



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

December 23, 2011

Stephen Kelleher, Real Estate Consultant
New Cingular Wireless PCS, LLC
960 Turnpike Street, Suite 28
Canton, MA 02021

RE: EM-CING-126-111207 - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 219 Nells Rock Road, Shelton, Connecticut.

Dear Ms. Fournier:

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:

- Any deviation from the proposed modification as specified in this notice and supporting materials with Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Not less than 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration;

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated December 6, 2011. 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. Thank you for your attention and cooperation.

Very truly yours,

Linda Roberts

Executive Director

LR/CDM/laf

c: The Honorable Mark A. Lauretti, Mayor, City of Shelton
Richard Schultz, Planning Administrator, City of Shelton
RCC Consultants



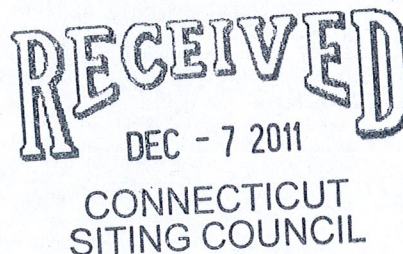


New Cingular Wireless PCS, LLC
 960 Turnpike Street, Suite 28
 Canton, MA 02021
 Phone: (508) 404-8917
 Fax: (617) 249-0819

Stephen Kelleher
 Real Estate Consultant

December 6, 2011

Honorable Robert Stein, Chairman,
 and Members of the Connecticut Siting Council
 Connecticut Siting Council
 10 Franklin Square
 New Britain, Connecticut 06051



Re: Request by New Cingular Wireless PCS, LLC for an Order Approving an Exempt Modification of an Existing tower at 219 Nells Rock Road, Shelton, CT.

Dear Chairman Stein and Members of the Council:

In order to accommodate technological changes, implement 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.

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 of 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. 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 contact me at 508-404-8917 with questions concerning this matter. Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen Kelleher". The signature is fluid and cursive, with a large initial "S" and "K".

Stephen Kelleher
Real Estate Consultant

Attachments



WIRELESS COMMUNICATIONS FACILITY

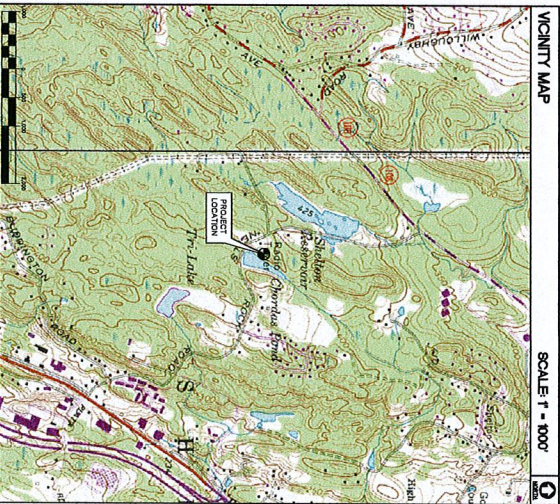
CT2113 SHELTON

219 NELLE'S ROCK ROAD SHELTON, CT 06484

SITE DIRECTIONS	FROM:	TO:
1. Start at top of page 200 of Site Plan	200 DIVERSITY DRIVE	219 NELLE'S ROCK ROAD
2. Turn LEFT onto West Street	W. MAIN STREET	
3. Turn RIGHT onto West Street	W. MAIN STREET	
4. Turn LEFT onto West Street	W. MAIN STREET	
5. Turn LEFT onto West Street	W. MAIN STREET	
6. Turn LEFT onto West Street	W. MAIN STREET	
7. Turn LEFT onto West Street	W. MAIN STREET	
8. Turn LEFT onto West Street	W. MAIN STREET	
9. Turn LEFT onto West Street	W. MAIN STREET	
10. Turn LEFT onto West Street	W. MAIN STREET	
11. Turn LEFT onto West Street	W. MAIN STREET	
12. Turn LEFT onto West Street	W. MAIN STREET	
13. Turn LEFT onto West Street	W. MAIN STREET	

GENERAL NOTES

- ALL WORK SHALL BE IN ACCORDANCE WITH THE 2003 INTERNATIONAL BUILDING CODE, THE 2003 INTERNATIONAL ELECTRICAL CODE, THE 2003 INTERNATIONAL MECHANICAL AND PLUMBING CODE, THE 2003 INTERNATIONAL PIPE CODE AND 2003 MECHANICAL, MECHANICAL, ELECTRICAL AND PLUMBING CODES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL UTILITY COMPANIES AND ALL APPLICABLE SUBCONTRACTORS FOR ANY WORK TO BE PERFORMED ON THE SITE.
- CONTRACTOR SHALL REVIEW ALL DIMENSIONS AND SPECIFICATIONS IN ALL WORK SHOWN IN THE SET OF DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF ALL DIMENSIONS AND SPECIFICATIONS FOR THE WORK SHOWN IN THE SET OF DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF ALL DIMENSIONS AND SPECIFICATIONS FOR THE WORK SHOWN IN THE SET OF DRAWINGS.
- CONTRACTOR SHALL PROVIDE A COMPLETE BUILD-OUT WITH ALL NECESSARY ELECTRICAL, MECHANICAL AND PLUMBING COMPONENTS AND ALL RELATED MATERIALS AND EQUIPMENT AS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL UTILITY COMPANIES AND ALL APPLICABLE SUBCONTRACTORS FOR ANY WORK TO BE PERFORMED ON THE SITE.
- CONTRACTOR SHALL PROVIDE ALL MATERIAL, LABOR AND EQUIPMENT TO COMPLETE THE WORK AND FINISH A COMPLETE JOB AS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL UTILITY COMPANIES AND ALL APPLICABLE SUBCONTRACTORS FOR ANY WORK TO BE PERFORMED ON THE SITE.
- CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND ALL INSPECTIONS REQUIRED AND SHALL ALSO PAY ALL FEES REQUIRED FOR PERMITS AND ALL INSPECTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL UTILITY COMPANIES AND ALL APPLICABLE SUBCONTRACTORS FOR ANY WORK TO BE PERFORMED ON THE SITE.
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PROJECT SUMMARY

- THE PROPOSED SCOPE OF WORK GENERALLY CONSISTS OF THE INSTALLATION OF ONE (1) WIRELESS COMMUNICATIONS FACILITY (WCF) ON THE SITE. THE WCF SHALL BE INSTALLED IN ACCORDANCE WITH THE LOCAL UTILITY COMPANIES AND ALL APPLICABLE SUBCONTRACTORS FOR ANY WORK TO BE PERFORMED ON THE SITE.
- APPROXIMATE (2) REPORT AND LOTS (R&L) PER SECTION WILL BE INSTALLED ADJACENT TO THE PROPOSED WCF. THE ANTENNAS SHALL BE INSTALLED IN ACCORDANCE WITH THE LOCAL UTILITY COMPANIES AND ALL APPLICABLE SUBCONTRACTORS FOR ANY WORK TO BE PERFORMED ON THE SITE.

PROJECT INFORMATION

PROJECT NUMBER: CT2113
PROJECT NAME: SHELTON
PROJECT ADDRESS: 219 NELLE'S ROCK ROAD
PROJECT CITY: SHELTON, CT 06484
PROJECT STATE: CT
PROJECT ZIP: 06484
PROJECT CONTACT: AT&T MOBILITY
PROJECT PHONE: 860-486-1000
PROJECT FAX: 860-486-1000
PROJECT EMAIL: SHELTON@ATT.COM
PROJECT WEBSITE: WWW.ATT.COM

SHEET INDEX

SHEET NO.	DESCRIPTION	REV.
1-1	TITLE SHEET	1
M-1	NOTES AND SPECIFICATIONS	1
C-1	PLANS AND ELEVATION	1
C-2	LIE SYSTEM EQUIPMENT PLANS & DETAILS	1
E-1	ELECTRICAL DETAILS AND NOTES	1
E-2	ELECTRICAL DETAILS	1

<p> AT&T MOBILITY WIRELESS COMMUNICATIONS FACILITY SITE NUMBER: CT2113 SITE NAME: SHELTON 219 NELLE'S ROCK RD SHELTON, CT 06484 </p>	<p> CENTEX 2000 W. MAIN STREET SHELTON, CT 06484 WWW.CENTEX.COM </p>	<p> LINK 1000 W. MAIN STREET SHELTON, CT 06484 WWW.LINK.COM </p>	<p> at&t 2000 W. MAIN STREET SHELTON, CT 06484 WWW.ATT.COM </p>	<p> PROFESSIONAL ENGINEER SEAL STATE OF CONNECTICUT LICENSE NO. 111072008 DATE: 03/24/11 DRAWN BY: CMC CHECKED BY: CMC </p>	<table border="1"> <tr> <th>REVISION</th> <th>DATE</th> <th>DRAWN BY</th> <th>CHECKED BY</th> </tr> <tr> <td>1</td> <td>03/24/11</td> <td>CMC</td> <td>CMC</td> </tr> </table>	REVISION	DATE	DRAWN BY	CHECKED BY	1	03/24/11	CMC	CMC
REVISION	DATE	DRAWN BY	CHECKED BY										
1	03/24/11	CMC	CMC										

STRUCTURAL SPECIFICATIONS

DESIGN BASIS

CONCRETE CODE: 2003 INTERNATIONAL BUILDING CODE (IBC) AS AMENDED BY THE 2005 CONNECTICUT STATE BUILDING CODE AND 2009 AMENDMENTS.

1. DESIGN CRITERIA:
 - WIND LOAD PER ASCE 7-05 (MINIMUM WINDSPEED: 65 MPH (FASTEST WIND), EQUIVALENT TO 105 MPH (3 SECOND GUST))
 - BUILDING CLASSIFICATION: II (BASED ON IBC TABLE 1604.5)
 - BASIC WIND SPEED (OTHER STRUCTURES): 105 MPH (3 SECOND GUST) (ENVIRONMENTAL FACTOR: 1.0 BASED ON ASCE 7-02 PER 2003 INTERNATIONAL BUILDING CODE)
 - FLOOR LIVE LOAD PER ASCE 7-02 PER 2003 INTERNATIONAL BUILDING CODE
 - SEISMIC LOAD PER ASCE 7-02 PER 2003 INTERNATIONAL BUILDING CODE
 - BUILDING USE PER ASCE 7-02 PER 2003 INTERNATIONAL BUILDING CODE

GENERAL NOTES

1. IF ANY FIELD CONDITIONS EXIST WHICH PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL PROCEED WITH AFFECTED WORK AFTER CONSULTATION WITH THE ENGINEER.
2. DIMENSIONS AND DETAILS SHALL BE CHECKED AGAINST THE PRE MANUFACTURED EQUIPMENT BUILDING SHOP DRAWINGS.
3. THE CONTRACTOR SHALL VERIFY AND CORRECTIVE THE SIZE AND LOCATION OF ALL OPENINGS, SEWERS AND MACHINERY BOILERS AS REQUIRED BY ALL TRADES.
4. REFER TO DRAWING T1 FOR ADDITIONAL NOTES AND REQUIREMENTS.

SITE NOTES

1. THE CONTRACTOR SHALL CALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.
2. CONCRETE SHALL BE PLACED IN THE FOUNDATION. ALL REINFORCEMENT SHALL BE PLACED IN THE FOUNDATION PRIOR TO THE START OF CONSTRUCTION.
3. ALL REINFORCEMENT, STAPLES, CHAINS, STEEL, STONES AND OTHER DEBRIS SHALL BE REMOVED OFF SITE AND TO BE DISPOSED OF AT AN APPROPRIATE LOCATION.
4. ALL REINFORCEMENT SHALL BE CHECKED TO BE PLACED ON FROZEN GROUND, FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EXCAVATION.
5. THE REINFORCEMENT SHALL BE PLACED ON A SMOOTH UNPAVED GRADE PRIOR TO FINISH.
6. THE REINFORCEMENT SHALL BE PLACED ON A SMOOTH UNPAVED GRADE PRIOR TO FINISH.
7. THE REINFORCEMENT SHALL BE PLACED ON A SMOOTH UNPAVED GRADE PRIOR TO FINISH.
8. CONCRETE SHALL BE IN COMPLIANCE WITH THE LOCAL ORDINANCES FOR EROSION AND SEDIMENT CONTROL.

EARTHWORK NOTES

1. CONCRETE GRAVEL FILL SHALL BE REMOVED AND PLACED AS A FILL FOR FOUNDATION FOR STRUCTURES, WHERE INDICATED.
2. CONCRETE GRAVEL FILL SHALL BE PLACED IN 12" MAX. LIFTS AND COMPACTED USING A WALK BEHIND VIBRATORY PLATE COMPACTOR WITH A MINIMUM OF 2 PASSES OF COMPACTOR PER LIFT.
3. CONCRETE GRAVEL FILL TO BE WELL GRADED BANK RUN GRAVEL, MEETING THE FOLLOWING GRAVIMETRIC REQUIREMENTS:

TEST DESIGNATION	% PASSING
No. 10	40-70
No. 4	70-95
No. 20	4-8
No. 100	0-5
4. CONCRETE GRAVEL TO BE UNIFORMLY GRADED CLEAN, HARD PROCESS AGGREGATE MEETING THE FOLLOWING GRAVIMETRIC REQUIREMENTS:

TEST DESIGNATION	% PASSING
No. 10	100
No. 4	90-100
No. 20	0-15
No. 100	0-5
5. SELECT BACKFILL FOR FOUNDATION WALLS SHALL BE FREE OF ORGANIC MATERIAL, TOPSOIL, DEBRIS AND DEBRIS LARGER THAN 3/8"
6. UNLESS OTHERWISE NOTED, ALL LAP SPACES SHALL BE 48 BAR DIAMETERS.
7. NON-WORKING SPECIFICATIONS FOR SEPARATION PURPOSES SHALL BE WITHIN 1/4" OR ENGINEER APPROVED EQUAL.

FOUNDATION CONSTRUCTION NOTES

1. ALL FORMS SHALL BE PLACED ON STABLE, COMPACTED SOIL HAVING ADEQUATE BEARING CAPACITY TO SUPPORT ALL FORMING LOADS. ALL FORMS SHALL BE CLEAN, PROPERLY OILED AND PROTECTED FROM RUST BY AN OIL OR OIL-BASED PRODUCT. FORMS SHALL BE PROTECTED FROM RUST BY AN OIL OR OIL-BASED PRODUCT. FORMS SHALL BE PROTECTED FROM RUST BY AN OIL OR OIL-BASED PRODUCT.
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5. ALL FORMS SHALL BE PROTECTED FROM RUST BY AN OIL OR OIL-BASED PRODUCT.

CONCRETE CONSTRUCTION NOTES

1. CONCRETE CONSTRUCTION SHALL CONFORM TO THE FOLLOWING STANDARDS:
 - ACI 311 - STANDARD PRACTICE FOR SELECTING PROPORTIONS FOR NORMAL AND HEAVYWEIGHT CONCRETE
 - ACI 302 - GUIDE FOR CONCRETE CURE AND CURING
 - ACI 308 - RECOMMENDED PRACTICE FOR WORKING, MIXING, TRANSPORTING AND PLACING CONCRETE
 - ACI 306 - RECOMMENDED PRACTICE FOR CONCRETE REPAIR
 - ACI 310 - BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
2. CONCRETE SHALL DEVELOP COMPRESSIVE STRENGTH IN 28 DAYS AS FOLLOWS:

SLABS ON GRADE	4000 PSI
ALL OTHER CONCRETE	5000 PSI
3. REINFORCING STEEL SHALL BE 60,000 PSI YIELD STRENGTH.
4. WELDED WIRE FABRIC SHALL CONFORM TO ASTM - A-185.
5. ALL DETAILING, FABRICATION AND SECTION OF REINFORCING BARS, UNLESS OTHERWISE NOTED, MUST FOLLOW THE LATEST AIA CODE AND LATEST AIA MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES.
6. CONCRETE COVER OVER REINFORCING SHALL CONFORM TO THE FOLLOWING, UNLESS OTHERWISE NOTED:

BOTTOM OF FLOORS	3 INCHES
SLABS AND OTHER MEMBERS	1-1/2 INCHES
DEVELOPMENT LENGTH	40 BAR DIAMETERS
DEVELOPMENT LENGTH	40 BAR DIAMETERS
7. ALL REINFORCEMENT SHALL BE CONTINUOUS UNLESS OTHERWISE NOTED. SPICES SHALL BE WELL STITCHED. ADDITIONAL BARS AND SPECIAL BRACING DETAILS ARE REQUIRED AT INTERSECTIONS. BARS AND SPICES SHALL BE WELL STITCHED.
8. NO TACK WELDING OF REINFORCING WILL BE PERMITTED.
9. UNLESS OTHERWISE NOTED, ALL LAP SPACES SHALL BE 48 BAR DIAMETERS.
10. UNLESS OTHERWISE NOTED, ALL LAP SPACES SHALL BE 48 BAR DIAMETERS.
11. UNLESS OTHERWISE NOTED, ALL LAP SPACES SHALL BE 48 BAR DIAMETERS.
12. UNLESS OTHERWISE NOTED, ALL LAP SPACES SHALL BE 48 BAR DIAMETERS.

GENERAL NOTES

1. UNLESS OTHERWISE NOTED, ALL LAP SPACES SHALL BE 48 BAR DIAMETERS.
2. UNLESS OTHERWISE NOTED, ALL LAP SPACES SHALL BE 48 BAR DIAMETERS.

REVISION	DATE	BY	DESCRIPTION
01	03/24/11	DMO	CONSTRUCTION - CLIENT REVIEW
02	03/19/11	DMO	CONSTRUCTION - CLIENT REVIEW

219 HELLS ROCK RD. SHELTON, CT 06484

AT&T MOBILITY

WIRELESS COMMUNICATIONS FACILITY

SITE NUMBER: CT2113

SITE NAME: SHELTON

DATE: 03/07/11
SCALE: AS NOTED
JOB NO.: 11070208

N-1

NOTES AND SPECIFICATIONS

Sheet No. 2 of 5

AT&T MOBILITY
WIRELESS COMMUNICATIONS FACILITY
SITE NUMBER: CT2113
SHELTON, CT 06484

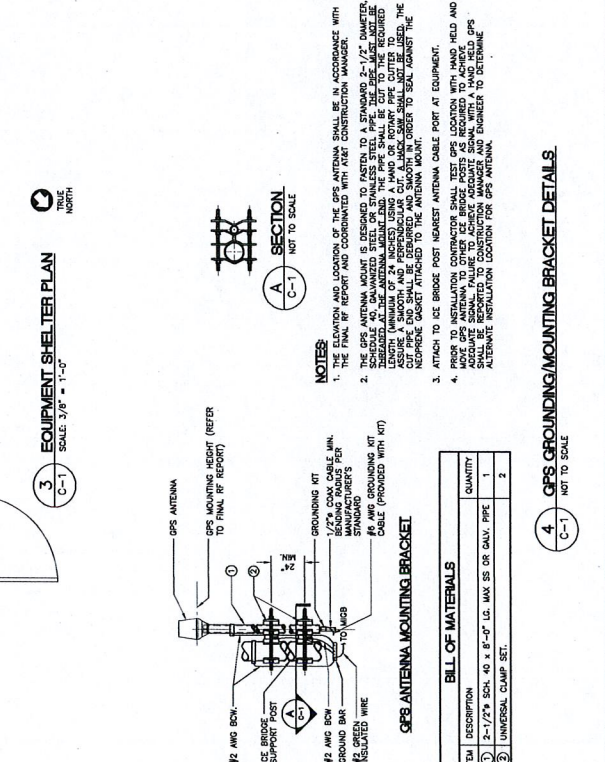
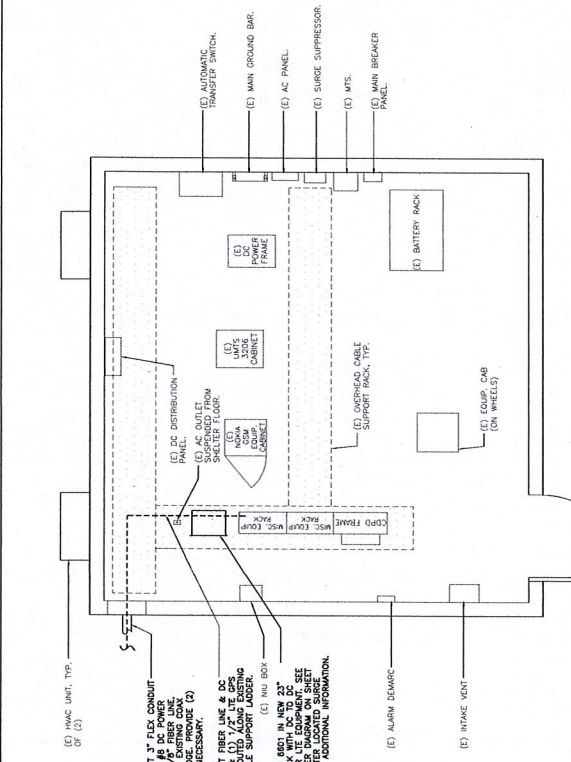
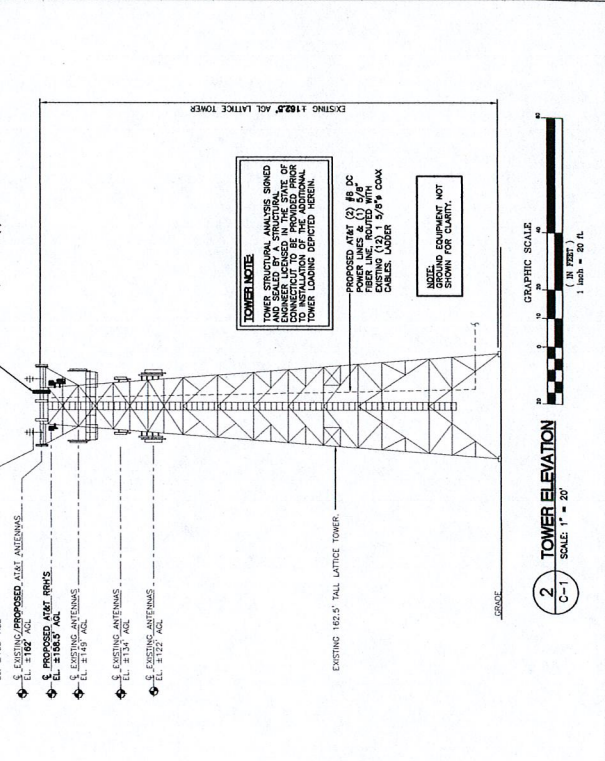
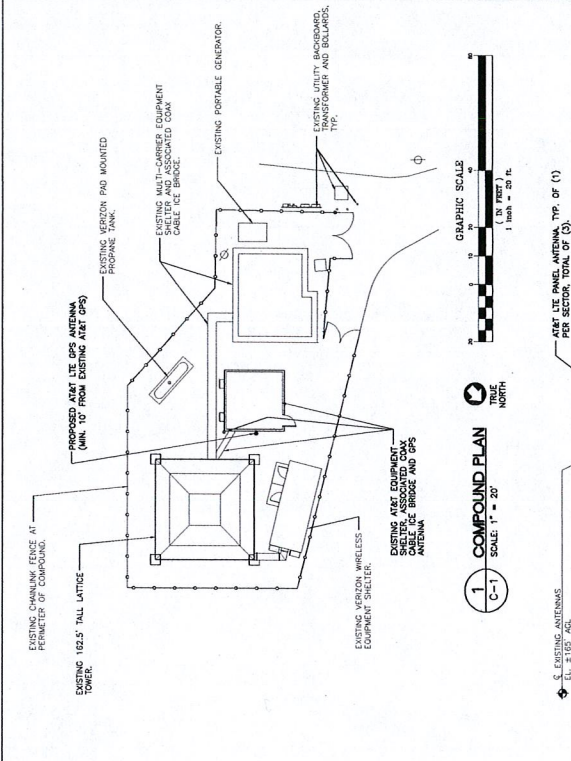
DATE: 03/07/11
SCALE: AS NOTED
JOB NO.: 11107208

PLANS AND ELEVATION
C-1
Sheet No. 3 of 5

DESIGNED BY:	CFC
DRAWN BY:	DBB
CHECKED BY:	CFC
DATE:	03/24/11
REV:	0
REV:	1

PROFESSIONAL ENGINEER SEAL
STATE OF CONNECTICUT
JAMES J. MURPHY
No. 20004
Exp. 12/31/11

at&t
VERIZON
CENTEK
2008-2009
2009-2010
2010-2011
2011-2012
www.Connecticut.com



NOTES:

1. THE ELEVATION AND LOCATION OF THE GPS ANTENNA SHALL BE IN ACCORDANCE WITH THE FINAL RF REPORT AND COORDINATED WITH AERIAL CONSTRUCTION WARRIOR.
2. THE GPS ANTENNA MOUNT IS DESIGNED TO FASTEN TO A STANDARD 2-1/2" DIAMETER, SCHEDULE 40 PIPE. THE MOUNT SHALL BE CUT TO THE REQUIRED LENGTH (MINIMUM OF 24 INCHES) USING A HAND OR POWER PIPE CUTTER TO REMOVE THE CUT PIPE END SHALL BE EXPANDED AND SMOOTH IN ORDER TO SEAL AGAINST THE RESORBABLE CASSET ATTACHED TO THE ANTENNA MOUNT.
3. ATTACH TO ICE BRIDGE POST HIGHEST ANTENNA CABLE PORT AT EQUIPMENT.
4. MOVE GPS ANTENNA TO OTHER ICE BRIDGE POSTS AS REQUIRED TO ACHIEVE ADEQUATE SIGNAL. FAILURE TO ACHIEVE ADEQUATE SIGNAL WITH A HAND HELD GPS ANTENNA SHALL BE REPORTED TO THE PROJECT MANAGER TO DETERMINE ALTERNATE INSTALLATION LOCATION FOR GPS ANTENNA.

BILL OF MATERIALS

ITEM	DESCRIPTION	QUANTITY
1	2-1/2" SCH. 40 x 8'-0" LG. MAX. SS OR GALV. PIPE	1
2	UNIVERSAL CLAMP SET	2

AT&T MOBILITY
WIRELESS COMMUNICATIONS FACILITY
SITE NUMBER: CT2113
SHELTON, CT 06484

DATE: 03/07/11
SCALE: AS NOTED
JOB NO.: 11107208

PLANS AND ELEVATION
C-1
Sheet No. 3 of 5

ISSUED BY:	OC
ISSUED BY:	DB
CHG BY:	OC

CONSTRUCTION	CONSTRUCTION - CLIENT REVIEW
DATE	03/24/11
BY	OC
DATE	03/24/11
BY	OC

PROFESSIONAL DESIGN SEAL	
DATE	03/24/11
BY	OC
DATE	03/24/11
BY	OC

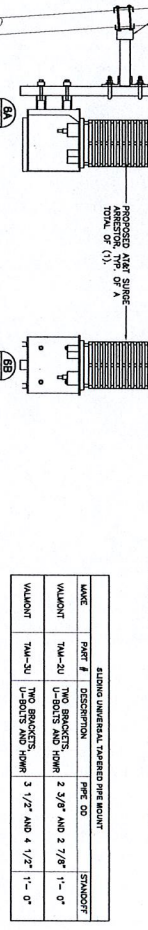
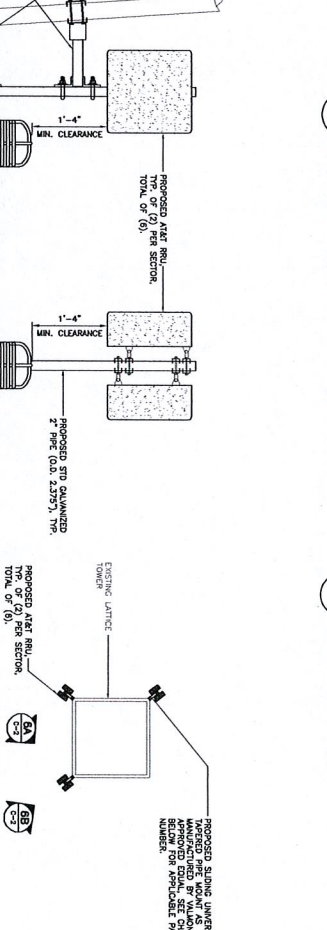
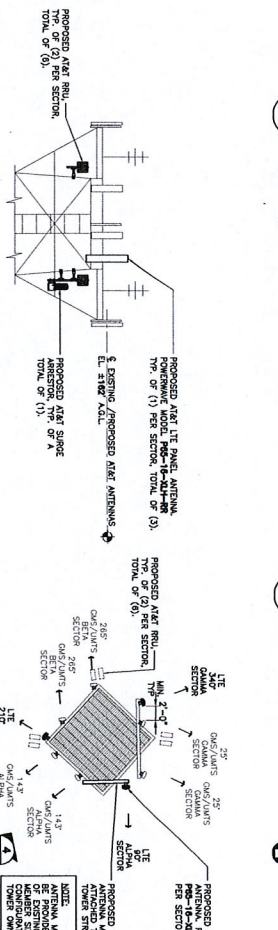
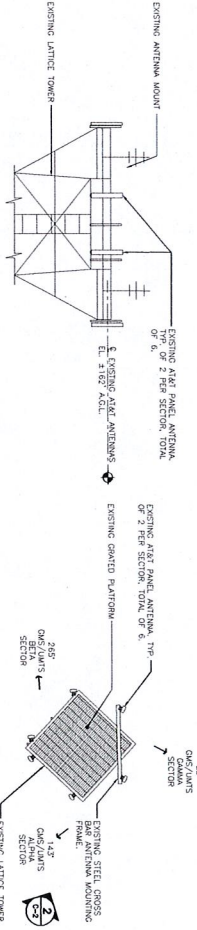
AT&T MOBILITY
WIRELESS COMMUNICATIONS FACILITY
SITE NUMBER: CT2113
SITE NAME: SHELTON
219 HELLS ROCK RD.
SHELTON, CT 06484
www.att.com

ENTERGY
2005-2006
111070208
www.entergy.com

at&t

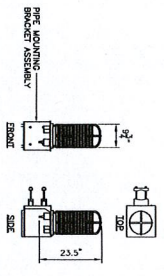
DATE: 03/07/11
SCALE: AS NOTED
JOB NO.: 111070208
LTS SYSTEMS
EQUIPMENT
AND DETAILS

C-2
NOT TO SCALE



SITE TYPE	ARRESTOR MAKE/MODEL	QTY REQUIRED	ARRESTOR LOCATION	WEIGHT
TOWER	ROPER SURGE ARRESTOR MODEL DCL-46-50-18-6"	(1) PER SITE	TOWER ADJACENT TO 20 LBS. PANEL ANTENNA (WITHOUT MOUNT)	

NOTES:
1. CONTRACTOR TO COORDINATE FINAL SURGE ARRESTOR MODEL SELECTION(S) WITH MANUFACTURER.
2. CONTRACTOR TO INSTALL ARRESTOR IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS.

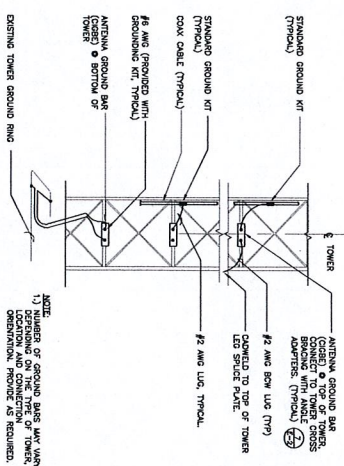


EQUIPMENT	DIMENSIONS	WEIGHT	CLEARANCES
PROPOSED SURGE ARRESTOR MODEL DCL-46-50-18-6"	17.2" x 17.2" x 7.2"	41 LBS.	ASQC: 18" MIN. BELOW: 12" MIN. SIDE: 0"

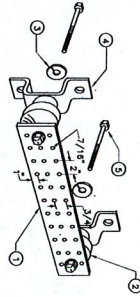
NOTES:
1. CONTRACTOR TO COORDINATE FINAL SURGE ARRESTOR MODEL SELECTION WITH AIR-TECH. CONTRACTOR TO INSTALL ARRESTOR IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS.

7 RRU DETAIL
NOT TO SCALE

6A **6B** RRU AND SURGE ARRESTOR MOUNTING DETAILS
NOT TO SCALE



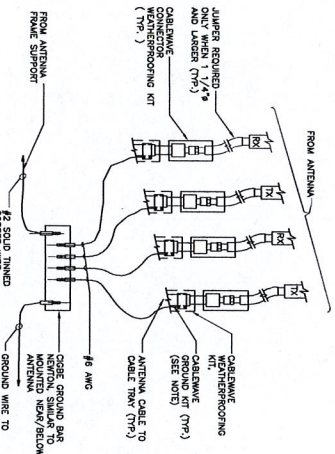
1 ANTENNA CABLE GROUNDING - LATTICE
NOT TO SCALE



LEGEND

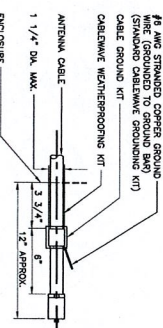
1. TINED COPPER GROUND BAR, 1/2" DIA, 1/2" THK, NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEW DOUBLE LUG.
2. INSULATORS, NEWTON INSTRUMENT CO. NO. 2.
3. 1/2" DIA, 1/2" THK, NEWTON INSTRUMENT CO. DWT. NO. 3071-B.
4. DWT. NO. A-0056.
5. STAINLESS STEEL SECURITY SCREWS.

2 GROUND BAR DETAIL
NOT TO SCALE



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

3 CONNECTION OF GROUND WIRES TO GROUND BAR
NOT TO SCALE



- NOTE**
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.

4 ANTENNA CABLE GROUNDING DETAIL
NOT TO SCALE

DESIGNED BY	1-8
DRAWN BY	1-8
CHECK BY	1-8
CAD	

REV.	DATE	DRAWN BY	CHECK BY	DESCRIPTION
1	03/24/11	FLO	CFC	CONSTRUCTION
0	03/01/11	DMD	CFC	CONSTRUCTION - CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL	
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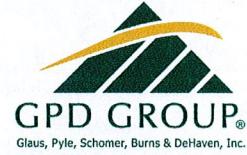
AT&T MOBILITY
WIRELESS COMMUNICATIONS FACILITY
SITE NUMBER: CT2113
SITE NAME: SHELTON
219 NELLIS ROCK RD
SHELTON, CT 06484

E-2
ELECTRICAL
DETAILS



at&t

Marty Jelleme
AT&T Mobility
5405 Windward Pkwy
Alpharetta, GA 30004
(770) 708-6124



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

GPD# 2011265.91
September 8, 2011

STRUCTURAL ANALYSIS REPORT

AT&T DESIGNATION: Site USID: SNET025
Site FA: 10137492
Site Name: SHELTON
AT&T Project: Wireline AT&T Mobility Modification 6-23-2011

AT&T MOBILITY DESIGNATION: Site Name: Shelton
Site Number: CT 2113

ANALYSIS CRITERIA: Codes: TIA/EIA-222-F & 2003 IBC
90-mph with 0" ice
78-mph with 1/2" ice

SITE DATA: 2 Oak Valley Road, Shelton, CT 06484, Fairfield County
Latitude 41° 18' 15.012" N, Longitude 73° 7' 5.999" W
162.5' Self Support Tower

Mr. Jelleme,

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:

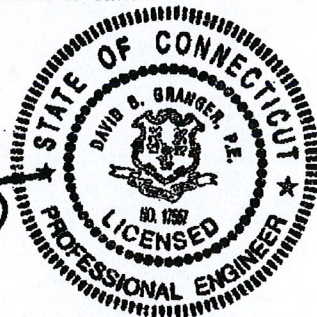
- Elev. 162' (3) Powerwave P65-16-XLH-RR Antennas on a 28' Platform w/ rails w/ (1) 1/2" Fiber Cables
- (6) Ericsson RRUS 11 Remote Radio Head Units on the same mount w/ (2) 7/8" DC Power Line
- (3) Raycap DC6-48-60-18-8F Dome Suppression Units on the same mount
- (1) GPS Unit on the same mount

Based on our analysis we have determined the tower and its foundations 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 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 whether the existing structure is capable of carrying the proposed loading configuration as specified by AT&T Mobility to AT&T. This report was commissioned by Mr. Marty Jelleme of AT&T.

TOWER SUMMARY AND RESULTS

Member	Capacity	Results
Legs	48.2%	Pass
Diagonals	99.8%	Pass
Horizontals	68.3%	Pass
Redundant Members	71.9%	Pass
Inner Bracing	40.2%	Pass
Member Bolts	59.6%	Pass
Anchor Rods	41.6%	Pass
Foundation (Compression)	35.7%	Pass
Foundation (Uplift)	63.3%	Pass

ANALYSIS METHOD

RISA 3D (version 8.1.3) and RISA Tower (version 5.4.2.0), commercially available software programs, were 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.

DOCUMENTS PROVIDED

Document	Remarks	Source
Preliminary Tower Summary	AT&T Co-location document	Siterra
Site Lease Application	AT&T Application, dated 4/27/11	Siterra
Tower Mapping	GPD Group and MTSI Northeast, dated 7/1/10	Siterra
Foundation Mapping	WEI Project #: 2010-1160, dated 7/20/10	Siterra
Geotechnical Report	WEI Project #: 2010-1160, dated 7/20/10	Siterra
Previous Analysis	GPD Project #: 2010269.68 Rev. 1, dated 5/27/11	Siterra

ASSUMPTIONS

This structural analysis is based on the theoretical capacity of the members and is not a condition assessment of the tower. 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 tower member sizes and shapes 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 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 are assumed to be installed behind antennas.
10. All existing loading was obtained from the previous analysis by GPD Project #: 2010269.68 Rev. 1 dated 5/27/11, site photos and the provided preliminary tower summary and is assumed to be accurate.
11. Foundation steel was not able to be determined through testing. Therefore it was assumed that the foundation steel in place is equal to or in excess of the soil failure criteria in the foundation analysis.
12. The existing AT&T loading elevation found in the mapping by GPD Group and MTSI Northeast, dated 7/1/10 was found to vary from the listed elevation within the provided preliminary tower summary. The existing elevations have been modeled based on the elevations reflected within the mapping.

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.

DISCLAIMER OF WARRANTIES

GPD GROUP has performed a recent site visit to the tower to verify the member sizes and antenna/coax loading. If the existing conditions are not as represented on the tower elevation contained in this report, we should be contacted immediately to evaluate the significance of the discrepancy. 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 GROUP 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 GROUP 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 GROUP 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 GROUP, 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 GROUP 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 GROUP 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 GROUP pursuant to this report will be limited to the total fee received for preparation of this report.

APPENDIX A

Tower Analysis Summary Form

APPENDIX B

RISA Output Files and Calculations

RISATower GPD Group 520 South Main St. Akron, OH 44311 Phone: (330) 572-2100 FAX: (330) 572-2102	Job	SNET025 SHELTON	Page	1 of 5
	Project	2011265.91	Date	14:42:27 09/08/11
	Client	AT&T Mobility	Designed by	Irife

Tower Input Data

The main tower is a 4x free standing tower with an overall height of 162.50 ft above the ground line.
The base of the tower is set at an elevation of 0.00 ft above the ground line.
The face width of the tower is 12.25 ft at the top and 36.25 ft at the base.
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 90 mph.
- Nominal ice thickness of 0.5000 in.
- Ice density of 56 pcf.
- A wind speed of 78 mph is used in combination with ice.
- Temperature drop of 50 °F.
- Deflections calculated using a wind speed of 50 mph.
- Pressures are calculated at each section.
- Stress ratio used in tower member 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 Round Or Flat

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
Feedline Ladder (Af)	A	Yes	Af (CfAe)	150.00 - 10.00	0.0000	0	1	1	3.0000	3.0000	12.0000	8.40
LDF7-50A (1-5/8 FOAM)	A	Yes	Ar (CfAe)	150.00 - 10.00	0.0000	0	6	6	1.0000	1.9800		0.82
LDF4P-50A (1/2 FOAM)	C	Yes	Ar (CfAe)	65.00 - 10.00	0.0000	-0.45	3	2	0.2500	0.6300		0.15
LDF4P-50A (1/2 FOAM)	C	Yes	Ar (CfAe)	68.00 - 65.00	0.0000	-0.45	2	2	0.2500	0.6300		0.15
LDF4P-50A (1/2 FOAM)	C	Yes	Ar (CfAe)	162.50 - 68.00	0.0000	-0.45	1	1	0.2500	0.6300		0.15
2" Flex Conduit	C	Yes	Ar (CfAe)	162.50 - 10.00	0.0000	-0.44	1	1	0.2500	2.0000		0.32
Feedline Ladder (Af)	C	Yes	Af (CfAe)	162.50 - 10.00	0.0000	0	1	1	3.0000	3.0000	12.0000	8.40
LDF7-50A (1-5/8 FOAM)	C	Yes	Ar (CfAe)	136.00 - 10.00	0.0000	0.03	12	9	1.0000	1.9800		0.82
Feedline Ladder (Af)	C	Yes	Af (CfAe)	162.50 - 10.00	-1.0000	0.2	1	1	3.0000	3.0000	12.0000	8.40
LDF7-50A (1-5/8 FOAM)	C	Yes	Ar (CfAe)	162.50 - 10.00	-6.0000	0.2	12	4	1.0000	1.9800		0.82
LDF5-50A (7/8 FOAM)	C	Yes	Ar (CfAe)	162.50 - 10.00	-6.0000	0.22	2	1	1.0000	1.0900		0.33
LDF6-50A (1-1/4 FOAM)	C	Yes	Ar (CfAe)	162.50 - 10.00	-1.0000	0.23	1	1	1.0000	1.5500		0.66
1/2" Fiber Cable	C	Yes	Ar (CfAe)	162.50 - 10.00	-5.0000	0.18	1	1	0.6300	0.6300		0.15
7/8" DC Power Cable	C	Yes	Ar (CfAe)	162.50 - 10.00	-5.0000	0.18	2	2	0.8750	0.8750		0.60
LDF5-50A (7/8 FOAM)	D	Yes	Ar (CfAe)	162.50 - 10.00	0.0000	-0.48	1	1	1.0000	1.0900		0.33
Feedline Ladder (Af)	D	Yes	Af (CfAe)	124.00 - 10.00	0.0000	0.45	1	1	3.0000	3.0000	12.0000	8.40
LDF7-50A	D	Yes	Ar (CfAe)	124.00 - 10.00	0.0000	0.45	18	9	1.0000	1.9800		0.82

RISATower GPD Group 520 South Main St. Akron, OH 44311 Phone: (330) 572-2100 FAX: (330) 572-2102	Job SNET025 SHELTON	Page 2 of 5
	Project 2011265.91	Date 14:42:27 09/08/11
	Client AT&T Mobility	Designed by Irife

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	# Per Row	#	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
(1-5/8 FOAM) LDF4P-50A (1/2 FOAM)	D	No	Ar (Leg)	92.00 - 10.00	0.0000	0	1	1	0.6300	0.6300		0.15

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _{AA} Front ft ²	C _{AA} Side ft ²	Weight lb
28' Top Platform w/ rails	C	None		0.0000	162.50	No Ice 48.00 1/2" Ice 64.00	48.00 64.00	12590.000 16000.000
Flash Beacon Lighting	C	From Leg	0.00 0.00 12.50	0.0000	162.50	No Ice 2.70 1/2" Ice 3.10	2.70 3.10	50.000 70.000
W5 x 13' Mount	C	From Leg	0.00 0.00 6.25	0.0000	162.50	No Ice 5.42 1/2" Ice 7.00	5.42 7.00	210.000 280.000
10' Dipole	B	From Face	7.00 5.00 5.50	0.0000	162.50	No Ice 2.00 1/2" Ice 3.02	2.00 3.02	20.000 35.501
10' Dipole	B	From Face	7.00 5.00 -4.50	0.0000	162.50	No Ice 2.00 1/2" Ice 3.02	2.00 3.02	20.000 35.501
5' Omni	B	From Face	7.00 -3.00 5.00	0.0000	162.50	No Ice 1.00 1/2" Ice 1.39	1.00 1.39	15.000 22.865
10' P4x.237 Mount Pipe	D	From Face	7.00 -5.00 5.50	0.0000	162.50	No Ice 4.50 1/2" Ice 5.24	4.50 5.24	130.000 160.913
2' Standoff	D	From Face	6.50 -5.00 9.50	0.0000	162.50	No Ice 1.36 1/2" Ice 2.45	1.36 2.45	20.000 40.000
2' Standoff	D	From Face	7.50 -5.00 9.50	0.0000	162.50	No Ice 1.36 1/2" Ice 2.45	1.36 2.45	20.000 40.000
10' Omni	D	From Face	8.00 -5.00 15.50	0.0000	162.50	No Ice 2.00 1/2" Ice 3.02	2.00 3.02	25.000 40.501
W8 x 19' Beams	A	From Leg	2.87 0.88 1.00	17.0000	162.50	No Ice 17.00 1/2" Ice 19.00	1.00 1.50	290.000 340.000
W8 x 19' Beams	D	From Leg	2.92 -0.68 1.00	-13.0000	162.50	No Ice 17.00 1/2" Ice 19.00	1.00 1.50	290.000 340.000
(2) RA21.7770.00 w/Mount Pipe	A	From Leg	2.87 0.88 -1.50	17.0000	162.50	No Ice 7.15 1/2" Ice 7.82	5.13 6.25	66.000 118.259
(2) RA21.7770.00 w/Mount Pipe	D	From Leg	2.92 -0.68 -1.50	-13.0000	162.50	No Ice 7.15 1/2" Ice 7.82	5.13 6.25	66.000 118.259
(2) RA21.7770.00 w/Mount Pipe	C	From Face	0.50 0.00 0.50	0.0000	162.50	No Ice 7.15 1/2" Ice 7.82	5.13 6.25	66.000 118.259
(2) LGP21401	A	From Leg	2.87	17.0000	162.50	No Ice 1.29	0.23	14.000

RISATower

GPD Group
 520 South Main St.
 Akron, OH 44311
 Phone: (330) 572-2100
 FAX: (330) 572-2102

Job	SNET025 SHELTON	Page	3 of 5
Project	2011265.91	Date	14:42:27 09/08/11
Client	AT&T Mobility	Designed by	Irife

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _{AA} Front ft ²	C _{AA} Side ft ²	Weight lb	
			0.88						
			-1.50						
(2) LGP21401	D	From Leg	2.92	-13.0000	162.50	No Ice	1.29	0.23	14.000
			-0.68			1/2" Ice	1.45	0.31	21.263
			-1.50						
(2) LGP21401	C	From Face	0.50	0.0000	162.50	No Ice	1.29	0.23	14.000
			0.00			1/2" Ice	1.45	0.31	21.263
			0.50						
P65-16-XLH-RR w/ Mount Pipe	A	From Leg	2.87	-28.0000	162.50	No Ice	8.64	6.36	89.550
			0.88			1/2" Ice	9.29	7.54	152.500
			-0.50						
P65-16-XLH-RR w/ Mount Pipe	D	From Leg	2.92	-68.0000	162.50	No Ice	8.64	6.36	89.550
			-0.68			1/2" Ice	9.29	7.54	152.500
			-0.50						
P65-16-XLH-RR w/ Mount Pipe	C	From Face	0.50	-53.0000	162.50	No Ice	8.64	6.36	89.550
			0.00			1/2" Ice	9.29	7.54	152.500
			-0.50						
(2) RRUS-11	A	From Leg	2.87	-28.0000	162.50	No Ice	4.42	1.63	55.000
			0.88			1/2" Ice	4.71	1.84	80.775
			-0.50						
(2) RRUS-11	D	From Leg	2.92	-68.0000	162.50	No Ice	4.42	1.63	55.000
			-0.68			1/2" Ice	4.71	1.84	80.775
			-0.50						
(2) RRUS-11	C	From Face	0.50	-53.0000	162.50	No Ice	4.42	1.63	55.000
			0.00			1/2" Ice	4.71	1.84	80.775
			-0.50						
DC6-48-60-18-8F	A	From Leg	2.87	-28.0000	162.50	No Ice	1.27	1.27	20.000
			0.88			1/2" Ice	1.46	1.46	35.116
			-0.50						
DC6-48-60-18-8F	D	From Leg	2.92	-68.0000	162.50	No Ice	1.27	1.27	20.000
			-0.68			1/2" Ice	1.46	1.46	35.116
			-0.50						
DC6-48-60-18-8F	C	From Face	0.50	-53.0000	162.50	No Ice	1.27	1.27	20.000
			0.00			1/2" Ice	1.46	1.46	35.116
			-0.50						
GPS	C	From Face	0.50	-53.0000	162.50	No Ice	0.17	0.17	0.870
			0.00			1/2" Ice	0.24	0.24	3.845
			-0.50						
Sabre 14' T-Boom (1)	A	From Leg	2.00	0.0000	150.00	No Ice	25.00	25.00	380.000
			0.00			1/2" Ice	33.12	33.12	556.690
			0.00						
Sabre 14' T-Boom (1)	B	From Leg	2.00	0.0000	150.00	No Ice	25.00	25.00	380.000
			0.00			1/2" Ice	33.12	33.12	556.690
			0.00						
Sabre 14' T-Boom (1)	C	From Leg	2.00	0.0000	150.00	No Ice	25.00	25.00	380.000
			0.00			1/2" Ice	33.12	33.12	556.690
			0.00						
(2) 7184.05 w/ Mount Pipe	A	From Leg	4.00	0.0000	150.00	No Ice	3.13	2.67	29.000
			0.00			1/2" Ice	3.52	3.35	55.701
			0.00						
(2) 7184.05 w/ Mount Pipe	B	From Leg	4.00	0.0000	150.00	No Ice	3.13	2.67	29.000
			0.00			1/2" Ice	3.52	3.35	55.701
			0.00						
(2) 7184.05 w/ Mount Pipe	C	From Leg	4.00	0.0000	150.00	No Ice	3.13	2.67	29.000
			0.00			1/2" Ice	3.52	3.35	55.701
			0.00						
30' x 30' Cross Catwalk w/	C	None		0.0000	144.00	No Ice	39.60	39.60	6670.000

RISATower GPD Group 520 South Main St. Akron, OH 44311 Phone: (330) 572-2100 FAX: (330) 572-2102	Job	SNET025 SHELTON	Page	4 of 5
	Project	2011265.91	Date	14:42:27 09/08/11
	Client	AT&T Mobility	Designed by	Irife

Description	Face or Leg	Offset Type	Offsets: Horz Lateral	Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight
			ft ft ft	°	ft	ft ²	ft ²	lb
Handrails								
Additional Hand Rail Area	D	From Leg	0.00	0.0000	144.00	1/2" Ice 50.00 No Ice 7.00 1/2" Ice 9.00	50.00 5.00 6.00	8000.000 340.000 500.000
(2)			0.00					
APX16DWV-16DWV-S-E-A	A	From Leg	0.50	0.0000	136.00	No Ice 7.31 1/2" Ice 8.01	3.67 4.72	65.000 112.157
CU w/ Mount Pipe			0.00					
(2)			0.00					
APX16DWV-16DWV-S-E-A	B	From Leg	0.50	0.0000	136.00	No Ice 7.31 1/2" Ice 8.01	3.67 4.72	65.000 112.157
CU w/ Mount Pipe			0.00					
(2)			0.00					
APX16DWV-16DWV-S-E-A	D	From Leg	0.50	0.0000	136.00	No Ice 7.31 1/2" Ice 8.01	3.67 4.72	65.000 112.157
CU w/ Mount Pipe			0.00					
(2) 10"x7"x4" TMA	A	From Leg	0.50	0.0000	136.00	No Ice 0.78 1/2" Ice 0.90	0.29 0.38	10.000 15.056
(2) 10"x7"x4" TMA	B	From Leg	0.50	0.0000	136.00	No Ice 0.78 1/2" Ice 0.90	0.29 0.38	10.000 15.056
(2) 10"x7"x4" TMA	D	From Leg	0.50	0.0000	136.00	No Ice 0.78 1/2" Ice 0.90	0.29 0.38	10.000 15.056
(4) RET	A	From Leg	0.50	0.0000	136.00	No Ice 0.24 1/2" Ice 0.31	0.15 0.20	2.000 4.436
(4) RET	B	From Leg	0.50	0.0000	136.00	No Ice 0.24 1/2" Ice 0.31	0.15 0.20	2.000 4.436
(4) RET	D	From Leg	0.50	0.0000	136.00	No Ice 0.24 1/2" Ice 0.31	0.15 0.20	2.000 4.436
Sabre 12' T-Boom (1)	A	From Leg	0.50	0.0000	124.00	No Ice 18.81 1/2" Ice 24.75	10.62 15.16	513.500 719.590
Sabre 12' T-Boom (1)	C	From Leg	0.50	0.0000	124.00	No Ice 18.81 1/2" Ice 24.75	10.62 15.16	513.500 719.590
Sabre 12' T-Boom (1)	D	From Leg	0.50	0.0000	124.00	No Ice 18.81 1/2" Ice 24.75	10.62 15.16	513.500 719.590
(2) DB846F65ZAXY w/ Mount Pipe	A	From Leg	1.00	0.0000	124.00	No Ice 7.27 1/2" Ice 7.88	7.82 9.01	47.000 111.104
(2) DB846F65ZAXY w/ Mount Pipe	C	From Leg	1.00	0.0000	124.00	No Ice 7.27 1/2" Ice 7.88	7.82 9.01	47.000 111.104
(2) DB846F65ZAXY w/ Mount Pipe	D	From Leg	1.00	0.0000	124.00	No Ice 7.27 1/2" Ice 7.88	7.82 9.01	47.000 111.104
(2) LPA-185080/12CFDIN2 w/ Mount Pipe	A	From Leg	1.00	0.0000	124.00	No Ice 3.77 1/2" Ice 4.30	6.21 7.37	36.000 77.764
(2) LPA-185080/12CFDIN2 w/ Mount Pipe	C	From Leg	1.00	0.0000	124.00	No Ice 3.77 1/2" Ice 4.30	6.21 7.37	36.000 77.764
(2) LPA-185080/12CFDIN2 w/ Mount Pipe	D	From Leg	1.00	0.0000	124.00	No Ice 3.77 1/2" Ice 4.30	6.21 7.37	36.000 77.764

RISATower

GPD Group
 520 South Main St.
 Akron, OH 44311
 Phone: (330) 572-2100
 FAX: (330) 572-2102

Job	SNET025 SHELTON	Page	5 of 5
Project	2011265.91	Date	14:42:27 09/08/11
Client	AT&T Mobility	Designed by	Irife

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _{AA} Front ft ²	C _{AA} Side ft ²	Weight lb	
BXA-70063-6CF-EDIN-4 w/ Mount Pipe	A	From Leg	0.00 1.00 0.00	0.0000	124.00	No Ice 1/2" Ice	7.97 8.61	5.40 6.55	42.000 98.329
BXA-70063-6CF-EDIN-4 w/ Mount Pipe	C	From Leg	0.00 1.00 0.00	0.0000	124.00	No Ice 1/2" Ice	7.97 8.61	5.40 6.55	42.000 98.329
BXA-70063-6CF-EDIN-4 w/ Mount Pipe	D	From Leg	0.00 1.00 0.00	0.0000	124.00	No Ice 1/2" Ice	7.97 8.61	5.40 6.55	42.000 98.329
4.25' x 7' Catwalk	B	From Face	0.00 0.00 0.00	0.0000	112.50	No Ice 1/2" Ice	7.00 8.00	5.00 6.00	750.000 1000.000
23' x 3' Catwalk	A	From Face	0.00 0.00 0.00	0.0000	87.50	No Ice 1/2" Ice	38.00 45.00	5.00 6.00	1870.000 2800.000
23' x 3' Catwalk	B	From Face	0.00 0.00 0.00	0.0000	87.50	No Ice 1/2" Ice	38.00 45.00	5.00 6.00	1870.000 2800.000
GPS	D	From Leg	0.00 0.50 0.00	0.0000	68.00	No Ice 1/2" Ice	0.17 0.24	0.17 0.24	0.870 3.845
GPS	B	From Leg	0.00 0.50 0.00	0.0000	65.00	No Ice 1/2" Ice	0.17 0.24	0.17 0.24	0.870 3.845
13' x 4.25' Catwalk	B	From Face	0.00 0.00 0.00	0.0000	62.50	No Ice 1/2" Ice	18.85 26.00	7.00 8.00	1250.000 1750.000
13' x 4.25' Catwalk	B	From Face	0.00 0.00 0.00	0.0000	25.00	No Ice 1/2" Ice	18.85 26.00	7.00 8.00	1250.000 1750.000

Company : GPD Group
 Designer : Irife
 Job Number : 2011265.91

SNET025 SHELTON

Sept 8, 2011
 2:57 PM
 Checked By:

Hot Rolled Steel Properties

Label	E [ksi]	G [ksi]	Nu	Therm (1/E5 F)	Density[k/ft^3]	Yield[ksi]
A572-50	29000	11200	.295	.65	.49	50
A36	29000	11200	.295	.65	.49	36

Hot Rolled Steel Section Sets

Label	Shape	Type	Design List	Material	Design Rules	A [in2]	Iy [in4]	Izz [in4]	J [in4]
1	TWR LEG T1	L6x6x1/2	Column	A36	Typical	5.75	19.9	19.9	.501
2	TWR TOP GIRT T1	MC18X58	Beam	A36	Typical	17.1	17.8	676	2.81
3	TWR DIAG T1	L3 1/2x3 1/2x1/4	Column	A36	Typical	1.69	2.01	2.01	.039
4	TWR STEP T1	L2x2 1/2x1/4	Beam	A36	Typical	1.06	.654	.372	.023
5	TWR LEG T2	L6x6x1/2	Column	A36	Typical	5.75	19.9	19.9	.501
6	TWR TOP GIRT T2	2L3 1/2x3 1/2x1/4x3/8	Beam	A36	Typical	3.38	8.518	4.02	.07
7	TWR DIAG T2	L3 1/2x3x1/4	Column	A36	Typical	1.56	1.3	1.91	.036
8	TWR STEP T2	C6X10.5	Beam	A36	Typical	3.09	.866	15.2	.13
9	TWR LEG T3	L6x6x5/8	Column	A36	Typical	7.11	24.2	24.2	.954
10	TWR TOP GIRT T3	2L3 1/2x3x1/4x3/8	Beam	A36	Typical	3.13	5.561	3.83	.065
11	TWR INNER SUPP T3	2L2x2 1/2x3/16x3/8	Beam	A36	Typical	1.62	2.48	.58	.019
12	TWR DIAG T3	L4x3x1/4	Column	A36	Typical	1.69	1.36	2.77	.039
13	TWR STEP T3	2L2 1/2x3x1/4x3/8	Beam	A36	Typical	2.63	5.508	1.49	.055
14	TWR LEG T4	L6x6x5/8	Column	A36	Typical	7.11	24.2	24.2	.954
15	TWR TOP GIRT T4	2L3 1/2x3x1/4x3/8	Beam	A36	Typical	3.13	5.561	3.83	.065
16	TWR DIAG T4	L4x3x1/4	Column	A36	Typical	1.69	1.36	2.77	.039
17	TWR STEP T4	2L2 1/2x3x1/4x3/8	Beam	A36	Typical	2.63	5.508	1.49	.055
18	TWR LEG T5	L6x6x3/4	Column	A36	Typical	8.44	28.2	28.2	1.61
19	TWR HORZ T5	2L2 1/2x2 1/2x1/4x3/8	Beam	A36	Typical	2.38	3.347	1.41	.049
20	TWR DIAG T5	2L2 1/2x2 1/2x1/4x3/4	Column	A36	Typical	2.38	4.237	1.41	.049
21	TWR RED HORZ T5	L2x2 1/2x3/16 HRA	Beam	A36	Typical	.809	.509	.291	.01
22	TWR RED DIAG T5	L2x2 1/2x3/16 HRA	Column	A36	Typical	.809	.509	.291	.01
23	TWR INNER SUPP T5	2L2 1/2x2 1/2x3/16x3/8	Beam	A36	Typical	1.8	2.499	1.09	.021
24	TWR LEG T6	L6x6x7/8	Column	A36	Typical	9.73	31.9	31.9	2.51
25	TWR HORZ T6	2L2 1/2x2 1/2x1/4x3/8	Beam	A36	Typical	2.38	3.347	1.41	.049
26	TWR DIAG T6	2L2 1/2x2 1/2x1/4x3/4	Column	A36	Typical	2.38	4.237	1.41	.049
27	TWR RED HORZ T6	L2x2 1/2x3/16 HRA	Beam	A36	Typical	.809	.509	.291	.01
28	TWR RED DIAG T6	L2 1/2x2 1/2x3/16	Column	A36	Typical	.902	.547	.547	.011
29	TWR INNER SUPP T6	2L2 1/2x2 1/2x3/16x3/8	Beam	A36	Typical	1.8	2.499	1.09	.021
30	TWR LEG T7	L8x8x7/8	Column	A36	Typical	13.2	79.6	79.6	3.46
31	TWR HORZ T7	LL3X2.5X4X3	Beam	A36	Typical	2.63	3.358	2.35	.055
32	TWR DIAG T7	2L2 1/2x2 1/2x1/4x3/4	Column	A36	Typical	2.38	4.237	1.41	.049
33	TWR RED_HORZ_T7	L2 1/2x2 1/2x1/4	Beam	A36	Typical	1.19	.703	.703	.025

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area (Member)	Surface (Plate)
1	Dead	None		-1		60	254	36		
2	No Ice Wind 0 deg	None				60	596	108		
3	No Ice Wind 45 deg	None				120	586	144		
4	No Ice Wind 90 deg	None				60	592	108		
5	No Ice Wind 135 deg	None				120	582	144		
6	No Ice Wind 180 deg	None				60	596	108		
7	No Ice Wind 225 deg	None				120	586	144		
8	No Ice Wind 270 deg	None				60	592	108		
9	No Ice Wind 315 deg	None				120	582	144		
10	Ice	None				60	248	420		
11	Temperature Drop	None						379		
12	Ice Wind 0 deg	None				60	596	108		
13	Ice Wind 45 deg	None				120	586	144		
14	Ice Wind 90 deg	None				60	592	108		
15	Ice Wind 135 deg	None				120	582	144		
16	Ice Wind 180 deg	None				60	596	108		
17	Ice Wind 225 deg	None				120	586	144		
18	Ice Wind 270 deg	None				60	592	108		
19	Ice Wind 315 deg	None				120	582	144		
20	Service Wind 0 deg	None				60	592	108		
21	Service Wind 45 deg	None				120	576	144		
22	Service Wind 90 deg	None				60	584	108		
23	Service Wind 135 deg	None				120	564	144		
24	Service Wind 180 deg	None				60	592	108		
25	Service Wind 225 deg	None				120	576	144		
26	Service Wind 270 deg	None				60	584	108		
27	Service Wind 315 deg	None				120	564	144		
28	Superimposed Self Weight	None						384		

Load Combinations

	Description	Solve	PDelta	SRSS	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	Dead Only	Yes			1	1	28	1	29	1	0	0	0	0	0	0
2	Dead+Wind 0 deg...	Yes			1	1	2	1	28	1	29	1	0	0	0	0
3	Dead+Wind 45 de...	Yes			1	1	3	1	28	1	29	1	0	0	0	0
4	Dead+Wind 90 de...	Yes			1	1	4	1	28	1	29	1	0	0	0	0
5	Dead+Wind 135 d...	Yes			1	1	5	1	28	1	29	1	0	0	0	0
6	Dead+Wind 180 d...	Yes			1	1	6	1	28	1	29	1	0	0	0	0
7	Dead+Wind 225 d...	Yes			1	1	7	1	28	1	29	1	0	0	0	0

Load Combinations (Continued)

Description	Solve	PDelta	SRSS	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
8 Dead+Wind 270 d...	Yes			1	1	8	1	28	1	29	1	0	0	0	0	0	0	0	0
9 Dead+Wind 315 d...	Yes			1	1	9	1	28	1	29	1	0	0	0	0	0	0	0	0
10 Dead+Ice+Temp	Yes			1	1	10	1	11	1	28	1	29	1	0	0	0	0	0	0
11 Dead+Wind 0 deg...	Yes			1	1	12	1	10	1	11	1	28	1	29	1	0	0	0	0
12 Dead+Wind 45 de...	Yes			1	1	13	1	10	1	11	1	28	1	29	1	0	0	0	0
13 Dead+Wind 90 de...	Yes			1	1	14	1	10	1	11	1	28	1	29	1	0	0	0	0
14 Dead+Wind 135 d...	Yes			1	1	15	1	10	1	11	1	28	1	29	1	0	0	0	0
15 Dead+Wind 180 d...	Yes			1	1	16	1	10	1	11	1	28	1	29	1	0	0	0	0
16 Dead+Wind 225 d...	Yes			1	1	17	1	10	1	11	1	28	1	29	1	0	0	0	0
17 Dead+Wind 270 d...	Yes			1	1	18	1	10	1	11	1	28	1	29	1	0	0	0	0
18 Dead+Wind 315 d...	Yes			1	1	19	1	10	1	11	1	28	1	29	1	0	0	0	0
19 Dead+Wind 0 deg...	Yes			1	1	20	1	28	1	29	1	0	0	0	0	0	0	0	0
20 Dead+Wind 45 de...	Yes			1	1	21	1	28	1	29	1	0	0	0	0	0	0	0	0
21 Dead+Wind 90 de...	Yes			1	1	22	1	28	1	29	1	0	0	0	0	0	0	0	0
22 Dead+Wind 135 d...	Yes			1	1	23	1	28	1	29	1	0	0	0	0	0	0	0	0
23 Dead+Wind 180 d...	Yes			1	1	24	1	28	1	29	1	0	0	0	0	0	0	0	0
24 Dead+Wind 225 d...	Yes			1	1	25	1	28	1	29	1	0	0	0	0	0	0	0	0
25 Dead+Wind 270 d...	Yes			1	1	26	1	28	1	29	1	0	0	0	0	0	0	0	0
26 Dead+Wind 315 d...	Yes			1	1	27	1	28	1	29	1	0	0	0	0	0	0	0	0

Envelope Joint Reactions

Joint	X [k]	Y [k]	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1 N189	max	27.793	198.631	16	0	12	0	1	0	5
2	min	-21.392	-134.695	3	0	7	-0.004	1	0	9
3 N190	max	21.186	197.679	14	0	18	0	1	0	3
4	min	-27.631	-134.824	9	0	5	-0.004	1	0	7
5 N191	max	20.539	196.658	12	0	3	0	1	0	9
6	min	-26.904	-135.049	7	0	16	-0.005	1	0	5
7 N192	max	26.976	196.586	18	0	9	0	1	0	7
8	min	-20.656	-134.062	5	0	14	-0.005	1	0	3
9	max	80.413	161.495	11	0	2	0	1	0	
10	min	-80.413	-112.593	7	0	6	-0.005	1	0	

Envelope AISC 13th ASD Steel Code Checks

Member	Shape	Code Check	Loc[ft]	LC	Shear Che...	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mny/o...	Mnzz/o...	Cb	Eqn
1 M408A	L2.5X2.5X4	.009	0	13	.002	0	1	4.52	25.653	- Code c...			
2 M409A	L2.5X2.5X4	.009	0	15	.002	0	1	4.52	25.653	- Code c...			
3 M410A	L2.5X2.5X4	.009	0	17	.002	0	1	4.52	25.653	- Code c...			

Company : GPD Group
 Designer : Irife
 Job Number : 2011265.91

Sept 8, 2011
 2:57 PM
 Checked By:

SNETO25 SHELTON

Envelope AISC 13th ASD Steel Code Checks (Continued)

Member	Shape	Code Check	Loc[ft]	LC	Shear Che...	Loc[ft]	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mnyy/o...	Mnzz/o...	Cb	Edn
4	M411A	L2.5X2.5X4	.009	0	11	.002	0	Y	1	4.52	25.653	- Code c...		
5	M476A	L3X2.5X4	.004	0	16	.002	7.971	Y	3	6	28.24	- Code c...		
6	M477	L3X2.5X4	.004	0	12	.002	7.971	Y	2	6	28.24	- Code c...		
7	M478	L3X2.5X4	.004	0	16	.002	7.971	Y	8	6	28.24	- Code c...		
8	M479	L3X2.5X4	.004	0	12	.002	7.971	Y	5	6	28.24	- Code c...		
9	M461A	LL2X2.5X3X3	.072	5.37	17	.003	10.74	Y	1	5.275	34.922	2.664	1.128	1 H1-1b
10	M462A	LL2X2.5X3X3	.072	5.37	18	.003	10.74	Y	1	5.275	34.922	2.664	1.128	1 H1-1b
11	M463	LL2X2.5X3X3	.072	5.37	17	.003	10.74	Y	1	5.275	34.922	2.664	1.128	1 H1-1b
12	M464	LL2X2.5X3X3	.072	5.37	18	.003	10.74	Y	1	5.275	34.922	2.664	1.128	1 H1-1b
13	M465	LL2X2.5X3X3	.060	4.909	16	.003	9.817	Y	3	6.314	34.922	2.664	1.128	1 H1-1b
14	M466	LL2X2.5X3X3	.060	4.909	12	.003	9.817	Y	2	6.314	34.922	2.664	1.128	1 H1-1b
15	M467	LL2X2.5X3X3	.060	4.909	16	.003	9.817	Y	7	6.314	34.922	2.664	1.128	1 H1-1b
16	M468	LL2X2.5X3X3	.060	4.909	12	.003	9.817	Y	5	6.314	34.922	2.664	1.128	1 H1-1b
17	M447A	LL2X2.5X3X3	.098	6.293	18	.004	0	Y	1	3.841	34.922	2.664	1.128	1 H1-1b
18	M448A	LL2X2.5X3X3	.098	6.293	17	.004	0	Y	1	3.841	34.922	2.664	1.128	1 H1-1b
19	M449	LL2X2.5X3X3	.098	6.293	18	.004	0	Y	1	3.841	34.922	2.664	1.128	1 H1-1b
20	M450	LL2X2.5X3X3	.098	6.293	17	.004	0	Y	1	3.841	34.922	2.664	1.128	1 H1-1b
21	M451	LL2X2.5X3X3	.084	5.832	17	.003	11.663	Y	1	4.473	34.922	2.664	1.128	1 H1-1b
22	M452	LL2X2.5X3X3	.084	5.832	18	.003	11.663	Y	1	4.473	34.922	2.664	1.128	1 H1-1b
23	M453	LL2X2.5X3X3	.084	5.832	17	.003	11.663	Y	1	4.473	34.922	2.664	1.128	1 H1-1b
24	M454	LL2X2.5X3X3	.084	5.832	18	.003	11.663	Y	1	4.473	34.922	2.664	1.128	1 H1-1b
25	M438B	LL2X2.5X3X3	.208	6.755	11	.005	13.51	Y	6	13.337	34.922	2.664	1.128	1 H1-1b
26	M439A	LL2X2.5X3X3	.208	6.755	17	.005	13.51	Y	1	13.337	34.922	2.664	1.128	1 H1-1b
27	M440A	LL2X2.5X3X3	.112	6.755	18	.004	13.51	Y	11	13.337	34.922	2.664	1.128	1 H1-1b
28	M441A	LL2X2.5X3X3	.208	6.755	13	.005	0	Y	11	13.337	34.922	2.664	1.128	1 H1-1b
29	M423B	LL2X2.5X3X3	.230	7.216	15	.005	14.433	Y	1	11.686	34.922	2.664	1.128	1 H1-1b
30	M424A	LL2X2.5X3X3	.230	7.216	17	.005	14.433	Y	1	11.686	34.922	2.664	1.128	1 H1-1b
31	M425A	LL2X2.5X3X3	.230	7.216	11	.005	14.433	Y	1	11.686	34.922	2.664	1.128	1 H1-1b
32	M426A	LL2X2.5X3X3	.230	7.216	13	.005	14.433	Y	1	11.686	34.922	2.664	1.128	1 H1-1b
33	M404	LL2.5X2.5X4X3	.229	8.139	17	.006	16.279	Y	16	21.978	51.305	3.605	2.273	1 H1-1b
34	M405	LL2.5X2.5X4X3	.248	8.139	15	.006	16.279	Y	10	21.978	51.305	3.605	2.273	1 H1-1b
35	M406A	LL2.5X2.5X4X3	.197	8.139	13	.005	16.279	Y	2	21.978	51.305	3.605	2.273	1 H1-1b
36	M407	LL2.5X2.5X4X3	.229	8.139	11	.006	16.279	Y	12	21.978	51.305	3.605	2.273	1 H1-1b
37	M446	L2.5X2.5X4	.006	0	13	.002	0	Y	12	6.563	25.653	- Code c...		
38	M447	L2.5X2.5X4	.006	0	11	.002	0	Y	11	6.563	25.653	- Code c...		
39	M448	L2.5X2.5X4	.006	0	17	.002	6.755	Y	16	6.563	25.653	- Code c...		
40	M431	L2.5X2.5X4	.006	0	13	.002	0	Y	3	5.75	25.653	- Code c...		
41	M432	L2.5X2.5X4	.006	0	15	.002	7.216	Y	5	5.75	25.653	- Code c...		
42	M433	L2.5X2.5X4	.006	0	17	.002	7.216	Y	7	5.75	25.653	- Code c...		
43	M434	L2.5X2.5X4	.006	0	11	.002	7.216	Y	2	5.75	25.653	- Code c...		
44	M9	L3 1/2x3 1/2x1/4	.301	0	8	.003	9.66	Z	11	11.74	36.431	- Code c...		

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Sept 8, 2011
 2:57 PM
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Envelope AISC 13th ASD Steel Code Checks (Continued)

Member	Shape	Code Check	Loc[ft]	LC	Shear Che... Loc[ft]	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mnvy/o... Mnzz/o... Cb	Eqn
45	M10	L3 1/2x3 1/2x1/4	.303	4	.004	9.66	Z	12	11.74	- Code c...	36.431
46	M11	L3 1/2x3 1/2x1/4	.294	6	.003	9.66	Z	16	11.74	- Code c...	36.431
47	M12	L3 1/2x3 1/2x1/4	.296	2	.004	9.66	Z	18	11.74	- Code c...	36.431
48	M13	L3 1/2x3 1/2x1/4	.279	4	.003	9.66	Z	15	11.74	- Code c...	36.431
49	M14	L3 1/2x3 1/2x1/4	.277	8	.004	9.66	Z	15	11.74	- Code c...	36.431
50	M15	L3 1/2x3 1/2x1/4	.321	2	.003	9.66	Z	13	11.74	- Code c...	36.431
51	M16	L3 1/2x3 1/2x1/4	.318	6	.004	9.66	Z	14	11.74	- Code c...	36.431
52	M29	L3 1/2x3x1/4	.722	8	.004	10.189	Z	18	8.108	- Code c...	33.629
53	M30	L3 1/2x3x1/4	.722	4	.004	10.189	Z	12	8.108	- Code c...	33.629
54	M31	L3 1/2x3x1/4	.762	6	.004	10.189	Z	16	8.108	- Code c...	33.629
55	M32	L3 1/2x3x1/4	.764	2	.004	10.189	Z	18	8.108	- Code c...	33.629
56	M33	L3 1/2x3x1/4	.734	4	.004	10.189	Z	14	8.108	- Code c...	33.629
57	M34	L3 1/2x3x1/4	.734	8	.004	10.189	Z	16	8.108	- Code c...	33.629
58	M35	L3 1/2x3x1/4	.735	2	.004	10.189	Z	12	8.108	- Code c...	33.629
59	M36	L3 1/2x3x1/4	.732	6	.004	10.189	Z	14	8.108	- Code c...	33.629
60	M54	L4x3x1/4	.822	8	.004	10.944	Z	18	8.283	- Code c...	36.431
61	M55	L4x3x1/4	.821	4	.004	10.944	Z	12	8.283	- Code c...	36.431
62	M56	L4x3x1/4	.864	6	.004	10.944	Z	16	8.283	- Code c...	36.431
63	M57	L4x3x1/4	.865	2	.004	10.944	Z	18	8.283	- Code c...	36.431
64	M58	L4x3x1/4	.840	4	.004	10.944	Z	14	8.283	- Code c...	36.431
65	M59	L4x3x1/4	.840	8	.004	10.944	Z	16	8.283	- Code c...	36.431
66	M60	L4x3x1/4	.832	2	.004	10.944	Z	12	8.283	- Code c...	36.431
67	M61	L4x3x1/4	.831	6	.004	10.944	Z	14	8.283	- Code c...	36.431
68	M74	L4x3x1/4	1.253	8	.004	11.73	Z	11	7.384	- Code c...	36.431
69	M75	L4x3x1/4	1.255	4	.004	11.73	Z	11	7.384	- Code c...	36.431
70	M76	L4x3x1/4	1.218	6	.004	11.73	Z	17	7.384	- Code c...	36.431
71	M77	L4x3x1/4	1.227	2	.004	11.73	Z	17	7.384	- Code c...	36.431
72	M78	L4x3x1/4	1.184	4	.004	11.73	Z	15	7.384	- Code c...	36.431
73	M79	L4x3x1/4	1.180	8	.004	11.73	Z	15	7.384	- Code c...	36.431
74	M80	L4x3x1/4	1.251	2	.004	11.73	Z	13	7.384	- Code c...	36.431
75	M81	L4x3x1/4	1.244	6	.004	11.73	Z	13	7.384	- Code c...	36.431
76	M91	2L2 1/2x2 1/2x1/4x...	.792	8	.003	8.561	Y	18	16.362	4.236 1.419 1 H1-1a	
77	M94	2L2 1/2x2 1/2x1/4x...	.794	4	.003	8.561	Y	12	16.362	4.236 1.419 1 H1-1a	
78	M98	2L2 1/2x2 1/2x1/4x...	.771	6	.003	8.561	Y	16	16.362	4.236 1.419 1 H1-1a	
79	M101	2L2 1/2x2 1/2x1/4x...	.775	2	.003	8.561	Y	18	16.362	4.236 1.419 1 H1-1a	
80	M105	2L2 1/2x2 1/2x1/4x...	.737	4	.003	8.561	Y	14	16.362	4.236 1.419 1 H1-1a	
81	M108	2L2 1/2x2 1/2x1/4x...	.736	8	.003	8.561	Y	16	16.362	4.236 1.419 1 H1-1a	
82	M112	2L2 1/2x2 1/2x1/4x...	.777	2	.003	8.561	Y	12	16.362	4.236 1.419 1 H1-1a	
83	M115	2L2 1/2x2 1/2x1/4x...	.773	6	.003	8.561	Y	14	16.362	4.236 1.419 1 H1-1a	
84	M124	2L2 1/2x2 1/2x1/4x...	.710	8	.003	8.253	Y	18	17.64	4.236 1.419 1 H1-1a	
85	M127	2L2 1/2x2 1/2x1/4x...	.712	4	.003	8.253	Y	12	17.64	4.236 1.419 1 H1-1a	

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Sept 8, 2011
 2:57 PM
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Envelope AISC 13th ASD Steel Code Checks (Continued)

Member	Shape	Code Check	Locf1f1	LC	Shear Che.	Locf1f1 Dir	LC	Pnc/om [k]	Pnt/om [k]	Mnw/o...	Minzz/o...	Cb	Ean
86	M131	2L2 1/2x2 1/2x1/4x...	.694	6	.003	8.253	16	17.64	51.305	4.236	1.419	1	H1-1a
87	M134	2L2 1/2x2 1/2x1/4x...	.697	2	.003	8.253	18	17.64	51.305	4.236	1.419	1	H1-1a
88	M138	2L2 1/2x2 1/2x1/4x...	.669	4	.003	8.253	14	17.64	51.305	4.236	1.419	1	H1-1a
89	M141	2L2 1/2x2 1/2x1/4x...	.668	8	.003	8.253	16	17.64	51.305	4.236	1.419	1	H1-1a
90	M145	2L2 1/2x2 1/2x1/4x...	.705	2	.003	8.253	12	17.64	51.305	4.236	1.419	1	H1-1a
91	M148	2L2 1/2x2 1/2x1/4x...	.702	6	.003	8.253	14	17.64	51.305	4.236	1.419	1	H1-1a
92	M161	2L2 1/2x2 1/2x1/4x...	1.013	8	.003	9.214	18	14.028	51.305	4.236	1.419	1	H1-1a
93	M164	2L2 1/2x2 1/2x1/4x...	1.020	4	.003	9.214	12	14.028	51.305	4.236	1.419	1	H1-1a
94	M168	2L2 1/2x2 1/2x1/4x...	.989	15	.003	9.214	16	14.028	51.305	4.236	1.419	1	H1-1a
95	M171	2L2 1/2x2 1/2x1/4x...	.996	11	.003	9.214	18	14.028	51.305	4.236	1.419	1	H1-1a
96	M175	2L2 1/2x2 1/2x1/4x...	.951	13	.003	9.214	14	14.028	51.305	4.236	1.419	1	H1-1a
97	M178	2L2 1/2x2 1/2x1/4x...	.944	17	.003	9.214	16	14.028	51.305	4.236	1.419	1	H1-1a
98	M182	2L2 1/2x2 1/2x1/4x...	.989	11	.003	9.214	12	14.028	51.305	4.236	1.419	1	H1-1a
99	M185	2L2 1/2x2 1/2x1/4x...	.986	6	.003	9.214	14	14.028	51.305	4.236	1.419	1	H1-1a
100	M194	2L2 1/2x2 1/2x1/4x...	.912	8	.003	8.881	18	15.13	51.305	4.236	1.419	1	H1-1a
101	M197	2L2 1/2x2 1/2x1/4x...	.920	4	.003	8.881	12	15.13	51.305	4.236	1.419	1	H1-1a
102	M201	2L2 1/2x2 1/2x1/4x...	.892	6	.003	8.881	16	15.13	51.305	4.236	1.419	1	H1-1a
103	M204	2L2 1/2x2 1/2x1/4x...	.890	2	.003	8.881	18	15.13	51.305	4.236	1.419	1	H1-1a
104	M208	2L2 1/2x2 1/2x1/4x...	.854	4	.003	8.881	14	15.13	51.305	4.236	1.419	1	H1-1a
105	M211	2L2 1/2x2 1/2x1/4x...	.846	8	.003	8.881	16	15.13	51.305	4.236	1.419	1	H1-1a
106	M215	2L2 1/2x2 1/2x1/4x...	.892	2	.003	8.881	12	15.13	51.305	4.236	1.419	1	H1-1a
107	M218	2L2 1/2x2 1/2x1/4x...	.894	6	.003	8.881	14	15.13	51.305	4.236	1.419	1	H1-1a
108	M231	2L2 1/2x2 1/2x1/4x...	1.112	17	.004	9.558	18	13.422	51.305	4.236	1.419	1	H1-1a
109	M234	2L2 1/2x2 1/2x1/4x...	1.115	13	.004	9.558	12	13.422	51.305	4.236	1.419	1	H1-1a
110	M238	2L2 1/2x2 1/2x1/4x...	1.095	15	.004	9.558	16	13.422	51.305	4.236	1.419	1	H1-1a
111	M241	2L2 1/2x2 1/2x1/4x...	1.100	11	.004	9.558	18	13.422	51.305	4.236	1.419	1	H1-1a
112	M245	2L2 1/2x2 1/2x1/4x...	1.043	13	.004	9.558	14	13.422	51.305	4.236	1.419	1	H1-1a
113	M248	2L2 1/2x2 1/2x1/4x...	1.032	17	.004	9.558	16	13.422	51.305	4.236	1.419	1	H1-1a
114	M252	2L2 1/2x2 1/2x1/4x...	1.091	11	.004	9.558	12	13.422	51.305	4.236	1.419	1	H1-1a
115	M255	2L2 1/2x2 1/2x1/4x...	1.081	15	.004	9.558	14	13.422	51.305	4.236	1.419	1	H1-1a
116	M268	2L2 1/2x3 1/2x1/4x...	1.307	17	.003	19.927	17	16.507	62.084	7.395	1.476	1	H1-1a
117	M273	2L2 1/2x3 1/2x1/4x...	1.314	4	.003	19.927	13	16.507	62.084	7.395	1.476	1	H1-1a
118	M279	2L2 1/2x3 1/2x1/4x...	1.331	15	.003	19.927	15	16.507	62.084	7.395	1.476	1	H1-1a
119	M284	2L2 1/2x3 1/2x1/4x...	1.285	11	.003	19.927	11	16.507	62.084	7.395	1.476	1	H1-1a
120	M294	2L2 1/2x3 1/2x1/4x...	1.210	13	.003	19.927	13	16.507	62.084	7.395	1.476	1	H1-1a
121	M299	2L2 1/2x3 1/2x1/4x...	1.199	17	.003	19.927	17	16.507	62.084	7.395	1.476	1	H1-1a
122	M309	2L2 1/2x3 1/2x1/4x...	1.270	11	.003	19.927	11	16.507	62.084	7.395	1.476	1	H1-1a
123	M314	2L2 1/2x3 1/2x1/4x...	1.268	6	.003	19.927	15	16.507	62.084	7.395	1.476	1	H1-1a
124	M337	2L3 1/2x3x3/8x3/4	.875	8	.003	10.403	12	27.271	98.946	8.83	4.048	1	H1-1a
125	M342	2L3 1/2x3x3/8x3/4	.878	4	.003	10.403	18	27.271	98.946	8.83	4.048	1	H1-1a
126	M353	2L3 1/2x3x3/8x3/4	.859	6	.003	10.403	18	27.271	98.946	8.83	4.048	1	H1-1a

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Sept 8, 2011
 2:57 PM
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Envelope AISC 13th ASD Steel Code Checks (Continued)

Member	Shape	Code Check	Loc[ft]	LC	Shear Che..	Loc[ft]	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mny/o...	Mnz/o...	Cb	Egn
127	M358	2L3 1/2x3x3/8x3/4	.878	3	.003	10.403	Y	16	27.271	98.946	8.83	6.476	1	H1-1a
128	M372	2L3 1/2x3x3/8x3/4	.814	3	.003	10.403	Y	16	27.271	98.946	8.83	6.476	1	H1-1a
129	M377	2L3 1/2x3x3/8x3/4	.818	9	.003	10.403	Y	14	27.271	98.946	8.83	6.476	1	H1-1a
130	M391	2L3 1/2x3x3/8x3/4	.870	9	.003	10.403	Y	14	27.271	98.946	8.83	6.476	1	H1-1a
131	M396	2L3 1/2x3x3/8x3/4	.854	6	.003	10.403	Y	12	27.271	98.946	8.83	6.476	1	H1-1a
132	M90	2L2 1/2x2 1/2x1/4x...	.592	17	.005	10.74	Y	15	15.854	51.305	3.58	1.419	1	H1-1a
133	M97	2L2 1/2x2 1/2x1/4x...	.585	11	.005	10.74	Y	13	15.854	51.305	3.58	1.419	1	H1-1a
134	M104	2L2 1/2x2 1/2x1/4x...	.558	17	.005	10.74	Y	11	15.854	51.305	3.58	1.419	1	H1-1a
135	M111	2L2 1/2x2 1/2x1/4x...	.583	11	.005	10.74	Y	17	15.854	51.305	3.58	1.419	1	H1-1a
136	M123	2L2 1/2x2 1/2x1/4x...	.435	4	.005	9.817	Y	15	19.147	51.305	3.58	1.419	1	H1-1a
137	M130	2L2 1/2x2 1/2x1/4x...	.428	2	.005	9.817	Y	13	19.147	51.305	3.58	1.419	1	H1-1a
138	M137	2L2 1/2x2 1/2x1/4x...	.412	4	.005	9.817	Y	11	19.147	51.305	3.58	1.419	1	H1-1a
139	M144	2L2 1/2x2 1/2x1/4x...	.432	2	.005	9.817	Y	17	19.147	51.305	3.58	1.419	1	H1-1a
140	M160	2L2 1/2x2 1/2x1/4x...	.911	13	.006	12.587	Y	15	12.139	51.305	3.58	1.419	1	H1-1a
141	M167	2L2 1/2x2 1/2x1/4x...	.890	11	.006	12.587	Y	13	12.139	51.305	3.58	1.419	1	H1-1a
142	M174	2L2 1/2x2 1/2x1/4x...	.851	13	.006	12.587	Y	11	12.139	51.305	3.58	1.419	1	H1-1a
143	M181	2L2 1/2x2 1/2x1/4x...	.884	11	.006	12.587	Y	17	12.139	51.305	3.58	1.419	1	H1-1a
144	M193	2L2 1/2x2 1/2x1/4x...	.738	13	.006	11.663	Y	15	14.227	51.305	3.58	1.419	1	H1-1a
145	M200	2L2 1/2x2 1/2x1/4x...	.721	11	.006	11.663	Y	13	14.227	51.305	3.58	1.419	1	H1-1a
146	M207	2L2 1/2x2 1/2x1/4x...	.715	13	.006	11.663	Y	11	14.227	51.305	3.58	1.419	1	H1-1a
147	M214	2L2 1/2x2 1/2x1/4x...	.740	11	.006	11.663	Y	17	14.227	51.305	3.58	1.419	1	H1-1a
148	M230	LL3X2.5X4X3	.681	17	.006	13.51	Y	15	17.864	56.695	3.592	2.021	1	H1-1a
149	M237	LL3X2.5X4X3	.674	15	.006	13.51	Y	13	17.864	56.695	3.592	2.021	1	H1-1a
150	M244	LL3X2.5X4X3	.644	13	.006	13.51	Y	11	17.864	56.695	3.592	2.021	1	H1-1a
151	M251	LL3X2.5X4X3	.670	11	.006	13.51	Y	17	17.864	56.695	3.592	2.021	1	H1-1a
152	M267	LL3X2.5X4X3	.837	13	.006	14.433	Y	15	16.332	56.695	3.592	2.021	1	H1-1a
153	M278	LL3X2.5X4X3	.817	11	.006	14.433	Y	13	16.332	56.695	3.592	2.021	1	H1-1a
154	M293	LL3X2.5X4X3	.775	17	.006	14.433	Y	11	16.332	56.695	3.592	2.021	1	H1-1a
155	M308	LL3X2.5X4X3	.807	15	.006	14.433	Y	17	16.332	56.695	3.592	2.021	1	H1-1a
156	M336	2L3x3x3/8x3/8	.517	12	.004	26.792	Y	14	32.485	90.97	7.569	2.993	2	H1-1a
157	M352	2L3x3x3/8x3/8	.521	16	.005	26.792	Y	12	32.485	90.97	7.569	2.993	2	H1-1a
158	M371	2L3x3x3/8x3/8	.495	14	.004	26.792	Y	18	32.485	90.97	7.569	2.993	2	H1-1a
159	M390	2L3x3x3/8x3/8	.514	14	.004	26.792	Y	16	32.485	90.97	7.569	2.993	2	H1-1a
160	M49	2L2x2 1/2x3/16x3/8	.247	16	.007	0	Y	12	17.72	34.922	2.652	1.121	1	H1-1b
161	M50	2L2x2 1/2x3/16x3/8	.246	12	.007	0	Y	18	17.72	34.922	2.652	1.121	1	H1-1b
162	M51	2L2x2 1/2x3/16x3/8	.247	16	.007	11.273	Y	12	17.72	34.922	2.652	1.121	1	H1-1b
163	M52	2L2x2 1/2x3/16x3/8	.246	12	.007	11.273	Y	18	17.72	34.922	2.652	1.121	1	H1-1b
164	M118	2L2 1/2x2 1/2x3/16...	.327	18	.009	15.189	Y	12	18.757	38.802	2.672	1.737	1	H1-1b
165	M119	2L2 1/2x2 1/2x3/16...	.328	16	.009	0	Y	18	18.757	38.802	2.672	1.737	1	H1-1b
166	M120	2L2 1/2x2 1/2x3/16...	.327	14	.009	15.189	Y	12	18.757	38.802	2.672	1.737	1	H1-1b
167	M121	2L2 1/2x2 1/2x3/16...	.328	12	.009	15.189	Y	18	18.757	38.802	2.672	1.737	1	H1-1b

Company : GPD Group
 Designer : Irife
 Job Number : 2011265.91

Sept 8, 2011
 2:57 PM
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Envelope AISC 13th ASD Steel Code Checks (Continued)

Member	Shape	Code Check	Loc[ft]	LC	Shear Che...	Loc[ft]	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mnyw/o...	Mnzz/o...	Cb	Ean
168	M151	2L2 1/2x2 1/2x3/16...	6.942	18	.008	0	Y	16	21.08	38.802	2.672	1.737	1....	H1-1b
169	M152	2L2 1/2x2 1/2x3/16...	6.942	16	.008	0	Y	18	21.08	38.802	2.672	1.737	1....	H1-1b
170	M153	2L2 1/2x2 1/2x3/16...	6.942	14	.008	13.884	Y	16	21.08	38.802	2.672	1.737	1....	H1-1b
171	M154	2L2 1/2x2 1/2x3/16...	6.942	12	.008	0	Y	18	21.08	38.802	2.672	1.737	1....	H1-1b
172	M188	2L2 1/2x2 1/2x3/16...	8.9	18	.011	17.8	Y	12	14.364	38.802	2.672	1.737	1....	H1-1b
173	M189	2L2 1/2x2 1/2x3/16...	8.9	16	.011	0	Y	14	14.364	38.802	2.672	1.737	1....	H1-1b
174	M190	2L2 1/2x2 1/2x3/16...	8.9	14	.011	17.8	Y	12	14.364	38.802	2.672	1.737	1....	H1-1b
175	M191	2L2 1/2x2 1/2x3/16...	8.9	12	.011	0	Y	14	14.364	38.802	2.672	1.737	1....	H1-1b
176	M221	2L2 1/2x2 1/2x3/16...	8.247	18	.010	16.495	Y	12	16.516	38.802	2.672	1.737	1....	H1-1b
177	M222	2L2 1/2x2 1/2x3/16...	8.247	16	.010	0	Y	18	16.516	38.802	2.672	1.737	1....	H1-1b
178	M223	2L2 1/2x2 1/2x3/16...	8.247	14	.010	0	Y	12	16.516	38.802	2.672	1.737	1....	H1-1b
179	M224	2L2 1/2x2 1/2x3/16...	8.247	12	.010	16.495	Y	18	16.516	38.802	2.672	1.737	1....	H1-1b
180	M258	2L2 1/2x2 1/2x3/16...	9.553	18	.012	19.105	Y	12	12.468	38.802	2.672	1.737	1....	H1-1b
181	M259	2L2 1/2x2 1/2x3/16...	9.553	16	.012	19.105	Y	18	12.468	38.802	2.672	1.737	1....	H1-1b
182	M260	2L2 1/2x2 1/2x3/16...	9.553	14	.012	0	Y	12	12.468	38.802	2.672	1.737	1....	H1-1b
183	M261	2L2 1/2x2 1/2x3/16...	9.553	12	.012	19.105	Y	18	12.468	38.802	2.672	1.737	1....	H1-1b
184	M327	L3x3x1/4	10.205	7	.006	10.205	Y	12	5.058	31.042	- Code c...			
185	M328	L3x3x1/4	10.205	5	.006	10.205	Z	13	5.058	31.042	- Code c...			
186	M329	L3x3x1/4	10.205	3	.006	10.205	Y	11	5.058	31.042	- Code c...			
187	M330	L3x3x1/4	10.205	9	.006	10.205	Y	17	5.058	31.042	- Code c...			
188	M412	2L3x2 1/2x1/4x3/8	11.511	14	.006	11.511	Y	12	18.513	56.695	3.608	2.019	1....	H1-1b
189	M413	2L3x2 1/2x1/4x3/8	11.511	12	.006	11.511	Y	11	18.513	56.695	3.608	2.019	1....	H1-1b
190	M414	2L3x2 1/2x1/4x3/8	11.511	18	.006	11.511	Y	12	18.513	56.695	3.608	2.019	1....	H1-1b
191	M415	2L3x2 1/2x1/4x3/8	11.511	16	.006	11.511	Y	18	18.513	56.695	3.608	2.019	1....	H1-1b
192	M412A	2L3x2 1/2x1/4x3/8	6.034	15	.002	0	Y	18	16.149	56.695	3.608	3.23	1	H1-1b
193	M413A	2L3x2 1/2x1/4x3/8	6.291	17	.002	12.325	Y	18	16.149	56.695	3.608	3.23	1	H1-1b
194	M414A	2L3x2 1/2x1/4x3/8	6.034	17	.002	12.325	Y	12	16.149	56.695	3.608	3.23	1	H1-1b
195	M415A	2L3x2 1/2x1/4x3/8	6.291	12	.002	0	Y	6	16.149	56.695	3.608	3.23	1	H1-1b
196	M416	2L3x2 1/2x1/4x3/8	6.034	18	.003	12.325	Y	14	16.149	56.695	3.608	3.23	1	H1-1b
197	M417	2L3x2 1/2x1/4x3/8	6.291	13	.002	0	Y	16	16.149	56.695	3.608	3.23	1	H1-1b
198	M418	2L3x2 1/2x1/4x3/8	6.034	13	.002	0	Y	12	16.149	56.695	3.608	3.23	1	H1-1b
199	M419	2L3x2 1/2x1/4x3/8	6.291	15	.002	0	Y	3	16.149	56.695	3.608	3.23	1	H1-1b
200	M1	L6x6x1/2	0	16	.002	6.677	Y	3	96.904	123.952	- Code c...			
201	M2	L6x6x1/2	0	14	.003	6.677	Y	2	96.904	123.952	- Code c...			
202	M3	L6x6x1/2	0	12	.003	6.677	Z	6	96.904	123.952	- Code c...			
203	M4	L6x6x1/2	0	18	.002	6.677	Z	5	96.904	123.952	- Code c...			
204	M21	L6x6x1/2	0	16	.004	6.546	Y	4	97.287	123.952	- Code c...			
205	M22	L6x6x1/2	0	14	.004	6.546	Z	8	97.287	123.952	- Code c...			
206	M23	L6x6x1/2	0	12	.004	6.546	Z	6	97.287	123.952	- Code c...			
207	M24	L6x6x1/2	0	18	.004	6.546	Y	6	97.287	123.952	- Code c...			
208	M41	L6x6x5/8	0	16	.007	12.568	Z	2	120.666	153.269	- Code c...			

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Sept 8, 2011
 2:57 PM
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Envelope AISC 13th ASD Steel Code Checks (Continued)

Member	Shape	Code Check	Loc[ft]	LC	Shear Che...	Loc[ft]	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mnzz/b...	Cb	Egn
209	M42	L6x6x5/8	.257	14	.007	12.568	Y	2	120.666	153.269	- Code c...		
210	M43	L6x6x5/8	.254	12	.008	12.568	Y	8	120.666	153.269	- Code c...		
211	M44	L6x6x5/8	.250	18	.008	12.568	Z	4	120.666	153.269	- Code c...		
212	M66	L6x6x5/8	.377	16	.027	12.568	Y	4	120.961	153.269	- Code c...		
213	M67	L6x6x5/8	.376	14	.027	12.568	Z	8	120.961	153.269	- Code c...		
214	M68	L6x6x5/8	.365	12	.019	12.568	Z	6	120.961	153.269	- Code c...		
215	M69	L6x6x5/8	.364	18	.026	12.568	Y	6	120.961	153.269	- Code c...		
216	M86	L6x6x3/4	.480	16	.008	0	Y	5	146.203	181.94	- Code c...		
217	M87	L6x6x3/4	.480	14	.008	0	Z	7	146.203	181.94	- Code c...		
218	M88	L6x6x3/4	.468	12	.007	0	Y	9	146.203	181.94	- Code c...		
219	M89	L6x6x3/4	.466	9	.007	0	Z	3	146.203	181.94	- Code c...		
220	M156	L6x6x7/8	.610	16	.008	0	Y	14	168.549	209.749	- Code c...		
221	M157	L6x6x7/8	.602	14	.008	0	Y	12	168.549	209.749	- Code c...		
222	M158	L6x6x7/8	.595	12	.007	0	Y	18	168.549	209.749	- Code c...		
223	M159	L6x6x7/8	.600	18	.007	0	Y	7	168.549	209.749	- Code c...		
224	M226	L8x8x7/8	.472	16	.013	0	Y	14	252.009	284.551	- Code c...		
225	M227	L8x8x7/8	.467	14	.012	0	Y	12	252.009	284.551	- Code c...		
226	M228	L8x8x7/8	.464	12	.012	0	Y	18	252.009	284.551	- Code c...		
227	M229	L8x8x7/8	.466	18	.012	0	Y	16	252.009	284.551	- Code c...		
228	M263	L8x8x7/8	.594	16	.010	0	Y	14	229.294	284.551	- Code c...		
229	M264	L8x8x7/8	.587	14	.017	0	Y	12	229.294	284.551	- Code c...		
230	M265	L8x8x7/8	.582	12	.009	0	Y	18	229.294	284.551	- Code c...		
231	M266	L8x8x7/8	.584	18	.009	0	Y	16	229.294	284.551	- Code c...		
232	M332	L8x8x1	.642	16	.006	25.136	Y	14	259.839	323.353	- Code c...		
233	M333	L8x8x1	.639	14	.008	25.136	Y	12	259.839	323.353	- Code c...		
234	M334	L8x8x1	.634	12	.005	25.136	Y	18	259.839	323.353	- Code c...		
235	M335	L8x8x1	.634	18	.005	25.136	Y	16	259.839	323.353	- Code c...		
236	M272	L3 1/2x3x1/4	.077	5	.003	12.286	Z	14	4.633	33.629	- Code c...		
237	M277	L3 1/2x3x1/4	.016	18	.003	12.286	Z	18	4.633	33.629	- Code c...		
238	M283	L3 1/2x3x1/4	.072	3	.003	0	Z	12	4.633	33.629	- Code c...		
239	M288	L3 1/2x3x1/4	.016	17	.003	12.286	Z	14	4.633	33.629	- Code c...		
240	M298	L3 1/2x3x1/4	.083	9	.003	0	Z	17	4.633	33.629	- Code c...		
241	M303	L3 1/2x3x1/4	.015	15	.003	12.286	Z	13	4.633	33.629	- Code c...		
242	M313	L3 1/2x3x1/4	.088	7	.003	12.286	Z	16	4.633	33.629	- Code c...		
243	M318	L3 1/2x3x1/4	.014	13	.003	0	Z	12	4.633	33.629	- Code c...		
244	M341	LL2.5X2X4X3	.956	6	.004	0	Z	14	8.054	45.916	2.447	1.374	1 H1-1a
245	M346	LL2.5X2X4X3	.934	6	.004	0	Z	17	8.054	45.916	2.447	2.198	1 H1-1a
246	M357	LL2.5X2X4X3	.944	4	.004	13.457	Z	11	8.054	45.916	2.447	1.374	1 H1-1a
247	M362	LL2.5X2X4X3	.918	4	.004	13.457	Z	13	8.054	45.916	2.447	2.198	1 H1-1a
248	M376	LL2.5X2X4X3	.958	2	.004	0	Z	17	8.054	45.916	2.447	1.374	1 H1-1a
249	M381	LL2.5X2X4X3	.939	2	.004	0	Z	13	8.054	45.916	2.447	2.198	1 H1-1a

Envelope AISC 13th ASD Steel Code Checks (Continued)

Member	Shape	Code Check	Lociflt	LC	Shear Che...	Lociflt	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mnw/lo...	Mnzz/lo...	Cb	Ecan
250	M395	LL2.5X2X4X3	.943	8	.004	13.457	Z	18	8.054	45.916	2.447	1.374	1	H1-1a
251	M400	LL2.5X2X4X3	.928	8	.004	13.457	Z	18	8.054	45.916	2.447	2.198	1	H1-1a
252	M93	L2x2 1/2x3/16_HRA	.144	5	.002	7.961	Z	13	2.694	17.44	- Code c...	- Code c...		
253	M96	L2x2 1/2x3/16_HRA	.140	7	.002	7.961	Z	12	2.694	17.44	- Code c...	- Code c...		
254	M100	L2x2 1/2x3/16_HRA	.138	3	.002	7.961	Z	13	2.694	17.44	- Code c...	- Code c...		
255	M103	L2x2 1/2x3/16_HRA	.143	5	.002	0	Z	15	2.694	17.44	- Code c...	- Code c...		
256	M107	L2x2 1/2x3/16_HRA	.145	9	.002	7.961	Z	18	2.694	17.44	- Code c...	- Code c...		
257	M110	L2x2 1/2x3/16_HRA	.150	3	.002	0	Z	18	2.694	17.44	- Code c...	- Code c...		
258	M114	L2x2 1/2x3/16_HRA	.149	7	.002	0	Z	16	2.694	17.44	- Code c...	- Code c...		
259	M117	L2x2 1/2x3/16_HRA	.143	9	.002	0	Z	18	2.694	17.44	- Code c...	- Code c...		
260	M126	L2x2 1/2x3/16_HRA	.103	5	.002	0	Z	13	2.901	17.44	- Code c...	- Code c...		
261	M129	L2x2 1/2x3/16_HRA	.099	7	.002	0	Z	18	2.901	17.44	- Code c...	- Code c...		
262	M133	L2x2 1/2x3/16_HRA	.098	3	.002	7.685	Z	12	2.901	17.44	- Code c...	- Code c...		
263	M136	L2x2 1/2x3/16_HRA	.107	5	.002	7.685	Z	12	2.901	17.44	- Code c...	- Code c...		
264	M140	L2x2 1/2x3/16_HRA	.108	9	.002	7.685	Z	18	2.901	17.44	- Code c...	- Code c...		
265	M143	L2x2 1/2x3/16_HRA	.114	3	.002	7.685	Z	12	2.901	17.44	- Code c...	- Code c...		
266	M147	L2x2 1/2x3/16_HRA	.113	7	.002	7.685	Z	11	2.901	17.44	- Code c...	- Code c...		
267	M150	L2x2 1/2x3/16_HRA	.102	9	.002	7.685	Z	12	2.901	17.44	- Code c...	- Code c...		
268	M163	L2 1/2x2 1/2x3/16	.132	5	.003	8.561	Z	12	3.439	19.444	- Code c...	- Code c...		
269	M166	L2 1/2x2 1/2x3/16	.117	7	.003	8.561	Z	16	3.439	19.444	- Code c...	- Code c...		
270	M170	L2 1/2x2 1/2x3/16	.129	3	.003	8.561	Z	11	3.439	19.444	- Code c...	- Code c...		
271	M173	L2 1/2x2 1/2x3/16	.117	5	.003	8.561	Z	15	3.439	19.444	- Code c...	- Code c...		
272	M177	L2 1/2x2 1/2x3/16	.130	9	.003	8.561	Z	18	3.439	19.444	- Code c...	- Code c...		
273	M180	L2 1/2x2 1/2x3/16	.122	3	.003	8.561	Z	14	3.439	19.444	- Code c...	- Code c...		
274	M184	L2 1/2x2 1/2x3/16	.131	7	.003	0	Z	15	3.439	19.444	- Code c...	- Code c...		
275	M187	L2 1/2x2 1/2x3/16	.119	9	.003	8.561	Z	15	3.439	19.444	- Code c...	- Code c...		
276	M196	L2 1/2x2 1/2x3/16	.117	5	.002	8.253	Z	14	3.623	19.444	- Code c...	- Code c...		
277	M199	L2 1/2x2 1/2x3/16	.114	7	.002	0	Z	14	3.623	19.444	- Code c...	- Code c...		
278	M203	L2 1/2x2 1/2x3/16	.114	3	.002	0	Z	11	3.623	19.444	- Code c...	- Code c...		
279	M206	L2 1/2x2 1/2x3/16	.115	5	.002	0	Z	14	3.623	19.444	- Code c...	- Code c...		
280	M210	L2 1/2x2 1/2x3/16	.116	9	.002	8.253	Z	17	3.623	19.444	- Code c...	- Code c...		
281	M213	L2 1/2x2 1/2x3/16	.119	3	.002	0	Z	14	3.623	19.444	- Code c...	- Code c...		
282	M217	L2 1/2x2 1/2x3/16	.118	7	.002	8.253	Z	14	3.623	19.444	- Code c...	- Code c...		
283	M220	L2 1/2x2 1/2x3/16	.116	9	.002	0	Z	11	3.623	19.444	- Code c...	- Code c...		
284	M233	L2 1/2x2 1/2x3/16	.305	14	.003	0	Z	12	3.171	19.444	- Code c...	- Code c...		
285	M236	L2 1/2x2 1/2x3/16	.102	7	.003	8.881	Z	18	3.171	19.444	- Code c...	- Code c...		
286	M240	L2 1/2x2 1/2x3/16	.286	12	.003	8.881	Z	11	3.171	19.444	- Code c...	- Code c...		
287	M243	L2 1/2x2 1/2x3/16	.104	5	.003	8.881	Z	10	3.171	19.444	- Code c...	- Code c...		
288	M247	L2 1/2x2 1/2x3/16	.291	18	.003	8.881	Z	10	3.171	19.444	- Code c...	- Code c...		
289	M250	L2 1/2x2 1/2x3/16	.108	3	.003	8.881	Z	14	3.171	19.444	- Code c...	- Code c...		
290	M254	L2 1/2x2 1/2x3/16	.293	16	.003	0	Z	17	3.171	19.444	- Code c...	- Code c...		

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 2:57 PM
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Member	Shape	Code Check	Loc[ft]	LC	Shear Cbr...	Loc[ft] Dir	LC	Pnc/om [k]	Pnt/om [k]	Mnw/o...	Mnzz/o...	Cb	Ean
332	M339	LL2.5X2.5X4X3	.075	11.164	18	.005	11.164	Z	17	12.548	3.605	2.273	1 H1-1b
333	M344	LL2.5X2.5X4X3	.068	0	12	.005	0	Z	13	12.548	3.605	2.273	1 H1-1b
334	M355	LL2.5X2.5X4X3	.066	11.164	15	.004	11.164	Z	15	12.548	3.605	2.273	1 H1-1b
335	M360	LL2.5X2.5X4X3	.067	0	18	.004	0	Z	11	12.548	3.605	2.273	1 H1-1b
336	M374	LL2.5X2.5X4X3	.074	11.164	14	.005	11.164	Z	13	12.548	3.605	2.273	1 H1-1b
337	M379	LL2.5X2.5X4X3	.067	0	16	.004	0	Z	17	12.548	3.605	2.273	1 H1-1b
338	M393	LL2.5X2.5X4X3	.074	11.164	12	.005	11.164	Z	11	12.548	3.605	2.273	1 H1-1b
339	M398	LL2.5X2.5X4X3	.067	0	15	.004	0	Z	15	12.548	3.605	2.273	1 H1-1b
340	M92	L2x2 1/2x3/16_HRA	.082	0	9	.003	5.37	Z	10	5.873	- Code c...		
341	M95	L2x2 1/2x3/16_HRA	.080	0	3	.003	5.37	Z	10	5.873	- Code c...		
342	M99	L2x2 1/2x3/16_HRA	.079	0	7	.003	5.37	Z	10	5.873	- Code c...		
343	M102	L2x2 1/2x3/16_HRA	.081	0	9	.003	5.37	Z	10	5.873	- Code c...		
344	M106	L2x2 1/2x3/16_HRA	.082	0	5	.003	5.37	Z	16	5.873	- Code c...		
345	M109	L2x2 1/2x3/16_HRA	.084	0	7	.003	5.37	Z	10	5.873	- Code c...		
346	M113	L2x2 1/2x3/16_HRA	.084	0	3	.003	5.37	Z	10	5.873	- Code c...		
347	M116	L2x2 1/2x3/16_HRA	.081	0	5	.003	5.37	Z	10	5.873	- Code c...		
348	M125	L2x2 1/2x3/16_HRA	.051	0	9	.002	0	Z	10	7.058	- Code c...		
349	M128	L2x2 1/2x3/16_HRA	.049	0	3	.002	0	Z	10	7.058	- Code c...		
350	M132	L2x2 1/2x3/16_HRA	.048	0	7	.002	0	Z	14	7.058	- Code c...		
351	M135	L2x2 1/2x3/16_HRA	.052	0	9	.002	0	Z	14	7.058	- Code c...		
352	M139	L2x2 1/2x3/16_HRA	.053	0	5	.002	0	Z	12	7.058	- Code c...		
353	M142	L2x2 1/2x3/16_HRA	.055	0	7	.002	0	Z	10	7.058	- Code c...		
354	M146	L2x2 1/2x3/16_HRA	.055	0	3	.002	0	Z	11	7.058	- Code c...		
355	M149	L2x2 1/2x3/16_HRA	.050	0	5	.002	0	Z	11	7.058	- Code c...		
356	M162	L2x2 1/2x3/16_HRA	.145	0	9	.003	0	Z	10	4.22	- Code c...		
357	M165	L2x2 1/2x3/16_HRA	.136	0	3	.003	0	Z	10	4.22	- Code c...		
358	M169	L2x2 1/2x3/16_HRA	.144	0	7	.003	0	Z	14	4.22	- Code c...		
359	M172	L2x2 1/2x3/16_HRA	.132	0	9	.003	0	Z	14	4.22	- Code c...		
360	M176	L2x2 1/2x3/16_HRA	.143	0	5	.003	0	Z	12	4.22	- Code c...		
361	M179	L2x2 1/2x3/16_HRA	.134	0	7	.003	0	Z	10	4.22	- Code c...		
362	M183	L2x2 1/2x3/16_HRA	.142	0	3	.003	0	Z	11	4.22	- Code c...		
363	M186	L2x2 1/2x3/16_HRA	.134	0	5	.003	0	Z	11	4.22	- Code c...		
364	M195	L2x2 1/2x3/16_HRA	.114	0	9	.003	0	Z	10	4.945	- Code c...		
365	M198	L2x2 1/2x3/16_HRA	.114	0	3	.003	0	Z	16	4.945	- Code c...		
366	M202	L2x2 1/2x3/16_HRA	.113	0	7	.003	0	Z	10	4.945	- Code c...		
367	M205	L2x2 1/2x3/16_HRA	.111	0	9	.003	0	Z	10	4.945	- Code c...		
368	M209	L2x2 1/2x3/16_HRA	.113	0	5	.003	0	Z	10	4.945	- Code c...		
369	M212	L2x2 1/2x3/16_HRA	.113	0	7	.003	0	Z	10	4.945	- Code c...		
370	M216	L2x2 1/2x3/16_HRA	.113	0	3	.003	0	Z	10	4.945	- Code c...		
371	M219	L2x2 1/2x3/16_HRA	.112	0	5	.003	0	Z	10	4.945	- Code c...		
372	M232	L2 1/2x2 1/2x1/4	.135	0	9	.003	0	Z	17	7.265	- Code c...		
											25.653		

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 Designer : Irife
 Job Number : 2011265.91

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Envelope AISC 13th ASD Steel Code Checks (Continued)

Member	Shape	Code Check	Loc[ft]	LC	Shear Che...Loc[ft]	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mnyz/o... Mnrz/o... Cb	Egn
373	M235	L2 1/2x2 1/2x1/4	.060	3	.003	0	13	7.265	25.653	- Code c...	
374	M239	L2 1/2x2 1/2x1/4	.137	7	.003	0	10	7.265	25.653	- Code c...	
375	M242	L2 1/2x2 1/2x1/4	.059	9	.003	0	14	7.265	25.653	- Code c...	
376	M246	L2 1/2x2 1/2x1/4	.130	5	.003	0	10	7.265	25.653	- Code c...	
377	M249	L2 1/2x2 1/2x1/4	.060	7	.003	0	12	7.265	25.653	- Code c...	
378	M253	L2 1/2x2 1/2x1/4	.126	3	.003	0	10	7.265	25.653	- Code c...	
379	M256	L2 1/2x2 1/2x1/4	.059	5	.003	0	11	7.265	25.653	- Code c...	
380	M269	L2x2 1/2x3/16_HRA	.085	2	.002	0	12	7.549	17.44	- Code c...	
381	M274	L2x2 1/2x3/16_HRA	.049	11	.002	0	13	7.549	17.44	- Code c...	
382	M280	L2x2 1/2x3/16_HRA	.124	13	.002	0	10	7.549	17.44	- Code c...	
383	M285	L2x2 1/2x3/16_HRA	.047	8	.002	0	12	7.549	17.44	- Code c...	
384	M295	L2x2 1/2x3/16_HRA	.085	6	.002	0	10	7.549	17.44	- Code c...	
385	M300	L2x2 1/2x3/16_HRA	.046	6	.002	0	10	7.549	17.44	- Code c...	
386	M310	L2x2 1/2x3/16_HRA	.081	4	.002	0	14	7.549	17.44	- Code c...	
387	M315	L2x2 1/2x3/16_HRA	.044	4	.002	0	10	7.549	17.44	- Code c...	
388	M338	L2 1/2x2 1/2x3/16	.044	3	.002	0	16	8.266	19.444	- Code c...	
389	M343	L2 1/2x2 1/2x3/16	.043	9	.002	0	17	8.266	19.444	- Code c...	
390	M354	L2 1/2x2 1/2x3/16	.041	18	.002	0	14	8.266	19.444	- Code c...	
391	M359	L2 1/2x2 1/2x3/16	.043	7	.002	0	15	8.266	19.444	- Code c...	
392	M373	L2 1/2x2 1/2x3/16	.039	7	.002	0	12	8.266	19.444	- Code c...	
393	M378	L2 1/2x2 1/2x3/16	.040	5	.002	0	13	8.266	19.444	- Code c...	
394	M392	L2 1/2x2 1/2x3/16	.042	5	.002	0	11	8.266	19.444	- Code c...	
395	M397	L2 1/2x2 1/2x3/16	.040	3	.002	0	11	8.266	19.444	- Code c...	
396	M348	2L3x3x1/4	.854	8	.002	10.132	16	25.238	62.084	4.335 3.315 1...H1-1a	
397	M349	2L3x3x1/4	.859	4	.002	0	10	25.238	62.084	4.335 3.315 1...H1-1a	
398	M367	2L3x3x1/4	.839	6	.002	10.132	10	25.238	62.084	4.335 3.315 1...H1-1a	
399	M368	2L3x3x1/4	.844	11	.002	0	12	25.238	62.084	4.335 3.315 1...H1-1a	
400	M386	2L3x3x1/4	.788	4	.002	10.132	14	25.238	62.084	4.335 3.315 1...H1-1a	
401	M387	2L3x3x1/4	.786	8	.002	0	12	25.238	62.084	4.335 3.315 1...H1-1a	
402	M408	2L3x3x1/4	.831	2	.002	10.132	11	25.238	62.084	4.335 3.315 1...H1-1a	
403	M409	2L3x3x1/4	.833	6	.002	10.132	14	25.238	62.084	4.335 3.315 1...H1-1a	
404	M347	2L3 1/2x2 1/2x1/4x...	.239	6	.006	0	17	44.368	62.084	4.364 2.708 2...H1-1a	
405	M363	2L3 1/2x2 1/2x1/4x...	.238	4	.006	0	15	44.368	62.084	4.364 2.708 2...H1-1a	
406	M382	2L3 1/2x2 1/2x1/4x...	.240	2	.005	0	13	44.368	62.084	4.364 2.708 2...H1-1a	
407	M401	2L3 1/2x2 1/2x1/4x...	.238	0	.006	0	11	44.368	62.084	4.364 2.708 2...H1-1a	
408	M420	L3x3x1/4	.064	12	.001	0	11	5.484	31.042	- Code c...	
409	M421	L3x3x1/4	.064	18	.001	9.801	14	5.484	31.042	- Code c...	
410	M422	L3x3x1/4	.064	18	.001	0	16	5.484	31.042	- Code c...	
411	M423	L3x3x1/4	.064	16	.001	9.801	16	5.484	31.042	- Code c...	
412	M424	L3x3x1/4	.064	12	.001	9.801	15	5.484	31.042	- Code c...	
413	M425	L3x3x1/4	.064	14	.001	0	11	5.484	31.042	- Code c...	

Company : GPD Group
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Envelope AISC 13th ASD Steel Code Checks (Continued)

Member	Shape	Code Check	Loc[ft]	LC	Shear.Che.	Loc[ft]	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mnvw/b...	Mnzz/b...	Cb	Egn
414	M426	L3x3x1/4	.064	0	14	.001	9.801	Y	10	5.484	31.042	- Code c...		
415	M427	L3x3x1/4	.064	0	16	.001	0	Y	11	5.484	31.042	- Code c...		
416	M420A	L3x3x1/4	.006	8.356	12	.000	0	Y	16	7.544	31.042	- Code c...		
417	M421A	L3x3x1/4	.006	8.356	18	.000	0	Y	12	7.544	31.042	- Code c...		
418	M422A	L3x3x1/4	.006	8.356	16	.000	0	Y	17	7.544	31.042	- Code c...		
419	M423A	L3x3x1/4	.006	8.356	15	.000	0	Y	17	7.544	31.042	- Code c...		
420	M17	L2x2 1/2x1/4	.081	6.554	7	.004	6.554	Z	16	2.222	22.85	- Code c...		
421	M18	L2x2 1/2x1/4	.092	0	2	.004	6.554	Z	14	2.222	22.85	- Code c...		
422	M19	L2x2 1/2x1/4	.076	0	9	.004	6.554	Z	12	2.222	22.85	- Code c...		
423	M20	L2x2 1/2x1/4	.055	6.554	2	.004	6.554	Z	18	2.222	22.85	- Code c...		
424	M37	C6X10.5	.101	7.481	13	.003	7.481	Y	17	4.323	66.611	1.622	8.807	1 H1-1b
425	M38	C6X10.5	.097	7.481	11	.003	7.481	Y	16	4.323	66.611	1.622	8.807	1 H1-1b
426	M39	C6X10.5	.093	7.481	13	.003	7.481	Y	18	4.323	66.611	1.622	8.807	1 H1-1b
427	M40	C6X10.5	.099	7.481	11	.003	7.481	Y	18	4.323	66.611	1.622	8.807	1 H1-1b
428	M62	2L2 1/2x3x1/4x3/8	.098	8.407	12	.005	8.407	Y	18	30.727	56.695	4.967	1.454	1 H1-1b
429	M63	2L2 1/2x3x1/4x3/8	.099	8.407	15	.005	8.407	Y	16	30.727	56.695	4.967	1.454	1 H1-1b
430	M64	2L2 1/2x3x1/4x3/8	.099	8.407	17	.005	8.407	Y	14	30.727	56.695	4.967	1.454	1 H1-1b
431	M65	2L2 1/2x3x1/4x3/8	.098	8.407	12	.005	8.407	Y	12	30.727	56.695	4.967	1.454	1 H1-1b
432	M82	2L2 1/2x3x1/4x3/8	.123	9.333	13	.005	9.333	Y	18	27.692	56.695	4.967	1.454	1 H1-1b
433	M83	2L2 1/2x3x1/4x3/8	.122	9.333	16	.005	9.333	Y	16	27.692	56.695	4.967	1.454	1 H1-1b
434	M84	2L2 1/2x3x1/4x3/8	.121	9.333	16	.005	9.333	Y	14	27.692	56.695	4.967	1.454	1 H1-1b
435	M85	2L2 1/2x3x1/4x3/8	.123	9.333	14	.005	9.333	Y	12	27.692	56.695	4.967	1.454	1 H1-1b
436	M5	MC18X58	.015	6.125	11	.003	12.25	Y	13	286.692	368.623	15.327	161.704	1 H1-1b
437	M6	MC18X58	.015	6.125	17	.003	12.25	Y	11	286.692	368.623	15.327	161.704	1 H1-1b
438	M7	MC18X58	.015	6.125	15	.003	12.25	Y	17	286.692	368.623	15.327	161.704	1 H1-1b
439	M8	MC18X58	.015	6.125	13	.003	12.25	Y	15	286.692	368.623	15.327	161.704	1 H1-1b
440	M25	2L3 1/2x3 1/2x1/4x...	.107	7.048	15	.005	14.096	Y	10	51.423	72.862	6.64	4.56	1 H1-1b
441	M26	2L3 1/2x3 1/2x1/4x...	.106	7.048	13	.005	14.096	Y	10	51.423	72.862	6.64	4.56	1 H1-1b
442	M27	2L3 1/2x3 1/2x1/4x...	.107	7.048	11	.005	14.096	Y	10	51.423	72.862	6.64	4.56	1 H1-1b
443	M28	2L3 1/2x3 1/2x1/4x...	.107	7.048	17	.005	14.096	Y	10	51.423	72.862	6.64	4.56	1 H1-1b
444	M45	2L3 1/2x3x1/4x3/8	.271	7.971	15	.009	15.942	Y	11	46.158	67.473	5.014	4.463	1 H1-1b
445	M46	2L3 1/2x3x1/4x3/8	.271	7.971	13	.009	15.942	Y	18	46.158	67.473	5.014	4.463	1 H1-1b
446	M47	2L3 1/2x3x1/4x3/8	.271	7.971	11	.009	15.942	Y	11	46.158	67.473	5.014	4.463	1 H1-1b
447	M48	2L3 1/2x3x1/4x3/8	.271	7.971	17	.009	15.942	Y	18	46.158	67.473	5.014	4.463	1 H1-1b
448	M70	2L3 1/2x3x1/4x3/8	.170	8.894	15	.006	17.788	Y	10	46.492	67.473	5.014	4.463	1 H1-1b
449	M71	2L3 1/2x3x1/4x3/8	.169	8.894	13	.006	17.788	Y	10	46.492	67.473	5.014	4.463	1 H1-1b
450	M72	2L3 1/2x3x1/4x3/8	.169	8.894	11	.006	17.788	Y	10	46.492	67.473	5.014	4.463	1 H1-1b
451	M73	2L3 1/2x3x1/4x3/8	.169	8.894	17	.006	17.788	Y	10	46.492	67.473	5.014	4.463	1 H1-1b

ASD Bolt Checks

V_r/Ω (3/4" A307 - Assumed)
 4.42 kips/bolt
 V_r/Ω (7/8" A307 - Assumed)
 6.01 kips/bolt

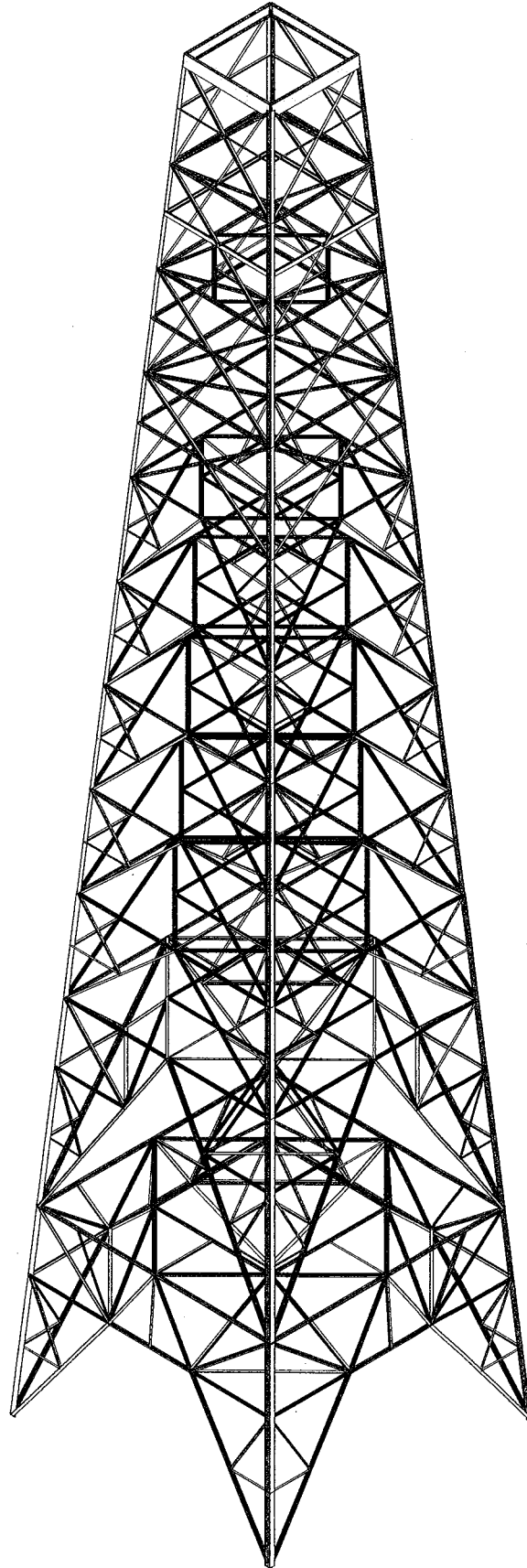
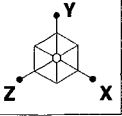
L. Rife
 Pg. 1 of 1
 9/8/2011

Section	Leg Bolts	Shear Planes	r_p/Ω	r_{max}	% Capacity	Diagonal Bolts	Shear Planes	r_p/Ω	r_{max}	% Capacity	Horizontal Bolts	Shear Planes	r_p/Ω	r_{max}	% Capacity
T9	(36)	(2)	318.24	164.7	38.8%	(5)	(2)	44.2	21.8	36.9%	(3)	(2)	26.5	15.3	43.2%
T8	(32)	(2)	282.88	133.7	35.4%	(3)	(2)	26.5	21.1	59.6%	(3)	(2)	26.5	10.1	28.7%
T7	(28)	(2)	247.52	117.5	35.6%	(3)	(2)	26.5	13.9	39.3%	(2)	(2)	17.7	10.4	44.2%
T6	(28)	(2)	247.52	101.1	30.6%	(2)	(2)	17.7	13.4	56.9%	(2)	(2)	17.7	9.8	41.5%
T5	(20)	(2)	176.8	68.1	28.9%	(2)	(2)	17.7	12.2	51.8%	(2)	(2)	17.7	8.2	34.9%
T4	(16)	(2)	141.44	44.1	23.4%	(3)	(1)	13.3	8.7	49.3%	(2)	(2)	17.7	2.2	9.5%
T3	(16)	(2)	141.44	18.4	9.7%	(3)	(1)	13.3	7.0	39.4%	(2)	(2)	17.7	1.7	7.4%
T2	(16)	(2)	141.44	18.4	9.7%	(3)	(1)	13.3	6.0	33.7%	(2)	(2)	17.7	1.3	5.7%
T1	(16)	(2)	141.44	18.4	9.7%	(3)	(1)	13.3	3.5	20.0%	(2)	(1)	8.84	0.2	1.4%

Section	Anchor Rods	r_p/Ω	r_{max}	% Capacity
T9	(4)	74.22	41.18	41.6%

APPENDIX C

Tower Elevation Drawing



Solution: Envelope

GPD Group

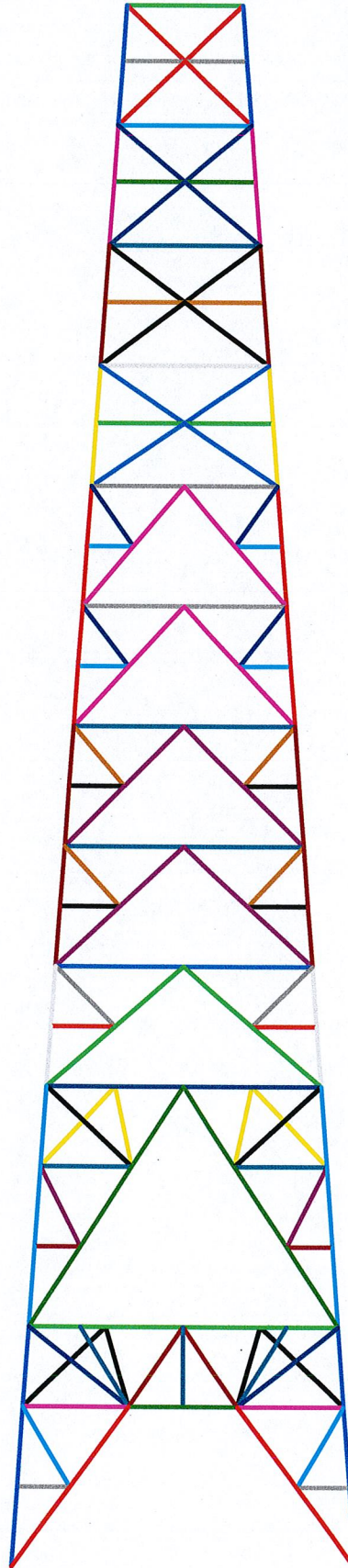
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SNET025.r3d



- Section Sets
- TWR_LEG_T1
 - TWR_TOP_GIRT_T1
 - TWR_DIAG_T1
 - TWR_STEP_T1
 - TWR_LEG_T2
 - TWR_TOP_GIRT_T2
 - TWR_DIAG_T2
 - TWR_STEP_T2
 - TWR_LEG_T3
 - TWR_TOP_GIRT_T3
 - TWR_INNER_SUPP_T3
 - TWR_DIAG_T3
 - TWR_STEP_T3
 - TWR_LEG_T4
 - TWR_TOP_GIRT_T4
 - TWR_DIAG_T4
 - TWR_STEP_T4
 - TWR_LEG_T5
 - TWR_HORZ_T5
 - TWR_DIAG_T5
 - TWR_RED_HORZ_T5
 - TWR_RED_DIAG_T5
 - TWR_INNER_SUPP_T5
 - TWR_LEG_T6
 - TWR_HORZ_T6
 - TWR_DIAG_T6
 - TWR_RED_HORZ_T6
 - TWR_RED_DIAG_T6
 - TWR_INNER_SUPP_T6
 - TWR_LEG_T7
 - TWR_HORZ_T7
 - TWR_DIAG_T7
 - TWR_RED_HORZ_T7
 - TWR_RED_DIAG_T7
 - TWR_INNER_SUPP_T7
 - TWR_LEG_T8
 - TWR_HORZ_T8
 - TWR_DIAG_T8
 - TWR_RED_HORZ_T8
 - TWR_RED_HORZ_2_T8
 - TWR_RED_DIAG_T8
 - TWR_RED_DIAG_2_T8
 - TWR_RED_HIP_2_T8
 - TWR_RED_HIPDIA_T8
 - TWR_INNER_SUPP_T8
 - TWR_LEG_T9
 - TWR_HORZ_T9
 - TWR_DIAG_T9
 - TWR_RED_HORZ_T9
 - TWR_RED_HORZ_2_T9
 - TWR_RED_DIAG_T9
 - TWR_RED_DIAG_2_T9
 - TWR_RED_SUBHOR_T9
 - TWR_RED_SUBDIA_T9
 - TWR_RED_VERT_T9
 - TWR_RED_HIP_2_T9
 - TWR_INNER_SUPP_T9
 - Corner Brace 1_T9
 - Inner Square_T9
 - Inner Square_T8
 - Corner Brace_T8
 - Mid Girt_T8
 - Inner Square_T7
 - Corner Brace_T7
 - Mid Girt_T7
 - Inner Square_T6
 - Corner Brace_T6
 - Inner Square_T5
 - Corner Brace_T5
 - Inner Square_T4
 - Corner Brace_T4

Solution: Envelope

GPD Group

Irife

2011265.91

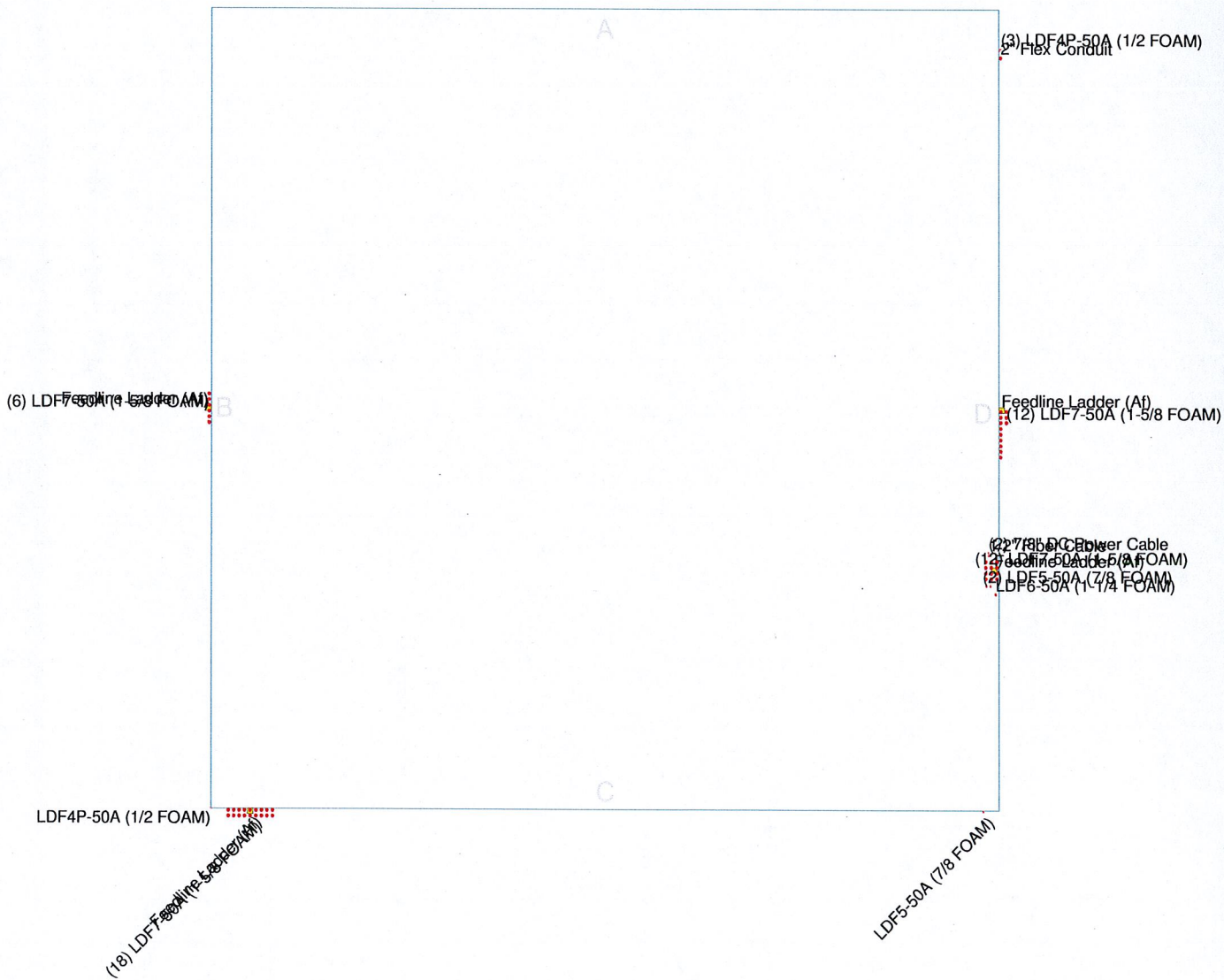
SNET025 SHELTON

Sept 8, 2011 at 2:59 PM

SNET025.r3d

Feedline Plan

Round
 Flat
 App In Face
 App Out Face



 GPD Group Consulting Engineers	520 South Main St. Akron, OH 44311		Job: SNET025 SHELTON Project: 2011265.91	
	Phone: (330) 572-2100		Client: AT&T Mobility	Drawn by: Irife
	FAX: (330) 572-2102		Code: TIA/EIA-222-F	Date: 09/08/11
			Path: N:\2011\2011265\91\VISATower\SNET025.dwg	App'd: _____
				Scale: NTS Dwg No. E-7

APPENDIX G

Foundation Analysis



Mat Foundation Analysis
SNET025 SHELTON
2011265.91

General Info	
Code	TIA/EIA-222-F (ASD)
Bearing On	Soil
Foundation Type	Mono Pad
Pier Type	Square
Reinforcing Known	No
Max Capacity	1

Tower Reactions	
Moment, M	k-ft
Axial, P	198.631 k
Shear, V	38.717 k

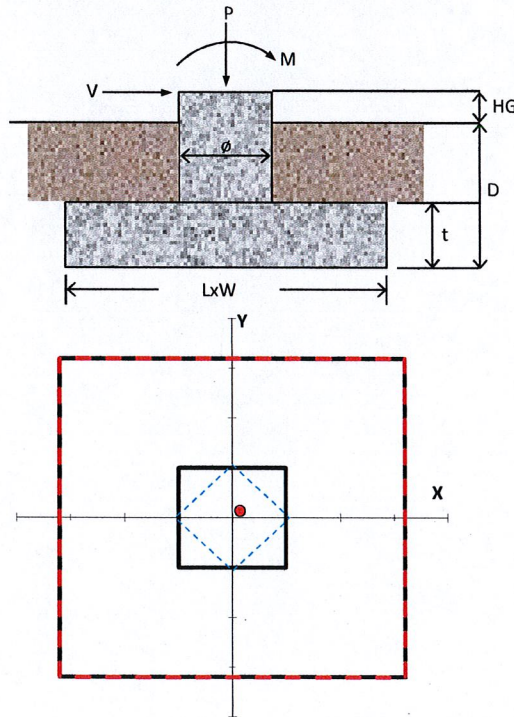
Pad & Pier Geometry	
Pier Width, ϕ	5 ft
Pad Length, L	16 ft
Pad Width, W	16 ft
Pad Thickness, t	2 ft
Depth, D	8 ft
Height Above Grade, HG	1 ft

Pad & Pier Reinforcing	
Rebar Fy	ksi
Concrete Fc'	ksi
Clear Cover	in
Reinforced Top & Bottom?	
Pad Reinforcing Size	
Pad Quantity Per Layer	
Pier Rebar Size	
Pier Quantity of Rebar	

Soil Properties	
Soil Type	Granular
Soil Unit Weight	120 pcf
Angle of Friction, ϕ	34 °
Bearing Type	Net
Ultimate Bearing	12 ksf
Water Table Depth	8 ft
Frost Depth	3.33 ft

Bearing Summary			Load Case
Qxmax	1.83	ksf	1D+1W
Qymax	1.83	ksf	1D+1W
Qmax @ 45°	2.31	ksf	1D+1W
Q _{(all) Gross}	6.48	ksf	
Controlling Capacity	35.7%	Pass	

Overturning Summary (Required FS=1.5)			Load Case
FS(ot)x	74880.16	≥1.5	1D+1W
FS(ot)y	74880.16	≥1.5	1D+1W
Controlling Capacity	0.0%	Pass	





GPD GROUP®

Glaus, Pyle, Schomer, Burns & DeHaven, Inc.

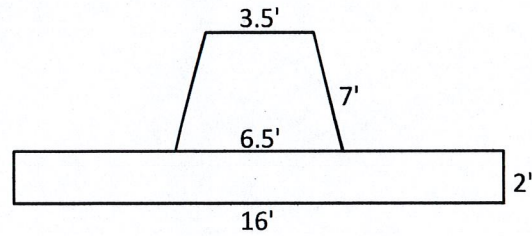
Job No. 2011265.91
Sheet No. 1 of 1

Calculated By: LR Date: 9/8/11
Checked By: AW Date: 9/8/11

Pad and Pier Uplift Analysis

$$W_c = 92.81 \text{ kips}$$

$$W_s = 278.0 \text{ kips}$$

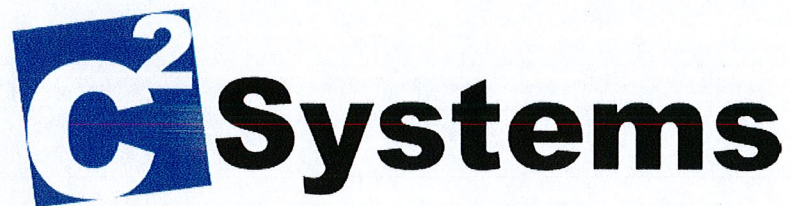


$$W_c/1.25 + W_s/2.0 = 213.2 \text{ kips}$$

$$W_c/1.5 + W_s/1.5 = 247.2 \text{ kips}$$

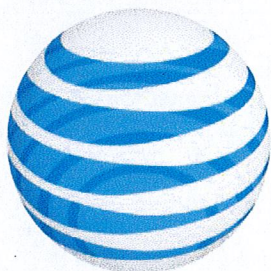
$$\text{Max Uplift} = 135.0 \text{ kips}$$

Rating = 63.3% OK



C Squared Systems, LLC
65 Dartmouth Dr, Unit A3
Auburn, NH 03032
Phone: (603) 644-2800
support@csquaredsystems.com

Calculated Radio Frequency Emissions



at&t

CT2113

219 Nell's Rock Road, Shelton, CT 06484

October 25, 2011

Table of Contents

1. Introduction.....	1
2. FCC Guidelines for Evaluating RF Radiation Exposure Limits.....	1
3. RF Exposure Prediction Methods.....	2
4. Calculation Results.....	3
5. Conclusion.....	4
6. Statement of Certification.....	4
Attachment A: References.....	5
Attachment B: FCC Limits for Maximum Permissible Exposure (MPE).....	6
Attachment C: AT&T's Antenna Model Data Sheets and Electrical Patterns.....	8

List of Tables

Table 1: Carrier Information.....	3
Table 2: FCC Limits for Maximum Permissible Exposure (MPE).....	6

List of Figures

Figure 1: Graph of FCC Limits for Maximum Permissible Exposure (MPE).....	7
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1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed modifications to the existing AT&T antenna arrays mounted on the existing lattice tower located at 219 Nell's Rock Road in Shelton, CT. Sprint, Verizon, T-Mobile, Clearwire, Pagenet, Arrow Bus, and Metricom all have antennas mounted on the tower. The coordinates of the tower are 41° 18' 15.09" N, -73° 7' 5.89" W.

AT&T is proposing the following modifications:

- 1) Install three dual-band (700 MHz/2100 MHz) LTE/AWS antennas (one per sector).

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

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

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm^2). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment B of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure, and they must be able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals. Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

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

3. RF Exposure Prediction Methods

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

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

Where:

EIRP = Effective Isotropic Radiated Power

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

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

Ground reflection factor of 1.6

Off Beam Loss is determined by the selected antenna pattern

These calculations assume that the antennas are operating at 100 percent capacity and power, and that all channels are transmitting simultaneously. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. The calculations assume even terrain in the area of study and do not take into account actual terrain elevations which could attenuate the signal. As a result, the predicted signal levels reported below are much higher than the actual signal levels will be from the finished modifications.

4. Calculation Results

Table 1 below outlines the power density information for the site. All information for Sprint, Verizon, T-Mobile, Clearwire, Pagenet, Arrow Bus, and Metricom comes directly from the current CSC database. Because the proposed AT&T antennas are directional in nature, the majority of the RF power is focused out towards the horizon. As a result, there will be less RF power directed below the antennas relative to the horizon, and consequently lower power density levels around the base of the tower. Please refer to Attachment C for the vertical pattern of the proposed AT&T antennas. The calculated results for AT&T in Table 1 include a nominal 10 dB off-beam pattern loss to account for the lower relative gain below the antennas.

Carrier	Antenna Height (Feet)	Operating Frequency (MHz)	Number of Trans.	ERP Per Transmitter (Watts)	Power Density (mw/cm ²)	Limit	%MPE
Verizon	122	869	9	383	0.0833	0.5793	14.37%
Verizon	122	1970	7	446	0.0754	1.0000	7.54%
Verizon	122	757	1	787	0.0190	0.5047	3.77%
Sprint	155	1962.5			0.0201	1.0000	2.01%
Clearwire	114	2496	2	153	0.0085	1.0000	0.85%
Clearwire	119	23000	1	211	0.0054	1.0000	0.54%
Pagenet	181	931			0.0170	0.6207	2.74%
Arrow Bus	160				0.0038	0.2000	1.90%
T-Mobile GSM	135	1945	8	129	0.0204	1.0000	2.04%
T-Mobile UMTS	135	2100	2	516	0.0204	1.0000	2.04%
Metricom	171.5				0.0002	1.0000	0.02%
AT&T LTE	162	734	1	500	0.0069	0.4893	0.14%
AT&T UMTS	162	880	1	500	0.0069	0.5867	0.12%
AT&T UMTS	162	1900	1	500	0.0069	1.0000	0.07%
AT&T GSM	162	880	3	296	0.0122	0.5867	0.21%
AT&T AWS	162	2100	2	978	0.0268	1.0000	0.27%
						Total	38.61%

Table 1: Carrier Information^{1 2}

¹ Calculated values for AT&T include a -10 dB off-beam loss factor. Antenna specifics for Sprint, Verizon, T-Mobile, Clearwire, Pagenet, Arrow Bus, and Metricom were unavailable and therefore do not include any off-beam loss factor.

² Blank spaces indicate where information was unavailable from the CSC database.

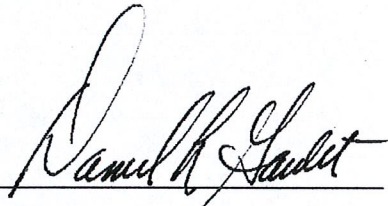
5. Conclusion

The above analysis verifies that emissions from the existing site will be below the maximum power density levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Even when using conservative methods, the cumulative power density from the proposed and existing transmit antennas at the existing facility is below the limits for the general public. The highest expected percent of Maximum Permissible Exposure at the base of the tower is 38.61% of the FCC limit.

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

6. Statement of Certification

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



Daniel L. Goulet
C Squared Systems, LLC

October 25, 2011

Date

Attachment A: References

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

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

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

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

(A) Limits for Occupational/Controlled Exposure³

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

(B) Limits for General Population/Uncontrolled Exposure⁴

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz * Plane-wave equivalent power density

Table 2: FCC Limits for Maximum Permissible Exposure (MPE)

³ Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure

⁴ General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure

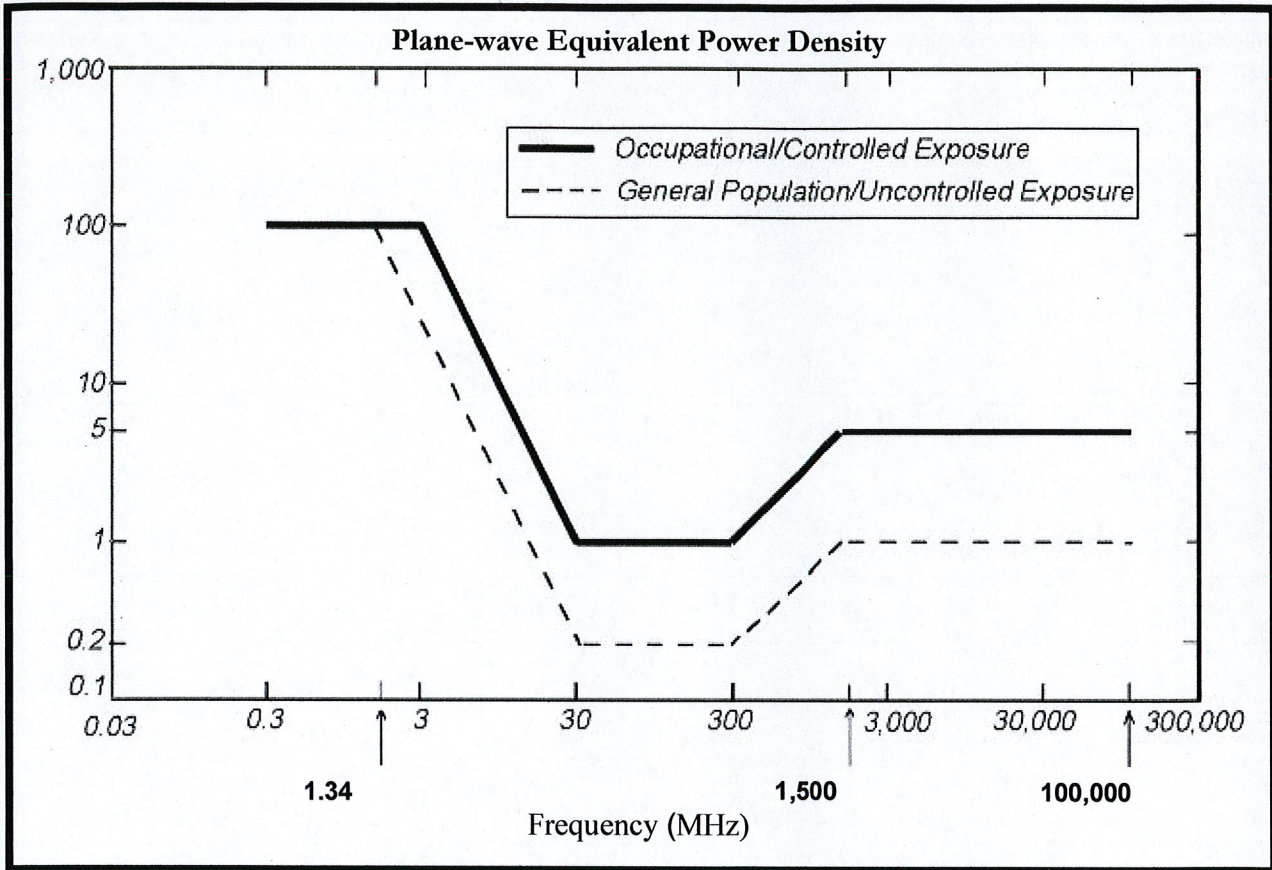
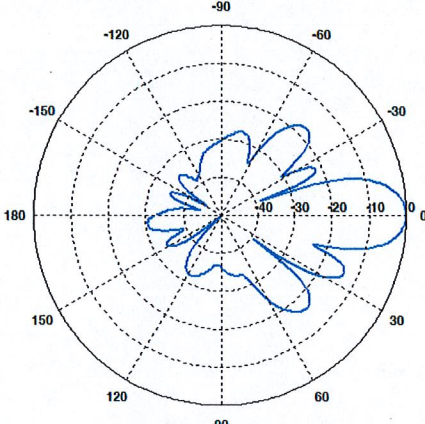
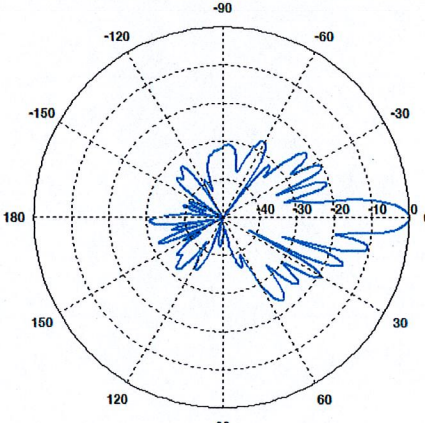
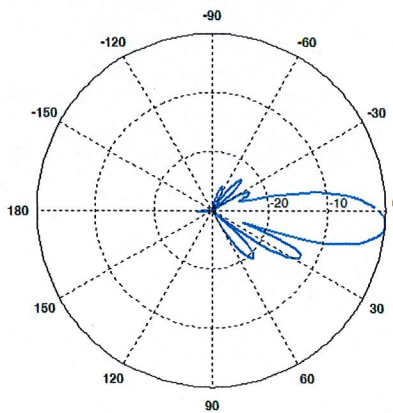


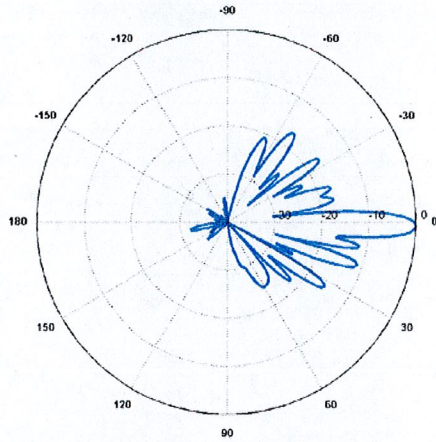
Figure 1: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: AT&T's Antenna Model Data Sheets and Electrical Patterns

<p>850 MHz</p> <p>Manufacturer: Powerwave Model #: 7770 Frequency Band: 824-896 MHz Gain: 11.4 dBd Vertical Beamwidth: 15 deg Horizontal Beamwidth: 85 deg Polarization: Dual Linear \pm 45 deg Size L x W x D: 55.4" x 11" x 4.9"</p>	
<p>1900 MHz</p> <p>Manufacturer: Powerwave Model #: 7770 Frequency Band: 1850-1990 MHz Gain: 13.4 dBd Vertical Beamwidth: 7 deg Horizontal Beamwidth: 90 deg Polarization: Dual Linear \pm 45 deg Size L x W x D: 55.4" x 11" x 4.9"</p>	
<p>700 MHz</p> <p>Manufacturer: Powerwave Model #: P65-16-XLH-RR Frequency Band: 698-894 MHz Gain: 12.7 dBd Vertical Beamwidth: 14.7 deg Horizontal Beamwidth: 73 deg Polarization: Dual Linear \pm 45 deg Size L x W x D: 72" x 12" x 6"</p>	

2100 MHz

Manufacturer: Powerwave
Model #: P65-16-XLH-RR
Frequency Band: 1710-2170 MHz
Gain: 15.4 dBd
Vertical Beamwidth: 5.7 deg
Horizontal Beamwidth: 52 deg
Polarization: Dual Linear ± 45 deg
Size L x W x D: 72" x 12" x 6"





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

December 8, 2011

The Honorable Mark A. Lauretti
Mayor
City of Shelton
54 Hill Street
P. O. Box 364
Shelton, CT 06484

RE: **EM-CING-126-111207** - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 219 Nells Rock Road, Shelton, Connecticut.

Dear Mayor Lauretti:

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

If you have any questions or comments regarding this proposal, please call me or inform the Council by December 22, 2011.

Thank you for your cooperation and consideration.

Very truly yours,

Linda Roberts
Executive Director

LR/jbw

Enclosure: Notice of Intent

c: Richard Schultz, Planning Administrator, City of Shelton