



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

Internet: ct.gov/csc

Daniel F. Caruso

Chairman

May 27, 2009

Carrie L. Larson, Esq.
Pullman & Comley, LLC
90 State House Square
Hartford, CT 06103-3702

RE: **EM-POCKET-047-090504** – Youghiogheny Communications-Northeast, LLC d/b/a Pocket Communications notice of intent to modify an existing telecommunications facility located at 50 Plantation Road, East Windsor, Connecticut.

Dear Attorney Larson:

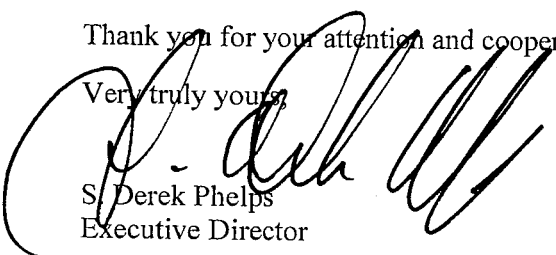
The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated May 1, 2009, including the placement of all necessary equipment and shelters within the tower compound. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,


S. Derek Phelps
Executive Director

SDP/CDM/laf

c: The Honorable Denise Sabotka Menard, First Selectman, Town of East Windsor
Laurie Whitten, Town Planner, Town of East Windsor
Unison Site Management

EM-POCKET-047-090504

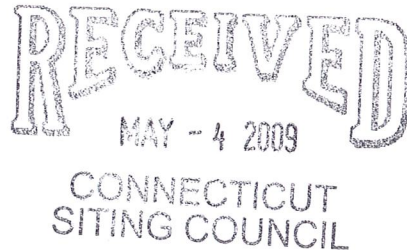
CARRIE L. LARSON
90 State House Square
Hartford, CT 06103-3702
p (860) 424-4312
f (860) 424-4370

www.pullcom.com

May 1, 2009

Via Federal Express

S. Derek Phelps, Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051



**Re: Notice of Exempt Modification
Unison Site Management Telecommunications Facility
50 Plantation Road, East Windsor, Connecticut**

ORIGINAL

Dear Mr. Phelps:

Youghiogheny Communications-Northeast, LLC, doing business as Pocket Communications ("Pocket"), intends to install antennas and appurtenant equipment at the existing 135-foot out of service water tank facility owned by Unison Site Management and located at 50 Plantation Road, East Windsor, Connecticut ("Facility"). Pocket Communications provides prepaid, flat rate wireless voice and data services to more than a quarter of a million subscribers. Pocket is licensed by the Federal Communications Commission (FCC) to provide PCS wireless telecommunications service in the State of Connecticut, which includes the area to be served by the proposed installation. This installation constitutes an exempt modification pursuant to the Public Utility Environmental Standards Act, Connecticut General Statutes Section 16-50g et. seq. (PUESA), and Section 16-50j-72(b)(2) of the Regulations of the Connecticut State Agencies adopted pursuant to PUESA. In accordance with R.C.S.A. Section 16-50j-73, a copy of this notice has been sent to Denise Menard, First Selectman, Town of East Windsor.

The existing Facility consists of a 135-foot water tank capable of supporting multiple carriers within a fenced compound. The water tank is out of service and is controlled by Unison Site Management, with exclusive rights to the tank and the ground space. This water tank has already been established as being within the jurisdiction of the Siting Council. The coordinates for the Facility are **Lat: 41°-52'-32" and Long: 72°-33'-53"**. The water tank is located in the central portion of East Windsor. The Facility is roughly 10 feet south of Plantation Road and roughly 2 miles north of Sullivan Avenue (Route 194). The Facility is roughly 3 miles east of Main Street (Route 5) (see Site Map, attached as Exhibit A). The tower currently supports AT&T antennas at the one hundred sixteen foot level (116') centerline AGL (above ground level); and Sprint antennas at the approximate one hundred twenty-six foot level (126') AGL. Pocket proposes to install three APXV18-2065S-C antennas at the one hundred twenty-three foot level (123') AGL, and a Nortel CDMA Micro BTS 3231 cabinet, mounted on an "H-Frame,"

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contained within a six foot by six foot (6'-0" x 6'-0") lease area. A small GPS antenna will be mounted to the antenna mount pipe on water tower (see detail 4/05, Exhibit B). An ice bridge will run from the lease area to the tower. Utilities will be run via a proposed underground conduit from existing utility sources within the compound (See Design Drawings and Equipment Specifications, attached as Exhibits B and C respectively). To accommodate Pocket's equipment on a temporary basis, a mobile, EPA approved generator and small microwave dish antenna (approximately 14" by 14") will be used at the site to provide electricity until permanent power can be established by the utility provider. Pocket anticipates that the temporary generator will be in use for a maximum of eight weeks from the time of approval. The specifications on this proposed temporary generator and microwave dish are included in the Equipment Specifications, attached as Exhibit C. Due to the temporary use and low emissions from the generator, no permit is required from the Department of Environmental Protection. Pocket would propose to refuel the generator every 48 hours.

For the following reasons, the proposed modifications to the Plantation Road Facility meet the exempt modification criteria set forth in R.C.S.A. Section 16-50j-72(b)(2):

1. The proposed modification will not increase the height of the tower as Pocket's antennas will be installed at a center line height of approximately 123 feet.
2. The installation of Pocket's equipment and shelter will not require an extension of the site boundaries.
3. The proposed modifications will not increase the noise levels at the existing Facility by six decibels or more.
4. The operation of the additional antennas will not increase the total radio frequency (RF) power density, measured at the site boundary, to a level at or above the standard adopted by the Connecticut Department of Environmental Protection as set forth in Section 22a-162 of the Connecticut General Statutes and MPE limits established by the Federal Communications Commission. The worst-case RF power density calculations for the proposed Pocket antennas would be 30.06% of the FCC standard (see general power density calculations table, attached as Exhibit D).

Also attached, Exhibit E, is a structural analysis confirming that the tower can support the existing and proposed antennas and associated equipment.

For the foregoing reasons, Pocket respectfully submits that the proposed antenna installation and equipment at the East Windsor Facility constitutes an exempt modification under R.C.S.A. Section 16-50j-72(b)(2)

PULLMAN & COMLEY, LLC
ATTORNEYS AT LAW

Page 3

Respectfully Submitted,



Carrie L. Larson

cc: Denise Menard, First Selectman, Town of East Windsor
Unison Site Management, underlying property owner

Hartford/72572.2/JTP/367045v1

Exhibit A

Site Map

Pocket Site HFCT1508B

50 Plantation Road

East Windsor, Connecticut



Exhibit B

Design Drawings

Pocket Site HFCT1508B

50 Plantation Road

East Windsor, Connecticut

PROJECT INFORMATION

TOWER OWNER: UNISON SITE MANAGEMENT
57 THOMAS JOHNSON DR.
FREDERICK, MD 21702

OWNER SITE ID#: TBD

APPLICANT: YOUNGHOPE COMMUNICATIONS-
2819 NW LOOP 410
SAN ANTONIO, TX 78230

SITE ADDRESS: 50 PLANTATION ROAD
EAST WINDSOR, CT 06016

COUNTY: HARTFORD

LATITUDE: 41.8756

LONGITUDE: -72.5648

STRUCTURE HEIGHT: 135' AGL

ZONING CLASSIFICATION: N/A

ZONING JURISDICTION: CONNECTICUT SITING COUNCIL

POWER COMPANY: CL&P

TELEPHONE COMPANY: AT&T

DESIGN FIRM: URS CORPORATION, AES
SUITE 300
ROCKY HILL, CT 06867
PHONE: 860-529-8882

DRAWING INDEX

TITLE SHEET	0
01	0
02	0
03	0
03A	0
04	0
05	0
06	0

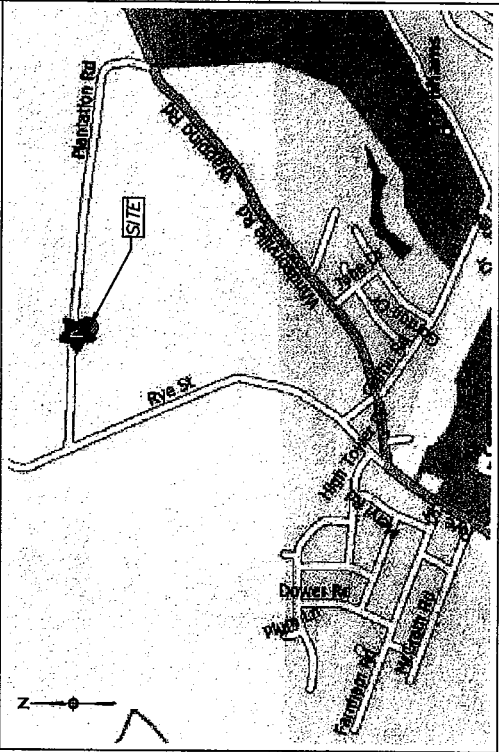
APPROVALS

REAL ESTATE	RF
OPS/CONSTRUCTION	LEGAL/COMPLIANCE
NET DESIGN	



**HFCT1508B
50 PLANTATION ROAD
WATER TANK**

LOCATION MAP



DRIVING DIRECTIONS

FROM HARTFORD, TO EXIT 98 TO ROUTE 5 NORTH TO EXIT 80, TAKE A LEFT ON MAIN STREET, THEN RIGHT ON CT-194 SULLIVAN AVE, TAKE A LEFT ON RYE STREET AND A RIGHT ON PLANTATION ROAD TO TANK ON THE RIGHT.

APPLICABLE BUILDING CODES AND STANDARDS

CONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. CONTRACT AWARD SHALL GOVERN THE DESIGN.

CONNECTICUT STATE BUILDING CODE
2003 INTERNATIONAL BUILDING CODE
2003 INTERNATIONAL MECHANICAL CODE
2003 INTERNATIONAL EXISTING BUILDING CODE
2005 CONNECTICUT SUPPLEMENT

ELECTRICAL CODE:
2005 NATIONAL ELECTRICAL CODE
CONNECTICUT STATE FIRE SAFETY CODE

2003 INTERNATIONAL FIRE CODE

CONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST APPROVED EDITION OF THE FOLLOWING STANDARDS:

AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION
TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-F, STRUCTURAL STANDARD FOR STRUCTURAL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES
TIA 607, COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS

INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING SURFACE RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND EQUIPMENT
IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE")
IEEE C62.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER SYSTEMS
TELEODORA GR-1275 GENERAL INSTALLATION REQUIREMENTS
TELEODORA GR-1503 COAXIAL CABLE CONNECTIONS
ANSI T1.311, FOR TELECOM - DC POWER SYSTEMS - TELECOM, ENVIRONMENTAL PROTECTION FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING TELECOM INSTALLATION, USE OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. THE GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

SITE NOTES

1. THIS SITE IS UNMANNED AND IS RESTRICTED TO OUTDOOR EQUIPMENT. IT WILL BE USED FOR THE TRANSMISSION OF RADIO SIGNALS FOR THE PURPOSE OF PROVIDING PUBLIC CELLULAR SERVICE.
2. POCKET COMMUNICATIONS CERTIFIES THAT THIS TELEPHONE EQUIPMENT FACILITY WILL BE SERVICED ONLY BY POCKET COMMUNICATIONS EMPLOYEES AND THE WORK ASSOCIATED WITH THE FACILITY WILL BE LIMITED TO MAINTENANCE AND REPAIR. REPAIR PERSONNEL FOR THIS FACILITY IS EXEMPT FROM THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA) APPENDIX B, SECTION 4.11.(5)(9)
3. NO POTABLE WATER SUPPLY IS TO BE PROVIDED AT THIS LOCATION.
4. NO SOLID WASTE WILL BE GENERATED AT THIS LOCATION.
5. THE AVERAGE OF ONE TRIP PER MONTH AT ONE HOUR PER VISIT.
6. AVERAGE OF ONE TRIP PER MONTH AT ONE HOUR PER VISIT.

NO.	DATE	ISSUED FOR	REVISIONS
0	04/23/08	ISSUED FOR CONSTRUCTION	

HFCT1508B, 50 PLANTATION ROAD
TITLE SHEET



THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF POCKET COMMUNICATIONS. THIS DOCUMENT IS NOT TO BE REPRODUCED WITHOUT THE WRITTEN PERMISSION OF POCKET COMMUNICATIONS.



URS CORPORATION
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06867

PROJECT NO: JCT
DATE: 04/23/08
DRAWING NO: 15075/58923893
SCALE: AS SHOWN

01



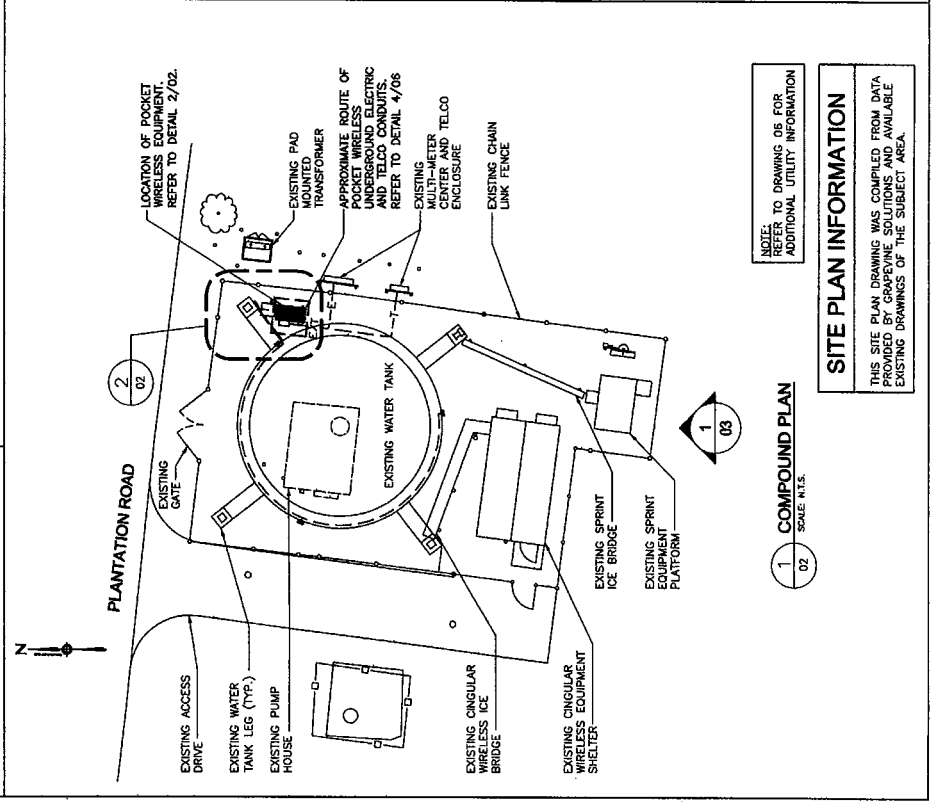
CONSTRUCTION NOTES

1. FIELD VERIFICATION: CONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, POCKET COMMUNICATIONS ANTENNA LOCATION, POCKET COMMUNICATIONS ANTENNA COORDINATION OF WORK: CONTRACTOR SHALL COORDINATE OF WORK AND PROCEDURES WITH POCKET COMMUNICATIONS.
2. GRAVEL SURFACE IN AREAS OF COMPOUND THAT ARE DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION BY CONTRACTOR.

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
OWNER - POCKET COMMUNICATIONS
OEM - ORIGINAL EQUIPMENT MANUFACTURER
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO BECOME FAMILIAR WITH THE SITE AND TO VERIFY THE INFORMATION SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCIES SHALL BE BRING TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND THE ENGINEER.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN ACCORDANCE WITH ALL APPLICABLE NATIONAL, STATE, LOCAL, AND FEDERAL REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY AGENCY OR AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.

4. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY REGULATIONS, ORDINANCES AND APPLICABLE REGULATIONS.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, AND LABOR TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. THE CONTRACTOR SHALL INSTALL ALL MATERIALS AND EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
7. CONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND IT CABLES, INCLUDING CABLES AS SHOWN ON THE SITE PLAN.
8. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
9. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS AND OTHER ITEMS SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
10. CONTRACTOR TO OBTAIN REQUIRED NOTICE TO PROCEED DOCUMENTS FROM THE WATER TANK OWNER BEFORE COMMENCING CONSTRUCTION.



NOTE:
REFER TO DRAWING 05 FOR
ADDITIONAL UTILITY INFORMATION

SITE PLAN INFORMATION
THIS SITE PLAN DRAWING WAS COMPILED FROM DATA PROVIDED BY GRAPEVINE SOLUTIONS AND AVAILABLE EXISTING DRAWINGS OF THE SUBJECT AREA.

1 02
COMPOUND PLAN
SCALE: N.T.S.

NO.	DATE	REVISIONS
0	04/27/08	ISSUED FOR CONSTRUCTION

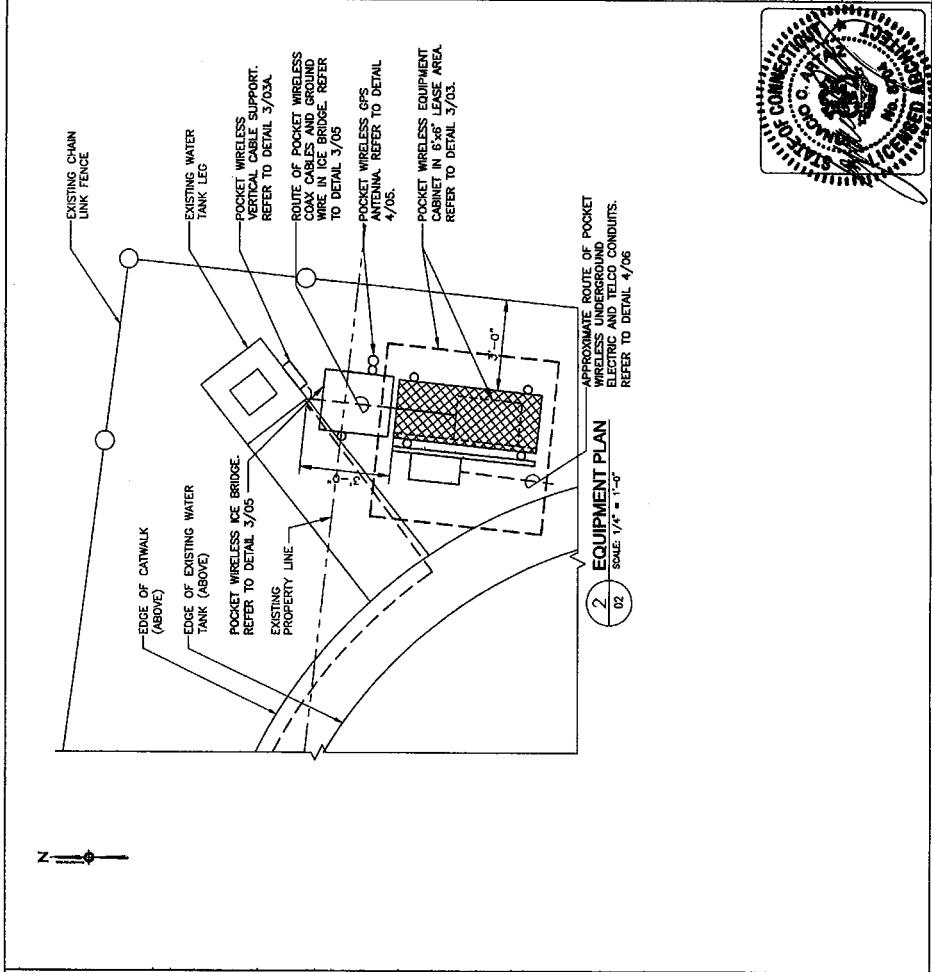
SITE PLANS AND NOTES
HFCT1508B, 50 PLANTATION ROAD
Pocket
WIRELESS COMMUNICATIONS

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URS
60 ENTERPRISE DRIVE
POCKET HILL, CT 06097

PROJECT NO: 04/23/09
DATE: 04/23/09
PC: 1073/56923993
JOB NUMBER

02

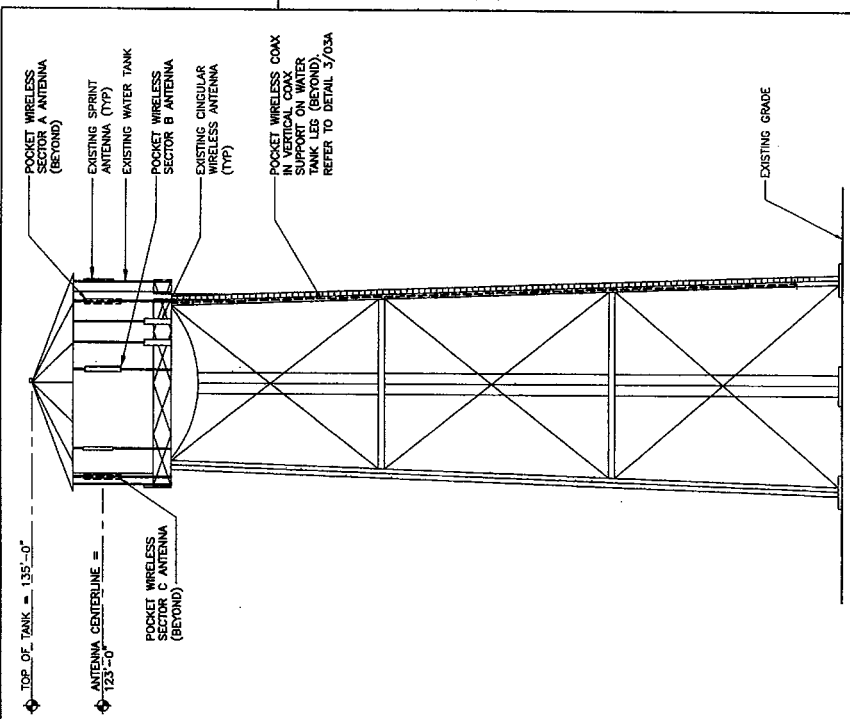


ANTENNA KEY

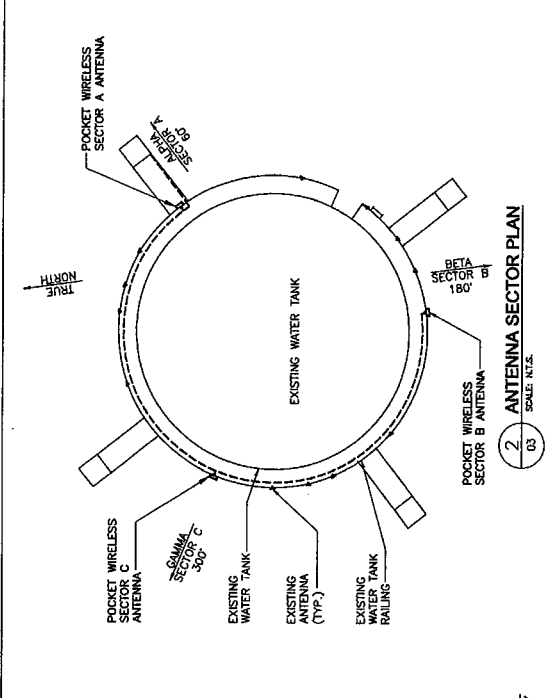
# ANTENNAS PER SECTOR	ANTENNA NUMBER	COAX COLOR CODE	ANTENNA VENDOR	MODEL NUMBER	AZIMUTH	C/L HEIGHT	ELECTRICAL DOWNTILT	MECHANICAL DOWNTILT	COAX SIZE	CABLE PER ANTENNA	COAX MANUFACTURER
1	ALPHA	(1) RED BAND	RFS	APXV18-206517S-C	60°	123'-0"	SEE NOTE	0°	1 5/8"	(2) ● 140'	RFS
1	BETA	(1) BLUE BAND	RFS	APXV18-206517S-C	180°	123'-0"	SEE NOTE	0°	1 5/8"	(2) ● 205'	RFS
1	GAMMA	(1) GREEN BAND	RFS	APXV18-206517S-C	300°	123'-0"	SEE NOTE	0°	1 5/8"	(2) ● 170'	RFS
1	GPS	(1) YELLOW BAND	NORTEL	MTGB01MA	-	9'-0"	-	-	LMR400	(1) ● 10'	ANDREW

TANK NOTES:
 1. FOR DETAILED TANK INFORMATION REFER TO TANK ERECTION DRAWINGS BY OTHERS. THE TANK SHOWN ON THIS DRAWING IS FOR GENERAL CONFIGURATION PURPOSES ONLY.
 2. ANTENNA CONFIGURATION IS SUBJECT TO CHANGE. VERIFY ANTENNA HEIGHT, DOWN-TILT, AND AZIMUTH WITH PROJECT MANAGER PRIOR TO CONSTRUCTION.

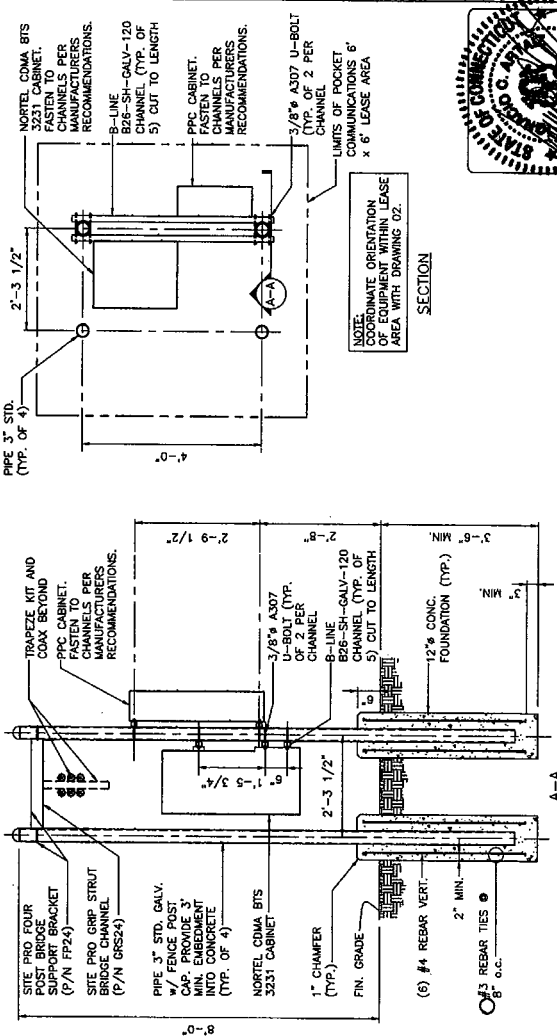
ANTENNA NOTES:
 1. THE COAX SHALL BE COLOR CODED AT THE CABINET AND AT THE EQUIPMENT CABINET.
 2. (2) COLOR BANDS DENOTES TRANSMIT. TRANSMITS TO BE CONNECTED TO THE +45 PORTS OF THE ANTENNAS.
 3. PRIOR TO ORDERING ANY ANTENNAS OR COAX, CONTRACTOR SHALL CONTACT POCKET COMMUNICATIONS FOR MATERIALS LISTED. CONTRACTOR IS SOLELY RESPONSIBLE FOR THIS COORDINATION.



1 WATER TANK ELEVATION
 SCALE: N.T.S.



2 ANTENNA SECTOR PLAN
 SCALE: N.T.S.



3 EQUIPMENT SUPPORT FRAME
 SCALE: N.T.S.

POCKET COMMUNICATIONS

WATER TANK ELEVATION
HFCT1608B, 60 PLANTATION ROAD

NO. 0 DATE 04/21/09 ISSUED FOR CONSTRUCTION
 REVISIONS

PROJECT: 04/23/09
 DRAWN BY: JCT
 CHECKED BY: JCT
 PROJECT: 04/23/09
 DRAWN BY: JCT
 CHECKED BY: JCT
 PROJECT: 04/23/09
 DRAWN BY: JCT
 CHECKED BY: JCT

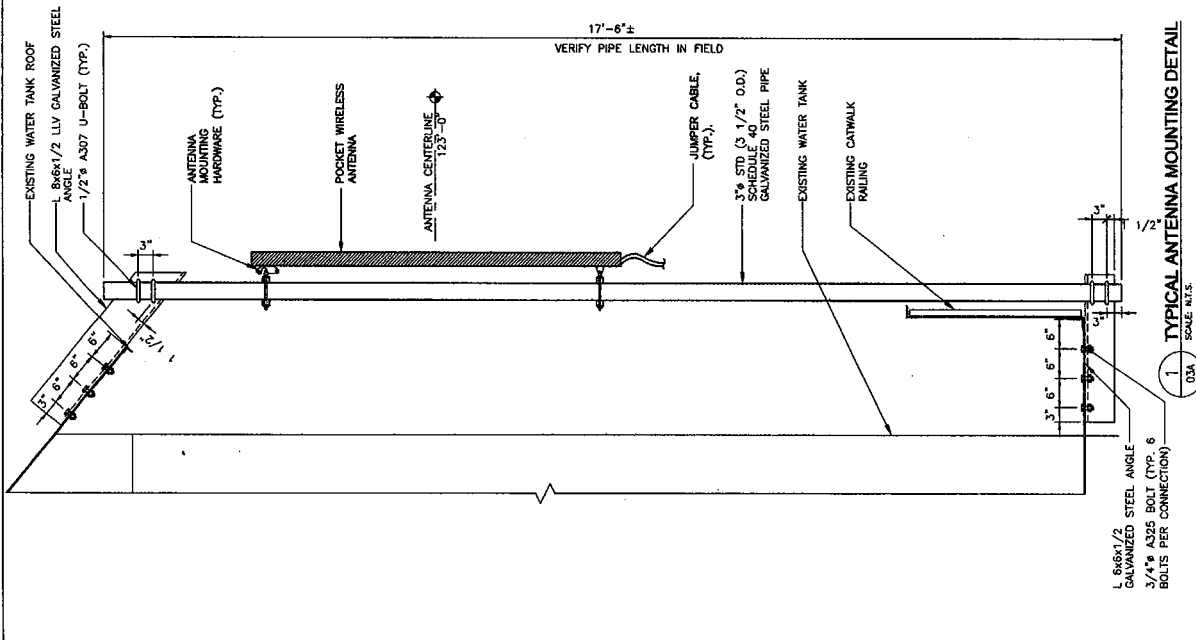
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URS

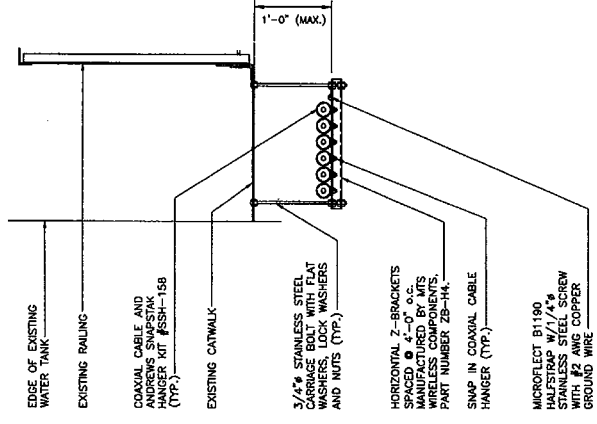
800 ENTERPRISE DRIVE
 ROCKY HILL, CT 06067

STATE OF CONNECTICUT
 REGISTERED PROFESSIONAL ENGINEER
 LICENSE NO. 10000
 EXPIRES 12/31/2010

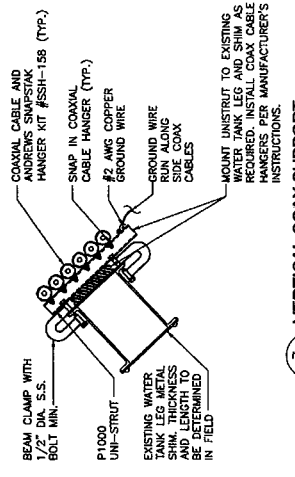
PROPERTY, ENGINEERING, ARCHITECTURE, INTERIOR DESIGN, AND LANDSCAPE ARCHITECTURE DOCUMENT PREPARED BY THIS FIRM. THIS DOCUMENT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF URS CORPORATION.



1 TYPICAL ANTENNA MOUNTING DETAIL
SCALE: 1/2" = 1'-0"



2 COAXIAL SUPPORT AT CATWALK
SCALE: 1/2" = 1'-0"



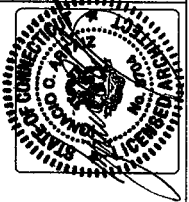
3 VERTICAL COAX SUPPORT
SCALE: 1/2" = 1'-0"

NO.	DATE	REVISIONS
0	01/17/09	ISSUED FOR CONSTRUCTION

POCKET SMARTWORKS
HFC1608B, 60 PLANTATION ROAD

THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF POCKET SMARTWORKS. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFIC TO WHICH IT IS ISSUED. IT IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF POCKET SMARTWORKS.

URS
600 ENTERPRISE DRIVE
ANN ARBOR, MI 48106
PROJECT NO. 06007
DRAWING NO. JCF
ISSUED BY: JCF
DATE: 01/23/09
SCALE: AS SHOWN
PC: 1073/56923893
DRAWING NUMBER



03A

ANTENNA DETAIL AND NOTES

04	04/23/08	REVISED FOR CONSTRUCTION
03		
02		
01		

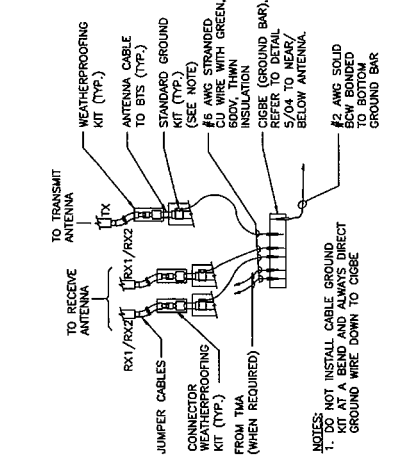
GROUNDING DETAILS
 HFCT1508B, 50 PLANTATION ROAD
 pocket SMART WIRELESS

THE INFORMATION CONTAINED HEREIN IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE. THIS DOCUMENT FRESH IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE. IT IS THE POLICY OF THE URS CORPORATION TO BE OPEN TO THE PUBLIC AND TO BE USED ON A NON-EXCLUSIVE BASIS BY ANY PERSON OR ENTITY WITHOUT PERMISSION OF URS CORPORATION.

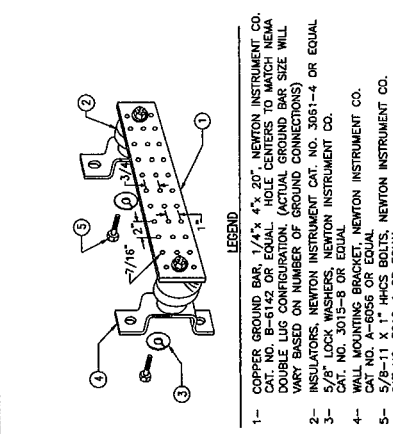
URS

PROJECT NO. JCT
 DRAWING NO. BAL
 DATE: 04/23/08
 PROJECT NAME:
 PROJECT NO. HFCT1508B
 PROJECT NAME: 50 PLANTATION ROAD

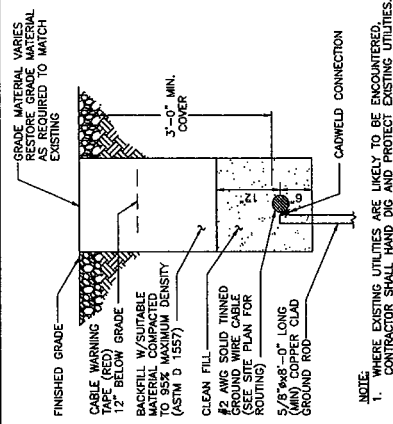
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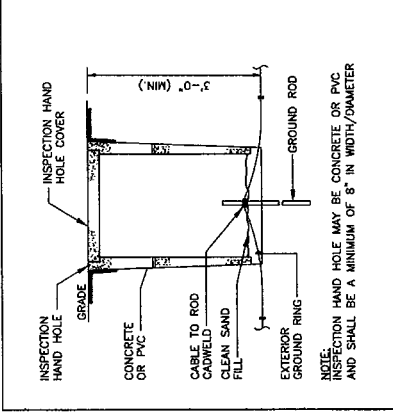
4 CONNECTION OF GROUND WIRE TO GROUND BAR
 SCALE: N.T.S.



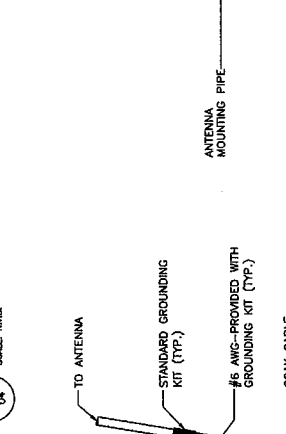
5 MASTER/EQUIPMENT GROUND BAR DETAIL
 SCALE: N.T.S.



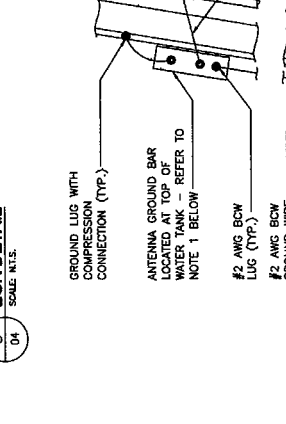
7 GROUND ROD WITH INSPECTION HANDHOLE
 SCALE: N.T.S.



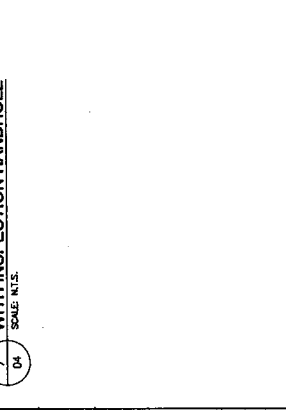
3 CONNECTION OF CABLE GROUND KIT TO ANTENNA CABLE
 SCALE: N.T.S.



6 EGR DETAIL
 SCALE: N.T.S.



1 TYPICAL ANTENNA GROUNDING DETAIL
 SCALE: N.T.S.



4 CONNECTION OF GROUND WIRE TO GROUND BAR
 SCALE: N.T.S.

NOTES:

- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
- GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
- WEATHER PROOFING SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.

NOTES:

- NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF WATER TANK.
- ANTENNA LOCATIONS AND CONNECTION ORIENTATION, PROVIDE AS REQUIRED.
- NO WELDING OR DRILLING SHALL BE ALLOWED ON THE WATER TANK.

NOTES:

- WHERE EXISTING UTILITIES ARE LIKELY TO BE ENCOUNTERED, CONTRACTOR SHALL HAND DIG AND PROTECT ALL UTILITIES.
- ALL GROUND RODS SHALL BE DRIVEN INTO PLACE.

NOTES:

- GRADE MATERIAL VARIES. RESTORE GRADE MATERIAL AS REQUIRED TO MATCH EXISTING.
- BACKFILL W/SUITABLE MATERIAL COMPACTED TO MINIMUM DENSITY (ASTM D 1557).
- CLEAN FILL.
- #2 AWG SOLID THINNED GROUND WIRE CABLE (SEE SITE PLAN FOR ROUTING).
- 5/8" x 8'-0" LONG (MIN) COVER CLAD GROUND ROD.
- CABLE WARNING TAPE (RED) 12" BELOW GRADE.
- FINISHED GRADE.
- 3'-0" MIN. COVER.
- CABLE TO ROD.
- CABLEWELD.
- CLEAN SAND FILL.
- EXTERIOR GROUND ROD.
- GROUND ROD.
- INSPECTION HAND HOLE COVER.
- INSPECTION HAND HOLE.

LEGEND

- COPPER GROUND BAR, 1/4" x 4" x 20", NEWTON INSTRUMENT CO. CAT. NO. B-6142 OR EQUAL. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION. (ACTUAL GROUND BAR SIZE WILL VARY BASED ON NUMBER OF GROUND CONNECTIONS)
- INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4 OR EQUAL
- 5/8" LOCK WASHERS, NEWTON INSTRUMENT CO.
- CAT. NO. 3015-9 OR EQUAL, NEWTON INSTRUMENT CO.
- 5/8"-11 x 1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT. NO. 3012-1 OR EQUAL.

NOTES:

- DO NOT INSTALL CABLE GROUND DIRECT TO BOTTOM GROUND BAR.

NO.	DATE	ISSUED FOR CONSTRUCTION	REVISIONS
0	04/12/09		

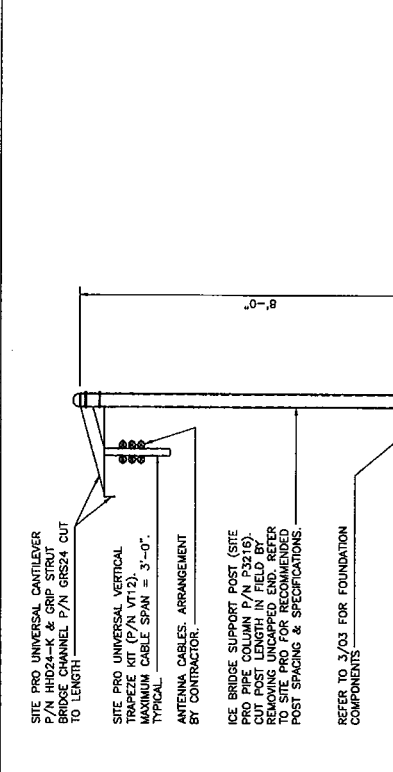
HCFT1008B, 50 PLANTATION ROAD
Packet
 SHEET NO. 05
 DATE 04/12/09

USE INFORMATION CONTAINED IN THIS DOCUMENT FOR THE PROJECT DESCRIBED ONLY. THIS DOCUMENT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF URS CORPORATION.

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PROJECT NO. PC10173/58923983
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05

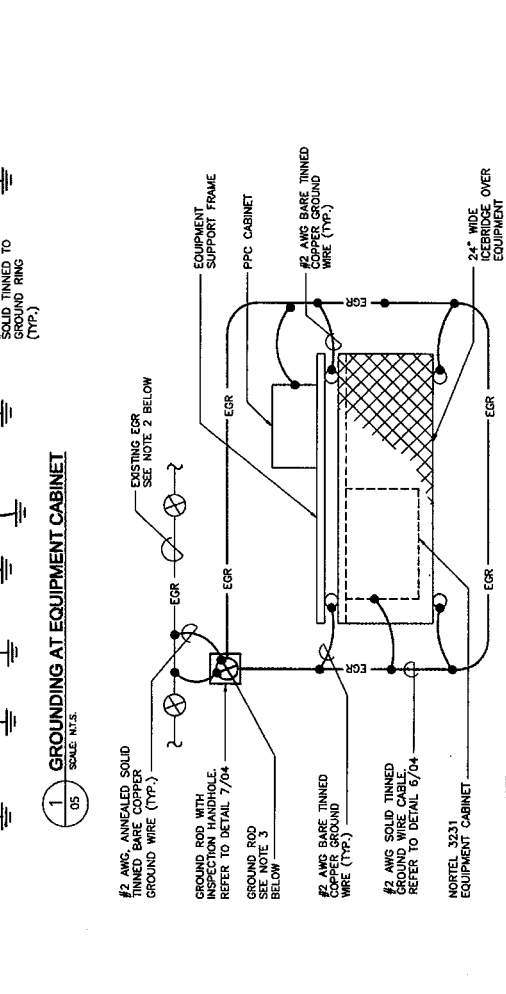
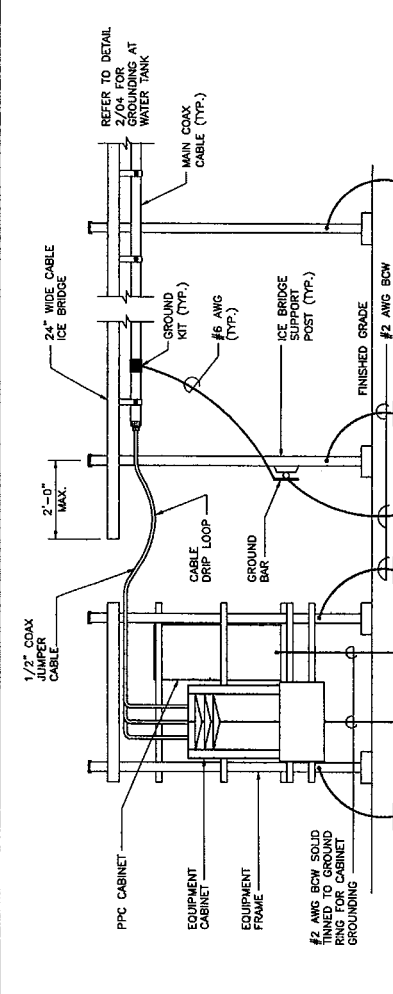
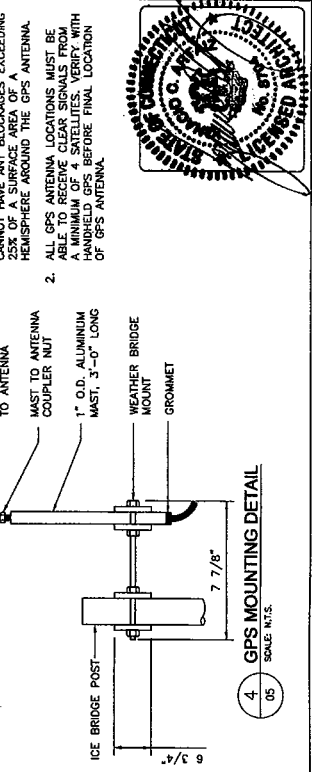


MAXIMUM ALLOWABLE SPAN BETWEEN SUPPORTS ON A CONTINUOUS SINGLE SECTION OF BRIDGE CHANNEL SHALL BE 8 FEET FOR 10 FEET BRIDGE CHANNEL. FOR SPlicing BRIDGE CHANNEL SECTIONS, THE SPLICE SHOULD BE PROVIDED AT THE SUPPORT, IF POSSIBLE, OR AT A MAXIMUM OF 2 FEET FROM THE SUPPORT. SUPPORT SHOULD BE PROVIDED AS CLOSE AS POSSIBLE TO THE ENDS OF ICE BRIDGES, WITH A MINIMUM CANTILEVER DISTANCE OF 2 FEET FROM THE SUPPORT TO THE FREE END OF THE ICE BRIDGE.

CUT BRIDGE CHANNEL SECTIONS SHALL HAVE RAW EDGES TREATED WITH A MATERIAL TO RESTORE THESE EDGES TO THE ORIGINAL CHANNEL OR EQUIVALENT, FINISH.

DEVIATIONS FROM STANDARDS FOR COMPONENT INSTALLATIONS ARE PERMITTED WITH THE RESPECTIVE MANUFACTURER'S APPROVAL.

DEVIATIONS FROM ICE BRIDGE FOUNDATIONS REQUIRE ENGINEERING APPROVAL.



NOTES:

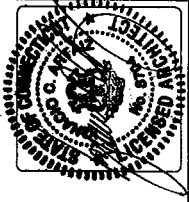
- SEE SHEET 02 FOR EQUIPMENT ORIENTATION AND LOCATION.
- EXISTING EGR, VERIFY LOCATION IN FIELD. CONTRACTOR SHALL HAND DIG AND LOCATE EXISTING EGR. CONTRACTOR SHALL REPAIR THE DAMAGE AT HIS OWN COST TO THE SATISFACTION OF RESPECTIVE CELL ENGINEERS.
- GROUNDING ELECTRODE SHALL BE 5/8" DIA. x 8'-0" COPPER CLAD STEEL ROD. ADJUST LOCATION ONLY WITH PROPER DRIVER SLEEVE TO PREVENT MUSHROOMING TOP OF ROD. WHEN ROCK BOTTOM IS ENCOUNTERED, THE ELECTRODE SHALL BE DRIVEN AT AN OBLIQUE ANGLE NOT TO EXCEED 45° FROM THE VERTICAL. CONTRACTOR SHALL VERIFY THE ELECTRODE IS DRIVEN TO THE REQUIRED DEPTH. CONTRACTOR SHALL INSTALL THE GROUND ROD HORIZONTALLY IN A TRENCH AWAY FROM STRUCTURE, NOT LESS THAN 36" BELOW FINISHED GRADE. UNDER NO CIRCUMSTANCES SHALL THE GROUND ROD BE CUT OR MODIFIED TO ACCOMMODATE VERTICAL INSTALLATION INTO LOGS. REFER TO THE NEC 2005, ARTICLE #250 FOR MORE INFORMATION ON GROUNDING.

1. GROUNDING AT EQUIPMENT CABINET
 SCALE: N.T.S.

2. EQUIPMENT GROUNDING PLAN
 SCALE: N.T.S.

3. ICE BRIDGE DETAIL
 SCALE: N.T.S.

4. GPS MOUNTING DETAIL
 SCALE: N.T.S.



PANEL SSC				
LOAD DESCRIPTION	LOAD (KVA)	BRKR	PHASE	LOAD DESCRIPTION
			A B	
BTS CABINET	2.5	30/2	1	BTS CABINET
			2	120/2 2.2
LIGHTING	1.9	10/1	5	GF OUTLET
SPACE			7	SPACE
SPACE			10	SPACE
SPACE			11	SPACE
SPACE			12	SPACE
SPACE			13	SPACE
SPACE			14	SPACE
SPACE			15	SPACE
SPACE			16	SPACE
SPACE			17	SPACE
SPACE			18	SPACE
SPACE			19	SPACE
SPACE			20	SPACE
SPACE			21	SPACE
SPACE			22	SPACE
SPACE			23	SPACE
SPACE			24	SPACE
LOAD SUB-TOTAL	5.9			LOAD SUB-TOTAL
				4.6

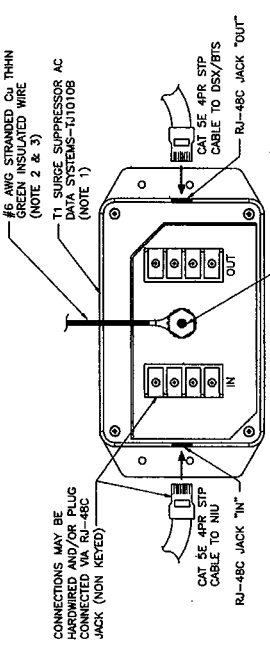
PANEL SCHEDULE		
NO.	DATE	REVISIONS
1	04/27/09	ISSUED FOR CONSTRUCTION

TOTAL CONNECTED LOAD	11.5 KW
25% OF LARGEST CONT. LOAD	1.25 KW
TOTAL LOADS	12.75 KW

NOTE: ALL NON-OPTIONAL BREAKERS PROVIDED BY SSC MFR

GENERAL ELECTRIC NOTES:

- ALL ELECTRICAL AND GROUNDING WORK SHALL BE PERFORMED IN ACCORDANCE WITH PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.
- CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL VERIFY ROUTING AND LENGTHS PRIOR TO CONSTRUCTION.
- MINIMUM 1/2" AIR SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELECOM.
- THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES, AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.

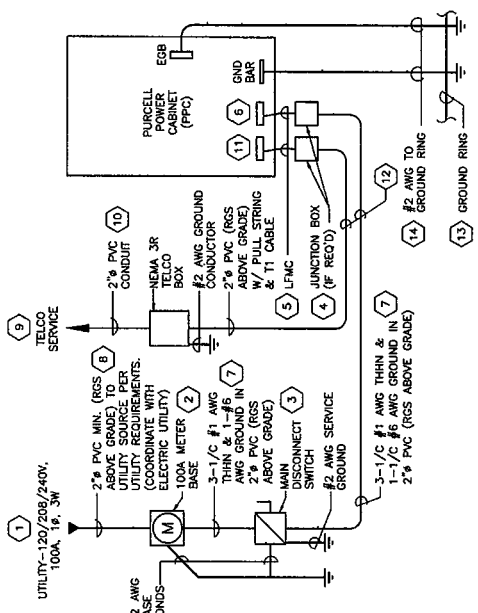


NOTES:

- UNIT T1-TVS UNIT ON EQUIPMENT FRAME USING THE DSX UNIT. USE APPROPRIATE STAINLESS STEEL BOLTS WITH FLAT WASHERS AND LOCK WASHER ON THE UNIT SIDE. THE TVSS MAY BE LOCATED ON THE TELCO BACKBOARD. REFER TO MANUFACTURER'S INSTRUCTIONS.
- ATTACH RING TERMINAL FROM SUPPLIED GROUND CONDUCTOR TO TVSS GROUND STUD SECURELY FASTEN WITH SUPPLIED WASHER AND NUT. REFER TO MANUFACTURER'S INSTRUCTIONS FOR PROPER PERFORMANCE. THE GROUND CONDUCTOR LENGTH SHOULD BE LIMITED WITH NO SHARP BENDS ON COILS.
- WHEN TVSS IS MOUNTED ON EQUIPMENT FRAME, BOND THE GROUND CONDUCTOR TO THE EQUIPMENT FRAME GROUND. ENSURE PROPER GROUNDING SURFACES. WHEN TVSS IS MOUNTED ON THE TELCO BACK BOARD, BOND THE GROUND CONDUCTOR TO THE TELCO (GROUND) GROUND BARR OR NEAREST GROUND BAR.



3. TVSS DETAIL
SCALE: N.T.S.



2. POWER, TELCO, GROUND SINGLE LINE DIAGRAM FOR OUTDOOR CABINET
SCALE: N.T.S.

REFERENCE NOTES:

- ELECTRICAL DEPARTMENT POINT. ELECTRICAL CONTRACTOR TO COORDINATE WITH LOCAL UTILITY COMPANY FOR SERVICE TO METER.
- CONTRACTOR TO SUPPLY AND INSTALL A 100A, 120/208/240V, 1P, 3W METER BASE. METER BASE TO BE NEMA 3R RATED AND ACCEPTABLE TO LOCAL UTILITY. INDICATING "POCKET COMMUNICATIONS METER".
- CONTRACTOR TO SUPPLY AND INSTALL NEMA 3R 100A FUSIBLE DISCONNECT SWITCH WITH LOCKABLE HANDLE. PROVIDE WITH TWO (2) 100A FUSES. AIC MECHANICALLY ATTACHED EXHAUSTED IDENTIFICATION LABEL INDICATING "POCKET COMMUNICATIONS SERVICE DISCONNECT".
- WEATHER TIGHT NEMA 3R JUNCTION BOX (IF REQUIRED). SIZE TO NEC CODE FOR APPLICATION.
- LIQUID TIGHT FLEXIBLE METALLIC CONDUIT W/ WEATHER TIGHT FITTINGS (POWER OR TELCO) SEE NOTE #5 BELOW.
- UTILITY POWER ENTRY INTO CABINET. COORDINATE TERMINATION WITH CABINET MANUFACTURER.
- CONTRACTOR SHALL SUPPLY AND INSTALL PVC 3/4" AND PVC 3/8" BFG CONDUIT SHALL SUPPLY AND INSTALL PVC 1/2" AND PVC 3/8" BFG TELCO DEPARTMENT POINT. ELECTRICAL CONTRACTOR TO COORDINATE WITH LOCAL TELCO FOR SERVICE TO TELCO BOX OR CABINET.
- CONTRACTOR TO SUPPLY AND INSTALL (1) 2" GRC AGS AND PVC 3/8" BFG C/W PULL CORDS FOR TELCO SERVICE TO CABINET TERMINATION POINT.
- TELCO SERVICE ENTRY INTO CABINET. COORDINATE TERMINATION WITH CABINET MANUFACTURER.
- CONTRACTOR TO ARRANGE AND PAY FOR UNDERGROUND UTILITY LOCATION AND MARKING. CONTRACTOR TO VERIFY ALL UTILITIES. INSTALL 6" WIDE METALLIC LINED RED PLASTIC MARK TAPE 12" BELOW GRADE.
- PORTION OF EXTERIOR GROUND RING
- 1/2" SOLID BARE THINNED COPPER EQUIPMENT GROUND CONDUCTOR LOCATED GROUNDING ELECTRODE ADJACENT TO CABINET. BOND GROUNDING ELECTRODE SYSTEM TO CABINET GROUND RING.

NOTES:

- CONTRACTOR SHALL PROVIDE 100 AMP, SINGLE PHASE, 120/208/240 VAC, 60 HZ ELECTRIC SERVICE FOR SITE.
- CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY BEFORE THE GROUNDING SYSTEM IS INSTALLED. THE GROUNDING SYSTEM SHALL BE PROVIDED AND INSTALLED PER UTILITY REQUIREMENTS.
- FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT REFER TO DRAWINGS PROVIDED BY AC OR TELCO PANEL MANUFACTURER.
- ALL SERVICE EQUIPMENT AND INSTALLATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELECOM.
- CONTRACTOR SHALL INSTALL SEPARATE LENGTHS OF CONDUIT EXCEEDING 6'-0" INCLUDING ALL CONDUIT FITTINGS (NUTS, REDUCING BUSHINGS, ELBOWS, COUPLINGS, ETC.) NECESSARY FOR CONNECTION FROM IMC CONDUIT TO THE PANELS FOR THE CABINET. (PVC) ELECTRICAL SERVICE EQUIPMENT WITH FAULT CURRENT RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY.
- CONTRACTOR SHALL VERIFY THAT THE MAIN BONDING JUMPER AND GROUNDING ELECTRODE CONDUCTOR IS INSTALLED PROPERLY IN MAIN DISCONNECT SWITCH.

POCKET
SMART WIRELESS

06

PC1073/35823583
Drawing Number

URS

URS CORPORATION
200 ENTERPRISE DRIVE
BOSTON, MA 02118
TEL: 617.552.3000
FAX: 617.552.3001
WWW.URS.COM

04/27/09

DATE

04/27/09

DATE

Exhibit C

Equipment Specifications

Pocket Site HFCT1508B

50 Plantation Road

East Windsor, Connecticut

Optimizer® Panel Dual Polarized Antenna equipped with AISG 2.0 ACU motor

Product Description

This X-Polarized variable tilt antenna provides exceptional suppression of all upper sidelobes at all downtilt angles. It also features a wide downtilt range. This antenna is optimized for performance across the entire AWS frequency band (1710-2155 MHz). The antenna comes pre-connected with one antenna control unit (ACU).

Features/Benefits

- **Variable electrical downtilt - provides enhanced precision in controlling intercell interference. The tilt is infield adjustable 0-10 deg.**
- **High Suppression of all Upper Sidelobes (Typically <-18dB).**
- **Gain tracking – difference between AWS UL (1710-1755 MHz) and DL (2110-2155 MHz) <1dB.**
- **Azimuth horizontal beamwidth difference <6deg between AWS UL (1710-1755 MHz) and DL (2110-2155 MHz)**
- **Low profile for low visual impact.**
- **Dual polarization; Broadband design.**
- **Includes AISG 2.0 Compatible ACU-A20-N antenna control unit**



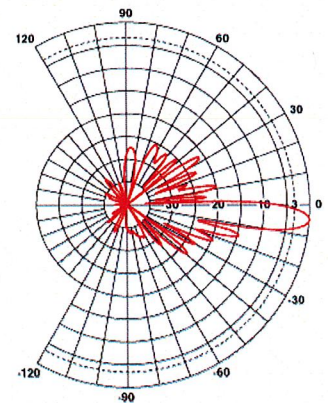
Technical Specifications

Electrical Specifications

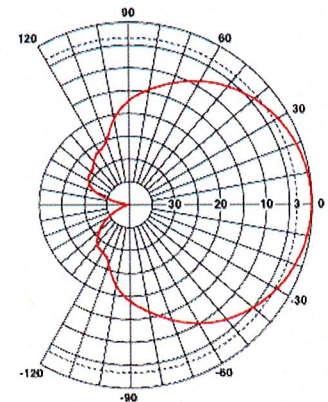
Frequency Range, MHz	1710-2170
Antenna Type	Panel Dual Polarized
Electrical Down Tilt Option	Variable
Gain, dBi (dBd)	18.4 (16.3)
Electrical Downtilt, deg	0-10 , 0-10
Horizontal Beamwidth, deg	65
VSWR	< 1.5:1
Vertical Beamwidth, deg	5.9 to 7.7
1st Upper Sidelobe Suppression, dB	> 18
Upper Sidelobe Suppression, dB	> 18 all
Polarization	Dual pol +/-45°
Front-To-Back Ratio, dB	>26 (typically 28)
Maximum Power Input, W	300
Isolation between Ports, dB	> 30
Lightning Protection	Direct Ground
3rd Order IMP @ 2 x 43 dBm, dBc	> 150 (155 Typical)

Mechanical Specifications

Rated Wind Speed, km/h (mph)	160 (100)
Survival Wind Speed, km/h (mph)	200 (125)
Max Wind Loading Area, m² (ft²)	0.29 (2.9)
Maximum Thrust @ Rated Wind, N (lbf)	380 (185)
Front Thrust @ Rated Wind, N (lbf)	380 (185)
Reflector Material	Aluminum
Radiating Element Material	Brass
Radome Material	Fiberglass
Connector Type	(2) 7-16 DIN Female
Connector Location	Bottom
Mount Type	Downtilt
Mounting Hardware	APM40-2
Weight w/o Mtg Hardware, kg (lb)	8.5 (18.7)
Packing Dimensions, HxWxD, mm (in)	1439 x 237 x 260 (56.6 x 9.3 x 10.3)
Dimensions - HxWxD, mm (in)	1349 x 175 x 80 (53.1 x 6.9 x 3.15)
Shipping Weight, kg (lb)	14.5 (31.9)



Vertical Pattern



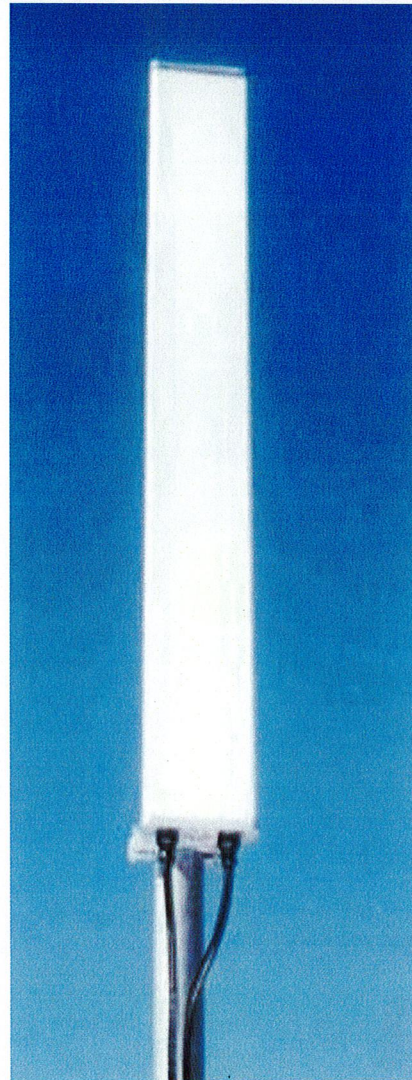
Horizontal Pattern

All information contained in the present datasheet is subject to confirmation at time of ordering.



Product Description

This variable tilt antenna provides exceptional suppression of all upper sidelobes at all downtilt angles. It also features null fill and a wide downtilt range with optional remote tilt.



Features/Benefits

- Variable electrical downtilt - provides enhanced precision in controlling intercell interference. The tilt is infield adjustable 0-10 deg.
- High Suppression of all Upper Sidelobes (Typically <-20dB).
- Optional remote tilt - can be retrofitted.
- Broadband design.
- Dual polarization.
- Low profile for low visual impact.

Technical Features

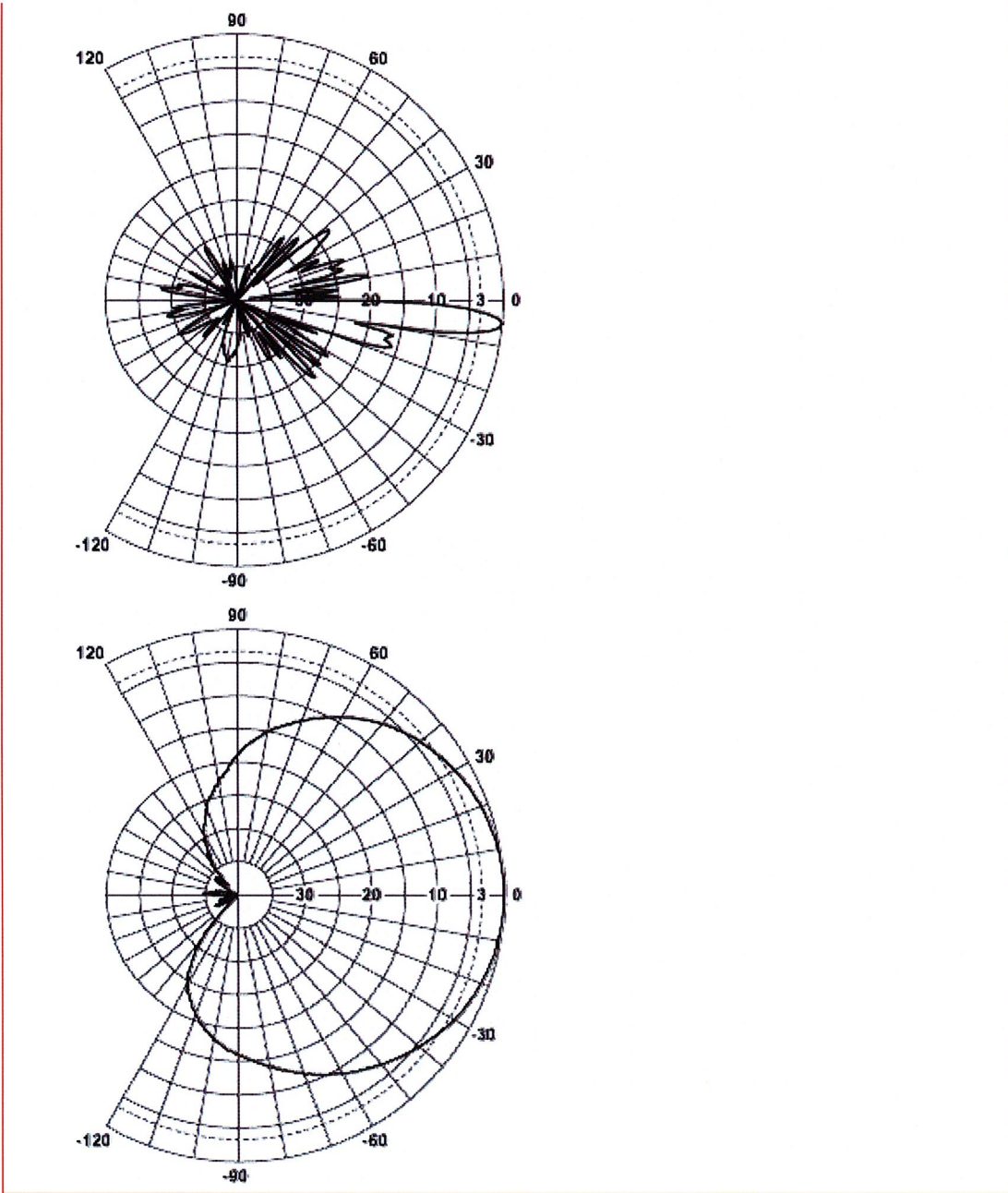
Frequency Band	3G/UMTS (Single, Broad, Dual and Triple-Band)
Horizontal Pattern	Directional
Antenna Type	Panel Dual Polarized
Electrical Down Tilt Option	Variable

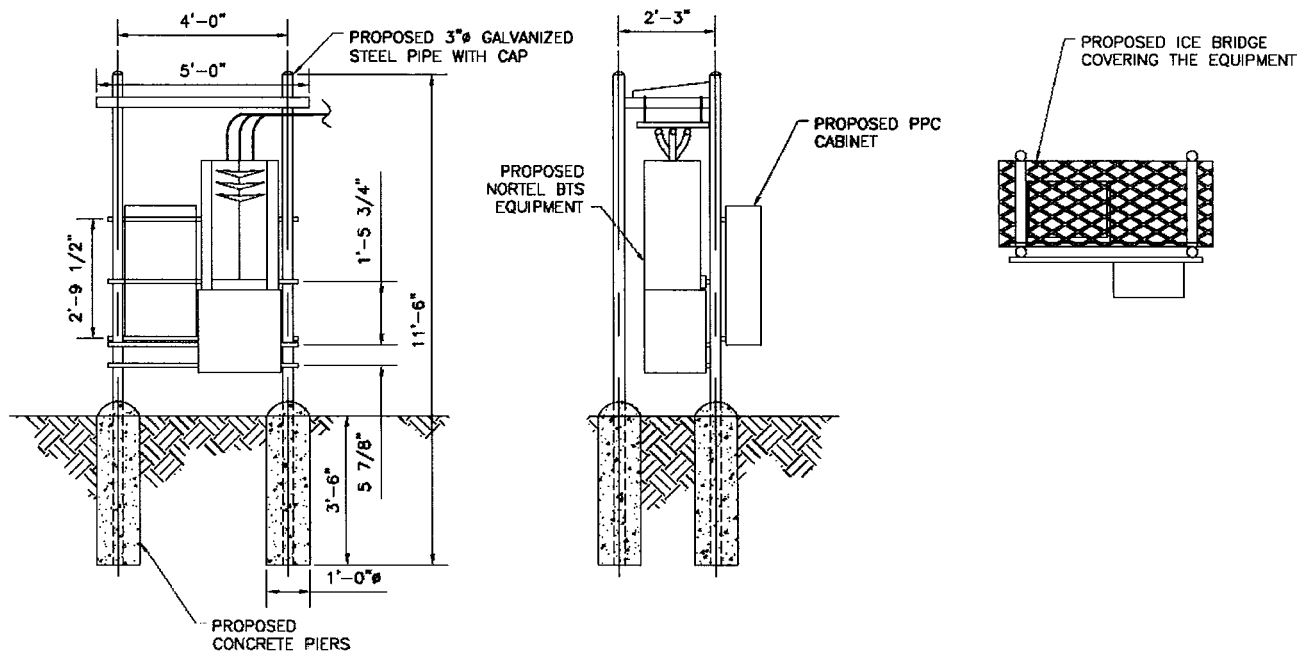


Gain, dBi (dBd)	18.8 (16.7) , 19.0 (16.9)
Frequency Range, MHz	1710-1900, 1900-2170
Connector Type	(2) 7-16 DIN Female
Connector Location	Bottom
Mount Type	Downtilt
Electrical Downtilt, deg	0-10
Horizontal Beamwidth, deg	67 , 63
Mounting Hardware	APM40-2
Rated Wind Speed, km/h (mph)	160 (100)
VSWR	< 1.5:1
Vertical Beamwidth, deg	5.0 , 4.6
Upper Sidelobe Suppression, dB	>17 , >18 all (Typically >20)
Polarization	Dual pol +/-45°
Front-To-Back Ratio, dB	>30
Maximum Power Input, W	300
Isolation between Ports, dB	>30
Lightning Protection	Direct Ground
3rd Order IMP @ 2 x 43 dBm, dBc	>150
7th Order IMP @ 2x46 dBm, dBc	>170
Impedance, Ohms	50
Overall Length, m (ft)	1.85 (6.06)
Mounting Hardware Weight, kg (lb)	3.4 (7.5)
Dimensions - HxWxD, mm (in)	1850 x 175 x 80 (72.0 x 6.8 x 3.15)
Weight w/o Mtg Hardware, kg (lb)	12 (26.4)
Weight w/ Mtg Hardware, kg (lb)	14.8 (32.5)
Radiating Element Material	Brass
Radome Color	Light Grey RAL7035
Radome Material	Fiberglass
Mounting Hardware Material	Diecasted Aluminum
Reflector Material	Aluminum
Max Wind Loading Area, m ² (ft ²)	0.31 (3.3)
Survival Wind Speed, km/h (mph)	200 (125)
Maximum Thrust @ Rated Wind, N (lbf)	558 (125)
Front Thrust @ Rated Wind, N (lbf)	558 (125)
Shipping Weight, kg (lb)	18.3 (39.8)
Packing Dimensions, HxWxD, mm (in)	2021 x 260 x 200 (79.5 x 10.2 x 7.8)
Packing Dimensions - HxWxD, m (ft)	2.0 x 0.26 x 0.2 (6.6 x 0.85 x 0.65)

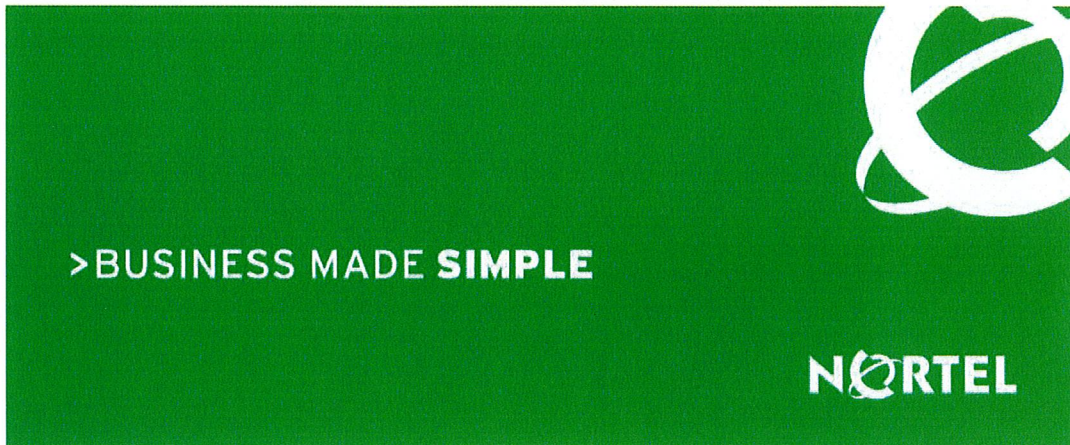
Notes

For additional mounting information please click "External Document Link" below.





Pocket/Youghiogheny Communications - Northeast, LLC
 Rack Detail



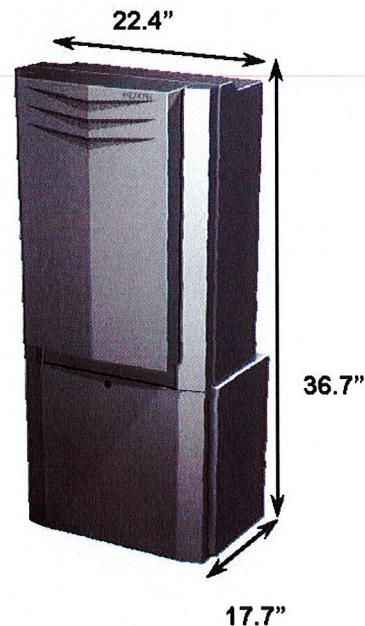
CDMA BTS 3231 AWS 1.7/2.1 GHz (Outdoor/Indoor)

to transport to hard to reach locations such as the top of a high rise building.

CDMA BTS 3231

Industry's Highest Capacity AWS Micro BTS

The CDMA BTS 3231 is the latest extension to Nortel Networks BTS (Base Transceiver Station) portfolio providing the ideal solution for urban, sub-urban and rural deployments. The CDMA BTS 3231 is a 3-carrier, 3-sector outdoor/indoor BTS operating at the AWS band of 1.7/2.1 GHz supporting IS-95, 1XRTT and 1xEV-DO simultaneously. BTS 3231 provides flexible deployments solutions including floor, rack, and wall mount options. The power consumption of BTS3231 is industry leading consuming only 630W for 3C3S. The BTS 3231 is also very light at 240lbs making it easy





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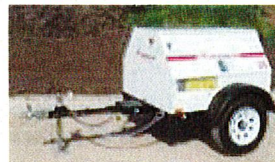
Contact Us

GLOSSARY

MLG15 Lite Generator Interim Tier IV EPA Approved Engine

Magnum recognizes environmental responsibility and continues to meet emission regulations with the addition of their Interim Tier IV Generator line. The MLG15 generator is powered by a Mitsubishi diesel engine. Proven power you can trust, while maximizing fuel efficiency and high performance.

Affordable, Reliable, Mobile



More Information

Manuals

- [Operating & Parts](#)

**ALWAYS
check for**

Search Site

Power

The MLG15 diesel generator provides just the right combination of output, flexibility, ruggedness, efficiency and affordability for on-the-go, smaller-to-midsize, single phase power needs.

Features

Tough

- Full tubular steel frame, with lockable enclosure
- Durable, fade resistant, white baked on powder coat finish
- Stainless steel hinges, exterior hardware and pad lockable door latches

Reliable

- Key switch to preheat (glow plug), start & stop
- Automatic low oil level / high temp shutdown alerts
- 70A Start limit main breaker
- 2 year - 2,000 hour warranty
- Marathon voltage regulation within +/- 1%

Ease for Your Users

- Self-priming 4 cylinder Mitsubishi engine
- External convenience outlets with individual breaker switches
- External emergency stop switch

Specifications

Output

3 Phase - Standby kW (kVA)	N/A
Amps 480V (208V)	N/A
3 Phase - Prime kW (kVA)	N/A
Amps 480V (208V)	N/A
1 Phase - Standby kW (kVA)	14.0 (14.0)
Amps 240V	58
1 Phase - Prime kW (kVA)	13.0 (13.0)
Amps 240V	54
AC Voltage 1-phase	120, 240
AC Voltage 3-phase	N/A
Frequency Hz	60
Power Factor	1.0 (1 Phase)
Generator - Brand / Type / Insulation	Marathon / Brushless / F
Sound (dB(A) 23 ft @ prime)	68

Size and Weight

Skid Mounted - L x W x H in (m)	N/A
Dry Weight lbs (kg)	N/A
Operating Weight lbs (kg)	N/A
Trailer Mounted - L x W x H in (m)	105 x 67 x 56 (2.67 x 1.70 x 1.42)
Dry Weight lbs (kg)	1425 (646)

updated parts information before placing a parts order.

Tech. Specs.

- [MLG15](#)

Literature / Sales

- [Generator Lit.](#)
- [Service Kit Lit.](#)
- [Sales Support](#)



- [Warranty Overview](#)
- [Warranty Claim Policy](#)

Operating Weight lbs (kg)	1823 (827)
Engine	
Type	Interim Tier IV
Brand	Mitsubishi
Aspiration	Natural
Power - Prime @ 1800 rpm hp (kWm)	22.3 (16.6)
Displacement cubic in (L)	107 (1.8)
Cylinders	4
Speed rpm	1800
Fuel Consumption - Prime gph (Lph)	1.30 (4.92)
Capacities	
Fuel Tank gal (L)	56 (212)
Approximate Run Time hrs	43
Coolant qt (L)	11.6 (11.0)
Electrical Distribution	
Battery - 12V	1 - 12V 440 CCA Wet Cell
Main Circuit Breaker Size A	70
Voltage Selection	N/A
Voltage Regulation	+/-1%
120V - 20A GFI Duplex Outlets - qty	2
240V - 30A Twist Lock Outlets - qty	2
240V - 50A Twist Lock Outlets - qty	2
Trailer	
Number of Axles	1
Capacity - Axle Rating lbs (kg)	2200 (998)
Tire Size in	15
Brakes	N/A
Hitch	2" Ball
Maximum Tire Pressure psi	50
Options	
Powertrain (Engine/Gen)	<ul style="list-style-type: none"> • 60/40 Coolant • Heated Fuel Filter • Engine Heater - Lower Radiator Hose • Oil Drain Valve Kit
Controls	<ul style="list-style-type: none"> • Battery, 720 CCA Gel Cell • Battery, 720 CCA Wet Cell • Battery, 685 CCA Gel Cell • No Battery • Battery Disconnect, Lockable • Battery Charger, 2 Amp • Alternative Outlet Panel Options (Consult factory for details)

Cabinet/Fuel Tank

- Interior Cabinet Light
- Level Indicator
- 56 Gallon Fuel Tank
- Fuel Tank Cap - Vent w/ Lanyard
- Spare Tire & Carrier
- Lift Structure
- Liquid Containment/Quiet Pack

Trailer

- Tube & Sleeve Jack
- Combo Hitch - 2.5" Ring/2" Ball
- 2.5" Ring
- 3" Ring
- 3" Ring (1.625 TH)
- Plug Adapter, 4 Flat to 6 Round
- Plug Adapter, 4 Flat to 7 Pin
- Plug Adapter, 4 Flat to 7 Round
- Spade
- Outrigger Package

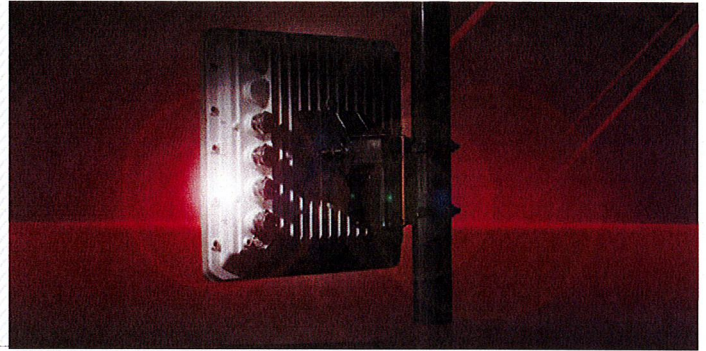
Product Images (click small image to pop-up larger version)



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EX-5r Series



All-Outdoor, Carrier-Class, Tri-Band 5 GHz TDD Radio System for Low, Medium and High Capacity Ethernet and TDM Applications

The EX-5r series of all-outdoor digital microwave radios is the first family of carrier-class, tri-band TDD radios available in the 5.2 – 5.8 GHz license-exempt bands. Radios in the EX-5r line support capacities ranging from 27 Mbps to an industry-leading 440 Mbps of aggregate user throughput, from zero to four T1/E1s and both 100BaseT and GbE interfaces. Featuring native TDM and native Ethernet transport and full software configurability and upgradeability, the EX-5r series was designed to meet demanding backhaul requirements of enterprise organizations and service providers seeking the performance benefits of an all-outdoor configuration.

Carrier-class TDD. The EX-5r series radios combine native TDM and native Ethernet transport with low, fixed latency to deliver guaranteed throughput and service quality. Capacity can be allocated variably between TDM and Ethernet via software, while the selectable throughput symmetry control feature enables radio capacity to efficiently match asymmetric traffic requirements.

Industry-leading Spectrum Management. The EX-5r radios include selectable channel bandwidth and 1 MHz tuning resolution,

yielding up to 54 non-overlapping frequency channels and up to 415 center frequencies of operation. These capabilities, combined with selectable modulation and superior system gain, provide unparalleled interference avoidance and transmission resiliency. A built-in spectrum analyzer is even included to accelerate deployment and simplify troubleshooting.

ExaltSync Synchronization. The ExaltSync technology embedded in the EX-5r series radios allows multiple radio systems to be collocated in close proximity without self-interference, minimizing antenna separation and ensuring reuse of scarce spectrum across all collocated systems.

Security, Management and Data Networking. The EX-5r radios deliver the highest data and management security available with optional 128- and 256-bit AES encryption and secure SNMP v3 management, together with enhanced fault management and diagnostic features. The 802.1Q VLAN option provides built-in network administration and security flexibility.

EX-5r series radios are available in both integrated antenna and external antenna (connectorized) versions.



Primary Specifications		EX-5r Lite / EX-5r-c Lite	EX-5r v3 / EX-5r-c v2	EX-5r GigE / EX-5r-c GigE
Maximum Capacity ¹	TDM		4xT1/E1	
	Ethernet (Aggregate)	100 Mbps	200 Mbps	440 Mbps
Frequency (GHz)		Tri-band: 5.250-5.350, 5.470-5.725, 5.725-5.850		
Range ²		> 30 miles at 99.999% throughput availability		

¹ Please refer to the Exalt Throughput and Range Specification document for detailed capacity information.

² Distance based upon FCC regulations, average climate and terrain, 6' dish antennas, 3 dB transmission system losses at each end. Longer or shorter distances will apply for alternative antennas, country regulations, transmission system losses, path topologies and radio configurations. See Exalt's link budget and path planning tool to model your scenario.

Specifications

EX-5r Series

System

Frequency Bands ¹ (GHz)	5.250-5.350, 5.470-5.725, 5.725-5.850			
Tuning Resolution	1 MHz			
Output Power (full power)	+24 dBm QPSK; +21 dBm 16QAM			
5725-5850 MHz band	+24 dBm QPSK; +21 dBm 16QAM			
5250-5350 MHz band ²	+13 dBm			
5470-5725 MHz band ²	+13 dBm			
Output Power (min power)	Full power minus 20 dB			
Power Control Step Size	0.5 dB			
Receiver Threshold (BER=10 ⁻⁴)	8 MHz	16 MHz	32 MHz	64 MHz
QPSK	-86	-83	-80	-77
16QAM	-78	-75	-72	-69
Non-overlapping Channels				
5.250-5.350 GHz	10	5	2	1
5.470-5.725 GHz	29	14	7	3
5.725-5.850 GHz	15	7	3	1
Maximum RSL	-25 dBm error-free 0 dBm no damage			
Throughput Symmetry Control	5 modes 20/80, 80/20, 35/65, 65/35, 50/50			
Error Floor	10 ⁻¹²			
Latency (T1/E1)	1ms, typical			
Maximum Packet Size	All 1916 bytes except GigE 9728 bytes			

System (continued)

Link Security	96-bit proprietary encryption 128-bit and 256-bit AES encryption ³
Spectrum Analyzer	Embedded
VLAN	802.1Q
QoS	802.1p (GigE)
Management	HTTP GUI CLI/Telnet SNMP v1, 2c, v3
Compliance	FCC 15.247, FCC 15.407 EN 301-893, EN 302-502 EN 60-950, EN 301-489 IC RSS-210

System Components

Complete Link	Two terminals, each with AC adapter & accessory kit
Single Terminal	One terminal with AC adapter & accessory kit
Accessory Kit	DC power connector, rack and grounding hardware (spare)
AC Adapter	AC adapter (spare)
Mounting Kits	Available for each product (spare)
ExaltSync GPS Sync Kit	GPS receiver and mounting bracket (optional)

Specifications

EX-5r Lite

EX-5r-c Lite

EX-5r v3

EX-5r-c v2

EX-5r GigE

EX-5r-c GigE

Physical

Physical Configuration	Outdoor Unit (ODU)					
Dimensions (H x W x D)	14 x 14 x 3.8 in	14 x 14 x 2.5 in	14 x 14 x 3.8 in	14 x 14 x 2.5 in	14 x 14 x 3.8 in	14 x 14 x 2.5 in
	35.6 x 35.6 x 9.7 cm	35.6 x 35.6 x 6.4 cm	35.6 x 35.6 x 9.7 cm	35.6 x 35.6 x 6.4 cm	35.6 x 35.6 x 9.7 cm	35.6 x 35.6 x 6.4 cm
Antenna	Integrated	2x Type-N (F) Connector	Integrated	2x Type-N (F) Connector	Integrated	2x Type-N (F) Connector
Integrated Antenna						
Gain/3 dB Beamwidth	23 dBi / 9 degrees	-	23 dBi / 9 degrees	-	23 dBi / 9 degrees	-
Operating Temperature	-40 to +65 °C; -40 to +149 °F					
Full Spec Temperature	-40 to +60 °C; -40 to +140 °F					
Weight	14 lbs/6.4 kg	12 lbs/5.5 kg	14 lbs/6.4 kg	12 lbs/5.5 kg	14 lbs/6.4 kg	12 lbs/5.5 kg
Environmental	NEMA 4/IP56					
Altitude	15,000 ft; 4.6 km					
Humidity	100% condensing					

Interfaces

RF	-	2x N-type (F), 50 ohm	-	2x N-type (F), 50 ohm	-	2x N-type (F), 50 ohm
TDM T1/E1 Interfaces	RJ48C/RJ45 (F) (x4)					
T1 Impedance	100 ohms, balanced					
T1 Line Code	AMI, B8ZS, selectable per channel					
T1 Data Rate	1.544 Mbps					
T1 Compliance	ANSI T1.102-1987; ITU-T; G.823; GR-499-CORE					
E1 Impedance	120 ohms, balanced					
E1 Line Code	HDB3					
E1 Data Rate	2.048 Mbps					
E1 Compliance	CEPT-1; G.703; ITU-T-G.703					
Loopback Modes	Remote Internal; Remote External; Local Line					
Ethernet	RJ45 (F)			RJ45 Female (x2)		
Interface Speed	10/100BaseT (POE)			10/100/1000BaseT (1xPOE)		
Duplex	Half, Full, Auto-MDIX			Half, Full, Auto-MDIX		
Compliance	802.3			802.3		
ExaltSync Synchronization	RJ45 (F)			RJ45 Female (x2)		
	Input: 1pps (GPS)			Input: 1pps (GPS); Output: Sync out		
DC Power	48VDC, <50W			48VDC, <70W		
AC Power Adapter						
Input	100-240VAC, 1.5A					
Output	48VDC, 1.5A, 72W (via power injector)			48VDC, 2.08A, 100W (via power injector)		

¹ Not all frequency bands are authorized or available for use in all countries.

² +24 dBm output power available in EX-5r v3 and EX-5r Lite. Consult Exalt for availability in other models.

³ Software license key upgrade.

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World Headquarters
Exalt Communications Inc.
580 Division Street
Campbell, CA 95008 USA

Phone: +1 (408) 871-1804
Toll free: (888) 91EXALT
sales@exaltcom.com

www.exaltcom.com



EX-5i Series



All-Indoor, Carrier-Class, Tri-Band 5 GHz TDD Radio Systems for Low, Medium and High Capacity Ethernet and TDM Applications

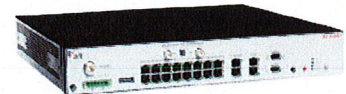
The EX-5i series of all-indoor digital microwave radios is the first family of carrier-class, tri-band TDD radios available in the 5.2 – 5.8 GHz license-exempt bands. The EX-5i line delivers up to 216 Mbps of aggregate user throughput and up to sixteen T1/E1s plus one DS3. Featuring native TDM and native Ethernet transport and full software configurability and upgradeability, the EX-5i series was designed to meet demanding backhaul requirements of enterprise organizations and service providers seeking the accessibility benefits of an all-indoor configuration.

Carrier-class TDD. The EX-5i series radios combine native TDM and native Ethernet transport with low, fixed latency to deliver guaranteed throughput and service quality. Capacity can be allocated variably between TDM and Ethernet via software, while the selectable throughput symmetry control feature enables radio capacity to efficiently match asymmetric traffic requirements. Optional 1+1 monitored hot standby (MHS) protection provides full hardware redundancy.

Industry-leading Spectrum Management. The EX-5i radios include selectable channel bandwidth and 1 MHz tuning resolution, yielding up to 54 non-overlapping frequency channels and up to 415 center frequencies of operation. These capabilities, combined with selectable modulation and superior system gain, provide unparalleled interference avoidance and transmission resiliency. A built-in spectrum analyzer is even included to accelerate deployment and simplify troubleshooting.

ExaltSync™ Synchronization. The ExaltSync technology embedded in the EX-5i series radios allows multiple radio systems to be collocated in close proximity without self-interference, minimizing antenna separation and ensuring reuse of scarce spectrum across all collocated systems.

Security, Management and Data Networking. The EX-5i radios deliver the highest data and management security available with optional 128- and 256-bit AES encryption and secure SNMP v3 management, together with enhanced fault management and diagnostic features. The 802.1Q VLAN option provides built-in network administration and security flexibility.



Primary Specifications		EX-5i Lite	EX-5i	EX-5i-16	EX-5i-DS3
Maximum Capacity ¹	TDM	4xT1/E1		16xT1/E1	16xT1/E1; 1xDS3
	Ethernet (Aggregate)	100 Mbps		200 Mbps	
Frequency (GHz)	Tri-band: 5.250-5.350, 5.470-5.725, 5.725-5.850				
Range ²	> 30 miles at 99.999% throughput availability				

¹ Please refer to the Exalt Throughput and Range Specification document for detailed capacity information.

² Distance based upon FCC regulations, average climate and terrain, 6' dish antennas, 3 dB transmission system losses at each end. Longer or shorter distances will apply for alternative antennas, country regulations, transmission system losses, path topologies and radio configurations. See Exalt's path planning tool to model your scenario.

Specifications	EX-5i Series	Specifications	EX-5i Lite	EX-5i	EX-5i-16	EX-5i-DS3
System		Physical				
Frequency Bands ¹ (GHz)	5.250-5.350 5.470-5.725 5.725-5.850	Dimensions (H x W x D)	1RU 1.75 x 17 x 14 in 4.5 x 43.2 x 35.6 cm		1.5RU 2.63 x 17 x 14 in 6.7 x 43.2 x 35.6 cm	
Tuning Resolution	1 MHz	Physical Configuration	Single-piece Indoor Unit (IDU)			
Output Power (full power)		Operating Temperature	-40 to +65 °C -40 to +149 °F			
5725-5850 MHz band	+24 dBm QPSK; +21 dBm 16QAM	Full Spec Temperature	-25 to +60 °C -13 to +140 °F			
5250-5350 MHz band ²	+13 dBm	Weight	9.5 lbs / 4.3 kg		12 lbs / 5.5 kg	
5470-5725 MHz band ²	+13 dBm	Environmental	GR-1089-CORE intra-building			
Output Power (min power)	Full power minus 20 dB	Altitude	15,000 ft, 4.6 km			
Power Control Step Size	0.5 dB	Humidity	95% non-condensing			
Receiver Threshold (BER=10 ⁻⁹)	8 MHz 16 MHz 32 MHz 64 MHz ³	Interfaces				
QPSK	-86 -83 -80 -77	RF	N-type(F), impedance 50 ohm			
16QAM	-78 -75 -72 -69	TDM T1/E1 Interfaces	RJ48C/RJ45 (F) (x4)		RJ48C/RJ45 (F) (x16)	
Non-overlapping Channels		T1 Impedance	100 ohms, balanced			
5.250-5.350 GHz	10 5 2 1	T1 Line Code	AMI, B8ZS, selectable per channel			
5.470-5.725 GHz	29 14 7 3	T1 Data Rate	1,544 Mbps			
5.725-5.850 GHz	15 7 3 1	T1 Compliance	ANSI T1.102-1987; ITU-T; G.823; GR-499-CORE			
Maximum RSL (QPSK)	-25 dBm error-free 0 dBm no damage	E1 Impedance	120 ohms, balanced			
Throughput Symmetry Control	5 modes 20/80, 80/20, 35/65, 65/35, 50/50	E1 Line Code	HDB3			
Error Floor	10 ⁻¹²	E1 Data Rate	2,048 Mbps			
Latency (T1/E1)	1ms, typical	E1 Compliance	CEPT-1; G.703; ITU-T-G.703			
Link Security	96-bit proprietary encryption 128-bit and 256-bit AES encryption ³	DS3 Impedance	- BNC (F) (2x) 75 ohms, unbalanced			
VLAN	802.1Q	DS3 Line Code	- B3ZS			
Management	HTTP GUI CLI/Telnet SNMP v1, 2c, v3	DS3 Data Rate	- 44.736 Mbps			
Compliance	FCC 15.247, FCC 15.407 EN 301-893, EN 302-502 EN 60-950, EN 301-489, IC RSS-210	DS3 Compliance	-ANSI T1.102-1993; GR-499-CORE			
System Components		Loopback Modes	Remote Internal; Remote External; Local Line			
Complete Link ⁴	Two terminals, each with AC adapter and accessory kit	Ethernet	RJ45 (F) (x2), auto-MDIX			
Single terminal	One terminal with AC adapter and accessory kit	Interface Speed	10/100BaseT			
Accessory Kit	DC power connector, rack and grounding hardware (spare)	Duplex	Half, Full, Auto			
AC Adapter	AC adapter (spare)	Compliance	802.3			
Exalt Capacity Expansion Kit	For 6 GHz Part 101 links (optional accessory kit)	Console (Serial)	9-pin Sub-D (F)			
		Interface Speed	9600 bps			
		Compliance	EIA-574 (RS-232)			
		Alarm	9-pin Sub-D (F)			
		Inputs (2)	TTL/Closure			
		Outputs (2)	Relay (Form C)			
		ExaltSync	RJ45 (F)			
		Synchronization	Internal Sync 1pps (GPS)			
		DC Power	6-pin barrier strip		6-pin barrier strip	
		Input Voltage	±20-60VDC		±20-60VDC	
		Consumption	<38.5W (48V:<0.8A, 24V:<1.6A)		< 45W (48V: <0.9A, 24V: 1.8A)	
		AC Power Adapter	EIC to NEMA 5-15			
		Input	100-240VAC, 1.5A			
		Output	48VDC, 1.5A, 72W			

¹ Not all frequency bands are authorized or available for use in all countries.

² +24 dBm output power. Consult Exalt for availability.

³ Software license key upgrade.

⁴ Two complete links (4 terminals) required for MHS protection along with Exalt MHS kit and protection cabling. Consult your Exalt Sales representatives for MHS availability. (MHS is not available on EX-5i or EX-5i lite).



Exhibit D

Power Density Calculations

Pocket Site HFCT1508B

50 Plantation Road

East Windsor, Connecticut



C Squared Systems, LLC
920 Candia Road
Manchester, NH 03109
Phone: (603) 657 9702
E-mail:

support@csquaredsystems.com

Calculated Radio Frequency Emissions



HFCT1508B

50 Plantation Road, East Windsor, CT 06016

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1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed Pocket antennas to be installed on the existing water tank at 50 Plantation Road, East Windsor, CT 06016.

These calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are much more conservative (higher) than the actual signal levels will be from the finished installation.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter (mW/cm^2). The number of mW/cm^2 emitted is called the power density. The general population exposure limit for the cellular band is 0.567-0.593 mW/cm^2 , and the general population exposure limit for the PCS/AWS band is 1.0 mW/cm^2 . Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

The FCC general population / uncontrolled limits set the maximum exposure to which most people may be subjected. 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.

Higher exposure limits are permitted under the occupational / controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure (through training), and they must be able to exercise control over their exposure. General population / uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals.

The FCC describes exposure to radio frequency (RF) energy in terms of percentage of maximum permissible exposure (MPE) with 100% being the maximum allowed. Rather than the FCC presenting the user specification in terms of complex power density figures over a specified surface area, this MPE measure is particularly useful, and even more so when considering that power density limits actually vary by frequency because of the different absorptive properties of the human body at different frequencies.

MPE limits are specified as time-averaged exposure limits. This means that exposure can be averaged over 30 minutes for general population / uncontrolled exposure (or 6 minutes for occupational / controlled exposure). However, for the case of exposure of the general public, time averaging is usually not applied because of uncertainties over exact exposure conditions and difficulty in controlling time of exposure. Therefore, the typical conservative approach is to assume that any RF exposure to the general public will be continuous.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population / uncontrolled exposure and for occupational / controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include limits for Maximum Permissible Exposure (MPE) for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP), the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit. As shown in these excerpts, each frequency band has different exposure limits, requiring power density to be reported as a percent of Maximum Permissible Exposure (MPE) when dealing with carriers transmitting in different frequency bands.

3. RF Exposure Prediction Methods

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{Power Density} = \left(\frac{1.6^2 \times EIRP}{4\pi \times R^2} \right)$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial Distance = $\sqrt{(H^2 + V^2)}$

H = Horizontal Distance from antenna

V = Vertical Distance from bottom of antenna

1.6 is the ground reflection factor

4. Calculation Results

Table 1 below outlines the power density information for the site. All information for carriers other than Pocket is based on the current CSC filings.

Carrier	Antenna Height (Feet)	Operating Frequency (MHz)	Number of Trans.	Effective Radiated Power (ERP) Per Transmitter (Watts)	Power Density (mw/cm ²)	Limit	%MPE
AT&T/Cingular	116	880	6	296	0.0474	0.5867	8.09%
AT&T/Cingular	116	1930	3	427	0.0342	1.0000	3.42%
Sprint	126	1962.5	12	500	0.1358	1.0000	13.58%
Pocket	123	2130-2133.75	3	631	0.0497	1.0000	4.97%
Total							30.06%

Table 1: Proposed Carrier Information

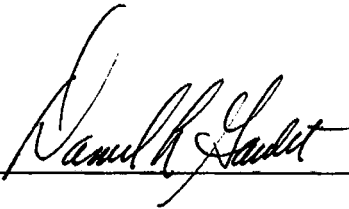
5. Conclusion

The above analysis verifies that emissions from the proposed site will be well below the maximum power density levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Even when using conservative methods, the cumulative power density from the proposed transmit antennas at the existing facility is well below the limits for the general public. The highest expected percent of Maximum Permissible Exposure at the base of the site is 30.06% of the FCC limit.

As noted in the introduction, obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are more conservative (higher) than the actual signal levels will be from the finished installation.

6. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.



Daniel I. Goulet
C Squared Systems, LLC

April 29, 2009
Date

Attachment A: References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

ANSI C95.1-1982, American National Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz. IEEE-SA Standards Board

IEEE Std C95.3-1991 (Reaff 1997), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave. IEEE-SA Standards Board

Attachment B: FCC Limits For Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure

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

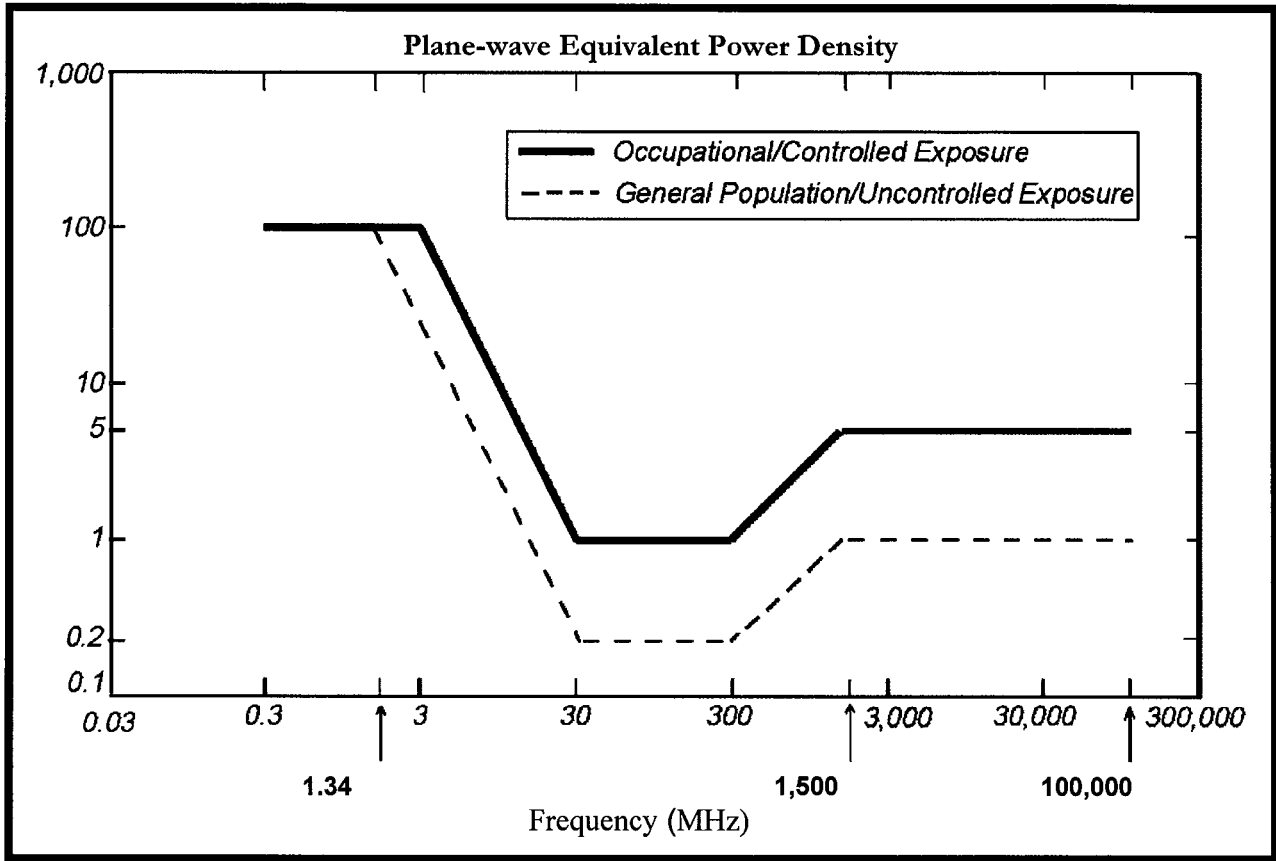
(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	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 can not exercise control over their exposure.



• FCC Limits for Maximum Permissible Exposure (MPE)

Exhibit E

Structural Analysis

Pocket Site HFCT1508B

50 Plantation Road

East Windsor, Connecticut



April 27, 2009

Mr. Jason D'Amico
Grapevine Solutions
27 Hillside Place, #28
New Britain, CT 06501

**Reference: Proposed Telecommunications Facility
Pocket Wireless Site Number: HFCT1508B
50 Plantation Road
East Windsor, Connecticut
PC1073 / 36923993**

Dear Mr. D'Amico:

URS Corporation has been authorized by Grapevine Solutions to conduct a structural evaluation of the proposed Pocket Wireless antenna installation on the existing water tank at 50 Plantation Road, East Windsor, CT

The water tank is a 50,000-gallon water tower designed by W.E. Cadwell Company, Louisville, KY, erected in 1947. The water tank appears to be in acceptable condition and has not experienced significant section loss or damage due to exposure to the elements. The tank structure is currently supporting (2) two other carrier's antennas on top of the tank.

Pocket Wireless is proposing to install (3) three RFS APXV18-206517S-C panel antennas on the exterior of the water tank at an antenna centerline elevation of 123'-0". Each antenna is 72.0" (H) x 6.8" (W) x 3.15" (D) and weighs 32.5 lb. The antennas have a Max Wind Area of 3.4 ft² and a horizontal thrust force of 125 lbf each. The proposed antennas will have 2 associated coaxial cables each. All coax cables will be routed up the existing water tank leg in a vertical cable tray. For additional information refer to Rev 0, Construction drawings, prepared by URS Corporation, dated 04/27/09.

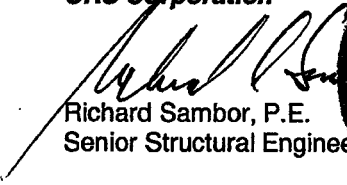
It is our determination that the existing water tank is adequate to support the proposed antenna and cable installation described above. The limitations of this determination are as follows:

1. Previous telecommunication installations were designed per Connecticut Building Code with all relevant supplements and amendments.

The above evaluation assumes the continuous routine inspection and maintenance of the existing water tank.

The installation is based on requirements of the Connecticut Building Code 2003 and latest supplements and amendment. The tank design and construction predates seismic design requirements, therefore no attempt was made to assess the structure for seismic load compliance. Should you have any further questions, please do not hesitate to call me.

Sincerely,
URS Corporation


Richard Sambor, P.E.
Senior Structural Engineer



RS/jcf
cc: CF/Book - URS

URS Corporation
500 Enterprise Drive, Suite 3B
Rocky Hill, CT 06067
Tel: 860.529.8882
Fax: 860.529.3991