December 2, 2016

Melanie A. Bachman
Executive Director
Connecticut Siting Council
10 Franklin Street
New Britain, CT 06051

Regarding:	Notice of Exempt Modification – RRU Swap & Mount Replacement
Property Address:	6 Progress Avenue, Seymour, CT 06483
AT&T Site:	CT5633 – Seymour East

Dear Ms. Bachman:

AT&T currently maintains a wireless telecommunications facility on an existing 280-foot self-support tower at the above-referenced address, latitude 41.3914919, longitude -73.0532989. Said self-support is owned by EMAC Communications, LLC. The existing equipment shelter is 20' x 10' totaling 200 square feet.

AT&T desires to modify its existing telecommunications facility by swapping three (3) three remote-radio heads ("RRHs") and replacing the existing mount with a heavy duty sector frame mount. The centerline height of said antennas is and will remain at 160 feet. The proposed installation requires modification to the tower, as indicated on the modification drawings attached.

Please accept this application as notification pursuant to R.C.S.A. §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16-50j-72 (b)(2). In accordance with R.C.S.A. §16-50j-73, a copy of this letter is being sent to W. Kurt Miller, First Selectman for the Town of Seymour. A copy of this letter is also being sent to EMAC Communications, LLC, the tower and landowner.

The planned modifications to AT&T's facility fall squarely within those activities explicitly provided for in R.C.S.A. §16-50j-72 (b)(2). Specifically:

1. The planned modification will not result in an increase in the height of the existing structure. The antennas to be swapped will be installed at the existing height of 160 feet on the 280-foot self-support tower.

2. The proposed modifications will not involve any changes to ground-mounted equipment, and therefore will not require an extension of the site boundary.

3. The proposed modification will not increase the noise level at the facility by six decibel or more, or to levels that exceed state and local criteria.

4. The operation of the modified facility will not increase radio frequency (RF) emissions at the facility to a level at or above Federal Communications Commission (FCC) safety standard. An RF emissions calculation (attached) for AT&T's modified facility is herein provided.

5. The proposed modifications will not case a change or alteration in the physical or environmental characteristics of the site.

6. The self-support tower and its foundation can support AT&T's proposed modifications (please see attached structural analysis completed by PiRod Engineering dated October 24, 2016 and modification drawings dated November 18, 2016).

For the foregoing reasons, AT&T respectfully requests that the proposed antenna swap and remote radio head installation be allowed within the exempt modifications under R.C.S.A. §16-50j-72 (b)(2).

Sincerely,

Sarah Snell
Site Acquisition Specialist

cc: W. Kurt Miller, First Selectman for the Town of Seymour
EMAC Communications, LLC, the tower and landowner

Sarah Snell • Empire Telecom USA, LLC • 16 Esquire Road Billerica, MA 01862 • T: 978-608-8146 •
E: ssnell@empiretelecomm.com

Town of Seymour, CT

Property Listing Report

Map Block Lot **1-05-12N-0** Account **015124**

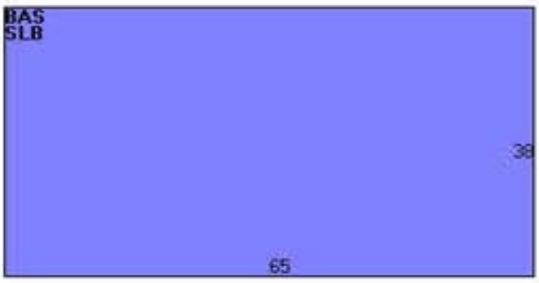
Property Information

Property Location	6 PROGRESS AVE
Owner	EDMAC LLC
Co-Owner	
Mailing Address	2702 FOREST VIEW LANE KISSIMMEE FL 34744
Land Use	4330 RAD/TV TR
Land Class	I
Zoning Code	GI-2
Census Tract	01301

Neighborhood	D
Acreage	2.15
Utilities	
Lot Setting/Desc	Industrial Level
Additional Info	

Photo

Sketch



Primary Construction Details

Year Built	2001
Stories	1
Building Style	Com Garage
Building Use	Comm/Ind
Building Condition	Average
Floors	Precast Concr
Total Rooms	

Bedrooms	
Full Bathrooms	0
Half Bathrooms	
Bath Style	
Kitchen Style	
Roof Style	Flat
Roof Cover	Rolled Compos

Exterior Walls	Concr/Cinder
Interior Walls	Minim/Masonry
Heating Type	Hot Air-no Duc
Heating Fuel	Gas
AC Type	None
Gross Bldg Area	4940
Total Living Area	2470

Report Created On **12/2/2016**

Town of Seymour, CT

Property Listing Report | Map Block Lot **1-05-12N-0** | Account **015124**

Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	52000	36400
Extras	0	0
Improvements	59000	41300
Outbuildings	7000	4900
Land	157900	110530
Total	216900	151830

Outbuilding and Extra Items

Type	Description
Paving Asph.	7000 S.F.
Fence 8 Ft	215 L.F.

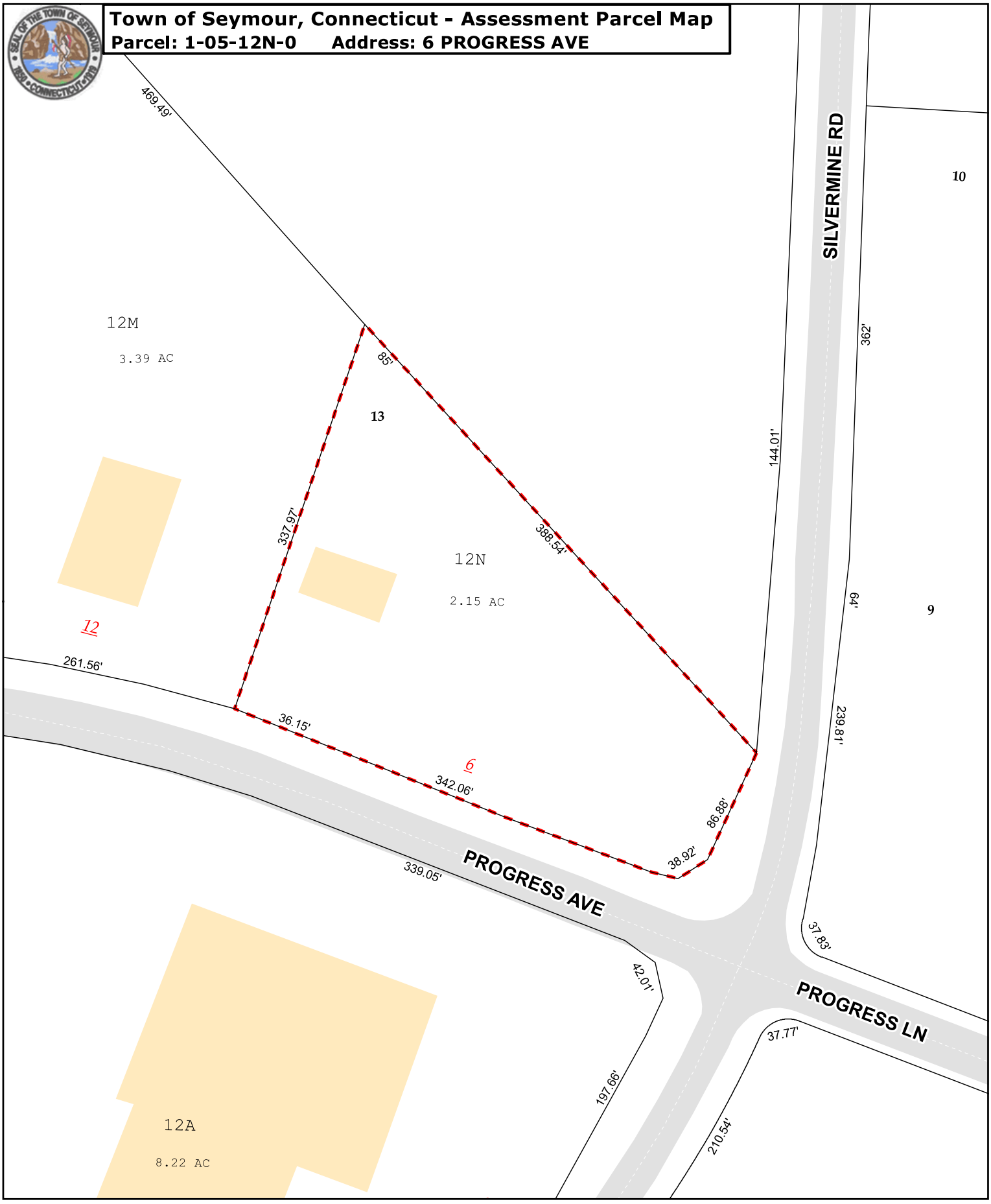
Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
First Floor	2470	2470
Slab	2470	0
Total Area	4940	2470

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
EDMAC LLC	00285/0679	9/25/2001	
MACCONNIE EDWARD H	00269/0272	6/28/2000	
EMAC COMMUNICATIONS CO INC	00266/0050	2/11/2000	110000
HUBBELL REALTY DEVELOPMENT	00150/0777		0

Report Created On **12/2/2016**


Town of Seymour, Connecticut - Assessment Parcel Map
Parcel: 1-05-12N-0 Address: 6 PROGRESS AVE
469.49'
12M
3.39 AC
85'
13
337.97'
388.54'
12N
2.15 AC
144.01'
SILVERMINE RD
362'
64'
239.81'
10
9
12
261.56'
36.15'
6
342.06'
86.88'
38.92'
339.05'
PROGRESS AVE
37.83'
PROGRESS LN
42.01'
197.66'
37.77'
210.54'
12A
8.22 AC
N
Approximate Scale: 1 inch = 100 feet
0 60 120 180
Feet
Map Produced:
July 2016
Disclaimer:
This map is for informational purposes only.
All information is subject to verification by any user.
The Town of Seymour and its mapping contractors
assume no legal responsibility for the
information contained herein.

PROJECT INFORMATION

SCOPE OF WORK:	UNMANNED COMMUNICATIONS FACILITY MODIFICATIONS INCLUDING THE REPLACEMENT OF EXISTING THREE RRUS-11 RADIOS WITH NEW ERICSSON RRUS-32 B2, REUSING EXISTING SURGE ARRESTOR, FIBER & DC CABLES.
SITE NUMBER:	CT5633
SITE NAME:	SEYMOUR - EAST
SITE ADDRESS:	6 PROGRESS AVE. SEYMOUR, CT 06483
TOWER OWNER:	EMAC COMMUNICATIONS 6 PROGRESS AVE. SEYMOUR, CT 06483
APPLICANT:	AT&T MOBILITY 550 COCHITUATE RD SUITES 13 & 14 FRAMINGHAM, MA 01701
CONTACT:	TEL 866-915-5600
COORDINATES	LAT. N41°23'29.37" LONG. W73°03'11.87"
GROUND LEVEL:	±482'
DEED REFERENCE:	N/A
SITE PARCEL NO.:	N/A
CURRENT ZONING:	N/A
HORIZONTAL DATUM:	(NAD) 1983

SITE NUMBER: CT5633
SITE NAME: SEAMOUR EAST
PROJECT: LTE BWE EXPANSION

DRAWING INDEX

ONE CALL 1-800-922-4455

AT LEAST 2 WORKING DAYS PRIOR TO DIGGING, THE CONTRACTOR IS REQUIRED TO CONNECTICUT ONE CALL SYSTEM AT 1-800-922-4455

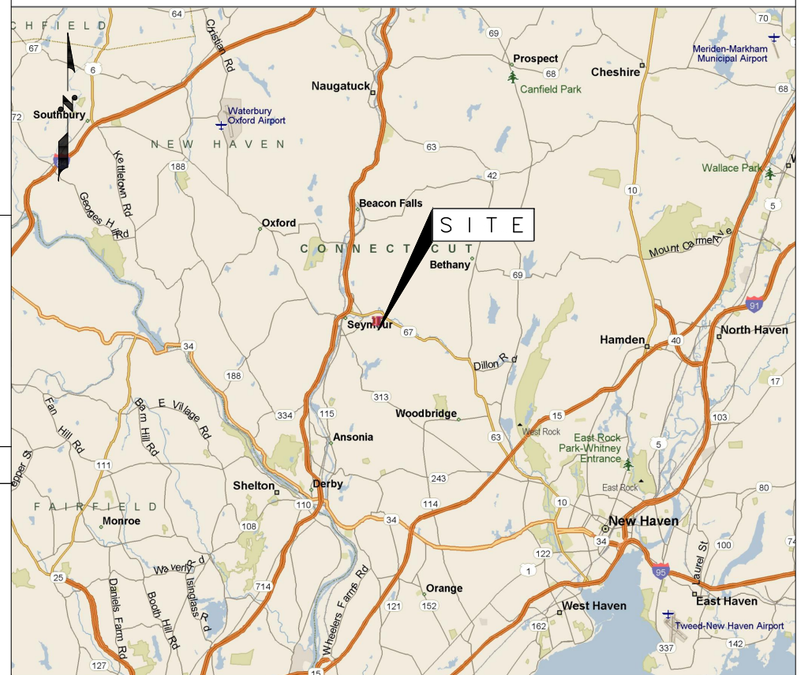
CONTACT & UTILITY INFORMATION

CONTACT	CONTACT	COMPANY	PHONE NO.
ENGINEERING:	MIGUEL NOBRE	VRG	(508) 981-9590
SITE ACQUISITION:	DAVID COOPER	EMPIRE	(484) 683-5349
CONSTRUCTION:	BILL DANIELS	EMPIRE	(484) 683-5349
UTILITIES			
POWER:	WORK REQUEST GROUP	NATIONAL GRID	(800) 375-7405
TELCO:	.	VERIZON	(800) 941-9900

LOCATION MAP

DIRECTIONS: FROM ROCKY HILL, TAKE I-91 SOUTH TOWARDS NEW HAVEN. TAKE EXIT 17(CT-15 SOUTH). TAKE CT-15 EXIT 59. PROCEED NORTH ON RT-63 (AMITY RD). TURN LEFT ONTO SEYMOUR RD. (RT-67). TURN LEFT ONTO COGWHEEL LANE. TURN RIGHT ONTO PROGRESS AVE. SITE WILL BE ON RIGHT.

SITE ACCESS: LOCKED GATE



APPLICABLE BUILDING CODES AND STANDARDS

SUBCONTRACTOR'S WORK SHALL COMPLY WITH PROJECT STANDARDS AND SPECIFICATIONS. SUBCONTRACTOR WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

BUILDING CODE:
CONNECTICUT STATE BUILDING CODE

ELECTRICAL CODE:
NATIONAL ELECTRICAL CODE LATEST EDITION
SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS.
AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION
AMERICAN NATIONAL STANDARDS INSTITUTE/TELECOMMUNICATIONS INDUSTRY ASSOCIATION (ANSI/TIA) 222-F OR G AS APPLICABLE, STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES:
TIA 607, COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS

INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM
IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT

IEEE C62.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE")

TELCORDIA GR-1503, COAXIAL CABLE CONNECTIONS

ANSI T1.311, FOR TELECOM - DC POWER SYSTEMS - TELECOM, ENVIRONMENTAL PROTECTION

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

VRG
VERTICAL RESOURCES GRP.
489 Washington Street
Auburn, MA 01501
Tel. (508) 981- 9590
Fax (508) 519 - 8939
mnobre@verticalresourcesgrp.com

EMPIRE telecom
EMPIRE TELECOM USA, LLC
16 ESQUIRE ROAD
BILLERICA, MA 01821

SITE NUMBER: CT5633
SITE NAME: SEYMOUR EAST
6 PROGRESS AVE.
SEYMOUR, CT 06483
NEW HAVEN COUNTY

at&t Mobility
550 COCHITUATE RD
SUITES 13 & 14
FRAMINGHAM, MA 01701

NO.	DATE	REVISION	BY	CHK	APP'D
1	10/11/16	FOR CONSTRUCTION	G.A.M.		
0	09/30/16	FOR REVIEW	G.A.M.		

SCALE | DESIGNED BY: M.N. | DRAWN BY: G.A.M.

AT&T MOBILITY

TITLE SHEET

JOB NUMBER	DRAWING NUMBER	REV.
50-145	01	1

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
   CONTRACTOR – PRIME CONTRACTOR
   SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER – AT&T WIRELESS
   OEM – ORIGINAL EQUIPMENT MANUFACTURER

2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.

3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.

ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

4. DRAWINGS PROVIDED HERE ARE NOT TO SCALE UNLESS OTHERWISE NOTED AND ARE INTENDED TO SHOW OUTLINE ONLY.

5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

6. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

7. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.

8. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. ROUTING OF CONDUIT FOR POWER AND TELCO SHALL BE APPROVED BY OWNER OF SITE.

9. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.

10. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

11. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.

SITE WORK GENERAL NOTES

1. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.

2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING & EXCAVATION.

3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.

4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES, TOP SOIL AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.

5. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.

6. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION.

7. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE OWNER SPECIFICATION FOR SITE SIGNAGE.

8. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE TRANSMISSION EQUIPMENT AND TOWER AREAS.

9. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

10. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION, SEE DETAIL 303.

11. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.

12. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL JURISDICTION'S GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

13. ALL EARTH WORK SHALL BE PERFORMED IN ACCORDANCE WITH TECHNICAL SPECIFICATION FOR CONSTRUCTION OF RADIO ACCESS NETWORK SITES.

STRUCTURAL STEEL NOTES:

1. ALL STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 (HOT–DIP) UNLESS NOTED OTHERWISE. STRUCTURAL STEEL SHALL BE ASTM–A–36 UNLESS OTHERWISE NOTED ON THE SITE SPECIFIC DRAWINGS. STEEL DESIGN, INSTALLATION AND BOLTING SHALL BE PERFORMED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION".

2. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION". PAINTED SURFACES SHALL BE TOUCHED UP.

3. BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE (3/4"ø) CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE. STEEL FASTENER HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 (HOT–DIP)

4. NON–STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.

5. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD, HILTI OR APPROVED EQUAL.

6. ALL STRUCTURAL STEEL SHALL BE SUPPLIED IN ACCORDANCE WITH TECHNICAL SPECIFICATION FOR CONSTRUCTION OF RADIO ACCESS NETWORK SITES.

CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST–IN–PLACE CONCRETE.

2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. A HIGHER STRENGTH (4000 PSI) MAY BE USED.

3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.

4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

   CONCRETE CAST AGAINST EARTH.....3 IN.
   CONCRETE EXPOSED TO EARTH OR WEATHER:

   #6 AND LARGER .....2 INCH
   #5 AND SMALLER & WWF.....1 1/2 INCH

   CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:

   SLAB AND WALL .....3/4 INCH
   BEAMS AND COLUMNS.....1 1/2 INCH

5. A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

6. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD HILTI OR APPROVED EQUAL.

7. CONCRETE CYLINDER TEST IS NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (IBC 1905.6.2.3) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER;
   (A) RESULTS OF CONCRETE CYLINDER TESTS PERFORMED AT THE SUPPLIER'S PLANT,

   (B) CERTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED.

   FOR GREATER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST.

8. AS AN ALTERNATIVE TO ITEM 7, TEST CYLINDERS SHALL BE TAKEN INITIALLY AND THEREAFTER FOR EVERY 50 YARDS OF CONCRETE FROM EACH DIFFERENT BATCH PLANT.

9. EQUIPMENT SHALL NOT BE PLACED ON NEW PADS FOR SEVEN DAYS AFTER PAD IS POURED, UNLESS IT IS VERIFIED BY TESTS THAT COMPRESSIVE STRENGTH HAS BEEN ATTAINED.

10. ALL CONCRETE SHALL BE SUPPLIED IN ACCORDANCE WITH TECHNICAL SPECIFICATION FOR CONSTRUCTION OF RADIO ACCESS NETWORK SITES.

SOIL COMPACTION NOTES FOR SLAB ON GRADE:

1. EXCAVATE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL, EXPOSE UNDISTURBED NATURAL SUBGRADE AND PLACE CRUSHED STONE AS REQUIRED.

2. COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR ENGINEER IS ACCEPTABLE.

3. AS AN ALTERNATIVE TO INSPECTION AND WRITTEN CERTIFICATION, THE "UNDISTURBED SOIL" BASE SHALL BE COMPACTED WITH "COMPACTION EQUIPMENT", LISTED BELOW, TO AT LEAST 90% MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM D 1557 METHOD C.

4. COMPACTED SUBBASE SHALL BE UNIFORM AND LEVELED. PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED IN 3" LIFTS ABOVE COMPACTED SOIL. GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING 1" SIEVE.

5. AS AN ALTERNATIVE TO ITEMS 2 AND 3 PROOF ROLL THE SUBGRADE SOILS WITH 5 PASSES OF A MEDIUM SIZED VIBRATORY PLATE COMPACTOR (SUCH AS BOMAG BPR 30/38) OR HAND–OPERATED SINGLE DRUM VIBRATORY ROLLER (SUCH AS BOMAG BW 55E). ANY SOFT AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL–GRADED GRANULAR FILL, AND COMPACTED AS STATED ABOVE.

6. COMPACTION CRITERIA FOR OTHER FILL AREAS ON SITE SHALL MEET THE SAME REQUIREMENTS AS NOTED ABOVE.

7. SOIL COMPACTION SHALL BE PERFORMED IN ACCORDANCE WITH TECHNICAL SPECIFICATION FOR CONSTRUCTION OF RADIO ACCESS NETWORK SITES.

COMPACTION EQUIPMENT:

HAND OPERATED DOUBLE DRUM, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.

ELECTRICAL INSTALLATION NOTES

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.

2. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.

3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.

4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.

5. CABLES SHALL NOT BE ROUTED THROUGH LADDER–STYLE CABLE TRAY RUNGS.

6. EACH END OF EVERY POWER, POWER PHASE CONDUCTOR (I.E., HOTS), GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA.

7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH PERMANENT LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S). NO HAND WRITTEN LABELS ALLOWED.

8. PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED. NO HAND WRITTEN LABELS ALLOWED.

9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.

10. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (SIZE 14 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN–2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.

11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (SIZE 6 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN–2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.

12. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI–CONDUCTOR, TYPE TC CABLE (SIZE 14 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN–2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.

13. ALL POWER AND POWER GROUNDING CONNECTIONS SHALL BE CRIMP–STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).

14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.

ELECTRICAL INSTALLATION NOTES (cont.)

15. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.

16. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.

17. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.

18. RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.

19. LIQUID–TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID–TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.

20. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION–TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.

21. CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.

22. WIREWAYS SHALL BE EPOXY–COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.

23. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY–COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS

24. METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY–COATED, OR NON–CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.

25. NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.

26. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.

27. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.

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NO.	DATE	REVISION	BY	CHK	APP'D
1	10/11/16	FOR CONSTRUCTION	G.A.M.		
0	09/30/16	FOR REVIEW	G.A.M.		

SCALE | DESIGNED BY: M.N. | DRAWN BY: G.A.M.

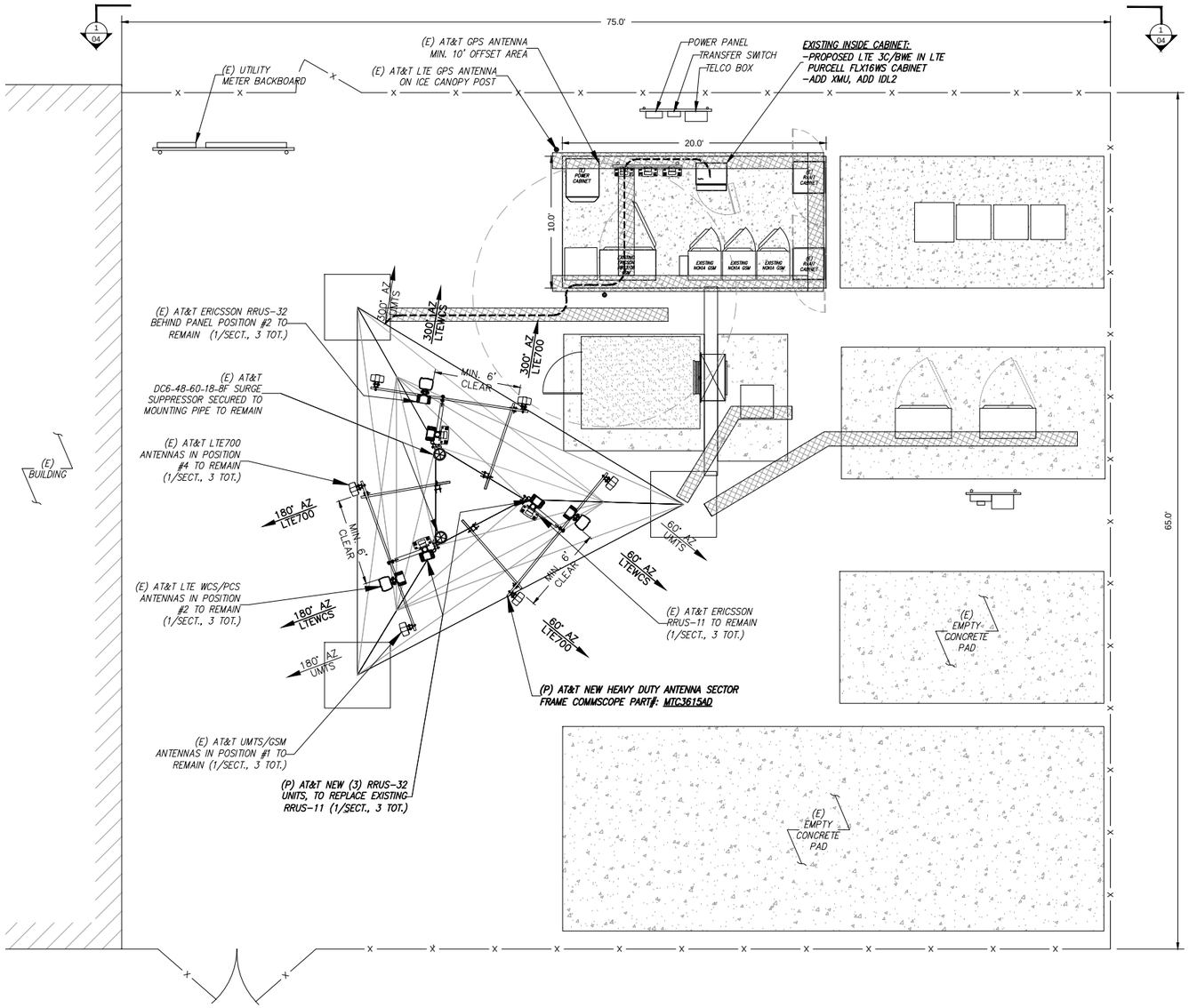
AT&T MOBILITY

NOTES

JOB NUMBER	DRAWING NUMBER	REV.
50–145	02	1

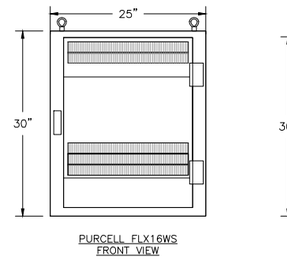
GENERAL NOTES

1. THE TYPE, DIMENSIONS, MOUNTING HARDWARE, AND THE POSITIONS OF ALL EQUIPMENT IN THE COMPOUND ARE SHOWN IN ILLUSTRATIVE FASHION. THESE DRAWINGS ARE NOT INTENDED FOR CONSTRUCTION. ACTUAL HARDWARE DETAILS AND FINAL LOCATIONS MAY DIFFER SLIGHTLY FROM WHAT IS SHOWN.
2. THE CELLULAR INSTALLATION IS AN UNMANNED PRIVATE AND SECURED COMPOUND. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
3. CONSTRUCTION, MAINTENANCE & OPERATION OF PROPOSED TOWER FACILITY WILL BE HELD IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE & FEDERAL REGULATIONS AND GUIDELINES.

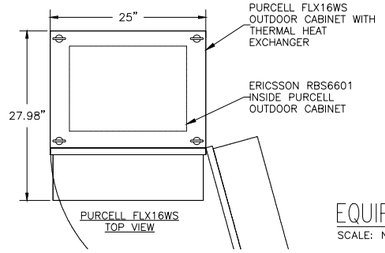


COMPOUND PLAN 1/03
SCALE: 1" = 8'

GRAPHIC SCALE
8 0 4 8 16 32
(IN FEET)
1 inch = 8 ft.



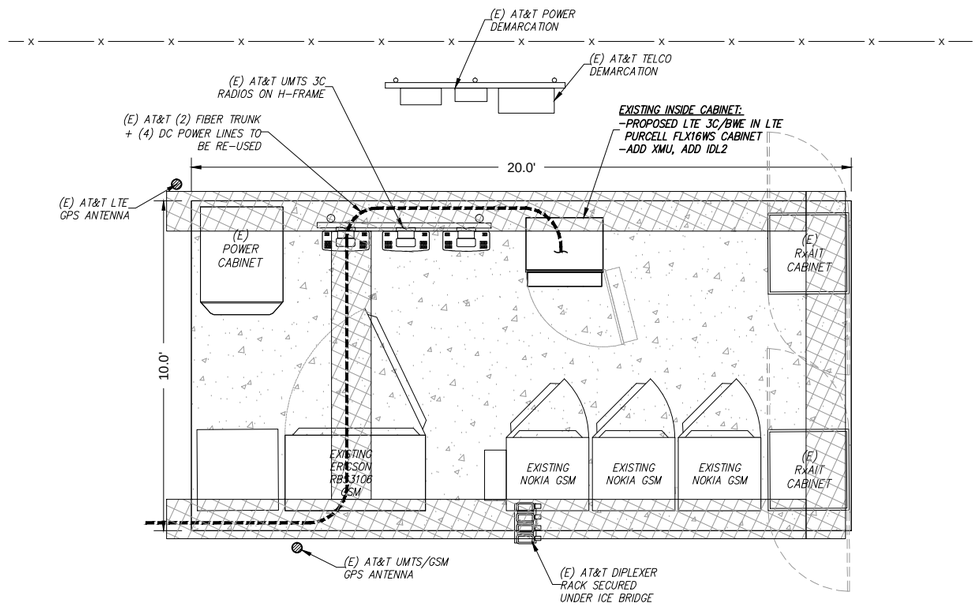
ERICSSON RBS6601 RADIO SPECS	
HEIGHT	2.59"
WIDTH	18.97"
DEPTH	13.78"
WEIGHT (TYP.)	23Lbs
POWER REQUIREMENTS DC	-48V DC (-40 to -57.6)
POWER REQUIREMENTS AC	100 to 250 V AC
IN USE REQUIREMENTS	OPER. TEMP: 41F to 122F



STANDARD INSTALLATION NOTES

1. CHANGE OUT EXISTING ANTENNAS, INSTALL TMAS & RET SYSTEMS WITH CONTROLS
2. INSTALL NEW SURGE ARRESTORS ON GSM, UMTS AND TDMA LINES.
3. INSTALL DIPLEXERS, CIU & PDU AND RECONFIGURE GSM & UMTS JUMPERS TO RF REQUIREMENTS.
4. PROVIDE SWEEP TESTS AND CLOSEOUT DOCUMENTATION.

EQUIPMENT DETAIL 4/03
SCALE: N.T.S.



EQUIPMENT PLAN 2/03
SCALE: 1" = 2'

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SCALE | DESIGNED BY: M.N. | DRAWN BY: G.A.M.

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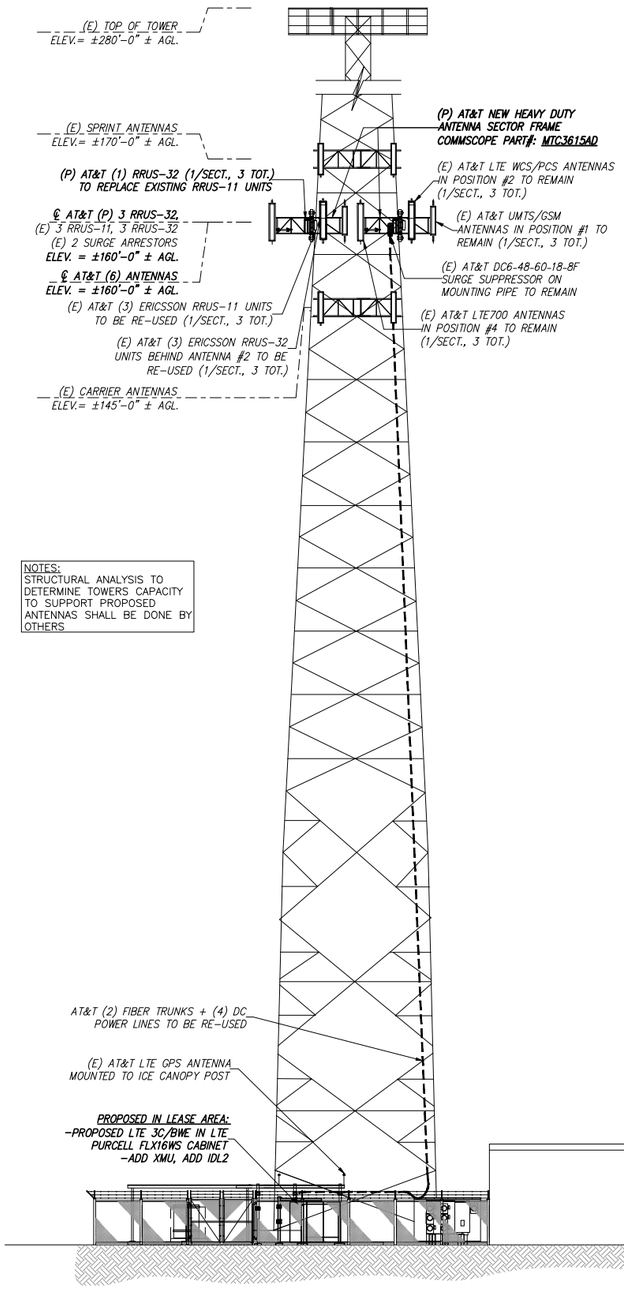
SITE PLAN & EQUIPMENT PLAN

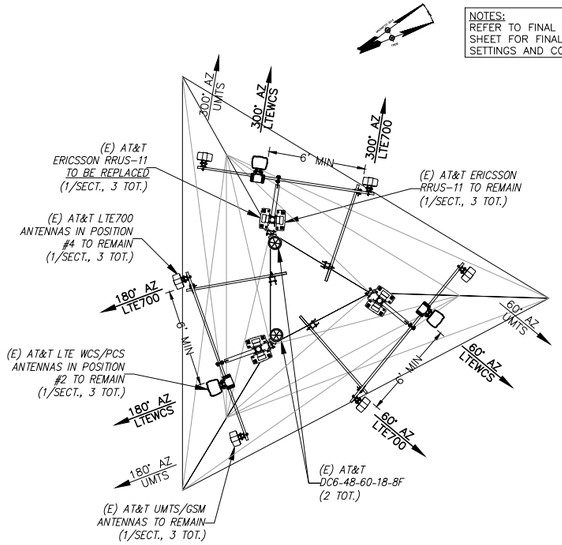
JOB NUMBER	DRAWING NUMBER	REV.
50-145	03	1



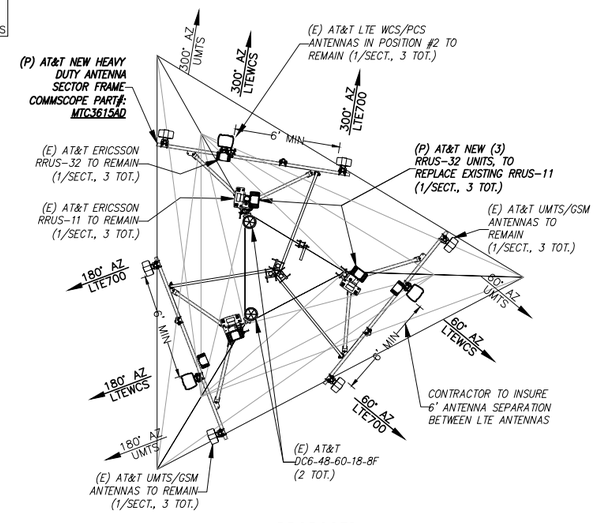
NOTES:
STRUCTURAL ANALYSIS TO DETERMINE TOWERS CAPACITY TO SUPPORT PROPOSED ANTENNAS SHALL BE DONE BY OTHERS.

ELEVATION VIEW (1/04)
SCALE: 1" = 12'

GRAPHIC SCALE
12 0 6 12 24 48
(IN FEET)
1 inch = 12 ft.

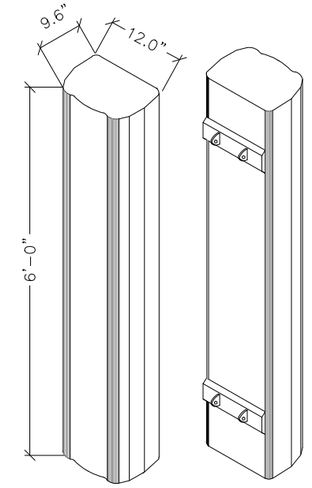


EXISTING



PROPOSED

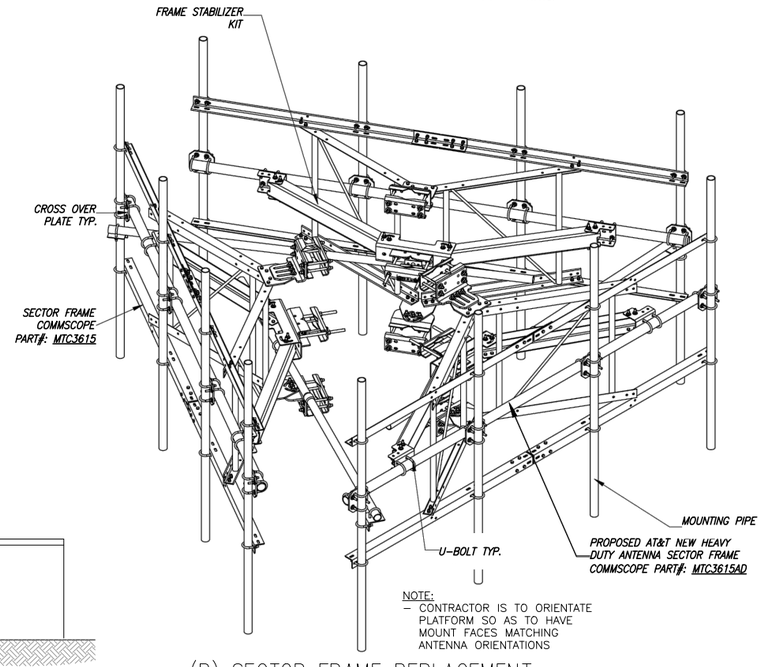
ANTENNA MOUNTING PLAN VIEW (2/04)
SCALE: N.T.S.



ISOMETRIC FRONT VIEW

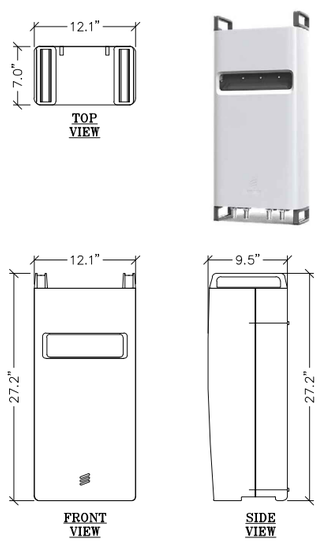
ISOMETRIC REAR VIEW

LTE WCS TWELVEPORT PANEL ANTENNA (3/04)
SCALE: N.T.S.

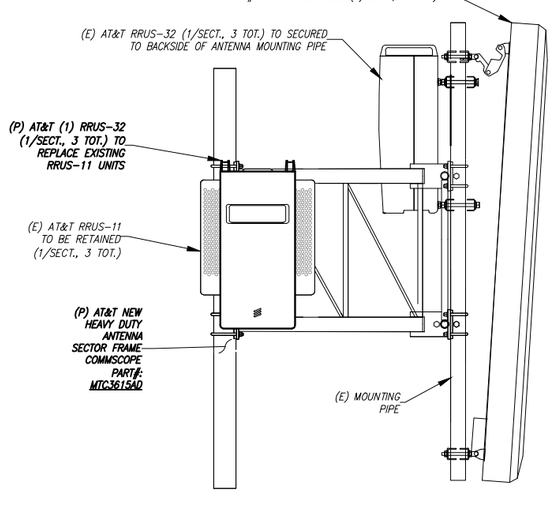


NOTE:
- CONTRACTOR IS TO ORIENTATE PLATFORM SO AS TO HAVE MOUNT FACES MATCHING ANTENNA ORIENTATIONS

(P) SECTOR FRAME REPLACEMENT RRH & SURGE MOUNTING DETAIL (4/04)
SCALE: N.T.S.



PROPOSED ERICSSON DUAL PA RRUS-32 (5/04)
SCALE: N.T.S.



PROPOSED RRH & SURGE ARRESTOR MOUNTING DETAIL (6/04)
SCALE: N.T.S.

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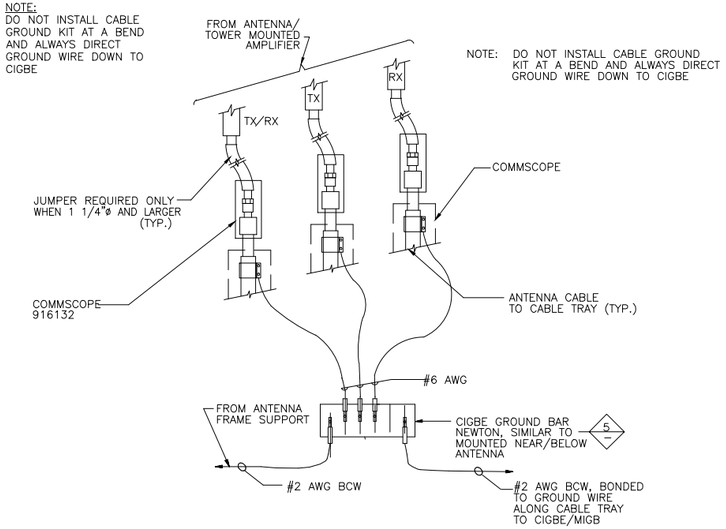
ELEVATION VIEW & ANTENNA LAYOUT

JOB NUMBER	DRAWING NUMBER	REV.
50-145	04	1

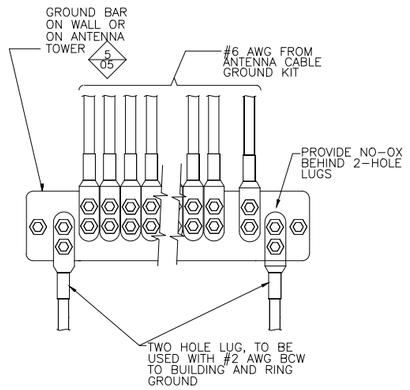
NOTE:
DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE



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

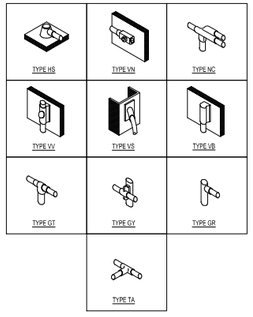
CONNECTION OF GROUND WIRES TO GROUNDING BAR (CIGBE) 1/05

SCALE: N.T.S.



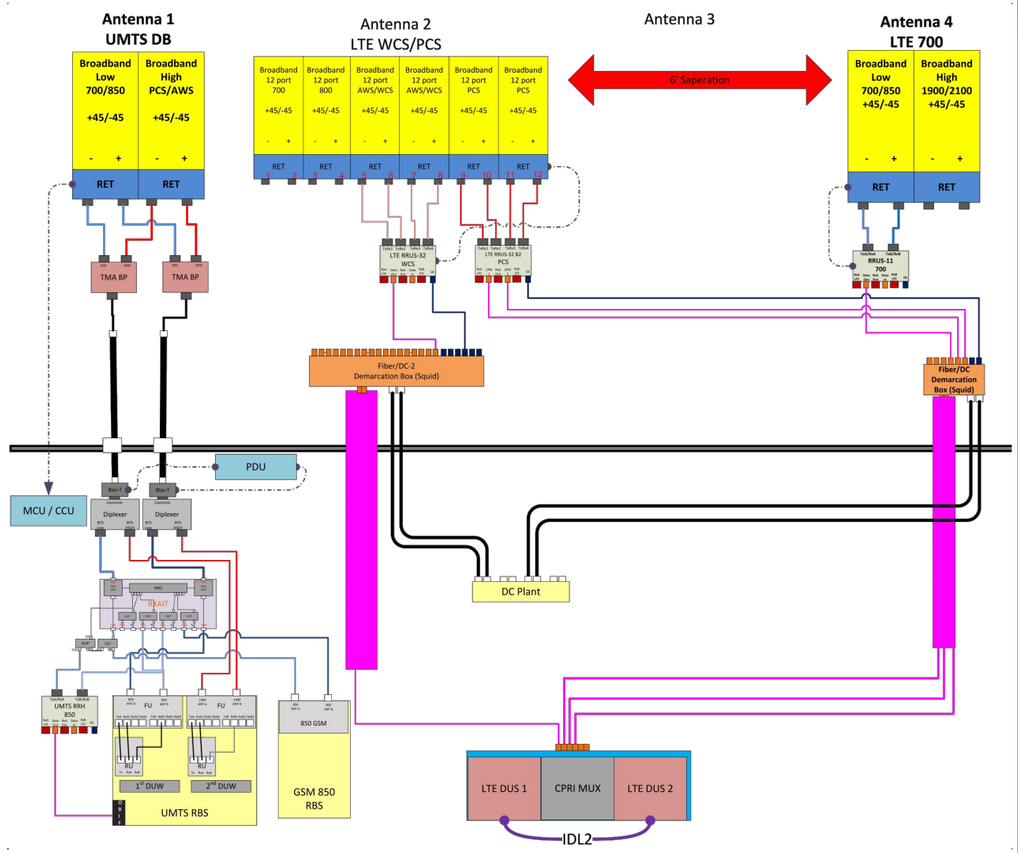
INSTALLATION OF GROUND WIRE TO GROUND BAR 2/05

SCALE: N.T.S.



GROUNDING CONNECTION DETAIL 5/05

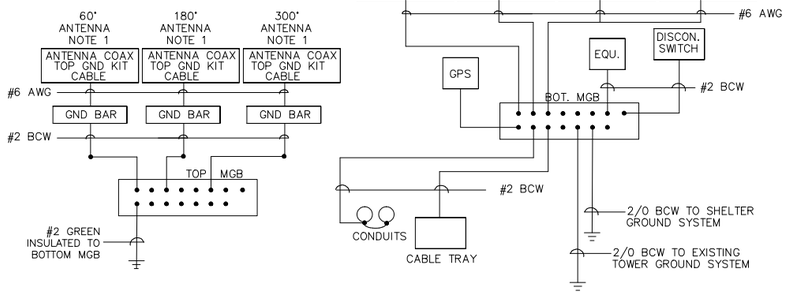
SCALE: N.T.S.



NOTE:
1. CONTRACTOR TO CONFIRM ALL PARTS
2. INSTALL ALL EQUIPMENT PER MANUFACTURERS RECOMMENDATIONS

PLUMBING DIAGRAM FACE 3/05

SCALE: N.T.S.

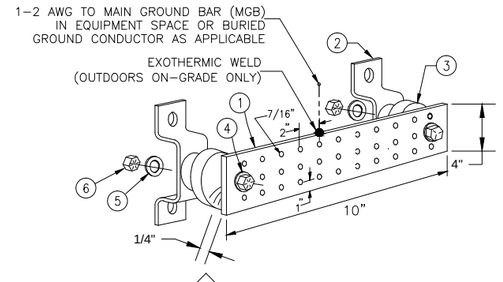


NOTE:
1. BOND ANTENNA GROUNDING KIT CABLE TO TOP CIGBE
2. BOND ANTENNA GROUNDING KIT CABLE TO BOTTOM CIGBE

SCHEMATIC GROUNDING DIAGRAM 4/05

SCALE: N.T.S.

NEWTON INSTRUMENT COMPANY, INC. BUTNER, N.C. OR APPROVED EQUAL			
ITEM	REQ.	PART NO.	DESCRIPTION
1	1	1/4"x4"x12"	PRE DRILLED GND. BAR
2	2	A-6056	WALL MTG. BRKT.
3	2	3061-4	INSULATORS
4	2	3012-13	5/8"-11x4" H.H.C.S.
5	4	3015-8	5/8 LOCKWASHER
6	2	3014-8	5/8"-11 HEX NUT



GROUND BAR DETAIL 6/05

SCALE: N.T.S.

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SCALE | DESIGNED BY: M.N. | DRAWN BY: G.A.M.

AT&T MOBILITY

GROUNDING DETAILS

JOB NUMBER	DRAWING NUMBER	REV
50-145	05	1

Tower Reanalysis Report

Proposal 185135-4-1
October 24, 2016

U-28 x 280' Tower
Seymour, CT
6 Progress Ave
PiRod Engineering File A-116966

Prepared for
Vertical Resources Group.
Attn: Miguel Nobre
489 Washington Street
Auburn, MA 01501

Authorization Provided by
EMAC Communications LLC
Edward MacConnie
2702 Forest View Lane
Kissimmee FL 34744

This document does not constitute a construction document. All modifications and/or installations of structural members and/or appurtenances shall be completed under the direction of a person qualified to conduct and/or direct the installation procedures in accordance with state, local and national rules.

116966 185135-4-1

Completed under the Supervision and Approval by
William R. Heiden III, P.E.
Engineering Group Leader
e-mail: William.Heiden@valmont.com
telephone extension: 5243

William R. Heiden III, CT Professional Engineer # 23038

TABLE OF CONTENTS

Description **Page No.**

1.0 EXECUTIVE SUMMARY

This reanalysis was performed by PiRod to determine if the structure is capable of accommodating loading that is different than previous design specifications. This engineering report gives details how the loading changes affect the tower, specifies feasible modifications, and proposes modification materials. **PiRod's engineering study concludes that the tower does not comply.** See section 6.0 for details.

2.0 ASSUMPTIONS

This engineering study is based on the theoretical capacity of the structure. It is not a condition assessment of the tower. This report is being provided by PiRod without the benefit of an inspection by PiRod personnel and is based on information supplied by the customer to PiRod. PiRod has made no independent determination, nor is required to, of the accuracy of the information provided. Therefore, unless specifically informed to the contrary by the customer in writing, PiRod assumes the following:

1. The subsoil characteristics exist as stated on the tower drawing or stated elsewhere in this report;
2. The tower is erected and maintained in accordance with the manufacturer's plans and specifications and is plumb;
3. There is no damage, natural or manmade, to the structure, either gradual or sudden;
4. All connections and guy cables are properly installed;
5. The information concerning the components, existing and proposed, is accurate; and
6. There are no modifications to the tower itself, except as may be disclosed elsewhere in this report.

PiRod recommends that qualified personnel assess the physical condition of the tower, preferably under the direction of a licensed professional engineer. Following is a list of the general areas that PiRod recommends to be inspected.

Tower Structure	Guyed Towers	Foundations	Appurtenances
Tower Sections	Guy Cables	Cracking	Antennas
Bolted Connections	Turnbuckles	Drainage	Mounts
Welded Connections	Preforms	Spalling	Transmission Lines
Plumbness	Guy Lugs	Anchor Bolts	Line Brackets
Corrosion	Thimbles	Settling	Cable Hangers
Linearity	Torque Arms	Grounding	Lighting
Galvanization	Ice Clips	Grout	
Paint	Guy Tensions	Subsoil Characteristics	
	Anchor Rods	Erosion	
	Shackles		
	Insulators		

3.0 TOWER HISTORY

Date of Origination: 4/2000
PiRod Model: U-28 x 280' Tower
Sold to: EMAC Communications

ORIGINAL DESIGN CRITERIA				
Code/Standard	**Wind Loading**	**Radial Ice**	**Wind Load Reduction Used**	**Allowable Stress Increase Used**
TIA/EIA-222- F	90 mph fastest mile	no	none	yes
TIA/EIA-222-F	90 mph fastest mile	½" solid	25%	yes

For the structural analysis, the tower and foundation are assumed to exist as shown on the enclosed tower drawing, which is PiRod's latest revision.

4.0 CURRENT WIND LOAD REQUIREMENT

We have taken the opportunity to reanalyze this structure using the following wind speed and ice load conditions:

Code/Standard	**Wind Loading**	**Radial Ice**	**Topography**	**Structure Class**	**Exposure**
TIA/EIA-222-G	***106*** mph 3-second gust	NO	1	II	C
	50 mph 3-second gust	0.75"			

Note: Some localities stipulate wind load requirements that are different from that required by the TIA/EIA Standard. Please check with your local building department and verify the required wind load.

5.0 ANTENNA LOADING

The tower analysis uses the following antenna loading, which was provided on 10/14/2016.

Height (ft)	Antennas #	Antennas Model	Assumed CAAc (sq.ft.)	Mounts #	Mounts Model	Lines #	Lines Size	Lines Bracket
Existing Loading								
Top	1 1	Beacon Lightning Rod Ext				1	1"	
280	1 1	DB420 DB586-XC		1	9-arm Halo	2	1-5/8"	Expandable T
250	3 3 6	**RR90-17-02DP** **LNX-6515DS-A1M** **TMA*(12"x12"x8")**		3 12	15' T-frame 2" x 84" Antenna Pipe	12	1-5/8"	"
245	1	DB420				1	1-5/8"	"
235	1	DB225-2-F		1	9-arm Halo	1	1-5/8"	"
200	9	DB980H120A-M		3 9	10' Lt T-frames 2" x 60" Antenna Pipe	9	1-5/8"	"
190	9	DB980H120A-M		3 9	10' Lt T-frames 2" x 60" Antenna Pipe	9	1-5/8"	"
180	9	DB980H120A-M		3 9	10' Lt T-frames 2" x 60" Antenna Pipe	9	1-5/8"	"
170	3 3 3 3 3	**APXVSPP18CA20** **APXVTM14-ALU-I20** **FDRRH2X50** **FDRRH4X40** **TDRRH8X20**	1.7 2.32 3.7	3 9	15' T-frame 2" x 60 " Antenna Pipe	6	1-5/8"	"
150	3	APXV18-206517S0C-ACU				3	1-5/8"	"
140	3 3 3 3 3 1 6	HBX-6517DS-VTM LNX-6514DS-T4M LNX-6514DS-VTM BXA-171063-12BF RHH_2X40-AWS RFS DB-T1-6Z-8AB-0Z box RFS FD9R6004/2C-3L Diplexer	Verizon 10°, 110°, 240°	3 12	12' V-frames 2" x 72" Pipe mounts	12 1	1-5/8" 1-5/8" Hybri-flex	SE leg Ext. Double T
Proposed Loading								
160	3 6 3 3 3 3 1 **3**	Kathrein 80010121 LGP 21401 TMA Quintel QS66512-3 KMW AM-X-CD-16-65-00T-RET Ericsson RRUS-11 Ericsson RRUS-32 Racap DC6-48-60-18-8F **Ericsson RRUS-32 B2**	AT&T 60° 160° 300°	3 9	12.5' Sector Frames Commscope MTC3615 2" x 72 " Antenna Pipe	2 1 2	1-5/8" 3/8" ¾"	"

These antennas, mounts, and lines represent our understanding of the antenna loading required. Please contact us if any discrepancies are evident. If different antennas, mounts, or lines are installed on this

structure, this analysis is invalid. If the lines are mounted on PiRod Double-T, Extended Double-T or Expandable Double-T, they are assumed to be mounted inside the tower and the transmission lines are mounted in a back to back configuration. If any of these brackets cannot be placed inside concerning physical fit, alternatively they can be installed outside the tower, but all the brackets need to be swung back as close as possible to one of the tower faces, to minimize the torque.

* An asterisk indicates that we were not provided with a value for the effective projected area (C_AA_C), and that the area has been assumed based on any information that was made available. The actual effective projected area for each antenna must be confirmed to be equal to the assumed area listed above. If it is determined that the area is different than that stated for any of the above items, this analysis is invalid.

6.0 RESULTS

With the antennas listed in section 5.0, the following modifications are required for the tower to comply with the indicated code and TIA/EIA Standard listed in section 4.0.

6.1 Tower Results – FAIL

The tower complies without modifications.

- Tower capacity 137.4%
- Diagonals are overstressed from 180' to 200' and 220' to 230'.

Designing modifications was not included in the scope of this project. A quote is attached if you wish to order a modification design, contact Melinda.Keilman@Valmont.com or 877-467-4763 Ext. 5320. Note: purchase of a modification design does not guarantee that we can design modifications to bring the structure into compliance.

6.2 Foundation Results – PASS

The foundation complies without modifications.

The foundation analysis is based on the soil report by AET, Inc., dated 3/31/2000, file #42GT2K.

7.0 LIST OF APPENDICES

Tower elevation drawing

8.0 DISCLAIMER

1. The information and conclusions contained in this Report were determined by the application of the then current "state of the art" engineering and analysis procedures and formulae, and Valmont Structures [1] assumes no obligation to revise any of the information or conclusions contained in this Report in the event such engineering and analysis procedures and formulae are hereafter modified or revised.

2. In no event shall Valmont Structures be liable for any incidental, consequential, indirect, special or punitive damages (including without limitation lost profits) arising out of any claim associated with the use of this report (whether for breach of contract, tort, negligence or other form of action), irrespective of whether Valmont Structures has been advised of the possibility of any such loss or damage. In no event shall Valmont Structures' total, cumulative liability to the customer exceed the amount paid by customer for the preparation of this report.

3. Valmont Structures shall have no liability whatsoever to Customer or to others for any work or services performed by any persons other than Valmont Structures personnel, including but not limited to, any services rendered by riggers, erectors or other subcontractors . Customer acknowledges and agrees that any riggers, erectors or subcontractors retained or employed by Customer shall be solely responsible to Customer for the quality of work performed by them

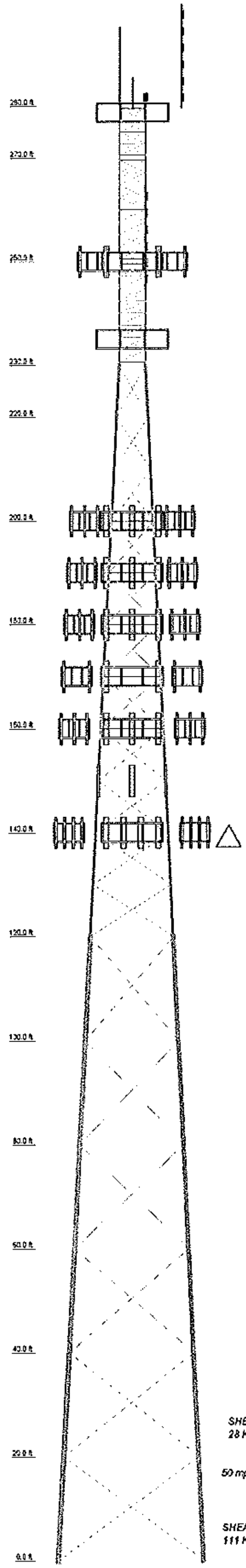
4. Valmont Structures makes no warranties, expressed or implied, in connection with this Report as to any other matter whatsoever, and in particular, any and all warranties of merchantability or fitness for a particular purpose are hereby expressly disclaimed. Valmont Structures further expressly disclaims any liability arising from material, fabrication, and erection deficiencies. This Report is being provided by Valmont Structures without the benefit of an inspection by Valmont Structures personnel and is based solely on information supplied by the Customer to Valmont Structures. Valmont Structures has made no independent determination, nor is it required to do so, of the accuracy of the information provided by Customer. Therefore, unless specifically informed to the contrary by the Customer in writing, the following assumptions apply to the Report:

    A. The subsoil characteristics exist as stated on the tower drawing or stated elsewhere in this report;
    B. The tower is erected and maintained in accordance with the manufacturer's plans and specifications and is plumb;
    C. There is no damage, natural or manmade, to the structure, either gradual or sudden;
    D. All connections are properly installed;
    E. The information concerning the components, existing and proposed, is accurate; and
    F. There are no modifications to the tower itself, except as may be disclosed elsewhere in this report. Examples include but are not limited to replacement or strengthening of bracing members, reinforcing vertical members in any manner, adding additional bracing, or extending tower.

6. All representations and recommendations and conclusions are based upon the information contained and set forth herein. If Customer is aware of any information which is contrary to that which is contained herein, or if Customer is aware of any defects arising from the original design, material, fabrication, and erection deficiencies Customer must disregard this Report and immediately contact Valmont Structures.

[1] Valmont Structures is the Structures Division of Valmont Industries, Inc., and performs engineering services under the engineering corporation name PiRod, Inc.

Section	0–20 ft	20–40 ft	40–60 ft	60–80 ft	80–100 ft	100–120 ft	120–140 ft	140–160 ft	160–180 ft	180–200 ft	200–220 ft	220–230 ft	230–250 ft	250–270 ft	270–280 ft
Legs	C	#18 - 3.00" (Pirod 112745)	#18 - 2.75" (Pirod 112744)		#18 - 2.50" (Pirod 112743)		#12 - 2.25" - 1.25" conn. (Pirod 105220)		B	#12 - 1.75" - 1.00" conn. (Pirod 105218)		A	SR 2 1/2	SR 2	SR 1 3/4
Leg Grade	A572-50														
Diagonals	2L3 1/2x3 1/2x5/16						L3 1/2x3 1/2x5/16		L3x3x5/16	L3x3x3/16		D	SR 1	SR 7/8	
Diagonal Grade	A36												A572-50		
Top Girts	N.A.							L3 1/2x3 1/2x5/16	L4x4x1/4	L3x3x3/16	N.A.		SR 1 1/4	SR 1	
Mid Girts	N.A.								L4x4x1/4	L3x3x3/16	N.A.			SR 1	
Bottom Girts	N.A.												SR 1 1/4	SR 1	
Horizontals	N.A.												SR 7/8		
Face Width (ft)	28	26	24	22	20	18	16	14	12	10	8	6			5
# Panels @ (ft)	6 @ 20						11 @ 10						10 @ 2.375		4 @ 2.25
Weight (K) 77.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Beacon	280	2" x 60" Sch. 40	170
15' LRE with 6' lightning rod (atm=7.75)	280	Alcatel-Lucent RRH2X50 (800 MHz)	170
DB420-A	280	Alcatel-Lucent RRH2X50 (800 MHz)	170
DB586-XC	280	Alcatel-Lucent RRH2X50 (800 MHz)	170
2" x 84" Sch. 40	280	Alcatel-Lucent RRH4X45-1900	170
2" x 84" Sch. 40	280	Alcatel-Lucent RRH4X45-1900	170
9-Arm Halo Mount	280	Alcatel-Lucent RRH4X45-1900	170
RR90-17-XXDP	250	Alcatel-Lucent ALU TD-RRH8x20	170
RR90-17-XXDP	250	Alcatel-Lucent ALU TD-RRH8x20	170
RR90-17-XXDP	250	Alcatel-Lucent ALU TD-RRH8x20	170
2" x 84" Sch. 40	250	15' T-Frame	170
2" x 84" Sch. 40	250	15' T-Frame	170
2" x 84" Sch. 40	250	15' T-Frame	170
LNX-6515DS-A1M	250	800 10121 (ATI)	150
LNX-6515DS-A1M	250	800 10121 (ATI)	150
LNX-6515DS-A1M	250	800 10121 (ATI)	150
2" x 84" Sch. 40	250	2" x 72" Sch. 40 (ATI)	150
2" x 84" Sch. 40	250	2" x 72" Sch. 40 (ATI)	150
2" x 84" Sch. 40	250	2" x 72" Sch. 40 (ATI)	150
(2) 2" x 84" Sch. 40	250	(2) Powerwave LGP2140X TMA (ATI)	150
(2) 2" x 84" Sch. 40	250	(2) Powerwave LGP2140X TMA (ATI)	150
(2) 2" x 84" Sch. 40	250	(2) Powerwave LGP2140X TMA (ATI)	150
(2) TMA (12"x12"x8")	250	Quintel QS66512-3 (ATI)	150
(2) TMA (12"x12"x8")	250	Quintel QS66512-3 (ATI)	150
(2) TMA (12"x12"x8")	250	Quintel QS66512-3 (ATI)	150
15' T-Frame	250	(2) 2" x 72" Sch. 40 (ATI)	150
15' T-Frame	250	(2) 2" x 72" Sch. 40 (ATI)	150
15' T-Frame	250	(2) 2" x 72" Sch. 40 (ATI)	150
DB420-A	245	AM-X-CD-16-65-00T-RET (ATI)	150
DB725-74	235	AM-X-CD-16-65-00T-RET (ATI)	150
2" x 84" Sch. 40	235	AM-X-CD-16-65-00T-RET (ATI)	150
9-Arm Halo Mount	235	(2) 2" x 72" Sch. 40 (ATI)	150
(3) DB880H120E-M_EXL	200	(2) 2" x 72" Sch. 40 (ATI)	150
(3) DB880H120E-M_EXL	200	(2) 2" x 72" Sch. 40 (ATI)	150
(3) DB880H120E-M_EXL	200	Ericsson RRUS11 (ATI)	150
(3) 2" x 60" Sch. 40	200	Ericsson RRUS11 (ATI)	150
(3) 2" x 60" Sch. 40	200	Ericsson RRUS11 (ATI)	150
(3) 2" x 60" Sch. 40	200	(2) Ericsson RRUS-32 (ATI)	150
12' Lightweight T-Frame	200	(2) Ericsson RRUS-32 (ATI)	150
12' Lightweight T-Frame	200	(2) Ericsson RRUS-32 (ATI)	150
12' Lightweight T-Frame	200	Raycap DC6-48-60-18-8F (ATI)	150
(3) DB880H120E-M_EXL	190	Commscope MTC3615 Sector Frame (ATI)	150
(3) DB880H120E-M_EXL	190	Commscope MTC3615 Sector Frame (ATI)	150
(3) DB880H120E-M_EXL	190	Commscope MTC3615 Sector Frame (ATI)	150
(3) 2" x 60" Sch. 40	190	APXV18-206517S-C	150
(3) 2" x 60" Sch. 40	190	APXV18-206517S-C	150
(3) 2" x 60" Sch. 40	190	APXV18-206517S-C	150
12' Lightweight T-Frame	190	HBX-6517DS-VTM (Verizon)	140
12' Lightweight T-Frame	190	HBX-6517DS-VTM (Verizon)	140
12' Lightweight T-Frame	190	HBX-6517DS-VTM (Verizon)	140
(3) DB880H120E-M_EXL	180	LNX-6514DS-T4M (Verizon)	140
(3) DB880H120E-M_EXL	180	LNX-6514DS-T4M (Verizon)	140
(3) DB880H120E-M_EXL	180	LNX-6514DS-T4M (Verizon)	140
(3) 2" x 60" Sch. 40	180	LNX-6514DS-VTM (Verizon)	140
(3) 2" x 60" Sch. 40	180	LNX-6514DS-VTM (Verizon)	140
(3) 2" x 60" Sch. 40	180	LNX-6514DS-VTM (Verizon)	140
12' Lightweight T-Frame	180	BXA-171063-12BF-EDIN-X (Verizon)	140
12' Lightweight T-Frame	180	BXA-171063-12BF-EDIN-X (Verizon)	140
12' Lightweight T-Frame	180	BXA-171063-12BF-EDIN-X (Verizon)	140
APXVSPP18-C-A20	170	Alcatel-Lucent RRH2x40-AWS (Verizon)	140
APXVSPP18-C-A20	170	Alcatel-Lucent RRH2x40-AWS (Verizon)	140
APXVSPP18-C-A20	170	Alcatel-Lucent RRH2x40-AWS (Verizon)	140
2" x 60" Sch. 40	170	RFS DB-B1-6C-12AB-0Z Distribution Box (Verizon)	140
2" x 60" Sch. 40	170	(2) RFS FD9R6004/2C-3L Diplexer (Verizon)	140
2" x 60" Sch. 40	170	(2) RFS FD9R6004/2C-3L Diplexer (Verizon)	140
APXVTM14-C-120	170	(2) RFS FD9R6004/2C-3L Diplexer (Verizon)	140
APXVTM14-C-120	170	(4) 2" x 72" Sch. 40 (Verizon)	140
APXVTM14-C-120	170	(4) 2" x 72" Sch. 40 (Verizon)	140
2" x 60" Sch. 40	170	(4) 2" x 72" Sch. 40 (Verizon)	140
2" x 60" Sch. 40	170	12' V-Frame (Verizon)	140
2" x 60" Sch. 40	170	12' V-Frame (Verizon)	140
2" x 60" Sch. 40	170	12' V-Frame (Verizon)	140
2" x 60" Sch. 40	170		

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	#12ZG - 1.50" - 1.00" conn. (Pirod 105245-BAO)	C	#18 - 3.00" (Pirod 112747) BASE ONLY
B	#12 - 2.00" - 1.25" conn. (Pirod 105218)	D	L2 1/2x2 1/2x3/16

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in New Haven County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-G Standard.
3. Tower designed for a 106 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 137.4%

ALL REACTIONS ARE FACTORED

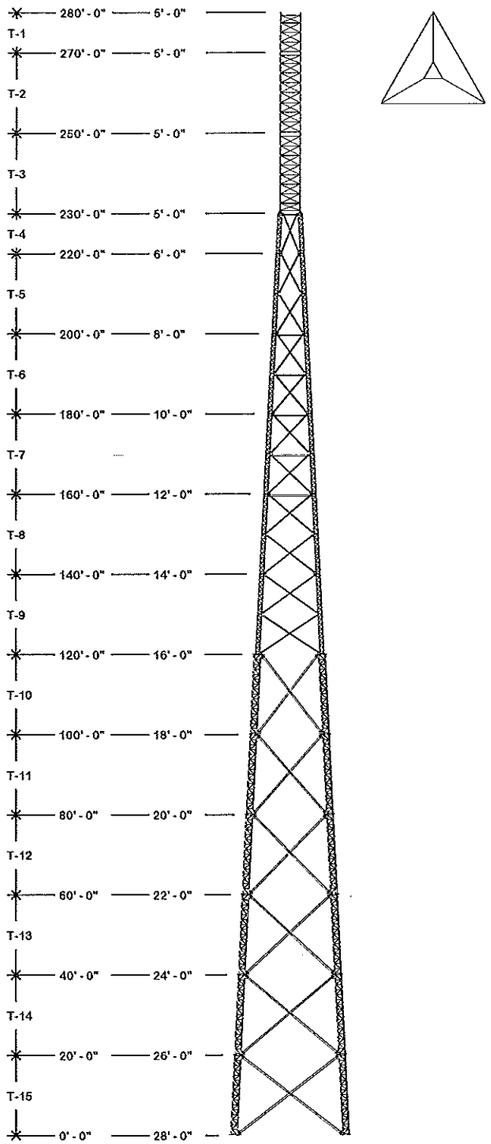
MAX. CORNER REACTIONS AT BASE:
DOWN: 717 K
UPLIFT: -624 K
SHEAR: 74 K

AXIAL 367 K
SHEAR 28 K
MOMENT 4573 kip-ft
TORQUE 10 kip-ft
50 mph WIND - 0.7500 in ICE

AXIAL 127 K
SHEAR 111 K
MOMENT 16364 kip-ft
TORQUE 43 kip-ft
REACTIONS - 106 mph WIND

valmont STRUCTURES
Valmont Structures, Inc. - Specialty Structures Group
Valmont Structures
1545 Pidco Drive
Plymouth, IN 46563
Phone: (574) 936-4221
FAX: (574) 936-6458

Job	A-116966 (Reanalysis 185135
Project	U-28 x 280' - Seymour, CT
Client	Verizon Wireless — Drawn by CRF1 — App'd
Code	TIA-222-G — Date 10/25/16 — Scale
Path	Dwg No.



SEE PAGE 2 FOR
APPURTENANCES

BUILDING_CODE(S):2009 International Building Code

Design Standard: TIA-222-G

TOWER DESIGN CRITERIA
Basic Wind Speed: 106 mph (no ice)
50 mph(0.75" ice)
60 mph (deflection only)
Structure Class: II
Exposure: C
Topographic Category: 1
Crest Height: 0 ft.

MATERIAL STRENGTHS

Solid Rod	A36	(rod dia. <3/4")
	A572 Gr.50	(3/4" thru 1" dia.)
	A572 Gr.50	(>1" dia. T-5 - T9)
Pipe	A500 Gr.B	(antenna pipes)
	A500 Gr.B/C	(tower legs min. Fy 50 ksi)
Angle	A36 Gr.36	
Plate	A572 Gr.50	
Bolts	A-325/A-449	(leg & angle)

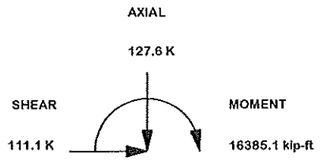
Anchor Bolts: F1554 grade 105 or A687

Finish: Tower & Hardware are hotdip galvanized

TOWER COLUMN										
SECTION	ELEVATION	FACE WIDTH	PANELS	LEG SIZE	LEG STYLE	LEG BOLT QTY & DIA	DIAGONAL BRACING SIZE	HORIZONAL BRACING SIZE	BRACING BOLT QTY & DIA	SECTION WEIGHT
T1	270' - 280'	5.0'	8	1.75"	FAB	5 x 5/8"				1368.75
T2	250' - 270'	5.0'	8	2.00"	FAB	2 x 2"				1868.6
T3	230' - 250'	5.0'	8	2.50"	FAB	6 x 1"				2154.22
T4	220' - 230'	6.0'	1	1.50"	12BD	6 x 1"	5/16" x 3" x 3"	3/16" x 3" x 3"	1 x 1 "	1428.03
T5	200' - 220'	8.0'	2	1.75"	12BD	6 x 1"	3/16" x 3" x 3"		1 x 1 "	2675.40
T6	180' - 200'	10.0'	2	1.75"	12BD	6 x 1"	5/16" x 3" x 3"	3/16" x 3" x 3"	1 x 1 "	3234.33
T7	160' - 180'	12.0'	2	2.00"	12BD	6 x 1-1/4"	5/16" x 3" x 3"	1/4" x 4" x 4"	1 x 1 1/4 "	4245.72
T8	140' - 160'	14.0'	2	2.25"	12BD	6 x 1-1/4"	5/16" x 3-1/2" x 3-1/2"	3/8" x 5" x 5"	1 x 1 1/4 "	5120.64
T9	120' - 140'	16.0'	2	2.25"	12BD	6 x 1-1/4"	5/16" x 3-1/2" x 3-1/2"		1 x 1 1/4 "	5536.83
T10	100' - 120'	18.0'	1	2.50"	18BD	12 x 1 1/4"	5/16" x 3-1/2" x 3-1/2"		1 x 1 "	7092.66
T11	80' - 100'	20.0'	1	2.50"	18BD	12 x 1 1/4"	5/16" x 3-1/2" x 3-1/2"		1 x 1 "	7203.30
T12	60' - 80'	22.0'	1	2.75"	18BD	12 x 1 1/4"	5/16" x 3-1/2" x 3-1/2"		1 x 1 "	7972.08
T13	40' - 60'	24.0'	1	2.75"	18BD	12 x 1 1/4"	5/16" x 3-1/2" x 3-1/2"		1 x 1 "	8096.22
T14	20' - 40'	26.0'	1	3.00"	18BD	12 x 1 1/4"	5/16" x 3-1/2" x 3-1/2"		1 x 1 "	8937.48
T15	0' - 20'	28.0'	1	3.00"	18BD	6 x 2 1/4"	5/16" x 3-1/2" x 3-1/2"		1 x 1 "	9226.50

REPLACE DIAGONALS AT:
U10 180'-200' AND U6 220'- 230'
WITH 5/16" X 3" X 3" ANGLE UNDER
REANALYSIS 185135-5-1 (A-116966)

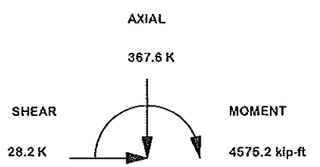
Reactions - No Ice



MAX. CORNER REACTIONS AT BASE:
DOWN: 718.2 K
UPLIFT: -624.6 K
SHEAR: 74.3 K

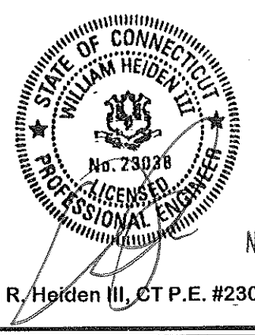
TORQUE 42.5 kip-ft
REACTIONS 106.0 mph WIND (no ice)

Reactions - Ice



MAX. CORNER REACTIONS AT BASE:
DOWN: 718.2 K
UPLIFT: -624.6 K
SHEAR: 74.3 K

TORQUE 10.2 kip-ft
REACTIONS 50.0 mph WIND (0.75" ice)



NOV 1 8 2016

William R. Heiden III, CT P.E. #23038

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
@A	<ACBATCH>		SKK	11/15/2016

REVISION HISTORY

SITE
SEYMOUR, CT
VERTICAL RESOURCES GROUP
U 28 X 280'

DESCRIPTION
Tower View Page 1

STRUCTURE APPROVAL
SKK 11/15/2016

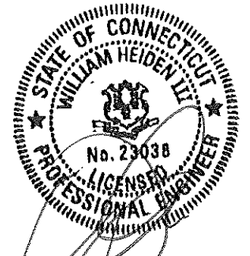
FOUNDATION APPROVAL

valmont STRUCTURES
1-877-467-4763 Plymouth, IN
1-800-547-2151 Salem, OR

ENG. FILE NO.
185135

DWG. NO.
270438T

DESIGNED APPURTENANCE LOADING		DESIGNED APPURTENANCE LOADING	
TYPE	ELEVATION	TYPE	ELEVATION
(1) 15' LRE WITH 4' LIGHTNING ROD (ARM=7.75')	280'	(6) RFS FD9R6004/2C-3L DIPLEXER	140'
(2) 2" X 84" SCH. 40	280'		
(1) 9-ARM HALO MOUNT	280'		
(1) BEACON	280'		
(1) DB420-A	280'		
(1) DB586-XC	280'		
(3) 15' T-FRAME	250'		
(12) 2" X 84" SCH. 40	250'		
(3) LNX-6515DS-A1M	250'		
(3) RR90-17-XXDP	250'		
(6) TMA (12"X12"X8")	250'		
(1) DB420-A	245'		
(1) 2" X 84" SCH. 40	235'		
(1) 9-ARM HALO MOUNT	235'		
(1) DB225-74	235'		
(3) 10' LIGHTWEIGHT T-FRAME	200'		
(9) 2" X 60" SCH. 40	200'		
(9) DB980H120E-M & EKL	200'		
(3) 10' LIGHTWEIGHT T-FRAME	190'		
(9) 2" X 60" SCH. 40	190'		
(9) DB980H120E-M & EKL	190'		
(3) 10' LIGHTWEIGHT T-FRAME	180'		
(9) 2" X 60" SCH. 40	180'		
(9) DB980H120E-M & EKL	180'		
(3) 15' T-FRAME	170'		
(9) 2" X 60" SCH. 40	170'		
(3) ALCATEL-LUCENT ALU TD-RRH8X20	170'		
(3) ALCATEL-LUCENT RRH2X60 (800 MHZ)	170'		
(3) ALCATEL-LUCENT RRH4X45-1900	170'		
(3) APXVSPP18-C-A20	170'		
(3) APXVTM14-C-120	170'		
(15) 2" X 72" SCH. 40	160'		
(3) 800 10121	160'		
(3) AM-X-CD-16-65-00T-RET	160'		
(3) COMMSCOPE MTC3615 SECTOR FRAME	160'		
(6) ERICSSON RRUS-32	160'		
(3) ERICSSON RRUS11	160'		
(6) POWERWAVE LGP2140X TMA	160'		
(3) QUINTEL QS66512-3	160'		
(1) RAYCAP DC6-48-60-18-8F	160'		
(3) APXV18-206517S-C	150'		
(3) 12' V FRAME	140'		
(12) 2" X 72" SCH. 40	140'		
(3) ALCALTEL-LUCENT RRH2X40-AWS	140'		
(3) BXA-171063-12BF-EDIN-X	140'		
(3) HBX-6517DS-VTM	140'		
(3) LNX-6514DS-T4M	140'		
(3) LNX-6514DS-VTM	140'		
(1) RFS DB-B1-6C-12AB-0ZDISTRIBUTION BOX	140'		



NOV 1 8 2016

William R. Heiden III, CT P.E. #23038

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
@A	<ACBATCH>		SKK	11/15/2016

REVISION HISTORY

SITE

SEYMOUR, CT
VERTICAL RESOURCES GROUP
U 28 X 280'

DESCRIPTION

Tower View Page 2

STRUCTURE APPROVAL
SKK 11/15/2016

FOUNDATION APPROVAL

valmont STRUCTURES
1-877-467-4763 Plymouth, IN
1-800-547-2151 Salem, OR

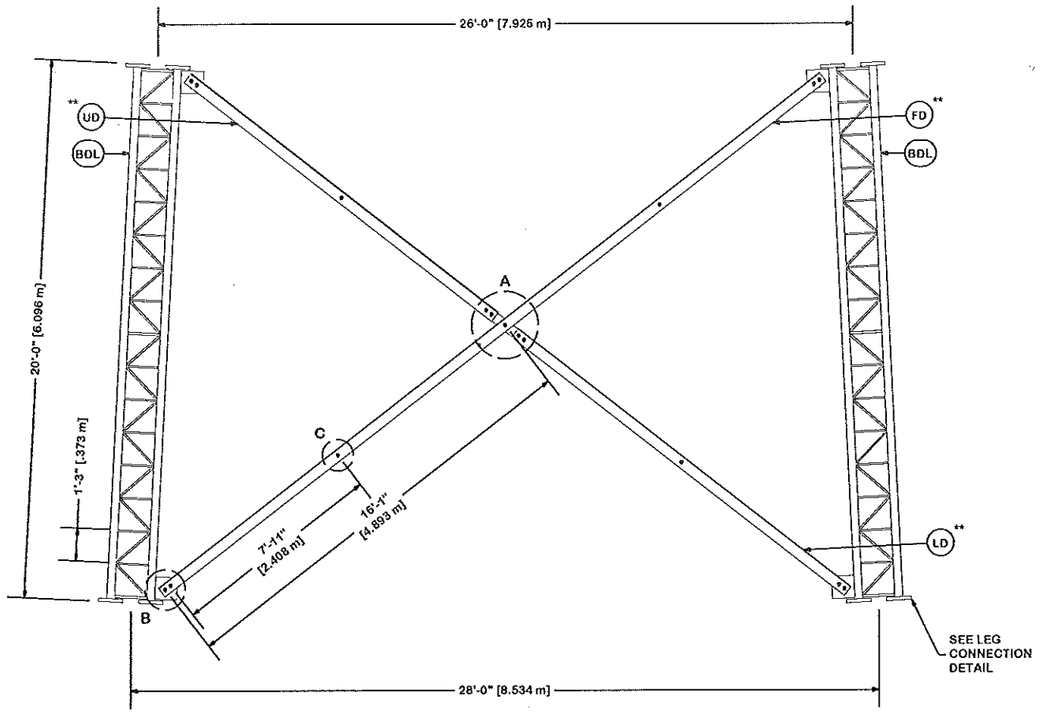
ENG. FILE NO. 185135

DWG. NO. 270438T

ORIENT LEGS WITH P/N STAMP TOWARD BOTTOM OF SECTION

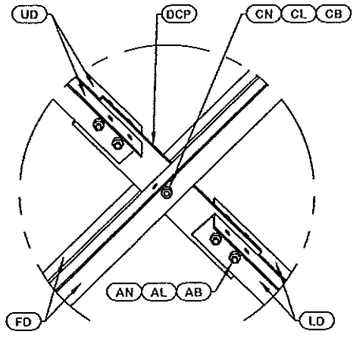
** DIAGONAL ANGLES MUST BE INSTALLED WITH THE NON-BOLTED FACE UP, ⊤

* STITCH BOLT SPACING SHOWN IS MAX. FOR ALL ANGLES

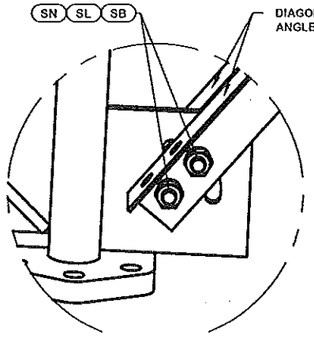


PARTS LIST

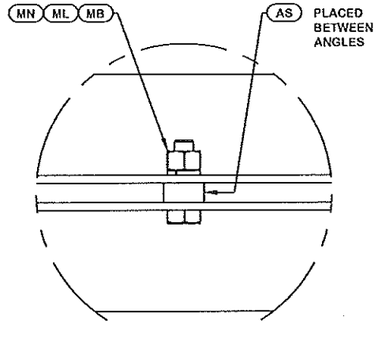
ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	112740	#16B BD LEG BASE 3" LEGS 20'	2104.000	6312.000
UD	6	112873	DIAG BRACE 5/16" X 3-1/2" X 3-1/2" 14'- 5-17/32"	107.110	642.660
LD	6	112869	DIAG BRACE 5/16" X 3-1/2" X 3-1/2" 15'- 7-7/8" LO	116.030	696.180
FD	6	112799	U-28 DIAG 373 29/32" 3-1/2" X 3-1/2" X 5/16"LONG (	233.000	1398.000
AS	24	104293	MID-DIAGONAL SPACER 1-1/16" HOLE 1/2" THICK	0.440	10.560
AL/SL/ML	36	312223	1" GALVANIZED LOCKWASHER	0.080	2.880
AB/SB/MB	36	222018	1"-8 X 3-1/2" A-325 BOLT WITH 1-3/4" THREAD	1.090	39.240
AN/SN/MN	36	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	15.480
DCP	3	112756	DIAGONAL BRACE CENTER PLATE (1" THICK); USE UP TO	28.500	85.500
AN	15	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	6.450
AB	15	222018	1"-8 X 3-1/2" A-325 BOLT WITH 1-3/4" THREAD	1.090	16.350
AL	15	312223	1" GALVANIZED LOCKWASHER	0.080	1.200
			Total Wt	9226.50 lb [4188.91 kg]	



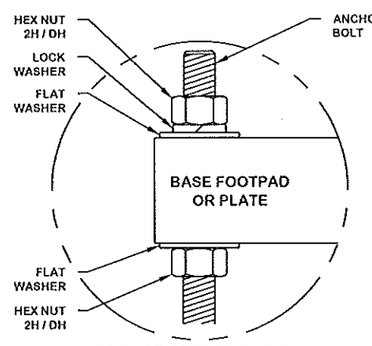
DETAIL A
ANGLE INTERSECTION CONNECTION



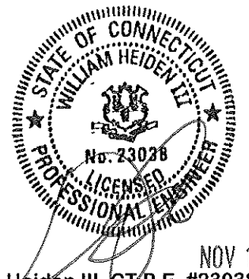
DETAIL B
END SIDE PLATE ANGLE CONNECTION



DETAIL C
STITCH BOLT CONNECTION



ANCHOR BOLT ASSY. (TYP)
SEE FOUNDATION DRAWING FOR DETAILS



NOV 16 2016

William R. Heiden III, CT P.E. #23038

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
@A	<ACBATCH>		SKK	11/15/2016

REVISION HISTORY

SITE

SEYMOUR, CT
VERTICAL RESOURCES GROUP
U 28 X 280'

DESCRIPTION

SECTION U-28.0 (0' - 20' ELEVATION)

STRUCTURE APPROVAL
SKK 11/15/2016

FOUNDATION APPROVAL

valmont STRUCTURES
1-877-467-4763 Plymouth, IN
1-800-547-2151 Salem, OR

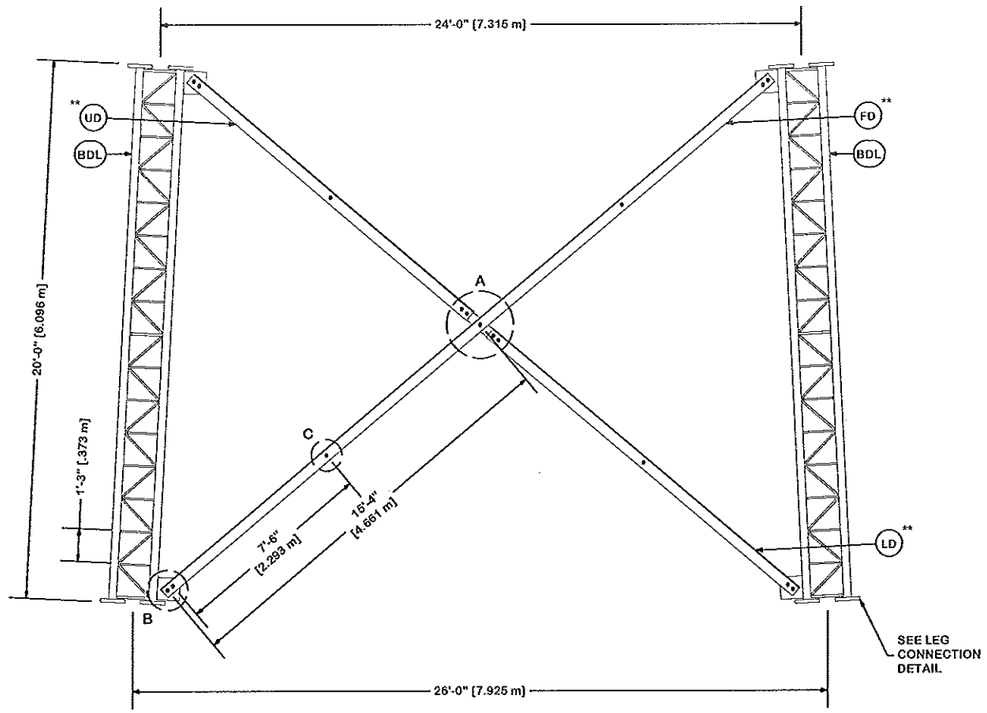
ENG. FILE NO.
185135

DWG. NO.
270438T

ORIENT LEGS WITH P/N STAMP TOWARD BOTTOM OF SECTION

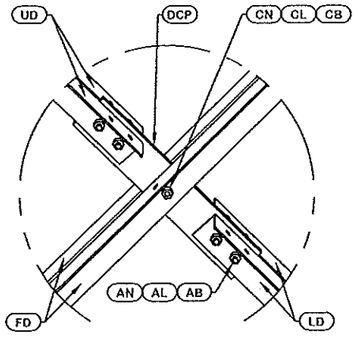
** DIAGONAL ANGLES MUST BE INSTALLED WITH THE NON-BOLTED FACE UP,

* STITCH BOLT SPACING SHOWN IS MAX. FOR ALL ANGLES

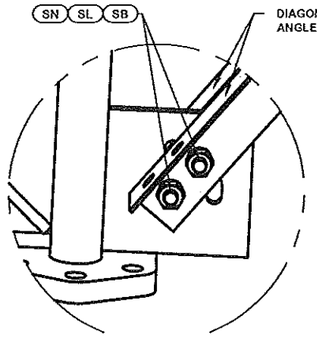


PARTS LIST

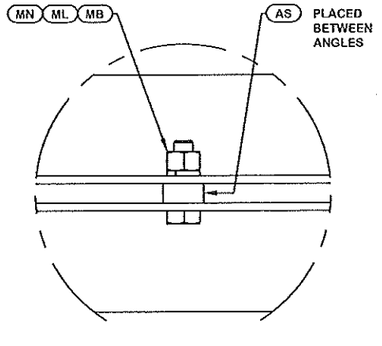
ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	112745	#18 BD LEG 3" LEG 20' 12 BOLT	2040.000	6120.000
UD	6	112881	DIAG BRACE 5/16" X 3-1/2" X 3-1/2" 13'- 7-15/16"	101.150	606.900
LD	6	112877	DIAG BRACE 5/16" X 3-1/2" X 3-1/2" 14'- 10-25/32"	110.380	662.280
FD	6	112803	U-26 DIAG 355 7/32" 3-1/2" X 3-1/2" X 5/16" LONG (	213.000	1278.000
AL/SL/ML	36	312223	1" GALVANIZED LOCKWASHER	0.080	2.880
AB/SB/MB	36	225017	1"-8 X 3-1/2" A-325T BOLT WITH FULL THREAD	1.090	39.240
AN/SN/MN	36	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	15.480
AS	12	153239	5/8" X 2" X 2" SPACER W/ 1 1/16" HOLE	0.550	6.600
AL	15	312223	1" GALVANIZED LOCKWASHER	0.080	1.200
AB	15	225017	1"-8 X 3-1/2" A-325T BOLT WITH FULL THREAD	1.090	16.350
DCP	3	153241	DIAGONAL BRACE CENTER PLATE (5/8" THICK)	20.140	60.420
AN	15	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	6.450
LCB	36	311299	1-1/4"-7 X 5-1/2" A-325 BOLT WITH 2" THREAD	2.530	91.080
LCF	36	312282	1-1/4" GALVANIZED FLAT WASHER (F436)	0.130	4.680
LCN	36	312281	1-1/4"-7 MECH. GALVANIZED LOCKNUT	0.720	25.920
			Total Wt	8937.48 lb [4057.70kg]	



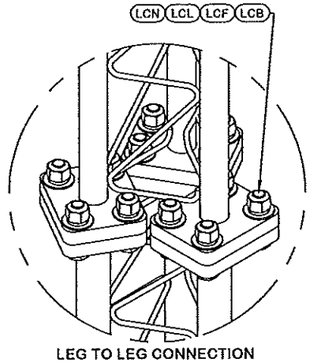
DETAIL A
ANGLE INTERSECTION CONNECTION



DETAIL B
END SIDE PLATE ANGLE CONNECTION



DETAIL C
STITCH BOLT CONNECTION



LEG TO LEG CONNECTION
(SIDE PLATES NOT SHOWN FOR CLARITY)

STATE OF CONNECTICUT
WILLIAM HEIDEN III
No. 23038
LICENSED PROFESSIONAL ENGINEER

NOV 18 2016

William R. Heiden III, CT P.E. #23038

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
@A	<ACBATCH>		SKK	11/15/2016

REVISION HISTORY

SITE
SEYMOUR, CT
VERTICAL RESOURCES GROUP
U 28 X 280'

DESCRIPTION
SECTION U-26.0 (20' - 40' ELEVATION)

STRUCTURE APPROVAL
SKK 11/15/2016

FOUNDATION APPROVAL

valmont STRUCTURES
1-877-467-4763 Plymouth, IN
1-800-547-2151 Salem, OR

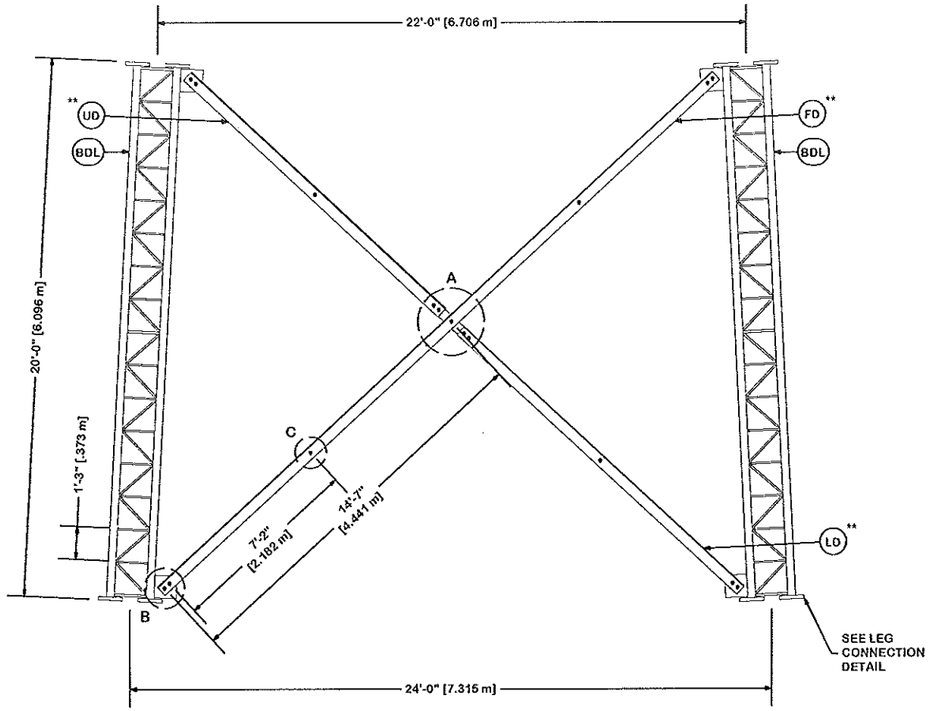
ENG. FILE NO. 185135

DWG. NO. 270438T

ORIENT LEGS WITH P/N STAMP
TOWARD BOTTOM OF SECTION

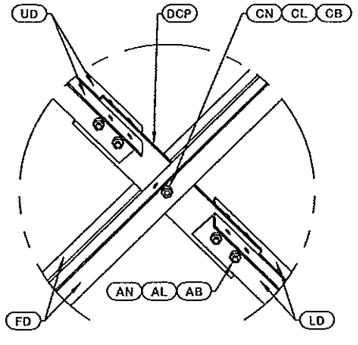
** DIAGONAL ANGLES MUST BE
INSTALLED WITH THE NON-BOLTED
FACE UP, ⊤

* STITCH BOLT SPACING SHOWN
IS MAX. FOR ALL ANGLES

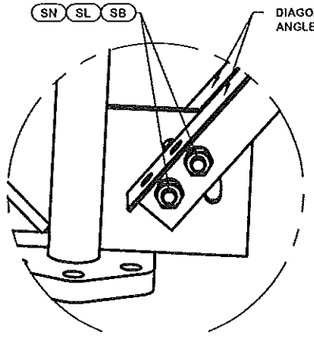


PARTS LIST

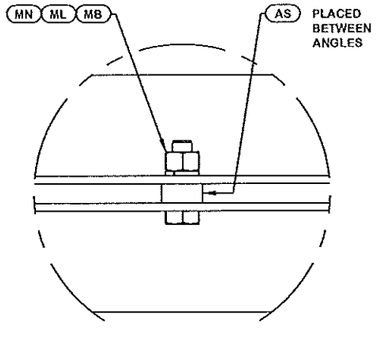
ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	112744	#18 BD LEG 2-3/4" LEG 20' 12 BOLT	1804.000	5412.000
UD	6	112889	DIAG BRACE 5/16" X 3-1/2" X 3-1/2" 12'- 10-5/8" L	95.360	572.160
LD	6	112885	DIAG BRACE 5/16" X 3-1/2" X 3-1/2" 14'- 2-1/16" L	104.960	629.760
FD	6	112807	U-22 DIAG 337 3/16" 3 1/2" X 3 1/2" X 5/16" LONG (	202.000	1212.000
AL/SL/ML	36	312223	1" GALVANIZED LOCKWASHER	0.080	2.880
AB/SB/MB	36	225017	1"-8 X 3-1/2" A-325T BOLT WITH FULL THREAD	1.090	39.240
AN/SN/MN	36	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	15.480
AS	12	153239	5/8" X 2" X 2" SPACER W/ 1 1/16" HOLE	0.550	6.600
AL	15	312223	1" GALVANIZED LOCKWASHER	0.080	1.200
AB	15	225017	1"-8 X 3-1/2" A-325T BOLT WITH FULL THREAD	1.090	16.350
DCP	3	153241	DIAGONAL BRACE CENTER PLATE (5/8" THICK)	20.140	60.420
AN	15	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	6.450
LCB	36	311299	1-1/4"-7 X 5-1/2" A-325 BOLT WITH 2" THREAD	2.530	91.080
LCF	36	312282	1-1/4" GALVANIZED FLAT WASHER (F436)	0.130	4.680
LCN	36	312281	1-1/4"-7 MECH. GALVANIZED LOCKNUT	0.720	25.920
			Total Wt	8096.22 lb [3675.76kg]	



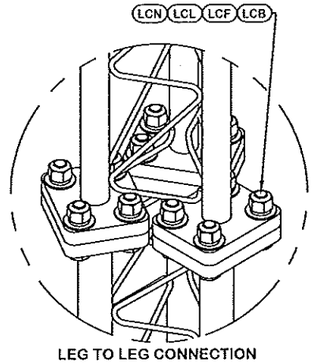
DETAIL A
ANGLE INTERSECTION CONNECTION



DETAIL B
END SIDE PLATE ANGLE CONNECTION



DETAIL C
STITCH BOLT CONNECTION



LEG TO LEG CONNECTION
(SIDE PLATES NOT SHOWN FOR CLARITY)

STATE OF CONNECTICUT
WILLIAM HEIDEN III
No. 23038
LICENSED PROFESSIONAL ENGINEER

NOV 18 2016

William R. Heiden III, CT P.E. #23038

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
@A	<ACBATCH>		SKK	11/15/2016

REVISION HISTORY

SITE
SEYMOUR, CT
VERTICAL RESOURCES GROUP
U 28 X 280'

DESCRIPTION
SECTION U-24.0 (40' - 60' ELEVATION)

STRUCTURE APPROVAL
SKK 11/15/2016

FOUNDATION APPROVAL

valmont STRUCTURES
1-877-467-4763 Plymouth, IN
1-800-547-2151 Salem, OR

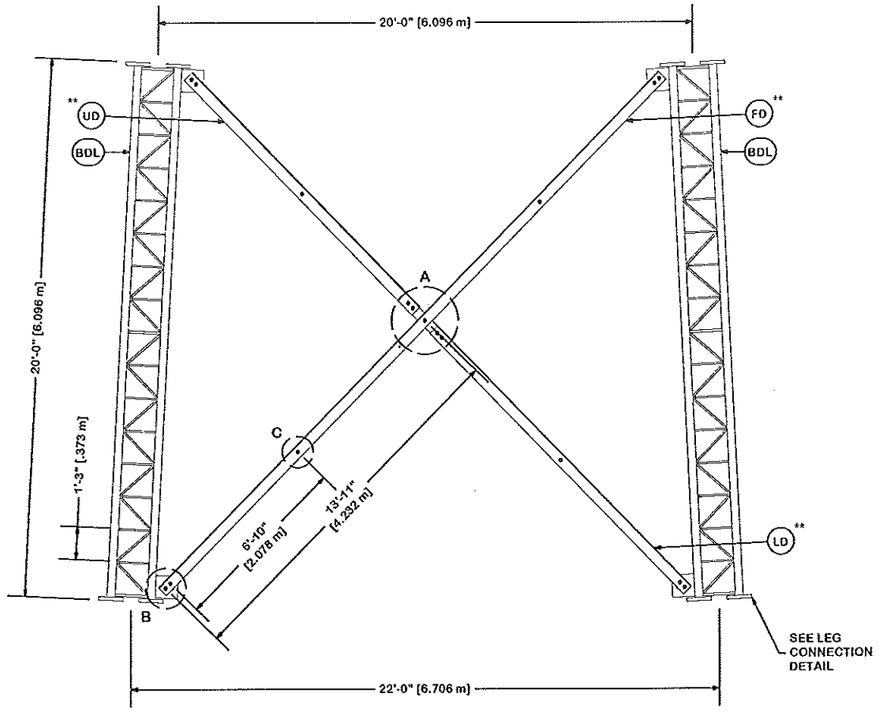
ENG. FILE NO.
185135

DWG. NO.
270438T

ORIENT LEGS WITH P/N STAMP TOWARD BOTTOM OF SECTION

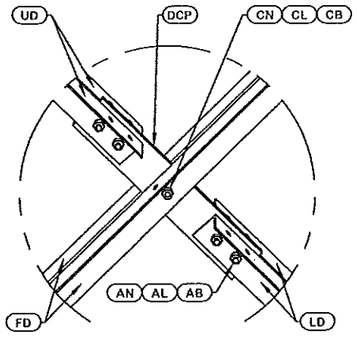
** DIAGONAL ANGLES MUST BE INSTALLED WITH THE NON-BOLTED FACE UP,

* STITCH BOLT SPACING SHOWN IS MAX. FOR ALL ANGLES

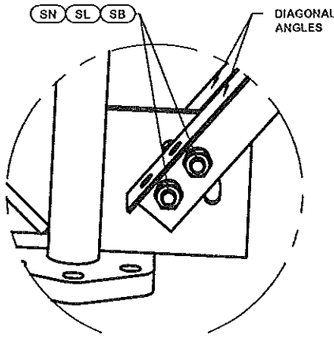


PARTS LIST

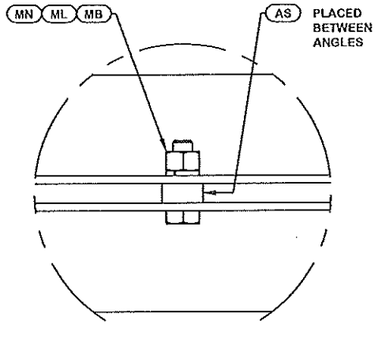
ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	112744	#18 BD LEG 2-3/4" LEG 20' 12 BOLT	1804.000	5412.000
UD	6	112899	DIAG BRACE 5/16" X 3-1/2" X 3-1/2" 12'- 1-5/8" LO	89.760	538.560
LD	6	112894	DIAG BRACE 5/16" X 3-1/2" X 3-1/2" 13'- 5-7/8" LO	99.870	599.220
FD	6	112812	U-22 DIAG 320" 3-1/2" X 3-1/2" X 5/16" LONG (A36)	192.000	1152.000
AL/SL/ML	36	312223	1" GALVANIZED LOCKWASHER	0.080	2.880
AB/SB/MB	36	225017	1"-8 X 3-1/2" A-325T BOLT WITH FULL THREAD	1.090	39.240
AN/SN/MN	36	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	15.480
AS	12	153239	5/8" X 2" X 2" SPACER W/ 1 1/16" HOLE	0.550	6.600
AL	15	312223	1" GALVANIZED LOCKWASHER	0.080	1.200
AB	15	225017	1"-8 X 3-1/2" A-325T BOLT WITH FULL THREAD	1.090	16.350
DCP	3	153241	DIAGONAL BRACE CENTER PLATE (5/8" THICK)	20.140	60.420
AN	15	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	6.450
LCB	36	311299	1-1/4"-7 X 5-1/2" A-325 BOLT WITH 2" THREAD	2.530	91.080
LCF	36	312282	1-1/4" GALVANIZED FLAT WASHER (F436)	0.130	4.680
LCN	36	312281	1-1/4"-7 MECH. GALVANIZED LOCKNUT	0.720	25.920
			Total Wt	7972.08 lb (3619.40kg)	



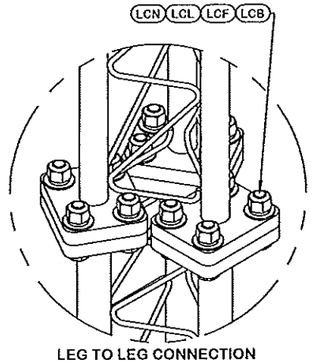
DETAIL A
ANGLE INTERSECTION CONNECTION



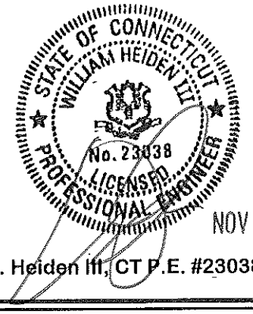
DETAIL B
END SIDE PLATE ANGLE CONNECTION



DETAIL C
STITCH BOLT CONNECTION



LEG TO LEG CONNECTION
(SIDE PLATES NOT SHOWN FOR CLARITY)



NOV 18 2016

William R. Heiden III, CT P.E. #23038

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
@A	<ACBATCH>		SKK	11/15/2016

REVISION HISTORY

SITE
SEYMOUR, CT
VERTICAL RESOURCES GROUP
U 28 X 280'

DESCRIPTION
SECTION U-22.0 (60' - 80' ELEVATION)

STRUCTURE APPROVAL
SKK 11/15/2016

FOUNDATION APPROVAL

valmont STRUCTURES
1-877-467-4763 Plymouth, IN
1-800-547-2151 Salem, OR

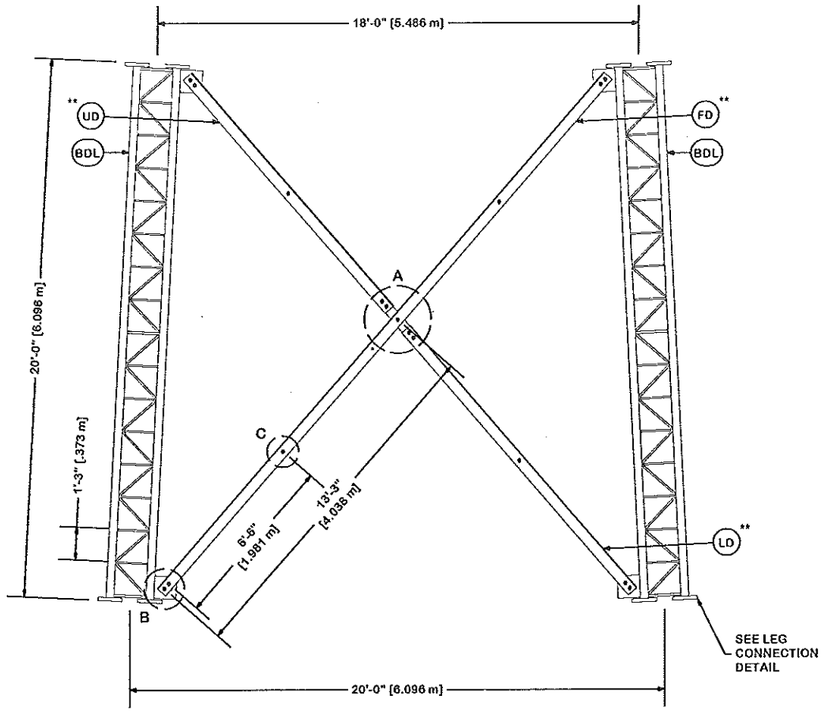
ENG. FILE NO.
185135

DWG. NO.
270438T

ORIENT LEGS WITH P/N STAMP
TOWARD BOTTOM OF SECTION

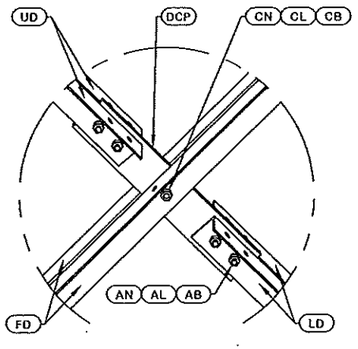
** DIAGONAL ANGLES MUST BE
INSTALLED WITH THE NON-BOLTED
FACE UP,

* STITCH BOLT SPACING SHOWN
IS MAX. FOR ALL ANGLES

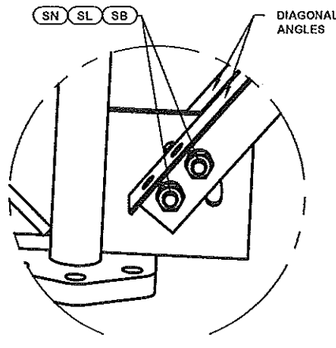


PARTS LIST

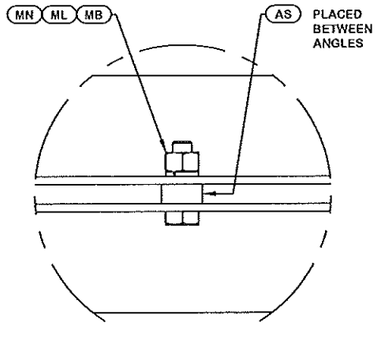
ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	112743	#18 BD LEG 2-1/2" LEGS 20' 12 BOLT	1588.000	4764.000
UD	6	112909	DIAG BRACE 5/16" X 3-1/2" X 3-1/2" 11'- 4-31/32"	84.390	506.340
LD	6	112904	DIAG BRACE 5/16" X 3-1/2" X 3-1/2" 12'- 10-7/32"	95.110	570.660
FD	6	112817	U-20 DIAG 303 11/16" 3-1/2" X 3-1/2" X 5/16"LONG (	182.000	1092.000
AL/SL/ML	36	312223	1" GALVANIZED LOCKWASHER	0.080	2.880
AB/SB/MB	36	226017	1"-8 X 3-1/2" A-325T BOLT WITH FULL THREAD	1.090	39.240
AN/SN/MN	36	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	15.480
AS	12	153239	5/8" X 2" X 2" SPACER W/ 1 1/16" HOLE	0.550	6.600
AL	15	312223	1" GALVANIZED LOCKWASHER	0.080	1.200
AB	15	226017	1"-8 X 3-1/2" A-325T BOLT WITH FULL THREAD	1.090	16.350
DCP	3	153241	DIAGONAL BRACE CENTER PLATE (5/8" THICK)	20.140	60.420
AN	15	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	6.450
LCB	36	311299	1-1/4"-7 X 5-1/2" A-325 BOLT WITH 2" THREAD	2.530	91.080
LCF	36	312282	1-1/4" GALVANIZED FLAT WASHER (F436)	0.130	4.680
LCN	36	312281	1-1/4"-7 MECH. GALVANIZED LOCKNUT	0.720	25.920
			Total Wt		7203.30 lb [3270.36kg]



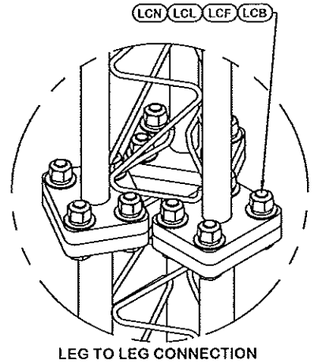
DETAIL A
ANGLE INTERSECTION CONNECTION



DETAIL B
END SIDE PLATE ANGLE CONNECTION



DETAIL C
STITCH BOLT CONNECTION



LEG TO LEG CONNECTION
(SIDE PLATES NOT SHOWN FOR CLARITY)

NOV 18 2016

William R. Heiden III, CT P.E. #23038

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
@A	<ACBATCH>		SKK	11/15/2016

REVISION HISTORY

SITE
SEYMOUR, CT
VERTICAL RESOURCES GROUP
U 28 X 280'

DESCRIPTION
SECTION U-20.0 (80' - 100' ELEVATION)

STRUCTURE APPROVAL
SKK 11/15/2016

FOUNDATION APPROVAL

valmont STRUCTURES
1-877-467-4763 Plymouth, IN
1-800-547-2151 Salem, OR

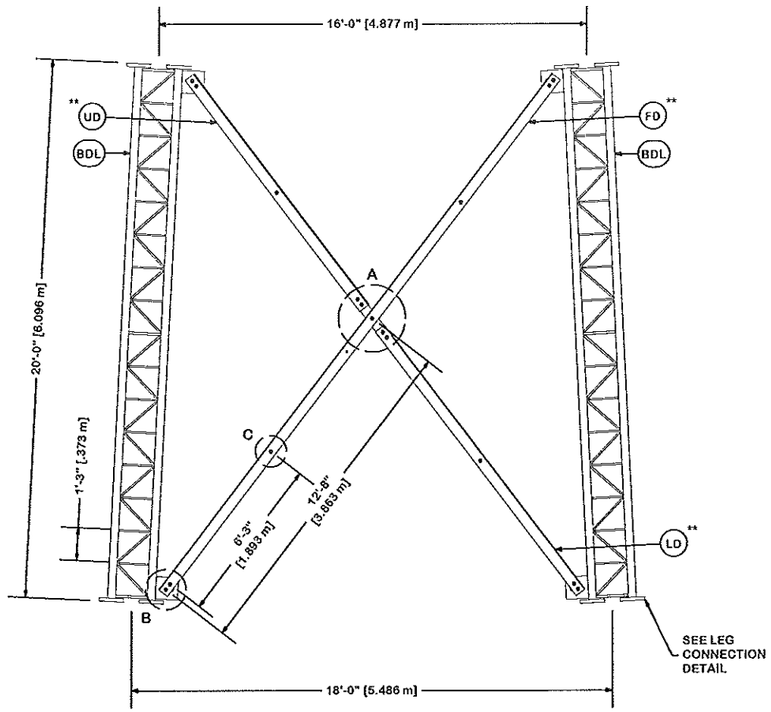
ENG. FILE NO.
185135

DWG. NO.
270438T

ORIENT LEGS WITH P/N STAMP TOWARD BOTTOM OF SECTION

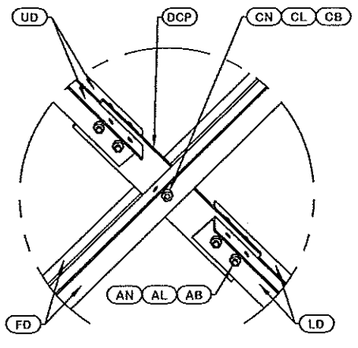
** DIAGONAL ANGLES MUST BE INSTALLED WITH THE NON-BOLTED FACE UP,

* STITCH BOLT SPACING SHOWN IS MAX. FOR ALL ANGLES

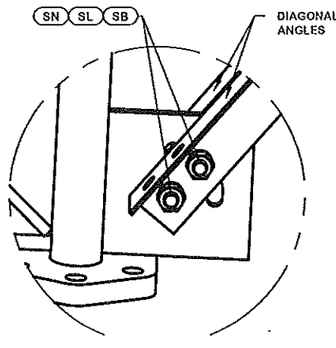


PARTS LIST

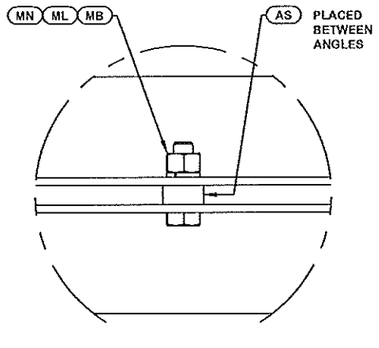
ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	112743	#18 BD LEG 2-1/2" LEGS 20' 12 BOLT	1588.000	4764.000
UD	6	114366	DIAG BRACE 5/16" X 3-1/2" X 3-1/2" 10'- 8-21/32"	79.220	475.320
LD	6	114367	DIAG BRACE 5/16" X 3-1/2" X 3-1/2" 12'- 3-11/32"	90.840	545.040
FD	6	114362	U-18 DIAG 288 1/2" 3 1/2" X 3 1/2" X 5/16 LONG (A-	173.000	1038.000
AL/SL/ML	36	312223	1" GALVANIZED LOCKWASHER	0.080	2.880
AB/SB/MB	36	225017	1"-8 X 3-1/2" A-325T BOLT WITH FULL THREAD	1.090	39.240
AN/SN/MN	36	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	15.480
AS	12	153239	5/8" X 2" X 2" SPACER W/ 1 1/16" HOLE	0.550	6.600
AL	15	312223	1" GALVANIZED LOCKWASHER	0.080	1.200
AB	15	225017	1"-8 X 3-1/2" A-325T BOLT WITH FULL THREAD	1.090	16.350
DCP	3	153241	DIAGONAL BRACE CENTER PLATE (5/8" THICK)	20.140	60.420
AN	15	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	6.450
LCB	36	311299	1-1/4"-7 X 5-1/2" A-325 BOLT WITH 2" THREAD	2.530	91.080
LCF	36	312282	1-1/4" GALVANIZED FLAT WASHER (F436)	0.130	4.680
LCN	36	312281	1-1/4"-7 MECH. GALVANIZED LOCKNUT	0.720	25.920
			Total Wt	7092.66 lb [3220.13 kg]	



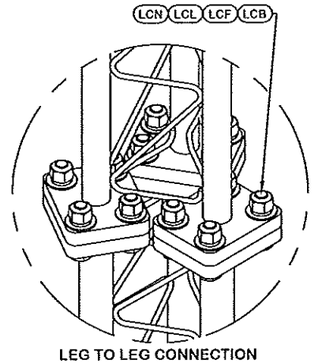
DETAIL A
ANGLE INTERSECTION CONNECTION



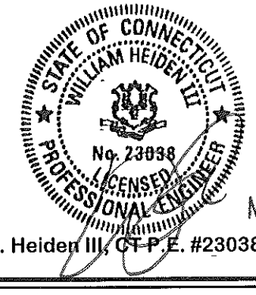
DETAIL B
END SIDE PLATE ANGLE CONNECTION



DETAIL C
STITCH BOLT CONNECTION



LEG TO LEG CONNECTION
(SIDE PLATES NOT SHOWN FOR CLARITY)



NOV 1 8 2016

William R. Heiden III, CT P.E. #23038

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
@A	<ACBATCH>		SKK	11/15/2016

REVISION HISTORY

SITE
SEYMOUR, CT
VERTICAL RESOURCES GROUP
U 28 X 280'

DESCRIPTION
SECTION U-18.0 (100' - 120' ELEVATION)

STRUCTURE APPROVAL
SKK 11/15/2016

FOUNDATION APPROVAL

valmont STRUCTURES
1-877-467-4763 Plymouth, IN
1-800-547-2151 Salem, OR

ENG. FILE NO.
185135

DWG. NO.
270438T

ORIENT LEGS WITH P/N STAMP
TOWARD BOTTOM OF SECTION

ORIENT ANGLES WITH STAMPED
END TOWARD TOP OF SECTION

** DIAGONAL ANGLES MUST BE INSTALLED
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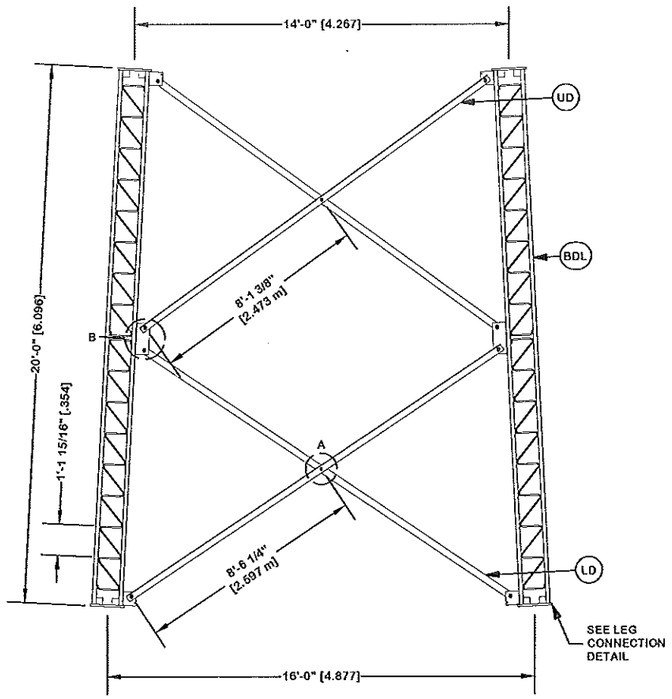
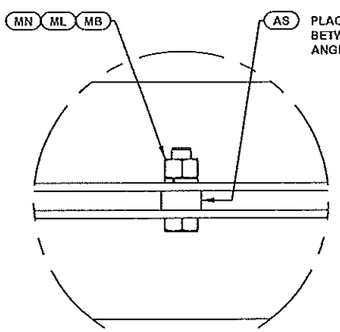
THIS MAY BE ON THE OPPOSITE SIDE OF THE
SIDE PLATE THAN WHAT IS SHOWN IN THE DETAIL.

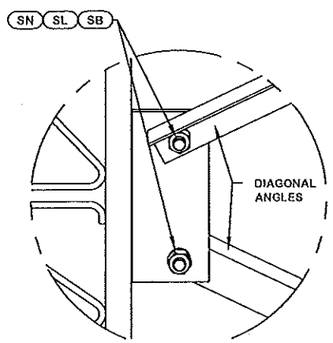


PARTS LIST

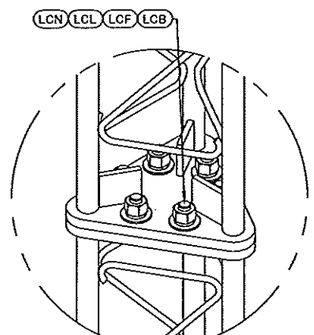
ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	105220-1	#12 LEG SECTION 20'-0" LONG, MODEL "U" 2 1/4" LEG	1106.500	3319.500
LD	6	128224	DIAG BRACE 5/16" X 3-1/2" X 3-1/2" 16'-8-11/32"	120.000	720.000
AS	6	104291	SPACER 1/2" THICK 13/16" HOLE	0.500	3.000
MN	6	312502	3/4"-10 HOT DIPPED GALVANIZED NUT	0.190	1.140
ML	6	312153	3/4" GALVANIZED LOCKWASHER	0.030	0.180
MB	6	160427	3/4"-10 X 3" A-325T BOLT WITH FULL THREAD	0.470	2.820
SB	24	311288	1-1/4"-7 X 2-3/4" A-325T BOLT WITH FULL THREAD	1.590	38.160
SL	24	312283	1-1/4" GALVANIZED LOCKWASHER	0.150	3.600
SN	24	312281	1-1/4"-7 MECH. GALVANIZED LOCKNUT	0.720	17.280
UD	6	128223	DIAG BRACE 5/16" X 3-1/2" X 3-1/2" 15'-10-9/16"	114.000	684.000
NOT SHOWN	3	128693	TRANSITION PLATE - 18" TO 12" BREAKDOWN LEG (1-1/2	186.350	559.050
TPB	36	311299	1-1/4"-7 X 5-1/2" A-325 BOLT WITH 2" THREAD	2.530	91.080
TPF	36	312282	1-1/4" GALVANIZED FLAT WASHER (F436)	0.130	4.680
TPL	36	312283	1-1/4" GALVANIZED LOCKWASHER	0.150	5.400
TPN	36	312507	1-1/4"-7 HOT DIPPED GALVANIZED NUT	0.730	26.280
LCB	18	222021	1-1/4"-7 X 5" A-325 BOLT WITH 2" THREAD	2.360	42.480
LCF	18	312282	1-1/4" GALVANIZED FLAT WASHER (F436)	0.130	2.340
LCL	18	312283	1-1/4" GALVANIZED LOCKWASHER	0.150	2.700
LCN	18	312507	1-1/4"-7 HOT DIPPED GALVANIZED NUT	0.730	13.140
			Total Wt	5536.83 lb [2513.77kg]	



DETAIL A
ANGLE INTERSECTION CONNECTION



DETAIL B
MID SIDE PLATE ANGLE CONNECTION



LEG TO LEG CONNECTION
(SIDE PLATES NOT SHOWN FOR CLARITY)

NOV 18 2016

William R. Heiden III, CT P.E. #23038

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
@A	<ACBATCH>		SKK	11/15/2016

REVISION HISTORY

SITE
SEYMOUR, CT
VERTICAL RESOURCES GROUP
U 28 X 280'

DESCRIPTION
SECTION U-16.0 (120' - 140' ELEVATION)

STRUCTURE APPROVAL
SKK 11/15/2016

FOUNDATION APPROVAL

valmont STRUCTURES
1-877-467-4763 Plymouth, IN
1-800-547-2151 Salem, OR

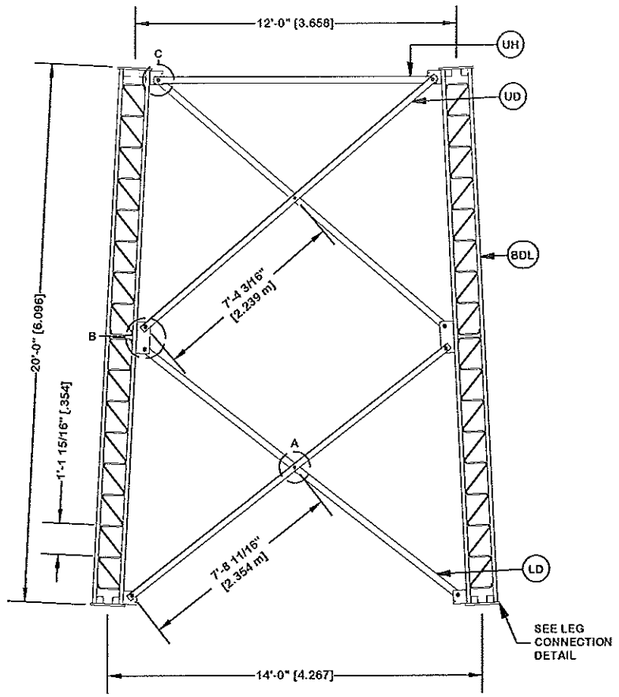
ENG. FILE NO.
185135

DWG. NO.
270438T

ORIENT LEGS WITH P/N STAMP
TOWARD BOTTOM OF SECTION

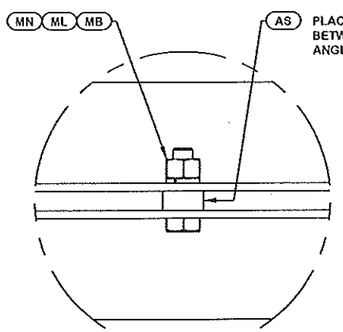
ORIENT ANGLES WITH STAMPED
END TOWARD TOP OF SECTION

** DIAGONAL ANGLES MUST BE INSTALLED WITH THE NON-BOLTED FACE UP, THIS MAY BE ON THE OPPOSITE SIDE OF THE SIDE PLATE THAN WHAT IS SHOWN IN THE DETAIL.

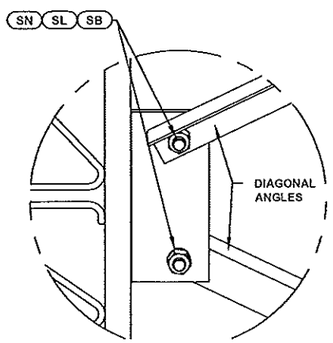


PARTS LIST

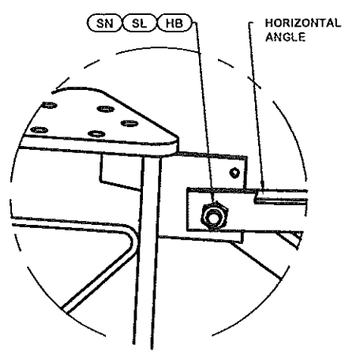
ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	105220-1	#12 LEG SECTION 20'-0" LONG, MODEL "U" 2 1/4" LEG	1106.500	3319.500
LD	6	113374	DIAG BRACE 5/16" X 3-1/2" X 3-1/2" 15'- 1-1/32" L	108.600	651.600
AS	6	104291	SPACER 1/2" THICK 13/16" HOLE	0.500	3.000
MN	6	312502	3/4"-10 HOT DIPPED GALVANIZED NUT	0.190	1.140
ML	6	312153	3/4" GALVANIZED LOCKWASHER	0.030	0.180
MB	6	160427	3/4"-10 X 3" A-325T BOLT WITH FULL THREAD	0.470	2.820
SB	24	311288	1-1/4"-7 X 2-3/4" A-325T BOLT WITH FULL THREAD	1.590	38.160
SL	24	312283	1-1/4" GALVANIZED LOCKWASHER	0.150	3.600
SN	24	312281	1-1/4"-7 MECH. GALVANIZED LOCKNUT	0.720	17.280
UD	6	113373	DIAG BRACE 5/16" X 3-1/2" X 3-1/2" 14'- 3-13/16"	103.000	618.000
UH	3	113420	HORIZONTAL BRACE 10'-4 1/32" LONG (A-36)	133.460	400.380
HB	6	156674	1-1/4"-7 X 3-1/4" A-325 BOLT WITH 2" THREAD	1.710	10.260
LCB	18	311295	1-1/4"-7 X 4-1/2" A-325 BOLT WITH 2" THREAD	2.190	39.420
LCF	18	312282	1-1/4" GALVANIZED FLAT WASHER (F436)	0.130	2.340
LCN	18	312281	1-1/4"-7 MECH. GALVANIZED LOCKNUT	0.720	12.960
			Total Wt	5120.64 lb [2324.82kg]	



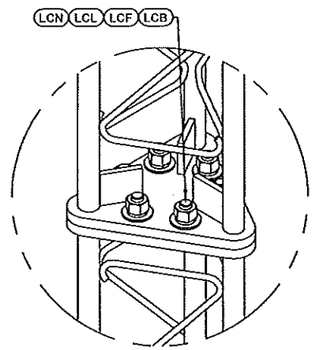
DETAIL A
ANGLE INTERSECTION CONNECTION



DETAIL B
MID SIDE PLATE ANGLE CONNECTION



DETAIL C
HORIZONTAL CONNECTION



LEG TO LEG CONNECTION
(SIDE PLATES NOT SHOWN FOR CLARITY)

NOV 1 8 2016

William R. Heiden III, CT P.E. #23038

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
@A	<ACBATCH>		SKK	11/15/2016

REVISION HISTORY

SITE
SEYMOUR, CT
VERTICAL RESOURCES GROUP
U 28 X 280'

DESCRIPTION
SECTION U-14.0 (140' - 160' ELEVATION)

STRUCTURE APPROVAL
SKK 11/15/2016

FOUNDATION APPROVAL

valmont STRUCTURES
1-877-467-4763 Plymouth, IN
1-800-547-2151 Salem, OR

ENG. FILE NO.
185135

DWG. NO.
270438T

ORIENT LEGS WITH P/N STAMP
TOWARD BOTTOM OF SECTION

ORIENT ANGLES WITH STAMPED
END TOWARD TOP OF SECTION

** DIAGONAL ANGLES MUST BE INSTALLED
WITH THE NON-BOLTED FACE UP,
THIS MAY BE ON THE OPPOSITE SIDE OF THE
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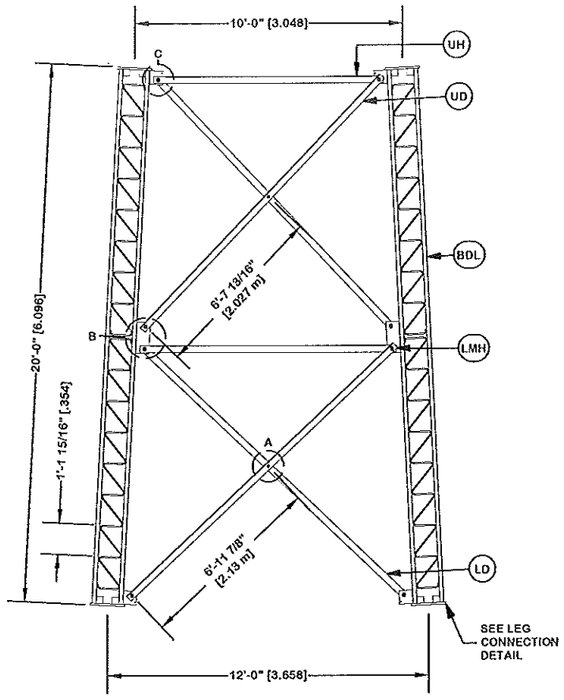
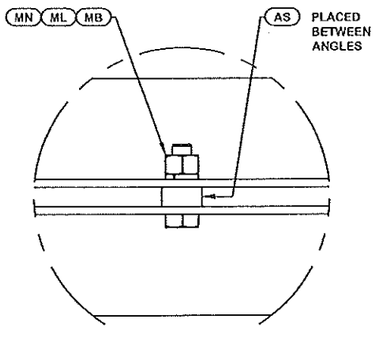
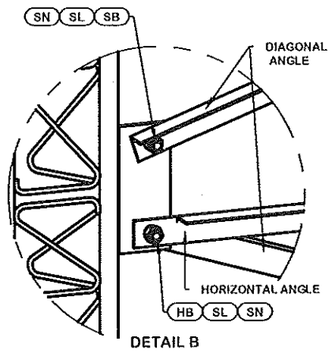


PARTS LIST

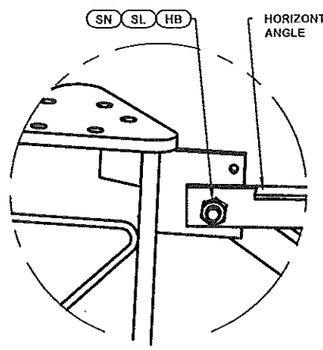
ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	105219-1	#12 LEG SECTION 20'-0" LONG, MODEL "U" 2" LEG DIA.	930.510	2791.530
LD	6	116495	DIAG BRACE 5/16" X 3" X 3" 13'- 6-31/32" LONG LOW	82.000	492.000
AS	6	104291	SPACER 1/2" THICK 13/16" HOLE	0.500	3.000
MN	6	312502	3/4"-10 HOT DIPPED GALVANIZED NUT	0.190	1.140
ML	6	312153	3/4" GALVANIZED LOCKWASHER	0.030	0.180
MB	6	160427	3/4"-10 X 3" A-325T BOLT WITH FULL THREAD	0.470	2.820
SB	24	311288	1-1/4"-7 X 2-3/4" A-325T BOLT WITH FULL THREAD	1.590	38.160
SL	24	312283	1-1/4" GALVANIZED LOCKWASHER	0.150	3.600
SN	24	312281	1-1/4"-7 MECH. GALVANIZED LOCKNUT	0.720	17.280
LMH	3	107429	HORIZONTAL BRACE 9'- 4- 1/32" LONG (A-36)	64.680	194.040
UD	6	116494	DIAG BRACE 5/16" X 3" X 3" 12'- 10-19/32" LONG UP	79.000	474.000
UH	3	107427	HORIZONTAL BRACE 8'- 4- 1/32" LONG (A-36)	57.750	173.250
LCB	18	311295	1-1/4"-7 X 4-1/2" A-325 BOLT WITH 2" THREAD	2.190	39.420
LCF	18	312282	1-1/4" GALVANIZED FLAT WASHER (F436)	0.130	2.340
LCN	18	312281	1-1/4"-7 MECH. GALVANIZED LOCKNUT	0.720	12.960
			Total Wt	4245.72 lb (1927.59kg)	



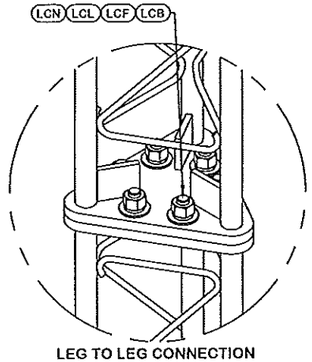
DETAIL A
ANGLE INTERSECTION CONNECTION



DETAIL B
MID SIDE PLATE ANGLE CONNECTION



DETAIL C
HORIZONTAL CONNECTION



LEG TO LEG CONNECTION
(SIDE PLATES NOT SHOWN FOR CLARITY)

NOV 18 2016

William R. Heiden III, CT P.E. #23038

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
@A	<ACBATCH>		SKK	11/15/2016

REVISION HISTORY

SITE
SEYMOUR, CT
VERTICAL RESOURCES GROUP
U 28 X 280'

DESCRIPTION
SECTION U-12.0 (160' - 180' ELEVATION)

STRUCTURE APPROVAL
SKK 11/15/2016

FOUNDATION APPROVAL

valmont STRUCTURES
1-877-467-4763 Plymouth, IN
1-800-547-2151 Salem, OR

ENG. FILE NO.
185135

DWG. NO.
270438T

ORIENT LEGS WITH P/N STAMP
TOWARD BOTTOM OF SECTION

ORIENT ANGLES WITH STAMPED
END TOWARD TOP OF SECTION

** DIAGONAL ANGLES MUST BE INSTALLED
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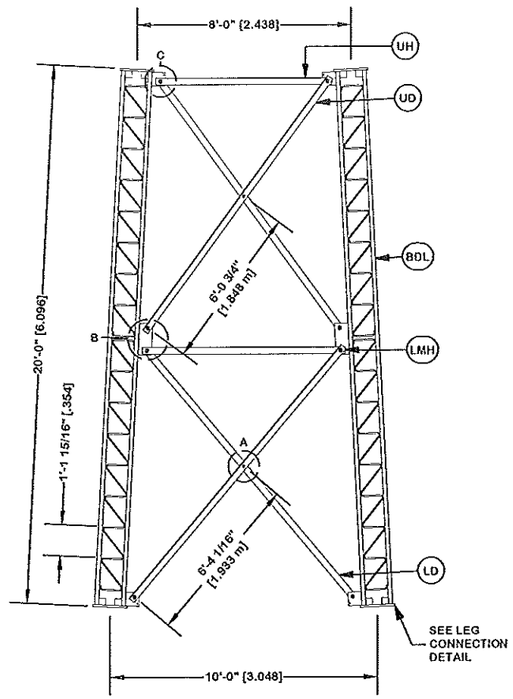
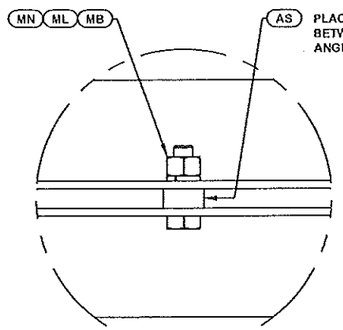
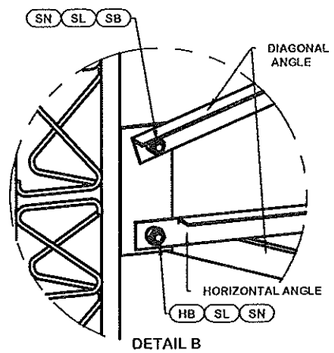


PARTS LIST

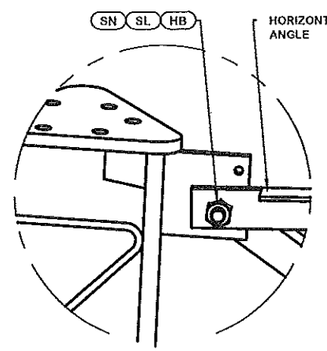
ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	105218-1	#12 LEG SECTION 20'-0" LONG, MODEL "U" 1 3/4" LEG	699.160	2097.480
LD	6	105569	ANGLE U-10 LOW 12'-3 5/8"	78.790	472.740
AS	6	104291	SPACER 1/2" THICK 13/16" HOLE	0.500	3.000
MN	6	312502	3/4"-10 HOT DIPPED GALVANIZED NUT	0.190	1.140
ML	6	312153	3/4" GALVANIZED LOCKWASHER	0.030	0.180
MB	6	160427	3/4"-10 X 3" A-325T BOLT WITH FULL THREAD	0.470	2.820
SL	24	312223	1" GALVANIZED LOCKWASHER	0.080	1.920
SN	24	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	10.320
SB	24	172265	1"-8 X 2-1/4" A-325 BOLT WITH 1-3/4" THREAD	0.840	20.160
LMH	3	105943	HORIZONTAL BRACE 7'- 7- 1/32" LONG (A-36)	23.300	69.900
HBO	6	225017	1"-8 X 3-1/2" A-325T BOLT WITH FULL THREAD	1.090	6.540
UD	6	105566	ANGLE U-10 UP 11'-8 7/32"	74.840	449.040
UH	3	105942	HORIZONTAL BRACE 6'- 7- 1/32" LONG (A-36)	20.230	60.690
HB	6	225017	1"-8 X 3-1/2" A-325T BOLT WITH FULL THREAD	1.090	6.540
LCB	18	172272	1"-8 X 4-1/4" A-325 BOLT WITH 1-3/4" THREAD	0.840	15.120
NOT SHOWN	18	312901	BUSHING 1.032" ID X 1.250" OD X 1.188" LONG (GALV	0.140	2.520
LCF	36	312222	1" GALVANIZED FLAT WASHER (F436)	0.140	5.040
LCL	18	312223	1" GALVANIZED LOCKWASHER	0.080	1.440
LCN	18	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	7.740
			Total Wt	3234.33 lb (1468.41kg)	



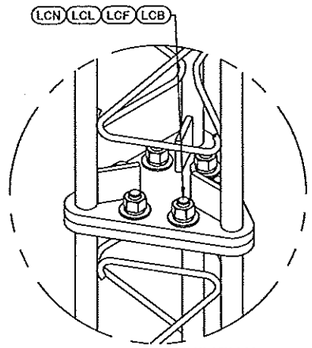
DETAIL A
ANGLE INTERSECTION CONNECTION



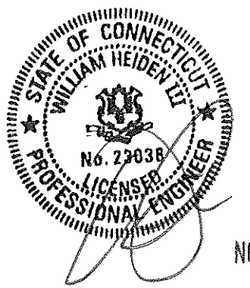
DETAIL B
MID SIDE PLATE ANGLE CONNECTION



DETAIL C
HORIZONTAL CONNECTION



LEG TO LEG CONNECTION
(SIDE PLATES NOT SHOWN FOR CLARITY)



NOV 1 8 2016

William R. Heiden III, CT P.E. #23038

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
@A	<ACBATCH>		SKK	11/15/2016

REVISION HISTORY

SITE
SEYMOUR, CT
VERTICAL RESOURCES GROUP
U 28 X 280'

DESCRIPTION
SECTION U-10.0 (180' - 200' ELEVATION)

STRUCTURE APPROVAL
SKK 11/15/2016

FOUNDATION APPROVAL

valmont STRUCTURES
1-877-467-4763 Plymouth, IN
1-800-547-2151 Salem, OR

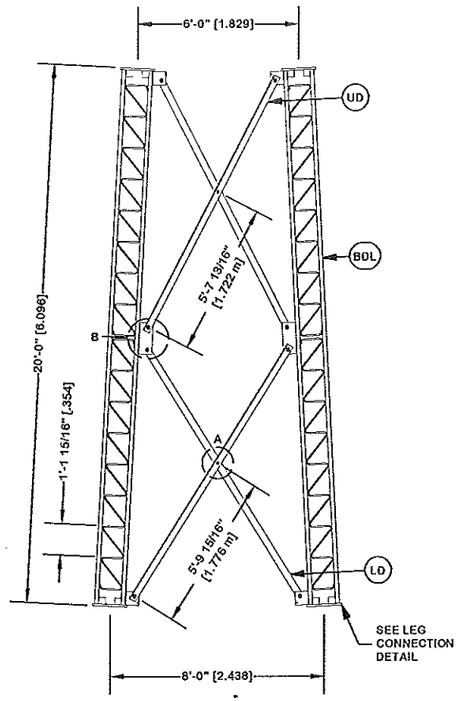
ENG. FILE NO.
185135

DWG. NO.
270438T

ORIENT LEGS WITH P/N STAMP
TOWARD BOTTOM OF SECTION

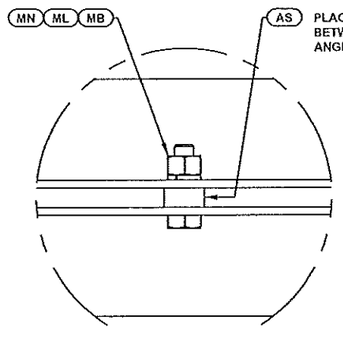
ORIENT ANGLES WITH STAMPED
END TOWARD TOP OF SECTION

** DIAGONAL ANGLES MUST BE INSTALLED
WITH THE NON-BOLTED FACE UP,
THIS MAY BE ON THE OPPOSITE SIDE OF THE
SIDE PLATE THAN WHAT IS SHOWN IN THE DETAIL.

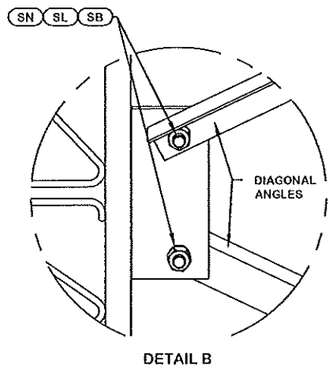


PARTS LIST

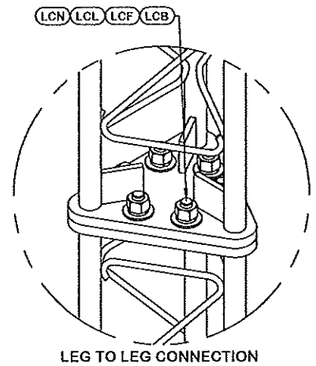
ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	105218-1	#12 LEG SECTION 20'-0" LONG, MODEL "U" 1 3/4" LEG	699.160	2097.480
LD	6	105562	ANGLE U-8 LOW 11'-1 15/32"	43.210	259.260
AS	6	104291	SPACER 1/2" THICK 13/16" HOLE	0.500	3.000
MN	6	312502	3/4"-10 HOT DIPPED GALVANIZED NUT	0.190	1.140
ML	6	312153	3/4" GALVANIZED LOCKWASHER	0.030	0.180
MB	6	160427	3/4"-10 X 3" A-325T BOLT WITH FULL THREAD	0.470	2.820
SL	24	312223	1" GALVANIZED LOCKWASHER	0.080	1.920
SN	24	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	10.320
SB	24	172265	1"-8 X 2-1/4" A-325 BOLT WITH 1-3/4" THREAD	0.840	20.160
UD	6	105559	ANGLE U-8 UP 10'-7 9/16"	41.300	247.800
LCB	18	222018	1"-8 X 3-1/2" A-325 BOLT WITH 1-3/4" THREAD	1.090	19.620
LCF	18	312222	1" GALVANIZED FLAT WASHER (F436)	0.140	2.520
LCL	18	312223	1" GALVANIZED LOCKWASHER	0.080	1.440
LCN	18	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	7.740
			Total Wt	2675.40 lb [1214.66kg]	



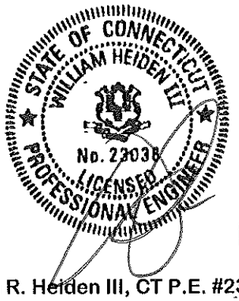
DETAIL A
ANGLE INTERSECTION CONNECTION



DETAIL B
MID SIDE PLATE ANGLE CONNECTION



LEG TO LEG CONNECTION
(SIDE PLATES NOT SHOWN FOR CLARITY)



NOV 18 2016

William R. Heiden III, CT P.E. #23038

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
@A	<ACBATCH>		SKK	11/15/2016

REVISION HISTORY

SITE
SEYMOUR, CT
VERTICAL RESOURCES GROUP
U 28 X 280'

DESCRIPTION
SECTION U-8.0 (200' - 220' ELEVATION)

STRUCTURE APPROVAL
SKK 11/15/2016

FOUNDATION APPROVAL

valmont STRUCTURES
1-877-467-4763 Plymouth, IN
1-800-547-2151 Salem, OR

ENG. FILE NO.
185135

DWG. NO.
270438T

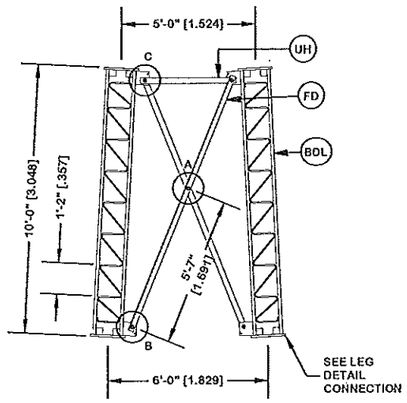
ORIENT LEGS WITH P/N STAMP
TOWARD BOTTOM OF SECTION

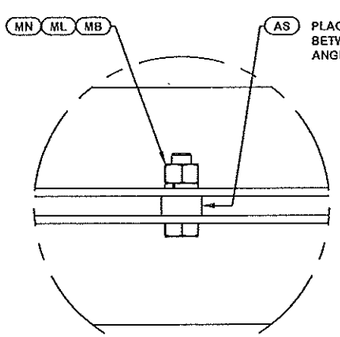
ORIENT ANGLES WITH STAMPED
END TOWARD TOP OF SECTION

** DIAGONAL ANGLES MUST BE INSTALLED
WITH THE NON-BOLTED FACE UP,
THIS MAY BE ON THE OPPOSITE SIDE OF THE
SIDE PLATE THAN WHAT IS SHOWN IN THE DETAIL.

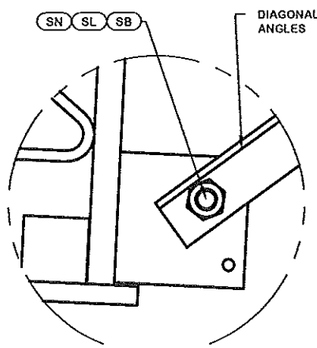
PARTS LIST

ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	105245-1	#12 LEG SECTION 10'-0" LONG MODEL "U" 1 1/2" LEG D	314.980	944.940
LD	6	105901	DIAG BRACE 5/16" X 3" X 3" 10'- 2-17/32" LONG (A-	65.400	392.400
AS	3	104291	SPACER 1/2" THICK 13/16" HOLE	0.500	1.500
MN	3	312502	3/4"-10 HOT DIPPED GALVANIZED NUT	0.190	0.570
ML	3	312153	3/4" GALVANIZED LOCKWASHER	0.030	0.090
MB	3	160427	3/4"-10 X 3" A-325T BOLT WITH FULL THREAD	0.470	1.410
SL	12	312223	1" GALVANIZED LOCKWASHER	0.080	0.960
SN	12	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	5.160
SB	12	172265	1"-8 X 2-1/4" A-325 BOLT WITH 1-3/4" THREAD	0.840	10.080
UH	3	105939	HORIZONTAL BRACE 3'- 7- 1/32" LONG (A-36)	11.020	33.060
HB	6	225017	1"-8 X 3-1/2" A-325T BOLT WITH FULL THREAD	1.090	6.540
LCB	18	222018	1"-8 X 3-1/2" A-325 BOLT WITH 1-3/4" THREAD	1.090	19.620
LCF	18	312222	1" GALVANIZED FLAT WASHER (F436)	0.140	2.520
LCL	18	312223	1" GALVANIZED LOCKWASHER	0.080	1.440
LCN	18	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	7.740
			Total Wt	1428.03 lb [648.34 kg]	

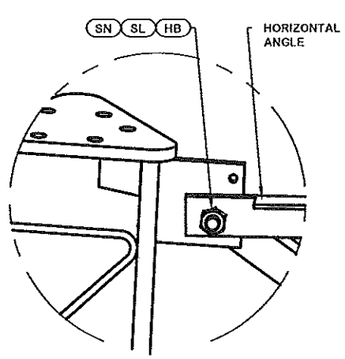




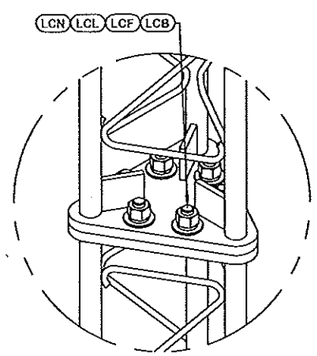
DETAIL A
ANGLE INTERSECTION CONNECTION



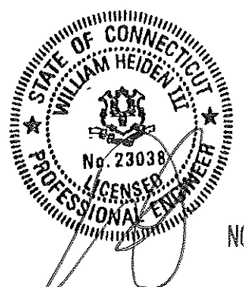
DETAIL B
END PLATE ANGLE CONNECTION



DETAIL C
HORIZONTAL CONNECTION



LEG TO LEG CONNECTION
(SIDE PLATES NOT SHOWN FOR CLARITY)



NOV 18 2016

William R. Heiden III, CT P.E. #23038

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
@A	<ACBATCH>		SKK	11/15/2016

REVISION HISTORY

SITE

SEYMOUR, CT
VERTICAL RESOURCES GROUP
U 28 X 280'

DESCRIPTION

SECTION U-6.0 (220' - 230' ELEVATION)

STRUCTURE APPROVAL
SKK 11/15/2016

FOUNDATION APPROVAL

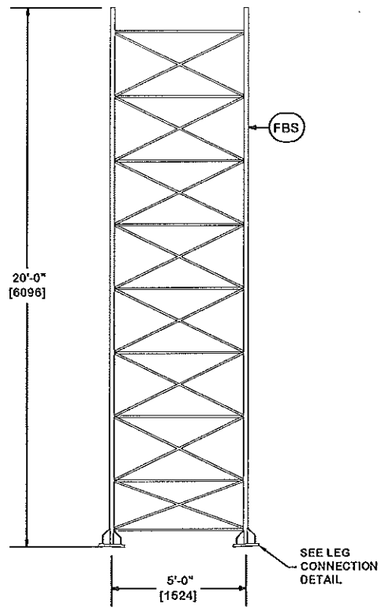
valmont STRUCTURES
1-877-467-4763 Plymouth, IN
1-800-547-2151 Salem, OR

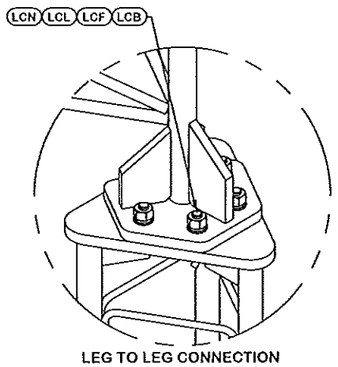
ENG. FILE NO.
185135

DWG. NO.
270438T

PARTS LIST

ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
FBS	1	127259	#60/60 STRAIGHT TRANSITION SECTION 2-1/2" LEGS 1"	2122.900	2122.900
LCB	18	222018	1"-8 X 3-1/2" A-325 BOLT WITH 1-3/4" THREAD	1.090	19.620
LCF	18	312222	1" GALVANIZED FLAT WASHER (F436)	0.140	2.520
LCL	18	312223	1" GALVANIZED LOCKWASHER	0.080	1.440
LCN	18	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	7.740
			Total Wt	2154.22 lb [978.04 kg]	





LEG TO LEG CONNECTION
(SIDE PLATES NOT SHOWN FOR CLARITY)

NOV 18 2016

William R. Heiden III, CT P.E. #23038

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
@A	<ACBATCH>		SKK	11/15/2016

REVISION HISTORY

SITE

SEYMOUR, CT
VERTICAL RESOURCES GROUP
U 28 X 280'

DESCRIPTION

SECTION V-5.0 (230' - 250' ELEVATION)

STRUCTURE APPROVAL
SKK 11/15/2016

FOUNDATION APPROVAL

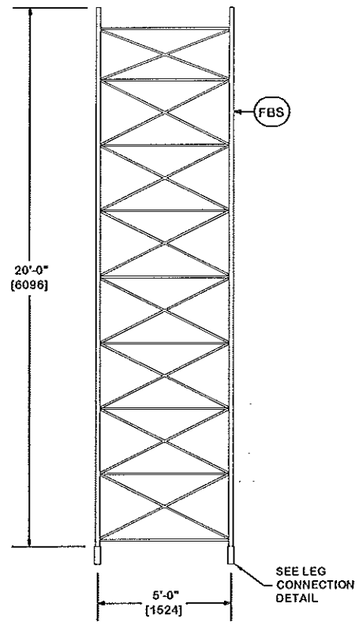
valmont STRUCTURES
1-877-467-4763 Plymouth, IN
1-800-547-2151 Salem, OR

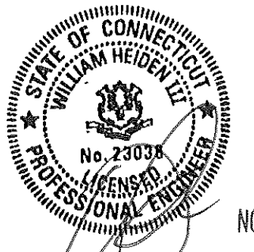
ENG. FILE NO. 185135

DWG. NO. 270438T

PARTS LIST

ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
FBS	1	106772	#60/60 SEC. 2" LEGS 7/8" BRACE 20' LONG	1484.900	1484.900
LCB	6	311476	2"-4.5 X 8" A-449 BOLT WITH 8" THREAD	10.800	64.800
LCL	6	312393	2" GALVANIZED LOCKWASHER	0.310	1.860
LCN	6	312512	2"-4.5 HOT DIPPED GALVANIZED NUT	2.840	17.040
			Total Wt	1568.60 lb [712.16kg]	





NOV 1 8 2016

William R. Heiden III, CT P.E. #23038

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
@A	<ACBATCH>		SKK	11/15/2016

REVISION HISTORY

SITE

SEYMOUR, CT
VERTICAL RESOURCES GROUP
U 28 X 280'

DESCRIPTION

SECTION V-5.0 (250' - 270' ELEVATION)

STRUCTURE APPROVAL: SKK 11/15/2016

FOUNDATION APPROVAL:

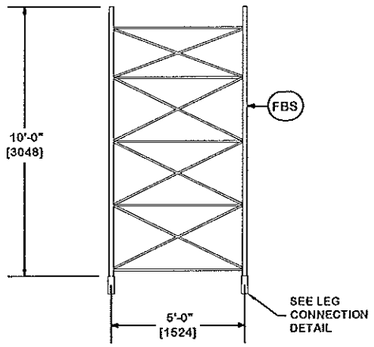
valmont STRUCTURES
1-877-467-4763 Plymouth, IN
1-800-547-2151 Salem, OR

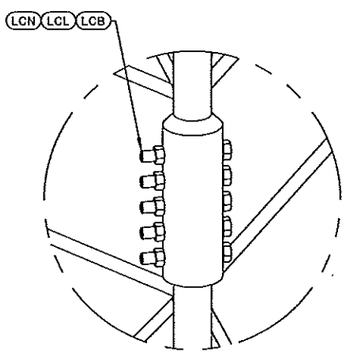
ENG. FILE NO. 185135

DWG. NO. 270438T

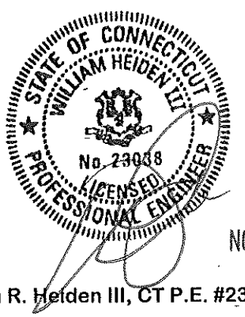
PARTS LIST

ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
FBS	1	106771	#60 X- BRACED SECTIONS - 1.75" LEGS .8750" BRA	1326.000	1326.000
LCB	15	222011	5/8"-11 X 4-1/2" A-325 BOLT WITH 1-1/4" THREAD	0.430	6.450
LCL	15	312123	5/8" GALVANIZED LOCKWASHER (53-22230)	0.020	0.300
LCN	15	312501	5/8"-11 HOT DIPPED GALVANIZED NUT	0.120	1.800
			Total Wt	1334.55 lb (605.90 kg)	





LEG TO LEG CONNECTION



NOV 1 8 2016

William R. Heiden III, CT P.E. #23038

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
@A	<ACBATCH>		SKK	11/15/2016

REVISION HISTORY

SITE

SEYMOUR, CT
VERTICAL RESOURCES GROUP
U 28 X 280'

DESCRIPTION

SECTION V-5.0 (270' - 280' ELEVATION)

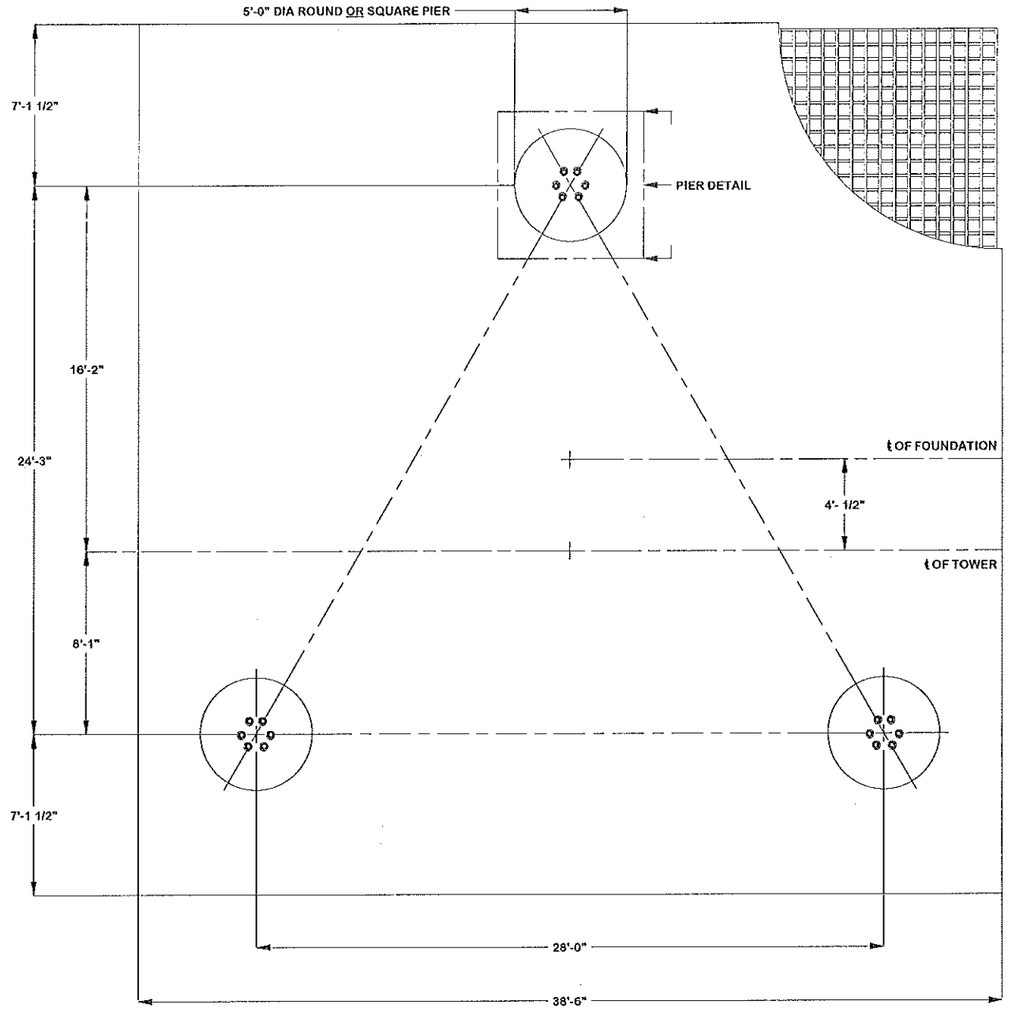
STRUCTURE APPROVAL
SKK 11/15/2016

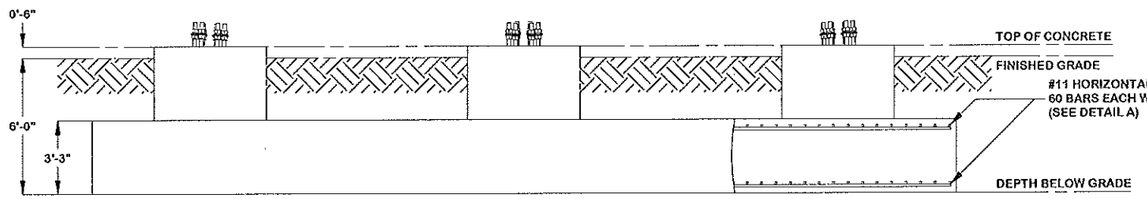
FOUNDATION APPROVAL

valmont STRUCTURES
1-877-467-4763 Plymouth, IN
1-800-547-2151 Salem, OR

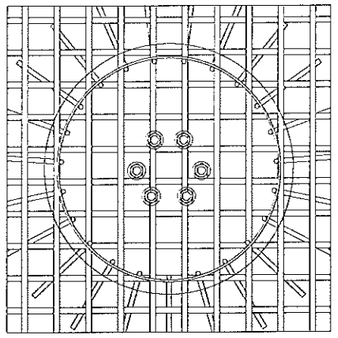
ENG. FILE NO. 185135

DWG. NO. 270438T

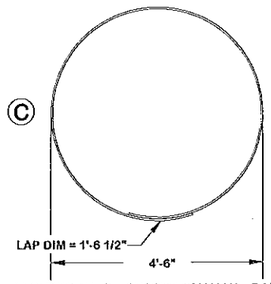




PACK NON-SHRINK STRUCTURAL GROUT UNDER FLANGE AFTER LEVELING TOWER
NON-SHRINK GROUT TO HAVE COMPRESSIVE STRENGTH OF 5000 PSI @28 DAYS
CONCRETE NOTES: 185.6 CUBIC YARDS OF CONCRETE REQUIRED
CONCRETE TO HAVE MIN COMPRESSIVE STRENGTH OF 4000 PSI @ 28 DAYS.



PIER DETAIL (TOP VIEW)



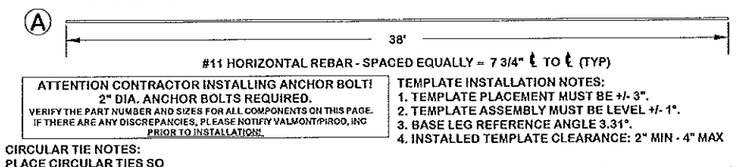
#4 CIRCULAR TIE - SPACED EQUALLY = 7 3/4" (TYP)
APPROX UNBENT LENGTH = 15'-8 1/4"

REBAR/ANCHOR STEEL TABLE				
ITEM	QTY	PART DESCRIPTION	UNIT WT.	NET WT.
A	240	HORIZONTAL REBAR (#11 REBAR)	201.9	48456
B	69	VERTICAL REBAR (#9 REBAR)	25.2	1739
C	21	CIRCULAR TIE (#4 REBAR)	10.5	221
D	121	STANDEE (#6 REBAR)	11.7	1416
			APPROX TOTAL WT #	51832

REBAR NOTES: ALL REINFORCING BARS MUST CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS.

FOUNDATION NOTES:

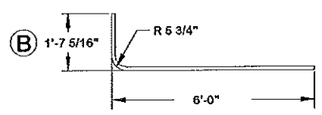
1. SOIL AS PER REPORT BY AET, DATED 03/31/00 (FILE# 42GT2K)
2. REINFORCING BAR TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. CONCRETE INSTALLATION TO CONFORM TO ACI-318 (2008) BUILDING REQUIREMENTS FOR REINFORCED CONCRETE. ALL CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH FREE OF WATER AND ALL FOREIGN OBJECTS AND MATERIALS. A MINIMUM OF THREE INCHES OF CONCRETE SHALL COVER ALL REINFORCEMENT. WELDING OF REBAR NOT PERMITTED.
3. A COLD JOINT IS PERMISSIBLE UPON CONSULTATION WITH PIROD. ALL COLD JOINTS SHALL BE COATED WITH BONDING AGENTS PRIOR TO SECOND POUR.
4. ALL FILL SHOULD BE PLACED IN LOOSE LEVEL LIFTS OF NO MORE THAN 12" THICK. FILL MATERIALS SHOULD BE CLEAN AND FREE OF ORGANIC AND FROZEN MATERIALS OR ANY OTHER DELETERIOUS MATERIALS. COMPACT FILL TO 97% OF STANDARD PROCTOR MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D698.
5. BENDING, STRAIGHTENING OR REALIGNING (HOT OR COLD) OF THE ANCHOR BOLTS BY ANY METHOD IS PROHIBITED.
6. CROWN TOP OF FOUNDATION FOR PROPER DRAINAGE.
7. THE FOUNDATION MUST BEAR ENTIRELY ON EITHER SOIL OR ROCK. THE FOUNDATION IS NOT TO BEAR ON ANY COMBINATION OF SOIL AND BEDROCK AS THIS MAY CAUSE EXCESSIVE DIFFERENTIAL SETTLEMENT.
8. DIFFICULTIES DURING EXCAVATION MAY ARISE DUE TO THE PRESENCE OF SHALLOW BEDROCK. PNEUMATIC HAMMERS, RIPPERS, AND/OR BLASTING MAY BE REQUIRED TO REMOVE MATERIAL FROM THE EXCAVATION.
9. IF THE DIFFICULTIES WITH ROCK ARE TOO CUMBERSOME, IT MAY BE DEEMED NECESSARY TO RELOCATE THE FOUNDATION TO A POINT AT WHICH THE ROCK LIES AT A GREATER DEPTH. THE FOUNDATION SHOULD NOT BE RELOCATED WITHOUT THE CONSENT OF THE GEOTECHNICAL ENGINEERING FIRM AND PIROD, INC.



#11 HORIZONTAL REBAR - SPACED EQUALLY = 7 3/4" ℄ TO ℄ (TYP)

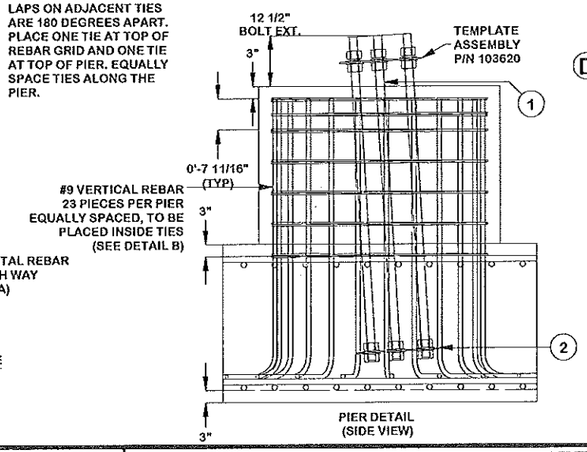
ATTENTION CONTRACTOR INSTALLING ANCHOR BOLT!
2" DIA. ANCHOR BOLTS REQUIRED.
VERIFY THE PART NUMBER AND SIZES FOR ALL COMPONENTS ON THIS PAGE. IF THERE ARE ANY DISCREPANCIES, PLEASE NOTIFY VALMONT/PIROD, INC PRIOR TO INSTALLATION.

TEMPLATE INSTALLATION NOTES:
1. TEMPLATE PLACEMENT MUST BE +/- 3".
2. TEMPLATE ASSEMBLY MUST BE LEVEL +/- 1°.
3. BASE LEG REFERENCE ANGLE 3.31°.
4. INSTALLED TEMPLATE CLEARANCE: 2" MIN - 4" MAX

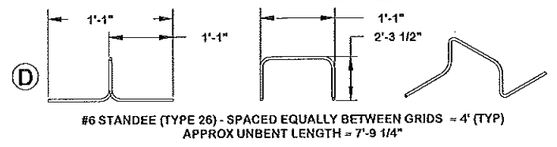


#9 VERTICAL REBAR - TO BE SPACED EQUALLY AROUND PIER AND INSIDE CIRCULAR TIES
APPROX UNBENT LENGTH = 7'-4- 7/8"

CIRCULAR TIE NOTES:
PLACE CIRCULAR TIES SO LAPS ON ADJACENT TIES ARE 180 DEGREES APART. PLACE ONE TIE AT TOP OF REBAR GRID AND ONE TIE AT TOP OF PIER. EQUALLY SPACE TIES ALONG THE PIER.



PIER DETAIL
(SIDE VIEW)



#6 STANDEE (TYPE 26) - SPACED EQUALLY BETWEEN GRIDS = 4' (TYP)
APPROX UNBENT LENGTH = 7'-9 1/4"

NOV 1 8 2016

William R. Heiden III, CT P.E. #23038

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
REVISION HISTORY				

SITE
SEYMOUR, CT
VERTICAL RESOURCES GROUP
U 28 X 280'

DESCRIPTION
SHALLOW MAT WITH RAISED PIERS
TOWER FOUNDATION #1

STRUCTURE APPROVAL

FOUNDATION APPROVAL
MS13 11/17/2016

valmont STRUCTURES
1-877-467-4763 Plymouth, IN
1-800-547-2151 Salem, OR

ENG. FILE NO. 185135

DWG. NO. 270438F

EBI Consulting
environmental | engineering | due diligence

RADIO FREQUENCY EMISSIONS ANALYSIS REPORT
EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

AT&T Existing Facility

Site ID: CT5633

Seymour East
6 Progress Ave.
Seymour, CT 06483

October 30, 2016

EBI Project Number: 6216004900

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general public allowable limit:	6.18 %

21 B Street · Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

October 30, 2016

AT&T Mobility – New England
Attn: Cameron Syme, RF Manager
550 Cochituate Road
Suite 550 – 13&14
Framingham, MA 06040

Emissions Analysis for Site: **CT5633 – Seymour East**

EBI Consulting was directed to analyze the proposed AT&T facility located at **6 Progress Ave., Seymour, CT**, for the purpose of determining whether the emissions from the Proposed AT&T Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limits for the 700 and 850 MHz Bands are approximately 467 $\mu W/cm^2$ and 567 $\mu W/cm^2$ respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 2300 MHz (WCS) bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed AT&T Wireless antenna facility located at **6 Progress Ave., Seymour, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since AT&T is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

For all calculations, all equipment was calculated using the following assumptions:

1) 2 UMTS channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

2) 2 UMTS channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

3) 2 GSM channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

4) 2 LTE channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

5) 2 LTE channels (2300 MHz (WCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

6) 2 LTE channels (700 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

7) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.

8) For the following calculations the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

9) The antennas used in this modeling are the **Powerwave 800-10121, Quintel QS66512-2 and the KMW AM-X-CD-16-65-00T-RET** for transmission in the 700 MHz, 850 MHz, 1900 MHz (PCS) and 2300 MHz (WCS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

10) The antenna mounting height centerlines of the proposed antennas are **160 feet** above ground level (AGL) for **Sector A**, **160 feet** above ground level (AGL) for **Sector B** and **160 feet** above ground level (AGL) for Sector C.

11) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

All calculations were done with respect to uncontrolled / general public threshold limits.

AT&T Site Inventory and Power Data by Antenna

Sector:	A	Sector:	B	Sector:	C
Antenna #:	**1**	Antenna #:	**1**	Antenna #:	**1**
Make / Model:	Kathrein 800-10121	Make / Model:	Kathrein 800-10121	Make / Model:	Kathrein 800-10121
Gain:	11.45 / 14.35 dBd	Gain:	11.45 / 14.35 dBd	Gain:	11.45 / 14.35 dBd
Height (AGL):	**160 feet**	Height (AGL):	**160 feet**	Height (AGL):	**160 feet**
Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)
Channel Count	6	Channel Count	6	Channel Count	6
Total TX Power(W):	180 Watts	Total TX Power(W):	180 Watts	Total TX Power(W):	180 Watts
ERP (W):	3,309.26	ERP (W):	3,309.26	ERP (W):	3,309.26
Antenna A1 MPE%	**0.70 %**	Antenna B1 MPE%	**0.70 %**	Antenna C1 MPE%	**0.70 %**
Antenna #:	**2**	Antenna #:	**2**	Antenna #:	**2**
Make / Model:	Quintel QS66512-2	Make / Model:	Quintel QS66512-2	Make / Model:	Quintel QS66512-2
Gain:	14.85 / 13.85 dBd	Gain:	14.85 / 13.85 dBd	Gain:	14.85 / 13.85 dBd
Height (AGL):	**160 feet**	Height (AGL):	**160 feet**	Height (AGL):	**160 feet**
Frequency Bands	2300 MHz (WCS) / 1900 MHz (PCS)	Frequency Bands	2300 MHz (WCS) / 1900 MHz (PCS)	Frequency Bands	2300 MHz (WCS) / 1900 MHz (PCS)
Channel Count	4	Channel Count	4	Channel Count	4
Total TX Power(W):	240 Watts	Total TX Power(W):	240 Watts	Total TX Power(W):	240 Watts
ERP (W):	6,577.84	ERP (W):	6,577.84	ERP (W):	6,577.84
Antenna A2 MPE%	**1.00 %**	Antenna B2 MPE%	**1.00 %**	Antenna C2 MPE%	**1.00 %**
Antenna #:	**3**	Antenna #:	**3**	Antenna #:	**3**
Make / Model:	KMW AM-X-CD-16-65-00T-RET	Make / Model:	KMW AM-X-CD-16-65-00T-RET	Make / Model:	KMW AM-X-CD-16-65-00T-RET
Gain:	13.85 dBd	Gain:	13.85 dBd	Gain:	13.85 dBd
Height (AGL):	**160 feet**	Height (AGL):	**160 feet**	Height (AGL):	**160 feet**
Frequency Bands	700 MHz	Frequency Bands	700 MHz	Frequency Bands	700 MHz
Channel Count	2	Channel Count	2	Channel Count	2
Total TX Power(W):	120 Watts	Total TX Power(W):	120 Watts	Total TX Power(W):	120 Watts
ERP (W):	2,595.26	ERP (W):	2,595.26	ERP (W):	2,595.26
Antenna A3 MPE%	**0.84 %**	Antenna B3 MPE%	**0.84 %**	Antenna C3 MPE%	**0.84 %**

Site Composite MPE%	
Carrier	**MPE%**
AT&T – Max per sector	**2.54 %**
Verizon Wireless	2.41 %
T-Mobile	0.28 %
Sprint	0.56 %
Mike Gardella	0.06 %
Town	0.33 %
Site Total MPE %:	**6.18 %**

AT&T Sector A Total:	2.54 %
AT&T Sector B Total:	2.54 %
AT&T Sector C Total:	2.54 %
Site Total:	6.18 %

AT&T _ Frequency Band / Technology	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
AT&T 850 MHz UMTS	2	418.91	160	1.27	850 MHz	567	0.22%
AT&T 1900 MHz (PCS) UMTS	2	816.81	160	2.48	1900 MHz (PCS)	1000	0.25%
AT&T 850 MHz GSM	2	418.91	160	1.27	850 MHz	567	0.22%
AT&T 2300 MHz (WCS) LTE	2	1,832.95	160	5.56	2300 MHz (WCS)	1000	0.56%
AT&T 1900 MHz (PCS) LTE	2	1,455.97	160	4.41	1900 MHz (PCS)	1000	0.44%
AT&T 700 MHz LTE	2	1,297.63	160	3.93	700 MHz	467	0.84%
						Total*:	2.54%

*NOTE: Totals may vary by 0.01% due to summing of remainders

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general public exposure to RF Emissions.

The anticipated maximum composite contributions from the AT&T facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general public exposure to RF Emissions are shown here:

AT&T Sector	Power Density Value (%)
Sector A:	2.54 %
Sector B:	2.54 %
Sector C:	2.54 %
AT&T Maximum Total (per sector):	2.54 %
Site Total:	6.18 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **6.18 %** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.