

JUL - 8 2005

FILE COPY

## **Final Environmental Assessment**

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*for*

***Proposed New Cingular Wireless of Hawaii LLC  
Bilger Hall Addition Rooftop Antenna Site  
University of Hawaii at Manoa  
Honolulu, Oahu, Hawaii***

Submitted Pursuant to Chapter 343, Hawaii Revised Statutes (HRS), as amended

**Applicant:**

*New Cingular Wireless of Hawaii LLC*

**Approving Agency:**

*University of Hawaii at Manoa*

**Prepared by:**

*Environmental Planning Solutions, LLC*

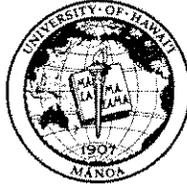
**June 2005**

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DEPT. OF ENVIRONMENTAL  
QUALITY CONTROL

JUN 27 PM 2:19

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UNIVERSITY OF HAWAII AT MĀNOA

OFFICE OF THE CHANCELLOR

June 24, 2005

Ms. Genevieve Salmonson, Director  
Office of Environmental Quality Control  
State of Hawai'i  
235 South Beretania Street, Suite 702  
Honolulu, Hawai'i 96813

RECEIVED  
05 JUN 27 PM 2:18  
OFFICE OF ENVIRONMENTAL  
QUALITY CONTROL

Dear Ms. Salmonson:

Subject: Notice of Determination – Finding of No Significant Impact  
Telecommunications Facility, University of Hawai'i at Mānoa, Bilger Hall  
Addition Rooftop, Honolulu, O'ahu, Hawai'i  
TMK: (1) 2-8-023:003

The University of Hawai'i at Mānoa has reviewed the responses to comments related to the Draft Environmental Assessment received during the 30-day public comment period that began on May 8, 2005. The agency has determined that this project will not have significant environmental effects and has issued a Finding of No Significant Impact. Please publish this notice in the July 8, 2005 edition of *The Environmental Notice*.

We have enclosed the following items for your review:

- (1) One copy of the OEQC Environmental Notice Publication Form;
- (2) Four copies of the Final EA.

The following information is provided in accordance with the requirements for a Notice of Determination:

Identification of Applicant  
New Cingular Wireless of Hawai'i LLC

Identification of Accepting Agency  
University of Hawai'i at Mānoa, State of Hawai'i

Determination  
Finding of No Significant Impact (FONSI)

Reasons Supporting Determination

This determination is based on the significance criteria listed in Section 11-200-12 of the Environmental Impact Statement Rules:

Reasons Supporting Determination

This determination is based on the significance criteria listed in Section 11-200-12 of the Environmental Impact Statement Rules:

1. The proposed project will not involve an irrevocable commitment to loss or destruction of any natural or cultural resources.
2. The proposed project will not curtail the range of beneficial uses of the environment. The project will be located within the University of Hawai'i parcel and easements, designated for institutional facilities.
3. The proposed project will not conflict with the state's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders.
4. The proposed project will not have a substantial negative effect on the economic or social welfare of the community or state. The project will not have a long-term impact on employment or economics. The impact on social welfare will be positive since the proposed project will enhance telecommunication service for the community.
5. The proposed project will not substantially affect public health (in a negative manner). Rather, the project will provide a means to minimize emergency response time by providing efficient, quality telecommunication service on the university campus and its surrounding area.
6. The proposed project does not involve substantial secondary impacts, such as effects on public facilities (in a negative manner). Rather, it will increase capacity of the existing communication system to serve the university campus and its neighboring parcels in conformance with the County General Plan and the Primary Urban Center Development Plan.
7. The proposed project does not involve a substantial degradation of environmental quality. Antenna facilities are clean, unmanned facilities that do not generate additional vehicular traffic or degrade noise or air quality.
8. The proposed project does not have considerable cumulative effect upon the environment, and no larger commitment is required for the proposed antenna site.

Ms. Genevieve Salmonson, Director

June 24, 2005

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9. The proposed project will not substantially affect rare, threatened, or endangered species, or their habitat since there are none present within the project site.
10. The proposed project will not detrimentally affect air or water quality or ambient noise levels. These potential impacts and mitigation measures have been addressed in the appropriate sections of the EA.
11. The proposed project will not affect, nor is it likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.
12. The proposed project will not substantially affect scenic vistas or viewplanes identified in county or state plans or studies. The antennas will be painted the same color as the existing building and will not exceed the existing height of the structure.
13. The proposed antenna facility will not require substantial additional energy.

Should you have any questions, please contact Wallace Gretz of Facilities Planning and Management at 956-8896.

Sincerely,



Kathy Cutshaw  
Acting Vice Chancellor for  
Administration, Finance and Operations

cc: Colette Sakoda (Consultant)

**Final Environmental Assessment**

**Proposed New Cingular Wireless Hawaii LLC Antenna Facility  
Bilger Hall Addition Rooftop  
University of Hawaii at Manoa  
Tax Map Key No. 2-8-023:003**

Prepared Pursuant to Chapter 343, HRS, as amended

**Applicant:**

New Cingular Wireless Hawaii, LLC  
500 Kahelu Avenue  
Mililani, HI 96789

**Approving Agency:**

University of Hawaii at Manoa  
2444 Dole Street  
Honolulu, HI 96822

**Prepared by:**

Environmental Planning Solutions, LLC  
945 Makaiwa Street  
Honolulu, HI 96816

**June 2005**

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- 2 Building Location
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- A Pre-Assessment Phase: Agency Correspondence and DEA Comments, Responses
- B Manoa Neighborhood Board Meeting Record
- C Pacific Wireless Communication EME Prediction Study
- D V. Peterson Statement Regarding Electromagnetic Radiation Levels

**SUMMARY INFORMATION**

**CHAPTER 343, HAWAII REVISED STATUTES (HRS)  
FINAL ENVIRONMENTAL ASSESSMENT**

**Project Name:** Proposed Antenna Facility  
University of Hawaii at Manoa (UHM)  
Bilger Hall Addition Rooftop

**Applicant:** New Cingular Wireless of Hawaii LLC  
500 Kahelu Avenue  
Mililani, Hawaii 96789

**Approving Agency:** University of Hawaii at Manoa  
2444 Dole Street  
Honolulu, Hawaii 96822

**Prepared by:** Colette M. Sakoda  
Environmental Planning Solutions LLC  
945 Makaiwa Street  
Honolulu, Hawaii 96816

**Anticipated Determination:** Finding of No Significant Impact (FONSI)

**Project Description:** 9 panel antennas measuring 76.3 inches long, 10.3 inches wide and 5.3 inches deep are to be mounted vertically on the north, south and west sections of the upper and lower rooftops of the building. PCS base transceiver station (BTS) will consist of 3 equipment cabinets, each 30.3 inches wide, 76.4 inches high, and 29.3 inches deep. Total space required on rooftop will be about 100 sq.ft.

**Land Owner:** University of Hawaii  
2444 Dole Street  
Honolulu, Hawaii 96822

***New Cingular Wireless of Hawaii, LLC.  
UHM Bilger Environmental Assessment***

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**Location:** Bilger (Hall) Addition, UHM,  
Manoa, Honolulu District, Oahu

**Site Address:** Bilger (Hall) Addition  
UHM Dept. of Chemistry  
2545 The Mall  
Honolulu, Hawaii 96822-2275

**TMK No.:** 2-8-023:003

**Land Use Classifications:** State Land Use District: Urban  
County Development Plan: Institutional  
County Zoning: R-5 Residential

**Lot Area:** 88,760,400 square feet (103.482 acres)

**Height Limit:** 25-30 feet  
**Special Management Area:** No  
**Flood Zone:** AE & X  
**Existing Use:** Bilger Hall Addition houses research and teaching labs of the UHM Chemistry Dept. The campus telecommunications facilities are housed at the top of the building alongside the air conditioning units.

**Surrounding Land Uses:** Bilger is located in the center of the UHM campus. It is surrounded by the original Bilger Hall to the north, Physical Science Building to the east, Kuykendall Hall and HIG Building to the south, and the Art Building to the west.

**I. INTRODUCTION**

This Environmental Assessment (EA) has been prepared to identify and evaluate the existing conditions and potential impacts of the installation of an antenna installation at the top of Bilger (Hall) Addition on the natural and human environment. This EA has been prepared in accordance with the provisions of Chapter 343, HRS and Title 11, Chapter 200 of the State Department of Health's Administrative Rules, as the proposed action involves the use of State land. See Figures 1 and 2 for Vicinity and Building Location.

**1.1 IDENTIFICATION OF APPLICANT**

New Cingular Wireless of Hawaii, LLC, formerly AT&T Wireless, is a telecommunications service provider proposing to implement this project.

**1.2 IDENTIFICATION OF APPROVING AGENCY**

The University of Hawaii is the designated approving agency because it is the landowner. A minor modification to the University's Plan Review Use (PRU) File No. 88/PRU-3 is required by the City and County of Honolulu. Thus, the EA prepared in accordance with Chapter 343, HRS, is a supplemental document to the minor modification to the PRU application.

**1.3 IDENTIFICATION OF AGENCIES AND ORGANIZATIONS  
CONSULTED IN MAKING THE ASSESSMENT**

Listed below are the agencies and organizations consulted in the preparation of the DEA. The same parties were consulted during the DEA public review period which was from May 8 to June 7, 2005. Consulted parties that submitted written responses during the Pre-assessment and the DEA public review periods are identified below by a check (√) mark below.

<u>Consulted Party</u>	<u>RESPONDED</u>	
<u>Federal Government:</u>	<u>Pre-Assessment</u>	<u>DEA</u>
1. U.S. Army Corps of Engineers POD Regulatory Branch	√	
2. U.S. Department of Interior U.S. Fish & Wildlife Service	√	
3. Environmental Protection Agency—PICO		
4. Dir. of Fac. Engineer U.S. Army Support Command HI		
 <u>State of Hawaii:</u>		
5. Department of Education	√	√
6. State Department of Land and Natural Resources		

***New Cingular Wireless of Hawaii, LLC.  
UHM Bilger Environmental Assessment***

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- |   |   |   |
|---|---|---|
| Historic Preservation Division                              | √ |   |
| 7. State Department of Land and Natural Resources Land Div. |   |   |
| 8. Office of Hawaiian Affairs                               |   | √ |
| 9. Office of Planning                                       |   |   |
| 10. UHM Environmental Center                                |   |   |
| 11. University of Hawaii Manoa Fac. Plng and Mgt. Office    |   | √ |
| 12. State Department of Health OEQC                         |   |   |
| 13. State Department of Transportation                      | √ |   |
| Highways Div.   |   | √ |

City and County of Honolulu:

- |   |   |   |
|---|---|---|
| 14. Board of Water Supply                 |   | √ |
| 15. Department of Parks and Recreation    | √ |   |
| 16. Department of Planning and Permitting | √ | √ |
| 17. Department of Environmental Services  |   |   |
| 18. Department of Transportation Services | √ | √ |
| 19. Fire Department                       | √ | √ |
| 20. Police Department                     | √ | √ |

Utilities:

- |   |   |  |
|---|---|--|
| 21. Verizon Hawaii Inc.                 | √ |  |
| 22. Hawaiian Electric Company           |   |  |
| 23. Oceanic Time Warner Cable of Hawaii |   |  |
| 24. The Gas Company                     |   |  |

Other Organizations:

- |  |  |  |
|--|--|--|
| 25. Nature Conservancy                       |  |  |
| 26. Sierra Club                              |  |  |
| 27. Manoa Neighborhood Board No. 7           |  |  |
| 28. Ann Kobayashi, Councilmember, District 5 |  |  |

**1.4 SUMMARY OF MAJOR IMPACTS AND MITIGATING MEASURES**

**D. SHORT TERM IMPACTS**

**TRAFFIC AND PARKING.** Minor traffic impacts will occur as a result of construction related traffic and the operation of construction equipment which may, on occasion, impede traffic in the immediate vicinity of Bilger. In addition, the proposed project may inhibit the use of three parking stalls on the Correa Road side of the building while a boom truck is parked to unload the bulk of the panel antenna hardware. This is expected to be up to a 3-day period.

**NOISE.** Construction activities will result in an increase in noise levels during the 5- to 8-week installation period. However, disruption to existing activities is anticipated to be

minimal as the proposed project will not involve major earthmoving, pile driving or heavy demolition work.

**AIR QUALITY.** During construction, fugitive dust generation and on-site emission from construction and installation activities may affect air quality in the immediate vicinity of the project. However, these impacts are anticipated to be minor due to the short construction period and small size of the actual exterior equipment installation.

To mitigate potential short-term impacts associated with construction activities, the installation of the equipment should be coordinated with the university to minimize disruption of classes, preferably when the university is not in session.

## **B. LONG TERM IMPACTS**

**TRAFFIC AND PARKING.** The proposed project will not result in any loss of parking spaces. Neither will it result in an increase in parking demand. The antenna facility will be unmanned and monitored from an offsite location. It will be visited once a month by a maintenance engineer whose normal length of stay on the site will be one hour. The project will not result in an increase in traffic volumes because it will be unmanned.

**NOISE.** The installation of electrical switching equipment in the 4 cabinets and 9 panel antennas will not result in any increase in noise levels at the rooftop or in the Bilger Hall complex.

**VISUAL RESOURCES.** The placement of 6 panel antennas on the north, south and west sides of the building's lower rooftop level and 3 on the steel fume exhaust shaft structure on the building's upper rooftop will have limited impact on ground level views in the vicinity of the building as the view angle from the ground limits views to the outer portions of the roof. Visual impacts will mainly occur to view from the upper floors of adjacent buildings or from distant ground level viewpoints. However, these impacts are anticipated to be minimal as: (1) the visual quality of the existing environment is already impacted by existing structures; (2) the overall size of the antennas and related accessories in comparison to the building itself will result in changes to portions of the building roof, but will not result in a significant alteration to the overall form. The antennas will be painted a cream beige and brown to blend in with the building paint color.

The installation of 4 electrical equipment cabinets on the rooftop near the exhaust towers will not impact ground level views because this part of the roof is recessed from the edges of the building. The equipment cabinets may be visible from upper floors of adjacent buildings, but should not significantly impact the overall visual quality of views from these buildings.

***New Cingular Wireless of Hawaii, LLC  
UHM Bilger Environmental Assessment***

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**ELECTROMAGNETIC RADIATION (EMF).** The upper and lower levels of the rooftop of the Bilger Addition are restricted to public access. Only campus maintenance, contractors and Cingular personnel will have access to the rooftop. The Cingular Wireless engineering department will provide contractors and maintenance personnel with information (upon request) on FCC RF compliance rules as it applies to worker safety. These personnel will be aware of the facility and knowledgeable of the potential for exposure and can exercise control over their exposure. In the event that UH workers will be in close proximity to the antennas for prolonged periods, UH personnel will make prior arrangements with Cingular Wireless. Cingular will work with the UH personnel to mitigate any concerns including education of RF safety and use of RF monitor devices. If it is determined that work will be unsafe, Cingular will work with UH on reducing the power level of the antennas possibly remotely powering down the antennas. UH personnel are aware that powering down the antennas will affect service and will be possible for rare and short periods of time. Caution or warning signs related to radiation safety will be posted on the locked roof access door and padlocked roof scuttle.

New Cingular of Hawaii LLC is licensed by the Federal Communications Commission (FCC) and complies with very strict emission guidelines. Cingular radio engineers have certified that the Effective Radiated Power (ERP) of the antennas proposed for Bilger Annex will be no more than 200 watts and within  $.56733\text{mW}/\text{cm}^2$  as per FCC guidelines for MPE at the lower rooftop level. See Certificate for Telecommunications Antenna, DPP form 0166L.6.13.88, and Certification of Categorical Exclusion for Antenna Installations, DPP form 56153 dated September 20, 2000) as well as a report prepared document for Cingular on MPE, SAR and Compliance Exhibit in the Appendix. In addition, analysis of the proposed panel antennas on the rooftop of Bilger Hall Annex do not emit Electromagnetic Energy (EME) levels above the 20% Controlled MPE Standard onto the rooftop (Pacific Wireless Communications EME Prediction Study for Cingular, March 2005).

Professor Vincent Z. Petersen, an expert in the field of radiation and radio transmission at the UHM Department of Physics, was asked by the Associated Students of the University of Hawaii (ASUH), to determine whether a higher intensity KTUH antenna on Saunders Hall would result in a radiation hazard to occupants of the building. Dr. Petersen prepared a paper entitled, "Statement Regarding Electromagnetic Radiation Levels Associated with Proposed KTUH FM Radio Transmission" in 1995. Calculations prepared by Dr. Petersen concluded that the FM radiation from the KTUH antenna with 3000 watt total radiated power, does not constitute a radiation hazard to occupants at the top floor (or any floor) of the Social Sciences Building. The maximum intensity on the rooftop was projected as 30 times lower than FCC-acceptable radiation levels of  $1.0\text{mW}/\text{cm}^2$ . Please refer to a copy of Dr. Petersen's paper in the Appendix.

Cingular's antenna would be radiating at a significantly lower level than the KTUH site.

**SOCIO-ECONOMIC.** Wireless technology provides high quality, safe and secure communication services to the community. To be effective, the necessary infrastructure must be built so that the convenience, mobility and connectivity of wireless phones are easily and readily available to all residents. In addition to improving public safety and providing new jobs, Cingular is helping build a communications infrastructure that will support economic growth and additional tax revenues. Efficient and reliable communication is an essential requirement for people in any community. This installation is a part of a cellular telecommunications system that will help fulfill this need.

### **1.5 SUMMARY OF ALTERNATIVES CONSIDERED**

Other buildings on campus that have existing facilities were considered but were ruled out either mainly because they are either not suitable for RF purposes or lack adequate infrastructure for additional antenna facilities, such as Saunders Building where there are existing antennas. Off campus, the buildings that met RF criteria were the YMCA on University Avenue and the Latter Day Saints building. The YMCA is a historic building and designing a site was problematic without adversely affecting the architectural character. The Latter Day Saints organization was not interested in pursuing Cingular's proposal to lease space for a telecommunications facility. The other buildings were not suitable because of low heights or vegetation clutter.

### **1.6 DETERMINATION**

Based upon the findings presented in the DEA and supporting technical analysis, the potential impacts of the installation and operation of the Cingular Wireless antenna facility have been sufficiently examined and discussed. After reviewing the significance criteria outlined in Section 11-200-12, EIS Rules, Contents of Environmental Assessments, it was determined that the action is not expected to result in significant adverse effects on the natural environment. The DEA was circulated for public review and comment for a period of 30 days between May 8, 2005 and June 7, 2005. As the approving agency the UH Facilities and Management Office reviewed written comments received at the end of the review period.

## **2.0 PROJECT DESCRIPTION**

### **2.1 PURPOSE AND NEED FOR THE PROJECT**

Cingular is seeking to improve and expand telecommunication service to its customers in University of Hawaii Manoa, Manoa Valley, and upper Moiliili areas. The purpose of the transmitter/antenna facility is to provide a large coverage zone over the University of Hawaii campus, Manoa, and particularly improve in-building service throughout the campus. Increasingly, PCS systems are being used to transmit data allowing callers to communicate with other telephones, computers, faxes and pagers around the world. This has greatly increased usage and demand for efficient coverage. PCS uses "cells" or

geographic areas that resemble a honeycomb pattern. Located within each cell area, an antenna and a base station comprised of switching equipment. The signal travels from the wireless phone to the base station and is relayed to the switching equipment. The call is then connected to the local phone network or to other wireless users on the system.

Wireless technology provides high quality, safe and secure communication services to the community. To be effective, the necessary infrastructure must be built so that the convenience, mobility and connectivity of wireless phones are easily and readily available to all residents. In addition to improving public safety and providing new jobs, Cingular is helping build a communications infrastructure that will support economic growth and additional tax revenues. Efficient and reliable communication is an essential requirement for people in any community. This installation is a part of a cellular telecommunications system that will help fulfill this need.

## **2.2 LOCATION, OWNERSHIP AND SURROUNDING LAND USES**

The site for the proposed Cingular antenna facility is located on the University of Hawaii, Manoa (UHM) campus in Honolulu on the island of Oahu. See Figure 1. The University of Hawaii is a multi-campus system of post-secondary educational institutions serving the State of Hawaii. The UHM is the system's major comprehensive graduate and research campus with more than 18,700 students and is commonly referred to as the Manoa Campus.

The University of Hawaii Long Range Development Plan (UHLRDP) divides the Manoa campus into four subareas: the Central campus, the Upper/Central campus, the Mauka campus, and the Makai campus. The Bilger building is centrally located within the Central campus on less than an acre of land. The building occupies a portion of Tax Map Key: 2-8-023:003 which is owned by the University of Hawaii. See Figure 2.

Bilger Addition which is part of the second phase expansion to the original Bilger Hall, is bordered by Correa Road and Kuykendall Hall and HIG Building on the south, the Physical Science Building to the east, the original Bilger Hall to the north, and the Art Building to the west. Bilger houses the Chemistry Department of the Manoa Campus.

## **2.3 EXISTING FACILITY**

The research and teaching laboratories of the Chemistry Department are located in Bilger Hall and Bilger Addition which is a 5-story concrete building. Other departmental resources include mass spectrometry services, a machine shop, electronics shop, and glassblowing services, in addition to personal computers and workstations available to members of the Chemistry Department. The entire fifth floor houses Verizon Hawaii telecommunications equipment for the UHM campus, and Bilger's air conditioning equipment. The rooftop of Bilger Addition houses air conditioning exhaust shafts, additional Verizon Hawaii telco facilities, and numerous vents associated with the Chemistry Department's laboratories and classroom needs.

#### **2.4 PROPOSED PROJECT**

The PCS base Bilger Addition transceiver station (BTS) will consist of 4 equipment cabinets, each 30.3 inches wide, 76.4 inches high, and 29.3 inches deep. All in all, the facility will occupy approximately 100 s.f. on the upper roof of the building. The installation, which will operate 24 hours a day, 7 days a week, is unmanned, and requires only monthly maintenance by the carrier's personnel.

Cingular panel antennas measure 79.9 inches long, 10.3 inches wide and 5.5 inches deep. Three of these antenna panels are to be mounted vertically on the north, south and west sections of the building. The tops of the panels will not extend above the top of Bilger Addition's structure on the south and west sections. The panels on the north section will be attached to the steel structure surrounding the exhaust towers. Equipment specifications are included as Exhibits in this application. See Exhibit A zoning drawings, photos and photo simulation.

Cingular must look carefully for sites where transmitters can overcome natural and man-made barriers, chiefly hills and buildings. In rural areas, transmitters can be located up to seven miles apart; in urban areas, they must be situated closer together. When there is increased usage in an area, it is necessary to add additional transmission sites to avoid dropped calls and decrease in call quality. Presently, Cingular's existing transmission facilities south of the proposed UH site is at 2884 S. King St., west of the proposed site at 1541 Dominis St. and north of the proposed site at 2733 East Manoa Road. The proposed UH facility will help to bridge the gap in coverage between these sites and improve the quality of service in the surrounding areas thereby meeting community demands for better coverage.

#### **2.5 PROJECT SCHEDULE, COSTS, REQUIRED PERMITS AND APPROVALS**

The construction of the project will take approximately 5 to 8 weeks. It is scheduled to start upon receipt of all zoning and building permit approvals. The estimated construction cost of the installation of the antenna facility is \$85,000.00.

A minor modification to the University's Plan Review Use (PRU) File No. 88/PRU-3 is required by the City and County of Honolulu. Also, a Building Permit from the City and County will be required for actual construction.

### **3.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT, ANTICIPATED IMPACTS AND MITIGATIVE MEASURES**

#### **3.1 CLIMATE**

##### **A. Existing Conditions**

Average daily minimum and maximum temperatures range from the low 70s (degrees Fahrenheit) to the low 90s, depending on the time of day and the season. Average daily temperatures vary by about 6.5 degrees between winter and summer seasons, and 15 to 20 degrees between day and night.

Precipitation is seasonal, with most rainfall occurring between the months of December through April. The adjusted median annual rainfall for this location is approximately 30 inches.

**B. Anticipated Impacts and Mitigative Measures**

The proposed project will have no effect on climatic conditions.

**3.2 TOPOGRAPHY**

**A. Existing Conditions**

The site is essentially flat. The elevation is approximately 70 feet above mean sea level (msl). The proposed project will not require alterations to existing grades as the project involves primarily installation of new fixtures to an existing structure without ground alterations or grading activities.

**B. Anticipated Impacts and Mitigative Measures**

The proposed project will have no effect on topographic conditions.

**3.3 SOILS**

**A. Existing Conditions**

According to the U.S. Soil Conservation Service, the soils on the property are comprised of Makiki Stony Clay Loam (MIA). This series consists of well-drained soil, and this particular soil type is found on slopes of 0 to 3 percent. Stones make up about 15 percent of this soil type by volume. The depth of the underlying bedrock or ash varies from 20 to 60 inches.

**B. Anticipated Impacts and Mitigative Measures**

The proposed project will have no effect on soil character as the site is entirely urban in character and the proposed improvements (which are concentrated on the upper rooftop of the Bilger Addition building) will not involve earthwork.

**3.4 SURFACE WATER AND DRAINAGE**

**A. Existing Conditions**

The proposed project is designated as Zone X, defined as "areas determined to be outside the 500-year flood plain" by the National Flood Insurance Program, Flood Insurance Rate Map (FIRM). The site is urban in character with concrete pavement and landscaping. The bulk of work on the proposed project will be concentrated on the upper roof of the existing building.

**B. Anticipated Impacts and Mitigative Measures**

The proposed project is not anticipated to have any impacts on existing drainage patterns or volumes because the site is already highly urban. Ground level activity will involve trucking in the panel antennas and associated facility hardware to the freight loading dock, with construction workers carrying the hardware to the rooftop via the freight elevator. Because installation hardware will be delivered to the rooftop in the same manner as office equipment, little to no impact is expected even during construction.

**3.5 FLORA AND FAUNA**

**A. Existing Conditions**

The vegetation and wildlife on the project site are entirely urban in character. No threatened or endangered species presently reside on the project site. Existing vegetation in the vicinity of the ground floor improvements include a Chinese banyan tree, plumeria trees, and kukui nut trees along the driveway on the ewa side of the building. Other vegetation includes grass and shrubs on the front of Bilger Addition which faces Correa Road. Some birds observed at the site include the Barred Dove, the Common English Sparrow, and the Mynah. Other animal species likely to occur are feral cats and mice.

**B. Anticipated Impacts and Mitigative Measures**

Neither construction activity nor operation of the proposed antenna facility will result in disturbance or removal of existing vegetation in the vicinity of the ground floor improvements. Wildlife species currently utilizing the site will most likely be displaced into adjacent areas during facility hardware installation.

**3.6 ARCHEOLOGICAL, HISTORICAL AND CULTURAL RESOURCES .**

**A. Existing Conditions**

There are no known archaeological or historic sites on the project site. Bilger Hall Addition is not on the National or State Historic Register.

Act 50, enacted by the Legislature of the State of Hawaii (2000) requires state agencies and other developers to assess the effect of proposed land use or shoreline developments on the “cultural practices of the community and State as part of the HRS Chapter 343 environmental review process (2001). Its purpose has broadened, “to promote and protect cultural beliefs, practices and resources of native Hawaiians and other ethnic groups, and it also amends the definition of ‘significant effect’ to be re-defined as “the sum of effects on the quality of the environment including actions that are...contrary to the State’s environmental policies...or adversely affect the economic welfare, social welfare, or cultural practices of the community and State” (H.B. 2895, Act 50, 2000).

As suggested in the “Guidelines for Assessing Cultural Impacts” (OEQC 1997), consultation with organizations familiar with cultural practices and features associated with the project area is permissible in the process of determining the project’s impacts on cultural practices in the area. According to the OEQC (1997), a “good faith effort” is required to investigate the potential cultural impact on a property. In the case of the present site, limited archival research was conducted, and letters of inquiry during the Pre-Assessment period were sent to the Oahu Office of Hawaiian Affairs and the State Historic Preservation Division. The responses obtained, included in Appendix A, provide a good faith level of effort.

The University of Hawaii at Manoa began in 1907 as a land-grant college of agriculture and mechanic arts called the College of Hawaii. The first classes were held at a temporary site in downtown Honolulu. In 1912, the school moved to its permanent site in Manoa Valley. Since 1912, the University of Hawaii Manoa campus has grown to encompass 304 acres as a major educational institution in urban Honolulu. The project area has not been used for traditional cultural purposes within the last 93 years.

#### **B. Anticipated Impacts and Mitigative Measures**

Because the proposed project does not require earthwork, no archaeological or historically significant resources are anticipated to be encountered during the construction and installation period. The State Historic Preservation Officer concluded that the project would have a “no historic properties affected” determination (January 25, 2005). Additionally, in a letter from the Office of Hawaiian Affairs dated May 31, 2005, the agency concluded that no changes will be made to the surrounding physical environment and visual impacts will be minimal. Please see letters in the Appendix. Based on historical research and in particular the response from OHA, it is reasonable to conclude that Hawaiian rights related to gathering, access or other customary activities will not be affected and there will be no direct adverse effect upon cultural practices or beliefs.

Therefore, it is reasonable to conclude that, pursuant to Act 50, the exercise of native Hawaiian rights, or any ethnic group, related to gathering, access or other customary activities will not be affected by the proposed antenna installation on the property. Because there were no activities identified, there are no adverse effects.

### 3.7 TRAFFIC AND PARKING

#### A. Existing Conditions

Students, faculty and employees access the project site in a variety of ways: ride-sharing, motorcycles, mopeds, bicycles, City bus service, shuttle service, private vehicles, and on foot. Parking on campus nearest the project site is allowed by permit only. There is an open area where trucks can park for short periods at a time, in the loading dock driveway fronting Correa Road between Bilger and the Art Building for maintenance personnel and deliveries.

#### B. Anticipated Impacts and Mitigative Measures

Short-term impacts on parking between Bilger Addition and the Art Building will probably occur as a result of construction related traffic entering and exiting the project site. Traffic generated by construction workers will occur during normal working hours and between 7:30 a.m. and 4:30 p.m. However, construction activity will have very little impact on traffic entering and leaving the campus because the number of project workers is expected to be small. Operation of construction/installation equipment and trucks may, on occasion, impede traffic in the immediate area of Bilger Addition during construction which is expected to occur for about a one-month period. During construction, the proposed project may inhibit the use of the open parking area in the driveway between Bilger and the Art Building on Correa Road.

No long-term impacts on traffic or parking are expected because the proposed project is an unmanned facility that will operate 24 hours a day 7 days a week, with a once-per-month visit by the carrier's maintenance technician.

While the proposed project will have minimal impact on the existing traffic and parking conditions on the Manoa campus, the contractor should be expected to do proactive planning to avoid any short-term delays or parking problems during construction. Such measures would include notifying the UHM facilities planning and management office, Bilger's Chemistry Department administrative staff, and the security office of its construction schedule well in advance prior to commencement of activities, and to have a worker monitoring traffic and parking in the immediate vicinity of Bilger Addition during the peak construction/installation period.

### 3.8 UTILITIES

**A. Water and Wastewater**

UHM Water and wastewater infrastructure systems are owned, operated and maintained by City and County of Honolulu agencies. Like the other buildings on the campus, Bilger Addition is served by these existing systems. The proposed project will not require water or wastewater system services because it is an unmanned facility. Therefore, this section does not include further discussion of water and wastewater systems.

**B. Electrical and Telephone Systems**

**a. Existing Conditions**

The source of electrical power for Bilger Addition is provided by Hawaiian Electric Company (HECO) while the electrical power distribution system for the entire campus including Bilger Addition is owned and managed by the University. Telephone service is provided by Verizon Hawaii. As stated in Section 2.3 Existing Conditions, the fifth floor of Bilger Addition is occupied by the UHM campus' Verizon Hawaii communications systems equipment and hardware. The proposed project will require electrical power and telephone service for its operations on the Bilger Addition rooftop.

**b. Anticipated Impacts and Mitigative Measures**

According to past demand charts from the UHM Facilities Planning and Management office, the capacity required for the antenna facility would be available from the existing electrical power and telecommunications systems.

**3.9 NOISE**

**A. Existing Conditions**

Noise levels in the vicinity of the project site's ground floor through the upper floors are affected by student voices and vehicular noise. The fifth floor of Bilger Addition is occupied by the campus' Information Technology Services (ITS) telecom offices and Verizon Hawaii's communications equipment for the UHM campus. Air conditioning equipment is also contained on the fifth floor. Mechanical and exhaust systems already operating on the building's rooftop contribute to the ambient noise level of the project area. Traffic noise from Correa Road and the parking area fronting Bilger Addition on Correa are generally not disruptive because vehicle speeds are low. Activities such as wood sawing, stage prop construction, and indoor building add to the ambient noise levels of the ground level of the project site. The Art Building's workshop is located at the ground level immediately west (ewa) of the driveway off Correa Road which services both Bilger Addition and the Art Building.

**B. Anticipated Impacts and Mitigative Measures**

The construction activities of the Cingular antenna facility will result in an increase in noise levels during the 5- to 8-week installation period. Construction related noise may affect faculty, staff, and ITS telecom offices, and laboratories. However, disruption to these activities is anticipated to be minor as the proposed project will not involve major activities such as earthmoving, pile driving or demolition work. At most, disruption may be limited to about 4 weeks. Construction related noise should not seriously affect the teaching and learning processes in the neighboring Kuykendall Hall, HIG Building or Physical Science Building, or Watanabe Hall, as these buildings are either substantially enclosed or air conditioned, or both. The only exception would be the Art Building's workshop which is partially opened to the driveway it shares with Bilger Addition. However, the anticipated increase in noise level will be limited to the contractor's allowed work hours of weekdays, 7:30 a.m. to 4:30 p.m.

There will be a brief two-to-three day period during which flatbed trucks will deliver the panel antennas, reels of coax cable, and the BTS equipment cabinets to the rooftop. All items are small enough to be carried via the elevator to the fifth floor, then via the stairwell to the rooftop. The trucks will likely be parked on the Correa Road (makai) side of the building to minimize disruption to normal daily activities. Equipment deliveries should be done on a weekend, if necessary, to minimize impact to the school and offices.

No long-term noise impacts are anticipated by the operations of the unmanned antenna facility. After installation of the panel antennas and equipment cabinets is complete, noise generated from the rooftop will be practically unchanged from the current situation due to the fact that the proposed project is not a noise-generating facility. No emergency generator or air conditioner is planned for the antenna facility, which is sometimes included in telecommunications facilities.

### 3.10 AIR QUALITY

#### A. Existing Conditions

Overall the air quality in the vicinity of the project area is generally good. There are no major sources of pollution near the project site. The site is upwind from all major transportation corridors. Present air quality in the project area is mostly affected by air pollutants from motor vehicles, with carbon monoxide being the most abundant of the air pollutants emitted.

#### B. Anticipated Impacts and Mitigative Measures

##### 1. Short-Term Impacts

There will be two types of short-term air quality impacts that will result from the proposed project: 1) fugitive dust generation and 2) on-site emissions from construction equipment. Fugitive dust emissions may arise from exterior site preparations and construction activity. On-site mobile and stationary construction equipment will emit some air pollutants in the form of engine exhausts. However, these impacts are anticipated to be minimal due to the short construction period and the small size and scale of the proposed project.

Contractor construction equipment will be required to comply with State and County standards with respect to maintaining equipment so that trucks and heavy equipment will be operating in good condition. Best management practices such as this will help minimize any on-site emissions of air pollutants during the brief construction period. Additionally, if the most disruptive phase of the installation involves a boom truck lifting supporting beams, coax cable and BTS equipment cabinets to the rooftop can be accomplished over a single weekend, air quality impacts would be substantially minimized.

## **2. Long-Term Impacts**

Long-term air quality impacts will remain at current levels from normal, day-to-day operations after the construction of the proposed project since, 1) the capacity of the parking lot next to Bilger will remain unchanged. As stated in Section 3.7 Traffic and Parking, this facility will be unmanned with a Cingular technician expected to visit the project site once a month to maintain the equipment and antennas.

## **3.11 VISUAL RESOURCES**

### **A. Existing Conditions**

The Koolau mountains, Waahila Ridge and Tantalus (Puu Ohia) serve as a backdrop for views in the vicinity of Bilger Addition. However, opportunities for experiencing these views are limited due to a number of multi-story structures surrounding the Bilger building complex. There are numerous exhaust vents, mechanical and air conditioning units, storage boxes and pipes, and telephone system facilities currently located on the roof of Bilger Addition. The lattice structure that surrounds the 4 steel exhaust vents protrudes an additional 20 feet above the building roof.

### **B. Anticipated Impacts and Mitigative Measures**

The addition of three 7' tall panel antennas to the sides of the steel structure that surrounds the exhaust shafts will alter the appearance of the current condition on the upper roof. However, the proposed project will not significantly impact the existing massing or already urban appearance of the rooftop condition. The installation of the proposed antennas will have limited impacts on ground level views as the view angle from the ground limits views

to the outer portion of the roof. Visual impacts will mainly occur to views from the upper floors of adjacent buildings looking toward Bilger Addition. However, these impacts are anticipated to be minimal because: (1) views are urban in character and are already impacted by the existing built environment; (2) the overall size of the antennas in comparison to the building as well as the lattice structure and exhaust shaft will result in changes to a portion of the building roof, but will not result in a significant alteration to the overall form.

**Mitigation Measures:** The planned placement of the three panel antennas at the lower sector of the steel lattice structure such that the tops of the antennas will be well below the upper limits of the existing structure. This strategy will help minimize any potential impact to the existing view. Additionally, the panel antennas will be painted to match the color of the rooftop structure to which they are being attached to blend the facilities. See photo simulation in photos section.

### 3.12 LAND USE DESIGNATIONS

#### A. Existing Conditions

The project site is located within the State's Urban land use district, as is all of the surrounding area. The project site is comprised of lands that are designated as R-5 single-family residential. There is a height limit of 25 feet for R-5 districts, but this limit is amended by City Council-approved Plan Review Use/Long Range Development Plan (PRU-LRDP) which sets different heights in different locations. Although no specific height is set for Bilger Addition, the general rule of thumb used in the UH LRDP is the relationship to surrounding facilities.

#### B. Anticipated Impacts and Mitigative Measures

No changes in land use classification or zoning are required to implement the proposed action.

### 3.13 SOCIO-ECONOMIC CHARACTERISTICS

#### A. Existing Conditions

The Manoa community surrounding the UH Manoa campus is an older, stable neighborhood of predominantly single family residences. Most homes were built in the first quarter of the twentieth century, and are still maintained in good condition. The neighborhood gets its name from the valley formed by two mountain ridges of the Koolau mountain chain. Waahila Ridge borders UHM on the east, and residential properties and private educational institutions border much of the rest of the perimeter. Manoa is generally regarded as a very desirable place to live, and hence, home values are high. Many University students, faculty and staff live in the surrounding community.

The Bilger Addition, built in 1972 as an extension to the original Bilger Hall, bordered by Correa Road and Kuykendall Hall on the south, the Physical Science Building to the east, the original Bilger Hall to the north, and the Art Building to the west. Bilger houses the Chemistry Department of the Manoa Campus.

The research and teaching laboratories of the Chemistry Department are located in Bilger Hall and Bilger Addition which is a 5-story concrete building. Other departmental resources include mass spectrometry services, a machine shop, electronics shop, and glassblowing services, in addition to personal computers and workstations available to members of the Chemistry Department. The ITS offices are located on the fifth floor of Bilger Addition.

#### **B. Potential Impacts and Mitigation Measures**

In the short-term, construction of the proposed facility will create a slight increase in employment opportunities for construction related jobs. In the long-term, the new telecommunications facility would be expected to not only improve the quality of Cingular Wireless on-air service but could increase the customer base. In addition to improving public safety and providing new jobs, Cingular is creating a communications infrastructure that will support economic growth and additional tax revenues. Efficient and reliable communication is an essential requirement for people in any community. This installation is a part of a cellular telecommunications system that will help fulfill this need.

#### **3.14 Police and Fire**

The proposed project is not expected to result in increased demand for police and fire protection. The antenna facility will not require employees except for one technician who would need to visit the Bilger Addition rooftop facility on a monthly basis to check equipment and maintain the hardware.

#### **3.15 EMF**

##### **A. Existing Conditions**

Electromagnetic fields exist wherever electricity is used. Bilger Addition has existing equipment and antennas that produce various levels of EMF at the present time.

In August 1996 the Federal Communication Commission (FCC) adopted new guidelines for evaluating the environmental effects of radiofrequency (RF) energy from transmitters on wireless communication sites. While there is no scientific evidence that RF emissions from these sites operating within established safety guidelines pose a health risk, fields close to antennas on transmitter sites must be understood and care must be taken to assure

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safe operation during maintenance. The guidelines adopted by the FCC provide considerable margins of protection from any known health risk.

The Telecommunications Act of 1996 mandated that the FCC implement regulations to protect public and workers from potentially hazardous exposure to non-ionizing radiation. The Act of Congress was driven by the National Environmental Policy Act (NEPA) of 1969, which requires agencies of the federal government to evaluate the effects of their actions on the quality of the human environment. In addition, recent studies indicated existing standards did not adequately protect workers and the general public from continuously increasing presence of Emissions associated with radio frequency transmissions.

In response to this mandate, the FCC passed law 96-326 in August 1996. The new guidelines implement more recent scientific studies of the biological effect of RF emissions and were recommended for adoption by the American National Standards Institute (ANSI), the Institute of Electrical and Electronic Engineers (IEEE), and the National Council on Radiation Protection and measurements (NCRP). The FCC received favorable support for these stricter standards from the Environmental Protection Agency (EPA), the Food and Drug Administration (FDA), and the Occupational Safety and Health Administration (OSHA), as well as from a number of nongovernmental groups and companies.

Exposure limits in the new guidelines adopted by the FCC are specified in terms of Maximum Permissible Exposure (MPE) as a function of frequency; MPEs are given in units of electric and magnetic field strength and power densities. For exposure to multiple frequencies, the fraction (or percentage) of the MPE produced by each frequency is determined and these fractions (or percentages) must not exceed unity (or 100 percent).

A prediction analysis was conducted by Pacific Wireless Communications (PWC) for Cingular Wireless in accordance with FCC 96-326 in March 2005 in order to determine the Maximum Permissible Exposure levels of the proposed panel antennas. The complete report is included in the Appendix.

The antenna facility is a pulsed transmission because it is only active when transmitting. Most antenna facilities are not continuously transmitting, which means that they operate at a much lower power output. Given Cingular's proposed 850 GSM/1900 GSM panel antennas on the rooftop of Bilger Addition, the maximum predicted MPE result is 18.2%, and the minimum predicted MPE result is 0.0%. Therefore the cellular panel antennas at the proposed location do not emit EME levels above the 20% Controlled MPE Standard onto the rooftop, according to the prediction analysis. Note: "Hot Zones" are any areas

greater than 20% of the Controlled Standard; i.e., deeming the area an Occupational/Controlled Environment.<sup>1</sup>

**B. Anticipated Impacts and Mitigative Measures**

The proposed project will result in a minor increase of electromagnetic radiation levels of 997 watts maximum if all antennas were transmitting simultaneously. Yet, this increased maximum level of 997 watts is significantly lower than FCC-acceptable level of 1.0mW/cm<sup>2</sup>. Thus, the project will not result in increased radiation hazard to building occupants of Bilger Addition. Professor Vincent Z. Petersen, an expert in the field of radiation and radio transmission at the UHM Department of Physics, was asked by the Associated Students of the University of Hawaii (ASUH), to determine whether a higher intensity KTUH antenna on Saunders Hall would result in a radiation hazard to occupants of the building. Dr. Petersen prepared a paper entitled, "Statement Regarding Electromagnetic Radiation Levels Associated with Proposed KTUH FM Radio Transmission" in 1995. Calculations prepared by Dr. Petersen concluded that the FM radiation from the KTUH 4-bay antenna with 3000 watt total radiated power, does not constitute a radiation hazard to occupants at the top floor (or any floor) of the Social Sciences Building. The maximum intensity on the rooftop was projected as 30 times lower than FCC-acceptable radiation levels of 1.0 mW/cm<sup>2</sup>. Please refer to a copy of Dr. Petersen's paper in the Appendix. Additionally, the Cingular engineering group has certified that the Effective Radiated Power (ERP) of the antennas proposed for Bilger Addition will be 997 watts, which is lower than FCC-acceptable levels of 1.0 mW/cm<sup>2</sup>. See Certificate for Telecommunications Antenna, DPP form 0166L.6.13.88, and Certification of Categorical Exclusion for Antenna Installations, DPP form 56153 dated September 2000) in the Appendix.

Additionally, the prediction analysis conducted by PWC in March 2005 concludes that the cellular panel antennas at the proposed rooftop locations at Bilger Addition would not emit EME levels above the 20% Controlled MPE Standard onto the rooftop. Upon completion of installation of the facility, Cingular will conduct an EME survey of the actual site to supplement the predicted analysis. Therefore, it is preliminarily concluded that the Cingular rooftop installation would not result in a potential exposure risk to workers.

Cingular RF engineers have certified that the Effective Radiated Power (ERP) of the antennas proposed for Bilger Hall Addition will be 997 watts, which is lower than FCC-

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<sup>1</sup> Occupational/Controlled Environment limits apply to individuals who should know that there is a potential for exposure as a requirement of employment, or as the incidental result of transient passage through areas that may exceed exposure levels beyond the General Population Uncontrolled environment MPEs. For example, a maintenance technician who performs work on transmitters should be aware—due to training and the nature of his work – that transmitters produce RF energy. Because of the knowledge and understanding that exposure is possible, this individual would be evaluated against the Occupational/Controlled environment limits.

acceptable levels of 1.0 mW/cm<sup>2</sup>. See Certificate for Telecommunications Antenna, DPP form 0166L.6.13.88, and Certification of Categorical Exclusion for Antenna Installations, DPP form 56153 dated 4/11/05) Exhibit in the Appendix.

**Safety Statement:** RF Emissions Prediction Study Conclusions by PWC provides a summary of a report completed for the project. The complete report can be found in the Appendix.

The antenna exclusion distance is 21.2 feet, and this contour will be inaccessible to the public due to the height of the antenna installation. The proposed facility will conform to all applicable State and FCC regulations.

Only campus maintenance, contractors and Cingular personnel will have access to the rooftop. The Cingular Wireless engineering department will provide contractors and campus maintenance personnel with information (upon request) on FCC RF compliance rules as it applies to worker safety. These personnel will be aware of the facility and knowledgeable of the potential for exposure and can exercise control over their exposure. In the event that UH workers will be in close proximity to the antennas for prolonged periods, UH personnel will make prior arrangements with Cingular Wireless. Cingular will work with the UH personnel to mitigate any concerns including education of RF safety and use of RF monitor devices. If it is determined that work will be unsafe, Cingular will work with UH on reducing the power level of the antennas possibly remotely powering down the antennas. UH personnel are aware that powering down the antennas will affect service and will be possible for rare and short periods of time.

#### **4.0 UNAVOIDABLE ADVERSE IMPACTS**

The construction of the antenna facility will have only minimal adverse environmental impacts which cannot be fully mitigated by the measures planned to be implemented. The following list includes those short-term and long-term impacts that are expected to be unavoidable.

1. Negligible releases of air contaminants will occur from construction equipment. Emissions of fugitive dust may occur during dry periods as a result of construction operations despite efforts to control dust per State Department of Health (DOH) regulations.
2. In the short-term, the visual character of the area will be affected by construction activities and by the presence and operation of construction equipment.

3. Short-term increases in noise levels will result from construction activities. Noise and construction may cause minor disruptions to floors directly below the proposed activity.

## 5.0 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The construction and operation of the Cingular antenna facility will involve the irretrievable commitment of certain physical and fiscal resources. The major resource commitment will be the loss of utility infrastructure space on the upper roof of Bilger Addition for the development of the project. Financial resources, construction materials, manpower, and energy will be expended by Cingular Wireless to construct and operate the facility.

The impact of utilizing these resources should, however, be weighed against the benefits of providing upgraded, expanded, and improved Cingular Wireless service throughout the UH Manoa campus.

## 6.0 ALTERNATIVES

Alternative sites that were considered are discussed in Section 1.6 of this DEA.

The no-action alternative would result in Cingular not proceeding with necessary physical upgrades of its existing service level for the Manoa area. This alternative would result in no change to the present environmental characteristics of the project site; to employment, to government expenditures, to infrastructure services, and to traffic conditions. However, the existing capacity is diminishing and continued operations without improvements will make it difficult for Cingular to maintain expected quality service to its present customers on campus. A potential scenario that may result from the no-action alternative is: For any customer who is in need of emergency assistance or able to respond to an emergency situation, lack of reliable cell phone service at a critical moment could mean a lost opportunity to save a life.

## 7.0 RELATIONSHIP TO EXISTING PLANS, POLICIES

This section includes a discussion of the relationship of the project to the following policies and plans: Hawaii State Plan, State Land Use Law, University of Hawaii, Manoa Campus Long Range Development Plan (LRDP), the County Development Plan, and the Land Use Ordinance.

### 7.1 The Hawaii State Plan

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This section includes an assessment of the proposed facility to the applicable goals, objectives, and policies of the Hawaii State Plan, Chapter 226, HRS.

Section 6(a): Objectives and policies for the economy-general:

Section 6(b): Applicable policies:

*“(9): Foster greater cooperation and coordination between the public and private sectors in developing Hawaii’s employment and economic growth opportunities.”*

Discussion: By working out an amenable leasing arrangement with Cingular, both Cingular and the UH Manoa administration are an example of public and private sector partnerships which are beneficial to the State’s economic growth and diversification. The facility will be under lease from the State of Hawaii and will provide a source of revenue to the State.

Section 18(a): Objectives and policies for facility systems—  
energy/telecommunications:

Section 18(b): Applicable policies:

Section 18(d): Applicable telecommunication objectives:

*“(2): Encourage public and private sector efforts to develop means for adequate, ongoing telecommunication planning.”*

Discussion: By working with Cingular, the UH Manoa offices of Facilities Planning and Management and Procurement Real Estate and Risk Management are actively participating in the planning process to help achieve the State’s objectives of gaining dependable, efficient, and economical statewide telecommunication systems capable of supporting the needs of residents and businesses. By facilitating Cingular’s plans to expand and improve its telecommunication system, this action should spur this carrier’s competitors to either improve or expand their services in this area as well.

## 7.2 STATE LAND USE LAW

The proposed project is presently classified within the State Land Use Urban District. Public and private utility system facilities and research institutions are compatible in the Urban District. Thus, the project is consistent with the State Land Use District classification.

## 7.3 UNIVERSITY OF HAWAII, MANOA CAMPUS LONG RANGE DEVELOPMENT PLAN (LRDP)

In 1987, the University of Hawaii Board of Regents adopted the LRDP for the University of Hawaii Manoa Campus, to guide campus development through the year 2010. The

Bilger Hall complex houses the Chemistry Department, and is a part of the Science and Research component of the Central Campus layout. Bilger Addition was built in 1972 and entry improvements to the main Bilger Hall are a part of the LRDP's Bilger Addition's second phase of development, according to the LRDP.

Because the upper roof level of Bilger Addition houses numerous mechanical, telecommunications and electrical systems exhaust shafts, pipes, and other equipment appurtenant to the Chemistry Department and laboratories, the proposed use is similar and compatible with current uses. The proposed project is consistent with the University of Hawaii, Manoa Campus LRDP.

#### 7.4 CITY AND COUNTY OF HONOLULU GENERAL PLAN

The 1992 edition of the General Plan is a statement of the long-range social, economic, environmental, and design objectives for the general welfare and prosperity of Oahu's citizens. These objectives contain both statements of desirable conditions to be sought over the long run and statements of desirable conditions which can be achieved within an approximate 20-year time horizon. The General Plan is also a statement of broad policies which facilitate the attainment of the objectives of the Plan. The following discussion provides an assessment of how the proposed project implements the objectives and policies for Education in the General Plan.

##### **Objective C To make Honolulu the center of higher education in the Pacific.**

**Discussion:** The proposed project is located at the Manoa campus of the University of Hawaii thereby facilitating the objective to focus on Honolulu as the center of higher education.

##### **Policy 1**

Encourage continuing improvement in the quality of higher education in Hawaii.

**Discussion:** The project proposes to improve the quality of higher education locally by helping to upgrade wireless communication systems on the Manoa campus.

##### **Policy 2**

Encourage the development of diverse opportunities in higher education.

**Discussion:** By enabling the expansion of the University campus' wireless telecommunications system, the project proposes to strengthen the physical infrastructure that can facilitate diversification and expansion of opportunities to faculty, students and administration.

The proposed facility is appropriately located on the Bilger Hall Annex rooftop because the hardware is proposed to be non-intrusive on existing views while expanding and improving the quality of high tech communications services to Cingular customers. Equally important to note, antenna facilities such as the proposed project are clean and nonpolluting state-of-the-art installations.

#### 7.5 THE CITY AND COUNTY OF HONOLULU PRIMARY URBAN CENTER DEVELOPMENT PLAN

The City and County of Honolulu Primary Urban Center Development Plan (PUC DP), approved on June 21, 2004 (Ordinance No. 04-14), presents a vision for the PUC's future development consisting of policies, guidelines and conceptual schemes that will serve as a policy guide for more detailed zoning maps and regulations and for public and private sector investment decisions. The PUC-East Land Use Map designates the University of Hawaii parcel as Institutional. Since the proposed project is accessory to the university's infrastructure as a technical, non-intrusive improvement to the existing telecommunication system, it would be consistent with the existing Institutional land use designation.

#### 7.6 LAND USE ORDINANCE – ZONING

The existing zoning is R-5 Residential. University uses are permitted in the R-5 Residential District with an approved Plan Review Use (PRU). An antenna installation such as this is defined by the Land Use Ordinance (LUO) as a Utility Installation Type B which is permitted in the R-5 residential district with an approved conditional use permit-minor. However, the University of Hawaii at Manoa is operating under a Plan Review Use (PRU) File No. 88/PRU-3 (City and County of Honolulu Department of Planning and Permitting (DPP)). In a letter dated January 14, 2005, DPP indicated that if the antenna facility is necessary to improve telecommunication service at the University of Hawaii Manoa, then the proposal can be reviewed as a minor modification to the Plan Review Use. Section 7.7 Plan Review Use below contains a detailed discussion. Development standards related to permitted uses and the maximum height of structures for the university are regulated under the PRU. A building permit is also required.

#### 7.7 PLAN REVIEW USE

Plan Review Use (PRU) approval is required for a number of public and private uses including colleges and universities. In December 1989, a PRU was approved for the Five-Year master plan 1988-1993 University of Hawaii, Manoa Campus. As a result, the University of Hawaii at Manoa is operating under a Plan Review Use File No. 88/PRU-3.

On December 13, 1989, a PRU File No. 88/PRU-3 (Resolution No. 89-411, CD-2) was approved by the Honolulu City Council to expand the University of Hawaii Manoa

campus. A major modification to the PRU was approved on March 10, 1993 (Resolution No. 92-286) to increase the seating capacity of the Physical Education Facilities Phase II and to redesignate the facility as the Special Events Arena (DPP, December 2004). The proposed Cingular antenna facility necessary to improve wireless communication service for the university campus. The proposed project is consistent with the uses approved in the PRU, and therefore can be reviewed as a minor modification to the PRU.

## **8.0 FINDINGS AND REASONS FOR SUPPORTING THE DETERMINATION**

Based upon the findings presented in the DEA and supporting technical analysis, the potential impacts of the installation and operation of the Cingular antenna facility have been sufficiently examined and discussed. After reviewing the significance criteria outlined in Section 11-200-12, EIS Rules, Contents of Environmental Assessments, it was determined that the action is not expected to result in significant adverse effects on the natural environment. The DEA was circulated for public review and comment for a period of 30 days between May 8, 2005 and June 7, 2005. As the approving agency the UH Facilities and Management Office reviewed written comments received at the end of the review period.

### **1. Involves an irrevocable commitment to loss or destruction of any natural or cultural resources.**

Development of the proposed project is not expected to impact natural or cultural resources, as the project site is located in a developed, urbanized area and the rooftop is already populated with similar mechanical and electrical facility hardware. Consultation with SHPD indicates that no known cultural resources were identified at the project site. Correspondence with SHPD is available in the Appendix for reference.

### **2. Curtails the range of beneficial uses of the environment.**

The proposed project will be compatible with the existing uses of the surrounding area and will have minimal disturbance to the UHM campus and surrounding community as it is located on the Bilger Addition upper roof with other similar mechanical and electrical facilities.

### **3. Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in chapter 344 HRS.**

The proposed project is consistent with the State's long-term environmental policies as well as the State's Land Use Plan because the proposed location is an urban, developed part of campus designated for scientific and research activity.

### **4. Substantially affects the economic, social welfare, and cultural practices of the community or State.**

Short-term construction related activities may result in negative impacts, as well as positive economic impact through increased work for a selected contractor and design engineers during implementation of the project. Long-term adverse effects are not foreseeable, as the economic, social welfare, or cultural practices of the community should not be affected.

**5. Substantially affects public health.**

Short-term construction related activities will not impact public health as they are temporary in nature. In addition, construction activities will be regulated by State and County standards to minimize noise, dust, and exhaust emissions.

**6. Involves substantial secondary impacts, such as population changes or effects on public facilities.**

The proposed project does not directly result in secondary impacts, and will only increase capacity of the communications systems to serve Oahu's citizens in conformance with the County General Plan.

**7. Involves a substantial degradation of environmental quality.**

The proposed project is located on a rooftop of a 5-story concrete building, therefore the environmental quality of the surrounding campus will be essentially unaffected.

**8. Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions.**

The proposed project does not have any cumulative effect upon the environment, and no larger commitments are required for the proposed antenna facility.

**9. Substantially affects a rare, threatened, or endangered species, or its habitat.**

There are no known rare, endangered, or threatened species or habitat associated with the project site. The area has been urbanized and the ground on which Bilger Addition is located has undergone a relatively sufficient level of disturbance over the years with the development of the original Bilger Hall and its subsequent additions.

**10. Detrimentially affects air or water quality or ambient noise levels.**

Negative effects on environmental quality will be short-term due to construction and be limited to the areas adjacent to the project. These short-term impacts will be mitigated to meet project plans approvals and specification regulations.

**11. Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.**

The project site is not located in an environmentally sensitive area that would be vulnerable to flooding because it is outside the 500-year flood plain. It is far removed from the tsunami zone, coast, erosion-prone area, geologically hazardous land, estuary,

fresh water or coastal waters. Therefore, the project will not affect environmentally sensitive areas.

**12. Substantially affects scenic vistas and view planes identified in county or states plans or studies.**

The three 7-foot tall panel antennas are being installed at a lower portion of the building's rooftop exhaust shaft structure which is more than 29 feet tall in order to avoid causing any disruption to existing vistas and view planes. The panel antennas are also being painted to match the color of the steel structure. Therefore, the proposed project is not expected to having an adverse affect on existing views on campus or surrounding areas.

**13. Requires substantial energy consumption.**

Energy consumption will consist of short-term construction activities, in which diesel or gas powered equipment will be used. Once completed, the antenna facility will require electrical power and telephone service at levels that UHM infrastructure and utilities systems have capacity enough to supply. Thus, the proposed project would not be a burden on the existing facilities in terms of energy requirements.

***New Cingular Wireless of Hawaii, LLC.  
UHM Bilger Environmental Assessment***

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**9.1 CONSULTED PARTIES**

Listed below are the agencies and organizations consulted in the preparation of the DEA. The same parties were consulted during the DEA public review period which was from May 8 to June 7, 2005. Consulted parties that submitted written responses during the Pre-assessment and the DEA public review periods are identified below by a check (√) mark below.

<u>Consulted Party</u>	<u>RESPONDED</u>	
	<u>Pre-Assessment</u>	<u>DEA</u>
<u>Federal Government:</u>		
1. U.S. Army Corps of Engineers POD Regulatory Branch	√	
2. U.S. Department of Interior U.S. Fish & Wildlife Service	√	
3. Environmental Protection Agency—PICO		
4. Dir. of Fac. Engineer U.S. Army Support Command HI		
<u>State of Hawaii:</u>		
5. Department of Education	√	√
6. State Department of Land and Natural Resources Historic Preservation Division	√	
7. State Department of Land and Natural Resources Land Div.		
8. Office of Hawaiian Affairs		√
9. Office of Planning		
10. UHM Environmental Center		
11. University of Hawaii Manoa Fac. Plng and Mgt. Office		√
12. State Department of Health OEQC		
13. State Department of Transportation Highways Div.	√	√
<u>City and County of Honolulu:</u>		
14. Board of Water Supply		√
15. Department of Parks and Recreation	√	
16. Department of Planning and Permitting	√	√
17. Department of Environmental Services		
18. Department of Transportation Services	√	√
19. Fire Department	√	√
20. Police Department	√	√
<u>Utilities:</u>		
21. Verizon Hawaii Inc.	√	
22. Hawaiian Electric Company		
23. Oceanic Time Warner Cable of Hawaii		
24. The Gas Company		

***New Cingular Wireless of Hawaii, LLC.  
UHM Bilger Environmental Assessment***

---

**Other Organizations:**

25. Nature Conservancy
26. Sierra Club
27. Manoa Neighborhood Board No. 7
28. Ann Kobayashi, Councilmember, District 5

**Manoa Neighborhood Board No. 7 Presentation.** A project presentation was made at the Manoa Neighborhood Board's April 7, 2004 meeting. See regular meeting agenda of April 7, 2004, and regular meeting minutes in the Appendix. At the April 7<sup>th</sup> meeting, the board vote indicated that it had no objection to the proposed installation on the Bilger Addition rooftop.

**9.2 REFERENCES**

- Broadcast Communication Authority. May 18, 1995. *Environmental Assessment, Proposed KTUH College Radio Power Increase from 100 Watts to 3000 Watts Transmitting Power Porteus Hall, University of Hawaii at Manoa.* Honolulu, Hawaii.
- Environmental Planning Solutions, LLC. October 2004. *Final Environmental Assessment for Nextel Partners, Inc. (NPI) Telecommunications Facility on the University of Hawaii at Manoa Campus Hamilton Library Annex Rooftop, TMK No. (1) 2-8-023:003 (por).* Honolulu, Hawaii.
- FCC Office of Engineering and Technology. August 1997. *Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Frequency. OET Bulletin 65.* Washington, D.C.
- Group 70 International, Inc. December 1987. *University of Hawaii Long Range Development Plan Appendix.* Honolulu, Hawaii.
- Group 70 International, Inc. April 1994. *Long Range Development Plan University of Hawaii, Manoa Campus 1994 Update.* Honolulu, Hawaii.
- Group 70 International, Inc. June 1994. *Weather Forecast Office, University of Hawaii at Manoa. Environmental Assessment.*
- McPeak Architects and RC Engineering Structural Engineering, Honolulu March 2004. *Preliminary Zoning Drawings. UH Manoa Campus Bilger Hall.* Honolulu, Hawaii.
- Petersen, Professor Vincent Z. Department of Physics, UHM. May 1995. *Statement Regarding Electromagnetic Radiation Levels Associated with Proposed KTUH FM Radio Transmission.* Honolulu, Hawaii.

***New Cingular Wireless of Hawaii, LLC.  
UHM Bilger Environmental Assessment***

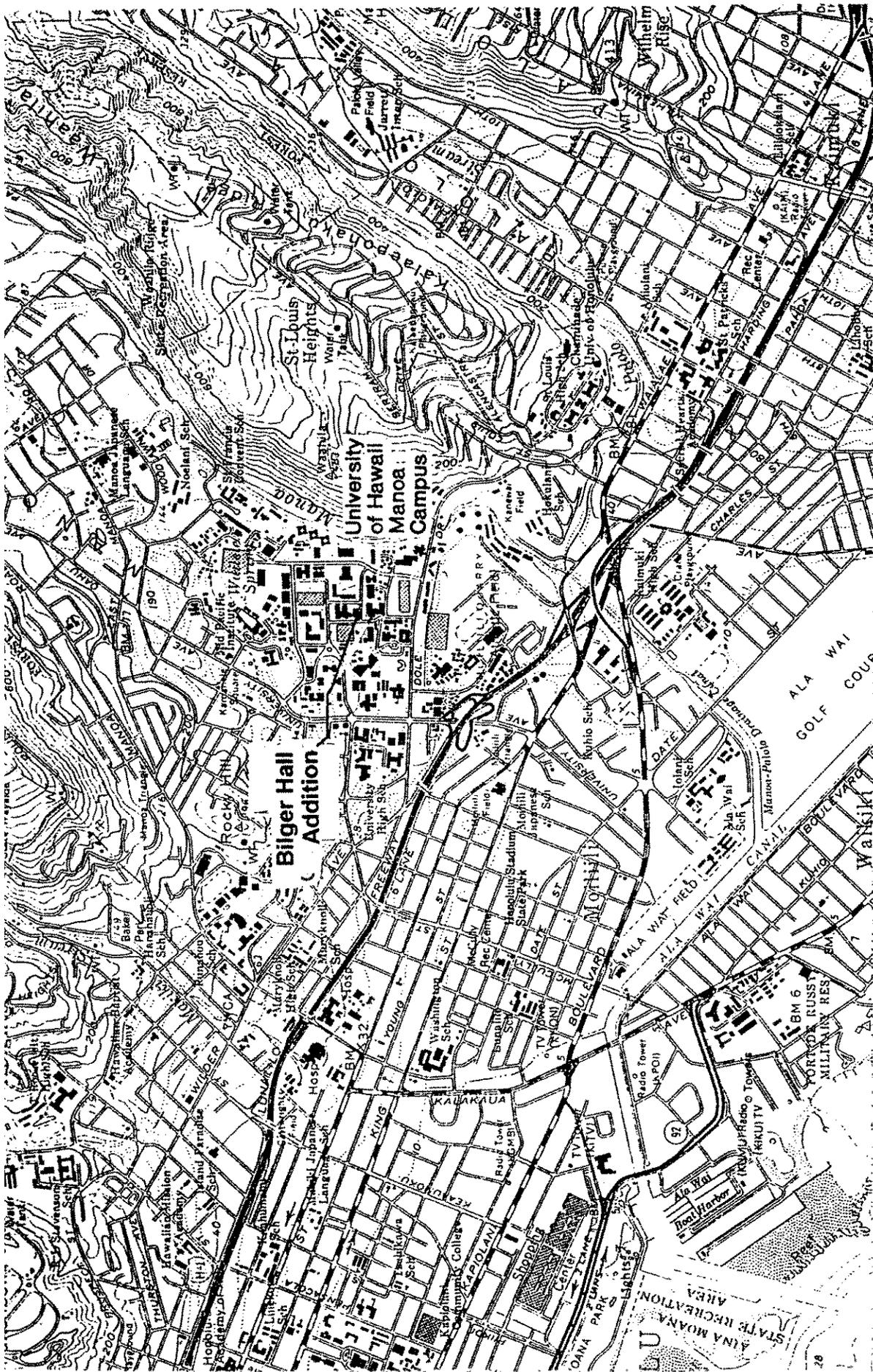
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U.S. Department of Agriculture. August 1972. *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai and Lanai; State of Hawaii*; Soil Conservation Service, in cooperation with the University of Hawaii Agricultural Experiment Station. Washington, D.C.

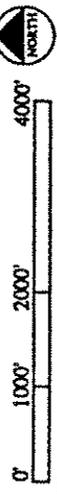








Source: USGS, 1983

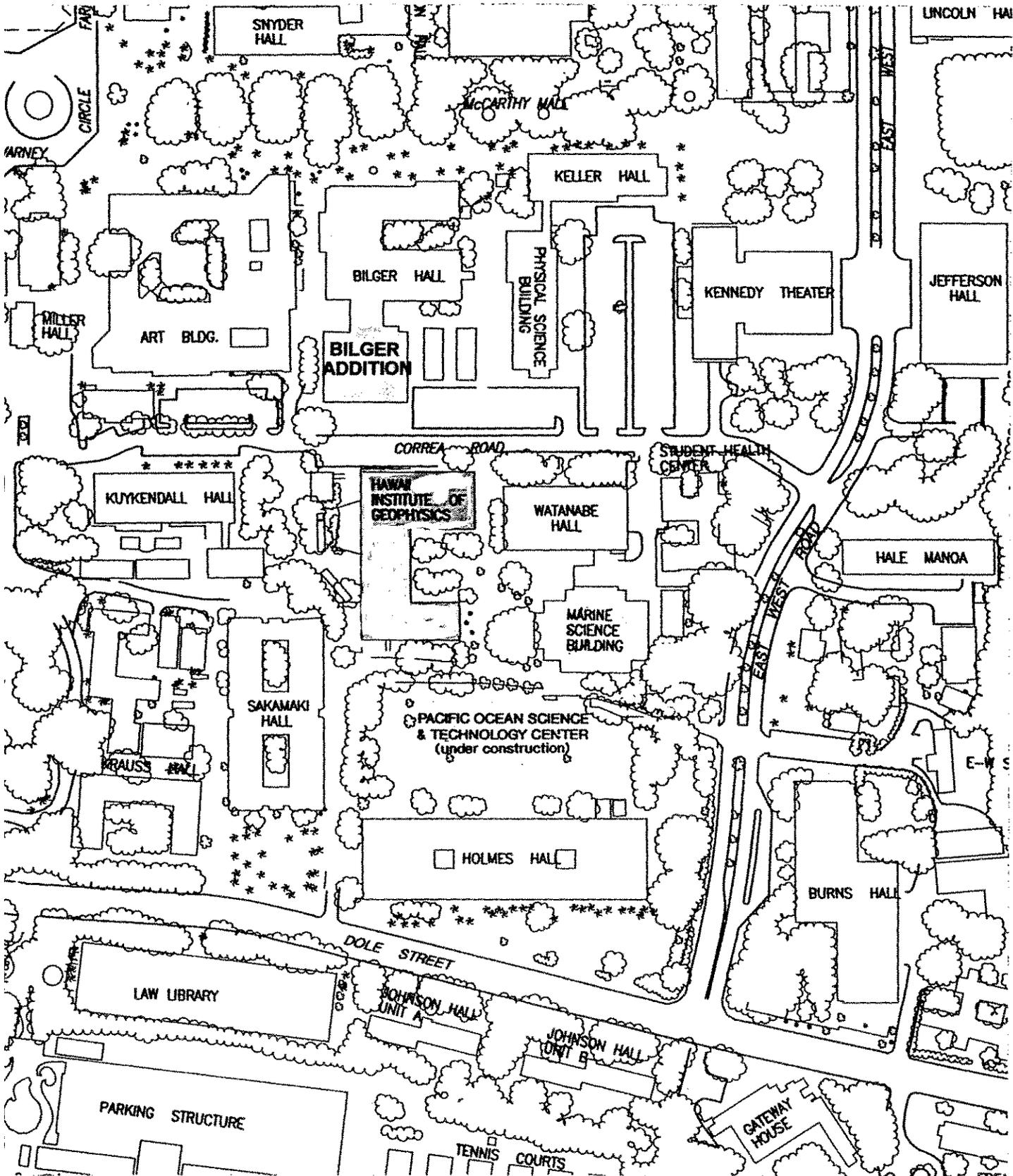


LOCATION MAP

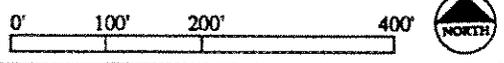
NEW CINGULAR WIRELESS BILGER, UNIVERSITY OF HAWAII AT MANOA ENVIRONMENTAL ASSESSMENT

FIGURE 1





Source: R. M. Towill



**BUILDING LOCATION MAP**

**AT&T WIRELESS BILGER, UNIVERSITY OF HAWAII AT MANOA**

**FIGURE 2**



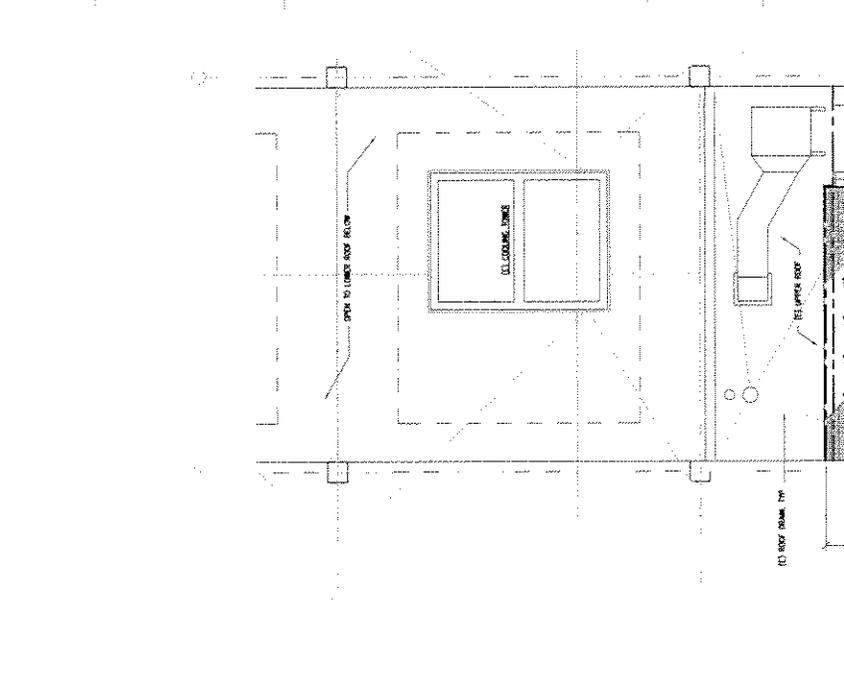
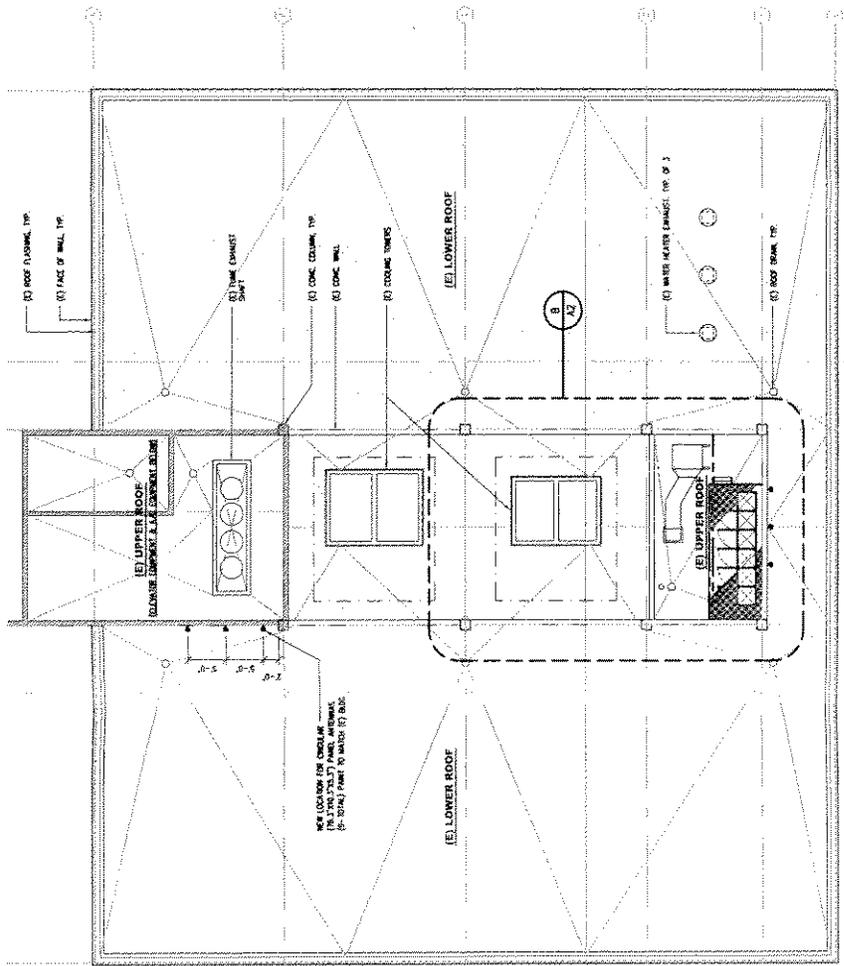




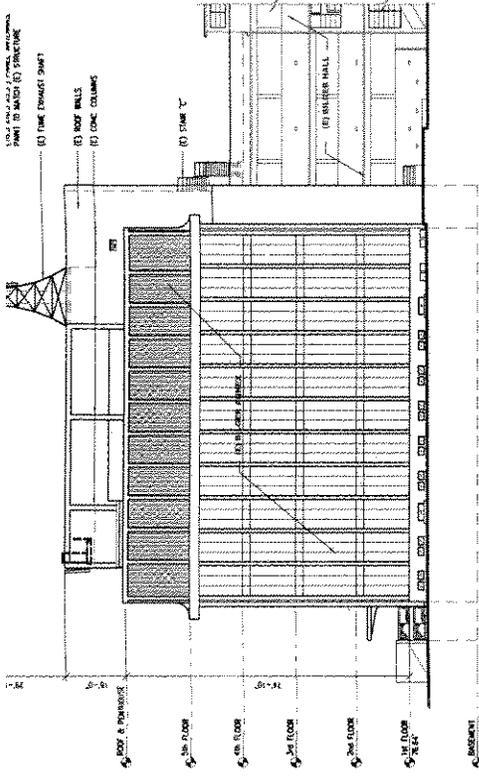




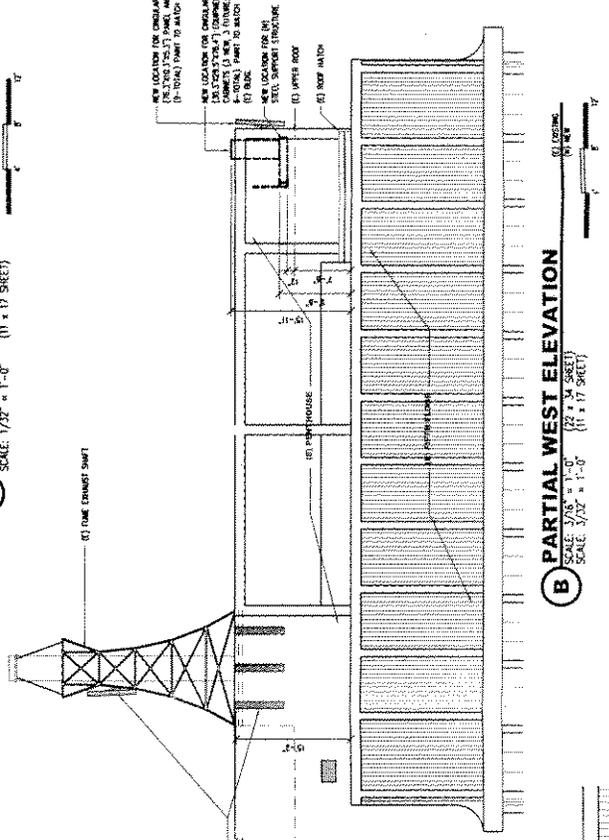
<b>PEAK ARCHITECTS</b> 1000 KALANOAUOUE AVENUE, SUITE 1100 HONOLULU, HAWAII 96813 (808) 531-1100	CONSULTANT	DRAWN BY: _____ DATE: _____ JOB NO.: _____	LICENSE NO.: _____ LICENSEE: _____ LICENSED PROFESSIONAL ARCHITECT STATE OF HAWAII, LICENSE NO. _____ REGISTERED PROFESSIONAL ARCHITECT STATE OF CALIFORNIA, LICENSE NO. _____	<b>cingular</b> NEW TELECOM FACILITY <b>UH MANOA CAMPUS</b> <b>(BILGER HALL -</b> <b>CHEMISTRY FAC. BLDG.)</b> SITE ID #: HNL110123 2444 DOLE STREET HONOLULU, HAWAII 96822 TWM: 2-8-023-003	SHEET TITLE <b>ROOF PLAN,</b> <b>ENLARGED ROOF PLAN</b>	CURRENT ISSUE DATESHIPPED FOR: <b>4/19/05 -- ZONING</b>	REV. NO. _____ DESCRIPTION _____ _____ _____ _____	SHEET NUMBER: <b>A2</b>	3	4
									OF	SHEETS



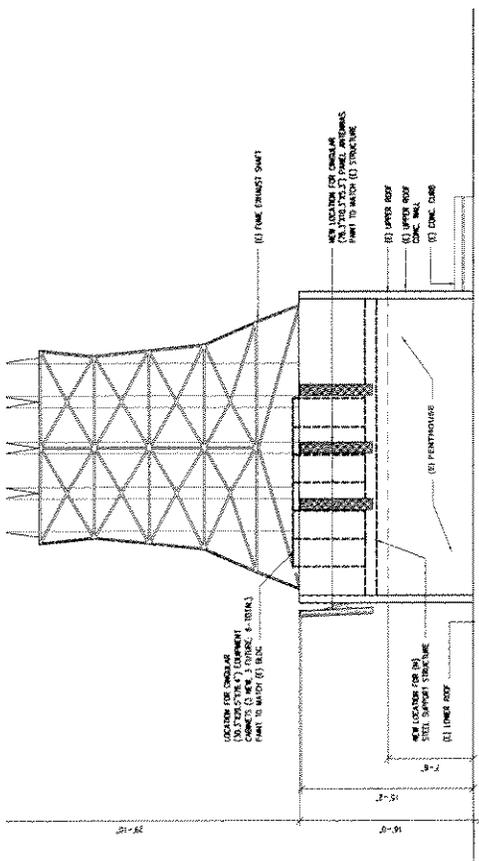




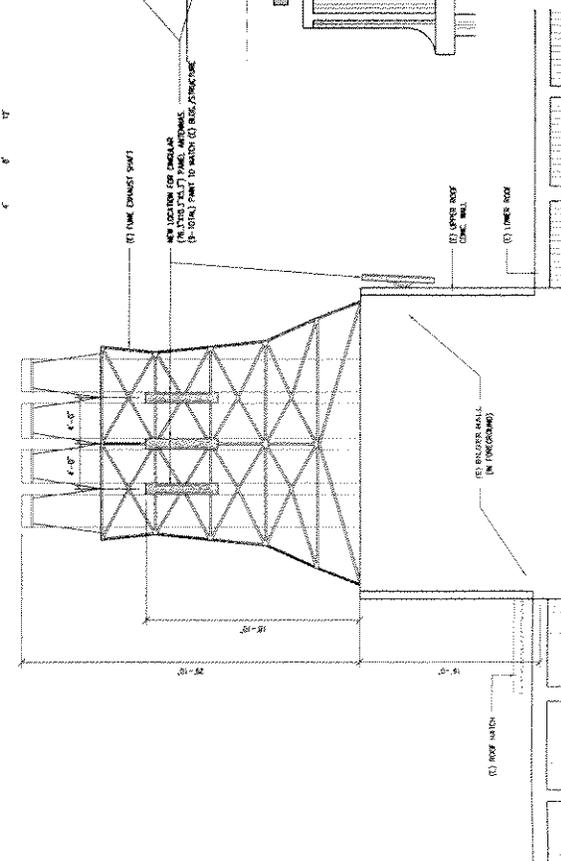
**A EAST ELEVATION**  
 SCALE: 3/16" = 1'-0"  
 SCALE: 1/32" = 1'-0" (1 x 10 SHEET)  
 (12 x 34 SHEET)



**B PARTIAL WEST ELEVATION**  
 SCALE: 3/16" = 1'-0"  
 SCALE: 1/32" = 1'-0" (1 x 17 SHEET)  
 (12 x 34 SHEET)



**C PARTIAL SOUTH ELEVATION**  
 SCALE: 3/16" = 1'-0"  
 SCALE: 1/32" = 1'-0" (1 x 17 SHEET)  
 (12 x 34 SHEET)



**D PARTIAL NORTH ELEVATION**  
 SCALE: 3/16" = 1'-0"  
 SCALE: 1/32" = 1'-0" (1 x 17 SHEET)  
 (12 x 34 SHEET)

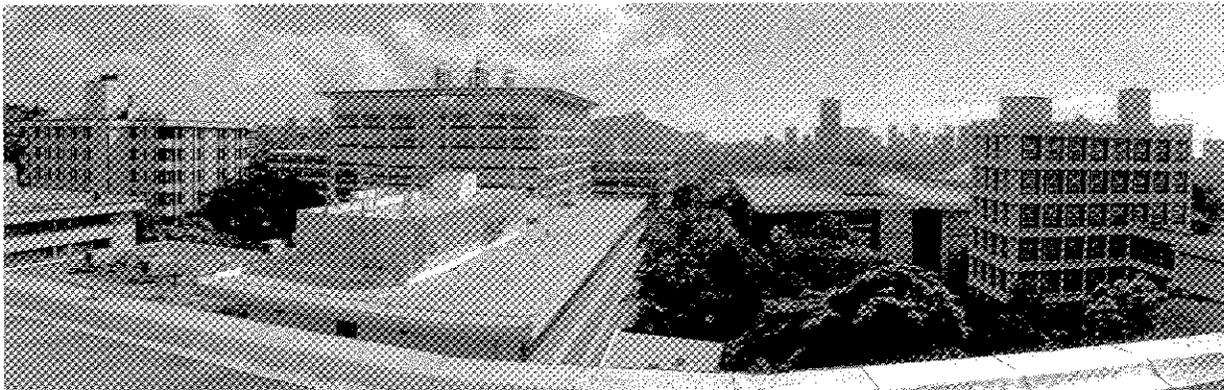


# **PHOTOGRAPHS**

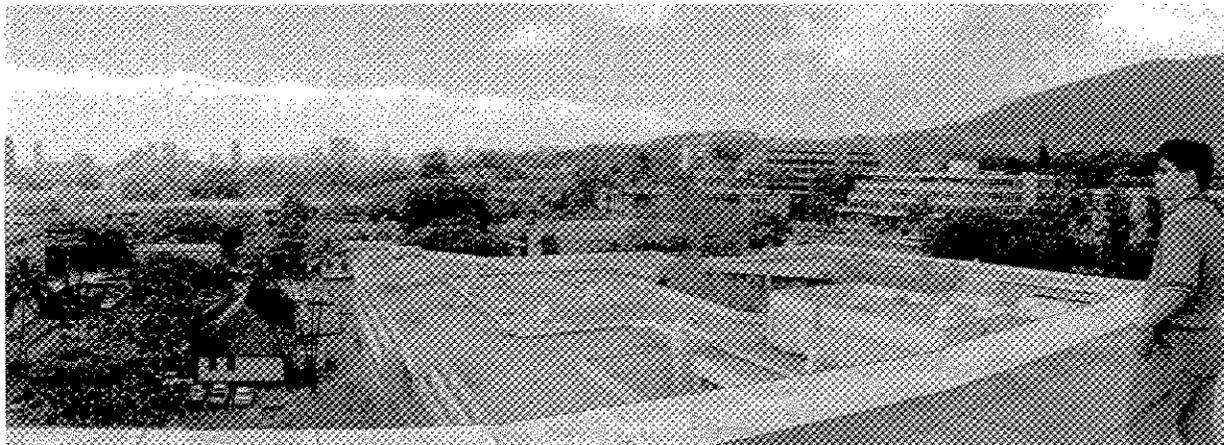




Photo simulation: View of north-facing wall of Bilger Hall Addition. Panel antennas on lower half of existing steel structure on upper roof, and flush mounted on wall of lower roof.



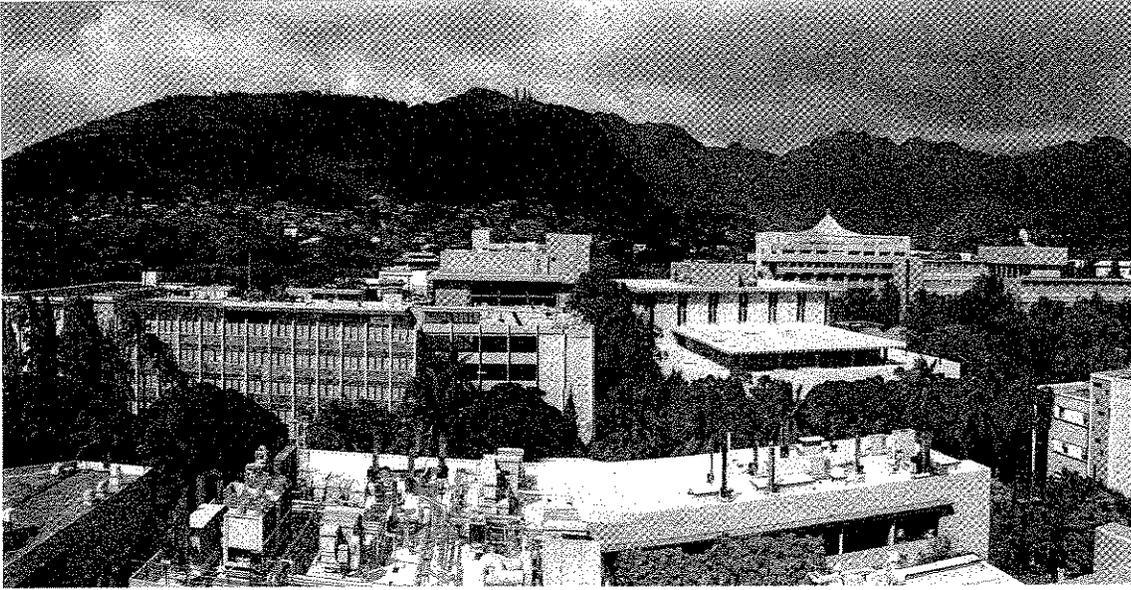
South-facing view from Bilger Hall Addition rooftop.



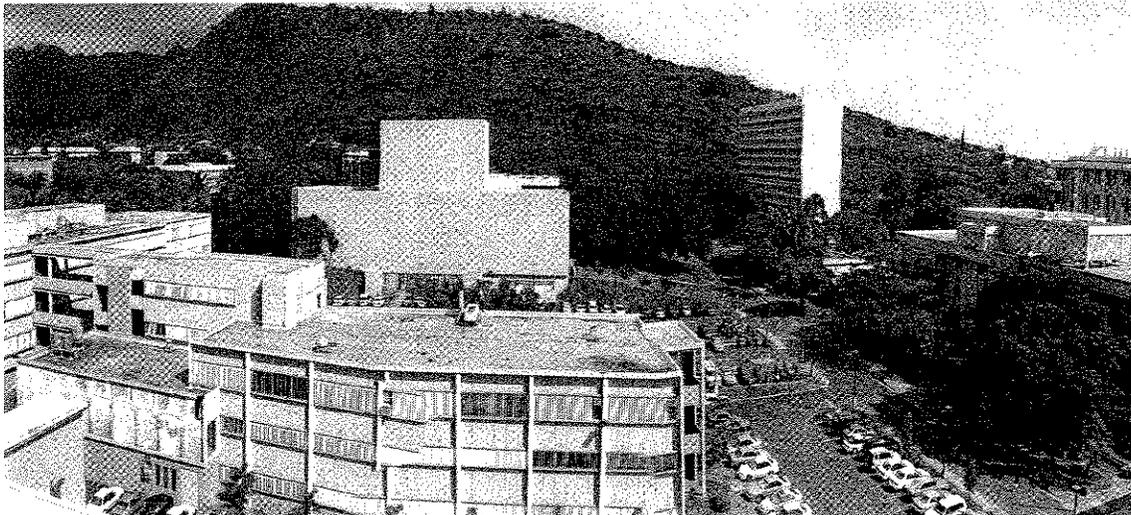
West-facing view from Bilger Addition rooftop; Social Sciences Bldg. rooftop antenna toward the right horizon.



**View from Bilger Annex Rooftop**



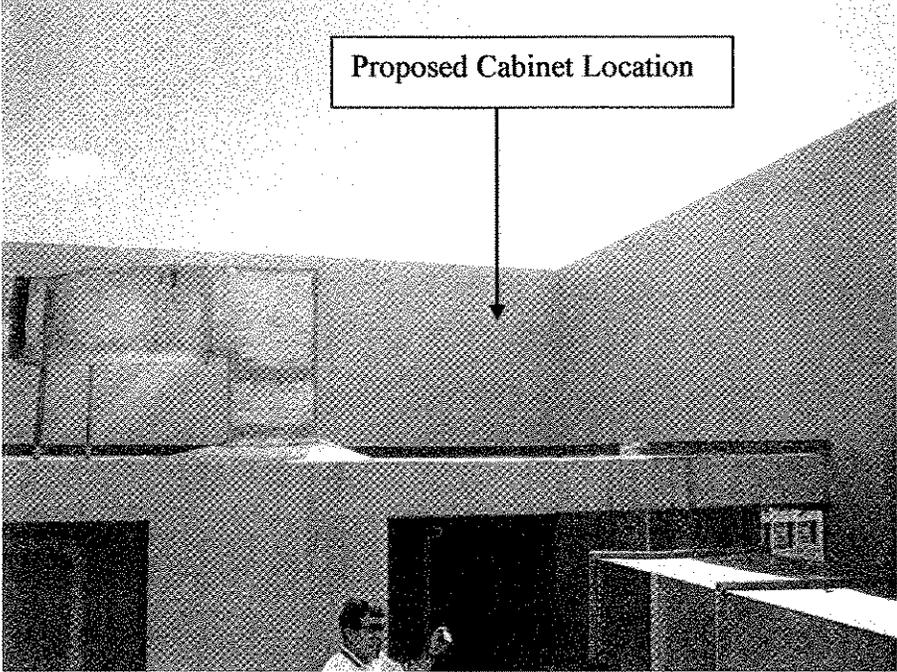
**North View**



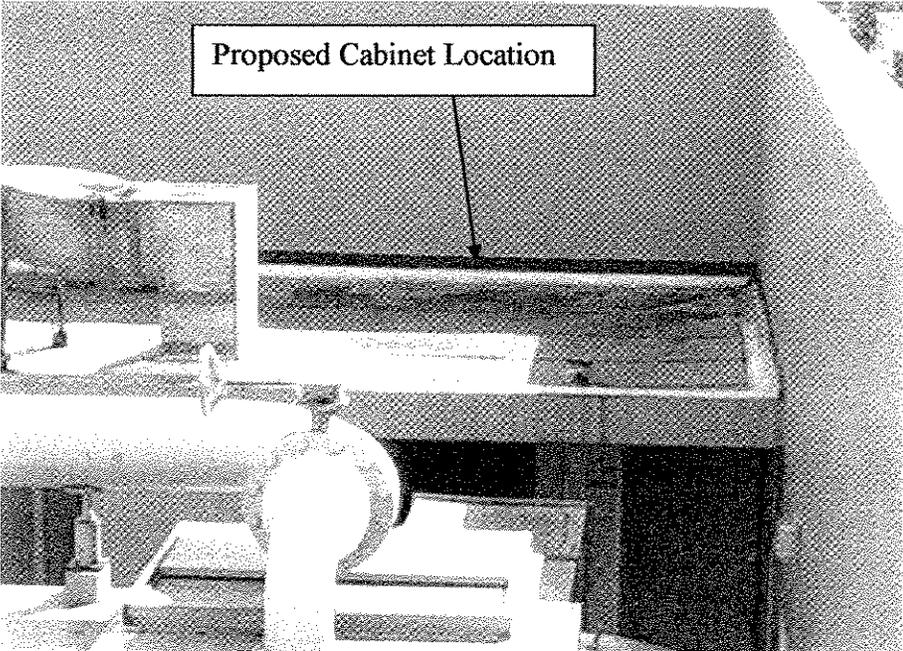
**East View**



# Equipment Pad

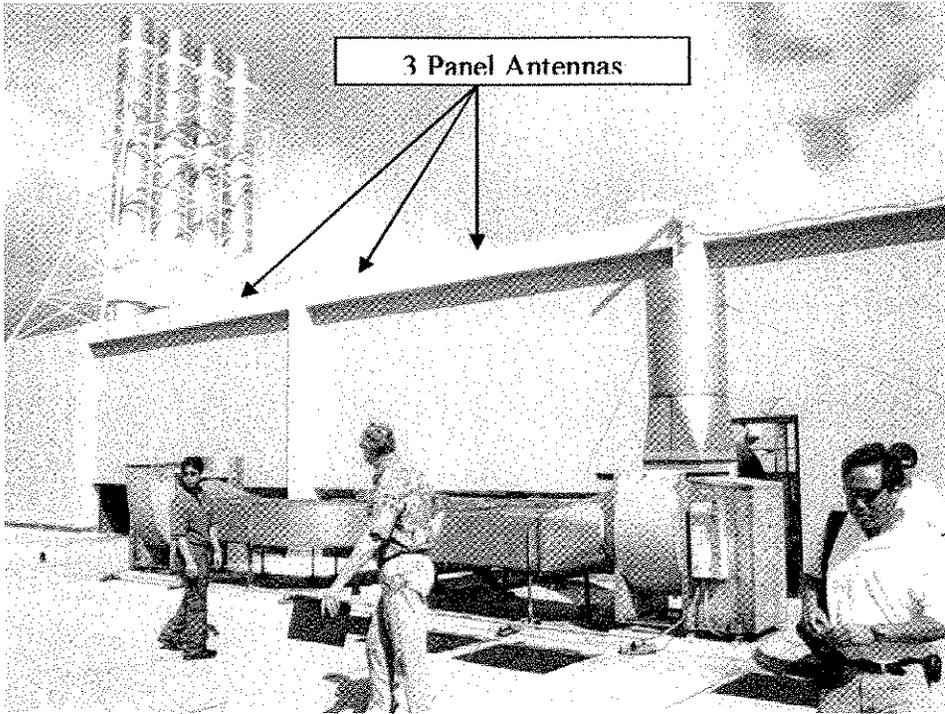


Front View

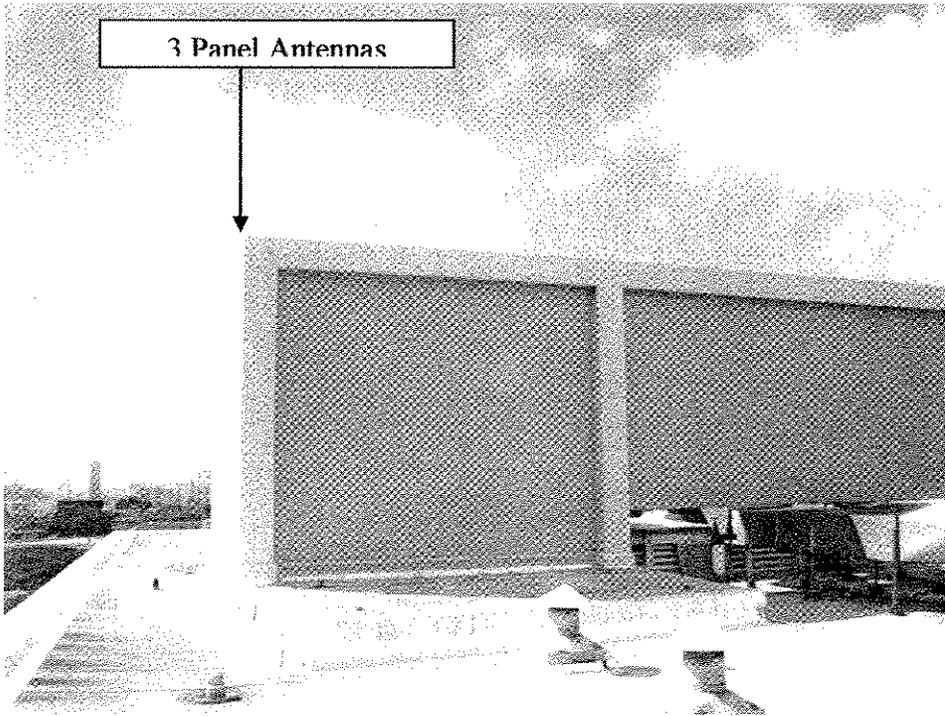


Top View





**West Sector Antennas**



**South Sector Antennas**



## **APPENDICES**

- a. Preassessment Consultation**
- b. Neighborhood Board Meeting  
Records**
- c. PWC Report**
- d. V. Peterson Statement**



**a. Pre-Assessment Consultation**



December 12, 2004

Subject: New Cingular Wireless Services of Hawaii, LLC's Proposed University of Hawaii Bilger Addition Antenna Site, Manoa, Honolulu District, Island of Oahu, TMK No. 2-8-023:003, Pre-Assessment Consultation

Dear Consulted Party:

New Cingular Wireless Services of Hawaii, LLC is preparing a Chapter 343, HRS Environmental Assessment for a proposed telecommunications facility on the University of Hawaii at Manoa Bilger Addition. The antenna facility is to consist of:

- 9 panel antennas measuring 79.9 inches long, 10.3 inches wide and 5.5 inches deep are to be mounted vertically on the north, south and west sections on the building's existing rooftop structure.
- PCS base transceiver station (BTS) will consist of 4 equipment cabinets, each 30.3 inches wide, 76.4 inches high, and 29.3 inches deep. Total space required on rooftop will be about 100 sq.ft.

This installation will be regulated by the Federal Communications Commission and requires additional zoning and building permits from the City & County of Honolulu. New Cingular Wireless' installation is classified as a Utility Installation, Type B, in the R-5 zoning district (residential), which requires a Plan Review Use (PRU) approval from the Department of Planning and Permitting, City and County of Honolulu.

In conjunction with this work, we are requesting any written comments and/or information with respect to your area(s) of concern. We welcome your participation in the planning phase of this important project and would appreciate your feedback by January 14, 2005. Please forward your written comments to:

Environmental Planning Solutions, LLC  
945 Makaiwa Street  
Honolulu, Hawaii 96816

Sincerely,



Colette Sakoda

cc: UH Manoa, Wallace Gretz  
Enclosure: location map





# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Pacific Islands Fish and Wildlife Office  
300 Ala Moana Boulevard, Room 3-122, Box 50088  
Honolulu, Hawaii 96850

In Reply Refer To:  
1-2-2005-SP-092

FEB 3 2005

Colette Sakoda  
Environmental Planning Solutions, LLC  
945 Makaiwa Street  
Honolulu, Hawaii 96816

Dear Ms. Sakoda:

Thank you for your letter dated December 12, 2004, in which you request information concerning the proposed University of Hawaii Bilger Addition antenna cell site located at the University of Hawaii Manoa, Honolulu, Hawaii. The proposal is to install nine panel antennas and four equipment cabinets on the building's existing rooftop. We understand that the Federal Communications Commission has designated the licensees, applicants, tower companies and their representatives as non-Federal representatives for informal consultation. We received your letter on December 14, 2004.

We reviewed the information you provided and pertinent information in our files, including data compiled by the Hawaii Natural Heritage Program. To the best of our knowledge, no federally listed or proposed species, or proposed or designated critical habitat occur on the proposed project site.

We appreciate the opportunity to provide comments on the proposed project. If you have questions regarding these comments, please contact Fish and Wildlife Biologist Elizabeth Sharpe by telephone at (808) 792-9400.

Sincerely,

Gina M. Shultz  
Acting Field Supervisor





DEPARTMENT OF THE ARMY  
U. S. ARMY ENGINEER DISTRICT, HONOLULU  
FT. SHAFTER, HAWAII 96858-5440

REPLY TO  
ATTENTION OF

December 14, 2004

Regulatory Branch

Ms. Colette Sakoda  
Environmental Planning Solutions, LLC  
945 Makaiwa Street  
Honolulu, Hawaii 96816

Dear Ms. Sakoda:

This letter responds to your request for a jurisdictional determination for a proposed FCC telecommunications cell site at the Univeristy of Hawaii at Manoa Bilger Addition, Oahu, TMK 2-8-23:3 dated December 12, 2004. We have reviewed the project information you provided with respect to the Corps' authority to issue Department of the Army (DA) permits under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344).

Based on the information you provided, building antennas on existing rooftops is not in our jurisdiction and therefore a Department of the Army (DA) permit will not be required. If you would like more information on our U.S. Army Corps of Engineers Regulatory Program; Section 404 and Section 10, please browse our website at <http://www.poh.usace.army.mil/regulatory.asp>.

This determination does not relieve you from obtaining other authorizations from the State of Hawaii or the City and County of Honolulu. If you have any further questions, please contact Ms. Paulette Choy at 438-2303 and reference file number POH-2004-1138.

Sincerely,

A handwritten signature in black ink, appearing to read "George P. Young".

George P. Young, P.E.  
Chief, Regulatory Branch



LINDA LINGLE  
GOVERNOR OF HAWAII



PETER T. YOUNG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

DAN DAVIDSON  
DEPUTY DIRECTOR - LAND

YVONNE Y. IZU  
DEPUTY DIRECTOR - WATER



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

JAN 25 2005

Colette Sakoda  
Environmental Planning Solutions, LLC  
945 Makaiwa Street  
Honolulu, Hawaii 96816

LOG NO: 2005.0046  
DOC NO: 0501TL04  
Architecture

Dear Ms. Sakoda:

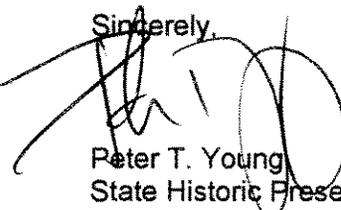
**SUBJECT: Section 106 (NHPA) Historic Preservation Review for Proposed  
New Cingular Wireless Telecommunication Facility Located at  
University of Hawaii, Bilger Addition  
Manoa, Honolulu, Kona, Oahu, 96782  
TMK: (1)2-8-022:003**

---

Thank you for allowing me to comment on the proposal to install a New Cingular Wireless Telecommunication facility on the Bilger Building addition at the University of Manoa, Honolulu, Oahu. The facility consists of 9 panel antennas mounted on the building's existing rooftop structure, and four equipment cabinets installed on the rooftop.

We concur that the determination for the project is "no historic properties affected." Thank you for the opportunity to comment. Should you have further questions, please feel free to call Thomas Lim at (808) 692-8030.

Sincerely,

  
Peter T. Young  
State Historic Preservation Officer

TL:jen  




LINDA LINGLE  
GOVERNOR



PATRICIA HAMAMOTO  
SUPERINTENDENT

STATE OF HAWAII  
DEPARTMENT OF EDUCATION  
P.O. BOX 2360  
HONOLULU, HAWAII 96804

OFFICE OF THE SUPERINTENDENT

January 13, 2005

Ms. Colette Sakoda  
Environmental Planning Solutions, LLC  
945 Makaiwa Street  
Honolulu, Hawaii 96816

Dear Ms. Sakoda:

SUBJECT: University of Hawaii - Bilger Hall Addition  
Pre-assessment Consultation  
Honolulu, Oahu TMK: 2-8-023:003

The Department of Education (DOE) has no comment or concern regarding the proposed telecommunications facility on the campus of the University of Hawaii at Manoa.

Thank you for the opportunity to respond.

If you have any questions, please call Rae M. Loui, Assistant Superintendent of the Office of Business Services, at 586-3444 or Heidi Meeker of the Facilities and Support Services Branch at 733-4862.

Very truly yours,

A handwritten signature in cursive script that reads "Patricia Hamamoto".

Patricia Hamamoto  
Superintendent

PH:jl

c: Rae Loui, OBS



LINDA LINGLE  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

RODNEY K. HARAGA  
DIRECTOR

Deputy Directors  
BRUCE Y. MATSUI  
BARRY FUKUNAGA  
BRIAN H. SEKIGUCHI

IN REPLY REFER TO:

STP 8.1520

January 10, 2005

Ms. Colette Sakoda  
Environmental Planning Solutions, LLC  
945 Makaiwa Street  
Honolulu, Hawaii 96816

Dear Ms. Sakoda:

Subject: New Cingular Wireless Services of Hawaii Antenna Site  
Pre-Assessment Consultation  
TMK: 2-8-023: 003

Thank you for your transmittal requesting our review on the subject application.

The proposed telecommunications facility will not have an impact on our State transportation facilities.

We appreciate the opportunity to provide our comments.

Very truly yours,

A handwritten signature in black ink, appearing to read "Rodney K. Haraga".

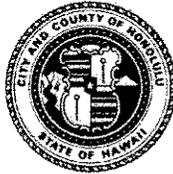
*for* RODNEY K. HARAGA  
Director of Transportation



FIRE DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**

3375 Koapaka Street, Suite H-425  
Honolulu, Hawaii 96819-1869  
Phone: (808) 831-7761 Fax: (808) 831-7750 Internet: www.honolulufire.org

MUFI HANNEMANN  
MAYOR



ATTILIO K. LEONARDI  
FIRE CHIEF

JOHN CLARK  
DEPUTY FIRE CHIEF

January 6, 2005

Ms. Colette Sakoda  
Environmental Planning Solutions, LLC  
945 Makaiwa Street  
Honolulu, Hawaii 96816

Dear Ms. Sakoda:

Subject: Preassessment Consultation  
New Cingular Wireless Services of Hawaii, LLC  
Proposed University of Hawaii at Manoa Bilger Addition Antenna Site  
Honolulu, Oahu, Hawaii  
Tax Map Key: 2-8-023: 003

We received your letter dated December 12, 2004, requesting our comments on the above-mentioned project.

The Honolulu Fire Department has no objections to the project or its approving authority.

Should you have any questions, please call Battalion Chief Lloyd Rogers of our Fire Prevention Bureau at 831-7778.

Sincerely,

A handwritten signature in black ink, reading "Attilio K. Leonardi".

ATTILIO K. LEONARDI  
Fire Chief

AKL/SK:jl

cc: Mr. Wallace Gretz, Architect  
University of Hawaii at Manoa, Facilities Planning and Management



DEPARTMENT OF TRANSPORTATION SERVICES  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET, 3RD FLOOR • HONOLULU, HAWAII 96813  
TELEPHONE: (808) 523-4529 • FAX: (808) 523-4730 • INTERNET: www.co.honolulu.hi.us

MUFI HANNEMANN  
MAYOR



EDWARD Y. HIRATA  
ACTING DIRECTOR

TP12/04-87147R

January 11, 2005

Ms. Colette Sakoda  
Environmental Planning Solutions, LLC  
945 Makaiwa Street  
Honolulu, Hawaii 96816

Dear Ms. Sakoda:

Subject: New Cingular Wireless Services of Hawaii, LLC's Proposed University  
of Hawaii Bilger Addition Antenna Site

In response to your December 12, 2004 letter, we have reviewed the information provided regarding the subject project. At this time, we have no comments to offer for your consideration as you prepare the environmental assessment.

Should you have any questions regarding this matter, please contact Faith Miyamoto of the Transportation Planning Division at 527-6976.

Sincerely,

A handwritten signature in black ink, appearing to read "Edward Y. Hirata", is written over a white background.

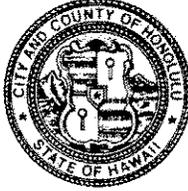
EDWARD Y. HIRATA  
Acting Director



DEPARTMENT OF PLANNING AND PERMITTING  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET, 7<sup>TH</sup> FLOOR • HONOLULU, HAWAII 96813  
PHONE: (808) 523-4432 • FAX: (808) 527-6743  
DEPT. WEB SITE: [www.honolulu.gov](http://www.honolulu.gov) • CITY WEB SITE: [www.honolulu.gov](http://www.honolulu.gov)

MUFI HANNEMANN  
MAYOR



HENRY ENG, FAICP  
ACTING DIRECTOR

DAVID K. TANOUÉ  
DEPUTY DIRECTOR

2004/ELOG-2820 (1k)  
88/PRU-3

January 14, 2005

Ms. Colette Sakoda  
Environmental Planning Solutions, LLC  
945 Makaiwa Street  
Honolulu, Hawaii 96816

Dear Ms. Sakoda:

Cingular Wireless Services of Hawaii  
University of Hawaii at Manoa  
2563 Dole Street - Manoa  
Tax Map Key 2-8-23: 3

This is in response to your December 12, 2004 letter, received on December 15, 2004, requesting comments on a proposed telecommunications facility at the University of Hawaii at Manoa.

You indicate that the project will involve the following:

- Nine panel antennas will be mounted vertically on the north, south and west sections on the existing rooftop structure of the Bilger Hall Addition.
- The antennas will measure 79.9 inches long, 10.3 inches wide and 5.5 inches deep.
- The base transceiver station (BTS) will consist of 4 equipment cabinets (30.3 inches wide, 76.4 inches high, and 29.3 inches deep). The equipment will occupy about a 100-square foot area on the rooftop of the existing building.

We are not able to determine the permit requirements based on the information provided. However, if the proposed antenna facility is necessary to improve telecommunication service at the University of Hawaii at Manoa, then the proposal can be reviewed as a minor modification to the Plan Review Use (PRU) File No. 88/PRU-3. If the project is a "stand-alone" facility intended to



Ms. Colette Sakoda

Page 2

January 14, 2005

improve regional service, then a Conditional Use Permit-Minor (CUPm) for a Utility Installation, Type B, and possibly a Height Waiver will be required.

In addition, the following must be provided:

1. Documentation of compliance with Chapter 343 must be provided prior to submittal of a request for land use permits.
2. Documentation confirming that the proposal was presented to the Neighborhood Board including a description of all issues or concerns relating to the project raised at the presentation and the measures taken to mitigate such issues or concerns.
3. Elevation views of the proposed facility and the existing building. Indicate the height of the existing building and the proposed structures.
4. A photo simulation illustrating the visual impact of the proposed facility.
5. Fencing or other barriers to restrict public access within the area exposed to a power density of 0.1 milliwatt/cm<sup>2</sup> for all associated antennas involving radio frequency (RF) or microwave transmissions shall be provided.
6. If the project can be processed as a minor modification to the PRU, a \$300 filing fee will be required if Cingular Wireless Services of Hawaii is the applicant.

Should you have any questions, please call Lynne Kauer of our staff at 527-6278.

Sincerely yours,

  
HENRY ENG, FAICP  
for Acting Director of Planning  
and Permitting

HE:fm



POLICE DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**

801 SOUTH BERETANIA STREET  
HONOLULU, HAWAII 96813 - AREA CODE (808) 529-3111  
<http://www.honolulu.org>  
<http://www.honolulupd.org>  
[www.honolulu.gov](http://www.honolulu.gov)

JEREMY HARRIS  
MAYOR



BOISSE P. CORREA  
CHIEF

GLEN R. KAJIYAMA  
PAUL D. PUTZULU  
DEPUTY CHIEFS

OUR REFERENCE CS-KP

December 29, 2004

Ms. Colette Sakoda  
Environmental Planning Solutions, LLC  
945 Makaiwa Street  
Honolulu, Hawaii 96816

Dear Ms. Sakoda:

Thank you for the opportunity to comment on the Pre-Assessment Consultation for the New Cingular Wireless Services of Hawaii, LLC's, Proposed University of Hawaii Bilger Addition Antenna Site at Manoa.

Although this project should have negligible impact on the facilities and services provided by the Honolulu Police Department, it may impact the City and County of Honolulu's radio system. We expect to continue working with Cingular Wireless Services of Hawaii, LLC, in resolving the problems relative to potential signals interfering with the radio system.

If there are any questions, please call Mr. Warren Izumigawa of the Telecommunications Systems Section at 831-7200 or Ms. Carol Sodetani of the Support Services Bureau at 529-3658.

Sincerely,

BOISSE P. CORREA  
Chief of Police

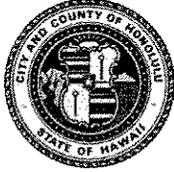
By   
KARL GODSEY  
Assistant Chief of Police  
Support Services Bureau



DEPARTMENT OF PARKS AND RECREATION  
CITY AND COUNTY OF HONOLULU

1000 ULUOHIA STREET, SUITE 309 • KAPOLEI, HAWAII 96707  
Phone: (808) 692-5585 • FAX: 692-5131 • Internet: www.co.honolulu.hi.us

JEREMY HARRIS  
MAYOR



WILLIAM D. BALFOUR, JR.  
DIRECTOR

EDWARD T. "SKIPPA" DIAZ  
DEPUTY DIRECTOR

December 27, 2004

Ms. Colette Sakoda  
Environmental Planning Solutions, LLC  
945 Makaiwa Street  
Honolulu, Hawaii 96816

Dear Ms. Sakoda:

Thank you for your letter of December 12, 2004, concerning the new Cingular Wireless Services proposed antenna site on the University of Hawaii campus.

We have no comments or concerns as it does not directly impact any park properties.

Should you have any further questions, you may contact Ms. Toni Robinson, East Honolulu District Manager, at 973-7250.

Sincerely,

A handwritten signature in black ink that reads "W.D. Balfour, Jr." with a stylized flourish at the end.

WILLIAM D. BALFOUR, JR.  
Director

WDB:fe  
(87199)





Verizon Hawaii Inc.  
P.O. Box 2200  
Honolulu, HI 96841

December 20, 2004

Environmental Planning Solutions, LLC  
945 Makaiwa Street  
Honolulu, Hawaii 96816  
Attention: Colette Sakoda

Subject: New Cingular Wireless Services at UH of Manoa, Bilger Addition

Dear Ms. Sakoda:

Thank you for the opportunity to review the above project. We have the following comments to make:

- As far as Verizon Hawaii's concern, providing telephone service should not negatively impact the environment.
- All electrical work shall conform to all electrical codes.
- Telephone service connection shall be determined once electrical drawings are submitted.

Should you have any questions, please call Noel Remigio at 840-5847.

Sincerely,

A handwritten signature in black ink, appearing to read "Jill Lee".

Jill Lee  
Manager – OSP Engineering, East & West Oahu

C: File (Punahou)  
N. Remigio



**a. (2) DEA Comments and Responses**



**BOARD OF WATER SUPPLY**

CITY AND COUNTY OF HONOLULU  
500 SOUTH BERETANIA STREET  
HONOLULU, HI 96843



MUFI HANWEMAN, Mayor  
EDDIE FLORES, JR., Chairman  
HERBERT S. K. KAOPUA, SR.  
MAYORAL DEPUTY  
SANDALY S. EDUORO  
SAMUEL T. HATA  
ROONEY K. HARADA, Ex-Officio  
LAIBENE MUA, Ex-Officio  
CLIFFORD S. JAMILE  
Manager and Chief Engineer  
DONNA FAY K. KITOSANI  
City Manager and Chief Engineer

June 1, 2005

Mr. Robert Teixeira  
New Cingular Wireless Hawaii LLC  
500 Kahaia Avenue  
Miliilani, Hawaii 96789

Dear Mr. Teixeira:

Subject: The Draft Environmental Assessment for the Proposed New Cingular Wireless  
Hawaii LLC University of Hawaii Manoa Bilger Hall Addition, Rooftop  
Antenna Facility, TMK-2-8-23-3

(No response needed)

Thank you for the opportunity to comment on the subject document.

We have no comments on the proposed project.

If you have any questions, please contact Joseph Kaakua at 748-5442.

Very truly yours,

  
KEITH S. SHIDA  
Principal Executive  
Customer Care Unit

cc: Office of Environmental Quality Control, Wallace Gretz - University of Hawaii,  
Colette Sakoda - Environmental Planning Solutions LLC

FIRE DEPARTMENT  
CITY AND COUNTY OF HONOLULU

507 KOWALEW STREET, SUITE 1400, HONOLULU, HAWAII 96813-5650  
TELEPHONE: (808) 831-7741 • FAX: (808) 831-7750 • INTERNET: WWW.HONOLULU.FO



MUPTI RANNENMANN  
CHIEF



ATTILIO K. LEONARDI  
FIRE CHIEF  
JOHN CLARK  
DEPUTY FIRE CHIEF

May 27, 2005

Mr. Robert Teixeira  
New Cingular Wireless of Hawaii, LLC  
500 Kahalu Avenue  
Mililani, Hawaii 96789

Dear Mr. Teixeira:

Subject: Draft Environmental Assessment  
Proposed New Cingular Wireless of Hawaii, LLC  
Bilger Hall Addition Rooftop Antenna Site  
University of Hawaii at Manoa  
Honolulu, Oahu, Hawaii  
Tax Map Key: 2-8-023: 003

We received a letter dated May 6, 2005, from Ms. Colette Sakoda of Environmental Planning Solutions, LLC, requesting that our comments on the above-mentioned project be submitted to you.

The Honolulu Fire Department has no objections to the above-mentioned project.

Should you have any questions, please call Battalion Chief Lloyd Rogers of our Fire Prevention Bureau at 831-7778.

Sincerely,

ATTILIO K. LEONARDI  
Fire Chief

AKL/SK:hh

cc: Ms. Genevieve Salmonson, Director, State of Hawaii, Department of Health,  
Office of Environmental Quality Control  
Mr. Wallace Gretz, Architect, University of Hawaii at Manoa,  
Facilities Planning and Management  
Ms. Colette Sakoda, Planner, Environmental Planning Solutions, LLC

(No response needed)

DEPARTMENT OF PLANNING AND PERMITTING  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813  
TELEPHONE: (808) 523-4431 • FAX: (808) 527-6743  
DEPT. INTERNET: www.honolulu.gov • INTERNET: www.honolulu.gov



KUPI HANEMANN  
MAYOR

HENRY ENG, FAICP  
DIRECTOR

DAVID A. TAOUE  
SENIOR DIRECTOR

2005/ELOG-1014(1k)  
88/PRU-3

June 7, 2005

Ms. Colette Sakoda  
Environmental Planning Solutions, LLC  
945 Makaia Street  
Honolulu, Hawaii 96816

Dear Ms. Sakoda:

Subject: Draft Environmental Assessment (DEA)  
Cingular Wireless Services of Hawaii  
University of Hawaii at Manoa  
2563 Dole Street - Manoa  
Tax Map Key 2-8-23: 3

We have reviewed the Draft Environmental Assessment (DEA) for the proposed telecommunications antenna on the rooftop of the Bilger Hall Addition at the University of Hawaii at Manoa (University) and offer the following comments:

1. Section 2.0 Project Description  
Clarify if the proposed antenna is primarily to improve telecommunication service at the University of Hawaii, or to improve regional service. If the antenna facility is being constructed for the benefit of the University, then explain why the improvements are necessary.
2. Section 7.6 Land Use Ordinance - Zoning  
This section should be revised to say that a Utility Installation, Type B is permitted in the R-5 Residential District with an approved Conditional Use Permit-Minor (CUPM).

The section should also reference DPP's letter of January 14, 2005 stating that the proposal can be reviewed as a minor modification to the Plan Review Use File No. 88/PRU-3 if the proposed antenna facility is necessary to

Ms. Colette Sakoda  
Page 2  
June 7, 2005

improve telecommunication service at the University. However, if the project is a "stand-alone" facility intended to improve regional service, then a Conditional Use Permit-Minor (CUPM) for a Utility Installation, Type B, and a Height Waiver will be required.

Thank you for the opportunity to comment on the DEA. If you have any questions, please contact Lynne Kauz of our staff at 527-6278.

Sincerely yours,

  
HENRY ENG, FAICP  
Director of Planning  
and Permitting

#E:pl

F:\Andreas\pawsework\ngdir\actory\1\kauer\051014.doc

**ENVIRONMENTAL PLANNING SOLUTIONS, LLC**  
945 Makawe Street, Honolulu, HI 96816

Phone: 732-8602 Fax: 538-3168

June 17, 2005

Mr. Henry Eng, Director  
Department of Planning and Permitting  
City and County of Honolulu  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Attention: Ms. Barbara Moon

Subject: Draft Environmental Assessment for New Cingular Wireless Hawaii Bilger Hall  
Addition Rooftop Antenna Facility, University of Hawaii at Manoa, Honolulu,  
Island of Oahu, TMK No. 2-8-023-003

Dear Mr. Eng:

We have received your letter dated June 7, 2005 regarding the subject project. The following has been prepared in response to your comments.

1. Section 2.0 Project Description. This section will clarify the purpose of the proposed antenna facility is to improve wireless communication service to Cingular wireless customers on the University of Hawaii Manoa campus, particularly for in-building penetration.
2. Section 7.6 Land Use Ordinance - Zoning. This section will be revised to state that a Utility Installation Type B is permitted in the R-5 Residential District with an approved Conditional Use Permit-Minor (CUPm).

Also, DPP's January 14, 2005 letter will be referenced to reflect the department's policy regarding the condition under which a minor modification to the Plan Review Use File No. 88/PRU-3 can be filed in the case of the proposed Bilger Hall Addition rooftop antenna facility.

Thank you for participating in the planning phase of this important project.

Sincerely,



Colette Sakoda

cc: Robert Teixeira, Cingular  
Wally Gretz, UHM

POLICE DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**  
801 SOUTH BERETANIA STREET  
HONOLULU, HAWAII 96813 - AREA CODE (808) 525-3111  
<http://www.honolulu.gov>



BOISSE P. CORREA  
CHIEF  
GLEN R. KAITAKA  
PAUL D. PUTZLU  
DEPUTY CHIEFS

MUFL NANNEMANN  
MAYOR

OUR REFERENCE BS-KP

May 9, 2005

Mr. Robert Teixeira  
New Cingular Wireless Hawaii LLC  
500 Kaholu Avenue  
Mililani, Hawaii 96789

Dear Mr. Teixeira:

This is in response to the Draft Environmental Assessment for the Proposed New Cingular Wireless of Hawaii LLC Bligger Half Addition Rooftop Antenna Site at the University of Hawaii at Manoa.

This project should have no significant impact on the facilities or operations of the Honolulu Police Department.

If there are any questions, please call Major Bart Huber of District 7 at 529-3796 or Mr. Brandon Stone of the Executive Bureau at 529-3644.

Thank you for the opportunity to review and comment.

Sincerely,

BOISSE P. CORREA  
Chief of Police

By *Shall Zedof*  
for KARL GODSEY  
Assistant Chief of Police  
Support Services Bureau

cc: Mr. Wallace Greiz  
University of Hawaii  
Ms. Genevieve Salmonson  
OEQC  
✓ Ms. Colette Sakoda  
Environmental Planning Solutions, LLC

*Serving and Protecting with Aloha*

(No response needed)

DEPARTMENT OF TRANSPORTATION SERVICES  
**CITY AND COUNTY OF HONOLULU**

840 SOUTH KING STREET, 3RD FLOOR • HONOLULU, HAWAII 96813  
TELEPHONE: (808) 521-4531 • FAX: (808) 521-4730 • INTERNET: WWW.HONOLULU.HI



EDWARD Y. HIRATA  
DIRECTOR

TPS/05-103811R

May 31, 2005

Mr. Robert Teixeira  
New Cingular Wireless Hawaii LLC  
500 Kahehu Avenue  
Mililani, Hawaii 96789

(No response needed)

Dear Mr. Teixeira:

Subject: New Cingular Wireless Hawaii LLC University of Hawaii-  
Manoa Bilger Hall Addition Rooftop Antenna Site

Thank you for the May 6, 2005 letter from Environmental Planning Solutions LLC requesting our review of and comments on the draft environmental assessment (EA) for the subject project. We have no comments to offer relating to the draft EA.

Should you have any questions regarding this matter, please contact Faith Miyamoto of the Transportation Planning Division at 527-6976.

Sincerely,

  
EDWARD Y. HIRATA  
Director

cc: Ms. Genevieve Salmonson  
Office of Environmental Quality Control  
Mr. Wallace Gretz  
University of Hawaii at Manoa  
✓ Ms. Colette Sakoda  
Environmental Planning Solutions LLC

PATRICIA HAMAMOTO  
SUPERINTENDENT



STATE OF HAWAII  
DEPARTMENT OF EDUCATION  
P.O. BOX 2280  
HONOLULU, HAWAII 96814

OFFICE OF THE SUPERINTENDENT  
May 26, 2005

Mr. Robert Teixeira  
New Cingular Wireless of Hawaii LLC  
500 Kaha'u Avenue  
Mililani, Hawaii 96789

Dear Mr. Teixeira:

Subject: New Cingular Wireless of Hawaii LLC - Draft Environmental Assessment  
Rooftop Antenna Facility at the University of Hawaii  
Manoa, Oahu, TMK: 2-8-23-003

The Department of Education has no comment or concern regarding the proposed telecommunications facility on the University of Hawaii at Manoa campus.

If you should have any questions, please call Rae Loui, Assistant Superintendent of the Office of Business Services, at 586-3444 or Heidi Meeker of the Facilities and Support Services Branch at 733-4862.

Very truly yours,

Patricia Hamamoto  
Superintendent

PH:hy (4pm)

cc: Rae Loui, Asst. Supt., OBS  
Raelene Chook, CAS, McKinley/Roosevelt Complex Area  
Genevieve Salmonson, OEQC  
Wallace Gretz, University of Hawaii at Manoa  
Colette Sakoda, Environmental Planning Solutions LLC

(No response needed)



LINDA LINGLE  
GOVERNOR OF HAWAII

STATE OF HAWAII  
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

225 SOUTH BERETANIA STREET  
SUITE 700  
HONOLULU, HAWAII 96822  
TELEPHONE: 808-586-4186  
FACSIMILE: 808-586-4185  
E-mail: [oeqc@hawaii.gov](mailto:oeqc@hawaii.gov)

GENEVIEVE SALMONSON  
DIRECTOR

Kathy Cutshaw  
May 9, 2005  
Page 2

May 9, 2005

Kathy Cutshaw  
University of Hawaii  
Office of the Chancellor  
2500 Campus Road  
Honolulu, Hawaii 96822

Attn: Wally Gretz

Dear Ms. Cutshaw:

Subject: Draft Environmental Assessment (EA), Cingular Facility on Bilger Hall Annex

We have the following comments to offer:

**Two-sided pages:** In order to reduce bulk and save on paper, please print on both sides of the pages in the final document.

**Cultural impacts assessment:**

Act 50 was passed by the legislature in April 2000. This mandates an assessment of impacts to current cultural practices by the proposed project. In the final EA include such an assessment.

If the subject area is in a developed urban setting, cultural impacts must still be assessed. Many incorrectly assume that the presence of urban infrastructure effectively precludes consideration of current cultural factors. For example, persons are known to gather kauna'oa, 'ilima, 'uhaloa, noni or ki on the grassy slopes and ramps of the H-1 freeway and some state highways on the neighbor islands. Certain landmarks and physical features are used by Hawaiian navigators for sailing, and the lines of sight from landmarks to the coast by fisherman to locate certain fishing spots. Blocking these features by the construction of buildings or tanks may constitute an adverse cultural impact.

For assistance in the preparation refer to our *Guidelines for Assessing Cultural Impacts*. Contact our office for a paper copy or go to our homepage at <http://www.state.hi.us/health/oeqc/guidance/index.html>. You will also find the text of Act 50 linked to this section of our homepage.

Permits and approvals: In the final EA include a list of all required permits and approvals. An appropriate place to include it would be section 2.5, *Project Schedule and Costs*.

**Significance criteria:** Criteria # 4 was amended in 2000 to read, "Substantially affects the economic welfare, social welfare, and cultural practices of the community or State." [italics added] Please modify your analysis of #4 accordingly.

If you have any questions, call Nancy Heinrich at 586-4185.

Sincerely,

GENEVIEVE SALMONSON  
Director

c: Colette Sakoda

**ENVIRONMENTAL PLANNING SOLUTIONS, LLC**  
945 Makena Street, Honolulu, HI 96816

Phone: 732-9602 Fax: 538-3168

June 17, 2005

Ms. Genevieve Salmonson, Director  
Office of Environmental Quality Control  
State of Hawaii  
235 Beretania Street, Suite 702  
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment for New Cingular Wireless Hawaii Bigger Hall  
Addition Rooftop Antenna Facility, University of Hawaii at Manoa, Honolulu,  
Island of Oahu, TMK No. 2-8-023-003

Dear Ms. Salmonson:

We have received your letter dated May 9, 2005 regarding the subject project. The following has been prepared in response to your comments:

1. Two-sided pages. Your recommendation to print on both sides of pages has been taken under advisement. New revised portions of the final document will be printed on both sides of pages.
2. Cultural impacts assessment. The historic and archaeological resources section of the final document will be revised to include a discussion pursuant to Act 50.
3. Permits and approvals. A list of required permits and approvals was included in sect. 7.6 Land Use Ordinance and Zoning of the DEA. This information will also be added to sect. 2.5 Project Schedule and Costs.
4. Significance criteria. Criteria #4 will be amended to include consideration of cultural practices as part of the analysis.

Thank you for participating in the planning phase of this important project.

Sincerely,



Colette Sakoda

cc: Robert Teixeira, Cingular

PHONE (808) 594-1888

FAX (808) 594-1885



STATE OF HAWAII  
OFFICE OF HAWAIIAN AFFAIRS  
711 KAPITOLANI BOULEVARD, SUITE 500  
HONOLULU, HAWAII 96813

Honolulu, HI 96789

✓ Colette Sakoda  
Environmental Planning Solutions, LLC  
945 Māka'iwa Street  
Honolulu, HI 96816

HRD05/1670B

May 31, 2005

Robert Teixeira  
New Cingular Wireless Hawaii LLC  
500 Kahelu Avenue  
Māhālanui, HI 96789

RE: Proposed Cingular Wireless Hawaii LLC, University of Hawaii at Manoa, Bilger Hall Rooftop Antenna Facility, Mānoa, Honolulu, O'ahu, TMK: 2-8-023-003.

Dear Mr. Teixeira,

The Office of Hawaiian Affairs (OHA) is in receipt of your May 6, 2005 Draft Environmental Assessment for the above listed proposed project, TMK: 2-8-023-003. Cingular Wireless Hawaii, LLC proposes to place 9 panel antennas measuring 79 inches long atop the Bilger Hall Building. Addition. No changes will be made to the surrounding physical environment and visual impacts will be minimal, therefore OHA has no comment at this time.

Thank you for the opportunity to comment. If you have further questions or concerns, please contact Jesse York at 594-0239 or [jesssey@oha.org](mailto:jesssey@oha.org).

'O wau iho nō,

Clyde W. Nāmu'o  
Administrator

CC: Wallace Gretz  
University of Hawaii at Mānoa  
2444 Dole Street

**ENVIRONMENTAL PLANNING SOLUTIONS, LLC**  
945 Makaiwa Street, Honolulu, HI 96816

Phone: 732-9602 Fax: 538-3168

June 17, 2005

Mr. Clyde W. Namuo, Administrator  
Office of Hawaiian Affairs  
State of Hawaii  
711 Kapiolani Boulevard, Suite 500  
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment for New Cingular Wireless Hawaii Bigler Hall  
Addition Rooftop Antenna Facility, University of Hawaii at Manoa, Honolulu,  
Island of Oahu, TMK No. 2-8-023:003

Dear Mr. Namuo:

We have received your letter dated May 31, 2005 regarding the subject project in which you stated that because no changes will be made to the surrounding physical environment and visual impacts will be minimal, OHA has no comments at this time.

Thank you for participating in the planning phase of this project.

Sincerely,



Colette Sakoda

cc: Robert Teixeira, Cingular  
Wally Gretz, University of Hawaii at Manoa

LINDA LINGGLE  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

May 19, 2005

Mr. Robert Teixeira  
New Cingular Wireless Hawaii LLC  
500 Kahala Avenue  
Mililani, Hawaii 96789

Dear Mr. Teixeira:

Subject: New Cingular Wireless Services of Hawaii Antenna Site  
Draft Environmental Assessment (DEA)  
TMK: (1) 2-8-023: 003

Thank you for your transmittal requesting our review on the subject application.

The proposed telecommunications facility will not have any impact on our State facility.

We appreciate the opportunity to provide our comments.

Very truly yours,

Handwritten signature of Rodney K. Haraga in black ink.

RODNEY K. HARAGA  
for  
Director of Transportation

c: Wallace Gretz, University of Hawaii at Manoa  
Colette Sakoda, Environmental Planning Solutions LLC  
Genevieve Salmonson, Office of Environmental Quality Control

RODNEY K. HARAGA  
DIRECTOR

DENISE OWENS  
BRUCE Y. SATO  
BARRY FUKUNAGA  
BRYAN MORIYA  
GRANT SUGIUCHI  
IN REPLY REFER TO:

STP 8-1753

(No response needed)

**UNIVERSITY OF HAWAII AT MANOA**  
 Facilities Planning and Management Office

Mr. Robert Teixeira  
 New Cingular Wireless Hawaii LLC  
 500 Kalia Avenue  
 Mililani, Hawaii 96789

Dear Mr. Teixeira:

Subject: New Cingular Wireless Hawaii LLC  
 University of Hawaii - Manoa  
 Bilger Hall Addition Rooftop Antenna Site  
 Draft Environmental Assessment (DEA)  
 TMK: (1) 2-8-023-003

Thank you for the May 6, 2005 letter from Environmental Planning Solutions LLC requesting our review of and comments on the draft environmental assessment (EA) for the subject project. Our remarks are indicated on the following documents:

1. Review comments dated 6/3/05 (2 pages)
2. Memo from Blake Araki dated 6/1/05
3. Drawing Sheet A2

Should you have any questions regarding this matter, please contact me at 956-8896.

Sincerely,

*Wallace Gretz*  
 Wallace Gretz  
 Planner

WG:sd

Attachments

cc: Genevieve Salmonson, Office of Environmental Quality Control  
 Colette Sakoda, Environmental Planning Solutions LLC  
 Jack Sidener, University of Hawaii at Manoa

**UNIVERSITY OF HAWAII AT MANOA**  
 Facilities Planning and Management Office

**Plans / Specifications Review Comments**

Project Title: Bilger Hall Addition Antenna Site for Cingular Wireless of Hawaii, LLC    DATE: 6/3/05  
 Project Number: UHM 00-009-000    A/E: UHM Planning Office  
 Reviewed by: Wally Gretz    Project Designer:

Item No.	Drawing Sheet / Section Title	COMMENTS	ACTION TAKEN (If none, SIGN, REVISION, etc.)
1	2.4, pg 9	Weight of equipment cabinets?	
2		Supporting structure for cabinets?	
3	3.9A, pg 13	ITS Telecom Offices are housed on the 3 <sup>rd</sup> Floor	
4	3.9B, pg 14	Construction noise could affect the ITS Telecom Offices on the 5 <sup>th</sup> Flr	
5		Using the 5 <sup>th</sup> Flr as an acoustical buffer won't work for the ITS Telecom Offices on the 5th Flr.	
6		There is one passenger elevator in the building. No service elevator.	
7		Delivery of equipment should be done on weekends to minimize impact.	
8		Also, the ITS Telecom Offices are located on the 5th floor.	
9	3.13A, pg 17	"Discussion" How is this upgrading the University's telecom system?	
10	7.4, pg 23	b. Manoa Neighborhood Board Meeting	
11	Appendices	Doesn't work with Telecom Ofc in the buffer zone.	
12		Landline is irrelevant.	
13		Don't understand #3, clarify or re-word.	
14		c. PWC EME Prediction Study	
15	Appendices	Revise from Bilger Hall to "Bilger Hall Addition"	
16	Drawings	Sheets T1, A1-A3	
17		Revise building name from Bilger Hall to "Bilger Hall Addition"	
18	Sheet A3	Antenna on antennas on exhaust support frame is to be lower (drop to the next horizontal strut) as discussed previously	
19	Sheet A3	Antenna size is different than indicated on page 1 Summary Information	
20	Sheet A2, A3	Which is correct?	
21	Sheet A2, A3	Show 65.1 degree horizontal angle shown on Prediction Study and the (?) vertical angle on all plans and elevations.	
22		3 new and 3 future BTS cabinets are indicated. Page 1 Summary information indicates 4. Which is correct?	
23			
24			
25	Sheet A2		
26			



# University of Hawai'i at Mānoa

Facilities Planning and Management Office  
 Physical Plant Building • 2002 East-West Road • Honolulu, Hawaii 96822  
 Fax: (808) 956-5385

## INTER-OFFICE MEMORANDUM

Date : 06/01/05 Time :  
 To : *Wesly*  
 Attention : See Above  
 From : Blake Araki  
 Subject : Mechanical review  
 Project : Bilger Addition  
 Cingular Telecommunications Facility

The following are the mechanical review comments for the subject project.

1. Safety concerns must be properly addressed and documents, FPMO engineers and service technicians must access the rooftop to perform inspections, service, repair or maintenance at anytime.
2. The location of the new cabinets on the high roof is near an existing exhaust fan. Make sure the new structural support does not impede proper access to service, maintenance, repair or replacement of the equipment and accessories. There is concern about the new steel beam support. The fan is already located near one side of the roof. The side that has the new beam is actually the service side of the equipment. Recommend stopping the beam at the end of the platform and supporting from the adjacent wall.
3. Need to have EHSO review the safety and health risk issues. We will rely on their expertise to assure the safety of FPMO workers. Our workers may have to spend a lot of time on the roof when performing a major repair project. This is a very sensitive issue and I want to make sure our workers are safe all the time and can work anywhere on the roof, at any time and for any duration. If not, need to be very specific in describing the limitations.

Thanks Blake  
 Number of Pages Sent:

ITEM NO.	Original Sheet No. / Sheet No.	COMMENTS	ACTION TAKEN (If none, state reason why)
27	Sheet A2	cont. See item 2 on attached memo and drawing from Blake Araki, ME dated 6/1/05 regarding eliminating portion of proposed platform beam.	
28			
29	3.8B, pg 13	a. Existing Conditions, first sentence. Incorrect; Electrical service infrastructure is owned, operated and maintained by the University.	
30			
31	Misc.	See items 1 & 3 on attached memo from Blake Araki, ME dated 6/1/05 regarding safety concerns	
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**ENVIRONMENTAL PLANNING SOLUTIONS, LLC**

945 Mākae Street, Honolulu, HI 96816 Phone: 732-8602 Fax: 538-3168

June 20, 2005

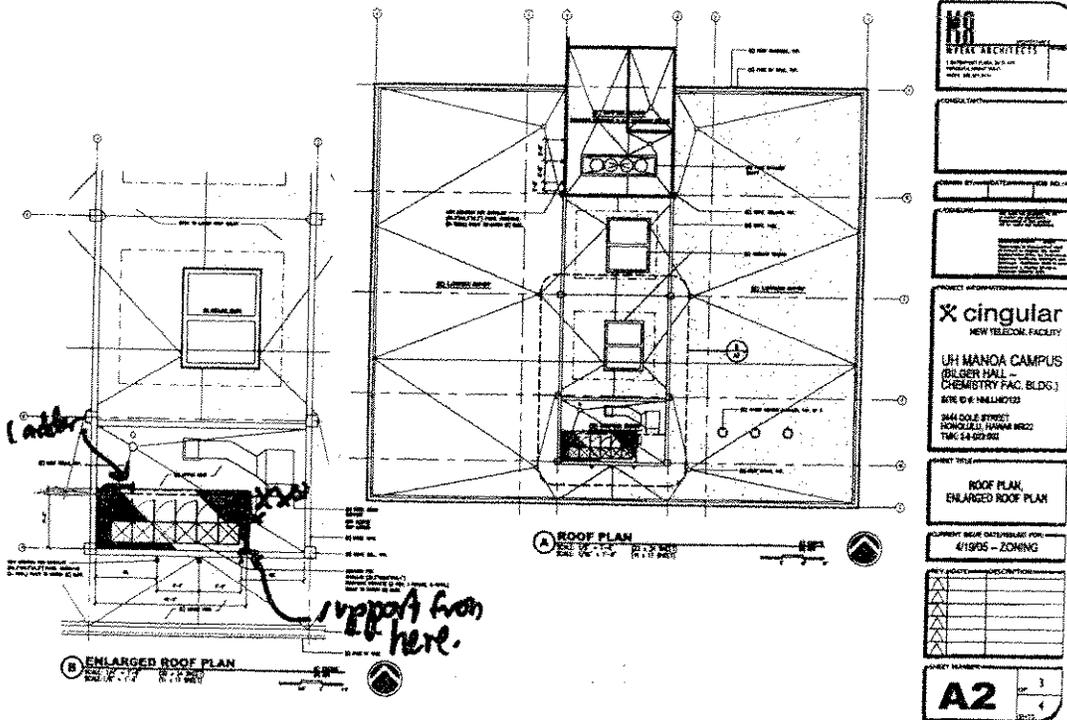
Mr. Wallace Gretz, Planner  
Facilities Planning and Management Office  
University of Hawaii at Manoa  
2002 East-West Road  
Honolulu, HI 96822

Subject: Draft Environmental Assessment for New Cingular Wireless Hawaii Bilger Hall  
Addition Rooftop Antenna Facility, University of Hawaii at Manoa, Honolulu,  
Island of Oahu, TMK No. 2-8-023-003

Dear Mr. Gretz:

We have received your review comments dated June 7, 2005 regarding the subject project. The following has been prepared in response to your comments.

1. Section 2.4, pg. 9 (line item 1). Weight of equipment cabinets: each weighs a maximum of 1000 pounds. Supporting structure for the cabinets; Steel beams extending in an east-west direction will be used to support the equipment. The beams will be anchored to the existing concrete walls.
2. Section 3.9A, pg. 13 (line item 3). Information Technology Offices (ITS) house on the 5<sup>th</sup> floor. The section has been revised to include this information in the final EA.
3. Section 3.9B, pg. 14 (line item 4). This section has been revised in the final EA to include the following: (1) Because the ITS telecom offices are located on the 5<sup>th</sup> floor, this floor would be affected by short-term noise resulting from construction activity associated with antenna facility installation on the rooftop; (2) equipment delivery will be via the one passenger elevator to the fifth floor, and then the stairwell to the rooftop; and (3) delivery should be done on weekends to minimize impact to the existing tenants.
4. Section 3.13A, pg. 17 (line item 9). The ITS telecom offices has been included as an existing activity on the 5<sup>th</sup> floor in the final EA.
5. Section 7.4, pg. 23 (line item 10). The discussion in the final EA has been revised to state that the wireless communication infrastructure on the campus will be upgraded.
6. Appendixes b. Manoa Neighborhood Board Meeting (line item 11). Comments have been noted and appropriate sections within the final EA have been revised. However, revisions to the Board meeting minutes cannot be made because these are archived as final when filed by the Neighborhood Commission office and approved by the Board.



JUN-07-2005 TUE 10:09 AM UH FACIL GRNDS & SFTY FAX NO. 808 956 6142 P. 06/05

Mr. Wallace Gretz  
June 20, 2005  
Page 2

7. Appendices C, PWC EME Prediction Study and Drawings (line items 15 & 17). Bilger Hall has been revised to "Bilger Hall Addition" for the final EA.
8. Sheet A3 (line item 19). Revised location of antennas on exhaust support frame will be reflected in the construction drawings.
9. Sheet A2, A3 (line items 21 & 25). The antenna size and the number of new and future BTS cabinets described on page 1 Summary Information have been updated in the final EA. The zoning drawing reflects the updated antenna size and number of cabinets. Also, the horizontal and vertical angles shown in the Prediction Study will be included in the construction drawings.
10. Sheet A2 (line item 27). Recommended change to the platform beam has been noted. Steel platform will be shortened back toward the makai side to maximize the clearance between the existing mechanical equipment and the new steel beams. New steel beams will be located directly under the equipment cabinet. Unfortunately, cantilevering the framing (as suggested on Blake's sketch) is not possible.
11. Section 3.8B, pg.13 (line item 29). Discussion of the campus electricity distribution system as being owned and managed by the University has been revised in the final EA.
11. Misc. (line item 31). Comments 1 and 3 in the 6/1/05 memorandum regarding safety concerns for Facilities Planning and Management Office engineers and service technicians who need to access the rooftop have been noted. Appropriate signage on the rooftop is being considered as part of the proposed facility and the final design will be included in the construction drawings.

Thank you for participating in the planning phase of this important project.

Sincerely,



Colette Sakoda

cc: Robert Teixeira, Cingular

**b. Neighborhood Board Meeting Record**

Environmental Planning Solutions, LLC

March 28, 2004

To Whom It May Concern:

This is to inform you that on Wednesday April 7, 2004, at the monthly meeting of the Manoa Neighborhood Board #7, a presentation will be made concerning a proposal to install an unmanned communication facility consisting of panel antennas mounted on the side of Bilger Addition building on the University of Hawaii Manoa campus, Tax Map Key no. 2-8-023:003, address: 2444 Dole Street, by AT&T Wireless Services (AWS) Inc.

Presently, AWS' existing transmission facilities south of the proposed UH site is at 2884 S. King St., west of the proposed site at 1541 Dominis St. and north of the proposed site at 2733 East Manoa Road. The proposed UH facility will help bridge the gap in coverage between these sites and improve the quality of service in the surrounding areas thereby meeting community demands for better coverage. AWS is requesting a Minor Conditional Use Permit for a Utility Installation Type B from the Department of Planning and Permitting, City and County of Honolulu to construct the facility on the property. In accordance with the requirements of the Land Use Ordinance, adjoining property owners are being notified of the presentation.

The meeting will be held at 7:00 p.m. at Noelani Elementary School Cafetorium at 2655 Woodlawn Drive. Representatives from AWS will be there to discuss the proposed project and to answer any questions.

If you have any questions you may contact me at 732-8602.

Sincerely,



Colette M. Sakoda  
Agent for AWS Inc.

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## MANOA NEIGHBORHOOD BOARD

“ ... to increase and assure effective citizen participation in the decisions of government ... ”

### REGULAR MEETING AGENDA

Wednesday April 7, 2004 7:00 P.M.  
Noelani Elementary School Cafetorium  
2655 Woodlawn Drive

~~~~~  
**PLEASE NOTE:** To accommodate the business that must be considered at this meeting as listed on the agenda below, the following general schedule will guide the Manoa Neighborhood Board:

|                     |                                                      |
|---------------------|------------------------------------------------------|
| 7:00 to 8:00 P.M.   | - Public Safety Input Reports & New Business, Part 1 |
| 8:00 to 8:30 P.M.   | - Community Input Reports                            |
| 8:30 to 9:15 P.M.   | - Board Planning & Administration                    |
| 9:15 to 10:00+ P.M. | - New Business, Part 2 & Unfinished Business         |

All speakers are encouraged to be brief (2 minutes for questions and comments unless otherwise directed by the Board) and to the point in order to move the discussions forward. All interested persons will be afforded an opportunity to submit data, views, or arguments in writing and present oral testimony on any agenda item, pursuant to the “Sunshine Law” - Hawaii Revised Statutes Section 92-3. ***Thank you for your participation and cooperation!***

- ~~~~~
1. Call to Order by Chair Tom Heinrich
  2. **Public Safety Input**
    - 2.1. Honolulu Fire Department
    - 2.2. Honolulu Police Department [& See Agenda Item 3.1]
  3. **New Business, Part 1**
    - 3.1. Consideration of Proposed Resolutions in Support of the “**Law Enforcement Legislative Package**” Elements, Including But Not Limited To: **(1)** Allowing for “Early” Retirement Eligibility for Police/Emergency Dispatch Operators After 25 Years of Service; **(2)** Imposition of Criminal and/or Civil Penalties for Misuse of the 9-1-1 System
    - 3.2. Consideration of Proposal by AT&T Wireless Services, Inc. (AWSI) to Install a Cellular Antenna at the Bilger Addition Building, University of Hawaii at Manoa Campus - Colette Sakoda, Agent for AWSI [15 minutes]
    - 3.3. Presentation Concerning the Mauka Ala Wai Watershed Controlled Feral Pig Hunt (May 3 to July 30, 2004) - Sean Casey, Ala Wai Mauka Restoration Program [20 minutes]

4. **Community Input \*\*THREE (3) MINUTE TIME LIMIT GUIDELINE \*\***
- 4.1. Residents & Others [For Matters Not Otherwise Listed on the Agenda]
  - 4.2. Malama o Manoa
  - 4.3. Governor's Representative – Lawrence Reifurth, Deputy Director, DCCA
  - 4.4. University of Hawaii Administration -- Jim Manke
  - 4.5. Elected Officials: Councilmember Ann Kobayashi (District 5)  
Senator Brian Taniguchi (District 10)  
Representative Kirk Caldwell (District 24)
  - 4.6. Mayor's Representative – Peter Radulovic
  - 4.7. Board of Water Supply -- Howard Matsuda
  - 4.8. Department of Parks & Recreation -- Howard Yoshioka
5. **Board Planning & Administration**
- 5.1. Treasurer's Report
  - 5.2. General Discussion Regarding Administrative Matters, Planning for Future Meetings and Activities, Networking, Coordination with Adjacent Neighborhood Boards, Announcements, Etc.
  - 5.3. Consideration of Whether the Manoa Neighborhood Board Should Initiate the Process of Revised Neighborhood Plan 1986 (1998 edition) Section 4-2.3 to Declare a Member's Seat Vacant if the Member Has Accumulated Three (3) or More Absences From Duly Noticed Regular Meetings From June 1, 2003 to the Present
  - 5.4. Discussion of the Manoa Neighborhood Board's Regular Meeting Schedule to January 2005; July and August 2004 Meeting Place (Noelani Elementary School Cafetorium to be Closed for Maintenance Activities); Whether to Have "Special Focus" Meetings; Whether to Sponsor "Candidates Forums" Prior to the 2004 Primary and General Elections
  - 5.5. Consideration of Use of the Publicity Account Funds and Whether to (1) Continue to Videotape Manoa Neighborhood Board Regular Meetings for Later Repeated Broadcast on Olole Channel 54, (2) Prepare a District Newsletter, (3) Prepare a District Survey, (4) Make Banners or Other Signage, or (5) Consider Other Ideas
  - 5.6. Consideration and Establishment of Committees, Appointment of Committee Chairs, & Appointment of Board Delegates and Liaisons
  - 5.7. Manoa Neighborhood Board No. 7 District Inspection Report and Proposal to Create a District/Subdistrict Issues & Inspection Program – Tom Heinrich
  - 5.8. Discussion of **"Manoa Vision: The Future of a Valley"** – Community-Based Planning Initiatives and Public-Private Partnering Opportunities; Consideration of a Proposed Initiative to Develop a Series of Manoa Neighborhood Board "Planning Principles & Issue Statements"
  - 5.9. Consideration of a Proposed Resolution to Establish a "Vision Statement" for the Manoa Neighborhood Board No. 7 District
  - 5.10. Update Concerning the Proposed Amendments to the Manoa Neighborhood Board No. 7 Initiative Petition Regarding Changes to the Four Subdistrict Boundaries
  - 5.11. Neighborhood Plan Revision Effort Update (Third Draft RNP 2004 in Progress)
  - 5.12. Approval of the Regular Meeting Minutes of April 2, 2003, May 7, 2003, June 4, 2003, July 2, 2003, and August 6, 2003, October 1, 2003, November 5, 2003, December 3, 2003, February 4, 2004, March 3, 2004, and the Special Meeting Minutes of June 21, 2003
6. **New Business, Part 2**
- 6.1. Discussion of the City Administration's Primary Budget Bills Now Before the

Honolulu City Council – **Bill 13 (2004)** Relating to the Executive

**Operating**

**Budget** and Program for the Fiscal Year July 1, 2004 to June 30, 2005,  
and

the **Bill 14 (2004)** Relating to the Executive **Capital Budget** and Program for

Fiscal Year July 1, 2004 to June 30, 2005

6.2. Consideration of a Proposed Resolution Concerning Honolulu City  
Council

**Resolution 03-54, CD1** Relating to Civil Service Status for Neighborhood  
Commission Office Employees Other Than the Executive Secretary

6.3. Consideration of a Proposed Resolution Concerning Honolulu City  
Council

**Resolution 04-18** Proposing a City Charter Amendment to Require Five  
of the Nine (5/9) Neighborhood Commissioners to Have Previously Served at  
Least One Full Term on a Neighborhood Board (An Increase from Three of the  
Nine (3/9))

6.4. Consideration of a Proposed Resolution Concerning the Fiscal Year 2005  
Budget for the Neighborhood Board System

6.5. Consideration of a Proposed Resolution Related to Amending the Name of  
Pawaina Street to Distinguish Between the Northern and Southern

Portions

Which Are Separated by Manoa Stream and Not Connected by a Vehicular  
Bridge

6.6. Consideration of a Proposed Resolution to Request that the  
Primary Address of Manoa Valley District Park be Changed from 2721 Kaaipu  
Avenue to Manoa Road

6.7. Consideration of a Proposed Resolution Related to Requiring an  
Additional

Presentation to the Neighborhood Boards by Permit Applicants in the  
Event of Substantive and/or Substantial Changes to the Original Proposal as  
First Presented to the Public

6.8. Consideration of a Proposed Resolution Relating to the Oahu Landfill Site  
Selection Process

6.9. Consideration of a Proposed Resolution Relating to Beautification and  
Public Use of the Southeast Area of the H-1 Freeway/University Avenue Interchange

**7. Unfinished Business**

7.1. Update on Honolulu City Council **Bill 74 (2003), CD1** (March 24, 2004) to  
Adopt the Primary Urban Center Development Plan (PUCDP)

7.2. Update on the Possible Installation of a Crosswalk on Woodlawn Drive  
Near

Longs Drugs and the Manoa Stream Bridge

7.3. Consideration of Potential Improvements to the Woodlawn Drive Public  
Right-of- Way Between Kolowalu Street and Kahaloa Drive Including, But Not Limited  
To,

Street Trees, Parking “Bulb-outs”, and Pedestrian Safety Improvements

7.4. Consideration of the Possible Development of a Neighborhood  
Transportation Center, Revision of Bus Routes, and Use of Shuttles

7.5. Update on the Woodlawn Area Earth Movement (Hill Slippage) Problem  
and

## Engineering Efforts (Tie-backs and Drainage)

7.6. Consideration of Public Safety Issues Related to Parking and Signage in the 3100 Block Area of Alani Drive, Makai of Puhala Rise to Paty Drive

7.7. Consideration of Issues Related to the Status of Building and Other Permits

Required for the Hawaii Korean Central Church (Located at 3516 Pilikino Street, Tax Map Key No. 2-9-069-072) to be in Compliance with City & County of

## Honolulu Laws (After the Fact Approvals May Be Necessary)

- 7.8. CAPITAL IMPROVEMENT PROJECT (CIP) PROGRAM UPDATE; Fiscal Year 2004 & 2005 CIP Proposals Status; Manoa Valley District Park Master Plan Update; District Roadway Repair & Resurfacing Projects; Traffic Calming & Pedestrian Safety Program Projects
- 7.9. Consideration of a Proposed Resolution Concerning the Honolulu City Council's Budget Cut Affecting the Neighborhood Commission and All 32 Neighborhood Board Operating and Publicity Account Budgets
- 7.10. Consideration of Proposed Resolutions Concerning the Honolulu City Council's (1) Resolution No. 03-105 "Establishing a Moratorium for a Period of Two Years on the Budgeting and Construction of Vision Team and Neighborhood Board Capital Improvement Projects" and (2) Resolution No. 03-143 "Concerning Budgeting for the Maintenance of City Roads"
- 7.11. Kamoku-Pukele 138 kV Transmission Line Project & 46 kV Alternatives Update
- 7.12. Update on the Proposal for a Privately Developed Student Housing and/or Mixed Use Complex at the Varsity Theatre and Varsity Building Property (Mauka-Ewa Corner of University Avenue & Coyne Street) to Serve the University of Hawaii
- 7.13. Consideration of Resolutions Related to Support of Alternative Energy Initiatives, Establishment of a Moratorium on 138 kV Transmission Line Construction, Undergrounding of Utility Lines & Facilities, and Public Utilities Commission Reforms to Benefit Consumer Access & Participation in Proceedings (including a Consumers' Intervenors Fund)
- 7.14. Update Concerning Central Union Church's Plans to Proceed with a Change of Zone Application for a 5.1-Acre Portion of CUC's 8.4-Acre Campus from A-2 (Medium Density Apartment) to BMX-3 (Community Business Mixed Use) – Proposed Partial Rezoning (Bill 71 (2003)), Transfer of Development Density Rights, and Application for Historic Registration
- 7.15. Proposed Resolution in Opposition to the Possible Widening of South Beretania Street Fronting the Makai Side of Central Union Church (1660 South Beretania Street & Punahou Street)
- 7.16. District Traffic & Parking Concerns and Update
- 7.17. Paradise Park Acquisition Initiative by the University of Hawaii Update
- 7.18. Manoa Falls Trail & Manoa Stream Management Issues Update
- 7.19. Update on the "Dog Park" and On-Leash Exercise Area Authorization Issues

8. **Committee & Board Delegate/Liaison Reports**

- 8.1. Communications Committee (Fassler)
- 8.2. Historical & Cultural Resources Committee (Andersen)
- 8.3. Planning, Transportation & Public Safety Committee (Ragsdale)
- 8.4. Sustainability Committee (Harwood)
- 8.5. Vision Team No. 10: Makiki-McCully-Mo'ili'ili-Manoa (Heinrich)
- 8.6. Ala Wai Watershed Association (Heinrich)
- 8.7. Kamoku-Pukele Community Advisory Committee (Heinrich, Lam)
- 8.8. Oahu Metropolitan Planning Organization Citizens Advisory Committee (Heinrich, Shoji, Ragsdale (alt.))
- 8.9. Ad Hoc Community Parking Committee (Heinrich, Ragsdale)

## 9. Announcements & Correspondence

**9.1. Next Regular Board Meeting.** The Manoa Neighborhood Board's next regular meeting will be held on **Wednesday May 5, 2004 at 7:00 P.M.** at the Noelani Elementary School Cafetorium, 2655 Woodlawn Drive. The regular meetings of the Board are held on the first Wednesday of each month at the same time and place, unless otherwise noticed. To verify the meeting schedule, please call the Neighborhood Commission Office at 527-5749.

**9.2.** The **next Neighborhood Commission meeting** is tentatively scheduled for **Tuesday April 13, 2004 at 6:30 P.M.** at City Council Chambers, City Hall, 3rd Floor, 530 South King Street. To verify the meeting schedule and review the agenda, please call the Neighborhood Commission Office at 527-5749.

**PLEASE NOTE** that Manoa Neighborhood Board No. 7 member Clara Y. Ching, Ph.D. (Subdistrict 3) has been appointed by Mayor Jeremy Harris and confirmed by the City Council to serve a 5 year term on the 9 member Neighborhood Commission (succeeding Karen Iwamoto; Section 14-102 of the Revised Charter of the City & County of Honolulu 1973 (2000 edition)). Dr. Ching was to take the oath of office in mid-March, upon her return from an out-of-state trip. **CONGRATULATIONS!**

**9.3. Manoa Valley District Park (MVDP) Activities.** **(1) Easter Sunday** activities are scheduled for **April 11, 2004** with Crafts at 9:30 A.M. and an Egg Hunt at 10:00 A.M. Meet at the "old gym." For more information, call 988-4747. **(2) TryFest**, a senior citizens (age 55+) special activity designed to encourage folks to try different things and to stay active, will be held on **Thursday April 15, 2004**. Registration begins at 7:30 A.M. and activities are scheduled on the hour at 9:00, 10:00, and 11:00 A.M. This year's line-up includes sessions in various types of exercise movement, sports like tennis and golf, special interest classes in ukulele and hiking (including a hike on Wa'ahila Ridge), and a session in healthy cooking. Over 400 senior citizens from all of Oahu are expected to attend. For more information, please call MVDP Supervisor Howard Yoshioka at 988-0513. **(3) Manoa Aquatics** is holding a major swim meet on **Friday to Sunday April 23-25, 2004**. For more information, call the Manoa Pool Office at 988-6868.

**9.4.** The next **Vision Team 10: Makiki-McCully-Mo`ili`ili-Manoa** meeting has not yet been scheduled. Everyone is welcome to attend and participate! Please call Tom Heinrich at 988-3469 or Peter Radulovic at 523-4259 to verify the meeting schedule, for more information, or to be added to the Vision Team 10's mailing list.

**9.5. Neighborhood Plan Revision Effort Update.** The Neighborhood Plan Committee of the Neighborhood Commission has completed a 7-month long series of workshops to refine the Second Draft Revised Neighborhood Plan (RNP) 2002. The document sets forth the rules to govern the Neighborhood Commission and all Neighborhood Boards, and is a comprehensive revision of the present RNP 1986 (1998 edition). A "Third Draft Revised Neighborhood Plan 2004" is now being prepared to serve as the basis for public hearings and final Neighborhood Commission action to adopt the new plan. For more information or to obtain a copy of the Second Draft RNP 2002 (available now) or Third Draft RNP 2004 (when completed), please contact Terry Morris at the Neighborhood Commission Office at 523-4088.

**9.6.** The revised draft of the **Primary Urban Center Development Plan (PUCDP)** dated May 2002 has been released by the Department of Planning & Permitting for public review and comment; the comment deadline was November 30, 2002. The document must go before the Planning Commission and Honolulu City Council for public hearings prior to adoption. A public hearing was held before the Planning Commission on October 29, 2003; the commission voted 7-0-0 in support of the PUCDP. First reading of **Bill 74 (2003)** to adopt the PUCDP and referral to the City Council's Committee on Planning occurred on January 28, 2004.



Neighborhood Board agendas and minutes are available on the internet at  
<http://www.co.honolulu.hi.us>.

Any disabled person requiring accommodation to be able to participate at this meeting may call the Neighborhood Commission Office at 527-5749 for information and assistance.

Monday, April 12, 2004

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## MANOA NEIGHBORHOOD BOARD

### DRAFT

#### REGULAR MEETING MINUTES

Wednesday, April 7, 2004 7:00 p.m.  
Noelani Elementary School Cafetorium  
265 Woodlawn Drive

**CALL TO ORDER:** Chair Tom Heinrich called the meeting to order at 7:15 p.m. with a quorum present. He introduced present Board members and Neighborhood Assistant Kimberly Kaupu.

Grace Furukawa a resident of Manoa thanked the Board on their position against the Chair's Veto last month. The Board voted 11-0-0 on the resolution written by member George Nakano against such a bill.

**MEMBERS PRESENT:** George Nakano, Chuck Pearson, Gary Andersen, Joe Ezaki, Virginia Hueftle, Clara Ching, Jason Iwai, Nadine Nishioka, Cecily Wong, Richard Fassler, Tom Heinrich, Jim Harwood, Tom Borges, and Milton Ragsdale.

**MEMBERS ABSENT:** Hank Chapin, Peter Shoji, and Julie Reyes.

**GUESTS:** Grace Furukawa, Lt. A. DeLima and Sgt. T. Jones (Honolulu Police Department), Officer R. Cobangbang and Lt. J. Matassa (Honolulu Police Department), Captain Chung (Honolulu Fire Department), Lawrence Reifurth (Governor's Representative), Clifton Takamura (Vice Chair Neighborhood Board No. 8 McCully/Moili'iili), Sean Casey (Ala Wai Mauka Restoration Program), Traci Aiamau, Lynn Miller (Representative Kirk Caldwell's Office Staff), Councilmember Ann Kobayashi, Peter Radulovic (Mayor's Representative), Duke and Jennifer Bainum, and Kimberly Kaupu (Neighborhood Commission Office Staff).

#### PUBLIC SAFETY INPUT

**Honolulu Fire Department:** Captain Chung, from the Manoa Fire Station reported the following:  
1. There were 3 structure, 1 brush, and 1 vehicle fire, 34 medical emergencies, 1 search/rescue, and 4 miscellaneous alarms.

2. Fire Safety Tip: When cooking, roll up your long sleeves. Long sleeves are a hazard, as they may get caught on a pot handle or brush against a flame.

3. Residents may call the City's Household Hazardous Waste Hotline at 692-5411 or log onto their website at [www.opala.org](http://www.opala.org) for information on proper recycling and waste disposal.

**Honolulu Police Department:** Officer Cobangbang from District Seven gave the monthly statistics: Beat 750: There was 2 burglaries, and 1 unauthorized entry into a motor vehicle. Beat 751: There were 3 burglaries, and 1 unauthorized entry into a motor vehicle. Beat 752: There were 2 burglaries and 2 unauthorized entry into a mote vehicle.

Narcotics statistics: Currently, the Narcotics/Vice Division's Complaint's Detail is working on

eight new complaints, a total of 3 complaints were closed. There were 3 people arrested for narcotics related offenses including 3 lock up cases. There were four methamphetamine arrests, and 2 drug paraphernalia arrests.

During the month of March, Narcotics/Vice personnel assigned to the Hawaii Airport Task Force (HATF) seized approximately 12,500 grams of methamphetamine with a total value of 5,000,000.000 dollars, with 14 people arrested for the offenses.

The new areas of complaints are Hawaii Kai Drive, Lunalilo Home Road, and Sandy Beach.

Questions, answers, and concerns:

1. Officer Cobangbang mentioned a car couldn't be parked on City streets for more than twenty-four hours. The Department is continuing to monitor the University area for abandoned vehicles.

Chair Heinrich mentioned on the makai side of the intersection of Liloa Street and Armstrong Street there seems to be an abandoned Chevy with the hood unlocked.

Lt. Matassa updated the situation on legislative and City Council bills. (1) House Bill 2259, which creates a misdemeanor offense for using the 911 emergency telephone numbers to make a false alarm, false complaint, or report of false information is currently alive but will most likely be killed next week. (2) Council Bill 7, will allow for issuance of administrative citations for violations of the Traffic Code.

Questions, answers, and concerns:

1. Pearson inquired about who introduced Council Bill 7. Lt Matassa replied the Council proposed the bill to create city revenues.
2. Harwood expressed concern for the status of the 311 non-emergency number. Lt. Matassa mentioned the bill would be going into combine conference committee. Now the department needs to wait and see if there are funds in the final budget.
3. Chair Heinrich asked the Board if anyone would like to entertain a motion considering a proposed resolution in support of the "Law Enforcement Legislative Package" Elements, including but not limited to: (1) Allowing for "Early" Retirement Eligibility for Police/Emergency Dispatch Operators after 25 years of service; (2) Imposition of Criminal and/ or Civil Penalties for misuse of the 9-1-1 system.

The Board made no recommendations and would like to see what measures will continue.

The agenda was taken out of order with no objections.

**Approval of the Regular Meeting Minutes of April 2, 2003, May 7, 2003, June 4, 2003, July 2, 2003, and August 6, 2003. October 1, 2003, November 5, 2003, December 3, 2003, February 4, 2004 March 3, 2004, and the Special Meeting Minutes of June 21, 2003:** Andersen read an insert "Rule of Order" of the book of Robert Rules.

Chair Heinrich will take it under advisement and pointed out the statement which calls the approval of the minutes is the ratification of what the Board did. He mentioned that's not correct. The approval of the minutes is the approval of the written representation of the summary recoding of what happened at the meeting.

Andersen felt the issue could be debated. Chair Heinrich replied the actions that are taken and recorded out is consistent with actions are the actions of the Board stand. The approval of the minutes is simply the recording and public record and the draft minutes are available at the Neighborhood Commission Office. But the approval of the minutes does not affect the validity of what was done at the meeting. So there is nothing to do with

the business that was considered, but has to with providing the written record of what was done and not so much what was said. Andersen replied he believes the plan says what was said.

Andersen would like the draft minutes to be e-mailed to all Board members and postal mail to others without e-mail. Chair Heinrich agreed that could be done.

Ching expressed the minutes serve as the official record of the Neighborhood Board and serves also as information to those in the neighborhood. The minutes had previously always been sent out and its important for everyone to know the business the board is involved in. She mentioned the draft from last month's meeting was incomplete and feels if the chair is too busy and the Board may help to assist with the draft minutes.

Chair Heinrich mentioned the minutes would be prepared in draft form for consideration of approval at the next meeting on May 5, 2004.

Borges would like to ask why the minutes have not been approved. Chair Heinrich mentioned the bottom line is he had not put his attention into the minutes. Borges asked if anyone could be delegated to review the drafts. Chair Heinrich announced the members of the Board could receive the drafts in advance.

Harwood thinks the e-mail is a great step forward.

Pearson would like to receive the draft minutes. Andersen implied the whole board should receive them.

The agenda resumed back to order.

#### **New Business**

**Consideration of Proposal by AT&T Wireless Services, Inc. (AWSI) to Install a Cellular Antenna at the Bilger Addition Building, University of Hawaii at Manoa Campus - Colette Sakoda, Agent for AWSI:** Colette Sakoda mentioned AT&T Wireless will need to apply for a minor Conditional Use Permit and have a Chapter 3-43 Environment Assessment done for the state. They are looking to install the 6 six feet tall cellular antennas on the Bilger Addition Building at the University of Hawaii at Manoa Campus that houses their Chemistry Department. Sakoda mentioned the antennas will be the same color as the existing building and is also hidden from site.

AT&T would like to install these antennas so wireless customers can receive better quality of service.

Questions, answers, and concerns:

1. Andersen implied if the architecture of the building will be kept the same. Sakoda replied the company would be working to keep with the same architecture.
2. It was mentioned no effects would show until the bids have gone out.
3. A resident would like to see more cellular antenna sites so there can be an increase in the quality of service.
4. Andersen asked if the antennas could hold enough strength to reach back to Manoa Falls. It was mentioned there would have to be an additional site within the valley.
5. Chair Heinrich pointed out there will no public hearing required for the minor permits. A letter is sent to the Department of Planning and Permitting saying that they appeared before the Manoa Neighborhood Board.

Chair Heinrich asked if the Board would like to entertain a motion.

**Ragsdale moved and Harwood second that the Manoa Neighborhood Board No. 7 has no**

**objection to the proposed installation of cellular service panel antennas at the University of Hawaii at Manoa campus, Bilger Addition building (Tax Map key No. 2-8-023:003) by AT&T Wireless Services, Inc., for which a Minor Conditional Use Permit for a Utility Installation Type B is needed from the City and County of Honolulu Department of Planning and Permitting.**

Board Discussion:

1. Nishioka mentioned one day at the park there was a period of time that no one could use his or her cellular phones. It was mentioned that if the antennas were down other wireless companies would feel the affect.
2. Ching implied there could be danger if the antennas are placed on top of the Chemistry Department. Sakoda replied there is a buffer zone and the same building houses the landline system for the entire University of Hawaii.
3. It was told to the Board and the antennas will produce residents about 35 to 300 watts.

**The motion passed unanimously 13-0-0.**

Presentation Concerning the Mauka Ala Wai Watershed Controlled Feral Pig Hunt (May 3, to July 30, 2004) Sean Casey, Ala Wai Mauka restoration Program: Sean Casey reported the following. The Koolau Mountains Watershed Partnership is a voluntary alliance of public and private partners managing forested watersheds to protect the environment and ensure fresh water supplies for future generations. They assist landowners in managing nearly 100,00 acres to improve the Koolau watershed for economic, social, and environmental purposes.

There are seven primary threats to the Ko'olau Mountains Watershed that can be identified. (1) Feral Ungulates, (2) Invasive Non-Native Plant Species, (3) Other Non-Native Animals, (4) Human Activities, (5) Aquatic Pollutions, (6) Wildfires, and (7) Urbanization and Development.

The Ala Wai Watershed Mauka Restoration Project is funded through the US EPA, State DOH Clean Water Branch. The cooperators involved are: (1) DLNR-DOFAW, (2) Hawaii Nature center, (3) Maunalaha Community Association, (4) Honolulu Board of Water Supply, and (5) Volunteer Stewardship Network, the Nature Conservancy. The project components are as followed: Controlled ungulate hunting program, Forest Restoration, Volunteering training and project monitoring (ungulate vegetation and water quality).

The impacts of Feral Pigs: (1) they destroy native habitat through trampling, eating, and rooting. (2) They disturb soil, accelerating degradation, erosion, landslides, and sedimentation. (3) This encourages the spread of alien plants by tilling the soil. (4) There is a spread of weeds of invasive species (i.e. strawberry and guava). (5) There is direct predation on native species such as free ferns. (6) The areas will be vector for human diseases, including coliform bacteria and Leptospirosis. (7) There will be archeological sites begin disturbed. (8) Creates wallows, breeding grounds for mosquitoes and cause for avian malaria and other diseases.

Ungulate Control- There is several strategies available to land managers to control pigs: Fencing (enclosure and Strategic), Snaring and Trapping (box traps, bait and poison), and Hunting (bow & arrow, firearms, dog & knife).

Makiki-Tantalus-Manoa Controlled Hunt is a 15 month program which is on 3 months, and off 3 months. Phase One is from May 3 through July 30, 2004. Phase Two is from November 1 through January 28, 2005. Phase Three is from May 2 through July 29, 2005. The days for hunting will be Monday, Wednesday, and Fridays. They are able to hunt from sun up to sundown with dog and knife only.

Application Process- Hunters must apply by April 12, 2004 for Phase One, and all hunters must have a current hunting license. There is a maximum of 10 dogs per group and the group leader

must attend briefing and education meeting on April 22, 2004. Application could be picked up at the Makiki DLNR baseyard, Waimano baseyard, the Kalanimoku Building #325, and on the web at [www.dofaw.net](http://www.dofaw.net).

The hunting educational briefing will be on April 22 from 6-8 p.m. at the Makiki DLNR baseyard, and only two groups are chosen for each day and the first group chosen per day will have the choice of mauka access point. The access points are the Makiki baseyard, Lyon Arboretum, Manoa Cliff Trail, Puu Pia Trail, and the Waahila Ridge Trails. The Nuuanu Public Hunting Area and Palolo-Kaau Crater Loop Trail are areas that the hunters should avoid and are closed trails.

The hunters should always remember to avoid incidents with hikers and residents, they should always take control of their dogs entering and exiting, and when encountering any hikers. They need to remember general decency and remember to hang or keep out of plain view the gut sacks. The dog feces at trailheads should be cleaned up. All reports of grievous misconduct will result in the termination of this program. This is a chance to change the public perception of hunters. When possible, take the time to explain the program to hikers/residents. This will help to pave the way for future hunting opportunities in this area and others.

The hunters should follow these certain rules. They should only use the access point, only hunt with dog and knife only and there should be no use of firearms and no bow, and arrow hunting will be allowed.

The hunters also have some special conditions that are important at the time of hunting. The permit and hunting licenses of all group members should be on the person while hunting, each permit should list the names of the participating hunters, the hunters are required to report their harvest after each hunt by calling 973-9789, and reports of unauthorized hunters should be made.

Each group will have additional education in miconia, with the Hawaii nature Center, DOCARE, the Honolulu Police Department, and the Na Ala Hele and with DOFAW.

When the hunting starts there will be noticed posted with the following: "PIG CONTROL IN PROGRESS HUNTERS WITH DOGS MAY BE ON HIKING TRAIL, MONDAY, WEDNESDAY, AND FRIDAY FROM SUN-UP TO SUNDOWN. Hikers Should Wear Bright Clothing; Dog Owners Should Hike Other Trails During Control Periods. NON-PERMITTED HUNTERS WILL BE PROSECUTED. State of Hawaii Department of Land and Natural Resources, Division of Forestry and Wildlife.

The department will take precautions such as signs, press releases, and community presentation and push the media.

When the each phase is done there will be ungulate monitoring. The pre and post monitoring is to monitor the effects of controlled hunts, to create usable long-term protocol and to educate and involve community volunteers. Phase one pre-hunt monitoring will happen on May 1, 2004 with two volunteers at each access points.

For more information please call Sean Casey at 453-6110 or 780-7326 or by e-mail [sean\\_casey99@hotmail.com](mailto:sean_casey99@hotmail.com)

Questions, answers, and concerns:

1. Harwood would like to know if the hunts are for the hunters to practice their skills or to primary get rid of the pigs. Casey replied it's to get the pigs out of the watershed areas and at this time there is an opportunity for the state to open up more hunting areas. Harwood feels there are better ways for hunting than to use dog and knife. Casey replied there are several other ways like trapping, poisoning, and snares that have shown some problems.
2. Andersen would like to know if the program is part of the Department of Land and Natural Resources. Casey mentioned the program is funded by the EPA grants and is in corporation with the state and DOFAW. Andersen asked who is liable. Casey replied the State is not assuming third party liable for injuries associated with this controlled hunt. The department is posting informational signs at trail heads and

putting out press releases to inform the public that hunting is taking place in the area.

3. Andersen pointed out the gut sacks should be removed from the Watershed. Casey mentioned if the hunters don't follow the rules the hunts will stop. Andersen asked if other consideration was taken into what type of method to use on the hunts. Casey replied the dog and knife option was selected for safety reasons – not allowing guns or bow and arrows because of the proximity to residential areas and use of trails by hiker; and for efficiency – dogs are the most effective way to hunt, find and take pigs out of the area. Pig hunting with dogs and knife or spear is a traditional hunting method in Hawaii.
4. As a hiker Borges would like to see maps of the areas that the hunters will occupy. Casey mentioned the hunters could start in one area and by lunchtime they could on the other side of the valley.

Pearson replied property owners and associations could be involved and inform hikers the area the hunters are in at that time.

5. Ragsdale pointed out the dog and knife method is the way to go and it is typically normal for the gut sacks to remain on the trails.

#### **Committee Input**

**Residents & Others:** Cecily Wong informed there would be a blood drive at the Manoa Market Place on April 29, 2004 from 10:00 a.m. to 4:00 p.m.

**Malama O Manoa:** No representative was present.

**University of Hawaii Administration:** Jim Manke reported there are only four more weeks of school and on Saturday, April 10 there will be heavy traffic on Dole Street due the concrete pour.

Questions, answers, and concerns:

Chair Heinrich inquired if the grass area is still going to be used for parking. Manke replied until the semester is over and the new parking structure is completed.

**Governor's Representative:** Lawrence Reifurth, Deputy Director for the Department of Commerce and Consumer Affairs distributed the Governor's Weekly Highlights and was open for any questions.

Board member Richard Fassler arrived at this time.

#### **Elected Officials**

**Councilmember Ann Kobayashi:** Councilmember Kobayashi distributed a handout and highlighted the following: (1) there will be a public hearing on April 13, 2004 on the budget for the fiscal year 05 starting at 2:00 p.m. (2) The landfill selection: The Land Use Commission gave the Council a deadline of June 1, 2004 to select the site of the new landfill. However Councilmember Kobayashi feels that rather than trying to find a new site, the council should be looking if there is new technology and different alternatives to mitigate the need for a landfill. The council should be looking at the current recycling method and all of its problem, and implement of a recycling system that works. (3) Sale of Rental Property: the current plan by the administration is to sell off all the City's rental properties is causing much distress for the tenants, and the proposed resolution is fraught with problems and misgivings. The council is not in favor of these sales and will not pass any resolution to do so.

Questions, answers, and concerns:

1. Andersen asked why the 30% cut to the Neighborhood Commission Office.

Councilwomen Kobayashi replied the bill has been rejected and cuts will be made to the supply area.

2. Councilmember Kobayashi mentioned the Department of Parks and Recreation are having problems and forces projects on a wait list.
3. Clifton Takamura expressed concern on the proposal from the City Council to cut the Neighborhood Commission Office budget by 30%. He is deeply upset because he believes in the government so much. Councilwomen Kobayashi mentioned the proposal was rejected and some amendments have been made.

**Representative Kirk Caldwell:** The representative was not present; Lynn Miller distributed a written report.

**Mayor's Representative:** Peter Radulovic mentioned the Mayor submitted the administrative budget and there are no significant increases only a 7% increase for commercial properties, and the island wide recycling project will be of no charge.

Questions, answers, and concerns:

1. Iwai would like to where the next landfill will be. Radulovic replied the City Council would make that decision.

**Board of Water Supply:** Howard Matsuda gave the following report for the past month: (1) there were no main breaks in March. (2) There are still four pending projects and one ongoing project at Waahila Ridge. (3) The department has now four projects in the design phase: (a) Woodlawn Water System Improvements, Part 2, (b) Woodlawn Drive 8-inch Water Main, (c) Oahu Avenue and Huelani Drive 8-inch Main, and (d) University Water System Improvements, Part 2.

(4) General Water Announcements: (a) The BWS hopes everyone can attend the workshop on Saturday April 17, 2004 at the Honolulu Hale courtyard. (b) More than three thousand Oahu students from Kindergarten to 6<sup>th</sup> grade entered the annual water conservation poster contest with the theme "Conserving Water for Life." Entries were judge last week and the winners will be announced at the end of April 2004. (c) Water use on Oahu is down slightly with residents consuming an average of 137.38 million gallons during the week ending March 24, 2004. This is a decrease of 1,18 mgd over the previous week, however, compared to last year, water use is down 15.09 mgd. Please continue your conservation efforts to allow the aquifers to recharge.

(5) In response to a previous question about whether the Board of Water Supply knows about the earth movement at the University, the Board of Water has not yet looked into it as being a problem.

**Department of Parks and Recreation:** Chair Heinrich listed the following in the agenda item 9.3 Manoa Valley District Park Activities: (1) Easter Sunday activities are scheduled for April 11, 2004 with crafts at 9:30 a.m. and an egg hunt at 10:00 a.m. Meet at the "old gym." For more information, call 988-4747. (2) TryFest, a senior citizens (age 55+) special activity designed to encourage folks to try different things and to stay active, will be held on Thursday April 15, 2004. Registration beings at 7:30 a.m. and activities are scheduled on the hour at 9:00, 10:00, and 11:00 a.m. This year's line-up includes sessions in various types of exercise movement, sports like tennis and golf, special interest classes in ukulele and hiking (including a hike on Wa'ahila Ridge), and a session in healthy cooking. Over 400 senior citizens from all over Oahu are expected to attend. For more information, please call Howard Yoshioka at 988-0513. (3) Manoa Aquatics is holding swim meet on Friday to Sunday April 23-25, 2004. For more information, call the Manoa Pool Office at 988-6868.

#### **Board Planning and Administration**

**Treasurer's Report:** Chair Heinrich read the monthly financial report, which is available for interested parties.

**Consideration of Whether the Manoa Neighborhood Board Should Initiate the Process of**

**Revised Neighborhood Plan 1986 (1998 edition) Section 4-2.3 to Declare a Member's Seat Vacant if the Member Has accumulated Three (3) or More Absences From Duly Noticed Regular Meeting From June 1, 2003 to the Present.** Chair Heinrich advised everyone to look at the graphs that were distributed and see that Board member Julie Ryes has missed six (6) of the nine (9) regular meetings that have been held.

Pearson mentioned the Board needs the members to show up so that there is quorum and business can be taken at that time. Chair Heinrich mentioned everyone has been in contact with him as to not attending meetings except for Ryes. The times period for the meetings are from June 1, 2003 to May 2004. A member is only allowed three (3) absences in a twelve month period, which is the term that they were elected for.

The Neighborhood Assistant left the meeting at 10:00 p.m. and the reminder of the minutes were taken by Chair Heinrich.

Submitted by,  
Kimberly Kaupu  
Neighborhood Assistant

Friday, September 03, 2004

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**c. PWC EME Prediction Study**

# **ELECTROMAGNETIC ENERGY (EME) PREDICTION STUDY**

## **CINGULAR**

**SITE:**

**UNIVERSITY OF HAWAII AT MANOA  
BILGER HALL ADDITION ROOFTOP**

**MARCH 2005**



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    Terms and Notes

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## FOREWORD

The following is provided to assist in complying with the following regulatory requirements:

FCC passed law 96-326, August 1996  
FCC Title 47 CFR 1. & 2. and OET Bulletin 65 with Supplements  
OSHA Title 29 CFR 1910. 147, Control of Hazardous Energy  
(Lockout/Tagout)

This document is not intended to substitute for or supersede the requirements of the foregoing law and regulation. It should be reviewed for relevancy to your particular work applications and modified, as necessary, in order to develop an effective, comprehensive RF/Microwave Emissions Program. Employers should note that program documentation is expected to be reviewed at least annually and updated as necessary.

## APPLICATION

This document applies to operations where employees, visitors and the general public may be exposed to levels of RF and Microwave Emissions at or above maximum permissible exposure (MPE) limits.

## BACKGROUND

In August 1996 the Federal Communication Commission (FCC) adopted new guidelines for evaluating the environmental effects of radiofrequency (RF) energy from transmitters on wireless communication sites. While there is no scientific evidence that RF emissions from these sites operating within established safety guidelines pose a health risk, fields close to antennas on transmitter sites must be understood and care must be taken to assure safe operation during maintenance. The guidelines adopted by the FCC provide considerable margins of protection from any known health risk.

The Telecommunications Act of 1996 mandated that the FCC implement regulations to protect public and workers from potentially hazardous exposure to non-ionizing radiation. The Act of Congress was driven by the National Environmental Policy Act (NEPA) of 1969, which requires agencies of the federal government to evaluate the effects of their actions on the quality of the human environment. In addition, recent studies indicated existing standards did not adequately protect workers and the general public from continuously increasing presence of Emissions associated with radio frequency transmissions.

In response to this mandate, the FCC passed law 96-326 in August 1996. The new guidelines implement more recent scientific studies of the biological effects of RF emissions and were recommended for adoption by the American National Standards Institute (ANSI), the Institute of Electrical and Electronic Engineers

(IEEE), and the National Council on Radiation Protection and measurements (NCRP). The FCC received favorable support for these stricter standards from the Environmental Protection Agency (EPA), the Food and Drug Administration (FDA), and the Occupational Safety and Health Administration (OSHA), as well as from a number of nongovernmental groups and companies.

**The FCC's rules on evaluation of environmental RF emissions are found in Section 1.1307(b) of the FCC's Rules and Regulations [47 CFR 1.1307(b)]. Guidelines for compliance with the FCC's rules can be found in an FCC technical bulletin (OET Bulletin No.65). Subsequent FCC items adopted since the first Order have dealt primarily with which RF sources are subject to the RF environmental rule and which are excluded [52 Federal Register 13240, 1987; 52 Federal Register 49032, 1987; 53 Federal Register 26223, 1988; 53 Federal Register 40916, 1988].**

## EXPOSURE STANDARDS AND LIMITS

With the publication of the SCC28 standard as ANSI/IEEE C95.1-1992, a number of new elements were added to prior ANSI standards. These changes included modification of the exposure limits and the classification of exposure environments as Occupational/Controlled and General Population Uncontrolled. Exposure limits in the new guidelines adopted by the FCC are specified in terms of Maximum Permissible Exposure (MPE) as a function of frequency; MPE's are given in units of electric and magnetic field strength and power densities. For exposure to multiple frequencies, the fraction (or percentage) of the MPE produced by each frequency is determined and these fractions (or percentages) must not exceed unity (or 100 percent).

Different limits apply to different circumstances, based on whether a person at or near a specific site knows or is informed and has control of potential RF exposure. **Occupational/Controlled Environment** limits apply to individuals who should know that there is a potential for exposure as a requirement of employment, or as the incidental result of transient passage through areas that may exceed exposure levels beyond the General Population Uncontrolled environment MPE's. For example, a maintenance technician who performs work on transmitters should be aware -- due to training and the nature of his work -- that transmitters produce RF energy. Because of the knowledge and understanding that exposure is possible, this individual would be evaluated against the Occupational/Controlled environment limits. **General Population Uncontrolled Environment** limits apply to individuals assumed to have no knowledge of or control over their possible exposure to RF energy. If the technician in the example above brought his family to the same area, the situation would change. Since the family members would not be assumed to have knowledge or understanding of the RF environment, their exposures would be judged against the limits for General Population Uncontrolled environments. The technician, however, would be evaluated against the Occupational/Controlled environment limits. Simple understanding or precautions can assure that RF levels at or near an antenna site do not exceed maximum permitted exposure levels. The MPE exposure levels for General Population controlled environments are five times lower than the MPE exposure levels for Occupational/Controlled environments (see Table 1 & Figure 1).

Table 1. LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

(A) Limits for Occupational/Controlled Exposure

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

(B) Limits for General Population/Uncontrolled Exposure

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

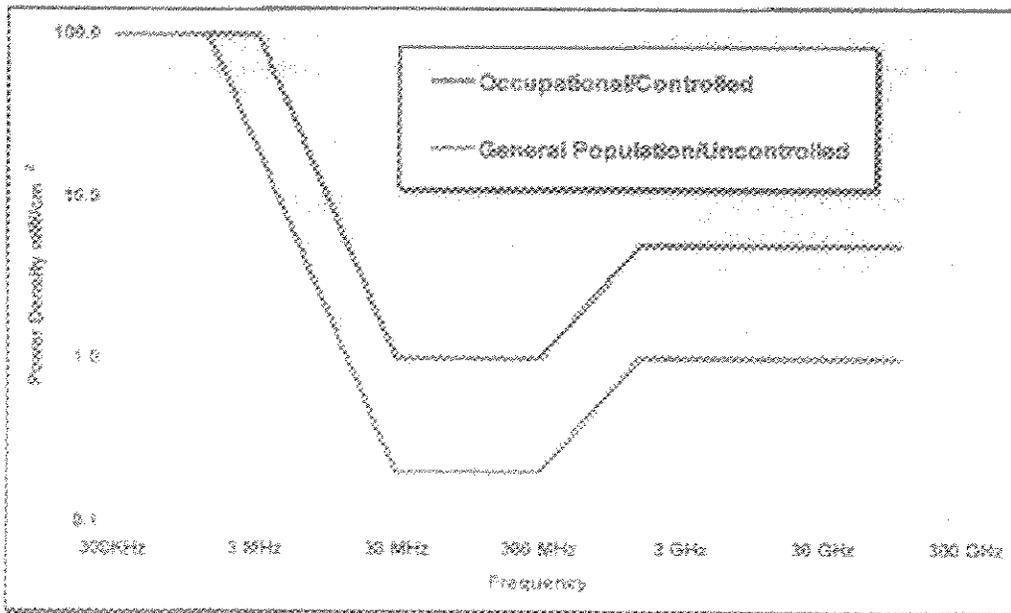
f = frequency in MHz

\*Plane-wave equivalent power density

NOTE 1: *Occupational/controlled* limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2: *General population/uncontrolled* exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Figure 1. FCC ADOPTED MAXIMUM PERMISSIBLE EXPOSURE LIMITS



## TERMS AND NOTES NEEDED FOR THIS PREDICTION REPORT

### Prediction Surveys

These models are intended to give an estimated indication of the MPE levels present around an antenna system. Personnel working around antennas should always make use of a personal RF monitor and follow all pertaining safety rules.

### Actual Survey Diagrams

The Hot Zones - blue, yellow, and red - depicted in these diagrams are color-coded to match appropriate signage, which should be placed in the vicinity of any Hot Zone(s). These signs are used to alert personnel of the EME levels present in the area.

#### ACTUAL SURVEY KEY

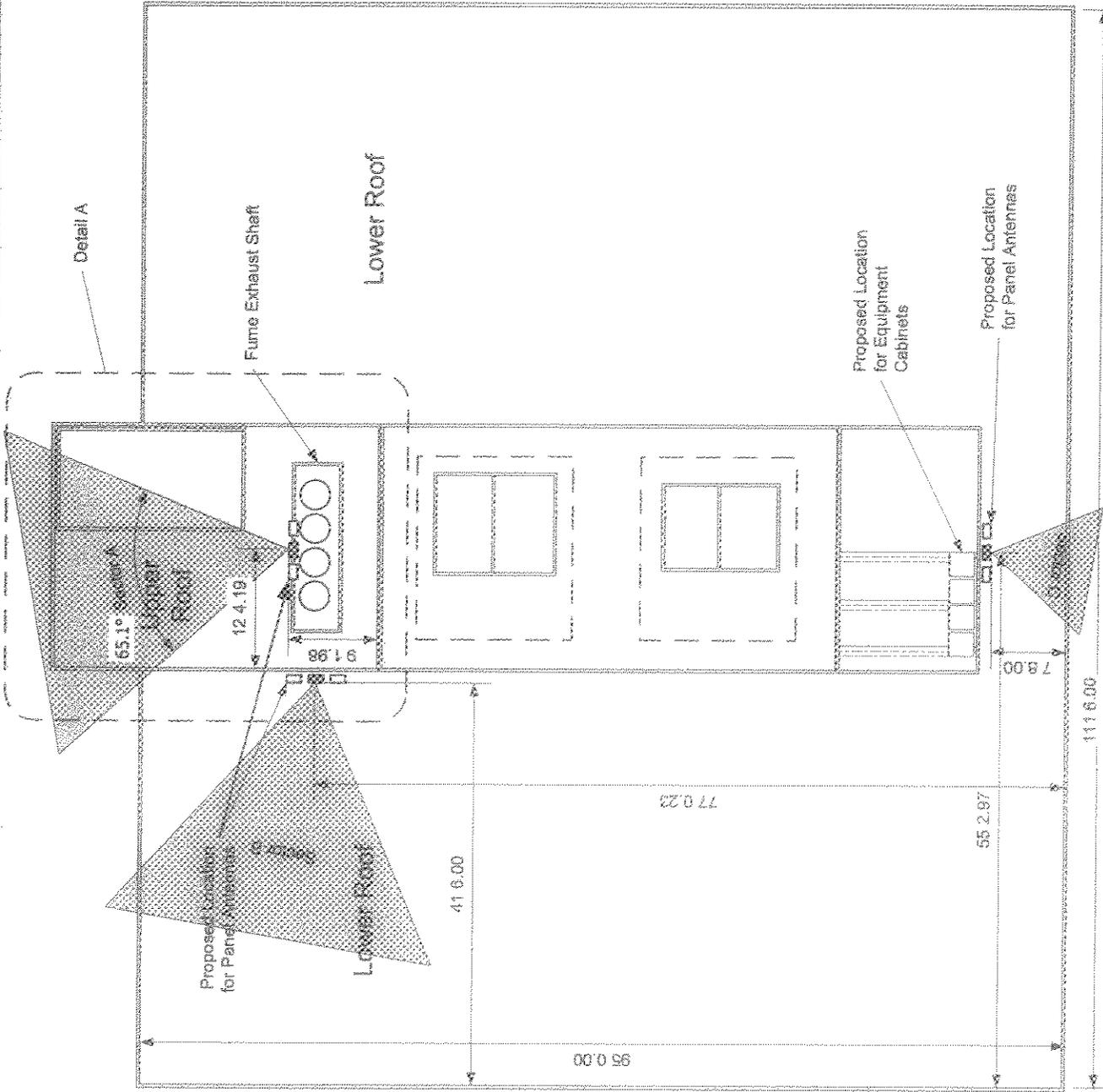
|                                                                                     |                                                 |
|-------------------------------------------------------------------------------------|-------------------------------------------------|
|  | Over 1001%<br>Broadcast Contractors<br>Allowed  |
|  | 101% - 1000% MPE<br>RF Qualified/Trained worker |
|  | 21% - 100% MPE<br>General Site Worker           |
|  | 0% - 20% MPE<br>General Population              |

#### SIGNAGE



## Section 2

**Bilger Hall Addition,  
Chemistry Facilities  
Building, Upper and  
Lower Rooftop**



- TX Antennas
- RX Antenna
- INOP Antenna
- Unidentified Antenna
- TV Antenna



TITLE

**Cingular - UH Manoa, Bilger Hall Addition**

Project: Cingular

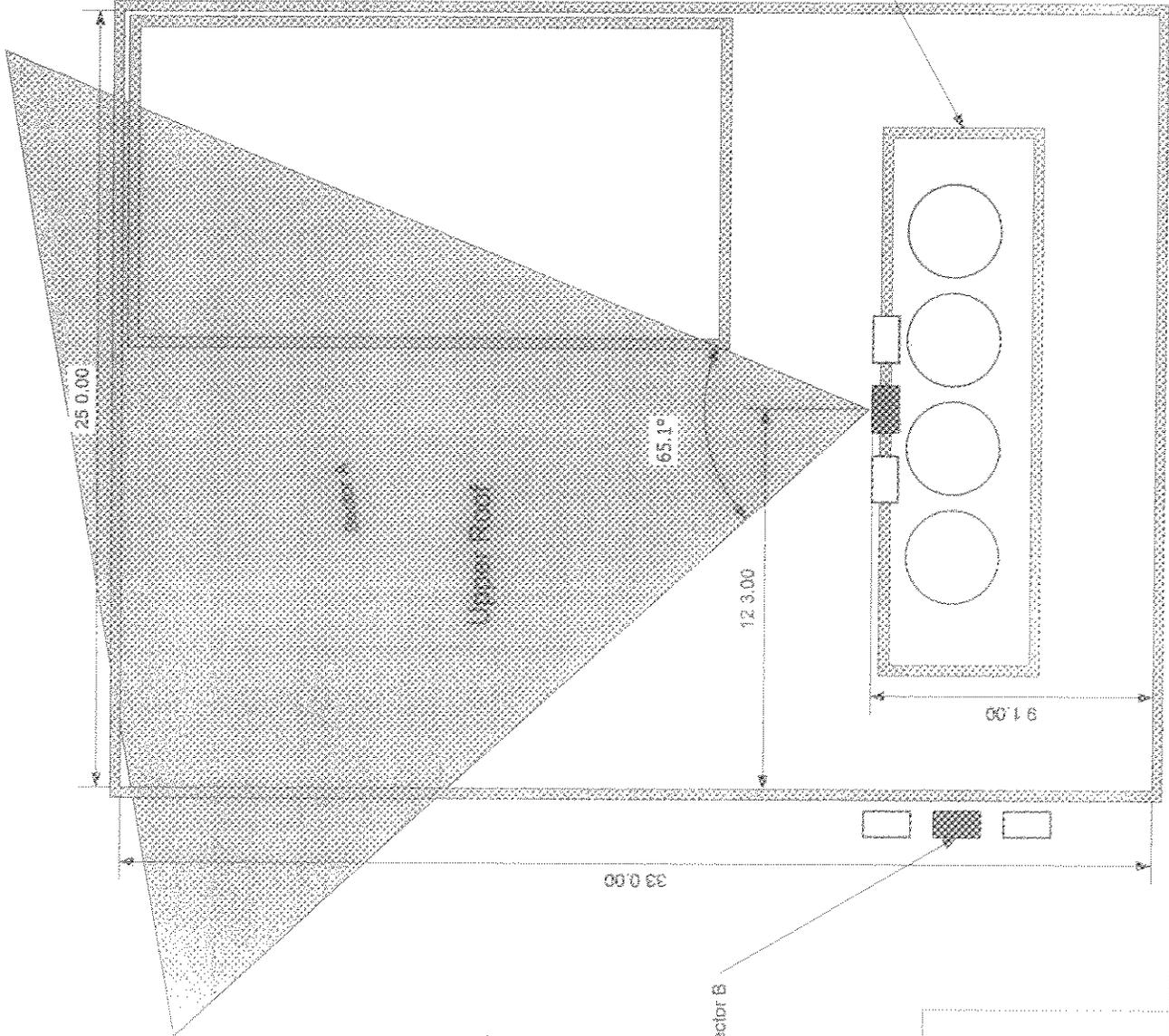
Dwg: UH Manoa - Bilger Hall Addition

06/13/05

Rev. 1

Scale : 1/16" = 1'

Pg. 1 of 6



Detail A: Bilger  
Hall Addition,  
Section of Upper  
Roof, Sector A

Sector B

Fume Exhaust Shaft

-  TX Antennas
-  RX Antenna
-  INOP Antenna
-  Unidentified Antenna
-  TV Antenna

TITLE

**Cingular - UH Manoa, Bilger Hall Addition**

06/13/05

Rev. 1

Project: Cingular

Dwg: UH Manoa - Bilger  
Hall Addition

Pg. 2 of 6

Scale: 3/16" = 1'



|           |                                                 |
|-----------|-------------------------------------------------|
| Customer: | Cingular                                        |
| Site:     | University of Hawaii, Manoa Campus, Bilger Hall |
| Study:    | Prediction Analysis                             |

| Antenna Description                | transmission power (watts) | number of antennas | total power (watts) | number (dB) | 7/8 length (dB) | loss (dB) | antenna gain (dB) | sum (watts) |
|------------------------------------|----------------------------|--------------------|---------------------|-------------|-----------------|-----------|-------------------|-------------|
| Cellular Panel, Sector A, 869 MHz  | 30                         | 4                  | 120                 | 0           | 50              | 0.2       | 13.3              | 1,981       |
| Cellular Panel, Sector B, 869 MHz  | 30                         | 4                  | 120                 | 0           | 50              | 0.2       | 13.3              | 1,981       |
| Cellular Panel, Sector C, 869 MHz  | 30                         | 4                  | 120                 | 0           | 50              | 0.2       | 13.3              | 1,981       |
| Cellular Panel, Sector A, 1950 MHz | 30                         | 4                  | 120                 | 0           | 50              | 0.2       | 16.3              | 3,953       |
| Cellular Panel, Sector B, 1950 MHz | 30                         | 4                  | 120                 | 0           | 50              | 0.2       | 16.3              | 3,953       |
| Cellular Panel, Sector C, 1950 MHz | 30                         | 4                  | 120                 | 0           | 50              | 0.2       | 16.3              | 3,953       |

Note: I used 50 ft of Coax for each antenna, 7/8" LDF Type Cable, and a loss of 0.2 dB. These values are for research purposes only. These will change the outcome of the prediction. In order to provide a more accurate prediction, actual data is necessary.

| Planum             | Del Blank  | Hide Power Detail | Peer Hide | Update Linking | Calculator | Export                    | All On |      |                |    |        |     |
|--------------------|------------|-------------------|-----------|----------------|------------|---------------------------|--------|------|----------------|----|--------|-----|
| Clear              | Ins Copy   |                   |           |                |            |                           |        |      |                |    |        |     |
| Antenna Data Table |            |                   |           |                |            |                           |        |      |                |    |        |     |
| 2 SEC B            | 1950.00000 | 30.0              | 4         | 50 7/8 LDF     | 0.2        | 97.8 Kathrein AP15 18-880 | 41.5   | 77.0 | 12.5 Panel 6.4 | 16 | 65,30  | ON* |
| 3 SEC C            | 1950.00000 | 30.0              | 4         | 50 7/8 LDF     | 0.2        | 97.8 Kathrein AP15 18-880 | 55.0   | 75.0 | 12.5 Panel 6.4 | 16 | 65,190 | ON* |
| 6 SEC B2           | 869.00000  | 30.0              | 4         | 50 7/8 LDF     | 0.2        | 97.8 Kathrein AP15 18-880 | 41.5   | 77.0 | 12.5 Panel 6.4 | 13 | 65,80  | ON* |
| 8 SEC C2           | 869.00000  | 30.0              | 4         | 50 7/8 LDF     | 0.2        | 97.8 Kathrein AP15 18-880 | 55.0   | 75.0 | 12.5 Panel 6.4 | 13 | 65,190 | ON* |

Lower Rooftop Antenna Information

| Customer:                          | Cingular                                        |                        |      |                   |                      |                |                    |             |  |  |
|------------------------------------|-------------------------------------------------|------------------------|------|-------------------|----------------------|----------------|--------------------|-------------|--|--|
| Site:                              | University of Hawaii, Manoa Campus, Bilger Hall |                        |      |                   |                      |                |                    |             |  |  |
| Study:                             | Prediction Analysis                             |                        |      |                   |                      |                |                    |             |  |  |
| Antenna ERP                        |                                                 |                        |      |                   |                      |                |                    |             |  |  |
| Antenna Description                | transmitter power                               | number of transmitters | loss | coaxial loss (dB) | 7/8 length loss (dB) | jump loss (dB) | antenna gain (dBi) | erp (watts) |  |  |
| Cellular Panel, Sector A, 869 MHz  | 30                                              | 4                      | 120  | 0                 | 50                   | 0.2            | 13.3               | 1,961       |  |  |
| Cellular Panel, Sector B, 869 MHz  | 30                                              | 4                      | 120  | 0                 | 50                   | 0.2            | 13.3               | 1,961       |  |  |
| Cellular Panel, Sector C, 869 MHz  | 30                                              | 4                      | 120  | 0                 | 50                   | 0.2            | 13.3               | 1,961       |  |  |
| Cellular Panel, Sector A, 1950 MHz | 30                                              | 4                      | 120  | 0                 | 50                   | 0.2            | 16.3               | 3,953       |  |  |
| Cellular Panel, Sector B, 1950 MHz | 30                                              | 4                      | 120  | 0                 | 50                   | 0.2            | 16.3               | 3,953       |  |  |
| Cellular Panel, Sector C, 1950 MHz | 30                                              | 4                      | 120  | 0                 | 50                   | 0.2            | 16.3               | 3,953       |  |  |

Note: I used 50 ft of Coax for each antenna, 7/8" LDF Type Cable, and a loss of 0.2 dB. These values are for research purposes only. These will change the outcome of the prediction. In order to provide a more accurate prediction, actual data is necessary.

Return Del Blank

Clear Ins Copy

Hide Power Detail

Hide

Update Logging

Calculator

Export

Import

Antenna Data Table

| Num | ID     | Name       | Power | Loss | Gain       | ERP | Panel | Gain               | ERP  |
|-----|--------|------------|-------|------|------------|-----|-------|--------------------|------|
| 2   | SEC A  | 1950 00000 | 30.0  | 4    | 50.7/8 LDF | 0.2 | 37.8  | Kathren AP1518-880 | 12.5 |
| 5   | SEC A2 | 869 00000  | 30.0  | 4    | 50.7/8 LDF | 0.2 | 97.6  | Kathren AP1518-880 | 12.5 |

Upper Rooftop Antenna Information



TITLE: Cingular - UH Manoa, Bilger Hall Addition

Project: Cingular  
 Dwg: UH Manoa - Bilger Hall Addition  
 Scale:   
 06/13/05  
 Rev. 1  
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### Section 3

**Cingular**  
**Horizontal Maximum Permissible Exposure Profile**

**Prediction Site:** UH Manoa – Bilger Hall Addition, Lower Roof

**Antenna(s) included in Prediction:**

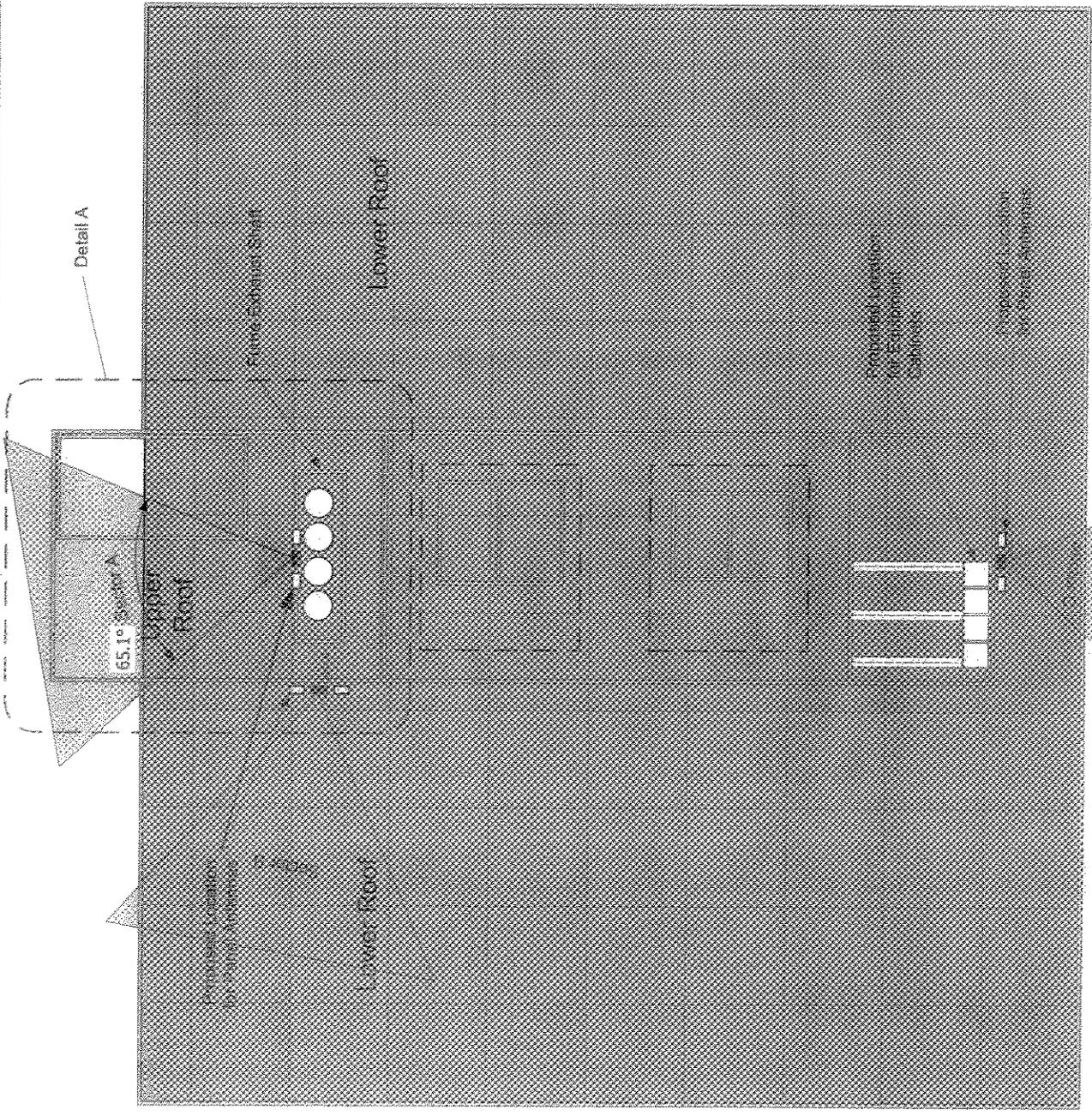
850 GSM / 1900 GSM Panel Antennas  
(Sectors B & C)

The following describes the results produced by the prediction software. For a given area, the Maximum Permissible Exposure readings between the 0' to the 6' level are calculated by the prediction software.

The area shown is the rooftop of Bilger Hall Addition. The area applied to the predicted analysis is approximately 10,640 square feet.

The area shown in green depicts an area where the predicted results are 0 – 19% of the Controlled Standard MPE, which is 100% of the total area (10,640 square feet). The maximum predicted MPE result is 18.2%, and the minimum predicted MPE result is 0.0%.

Note: "Hot Zones" are any areas greater than 20% of the Controlled Standard (i.e. deeming the area an Occupational/Controlled Environment. See Section One for definition).



-  Time Averaging area  
101% and Above MPE
-  Occupational/Controlled Area  
20% - 100% MPE
-  General Population/  
Uncontrolled Area  
0% - 19% MPE

Statistical Summary

| %MPE           | SQ. FT.     | %SQ. FT.    |
|----------------|-------------|-------------|
| 101% and Above | 1000        | 100%        |
| 20% - 100%     | 0           | 0%          |
| 0% - 19%       | 0           | 0%          |
| <b>Total</b>   | <b>1000</b> | <b>100%</b> |

Cingular  
Horizontal Maximum Permissible Exposure Profile

**Prediction Site:** UH Manoa – Bilger Hall Addition, Upper Roof

**Antenna(s) included in Prediction:**

850 GSM / 1900 GSM Panel Antennas (Sector A)

The following describes the results produced by the prediction software. For a given area, the Maximum Permissible Exposure readings between the 0' to the 6' level are calculated by the prediction software.

The area shown is a section of the upper roof of Bilger Hall Addition. The area applied to the predicted analysis is approximately 825 square feet. The area shown in green depicts an area where the predicted results are 0 – 19% of the Controlled Standard MPE, which is 100% of the total area (825 square feet). The maximum predicted MPE result is 18.2%, and the minimum predicted MPE result is 0.0%.

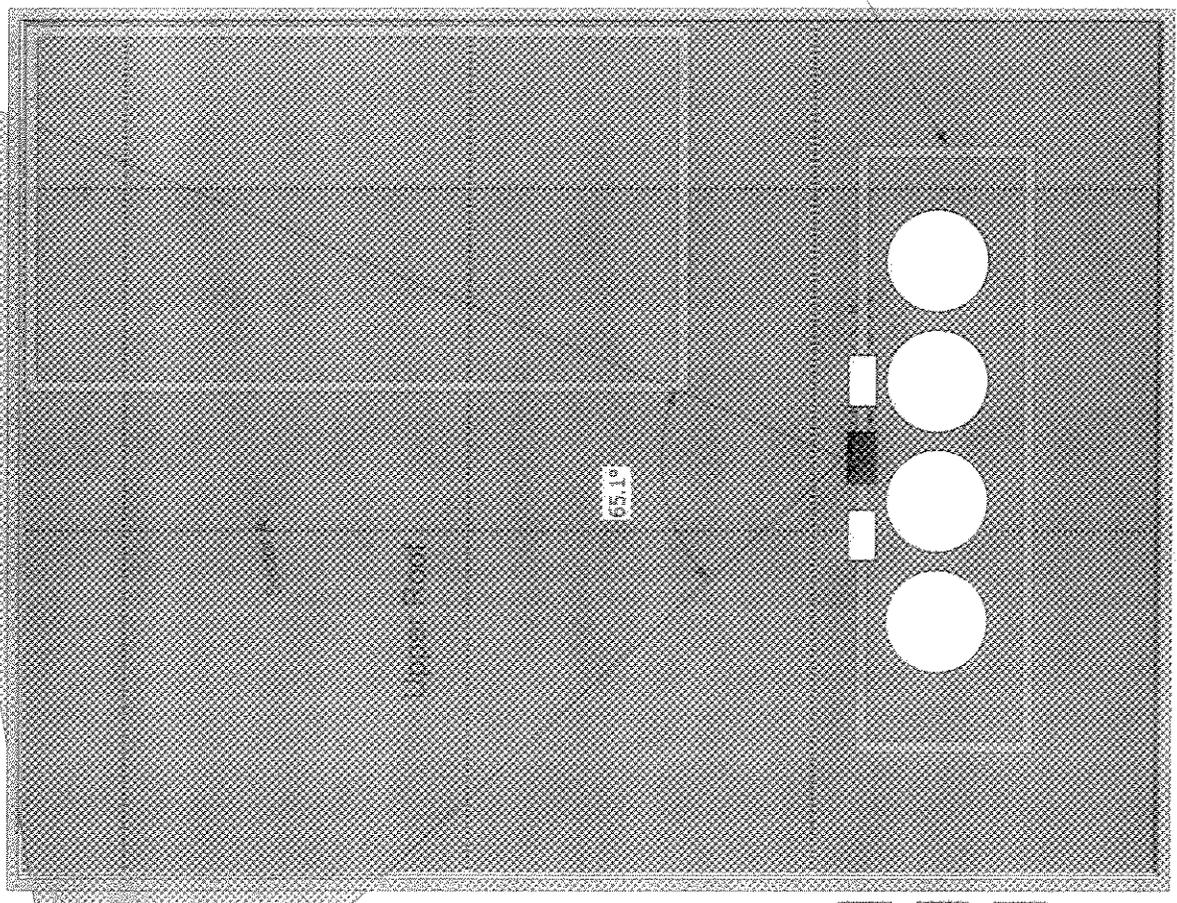
Note: "Hot Zones" are any areas greater than 20% of the Controlled Standard (i.e. deeming the area an Occupational/Controlled Environment. See Section One for definition).

-  Time Averaging area  
101% and Above MPE
-  Occupational/Controlled Area  
20% - 100% MPE
-  General Population/  
Uncontrolled Area  
0% - 19% MPE

Statistical Summary

| %MPE     | SQ. FT. | %SQ. FT.                    |
|----------|---------|-----------------------------|
| 0-19     | 100     | 100.00 % of Subdivided Area |
| 20-100   | 0       | 0.00 % of Subdivided Area   |
| 101-1000 | 0       | 0.00 % of Subdivided Area   |
| > 1000   | 0       | 0.00 % of Subdivided Area   |

Sector B



Project: Cingular  
 Dwg: UH Manoa - Bilger  
 Hall Addition  
 Scale : 3/16" = 1'

TITLE **Cingular - UH Manoa, Bilger Hall Addition**

DATE: 06/13/05



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## Section 4

## CINGULAR – UH MANOA, BILGER HALL ADDITION

### EQUIPMENT RECOMMENDATIONS

The cellular panel antennas on the rooftop of Bilger Hall Addition at the University of Hawaii, Manoa Campus, does not emit EME levels above the 20% Controlled MPE Standard onto the rooftop, according to the prediction analysis.

### SITE RECOMMENDATIONS

It is recommended that an EME Survey of the actual site be taken to supplement this predicted analysis report.

Note: The EME study and site recommendations pertain to equipment on the site during 3/30/05. In the event there is a site change in transmitter or antenna characteristic the study would need to be re-evaluated to include the changes.

## Section 5

#### DISCLAIMER

The purpose of this plan is to provide information to assist *Cingular* in understanding the concepts required to comply with FCC guidelines for human exposure to Electromagnetic Energy at antenna sites. Pacific Wireless Communications, LLC disclaims all warranties, expressed or implied including, without limitation, the implied warranties of merchantability and fitness for a particular purpose. In no event shall PWC be liable for incidental, special, consequential, or punitive damage (including without limitation loss of profit, revenue, savings, opportunity, or advantage of any kind), whether arising under contract, tort, or any other legal theory or cause of action, even if PWC has been advised of the possibility of such damages. PWC's aggregate monetary liability for any cause or causes shall in no event exceed the total of all amounts paid to PWC by *Cingular* the one-year period on which any claim is made.

The procedures presented in this document represent one approach for meeting FCC requirement and the procedures presented may be revised from time to time to reflect engineering advances and technology changes.

## **Certification of Categorical Exclusion**

## CERTIFICATE FOR TELECOMMUNICATIONS ANTENNA

This form is to be submitted along with building permit applications for telecommunication antennas. It shall be signed by the building permit applicant who shall be responsible for meeting the exclusion distance (setbacks) required by the Land Use Ordinance (LUO), and the veracity of information submitted within.

Building permit plans shall include a delineation of the exclusion distance, and shall provide any additional information to demonstrate that fencing or other measures are being taken to restrict public access within this distance.

Please type or print legibly all required information.

Tax Map Key: 2-8-023-003

Bilger Hall  
2444 Dole Street  
Honolulu, HI 96822

Applicant: Cingular Wireless

Brief Description of the Type of Antenna:

Directional PCS Panel Antenna

(e.g. land-mobile, paging service, mast antenna, dish. If antenna is an independent operational fixed-point microwave or receiving-only antenna, that does not qualify as an accessory use, please note this here; no other additional information is required for these antennas.)

Effective Radiated Power (ERP) of Antenna(s):

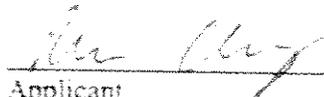
997 watts

(If more than one antenna is being proposed, or if an antenna is being added to a site where there are already other antennas, indicate combined ERP)

Computation of Exclusion Distance (ED) in feet:

$$\text{Exclusion Distance (in feet)} = .0325 * \frac{21.2}{\sqrt{(796\text{ERP})}}$$

Using the above formula, the Exclusion Distance is 29.0 feet.

  
Applicant \_\_\_\_\_ Date 4-1-05  
(If company, authorized signature)

## CERTIFICATION OF CATEGORICAL EXCLUSION FOR ANTENNA INSTALLATIONS

This certification shall be submitted with all Land Use Permit applications for antenna-related utility installations (see LUO Sec. 21-10.1). It shall be signed by the applicant who shall be responsible for the information submitted herein.

Tax Map Key: 2-8-023-003  
Bilger Hall  
2444 Dole Street  
HONOLULU HI 96822

Applicant: Cingular Wireless  
(if company, list company name)

Signature: *[Handwritten Signature]* 4-11-05  
Applicant Date

### Part I.

The proposed utility installation will be operated in the Multi-point Distribution Service, Paging and Radiotelephone Service, Cellular Radiotelephone Service, Narrowband or Broadband Personal Communications Service, Private Land Mobile Radio Services, Paging Operations, Private Land Mobile Radio Service, Specialized Mobile Radio, Local Multi-point Distribution Service, or service regulated under CFR Part 74, Subpart I.

Yes (circle the applicable service above)  No \_\_\_\_\_

Indicate the type of service

The proposed antenna will be a freestanding antenna structure (see LUO Sec. 21-10.1):  Yes  No

The lowest point of any antenna associated with the proposed utility installation will be at least 10 meters (~33 feet) above the ground:  Yes  No

If the response to **ALL** three of these questions is "Yes", then the proposed utility installation **IS** categorically excluded. It is unlikely to cause exposure in excess of the FCC's guidelines. You do not need to complete Parts II, III or IV of the certification.

If the response to **ANY** of the three questions is "No", then you must complete Part II of the certification.

### Part II.

The transmitting antennas (see LUO Sec. 21-10.1) associated with the proposed utility installation will be inaccessible to the public:  Yes  No

Antenna is mounted to penthouse structure on secured building rooftop. Only Authorized Employees of AT&T Wireless and RF Trained personnel are permitted to enter site.

Briefly describe how the antennas will be rendered inaccessible to the public

If the response is "Yes", then the proposed utility installation **IS** categorically excluded. It is unlikely to cause exposure in excess of the FCC's guidelines. You do not need to complete Parts III or IV of the certification.

If the response is "No", then you must complete Part III of the certification.

### Part III.

This is a  Single facility site (the site contains **ONLY ONE** antenna array). Please complete Part III of the certification.  
 Multiple facility site (the site contains **MORE THAN ONE** antenna array). Please skip the remainder of Part III of the certification and proceed to Part IV.

Please provide the following information and calculations:

A. Enter the power threshold for categorical exclusion for this service from the attached Table 1 in watts ERP or EIRP [note:  $EIRP = (1.64 \times ERP)$ ]. \_\_\_\_\_

B. Enter the total number of channels if this will be an omnidirectional antenna(s), or the maximum number of channels in any sector if this will be a sectored antenna. \_\_\_\_\_

C. Enter the ERP or EIRP per channel using the same units as in "A". \_\_\_\_\_

D. Multiply the answer from "B" by the answer from "C". \_\_\_\_\_

The response to "D" is less than or equal to the value for "A":  Yes  No

If the response is "Yes", then the utility installation **IS** categorically excluded. It is unlikely to cause exposure in excess of the FCC's guidelines. You do not need to complete Part IV of the certification.

If the response is "No", the utility installation is **NOT** categorically excluded and you must complete Part IV of the certification.

### Part IV.

Estimate the "worst case" horizontal distance, which must be maintained:

A. This is a  Single facility site (the site contains **ONLY ONE** antenna array). Enter the ERP or EIRP for the Proposed antenna array: \_\_\_\_\_

Multiple facility site (the site contains **MORE THAN ONE** antenna array). Enter the **TOTAL** ERP or EIRP for **ALL** antenna arrays at the site, including the proposed antenna installation: \_\_\_\_\_

**d. V. Peterson Statement**

STATEMENT  
Regarding Electromagnetic Radiation Levels  
Associated with Proposed KTUH FM Radio Transmission  
by  
Prof. Vincent Z. Peterson  
Department of Physics, UHM

INTRODUCTION:

At the request of ASUH I agreed to review the proposed increase in power of KTUH's FM radio CW (continuous-wave) transmission in order to calculate the expected FM radiation power levels in the top-floor offices of Porteus Hall.

I agreed to do this, on a "pro-bono" basis, since I am impressed with the dedication and hard work of the students concerned, who hope to have KTUH reach a wider audience than can now be reached with the present power limitation (100 watts). Although the proposed increase in radiated power (to 3000 watts) may seem major (30x factor), it is really quite modest --in comparison with power radiated by commercial FM stations. Yet it is also prudent to be concerned with possible effects of electromagnetic radiation on nearby members of the campus community. Since I've been involved in advising the State Department of Health, and the National Weather Service/FAA, on the effects of electromagnetic radiation, ASUH asked me --- as a member of the Physics faculty at UHM -- to calculate the expected maximum radiation intensity which KTUH might project, and compare that with accepted standards.

Since ASUH already has competent electronic engineering advice from Mr. Dale Machado of KSSK (knowledgeable on FCC regulations for FM radio) I will confine my remarks to the "physics and biophysics" of electromagnetic radiation in the FM radio band (specifically, at about 90 Megahertz, or 90 MHz).

Standards of permissible radiation exposure of human to electromagnetic fields (EMF) are determined by ANSI (American National Standards Institute) for a wide range of frequencies, including FM radio. The Federal Communications Commission (FCC) had adopted the ANSI standards. The FCC OST-Bulletin No. 65 "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation") also included useful graphs and tables for determining the minimum height of antenna.

MY QUALIFICATIONS AS AN "EXPERT" ON ELECTROMAGNETIC RADIATION:

Besides a PhD in Physics (UC-Berkeley, 1950), I have 38 years of experience in teaching physics courses, at CalTech and (since 1964) at UHM. I have taught the full range of courses in Electricity and Magnetism (E&M), including the most advanced physics courses in Electromagnetic Fields (EMF). Radiation of electromagnetic waves is a prime topic in these courses. While involved with research at the Caltech Electron Synchrotron (1950-1962) I served part-time as Radiation Safety Officer. I also was a member of the CalTech campus Health and Safety Committee, chaired by George Beadle (Nobel prize in genetics).

In recent years, a series of articles in the New Yorker aroused public concern over "Does EMF cause cancer?". The UH School of Public Health was asked (by the Hawaii Legislature) to convene a Symposium on "Electromagnetic Fields: Scientific Facts and Community Concerns". I was asked to participate, as a physicist with expertise on EMF. In 1993 Dr. Bruce Anderson (State Board of Health Deputy Director for Environmental Health) asked me to serve on an Advisory Committee concerned with possible health effects of powerline frequency EMF. Other members of the panel included medical doctors, two EEs, a HECO official, and community group representatives. My role was nominally as a physicist but it turned out I was the only member with personal contact with scientists directly involved in setting national radiation exposure standards. The data obtained covered potential medical effects of radiation over a wide range of frequencies. Our panel achieved unanimous agreement on the lack of convincing evidence that ordinary powerline frequency EMFs provide a serious hazard to human health. This advice was accepted by the Legislature.

Later on (in 1994) I was asked to serve as a Consultant to a group of National Weather Service/FAA officials in charge of explaining the impact of installing the new "NEXRAD" Weather radars (pulsed Doppler radars) at four different sites in the State of Hawaii. My role was to explain the "physics of electromagnetic radiation (and its relationship to biophysical parameters)" to the Boards of Supervisors of the Counties of Maui/Molokai, Kauai, and the Big Island. (My testimony was complementary to that of a medical radiologist from the East Coast.) Despite some initial concerns about the possible health effects of NEXRAD's pulsed radar by various Supervisors, and after substantial discussion, all the Boards of Supervisors declared themselves satisfied that NEXRAD radar would not pose a danger to human health in their communities.

Although I am NOT a medical doctor, I've been stimulated to learn more about the potential effects on the human body by EMFs at various frequencies and power levels. Fortunately, several of my close friends in physics and biophysics are national figures in Radiation Protection and I have corresponded regularly with them regarding the basis for the ANSI (American National Standards Institute) radiation levels for "maximum permissible exposures". For example, Dr. E. Adair of Yale Biophysics is co-chairperson of COMAR (Committee on Man and Radiation) which included representatives from ANSI, NCRP (National Committee on Radiation Protection) and the EPA. Dr. Adair has provided me with detailed information on these matters, for EMF frequencies extending from 60 Hz to ultra-high frequencies (radar).

## ELECTROMAGNETIC RADIATION EFFECTS ON HUMANS: (simplified summary)

There are two major aspects to consider:

(a) Damage caused by ionizing radiation (radiation able to ionize atoms knocking electrons free from their atomic bonds). Ionization is the most direct way electromagnetic fields (of sufficient strength) can cause biological damage and is capable of modifying DNA in the human body.

(b) The local heating of human flesh, such that local body temperatures are raised beyond acceptable limits (i.e., beyond the range which natural body mechanisms can control, a few degrees Fahrenheit from 98.6)

Let us consider each aspect in turn.

Ionization of atoms in the body: Fortunately, in dealing with EMFs at FM-radio frequencies (KTUH operates at 90.3 Megahertz), we don't need to worry about KTUH radiation ionizing any atom: KTUH's frequency is much too low to ionize even the least tightly-bound electron. (The energy of the smallest "packet" of EMF -- called the "photon" -- is given by  $E = hf$ , where  $f$  = frequency, and  $h$  = Planck's constant.) Since electromagnetic waves can be labelled by wavelength ( $\lambda$ ) as well as by frequency ( $f$ ), it is useful to write down the simple formula relating the two:

$$f \times \lambda = c = \text{velocity of light} = 186,300 \text{ miles/second} \\ = 300,000,000 \text{ meters per second.}$$

Thus, 90 MHz frequency corresponds to a wavelength of 3.3 meters = 330 cm. In general, high frequencies (short wavelengths) pack more "power" into each photon. (Example: in sunbathing, UV photons can be dangerous and cause skin cancer directly (by ionization), whereas IR (infrared) photons are not dangerous unless incident at high intensity (lots of photons/second per unit area of skin)).

To illustrate the frequency (or wavelength) dependence of EMF, Figure 1 displays the of various bands of frequencies, on a logarithmic scale (linear in powers of 10), with labels for various types of radiation.

(Project Figure 1 at this point, and explain the Figure, pointing out where KTUH frequency lies relative to UV, IR, etc).

In particular, note that all ionizing radiations have frequencies above about  $10^{14}$  Herz (or cycles/second), the lowest ionizing frequency corresponding to the least tightly-bound electron.

Since KTUH's frequency is  $\frac{10^8}{10^{14}}$  times lower than the threshold frequency for ionizing radiation, we can dismiss any worry about direct (ionizing) damage to human flesh from KTUH radiation.

Local heating of human flesh: from thorough studies of the effects of EMF on human biology, all other (non-ionizing) effects on mammalian flesh (human or otherwise) can be attributed to local heating, which raises the local temperature of the body more than a critical amount ( $\Delta T_c$ ). For the human body it is well known

that a fever of more than a few degrees Fahrenheit can be serious, since it causes the body's natural heat-regulating system to lose control. The (very conservative) ANSI standards for Maximum Permissible radiation intensity, in the non-ionizing EMF range, roughly correspond to  $\Delta T = 0.1$  deg. Fahrenheit, for exposures sustained for at least 6 minutes. (The body can handle higher intensity radiation for shorter exposures, since the body fluids distribute the heat fairly rapidly over a large volume.)

One example (from NEXRAD radar, whose frequency closely matches those of microwave ovens, yet is non-ionizing): It is the average power/unit area, averaged over some seconds exposure, which is important. Microwave ovens (HIGH power consumption of 300 watts) can "cook" meat very efficiently by raising the meat's temperature by hundreds of degrees. Yet the NEXRAD radar, pulsed at high power (450,000 watts in a narrow beam) for very short time intervals (a few microseconds for about 1000 times per second), has very low average power, even in the main beam. The radiation intensity (in milliwatts per square centimeter) is less than one milliwatt/square centimeter at the nearest accessible distance. (The radiation from a home "nightlight", used to illuminate the hallway at night, is more dangerous than NEXRAD radiation outside the perimeter fence around the transmitter/antenna).

The FCC regulations for radiated power levels include the ANSI limits on radiation intensity levels wherever humans are involved. Thus, the radiation intensity from KTUH must be less than  $1.0 \text{ mW/cm}^2$  (one milliwatt per square centimeter) at all regions where humans might possibly occupy.

#### ESTIMATE OF RADIATION INTENSITY FROM THE PROPOSED KTUH ANTENNA (on top of Porteus Hall), at a power level of 3000 watts:

The present KTUH transmitting, located on top of Porteus hall, radiates a maximum of 100 watts of electromagnetic power. It is proposed to increase the power to 3000 watts (a factor of 30). A new "4-bay" FM antenna would be installed, to emit FM power in a relatively narrow beam pattern (vertically) but distributed over all azimuthal directions in a horizontal plane.

A rough sketch (not to scale) of the KTUH antenna, mounted on top of Porteus, is shown in Figure 2. Dimensions are in meters. Note that the center of the antenna would be 15.75 meters (52 feet) above the roof of Porteus. The smallest vertical angle of radiation which would impact any portion of the top floor of Porteus Hall would be about 45-degrees.

The angular distribution (in the vertical plane) of the electric field (E) from a 4-bay antenna is shown in Figure 3. Note that the value of the E-field in the secondary peaks does not exceed 0.25 of the maximum value of the E-field in the main beam. Since the power (or intensity) in the beam varies as the square of the electric field, this means that the intensity reaching Porteus' to floor will always be less than (0.25)-squared times that in the main beam, or 1/16th the main beam power.

The radiation intensity in the main beam can be calculated from the standard antennae formula,

$$S = \frac{K \cdot P \cdot G}{4\pi R^2}$$

where P = total radiated power (in watts), R = radial distance from antenna to observation point, G = antenna "gain" (r.m.s. value), and "K" takes into account beam polarization and time-averaging effects. For KTUH the power is 3000 watts, and R = 16 to 24 meters (various distances from Antenna midpoint to Porteus rooftop points). If the power were radiated in an exactly spherical pattern, and if K = 1, the radiation intensity over a spherical surface of radius R would be just  $P/(4\pi R^2)$  --- "isotropic radiation".

The antenna concentrates the radiation in a fairly narrow horizontal plane, in order to reach greater distances with a detectable signal. The "antenna gain factor, G" is a measure of this concentration of power into the main beam; i.e., G is how much more intense the FM intensity is at zero degrees than a completely isotropic radiation pattern. A detailed calculation for this 4-bay turnstile antenna yields G=2.1, so that the main beam intensity is 2.1 times greater than it would be for an isotropic radiation pattern.

The factor  $K/4 = 0.64$ , so that the formula for the radiation intensity (power per unit area) in the main beam becomes:

$$S = 0.64 \frac{P \cdot G}{\pi R^2}$$

showing that the intensity falls off as the square of the distance from the antenna (if R is at least several wavelengths). For a nominal distance of R = 15 meters, P = 3000 watts, and G = 2.1, the FM radiation intensity in the main beam calculates to be:

$$S (0 \text{ deg}) = 0.57 \text{ mW/cm}^2,$$

FCC permissible radiation intensity (for 24-hr. continuous exposure of humans) is  $1.0 \text{ mW/cm}^2$ , so that even in the main beam (15 meters distant) the KTUH beam is within the FCC limit of "maximum permissible intensity".

The angular distribution (in the vertical plane) of the electric field (E) from a 4-bay antenna is shown in Figure 3. Note that the value of the electric-field in the secondary peaks does not exceed 0.25 of the maximum value of the E-field in the main beam. Since the power (or intensity) in the beam varies as the square of the electric field, this means that the intensity reaching Porteus' to floor will always be less than (0.25)-squared times that in the main beam, or 1/16th the main beam power. Thus the maximum intensity on Porteus' roof will be"

$$S (\text{max, roof}) = (0.57/16) = 0.035 \text{ mW/cm}^2$$

Which is 30x lower than FCC-acceptable radiation levels of  $1.0 \text{ mW/cm}^2$ .

I conclude, therefore, that the FM radiation from KTUH 4-bay antenna as described, with 3000 total radiated power, does NOT constitute a radiation hazard to occupants of the top floor (or ANY floor) of Porteus Hall.

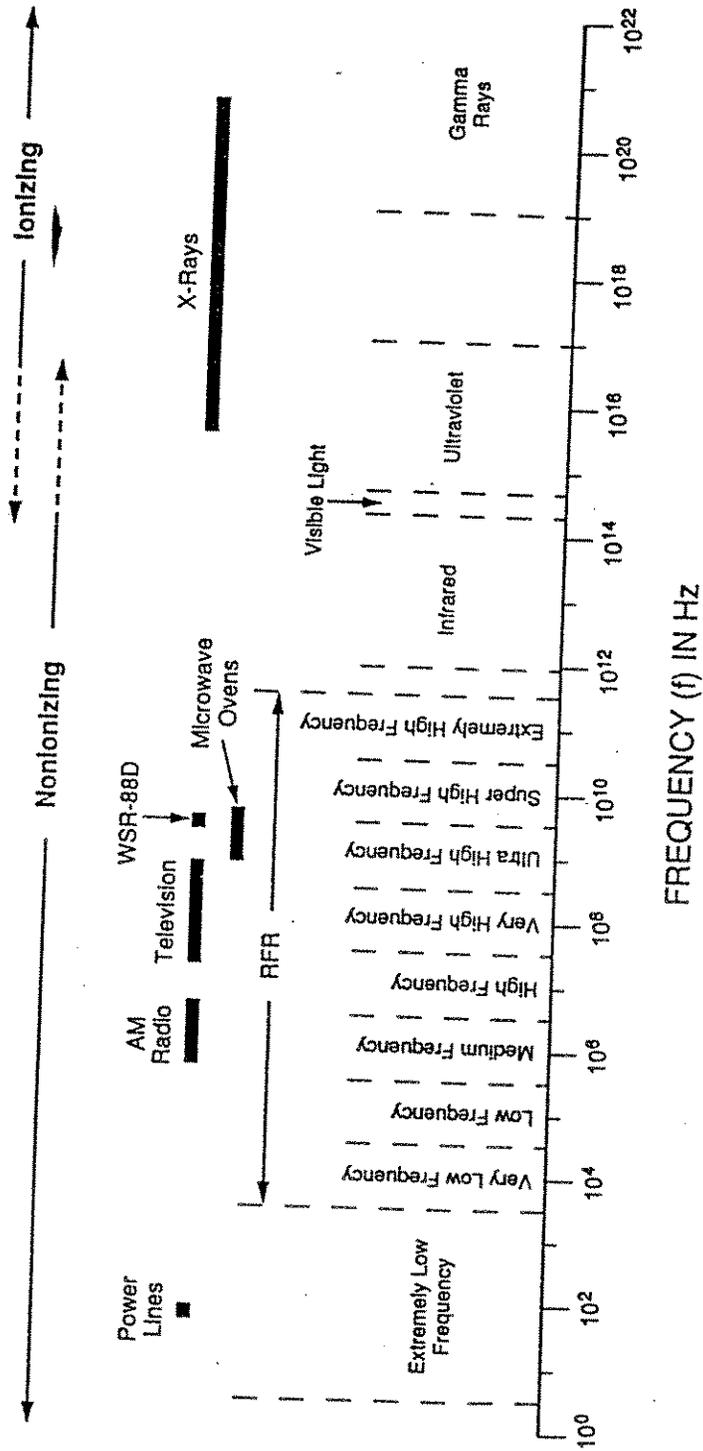
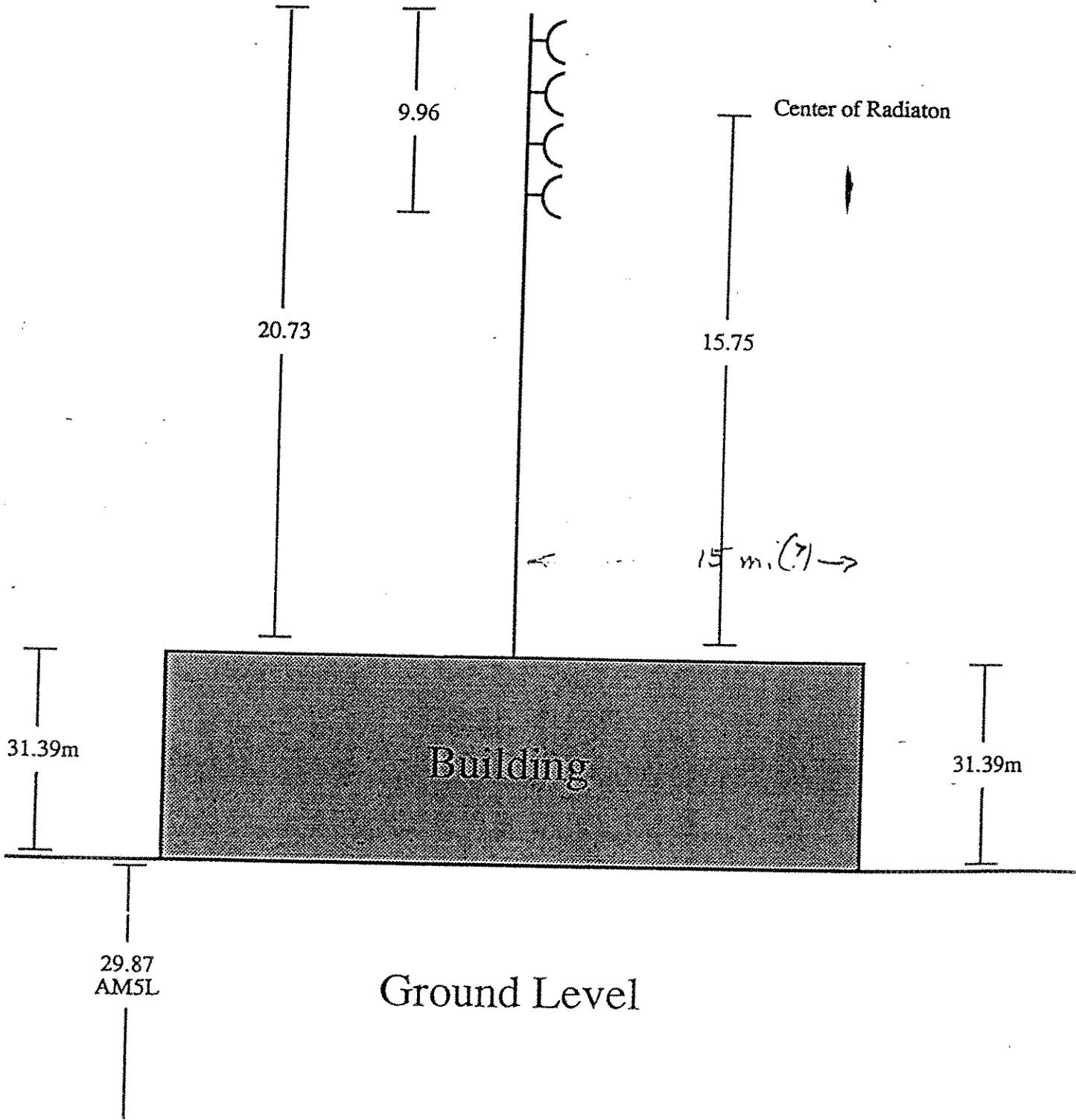


FIGURE 1 The Electromagnetic Spectrum

# PROPOSED INSTALLATION OF KTUH ANTENNA ON PORTEUS HALL



All data in meters

Fig. 2

