EM-CING-034-110527

Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 463-5511
Fax: (860) 513-7190

Douglas L. Culp
Real Estate Consultant

HAND DELIVERED

May 27, 2011

Ms. Linda Roberts
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 66 Sugar Hollow Road Danbury, CT (owner AT&T)

Dear Ms. Roberts:

In order to accommodate technological changes, implement Uniform Mobile Telecommunications System ("UMTS") and/or Long Term Evolution ("LTE") capabilities, and enhance system performance in the State of Connecticut, New Cingular Wireless PCS, LLC ("AT&T") plans to modify the equipment configurations at many of its existing cell sites. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter and attachments is being sent to the chief elected official of the municipality in which the affected cell site is located.

UMTS technology offers services to mobile computer and phone users anywhere in the world. Based on the Global System for Mobile ("GSM") communication standard, UMTS is the planned worldwide standard for mobile users. UMTS, fully implemented, gives computer and phone users high-speed access to the Internet as they travel. They have the same capabilities even when they roam, through both terrestrial wireless and satellite transmissions.

LTE is a new high-performance air interface for cellular mobile communications. It is designed to increase the capacity and speed of mobile telephone networks.

Attached is a summary of the planned modifications, including power density calculations reflecting the change in AT&T's operations at the site. Also included is documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

The changes to the facility do not constitute modifications as defined in Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facility will not be significantly changed or altered. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for in R.C.S.A. Section 16-50j-72(b)(2).

1. The height of the overall structure will be unaffected.

2. The proposed changes will not extend the site boundaries. There will be no effect on the site compound other than some enlarged equipment pads as may be noted in the attachments.

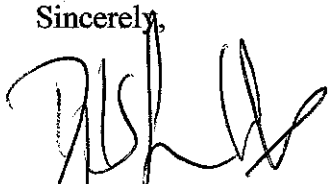
3. The proposed changes will not increase the noise level at the existing facility by six decibels or more.

4. Radio frequency power density may increase due to use of one or more GSM channel for UMTS transmissions. Moreover, LTE will utilize additional radio frequencies newly-licensed by the FCC for cellular mobile communications. However, the changes will not increase the calculated "worst case" power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environments as calculated for a mixed frequency site.

For the foregoing reasons, New Cingular Wireless respectfully submits that the proposed changes at the referenced site constitute exempt modifications under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (860) 463-5511 with questions concerning this matter. Thank you for your consideration.

Sincerely,



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Attachments

NEW CINGULAR WIRELESS PCS, LLC
Equipment Modification

66 Sugar Hollow Road Danbury, CT
Site Number CT5069
Exempt Mod

Tower Owner/Manager: AT&T

Equipment configuration: Monopole

Current and/or approved: Six PowerWave antennas @ 108 ft
Twelve PowerWave TMA's @ 108 ft
Twelve runs 1 1/4 inch coax to 108 ft
Equipment Shelter

Planned Modifications: Retain existing PowerWave Antenna's, TMA's and Diplexer's at 108 ft
Retain all Coax Cabling
Install three PowerWave P65-16 antennas or equivalent @ 108 ft
Install six remote radio heads and surge arrestor @ 108 ft
Install one fiber and two DC power cables to 108 ft

Power Density:

Worst-case calculations for existing wireless operations at the site, using standard parameters for other carriers, indicate a radio frequency electromagnetic radiation power density, measured at ground level beside the Tower, of 38.2% of the standard adopted by the FCC. As depicted in the second table below, the total radio frequency electromagnetic radiation power density following proposed modifications would be approximately 41.4% of the standard.

Existing

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm^2)	Standard Limits (mW/cm^2)	Percent of Limit
Other Users							26.17
AT&T UMTS	108	1900 Band	1	500	0.0154	1.0000	1.54
AT&T UMTS	108	800 Band	1	500	0.0154	0.5867	2.63
AT&T GSM	108	1900 Band	6	427	0.0790	1.0000	7.90
Total							**38.2%**

* Data for other users are from Siting Council records.

Proposed

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm^2)	Standard Limits (mW/cm^2)	Percent of Limit
Other Users							26.17
AT&T UMTS	108	800 Band	1	500	0.0154	0.5867	2.63
AT&T UMTS	108	1900 Band	1	500	0.0154	1.0000	1.54
AT&T GSM	108	1900 Band	6	427	0.0790	1.0000	7.90
AT&T LTE	108	740 - 746	1	500	0.0154	0.4933	3.12
Total							**41.4%**

* Data for other users are from Siting Council records.

Structural information:

The attached structural analysis demonstrates that the monopole and foundation have adequate structural capacity to accommodate the proposed modifications. (GDP Group. dated 5-16-11).

NEW CINGULAR WIRELESS PCS, LLC
WIRELESS COMMUNICATIONS FACILITY CT5069
DANBURY SOUTH - BENNETT PONDS

66 SUGAR HOLLOW ROAD
DANBURY, CONNECTICUT

PROJECT SUMMARY

SITE NUMBER:	CT5069
SITE NAME:	DANBURY SOUTH – BENNETT PONDS
SITE ADDRESS:	66 SUGAR HOLLOW ROAD DANBURY, CT 06810
STRUCTURE OWNER:	AT&T MOBILITY
APPLICANT:	NEW CINGULAR WIRELESS PCS, LLC 500 ENTERPRISE DRIVE ROCKY HILL, CT 06067
CONTACT:	MICHAEL D. FOLEY (203) 414-1184
COORDINATES:	41° 20' 12.09"N 73° 28' 15.96"W
HORIZONTAL DATUM:	NAD 83
ENGINEER:	CHA, INC. 2139 SILAS DEANE HIGHWAY SUITE 212 ROCKY HILL, CT 06067
CONTACT:	PAUL LUSITANI (860) 257-4557

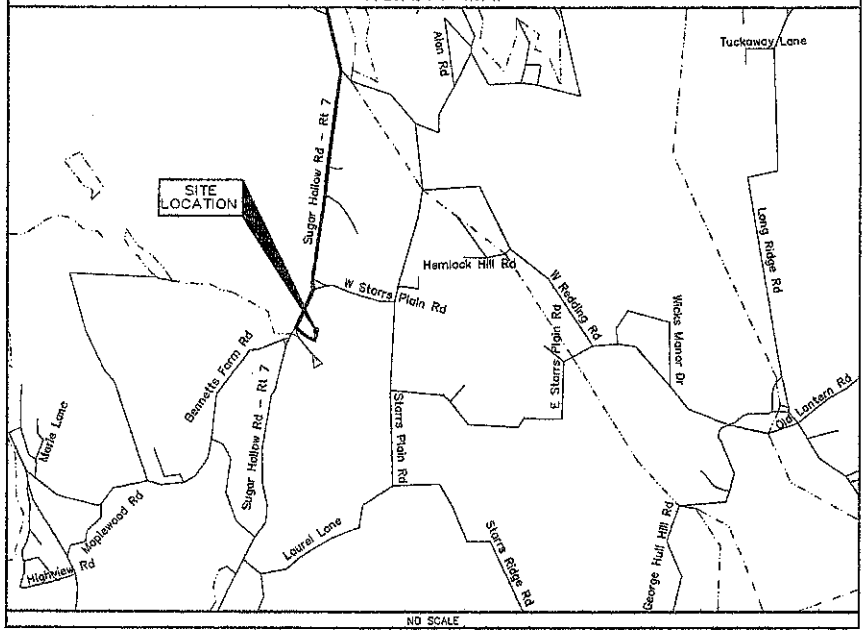
DRIVING DIRECTIONS

FROM HARTFORD:
1. MERGE ONTO I-84 W TOWARD WATERBURY/DANBURY
2. CONTINUE ONTO US-7 S (BECOMES SUGAR HOLLOW ROAD)
3. DESTINATION WILL BE ON THE LEFT AFTER APPROXIMATELY 3.6 MILES
4. SITE IS ADJACENT TO THE TRIANGLE CAFE

PROJECT DESCRIPTION

THIS PROJECT ADDS THREE ANTENNAS, SIX RRH, SURGE ARRESTORS, AND A RADIO CABINET TO AN EXISTING TELECOMMUNICATIONS SITE.

VICINITY MAP



NO SCALE

NORTH

APRIL 21, 2011

SHEET INDEX

SHEET NO:	SHEET TITLE	REVISION HISTORY NO:	REVISION HISTORY DATE
T01	TITLE SHEET	1	04 / 21 / 11
C01	COMPOUND PLAN	1	04 / 21 / 11
C02	SHELTER PLAN	1	04 / 21 / 11
C03	ELEVATION AND ANTENNA PLAN	1	04 / 21 / 11
C04	STRUCTURAL DETAILS	1	04 / 21 / 11
E01	GROUNDING DETAILS & PLUMBING DIAGRAM	1	04 / 21 / 11
GN01	GENERAL NOTES	1	04 / 21 / 11

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS & EXISTING DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

CALL before you DIG FOR CT 1-800-922-4455

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NEW CINGULAR WIRELESS PCS, LLC
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067

CHA
2139 Silas Deane Highway, Suite 212 - Rocky Hill, CT 06067-2350
Public (860) 257-4557 - www.chacompanies.com

CHA PROJECT NO:
22702 – 1023 – 43000

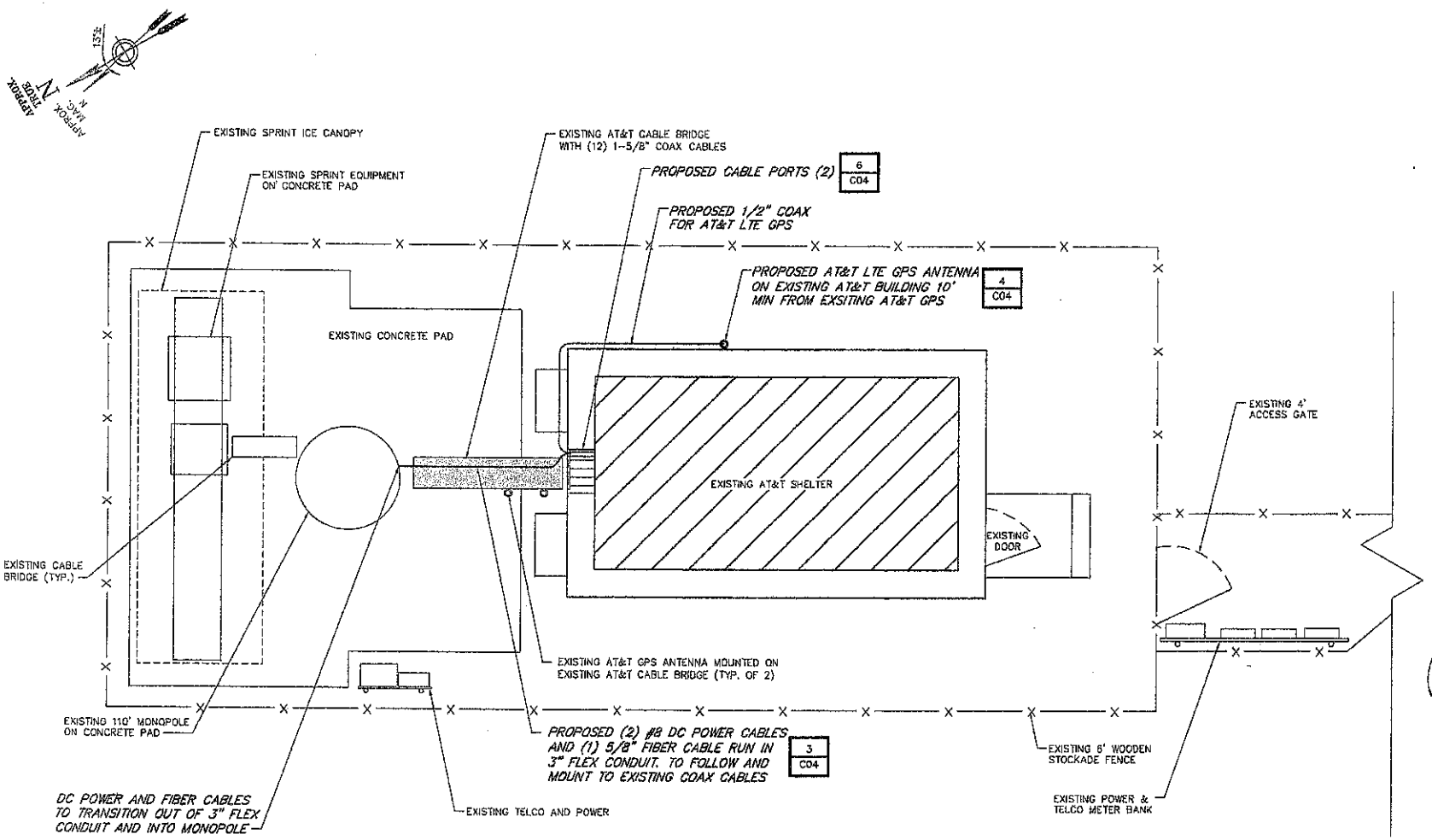
NO.	SUBMITTAL	
0	03/14/11	ISSUED FOR REVIEW
	BY: TAD	CHK: PAL APP'D: JPS
1	04/21/11	ISSUED FOR CONSTRUCTION
	BY: TAD	CHK: PAL APP'D: JPS

STATE OF CONNECTICUT
JOHN P. SOBIE
No. 17827
LICENSED PROFESSIONAL ENGINEER

SITE ID:
CT5069
SITE NAME:
DANBURY SOUTH–
BENNETT PONDS
SITE ADDRESS:
66 SUGAR HOLLOW RD
DANBURY, CT
06810
FAIRFIELD COUNTY

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T01



1 C01 SITE PLAN

GRAPHIC SCALE

5 0 2.5 5

IN FEET

NOTE:
1. PLANS BASED ON A SITE VISIT BY CHA ON MARCH 09, 2011 AND PLANS PREPARED BY HUDSON DESIGN GROUP, LLC, LAST DATED 05/27/2008.

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500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067

CHA

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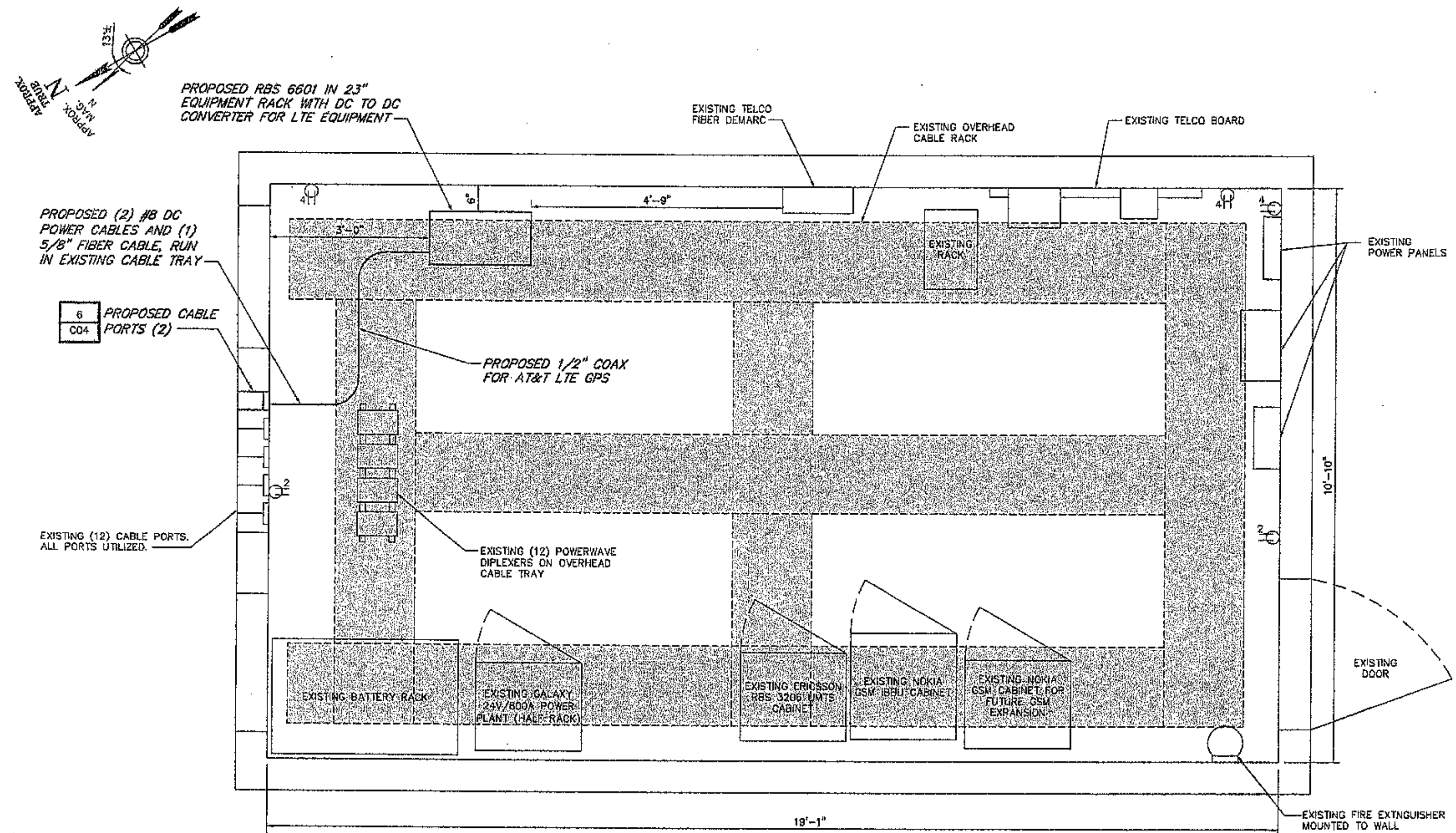
SITE ADDRESS:
66 SUGAR HOLLOW RD
DANBURY, CT
06810
FAIRFIELD COUNTY

SHEET TITLE
COMPOUND PLAN

SHEET NUMBER
C01



LEGEND

- EXISTING DUPLEX OUTLET
- EXISTING FOURPLEX OUTLET
- EXISTING OVERHEAD RACK

1 / C02 SHELTER PLAN

GRAPHIC SCALE

2 0 1 2

IN FEET

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	BY: TAO	CHK: PAL	APP'D: JPS

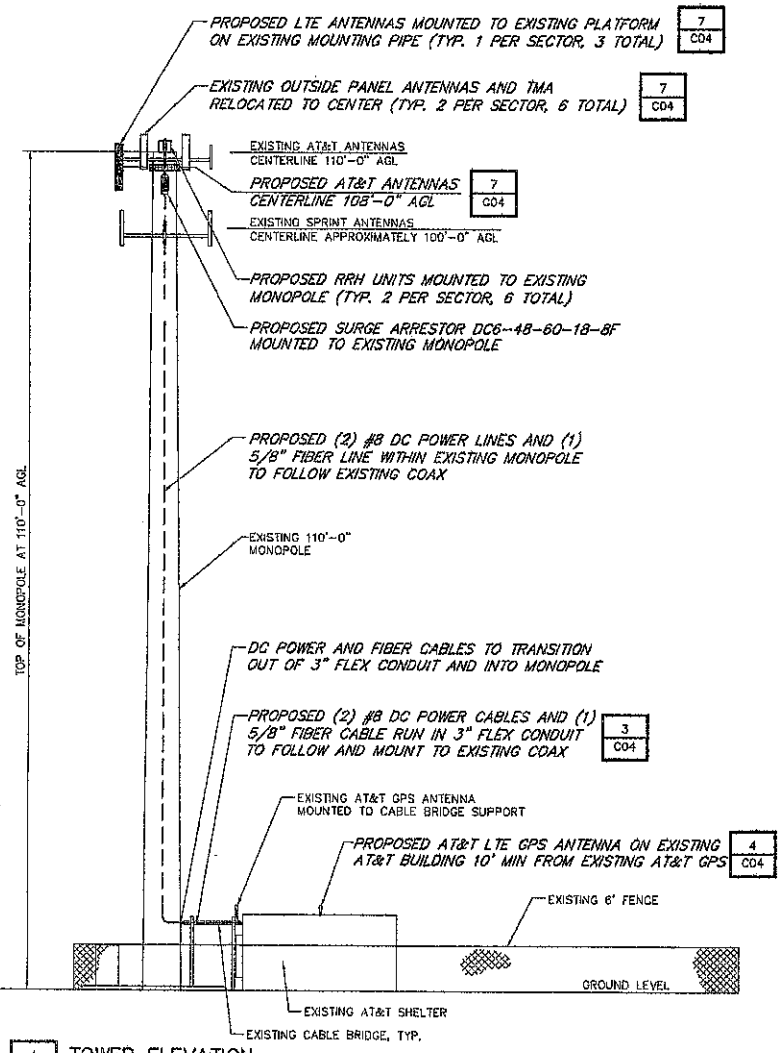
STATE OF CONNECTICUT
JOHN P. SOBIESKI
No. 17827
LICENSED
PROFESSIONAL ENGINEER

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.

SITE ID:
CT5069
SITE NAME:
DANBURY SOUTH–BENNETT PONDS
SITE ADDRESS:
66 SUGAR HOLLOW RD
DANBURY, CT
06810
FAIRFIELD COUNTY

SHEET TITLE
SHELTER PLAN

SHEET NUMBER
C02

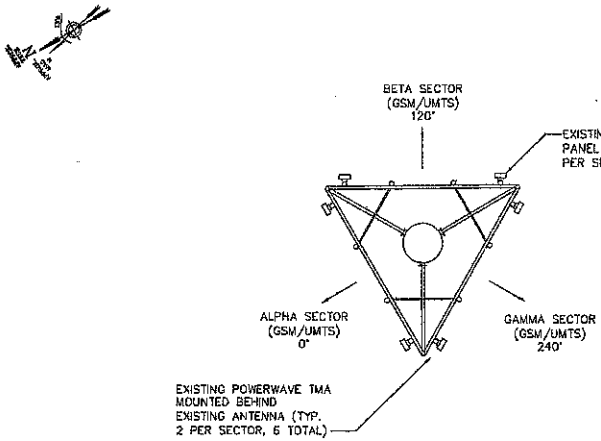


1 C03 TOWER ELEVATION

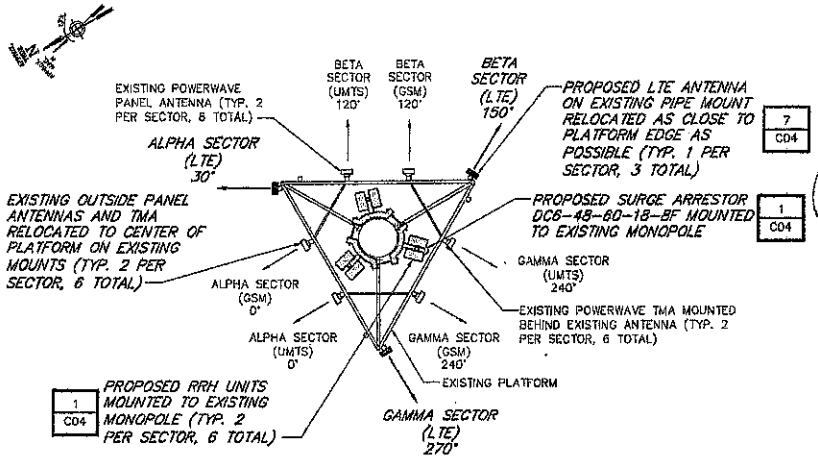
SCALE: 1" = 8' FULL SIZE
1" = 16' 11 X 17

GRAPHIC SCALE
16 0 8 16
IN FEET

NOTE:
A STRUCTURAL ANALYSIS OF THE EXISTING TOWER HAS NOT BEEN PERFORMED. AN ANALYSIS OF THE EXISTING STRUCTURE MUST BE PERFORMED PRIOR TO CONSTRUCTION TO CONFIRM STRUCTURE IS CAPABLE OF SUPPORTING PROPOSED LOADS.



EXISTING



PROPOSED

2 C03 ANTENNA PLANS

SCALE: N.T.S.

NOTE:
REFER TO FINAL RFDS FOR FINAL SECTOR CONFIGURATIONS.

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JOHN P. SOBIESKI
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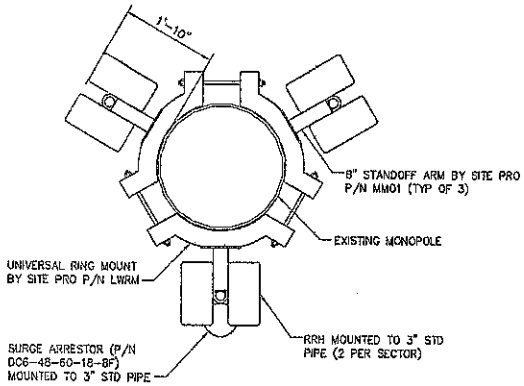
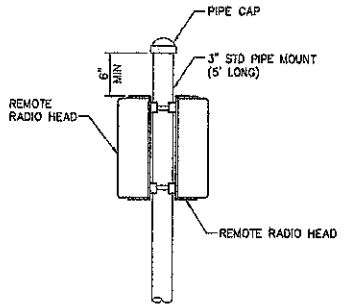
DANBURY SOUTH--BENNETT PONDS
SITE ADDRESS:
66 SUGAR HOLLOW RD
DANBURY, CT
06810
FAIRFIELD COUNTY

SHEET TITLE
ELEVATION AND ANTENNA PLAN

SHEET NUMBER
C03



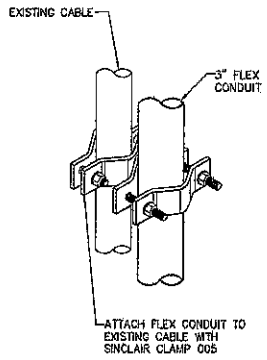
PLAN



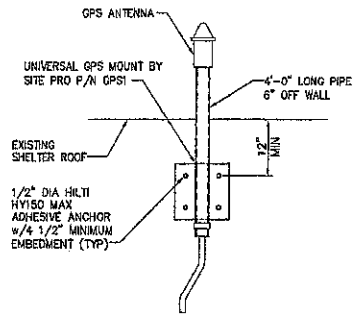
NOTE:

REMOTE RADIO HEAD MOUNTING BRACKET AND HARDWARE TO BE PROVIDED BY MANUFACTURER.

2 / C04 RRH MOUNTING DETAIL
SCALE: NTS



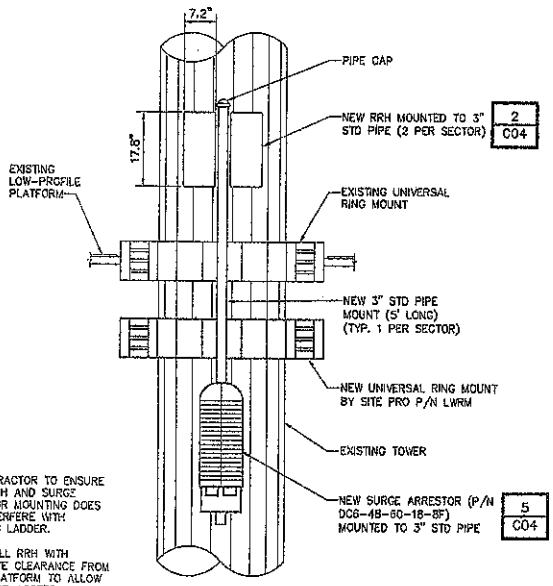
3 / C04 FLEX CONDUIT DETAIL
SCALE: NTS



NOTE:

1. THE WEIGHT OF THE ANTENNA MOUNT IS 6.5 LBS.

4 / C04 GPS MOUNTING DETAIL
SCALE: NTS

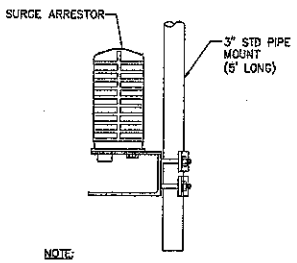


NOTE:
1. CONTRACTOR TO ENSURE THAT RRH AND SURGE ARRESTOR MOUNTING DOES NOT INTERFERE WITH CLIMBING LADDER.

2. INSTALL RRH WITH ADEQUATE CLEARANCE FROM AT&T PLATFORM TO ALLOW ROOM FOR ACCESS.

ELEVATION

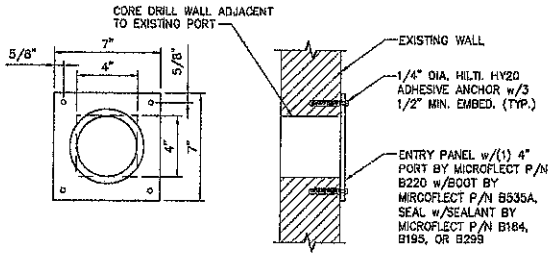
1 / C04 RRH/SURGE ARRESTOR MOUNTING DETAIL
SCALE: NTS



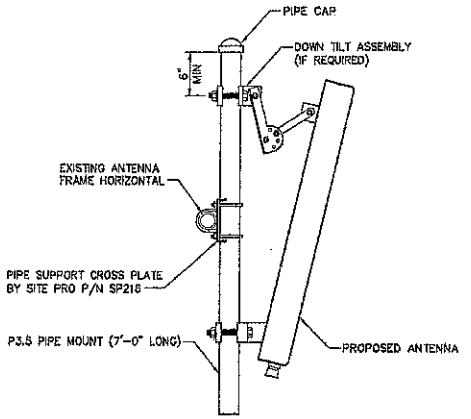
NOTE:

SURGE ARRESTOR MOUNTING BRACKET AND HARDWARE TO BE PROVIDED BY MANUFACTURER.

5 / C04 SURGE ARRESTOR MOUNTING DETAIL
SCALE: NTS



6 / C04 PORT PANEL DETAIL
SCALE: NTS



NOTE:

1. MOUNT ANTENNA IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED PROCEDURE.

2. USE EXISTING PIPE MOUNT IF AVAILABLE.

7 / C04 TYPICAL ANTENNA MOUNTING DETAIL
SCALE: NTS

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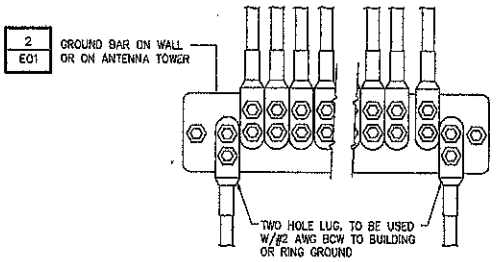
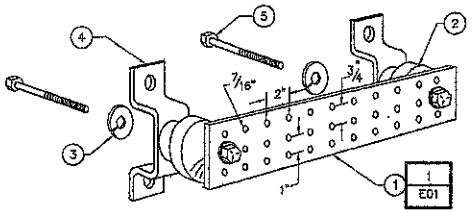
SITE ADDRESS:
66 SUGAR HOLLOW RD
DANBURY, CT
06810
FAIRFIELD COUNTY

SHEET TITLE
STRUCTURAL DETAILS

SHEET NUMBER
C04



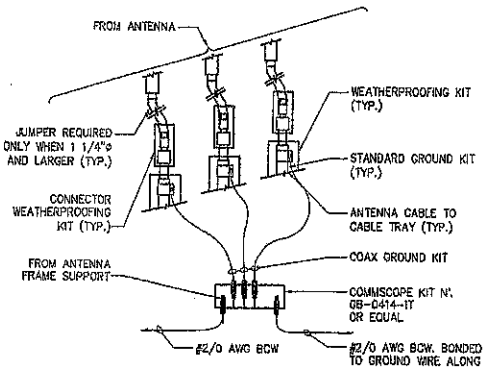
1 E01 GROUND WIRE INSTALLATION TO GROUND BAR
NO SCALE



LEGEND

1 – COPPER GROUND BAR. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
2 – INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061–4. (NOT TO BE USED ON BARS PHYSICALLY ATTACHED TO TOWER.)
3 – 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015–8
4 – WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A–5056
5 – 5/8–11 X 1" H.H.C.S.BOLTS, NEWTON INSTRUMENT CO. CAT NO. 3012–1

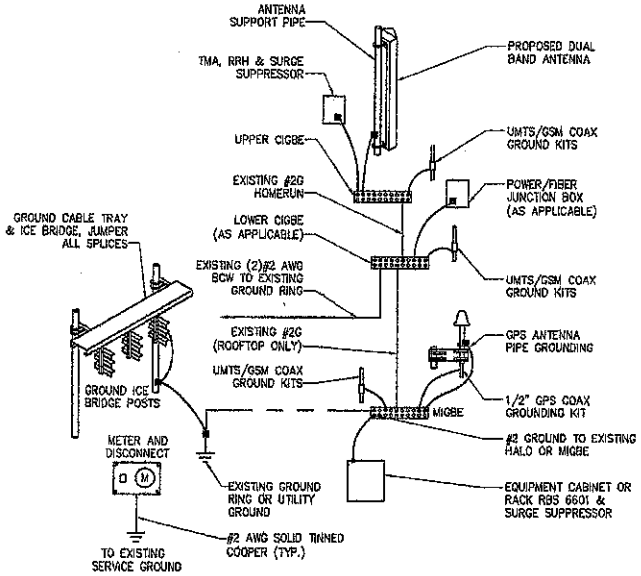
2 E01 GROUND BAR
NO SCALE



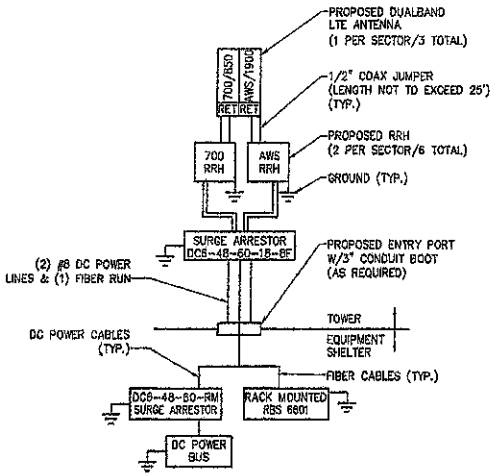
NOTE:

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

GROUND WIRE TO GROUND BAR CONNECTION DETAIL
3 E01
NO SCALE



4 E01 GROUNDING RISER DIAGRAM
NO SCALE



NOTES:

1. CONTRACTOR TO CONFIRM ALL PARTS.
2. INSTALL ALL EQUIPMENT TO MANUFACTURER'S RECOMMENDATIONS.

5 E01 PLUMBING DIAGRAM
NO SCALE

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SITE ADDRESS:
66 SUGAR HOLLOW RD
DANBURY, CT
06810
FAIRFIELD COUNTY

SHEET TITLE:
GROUNDING DETAILS & PLUMBING DIAGRAM

SHEET NUMBER
E01

GROUNDING SYSTEM NOTES:

1. CONDUCTOR USED FOR CELLULAR GROUNDING SYSTEM
   EGR – #2 AWG ANNEALED SOLID TINNED BARE COPPER.
   INTER–BUS EXTENSION (FROM IGR TO EGR) – #2 AWG ANNEALED SOLID TINNED BARE COPPER.
   EXTERNAL BOND CONNECTIONS TO EGR – #2 AWG ANNEALED SOLID TINNED BARE COPPER.
   TOWER BOND CONNECTION TO EGR – #2 AWG SOLID COPPER.

2. MINIMUM BENDING RADIUS
   EGR #2: 2'–0" NOMINAL AND 8" MINIMUM.
   CELLULAR GROUNDING CONDUCTOR SHALL BE AS STRAIGHT AS POSSIBLE WITH MINIMUM 8" RADIUS.

3. CONNECTIONS (MECHANICAL)
   COMPRESSION LUG CONNECTOR – 15 TON COMPRESSION, 2 HOLE, LONG BARREL, ELECTRO TINNED PLATED, HIGH CONDUCTIVITY COPPER, 600V RATED. USE 1/4" DIA. BOLT, 3/4" SPACING LUGS TO BOND OBJECTS FROM IGR. CONNECTOR SHALL BE BURNDY "HYLUG SERIES" OR EQUAL.

   EXOTHERMIC WELD LUG CONNECTOR – 2 HOLE OFFSET, ELECTRO TINNED PLATED, HIGH CONDUCTIVITY COPPER. 600V. USE ½" DIA. BOLT, 1–3/4" SPACING LUGS. CONNECTOR SHALL BE CADWELD CONNECTION STYLE (CABLE TO SURFACE) TYPE "IA". EXOTHERMIC WELD TO LUG AS REQUIRED.

   "C" TAP COMPRESSION CONNECTOR – HIGH CONDUCTIVITY COPPER FOR MAIN–BRANCH TAPPING. CONNECTOR SHALL BE BURNDY "HYTAP" SERIES OR EQUAL.

   USE MATCHING MANUFACTURER TOOL AND DIE FOR COMPRESSION CONNECTION. APPLY ANTI–OXIDANT CONDUCTIVITY ENHANCER COMPOUND ON SURFACES THAT ARE COMPRESSED. SURFACES INTENDED TO BE CONNECTED WITH MECHANICAL CONNECTORS SHALL BE BARE METAL TO BARE METAL. PRIME AND PAINT OVER BONDED AREA TO PREVENT CORROSION.

4. CONNECTIONS BELOW GRADE (EXOTHERMIC)
   PROVIDE CADWELD CONNECTIONS – STYLE AND TYPE AS REQUIRED.

5. WHEN BONDING #2 TO #2
   EXTERIOR OF SHELTER – USE EXOTHERMIC WELD CONNECTION.

6. WHEN BONDING #2 TO FENCE POST
   USE EXOTHERMIC WELD "CADWELD TYPE VS" CONNECTION TO FENCE POST STEEL SURFACE. TEST WELD FOR POSSIBLE BURN THROUGH. PATCH WELDED AREA WITH GALVANIZED COATING AS REQUIRED FOR PROPER WELDED PERMANENT BOND. REFER TO MANUFACTURER'S REQUIREMENTS FOR DETAILS.

SECTION 16050 GROUNDING

1.01 ALL NON–CURRENT CARRYING PARTS OF THE ELECTRICAL SYSTEM AND TELEPHONE CONDUIT SYSTEMS SHALL BE MECHANICALLY AND ELECTRICALLY CONNECTED TO PROVIDE AN INDEPENDENT RETURN PATH TO THE EQUIPMENT GROUNDING SOURCES.

1.02 GROUNDING SYSTEM WILL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND LOCAL INSPECTOR HAVING JURISDICTION.

1.03 ELECTRICAL AC SERVICE GROUNDED SYSTEM – GROUNDING AT MAIN SERVICE OVERCURRENT PROTECTION DEVICE.

A. THE GROUNDED CONDUCTOR (NEUTRAL) OF THE INCOMING SERVICE FEEDERS (LINE SIDE OF THE METER SOCKET) SHALL TERMINATE INTO THE MAIN OVERCURRENT DEVICE ENCLOSURE SOLID NEUTRAL BAR WHICH IS INSULATED FROM THE ENCLOSURE.

B. THE GROUNDING ELECTRODE CONDUCTOR SHALL EXTEND CONTINUOUSLY WITHOUT SPLICES OR JOINTS FROM THE MAIN OVERCURRENT DEVICES SOLID NEUTRAL BAR TO THE MAIN SWITCHBOARD GROUND TERMINAL.

C. THE MAIN SERVICE OVERCURRENT PROTECTION DEVICE ENCLOSURE'S EQUIPMENT GROUND BAR KIT SHALL BE LUGGED TO THE ENCLOSURE WITH THE SURFACES BETWEEN THEM BARE METAL TO BARE METAL. PROVIDE BONDING JUMPER BETWEEN EQUIPMENT GROUND BAR AND SOLID NEUTRAL. BONDING JUMPER CONDUCTOR SIZE SHALL BE THE SAME AS THE GROUNDING ELECTRODE CONDUCTOR. CONDUITS TERMINATING INTO THE MAIN OVERCURRENT DEVICE ENCLOSURE SHALL HAVE GROUNDING TYPE BUSHINGS. THE BUSHINGS SHALL BE BONDED TOGETHER WITH #10 AWG BARE COPPER WHICH IN TURN IS TERMINATED INTO THE EQUIPMENT GROUND BAR KIT.

1.04 CELLULAR GROUNDING SYSTEM:

PROVIDE THE CELLULAR GROUNDING SYSTEM AS SPECIFIED ON DRAWINGS. INCLUDING BUT NOT LIMITED TO:

–GROUND BARS
–EXTERIOR GROUNDING RING
–ANTENNA GROUND CONNECTIONS AND PLATES

1.05 CONTRACTOR, AFTER COMPLETION OF THE COMPLETE GROUNDING SYSTEM BUT PRIOR TO CONCEALMENT/BURIAL OF SAME, SHALL NOTIFY THE AT&T CONSTRUCTION REPRESENTATIVE AND LOCAL AUTHORITY HAVING JURISDICTION WHO WILL MAKE A VISUAL INSPECTION OF THE GROUNDING GRID, RODS AND CONNECTIONS OF THE EXTERIOR GROUNDING SYSTEMS.

SECTION 16120 CONDUCTORS

1.01 ALL CONDUCTORS SHALL BE THE TYPE THWN (INTERIOR) AND XHHW (EXTERIOR), 75 DEGREES C, 600 VOLT INSULATION, SOFT ANNEALED STRANDED COPPER. #10 AWG AND SMALLER SHALL BE SPLICED USING SOLDERLESS PRESSURE CONNECTORS, ACCEPTABLE. #12 AWG SHALL BE MINIMUM SIZE CONDUCTOR FOR LINE VOLTAGE BRANCH CIRCUITS. REFER TO PANEL SCHEDULE FOR BRANCH CIRCUIT CONDUCTOR SIZES. CONDUCTORS SHALL BE COLOR CODED FOR CONSISTENT PHASE IDENTIFICATION:

120 / 240 VAC – 1 PHASE, 3 WIRE SYSTEM

PHASE:	COLOR:
A	BLACK
B	RED
N	CONTINUOUS WHITE
G	CONTINUOUS GREEN

1.02 MINIMUM BENDING RADIUS FOR CONDUCTORS SHALL BE 12 TIMES THE LARGEST DIAMETER OF BRANCH CIRCUIT CONDUCTOR.

SECTION 16130 RACEWAY

1.01 CONDUIT MATERIAL SHALL BE AS FOLLOWS:

(1) GALVANIZED RIGID CONDUIT (GRC) – FEEDERS EXPOSED TO EXTERIOR & UNDERGROUND CONDUIT SWEEPS.

(2) PVC CONDUIT – SERVICE CONDUITS AND WHERE SHOWN ON GROUNDING DETAILS.

GENERAL NOTES:

1. ALL DIMENSIONS TO, OF, AND IN EXISTING STRUCTURES SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
2. DO NOT CHANGE THE SIZE NOR SPACING OF STRUCTURAL ELEMENTS WITHOUT THE APPROVAL OF THE ENGINEER.
3. DETAILS SHOWN ARE TYPICAL AND APPLY TO SIMILAR CONDITIONS UNLESS NOTED OTHERWISE.
4. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
5. BRACE STRUCTURES AS REQUIRED FOR CONSTRUCTION AND WIND LOADS UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: (LATERAL BRACING MEMBERS, ANCHOR BOLTS, ETC.)
6. THE DESIGN IS BASED ON THE 2005 CONNECTICUT STATE BUILDING CODE (IBC 2003), 2005 CONNECTICUT SUPPLEMENT AND THE 2009 AMENDMENT TO THE 2005 CONNECTICUT SUPPLEMENT AND TIA/EIA–222–G.
7. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE UNDERGROUND UTILITIES.
8. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE ENGINEER'S APPROVAL.
9. EACH CONTRACTOR SHALL COOPERATE WITH THE OWNER'S REPRESENTATIVE AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
10. VERIFY SIZE AND LOCATION OF OPENINGS PRIOR TO BEGINNING WORK. FOR DIMENSIONS NOT SHOWN, SEE CIVIL DRAWINGS.
11. VERIFY SIZE AND LOCATION OF EQUIPMENT PADS WITH MECHANICAL AND/OR ELECTRICAL CONTRACTOR AND EQUIPMENT MANUFACTURER.
12. CONTRACTOR TO FOLLOW ALL STATE, LOCAL AND NATIONAL CODES AS APPLICABLE.

APPURTENANCE SUPPORT BRACKET NOTES:

1. DESIGN RESPONSIBILITY OF APPURTENANCE MOUNTING BRACKETS AND POLES AND ALL COMPONENTS THERE OF AND ATTACHMENT THERE TO SHALL BE THE RESPONSIBILITY OF THE MANUFACTURER. MANUFACTURER SHALL PROVIDE TO THE ENGINEER FOR APPROVAL, DRAWINGS DETAILING ALL COMPONENTS OF THE ASSEMBLY, INCLUDING CONNECTIONS, DESIGN LOADS, AND ALL OTHER PERTINENT DATA. ALL SUBMISSIONS SHALL BEAR THE STAMP AND SIGNATURE OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF CONNECTICUT.
2. BRACKETS SHALL BE DESIGNED TO SUPPORT CURRENT AND FUTURE PANEL ANTENNAS, REMOTE RADIO HEADS, SURGE ARRESTORS, AND COAXIAL CABLES AS SHOWN.

STEEL NOTES:

1. STRUCTURAL STEEL FABRICATION AND ERECTION SHALL CONFORM TO THE LATEST EDITION OF THE AISC STEEL CONSTRUCTION MANUAL.
2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:
   A. WIDE FLANGE AND CHANNEL SHAPES – A992 GR 50 (50 KSI) UNLESS OTHERWISE NOTED
   B. ANGLES AND PLATES – ASTM A36 (36 KSI)
   C. STEEL PIPE – ASTM A53, GRADE B A500 GRADE B (35 KSI)
3. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM SPECIFICATION A123 UNLESS OTHERWISE NOTED. GALVANIZING SHALL BE PERFORMED AFTER SHOP FABRICATION TO THE GREATEST EXTENT POSSIBLE. ALL DINGS, SCRAPES, MARS AND WELDS IN THE GALVANIZED AREAS SHALL BE REPAIRED BY FIELD TOUCHUP PRIOR TO COMPLETION OF THE WORK USING ZRC COLD GALVANIZING COMPOUND OR APPROVED EQUAL.
4. CONNECTIONS:
   A. ALL BOLTS, NUTS AND WASHERS USED IN EXTERIOR APPLICATIONS SHALL BE GALVANIZED.

DESIGN LOADS:

THE FOLLOWING DESIGN LOADS WERE USED FOR THIS BUILDING BASED ON THE 2005 CONNECTICUT STATE BUILDING CODE (IBC 2003), 2005 CONNECTICUT SUPPLEMENT AND THE 2009 AMENDMENT TO THE 2005 CONNECTICUT SUPPLEMENT AND TIA/EIA–222–G:

ICE LOAD:
3/4" RADIAL ON ALL COMPONENTS AND CABLE

WIND DESIGN DATA:
BASIC WIND SPEED (3 SECOND GUST): 110 MPH
WIND IMPORTANCE FACTOR = 1.0
WIND EXPOSURE CATEGORY: B

EARTHQUAKE DESIGN DATA:
SEISMIC IMPORTANCE FACTOR, I: 1.0
MAPPED SPECTRAL RESPONSE ACCELERATIONS: SS=0.286 S1=0.066
SITE CLASS: D
SEISMIC DESIGN CATEGORY: B

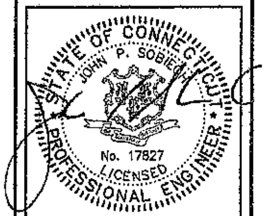
at&t
Your world. Delivered.

NEW CINGULAR WIRELESS PCS, LLC
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067

CHA

CHA PROJECT NO:
22702 – 1023 – 43000

NO.	SUBMITTAL		
0	03/14/11	ISSUED FOR REVIEW	
	BY: TAD	CHK: PAL	APP'D: JPS
1	04/21/11	ISSUED FOR CONSTRUCTION	
	BY: TAD	CHK: PAL	APP'D: JPS



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.

SITE ID:
CT5069
SITE NAME:
DANBURY SOUTH–BENNETT PONDS
SITE ADDRESS:
66 SUGAR HOLLOW RD
DANBURY, CT
06810
FAIRFIELD COUNTY

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN01

Meredith Paynter
SAI Communications
22 Keywaydin Drive
Salem, NH 03079
(603) 560-5156

Kevin Clements
12600 Deerfield Pkwy Suite 2039
Alpharetta, GA 30004
(678) 762-3305
kclements@gpdgroup.com

GPD# 2011007.34
May 16, 2011

STRUCTURAL ANALYSIS REPORT

AT&T DESIGNATION:	Site USID:	5778
	Site FA:	10070924
	Site Name:	BENNETT POND
SAI DESIGNATION:	**Site Name:**	**CT5069**
ANALYSIS CRITERIA:	**Codes:**	**TIA/EIA-222-F** **85-mph with 0" ice** **74-mph with 1/2" ice**
SITE DATA:		**66 Sugar Hollow Road, Danbury, CT 06810, Fairfield County** **Latitude 41° 20' 12.091" N, Longitude 73° 28' 15.956" W** **106' Summit Monopole**

Ms. Paynter,

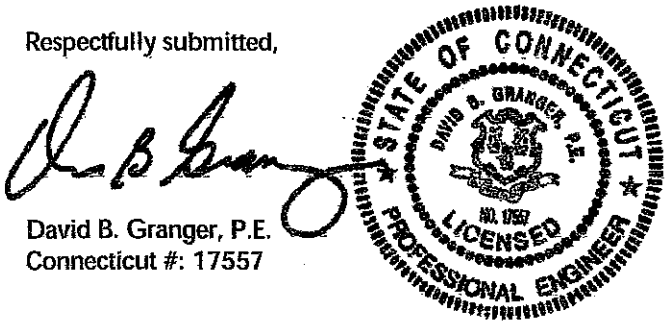
GPD is pleased to submit this Structural Analysis Report to determine the structural integrity of the aforementioned tower. The purpose of the analysis is to determine the suitability of the tower with the addition of the following proposed loading configuration:

Elev. 106' (3) Powerwave P65-16-XLH-RR Antennas mounted on an existing 14' LP Platform w/ (12) existing 1-1/4" internal coax
(6) Ericsson RRUS-11 RRUs on the same mount w/ (2) 3/4" Power Cables
(1) Raycap DC6-48-60-18-8F on the same mount w/ (1) 1/2" Fiber Cable

Based on our analysis we have determined the designs of the **tower and its foundation are sufficient** for the proposed, existing, and reserved loadings as referenced in Appendix A.

We at GPD appreciate the opportunity of providing our continuing professional services to you and SAI. If you have any questions please do not hesitate to call.

Respectfully submitted,



David B. Granger, P.E.
Connecticut #: 17557

SUMMARY & RESULTS

The purpose of this analysis was to verify whether the existing structure is capable of carrying the proposed loading configuration as specified by AT&T to SAI. This report was commissioned by Ms. Meredith Paynter of SAI.

TOWER SUMMARY AND RESULTS

Member	Capacity	Results
Monopole	97.3%	Pass
Anchor Rods	80.0%	Pass
Base Plate	75.3%	Pass
Foundation	97.9%	Pass

ANALYSIS METHOD

RISA Tower (Version 5.4.2.0), a commercially available software program, was used to create a three-dimensional model of the tower and calculate primary member stresses for various dead, live, wind, and ice load cases. Selected output from the analysis is included in Appendix B. The following table details the information provided to complete this structural analysis. This analysis is based solely on this information and is being completed without the benefit of a site visit.

DOCUMENTS PROVIDED

Document	Remarks	Source
Equipment Modification Form	AT&T Co-location document	Siterra
Previous Structural Analysis	PJF Project #: A00008-T083, dated 6/10/08	Siterra

ASSUMPTIONS

This structural analysis is based on the theoretical capacity of the members and is not a condition assessment of the monopole. This analysis is from information supplied, and therefore, its results are based on and are as accurate as that supplied data. GPD has made no independent determination, nor is it required to, of its accuracy. The following assumptions were made for this structural analysis.

1. The monopole shaft sizes and shape are considered accurate as supplied. The material grade is as per data supplied and/or as assumed and as stated in the materials section.
2. The antenna configuration is as supplied and/or as modeled in the analysis. It is assumed to be complete and accurate. All antennas, mounts, coax and waveguides are assumed to be properly installed and supported as per manufacturer requirements
3. Some assumptions are made regarding antennas and mount sizes and their projected areas based on best interpretation of data supplied and of best knowledge of antenna type and industry practice.
4. All mounts, if applicable, are considered adequate to support the loading. No actual analysis of the mount(s) is performed. This analysis is limited to analyzing the tower only.
5. The soil parameters are as per data supplied or as assumed and stated in the calculations. If no data is available, the foundation system is not verified.
6. The tower and structures have been properly maintained in accordance with TIA Standards and/or with manufacturer's specifications.
7. All welds and connections are assumed to develop at least the member capacity, unless determined otherwise and explicitly stated in this report.
8. All existing loading was obtained from the previous structural analysis by PJF Project #: A00008-T083, dated 6/10/08, Equipment Modification Form, and site photos and is assumed to be accurate.
9. All proposed coax shall be installed internal to the monopole.
10. The existing loading elevation found in the photos and previous structural analysis by PJF Project #: A00008-T076, dated 6/10/08, was found to vary from the listed elevation within the provided Equipment Modification Form. The existing elevations have been modeled based on the elevation reflected within the photos and the previous structural analysis.
11. All coax assumed to be internal to the monopole.
12. Loading interpreted from photos is accurate to ±5' AGL, antenna size accurate to ±3.3 sf, and coax equal to the number of existing antennas without reserve.

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and GPD Group should be allowed to review any new information to determine its effect on the structural integrity of the tower.

APPENDIX A

Tower Analysis Summary Form

Tower Analysis Summary Form

General Info

Site Name	BENNETT POND
Site Number	5770
FA Number	10070924
Date of Analysis	5/16/2011
Company Performing Analysis	GPD

The information contained in this summary report is not to be used independently from the PE stamped tower analysis.

Tower Info	Description	Date
Tower Type (G, SST, MP)	MP	
Tower Height (top of steel AGL)	106'	
Tower Manufacturer	Summit	
Tower Model	n/a	
Tower Design	Summit Job #: 6336	
Foundation Design	Summit Job #: 6336	
Geotech Report	n/a	
Tower Mapping	n/a	
Previous Structural Analysis	PJF Project #: A00008-T083	6/10/2008

Design Parameters

Design Code Used	TIA/EIA-222-F
Location of Tower (County, State)	Fairfield, CT
Basic Wind Speed (mph)	85
Ice Thickness (in)	0.5
Structure Classification (I, II, III)	
Exposure Category (B, C, D)	
Topographic Category (1 to 5)	

Analysis Results (% Maximum Usage)

Existing/Reserved + Future + Proposed Condition	
Tower (%)	97.3%
Tower Base (%)	80.6%
Foundation (%)	97.9%
Foundation Adequate?	Yes

Steel Yield Strength (ksi)

Pole	65
Base Plate	50
Anchor Rods	75

Existing / Reserved Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Internal/External
AT&T Mobility	106	106	6	Panel	Powerwave	7770	0/120/240	1	Unknown	14' LP Platform	12	Unknown	1-1/4"	Internal
AT&T Mobility	106	106	6	TMA	Powerwave	LGP 21401	0/120/240			on same mount				
AT&T Mobility	106	106	6	Diplexer	Powerwave	LGP21901	0/120/240			on same mount				
Sprint	88	90	6	Panel	Decibel	DB980F90E-M		1	Unknown	14' LP Platform	6	Unknown	7/8"	Internal
Sprint	75	75	1	GPS	Unknown	GPS		1	Unknown	3' Sidearm	1	Unknown	1/2"	Internal

Note: All loading to remain.

Proposed Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Internal/External
AT&T Mobility	106	106	3	Panel	Powerwave	P65-16-XLH-RR	0/120/240			on existing mount	2	Power Cable	3/4"	Internal
AT&T Mobility	106	106	6	RRU	Ericsson	RRUS-11	0/120/240			on existing mount	1	Fiber Cable	1/2"	Internal
AT&T Mobility	106	106	1	Surge Protector	Raycap	DC6-48-60-18-8F				on existing mount				

Note: Proposed loading is in addition to the existing loading at the same elevation.

Future Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Internal/External

APPENDIX B

RISA Tower Output File

Tower Input Data

There is a pole section.
This tower is designed using the TIA/EIA-222-F standard.
The following design criteria apply:

Tower is located in Fairfield County, Connecticut.
Basic wind speed of 85 mph.
Nominal ice thickness of 0.5000 in.
Ice density of 56 pcf.
A wind speed of 74 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 50 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.333.
Local bending stresses due to climbing loads, feedline supports, and appurtenance mounts are not considered.

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
LDF6-50A (1-1/4 FOAM)	C	No	Inside Pole	106.00 - 8.00	12	No Ice	0.00	0.66
						1/2" Ice	0.00	0.66
3/4" DC Power Line	C	No	Inside Pole	106.00 - 8.00	2	No Ice	0.00	0.33
						1/2" Ice	0.00	0.33
1/2" Fiber Cable	C	No	Inside Pole	106.00 - 8.00	1	No Ice	0.00	0.15
						1/2" Ice	0.00	0.15
LDF5-50A (7/8 FOAM)	B	No	Inside Pole	90.00 - 8.00	6	No Ice	0.00	0.33
						1/2" Ice	0.00	0.33
LDF4-50A (1/2 FOAM)	B	No	Inside Pole	75.00 - 8.00	1	No Ice	0.00	0.15
						1/2" Ice	0.00	0.15
Climbing Pegs	C	No	CaAa (Out Of Face)	106.00 - 0.00	1	No Ice	0.01	0.31
						1/2" Ice	0.12	0.71
Safety Line 3/8	C	No	CaAa (Out Of Face)	106.00 - 0.00	1	No Ice	0.04	0.22
						1/2" Ice	0.14	0.75

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
14' LP Platform	C	None		0.0000	105.00	No Ice	35.00	35.00	2000.00
						1/2" Ice	45.00	45.00	2250.00
(2) 7770.00 w/Mount Pipe	A	From Centroid-Leg	4.00 0.00 1.00	0.0000	105.00	No Ice	6.58	4.94	75.53
						1/2" Ice	7.21	5.86	127.72
(2) 7770.00 w/Mount Pipe	B	From Centroid-Leg	4.00 0.00 1.00	0.0000	105.00	No Ice	6.58	4.94	75.53
						1/2" Ice	7.21	5.86	127.72
(2) 7770.00 w/Mount Pipe	C	From Centroid-Le	4.00 0.00	0.0000	105.00	No Ice	6.58	4.94	75.53
						1/2" Ice	7.21	5.86	127.72

RISATower	Job: CT5069 (5778) BENNETT POND	Page: 2 of 3
GPD GROUP 520 South Main St.; Suite 2531 Akron, OH 44311 Phone: (330) 572-2100 FAX: (330) 572-2101	Project: 2011007.34	Date: 16:32:39 05/16/11
	Client: SAI	Designed by: jslaga

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
		g	1.00						
P65-16-XLH-RR w/ Mount Pipe	A	From Centroid-Le g	4.00 0.00 1.00	0.0000	105.00	No Ice 1/2" Ice	8.64 9.29	6.36 7.54	89.55 152.50
P65-16-XLH-RR w/ Mount Pipe	B	From Centroid-Le g	4.00 0.00 1.00	0.0000	105.00	No Ice 1/2" Ice	8.64 9.29	6.36 7.54	89.55 152.50
P65-16-XLH-RR w/ Mount Pipe	C	From Centroid-Le g	4.00 0.00 1.00	0.0000	105.00	No Ice 1/2" Ice	8.64 9.29	6.36 7.54	89.55 152.50
(2) LGP21401	A	From Centroid-Le g	4.00 0.00 1.00	0.0000	105.00	No Ice 1/2" Ice	1.29 1.45	0.23 0.31	14.10 21.26
(2) LGP21401	B	From Centroid-Le g	4.00 0.00 1.00	0.0000	105.00	No Ice 1/2" Ice	1.29 1.45	0.23 0.31	14.10 21.26
(2) LGP21401	C	From Centroid-Le g	4.00 0.00 1.00	0.0000	105.00	No Ice 1/2" Ice	1.29 1.45	0.23 0.31	14.10 21.26
(2) LGP21901	A	From Centroid-Le g	4.00 0.00 1.00	0.0000	105.00	No Ice 1/2" Ice	0.27 0.34	0.18 0.25	5.50 7.92
(2) LGP21901	B	From Centroid-Le g	4.00 0.00 1.00	0.0000	105.00	No Ice 1/2" Ice	0.27 0.34	0.18 0.25	5.50 7.92
(2) LGP21901	C	From Centroid-Le g	4.00 0.00 1.00	0.0000	105.00	No Ice 1/2" Ice	0.27 0.34	0.18 0.25	5.50 7.92
(2) RRUS-11	A	From Leg	0.50 0.00 1.00	0.0000	105.00	No Ice 1/2" Ice	4.42 4.71	1.63 1.84	55.00 80.77
(2) RRUS-11	B	From Leg	0.50 0.00 1.00	0.0000	105.00	No Ice 1/2" Ice	4.42 4.71	1.63 1.84	55.00 80.77
(2) RRUS-11	C	From Leg	0.50 0.00 1.00	0.0000	105.00	No Ice 1/2" Ice	4.42 4.71	1.63 1.84	55.00 80.77
DC6-48-60-18-8F	A	From Leg	0.50 0.00 1.00	0.0000	105.00	No Ice 1/2" Ice	1.27 1.46	1.27 1.46	20.00 35.12
14' LP Platform	C	None		0.0000	88.00	No Ice 1/2" Ice	35.00 45.00	35.00 45.00	2000.00 2250.00
(2) DB980F90E-M w/Mount Pipe	A	From Centroid-Le g	4.00 0.00 2.00	0.0000	88.00	No Ice 1/2" Ice	4.37 4.96	3.95 5.04	34.05 70.69
(2) DB980F90E-M w/Mount Pipe	B	From Centroid-Le g	4.00 0.00 2.00	0.0000	88.00	No Ice 1/2" Ice	4.37 4.96	3.95 5.04	34.05 70.69
(2) DB980F90E-M w/Mount Pipe	C	From Centroid-Le g	4.00 0.00 2.00	0.0000	88.00	No Ice 1/2" Ice	4.37 4.96	3.95 5.04	34.05 70.69
3' Sidearm	A	From Leg	1.50 0.00 0.00	0.0000	75.00	No Ice 1/2" Ice	0.11 0.17	4.00 6.50	20.00 40.00
GPS	A	From Leg	3.00 0.00 0.00	0.0000	75.00	No Ice 1/2" Ice	0.17 0.24	0.17 0.24	0.87 3.85

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
16" x 3' Top Hat	C	None		0.0000	106.00	No Ice	3.60	3.60	0.15
						1/2" Ice	3.90	3.90	0.18

Critical Deflections and Radius of Curvature - Service Wind

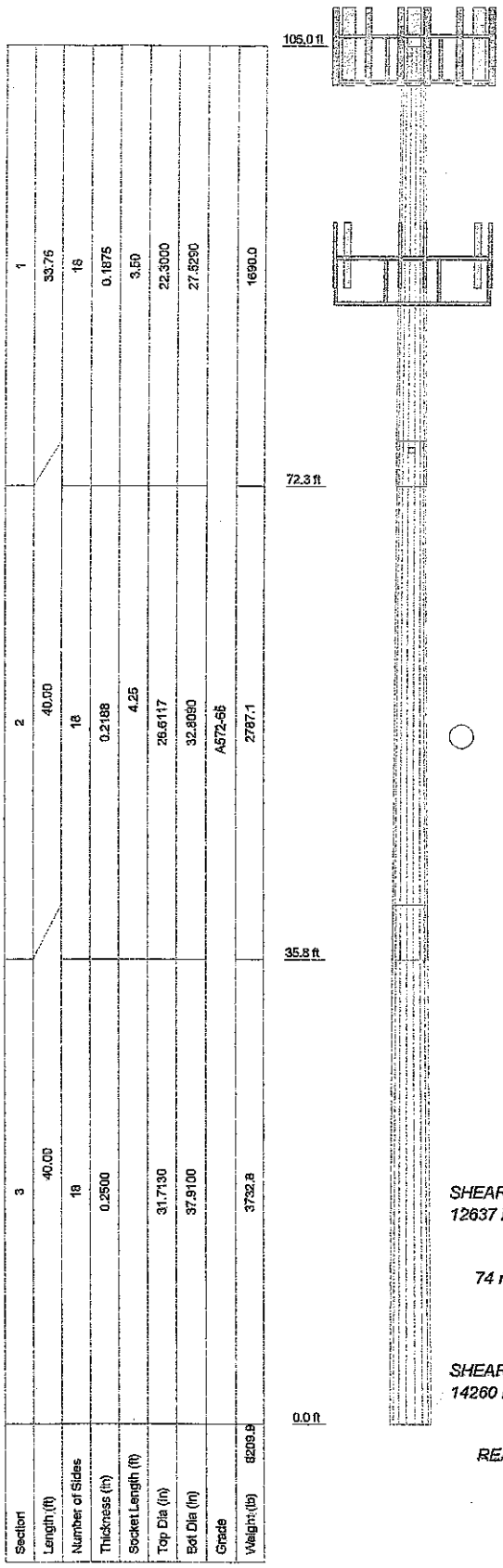
Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
106.00	16" x 3' Top Hat	36	22.247	1.6789	0.0019	25974
105.00	14' LP Platform	36	21.898	1.6732	0.0019	25974
88.00	14' LP Platform	36	16.064	1.5617	0.0018	7214
75.00	3' Sidearm	36	11.902	1.4270	0.0016	4227

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	$SF*P_{allow}$ lb	% Capacity	Pass Fail
L1	106 - 72.25	Pole	TP27.529x22.3x0.1875	1	-6493.59	829135.30	50.6	Pass
L2	72.25 - 35.75	Pole	TP32.809x26.6117x0.2188	2	-9789.99	1152585.07	83.8	Pass
L3	35.75 - 0	Pole	TP37.91x31.713x0.25	3	-14694.20	1551012.09	97.3	Pass
						Summary		
						Pole (L3)	97.3	Pass
						RATING =	**97.3**	**Pass**

APPENDIX C

Tower Elevation Drawing



Section	1	2	3
Length (ft)	33.75	40.00	40.00
Number of Sides	18	18	18
Thickness (in)	0.1875	0.2188	0.2500
Socket Length (ft)	3.50	4.25	
Top Dia (in)	22.3000	26.6117	31.7130
Bot Dia (in)	27.8290	32.8080	37.9100
Grade		A572-65	
Weight (lb)	1690.0	2787.1	3732.8

Total Weight: 8209.8

DESIGNED APPURTENANCE LOADING

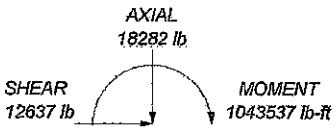
TYPE	ELEVATION	TYPE	ELEVATION
16" x 3' Top Hat	108	(2) LGP21901	105
(2) 7770.00 w/Mount Pipe	105	(2) RRUS-11	105
(2) 7770.00 w/Mount Pipe	105	(2) RRUS-11	105
(2) 7770.00 w/Mount Pipe	105	(2) RRUS-11	105
P65-16-XLH-RR w/ Mount Pipe	105	DC6-48-60-18-8F	105
P65-16-XLH-RR w/ Mount Pipe	105	14' LP Platform	105
P65-16-XLH-RR w/ Mount Pipe	105	(2) DB980F90E-M w/Mount Pipe	88
(2) LGP21401	105	(2) DB980F90E-M w/Mount Pipe	88
(2) LGP21401	105	(2) DB980F90E-M w/Mount Pipe	88
(2) LGP21401	105	14' LP Platform	88
(2) LGP21901	105	GPS	75
(2) LGP21901	105	3' Sidearm	75

MATERIAL STRENGTH

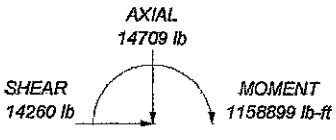
GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

1. Tower is located in Fairfield County, Connecticut.
2. Tower designed for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 74 mph basic wind with 0.50 in ice.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 97.3%



TORQUE 523 lb-ft
74 mph WIND - 0.5000 in ICE



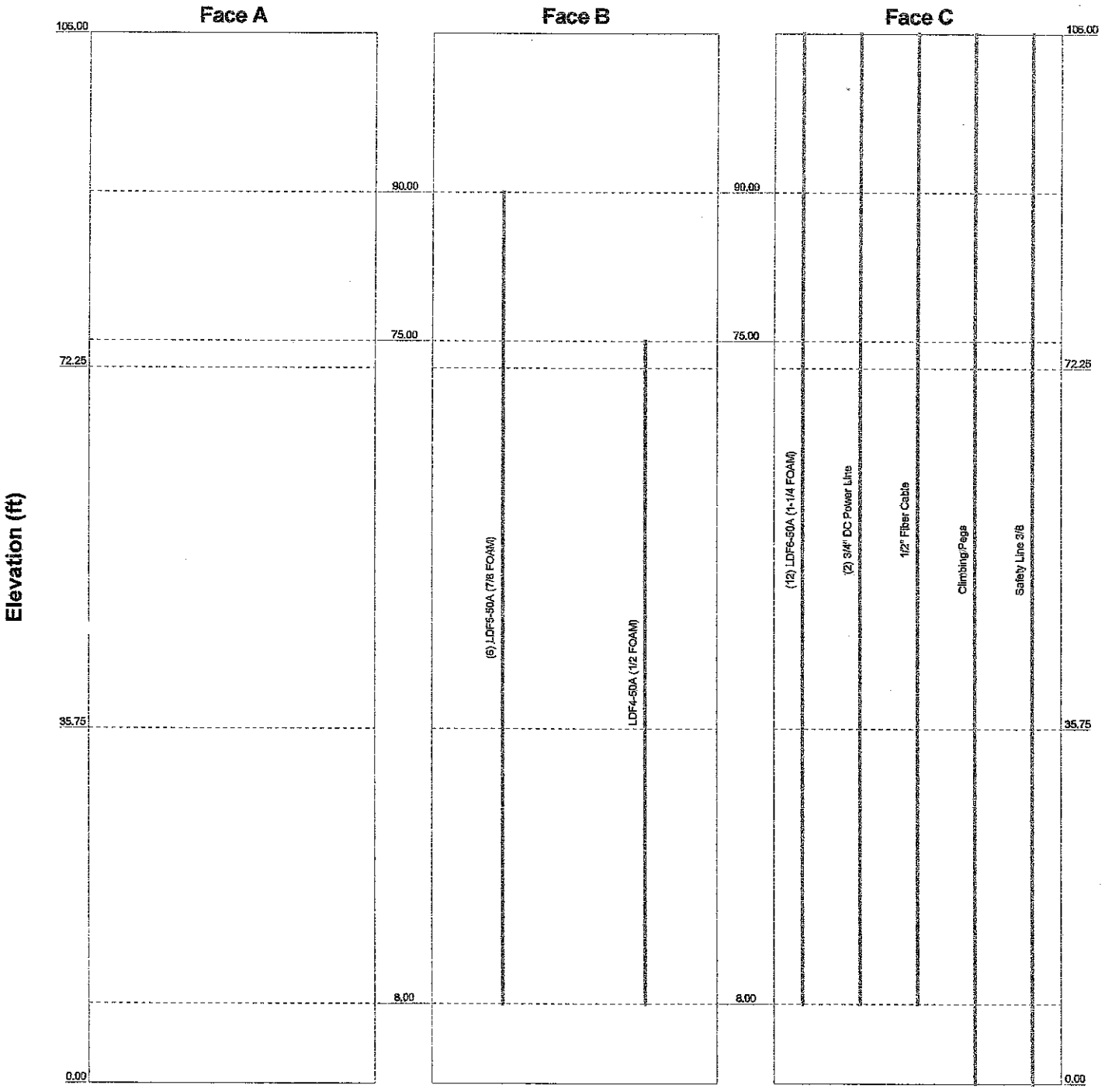
TORQUE 497 lb-ft
REACTIONS - 85 mph WIND

GPD GROUP
520 South Main St.; Suite 2531
Akron, OH 44311
Phone: (330) 572-2100
FAX: (330) 572-2101

Job: CT5069 (5778) BENNETT POND		
Project: 2011007.34		
Client: SAI	Drawn by: jslaga	App'd:
Code: TIA/EIA-222-F	Date: 05/16/11	Scale: NTS
Path: N:\2011\2011007\34\10070924 (5778) Bennett Pond\RISA\5778.eri		Dwg No. E-1

Feedline Distribution Chart
0' - 106'

Round | Flat | App In Face | App Out Face | Truss Leg



GPD GROUP
520 South Main St.; Suite 2531
Akron, OH 44311
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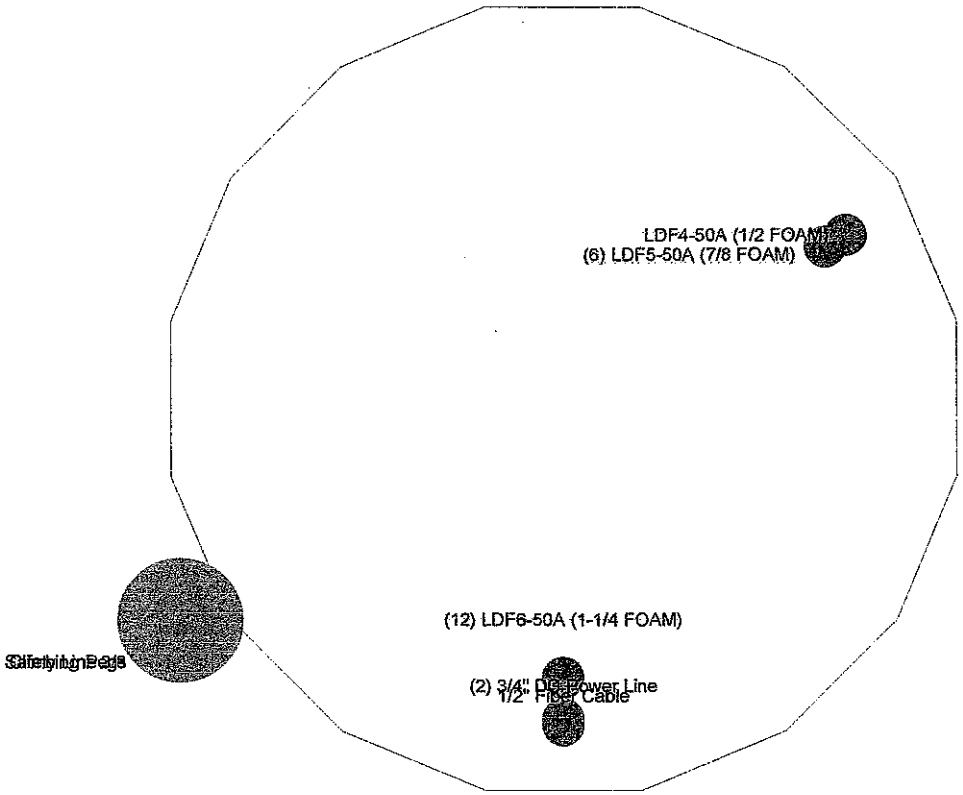
FAX: (330) 572-2101

Job: CT5069 (5778) BENNETT POND			
Project: 2011007.34			
Client: SAI	Drawn by: jslaga		App'd:
Code: TIA/EIA-222-F	Date: 05/16/11		Scale: NTS
Path: N:\2011\2011007\34\10070924 (5778) Bennett Pond\RISA\5778.eri			Dwg No. E-7

Feedline Plan

_____ Round _____ Flat _____ App In Face _____ App Out Face



GPD GROUP
520 South Main St.; Suite 2531
Akron, OH 44311
Phone: (330) 572-2100
FAX: (330) 572-2101

Job: CT5069 (5778) BENNETT POND			
Project: 2011007.34			
Client: SAI	Drawn by: jslaga	App'd:	
Code: TIA/EIA-222-F	Date: 05/16/11	Scale: NTS	
Path: N:\2011\2011007\34\100709\24 (5778) Bennett Pond\RISA\5778.eif		Dwg No. E-7	

APPENDIX D

Anchor Rod & Base Plate Analysis

GPD GROUP

Anchor Rod and Base Plate Stresses

CT5069 (5778) BENNETT POND

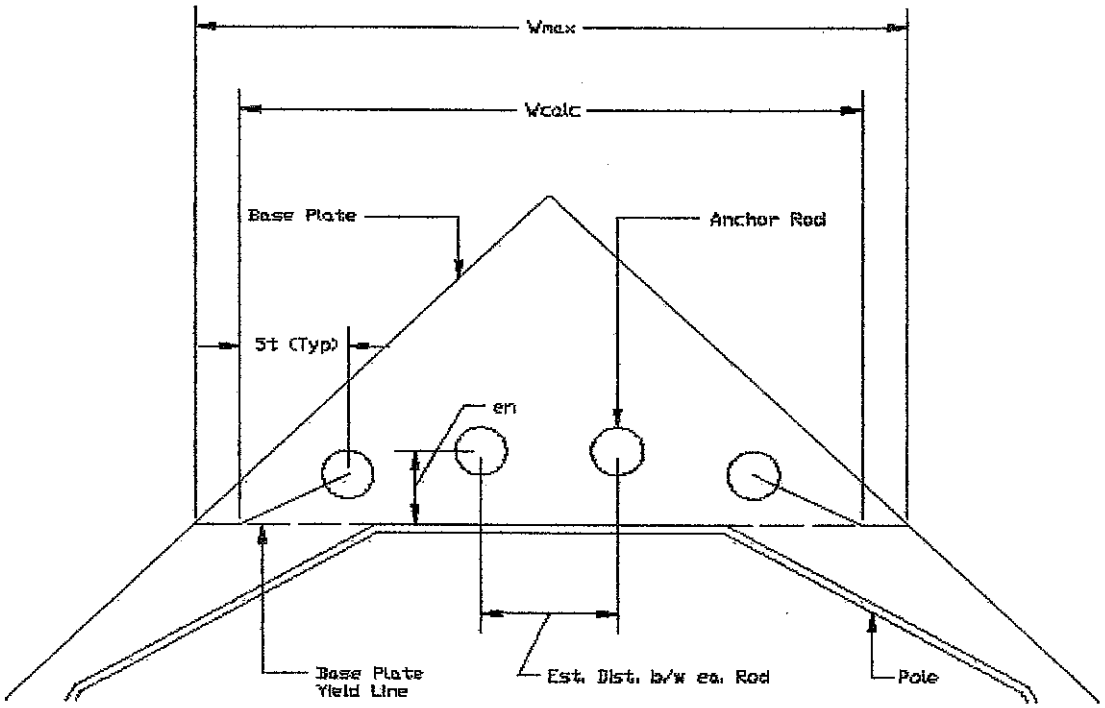
2011007.34

Overturning Moment =	1158.90	k*ft
Axial Force =	14.69	k
Shear Force =	14.27	k

Acceptable Stress Ratio =	105.0%

Anchor Rods		
Pole Diameter =	37.91	in
Number of Rods =	8	
Type =	Upset Rod	
Rod Yield Strength (Fy) =	75	ksi
ASIF =	1.333	
Rod Circle =	44	in
Rod Diameter =	2.25	in
Net Tensile Area =	3.25	in^2
Max Tension on Rod =	155.99	kips
Max Compression on Rod =	159.66	kips
Allow. Rod Force =	195.00	kips
Anchor Rod Capacity =	**80.0%**	**OK**

Base Plate		
Plate Strength (Fy) =	50	ksi
Plate Thickness =	2.5	in
Plate Width =	43	in
Est. Dist. b/w ea. Rod =	6	in
w_{calc} =	31.000	in
w_{max} =	22.901	in
w =	22.90	in
S =	23.86	in^3
fb =	37.66	ksi
Fb =	50	ksi
Base Plate Capacity =	**75.3%**	**OK**



APPENDIX E

Foundation Analysis

GPD GROUP

Mat Foundation Analysis
CT5069 (5778) BENNETT POND
2011007.34

General Info	
Code	TIA/EIA-222-F (ASD)
Bearing On	Soil
Foundation Type	Mono Pad
Pier Type	None
Reinforcing Known	No
Max Capacity	1.05

Tower Reactions	
Moment, M	1158.9 k-ft
Axial, P	14.69 k
Shear, V	14.27 k

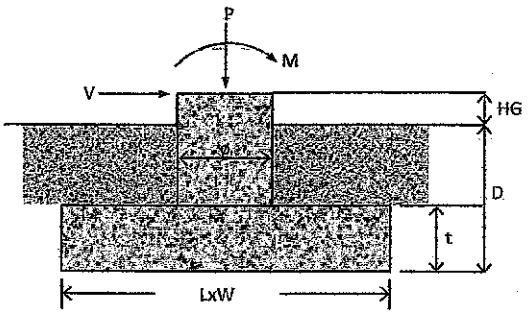
Pad & Pier Geometry		
Pier N/A	0	ft
Pad Length, L	16.5	ft
Pad Width, W	16.5	ft
Pad Thickness, t	6.5	ft
Depth, D	6	ft
Height Above Grade, HG	0.5	ft

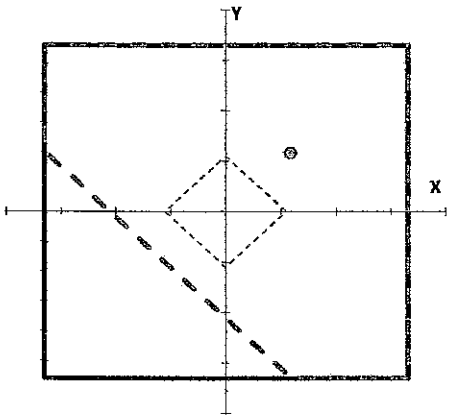
Pad & Pier Reinforcing		
Rebar Fy	60	ksi
Concrete Fc'	3	ksi
Clear Cover	3	in
Reinforced Top & Bottom?	Yes	
Pad Reinforcing Size	# 6	
Pad Quantity Per Layer	31	
Pier Rebar Size		
Pier Quantity of Rebar		

Soil Properties		
Soil Type	Granular	
Soil Unit Weight	100	pcf
Angle of Friction, ø	0	°
Bearing Type	Gross	
Ultimate Bearing	8	ksf
Water Table Depth	n/a	ft
Frost Depth	3.33	ft

Bearing Summary			Load Case
Qxmax	2.96	ksf	1D+1W
Qymax	2.96	ksf	1D+1W
Qmax @ 45°	3.92	ksf	1D+1W
$Q_{(all)\ Gross}$	4.00	ksf	
Controlling Capacity	**97.9%**	**Pass**	

Overturning Summary (Required FS=1.5)			Load Case
FS(ot)x	1.99	≥1.5	1D+1W
FS(ot)y	1.99	≥1.5	1D+1W
Controlling Capacity	**75.4%**	**Pass**	





P65-15-XLH-RR | Dual Broadband Antennas

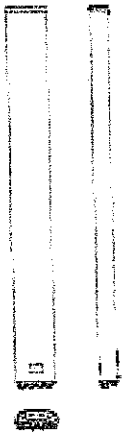
POLARIZATION: Dual linear ±45°
FREQUENCY (MHz): 698-894, 1710-2170
HORIZONTAL BEAM WIDTH (°): 65 65
GAIN (dBi/dBd): 14.7/12.6, 17.0/14.9
TILT: 2-10 2-10
LENGTH: 51"

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	698-894		1710-2170		
Frequency band (MHz)	698-806	806-894	1710-1850	1850-1990	1990-2170
Gain (dBi/dBd)	14/11.8	14.7/12.6	16.4/14.3	16.7/14.6	17.0/14.9
Polarization	Dual Linear +/- 45			Dual Linear +/- 45	
Nominal Impedance (Ω)	50			50	
VSWR	< 1.5:1			< 1.5:1	
Horizontal beam width, -3 dB (°)	73	65	65	61	60
Vertical beam width, -3 dB (°)	17			7.5	
Electrical down tilt (°)	0-13			0-9	
Side lobe suppression, vertical 1st upper (dB)	> 14			>20	
Isolation between inputs (dB)	>30			> 30	
Inter band isolation (dB)	> 40			> 40	
Tracking, horizontal plane ±60° (dB)	< 2			< 2	
Vertical beam squint (°)	<1.25			< 0.5	
Front to back ratio (dB) 180°±30° copolar	> 25			> 35	
Front to back ratio (dB) 180°±30° total power	> 25			> 25	
Cross polar discrimination (XPD) 0° (dB)	> 15			> 15	
Cross polar discrimination (XPD) ±60° (dB)	> 10			> 10	
IM3, 2x47x@43dBm (dBc)	<-153			<-153	
Power handling, average per input (W)	500			350	
Power handling, average total (W)	1000			600	

MECHANICAL SPECIFICATIONS*

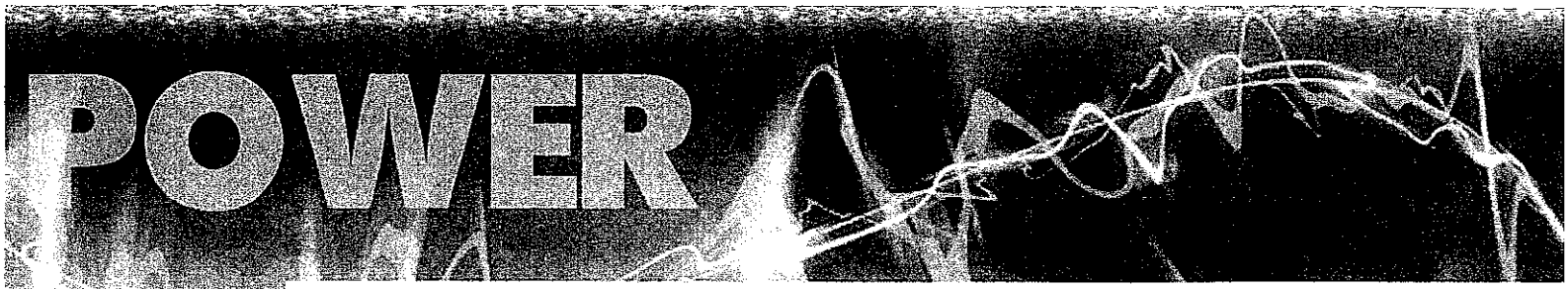
Connector	4.X 7/16 DIN Female, IP67
Connector position	Bottom
Dimensions, HxWxD, in (mm)	51" x 12" x 6" (1295 x 305 x 152)
Mounting	Pre-mounted Tilt Brackets
Weight, with brackets, lbs (kg)	41 (19)
Weight, without brackets, lbs (kg)	30 (14)
Wind load, horizontal/normal face 42 m/s Cd=1.0 (lbf)	620
Maximum operational wind speed, mph (m/s)	100 (45)
Survival wind speed, mph (m/s)	150 (67)
Lightning protection	DC Ground
Operating Temperature	-40°C to +60°C
Radome material	PVC, IP56
Packet size, HxWxD, in (mm)	60" x 16" x 10" (1524 x 400 x 255)
Radome colour	Light Grey
Shipping weight, lbs (kg)	52 (24)
RET	iRET ASGv1.1, MET and AISGv2.0
Bracket	7255.00, 7455.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/ps/.



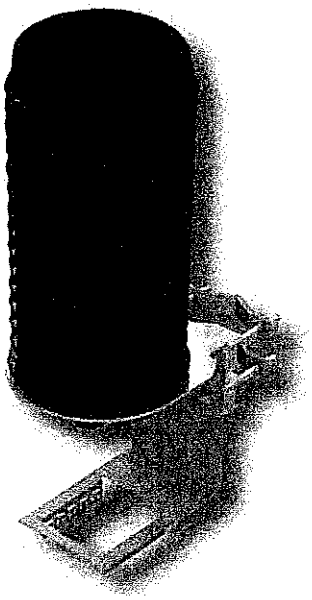
DC6-48-60-18-8F

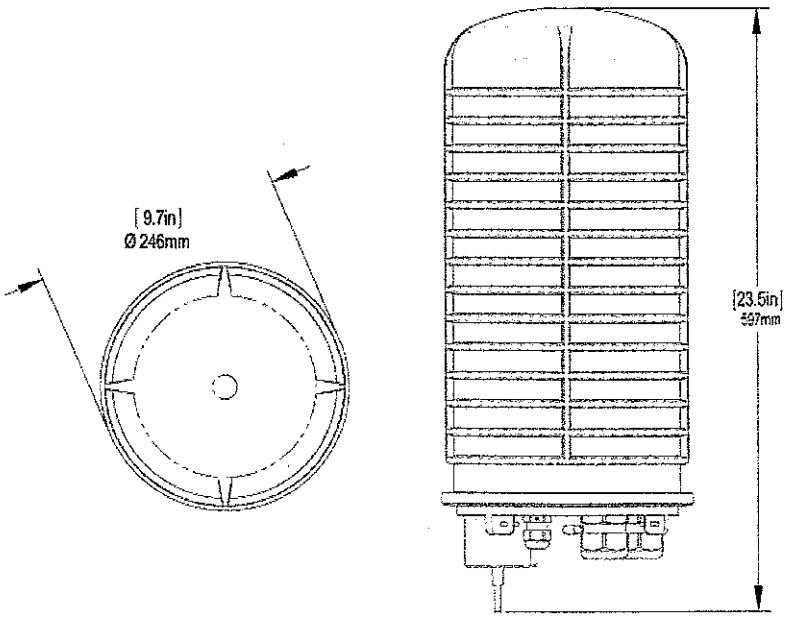
DC Surge Suppression Solution

The DC6-48-60-18 is a dual chambered, DC surge suppression system for use in multi-circuit, Distributed Antenna Systems. The system will protect up to 6 Remote Radio Heads from voltage surges and lightning, and connect up to 18 fiber pairs. The system is enclosed in a NEMA 4 rated, waterproof enclosure.

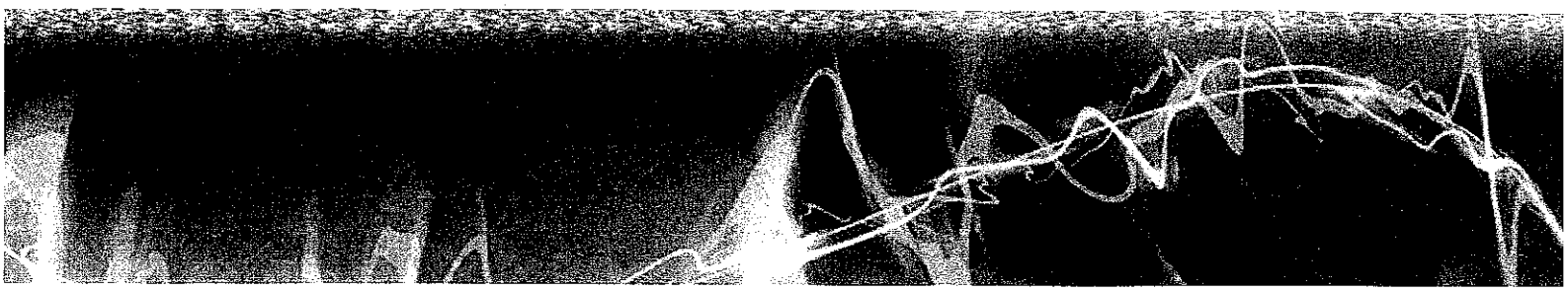
FEATURES

- Protects up to 6 Remote Radio Heads, each with its own protection circuit.
- Flexible design allows for installation at the top of a tower for Remote Radio Head protection.
- Includes fiber connections for up to 18 pairs of fiber.
- LED indicators on individual circuits provide visual indication of suppressor status.
- Form 'C' relays allow for remote monitoring of the suppressor status.
- Patented Strikesorb technology provides over 60 kA of surge current capacity per circuit.
- Strikesorb suppression modules are fully recognized to UL 1449-3rd Edition Safety Standard, meeting all intermediate and high current fault requirements to facilitate use in OEM applications.
- Raycap recommends that DC protection system be installed within 2 meters or 6 feet of the radio.
- Dome design is lightweight and aerodynamic providing maximum flexibility for installation on top of towers.





Phone 208.777.1166 Toll Free 800.890.2569 Fax 208.777.4466 www.raycapsurgeprotection.com



DC6-48-60-18-8F

DC Power Surge Protection

Electrical Specifications	
Model Number	DC6-48-60-18-8F
Nominal Operating Voltage	48 VDC
Nominal Discharge Current (I_n)	20 kA 8/20 µs
Maximum Discharge Current (I_{max}) per NEMA LS-1	60 kA 8/20 µs
Maximum Continuous Operating Voltage (U_c)	75 VDC
Voltage Protection Rating	400 V

Mechanical Specifications	
Suppression Connection Method	Compression lug, #2-#14 AWG Copper, #2-#12 Aluminum
Fiber Connection Method	LC-LC Single mode duplex
Environmental Rating	IP 68, 7m 72hrs
Operating Temperature	-40° C to + 80° C
Storage Temperature	-70° C to + 80° C
Cold Temperature Cycling	IEC 61300-2-22e -30° C to + 60° C 200 hrs @ 5 psi
Resistance to Aggressive Materials	CEI IEC 61073-2 including acids and bases
UV Protection	ISO 4892-2 Method A Xenon-Arc 2160 hrs
Weight	20 lbs without Mounting Bracket

STANDARDS

Strikesorb modules are compliant to the following Surge Protection Device (SPD) Standards:

- ANSI/UL 1449 – 3rd Edition
- IEEE C62.41
- NEMA LS-1, IEC 61643-1:2005 2nd Edition:2005
- IEC 61643-12
- EN 61643-11:2002 (including A11:2007)

GS-07F-0435V

Certified to ISO 9001:2000

TÜV Rheinland of North America

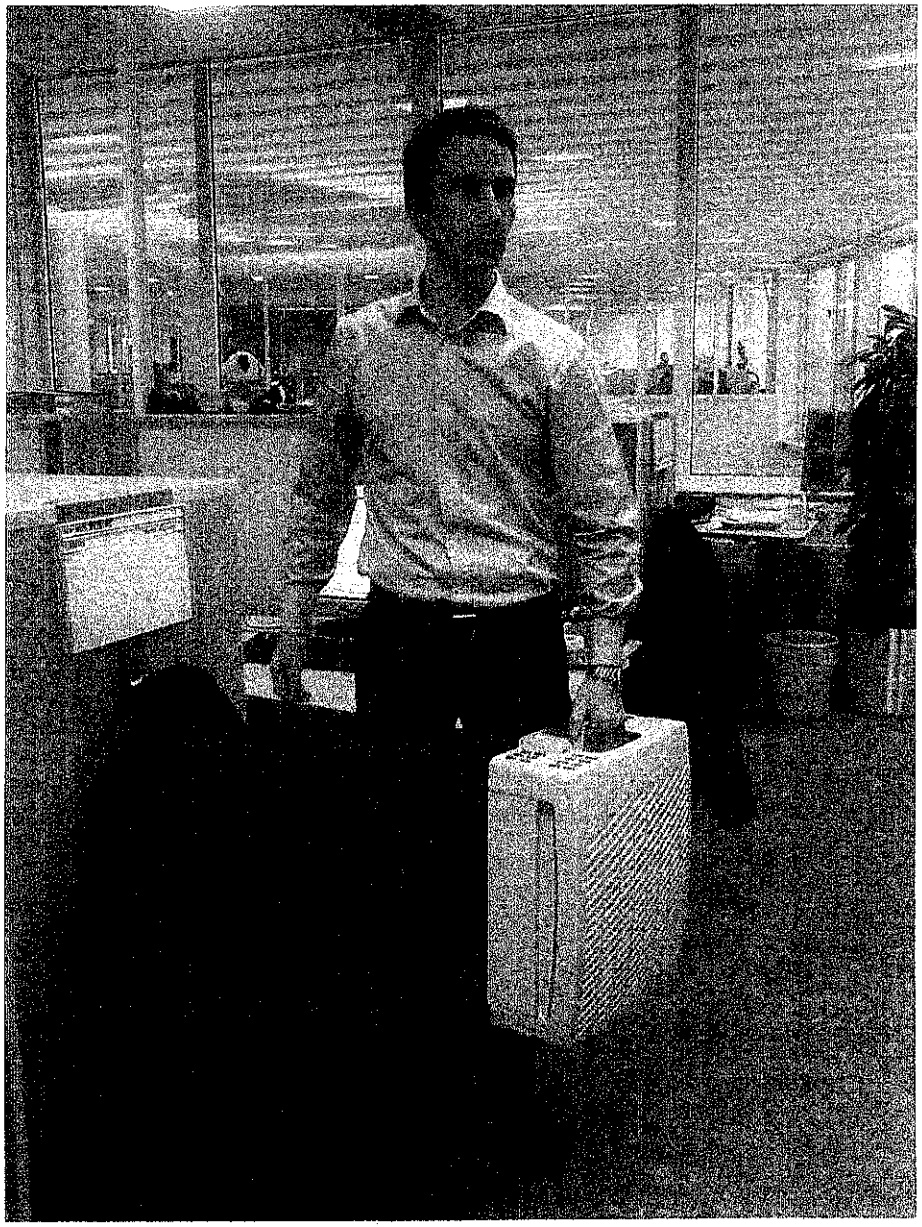
Raycap, inc. 806 W. Clearwater Loop • Post Falls • Idaho • 83854 • USA
Phone 208.777.1166 • Toll Free 800.890.2569 • Fax 208.777.4466 • www.raycapsurgeprotection.com

RRUS 11 – Dual PA RRU.

Technical Data

RBS6000

- Multi standard
- RF: 2x30 Watts
- Carrier BW: 1.4 – 20 MHz
- Alarms: 2
- Dimensions (with sunshield):
  - Width: 17.0 in
  - Height: 17.8 in
  - Depth: 7.2 in
  - Weight: 55 lbs (Band 12)
  - Weight: 50 lbs (Band 4)
- Temperature: -40 to +131 F
- Cooling: Self convection
- Power: -48 VDC
- Rec. fuse size 20 Amp
  - Rec. DC cable:
    - 6 mm^2 up to 60 meters
    - 10 mm^2 over 60 meters
    - Shielded
- Power Cons: 200 Watts typ.



RRUS-11 I/F