December 5th, 2018

Melanie Bachman, Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: Notice of Exempt Modification – Antenna Swap for wireless facility located at 93 OLD AMITY ROAD, BETHANY, CONNECTICUT – CT03XC043 (lat. 41° 24' 17.02" N, long. -73° 0' 0" W)

Dear Ms. Bachman:

Sprint Spectrum, LP ("Sprint") currently maintains wireless telecommunications antennas at the (71-foot level) on an existing (120-foot self-support tower) at the above-referenced address. The property and the tower are owned by American Towers Corporation

Sprint's proposed work involves antenna replacement and tower work. Sprint intends to replace three (3) antennas, add three (3) new antennas, and add six (6) new RRHs onto the tower. All the proposed work is contained within the existing fenced area. Please refer to the attached drawings for site plans prepared by Infinigy Engineering.

Please accept this letter 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). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Derrylyn Gorski, First Selectman and Isabel Kearns, Zoning Enforcement Officer of the Town of Bethany. A copy of this letter is also being sent to Justine Paul the manager for American Tower Corporation who owns the land and tower.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b).

1. The proposed modifications will not result in an increase in the height of the existing tower.
2. The antennas work is a one-for-one replacement of facility components.
3. The proposed modifications will include the addition of ground base equipment as depicted on the attached drawings; however, the proposed equipment will not require

an extension of the site boundaries.

4. The proposed modifications will not increase noise levels at the facility by six decibels or more.

5. The additional ground based equipment will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) adopted safety standard.

For the foregoing reasons, Sprint respectfully submits that the proposed modifications to the above referenced telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b).

The prior submittal for this project was denied 10/09/2018 due to the lack of a Post Modification passing Structural Analysis. This has been included in this submittal along with an approval letter from Joseph Cassidy, P.E., State Building Inspector, stating the 105% pass is acceptable based on the State of Connecticut Building Code.

If you have any questions or require any additional information regarding this request, please do not hesitate to give me a call at (518) 769-9165 or email me to rperry@asdwireless.com

Kind Regards,

Raymond A. Perry

Ray Perry
Airosmith Development Inc.
32 Clinton Street
Saratoga Springs, NY 12866
518-796-9165 cell
rperry@asdwireless.com

Attachment

CC: Derrylyn Gorski (First Selectman / Bethany, CT)
Isabel Kearns (Zoning Enforcement Office / Bethany, CT)
Justine Paul (American Tower Corporation – Manager)

Sprint

PROJECT:	DO MACRO UPGRADE
SITE NAME:	BETHANY CT
SITE CASCADE:	CT03XC043
SITE ADDRESS:	93 OLD AMITY ROAD BETHANY, CT 06524
SITE TYPE:	SELF SUPPORT TOWER
MARKET:	NORTHEAST

SITE INFORMATION

TOWER OWNER:
AMERICAN TOWER CORPORATION
10 PRESIDENTIAL WAY
WOBURN, MA 01801

LATITUDE (NAD83):
41° 24' 17.02" N
41.40472777°

LONGITUDE (NAD83):
-73° 0' 0" W
-73.0000°

COUNTY:
NEW HAVEN

ZONING JURISDICTION:
CONNECTICUT SITING COUNCIL

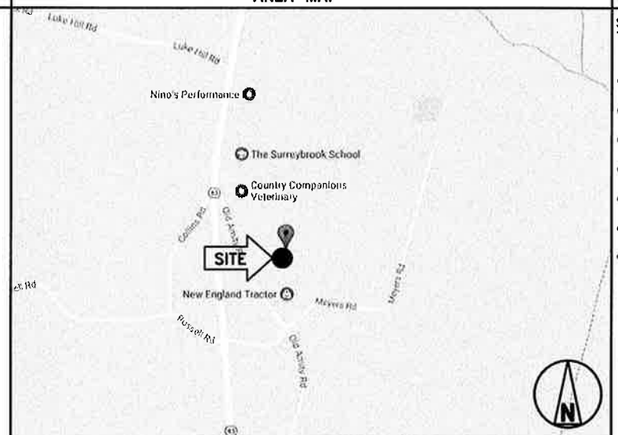
ZONING DISTRICT:
BUSINESS AND INDUSTRY

POWER COMPANY:
TBD

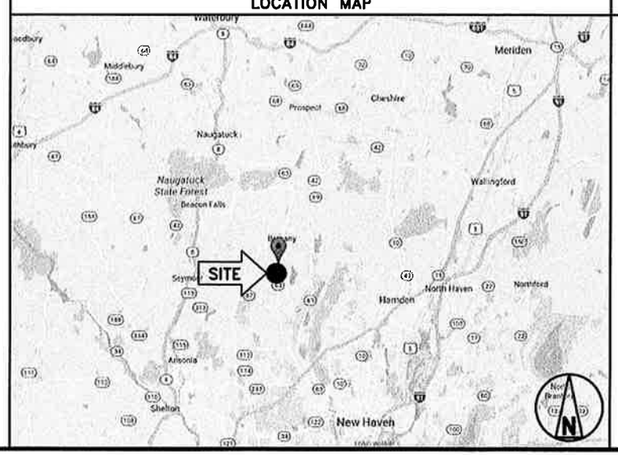
AAV PROVIDER:
TBD

PROJECT MANAGER:
AIROSMITH DEVELOPMENT
TERRI BURKHOLDER
(315) 719-2928
TBURKHOLDER@AIROSMITHDEVELOPMENT.COM

AREA MAP



LOCATION MAP



PROJECT DESCRIPTION

SPRINT PROPOSES TO MODIFY AN EXISTING UNMANNED TELECOMMUNICATIONS FACILITY.

- REMOVE (3) PANEL ANTENNAS
- INSTALL (6) PANEL ANTENNAS
- INSTALL (3) 2.5 GHz RRH'S BELOW PROPOSED ANTENNAS
- INSTALL (3) 800 MHz RRH'S BELOW PROPOSED ANTENNAS
- INSTALL (30) JUMPER CABLES
- INSTALL (1) HYBRID CABLE
- INSTALL 2.5 EQUIPMENT INSIDE EXISTING N.V. MMBS CABINET

THESE PLANS HAVE BEEN DEVELOPED FOR THE MODIFICATION OF AN EXISTING UNMANNED TELECOMMUNICATIONS FACILITY OWNED OR LEASED BY SPRINT IN ACCORDANCE WITH THE SCOPE OF WORK PROVIDED BY SPRINT. INFINIGY HAS INCORPORATED THIS SCOPE OF WORK IN THE PLANS. THESE PLANS ARE NOT FOR CONSTRUCTION UNLESS ACCOMPANIED BY A PASSING STRUCTURAL STABILITY ANALYSIS PREPARED BY A LICENSED STRUCTURAL ENGINEER. STRUCTURAL ANALYSIS MUST INCLUDE BOTH TOWER AND MOUNT.

APPLICABLE CODES

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALL IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. INTERNATIONAL BUILDING CODE (2015 IBC)
2. TIA-222-G OR LATEST EDITION
3. NFPA 780 – LIGHTNING PROTECTION CODE
4. 2011 NATIONAL ELECTRIC CODE OR LATEST EDITION
5. ANY OTHER NATIONAL OR LOCAL APPLICABLE CODES, MOST RECENT EDITIONS
6. CT BUILDING CODE
7. LOCAL BUILDING CODE
8. CITY/COUNTY ORDINANCES

811 Know what's below. Call before you dig. www.call811.com

DRAWING INDEX

SHEET NO.	SHEET TITLE	REV.
T-1	TITLE SHEET & PROJECT DATA	0
SP-1	SPRINT SPECIFICATIONS	0
SP-2	SPRINT SPECIFICATIONS	0
SP-3	SPRINT SPECIFICATIONS	0
A-1	SITE PLAN	0
A-2	TOWER ELEVATION	0
A-3	ANTENNA LAYOUT & MOUNTING DETAILS	0
A-4	EQUIPMENT & MOUNTING DETAILS	0
A-5	CIVIL DETAILS	0
A-6	PLUMBING DIAGRAM	0
E-1	ELECTRICAL & GROUNDING PLAN	0
E-2	ELECTRICAL & GROUNDING DETAILS	0
COVER	COVER	0
B-1	BILL OF MATERIALS	0
IGN	IBC GENERAL NOTES	0
SIC	SPECIAL INSPECTION CHECKLIST	0
C-101	SITE PLAN	0
A-1	MODIFICATION PROFILE	0
A-2	HIP BRACE INSTALLATION DETAILS	0
A-2A	HIP BRACE INSTALLATION DETAILS (CONT'D)	0
F-1	INTERNAL BRACE FABRICATION DETAILS	0

PLANS PREPARED FOR:
Sprint

PLANS PREPARED BY:
INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless
1033 Watervliet Shaker Rd | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 526-104

PROJECT MANAGER:
AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 306-3740

ENGINEERING LICENSE:
STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER
1.8.2018

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	09/10/18	MAP	0

SITE NAME:
BETHANY CT

SITE NUMBER:
CT03XC043

SITE ADDRESS:
93 OLD AMITY ROAD
BETHANY, CT 06524

SHEET DESCRIPTION:
TITLE SHEET & PROJECT DATA

SHEET NUMBER:
T-1

THESE OUTLINE SPECIFICATIONS IN CONJUNCTION WITH THE SPRINT STANDARD CONSTRUCTION SPECIFICATIONS, INCLUDING CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

SECTION 01 100 – SCOPE OF WORK

PART 1 – GENERAL

1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE SPRINT CONSTRUCTION STANDARDS FOR WIRELESS SITES, CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 RELATED DOCUMENTS:

A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.

B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

1.3 PRECEDENCE: SHOULD CONFLICTS OCCUR BETWEEN THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES INCLUDING THE STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES AND THE CONSTRUCTION DRAWINGS, INFORMATION ON THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE. NOTIFY SPRINT CONSTRUCTION MANAGER IF THIS OCCURS.

1.4 NATIONALLY RECOGNIZED CODES AND STANDARDS:

A. THE WORK SHALL COMPLY WITH APPLICABLE NATIONAL AND LOCAL CODES AND STANDARDS, LATEST EDITION, AND PORTIONS THEREOF, INCLUDED BUT NOT LIMITED TO THE FOLLOWING:

1. GR-63-CORE NEBS REQUIREMENTS: PHYSICAL PROTECTION
5. GR-78-CORE GENERIC REQUIREMENTS FOR THE PHYSICAL DESIGN AND MANUFACTURE OF TELECOMMUNICATIONS EQUIPMENT.
3. GR-1089 CORE, ELECTROMAGNETIC COMPATIBILITY AND ELECTRICAL SAFETY –GENERIC CRITERIA FOR NETWORK TELECOMMUNICATIONS EQUIPMENT.
4. NATIONAL FIRE PROTECTION ASSOCIATION CODES AND STANDARDS (NFPA) INCLUDING NFPA 70 (NATIONAL ELECTRICAL CODE – "NEC") AND NFPA 101 (LIFE SAFETY CODE).
5. AMERICAN SOCIETY FOR TESTING OF MATERIALS (ASTM)
6. INSTITUTE OF ELECTRONIC AND ELECTRICAL ENGINEERS (IEEE)
7. AMERICAN CONCRETE INSTITUTE (ACI)
8. AMERICAN WIRE PRODUCERS ASSOCIATION (AWPA)
9. CONCRETE REINFORCING STEEL INSTITUTE (CRSI)
10. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)
11. PORTLAND CEMENT ASSOCIATION (PCA)
12. NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA)
13. BRICK INDUSTRY ASSOCIATION (BIA)
14. AMERICAN WELDING SOCIETY (AWS)
15. NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA)
16. SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA)
17. DOOR AND HARDWARE INSTITUTE (DHI)
18. OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA)
19. APPLICABLE BUILDING CODES INCLUDING UNIFORM BUILDING CODE, SOUTHERN BUILDING CODE, BOCA, AND THE INTERNATIONAL BUILDING CODE.

1.5 DEFINITIONS:

A. WORK: THE SUM OF TASKS AND RESPONSIBILITIES IDENTIFIED IN THE CONTRACT DOCUMENTS.

B. COMPANY: SPRINT CORPORATION

C. ENGINEER: SYNONYMOUS WITH ARCHITECT & ENGINEER AND "A&E". THE DESIGN PROFESSIONAL HAVING PROFESSIONAL RESPONSIBILITY FOR DESIGN OF THE PROJECT.

D. CONTRACTOR: CONSTRUCTION CONTRACTOR; CONSTRUCTION VENDOR; INDIVIDUAL OR ENTITY WHO AFTER EXECUTION OF A CONTRACT IS BOUND TO ACCOMPLISH THE WORK.

E. THIRD PARTY VENDOR OR AGENCY: A VENDOR OR AGENCY ENGAGED SEPARATELY BY THE COMPANY, A&E, OR CONTRACTOR TO PROVIDE MATERIALS OR TO ACCOMPLISH SPECIFIC TASKS RELATED TO BUT NOT INCLUDED IN THE WORK.

F. OFCI: OWNER FURNISHED, CONTRACTOR INSTALLED EQUIPMENT.

G. CONSTRUCTION MANAGER – ALL PROJECTS RELATED COMMUNICATION TO FLOW THROUGH SPRINT REPRESENTATIVE IN CHARGE OF PROJECT...

1.6 SITE FAMILIARITY: CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE SPRINT CONSTRUCTION MANAGER PRIOR TO THE COMMENCEMENT OF WORK. NO COMPENSATION WILL BE AWARDED BASED ON CLAIM OF LACK OF KNOWLEDGE OR FIELD CONDITIONS.

1.7 POINT OF CONTACT: COMMUNICATION BETWEEN SPRINT AND THE CONTRACTOR SHALL FLOW THROUGH THE SINGLE SPRINT CONSTRUCTION MANAGER APPOINTED TO MANAGE THE PROJECT FOR SPRINT.

1.8 ON-SITE SUPERVISION: THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL EMPLOY A COMPETENT SUPERINTENDENT WHO SHALL BE IN ATTENDANCE AT THE SITE AT ALL TIMES DURING PERFORMANCE OF THE WORK.

1.9 DRAWINGS, SPECIFICATIONS AND DETAILS REQUIRED AT JOBSITE: THE CONSTRUCTION CONTRACTOR SHALL MAINTAIN A FULL SET OF THE CONSTRUCTION DRAWINGS, STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES AND THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES AT THE JOBSITE FROM MOBILIZATION THROUGH CONSTRUCTION COMPLETION.

A. THE JOBSITE DRAWINGS, SPECIFICATIONS AND DETAILS SHALL BE CLEARLY MARKED DAILY IN RED PENCIL WITH ANY CHANGES IN CONSTRUCTION OVER WHAT IS DEPICTED IN THE DOCUMENTS. AT CONSTRUCTION COMPLETION, THIS JOBSITE MARKUP SET SHALL BE DELIVERED TO THE COMPANY OR COMPANY'S DESIGNATED REPRESENTATIVE TO BE FORWARDED TO THE COMPANY'S A&E VENDOR FOR PRODUCTION OF "AS-BUILT" DRAWINGS.

B. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK. CONTRACTOR SHALL NOTIFY SPRINT CONSTRUCTION MANAGER OF ANY VARIATIONS PRIOR TO PROCEEDING WITH THE WORK.

C. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS NOTED OTHERWISE. SPACING BETWEEN EQUIPMENT IS THE REQUIRED CLEARANCE. SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS AND/OR DESIGN INTENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE SPRINT CONSTRUCTION MANAGER PRIOR TO PROCEEDING WITH THE WORK.

1.10 USE OF JOB SITE: THE CONTRACTOR SHALL CONFINE ALL CONSTRUCTION AND RELATED OPERATIONS INCLUDING STAGING AND STORAGE OF MATERIALS AND EQUIPMENT, PARKING, TEMPORARY FACILITIES, AND WASTE STORAGE TO THE LEASE PARCEL UNLESS OTHERWISE PERMITTED BY THE CONTRACT DOCUMENTS.

1.11 UTILITIES SERVICES: WHERE NECESSARY TO CUT EXISTING PIPES, ELECTRICAL WIRES, CONDUITS, CABLES, ETC., OF UTILITY SERVICES, OR OF FIRE PROTECTION OR COMMUNICATIONS SYSTEMS, THEY SHALL BE CUT AND CAPPED AT SUITABLE PLACES OR WHERE SHOWN. ALL SUCH ACTIONS SHALL BE COORDINATED WITH THE UTILITY COMPANY INVOLVED:

1.12 PERMITS / FEES: WHEN REQUIRED THAT A PERMIT OR CONNECTION FEE BE PAID TO A PUBLIC UTILITY PROVIDER FOR NEW SERVICE TO THE CONSTRUCTION PROJECT, PAYMENT OF SUCH FEE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

1.13 CONTRACTOR SHALL TAKE ALL MEASURES AND PROVIDE ALL MATERIAL NECESSARY FOR PROTECTING EXISTING EQUIPMENT AND PROPERTY.

1.14 METHODS OF PROCEDURE (MOPS) FOR CONSTRUCTION: CONTRACTOR SHALL PERFORM WORK AS DESCRIBED IN THE FOLLOWING INSTALLATION AND COMMISSIONING MOPS.

NOTE: IN SHORT-FORM SPECIFICATIONS ON THE DRAWINGS, A/E TO INSERT LIST OF APPLICABLE MOPS INCLUDING EN-2012-001, EN-2013-002, EL-0568, AND TS-0193

1.15 USE OF ELECTRONIC PROJECT MANAGEMENT SYSTEMS:

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 TEMPORARY UTILITIES AND FACILITIES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITIES AND FACILITIES NECESSARY EXCEPT AS OTHERWISE INDICATED IN THE CONSTRUCTION DOCUMENTS. TEMPORARY UTILITIES AND FACILITIES INCLUDE POTABLE WATER, HEAT, HVAC, ELECTRICITY, SANITARY FACILITIES, WASTE DISPOSAL FACILITIES, AND TELEPHONE/COMMUNICATION SERVICES. PROVIDE TEMPORARY UTILITIES AND FACILITIES IN ACCORDANCE WITH OSHA AND THE AUTHORITY HAVING JURISDICTION. CONTRACTOR MAY UTILIZE THE COMPANY ELECTRICAL SERVICE IN THE COMPLETION OF THE WORK WHEN IT BECOMES AVAILABLE. USE OF THE LESSORS OR SITE OWNER'S UTILITIES OR FACILITIES IS EXPRESSLY FORBIDDEN EXCEPT AS OTHERWISE ALLOWED IN THE CONTRACT DOCUMENTS.

3.2 ACCESS TO WORK: THE CONTRACTOR SHALL PROVIDE ACCESS TO THE JOB SITE FOR AUTHORIZED COMPANY PERSONNEL AND AUTHORIZED REPRESENTATIVES OF THE ARCHITECT/ENGINEER DURING ALL PHASES OF THE WORK.

3.3 TESTING: REQUIREMENTS FOR TESTING BY THIS CONTRACTOR SHALL BE AS INDICATED HEREWITH, ON THE CONSTRUCTION DRAWINGS, AND IN THE INDIVIDUAL SECTIONS OF THESE SPECIFICATIONS. SHOULD COMPANY CHOOSE TO ENGAGE ANY THIRD-PARTY TO CONDUCT ADDITIONAL TESTING, THE CONTRACTOR SHALL COOPERATE WITH AND PROVIDE A WORK AREA FOR COMPANY'S TEST AGENCY.

3.4 DIMENSIONS: VERIFY DIMENSIONS INDICATED ON DRAWINGS WITH FIELD DIMENSIONS BEFORE FABRICATION OR ORDERING OF MATERIALS. DO NOT SCALE DRAWINGS.

3.5 EXISTING CONDITIONS: NOTIFY THE SPRINT CONSTRUCTION MANAGER OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED ON THE DRAWINGS. DO NOT REMOVE OR ALTER STRUCTURAL COMPONENTS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ARCHITECT AND ENGINEER.

SECTION 01 200 – COMPANY FURNISHED MATERIAL AND EQUIPMENT

PART 1 – GENERAL

1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 RELATED DOCUMENTS:

A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.

B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 RECEIPT OF MATERIAL AND EQUIPMENT:

A. A COMPANY FURNISHED MATERIAL AND EQUIPMENT IS IDENTIFIED ON THE RF DATA SHEET IN THE CONSTRUCTION DOCUMENTS.

B. THE CONTRACTOR IS RESPONSIBLE FOR SPRINT PROVIDED MATERIAL AND EQUIPMENT AND UPON RECEIPT SHALL:

1 ACCEPT DELIVERIES AS SHIPPED AND TAKE RECEIPT.
2. VERIFY COMPLETENESS AND CONDITION OF ALL DELIVERIES.
3. TAKE RESPONSIBILITY FOR EQUIPMENT AND PROVIDE INSURANCE PROTECTION AS REQUIRED IN AGREEMENT.
4. RECORD ANY DEFECTS OR DAMAGES AND WITHIN TWENTY-FOUR HOURS AFTER RECEIPT, REPORT TO SPRINT OR ITS DESIGNATED PROJECT REPRESENTATIVE OF SUCH.
5. PROVIDE SECURE AND NECESSARY WEATHER PROTECTED WAREHOUSING.
6. COORDINATE SAFE AND SECURE TRANSPORTATION OF MATERIAL AND EQUIPMENT, DELIVERING AND OFF-LOADING FROM CONTRACTOR'S WAREHOUSE TO SITE.

3.2 DELIVERABLES:

A. COMPLETE SHIPPING AND RECEIPT DOCUMENTATION IN ACCORDANCE WITH COMPANY PRACTICE.

B. IF APPLICABLE, COMPLETE LOST/STOLEN/DAMAGED DOCUMENTATION REPORT AS NECESSARY IN ACCORDANCE WITH COMPANY PRACTICE, AND AS DIRECTED BY COMPANY.

C. UPLOAD DOCUMENTATION INTO SPRINT SITE MANAGEMENT SYSTEM (SMS) AND/OR PROVIDE HARD COPY DOCUMENTATION AS REQUESTED.

SECTION 01 300 – CELL SITE CONSTRUCTION CO.

PART 1 – GENERAL

1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 RELATED DOCUMENTS:

A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.

B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

1.3 NOTICE TO PROCEED

A. NO WORK SHALL COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED AND THE ISSUANCE OF THE WORK ORDER.

B. UPON RECEIVING NOTICE TO PROCEED, CONTRACTOR SHALL FULLY PERFORM ALL WORK NECESSARY TO PROVIDE SPRINT WITH AN OPERATIONAL WIRELESS FACILITY.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 FUNCTIONAL REQUIREMENTS:

A. THE ACTIVITIES DESCRIBED IN THIS PARAGRAPH REPRESENT MINIMUM ACTIONS AND PROCESSES REQUIRED TO SUCCESSFULLY COMPLETE THE WORK. THE ACTIVITIES DESCRIBED ARE NOT EXHAUSTIVE, AND CONTRACTOR SHALL TAKE ANY AND ALL ACTIONS AS NECESSARY TO SUCCESSFULLY COMPLETE THE CONSTRUCTION OF A FULLY FUNCTIONING WIRELESS FACILITY AT THE SITE IN ACCORDANCE WITH COMPANY PROCESSES.

B. SUBMIT SPECIFIC DOCUMENTATION AS INDICATED HEREIN, AND OBTAIN REQUIRED APPROVALS WHILE THE WORK IS BEING PERFORMED.

C. MANAGE AND CONDUCT ALL FIELD CONSTRUCTION SERVICE RELATED ACTIVITIES

D. PROVIDE CONSTRUCTION ACTIVITIES TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

PLANS PREPARED FOR:

Sprint

PLANS PREPARED BY:

INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless
1033 Watervliet Shaker Rd | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 526-104

PROJECT MANAGER:

AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 306-3740

ENGINEERING LICENSE:

STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24708
LICENSED PROFESSIONAL ENGINEER
FEB 1 8 2018

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	09/10/18	MAP	0

SITE NAME:

BETHANY CT

SITE NUMBER:

CT03XC043

SITE ADDRESS:

93 OLD AMITY ROAD
BETHANY, CT 06524

SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

SHEET NUMBER:

SP-1

CONTINUE FROM SP-1

1. PERFORM ANY REQUIRED SITE ENVIRONMENTAL MITIGATION.
2. PREPARE GROUND SITES; PROVIDE DE-GRUBBING; AND ROUGH AND FINAL GRADING, AND COMPOUND SURFACE TREATMENTS.
3. MANAGE AND CONDUCT ALL ACTIVITIES FOR INSTALLATION OF UTILITIES INCLUDING ELECTRICAL AND TELCO BACKHAUL.
4. INSTALL UNDERGROUND FACILITIES INCLUDING UNDERGROUND POWER AND COMMUNICATIONS CONDUITS, AND UNDERGROUND GROUNDING SYSTEM.
5. INSTALL ABOVE GROUND GROUNDING SYSTEMS.
6. PROVIDE NEW HVAC INSTALLATIONS AND MODIFICATIONS.
7. INSTALL "H-FRAMES", CABINETS AND SHELTERS AS INDICATED.
8. INSTALL ROADS, ACCESS WAYS, CURBS AND DRAINS AS INDICATED.
9. ACCOMPLISH REQUIRED MODIFICATION OF EXISTING FACILITIES.
10. PROVIDE ANTENNA SUPPORT STRUCTURE FOUNDATIONS.
11. PROVIDE SLABS AND EQUIPMENT PLATFORMS.
12. INSTALL COMPOUND FENCING, SIGHT SHIELDING, LANDSCAPING AND ACCESS BARRIERS.
13. PERFORM INSPECTION AND MATERIAL TESTING AS REQUIRED HEREINAFTER.
14. CONDUCT SITE RESISTANCE TO EARTH TESTING AS REQUIRED HEREINAFTER
15. INSTALL FIXED GENERATOR SETS AND OTHER STANDBY POWER SOLUTIONS.
16. INSTALL TOWERS, ANTENNA SUPPORT STRUCTURES AND PLATFORMS ON EXISTING TOWERS AS REQUIRED.
17. INSTALL CELL SITE RADIOS, MICROWAVE, GPS, COAXIAL MAINLINE, ANTENNAS, CROSS BAND COUPLERS, TOWER TOP AMPLIFIERS, LOW NOISE AMPLIFIERS AND RELATED EQUIPMENT.
18. PERFORM, DOCUMENT, AND CLOSE OUT ANY CONSTRUCTION CONTROL DOCUMENTS THAT MAY BE REQUIRED BY GOVERNMENT AGENCIES AND LANDLORDS.
19. PERFORM ANTENNAL AND COAX SWEEP TESTING AND MAKE ANY AND ALL NECESSARY CORRECTIONS.
20. REMAIN ON SITE MOBILIZED THROUGHOUT HAND-OFF AND INTEGRATION TO ASSIST AS NEEDED UNTIL SITE IS DEEMED SUBSTANTIALLY COMPLETE AND PLACED "ON AIR."

3.2 GENERAL REQUIREMENTS FOR CIVIL CONSTRUCTION:

A. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH. AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL REMAINING RUBBISH, IMPLEMENTS, TEMPORARY FACILITIES, AND SURPLUS MATERIALS.

B. EQUIPMENT ROOMS SHALL AT ALL TIMES BE MAINTAINED "BROOM CLEAN" AND CLEAR OF DEBRIS.

C. CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO DISCOVER AND LOCATE ANY HAZARDOUS CONDITION.

1. IN THE EVENT CONTRACTOR ENCOUNTERS ANY HAZARDOUS CONDITION WHICH HAS NOT BEEN ABATED OR OTHERWISE MITIGATED, CONTRACTOR AND ALL OTHER PERSONS SHALL IMMEDIATELY STOP WORK IN THE AFFECTED AREA AND NOTIFY COMPANY IN WRITING. THE WORK IN THE AFFECTED AREA SHALL NOT BE RESUMED EXCEPT BY WRITTEN NOTIFICATION BY COMPANY.
2. CONTRACTOR AGREES TO USE CARE WHILE ON THE SITE AND SHALL NOT TAKE ANY ACTION THAT WILL OR MAY RESULT IN OR CAUSE THE HAZARDOUS CONDITION TO BE FURTHER RELEASED IN THE ENVIRONMENT, OR TO FURTHER EXPOSE INDIVIDUALS TO THE HAZARD.

D. CONTRACTOR'S ACTIVITIES SHALL BE RESTRICTED TO THE PROJECT LIMITS. SHOULD AREAS OUTSIDE THE PROJECT LIMITS BE AFFECTED BY CONTRACTOR'S ACTIVITIES, CONTRACTOR SHALL IMMEDIATELY RETURN THEM TO ORIGINAL CONDITION

E. CONDUCT TESTING AS REQUIRED HEREIN.

3.3 DELIVERABLES:

A. CONTRACTOR SHALL REVIEW, APPROVE, AND SUBMIT TO SPRINT SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND SIMILAR SUBMITTALS AS REQUIRED HEREINAFTER

B. PROVIDE DOCUMENTATION INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING. DOCUMENTATION SHALL BE FORWARDED IN ORIGINAL FORMAT AND/OR UPLOADED INTO SMS.

1. ALL CORRESPONDENCE AND PRELIMINARY CONSTRUCTION REPORTS.
2. PROJECT PROGRESS REPORTS.
3. CIVIL CONSTRUCTION START DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
4. ELECTRICAL SERVICE COMPLETION DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
5. LINES AND ANTENNA INSTALL DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
6. POWER INSTALL DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
7. TELCO READY DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
8. PPC (OR SHELTER) INSTALL DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
9. TOWER CONSTRUCTION START DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
10. TOWER CONSTRUCTION COMPLETE DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
11. BTS AND RADIO EQUIPMENT DELIVERED AT SITE DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
12. NETWORK OPERATIONS HANDOFF CHECKLIST (HOC WALK) COMPLETE (UPLOAD FORM IN SMS)
13. CIVIL CONSTRUCTION COMPLETE DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
14. SITE CONSTRUCTION PROGRESS PHOTOS UNLOADED INTO SMS.

SECTION 01 400 – SUBMITTALS & TESTS

PART 1 – GENERAL

1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 RELATED DOCUMENTS:

A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.

B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

1.3 SUBMITTALS:

A. THE WORK IN ALL ASPECTS SHALL COMPLY WITH THE CONSTRUCTION DRAWINGS AND THESE SPECIFICATIONS.

B. SUBMIT THE FOLLOWING TO COMPANY REPRESENTATIVE FOR APPROVAL.

1. CONCRETE MIX-DESIGNS FOR TOWER FOUNDATIONS, ANCHORS PIERS, AND CONCRETE PAVING.
2. CONCRETE BREAK TESTS AS SPECIFIED HEREIN.
3. SPECIAL FINISHES FOR INTERIOR SPACES, IF ANY.
4. ALL EQUIPMENT AND MATERIALS SO IDENTIFIED ON THE CONSTRUCTION DRAWINGS.
5. CHEMICAL GROUNDING DESIGN

D. ALTERNATES: AT THE COMPANY'S REQUEST, ANY ALTERNATIVES TO THE MATERIALS OR METHODS SPECIFIED SHALL BE SUBMITTED TO SPRINT'S CONSTRUCTION MANAGER FOR APPROVAL PRIOR TO BEING SHIPPED TO SITE. SPRINT WILL REVIEW AND APPROVE ONLY THOSE REQUESTS MADE IN WRITING. NO VERBAL APPROVALS WILL BE CONSIDERED. SUBMITTAL FOR APPROVAL SHALL INCLUDE A STATEMENT OF COST REDUCTION PROPOSED FOR USE OF ALTERNATE PRODUCT.

1.4 TESTS AND INSPECTIONS:

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTS, INSPECTIONS AND PROJECT DOCUMENTATION.

B. CONTRACTOR SHALL ACCOMPLISH TESTING INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. COAX SWEEPS AND FIBER TESTS PER TS-0200 REV 4 ANTENNA LINE ACCEPTANCE STANDARDS.
2. AGL, AZIMUTH AND DOWNTILT USING ELECTRONIC COMMERCIAL MADE-FOR-THE-PURPOSE ANTENNA ALIGNMENT TOOL.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL CORRECTIONS TO ANY WORK IDENTIFIED AS UNACCEPTABLE IN SITE INSPECTION ACTIVITIES AND/OR AS A RESULT OF TESTING.

C. REQUIRED CLOSEOUT DOCUMENTATION INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING;

1. AZIMUTH, DOWNTILT, AGL – UPLOAD REPORT FROM ANTENNA ALIGNMENT TOOL TO SITERRA TASK 465. INSTALLED AZIMUTH, DOWNTILT, AND AGL MUST CONFORM TO THE RF DATA SHEETS. SWEEP AND FIBER TESTS
2. SCANABLE BARCODE PHOTOGRAPHS OF TOWER TOP AND INACCESSIBLE SERIALIZED EQUIPMENT
3. ALL AVAILABLE JURISDICTIONAL INFORMATION
4. PDF SCAN OF REDLINES PRODUCED IN FIELD
5. ELECTRONIC AS-BUILT DRAWINGS IN AUTOCAD AND PDF FORMATS. ANY FIELD CHANGE MUST BE REFLECTED BY MODIFYING THE PLANS, ELEVATIONS, AND DETAILS IN THE DRAWING SETS. GENERAL NOTES INDICATING MODIFICATIONS WILL NOT BE ACCEPTED. CHANGES SHALL BE HIGHLIGHTED AS "CLOUDS" IDENTIFIED AS THE "AS-BUILT" CONDITION.
6. LIEN WAIVERS
7. FINAL PAYMENT APPLICATION
8. REQUIRED FINAL CONSTRUCTION PHOTOS
9. CONSTRUCTION AND COMMISSIONING CHECKLIST COMPLETE WITH NO DEFICIENT ITEMS
10. ALL POST NTP TASKS INCLUDING DOCUMENT UPLOADS COMPLETED IN SITERRA (SPRINTS DOCUMENT REPOSITORY OF RECORD).

1.5 COMMISSIONING: PERFORM ALL COMMISSIONING AS REQUIRED BY APPLICABLE MOPs

1.6 INTEGRATION: PERFORM ALL INTEGRATION ACTIVITIES AS REQUIRED BY APPLICABLE MOPs

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 REQUIREMENTS FOR TESTING:

A. THIRD PARTY TESTING AGENCY:

1. WHEN THE USE OF A THIRD PARTY INDEPENDENT TESTING AGENCY IS REQUIRED, THE AGENCY THAT IS SELECTED MUST PERFORM SUCH WORK ON A REGULAR BASIS IN THE STATE WHERE THE PROJECT IS LOCATED AND HAVE A THOROUGH UNDERSTANDING OF LOCAL AVAILABLE MATERIALS, INCLUDING THE SOIL, ROCK, AND GROUNDWATER CONDITIONS.
2. THE THIRD PARTY TESTING AGENCY IS TO BE FAMILIAR WITH THE APPLICABLE REQUIREMENTS FOR THE TESTS TO BE DONE, EQUIPMENT TO BE USED, AND ASSOCIATED HEALTH AND SAFETY ISSUES.
3. EXPERIENCE IN SOILS, CONCRETE, MASONRY, AGGREGATE, AND ASPHALT TESTING USING ASTM, AASJTO, AND OTHER METHODS IS NEEDED.
4. EXPERIENCE IN SOILS, CONCRETE, MASONRY, AGGREGATE, AND ASPHALT TESTING USING ASTM, AASJTO, AND OTHER METHODS IS NEEDED.

3.2 REQUIRED TESTS:

A. CONTRACTOR SHALL ACCOMPLISH TESTING INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. CONCRETE CYLINDER BREAK TESTS FOR THE TOWER AND ANCHOR FOUNDATIONS AS SPECIFIED IN SECTION: PORTLAND CEMENT CONCRETE PAVING.
2. ASPHALT ROADWAY COMPACTED THICKNESS, SURFACE SMOOTHNESS, AND COMPACTED DENSITY TESTING AS SPECIFIED IN SECTION: HOT MIX ASPHALT PAVING.
3. FIELD QUALITY CONTROL TESTING AS SPECIFIED IN SECTION: PORTLAND CEMENT CONCRETE PAVING.
4. TESTING REQUIRED UNDER SECTION: AGGREGATE BASE FOR ACCESS ROADS, PADS AND ANCHOR LOCATIONS
5. STRUCTURAL BACKFILL COMPACTION TESTS FOR THE TOWER FOUNDATION.
6. SITE RESISTANCE TO EARTH TESTING PER EXHIBIT: CELL SITE GROUNDING SYSTEM DESIGN.
7. ANTENNA AND COAX SWEEP TESTS PER EXHIBIT: ANTENNA TRANSMISSION LINE ACCEPTANCE STANDARDS.
8. GROUNDING AT ANTENNA MASTS FOR GPS AND ANTENNAS
9. ALL OTHER TESTS REQUIRED BY COMPANY OR JURISDICTION.

3.3 REQUIRED INSPECTIONS

A. SCHEDULE INSPECTIONS WITH COMPANY REPRESENTATIVE.

B. CONDUCT INSPECTIONS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. GROUNDING SYSTEM INSTALLATION PRIOR TO EARTH CONCEALMENT DOCUMENTED WITH DIGITAL PHOTOGRAPHS BY CONTRACTOR, APPROVED BY A&E OR SPRINT REPRESENTATIVE.
2. FORMING FOR CONCRETE AND REBAR PLACEMENT PRIOR TO POUR DOCUMENTED WITH DIGITAL PHOTOGRAPHS BY CONTRACTOR, APPROVED BY A&E OR SPRINT REPRESENTATIVE.
3. COMPACTION OF BACKFILL MATERIALS; AGGREGATE BASE FOR ROADS, PADS, AND ANCHORS; ASPHALT PAVING; AND SHAFT BACKFILL FOR CONCRETE AND WOOD POLES, BY INDEPENDENT THIRD PARTY AGENCY.
4. PRE- AND POST-CONSTRUCTION ROOFTOP AND STRUCTURAL INSPECTIONS ON EXISTING FACILITIES.
5. TOWER ERECTION SECTION STACKING AND PLATFORM ATTACHMENT DOCUMENTED BY DIGITAL PHOTOGRAPHS BY THIRD PARTY AGENCY.
6. ANTENNA AZIMUTH , DOWN TILT AND PER SUNLIGHT TOOL SUNSIGHT INSTRUMENTS – ANTENNALIGN ALIGNMENT TOOL (AAT)

PLANS PREPARED FOR:

Sprint

PLANS PREPARED BY:
INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless
1033 Watervliet Shaker Rd | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 526-104

PROJECT MANAGER:
AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 306-3740

ENGINEERING LICENSE:

STATE OF CONNECTICUT
JOHN S. STEVENS
SEP 18 2018
No. 24795
LICENSED PROFESSIONAL ENGINEER

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	09/10/18	MAP	0

SITE NAME:
BETHANY CT

SITE NUMBER:
CT03XC043

SITE ADDRESS:
93 OLD AMITY ROAD
BETHANY, CT 06524

SHEET DESCRIPTION:
SPRINT SPECIFICATIONS

SHEET NUMBER:
SP-2

CONTINUE FROM SP-2

7. VERIFICATION DOCUMENTED WITH THE ANTENNA CHECKLIST REPORT, BY A&E, SITE DEVELOPMENT REP, OR RF REP.

8. FINAL INSPECTION CHECKLIST AND HANDOFF WALK (HOC.). SIGNED FORM SHOWING ACCEPTANCE BY FIELD OPS IS TO BE UPLOADED INTO SMS.

9. COAX SWEEP AND FIBER TESTING DOCUMENTS SUBMITTED VIA SMS FOR RF APPROVAL.

10. SCAN-ABLE BARCODE PHOTOGRAPHS OF TOWER TOP AND INACCESSIBLE SERIALIZED EQUIPMENT

11. ALL AVAILABLE JURISDICTIONAL INFORMATION

12. PDF SCAN OF REDLINES PRODUCED IN FIELD

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL CORRECTIONS TO ANY WORK IDENTIFIED AS UNACCEPTABLE IN SITE INSPECTION ACTIVITIES AND/OR AS A RESULT OF TESTING.

D. CONSTRUCTION INSPECTIONS AND CORRECTIVE MEASURES SHALL BE DOCUMENTED BY THE CONTRACTOR WITH WRITTEN REPORTS AND PHOTOGRAPHS. PHOTOGRAPHS MUST BE DIGITAL AND OF SUFFICIENT QUALITY TO CLEARLY SHOW THE SITE CONSTRUCTION. PHOTOGRAPHS MUST CLEARLY IDENTIFY THE PHOTOGRAPHED ITEM AND BE LABELED WITH THE SITE CASCADE NUMBER, SITE NAME, DESCRIPTION, AND DATE.

3.4 DELIVERABLES: TEST AND INSPECTION REPORTS AND CLOSEOUT DOCUMENTATION SHALL BE UPLOADED TO THE SMS AND/OR FORWARDED TO SPRINT FOR INCLUSION INTO THE PERMANENT SITE FILES.

A. THE FOLLOWING TEST AND INSPECTION REPORTS SHALL BE PROVIDED AS APPLICABLE.

1. CONCRETE MIX AND CYLINDER BREAK REPORTS.

2. STRUCTURAL BACKFILL COMPACTION REPORTS.

3. SITE RESISTANCE TO EARTH TEST.

4. ANTENNA AZIMUTH AND DOWN TILT VERIFICATION

5. TOWER ERECTION INSPECTIONS AND MEASUREMENTS DOCUMENTING TOWER INSTALLED PER SUPPLIER'S REQUIREMENTS AND THE APPLICABLE SECTIONS HEREIN.

6. COAX CABLE SWEEP TESTS PER COMPANY'S "ANTENNA LINE ACCEPTANCE STANDARDS".

B. REQUIRED CLOSEOUT DOCUMENTATION INCLUDES THE FOLLOWING;

1. TEST WELLS AND TRENCHES: PHOTOGRAPHS OF ALL TEST WELLS; PHOTOGRAPHS SHOWING ALL OPEN EXCAVATIONS AND TRENCHING PRIOR TO BACKFILLING SHOWING A TAPE MEASURE VISIBLE IN THE EXCAVATIONS INDICATING DEPTH.

2. CONDUITS, CONDUCTORS AND GROUNDING: PHOTOGRAPHS SHOWING TYPICAL INSTALLATION OF CONDUCTORS AND CONNECTORS; PHOTOGRAPHS SHOWING TYPICAL BEND RADIUS OF INSTALLED GROUND WIRES AND GROUND ROD SPACING;

3. CONCRETE FORMS AND REINFORCING: CONCRETE FORMING AT TOWER AND EQUIPMENT/SHELTER PAD/FOUNDATIONS – PHOTOGRAPHS SHOWING ALL REINFORCING STEEL, UTILITY AND CONDUIT STUB OUTS; PHOTOGRAPHS SHOWING CONCRETE POUR OF SHELTER SLAB/FOUNDATION, TOWER FOUNDATION AND GUY ANCHORS WITH VIBRATOR IN USE; PHOTOGRAPHS SHOWING EACH ANCHOR ON GUYED TOWERS, BEFORE CONCRETE POUR.

4. TOWER, ANTENNAS AND MAINLINE: INSPECTION AND PHOTOGRAPHS OF SECTION STACKING; INSPECTION AND PHOTOGRAPHS OF PLATFORM COMPONENT ATTACHMENT POINTS; PHOTOGRAPHS OF TOWER TOP GROUNDING; PHOTOS OF TOWER COAX LINE COLOR CODING AT THE TOP AND AT GROUND LEVEL; INSPECTION AND PHOTOGRAPHS OF OPERATIONAL OF TOWER LIGHTING, AND PLACEMENT OF FAA REGISTRATION SIGN; PHOTOGRAPHS SHOWING ADDITIONAL GROUNDING POINTS FOR TOWERS GREATER THAN 200 FEET.; PHOTOS OF ANTENNA GROUND BAR, EQUIPMENT GROUND BAR, AND MASTER GROUND BAR; PHOTOS OF GPS ANTENNA(S); PHOTOS OF EACH SECTOR OF ANTENNAS; ONE PHOTOGRAPH LOOKING AT THE SECTOR AND ONE FROM BEHIND SHOWING THE PROJECTED COVERAGE AREA; PHOTOS OF COAX WEATHERPROOFING – TOP AND BOTTOM; PHOTOS OF COAX GROUNDING--TOP AND BOTTOM; PHOTOS OF ANTENNA AND MAST GROUNDING; PHOTOS OF COAX CABLE ENTRY INTO SHELTER; PHOTOS OF PLATFORM MECHANICAL CONNECTIONS TO TOWER/MONOPOLE.

5. ROOF TOPS: PRE-CONSTRUCTION AND POST-CONSTRUCTION VISUAL INSPECTION AND PHOTOGRAPHS OF THE ROOF AND INTERIOR TO DETERMINE AND DOCUMENT CONDITIONS; ROOF TOP CONSTRUCTION INSPECTIONS AS REQUIRED BY THE JURISDICTION; PHOTOGRAPHS OF CABLE TRAY AND/OR ICE BRIDGE; PHOTOGRAPHS OF DOGHOUSE/CABLE EXIT FROM ROOF;

6. SITE LAYOUT – PHOTOGRAPHS OF THE OVERALL COMPOUND, INCLUDING EQUIPMENT PLATFORM FROM ALL FOUR CORNERS.

7. FINISHED UTILITIES: CLOSE-UP PHOTOGRAPHS OF THE PPC BREAKER PANEL; CLOSE-UP PHOTOGRAPH OF THE INSIDE OF THE TELCO PANEL AND NIU; CLOSE-UP PHOTOGRAPH OF THE POWER METER AND DISCONNECT; PHOTOS OF POWER AND TELCO ENTRANCE TO COMPANY ENCLOSURE; PHOTOGRAPHS AT METER BOX AND/OR FACILITY DISTRIBUTION PANEL.

8. REQUIRED MATERIALS CERTIFICATIONS: CONCRETE MIX DESIGNS; MILL CERTIFICATION FOR ALL REINFORCING AND STRUCTURAL STEEL; AND ASPHALT PAVING MIX DESIGN.

9. ANY AND ALL SUBMITTALS BY THE JURISDICTION OR COMPANY.

SECTION 01 400 – SUBMITTALS & TESTS

PART 1 – GENERAL

1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 RELATED DOCUMENTS:

A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.

B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 WEEKLY REPORTS:

A. CONTRACTOR SHALL PROVIDE SPRINT WITH WEEKLY REPORTS SHOWING PROJECT STATUS. THIS STATUS REPORT FORMAT WILL BE PROVIDED TO THE CONTRACTOR BY SPRINT. THE REPORT WILL CONTAIN SITE ID NUMBER, THE MILESTONES FOR EACH SITE, INCLUDING THE BASELINE DATE, ESTIMATED COMPLETION DATE AND ACTUAL COMPLETION DATE.

B. REPORT INFORMATION WILL BE TRANSMITTED TO SPRINT VIA ELECTRONIC MEANS AS REQUIRED. THIS INFORMATION WILL PROVIDE A BASIS FOR PROGRESS MONITORING AND PAYMENT.

3.2 PROJECT CONFERENCE CALLS:

A. SPRINT MAY HOLD WEEKLY PROJECT CONFERENCE CALLS. CONTRACTOR WILL BE REQUIRED TO COMMUNICATE SITE STATUS, MILESTONE COMPLETIONS AND UPCOMING MILESTONE PROJECTIONS, AND ANSWER ANY OTHER SITE STATUS QUESTIONS AS NECESSARY.

3.3 PROJECT TRACKING IN SMS:

A. CONTRACTOR SHALL PROVIDE SCHEDULE UPDATES AND PROJECTIONS IN THE SMS SYSTEM ON A WEEKLY BASIS.

3.4 ADDITIONAL REPORTING:

A. ADDITIONAL OR ALTERNATE REPORTING REQUIREMENTS MAY BE ADDED TO THE REPORT AS DETERMINED TO BE REASONABLY NECESSARY BY COMPANY.

3.5 PROJECT PHOTOGRAPHS:

A. FILE DIGITAL PHOTOGRAPHS OF COMPLETED SITE IN JPEG FORMAT IN THE SMS PHOTO LIBRARY FOR THE RESPECTIVE SITE. PHOTOGRAPHS SHALL BE CLEARLY LABELED WITH SITE NUMBER, NAME AND DESCRIPTION, AND SHALL INCLUDE AT A MINIMUM THE FOLLOWING AS APPLICABLE:

1. 1SHELTER AND TOWER OVERVIEW.

2. TOWER FOUNDATION(S) – FORMS AND STEEL BEFORE POUR (EACH ANCHOR ON GUYED TOWERS).

3. TOWER FOUNDATION(S) POUR WITH VIBRATOR IN USE (EACH ANCHOR ON GUYED TOWERS).

4. TOWER STEEL AS BEING INSTALLED INTO HOLE (SHOW ANCHOR STEEL ON GUYED TOWERS).

5. PHOTOS OF TOWER SECTION STACKING.

6. CONCRETE TESTING / SAMPLES.

7. PLACING OF ANCHOR BOLTS IN TOWER FOUNDATION.

8. BUILDING/WATER TANK FROM ROAD FOR TENANT IMPROVEMENTS OR COMMENTS.

9. SHELTER FOUNDATION--FORMS AND STEEL BEFORE POURING.

10. SHELTER FOUNDATION POUR WITH VIBRATOR IN USE.

11. COAX CABLE ENTRY INTO SHELTER.

12. PLATFORM MECHANICAL CONNECTIONS TO TOWER/MONOPOLE.

13. ROOFTOP PRE AND POST CONSTRUCTION PHOTOS TO INCLUDE PENETRATIONS AND INTERIOR CEILING.

14. PHOTOS OF TOWER TOP COAX LINE COLOR CODING AND COLOR CODING AT GROUND LEVEL.

15. PHOTOS OF ALL APPROPRIATE COMPANY OR REGULATORY SIGNAGE.

16. PHOTOS OF EQUIPMENT BOLT DOWN INSIDE SHELTER.

17. POWER AND TELCO ENTRANCE TO COMPANY ENCLOSURE AND POWER AND TELCO SUPPLY LOCATIONS INCLUDING METER/DISCONNECT.

18. ELECTRICAL TRENCH(S) WITH ELECTRICAL / CONDUIT BEFORE BACKFILL.

19. ELECTRICAL TRENCH(S) WITH FOIL-BACKED TAPE BEFORE FURTHER BACKFILL.

20. TELCO TRENCH WITH TELEPHONE / CONDUIT BEFORE BACKFILL.

21. TELCO TRENCH WITH FOIL-BACKED TAPE BEFORE FURTHER BACKFILL.

22. SHELTER GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADII).

23. TOWER GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADII).

24. FENCE GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADII).

25. ALL BTS GROUND CONNECTIONS.

26. ALL GROUND TEST WELLS.

27. ANTENNA GROUND BAR AND EQUIPMENT GROUND BAR.

28. ADDITIONAL GROUNDING POINTS ON TOWERS ABOVE 200'.

29. HVAC UNITS INCLUDING CONDENSERS ON SPLIT SYSTEMS.

30. GPS ANTENNAS.

31. CABLE TRAY AND/OR WAVEGUIDE BRIDGE.

32. DOGHOUSE/CABLE EXIT FROM ROOF.

33. EACH SECTOR OF ANTENNAS; ONE PHOTOGRAPH LOOKING AT THE SECTOR AND ONE FROM BEHIND SHOWING THE PROJECTED COVERAGE AREA.

34. MASTER BUS BAR.

35. TELCO BOARD AND NIU.

36. ELECTRICAL DISTRIBUTION WALL.

37. CABLE ENTRY WITH SURGE SUPPRESSION.

38. ENTRANCE TO EQUIPMENT ROOM.

39. COAX WEATHERPROOFING--TOP AND BOTTOM OF TOWER.

40. COAX GROUNDING --TOP AND BOTTOM OF TOWER.

41. ANTENNA AND MAST GROUNDING.

42. LANDSCAPING – WHERE APPLICABLE.

3.6 FINAL PROJECT ACCEPTANCE: COMPLETE ALL REQUIRED REPORTING TASKS PER CONTRACT, CONTRACT DOCUMENTS OR THE SPRINT INTEGRATED CONSTRUCTION STANDARDS FOR WIRELESS SITES AND UPLOAD INTO SITERRA.

PLANS PREPARED FOR:

Sprint

PLANS PREPARED BY:

INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless
1033 Watervliet Shaker Rd | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 526-104

PROJECT MANAGER:

AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 306-3740

ENGINEERING LICENSE:

STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER
SEP. 18 2018

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	09/10/18	MAP	0

SITE NAME:

BETHANY CT

SITE NUMBER:

CT03XC043

SITE ADDRESS:

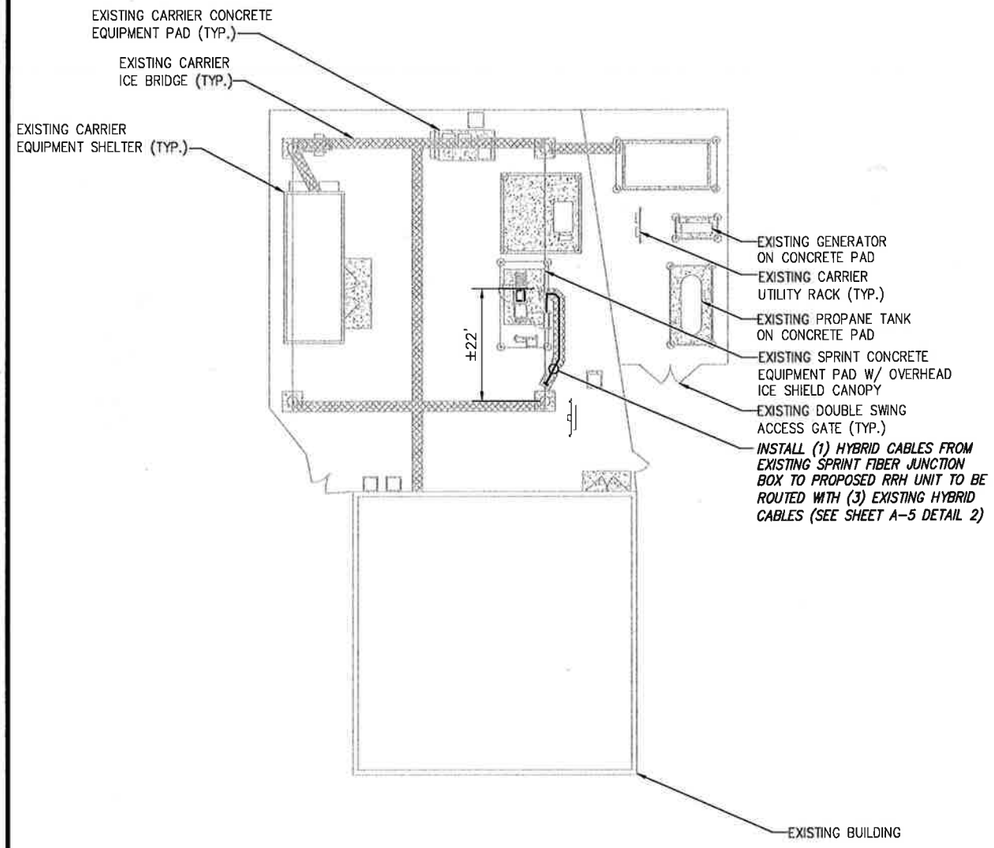
93 OLD AMITY ROAD
BETHANY, CT 06524

SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

SHEET NUMBER:

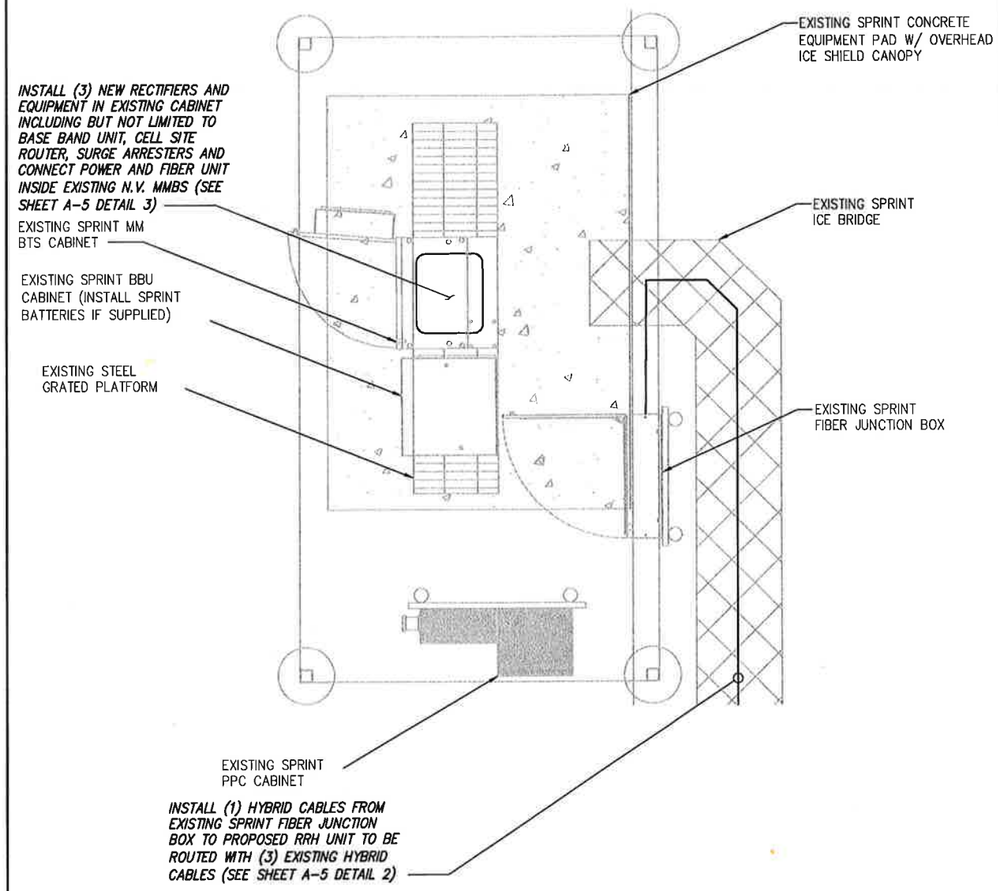
SP-3



INFORMATION CONTAINED WITHIN DRAWINGS ARE BASED ON PROVIDED INFORMATION AND ARE NOT THE RESULT OF A FIELD SURVEY.

GRAPHIC SCALE:
30' 15' 0 15' 30'
SCALE (11x17): 1" = 30'-0"
SCALE (22x34): 1" = 15'-0"

OVERALL SITE PLAN | SCALE: AS NOTED | 1



GRAPHIC SCALE:
4' 2' 0 2' 4'
SCALE (11x17): 1" = 4'-0"
SCALE (22x34): 1" = 2'-0"

SPRINT EQUIPMENT PLAN | SCALE: AS NOTED | 2

PLANS PREPARED FOR:
Sprint

PLANS PREPARED BY:
INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless
1033 Watervliet Shaker Rd | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 526-104

PROJECT MANAGER:
AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 306-3740

ENGINEERING LICENSE:
STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
PROFESSIONAL ENGINEER
SEP 19 2018

DRAWING NOTICE:
THESE DOCUMENTS ARE CONFIDENTIAL AND ARE THE SOLE PROPERTY OF SPRINT AND MAY NOT BE REPRODUCED, DISSEMINATED OR REDISTRIBUTED WITHOUT THE EXPRESS WRITTEN CONSENT OF SPRINT.

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	07/02/18	MAP	0

SITE NAME:
BETHANY CT

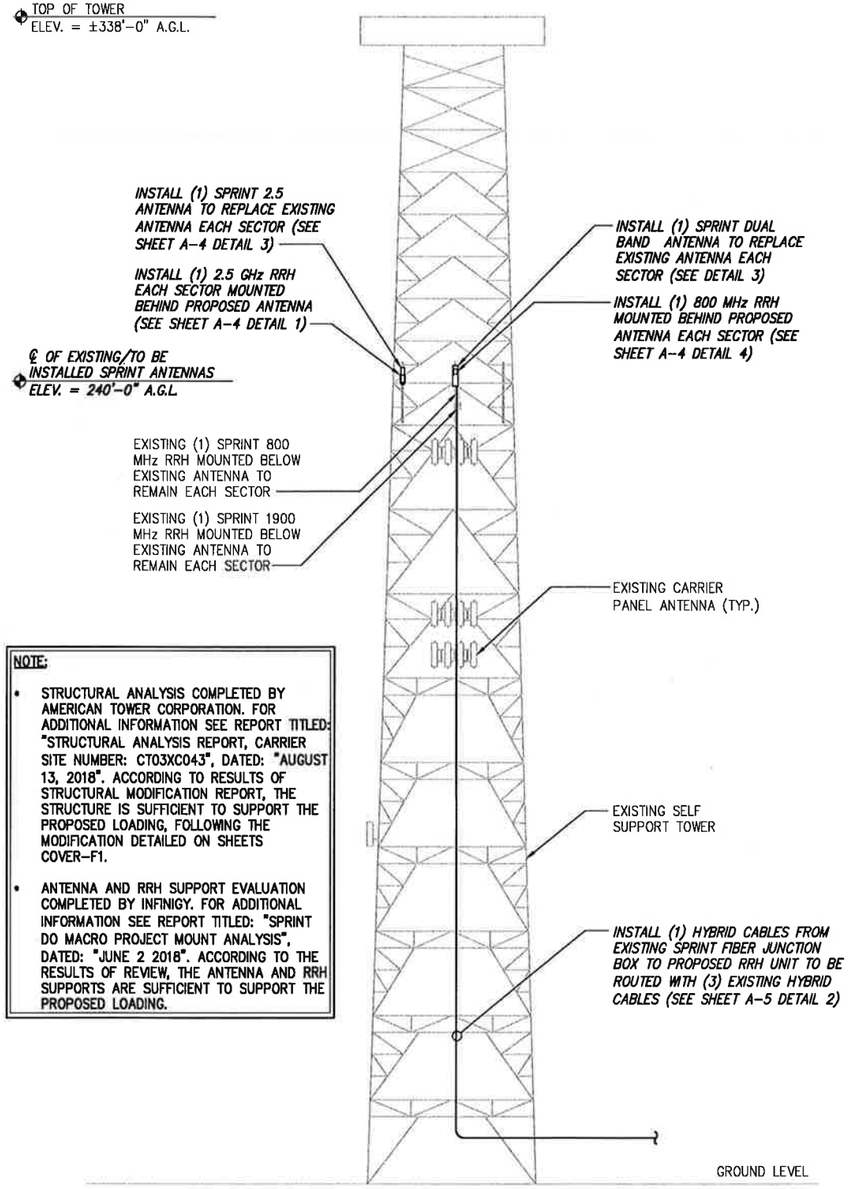
SITE NUMBER:
CT03XC043

SITE ADDRESS:
93 OLD AMITY ROAD
BETHANY, CT 06524

SHEET DESCRIPTION:
SITE PLAN

SHEET NUMBER:
A-1

NOTE:
SEE DETAIL 2 ON A-3 FOR ANTENNA LAYOUT



NOTE:

- STRUCTURAL ANALYSIS COMPLETED BY AMERICAN TOWER CORPORATION. FOR ADDITIONAL INFORMATION SEE REPORT TITLED: "STRUCTURAL ANALYSIS REPORT, CARRIER SITE NUMBER: CT03XC043", DATED: "AUGUST 13, 2018". ACCORDING TO RESULTS OF STRUCTURAL MODIFICATION REPORT, THE STRUCTURE IS SUFFICIENT TO SUPPORT THE PROPOSED LOADING, FOLLOWING THE MODIFICATION DETAILED ON SHEETS COVER-F1.
- ANTENNA AND RRH SUPPORT EVALUATION COMPLETED BY INFINIGY. FOR ADDITIONAL INFORMATION SEE REPORT TITLED: "SPRINT DO MACRO PROJECT MOUNT ANALYSIS", DATED: "JUNE 2 2018". ACCORDING TO THE RESULTS OF REVIEW, THE ANTENNA AND RRH SUPPORTS ARE SUFFICIENT TO SUPPORT THE PROPOSED LOADING.

TOWER ELEVATION | NO SCALE | 1

SITE LOADING CHART

SECTOR	EXISTING/ PROPOSED	ANTENNA MODEL #	VENDOR	AZIMUTH	QTY.	REMAIN/ REMOVED	RRH (QTY/MODEL)	CABLE	CABLE LENGTH	RAD CENTER
ALPHA	PROPOSED	APXVTM14-ALU-120	RFS	0°	1	–	(2) 800 MHZ 2X50W RRH	SEE SHEET A-5 DETAIL 1	±282'*	±240' AGL
	PROPOSED	NNVV-65B-R4	COMMSCOPE	0°	1	–	(1) TD-RRH8X20-25 W/ SOLAR SHIELD	SEE SHEET A-5 DETAIL 1		
	EXISTING	APXVSPP18-C-A20	RFS	0°	1	REMOVE	(1) 1900 MHz 4X45 RRH	EXISTING HYBRID		
BETA	PROPOSED	APXVTM14-ALU-120	RFS	140°	1	–	(2) 800 MHZ 2X50W RRH	SEE SHEET A-5 DETAIL 1		±240' AGL
	PROPOSED	NNVV-65B-R4	COMMSCOPE	140°	1	–	(1) TD-RRH8X20-25 W/ SOLAR SHIELD	SEE SHEET A-5 DETAIL 1		
	EXISTING	APXVSPP18-C-A20	RFS	140°	1	REMOVE	(1) 1900 MHz 4X45 RRH	EXISTING HYBRID		
GAMMA	PROPOSED	APXVTM14-ALU-120	RFS	220°	1	–	(2) 800 MHZ 2X50W RRH	SEE SHEET A-5 DETAIL 1		±240' AGL
	PROPOSED	NNVV-65B-R4	COMMSCOPE	220°	1	–	(1) TD-RRH8X20-25 W/ SOLAR SHIELD	SEE SHEET A-5 DETAIL 1		
	EXISTING	APXVSPP18-C-A20	RFS	220°	1	REMOVE	(1) 1900 MHz 4X45 RRH	EXISTING HYBRID		

PROJECT SCOPE:

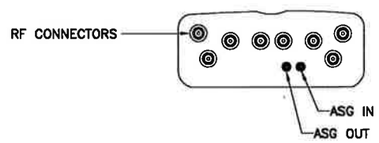
REMOVE: (3) PANEL ANTENNAS INSTALL: (6) PANEL ANTENNAS AND (6) RRH'S

* PROPOSED CABLE LENGTH WAS DETERMINED USING THE SUM OF THE RAD CENTER OF ANTENNAS, AND DISTANCE FROM EXISTING EQUIPMENT AREA TO TOWER BASE WITH AN ADDITIONAL 20' BUFFER. LENGTH TO BE VERIFIED IN FIELD PRIOR TO ORDERING MATERIALS.

SITE LOADING CHART | NO SCALE | 2

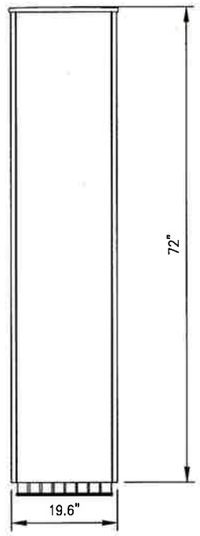
ANTENNA COMMSCOPE NNVV-65B-R4

RADOME MATERIAL:	FIBERGLASS
RADOME COLOR:	LIGHT GREY
DIMENSIONS, HxWxD.In(mlm):	72"x19.6"x7.8" (1829x498x198mm)
WEIGHT:	77.4 lbs
CONNECTORS:	(8) PIN DIN FEMALE
	(8) 8 PIN DIN MALE



PLAN VIEW

SIDE VIEW



FRONT VIEW

DUAL BAND ANTENNA DETAIL | NO SCALE | 3

PLANS PREPARED FOR:
Sprint

PLANS PREPARED BY:
INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless
1033 Watervliet Shaker Rd | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 526-104

PROJECT MANAGER:
AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 306-3740

ENGINEERING CERTIFICATION:
STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24709
LICENSED PROFESSIONAL ENGINEER

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	09/10/18	MAP	0

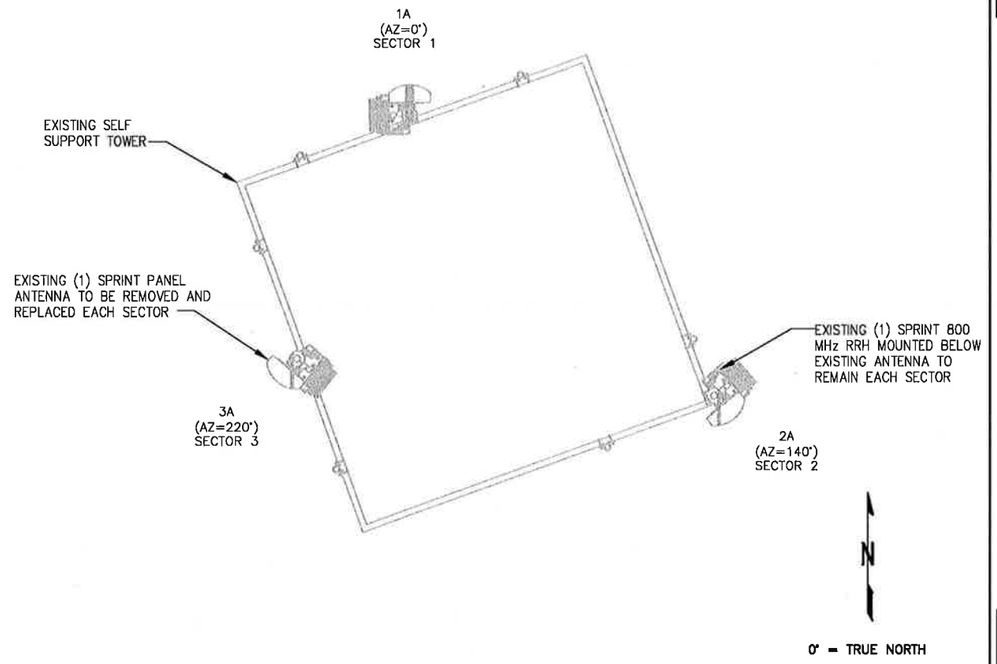
SITE NAME:
BETHANY CT

SITE NUMBER:
CT03XC043

SITE ADDRESS:
93 OLD AMITY ROAD
BETHANY, CT 06524

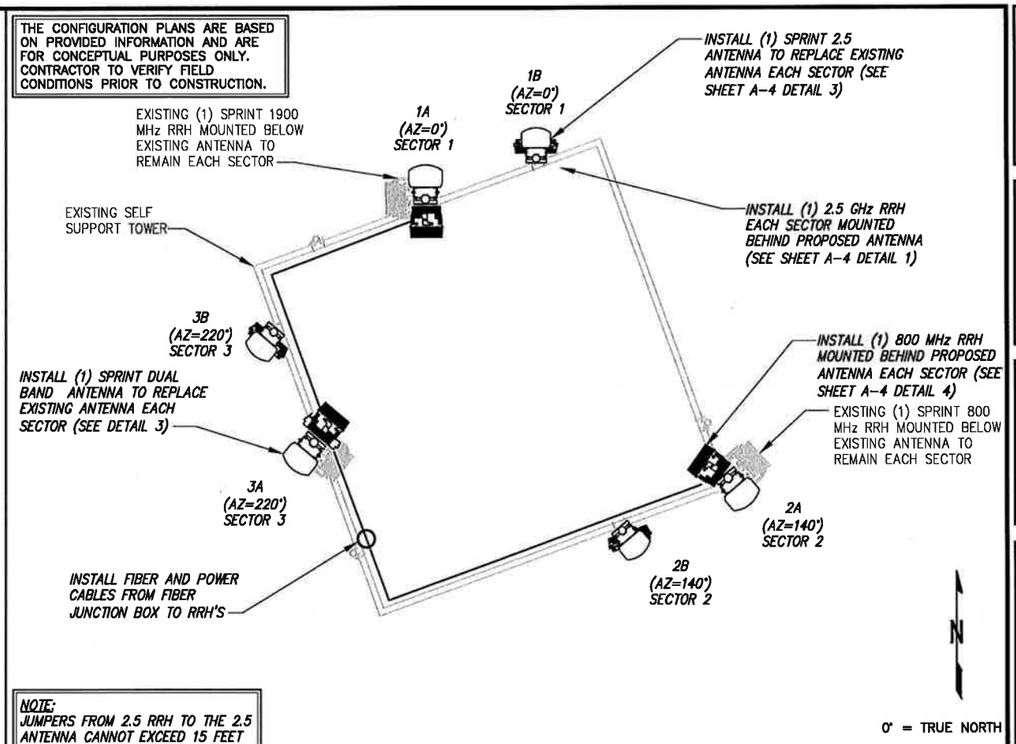
SHEET DESCRIPTION:
TOWER ELEVATION

SHEET NUMBER:
A-2



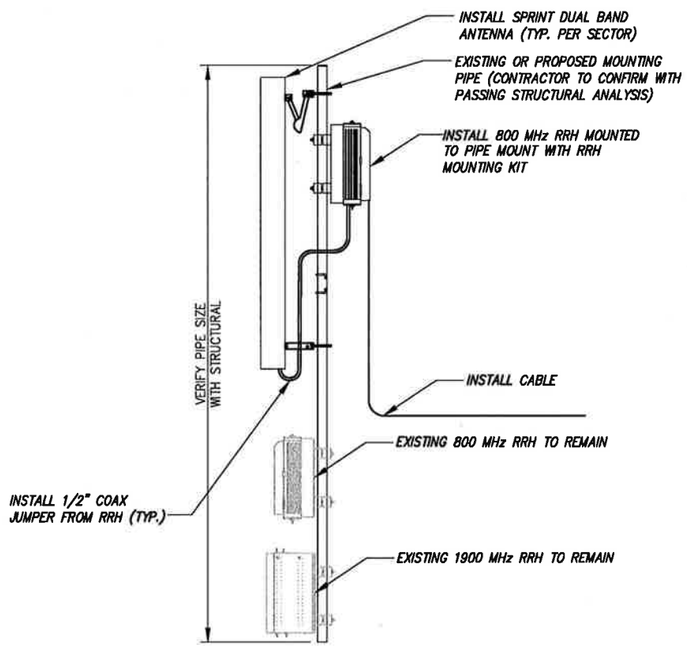
EXISTING ANTENNA & RRH LAYOUT | NO SCALE | 1

THE CONFIGURATION PLANS ARE BASED ON PROVIDED INFORMATION AND ARE FOR CONCEPTUAL PURPOSES ONLY. CONTRACTOR TO VERIFY FIELD CONDITIONS PRIOR TO CONSTRUCTION.



NOTE:
JUMPERS FROM 2.5 RRH TO THE 2.5 ANTENNA CANNOT EXCEED 15 FEET

FINAL ANTENNA LAYOUT | NO SCALE | 2



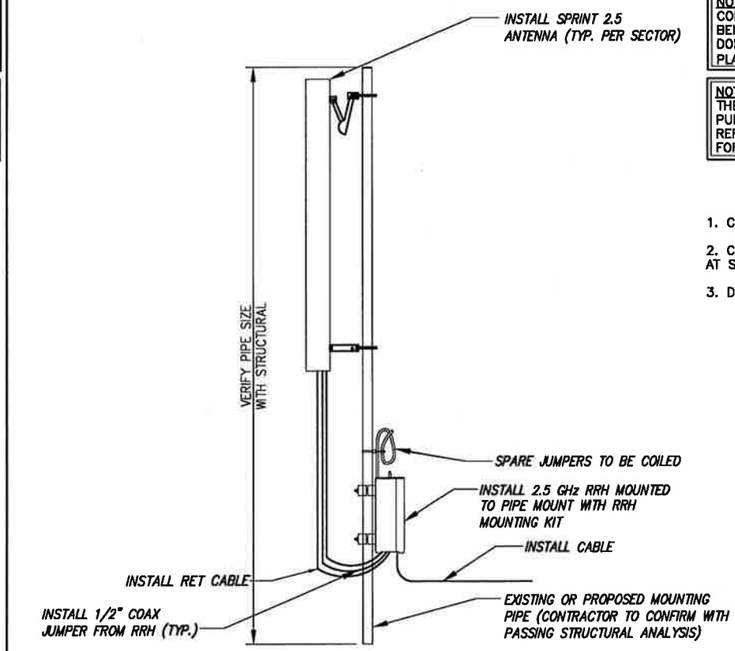
NOTE:
CONTRACTOR TO POSITION RRH ON MOUNT BEHIND ANTENNA SUCH THAT THE RRH DOES NOT INTERFERE WITH THE EXISTING PLATFORM/T-ARM MOUNTING HARDWARE.

NOTE:
THE DIAGRAM IS FOR CONCEPTUAL PURPOSES ONLY. CONTRACTOR IS TO REFER TO PASSING STRUCTURAL ANALYSIS FOR ANTENNA AND RRH MOUNTING DETAILS

NOTES:

1. CUT DC CONDUCTORS TO LENGTH.
2. COIL FIBER CABLE AND SECURE AT SIDE OF RRH.
3. DO NO EXCEED BEND RADIUS.

TYPICAL DUAL BAND ANTENNA & RRH MOUNTING DETAILS | NO SCALE | 3



NOTE:
CONTRACTOR TO POSITION RRH ON MOUNT BEHIND ANTENNA SUCH THAT THE RRH DOES NOT INTERFERE WITH THE EXISTING PLATFORM/T-ARM MOUNTING HARDWARE.

NOTE:
THE DIAGRAM IS FOR CONCEPTUAL PURPOSES ONLY. CONTRACTOR IS TO REFER TO PASSING STRUCTURAL ANALYSIS FOR ANTENNA AND RRH MOUNTING DETAILS

1. CUT DC CONDUCTORS TO LENGTH.
2. COIL FIBER CABLE AND SECURE AT SIDE OF RRH.
3. DO NO EXCEED BEND RADIUS.

TYPICAL 2.5 ANTENNA & RRH MOUNTING DETAIL | NO SCALE | 4

PLANS PREPARED FOR:
Sprint

PLANS PREPARED BY:
INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless
1033 Watervliet Shaker Rd | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 526-104

PROJECT MANAGER:
AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 306-3740

ENGINEERING LICENSE:
STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
NOT LICENSED PROFESSIONAL ENGINEER
SEP 18 2018

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	07/02/18	MAP	0

SITE NAME:
BETHANY CT

SITE NUMBER:
CT03XC043

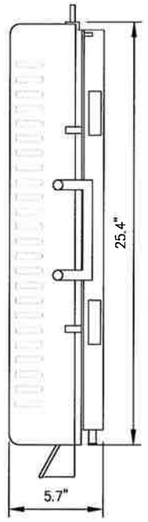
SITE ADDRESS:
93 OLD AMITY ROAD
BETHANY, CT 06524

SHEET DESCRIPTION:
ANTENNA LAYOUT
& MOUNTING DETAILS

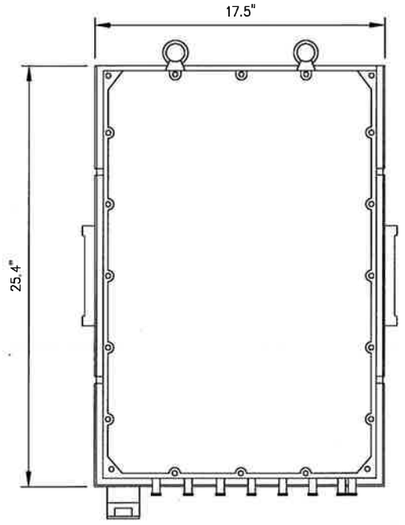
SHEET NUMBER:
A-3

RRH: ALCATEL LUCENT TD-RRH8X20

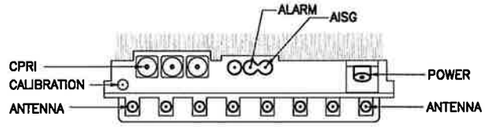
COLOR: LIGHT GREY
WEIGHT: 70 LBS.



SIDE VIEW



FRONT VIEW



PLAN VIEW

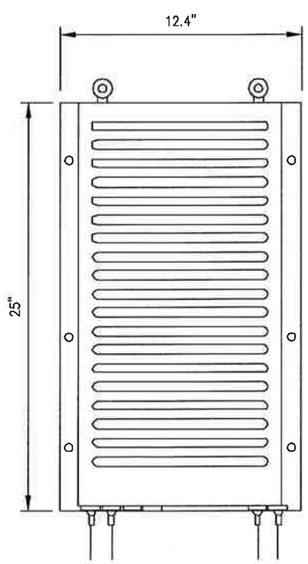
NOTES

COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRH'S RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING. DO NOT OPEN RRH PACKAGES IN THE RAIN.

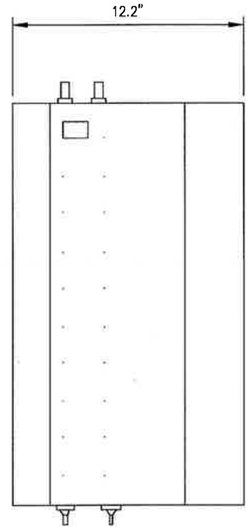
2.5 RRH	NO SCALE	1

RRH: ALCATEL LUCENT 1900 MHz

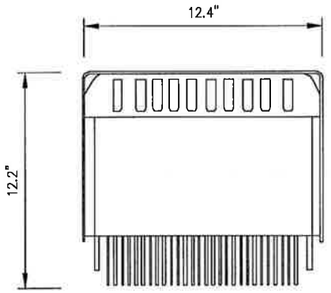
COLOR: LIGHT GREY
WEIGHT: 70 LBS.
(INCLUDING OPTIONAL SOLAR SHIELD)



FRONT VIEW



SIDE VIEW

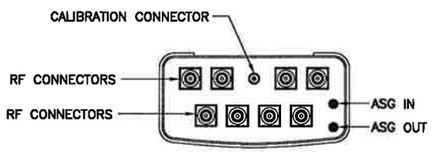


TOP VIEW

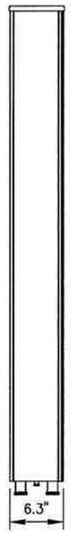
1900 MHz RRH	NO SCALE	2

ANTENNA RFS APXVTM14-ALU-I20

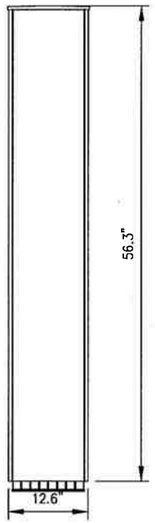
RADOME MATERIAL:	ASA
RADOME COLOR:	LIGHT GREY
DIMENSIONS, HxWxD.in(mim):	56.3"x12.6"x6.3" (1549x439x300mm)
WEIGHT:	56.2 lbs
CONNECTORS:	(8) 4.1/9.5 DIN FEMALE (1) NF – CALIBRATION CONNECTOR



PLAN VIEW



SIDE VIEW



FRONT VIEW

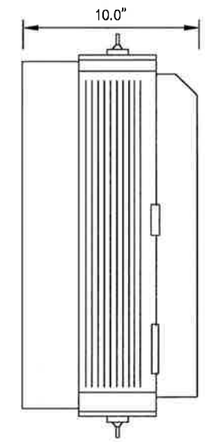
2.5 ANTENNA DETAIL	NO SCALE	3

RRH: ALCATEL LUCENT RRH 800 MHz 2x50W

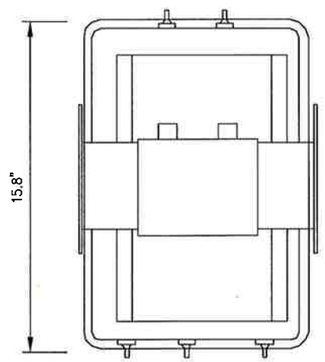
COLOR: LIGHT GREY
WEIGHT: 53 LBS.

NOTES

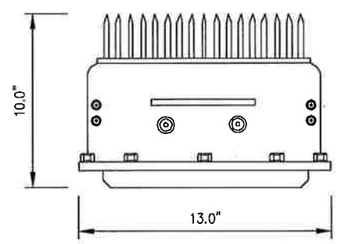
COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRH'S RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING. DO NOT OPEN RRH PACKAGES IN THE RAIN.



SIDE VIEW



FRONT VIEW



PLAN VIEW

800 MHz RRH	NO SCALE	4

PLANS PREPARED FOR:

Sprint

PLANS PREPARED BY:

INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless
1033 Watervliet Shaker Rd | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 526-104

PROJECT MANAGER:

AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 306-3740

ENGINEERING LICENSE:

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	07/02/18	MAP	0

SITE NAME:

BETHANY CT

SITE NUMBER:

CT03XC043

SITE ADDRESS:

93 OLD AMITY ROAD
BETHANY, CT 06524

SHEET DESCRIPTION:

EQUIPMENT & MOUNTING DETAILS

SHEET NUMBER:

A-4

RFS HYBRIFLEX RISER CABLE SCHEDULE

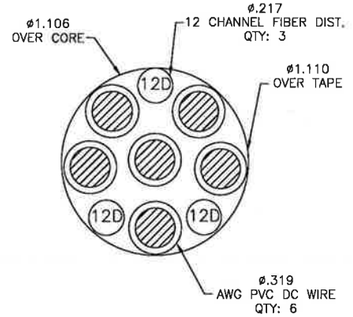
Fiber Only (Existing DC Power)	Hybrid cable MN: HB058-M12-050F 12x multi-mode fiber pairs, Top: Outdoor protected connectors, Bottom: LC Connectors, 5/8 cable, 50 ft	50 ft
	MN: HB058-M12-075F	75 ft
	MN: HB058-M12-100F	100 ft
	MN: HB058-M12-125F	125 ft
	MN: HB058-M12-150F	150 ft
	MN: HB058-M12-175F	175 ft
	MN: HB058-M12-200F	200 ft
8 AWG Power	Hybrid cable MN: HB114-08U3M12-050F 3x 8 AWG power pairs, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 1/4 cable, 50 ft	50 ft
	MN: HB114-08U3M12-075F	75 ft
	MN: HB114-08U3M12-100F	100 ft
	MN: HB114-08U3M12-125F	125 ft
	MN: HB114-08U3M12-150F	150 ft
	MN: HB114-08U3M12-175F	175 ft
	MN: HB114-08U3M12-200F	200 ft
6 AWG Power	Hybrid cable MN: HB114-13U3M12-225F 3x 6 AWG power pair, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 1/4 cable, 225 ft	225 ft
	MN: HB114-13U3M12-250F	250 ft
	MN: HB114-13U3M12-275F	275 ft
	MN: HB114-13U3M12-300F	300 ft (1)*
4 AWG Power	Hybrid cable MN: HB114-21U3M12-325F 3x 4 AWG power pair, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 1/4 cable, 325 ft	325 ft
	MN: HB114-21U3M12-350F	350 ft
	MN: HB114-21U3M12-375F	375 ft

RFS HYBRIFLEX JUMPER CABLE SCHEDULE

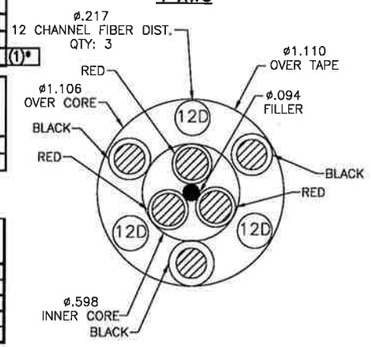
Fiber Only	Hybrid Jumper cable MN: HBF012-M3-SF1 5 ft, 3x multi-mode fiber pairs, Outdoor & LC connectors, 1/2 cable	5 ft
	MN: HBF012-M3-10F1	10 ft
	MN: HBF012-M3-15F1	15 ft
	MN: HBF012-M3-20F1	20 ft
	MN: HBF012-M3-25F1	25 ft
	MN: HBF012-M3-30F1	30 ft
8 AWG Power	Hybrid Jumper cable MN: HBF058-08U1M3-SF1 5 ft, 1x 8 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors, 5/8 cable	5 ft
	MN: HBF058-08U1M3-10F1	10 ft
	MN: HBF058-08U1M3-15F1	15 ft
	MN: HBF058-08U1M3-20F1	20 ft
	MN: HBF058-08U1M3-25F1	25 ft
	MN: HBF058-08U1M3-30F1	30 ft
6 AWG Power	Hybrid Jumper cable MN: HBF058-13U1M3-SF1 5 ft, 1x 6 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors, 5/8 cable	5 ft
	MN: HBF058-13U1M3-10F1	10 ft
	MN: HBF058-13U1M3-15F1	15 ft
	MN: HBF058-13U1M3-20F1	20 ft
	MN: HBF058-13U1M3-25F1	25 ft
	MN: HBF058-13U1M3-30F1	30 ft (3)*
4 AWG Power	Hybrid Jumper cable MN: HBF078-21U1M3-SF1 5 ft, 1x 4 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors, 7/8 cable	5 ft
	MN: HBF078-21U1M3-10F1	10 ft
	MN: HBF078-21U1M3-15F1	15 ft
	MN: HBF078-21U1M3-20F1	20 ft
	MN: HBF078-21U1M3-25F1	25 ft
	MN: HBF078-21U1M3-30F1	30 ft

NOTE:
SPRINT CM TO CONFIRM HYBRID OR FIBER RISER CABLE AND HYBRID OR FIBER JUMPER CABLE MODEL NUMBERS IF HYBRID CABLES ARE REQUIRED BEFORE PREPARING BOM.

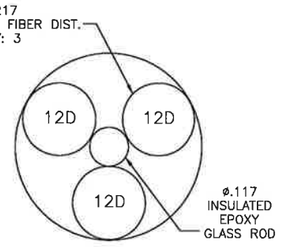
* PROPOSED CABLE LENGTH WAS DETERMINED USING THE SUM OF THE RAD CENTER OF ANTENNAS, AND DISTANCE FROM EXISTING EQUIPMENT AREA TO TOWER BASE WITH AN ADDITIONAL 20' BUFFER. LENGTH TO BE VERIFIED IN FIELD PRIOR TO ORDERING MATERIALS.



4 AWG

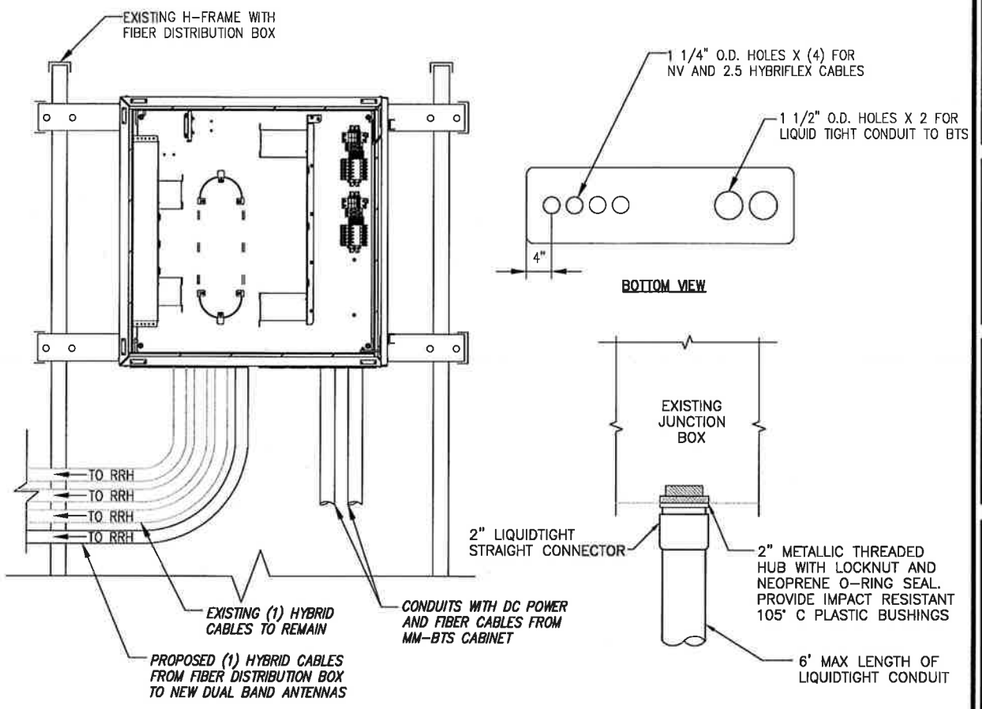


8 & 6 AWG



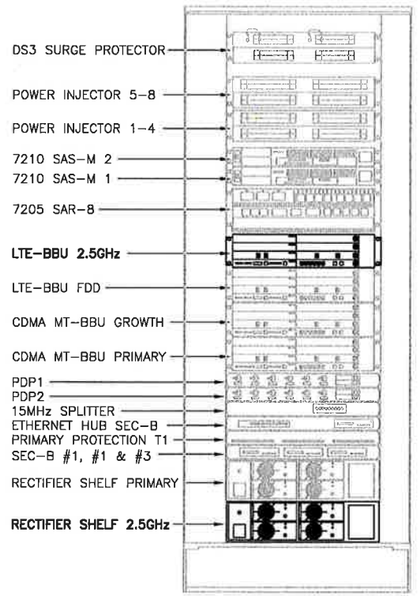
FIBER ONLY

800/1900/2500 CROSS SECTION DATA | NO SCALE | 1



FRONT VIEW

FIBER JUNCTION BOX & PENETRATION | NO SCALE | 2



FRONT VIEW

NEW EQUIPMENT IN EXISTING CABINET | NO SCALE | 3

PLANS PREPARED FOR:
Sprint

PLANS PREPARED BY:

INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless
1033 Watervliet Shaker Rd | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 526-104

PROJECT MANAGER:

AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 308-3740

ENGINEERING LICENSE:
STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER
SEP 18 2018

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	07/02/18	MAP	0

SITE NAME:
BETHANY CT

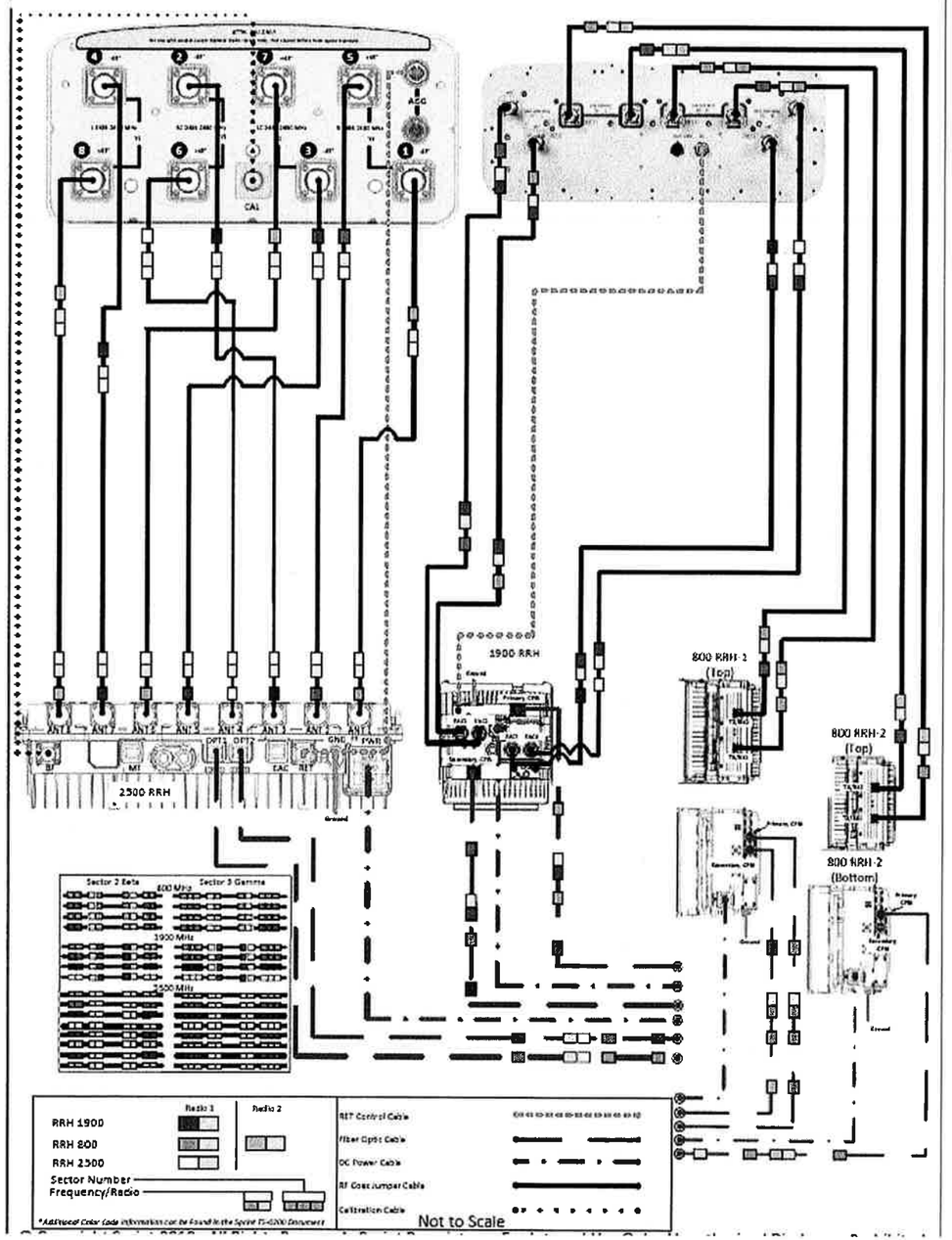
SITE NUMBER:
CT03XC043

SITE ADDRESS:
93 OLD AMITY ROAD
BETHANY, CT 06524

SHEET DESCRIPTION:
CIVIL DETAILS

SHEET NUMBER:
A-5

ALU-NSN 211 APXVTM14-ALU-I20 & NNVV-65B-R4 wo Filters



PLUMBING DIAGRAM | NO SCALE | 1

PLANS PREPARED FOR:

Sprint

PLANS PREPARED BY:

INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless
1033 Watervliet Shaker Rd | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 526-104

PROJECT MANAGER:

AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 308-3740

ENGINEERING LICENSE:

STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER
SEP. 14. 2018

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	07/02/18	MAP	0

SITE NAME:

BETHANY CT

SITE NUMBER:

CT03XC043

SITE ADDRESS:

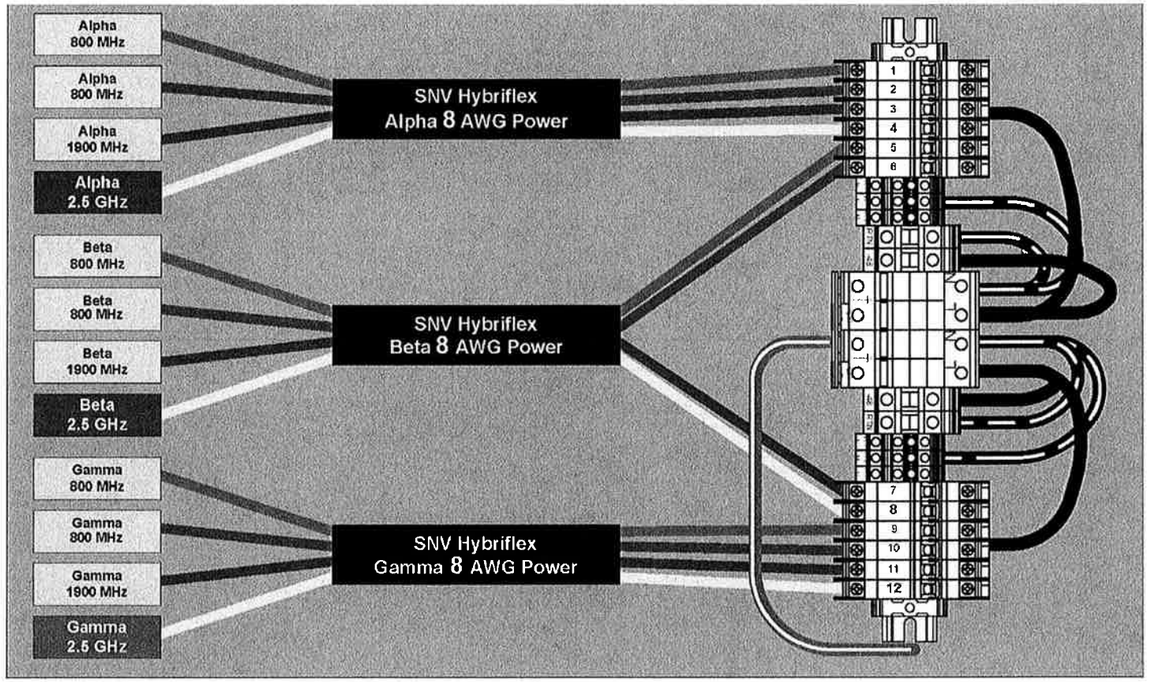
93 OLD AMITY ROAD
BETHANY, CT 06524

SHEET DESCRIPTION:

PLUMBING DIAGRAM

SHEET NUMBER:

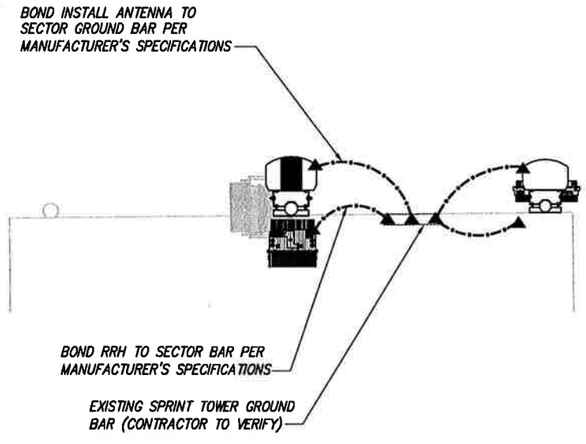
A-6



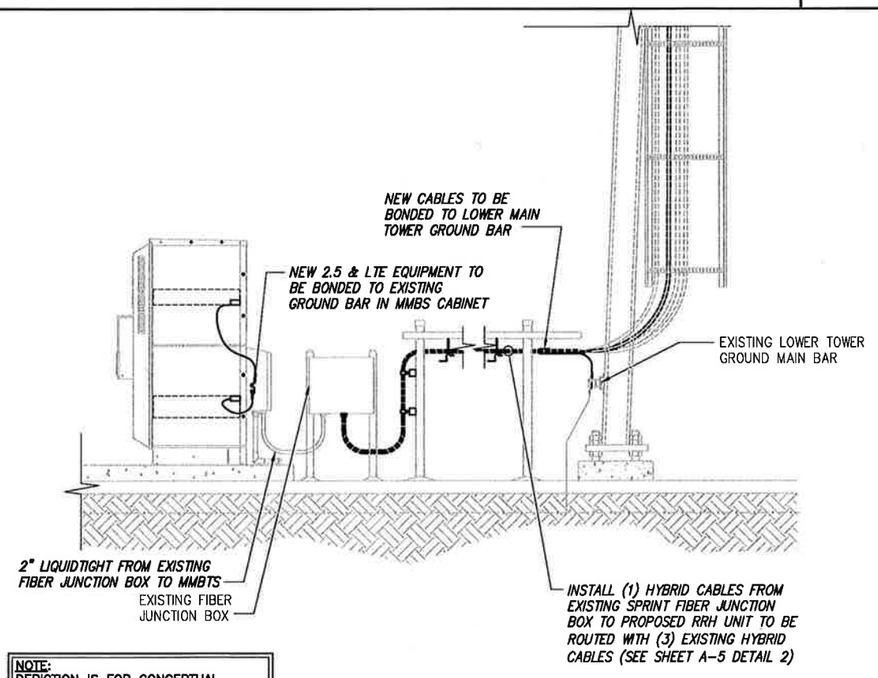
RRH TO DISTRIBUTION BOX POWER CONNECTIVITY | NO SCALE | 1

LEGEND:

- EXISTING GROUND RING
- ■ CADWELD CONNECTION (EXOTHERMIC WELD)
- ▲ MECHANICAL CONNECTION
- ⊗ GROUND ROD
- ● CABLE GROUND KIT



TYPICAL ANTENNA GROUNDING PLAN | NO SCALE | 2



NOTE:
DEPICTION IS FOR CONCEPTUAL PURPOSES ONLY. CONTRACTOR IS TO FIELD VERIFY PRIOR TO CONSTRUCTION

TYPICAL EQUIPMENT GROUNDING PLAN (ELEVATION) | NO SCALE | 3

PLANS PREPARED FOR:
Sprint

PLANS PREPARED BY:
INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless
1033 Watervliet Shaker Rd | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 526-104

PROJECT MANAGER:
AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 306-3740

ENGINEERING LICENSE:
STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER
SEP 10 2018

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	07/02/18	MAP	0

SITE NAME:
BETHANY CT

SITE NUMBER:
CT03XC043

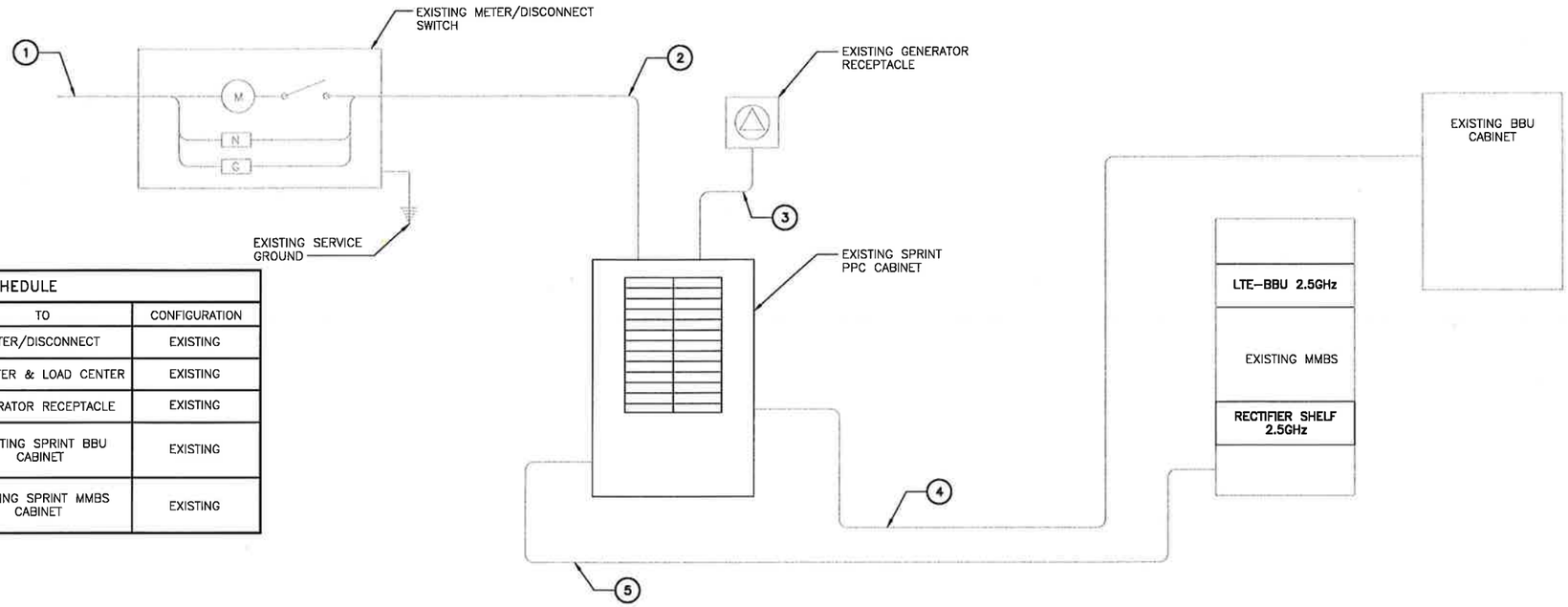
SITE ADDRESS:
93 OLD AMITY ROAD
BETHANY, CT 06524

SHEET DESCRIPTION:
ELECTRICAL & GROUNDING PLAN

SHEET NUMBER:
E-1

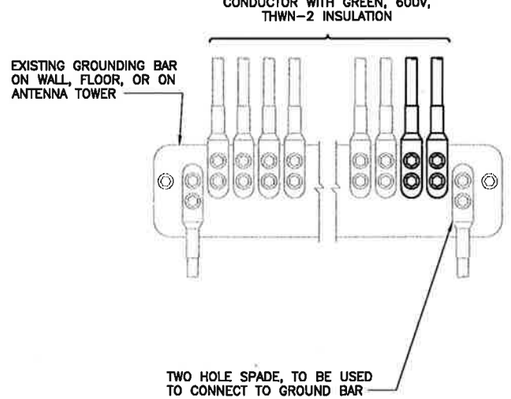
NOTES

CG SHALL REFERENCE ALL SPECS FOR "CONNECTING THE POWER SUPPLY" OF THE NEW INSTALLATION DOCUMENTS, FOR ALL CONNECTION SPECIFICATIONS.



CIRCUIT SCHEDULE			
NO	FROM	TO	CONFIGURATION
1	UTILITY SOURCE	METER/DISCONNECT	EXISTING
2	METER/DISCONNECT	TRANSFER & LOAD CENTER	EXISTING
3	TRANSFER & LOAD CENTER	GENERATOR RECEPTACLE	EXISTING
4	TRANSFER & LOAD CENTER	EXISTING SPRINT BBU CABINET	EXISTING
5	TRANSFER & LOAD CENTER	EXISTING SPRINT MMBS CABINET	EXISTING

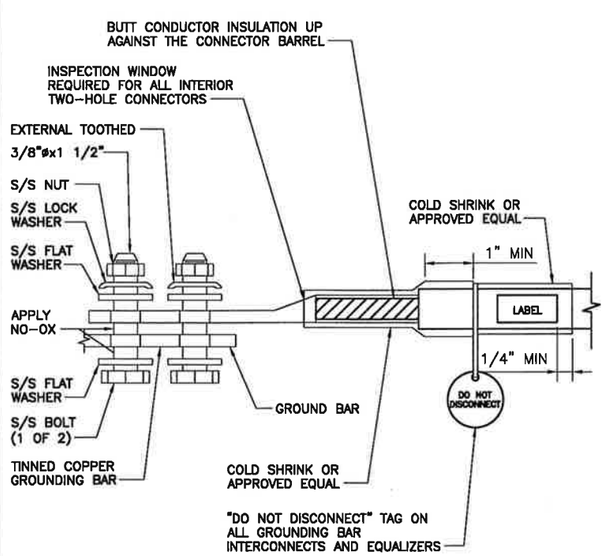
ELECTRICAL ONE–LINE DIAGRAM — NO SCALE — 1



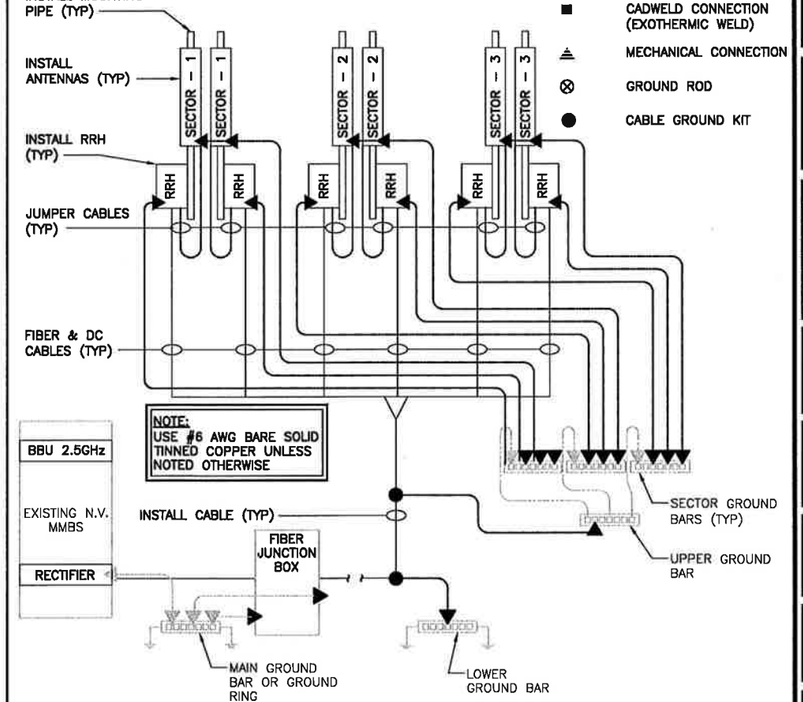
NOTES

1. APPLY NO–OX TO LUG AND BAR CONTACT SURFACE. DO NOT COAT INLINE LUG.
2. IF STOLEN GROUND BARS ARE ENCOUNTERED, CONTACT SPRINT CM FOR REPLACEMENT THREADED ROD KIT.

INSTALLATION OF GROUNDING CONDUCTOR TO GROUNDING BAR — NO SCALE — 2



TWO HOLE LUG — NO SCALE — 3



GROUNDING RISER DIAGRAM — NO SCALE — 4

PLANS PREPARED FOR:

Sprint

PLANS PREPARED BY:

INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless
1033 Watervliet Shaker Rd | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 526-104

PROJECT MANAGER:

AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 306-3740

ENGINEERING LICENSE:

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	07/02/18	MAP	0

SITE NAME:

BETHANY CT

SITE NUMBER:

CT03XC043

SITE ADDRESS:

93 OLD AMITY ROAD
BETHANY, CT 06524

SHEET DESCRIPTION:

ELECTRICAL & GROUNDING DETAILS

SHEET NUMBER:

E-2

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

88008 - BETHANY CT, CONNECTICUT

337.5 FT SELF SUPPORT TOWER MODIFICATIONS

AS-BUILT SIGN-OFF

DESCRIPTION	SIGNATURE	DATE
CONTRACTOR NAME		
CONTRACTOR REPRESENTATIVE (PRINT NAME)		
CONTRACTOR REPRESENTATIVE (SIGNATURE)		
REDEVELOPMENT P.M. (PRINT NAME)		
REDEVELOPMENT P.M. (SIGNATURE)		

PROJECT SUMMARY

ATC PROJECT NUMBER: OAA712592_C6_13

CUSTOMER: SPRINT NEXTEL

CUSTOMER SITE NAME: BETHANY, NY (AMERICAN TOWERS, INC.)

CUSTOMER SITE NUMBER: CT03XC043

SITE ADDRESS: 93 OLD AMITY ROAD
BETHANY, CT 06524

DATE: 08/13/18

GEOGRAPHIC COORDINATES: 41.40475833
-72.99998333

PROJECT DESCRIPTION

THE MODIFICATIONS PRESENTED ON THESE DRAWINGS ARE BASED ON THE RECOMMENDATIONS OUTLINED IN THE STRUCTURAL ANALYSIS COMPLETED UNDER ENGINEERING PROJECT NUMBER OAA712592_C3_11 DATED 03/29/18. SATISFACTORY COMPLETION OF THE WORK INDICATED ON THESE DRAWINGS WILL RESULT IN THE STRUCTURE MEETING THE REQUIREMENTS OF THE SPECIFICATIONS UNDER WHICH THE STRUCTURAL WAS COMPLETED.

SHEET	SHEET TITLE	REV.
B-1	BILL OF MATERIALS	0
IGN	IBC GENERAL NOTES	0
SIC	SPECIAL INSPECTION CHECKLIST	0
C-101	SITE PLAN	0
A-1	MODIFICATION PROFILE	0
A-2	HIP BRACE INSTALLATION DETAILS	0
A-2A	HIP BRACE INSTALLATION DETAILS (CONT'D)	0
F-1	INTERNAL BRACE FABRICATION DETAILS	0

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	CGM	08/13/18

ATC SITE NUMBER:
88008

ATC SITE NAME:
BETHANY CT
CONNECTICUT

SITE ADDRESS:
93 OLD AMITY ROAD
BETHANY, CT 06524

Authorized by "EOR"
Aug 17 2018 12:31 PM
cosign

DRAWN BY:	CGM
APPROVED BY:	AAV/DAVI
DATE DRAWN:	08/13/18
ATC JOB NO:	OAA712592_C6_13

COVER

SHEET NUMBER:	REVISION:
COVER	0

BILL OF MATERIALS

QUANTITY REQUIRED	QUANTITY PROVIDED	PART NUMBER	DESCRIPTION	LENGTH	SHEET LIST	PART WEIGHT	WEIGHT (lb)	NOTES
			INTERNAL BRACE MATERIAL & HARDWARE					
4	4	88008-1	L 2 1/2" X 2 1/2" X 1/4"	5'-2"	A-2, F-1	22.2	89	
4	4	88008-2	L 2 1/2" X 2 1/2" X 1/4"	4'-10"	A-2, F-1	20.8	83	
16	17	BK-625-175-A325	BOLT, 5/8"Ø A325 W/ HHN-LKW-FW, GALVANIZED	1 3/4"	----	----	----	ALLFASTENERS - 2STBG58134A325-A
			HIP BRACE MATERIAL & HARDWARE					
16	16	HB-580-1000	5/8"Ø THREADED ROD HIP BRACING KIT	10'-0"	A-2A, F-1	18.7	298	
16	16	HB-580-1400	5/8"Ø THREADED ROD HIP BRACING KIT	14'-0"	A-2A, F-1	22.0	351	
128	134	BK-625-200-A325	BOLT, 5/8"Ø A325 W/ HHN-LKW-FW, GALVANIZED	2"	----	----	----	ALLFASTENERS - 2STBG58200A325-A
						TOTAL WEIGHT (lb)	**821**	**PAGE 1 OF 1**

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OR SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

REV.	DESCRIPTION	BY	DATE
△0	FIRST ISSUE	CGM	08/13/18
△			
△			
△			
△			

ATC SITE NUMBER:
88008

ATC SITE NAME:
BETHANY CT

CONNECTICUT

SITE ADDRESS:
93 OLD AMITY ROAD
BETHANY, CT 06524

ESHA KAUSHAL MODI
32598
LICENSED PROFESSIONAL ENGINEER

Authorized by "EOR"
Aug 17 2018 12:31 PM
cosign

DRAWN BY:	CGM
APPROVED BY:	AAV/DAVI
DATE DRAWN:	08/13/18
ATC JOB NO:	OAA712592_C6_13

BILL OF MATERIALS

SHEET NUMBER:	REVISION:
B-1	0

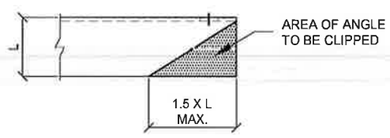
GENERAL

1. ALL WORK TO BE COMPLETED PER APPLICABLE LOCAL, STATE, FEDERAL CODES AND ORDINANCES AND COMPLY WITH ATC MASTER SPECIFICATIONS FOR WIRELESS TOWER SITES. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND ABIDING BY ALL REQUIRED PERMITS.
2. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN TOWER AND FOUNDATION CONSTRUCTION.
3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY OF ANY INSTALLATION INTERFERENCES. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. DETAILS NOT SPECIFICALLY SHOWN ON THE DRAWINGS SHALL FOLLOW SIMILAR DETAILS FOR THIS JOB.
4. ANY SUBSTITUTIONS SHALL CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
5. ANY MANUFACTURED DESIGN ELEMENTS SHALL CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS AND SHOULD BE SIMILAR TO THOSE SHOWN. THESE DESIGN ELEMENTS MUST BE STAMPED BY AN ENGINEER PROFESSIONALLY REGISTERED IN THE STATE OF THE PROJECT, AND SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION.
6. ALL WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL CODES AND OSHA SAFETY REGULATIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY, PER ANSI/TIA-322 AND ANSI/ASSE A10.48, TO PROVIDE A COMPLETE AND STABLE STRUCTURE AS SHOWN ON THESE DRAWINGS.
8. CONTRACTOR'S PROPOSED INSTALLATION SHALL NOT INTERFERE, NOR DENY ACCESS TO, ANY EXISTING OPERATIONAL AND SAFETY EQUIPMENT.

STRUCTURAL STEEL

1. ALL DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC SPECIFICATIONS, LATEST EDITION.
2. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
3. ALL U-BOLTS SHALL BE ASTM A36 OR EQUIVALENT, WITH LOCKING DEVICE, UNLESS NOTED OTHERWISE.
4. FIELD CUT EDGES, EXCEPT DRILLED HOLES, SHALL BE GROUND SMOOTH.
5. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES & GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.
6. ALL STRUCTURAL STEEL EMBEDDED IN THE CONCRETE SHALL BE APPLIED WITH (2) BRUSHED COATS OF POLYGUARD CA-14 MASTIC OR EQUIVALENT. REFER TO THE MANUFACTURER SPECIFICATIONS FOR SURFACE PREPARATION AND APPLICATION. APPLICATION OF POLYGUARD 400 WRAP IS NOT ESSENTIAL.
7. CONTRACTOR SHALL PERFORM WORK ON ONLY ONE (1) TOWER FACE AND REPLACE/REINFORCE ONE (1) BOLT/MEMBER AT A TIME.
8. ALL FIELD DRILLED HOLES TO BE USED FOR FIELD BOLTING INSTALLATION SHALL BE STANDARD HOLES, AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.

MAXIMUM ALLOWABLE ANGLE CLIP



PAINT

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

WELDING

1. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
2. ALL WELDS SHALL BE INSPECTED VISUALLY. IF DIRECTED BY ENGINEER OF RECORD, 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE (100% IF REJECTABLE DEFECTS ARE FOUND) TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
3. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
4. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
5. ALL WELDING ON LATTICE TOWERS SHALL BE DONE WITH E70XX ELECTRODES. ALL WELDING ON POLE STRUCTURES SHALL BE DONE WITH E80XX ELECTRODES UNLESS NOTED OTHERWISE.
6. PRIOR TO FIELD WELDING GALVANIZED MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING 1/2" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.

BOLT TIGHTENING PROCEDURE

1. STRUCTURAL CONNECTIONS TO BE ASSEMBLED AND INSPECTED IN ACCORDANCE WITH RCSC SPECIFICATIONS.
2. FLANGE BOLTS SHALL BE INSTALLED AND TIGHTENED USING DIRECT TENSION INDICATING (DTI) SQUIRTER WASHERS. DTI SQUIRTER WASHERS ARE TO BE INSTALLED AND ORIENTED / TIGHTENED PER MANUFACTURER SPECIFICATIONS TO ACHIEVE DESIRED LEVEL OF BOLT PRE-TENSION.
3. IN LIEU OF USING DTI SQUIRTER WASHERS, FLANGE BOLTS MAY BE TIGHTENED USING AISC / RCSC "TURN-OF-THE-NUT" METHOD, PENDING APPROVAL BY THE ENGINEER OF RECORD (EOR). TIGHTEN FLANGE BOLTS USING THE CHART BELOW:

BOLT LENGTHS UP TO AND INCLUDING FOUR DIAMETERS

1/2"	BOLTS UP TO AND INCLUDING 2.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
5/8"	BOLTS UP TO AND INCLUDING 2.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
3/4"	BOLTS UP TO AND INCLUDING 3.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
7/8"	BOLTS UP TO AND INCLUDING 3.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1"	BOLTS UP TO AND INCLUDING 4.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS UP TO AND INCLUDING 4.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS UP TO AND INCLUDING 5.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-3/8"	BOLTS UP TO AND INCLUDING 5.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS UP TO AND INCLUDING 6.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT

BOLT LENGTHS OVER FOUR DIAMETERS BUT NOT EXCEEDING EIGHT DIAMETERS

1/2"	BOLTS 2.25 TO 4.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
5/8"	BOLTS 2.75 TO 5.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
3/4"	BOLTS 3.25 TO 6.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
7/8"	BOLTS 3.75 TO 7.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1"	BOLTS 4.25 TO 8.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS 4.75 TO 9.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS 5.25 TO 10.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-3/8"	BOLTS 5.75 TO 11.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS 6.25 TO 12.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT

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

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

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

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

   ALL BOLT HOLES SHALL BE ALIGNED TO PERMIT INSERTION OF THE BOLTS WITHOUT UNDUE DAMAGE TO THE THREADS. BOLTS SHALL BE PLACED IN ALL HOLES WITH WASHERS POSITIONED AS REQUIRED AND NUTS THREADED TO COMPLETE THE ASSEMBLY. COMPACTING THE JOINT TO THE SNUG-TIGHT CONDITION SHALL PROGRESS SYSTEMATICALLY FROM THE MOST RIGID PART OF THE JOINT. THE SNUG-TIGHTENED CONDITION IS THE TIGHTNESS THAT IS ATTAINED WITH A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.

APPLICABLE CODES AND STANDARDS

1. ANSI/TIA: STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES, 222-G EDITION.
2. 2016 CONNECTICUT STATE BUILDING CODE.
3. 2012 INTERNATIONAL BUILDING CODE.
4. ACI 318: AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, 318-02.
5. CRSI: CONCRETE REINFORCING STEEL INSTITUTE, MANUAL OF STANDARD PRACTICE, LATEST EDITION.
6. AISC: AMERICAN INSTITUTE OF STEEL CONSTRUCTION, MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.
7. AWS: AMERICAN WELDING SOCIETY D1.1, STRUCTURAL WELDING CODE, LATEST EDITION.

SPECIAL INSPECTION

1. A QUALIFIED INDEPENDENT TESTING LABORATORY, EMPLOYED BY THE OWNER, SHALL PERFORM INSPECTION AND TESTING IN ACCORDANCE WITH IBC 2012, SECTION 1704 AS REQUIRED BY PROJECT SPECIFICATIONS FOR THE FOLLOWING CONSTRUCTION WORK:
   a) STRUCTURAL WELDING (CONTINUOUS INSPECTION OF FIELD WELD ONLY)
   b) HIGH STRENGTH BOLTS (PERIODIC INSPECTION OF A325 EXTENSION FLANGE BOLTS TO BE TIGHTENED PER "TURN-OF-THE-NUT" METHOD)
2. THE INSPECTION AGENCY SHALL SUBMIT INSPECTION AND TEST REPORTS TO THE BUILDING DEPARTMENT, THE ENGINEER OF RECORD, AND THE OWNER IN ACCORDANCE WITH IBC 2012, SECTION 1704, UNLESS THE FABRICATOR IS APPROVED BY THE BUILDING OFFICIAL TO PERFORM SUCH WORK WITHOUT THE SPECIAL INSPECTIONS.

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	CGM	08/13/18

ATC SITE NUMBER:
88008

ATC SITE NAME:
BETHANY CT

CONNECTICUT

SITE ADDRESS:
93 OLD AMITY ROAD
BETHANY, CT 06524

Authorized by "EOR"
Aug 17 2018 12:31 PM
cosign

DRAWN BY:	CGM
APPROVED BY:	AAV/DAVI
DATE DRAWN:	08/13/18
ATC JOB NO:	OAA712592_C6_13

IBC GENERAL NOTES

SHEET NUMBER:	REVISION:
IGN	0

MODIFICATION INSPECTION NOTES

THE SPECIAL INSPECTION (SI) PROCEDURE IS INTENDED TO CONFIRM THAT CONSTRUCTION AND INSTALLATION MEETS ENGINEERING DESIGN, ATC PROCEDURES AND ATC STANDARD SPECIFICATIONS FOR WIRELESS TOWER SITES.

TO ENSURE THAT THE REQUIREMENTS OF THE SI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR AND THE INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PO IS RECEIVED FROM AMERICAN TOWER CORPORATION (ATC). IT IS EXPECTED THAT EACH PARTY WILL PROACTIVELY REACH OUT TO THE OTHER PARTY. IF CONTACT INFORMATION IS NOT KNOWN, CONTACT YOUR AMERICAN TOWER POINT OF CONTACT.

SPECIAL INSPECTOR

THE SPECIAL INSPECTOR IS REQUIRED TO CONTACT THE GENERAL CONTRACTOR AS SOON AS RECEIVING A PO FROM ATC. UPON RECEIVING A PO FROM ATC THE SPECIAL INSPECTOR AT A MINIMUM MUST:

- REVIEW THE REQUIREMENTS OF THE SI CHECKLIST.
- WORK WITH THE GENERAL CONTRACTOR TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS.
- ANY CONCERNS WITH THE SCOPE OF WORK OR PROJECT COMMITMENT MUST BE RELAYED TO THE ATC POINT OF CONTACT IMMEDIATELY.

THE SPECIAL INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GENERAL CONTRACTOR INSPECTION AND TEST REPORTS, REVIEWING THESE DOCUMENTS FOR ADHERENCE TO CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE SI REPORT TO AMERICAN TOWER CORPORATION.

GENERAL CONTRACTOR

THE GENERAL CONTRACTOR IS REQUIRED TO CONTACT THE SI INSPECTOR AS SOON AS RECEIVING A PO FOR THE MODIFICATION INSTALLATION OR TURNKEY PROJECT TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE SI CHECKLIST.
- WORK WITH THE SI TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS.
- BETTER UNDERSTAND ALL INSPECTION AND TESTING REQUIREMENTS.

THE GENERAL CONTRACTOR SHALL PERFORM AND RECORD THE TEST AND INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE SI CHECKLIST.

SPECIAL INSPECTION CHECKLIST

INSPECTION DOCUMENT	DESCRIPTION	INSPECTION TESTING REQUIRED	RESPONSIBILITY	SI REVIEW REQUIRED			INSPECTION FREQUENCY	
				PRE CX	DURING CX	POST CX	PERIODIC	CONTINUOUS
SPECIAL INSPECTION FIELD WORK & REPORT	DOCUMENTATION AND SITE VISIT CONDUCTED BY AN ATC APPROVED SPECIAL INSPECTOR AS REQUIRED BY ATC AND OTHER AUTHORITIES HAVING JURISDICTION. INSPECTION PARAMETERS TO FOLLOW ATC'S STANDARD SPECIFICATION FOR WIRELESS TOWER SITES.	✔	SI			✔		
ENGINEERING ASSEMBLY DRAWINGS	GC SHALL SUBMIT DRAWINGS TO SI FOR INCLUSION IN SI REPORT	✔	GC	✔				
FABRICATED MATERIAL VERIFICATION & INSPECTION	MTR AND OR MILL CERTIFICATIONS FOR SUPPLIED MATERIALS GC SHALL SUPPLY SI WITH REPORTS TO BE INCLUDED IN SI REPORT WHEN REQUIRED BY ATC	✔	SI	✔				
CERTIFIED WELD INSPECTION	INSPECTION AND REPORT OF STRUCTURAL WELDING PERFORMED DURING PROJECT COMPLETED BY A CWI AND INCLUDED WITHIN SI REPORT		GC / TA					
FOUNDATION INSPECTION & VERIFICATION	VISUAL OBSERVATION AND APPROVAL OF FOUNDATION EXCAVATION, REBAR PLACEMENT, CASING/SHORING/FORMING PLACEMENT, AND ANCHOR TEMPLATE AND ANCHOR PLACEMENT - TO BE SI APPROVED PRIOR TO CONCRETE POUR AND DOCUMENTED IN THE SI REPORT		SI					
ANCHOR, ROCK ANCHOR OR HELICAL PULL-OUT TEST	PULL TESTING OF INSTALLED ANCHORS TO BE COMPLETED AND DOCUMENTED IN SI REPORT		GC / TA					
CONCRETE INSPECTION & VERIFICATION	CONCRETE MIX DESIGN, SLUMP TEST, COMPRESSIVE TESTING, AND SAMPLE GATHERING TECHNIQUES ARE TO BE PROVIDED FOR INCLUSION IN THE SI REPORT. SI SHALL VERIFY CONCRETE PLACEMENT AS REQUIRED BY THE DESIGN DOCUMENTS (INSPECTION FREQUENCY IS MARKED CONTINUOUS)		GC / TA					
DYWIDAG PLACEMENT/ANCHOR BOLT EMBEDMENT - EPOXY/GROUT INSTALL	ANCHOR/BAR EMBEDMENT, HOLE SIZE, EPOXY/GROUT TYPE, INSTALLATION TEMPERATURE AND INSTALLATION SHALL BE VERIFIED BY THE SI AND INCLUDED IN THE SI REPORT		GC / SI					
BASE PLATE GROUT INSPECTION & VERIFICATION	BASE PLATE GROUTING TYPE AND PLACEMENT SHALL BE CONFIRMED BY THE SI AND INCLUDED IN THE SI REPORT		GC / SI					
EARTHWORK INSPECTION & VERIFICATION	EXCAVATION, FILL, SLOPE, GRADE AND OTHER EARTHWORK REQUIREMENTS PER PLANS SHALL BE VERIFIED BY THE SI AND INCLUDED IN THE SI REPORT		GC / TA					
COMPACTION VERIFICATION	CONTRACTOR SHALL PROVIDE AN INDEPENDENT THIRD PARTY CERTIFIED INSPECTION WHICH PROVIDES TEST RESULTS FOR COMPACTION TEST OF SOILS IN PLACE TO ASTM STANDARDS.		GC / TA					
GROUND TESTING & VERIFICATION	GC SHALL PROVIDE DOCUMENTATION SHOWING THAT THE GROUNDING SYSTEM SHALL HAVE A MEASURED RESISTANCE TO THE GROUND OF NOT MORE THAN THE RECOMMENDED 10 OHMS. PER THE ATC CONSTRUCTION SPECIFICATION UNDER SECTION 2.15 THIS DOCUMENTATION MUST BE AN INDEPENDENT CERTIFICATION.		GC					
STEEL CONSTRUCTION INSPECTION & VERIFICATION	VISUAL OBSERVATION AND APPROVAL OF STEEL CONSTRUCTION TO BE PERFORMED BY THE SI. INSPECTION TO INCLUDE VERIFICATION OF NEW CONSTRUCTION OR MODIFICATION OF EXISTING CONSTRUCTION PER ENGINEERED PLANS. DETAILED VERIFICATION SHALL BE INCLUDED IN SI REPORT.	✔	SI			✔	✔	
ON-SITE COLD GALVANIZING VERIFICATION	SI SHALL VERIFY WITH GC ALL COLD GALVANIZATION TYPE AND APPLICATION AND INCLUDE SUMMARY IN SI REPORT	✔	GC			✔	✔	
GUY WIRE TENSIONING & TOWER ALIGNMENT REPORT	GC SHALL PROVIDE SI EVIDENCE OF PROPER GUY TENSIONING AND TOWER PLUMB PER PLANS. SI SHALL VERIFY AND INCLUDE PLUMB AND TENSION REPORTING IN SI REPORT.		GC					
GC AS-BUILT DRAWINGS WITH CONSTRUCTION RED-LINES	GC SHALL SUBMIT "AS-BUILT" DRAWINGS INDICATING ANY APPROVED CHANGES TO ENGINEERED PLANS TO SI FOR APPROVAL/REVIEW AND INCLUSION IN SI REPORT	✔	GC			✔		
SI AS-BUILT DRAWINGS WITH INSPECTION RED-LINES (AS REQUIRED)	SI SHALL SUBMIT "AS-BUILT" DRAWINGS INDICATING ANY APPROVED CHANGES TO ENGINEERED PLANS WITHIN SI REPORT	✔	SI			✔		
TIA INSPECTION	SI SHALL COMPLETE TIA INSPECTION AND PROVIDE SEPARATE TIA INSPECTION DOCUMENTATION TO ATC CM		SI					
PHOTOGRAPHS	PHOTOGRAPHIC EVIDENCE OF SPECIAL INSPECTION, ON SITE REMEDIATION, AND ITEMS FAILING INSPECTION & REQUIRING FOLLOW UP TO BE INCLUDED WITHIN THE SI REPORT. COMPLETE PHOTO LOG IS TO BE SUBMITTED WITHIN SI REPORT.	✔	GC / SI			✔		

NOTE: SPECIAL INSPECTIONS ARE INTENDED TO BE A COLLABORATIVE EFFORT BETWEEN GC AND SI. WHENEVER POSSIBLE GC IS TO PROVIDE SI WITH PHOTOGRAPHIC OR OTHER ACCEPTABLE EVIDENCE OF PROPER INSTALLATION IF PERIODIC INSPECTION FREQUENCY IS ACCEPTABLE. THE GC AND SI SHALL WORK TO COMPILE EVIDENCE OF PROPER CONSTRUCTION AND LIMIT THE NUMBER OF SI SITE VISITS REQUIRED.

TABLE KEY:
SI - ATC APPROVED SPECIAL INSPECTOR — CX - CONSTRUCTION
GC - GENERAL CONTRACTOR — CM - CONSTRUCTION MANAGER
TA - 3RD PARTY TESTING AGENCY — ATC - AMERICAN TOWER CORPORATION

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	CGM	08/13/18

ATC SITE NUMBER:
88008

ATC SITE NAME:
BETHANY CT

CONNECTICUT

SITE ADDRESS:
93 OLD AMITY ROAD
BETHANY, CT 06524

STATE OF CONNECTICUT
ESHA KAUSHAL MODI
32598
LICENSED
PROFESSIONAL ENGINEER

Authorized by "EOR"
Aug 17 2018 12:31 PM
cosign

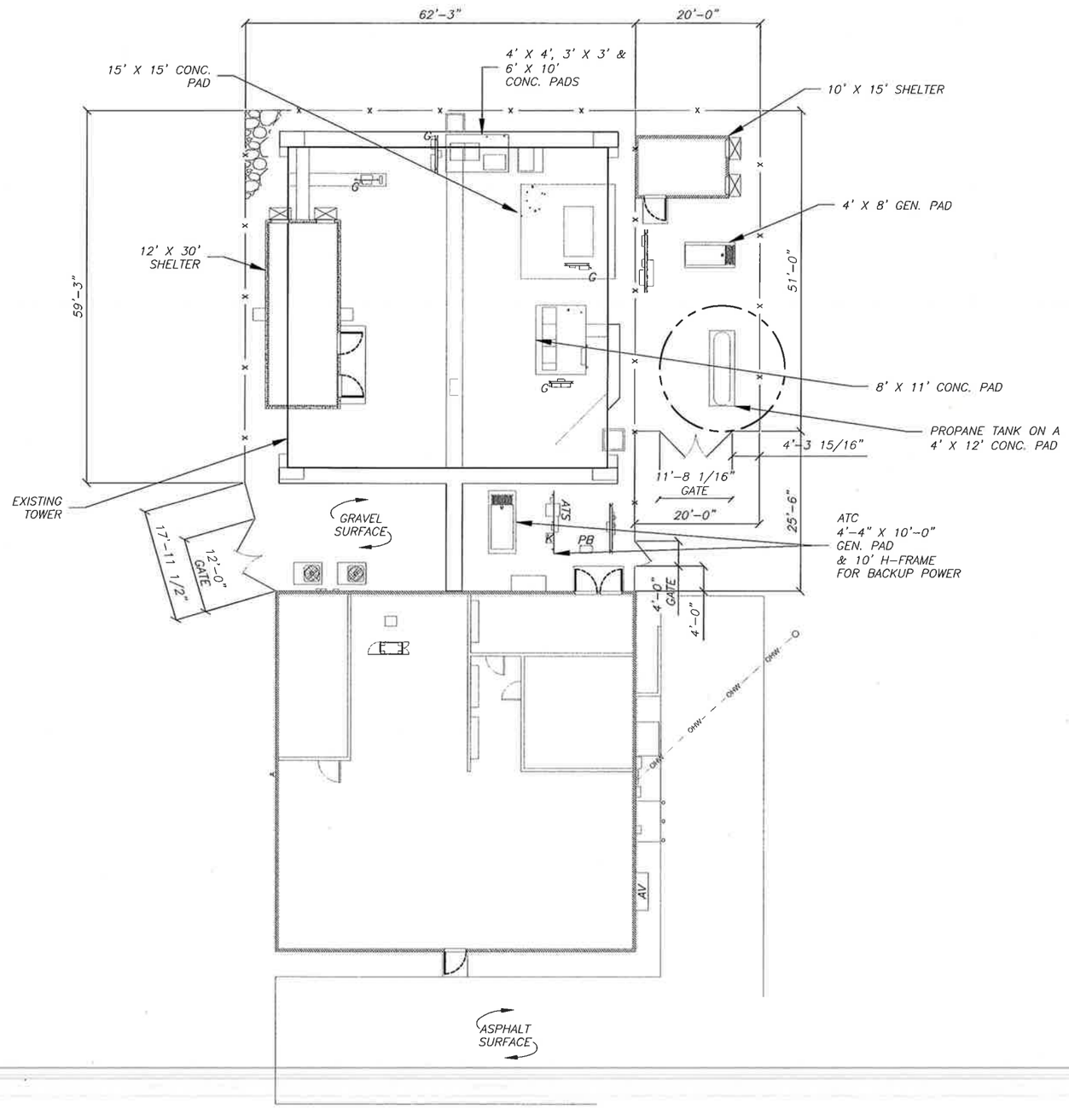
DRAWN BY:	CGM
APPROVED BY:	AAV/DAVI
DATE DRAWN:	08/13/18
ATC JOB NO:	OAA712592_C6_13

SPECIAL INSPECTION CHECKLIST

SHEET NUMBER:	REVISION:
SIC	0

LEGEND

⊗	GROUNDING TEST WELL
AV, A/V	AIR VENT
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
C	CABINET
CS	COAX SHROUD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACLE
HH, V	HAND HOLE, VAULT
HFC	HYDROGEN FUEL CELL
HSM	HYDROGEN STORAGE MATERIAL
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
LPG	LIQUID PROPANE GAS
M	METER
OHW	OVERHEAD WIRE
P	POWER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
	PROPERTY LINE
	ADJACENT PROPERTY LINE
	LEASE AREA
	EASEMENT
	WOOD FENCE
	WIRE FENCE
	METAL FENCE
	GUARD RAIL
x	CHAINLINK FENCE
	ROAD (DIRT)
	ROAD (STONE)
	ROAD (PAVED)



1 SITE PLAN

0 10' 20'

SCALE: 1"=10' (11X17)
1"=5' (22X34)

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	CGM	08/13/18

ATC SITE NUMBER:
88008

ATC SITE NAME:
BETHANY CT

CONNECTICUT

SITE ADDRESS:
93 OLD AMITY ROAD
BETHANY, CT 06524

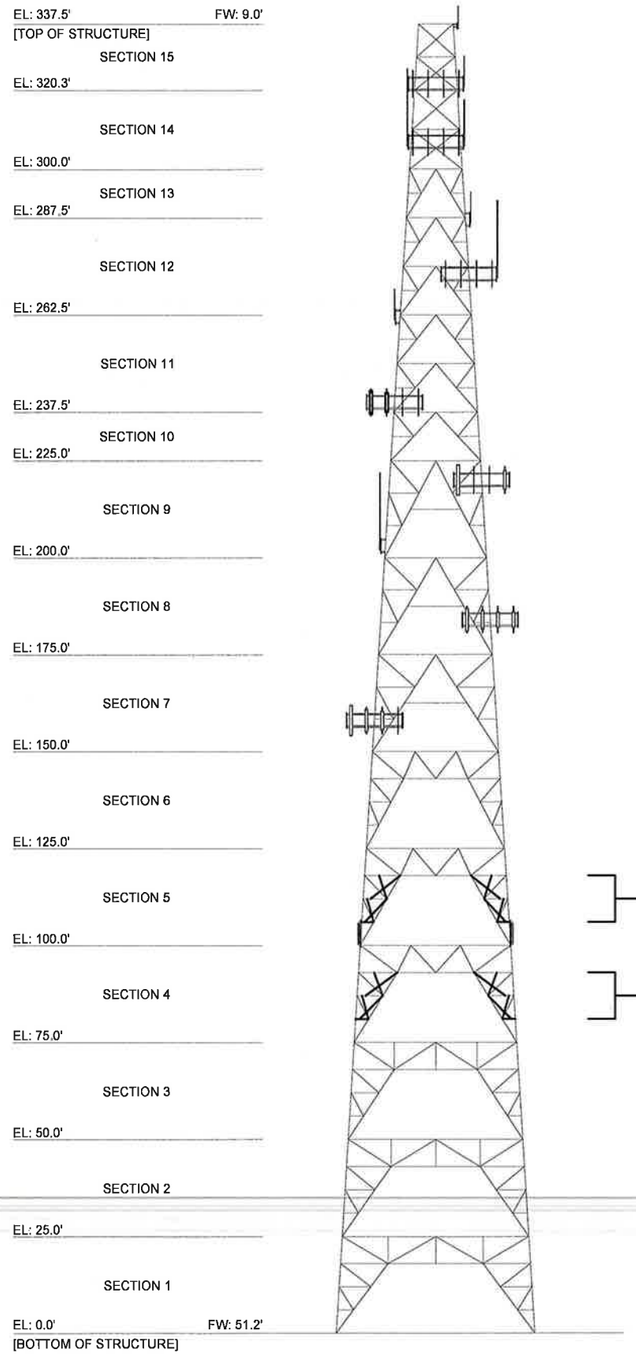
STATE OF CONNECTICUT
ESHA KAUSHAL MODI
32598
LICENSED PROFESSIONAL ENGINEER

Authorized by "EOR"
Aug 17 2018 12:32 PM
cosign

DRAWN BY:	CGM
APPROVED BY:	AAV/DAVI
DATE DRAWN:	08/13/18
ATC JOB NO:	OAA712592_C6_13

SITE PLAN

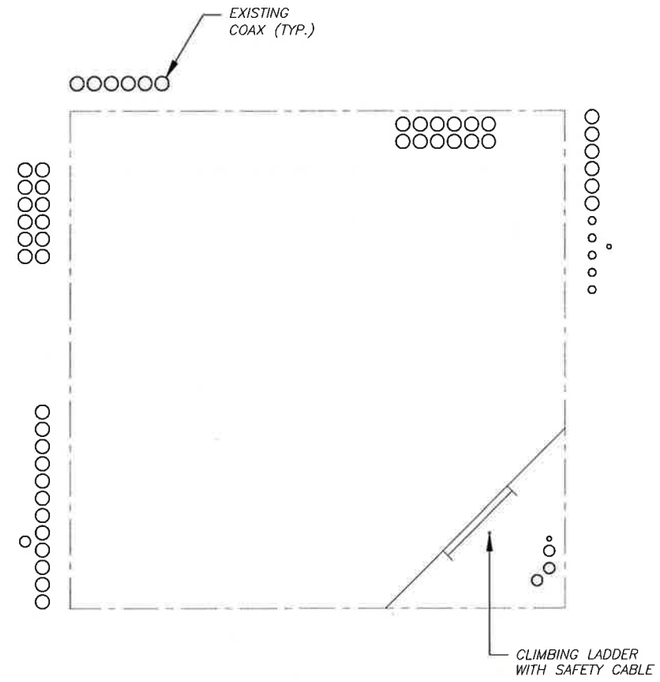
SHEET NUMBER:	REVISION:
C-101	0



SPRINT NEXTEL
EL: 240.0' [PROPOSED]

INSTALL HIP BRACING [5/8"Ø THREADED ROD] & INTERNAL BRACING [L 2 1/2" X 2 1/2" X 1/4"] FROM EL: 81.0'± TO 93.0'± & EL: 106.0'± TO 118.0'± SEE SHEETS A-2 THRU A-2A FOR INSTALLATION DETAILS.

TOWER ELEVATION VIEW



COAX DISTRIBUTION

NOTE:
CONTACT AMERICAN TOWER FIELD OPERATIONS WHEN EXISTING EQUIPMENT INTERFERES WITH INSTALLATION OF MODIFICATIONS. ONCE APPROVED, EXISTING EQUIPMENT MAY BE TEMPORARILY MOVED DURING INSTALLATION & REINSTALLED TO THE ORIGINAL HEIGHT & LOCATION BY CONTRACTOR POST COMPLETION OF MODIFICATIONS.

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	CGM	08/13/18

ATC SITE NUMBER:
88008

ATC SITE NAME:
BETHANY CT

CONNECTICUT

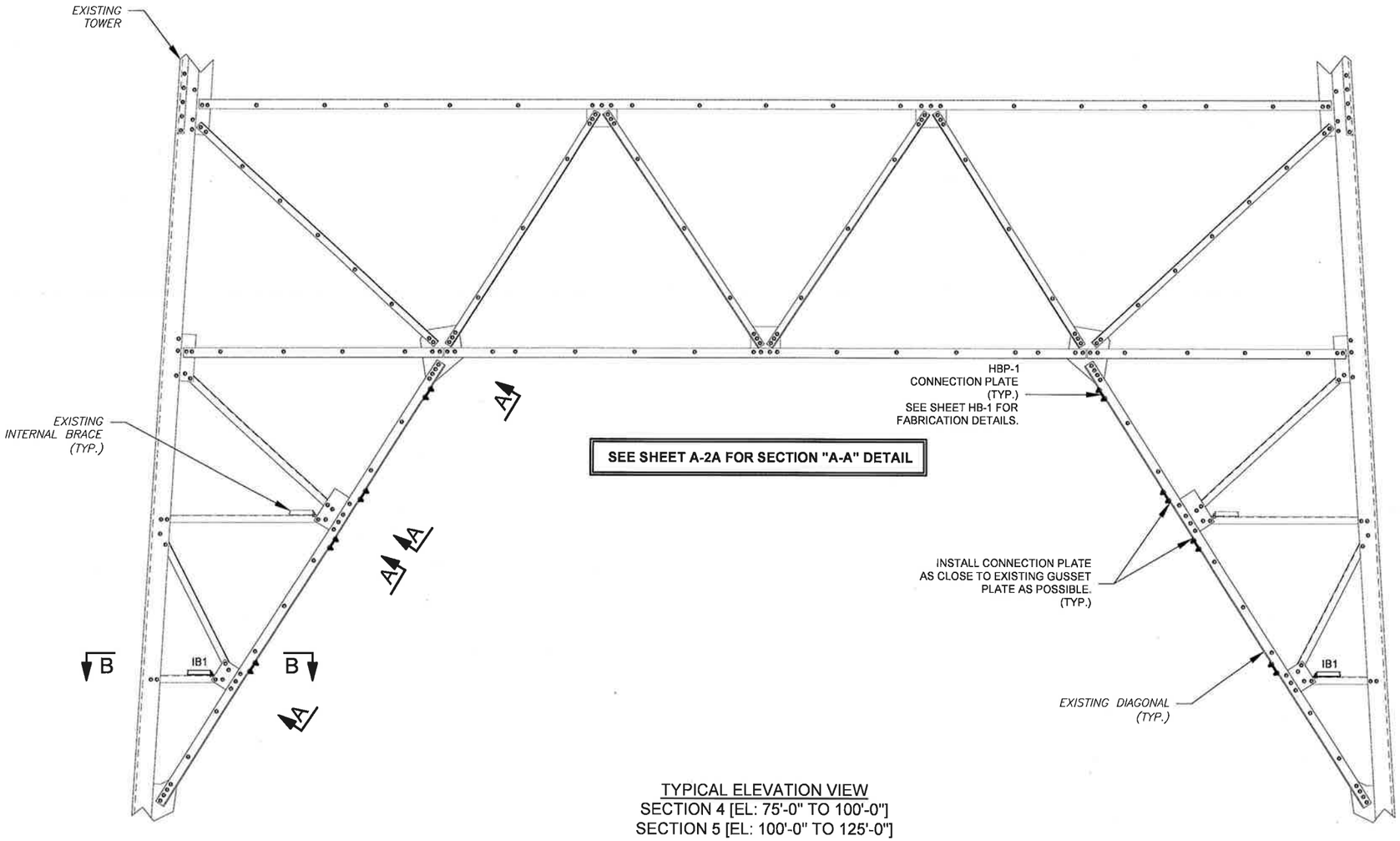
SITE ADDRESS:
93 OLD AMITY ROAD
BETHANY, CT 06524

Authorized by "EOR"
Aug 17 2018 12:32 PM
cosign

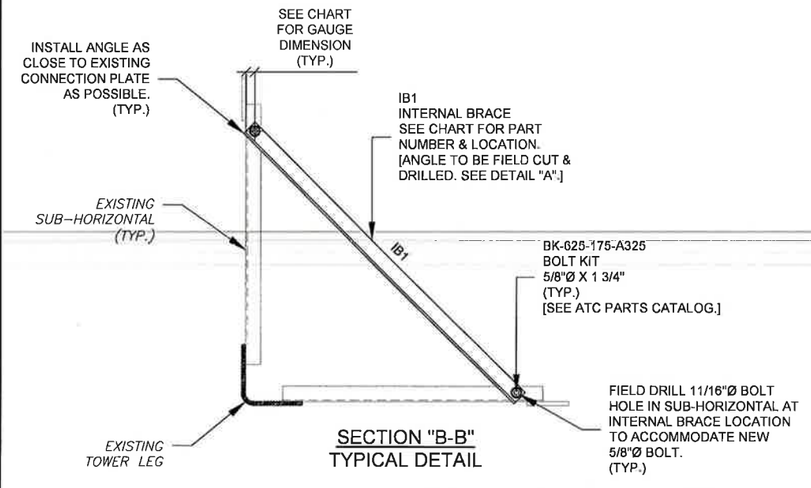
DRAWN BY:	CGM
APPROVED BY:	AAV/DAVI
DATE DRAWN:	08/13/18
ATC JOB NO:	OAA712592_C6_13

MODIFICATION PROFILE

SHEET NUMBER:	REVISION:
A-1	0



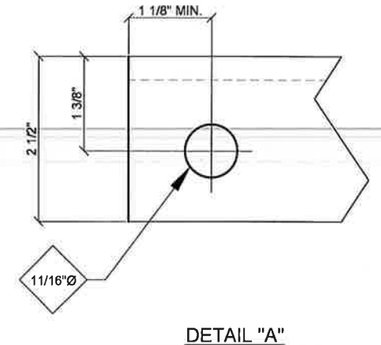
TYPICAL ELEVATION VIEW
SECTION 4 [EL: 75'-0" TO 100'-0"]
SECTION 5 [EL: 100'-0" TO 125'-0"]



SECTION "B-B"
TYPICAL DETAIL

INTERNAL BRACE INSTALLATION CHART		
TOWER SECTION	MODIFICATION ELEVATION	PART NUMBER (IB1)
4	81'-0"±	88008-1
5	106'-0"±	88008-2

GAUGE DIMENSION CHART	
ANGLE SIZE	GAUGE DIMENSION
2 1/2"	1 3/8"



DETAIL "A"
FIELD CUT & DRILL

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

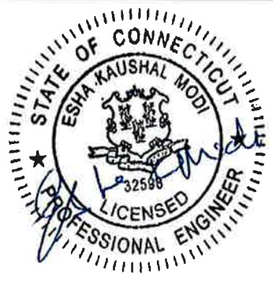
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	CGM	08/13/18

ATC SITE NUMBER:
88008

ATC SITE NAME:
BETHANY CT

CONNECTICUT

SITE ADDRESS:
93 OLD AMITY ROAD
BETHANY, CT 06524

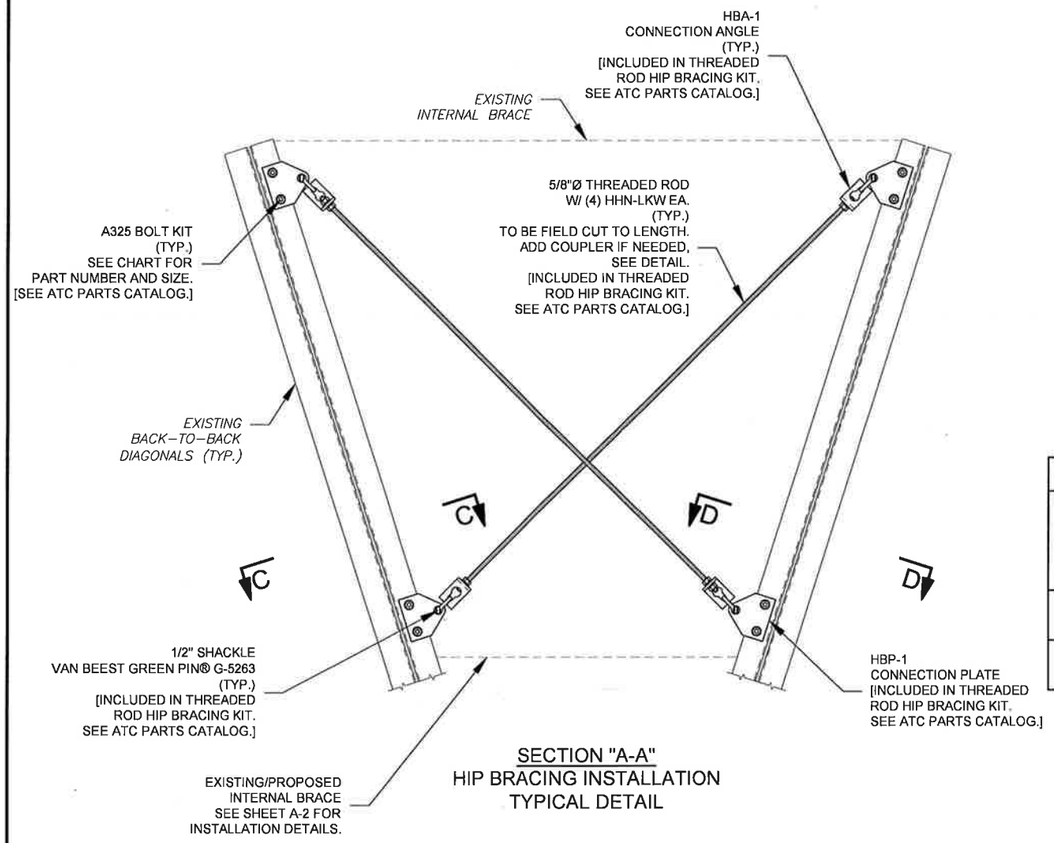


Authorized by "EOR"
Aug 17 2018 12:32 PM
cosign

DRAWN BY:	CGM
APPROVED BY:	AAV/DAVI
DATE DRAWN:	08/13/18
ATC JOB NO:	OAA712592_C6_13

HIP BRACE
INSTALLATION DETAILS

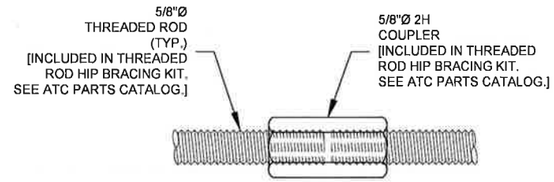
SHEET NUMBER:	REVISION:
A-2	0



SECTION "A-A"
HIP BRACING INSTALLATION
TYPICAL DETAIL

NOTES:

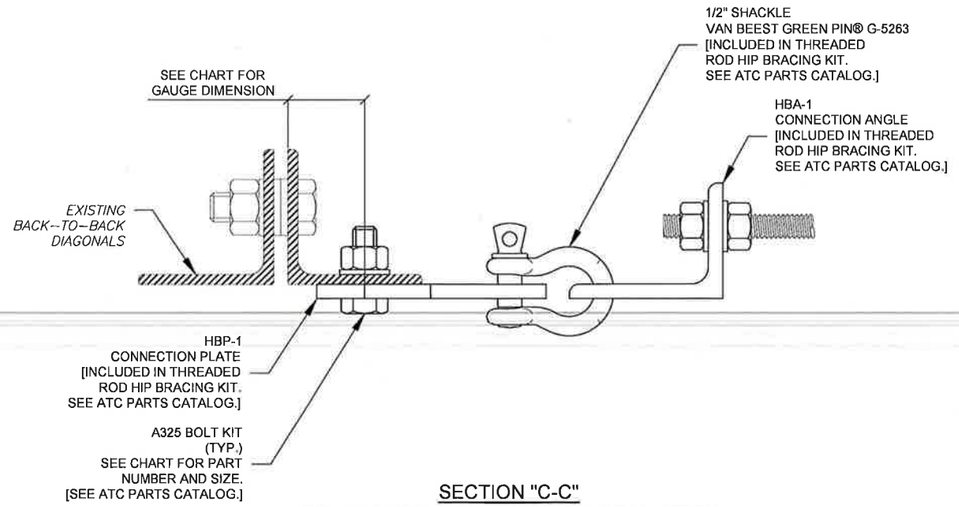
1. FIELD DRILL 11/16"Ø BOLT HOLE IN EXISTING DIAGONAL IN LOCATIONS SHOWN.
2. INSTALL CONNECTION PLATE AS CLOSE TO EXISTING GUSSET PLATE AS POSSIBLE.



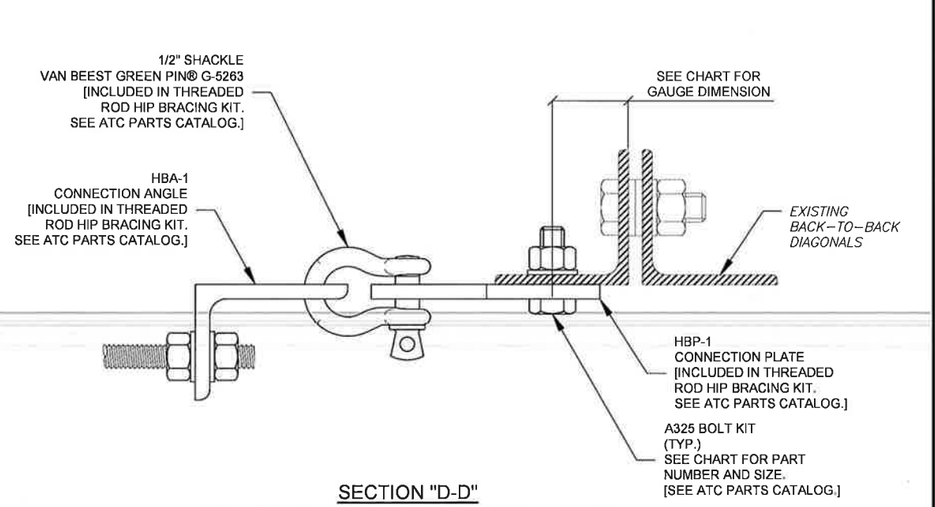
COUPLER DETAIL
TYPICAL (IF NEEDED)

HIP-BRACING INSTALLATION CHART

TOWER SECTION	MODIFICATION ELEVATION		THREADED ROD HIP BRACING KIT		CONNECTION PLATE INSTALLATION	BOLT KIT	
	BTM	TOP	PART NUMBER	THREADED ROD LENGTH	GAUGE DIMENSION	PART NUMBER	BOLT LENGTH
4	81'-0"	87'-0"	HB-580-1000	10'-0"	1 3/4"	BK-625-200-A325	2"
	87'-0"	93'-0"	HB-580-1400	14'-0"	1 3/4"	BK-625-200-A325	2"
5	106'-0"	112'-0"	HB-580-1000	10'-0"	1 3/4"	BK-625-200-A325	2"
	112'-0"	118'-0"	HB-580-1400	14'-0"	1 3/4"	BK-625-200-A325	2"



SECTION "C-C"
CONNECTION PLATE / ANGLE INSTALLATION
TYPICAL DETAIL



SECTION "D-D"
CONNECTION PLATE / ANGLE INSTALLATION
TYPICAL DETAIL

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	CGM	08/13/18

ATC SITE NUMBER:
88008

ATC SITE NAME:
BETHANY CT

CONNECTICUT

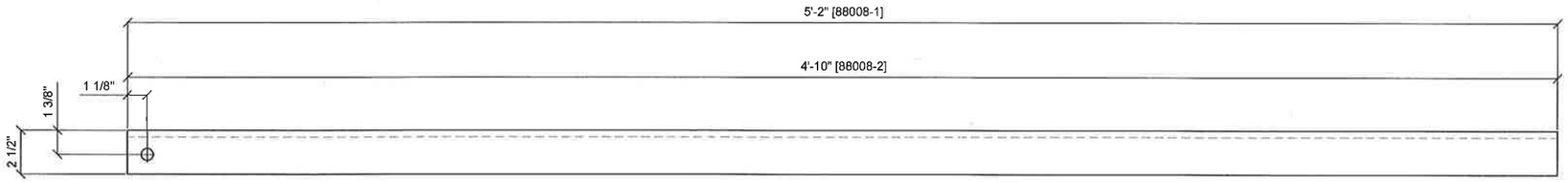
SITE ADDRESS:
93 OLD AMITY ROAD
BETHANY, CT 06524

Authorized by "EOR"
Aug 17 2018 12:32 PM
cosign

DRAWN BY:	CGM
APPROVED BY:	AAV/DAVI
DATE DRAWN:	08/13/18
ATC JOB NO:	OAA712592_C6_13

HIP BRACE
INSTALLATION DETAILS
(CONT'D)

SHEET NUMBER:	REVISION:
A-2A	0



INTERNAL BRACE

88008-2	L 2 1/2" X 2 1/2" X 1/4"	4'-10"		19.8#	20.8#
88008-1	L 2 1/2" X 2 1/2" X 1/4"	5'-2"		21.2#	22.2#
PART NO.	**DESCRIPTION**	**LENGTH**	**NOTES**	**BLK WT**	**GALV WT**
MATERIAL: A36		**FINISH:** GALVANIZED		**HOLES:** 11/16"Ø U.N.O.	

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	CGM	08/13/18

ATC SITE NUMBER:
88008

ATC SITE NAME:
BETHANY CT

CONNECTICUT

SITE ADDRESS:
93 OLD AMITY ROAD
BETHANY, CT 06524

Authorized by "EOR"
Aug 17 2018 12:32 PM
cosign

DRAWN BY:	CGM
APPROVED BY:	AAV/DAVI
DATE DRAWN:	08/13/18
ATC JOB NO:	OAA712592_C6_13

INTERNAL BRACE
FABRICATION DETAILS

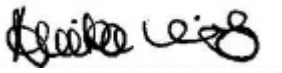
SHEET NUMBER:	REVISION:
F-1	0

AMERICAN TOWER®
CORPORATION

Post – Modification Structural Analysis Report

Structure	:	**337.5 ft Self Supported Tower**
ATC Site Name	:	**Bethany CT, CT**
ATC Site Number	:	**88008**
Engineering Number	:	**OAA712592_C4_14**
Proposed Carrier	:	**Sprint Nextel**
Carrier Site Name	:	**Bethany, NY (American Towers, INC.)**
Carrier Site Number	:	**CT03XC043**
Site Location	:	**93 Old Amity Road** **Bethany, CT 06524-3400** **41.404800,-73.000000**
County	:	**New Haven**
Date	:	**October 18, 2018**
Max Usage	:	**105%**
Result	:	**Pass**

Prepared By:
Annika A. Venning, E.I.
Structural Engineer II



Reviewed By:

COA: PEC.0001553

AMERICAN TOWER®
CORPORATION

Table of Contents

Introduction

The purpose of this report is to summarize results of a post – modification structural analysis performed on the 337.5 ft self supported tower to reflect the change in loading by Sprint Nextel.

Supporting Documents

Tower Drawings	CSEI Analysis ATC Engineering #73115244, dated November 18, 2002
Foundation Drawing	Mapping by ETS Project #120302.01, dated June 18, 2012
Geotechnical Report	Geotel Report #E12-221, dated June 5, 2012
Modification Drawings	ATC Job #OAA712592_C6_13, dated August 13, 2018 (Pending)

Analysis

The tower was analyzed Power Line System's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	97 mph (3-Second Gust, Vasd) / 125 mph (3-Second Gust, Vult)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2012 IBC / 2016 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	Ss = 0.19, S_1 = 0.06
Site Class:	D - Stiff Soil

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report. If the pending modifications cited in the supporting documents table are not completed, the results of this analysis are no longer valid, and Sprint Nextel should contact American Tower's Site Manager for further direction on how to proceed.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Existing and Reserved Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
340.0	340.0	1	Rohde & Schwarz ADD090	Side Arm	(2) 7/8" Coax (1) 1/2" Coax	US Dept Of Homeland Security
326.0	326.0	1	Kathrein 750 10074	Platform w/ Handrails	(1) 1 5/8" Coax	Ligado Networks
317.0	317.0	1	Sinclair SC281-L	Sector Frame	(1) 7/8" Coax	US Dept Of Homeland Security
314.0	314.0	1	Sinclair SC381-HL	Sector Frame	(1) 7/8" Coax	
291.0	291.0	2	8' Omni	Side Arm	-	--
283.0	283.0	1	Sinclair SC281-L	Sector Frame	(1) 7/8" Coax	US Dept Of Homeland Security
266.0	266.0	1	8' Omni	Side Arm	-	--
240.0	240.0	3	Alcatel-Lucent 800MHz 2X50W RRH w/ Filter	Sector Frame	(4) 1 1/4" Hybriflex	Sprint Nextel
		3	Alcatel-Lucent 1900MHz 4X45 RRH			
		3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
220.0	220.0	6	KMW Smart Bias-T	Sector Frame	(12) 1 5/8" Coax (1) 3/8" Coax	T-Mobile
		6	Remec S20057A1			
		3	RFS APX16PV-16PVL-E-00			
		3	Andrew LNX-6515DS-VTM			
213.0	213.0	1	Andrew DB616E-BC	Side Arm	(1) 1 1/4" Coax	US Dept Of Homeland Security
184.0	184.0	6	RFS FD9R6004/1C-3L	Sector Frame	(12) 1 5/8" Coax	Verizon
		3	Rymsa MGD3-800TX			
		6	Andrew DB844H90E-XY			
		3	Powerwave P65-16-XL-2			
158.0	158.0	3	Powerwave LGP21901	Sector Frame	(6) 1 5/8" Coax (2) 0.78" 8 AWG 6 (1) 3" conduit (1) 0.39" Fiber Trunk	AT&T Mobility
		3	Raycap DC2-48-60-0-9E			
		6	Powerwave LGP21401			
		1	Raycap FC12-PC6-10E			
		3	Ericsson RRUS 11 (Band 12)			
		3	Powerwave 7770.00			
		1	KMW AM-X-CD-16-65-00T-RET			
		2	Andrew SBNH-1D6565C			
103.0	103.0	3	RFS APXV18-206517S-C	Leg	(6) 1 5/8" Coax	Metro PCS
48.0	48.0	1	PCTEL GPS-TMG-HR-26N	Stand-Off	(1) 1/2" Coax	Sprint Nextel

Equipment to be Removed

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
253.0	253.0	12	Decibel DB844H90E-XY	Leg	(12) 1 5/8" Coax	Sprint Nextel
240.0	240.0	3	RFS RFS APXV9TM14-ALU-I20	-	(4) 1 1/4" Hybriflex	
		3	RFS APXVSPP18-C-A20			

Proposed Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
240.0	240.0	3	Alcatel-Lucent 800MHz 2X50W RRH w/ Filter	Sector Frame	-	Sprint Nextel
		3	RFS APXVTM14-ALU-I20			
		3	Commscope NNVV-65B-R4			

[1]Mount elevation is defined as height above bottom of steel structure to the bottom of mount, RAD elevation is defined as center of antenna above ground level (AGL).

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	85%	Pass
Diagonals	105%	Pass
Truss Diagonals	97%	Pass
Horizontals	91%	Pass
Truss Horizontals	74%	Pass
Anchor Bolts	45%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Uplift (Kips)	309.1	55%
Axial (Kips)	448.9	3%

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

AMERICAN TOWER®
CORPORATION

Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

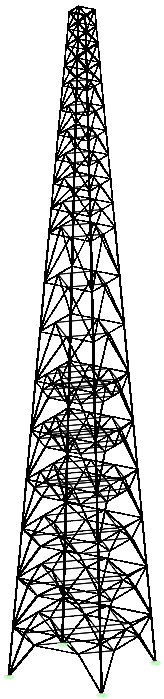
It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

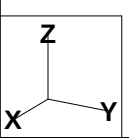
All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

American Tower Corp., Project: "POST MOD - OAA712592_C4_14-Sprint Nextel-10.18.18"
Tower Version 15.02, 2:53:35 PM Thursday, October 18, 2018
Undeformed geometry displayed





Project Name : 88008 - Bethany CT, CT
Project Notes: 337.5' AT&T Tag Self Supported Tower
Project File : N:\L2 - ATC\88008\POST MOD - OAA712592_C4_14-Sprint Nextel-10.18.18\POST MOD - OAA712592_C4_14-Sprint Nextel-10.18.18.tow
Date run   : 2:49:38 PM Thursday, October 18, 2018
by   : Tower Version 15.02
Licensed to : American Tower Corp.

Successfully performed nonlinear analysis

The model has 0 warnings.

Member check option: ANSI/TIA 222-G-1
Connection rupture check: Not Checked
Crossing diagonal check: Fixed
Included angle check: None
Climbing load check: None
Redundant members checked with: Actual Force
Loads from file: n:\l2 - atc\88008\post mod - oaa712592_c4_14-sprint nextel-10.18.18\post mod - oaa712592_c4_14-sprint nextel-10.18.18.eia

*** Analysis Results:

Maximum element usage is 105.06% for Angle "D 12X" in load case "W -90"   NG

Summary of Joint Support Reactions For All Load Cases:

Load Case	Joint Label	Long. Force (kips)	Tran. Force (kips)	Vert. Force (kips)	Shear Force (kips)	Tran. Moment (ft-k)	Long. Moment (ft-k)	Bending Moment (ft-k)	Vert. Moment (ft-k)	Found. Usage %
W 0	0P	-45.66	-21.84	-322.23	50.61	-0.99	-4.83	4.93	-2.93	0.00
W 0	0X	-44.25	22.53	-316.63	49.66	0.72	-4.61	4.67	2.92	0.00
W 0	0XY	-32.92	-12.93	183.39	35.37	0.50	-5.27	5.30	2.61	0.00
W 0	0Y	-33.96	12.24	182.75	36.10	-0.37	-5.50	5.52	-2.58	0.00
W 180	0P	33.92	11.95	179.61	35.97	-0.36	5.56	5.57	2.59	0.00
W 180	0X	32.95	-12.71	180.01	35.32	0.51	5.35	5.37	-2.62	0.00
W 180	0XY	44.29	22.35	-313.25	49.61	0.71	4.69	4.74	-2.93	0.00
W 180	0Y	45.62	-21.59	-319.10	50.48	-1.00	4.89	4.99	2.94	0.00
W 45	0P	-47.16	-47.21	-448.85	66.73	3.05	-3.04	4.31	0.00	0.00
W 45	0X	-21.32	-11.12	-66.58	24.04	4.40	-3.34	5.52	4.01	0.00
W 45	0XY	-37.59	-37.55	309.14	53.13	4.12	-4.13	5.83	-0.00	0.00
W 45	0Y	-11.09	-21.27	-66.44	23.99	3.33	-4.39	5.51	-4.01	0.00
W -45	0P	-22.42	11.60	-71.43	25.25	-4.61	-3.50	5.78	-4.02	0.00
W -45	0X	-46.10	47.68	-444.01	66.32	-3.26	-2.88	4.35	-0.01	0.00
W -45	0XY	-10.40	20.80	-65.04	23.25	-3.26	-4.22	5.33	4.03	0.00
W -45	0Y	-38.23	37.07	307.75	53.25	-4.05	-4.29	5.89	0.02	0.00
W 90	0P	-21.81	-45.70	-322.34	50.64	4.84	1.00	4.94	2.93	0.00
W 90	0X	12.22	-33.99	182.71	36.12	5.51	0.37	5.52	2.58	0.00
W 90	0XY	-12.94	-32.88	183.29	35.34	5.27	-0.51	5.29	-2.61	0.00
W 90	0Y	22.54	-44.21	-316.39	49.62	4.61	-0.71	4.66	-2.92	0.00
W -90	0P	11.94	33.96	179.72	36.00	-5.56	0.36	5.57	-2.59	0.00
W -90	0X	-21.58	45.67	-319.35	50.51	-4.89	1.01	5.00	-2.94	0.00
W -90	0XY	22.38	44.24	-313.14	49.58	-4.68	-0.70	4.73	2.93	0.00
W -90	0Y	-12.74	32.92	180.05	35.30	-5.34	-0.52	5.36	2.62	0.00
W 0 Ice	0P	-18.66	-13.67	-176.24	23.13	-1.68	0.45	1.74	-0.63	0.00
W 0 Ice	0X	-18.05	13.79	-171.94	22.71	1.57	0.51	1.65	0.62	0.00
W 0 Ice	0XY	-0.23	4.35	-49.50	4.35	1.63	-2.75	3.20	0.61	0.00
W 0 Ice	0Y	-0.23	-4.46	-53.01	4.47	-1.67	-2.81	3.27	-0.60	0.00
W 180 Ice	0P	0.18	-4.83	-56.88	4.83	-1.66	2.88	3.32	0.61	0.00
W 180 Ice	0X	0.27	4.62	-53.72	4.63	1.64	2.84	3.28	-0.63	0.00
W 180 Ice	0XY	18.09	13.54	-167.71	22.60	1.56	-0.42	1.61	-0.63	0.00
W 180 Ice	0Y	18.62	-13.34	-172.36	22.90	-1.70	-0.38	1.74	0.64	0.00
W 45 Ice	0P	-19.90	-19.91	-209.04	28.15	-0.75	0.76	1.07	0.00	0.00
W 45 Ice	0X	-12.52	5.55	-112.42	13.69	2.49	0.79	2.61	0.92	0.00
W 45 Ice	0XY	-1.69	-1.69	-16.94	2.39	2.50	-2.50	3.54	-0.00	0.00
W 45 Ice	0Y	5.55	-12.50	-112.28	13.68	-0.79	-2.49	2.61	-0.92	0.00
W -45 Ice	0P	-13.05	-5.48	-116.56	14.16	-2.59	0.74	2.69	-0.93	0.00
W -45 Ice	0X	-19.36	19.98	-204.90	27.82	0.65	0.81	1.04	-0.01	0.00
W -45 Ice	0XY	5.47	12.43	-108.60	13.58	0.73	-2.44	2.55	0.93	0.00
W -45 Ice	0Y	-1.61	1.62	-20.62	2.28	-2.56	-2.55	3.61	0.01	0.00
W 90 Ice	0P	-13.66	-18.67	-176.26	23.14	-0.45	1.69	1.74	0.63	0.00
W 90 Ice	0X	-4.47	-0.23	-53.13	4.48	2.81	1.67	3.27	0.60	0.00
W 90 Ice	0XY	4.35	-0.23	-49.52	4.35	2.75	-1.63	3.20	-0.61	0.00
W 90 Ice	0Y	13.70	-18.03	-171.77	22.70	-0.51	-1.57	1.65	-0.62	0.00
W -90 Ice	0P	-4.82	0.19	-56.86	4.83	-2.88	1.66	3.32	-0.61	0.00
W -90 Ice	0X	-13.34	18.63	-172.53	22.91	0.38	1.70	1.74	-0.64	0.00
W -90 Ice	0XY	13.55	18.08	-167.69	22.59	0.42	-1.55	1.61	0.63	0.00
W -90 Ice	0Y	4.61	0.27	-53.60	4.62	-2.84	-1.64	3.28	0.63	0.00

Summary of Joint Support Reactions For All Load Cases in Direction of Leg:

Load Case	Support Origin Joint	Joint Member Leg	Force In Leg Dir. (kips)	Residual Shear Perpendicular To Leg (kips)	Residual Shear Horizontal To Leg - Res. (kips)	Residual Shear Horizontal To Leg - Long. (kips)	Residual Shear Horizontal To Leg - Tran. (kips)	Total Long. Force (kips)	Total Tran. Force (kips)	Total Vert. Force (kips)
W 0	0P	1P L 1P	325.212	25.170	25.226	25.189	1.368	-45.66	-21.84	-322.23
W 0	0X	1X L 1X	319.588	24.204	24.262	24.142	-2.413	-44.25	22.53	-316.63
W 0	0XY	1XY L 1XY	-185.555	21.260	21.307	21.269	1.280	-32.92	-12.93	183.39
W 0	0Y	1Y L 1Y	-184.939	22.312	22.359	22.350	-0.631	-33.96	12.24	182.75
W 180	0P	1P L 1P	181.794	22.474	22.521	-22.515	-0.544	33.92	11.95	179.61
W 180	0X	1X L 1X	182.174	21.508	21.557	-21.519	1.278	32.95	-12.71	180.01
W 180	0XY	1XY L 1XY	316.208	24.455	24.513	-24.390	-2.455	44.29	22.35	-313.25
W 180	0Y	1Y L 1Y	322.072	25.333	25.389	-25.355	1.324	45.62	-21.59	-319.10
W 45	0P	1P L 1P	453.017	26.307	26.413	18.654	18.700	-47.16	-47.21	-448.85
W 45	0X	1X L 1X	66.961	22.970	22.970	17.086	15.352	-21.32	-11.12	-66.58
W 45	0XY	1XY L 1XY	-312.657	25.261	25.363	17.952	17.916	-37.59	-37.55	309.14
W 45	0Y	1Y L 1Y	66.818	22.912	22.912	15.306	17.049	-11.09	-21.27	-66.44
W -45	0P	1P L 1P	71.823	24.091	24.091	17.884	-16.141	-22.42	11.60	-71.43
W -45	0X	1X L 1X	448.165	26.347	26.453	17.897	-19.480	-46.10	47.68	-444.01
W -45	0XY	1XY L 1XY	65.435	22.110	22.110	14.531	-16.665	-10.40	20.80	-65.04
W -45	0Y	1Y L 1Y	-311.277	25.515	25.617	18.686	-17.524	-38.23	37.07	307.75
W 90	0P	1P L 1P	325.317	25.205	25.261	1.338	25.226	-21.81	-45.70	-322.34
W 90	0X	1X L 1X	-184.901	22.349	22.397	-0.610	22.388	12.22	-33.99	182.71
W 90	0XY	1XY L 1XY	-185.451	21.232	21.280	1.300	21.240	-12.94	-32.88	183.29
W 90	0Y	1Y L 1Y	319.341	24.179	24.237	-2.443	24.114	22.54	-44.21	-316.39
W -90	0P	1P L 1P	-181.898	22.502	22.550	-0.524	-22.543	11.94	33.96	179.72
W -90	0X	1X L 1X	322.319	25.359	25.415	1.294	-25.382	-21.58	45.67	-319.35
W -90	0XY	1XY L 1XY	316.104	24.421	24.480	-2.485	-24.353	22.38	44.24	-313.14
W -90	0Y	1Y L 1Y	-182.213	21.472	21.520	1.300	-21.481	-12.74	32.92	180.05
W 0 Ice	0P	1P L 1P	177.578	7.839	7.864	7.464	2.478	-18.66	-13.67	-176.24
W 0 Ice	0X	1X L 1X	173.261	7.657	7.683	7.127	-2.870	-18.05	13.79	-171.94
W 0 Ice	0XY	1XY L 1XY	49.560	3.579	3.581	3.374	-1.202	-0.23	4.35	-49.50
W 0 Ice	0Y	1Y L 1Y	53.063	3.754	3.757	3.593	1.097	-0.23	-4.46	-53.01
W 180 Ice	0P	1P L 1P	56.949	3.983	3.986	-3.797	1.213	0.18	-4.83	-56.88
W 180 Ice	0X	1X L 1X	53.781	3.876	3.879	-3.685	-1.210	0.27	4.62	-53.72
W 180 Ice	0XY	1XY L 1XY	169.041	7.951	7.978	-7.437	-2.887	18.09	13.54	-167.71
W 180 Ice	0Y	1Y L 1Y	173.693	8.005	8.030	-7.667	2.388	18.62	-13.34	-172.36
W 45 Ice	0P	1P L 1P	210.717	9.334	9.371	6.620	0.633	-19.90	-19.91	-209.04
W 45 Ice	0X	1X L 1X	113.114	5.601	5.606	5.376	1.590	-12.52	5.55	-112.42
W 45 Ice	0XY	1XY L 1XY	16.663	3.892	3.908	2.764	2.762	-1.69	-1.69	-16.94
W 45 Ice	0Y	1Y L 1Y	112.970	5.594	5.599	1.578	5.372	5.55	-12.50	-112.28
W -45 Ice	0P	1P L 1P	117.264	5.962	5.967	5.648	-1.924	-13.05	-5.48	-116.56
W -45 Ice	0X	1X L 1X	206.567	9.387	9.425	6.348	-6.966	-19.36	19.98	-204.90
W -45 Ice	0XY	1XY L 1XY	109.300	5.709	5.715	1.424	-5.534	5.47	12.43	-108.60
W -45 Ice	0Y	1Y L 1Y	20.333	4.115	4.132	2.918	-2.925	-1.61	1.62	-20.62
W 90 Ice	0P	1P L 1P	177.597	7.847	7.872	2.469	7.475	-13.66	-18.67	-176.26
W 90 Ice	0X	1X L 1X	53.187	3.763	3.767	1.098	3.603	-4.47	-0.23	-53.13
W 90 Ice	0XY	1XY L 1XY	49.580	3.578	3.581	-1.203	3.373	4.35	-0.23	-49.52
W 90 Ice	0Y	1Y L 1Y	173.098	7.658	7.684	-2.879	7.124	13.79	-18.03	-171.77
W -90 Ice	0P	1P L 1P	56.930	3.983	3.987	1.212	-3.798	-4.82	0.19	-56.86
W -90 Ice	0X	1X L 1X	173.856	8.005	8.030	2.380	-7.670	-13.34	18.63	-172.53
W -90 Ice	0XY	1XY L 1XY	169.022	7.944	7.970	-2.898	-7.425	13.55	18.08	-167.69
W -90 Ice	0Y	1Y L 1Y	53.657	3.866	3.869	-1.209	-3.676	4.61	0.27	-53.60

Overturning Moment Summary For All Load Cases:

Load Case	Transverse Moment (ft-k)	Longitudinal Moment (ft-k)	Torsional Moment (ft-k)	Resultant Moment (ft-k)	Transverse Force (kips)	Longitudinal Force (kips)	Vertical Force (kips)
W 0	161.889	-26067.371	99.135	26067.874	-0.000	156.786	272.728
W 180	162.013	25729.143	-99.210	25729.654	-0.000	-156.786	272.728
W 45	19656.641	-19664.059	-4.272	27803.934	117.155	117.155	272.728
W -45	-19333.082	-19664.436	144.580	27576.405	-117.155	117.155	272.728
W 90	26059.969	-169.314	-105.181	26060.519	156.786	-0.000	272.728
W -90	-25736.566	-169.439	105.256	25737.124	-156.786	-0.000	272.728
W 0 Ice	202.629	-6372.060	21.885	6375.281	-0.000	37.162	450.681
W 180 Ice	202.647	5951.901	-21.887	5955.350	-0.000	-37.162	450.681
W 45 Ice	4978.662	-4986.098	-0.798	7046.152	28.549	28.549	450.681
W -45 Ice	-4573.389	-4986.139	31.769	6765.905	-28.549	28.549	450.681
W 90 Ice	6364.625	-210.067	-23.012	6368.090	37.162	-0.000	450.681
W -90 Ice	-5959.341	-210.085	23.015	5963.042	-37.162	-0.000	450.681

EIA Sections Information:

Section Label	Top Z (ft)	Bottom Z (ft)	Joint Count	Member Count	Top Width (ft)	Bottom Width (ft)	Gross Area (ft^2)	Face Af Adjust Factor	Face Ar Adjust Factor	Dead Load Factor
328.9-337.5	337.500	328.917	8	20	9.00	10.09	81.93	1.1220	1.1220	1.346
320.3-328.9	328.917	320.334	8	16	10.09	11.18	91.28	1.1610	1.1610	1.393
310.2-320.3	320.334	310.167	8	16	11.18	12.47	120.24	1.1970	1.1970	1.436

300.0-310.2	310.167	300.000	12	24	12.47	13.76	133.37	1.1540	1.1540	1.385
287.5-300.0	300.000	287.500	16	24	13.76	15.35	181.97	1.2010	1.2010	1.442
275.0-287.5	287.500	275.000	16	24	15.35	16.94	201.82	1.2080	1.2080	1.449
262.5-275.0	275.000	262.500	16	24	16.94	18.53	221.67	1.2140	1.2140	1.457
250.0-262.5	262.500	250.000	16	24	18.53	20.12	241.52	1.2200	1.2200	1.464
237.5-250.0	250.000	237.500	16	24	20.12	21.70	261.37	1.2260	1.2260	1.471
225.0-237.5	237.500	225.000	16	24	21.70	23.29	281.22	1.2320	1.2320	1.478
200.0-225.0	225.000	200.000	16	24	23.29	26.47	621.99	1.2640	1.2640	1.516
175.0-200.0	200.000	175.000	16	24	26.47	29.64	701.39	1.2730	1.2730	1.528
150.0-175.0	175.000	150.000	20	32	29.64	32.82	780.79	1.2750	1.2750	1.530
125.0-150.0	150.000	125.000	36	76	32.82	36.00	860.19	1.2300	1.2300	1.476
100.0-125.0	125.000	100.000	36	76	36.00	39.17	939.58	1.2250	1.2250	1.470
75.00-100.0	100.000	75.000	32	68	39.17	42.35	1018.98	1.2270	1.2270	1.472
50.00-75.00	75.000	50.000	24	52	42.35	45.52	1098.38	1.3380	1.3380	1.606
25.00-50.00	50.000	25.000	24	52	45.52	48.70	1177.78	1.3250	1.3250	1.590
0.000-25.00	25.000	0.000	20	40	48.70	51.88	1257.18	1.3210	1.3210	1.585

Printed capacities do not include the strength factor entered for each load case.
The Group Summary reports on the member and load case that resulted in maximum usage which may not necessarily be the same as that which produces maximum force.

Group Summary (Compression Portion):

Group Label	Group Desc.	Angle Type	Angle Size	Steel Strength (ksi)	Max Usage %	Usage Cont-rol	Max Use In Comp. %	Comp. Control Member	Comp. Force (kips)	Comp. Control Load Case	L/r Capacity (kips)	Comp. Connect. Shear Capacity (kips)	Comp. Connect. Bearing Capacity (kips)	RLX	RLY	RLZ	L/r	KL/r Comp. Member (ft)	Length	Curve No.	No. Of Bolts Comp.	
Leg S1	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	85.32	Comp	85.32	L 1P	-396.006	W 45	464.132	0.000	0.000	0.281	0.281	0.281	54.29	54.29	25.101	1	0	
Leg S2	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	76.43	Comp	76.43	L 2P	-354.736	W 45	464.132	0.000	0.000	0.281	0.281	0.281	54.29	54.29	25.101	1	0	
Leg S3	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	67.81	Comp	67.81	L 3P	-314.742	W 45	464.132	0.000	0.000	0.281	0.281	0.281	54.29	54.29	25.101	1	0	
Leg S4	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	56.22	Comp	56.22	L 4P	-260.926	W 45	464.132	0.000	0.000	0.281	0.281	0.281	54.29	54.29	25.101	1	0	
Leg S5	L 8" x 8" x 1"	SAE	8X8X1	36.0	53.48	Comp	53.48	L 5P	-222.567	W 45	416.138	0.000	0.000	0.281	0.281	0.281	54.29	54.29	25.101	1	0	
Leg S6	L 8" x 8" x 1"	SAE	8X8X1	36.0	43.77	Comp	43.77	L 6P	-182.152	W 45	416.138	0.000	0.000	0.281	0.281	0.281	54.29	54.29	25.101	1	0	
Leg S7	L 8" x 8" x 0.875"	SAE	8X8X0.88	36.0	49.84	Comp	49.84	L 7P	-172.279	W 45	345.636	0.000	0.000	0.333	0.333	0.333	63.94	63.94	25.101	1	0	
Leg S8	L 8" x 8" x 0.75"	SAE	8X8X0.75	36.0	46.27	Comp	46.27	L 8P	-138.667	W 45	299.685	0.000	0.000	0.333	0.333	0.333	63.54	63.54	25.101	1	0	
Leg S9	L 8" x 8" x 0.75"	SAE	8X8X0.75	36.0	36.00	Comp	36.00	L 9P	-107.874	W 45	299.685	0.000	0.000	0.333	0.333	0.333	63.54	63.54	25.101	1	0	
Leg S10	L 6" x 6" x 0.875"	SAE	6X6X0.88	36.0	36.49	Comp	36.49	L 10P	-92.506	W 45	253.484	0.000	0.000	0.500	0.500	0.500	64.36	64.36	12.550	1	0	
Leg S11	L 6" x 6" x 0.75"	SAE	6X6X0.75	36.0	35.11	Comp	35.11	L 11P	-77.200	W 45	219.877	0.000	0.000	0.500	0.500	0.500	64.36	64.36	12.550	1	0	
Leg S12	L 6" x 6" x 0.75"	SAE	6X6X0.75	36.0	29.58	Comp	29.58	L 12P	-65.051	W 45	219.877	0.000	0.000	0.500	0.500	0.500	64.36	64.36	12.550	1	0	
Leg S13	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0	31.44	Comp	31.44	L 13P	-52.857	W 45	168.131	0.000	0.000	0.500	0.500	0.500	63.82	63.82	12.550	1	0	
Leg S14	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0	24.40	Comp	24.40	L 14P	-41.021	W 45	168.131	0.000	0.000	0.500	0.500	0.500	63.82	63.82	12.550	1	0	
Leg S15	L 6" x 6" x 0.4375"	SAE	6X6X0.44	36.0	22.08	Comp	22.08	L 15P	-29.323	W 45	132.784	0.000	0.000	0.500	0.500	0.500	63.28	63.28	12.550	1	0	
Leg S16	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	26.09	Comp	26.09	L 16P	-28.837	W 45	110.535	0.000	0.000	0.500	0.500	0.500	62.12	62.12	10.208	1	0	
Leg S17	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	17.67	Comp	17.67	L 17P	-19.528	W 45	110.535	0.000	0.000	0.500	0.500	0.500	62.12	62.12	10.208	1	0	
Leg S18	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0	12.16	Comp	12.16	L 18P	-10.326	W 45	84.914	0.000	0.000	0.500	0.500	0.500	52.02	52.02	8.618	1	0	
Leg S19	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0	6.54	Comp	6.54	L 19P	-5.549	W 45	84.914	0.000	0.000	0.500	0.500	0.500	52.02	52.02	8.618	1	0	
Diag S1	B/B L3"x4"x0.375"	DAS	4X3X0.38	36.0	65.51	Comp	65.51	D 2X	-44.986	W -90	68.665	0.000	0.000	0.333	0.940	0.333	131.78	127.24	22.664	6	0	
Diag S2	B/B L3"x4"x0.25"	DAS	4X3X0.25	36.0	92.55	Comp	92.55	D 4X	-43.723	W -90	47.240	0.000	0.000	0.333	0.940	0.333	130.37	126.38	22.190	6	0	
Diag S3	B/B L3"x4"x0.25"	DAS	4X3X0.25	36.0	87.68	Comp	87.68	D 6X	-42.330	W -90	48.277	0.000	0.000	0.333	0.940	0.333	127.70	124.73	21.736	6	0	
Diag S4	B/B L3"x3.5"x0.25"	DAS	3.5X3X0.25	36.0	70.09	Comp	70.09	D 8X	-45.843	W -90	65.408	0.000	0.000	0.333	0.330	0.333	91.27	91.27	20.858	1	0	
Diag S5	B/B L3"x3.5"x0.25"	DAS	3.5X3X0.25	36.0	66.59	Comp	66.59	D 10X	-44.239	W -90	66.434	0.000	0.000	0.333	0.330	0.333	89.64	89.64	20.484	1	0	
Diag S6	**B/B L2.5"x3.5"x0.25"**	**DAS**	**3.5X2.5X0.25**	**36.0**	**105.06**	**Comp**	**105.06**	**D 12X**	**-41.714**	**W -90**	**39.706**	**0.000**	**0.000**	**0.300**	**0.940**	**0.300**	**132.03**	**127.40**	**20.132**	**6**	**0**	**NG**
Diag S7	B/B L3"x3"x0.375"	DAE	3X3X0.38	36.0	55.30	Comp	55.30	D 13X	-26.802	W -90	48.470	0.000	0.000	0.300	0.600	0.300	152.92	140.25	29.947	6	0	
Diag S8	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	73.25	Comp	73.25	D 16Y	-23.848	W 180	32.559	0.000	0.000	0.300	0.600	0.300	144.53	135.09	29.107	6	0	
Diag S9	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	65.46	Comp	65.46	D 18Y	-22.067	W 180	33.712	0.000	0.000	0.300	0.600	0.300	140.68	132.72	28.331	6	0	
Diag S10	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	54.86	Comp	54.86	D 20Y	-12.723	W 180	23.190	0.000	0.000	0.500	1.000	0.500	172.47	152.27	17.103	6	0	
Diag S11	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	42.87	Comp	42.87	D 22Y	-10.385	W 180	24.226	0.000	0.000	0.500	1.000	0.500	167.12	148.98	16.572	6	0	
Diag S12	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	40.05	Comp	40.05	D 24Y	-10.126	W 180	25.286	0.000	0.000	0.500	1.000	0.500	161.99	145.82	16.064	6	0	
Diag S13	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	58.94	Comp	58.94	D 26Y	-9.011	W 180	16.815	0.000	0.000	0.500	1.000	0.500	199.94	169.16	15.579	6	0	
Diag S14	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	51.15	Comp	51.15	D 28Y	-8.982	W 180	17.559	0.000	0.000	0.500	1.000	0.500	194.06	165.54	15.120	6	0	
Diag S15	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	45.67	Comp	45.67	D 29X	-8.359	W -90	18.301	0.000	0.000	0.500	1.000	0.500	188.54	162.15	14.690	6	0	
Diag S16	L 3.5" x 3.5" x 0.25"	SAE	3.5X3.5X0.25	36.0	16.61	Tens	0.00	D 32Y	0.000		0.001	0.000	0.000	100.000	100.000	100.000	28719.28	17708.56	16.609	6	0	
Diag S17	L 3.5" x 3.5" x 0.25"	SAE	3.5X3.5X0.25	36.0	13.02	Tens	0.00	D 34Y	0.000		0.001	0.000	0.000	100.000	100.000	100.000	26990.20	20595.13	15.609	5	0	
Diag S18	L 3" x 3" x 0.25"	SAE	3X3X0.25	36.0	9.62	Tens	0.00	D 36Y	0.000		0.001	0.000	0.000	100.000	100.000	100.000	27725.09	21155.12	13.678	5	0	
Diag S19	L 3" x 3" x 0.25"	SAE	3X3X0.25	36.0	7.40	Tens	0.00	D 38Y	0.000		0.001	0.000	0.000	100.000	100.000	100.000	26043.59	19873.82	12.848	5	0	
Horiz 1	B/B L4"x3"x0.25"	DAL	4X3X0.25	36.0	69.44	Comp	69.44	H 1P	-38.300	W -90	55.158	0.000	0.000	0.500	0.500	0.500	114.14	114.14	24.350	1	0	
Horiz 2	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0	84.11	Comp	84.11	H 3P	-35.981	W -90	42.779	0.000	0.000	0.490	0.490	0.490	122.79	121.71	22.762	6	0	
Horiz 3	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	85.62	Comp	85.62	H 5P	-33.211	W -90	38.791	0.000	0.000	0.460	0.460	0.460	123.68	122.26	21.174	6	0	
Horiz 4	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0	91.15	Comp	91.15	H 7P	-32.730	W -90	35.910	0.000	0.000	1.000	1.000	1.000	143.75	134.60	13.057	6	0	
Horiz 5	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0	73.40	Comp	73.40	H 9P	-29.768	W -90	40.555	0.000	0.000	0.980	0.980	0.980	129.45	125.81	11.998	6	0	
Horiz 6	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	76.26	Comp	76.26	H 11P	-26.099	W -90	34.224	0.000	0.000	1.000	1.000	1.000	138.92	131.63	10.940	6	0	
Horiz 7	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	57.40	Comp	57.40	H 14P	-13.003	W 180	22.653	0.000	0.000	1.000	1.000	1.000	188.21	161.95	14.822	6	0	
Horiz 8	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	41.12	Comp	41.12	H 16P	-10.925	W 180	26.566	0.000	0.000	1.000	1.000	1.000	168.05	149.55	13.234	6	0	
Horiz 9	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	42.09	Comp	42.09	H 18P	-9.070	W 180	21.548	0.000	0.000	1.000	1.000	1.000	181.73	157.96	11.646	6	0	
Horiz 10	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	33.13	Comp	33.13	H 20P	-7.881	W 180	23.787	0.000	0.000	1.000	1.000	1.000	169.34	150.34	10.852	6	0	
Horiz 11	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	22.55	Comp	22.55	H 22P	-5.953	W 180	26.395	0.000	0.000	1.000	1.000	1.000	156.95	142.72	10.058	6	0	
Horiz 12	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	19.19	Comp	19.19	H 24P	-5.654	W 180	29.456	0.000	0.000	1.000	1.000	1.000	144.56	135.10	9.264	6	0	
Horiz 13	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	17.50	Comp	17.50	H 26P	-5.737	W 180	32.775	0.000	0.000	1.000	1.000	1.000	132.17	127.48	8.470	6	0	
Horiz 14	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	13.31	Comp	13.31	H 28P	-4.823	W 180	36.232	0.000	0.000	1.000	1.200	1.000	119.78	119.78	7.676	1	0	
Horiz 15	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	17.64	Comp	17.64	H 29P	-7.410	W -90	42.019	0.000	0.000	1.000	1.070	1.000	107.39	107.39	6.882	1	0	
Horiz 16	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	36.0	41.76	Comp	41.76	H 31P	-6.948	W -90	16.641	0.000	0.000	0.520	0.500	0.500	141.73	133.36	12.472	6	0	
Horiz 17	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	11.82	Comp	11.82	H 33P	-4.796	W -90	40.568	0.000	0.000	0.500	1.000	0.500	118.73	118.73	11.181	1	0	
Horiz 18	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	36.0	21.80	Comp	21.80	H 35P	-3.065	W -90	14.058	0.000	0.000	0.500	1.000	0.500	160.80	145.09	10.090	6	0	
Horiz 19	C8x11.5	CHN	C8x11.5	36.0	5.80	Comp	5.80	H 37P	-1.904	W -90	32.845	0.000	0.000	1.000	1.000	1.000	172.80	152.47	9.000	6	0	
LD 1	B/B L3"x2.5"x0.3125"	DAL	3X2.5X0.31	36.0	55.90	Comp	55.90	LD 1X	-19.103	W -90	34.175	0.000	0.000	0.904	0.904	0.904	162.84	146.35	14.066	6	0	
LD 2	B/B L4"x3"x0.3125"	DAL	4X3X0.31	36.0	78.18	Comp	78.18	LD 3X	-49.558	W -90	63.387	0.000	0.000	0.904	0.904	0.904	120.15	120.00	14.066	6	0	
LD 4	B/B L3"x2"x0.25"	DAL	3X2X0.25	36.0	72.49	Comp	72.49	LD 7X	-18.182	W -90	25.080	0.000	0.000	0.904	0.904	0.904	162.96	146.42	13.384	6	0	
LD 5	B/B L4"x3"x0.25"	DAL	4X3X0.25	36.0	84.59	Comp	84.59	LD 9X	-47.056	W -90	55.626	0.000	0.000	0.904	0.904	0.904	113.43	113.43	13.384	1	0	
LD 7	B/B L2.5"x2.5"x0.375"	DAE	2.5X2.5X0.38	36.0	54.74	Comp	54.74	LD 13X	-17.002	W -90	31.061	0.000	0.000	0.904	0.904	0.904	183.19	158.86	12.716	6	0	
LD 8	B/B L3.5"x3"x0.25"	DAL	3.5X3X0.25	36.0	96.51	Comp	96.51	LD 15X	-44.348	W -90	45.949	0.000	0.000	0.904	0.904	0.904	124.27	122.63	12.716	6	0	
LD 10	B/B L3"x3"x0.25"	DAL	3X3X0.25	36.0	51.59	Comp	51.59	LD 17X	-22.228	W -45	43.084	0.000	0.000	0.830	0.830	0.830	121.89	121.16	11.381	6	0	
LD 11	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	77.87	Comp	77.87	LD 21X	-29.692	W -90	38.130	0.000	0.000	0.850	0.850	0.850	106.16	106.16	8.160	1	0	
LD 12	B/B L3"x2"x0.25"	DAL	3X2X0.25	36.0	79.63	Comp	79.63	LD 23P	-32.010	W -90	40.197	0.000	0.000	0.860	0.860	0.860	111.24	111.24	9.604	1	0	
LD 13	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	72.67	Comp	72.67	LD 25X	-20.453	W -45	28.144	0.000	0.000	0.830	0.830	0.830	137.12	130.53	10.793	6	0	
LD 14	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	73.36	Comp	73.36	LD 27X	-28.566	W -90	38.941	0.000	0.000	0.850	0.850	0.850	104.26	104.26	8.014	1	0	
LD 15	B/B L3"x3"x0.25"	DAE	3X3X0.25	36.0	57.10	Comp	57.10	LD 29P	-30.587	W -90	53.569	0.000	0.000	0.860	0.860	0.860	102.67	102.67	9.253	1	0	
LD 16	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	63.51	Comp	63.51	LD 31X	-18.573	W -45	29.872	0.000	0.000	0.830	0.830	0.830	129.95	126.12	10.229	6	0	
LD 17	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	68.18	Comp	68.18	LD 33X	-27.071	W -90	39.707	0.000	0.000	0.850	0.850	0.850	102.47	102.47	7.876	1	0	
LD 18	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	83.78	Comp	83.78	LD 35P	-27.988	W -90	33.406	0.000	0.000	0.860	0.860	0.860	117.40	117.40	8.919	1	0	
LH 1	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	10.70	Tens	0.00	LH 2X	0.000		0.001	0.000	0.000	100.000	100.000	100.000	38804.04	23910.69	24.350	6	0	
LH 2	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	6.79	Tens	0.00	LH 4X	0.000		0.001	0.000	0.000	100.000	100.000	100.000	36273.42	22354.36	22.762	6	0	
LH 3	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	7.05	Tens	0.00	LH 6X	0.000		0.001	0.000	0.000	100.000	100.000	100.000	33742.81	20798.03	21.174	6	0	
LH 4	B/B L3"x3"x0.375"	DAE	3X3X0.38	36.0	60.44	Comp	60.44	LH 7X	-25.283	W -45	41.832	0.000	0.000	0.940	1.880	0.940	170.35	150.96	10.647	6	0	
LH 5	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	74.16	Comp	74.16	LH 9X	-22.430	W -45	30.244	0.000	0.000	0.940	1.880	0.940	152.78	140.16	9.820	6	0	
LH 6	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	58.66	Comp	58.66	LH 11X	-19.904	W -45	33.934	0.000	0.000	0.940	1.880	0.940	139.91	132.25	8.993	6	0	
DUM 1	Dummy Bracing Member	DUM	0.1X0.1X1	36.0	0.00		0.00	BR 15XY	-0.933	W 45	0.324	0.000	0.000	1.000	1.000	1.000	2.25	2.25	18.715	1	0	

Group Summary (Tension Portion):

Group Label	Group Desc.	Angle Type	Angle Size	Steel Strength (ksi)	Max Usage %	Usage Cont-rol	Max Tension Use In Tens. %	Tension Control Member	Tension Force (kips)	Tension Control Load Case	Net Section Capacity (kips)	Tension Connect. Shear Capacity (kips)	Tension Connect. Bearing Capacity (kips)	Tension Connect. Rupture Capacity (kips)	Length Tens. Member (ft)	No. Of Bolts	No. Of Holes	Hole Diameter Tens. (in)
Leg S1	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	85.32	Comp	48.66	L 1XY	263.783	W 45	542.051	0.000	0.000	0.000	25.101	0	0.000	0
Leg S2	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	76.43	Comp	44.04	L 2XY	238.737	W 45	542.051	0.000	0.000	0.000	25.101	0	0.000	0
Leg S3	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	67.81	Comp	38.92	L 3XY	210.953	W 45	542.051	0.000	0.000	0.000	25.101	0	0.000	0
Leg S4	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	56.22	Comp	32.88	L 4XY	178.210	W 45	542.051	0.000	0.000	0.000	25.101	0	0.000	0
Leg S5	L 8" x 8" x 1"	SAE	8X8X1	36.0	53.48	Comp	31.18	L 5XY	151.543	W 45	485.999	0.000	0.000	0.000	25.101	0	0.000	0
Leg S6	L 8" x 8" x 1"	SAE	8X8X1	36.0	43.77	Comp	25.96	L 6XY	126.166	W 45	485.999	0.000	0.000	0.000	25.101	0	0.000	0
Leg S7	L 8" x 8" x 0.875"	SAE	8X8X0.88	36.0	49.84	Comp	28.53	L 7XY	122.309	W 45	428.651	0.000	0.000	0.000	25.101	0	0.000	0
Leg S8	L 8" x 8" x 0.75"	SAE	8X8X0.75	36.0	46.27	Comp	26.50	L 8XY	98.230	W 45	370.655	0.000	0.000	0.000	25.101	0	0.000	0
Leg S9	L 8" x 8" x 0.75"	SAE	8X8X0.75	36.0	36.00	Comp	20.05	L 9XY	74.312	W 45	370.655	0.000	0.000	0.000	25.101	0	0.000	0
Leg S10	L 6" x 6" x 0.875"	SAE	6X6X0.88	36.0	36.49	Comp	20.16	L 10XY	63.551	W 45	315.252	0.000	0.000	0.000	12.550	0	0.000	0
Leg S11	L 6" x 6" x 0.75"	SAE	6X6X0.75	36.0	35.11	Comp	19.74	L 11Y	53.991	W -45	273.456	0.000	0.000	0.000	12.550	0	0.000	0
Leg S12	L 6" x 6" x 0.75"	SAE	6X6X0.75	36.0	29.58	Comp	16.16	L 12Y	44.183	W -45	273.456	0.000	0.000	0.000	12.550	0	0.000	0
Leg S13	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0	31.44	Comp	16.47	L 13Y	34.310	W -45	208.332	0.000	0.000	0.000	12.550	0	0.000	0
Leg S14	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0	24.40	Comp	11.93	L 14Y	24.860	W -45	208.332	0.000	0.000	0.000	12.550	0	0.000	0
Leg S15	L 6" x 6" x 0.4375"	SAE	6X6X0.44	36.0	22.08	Comp	9.62	L 15Y	15.772	W -45	163.944	0.000	0.000	0.000	12.550	0	0.000	0
Leg S16	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	26.09	Comp	6.39	L 16Y	8.651	W -45	135.432	0.000	0.000	0.000	10.208	0	0.000	0
Leg S17	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	17.67	Comp	1.76	L 17Y	2.388	W -45	135.432	0.000	0.000	0.000	10.208	0	0.000	0
Leg S18	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0	12.16	Comp	0.42	L 18Y	0.416	W -45	98.172	0.000	0.000	0.000	8.618	0	0.000	0
Leg S19	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0	6.54	Comp	0.00	L 19Y	0.000		98.172	0.000	0.000	0.000	8.618	0	0.000	0
Diag S1	B/B L3"x4"x0.375"	DAS	4X3X0.38	36.0	65.51	Comp	23.75	D 2P	38.249	W -90	161.028	0.000	0.000	0.000	22.664	0	0.000	0
Diag S2	B/B L3"x4"x0.25"	DAS	4X3X0.25	36.0	92.55	Comp	34.66	D 4P	37.955	W -90	109.512	0.000	0.000	0.000	22.190	0	0.000	0
Diag S3	B/B L3"x4"x0.25"	DAS	4X3X0.25	36.0	87.68	Comp	34.22	D 6P	37.479	W -90	109.512	0.000	0.000	0.000	21.736	0	0.000	0
Diag S4	B/B L3"x3.5"x0.25"	DAS	3.5X3X0.25	36.0	70.09	Comp	38.18	D 8P	38.720	W -90	101.412	0.000	0.000	0.000	20.858	0	0.000	0
Diag S5	B/B L3"x3.5"x0.25"	DAS	3.5X3X0.25	36.0	66.59	Comp	37.28	D 10P	37.809	W -90	101.412	0.000	0.000	0.000	20.484	0	0.000	0
Diag S6	**B/B L2.5"x3.5"x0.25"**	**DAS**	**3.5X2.5X0.25**	**36.0**	**105.06**	**Comp**	**37.64**

Horiz 5	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0	73.40	Comp	36.16	H 9X	33.740	W -90	93.312	0.000	0.000	0.000	11.998	0	0.000	0
Horiz 6	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	76.26	Comp	33.18	H 11P	28.276	W 90	85.212	0.000	0.000	0.000	10.940	0	0.000	0
Horiz 7	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	57.40	Comp	15.53	H 14P	13.231	W 0	85.212	0.000	0.000	0.000	14.822	0	0.000	0
Horiz 8	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	41.12	Comp	13.01	H 16P	11.087	W 0	85.212	0.000	0.000	0.000	13.234	0	0.000	0
Horiz 9	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	42.09	Comp	12.30	H 18Y	9.483	W 180	77.112	0.000	0.000	0.000	11.646	0	0.000	0
Horiz 10	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	33.13	Comp	10.31	H 20Y	7.952	W 180	77.112	0.000	0.000	0.000	10.852	0	0.000	0
Horiz 11	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	22.55	Comp	8.19	H 22Y	6.313	W 180	77.112	0.000	0.000	0.000	10.058	0	0.000	0
Horiz 12	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	19.19	Comp	7.64	H 24P	5.893	W 0	77.112	0.000	0.000	0.000	9.264	0	0.000	0
Horiz 13	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	17.50	Comp	7.63	H 26P	5.887	W 0	77.112	0.000	0.000	0.000	8.470	0	0.000	0
Horiz 14	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	13.31	Comp	6.39	H 28P	4.931	W 0	77.112	0.000	0.000	0.000	7.676	0	0.000	0
Horiz 15	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	17.64	Comp	0.81	H 29XY	0.624	W -90	77.112	0.000	0.000	0.000	6.882	0	0.000	0
Horiz 16	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	36.0	41.76	Comp	0.00	H 32X	0.000		42.444	0.000	0.000	0.000	12.472	0	0.000	0
Horiz 17	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	11.82	Comp	0.00	H 34X	0.000		85.212	0.000	0.000	0.000	11.181	0	0.000	0
Horiz 18	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	36.0	21.80	Comp	0.00	H 36X	0.000		42.444	0.000	0.000	0.000	10.090	0	0.000	0
Horiz 19	C8x11.5	CHN	C8x11.5	36.0	5.80	Comp	0.00	H 38X	0.000		109.512	0.000	0.000	0.000	9.000	0	0.000	0
LD 1	B/B L3"x2.5"x0.3125"	DAL	3X2.5X0.31	36.0	55.90	Comp	18.48	LD 2Y	19.402	W -45	104.976	0.000	0.000	0.000	14.066	0	0.000	0
LD 2	B/B L4"x3"x0.3125"	DAL	4X3X0.31	36.0	78.18	Comp	32.79	LD 3P	44.401	W -90	135.432	0.000	0.000	0.000	14.066	0	0.000	0
LD 4	B/B L3"x2"x0.25"	DAL	3X2X0.25	36.0	72.49	Comp	22.88	LD 7P	17.640	W -90	77.112	0.000	0.000	0.000	13.384	0	0.000	0
LD 5	B/B L4"x3"x0.25"	DAL	4X3X0.25	36.0	84.59	Comp	38.96	LD 9P	42.664	W -90	109.512	0.000	0.000	0.000	13.384	0	0.000	0
LD 7	B/B L2.5"x2.5"x0.375"	DAE	2.5X2.5X0.38	36.0	54.74	Comp	14.90	LD 13P	16.750	W -90	112.428	0.000	0.000	0.000	12.716	0	0.000	0
LD 8	B/B L3.5"x3"x0.25"	DAL	3.5X3X0.25	36.0	96.51	Comp	40.38	LD 15P	40.950	W -90	101.412	0.000	0.000	0.000	12.716	0	0.000	0
LD 10	B/B L3"x3"x0.25"	DAE	3X3X0.25	36.0	51.59	Comp	20.63	LD 20Y	19.247	W -45	93.312	0.000	0.000	0.000	11.381	0	0.000	0
LD 11	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	77.87	Comp	37.26	LD 21P	25.714	W -90	69.012	0.000	0.000	0.000	8.160	0	0.000	0
LD 12	B/B L3"x2"x0.25"	DAL	3X2X0.25	36.0	79.63	Comp	42.83	LD 23X	33.025	W -90	77.112	0.000	0.000	0.000	9.604	0	0.000	0
LD 13	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	72.67	Comp	25.60	LD 26Y	17.664	W -45	69.012	0.000	0.000	0.000	10.793	0	0.000	0
LD 14	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	73.36	Comp	36.58	LD 27P	25.242	W -90	69.012	0.000	0.000	0.000	8.014	0	0.000	0
LD 15	B/B L3"x3"x0.25"	DAE	3X3X0.25	36.0	57.10	Comp	33.62	LD 29X	31.369	W -90	93.312	0.000	0.000	0.000	9.253	0	0.000	0
LD 16	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	63.51	Comp	24.33	LD 32Y	16.794	W -45	69.012	0.000	0.000	0.000	10.229	0	0.000	0
LD 17	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	68.18	Comp	33.52	LD 33P	23.134	W -90	69.012	0.000	0.000	0.000	7.876	0	0.000	0
LD 18	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	83.78	Comp	41.59	LD 35X	28.703	W -90	69.012	0.000	0.000	0.000	8.919	0	0.000	0
LH 1	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	10.70	Tens	10.70	LH 1Y	9.116	W 0	85.212	0.000	0.000	0.000	24.350	0	0.000	0
LH 2	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	6.79	Tens	6.79	LH 3Y	5.783	W 0	85.212	0.000	0.000	0.000	22.762	0	0.000	0
LH 3	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	7.05	Tens	7.05	LH 5Y	6.004	W 0	85.212	0.000	0.000	0.000	21.174	0	0.000	0
LH 4	B/B L3"x3"x0.375"	DAE	3X3X0.38	36.0	60.44	Comp	15.44	LH 8Y	21.106	W -45	136.728	0.000	0.000	0.000	10.647	0	0.000	0
LH 5	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	74.16	Comp	22.06	LH 10Y	18.799	W -45	85.212	0.000	0.000	0.000	9.820	0	0.000	0
LH 6	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	58.66	Comp	20.07	LH 12Y	17.098	W -45	85.212	0.000	0.000	0.000	8.993	0	0.000	0
DUM 1	Dummy Bracing Member	DUM	0.1X0.1X1	36.0	0.00		0.00	BR 15X	0.739	W -45	0.324	0.000	0.000	0.000	18.715	0	0.000	0

*** Maximum Stress Summary for Each Load Case

Summary of Maximum Usages by Load Case:

Load Case	Maximum Usage %	Element Label	Element Type	
W 0	103.47	D 11P	Angle	NG
W 180	104.70	D 11Y	Angle	NG
W 45	86.67	D 12P	Angle	
W -45	92.43	D 12X	Angle	
W 90	103.91	D 12P	Angle	NG
W -90	105.06	D 12X	Angle	NG
W 0 Ice	36.33	D 11P	Angle	
W 180 Ice	37.60	D 11Y	Angle	
W 45 Ice	40.65	L 1P	Angle	
W -45 Ice	39.74	L 1X	Angle	
W 90 Ice	36.46	D 12P	Angle	
W -90 Ice	37.65	D 12X	Angle	

*** Weight of structure (lbs):

Weight of Angles*Section DLF:	179060.9
Total:	179060.9

*** End of Report

Site #:	88008			Engineer:	AAV	Windspeed:	No Ice:	97 mph	Ice:	50 mph			Taper:	-0.127037		Taper Change:	337.5	ft			
Name:	Bethany CT, CT			Date:	03/29/18	Carrier	Sprint Nextel						FW @ Base:	51.88	ft	FW @ Top:	9	ft			

Spreadsheet Version Last Updated: 11/12/2014

Joint Label	Symmetry Code	X Coord. (ft)	Y Coord. (ft)	Z Coord. (ft)	X Disp. Rest.	Y Disp. Rest.	Z Disp. Rest.	X Rot. Rest.	Y Rot. Rest.	Z Rot. Rest.	Drop Sub-Brace (Y or Blank)	# Vert	Drop (ft)	Height (ft)	Type	Count	Z-Elev. (ft)	FW (ft)	# Sub-Brace
0	XY-Symmetry	25.9375	25.9375	0	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed		3	7.030	25	1	1	0	51.875	3
1	XY-Symmetry	24.34953704	24.34953704	25	Free	Free	Free	Free	Free	Free		3	7.030	25	1	2	25	48.69907407	3
2	XY-Symmetry	22.76157408	22.76157408	50	Free	Free	Free	Free	Free	Free		3	7.030	25	1	3	50	45.52314815	3
3	XY-Symmetry	21.17361111	21.17361111	75	Free	Free	Free	Free	Free	Free			7.030	25	2	4	75	42.34722222	3
4	XY-Symmetry	19.58564815	19.58564815	100	Free	Free	Free	Free	Free	Free			7.030	25	2	5	100	39.1712963	3
5	XY-Symmetry	17.99768519	17.99768519	125	Free	Free	Free	Free	Free	Free			7.03	25	2	6	125	35.99537037	3
6	XY-Symmetry	16.40972222	16.40972222	150	Free	Free	Free	Free	Free	Free				25	A	7	150	32.81944444	2
7	XY-Symmetry	14.82175926	14.82175926	175	Free	Free	Free	Free	Free	Free				25	A	8	175	29.64351852	2
8	XY-Symmetry	13.2337963	13.2337963	200	Free	Free	Free	Free	Free	Free				25	A	9	200	26.46759259	2
9	XY-Symmetry	11.64583334	11.64583334	225	Free	Free	Free	Free	Free	Free				12.5	A	10	225	23.29166667	1
10	XY-Symmetry	10.85185185	10.85185185	237.5	Free	Free	Free	Free	Free	Free				12.5	A	11	237.5	21.7037037	1
11	XY-Symmetry	10.05787037	10.05787037	250	Free	Free	Free	Free	Free	Free				12.5	A	12	250	20.11574074	1
12	XY-Symmetry	9.26388889	9.26388889	262.5	Free	Free	Free	Free	Free	Free				12.5	A	13	262.5	18.52777778	1
13	XY-Symmetry	8.469907405	8.469907405	275	Free	Free	Free	Free	Free	Free				12.5	A	14	275	16.93981481	1
14	XY-Symmetry	7.675925925	7.675925925	287.5	Free	Free	Free	Free	Free	Free				12.5	A	15	287.5	15.35185185	1
15	XY-Symmetry	6.881944445	6.881944445	300	Free	Free	Free	Free	Free	Free				10.167	X	16	300	13.76388889	1
16	XY-Symmetry	6.236151665	6.236151665	310.167	Free	Free	Free	Free	Free	Free		1		10.167	X	17	310.167	12.47230333	1
17	XY-Symmetry	5.59035889	5.59035889	320.334	Free	Free	Free	Free	Free	Free				8.583	X	18	320.334	11.18071778	1
18	XY-Symmetry	5.045179445	5.045179445	328.917	Free	Free	Free	Free	Free	Free				8.583	X	19	328.917	10.09035889	1
19	XY-Symmetry	4.5	4.5	337.5	Free	Free	Free	Free	Free	Free						20	337.5	9	
A1	Y-Symmetry	24.34953704	0	25	Free	Free	Free	Free	Free	Free									
A2	X-Symmetry	0	24.34953704	25	Free	Free	Free	Free	Free	Free									
A3	Y-Symmetry	22.76157407	0	50	Free	Free	Free	Free	Free	Free									
A4	X-Symmetry	0	22.76157407	50	Free	Free	Free	Free	Free	Free									
A5	Y-Symmetry	21.17361111	0	75	Free	Free	Free	Free	Free	Free									
A6	X-Symmetry	0	21.17361111	75	Free	Free	Free	Free	Free	Free									
A7	XY-Symmetry	19.58564815	6.528549383	100	Free	Free	Free	Free	Free	Free									
A8	XY-Symmetry	6.528549383	19.58564815	100	Free	Free	Free	Free	Free	Free									
A9	XY-Symmetry	17.99768519	5.999228395	125	Free	Free	Free	Free	Free	Free									
A10	XY-Symmetry	5.999228395	17.99768519	125	Free	Free	Free	Free	Free	Free									
A11	XY-Symmetry	16.40972222	5.469907407	150	Free	Free	Free	Free	Free	Free									
A12	XY-Symmetry	5.469907407	16.40972222	150	Free	Free	Free	Free	Free	Free									
A13	Y-Symmetry	14.82175926	0	175	Free	Free	Free	Free	Free	Free									
A14	X-Symmetry	0	14.82175926	175	Free	Free	Free	Free	Free	Free									
A15	Y-Symmetry	13.2337963	0	200	Free	Free	Free	Free	Free	Free									
A16	X-Symmetry	0	13.2337963	200	Free	Free	Free	Free	Free	Free									
A17	Y-Symmetry	11.64583333	0	225	Free	Free	Free	Free	Free	Free									
A18	X-Symmetry	0	11.64583333	225	Free	Free	Free	Free	Free	Free									
A19	Y-Symmetry	10.85185185	0	237.5	Free	Free	Free	Free	Free	Free									
A20	X-Symmetry	0	10.85185185	237.5	Free	Free	Free	Free	Free	Free									
A21	Y-Symmetry	10.05787037	0	250	Free	Free	Free	Free	Free	Free									
A22	X-Symmetry	0	10.05787037	250	Free	Free	Free	Free	Free	Free									
A23	Y-Symmetry	9.263888889	0	262.5	Free	Free	Free	Free	Free	Free									
A24	X-Symmetry	0	9.263888889	262.5	Free	Free	Free	Free	Free	Free									
A25	Y-Symmetry	8.469907407	0	275	Free	Free	Free	Free	Free	Free									
A26	X-Symmetry	0	8.469907407	275	Free	Free	Free	Free	Free	Free									
A27	Y-Symmetry	7.675925926	0	287.5	Free	Free	Free	Free	Free	Free									
A28	X-Symmetry	0	7.675925926	287.5	Free	Free	Free	Free	Free	Free									
A29	Y-Symmetry	6.881944444	0	300	Free	Free	Free	Free	Free	Free									
A30	X-Symmetry	0	6.881944444	300	Free	Free	Free	Free	Free	Free									
H1	XY-Symmetry	24.79607222	12.17476852	17.97	Free	Free	Free	Free	Free	Free									
H2	XY-Symmetry	12.17476852	24.79607222	17.97	Free	Free	Free	Free	Free	Free									
H5	XY-Symmetry	23.20810926	11.38078704	42.97	Free	Free	Free	Free	Free	Free									
H6	XY-Symmetry	11.38078704	23.20810926	42.97	Free	Free	Free	Free	Free	Free									
H9	XY-Symmetry	21.6201463	10.58680556	67.97	Free	Free	Free	Free	Free	Free									
H10	XY-Symmetry	10.58680556	21.6201463	67.97	Free	Free	Free	Free	Free	Free									
H13	XY-Symmetry	20.03218333	10.64674074	92.97	Free	Free	Free	Free	Free	Free									
H14	XY-Symmetry	10.64674074	20.03218333	92.97	Free	Free	Free	Free	Free	Free									
H15	Y-Symmetry	20.03218333	0	92.97	Free	Free	Free	Free	Free	Free									
H16	X-Symmetry	0	20.03218333	92.97	Free	Free	Free	Free	Free	Free									
H17	XY-Symmetry	18.44422037	9.81972963	117.97	Free	Free	Free	Free	Free	Free									
H18	XY-Symmetry	9.81972963	18.44422037	117.97	Free	Free	Free	Free	Free	Free									
H19	Y-Symmetry	18.44422037	0	117.97	Free	Free	Free	Free	Free	Free									
H20	X-Symmetry	0	18.44422037	117.97	Free	Free	Free	Free	Free	Free									
H21	XY-Symmetry	16.85625741	8.992718518	142.97	Free	Free	Free	Free	Free	Free									
H22	XY-Symmetry	8.992718518	16.85625741	142.97	Free	Free	Free	Free	Free	Free									
H23	Y-Symmetry	16.85625741	0	142.97	Free	Free	Free	Free	Free	Free									
H24	X-Symmetry	0	16.85625741	142.97	Free	Free	Free	Free	Free	Free									

NOTES

Types:

1: Built up Horizs. w/ A

2: Built up Horizs. w/ M

A: Typical A brace

X: Typical X brace

Drop: Use only for types 1 & 2

Sections: 19

Legs

Site No.:	88008
Engineer:	AAV
Date:	03/29/2018
Carrier:	Sprint Nextel

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations *(ft)*	Type of Shape [1]	Diameter or Length *(in)*	Thickness [2] *(in)*	F_Y *(ksi)*
1	0.000-25.00	L	8	1.125	36
2	25.00-50.00	L	8	1.125	36
3	50.00-75.00	L	8	1.125	36
4	75.00-100.0	L	8	1.125	36
5	100.0-125.0	L	8	1	36
6	125.0-150.0	L	8	1	36
7	150.0-175.0	L	8	0.875	36
8	175.0-200.0	L	8	0.75	36
9	200.0-225.0	L	8	0.75	36
10	225.0-237.5	L	6	0.875	36
11	237.5-250.0	L	6	0.75	36
12	250.0-262.5	L	6	0.75	36
13	262.5-275.0	L	6	0.5625	36
14	275.0-287.5	L	6	0.5625	36
15	287.5-300.0	L	6	0.4375	36
16	300.0-310.2	L	5	0.4375	36
17	310.2-320.3	L	5	0.4375	36
18	320.3-328.9	L	5	0.3125	36
19	328.9-337.5	L	5	0.3125	36

Notes:

[1] Type of Leg Shape: **R** = Round or **P** = Bent Plate or **S** = Schifflerized Angle. **L** = Even Leg

[2] For Solid Round Leg Shapes Thickness Equals Zero.

[3] Adjust for Bent Plate Leg Shapes.

Diagonals

Site No.:	88008
Engineer:	AAV
Date:	03/29/2018
Carrier:	Sprint Nextel

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape [1]	Diameter [2] (in)	Web Length [3] (in)	Flange Length [3] (in)	Thickness (in)	F_y (ksi)	Is Diag. Tension Only? (Y/N)
1	0.000-25.00	2L		3	4	0.375	36	
2	25.00-50.00	2L		3	4	0.25	36	
3	50.00-75.00	2L		3	4	0.25	36	
4	75.00-100.0	2L		3	3.5	0.25	36	
5	100.0-125.0	2L		3	3.5	0.25	36	
6	125.0-150.0	2L		2.5	3.5	0.25	36	
7	150.0-175.0	2L		3	3	0.375	36	
8	175.0-200.0	2L		2.5	3	0.25	36	
9	200.0-225.0	2L		2.5	3	0.25	36	
10	225.0-237.5	2L		2.5	2.5	0.25	36	
11	237.5-250.0	2L		2.5	2.5	0.25	36	
12	250.0-262.5	2L		2.5	2.5	0.25	36	
13	262.5-275.0	2L		2.5	2	0.25	36	
14	275.0-287.5	2L		2.5	2	0.25	36	
15	287.5-300.0	2L		2.5	2	0.25	36	
16	300.0-310.2	L		3.5	3.5	0.25	36	Y
17	310.2-320.3	L		3.5	3.5	0.25	36	Y
18	320.3-328.9	L		3	3	0.25	36	Y
19	328.9-337.5	L		3	3	0.25	36	Y

Notes:

[1] Type of Diagonal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.

[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

[3] Applies to Single-Angle and Double-Angle Shapes only.

[4] Applies to Double-Angle Shapes only.

[5] Applies to Single-Angle Shapes only.

Horizontals

Site No.:	88008
Engineer:	AAV
Date:	03/29/2018
Carrier:	Sprint Nextel

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations *(ft)*	Type of Shape [1]	Diameter [2] *(in)*	Web Length [3] *(in)*	Flange Length [3] *(in)*	Thickness *(in)*	F_y *(ksi)*	
1	0.000-25.00	2L		4	3	0.25	36	
2	25.00-50.00	2L		3.5	2.5	0.25	36	
3	50.00-75.00	2L		3	2.5	0.25	36	
4	75.00-100.0	2L		3.5	2.5	0.25	36	
5	100.0-125.0	2L		3.5	2.5	0.25	36	
6	125.0-150.0	2L		3	2.5	0.25	36	
7	150.0-175.0	2L		3	2.5	0.25	36	
8	175.0-200.0	2L		3	2.5	0.25	36	
9	200.0-225.0	2L		2.5	2.5	0.25	36	
10	225.0-237.5	2L		2.5	2.5	0.25	36	
11	237.5-250.0	2L		2.5	2.5	0.25	36	
12	250.0-262.5	2L		2.5	2.5	0.25	36	
13	262.5-275.0	2L		2.5	2.5	0.25	36	
14	275.0-287.5	2L		2.5	2.5	0.25	36	
15	287.5-300.0	2L		2.5	2.5	0.25	36	
16	300.0-310.2	L		3	2.5	0.25	36	
17	310.2-320.3	2L		3	2.5	0.25	36	
18	320.3-328.9	L		3	2.5	0.25	36	
19	328.9-337.5	C		8	11.5		36	

Notes:

[1] Type of Horizontal Shape: **R** = Round, **L** = Single-Angle, **2L** = Double-Angle, **C** = Channel, **W** = W Shape

[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

[3] Applies to Single-Angle and Double-Angle Shapes only.

[4] Applies to Double-Angle Shapes only.

[5] Applies to Single-Angle Shapes only.

Built-up Diagonals

Site No.:	88008
Engineer:	AAV
Date:	03/29/2018
Carrier:	Sprint Nextel

When inputting thickness values, include all decimal places.
Input diags. from left to center & from base section upward.

Tower Built-up Diag. #	Section Elevations *(ft)*	Type of Shape [1]	Diameter [2] *(in)*	Web Length [3] *(in)*	Flange Length [3] *(in)*	Thickness *(in)*	F_y *(ksi)*
1	0.000-25.00	2L		3	2.5	0.3125	36
2	0.000-25.00	2L		4	3	0.3125	36
3	25.00-50.00	2L		3	2	0.25	36
4	25.00-50.00	2L		4	3	0.25	36
5	50.00-75.00	2L		2.5	2.5	0.375	36
6	50.00-75.00	2L		3.5	3	0.25	36
7	75.00-100.0	2L		3	3	0.25	36
8	75.00-100.0	2L		2.5	2	0.25	36
9	75.00-100.0	2L		3	2	0.25	36
10	100.0-125.0	2L		2.5	2	0.25	36
11	100.0-125.0	2L		2.5	2	0.25	36
12	100.0-125.0	2L		3	3	0.25	36
13	125.0-150.0	2L		2.5	2	0.25	36
14	125.0-150.0	2L		2.5	2	0.25	36
15	125.0-150.0	2L		2.5	2	0.25	36

Notes:

[1] Type of Diagonal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.

[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

[3] Applies to Single-Angle and Double-Angle Shapes only.

[4] Applies to Double-Angle Shapes only.

[5] Applies to Single-Angle Shapes only.

Built-up Horizontals

Site No.:	88008
Engineer:	AAV
Date:	03/29/2018
Carrier:	Sprint Nextel

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations *(ft)*	Type of Shape [1]	Diameter [2] *(in)*	Web Length [3] *(in)*	Flange Length [3] *(in)*	Thickness *(in)*	F_y *(ksi)*	Is Horiz. Tension Only? *(Y/N)*
1	0.000-25.00	2L		2.5	3	0.25	36	Y
2	25.00-50.00	2L		2.5	3	0.25	36	Y
3	50.00-75.00	2L		2.5	3	0.25	36	Y
4	75.00-100.0	2L		3	3	0.375	36	
5	100.0-125.0	2L		2.5	3	0.25	36	
6	125.0-150.0	2L		2.5	3	0.25	36	

Notes:

[1] Type of Horizontal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.

[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

[3] Applies to Single-Angle and Double-Angle Shapes only.

[4] Applies to Double-Angle Shapes only.

[5] Applies to Single-Angle Shapes only.

Coax (p. 1 of 2)

Orig by MED, Improved by ABL. Last update 6/25/13 MED

Site No.:	88008
Engineer:	AAV
Date:	03/29/18
Carrier:	Sprint Nextel

Description	From (ft)	To (ft)	Quantity	Shape	Width or Diameter (in)	Perimeter (in)	Unit Weight (lb/ft)	Part of Face Solidity Ratio (Yes/No)	Include in Wind Load (Yes/No)
1 Climbing Ladder	0	337.5	1	Flat	2	8.0	6	Yes	Yes
2 US Dept	0	337.5	2	Round	1.09	3.4	0.33	Yes	Yes
3 US Dept1	0	337.5	1	Round	0.63	2.0	0.15	Yes	Yes
4 Ligado	0	319	1	Round	1.98	6.2	0.82	Yes	Yes
5 US Dept2	0	310	2	Round	1.09	3.4	0.33	Yes	Yes
6 US Dept3	0	275	1	Round	1.09	3.4	0.33	Yes	Yes
7 Sprint1	0	240	4	Round	1.54	4.8	1	Yes	Yes
8 TMO	0	220	1	Flat	6.5025	34.7	9.84	Yes	Yes
9 TMO1	0	220	1	Round	0.44	1.4	0.08	Yes	Yes
10 US Dept4	0	194	1	Round	0	#DIV/0!	0.63	No	No
11 Verizon	0	180	1	Flat	6.5025	34.7	9.84	Yes	Yes
12 ATT	0	165	6	Round	1.98	6.2	0.82	Yes	Yes
13 ATT1	0	165	1	Round	0	#DIV/0!	0.17	No	No
14 ATT2	0	165	1	Round	0	#DIV/0!	1.18	No	No
15 ATT3	0	165	1	Round	0	#DIV/0!	7.58	No	No
16 Metro	0	100	6	Round	1.98	6.2	0.82	Yes	Yes
17 Sprint2	0	48	1	Round	0	#DIV/0!	0.15	No	No
18 Coax Cage	12.5	32.5	2	Flat	12	48.0	25	Yes	Yes
19 Coax Cage2	12.5	32.5	2	Flat	12	48.0	25	Yes	Yes
20 Waive Guide	0	180	1	Flat	1.5	6.0	#N/A	Yes	Yes
21 Waive Guide1	0	165	1	Flat	1.5	6.0	#N/A	Yes	Yes
22 Waive Guide2	0	100	1	Flat	1.5	6.0	#N/A	Yes	Yes

Coax (p. 2 of 2)

Site No.:	88008
Engineer:	AAV
Date:	03/29/18
Carrier:	Sprint Nextel

Exposure B
Tia Code: TIA-222-G **Topo Cat:** 1
f

α	7	$k_{z\,max}$	2.01
z_g	1200	$k_{z\,min}$	0.7
K_e	0.9	K_t	

Description	From (ft)	To (ft)	Quantity	Face # (1-4, A-D)	Coax Width (in)	Coax Shape (Block / Flat / Ind)	% Exposed	Spacing (in)	Shape (Round/Flat)	Block Width (# coax)	Block Depth (# coax)	Perimeter (in)	Unit Weight (lb/ft)	In Face Zone (Yes/No)	Include in Wind Load (Yes/No)
Climbing Ladder	0	337.5	1	B	2.00	**Flat**	100	0	**Flat**	**1**	**1**	**8.0**	**6**	Yes	Yes
US Dept	0	337.5	2	2	1.09	**Ind**	100	0	**Round**	**2**	**1**	**3.4**	**0.33**	Yes	Yes
US Dept1	0	337.5	1	2	0.63	**Ind**	100	0	**Round**	**1**	**1**	**2.0**	**0.15**	Yes	Yes
Ligado	0	319	1	4	1.98	**Ind**	100	0	**Round**	**1**	**1**	**6.2**	**0.82**	Yes	Yes
US Dept2	0	310	2	2	1.09	**Ind**	100	0	**Round**	**2**	**1**	**3.4**	**0.33**	Yes	Yes
US Dept3	0	275	1	2	1.09	**Ind**	100	0	**Round**	**1**	**1**	**3.4**	**0.33**	Yes	Yes
Sprint1	0	240	4	B	1.54	**Ind**	100	0	**Round**	**4**	**1**	**4.8**	**1**	Yes	Yes
TMO	0	220	12	1	1.98	**Block**	50	0.25	**Flat**	**6**	**2**	**34.7**	**9.84**	Yes	Yes
TMO1	0	220	1	1	0.44	**Ind**	100	0	**Round**	**1**	**1**	**1.4**	**0.08**	Yes	Yes
US Dept4	0	194	1	4	1.55	**Ind**	0	0	**Round**	**0**	**#DIV/0!**	**#DIV/0!**	**0.63**	No	No
Verizon	0	180	12	4	1.98	**Block**	50	0.25	**Flat**	**6**	**2**	**34.7**	**9.84**	Yes	Yes
ATT	0	165	6	2	1.98	**Ind**	100	0	**Round**	**6**	**1**	**6.2**	**0.82**	Yes	Yes
ATT1	0	165	1	2	0.39	**Ind**	0	0	**Round**	**0**	**#DIV/0!**	**#DIV/0!**	**0.17**	No	No
ATT2	0	165	2	2	0.78	**Ind**	0	0	**Round**	**0**	**#DIV/0!**	**#DIV/0!**	**1.18**	No	No
ATT3	0	165	1	2	3.50	**Ind**	0	0	**Round**	**0**	**#DIV/0!**	**#DIV/0!**	**7.58**	No	No
Metro	0	100	6	1	1.98	**Ind**	100	0	**Round**	**6**	**1**	**6.2**	**0.82**	Yes	Yes
Sprint2	0	48	1	B	0.63	**Ind**	0	0	**Round**	**0**	**#DIV/0!**	**#DIV/0!**	**0.15**	No	No
Coax Cage	12.5	32.5	2	1	12.00	**Flat**	100	0	**Flat**	**2**	**1**	**48.0**	**25**	Yes	Yes
Coax Cage2	12.5	32.5	2	3	12.00	**Flat**	100	0	**Flat**	**2**	**1**	**48.0**	**25**	Yes	Yes
Waive Guide	0	180	1	4	1.50	**Flat**	100	0	**Flat**	**1**	**1**	**6.0**	**#N/A**	Yes	Yes
Waive Guide1	0	165	1	2	1.50	**Flat**	100	0	**Flat**	**1**	**1**	**6.0**	**#N/A**	Yes	Yes
Waive Guide2	0	100	1	1	1.50	**Flat**	100	0	**Flat**	**1**	**1**	**6.0**	**#N/A**	Yes	Yes
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No

Site #:	88008
Name:	Sprint Nextel

Engineer:	AAV
Date:	03/29/18

Member Label	Group Label	Section Label	Symmetry Code	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
L 1	Leg S1		XY-Symmetry	0P	1P	1	4	0.2812	0.2812	0.2812
L 2	Leg S2		XY-Symmetry	1P	2P	1	4	0.2812	0.2812	0.2812
L 3	Leg S3		XY-Symmetry	2P	3P	1	4	0.2812	0.2812	0.2812
L 4	Leg S4		XY-Symmetry	3P	4P	1	4	0.2812	0.2812	0.2812
L 5	Leg S5		XY-Symmetry	4P	5P	1	4	0.2812	0.2812	0.2812
L 6	Leg S6		XY-Symmetry	5P	6P	1	4	0.2812	0.2812	0.2812
L 7	Leg S7		XY-Symmetry	6P	7P	1	4	0.333333333	0.333333333	0.333333333
L 8	Leg S8		XY-Symmetry	7P	8P	1	4	0.333333333	0.333333333	0.333333333
L 9	Leg S9		XY-Symmetry	8P	9P	1	4	0.333333333	0.333333333	0.333333333
L 10	Leg S10		XY-Symmetry	9P	10P	1	4	0.5	0.5	0.5
L 11	Leg S11		XY-Symmetry	10P	11P	1	4	0.5	0.5	0.5
L 12	Leg S12		XY-Symmetry	11P	12P	1	4	0.5	0.5	0.5
L 13	Leg S13		XY-Symmetry	12P	13P	1	4	0.5	0.5	0.5
L 14	Leg S14		XY-Symmetry	13P	14P	1	4	0.5	0.5	0.5
L 15	Leg S15		XY-Symmetry	14P	15P	1	4	0.5	0.5	0.5
L 16	Leg S16		XY-Symmetry	15P	16P	1	4	0.5	0.5	0.5
L 17	Leg S17		XY-Symmetry	16P	17P	1	4	0.5	0.5	0.5
L 18	Leg S18		XY-Symmetry	17P	18P	1	4	0.5	0.5	0.5
L 19	Leg S19		XY-Symmetry	18P	19P	1	4	0.5	0.5	0.5
D 1	Diag S1		XY-Symmetry	0P	H2P	1	6	0.333333333	0.94	0.333333333
D 2	Diag S1		XY-Symmetry	0P	H1P	1	6	0.333333333	0.94	0.333333333
D 3	Diag S2		XY-Symmetry	1P	H6P	1	6	0.333333333	0.94	0.333333333
D 4	Diag S2		XY-Symmetry	1P	H5P	1	6	0.333333333	0.94	0.333333333
D 5	Diag S3		XY-Symmetry	2P	H10P	1	6	0.333333333	0.94	0.333333333
D 6	Diag S3		XY-Symmetry	2P	H9P	1	6	0.333333333	0.94	0.333333333
D 7	Diag S4		XY-Symmetry	3P	H14P	1	6	0.333333333	0.33	0.333333333
D 8	Diag S4		XY-Symmetry	3P	H13P	1	6	0.333333333	0.33	0.333333333
D 9	Diag S5		XY-Symmetry	4P	H18P	1	6	0.333333333	0.33	0.333333333
D 10	Diag S5		XY-Symmetry	4P	H17P	1	6	0.333333333	0.33	0.333333333
D 11	Diag S6		XY-Symmetry	5P	H22P	1	6	0.3	0.94	0.3
D 12	Diag S6		XY-Symmetry	5P	H21P	1	6	0.3	0.94	0.3
D 13	Diag S7		XY-Symmetry	6P	A13P	1	6	0.3	0.6	0.3
D 14	Diag S7		XY-Symmetry	6P	A14P	1	6	0.3	0.6	0.3
D 15	Diag S8		XY-Symmetry	7P	A15P	1	6	0.3	0.6	0.3
D 16	Diag S8		XY-Symmetry	7P	A16P	1	6	0.3	0.6	0.3
D 17	Diag S9		XY-Symmetry	8P	A17P	1	6	0.3	0.6	0.3
D 18	Diag S9		XY-Symmetry	8P	A18P	1	6	0.3	0.6	0.3
D 19	Diag S10		XY-Symmetry	9P	A19P	1	6	0.5	1	0.5
D 20	Diag S10		XY-Symmetry	9P	A20P	1	6	0.5	1	0.5
D 21	Diag S11		XY-Symmetry	10P	A21P	1	6	0.5	1	0.5
D 22	Diag S11		XY-Symmetry	10P	A22P	1	6	0.5	1	0.5
D 23	Diag S12		XY-Symmetry	11P	A23P	1	6	0.5	1	0.5
D 24	Diag S12		XY-Symmetry	11P	A24P	1	6	0.5	1	0.5
D 25	Diag S13		XY-Symmetry	12P	A25P	1	6	0.5	1	0.5
D 26	Diag S13		XY-Symmetry	12P	A26P	1	6	0.5	1	0.5
D 27	Diag S14		XY-Symmetry	13P	A27P	1	6	0.5	1	0.5
D 28	Diag S14		XY-Symmetry	13P	A28P	1	6	0.5	1	0.5
D 29	Diag S15		XY-Symmetry	14P	A29P	1	6	0.5	1	0.5
D 30	Diag S15		XY-Symmetry	14P	A30P	1	6	0.5	1	0.5
D 31	Diag S16		XY-Symmetry	15P	16Y	2	6	100	100	100
D 32	Diag S16		XY-Symmetry	15P	16X	2	6	100	100	100
D 33	Diag S17		XY-Symmetry	16P	17Y	2	5	100	100	100
D 34	Diag S17		XY-Symmetry	16P	17X	2	5	100	100	100
D 35	Diag S18		XY-Symmetry	17P	18Y	2	5	100	100	100
D 36	Diag S18		XY-Symmetry	17P	18X	2	5	100	100	100
D 37	Diag S19		XY-Symmetry	18P	19Y	2	5	100	100	100
D 38	Diag S19		XY-Symmetry	18P	19X	2	5	100	100	100
H 1	Horiz 1		XY-Symmetry	1P	A1P	1	6	0.5	0.5	0.5
H 2	Horiz 1		XY-Symmetry	1P	A2P	1	6	0.5	0.5	0.5
H 3	Horiz 2		XY-Symmetry	2P	A3P	1	6	0.49	0.49	0.49
H 4	Horiz 2		XY-Symmetry	2P	A4P	1	6	0.49	0.49	0.49
H 5	Horiz 3		XY-Symmetry	3P	A5P	1	6	0.46	0.46	0.46

Member Label	Group Label	Section Label	Symmetry Code	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
H 6	Horiz 3		XY-Symmetry	3P	A6P	1	6	0.46	0.46	0.46
H 7	Horiz 4		XY-Symmetry	4P	A7P	1	6	1	1	1
H 8	Horiz 4		XY-Symmetry	4P	A8P	1	6	1	1	1
H 9	Horiz 5		XY-Symmetry	5P	A9P	1	6	0.98	0.98	0.98
H 10	Horiz 5		XY-Symmetry	5P	A10P	1	6	0.98	0.98	0.98
H 11	Horiz 6		XY-Symmetry	6P	A11P	1	6	1	1	1
H 12	Horiz 6		XY-Symmetry	6P	A12P	1	6	1	1	1
H 13	Horiz 7		XY-Symmetry	7P	A13P	1	6	1	1	1
H 14	Horiz 7		XY-Symmetry	7P	A14P	1	6	1	1	1
H 15	Horiz 8		XY-Symmetry	8P	A15P	1	6	1	1	1
H 16	Horiz 8		XY-Symmetry	8P	A16P	1	6	1	1	1
H 17	Horiz 9		XY-Symmetry	9P	A17P	1	6	1	1	1
H 18	Horiz 9		XY-Symmetry	9P	A18P	1	6	1	1	1
H 19	Horiz 10		XY-Symmetry	10P	A19P	1	6	1	1	1
H 20	Horiz 10		XY-Symmetry	10P	A20P	1	6	1	1	1
H 21	Horiz 11		XY-Symmetry	11P	A21P	1	6	1	1	1
H 22	Horiz 11		XY-Symmetry	11P	A22P	1	6	1	1	1
H 23	Horiz 12		XY-Symmetry	12P	A23P	1	6	1	1	1
H 24	Horiz 12		XY-Symmetry	12P	A24P	1	6	1	1	1
H 25	Horiz 13		XY-Symmetry	13P	A25P	1	6	1	1	1
H 26	Horiz 13		XY-Symmetry	13P	A26P	1	6	1	1	1
H 27	Horiz 14		XY-Symmetry	14P	A27P	1	6	1	1.2	1
H 28	Horiz 14		XY-Symmetry	14P	A28P	1	6	1	1.2	1
H 29	Horiz 15		XY-Symmetry	15P	A29P	1	6	1	1.07	1
H 30	Horiz 15		XY-Symmetry	15P	A30P	1	6	1	1.07	1
H 31	Horiz 16		Y-Symmetry	16P	16X	3	6	0.5	0.52	0.5
H 32	Horiz 16		X-Symmetry	16P	16Y	3	6	0.5	0.52	0.5
H 33	Horiz 17		Y-Symmetry	17P	17X	1	6	0.5	1	0.5
H 34	Horiz 17		X-Symmetry	17P	17Y	1	6	0.5	1	0.5
H 35	Horiz 18		Y-Symmetry	18P	18X	3	6	0.5	1	0.5
H 36	Horiz 18		X-Symmetry	18P	18Y	3	6	0.5	1	0.5
H 37	Horiz 19		Y-Symmetry	19P	19X	3	6	1	1	1
H 38	Horiz 19		X-Symmetry	19P	19Y	3	6	1	1	1
H 45	Horiz 4		Y-Symmetry	A7P	A7X	1	6	1	1	1
H 46	Horiz 4		X-Symmetry	A8P	A8Y	1	6	1	1	1
H 47	Horiz 5		Y-Symmetry	A9P	A9X	1	6	1	1	1
H 48	Horiz 5		X-Symmetry	A10P	A10Y	1	6	1	1	1
H 49	Horiz 6		Y-Symmetry	A11P	A11X	1	6	1	1	1
H 50	Horiz 6		X-Symmetry	A12P	A12Y	1	6	1	1	1
LH 1	LH 1		Y-Symmetry	H1P	H1X	1	6	100	100	100
LH 2	LH 1		X-Symmetry	H2P	H2Y	1	6	100	100	100
LH 3	LH 2		Y-Symmetry	H5P	H5X	1	6	100	100	100
LH 4	LH 2		X-Symmetry	H6P	H6Y	1	6	100	100	100
LH 5	LH 3		Y-Symmetry	H9P	H9X	1	6	100	100	100
LH 6	LH 3		X-Symmetry	H10P	H10Y	1	6	100	100	100
LH 7	LH 4		XY-Symmetry	H13P	H15P	1	6	0.94	1.88	0.94
LH 8	LH 4		XY-Symmetry	H14P	H16P	1	6	0.94	1.88	0.94
LH 9	LH 5		XY-Symmetry	H17P	H19P	1	6	0.94	1.88	0.94
LH 10	LH 5		XY-Symmetry	H18P	H20P	1	6	0.94	1.88	0.94
LH 11	LH 6		XY-Symmetry	H21P	H23P	1	6	0.94	1.88	0.94
LH 12	LH 6		XY-Symmetry	H22P	H24P	1	6	0.94	1.88	0.94
LD 1	LD 1		XY-Symmetry	H1P	1P	1	6	0.904	0.904	0.904
LD 2	LD 1		XY-Symmetry	H2P	1P	1	6	0.904	0.904	0.904
LD 3	LD 2		XY-Symmetry	H1P	A1P	1	6	0.904	0.904	0.904
LD 4	LD 2		XY-Symmetry	H2P	A2P	1	6	0.904	0.904	0.904
LD 7	LD 4		XY-Symmetry	H5P	2P	1	6	0.904	0.904	0.904
LD 8	LD 4		XY-Symmetry	H6P	2P	1	6	0.904	0.904	0.904
LD 9	LD 5		XY-Symmetry	H5P	A3P	1	6	0.904	0.904	0.904
LD 10	LD 5		XY-Symmetry	H6P	A4P	1	6	0.904	0.904	0.904
LD 13	LD 7		XY-Symmetry	H9P	3P	1	6	0.904	0.904	0.904

Member Label	Group Label	Section Label	Symmetry Code	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
LD 14	LD 7		XY-Symmetry	H10P	3P	1	6	0.904	0.904	0.904
LD 15	LD 8		XY-Symmetry	H9P	A5P	1	6	0.904	0.904	0.904
LD 16	LD 8		XY-Symmetry	H10P	A6P	1	6	0.904	0.904	0.904
LD 19	LD 10		XY-Symmetry	H13P	4P	1	6	0.83	0.83	0.83
LD 20	LD 10		XY-Symmetry	H14P	4P	1	6	0.83	0.83	0.83
LD 21	LD 11		XY-Symmetry	H13P	A7P	1	6	0.85	0.85	0.85
LD 22	LD 11		XY-Symmetry	H14P	A8P	1	6	0.85	0.85	0.85
LD 23	LD 12		XY-Symmetry	A7P	H15P	1	6	0.86	0.86	0.86
LD 24	LD 12		XY-Symmetry	A8P	H16P	1	6	0.86	0.86	0.86
LD 25	LD 13		XY-Symmetry	H17P	5P	1	6	0.83	0.83	0.83
LD 26	LD 13		XY-Symmetry	H18P	5P	1	6	0.83	0.83	0.83
LD 27	LD 14		XY-Symmetry	H17P	A9P	1	6	0.85	0.85	0.85
LD 28	LD 14		XY-Symmetry	H18P	A10P	1	6	0.85	0.85	0.85
LD 29	LD 15		XY-Symmetry	A9P	H19P	1	6	0.86	0.86	0.86
LD 30	LD 15		XY-Symmetry	A10P	H20P	1	6	0.86	0.86	0.86
LD 31	LD 16		XY-Symmetry	H21P	6P	1	6	0.83	0.83	0.83
LD 32	LD 16		XY-Symmetry	H22P	6P	1	6	0.83	0.83	0.83
LD 33	LD 17		XY-Symmetry	H21P	A11P	1	6	0.85	0.85	0.85
LD 34	LD 17		XY-Symmetry	H22P	A12P	1	6	0.85	0.85	0.85
LD 35	LD 18		XY-Symmetry	A11P	H23P	1	6	0.86	0.86	0.86
LD 36	LD 18		XY-Symmetry	A12P	H24P	1	6	0.86	0.86	0.86
BR 1	DUM 1		XY-Symmetry	A1P	A2P	1	4	1	1	1
BR 3	DUM 1		XY-Symmetry	A3P	A4P	1	4	1	1	1
BR 5	DUM 1		XY-Symmetry	A5P	A6P	1	4	1	1	1
BR 7	DUM 1		XY-Symmetry	A7P	A8P	1	4	1	1	1
BR 8	DUM 1		XY-Symmetry	A7P	A8XY	1	4	1	1	1
BR 9	DUM 1		XY-Symmetry	A9P	A10P	1	4	1	1	1
BR 10	DUM 1		XY-Symmetry	A9P	A10XY	1	4	1	1	1
BR 11	DUM 1		XY-Symmetry	A11P	A12P	1	4	1	1	1
BR 12	DUM 1		XY-Symmetry	A11P	A12XY	1	4	1	1	1
BR 13	DUM 1		XY-Symmetry	A13P	A14P	1	4	1	1	1
BR 15	DUM 1		XY-Symmetry	A15P	A16P	1	4	1	1	1
BR 17	DUM 1		XY-Symmetry	A17P	A18P	1	4	1	1	1
BR 19	DUM 1		XY-Symmetry	A19P	A20P	1	4	1	1	1
BR 21	DUM 1		XY-Symmetry	A21P	A22P	1	4	1	1	1
BR 23	DUM 1		XY-Symmetry	A23P	A24P	1	4	1	1	1
BR 25	DUM 1		XY-Symmetry	A25P	A26P	1	4	1	1	1
BR 27	DUM 1		XY-Symmetry	A27P	A28P	1	4	1	1	1
BR 29	DUM 1		XY-Symmetry	A29P	A30P	1	4	1	1	1
BR 61	DUM 1		XY-Symmetry	H1P	H2P	1	4	1	1	1
BR 62	DUM 1		XY-Symmetry	H1P	H2XY	1	4	1	1	1
BR 64	DUM 1		XY-Symmetry	H5P	H6P	1	4	1	1	1
BR 65	DUM 1		XY-Symmetry	H5P	H6XY	1	4	1	1	1
BR 67	DUM 1		XY-Symmetry	H9P	H10P	1	4	1	1	1
BR 68	DUM 1		XY-Symmetry	H9P	H10XY	1	4	1	1	1
BR 70	DUM 1		XY-Symmetry	H13P	H14P	1	4	1	1	1
BR 71	DUM 1		XY-Symmetry	H13P	H14XY	1	4	1	1	1
BR 72	DUM 1		XY-Symmetry	H15P	H16P	1	4	1	1	1
BR 73	DUM 1		XY-Symmetry	H17P	H18P	1	4	1	1	1

Member Label	Group Label	Section Label	Symmetry Code	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
BR 74	DUM 1		XY-Symmetry	H17P	H18XY	1	4	1	1	1
BR 75	DUM 1		XY-Symmetry	H19P	H20P	1	4	1	1	1
BR 76	DUM 1		XY-Symmetry	H21P	H22P	1	4	1	1	1
BR 77	DUM 1		XY-Symmetry	H21P	H22XY	1	4	1	1	1
BR 78	DUM 1		XY-Symmetry	H23P	H24P	1	4	1	1	1

Task:	Determine Point Loads	
Tower Height:	337.5	ft
Gh:	0.85	
Wind Speed:	97	mph, Vasd
Ice Wind Speed:	50	
Ice Density:	56	
Tower Type:	S	

Ice Thick:	0.75	in
Topographic Category (1-4):	1	
Exposure Category (B-D):	B	
Structure Class (1-3):	2	
Height of Crest (H) if Topo Cat. >1:	0	ft
Load Factor; Wind:	1.6	
Load Factor; Dead:	1.2	

Site No.:	88008
Engineer:	AAV
Date:	03/29/2018
Carrier:	Sprint Nextel

No.	Carrier	Elevation (ft)	Quantity	# of Azimuths		Manufacturer	Model	Height (in)	Width (in)	Depth (in)	Weight (lbs/ea)	Flat/Round (F/R)	Reduction	C_AA_C (ft^2)	Weight (k)	Ka
1	US Dept	338	1	1		-		0.001	0.001	0.001	0.001	F	0.001			1
	US Dept	338	1	1		Rohde & Schwarz	ADD090						1.000	20.76	0.09	1
2	-	338	1	1		-		0.001	0.001	0.001	0.001	F	0.001			1
	-	338	1	4		-	Platform						1.000	70.00	6.00	1
3	Ligado	319	1	1		-		0.001	0.001	0.001	0.001	F	0.001			1
	Ligado	319	1	1		Kathrein Scala	750 10074						1.000	1.73	0.02	1
4	Ligado	319	1	1		-		0.001	0.001	0.001	0.001	F	0.001			1
	Ligado	319	1	1		-	Side Arm						1.000	5.20	0.15	1
5	US Dept	310	1	1		-		0.001	0.001	0.001	0.001	F	0.001			1
	US Dept	310	1	1		Sinclair	SC381-HL (160")						1.000	6.00	0.05	1
6	US Dept	310	1	1		-		0.001	0.001	0.001	0.001	F	0.001			1
	US Dept	310	1	1		Sinclair	SC281-L						1.000	10.46	0.08	1
7	-	310	1	1		-		0.001	0.001	0.001	0.001	F	0.001			1
	-	310	1	1		-	Sector Frame						1.000	14.90	0.30	1
8	Unknown	287	1	1		-		0.001	0.001	0.001	0.001	F	0.001			1
	Unknown	287	1	1		Generic	8' Omni						1.000	2.40	0.03	1
9	US Dept	275	1	1		-		0.001	0.001	0.001	0.001	F	0.001			1
	US Dept	275	1	1		Sinclair	SC281-L						1.000	10.46	0.08	1
10	US Dept	275	1	1		-		0.001	0.001	0.001	0.001	F	0.001			1
	US Dept	275	1	1		-	Sector Frame						1.000	14.90	0.30	1
11	Unknown	262	1	1		-		0.001	0.001	0.001	0.001	F	0.001			1
	Unknown	262	1	1		Generic	8' Omni						1.000	2.40	0.03	1
12	Sprint	240	6	3	proposed	Alcatel-Lucent	800 MHz 2X50W RRH w/ Filter	19	13	12.2	64	F	0.500			0.8
	Sprint	240	3	3	proposed	RFS	APXVTM14-ALU-I20						0.660	6.34	0.06	0.8
13	Sprint	240	3	3		Alcatel-Lucent	1900 MHz 4X45 RRH	25.1	11.1	10.7	60	F	0.500			0.8
	Sprint	240	1	1		-	-						0.001	0.00	0.00	1
14	Sprint	240	3	3		Alcatel-Lucent	TD-RRH8x20-25 w/ Solar Shield	26.1	18.6	6.7	70	F	0.500			0.8
	Sprint	240	1	1		-	-						0.001	0.00	0.00	1
15	Sprint	240	3	3	proposed	Commscope	NNVV-65B-R4	72	19.6	7.8	77.4	F	0.640			0.8
	Sprint	240	3	3		-	Sector Frame						0.670	14.90	0.30	0.75
16	TMO	220	6	3		KMW	Smart Bias-T	3.5	2.8	1.7	3.1	F	0.500			0.8
	TMO	220	1	1		-	-						0.001	0.00	0.00	1
17	TMO	220	6	3		Remec	S20057A1	13.2	6.4	3	15.4	F	0.500			0.8
	TMO	220	1	1		-	-						0.001	0.00	0.00	1
18	TMO	220	3	3		RFS	APX16PV-16PVL-E-00	53	12.9	3.1	14	F	0.600			0.8
	TMO	220	1	1		-	-						0.001	0.00	0.00	1
19	TMO	220	3	3		Andrew	LNX-6515DS-VTM	96.3	11.9	7.1	33	F	0.700			0.8
	TMO	220	3	3		-	Sector Frame						0.670	14.90	0.30	0.75
20	US Dept	194	1	1		-	-	0.001	0.001	0.001	0.001	F	0.001			1
	US Dept	194	1	1		Andrew	DB616E-BC						1.000	6.73	0.05	1
21	US Dept	194	1	1		-	-	0.001	0.001	0.001	0.001	F	0.001			1
	US Dept	194	1	1		-	Side Arm						1.000	5.20	0.15	1
22	Verizon	180	6	3		RFS	FD9R6004/1C-3L	5.8	6.5	1.5	3.1	F	0.500			0.8
	Verizon	180	1	1		-	-						0.001	0.00	0.00	1
23	Verizon	180	3	3		Rymsa	MGD3-800TX	52.8	6.3	3.5	15.4	F	0.690			0.8
	Verizon	180	1	1		-	-						0.001	0.00	0.00	1
24	Verizon	180	6	3		Andrew	DB844H90E-XY	48	6.5	8	14	F	0.740			0.8
	Verizon	180	1	1		-	-						0.001	0.00	0.00	1
25	Verizon	180	3	3		Powerwave Allgon	P65-16-XL-2	72	12	5	33	F	0.650			0.8
	Verizon	180	3	3		-	Sector Frame						0.670	14.90	0.30	0.75
26	ATT	165	3	3		Powerwave Allgon	LGP21901	4	6	3	5.5	F	0.500			0.8
	ATT	165	1	1		-							0.001	0.00	0.00	1
27	ATT	165	3	3		Raycap	DC2-48-60-0-9E	10.3	10.3	6.2	16	F	0.500			0.8
	ATT	165	1	1		-							0.001	0.00	0.00	1
28	ATT	165	6	3		Powerwave Allgon	LGP21401	14.4	9.2	2.6	14.1	F	0.500			0.8
	ATT	165	1	1		-							0.001	0.00	0.00	1
29	ATT	165	1	1		Raycap	FC12-PC6-10E	15.5	16.3	6.6	25	F	0.500			0.8
	ATT	165	1	1		-							0.001	0.00	0.00	1
30	ATT	165	3	3		Ericsson	RRUS 11 (Band 12)	17.8	17.3	7.2	50	F	0.500			0.8
	ATT	165	1	1		-							0.001	0.00	0.00	1
31	ATT	165	3	3		Powerwave Allgon	7770	55	11	5	35	F	0.650			0.8
	ATT	165	1	1		-							0.001	0.00	0.00	1
32	ATT	165	1	1		KMW	AM-X-CD-16-65-00T-RET	72	11.8	5.9	48.5	F	0.670			0.8
	ATT	165	1	1		-							0.001	0.00	0.00	1
33	ATT	165	2	2		Andrew	SBNH-1D6565C (60.8 lbs)	96.4	11.9	7.1	60.8	F	0.700			0.8
	ATT	165	3	3		-	Sector Frame						0.670	14.90	0.30	0.75
34	Metro	100	3	3		RFS	APXV18-206517S-C	72	6.8	3.2	26.4	F	0.680			1
	Metro	100	1	1		-	-						0.001	0.00	0.00	1
35	Sprint	48	1	1		PCTEL	GPS-TMG-HR-26N	5	3.2	3.2	0.6	F	1.000			1
	Sprint	48	1	1		-	-						0.001	0.00	0.00	1
36	-	320	1	1		-	-	0.001	0.001	0.001	0.001	F	0.001			1
	-	320	1	4		-	Access Platform						1.000	45.00	5.00	1
37	-	287.5	1	1		-	-	0.001	0.001	0.001	0.001	F	0.001			1
	-	287.5	1	1		-	Rest Platform						1.000	15.00	0.50	1
38	-	237	1	1		-	-	0.001	0.001	0.001	0.001	F	0.001			1
	-	237	1	3		-	Catwalk						1.000	50.00	5.00	1
39	-	200	1	1		-	-	0.001	0.001	0.001	0.001	F	0.001			1
	-	200	1	1		-	Rest Platform						1.000	15.00	0.50	1
40	-	150	1	1		-	-	0.001	0.001	0.001	0.001	F	0.001			1
	-	150	1	1		-	Rest Platform						1.000	15.00	0.50	1
41	-	125	1	1		-	-	0.001	0.001	0.001	0.001	F	0.001			1
	-	125	1	3		-	Catwalk						1.000	70.00	8.00	1
42																1
43																1
44																1
45																1
46																1
47																1
48																1
49																1
50																1

No.	Elevation	C_AA_C	C_AA_C (Ice)	Force	Force (Ice)	Weight	Weight (Ice)	60 Azi	Force	F (Ice)	Height	Sum of Forces (No I	
	(ft)	(ft^2)	(ft^2)	(lb)	(lb)	(lb)	(lb)	Mult.	mean	mean	Flag	60 Azi.	180 Azi.
1	338	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00			
	338	20.76	28.03	808.996	181.366	108	140	1.00	444.95	99.75	0.0000010	808.9957366	
2	338	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	0.0000020		
	338	70.00	94.50	2727.828	611.543	7200	9360	1.00	1500.31	336.35	1.5029586	3536.823365	
3	319	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5029596		
	319	1.73	2.34	66.311	14.866	24	31	1.00	36.47	8.18	1.5029596	66.31108359	
4	319	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5029606		
	319	5.20	7.02	199.317	44.684	180	234	1.00	109.62	24.58	1.5031348	265.6276354	
5	310	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5031358		
	310	6.00	8.10	228.108	51.139	60	78	1.00	125.46	28.13	1.5031358	228.1077981	
6	310	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5031368		
	310	10.46	14.12	397.668	89.152	96	125	1.00	218.72	49.03	1.5031368	625.775726	
7	310	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5031378		
	310	14.90	20.12	566.468	126.995	360	468	1.00	311.56	69.85	1.5032258	1192.243424	
8	287	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5032268		
	287	2.40	3.24	89.255	20.010	36	47	1.00	49.09	11.01	1.5034843	89.25539314	
9	275	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5034853		
	275	10.46	14.12	384.287	86.152	96	125	1.00	211.36	47.38	1.5034853	384.2865087	
10	275	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5034863		
	275	14.90	20.12	547.406	122.721	360	468	1.00	301.07	67.50	1.5036364	931.692721	
11	262	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5036374		
	262	2.40	3.24	86.961	19.496	36	47	1.00	47.83	10.72	1.5038168	86.96123981	
12	240	5.41	6.94	191.127	40.701	461	636	1.00	105.12	22.39	1.5038178		
	240	12.55	16.95	354.876	79.558	202	263	1.00	195.18	43.76	1.5038178	546.0024273	
13	240	3.13	3.91	110.723	22.946	216	356	1.00	60.90	12.62	1.5038188		
	240	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5038188	656.7249666	
14	240	4.85	6.47	171.548	37.980	252	428	1.00	94.35	20.89	1.5038198		
	240	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5041667	828.2727658	
15	240	18.85	23.16	666.050	135.905	279	703	1.00	366.33	74.75	1.5041677		
	240	29.95	40.43	793.734	177.945	1080	1404	1.00	436.55	97.87	1.5041667	2288.056977	
16	220	0.20	0.50	6.756	2.872	22	31	1.00	3.72	1.58	1.5041677		
	220	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5045455	6.756054826	
17	220	1.69	2.71	58.240	15.511	111	159	1.00	32.03	8.53	1.5045465		
	220	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5045455	64.99574233	
18	220	8.69	10.99	299.649	62.892	50	238	1.00	164.81	34.59	1.5045465		
	220							1.00	0.00	0.00	1.5045455	364.6451609	
19	220	19.20	21.56	661.965	123.397	119	477	1.00	364.08	67.87	1.5045465		
	220	29.95	40.43	774.245	173.576	1080	1404	1.00	425.83	95.47	1.5045455	1800.85479	
20	194	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5045465		
	194	6.73	9.09	223.792	50.171	60	78	1.00	123.09	27.59	1.5051546	223.7916902	
21	194	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5051556		
	194	5.20	7.02	172.915	38.765	180	234	1.00	95.10	21.32	1.5051546	396.7065178	
22	180	0.75	1.36	24.542	7.365	22	37	1.00	13.50	4.05	1.5051556		
	180							1.00	0.00	0.00	1.5055556	24.54178651	
23	180	5.53	6.82	180.047	36.858	55	170	1.00	99.03	20.27	1.5055566		
	180							1.00	0.00	0.00	1.5055556	204.5884044	
24	180	13.26	16.24	431.623	87.777	101	247	1.00	237.39	48.28	1.5055566		
	180							1.00	0.00	0.00	1.5055556	636.2113786	
25	180	12.69	15.05	412.979	81.343	119	374	1.00	227.14	44.74	1.5055566		
	180	29.95	40.43	731.103	163.904	1080	1404	1.00	402.11	90.15	1.5055556	1780.293156	
26	165	0.24	0.48	7.620	2.537	20	31	1.00	4.19	1.40	1.5055566		
	165	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5060606	7.619932909	
27	165	1.06	1.62	33.683	8.565	58	100	1.00	18.53	4.71	1.5060616		
	165	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5060606	41.30310274	
28	165	2.65	3.97	84.124	20.930	102	157	1.00	46.27	11.51	1.5060616		
	165	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5060606	125.4268433	
29	165	0.84	1.18	26.738	6.205	30	101	1.00	14.71	3.41	1.5060616		
	165	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5060606	152.1653199	
30	165	3.08	4.23	97.770	22.319	180	295	1.00	53.77	12.28	1.5060616		
	165	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5060606	249.9350334	
31	165	8.59	10.71	272.832	56.476	126	315	1.00	150.06	31.06	1.5060616		
	165	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5060606	522.7669197	
32	165	4.30	5.09	136.558	26.859	58	302	1.00	75.11	14.77	1.5060616		
	165	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5060606	659.3251756	
33	165	12.82	14.39	406.988	75.864	146	499	1.00	223.84	41.73	1.5060616		
	165	29.95	40.43	713.151	159.879	1080	1404	1.00	392.23	87.93	1.5060606	1779.464957	
34	100	10.54	12.63	290.028	57.731	95	250	1.00	159.52	31.75	1.5060616		
	100	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5100000	290.0283678	
35	48	0.16	0.30	3.471	1.100	1	7	1.00	1.91	0.61	1.5100010		
	48	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5208333	3.470677117	
36	320	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5208343		
	320	45.00	60.75	1726.398	387.036	6000	7800	1.00	949.52	212.87	1.5031250	1726.397926	
37	287.5	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5031260		
	287.5	15.00	20.25	558.124	125.124	600	780	1.00	306.97	68.82	1.5034783	558.1237081	
38	237	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5034793		
	237	50.00	67.50	1760.519	394.685	6000	7800	1.00	968.29	217.08	1.5042194	1760.519285	
39	200	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5042204		
	200	15.00	20.25	503.153	112.800	600	780	1.00	276.73	62.04	1.5050000	503.1525241	
40	150	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5050010		
	150	15.00	20.25	463.450	103.899	600	780	1.00	254.90	57.14	1.5066667	463.4499865	
41	125	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5066677		
	125	70.00	94.50	2052.988	460.253	9600	12480	1.00	1129.14	253.14	1.5080000	2052.988145	
42				#DIV/0!				1.00	#DIV/0!	0.00	1.5080010		
								1.00	0.00	0.00	1.5080010	#DIV/0!	
43					#VALUE!			1.00	#VALUE!	#VALUE!	1.5080020		
								1.00	#VALUE!	#VALUE!	1.5080020	#DIV/0!	
44					#VALUE!			1.00	#VALUE!	#VALUE!	1.5080030		
								1.00	#VALUE!	#VALUE!	1.5080030	#DIV/0!	
45					#VALUE!			1.00	#VALUE!	#VALUE!	1.5080040		
								1.00	#VALUE!	#VALUE!	1.5080040	#DIV/0!	
46					#VALUE!			1.00	#VALUE!	#VALUE!	1.5080050		
								1.00	#VALUE!	#VALUE!	1.5080050	#DIV/0!	
47					#VALUE!			1.00	#VALUE!	#VALUE!	1.5080060		
								1.00	#VALUE!	#VALUE!	1.5080060	#DIV/0!	
48					#VALUE!			1.00	#VALUE!	#VALUE!	1.5080070		
								1.00	#VALUE!	#VALUE!	1.5080070	#DIV/0!	
49					#VALUE!			1.00	#VALUE!	#VALUE!	1.5080080		
								1.00	#VALUE!	#VALUE!	1.5080080	#DIV/0!	
50					#VALUE!			1.00	#VALUE!	#VALUE!	1.5080090		
								1.00	#VALUE!	#VALUE!	1.5080090	#DIV/0!	

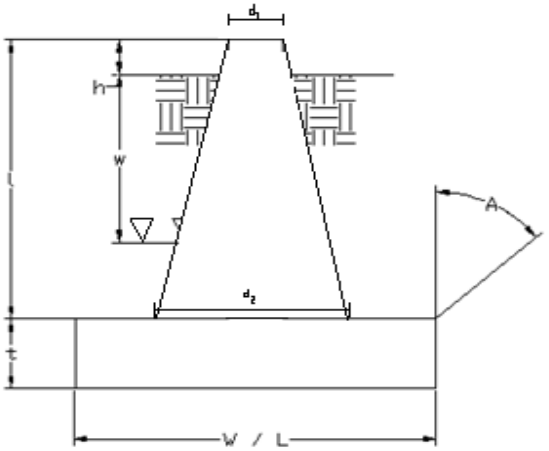
Foundation

Site No.:	88008
Engineer:	AAV
Date:	03/29/18
Carrier:	Sprint Nextel

Design Loads (Factored)

Compression/Leg:	448.85	k
Uplift/Leg:	309.14	k
Shear/Leg	66.73	k

Face Width @ Top of Pier (d_1):	4.00	ft
Face Width @ Bottom of Pier (d_2):	7.50	ft
Total Length of Pier (l):	7.25	ft
Height of Pedestal Above Ground (h):	0.50	ft
Width of Pad (W):	21.50	ft
Length of Pad (L):	21.50	ft
Thickness of Pad (t):	2.50	ft
Water Table Depth (w):	99.00	ft
Unit Weight of Concrete:	150.0	pcf
Unit Weight of Soil (Above Water Table):	131.0	pcf
Unit Weight of Soil (Below Water Table):	68.6	pcf
Friction Angle of Uplift (A):	30	°
Ultimate Compressive Bearing Pressure:	48200	psf
Ultimate Skin Friction:	0	psf



Volume Pier (Total):	247.10	ft³
Volume Pad (Total):	1155.63	ft³
Volume Soil (Total):	4120.07	ft³
Volume Pier (Buoyant):	0.00	ft³
Volume Pad (Buoyant):	0.00	ft³
Volume Soil (Buoyant):	0.00	ft³
Weight Pier:	37.07	k
Weight Pad:	173.34	k
Weight Soil:	539.73	k
Uplift Skin Friction:	0.00	k

Uplift Check

ϕs Uplift Resistance (k)	Ratio	Result
562.60	0.55	**OK**

Axial Check

ϕs Axial Resistance (k)	Ratio	Result
16710.34	0.03	**OK**

Anchor Bolt Check

Bolt Diameter (in)	2.25
# of Bolts	6
Steel Grade	A36
Steel Fy	36
Steel Fu	58
Detail Type	B

Usage Ratio	Result
0.45	**OK**

EBI Consulting
environmental | engineering | due diligence

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

SPRINT Existing Facility

Site ID: CT03XC043

Bethany CT
93 Old Amity Road
Bethany, CT 06524

October 2, 2018

EBI Project Number: 6218006413

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	5.50 %

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

EBI Consulting
environmental | engineering | due diligence

October 2, 2018

SPRINT
Attn: RF Engineering Manager
1 International Boulevard, Suite 800
Mahwah, NJ 07495

Emissions Analysis for Site: **CT03XC043 – Bethany CT**

EBI Consulting was directed to analyze the proposed SPRINT facility located at **93 Old Amity Road, Bethany, CT**, for the purpose of determining whether the emissions from the Proposed SPRINT 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 population 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 population 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.

General population 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 850 MHz Band is approximately 567 $\mu W/cm^2$. The general population exposure limit for the 1900 MHz (PCS) and 2500 MHz (BRS) 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 SPRINT Wireless antenna facility located at **93 Old Amity Road, Bethany, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since SPRINT 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 for directional panel antennas, 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) 1 CDMA channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.

2) 2 LTE channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 50 Watts per Channel.

3) 5 CDMA channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 16 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 40 Watts per Channel.

5) 8 LTE channels (2500 MHz (BRS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.

6) 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.

7) 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 for directional panel antennas, 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.

8) The antennas used in this modeling are the **Commscope NNVV-65B-R4 and the RFS APXVTM14-ALU-I20** for transmission in the 850 MHz, 1900 MHz (PCS) and 2500 MHz (BRS) 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 for directional panel antennas, 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.

9) The antenna mounting height centerlines of the proposed panel antennas are **240 feet** above ground level (AGL) for **Sector A**, **240 feet** above ground level (AGL) for **Sector B** and **240 feet** above ground level (AGL) for Sector C.

10) 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 population threshold limits.

SPRINT Site Inventory and Power Data by Antenna

Sector:	A	Sector:	B	Sector:	C
Antenna #:	**1**	Antenna #:	**1**	Antenna #:	**1**
Make / Model:	Commscope NNVV-65B-R4	Make / Model:	Commscope NNVV-65B-R4	Make / Model:	Commscope NNVV-65B-R4
Gain:	12.75 / 15.05 dBd	Gain:	12.75 / 15.05 dBd	Gain:	12.75 / 15.05 dBd
Height (AGL):	**240 feet**	Height (AGL):	**240 feet**	Height (AGL):	**240 feet**
Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)
Channel Count	10	Channel Count	10	Channel Count	10
Total TX Power(W):	280 Watts	Total TX Power(W):	280 Watts	Total TX Power(W):	280 Watts
ERP (W):	7,378.61	ERP (W):	7,378.61	ERP (W):	7,378.61
Antenna A1 MPE%	**0.60 %**	Antenna B1 MPE%	**0.60 %**	Antenna C1 MPE%	**0.60 %**
Antenna #:	**2**	Antenna #:	**2**	Antenna #:	**2**
Make / Model:	RFS APXVTM14-ALU-I20	Make / Model:	RFS APXVTM14-ALU-I20	Make / Model:	RFS APXVTM14-ALU-I20
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	**240 feet**	Height (AGL):	**240 feet**	Height (AGL):	**240 feet**
Frequency Bands	2500 MHz (BRS)	Frequency Bands	2500 MHz (BRS)	Frequency Bands	2500 MHz (BRS)
Channel Count	8	Channel Count	8	Channel Count	8
Total TX Power(W):	160 Watts	Total TX Power(W):	160 Watts	Total TX Power(W):	160 Watts
ERP (W):	6,224.72	ERP (W):	6,224.72	ERP (W):	6,224.72
Antenna A2 MPE%	**0.41 %**	Antenna B2 MPE%	**0.41 %**	Antenna C2 MPE%	**0.41 %**

Site Composite MPE%	
Carrier	**MPE%**
SPRINT – Max per sector	**1.01 %**
AT&T	1.29 %
MetroPCS	0.77 %
Verizon Wireless	0.67 %
Indus'l Commcns	0.16 %
Nextel	0.16 %
T-Mobile	1.00 %
Rescue 21	0.22 %
Dept Homeland Security	0.20 %
Light Squared, Inc.	0.02 %
Site Total MPE %:	**5.50 %**

SPRINT Sector A Total:	1.01 %
SPRINT Sector B Total:	1.01 %
SPRINT Sector C Total:	1.01 %
Site Total:	5.50 %

SPRINT _ Frequency Band / Technology (Per Sector)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
Sprint 850 MHz CDMA	1	376.73	240	0.25	850 MHz	567	0.04%
Sprint 850 MHz LTE	2	941.82	240	1.24	850 MHz	567	0.22%
Sprint 1900 MHz (PCS) CDMA	5	511.82	240	1.68	1900 MHz (PCS)	1000	0.17%
Sprint 1900 MHz (PCS) LTE	2	1,279.56	240	1.68	1900 MHz (PCS)	1000	0.17%
Sprint 2500 MHz (BRS) LTE	8	778.09	240	4.09	2500 MHz (BRS)	1000	0.41%
						Total:	**1.01%**

Summary

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

The anticipated maximum composite contributions from the SPRINT facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

SPRINT Sector	Power Density Value (%)
Sector A:	1.01 %
Sector B:	1.01 %
Sector C:	1.01 %
SPRINT Maximum MPE % (per sector):	1.01 %
Site Total:	5.50 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **5.50 %** of the allowable FCC established general population 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.

The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2013.

Information on the Property Records for the Municipality of Bethany was last updated on 10/4/2018.

Property Summary Information

Parcel Data And Values | Building | Outbuildings | Sales | Google Map

Parcel Information

Location:	9 MEYERS RD	Property Use:	Industrial	Primary Use:	Light Industrial
Unique ID:	00002800	Map Block Lot:	118/51C	Acres:	9.20
490 Acres:	0.00	Zone:	R-65	Volume / Page:	0000/0000
Developers Map / Lot:		Census:			

Value Information

	Appraised Value	Assessed Value
Land	486,450	340,520
Buildings	117,412	82,190

	Appraised Value	Assessed Value
Detached Outbuildings	15,219	10,650
Total	619,081	433,360

Owner's Information

Owner's Data
AMERICAN TOWERS RE: SITE # 88008 STE 205 P O BOX 723597 ATLANTA GA 31139

Back To Search (JavaScript:window.history.back(1);)

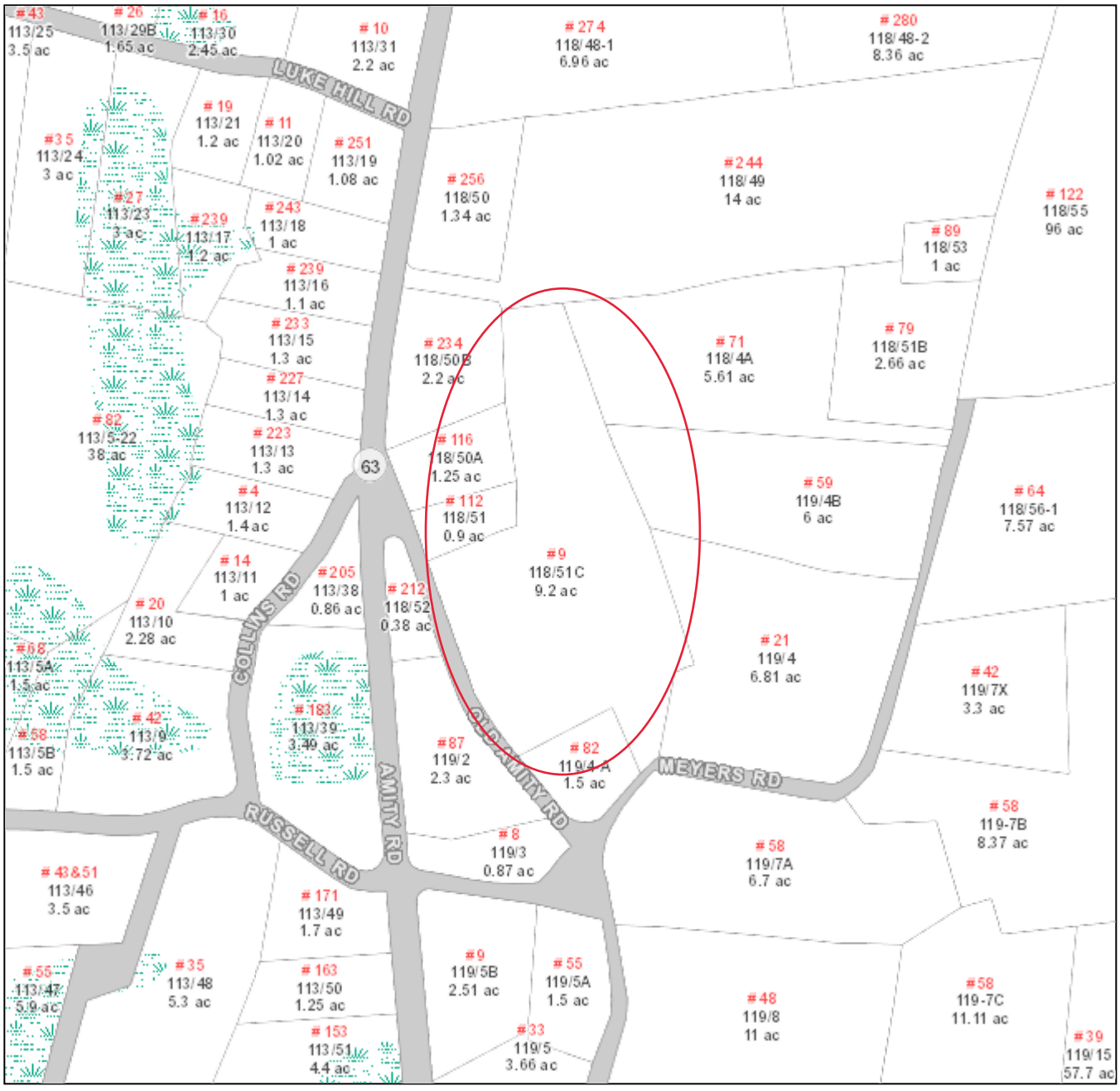
Print View (PrintPage.aspx?towncode=008&uniqueid=00002800)

Town of Bethany

Geographic Information System (GIS)

Parcels Updated: June 2014

Date Printed: 10/4/2018



MAP DISCLAIMER - NOTICE OF LIABILITY

This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The Town of Bethany and its mapping contractors assume no legal responsibility for the information contained herein.

0 400 Feet

N W E S

UNITED STATES POSTAL SERVICE®

Click-N-Ship®

9405 5036 9930 0337 3352 25 0136 5000 0020 6051

usps.com
$13.65
US POSTAGE
MD Flat Rate Box

12/05/2018 Mailed from 12866 062S0000001309

P

PRIORITY MAIL 1-DAY™

RAYMOND A PERRY
106 MOHICAN ST
LAKE GEORGE NY 12845-1621

Expected Delivery Date: 12/07/18
Ref#: CT03XC169

0024

Carrier -- Leave if No Response

C006

SHIP TO: MELANIE A BACHMAN
CONNECTICUT SITING COUNCIL
10 FRANKLIN SQ
NEW BRITAIN CT 06051-2655

USPS TRACKING #

9405 5036 9930 0337 3352 25

Electronic Rate Approved #038555749

Cut on dotted line.

Instructions

1. **Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.**
2. **Place your label so it does not wrap around the edge of the package.**
3. **Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.**
4. **To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.**
5. **Mail your package on the "Ship Date" you selected when creating this label.**

Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0337 3352 25

Trans. #:	450342695
Print Date:	12/05/2018
Ship Date:	12/05/2018
Expected Delivery Date:	12/07/2018

Priority Mail® Postage:	**$13.65**
Total	**$13.65**

From: RAYMOND A PERRY
106 MOHICAN ST
LAKE GEORGE NY 12845-1621

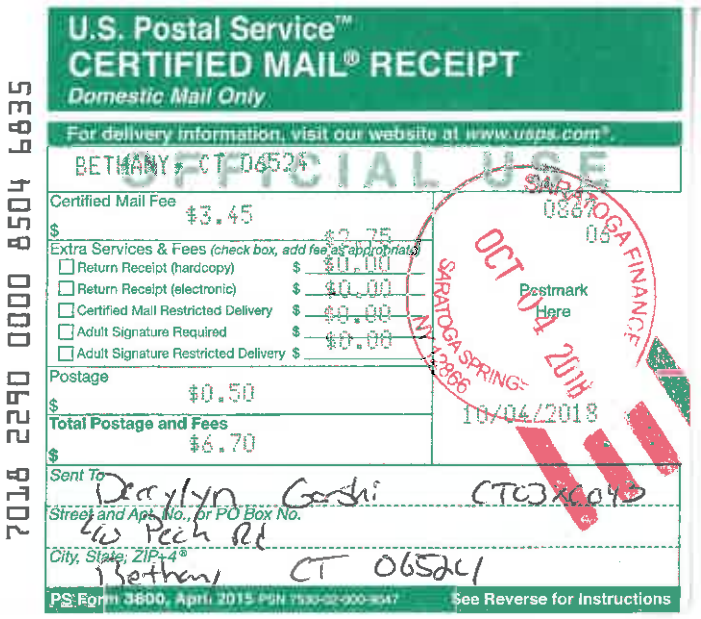
Ref#: CT03XC169

To: MELANIE A BACHMAN
CONNECTICUT SITING COUNCIL
10 FRANKLIN SQ
NEW BRITAIN CT 06051-2655

* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.

UNITED STATES POSTAL SERVICE®

Thank you for shipping with the United States Postal Service!
Check the status of your shipment on the USPS Tracking® page at usps.com



U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

BETHANY, CT 06524

OFFICIAL USE

Certified Mail Fee $3.45

Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $0.00
- Return Receipt (electronic) $0.00
- Certified Mail Restricted Delivery $0.00
- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $

Postage $0.50

Total Postage and Fees $6.70

Sent To Darylyn Gorshi CT03X00403

Street and Apt. No., or PO Box No. 40 Peck Rd

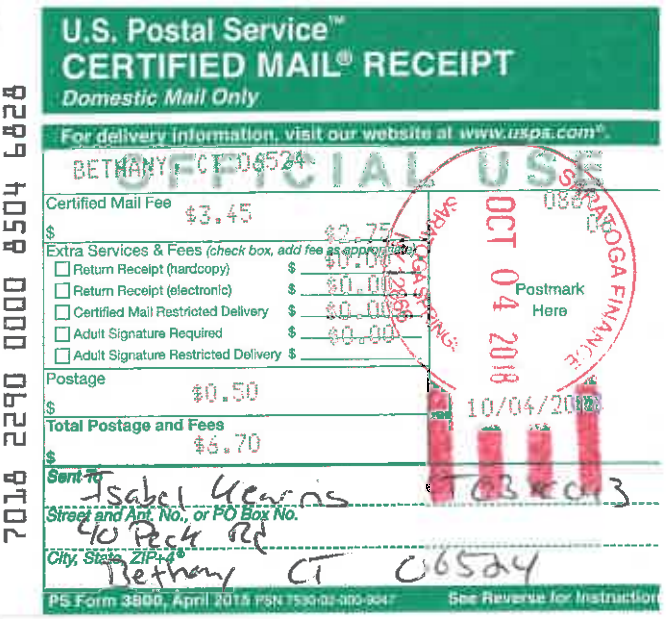
City, State, ZIP+4® Bethany CT 06524

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

SARATOGA FINANCE 0886 06 SARATOGA SPRINGS NY 12866 OCT 04 2018 10/04/2018

Postmark Here

7018 2290 0000 8504 6835



U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

BETHANY, CT 06524

OFFICIAL USE

Certified Mail Fee $3.45

Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $0.00
- Return Receipt (electronic) $0.00
- Certified Mail Restricted Delivery $0.00
- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $

Postage $0.50

Total Postage and Fees $6.70

Sent To Isabel Herras

Street and Apt. No., or PO Box No. 40 Peck Rd

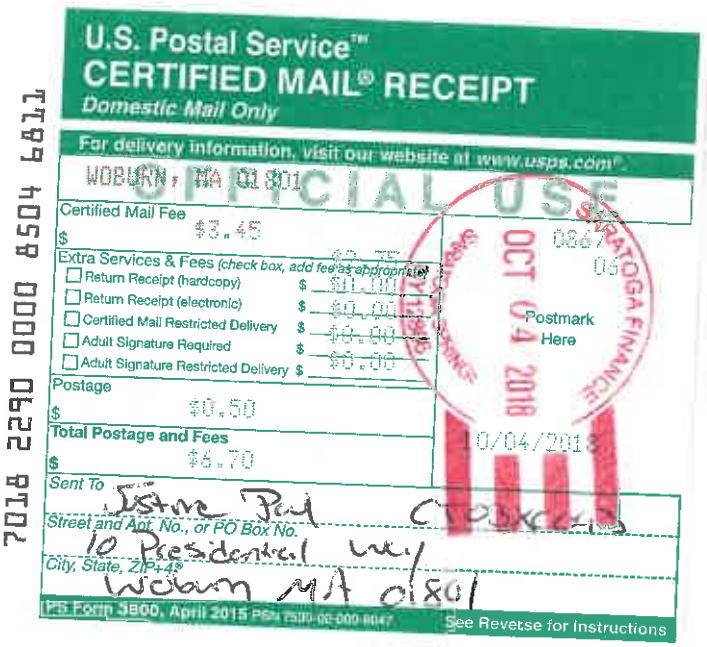
City, State, ZIP+4® Bethany CT 06524

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instruction

SARATOGA FINANCE 0886 06 SARATOGA SPRINGS NY 12866 OCT 04 2018 10/04/2018

Postmark Here

7018 2290 0000 8504 6828



U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

WOBURN, MA 01801

OFFICIAL USE

Certified Mail Fee $3.45

Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $0.00
- Return Receipt (electronic) $0.00
- Certified Mail Restricted Delivery $0.00
- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $

Postage $0.50

Total Postage and Fees $6.70

Sent To Justice Paul CT03X00403

Street and Apt. No., or PO Box No. 10 Presidential Way

City, State, ZIP+4® Woburn MA 01801

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

SARATOGA FINANCE 0886 06 SARATOGA SPRINGS NY 12866 OCT 04 2018 10/04/2018

Postmark Here

7018 2290 0000 8504 6811