

M-NCPPC



**MONTGOMERY COUNTY DEPARTMENT OF PARK AND PLANNING**

THE MARYLAND-NATIONAL CAPITAL  
PARK AND PLANNING COMMISSION

8787 Georgia Avenue  
Silver Spring, Maryland 20910-3760  
301-495-4500, [www.mncppc.org](http://www.mncppc.org)

May 23, 2005

MEMORANDUM

TO: Montgomery County Planning Board

FROM: Joel Gallihue, AICP, Senior Planner  
Development Review Division

A handwritten signature in black ink, appearing to be 'JG', is written over the name 'Joel Gallihue' in the 'FROM' field.

SUBJECT: **Addendum To Report** - Special Exception No. S-2639: Rooftop wireless telecommunication facility. (Includes Modification of S-1424)

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Please find attached the Tower committee report materials for the above referenced special exception. These attachments were inadvertently omitted from the May 20, 2004 staff report. Staff has confirmed that coverage data was provided to the Tower Committee's consultant and evaluated to confirm that this request does not constitute an unnecessary duplication in coverage. As this information is proprietary in nature, it was not included in the special exception application or this packet. Our staff liaison member of the Tower Committee will be present at the session should there be any further questions.

**EXCERPTS FROM TTFCG MEETING OF MARCH 24, 2004**

**Action Item:** T-Mobile application to attach three 54" panel antennas on a support pole enclosed within a shroud at the 51' level of the 35' University Gardens building located at 440 University Boulevard in Silver Spring (Application #200403-13).

Bob Hunnicutt summarized the application and noted that it would require a Special Exception because the building height did not meet the 50' height requirement for this residential zone.

The group commended T-Mobile's stealth design for this site.

**Motion:** Steve Batterden moved the application be recommended. Helen Xu seconded the motion and it was unanimously approved.



**MONTGOMERY COUNTY, MARYLAND**  
**TELECOMMUNICATIONS TRANSMISSION**  
**FACILITY COORDINATING GROUP**  
**RECORD OF ACTION**

APPLICATION NUMBER: 200403-13

DATE: 24 March 2004

<b>Application Review:</b>	
Applicant:	T-Mobile
Description:	Attach three 54" panel antennas clustered (one per sector) around a support pole and enclosed within a shroud at the 51' level on an existing 35' building. A GPS antenna will also be added.
Site Location:	University Gardens 440 University Boulevard, Silver Spring
Property Owner:	Korean Community Senior Housing
Tower Coordinator Recommendation:	Recommended: <input checked="" type="checkbox"/> Not recommended: <input type="checkbox"/>
Land-owning Agency input:	Attached: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Group Comments: Conditioned on the applicant receiving a Special Exception to attach to this building.	

<b>Vote on recommendation of approval:</b>	For	Against:	Abstain:
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<b>Results:</b>	Recommended <input type="checkbox"/>	Not recommended <input type="checkbox"/>
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Chairman Signature	Date

Tower Coordinator Signature	Date



**MONTGOMERY COUNTY, MARYLAND**  
**TOWER COORDINATOR**  
**RECOMMENDATION**

APPLICATION NUMBER: 200403-13

DATE: 3 March 2004

<b>Application Information:</b>		
Applicant:	T-Mobile	
Description:	Attach three 54" panel antennas clustered (one per sector) around a support pole and enclosed within a shroud at the 51' level on an existing 35' building. A GPS antenna will also be added.	
Site Location:	University Gardens 440 University Boulevard, Silver Spring	
Property Owner:	Korean Community Senior Housing	
Classification in accordance with Zoning Ordinance: R60		
Private Property:	<input checked="" type="checkbox"/>	By right: <input type="checkbox"/>
Public Property:	<input type="checkbox"/>	By right: <input type="checkbox"/>
		Special Exception: <input checked="" type="checkbox"/>
		Special Exception: <input type="checkbox"/>
		Mandatory Referral: <input type="checkbox"/>
Impact on land-owning agency: Minimal		
Existing or future public safety telecommunications facilities and plans:		
Co-location options:		
Implications to surrounding area: Minimal. The antennas will be enclosed within a shroud designed to be similar in appearance as the existing metal chimney atop the penthouse of the building. The antennas will extend 8' above the 9' penthouse roof.		
Attachments: Application		
Comments: The equipment will be placed on a 10'x20' steel platform enclosed within a facade designed to be similar in appearance to the penthouse.		

<b>Tower Coordinator Recommendation:</b>	Recommended: <input checked="" type="checkbox"/>
	Not recommended: <input type="checkbox"/>
<i>[Handwritten Signature]</i>	3-15-04
Signature	Date



**MONTGOMERY COUNTY, MARYLAND**  
**APPLICATION FOR WIRELESS COMMUNICATIONS**  
**SITE COORDINATION**

DATE: 3-3-04NUMBER: 200403-13  
(To be filled in by County)Applicant Name: **Omnipoint Communications CAP Operations, LLC**DBA: **T-Mobile, USA**Address: **12050 Baltimore Ave., Beltsville, MD 20705**

Contact Person

and Phone No.: **David G. Orphanides, 215-870-4216**

Provide a description of the proposed installation, including the type and height of the structure (i.e. monopole, rooftop, water tank, guyed tower, self-support tower, etc.) and whether it is existing, modified, or new. Describe any modifications that will be made to existing structure.

The applicant proposes the installation of the following upon the roof of an existing thirty-five and one-third foot (35.33') tall apartment building: 1) three (3) panel antenna at fifty-one and one-third feet/agl (51.33') (top of antenna) with all three (3) antenna cluster mounted and enclosed within a shroud or sheath which will be designed in terms of both size and color to mimic an existing metal stack/chimney which currently protrudes from the primary roof of the building and then extends up the side and slightly above the roof of an existing nine foot (9') elevator penthouse located in the approximate center of the apartment building roof; 2) three (3) equipment cabinets and related utility equipment upon a twenty foot (20') x ten foot (10') steel platform which will be situated near the center of the primary building roof adjacent to the existing elevator penthouse and concealed from view by an enclosure designed to closely immitate the existing elevator penthouse; and 3) a work light and GPS antenna pole mounted upon the proposed equipment platform.

Address/City: 440 University Boulevard, Silver Spring, MD 20901

Site Name: Korean Community Senior Housing  
Zoning: R60*University Gardens 3/17/04 WAA/253*

Site Owner/Landlord: Korean Community Senior Housing

Latitude/Longitude (NAD27 degrees/minutes/seconds: 39-00-22.58/76-59-50.33

Ground Elevation AMSL in feet: 310.5 ft.

Antenna Height AGL in feet: 51.33

Frequency bands to be used: 1885-1895 Mhz (Rx); 1965-1975 Mhz (Tx)

Maximum Effective Radiation Power (ERP): 500 watts

Federal Communication Commission (FCC) Emission Designator: KNLH327 KNLG276

FCC Antenna Structure Registration Number: N/A

Description of antenna(s), including physical size, patterns, gain and orientation (include copy of spec sheet or drawings): Three (3) EMS model DR65-18-XXDPL2Q antenna. Size: 54"(h) x 12"(w) x 4"(d). Gain: 17.3 dBi (15.2 dBd). Orientation: Three (3) sectors with one (1) antenna per sector - 15 degrees, 135 degrees and 255 degrees.

Describe area to be served by the proposed installation. Attach a map of the general area showing the location of the site. Upon request, attach RF propagation studies showing service area coverage surrounding the proposed site with and without the proposed site.  
Please see attachments

Will antennas be installed on an existing structure? Yes

If not, describe results of investigation about possible co-location. Include a listing of alternative sites considered and an explanation as to why each possible alternative was not selected. If a site was ruled out because of radio frequency (RF) issues, provide RF propagation maps documenting inadequate coverage: N/A

Justification of why this site was selected:

Will site be used to support government telecommunications facilities or other equipment for government use? No

If yes, describe: N/A

Attach a site plan of the proposed facility showing location of monopole, tower, or structure on the property, location of existing and proposed equipment buildings or cabinets, and distance of any new structures or buildings from property lines and other buildings or residences within 300 feet. Clearly identify existing versus proposed facilities. Also provide an elevation sketch of the structure showing major dimensions, existing attachments, and mounting height of proposed antennas. If a balloon test has been performed, please provide copies of the photographs.

Will the antenna installation be in compliance with the maximum permissible RF exposure limits set forth in §1.1310 of the FCC Rules and Regulations? Yes  No

If the answer is no, please attach an explanation.

Type of compliance study required under §1.1307 of the FCC Rules and Regulations:

Categorically Excluded

Routine Environmental Evaluation

Environmental Assessment

If antennas will be located on a rooftop, please attach a description of any steps that have been or will be taken to prevent the aggregate RF from exceeding exposure limits. The proposed location and installation of antenna at this site will comply with all local, state and federal statutes, laws, ordinances and regulations relating to the same. In addition, the current proposal calls for the placement of the planned antennas within a cylinder shaped shroud at a height well above body and/or head height as measured from the primary roof deck and rooftop access is limited to building maintenance staff only.

Montgomery County Code, Chapter 2-58E requires applicants to submit a facility location plan indicating the location of every existing telecommunications transmission facility and the general location of facilities that are anticipated to be built in the near future. Has a new or updated plan been filed with the County within the last year?

Yes  No  If the answer if no, please submit a plan with this application.

If an application for an FAA review has been submitted or an FAA determination has been issued, please attach a copy.

Application fees have been paid to Montgomery County Government on

- - T - Mobile -

March 3, 2004

Mr. Robert Hunnicutt  
Montgomery County Tower Coordinator  
5550 Sterrett Place Suite 200  
Columbia, MD 21044

Dear Mr. Hunnicutt:

Enclosed please find an application to the Montgomery County Telecommunications Transmission Facilities Coordinating Group (MCTTFCG) for recommendation of a proposed facility for Omnipoint Communications CAP Operations, LLC (T-Mobile USA, Inc.) at the following location:

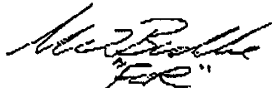
440 University Boulevard  
Silver Spring, MD 20901

The proposed facility calls for the placement of antenna and related equipment atop the roof of an existing 35.33' building owned by Korean Community Senior Housing. All proposed antenna will be installed at a maximum height of 51.33' within a cylinder shaped shroud adjacent to the existing 9' penthouse in order to mimic (in terms of height, color and shape) an existing metal stack currently located adjacent to the penthouse. The related equipment cabinets will be placed on the roof upon a metal platform and will be enclosed by screening designed to mimic the color and materials of the existing rooftop penthouse.

T-Mobile USA, Inc., respectfully requests consideration of this application at the next meeting of the MCTTFCG, if possible. We trust that the enclosed application and attachments are inclusive and complete; however, please feel free to contact me at (215) 870-4216 if any additional information is required.

Thank you for your consideration in this matter.

Sincerely,



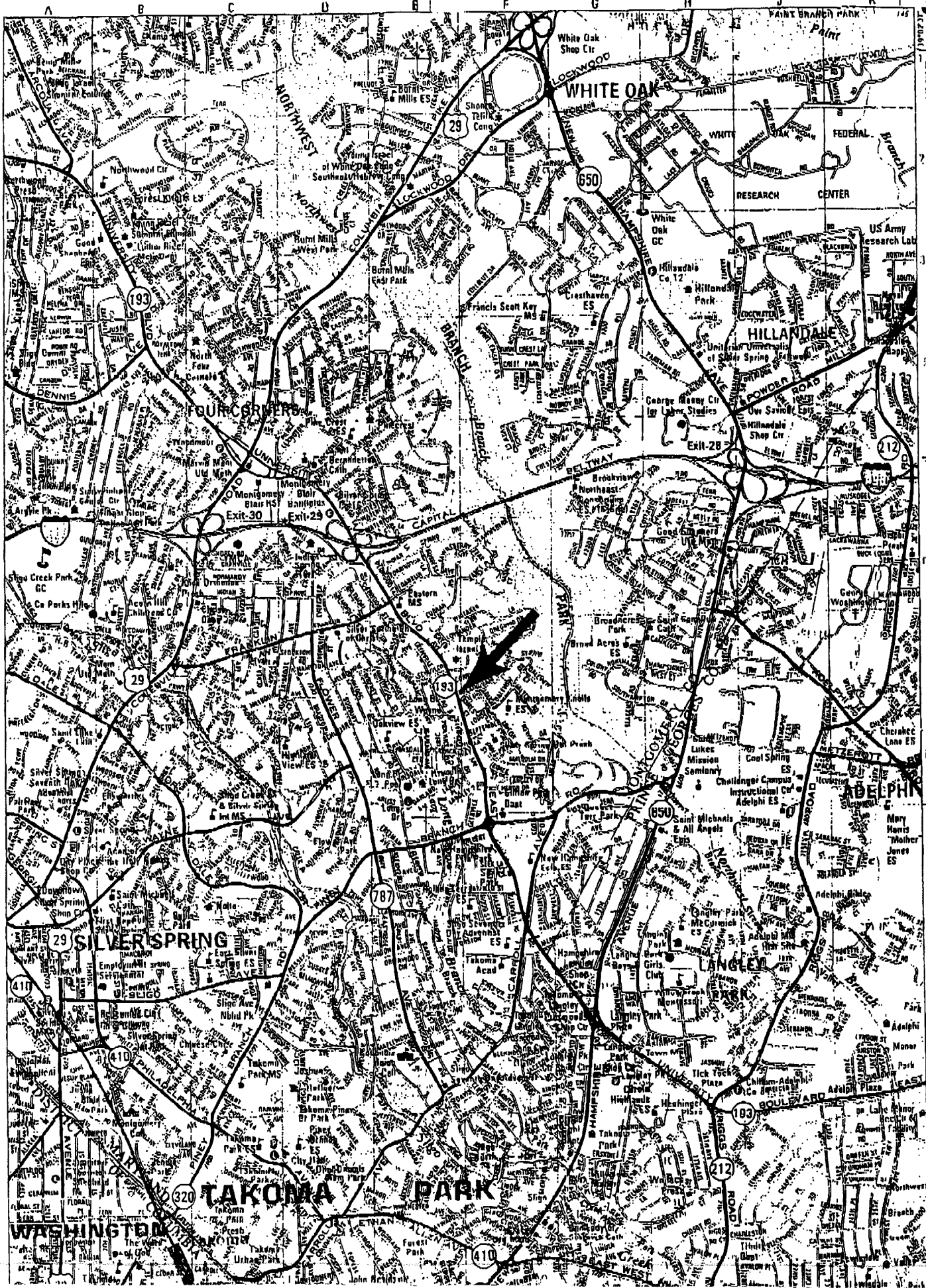
David G. Orphanides  
Zoning Associate

Enclosures

Joins Map 31  
77-00001 800,000 FT

5 10,000 FT

MA 31



Scale 1:62,500

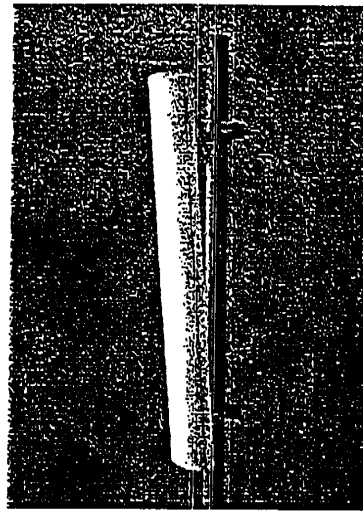
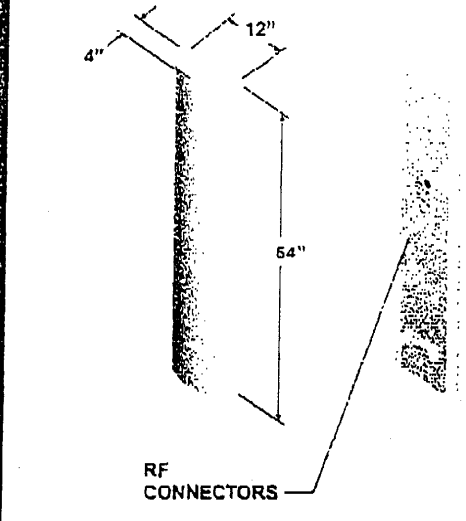
1:17,000 FT





# OptiRange™ Suppressor™ DR65-18-XXDPL20

1850 MHz - 1990 MHz (P)



- 65° beamwidth
- 17.3 dBi gain
- ±45° Dual DualPol
- 54 inch

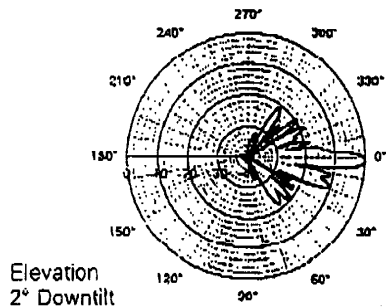
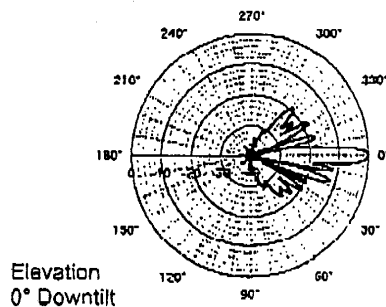
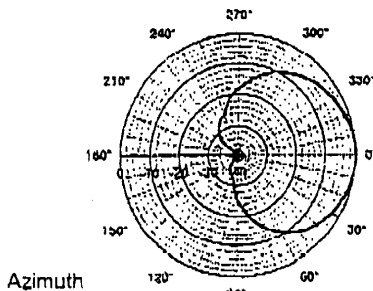
## SPECIFICATIONS

Electrical		Mechanical	
Azimuth Beamwidth (-3 dB)	65°	Dimensions (L x W x D)	54 in x 12 in x 4 in (137.2 cm x 30.5 cm x 10.2 cm)
Elevation Beamwidth (-3 dB)	6°	Rated Wind Velocity	130 mph (209 km/hr)
Elevation Sidelobes (Upper)	>18 dB	Equivalent Flat Plate Area	4.5ft <sup>2</sup> (.42 m <sup>2</sup> )
Gain	17.3 dBi (15.2 dBd)	Front Wind Load @ 100 mph (161 kph)	130 lbs (576 N)
Polarization	Slant, ± 45°	Side Wind Load @ 100 mph (161 kph)	43 lbs (192 N)
Port-to-Port Isolation	>30 dB	Weight	24 lbs (11 kg)
Front-to-Back Ratio	>35 dB	Note: Patent Pending and US Patent number 5, 767, 246. Values and patterns are representative and variations may occur. Specifications may change without notice due to continuous product enhancements. Digitized pattern data is available from the factory or via the web site <a href="http://www.emswireless.com">www.emswireless.com</a> and reflect all updates.	
Electrical Downtilt Options	0°, 2°		
VSWR	1.35:1 Max		
Connectors	4; 7-16 DIN (female)		
Power Handling	250 Watts CW		
Passive Intermodulation	-147 dBc		
Lightning Protection	[2x20W (+43 dBm)] Chassis Ground		

## MOUNTING OPTIONS

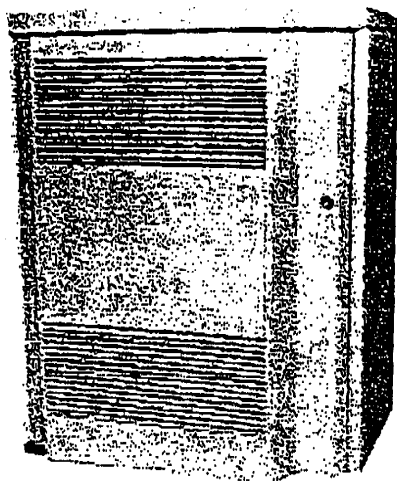
Model Number	Description	Comments
MTG-P00-10	Standard Mount (Supplied with antenna)	Mounts to Wall or 1.5 inch to 5.0 inch O.D. Pole (3.8 cm to 12.7 cm)
MTG-S02-10	Swivel Mount	Mounting kit providing azimuth adjustment.
MTG-DXX-20°	Mechanical Downtilt Kits	0° - 10° or 0° - 15° Mechanical Downtilt
MTG-CXX-10°	Cluster Mount Kits	3 antennas 120° apart or 2 antennas 180° apart
MTG-C02-10	U-Bolt Cluster Mount Kit	3 antennas 120° apart, 4.5" O.D. pole.
MTG-TXX-10°	Steel Band Mount	Pole diameters 7.5" - 45"

\* Model number shown represents a series of products. See mounting options section for specific model number.



### The RBS 2106 cabinet

- Outdoor specified.
- Supports up to six double transceiver units (12 TRX's) per cabinet.
- One cabinet can be configured as a one, two or three sector cell configuration.
- The cabinet fulfils seismic requirements



*Figure 7. RBS 2106 cabinet.*

All units in the cabinet are easily accessible from the front of the cabinet. There are no requirements on access to the cabinet from the sides or the back, which implies that the cabinets can be mounted side by side with the back to a wall.

Cable entries for antenna feeders, transmission cables, and mains power are concentrated at the bottom of the cabinet.

### 3 Technical Specification

#### 3.1 Mechanical Dimensions

Table 1. Mechanical Dimensions.

Quantity	Value (mm)	
Height	1614	5.29 Ft.
Width	1300	4.26 Ft
Depth (inclusive door of 230 mm)	940	3.08 Ft
Footprint (Depth)	710	2.33 Ft

#### 3.2 Weight

Table 2. Weight.

Unit	Weight (kg)
Fully equipped cabinet incl. batteries.	590
Fully equipped cabinet excl. batteries.	550

#### 3.3 Power Requirements

Table 3. Power Requirements.

Quantity	Value
AC input voltage:	200-250 VAC
Backup capacity at maximum load (depending on number of batteries)	15-30 min
External fuse:	
- AC input	1x50A or 3x32 A

#### 3.4 Power Consumption

The maximum operating power consumption for RBS 2106 is 6.6 kW with air condition valid for 200-250 VAC.

These figures correspond to operation during peak load in extreme conditions. The power consumption during normal operation is however also configuration dependent.

### 3.5 Colour

The RBS 2106 will have same colours, which are used on the RBS 2102.

Table 4. Colours

Colour	Reference Number	Ericsson Number
Grey	RAL 7035	MZY 543 03/8119
Green	NCS 8010-G 10Y	MZY 543 03/685

### 3.6 Electromagnetic Compatibility (EMC)

All RBS 2106 models fulfils the Electromagnetic Compatibility (EMC) requirements according to:

- ETS 300 342-2, the BTS product standard, in line with the European EMC Directive 89/336/EEC.
- 1999/5/EC Radio and TTE directive
- EN 55022 Class B
- GSM:11.21
- FCC, part 15

The RBS 2106 is CE marked in order to show this compliance.

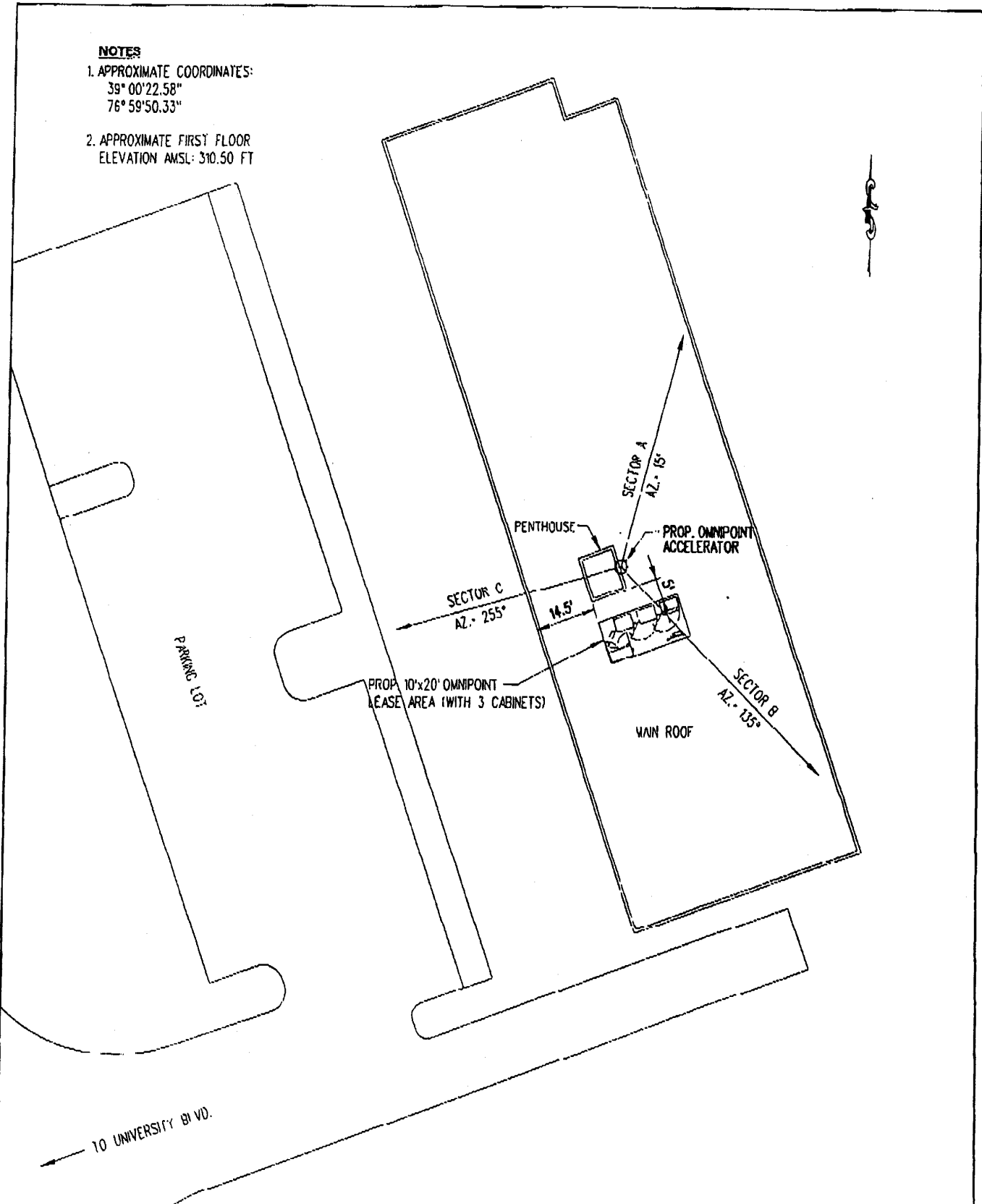
### 3.7 External Alarms

RBS 2106 provides connections for external alarms. The external alarms are defined by the customer and are reported to the BSC via LAPD signalling on the A-bis O&M interface.

There are 16 external alarms available (unoccupied). The external alarms are defined by using the Operation and Maintenance Terminal (OMT) or the Remote OMT.

**NOTES**

- 1. APPROXIMATE COORDINATES:  
39° 00'22.58"  
76° 59'50.33"
- 2. APPROXIMATE FIRST FLOOR  
ELEVATION AMSL: 310.50 FT



\\lms10101\lms10101\lms10101



ENGINEERS  
PLANNERS  
SCIENTISTS  
CONSTRUCTION MANAGERS

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12050 BALTIMORE AVENUE  
BELTSVILLE, MD 20705  
(240) 264-8600 FAX: (240) 264-8610

PROJECT:  
**SITE WAN 253**  
**UNIVERSITY GARDENS**  
**UNMANNED WIRELESS**  
**COMMUNICATION SITE**  
400 UNIVERSITY BLVD  
SILVER SPRING, MD

**LEASE EXHIBIT**  
**SHEET 1 OF 2**

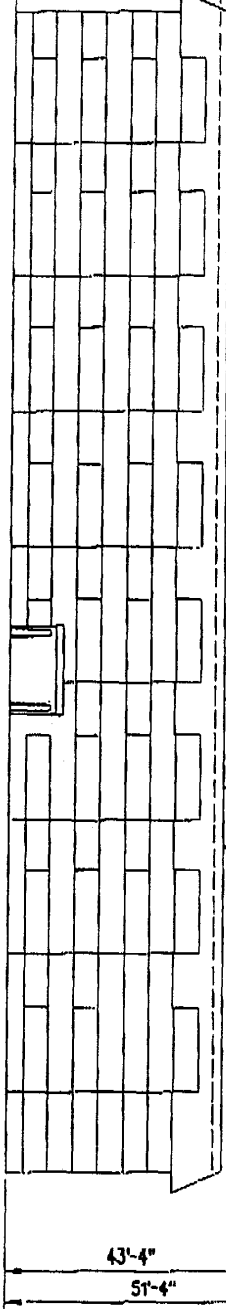
DRAWN BY: HS	DATE:
CHECKED BY: JWR	03-03-04
PROJECT No.1	SCALE:
1604245011	AS SHOWN
LEASE.dgn	

FILE: J10.50 AMSL

36'-10"

35'-4"

MAN ROOF



PROP. 36" DIA  
ACCELERATOR  
ANTENNA  
E. PENHOUSE

PROP. 10'-20" QUINQUINT  
LEASE AREA (WITH 3 CABINETS)

43'-4"

51'-4"

FRONT ELEVATION  
SCALE: 1/8"=1'-0"

\\156424201\working\EL.dwg



ENGINEERS  
PLANNERS  
SCIENTISTS  
CONSTRUCTION MANAGERS

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fax: (410) 792-7419  
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**OMNIPPOINT**  
COMMUNICATIONS CAP  
OPERATIONS, LLC

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BELTSVILLE, MD 20705  
(240) 264-8600 FAX: (240) 264-8610

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LEASE EXHIBIT  
SHEET 2 OF 2

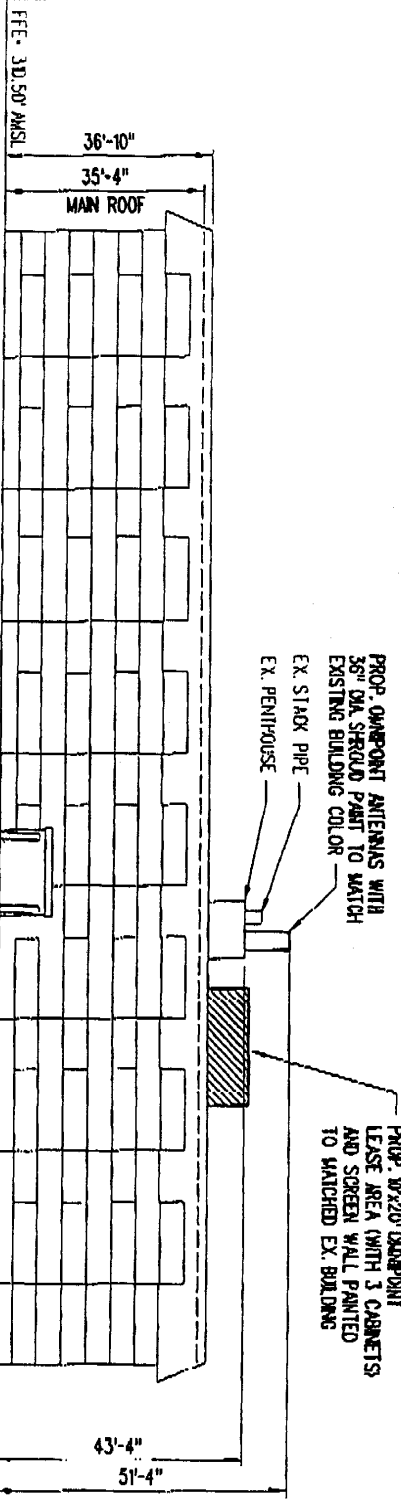
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DATE:  
03-03-04

PROJECT No 1  
1604245011

SCALE:  
AS SHOWN


LEASE.dwg



**FRONT ELEVATION**  
SCALE: 1/8"=1'-0"

*Handwritten notes:*  
 Proposed Antenna  
 100' @ 10' x 10' x 10'  
 TRG-10'

c:\work\1001\1001.dgn



**KCI**  
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**OMNIPONT**  
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PROJECT:  
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 COMMUNICATION SITE  
 440 E. UNIVERSITY BLVD  
 SILVER SPRING, MD

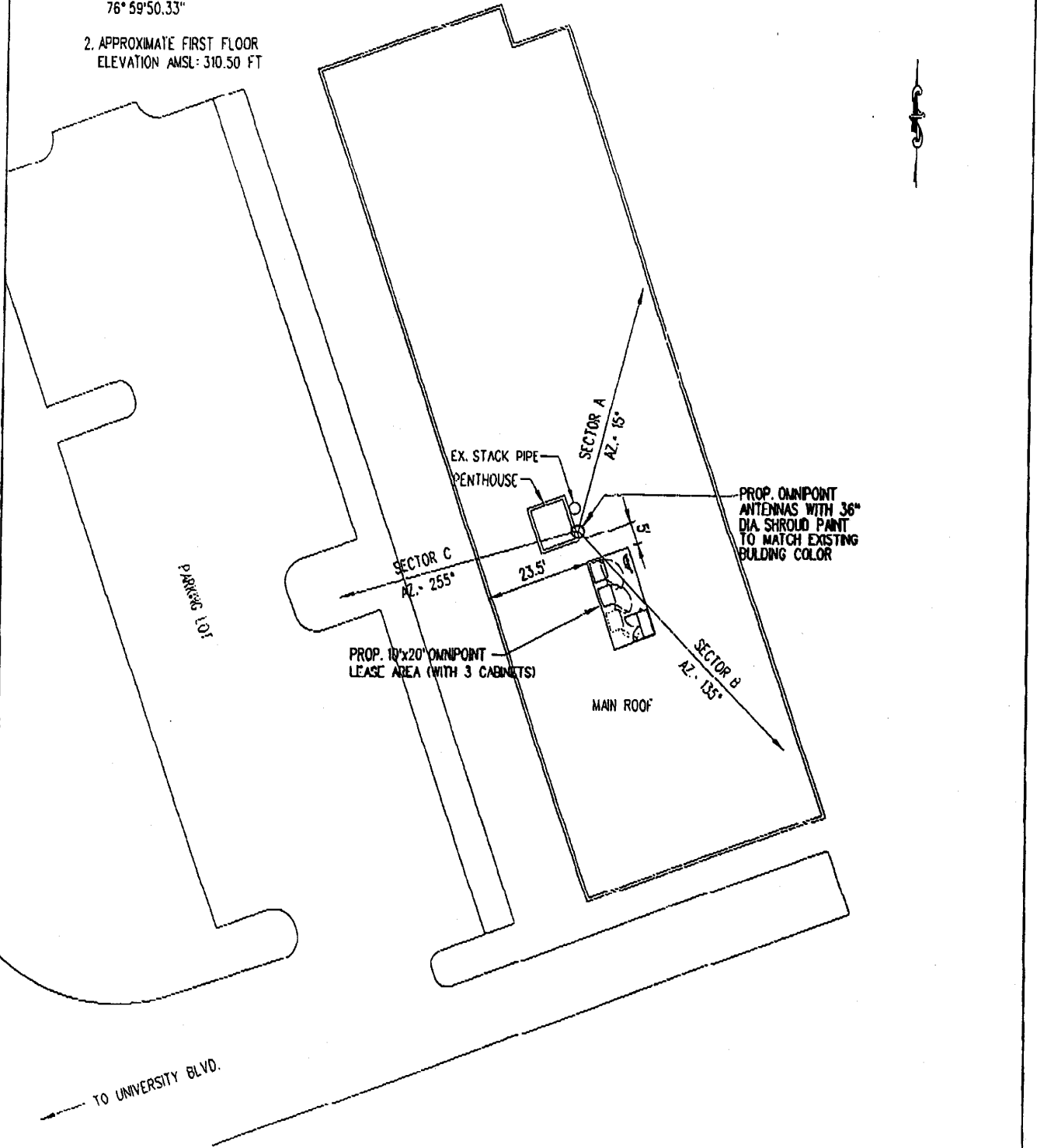
LEASE EXHIBIT  
SHEET 2 OF 2

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CHECKED BY: J.R.	03-16-04
PROJECT NO.:	SCALE:
1604245011	AS SHOWN

LEASE.dgn

**NOTES**

- 1. APPROXIMATE COORDINATES:  
39° 00' 22.58"  
76° 59' 50.33"
- 2. APPROXIMATE FIRST FLOOR  
ELEVATION AMSL: 310.50 FT



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SILVER SPRING, MD

LEASE EXHIBIT  
SHEET 1 OF 2

DRAWN BY: HS  
CHECKED BY: LJR

DATE:  
03-16-04

PROJECT No.:  
1604245011

SCALE:  
AS SHOWN

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