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

March 18, 2009

Steven L. Levine
Real Estate Consultant
New Cingular Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, CT 06067-3900

RE: **EM-CING-041-090205** - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 33 Neptune Avenue, East Haddam, Connecticut.

Dear Mr. Levine:

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 modified per Appendix F of the structural analysis report dated February 4, 2009 and sealed by David Granger, P.E. prior to the antenna swap;
- A post-construction tower rating of not more than 100 percent shall be achieved; and
- A signed letter from a Professional Engineer duly licensed in the State of Connecticut shall be submitted to the Council to certify that the modifications have been properly completed and a post-construction tower rating of not more than 100 percent has been achieved.

The proposed modifications are to be implemented as specified here and in your notice dated February 5, 2009, including the placement of all necessary equipment and shelters within the tower compound. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65.

CSC
CONNECTICUT SITING COUNCIL

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 Mark B. Walter, First Selectman, Town of East Haddam
James Ventres, Land-Use Administrator, Town of East Haddam
American Legion

EM-CING-041-090205

The new at&t Your world. Delivered. cingular raising the bar

Cingular Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 513-7636
Fax: (860) 513-7190

Steven L. Levine
Real Estate Consultant

ORIGINAL

HAND DELIVERED

February 5, 2009

RECEIVED
FEB - 5
CONNECTICUT SITING COUNCIL

Honorable Daniel F. Caruso, Chairman,
and Members of the Connecticut Siting Council
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: New Cingular Wireless PCS, LLC notice of intent to modify an existing tele-communications facility located at 33 Neptune Avenue, East Haddam (owner, American Legion)

Dear Chairman Caruso and Members of the Council:

In order to accommodate technological changes, implement Uniform Mobile Telecommunications System ("UMTS") capability, 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.

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. 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) 513-7636 with questions concerning this matter. Thank you for your consideration.

Sincerely,

Steven L. Levine
Real Estate Consultant

Attachments

NEW CINGULAR WIRELESS
Equipment Modification

33 Neptune Avenue, East Haddam
Site Number 5870
Former AT&T cell site
Petition 637 approved 11/03

Tower Owner/Manager: American Legion

Equipment Configuration: Light Pole

Current and/or Approved: Three Allgon 7250 panel antennas @ 90 ft AGL
Six runs 7/8 inch coax cable
Concrete pad with outdoor equipment cabinets

Planned Modifications: Remove all existing antennas
Install three Powerwave 7770 antennas (or equivalent) @ 90 ft
Install six TMA's diplexers @ 90 ft
Remove one existing cabinet
Install one new outdoor cabinet for UMTS

Power Density:

Worst-case calculations for existing wireless operations at the site indicate a radio frequency electromagnetic radiation power density, measured at ground level beside the tower, of approximately 4.4 % 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 16.5 % 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 *							0.00
AT&T GSM *	90	1900 Band	4	250	0.0444	1.0000	4.44
Total							**4.4%**

* Per CSC records

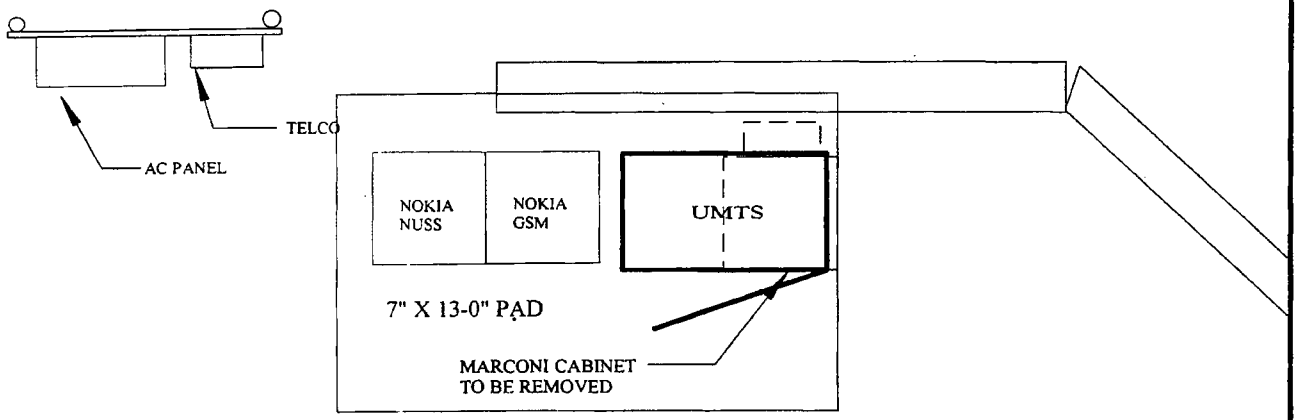
Proposed

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 *							0.00
AT&T UMTS	90	880 - 894	1	500	0.0222	0.5867	3.78
AT&T GSM	90	1900 Band	2	427	0.0379	1.0000	3.79
AT&T GSM	90	880 - 894	4	296	0.0526	0.5867	8.96
Total							**16.5%**

* Per CSC records

Structural information:

The attached structural analysis demonstrates that the tower and foundation will have adequate structural capacity to accommodate the proposed equipment modifications upon completion of recommended structural modifications to the tower. (GPD Group, 2/4/09)



at&t

SAI communications

SITE NUMBER
5870

SITE NAME
East Haddam North

TITLE:	EQUIPMENT PLAN
MISC. INFO:	
DWG. BY:	SGB
DATE:	07/07/08
SCALE:	N.T.S.
SHEET:	1 OF 1

New Cingular Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 513-7636
Fax: (860) 513-7190

Steven L. Levine
Real Estate Consultant

February 5, 2009

Honorable Mark B. Walter
1st Selectman, Town of East Haddam
Town Office Bldg. 7 Main Street
East Haddam, CT 06423

Re: Telecommunications Facility – 33 Neptune Avenue, East Haddam

Dear Mr. Walter:

In order to accommodate technological changes, implement Uniform Mobile Telecommunications System ("UMTS") capability, and enhance system performance in the State of Connecticut, New Cingular Wireless PCS, LLC ("AT&T") will be changing its equipment configuration at certain cell sites.

As required by Regulations of Connecticut State Agencies ("R.C.S.A.") Section 16-50j-73, the Connecticut Siting Council has been notified of the changes and will review AT&T's proposal. Please accept this letter as notification under Section 16-50j-73 of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2).

The accompanying letter to the Siting Council fully describes AT&T's proposal for the referenced cell site. However, if you have any questions or require any further information on our plans or the Siting Council's procedures, please call me at (860) 513-7636 or Mr. Derek Phelps, Executive Director, Connecticut Siting Council at (860) 827-2935.

Sincerely,

Steven L. Levine
Real Estate Consultant

Enclosure

Derek Creaser
Hudson Design Group, LLC
1600 Osgood Street, Building 20 North, Suite 2-101
North Andover, MA 01845
(617) 306-3034

GPD ASSOCIATES
Aaron Herkenhoff
520 South Main St., Suite 2531
Akron, Ohio 44311
(330) 572-2199
aherkenhoff@gpdgroup.com

GPD# 2009147.01
February 4, 2009

STRUCTURAL ANALYSIS REPORT

HDG DESIGNATION:	**Site B-ID:**	**CT5870**
	Site Name:	**East Haddam North**
AT&T DESIGNATION:	Site USID:	27088
	Site FA:	10071141
	Site Name:	East Haddam North
ANALYSIS CRITERIA:	**Codes:**	**TIA/EIA-222-F & 2003 IBC**
		85-mph with 0" ice
		74-mph with 1/2" ice
SITE DATA:		**33 Neptune Avenue, East Haddam, CT 06469, Middlesex County**
		Latitude 41° 29' 55.643" N, 72° 27' 35.999" W
		90' FT Monopole Tower

Mr. Derek Creaser,

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:

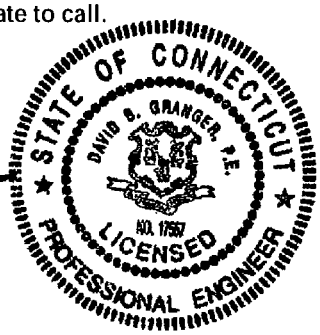
Elev. 88' (3) Powerwave 7770 Antennas on (3) 1' Standoffs, w/ (6) 7/8" existing coax
(6) LGP 21401 TMA's, on the same mount

Based on our analysis we have determined the **design of the tower and its foundation will be sufficient once the modifications are installed in reference to the GPD design drawings (Job #: 2009147.01, dated 2/4/09, see Appendix F)** 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 AT&T. 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 that the existing structure is capable of carrying the proposed loading configuration as specified AT&T to Hudson Design Group. This report was commissioned by Mr. Derek Creaser of Hudson Design Group.

No foundation or geotechnical information was available or provided for this report. Therefore, the in place capacity of the existing foundation could not be verified. A geotechnical investigation and foundation exploration are recommended to verify the capacity of the foundation with the proposed loading.

Modifications have been designed by GPD Associates (Job #: 2009147.01 dated 2/4/09, see Appendix F) and consisted of reinforcing the pole from 0' – 25'.

TOWER SUMMARY AND RESULTS

Member	Capacity	Results
Monopole	94.9%	Pass
Base Plate	89.8%	Pass
Anchor Rods	58.6%	Pass
Foundation*	85.3%	Pass

*Capacity determined by comparing analysis reactions to original design reactions.

RECOMMENDED MODIFICATIONS

The design of the existing tower and its foundation will be sufficient for the proposed loads once the modifications by GPD Associates (Job #: 2009147.01, dated 2/4/09) are installed.

ANALYSIS METHOD

RISA Tower (Version 5.3.0.1), 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 solely based on this information and being provided without the benefit of a site visit.

DOCUMENTS PROVIDED

Document	Remarks	Source
AT&T Proposed Loading	RF Data Sheet, Dated 10/29/2008	HDG
Previous Structural Analysis	JEM Engineering & Manufacturing, Inc. Quote #: Q23486, dated 3/4/2003	HDG
Foundation Drawings	JEM Engineering & Manufacturing, Inc. Job # 12061, dated 2/12/03	HDG
Modification Drawings	GPD Associates Job #: 2009147.01, dated 2/4/09	GPD

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 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. In the case of absent foundation data, it is the tower owner's responsibility to insure that the foundation system is adequate to support the structure with its new reactions.
6. The tower and structures have been properly maintained in accordance TIA Standard 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 prior structural modifications, if any, are assumed to be as per data supplied/available, to have been properly installed and to be fully effective.
9. Tower Mounted Amplifiers and diplexers are assumed to be installed behind antennas.
10. All existing loading was obtained from the previous structural analysis by JEM Engineering & Manufacturing, Inc. Quote #: Q23486, dated 3/4/2003, site photos and the provided preliminary tower summary and is assumed to be accurate.
11. All proposed coax is assumed to be internal to the monopole.

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

DISCLAIMER OF WARRANTIES

GPD ASSOCIATES has not performed a site visit to the tower to verify the member sizes or antenna/coax loading. This is not a condition assessment of the tower or foundation. This report does not replace a full tower inspection. The tower and foundations are assumed to have been properly fabricated, erected, maintained, in good condition, twist free, and plumb.

The engineering services rendered by GPD ASSOCIATES in connection with this Structural Analysis are limited to a computer analysis of the tower structure and theoretical capacity of its main structural members. All tower components have been assumed to only resist dead loads when no other loads are applied. No allowance was made for any damaged, bent, missing, loose, or rusted members (above and below ground). No allowance was made for loose bolts or cracked welds.

GPD ASSOCIATES does not analyze the fabrication of the structure (including welding). It is not possible to have all the very detailed information needed to perform a thorough analysis of every structural sub-component and connection of an existing tower. GPD ASSOCIATES provides a limited scope of service in that we cannot verify the adequacy of every weld, plate connection detail, etc. The purpose of this report is to assess the feasibility of adding appurtenances usually accompanied by transmission lines to the structure.

It is the owner's responsibility to determine the amount of ice accumulation, if any, that should be considered in the structural analysis.

The attached sketches are a schematic representation of the analyzed tower. If any material is fabricated from these sketches, the contractor shall be responsible for field verifying the existing conditions, proper fit, and clearance in the field. Any mentions of structural modifications are reasonable estimates and should not be used as a precise construction document. Precise modification drawings are obtainable from GPD ASSOCIATES, but are beyond the scope of this report.

Miscellaneous items such as antenna mounts etc. have not been designed or detailed as a part of our work. We recommend that material of adequate size and strength be purchased from a reputable tower manufacturer.

GPD ASSOCIATES makes no warranties, expressed and/or implied, in connection with this report and disclaims any liability arising from material, fabrication, and erection of this tower. GPD ASSOCIATES will not be responsible whatsoever for, or on account of, consequential or incidental damages sustained by any person, firm, or organization as a result of any data or conclusions contained in this report. The maximum liability of GPD ASSOCIATES pursuant to this report will be limited to the total fee received for preparation of this report.

Tower Analysis Summary Form

General Info

Site Name	EAST HADDAM NORTH
Site Number	27088
Date of Analysis	2/4/2009
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)	90	
Tower Manufacturer	n/a	
Tower Model	n/a	
Manufacturer Drawings	JEM Engineering & Manufacturing, Inc	2/12/2003
Foundation Design	n/a	
Geotech Report	n/a	
Tower Mapping	n/a	
Previous Structural Analysis	JEM Engineering & Manufacturing, Inc	3/4/2003

Design Parameters

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

Analysis Results

Existing & reserved Condition	
Tower	107.8%
Foundation	79.7%
Guy Wire	n/a

Proposed Condition	
Tower	94.9%
Foundation	85.3%
Guy Wire	n/a

Steel Yield Strength (ksi)

Monopole	50
Anchor Rods	55
Base Plate	36

Note: Steel grades were taken from previous analysis.

NOTE: THIS ANALYSIS CONSIDERS PROPOSED MODIFICATIONS

Existing/Reserved

Antenna							Mount				Transmission Line		
Antenna Owner	Attachment Height (ft)	Quantity	Type	Model	EPA (ft²) each	Azimuth	Quantity	Type	Model	EPA (ft²) total	Quantity	Size	Attachment Leg/Face
AT&T Mobility	88	3	Panel	7250.02	4.00		3	1' Standoff		2.04	6	7/8"	Internal
Unknown	73	12		2' Dia. Baseball Field Lights	3.14		1	Platform with Rails		35.90			

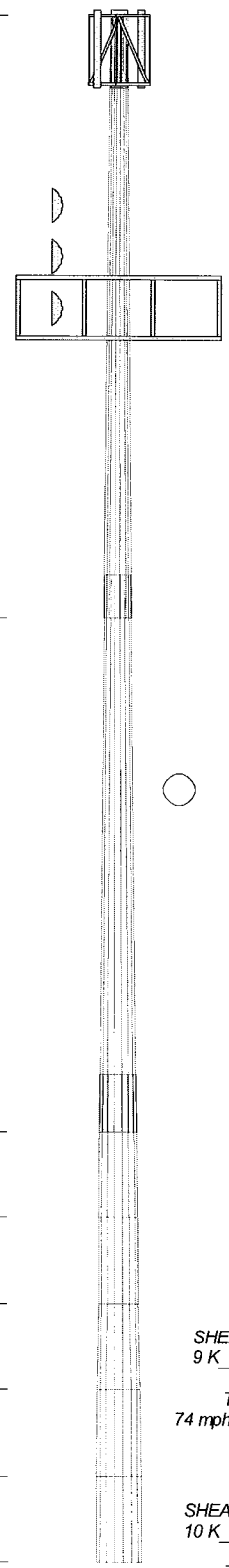
Proposed

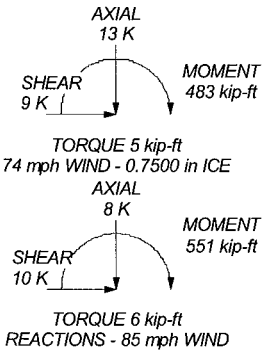
Antenna							Mount				Transmission Line		
Antenna Owner	Attachment Height (ft)	Quantity	Type	Model	EPA (ft²) each	Azimuth	Quantity	Type	Model	EPA (ft²) total	Quantity	Size	Attachment Leg/Face
AT&T Mobility	88	3	Panel	7770.00	5.88			On Existing Mount					
AT&T Mobility	88	6	TMA	LGP21401	Shielded			On Existing Mount					

Note: Propose antennas and TMA's are to replace the existing antennas at 88' (coax to be reused).

Revision:1.2
Date: 12/15/06

Section	7	6	5	4	3	2	1
Length (ft)	5.00	5.00	5.00	5.00	8.33	32.50	35.00
Number of Sides	16	16	16	16	16	16	16
Thickness (in)	0.1875	0.1875	0.1875	0.1875	0.1875	0.1875	0.1250
Lap Splice (ft)					3.33		2.50
Top Dia (in)	31.2898	30.0796	28.8695	27.6593	25.6414	18.9066	11.0000
Bot Dia (in)	32.5000	31.2898	30.0796	28.8695	27.6593	26.8290	19.7840
Grade	A572-50						
Weight (K)	3.9	0.3	0.3	0.3	0.4	1.5	0.7





DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
1' Standoff	88	(2) LGP21401	88
1' Standoff	88	(2) LGP21401	88
1' Standoff	88	Valmont 13' Platform w/ Rails (GPD)	73
7770.00	88	(4) 2' Dia. Round Ball Field Light	73
7770.00	88	(4) 2' Dia. Round Ball Field Light	73
7770.00	88	(4) 2' Dia. Round Ball Field Light	73
(2) LGP21401	88		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi			

TOWER DESIGN NOTES

1. Tower is located in Middlesex 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 0.75 in ice.
4. Deflections are based upon a 60 mph wind.

GPD GROUP
GPD Associates
520 South Main - Suite 2531
Akron, OH 44311
Phone: (614)-210-0751
FAX:

Job: ***EAST HADDAM NORTH CT5879***			
Project: ***2009147.01***			
Client: Hudson Design Group	Drawn by: Dan Palkovic	App'd:	
Code: TIA/EIA-222-F	Date: 02/04/09	Scale: NTS	
Path: N:\2009\2009147\01\Mod Design\RISA\EAST HADDAM NORTH.eri		Dwg No. E-1	

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 Middlesex County, Connecticut.
Basic wind speed of 85 mph.
Nominal ice thickness of 0.7500 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 60 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
LDF5-50A (7/8 FOAM)	C	No	Inside Pole	88.00 - 8.00	6	No Ice	0.00	0.33
						1/2" Ice	0.00	0.33
						1" Ice	0.00	0.33
MP3-05 Mod Channel	A	No	CaAa (Out Of Face)	25.00 - 0.00	2	No Ice	0.17	19.22
						1/2" Ice	0.35	21.90
						1" Ice	0.52	24.50
MP3-05 Mod Channel	B	No	CaAa (Out Of Face)	25.00 - 0.00	1	No Ice	0.00	19.22
						1/2" Ice	0.00	21.90
						1" Ice	0.00	24.50

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 K
Valmont 13' Platform w/ Rails (GPD)	C	None			0.0000	73.00	No Ice	35.90	35.90	1.34
							1/2" Ice	40.50	40.50	3.00
							1" Ice	45.10	45.10	4.00
1' Standoff	A	From Leg	0.50	0.00	0.0000	88.00	No Ice	0.68	0.68	0.01
							1/2" Ice	1.22	1.22	0.02
							1" Ice	1.76	1.76	0.00
1' Standoff	B	From Leg	0.50	0.00	0.0000	88.00	No Ice	0.68	0.68	0.01
							1/2" Ice	1.22	1.22	0.02
							1" Ice	1.76	1.76	0.00
1' Standoff	C	From Leg	0.50	0.00	0.0000	88.00	No Ice	0.68	0.68	0.01
							1/2" Ice	1.22	1.22	0.02
							1" Ice	1.76	1.76	0.00
7770.00	A	From Leg	1.00	0.00	2.0000	88.00	No Ice	5.88	2.93	0.04
							1/2" Ice	6.31	3.27	0.07
							1" Ice	6.75	3.63	0.11

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 K
7770.00	B	From Leg	1.00	2.0000	88.00	No Ice	5.88	2.93	0.04
			0.00			1/2" Ice	6.31	3.27	0.07
			0.00			1" Ice	6.75	3.63	0.11
7770.00	C	From Leg	1.00	2.0000	88.00	No Ice	5.88	2.93	0.04
			0.00			1/2" Ice	6.31	3.27	0.07
			0.00			1" Ice	6.75	3.63	0.11
(2) LGP21401	A	From Leg	0.00	2.0000	88.00	No Ice	0.00	0.23	0.01
			0.00			1/2" Ice	0.00	0.31	0.02
			0.00			1" Ice	0.00	0.40	0.03
(2) LGP21401	B	From Leg	0.00	2.0000	88.00	No Ice	0.00	0.23	0.01
			0.00			1/2" Ice	0.00	0.31	0.02
			0.00			1" Ice	0.00	0.40	0.03
(2) LGP21401	C	From Leg	0.00	2.0000	88.00	No Ice	0.00	0.23	0.01
			0.00			1/2" Ice	0.00	0.31	0.02
			0.00			1" Ice	0.00	0.40	0.03

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft^2	Weight K
(4) 2' Dia. Round Ball Field Light	C	Paraboloid w/o Radome	From Leg	2.00	0.0000		73.00	2.00	No Ice	3.14	0.08
				2.00					1/2" Ice	3.41	0.11
				6.00					1" Ice	3.68	0.13
(4) 2' Dia. Round Ball Field Light	C	Paraboloid w/o Radome	From Leg	2.00	0.0000		73.00	2.00	No Ice	3.14	0.08
				2.00					1/2" Ice	3.41	0.11
				3.00					1" Ice	3.68	0.13
(4) 2' Dia. Round Ball Field Light	C	Paraboloid w/o Radome	From Leg	2.00	0.0000		73.00	2.00	No Ice	3.14	0.08
				2.00					1/2" Ice	3.41	0.11
				0.00					1" Ice	3.68	0.13

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
L1	90 - 55	Pole	TP19.784x11x0.125	1	-2.85	59.45	94.5	Pass
L2	55 - 25	Pole	TP26.829x18.9066x0.1875	2	-4.43	222.92	94.9	Pass
L3	25 - 20	Pole	TP27.6593x25.6414x0.1875	3	-5.41	268.22	*	Pass
L4	20 - 15	Pole	TP28.8695x27.6593x0.1875	4	-6.04	305.10	*	Pass
L5	15 - 10	Pole	TP30.0796x28.8695x0.1875	5	-6.68	342.23	*	Pass
L6	10 - 5	Pole	TP31.2898x30.0796x0.1875	6	-7.33	378.67	*	Pass
L7	5 - 0	Pole	TP32.5x31.2898x0.1875	7	-7.99	414.52	*	Pass
							Summary	
						Pole (L7)	94.9	Pass
						RATING =	**94.9**	**Pass**

*See Appendix D for % Capacity

APPENDIX F

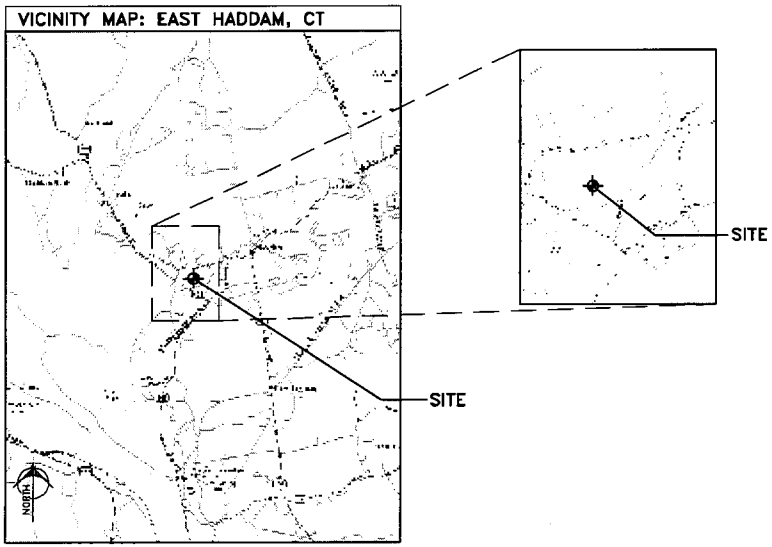
Modification Design Drawings

EAST HADDAM NORTH

USID # 27088

EXISTING 90' FWT MONOPOLE TOWER

VICINITY MAP: EAST HADDAM, CT



PROJECT SUMMARY	
TOWER OWNER:	AT&T MOBILITY
TOWER TYPE:	MONOPOLE
GOVERNING CODE:	TIA/EIA-222-F & 2003 IBC
SITE ADDRESS:	33 NEPTUNE AVENUE EAST HADDAM, CT 06469 MIDDLESEX COUNTY
LATITUDE:	41° 29' 55.643"
LONGITUDE:	72° 27' 35.999"
OWNER CONTACT:	MR. DEREK CREASER 1800 OSCOOD STREET, BUILDING 20 NORTH, SUITE 2-101 NORTH ANDOVER, MA 01845 (617) 306-3034
ENGINEER CONTACT:	MR. JASON CHERONIS 520 S. MAIN STREET, SUITE 2531 AKRON, OH 44311 (330)572-2137

PROJECT OVERVIEW:
THE LISTED DRAWINGS REPRESENT REQUIRED MODIFICATIONS TO THE TOWER BY REINFORCING THE POLE FROM 0'-25'.

DATE	REVISION	DRAWING INDEX
-		TITLE SHEET
-		N-1 PROJECT NOTES
-		S-1 TOWER ELEVATION & MODIFICATION DETAILS
-		S-2 ADDITIONAL SECTIONS & DETAILS

TOWER OWNER

at&t

PREPARED FOR

Hudson Design Group LLC

ENGINEERS

GLAUS PYLE SCHOMER BURNS & DEHAVEN INC.
GPD ASSOCIATES
520 South Main Street, Suite 2531 Akron, Ohio 44311
330-572-2100, Fax 330-572-2102

SITE NAME:
EAST HADDAM NORTH

SITE NUMBER:
USID #: 27088

GPD JOB NUMBER:
2009147.01

DATE : 02/04/09

REVISION 0

GENERAL NOTES

1. THE FOLLOWING DRAWINGS REPRESENT MODIFICATIONS TO THE EXISTING TOWER. THE MODIFICATIONS ARE BASED ON GPD ASSOCIATES STRUCTURAL REPORT (PROJECT #: 2008147.21, DATED JANUARY 14, 2009). ALL MODIFICATIONS MUST BE INSTALLED TO BRING THE TOWER INTO CONFORMANCE WITH TIA/EIA-222-F AND 2003 IBC.

2. THESE MODIFICATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF TIA/EIA-222-F, 2003 IBC AWS, AND AISC. MATERIALS AND SERVICES PROVIDED BY THE CONTRACTOR SHALL CONFORM TO THE ABOVE MENTIONED CODES AND THE CONTRACT SPECIFICATIONS.

3. ALL TOWER INFORMATION WAS OBTAINED IN THE FORM OF A STRUCTURAL ANALYSIS BY JEM ENGINEERING & MANUFACTURING, INC (QUOTE #: Q03488, DATED MARCH 4, 2003).

4. THIS DESIGN ASSUMES THE TOWER AND FOUNDATIONS HAVE BEEN WELL MAINTAINED, IN GOOD CONDITION, AND ARE WITHOUT DEFECT. BENT MEMBERS, CORRODED MEMBERS, LOOSE BOLTS, CRACKED WELDS AND OTHER MEMBER DEFECTS HAVE NOT BEEN CONSIDERED. THE TOWER IS ASSUMED TO BE PLUMB AND THE SITE IS ASSUMED TO BE LEVEL. THIS DESIGN IS BEING PROVIDED WITHOUT THE BENEFIT OF A SITE VISIT BY GPD ASSOCIATES. CONTRACTOR SHALL PERFORM COMPLETE CONDITION ASSESSMENT PRIOR TO ORDERING ANY REINFORCING MATERIALS. CONTRACTOR SHALL SUPPLY CONDITION ASSESSMENT TO ENGINEER FOR REVIEW. SEE CONTRACTOR NOTES.

5. MANUFACTURER TOLERANCES, FIELD ADJUSTMENTS, INCORRECT STACKING, AND TEMPERATURE CAN CAUSE DIMENSION DISCREPANCIES. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ORDERING MATERIALS. ALL FIELD MEASUREMENTS MUST BE REPORTED TO ENGINEER.

6. ALL NEW STEEL SHALL BE HOT DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.

7. ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER AND BEHIND STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING BRUSH APPLIED PAINT (ZRC OR EQUAL), AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).

8. CAULKING SHALL BE PROVIDED AROUND PERIMETER OF ANY AND ALL STIFFENING CHANNELS TO ENSURE COMPLETE SEAL BETWEEN EXISTING STRUCTURE AND REINFORCING PLATES. SEALANT IS TO BE EXTERIOR GRADE, PAINTABLE SILICONE CAULKING AS MANUFACTURED BY DOW AND ACCEPTABLE TO GPD.

LOADINGS:

WIND LOADS:
FASTEST MILE WIND SPEED (PER: TIA/EIA-222-F & 2003 IBC) 85 MPH
(MIDDLESEX COUNTY, MA)

9. STRUCTURAL STEEL:

MATERIAL SPECIFICATIONS
LATEST EDITION OF AISC

MATERIAL

STIFFENER PLATES	ASTM A572 (GR 65)
MP CHANNEL	ASTM A572 (GR. 65)
BOLTS	AJAX
HOT DIPPED GALVANIZING	ASTM A123
WELDS	E70XX

10. ALL MATERIAL UTILIZED FOR THIS PROJECT MUST BE NEW AND FREE OF ANY DEFECTS. ANY MATERIAL SUBSTITUTIONS, INCLUDING BUT NOT LIMITED TO ALTERED SIZES AND/OR STRENGTHS, MUST BE APPROVED BY THE OWNER AND ENGINEER IN WRITING.

11. PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.

12. THE ENGINEER (GPD ASSOCIATES) SHALL MAKE POST INSTALLATION OBSERVATION FOR TOWER. CONTRACTOR SHALL COORDINATE W/ENGINEER (GPD ASSOCIATES) 72 HOURS AFTER INSTALLATION OF MODIFICATIONS. INSTALLATION OF PROPOSED LOADING WITHOUT ENGINEER APPROVAL IS PROHIBITED.

CONTRACTOR NOTES

1. ALL CONTRACTORS AND LOWER TIER CONTRACTORS MUST ACKNOWLEDGE IN WRITING TO AT&T MOBILITY AND GPD ASSOCIATES THAT THEY HAVE OBTAINED, UNDERSTAND, AND WILL FOLLOW AT&T MOBILITY STANDARDS OF PRACTICE, CONSTRUCTION GUIDELINES, ALL SITE AND TOWER SAFETY PROCEDURES, ALL PRODUCT LIMITATIONS AND INSTALLATION PROCEDURES USED ON SITE, AND PROPOSED MODIFICATIONS DESCRIBED. RECEIPT OF ACKNOWLEDGMENT MUST OCCUR PRIOR TO BEGINNING CONSTRUCTION OR CLIMBING. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO PROVIDE THIS DOCUMENTATION FOR AT&T MOBILITY AND GPD ASSOCIATES ON COMPANY LETTERHEAD AND THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OBTAIN THIS DOCUMENTATION FROM LOWER TIER SUBCONTRACTORS (ON SUBCONTRACTOR LETTERHEAD) AND DELIVER IT TO AT&T MOBILITY AND GPD ASSOCIATES.

2. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING; ANY PROBLEMS WITH ACCESS, INTERFERENCE, ETC. SHALL BE RESOLVED PRIOR TO MOBILIZATION. THE CONTRACTOR MUST VISIT THE SITE PRIOR TO ORDERING ANY MATERIAL AND MUST RESOLVE ALL ISSUES WITH THE OWNER PREVENTING A CONTINUOUS INSTALLATION. CONTRACTOR SHALL NOTE ALL ANTENNAS, MOUNTS, COAX, LIGHTING, CLIMBING SUPPORTS, STEP BOLTS, AND ANY OTHER TOWER APPURTENANCES IN THE REGION OF THE MODIFICATIONS. SEE GENERAL NOTES #4, AND #5, THIS SHEET.

3. CONTRACTOR IS RESPONSIBLE FOR TEMPORARILY REMOVING ALL COAX, T-BRACKETS, ANTENNA MOUNTS, AND ANY OTHER TOWER APPURTENANCE THAT MAY INTERFERE WITH THE TOWER MODIFICATIONS. ALL TOWER APPURTENANCES MUST BE REPLACED AND/OR RESTORED TO ITS ORIGINAL LOCATION. ANY CARRIER DOWNTIME MUST BE COORDINATED WITH THE TOWER OWNER IN WRITING.

4. SOME ATTACHMENTS MAY REQUIRE CUSTOM MODIFICATIONS TO PROPERLY FIT THE MODIFIED REGION OF THE STRUCTURE. THOSE CUSTOMIZATIONS ARE DESIGNED BY OTHERS AND MUST BE APPROVED BY THE ENGINEER PRIOR TO REMOVING SUCH ATTACHMENTS. ANY CARRIER DOWNTIME MUST BE COORDINATED WITH THE TOWER OWNER IN WRITING.

5. CONTRACTOR SHALL ONLY WORK WITHIN THE LIMITS OF THE TOWER OWNER'S PROPERTY AND APPROVED EASEMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY WORK IS WITHIN THESE BOUNDARIES. ANY WORK OUTSIDE THESE BOUNDARIES SHALL BE APPROVED IN WRITING BY THE LAND OWNER PRIOR TO MOBILIZATION. CONSTRUCTION STAKING AND BOUNDARY MARKING IS BY OTHERS NOT GPD.

6. WORK SHALL ONLY BE PERFORMED DURING CALM DRY DAYS (WINDS LESS THEN 10-MPH). CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY LOCAL TOWER SHORING, TEMPORARY GLOBAL TOWER SHORING, AND ALL SHORING OF SURROUNDING BUILDINGS, PADS, AND OTHER OUTDOOR SITE OBSTRUCTIONS. ALL SHORING, TEMPORARY BRACING, AND TEMPORARY SUPPORTS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

WELD NOTES

1. PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL PERFORM A NONDESTRUCTIVE TEST ON THE EXISTING BASE PERIMETER WELD TO INSURE ITS STRUCTURAL INTEGRITY IN ACCORDANCE WITH AWS D1.1/D1.1M: 2006 STRUCTURAL WELDING CODE. IF ANY FLAWS ARE DISCOVERED, THE PROJECT SHALL BE PUT ON HOLD UNTIL REMEDIES TO CORRECT THE DEFICIENCIES ARE DESIGNED AND INSTALLED. AT&T AND THE ENGINEER SHALL BE CONTACTED IMMEDIATELY UPON A FAILING NONDESTRUCTIVE TESTING RESULT.

2. CONTRACTOR IS RESPONSIBLE FOR COMMISSIONING A CERTIFIED WELD INSPECTOR (CWI) THROUGHOUT THE ENTIRETY OF THE PROJECT. A PASSING CWI REPORT SHALL BE PROVIDED TO THE ENGINEER UPON COMPLETION OF THE PROJECT.

3. WELDING CERTIFICATES MUST BE PROVIDED TO CWI PRIOR TO WELDING CONTRACTOR BEGINNING WORK ON SITE. CERTIFICATE WILL BE ASKED FOR AS PART OF INSPECTION PROCESS. ALL WELDING SHOULD BE PERFORMED BY AN AWS QUALIFIED WELDER WHO HAS EXPERIENCE WITH GALVANIZED SURFACES AND IN ACCORDANCE WITH ANSI/AWS D1.1 AND ANSI Z 49.1 OR LATEST EDITIONS.

4. UPON COMPLETION OF THE PROJECT, CONTRACTOR SHALL PERFORM A NONDESTRUCTIVE TEST ON THE NEW WELDS AT THE BASE OF THE STRUCTURE TO INSURE THEIR STRUCTURAL INTEGRITY IN ACCORDANCE WITH AWS D1.1/D1.1M: 2006 STRUCTURAL WELDING CODE. NEW WELDS AT THE BASE INCLUDE, BUT ARE NOT LIMITED TOO, BASE PLATE STIFFENER WELDS, ANCHOR ROD BRACKET WELDS, AND REINFORCING TERMINATION WELDS.

5. OXY FUEL GAS WELDING OR BRAZING IS STRICTLY PROHIBITED.

6. INSTALL 3000° (NFPA 701) FIRE BLANKET AROUND ALL COAX.

7. MORE SPLATTER AND SPARKS SHALL BE ANTICIPATED GIVEN THE PREVIOUSLY GALV. SURFACE.

8. COAX IS FLAMMABLE AND CAN CATCH FIRE IF PROPER PRECAUTIONS ARE NOT MADE TO SHIELD COAX FROM ALL WELDING PROCEDURES. ALL COAX SHALL BE SHIELDED AT AND BELOW EACH WELDING PROCEDURE AND ELEVATION.

9. WELDING ON A GALVANIZED SURFACE SHOULD BE DONE WITH EXTREME CAUTION. IF THE WELD MATERIAL IS CONTAMINATED WITH ZINC IT DOES NOT PROVIDE A STRUCTURAL WELD.

10. FUMES CREATED FROM WELDING ON A PREVIOUSLY GALV. SURFACE CAN BE HAZARDOUS.

11. PRIOR TO WELDING, ALL SURFACES SHALL BE PROPERLY GROUND TO REMOVE GALVANIZING.

12. ALL FIELD WELDS SHALL BE TOUCHED UP WITH A GALVANIZING PAINT REPAIR (ZRC OR EQUIVALENT).

MP CHANNEL SYSTEM & BASE PLATE NOTES

1. CONTRACTOR SHALL REFERENCE AERO SOLUTIONS SPECIFICATIONS, PROCEDURES, AND GUIDELINES FOR ADDITIONAL ASSEMBLY DETAILS AND INSTALLATION OF THE MP CHANNEL REINFORCING SYSTEM.

2. CONTRACTOR SHALL INSTALL MP CHANNELS AND STIFFENERS AT LOCATIONS PER PLAN VIEW. FIELD ADJUSTMENTS MAY BE REQUIRED TO CLEAR EXISTING PORT HOLE AND STEP LUG LOCATIONS. CONTACT ENGINEER PRIOR TO ANY FIELD ADJUSTMENTS.

3. USE AJAX BOLTS WITH CORRECT SLEEVE LENGTHS PER DETAILS.

4. ALL HOLES DRILLED IN POLE SOLVENT CLEANED AND TOUCHED UP WITH ZRC ZINC RICH PAINT.

5. SLIP JOINTS TO BE JACKED TOGETHER USING 8 TON COME-A-LONGS PRIOR TO MOUNTING CHANNELS.

6. SPLICE BOLTS AND AJAX BOLTS TO BE TIGHTENED PER AISC "SNUG-TIGHT CONDITION".

7. AERO SOLUTIONS' SHOP DRAWINGS MUST BE SENT TO DESIGN ENGINEER FOR FINAL APPROVAL PRIOR TO FABRICATION.

8. CONTRACTOR SHALL VERIFY THAT TOWER IS PLUMB PRIOR TO THE INSTALLATION OF ANY TOWER MODIFICATIONS.

GPD ASSOCIATES

CT5870

REV.	DATE	DESCRIPTION

EAST HADDAM NORTH
33 NEPTUNE AVENUE
EAST HADDAM, CT 06469

PROJECT NOTES

	DATE
SURVEYED: DJP	01/26/09
DRAWN: TMT	02/04/09
CHECKED: BDP	02/04/09

JOB NO: 2009147.01

N-1

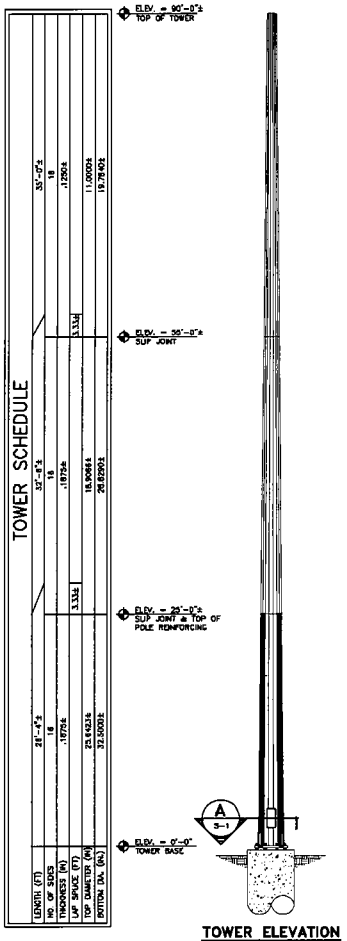
ANTENNA SCHEDULE

ELEVATION	STATUS	ANTENNA	MOUNT	COAX
86' (AT&T MOBILITY)	PROPOSED	(3) 7770.00 (6) LGP21401 TMA'S	(3) 1' STANDOFFS	(6) 7/8
86'* (AT&T MOBILITY)	EXISTING	(3) 7250.02	(3) 1' STANDOFFS	(6) 7/8
73' (UNKNOWN)	EXISTING	(12) 2'ø BASEBALL FIELD LIGHTS	(1) PLATFORM W/ RAILS	

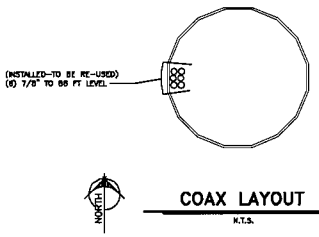
* ALL EXISTING ANTENNAS AT THE 86' LEVEL ARE TO BE REMOVED PRIOR TO THE INSTALLATION OF THE PROPOSED LOADING AND WERE NOT CONSIDERED IN THE ASSOCIATED ANALYSIS. THE EXISTING COAX IS TO BE REUSED.

TOWER MODIFICATION SCHEDULE

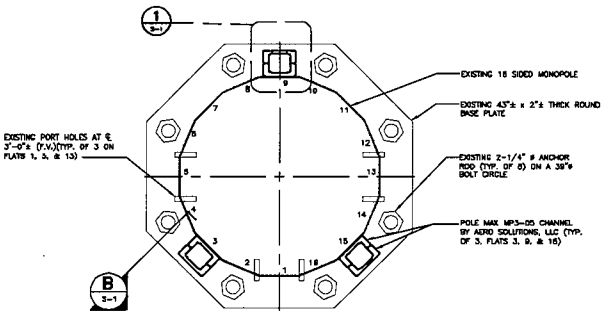
ELEVATION	NOTES
0'-25'	INSTALL THREE (3) NEW CHANNELS TO THE POLE. REFER TO SECTION A/S-1 FOR DETAILS.



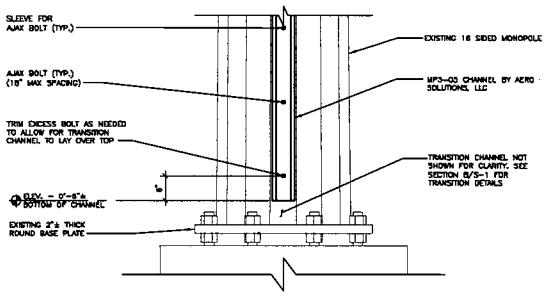
TOWER ELEVATION
3/16" = 1'-0"



COAX LAYOUT
N.T.S.



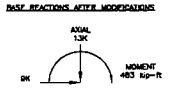
SECTION A S-1
1-1/2"=1'-0"



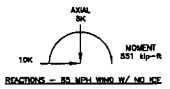
BOTTOM OF MODIFICATION
3/4" = 1'-0"

SEE MP CHANNEL NOTES ON SHEET N-1.
MP3-03 CHANNEL MUST DEVELOP AN END STRENGTH OF 220 KIPS (DOES NOT INCLUDE 4/3 INCREASE)

BASE REACTIONS AFTER MODIFICATIONS



REACTIONS – 74 MPH WIND W/ 1/2" ICE



REACTIONS – 85 MPH WIND W/ NO ICE

GPD ASSOCIATES
CT5870

REV.	DATE	DESCRIPTION

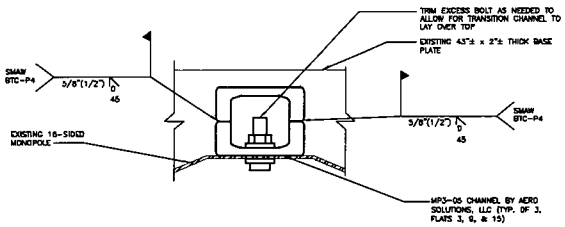
EAST HADDAM NORTH
33 NEPTUNE AVE.
EAST HADDAM, CT 06469

TOWER ELEVATIONS & MODIFICATION DETAILS

	DATE
DRAWN BY: DJP	01/26/09
CHECKED BY: MJ	02/04/09
APPROVED BY: REP	02/04/09

JOB NO: 2009147.01

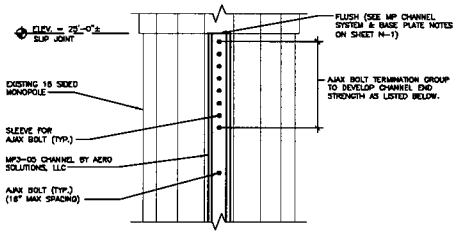
S-1



DETAIL 1 / S-1

4" = 1'-0"

NOTE: TYPICAL FOR CHANNELS ON FLATS 3, 9, AND 15.

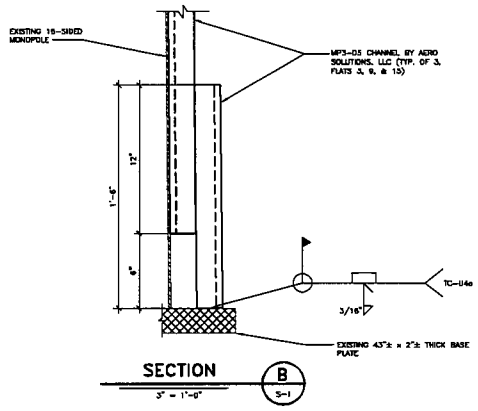


TYP. TOP OF MODIFICATION

1" = 1'-0"

ONE MP3-05 CHANNEL SHOWN FOR CLARITY
SEE MP CHANNEL NOTES ON SHEET N-1.
MP3-05 CHANNEL MUST DEVELOP AN END STRENGTH OF 220 KIPS (DOES NOT INCLUDE 4/3 INCREASE)

NOTE: CHANNEL SPLICE CONNECTIONS MAY BE REQUIRED AND ARE TO BE PROVIDED BY AERO SOLUTIONS. ALL SPLICE CONNECTIONS MUST DEVELOP A STRENGTH OF 220 KIPS. (DOES NOT INCLUDE 4/3 INCREASE)



SECTION B / S-1

3" = 1'-0"

NOTE: TYPICAL FOR CHANNELS ON FLATS 3, 9, AND 15.

GPD ASSOCIATES

CT5870

REV.	DATE	DESCRIPTION

EAST HADDAM NORTH
33 NEPTUNE AVE.
EAST HADDAM, CT 06469

ADDITIONAL SECTIONS & DETAILS

	DATE
DJP	01/26/09
TME	02/04/09
BDP	02/04/09

JOB NO.
2009147.01

S-2