PULLMAN
&COMLEY LLC
ATTORNEYS

ORIGINAL

CARRIE L. LARSON
90 State House Square
Hartford, CT 06103-3702
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October 25, 2010

VIA FACSIMILE (860-827-2950) and ELECTRONIC MAIL

RECEIVED
OCT 25 2010
CONNECTICUT
SITING COUNCIL

Linda Roberts, Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: Pocket Communications List of Exempt Modification and Petition Application Sites With Subsequent Filings and Structural Improvements

Dear Ms. Roberts:

Please be advised that Pullman & Comley, LLC represents Youghiogheny Communications-Northeast, LLC, doing business as Pocket Communications ("Pocket") in matters before the Connecticut Siting Council ("Council"). As you know, Pocket is currently in the process of transferring its assets to Metro PCS. Pocket hereby submits a list below of sites for which it has filed applications and received conditional approvals from the Council and for which subsequent applications have been filed by other carriers. In researching these sites, Pocket has determined that the subsequent filings all depict Pocket's installation, have satisfied the Council in terms of the sites structural integrity or otherwise required the subsequent applicant to provide the required information. The list below shows Pocket's Council filing number followed by the number of the subsequent filing by another carrier.

Pocket CSC Filing Number		Subsequent CSC Filing Number
EM-POCKET-094-080922		EM-CING-094-090609
EM-POCKET-002-080912		EM-CLEARWIRE-002-100504
EM-POCKET-084-081208B		EM-CLEARWIRE-084-100504
EM-POCKET-007-081008		EM-T-MOBILE-007-090406
EM-POCKET-017-080924		EM-T-MOBILE-017-100326
EM-POCKET-064-090720		PETITION NO. 920 - The Clearwire Corporation
EM-POCKET-060-080922		EM-CING-060-081218
EM-POCKET-167-080926		EM-VER-167-100222
EM-POCKET-066-081208		EM-CING-066-090420

PULLMAN
&COMLEY LLC
ATTORNEYS

Pocket CSC Filing Number		Subsequent CSC Filing Number
EM-POCKET-162-081223		EM-CING-162-090521
EM-POCKET-082-081023		EM-T-MOBILE-082-100611
EM-POCKET-025-090123		EM-VER-151-100107
PETITION NO. 878 - Youghiogheny Communications-Northeast, LLC d/b/a Pocket Communications		EM-VER-156-091218
EM-POCKET-062-081211		EM-CLEARWIRE-062-091023
PETITION NO. 879 - Youghiogheny Communications-Northeast, LLC d/b/a Pocket Communications		EM-VER-101-100107
EM-POCKET-119-080910		EM-T-MOBILE-119-090406
EM-POCKET-054-081110		TS-CLEARWIRE-054-100916
EM-POCKET-132-081016		EM-T-MOBILE-132-090406
EM-POCKET-052-080911		EM-VER-052-100201
EM-POCKET-107-080919A		EM-VER-107-100107
EM-POCKET-167-081021		EM-VER-167-100111
EM-POCKET-084-090415		EM-T-MOBILE-084-100628
EM-POCKET-084-090610		EM-VER-084-100107
PETITION NO. 887 - Youghiogheny Communications-Northeast, LLC d/b/a Pocket Communication		EM-CLEARWIRE-014-091016
EM-POCKET-012-081002A		EM-CLEARWIRE-012-100722
EM-POCKET-156-090109		EM-T-MOBILE-156-090122
EM-POCKET-132-081119		TS-CLEARWIRE-132-100916
EM-POCKET-119-081205		EM-VER-119-100504

As a result of these subsequent filings, Pocket believes that the conditions on its approvals have been satisfied or these subsequent approvals by your office now places the burden on those subsequent applicants to provide additional information and relieves Pocket of such responsibility. Pocket requests confirmation from your office verifying that this is the case. Please let us know if you have any questions about the enclosed information or if we can be of any further assistance in this matter.

Respectfully Submitted,

Carrie L. Larson

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
www.ct.gov/csc

August 18, 2009

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

RE: **EM-POCKET-064-090720** – Youghiogheny Communications-Northeast, LLC d/b/a Pocket Communications notice of intent to modify an existing telecommunications facility located at 289 Mountain Street, Hartford, 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 with the following conditions:

- The tower shall be reinforced per the attached drawings sealed by Raphael Mohamed, P.E. prior to the antenna installation;
- The tower shall not exceed 100 percent of its post-construction structural rating;
- Not more than 45 days after completion of construction, a signed letter from a Professional Engineer duly licensed in the State of the Connecticut shall be submitted to the Council to certify that the reinforcement has been properly completed and the tower does not exceed 100 percent of its post-construction structural rating;
- The applicant shall take steps to mitigate the generator noise and ensure compliance of applicable noise standards while the temporary generator is in place until permanent utility connections are installed; and
- An updated structural analysis taking into account the temporary microwave dish shall be submitted to the Council prior to the installation of such dish on the tower.

The proposed modifications are to be implemented as specified here and in your notice dated July 17, 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.

CSC
CONNECTICUT SITING COUNCIL

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/MP/laf

c: The Honorable Eddie A. Perez, Mayor, City of Hartford
Lee C. Erdmann, Chief Operating Officer, City of Hartford
Roger J. O'Brien, Director of Planning, City of Hartford
American Tower Corporation

PULLMAN & COMLEY LLC
ATTORNEYS AT LAW

EM-POCKET-064-090720

RRIE L. LARSON
State House Square
artford, CT 06103-3702
(860) 424-4312
(860) 424-4370

www.pullcom.com

ORIGINAL

July 17, 2009

Via Federal Express

RECEIVED
JUL 20 2009
CONNECTICUT
SITING COUNCIL

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

Re: Notice of Exempt Modification
American Tower Corporation Telecommunications Facility
289 Mountain Street, Hartford, Connecticut

Dear Mr. Phelps:

Youghiogheny Communications-Northeast, LLC, doing business as Pocket Communications ("Pocket"), intends to install antennas and appurtenant equipment at the existing 100-foot monopole facility owned by **American Tower Corporation** and located at **289 Mountain Street, Hartford**, 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 Eddie A. Perez, Mayor, City of Hartford.

The existing Facility consists of a 100-foot self-supporting monopole tower capable of supporting multiple carriers within a fenced compound. The coordinates for the Facility are **Lat: 41°-43'-36" and Long: 72°–42'-31".** The tower is located in the southern portion of Hartford, approximately 300 feet east of Newington Road and roughly 4000 feet west of Maple Avenue (see Site Map, attached as Exhibit A). The tower currently supports Town of West Hartford and Verizon antennas at the seventy-seven foot (77') level centerline AGL (above ground level); T-Mobile antennas at the eighty-seven foot (87') level centerline AGL (above ground level) and AT&T antennas at the one hundred foot level (100') AGL. Per the specifications of the structural report and as detailed in the Proposed Structural Modification Drawings (see attached Exhibit F), modifications will be made to insure the structural integrity and proper capacity for the tower. Pocket proposes to install three RFS APXV18-206517S-C flush mount antennas on the tower at the seventy foot centerline (70') AGL, and a Nortel CDMA Micro BTS 3231

cabinet, mounted on an "H-Frame," contained within a six foot by six foot (6'-0" x 6'-0") lease area. A small GPS antenna will be mounted to an ice bridge which will run from the lease area to the tower. Utilities will be run via a proposed underground conduit from an existing utility backboard, 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, if used at all. 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 Mountain Street 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 70 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 48.30% 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 Hartford Facility constitutes an exempt modification under R.C.S.A. Section 16-50j-72(b)(2).

Respectfully Submitted,

Carrie L. Larson

cc: Eddie A. Perez, Mayor, City of Hartford
Metropolitan District Commission, underlying property owner

Hartford/72572.2/JTP/380073v1

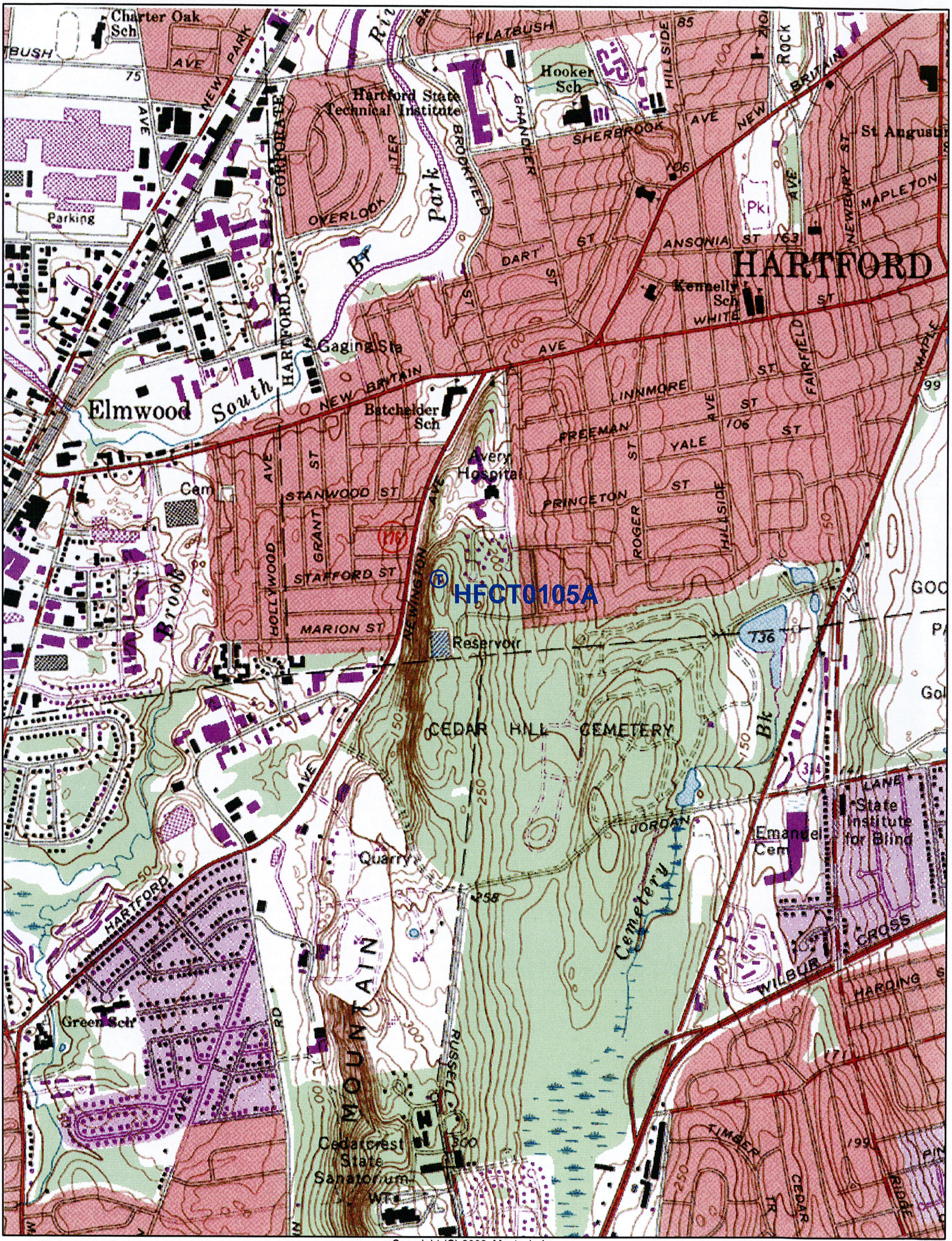
Exhibit A

Site Map

Pocket Site HFCT0105A

289 Mountain Street

Hartford, Connecticut



Copyright (C) 2002, Maptech, Inc.

Exhibit B

Design Drawings

Pocket Site HFCT0105A

289 Mountain Street

Hartford, Connecticut

pocket
SMART WIRELESS

HFCT0105A
289 MOUNTAIN STREET
HARTFORD, CT 06120

PROJECT SCOPE

THE PROPOSED SCOPE OF WORK GENERALLY ENTAILS THE INSTALLATION OF:

1. TELECOMMUNICATIONS ANTENNAS, COAX, ICE BRIDGE OR CABLE TRAY, RADIO & PPC CABINET INCLUDING THE NECESSARY UTILITIES.

2. A TOTAL OF (3) PROPOSED PANEL ANTENNAS MOUNTED TO THE EXISTING STRUCTURE.

3. ELECTRIC & TELCO SHALL BE ROUTED ABOVE OR UNDERGROUND TO THE PROPOSED EQUIPMENT IN ACCORDANCE WITH LATEST NEC EDITION ADOPTED BY LOCAL AUTHORITIES.

PROJECT SUMMARY

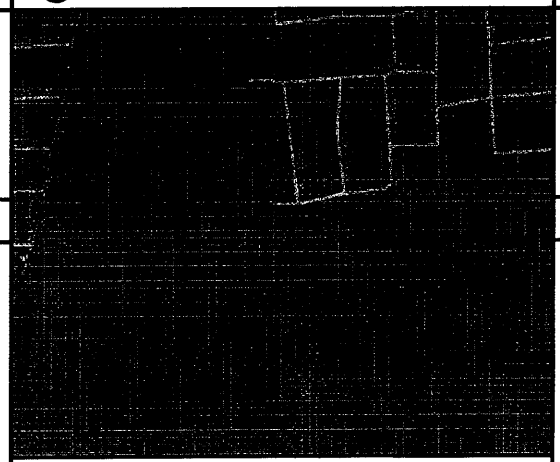
APPLICANT / LESSEE

YOUGHIOGHENY COMMUNICATIONS NORTHEAST, LLC.
D/B/A POCKET COMMUNICATIONS
1 FEDERAL STREET, BUILDING #111
SPRINGFIELD, MA 01105

PROPERTY INFORMATION

SITE ADDRESS:	289 MOUNTAIN STREET HARTFORD, CT 06120
PROPERTY OWNER:	SPRINGWHICH CELLULAR TOWER HOLDINGS, LLC. C/O: CINGULAR WIRELESS SITE #:CT-0017/SBA NO. 11 6100 ATLANTIC BLVD. NORCROSS, GA 30071
TOWER OWNER:	AMERICAN TOWER CORPORATION 10 PRESIDENTIAL WAY WOBURN, MA. 08101
POCKET COMMUNICATIONS CONSTRUCTION MANAGER:	ALAN STUMPP
STRUCTURE TYPE:	MONOPOLE
COORDINATES:	LATITUDE: N 41° 43' 36.12" LONGITUDE: W 72° 42' 30.24"

VICINITY MAP (NOT TO SCALE)



DRIVING DIRECTIONS

FROM POCKET OFFICE:

START OUT GOING SOUTHEAST ON FEDERAL ST TOWARD HALL ST. TURN RIGHT ONTO CT-173/NEW BRITAIN AVE. FOLLOW NEW BRITAIN TO MOUNTAIN STREET. TURN RIGHT ONTO MOUNTAIN STREET. FOLLOW TO HADDAM STREET. TURN RIGHT ONTO HADDAM STREET. FOLLOW TO MOUNTAIN STREET TURN LEFT ONTO MOUNTAIN AND FOLLOW TO END. SITE IS LOCATED OFF ACCESS ROAD ON RIGHT.

CODE COMPLIANCE

1. BUILDING CODE:
SBC-2005. 2003 INTERNATIONAL BUILDING CODE WITH CT SUPPLEMENT.

2. ELECTRICAL CODE:
NEC-2005. 2005 NATIONAL ELECTRICAL CODE

PROJECT INFORMATION

1. THIS IS AN UNMANNED TELECOMMUNICATION FACILITY CONSISTING OF BTS EQUIPMENT AND PANEL ANTENNAS.
2. ALL ITEMS SHOWN HEREON ARE EXISTING UNLESS OTHERWISE NOTED.
3. THIS IS AN UNMANNED FACILITY. THE SITE WILL CREATE NO TRASH, THUS REQUIRES NO DUMPSTER.
4. DEVELOPMENT AND USE OF THE SITE WILL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES.
5. EMERGENCY POWER SUPPLY IS A CELL PACK BATTERY SOURCE AND NOT A FLAMMABLE LIQUID SOURCE.
6. NO POTABLE WATER SUPPLY IS TO BE PROVIDED AT THIS LOCATION.
7. THE POCKET COMMUNICATION MAINTENANCE CREW (TYPICALLY ONE PERSON) WILL MAKE AN AVERAGE OF ONE TRIP PER MONTH AT ONE HOUR PER VISIT.
8. FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION, HANDICAPPED ACCESS NOT REQUIRED.

SHEET INDEX

SHEET	DESCRIPTION
T-1	TITLE SHEET
GN-1	GENERAL NOTES
A-1	COMPOUND AND EQUIPMENT LAYOUT PLANS
A-2	ELEVATION
A-3	CONSTRUCTION DETAILS
E-1	POWER & GROUNDING RISER DIAGRAMS
	AND DETAILS

APPROVALS

LANDLORD: _____

CONSTRUCTION MANAGER: _____

RF ENGINEER: _____

SITE ACQUISITION AGENT: _____

GENERAL CONTRACTOR NOTES

UNDERGROUND SERVICE ALERT
CALL TOLL FREE
1-888-DIG-SAFE
THREE WORKING DAYS BEFORE YOU DIG

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.

pocket
Pocket Communications
1 Federal Street
Building #111
Springfield, MA 01105

MAXTON
241 Boston Post Road West
Marlborough, MA 01752
Phone: 508-229-4100
Fax: 508-485-5321

BAY STATE DESIGN
Bay State Design, Inc.
Architects - Engineers
241 Boston Post Road West
Marlborough, MA 01752
Phone: 508-229-4100
Fax: 508-485-5321

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STATE OF CONNECTICUT
GORDON E. GOVATSKI
No. 16430
LICENSED PROFESSIONAL ENGINEER

7-17-09
ENGINEER/LAND SURVEYOR DATE

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

REVISIONS		
2	07/17/09	REVISION PER LANDLORD
1	07/01/09	CONSTRUCTION FINAL
0	06/30/09	ISSUED FOR REVIEW
REV	DATE	DESCRIPTION

PROJECT #:	DESIGNED BY: MJC	SCALE:
2882.099	DRAWN BY: MJC	AS NOTED
	CHECKED BY: TAV/RP	

SITE NAME:
HFCT0105A
HARTFORD, CT

SITE ADDRESS:
289 MOUNTAIN STREET
HARTFORD, CT 06120

DRAWING TITLE:
TITLE SHEET

DRAWING NO:
T-1

GENERAL NOTES:

1. CONSTRUCTION WORK SHALL ADHERE TO POCKET COMMUNICATIONS CELL SITE CONSTRUCTION SPECIFICATIONS MANUAL.
2. ALL DIMENSIONS SHOWN THUS ± ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WHICH AFFECT THE CONTRACTORS WORK. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
3. NORTH ARROW SHOWN ON PLANS REFERS TO TRUE NORTH. CONTRACTOR SHALL VERIFY TRUE NORTH AND INFORM CONSTRUCTION MANAGER OF ANY DISCREPANCIES BEFORE STARTING CONSTRUCTION.
4. THE CONTRACTOR AND OR HIS SUB CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.
5. ANTENNA INSTALLATION SHALL BE CONDUCTED BY FIELD CREWS EXPERIENCED IN THE ASSEMBLY AND ERECTION OF RADIO ANTENNAS, TRANSMISSION LINES AND SUPPORT STRUCTURES.
6. COORDINATION, LAYOUT, AND FURNISHING OF CONDUIT, CABLE AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
7. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.
8. PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE IS REQUIRED TO MEET NATIONWIDE STANDARDS FOR WIRELESS COMMUNICATIONS SYSTEMS. LESSEE/LICENSEE'S IMPLEMENTATION REQUIRES DEPLOYMENT OF EQUIPMENT AND ANTENNA GENERALLY DEPICTED ON THIS PLAN, ATTACHED TO OR MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. LESSEE RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO E911 EQUIPMENT AND LOCATION AS TECHNOLOGY EVOLVES TO MEET REQUIRED SPECIFICATIONS.

SITE WORK GENERAL NOTES:

1. CONTRACTOR SHALL CONTACT "DIG SAFE" (1-888-DIG-SAFE) PRIOR TO COMMENCEMENT OF WORK.
2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIPES AROUND OR NEAR UTILITIES. SUBCONTRACTORS SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING & EXCAVATION.
3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
5. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
6. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE.
7. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
8. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF ENGINEERING, OWNER AND/OR LOCAL UTILITIES.
9. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK SHALL BE GRADED TO A UNIFORM SLOPE AND STABILIZED TO PREVENT EROSION AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
10. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
11. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE POCKET COMMUNICATIONS SPECIFICATIONS FOR SITE SIGNAGE.

SOIL COMPACTION NOTES FOR SLAB ON GRADE:

1. EXCAVATE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL TO EXPOSE NATURAL SUBGRADE AND PLACE CRUSHED STONE AS REQUIRED.
2. COMPACTED SUBBASE SHALL BE UNIFORM AND LEVELED. 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED IN 3" LIFTS.
3. HAND OPERATED DOUBLE DRUM, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.
4. SOIL STABILIZATION FABRIC SHALL BE MIRAFI 600X OR EQUAL.

CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 336, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. ALL CONCRETE SHALL HAVE MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301 CODE REQUIREMENTS.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS OTHERWISE ON DRAWINGS:
   CONCRETE CAST AGAINST EARTH.....3 IN.
   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 AND LARGER .....2 IN.
   #5 AND SMALLER & WWF .....1 1/2 IN.
   CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
   SLAB AND WALL .....3/4 IN.
   BEAMS AND COLUMNS .....1 1/2 IN.
5. A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE.
6. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S RECOMMENDATION.
7. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL. CONCRETE CYLINDER TEST IS NOT REQUIRED FOR THIS PROJECT.
8. THE GENERAL CONTRACTOR SHALL PROVIDE CERTIFICATION FOR THE CONCRETE SUPPLIED.
9. EQUIPMENT SHALL NOT BE PLACED ON NEW PADS FOR SEVEN DAYS AFTER PAD IS POURED, UNLESS IT IS VERIFIED BY CYLINDER TEST THAT COMPRESSIVE STRENGTH HAS BEEN ATTAINED.

STRUCTURAL STEEL NOTES:

1. DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "SPECIFICATION FOR THE DESIGN FABRICATION & ERECTION OF STRUCTURAL STEEL FOR BUILDING" NINTH EDITION.
2. ALL STEEL EXPOSED TO THE WEATHER SHALL BE HOT-DIP GALVANIZED. INTERIOR STEEL SHALL BE PAINTED.
3. ALL PROPOSED WIDE FLANGE BEAMS SHALL CONFORM TO ASTM A572, GR. 50. OTHER STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36.
4. STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE A, OR ASTM A53 PIPE, STEEL BLACK AND HOT-DIPPED ZINC-COATED WELDED AND SEAMLESS TYPE E OR S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.
5. CONNECTIONS SHALL BE DESIGNED BY THE FABRICATOR AND CONSTRUCTED IN ACCORDANCE WITH THE NINTH EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION. CONNECTIONS SHALL BE PROVIDED TO CONFORM TO THE REQUIREMENTS OF TYPE 2 CONSTRUCTION UNLESS OTHERWISE DETAIL.
6. CONNECTIONS SHALL BE MADE USING 3/4" DIAMETER ASTM A325 BOLTS (SNUG TIGHT OR SLIP CRITICAL) OR WELDS, UNLESS NOTED OTHERWISE. IF TENSION CONTROL BOLTS ARE USED, CONNECTIONS SHALL BE DESIGNED FOR SLIP CRITICAL BOLT ALLOWABLE LOAD VALUES.
7. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
8. USE MINIMUM SIZE WELDS PER AISC SPECIFICATIONS OR AS SHOWN ON DRAWINGS.
9. FIELD WELDS, DRILL HOLES, SAW CUTS AND ALL DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED WITH AN ORGANIC ZINC REPAIR PAINT COMPLYING WITH REQUIREMENTS OF ASTM A780. GALVANIZING REPAIR PAINT SHALL HAVE 65 PERCENT ZINC BY WEIGHT, ZRP BY DUNCAN GALVANIZING, GALVA BRIGHT PREMIUM BY CROWN OR EQUAL. THICKNESS OF APPLIED GALVANIZING REPAIR PAINT SHALL BE NOT NOT LESS THAN 4 COATS (ALLOW FOR DRY TIME BETWEEN COATS) WITH A RESULTING COATING THICKNESS REQUIRED BY ASTM A123 OR A153 AS APPLICABLE.
10. CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND DR WHERE FILLET WELD SIZES ARE NOT SHOWN. PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 9TH EDITION.
11. UNISTRUTS SHALL BE FORMED STEEL CHANNEL STRUT FRAMING AS MANUFACTURED BY UNISTRUT CORP., WAYNE, MI OR EQUAL. STRUT MEMBERS SHALL BE 1-5/8" X 1-5/8" X 12 GA. UNLESS OTHERWISE NOTED, AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
12. GROUT SHALL BE NON METALLIC, NON SHRINK PREPACKAGED GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI AT 28 DAYS. GROUT SHALL BE FIVE STAR GROUT AS MANUFACTURED BY FIVE STAR PRODUCTS, FAIRFIELD, CT OR APPROVED EQUAL.
13. WHERE ROOF PENETRATIONS ARE REQUIRED, THE CONTRACTOR SHALL CONTACT AND COORDINATE RELATED WORK WITH THE BUILDING OWNER AND THE EXISTING ROOF INSTALLER. WORK SHALL BE PERFORMED IN SUCH A MANNER AS TO NOT VOID THE EXISTING ROOF WARRANTY.

ELECTRICAL NOTES:

1. UTILITY SERVICES SHOWN ARE PROPOSED. THE ELECTRIC CONTRACTOR SHALL COORDINATE EXACT TELEPHONE AND ELECTRIC SERVICE CONNECTION POINTS, PULL BOXES, ROUTING AND ASSOCIATED REQUIREMENTS WITH LOCAL UTILITY COMPANIES.
2. VISIT SITE AND EXAMINE CONDITIONS UNDER WHICH WORK MUST BE PERFORMED. REPORT ADVERSE CONDITIONS IN WRITING. COMMENCEMENT OF WORK SHALL BE CONSTRUED AS COMPLETE ACCEPTANCE OF EXISTING CONDITIONS INCLUDING PREPARATORY WORK DONE BY OTHERS.
3. ALL EXISTING UNDERGROUND LINES ON SITE SHALL BE LOCATED PRIOR TO CONSTRUCTION.
4. GIVE NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES AND BACK CHARGES, AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES THAT HAVE JURISDICTION.
5. PERFORM WORK AS REQUIRED BY NEC AND AUTHORITY HAVING JURISDICTION.
6. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL CONDUIT ROUTING WITH LOCAL UTILITY COMPANIES AND FIELD CONSTRUCTION MANAGER.
7. ALL EXTERIOR WALL PENETRATIONS SHALL BE SILICONE SEALED.
8. MATERIAL AND EQUIPMENT SHALL BE UL, NEMA, ANSI, IEEE, ADA & CBM APPROVED FOR INTENDED SERVICE.
9. ALL ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THEN THE MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED, AND A MINIMUM OF 10,000 A.I.C..
10. NEW WIRING SHALL BE TYPE THWN, UNLESS OTHERWISE NOTED. NEW WIRING PROVIDING POWER TO BTS SHALL BE STRANDED CLASS B, THWN. MINIMUM BRANCH CIRCUIT WIRING SHALL BE #12 AWG SOLID COPPER.
11. ALL METALLIC CONDUITS SHALL BE PROVIDED WITH BONDING BUSHINGS.
12. ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO THE PROJECT MANAGER AT JOB COMPLETION.
13. PROVIDE THE OWNER WITH ONE SET OF COMPLETE ELECTRICAL "AS BUILT" DRAWINGS AT THE COMPLETION OF THE JOB.
14. GUARANTEE WORK IN WRITING FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE. REPAIR OR REPLACE DEFECTIVE MATERIALS OR INSTALLATION AT NO COST TO OWNER. CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER GUARANTEE AT NO COST TO OWNER.

GROUNDING NOTES:

1. ALL GROUND WIRE SHALL BE BARE COPPER #2 AWG UNLESS OTHERWISE NOTED.
2. ALL GROUND WIRES SHALL PROVIDE A STRAIGHT, DOWNWARD PATH TO GROUND WITH GRADUAL BENDS AS REQUIRED. GROUND WIRES SHALL NOT BE LOOPED OR SHARPLY BENT.
3. ELECTRICAL CONTRACTOR SHALL COORDINATE INSTALLATION OF GROUND RODS AND GROUND RING WITH FOUNDATION AND UNDERGROUND CONDUIT.
4. EACH EQUIPMENT CABINET SHALL BE CONNECTED TO THE MASTER ISOLATION GROUND BAR (MGB) WITH #2 AWG BTCW, UNLESS OTHERWISE NOTED. EQUIPMENT CABINETS SHALL EACH HAVE (2) CONNECTIONS.
5. PROVIDE DEDICATED #2 AWG BTCW FROM EACH ANTENNA MOUNTING PIPE TO ASSOCIATED CICBE (TYPICAL FOR FOUR MOUNTING PIPES PER SECTOR).
6. ANTENNA GROUND KITS SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
7. COORDINATE NEW GROUND SYSTEM WITH EXISTING SITE GROUND SYSTEM.
8. EACH SECTION OF CABLE TRAY, ICE BRIDGE AND ICE SHIELD SHALL BE CONNECTED IN A FASHION TO PROVIDE A CONTINUOUS GROUND.
9. CONDUCTOR TERMINATIONS SHALL BE TWO-HOLE BOLTED, COMPRESSION TYPE, WITH STAINLESS STEEL, SELF-TAPING SCREWS AT ALL ENCLOSURES, PANELS, FRAMES, AND WHERE EXPOSED FOR GROUNDING.
10. DO NOT USE METAL BRACKETS OR SUPPORTS WHICH WOULD FORM A COMPLETE RING AROUND ANY GROUNDING CONDUCTOR. ALL CLAMPS AND SUPPORTS USED IN THE GROUNDING SYSTEM SHALL BE NON CONDUCTIVE.
11. ALL GROUNDING CONNECTIONS SHALL BE COATED WITH A COPPER SHIELD ANTI-CORROSIVE AGENT SUCH AS T&B KOPR SHIELD. VERIFY PRODUCT WITH PROJECT MANAGER.
12. ALL BOLTS, WASHERS, AND NUTS USED ON GROUNDING CONNECTIONS SHALL BE STAINLESS STEEL.
13. INSTALL GROUND BUSHINGS ON ALL METALLIC CONDUITS AND BOND TO THE EQUIPMENT GROUND BUS IN THE PANELBOARD.
14. GROUND ANTENNA BASES, FRAMES, CABLE RACKS AND OTHER METALLIC COMPONENTS WITH #2 GROUNDING CONDUCTORS AND CONNECT TO INSULATED SURFACE MOUNTED GROUND BARS. CONNECTION DETAILS SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS FOR GROUNDING.
15. GROUND COAXIAL SHIELD AT BOTH ENDS USING MANUFACTURER'S GUIDELINES.
16. GROUND SYSTEM SHALL BE TESTED AND HAVE A RESISTANCE OF 5 OHMS OR LESS.

FOR CONSTRUCTION

pocket

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STATE OF CONNECTICUT
GORDON E. GOVATZ
No. 16490
LICENSED PROFESSIONAL ENGINEER

7-17-09
ENGINEER/LAND SURVEYOR DATE

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

REVISIONS		
2	07/17/09	REVISION PER LANDLORD
1	07/01/09	CONSTRUCTION FINAL
0	06/30/09	ISSUED FOR REVIEW
REV	DATE	DESCRIPTION

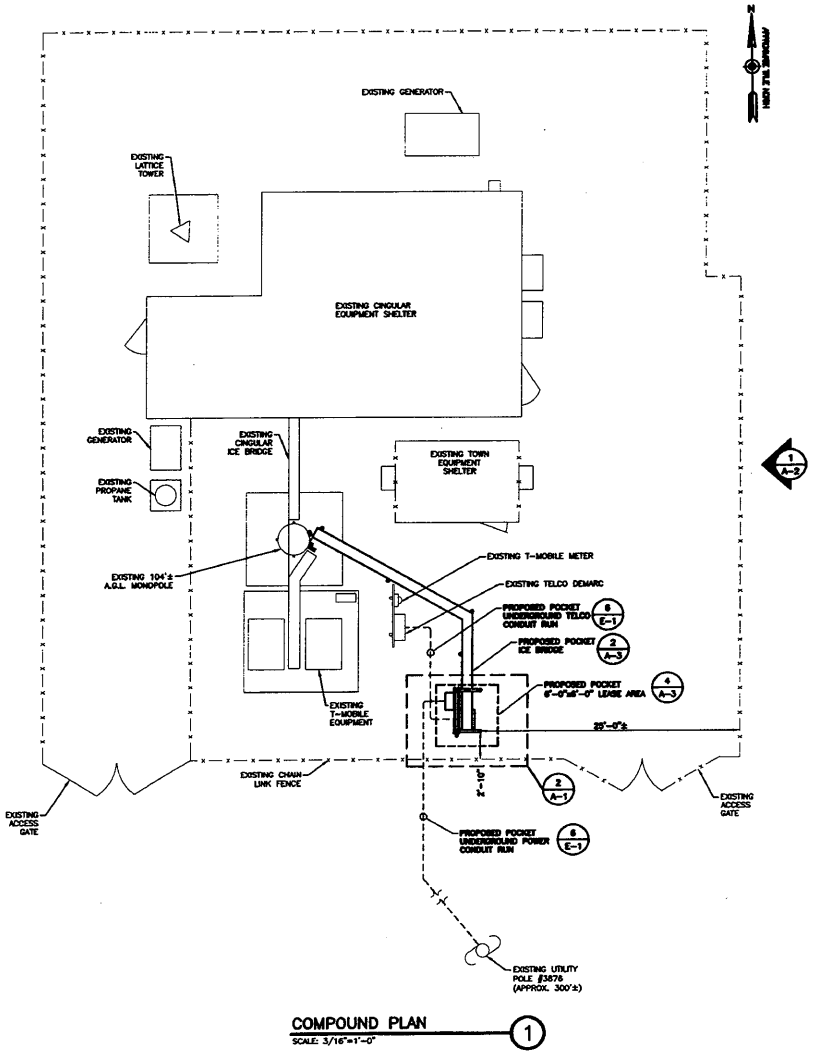
PROJECT #:	DESIGNED BY: KM	SCALE:
2882.099	DRAWN BY: JMK	AS NOTED
	CHECKED BY: EM/GG	

SITE NAME:
HFCT0105A
HARTFORD, CT

SITE ADDRESS:
289 MOUNTAIN STREET
HARTFORD, CT 06120

DRAWING TITLE:
GENERAL NOTES

DRAWING NO:
GN-1

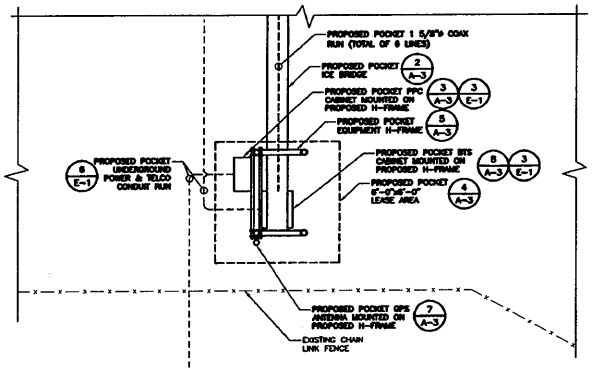


COMPOUND PLAN (1)
SCALE: 3/16"=1'-0"

POCKET RF SYSTEM SCHEDULE

SECTOR	ANTENNA	AZIMUTH	DOWNTILT	RAD CTR. FT. AGL	MAKE	MODEL	FEED	PCS COAX SIZE, IN.	COAX MFR.	LENGTH, FT.*
ALPHA	1R, 1R	10°	SEE NOTE	70'±	RFS	APXV18-206517S-C-ACU	BOTTOM	1 5/8"ø	RFS (LCF158-50JL)	100'±
BETA	1B, 1B	90°	SEE NOTE	70'±	RFS	APXV18-206517S-C-ACU	BOTTOM	1 5/8"ø	RFS (LCF158-50JL)	100'±
GAMMA	1G, 1G	170°	SEE NOTE	70'±	RFS	APXV18-206517S-C-ACU	BOTTOM	1 5/8"ø	RFS (LCF158-50JL)	100'±
GPS #1	1Y & 1Y	PRIMARY	–	N/A	RFS	MTG8013MA	BOTTOM	1/2"	RFS	10'±

* COAX CABLE LENGTHS ARE ESTIMATES; CONTRACTOR SHALL VERIFY IN FIELD.
* REFER TO RFDS ANTENNA SHEET FOR FINAL TILT AND AZIMUTH



EQUIPMENT LAYOUT PLAN (2)
SCALE: 3/4"=1'-0"

FOR CONSTRUCTION

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STATE OF CONNECTICUT
GORDON E. GOWLEY
No. 16430
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PROFESSIONAL ENGINEER

7-17-09
ENGINEER/LAND SURVEYOR — DATE

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1	07/01/09	CONSTRUCTION FINAL
0	06/30/09	ISSUED FOR REVIEW
REV	DATE	DESCRIPTION

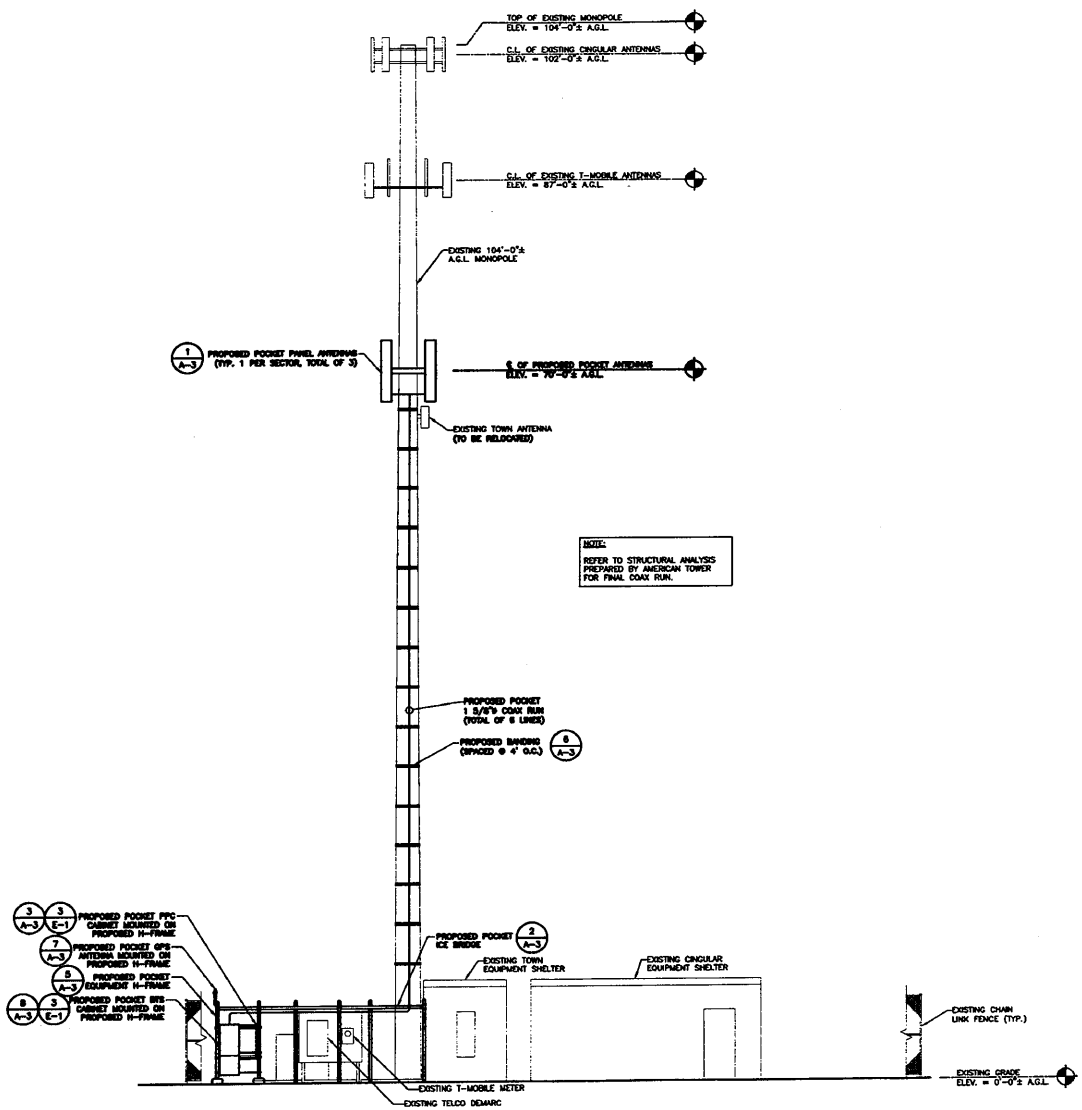
PROJECT #: 2882.099
DESIGNED BY: KW
DRAWN BY: MJC
CHECKED BY: GW/KW/RR
SCALE: AS NOTED

SITE NAME:
HFCT0105A
HARTFORD, CT

SITE ADDRESS:
289 MOUNTAIN STREET
HARTFORD, CT 06120

DRAWING TITLE:
COMPOUND AND EQUIPMENT LAYOUT PLANS

DRAWING NO:
A-1



ELEVATION (2)
SCALE: 3/16"=1'-0"

FOR CONSTRUCTION

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STATE OF CONNECTICUT
GORDON E. GOVALET
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LICENSED
PROFESSIONAL ENGINEER

ENGINEER/LAND SURVEYOR 7.17.09 DATE

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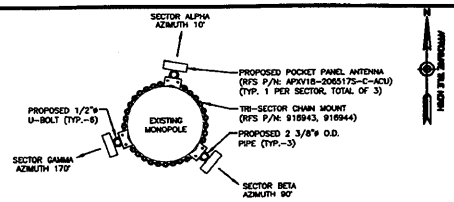
PROJECT #:	DESIGNED BY: KW	SCALE:
2882.099	DRAWN BY: MJC	AS NOTED
	CHECKED BY: TM/RP	

SITE NAME:
HFCT0105A
HARTFORD, CT

SITE ADDRESS:
289 MOUNTAIN STREET
HARTFORD, CT 06120

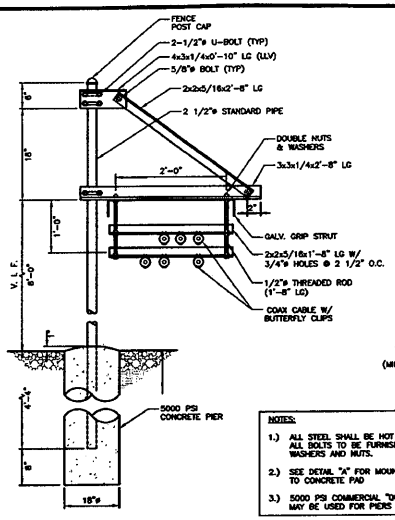
DRAWING TITLE:
ELEVATION

DRAWING NO:
A-2



ANTENNA MOUNT DETAIL — 1

SCALE: N.T.S.



NOTES:

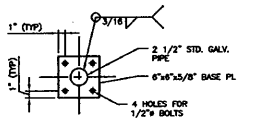
1.) ALL STEEL SHALL BE HOT DIPPED GALVANIZED. ALL BOLTS TO BE FURNISHED WITH LOCK WASHERS AND NUTS.

2.) SEE DETAIL "A" FOR MOUNTING ICE BRIDGE TO CONCRETE PAD

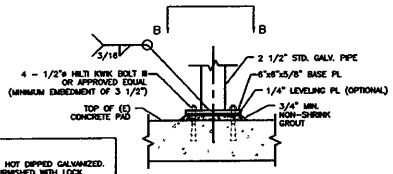
3.) 5000 PSI COMMERCIAL "QUIK-CRETE" MAY BE USED FOR PIERS

ICE BRIDGE DETAIL — 2

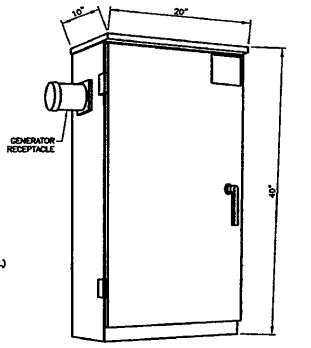
SCALE: N.T.S.



SECTION "B-B"



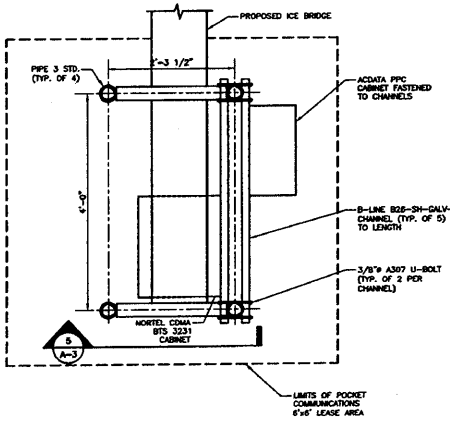
DETAIL "A"



ACDATA POWER PROTECTION CABINET (PPC) SPECIFICATIONS	
DIMENSIONS	40"H x 20"W x 10"D

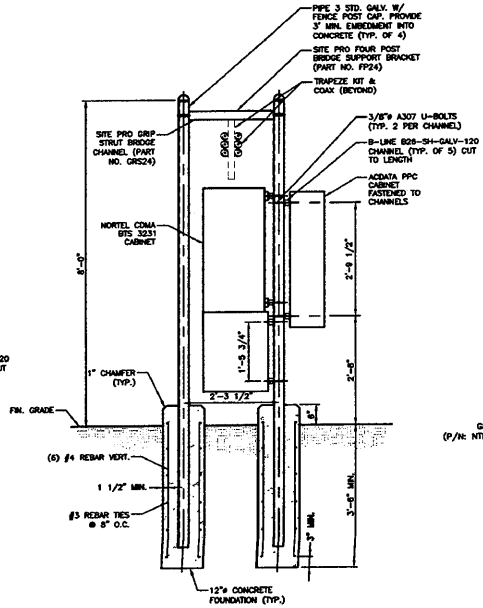
PPC CABINET DETAIL — 3

SCALE: N.T.S.



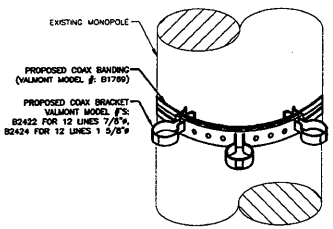
EQUIPMENT CABINET
SUPPORT FRAME DETAIL — 4

SCALE: 1"=1'-0"



EQUIPMENT FRAME ELEVATION — 5

SCALE: 3/4"=1'-0"



COAX BANDING DETAIL — 6

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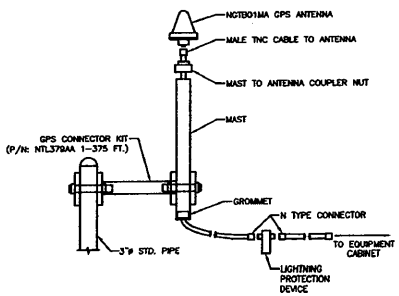
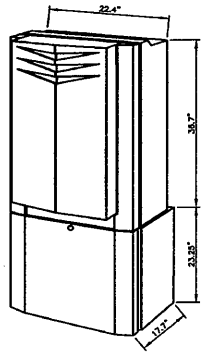


GPS ANTENNA DETAIL — 7

SCALE: N.T.S.



NORTEL BTS 3231 CABINET SPECIFICATIONS	
BTS DIMENSIONS	17.7"D x 22.4"W x 36.7"H
BATTERY ENCLOSURE DIMENSIONS	14.5"D x 23.25"W x 23.25"H
WEIGHT W/O BATTERY	240 LBS. MAX
WEIGHT W/ BATTERIES	750 LBS. MAX

NORTEL BTS 3231 CABINET MINIMUM CLEARANCES	
DIRECTION	MINIMUM CLEARANCE
CABINET BOTTOM	0"
CABINET FRONT	27.5"

BTS CABINET DETAIL — 8

SCALE: N.T.S.

FOR CONSTRUCTION

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STATE OF CONNECTICUT
GORDON E. GOYETTE
No. 16430
LICENSED
PROFESSIONAL ENGINEER

7.11.09
ENGINEER/LAND SURVEYOR — DATE

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REV	DATE	DESCRIPTION

PROJECT #:	DESIGNED BY: MJC	SCALE:
2882.099	DRAWN BY: MJC	AS NOTED
	CHECKED BY: GEG/MJC	

SITE NAME:

HFCT0105A

HARTFORD, CT

SITE ADDRESS:

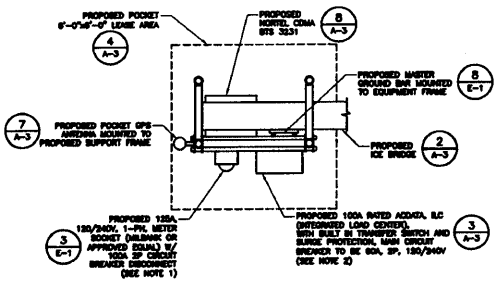
289 MOUNTAIN STREET
HARTFORD, CT 06120

DRAWING TITLE:

CONSTRUCTION DETAILS

DRAWING NO:

A-3

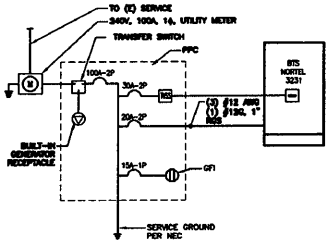


EQUIPMENT LAYOUT PLAN VIEW (1)

SCALE: N.T.S.

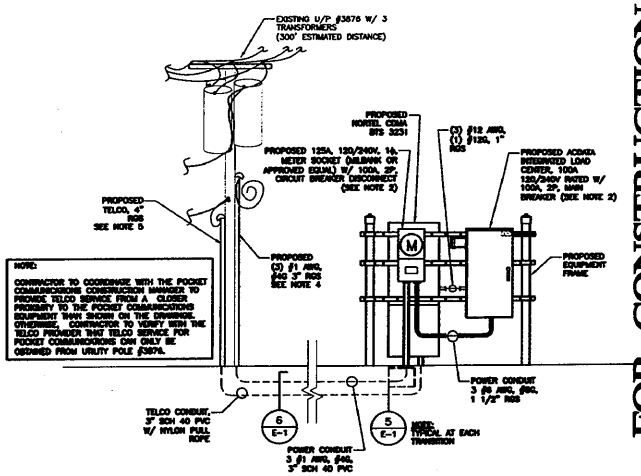
NOTES:

1. ALL UTILITY RUNS SHALL BE COORDINATED WITH POCKET COMMUNICATIONS CONSTRUCTION MANAGER AND RESPECTIVE UTILITY COMPANIES. UTILITY COMPANY TO ASSESS THE CAPACITY OF THE EXISTING SERVICE AT THE UTILITY POLE (#3876 WITH (3) TRANSFORMER TO ACCOMODATE AN ADDITIONAL 100A, 120/240V,1-PH REQUIRED FOR THE POCKET COMMUNICATIONS CELL SITE.
2. POCKET COMMUNICATIONS TO PROVIDE 100A 120/240V, NEMA 3R RATED INTEGRATED LOAD CENTER (MODEL FROM ACOMEA SOLUTIONS) WITH BUILT IN TRANSFER SWITCH, GENERATOR RECEPTACLE AND TVSS. MAIN DISCONNECT TO BE 100A 2P (SQUARE D OR APPROVED EQUAL). CONTRACTOR TO SUPPLY AND INSTALL A 125A, 1ϕ, 120/240V METER SOCKET (MILBANK OR EQUAL) WITH A 100A 2P CIRCUIT BREAKER DISCONNECT (SQUARE D OR EQUAL).
3. UTILITY SERVICES SHOWN ARE PROPOSED. THE ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT TELEPHONE AND ELECTRIC SERVICE CONNECTION POINTS, ROUTING, ASSOCIATED REQUIREMENTS AND BACKCHARGES WITH LOCAL UTILITY COMPANIES.
4. PROPOSED SERVICE RISER TO INCLUDE RGS VERTICAL SWEEP WITH DRAG LINE TO SUPPORT ELECTRICAL SERVICE. A 3" RGS RISER TO EXTEND AT LEAST 10' A.F.G. FINISH CONDUIT TO POLE PER UTILITY REQUIREMENTS AND PROVIDE CONDUCTORS WITH SUFFICIENT LENGTH TO ATTACH TO THE UTILITY SECONDARY THROUGH A WEATHERHEAD AND WITH A DRIP LINE. THE UTILITY WILL MAKE THE FINAL CONNECTIONS.
5. THE PROPOSED TELCO RISER TO INCLUDE RGS VERTICAL SWEEP WITH DRAG LINE TO SUPPORT TELCO SERVICE. COORDINATE WITH UTILITY COMPANY AS TO THE QUANTITY OF PROPOSED RISERS TO BE ADDED TO THE EXISTING POLE.



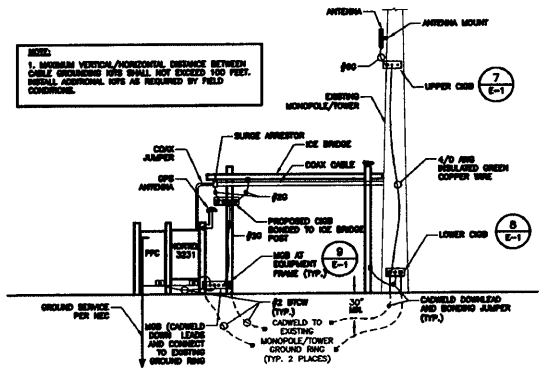
ONE LINE DIAGRAM (2)

SCALE: N.T.S.



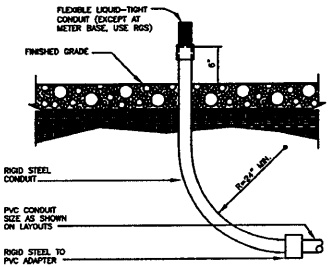
POWER & TELCO RISER DIAGRAM (3)

SCALE: N.T.S.



GROUNDING RISER DIAGRAM (4)

SCALE: N.T.S.

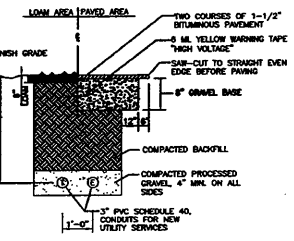


NOTE:

CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF CONDUIT STUB-UP.

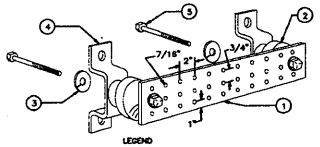
CONDUIT STUB-UP DETAIL (5)

SCALE: NTS



BURIED CONDUIT DETAIL (6)

SCALE: NTS



LEGEND

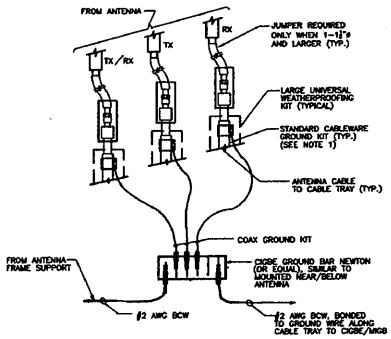
1- COPPER TINNED GROUND BAR, 1/4"x 4"x 20", OR OTHER LENGTH AS REQUIRED, HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION
2- INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4 OR EQUAL
3- 5/8" LOCKWASHERS OR EQUAL
4- WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-8056 OR EQUAL
5- 5/8-11 X 1" H.H.C.S.BOLTS

NOTE:

ALL BOLTS, NUTS, WASHERS AND LOCK WASHERS SHALL BE 18-8 STAINLESS STEEL.

GROUNDING – STANDARD DETAIL GROUND BAR (8)

SCALE: NTS

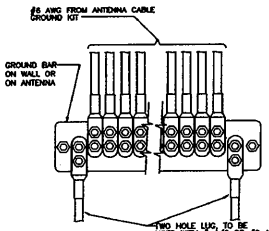


NOTE:

DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.

STANDARD DETAIL CONNECTION OF GROUND WIRES TO GROUNDING BAR (CIGBE) (7)

SCALE: NTS



NOTE:

CONTRACTOR TO UTILIZE KOPR-SHIELD (THOMAS & BETTS) ON ALL LUG CONNECTIONS.

INSTALLATION OF GROUND WIRE TO GROUND BAR (9)

SCALE: NTS

FOR CONSTRUCTION

pocket

Pocket Communications
1 Federal Street
Building #111
Springfield, MA 01105

MAXTON
241 Boston Post Road West
Marlborough, MA 01752
Phone: 508-229-4100
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STATE OF CONNECTICUT
TRICHUR A. VENKATARAMAN
No. 22948
LICENSED PROFESSIONAL ENGINEER

ENGINEER/LAND SURVEYOR DATE

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

REVISIONS		
2	07/17/09	REVISION PER LANDLORD
1	07/01/09	CONSTRUCTION FINAL
0	06/30/09	ISSUED FOR REVIEW
REV	DATE	DESCRIPTION

PROJECT #:	DESIGNED BY: MS	SCALE:
2882.099	DRAWN BY: MS	AS NOTED
	CHECKED BY: TAV/TS	

SITE NAME:

HFCT0105A

HARTFORD, CT

SITE ADDRESS:

289 MOUNTAIN STREET
HARTFORD, CT 06120

DRAWING TITLE:

POWER & GROUNDING RISER DIAGRAMS AND DETAILS

DRAWING NO:

E-1

Exhibit C

Equipment Specifications

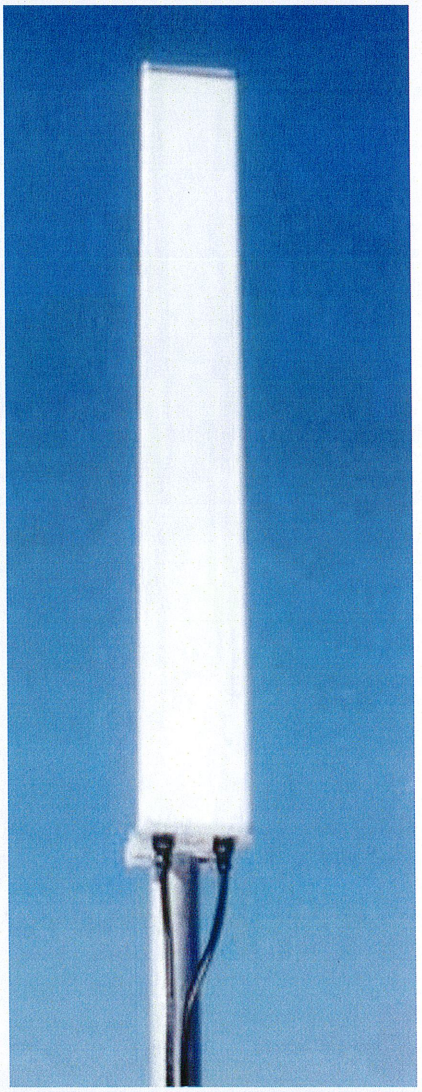
Pocket Site HFCT0105A

289 Mountain Street

Hartford, Connecticut

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

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

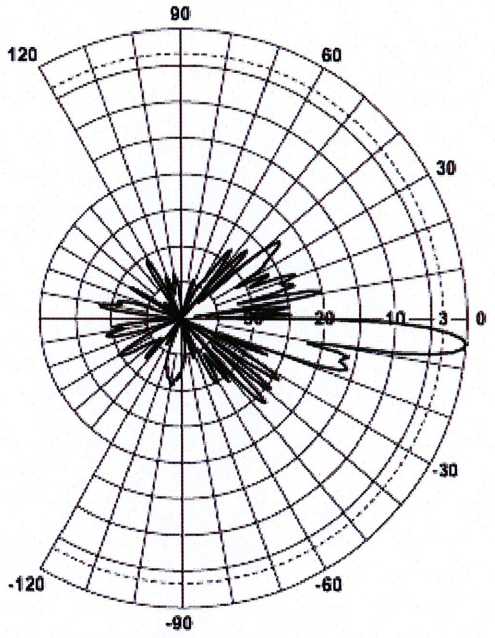
Technical Data Sheet APXV18-206517S-C

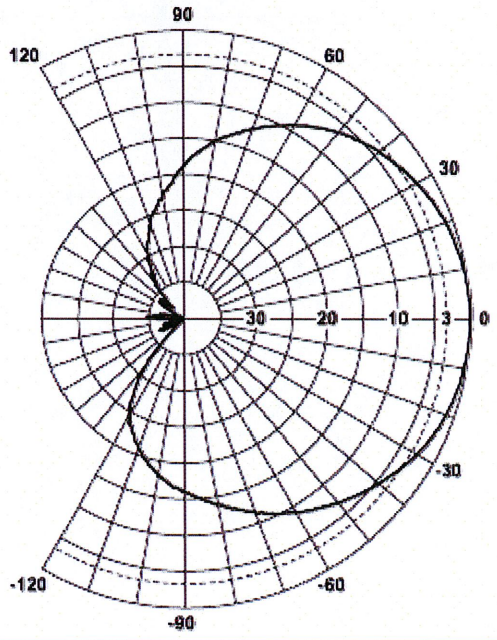
Gain, dBi (dBd)	18.8 (16.7) , 19.0 (16.9)
Frequency Range, MHz	1710-1900, 1900-2170
Connector Type	(2) 7-16 DIN Female
Connector Location	Bottom
Mount Type	Downtilt
Electrical Downtilt, deg	0-10
Horizontal Beamwidth, deg	67 , 63
Mounting Hardware	APM40-2
Rated Wind Speed, km/h (mph)	160 (100)
VSWR	< 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

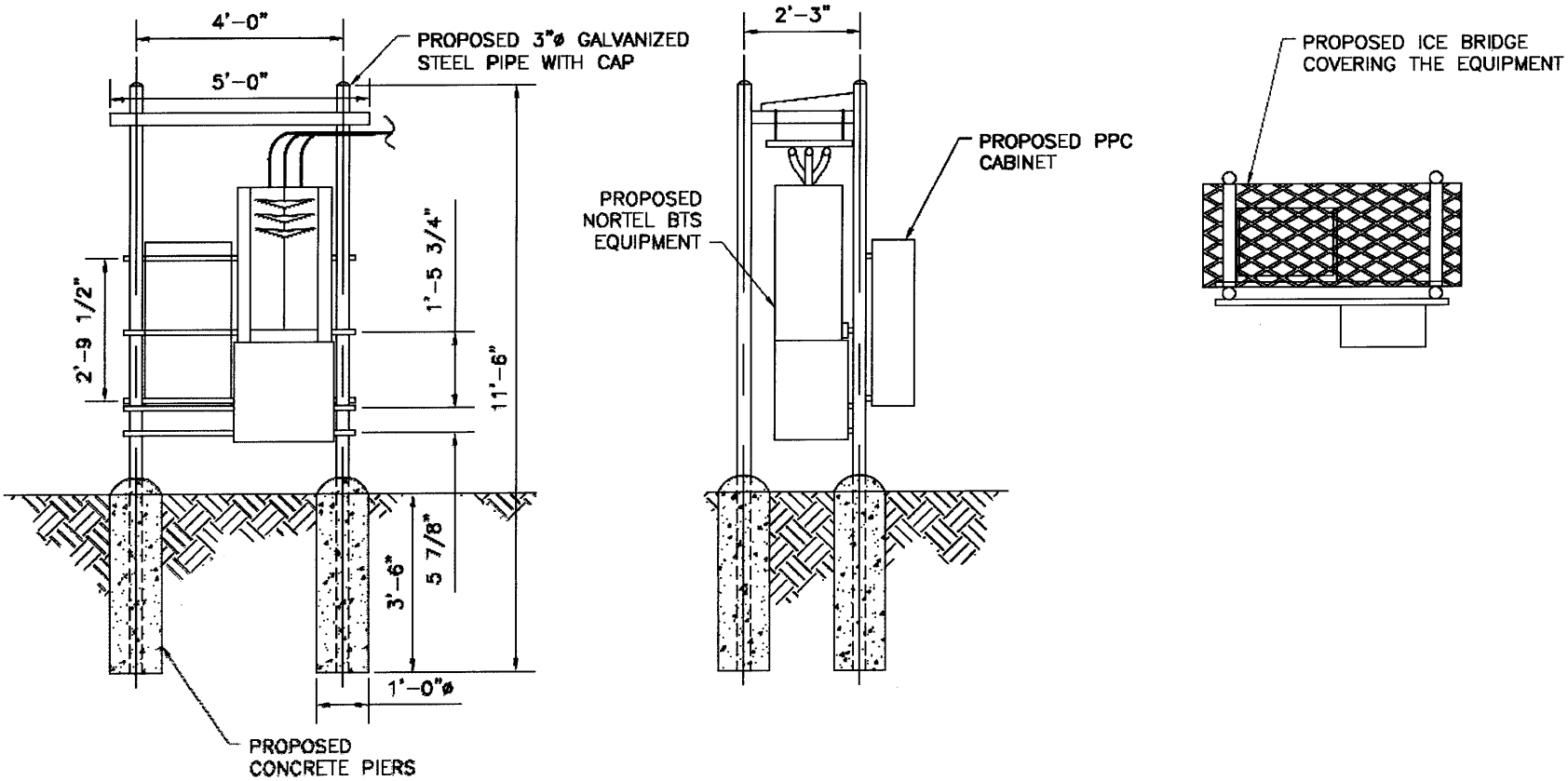
For additional mounting information please click "External Document Link" below.

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





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



Pocket/Youghiogheny Communications – Northeast, LLC

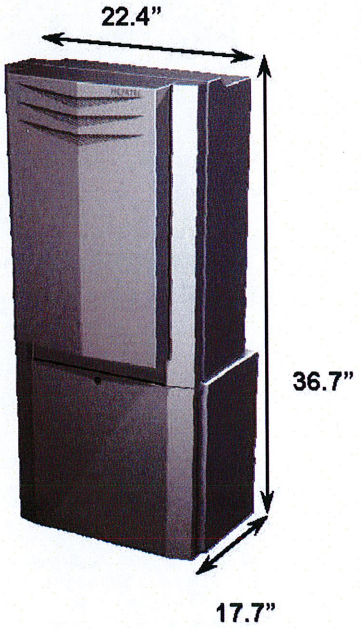
Rack Detail

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

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



MAGNUM PRODUCTS LLC

CH&E Power Zone

EMPOWERING REAL PEOPLE

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

updated parts information before placing a parts order.

Tech. Specs.

- MLG15

Literature / Sales

- Generator Lit.
- Service Kit Lit.
- Sales Support

WARRANTY

- Warranty Overview
- Warranty Claim Policy

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

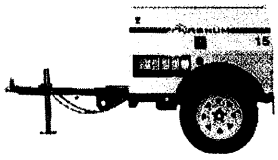
Size and Weight

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)

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)	• 60/40 Coolant • Heated Fuel Filter • Engine Heater - Lower Radiator Hose • Oil Drain Valve Kit
Controls	• 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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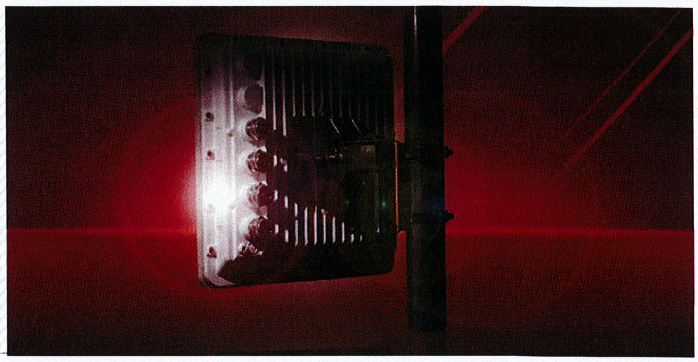
EX-5r Series



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)				
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^{-6})	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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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

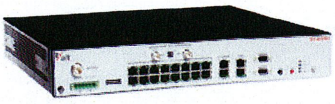
The EX-5i series of all-indoor digital microwave radios is the first family of carrier-class, tri-band TDD radios available in the 5.2 – 5.8 GHz license-exempt bands. The EX-5i line delivers up to 216 Mbps of aggregate user throughput and up to sixteen T1/E1s plus one DS3. Featuring native TDM and native 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
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)	
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^{-6})	8 MHz / 16 MHz / 32 MHz / 64 MHz[3]
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 (QPSK)	-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
Link Security	96-bit proprietary encryption
	128-bit and 256-bit AES encryption[3]
VLAN	802.1Q
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[4]	Two terminals, each with AC adapter and accessory kit
Single terminal	One terminal with AC adapter and accessory kit
Accessory Kit	DC power connector, rack and grounding hardware (spare)
AC Adapter	AC adapter (spare)
Exalt Capacity Expansion Kit	For 6 GHz Part 101 links (optional accessory kit)

[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).

Specifications	EX-5i Lite	EX-5i	EX-5i-16	EX-5i-DS3
Physical				
Dimensions	1RU		1.5RU	
(H x W x D)	1.75 x 17 x 14 in		2.63 x 17 x 14 in	
	4.5 x 43.2 x 35.6 cm		6.7 x 43.2 x 35.6 cm	
Physical Configuration	Single-piece Indoor Unit (IDU)			
Operating Temperature	-40 to +65 °C			
	-40 to +149 °F			
Full Spec Temperature	-25 to +60 °C			
	-13 to +140 °F			
Weight	9.5 lbs / 4.3 kg		12 lbs / 5.5 kg	
Environmental	GR-1089-CORE intra-building			
Altitude	15,000 ft; 4.6 km			
Humidity	95% non-condensing			
Interfaces				
RF	N-type(F), impedance 50 ohm			
TDM T1/E1 Interfaces	RJ48C/RJ45 (F) (x4)		RJ48C/RJ45 (F) (x16)	
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			
DS3 Impedance	- BNC (F) (2x) 75 ohms, unbalanced			
DS3 Line Code	- B3ZS			
DS3 Data Rate	- 44.736 Mbps			
DS3 Compliance	-ANSI T1.102-1993; GR-499-CORE			
Loopback Modes	Remote Internal; Remote External; Local Line			
Ethernet	RJ45 (F) (x2), auto-MDIX			
Interface Speed	10/100BaseT			
Duplex	Half, Full, Auto			
Compliance	802.3			
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			

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Exhibit D

Power Density Calculations

Pocket Site HFCT0105A

289 Mountain Street

Hartford, Connecticut

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

Calculated Radio Frequency Emissions

HFCT0105A

289 Mountain St, Hartford, CT 06106

Table of Contents

List of Tables

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 tower at the 289 Mountain St, Hartford, CT 06106.

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 = 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 database.

Carrier	Antenna Height (Feet)	Operating Frequency (MHz)	Number of Trans.	Effective Radiated Power (ERP) Per Transmitter (Watts)	Power Density (mw/cm^2)	Limit	%MPE
SNET Paging	110	Unknown	9	Unknown	0.0458	1.0000	4.58%
AT&T GSM	103	880	2	296	0.0201	0.5867	3.42%
AT&T GSM	103	1930	2	427	0.0289	1.0000	2.89%
AT&T UMTS	102	1935	1	500	0.0173	1.0000	1.73%
T-Mobile GSM	87	1945	8	170	0.0646	1.0000	6.46%
T-Mobile UMTS	87	2100	2	741	0.0704	1.0000	7.04%
Town of W. Htfd	75	866.075	5	150	0.0479	0.5774	8.30%
Pocket	70	2130-2133.75	3	631	0.1388	1.0000	13.88%
						Total	**48.30%**

Table 1: Proposed Carrier Information

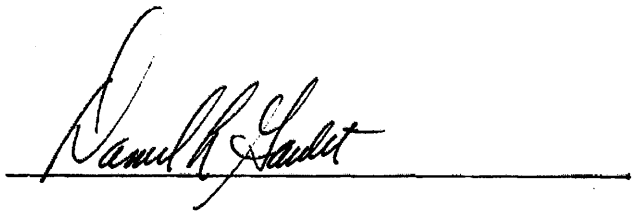
5. Conclusion

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 tower is 48.30% 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.



July 14, 2009
Date

Daniel l. Goulet
C Squared Systems, LLC

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

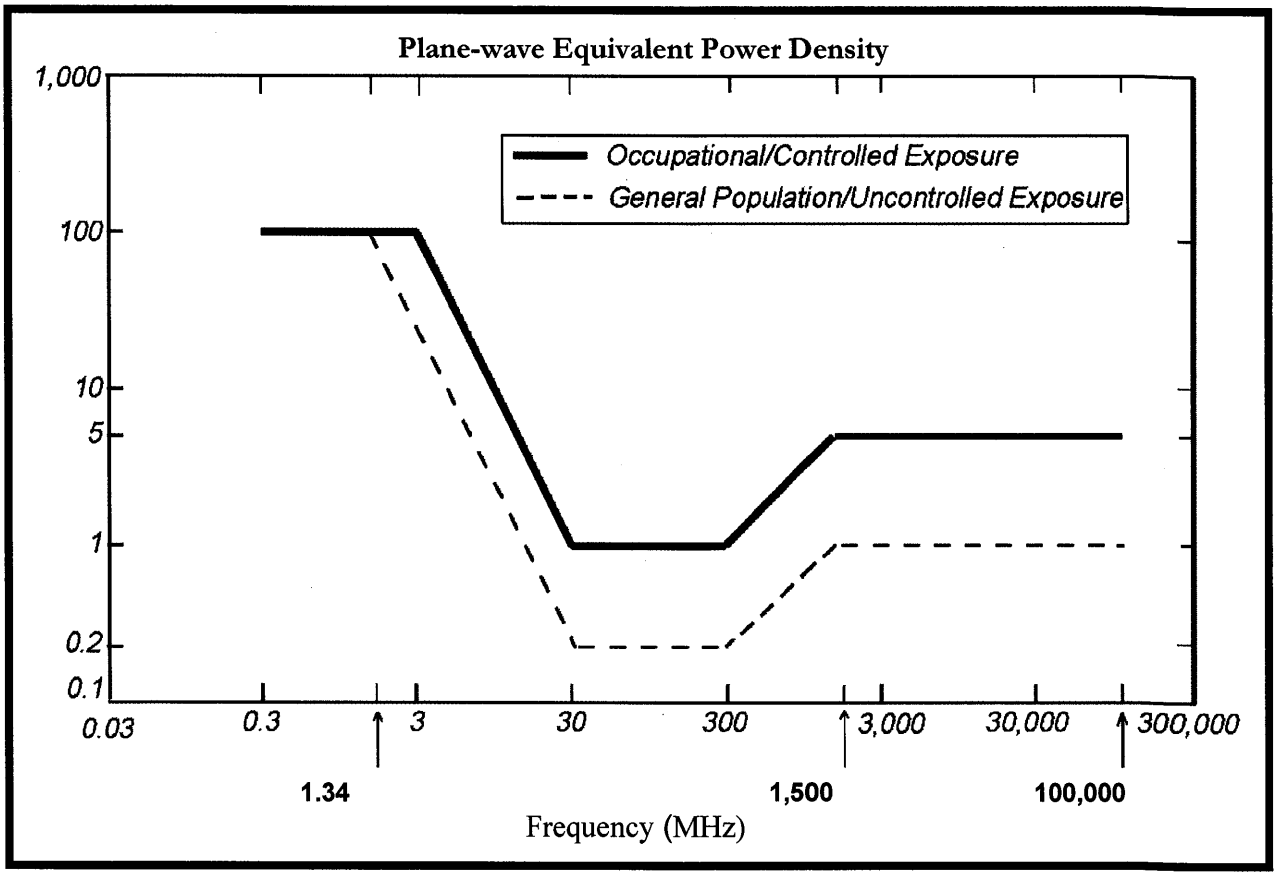
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

(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 HFCT0105A

289 Mountain Street

Hartford, Connecticut

AMERICAN TOWER

Structural Analysis Report

Structure	:	**100 ft ITT Meyer Monopole**
ATC Site Name	:	**Hrfr South, CT**
ATC Site Number	:	**302481**
Proposed Carrier	:	**Youghiogheny**
Carrier Site Name	:	**Hartford South**
Carrier Site Number	:	**HFCT0105A**
County	:	**Hartford**
Eng. Number	:	**43595321**
Date	:	**June 19, 2009***
Usage	:	**104% [P]**
Portholes Required	:	**No**

Submitted by:
Christina Minor
Design Engineer

6/22/09

American Tower Engineering Services
400 Regency Forest Drive
Cary, NC 27518
Phone: 919-468-0112

Introduction

The purpose of this report is to summarize results of the structural analysis performed on the 100 ft Monopole located at Mountain Road, Harford, CT 06106, Hartford County (ATC site #302481). The tower was originally designed and manufactured by ITT Meyer, per AT-8935 Type B standards (dated April 13, 1984). Tower dimensions have been verified via mapping by Smith Cullum, Inc. (Acquisition No. CT-0017(A), dated June 6, 2001).). The tower has been modified per design by American Tower, Corp (Job # 42719232, dated January 12, 2009). This structural considers tower modifications per design by American Tower, Corp (Job # 43004034, dated June 1, 2009) as completed.

Analysis

The tower was analyzed using Semaan Engineering Solutions, Inc., Software. The analysis assumes that the tower is in good, undamaged, and non-corroded condition.

Basic Wind Speed:	95 mph (3-Second Gust)
Radial Ice:	50 mph (3-Second Gust) w/ 1 ¼" ice
Code:	ANSI/TIA-222-G / 2003 International Building Code with 2005 CT Supplement and 2008 CT Amendments

Antenna Loads

The following antenna loads were used in the tower analysis.

Existing Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax	Carrier
100.0	6	RET/ RCU	Platform w/ Handrails and Arms	(6) 7/8" (6) 1 5/8"	AT&T Mobility
	12	CSS DUO4-8670			
	12	ADC CG-800DD-FULL-DIN			
	1	10' Omni		(1) 7/8"	USA Mobility
87.0	3	RFS APX16DWV-16DWV-S-E-ACU	Low Profile Platform	(18) 1 5/8"	T-Mobile
	6	CCI DTMA-1819-DD-12			
	3	RFS APXV18-206516S-C			
77.0	1	TX RX Systems 421-86A-10-18-12	(3) T-Arm	(1) 7/8"	Town of W. Hartford
	1	Scala 840 10212			
	6	Antel LPA-80063/4CF		(12) 1 5/8"	Verizon
	6	Antel LPA-185063/8CF			
60.0	1	Scala 840 10212	Flush	(1) 7/8"	Town of W. Hartford

Antenna Loads (continued)

Proposed Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax	Carrier
70.0	3	RFS APXV18-206517S-C	Flush	(6) 1 5/8"	Youghiogheny

Install proposed coax on outside of monopole.

Results

The maximum structure usage is: 104% (Acceptable Overstress)

Additional exit and/or entry ports may be required to accommodate the running of the proposed lines to the proposed antennas. These additional ports **may not** be installed without installation drawings providing the location, size and welding requirements of each port.

To ensure compliance with all conditions of this structural analysis, port installation drawings shall be provided by American Tower's Engineering Department under a subsequent project.

Pole Reactions	Original Design Reactions	Design Reactions w/ 1.35 Multiplier	Current Analysis Reactions	% Of Design w/ 1.35 Multiplier*
Moment (ft-kips)	516.0	696.6	1,180.60	169.5*
Shear (kips)	7.9	10.7	17.58	164.9*

(*) The percentage is factored by 1.35 per ANSI/TIA-222-G

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.

Conclusion

Based on the analysis results, the structure meets the requirements per ANSI/TIA-222-G and 2003 IBC standards with 2005 CT supplements and 2008 CT amendments.

The tower and foundation can support the existing and proposed antennas with the TX line distribution as described in this report.

If you have any questions or require additional information, please call 919-466-5619.

Standard Conditions

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

-- Information supplied by the client regarding the structure itself, the antenna and feed line loading on the structure and its components, or other relevant information.

-- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to ATC Engineering Services and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and are in an un-corroded condition and have not deteriorated; and we, therefore, assume that their capacity has not significantly changed from the "as new" condition.

All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/EIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. ATC Engineering Services is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

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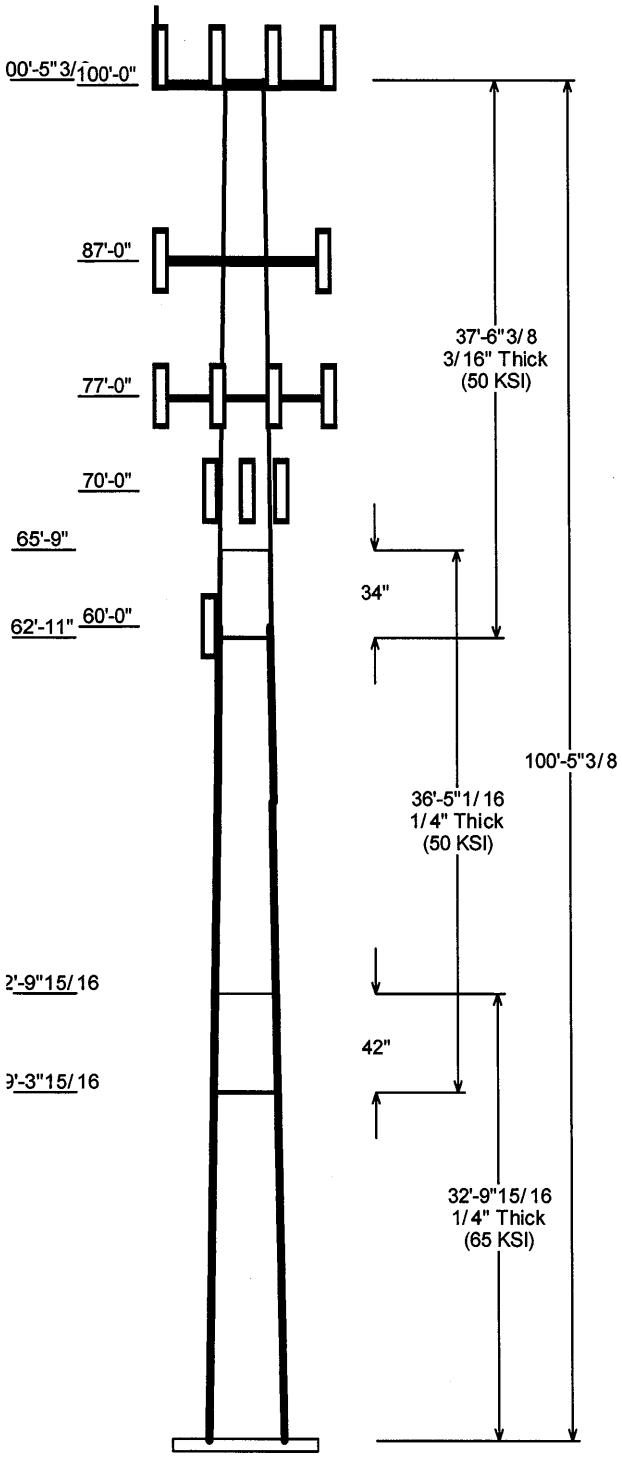


Job Information

Pole :	302481	Code: ANSI/TIA-222 Rev G	
Description :	100 ft ITT Meyer Type "D" Monopole		Struct Class : II
Client :	Youghiogheny		Exposure : B
Location :	Hrfr South, CT		Topo : 1
Shape :	12 Sides	Base Elev (ft): 0.00	
Height :	100.45 (ft)	Taper: 0.163016(in/ft)	

Sections Properties

Shaft Section	Length (ft)	Diameter (in) Across Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Taper (in/ft)	Steel Grade (ksi)
1	32.830	24.64	30.00	0.250		0.000	0.163016	65
2	36.420	19.78	25.71	0.250	Slip Joint	42.000	0.163016	50
3	37.533	14.50	20.61	0.188	Slip Joint	34.000	0.163016	50

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
100.000	102.000	6	RET/ RCU
100.000	102.000	12	CSS DUO4-8670
100.000	100.000	1	Platform w/ Rails and Arms
100.000	102.000	12	ADC CG-800DD-FULL-DIN
100.000	105.000	1	10' Omni
87.000	87.000	3	RFS APX16DWV-16DWV-S-E-
87.000	87.000	6	CCI DTMA-1819-DD-12
87.000	87.000	3	RFS APXV18-206516S-C
87.000	87.000	1	Flat Low Profile Platform
77.000	77.000	1	TX RX Systems 421-86A-10-18-
77.000	77.000	1	Scala 840 10212
77.000	77.000	6	Antel LPA-80063/4CF
77.000	77.000	6	Antel LPA-185063/8CF
77.000	77.000	3	Flat T-Arm
70.000	70.000	3	RFS APXV18-206517S-C
60.000	60.000	1	Scala 840 10212

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
5.000	70.000	1 5/8" Coax	Yes
5.000	77.000	1 5/8" Coax	Yes
5.000	77.000	7/8" Coax	No
5.000	87.000	1 5/8" Coax	Yes
5.000	100.0	1 5/8" Coax	No
5.000	100.0	7/8" Coax	No
5.000	100.0	7/8" Coax	No
5.000	60.000	7/8" Coax	Yes
0.000	62.000	#20 Dywidag	Yes

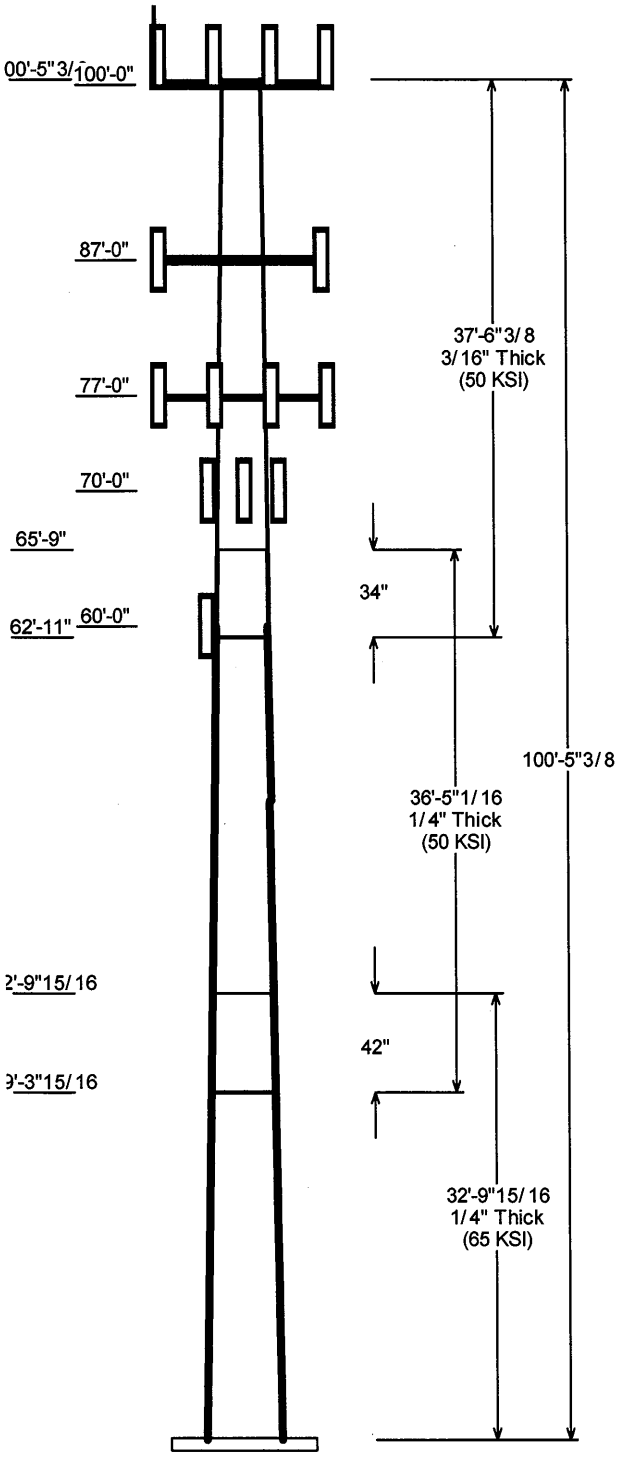
Load Cases

1.2D + 1.6W	95.00 mph with No Ice
0.9D + 1.6W	95.00 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50.00 mph with 1.25 in Radial Ice
1.0D + 1.0W	60.00 mph Serviceability

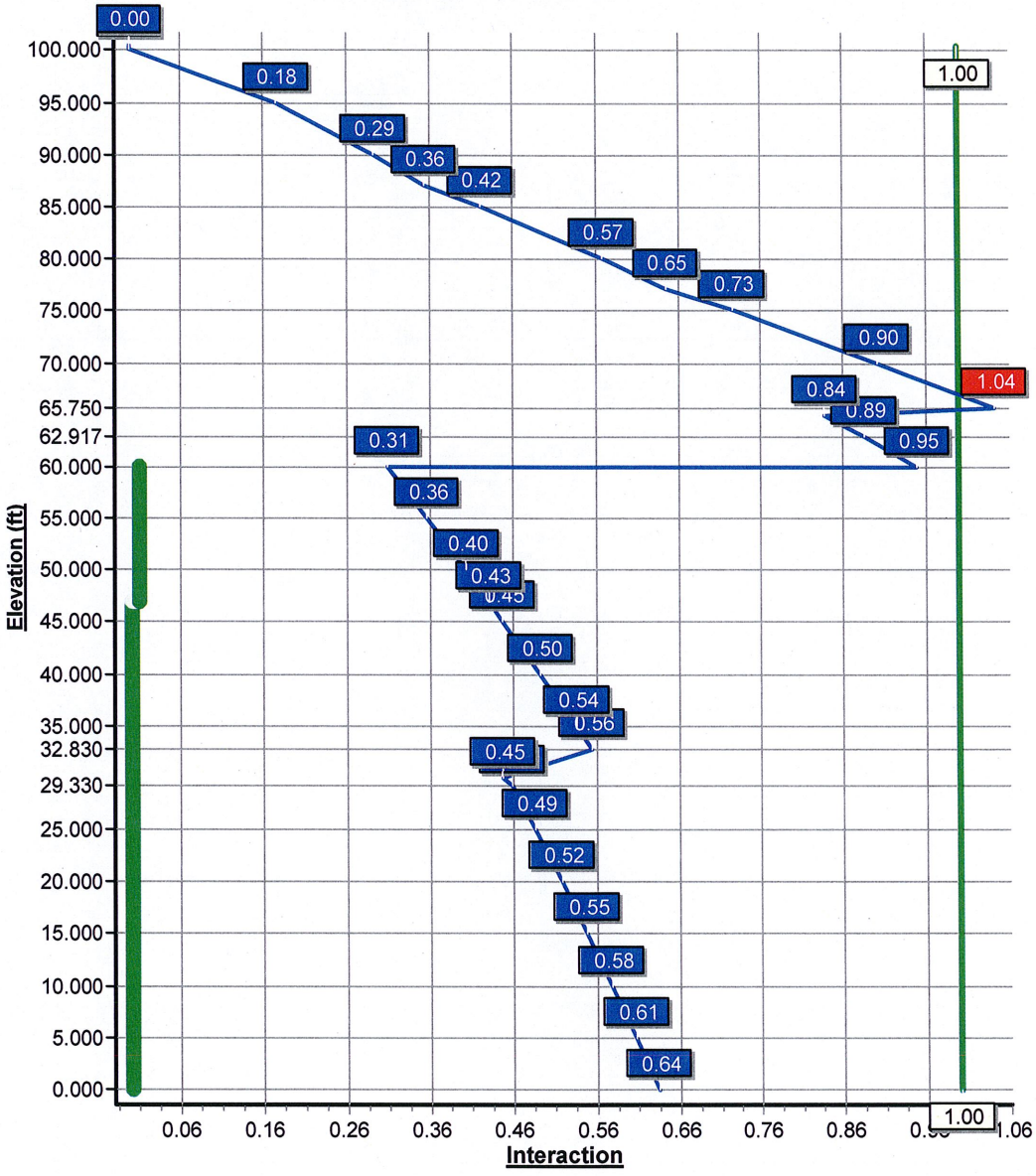
Reactions

Load Case	Moment (Kip-ft)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W	1180.60	17.58	21.69
0.9D + 1.6W	1170.88	17.57	17.26
1.2D + 1.0Di + 1.0Wi	361.28	5.05	59.15
1.0D + 1.0W	292.89	4.38	18.78

Dish Deflections			
Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	0.00	0.000	0.000



Load Case : 1.2D + 1.6W
Max Ratio 104.44% at 65.7ft



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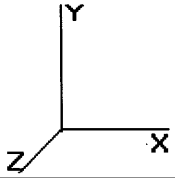
Pole :	302481	Code: ANSI/TIA-222 Rev G	6/19/2009 11:09:18 AM
Location :	Hrfr South, CT	Struct Class : II	Page: 1
Height :	100.4 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	30.00 (in)		
Top Dia :	14.50 (in)		
Taper :	0.163016 (in/ft)	Base Elev : 0.000 (ft)	



Shaft Section Properties

Sect Num	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (sqin)	Bottom Ix (in^4)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (sqin)	Top Ix (in^4)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1	32.830	0.2500	65		0.00	2,435	30.00	0.000	23.95	2705.5	30.01	120.0	24.64	32.83	19.64	1492.3	24.27	98.59	0.16302
2	36.420	0.2500	50	Slip Joint	42.00	2,245	25.71	29.33	20.50	1697.5	25.42	102.8	19.78	65.75	15.72	765.6	19.06	79.13	0.16302
3	37.533	0.1875	50	Slip Joint	34.00	1,340	20.61	62.91	12.34	657.2	27.32	109.9	14.50	100.4	8.64	225.9	18.58	77.33	0.16302
				Shaft Weight		6,019													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Distance From Face (ft)	Vert Ecc (ft)
100.0	RET/ RCU	6	1.00	0.160	0.45	25.37	0.558	0.45	0.000	2.000
100.0	CSS DUO4-8670	12	66.50	6.530	0.71	366.63	7.498	0.71	0.000	2.000
100.0	Platform w/ Rails and Arms	1	2000.00	27.200	1.00	4078.08	66.402	1.00	0.000	0.000
100.0	ADC CG-800DD-FULL-DIN	12	13.90	1.250	0.45	82.90	1.841	0.45	0.000	2.000
100.0	10' Omni	1	25.00	3.000	1.00	290.05	7.260	1.00	0.000	5.000
87.00	RFS APX16DWV-16DWV-S-E-	3	39.60	6.700	0.67	273.95	7.844	0.67	0.000	0.000
87.00	CCI DTMA-1819-DD-12	6	14.30	0.710	0.45	64.90	1.253	0.45	0.000	0.000
87.00	RFS APXV18-206516S-C	3	18.70	3.620	0.77	184.80	5.183	0.77	0.000	0.000
87.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	2524.67	56.295	1.00	0.000	0.000
77.00	TX RX Systems 421-86A-10-	1	15.00	2.590	0.50	110.19	3.228	0.50	0.000	0.000
77.00	Scala 840 10212	1	6.70	2.530	1.00	121.70	3.267	1.00	0.000	0.000
77.00	Antel LPA-80063/4CF	6	20.00	7.000	0.93	370.77	7.821	0.93	0.000	0.000
77.00	Antel LPA-185063/8CF	6	9.00	2.960	0.96	179.22	4.353	0.96	0.000	0.000
77.00	Flat T-Arm	3	250.00	12.900	0.67	576.53	25.677	0.67	0.000	0.000
70.00	RFS APXV18-206517S-C	3	26.40	5.160	0.80	238.27	7.137	0.80	0.000	0.000
60.00	Scala 840 10212	1	6.70	2.530	1.00	117.70	3.237	1.00	0.000	0.000
	Totals	66	5788.10			7174.17			Number of Loadings :	16

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Exposed Width (in)	Exposed To Wind
5.00	100.00	(6) 1 5/8" Coax	0.00	N
5.00	100.00	(1) 7/8" Coax	0.00	N
5.00	100.00	(6) 7/8" Coax	0.00	N
5.00	87.00	(18) 1 5/8" Coax	3.96	Y
5.00	77.00	(12) 1 5/8" Coax	3.96	Y
5.00	77.00	(1) 7/8" Coax	1.09	N
5.00	70.00	(6) 1 5/8" Coax	3.96	Y
0.00	62.00	(4) #20 Dywidag	2.00	Y
5.00	60.00	(1) 7/8" Coax	1.09	Y

Additional Steel

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Offset (in)	Intermediate Connections — Description	Spacing (in)	Len (in)	Connectors	Continuation?
0.00	47.00	4	SOL #20 All Thread	80	2.09	6" Angle Bracket	30.0	3.31	5/8" A36 U-Bolt	
47.00	60.00	4	SOL #20 All Thread	80	2.09	6" Angle Bracket	30.0	3.31	5/8" A36 U-Bolt	Yes

Pole :	302481	Code: ANSI/TIA-222 Rev G	
Location :	Hrfr South, CT	Struct Class : II	
Height :	100.4 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	30.00 (in)		
Top Dia :	14.50 (in)		
Taper :	0.163016 (in/ft)	Base Elev : 0.000 (ft)	

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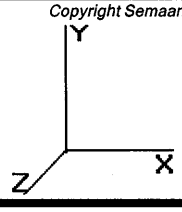

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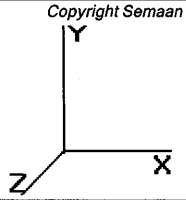
Pole : 302481
Location : Hrfr South, CT
Height : 100.4 (ft)
Shape : 12 Sides
Base Dia : 30.00 (in)
Top Dia : 14.50 (in)
Taper : 0.163016 (in/ft)

Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure Category : B
Topographic Category : 1

Base Elev : 0.000 (ft)

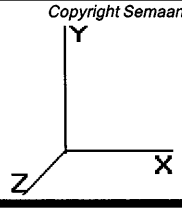


Segment Properties

(Max Len : 5 ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	S (in3)	Weight (lb)	Additional Reinforcing Area (in^2)	Additional Reinforcing Ix (in^4)	Additional Reinforcing Weight (lb)
0.00		0.2500	30.000	23.949	2,705.5	30.01	120.00	64.8	174.2	0.0	19.64	3,310	0.0
5.00		0.2500	29.185	23.293	2,489.1	29.14	116.74	65.0	164.8	401.9	19.64	3,165	334.0
10.00		0.2500	28.370	22.636	2,284.7	28.26	113.48	65.0	155.6	390.7	19.64	3,023	334.0
15.00		0.2500	27.555	21.980	2,091.7	27.39	110.22	65.0	146.6	379.6	19.64	2,885	334.0
20.00		0.2500	26.740	21.324	1,909.9	26.52	106.96	65.0	138.0	368.4	19.64	2,749	334.0
25.00		0.2500	25.925	20.668	1,739.0	25.64	103.70	65.0	129.6	357.2	19.64	2,617	334.0
29.33	Bot - Section 2	0.2500	25.219	20.100	1,599.5	24.89	100.87	65.0	122.5	300.3	19.64	2,505	289.2
30.00		0.2500	25.110	20.012	1,578.6	24.77	100.44	65.0	121.4	92.4	19.64	2,567	44.8
32.83	Top - Section 1	0.2500	25.148	20.043	1,585.9	24.81	100.59	50.0	121.8	385.7	19.64	2,494	189.0
35.00		0.2500	24.794	19.758	1,519.3	24.43	99.18	50.0	118.4	147.0	19.64	2,439	145.0
40.00		0.2500	23.979	19.102	1,372.9	23.56	95.92	50.0	110.6	330.6	19.64	2,315	334.0
45.00		0.2500	23.164	18.446	1,236.2	22.68	92.66	50.0	103.1	319.4	19.64	2,194	334.0
47.00	Reinf. Top Reinf	0.2500	22.838	18.184	1,184.2	22.33	91.35	50.0	100.2	124.6	19.64	2,146	133.6
50.00		0.2500	22.349	17.790	1,108.9	21.81	89.40	50.0	95.9	183.6	19.64	2,076	200.4
55.00		0.2500	21.534	17.134	990.7	20.94	86.14	50.0	88.9	297.1	19.64	1,961	334.0
60.00	Reinf. Top	0.2500	20.719	16.478	881.2	20.06	82.88	50.0	82.2	285.9	19.64	1,850	334.0
62.92	Bot - Section 3	0.2500	20.244	16.095	821.2	19.55	80.97	50.0	78.4	161.6			
65.00		0.2500	19.904	15.821	780.1	19.19	79.62	50.0	75.7	199.9			
65.75	Top - Section 2	0.1875	20.157	12.056	613.7	26.66	107.50	50.0	58.8	71.1			
70.00		0.1875	19.464	11.638	552.0	25.67	103.81	50.0	54.8	171.3			
75.00		0.1875	18.649	11.146	484.9	24.51	99.46	50.0	50.2	193.8			
77.00		0.1875	18.323	10.949	459.6	24.04	97.72	50.0	48.5	75.2			
80.00		0.1875	17.834	10.654	423.4	23.34	95.11	50.0	45.9	110.3			
85.00		0.1875	17.019	10.162	367.4	22.18	90.77	50.0	41.7	177.1			
87.00		0.1875	16.693	9.965	346.5	21.71	89.03	50.0	40.1	68.5			
90.00		0.1875	16.204	9.670	316.6	21.01	86.42	50.0	37.7	100.2			
95.00		0.1875	15.388	9.178	270.7	19.85	82.07	50.0	34.0	160.3			
100.0		0.1875	14.573	8.685	229.4	18.68	77.72	50.0	30.4	152.0			
100.4		0.1875	14.500	8.641	225.9	18.58	77.33	50.0	30.1	13.3			
										6,019.0			4,008.0

Pole : 302481	Code: ANSI/TIA-222 Rev G	Copyright Semaan Engineering Solutions, Inc	
Location : Hrfr South, CT	Struct Class : II		
Height : 100.4 (ft)	Exposure Category : B		
Shape : 12 Sides	Topographic Category : 1		
Base Dia : 30.00 (in)			
Top Dia : 14.50 (in)			
Taper : 0.163016 (in/ft)	Base Elev : 0.000 (ft)		



Load Case: 1.2D + 1.6W — 95.00 mph with No Ice — 22 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf		Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	15.364	16.90	205.71	1.000		0.00	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	15.364	16.90	200.12	1.000		0.00	5.00	12.765	12.77	345.2	0.0	816.3
10.00		1.00	0.70	15.364	16.90	194.53	1.200	*	0.00	5.00	12.414	14.90	402.8	0.0	802.9
15.00		1.00	0.70	15.364	16.90	188.94	1.200	*	0.00	5.00	12.062	14.47	391.4	0.0	789.5
20.00		1.00	0.70	15.364	16.90	183.36	1.200	*	0.00	5.00	11.710	14.05	380.0	0.0	776.1
25.00		1.00	0.70	15.364	16.90	177.77	1.200	*	0.00	5.00	11.359	13.63	368.6	0.0	762.7
29.33	Bot - Section 2	1.00	0.70	15.364	16.90	172.93	1.200	*	0.00	4.33	9.552	11.46	310.0	0.0	649.6
30.00		1.00	0.70	15.377	16.91	172.25	1.200	*	0.00	0.67	1.484	1.78	48.2	0.0	155.6
32.83	Top - Section 1	1.00	0.71	15.778	17.35	171.28	1.200	*	0.00	2.83	6.196	7.44	206.5	0.0	651.9
35.00		1.00	0.73	16.070	17.67	173.88	1.200	*	0.00	2.17	4.675	5.61	158.7	0.0	321.3
40.00		1.00	0.76	16.694	18.36	171.40	1.200	*	0.00	5.00	10.520	12.62	370.9	0.0	730.7
45.00		1.00	0.78	17.266	18.99	168.38	1.200	*	0.00	5.00	10.168	12.20	370.8	0.0	717.3
47.00	Reinf. Top Reinf Bottom	1.00	0.79	17.482	19.23	167.05	1.200	*	0.00	2.00	3.969	4.76	146.5	0.0	283.2
50.00		1.00	0.81	17.793	19.57	164.92	1.200	*	0.00	3.00	5.848	7.02	219.8	0.0	420.7
55.00		1.00	0.83	18.285	20.11	161.08	1.200	*	0.00	5.00	9.465	11.36	365.5	0.0	690.5
60.00	Reinf. Top	1.00	0.85	18.745	20.61	156.92	1.200	*	0.00	5.00	9.113	10.94	360.8	0.0	677.1
62.92	Bot - Section 3	1.00	0.86	19.001	20.90	154.37	1.200	*	0.00	2.92	5.154	6.18	206.8	0.0	194.0
65.00		1.00	0.87	19.179	21.09	152.49	1.200	*	0.00	2.08	3.676	4.41	148.9	0.0	239.8
65.75	Top - Section 2	1.00	0.87	19.242	21.16	151.80	1.200	*	0.00	0.75	1.308	1.57	53.2	0.0	85.3
70.00	Appertunance(s)	1.00	0.89	19.589	21.54	150.70	1.200	*	0.00	4.25	7.264	8.72	300.5	0.0	205.6
75.00		1.00	0.91	19.979	21.97	145.82	1.200	*	0.00	5.00	8.220	9.86	346.9	0.0	232.6
77.00	Appertunance(s)	1.00	0.91	20.130	22.14	143.81	1.200	*	0.00	2.00	3.190	3.83	135.6	0.0	90.2
80.00		1.00	0.92	20.351	22.38	140.74	1.200	*	0.00	3.00	4.679	5.61	201.1	0.0	132.3
85.00		1.00	0.94	20.706	22.77	135.47	1.200	*	0.00	5.00	7.517	9.02	328.7	0.0	212.5
87.00	Appertunance(s)	1.00	0.95	20.844	22.92	133.32	1.200	*	0.00	2.00	2.908	3.49	128.0	0.0	82.2
90.00		1.00	0.95	21.047	23.15	130.04	1.000		0.00	3.00	4.257	4.26	157.7	0.0	120.3
95.00		1.00	0.97	21.375	23.51	124.46	1.000		0.00	5.00	6.814	6.81	256.3	0.0	192.4
100.0	Appertunance(s)	1.00	0.98	21.690	23.86	118.73	1.000		0.00	5.00	6.462	6.46	246.7	0.0	182.4
100.4		1.00	0.98	21.718	23.89	118.21	1.000		0.00	0.45	0.564	0.56	21.6	0.0	15.9
* = Cf Adjusted By Linear Load Ra Effect							Totals:			100.45			6,977.5	0.0	11,230.7

Pole :	302481	Code: ANSI/TIA-222 Rev G	
Location :	Hrfr South, CT	Struct Class : II	
Height :	100.4 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	30.00 (in)		
Top Dia :	14.50 (in)		
Taper :	0.163016 (in/ft)	Base Elev : 0.000 (ft)	

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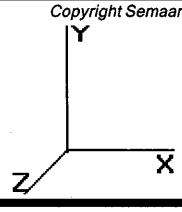

Load Case: 1.2D + 1.6W — 95.00 mph with No Ice — 22 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60
Wind Importance Factor : 1.00

Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Ka	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
60.00	Scala 840 10212	1	18.745	20.619	0.90	0.90	2.28	0.000	0.000	75.12	0.00	0.00	8.04
70.00	RFS APXV18-206517S-	3	19.589	21.548	0.64	0.80	9.91	0.000	0.000	341.57	0.00	0.00	95.04
77.00	TX RX Systems 421-86	1	20.130	22.143	0.45	0.90	1.17	0.000	0.000	41.29	0.00	0.00	18.00
77.00	Scala 840 10212	1	20.130	22.143	0.90	0.90	2.28	0.000	0.000	80.67	0.00	0.00	8.04
77.00	Antel LPA-80063/4CF	6	20.130	22.143	0.74	0.80	31.25	0.000	0.000	1,107.06	0.00	0.00	144.00
77.00	Antel LPA-185063/8CF	6	20.130	22.143	0.77	0.80	13.64	0.000	0.000	483.23	0.00	0.00	64.80
77.00	Flat T-Arm	3	20.130	22.143	0.50	0.75	19.45	0.000	0.000	688.97	0.00	0.00	900.00
87.00	RFS APX16DWV-	3	20.844	22.929	0.54	0.80	10.77	0.000	0.000	395.24	0.00	0.00	142.56
87.00	CCI DTMA-1819-DD-12	6	20.844	22.929	0.36	0.80	1.53	0.000	0.000	56.26	0.00	0.00	102.96
87.00	RFS APXV18-206516S-	3	20.844	22.929	0.62	0.80	6.69	0.000	0.000	245.42	0.00	0.00	67.32
87.00	Flat Low Profile Pla	1	20.844	22.929	1.00	1.00	26.10	0.000	0.000	957.51	0.00	0.00	1,800.00
100.0	RET/ RCU	6	21.814	23.995	0.34	0.75	0.32	0.000	2.000	12.44	0.00	24.88	7.20
100.0	CSS DUO4-8670	12	21.814	23.995	0.53	0.75	41.73	0.000	2.000	1,601.97	0.00	3,203.93	957.60
100.0	Platform w/ Rails an	1	21.690	23.860	1.00	1.00	27.20	0.000	0.000	1,038.36	0.00	0.00	2,400.00
100.0	ADC CG-800DD-FULL-	12	21.814	23.995	0.34	0.75	5.06	0.000	2.000	194.36	0.00	388.72	200.16
100.0	10' Omni	1	21.995	24.194	0.75	0.75	2.25	0.000	5.000	87.10	0.00	435.50	30.00
										7,406.57			6,945.72

Pole :	302481	Code: ANSI/TIA-222 Rev G	
Location :	Hrfr South, CT	Struct Class : II	
Height :	100.4 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	30.00 (in)		
Top Dia :	14.50 (in)		
Taper :	0.163016 (in/ft)	Base Elev : 0.000 (ft)	

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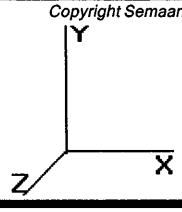

Load Case: 1.2D + 1.6W — 95.00 mph with No Ice — 22 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Linear Appurtenance Segment Forces (Factored)

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	qz (psf)	Ra	Cf Adjust Factor	F X (lb)	Dead Load (lb)
5.00	(4) #20 Dywidag	Yes	5.00	0.000	2.00	0.83	0.00	15.364	0.065	0.000	0.00	0.00
10.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.502	0.000	53.54	88.55
10.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.502	0.000	53.54	59.03
10.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.502	0.000	53.54	29.52
10.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	15.364	0.502	0.000	27.04	0.00
10.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	15.364	0.502	0.000	14.74	1.98
15.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.517	0.000	53.54	88.55
15.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.517	0.000	53.54	59.03
15.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.517	0.000	53.54	29.52
15.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	15.364	0.517	0.000	27.04	0.00
15.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	15.364	0.517	0.000	14.74	1.98
20.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.533	0.000	53.54	88.55
20.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.533	0.000	53.54	59.03
20.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.533	0.000	53.54	29.52
20.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	15.364	0.533	0.000	27.04	0.00
20.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	15.364	0.533	0.000	14.74	1.98
25.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.549	0.000	53.54	88.55
25.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.549	0.000	53.54	59.03
25.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.549	0.000	53.54	29.52
25.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	15.364	0.549	0.000	27.04	0.00
25.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	15.364	0.549	0.000	14.74	1.98
29.33	(18) 1 5/8" Coax	Yes	4.33	1.200	3.96	1.43	1.71	15.364	0.565	0.000	46.37	76.68
29.33	(12) 1 5/8" Coax	Yes	4.33	1.200	3.96	1.43	1.71	15.364	0.565	0.000	46.37	51.12
29.33	(6) 1 5/8" Coax	Yes	4.33	1.200	3.96	1.43	1.71	15.364	0.565	0.000	46.37	25.56
29.33	(4) #20 Dywidag	Yes	4.33	1.200	2.00	0.72	0.87	15.364	0.565	0.000	23.42	0.00
29.33	(1) 7/8" Coax	Yes	4.33	1.200	1.09	0.39	0.47	15.364	0.565	0.000	12.76	1.71
30.00	(18) 1 5/8" Coax	Yes	0.67	1.200	3.96	0.22	0.27	15.377	0.575	0.000	7.18	11.87
30.00	(12) 1 5/8" Coax	Yes	0.67	1.200	3.96	0.22	0.27	15.377	0.575	0.000	7.18	7.91
30.00	(6) 1 5/8" Coax	Yes	0.67	1.200	3.96	0.22	0.27	15.377	0.575	0.000	7.18	3.96
30.00	(4) #20 Dywidag	Yes	0.67	1.200	2.00	0.11	0.13	15.377	0.575	0.000	3.63	0.00
30.00	(1) 7/8" Coax	Yes	0.67	1.200	1.09	0.06	0.07	15.377	0.575	0.000	1.98	0.27
32.83	(18) 1 5/8" Coax	Yes	2.83	1.200	3.96	0.93	1.12	15.778	0.581	0.000	31.12	50.12
32.83	(12) 1 5/8" Coax	Yes	2.83	1.200	3.96	0.93	1.12	15.778	0.581	0.000	31.12	33.41
32.83	(6) 1 5/8" Coax	Yes	2.83	1.200	3.96	0.93	1.12	15.778	0.581	0.000	31.12	16.71
32.83	(4) #20 Dywidag	Yes	2.83	1.200	2.00	0.47	0.57	15.778	0.581	0.000	15.72	0.00
32.83	(1) 7/8" Coax	Yes	2.83	1.200	1.09	0.26	0.31	15.778	0.581	0.000	8.57	1.12
35.00	(18) 1 5/8" Coax	Yes	2.17	1.200	3.96	0.72	0.86	16.070	0.579	0.000	24.30	38.43
35.00	(12) 1 5/8" Coax	Yes	2.17	1.200	3.96	0.72	0.86	16.070	0.579	0.000	24.30	25.62
35.00	(6) 1 5/8" Coax	Yes	2.17	1.200	3.96	0.72	0.86	16.070	0.579	0.000	24.30	12.81
35.00	(4) #20 Dywidag	Yes	2.17	1.200	2.00	0.36	0.43	16.070	0.579	0.000	12.28	0.00
35.00	(1) 7/8" Coax	Yes	2.17	1.200	1.09	0.20	0.24	16.070	0.579	0.000	6.69	0.86
40.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	16.694	0.593	0.000	58.18	88.55
40.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	16.694	0.593	0.000	58.18	59.03
40.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	16.694	0.593	0.000	58.18	29.52
40.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	16.694	0.593	0.000	29.38	0.00
40.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	16.694	0.593	0.000	16.01	1.98
45.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	17.266	0.613	0.000	60.17	88.55
45.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	17.266	0.613	0.000	60.17	59.03
45.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	17.266	0.613	0.000	60.17	29.52
45.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	17.266	0.613	0.000	30.39	0.00
45.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	17.266	0.613	0.000	16.56	1.98

Pole : 302481
Location : Hrfr South, CT
Height : 100.4 (ft)
Shape : 12 Sides
Base Dia : 30.00 (in)
Top Dia : 14.50 (in)
Taper : 0.163016 (in/ft)

Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure Category : B
Topographic Category : 1
Base Elev : 0.000 (ft)

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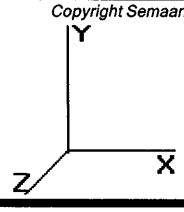

Load Case: 1.2D + 1.6W — 95.00 mph with No Ice — 22 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

47.00	(18) 1 5/8" Coax	Yes	2.00	1.200	3.96	0.66	0.79	17.482	0.629	0.000	24.37	35.42
47.00	(12) 1 5/8" Coax	Yes	2.00	1.200	3.96	0.66	0.79	17.482	0.629	0.000	24.37	23.61
47.00	(6) 1 5/8" Coax	Yes	2.00	1.200	3.96	0.66	0.79	17.482	0.629	0.000	24.37	11.81
47.00	(4) #20 Dywidag	Yes	2.00	1.200	2.00	0.33	0.40	17.482	0.629	0.000	12.31	0.00
47.00	(1) 7/8" Coax	Yes	2.00	1.200	1.09	0.18	0.22	17.482	0.629	0.000	6.71	0.79
50.00	(18) 1 5/8" Coax	Yes	3.00	1.200	3.96	0.99	1.19	17.793	0.640	0.000	37.20	53.13
50.00	(12) 1 5/8" Coax	Yes	3.00	1.200	3.96	0.99	1.19	17.793	0.640	0.000	37.20	35.42
50.00	(6) 1 5/8" Coax	Yes	3.00	1.200	3.96	0.99	1.19	17.793	0.640	0.000	37.20	17.71
50.00	(4) #20 Dywidag	Yes	3.00	1.200	2.00	0.50	0.60	17.793	0.640	0.000	18.79	0.00
50.00	(1) 7/8" Coax	Yes	3.00	1.200	1.09	0.27	0.33	17.793	0.640	0.000	10.24	1.19
55.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	18.285	0.659	0.000	63.72	88.55
55.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	18.285	0.659	0.000	63.72	59.03
55.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	18.285	0.659	0.000	63.72	29.52
55.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	18.285	0.659	0.000	32.18	0.00
55.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	18.285	0.659	0.000	17.54	1.98
60.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	18.745	0.684	0.000	65.32	88.55
60.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	18.745	0.684	0.000	65.32	59.03
60.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	18.745	0.684	0.000	65.32	29.52
60.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	18.745	0.684	0.000	32.99	0.00
60.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	18.745	0.684	0.000	17.98	1.98
62.92	(18) 1 5/8" Coax	Yes	2.92	1.200	3.96	0.96	1.15	19.001	0.625	0.000	38.62	51.65
62.92	(12) 1 5/8" Coax	Yes	2.92	1.200	3.96	0.96	1.15	19.001	0.625	0.000	38.62	34.43
62.92	(6) 1 5/8" Coax	Yes	2.92	1.200	3.96	0.96	1.15	19.001	0.625	0.000	38.62	17.22
62.92	(4) #20 Dywidag	Yes	2.00	1.200	2.00	0.33	0.40	19.001	0.625	0.000	13.38	0.00
65.00	(18) 1 5/8" Coax	Yes	2.08	1.200	3.96	0.69	0.83	19.179	0.572	0.000	27.85	36.90
65.00	(12) 1 5/8" Coax	Yes	2.08	1.200	3.96	0.69	0.83	19.179	0.572	0.000	27.85	24.60
65.00	(6) 1 5/8" Coax	Yes	2.08	1.200	3.96	0.69	0.83	19.179	0.572	0.000	27.85	12.30
65.75	(18) 1 5/8" Coax	Yes	0.75	1.200	3.96	0.25	0.30	19.242	0.578	0.000	10.06	13.28
65.75	(12) 1 5/8" Coax	Yes	0.75	1.200	3.96	0.25	0.30	19.242	0.578	0.000	10.06	8.85
65.75	(6) 1 5/8" Coax	Yes	0.75	1.200	3.96	0.25	0.30	19.242	0.578	0.000	10.06	4.43
70.00	(18) 1 5/8" Coax	Yes	4.25	1.200	3.96	1.40	1.68	19.589	0.579	0.000	58.03	75.27
70.00	(12) 1 5/8" Coax	Yes	4.25	1.200	3.96	1.40	1.68	19.589	0.579	0.000	58.03	50.18
70.00	(6) 1 5/8" Coax	Yes	4.25	1.200	3.96	1.40	1.68	19.589	0.579	0.000	58.03	25.09
75.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	19.979	0.401	0.000	69.62	88.55
75.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	19.979	0.401	0.000	69.62	59.03
77.00	(18) 1 5/8" Coax	Yes	2.00	1.200	3.96	0.66	0.79	20.130	0.414	0.000	28.06	35.42
77.00	(12) 1 5/8" Coax	Yes	2.00	1.200	3.96	0.66	0.79	20.130	0.414	0.000	28.06	23.61
80.00	(18) 1 5/8" Coax	Yes	3.00	1.200	3.96	0.99	1.19	20.351	0.212	0.000	42.55	53.13
85.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	20.706	0.220	0.000	72.16	88.55
87.00	(18) 1 5/8" Coax	Yes	2.00	1.200	3.96	0.66	0.79	20.844	0.227	0.000	29.06	35.42
										Totals:	3,145.67	2,707.77

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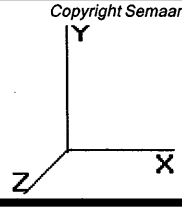
Pole :	302481	Code: ANSI/TIA-222 Rev G	6/19/2009 11:09:20 AM
Location :	Hrfr South, CT	Struct Class : II	Page: 8
Height :	100.4 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	30.00 (in)		
Top Dia :	14.50 (in)		
Taper :	0.163016 (in/ft)	Base Elev : 0.000 (ft)	



Load Case: 1.2D + 1.6W — 95.00 mph with No Ice — 22 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60
Wind Importance Factor : 1.00

Applied Segment Forces Summary

Seg Elev (ft)		Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		345.18	816.25	0.00	0.00
10.00		605.21	1,027.29	0.00	0.00
15.00		593.80	1,013.90	0.00	0.00
20.00		582.39	1,000.50	0.00	0.00
25.00		570.98	987.10	0.00	0.00
29.33		485.24	843.99	0.00	0.00
30.00		75.33	185.70	0.00	0.00
32.83		324.12	778.91	0.00	0.00
35.00		250.55	418.72	0.00	0.00
40.00		590.84	955.13	0.00	0.00
45.00		598.24	941.74	0.00	0.00
47.00		238.65	372.94	0.00	0.00
50.00		360.40	555.40	0.00	0.00
55.00		606.38	914.94	0.00	0.00
60.00		682.84	909.59	0.00	0.00
62.92		336.06	323.72	0.00	0.00
65.00		232.43	332.52	0.00	0.00
65.75		83.32	118.69	0.00	0.00
70.00		816.16	489.74	0.00	0.00
75.00		486.10	425.53	0.00	0.00
77.00		2,592.95	1,302.24	0.00	0.00
80.00		243.66	211.47	0.00	0.00
85.00		400.89	344.42	0.00	0.00
87.00		1,811.52	2,247.79	0.00	0.00
90.00		157.70	146.29	0.00	0.00
95.00		256.34	235.78	0.00	0.00
100.0		3,180.92	3,820.69	0.00	4,053.03
100.4		21.57	15.92	0.00	0.00
	Totals:	17,529.77	21,736.89	0.00	4,053.03

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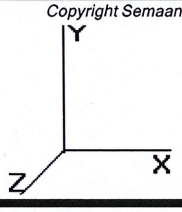
Pole :	302481
Location :	Hrfr South, CT
Height :	100.4 (ft)
Shape :	12 Sides
Base Dia :	30.00 (in)
Top Dia :	14.50 (in)
Taper :	0.163016 (in/ft)

Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure Category : B
Topographic Category : 1

Base Elev : 0.000 (ft)



Load Case: 1.2D + 1.6W — 95.00 mph with No Ice — 22 Iterations

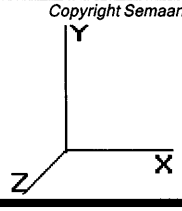
Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-21.69	-17.58	0.00	-1,180.60	0.00	1,180.60	1,396.48	698.24	1,714.19	846.57	0.00	0.00	0.636
5.00	-20.80	-17.33	0.00	-1,092.69	0.00	1,092.69	1,362.62	681.31	1,626.42	803.23	0.15	-0.27	0.608
10.00	-19.70	-16.81	0.00	-1,006.04	0.00	1,006.04	1,324.23	662.12	1,535.70	758.42	0.57	-0.53	0.580
15.00	-18.62	-16.29	0.00	-921.99	0.00	921.99	1,285.85	642.92	1,447.58	714.91	1.27	-0.79	0.550
20.00	-17.56	-15.76	0.00	-840.56	0.00	840.56	1,247.46	623.73	1,362.07	672.67	2.23	-1.04	0.520
25.00	-16.53	-15.24	0.00	-761.74	0.00	761.74	1,209.08	604.54	1,279.15	631.73	3.46	-1.29	0.489
29.33	-15.66	-14.76	0.00	-695.76	0.00	695.76	1,175.84	587.92	1,209.46	597.31	4.72	-1.49	0.461
30.00	-15.46	-14.71	0.00	-685.87	0.00	685.87	1,170.70	585.35	1,198.85	592.07	4.94	-1.53	0.448
32.83	-14.66	-14.39	0.00	-644.25	0.00	644.25	901.94	450.97	925.08	456.86	5.88	-1.65	0.557
35.00	-14.21	-14.17	0.00	-613.03	0.00	613.03	889.12	444.56	898.85	443.91	6.66	-1.75	0.539
40.00	-13.23	-13.59	0.00	-542.20	0.00	542.20	859.60	429.80	839.85	414.77	8.60	-1.96	0.495
45.00	-12.28	-12.99	0.00	-474.25	0.00	474.25	830.07	415.03	782.85	386.62	10.76	-2.16	0.450
47.00	-11.89	-12.75	0.00	-448.27	0.00	448.27	830.07	415.03	782.85	386.62	11.68	-2.23	0.432
47.00	-11.89	-12.75	0.00	-448.27	0.00	448.27	830.07	415.03	782.85	386.62	11.68	-2.23	0.432
50.00	-11.32	-12.40	0.00	-410.01	0.00	410.01	800.54	400.27	727.86	359.46	13.12	-2.34	0.405
55.00	-10.40	-11.78	0.00	-348.01	0.00	348.01	771.02	385.51	674.87	333.29	15.67	-2.51	0.358
60.00	-9.50	-11.08	0.00	-289.09	0.00	289.09	771.02	385.51	674.87	333.29	18.38	-2.66	0.309
60.00	-9.50	-11.08	0.00	-289.09	0.00	289.09	771.02	385.51	674.87	333.29	18.38	-2.66	0.952
62.92	-9.17	-10.75	0.00	-256.78	0.00	256.78	724.27	362.13	595.07	293.88	20.04	-2.75	0.887
65.00	-8.83	-10.52	0.00	-234.38	0.00	234.38	711.96	355.98	574.90	283.92	21.28	-2.93	0.839
65.75	-8.68	-10.46	0.00	-226.49	0.00	226.49	542.54	271.27	446.58	220.55	21.74	-2.99	1.044
70.00	-8.17	-9.67	0.00	-182.03	0.00	182.03	523.71	261.86	415.99	205.44	24.55	-3.31	0.903
75.00	-7.73	-9.20	0.00	-133.67	0.00	133.67	501.57	250.78	381.40	188.36	28.24	-3.72	0.726
77.00	-6.59	-6.54	0.00	-115.28	0.00	115.28	492.71	246.36	367.98	181.73	29.83	-3.86	0.648
80.00	-6.37	-6.31	0.00	-95.65	0.00	95.65	479.42	239.71	348.30	172.01	32.32	-4.06	0.570
85.00	-6.03	-5.91	0.00	-64.08	0.00	64.08	457.28	228.64	316.71	156.41	36.72	-4.33	0.424
87.00	-3.92	-3.93	0.00	-52.27	0.00	52.27	448.42	224.21	304.49	150.38	38.55	-4.42	0.357
90.00	-3.78	-3.77	0.00	-40.47	0.00	40.47	435.14	217.57	286.61	141.55	41.37	-4.53	0.295
95.00	-3.56	-3.51	0.00	-21.60	0.00	21.60	412.99	206.50	258.02	127.43	46.19	-4.67	0.178
100.00	-0.01	-0.02	0.00	-0.01	0.00	0.01	390.85	195.42	230.93	114.05	51.12	-4.74	0.000
100.45	0.00	-0.02	0.00	0.00	0.00	0.00	388.85	194.43	228.57	112.88	51.57	-4.74	0.000

Pole : 302481	Code: ANSI/TIA-222 Rev G	Copyright Semaan Engineering Solutions, Inc	
Location : Hrfr South, CT	Struct Class : II		6/19/2009 11:09:20 AM
Height : 100.4 (ft)	Exposure Category : B		Page: 10
Shape : 12 Sides	Topographic Category : 1		
Base Dia : 30.00 (in)			
Top Dia : 14.50 (in)			
Taper : 0.163016 (in/ft)	Base Elev : 0.000 (ft)		



Load Case: 0.9D + 1.6W , 95.00 mph with No Ice (Reduced DL) 22 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 0.90
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf		Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	15.364	16.90	205.71	1.000		0.00	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	15.364	16.90	200.12	1.000		0.00	5.00	12.765	12.77	345.2	0.0	695.7
10.00		1.00	0.70	15.364	16.90	194.53	1.200	*	0.00	5.00	12.414	14.90	402.8	0.0	685.6
15.00		1.00	0.70	15.364	16.90	188.94	1.200	*	0.00	5.00	12.062	14.47	391.4	0.0	675.6
20.00		1.00	0.70	15.364	16.90	183.36	1.200	*	0.00	5.00	11.710	14.05	380.0	0.0	665.5
25.00		1.00	0.70	15.364	16.90	177.77	1.200	*	0.00	5.00	11.359	13.63	368.6	0.0	655.5
29.33	Bot - Section 2	1.00	0.70	15.364	16.90	172.93	1.200	*	0.00	4.33	9.552	11.46	310.0	0.0	559.5
30.00		1.00	0.70	15.377	16.91	172.25	1.200	*	0.00	0.67	1.484	1.78	48.2	0.0	127.9
32.83	Top - Section 1	1.00	0.71	15.778	17.35	171.28	1.200	*	0.00	2.83	6.196	7.44	206.5	0.0	536.2
35.00		1.00	0.73	16.070	17.67	173.88	1.200	*	0.00	2.17	4.675	5.61	158.7	0.0	277.2
40.00		1.00	0.76	16.694	18.36	171.40	1.200	*	0.00	5.00	10.520	12.62	370.9	0.0	631.5
45.00		1.00	0.78	17.266	18.99	168.38	1.200	*	0.00	5.00	10.168	12.20	370.8	0.0	621.5
47.00	Reinf. Top Reinf Bottom	1.00	0.79	17.482	19.23	167.05	1.200	*	0.00	2.00	3.969	4.76	146.5	0.0	245.8
50.00		1.00	0.81	17.793	19.57	164.92	1.200	*	0.00	3.00	5.848	7.02	219.8	0.0	365.7
55.00		1.00	0.83	18.285	20.11	161.08	1.200	*	0.00	5.00	9.465	11.36	365.5	0.0	601.4
60.00	Reinf. Top	1.00	0.85	18.745	20.61	156.92	1.200	*	0.00	5.00	9.113	10.94	360.8	0.0	591.3
62.92	Bot - Section 3	1.00	0.86	19.001	20.90	154.37	1.200	*	0.00	2.92	5.154	6.18	206.8	0.0	145.5
65.00		1.00	0.87	19.179	21.09	152.49	1.200	*	0.00	2.08	3.676	4.41	148.9	0.0	179.9
65.75	Top - Section 2	1.00	0.87	19.242	21.16	151.80	1.200	*	0.00	0.75	1.308	1.57	53.2	0.0	64.0
70.00	Appertunance(s)	1.00	0.89	19.589	21.54	150.70	1.200	*	0.00	4.25	7.264	8.72	300.5	0.0	154.2
75.00		1.00	0.91	19.979	21.97	145.82	1.200	*	0.00	5.00	8.220	9.86	346.9	0.0	174.4
77.00	Appertunance(s)	1.00	0.91	20.130	22.14	143.81	1.200	*	0.00	2.00	3.190	3.83	135.6	0.0	67.7
80.00		1.00	0.92	20.351	22.38	140.74	1.200	*	0.00	3.00	4.679	5.61	201.1	0.0	99.2
85.00		1.00	0.94	20.706	22.77	135.47	1.200	*	0.00	5.00	7.517	9.02	328.7	0.0	159.4
87.00	Appertunance(s)	1.00	0.95	20.844	22.92	133.32	1.200	*	0.00	2.00	2.908	3.49	128.0	0.0	61.6
90.00		1.00	0.95	21.047	23.15	130.04	1.000		0.00	3.00	4.257	4.26	157.7	0.0	90.2
95.00		1.00	0.97	21.375	23.51	124.46	1.000		0.00	5.00	6.814	6.81	256.3	0.0	144.3
100.0	Appertunance(s)	1.00	0.98	21.690	23.86	118.73	1.000		0.00	5.00	6.462	6.46	246.7	0.0	136.8
100.4		1.00	0.98	21.718	23.89	118.21	1.000		0.00	0.45	0.564	0.56	21.6	0.0	11.9
* = Cf Adjusted By Linear Load Ra Effect							Totals:			100.45			6,977.5	0.0	9,425.0

Pole :	302481	Code: ANSI/TIA-222 Rev G	
Location :	Hrfr South, CT	Struct Class : II	
Height :	100.4 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	30.00 (in)		
Top Dia :	14.50 (in)		
Taper :	0.163016 (in/ft)	Base Elev : 0.000 (ft)	

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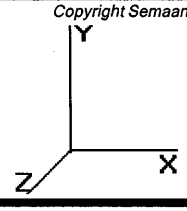

Load Case: 0.9D + 1.6W — 95.00 mph with No Ice (Reduced DL) — 22 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 0.90
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Ka	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
60.00	Scala 840 10212	1	18.745	20.619	0.90	0.90	2.28	0.000	0.000	75.12	0.00	0.00	6.03
70.00	RFS APXV18-206517S-	3	19.589	21.548	0.64	0.80	9.91	0.000	0.000	341.57	0.00	0.00	71.28
77.00	TX RX Systems 421-86	1	20.130	22.143	0.45	0.90	1.17	0.000	0.000	41.29	0.00	0.00	13.50
77.00	Scala 840 10212	1	20.130	22.143	0.90	0.90	2.28	0.000	0.000	80.67	0.00	0.00	6.03
77.00	Antel LPA-80063/4CF	6	20.130	22.143	0.74	0.80	31.25	0.000	0.000	1,107.06	0.00	0.00	108.00
77.00	Antel LPA-185063/8CF	6	20.130	22.143	0.77	0.80	13.64	0.000	0.000	483.23	0.00	0.00	48.60
77.00	Flat T-Arm	3	20.130	22.143	0.50	0.75	19.45	0.000	0.000	688.97	0.00	0.00	675.00
87.00	RFS APX16DWV-	3	20.844	22.929	0.54	0.80	10.77	0.000	0.000	395.24	0.00	0.00	106.92
87.00	CCI DTMA-1819-DD-12	6	20.844	22.929	0.36	0.80	1.53	0.000	0.000	56.26	0.00	0.00	77.22
87.00	RFS APXV18-206516S-	3	20.844	22.929	0.62	0.80	6.69	0.000	0.000	245.42	0.00	0.00	50.49
87.00	Flat Low Profile Pla	1	20.844	22.929	1.00	1.00	26.10	0.000	0.000	957.51	0.00	0.00	1,350.00
100.0	RET/ RCU	6	21.814	23.995	0.34	0.75	0.32	0.000	2.000	12.44	0.00	24.88	5.40
100.0	CSS DUO4-8670	12	21.814	23.995	0.53	0.75	41.73	0.000	2.000	1,601.97	0.00	3,203.93	718.20
100.0	Platform w/ Rails an	1	21.690	23.860	1.00	1.00	27.20	0.000	0.000	1,038.36	0.00	0.00	1,800.00
100.0	ADC CG-800DD-FULL-	12	21.814	23.995	0.34	0.75	5.06	0.000	2.000	194.36	0.00	388.72	150.12
100.0	10' Omni	1	21.995	24.194	0.75	0.75	2.25	0.000	5.000	87.10	0.00	435.50	22.50
										7,406.57			5,209.29

Pole :	302481	Code: ANSI/TIA-222 Rev G	
Location :	Hrfr South, CT	Struct Class : II	
Height :	100.4 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	30.00 (in)		
Top Dia :	14.50 (in)		
Taper :	0.163016 (in/ft)	Base Elev : 0.000 (ft)	

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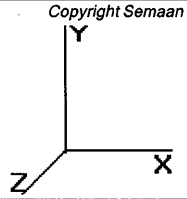

Load Case: 0.9D + 1.6W — 95.00 mph with No Ice (Reduced DL) — 22 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 0.90
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Linear Appurtenance Segment Forces (Factored)

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	qz (psf)	Ra	Cf Adjust Factor	F X (lb)	Dead Load (lb)
5.00	(4) #20 Dywidag	Yes	5.00	0.000	2.00	0.83	0.00	15.364	0.065	0.000	0.00	0.00
10.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.502	0.000	53.54	66.41
10.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.502	0.000	53.54	44.27
10.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.502	0.000	53.54	22.14
10.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	15.364	0.502	0.000	27.04	0.00
10.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	15.364	0.502	0.000	14.74	1.49
15.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.517	0.000	53.54	66.41
15.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.517	0.000	53.54	44.27
15.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.517	0.000	53.54	22.14
15.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	15.364	0.517	0.000	27.04	0.00
15.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	15.364	0.517	0.000	14.74	1.49
20.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.533	0.000	53.54	66.41
20.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.533	0.000	53.54	44.27
20.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.533	0.000	53.54	22.14
20.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	15.364	0.533	0.000	27.04	0.00
20.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	15.364	0.533	0.000	14.74	1.49
25.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.549	0.000	53.54	66.41
25.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.549	0.000	53.54	44.27
25.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	15.364	0.549	0.000	53.54	22.14
25.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	15.364	0.549	0.000	27.04	0.00
25.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	15.364	0.549	0.000	14.74	1.49
29.33	(18) 1 5/8" Coax	Yes	4.33	1.200	3.96	1.43	1.71	15.364	0.565	0.000	46.37	57.51
29.33	(12) 1 5/8" Coax	Yes	4.33	1.200	3.96	1.43	1.71	15.364	0.565	0.000	46.37	38.34
29.33	(6) 1 5/8" Coax	Yes	4.33	1.200	3.96	1.43	1.71	15.364	0.565	0.000	46.37	19.17
29.33	(4) #20 Dywidag	Yes	4.33	1.200	2.00	0.72	0.87	15.364	0.565	0.000	23.42	0.00
29.33	(1) 7/8" Coax	Yes	4.33	1.200	1.09	0.39	0.47	15.364	0.565	0.000	12.76	1.29
30.00	(18) 1 5/8" Coax	Yes	0.67	1.200	3.96	0.22	0.27	15.377	0.575	0.000	7.18	8.90
30.00	(12) 1 5/8" Coax	Yes	0.67	1.200	3.96	0.22	0.27	15.377	0.575	0.000	7.18	5.93
30.00	(6) 1 5/8" Coax	Yes	0.67	1.200	3.96	0.22	0.27	15.377	0.575	0.000	7.18	2.97
30.00	(4) #20 Dywidag	Yes	0.67	1.200	2.00	0.11	0.13	15.377	0.575	0.000	3.63	0.00
30.00	(1) 7/8" Coax	Yes	0.67	1.200	1.09	0.06	0.07	15.377	0.575	0.000	1.98	0.20
32.83	(18) 1 5/8" Coax	Yes	2.83	1.200	3.96	0.93	1.12	15.778	0.581	0.000	31.12	37.59
32.83	(12) 1 5/8" Coax	Yes	2.83	1.200	3.96	0.93	1.12	15.778	0.581	0.000	31.12	25.06
32.83	(6) 1 5/8" Coax	Yes	2.83	1.200	3.96	0.93	1.12	15.778	0.581	0.000	31.12	12.53
32.83	(4) #20 Dywidag	Yes	2.83	1.200	2.00	0.47	0.57	15.778	0.581	0.000	15.72	0.00
32.83	(1) 7/8" Coax	Yes	2.83	1.200	1.09	0.26	0.31	15.778	0.581	0.000	8.57	0.84
35.00	(18) 1 5/8" Coax	Yes	2.17	1.200	3.96	0.72	0.86	16.070	0.579	0.000	24.30	28.82
35.00	(12) 1 5/8" Coax	Yes	2.17	1.200	3.96	0.72	0.86	16.070	0.579	0.000	24.30	19.22
35.00	(6) 1 5/8" Coax	Yes	2.17	1.200	3.96	0.72	0.86	16.070	0.579	0.000	24.30	9.61
35.00	(4) #20 Dywidag	Yes	2.17	1.200	2.00	0.36	0.43	16.070	0.579	0.000	12.28	0.00
35.00	(1) 7/8" Coax	Yes	2.17	1.200	1.09	0.20	0.24	16.070	0.579	0.000	6.69	0.64
40.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	16.694	0.593	0.000	58.18	66.41
40.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	16.694	0.593	0.000	58.18	44.27
40.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	16.694	0.593	0.000	58.18	22.14
40.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	16.694	0.593	0.000	29.38	0.00
40.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	16.694	0.593	0.000	16.01	1.49
45.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	17.266	0.613	0.000	60.17	66.41
45.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	17.266	0.613	0.000	60.17	44.27
45.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	17.266	0.613	0.000	60.17	22.14
45.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	17.266	0.613	0.000	30.39	0.00
45.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	17.266	0.613	0.000	16.56	1.49

Pole :	302481				Code: ANSI/TIA-222 Rev G							
Location :	Hrfr South, CT				Struct Class : II							
Height :	100.4 (ft)				Exposure Category : B							
Shape :	12 Sides				Topographic Category : 1							
Base Dia :	30.00 (in)											
Top Dia :	14.50 (in)											
Taper :	0.163016 (in/ft)				Base Elev : 0.000 (ft)							

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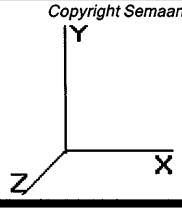

Load Case: 0.9D + 1.6W — 95.00 mph with No Ice (Reduced DL) — 22 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 0.90
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

47.00	(18) 1 5/8" Coax	Yes	2.00	1.200	3.96	0.66	0.79	17.482	0.629	0.000	24.37	26.56
47.00	(12) 1 5/8" Coax	Yes	2.00	1.200	3.96	0.66	0.79	17.482	0.629	0.000	24.37	17.71
47.00	(6) 1 5/8" Coax	Yes	2.00	1.200	3.96	0.66	0.79	17.482	0.629	0.000	24.37	8.85
47.00	(4) #20 Dywidag	Yes	2.00	1.200	2.00	0.33	0.40	17.482	0.629	0.000	12.31	0.00
47.00	(1) 7/8" Coax	Yes	2.00	1.200	1.09	0.18	0.22	17.482	0.629	0.000	6.71	0.59
50.00	(18) 1 5/8" Coax	Yes	3.00	1.200	3.96	0.99	1.19	17.793	0.640	0.000	37.20	39.85
50.00	(12) 1 5/8" Coax	Yes	3.00	1.200	3.96	0.99	1.19	17.793	0.640	0.000	37.20	26.56
50.00	(6) 1 5/8" Coax	Yes	3.00	1.200	3.96	0.99	1.19	17.793	0.640	0.000	37.20	13.28
50.00	(4) #20 Dywidag	Yes	3.00	1.200	2.00	0.50	0.60	17.793	0.640	0.000	18.79	0.00
50.00	(1) 7/8" Coax	Yes	3.00	1.200	1.09	0.27	0.33	17.793	0.640	0.000	10.24	0.89
55.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	18.285	0.659	0.000	63.72	66.41
55.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	18.285	0.659	0.000	63.72	44.27
55.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	18.285	0.659	0.000	63.72	22.14
55.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	18.285	0.659	0.000	32.18	0.00
55.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	18.285	0.659	0.000	17.54	1.49
60.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	18.745	0.684	0.000	65.32	66.41
60.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	18.745	0.684	0.000	65.32	44.27
60.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	18.745	0.684	0.000	65.32	22.14
60.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	18.745	0.684	0.000	32.99	0.00
60.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	18.745	0.684	0.000	17.98	1.49
62.92	(18) 1 5/8" Coax	Yes	2.92	1.200	3.96	0.96	1.15	19.001	0.625	0.000	38.62	38.74
62.92	(12) 1 5/8" Coax	Yes	2.92	1.200	3.96	0.96	1.15	19.001	0.625	0.000	38.62	25.83
62.92	(6) 1 5/8" Coax	Yes	2.92	1.200	3.96	0.96	1.15	19.001	0.625	0.000	38.62	12.91
62.92	(4) #20 Dywidag	Yes	2.00	1.200	2.00	0.33	0.40	19.001	0.625	0.000	13.38	0.00
65.00	(18) 1 5/8" Coax	Yes	2.08	1.200	3.96	0.69	0.83	19.179	0.572	0.000	27.85	27.67
65.00	(12) 1 5/8" Coax	Yes	2.08	1.200	3.96	0.69	0.83	19.179	0.572	0.000	27.85	18.45
65.00	(6) 1 5/8" Coax	Yes	2.08	1.200	3.96	0.69	0.83	19.179	0.572	0.000	27.85	9.22
65.75	(18) 1 5/8" Coax	Yes	0.75	1.200	3.96	0.25	0.30	19.242	0.578	0.000	10.06	9.96
65.75	(12) 1 5/8" Coax	Yes	0.75	1.200	3.96	0.25	0.30	19.242	0.578	0.000	10.06	6.64
65.75	(6) 1 5/8" Coax	Yes	0.75	1.200	3.96	0.25	0.30	19.242	0.578	0.000	10.06	3.32
70.00	(18) 1 5/8" Coax	Yes	4.25	1.200	3.96	1.40	1.68	19.589	0.579	0.000	58.03	56.45
70.00	(12) 1 5/8" Coax	Yes	4.25	1.200	3.96	1.40	1.68	19.589	0.579	0.000	58.03	37.63
70.00	(6) 1 5/8" Coax	Yes	4.25	1.200	3.96	1.40	1.68	19.589	0.579	0.000	58.03	18.82
75.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	19.979	0.401	0.000	69.62	66.41
75.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	19.979	0.401	0.000	69.62	44.27
77.00	(18) 1 5/8" Coax	Yes	2.00	1.200	3.96	0.66	0.79	20.130	0.414	0.000	28.06	26.56
77.00	(12) 1 5/8" Coax	Yes	2.00	1.200	3.96	0.66	0.79	20.130	0.414	0.000	28.06	17.71
80.00	(18) 1 5/8" Coax	Yes	3.00	1.200	3.96	0.99	1.19	20.351	0.212	0.000	42.55	39.85
85.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	20.706	0.220	0.000	72.16	66.41
87.00	(18) 1 5/8" Coax	Yes	2.00	1.200	3.96	0.66	0.79	20.844	0.227	0.000	29.06	26.56
										Totals:	3,145.67	2,030.83

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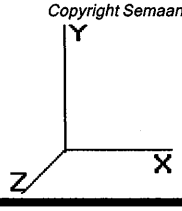

Load Case: 0.9D + 1.6W — 95.00 mph with No Ice (Reduced DL) — 22 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 0.90
Wind Load Factor : 1.60
Wind Importance Factor : 1.00

Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	345.18	695.69	0.00	0.00
10.00	605.21	853.97	0.00	0.00
15.00	593.80	843.92	0.00	0.00
20.00	582.39	833.87	0.00	0.00
25.00	570.98	823.83	0.00	0.00
29.33	485.24	705.30	0.00	0.00
30.00	75.33	150.47	0.00	0.00
32.83	324.12	631.44	0.00	0.00
35.00	250.55	350.28	0.00	0.00
40.00	590.84	799.85	0.00	0.00
45.00	598.24	789.80	0.00	0.00
47.00	238.65	313.11	0.00	0.00
50.00	360.40	466.65	0.00	0.00
55.00	606.38	769.71	0.00	0.00
60.00	682.84	765.69	0.00	0.00
62.92	336.06	242.79	0.00	0.00
65.00	232.43	249.39	0.00	0.00
65.75	83.32	89.02	0.00	0.00
70.00	816.16	367.30	0.00	0.00
75.00	486.10	319.14	0.00	0.00
77.00	2,592.95	976.68	0.00	0.00
80.00	243.66	158.61	0.00	0.00
85.00	400.89	258.31	0.00	0.00
87.00	1,811.52	1,685.85	0.00	0.00
90.00	157.70	109.72	0.00	0.00
95.00	256.34	176.83	0.00	0.00
100.0	3,180.92	2,865.52	0.00	4,053.03
100.4	21.57	11.94	0.00	0.00
Totals:	17,529.77	17,304.66	0.00	4,053.03

Pole :	302481	Code: ANSI/TIA-222 Rev G	
Location :	Hrfr South, CT	Struct Class : II	
Height :	100.4 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	30.00 (in)		
Top Dia :	14.50 (in)		
Taper :	0.163016 (in/ft)	Base Elev : 0.000 (ft)	

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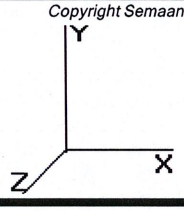

Load Case: 0.9D + 1.6W — 95.00 mph with No Ice (Reduced DL) — 22 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 0.90
Wind Load Factor : 1.60
Wind Importance Factor : 1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-17.26	-17.57	0.00	-1,170.88	0.00	1,170.88	1,396.48	698.24	1,714.19	846.57	0.00	0.00	0.629
5.00	-16.49	-17.30	0.00	-1,083.03	0.00	1,083.03	1,362.62	681.31	1,626.42	803.23	0.14	-0.27	0.601
10.00	-15.56	-16.76	0.00	-996.53	0.00	996.53	1,324.23	662.12	1,535.70	758.42	0.57	-0.53	0.572
15.00	-14.65	-16.22	0.00	-912.73	0.00	912.73	1,285.85	642.92	1,447.58	714.91	1.26	-0.78	0.543
20.00	-13.76	-15.68	0.00	-831.63	0.00	831.63	1,247.46	623.73	1,362.07	672.67	2.21	-1.03	0.513
25.00	-12.89	-15.15	0.00	-753.21	0.00	753.21	1,209.08	604.54	1,279.15	631.73	3.43	-1.28	0.482
29.33	-12.17	-14.67	0.00	-687.63	0.00	687.63	1,175.84	587.92	1,209.46	597.31	4.68	-1.48	0.454
30.00	-12.00	-14.61	0.00	-677.80	0.00	677.80	1,170.70	585.35	1,198.85	592.07	4.89	-1.51	0.442
32.83	-11.35	-14.29	0.00	-636.47	0.00	636.47	901.94	450.97	925.08	456.86	5.83	-1.64	0.549
35.00	-10.97	-14.06	0.00	-605.46	0.00	605.46	889.12	444.56	898.85	443.91	6.59	-1.73	0.531
40.00	-10.14	-13.48	0.00	-535.18	0.00	535.18	859.60	429.80	839.85	414.77	8.52	-1.94	0.487
45.00	-9.34	-12.87	0.00	-467.80	0.00	467.80	830.07	415.03	782.85	386.62	10.66	-2.13	0.442
47.00	-9.02	-12.64	0.00	-442.06	0.00	442.06	830.07	415.03	782.85	386.62	11.57	-2.21	0.425
47.00	-9.02	-12.64	0.00	-442.06	0.00	442.06	830.07	415.03	782.85	386.62	11.57	-2.21	0.425
50.00	-8.54	-12.28	0.00	-404.16	0.00	404.16	800.54	400.27	727.86	359.46	12.99	-2.32	0.397
55.00	-7.76	-11.66	0.00	-342.77	0.00	342.77	771.02	385.51	674.87	333.29	15.51	-2.48	0.351
60.00	-7.01	-10.96	0.00	-284.47	0.00	284.47	771.02	385.51	674.87	333.29	18.19	-2.63	0.303
60.00	-7.01	-10.96	0.00	-284.47	0.00	284.47	771.02	385.51	674.87	333.29	18.19	-2.63	0.934
62.92	-6.76	-10.63	0.00	-252.51	0.00	252.51	724.27	362.13	595.07	293.88	19.83	-2.72	0.869
65.00	-6.50	-10.40	0.00	-230.37	0.00	230.37	711.96	355.98	574.90	283.92	21.05	-2.89	0.821
65.75	-6.38	-10.33	0.00	-222.57	0.00	222.57	542.54	271.27	446.58	220.55	21.51	-2.95	1.022
70.00	-5.99	-9.53	0.00	-178.67	0.00	178.67	523.71	261.86	415.99	205.44	24.29	-3.27	0.882
75.00	-5.66	-9.05	0.00	-131.01	0.00	131.01	501.57	250.78	381.40	188.36	27.93	-3.67	0.708
77.00	-4.84	-6.42	0.00	-112.90	0.00	112.90	492.71	246.36	367.98	181.73	29.50	-3.81	0.632
80.00	-4.67	-6.18	0.00	-93.65	0.00	93.65	479.42	239.71	348.30	172.01	31.95	-4.00	0.555
85.00	-4.43	-5.78	0.00	-62.74	0.00	62.74	457.28	228.64	316.71	156.41	36.29	-4.27	0.411
87.00	-2.88	-3.85	0.00	-51.18	0.00	51.18	448.42	224.21	304.49	150.38	38.10	-4.35	0.347
90.00	-2.77	-3.69	0.00	-39.64	0.00	39.64	435.14	217.57	286.61	141.55	40.87	-4.47	0.287
95.00	-2.61	-3.42	0.00	-21.19	0.00	21.19	412.99	206.50	258.02	127.43	45.62	-4.60	0.173
100.00	-0.01	-0.02	0.00	-0.01	0.00	0.01	390.85	195.42	230.93	114.05	50.48	-4.67	0.000
100.45	0.00	-0.02	0.00	0.00	0.00	0.00	388.85	194.43	228.57	112.88	50.92	-4.67	0.000

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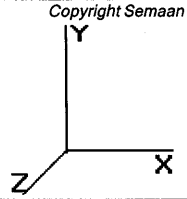
Pole : 302481
Location : Hrfr South, CT
Height : 100.4 (ft)
Shape : 12 Sides
Base Dia : 30.00 (in)
Top Dia : 14.50 (in)
Taper : 0.163016 (in/ft)

Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure Category : B
Topographic Category : 1
Base Elev : 0.000 (ft)



Load Case: 1.2D + 1.0Di + 1.0Wi — 50.00 mph with 1.25 in Radial Ice — 22 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.00

Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00
Ice Importance Factor : 1.00

Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf		Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	4.256	4.682	0.000	1.200		0.00	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	4.256	4.682	0.000	1.200		2.07	5.00	14.490	17.39	81.4	418.4	1,234.7
10.00		1.00	0.70	4.256	4.682	0.000	1.200	*	2.21	5.00	14.262	17.11	80.1	438.8	1,241.7
15.00		1.00	0.70	4.256	4.682	0.000	1.200	*	2.31	5.00	13.987	16.78	78.6	446.1	1,235.6
20.00		1.00	0.70	4.256	4.682	0.000	1.200	*	2.37	5.00	13.692	16.43	76.9	447.6	1,223.6
25.00		1.00	0.70	4.256	4.682	0.000	1.200	*	2.43	5.00	13.385	16.06	75.2	445.6	1,208.3
29.33	Bot - Section 2	1.00	0.70	4.256	4.682	0.000	1.200	*	2.47	4.33	11.335	13.60	63.7	382.8	1,032.5
30.00		1.00	0.70	4.260	4.686	0.000	1.200	*	2.47	0.67	1.760	2.11	9.9	60.2	215.9
32.83	Top - Section 1	1.00	0.71	4.371	4.808	0.000	1.200	*	2.49	2.83	7.375	8.85	42.5	252.7	904.5
35.00		1.00	0.73	4.451	4.897	0.000	1.200	*	2.51	2.17	5.585	6.70	32.8	192.6	513.9
40.00		1.00	0.76	4.625	5.087	0.000	1.200	*	2.54	5.00	12.643	15.17	77.2	436.8	1,167.5
45.00		1.00	0.78	4.783	5.261	0.000	1.200	*	2.57	5.00	12.317	14.78	77.8	428.8	1,146.1
47.00	Reinf. Top Reinf Bottom	1.00	0.79	4.843	5.327	0.000	1.200	*	2.59	2.00	4.832	5.80	30.9	170.2	453.3
50.00		1.00	0.81	4.929	5.422	0.000	1.200	*	2.60	3.00	7.151	8.58	46.5	252.0	672.8
55.00		1.00	0.83	5.065	5.572	0.000	1.200	*	2.63	5.00	11.657	13.99	77.9	410.6	1,101.1
60.00	Reinf. Top	1.00	0.85	5.193	5.712	0.000	1.200	*	2.65	5.00	11.325	13.59	77.6	400.5	1,077.6
62.92	Bot - Section 3	1.00	0.86	5.263	5.790	0.000	1.200	*	2.66	2.92	6.450	7.74	44.8	230.1	424.0
65.00		1.00	0.87	5.313	5.844	0.000	1.200	*	2.67	2.08	4.605	5.53	32.3	165.2	405.0
65.75	Top - Section 2	1.00	0.87	5.330	5.863	0.000	1.200	*	2.67	0.75	1.643	1.97	11.6	59.2	144.5
70.00	Appertunance(s)	1.00	0.89	5.426	5.969	0.000	1.200	*	2.69	4.25	9.173	11.01	65.7	327.7	533.3
75.00		1.00	0.91	5.534	6.088	0.000	1.200	*	2.71	5.00	10.482	12.58	76.6	374.2	606.8
77.00	Appertunance(s)	1.00	0.91	5.576	6.134	0.000	1.200	*	2.72	2.00	4.097	4.92	30.2	147.8	238.0
80.00		1.00	0.92	5.637	6.201	0.000	1.200	*	2.73	3.00	6.045	7.25	45.0	217.5	349.8
85.00		1.00	0.94	5.736	6.309	0.000	1.200	*	2.74	5.00	9.807	11.77	74.3	350.4	562.9
87.00	Appertunance(s)	1.00	0.95	5.774	6.351	0.000	1.200	*	2.75	2.00	3.827	4.59	29.2	138.2	220.4
90.00		1.00	0.95	5.830	6.413	0.000	1.200		2.76	3.00	5.639	6.77	43.4	202.9	323.1
95.00		1.00	0.97	5.921	6.513	0.000	1.200		2.77	5.00	9.130	10.96	71.4	325.5	517.9
100.0	Appertunance(s)	1.00	0.98	6.008	6.609	0.000	1.200		2.79	5.00	8.790	10.55	69.7	312.7	495.0
100.4		1.00	0.98	6.016	6.618	0.000	1.200		2.79	0.45	0.774	0.93	6.1	28.0	44.0
* = Cf Adjusted By Linear Load Ra Effect							Totals:			100.45			1,529.2	8,063.3	19,294.0

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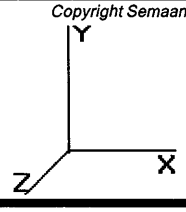

Load Case: 1.2D + 1.0Di + 1.0Wi — 50.00 mph with 1.25 in Radial Ice — 22 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.00

Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00
Ice Importance Factor : 1.00

Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Ka	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
60.00	Scala 840 10212	1	5.193	5.712	0.90	0.90	2.91	0.000	0.000	16.64	0.00	0.00	119.04
70.00	RFS APXV18-206517S-	3	5.426	5.969	0.64	0.80	13.70	0.000	0.000	81.79	0.00	0.00	730.66
77.00	TX RX Systems 421-86	1	5.576	6.134	0.45	0.90	1.45	0.000	0.000	8.91	0.00	0.00	113.19
77.00	Scala 840 10212	1	5.576	6.134	0.90	0.90	2.94	0.000	0.000	18.04	0.00	0.00	123.04
77.00	Antel LPA-80063/4CF	6	5.576	6.134	0.74	0.80	34.91	0.000	0.000	214.14	0.00	0.00	2,248.65
77.00	Antel LPA-185063/8CF	6	5.576	6.134	0.77	0.80	20.06	0.000	0.000	123.04	0.00	0.00	1,086.09
77.00	Flat T-Arm	3	5.576	6.134	0.50	0.75	38.71	0.000	0.000	237.42	0.00	0.00	1,687.58
87.00	RFS APX16DWV-	3	5.774	6.351	0.53	0.80	12.56	0.000	0.000	79.75	0.00	0.00	845.60
87.00	CCI DTMA-1819-DD-12	6	5.774	6.351	0.36	0.80	2.71	0.000	0.000	17.19	0.00	0.00	406.57
87.00	RFS APXV18-206516S-	3	5.774	6.351	0.62	0.80	9.58	0.000	0.000	60.83	0.00	0.00	565.61
87.00	Flat Low Profile Pla	1	5.774	6.351	1.00	1.00	56.29	0.000	0.000	357.55	0.00	0.00	2,624.67
100.0	RET/ RCU	6	6.043	6.647	0.34	0.75	1.13	0.000	2.000	7.52	0.00	15.03	153.43
100.0	CSS DUO4-8670	12	6.043	6.647	0.53	0.75	47.91	0.000	2.000	318.46	0.00	636.92	4,559.10
100.0	Platform w/ Rails an	1	6.008	6.609	1.00	1.00	66.40	0.000	0.000	438.87	0.00	0.00	4,078.08
100.0	ADC CG-800DD-FULL-	12	6.043	6.647	0.34	0.75	7.46	0.000	2.000	49.56	0.00	99.13	1,028.16
100.0	10' Omni	1	6.093	6.702	0.75	0.75	5.44	0.000	5.000	36.49	0.00	182.46	295.05
										2,066.22			20,664.52

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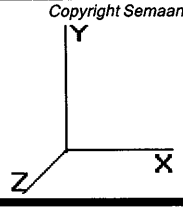


Load Case: 1.2D + 1.0Di + 1.0Wi — 50.00 mph with 1.25 in Radial Ice — 22 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.00

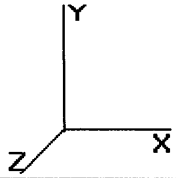
Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00
Ice Importance Factor : 1.00

Linear Appurtenance Segment Forces (Factored)

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	qz (psf)	Ra	Cf Adjust Factor	F X (lb)	Dead Load (lb)
5.00	(4) #20 Dywidag	Yes	5.00	0.000	2.00	2.56	0.00	4.256	0.065	0.000	0.00	117.11
10.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.50	4.20	4.256	0.502	0.000	19.66	455.57
10.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.50	4.20	4.256	0.502	0.000	19.66	313.74
10.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.50	4.20	4.256	0.502	0.000	19.66	171.90
10.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	2.68	3.22	4.256	0.502	0.000	15.07	126.78
10.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	2.30	2.76	4.256	0.502	0.000	12.94	41.95
15.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.58	4.29	4.256	0.517	0.000	20.09	470.83
15.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.58	4.29	4.256	0.517	0.000	20.09	324.76
15.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.58	4.29	4.256	0.517	0.000	20.09	178.68
15.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	2.76	3.31	4.256	0.517	0.000	15.50	132.89
15.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	2.38	2.86	4.256	0.517	0.000	13.37	44.88
20.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.63	4.36	4.256	0.533	0.000	20.40	482.11
20.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.63	4.36	4.256	0.533	0.000	20.40	332.92
20.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.63	4.36	4.256	0.533	0.000	20.40	183.73
20.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	2.81	3.38	4.256	0.533	0.000	15.81	137.45
20.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	2.44	2.92	4.256	0.533	0.000	13.68	47.10
25.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.68	4.41	4.256	0.549	0.000	20.65	491.12
25.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.68	4.41	4.256	0.549	0.000	20.65	339.46
25.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.68	4.41	4.256	0.549	0.000	20.65	187.79
25.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	2.86	3.43	4.256	0.549	0.000	16.07	141.11
25.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	2.48	2.98	4.256	0.549	0.000	13.94	48.90
29.33	(18) 1 5/8" Coax	Yes	4.33	1.200	3.96	3.21	3.85	4.256	0.565	0.000	18.04	431.02
29.33	(12) 1 5/8" Coax	Yes	4.33	1.200	3.96	3.21	3.85	4.256	0.565	0.000	18.04	298.11
29.33	(6) 1 5/8" Coax	Yes	4.33	1.200	3.96	3.21	3.85	4.256	0.565	0.000	18.04	165.20
29.33	(4) #20 Dywidag	Yes	4.33	1.200	2.00	2.50	3.01	4.256	0.565	0.000	14.07	124.53
29.33	(1) 7/8" Coax	Yes	4.33	1.200	1.09	2.18	2.61	4.256	0.565	0.000	12.23	43.51
30.00	(18) 1 5/8" Coax	Yes	0.67	1.200	3.96	0.50	0.60	4.260	0.575	0.000	2.80	66.83
30.00	(12) 1 5/8" Coax	Yes	0.67	1.200	3.96	0.50	0.60	4.260	0.575	0.000	2.80	46.23
30.00	(6) 1 5/8" Coax	Yes	0.67	1.200	3.96	0.50	0.60	4.260	0.575	0.000	2.80	25.62
30.00	(4) #20 Dywidag	Yes	0.67	1.200	2.00	0.39	0.47	4.260	0.575	0.000	2.18	19.32
30.00	(1) 7/8" Coax	Yes	0.67	1.200	1.09	0.34	0.40	4.260	0.575	0.000	1.90	6.76
32.83	(18) 1 5/8" Coax	Yes	2.83	1.200	3.96	2.11	2.53	4.371	0.581	0.000	12.19	284.38
32.83	(12) 1 5/8" Coax	Yes	2.83	1.200	3.96	2.11	2.53	4.371	0.581	0.000	12.19	196.78
32.83	(6) 1 5/8" Coax	Yes	2.83	1.200	3.96	2.11	2.53	4.371	0.581	0.000	12.19	109.18
32.83	(4) #20 Dywidag	Yes	2.83	1.200	2.00	1.65	1.98	4.371	0.581	0.000	9.52	82.49
32.83	(1) 7/8" Coax	Yes	2.83	1.200	1.09	1.44	1.72	4.371	0.581	0.000	8.28	28.98
35.00	(18) 1 5/8" Coax	Yes	2.17	1.200	3.96	1.63	1.95	4.451	0.579	0.000	9.55	219.25
35.00	(12) 1 5/8" Coax	Yes	2.17	1.200	3.96	1.63	1.95	4.451	0.579	0.000	9.55	151.76
35.00	(6) 1 5/8" Coax	Yes	2.17	1.200	3.96	1.63	1.95	4.451	0.579	0.000	9.55	84.26
35.00	(4) #20 Dywidag	Yes	2.17	1.200	2.00	1.27	1.53	4.451	0.579	0.000	7.47	63.74
35.00	(1) 7/8" Coax	Yes	2.17	1.200	1.09	1.11	1.33	4.451	0.579	0.000	6.50	22.47
40.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.77	4.53	4.625	0.593	0.000	23.04	510.90
40.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.77	4.53	4.625	0.593	0.000	23.04	353.83
40.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.77	4.53	4.625	0.593	0.000	23.04	196.75
40.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	2.96	3.55	4.625	0.593	0.000	18.05	149.22
40.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	2.58	3.09	4.625	0.593	0.000	15.74	52.96
45.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.80	4.56	4.783	0.613	0.000	23.98	516.03
45.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.80	4.56	4.783	0.613	0.000	23.98	357.56
45.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.80	4.56	4.783	0.613	0.000	23.98	199.09
45.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	2.98	3.58	4.783	0.613	0.000	18.83	151.34
45.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	2.60	3.12	4.783	0.613	0.000	16.43	54.03

Pole : 302481	Code: ANSI/TIA-222 Rev G	Copyright Semaan Engineering Solutions, Inc	
Location : Hrfr South, CT	Struct Class : II		6/19/2009 11:09:22 AM
Height : 100.4 (ft)	Exposure Category : B		Page : 19
Shape : 12 Sides	Topographic Category : 1		
Base Dia : 30.00 (in)			
Top Dia : 14.50 (in)			
Taper : 0.163016 (in/ft)	Base Elev : 0.000 (ft)		



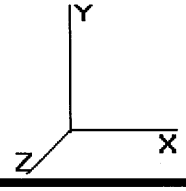
Load Case: 1.2D + 1.0Di + 1.0Wi — 50.00 mph with 1.25 in Radial Ice — 22 Iterations

Gust Response Factor : 1.10 — Ice Dead Load Factor : 1.00 — Wind Importance Factor : 1.00

Dead Load Factor : 1.20 — Ice Importance Factor : 1.00

Wind Load Factor : 1.00

47.00	(18) 1 5/8" Coax	Yes	2.00	1.200	3.96	1.52	1.83	4.843	0.629	0.000	9.74	207.18
47.00	(12) 1 5/8" Coax	Yes	2.00	1.200	3.96	1.52	1.83	4.843	0.629	0.000	9.74	143.58
47.00	(6) 1 5/8" Coax	Yes	2.00	1.200	3.96	1.52	1.83	4.843	0.629	0.000	9.74	79.99
47.00	(4) #20 Dywidag	Yes	2.00	1.200	2.00	1.20	1.44	4.843	0.629	0.000	7.65	60.85
47.00	(1) 7/8" Coax	Yes	2.00	1.200	1.09	1.04	1.25	4.843	0.629	0.000	6.68	21.77
50.00	(18) 1 5/8" Coax	Yes	3.00	1.200	3.96	2.29	2.75	4.929	0.640	0.000	14.92	312.41
50.00	(12) 1 5/8" Coax	Yes	3.00	1.200	3.96	2.29	2.75	4.929	0.640	0.000	14.92	216.57
50.00	(6) 1 5/8" Coax	Yes	3.00	1.200	3.96	2.29	2.75	4.929	0.640	0.000	14.92	120.73
50.00	(4) #20 Dywidag	Yes	3.00	1.200	2.00	1.80	2.16	4.929	0.640	0.000	11.73	91.96
50.00	(1) 7/8" Coax	Yes	3.00	1.200	1.09	1.58	1.89	4.929	0.640	0.000	10.25	33.01
55.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.84	4.61	5.065	0.659	0.000	25.69	524.94
55.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.84	4.61	5.065	0.659	0.000	25.69	364.06
55.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.84	4.61	5.065	0.659	0.000	25.69	203.17
55.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	3.03	3.63	5.065	0.659	0.000	20.23	155.04
55.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	2.65	3.18	5.065	0.659	0.000	17.70	55.91
60.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.86	4.63	5.193	0.684	0.000	26.47	528.87
60.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.86	4.63	5.193	0.684	0.000	26.47	366.92
60.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.86	4.63	5.193	0.684	0.000	26.47	204.98
60.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	3.05	3.65	5.193	0.684	0.000	20.87	156.67
60.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	2.67	3.20	5.193	0.684	0.000	18.27	56.75
62.92	(18) 1 5/8" Coax	Yes	2.92	1.200	3.96	2.26	2.71	5.263	0.625	0.000	15.69	309.76
62.92	(12) 1 5/8" Coax	Yes	2.92	1.200	3.96	2.26	2.71	5.263	0.625	0.000	15.69	214.95
62.92	(6) 1 5/8" Coax	Yes	2.92	1.200	3.96	2.26	2.71	5.263	0.625	0.000	15.69	120.14
62.92	(4) #20 Dywidag	Yes	2.00	1.200	2.00	1.22	1.47	5.263	0.625	0.000	8.49	63.03
65.00	(18) 1 5/8" Coax	Yes	2.08	1.200	3.96	1.62	1.94	5.313	0.572	0.000	11.34	221.90
65.00	(12) 1 5/8" Coax	Yes	2.08	1.200	3.96	1.62	1.94	5.313	0.572	0.000	11.34	154.00
65.00	(6) 1 5/8" Coax	Yes	2.08	1.200	3.96	1.62	1.94	5.313	0.572	0.000	11.34	86.11
65.75	(18) 1 5/8" Coax	Yes	0.75	1.200	3.96	0.58	0.70	5.330	0.578	0.000	4.10	79.95
65.75	(12) 1 5/8" Coax	Yes	0.75	1.200	3.96	0.58	0.70	5.330	0.578	0.000	4.10	55.49
65.75	(6) 1 5/8" Coax	Yes	0.75	1.200	3.96	0.58	0.70	5.330	0.578	0.000	4.10	31.03
70.00	(18) 1 5/8" Coax	Yes	4.25	1.200	3.96	3.31	3.97	5.426	0.579	0.000	23.72	455.55
70.00	(12) 1 5/8" Coax	Yes	4.25	1.200	3.96	3.31	3.97	5.426	0.579	0.000	23.72	316.28
70.00	(6) 1 5/8" Coax	Yes	4.25	1.200	3.96	3.31	3.97	5.426	0.579	0.000	23.72	177.00
75.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.91	4.69	5.534	0.401	0.000	28.58	539.13
75.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.91	4.69	5.534	0.401	0.000	28.58	374.42
77.00	(18) 1 5/8" Coax	Yes	2.00	1.200	3.96	1.57	1.88	5.576	0.414	0.000	11.53	216.15
77.00	(12) 1 5/8" Coax	Yes	2.00	1.200	3.96	1.57	1.88	5.576	0.414	0.000	11.53	150.13
80.00	(18) 1 5/8" Coax	Yes	3.00	1.200	3.96	2.36	2.83	5.637	0.212	0.000	17.53	325.29
85.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	3.94	4.73	5.736	0.220	0.000	29.83	545.01
87.00	(18) 1 5/8" Coax	Yes	2.00	1.200	3.96	1.58	1.89	5.774	0.227	0.000	12.03	218.45
										Totals:	1,415.23	18,342.05



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Load Case: 1.2D + 1.0Di + 1.0Wi — 50.00 mph with 1.25 in Radial Ice — 22 Iterations

Gust Response Factor: 1.10
Dead Load Factor: 1.20
Wind Load Factor: 1.00

Ice Dead Load Factor: 1.00

Wind Importance Factor: 1.00
Ice Importance Factor: 1.00

Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	81.40	1,351.80	0.00	0.00
10.00	167.10	2,396.97	0.00	0.00
15.00	167.70	2,432.96	0.00	0.00
20.00	167.62	2,452.28	0.00	0.00
25.00	167.16	2,462.02	0.00	0.00
29.33	144.11	2,134.12	0.00	0.00
30.00	22.37	386.70	0.00	0.00
32.83	96.91	1,632.03	0.00	0.00
35.00	75.44	1,075.08	0.00	0.00
40.00	180.08	2,476.51	0.00	0.00
45.00	184.97	2,469.55	0.00	0.00
47.00	74.43	984.85	0.00	0.00
50.00	113.26	1,474.66	0.00	0.00
55.00	192.94	2,449.57	0.00	0.00
60.00	212.81	2,556.24	0.00	0.00
62.92	100.38	1,158.37	0.00	0.00
65.00	66.30	885.95	0.00	0.00
65.75	23.85	317.81	0.00	0.00
70.00	218.66	2,251.35	0.00	0.00
75.00	133.72	1,565.67	0.00	0.00
77.00	654.77	5,881.00	0.00	0.00
80.00	62.51	701.12	0.00	0.00
85.00	104.08	1,151.32	0.00	0.00
87.00	556.52	4,898.65	0.00	0.00
90.00	43.40	349.16	0.00	0.00
95.00	71.35	561.30	0.00	0.00
100.0	920.61	10,652.24	0.00	933.54
100.4	6.15	43.96	0.00	0.00
Totals:	5,010.63	59,153.26	0.00	933.54

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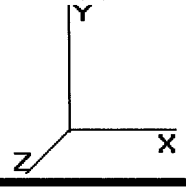
Pole :	302481
Location :	Hrfr South, CT
Height :	100.4 (ft)
Shape :	12 Sides
Base Dia :	30.00 (in)
Top Dia :	14.50 (in)
Taper :	0.163016 (in/ft)

Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure Category : B
Topographic Category : 1

Base Elev : 0.000 (ft)



Load Case: 1.2D + 1.0Di + 1.0Wi — 50.00 mph with 1.25 in Radial Ice — 22 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.00

Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00
Ice Importance Factor : 1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-59.15	-5.05	0.00	-361.28	0.00	361.28	1,396.48	698.24	1,714.19	846.57	0.00	0.00	0.215
5.00	-57.79	-5.05	0.00	-336.01	0.00	336.01	1,362.62	681.31	1,626.42	803.23	0.04	-0.08	0.207
10.00	-55.39	-4.96	0.00	-310.74	0.00	310.74	1,324.23	662.12	1,535.70	758.42	0.17	-0.16	0.199
15.00	-52.95	-4.86	0.00	-285.94	0.00	285.94	1,285.85	642.92	1,447.58	714.91	0.39	-0.24	0.190
20.00	-50.49	-4.75	0.00	-261.66	0.00	261.66	1,247.46	623.73	1,362.07	672.67	0.69	-0.32	0.181
25.00	-48.02	-4.62	0.00	-237.93	0.00	237.93	1,209.08	604.54	1,279.15	631.73	1.07	-0.40	0.171
29.33	-45.89	-4.49	0.00	-217.93	0.00	217.93	1,175.84	587.92	1,209.46	597.31	1.46	-0.46	0.162
30.00	-45.50	-4.49	0.00	-214.92	0.00	214.92	1,170.70	585.35	1,198.85	592.07	1.52	-0.47	0.158
32.83	-43.87	-4.40	0.00	-202.22	0.00	202.22	901.94	450.97	925.08	456.86	1.82	-0.51	0.197
35.00	-42.79	-4.35	0.00	-192.67	0.00	192.67	889.12	444.56	898.85	443.91	2.06	-0.54	0.191
40.00	-40.31	-4.19	0.00	-170.91	0.00	170.91	859.60	429.80	839.85	414.77	2.66	-0.61	0.177
45.00	-37.84	-4.01	0.00	-149.95	0.00	149.95	830.07	415.03	782.85	386.62	3.33	-0.67	0.162
47.00	-36.85	-3.94	0.00	-141.94	0.00	141.94	830.07	415.03	782.85	386.62	3.62	-0.70	0.156
47.00	-36.85	-3.94	0.00	-141.94	0.00	141.94	830.07	415.03	782.85	386.62	3.62	-0.70	0.156
50.00	-35.38	-3.84	0.00	-130.12	0.00	130.12	800.54	400.27	727.86	359.46	4.07	-0.73	0.147
55.00	-32.93	-3.64	0.00	-110.94	0.00	110.94	771.02	385.51	674.87	333.29	4.86	-0.78	0.132
60.00	-30.37	-3.41	0.00	-92.73	0.00	92.73	771.02	385.51	674.87	333.29	5.71	-0.83	0.116
60.00	-30.37	-3.41	0.00	-92.73	0.00	92.73	771.02	385.51	674.87	333.29	5.71	-0.83	0.342
62.92	-29.21	-3.32	0.00	-82.78	0.00	82.78	724.27	362.13	595.07	293.88	6.23	-0.86	0.322
65.00	-28.32	-3.25	0.00	-75.88	0.00	75.88	711.96	355.98	574.90	283.92	6.62	-0.92	0.307
65.75	-28.00	-3.26	0.00	-73.44	0.00	73.44	542.54	271.27	446.58	220.55	6.76	-0.94	0.385
70.00	-25.75	-3.05	0.00	-59.60	0.00	59.60	523.71	261.86	415.99	205.44	7.65	-1.04	0.339
75.00	-24.18	-2.93	0.00	-44.33	0.00	44.33	501.57	250.78	381.40	188.36	8.81	-1.18	0.284
77.00	-18.31	-2.17	0.00	-38.47	0.00	38.47	492.71	246.36	367.98	181.73	9.32	-1.22	0.249
80.00	-17.61	-2.11	0.00	-31.97	0.00	31.97	479.42	239.71	348.30	172.01	10.11	-1.29	0.223
85.00	-16.46	-2.00	0.00	-21.40	0.00	21.40	457.28	228.64	316.71	156.41	11.51	-1.38	0.173
87.00	-11.58	-1.33	0.00	-17.40	0.00	17.40	448.42	224.21	304.49	150.38	12.09	-1.41	0.142
90.00	-11.23	-1.29	0.00	-13.41	0.00	13.41	435.14	217.57	286.61	141.55	12.99	-1.45	0.121
95.00	-10.67	-1.21	0.00	-6.98	0.00	6.98	412.99	206.50	258.02	127.43	14.54	-1.49	0.081
100.00	-0.04	-0.01	0.00	0.00	0.00	0.00	390.85	195.42	230.93	114.05	16.11	-1.51	0.000
100.45	0.00	-0.01	0.00	0.00	0.00	0.00	388.85	194.43	228.57	112.88	16.26	-1.51	0.000

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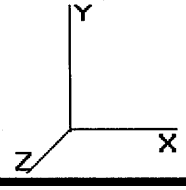
Pole :	302481	Code: ANSI/TIA-222 Rev G	6/19/2009 11:09:23 AM
Location :	Hrfr South, CT	Struct Class : II	Page: 22
Height :	100.4 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	30.00 (in)		
Top Dia :	14.50 (in)		
Taper :	0.163016 (in/ft)	Base Elev : 0.000 (ft)	



Load Case: 1.2D + 1.0E — Dead Load with Seismic — 0 Iterations

Gust Response Factor : 1.10		Sds : 0.39	Ss : 0.40
Dead Load Factor : 1.20	Seismic Load Factor : 1.00	Sd1 : 0.10	S1 : 0.06
Wind Load Factor : 0.00	Structure Frequency : 0.2611	SA : 0.03	Seismic Importance Factor : 1.00

Total Segment Forces (Factored)

R : 1.50

Seg Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)
0.00		0.00	0.00	0.00	0.00	0.00
5.00		401.88	0.00	0.04	0.02	27.15
10.00		390.72	0.02	0.07	0.04	33.43
15.00		379.55	0.04	0.09	0.04	39.50
20.00		368.39	0.07	0.12	0.05	50.85
25.00		357.23	0.12	0.17	0.05	69.58
29.33	Bot - Section 2	300.33	0.16	0.24	0.06	78.36
30.00		92.38	0.17	0.26	0.06	25.14
32.83	Top - Section 1	385.71	0.20	0.32	0.06	123.86
35.00		146.95	0.23	0.37	0.07	52.80
40.00		330.58	0.30	0.50	0.08	146.39
45.00		319.42	0.38	0.63	0.10	163.56
47.00	Reinf. Top Reinf Bottom	124.64	0.41	0.69	0.11	66.56
50.00		183.61	0.47	0.76	0.12	102.76
55.00		297.09	0.57	0.86	0.15	172.46
60.00	Reinf. Top	291.93	0.67	0.91	0.17	166.62
62.92	Bot - Section 3	161.63	0.74	0.91	0.19	88.89
65.00		199.86	0.79	0.90	0.20	105.58
65.75	Top - Section 2	71.10	0.81	0.90	0.20	36.91
70.00	Appertunance(s)	177.34	0.92	0.83	0.23	80.61
75.00		193.82	1.05	0.70	0.26	69.50
77.00	Appertunance(s)	3070.98	1.11	0.64	0.28	976.72
80.00		110.27	1.20	0.55	0.32	28.74
85.00		177.08	1.35	0.46	0.40	34.10
87.00	Appertunance(s)	3039.29	1.42	0.46	0.44	552.39
90.00		100.22	1.52	0.52	0.53	18.99
95.00		160.33	1.69	0.91	0.75	44.45
100.0	Appertunance(s)	3147.76	1.87	1.86	1.10	1469.83
100.4		13.27	1.89	1.98	1.14	6.49
	Totals:	14,993.36				4,832.19

Total Wind : 17,529.8

Seismic Base Shear Is Less Than 50% Of Wind Force - Analysis Not Required

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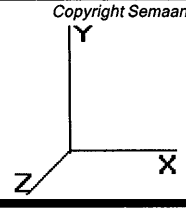
Pole :	302481	Code: ANSI/TIA-222 Rev G	6/19/2009 11:09:23 AM
Location :	Hrfr South, CT	Struct Class : II	Page: 23
Height :	100.4 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	30.00 (in)		
Top Dia :	14.50 (in)		
Taper :	0.163016 (in/ft)	Base Elev : 0.000 (ft)	



Load Case: 0.9D + 1.0E — Dead Load with Seismic (Reduced DL) — 0 Iterations

Gust Response Factor : 1.10		Sds : 0.39	Ss : 0.40
Dead Load Factor : 0.90	Seismic Load Factor : 1.00	Sd1 : 0.10	S1 : 0.06
Wind Load Factor : 0.00	Structure Frequency : 0.2611	SA : 0.03	Seismic Importance Factor : 1.00

Total Segment Forces (Factored)

R : 1.50

Seg Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)
0.00		0.00	0.00	0.00	0.00	0.00
5.00		401.88	0.00	0.04	0.02	27.15
10.00		390.72	0.02	0.07	0.04	33.43
15.00		379.55	0.04	0.09	0.04	39.50
20.00		368.39	0.07	0.12	0.05	50.85
25.00		357.23	0.12	0.17	0.05	69.58
29.33	Bot - Section 2	300.33	0.16	0.24	0.06	78.36
30.00		92.38	0.17	0.26	0.06	25.14
32.83	Top - Section 1	385.71	0.20	0.32	0.06	123.86
35.00		146.95	0.23	0.37	0.07	52.80
40.00		330.58	0.30	0.50	0.08	146.39
45.00		319.42	0.38	0.63	0.10	163.56
47.00	Reinf. Top Reinf Bottom	124.64	0.41	0.69	0.11	66.56
50.00		183.61	0.47	0.76	0.12	102.76
55.00		297.09	0.57	0.86	0.15	172.46
60.00	Reinf. Top	291.93	0.67	0.91	0.17	166.62
62.92	Bot - Section 3	161.63	0.74	0.91	0.19	88.89
65.00		199.86	0.79	0.90	0.20	105.58
65.75	Top - Section 2	71.10	0.81	0.90	0.20	36.91
70.00	Appertunance(s)	177.34	0.92	0.83	0.23	80.61
75.00		193.82	1.05	0.70	0.26	69.50
77.00	Appertunance(s)	3070.98	1.11	0.64	0.28	976.72
80.00		110.27	1.20	0.55	0.32	28.74
85.00		177.08	1.35	0.46	0.40	34.10
87.00	Appertunance(s)	3039.29	1.42	0.46	0.44	552.39
90.00		100.22	1.52	0.52	0.53	18.99
95.00		160.33	1.69	0.91	0.75	44.45
100.0	Appertunance(s)	3147.76	1.87	1.86	1.10	1469.83
100.4		13.27	1.89	1.98	1.14	6.49
	Totals:	14,993.36				4,832.19

Total Wind : 17,529.8

Seismic Base Shear Is Less Than 50% Of Wind Force - Analysis Not Required

Pole :	302481	Code: ANSI/TIA-222 Rev G	
Location :	Hrfr South, CT	Struct Class : II	
Height :	100.4 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	30.00 (in)		
Top Dia :	14.50 (in)		
Taper :	0.163016 (in/ft)	Base Elev : 0.000 (ft)	

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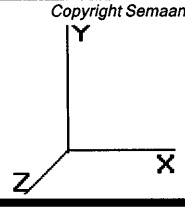

Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 21 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Wind Importance Factor : 1.00

Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf		Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	6.129	6.742	129.92	1.000		0.00	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	6.129	6.742	126.39	1.000		0.00	5.00	12.765	12.77	86.1	0.0	735.9
10.00		1.00	0.70	6.129	6.742	122.86	1.200	*	0.00	5.00	12.414	14.90	100.4	0.0	724.7
15.00		1.00	0.70	6.129	6.742	119.33	1.200	*	0.00	5.00	12.062	14.47	97.6	0.0	713.6
20.00		1.00	0.70	6.129	6.742	115.80	1.200	*	0.00	5.00	11.710	14.05	94.7	0.0	702.4
25.00		1.00	0.70	6.129	6.742	112.27	1.200	*	0.00	5.00	11.359	13.63	91.9	0.0	691.2
29.33	Bot - Section 2	1.00	0.70	6.129	6.742	109.21	1.200	*	0.00	4.33	9.552	11.46	77.3	0.0	589.6
30.00		1.00	0.70	6.134	6.747	108.79	1.200	*	0.00	0.67	1.484	1.78	12.0	0.0	137.1
32.83	Top - Section 1	1.00	0.71	6.294	6.923	108.17	1.200	*	0.00	2.83	6.196	7.44	51.5	0.0	574.7
35.00		1.00	0.73	6.410	7.051	109.81	1.200	*	0.00	2.17	4.675	5.61	39.6	0.0	291.9
40.00		1.00	0.76	6.659	7.325	108.25	1.200	*	0.00	5.00	10.520	12.62	92.5	0.0	664.6
45.00		1.00	0.78	6.887	7.576	106.34	1.200	*	0.00	5.00	10.168	12.20	92.4	0.0	653.4
47.00	Reinf. Top Reinf Bottom	1.00	0.79	6.973	7.671	105.50	1.200	*	0.00	2.00	3.969	4.76	36.5	0.0	258.2
50.00		1.00	0.81	7.098	7.807	104.16	1.200	*	0.00	3.00	5.848	7.02	54.8	0.0	384.0
55.00		1.00	0.83	7.294	8.023	101.74	1.200	*	0.00	5.00	9.465	11.36	91.1	0.0	631.1
60.00	Reinf. Top	1.00	0.85	7.477	8.225	99.113	1.200	*	0.00	5.00	9.113	10.94	89.9	0.0	619.9
62.92	Bot - Section 3	1.00	0.86	7.579	8.337	97.498	1.200	*	0.00	2.92	5.154	6.18	51.6	0.0	161.6
65.00		1.00	0.87	7.650	8.415	96.309	1.200	*	0.00	2.08	3.676	4.41	37.1	0.0	199.9
65.75	Top - Section 2	1.00	0.87	7.675	8.443	95.875	1.200	*	0.00	0.75	1.308	1.57	13.3	0.0	71.1
70.00	Appertunance(s)	1.00	0.89	7.814	8.595	95.182	1.200	*	0.00	4.25	7.264	8.72	74.9	0.0	171.3
75.00		1.00	0.91	7.969	8.766	92.099	1.200	*	0.00	5.00	8.220	9.86	86.5	0.0	193.8
77.00	Appertunance(s)	1.00	0.91	8.030	8.833	90.830	1.200	*	0.00	2.00	3.190	3.83	33.8	0.0	75.2
80.00		1.00	0.92	8.118	8.930	88.890	1.200	*	0.00	3.00	4.679	5.61	50.1	0.0	110.3
85.00		1.00	0.94	8.260	9.086	85.565	1.200	*	0.00	5.00	7.517	9.02	82.0	0.0	177.1
87.00	Appertunance(s)	1.00	0.95	8.315	9.146	84.205	1.200	*	0.00	2.00	2.908	3.49	31.9	0.0	68.5
90.00		1.00	0.95	8.396	9.235	82.135	1.000		0.00	3.00	4.257	4.26	39.3	0.0	100.2
95.00		1.00	0.97	8.526	9.379	78.608	1.000		0.00	5.00	6.814	6.81	63.9	0.0	160.3
100.0	Appertunance(s)	1.00	0.98	8.652	9.517	74.992	1.000		0.00	5.00	6.462	6.46	61.5	0.0	152.0
100.4		1.00	0.98	8.663	9.530	74.662	1.000		0.00	0.45	0.564	0.56	5.4	0.0	13.3
							Totals:			301.35			36,799.1	0.0	30,682.7

* = Cf Adjusted By Linear Load Ra Effect

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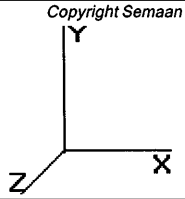

Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 21 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.00
Wind Load Factor : 1.00
Wind Importance Factor : 1.00

Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Ka	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
60.00	Scala 840 10212	1	7.477	8.225	0.90	0.90	2.28	0.000	0.000	18.73	0.00	0.00	6.70
70.00	RFS APXV18-206517S-	3	7.814	8.595	0.64	0.80	9.91	0.000	0.000	85.16	0.00	0.00	79.20
77.00	TX RX Systems 421-86	1	8.030	8.833	0.45	0.90	1.17	0.000	0.000	10.29	0.00	0.00	15.00
77.00	Scala 840 10212	1	8.030	8.833	0.90	0.90	2.28	0.000	0.000	20.11	0.00	0.00	6.70
77.00	Antel LPA-80063/4CF	6	8.030	8.833	0.74	0.80	31.25	0.000	0.000	276.00	0.00	0.00	120.00
77.00	Antel LPA-185063/8CF	6	8.030	8.833	0.77	0.80	13.64	0.000	0.000	120.47	0.00	0.00	54.00
77.00	Flat T-Arm	3	8.030	8.833	0.50	0.75	19.45	0.000	0.000	171.76	0.00	0.00	750.00
87.00	RFS APX16DWV-	3	8.315	9.146	0.54	0.80	10.77	0.000	0.000	98.54	0.00	0.00	118.80
87.00	CCI DTMA-1819-DD-12	6	8.315	9.146	0.36	0.80	1.53	0.000	0.000	14.03	0.00	0.00	85.80
87.00	RFS APXV18-206516S-	3	8.315	9.146	0.62	0.80	6.69	0.000	0.000	61.19	0.00	0.00	56.10
87.00	Flat Low Profile Pla	1	8.315	9.146	1.00	1.00	26.10	0.000	0.000	238.71	0.00	0.00	1,500.00
100.0	RET/ RCU	6	8.701	9.571	0.34	0.75	0.32	0.000	2.000	3.10	0.00	6.20	6.00
100.0	CSS DUO4-8670	12	8.701	9.571	0.53	0.75	41.73	0.000	2.000	399.38	0.00	798.76	798.00
100.0	Platform w/ Rails an	1	8.652	9.517	1.00	1.00	27.20	0.000	0.000	258.87	0.00	0.00	2,000.00
100.0	ADC CG-800DD-FULL-	12	8.701	9.571	0.34	0.75	5.06	0.000	2.000	48.46	0.00	96.91	166.80
100.0	10' Omni	1	8.774	9.651	0.75	0.75	2.25	0.000	5.000	21.71	0.00	108.57	25.00
										1,846.51			5,788.10

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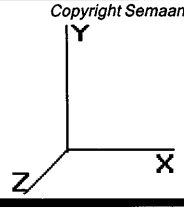

Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 21 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Wind Importance Factor : 1.00

Linear Appurtenance Segment Forces (Factored)

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	qz (psf)	Ra	Cf Adjust Factor	F X (lb)	Dead Load (lb)
5.00	(4) #20 Dywidag	Yes	5.00	0.000	2.00	0.83	0.00	6.129	0.065	0.000	0.00	0.00
10.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	6.129	0.502	0.000	13.35	73.79
10.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	6.129	0.502	0.000	13.35	49.19
10.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	6.129	0.502	0.000	13.35	24.60
10.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	6.129	0.502	0.000	6.74	0.00
10.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	6.129	0.502	0.000	3.67	1.65
15.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	6.129	0.517	0.000	13.35	73.79
15.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	6.129	0.517	0.000	13.35	49.19
15.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	6.129	0.517	0.000	13.35	24.60
15.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	6.129	0.517	0.000	6.74	0.00
15.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	6.129	0.517	0.000	3.67	1.65
20.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	6.129	0.533	0.000	13.35	73.79
20.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	6.129	0.533	0.000	13.35	49.19
20.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	6.129	0.533	0.000	13.35	24.60
20.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	6.129	0.533	0.000	6.74	0.00
20.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	6.129	0.533	0.000	3.67	1.65
25.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	6.129	0.549	0.000	13.35	73.79
25.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	6.129	0.549	0.000	13.35	49.19
25.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	6.129	0.549	0.000	13.35	24.60
25.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	6.129	0.549	0.000	6.74	0.00
25.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	6.129	0.549	0.000	3.67	1.65
29.33	(18) 1 5/8" Coax	Yes	4.33	1.200	3.96	1.43	1.71	6.129	0.565	0.000	11.56	63.90
29.33	(12) 1 5/8" Coax	Yes	4.33	1.200	3.96	1.43	1.71	6.129	0.565	0.000	11.56	42.60
29.33	(6) 1 5/8" Coax	Yes	4.33	1.200	3.96	1.43	1.71	6.129	0.565	0.000	11.56	21.30
29.33	(4) #20 Dywidag	Yes	4.33	1.200	2.00	0.72	0.87	6.129	0.565	0.000	5.84	0.00
29.33	(1) 7/8" Coax	Yes	4.33	1.200	1.09	0.39	0.47	6.129	0.565	0.000	3.18	1.43
30.00	(18) 1 5/8" Coax	Yes	0.67	1.200	3.96	0.22	0.27	6.134	0.575	0.000	1.79	9.89
30.00	(12) 1 5/8" Coax	Yes	0.67	1.200	3.96	0.22	0.27	6.134	0.575	0.000	1.79	6.59
30.00	(6) 1 5/8" Coax	Yes	0.67	1.200	3.96	0.22	0.27	6.134	0.575	0.000	1.79	3.30
30.00	(4) #20 Dywidag	Yes	0.67	1.200	2.00	0.11	0.13	6.134	0.575	0.000	0.90	0.00
30.00	(1) 7/8" Coax	Yes	0.67	1.200	1.09	0.06	0.07	6.134	0.575	0.000	0.49	0.22
32.83	(18) 1 5/8" Coax	Yes	2.83	1.200	3.96	0.93	1.12	6.294	0.581	0.000	7.76	41.76
32.83	(12) 1 5/8" Coax	Yes	2.83	1.200	3.96	0.93	1.12	6.294	0.581	0.000	7.76	27.84
32.83	(6) 1 5/8" Coax	Yes	2.83	1.200	3.96	0.93	1.12	6.294	0.581	0.000	7.76	13.92
32.83	(4) #20 Dywidag	Yes	2.83	1.200	2.00	0.47	0.57	6.294	0.581	0.000	3.92	0.00
32.83	(1) 7/8" Coax	Yes	2.83	1.200	1.09	0.26	0.31	6.294	0.581	0.000	2.14	0.93
35.00	(18) 1 5/8" Coax	Yes	2.17	1.200	3.96	0.72	0.86	6.410	0.579	0.000	6.06	32.03
35.00	(12) 1 5/8" Coax	Yes	2.17	1.200	3.96	0.72	0.86	6.410	0.579	0.000	6.06	21.35
35.00	(6) 1 5/8" Coax	Yes	2.17	1.200	3.96	0.72	0.86	6.410	0.579	0.000	6.06	10.68
35.00	(4) #20 Dywidag	Yes	2.17	1.200	2.00	0.36	0.43	6.410	0.579	0.000	3.06	0.00
35.00	(1) 7/8" Coax	Yes	2.17	1.200	1.09	0.20	0.24	6.410	0.579	0.000	1.67	0.72
40.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	6.659	0.593	0.000	14.50	73.79
40.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	6.659	0.593	0.000	14.50	49.19
40.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	6.659	0.593	0.000	14.50	24.60
40.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	6.659	0.593	0.000	7.33	0.00
40.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	6.659	0.593	0.000	3.99	1.65
45.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	6.887	0.613	0.000	15.00	73.79
45.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	6.887	0.613	0.000	15.00	49.19
45.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	6.887	0.613	0.000	15.00	24.60
45.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	6.887	0.613	0.000	7.58	0.00
45.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	6.887	0.613	0.000	4.13	1.65

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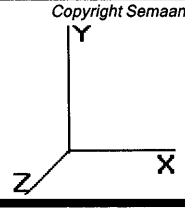

Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 21 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Wind Importance Factor : 1.00

47.00	(18) 1 5/8" Coax	Yes	2.00	1.200	3.96	0.66	0.79	6.973	0.629	0.000	6.08	29.52
47.00	(12) 1 5/8" Coax	Yes	2.00	1.200	3.96	0.66	0.79	6.973	0.629	0.000	6.08	19.68
47.00	(6) 1 5/8" Coax	Yes	2.00	1.200	3.96	0.66	0.79	6.973	0.629	0.000	6.08	9.84
47.00	(4) #20 Dywidag	Yes	2.00	1.200	2.00	0.33	0.40	6.973	0.629	0.000	3.07	0.00
47.00	(1) 7/8" Coax	Yes	2.00	1.200	1.09	0.18	0.22	6.973	0.629	0.000	1.67	0.66
50.00	(18) 1 5/8" Coax	Yes	3.00	1.200	3.96	0.99	1.19	7.098	0.640	0.000	9.28	44.27
50.00	(12) 1 5/8" Coax	Yes	3.00	1.200	3.96	0.99	1.19	7.098	0.640	0.000	9.28	29.52
50.00	(6) 1 5/8" Coax	Yes	3.00	1.200	3.96	0.99	1.19	7.098	0.640	0.000	9.28	14.76
50.00	(4) #20 Dywidag	Yes	3.00	1.200	2.00	0.50	0.60	7.098	0.640	0.000	4.68	0.00
50.00	(1) 7/8" Coax	Yes	3.00	1.200	1.09	0.27	0.33	7.098	0.640	0.000	2.55	0.99
55.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	7.294	0.659	0.000	15.89	73.79
55.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	7.294	0.659	0.000	15.89	49.19
55.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	7.294	0.659	0.000	15.89	24.60
55.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	7.294	0.659	0.000	8.02	0.00
55.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	7.294	0.659	0.000	4.37	1.65
60.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	7.477	0.684	0.000	16.29	73.79
60.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	7.477	0.684	0.000	16.29	49.19
60.00	(6) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	7.477	0.684	0.000	16.29	24.60
60.00	(4) #20 Dywidag	Yes	5.00	1.200	2.00	0.83	1.00	7.477	0.684	0.000	8.22	0.00
60.00	(1) 7/8" Coax	Yes	5.00	1.200	1.09	0.45	0.55	7.477	0.684	0.000	4.48	1.65
62.92	(18) 1 5/8" Coax	Yes	2.92	1.200	3.96	0.96	1.15	7.579	0.625	0.000	9.63	43.04
62.92	(12) 1 5/8" Coax	Yes	2.92	1.200	3.96	0.96	1.15	7.579	0.625	0.000	9.63	28.70
62.92	(6) 1 5/8" Coax	Yes	2.92	1.200	3.96	0.96	1.15	7.579	0.625	0.000	9.63	14.35
62.92	(4) #20 Dywidag	Yes	2.00	1.200	2.00	0.33	0.40	7.579	0.625	0.000	3.33	0.00
65.00	(18) 1 5/8" Coax	Yes	2.08	1.200	3.96	0.69	0.83	7.650	0.572	0.000	6.94	30.75
65.00	(12) 1 5/8" Coax	Yes	2.08	1.200	3.96	0.69	0.83	7.650	0.572	0.000	6.94	20.50
65.00	(6) 1 5/8" Coax	Yes	2.08	1.200	3.96	0.69	0.83	7.650	0.572	0.000	6.94	10.25
65.75	(18) 1 5/8" Coax	Yes	0.75	1.200	3.96	0.25	0.30	7.675	0.578	0.000	2.51	11.07
65.75	(12) 1 5/8" Coax	Yes	0.75	1.200	3.96	0.25	0.30	7.675	0.578	0.000	2.51	7.38
65.75	(6) 1 5/8" Coax	Yes	0.75	1.200	3.96	0.25	0.30	7.675	0.578	0.000	2.51	3.69
70.00	(18) 1 5/8" Coax	Yes	4.25	1.200	3.96	1.40	1.68	7.814	0.579	0.000	14.47	62.72
70.00	(12) 1 5/8" Coax	Yes	4.25	1.200	3.96	1.40	1.68	7.814	0.579	0.000	14.47	41.82
70.00	(6) 1 5/8" Coax	Yes	4.25	1.200	3.96	1.40	1.68	7.814	0.579	0.000	14.47	20.91
75.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	7.969	0.401	0.000	17.36	73.79
75.00	(12) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	7.969	0.401	0.000	17.36	49.19
77.00	(18) 1 5/8" Coax	Yes	2.00	1.200	3.96	0.66	0.79	8.030	0.414	0.000	7.00	29.52
77.00	(12) 1 5/8" Coax	Yes	2.00	1.200	3.96	0.66	0.79	8.030	0.414	0.000	7.00	19.68
80.00	(18) 1 5/8" Coax	Yes	3.00	1.200	3.96	0.99	1.19	8.118	0.212	0.000	10.61	44.27
85.00	(18) 1 5/8" Coax	Yes	5.00	1.200	3.96	1.65	1.98	8.260	0.220	0.000	17.99	73.79
87.00	(18) 1 5/8" Coax	Yes	2.00	1.200	3.96	0.66	0.79	8.315	0.227	0.000	7.24	29.52
										Totals:	784.24	2,256.48

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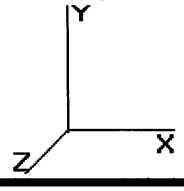

Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 21 Iterations

Gust Response Factor: 1.10
Dead Load Factor: 1.00
Wind Load Factor: 1.00

Wind Importance Factor: 1.00

Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	86.06	735.88	0.00	0.00
10.00	150.88	911.74	0.00	0.00
15.00	148.04	900.58	0.00	0.00
20.00	145.19	889.42	0.00	0.00
25.00	142.35	878.25	0.00	0.00
29.33	120.97	751.53	0.00	0.00
30.00	18.78	162.21	0.00	0.00
32.83	80.81	680.60	0.00	0.00
35.00	62.46	373.09	0.00	0.00
40.00	147.30	851.61	0.00	0.00
45.00	149.14	840.45	0.00	0.00
47.00	59.50	333.05	0.00	0.00
50.00	89.85	496.23	0.00	0.00
55.00	151.18	818.12	0.00	0.00
60.00	170.24	813.66	0.00	0.00
62.92	83.78	269.76	0.00	0.00
65.00	57.95	277.10	0.00	0.00
65.75	20.77	98.91	0.00	0.00
70.00	203.48	408.11	0.00	0.00
75.00	121.19	354.60	0.00	0.00
77.00	646.44	1,085.20	0.00	0.00
80.00	60.75	176.23	0.00	0.00
85.00	99.95	287.02	0.00	0.00
87.00	451.63	1,873.16	0.00	0.00
90.00	39.31	121.91	0.00	0.00
95.00	63.91	196.48	0.00	0.00
100.0	793.03	3,183.91	0.00	1,010.45
100.4	5.38	13.27	0.00	0.00
Totals:	4,370.30	18,782.07	0.00	1,010.45

Pole :	302481	Code: ANSI/TIA-222 Rev G	
Location :	Hrfr South, CT	Struct Class : II	
Height :	100.4 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	30.00 (in)		
Top Dia :	14.50 (in)		
Taper :	0.163016 (in/ft)	Base Elev : 0.000 (ft)	

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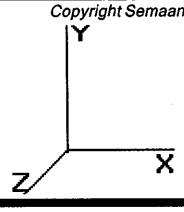
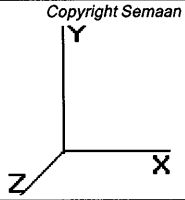


Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 21 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.00
Wind Load Factor : 1.00
Wind Importance Factor : 1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-18.78	-4.38	0.00	-292.89	0.00	292.89	1,396.48	698.24	1,714.19	846.57	0.00	0.00	0.163
5.00	-18.04	-4.32	0.00	-270.98	0.00	270.98	1,362.62	681.31	1,626.42	803.23	0.04	-0.07	0.156
10.00	-17.12	-4.18	0.00	-249.41	0.00	249.41	1,324.23	662.12	1,535.70	758.42	0.14	-0.13	0.148
15.00	-16.22	-4.05	0.00	-228.50	0.00	228.50	1,285.85	642.92	1,447.58	714.91	0.31	-0.20	0.141
20.00	-15.32	-3.92	0.00	-208.25	0.00	208.25	1,247.46	623.73	1,362.07	672.67	0.55	-0.26	0.133
25.00	-14.44	-3.78	0.00	-188.67	0.00	188.67	1,209.08	604.54	1,279.15	631.73	0.86	-0.32	0.125
29.33	-13.69	-3.67	0.00	-172.28	0.00	172.28	1,175.84	587.92	1,209.46	597.31	1.17	-0.37	0.118
30.00	-13.53	-3.65	0.00	-169.82	0.00	169.82	1,170.70	585.35	1,198.85	592.07	1.22	-0.38	0.115
32.83	-12.85	-3.57	0.00	-159.49	0.00	159.49	901.94	450.97	925.08	456.86	1.46	-0.41	0.143
35.00	-12.47	-3.51	0.00	-151.74	0.00	151.74	889.12	444.56	898.85	443.91	1.65	-0.43	0.138
40.00	-11.62	-3.37	0.00	-134.17	0.00	134.17	859.60	429.80	839.85	414.77	2.13	-0.49	0.127
45.00	-10.78	-3.22	0.00	-117.32	0.00	117.32	830.07	415.03	782.85	386.62	2.67	-0.53	0.116
47.00	-10.44	-3.16	0.00	-110.88	0.00	110.88	830.07	415.03	782.85	386.62	2.90	-0.55	0.111
47.00	-10.44	-3.16	0.00	-110.88	0.00	110.88	830.07	415.03	782.85	386.62	2.90	-0.55	0.111
50.00	-9.95	-3.07	0.00	-101.39	0.00	101.39	800.54	400.27	727.86	359.46	3.25	-0.58	0.104
55.00	-9.13	-2.92	0.00	-86.03	0.00	86.03	771.02	385.51	674.87	333.29	3.88	-0.62	0.092
60.00	-8.31	-2.74	0.00	-71.43	0.00	71.43	771.02	385.51	674.87	333.29	4.56	-0.66	0.080
60.00	-8.31	-2.74	0.00	-71.43	0.00	71.43	771.02	385.51	674.87	333.29	4.56	-0.66	0.243
62.92	-8.04	-2.66	0.00	-63.42	0.00	63.42	724.27	362.13	595.07	293.88	4.97	-0.68	0.227
65.00	-7.77	-2.60	0.00	-57.88	0.00	57.88	711.96	355.98	574.90	283.92	5.27	-0.72	0.215
65.75	-7.67	-2.59	0.00	-55.92	0.00	55.92	542.54	271.27	446.58	220.55	5.39	-0.74	0.268
70.00	-7.26	-2.39	0.00	-44.92	0.00	44.92	523.71	261.86	415.99	205.44	6.08	-0.82	0.233
75.00	-6.90	-2.27	0.00	-32.96	0.00	32.96	501.57	250.78	381.40	188.36	7.00	-0.92	0.189
77.00	-5.83	-1.61	0.00	-28.41	0.00	28.41	492.71	246.36	367.98	181.73	7.39	-0.96	0.168
80.00	-5.65	-1.56	0.00	-23.57	0.00	23.57	479.42	239.71	348.30	172.01	8.01	-1.00	0.149
85.00	-5.36	-1.45	0.00	-15.79	0.00	15.79	457.28	228.64	316.71	156.41	9.10	-1.07	0.113
87.00	-3.50	-0.97	0.00	-12.88	0.00	12.88	448.42	224.21	304.49	150.38	9.55	-1.09	0.093
90.00	-3.38	-0.93	0.00	-9.98	0.00	9.98	435.14	217.57	286.61	141.55	10.25	-1.12	0.078
95.00	-3.18	-0.86	0.00	-5.33	0.00	5.33	412.99	206.50	258.02	127.43	11.44	-1.15	0.050
100.00	-0.01	-0.01	0.00	0.00	0.00	0.00	390.85	195.42	230.93	114.05	12.66	-1.17	0.000
100.45	0.00	-0.01	0.00	0.00	0.00	0.00	388.85	194.43	228.57	112.88	12.77	-1.17	0.000



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Analysis Summary

Load Case	Reactions Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Max Usage Elev (ft)	Max Usage Interaction Ratio
1.2D + 1.6W	17.58	0.00	21.69	0.00	0.00	1180.60	65.75	1.04
0.9D + 1.6W	17.57	0.00	17.26	0.00	0.00	1170.88	65.75	1.02
1.2D + 1.0Di + 1.0Wi	5.05	0.00	59.15	0.00	0.00	361.28	65.75	0.38
1.0D + 1.0W	4.38	0.00	18.78	0.00	0.00	292.89	65.75	0.27

Additional Steel Summary

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors VQ/I (lb/in)	Shear Applied (kips)	Shear phiVn (kips)	Upper Termination Connectors MQ/I (kips)	phiVn (kips)	Num Reqd	Num Actual	Lower Termination Connectors MQ/I (kips)	phiVn (kips)	Num Reqd	Num Actual	Max Member Pu (kip)	phiPn (kip)	Ratio
0.00	47.0	(4) SOL-#20 All Thre	282.0	8.5	16.8	0.0	12.0	0	8	0.0	12.0	0	0	214.5	330.5	0.65
47.0	60.0	(4) SOL-#20 All Thre	277.5	8.3	16.8	85.4	12.0	8	8	0.0	12.0	0	0	118.6	330.5	0.36

Base/Flange Plate	Plate Type	***Baseplate***	
	Pole Diameter	31	in
	Pole Thickness	0.281	in
	Plate Length	44	in
	Plate Thickness	2	in
	Plate Fy	60	ksi
	Weld Length	0.375	in
	ϕ_s Resistance	1469.75	k-in
	Applied	968.93	k-in
Stiffeners	#	***0***	

Bolts	#	***8***	
	Bolt Circle	44	in
	(R)adial / (S)quare	S	
	Bolt Gap	6	in
●	Diameter	2.25	in
	Hole Diameter	2.375	in
	Type	18J	
	Fy	75	ksi
	Fu	100	ksi
	ϕ_s Resistance	259.82	k
	Applied	98.12	k
Reinforcement ●	#	***4***	
	DYW. Circle	44	in
	Offset Angle	22.5	°
	Type	#20	
	Diameter	2.5	in
	Fu	100	ksi
Extra Bolts O	#	***0***	

Code Rev. **G**

Moment	1180.6 k-ft
Axial	59.2 k

Date	6/19/2009
Engineer	CM
Site #	302481
Carrier	Verizon

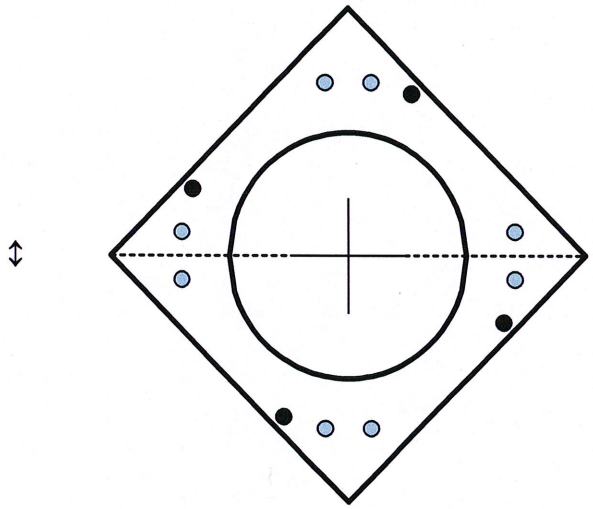
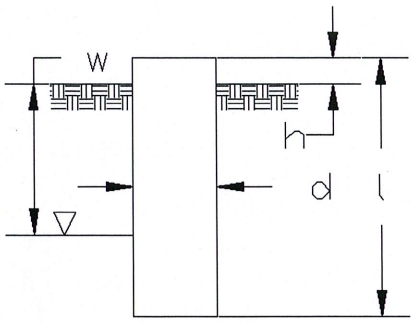


Plate Stress Ratio:
0.66 (Pass)

Bolt Stress Ratio:
0.38 (Pass)

Site Name:	**Hrfr-South, CT**
Site Number:	**302481**
Engineer:	**CM**
Date:	**6/19/2009**



Design Base Loads (Factored)

Moment (Mu):	1180.6	k-ft
Shear (Vu):	17.6	k
Compression (Pu):	59.2	k
Uplift (Tu):		k

	MP	
Tower Type (MP, SST, GT):		
Diameter of Caisson (d):	6.0	ft
Length of Caisson (l):	6.5	ft
Caisson Height Above Ground (h):	0.5	ft
Depth Below Ground Surface to Water Table (w):	50.0	ft
Unit Weight of Concrete:	150.0	pcf
Unit Weight of Water:	62.4	pcf
Tension Skin Friction/Compression Skin Friction:	1.00	
Ultimate Compressive Bearing Pressure:	15000.0	psf
Capacity Increase (Due to Transient Loads):	1.00	

Axial Capacities

Depth (ft) Top	Depth (ft) Bottom	Ultimate Skin Friction (psf)	Resistance per Depth (k)

Volume of Concrete:	183.8	ft^3
Weight of Concrete (Buoyancy Effect Considered):	27.6	k
Skin Friction Resistance:	0.0	k
Compressive Bearing Resistance:	424.1	k
Nominal Uplift Capacity per Leg (f_sT_n) (w/ 2/3 factor):	13.8	k
Nominal Compressive Capacity per Leg (f_sP_n):	318.1	k
T_u/f_sT_n:	0.00	Result: OK
P_u/f_sP_n:	0.19	Result: OK

Lateral Capacity

Lateral Bearing Pressure/Depth

Depth (ft) Top	Depth (ft) Bottom	Ultimate Lateral Bearing Pressure (psf)	Increment (psf/ft)	g_{Soil} (pcf)	f (degree)	Cohesion (psf)
0.0	1.0	0.0	325.5	100	32	0
1.0	3.0	325.5	358.0	110	32	0
2.0	3.0	1041.5	358.0	110	32	0
3.0	5.0	1521.0	371.4	105	34	0
5.0	6.0	2465.2	462.2	120	36	0

Total Lateral Resistance:	55.4	k
Inflection Point (Below Ground Surface):	4.8	ft
Design Overturning Moment At Inflection Point (M_{uip}):	1273.7	k-ft
Nominal Moment Capacity per Leg (f_sM_n) (adjusted for Rock Anchors):	1297.4	k-ft
M_{uip}/f_sM_n:	0.98	Result: OK

Caisson Strength Capacity

Concrete Compressive Strength (f'_c):	3000	psi
Vertical Steel Rebar Area:	1.56	in^2
# of Vertical Steel Rebars:	52	Minimum # of vertical rebar met
Vertical Steel Rebar Yield Strength (F_y):	60	ksi
Horizontal Tie / Stirrup Area:	0.20	in^2
Horizontal Tie / Stirrup Spacing:	12.0	in
Horizontal Tie / Stirrup Steel Yield Strength (F_y):	60	ksi
Rebar Cage Diameter:	66.0	in
Strength Bending/Tension Reduction Factor (f_B):	0.90	ACI318-005 - 9.3.2.1
Strength Shear Reduction Factor (f_V):	0.75	ACI318-005 - 9.3.2.3
Strength Compression Reduction Factor (f_V):	0.65	ACI318-005 - 9.3.2.2
Steel Elastic Modulus:	29000	ksi
Maximum Allowable Strain in Rebar:	0.004	ACI318-005 - 10.3.5
Design Moment (M_u):	1356.4	k-ft
Nominal Moment Capacity ($f_B M_n$):	12192.8	k-ft - ACI318-005 - 10.2
$M_u/f_B M_n$:	0.11	Result: OK
Design Shear (V_u):	18.6	k
Nominal Shear Capacity ($f_V V_n$):	420.9	k - ACI318-005 - 11.3.1.1 or 11.5.7.2
$V_u/f_V V_n$:	0.04	Result: OK
Design Tension (T_u):	0.0	k
Nominal Tension Capacity ($f_T T_n$):	4380.5	k - ACI318-005 - 10.2
$T_u/f_T T_n$:	0.00	Result: OK
Design Compression (P_u):	59.2	k
Nominal Compression Capacity ($f_P P_n$):	6614.1	k - ACI318-005 - 10.3.6.2
$P_u/f_P P_n$:	0.01	Result: OK
Bending Reinforcement Ratio:	0.020	Reinforcement Ratio is Satisfactory - ACI318-005 - 10.5.1

Exhibit F

Structural Modification Drawings

Pocket Site HFCT0105A

289 Mountain Street

Hartford, Connecticut

AMERICAN TOWER®
CORPORATION
400 REGENCY FOREST DRIVE
CARY, NORTH CAROLINA 27518
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302481 - HRFR - SOUTH, CONNECTICUT

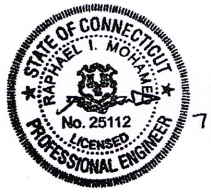
100 FT ITT MEYER MONOPOLE REINFORCING

PROJECT DESCRIPTION:
"THE MODIFICATIONS PRESENTED ON THESE DRAWINGS ARE BASED ON THE RECOMMENDATIONS OUTLINED IN THE STRUCTURAL ANALYSIS COMPLETED UNDER ENGINEERING PROJECT NUMBER 43004023 & 43595321 DATED 05/15/09 & 06/19/09. SATISFACTORY COMPLETION OF THE WORK INDICATED ON THESE DRAWINGS WILL RESULT IN THE STRUCTURE MEETING THE REQUIREMENTS OF THE SPECIFICATIONS UNDER WHICH THE STRUCTURAL WAS COMPLETED."

AS-BUILT SIGN-OFF		
DESCRIPTION	SIGNATURE	DATE
CONTRACTOR NAME		
CONTRACTOR REP. (PRINT NAME)		
CONTRACTOR REP. (SIGNATURE)		
REDEVELOPMENT P.M. (PRINT NAME)		
REDEVELOPMENT P.M. (SIGNATURE)		

PROJECT SUMMARY

ATC PROJECT NUMBER:	43004034 & 43595333
CUSTOMER:	VERIZON & YOUGHIOGHENY
CUSTOMER SITE NUMBER:	N/A & HFCT0105A
CUSTOMER SITE NAME:	HARTFORD SOUTH-3 & HARTFORD SOUTH
SITE ADDRESS:	END OF MOUNTAIN STREET HARTFORD, CT 06106
DATE:	07/01/09
REVISION:	0



7/2/09

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the state of Connecticut.

DRAWING	DRAWING TITLE	REV.
BOM	BILL OF MATERIALS (1 PAGE)	0
CTGN	CONNECTICUT GENERAL NOTES	0
A-1	MODIFICATION PROFILE	0
A-2	REINFORCEMENT INSTALLATION DETAILS	0
BR-20E	#20 BAR BRACKET DETAIL [ECCENTRIC]	0
ETB5H	TERMINATION BRACKET DETAILS	0
#20SB	#20 STEP BOLT BRACKET INSTALLATION DETAILS	0

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PROJECT SUMMARY

ATC PROJECT NUMBER	CUSTOMER	CUSTOMER SITE NUMBER	CUSTOMER SITE NAME	SITE ADDRESS	REV.
43004034 & 43595333	VERIZON & YOUGHIOGHENY	N/A & HFCT0105A	HARTFORD SOUTH-3 & HARTFORD SOUTH	END OF MOUNTAIN STREET HARTFORD, CT 06106	0

BILL OF MATERIALS

QUANTITY REQUIRED	QUANTITY SHIPPED	PART NUMBER	DESCRIPTION	LENGTH	DRAWING LIST	PIECE WEIGHT	WEIGHT (lb)	NOTES
			DYWIDAG REINFORCEMENT MATERIAL & HARDWARE					
4	4	—	#20 GALVANIZED DYWIDAG BAR	20'-0"	A-1, A-2	334.0	1336	
4	4	—	#20 COUPLER W/ (2) NUTS EA.	—	—	—	—	
28	28	BR-20E	L 6" X 3 1/2" X 3/8"	1'-0"	A-2, BR-20E	12.3	344	ECCENTRIC
4	4	ETB5H	L 6" X 3 1/2" X 3/8"	2'-5 1/2"	A-2, ETB5H	30.2	121	ECCENTRIC
88	92	—	RU-BOLT, 5/8"Ø X 3 1/8" C/C	—	—	—	—	(2) HHN - LKW
76	80	—	HOLLO-BOLT, 5/8"Ø (M16) LINDAPTER	—	—	—	—	GALVANIZED
						TOTAL WEIGHT (lb) =	1,801	

GENERAL

1. ALL METHODS, MATERIALS AND WORKMANSHIP SHALL FOLLOW THE DICTATES OF GOOD CONSTRUCTION PRACTICE.
2. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN TOWER AND FOUNDATION CONSTRUCTION.
3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY OF ANY INSTALLATION INTERFERENCES. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. DETAILS NOT SPECIFICALLY SHOWN ON THE DRAWINGS SHALL FOLLOW SIMILAR DETAILS FOR THIS JOB.
4. ANY SUBSTITUTIONS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
5. ANY MANUFACTURED DESIGN ELEMENTS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS AND SHOULD BE SIMILAR TO THOSE SHOWN. THESE DESIGN ELEMENTS MUST BE STAMPED BY AN ENGINEER PROFESSIONALLY REGISTERED IN THE STATE OF THE PROJECT, AND SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION.
6. ALL WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL CODES AND OSHA SAFETY REGULATIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY TO PROVIDE A COMPLETE AND STABLE STRUCTURE AS SHOWN ON THESE DRAWINGS.
8. CONTRACTOR'S PROPOSED INSTALLATION SHALL NOT INTERFERE, NOR DENY ACCESS TO, ANY EXISTING OPERATIONAL AND SAFETY EQUIPMENT.
9. FIELD CUT EDGES, EXCEPT DRILLED HOLES, SHALL BE GROUND SMOOTH.
10. ALL FIELD CUT SURFACES SHALL BE REPAIRED WITH ZRC GALVITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS REQUIREMENTS.

APPLICABLE CODES AND STANDARDS

1. ANSI/TIA/EIA: STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES, 222-G EDITION.
2. 2003 INTERNATIONAL BUILDING CODE WITH 2005 CONNECTICUT SUPPLEMENTS AND 2006 CONNECTICUT AMENDMENTS.
3. ACI 318: AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, 318-99.
4. CRSI: CONCRETE REINFORCING STEEL INSTITUTE, MANUAL OF STANDARD PRACTICE, LATEST EDITION.
5. AISC: AMERICAN INSTITUTE OF STEEL CONSTRUCTION, MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.
6. AWS: AMERICAN WELDING SOCIETY D1.1, STRUCTURAL WELDING CODE, LATEST EDITION.

STRUCTURAL STEEL

1. ALL DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC SPECIFICATIONS, LATEST EDITION.
2. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
3. ALL U-BOLTS SHALL BE ASTM A307 OR EQUIVALENT, WITH LOCKING DEVICE, UNLESS NOTED OTHERWISE.

WELDING

1. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
2. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, U.N.O.
3. MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.
4. PRIOR TO FIELD WELDING GALVANIZED MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING 1/2" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS REQUIREMENTS.

PAINT

1. AS REQUIRED, CLEAN AND PAINT PROPOSED STEEL ACCORDING TO FAA ADVISORY CIRCULAR AC 70/7460-1K.

BOLT TIGHTENING PROCEDURE

1. TIGHTEN FLANGE BOLTS BY AISC "TURN-OF-THE-NUT" METHOD, USING THE CHART BELOW:

BOLT LENGTHS UP TO AND INCLUDING FOUR DIAMETERS

1/2"	BOLTS UP TO AND INCLUDING 2.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
5/8"	BOLTS UP TO AND INCLUDING 3.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
3/4"	BOLTS UP TO AND INCLUDING 4.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
7/8"	BOLTS UP TO AND INCLUDING 3.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1"	BOLTS UP TO AND INCLUDING 4.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS UP TO AND INCLUDING 4.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS UP TO AND INCLUDING 5.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS UP TO AND INCLUDING 6.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT

BOLT LENGTHS OVER FOUR DIAMETERS BUT NOT EXCEEDING EIGHT DIAMETERS

1/2"	BOLTS 2.75 TO 4.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
5/8"	BOLTS 3.25 TO 5.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
3/4"	BOLTS 4.25 TO 6.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
7/8"	BOLTS 3.75 TO 7.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1"	BOLTS 4.25 TO 8.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS 4.75 TO 9.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS 5.25 TO 10.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS 6.25 TO 12.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT

2. SPLICE BOLTS SUBJECT TO DIRECT TENSION SHALL BE INSTALLED AND TIGHTENED AS PER SECTION 8.2.1 OF THE AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS", LOCATED IN THE AISC MANUAL OF STEEL CONSTRUCTION. THE INSTALLATION PROCEDURE IS PARAPHRASED AS FOLLOWS:

   FASTENERS SHALL BE INSTALLED IN PROPERLY ALIGNED HOLES AND TIGHTENED BY ONE OF THE METHODS DESCRIBED IN SUBSECTION 8.2.1 THROUGH 8.2.4.

   8.2.1 TURN-OF-NUT PRETENSIONING
   BOLTS SHALL BE INSTALLED IN ALL HOLES OF THE CONNECTION AND BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1, UNTIL ALL THE BOLTS ARE SIMULTANEOUSLY SNUG TIGHT AND THE CONNECTION IS FULLY COMPACTED. FOLLOWING THIS INITIAL OPERATION ALL BOLTS IN THE CONNECTION SHALL BE TIGHTENED FURTHER BY THE APPLICABLE AMOUNT OF ROTATION SPECIFIED ABOVE. DURING THE TIGHTENING OPERATION THERE SHALL BE NO ROTATION OF THE PART NOT TURNED BY THE WRENCH. TIGHTENING SHALL PROGRESS SYSTEMATICALLY.

3. ALL OTHER BOLTED CONNECTIONS SHALL BE BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1 OF THE SPECIFICATION.

SPECIAL INSPECTION

1. A QUALIFIED INDEPENDENT TESTING LABORATORY, EMPLOYED BY THE OWNER, SHALL PERFORM INSPECTION AND TESTING IN ACCORDANCE WITH IBC 2003, SECTION 1704 AS REQUIRED BY PROJECT SPECIFICATIONS FOR THE FOLLOWING CONSTRUCTION WORK:
   a) STRUCTURAL WELDING
   b) HIGH STRENGTH BOLTS
2. THE INSPECTION AGENCY SHALL SUBMIT INSPECTION AND TEST REPORTS TO THE BUILDING DEPARTMENT, THE ENGINEER OF RECORD, AND THE OWNER IN ACCORDANCE WITH IBC 2003, SECTION 1704, UNLESS THE FABRICATOR IS APPROVED BY THE BUILDING OFFICIAL TO PERFORM SUCH WORK WITHOUT THE SPECIAL INSPECTIONS.

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NYSE AMT

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REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	PAT	01/15/09

SITE NUMBER:
VARIOUS
SITE NAME:
VARIOUS
SITE ADDRESS:
VARIOUS

DRAWN BY:	PAT
CHECKED BY:	BKL
DATE DRAWN:	01/15/09
ATC JOB NO:	VARIOUS

SHEET TITLE:
CONNECTICUT GENERAL NOTES

SHEET NUMBER:	REV. #
CTGN	0

AT&T MOBILITY
EL: 100.0'± [EXISTING]

EL: 100.0'
[TOP OF STRUCTURE]

T-MOBILE
EL: 87.0' [EXISTING]

SECTION 3

VERIZON
EL: 77.0' [PROPOSED RECO.]

TOWN OF W. HARTFORD
EL: 75.0' [EXISTING]

TOWN OF W. HARTFORD
EL: 71.0' [EXISTING]

YOUGHIOGHENY
EL: 70.0' [PROPOSED]

EL: 65.8'

TOWN OF W. HARTFORD
EL: 60.0' [EXISTING]

#20 DYWIDAG REINFORCEMENT FROM EL: 51.0' TO 71.0'. SEE SHEET A-2 FOR INSTALLATION DETAILS.

SECTION 2

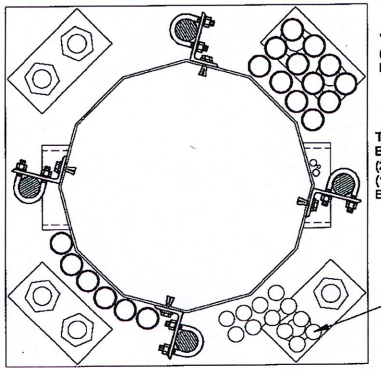
EL: 32.8'

SECTION 1

EL: 0.0'
[BOTTOM OF STRUCTURE]

GRADE

TOWER ELEVATION VIEW



VERIZON PROPOSED
(12) 1 5/8"Ø COAX
EL: 77.0'

TOWN OF W. HARTFORD
EXISTING
(2) 7/8"Ø COAX
(1) 3/8"Ø COAX
EL: VARIES

YOUGHIOGHENY
PROPOSED
(6) 1 5/8"Ø COAX
EL: 70.0'

COAX TO BE RECONFIGURED AS NECESSARY.

T-MOBILE EXISTING
(12) 7/8"Ø COAX
EL: 87.0'

COAX DISTRIBUTION
[EXTERIOR]

NOTE: RELOCATE TOWN OF W. HARTFORD ANTENNAS AS NECESSARY.

AMERICAN TOWER
STRUCTURAL ENGINEERING
400 REGENCY FOREST DRIVE
CARY, NORTH CAROLINA 27518
PHONE: (919) 468-0112
FAX: (919) 468-5040
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REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	JMB	07/01/09

SITE NUMBER:
302481

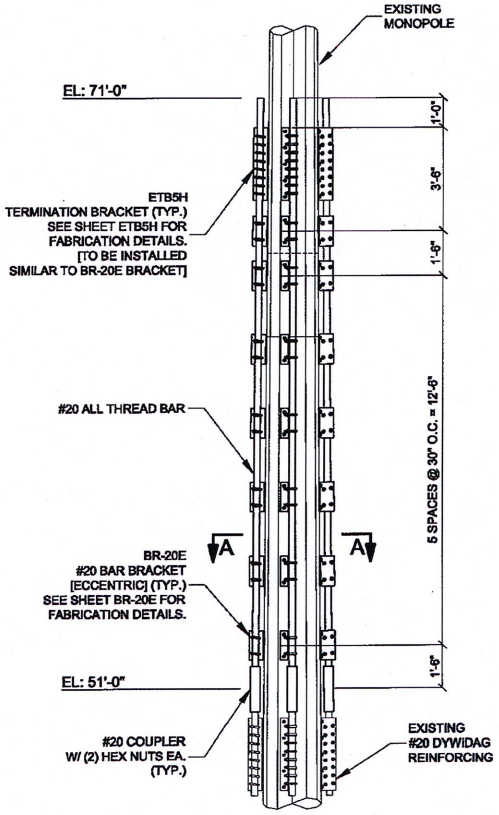
SITE NAME:
HRFR - SOUTH CONNECTICUT

SITE ADDRESS:
END OF MOUNTAIN STREET
HARTFORD, CT 06106

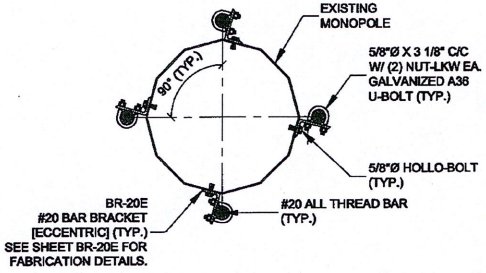
DRAWN BY:	JMB
CHECKED BY:	JMS
DATE DRAWN:	07/01/09
ATC JOB NO:	43004094 & 43595333

SHEET TITLE:
MODIFICATION PROFILE

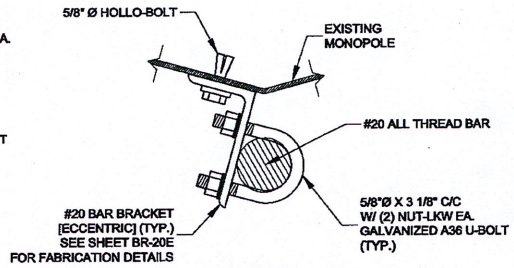
SHEET NUMBER:	REV. #
A-1	0



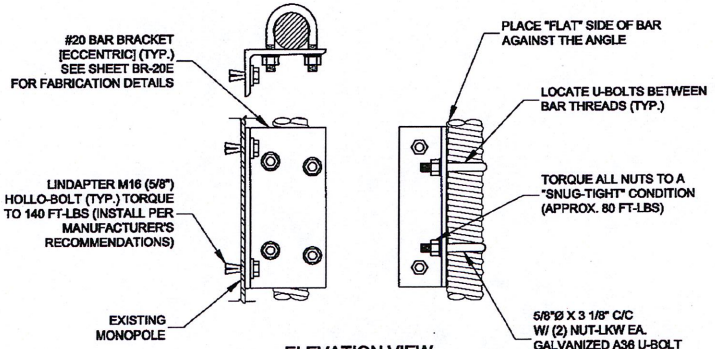
ELEVATION VIEW
(#20 BRACKET SPACING DETAIL)



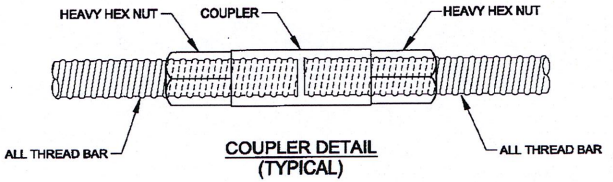
PLAN VIEW
(SECTION "A-A")



PLAN VIEW
(#20 DYWIDAG ORIENTATION)
[ECCENTRIC]



ELEVATION VIEW
(#20 DYWIDAG ORIENTATION)
[ECCENTRIC]



COUPLER DETAIL
(TYPICAL)

NOTES:
1) REPLACE ANY EXISTING STEP BOLTS THAT INTERFERE WITH NEW REINFORCING BARS. THE NEW STEP SHALL BE ATTACHED TO THE REINFORCING BARS IN THE SAME APPROXIMATE LOCATION. SEE SHEET #20SB-BRACKET FOR INSTALLATION DETAILS.
2) PLACE A BRACKET (BR-20E) DIRECTLY ABOVE AND BELOW ANY EXISTING PORTHOLE AS REQUIRED.

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REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	JMB	07/01/09
1			
2			

SITE NUMBER:
302481

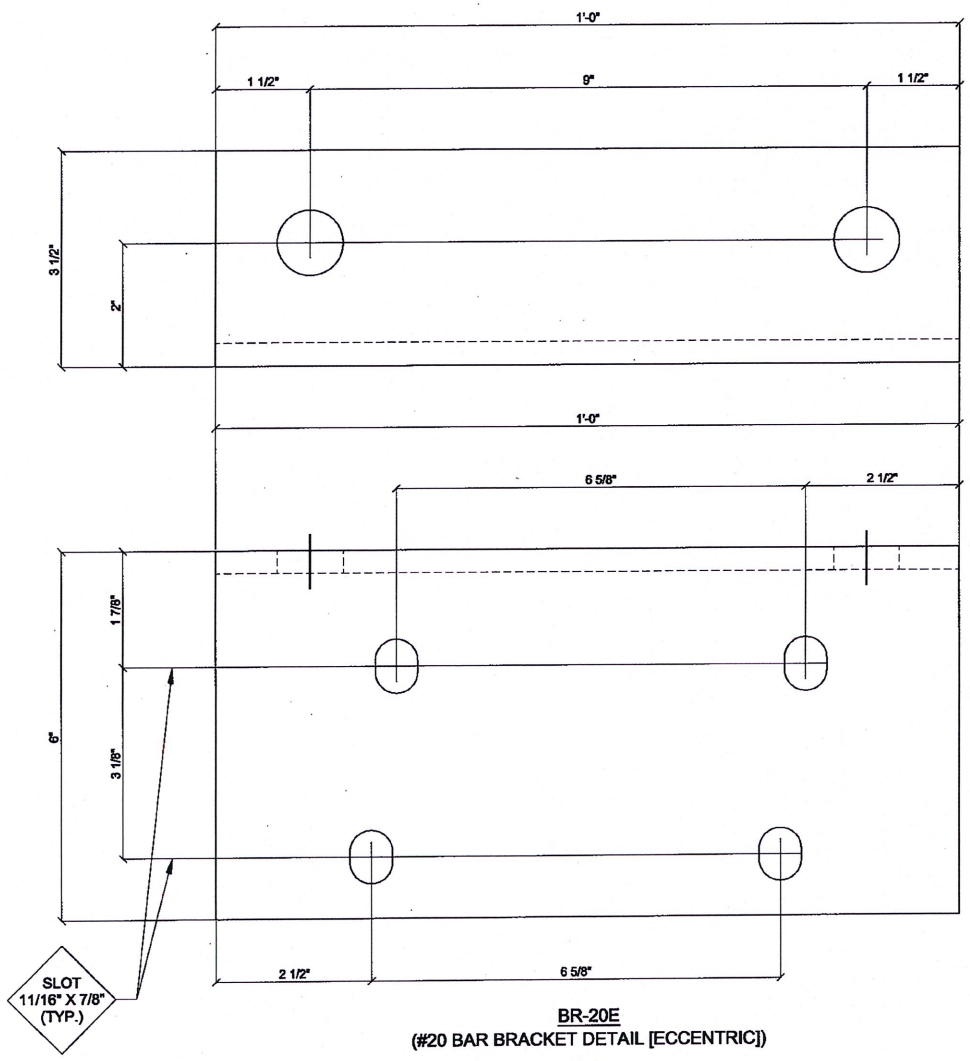
SITE NAME:
HRFR - SOUTH CONNECTICUT

SITE ADDRESS:
END OF MOUNTAIN STREET
HARTFORD, CT 06106

DRAWN BY:	JMB
CHECKED BY:	JMS
DATE DRAWN:	07/01/09
ATC JOB NO:	4300409 & 4399333

SHEET TITLE:
REINFORCEMENT INSTALLATION DETAILS

SHEET NUMBER:	REV. #
A-2	0



BR-20E

(#20 BAR BRACKET DETAIL [ECCENTRIC])

MK	QTY	DESCRIPTION	LENGTH	REMARKS	REV	WT
BR-20E	ONE	L 6" X 3 1/2" X 3/8"	1'-0"			11.7#

TOTAL WEIGHT:	12.3 lbs
HOLES:	1 1/16"Ø U.N.O.
MATERIAL:	A36
FINISH:	GALVANIZE

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REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	JMB	08/04/06

SITE NUMBER:
VARIOUS

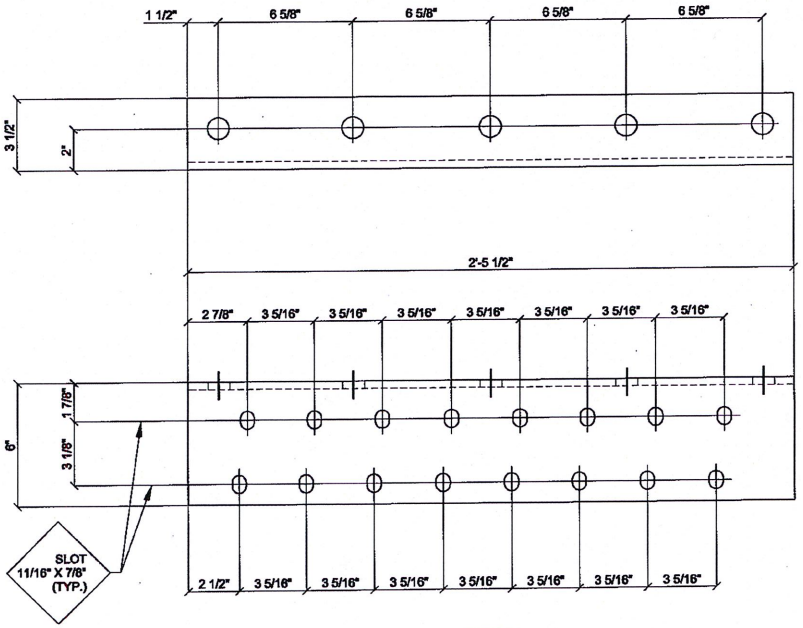
SITE NAME:
VARIOUS

SITE ADDRESS:
VARIOUS

DRAWN BY:	JMB
CHECKED BY:	JMS
DATE DRAWN:	08/04/06
ATC JOB NO:	VARIOUS

SHEET TITLE:
#20 BAR BRACKET DETAIL [ECCENTRIC]

SHEET NUMBER:	REV. #
BR-20E	0



ETB5H
(TERMINATION BRACKET)

MK	QTY	DESCRIPTION	LENGTH	REMARKS	REV	WT
ETB5H	ONE	L 6" X 3 1/2" X 3/8"	2'-5 1/2"			28.8#

TOTAL WEIGHT:	30.2 lbs
HOLES:	1 1/16"Ø U.N.O.
MATERIAL:	A36
FINISH:	GALVANIZE

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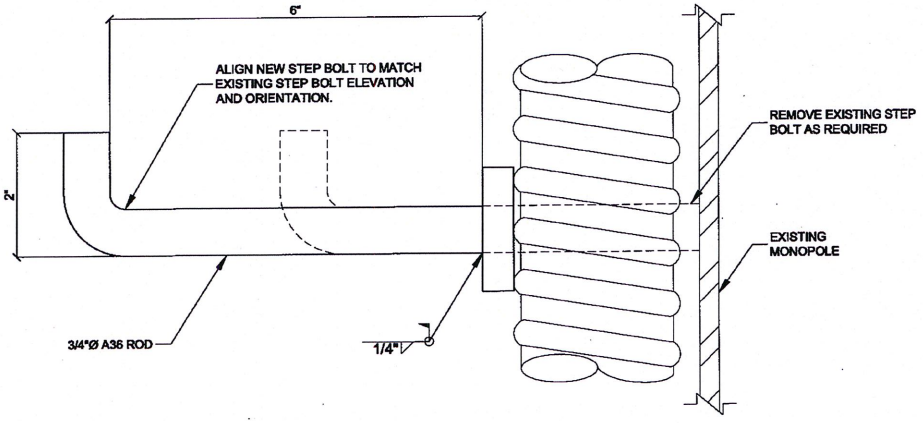
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	JTP	11/13/06

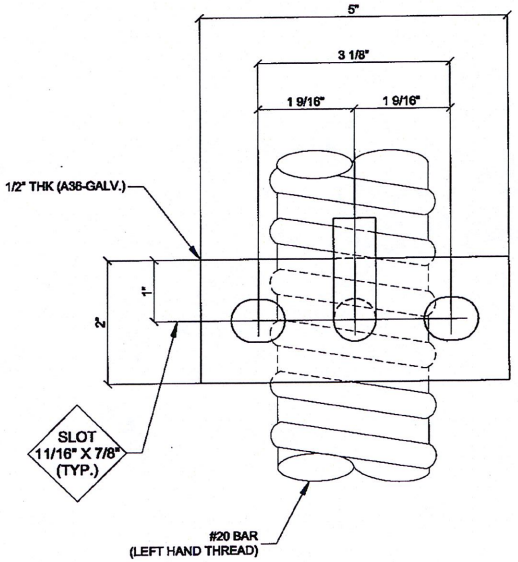
SITE NUMBER:
VARIOUS
SITE NAME:
VARIOUS
SITE ADDRESS:
VARIOUS

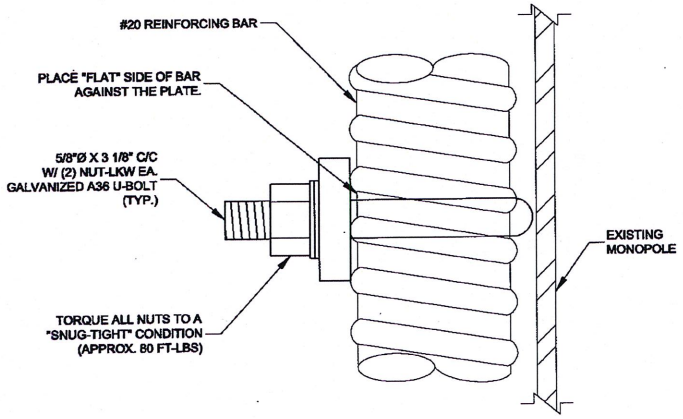
DRAWN BY:	JTP
CHECKED BY:	JMB
DATE DRAWN:	11/13/06
ATC JOB NO:	VARIOUS

SHEET TITLE:
TERMINATION BRACKET DETAILS

SHEET NUMBER: ETB5H
REV. # 0







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REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	JMB	08/04/08

SITE NUMBER:
VARIOUS
SITE NAME:
VARIOUS
SITE ADDRESS:
VARIOUS

DRAWN BY:	JMB
CHECKED BY:	JMS
DATE DRAWN:	08/04/08
ATC JOB NO:	VARIOUS

SHEET TITLE:
#20 STEP BOLT BRACKET INSTALLATION DETAILS

SHEET NUMBER:	REV. #
#20SB	0

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
www.ct.gov/csc

July 30, 2009

The Honorable Eddie A. Perez
Mayor
City of Hartford
Municipal Building
550 Main Street
Hartford, CT 06103

RE: **EM-POCKET-064-090720** – Youghiogheny Communications-Northeast, LLC d/b/a Pocket Communications notice of intent to modify an existing telecommunications facility located at 289 Mountain Street, Hartford, Connecticut.

Dear Mayor Perez:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

If you have any questions or comments regarding this proposal, please call me or inform the Council by August 13, 2009.

Thank you for your cooperation and consideration.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/jb

Enclosure: Notice of Intent

c: Roger J. O'Brien, Director of Planning, City of Hartford
Lee C. Erdmann, Chief Operating Officer, City of Hartford

CSC
CONNECTICUT SITING COUNCIL