

REQUEST FOR ACTION

Subject	Sprint- Antenna System Installation				
Preparer	Jon McKenna	AOUO Title	Management Executive		
Date	8/16/17	For Board	X	Action	Info

EXECUTIVE SUMMARY

Purpose

Sprint has requested the Boards consideration to install a cell site (antenna system) on The Collection rooftop.

Rational

1. By installing an antenna system on The Collection rooftop, the Association can achieve increased revenue of approximately \$14,400 to \$19,200 annually and, over a 5-year contract period, \$72,000 to \$96,000 (based on correspondence from Sprint identified in Exhibit A).
2. State Law 514B-140 (d) (1) (A) and (B) is referenced in Exhibit B and provides the Board authority to install such and antenna system without requiring the vote of the owners.
3. The design, installation, maintenance requirements, and so forth, will have to be fully vetted to ensure the antennae installation does not adversely affect the aesthetic appearance or overall operation of the building.

RECOMMENDATION

Recommendation is to allow Sprint to conduct a site walk to verify installation/design feasibility by Sprint engineers and to then report findings along, with a refined proposal, back to the Board for consideration at a future Board meeting.

Exhibits <small>(If applicable)</small>	Index	Title
	A	Correspondence and pictures from Sprint.
	B	514B-140 Additions to and alterations of condominium

FOR BOARD USE ONLY

CERTIFICATE OF BOARD ACTION

<input type="checkbox"/>	Approved	<input type="checkbox"/>	Declined	<input type="checkbox"/>	Noted	<input type="checkbox"/>	Returned	<input type="checkbox"/>	Deferred	<input checked="" type="checkbox"/>	X	Withdrawn
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Stipulations

At the 2/15/18 Board meeting, the Board approved to withdraw consideration of this matter.

Coordinating Instructions

Distribution Instructions

Recording Secretary	Ryan Kamo	Action Date	2/15/18	RFA No.	19-2017
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420 Waiakamilo Suite 405
Honolulu, Hawaii 96817
Toll Free: (800) 357-7641
Facsimile: (913) 523-9735
Email: LandlordSolutions@Sprint.com

Jon,

Due to the build out of the Collection, the Sprint site wireless signal has diminished in that building and east of your building in the Kakaako area. Sprint is interested in securing a potential location for a cell site (antenna system) on the Collection rooftop. Depending on the viability to meet the radio frequency engineer's coverage objective, zoning it, cost of construction and of course leasing it, will determine if we can move forward.

Attached are a few pics of the equipment that would be installed on the rooftop cell site. Due to esthetic concerns, we can box the antennas in and stealth it to look exactly like the design on the roof now. Essentially it will not be seen from ground level. The actual final design would be determined by a site walk by our engineers to make sure it meets the objective in terms of coverage and meets all building codes in terms of structurally sound as this work requires permits from the jurisdiction of Honolulu county.

Sprint design requires a 3 sector array with 2 antennas per sector and a 30 inch microwave dish. These antennas can be installed flush against a building or on a rooftop with sleds or a popsicle type of a design. It will also require a compound to house the 2 cabinets which is usually a 10'x15' area, but if space is an issue, a smaller foot print may be considered.

The agreement to rent the antenna space would be a 5 year initial term lease with 5x5 year options. The rate can be from \$1,200 a month to \$1,600 a month depending on the final design and space leasing.

If you would like to move to the next step to do a site walk to verify a design that is approved by our engineers, but more importantly approved by you the owners, please let me know so we can proceed as we would like to start the permitting process as soon as possible.





PROJECT: LOCAL ASK NEW SITE BUILD
 SITE NAME: ALA MOANA
 SPRINT CASCADE: HI80XC003
 SITE ADDRESS: 600 ALA MOANA BLVD
 HONOLULU, HI 96814
 SITE TYPE: ROOF TOP

STA ROOF TOP

PLANS PREPARED FOR:

6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED FOR:

WIRELESS RESOURCES

WWW.WIRELESSRESOURCES.COM
 4730 S.FORT APACHE RD, SUITE 300
 LAS VEGAS, NV 89147
 PHONE: 808-478-0095

PLANS PREPARED BY:

State 48
Development Consulting

NOT FOR CONSTRUCTION

WWW.STATE48CONSULTING.COM
 9375 E. SHEA BLVD #100
 SCOTTSDALE, AZ 85260
 480-242-2477 602-821-3567

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REVISIONS:

ISSUED FOR REVIEW	DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW		9/16/17	DM	A
ISSUED FOR REVIEW		9/21/17	DM	B

SITE NAME:

ALA MOANA

SITE CASCADE:

HI80XC003

SITE ADDRESS:

600 ALA MOANA BLVD
HONOLULU, HI 96814

SHEET DESCRIPTION:

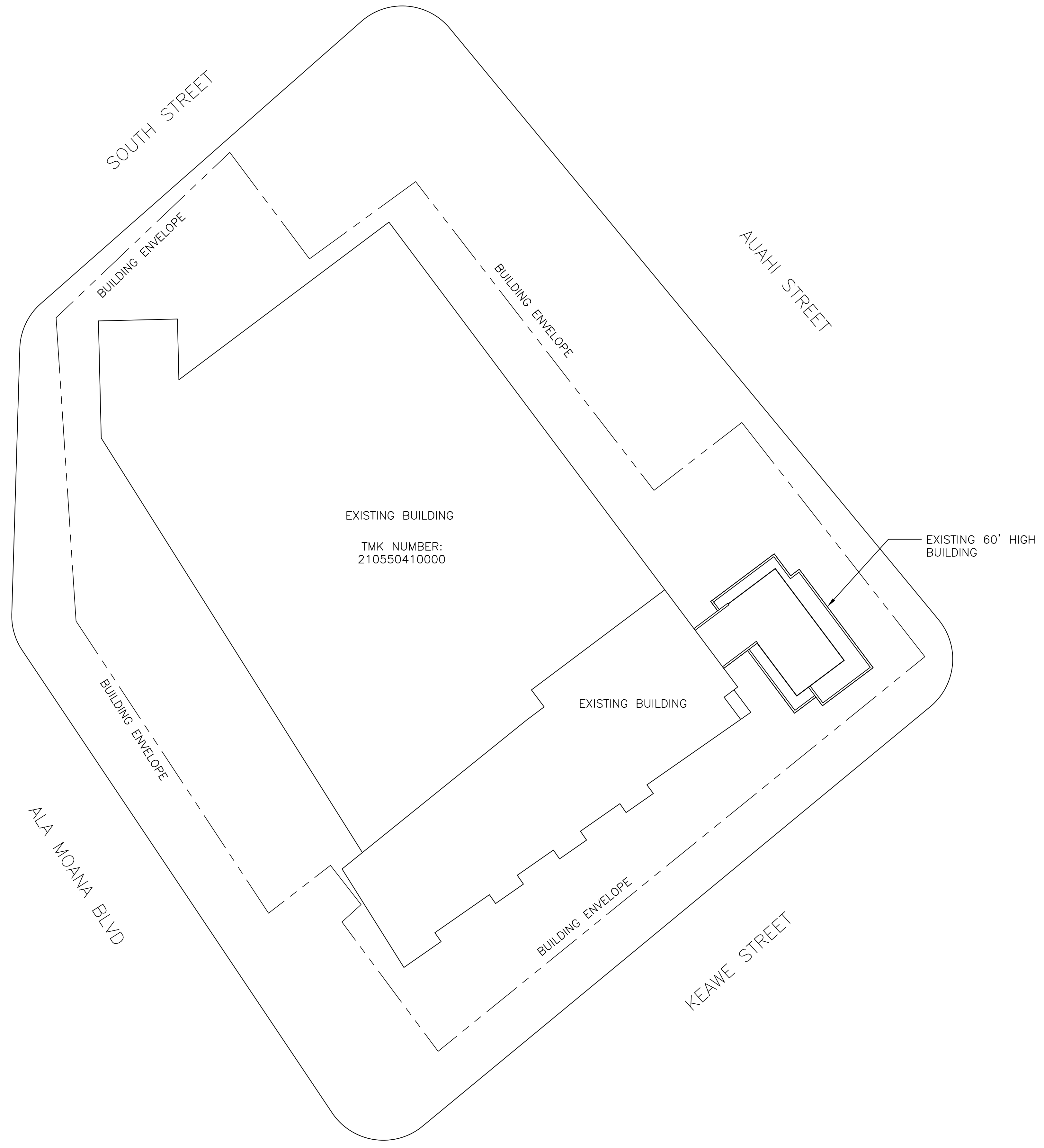
TITLE SHEET

SHEET NUMBER:

T-1

SITE INFORMATION	AREA MAP	PROJECT DESCRIPTION	DRAWING INDEX																																
<p>PROPERTY OWNER: THE COLLECTION CONDO MASTER 711 KAPIOLANI BLVD. HONOLULU, HI 96813 PHONE: 808-203-5234 CONTACT: JIMMY VENTURA</p> <p>LATITUDE (NAD83): 21° 17' 56.7594" N -157.862°</p> <p>LONGITUDE (NAD83): 157° 51' 43.1994" W -157.862°</p> <p>COUNTY: HONOLULU</p> <p>ZONING JURISDICTION: CITY AND COUNTY OF HONOLULU</p> <p>ZONING DISTRICT: TBD</p> <p>POWER COMPANY: HECO</p> <p>AAV PROVIDER: HAWAIIAN TELECOM</p> <p>WIRELESS RESOURCES SITE DEVELOPMENT MANAGER: NEAL EUCHNER PHONE: 650-777-1312</p> <p>SPRINT PROGRAM MANAGER: JOHN "PETE" JAEGER PHONE: 808-478-7734</p> <p>TMK NUMBER: 210550410000</p>		<p>SPRINT IS PROPOSING TO PLACE ANTENNAS AND ACCESSORY EQUIPMENT TO AN EXISTING BUILDING, CURRENTLY IN USE AS APARTMENT BUILDING. SPRINT ROOFTOP MOUNTED EQUIPMENT WILL BE PLACED AT ROOF TOP, ANTENNAS WILL BE PLACED SIDE OF EXISTING BUILDING.</p> <p>THIS SITE IS REQUIRED FOR THE SPRINT NETWORK TO PROVIDE REASONABLY RELIABLE COVERAGE PURSUANT TO FEDERAL LICENSING REQUIREMENTS.</p>	<table border="1"> <thead> <tr> <th>SHEET NO:</th> <th>SHEET TITLE</th> <th>REV</th> <th>ENGINEER</th> </tr> </thead> <tbody> <tr> <td>T-1</td> <td>TITLE SHEET & PROJECT DATA</td> <td>B</td> <td>X</td> </tr> <tr> <td>A-1</td> <td>OVERALL SITE PLAN</td> <td>B</td> <td>X</td> </tr> <tr> <td>A-2</td> <td>EXISTING EQUIPMENT PLAN</td> <td>B</td> <td>X</td> </tr> <tr> <td>A-3</td> <td>PROPOSED EQUIPMENT PLAN</td> <td>B</td> <td>X</td> </tr> <tr> <td>A-4</td> <td>EXISTING & PROPOSED TOWER ELEVATION</td> <td>B</td> <td>X</td> </tr> <tr> <td>A-5</td> <td>ANTENNA PLAN VIEW & CABLE PLAN</td> <td>B</td> <td>X</td> </tr> <tr> <td>A-6</td> <td>EQUIPMENT SPECS.</td> <td>B</td> <td>X</td> </tr> </tbody> </table>	SHEET NO:	SHEET TITLE	REV	ENGINEER	T-1	TITLE SHEET & PROJECT DATA	B	X	A-1	OVERALL SITE PLAN	B	X	A-2	EXISTING EQUIPMENT PLAN	B	X	A-3	PROPOSED EQUIPMENT PLAN	B	X	A-4	EXISTING & PROPOSED TOWER ELEVATION	B	X	A-5	ANTENNA PLAN VIEW & CABLE PLAN	B	X	A-6	EQUIPMENT SPECS.	B	X
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A-6	EQUIPMENT SPECS.	B	X																																
	<p>LOCATION MAP</p>	<p>NEW SITE BUILD FOR FOLLOWING EQUIPMENT</p> <ul style="list-style-type: none"> INSTALL (1) CABLE TRAY INSTALL (1) STEEL EQUIPMENT PLATFORM INSTALL (1) NOKIA MMBS CABINET INSTALL (1) NOKIA POWER CABINET INSTALL (12) PANEL ANTENNAS INSTALL (12) RRH'S BEHIND ANTENNAS INSTALL (1) GPS ANTENNA INSTALL (6) 1-1/2" HYPERFLEX CABLES INSTALL (18) JUMPERS INSTALL (1) 2' MICROWAVE DISH INSTALL (1) 1/2' COAX FOR MICROWAVE DISH INSTALL (3) 8' HIGH FRP SCREEN WALLS 																																	
		<p>APPLICABLE CODES</p> <p>ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALL IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.</p> <ol style="list-style-type: none"> 2006 INTERNATIONAL BUILDING CODE 2006 INTERNATIONAL MECHANICAL CODE ANSI/TIA-222 STRUCTURAL STANDARD NFPA 780 - LIGHTNING PROTECTION CODE 1997 UNIFORM PLUMBING CODE 2008 NATIONAL ELECTRICAL CODE 																																	

NOTE:
THIS EXACT SITE LOCATIONS
PENDING SITE SURVEY



STA ROOF TOP

PLANS PREPARED FOR:

Sprint

6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED FOR:

WIRELESS RESOURCES

WWW.WIRELESSRESOURCES.COM
4730 S.FORT APACHE RD, SUITE 300
LAS VEGAS, NV 89147
PHONE: 808-478-0095

PLANS PREPARED BY:

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WWW.STATE48CONSULTING.COM
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480-242-2477 602-821-3567

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REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	9/16/17	DM	A
ISSUED FOR REVIEW	9/21/17	DM	B

SITE NAME:

ALA MOANA

SITE CASCADE:

HI80XC003

SITE ADDRESS:

600 ALA MOANA BLVD
HONOLULU, HI 96814

SHEET DESCRIPTION:

OVERALL SITE PLAN

SHEET NUMBER:

A-1

24"x36" SCALE: 1" = 30'-0"
11"x17" SCALE: 1" = 60'-0"

TMK NUMBER:
210550410000

BUILDING ENVELOPE

EXISTING HANDRAIL

EXISTING 60' HIGH BUILDING

EXISTING BUILDING

STA ROOF TOP

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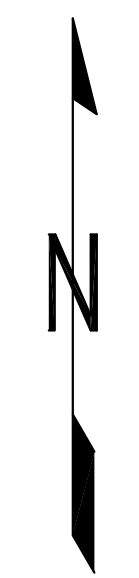
600 ALA MOANA BLVD
HONOLULU, HI 96814

SHEET DESCRIPTION:

EXISTING EQUIPMENT PLAN

SHEET NUMBER:

A-2



STA ROOF TOP

- TOP OF BUILDING
⊙ ELEVATION 62'-6"± AGL
- TOP OF FINISHED ROOF SURFACE
⊙ ELEVATION 60'-0"± AGL

- TOP OF SCREEN WALL
⊙ ELEVATION 68'-0"± AGL
- TOP OF EQUIPMENT
⊙ ELEVATION 66'-10"± AGL
- TOP OF BUILDING
⊙ ELEVATION 62'-6"± AGL
- TOP OF FINISHED ROOF SURFACE
⊙ ELEVATION 60'-0"± AGL

- INSTALL (1) 2'Ø SPRINT MICROWAVE DISH AZIMUTH TBD & RAD CENTER TBD
- PROVIDE 8' HIGH FRP SCREEN WALL PAINT TO MATCH EXISTING BUILDING, (TYP. OF 3)
- INSTALL (4) SPRINT ANTENNAS PER SECTOR
- INSTALL (4) SPRINT RRH'S PER SECTOR
- (6) INSTALL SPRINT 2500 ANTENNAS @ ELEVATION 65'-0" AGL
- (6) INSTALL SPRINT 800/1900 ANTENNAS @ ELEVATION 65'-0" AGL

INSTALL NEW MMBS-BBU CABINET INCLUDING BUT NOT LIMITED TO BASE BAND UNIT, CELL SITE ROUTER, SURGE ARRESTERS AND CONNECT POWER AND FIBER

INSTALL SPRINT BATTERY CABINET

PROVIDE SPRINT UTILITY RACK WITH AAV, POWER AND TELCO MOUNTED EXISTING BUILDING

PROVIDE 8' HIGH SCREEN WALL PAINT TO MATCH EXISTING BUILDING

INSTALL (1) GPS

EXISTING SPRINT 20'-6" ANTENNA EXCLUSION DISTANCE, TYP.



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SITE CASCADE:

HI80XC003

SITE ADDRESS:

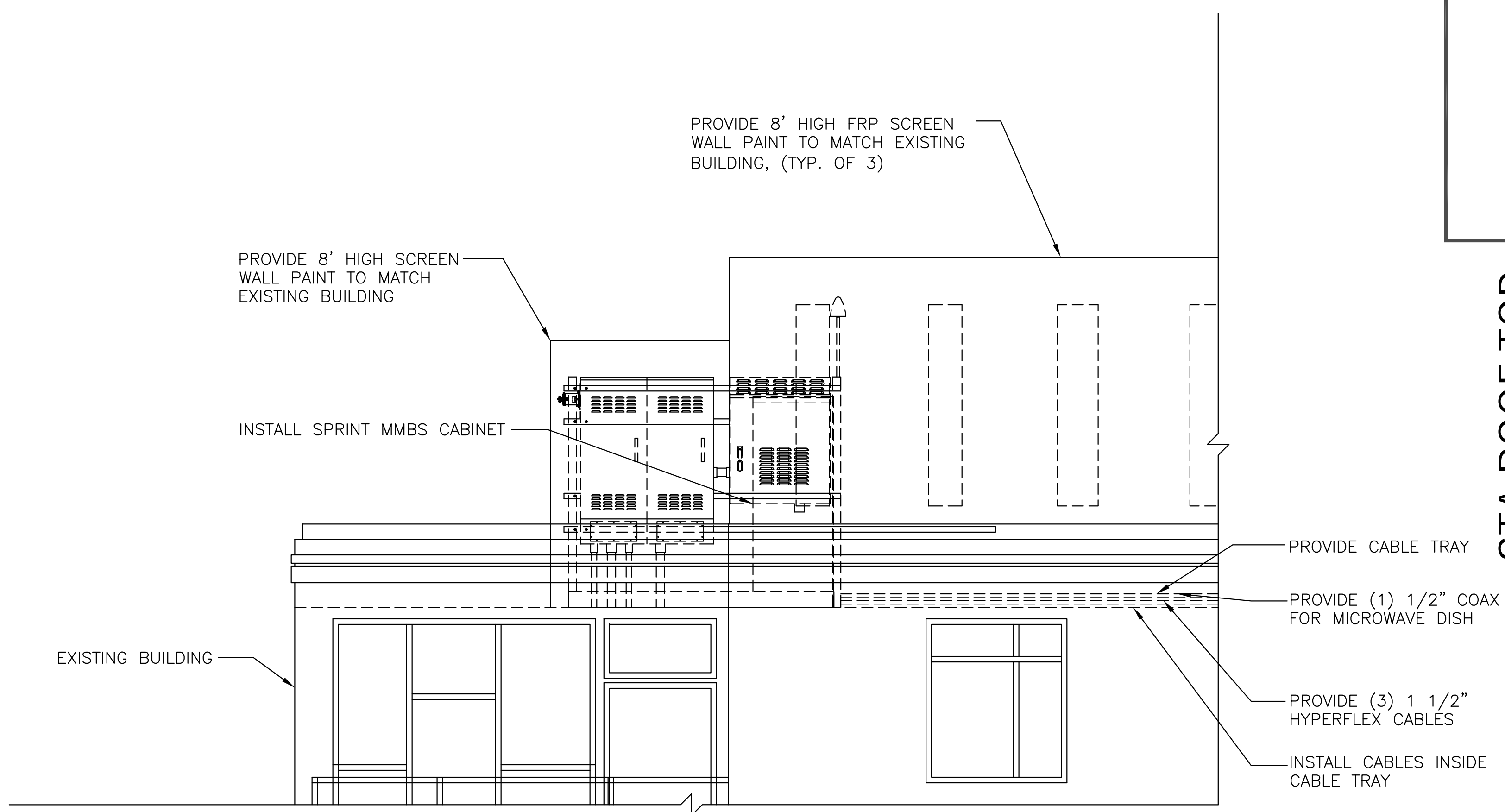
600 ALA MOANA BLVD
HONOLULU, HI 96814

SHEET DESCRIPTION:

EXISTING & PROPOSED TOWER ELEVATION

SHEET NUMBER:

A-4



STA ROOF TOP

PLANS PREPARED FOR:



6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED FOR:

WIRELESS RESOURCES

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4730 S.FORT APACHE RD, SUITE 300
LAS VEGAS, NV 89147
PHONE: 808-478-0095

PLANS PREPARED BY:



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ALA MOANA

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HI80XC003

SITE ADDRESS:

600 ALA MOANA BLVD
HONOLULU, HI 96814

SHEET DESCRIPTION:

ANTENNA PLAN VIEW & CABLE PLAN

SHEET NUMBER:

A-5

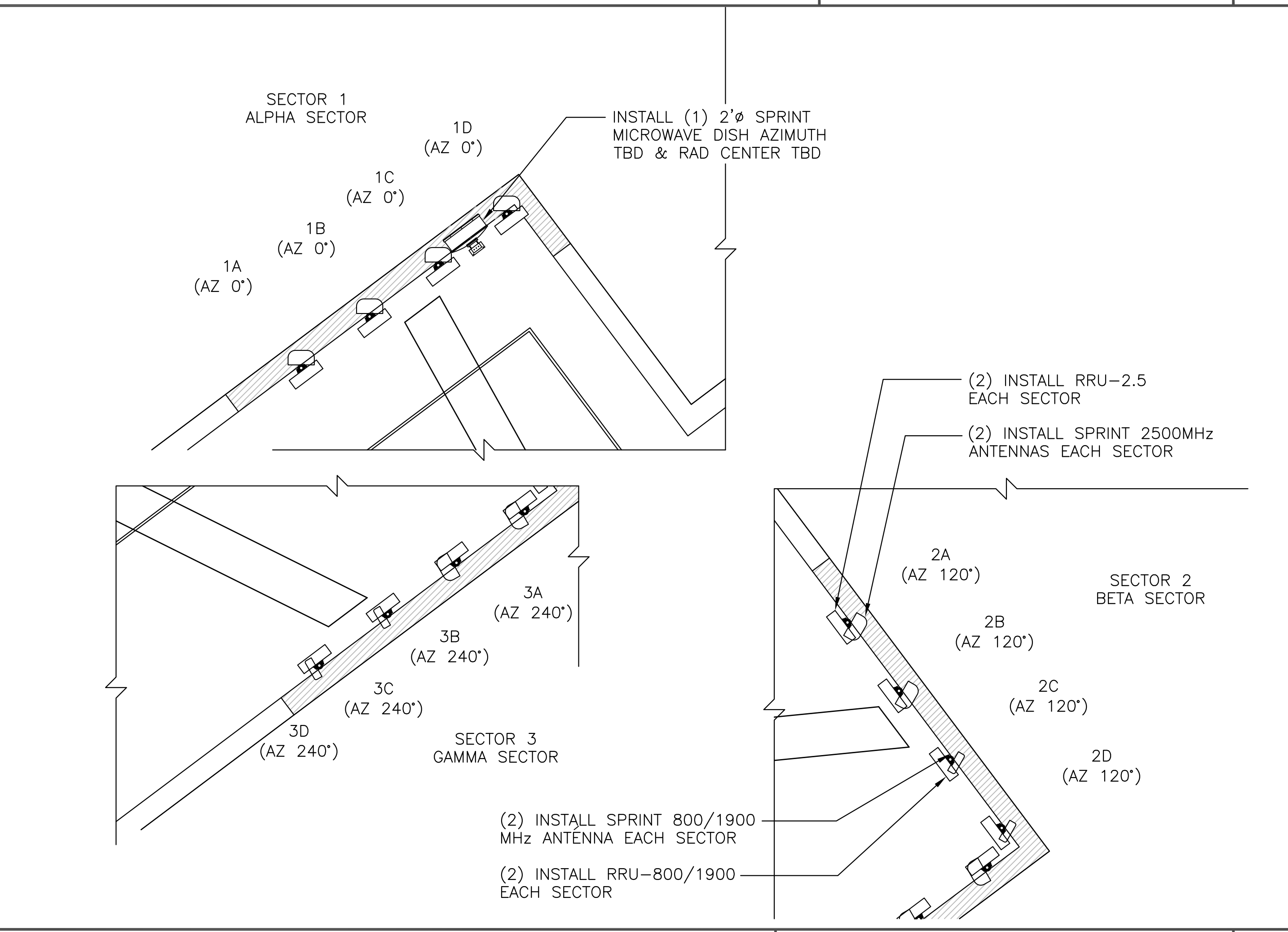
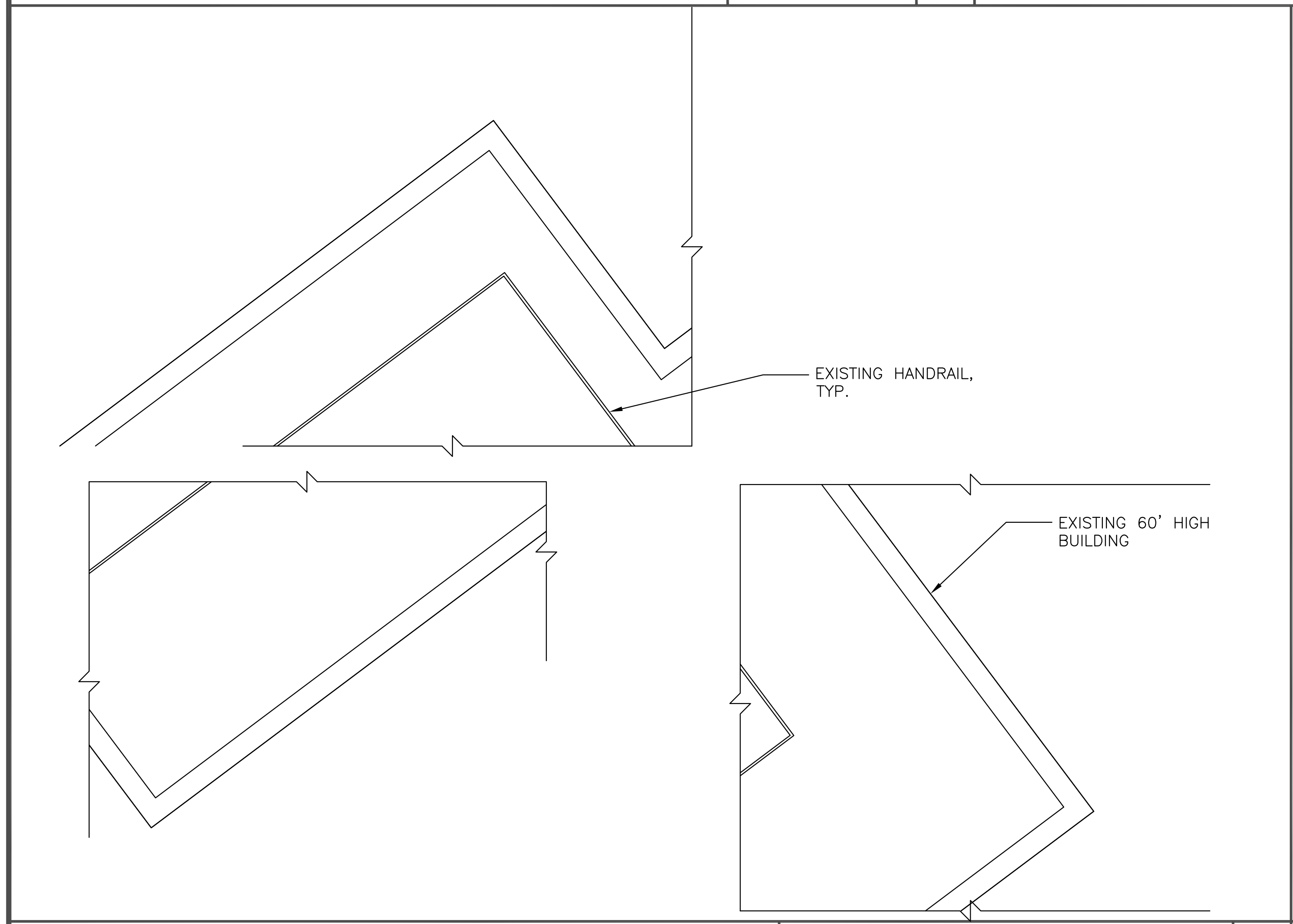
DETAIL NOT USED

NO SCALE D

CABLE ROUTE FROM CABINET

24"x36" SCALE: 3/8" = 1'-0"
11"x17" SCALE: 3/16" = 1'-0"
2' 1' 0" 2'

A



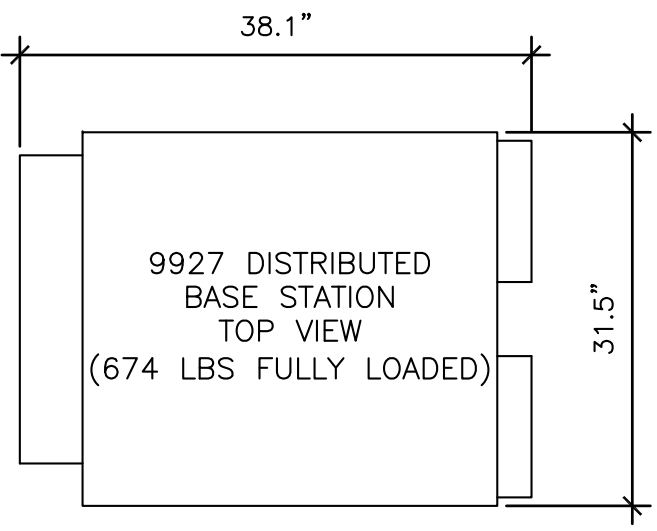
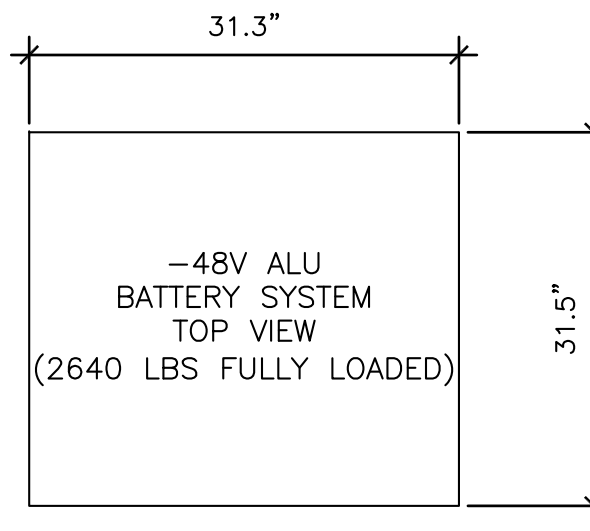
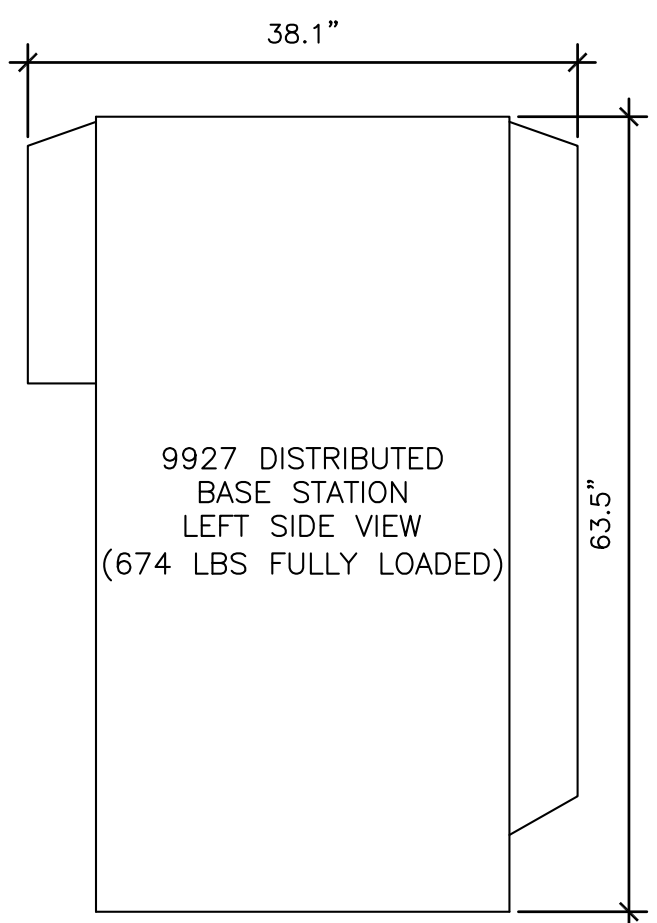
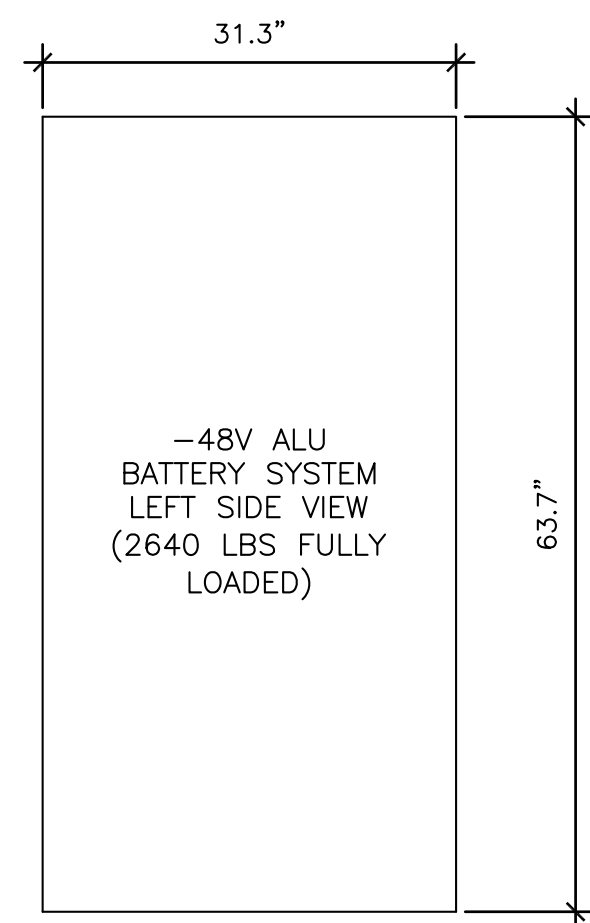
EXISTING ANTENNA LAYOUT

24"x36" SCALE: 1/4" = 1'-0"
11"x17" SCALE: 1/8" = 1'-0"
4' 3' 2' 1' 0" 4'

PROPOSED ANTENNA LAYOUT @ 65'

24"x36" SCALE: 1/4" = 1'-0"
11"x17" SCALE: 1/8" = 1'-0"
4' 3' 2' 1' 0" 4'

B



STA ROOF TOP

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Overland Park, Kansas 66251

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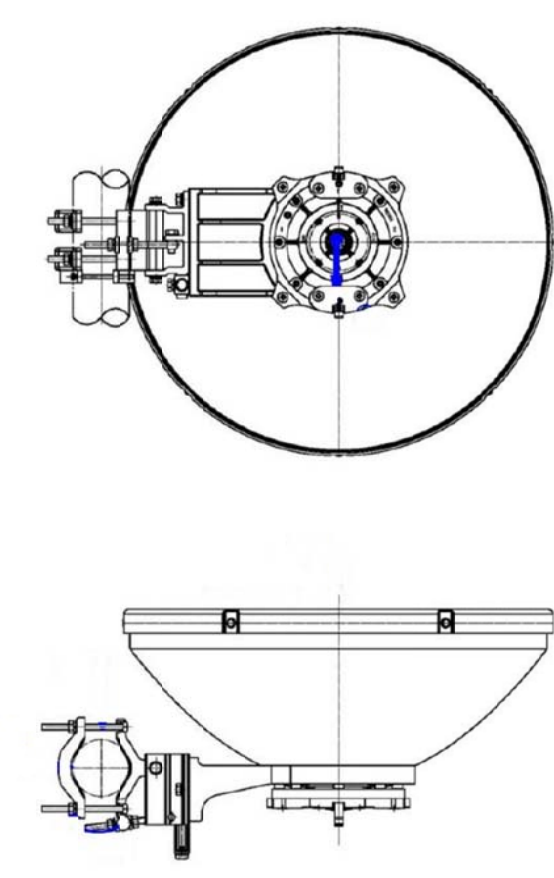
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9375 E. SHEA BLVD #100
SCOTTSDALE, AZ 85260
480-242-2477 602-821-3567

9927 DISTRIBUTED BASE STATION & 48v BATTERY CABINET

NO SCALE A

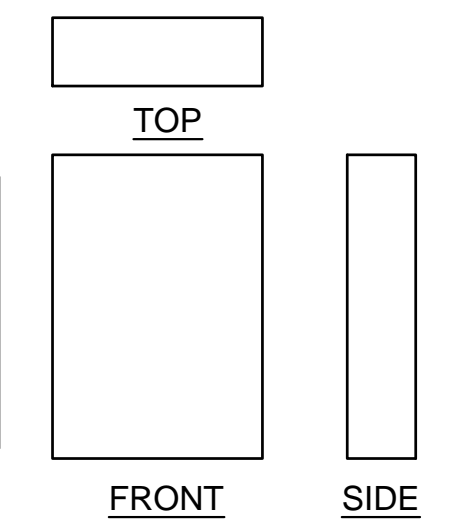
NOT USED

NO SCALE D



NOMINAL DIAMETER	0.6MM (2FT)
POLARIZATION	SINGLE, VERTICAL OR HORIZONTAL
RADIO INTERFACE	DIRECT MOUNT FOR CERAGON ODU
ANTENNA COLOR	GRAY (PANTONE 1C)
RADOME COLOR	GRAY (PANTONE 1C)
RADOME TYPE	HARD COVER
PACKING TYPE	CARTON
GROSS WIGHT, kg	18 ±2
PACKED DIMENSIONS, mm	LxWxH : 750 x 750 x 440
PACKING VOLUME, m ³	

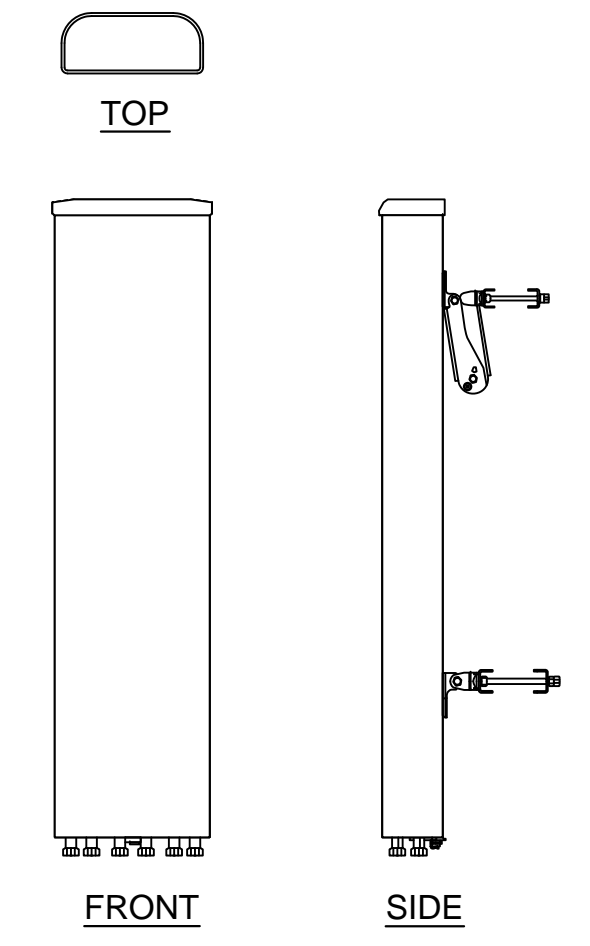
MANUFACTURER:	ALCATEL-LUCENT
PART NUMBER:	TD-RRHx20 (2500 MHz)
LENGTH:	25.30"
WIDTH:	17.50"
DEPTH:	5.7"
WEIGHT W/O BRACKETS:	66.1 LBS



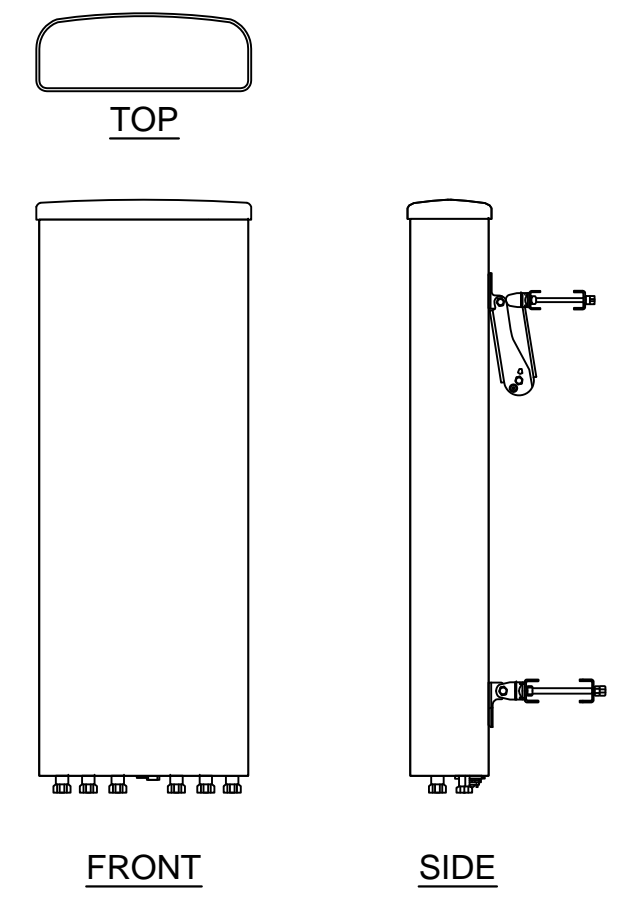
MICROWAVE

NO SCALE B

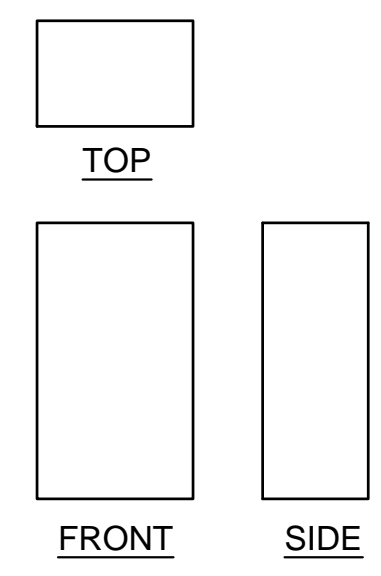
MANUFACTURER:	RFS
PART NUMBER:	APXV/SPP19-C-NA20
LENGTH:	76.00"
WIDTH:	14.6"
DEPTH:	8.1"
WEIGHT W/O BRACKETS:	75 LBS



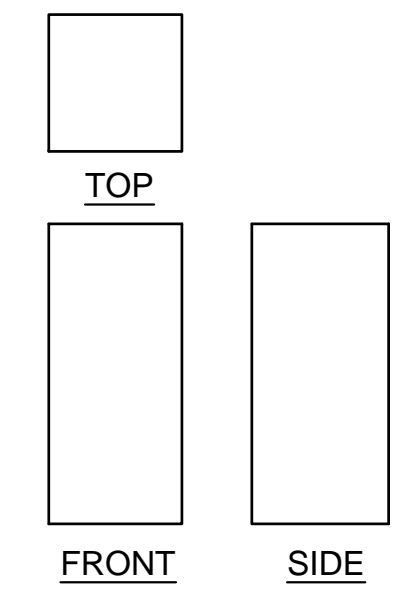
MANUFACTURER:	KMW
PART NUMBER:	ET-X-WM-18-65-8P
LENGTH:	61.0"
WIDTH:	12.0"
DEPTH:	4.3"
WEIGHT W/ BRACKETS:	47.0 LBS



MANUFACTURER:	ALCATEL-LUCENT
PART NUMBER:	800MHz RRH
LENGTH:	23.00"
WIDTH:	13.00"
DEPTH:	8.8"
WEIGHT W/O BRACKETS:	61 LBS



MANUFACTURER:	ALCATEL-LUCENT
PART NUMBER:	1900MHz RRH
LENGTH:	25.00"
WIDTH:	11.10"
DEPTH:	11.4"
WEIGHT W/O BRACKETS:	60 LBS



ANTENNA SPECS

NO SCALE C

RRH SPECS

NO SCALE E

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ALA MOANA

SITE CASCADE:

HI80XC003

SITE ADDRESS:

600 ALA MOANA BLVD
HONOLULU, HI 96814

SHEET DESCRIPTION:

EQUIPMENT SPECIFICATION

SHEET NUMBER:

A-6



Looking Northwest Before



Looking Northwest

PHOTO-SIMULATIONS
PREPARED FOR:

Sprint



6580 Sprint Parkway
Overland Park, Kansas 66251

PHOTO-SIMULATIONS PREPARED FOR:

WIRELESS RESOURCES

WWW.WIRELESSRESOURCES.COM
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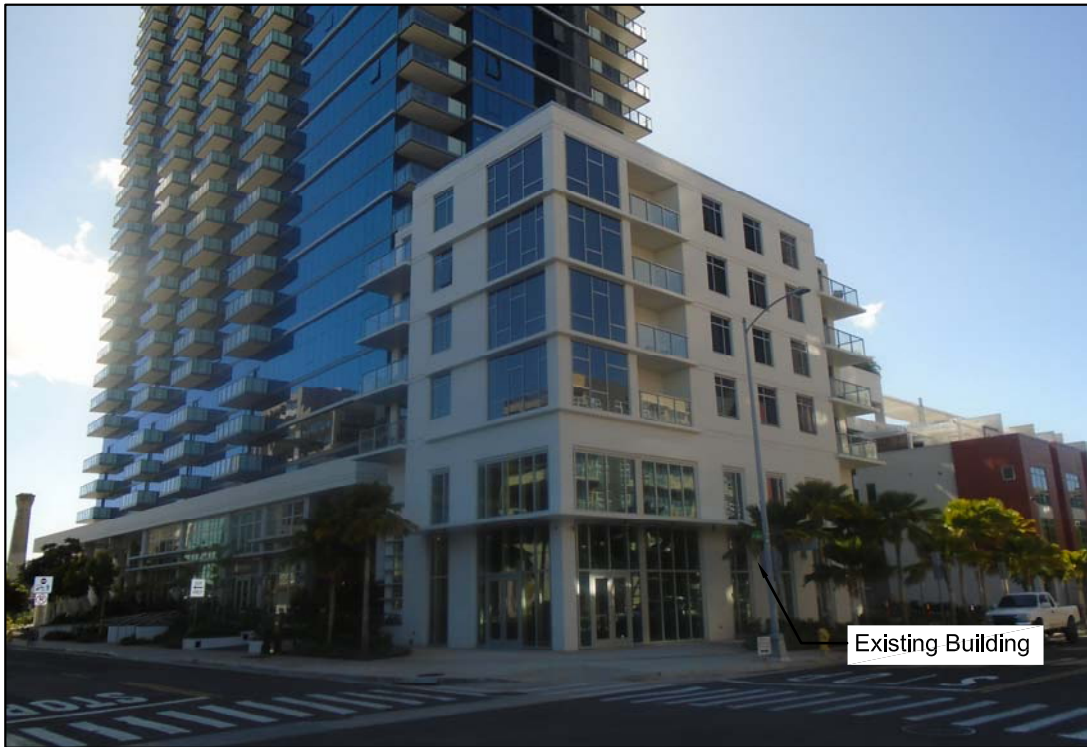
PHOTO-SIMULATIONS PREPARED BY:



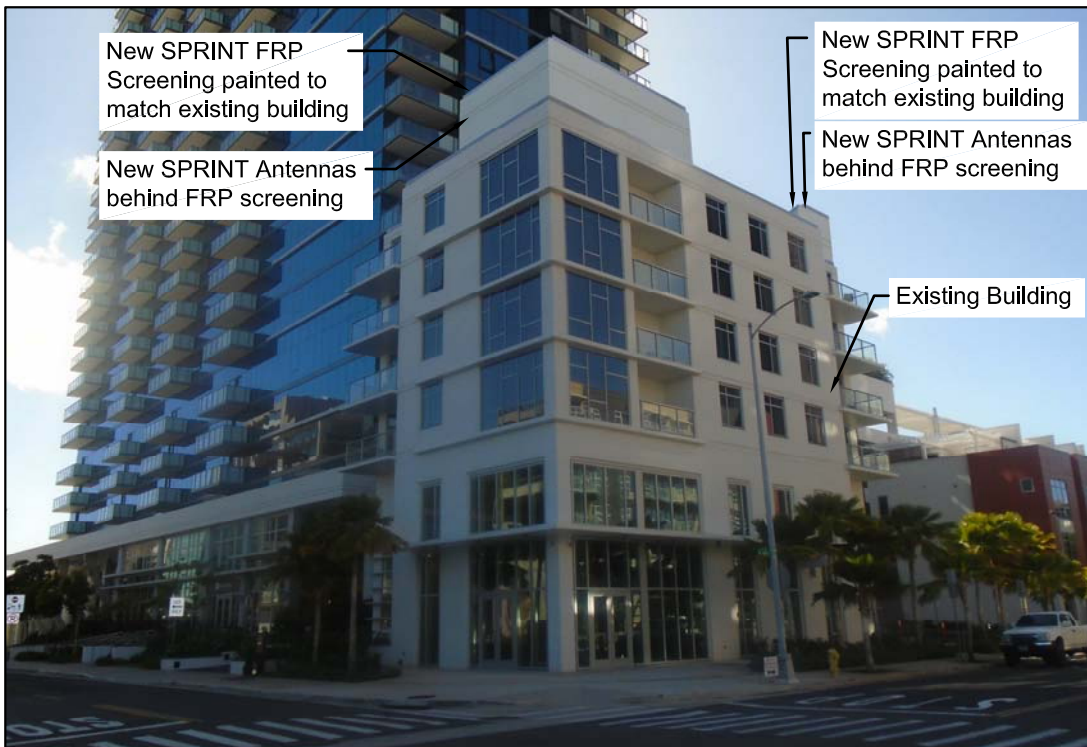
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480-242-2477 602-821-3567

(This photo simulation is for illustrative purposes only)



Looking Northwest Before



Looking North After

PHOTO-SIMULATIONS
PREPARED FOR:

Sprint



6580 Sprint Parkway
Overland Park, Kansas 66251

PHOTO-SIMULATIONS PREPARED FOR:

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PHOTO-SIMULATIONS PREPARED BY:

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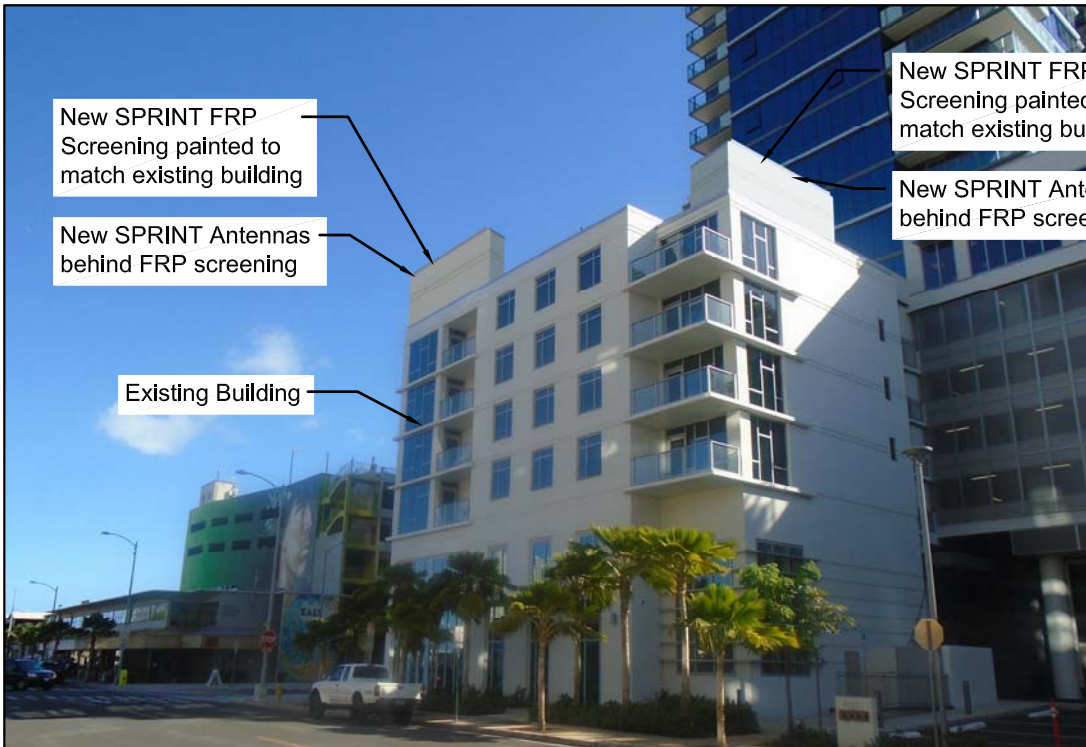
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SCOTTSDALE, AZ 85260
480-242-2477 602-821-3567

(This photo simulation is for illustrative purposes only)



Existing Building

Looking South Before



New SPRINT FRP
Screening painted to
match existing building

New SPRINT Antennas
behind FRP screening

Existing Building

New SPRINT FRP
Screening painted to
match existing building

New SPRINT Antennas
behind FRP screening

Looking South After

PHOTO-SIMULATIONS
PREPARED FOR:



6580 Sprint Parkway
Overland Park, Kansas 66251

PHOTO-SIMULATIONS PREPARED FOR:



WWW.WIRELESSRESOURCES.COM
4730 S.FORT APACHE RD. SUITE 300
LAS VEGAS, NV 89147
PHONE: 808-478-0095

PHOTO-SIMULATIONS PREPARED BY:



WWW.STATE48CONSULTING.COM
9375 E. SHEA BLVD #100
SCOTTSDALE, AZ 85260
480-242-2477 602-821-3567

(This photo simulation is for illustrative purposes only)

Do Cell Phones Cause Cancer?

By [Joshua Levine](#)

Health Correspondent - *Every 2nd Saturday*

In the year 2000, it was estimated that 92 million people used cellular phone in the U.S.; a number that keeps growing by one million every month. By 2003, it is believed that the number of users worldwide will reach upwards of 700 million. In recent years, the widespread use of cell phones has led to increased concerns about possible health hazards, particularly [brain cancer](#).

The issue first came to public attention in 1993, when a Florida man appeared on a popular TV talk show and claimed that his wife's [brain tumor](#) was caused by RF (radiofrequency) radiation from her cell phone.

The lawsuit was dismissed in 1995 due to a lack of scientific and medical evidence, but the issue had already taken on a great deal of importance. Since then, there have been many allegations in the media that cell phones cause [cancer](#).

The question remains: Are cell phones really dangerous? The following summary of recent research results and answers to frequently asked questions may shed some light on this burning topic.

what is the concern?

Cellular phones operate with RF (Radio Frequencies); a form of electromagnetic energy located on the electromagnetic spectrum between FM radio waves and the waves used in microwave ovens, radars and satellites.

The amount of RF a person is exposed to with the use of a cell phone depends on a number of factors:

- The distance from the base station;
- The duration and frequency of cell phone use;
- The age of the phone (older analog models involve higher exposure than newer, digital ones).

A number of organizations, such as the FCC (Federal Communications Commission), have set limits for human exposure to RF fields. Nevertheless, many individuals claim that repeated RF exposure from cell phones, even at low levels, may cause [brain tumors](#).

research results

Because cell phones have only been in widespread use for about a decade, there hasn't been much opportunity to carry out long-term studies of their effects on our health.

However, four recently published studies that compared cell phone use in brain [cancer patients](#) and individuals with no brain cancer found the same results.

Here they are...

The first study (conducted by Hardell et al.) compared 233 [brain cancer](#) patients, diagnosed between 1994 and 1996, to 466 controls in Sweden. The second (conducted by Muscat et al.) compared 469 brain cancer patients, diagnosed between 1994 and 1998, in New York, Providence and Boston, with 422 controls. The third and largest study (conducted by Inskip et al.) was conducted in Phoenix, Boston and Pittsburgh. It compared 782 brain cancer patients, diagnosed between 1994 and 1998, with 799 controls.

Finally, a Danish study (conducted by Johansen et al.) linked data on all of the 420,095 cell phone users in Denmark between 1982 and 1995, to the Danish [Cancer](#) Registry and found the same results as the three case-control studies. The results are the following:

- The brain [cancer patients](#) didn't report more cell phone use than the subjects who were free of brain cancer. In fact, for reasons that remain unclear, most of the studies showed a tendency toward lower risk of brain cancer among cellular phone users.
- When different types of brain cancer were considered, none were consistently associated with cell phone use.
- When specific locations of tumors within the brain were considered, no associations with cell phone use were found.
- None of the studies showed a clear link between the side of the head on which the brain cancer occurred and the side on which the cellular phone was used.

Many animal experiments have also been conducted and have yielded conflicting results. A few of these studies have suggested that low levels of RF could accelerate the development of cancer in laboratory rats.

However, many of the studies that showed increased tumor development used rats that had been genetically engineered to be predisposed to develop cancer in the absence of RF exposure. Other studies exposed the animals to RF for up to 22 hours per day.

Since these conditions are not similar to the conditions under which people use wireless phones, we do not know with certainty what the results of such studies mean for human health.

In summary, there is now considerable evidence that shows no consistent association between cell phone use and brain cancer, although more research is needed before any definite conclusions can be drawn.

Article Suggested By: Harbinder P., Plover, WI

ANTENNA TOWERS

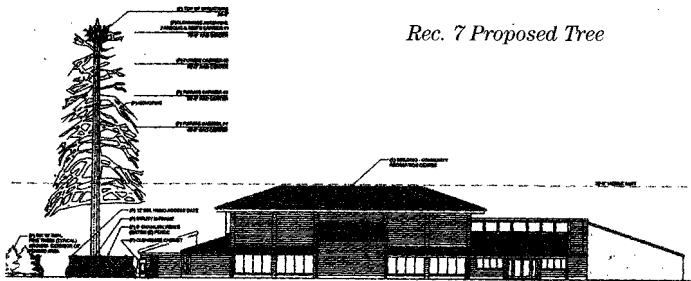
Continued from page 1.

Property Values

There is no data to support the claim that antenna towers lower property values. There have been claims that an antenna tower will lower property values for homes near the antenna. A Realtor has claimed that an antenna tower at Recreation Center VII will discourage prospective Buyers of homes in that area. Another Realtor claims he has had potential Buyers decide not to purchase a particular home because cellular and/or cell-based internet service signal coverage was not available in the neighborhood. The same Realtor claims he has sold homes that are located near a recreation center with an antenna tower. The antenna did not factor in the tax assessment, the appraisal or the Buyer's offer on the property.

Cellular/Internet Service in Mililani Mauka

Some homeowners in upper Mililani Mauka claim that the cellular or internet service that they currently use provides satisfactory signals. Therefore, a cellular or internet antenna tower is not needed in upper Mililani Mauka. However, other homeowners have complained about unreliable service from different service providers. These homeowners claim they have switched carriers until a reliable service is found for upper Mililani Mauka.



Clearwire requires an antenna in upper Mililani Mauka to provide its internet service to the area. The Clearwire tower antenna located at Recreation Center V currently provides wireless internet service only to Mililani Town and a portion of lower Mililani Mauka homeowners. Even raising the height of the antenna at this site would not provide signal to upper Mililani Mauka. The proposed Clearwire antenna tower at Recreation Center VII will fulfill the required coverage. Eventually, other cellular phone and internet vendors that cannot provide strong signals to upper Mililani Mauka will also require an antenna site in upper Mililani Mauka. In light of these facts, MTA is considering having antennas of other cellular phone companies installed on the Clearwire antenna tower to minimize the number of antenna towers in upper Mililani Mauka. Clearwire has said that it has approached all non-residential landowners in upper Mililani Mauka to see if they could establish an antenna tower on their

Continues on page 8.



New location in
Mililani Towne Center

Come in today to see
the most compelling line
up of smartphones at
the new Sprint Store.

95-1249 Meheula Parkway
Suite D-12
Mililani, HI 96789
(808) 627-9999



Legal: Coverage not available everywhere. The Nationwide Sprint Network reaches over 276 million people. The 3G Sprint Mobile Broadband Network reaches over 273 million people. Offers not available in all markets/retail locations or for all phones/networks. Pricing, offer terms, fees and features may vary for existing customers not eligible for upgrade. Other restrictions apply. See store or sprint.com for details. ©2010 Sprint. Sprint and the logo are trademarks of Sprint. Other marks are the property of their respective owners.

MTA recognizes that the world is in the high technology era. Communication via internet and blue-tooth cellular phones has become the norm for homeowners, many of who need and depend on reliable cellular and internet service for both personal and business use. Most households have at least one cellular phone user, and in many instances, every household member has their own cell phone. Some households no longer subscribe to DSL (Hawaiian Telecom) lines, relying on their cellular phones as their primary family phone. Many children as young as elementary school aged are given cellular phones by their parents as a safety and communication tool.

Cellular phone vendors are now equipping their antenna sites with Global Positioning Systems (GPS) to assist emergency personnel in locating victims requiring emergency services. The State of Hawaii Civil Defense Advisory Council feels that the ability to make an emergency call is not only critical for the resident living in that neighborhood, but for others visiting the area or driving in the area. Cellular and internet vendors are also upgrading their service with 4G signals, which allow greater amounts of information to be streamed to cell phones and computers at a quicker rate. (The downside of 4G signals, however, is that they require a closer proximity between the antenna towers and the phone/internet users.) Antenna tower companies have also begun installing electric generators at their sites as back-up during power outages. This is especially important during emergencies when users depend on their cellular phones.

NEW LOCATION !!



808-630-2272

Now In Mililani Mauka!

95-1840 Meheula Pkwy.

Mililani, Hi 96789

Next to McDonald's & Tesoro



If you don't have one yet,
bring this coupon in for your FREE 10% OFF
V.I.P. Membership card. This card allows you to
receive 10% OFF all your future purchases.
(Card must be presented at beginning of purchase, not to
be combined with any other offers, excluding
puppies & sale items)

FREE SEMINARS IN AUGUST & SEPTEMBER

Sponsored by the Mililani Town Association

Tuesday, August 10 & 17, 2010

at Recreation Center 2; 6:30 p.m. to 8:00 p.m.

FREE INFORMATIONAL PRESENTATION ON REMODELING YOUR HOME FOR A LIFETIME

Presented by: Curt Kiriu

President of CK Independent Living Builders

Come Learn About:

√ How you can live in your home safely, comfortably and independently regardless of age or physical ability.

√ What types of simple, inexpensive modifications you can make to make your home safer and more accessible for all.

√ Remodeling your home to accommodate your needs and make it safe & accessible for everyone in your family.

√ The high rate of falling in the senior population, the risks, the causes and how you can reduce or prevent the risks of falling.

√ What types of options you have regarding living at home or living in an elderly care institutional facility.

√ What types of remodeling increases the value of your home; and gives you the best percentage of return if you decide to sell.

√ How the New EPA Lead Based Paint Rule (that took effect this year) may affect your home.

Thursday, August 19, 2010

at Recreation Center 2; 6:30 p.m. to 8:00 p.m.

FREE SOLAR ELECTRIC SEMINAR

Presented by: Gregg Murphy, Project Developer

Come Learn About:

√ How to choose the best Solar Module for your home.

√ The do's and don'ts of a Solar installation.

√ Mililani Town Association installation guidelines for solar energy.

√ Why Hawaii State and Federal Tax credits are the best offered in history.

√ How to spin your HECO meter backwards with no money down while making the same monthly installments.

Wednesday, September 1, 2010

at Recreation Center 2; 6:00 p.m. to 8:00 p.m.

FREE INVESTING 101:

BUILDING YOUR INVESTOR IQ

Presented by: David Matsushita, Financial Advisor

Edward Jones Investments

Don't let fear of the unknown prevent you from investing in your future. Getting started can be easier than you think if you understand the basics. Whether you are new to investing or need a refresher, join us for our free Foundations of Investing seminar to learn more about:

√ The key features of bonds, stocks and mutual funds.

√ The importance of asset allocation

√ The impact of inflation

If interested in attending any of these seminars listed above, please call the Administration office at 623-7300 to reserve your spot. Seminar is on a first come, first serve basis. When calling in to reserve your spot please have your name and MTA ID card number available. MTA ID cards will be checked at the door of this seminar.

NO MTA CARD. NO ENTRANCE

ANTENNA TOWERS

Continued from page 5.

property, but all have declined. If MTA also declines their request for the Rec. Center VII site, upper Mililani Mauka residents will not receive Clearwire service. Similarly, other cellular/internet vendors will not be able to provide stronger signal service to upper Mililani Mauka without the Clearwire antenna tower.

Other Factors of Consideration

Benefit to the Association and its Members

In addition to the increased number of service provider choices and stronger signals from cellular and internet providers, each antenna tower installed on MTA property provides income revenue to the Association. As a non-profit membership organization, MTA's primary source of income is derived from homeowner-paid maintenance assessment fees. The MTA Board of Directors recognizes that operational costs of the association will continue to increase each year due to inflation. Where the Board has restrained raising the maintenance assessment in most years by keeping a tight rein on expenditures, unanticipated expense increases such as higher taxes, upsurges in utility and gasoline rates and changes to the minimum wage necessitate maintenance assessment fee increases. However, the Board also realizes that a great segment of the Mililani Town population is aging and that many homeowners are on fixed incomes. Each increase to the MTA maintenance assessment is a major hardship for most of the MTA senior citizens. Therefore, the Board of Directors is constantly seeking other sources of income for MTA that will minimize the increases to the maintenance assessment to homeowners.

Every homeowner in Mililani Town directly benefits from the antenna towers that are operating from MTA common areas. The eight MTA cellular antenna site easement agreements generate nearly \$170,000 in revenues annually. For the 15,831 MTA homeowners, this equates to a savings of nearly **\$11.00 a year in maintenance assessments.**

A Future Concern

Sometimes municipal governments and private community organizations make it difficult for wireless internet and cellular phone providers to bring their services to the consumers, but federal law could supersede all such restrictions. Years ago, for example, a federal (FCC) law removed all restrictions which previously prevented homeowners from receiving television transmitted signals using outdoor antennas. Now, townhouse, condominium and planned community associations cannot lawfully prevent television antennas from being installed regardless of whether or not they will be visible from the street or neighboring properties. Planned communities like Mililani Town that had no visible antennas before this law was enacted now have a proliferation of satellite dishes on their residential properties.

MTA is concerned that if cellular companies are unable to expand its services to consumers because of restrictions, a similar federal law could be enacted to remove such restrictions. Aesthetic concerns would take a back seat to hasty installation of antenna towers whenever and wherever there is a demand, including residential property. If this happens, MTA would no longer have control over the location, the height and the appearance of antenna towers.

WHO YOU GONNA CALL?

The Mililani Town Association often receives inquiries from homeowners seeking information on topics which require redirection to more appropriate informational sources. Here are some frequent Mililani Town issues, helpful resources and their contact information.

ABANDONED VEHICLE REPORTING

Ph: 733-2530, 532-7700 x250 (24hr

recording), City & County of Honolulu

Be prepared to provide a description of the abandoned vehicle (license plate number, make, model and color) and the location of the vehicle (address or street name).

SIDEWALK PROBLEMS

Ph: 768-8159, Department of Planning,

Permitting and Housing

Sidewalk cracks, holes, obstructions, etc.

REFUSE COLLECTION & DISPOSAL

Ph: 621-5241, www.opala.org,

Department of Environmental Services

Refuse & Collection Division.

For route scheduling, green waste disposal, recycling, removal of or damage to waste receptacles, etc.

GENERAL COMPLAINTS

Ph: 768-4385 (TDD: 768-3489), The City

& County of Honolulu Complaint Office

A complaint can also be submitted online at honorolulu.gov/csd/publiccom/fixit/htm, via e-mail at complaints@honolulu.gov or by letter addressed to: Director of Customer Services, 530 South King Street, Room 302A, Honolulu, HI 96813.

BULKY ITEM COLLECTION

Ph: 621-5241, www.opala.org,

Department of Environmental Services

Refuse & Collection Division

All areas of O'ahu are on a no-call monthly collection schedule for bulky item pickup.

Pickup is conducted over a three to four day period. All items should be placed at the curbside in front of your property by 6 a.m.

on the first day to ensure collection. Bulky items must not be placed on the curb any earlier than the day before collection day.

ANIMAL NUISANCE, PET

ADOPTION, SPAY/NEUTER PROGRAM

Ph: 946-2187, The Hawaiian Humane

Society, www.hawaiianhumane.org;

529-3352, Honolulu Police Department

For cruelty to animals, excessive number of animals, leash law violations, spay/ neuter programs and pet adoption, call the Hawaiian Humane Society. To address a problem with barking dogs, call HPD.

PUBLIC TREES

Ph: 971-7151, Department of Parks and

Recreation Urban Forestry Division

For public tree trimming, relocation, removal, donations, etc.



STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HAWAII 96801

In reply, please refer to:
HEER OFFICE

May 2, 1996

TEA-FMR

TO: Alfred K. Suga
Assistant Superintendent
Department of Education

THROUGH: Bruce S. Anderson, Ph.D. *Bruce S. Anderson*
Deputy Director
for Environmental Health

FROM: Leslie K.L. Au, M.Sc. *Leslie K.L. Au*
Toxicologist, HEER Office

SUBJECT: Proposed Communications Antennae at Waialua High School

The Hazard Evaluation and Emergency Response (HEER) Office received a technical-information packet dated April 8, 1996, from TEA Group Incorporated, representing Hawaiian Wireless Partners. They are proposing to install a transmitting antenna (frequency 806-869 megahertz, Effective Radiated Power 120 watts) atop a 100-foot-high light pole at the southeastern end of Waialua High School's athletic field.

Based on our review, we have no objection to this proposal. The potential public-health risk, if any, should be insignificant.

The wireless company stated that the "exclusion distance" for the general public would be 10 feet at the most, at the same height as the antenna, and that very little energy would be broadcasted downwards. We agree with this. Our own calculation indicated that the safe distance, based on the health-protective standards of the American National Standards Institute, would be 9 feet or farther from the antenna. The 100-foot-high light pole plus their choice of antenna provide an additional safety margin.

There would also be two receiving antennae, which present no risk to public health. If you should have any questions, please call me (L. Au) at 586-7539.

cc: Ms. Aileen Hokama, Superintendent,
DOE Central District
Eric Schatz, TEA/Western Wireless

Cellular Phone and Base Station

Q Why is it dangerous to have your mobile phone in operation during refueling at a gas station?

A The following is a quote from the chair of the Cellular Telecommunications Industry Association (dated June 28, 1999): "You may have received inquiries about wireless phones causing fires or explosions at gas stations. In an abundance of caution, some manufacturers have included language in the owner's manuals for their products that recommends wireless phone users turn off their phones while at refueling points (gas stations). In addition, we have received information that Exxon will begin issuing warning signs at all domestic gas stations advising drivers to turn off all wireless communications devices when entering Exxon gas stations. While wireless phone owners should always consult their owner's manual for information on the use of the phone, we are not aware of any incident that would justify these concerns."

Q Is there any risk for health with the installation of a cellular tower near a community?

A Radiofrequency (RF) emissions from antennas used for wireless transmissions such as cellular and PCS (personal communication systems) signals result in exposure levels on the ground that are typically thousands of times less than safety limits. These safety limits were adopted by the Federal Communications Commission (FCC) based on the recommendations of expert organizations and endorsed by agencies of the federal government responsible for health and safety. Therefore, there is no reason to believe that such towers could constitute a potential health hazard to nearby residents or students.

Other antennas, such as those used for radio and television broadcast transmissions, use power levels that are generally higher than those used for cellular and PCS antennas. Therefore, in some cases there could be a potential for higher levels of exposure on the ground. However, all broadcast stations are required to demonstrate compliance with FCC safety guidelines, and ambient exposures to nearby persons from such stations are typically well below FCC safety limits.

The "Minimum Safe Distance" from a mobile phone base antenna is described by the Food and Drug Administration/FCC as follows: "To be exposed to levels at or near the FCC limits for cellular or PCS frequencies an individual would essentially have to remain in the main transmitted radio signal (at the height of the antenna) and within a few feet from the antenna In addition, for sector-type antennas RF levels to the side and in back are insignificant." Note that the quote about safe distances applies to the actual radiating antenna, not to the tower (or building or structure) the antenna is on. For a mobile phone base station antenna mounted on a tower that is 5+ meters high (about 15 feet), there should be no areas that will come anywhere close to the RF radiation safety guidelines, so the concept of a "minimum safe distance" doesn't really apply to generally occupied areas.

Q Is it safe to live or work on the top floor of a building that has a mobile phone base station antenna on it?

A In general this will not be a problem. The roof of the building will absorb large amounts of the RF energy. Typically a roof would be expected to decrease signal strength by a factor of 5 to 10 (or more for a reinforced concrete or metal roof). In addition, the FCC requires RF radiation evaluations of high-power rooftop transmitters. Even a worst-case calculation predicts that power density on the floor below an antenna will meet all current RF safety guidelines, and actual measurements in top-floor apartments and corridors confirm the power density is far below all current RF safety guidelines.



What's New?

- . [January Newsletter](#)
- . [January Journal](#)
- . [2013 CHP Salary Survey](#)
- . [Scholarship and Summer School Education Grants](#)
- . [EPA Environmental Education Grants](#)
- . [3rd Turner Symposium](#)
- . [IAEA Fukushima Meeting - IEM6](#)
- . [ACS Summer School Announced](#)
- . [RPM2014 - RP in Medicine Conference](#)
- . [Radiation Safety in Medicine PDS](#)

Upcoming Events

- . [NRC Meeting Webcasts - Live Ongoing](#)
- . [IAEA Meeting International Experts' Meeting on Radiation Protection after the Fukushima Daiichi Accident](#)
17-21 Feb 2014
Vienna, Austria
- . [Image Gently ALARA CT Summit](#)
How to Use New CT Technologies for Children
21-22 Feb 2014
Orlando, FL
- . [NCRP Meeting](#)
NCRP: Achievements of the Past 50 Years and Addressing the Needs of the Future
10-11 March 2014
Bethesda, MD
- . [Canadian Radiation Protection Association \(CRPA\) Annual Conference](#)
Managing the Risk – Perceptions and Realities
25-29 May 2014
Vancouver BC, Canada
- . [RPM2014](#)
Rad Protection in Medicine
30 May - 2 June 2014
Varna, Bulgaria
- . [AFRIRPA04](#)
4th African Regional IRPA Congress
13-17 Sept 2014
Rabat, Morocco
- . [Radiation Protection and Shielding Conference](#)
14-18 Sept 2014
Knoxville, TN

07 January 2014

LogoStore



Q Is it true that hands-free cell phone car microphones radiate more than any other instrument used with these phones?

A Hands-free cell phone car microphones have been tested by the manufacturers and meet the current American National Standards Institute (ANSI)/Institute of Electrical and Electronics Engineers (IEEE) standards for R) radiation safety. These are the same standards that the FCC enforces under the Telecommunications Act of 1996, and they place limits on the specific absorption rate of RF energy in the body. There has been no substantiated information that the car microphones emit more RF than any other item used with cell phones.

Q I am in a situation where I would like to be able to wear my hands-free cellular kit all day. Does the radiation only exist when I'm actually making a call or just any time the phone is on?

A Whenever they are turned on, cell phones communicate at infrequent intervals with a nearby base station even when they are not being used for a call. This is necessary to tell the system where the user is in case a call should come in. Thus, even while they are inactive, the phones are a source of (very low) RF energy exposure to the user.

Hands-free kits reduce exposure to a user by removing the phone from the vicinity of the head. There is no identifiable health benefit in using the kits, but there is no detriment either, and using them may increase a user's peace of mind. In your case, the cell phone and hands-free kit are clearly an important link to the outside world and I would not hesitate in using them. There may be comfort issues with having the earpiece in place for a long time, but RF radiation exposure should not be a concern at all. The hands-free kits will reduce exposure below that which you would receive if the phone were kept close to your head.

Q Are there products available to the general public that can be purchased to protect cellular or portable telephone users from radiation?

A There are a number of opportunistic gadgets on the market to allegedly protect the user from hazards of cellular phones. You can search the Internet to find the latest, ranging from antenna shields to whole-body shielding materials. Most experts believe that these devices take advantage of customers' misunderstanding and unfounded fears to sell products with no real value. First of all, cell phones that operate within the guidelines established by national and international safety panels have never been shown to pose a health risk to the user (see answers to other questions on cell phone safety on this page). Secondly, placing any kind of shield over the antenna of a cell phone will in most cases cause it to increase its RF output as it attempts to compensate for signal loss in the shield and maintain a quality phone call.

Q I need help in gathering published information about the risks posed by cell towers placed on school grounds. Is there information that would enable me to gather/calculate or measure radiation on the specific site?

A The best single reference is the [Federal Communications Commission Website](#). Look for:

1. Bulletin 56, "Questions and Answers about Biological Effects and Potential Hazards of Radiofrequency Electromagnetic Fields."
2. Bulletin 65, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields."
3. "A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance."

An excellent technical paper with field measurements of cell-tower emissions was published by R.C. Petersen and P.A. Testagrossa in the journal *Bioelectromagnetics*, volume 13, page 527ff, 1992.

Q Is cell phone use in and around a hospital safe?

A The issue of banning mobile phone use in hospitals is a subject of some controversy. For a snapshot of the controversy it is useful to look at an article that was published in March 2003 in the *British Medical Journal* (BMJ 326:460, March 2003). The authors concluded: "Mobile phones in hospitals are not as hazardous as believed and should be allowed at least in nonclinical areas."

At least as interesting as the article itself are the online responses to the article. This is what we know:

- Mobile phones can interfere with medical equipment.
- The interference is relatively rare and generally goes away when the phone is turned off or moved away.
- There appear to be no confirmed reports of life-threatening interference.
- The two-way radios used by emergency-service personnel and hospital transport aides (porters) are a bigger source of interference than consumer mobile phones.
- Other sources of RF radiation (for example, digital TV broadcasts and other medical equipment) have also caused interference with medical devices.
- Many (most?) hospitals ban mobile phones, but the basis for their bans is generally vague, and the bans are often very poorly enforced on visitors or on staff.

I am unaware of any general governmental bans on the use of mobile phones in hospitals. In the United States, this would fall under the jurisdiction of the [Center for Devices and Radiological Health of the Food and Drug Administration](#) and to date the Food and Drug Administration has not taken a position on the subject. The bottom line is that interference with medical equipment by devices that produce RF radiation is an issue for hospitals and medical-equipment makers, but the source of the problem is not limited to mobile phones.

Q Hospitals do not allow cell phone use due to potential interference. Last weekend I was in a hospital where the top of the hospital building was studded with cell tower antennas. Why is it that cell phones would cause interference, but cell tower antennas would not?

A It's a question of signal strength. Interference with medical devices has been observed only very close to transmitting antennas where there is strong signal strength. Interference has been observed in some medical electronics due to hand-held cell phones. Rooftop antennas are some distance away from any susceptible electronics. In addition to proximity, the directionality of the antennas is important. Most rooftop antennas have strong gain in the forward direction towards the horizon and very low gain in the vertical direction. Finally, there are layers of building materials shielding the interior areas from the rooftop antennas. Proximity, directionality, shielding all go towards reducing the signal strength inside a building due to the antennas on the roof so that interference is not generally an issue. This does not mean that you cannot receive the signals from the rooftop antennas inside the building; it simply means that the received signals are not strong enough to cause interference.

Q I would like to inquire about the physics principles regarding the use of mobile phones and the development of brain tumors. I've been through many sites but they can never give an exact answer. Can they really give someone brain tumors or does it have to do with the intensity of the radiation and the distance between the phone and an individual?

A It is not clear that mobile phones do produce brain tumors, or any serious health effects for that matter. A number of epidemiology studies have been almost completely negative on the issue. See the article by Kenneth Foster and John Moulder in *IEEE Spectrum* magazine and also [Moulder's FAQ](#) on mobile phones and health. There has been a lot of discussion over the years about the possible

mechanisms by which microwave energy such as emitted by cell phones might produce biological effects. The one proven mechanism is the heating of tissue, but mobile phones operate at power levels that are too low to cause noticeable heating in the user. Scientists have speculated about other mechanisms, but these theories remain unproven and many of them have been challenged on biophysical grounds.

Whatever may be the risks or nonrisks of mobile phone radiation, a hands-free kit is an effective way for the user to reduce his or her exposure to RF energy while using a mobile phone. If you have serious concerns, limited or no use of a cellular phone might be a consideration for you.

The information posted on this web page is intended as general reference information only. Specific facts and circumstances may affect the applicability of concepts, materials, and information described herein. The information provided is not a substitute for professional advice and should not be relied upon in the absence of such professional advice. To the best of our knowledge, answers are correct at the time they are posted. Be advised that over time, requirements could change, new data could be made available, and Internet links could change, affecting the correctness of the answers. Answers are the professional opinions of the expert responding to each question; they do not necessarily represent the position of the Health Physics Society.

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sell the personalty in a commercially reasonable manner, store the personalty at the expense of its owner, donate the personalty to a charitable organization, or otherwise dispose of the personalty in its sole discretion; provided that no sale, storage, or donation shall occur until sixty days after the board complies with the following:

- (1) The board notifies the owner in writing of:
 - (A) The identity and location of the personalty; and
 - (B) The board's intent to so sell, store, donate, or dispose of the personalty.
 Notification shall be by certified mail, return receipt requested, to the owner's address as shown by the records of the association or to an address designated by the owner for the purpose of notification or, if neither of these is available, to the owner's last known address, if any; or
 - (2) If the identity or address of the owner is unknown, the board shall first advertise the sale, donation, or disposition at least once in a daily paper of general circulation within the circuit in which the personalty is located.
- (b) The proceeds of any sale or disposition of personalty under subsection (a), after deduction of any accrued costs of mailing, advertising, storage, and sale, shall be held for the owner for thirty days. Any proceeds not claimed within this period shall become the property of the association.

§514B-140 Additions to and alterations of condominium. (a) No unit owner shall do any work that may jeopardize the soundness or safety of the property, reduce the value thereof, or impair any easement, as reasonably determined by the board.

(b) Subject to the provisions of the declaration, no unit owner may make or allow any material addition or alteration, or excavate an additional basement or cellar, without first obtaining the written consent of sixty-seven per cent of the unit owners, the consent of all unit owners whose units or appurtenant limited common elements are directly affected, and the approval of the board, which shall not unreasonably withhold such approval. The declaration may limit the board's ability to approve or condition a proposed addition or alteration; provided that the board shall always have the right to disapprove a proposed addition or alteration that the board reasonably determines could jeopardize the soundness or safety of the property, impair any easement, or interfere with or deprive any nonconsenting owner of the use or enjoyment of any part of the property.

(c) Subject to the provisions of the declaration, nonmaterial additions to or alterations of the common elements or units, including, without limitation, additions to or alterations of a unit made within the unit or within a limited common element appurtenant to and for the exclusive use of the unit, shall require approval only by the board, which shall not unreasonably withhold the approval, and such percentage, number, or group of unit owners as may be required by the declaration or bylaws; provided that the installation of solar energy devices shall be allowed on single-family residential dwellings or townhouses pursuant to the provisions in section 196-7.

As used in this subsection:

"Nonmaterial additions and alterations" means an addition to or alteration of the common elements or a unit that does not jeopardize the soundness or safety of the property, reduce the value thereof, impair any easement, detract from the appearance of the project, interfere with or

deprive any nonconsenting owner of the use or enjoyment of any part of property, or directly affect any nonconsenting owner.

"Solar energy device" means any new identifiable facility, equipment, apparatus, or the like which makes use of solar energy for heating, cooling, or reducing the use of other types of energy dependent upon fossil fuel for its generation; provided that if the equipment sold cannot be used as a solar device without its incorporation with other equipment, it shall be installed in place and be ready to be made operational in order to qualify as a "solar energy device"; provided further that "solar energy device" shall not include skylights or windows.

"Townhouse" means a series of individual houses, having architectural unity and a common wall between each unit, provided that each unit extends from the ground to the roof.

(d) Notwithstanding any other law to the contrary in this chapter or any provisions in any declaration or bylaws:

(1) Regarding the installment of telecommunications equipment:

(A) The board shall have the authority to install or cause the installation of antennas, conduits, chases, cables, wires, and other television signal distribution and telecommunications equipment upon the common elements of the project; provided that the same shall not be installed upon any limited common element without the consent of the owner or owners of the unit or units for the use of which the limited common element is reserved; and

(B) The installation of antennas, conduits, chases, cables, wires, and other television signal distribution and telecommunications equipment upon the common elements by the board shall not be deemed to alter, impair, or diminish the common interest, common elements, and easements appurtenant to each unit, or to be a structural alteration or addition to any building constituting a material change in the plans of the project filed in accordance with sections 514B-33 and 514B-34; provided that no installation shall directly affect any nonconsenting unit owner;

(2) Regarding the abandonment of telecommunications equipment:

(A) The board shall be authorized to abandon or change the use of any television signal distribution and telecommunications equipment due to technological or economic obsolescence or to provide an equivalent function by different means or methods; and

(B) The abandonment or change of use of any television signal distribution or telecommunications equipment by the board due to technological or economic obsolescence or to provide an equivalent function by different means or methods shall not be deemed to alter, impair, or diminish the common interest, common elements, and easements appurtenant to each unit or to be a structural alteration or addition to any building constituting a material change in the plans of the project filed in accordance with sections 514B-33 and 514B-34; and

(3) Regarding the installation of solar energy devices and wind energy devices:

(A) The board shall have the authority to install or cause the installation of, or lease or license *common elements for the installation of solar energy devices and wind energy devices on the common elements of the project; provided that solar or wind energy devices shall not be installed upon any

limited common element without the consent of the owner or owners of the unit or units for which use of the limited common element is reserved; and

- (B) The installation of solar energy devices and wind energy devices on the common elements of the project by the board shall not be deemed to alter, impair, or diminish the common interest, common elements, or easements appurtenant to each unit or to be a structural alteration or addition to any building constituting a material change in the plans of the project filed in accordance with sections 514B-33 and 514B-34; provided that the installation does not directly affect any nonconsenting unit owner.

(e) As used in this subsection:

"Directly affect" means the installation of television signal distribution and telecommunications equipment, solar energy devices, or wind energy devices in a manner which would specially, personally, and adversely affect an individual unit owner in a manner not common to the unit owners as a whole.

"Solar energy device" means the same as in subsection (c).

"Television signal distribution" and "telecommunications equipment" shall be construed in their broadest possible senses to encompass all present and future forms of communications technology.

"Wind energy device" means any new identifiable facility, equipment, apparatus, or the like which makes use of wind energy for producing electricity or reducing the use of other types of energy that are dependent upon fossil fuel for generation; provided that if the facility, equipment, apparatus, or the like cannot be used as a wind energy device without incorporation with other equipment, it shall be installed in place and ready to be operational to qualify as a "wind energy device."

*[Revisor of statutes will reflect "comment" corrected to "common."]

§514B-141 Tort and contract liability; tolling of limitation period. (a) A unit owner is not liable, solely by reason of being a unit owner, for any injury or damage arising out of the condition or use of the common elements. Neither the association nor any unit owner except the developer is liable for that developer's torts in connection with any part of the condominium that that developer has the responsibility to maintain.

(b) An action alleging a wrong done by the association, including an action arising out of the condition or use of the common elements, may be maintained only against the association and not against any unit owner. If the wrong occurred during any period of developer control and the association gives the developer reasonable notice of and an opportunity to defend against the action, the developer who then controlled the association is liable to the association or to any unit owner for:

- (1) All tort losses not covered by insurance suffered by the association or that unit owner; and
- (2) All costs that the association would not have incurred but for a breach of contract or other wrongful act or omission, as the same may be established through adjudication.

Whenever the developer is liable to the association under this section, the developer is also liable for all expenses of litigation, including reasonable attorneys' fees, incurred by the association.