2):

a. Shared Use of Support Structure. The applicant had made a good faith effort to demonstrate that no existing or planned support structure, including an antenna tower, is available to accommodate the proposed antenna.

The proposal is using an existing utility pole as the support structure.

b. Site Size. The site is of a size and shape sufficient to provide an adequate setback from the base of the antenna support structure to any property line abutting a residential use.

Existing residential development in the vicinity is separated from the project by distance, vegetation, and topography. The nearest single family house to the project is approximately 200 feet away. Houses are situated on top of the hills along both sides of this portion of Cliff Drive and are approximately 55 feet higher in elevation than the project site. A drainage channel runs along the south side of Cliff Drive, and the embankments along both sides of the road are heavily vegetated.

c. Visual Impact. The project has been reviewed by the Architectural Board of Review. The Board may take action on the location of the antenna(s) on the site, color and size so as to minimize any adverse visual impacts by requiring that the antenna and its supporting structure be designed and placed so as to be as visually unobtrusive as feasible, taking into consideration technical engineering and other pertinent factors.

As discussed in Section VI.B.2, the ABR found that the antennas and supporting structure had been reduced to be as visually unobtrusive as feasible; however, they were still unable to find No Visual Impact for an unscreened installation at this location. The ABR comments that the pole mounted equipment and conduits should be painted brown to match the existing pole and the existing ground-mounted cabinets at the site should be painted green have been incorporated as conditions of approval to further minimize the visual impacts of the proposal.

d. *Non-ionizing Electromagnetic Radiation (NIER) Emissions. Any new transmitters and/or antennas, when combined with existing sources of NIER emissions on or adjacent to the site and when operating as designed and licensed, shall not expose the general public to ambient radiation emissions which exceed American National Standards Institute (ANSI) C95.1-1992 standard (if the Federal Communications Commission (FCC) rulemaking committee adopts a revised standard, said standard shall apply).*

As discussed in Section VII of this report and the Statement by Hammett & Edison, Inc. dated June 18, 2013, the antennas will not expose the general public to ambient radiation emissions in excess of applicable FCC standards.

Exhibits:

A. Conditions of Approval
B. Site Plan
C. Applicant's photographic simulations
D. Applicable General Plan Policies
E. Applicant's Supplemental Site Analysis
F. Applicant's Justification/Project Description Document
G. Statement of Hammett & Edison, Consulting Engineers
H. ABR Minutes August 5, 2013, October 28, 2013, February 2, 2015

PLANNING COMMISSION CONDITIONS OF APPROVAL

RIGHT-OF-WAY ADJACENT TO 3139 CLIFF DRIVE
CONDITIONAL USE PERMIT
MARCH 12, 2015

I. In consideration of the project approval granted by the Planning Commission and for the benefit of the owner(s) and occupant(s) of the Real Property, the owners and occupants of adjacent real property and the public generally, the following terms and conditions are imposed on the use, possession, and enjoyment of the Real Property:

A. **Order of Development**. In order to accomplish the proposed development, the following steps shall occur in the order identified:

1. Obtain all required design review approvals.
2. Pay Land Development Team Recovery Fee.
3. Submit any required agreements (see Written Agreement section).
4. Submit an application for and obtain a Public Works Permit (PBW) for all proposed construction in the Public right-of-way and complete said construction.

Details on implementation of these steps are provided throughout the conditions of approval.

B. **Written Agreement.** The Applicant, AT&T Mobility, shall execute a *written instrument*, which shall be prepared by Planning staff, reviewed as to form and content by the City Attorney, Community Development Director and Public Works Director, indicating the following:

1. **Approved Development.** The development of the Real Property approved by the Planning Commission on March 12, 2015 is limited to the cellular antennas mounted on the existing utility pole and associated equipment in the existing ground vault and related improvements shown on the plans signed by the chair of the Planning Commission on said date and on file at the City of Santa Barbara.
2. **Modification of Site.** The design of this installation is a compromise between the City's Architectural Board of Review and AT&T Mobility. The goal of this compromise is to minimize the visual and aesthetic impacts posed by the installation while enabling a functional installation. With this goal in mind, the approved installation constitutes the maximum acceptable size of installation in terms of the horizontal separation away from the utility pole and the vertical length of the antennas from their supporting arm. Any future collocated antennas at this location shall not frustrate the effort to minimize the visual and aesthetic impacts by exceeding the dimensions of the approved installation. In addition, any camouflaging colors or other aesthetic treatments applicable to the approved installation shall be applicable to future collocated installations.
3. **Discontinuance of Use.** All structures and equipment associated with the cellular facility shall be removed within 30 days of the discontinuance of the use and the site shall be restored by the Applicant to its original pre-development condition.

4. **Site maintenance.** The equipment and structures shall be maintained in good condition over the term of the permit. This shall include the painting of the equipment on the pole, keeping the project area clean and free of trash accumulation, and the structures free of graffiti.

5. **Pesticide or Fertilizer Usage near Creeks.** The use of pesticides or fertilizer shall be prohibited within the project area.

C. **Design Review.** The project, including public improvements, is subject to the review and approval of the Architectural Board of Review (ABR). All ABR conditions of approval shall be clearly shown and specified on the permit plans.

D. **Requirements Prior to Permit Issuance.** The Applicant shall submit the following, or evidence of completion of the following, for review and approval by the Department listed below prior to the issuance of any permit for the project. Please note that these conditions are in addition to the standard submittal requirements for each department.

1. **Public Works Department.**

   a. **Approved Public Improvement Plans.** Construction work in the Public right-of-way shall be submitted to the Public Works Department for review and approval.

2. **Community Development Department.**

   a. **Written Agreement.** The Applicant shall submit an executed written instrument identified in condition B, "Written Agreement" to the Community Development Department prior to issuance of any permits.

   b. **Design Review Requirements.** Plans shall show all design elements as approved by the Architectural Board of Review and all elements/specifications shall be implemented on-site, including painting all equipment cabinets as approved by the ABR.

   c. **Conditions on Plans/Signatures.** The final Resolution shall be provided on a full size drawing sheet as part of the drawing sets. A statement shall also be placed on the sheet as follows: The undersigned have read and understand the required conditions, and agree to abide by any and all conditions which are their usual and customary responsibility to perform, and which are within their authority to perform.

Signed:

Property Owner		Date
Contractor	Date	License No.
Architect	Date	License No.
Engineer	Date	License No.

E. **Construction Implementation Requirements.** All of these construction requirements shall be carried out in the field by the Applicant and/or Contractor for the duration of the project construction, including demolition and grading.

1. **Construction Contact Sign.** Immediately after permit issuance, signage shall be posted at the site that list the contractor(s) name and telephone number(s), to assist City Inspectors and Police Officers in the enforcement of the conditions of approval. The font size shall be a minimum of 0.5 inches in height. Said sign shall not exceed six feet in height from the ground if it is free-standing or placed on a fence. It shall not exceed 24 square feet if in a multi-family or commercial zone or six square feet if in a single family zone.

F. **Prior to Final Inspection.** Prior to approval of Final Inspection, the Applicant shall complete the following:

1. **Repair Damaged Public Improvements.** Repair any public improvements (curbs, gutters, sidewalks, roadways, etc.) or property damaged by construction subject to the review and approval of the Public Works Department per SBMC §22.60.

2. **Compliance with Requirements.** All requirements of the city of Santa Barbara and any other applicable requirements of any law or agency of the State and/or any government entity or District shall be met. This includes, but is not limited to, the Endangered Species Act of 1973 [ESA] and any amendments thereto (16 U.S.C. § 1531 et seq.), the 1979 Air Quality Attainment Plan, and the California Code of Regulations.

3. **Approval Limitations.**

   a. The conditions of this approval supersede all conflicting notations, specifications, dimensions, and the like which may be shown on submitted plans.

   b. All antennas and related equipment, parking areas and other features shall be located substantially as shown on the plans approved by the Planning Commission.

c. Any deviations from the project description, approved plans or conditions must be reviewed and approved by the City, in accordance with the Planning Commission Guidelines. Deviations may require changes to the permit and/or further environmental review. Deviations without the above-described approval will constitute a violation of permit approval.

4. **Land Development Team Recovery Fee Required.** The land development team recovery fee (30% of all planning fees, as calculated by staff) shall be paid at time of building permit application.

5. **Litigation Indemnification Agreement.** In the event the Planning Commission approval of the Project is appealed to the City Council, Applicant hereby agrees to defend the City, its officers, employees, agents, consultants and independent contractors ("City's Agents") from any third party legal challenge to the City Council's denial of the appeal and approval of the Project, including, but not limited to, challenges filed pursuant to the California Environmental Quality Act (collectively "Claims"). Applicant/Owner further agrees to indemnify and hold harmless the City and the City's Agents from any award of attorney fees or court costs made in connection with any Claim.

   Applicant shall execute a written agreement, in a form approved by the City Attorney, evidencing the foregoing commitments of defense and indemnification within thirty (30) days of being notified of a lawsuit regarding the Project. These commitments of defense and indemnification are material conditions of the approval of the Project. If Applicant fails to execute the required defense and indemnification agreement within the time allotted, the Project approval shall become null and void absent subsequent acceptance of the agreement by the City, which acceptance shall be within the City's sole and absolute discretion. Nothing contained in this condition shall prevent the City or the City's Agents from independently defending any Claim. If the City or the City's Agents decide to independently defend a Claim, the City and the City's Agents shall bear their own attorney fees, expenses, and costs of that independent defense.

NOTICE OF CONDITIONAL USE PERMIT APPROVAL TIME LIMITS:

The Planning Commission action approving the Conditional Use Permit shall terminate two (2) years from the date of the approval, per Santa Barbara Municipal Code §28.87.360, unless:

1. An extension is granted by the Community Development Director prior to the expiration of the approval; or

2. A Public Works permit for the use authorized by the approval is issued and the construction authorized by the permit is being diligently pursued to completion of Final Inspection.

EXHIBIT B

COORDINATES:

LATITUDE 34°24'18.89" N
LONGITUDE 119°44'49.35" W

NAD 1983 GEODETIC COORDINATES AND ELEVATIONS WERE ESTABLISHED USING SURVEY GRADE "ASHTECH" G.P.S. RECEIVERS AND ASHTECH SURVEY GRADE PRECISION SOFTWARE FOR POST-PROCESSING.

BASIS OF BEARINGS:

A CHORD OF A CURVE IN THE CENTERLINE OF LAS GAVIOTAS, AS SHOWN ON FINAL MAP NO. 20,224, R.M. 121/3-6, SAID CURVE BEING CONCAVE NORTHEASTERLY HAVING A RADIUS OF 412 FEET, A DELTA OF 24°47'58" AND A LENGTH OF 178.32 FEET, SAID CHORD BEARS N58°10'13"W, 176.93 FEET FROM THE EASTERLY TERMINUS OF SAID CURVE, RECORDS OF SANTA BARBARA COUNTY.

ASSESSOR'S IDENTIFICATION:

N/A

AREA:

N/A

BENCH MARK REFERENCE:

U.S.G.S. BENCH MARK "BM 100"

UNITED STATES GEOLOGICAL SURVEY BENCH MARK "BM 100" AS SHOWN ON THE "SANTA BARBARA" 7.5 MINUTE QUADRANGLE MAP.

ELEVATION: 102.5 FEET A.M.S.L. (NAVD88) (DATUM VERIFIED IN FIELD TO BE WITHIN 1-A ACCURACY STANDARDS)

TITLE REPORT IDENTIFICATION:

N/A

EASEMENT NOTES:

N/A

LEGAL DESCRIPTION:

N/A

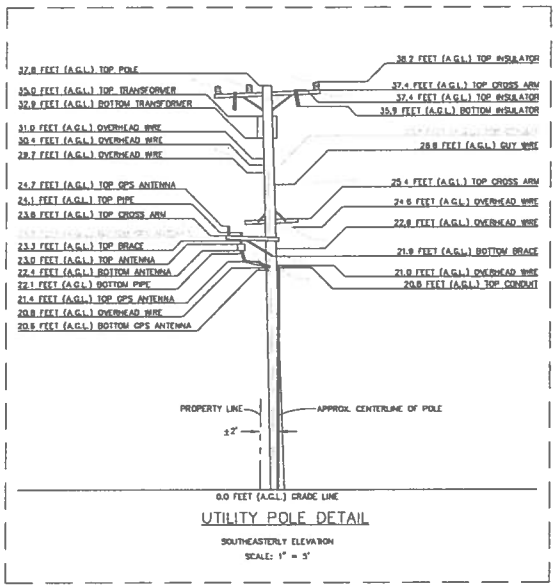
DATE OF SURVEY:

MARCH 08, 2014

SURVEYORS NOTE:

THE RIGHT OF WAY LINES AND THEIR DIMENSIONS SHOWN HEREON ARE PER READILY AVAILABLE RECORDED INFORMATION AND THEIR LOCATIONS ARE APPROXIMATE, PENDING RECEIPT OF TITLE REPORT(S) FOR THE ADJACENT REAL PROPERTY.

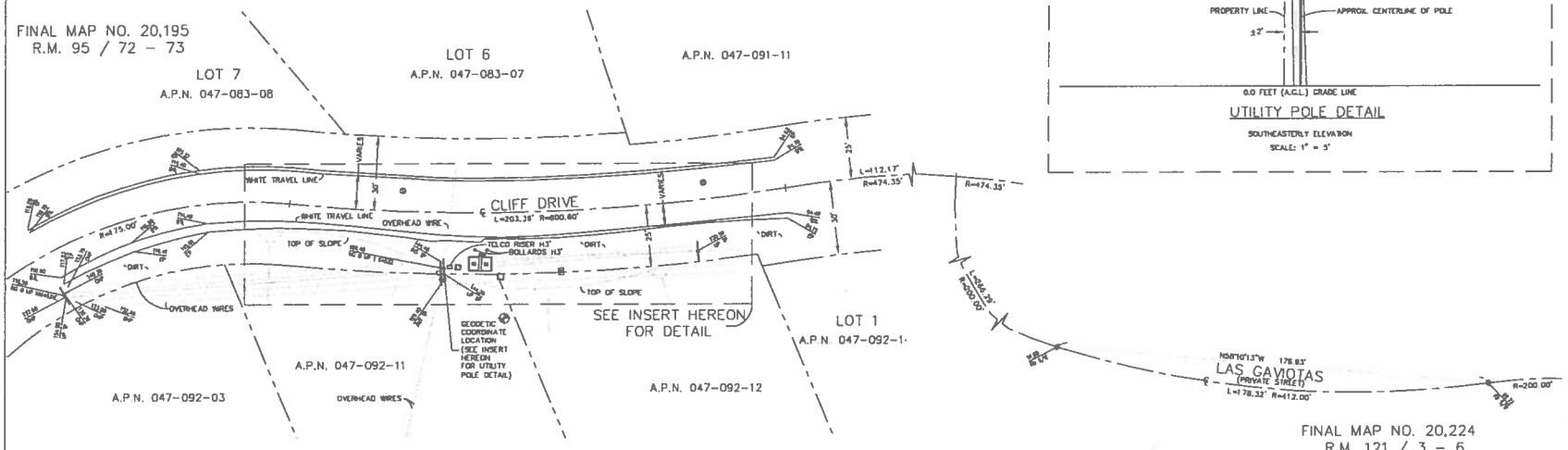
SCALE: 1" = 20'

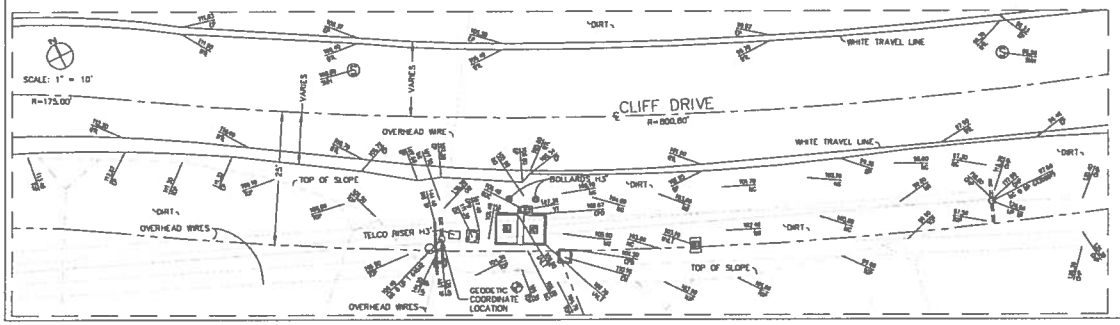


UTILITY POLE DETAIL

SOUTHEASTERLY ELEVATION

SCALE: 1" = 5'





LEGEND:

ANT	ANTENNA	TP	TOP
BRC	BRACE	TRN	TRANSFORMER
BTM	BOTTOM	UP	UTILITY POLE
CBLG	CABLE GROUP	UVLT	UTILITY VAULT
CDT	CONDUIT	VT	VENT
CPD	CONCRETE PAD	WTL	WHITE TRAVEL LINE
EM	ELECTRICAL METER	XARM	CROSS ARM
EOC	EDGE OF CONCRETE		ANTENNA
EP	EDGE OF PAVEMENT		BOLLARD
FD	FOUND		CENTERLINE
GW	GUY WIRE		FOUND MONUMENT
H	HEIGHT		SEWER MANHOLE
INS	INSULATOR		UTILITY POLE
IP	IRON PIPE		UTILITY VAULT
NG	NATURAL GROUND		VENT
OHP	OVERHEAD POWER LINE		
S/W	SPIKE AND WASHER		
SMH	SEWER MANHOLE		
TOP	TOP OF SLOPE		

PROFESSIONAL LAND SURVEYOR
BRENT WALL
No. 7211
Exp. 3-31-16
STATE OF CALIFORNIA

REVISIONS:			
NO.	DATE	DESCRIPTION	BY
1	03/11/14	ISSUED FOR REVIEW	RF

PREPARED BY:

EARTH DATA
SURVEYING AND MAPPING ASSOCIATES, INC.
LAND SURVEYING & MAPPING
3189 AIRWAY AVENUE, SUITE #1
COSTA MESA, CALIFORNIA 92626
714 557-1567 OFFICE
714 557-1568 FAX

PREPARED FOR:

at&t

1299 PARK PLAZA DRIVE
SUITE 100
CONCORD, CA 94520
925.446.4700 FAX 925.686.6998

TOPOGRAPHIC SURVEY

SBSB98 "CLIFF DRIVE 1"
3139 CLIFF DRIVE
SANTA BARBARA, CA 93109

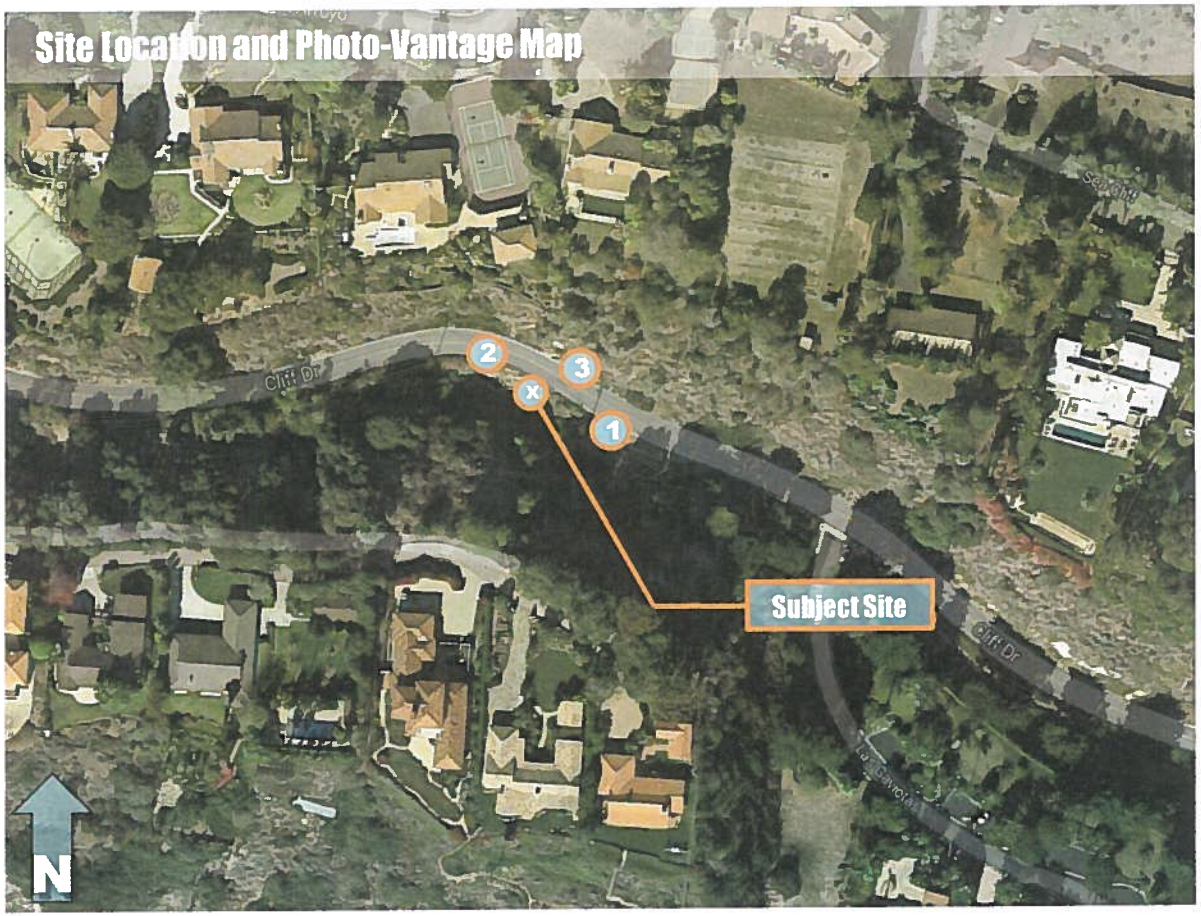
SCALE:	DATE:
AS SHOWN	03/11/14
DRAWN BY:	CHECKED BY:
RF	CWW

DRAWING #: 7452.731/SB3B98

SHEET LS-1

SITE PHOTOSIMULATIONS

EXHIBIT C



Images from Google Maps 2014©

Date:	**11/6/14**
Site Name:	**SBSB98**
Address:	**3139 Cliff Dr.** **Santa Barbara, CA 93109**
Applicant:	**AT&T Mobility** **12900 Park Plaza Dr.** **Cerritos, CA 90703**
Contact:	**Adrian Culici** **Cable Engineering Services** **(818) 898-2352** **adrian.culici@cableeng.com**

Certificate of Authenticity / Disclaimer:
Cable Engineering Services warrants that this photo simulation is an accurate representation of the proposed site based upon the project plans and additional information provided by the Applicant. The final constructed site may vary.

Prescott Communications Inc.

Existing

View 1

Looking northwest from Cliff Dr. toward subject site.

Photosimulation

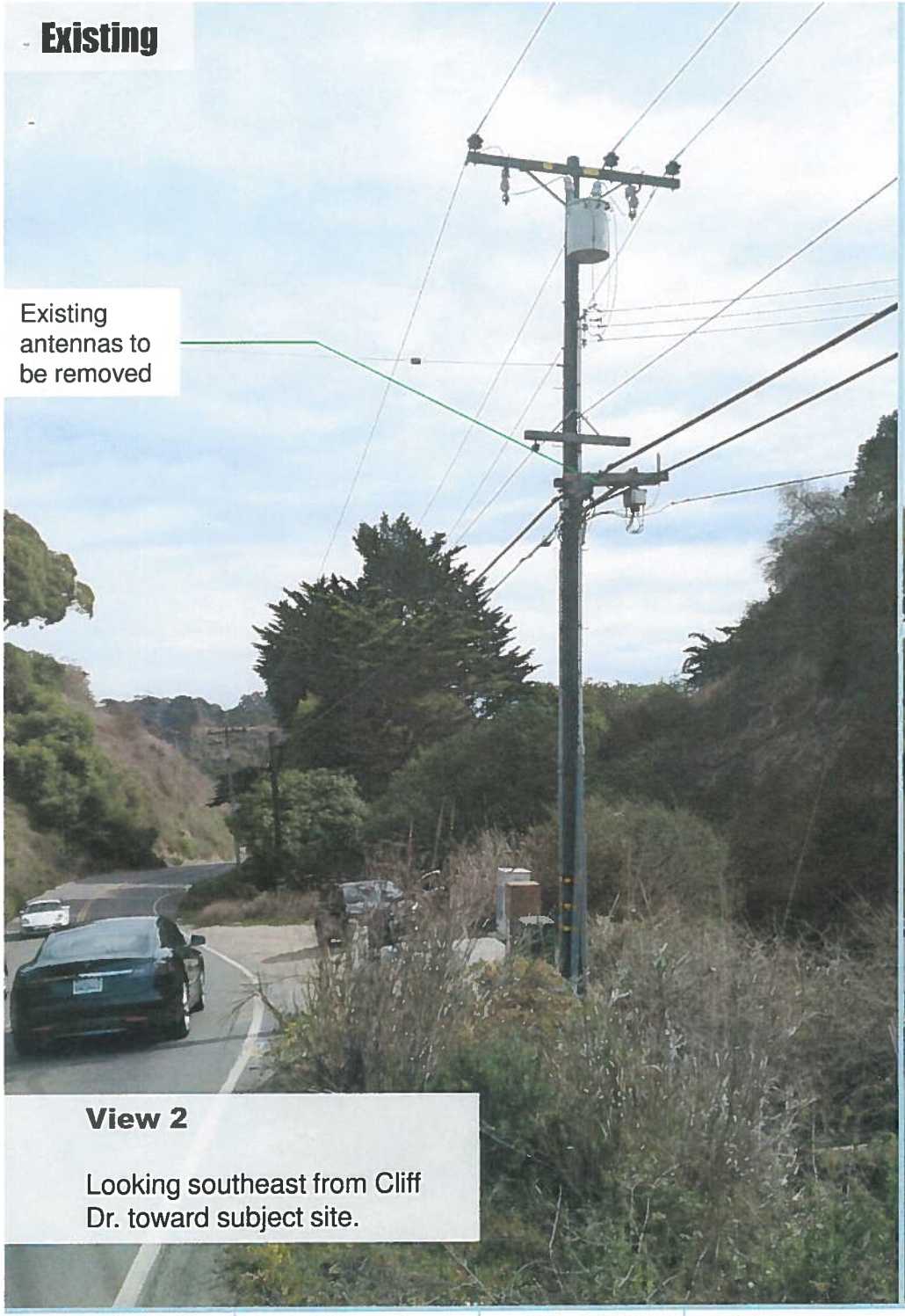
at&t | MYCOM | CeS cable engineering services Prescott Communications Inc.

Cable Engineering Services
10640 Sepulveda Blvd.
Mission Hills, CA 91345
(818) 898-2352

Date: *11/6/14*
Site Id: *SBSB98*

Address: *3139 Cliff Dr.*
Santa Barbara, CA 93109

Existing



View 2

Looking southeast from Cliff Dr. toward subject site.

Photosimulation

at&t | MYCOM | CES cable engineering services — Prescott Communications Inc.

Cable Engineering Services
10640 Sepulveda Blvd.
Mission Hills, CA 91345
(818) 898-2352

Date: *11/6/14*
Site Id: *SBSB98*

Address: *3139 Cliff Dr.*
Santa Barbara, CA 93109

View 2

Looking southwest from Cliff Dr. toward subject site.

Cable Engineering Services
10640 Sepulveda Blvd.
Mission Hills, CA 91345
(818) 898-2352

Date: *11/6/14*
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Address: *3139 Cliff Dr.*
Santa Barbara, CA 93109

Aesthetics and Visual Resources Policies

ER29. **Visual Resources Protection.** New development or redevelopment shall preserve or enhance important public views and viewpoints for public enjoyment, where such protection would not preclude reasonable development of property.

ER30. **Enhance Visual Quality.** Not only retain, but improve visual quality of the city wherever practicable.

Possible Implementation Action to be Considered

ER30.1 Underground Utilities. Cooperate with developers and utility companies to underground as many as possible overhead utilities in the city by 2030. Establish a listing of priority street segments with realistic target dates in the capital improvements program and continue to support neighborhood efforts for undergrounding.

Circulation Element Policies

The comprehensive goal of the existing Circulation Element is

"While sustaining or increasing economic vitality and quality of life, Santa Barbara should be a city in which alternative forms of transportation and mobility are so available and attractive that use of an automobile is a choice, not a necessity. To meet this challenge, the City is rethinking its transportation goals and land use policies, and focusing its resources on developing balanced mobility solutions..." (Circulation Element)

Goal 16 PUBLIC UTILITIES

COMMUNICATION FACILITIES
16.6 Ensure adequate telecommunication and cable services are provided to meet the needs of Santa Barbara residents and businesses.

16.6.1 Work with communication service providers to maintain current levels of service and meet future demands.
16.6.2 Promote the development of telecommuting and teleconferencing info/infra structure and facilities to help reduce the number of automobile trips.
16.6.3 Promote implementation of new communication technologies (e.g. fiber-optic lines with higher speed and wider band-width utilization).

Supplemental Site Analysis

Conditional Use Permit and Local Coastal Development Permit
Proposed Wireless Telecommunications Facility Modification
3139 Cliff Drive, Santa Barbara, CA
AT&T Mobility Site SBSB98

Introduction:

As a normal course of business, AT&T Mobility continuously evaluates its network to see if there are redundancies or unnecessary overlap which can be eliminated. As such, AT&T Mobility researched this area to see how best to fill the significant gap in coverage which exists in this area.

AT&T has determined that no other location would adequately fill the significant gap in coverage as this site would.

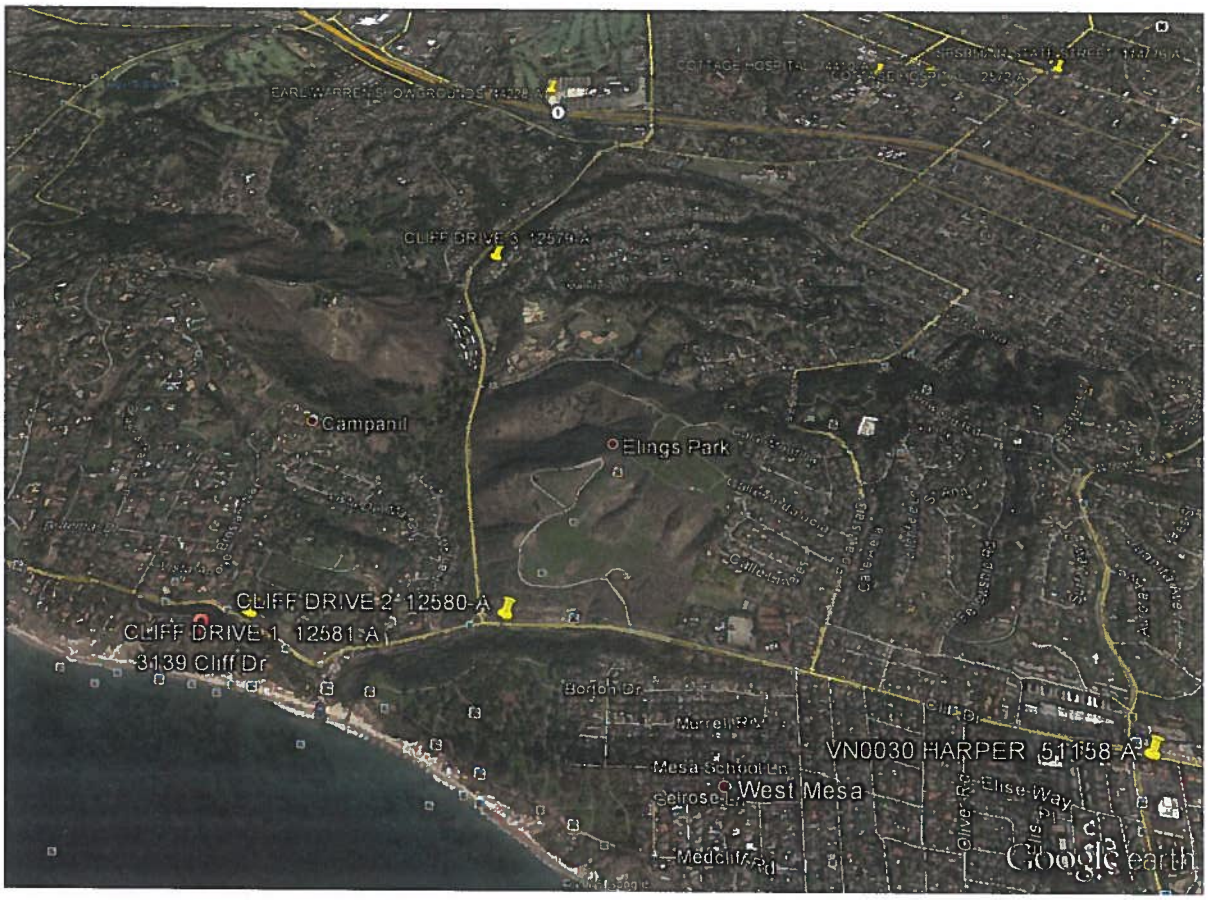
AT&T has been continuously operating this site since 2004 using this site for the oldest technology AT&T employs. (GSM) Since the wireless industry is continuously evolving and the demand exploding, it was determined this site would be the ideal site for delivering advanced technologies with additional capacity.

Eling Park:

At the time this upgrade was determined to be necessary, and to best fill the significant gap in coverage, RF engineers looked at the addition of more sites to cover the gap. The addition of new sites could add additional capacity, at the same time, could and likely would add interference in the network, thus creating an imbalance in the network.

Eling Park was among the areas considered for location of additional capacity, but was eliminated for several reasons which will be outlined below:

1. This site was too far away from the target area. The site could deliver service to a portion of the area, but cell phone and wireless equipment would have a difficult time reaching the tower to connect to the service.
2. Topographically this site would not be able to adequately reach the target area, as the signal would either go over the top of the target area, or be blocked by hills or cliffs.
3. This site is also located at such an elevation that it would interfere with other sites within the network.
4. There is no direct line of sight to a large portion of the target area. (Arroyo Beach)
5. If a site were to be located here, there would still need to be a facility proximal to the target area in order to fill the significant gap in coverage.



This Google Earth image shows the site location on Cliff Drive as well as other sites surround Elings Park which are delivering service. (Yellow stick pin images on Google Earth map)

In this photo you can see the topography of the area, showing the elevation of Elings Park verses the elevation of the target area.

The site is approximately 2500 feet from the park.

The park does not have a clear view to a portion of the target area, namely the beach and homes beneath the top of cliff drive. (image taken from the photos posted on Google Earth by Chad Bastain)

If AT&T was to install small, low level antennas on short poles (lollipop) there would be no line of sight to a good portion of the area, the antennas are too high.

The addition of a monopole at 50 feet would allow for more elevation and a better line of site, but the antennas would have to be tilted down to get a good portion of the target area, but would not fully propagate to the target area. Again, the topography would be the problem here.

Placing a monopole here to get a portion of the target area would now introduce a large element on the ridgeline of a relatively level mesa.

Conclusion:

Elings Park may be able to serve the network by offering a place to ADD coverage, to east and north along the Los Positas corridor as well as along the ridge line at Cliff Drive. This site could also possibly be used should the AT&T network be reworked to reconfigure coverage in this area.

At this time, the proposed location will be adequate to increase capacity and coverage, thereby filling the significant gap in coverage in this area.

Justification / Project Description

Conditional Use Permit and Local Coastal Development Permit
Proposed Wireless Telecommunications Facility Modification
3139 Cliff Drive, Santa Barbara, CA
AT&T Mobility Site SBSB98

Introduction:

AT&T Mobility, a federally licensed and California Public Utilities Commission (CUPC) registered telecommunications utility / franchisee, requests approval of a Conditional Use Permit and Coastal Development Permit for the modification of an existing wireless telecommunications facility in the Public Right of Way, 3139 Cliff Drive. Santa Barbara.

On August 5, 2013 and again on October 28, 2013, AT&T, by way of its Agent, Peter Hilger, from CES, appeared before the Architectural Review Board for approval of this proposed modification. On both occasions, the board would not make a finding of "No Visual Impact". Ultimately the Architectural Committee denied the project voting there was a visual impact. AT&T requests approval of a DART Application and CDP for the modification of this site.

On February 11, 2014 we met with City Staff to plan the path forward to getting the approval for this site, based on the letter of incompleteness, dated February, 5, 2014. In our discussions staff pointed out changes staff needed to see in order for them to deem the project submittal complete.

This submittal is to address those items contained in that letter and to begin the 90 Day "Shot Clock" for submittal and approval of this project under the Telecommunications act of 1996 and Sec. 6409 of The Middle Class Tax Relief and Job Creation Act of 2012 as well as FCC rules and regulations created to interpret and implement those laws.

Based on City Staff recommendations AT&T has redesigned this site with 4 antennas, rather than the previously submitted, 6 antennas. The size of the proposed antennas has also been reduced by approximately 3 inches from 51" to 48". The proposed antennas are the smallest available, with the capacity to operate and propagate the frequencies necessary to use the technologies available and to cover the significant gap in coverage that exists in this area. This configuration is not ideal and will not deliver the level of service, but will be adequate.

Project Description

The facility will consist of pole mounted antennas and equipment vault. The antennas will be mounted on an existing 37'-6" (AGL) wood utility pole. The pole is located in the Public Right of Way along Cliff Drive. Currently the Cliff Drive Right-of-Way is developed with wood utility poles distributed throughout the subject area. The proposed WTF will employ the existing 37'-6"wood utility pole with a set of four (4) 48" panel antennas

EXHIBIT F

mounted on (2) 8' composite cross arms at a height of 19'-6". The antenna tip height will be at approximately 19'. All related equipment, for the proposed project, will be placed in the existing vault.

The reduced design was made possible by some technological and configuration improvements on equipment AT&T uses to propagate its signal. The equipment has been made more efficient and is able to use 3 of the technologies AT&T employs in its network configuration.

AT&T Previously applied for and was denied administrative approval based on the Architectural Committee's Finding that there was visual impact.

This site is being modified to cover a significant gap in coverage and capacity. The site, as currently configured, is technologically incapable of providing adequate coverage. At this moment AT&T is only able to deliver it's GSM (2G) service to the area. That 2G service is generations older than service AT&T is able to deliver to the customers. This site will be improved to allow for more robust coverage and capacity, as well as provide new UMTS (3G) technology as well as LTE (4G) high speed broadband data service to the area. The modification of this site is necessary to maintain AT&T network integrity and provide improved coverage and fill the significant gap in coverage and complete lack of coverage in some instances as well as provide for E911 and other emergency communications.

Site Selection:

The site is located in a topographically challenging area and is placed in such a manner as to more than adequately integrate into the existing AT&T network, and provide excellent coverage to the target areas. This site has the elevation and line of site necessary to propagate the signal to this target area with minimal interference from structures or topography.

Several times ABR members suggested that AT&T move to another location, at a park, where there are already facilities. AT&T already has a site location in this area and moving the capacity and coverage for this site location to that existing facility would not work, and would, in fact, open a significant gap in coverage in the target area and disrupt the network thus denying customers adequate service in the target area.

It was also suggested that AT&T investigate the installation of an additional site within the area, where the antennas can be flush-mounted to a pole. Again, the topography of the area and the constraints of the right of way preclude installation of a second facility in this area. There are also technological issues with regard to placing an additional facility within the area, in that, coverage would be diminished by interference from one site to the other. Again, this would lessen the effectiveness of the service and degrade the network.

Wireless telecommunications services work on a line of site principle, in that, it needs as clear a view to the target area as possible. The signal can penetrate foliage and buildings but there is substantial loss of signal strength and degradation with each obstruction. The facilities are created and placed to take these issues into account.

Finally the selection of the proposed site rested on several factors.

1. Would be able to adequately meet the coverage objective minimizing and hopefully, fully eliminating the significant gap in coverage;
2. Would modification enhance service in this area as well as provide updated voice and data service;
3. Would we be able to adequately shield and conceal our equipment to best maintain the site lines and aesthetic beauty of the area;

The subject site, once modified and operating, will have no impact on the foot, bicycle and vehicular traffic. It will not adversely affect the surrounding property, will provide better, more service, adding more voice service and broadband and will have a minimal physical and aesthetic footprint in this area.

Site Justification:

Wireless telecommunication networks operate on a grid system of facilities that establish the functionality and performance of the system. The network is established on a "line of sight" premise that requires each site be situated in a manner that allows adjacent and abutting sites to generate signals that slightly overlap. By establishing this model of network deployment, the objective to provide seamless, or near seamless service is increased.

At this time, AT&T Mobility's RF engineers have identified a significant gap or complete lack in the level of service in the area that this proposed project will serve. The network is evaluated continuously in an effort to maintain the standard of service demanded by the public and mandated by governmental regulations. Currently, a significant gap in service exists in all areas proximal to the proposed location on the roadways and in-buildings. This area is comprised of a roadway and a beach area as well as single family residential developments. The outdoor service level in this area is inadequate and poor to nonexistent within the service objective. The current network configuration lacks signal strength, lacks access to all available technologies and lacks the capacity necessary to establish and maintain consistent and acceptable service. The proposed facility will upgrade the deficiency within the target area and will provide near seamless coverage along Cliff Drive, where improved service exists, and the surrounding area and will greatly improve or finally offer in-building coverage to the of the proposed site location.

In the absence of the proposed facility modification, AT&T Mobility will be precluded from improving the network deployment and their customers will continue to experience unacceptable levels of service. The detrimental impact may be most pronounced in

daily usage and heightened during emergencies and catastrophic events. The system will provide access to "E911" and to first responders during periods that landlines may not be operable.

This modification will increase the level of service and will give AT&T customers many of the available technologies has at its disposal to provide that improved service. This will not provide all of the technologies available to AT&T at this time.

Preferred Mounting Technique

The mounting technique used is the least intrusive technologically feasible design possible while maintaining the "line of sight" premise. In order to achieve the propagation objective and fill the significant gap in coverage the antennas are mounted to cross arms and painted to blend into the background of hills and vegetation in the best manner possible to reduce the aesthetic impact while maintaining the coverage objective. Again AT&T has been able to fashion a smaller technologically feasible and adequate facility to deliver several of the technologies and frequencies available to AT&T and its customers.

Because of the nature of the facility, a utility pole, in the public right of way, the means of mounting the facility to the pole is limited. AT&T Mobility is a public utility and member of the Southern California Joint Pole Committee and has rights to use the pole for a wireless telecommunications facility.

In this instance, Southern California Edison, the main user/owner of the pole, has standards it sets for use that promotes worker safety. These are over and above California General Order 95 Rule 94. Because of the safety standards SCE requires there is only one way to mount the antennas for this site. The antennas must be mounted from Cross arms at the level requested, which is a lower antenna center than the existing. The antennas must be mounted at a minimum 36 inches from the face of the pole to the closest portion of the antenna. This standard gives adequate "climbing space" for power workers to gain access to electric lines by climbing the pole.

The other consideration with regard to the mounting is interference of one frequency band with the other and technology, one with the other. The antennas are mounted in such a way that there is adequate clearance to allow them to function at the highest efficiency possible allowing adequate network coverage, and diminish the significant gap in coverage at a minimum, or eliminate it at best.

Remote radio units, normally mounted behind the antennas will be mounted in the equipment vault on site.

Noise/Acoustical Information

There will be no increase in noise, as the radio and telephone equipment is located in a subterranean vault.

Maintenance

The wireless telecommunications site will be maintained approximately once a month for graffiti mitigation and to ensure the property is kept in good visual condition. The equipment cabinets will be housed in a underground vault, therefore mitigating or at the very least minimizing opportunity for vandalism. Vandalism related damages should be reported by calling Property Management as identified on each WTF and a maintenance crew will be dispatched within 48 hours to repair or restore the facility.

Conclusion:

Based on the preceding facts and statements, consistent with the City's code standards for development and operation of WTF's, AT&T Mobility respectfully requests approval of the DART and CDP applications to modify and operate an improved WTF within the ROW.

AT&T Mobility • Base Station No. SBSB98
3139 Cliff Drive • Santa Barbara, California

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of AT&T Mobility, a personal wireless telecommunications carrier, to evaluate proposed modifications to its existing base station (Site No. SBSB98) located near 3139 Cliff Drive in Santa Barbara, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

Executive Summary

AT&T proposes to replace its directional panel antenna on a utility pole located near 3139 Cliff Drive in Santa Barbara. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

Prevailing Exposure Standards

The U.S. Congress requires that the Federal Communications Commission ("FCC") evaluate its actions for possible significant impact on the environment. A summary of the FCC's exposure limits is shown in Figure 1. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. The most restrictive FCC limit for exposures of unlimited duration to radio frequency energy for several personal wireless services are as follows:

Wireless Service	Frequency Band	Occupational Limit	Public Limit
Microwave (Point-to-Point)	5,000–80,000 MHz	5.00 mW/cm^2	1.00 mW/cm^2
BRS (Broadband Radio)	2,600	5.00	1.00
AWS (Advanced Wireless)	2,100	5.00	1.00
PCS (Personal Communication)	1,950	5.00	1.00
Cellular	870	2.90	0.58
SMR (Specialized Mobile Radio)	855	2.85	0.57
700 MHz	700	2.40	0.48
[most restrictive frequency range]	30–300	1.00	0.20

Power line frequencies (60 Hz) are well below the applicable range of these standards, and there is considered to be no compounding effect from simultaneous exposure to power line and radio frequency fields.

General Facility Requirements

Base stations typically consist of two distinct parts: the electronic transceivers (also called "radios" or "channels") that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The

transceivers are often located at ground level and are connected to the antennas by coaxial cables. A small antenna for reception of GPS signals is also required, mounted with a clear view of the sky. Because of the short wavelength of the frequencies assigned by the FCC for wireless services, the antennas require line-of-sight paths for their signals to propagate well and so are installed at some height above ground. The antennas are designed to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. This means that it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically very near the antennas.

Computer Modeling Method

The FCC provides direction for determining compliance in its Office of Engineering and Technology Bulletin No. 65, "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radio Frequency Radiation," dated August 1997. Figure 2 attached describes the calculation methodologies, reflecting the facts that a directional antenna's radiation pattern is not fully formed at locations very close by (the "near-field" effect) and that at greater distances the power level from an energy source decreases with the square of the distance from it (the "inverse square law"). The conservative nature of this method for evaluating exposure conditions has been verified by numerous field tests.

Site and Facility Description

Based upon information provided by AT&T, including construction drawings by Cable Engineering Services, dated February 20, 2013, that carrier presently has one directional panel antenna installed on the existing 37½-foot utility pole sited in the public right-of-way along Cliff drive, north of the residence located at 3139 Cliff Drive in Santa Barbara. AT&T proposes to remove that antenna and to install six Andrew Model DBXNH-6565A-R2M directional panel antennas on the same pole. The antennas would be mounted with no downtilt at an effective height of about 17 feet above ground and would be oriented in groups of three toward 120°T and 280°T. The maximum effective radiated power in any direction would be 6,100 watts, representing simultaneous operation at 2,120 watts for AWS, 1,590 watts for PCS, 1,350 watts for cellular, and 1,040 watts for 700 MHz service. There are reported no other wireless telecommunications base stations at the site or nearby.

Study Results

For a person anywhere at ground, the maximum RF exposure level due to the proposed AT&T operation is calculated to be 0.18 mW/cm^2, which is 20% of the applicable public exposure limit. The maximum calculated level at the second-floor elevation of any nearby residence* is 2.2% of the public

* Located at least 160 feet away, based on photographs from Google Maps.

exposure limit. It should be noted that these results include several "worst-case" assumptions and therefore are expected to overstate actual power density levels from the proposed operation.

Recommended Mitigation Measures

Due to their mounting locations, the AT&T antennas would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. To prevent occupational exposures in excess of the FCC guidelines, no access within 19 feet directly in front of the antennas themselves, such as might occur during maintenance work on the pole, should be allowed while the base station is in operation, unless other measures can be demonstrated to ensure that occupational protection requirements are met. Posting explanatory warning signs† at the antennas and/or on the pole below the antennas, such that the signs would be readily visible from any angle of approach to persons who might need to work within that distance, would be sufficient to meet FCC-adopted guidelines.

Conclusion

Based on the information and analysis above, it is the undersigned's professional opinion that the proposed operation of the AT&T Mobility base station located at 3139 Cliff Drive in Santa Barbara, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations. Posting explanatory signs is recommended to establish compliance with occupational exposure limitations.

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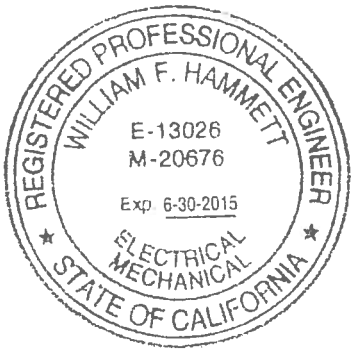
† Warning signs should comply with OET-65 color, symbol, and content recommendations. Contact information should be provided (*e.g.*, a telephone number) to arrange for access to restricted areas. The selection of language(s) is not an engineering matter, and guidance from the landlord, local zoning or health authority, or appropriate professionals may be required. Signage may also need to comply with the requirements of California Public Utilities Commission General Order No. 95.

Authorship

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration Nos. E-13026 and M-20676, which expire on June 30, 2015. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.



William F. Hammett, P.E.
707/996-5200

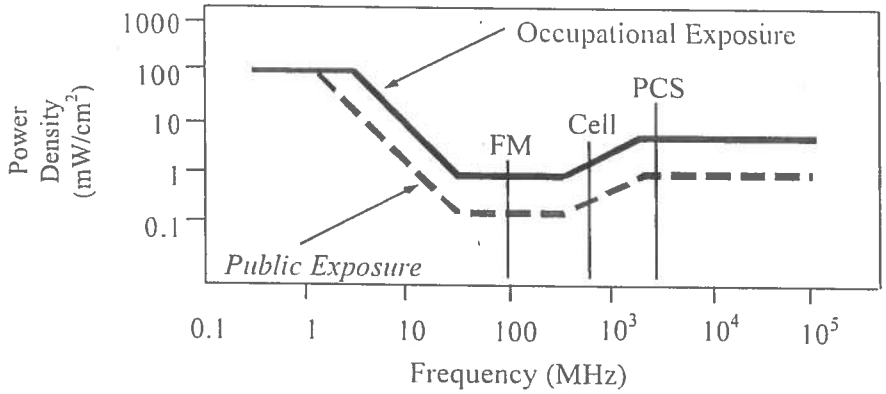
June 18, 2013

FCC Radio Frequency Protection Guide

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission ("FCC") to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The FCC adopted the limits from Report No. 86, "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," published in 1986 by the Congressionally chartered National Council on Radiation Protection and Measurements ("NCRP"). Separate limits apply for occupational and public exposure conditions, with the latter limits generally five times more restrictive. The more recent standard, developed by the Institute of Electrical and Electronics Engineers and approved as American National Standard ANSI/IEEE C95.1-2006, "Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," includes similar limits. These limits apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

As shown in the table and chart below, separate limits apply for occupational and public exposure conditions, with the latter limits (in *italics* and/or dashed) up to five times more restrictive:

Frequency	Electromagnetic Fields (f is frequency of emission in MHz)					
Applicable Range (MHz)	Electric Field Strength (V/m)		Magnetic Field Strength (A/m)		Equivalent Far-Field Power Density (mW/cm^2)	
0.3 – 1.34	614	*614*	1.63	*1.63*	100	*100*
1.34 – 3.0	614	*823.8/f*	1.63	*2.19/f*	100	*180/f^2*
3.0 – 30	1842/ f	*823.8/f*	4.89/ f	*2.19/f*	900/ f^2	*180/f^2*
30 – 300	61.4	*27.5*	0.163	*0.0729*	1.0	*0.2*
300 – 1,500	3.54$\sqrt{f}$	*1.59$\sqrt{f}$*	$\sqrt{f}$/106	*$\sqrt{f}$/238*	f/300	*f/1500*
1,500 – 100,000	137	*61.4*	0.364	*0.163*	5.0	*1.0*



Higher levels are allowed for short periods of time, such that total exposure levels averaged over six or thirty minutes, for occupational or public settings, respectively, do not exceed the limits, and higher levels also are allowed for exposures to small areas, such that the spatially averaged levels do not exceed the limits. However, neither of these allowances is incorporated in the conservative calculation formulas in the FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) for projecting field levels. Hammett & Edison has built those formulas into a proprietary program that calculates, at each location on an arbitrary rectangular grid, the total expected power density from any number of individual radio sources. The program allows for the description of buildings and uneven terrain, if required to obtain more accurate projections.

RFR.CALC™ Calculation Methodology

Assessment by Calculation of Compliance with FCC Exposure Guidelines

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission ("FCC") to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The maximum permissible exposure limits adopted by the FCC (see Figure 1) apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. Higher levels are allowed for short periods of time, such that total exposure levels averaged over six or thirty minutes, for occupational or public settings, respectively, do not exceed the limits.

Near Field.

Prediction methods have been developed for the near field zone of panel (directional) and whip (omnidirectional) antennas, typical at wireless telecommunications base stations, as well as dish (aperture) antennas, typically used for microwave links. The antenna patterns are not fully formed in the near field at these antennas, and the FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) gives suitable formulas for calculating power density within such zones.

For a panel or whip antenna, power density $S = \frac{180}{\theta_{BW}} \times \frac{0.1 \times P_{net}}{\pi \times D \times h}$, in mW/cm^2,

and for an aperture antenna, maximum power density $S_{max} = \frac{0.1 \times 16 \times \eta \times P_{net}}{\pi \times h^2}$, in mW/cm^2,

where θ_{BW} = half-power beamwidth of the antenna, in degrees, and
P_{net} = net power input to the antenna, in watts,
D = distance from antenna, in meters,
h = aperture height of the antenna, in meters, and
η = aperture efficiency (unitless, typically 0.5-0.8).

The factor of 0.1 in the numerators converts to the desired units of power density.

Far Field.

OET-65 gives this formula for calculating power density in the far field of an individual RF source:

power density $S = \frac{2.56 \times 1.64 \times 100 \times RFF^2 \times ERP}{4 \times \pi \times D^2}$, in mW/cm^2,

where ERP = total ERP (all polarizations), in kilowatts,
RFF = relative field factor at the direction to the actual point of calculation, and
D = distance from the center of radiation to the point of calculation, in meters.

The factor of 2.56 accounts for the increase in power density due to ground reflection, assuming a reflection coefficient of 1.6 (1.6 x 1.6 = 2.56). The factor of 1.64 is the gain of a half-wave dipole relative to an isotropic radiator. The factor of 100 in the numerator converts to the desired units of power density. This formula has been built into a proprietary program that calculates, at each location on an arbitrary rectangular grid, the total expected power density from any number of individual radiation sources. The program also allows for the description of uneven terrain in the vicinity, to obtain more accurate projections.

ARCHITECTURAL BOARD OF REVIEW MINUTES

Monday, August 5, 2013 630 Garden Street: David Gebhard Public Meeting Room

CONCEPT REVIEW - NEW ITEM: PUBLIC HEARING

3. RIGHT OF WAY ADJACENT TO 3139 CLIFF DR. City Right-Of-Way
(4:10) Assessor's Parcel Number: ROW-002-941
Application Number: MST2013-00117
Applicant: Cable Engineering Services
Owner: City of Santa Barbara

(Proposal to modify an existing microcell antenna site for AT&T. The existing 12-inch panel antennas located on the utility pole in the public right-of-way will be replaced with six larger 4-foot by 12-inch panel antennas on new ten-foot cross arms. The project includes replacement of the existing meter pedestal, new equipment in an existing vault, and new vent stacks.)

(Action may be taken if sufficient information is provided. Project requires finding of No Visual Impacts. Requires Coastal Review.)

Actual time: 4:31 p.m.
Present: Peter Hilger, Agent for AT& T Mobility.
Public comment opened at 4:38 p.m.

1) Mark Noble, (submitted letter) opposed; expressed concerns regarding negative visual impacts of the proposed larger antennas, size of the service turnout parking area, and past graffiti on equipment cabinets.
2) Gil Barry, representing the Braemar Neighborhood Association, opposed; proposal is a significant adverse visual impact and presents an industrial appearance in the semi-rural setting.

A letter of concern from Mark Noble was acknowledged; and a letter from Paula Westbury was received.
Public comment closed at 4:43 p.m.

Staff reminded the Board that findings of no adverse visual impacts and aesthetic findings must be made, and that a Coastal Review is still required.

Motion: **Continued indefinitely to return to Full Board with comments:**
1) As presented, the Board could not make the finding of no adverse visual impacts. The current proposed project does not meet the Wireless Communication Facility Guidelines, and poses a substantial additional visual impact to the existing site. The applicant is directed to study alternatives.
2) Staff to research the turnout parking area for a possible violation.

Action: Gradin/Wittausch, 5/0/0. Motion carried. (Poole/Cung absent).

EXHIBIT H

CONCEPT REVIEW - CONTINUED ITEM

2. RIGHT OF WAY ADJACENT TO 3139 CLIFF

(3:40) Assessor's Parcel Number: ROW-002-941
Application Number: MST2013-00117
Applicant: Cable Engineering Services
Owner: City of Santa Barbara
Agent: Peter Hilger

(Proposal to modify an existing microcell antenna site for AT&T. The existing 12-inch panel antennas located on the utility pole in the public right-of-way will be replaced with six larger 4-foot by 12-inch panel antennas on new ten-foot cross arms. The project includes replacement of the existing meter pedestal, new equipment in an existing vault, and new vent stacks.)

(Second review, project last reviewed on August 5, 2013. Action may be taken if sufficient information is provided. Project requires finding of No Visual Impacts and Coastal Review.)

Actual time: 4:17 p.m.

Present: Peter Hilger and Rob Searcy, Agents for Applicant.

Public comment opened at 4:30 p.m., and as no one wished to speak, public comment was closed.

A letter of concern from Paula Westbury regarding was received.

Motion: **Continued indefinitely to Planning Commission with comments:**

1) The Board is unable to make the finding for no adverse visual impact.
2) The Board would like to see a stronger effort to conceal the project, including the roadside cabinets.
3) The Board expressed concerns about the elimination of roadside landscaping.

Action: Wittausch/Gradin, 6/0/1. Motion carried. (Cung supports the project).

CONCEPT REVIEW - CONTINUED ITEM

6. RIGHT OF WAY ADJACENT TO 3139 CLIFF DRIVE

(5:45) Assessor's Parcel Number: ROW-002-941
Application Number: MST2013-00117
Applicant: Cable Engineering Services
Owner: City of Santa Barbara
Agent: Peter Hilger

(The project consists of the replacement of an existing microcell site with a full site for AT&T. The existing 12-inch panel antennas located on the existing wood utility pole in the public right-of-way will be replaced with four larger 4-foot by 15-inch panel antennas on new eight-foot cross arms. The project includes new equipment in an existing underground vault.)

(Third Concept Review. Project requires a finding of No Visual Impacts in order for action to be taken. If finding is not made, project will be continued to the Planning Commission for review of a Conditional Use Permit and a Coastal Development Permit. Project was last reviewed on August 5, 2013.)

Actual time: 7:29 p.m.

Present: Peter Hilger, Agent; and Tony Boughman, Assistant Planner.

Public comment opened at 7:41 p.m.

1) Gil Barry, neighbor; expressed opposition with concerns regarding significant negative visual impact issues along the heavily traveled road.

Public comment closed at 7:43 p.m.

Motion: **Continued indefinitely to the Planning Commission with comments:**

1) Because this is a scenic part of the City close to Arroyo Burro Beach and other public areas the Board found this is not an appropriate location for an installation of this kind. The Board was unable to make the finding of No Visual Impacts due to the proposed bulk and scale of the project on a scenic drive.
2) The applicant has stated that the proposal is already minimized in size. If the project is approved for the site, the conduit and other equipment attached to the pole should be painted the proposed brown color to match the existing pole. The ground-mounted cabinets should be painted Malaga green.

Action: Wittausch/Hopkins, 6/1/0. Motion carried. (Cung opposed, but could make the finding of No Visual Impacts).