

December 2, 2020

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

Re: Notice of Exempt Modifications – AT&T Site CT5403
AT&T Telecommunications Facility @ 605 Willard Ave Newington, CT 06111

Dear Ms. Bachman,

New Cingular Wireless, PCS, LLC (“AT&T”) currently maintains a wireless telecommunications facility on an existing +/- 198’ monopole tower at the above referenced address, latitude 41.69837222, longitude -72.73714722. Said monopole tower is owned and managed by American Tower Corporation.

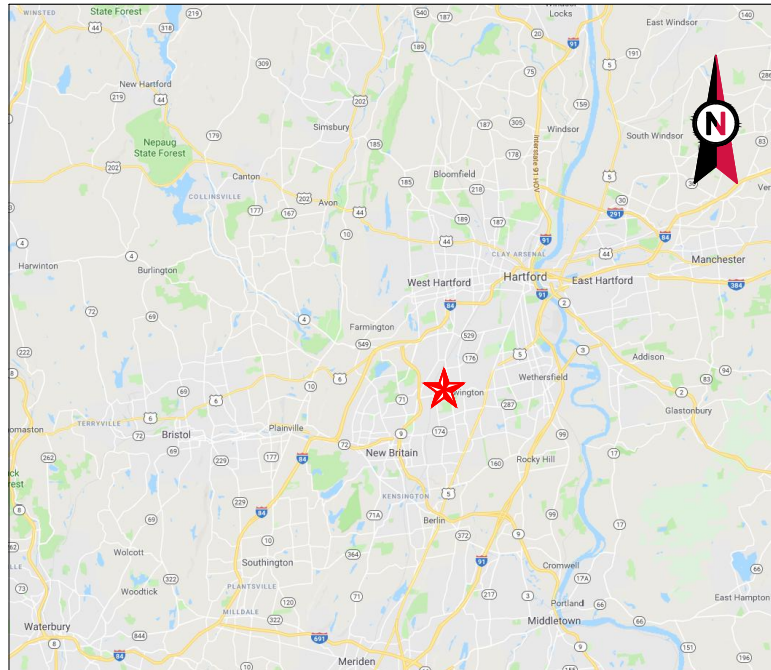
AT&T desires to modify its existing telecommunications facility by adding three (3) antennas, replacing (9) RRUs, removing (3) RRUs, adding one (1) surge arrestor with the associated cables as more particularly detailed and described on the enclosed Construction Drawings prepared by Infinigy Engineering PLLC, last revised on August 18, 2020. The centerline height of the existing antennas is and will remain at 154 feet.

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)(2). In accordance with R.C.S.A §16-50j-73, a copy of this letter is being sent to the following individuals: Keith Chapman Town Manager for the Town of Newington; Renata Bertotti Town Planner; American Tower Corporation as tower owner and Newington High School as property owner.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. §16-50j-72(b)(2). Specifically:

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require an extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the modified facility will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commissions safety standard. *Please see the RF emissions calculation for AT&T’s modified facility enclosed herewith.*
5. The proposed modifications will not cause an ineligible change or alternation in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading. Please see the structural analysis dated September 23, 2020 and prepared by American Tower Corporation enclosed herewith.

EXHIBIT 1



VICINITY MAP

CURRENT PROJECTS:
 LTE - PACE #:MRCTB047534
 4TX4RX - PACE #:MRCTB047025
 5G NR - PACE #:MRCTB047026
 LTE 7C - PACE #:MRCTB046697



AMERICAN TOWER®

ATC SITE NAME: NEWINGTON CT
 ATC SITE NUMBER: 370627
 AT&T PACE NUMBER: MRCTB046697
 AT&T SITE ID: CTL05403
 AT&T FA CODE:NEWINGTON CENTRAL
 AT&T SITE NAME: 10071165
 SITE ADDRESS: 605 WILLARD AVE.
 NEWINGTON, CT 06111

**AT&T MOBILITY
 ANTENNA AMENDMENT PLAN**



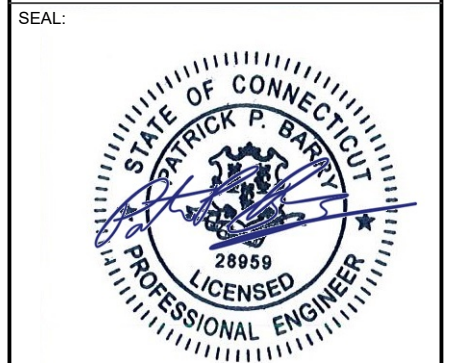
LOCATION MAP

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 | FOR CONSTRUCTION | LR | 08/18/20 |
| | | | |
| | | | |
| | | | |
| | | | |

ATC SITE NUMBER:
370627
 ATC SITE NAME:
NEWINGTON CT
 AT&T MOBILITY SITE NAME:
10071165
 SITE ADDRESS:
 605 WILLARD AVE.
 NEWINGTON, CT 06111



DATE DRAWN: 08/18/20
 ATC JOB NO: 13222844_G3
 CUSTOMER ID: 10071165
 CUSTOMER #: NEWINGTON CENTRAL

TITLE SHEET

SHEET NUMBER:
G-001

REVISION:
0

| COMPLIANCE CODE | PROJECT SUMMARY | PROJECT DESCRIPTION | SHEET INDEX | | | | |
|--|---|---|---------------|--------------------------------------|----------|----------|-----|
| ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES. 1. INTERNATIONAL BUILDING CODE (IBC) 2. NATIONAL ELECTRIC CODE (NEC) 3. LOCAL BUILDING CODE 4. CITY/COUNTY ORDINANCES | <u>SITE ADDRESS:</u> 605 WILLARD AVE. NEWINGTON, CT 06111 COUNTY: HARTFORD <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.69837222 LONGITUDE: -72.73714722 GROUND ELEVATION: 103' AMSL | THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: <u>TOWER WORK:</u> REMOVE (12) RRH(S), (1) PLATFORM, (2) #8 AWG DC TRUNK(S) AND (1) 3" CONDUIT INSTALL (3) ANTENNA(S), (1) LOW PROFILE PLATFORM, (9) RRH(S), (2) #6 AWG DC TRUNK(S), (1) 2" CONDUIT(S) AND (6) Y CABLE(S) EXISTING (9) ANTENNA(S), (6) RRH(S), (6) TTA(S), (3) SQUID(S), (6) 1-5/8" COAX CABLES, (4) #8 AWG DC TRUNK(S), (2) 2" CONDUIT(S), (1) 3/8" RET CONTROL CABLE AND (2) 18 PAIR FIBER TRUNK(S) TO REMAIN <u>GROUND WORK:</u> INSTALL (1) BBU 6630 | SHEET NO: | DESCRIPTION: | REV: | DATE: | BY: |
| | <u>PROJECT TEAM</u> <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801 <u>ENGINEER:</u> ATC TOWER SERVICES, LLC 3500 REGENCY PKWY STE 100 CARY, NC 27518 <u>PROPERTY OWNER:</u> TOWN OF NEWINGTON 131 CEDAR ST NEWINGTON, CT 06111 | <u>PROJECT NOTES</u> 1. THE FACILITY IS UNMANNED. 2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE. 3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE. 4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED. 5. HANDICAP ACCESS IS NOT REQUIRED. | G-001 | TITLE SHEET | 0 | 08/18/20 | LR |
| <u>UTILITY COMPANIES</u> POWER COMPANY: CONNECTICUT LIGHT AND POWER PHONE: (888) 783-6617 TELEPHONE COMPANY: FRONTIER COMMUNICATIONS PHONE: (800) 921-8102 | <u>PROJECT LOCATION DIRECTIONS</u> FROM DOWNTOWN HARTFORD START OUT GOING SOUTH ON MAIN ST TOWARD WELLS ST. TURN LEFT ONTO SHELDON ST. TURN SLIGHT LEFT ONTO RAMP. MERGE ONTO WHITEHEAD HWY E. MERGE ONTO I-91 S TOWARD NEW HAVEN. MERGE ONTO US-5 S/CT-15 S VIA EXIT 28 TOWARD BERLIN TPKE/WETHERSFIELD/NEWINGTON. TAKE THE CT-175 E EXIT TOWARD WETHERSFIELD. TURN LEFT ONTO E CEDAR ST/CT-175. TURN RIGHT ONTO OLD FARM DR. 60 OLD FARM DR IS ON THE RIGHT. | G-002 | GENERAL NOTES | 0 | 08/18/20 | LR | |
| 811 Know what's below. Call before you dig. | <u>PROJECT TEAM</u> <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801 <u>ENGINEER:</u> ATC TOWER SERVICES, LLC 3500 REGENCY PKWY STE 100 CARY, NC 27518 <u>PROPERTY OWNER:</u> TOWN OF NEWINGTON 131 CEDAR ST NEWINGTON, CT 06111 | <u>PROJECT LOCATION DIRECTIONS</u> FROM DOWNTOWN HARTFORD START OUT GOING SOUTH ON MAIN ST TOWARD WELLS ST. TURN LEFT ONTO SHELDON ST. TURN SLIGHT LEFT ONTO RAMP. MERGE ONTO WHITEHEAD HWY E. MERGE ONTO I-91 S TOWARD NEW HAVEN. MERGE ONTO US-5 S/CT-15 S VIA EXIT 28 TOWARD BERLIN TPKE/WETHERSFIELD/NEWINGTON. TAKE THE CT-175 E EXIT TOWARD WETHERSFIELD. TURN LEFT ONTO E CEDAR ST/CT-175. TURN RIGHT ONTO OLD FARM DR. 60 OLD FARM DR IS ON THE RIGHT. | C-101 | DETAILED SITE PLAN | 0 | 08/18/20 | LR |
| | | | C-102 | DETAILED EQUIPMENT LAYOUT | 0 | 08/18/20 | LR |
| | | | C-201 | TOWER ELEVATION | 0 | 08/18/20 | LR |
| | | | C-401 | RF SCHEDULE AND ANTENNA INSTALLATION | 0 | 08/18/20 | LR |
| | | | C-501 | CONSTRUCTION DETAILS | 0 | 08/18/20 | LR |
| | | | E-501 | GROUNDING DETAILS | 0 | 08/18/20 | LR |
| | | | R-601 | SUPPLEMENTAL | | | |
| | | | R-602 | SUPPLEMENTAL | | | |
| | | | R-603 | SUPPLEMENTAL | | | |

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GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, AT&T MOBILITY "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
 - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
 - B. AC/TELCO INTERFACE BOX (PPC)
 - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
 - D. TOWERS, MONOPOLES
 - E. TOWER LIGHTING
 - F. GENERATORS & LIQUID PROPANE TANK
 - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
 - H. ANTENNAS (INSTALLED BY OTHERS)
 - I. TRANSMISSION LINE
 - J. TRANSMISSION LINE JUMPERS
 - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
 - L. TRANSMISSION LINE GROUND KITS
 - M. HANGERS
 - N. HOISTING GRIPS
 - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF AT&T MOBILITY TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSIEIA/ITIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE AT&T MOBILITY REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE AT&T MOBILITY REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE AT&T MOBILITY REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE AT&T MOBILITY CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE AT&T MOBILITY REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH AT&T MOBILITY AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH AT&T MOBILITY REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL

- ALL ITEMS PROVIDED.
- EQUAL.
22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH AT&T MOBILITY REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY AT&T MOBILITY MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
 23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH AT&T MOBILITY SPECIFICATIONS AND REQUIREMENTS.
 24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO AT&T MOBILITY FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
 25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO AT&T MOBILITY SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
 26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
 27. CONTRACTOR SHALL NOTIFY AT&T MOBILITY REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
 28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
 29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
 30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE AT&T MOBILITY REP. ANY WORK FOUND BY THE AT&T MOBILITY REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
 31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
 32. AT&T MOBILITY FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE AT&T MOBILITY WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
 33. AT&T MOBILITY OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO AT&T MOBILITY OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION

ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
 - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY AT&T MOBILITY UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL AND
 - B. INSTALL ANTENNA AS INDICATE ON DRAWINGS AND AT&T MOBILITY SPECIFICATIONS.
 - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS
 - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE.
 - E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.
 - F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
 - G. ANTENNA AND COAXIAL CABLE GROUNDING:
2. ALL EXTERIOR #6 GREED GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

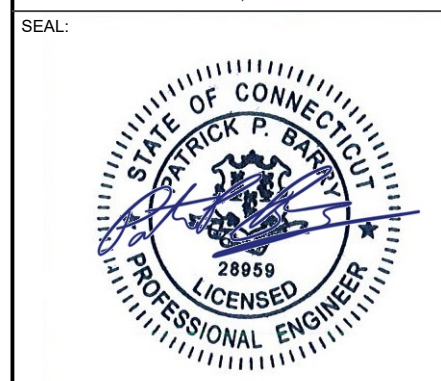


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| REV. | DESCRIPTION | BY | DATE |
|------|------------------|----|----------|
| 0 | FOR CONSTRUCTION | LR | 08/18/20 |
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ATC SITE NUMBER:
370627
 ATC SITE NAME:
NEWINGTON CT
 AT&T MOBILITY SITE NAME:
10071165
 SITE ADDRESS:
 605 WILLARD AVE.
 NEWINGTON, CT 06111



| | |
|--------------|-------------------|
| DATE DRAWN: | 08/18/20 |
| ATC JOB NO: | 13222844_G3 |
| CUSTOMER ID: | 10071165 |
| CUSTOMER #: | NEWINGTON CENTRAL |

GENERAL NOTES

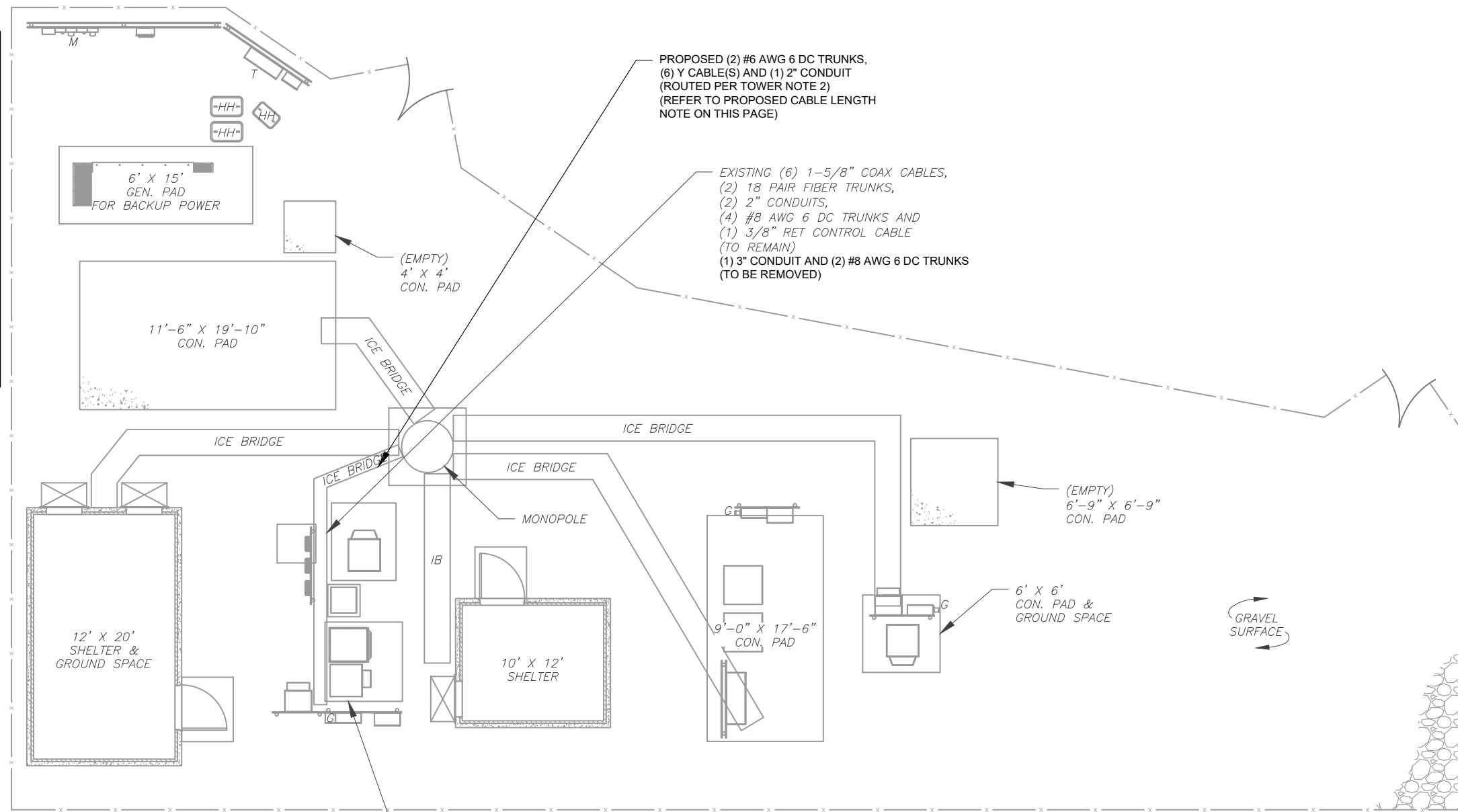
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| SHEET NUMBER: G-002 | REVISION: 0 |
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SITE PLAN NOTES:

1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
3. THIS PROJECT INCLUDES NO INSTALL OR MODIFICATION AT GRADE.

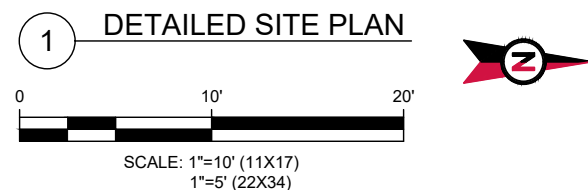
| LEGEND | |
|--------|---------------------------|
| ⊗ | GROUNDING TEST WELL |
| ATS | AUTOMATIC TRANSFER SWITCH |
| B | BOLLARD |
| CSC | CELL SITE CABINET |
| D | DISCONNECT |
| E | ELECTRICAL |
| F | FIBER |
| GEN | GENERATOR |
| G | GENERATOR RECEPTACAL |
| HH, V | HAND HOLE, VAULT |
| IB | ICE BRIDGE |
| K | KENTROX BOX |
| LC | LIGHTING CONTROL |
| M | METER |
| PB | PULL BOX |
| PP | POWER POLE |
| T | TELCO |
| TRN | TRANSFORMER |
| —x— | CHAINLINK FENCE |



PROPOSED CABLE LENGTH:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **180'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES), CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.

AT&T MOBILITY
2'-6" X 2'-6" &
3' X 3' &
5' X 6' &
6'-0" X 6'-2"
CON. PADS W/
10' X 20'
GROUND SPACE



AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
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| 0 | FOR CONSTRUCTION | LR | 08/18/20 |
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ATC SITE NUMBER:
370627
ATC SITE NAME:
NEWINGTON CT
AT&T MOBILITY SITE NAME:
10071165
SITE ADDRESS:
605 WILLARD AVE.
NEWINGTON, CT 06111

SEAL:



| | |
|--------------|-------------------|
| DATE DRAWN: | 08/18/20 |
| ATC JOB NO: | 13222844_G3 |
| CUSTOMER ID: | 10071165 |
| CUSTOMER #: | NEWINGTON CENTRAL |

DETAILED SITE PLAN

| | |
|---------------|-----------|
| SHEET NUMBER: | REVISION: |
| C-101 | 0 |

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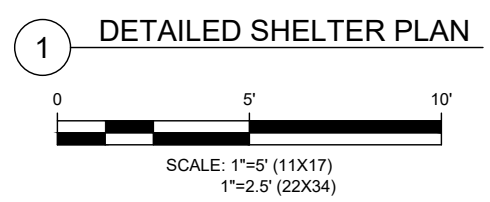
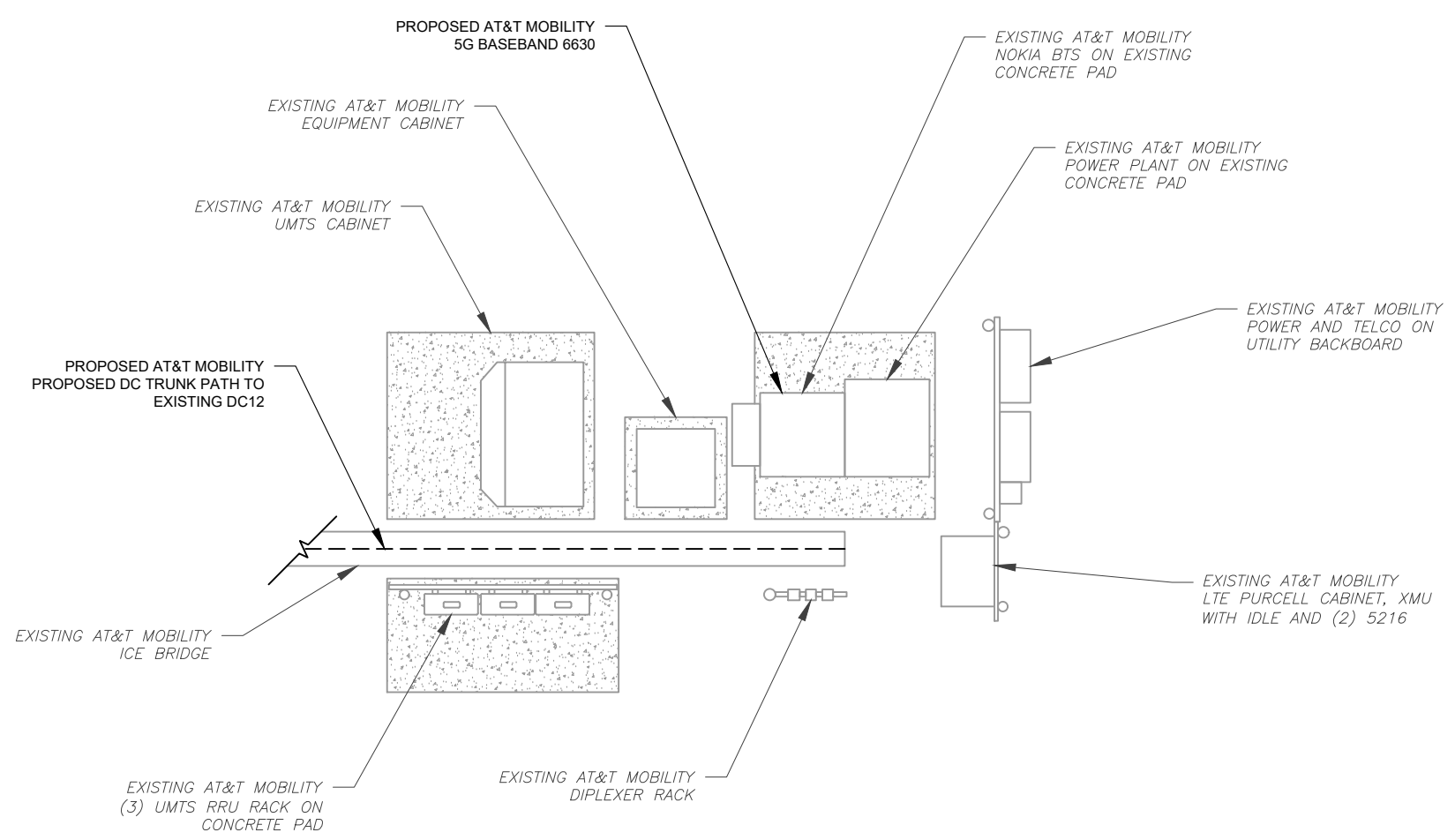
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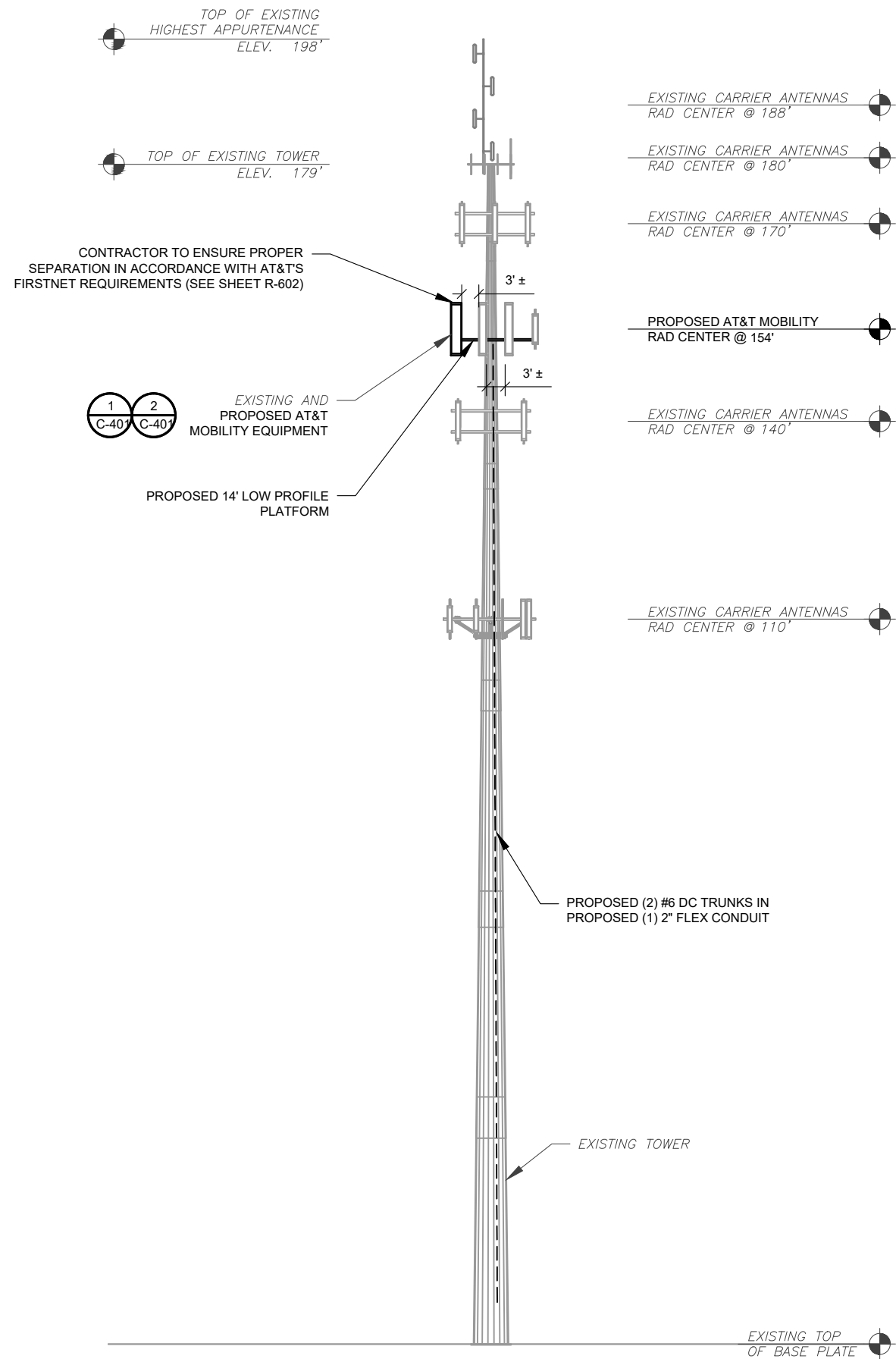
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|--------------|-------------------|
| DATE DRAWN: | 08/18/20 |
| ATC JOB NO: | 13222844_G3 |
| CUSTOMER ID: | 10071165 |
| CUSTOMER #: | NEWINGTON CENTRAL |

DETAILED EQUIPMENT LAYOUT

| | |
|---------------|-----------|
| SHEET NUMBER: | REVISION: |
| C-102 | 0 |



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- TOWER NOTE:**
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE AMERICAN TOWER CONSTRUCTION MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
 - ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.
 - TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)

1 TOWER ELEVATION
SCALE: N.T.S.

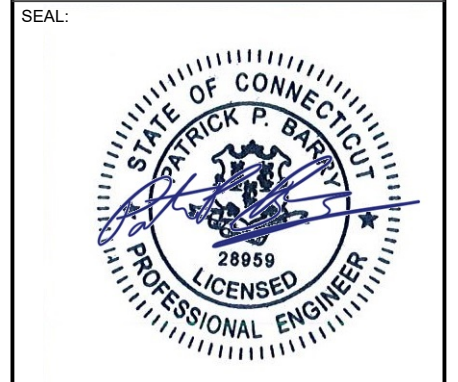


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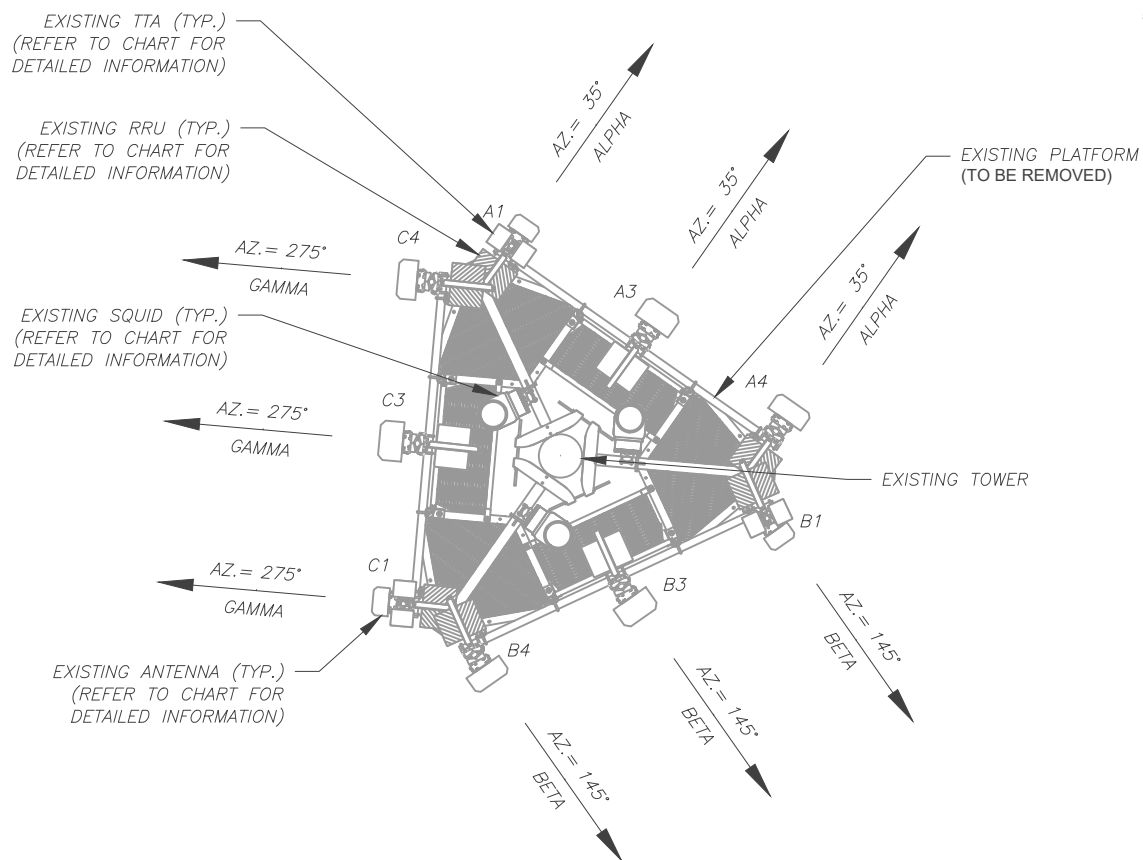
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| DATE DRAWN: | 08/18/20 |
| ATC JOB NO: | 13222844_G3 |
| CUSTOMER ID: | 10071165 |
| CUSTOMER #: | NEWINGTON CENTRAL |

TOWER ELEVATION

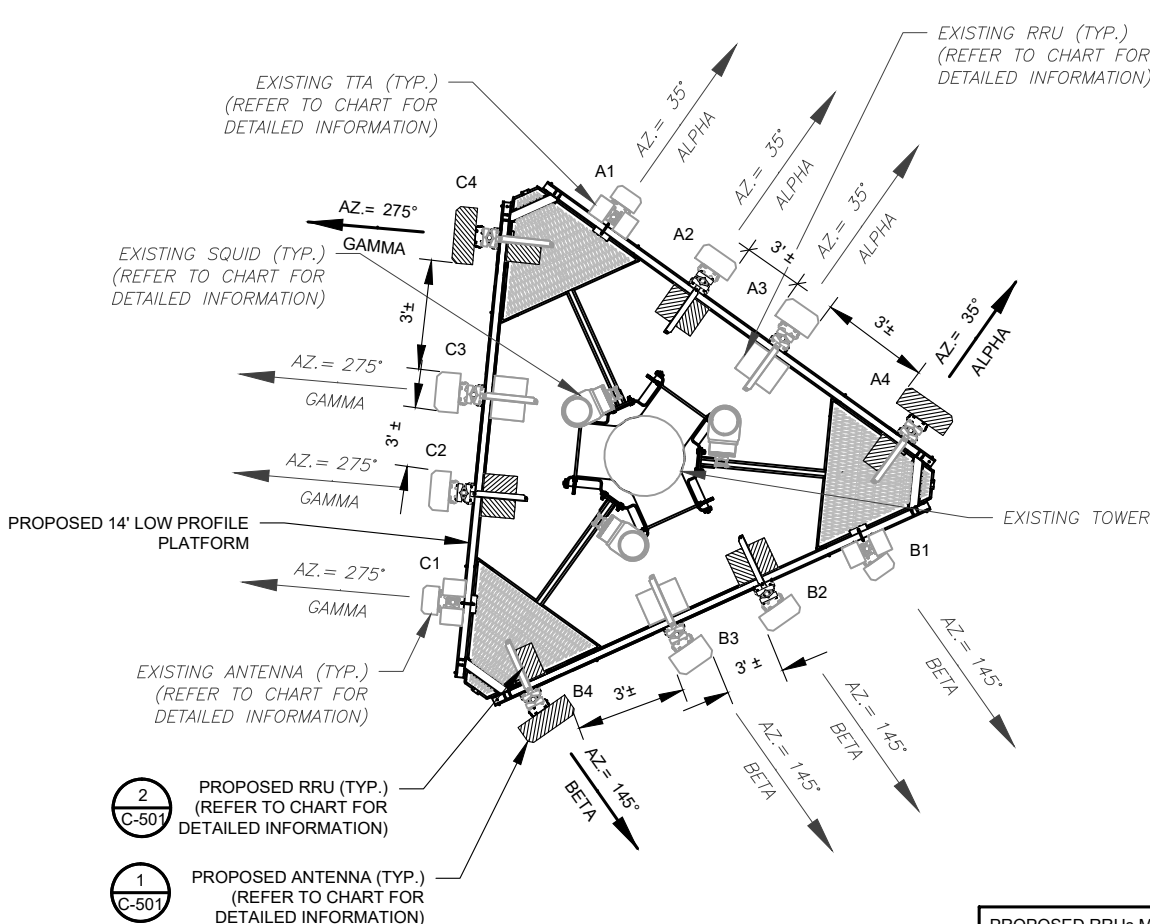
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| SHEET NUMBER: C-201 | REVISION: 0 |
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EXISTING CONFIGURATIONS ARE BASED ON RFDS. CONTRACTOR TO VERIFY EXISTING CONDITIONS.



1 CURRENT ANTENNA PLAN
SCALE: N.T.S.



2 FINAL ANTENNA PLAN
SCALE: N.T.S.

PROPOSED RRUs MUST BE INSTALLED A MINIMUM OF 8" AWAY FROM ALL ANTENNAS

| EXISTING ANTENNA SCHEDULE | | | | | | | | |
|---------------------------|------|------|-----------------|-------------------|----------------------|--------|--|-------------------|
| LOCATION | | | ANTENNA SUMMARY | | | | | |
| SECTOR | RAD | AZ | POS | ANTENNA | BAND | STATUS | ADDITIONAL TOWER MOUNTED EQUIPMENT | STATUS |
| ALPHA | 154' | 35° | A1 | 800-10121 | UMTS 850 | REL | (2) LGP21401 RRUS-12 B5 RRUS-32 B2 | REL RMV RMV |
| | | | A2 | - | - | - | - | - |
| | | | A3 | TPA-65R-LCUUUU-H8 | LTE 850/700/WCS/1900 | REL | 4478 B14 RRUS-32 B30 | REL |
| | | | A4 | OPA-65R-LCUU-H8 | LTE 700/AWS | REL | RRUS-11 B12 RRUS-32 B66A | RMV RMV |
| BETA | 154' | 145° | B1 | 800-10121 | UMTS 850 | REL | (2) LGP21401 RRUS-12 B5 RRUS-32 B2 | REL RMV RMV |
| | | | B2 | - | - | - | - | - |
| | | | B3 | QS66512-2 | LTE 850/700/WCS/1900 | REL | 4478 B14 RRUS-32 B30 | REL |
| | | | B4 | OPA-65R-LCUU-H6 | LTE 700/AWS | REL | RRUS-11 B12 RRUS-32 B66A | RMV RMV |
| GAMMA | 154' | 275° | C1 | 800-10121 | UMTS 850 | REL | (2) LGP21401 RRUS-12 B5 RRUS-32 B2 | REL RMV RMV |
| | | | C2 | - | - | - | - | - |
| | | | C3 | TPA-65R-LCUUUU-H8 | LTE 850/700/WCS/1900 | REL | 4478 B14 RRUS-32 B30 | REL |
| | | | C4 | OPA-65R-LCUU-H8 | LTE 700/AWS | REL | RRUS-11 B12 RRUS-32 B66A | RMV RMV |

NOTES

- CONFIRM WITH AT&T MOBILITY REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
- CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
- THE ANTENNA ORIENTATION PLAN IS A SCHEMATIC. ATC DID NOT CONFIRM EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, ANTENNA AZIMUTHS, MOUNT CONFIGURATIONS AND TOWER ORIENTATION. SCALES SHOWN ARE FOR REFERENCE ONLY AND EXISTING DIMENSIONS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO INSTALLATION AND NOTIFY ATC OF ANY DISCREPANCIES. CONTRACTOR TO ENSURE PROPER SEPARATION IN ACCORDANCE WITH AT&T'S FIRSTNET REQUIREMENTS (SEE SHEET R-602)
-

| FINAL ANTENNA SCHEDULE | | | | | | | | |
|------------------------|------|------|-----------------|-------------------|----------------------|--------|------------------------------------|--------|
| LOCATION | | | ANTENNA SUMMARY | | | | | |
| SECTOR | RAD | AZ | POS | ANTENNA | BAND | STATUS | ADDITIONAL TOWER MOUNTED EQUIPMENT | STATUS |
| ALPHA | 154' | 35° | A1 | 800-10121 | UMTS 850 | REL | (2) LGP21401 | REL |
| | | | A2 | OPA-65R-LCUU-H8 | LTE 700/AWS | REL | RRUS-E2 B29 8843 B2/B66A | ADD |
| | | | A3 | TPA-65R-LCUUUU-H8 | LTE 700/WCS/1900 | REL | 4478 B14 RRUS-32 B30 | REL |
| | | | A4 | DMP65R-BU8DA | LTE 700/ 850/ 5G 850 | ADD | 4449 B5/B12 | ADD |
| BETA | 154' | 145° | B1 | 800-10121 | UMTS 850 | REL | (2) LGP21401 | REL |
| | | | B2 | OPA-65R-LCUU-H6 | LTE 700/AWS | REL | RRUS-E2 B29 8843 B2/B66A | ADD |
| | | | B3 | QS66512-2 | LTE 700/WCS/1900 | REL | 4478 B14 RRUS-32 B30 | REL |
| | | | B4 | DMP65R-BU6DA | LTE 700/ 850/ 5G 850 | ADD | 4449 B5/B12 | ADD |
| GAMMA | 154' | 275° | C1 | 800-10121 | UMTS 850 | REL | (2) LGP21401 | REL |
| | | | C2 | OPA-65R-LCUU-H8 | LTE 700/AWS | REL | RRUS-E2 B29 8843 B2/B66A | ADD |
| | | | C3 | TPA-65R-LCUUUU-H8 | LTE 700/WCS/1900 | REL | 4478 B14 RRUS-32 B30 | REL |
| | | | C4 | DMP65R-BU8DA | LTE 700/ 850/ 5G 850 | ADD | 4449 B5/B12 | ADD |

| EXISTING FIBER DISTRIBUTION/SQUID | | EXISTING CABLING SUMMARY | | | |
|-----------------------------------|--------|--------------------------|------------|------------|--------|
| MODEL NUMBER | STATUS | COAX | DC | FIBER | STATUS |
| (2) DC6-48-60-18-8F | RMN | (6) 1-5/8" | (4) #8 AWG | (2)18 PAIR | RMN |
| DC6-48-60-0-8F | RMN | (2) 2" CONDUIT | 3/8" RET | - | RMN |
| - | - | 3" CONDUIT | (2) #8 AWG | - | RMV |

STATUS ABBREVIATIONS
 RMV: TO BE REMOVED
 RMN: TO REMAIN
 REL: TO BE RELOCATED
 ADD: TO BE ADDED

CABLE LENGTHS FOR JUMPERS
 JUNCTION BOX TO RRU: 15'
 RRU TO ANTENNA: 10'

3 EQUIPMENT SCHEDULES

| FINAL FIBER DISTRIBUTION/SQUID | | | FINAL CABLING SUMMARY | | | |
|--------------------------------|--------|----------------|-----------------------|------------|--------|--|
| MODEL NUMBER | STATUS | COAX | DC | FIBER | STATUS | |
| (2) DC6-48-60-18-8F | RMN | (6) 1-5/8" | (6) #8 AWG | (2)18 PAIR | RMN | |
| DC6-48-60-0-8F | RMN | (2) 2" CONDUIT | 3/8" RET | - | RMN | |
| - | - | 2" CONDUIT | (2) #6 AWG | - | ADD | |

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ATC SITE NUMBER:
370627
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NEWINGTON CT
 AT&T MOBILITY SITE NAME:
10071165
 SITE ADDRESS:
 605 WILLARD AVE.
 NEWINGTON, CT 06111

SEAL:

DATE DRAWN: 08/18/20
 ATC JOB NO: 13222844_G3
 CUSTOMER ID: 10071165
 CUSTOMER #: NEWINGTON CENTRAL

RF SCHEDULE AND ANTENNA INSTALLATION

SHEET NUMBER:
C-401
 REVISION:
0

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SEAL:

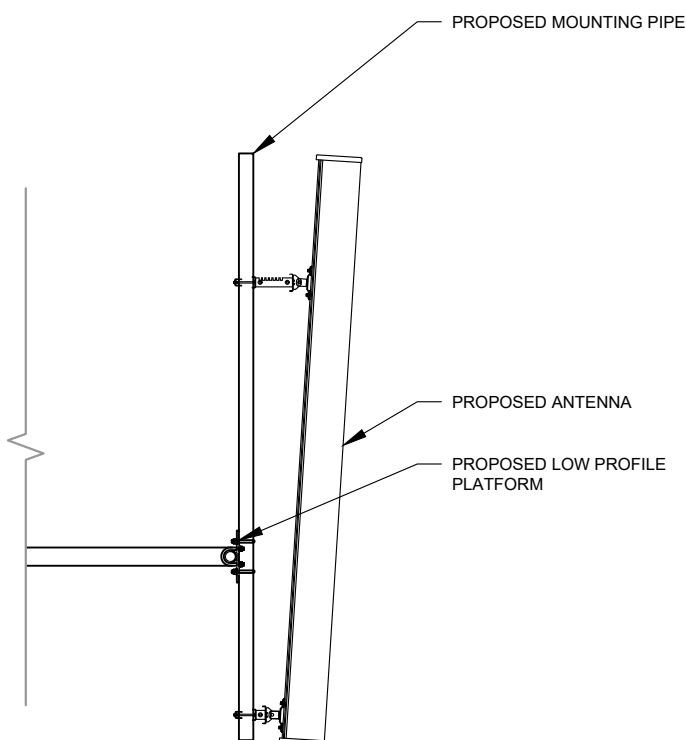


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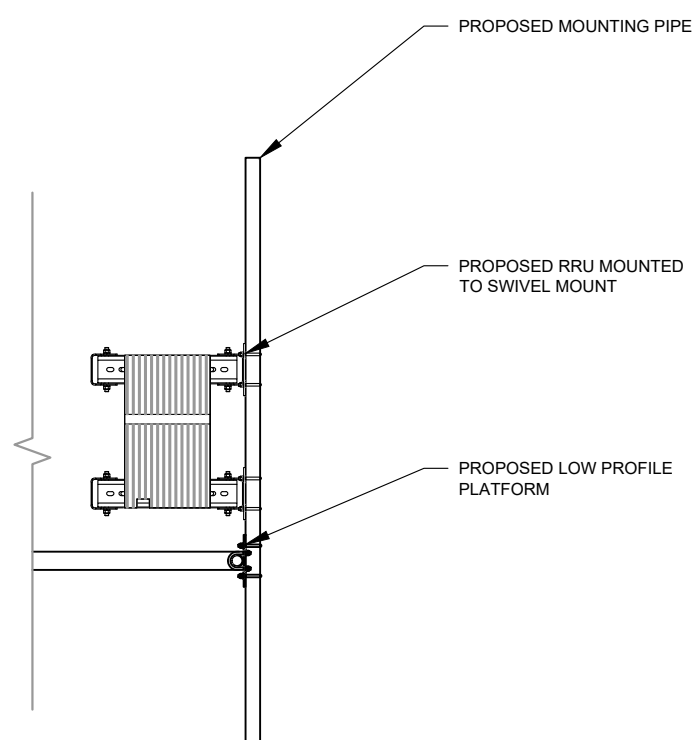
**CONSTRUCTION
 DETAILS**

SHEET NUMBER:
C-501

REVISION:
0

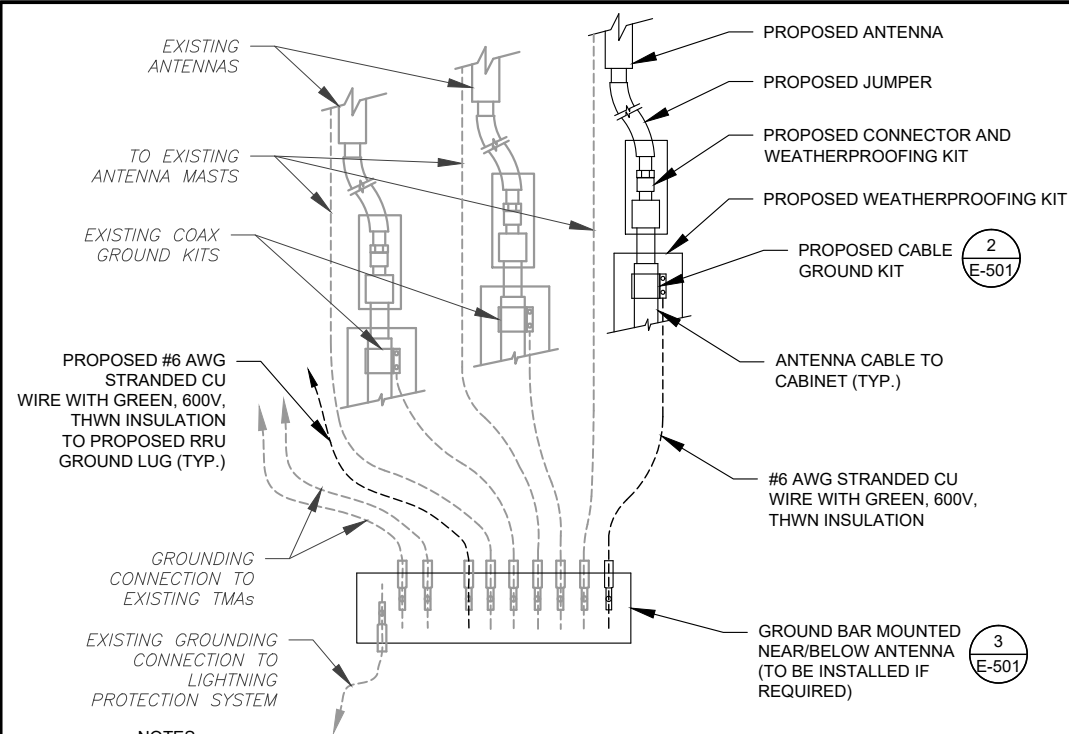


1 ANTENNA DETAIL
 SCALE: N.T.S.



2 RRU DETAIL
 SCALE: N.T.S.

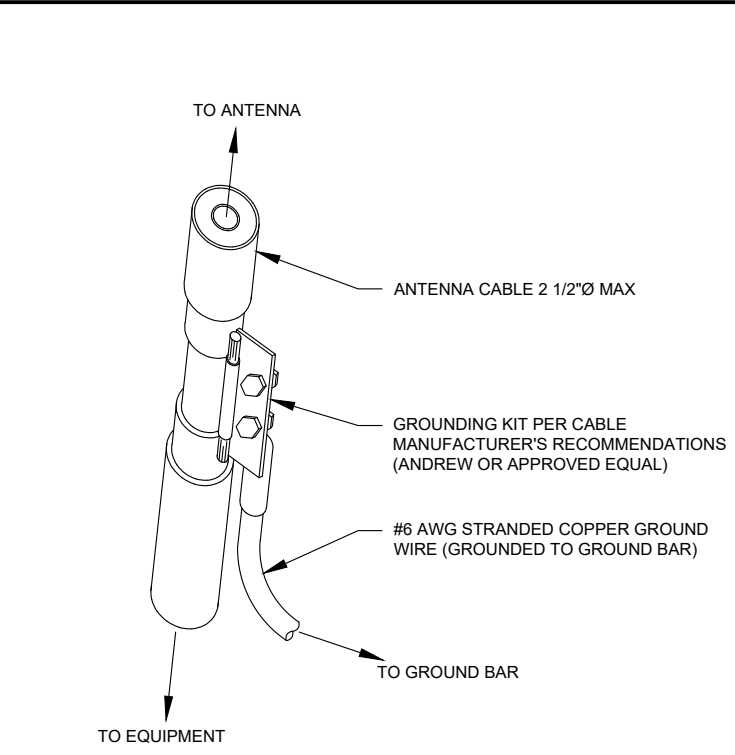
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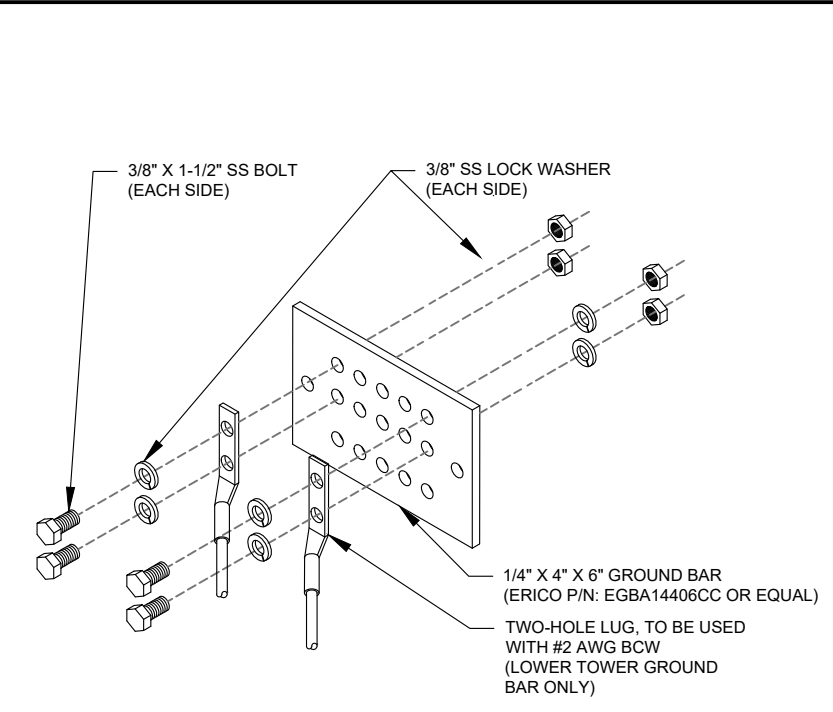
1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH AT&T MOBILITY GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH AT&T MOBILITY GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

1 TYPICAL ANTENNA GROUNDING DIAGRAM
SCALE: N.T.S.



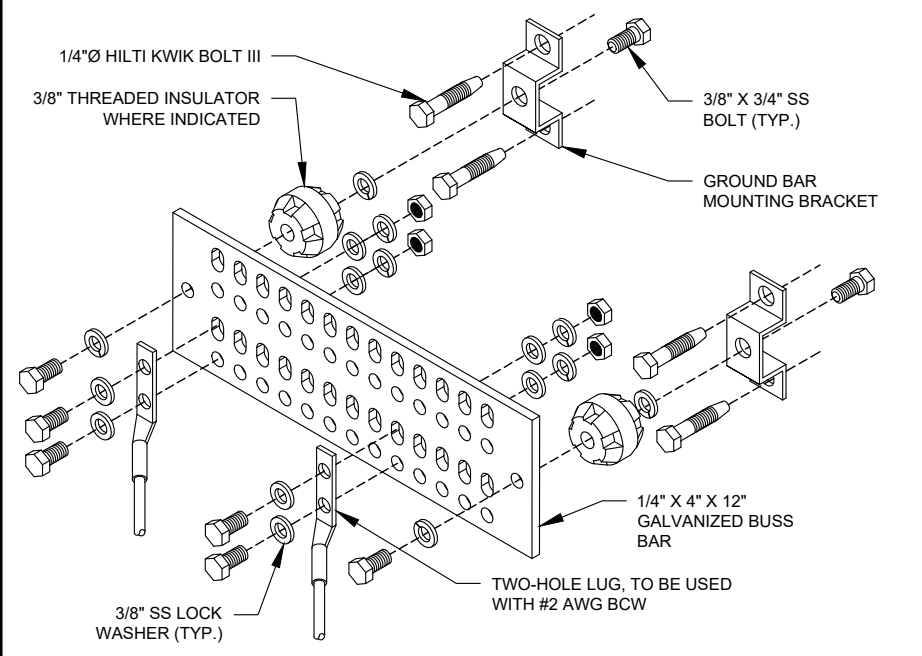
- GROUND KIT NOTES:**
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
 2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

2 CABLE GROUND KIT CONNECTION DETAIL
SCALE: N.T.S.



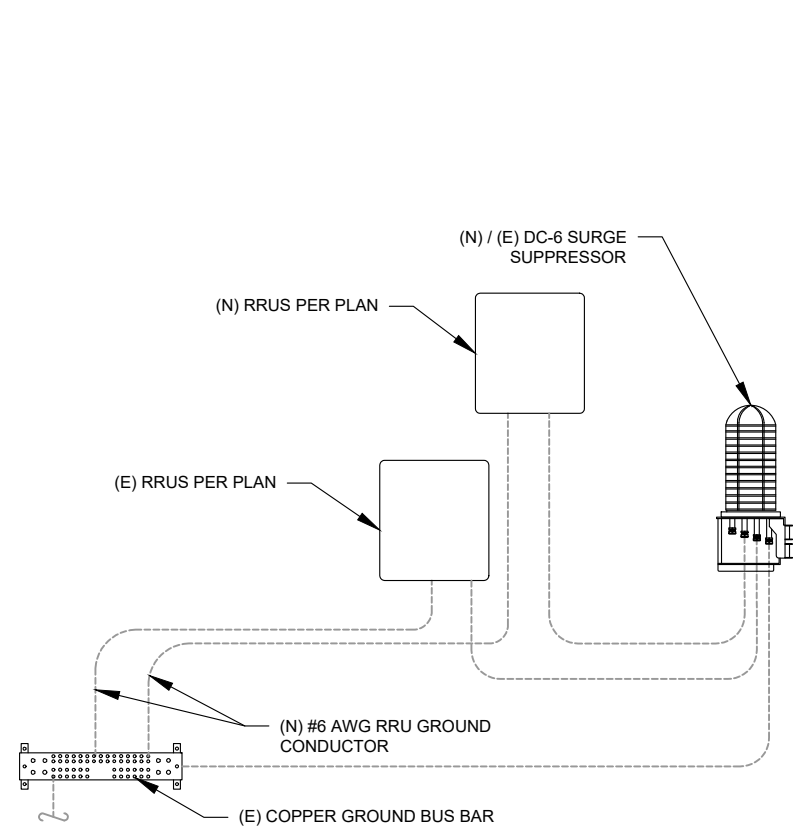
- GROUND BAR NOTES:**
1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
 2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

3 TOWER GROUND BAR DETAIL
SCALE: N.T.S.

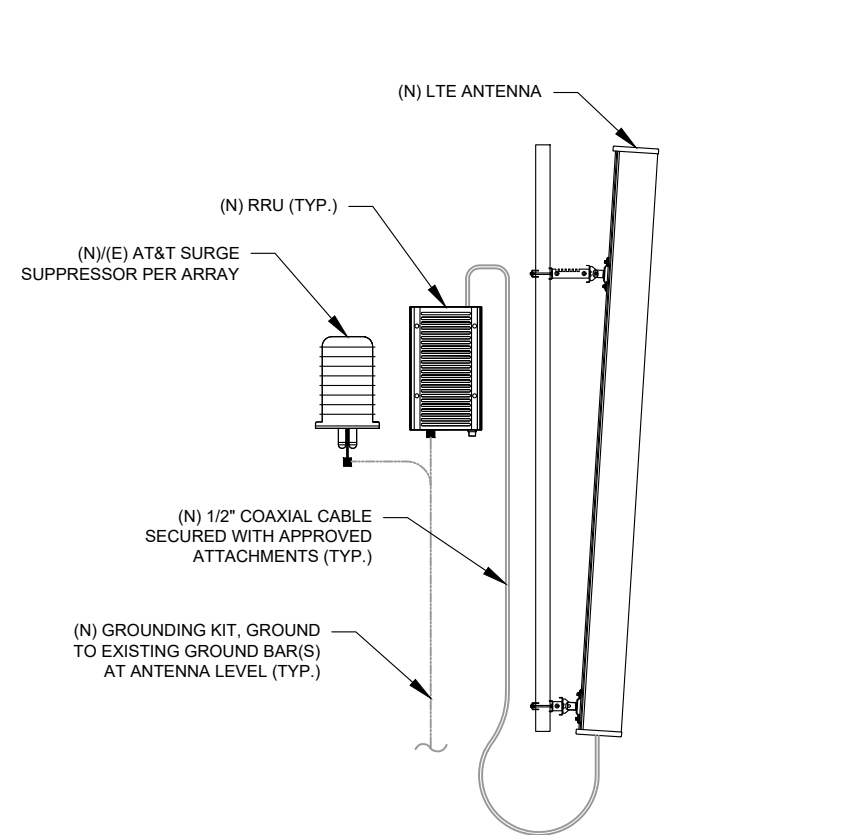


- GROUND BAR NOTES**
1. GROUND KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
 2. GROUND BAR SHALL BE BOLTED TO STRUCTURAL MEMBER OR ANCHORED TO CONCRETE SLAB W/ HILTI KWIK BOLT III.

4 MAIN GROUND BAR DETAIL
SCALE: N.T.S.



5 RRU GROUNDING
SCALE: N.T.S.



6 ANTENNA/RRU GROUNDING
SCALE: N.T.S.

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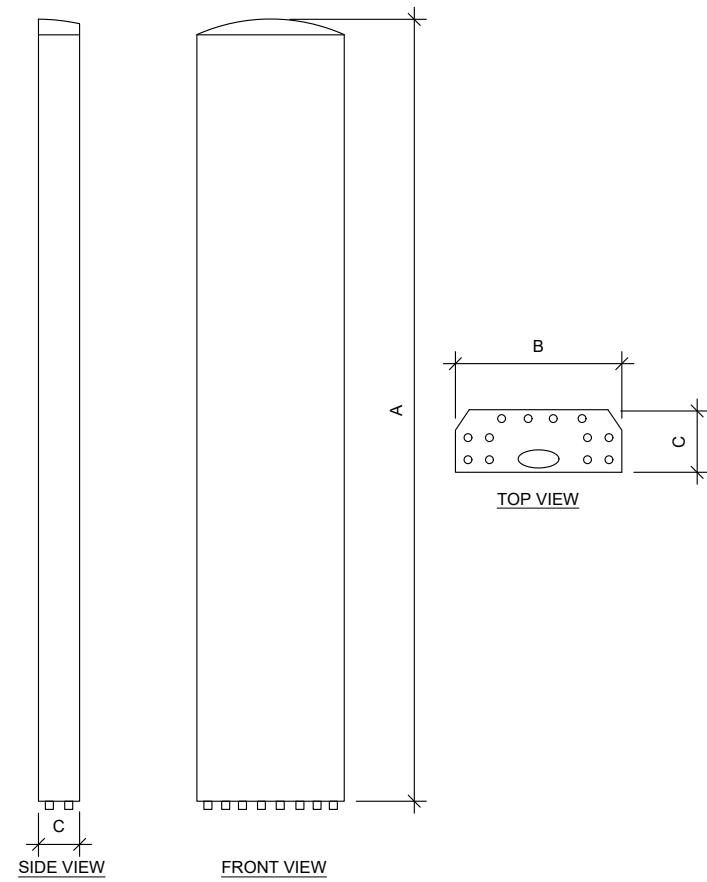
SEAL:

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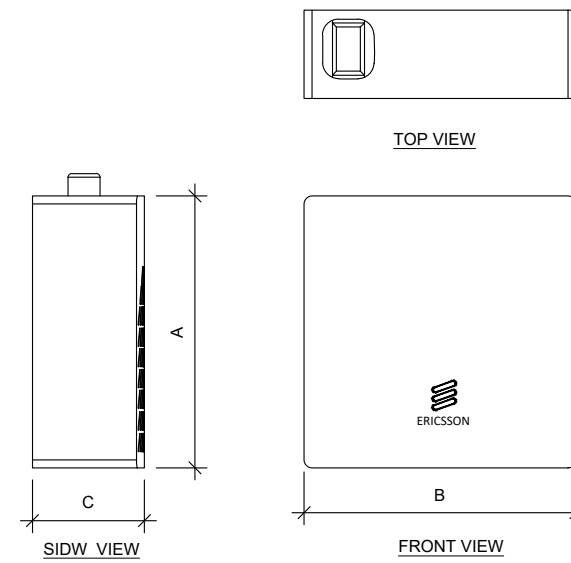
GROUNDING DETAILS

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|---------------|-----------|
| SHEET NUMBER: | REVISION: |
| E-501 | 0 |

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| ANTENNA SPECIFICATIONS | | | | |
|------------------------|-------|-------|------|--------------|
| ANTENNA MODEL | A | B | C | WEIGHT (LBS) |
| DMP65R-BU6DA | 71.2" | 20.7" | 7.7" | 79.4 |
| DMP65R-BU8D | 96" | 20.7" | 7.7" | 95.7 |



| RRU SPECIFICATIONS | | | | |
|--------------------|-------|-------|-------|--------------|
| RRU MODEL | A | B | C | WEIGHT (LBS) |
| RRUS-E2 B29 | 27.2" | 12.1" | 7" | 53.0 |
| 8843 B2/B66A | 14.9" | 13.2" | 10.9" | 72.0 |
| 4449 B5/B12 | 17.9" | 13.2" | 9.4" | 71.0 |

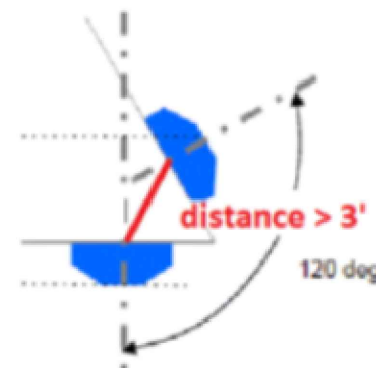
1 EQUIPMENT SPECIFICATIONS
SCALE: N.T.S.

SUPPLEMENTAL

SHEET NUMBER: R-601
REVISION: 0

RF REQUIREMENTS FOR 700 B14 FIRSTNET, 700 B12, 700D B29 ANTENNA SEPARATION

- Horizontal separation (side to side of antenna): $\geq 3'$
- Vertical separation (between the tips of the antennas): $> 3'$
- Inter-sector separation: $> 3'$ between the center of the antenna backplanes.



- Please note additional horizontal separation may be required if B14 antennas azimuth are different from others or antennas are severely angled with respect to the mount.
- Typical 3' horizontal separation can tolerate skew angle up to 6° .

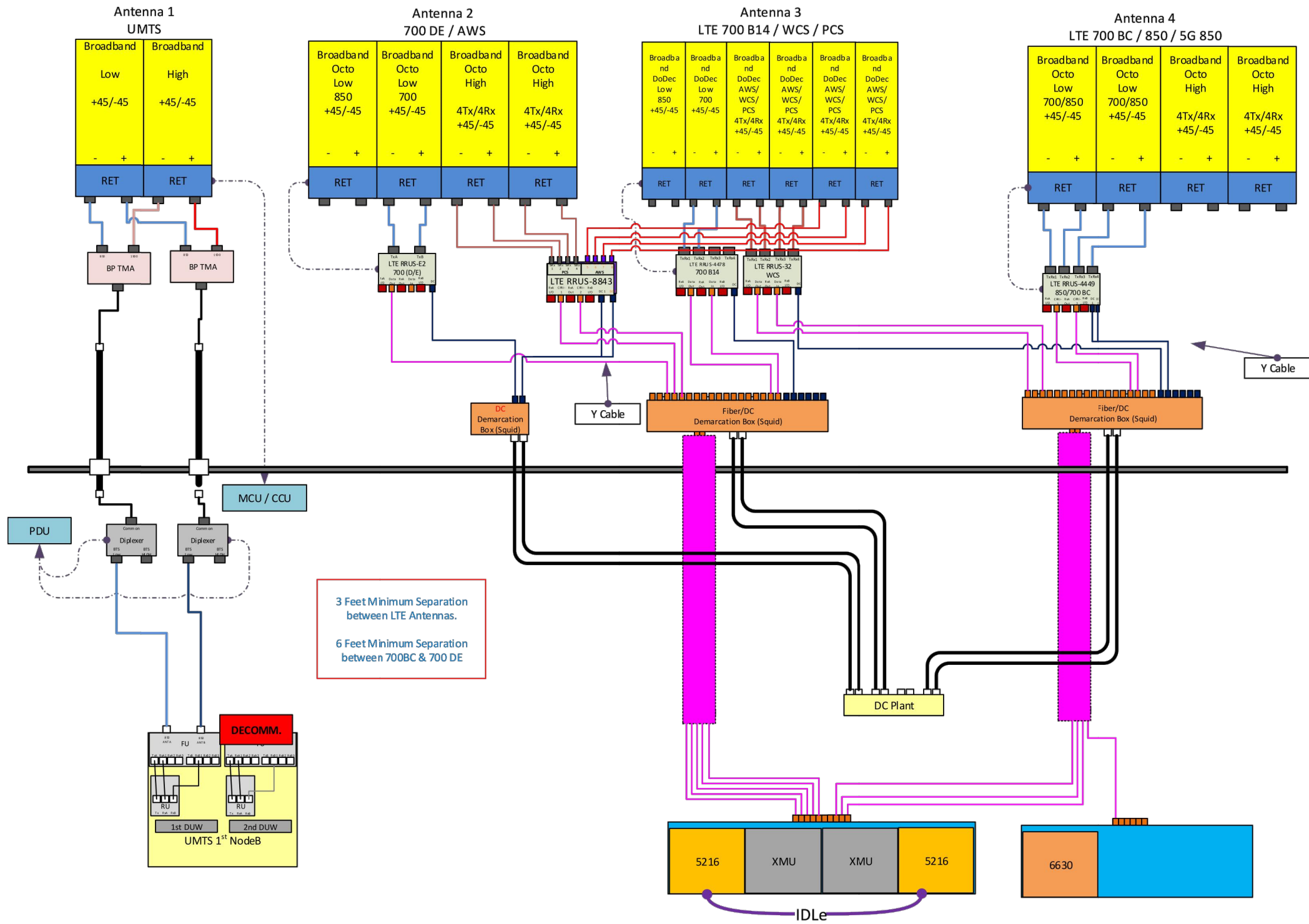


NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER:
R-602

REVISION:
0

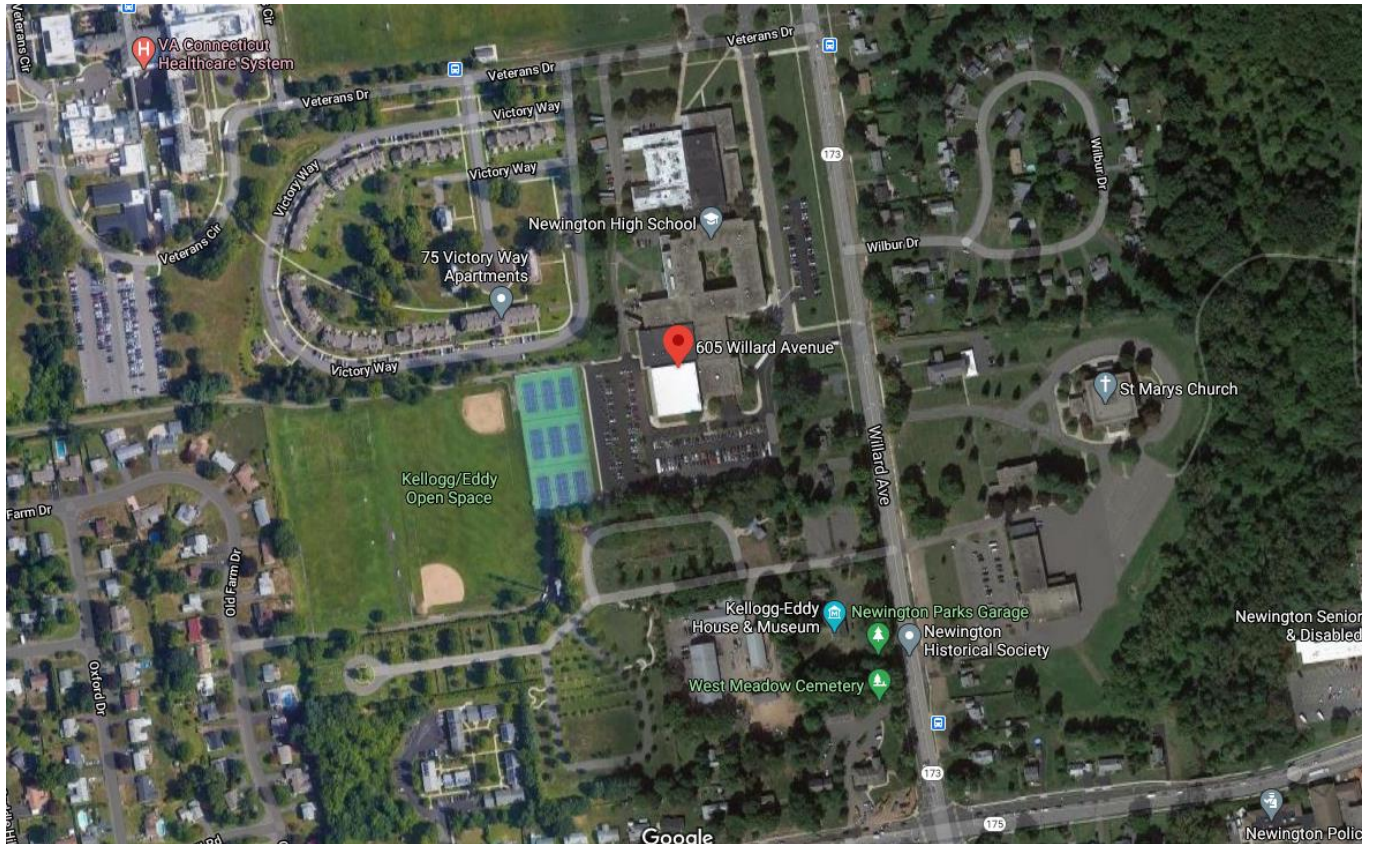


3 Feet Minimum Separation
between LTE Antennas.
6 Feet Minimum Separation
between 700BC & 700 DE


NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. GENERAL CONTRACTOR IS TO CHECK WITH THE AT&T MOBILITY CM TO ENSURE THIS IS THE MOST RECENT VERSION OF THE RFDS.

| | |
|-------------------------------|-----------------------|
| SUPPLEMENTAL | |
| SHEET NUMBER: R-603 | REVISION: 0 |

EXHIBIT 2



605 Willard Avenue, Newington, C



605 Willard Ave
Newington, CT 06111
Building

[Directions](#) [Save](#) [Nearby](#) [Send to your phone](#) [Share](#)

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 2015.

Town of Newington

ASSESSOR'S OFFICE



Information on the Property Records for the Municipality of Newington was last updated on 12/2/2020.

Parcel Information

| | | | | | |
|-----------------------|-----------------|----------------|------------|----------------|-------------------|
| Location: | 605 WILLARD AVE | Property Use: | School | Primary Use: | Elementary School |
| Unique ID: | N0046500 | Map Block Lot: | 09/300/000 | Acres: | 80.59 |
| 490 Acres: | 0.00 | Zone: | R-12/ | Volume / Page: | 189/67 |
| Developers Map / Lot: | N/W 1860 & 1969 | Census: | | | |

Value Information

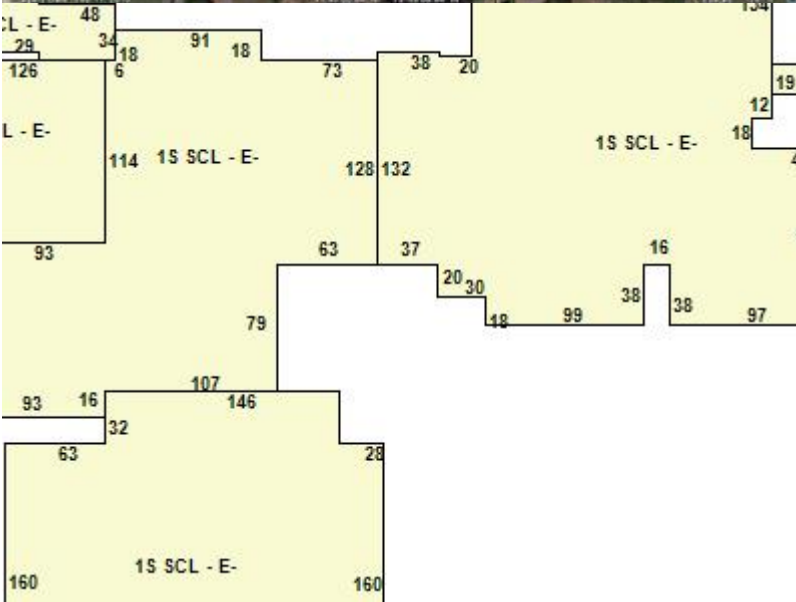
| | Appraised Value | Assessed Value |
|-----------------------|-----------------|----------------|
| Land | 8,147,790 | 5,703,450 |
| Buildings | 22,823,428 | 15,976,410 |
| Detached Outbuildings | 534,775 | 374,340 |
| Total | 31,505,993 | 22,054,200 |

Owner's Information

Owner's Data

NEWINGTON TOWN OF
 NEWINGTON HIGH SCHOOL
 131 CEDAR ST
 NEWINGTON, CT 06111

Building 1



| | | | | | |
|-----------|--------|---------------|-------------|-------------|---------|
| Category: | School | Use: | High School | GLA: | 171,729 |
| Stories: | 1.00 | Construction: | Masonry | Year Built: | 1971 |

| | | | | | |
|----------|----------------|----------------|-------------|------------------|-----|
| Heating: | Forced Hot Air | Fuel: | Natural Gas | Cooling Percent: | 100 |
| Siding: | Brick | Roof Material: | Asphalt | Beds/Units: | 0 |

Special Features

Attached Components

Detached Outbuildings

| Type: | Year Built: | Length: | Width: | Area: |
|------------------|-------------|---------|------------|---------|
| Tennis Courts | 1971 | 0.00 | 0.00 | 10,000 |
| 4 Ft Chain Fence | 1978 | 1.00 | 25,000.00 | 25,000 |
| Paving | 1978 | 1.00 | 175,000.00 | 175,000 |
| Gunite Pool | 1971 | 1.00 | 3,344.00 | 3,344 |
| Frame Shed | 1978 | 1.00 | 288.00 | 288 |

Owner History - Sales

| Owner Name | Volume | Page | Sale Date | Deed Type | Valid Sale | Sale Price |
|-------------------|--------|------|------------|-----------|------------|------------|
| NEWINGTON TOWN OF | 0189 | 0067 | 09/20/1968 | | No | \$0 |
| NEWINGTON TOWN OF | 0182 | 0151 | 10/03/1967 | | No | \$0 |
| NEWINGTON TOWN OF | 0180 | 0281 | 07/27/1967 | | No | \$0 |
| U S GOVT | 0027 | 0488 | 01/11/1930 | | No | \$0 |

Building Permits

| Permit Number | Permit Type | Date Opened | Date Closed | Permit Status | Reason |
|---------------|------------------|-------------|-------------|-----------------|--|
| E-20-27 | Electrical | 01/22/2020 | | Imported Record | Install low voltage cameras to existing system. |
| E-19-299 | Electrical | 08/14/2019 | | Closed | INSTALL 155 LOCATIONS WITH 3 CAT 6 PLENUM RATED CABLER PER. REMOVAL NOT INCLUDED |
| B-19-215 | Other | 04/30/2019 | | Closed | SWAP (6) PANELS AND SWAP (3) RRUs INSTALL (1) 1-1/4" HYBRID CABLE, AND (1) 1-5/8" HYBRID CABLE |
| B-19-75 | Comm Renovations | 02/26/2019 | | Closed | BUILD 8X12 ROOM OF I.T. SERVER |
| E-19-33 | Electrical | 02/12/2019 | | Closed | Newington High School, 605 Willard Ave, Newington -- Installation of a 12 strand, OS2 Armored Plenum |
| E-19-32 | Electrical | 02/11/2019 | | Closed | Install 200Amp Transfer switch |
| B-18-714 | Comm Renovations | 12/11/2018 | | Closed | UPGRADE AND REINFORCE MOUNTS WITH (3) RELOCATED & (3) REPLACEMENT ANTENNAS, (6) REPLACEMENT RRUs AN |
| M-18-209 | Mechanical | 08/08/2018 | | Closed | Install HVAC per plans and specifications. Includes ductless heat-pump system with air to air heat e |
| M-18-192 | Mechanical | 07/30/2018 | | Closed | INSTALL NEW GAS LINE & REPLACE BURNER |
| P-18-149 | Fire Sprinkler | 07/27/2018 | | Closed | INSTALL SPRINKLER HEADS IN NEW CEILINGS OF ART ROOMS 415, 415A, 416, 417, 418. |
| P-18-139 | Plumbing | 07/12/2018 | | Closed | INSTALL MEN & WOMEN'S HANDICAP BATHROOM, 3 W/C, 2 LAVS OFF KITCHEN |
| B-18-387 | Comm Renovations | 07/11/2018 | | Closed | INSTALL NEW SUSPENDED CEILING, REWORK SPRINKLERS. |
| B-18-290 | Comm Renovations | 06/01/2018 | | Closed | DEMO OF EXISTING EMPLOYEES TOILETS TO MAKE ADA ACCESSABLE |
| B-18-265 | Remodel | 05/24/2018 | | Closed | AT&T, an existing tenant on the existing wireless communication tower proposes to upgrade its equipm |
| E-18-167 | Electrical | 05/22/2018 | | Closed | Install 120 Volt power to 10 auto door openers |
| E-18-162 | Other | 05/17/2018 | | Closed | Replace existing generator and transfer switch |
| B-17-686 | Comm Renovations | 12/05/2017 | | Closed | ADDITION OF THREE (3) ANTENNAS AND THREE (3) RRHS ONTO EXISTING COMMUNICATION TOWER AT THE CURRENT C |

| Permit Number | Permit Type | Date Opened | Date Closed | Permit Status | Reason |
|---------------|-----------------------|-------------|-------------|---------------|--|
| E-17-451 | Other | 11/28/2017 | | Closed | Newington High School, Running fiber cable from the MDF to the Mech Room, through drop ceiling in ra |
| E-17-229 | Electrical | 07/18/2017 | | Closed | RENOVATION OF ART CLASS ROOMS. INCLUDES DEMO AND ALL NEW WIRING, BOTH HIGH & LOW VOLTAGE. PER PLAN |
| P-17-126 | Plumbing | 07/10/2017 | | Closed | INSTALL PLUMBING FOR SINKS & EMERGENCY EYE WASH & SHOWERS ART ROOMS 414, 415, 416, 417, 418. MOVE R |
| E-17-161 | Electrical | 05/25/2017 | | Closed | RELOCATION OF LOW-VOLTAGE FIBER CABLING IN ROOMS 418, 413, AND THE OFFICE |
| B-17-121 | Comm Renovations | 03/29/2017 | | Closed | RENOVATION OF ART ROOMS AT HIGH SCHOOL NORTH END |
| E-17-28 | Electrical | 01/24/2017 | | Closed | Install Burglar, access control and CCTV system. |
| E-16-549 | Electrical | 12/23/2016 | | Closed | COMPLETE CONTROL WIRING FOR (5) RTU'S, (1) EXHAUST FAN, (2) CABINET UNIT HEATERS, (2) RADIATORS AND |
| E-16-539 | Electrical | 12/15/2016 | | Closed | ELECTRICAL ALTERATIONS AS PER PLANS & SPECS ON FILE. POWER LIGHTING FIRE ALARM |
| P-16-259 | Fire Sprinkler | 12/13/2016 | | Closed | RELOCATE 4" MAIN FOR DUCTWORK BEING INSTALLED & RELOCATED. MISC. BRANCH PIPING AND DROP NEW HEADS I |
| P-16-242 | Plumbing | 11/23/2016 | | Closed | Plumbing Fixtures, Piping & Gas line |
| M-16-305 | Air Conditioning | 11/23/2016 | | Closed | New Sheet Metal, New Roof Top Units, New Cabinet Unit Heaters, New Gas Lines, New Radiators |
| P-16-195 | Plumbing | 09/21/2016 | | Closed | ROUGH UNDERGROUND PLUMBING FOR PHASE 1 CULINARY ARTS AREA. 2 H/C BATHROOMS, 2 F.O., 2 HANDSINKS, GR |
| B-16-589 | Comm Renovations | 08/04/2016 | | Closed | 10,00 SQ FT CONVERT INDUSTRIAL TECH PROGRAM TO A STEM PROGRAM. |
| TB-16-475 | Commercial Demolition | 05/30/2016 | | Closed | DEMO OF EXISTING SPACE. |
| M-16-75 | Air Conditioning | 04/20/2016 | | Closed | AC |
| B-15-606 | Comm Renovations | 02/23/2016 | | Closed | (3) PANEL ANTENNAS AND ADD A NEW COMMSCOPE |
| TB-14-295 | Addition | 05/20/2014 | | Closed | ADDITION TO BAND ROOM |

| Permit Number | Permit Type | Date Opened | Date Closed | Permit Status | Reason |
|---------------|----------------|-------------|-------------|---------------|------------------------------------|
| TB-13-197 | Remodel | 04/26/2013 | | Closed | AAUDITORIUM, BAND AND CHORUS ROOMS |
| B-11-429 | Commercial New | 08/16/2011 | | Closed | New construct |
| B-11-352 | Remodel | 08/03/2011 | | Closed | remodel |
| TB-11-352 | Remodel | 06/28/2011 | | Closed | Remodel |
| | Addition | 06/28/2010 | | Closed | Gym flr replacement / misc |

Information Published With Permission From The Assessor

EXHIBIT 3



AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 179 ft Monopole
ATC Site Name : Newington CT, CT
ATC Asset Number : 370627
Engineering Number : 13222844
Proposed Carrier : AT&T MOBILITY
Carrier Site Name : MRCTB046697
Carrier Site Number : CTL05403
Site Location : 605 Willard Ave.
Newington, CT 06111-0000
41.698400,-72.737100
County : Hartford
Date : September 23, 2020
Max Usage : 69%
Result : Pass

Prepared By:
Rebecca Malz
Structural Engineer

Reviewed By:



COA: PEC.0001553



Table of Contents

Introduction 1

Supporting Documents..... 1

Analysis..... 1

Conclusion..... 1

Existing and Reserved Equipment..... 2

Equipment to be Removed 2

Proposed Equipment..... 3

Structure Usages.....4

Foundations4

Deflection and Sway4

Standard Conditions5

Calculations..... Attached



Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 179 ft monopole to reflect the change in loading by AT&T MOBILITY.

Supporting Documents

| | |
|----------------------------|---|
| Tower Drawings | PiRod Engineering File #A-118092, dated August 10, 2001 |
| Foundation Drawing | PiRod Engineering File #A-118092, dated August 10, 2001 |
| Geotechnical Report | Clarence Welti, dated August 1, 2001 |
| Mount Analysis | ATC Project #13222844_C8_09, dated September 04, 2020 |

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

| | |
|--------------------------------------|--|
| Basic Wind Speed: | 118 mph (3-Second Gust) |
| Basic Wind Speed w/ Ice: | 50 mph (3-Second Gust) w/ 1-1/2" radial ice concurrent |
| Code: | ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code |
| Exposure Category: | B |
| Risk Category: | II |
| Topographic Factor Procedure: | Method 1 |
| Topographic Category: | 1 |
| Crest Height (H): | 0 ft |
| Spectral Response: | $S_s = 0.19, S_1 = 0.05$ |
| 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 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

| Elev. ¹ (ft) | Qty | Antenna | Mount Type | Lines | Carrier |
|-------------------------|-------------------|--|-------------------------|---|-----------------------|
| 189.0 | 1 | Generic 18' Dipole | Low Profile Platform | (3) 7/8" Coax | TOWN OF NEWINGTON, CT |
| 180.0 | 1 | Generic 8' Yagi | | | |
| | 1 | Generic 10' Omni | | | |
| | 1 | Generic 5' Dipole | | | |
| 170.0 | 3 | RFS APXVAARR24_43-U-NA20 | Low Profile Platform | (2) 1 1/4" (1.25"-31.8mm) Fiber (1) 1 5/8" (1.63"-41.3mm) Fiber (6) 1 5/8" Coax | METRO PCS INC |
| | 3 | Ericsson Radio 4449 B12,B71 | | | |
| | 3 | Ericsson AIR 21, 1.3 M, B2A B4P | | | |
| | 3 | Ericsson AIR-32 B2A/B66Aa | | | |
| | 3 | Ericsson KRY 112 144/1 | | | |
| 154.0 | 1 | Raycap DC6-48-60-0-8F (31.4" Height) | - | (2) 0.39" (10mm) Fiber Trunk (6) 0.78" (19.7mm) 8 AWG 6 (6) 1 5/8" Coax (2) 2" conduit (1) 3/8" (0.38"-9.5mm) RET Control Cable | AT&T MOBILITY |
| | 3 | Ericsson RRUS 32 B2 | | | |
| | 3 | Ericsson RRUS 4478 B14 | | | |
| | 2 | Raycap DC6-48-60-18-8F ("Squid") | | | |
| | 6 | Powerwave Allgon LGP21401 | | | |
| | 3 | Kathrein Scala 800 10121 | | | |
| | 2 | CCI TPA-65R-LCUUUU-H8 | | | |
| 1 | Quintel QS66512-2 | | | | |
| 140.0 | 3 | Alcatel-Lucent 800 MHz 2X50W RRH w/ Filter | Low Profile Platform | (4) 1 1/4" Hybriflex Cable | SPRINT NEXTEL |
| | 3 | Alcatel-Lucent 1900MHz RRH | | | |
| | 3 | Alcatel-Lucent TD-RRH8x20 | | | |
| | 3 | RFS APXVTM14-C-I20 (56.2 lbs) | | | |
| | 1 | RFS APXV9ERR18-C-A20 | | | |
| | 2 | RFS APXVSP18-C-A20 | | | |
| 113.0 | 3 | Amphenol Antel BXA-70063-6CF-EDIN-X | Platform with Handrails | (12) 1 5/8" Coax (2) 1 5/8" Hybriflex | VERIZON WIRELESS |
| 110.0 | 3 | Samsung B2/B66A RRH-BR049 | | | |
| | 3 | Samsung B5/B13 RRH-BR04C | | | |
| | 3 | Antel BXA-70063/4CF | | | |
| | 2 | RFS DB-T1-6Z-8AB-OZ | | | |
| | 3 | Antel BXA-80063/4CF ___ 5° | | | |
| | 6 | Commscope SBNHH-1D65B (40.6 lbs) | | | |

Equipment to be Removed

| Elev. ¹ (ft) | Qty | Antenna | Mount Type | Lines | Carrier |
|-------------------------|-----|------------------------------------|------------|----------------|---------------|
| 154.0 | 3 | Ericsson RRUS 11 (Band 12) (55 lb) | - | (1) 3" conduit | AT&T MOBILITY |
| | 3 | Ericsson RRUS 32 B66 | | | |
| | 3 | CCI OPA-65R-LCUU-H8 | | | |
| | 3 | Ericsson RRUS 12 | | | |
| | 3 | Ericsson RRUS 32 (55.1 lbs) | | | |



Proposed Equipment

| Elev. ¹ (ft) | Qty | Antenna | Mount Type | Lines | Carrier |
|-------------------------|-----|-----------------------------|---|--|---------------|
| 154.0 | 3 | Ericsson RRUS 8843 B2, B66A | Site Pro 1 RMQLP-4120-H10 Platform with Handrails | (2) 0.39" (10mm) Fiber Trunk (2) 0.78" (19.7mm) 8 AWG 6 (1) 2" conduit | AT&T MOBILITY |
| | 3 | Ericsson RRUS 4449 B5, B12 | | | |
| | 3 | Ericsson RRUS 32 B30 | | | |
| | 1 | CCI OPA-65R-LCUU-H6 | | | |
| | 1 | CCI DMP65R-BU6DA | | | |
| | 2 | CCI OPA-65R-LCUU-H8 (92.7") | | | |
| | 2 | CCI DMP65R-BU8D | | | |

¹ Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed coax inside the pole shaft.



Structure Usages

| Structural Component | Controlling Usage | Pass/Fail |
|----------------------|-------------------|-----------|
| Anchor Bolts | 69% | Pass |
| Shaft | 65% | Pass |
| Base Plate | 57% | Pass |

Foundations

| Reaction Component | Original Design Reactions | Factored Design Reactions* | Analysis Reactions | % of Design |
|--------------------|---------------------------|----------------------------|--------------------|-------------|
| Moment (Kips-Ft) | 4,601.2 | 6,211.6 | 3,804.6 | 61% |
| Shear (Kips) | 37.2 | 50.2 | 30.2 | 60% |

* The design reactions are factored by 1.35 per ANSI/TIA-222-H, Sec. 15.6.2

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Deflection and Sway*

| Antenna Elevation (ft) | Antenna | Carrier | Deflection (ft) | Sway (Rotation) (°) |
|------------------------|-----------------------------|---------------|-----------------|---------------------|
| 154.0 | Ericsson RRUS 8843 B2, B66A | AT&T MOBILITY | 1.849 | 1.537 |
| | Ericsson RRUS 4449 B5, B12 | | | |
| | Ericsson RRUS 32 B30 | | | |
| | CCI OPA-65R-LCUU-H6 | | | |
| | CCI DMP65R-BU6DA | | | |
| | CCI OPA-65R-LCUU-H8 (92.7") | | | |
| | CCI DMP65R-BU8D | | | |

*Deflection and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-H



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

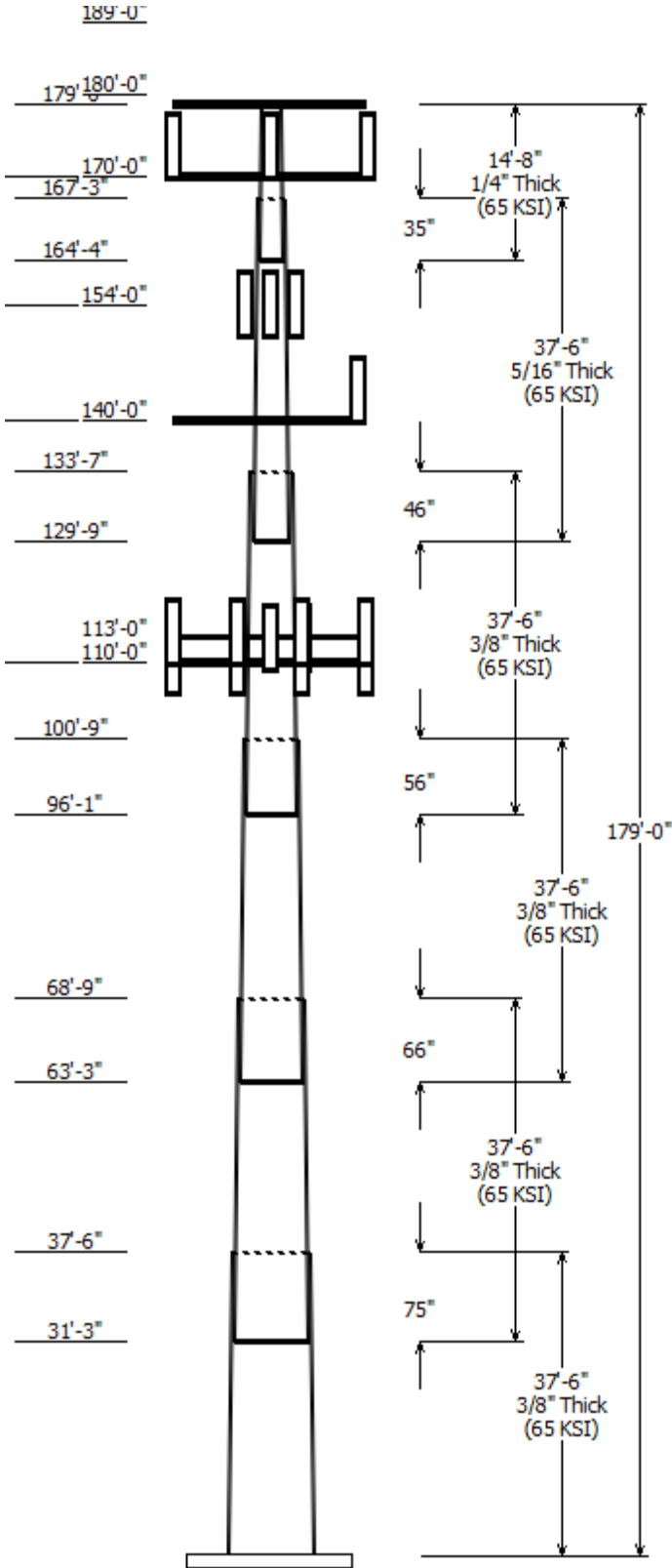
It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

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.

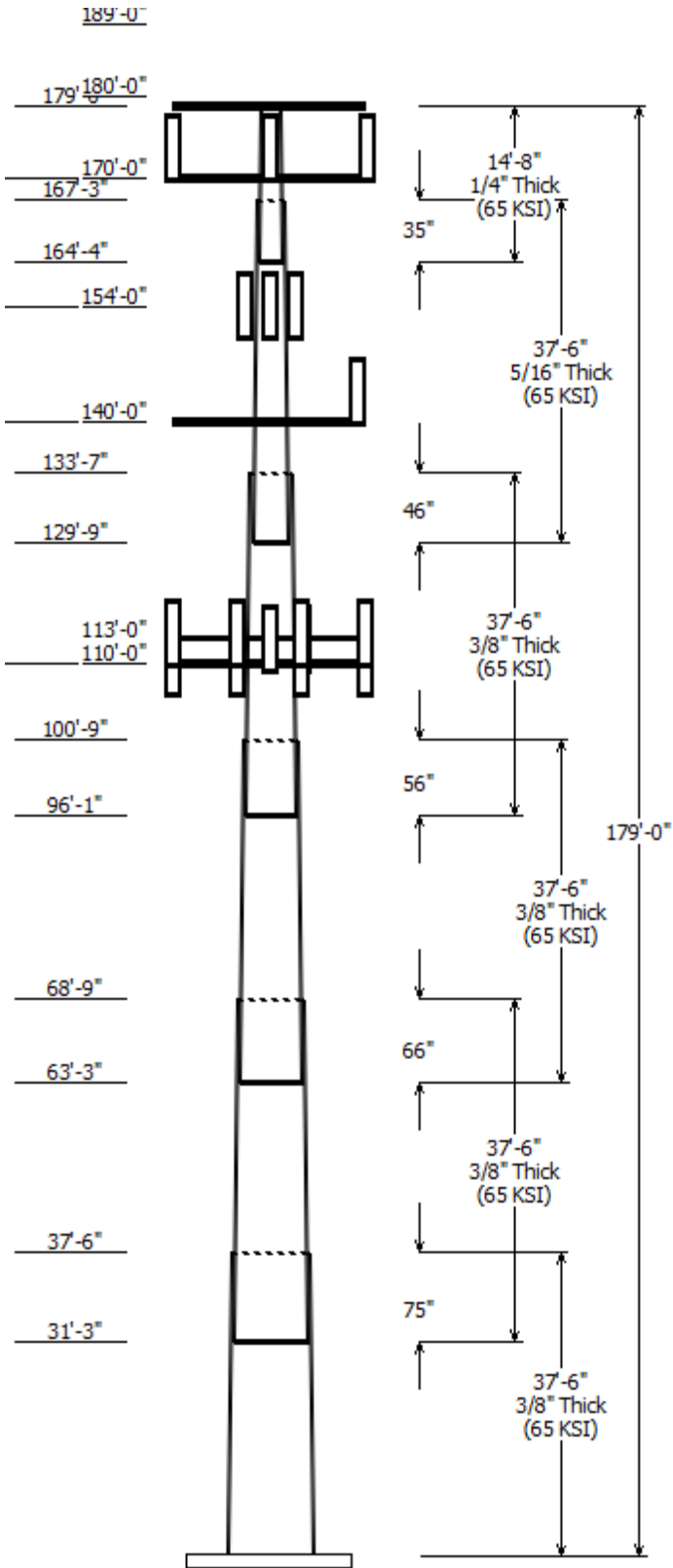
© 2007 - 2020 by ATC IP LLC. All rights reserved.



| Job Information | |
|-----------------------------------|--------------------------|
| Client : AT&T MOBILITY | Code: ANSI/TIA-222-H |
| Pole : 370627 | |
| Location : Newington CT, CT | |
| Description : 179' Pirod Monopole | Risk Category : II |
| Shape : 18 Sides | Exposure : B |
| Height : 179.00 (ft) | Topo Method : Method 1 |
| Base Elev (ft): 0.00 | Topographic Category : 1 |
| Taper: 0.30377(in/ft) | |

| Sections Properties | | | | | | | |
|---------------------|-------------|---------------|---------------|------------|------------|---------------------|-------------|
| Shaft Section | Length (ft) | Diameter (in) | | Thick (in) | Joint Type | Overlap Length (in) | Steel Grade |
| | | Across Top | Across Bottom | | | | |
| 1 | 37.500 | 51.60 | 63.00 | 0.375 | | 0.000 | 18 Sides 65 |
| 2 | 37.500 | 42.86 | 54.25 | 0.375 | Slip Joint | 75.000 | 18 Sides 65 |
| 3 | 37.500 | 33.89 | 45.28 | 0.375 | Slip Joint | 66.000 | 18 Sides 65 |
| 4 | 37.500 | 24.67 | 36.06 | 0.375 | Slip Joint | 56.000 | 18 Sides 65 |
| 5 | 37.500 | 15.06 | 26.46 | 0.313 | Slip Joint | 46.000 | 18 Sides 65 |
| 6 | 14.667 | 12.00 | 16.45 | 0.250 | Slip Joint | 35.000 | 18 Sides 65 |

| Discrete Appurtenance | | | |
|-----------------------|-----------------|-----|--------------------------------|
| Attach Elev (ft) | Force Elev (ft) | Qty | Description |
| 189.000 | 189.000 | 1 | Generic 18' Dipole |
| 180.000 | 180.000 | 1 | Generic 8' Yagi |
| 180.000 | 180.000 | 1 | Generic 10' Omni |
| 180.000 | 180.000 | 1 | Generic 5' Dipole |
| 179.000 | 179.000 | 1 | Round Low Profile Platform |
| 170.000 | 170.000 | 1 | Round Low Profile Platform |
| 170.000 | 173.000 | 3 | RFS APXVAARR24_43-U-NA20 |
| 170.000 | 173.000 | 3 | Ericsson AIR-32 B2A/B66Aa |
| 170.000 | 173.000 | 3 | Ericsson AIR 21, 1.3 M, B2A B4 |
| 170.000 | 173.000 | 3 | Ericsson Radio 4449 B12,B71 |
| 170.000 | 173.000 | 3 | Ericsson KRY 112 144/1 |
| 154.000 | 154.000 | 2 | CCI DMP65R-BU8D |
| 154.000 | 154.000 | 2 | CCI TPA-65R-LCUUUU-H8 |
| 154.000 | 154.000 | 2 | CCI OPA-65R-LCUU-H8 (92.7") |
| 154.000 | 154.000 | 1 | CCI DMP65R-BU6DA |
| 154.000 | 154.000 | 1 | CCI OPA-65R-LCUU-H6 |
| 154.000 | 154.000 | 1 | Quintel QS66512-2 |
| 154.000 | 154.000 | 3 | Kathrein Scala 800 10121 |
| 154.000 | 154.000 | 1 | Raycap DC6-48-60-0-8F (31.4" H |
| 154.000 | 154.000 | 3 | Ericsson RRUS 32 B2 |
| 154.000 | 154.000 | 3 | Ericsson RRUS 32 B30 |
| 154.000 | 154.000 | 3 | Ericsson RRUS 4449 B5, B12 |
| 154.000 | 154.000 | 3 | Ericsson RRUS 4478 B14 |
| 154.000 | 154.000 | 3 | Ericsson RRUS 8843 B2, B66A |
| 154.000 | 154.000 | 2 | Raycap DC6-48-60-18-8F |
| 154.000 | 154.000 | 6 | Powerwave Allgon LGP21401 |
| 154.000 | 154.000 | 1 | Site Pro 1 RMQLP-4120-H10 Plat |
| 140.000 | 140.000 | 1 | Round Low Profile Platform |
| 140.000 | 143.000 | 2 | RFS APXVSP18-C-A20 |
| 140.000 | 143.000 | 1 | RFS APXV9ERR18-C-A20 |
| 140.000 | 143.000 | 3 | RFS APXVTM14-C-I20 (56.2 lbs) |
| 140.000 | 143.000 | 3 | Alcatel-Lucent TD-RRH8x20 |
| 140.000 | 143.000 | 3 | Alcatel-Lucent 1900MHz RRH |
| 140.000 | 143.000 | 3 | Alcatel-Lucent 800 MHz 2X50W |
| 113.000 | 113.000 | 3 | Amphenol Antel BXA-70063- |
| 110.000 | 113.000 | 6 | Commscope SBNHH-1D65B |
| 110.000 | 114.000 | 2 | RFS DB-T1-6Z-8AB-0Z |
| 110.000 | 113.000 | 3 | Antel BXA-80063/4CF ___ 5° |
| 110.000 | 110.000 | 3 | Antel BXA-70063/4CF |
| 110.000 | 110.000 | 3 | Samsung B5/B13 RRH-BR04C |
| 110.000 | 110.000 | 3 | Samsung B2/B66A RRH-BR049 |



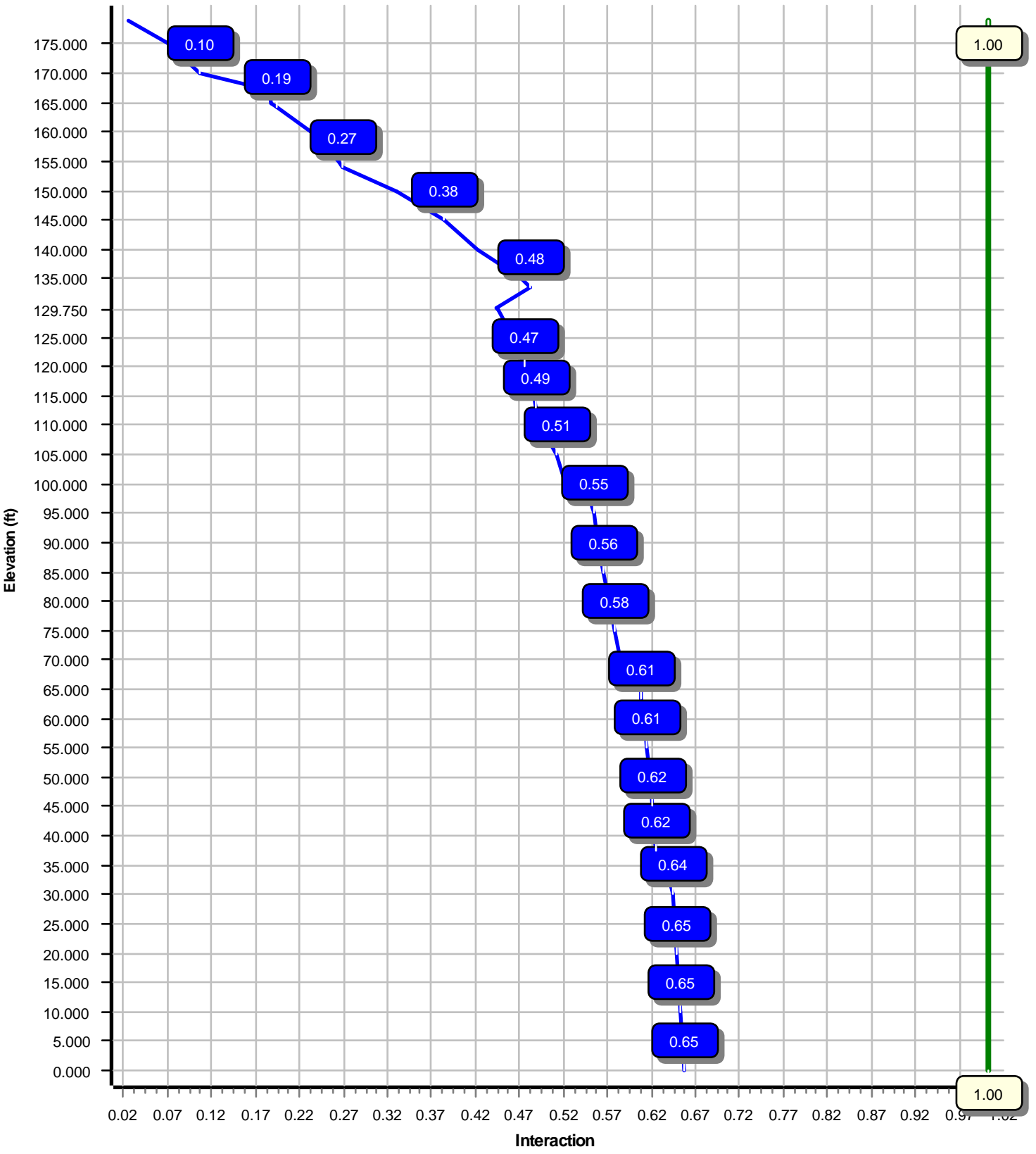
| Linear Appurtenance | | | |
|---------------------|-------|------------------|-----------------|
| Elev (ft) | | Description | Exposed To Wind |
| From | To | | |
| 0.000 | 110.0 | 1 5/8" Coax | No |
| 0.000 | 110.0 | 1 5/8" Hybriflex | No |
| 0.000 | 140.0 | 1 1/4" Hybriflex | No |
| 0.000 | 154.0 | 0.39" (10mm) | No |
| 0.000 | 154.0 | 0.39" (10mm) | No |
| 0.000 | 154.0 | 0.78" (19.7mm) 8 | No |
| 0.000 | 154.0 | 0.78" (19.7mm) 8 | No |
| 0.000 | 154.0 | 1 5/8" Coax | No |
| 0.000 | 154.0 | 2" conduit | No |
| 0.000 | 154.0 | 2" conduit | No |
| 0.000 | 154.0 | 3/8" (0.38") | No |
| 0.000 | 170.0 | 1 1/4" (1.25") | No |
| 0.000 | 170.0 | 1 5/8" (1.63") | No |
| 0.000 | 170.0 | 1 5/8" Coax | No |
| 0.000 | 180.0 | 7/8" Coax | No |

| Load Cases | |
|----------------------|----------------------------------|
| 1.2D + 1.0W | 118 mph with No Ice |
| 0.9D + 1.0W | 118 mph with No Ice (Reduced DL) |
| 1.2D + 1.0Di + 1.0Wi | 50 mph with 1.50 in Radial Ice |
| 1.2D + 1.0Ev + 1.0Eh | Seismic |
| 0.9D - 1.0Ev + 1.0Eh | Seismic (Reduced DL) |
| 1.0D + 1.0W | Serviceability 60 mph |

| Reactions | | | |
|----------------------|-----------------|-------------|-------------|
| Load Case | Moment (kip-ft) | Shear (kip) | Axial (kip) |
| 1.2D + 1.0W | 3804.63 | 30.24 | 62.25 |
| 0.9D + 1.0W | 3741.27 | 30.22 | 46.68 |
| 1.2D + 1.0Di + 1.0Wi | 1197.07 | 9.09 | 90.68 |
| 1.2D + 1.0Ev + 1.0Eh | 228.75 | 1.56 | 62.59 |
| 0.9D - 1.0Ev + 1.0Eh | 223.87 | 1.56 | 43.29 |
| 1.0D + 1.0W | 872.36 | 7.00 | 51.91 |

| Dish Deflections | | | |
|------------------|------------------|-----------------|----------------|
| Load Case | Attach Elev (ft) | Deflection (in) | Rotation (deg) |
| | 0.00 | 0.000 | 0.000 |

Load Case : 1.2D + 1.0W
Max Ratio 65.42% at 0.0 ft



Site Number: 370627

Code: ANSI/TIA-222-H

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

9/23/2020 4:47:55 PM

Customer: AT&T MOBILITY

Analysis Parameters

| | | | |
|---------------------|---------------------|----------------------|-------|
| Location : | Hartford County, CT | Height (ft) : | 179 |
| Code : | ANSI/TIA-222-H | Base Diameter (in) : | 63.00 |
| Shape : | 18 Sides | Top Diameter (in) : | 12.00 |
| Pole Type : | Taper | Taper (in/ft) : | 0.304 |
| Pole Manufacturer : | Pirod | Rotation (deg) : | 0.00 |
| Kd (non-service) : | 0.95 | Ke : | 1.00 |

Ice & Wind Parameters

| | | | |
|-------------------------------|----------|--------------------------------|-----------|
| Exposure Category: | B | Design Wind Speed Without Ice: | 118 mph |
| Risk Category: | II | Design Wind Speed With Ice: | 50 mph |
| Topographic Factor Procedure: | Method 1 | Operational Wind Speed: | 60 mph |
| Topographic Category: | 1 | Design Ice Thickness: | 1.50 in |
| Crest Height: | 0 ft | HMSL: | 101.00 ft |

Seismic Parameters

| | | | |
|--|---------------------------------|---------------------|-------|
| Analysis Method: | Equivalent Lateral Force Method | | |
| Site Class: | D - Stiff Soil | | |
| Period Based on Rayleigh Method (sec): | 3.02 | | |
| T _L (sec): | 6 | p: | 1 |
| S _s : | 0.194 | S ₁ : | 0.055 |
| F _a : | 1.600 | F _v : | 2.400 |
| S _{ds} : | 0.207 | S _{d1} : | 0.088 |
| | | C _s : | 0.030 |
| | | C _s Max: | 0.030 |
| | | C _s Min: | 0.030 |

Load Cases

| | |
|----------------------|----------------------------------|
| 1.2D + 1.0W | 118 mph with No Ice |
| 0.9D + 1.0W | 118 mph with No Ice (Reduced DL) |
| 1.2D + 1.0Di + 1.0Wi | 50 mph with 1.50 in Radial Ice |
| 1.2D + 1.0Ev + 1.0Eh | Seismic |
| 0.9D - 1.0Ev + 1.0Eh | Seismic (Reduced DL) |
| 1.0D + 1.0W | Serviceability 60 mph |

Site Number: 370627

Code: ANSI/TIA-222-H

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

9/23/2020 4:47:55 PM

Customer: AT&T MOBILITY

Shaft Section Properties

| Sect Info | Length (ft) | Thick (in) | Fy (ksi) | Joint Type | Slip Joint Len (in) | Weight (lb) | Bottom | | | | | | Top | | | | | | |
|--------------|-------------|------------|----------|------------|---------------------|-------------|----------|-----------|-------------------------|-----------------------|-----------|-----------|----------|-----------|-------------------------|-----------------------|-----------|-----------|---------------|
| | | | | | | | Dia (in) | Elev (ft) | Area (in ²) | Ix (in ⁴) | W/t Ratio | D/t Ratio | Dia (in) | Elev (ft) | Area (in ²) | Ix (in ⁴) | W/t Ratio | D/t Ratio | Taper (in/ft) |
| 1-18 | 37.500 | 0.3750 | 65 | | 0.00 | 8,646 | 63.00 | 0.00 | 74.54 | 36933.4 | 27.86 | 168.00 | 51.60 | 37.50 | 60.98 | 20222.7 | 22.50 | 137.62 | 0.303771 |
| 2-18 | 37.500 | 0.3750 | 65 | Slip | 75.00 | 7,318 | 54.25 | 31.25 | 64.13 | 23524.0 | 23.75 | 144.69 | 42.86 | 68.75 | 50.57 | 11536.1 | 18.39 | 114.31 | 0.303771 |
| 3-18 | 37.500 | 0.3750 | 65 | Slip | 66.00 | 5,956 | 45.28 | 63.25 | 53.45 | 13622.2 | 19.53 | 120.76 | 33.89 | 100.75 | 39.90 | 5663.6 | 14.17 | 90.39 | 0.303771 |
| 4-18 | 37.500 | 0.3750 | 65 | Slip | 56.00 | 4,555 | 36.06 | 96.08 | 42.48 | 6834.9 | 15.19 | 96.17 | 24.67 | 133.58 | 28.92 | 2156.7 | 9.84 | 65.79 | 0.303771 |
| 5-18 | 37.500 | 0.3125 | 65 | Slip | 46.00 | 2,589 | 26.46 | 129.75 | 25.93 | 2240.4 | 13.17 | 84.67 | 15.06 | 167.25 | 14.64 | 402.7 | 6.74 | 48.22 | 0.303771 |
| 6-18 | 14.667 | 0.2500 | 65 | Slip | 35.00 | 554 | 16.45 | 164.33 | 12.86 | 426.6 | 9.84 | 65.82 | 12.00 | 179.00 | 9.32 | 162.6 | 6.70 | 48.00 | 0.303771 |
| Shaft Weight | | | | | | 29,617 | | | | | | | | | | | | | |

Discrete Appurtenance Properties

| Attach Elev (ft) | Description | Qty | Ka | Vert Ecc (ft) | Weight (lb) | No Ice EPAa (sf) | Orientation Factor | Weight (lb) | Ice EPAa (sf) | Orientation Factor |
|------------------|---------------------------------|-----|------|---------------|-------------|------------------|--------------------|-------------|---------------|--------------------|
| 189.00 | Generic 18' Dipole | 1 | 1.00 | 0.000 | 55.00 | 6.770 | 1.00 | 258.06 | 17.658 | 1.00 |
| 180.00 | Generic 5' Dipole | 1 | 1.00 | 0.000 | 15.00 | 1.740 | 1.00 | 72.45 | 4.037 | 1.00 |
| 180.00 | Generic 10' Omni | 1 | 1.00 | 0.000 | 25.00 | 3.000 | 1.00 | 102.33 | 6.666 | 1.00 |
| 180.00 | Generic 8' Yagi | 1 | 1.00 | 0.000 | 30.00 | 12.000 | 1.00 | 375.04 | 46.025 | 1.00 |
| 179.00 | Round Low Profile Platform | 1 | 1.00 | 0.000 | 1,500.00 | 21.700 | 1.00 | 2,160.05 | 41.260 | 1.00 |
| 170.00 | Ericsson KRY 112 144/1 | 3 | 0.80 | 3.000 | 11.00 | 0.351 | 0.50 | 21.91 | 0.763 | 0.50 |
| 170.00 | Ericsson Radio 4449 B12,B71 | 3 | 0.80 | 3.000 | 74.00 | 1.639 | 0.50 | 130.76 | 2.494 | 0.50 |
| 170.00 | Ericsson AIR 21, 1.3 M, B2A B4P | 3 | 0.80 | 3.000 | 83.00 | 6.049 | 0.71 | 230.97 | 8.241 | 0.71 |
| 170.00 | Ericsson AIR-32 B2A/B66Aa | 3 | 0.80 | 3.000 | 132.20 | 6.510 | 0.71 | 294.02 | 8.731 | 0.71 |
| 170.00 | RFS APXVAARR24_43-U-NA20 | 3 | 0.80 | 3.000 | 127.90 | 20.243 | 0.63 | 525.92 | 24.003 | 0.63 |
| 170.00 | Round Low Profile Platform | 1 | 1.00 | 0.000 | 1,500.00 | 21.700 | 1.00 | 2,156.86 | 41.165 | 1.00 |
| 154.00 | Powerwave Allgon LGP21401 | 6 | 0.75 | 0.000 | 14.10 | 1.104 | 0.50 | 39.13 | 1.820 | 0.50 |
| 154.00 | Raycap DC6-48-60-18-8F | 2 | 0.75 | 0.000 | 31.80 | 1.470 | 1.00 | 93.71 | 2.171 | 1.00 |
| 154.00 | Ericsson RRUS 8843 B2, B66A | 3 | 0.75 | 0.000 | 72.00 | 1.639 | 0.50 | 133.50 | 2.487 | 0.50 |
| 154.00 | Ericsson RRUS 4478 B14 | 3 | 0.75 | 0.000 | 59.90 | 1.842 | 0.50 | 115.38 | 2.742 | 0.50 |
| 154.00 | Ericsson RRUS 4449 B5, B12 | 3 | 0.75 | 0.000 | 71.00 | 1.969 | 0.50 | 135.67 | 2.905 | 0.50 |
| 154.00 | Ericsson RRUS 32 B30 | 3 | 0.75 | 0.000 | 60.00 | 2.743 | 0.67 | 133.82 | 3.916 | 0.67 |
| 154.00 | Ericsson RRUS 32 B2 | 3 | 0.75 | 0.000 | 53.00 | 2.743 | 0.67 | 126.80 | 3.916 | 0.67 |
| 154.00 | Raycap DC6-48-60-0-8F (31.4") | 1 | 0.75 | 0.000 | 16.00 | 4.788 | 1.00 | 145.97 | 6.264 | 1.00 |
| 154.00 | Kathrein Scala 800 10121 | 3 | 0.75 | 0.000 | 46.30 | 5.162 | 0.68 | 161.32 | 7.276 | 0.68 |
| 154.00 | Quintel QS66512-2 | 1 | 0.75 | 0.000 | 111.00 | 8.133 | 1.00 | 310.95 | 10.930 | 1.00 |
| 154.00 | CCI OPA-65R-LCUU-H6 | 1 | 0.75 | 0.000 | 73.00 | 9.658 | 1.00 | 277.21 | 12.439 | 1.00 |
| 154.00 | CCI DMP65R-BU6DA | 1 | 0.75 | 0.000 | 79.40 | 12.709 | 1.00 | 337.87 | 15.507 | 1.00 |
| 154.00 | CCI OPA-65R-LCUU-H8 (92.7") | 2 | 0.75 | 0.000 | 88.00 | 12.746 | 0.75 | 337.13 | 16.354 | 0.75 |
| 154.00 | CCI TPA-65R-LCUUUU-H8 | 2 | 0.75 | 0.000 | 81.60 | 13.298 | 0.77 | 359.32 | 17.044 | 0.77 |
| 154.00 | CCI DMP65R-BU8D | 2 | 0.75 | 0.000 | 95.70 | 17.871 | 0.72 | 436.73 | 21.569 | 0.72 |
| 154.00 | Site Pro 1 RMQLP-4120-H10 | 1 | 1.00 | 0.000 | 3,250.00 | 27.200 | 1.00 | 5,362.76 | 51.727 | 1.00 |
| 140.00 | Alcatel-Lucent 800 MHz 2X50W | 3 | 0.80 | 3.000 | 64.00 | 2.058 | 0.67 | 140.53 | 3.009 | 0.67 |
| 140.00 | Alcatel-Lucent 1900MHz RRH | 3 | 0.80 | 3.000 | 44.00 | 3.258 | 0.72 | 152.22 | 4.439 | 0.72 |
| 140.00 | Alcatel-Lucent TD-RRH8x20 | 3 | 0.80 | 3.000 | 66.10 | 3.690 | 0.60 | 148.99 | 4.951 | 0.60 |
| 140.00 | RFS APXVTM14-C-I20 (56.2 lbs) | 3 | 0.80 | 3.000 | 56.20 | 6.342 | 0.66 | 192.91 | 8.506 | 0.66 |
| 140.00 | RFS APXV9ERR18-C-A20 | 1 | 0.80 | 3.000 | 62.00 | 8.024 | 1.00 | 241.91 | 10.795 | 1.00 |
| 140.00 | RFS APXVSP18-C-A20 | 2 | 0.80 | 3.000 | 57.00 | 8.024 | 0.77 | 228.35 | 10.795 | 0.77 |
| 140.00 | Round Low Profile Platform | 1 | 1.00 | 0.000 | 1,500.00 | 21.700 | 1.00 | 2,143.60 | 40.772 | 1.00 |
| 113.00 | Amphenol Antel BXA-70063-6CF- | 3 | 0.75 | 0.000 | 17.00 | 7.569 | 0.66 | 160.96 | 10.252 | 0.66 |
| 110.00 | Samsung B2/B66A RRH-BR049 | 3 | 0.75 | 0.000 | 84.40 | 1.875 | 0.50 | 146.23 | 2.750 | 0.50 |
| 110.00 | Samsung B5/B13 RRH-BR04C | 3 | 0.75 | 0.000 | 70.30 | 1.875 | 0.50 | 125.74 | 2.750 | 0.50 |
| 110.00 | Antel BXA-70063/4CF | 3 | 0.75 | 0.000 | 9.90 | 4.708 | 0.65 | 107.11 | 6.491 | 0.65 |
| 110.00 | Antel BXA-80063/4CF ____ 5° | 3 | 0.75 | 3.000 | 9.90 | 4.708 | 0.64 | 121.39 | 5.634 | 0.64 |
| 110.00 | RFS DB-T1-6Z-8AB-0Z | 2 | 0.75 | 4.000 | 44.00 | 4.800 | 0.72 | 165.99 | 6.177 | 0.72 |
| 110.00 | Commscope SBNHH-1D65B | 6 | 0.75 | 3.000 | 40.60 | 8.079 | 0.69 | 209.58 | 10.779 | 0.69 |
| 110.00 | Generic Flat Platform with | 1 | 1.00 | 0.000 | 2,500.00 | 42.400 | 1.00 | 4,221.79 | 62.727 | 1.00 |
| Totals | Num Loadings:42 | 98 | | | 15,477.10 | | | 32,820.00 | | |

Site Number: 370627

Code: ANSI/TIA-222-H

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

9/23/2020 4:47:55 PM

Customer: AT&T MOBILITY

Linear Appurtenance Properties Load Case Azimuth (deg) :

| Elev From (ft) | Elev To (ft) | Qty | Description | Coax Dia (in) | Coax Wt (lb/ft) | Max Coax / Flat Row | Dist Between Rows (in) | Dist Between Cols (in) | Azimuth (deg) | Dist From Face (in) | Exposed To Wind Carrier |
|----------------|--------------|-----|------------------------|---------------|-----------------|---------------------|------------------------|------------------------|---------------|---------------------|-------------------------|
| 0.00 | 180.00 | 3 | 7/8" Coax | 1.09 | 0.33 | N 0 | 0.00 | 0.00 | 0 | 0.00 | N TOWN OF |
| 0.00 | 170.00 | 2 | 1 1/4" (1.25"- 31.8mm) | 1.25 | 1.05 | N 0 | 0.00 | 0.00 | 0 | 0.00 | N METRO PCS INC |
| 0.00 | 170.00 | 1 | 1 5/8" (1.63"-41.3mm) | 1.63 | 1.61 | N 0 | 0.00 | 0.00 | 0 | 0.00 | N METRO PCS INC |
| 0.00 | 170.00 | 6 | 1 5/8" Coax | 1.98 | 0.82 | N 0 | 0.00 | 0.00 | 0 | 0.00 | N METRO PCS INC |
| 0.00 | 154.00 | 2 | 0.39" (10mm) Fiber | 0.39 | 0.06 | N 0 | 0.00 | 0.00 | 0 | 0.00 | N AT&T MOBILITY |
| 0.00 | 154.00 | 2 | 0.39" (10mm) Fiber | 0.39 | 0.06 | N 0 | 0.00 | 0.00 | 0 | 0.00 | N AT&T MOBILITY |
| 0.00 | 154.00 | 2 | 0.78" (19.7mm) 8 AWG | 0.78 | 0.59 | N 0 | 0.00 | 0.00 | 0 | 0.00 | N AT&T MOBILITY |
| 0.00 | 154.00 | 6 | 0.78" (19.7mm) 8 AWG | 0.78 | 0.59 | N 0 | 0.00 | 0.00 | 0 | 0.00 | N AT&T MOBILITY |
| 0.00 | 154.00 | 6 | 1 5/8" Coax | 1.98 | 0.82 | N 0 | 0.00 | 0.00 | 0 | 0.00 | N AT&T MOBILITY |
| 0.00 | 154.00 | 1 | 2" conduit | 2.38 | 3.65 | N 0 | 0.00 | 0.00 | 0 | 0.00 | N AT&T MOBILITY |
| 0.00 | 154.00 | 2 | 2" conduit | 2.38 | 3.65 | N 0 | 0.00 | 0.00 | 0 | 0.00 | N AT&T MOBILITY |
| 0.00 | 154.00 | 1 | 3/8" (0.38"- 9.5mm) | 0.38 | 0.23 | N 0 | 0.00 | 0.00 | 0 | 0.00 | N AT&T MOBILITY |
| 0.00 | 140.00 | 4 | 1 1/4" Hybriflex Cable | 1.54 | 1.00 | N 0 | 0.00 | 0.00 | 0 | 0.00 | N SPRINT NEXTEL |
| 0.00 | 110.00 | 12 | 1 5/8" Coax | 1.98 | 0.82 | N 0 | 0.00 | 0.00 | 0 | 0.00 | N VERIZON WIRELESS |
| 0.00 | 110.00 | 2 | 1 5/8" Hybriflex | 1.98 | 1.30 | N 0 | 0.00 | 0.00 | 0 | 0.00 | N VERIZON WIRELESS |

Segment Properties (Max Len : 5. ft)

| Seg Top Elev (ft) | Description | Thick (in) | Flat Dia (in) | Area (in ²) | Ix (in ⁴) | W/t Ratio | D/t Ratio | F'y (ksi) | S (in ³) | Z (in ³) | Weight (lb) |
|-------------------|-----------------|------------|---------------|-------------------------|-----------------------|-----------|-----------|-----------|----------------------|----------------------|-------------|
| 0.00 | | 0.3750 | 63.000 | 74.537 | 36,933.4 | 27.86 | 168.00 | 68.6 | 1154. | 0.0 | 0.0 |
| 5.00 | | 0.3750 | 61.481 | 72.729 | 34,310.8 | 27.15 | 163.95 | 69.5 | 1099. | 0.0 | 1,252.8 |
| 10.00 | | 0.3750 | 59.962 | 70.921 | 31,815.3 | 26.43 | 159.90 | 70.3 | 1045. | 0.0 | 1,222.0 |
| 15.00 | | 0.3750 | 58.443 | 69.113 | 29,443.9 | 25.72 | 155.85 | 71.2 | 992.3 | 0.0 | 1,191.3 |
| 20.00 | | 0.3750 | 56.925 | 67.306 | 27,193.4 | 25.00 | 151.80 | 72.0 | 940.9 | 0.0 | 1,160.5 |
| 25.00 | | 0.3750 | 55.406 | 65.498 | 25,060.6 | 24.29 | 147.75 | 72.8 | 890.9 | 0.0 | 1,129.8 |
| 30.00 | | 0.3750 | 53.887 | 63.690 | 23,042.3 | 23.57 | 143.70 | 73.7 | 842.2 | 0.0 | 1,099.0 |
| 31.25 | Bot - Section 2 | 0.3750 | 53.507 | 63.238 | 22,555.3 | 23.40 | 142.69 | 73.9 | 830.3 | 0.0 | 269.9 |
| 35.00 | | 0.3750 | 52.368 | 61.882 | 21,135.4 | 22.86 | 139.65 | 74.5 | 794.9 | 0.0 | 1,608.0 |
| 37.50 | Top - Section 1 | 0.3750 | 52.359 | 61.871 | 21,123.9 | 22.86 | 139.62 | 74.5 | 794.6 | 0.0 | 1,052.8 |
| 40.00 | | 0.3750 | 51.599 | 60.967 | 20,211.6 | 22.50 | 137.60 | 74.9 | 771.5 | 0.0 | 522.5 |
| 45.00 | | 0.3750 | 50.080 | 59.160 | 18,466.5 | 21.78 | 133.55 | 75.8 | 726.3 | 0.0 | 1,021.9 |
| 50.00 | | 0.3750 | 48.561 | 57.352 | 16,824.8 | 21.07 | 129.50 | 76.6 | 682.4 | 0.0 | 991.2 |
| 55.00 | | 0.3750 | 47.043 | 55.544 | 15,283.5 | 20.36 | 125.45 | 77.5 | 639.9 | 0.0 | 960.4 |
| 60.00 | | 0.3750 | 45.524 | 53.736 | 13,839.3 | 19.64 | 121.40 | 78.3 | 598.8 | 0.0 | 929.6 |
| 63.25 | Bot - Section 3 | 0.3750 | 44.536 | 52.561 | 12,951.1 | 19.18 | 118.76 | 78.8 | 572.8 | 0.0 | 587.8 |
| 65.00 | | 0.3750 | 44.005 | 51.929 | 12,489.0 | 18.93 | 117.35 | 79.1 | 559.0 | 0.0 | 627.5 |
| 68.75 | Top - Section 2 | 0.3750 | 43.616 | 51.465 | 12,157.8 | 18.75 | 116.31 | 79.4 | 549.0 | 0.0 | 1,319.4 |
| 70.00 | | 0.3750 | 43.236 | 51.014 | 11,840.3 | 18.57 | 115.30 | 79.6 | 539.4 | 0.0 | 217.9 |
| 75.00 | | 0.3750 | 41.717 | 49.206 | 10,625.7 | 17.85 | 111.25 | 80.4 | 501.7 | 0.0 | 852.6 |
| 80.00 | | 0.3750 | 40.198 | 47.398 | 9,497.0 | 17.14 | 107.20 | 81.2 | 465.3 | 0.0 | 821.8 |
| 85.00 | | 0.3750 | 38.679 | 45.590 | 8,451.3 | 16.42 | 103.15 | 82.1 | 430.4 | 0.0 | 791.0 |
| 90.00 | | 0.3750 | 37.161 | 43.783 | 7,485.3 | 15.71 | 99.09 | 82.6 | 396.7 | 0.0 | 760.3 |
| 95.00 | | 0.3750 | 35.642 | 41.975 | 6,595.9 | 15.00 | 95.04 | 82.6 | 364.5 | 0.0 | 729.5 |
| 96.08 | Bot - Section 4 | 0.3750 | 35.313 | 41.583 | 6,412.9 | 14.84 | 94.17 | 82.6 | 357.7 | 0.0 | 154.0 |
| 100.0 | | 0.3750 | 34.123 | 40.167 | 5,779.8 | 14.28 | 90.99 | 82.6 | 333.6 | 0.0 | 1,101.4 |
| 100.7 | Top - Section 3 | 0.3750 | 34.645 | 40.788 | 6,052.3 | 14.53 | 92.39 | 82.6 | 344.1 | 0.0 | 206.6 |
| 105.0 | | 0.3750 | 33.354 | 39.252 | 5,393.7 | 13.92 | 88.94 | 82.6 | 318.5 | 0.0 | 578.8 |
| 110.0 | | 0.3750 | 31.835 | 37.444 | 4,682.3 | 13.21 | 84.89 | 82.6 | 289.7 | 0.0 | 652.4 |
| 113.0 | | 0.3750 | 30.924 | 36.359 | 4,287.1 | 12.78 | 82.46 | 82.6 | 273.1 | 0.0 | 376.7 |
| 115.0 | | 0.3750 | 30.316 | 35.636 | 4,036.4 | 12.49 | 80.84 | 82.6 | 262.2 | 0.0 | 245.0 |
| 120.0 | | 0.3750 | 28.797 | 33.829 | 3,452.7 | 11.78 | 76.79 | 82.6 | 236.2 | 0.0 | 590.9 |
| 125.0 | | 0.3750 | 27.279 | 32.021 | 2,928.3 | 11.06 | 72.74 | 82.6 | 211.4 | 0.0 | 560.2 |
| 129.7 | Bot - Section 5 | 0.3750 | 25.836 | 30.304 | 2,481.9 | 10.38 | 68.90 | 82.6 | 189.2 | 0.0 | 503.7 |
| 130.0 | | 0.3750 | 25.760 | 30.213 | 2,459.8 | 10.35 | 68.69 | 82.6 | 188.1 | 0.0 | 47.8 |
| 133.5 | Top - Section 4 | 0.3125 | 25.296 | 24.780 | 1,954.2 | 12.51 | 80.95 | 82.6 | 152.2 | 0.0 | 669.2 |
| 135.0 | | 0.3125 | 24.866 | 24.353 | 1,854.9 | 12.27 | 79.57 | 82.6 | 146.9 | 0.0 | 118.4 |
| 140.0 | | 0.3125 | 23.347 | 22.847 | 1,531.6 | 11.41 | 74.71 | 82.6 | 129.2 | 0.0 | 401.5 |
| 145.0 | | 0.3125 | 21.828 | 21.340 | 1,248.1 | 10.55 | 69.85 | 82.6 | 112.6 | 0.0 | 375.9 |
| 150.0 | | 0.3125 | 20.309 | 19.834 | 1,002.0 | 9.70 | 64.99 | 82.6 | 97.2 | 0.0 | 350.3 |
| 154.0 | | 0.3125 | 19.094 | 18.629 | 830.2 | 9.01 | 61.10 | 82.6 | 85.6 | 0.0 | 261.8 |
| 155.0 | | 0.3125 | 18.791 | 18.327 | 790.6 | 8.84 | 60.13 | 82.6 | 82.9 | 0.0 | 62.9 |
| 160.0 | | 0.3125 | 17.272 | 16.821 | 611.2 | 7.98 | 55.27 | 82.6 | 69.7 | 0.0 | 299.0 |
| 164.3 | Bot - Section 6 | 0.3125 | 15.955 | 15.515 | 479.7 | 7.24 | 51.06 | 82.6 | 59.2 | 0.0 | 238.4 |
| 165.0 | | 0.3125 | 15.753 | 15.314 | 461.3 | 7.13 | 50.41 | 82.6 | 57.7 | 0.0 | 64.0 |
| 167.2 | Top - Section 5 | 0.2500 | 15.569 | 12.155 | 360.4 | 9.22 | 62.28 | 82.6 | 45.6 | 0.0 | 209.8 |
| 170.0 | | 0.2500 | 14.734 | 11.493 | 304.6 | 8.63 | 58.94 | 82.6 | 40.7 | 0.0 | 110.6 |
| 175.0 | | 0.2500 | 13.215 | 10.287 | 218.5 | 7.56 | 52.86 | 82.6 | 32.6 | 0.0 | 185.3 |
| 179.0 | | 0.2500 | 12.000 | 9.323 | 162.6 | 6.70 | 48.00 | 82.6 | 26.7 | 0.0 | 133.5 |

29,617.5

| | | |
|-------------------------------|----------------------------|----------------------|
| Load Case: 1.2D + 1.0W | 118 mph with No Ice | 27 Iterations |
| Gust Response Factor :1.10 | | |
| Dead Load Factor :1.20 | | |
| Wind Load Factor :1.00 | | |

Applied Segment Forces Summary

| Seg Elev (ft) | Description | Shaft Forces | | Discrete Forces | | | Linear Forces | | Sum of Forces | | | | |
|---------------|-----------------|--------------|----------------|-----------------|--------------------|-------------------|----------------|--------------|----------------|--------------|----------------|--------------------|----------------|
| | | Wind FX (lb) | Dead Load (lb) | Wind FX (lb) | Torsion MY (lb-ft) | Moment MZ (lb-ft) | Dead Load (lb) | Wind FX (lb) | Dead Load (lb) | Wind FX (lb) | Dead Load (lb) | Torsion MY (lb-ft) | Moment MZ (lb) |
| 0.00 | | 249.7 | 0.0 | | | | | 0.0 | 0.0 | 249.7 | 0.0 | 0.0 | 0.0 |
| 5.00 | | 493.3 | 1,503.3 | | | | | 0.0 | 282.7 | 493.3 | 1,786.1 | 0.0 | 0.0 |
| 10.00 | | 481.1 | 1,466.4 | | | | | 0.0 | 282.7 | 481.1 | 1,749.1 | 0.0 | 0.0 |
| 15.00 | | 468.9 | 1,429.5 | | | | | 0.0 | 282.7 | 468.9 | 1,712.2 | 0.0 | 0.0 |
| 20.00 | | 456.8 | 1,392.6 | | | | | 0.0 | 282.7 | 456.8 | 1,675.3 | 0.0 | 0.0 |
| 25.00 | | 444.6 | 1,355.7 | | | | | 0.0 | 282.7 | 444.6 | 1,638.4 | 0.0 | 0.0 |
| 30.00 | | 273.5 | 1,318.8 | | | | | 0.0 | 282.7 | 273.5 | 1,601.5 | 0.0 | 0.0 |
| 31.25 | Bot - Section 2 | 220.5 | 323.9 | | | | | 0.0 | 70.7 | 220.5 | 394.6 | 0.0 | 0.0 |
| 35.00 | | 278.1 | 1,929.6 | | | | | 0.0 | 212.0 | 278.1 | 2,141.6 | 0.0 | 0.0 |
| 37.50 | Top - Section 1 | 224.0 | 1,263.3 | | | | | 0.0 | 141.4 | 224.0 | 1,404.7 | 0.0 | 0.0 |
| 40.00 | | 337.8 | 627.0 | | | | | 0.0 | 141.4 | 337.8 | 768.3 | 0.0 | 0.0 |
| 45.00 | | 451.3 | 1,226.3 | | | | | 0.0 | 282.7 | 451.3 | 1,509.0 | 0.0 | 0.0 |
| 50.00 | | 451.1 | 1,189.4 | | | | | 0.0 | 282.7 | 451.1 | 1,472.1 | 0.0 | 0.0 |
| 55.00 | | 449.0 | 1,152.5 | | | | | 0.0 | 282.7 | 449.0 | 1,435.2 | 0.0 | 0.0 |
| 60.00 | | 368.2 | 1,115.6 | | | | | 0.0 | 282.7 | 368.2 | 1,398.3 | 0.0 | 0.0 |
| 63.25 | Bot - Section 3 | 223.0 | 705.3 | | | | | 0.0 | 183.8 | 223.0 | 889.1 | 0.0 | 0.0 |
| 65.00 | | 245.9 | 753.0 | | | | | 0.0 | 99.0 | 245.9 | 852.0 | 0.0 | 0.0 |
| 68.75 | Top - Section 2 | 222.7 | 1,583.2 | | | | | 0.0 | 212.0 | 222.7 | 1,795.3 | 0.0 | 0.0 |
| 70.00 | | 274.9 | 261.5 | | | | | 0.0 | 70.7 | 274.9 | 332.2 | 0.0 | 0.0 |
| 75.00 | | 435.2 | 1,023.1 | | | | | 0.0 | 282.7 | 435.2 | 1,305.8 | 0.0 | 0.0 |
| 80.00 | | 427.1 | 986.2 | | | | | 0.0 | 282.7 | 427.1 | 1,268.9 | 0.0 | 0.0 |
| 85.00 | | 418.2 | 949.3 | | | | | 0.0 | 282.7 | 418.2 | 1,232.0 | 0.0 | 0.0 |
| 90.00 | | 408.4 | 912.3 | | | | | 0.0 | 282.7 | 408.4 | 1,195.1 | 0.0 | 0.0 |
| 95.00 | | 244.6 | 875.4 | | | | | 0.0 | 282.7 | 244.6 | 1,158.2 | 0.0 | 0.0 |
| 96.08 | Bot - Section 4 | 199.4 | 184.8 | | | | | 0.0 | 61.3 | 199.4 | 246.1 | 0.0 | 0.0 |
| 100.00 | | 186.0 | 1,321.7 | | | | | 0.0 | 221.5 | 186.0 | 1,543.2 | 0.0 | 0.0 |
| 100.75 | Top - Section 3 | 194.6 | 247.9 | | | | | 0.0 | 42.4 | 194.6 | 290.3 | 0.0 | 0.0 |
| 105.00 | | 353.5 | 694.5 | | | | | 0.0 | 240.3 | 353.5 | 934.8 | 0.0 | 0.0 |
| 110.00 | Appurtenance(s) | 298.5 | 782.9 | 3,424.1 | 0.0 | 4,420.2 | 4,026.1 | 0.0 | 282.7 | 3,722.6 | 5,091.8 | 0.0 | 0.0 |
| 113.00 | Appurtenance(s) | 182.0 | 452.0 | 426.9 | 0.0 | 0.0 | 61.2 | 0.0 | 124.8 | 608.9 | 638.1 | 0.0 | 0.0 |
| 115.00 | | 247.3 | 294.0 | | | | | 0.0 | 83.2 | 247.3 | 377.2 | 0.0 | 0.0 |
| 120.00 | | 343.6 | 709.1 | | | | | 0.0 | 208.1 | 343.6 | 917.2 | 0.0 | 0.0 |
| 125.00 | | 321.4 | 672.2 | | | | | 0.0 | 208.1 | 321.4 | 880.3 | 0.0 | 0.0 |
| 129.75 | Bot - Section 5 | 161.2 | 604.4 | | | | | 0.0 | 197.7 | 161.2 | 802.1 | 0.0 | 0.0 |
| 130.00 | | 121.6 | 57.3 | | | | | 0.0 | 10.4 | 121.6 | 67.7 | 0.0 | 0.0 |
| 133.58 | Top - Section 4 | 157.3 | 803.1 | | | | | 0.0 | 149.1 | 157.3 | 952.2 | 0.0 | 0.0 |
| 135.00 | | 193.3 | 142.1 | | | | | 0.0 | 59.0 | 193.3 | 201.1 | 0.0 | 0.0 |
| 140.00 | Appurtenance(s) | 291.1 | 481.8 | 2,525.6 | 0.0 | 4,948.3 | 2,840.3 | 0.0 | 208.1 | 2,816.7 | 3,530.2 | 0.0 | 0.0 |
| 145.00 | | 274.9 | 451.1 | | | | | 0.0 | 184.1 | 274.9 | 635.2 | 0.0 | 0.0 |
| 150.00 | | 234.0 | 420.3 | | | | | 0.0 | 184.1 | 234.0 | 604.4 | 0.0 | 0.0 |
| 154.00 | Appurtenance(s) | 124.9 | 314.1 | 5,379.6 | 0.0 | 0.0 | 6,353.8 | 0.0 | 147.3 | 5,504.5 | 6,815.1 | 0.0 | 0.0 |
| 155.00 | | 140.6 | 75.5 | | | | | 0.0 | 11.5 | 140.6 | 87.0 | 0.0 | 0.0 |
| 160.00 | | 209.9 | 358.8 | | | | | 0.0 | 57.7 | 209.9 | 416.5 | 0.0 | 0.0 |
| 164.33 | Bot - Section 6 | 107.9 | 286.1 | | | | | 0.0 | 50.0 | 107.9 | 336.1 | 0.0 | 0.0 |
| 165.00 | | 61.1 | 76.7 | | | | | 0.0 | 7.7 | 61.1 | 84.4 | 0.0 | 0.0 |
| 167.25 | Top - Section 5 | 101.7 | 251.8 | | | | | 0.0 | 26.0 | 101.7 | 277.7 | 0.0 | 0.0 |
| 170.00 | Appurtenance(s) | 147.3 | 132.8 | 3,259.5 | 0.0 | 6,999.9 | 3,341.2 | 0.0 | 31.7 | 3,406.8 | 3,505.7 | 0.0 | 0.0 |
| 175.00 | | 159.7 | 222.3 | | | | | 0.0 | 5.9 | 159.7 | 228.3 | 0.0 | 0.0 |

Site Number: 370627

Code: ANSI/TIA-222-H

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

9/23/2020 4:48:00 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0W

118 mph with No Ice

27 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 1.20

Wind Load Factor : 1.00

| | | | | | | | | | | | | | |
|---------|-----------------|------|-------|-------|-----|-----|---------|-----|-----|----------|----------|------|------|
| 179.00 | Appurtenance(s) | 67.2 | 160.2 | 939.9 | 0.0 | 0.0 | 1,800.0 | 0.0 | 4.8 | 1,007.2 | 1,964.9 | 0.0 | 0.0 |
| Totals: | | | | | | | | | | 29,383.6 | 62,142.6 | 0.00 | 0.00 |

Site Number: 370627

Code: ANSI/TIA-222-H

© 2007 - 2020 by ATC IP LLC. All rights reserved.

Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

9/23/2020 4:48:00 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0W

118 mph with No Ice

27 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 1.20

Wind Load Factor : 1.00

Calculated Forces

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | phi Pn (kips) | phi Vn (kips) | phi Tn (ft-kips) | phi Mn (ft-kips) | Total Deflect (in) | Rotation (deg) | Ratio |
|---------------|------------------|------------------|-----------------|-----------------|-----------------|----------------------------|---------------|---------------|------------------|------------------|--------------------|----------------|-------|
| 0.00 | -62.25 | -30.24 | 0.00 | -3,804.63 | 0.00 | 3,804.63 | 4,604.11 | 1,308.12 | 7,398.90 | 5,943.65 | 0.00 | 0.00 | 0.654 |
| 5.00 | -60.39 | -29.90 | 0.00 | -3,653.45 | 0.00 | 3,653.45 | 4,547.42 | 1,276.39 | 7,044.39 | 5,727.25 | 0.08 | -0.14 | 0.652 |
| 10.00 | -58.57 | -29.56 | 0.00 | -3,503.97 | 0.00 | 3,503.97 | 4,488.01 | 1,244.67 | 6,698.58 | 5,511.07 | 0.31 | -0.29 | 0.649 |
| 15.00 | -56.78 | -29.24 | 0.00 | -3,356.16 | 0.00 | 3,356.16 | 4,425.86 | 1,212.94 | 6,361.48 | 5,295.36 | 0.70 | -0.45 | 0.647 |
| 20.00 | -55.03 | -28.92 | 0.00 | -3,209.98 | 0.00 | 3,209.98 | 4,360.98 | 1,181.22 | 6,033.07 | 5,080.38 | 1.25 | -0.60 | 0.645 |
| 25.00 | -53.31 | -28.61 | 0.00 | -3,065.38 | 0.00 | 3,065.38 | 4,293.36 | 1,149.49 | 5,713.38 | 4,866.38 | 1.97 | -0.77 | 0.643 |
| 30.00 | -51.66 | -28.41 | 0.00 | -2,922.33 | 0.00 | 2,922.33 | 4,223.01 | 1,117.76 | 5,402.38 | 4,653.64 | 2.86 | -0.94 | 0.641 |
| 31.25 | -51.22 | -28.26 | 0.00 | -2,886.82 | 0.00 | 2,886.82 | 4,205.00 | 1,109.83 | 5,325.99 | 4,600.68 | 3.12 | -0.98 | 0.640 |
| 35.00 | -49.03 | -28.04 | 0.00 | -2,780.83 | 0.00 | 2,780.83 | 4,149.93 | 1,086.04 | 5,100.09 | 4,442.40 | 3.94 | -1.12 | 0.638 |
| 37.50 | -47.59 | -27.87 | 0.00 | -2,710.72 | 0.00 | 2,710.72 | 4,149.47 | 1,085.84 | 5,098.24 | 4,441.10 | 4.55 | -1.21 | 0.623 |
| 40.00 | -46.76 | -27.63 | 0.00 | -2,641.06 | 0.00 | 2,641.06 | 4,111.89 | 1,069.98 | 4,950.38 | 4,336.13 | 5.21 | -1.30 | 0.621 |
| 45.00 | -45.18 | -27.28 | 0.00 | -2,502.93 | 0.00 | 2,502.93 | 4,034.69 | 1,038.25 | 4,661.20 | 4,127.64 | 6.67 | -1.48 | 0.618 |
| 50.00 | -43.63 | -26.94 | 0.00 | -2,366.51 | 0.00 | 2,366.51 | 3,954.76 | 1,006.53 | 4,380.71 | 3,921.32 | 8.33 | -1.67 | 0.615 |
| 55.00 | -42.12 | -26.59 | 0.00 | -2,231.82 | 0.00 | 2,231.82 | 3,872.09 | 974.80 | 4,108.94 | 3,717.40 | 10.18 | -1.87 | 0.612 |
| 60.00 | -40.65 | -26.29 | 0.00 | -2,098.87 | 0.00 | 2,098.87 | 3,786.70 | 943.07 | 3,845.86 | 3,516.15 | 12.25 | -2.07 | 0.608 |
| 63.25 | -39.72 | -26.11 | 0.00 | -2,013.42 | 0.00 | 2,013.42 | 3,729.72 | 922.45 | 3,679.52 | 3,386.89 | 13.70 | -2.21 | 0.606 |
| 65.00 | -38.83 | -25.92 | 0.00 | -1,967.72 | 0.00 | 1,967.72 | 3,698.56 | 911.35 | 3,591.48 | 3,317.83 | 14.53 | -2.28 | 0.604 |
| 68.75 | -36.99 | -25.69 | 0.00 | -1,870.54 | 0.00 | 1,870.54 | 3,675.54 | 903.22 | 3,527.71 | 3,267.52 | 16.38 | -2.45 | 0.583 |
| 70.00 | -36.61 | -25.49 | 0.00 | -1,838.43 | 0.00 | 1,838.43 | 3,652.91 | 895.29 | 3,466.04 | 3,218.63 | 17.03 | -2.50 | 0.582 |
| 75.00 | -35.23 | -25.13 | 0.00 | -1,710.99 | 0.00 | 1,710.99 | 3,560.66 | 863.56 | 3,224.77 | 3,025.21 | 19.77 | -2.72 | 0.576 |
| 80.00 | -33.89 | -24.77 | 0.00 | -1,585.36 | 0.00 | 1,585.36 | 3,465.68 | 831.83 | 2,992.21 | 2,835.36 | 22.73 | -2.94 | 0.570 |
| 85.00 | -32.58 | -24.42 | 0.00 | -1,461.50 | 0.00 | 1,461.50 | 3,367.96 | 800.11 | 2,768.35 | 2,649.35 | 25.93 | -3.17 | 0.562 |
| 90.00 | -31.31 | -24.08 | 0.00 | -1,339.41 | 0.00 | 1,339.41 | 3,252.82 | 768.38 | 2,553.19 | 2,456.33 | 29.37 | -3.40 | 0.556 |
| 95.00 | -30.11 | -23.84 | 0.00 | -1,219.03 | 0.00 | 1,219.03 | 3,118.51 | 736.66 | 2,346.73 | 2,256.70 | 33.06 | -3.64 | 0.551 |
| 96.08 | -29.83 | -23.69 | 0.00 | -1,193.21 | 0.00 | 1,193.21 | 3,089.41 | 729.78 | 2,303.15 | 2,214.56 | 33.89 | -3.70 | 0.550 |
| 100.00 | -28.25 | -23.46 | 0.00 | -1,100.42 | 0.00 | 1,100.42 | 2,984.21 | 704.93 | 2,148.98 | 2,065.52 | 37.01 | -3.90 | 0.543 |
| 100.75 | -27.92 | -23.31 | 0.00 | -1,082.83 | 0.00 | 1,082.83 | 3,030.38 | 715.84 | 2,215.99 | 2,130.29 | 37.62 | -3.94 | 0.519 |
| 105.00 | -26.92 | -23.00 | 0.00 | -983.76 | 0.00 | 983.76 | 2,916.22 | 688.87 | 2,052.20 | 1,971.97 | 41.23 | -4.16 | 0.509 |
| 110.00 | -22.05 | -18.99 | 0.00 | -864.33 | 0.00 | 864.33 | 2,781.91 | 657.14 | 1,867.55 | 1,793.54 | 45.71 | -4.40 | 0.491 |
| 113.00 | -21.43 | -18.38 | 0.00 | -807.37 | 0.00 | 807.37 | 2,701.33 | 638.11 | 1,760.94 | 1,690.55 | 48.53 | -4.56 | 0.486 |
| 115.00 | -21.01 | -18.17 | 0.00 | -770.62 | 0.00 | 770.62 | 2,647.61 | 625.42 | 1,691.61 | 1,623.57 | 50.46 | -4.66 | 0.483 |
| 120.00 | -20.05 | -17.84 | 0.00 | -679.79 | 0.00 | 679.79 | 2,513.30 | 593.69 | 1,524.37 | 1,462.07 | 55.47 | -4.92 | 0.474 |
| 125.00 | -19.12 | -17.53 | 0.00 | -590.60 | 0.00 | 590.60 | 2,378.99 | 561.97 | 1,365.83 | 1,309.02 | 60.76 | -5.18 | 0.460 |
| 129.75 | -18.30 | -17.33 | 0.00 | -507.35 | 0.00 | 507.35 | 2,251.40 | 531.83 | 1,223.29 | 1,171.46 | 66.03 | -5.43 | 0.442 |
| 130.00 | -18.21 | -17.24 | 0.00 | -503.02 | 0.00 | 503.02 | 2,244.69 | 530.24 | 1,216.00 | 1,164.43 | 66.32 | -5.45 | 0.441 |
| 133.58 | -17.23 | -17.03 | 0.00 | -441.24 | 0.00 | 441.24 | 1,841.02 | 434.89 | 981.50 | 942.04 | 70.48 | -5.64 | 0.479 |
| 135.00 | -17.00 | -16.88 | 0.00 | -417.11 | 0.00 | 417.11 | 1,809.31 | 427.40 | 947.99 | 909.67 | 72.16 | -5.72 | 0.469 |
| 140.00 | -13.71 | -13.78 | 0.00 | -327.78 | 0.00 | 327.78 | 1,697.39 | 400.96 | 834.35 | 799.95 | 78.30 | -6.01 | 0.419 |
| 145.00 | -13.04 | -13.50 | 0.00 | -258.88 | 0.00 | 258.88 | 1,585.46 | 374.52 | 727.97 | 697.27 | 84.73 | -6.28 | 0.381 |
| 150.00 | -12.42 | -13.25 | 0.00 | -191.38 | 0.00 | 191.38 | 1,473.54 | 348.08 | 628.84 | 601.65 | 91.44 | -6.54 | 0.328 |
| 154.00 | -6.27 | -7.00 | 0.00 | -138.39 | 0.00 | 138.39 | 1,384.00 | 326.93 | 554.76 | 530.23 | 96.99 | -6.73 | 0.266 |
| 155.00 | -6.19 | -6.87 | 0.00 | -131.38 | 0.00 | 131.38 | 1,361.62 | 321.64 | 536.96 | 513.08 | 98.40 | -6.77 | 0.261 |
| 160.00 | -5.78 | -6.63 | 0.00 | -97.04 | 0.00 | 97.04 | 1,249.70 | 295.20 | 452.34 | 431.55 | 105.59 | -6.98 | 0.230 |

Site Number: 370627

Code: ANSI/TIA-222-H

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

9/23/2020 4:48:00 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0W

118 mph with No Ice

27 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 1.20

Wind Load Factor : 1.00

| | | | | | | | | | | | | | |
|--------|-------|-------|------|--------|------|-------|----------|--------|--------|--------|--------|-------|-------|
| 164.33 | -5.44 | -6.49 | 0.00 | -68.32 | 0.00 | 68.32 | 1,152.70 | 272.29 | 384.86 | 366.60 | 111.99 | -7.15 | 0.192 |
| 165.00 | -5.36 | -6.42 | 0.00 | -63.99 | 0.00 | 63.99 | 1,137.78 | 268.77 | 374.96 | 357.08 | 112.99 | -7.17 | 0.184 |
| 167.25 | -5.09 | -6.29 | 0.00 | -49.54 | 0.00 | 49.54 | 903.09 | 213.33 | 295.25 | 282.29 | 116.38 | -7.25 | 0.182 |
| 170.00 | -2.04 | -2.47 | 0.00 | -25.23 | 0.00 | 25.23 | 853.84 | 201.69 | 263.94 | 252.11 | 120.57 | -7.33 | 0.103 |
| 175.00 | -1.83 | -2.29 | 0.00 | -12.86 | 0.00 | 12.86 | 764.30 | 180.54 | 211.50 | 201.60 | 128.27 | -7.42 | 0.066 |
| 179.00 | 0.00 | -2.03 | 0.00 | -3.70 | 0.00 | 3.70 | 692.67 | 163.62 | 173.72 | 165.26 | 134.49 | -7.46 | 0.023 |

| | | |
|-------------------------------|----------------------------------|---------------|
| Load Case: 0.9D + 1.0W | 118 mph with No Ice (Reduced DL) | 27 Iterations |
| Gust Response Factor : 1.10 | | |
| Dead Load Factor : 0.90 | | |
| Wind Load Factor : 1.00 | | |

Applied Segment Forces Summary

| Seg Elev (ft) | Description | Shaft Forces | | Discrete Forces | | | Linear Forces | | Sum of Forces | | | | |
|---------------|-----------------|--------------|----------------|-----------------|--------------------|-------------------|----------------|--------------|----------------|--------------|----------------|--------------------|----------------|
| | | Wind FX (lb) | Dead Load (lb) | Wind FX (lb) | Torsion MY (lb-ft) | Moment MZ (lb-ft) | Dead Load (lb) | Wind FX (lb) | Dead Load (lb) | Wind FX (lb) | Dead Load (lb) | Torsion MY (lb-ft) | Moment MZ (lb) |
| 0.00 | | 249.7 | 0.0 | | | | | 0.0 | 0.0 | 249.7 | 0.0 | 0.0 | 0.0 |
| 5.00 | | 493.3 | 1,127.5 | | | | | 0.0 | 212.0 | 493.3 | 1,339.5 | 0.0 | 0.0 |
| 10.00 | | 481.1 | 1,099.8 | | | | | 0.0 | 212.0 | 481.1 | 1,311.9 | 0.0 | 0.0 |
| 15.00 | | 468.9 | 1,072.1 | | | | | 0.0 | 212.0 | 468.9 | 1,284.2 | 0.0 | 0.0 |
| 20.00 | | 456.8 | 1,044.5 | | | | | 0.0 | 212.0 | 456.8 | 1,256.5 | 0.0 | 0.0 |
| 25.00 | | 444.6 | 1,016.8 | | | | | 0.0 | 212.0 | 444.6 | 1,228.8 | 0.0 | 0.0 |
| 30.00 | | 273.5 | 989.1 | | | | | 0.0 | 212.0 | 273.5 | 1,201.1 | 0.0 | 0.0 |
| 31.25 | Bot - Section 2 | 220.5 | 242.9 | | | | | 0.0 | 53.0 | 220.5 | 296.0 | 0.0 | 0.0 |
| 35.00 | | 278.1 | 1,447.2 | | | | | 0.0 | 159.0 | 278.1 | 1,606.2 | 0.0 | 0.0 |
| 37.50 | Top - Section 1 | 224.0 | 947.5 | | | | | 0.0 | 106.0 | 224.0 | 1,053.5 | 0.0 | 0.0 |
| 40.00 | | 337.8 | 470.2 | | | | | 0.0 | 106.0 | 337.8 | 576.3 | 0.0 | 0.0 |
| 45.00 | | 451.3 | 919.7 | | | | | 0.0 | 212.0 | 451.3 | 1,131.8 | 0.0 | 0.0 |
| 50.00 | | 451.1 | 892.0 | | | | | 0.0 | 212.0 | 451.1 | 1,104.1 | 0.0 | 0.0 |
| 55.00 | | 449.0 | 864.4 | | | | | 0.0 | 212.0 | 449.0 | 1,076.4 | 0.0 | 0.0 |
| 60.00 | | 368.2 | 836.7 | | | | | 0.0 | 212.0 | 368.2 | 1,048.7 | 0.0 | 0.0 |
| 63.25 | Bot - Section 3 | 223.0 | 529.0 | | | | | 0.0 | 137.8 | 223.0 | 666.8 | 0.0 | 0.0 |
| 65.00 | | 245.9 | 564.8 | | | | | 0.0 | 74.2 | 245.9 | 639.0 | 0.0 | 0.0 |
| 68.75 | Top - Section 2 | 222.7 | 1,187.4 | | | | | 0.0 | 159.0 | 222.7 | 1,346.4 | 0.0 | 0.0 |
| 70.00 | | 274.9 | 196.2 | | | | | 0.0 | 53.0 | 274.9 | 249.2 | 0.0 | 0.0 |
| 75.00 | | 435.2 | 767.3 | | | | | 0.0 | 212.0 | 435.2 | 979.3 | 0.0 | 0.0 |
| 80.00 | | 427.1 | 739.6 | | | | | 0.0 | 212.0 | 427.1 | 951.7 | 0.0 | 0.0 |
| 85.00 | | 418.2 | 711.9 | | | | | 0.0 | 212.0 | 418.2 | 924.0 | 0.0 | 0.0 |
| 90.00 | | 408.4 | 684.3 | | | | | 0.0 | 212.0 | 408.4 | 896.3 | 0.0 | 0.0 |
| 95.00 | | 244.6 | 656.6 | | | | | 0.0 | 212.0 | 244.6 | 868.6 | 0.0 | 0.0 |
| 96.08 | Bot - Section 4 | 199.4 | 138.6 | | | | | 0.0 | 45.9 | 199.4 | 184.6 | 0.0 | 0.0 |
| 100.00 | | 186.0 | 991.3 | | | | | 0.0 | 166.1 | 186.0 | 1,157.4 | 0.0 | 0.0 |
| 100.75 | Top - Section 3 | 194.6 | 185.9 | | | | | 0.0 | 31.8 | 194.6 | 217.8 | 0.0 | 0.0 |
| 105.00 | | 353.5 | 520.9 | | | | | 0.0 | 180.2 | 353.5 | 701.1 | 0.0 | 0.0 |
| 110.00 | Appurtenance(s) | 298.5 | 587.2 | 3,424.1 | 0.0 | 4,420.2 | 3,019.6 | 0.0 | 212.0 | 3,722.6 | 3,818.8 | 0.0 | 0.0 |
| 113.00 | Appurtenance(s) | 182.0 | 339.0 | 426.9 | 0.0 | 0.0 | 45.9 | 0.0 | 93.6 | 608.9 | 478.6 | 0.0 | 0.0 |
| 115.00 | | 247.3 | 220.5 | | | | | 0.0 | 62.4 | 247.3 | 282.9 | 0.0 | 0.0 |
| 120.00 | | 343.6 | 531.8 | | | | | 0.0 | 156.1 | 343.6 | 687.9 | 0.0 | 0.0 |
| 125.00 | | 321.4 | 504.2 | | | | | 0.0 | 156.1 | 321.4 | 660.2 | 0.0 | 0.0 |
| 129.75 | Bot - Section 5 | 161.2 | 453.3 | | | | | 0.0 | 148.3 | 161.2 | 601.6 | 0.0 | 0.0 |
| 130.00 | | 121.6 | 43.0 | | | | | 0.0 | 7.8 | 121.6 | 50.8 | 0.0 | 0.0 |
| 133.58 | Top - Section 4 | 157.3 | 602.3 | | | | | 0.0 | 111.8 | 157.3 | 714.1 | 0.0 | 0.0 |
| 135.00 | | 193.3 | 106.6 | | | | | 0.0 | 44.2 | 193.3 | 150.8 | 0.0 | 0.0 |
| 140.00 | Appurtenance(s) | 291.1 | 361.4 | 2,525.6 | 0.0 | 4,948.3 | 2,130.2 | 0.0 | 156.1 | 2,816.7 | 2,647.6 | 0.0 | 0.0 |
| 145.00 | | 274.9 | 338.3 | | | | | 0.0 | 138.1 | 274.9 | 476.4 | 0.0 | 0.0 |
| 150.00 | | 234.0 | 315.2 | | | | | 0.0 | 138.1 | 234.0 | 453.3 | 0.0 | 0.0 |
| 154.00 | Appurtenance(s) | 124.9 | 235.6 | 5,379.6 | 0.0 | 0.0 | 4,765.3 | 0.0 | 110.4 | 5,504.5 | 5,111.3 | 0.0 | 0.0 |
| 155.00 | | 140.6 | 56.6 | | | | | 0.0 | 8.7 | 140.6 | 65.2 | 0.0 | 0.0 |
| 160.00 | | 209.9 | 269.1 | | | | | 0.0 | 43.3 | 209.9 | 312.4 | 0.0 | 0.0 |
| 164.33 | Bot - Section 6 | 107.9 | 214.6 | | | | | 0.0 | 37.5 | 107.9 | 252.1 | 0.0 | 0.0 |
| 165.00 | | 61.1 | 57.6 | | | | | 0.0 | 5.8 | 61.1 | 63.3 | 0.0 | 0.0 |
| 167.25 | Top - Section 5 | 101.7 | 188.8 | | | | | 0.0 | 19.5 | 101.7 | 208.3 | 0.0 | 0.0 |
| 170.00 | Appurtenance(s) | 147.3 | 99.6 | 3,259.5 | 0.0 | 6,999.9 | 2,505.9 | 0.0 | 23.8 | 3,406.8 | 2,629.3 | 0.0 | 0.0 |
| 175.00 | | 159.7 | 166.8 | | | | | 0.0 | 4.5 | 159.7 | 171.2 | 0.0 | 0.0 |

Site Number: 370627

Code: ANSI/TIA-222-H

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

9/23/2020 4:48:05 PM

Customer: AT&T MOBILITY

Load Case: 0.9D + 1.0W

118 mph with No Ice (Reduced DL)

27 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 0.90

Wind Load Factor : 1.00

| | | | | | | | | | | | | | |
|---------|-----------------|------|-------|-------|-----|-----|---------|-----|-----|----------|----------|------|------|
| 179.00 | Appurtenance(s) | 67.2 | 120.1 | 939.9 | 0.0 | 0.0 | 1,350.0 | 0.0 | 3.6 | 1,007.2 | 1,473.7 | 0.0 | 0.0 |
| Totals: | | | | | | | | | | 29,383.6 | 46,606.9 | 0.00 | 0.00 |

Site Number: 370627

Code: ANSI/TIA-222-H

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

9/23/2020 4:48:05 PM

Customer: AT&T MOBILITY

Load Case: 0.9D + 1.0W

118 mph with No Ice (Reduced DL)

27 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 0.90

Wind Load Factor : 1.00

Calculated Forces

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | phi Pn (kips) | phi Vn (kips) | phi Tn (ft-kips) | phi Mn (ft-kips) | Total Deflect (in) | Rotation (deg) | Ratio |
|---------------|------------------|------------------|-----------------|-----------------|-----------------|----------------------------|---------------|---------------|------------------|------------------|--------------------|----------------|-------|
| 0.00 | -46.68 | -30.22 | 0.00 | -3,741.27 | 0.00 | 3,741.27 | 4,604.11 | 1,308.12 | 7,398.90 | 5,943.65 | 0.00 | 0.00 | 0.640 |
| 5.00 | -45.27 | -29.84 | 0.00 | -3,590.19 | 0.00 | 3,590.19 | 4,547.42 | 1,276.39 | 7,044.39 | 5,727.25 | 0.08 | -0.14 | 0.637 |
| 10.00 | -43.88 | -29.46 | 0.00 | -3,441.02 | 0.00 | 3,441.02 | 4,488.01 | 1,244.67 | 6,698.58 | 5,511.07 | 0.30 | -0.29 | 0.635 |
| 15.00 | -42.52 | -29.10 | 0.00 | -3,293.71 | 0.00 | 3,293.71 | 4,425.86 | 1,212.94 | 6,361.48 | 5,295.36 | 0.68 | -0.44 | 0.632 |
| 20.00 | -41.19 | -28.75 | 0.00 | -3,148.21 | 0.00 | 3,148.21 | 4,360.98 | 1,181.22 | 6,033.07 | 5,080.38 | 1.23 | -0.59 | 0.630 |
| 25.00 | -39.89 | -28.40 | 0.00 | -3,004.49 | 0.00 | 3,004.49 | 4,293.36 | 1,149.49 | 5,713.38 | 4,866.38 | 1.93 | -0.75 | 0.627 |
| 30.00 | -38.64 | -28.18 | 0.00 | -2,862.49 | 0.00 | 2,862.49 | 4,223.01 | 1,117.76 | 5,402.38 | 4,653.64 | 2.81 | -0.92 | 0.625 |
| 31.25 | -38.30 | -28.01 | 0.00 | -2,827.27 | 0.00 | 2,827.27 | 4,205.00 | 1,109.83 | 5,325.99 | 4,600.68 | 3.06 | -0.96 | 0.624 |
| 35.00 | -36.65 | -27.78 | 0.00 | -2,722.22 | 0.00 | 2,722.22 | 4,149.93 | 1,086.04 | 5,100.09 | 4,442.40 | 3.87 | -1.10 | 0.622 |
| 37.50 | -35.56 | -27.59 | 0.00 | -2,652.78 | 0.00 | 2,652.78 | 4,149.47 | 1,085.84 | 5,098.24 | 4,441.10 | 4.47 | -1.19 | 0.607 |
| 40.00 | -34.92 | -27.32 | 0.00 | -2,583.81 | 0.00 | 2,583.81 | 4,111.89 | 1,069.98 | 4,950.38 | 4,336.13 | 5.12 | -1.28 | 0.605 |
| 45.00 | -33.72 | -26.95 | 0.00 | -2,447.21 | 0.00 | 2,447.21 | 4,034.69 | 1,038.25 | 4,661.20 | 4,127.64 | 6.55 | -1.46 | 0.602 |
| 50.00 | -32.54 | -26.57 | 0.00 | -2,312.47 | 0.00 | 2,312.47 | 3,954.76 | 1,006.53 | 4,380.71 | 3,921.32 | 8.17 | -1.64 | 0.599 |
| 55.00 | -31.39 | -26.20 | 0.00 | -2,179.60 | 0.00 | 2,179.60 | 3,872.09 | 974.80 | 4,108.94 | 3,717.40 | 9.99 | -1.83 | 0.595 |
| 60.00 | -30.28 | -25.88 | 0.00 | -2,048.60 | 0.00 | 2,048.60 | 3,786.70 | 943.07 | 3,845.86 | 3,516.15 | 12.01 | -2.03 | 0.591 |
| 63.25 | -29.57 | -25.69 | 0.00 | -1,964.48 | 0.00 | 1,964.48 | 3,729.72 | 922.45 | 3,679.52 | 3,386.89 | 13.44 | -2.16 | 0.589 |
| 65.00 | -28.89 | -25.48 | 0.00 | -1,919.53 | 0.00 | 1,919.53 | 3,698.56 | 911.35 | 3,591.48 | 3,317.83 | 14.24 | -2.23 | 0.587 |
| 68.75 | -27.51 | -25.25 | 0.00 | -1,823.98 | 0.00 | 1,823.98 | 3,675.54 | 903.22 | 3,527.71 | 3,267.52 | 16.06 | -2.39 | 0.566 |
| 70.00 | -27.21 | -25.03 | 0.00 | -1,792.42 | 0.00 | 1,792.42 | 3,652.91 | 895.29 | 3,466.04 | 3,218.63 | 16.69 | -2.45 | 0.565 |
| 75.00 | -26.16 | -24.65 | 0.00 | -1,667.26 | 0.00 | 1,667.26 | 3,560.66 | 863.56 | 3,224.77 | 3,025.21 | 19.37 | -2.66 | 0.559 |
| 80.00 | -25.14 | -24.27 | 0.00 | -1,544.02 | 0.00 | 1,544.02 | 3,465.68 | 831.83 | 2,992.21 | 2,835.36 | 22.27 | -2.87 | 0.553 |
| 85.00 | -24.15 | -23.90 | 0.00 | -1,422.65 | 0.00 | 1,422.65 | 3,367.96 | 800.11 | 2,768.35 | 2,649.35 | 25.40 | -3.09 | 0.545 |
| 90.00 | -23.18 | -23.54 | 0.00 | -1,303.14 | 0.00 | 1,303.14 | 3,252.82 | 768.38 | 2,553.19 | 2,456.33 | 28.76 | -3.32 | 0.539 |
| 95.00 | -22.27 | -23.30 | 0.00 | -1,185.44 | 0.00 | 1,185.44 | 3,118.51 | 736.66 | 2,346.73 | 2,256.70 | 32.36 | -3.56 | 0.533 |
| 96.08 | -22.05 | -23.14 | 0.00 | -1,160.20 | 0.00 | 1,160.20 | 3,089.41 | 729.78 | 2,303.15 | 2,214.56 | 33.18 | -3.62 | 0.532 |
| 100.00 | -20.86 | -22.92 | 0.00 | -1,069.58 | 0.00 | 1,069.58 | 2,984.21 | 704.93 | 2,148.98 | 2,065.52 | 36.22 | -3.81 | 0.526 |
| 100.75 | -20.60 | -22.76 | 0.00 | -1,052.39 | 0.00 | 1,052.39 | 3,030.38 | 715.84 | 2,215.99 | 2,130.29 | 36.83 | -3.85 | 0.502 |
| 105.00 | -19.84 | -22.43 | 0.00 | -955.68 | 0.00 | 955.68 | 2,916.22 | 688.87 | 2,052.20 | 1,971.97 | 40.35 | -4.06 | 0.492 |
| 110.00 | -16.24 | -18.50 | 0.00 | -839.09 | 0.00 | 839.09 | 2,781.91 | 657.14 | 1,867.55 | 1,793.54 | 44.73 | -4.30 | 0.474 |
| 113.00 | -15.77 | -17.89 | 0.00 | -783.61 | 0.00 | 783.61 | 2,701.33 | 638.11 | 1,760.94 | 1,690.55 | 47.47 | -4.45 | 0.470 |
| 115.00 | -15.45 | -17.67 | 0.00 | -747.83 | 0.00 | 747.83 | 2,647.61 | 625.42 | 1,691.61 | 1,623.57 | 49.36 | -4.55 | 0.467 |
| 120.00 | -14.72 | -17.33 | 0.00 | -659.50 | 0.00 | 659.50 | 2,513.30 | 593.69 | 1,524.37 | 1,462.07 | 54.25 | -4.80 | 0.458 |
| 125.00 | -14.02 | -17.02 | 0.00 | -572.85 | 0.00 | 572.85 | 2,378.99 | 561.97 | 1,365.83 | 1,309.02 | 59.41 | -5.05 | 0.444 |
| 129.75 | -13.39 | -16.83 | 0.00 | -492.02 | 0.00 | 492.02 | 2,251.40 | 531.83 | 1,223.29 | 1,171.46 | 64.55 | -5.30 | 0.427 |
| 130.00 | -13.32 | -16.73 | 0.00 | -487.81 | 0.00 | 487.81 | 2,244.69 | 530.24 | 1,216.00 | 1,164.43 | 64.83 | -5.31 | 0.426 |
| 133.58 | -12.59 | -16.54 | 0.00 | -427.86 | 0.00 | 427.86 | 1,841.02 | 434.89 | 981.50 | 942.04 | 68.88 | -5.50 | 0.462 |
| 135.00 | -12.41 | -16.37 | 0.00 | -404.44 | 0.00 | 404.44 | 1,809.31 | 427.40 | 947.99 | 909.67 | 70.52 | -5.58 | 0.453 |
| 140.00 | -9.99 | -13.35 | 0.00 | -317.65 | 0.00 | 317.65 | 1,697.39 | 400.96 | 834.35 | 799.95 | 76.51 | -5.86 | 0.404 |
| 145.00 | -9.49 | -13.07 | 0.00 | -250.91 | 0.00 | 250.91 | 1,585.46 | 374.52 | 727.97 | 697.27 | 82.78 | -6.12 | 0.367 |
| 150.00 | -9.01 | -12.82 | 0.00 | -185.57 | 0.00 | 185.57 | 1,473.54 | 348.08 | 628.84 | 601.65 | 89.32 | -6.37 | 0.316 |
| 154.00 | -4.54 | -6.78 | 0.00 | -134.29 | 0.00 | 134.29 | 1,384.00 | 326.93 | 554.76 | 530.23 | 94.72 | -6.55 | 0.257 |
| 155.00 | -4.48 | -6.65 | 0.00 | -127.51 | 0.00 | 127.51 | 1,361.62 | 321.64 | 536.96 | 513.08 | 96.10 | -6.60 | 0.252 |
| 160.00 | -4.17 | -6.41 | 0.00 | -94.28 | 0.00 | 94.28 | 1,249.70 | 295.20 | 452.34 | 431.55 | 103.10 | -6.80 | 0.222 |

Site Number: 370627

Code: ANSI/TIA-222-H

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

9/23/2020 4:48:05 PM

Customer: AT&T MOBILITY

Load Case: 0.9D + 1.0W

118 mph with No Ice (Reduced DL)

27 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 0.90

Wind Load Factor : 1.00

| | | | | | | | | | | | | | |
|--------|-------|-------|------|--------|------|-------|----------|--------|--------|--------|--------|-------|-------|
| 164.33 | -3.92 | -6.28 | 0.00 | -66.48 | 0.00 | 66.48 | 1,152.70 | 272.29 | 384.86 | 366.60 | 109.33 | -6.96 | 0.185 |
| 165.00 | -3.86 | -6.22 | 0.00 | -62.29 | 0.00 | 62.29 | 1,137.78 | 268.77 | 374.96 | 357.08 | 110.30 | -6.98 | 0.178 |
| 167.25 | -3.66 | -6.10 | 0.00 | -48.30 | 0.00 | 48.30 | 903.09 | 213.33 | 295.25 | 282.29 | 113.60 | -7.06 | 0.176 |
| 170.00 | -1.47 | -2.39 | 0.00 | -24.53 | 0.00 | 24.53 | 853.84 | 201.69 | 263.94 | 252.11 | 117.69 | -7.14 | 0.099 |
| 175.00 | -1.32 | -2.22 | 0.00 | -12.57 | 0.00 | 12.57 | 764.30 | 180.54 | 211.50 | 201.60 | 125.19 | -7.22 | 0.064 |
| 179.00 | 0.00 | -2.03 | 0.00 | -3.70 | 0.00 | 3.70 | 692.67 | 163.62 | 173.72 | 165.26 | 131.25 | -7.27 | 0.023 |

| | | |
|--|--------------------------------|------------------------------|
| Load Case: 1.2D + 1.0Di + 1.0Wi | 50 mph with 1.50 in Radial Ice | 27 Iterations |
| Gust Response Factor : 1.10 | Ice Dead Load Factor : 1.00 | |
| Dead Load Factor : 1.20 | | Ice Importance Factor : 1.00 |
| Wind Load Factor : 1.00 | | |

Applied Segment Forces Summary

| Seg Elev (ft) | Description | Shaft Forces | | Discrete Forces | | | Linear Forces | | Sum of Forces | | | | |
|---------------|-----------------|--------------|----------------|-----------------|--------------------|-------------------|----------------|--------------|----------------|--------------|----------------|--------------------|----------------|
| | | Wind FX (lb) | Dead Load (lb) | Wind FX (lb) | Torsion MY (lb-ft) | Moment MZ (lb-ft) | Dead Load (lb) | Wind FX (lb) | Dead Load (lb) | Wind FX (lb) | Dead Load (lb) | Torsion MY (lb-ft) | Moment MZ (lb) |
| 0.00 | | 76.4 | 0.0 | | | | | 0.0 | 0.0 | 76.4 | 0.0 | 0.0 | 0.0 |
| 5.00 | | 151.3 | 1,958.1 | | | | | 0.0 | 282.7 | 151.3 | 2,240.8 | 0.0 | 0.0 |
| 10.00 | | 148.2 | 1,962.8 | | | | | 0.0 | 282.7 | 148.2 | 2,245.5 | 0.0 | 0.0 |
| 15.00 | | 144.9 | 1,939.5 | | | | | 0.0 | 282.7 | 144.9 | 2,222.2 | 0.0 | 0.0 |
| 20.00 | | 141.5 | 1,907.0 | | | | | 0.0 | 282.7 | 141.5 | 2,189.8 | 0.0 | 0.0 |
| 25.00 | | 138.0 | 1,869.8 | | | | | 0.0 | 282.7 | 138.0 | 2,152.5 | 0.0 | 0.0 |
| 30.00 | | 85.0 | 1,829.6 | | | | | 0.0 | 282.7 | 85.0 | 2,112.3 | 0.0 | 0.0 |
| 31.25 | Bot - Section 2 | 68.7 | 452.2 | | | | | 0.0 | 70.7 | 68.7 | 522.8 | 0.0 | 0.0 |
| 35.00 | | 86.6 | 2,314.6 | | | | | 0.0 | 212.0 | 86.6 | 2,526.7 | 0.0 | 0.0 |
| 37.50 | Top - Section 1 | 69.9 | 1,518.8 | | | | | 0.0 | 141.4 | 69.9 | 1,660.2 | 0.0 | 0.0 |
| 40.00 | | 105.6 | 880.6 | | | | | 0.0 | 141.4 | 105.6 | 1,022.0 | 0.0 | 0.0 |
| 45.00 | | 141.3 | 1,723.7 | | | | | 0.0 | 282.7 | 141.3 | 2,006.4 | 0.0 | 0.0 |
| 50.00 | | 141.6 | 1,677.7 | | | | | 0.0 | 282.7 | 141.6 | 1,960.5 | 0.0 | 0.0 |
| 55.00 | | 141.3 | 1,630.9 | | | | | 0.0 | 282.7 | 141.3 | 1,913.7 | 0.0 | 0.0 |
| 60.00 | | 116.1 | 1,583.4 | | | | | 0.0 | 282.7 | 116.1 | 1,866.2 | 0.0 | 0.0 |
| 63.25 | Bot - Section 3 | 70.4 | 1,005.2 | | | | | 0.0 | 183.8 | 70.4 | 1,189.0 | 0.0 | 0.0 |
| 65.00 | | 77.8 | 916.0 | | | | | 0.0 | 99.0 | 77.8 | 1,014.9 | 0.0 | 0.0 |
| 68.75 | Top - Section 2 | 70.5 | 1,925.2 | | | | | 0.0 | 212.0 | 70.5 | 2,137.2 | 0.0 | 0.0 |
| 70.00 | | 87.2 | 375.0 | | | | | 0.0 | 70.7 | 87.2 | 445.7 | 0.0 | 0.0 |
| 75.00 | | 138.3 | 1,463.6 | | | | | 0.0 | 282.7 | 138.3 | 1,746.3 | 0.0 | 0.0 |
| 80.00 | | 136.2 | 1,414.2 | | | | | 0.0 | 282.7 | 136.2 | 1,696.9 | 0.0 | 0.0 |
| 85.00 | | 133.8 | 1,364.4 | | | | | 0.0 | 282.7 | 133.8 | 1,647.1 | 0.0 | 0.0 |
| 90.00 | | 131.1 | 1,314.3 | | | | | 0.0 | 282.7 | 131.1 | 1,597.0 | 0.0 | 0.0 |
| 95.00 | | 78.7 | 1,263.9 | | | | | 0.0 | 282.7 | 78.7 | 1,546.6 | 0.0 | 0.0 |
| 96.08 | Bot - Section 4 | 64.3 | 268.5 | | | | | 0.0 | 61.3 | 64.3 | 329.8 | 0.0 | 0.0 |
| 100.00 | | 60.0 | 1,621.6 | | | | | 0.0 | 221.5 | 60.0 | 1,843.0 | 0.0 | 0.0 |
| 100.75 | Top - Section 3 | 63.0 | 305.1 | | | | | 0.0 | 42.4 | 63.0 | 347.5 | 0.0 | 0.0 |
| 105.00 | | 114.7 | 1,007.9 | | | | | 0.0 | 240.3 | 114.7 | 1,248.2 | 0.0 | 0.0 |
| 110.00 | Appurtenance(s) | 97.2 | 1,137.3 | 859.7 | 0.0 | 1,033.1 | 7,447.1 | 0.0 | 282.7 | 97.0 | 8,867.1 | 0.0 | 0.0 |
| 113.00 | Appurtenance(s) | 59.5 | 659.7 | 103.8 | 0.0 | 0.0 | 429.4 | 0.0 | 124.8 | 163.3 | 1,213.9 | 0.0 | 0.0 |
| 115.00 | | 81.2 | 430.1 | | | | | 0.0 | 83.2 | 81.2 | 513.4 | 0.0 | 0.0 |
| 120.00 | | 113.2 | 1,034.4 | | | | | 0.0 | 208.1 | 113.2 | 1,242.5 | 0.0 | 0.0 |
| 125.00 | | 106.6 | 982.6 | | | | | 0.0 | 208.1 | 106.6 | 1,190.7 | 0.0 | 0.0 |
| 129.75 | Bot - Section 5 | 53.6 | 885.8 | | | | | 0.0 | 197.7 | 53.6 | 1,083.5 | 0.0 | 0.0 |
| 130.00 | | 40.6 | 72.5 | | | | | 0.0 | 10.4 | 40.6 | 82.9 | 0.0 | 0.0 |
| 133.58 | Top - Section 4 | 52.6 | 1,011.9 | | | | | 0.0 | 149.1 | 52.6 | 1,161.0 | 0.0 | 0.0 |
| 135.00 | | 65.1 | 223.5 | | | | | 0.0 | 59.0 | 65.1 | 282.5 | 0.0 | 0.0 |
| 140.00 | Appurtenance(s) | 98.5 | 753.4 | 697.1 | 0.0 | 1,204.5 | 4,875.7 | 0.0 | 208.1 | 795.6 | 5,837.2 | 0.0 | 0.0 |
| 145.00 | | 93.9 | 707.2 | | | | | 0.0 | 184.1 | 93.9 | 891.3 | 0.0 | 0.0 |
| 150.00 | | 80.7 | 660.8 | | | | | 0.0 | 184.1 | 80.7 | 844.9 | 0.0 | 0.0 |
| 154.00 | Appurtenance(s) | 43.4 | 496.5 | 1,388.7 | 0.0 | 0.0 | 11,707.9 | 0.0 | 147.3 | 1,432.0 | 12,351.7 | 0.0 | 0.0 |
| 155.00 | | 49.4 | 120.5 | | | | | 0.0 | 11.5 | 49.4 | 132.0 | 0.0 | 0.0 |
| 160.00 | | 74.3 | 567.6 | | | | | 0.0 | 57.7 | 74.3 | 625.3 | 0.0 | 0.0 |
| 164.33 | Bot - Section 6 | 38.5 | 455.0 | | | | | 0.0 | 50.0 | 38.5 | 505.1 | 0.0 | 0.0 |
| 165.00 | | 22.0 | 103.2 | | | | | 0.0 | 7.7 | 22.0 | 110.9 | 0.0 | 0.0 |
| 167.25 | Top - Section 5 | 36.7 | 337.8 | | | | | 0.0 | 26.0 | 36.7 | 363.8 | 0.0 | 0.0 |
| 170.00 | Appurtenance(s) | 54.0 | 233.0 | 847.8 | 0.0 | 1,597.0 | 5,902.1 | 0.0 | 31.7 | 901.8 | 6,166.8 | 0.0 | 0.0 |
| 175.00 | | 59.5 | 388.2 | | | | | 0.0 | 5.9 | 59.5 | 394.2 | 0.0 | 0.0 |

Site Number: 370627

Code: ANSI/TIA-222-H

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

9/23/2020 4:48:10 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 1.50 in Radial Ice

27 Iterations

Gust Response Factor : 1.10

Ice Dead Load Factor : 1.00

Dead Load Factor : 1.20

Ice Importance Factor : 1.00

Wind Load Factor : 1.00

Calculated Forces

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | phi Pn (kips) | phi Vn (kips) | phi Tn (ft-kips) | phi Mn (ft-kips) | Total Deflect (in) | Rotation (deg) | Ratio |
|---------------|------------------|------------------|-----------------|-----------------|-----------------|----------------------------|---------------|---------------|------------------|------------------|--------------------|----------------|-------|
| 0.00 | -90.68 | -9.09 | 0.00 | -1,197.07 | 0.00 | 1,197.07 | 4,604.11 | 1,308.12 | 7,398.90 | 5,943.65 | 0.00 | 0.00 | 0.221 |
| 5.00 | -88.43 | -9.01 | 0.00 | -1,151.63 | 0.00 | 1,151.63 | 4,547.42 | 1,276.39 | 7,044.39 | 5,727.25 | 0.02 | -0.05 | 0.221 |
| 10.00 | -86.18 | -8.93 | 0.00 | -1,106.61 | 0.00 | 1,106.61 | 4,488.01 | 1,244.67 | 6,698.58 | 5,511.07 | 0.10 | -0.09 | 0.220 |
| 15.00 | -83.95 | -8.85 | 0.00 | -1,061.97 | 0.00 | 1,061.97 | 4,425.86 | 1,212.94 | 6,361.48 | 5,295.36 | 0.22 | -0.14 | 0.220 |
| 20.00 | -81.75 | -8.78 | 0.00 | -1,017.72 | 0.00 | 1,017.72 | 4,360.98 | 1,181.22 | 6,033.07 | 5,080.38 | 0.39 | -0.19 | 0.219 |
| 25.00 | -79.59 | -8.70 | 0.00 | -973.85 | 0.00 | 973.85 | 4,293.36 | 1,149.49 | 5,713.38 | 4,866.38 | 0.62 | -0.24 | 0.219 |
| 30.00 | -77.47 | -8.65 | 0.00 | -930.34 | 0.00 | 930.34 | 4,223.01 | 1,117.76 | 5,402.38 | 4,653.64 | 0.90 | -0.30 | 0.218 |
| 31.25 | -76.95 | -8.62 | 0.00 | -919.52 | 0.00 | 919.52 | 4,205.00 | 1,109.83 | 5,325.99 | 4,600.68 | 0.98 | -0.31 | 0.218 |
| 35.00 | -74.42 | -8.57 | 0.00 | -887.20 | 0.00 | 887.20 | 4,149.93 | 1,086.04 | 5,100.09 | 4,442.40 | 1.25 | -0.35 | 0.218 |
| 37.50 | -72.75 | -8.52 | 0.00 | -865.78 | 0.00 | 865.78 | 4,149.47 | 1,085.84 | 5,098.24 | 4,441.10 | 1.44 | -0.38 | 0.213 |
| 40.00 | -71.72 | -8.47 | 0.00 | -844.47 | 0.00 | 844.47 | 4,111.89 | 1,069.98 | 4,950.38 | 4,336.13 | 1.65 | -0.41 | 0.212 |
| 45.00 | -69.71 | -8.38 | 0.00 | -802.14 | 0.00 | 802.14 | 4,034.69 | 1,038.25 | 4,661.20 | 4,127.64 | 2.11 | -0.47 | 0.212 |
| 50.00 | -67.74 | -8.29 | 0.00 | -760.24 | 0.00 | 760.24 | 3,954.76 | 1,006.53 | 4,380.71 | 3,921.32 | 2.64 | -0.53 | 0.211 |
| 55.00 | -65.82 | -8.21 | 0.00 | -718.77 | 0.00 | 718.77 | 3,872.09 | 974.80 | 4,108.94 | 3,717.40 | 3.23 | -0.59 | 0.210 |
| 60.00 | -63.95 | -8.13 | 0.00 | -677.73 | 0.00 | 677.73 | 3,786.70 | 943.07 | 3,845.86 | 3,516.15 | 3.89 | -0.66 | 0.210 |
| 63.25 | -62.76 | -8.09 | 0.00 | -651.30 | 0.00 | 651.30 | 3,729.72 | 922.45 | 3,679.52 | 3,386.89 | 4.35 | -0.70 | 0.209 |
| 65.00 | -61.74 | -8.04 | 0.00 | -637.15 | 0.00 | 637.15 | 3,698.56 | 911.35 | 3,591.48 | 3,317.83 | 4.61 | -0.73 | 0.209 |
| 68.75 | -59.60 | -7.98 | 0.00 | -607.01 | 0.00 | 607.01 | 3,675.54 | 903.22 | 3,527.71 | 3,267.52 | 5.21 | -0.78 | 0.202 |
| 70.00 | -59.14 | -7.93 | 0.00 | -597.04 | 0.00 | 597.04 | 3,652.91 | 895.29 | 3,466.04 | 3,218.63 | 5.41 | -0.80 | 0.202 |
| 75.00 | -57.39 | -7.84 | 0.00 | -557.40 | 0.00 | 557.40 | 3,560.66 | 863.56 | 3,224.77 | 3,025.21 | 6.29 | -0.87 | 0.200 |
| 80.00 | -55.69 | -7.74 | 0.00 | -518.23 | 0.00 | 518.23 | 3,465.68 | 831.83 | 2,992.21 | 2,835.36 | 7.24 | -0.94 | 0.199 |
| 85.00 | -54.03 | -7.65 | 0.00 | -479.51 | 0.00 | 479.51 | 3,367.96 | 800.11 | 2,768.35 | 2,649.35 | 8.26 | -1.02 | 0.197 |
| 90.00 | -52.43 | -7.57 | 0.00 | -441.24 | 0.00 | 441.24 | 3,252.82 | 768.38 | 2,553.19 | 2,456.33 | 9.37 | -1.09 | 0.196 |
| 95.00 | -50.88 | -7.50 | 0.00 | -403.42 | 0.00 | 403.42 | 3,118.51 | 736.66 | 2,346.73 | 2,256.70 | 10.56 | -1.17 | 0.195 |
| 96.08 | -50.54 | -7.47 | 0.00 | -395.29 | 0.00 | 395.29 | 3,089.41 | 729.78 | 2,303.15 | 2,214.56 | 10.83 | -1.19 | 0.195 |
| 100.00 | -48.70 | -7.40 | 0.00 | -366.05 | 0.00 | 366.05 | 2,984.21 | 704.93 | 2,148.98 | 2,065.52 | 11.83 | -1.26 | 0.194 |
| 100.75 | -48.34 | -7.37 | 0.00 | -360.50 | 0.00 | 360.50 | 3,030.38 | 715.84 | 2,215.99 | 2,130.29 | 12.03 | -1.27 | 0.185 |
| 105.00 | -47.09 | -7.29 | 0.00 | -329.20 | 0.00 | 329.20 | 2,916.22 | 688.87 | 2,052.20 | 1,971.97 | 13.20 | -1.35 | 0.183 |
| 110.00 | -38.24 | -6.16 | 0.00 | -291.73 | 0.00 | 291.73 | 2,781.91 | 657.14 | 1,867.55 | 1,793.54 | 14.65 | -1.43 | 0.176 |
| 113.00 | -37.03 | -5.99 | 0.00 | -273.25 | 0.00 | 273.25 | 2,701.33 | 638.11 | 1,760.94 | 1,690.55 | 15.56 | -1.48 | 0.175 |
| 115.00 | -36.51 | -5.94 | 0.00 | -261.26 | 0.00 | 261.26 | 2,647.61 | 625.42 | 1,691.61 | 1,623.57 | 16.19 | -1.51 | 0.175 |
| 120.00 | -35.26 | -5.85 | 0.00 | -231.56 | 0.00 | 231.56 | 2,513.30 | 593.69 | 1,524.37 | 1,462.07 | 17.82 | -1.60 | 0.173 |
| 125.00 | -34.07 | -5.76 | 0.00 | -202.33 | 0.00 | 202.33 | 2,378.99 | 561.97 | 1,365.83 | 1,309.02 | 19.55 | -1.69 | 0.169 |
| 129.75 | -32.98 | -5.70 | 0.00 | -174.98 | 0.00 | 174.98 | 2,251.40 | 531.83 | 1,223.29 | 1,171.46 | 21.28 | -1.78 | 0.164 |
| 130.00 | -32.89 | -5.68 | 0.00 | -173.56 | 0.00 | 173.56 | 2,244.69 | 530.24 | 1,216.00 | 1,164.43 | 21.37 | -1.78 | 0.164 |
| 133.58 | -31.73 | -5.61 | 0.00 | -153.22 | 0.00 | 153.22 | 1,841.02 | 434.89 | 981.50 | 942.04 | 22.73 | -1.85 | 0.180 |
| 135.00 | -31.44 | -5.57 | 0.00 | -145.27 | 0.00 | 145.27 | 1,809.31 | 427.40 | 947.99 | 909.67 | 23.29 | -1.88 | 0.177 |
| 140.00 | -25.63 | -4.63 | 0.00 | -116.20 | 0.00 | 116.20 | 1,697.39 | 400.96 | 834.35 | 799.95 | 25.31 | -1.98 | 0.160 |
| 145.00 | -24.73 | -4.54 | 0.00 | -93.06 | 0.00 | 93.06 | 1,585.46 | 374.52 | 727.97 | 697.27 | 27.44 | -2.08 | 0.149 |
| 150.00 | -23.89 | -4.46 | 0.00 | -70.35 | 0.00 | 70.35 | 1,473.54 | 348.08 | 628.84 | 601.65 | 29.66 | -2.17 | 0.133 |
| 154.00 | -11.60 | -2.57 | 0.00 | -52.49 | 0.00 | 52.49 | 1,384.00 | 326.93 | 554.76 | 530.23 | 31.51 | -2.24 | 0.107 |
| 155.00 | -11.47 | -2.52 | 0.00 | -49.92 | 0.00 | 49.92 | 1,361.62 | 321.64 | 536.96 | 513.08 | 31.98 | -2.26 | 0.106 |
| 160.00 | -10.84 | -2.44 | 0.00 | -37.31 | 0.00 | 37.31 | 1,249.70 | 295.20 | 452.34 | 431.55 | 34.39 | -2.34 | 0.095 |

Site Number: 370627

Code: ANSI/TIA-222-H

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

9/23/2020 4:48:10 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 1.50 in Radial Ice

27 Iterations

Gust Response Factor : 1.10

Ice Dead Load Factor : 1.00

Dead Load Factor : 1.20

Ice Importance Factor : 1.00

Wind Load Factor : 1.00

| | | | | | | | | | | | | | |
|--------|--------|-------|------|--------|------|-------|----------|--------|--------|--------|-------|-------|-------|
| 164.33 | -10.34 | -2.38 | 0.00 | -26.76 | 0.00 | 26.76 | 1,152.70 | 272.29 | 384.86 | 366.60 | 36.54 | -2.40 | 0.082 |
| 165.00 | -10.22 | -2.36 | 0.00 | -25.17 | 0.00 | 25.17 | 1,137.78 | 268.77 | 374.96 | 357.08 | 36.87 | -2.41 | 0.080 |
| 167.25 | -9.86 | -2.31 | 0.00 | -19.86 | 0.00 | 19.86 | 903.09 | 213.33 | 295.25 | 282.29 | 38.02 | -2.44 | 0.081 |
| 170.00 | -3.74 | -1.15 | 0.00 | -11.90 | 0.00 | 11.90 | 853.84 | 201.69 | 263.94 | 252.11 | 39.43 | -2.47 | 0.052 |
| 175.00 | -3.35 | -1.08 | 0.00 | -6.14 | 0.00 | 6.14 | 764.30 | 180.54 | 211.50 | 201.60 | 42.05 | -2.52 | 0.035 |
| 179.00 | 0.00 | -0.93 | 0.00 | -1.84 | 0.00 | 1.84 | 692.67 | 163.62 | 173.72 | 165.26 | 44.16 | -2.54 | 0.011 |

Site Number: 370627

Code: ANSI/TIA-222-H

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

9/23/2020 4:48:10 PM

Customer: AT&T MOBILITY

| | | |
|-------------------------------|-----------------------|---------------|
| Load Case: 1.0D + 1.0W | Serviceability 60 mph | 26 Iterations |
| Gust Response Factor : 1.10 | | |
| Dead Load Factor : 1.00 | | |
| Wind Load Factor : 1.00 | | |

Applied Segment Forces Summary

| Seg Elev (ft) | Description | Shaft Forces | | Discrete Forces | | | Linear Forces | | Sum of Forces | | | | |
|---------------|-----------------|--------------|----------------|-----------------|--------------------|-------------------|----------------|--------------|----------------|--------------|----------------|--------------------|----------------|
| | | Wind FX (lb) | Dead Load (lb) | Wind FX (lb) | Torsion MY (lb-ft) | Moment MZ (lb-ft) | Dead Load (lb) | Wind FX (lb) | Dead Load (lb) | Wind FX (lb) | Dead Load (lb) | Torsion MY (lb-ft) | Moment MZ (lb) |
| 0.00 | | 57.8 | 0.0 | | | | | 0.0 | 0.0 | 57.8 | 0.0 | 0.0 | 0.0 |
| 5.00 | | 114.1 | 1,252.8 | | | | | 0.0 | 235.6 | 114.1 | 1,488.4 | 0.0 | 0.0 |
| 10.00 | | 111.3 | 1,222.0 | | | | | 0.0 | 235.6 | 111.3 | 1,457.6 | 0.0 | 0.0 |
| 15.00 | | 108.5 | 1,191.3 | | | | | 0.0 | 235.6 | 108.5 | 1,426.9 | 0.0 | 0.0 |
| 20.00 | | 105.7 | 1,160.5 | | | | | 0.0 | 235.6 | 105.7 | 1,396.1 | 0.0 | 0.0 |
| 25.00 | | 102.8 | 1,129.8 | | | | | 0.0 | 235.6 | 102.8 | 1,365.4 | 0.0 | 0.0 |
| 30.00 | | 63.3 | 1,099.0 | | | | | 0.0 | 235.6 | 63.3 | 1,334.6 | 0.0 | 0.0 |
| 31.25 | Bot - Section 2 | 51.0 | 269.9 | | | | | 0.0 | 58.9 | 51.0 | 328.8 | 0.0 | 0.0 |
| 35.00 | | 64.3 | 1,608.0 | | | | | 0.0 | 176.7 | 64.3 | 1,784.7 | 0.0 | 0.0 |
| 37.50 | Top - Section 1 | 51.8 | 1,052.8 | | | | | 0.0 | 117.8 | 51.8 | 1,170.6 | 0.0 | 0.0 |
| 40.00 | | 78.1 | 522.5 | | | | | 0.0 | 117.8 | 78.1 | 640.3 | 0.0 | 0.0 |
| 45.00 | | 104.4 | 1,021.9 | | | | | 0.0 | 235.6 | 104.4 | 1,257.5 | 0.0 | 0.0 |
| 50.00 | | 104.3 | 991.2 | | | | | 0.0 | 235.6 | 104.3 | 1,226.8 | 0.0 | 0.0 |
| 55.00 | | 103.9 | 960.4 | | | | | 0.0 | 235.6 | 103.9 | 1,196.0 | 0.0 | 0.0 |
| 60.00 | | 85.2 | 929.6 | | | | | 0.0 | 235.6 | 85.2 | 1,165.2 | 0.0 | 0.0 |
| 63.25 | Bot - Section 3 | 51.6 | 587.8 | | | | | 0.0 | 153.1 | 51.6 | 740.9 | 0.0 | 0.0 |
| 65.00 | | 56.9 | 627.5 | | | | | 0.0 | 82.5 | 56.9 | 710.0 | 0.0 | 0.0 |
| 68.75 | Top - Section 2 | 51.5 | 1,319.4 | | | | | 0.0 | 176.7 | 51.5 | 1,496.1 | 0.0 | 0.0 |
| 70.00 | | 63.6 | 217.9 | | | | | 0.0 | 58.9 | 63.6 | 276.8 | 0.0 | 0.0 |
| 75.00 | | 100.7 | 852.6 | | | | | 0.0 | 235.6 | 100.7 | 1,088.2 | 0.0 | 0.0 |
| 80.00 | | 98.8 | 821.8 | | | | | 0.0 | 235.6 | 98.8 | 1,057.4 | 0.0 | 0.0 |
| 85.00 | | 96.7 | 791.0 | | | | | 0.0 | 235.6 | 96.7 | 1,026.6 | 0.0 | 0.0 |
| 90.00 | | 94.5 | 760.3 | | | | | 0.0 | 235.6 | 94.5 | 995.9 | 0.0 | 0.0 |
| 95.00 | | 56.6 | 729.5 | | | | | 0.0 | 235.6 | 56.6 | 965.1 | 0.0 | 0.0 |
| 96.08 | Bot - Section 4 | 46.1 | 154.0 | | | | | 0.0 | 51.0 | 46.1 | 205.1 | 0.0 | 0.0 |
| 100.00 | | 43.0 | 1,101.4 | | | | | 0.0 | 184.6 | 43.0 | 1,286.0 | 0.0 | 0.0 |
| 100.75 | Top - Section 3 | 45.0 | 206.6 | | | | | 0.0 | 35.3 | 45.0 | 241.9 | 0.0 | 0.0 |
| 105.00 | | 81.8 | 578.8 | | | | | 0.0 | 200.3 | 81.8 | 779.0 | 0.0 | 0.0 |
| 110.00 | Appurtenance(s) | 69.0 | 652.4 | 792.1 | 0.0 | 1,022.5 | 3,355.1 | 0.0 | 235.6 | 861.2 | 4,243.1 | 0.0 | 0.0 |
| 113.00 | Appurtenance(s) | 42.1 | 376.7 | 98.8 | 0.0 | 0.0 | 51.0 | 0.0 | 104.0 | 140.9 | 531.7 | 0.0 | 0.0 |
| 115.00 | | 57.2 | 245.0 | | | | | 0.0 | 69.4 | 57.2 | 314.3 | 0.0 | 0.0 |
| 120.00 | | 79.5 | 590.9 | | | | | 0.0 | 173.4 | 79.5 | 764.3 | 0.0 | 0.0 |
| 125.00 | | 74.4 | 560.2 | | | | | 0.0 | 173.4 | 74.4 | 733.6 | 0.0 | 0.0 |
| 129.75 | Bot - Section 5 | 37.3 | 503.7 | | | | | 0.0 | 164.7 | 37.3 | 668.4 | 0.0 | 0.0 |
| 130.00 | | 28.1 | 47.8 | | | | | 0.0 | 8.7 | 28.1 | 56.4 | 0.0 | 0.0 |
| 133.58 | Top - Section 4 | 36.4 | 669.2 | | | | | 0.0 | 124.3 | 36.4 | 793.5 | 0.0 | 0.0 |
| 135.00 | | 44.7 | 118.4 | | | | | 0.0 | 49.1 | 44.7 | 167.6 | 0.0 | 0.0 |
| 140.00 | Appurtenance(s) | 67.3 | 401.5 | 584.3 | 0.0 | 1,144.7 | 2,366.9 | 0.0 | 173.4 | 651.6 | 2,941.8 | 0.0 | 0.0 |
| 145.00 | | 63.6 | 375.9 | | | | | 0.0 | 153.4 | 63.6 | 529.3 | 0.0 | 0.0 |
| 150.00 | | 54.1 | 350.3 | | | | | 0.0 | 153.4 | 54.1 | 503.7 | 0.0 | 0.0 |
| 154.00 | Appurtenance(s) | 28.9 | 261.8 | 1,244.5 | 0.0 | 0.0 | 5,294.8 | 0.0 | 122.7 | 1,273.4 | 5,679.3 | 0.0 | 0.0 |
| 155.00 | | 32.5 | 62.9 | | | | | 0.0 | 9.6 | 32.5 | 72.5 | 0.0 | 0.0 |
| 160.00 | | 48.6 | 299.0 | | | | | 0.0 | 48.1 | 48.6 | 347.1 | 0.0 | 0.0 |
| 164.33 | Bot - Section 6 | 25.0 | 238.4 | | | | | 0.0 | 41.7 | 25.0 | 280.1 | 0.0 | 0.0 |
| 165.00 | | 14.1 | 64.0 | | | | | 0.0 | 6.4 | 14.1 | 70.4 | 0.0 | 0.0 |
| 167.25 | Top - Section 5 | 23.5 | 209.8 | | | | | 0.0 | 21.6 | 23.5 | 231.4 | 0.0 | 0.0 |
| 170.00 | Appurtenance(s) | 34.5 | 110.6 | 754.0 | 0.0 | 1,619.3 | 2,784.3 | 0.0 | 26.5 | 788.5 | 2,921.4 | 0.0 | 0.0 |
| 175.00 | | 38.8 | 185.3 | | | | | 0.0 | 5.0 | 38.8 | 190.2 | 0.0 | 0.0 |

Site Number: 370627

Code: ANSI/TIA-222-H

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

9/23/2020 4:48:15 PM

Customer: AT&T MOBILITY

Load Case: 1.0D + 1.0W

Serviceability 60 mph

26 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 1.00

Wind Load Factor : 1.00

| | | | | | | | | | | | | | |
|---------|-----------------|------|-------|-------|-----|-----|---------|-----|-----|----------|----------|------|------|
| 179.00 | Appurtenance(s) | 17.0 | 133.5 | 217.4 | 0.0 | 0.0 | 1,500.0 | 0.0 | 4.0 | 234.4 | 1,637.4 | 0.0 | 0.0 |
| Totals: | | | | | | | | | | 6,801.03 | 51,785.5 | 0.00 | 0.00 |

Site Number: 370627

Code: ANSI/TIA-222-H

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

9/23/2020 4:48:15 PM

Customer: AT&T MOBILITY

Load Case: 1.0D + 1.0W

Serviceability 60 mph

26 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 1.00

Wind Load Factor : 1.00

Calculated Forces

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | phi Pn (kips) | phi Vn (kips) | phi Tn (ft-kips) | phi Mn (ft-kips) | Total Deflect (in) | Rotation (deg) | Ratio |
|---------------|------------------|------------------|-----------------|-----------------|-----------------|----------------------------|---------------|---------------|------------------|------------------|--------------------|----------------|-------|
| 0.00 | -51.91 | -7.00 | 0.00 | -872.36 | 0.00 | 872.36 | 4,604.11 | 1,308.12 | 7,398.90 | 5,943.65 | 0.00 | 0.00 | 0.158 |
| 5.00 | -50.42 | -6.91 | 0.00 | -837.39 | 0.00 | 837.39 | 4,547.42 | 1,276.39 | 7,044.39 | 5,727.25 | 0.02 | -0.03 | 0.157 |
| 10.00 | -48.95 | -6.83 | 0.00 | -802.84 | 0.00 | 802.84 | 4,488.01 | 1,244.67 | 6,698.58 | 5,511.07 | 0.07 | -0.07 | 0.157 |
| 15.00 | -47.52 | -6.75 | 0.00 | -768.70 | 0.00 | 768.70 | 4,425.86 | 1,212.94 | 6,361.48 | 5,295.36 | 0.16 | -0.10 | 0.156 |
| 20.00 | -46.12 | -6.67 | 0.00 | -734.98 | 0.00 | 734.98 | 4,360.98 | 1,181.22 | 6,033.07 | 5,080.38 | 0.29 | -0.14 | 0.155 |
| 25.00 | -44.75 | -6.59 | 0.00 | -701.64 | 0.00 | 701.64 | 4,293.36 | 1,149.49 | 5,713.38 | 4,866.38 | 0.45 | -0.18 | 0.155 |
| 30.00 | -43.42 | -6.54 | 0.00 | -668.69 | 0.00 | 668.69 | 4,223.01 | 1,117.76 | 5,402.38 | 4,653.64 | 0.66 | -0.21 | 0.154 |
| 31.25 | -43.09 | -6.50 | 0.00 | -660.51 | 0.00 | 660.51 | 4,205.00 | 1,109.83 | 5,325.99 | 4,600.68 | 0.71 | -0.23 | 0.154 |
| 35.00 | -41.30 | -6.45 | 0.00 | -636.12 | 0.00 | 636.12 | 4,149.93 | 1,086.04 | 5,100.09 | 4,442.40 | 0.90 | -0.26 | 0.153 |
| 37.50 | -40.13 | -6.41 | 0.00 | -620.00 | 0.00 | 620.00 | 4,149.47 | 1,085.84 | 5,098.24 | 4,441.10 | 1.04 | -0.28 | 0.149 |
| 40.00 | -39.48 | -6.35 | 0.00 | -603.97 | 0.00 | 603.97 | 4,111.89 | 1,069.98 | 4,950.38 | 4,336.13 | 1.19 | -0.30 | 0.149 |
| 45.00 | -38.22 | -6.27 | 0.00 | -572.23 | 0.00 | 572.23 | 4,034.69 | 1,038.25 | 4,661.20 | 4,127.64 | 1.53 | -0.34 | 0.148 |
| 50.00 | -36.99 | -6.18 | 0.00 | -540.90 | 0.00 | 540.90 | 3,954.76 | 1,006.53 | 4,380.71 | 3,921.32 | 1.91 | -0.38 | 0.147 |
| 55.00 | -35.79 | -6.10 | 0.00 | -509.99 | 0.00 | 509.99 | 3,872.09 | 974.80 | 4,108.94 | 3,717.40 | 2.33 | -0.43 | 0.146 |
| 60.00 | -34.62 | -6.03 | 0.00 | -479.50 | 0.00 | 479.50 | 3,786.70 | 943.07 | 3,845.86 | 3,516.15 | 2.80 | -0.47 | 0.146 |
| 63.25 | -33.88 | -5.98 | 0.00 | -459.92 | 0.00 | 459.92 | 3,729.72 | 922.45 | 3,679.52 | 3,386.89 | 3.14 | -0.50 | 0.145 |
| 65.00 | -33.17 | -5.94 | 0.00 | -449.45 | 0.00 | 449.45 | 3,698.56 | 911.35 | 3,591.48 | 3,317.83 | 3.33 | -0.52 | 0.144 |
| 68.75 | -31.67 | -5.88 | 0.00 | -427.19 | 0.00 | 427.19 | 3,675.54 | 903.22 | 3,527.71 | 3,267.52 | 3.75 | -0.56 | 0.139 |
| 70.00 | -31.39 | -5.84 | 0.00 | -419.83 | 0.00 | 419.83 | 3,652.91 | 895.29 | 3,466.04 | 3,218.63 | 3.90 | -0.57 | 0.139 |
| 75.00 | -30.30 | -5.75 | 0.00 | -390.66 | 0.00 | 390.66 | 3,560.66 | 863.56 | 3,224.77 | 3,025.21 | 4.53 | -0.62 | 0.138 |
| 80.00 | -29.24 | -5.66 | 0.00 | -361.91 | 0.00 | 361.91 | 3,465.68 | 831.83 | 2,992.21 | 2,835.36 | 5.20 | -0.67 | 0.136 |
| 85.00 | -28.20 | -5.58 | 0.00 | -333.59 | 0.00 | 333.59 | 3,367.96 | 800.11 | 2,768.35 | 2,649.35 | 5.93 | -0.72 | 0.134 |
| 90.00 | -27.21 | -5.50 | 0.00 | -305.68 | 0.00 | 305.68 | 3,252.82 | 768.38 | 2,553.19 | 2,456.33 | 6.72 | -0.78 | 0.133 |
| 95.00 | -26.24 | -5.45 | 0.00 | -278.18 | 0.00 | 278.18 | 3,118.51 | 736.66 | 2,346.73 | 2,256.70 | 7.57 | -0.83 | 0.132 |
| 96.08 | -26.03 | -5.41 | 0.00 | -272.28 | 0.00 | 272.28 | 3,089.41 | 729.78 | 2,303.15 | 2,214.56 | 7.76 | -0.85 | 0.131 |
| 100.00 | -24.74 | -5.36 | 0.00 | -251.10 | 0.00 | 251.10 | 2,984.21 | 704.93 | 2,148.98 | 2,065.52 | 8.47 | -0.89 | 0.130 |
| 100.75 | -24.50 | -5.32 | 0.00 | -247.08 | 0.00 | 247.08 | 3,030.38 | 715.84 | 2,215.99 | 2,130.29 | 8.61 | -0.90 | 0.124 |
| 105.00 | -23.72 | -5.25 | 0.00 | -224.46 | 0.00 | 224.46 | 2,916.22 | 688.87 | 2,052.20 | 1,971.97 | 9.43 | -0.95 | 0.122 |
| 110.00 | -19.49 | -4.33 | 0.00 | -197.18 | 0.00 | 197.18 | 2,781.91 | 657.14 | 1,867.55 | 1,793.54 | 10.46 | -1.01 | 0.117 |
| 113.00 | -18.95 | -4.19 | 0.00 | -184.19 | 0.00 | 184.19 | 2,701.33 | 638.11 | 1,760.94 | 1,690.55 | 11.10 | -1.04 | 0.116 |
| 115.00 | -18.64 | -4.14 | 0.00 | -175.80 | 0.00 | 175.80 | 2,647.61 | 625.42 | 1,691.61 | 1,623.57 | 11.55 | -1.07 | 0.115 |
| 120.00 | -17.87 | -4.07 | 0.00 | -155.09 | 0.00 | 155.09 | 2,513.30 | 593.69 | 1,524.37 | 1,462.07 | 12.69 | -1.12 | 0.113 |
| 125.00 | -17.13 | -3.99 | 0.00 | -134.76 | 0.00 | 134.76 | 2,378.99 | 561.97 | 1,365.83 | 1,309.02 | 13.90 | -1.18 | 0.110 |
| 129.75 | -16.47 | -3.95 | 0.00 | -115.79 | 0.00 | 115.79 | 2,251.40 | 531.83 | 1,223.29 | 1,171.46 | 15.11 | -1.24 | 0.106 |
| 130.00 | -16.41 | -3.93 | 0.00 | -114.80 | 0.00 | 114.80 | 2,244.69 | 530.24 | 1,216.00 | 1,164.43 | 15.17 | -1.24 | 0.106 |
| 133.58 | -15.61 | -3.88 | 0.00 | -100.72 | 0.00 | 100.72 | 1,841.02 | 434.89 | 981.50 | 942.04 | 16.12 | -1.29 | 0.115 |
| 135.00 | -15.44 | -3.85 | 0.00 | -95.21 | 0.00 | 95.21 | 1,809.31 | 427.40 | 947.99 | 909.67 | 16.51 | -1.31 | 0.113 |
| 140.00 | -12.51 | -3.14 | 0.00 | -74.83 | 0.00 | 74.83 | 1,697.39 | 400.96 | 834.35 | 799.95 | 17.92 | -1.37 | 0.101 |
| 145.00 | -11.98 | -3.08 | 0.00 | -59.13 | 0.00 | 59.13 | 1,585.46 | 374.52 | 727.97 | 697.27 | 19.39 | -1.44 | 0.092 |
| 150.00 | -11.48 | -3.02 | 0.00 | -43.74 | 0.00 | 43.74 | 1,473.54 | 348.08 | 628.84 | 601.65 | 20.92 | -1.49 | 0.081 |
| 154.00 | -5.83 | -1.60 | 0.00 | -31.66 | 0.00 | 31.66 | 1,384.00 | 326.93 | 554.76 | 530.23 | 22.19 | -1.54 | 0.064 |
| 155.00 | -5.76 | -1.57 | 0.00 | -30.06 | 0.00 | 30.06 | 1,361.62 | 321.64 | 536.96 | 513.08 | 22.52 | -1.55 | 0.063 |
| 160.00 | -5.42 | -1.51 | 0.00 | -22.22 | 0.00 | 22.22 | 1,249.70 | 295.20 | 452.34 | 431.55 | 24.16 | -1.59 | 0.056 |

Site Number: 370627

Code: ANSI/TIA-222-H

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

9/23/2020 4:48:15 PM

Customer: AT&T MOBILITY

Load Case: 1.0D + 1.0W

Serviceability 60 mph

26 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 1.00

Wind Load Factor : 1.00

| | | | | | | | | | | | | | |
|--------|-------|-------|------|--------|------|-------|----------|--------|--------|--------|-------|-------|-------|
| 164.33 | -5.14 | -1.48 | 0.00 | -15.66 | 0.00 | 15.66 | 1,152.70 | 272.29 | 384.86 | 366.60 | 25.63 | -1.63 | 0.047 |
| 165.00 | -5.07 | -1.47 | 0.00 | -14.67 | 0.00 | 14.67 | 1,137.78 | 268.77 | 374.96 | 357.08 | 25.86 | -1.64 | 0.046 |
| 167.25 | -4.83 | -1.44 | 0.00 | -11.37 | 0.00 | 11.37 | 903.09 | 213.33 | 295.25 | 282.29 | 26.63 | -1.66 | 0.046 |
| 170.00 | -1.94 | -0.57 | 0.00 | -5.79 | 0.00 | 5.79 | 853.84 | 201.69 | 263.94 | 252.11 | 27.59 | -1.67 | 0.025 |
| 175.00 | -1.75 | -0.52 | 0.00 | -2.95 | 0.00 | 2.95 | 764.30 | 180.54 | 211.50 | 201.60 | 29.36 | -1.70 | 0.017 |
| 179.00 | 0.00 | -0.47 | 0.00 | -0.86 | 0.00 | 0.86 | 692.67 | 163.62 | 173.72 | 165.26 | 30.78 | -1.71 | 0.005 |

Site Number: 370627

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

9/23/2020 4:48:15 PM

Customer: AT&T MOBILITY

Equivalent Lateral Forces Method Analysis

| | |
|--|---------|
| Spectral Response Acceleration for Short Period (S_s): | 0.19 |
| Spectral Response Acceleration at 1.0 Second Period (S_{d1}): | 0.05 |
| Long-Period Transition Period (T_L): | 6 |
| Importance Factor (I_E): | 1.00 |
| Site Coefficient F_a : | 1.60 |
| Site Coefficient F_v : | 2.40 |
| Response Modification Coefficient (R): | 1.50 |
| Design Spectral Response Acceleration at Short Period (S_{ds}): | 0.21 |
| Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}): | 0.09 |
| Seismic Response Coefficient (C_s): | 0.03 |
| Upper Limit C_s | 0.03 |
| Lower Limit C_s | 0.03 |
| Period based on Rayleigh Method (sec): | 3.02 |
| Redundancy Factor (p): | 1.00 |
| Seismic Force Distribution Exponent (k): | 2.00 |
| Total Unfactored Dead Load: | 51.91 k |
| Seismic Base Shear (E): | 1.56 k |

Load Case 1.2D + 1.0Ev + 1.0Eh

Seismic

| Segment | Height Above Base (ft) | Weight (lb) | W_z (lb-ft) | C_{vx} | Horizontal Force (lb) | Vertical Force (lb) |
|---------|------------------------|-------------|---------------|----------|-----------------------|---------------------|
| 48 | 177.00 | 137 | 4,305 | 0.007 | 11 | 171 |
| 47 | 172.50 | 190 | 5,661 | 0.010 | 15 | 236 |
| 46 | 168.63 | 137 | 3,898 | 0.007 | 10 | 170 |
| 45 | 166.13 | 231 | 6,387 | 0.011 | 17 | 287 |
| 44 | 164.67 | 70 | 1,908 | 0.003 | 5 | 87 |
| 43 | 162.17 | 280 | 7,366 | 0.012 | 19 | 348 |
| 42 | 157.50 | 347 | 8,610 | 0.015 | 23 | 431 |
| 41 | 154.50 | 72 | 1,730 | 0.003 | 5 | 90 |
| 40 | 152.00 | 384 | 8,883 | 0.015 | 23 | 477 |
| 39 | 147.50 | 504 | 10,958 | 0.019 | 29 | 625 |
| 38 | 142.50 | 529 | 10,748 | 0.018 | 28 | 657 |
| 37 | 137.50 | 575 | 10,870 | 0.018 | 29 | 714 |
| 36 | 134.29 | 168 | 3,022 | 0.005 | 8 | 208 |
| 35 | 131.79 | 793 | 13,782 | 0.023 | 36 | 985 |
| 34 | 129.88 | 56 | 952 | 0.002 | 3 | 70 |
| 33 | 127.38 | 668 | 10,845 | 0.018 | 29 | 830 |
| 32 | 122.50 | 734 | 11,008 | 0.019 | 29 | 911 |
| 31 | 117.50 | 764 | 10,553 | 0.018 | 28 | 949 |
| 30 | 114.00 | 314 | 4,085 | 0.007 | 11 | 390 |
| 29 | 111.50 | 481 | 5,977 | 0.010 | 16 | 597 |
| 28 | 107.50 | 888 | 10,263 | 0.017 | 27 | 1,102 |
| 27 | 102.88 | 779 | 8,245 | 0.014 | 22 | 967 |
| 26 | 100.38 | 242 | 2,438 | 0.004 | 6 | 300 |
| 25 | 98.04 | 1,286 | 12,361 | 0.021 | 33 | 1,596 |
| 24 | 95.54 | 205 | 1,872 | 0.003 | 5 | 255 |

Site Number: 370627

Code: ANSI/TIA-222-H

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

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Customer: AT&T MOBILITY

| | | | | | | |
|----------------------|--------|-------|--------|-------|-----|-------|
| 23 | 92.50 | 965 | 8,258 | 0.014 | 22 | 1,198 |
| 22 | 87.50 | 996 | 7,625 | 0.013 | 20 | 1,236 |
| 21 | 82.50 | 1,027 | 6,988 | 0.012 | 18 | 1,274 |
| 20 | 77.50 | 1,057 | 6,351 | 0.011 | 17 | 1,313 |
| 19 | 72.50 | 1,088 | 5,720 | 0.010 | 15 | 1,351 |
| 18 | 69.38 | 277 | 1,332 | 0.002 | 4 | 344 |
| 17 | 66.88 | 1,496 | 6,691 | 0.011 | 18 | 1,857 |
| 16 | 64.13 | 710 | 2,920 | 0.005 | 8 | 881 |
| 15 | 61.63 | 741 | 2,814 | 0.005 | 7 | 920 |
| 14 | 57.50 | 1,165 | 3,853 | 0.007 | 10 | 1,447 |
| 13 | 52.50 | 1,196 | 3,296 | 0.006 | 9 | 1,485 |
| 12 | 47.50 | 1,227 | 2,768 | 0.005 | 7 | 1,523 |
| 11 | 42.50 | 1,258 | 2,271 | 0.004 | 6 | 1,561 |
| 10 | 38.75 | 640 | 961 | 0.002 | 3 | 795 |
| 9 | 36.25 | 1,171 | 1,538 | 0.003 | 4 | 1,453 |
| 8 | 33.13 | 1,785 | 1,958 | 0.003 | 5 | 2,215 |
| 7 | 30.63 | 329 | 308 | 0.001 | 1 | 408 |
| 6 | 27.50 | 1,335 | 1,009 | 0.002 | 3 | 1,657 |
| 5 | 22.50 | 1,365 | 691 | 0.001 | 2 | 1,695 |
| 4 | 17.50 | 1,396 | 428 | 0.001 | 1 | 1,733 |
| 3 | 12.50 | 1,427 | 223 | 0.000 | 1 | 1,771 |
| 2 | 7.50 | 1,458 | 82 | 0.000 | 0 | 1,809 |
| 1 | 2.50 | 1,488 | 9 | 0.000 | 0 | 1,848 |
| Generic 18' Dipole | 179.00 | 55 | 1,762 | 0.003 | 5 | 68 |
| Generic 5' Dipole | 179.00 | 15 | 481 | 0.001 | 1 | 19 |
| Generic 10' Omni | 179.00 | 25 | 801 | 0.001 | 2 | 31 |
| Generic 8' Yagi | 179.00 | 30 | 961 | 0.002 | 3 | 37 |
| Round Low Profile PI | 179.00 | 1,500 | 48,062 | 0.081 | 127 | 1,862 |
| Ericsson KRY 112 144 | 170.00 | 33 | 954 | 0.002 | 3 | 41 |
| Ericsson Radio 4449 | 170.00 | 222 | 6,416 | 0.011 | 17 | 276 |
| Ericsson AIR 21, 1.3 | 170.00 | 249 | 7,196 | 0.012 | 19 | 309 |
| Ericsson AIR-32 B2A/ | 170.00 | 397 | 11,462 | 0.019 | 30 | 492 |
| RFS APXVAARR24_43-U- | 170.00 | 384 | 11,089 | 0.019 | 29 | 476 |
| Round Low Profile PI | 170.00 | 1,500 | 43,350 | 0.073 | 114 | 1,862 |
| Powerwave Allgon LGP | 154.00 | 85 | 2,006 | 0.003 | 5 | 105 |
| Raycap DC6-48-60-18- | 154.00 | 64 | 1,508 | 0.003 | 4 | 79 |
| Ericsson RRUS 8843 B | 154.00 | 216 | 5,123 | 0.009 | 14 | 268 |
| Ericsson RRUS 4478 B | 154.00 | 180 | 4,262 | 0.007 | 11 | 223 |
| Ericsson RRUS 4449 B | 154.00 | 213 | 5,052 | 0.009 | 13 | 264 |
| Ericsson RRUS 32 B30 | 154.00 | 180 | 4,269 | 0.007 | 11 | 223 |
| Ericsson RRUS 32 B2 | 154.00 | 159 | 3,771 | 0.006 | 10 | 197 |
| Raycap DC6-48-60-0-8 | 154.00 | 16 | 379 | 0.001 | 1 | 20 |
| Kathrein Scala 800 1 | 154.00 | 139 | 3,294 | 0.006 | 9 | 172 |
| Quintel QS66512-2 | 154.00 | 111 | 2,632 | 0.004 | 7 | 138 |
| CCI OPA-65R-LCUU-H6 | 154.00 | 73 | 1,731 | 0.003 | 5 | 91 |
| CCI DMP65R-BU6DA | 154.00 | 79 | 1,883 | 0.003 | 5 | 99 |
| CCI OPA-65R-LCUU-H8 | 154.00 | 176 | 4,174 | 0.007 | 11 | 218 |
| CCI TPA-65R-LCUUUU-H | 154.00 | 163 | 3,870 | 0.007 | 10 | 203 |
| CCI DMP65R-BU8D | 154.00 | 191 | 4,539 | 0.008 | 12 | 238 |
| Site Pro 1 RMQLP-412 | 154.00 | 3,250 | 77,077 | 0.131 | 203 | 4,035 |
| Alcatel-Lucent 800 M | 140.00 | 192 | 3,763 | 0.006 | 10 | 238 |
| Alcatel-Lucent 1900M | 140.00 | 132 | 2,587 | 0.004 | 7 | 164 |
| Alcatel-Lucent TD-RR | 140.00 | 198 | 3,887 | 0.007 | 10 | 246 |
| RFS APXVTM14-C-I20 (| 140.00 | 169 | 3,305 | 0.006 | 9 | 209 |
| RFS APXV9ERR18-C-A20 | 140.00 | 62 | 1,215 | 0.002 | 3 | 77 |
| RFS APXVSP18-C-A20 | 140.00 | 114 | 2,234 | 0.004 | 6 | 142 |
| Round Low Profile PI | 140.00 | 1,500 | 29,400 | 0.050 | 78 | 1,862 |
| Amphenol Antel BXA-7 | 113.00 | 51 | 651 | 0.001 | 2 | 63 |
| Samsung B2/B66A RRH- | 110.00 | 253 | 3,064 | 0.005 | 8 | 314 |
| Samsung B5/B13 RRH-B | 110.00 | 211 | 2,552 | 0.004 | 7 | 262 |
| Antel BXA-70063/4CF | 110.00 | 30 | 359 | 0.001 | 1 | 37 |
| Antel BXA-80063/4CF | 110.00 | 30 | 359 | 0.001 | 1 | 37 |
| RFS DB-T1-6Z-8AB-0Z | 110.00 | 88 | 1,065 | 0.002 | 3 | 109 |
| Commscope SBNHH-1D65 | 110.00 | 244 | 2,948 | 0.005 | 8 | 302 |

Site Number: 370627

Code: ANSI/TIA-222-H

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

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Customer: AT&T MOBILITY

| | | | | | | |
|----------------------|--------|--------|---------|-------|-------|--------|
| Generic Flat Platfor | 110.00 | 2,500 | 30,250 | 0.051 | 80 | 3,103 |
| | | 51,911 | 590,563 | 1.000 | 1,557 | 64,441 |

Load Case 0.9D - 1.0Ev + 1.0Eh

Seismic (Reduced DL)

| Segment | Height Above Base (ft) | Weight (lb) | W _z (lb-ft) | C _{vx} | Horizontal Force (lb) | Vertical Force (lb) |
|----------------------|------------------------|-------------|------------------------|-----------------|-----------------------|---------------------|
| 48 | 177.00 | 137 | 4,305 | 0.007 | 11 | 118 |
| 47 | 172.50 | 190 | 5,661 | 0.010 | 15 | 163 |
| 46 | 168.63 | 137 | 3,898 | 0.007 | 10 | 118 |
| 45 | 166.13 | 231 | 6,387 | 0.011 | 17 | 199 |
| 44 | 164.67 | 70 | 1,908 | 0.003 | 5 | 60 |
| 43 | 162.17 | 280 | 7,366 | 0.012 | 19 | 240 |
| 42 | 157.50 | 347 | 8,610 | 0.015 | 23 | 298 |
| 41 | 154.50 | 72 | 1,730 | 0.003 | 5 | 62 |
| 40 | 152.00 | 384 | 8,883 | 0.015 | 23 | 330 |
| 39 | 147.50 | 504 | 10,958 | 0.019 | 29 | 432 |
| 38 | 142.50 | 529 | 10,748 | 0.018 | 28 | 454 |
| 37 | 137.50 | 575 | 10,870 | 0.018 | 29 | 494 |
| 36 | 134.29 | 168 | 3,022 | 0.005 | 8 | 144 |
| 35 | 131.79 | 793 | 13,782 | 0.023 | 36 | 681 |
| 34 | 129.88 | 56 | 952 | 0.002 | 3 | 48 |
| 33 | 127.38 | 668 | 10,845 | 0.018 | 29 | 574 |
| 32 | 122.50 | 734 | 11,008 | 0.019 | 29 | 630 |
| 31 | 117.50 | 764 | 10,553 | 0.018 | 28 | 656 |
| 30 | 114.00 | 314 | 4,085 | 0.007 | 11 | 270 |
| 29 | 111.50 | 481 | 5,977 | 0.010 | 16 | 413 |
| 28 | 107.50 | 888 | 10,263 | 0.017 | 27 | 762 |
| 27 | 102.88 | 779 | 8,245 | 0.014 | 22 | 669 |
| 26 | 100.38 | 242 | 2,438 | 0.004 | 6 | 208 |
| 25 | 98.04 | 1,286 | 12,361 | 0.021 | 33 | 1,104 |
| 24 | 95.54 | 205 | 1,872 | 0.003 | 5 | 176 |
| 23 | 92.50 | 965 | 8,258 | 0.014 | 22 | 829 |
| 22 | 87.50 | 996 | 7,625 | 0.013 | 20 | 855 |
| 21 | 82.50 | 1,027 | 6,988 | 0.012 | 18 | 881 |
| 20 | 77.50 | 1,057 | 6,351 | 0.011 | 17 | 908 |
| 19 | 72.50 | 1,088 | 5,720 | 0.010 | 15 | 934 |
| 18 | 69.38 | 277 | 1,332 | 0.002 | 4 | 238 |
| 17 | 66.88 | 1,496 | 6,691 | 0.011 | 18 | 1,285 |
| 16 | 64.13 | 710 | 2,920 | 0.005 | 8 | 610 |
| 15 | 61.63 | 741 | 2,814 | 0.005 | 7 | 636 |
| 14 | 57.50 | 1,165 | 3,853 | 0.007 | 10 | 1,000 |
| 13 | 52.50 | 1,196 | 3,296 | 0.006 | 9 | 1,027 |
| 12 | 47.50 | 1,227 | 2,768 | 0.005 | 7 | 1,053 |
| 11 | 42.50 | 1,258 | 2,271 | 0.004 | 6 | 1,080 |
| 10 | 38.75 | 640 | 961 | 0.002 | 3 | 550 |
| 9 | 36.25 | 1,171 | 1,538 | 0.003 | 4 | 1,005 |
| 8 | 33.13 | 1,785 | 1,958 | 0.003 | 5 | 1,532 |
| 7 | 30.63 | 329 | 308 | 0.001 | 1 | 282 |
| 6 | 27.50 | 1,335 | 1,009 | 0.002 | 3 | 1,146 |
| 5 | 22.50 | 1,365 | 691 | 0.001 | 2 | 1,172 |
| 4 | 17.50 | 1,396 | 428 | 0.001 | 1 | 1,199 |
| 3 | 12.50 | 1,427 | 223 | 0.000 | 1 | 1,225 |
| 2 | 7.50 | 1,458 | 82 | 0.000 | 0 | 1,252 |
| 1 | 2.50 | 1,488 | 9 | 0.000 | 0 | 1,278 |
| Generic 18' Dipole | 179.00 | 55 | 1,762 | 0.003 | 5 | 47 |
| Generic 5' Dipole | 179.00 | 15 | 481 | 0.001 | 1 | 13 |
| Generic 10' Omni | 179.00 | 25 | 801 | 0.001 | 2 | 21 |
| Generic 8' Yagi | 179.00 | 30 | 961 | 0.002 | 3 | 26 |
| Round Low Profile PI | 179.00 | 1,500 | 48,062 | 0.081 | 127 | 1,288 |
| Ericsson KRY 112 144 | 170.00 | 33 | 954 | 0.002 | 3 | 28 |

Site Number: 370627

Code: ANSI/TIA-222-H

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

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Customer: AT&T MOBILITY

| | | | | | | |
|----------------------|--------|--------|---------|-------|-------|--------|
| Ericsson Radio 4449 | 170.00 | 222 | 6,416 | 0.011 | 17 | 191 |
| Ericsson AIR 21, 1.3 | 170.00 | 249 | 7,196 | 0.012 | 19 | 214 |
| Ericsson AIR-32 B2A/ | 170.00 | 397 | 11,462 | 0.019 | 30 | 341 |
| RFS APXVAARR24_43-U- | 170.00 | 384 | 11,089 | 0.019 | 29 | 329 |
| Round Low Profile PI | 170.00 | 1,500 | 43,350 | 0.073 | 114 | 1,288 |
| Powerwave Allgon LGP | 154.00 | 85 | 2,006 | 0.003 | 5 | 73 |
| Raycap DC6-48-60-18- | 154.00 | 64 | 1,508 | 0.003 | 4 | 55 |
| Ericsson RRUS 8843 B | 154.00 | 216 | 5,123 | 0.009 | 14 | 185 |
| Ericsson RRUS 4478 B | 154.00 | 180 | 4,262 | 0.007 | 11 | 154 |
| Ericsson RRUS 4449 B | 154.00 | 213 | 5,052 | 0.009 | 13 | 183 |
| Ericsson RRUS 32 B30 | 154.00 | 180 | 4,269 | 0.007 | 11 | 155 |
| Ericsson RRUS 32 B2 | 154.00 | 159 | 3,771 | 0.006 | 10 | 137 |
| Raycap DC6-48-60-0-8 | 154.00 | 16 | 379 | 0.001 | 1 | 14 |
| Kathrein Scala 800 1 | 154.00 | 139 | 3,294 | 0.006 | 9 | 119 |
| Quintel QS66512-2 | 154.00 | 111 | 2,632 | 0.004 | 7 | 95 |
| CCI OPA-65R-LCUU-H6 | 154.00 | 73 | 1,731 | 0.003 | 5 | 63 |
| CCI DMP65R-BU6DA | 154.00 | 79 | 1,883 | 0.003 | 5 | 68 |
| CCI OPA-65R-LCUU-H8 | 154.00 | 176 | 4,174 | 0.007 | 11 | 151 |
| CCI TPA-65R-LCUUUU-H | 154.00 | 163 | 3,870 | 0.007 | 10 | 140 |
| CCI DMP65R-BU8D | 154.00 | 191 | 4,539 | 0.008 | 12 | 164 |
| Site Pro 1 RMQLP-412 | 154.00 | 3,250 | 77,077 | 0.131 | 203 | 2,790 |
| Alcatel-Lucent 800 M | 140.00 | 192 | 3,763 | 0.006 | 10 | 165 |
| Alcatel-Lucent 1900M | 140.00 | 132 | 2,587 | 0.004 | 7 | 113 |
| Alcatel-Lucent TD-RR | 140.00 | 198 | 3,887 | 0.007 | 10 | 170 |
| RFS APXVTM14-C-I20 (| 140.00 | 169 | 3,305 | 0.006 | 9 | 145 |
| RFS APXV9ERR18-C-A20 | 140.00 | 62 | 1,215 | 0.002 | 3 | 53 |
| RFS APXVSPP18-C-A20 | 140.00 | 114 | 2,234 | 0.004 | 6 | 98 |
| Round Low Profile PI | 140.00 | 1,500 | 29,400 | 0.050 | 78 | 1,288 |
| Amphenol Antel BXA-7 | 113.00 | 51 | 651 | 0.001 | 2 | 44 |
| Samsung B2/B66A RRH- | 110.00 | 253 | 3,064 | 0.005 | 8 | 217 |
| Samsung B5/B13 RRH-B | 110.00 | 211 | 2,552 | 0.004 | 7 | 181 |
| Antel BXA-70063/4CF | 110.00 | 30 | 359 | 0.001 | 1 | 26 |
| Antel BXA-80063/4CF | 110.00 | 30 | 359 | 0.001 | 1 | 26 |
| RFS DB-T1-6Z-8AB-0Z | 110.00 | 88 | 1,065 | 0.002 | 3 | 76 |
| Commscope SBNHH-1D65 | 110.00 | 244 | 2,948 | 0.005 | 8 | 209 |
| Generic Flat Platfor | 110.00 | 2,500 | 30,250 | 0.051 | 80 | 2,147 |
| | | 51,911 | 590,563 | 1.000 | 1,557 | 44,571 |

Site Number: 370627

Code: ANSI/TIA-222-H

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

9/23/2020 4:48:15 PM

Customer: AT&T MOBILITY

Load Case 1.2D + 1.0Ev + 1.0Eh

Seismic

Calculated Forces

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | phi Pn (kips) | phi Vn (kips) | phi Tn (ft-kips) | phi Mn (ft-kips) | Total Deflect (in) | Rotation (deg) | Ratio |
|---------------|------------------|------------------|-----------------|-----------------|-----------------|----------------------------|---------------|---------------|------------------|------------------|--------------------|----------------|-------|
| 0.00 | -62.59 | -1.56 | 0.00 | -228.75 | 0.00 | 228.75 | 4,604.11 | 1,308.12 | 7,398.90 | 5,943.65 | 0.00 | 0.00 | 0.052 |
| 5.00 | -60.78 | -1.57 | 0.00 | -220.95 | 0.00 | 220.95 | 4,547.42 | 1,276.39 | 7,044.39 | 5,727.25 | 0.00 | -0.01 | 0.052 |
| 10.00 | -59.01 | -1.58 | 0.00 | -213.10 | 0.00 | 213.10 | 4,488.01 | 1,244.67 | 6,698.58 | 5,511.07 | 0.02 | -0.02 | 0.052 |
| 15.00 | -57.28 | -1.59 | 0.00 | -205.21 | 0.00 | 205.21 | 4,425.86 | 1,212.94 | 6,361.48 | 5,295.36 | 0.04 | -0.03 | 0.052 |
| 20.00 | -55.58 | -1.59 | 0.00 | -197.28 | 0.00 | 197.28 | 4,360.98 | 1,181.22 | 6,033.07 | 5,080.38 | 0.08 | -0.04 | 0.052 |
| 25.00 | -53.93 | -1.60 | 0.00 | -189.31 | 0.00 | 189.31 | 4,293.36 | 1,149.49 | 5,713.38 | 4,866.38 | 0.12 | -0.05 | 0.051 |
| 30.00 | -53.52 | -1.60 | 0.00 | -181.32 | 0.00 | 181.32 | 4,223.01 | 1,117.76 | 5,402.38 | 4,653.64 | 0.17 | -0.06 | 0.052 |
| 31.25 | -51.30 | -1.60 | 0.00 | -179.31 | 0.00 | 179.31 | 4,205.00 | 1,109.83 | 5,325.99 | 4,600.68 | 0.19 | -0.06 | 0.051 |
| 35.00 | -49.85 | -1.60 | 0.00 | -173.31 | 0.00 | 173.31 | 4,149.93 | 1,086.04 | 5,100.09 | 4,442.40 | 0.24 | -0.07 | 0.051 |
| 37.50 | -49.05 | -1.60 | 0.00 | -169.30 | 0.00 | 169.30 | 4,149.47 | 1,085.84 | 5,098.24 | 4,441.10 | 0.28 | -0.07 | 0.050 |
| 40.00 | -47.49 | -1.60 | 0.00 | -165.30 | 0.00 | 165.30 | 4,111.89 | 1,069.98 | 4,950.38 | 4,336.13 | 0.32 | -0.08 | 0.050 |
| 45.00 | -45.97 | -1.60 | 0.00 | -157.28 | 0.00 | 157.28 | 4,034.69 | 1,038.25 | 4,661.20 | 4,127.64 | 0.41 | -0.09 | 0.050 |
| 50.00 | -44.48 | -1.60 | 0.00 | -149.27 | 0.00 | 149.27 | 3,954.76 | 1,006.53 | 4,380.71 | 3,921.32 | 0.51 | -0.10 | 0.049 |
| 55.00 | -43.04 | -1.60 | 0.00 | -141.27 | 0.00 | 141.27 | 3,872.09 | 974.80 | 4,108.94 | 3,717.40 | 0.63 | -0.12 | 0.049 |
| 60.00 | -42.12 | -1.60 | 0.00 | -133.29 | 0.00 | 133.29 | 3,786.70 | 943.07 | 3,845.86 | 3,516.15 | 0.75 | -0.13 | 0.049 |
| 63.25 | -41.24 | -1.59 | 0.00 | -128.11 | 0.00 | 128.11 | 3,729.72 | 922.45 | 3,679.52 | 3,386.89 | 0.84 | -0.14 | 0.049 |
| 65.00 | -39.38 | -1.57 | 0.00 | -125.32 | 0.00 | 125.32 | 3,698.56 | 911.35 | 3,591.48 | 3,317.83 | 0.89 | -0.14 | 0.048 |
| 68.75 | -39.03 | -1.57 | 0.00 | -119.42 | 0.00 | 119.42 | 3,675.54 | 903.22 | 3,527.71 | 3,267.52 | 1.01 | -0.15 | 0.047 |
| 70.00 | -37.68 | -1.56 | 0.00 | -117.46 | 0.00 | 117.46 | 3,652.91 | 895.29 | 3,466.04 | 3,218.63 | 1.05 | -0.16 | 0.047 |
| 75.00 | -36.37 | -1.55 | 0.00 | -109.65 | 0.00 | 109.65 | 3,560.66 | 863.56 | 3,224.77 | 3,025.21 | 1.22 | -0.17 | 0.046 |
| 80.00 | -35.10 | -1.54 | 0.00 | -101.90 | 0.00 | 101.90 | 3,465.68 | 831.83 | 2,992.21 | 2,835.36 | 1.41 | -0.18 | 0.046 |
| 85.00 | -33.86 | -1.52 | 0.00 | -94.23 | 0.00 | 94.23 | 3,367.96 | 800.11 | 2,768.35 | 2,649.35 | 1.61 | -0.20 | 0.046 |
| 90.00 | -32.66 | -1.50 | 0.00 | -86.62 | 0.00 | 86.62 | 3,252.82 | 768.38 | 2,553.19 | 2,456.33 | 1.82 | -0.21 | 0.045 |
| 95.00 | -32.41 | -1.50 | 0.00 | -79.11 | 0.00 | 79.11 | 3,118.51 | 736.66 | 2,346.73 | 2,256.70 | 2.06 | -0.23 | 0.045 |
| 96.08 | -30.81 | -1.47 | 0.00 | -77.48 | 0.00 | 77.48 | 3,089.41 | 729.78 | 2,303.15 | 2,214.56 | 2.11 | -0.23 | 0.045 |
| 100.00 | -30.51 | -1.46 | 0.00 | -71.73 | 0.00 | 71.73 | 2,984.21 | 704.93 | 2,148.98 | 2,065.52 | 2.31 | -0.25 | 0.045 |
| 100.75 | -29.54 | -1.44 | 0.00 | -70.63 | 0.00 | 70.63 | 3,030.38 | 715.84 | 2,215.99 | 2,130.29 | 2.34 | -0.25 | 0.043 |
| 105.00 | -28.44 | -1.42 | 0.00 | -64.50 | 0.00 | 64.50 | 2,916.22 | 688.87 | 2,052.20 | 1,971.97 | 2.57 | -0.26 | 0.042 |
| 110.00 | -23.68 | -1.28 | 0.00 | -57.41 | 0.00 | 57.41 | 2,781.91 | 657.14 | 1,867.55 | 1,793.54 | 2.86 | -0.28 | 0.041 |
| 113.00 | -23.22 | -1.27 | 0.00 | -53.57 | 0.00 | 53.57 | 2,701.33 | 638.11 | 1,760.94 | 1,690.55 | 3.04 | -0.29 | 0.040 |
| 115.00 | -22.28 | -1.24 | 0.00 | -51.03 | 0.00 | 51.03 | 2,647.61 | 625.42 | 1,691.61 | 1,623.57 | 3.16 | -0.30 | 0.040 |
| 120.00 | -21.36 | -1.21 | 0.00 | -44.84 | 0.00 | 44.84 | 2,513.30 | 593.69 | 1,524.37 | 1,462.07 | 3.48 | -0.31 | 0.039 |
| 125.00 | -20.53 | -1.18 | 0.00 | -38.78 | 0.00 | 38.78 | 2,378.99 | 561.97 | 1,365.83 | 1,309.02 | 3.81 | -0.33 | 0.038 |
| 129.75 | -20.46 | -1.19 | 0.00 | -33.15 | 0.00 | 33.15 | 2,251.40 | 531.83 | 1,223.29 | 1,171.46 | 4.15 | -0.35 | 0.037 |
| 130.00 | -19.48 | -1.15 | 0.00 | -32.85 | 0.00 | 32.85 | 2,244.69 | 530.24 | 1,216.00 | 1,164.43 | 4.17 | -0.35 | 0.037 |
| 133.58 | -19.27 | -1.14 | 0.00 | -28.75 | 0.00 | 28.75 | 1,841.02 | 434.89 | 981.50 | 942.04 | 4.44 | -0.36 | 0.041 |
| 135.00 | -18.56 | -1.11 | 0.00 | -27.14 | 0.00 | 27.14 | 1,809.31 | 427.40 | 947.99 | 909.67 | 4.54 | -0.37 | 0.040 |
| 140.00 | -14.96 | -0.94 | 0.00 | -21.59 | 0.00 | 21.59 | 1,697.39 | 400.96 | 834.35 | 799.95 | 4.94 | -0.38 | 0.036 |
| 145.00 | -14.34 | -0.91 | 0.00 | -16.89 | 0.00 | 16.89 | 1,585.46 | 374.52 | 727.97 | 697.27 | 5.35 | -0.40 | 0.033 |
| 150.00 | -13.86 | -0.89 | 0.00 | -12.33 | 0.00 | 12.33 | 1,473.54 | 348.08 | 628.84 | 601.65 | 5.78 | -0.42 | 0.030 |
| 154.00 | -7.20 | -0.50 | 0.00 | -8.77 | 0.00 | 8.77 | 1,384.00 | 326.93 | 554.76 | 530.23 | 6.14 | -0.43 | 0.022 |
| 155.00 | -6.77 | -0.48 | 0.00 | -8.27 | 0.00 | 8.27 | 1,361.62 | 321.64 | 536.96 | 513.08 | 6.23 | -0.43 | 0.021 |
| 160.00 | -6.42 | -0.46 | 0.00 | -5.88 | 0.00 | 5.88 | 1,249.70 | 295.20 | 452.34 | 431.55 | 6.69 | -0.45 | 0.019 |
| 164.33 | -6.33 | -0.45 | 0.00 | -3.89 | 0.00 | 3.89 | 1,152.70 | 272.29 | 384.86 | 366.60 | 7.10 | -0.46 | 0.016 |
| 165.00 | -6.05 | -0.43 | 0.00 | -3.59 | 0.00 | 3.59 | 1,137.78 | 268.77 | 374.96 | 357.08 | 7.16 | -0.46 | 0.015 |
| 167.25 | -5.88 | -0.42 | 0.00 | -2.61 | 0.00 | 2.61 | 903.09 | 213.33 | 295.25 | 282.29 | 7.38 | -0.46 | 0.016 |
| 170.00 | -2.19 | -0.17 | 0.00 | -1.45 | 0.00 | 1.45 | 853.84 | 201.69 | 263.94 | 252.11 | 7.65 | -0.47 | 0.008 |

Site Number: 370627

Code: ANSI/TIA-222-H

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

9/23/2020 4:48:15 PM

Customer: AT&T MOBILITY

| | | | | | | | | | | | | | |
|--------|-------|-------|------|-------|------|------|--------|--------|--------|--------|------|-------|-------|
| 175.00 | -2.02 | -0.15 | 0.00 | -0.62 | 0.00 | 0.62 | 764.30 | 180.54 | 211.50 | 201.60 | 8.14 | -0.47 | 0.006 |
| 179.00 | 0.00 | -0.14 | 0.00 | 0.00 | 0.00 | 0.00 | 692.67 | 163.62 | 173.72 | 165.26 | 8.54 | -0.47 | 0.000 |

Site Number: 370627

Code: ANSI/TIA-222-H

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

9/23/2020 4:48:15 PM

Customer: AT&T MOBILITY

Load Case 0.9D - 1.0Ev + 1.0Eh

Seismic (Reduced DL)

Calculated Forces

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | phi Pn (kips) | phi Vn (kips) | phi Tn (ft-kips) | phi Mn (ft-kips) | Total Deflect (in) | Rotation (deg) | Ratio |
|---------------|------------------|------------------|-----------------|-----------------|-----------------|----------------------------|---------------|---------------|------------------|------------------|--------------------|----------------|-------|
| 0.00 | -43.29 | -1.56 | 0.00 | -223.87 | 0.00 | 223.87 | 4,604.11 | 1,308.12 | 7,398.90 | 5,943.65 | 0.00 | 0.00 | 0.047 |
| 5.00 | -42.04 | -1.57 | 0.00 | -216.07 | 0.00 | 216.07 | 4,547.42 | 1,276.39 | 7,044.39 | 5,727.25 | 0.00 | -0.01 | 0.047 |
| 10.00 | -40.82 | -1.57 | 0.00 | -208.24 | 0.00 | 208.24 | 4,488.01 | 1,244.67 | 6,698.58 | 5,511.07 | 0.02 | -0.02 | 0.047 |
| 15.00 | -39.62 | -1.58 | 0.00 | -200.39 | 0.00 | 200.39 | 4,425.86 | 1,212.94 | 6,361.48 | 5,295.36 | 0.04 | -0.03 | 0.047 |
| 20.00 | -38.44 | -1.58 | 0.00 | -192.51 | 0.00 | 192.51 | 4,360.98 | 1,181.22 | 6,033.07 | 5,080.38 | 0.07 | -0.04 | 0.047 |
| 25.00 | -37.30 | -1.58 | 0.00 | -184.61 | 0.00 | 184.61 | 4,293.36 | 1,149.49 | 5,713.38 | 4,866.38 | 0.12 | -0.05 | 0.047 |
| 30.00 | -37.02 | -1.59 | 0.00 | -176.69 | 0.00 | 176.69 | 4,223.01 | 1,117.76 | 5,402.38 | 4,653.64 | 0.17 | -0.06 | 0.047 |
| 31.25 | -35.48 | -1.58 | 0.00 | -174.71 | 0.00 | 174.71 | 4,205.00 | 1,109.83 | 5,325.99 | 4,600.68 | 0.19 | -0.06 | 0.046 |
| 35.00 | -34.48 | -1.58 | 0.00 | -168.78 | 0.00 | 168.78 | 4,149.93 | 1,086.04 | 5,100.09 | 4,442.40 | 0.23 | -0.07 | 0.046 |
| 37.50 | -33.93 | -1.58 | 0.00 | -164.82 | 0.00 | 164.82 | 4,149.47 | 1,085.84 | 5,098.24 | 4,441.10 | 0.27 | -0.07 | 0.045 |
| 40.00 | -32.85 | -1.58 | 0.00 | -160.87 | 0.00 | 160.87 | 4,111.89 | 1,069.98 | 4,950.38 | 4,336.13 | 0.31 | -0.08 | 0.045 |
| 45.00 | -31.79 | -1.58 | 0.00 | -152.97 | 0.00 | 152.97 | 4,034.69 | 1,038.25 | 4,661.20 | 4,127.64 | 0.40 | -0.09 | 0.045 |
| 50.00 | -30.77 | -1.57 | 0.00 | -145.09 | 0.00 | 145.09 | 3,954.76 | 1,006.53 | 4,380.71 | 3,921.32 | 0.50 | -0.10 | 0.045 |
| 55.00 | -29.77 | -1.57 | 0.00 | -137.22 | 0.00 | 137.22 | 3,872.09 | 974.80 | 4,108.94 | 3,717.40 | 0.61 | -0.11 | 0.045 |
| 60.00 | -29.13 | -1.56 | 0.00 | -129.39 | 0.00 | 129.39 | 3,786.70 | 943.07 | 3,845.86 | 3,516.15 | 0.73 | -0.13 | 0.044 |
| 63.25 | -28.52 | -1.56 | 0.00 | -124.31 | 0.00 | 124.31 | 3,729.72 | 922.45 | 3,679.52 | 3,386.89 | 0.82 | -0.13 | 0.044 |
| 65.00 | -27.24 | -1.54 | 0.00 | -121.58 | 0.00 | 121.58 | 3,698.56 | 911.35 | 3,591.48 | 3,317.83 | 0.87 | -0.14 | 0.044 |
| 68.75 | -27.00 | -1.54 | 0.00 | -115.80 | 0.00 | 115.80 | 3,675.54 | 903.22 | 3,527.71 | 3,267.52 | 0.99 | -0.15 | 0.043 |
| 70.00 | -26.06 | -1.53 | 0.00 | -113.88 | 0.00 | 113.88 | 3,652.91 | 895.29 | 3,466.04 | 3,218.63 | 1.02 | -0.15 | 0.043 |
| 75.00 | -25.15 | -1.51 | 0.00 | -106.25 | 0.00 | 106.25 | 3,560.66 | 863.56 | 3,224.77 | 3,025.21 | 1.19 | -0.17 | 0.042 |
| 80.00 | -24.27 | -1.50 | 0.00 | -98.69 | 0.00 | 98.69 | 3,465.68 | 831.83 | 2,992.21 | 2,835.36 | 1.37 | -0.18 | 0.042 |
| 85.00 | -23.42 | -1.48 | 0.00 | -91.20 | 0.00 | 91.20 | 3,367.96 | 800.11 | 2,768.35 | 2,649.35 | 1.57 | -0.19 | 0.041 |
| 90.00 | -22.59 | -1.46 | 0.00 | -83.79 | 0.00 | 83.79 | 3,252.82 | 768.38 | 2,553.19 | 2,456.33 | 1.78 | -0.21 | 0.041 |
| 95.00 | -22.41 | -1.46 | 0.00 | -76.49 | 0.00 | 76.49 | 3,118.51 | 736.66 | 2,346.73 | 2,256.70 | 2.00 | -0.22 | 0.041 |
| 96.08 | -21.31 | -1.43 | 0.00 | -74.90 | 0.00 | 74.90 | 3,089.41 | 729.78 | 2,303.15 | 2,214.56 | 2.05 | -0.23 | 0.041 |
| 100.00 | -21.10 | -1.42 | 0.00 | -69.32 | 0.00 | 69.32 | 2,984.21 | 704.93 | 2,148.98 | 2,065.52 | 2.24 | -0.24 | 0.041 |
| 100.75 | -20.43 | -1.40 | 0.00 | -68.25 | 0.00 | 68.25 | 3,030.38 | 715.84 | 2,215.99 | 2,130.29 | 2.28 | -0.24 | 0.039 |
| 105.00 | -19.67 | -1.37 | 0.00 | -62.30 | 0.00 | 62.30 | 2,916.22 | 688.87 | 2,052.20 | 1,971.97 | 2.50 | -0.26 | 0.038 |
| 110.00 | -16.38 | -1.24 | 0.00 | -55.43 | 0.00 | 55.43 | 2,781.91 | 657.14 | 1,867.55 | 1,793.54 | 2.78 | -0.27 | 0.037 |
| 113.00 | -16.06 | -1.23 | 0.00 | -51.71 | 0.00 | 51.71 | 2,701.33 | 638.11 | 1,760.94 | 1,690.55 | 2.95 | -0.28 | 0.037 |
| 115.00 | -15.41 | -1.20 | 0.00 | -49.25 | 0.00 | 49.25 | 2,647.61 | 625.42 | 1,691.61 | 1,623.57 | 3.07 | -0.29 | 0.036 |
| 120.00 | -14.78 | -1.17 | 0.00 | -43.25 | 0.00 | 43.25 | 2,513.30 | 593.69 | 1,524.37 | 1,462.07 | 3.38 | -0.30 | 0.035 |
| 125.00 | -14.20 | -1.15 | 0.00 | -37.39 | 0.00 | 37.39 | 2,378.99 | 561.97 | 1,365.83 | 1,309.02 | 3.71 | -0.32 | 0.035 |
| 129.75 | -14.15 | -1.14 | 0.00 | -31.95 | 0.00 | 31.95 | 2,251.40 | 531.83 | 1,223.29 | 1,171.46 | 4.04 | -0.34 | 0.034 |
| 130.00 | -13.47 | -1.11 | 0.00 | -31.66 | 0.00 | 31.66 | 2,244.69 | 530.24 | 1,216.00 | 1,164.43 | 4.05 | -0.34 | 0.033 |
| 133.58 | -13.33 | -1.10 | 0.00 | -27.70 | 0.00 | 27.70 | 1,841.02 | 434.89 | 981.50 | 942.04 | 4.31 | -0.35 | 0.037 |
| 135.00 | -12.83 | -1.07 | 0.00 | -26.14 | 0.00 | 26.14 | 1,809.31 | 427.40 | 947.99 | 909.67 | 4.42 | -0.35 | 0.036 |
| 140.00 | -10.35 | -0.91 | 0.00 | -20.79 | 0.00 | 20.79 | 1,697.39 | 400.96 | 834.35 | 799.95 | 4.80 | -0.37 | 0.032 |
| 145.00 | -9.92 | -0.88 | 0.00 | -16.26 | 0.00 | 16.26 | 1,585.46 | 374.52 | 727.97 | 697.27 | 5.20 | -0.39 | 0.030 |
| 150.00 | -9.59 | -0.85 | 0.00 | -11.87 | 0.00 | 11.87 | 1,473.54 | 348.08 | 628.84 | 601.65 | 5.62 | -0.41 | 0.026 |
| 154.00 | -4.98 | -0.49 | 0.00 | -8.46 | 0.00 | 8.46 | 1,384.00 | 326.93 | 554.76 | 530.23 | 5.96 | -0.42 | 0.020 |
| 155.00 | -4.68 | -0.46 | 0.00 | -7.97 | 0.00 | 7.97 | 1,361.62 | 321.64 | 536.96 | 513.08 | 6.05 | -0.42 | 0.019 |
| 160.00 | -4.44 | -0.44 | 0.00 | -5.66 | 0.00 | 5.66 | 1,249.70 | 295.20 | 452.34 | 431.55 | 6.50 | -0.43 | 0.017 |
| 164.33 | -4.38 | -0.44 | 0.00 | -3.75 | 0.00 | 3.75 | 1,152.70 | 272.29 | 384.86 | 366.60 | 6.89 | -0.44 | 0.014 |
| 165.00 | -4.18 | -0.42 | 0.00 | -3.46 | 0.00 | 3.46 | 1,137.78 | 268.77 | 374.96 | 357.08 | 6.96 | -0.44 | 0.013 |
| 167.25 | -4.06 | -0.41 | 0.00 | -2.52 | 0.00 | 2.52 | 903.09 | 213.33 | 295.25 | 282.29 | 7.17 | -0.45 | 0.013 |
| 170.00 | -1.51 | -0.16 | 0.00 | -1.40 | 0.00 | 1.40 | 853.84 | 201.69 | 263.94 | 252.11 | 7.42 | -0.45 | 0.007 |

Site Number: 370627

Code: ANSI/TIA-222-H

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

9/23/2020 4:48:15 PM

Customer: AT&T MOBILITY

| | | | | | | | | | | | | | |
|--------|-------|-------|------|-------|------|------|--------|--------|--------|--------|------|-------|-------|
| 175.00 | -1.39 | -0.15 | 0.00 | -0.59 | 0.00 | 0.59 | 764.30 | 180.54 | 211.50 | 201.60 | 7.90 | -0.46 | 0.005 |
| 179.00 | 0.00 | -0.14 | 0.00 | 0.00 | 0.00 | 0.00 | 692.67 | 163.62 | 173.72 | 165.26 | 8.28 | -0.46 | 0.000 |

Site Number: 370627

Code: ANSI/TIA-222-H

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Site Name: Newington CT, CT

Engineering Number: 13222844_C3_10

9/23/2020 4:48:15 PM

Customer: AT&T MOBILITY

Analysis Summary

| Load Case | Reactions | | | | | | Max Usage | |
|----------------------|-----------------------|-----------------------|-----------------------|---------------------------|---------------------------|---------------------------|--------------|----------------------|
| | Shear FX (kips) | Shear FZ (kips) | Axial FY (kips) | Moment MX (ft-kips) | Moment MY (ft-kips) | Moment MZ (ft-kips) | Elev (ft) | Interaction Ratio |
| 1.2D + 1.0W | 30.24 | 0.00 | 62.25 | 0.00 | 0.00 | 3804.63 | 0.00 | 0.65 |
| 0.9D + 1.0W | 30.22 | 0.00 | 46.68 | 0.00 | 0.00 | 3741.27 | 0.00 | 0.64 |
| 1.2D + 1.0Di + 1.0Wi | 9.09 | 0.00 | 90.68 | 0.00 | 0.00 | 1197.07 | 0.00 | 0.22 |
| 1.2D + 1.0Ev + 1.0Eh | 1.56 | 0.00 | 62.59 | 0.00 | 0.00 | 228.75 | 0.00 | 0.05 |
| 0.9D - 1.0Ev + 1.0Eh | 1.56 | 0.00 | 43.29 | 0.00 | 0.00 | 223.87 | 0.00 | 0.05 |
| 1.0D + 1.0W | 7.00 | 0.00 | 51.91 | 0.00 | 0.00 | 872.36 | 0.00 | 0.16 |

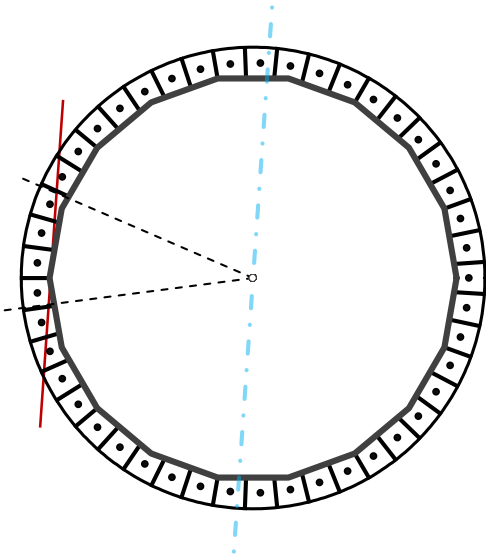
Base Plate & Anchor Rod Analysis

| Pole Dimensions | | |
|--------------------|-----|----|
| Number of Sides | 18 | - |
| Diameter | 63 | in |
| Thickness | 3/8 | in |
| Orientation Offset | | ° |

| Base Reactions | | |
|----------------|---------|------|
| Moment, Mu | 3,804.6 | k-ft |
| Axial, Pu | 62.3 | k |
| Shear, Vu | 30.2 | k |
| Neutral Axis | 86 | ° |

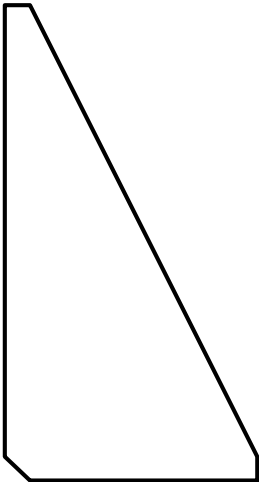
| Report Capacities | | |
|-------------------|----------|--------|
| Component | Capacity | Result |
| Base Plate | 57% | Pass |
| Anchor Rods | 69% | Pass |
| Dwyidag | - | - |

| Base Plate | | |
|---------------------------|---------|------------|
| Shape | Round | - |
| Diameter, ϕ | 73 | in |
| Thickness | 1 | in |
| Grade | A572-50 | |
| Yield Strength, Fy | 50 | ksi |
| Tensile Strength, Fu | 65 | ksi |
| Clip | N/A | in |
| Orientation Offset | | ° |
| Anchor Rod Detail | d | $\eta=0.5$ |
| Clear Distance | 3 | in |
| Applied Moment, Mu | 340.0 | k |
| Bending Stress, ϕMn | 599.9 | k |



| Original Anchor Rods | | |
|------------------------|--------|-----|
| Arrangement | Radial | - |
| Quantity | 45 | - |
| Diameter, ϕ | 1 1/4 | in |
| Bolt Circle | 68 | in |
| Grade | A687 | |
| Yield Strength, Fy | 105 | ksi |
| Tensile Strength, Fu | 125 | ksi |
| Spacing | 4.7 | in |
| Orientation Offset | | ° |
| Applied Force, Pu | 62.3 | k |
| Anchor Rods, ϕPn | 90.9 | k |

| Stiffeners | | |
|---------------------------|--------|-----|
| Arrangement | Radial | - |
| Quantity | 45 | - |
| Height | 10 | in |
| Width | 5 | in |
| Effective Width | 5.000 | in |
| Thickness | 3/4 | in |
| Effective Thickness | 0.750 | in |
| Notch | 0.5 | in |
| Flat Edge | 0.5 | in |
| Grade | A36 | |
| Yield Strength, Fy | 36 | ksi |
| Tensile Strength, Fu | 58 | ksi |
| Horizontal Weld | Fillet | |
| Horizontal Fillet Size | 5/16 | in |
| Bevel Depth | 0 | in |
| Vertical Weld | Fillet | |
| Vertical Fillet Size | 5/16 | in |
| Weld Strength | 70 | ksi |
| Electrode Coefficient | 1 | - |
| Orientation Offset | | ° |
| Vertical Weld, ϕRn | 137.6 | k |
| Horz. Weld, ϕRn | 73.9 | k |
| Ten. Capacity, ϕTn | 109.4 | k |
| Comp. Capacity, ϕPn | 992.8 | k |



Calculations for Monopole Base Plate & Anchor Rod Analysis

Reaction Distribution

| Reaction | Shear Vu | Moment Mu | Factor |
|-------------------------------|-------------|--------------|--------|
| - | k | k-ft | - |
| Base Forces | 30.2 | 3804.6 | 1.00 |
| Anchor Rod Forces | 30.2 | 3804.6 | 1.00 |
| Additional Bolt (Grp1) Forces | 0.0 | 0.0 | 0.00 |
| Additional Bolt (Grp2) Forces | 0.0 | 0.0 | 0.00 |
| Dywidag Forces | 0.0 | 0.0 | 0.00 |
| Stiffener Forces | 20.8 | 2615.8 | 0.69 |

Geometric Properties

| Section | Gross Area | Net Area | Individual Inertia | Threads per Inch | Moment of Inertia |
|-----------|-----------------|-----------------|--------------------|------------------|-------------------|
| - | in ² | in ² | in ⁴ | # | in ⁴ |
| Pole | 73.4043 | 4.0780 | 0.1917 | | 35988.93 |
| Bolt | 1.2272 | 0.9691 | 0.0747 | 7 | 24200.88 |
| Bolt1 | 0.0000 | 0.0000 | 0.0000 | 0 | 0.00 |
| Bolt2 | 0.0000 | 0.0000 | 0.0000 | 0 | 0.00 |
| Dywidag | 0.0000 | 0.0000 | 0.0000 | | 0.00 |
| Stiffener | 3.3750 | 3.0375 | 31.2500 | | 79185.11 |

| Base Plate | | |
|----------------------|--------|-----|
| Shape | Round | - |
| Diameter, D | 73 | in |
| Thickness, t | 1 | in |
| Yield Strength, Fy | 50 | ksi |
| Tensile Strength, Fu | 65 | ksi |
| Base Plate Chord | 36.878 | in |
| Detail Type | d | - |
| Detail Factor | 0.50 | - |
| Clear Distance | 3 | - |

| Anchor Rods | | |
|---------------------------|-------|-----|
| Anchor Rod Quantity, N | 45 | - |
| Rod Diameter, d | 1.25 | in |
| Bolt Circle, BC | 68 | in |
| Yield Strength, Fy | 105 | ksi |
| Tensile Strength, Fu | 125 | ksi |
| Applied Axial, Pu | 62.3 | k |
| Applied Shear, Vu | 0.0 | k |
| Compressive Capacity, φPn | 90.9 | k |
| Tensile Capacity, φRnt | 0.686 | OK |
| Interaction Capacity | 0.473 | OK |

| Base Plate Stiffeners | | |
|------------------------------|------|---|
| Applied Axial Force, Pu | 41.8 | k |
| Applied Horizontal Force, Vu | 0.23 | k |

| Vertical Weld | | |
|---|-------|----|
| Vert.-to-Stiffener a=e _x /l | 0.167 | - |
| Spacing Ratio, k | 0.075 | - |
| Weld Coefficient, C | 3.670 | - |
| Compressive Capacity, φPn | 137.6 | k |
| Vert.-to-Plate a=e _x /l | 0.333 | - |
| Spacing Ratio, k | 0.075 | - |
| Weld Coefficient, C | 2.940 | - |
| Shear Capacity, φVn | 110.3 | k |
| P _u /φ _p P _n + V _u /φ _v V _n | 0.306 | OK |

| External Base Plate | | |
|-----------------------|--------|-----------------|
| Chord Length AA | 29.077 | in |
| Additional AA | 24.245 | in |
| Section Modulus, Z | 13.331 | in ³ |
| Applied Moment, Mu | 340.0 | k-ft |
| Bending Capacity, φMn | 599.9 | k-ft |
| Capacity, Mu/φMn | 0.567 | OK |

| | | |
|-----------------------|--------|-----------------|
| Chord Length AB | 26.862 | in |
| Additional AB | 17.302 | in |
| Section Modulus, Z | 11.041 | in ³ |
| Applied Moment, Mu | 194.5 | k-ft |
| Bending Capacity, φMn | 496.8 | k-ft |
| Capacity, Mu/φMn | 0.392 | OK |

| | | |
|-----------------------|---------|-----------------|
| Bend Line Length | 20.725 | in |
| Additional Bend Line | 258.750 | in |
| Section Modulus, Z | 69.869 | in ³ |
| Applied Moment, Mu | 284.9 | k-ft |
| Bending Capacity, φMn | 3144.1 | k-ft |
| Capacity, Mu/φMn | 0.091 | OK |

| Internal Base Plate | | |
|-----------------------|-------|-----------------|
| Arc Length | 0.000 | in |
| Section Modulus, Z | 0.000 | in ³ |
| Moment Arm | 0.000 | in |
| Applied Moment, Mu | 0.0 | k-ft |
| Bending Capacity, φMn | 0.0 | k-ft |
| Capacity, Mu/φMn | | |

| Horizontal Weld | | |
|---|-------|----|
| Horz.-to-Stiffener a=e _x /l | 0.167 | - |
| Spacing Ratio, k | 0.150 | - |
| Weld Coefficient, C | 3.940 | - |
| Effective Fillet | 0.313 | in |
| Compressive Capacity, φPn | 73.9 | k |
| Horz.-to-Pole a=e _x /l | 0.333 | - |
| Spacing Ratio, k | 0.150 | - |
| Weld Coefficient, C | 3.090 | - |
| Shear Capacity, φVn | 57.9 | k |
| P _u /φ _p P _n + V _u /φ _v V _n | 0.570 | OK |

| Plate Tension | | |
|-----------------------|-------|-----------------|
| Gross Cross Section | 3.375 | in ² |
| Net Cross Section | 3.038 | in ² |
| Tensile Capacity, φTn | 109.4 | k |
| Capacity, Tu/φTn | 0.191 | OK |

| Plate Compression | | |
|----------------------------|--------|-----------------|
| Radius of Gyration | 0.217 | in ³ |
| kl/r | 27.71 | - |
| 4.71 √(E/Fy) | 133.68 | - |
| Buckling Stress(Fe) | 372.7 | - |
| Crit. Buckling Stress(Fcr) | 326.8 | ksi |
| Compressive Capacity, φPn | 992.8 | k |
| Capacity, Pu/φPn | 0.021 | OK |

EXHIBIT 4



AMERICAN TOWER®
CORPORATION

Antenna Mount Analysis Report

ATC Site Name : Newington CT, CT
ATC Site Number : 370627
Engineering Number : 13222844_C8_09
Mount Elevation : 157 ft
Carrier : AT&T Mobility
Carrier Site Name : MRCTB046697
Carrier Site Number : CTL05403
Site Location : 605 Willard Ave.
Newington, CT 06111-0000
41.69837222 , -72.73714722
County : Hartford
Date : September 4, 2020
Max Usage : 91%
Result : Replacement (Pass)

Prepared By:
Max Carter
Structural Engineer

Max Carter

Reviewed By:



COA: PEC.0001553



Table of Contents

Introduction 1

Supporting Documents 1

Analysis 1

Conclusion 1

Antenna Loading..... 2

Structure Usages..... 2

Mount Layout 3

Equipment Layout 4

Standard Conditions..... 7

Calculations Attached



Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for AT&T Mobility at 157 ft.

Supporting Documents

| | |
|-----------------------------------|---|
| Specifications Sheet | Site Pro 1 RMQLP-4120-H10, dated October 18, 2019 |
| Radio Frequency Data Sheet | RFDS ID #10071165, dated July 6, 2020 |

Analysis

This antenna mount was analyzed using American Tower Corporation's Mount Analysis Program and RISA-3D

| | |
|--------------------------------------|--|
| Basic Wind Speed: | 118 mph (3-Second Gust) |
| Basic Wind Speed w/ Ice: | 50 mph (3-Second Gust) w/ 1 1/2" radial ice concurrent |
| Codes: | ANSI/TIA-222-H |
| Exposure Category: | B |
| Risk Category: | II |
| Topographic Factor Procedure: | Method 2 |
| Feature: | Flat |
| Crest Height (H): | 0 ft |
| Crest Length (L): | 0 ft |
| Spectral Response: | Ss = 0.194, S1 = 0.055 |
| Site Class: | D - Stiff Soil |
| Live Loads: * | Lm = 500 lbs |

* Based on experience, it has been determined that the Lv load cases will not control over Lm load cases in platform mount analyses. Therefore, these load cases have been excluded from this analysis.

Conclusion

Due to customer antenna spacing/separation requirements, the existing mount cannot support the equipment as described in this report and must be replaced with the mount listed below. Based on the analysis results, the proposed mount meets the requirements, per the applicable codes listed above, and can support the equipment as described in this report.

- Replace existing mount(s) with Site Pro 1 RMQLP-4120-H10 platform.

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.

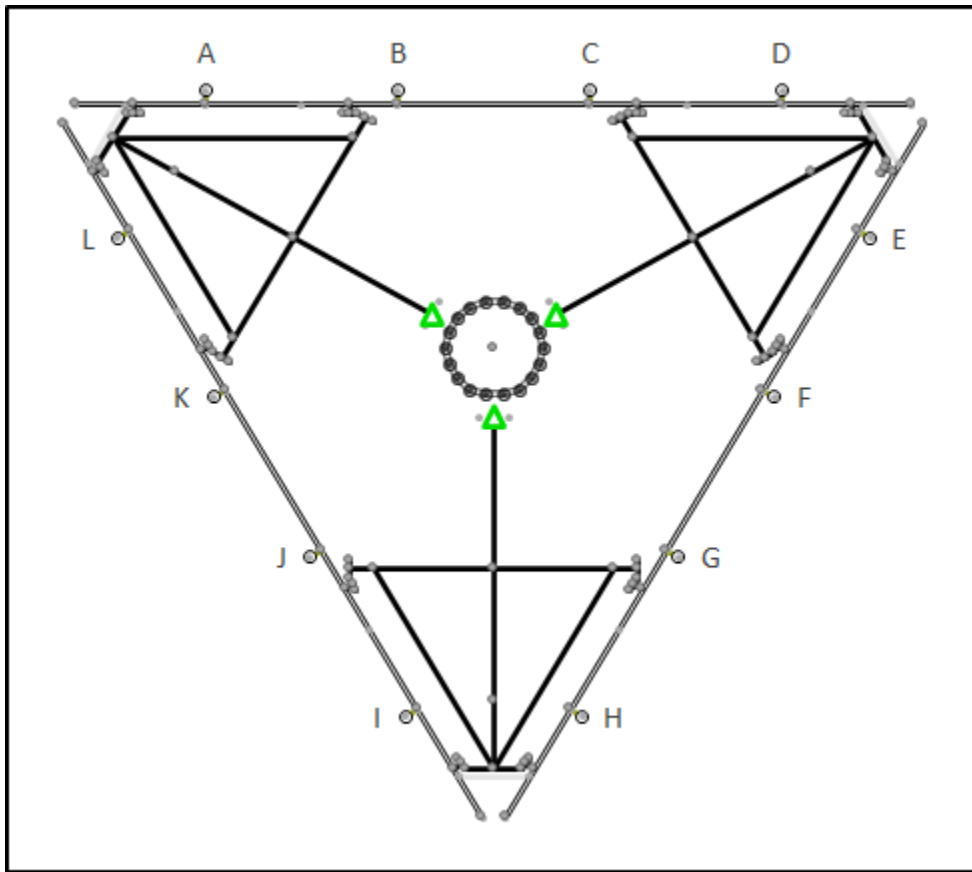
Application Loading

| Mount Centerline (ft) | Antenna Centerline (ft) | Qty | Antenna Model |
|-----------------------|-------------------------|-----|--------------------------------------|
| 157.0 | 154.0 | 2 | CCI OPA-65R-LCUU-H8 (92.7") |
| | | 1 | CCI OPA-65R-LCUU-H6 |
| | | 1 | CCI DMP65R-BU6DA |
| | | 2 | CCI DMP65R-BU8D |
| | | 3 | Kathrein Scala 800 10121 |
| | | 2 | CCI TPA-65R-LCUUUU-H8 |
| | | 1 | Quintel QS66512-2 |
| | | 6 | Powerwave Allgon LGP21401 |
| | | 1 | Raycap DC6-48-60-0-8F (31.4" Height) |
| | | 1 | Raycap DC6-48-60-18-8F ("Squid") |
| | | 1 | Raycap DC6-48-60-18-8F ("Squid") |
| | | 3 | Ericsson RRUS 32 B30 |
| | | 3 | Ericsson RRUS 32 B2 |
| | | 3 | Ericsson RRUS 4449 B5, B12 |
| | | 3 | Ericsson RRUS 8843 B2, B66A |
| | | 3 | Ericsson RRUS 4478 B14 |

Structure Usages

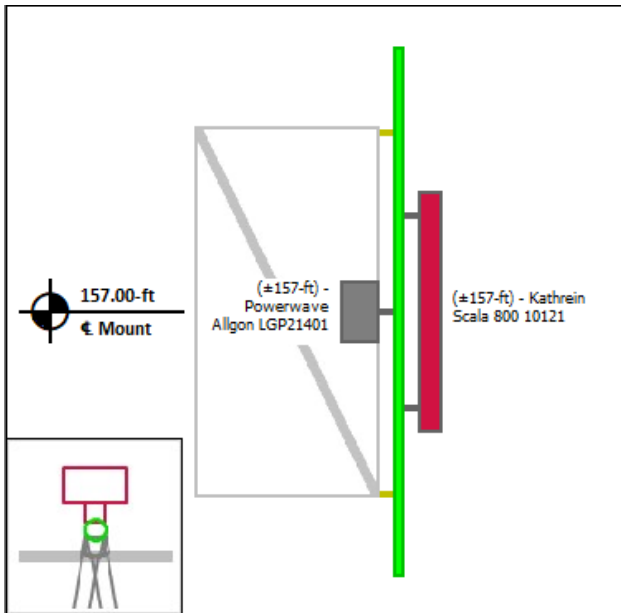
| Structural Component | Controlling Usage | Pass/Fail |
|----------------------|-------------------|-----------|
| Horizontals | 74% | Pass |
| Diagonals | 4% | Pass |
| Tie-Backs | 91% | Pass |
| Mount Pipes | 60% | Pass |
| Handrail | 54% | Pass |
| Connection | 32% | Pass |

Mount Layout

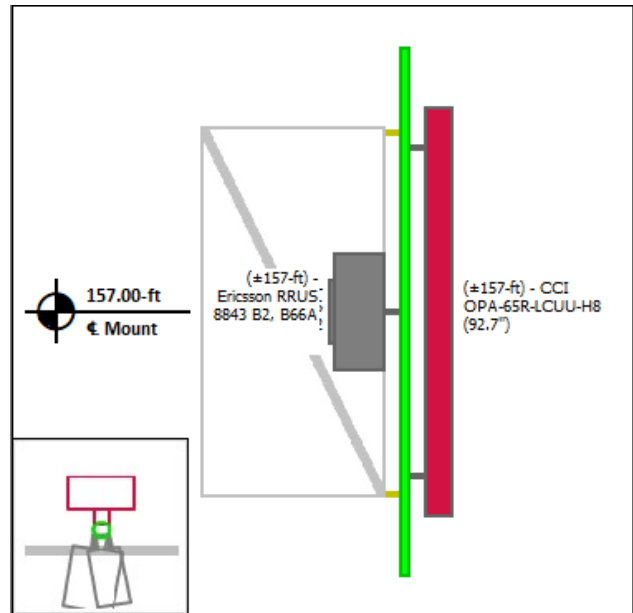


Equipment Layout

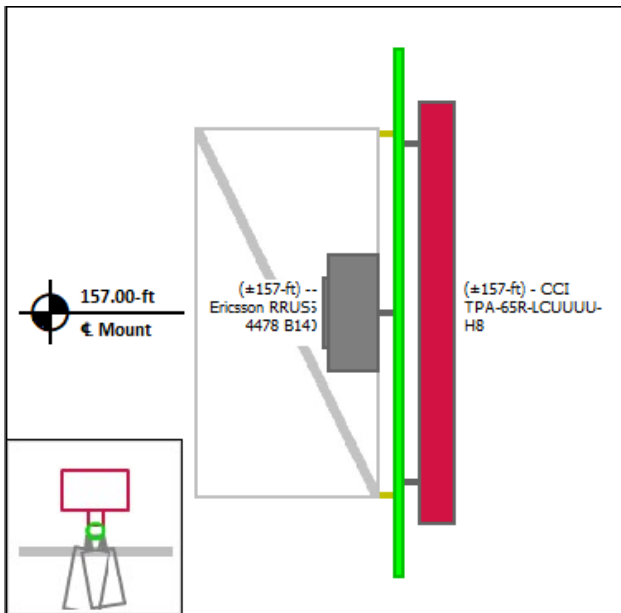
Mount Pipe A



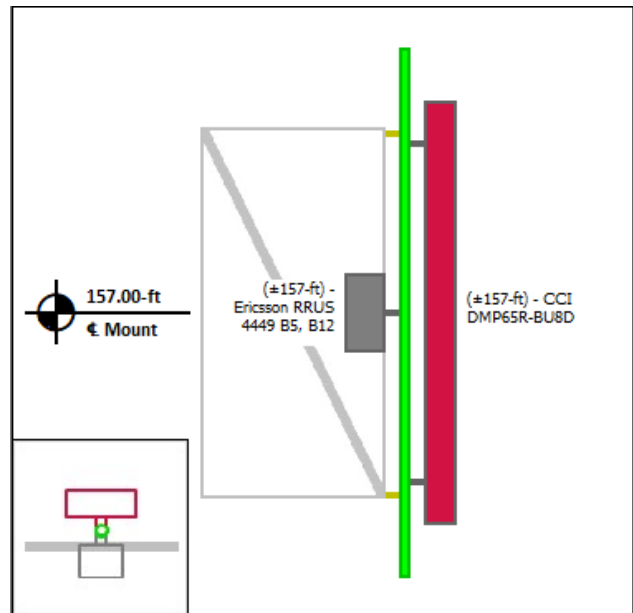
Mount Pipe B



Mount Pipe C

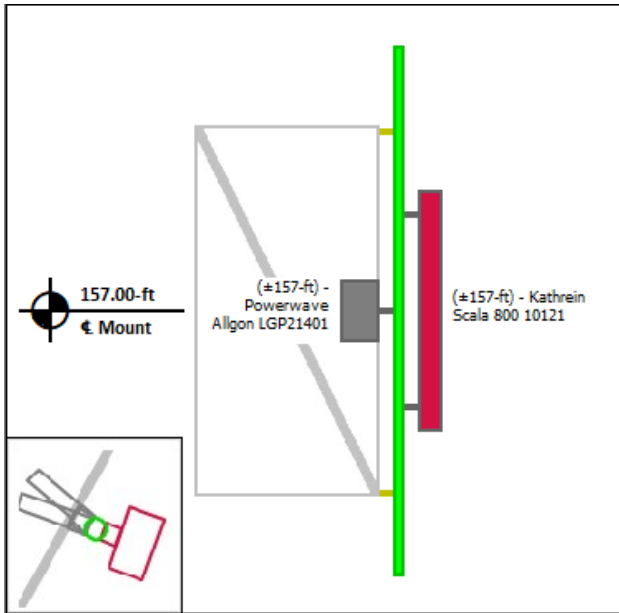


Mount Pipe D

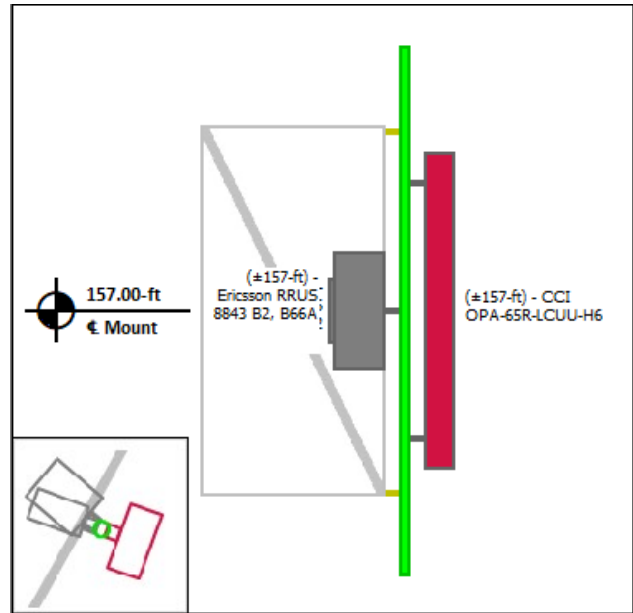


Equipment Layout Cont'd.

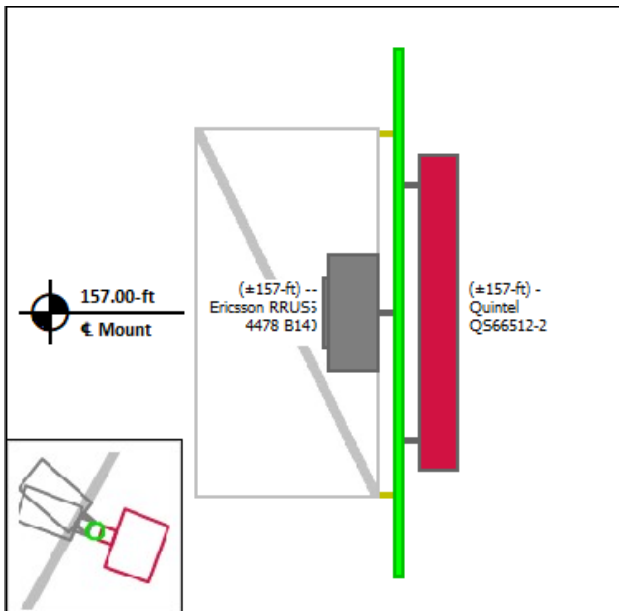
Mount Pipe E



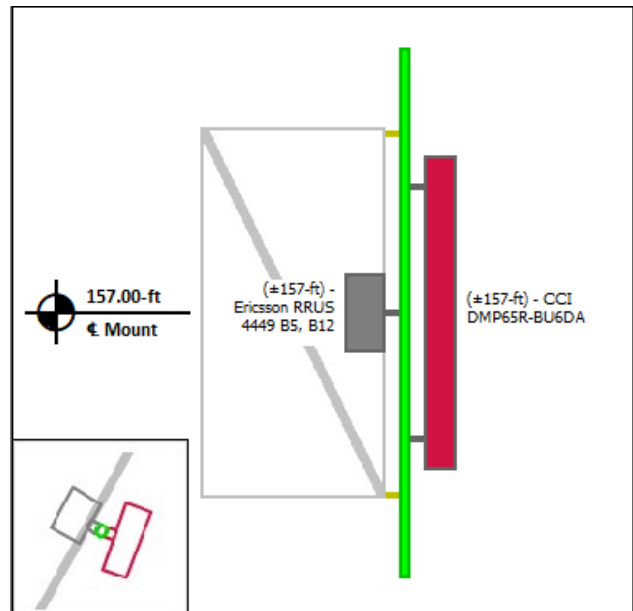
Mount Pipe F



Mount Pipe G

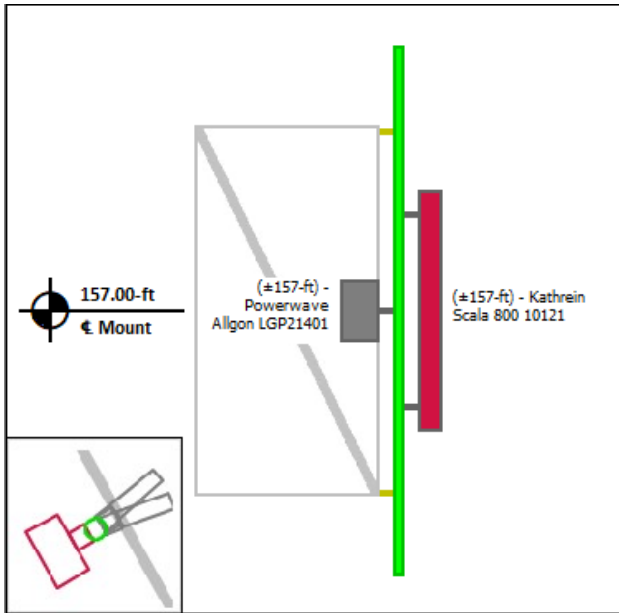


Mount Pipe H

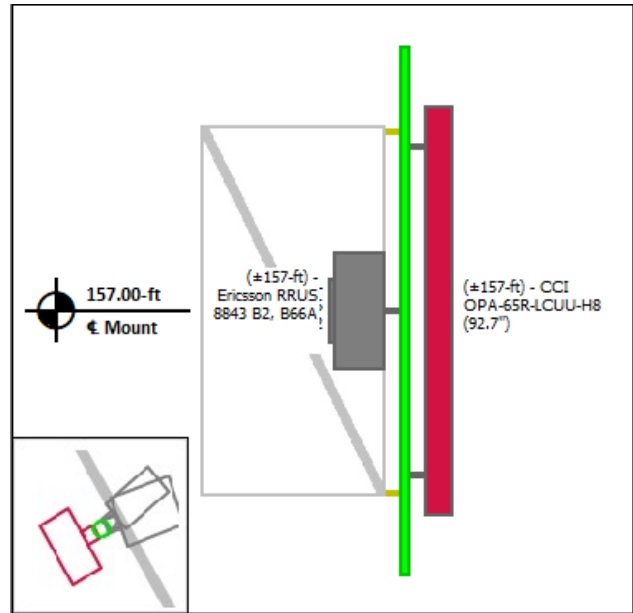


Equipment Layout Cont'd.

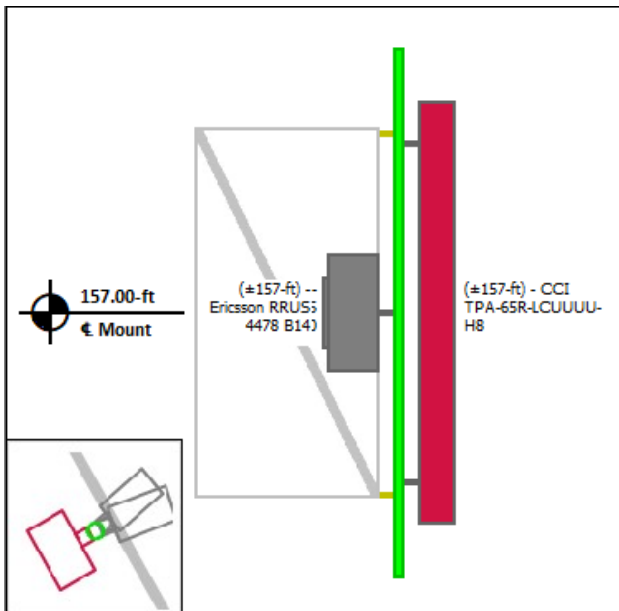
Mount Pipe I



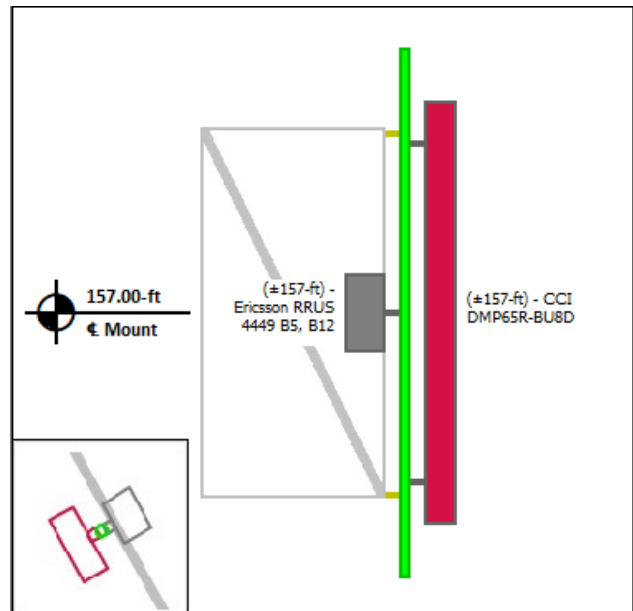
Mount Pipe J



Mount Pipe K



Mount Pipe L





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.

All connections are to be verified for condition and tightness by the installation contractor preceding any changes to the appurtenance mounting system and/or equipment attached to it.

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.



Site Number: 370627
Project Number: 13222844_C8_09
Carrier: AT&T Mobility
Mount Elevation: 157 ft
Date: 9/4/2020

Mount Analysis Force Calculations

| Wind & Ice Load Calculations | | | |
|-----------------------------------|----------|------|-----|
| Velocity Pressure Coefficient | K_z | 1.12 | |
| Topographic Factor | K_{zt} | 1.00 | |
| Rooftop Wind Speed-up Factor | K_s | 1.00 | |
| Shielding Factor | K_a | 0.90 | |
| Ground Elevation Factor | K_e | 1.00 | |
| Wind Direction Probability Factor | K_d | 0.95 | |
| Basic Wind Speed | V | 118 | mph |
| Velocity Pressure | q_z | 37.9 | psf |
| Height Escalation Factor | K_{iz} | 1.17 | |
| Thickness of Radial Glaze Ice | T_{iz} | 1.75 | in |

| Seismic Load Calculations | | | |
|-----------------------------------|----------|--------|-----|
| Short Period DSRAP | S_{DS} | 0.207 | |
| 1 Second DSRAP | S_{D1} | 0.088 | |
| Importance Factor | I | 1.0 | |
| Response Modification Coefficient | R | 2.0 | |
| Seismic Response Coefficient | C_s | 0.103 | |
| Amplification Factor | A | 1.0 | |
| Total Weight | W | 3625.4 | lbs |
| Total Shear Force | V_s | 375.1 | lbs |
| Horizontal Seismic Load | E_h | 375.1 | lbs |
| Vertical Seismic Load | E_v | 150.0 | lbs |

| Antenna Calculations | | | | | | | | |
|--------------------------------------|--------|-------|-------|--------|---------|---------|------------|------------|
| Equipment | Height | Width | Depth | Weight | EPA_N | EPA_T | EPA_{Ni} | EPA_{Ti} |
| Model # | in | in | in | lbs | sqft | sqft | sqft | sqft |
| CCI OPA-65R-LCUU-H8 (92.7") | 92.7 | 14.4 | 7.0 | 88.0 | 12.75 | 2.83 | 16.45 | 4.40 |
| CCI OPA-65R-LCUU-H6 | 72.0 | 14.8 | 7.4 | 73.0 | 9.66 | 2.24 | 12.53 | 3.46 |
| CCI DMP65R-BU6DA | 71.2 | 20.7 | 7.7 | 79.4 | 12.71 | 2.28 | 15.59 | 3.49 |
| CCI DMP65R-BU8D | 96.0 | 20.7 | 7.7 | 95.7 | 17.87 | 3.08 | 21.66 | 4.65 |
| Kathrein Scala 800 10121 | 54.5 | 10.3 | 5.9 | 46.3 | 5.16 | 1.51 | 7.36 | 2.56 |
| CCI TPA-65R-LCUUUU-H8 | 96.0 | 14.4 | 8.6 | 81.6 | 13.30 | 3.44 | 17.14 | 5.02 |
| Quintel QS66512-2 | 72.0 | 12.0 | 9.6 | 111.0 | 8.13 | 2.88 | 11.02 | 4.12 |
| Powerwave Allgon LGP21401 | 14.4 | 9.2 | 2.6 | 14.1 | 1.10 | 0.20 | 1.90 | 0.58 |
| Raycap DC6-48-60-0-8F (31.4" Height) | 31.4 | 18.3 | 10.3 | 16.0 | N/A | N/A | | |
| Raycap DC6-48-60-18-8F ("Squid") | 24.0 | 11.0 | 11.0 | 31.8 | N/A | N/A | | |
| Raycap DC6-48-60-18-8F ("Squid") | 24.0 | 11.0 | 11.0 | 31.8 | N/A | N/A | | |
| Ericsson RRUS 32 B30 | 27.2 | 12.1 | 7.0 | 60.0 | 2.74 | 1.67 | 3.99 | 2.83 |
| Ericsson RRUS 32 B2 | 27.2 | 12.1 | 7.0 | 53.0 | 2.74 | 1.67 | 3.99 | 2.83 |
| Ericsson RRUS 4449 B5, B12 | 17.9 | 13.2 | 9.4 | 71.0 | 1.97 | 1.40 | 2.98 | 2.30 |
| Ericsson RRUS 8843 B2, B66A | 14.9 | 13.2 | 10.9 | 72.0 | 1.64 | 1.35 | 2.56 | 2.21 |
| Ericsson RRUS 4478 B14 | 16.5 | 13.4 | 7.7 | 59.9 | 1.84 | 1.06 | 2.82 | 1.87 |

Mount-to-Tower Connection Analysis

Applied Loads from RISA 3D

| | | | |
|------------------------------|----------------|---------|-------|
| Controlling Load Combination | | 28 | |
| Node Label | | N006 | |
| Force in X | F _x | 416.5 | lbs |
| Force in Y | F _y | 1853.9 | lbs |
| Force in Z | F _z | -2244.3 | lbs |
| Moment about X | M _x | 3933.7 | lb-ft |
| Moment about Y | M _y | -758.8 | lb-ft |
| Moment about Z | M _z | -377.9 | lb-ft |

Bolt Shear and Tensile Capacity

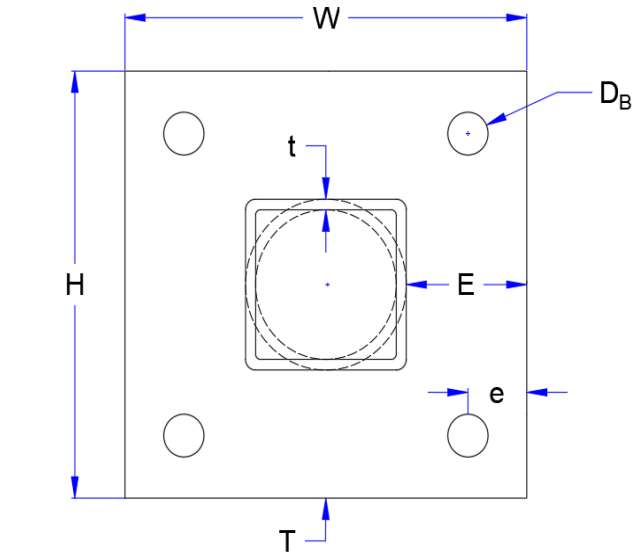
| | | | |
|----------------------|---|------|------|
| Bolt Quantity | n | 4 | |
| Bolt Diameter | D _B | 5/8 | in |
| Bolt Edge Distance | e | 1 | in |
| Bolt Grade | | A325 | |
| Bolt F _y | F _{yB} | 92 | ksi |
| Bolt F _u | F _{uB} | 120 | ksi |
| Applied Shear | V _u | 0.41 | k |
| Applied Tension | T _u | 4.13 | k |
| Tensile Strength | φT _n | 20.3 | k |
| Interaction Capacity | (T _u +V _u)/φT _n | 22% | Pass |

Plate Flexural Capacity

| | | | |
|----------------------|---------------------------------|------|------|
| Plate Height | H | 8 | in |
| Plate Width | W | 8 | in |
| Plate Thickness | T | 1/2 | in |
| Plate Grade | | A36 | |
| Plate F _y | F _{yP} | 36 | ksi |
| Plate F _u | F _{uP} | 58 | ksi |
| Shear Capacity | φV _n | 26.9 | k |
| Applied Moment | M _u | 8.3 | k-in |
| Flexural Strength | φM _n | 26.1 | k-in |
| Flexural Capacity | M _u /φM _n | 32% | Pass |

Prying Action Considerations

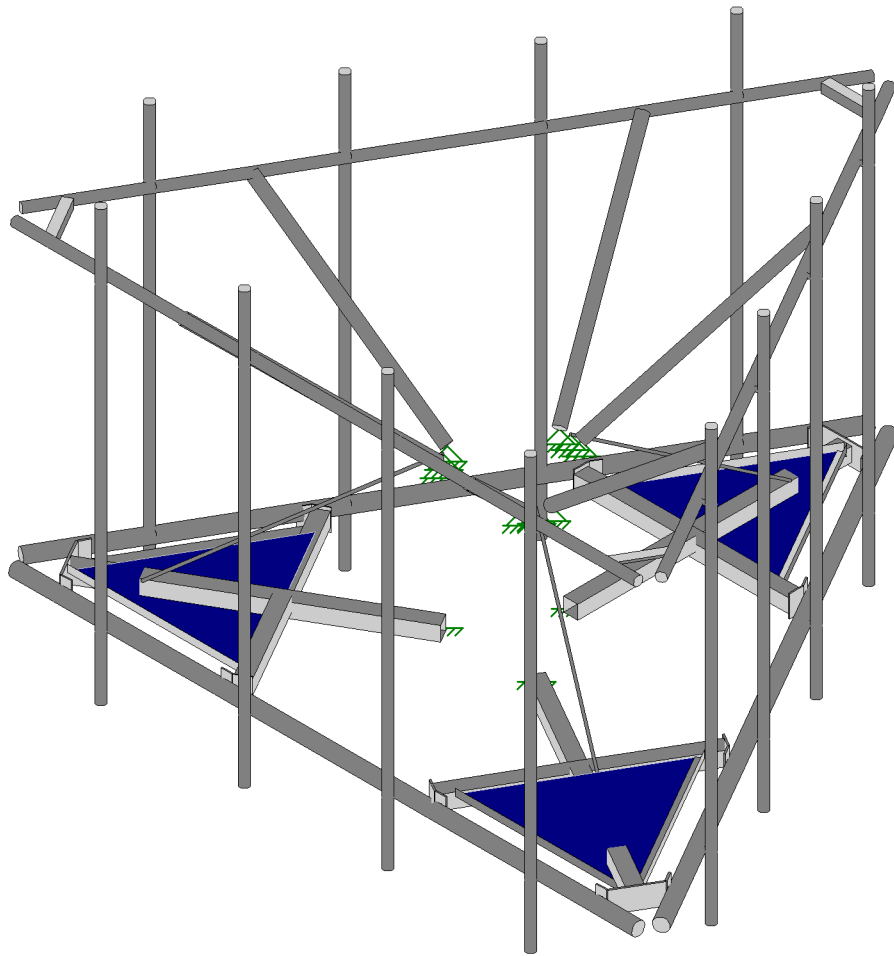
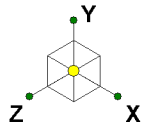
| | | | |
|-------------------------|----|------|----|
| Moment Arm | b | 1.00 | in |
| Effective Moment Arm | b' | 0.69 | in |
| Tributary Length | ρ | 2.75 | in |
| Effective Edge Distance | a' | 1.31 | in |



Weld and Base Metal Capacity

| | | |
|-----------------------|---------------------------------|-----------|
| Standoff Type | | Tube |
| Standoff Member | | HSS4x4x4 |
| Member Edge Distance | E | 2 in |
| Member Width | w | 4 in |
| Member Thickness | t | 0.250 in |
| Member Grade | | A53 Gr. B |
| Member F _y | F _{yM} | 35 ksi |
| Member F _u | F _{uM} | 60 ksi |
| Weld Size | a | 1/4 in |
| Weld Length | l | 16.0 in |
| Applied Load | P _u | 8.3 k |
| Weld Strength | φR _n | 44.5 k |
| Weld Capacity | P _u /φR _n | 19% Pass |

| | | |
|----------------------------------|-------|------------|
| Minimum Base Metal Thickness | 0.206 | in |
| Controlling Base Metal Thickness | 0.250 | in |
| Base Metal Result | | Acceptable |



American Tower Corp.

Max.Carter

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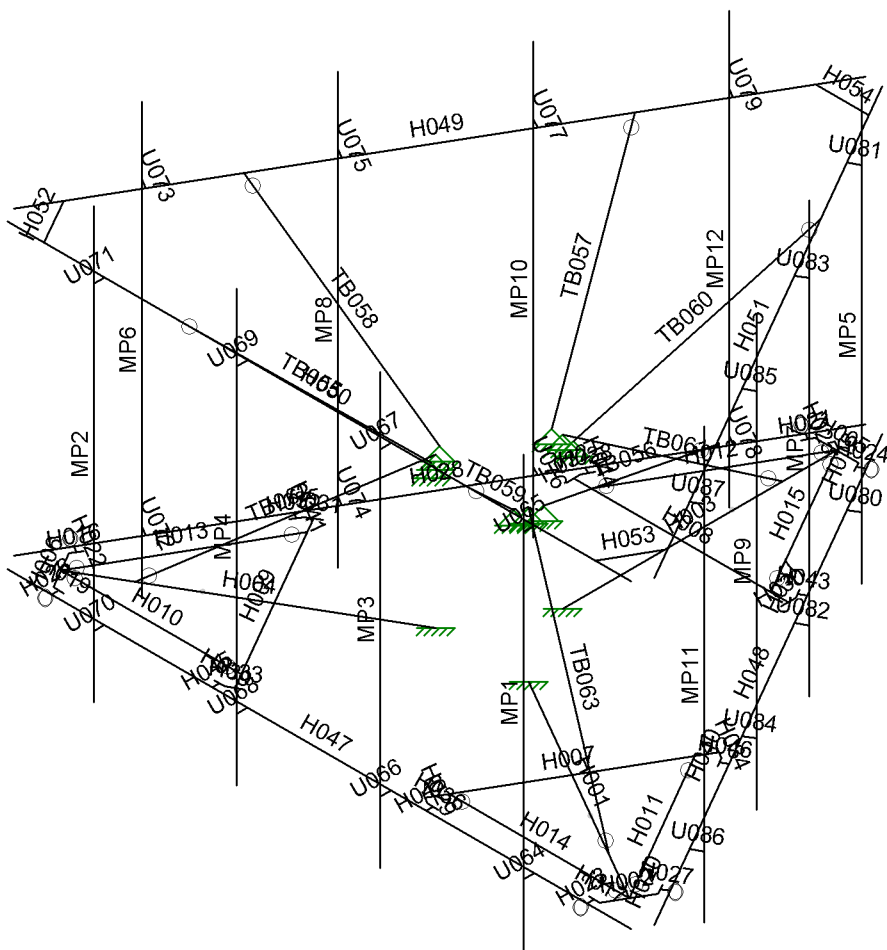
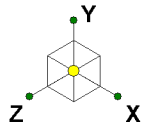
370627, Newington CT

3D Rendering

SK - 1

Sept 4, 2020 at 12:15 PM

R3D. AT&T MOBILITY @ 370627, N...



American Tower Corp.

Max.Carter

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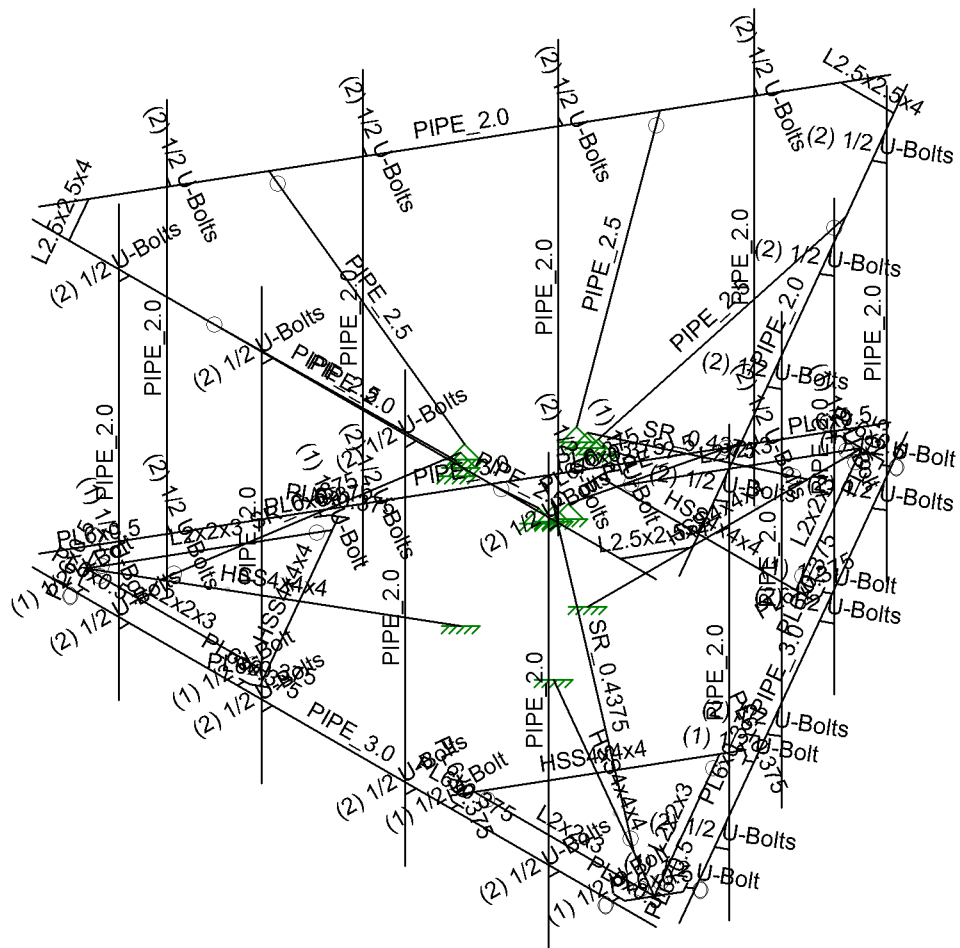
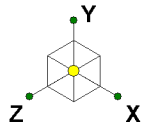
370627, Newington CT

Member Labels

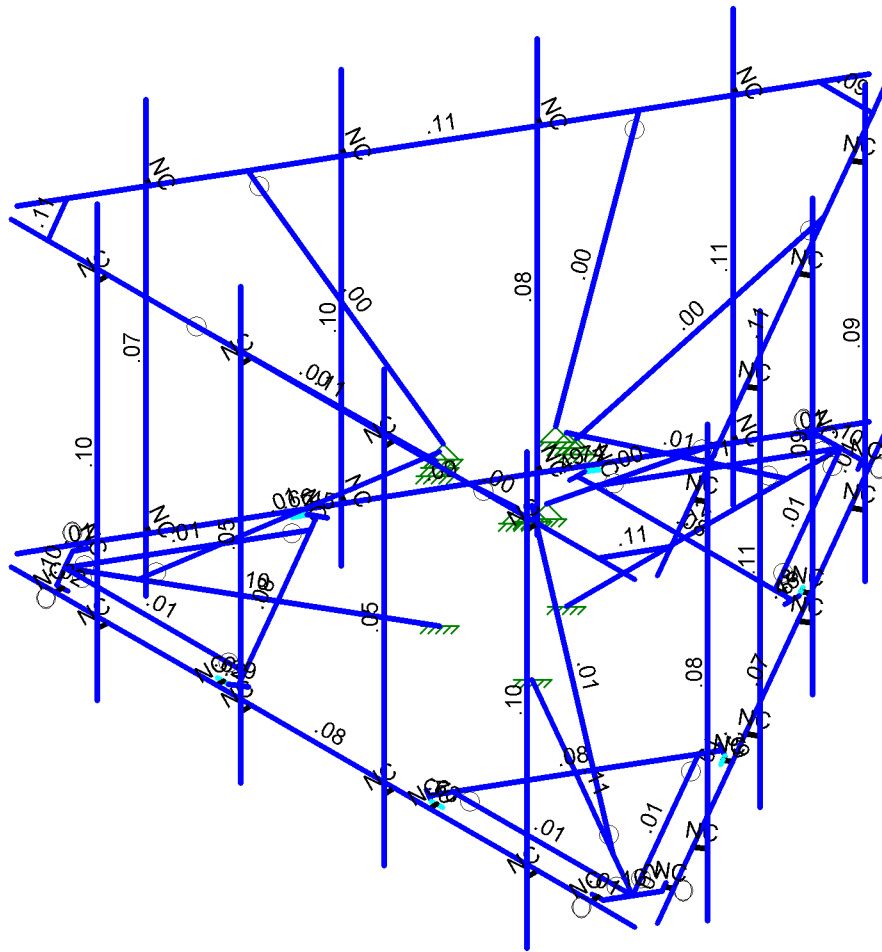
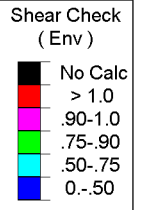
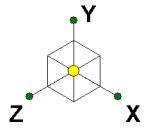
SK - 2

Sept 4, 2020 at 12:15 PM

R3D. AT&T MOBILITY @ 370627, N...



| | | |
|----------------------|---------------------------------------|-----------------------------------|
| American Tower Corp. | 370627, Newington CT Member Shapes | SK - 3 |
| Max.Carter | | Sept 4, 2020 at 12:15 PM |
| 13222844_C8_09 | | R3D. AT&T MOBILITY @ 370627, N... |



Member Shear Checks Displayed (Enveloped)
Results for LC 1, 1.4D

| | | |
|----------------------|--------------------------------------|-----------------------------------|
| American Tower Corp. | 370627, Newington CT Shear Checks | SK - 5 |
| Max.Carter | | Sept 4, 2020 at 12:16 PM |
| 13222844_C8_09 | | R3D. AT&T MOBILITY @ 370627, N... |



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 O @ & ^ a A O k e

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| | Saa^] | YAA a | YAA a | ZAA a | V^] Aza | O^ca&O[(Aoa] E |
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| I J | b e J | F i J e G H G H | J i | F i i e i i i i | e | |
| i e | b e e | F G e e H i F i J | J i | F i i e i e i G | e | |
| i F | b e F | F G e e F e F G | J i | F i e e i e i G | e | |
| i G | b e G | F G | J i | i i e | e | |
| i H | b e H | I F e e i G H F | J i | F F i e e F J G H i | e | |
| Ii | b e i | F G | J i | i e | e | |
| Ii | b e i | H i e e J i i H | J i | F F J e e F J G H i | e | |
| Ii | b e i | i i e | J i | i i e | e | |
| Ii | b e i | i F e e i G H F | J i | F i i e i e i G | e | |
| Ii | b e i | i i | J i | i e | e | |
| i J | b e J | i i e e J i i H | J i | F i e e i e i G | e | |
| i e | b e e | F i e e H i F i J | J i | F F i e e F J G H i | e | |
| i F | b e F | H i e e J i i H | J i | F G F e e F i H F i | e | |
| i G | b e G | i i e | J i | i i e e F J G | e | |
| i H | b e H | H i e e i i H | J i | F G e e F i G i | e | |
| Ii | b e i | i i e i | J i | i i e e e J i G | e | |
| Ii | b e i | H i e e i i i i | J i | F F J e e H i i i i | e | |
| Ii | b e i | i i e e i e i | J i | i i e F i H H | e | |
| Ii | b e i | F G e e F e F G | J i | F i e e i e i G | e | |
| Ii | b e i | F G e e | J i | i i e e F J G | e | |
| i J | b e J | i i e e J i i H | J i | F i e e i e i G | e | |
| i e | b e e | F i i e e F G | J i | F G F e e F i H F i | e | |
| i F | b e F | F G e e e F G | J i | F i e e i e i G | e | |
| i G | b e G | F G e e | J i | i i e e e J i G | e | |
| i H | b e H | i i e e J i i H | J i | F i e e i e i G | e | |
| Ii | b e i | F i i e e F G | J i | F G e e F i G i | e | |
| Ii | b e i | F G e e e F G | J i | F i G e i i | e | |
| Ii | b e i | F G e e i F J i | J i | i i e e F i H H | e | |
| Ii | b e i | i i e e J i i H | J i | F i G e i i | e | |
| Ii | b e i | F i i e e i H G F i | J i | F F J e e H i i i i | e | |
| i J | b e J | F i H e e e i F | J i | F i G e i i | e | |
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| i F | b e F | i e J J G G | J i | F i G e i i | e | |
| i G | b e G | F i i e e G i i | J i | F i i e e F i i | e | |
| i H | b e H | i e e i e H | F i e | F i i e e F i i | e | |
| Ii | b e i | J H e e i i e i | F i e | F i e e G F G G | e | |
| Ii | b e i | F i H e e e i F | F i e | F i G e i i | e | |
| Ii | b e i | J i e e G F J i | F i e | F i e e G F G G | e | |
| Ii | b e i | i e J J G G | F i e | F i G e i i | e | |
| Ii | b e i | F i i e e G i i | F i e | F i i e e F i i | e | |
| i J | b e J | J J | F H | F e | e | |
| J e | b e e | J H | F H | F e | e | |
| J F | b e F | J i | F H | F e | e | |
| J G | b e G | i F e e J i F J | F H | F G e e F J G | e | |
| J H | b e H | F e e J e i F | F H | F H e e J i e i | e | |
| J i | b e i | i H e e J i F J | F H | F G e e | e | |
| J i | b e i | F e e J e i F | F H | F G e e | e | |
| J i | b e i | i i e e J i F J | F H | F H e e J i e i | e | |
| J i | b e i | F F e e J e i F | F H | F G e e F J G | e | |
| J i | b e i | i i e e i i | F i e | G | e | |



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A Ya Vyf'5 Xj Ub WX'8 UUF'7 cbh'bi YXL

| Saa^ \ | Q^ \ ^ a^ ^ | RA^ \ ^ a^ ^ | Q^ \ ^ a^ a^ a^ | RA^ \ ^ a^ a^ a^ | VEDAU} | U @ . a^ a^ | O^ \ AU a^ e e e e a^ a^ A e e | Q a^ a^ ^ | U^ a^ { e e e |
|--------|-------------|--------------|-----------------|------------------|--------|-------------|--------------------------------|-----------|---------------|
| JÍ | T ÚI | | | | | Y^ . | E A P O A E E | | B [] ^ |
| JĪ | T ÚJ | | | | | Y^ . | E A P O A E E | | B [] ^ |
| JĪ | T ÚF€ | | | | | Y^ . | E A P O A E E | | B [] ^ |
| JÌ | T ÚFF | | | | | Y^ . | E A P O A E E | | B [] ^ |
| JJ | T ÚFG | | | | | Y^ . | E A P O A E E | | B [] ^ |

<chFc`YX'GhY'8 Yg]] b'DUFUa Yhfg

| Saa^ \ | U @ ^ | S^ \ * a^ a^ a^ | Sa^ \ a^ a^ a^ | Sa^ \ : a^ a^ a^ | S& [] A [e e e e [] A [a^ a^ a^ | S e e i ^ ^ a^ a^ a^ | S^ ^ | S : : | Oa | Ø } & a^ } |
|--------|-------|-----------------|----------------|------------------|-------------------------------------|----------------------|------|-------|----|--------------|
| F | P€F | PÙUÍ cÍ cÍ | Í Î Ě | | | | F | F | | Saa^ \ a^ a^ |
| G | P€G | ÚŠÍ c€Ě | FG | | | | Ě Í | Ě Í | | Saa^ \ a^ a^ |
| H | P€H | PÙUÍ cÍ cÍ | Í Î Ě | | | | F | F | | Saa^ \ a^ a^ |
| I | P€I | PÙUÍ cÍ cÍ | Í Î Ě | | | | F | F | | Saa^ \ a^ a^ |
| Í | P€Í | ÚŠÍ c€Ě | FG | | | | Ě Í | Ě Í | | Saa^ \ a^ a^ |
| Ī | P€Ī | ÚŠÍ c€Ě | FG | | | | Ě Í | Ě Í | | Saa^ \ a^ a^ |
| Ì | P€Ì | PÙUÍ cÍ cÍ | Í € | | | | Ě Í | Ě Í | | Saa^ \ a^ a^ |
| Ĭ | P€Ĭ | PÙUÍ cÍ cÍ | Í € | | | | Ě Í | Ě Í | | Saa^ \ a^ a^ |
| J | P€J | PÙUÍ cÍ cÍ | Í € | | | | Ě Í | Ě Í | | Saa^ \ a^ a^ |
| F€ | P€F€ | ŠQ G H | Í € G J | | | | F | F | | Saa^ \ a^ a^ |
| FF | P€FF | ŠQ G H | Í € G J | | | | F | F | | Saa^ \ a^ a^ |
| FG | P€FG | ŠQ G H | Í € G J | | | | F | F | | Saa^ \ a^ a^ |
| FH | P€FH | ŠQ G H | Í € G J | | | | F | F | | Saa^ \ a^ a^ |
| FI | P€FI | ŠQ G H | Í € G J | | | | F | F | | Saa^ \ a^ a^ |
| FÍ | P€FÍ | ŠQ G H | Í € G J | | | | F | F | | Saa^ \ a^ a^ |
| FĪ | P€FĪ | ÚŠÍ c€Ě | H | | | | F | F | | Saa^ \ a^ a^ |
| FĬ | P€FĬ | ÚŠÍ c€Ě | H | | | | F | F | | Saa^ \ a^ a^ |
| FÌ | P€FÌ | ÚŠÍ c€Ě | H | | | | F | F | | Saa^ \ a^ a^ |
| FJ | P€FJ | ÚŠÍ c€Ě | H | | | | F | F | | Saa^ \ a^ a^ |
| G€ | P€G€ | ÚŠÍ c€Ě | H | | | | F | F | | Saa^ \ a^ a^ |
| GF | P€GF | ÚŠÍ c€Ě | H | | | | F | F | | Saa^ \ a^ a^ |
| GG | P€GG | Q D A B A V E Q | G | | | | Ě Í | Ě Í | | Saa^ \ a^ a^ |
| GH | P€GH | Q D A B A V E Q | G | | | | Ě Í | Ě Í | | Saa^ \ a^ a^ |
| G | P€G | Q D A B A V E Q | G | | | | Ě Í | Ě Í | | Saa^ \ a^ a^ |
| G | P€G | Q D A B A V E Q | G | | | | Ě Í | Ě Í | | Saa^ \ a^ a^ |
| G | P€G | Q D A B A V E Q | G | | | | Ě Í | Ě Í | | Saa^ \ a^ a^ |
| G | P€G | Q D A B A V E Q | G | | | | Ě Í | Ě Í | | Saa^ \ a^ a^ |
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| GJ | P€GJ | ÚŠÍ c€Ě Í | I | | | | Ě Í | Ě Í | | Saa^ \ a^ a^ |
| H€ | P€H€ | ÚŠÍ c€Ě Í | I | | | | Ě Í | Ě Í | | Saa^ \ a^ a^ |
| HF | P€HF | ÚŠÍ c€Ě Í | I | | | | Ě Í | Ě Í | | Saa^ \ a^ a^ |
| HG | P€HG | ÚŠÍ c€Ě Í | I | | | | Ě Í | Ě Í | | Saa^ \ a^ a^ |
| HH | P€HH | ÚŠÍ c€Ě Í | I | | | | Ě Í | Ě Í | | Saa^ \ a^ a^ |
| HI | P€HI | ÚŠÍ c€Ě Í | I | | | | Ě Í | Ě Í | | Saa^ \ a^ a^ |
| HÍ | P€HÍ | ÚŠÍ c€Ě Í | H | | | | F | F | | Saa^ \ a^ a^ |
| HĪ | P€HĪ | ÚŠÍ c€Ě Í | H | | | | F | F | | Saa^ \ a^ a^ |
| HĬ | P€HĬ | ÚŠÍ c€Ě Í | H | | | | F | F | | Saa^ \ a^ a^ |
| HÌ | P€HÌ | ÚŠÍ c€Ě Í | H | | | | F | F | | Saa^ \ a^ a^ |
| HJ | P€HJ | ÚŠÍ c€Ě Í | H | | | | F | F | | Saa^ \ a^ a^ |
| I€ | P€I€ | ÚŠÍ c€Ě Í | H | | | | F | F | | Saa^ \ a^ a^ |
| IF | P€IF | Q D A B A V E Q | F B Í Í | | | | Ě Í | Ě Í | | Saa^ \ a^ a^ |
| IG | P€IG | Q D A B A V E Q | F B Í Í | | | | Ě Í | Ě Í | | Saa^ \ a^ a^ |



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| Saa^] | U@^ | S^)*c@a | Sa`^Za | Sa::Za | S&{ } A i H S & { } A i | ca | Sq i ^ ^ Z a | S` | S:: | Oa | Ø } & c } |
|-------|-------|---------|--------|--------|-------------------------|----|--------------|----|-----|----|-----------|
| Jí | T ÚI | ÚQÓ' GÉ | FOÉ | | | | | GÉ | GÉ | | Saa^] a} |
| JÍ | T ÚJ | ÚQÓ' GÉ | FOÉ | | | | | GÉ | GÉ | | Saa^] a} |
| Jİ | T ÚFÉ | ÚQÓ' GÉ | FOÉ | | | | | GÉ | GÉ | | Saa^] a} |
| Jì | T ÚFF | ÚQÓ' GÉ | FOÉ | | | | | GÉ | GÉ | | Saa^] a} |
| JJ | T ÚFG | ÚQÓ' GÉ | FOÉ | | | | | GÉ | GÉ | | Saa^] a} |

<chFc`YX`GhYY`DfcdYf]Yg`

| Saa^] | O^i a | O^i a | P` | V@{ (A P O H E) ^ a z a b e e | Y a i a z ^ a | U` | Ø z ^ a | Uc | | |
|-------|------------------------|-------|-----------|---------------------------------|---------------|------|---------|-----|--------|-----|
| F | OHI | GÉ^Eİ | FÉFİ ^ Eİ | İH | İİ | I JE | Hİ €€€ | FİÉ | İİ €€€ | FİG |
| G | OHI A^ | GÉ^Eİ | FÉFİ ^ Eİ | İH | İİ | € | Hİ €€€ | FİÉ | İİ €€€ | FİG |
| H | Oİ İ GÉ € | GÉ^Eİ | FÉFİ ^ Eİ | İH | İİ | I JE | İ €€€€ | FİÉ | İİ €€€ | FİÉ |
| I | Oİ €€O: E O A U P O a | GÉ^Eİ | FÉFİ ^ Eİ | İH | İİ | I G | I G€€€ | FİÉ | İİ €€€ | FİH |
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| İ | Oİ €€O: E O | GÉ^Eİ | FÉFİ ^ Eİ | İH | İİ | FJE | İİ €€€ | FİÉ | İİ €€€ | FİH |
| İ | Oİ € İ | GÉ^Eİ | FÉFİ ^ Eİ | İH | İİ | I JE | İ €€€€ | FİÉ | İİ €€€ | FİÉ |
| İ | Oİ H O: E O | GÉ^Eİ | FÉFİ ^ Eİ | İH | İİ | I JE | Hİ €€€ | FİÉ | İİ €€€ | FİG |
| J | Oİ JG | GÉ^Eİ | FÉFİ ^ Eİ | İH | İİ | I JE | İ €€€€ | FİÉ | İİ €€€ | FİÉ |
| FÉ | U O A R I G J A O: E G | GÉ^Eİ | FÉFİ ^ Eİ | İH | İİ | I JE | İİ €€€ | FİÉ | İİ €€€ | FİÉ |

>c]bh`@`UXg`UbX`9`bZ`f`WX`8`]gd`UMWa`Ybhg`f6`@`%`&`.'`@`f]L`

| R a o Saa^] | SÖİt | Oa^&c } | T a e } a a z a b e e O a E a a D a E a e e |
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>c]bh`@`UXg`UbX`9`bZ`f`WX`8`]gd`UMWa`Ybhg`f6`@`%`.'`@`f]L`

| R a o Saa^] | SÖİt | Oa^&c } | T a e } a a z a b e e O a E a a D a E a e e |
|-------------|------|---------|---|
| F T ÚCc | S | Y | İİ €€ |

>c]bh`@`UXg`UbX`9`bZ`f`WX`8`]gd`UMWa`Ybhg`f6`@`%`.'`@`f]L`

| R a o Saa^] | SÖİt | Oa^&c } | T a e } a a z a b e e O a E a a D a E a e e |
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| F T ÚHc | S | Y | İİ €€ |

>c]bh`@`UXg`UbX`9`bZ`f`WX`8`]gd`UMWa`Ybhg`f6`@`%`.'`@`f]L`

| R a o Saa^] | SÖİt | Oa^&c } | T a e } a a z a b e e O a E a a D a E a e e |
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>c]bh`@`UXg`UbX`9`bZ`f`WX`8`]gd`UMWa`Ybhg`f6`@`%`.'`@`f]L`

| R a o Saa^] | SÖİt | Oa^&c } | T a e } a a z a b e e O a E a a D a E a e e |
|-------------|------|---------|---|
| F T ÚIc | S | Y | İİ €€ |

>c]bh`@`UXg`UbX`9`bZ`f`WX`8`]gd`UMWa`Ybhg`f6`@`%`.'`@`f]L`

| R a o Saa^] | SÖİt | Oa^&c } | T a e } a a z a b e e O a E a a D a E a e e |
|-------------|------|---------|---|
| F T ÚIc | S | Y | İİ €€ |

>c]bh`@`UXg`UbX`9`bZ`f`WX`8`]gd`UMWa`Ybhg`f6`@`%`.'`@`f]L`

| R a o Saa^] | SÖİt | Oa^&c } | T a e } a a z a b e e O a E a a D a E a e e |
|-------------|------|---------|---|
| F T ÚIc | S | Y | İİ €€ |

U Q O H O A ^ . a } A i E E A A A O K a a a a a U H O E A V B A U O S Q Y A A i e i G e b ^ , a * d } A o v G E i E G E A G E a i U T D E h a A



0{ } a^ ^ K Q a^ a^ A[, ^ A[] E
 O^ a^ ^ K T a^ a^ a^
 R a^ ^ { a^ K F H G G I I ' O i ' e
 T[a^ ^ a^ ^ K H e G e^ , a^ * q } AOV

U^ a^ a^ e e e
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| | T^ { a^ ^ a^ ^ } | Oa^ & a^ } | T a^ } a^ ^ a^ a^ e a^ } | S^ & a^ } a^ a^ a^ } |
|-----|------------------|------------|--------------------------|----------------------|
| GJ | T U i | Y | E G | I J E |
| HE | T U i | Y | E H E | H E I |
| HF | T U i | Y | E H E | I I E |
| HG | T U j | Y | E e | I J E |
| HH | T U j | Y | E J E | I J E |
| HI | T U j | Y | E E | G E I |
| Hj | T U j | Y | E E | J I E |
| Hí | T U F e | Y | E e | I J E |
| Hï | T U F e | Y | E J E | I J E |
| Hì | T U F e | Y | E I E | H E I |
| Hj | T U F e | Y | E I E | I I E |
| I e | T U F F | Y | E I E I | G E I |
| I F | T U F F | Y | E I E I | J I E |
| I G | T U F F | Y | E F | I J E |
| I H | T U F G | Y | E F | I J E |
| I i | T U F G | Y | E U E | H E I |
| I í | T U F G | Y | E U E | I I E |

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| | T^ { a^ ^ a^ ^ } | Oa^ & a^ } | T a^ } a^ ^ a^ a^ e a^ } | S^ & a^ } a^ a^ a^ } |
|-----|------------------|------------|--------------------------|----------------------|
| F | T U F | Y | E J E | H I E |
| G | T U F | Y | E J E | I F E |
| H | T U F | Y | E H E J I | I J E |
| I | T U F | Y | E H E J I | I J E |
| í | T U G | Y | E J H E I | G E I |
| ï | T U G | Y | E J H E I | J I E |
| ì | T U G | Y | E J E I | I J E |
| ï | T U H | Y | E I I E I F | G G G |
| J | T U H | Y | E I I E I F | J I E |
| F e | T U H | Y | E E I | I J E |
| FF | T U H | Y | E I E J I | I J E |
| FG | T U i | Y | E I J E J I | G E I |
| FH | T U i | Y | E I J E J I | J I E |
| Fi | T U i | Y | E E I | I J E |
| Fí | T U i | Y | E I E I | I J E |
| Fï | T U i | Y | E H E J I | I J E |
| Fì | T U i | Y | E H E J I | I J E |
| Fj | T U i | Y | E J E | H I E |
| Fj | T U i | Y | E J E | I F E |
| F e | T U i | Y | E H E J I | I J E |
| Ff | T U i | Y | E H E J I | I J E |
| GG | T U i | Y | E J E | H I E |
| GH | T U i | Y | E J E | I F E |
| G | T U i | Y | E E I | I J E |
| G | T U i | Y | E I E J I | I J E |
| G | T U i | Y | E I I E I F | G G G |
| G | T U i | Y | E I I E I F | J I E |
| G | T U i | Y | E E I | I J E |
| Gj | T U i | Y | E I E J I | I J E |
| HE | T U i | Y | E F E H F | H E I |
| HF | T U i | Y | E F E H F | I I E |



0{ } a^ ^ K Q^ s{ } a^ ^ A[, ^ A[] E
 O^ a} s K T a^ O a^ c^
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 T [a^ / a^ a^ K H e G e^ , a * q } AOV

U^ a^ e e e e
 F G F I A U T
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| | T { a^ / a^ a^ } | O a^ & c a } | T a^ } a^ a^ a^ a^ e c a } | S } e a^ } a^ a^ a } |
|-----|------------------|--------------|----------------------------|----------------------|
| HG | T UJ | Y | E E I I | I J E G |
| HH | T UJ | Y | E I E I I | I J E G |
| H | T UJ | Y | E I J E J I | O E I |
| H I | T UJ | Y | E I J E J I | J I E I |
| H I | T U F E | Y | E E I I | I J E G |
| H I | T U F E | Y | E I E I I | I J E G |
| H I | T U F E | Y | E F I E H I | H E I |
| H U | T U F E | Y | E F I E H I | I I E |
| I E | T U F F | Y | E J H E I | O E I |
| I F | T U F F | Y | E J H E I | J I E I |
| I G | T U F F | Y | E J E I I | I J E G |
| I H | T U F G | Y | E J E I I | I J E G |
| I I | T U F G | Y | E I I E I | H E I |
| I I | T U F G | Y | E I I E I | I I E |

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| | T { a^ / a^ a^ } | O a^ & c a } | T a^ } a^ a^ a^ e c a } | S } e a^ } a^ a^ a } |
|-----|------------------|--------------|-------------------------|----------------------|
| F | T U F | Z | E I E E | H I E I |
| G | T U F | Z | E I E E | I F E |
| H | T U F | Z | E H E J | I J E G |
| I | T U F | Z | E H E J | I J E G |
| I | T U G | Z | E H E G | O E I |
| I | T U G | Z | E H E G | J I E I |
| I | T U G | Z | E H E G | I J E G |
| I | T U H | Z | E F I E I | O E G |
| J | T U H | Z | E F I E J I | J I E I |
| F E | T U H | Z | E F E J H G | I J E G |
| FF | T U H | Z | E I E E | I J E G |
| FG | T U I | Z | E G E E G | O E I |
| FH | T U I | Z | E G E E G | J I E I |
| FI | T U I | Z | E F E J H G | I J E G |
| F I | T U I | Z | E I E I | I J E G |
| F I | T U I | Z | E H E H | I J E G |
| F I | T U I | Z | E I E J I | H I E I |
| F J | T U I | Z | E I E J I | I F E |
| G E | T U I | Z | E I E H H | I J E G |
| G F | T U I | Z | E H E H | I J E G |
| G G | T U I | Z | E I E G | H I E I |
| G H | T U I | Z | E I E G | I F E |
| G | T U I | Z | E E E F I | I J E G |
| G | T U I | Z | E I E J I | I J E G |
| G | T U I | Z | E I J E F I | O E G |
| G | T U I | Z | E I J E F G | J I E I |
| G | T U I | Z | E E E I I | I J E G |
| G J | T U I | Z | E G E G | I J E G |
| H E | T U I | Z | E F E I I | H E I |
| H F | T U I | Z | E F E I I | I I E |
| H G | T U J | Z | E E E F I | I J E G |
| H H | T U J | Z | E F E I | I J E G |
| H I | T U J | Z | E I H E F I | O E I |



0{ } a^ ^ K Q s^ a^ A[, ^ A[] E
 O^ a^ s^ K T a^ O a^ c^
 R a^ b^ { a^ K F H G G I I ' O i ' e J
 T [a^ / a^ a^ K H e G e a^ , a^ * d } A O V

U^ a^ e e e e
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| | T \ (a^ / a^ a^) | O a^ & c a^ } | T a^ } a^ a^ a^ a^ e c a^ | S^ & e a^ } a^ a^ a^ |
|-----|--------------------|---------------|---------------------------|----------------------|
| H | T U J | Z | E I H E F I | J I E I |
| H | T U F E | Z | E E E I I | I J E G |
| H | T U F E | Z | E F E F I | I J E G |
| H | T U F E | Z | E H E F J | H E I |
| H J | T U F E | Z | E H E F J | I I E |
| I E | T U F F | Z | E J I E H I | G E I |
| I F | T U F F | Z | E J I E H I | J I E I |
| I G | T U F F | Z | E I E G | I J E G |
| I H | T U F G | Z | E I E I F | I J E G |
| I I | T U F G | Z | E F E E F I | H E I |
| I I | T U F G | Z | E F E E F | I I E |

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| | T \ (a^ / a^ a^) | O a^ & c a^ } | T a^ } a^ a^ a^ e c a^ | S^ & e a^ } a^ a^ a^ |
|-----|--------------------|---------------|------------------------|----------------------|
| F | T U F | Y | E G E G | H I E I |
| G | T U F | Y | E G E G | I F E |
| H | T U F | Y | E H E H | I J E G |
| I | T U F | Y | E H E H | I J E G |
| I | T U G | Y | E G G I | G E I |
| I | T U G | Y | E G G I | J I E I |
| I | T U G | Y | E I E J I | I J E G |
| I | T U H | Y | E I E E G | G G G |
| J | T U H | Y | E I E H I | J I E H |
| F E | T U H | Y | E E E G F | I J E G |
| F F | T U H | Y | E G E I | I J E G |
| F G | T U I | Y | E I E I I | G E I |
| F H | T U I | Y | E I E I I | J I E I |
| F I | T U I | Y | E E E G F | I J E G |
| F I | T U I | Y | E I E H I | I J E G |
| F I | T U I | Y | E G E G J | I J E G |
| F I | T U I | Y | E J E F H | I J E G |
| F I | T U I | Y | E I E I F | H I E I |
| F J | T U I | Y | E I E I F | I F E |
| G E | T U I | Y | E J E F H | I J E G |
| G F | T U I | Y | E G E G J | I J E G |
| G G | T U I | Y | E F E I | H I E I |
| G H | T U I | Y | E F E I | I F E |
| G | T U I | Y | E E H G G | I J E G |
| G | T U I | Y | E G G F | I J E G |
| G | T U I | Y | E F F E I I | G G G |
| G | T U I | Y | E F F E J J | J I E H |
| G | T U I | Y | E I E H | I J E G |
| G J | T U I | Y | E E I I | I J E G |
| H E | T U I | Y | E I I E G | H E I |
| H F | T U I | Y | E I I E G | I I E |
| H G | T U J | Y | E E H G G | I J E G |
| H H | T U J | Y | E I E I I | I J E G |
| H | T U J | Y | E G G E I I | G E I |
| H | T U J | Y | E G G E I I | J I E I |
| H | T U F E | Y | E I E H | I J E G |
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0{ } a^ ^ K Q s^ a^ A[, ^ A[] E
 O^ a^ s^ K T a^ O a^ c^
 R a^ b^ { a^ K F H G G I I ' O i ' e
 T[a^] a^ ^ K H e G e^ , a^ * q } AOV

U^] a^ e e e e
 F G F I A U T
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| | T^ { a^] a^ ^ } | Oa^&ca } | T a^ } a^ a^] a^ e e a^ | S' &ca } a^ a^ a^ |
|-----|------------------|----------|--------------------------|-------------------|
| II | T UFG | Y | E G E I I | H E I |
| I I | T UFG | Y | E G E I | I I E |

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| | T^ { a^] a^ ^ } | Oa^&ca } | T a^ } a^ a^] a^ e e a^ | S' &ca } a^ a^ a^ |
|-----|------------------|----------|--------------------------|-------------------|
| F | T UF | Z | E E I H | H I E I |
| G | T UF | Z | E E I H | I F E I |
| H | T UF | Z | E I G | I J E I |
| I | T UF | Z | E I G | I J E I |
| I | T UG | Z | E J E e | G E I |
| I | T UG | Z | E J E e | J I E I |
| I | T UG | Z | E E I | I J E I |
| I | T UH | Z | E H E J H | G G E |
| J | T UH | Z | E H E I I | J I E I |
| F€ | T UH | Z | E E I J | I J E I |
| FF | T UH | Z | E E I J | I J E I |
| FG | T UI | Z | E I E I J | G E I |
| FH | T UI | Z | E I E I J | J I E I |
| FI | T UI | Z | E E I J | I J E I |
| FÍ | T UI | Z | E E J | I J E I |
| Fî | T UI | Z | E E H | I J E I |
| Fï | T UI | Z | E E G | I J E I |
| Fì | T UI | Z | E E I | H I E I |
| FJ | T UI | Z | E E I | I F E I |
| G€ | T UI | Z | E E G | I J E I |
| GF | T UI | Z | E E H | I J E I |
| GG | T UI | Z | E E J H | H I E I |
| GH | T UI | Z | E E J H | I F E I |
| G | T UI | Z | E E I H | I J E I |
| G | T UI | Z | E E U I | I J E I |
| G | T UI | Z | E E I H | G G E |
| G | T UI | Z | E E I | J I E I |
| G | T UI | Z | E E e | I J E I |
| GJ | T UI | Z | E E I I | I J E I |
| H€ | T UI | Z | E E H F | H E I |
| HF | T UI | Z | E E H F | I I E I |
| HG | T UJ | Z | E E I H | I J E I |
| HH | T UJ | Z | E E J H | I J E I |
| HI | T UJ | Z | E E I H | G E I |
| HÍ | T UJ | Z | E E I H | J I E I |
| Hî | T U€ | Z | E E e | I J E I |
| Hï | T U€ | Z | E E J | I J E I |
| Hì | T U€ | Z | E E G F | H E I |
| HJ | T U€ | Z | E E G F | I I E I |
| I€ | T UFF | Z | E G E G J | G E I |
| IF | T UFF | Z | E G E G J | J I E I |
| IG | T UFF | Z | E G E F G | I J E I |
| IH | T UFG | Z | E E G | I J E I |
| II | T UFG | Z | E E F I | H E I |
| I I | T UFG | Z | E E H | I I E |



0{ } a^ ^ K Q s^ a^ A[, ^ A[] E
 O^ a^ s^ K T a^ O a^ c^
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 T{ a^ / a^ ^ K H e G e^ , a^ * d^ } AOV

U^ a^ e e e e
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| | T^{ a^ / a^ ^} | Oa^&ca} | T a^} a^ a^ ZaPaEca | S} &ca} Za E a |
|----|----------------|---------|---------------------|----------------|
| F | T UF | Y | E E I I | H I E I |
| G | T UF | Y | E E I I | I F E I |
| H | T UF | Y | E E I G | I J E I |
| I | T UF | Y | E E I G | I J E I |
| I | T UG | Y | E E I J | O E I |
| I | T UG | Y | E E I J | J I E I |
| I | T UG | Y | E E I I | I J E I |
| I | T UH | Y | E E H | G E G |
| J | T UH | Y | E E J I | J I E I |
| F€ | T UH | Y | E E I G | I J E I |
| FF | T UH | Y | E E I I | I J E I |
| FG | T UI | Y | E E I I | O E I |
| FH | T UI | Y | E E I I | J I E I |
| FI | T UI | Y | E E I G | I J E I |
| FÍ | T UI | Y | E E I I | I J E I |
| Fİ | T UI | Y | E E J G | I J E I |
| Fİ | T UI | Y | E E | I J E I |
| Fİ | T UI | Y | E E H G | H I E I |
| FJ | T UI | Y | E E H G | I F E I |
| Q€ | T UI | Y | E E | I J E I |
| QF | T UI | Y | E E J G | I J E I |
| QG | T UI | Y | E E I I | H I E I |
| QH | T UI | Y | E E I I | I F E I |
| Q | T UI | Y | E E I G | I J E I |
| Q | T UI | Y | E E G | I J E I |
| Q | T UI | Y | E E I I | G E G |
| Q | T UI | Y | E E I F | J I E I |
| Q | T UI | Y | E E J I | I J E I |
| GJ | T UI | Y | E E I I | I J E I |
| H€ | T UI | Y | E E J I | H E I |
| HF | T UI | Y | E E J I | I I E I |
| HG | T UJ | Y | E E I G | I J E I |
| HH | T UJ | Y | E E I I | I J E I |
| HI | T UJ | Y | E I E G F | O E I |
| HÍ | T UJ | Y | E I E G F | J I E I |
| Hİ | T U€ | Y | E E J I | I J E I |
| HÍ | T U€ | Y | E E I I | I J E I |
| Hİ | T U€ | Y | E E I I | H E I |
| HJ | T U€ | Y | E E I I | I I E I |
| I€ | T UFF | Y | E I E I J | O E I |
| IF | T UFF | Y | E I E I J | J I E I |
| IG | T UFF | Y | E E | I J E I |
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| II | T UFG | Y | E E I I | H E I |
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| | T^{ a^ / a^ ^} | Oa^&ca} | UcaO T a^} a^ a^ ZaPaEca) a^ T a^} a^ a^ ZaPaEca) UcaO S} &ca} Za E a | O) a^ S} &ca} Za E a |
|---|----------------|---------|---|----------------------|
| F | P€EF | Y | E I E J | E I E J |
| G | P€EG | Y | E I F | E I F |



0{ } a^ K Q a^ a^ A[, ^ / 0{ } E
 O^ a^ s K T a^ O a^ c^ l
 R a^ b^ { a^ K F H G G I I ' O i ' e j
 T{ a^ / a^ a^ K H e i G e b^ , a^ * d } A O V

U^ a^ a^ e e e e
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A Ya Vyf'8 jghfjvi hyx' @ UXg'f6 @ ' - : '9 j ' !MfGYjga JML'f7 c bhjbi YXL

| | T^{ a^ / a^ a^ } | O a^ & a^ } | U c a^ O a^ } a^ a^ z a^ b^ c^ d^ e^ } a^ A a^ } a^ a^ z a^ b^ c^ d^ e^ } U c a^ O a^ } z a^ A a^ } O i a^ O a^ } z a^ A a^ } | | | |
|-----|------------------|-------------|---|-----|---|-------|
| I G | T U F F | Y | III | III | € | A FEE |
| I H | T U F G | Y | III | III | € | A FEE |

A Ya Vyf'8 jghfjvi hyx' @ UXg'f6 @ '% : '9 \ ' !N'fGYjga JML

| | T^{ a^ / a^ a^ } | O a^ & a^ } | U c a^ O a^ } a^ a^ z a^ b^ c^ d^ e^ } a^ A a^ } a^ a^ z a^ b^ c^ d^ e^ } U c a^ O a^ } z a^ A a^ } O i a^ O a^ } z a^ A a^ } | | | |
|----|------------------|-------------|---|-----|---|-------|
| F | P E E F | Z | III | III | € | A FEE |
| G | P E E G | Z | III | III | € | A FEE |
| H | P E E H | Z | III | III | € | A FEE |
| I | P E E I | Z | III | III | € | A FEE |
| I | P E E I | Z | III | III | € | A FEE |
| I | P E E I | Z | III | III | € | A FEE |
| I | P E E I | Z | III | III | € | A FEE |
| I | P E E I | Z | III | III | € | A FEE |
| J | P E E J | Z | III | III | € | A FEE |
| F€ | P E F € | Z | III | III | € | A FEE |
| FF | P E F F | Z | III | III | € | A FEE |
| FG | P E F G | Z | III | III | € | A FEE |
| FH | P E F H | Z | III | III | € | A FEE |
| FI | P E F I | Z | III | III | € | A FEE |
| FÍ | P E F Í | Z | III | III | € | A FEE |
| FĪ | P E F Ī | Z | III | III | € | A FEE |
| Fİ | P E F İ | Z | III | III | € | A FEE |
| FJ | P E F J | Z | III | III | € | A FEE |
| G€ | P E G € | Z | III | III | € | A FEE |
| GF | P E G F | Z | III | III | € | A FEE |
| GG | P E G G | Z | III | III | € | A FEE |
| GH | P E G H | Z | III | III | € | A FEE |
| G | P E H € | Z | III | III | € | A FEE |
| G | P E H F | Z | III | III | € | A FEE |
| G | P E H G | Z | III | III | € | A FEE |
| G | P E H H | Z | III | III | € | A FEE |
| G | P E H I | Z | III | III | € | A FEE |
| GJ | P E H J | Z | III | III | € | A FEE |
| H€ | P E I € | Z | III | III | € | A FEE |
| HF | P E I F | Z | III | III | € | A FEE |
| HG | P E I G | Z | III | III | € | A FEE |
| HH | P E I H | Z | III | III | € | A FEE |
| HI | P E I I | Z | III | III | € | A FEE |
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| HJ | P E I F | Z | III | III | € | A FEE |
| I€ | P E I G | Z | III | III | € | A FEE |
| IF | P E I H | Z | III | III | € | A FEE |
| IG | P E I I | Z | III | III | € | A FEE |
| IH | V O E I | Z | III | III | € | A FEE |
| II | V O E I | Z | III | III | € | A FEE |
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|----|------------------|-------------|---|---|---|---|---|
| Fi | P e Fi | Z | e e e e | e e e e | e | H | |
| Fj | P e Fj | Z | e e e i | e e e i | e | H | |
| Fk | P e Fk | Z | e e e e | e e e e | e | H | |
| Fl | P e Fl | Z | e e e e | e e e e | e | H | |
| Fm | P e Fm | Z | e e e i | e e e i | e | G | |
| Fn | P e Fn | Z | e e e i | e e e i | e | G | |
| Fo | P e Fo | Z | e e e i | e e e i | e | G | |
| Fp | P e Fp | Z | e e e i | e e e i | e | G | |
| Fq | P e Fq | Z | e e e i | e e e i | e | G | |
| Fr | P e Fr | Z | e e e i | e e e i | e | F i e e e | |
| Fs | P e Fs | Z | e e e i | e e e i | e | i | |
| Ft | P e Ft | Z | e e e i | e e e i | e | i | |
| Fu | P e Fu | Z | e e e i | e e e i | e | i | |
| Fv | P e Fv | Z | e e e i | e e e i | e | i | |
| Fw | P e Fw | Z | e e e i | e e e i | e | i | |
| Fx | P e Fx | Z | e e e i | e e e i | e | F B i i | |
| Fy | P e Fy | Z | e e e i | e e e i | e | F B i i | |
| Fz | P e Fz | Z | e e e i | e e e i | e | F B i i | |
| Ga | P e Ga | Z | e e e i | e e e i | e | F B i i | |
| Gb | P e Gb | Z | e e e i | e e e i | e | F i e e e | |
| Gc | P e Gc | Z | e e e i | e e e i | e | F i e e e | |
| Gd | P e Gd | Z | e e e i | e e e i | e | F i e e e | |
| Ge | P e Ge | Z | e e e i | e e e i | e | F i e e e | |
| Gf | P e Gf | Z | e e e i | e e e i | e | F i e e e | |
| Gg | P e Gg | Z | e e e i | e e e i | e | F i e e e | |
| Gh | P e Gh | Z | e e e i | e e e i | e | F i e e e | |
| Gi | P e Gi | Z | e e e i | e e e i | e | F i e e e | |
| Gj | P e Gj | Z | e e e i | e e e i | e | F i e e e | |
| Gk | P e Gk | Z | e e e i | e e e i | e | F i e e e | |
| Gl | P e Gl | Z | e e e i | e e e i | e | F i e e e | |
| Gm | P e Gm | Z | e e e i | e e e i | e | F i e e e | |
| Gn | P e Gn | Z | e e e i | e e e i | e | F i e e e | |
| Go | P e Go | Z | e e e i | e e e i | e | F i e e e | |
| Gp | P e Gp | Z | e e e i | e e e i | e | F i e e e | |
| Gq | P e Gq | Z | e e e i | e e e i | e | F i e e e | |
| Gr | P e Gr | Z | e e e i | e e e i | e | F i e e e | |
| Gs | P e Gs | Z | e e e i | e e e i | e | F i e e e | |
| Gt | P e Gt | Z | e e e i | e e e i | e | F i e e e | |
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| Gw | P e Gw | Z | e e e i | e e e i | e | F i e e e | |
| Gx | P e Gx | Z | e e e i | e e e i | e | F i e e e | |
| Gy | P e Gy | Z | e e e i | e e e i | e | F i e e e | |
| Gz | P e Gz | Z | e e e i | e e e i | e | F i e e e | |
| Ha | P e Ha | Z | e e e i | e e e i | e | F i e e e | |
| Hb | P e Hb | Z | e e e i | e e e i | e | F i e e e | |
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| Hd | P e Hd | Z | e e e i | e e e i | e | F i e e e | |
| He | P e He | Z | e e e i | e e e i | e | F i e e e | |
| Hf | P e Hf | Z | e e e i | e e e i | e | F i e e e | |
| Hg | P e Hg | Z | e e e i | e e e i | e | F i e e e | |
| Hh | P e Hh | Z | e e e i | e e e i | e | F i e e e | |
| Hi | P e Hi | Z | e e e i | e e e i | e | F i e e e | |
| Hj | P e Hj | Z | e e e i | e e e i | e | F i e e e | |
| Hk | P e Hk | Z | e e e i | e e e i | e | F i e e e | |
| Hl | P e Hl | Z | e e e i | e e e i | e | F i e e e | |
| Hm | P e Hm | Z | e e e i | e e e i | e | F i e e e | |
| Ho | P e Ho | Z | e e e i | e e e i | e | F i e e e | |
| Hp | P e Hp | Z | e e e i | e e e i | e | F i e e e | |
| Hq | P e Hq | Z | e e e i | e e e i | e | F i e e e | |
| Gr | P e Gr | Z | e e e i | e e e i | e | F i e e e | |
| Gs | P e Gs | Z | e e e i | e e e i | e | F i e e e | |
| Gt | P e Gt | Z | e e e i | e e e i | e | F i e e e | |
| Gu | P e Gu | Z | e e e i | e e e i | e | F i e e e | |
| Gv | P e Gv | Z | e e e i | e e e i | e | F i e e e | |
| Gw | P e Gw | Z | e e e i | e e e i | e | F i e e e | |
| Gx | P e Gx | Z | e e e i | e e e i | e | F i e e e | |
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| I J | W E I | Z | E E I I | E E I I | E | H |
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| I G | T U H | Z | E E E | E E E | E | F G E |
| I H | T U I | Z | E E E | E E E | E | F G E |
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| I J | T U F E | Z | E E E | E E E | E | F G E |
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| F | P E E F | Y | E E G | E E G | E | I I E |
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| H | P E E H | Y | E F H I H | E F H I H | E | I I E |
| I | P E E I | Y | E E G | E E G | E | I I E |
| I | P E E I | Y | E I E H I | E I E H I | E | F G |
| I | P E E I | Y | E F H G | E F H G | E | I E |
| I | P E E J | Y | E F H G | E F H G | E | I E |
| I | P E F F | Y | E E F G | E E F G | E | I E G G |
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| F E | P E F H | Y | E E F G | E E F G | E | I E G G |
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| FH | P E F I | Y | E I E H I | E I E H I | E | H |
| FI | P E G E | Y | E I E H I | E I E H I | E | H |
| F I | P E G F | Y | E I E H I | E I E H I | E | H |
| F I | P E G G | Y | E E E | E E E | E | G |
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| F J | P E G | Y | E E E | E E E | E | G |
| G E | P E G | Y | E E F H | E E F H | E | G |
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| G G | P E G | Y | E E H I | E E H I | E | F I E E G |
| G H | P E G J | Y | E E G | E E G | E | I |
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| G | P E H G | Y | E E I | E E I | E | I |
| G | P E H H | Y | E E G | E E G | E | I |
| G | P E H I | Y | E E G | E E G | E | I |
| G J | P E H I | Y | E I E H I | E I E H I | E | H |
| H E | P E H I | Y | E I E H I | E I E H I | E | H |
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| I | P E E I | Y | E I F | E I F | E | I I E |
| I | P E E I | Y | E E I I | E E I I | E | FG |
| I | P E E I | Y | E I I | E I I | E | I E |
| I | P E E J | Y | E I I | E I I | E | I E |
| I | P E F F | Y | E I G | E I G | E | I E G J |
| J | P E F G | Y | E I G | E I G | E | I E G J |
| F E | P E F H | Y | E I G | E I G | E | I E G J |
| FF | P E F I | Y | E I G | E I G | E | I E G J |
| FG | P E F I | Y | E E I I | E E I I | E | H |
| FH | P E F I | Y | E E I I | E E I I | E | H |
| FI | P E G E | Y | E E I I | E E I I | E | H |
| F I | P E G F | Y | E E I I | E E I I | E | H |
| F I | P E G G | Y | E F F | E F F | E | G |
| F I | P E G H | Y | E G G F | E G G F | E | G |
| F I | P E G | Y | E F F | E F F | E | G |
| F J | P E G | Y | E F F | E F F | E | G |
| G E | P E G | Y | E G G F | E G G F | E | G |
| G F | P E G | Y | E F F | E F F | E | G |
| G G | P E G | Y | E I J | E I J | E | F I I E E G |
| G H | P E G J | Y | E I G | E I G | E | I |
| G | P E H E | Y | E E G | E E G | E | I |
| G | P E H F | Y | E I G | E I G | E | I |
| G | P E H G | Y | E E G | E E G | E | I |
| G | P E H H | Y | E I G | E I G | E | I |
| G | P E H I | Y | E I G | E I G | E | I |
| G J | P E H I | Y | E E I I | E E I I | E | H |
| H E | P E H I | Y | E E I I | E E I I | E | H |
| H F | P E H I | Y | E E I I | E E I I | E | H |
| H G | P E E | Y | E E I I | E E I I | E | H |
| H H | P E F | Y | E F F | E F F | E | F B I I |
| H I | P E G | Y | E G G F | E G G F | E | F B I I |
| H I | P E H | Y | E F F | E F F | E | F B I I |
| H I | P E I | Y | E F F | E F F | E | F B I I |
| H I | P E I | Y | E G G F | E G G F | E | F B I I |
| H I | P E I | Y | E F F | E F F | E | F B I I |
| H J | P E I | Y | E I J | E I J | E | F I I E E G |
| I E | P E J | Y | E I I | E I I | E | F I I E E G |
| I F | P E F | Y | E I I | E I I | E | F I I E E G |
| I G | P E G | Y | E I I | E I I | E | F I E I I |
| I H | P E H | Y | E I I | E I I | E | F I E I I |
| I I | V O E I | Y | E I H | E I H | E | I I E G |
| I I | V O E I | Y | E E G | E E G | E | I I E G |
| I I | V O E I | Y | E J I | E J I | E | I I E G |
| I I | V O E I | Y | E E G | E E G | E | I I E G |
| I I | V O E J | Y | E I H | E I H | E | I I E G |
| I J | V O E E | Y | E J I | E J I | E | I I E G |
| I E | W E I | Y | E G G F | E G G F | E | H |
| I F | W E I | Y | E G G F | E G G F | E | H |
| I G | W E I | Y | E G G F | E G G F | E | H |
| I H | W E I | Y | E G G F | E G G F | E | H |

EXHIBIT 5



**Lawrence Behr
Associates** INC
www.lbagroup.com

Radio Frequency Emissions Report

SITE NAME:

370627 Newington CT

LOCATION:

Newington, Connecticut

COMPANY:

**American Tower Corporation
Woburn, Massachusetts**

September 11th, 2020

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DISCLAIMER NOTICE

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LAWRENCE BEHR ASSOCIATES, INC.
GREENVILLE, NORTH CAROLINA



RADIO FREQUENCY EMISSIONS REPORT

370627 Newington CT

Newington, Connecticut

INTRODUCTION

Lawrence Behr Associates, Inc. (LBA) has been retained by American Tower Corporation (ATC) of Woburn, Massachusetts to evaluate the RF emissions of an existing tower at this location. AT&T is adding emitters to this site and the purpose of this study is to determine if, after the addition of the AT&T emitters, the site is in Compliance with FCC Regulations. This study determined that **THIS SITE IS IN COMPLIANCE** with Federal Regulations.

Details regarding the FCC Rules and the methodology used to determine compliance may be seen below.

SITE AND FACILITY CONSIDERATIONS

Site 370627 Newington CT is located at 605 Willard Avenue in Newington, Connecticut at coordinates 41.69837, -72.73714. The support structure is a 180' monopole.

All data used in this study was provided by one or more of the following sources:

1. ATC furnished data
2. Compiled from carrier and manufacturer standard configurations
3. Empirical data collected by LBA

AT&T proposes to add antennas to the tower at the 154' level. The structure already supports several antennas. This study only considers the new AT&T facility in detail.

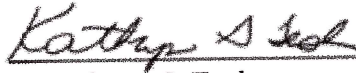
The load list may be seen in Appendix 1. Appendix 2 contains the AT&T channel counts, frequency bands, and power levels. AT&T Antenna information may be seen in Appendix 3.

POWER DENSITY CALCULATIONS

Based upon the provided information and the FCC limits for exposure as outlined in 47 CFR 1.1307(b)(1) - (b)(3), the power levels and percentages of the FCC's allowable general population limit are shown in Appendix 4. Calculations were done at industry standard average head height of six feet above ground level.

A summary of the power density from all emitters may be seen in Appendix 5.

These limits are based upon the Information Relating to MPE Standards found in Appendix 6. Study methodology may be seen in Appendix 7, which describes the Non-Ionizing Radiation Prediction Models. Approximate radiation patterns may be found in Appendix 5. This site **IS** in compliance with FCC OET-65 MPE limits.



September 11th, 2020

Kathryn G. Tesh

Wireless Services Manager

APPENDIX 1

Load List

| Proposed | Customer | RAD Height (ft) | Equipment Quantity | Equipment Type | Manufacturer | Model Number | Line Quantity | Line size | Mount Type | Azimuths | TX Frequency | RX Frequency |
|----------|------------------------|-----------------|--------------------|----------------|----------------|---------------------------|---------------|-----------------------------|-------------------------|------------|---|---|
| No | TOWN OF NEWINGT ON, CT | 189 | 1 | DIPOLE | Generic | 18' Dipole | | | Low Profile Platform | Dipole | | |
| No | TOWN OF NEWINGT ON, CT | 180 | 1 | DIPOLE | Generic | 5' Dipole | | | Low Profile Platform | Dipole | | |
| No | METRO PCS INC | 173 | 3 | PANEL | Ericsson | AIR 21, 1.3 M, B2A B4P | 6 | 1 5/8" Coax | Low Profile Platform | 30/150/270 | 1935-1945, 2140-2155 | 1740-1755, 1855-1865 |
| No | METRO PCS INC | 173 | 3 | PANEL | RFS | APXWAARR24_43-U-NA20 | 2 | 1 1/4" (1.25"-31.8mm) Fiber | Low Profile Platform | 30/150/250 | 668-673, 673-678, 698-734 | 622-627, 627-632, 698-734 |
| No | METRO PCS INC | 173 | 3 | PANEL | Ericsson | AIR-32 B2A/B65Aa | 1 | 1 5/8" (1.63"-41.3mm) Fiber | Low Profile Platform | 30/150/270 | 1935-1945, 2140-2155 | 1740-1755, 1855-1865 |
| Yes | AT&T MOBILITY | 154 | 2 | PANEL | CCI | DMP65R-BU8D | | | Low Profile Platform | 35/275 | 728-746, 845-849, 890-894 | 704-716, 824-845, 869-890 |
| Yes | AT&T MOBILITY | 154 | 1 | PANEL | CCI | OPA-65R-LCUU-H6 | | | Low Profile Platform | 145 | 2145-2155, 2170-2180, 728-746 | 1745-1755, 1770-1780, 704-716 |
| Yes | AT&T MOBILITY | 154 | 1 | PANEL | CCI | DMP65R-BU6DA | | | Low Profile Platform | 145 | 728-746, 845-849, 890-894 | 704-716, 824-845, 869-890 |
| Yes | AT&T MOBILITY | 154 | 2 | PANEL | CCI | OPA-65R-LCUU-H8 (92.7") | | | Low Profile Platform | 35/275 | 2145-2155, 2170-2180, 728-746 | 1745-1755, 1770-1780, 704-716 |
| No | AT&T MOBILITY | 154 | 3 | PANEL | Kathrein Scala | 800 10121 | 6 | 1 5/8" Coax | Platform with Handrails | 35/145/275 | 1930-1935, 1945-1950, 1965-1970, 824-847, 891.6-893.8 | 1855, 1865-1876, 1885-1890, 846.6-848.8 |
| No | AT&T MOBILITY | 154 | 3 | PANEL | CCI | OPA-65R-LCUU-H8 | | | Platform with Handrails | 35/145/275 | 1930-1935, 728-746 | 1850-1855, 698-716 |
| No | AT&T MOBILITY | 154 | 2 | PANEL | CCI | TPA-65R-LCUUUU-H8 | | | Platform with Handrails | 35/145/275 | 1930-1945, 1985-1990, 758-768, 869-879, 890-891 | 1850-1910, 788-798, 824-847, 845-846 |
| No | AT&T MOBILITY | 154 | 1 | PANEL | Quintel | QS66512-2 | | | Platform with Handrails | 35/145/275 | 1930-1945, 1985-1990, 758-768, 869-879, 890-891 | 1850-1910, 788-798, 824-847, 845-846 |
| No | SPRINT NEXTEL | 143 | 2 | PANEL | RFS | APXWPP18-C-A20 | 2 | 1 1/4" Hybridflex Cable | Low Profile Platform | 145,225 | 1950-1965, 862-869 | 1870-1885, 817-824 |
| No | SPRINT NEXTEL | 143 | 1 | PANEL | RFS | APXVSERR18-C-A20 | 1 | 1 1/4" Hybridflex Cable | Low Profile Platform | 30 | 1950-1965, 862-869 | 1870-1885, 817-824 |
| No | SPRINT NEXTEL | 143 | 3 | PANEL | RFS | APXVTM14-C-I20 (56.2 lbs) | | | Low Profile Platform | 30/145/225 | 2496-2690 | 2496-2690 |
| No | VERIZON WIRELESS | 113 | 6 | PANEL | Commscope | SBNH-1065B (40.6 lbs) | | | Low Profile Platform | 30/150/280 | 1970-1975, 2145-2155 | 1745-1755, 1890-1895 |
| No | VERIZON WIRELESS | 113 | 8 | PANEL | Antel | BXA-80063/4CF 5" | 6 | 1 5/8" Coax | Platform with Handrails | 30/150/280 | 1970-1975, 2145-2155, 746-757, 869-880, 890-892 | 1745-1755, 1890-1895, 776-787, 824-835, 845-847 |
| No | VERIZON WIRELESS | 113 | 8 | PANEL | Amphenol Antel | BXA-70063-6CF EDIN-X | 6 | 1 5/8" Coax | Platform with Handrails | 30/150/280 | 1970-1975, 2145-2155 | 1745-1755, 1890-1895 |
| No | VERIZON WIRELESS | 113 | 3 | PANEL | Antel | BXA-80063/4CF 5" | 6 | 1 5/8" Coax | Low Profile Platform | 30/150/280 | 1970-1975, 2145-2155, 746-757, 869-880, 890-892 | 1745-1755, 1890-1895, 776-787, 824-835, 845-847 |
| Yes | VERIZON WIRELESS | 110 | 3 | PANEL | Antel | BXA-70063/4CF | | | Platform with Handrails | 30/150/280 | 1970-1975, 2145-2155, 746-757, 869-880, 890-892 | 1745-1755, 1890-1895, 776-787, 824-835, 845-847 |
| No | VERIZON WIRELESS | 110 | 3 | PANEL | Antel | BXA-80063/4CF 5" | 6 | 1 5/8" Coax | Platform with Handrails | 30/150/280 | 1970-1975, 2145-2155, 746-757, 869-880, 890-892 | 1745-1755, 1890-1895, 776-787, 824-835, 845-847 |

APPENDIX 2

AT&T Channels Used

| Antenna | Technology | Frequency Band | Channel Count | Transmitter Power per Channel (W) |
|----------|------------|----------------|---------------|-----------------------------------|
| AT&T A1 | LTE | 700 | 1 | 40 |
| AT&T A2 | UMTS | 850 | 1 | 40 |
| AT&T A3 | UMTS | 850 | 1 | 40 |
| AT&T A4 | LTE | 2100 | 1 | 40 |
| AT&T A5 | LTE | 2100 | 1 | 40 |
| AT&T A6 | LTE | 700 | 1 | 40 |
| AT&T A7 | LTE | 1900 | 1 | 40 |
| AT&T A8 | LTE | 1900 | 1 | 40 |
| AT&T A9 | LTE | 1900 | 1 | 40 |
| AT&T A10 | UMTS | 850 | 1 | 40 |
| AT&T A11 | UMTS | 850 | 1 | 40 |
| AT&T A12 | LTE | 1900 | 1 | 40 |
| AT&T A13 | LTE | 700 | 1 | 40 |
| AT&T A14 | LTE | 1900 | 1 | 40 |
| AT&T A15 | LTE | 1900 | 1 | 40 |
| AT&T A16 | LTE | 700 | 1 | 40 |
| AT&T A17 | UMTS | 850 | 1 | 40 |
| AT&T A18 | UMTS | 850 | 1 | 40 |
| AT&T A19 | LTE | 1900 | 1 | 40 |
| AT&T A20 | LTE | 1900 | 1 | 40 |
| AT&T A21 | LTE | 700 | 1 | 40 |
| AT&T A22 | UMTS | 850 | 1 | 40 |
| AT&T A23 | UMTS | 850 | 1 | 40 |
| AT&T A24 | LTE | 1900 | 1 | 40 |
| AT&T A25 | LTE | 1900 | 1 | 40 |
| AT&T A26 | LTE | 2100 | 1 | 40 |
| AT&T A27 | LTE | 700 | 1 | 40 |
| AT&T A28 | UMTS | 850 | 1 | 40 |
| AT&T B1 | LTE | 2100 | 1 | 40 |
| AT&T B2 | LTE | 2100 | 1 | 40 |
| AT&T B3 | LTE | 700 | 1 | 40 |
| AT&T B4 | LTE | 700 | 1 | 40 |
| AT&T B5 | UMTS | 850 | 1 | 40 |
| AT&T B6 | UMTS | 850 | 1 | 40 |
| AT&T B7 | LTE | 1900 | 1 | 40 |
| AT&T B8 | LTE | 1900 | 1 | 40 |
| AT&T B9 | LTE | 1900 | 1 | 40 |
| AT&T B10 | UMTS | 850 | 1 | 40 |
| AT&T B11 | UMTS | 850 | 1 | 40 |
| AT&T B12 | LTE | 1900 | 1 | 40 |
| AT&T B13 | LTE | 700 | 1 | 40 |
| AT&T B14 | LTE | 1900 | 1 | 40 |
| AT&T B15 | LTE | 1900 | 1 | 40 |
| AT&T B16 | LTE | 700 | 1 | 40 |
| AT&T B17 | UMTS | 850 | 1 | 40 |
| AT&T B18 | UMTS | 850 | 1 | 40 |
| AT&T B19 | LTE | 1900 | 1 | 40 |
| AT&T B20 | LTE | 1900 | 1 | 40 |
| AT&T B21 | LTE | 700 | 1 | 40 |
| AT&T B22 | UMTS | 850 | 1 | 40 |
| AT&T B23 | UMTS | 850 | 1 | 40 |
| AT&T C1 | LTE | 700 | 1 | 40 |
| AT&T C2 | UMTS | 850 | 1 | 40 |
| AT&T C3 | UMTS | 850 | 1 | 40 |
| AT&T C4 | LTE | 2100 | 1 | 40 |
| AT&T C5 | LTE | 2100 | 1 | 40 |
| AT&T C6 | LTE | 700 | 1 | 40 |
| AT&T C7 | LTE | 1900 | 1 | 40 |
| AT&T C8 | LTE | 1900 | 1 | 40 |
| AT&T C9 | LTE | 1900 | 1 | 40 |
| AT&T C10 | UMTS | 850 | 1 | 40 |
| AT&T C11 | UMTS | 850 | 1 | 40 |
| AT&T C12 | LTE | 1900 | 1 | 40 |
| AT&T C13 | LTE | 700 | 1 | 40 |
| AT&T C14 | LTE | 1900 | 1 | 40 |
| AT&T C15 | LTE | 1900 | 1 | 40 |
| AT&T C16 | LTE | 700 | 1 | 40 |
| AT&T C17 | UMTS | 850 | 1 | 40 |
| AT&T C18 | UMTS | 850 | 1 | 40 |
| AT&T C19 | LTE | 1900 | 1 | 40 |
| AT&T C20 | LTE | 1900 | 1 | 40 |
| AT&T C21 | LTE | 700 | 1 | 40 |
| AT&T C22 | UMTS | 850 | 1 | 40 |
| AT&T C23 | UMTS | 850 | 1 | 40 |



APPENDIX 3

AT&T Antenna Information

| Sector | Antenna Number | Antenna Make / Model | Antenna Centerline (ft) |
|--------|----------------|--------------------------|-------------------------|
| A | AT&T A1 | CCI DMP65R-BU8D | 154 |
| A | AT&T A2 | CCI DMP65R-BU8D | 154 |
| A | AT&T A3 | CCI DMP65R-BU8D | 154 |
| A | AT&T A4 | CCI OPA-65R-LCUU-H8 | 154 |
| A | AT&T A5 | CCI OPA-65R-LCUU-H8 | 154 |
| A | AT&T A6 | CCI OPA-65R-LCUU-H8 | 154 |
| A | AT&T A7 | Kathrein Scala 800 10121 | 154 |
| A | AT&T A8 | Kathrein Scala 800 10121 | 154 |
| A | AT&T A9 | Kathrein Scala 800 10121 | 154 |
| A | AT&T A10 | Kathrein Scala 800 10121 | 154 |
| A | AT&T A11 | Kathrein Scala 800 10121 | 154 |
| A | AT&T A12 | CCI OPA-65R-LCUU-H8 | 154 |
| A | AT&T A13 | CCI OPA-65R-LCUU-H8 | 154 |
| A | AT&T A14 | CCI TPA-65R-LCUUUU-H8 | 154 |
| A | AT&T A15 | CCI TPA-65R-LCUUUU-H8 | 154 |
| A | AT&T A16 | CCI TPA-65R-LCUUUU-H8 | 154 |
| A | AT&T A17 | CCI TPA-65R-LCUUUU-H8 | 154 |
| A | AT&T A18 | CCI TPA-65R-LCUUUU-H8 | 154 |
| A | AT&T A19 | Quintel QS66512-2 | 154 |
| A | AT&T A20 | Quintel QS66512-2 | 154 |
| A | AT&T A21 | Quintel QS66512-2 | 154 |
| A | AT&T A22 | Quintel QS66512-2 | 154 |
| A | AT&T A23 | Quintel QS66512-2 | 154 |
| A | AT&T A24 | CCI OPA-65R-LCUU-H4 | 154 |
| A | AT&T A25 | CCI OPA-65R-LCUU-H4 | 154 |
| A | AT&T A26 | CCI OPA-65R-LCUU-H4 | 154 |
| A | AT&T A27 | CCI OPA-65R-LCUU-H4 | 154 |
| A | AT&T A28 | CCI OPA-65R-LCUU-H4 | 154 |
| B | AT&T B1 | CCI OPA-65R-LCUU-H6 | 154 |
| B | AT&T B2 | CCI OPA-65R-LCUU-H6 | 154 |
| B | AT&T B3 | CCI OPA-65R-LCUU-H6 | 154 |
| B | AT&T B4 | CCI DMP65R-BU6DA | 154 |
| B | AT&T B5 | CCI DMP65R-BU6DA | 154 |
| B | AT&T B6 | CCI DMP65R-BU6DA | 154 |
| B | AT&T B7 | Kathrein Scala 800 10121 | 154 |
| B | AT&T B8 | Kathrein Scala 800 10121 | 154 |
| B | AT&T B9 | Kathrein Scala 800 10121 | 154 |
| B | AT&T B10 | Kathrein Scala 800 10121 | 154 |
| B | AT&T B11 | Kathrein Scala 800 10121 | 154 |
| B | AT&T B12 | CCI OPA-65R-LCUU-H8 | 154 |
| B | AT&T B13 | CCI OPA-65R-LCUU-H8 | 154 |
| B | AT&T B14 | CCI TPA-65R-LCUUUU-H8 | 154 |
| B | AT&T B15 | CCI TPA-65R-LCUUUU-H8 | 154 |
| B | AT&T B16 | CCI TPA-65R-LCUUUU-H8 | 154 |
| B | AT&T B17 | CCI TPA-65R-LCUUUU-H8 | 154 |
| B | AT&T B18 | CCI TPA-65R-LCUUUU-H8 | 154 |
| B | AT&T B19 | Quintel QS66512-2 | 154 |
| B | AT&T B20 | Quintel QS66512-2 | 154 |
| B | AT&T B21 | Quintel QS66512-2 | 154 |
| B | AT&T B22 | Quintel QS66512-2 | 154 |
| B | AT&T B23 | Quintel QS66512-2 | 154 |
| C | AT&T C1 | CCI DMP65R-BU8D | 154 |
| C | AT&T C2 | CCI DMP65R-BU8D | 154 |
| C | AT&T C3 | CCI DMP65R-BU8D | 154 |
| C | AT&T C4 | CCI OPA-65R-LCUU-H8 | 154 |
| C | AT&T C5 | CCI OPA-65R-LCUU-H8 | 154 |
| C | AT&T C6 | CCI OPA-65R-LCUU-H8 | 154 |
| C | AT&T C7 | Kathrein Scala 800 10121 | 154 |
| C | AT&T C8 | Kathrein Scala 800 10121 | 154 |
| C | AT&T C9 | Kathrein Scala 800 10121 | 154 |
| C | AT&T C10 | Kathrein Scala 800 10121 | 154 |
| C | AT&T C11 | Kathrein Scala 800 10121 | 154 |
| C | AT&T C12 | CCI OPA-65R-LCUU-H8 | 154 |
| C | AT&T C13 | CCI OPA-65R-LCUU-H8 | 154 |
| C | AT&T C14 | CCI TPA-65R-LCUUUU-H8 | 154 |
| C | AT&T C15 | CCI TPA-65R-LCUUUU-H8 | 154 |
| C | AT&T C16 | CCI TPA-65R-LCUUUU-H8 | 154 |
| C | AT&T C17 | CCI TPA-65R-LCUUUU-H8 | 154 |
| C | AT&T C18 | CCI TPA-65R-LCUUUU-H8 | 154 |
| C | AT&T C19 | Quintel QS66512-2 | 154 |
| C | AT&T C20 | Quintel QS66512-2 | 154 |
| C | AT&T C21 | Quintel QS66512-2 | 154 |
| C | AT&T C22 | Quintel QS66512-2 | 154 |
| C | AT&T C23 | Quintel QS66512-2 | 154 |

APPENDIX 4

FCC OET-65 MPE Limit Study

| Antenna ID | Antenna Make / Model | Frequency Band | Antenna Gain (dBd) | Antenna Height (ft) | Channel Count | TX Power (W) | ERP (W) (All Channels) | Total Power Density ($\mu\text{W}/\text{cm}^2$) | Allowable Public MPE ($\mu\text{W}/\text{cm}^2$) | Public MPE% |
|------------------|--------------------------|----------------|--------------------|---------------------|---------------|--------------|------------------------|---|--|-------------|
| AT&T A1 | CCI DMP65R-BU8D | 700 | 11.85 | 154 | 1 | 40 | 1004.75 | 0.0613809 | 466.67 | 0.013153% |
| AT&T A2 | CCI DMP65R-BU8D | 850 | 12.45 | 154 | 1 | 40 | 1153.61 | 0.0704747 | 566.67 | 0.012437% |
| AT&T A3 | CCI DMP65R-BU8D | 850 | 12.45 | 154 | 1 | 40 | 1153.61 | 0.0704747 | 566.67 | 0.012437% |
| AT&T A4 | CCI OPA-65R-LCUU-H8 | 2100 | 14.25 | 154 | 1 | 40 | 1746.06 | 1.1775178 | 1000.00 | 0.117752% |
| AT&T A5 | CCI OPA-65R-LCUU-H8 | 2100 | 14.25 | 154 | 1 | 40 | 1746.06 | 1.1775178 | 1000.00 | 0.117752% |
| AT&T A6 | CCI OPA-65R-LCUU-H8 | 700 | 10.55 | 154 | 1 | 40 | 744.83 | 0.4912303 | 466.67 | 0.105264% |
| AT&T A7 | Kathrein Scala 800 10121 | 1900 | 14.35 | 154 | 1 | 40 | 1786.73 | 1.2049457 | 1000.00 | 0.120495% |
| AT&T A8 | Kathrein Scala 800 10121 | 1900 | 14.35 | 154 | 1 | 40 | 1786.73 | 1.2049457 | 1000.00 | 0.120495% |
| AT&T A9 | Kathrein Scala 800 10121 | 1900 | 14.35 | 154 | 1 | 40 | 1786.73 | 1.2049457 | 1000.00 | 0.120495% |
| AT&T A10 | Kathrein Scala 800 10121 | 850 | 11.35 | 154 | 1 | 40 | 895.49 | 0.1669155 | 566.67 | 0.029456% |
| AT&T A11 | Kathrein Scala 800 10121 | 1900 | 14.35 | 154 | 1 | 40 | 895.49 | 0.1669155 | 566.67 | 0.029456% |
| AT&T A12 | CCI OPA-65R-LCUU-H8 | 850 | 11.35 | 154 | 1 | 40 | 1486.14 | 2.088972 | 1000.00 | 0.208897% |
| AT&T A13 | CCI OPA-65R-LCUU-H8 | 1900 | 13.75 | 154 | 1 | 40 | 1556.18 | 2.1874222 | 1000.00 | 0.218742% |
| AT&T A14 | CCI TPA-65R-LCUUUU-H8 | 1900 | 13.75 | 154 | 1 | 40 | 1556.18 | 2.1874222 | 1000.00 | 0.218742% |
| AT&T A15 | CCI TPA-65R-LCUUUU-H8 | 1900 | 13.75 | 154 | 1 | 40 | 1556.18 | 2.1874222 | 1000.00 | 0.218742% |
| AT&T A16 | CCI TPA-65R-LCUUUU-H8 | 700 | 12.95 | 154 | 1 | 40 | 1294.37 | 0.1037704 | 466.67 | 0.022237% |
| AT&T A17 | CCI TPA-65R-LCUUUU-H8 | 850 | 13.45 | 154 | 1 | 40 | 1452.31 | 2.0414212 | 566.67 | 0.360251% |
| AT&T A18 | CCI TPA-65R-LCUUUU-H8 | 850 | 13.45 | 154 | 1 | 40 | 1452.31 | 2.0414212 | 566.67 | 0.360251% |
| AT&T A19 | Quintel QS66512-2 | 1900 | 15.55 | 154 | 1 | 40 | 2355.37 | 3.9608986 | 1000.00 | 0.396090% |
| AT&T A20 | Quintel QS66512-2 | 1900 | 15.55 | 154 | 1 | 40 | 2355.37 | 3.9608986 | 1000.00 | 0.396090% |
| AT&T A21 | Quintel QS66512-2 | 700 | 11.65 | 154 | 1 | 40 | 959.53 | 0.1788531 | 466.67 | 0.038326% |
| AT&T A22 | Quintel QS66512-2 | 850 | 11.45 | 154 | 1 | 40 | 916.35 | 0.1708034 | 566.67 | 0.030142% |
| AT&T A23 | Quintel QS66512-2 | 850 | 11.45 | 154 | 1 | 40 | 916.35 | 0.1708034 | 566.67 | 0.030142% |
| AT&T A24 | CCI OPA-65R-LCUU-H4 | 1900 | 13.55 | 154 | 1 | 40 | 1486.14 | 2.088972 | 1000.00 | 0.208897% |
| AT&T A25 | CCI OPA-65R-LCUU-H4 | 1900 | 13.55 | 154 | 1 | 40 | 1486.14 | 2.088972 | 1000.00 | 0.208897% |
| AT&T A26 | CCI OPA-65R-LCUU-H4 | 2100 | 14.25 | 154 | 1 | 40 | 1746.06 | 1.1775178 | 1000.00 | 0.117752% |
| AT&T A27 | CCI OPA-65R-LCUU-H4 | 700 | 10.55 | 154 | 1 | 40 | 744.83 | 0.4912303 | 466.67 | 0.105264% |
| AT&T A28 | CCI OPA-65R-LCUU-H4 | 850 | 11.15 | 154 | 1 | 40 | 855.18 | 0.5640078 | 566.67 | 0.099531% |
| AT&T B1 | CCI OPA-65R-LCUU-H6 | 2100 | 14.25 | 154 | 1 | 40 | 1746.06 | 1.1775178 | 1000.00 | 0.117752% |
| AT&T B2 | CCI OPA-65R-LCUU-H6 | 2100 | 14.25 | 154 | 1 | 40 | 1746.06 | 1.1775178 | 1000.00 | 0.117752% |
| AT&T B3 | CCI OPA-65R-LCUU-H6 | 700 | 10.55 | 154 | 1 | 40 | 744.83 | 0.4912303 | 466.67 | 0.105264% |
| AT&T B4 | CCI DMP65R-BU6DA | 700 | 10.55 | 154 | 1 | 40 | 744.83 | 0.4912303 | 466.67 | 0.105264% |
| AT&T B5 | CCI DMP65R-BU6DA | 850 | 11.15 | 154 | 1 | 40 | 855.18 | 0.5640078 | 566.67 | 0.099531% |
| AT&T B6 | CCI DMP65R-BU6DA | 850 | 11.15 | 154 | 1 | 40 | 855.18 | 0.5640078 | 566.67 | 0.099531% |
| AT&T B7 | Kathrein Scala 800 10121 | 1900 | 14.35 | 154 | 1 | 40 | 1786.73 | 1.2049457 | 1000.00 | 0.120495% |
| AT&T B8 | Kathrein Scala 800 10121 | 1900 | 14.35 | 154 | 1 | 40 | 1786.73 | 1.2049457 | 1000.00 | 0.120495% |
| AT&T B9 | Kathrein Scala 800 10121 | 1900 | 14.35 | 154 | 1 | 40 | 1786.73 | 1.2049457 | 1000.00 | 0.120495% |
| AT&T B10 | Kathrein Scala 800 10121 | 850 | 11.35 | 154 | 1 | 40 | 895.49 | 0.1669155 | 566.67 | 0.029456% |
| AT&T B11 | Kathrein Scala 800 10121 | 850 | 11.35 | 154 | 1 | 40 | 895.49 | 0.1669155 | 566.67 | 0.029456% |
| AT&T B12 | CCI OPA-65R-LCUU-H8 | 1900 | 15.95 | 154 | 1 | 40 | 2582.62 | 0.1842561 | 1000.00 | 0.018426% |
| AT&T B13 | CCI OPA-65R-LCUU-H8 | 700 | 12.15 | 154 | 1 | 40 | 1076.61 | 0.2006765 | 466.67 | 0.043002% |
| AT&T B14 | CCI TPA-65R-LCUUUU-H8 | 1900 | 13.75 | 154 | 1 | 40 | 1556.18 | 2.1874222 | 1000.00 | 0.218742% |
| AT&T B15 | CCI TPA-65R-LCUUUU-H8 | 1900 | 13.75 | 154 | 1 | 40 | 1556.18 | 2.1874222 | 1000.00 | 0.218742% |
| AT&T B16 | CCI TPA-65R-LCUUUU-H8 | 700 | 12.95 | 154 | 1 | 40 | 1294.37 | 0.1037704 | 466.67 | 0.022237% |
| AT&T B17 | CCI TPA-65R-LCUUUU-H8 | 850 | 13.45 | 154 | 1 | 40 | 1452.31 | 2.0414212 | 566.67 | 0.360251% |
| AT&T B18 | CCI TPA-65R-LCUUUU-H8 | 850 | 13.45 | 154 | 1 | 40 | 1452.31 | 2.0414212 | 566.67 | 0.360251% |
| AT&T B19 | Quintel QS66512-2 | 1900 | 15.55 | 154 | 1 | 40 | 2355.37 | 3.9608986 | 1000.00 | 0.396090% |
| AT&T B20 | Quintel QS66512-2 | 1900 | 15.55 | 154 | 1 | 40 | 2355.37 | 3.9608986 | 1000.00 | 0.396090% |
| AT&T B21 | Quintel QS66512-2 | 700 | 11.65 | 154 | 1 | 40 | 959.53 | 0.1788531 | 466.67 | 0.038326% |
| AT&T B22 | Quintel QS66512-2 | 850 | 11.45 | 154 | 1 | 40 | 916.35 | 0.1708034 | 566.67 | 0.030142% |
| AT&T B23 | Quintel QS66512-2 | 850 | 11.45 | 154 | 1 | 40 | 916.35 | 0.1708034 | 566.67 | 0.030142% |
| AT&T C1 | CCI DMP65R-BU8D | 700 | 11.85 | 154 | 1 | 40 | 1004.75 | 0.0613809 | 466.67 | 0.013153% |
| AT&T C2 | CCI DMP65R-BU8D | 850 | 12.45 | 154 | 1 | 40 | 1153.61 | 0.0704747 | 566.67 | 0.012437% |
| AT&T C3 | CCI DMP65R-BU8D | 850 | 12.45 | 154 | 1 | 40 | 1153.61 | 0.0704747 | 566.67 | 0.012437% |
| AT&T C4 | CCI OPA-65R-LCUU-H8 | 2100 | 14.25 | 154 | 1 | 40 | 1746.06 | 1.1775178 | 1000.00 | 0.117752% |
| AT&T C5 | CCI OPA-65R-LCUU-H8 | 2100 | 14.25 | 154 | 1 | 40 | 1746.06 | 1.1775178 | 1000.00 | 0.117752% |
| AT&T C6 | CCI OPA-65R-LCUU-H8 | 700 | 10.55 | 154 | 1 | 40 | 744.83 | 0.4912303 | 466.67 | 0.105264% |
| AT&T C7 | Kathrein Scala 800 10121 | 1900 | 14.35 | 154 | 1 | 40 | 1786.73 | 1.2049457 | 1000.00 | 0.120495% |
| AT&T C8 | Kathrein Scala 800 10121 | 1900 | 14.35 | 154 | 1 | 40 | 1786.73 | 1.2049457 | 1000.00 | 0.120495% |
| AT&T C9 | Kathrein Scala 800 10121 | 1900 | 14.35 | 154 | 1 | 40 | 1786.73 | 1.2049457 | 1000.00 | 0.120495% |
| AT&T C10 | Kathrein Scala 800 10121 | 850 | 11.35 | 154 | 1 | 40 | 895.49 | 0.1669155 | 566.67 | 0.029456% |
| AT&T C11 | Kathrein Scala 800 10121 | 850 | 11.35 | 154 | 1 | 40 | 895.49 | 0.1669155 | 566.67 | 0.029456% |
| AT&T C12 | CCI OPA-65R-LCUU-H8 | 1900 | 13.55 | 154 | 1 | 40 | 1486.14 | 2.088972 | 1000.00 | 0.208897% |
| AT&T C13 | CCI OPA-65R-LCUU-H8 | 700 | 10.55 | 154 | 1 | 40 | 744.83 | 0.4912303 | 466.67 | 0.105264% |
| AT&T C14 | CCI TPA-65R-LCUUUU-H8 | 1900 | 13.75 | 154 | 1 | 40 | 1556.18 | 2.1874222 | 1000.00 | 0.218742% |
| AT&T C15 | CCI TPA-65R-LCUUUU-H8 | 1900 | 13.75 | 154 | 1 | 40 | 1556.18 | 2.1874222 | 1000.00 | 0.218742% |
| AT&T C16 | CCI TPA-65R-LCUUUU-H8 | 700 | 12.95 | 154 | 1 | 40 | 1294.37 | 0.1037704 | 466.67 | 0.022237% |
| AT&T C17 | CCI TPA-65R-LCUUUU-H8 | 850 | 13.45 | 154 | 1 | 40 | 1452.31 | 2.0414212 | 566.67 | 0.360251% |
| AT&T C18 | CCI TPA-65R-LCUUUU-H8 | 850 | 13.45 | 154 | 1 | 40 | 1452.31 | 2.0414212 | 566.67 | 0.360251% |
| AT&T C19 | Quintel QS66512-2 | 1900 | 15.55 | 154 | 1 | 40 | 2355.37 | 3.9608986 | 1000.00 | 0.396090% |
| AT&T C20 | Quintel QS66512-2 | 1900 | 15.55 | 154 | 1 | 40 | 2355.37 | 3.9608986 | 1000.00 | 0.396090% |
| AT&T C21 | Quintel QS66512-2 | 700 | 11.65 | 154 | 1 | 40 | 959.53 | 0.1788531 | 466.67 | 0.038326% |
| AT&T C22 | Quintel QS66512-2 | 850 | 11.45 | 154 | 1 | 40 | 916.35 | 0.1708034 | 566.67 | 0.030142% |
| AT&T C23 | Quintel QS66512-2 | 850 | 11.45 | 154 | 1 | 40 | 916.35 | 0.1708034 | 566.67 | 0.030142% |
| AT&T All Sectors | | | | | | | | | Total | 10.3070% |



APPENDIX 5

Summary of Power Density

| Carriers | Power Density Value (% of General Population) |
|-------------------------|---|
| AT&T All Sectors: | 10.3070% |
| Other Carriers: | 32.9120% |
| Site Total: | 43.2190% |
| Site Compliance Status: | Compliant |



APPENDIX 6

Information Pertaining to MPE Studies

In 1985, the FCC first adopted guidelines to be used for evaluating human exposure to RF emissions. The FCC revised and updated these guidelines on August 1, 1996, as a result of a rule-making proceeding initiated in 1993. The new guidelines incorporate limits for Maximum Permissible Exposure (MPE) in terms of electric and magnetic field strength and power density for transmitters operating at frequencies between 300 kHz and 100 GHz.

The FCC's MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP) and, over a wide range of frequencies, the exposure limits were developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC's limits, and the NCRP and ANSI/IEEE limits on which they are based, are derived from exposure criteria quantified in terms of specific absorption rate (SAR). The basis for these limits is a whole-body averaged SAR threshold level of 4 watts per kilogram (4 W/kg), as averaged over the entire mass of the body, above which expert organizations have determined that potentially hazardous exposures may occur. The MPE limits are derived by incorporating safety factors that lead, in some cases, to limits that are more conservative than the limits originally adopted by the FCC in 1985. Where more conservative limits exist, they do not arise from a fundamental change in the RF safety criteria for whole-body averaged SAR, but from a precautionary desire to protect subgroups of the general population who, potentially, may be more at risk.

The FCC exposure limits are also based on data showing that the human body absorbs RF energy at some frequencies more efficiently than at others. The most restrictive limits occur in the frequency range of 30-300 MHz where whole-body absorption of RF energy by human beings is most efficient. At other frequencies, whole-body absorption is less efficient, and consequently, the MPE limits are less restrictive.

MPE limits are defined in terms of power density (units of milliwatts per centimeter squared: mW/cm²), electric field strength (units of volts per meter: V/m) and magnetic field strength (units of amperes per meter: A/m). The far-field of a transmitting antenna is where the electric field vector (E), the

magnetic field vector (H), and the direction of propagation can be considered to be all mutually orthogonal ("plane-wave" conditions).

The FCC guidelines define two separate tiers of exposure limits. As defined by the FCC, these limits are:

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.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment-related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area. Additional details can be found in FCC OET 65.

For the purposes of this study, only General population/uncontrolled exposure limits were studied.

APPENDIX 7

MPE Standards Methodology

This study predicts RF field strength and power density levels that emanate from communications system antennae. It considers all transmitter power levels (less filter and line losses) delivered to each active transmitting antenna at the communications site. Calculations are performed to determine power density and MPE levels for each antenna as well as composite levels from all antennas. The calculated levels are based on where a human (Observer) would be standing at various locations at the site. The point of interest where the MPE level is predicted is based on the height of the Observer.

Compliance with the FCC limits on RF emissions are determined by spatially averaging a person's exposure over the projected area of an adult human body, that is approximately six-feet or two-meters, as defined in the ANSI/IEEE C95.1 standard. The MPE limits are specified as time-averaged exposure limits. This means that exposure is averaged over an identifiable time interval. It is 30 minutes for the general population/uncontrolled RF environment and 6 minutes for the occupational/controlled RF environment. However, in the case of the general public, time averaging should not be applied because the general public is typically not aware of RF exposure and they do not have control of their exposure time. Therefore, it should be assumed that any RF exposure to the general public will be continuous.

The FCC's limits for exposure at different frequencies are shown in the following Tables.

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



Where:

f = frequency

* = Plane-wave equivalent power density

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

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

Where:

f = frequency

* = Plane-wave equivalent power density

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

It is important to understand that these limits apply cumulatively to all sources of RF emissions affecting a given area. For example, if several different communications system antennas occupy a shared facility such as a tower or rooftop, then the total exposure from all systems at the facility must be within compliance of the FCC guidelines.

The field strength emanating from an antenna can be estimated based on the characteristics of an antenna radiating in free space. There are basically two field areas associated with a radiating antenna. When close to the antenna, the region is known as the Near Field. Within this region, the characteristics of the RF fields are very complex and the wave front is extremely curved. As you move further from the antenna, the wave front has less curvature and becomes planar. The wave front still



has a curvature but it appears to occupy a flat plane in space (plane-wave radiation). This region is known as the Far Field.

Two models are utilized to predict Near and Far field power densities. They are based on the formulae in FCC OET 65. As this study is concerned only with Near Field calculations, we will only describe the model used for this study. For additional details, refer to FCC OET Bulletin 65.

Cylindrical Model (Near Field Predictions)

Spatially averaged plane-wave equivalent power densities parallel to the antenna may be estimated by dividing the antenna input power by the surface area of an imaginary cylinder surrounding the length of the radiating antenna. While the actual power density will vary along the height of the antenna, the average value along its length will closely follow the relation given by the following equation:

$$S = P \div 2\pi RL$$

Where:

S = Power Density

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

For directional-type antennas, power densities can be estimated by dividing the input power by that portion of a cylindrical surface area corresponding to the angular beam width of the antenna. For example, for the case of a 120-degree azimuthal beam width, the surface area should correspond to 1/3 that of a full cylinder. This would increase the power density near the antenna by a factor of three over that for a purely omni-directional antenna. Mathematically, this can be represented by the following formula:

$$S = (180 / \theta_{BW}) P \div \pi RL$$

Where:

S = Power Density

θ_{BW} = Beam width of antenna in degrees (3 dB half-power point)

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

If the antenna is a 360-degree omni-directional antenna, this formula would be equivalent to the previous formula.

Spherical Model (Far Field Predictions)

Spatially averaged plane-wave power densities in the Far Field of an antenna may be estimated by considering the additional factors of antenna gain and reflective waves that would contribute to exposure.

The radiation pattern of an antenna has developed in the Far Field region and the power gain needs to be considered in exposure predictions. Also, if the vertical radiation pattern of the antenna is considered, the exposure predictions would most likely be reduced significantly at ground level, resulting in a more realistic estimate of the actual exposure levels.

Additionally, to model a truly "worst case" prediction of exposure levels at or near a surface, such as at ground-level or on a rooftop, reflection off the surface of antenna radiation power can be assumed, resulting in a potential four-fold increase in power density.

These additional factors are considered and the Far Field prediction model is determined by the following equation:

$$S = \frac{EIRP \times Rc}{4\pi R^2}$$

Where:

S = Power Density

EIRP = Effective Radiated Power from antenna

Rc = Reflection Coefficient (2.56)

R = Distance from the antenna

The EIRP includes the antenna gain. If the antenna pattern is considered, the antenna gain is relative based on the horizontal and vertical pattern gain values at that particular location in space, on a rooftop or on the ground. However, it is recommended that the antenna radiation pattern characteristics not be considered to provide a conservative "worst case" prediction. This is the equation is utilized for the Far Field exposure predictions herein.

EXHIBIT 6

APPLICATION FOR BUILDING PERMIT

COMMERCIAL * INDUSTRIAL * MULTI-FAMILY RESIDENTIAL
TOWN OF NEWINGTON, 131 CEDAR STREET, NEWINGTON CT 06111
TEL. 860-665-8580 FAX 860-665-8577-BUILDING DEPARTMENT
APPLICATION MUST BE FILLED OUT COMPLETELY IN INK

JOB LOCATION: 605 Willard Ave

CONTRACTOR'S NAME McPhee Electrical TEL. NO. 677-9797 Doug Barker

CONTRACTOR'S ADDRESS: 505 Main Street

CITY Farmington STATE CT ZIP 06032 STATE REG. NO. _____

OWNER'S NAME Marcus Group TEL. NO. 860-643-0440 ext: 222

OWNER'S ADDRESS 275 New State Road, ~~Newington~~ Manchester CT. 06

DETAILED DESCRIPTION OF WORK TO BE PERFORMED: Installation of a telecommunications

monopole, associated equipment, buildings, ^{* NEWINGTON} generator, and power Telephone

(GENERATOR / POWER AND ALL RELATED ELECTRICAL WORK NOT INCLUDED)

TOTAL VALUE OF WORK TO BE PERFORMED: \$ 203,000

SIZE OF STRUCTURE TO BE BUILT: WIDTH _____ DEPTH _____ AREA _____ (SQ.FT.) 180' High

T.P.Z./Z.B.A. APPROVAL: 8-24 Approval DATE: _____

ALL WORK COVERED BY THIS APPLICATION HAS BEEN AUTHORIZED BY THE (OWNER) OR (AGENT) OF THIS PROPERTY AND WILL BE DONE ACCORDING TO STATE CODES AND REGULATIONS. **NO WORK SHALL BE STARTED UNTIL THE BUILDING DEPARTMENT HAS RECEIVED THIS APPLICATION AND HAS ISSUED A BUILDING PERMIT. ALL PERMITS APPROVED SUBJECT TO FIELD INSPECTIONS.**

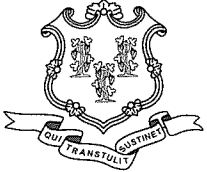
Signed Jeffrey York ^{Auth. Agent} for Marcus Group 10-29-01 860-916-4380
(applicant) (date) (telephone no.)

Please print name Jeffrey A. York

BUILDING PERMITS PAID FOR: BUILDING HEATING & AIR COND. _____
ELECTRICAL _____ PLUMBING _____

BUILDING PERMIT FEE \$ Paid under
OCCUPANCY FEE \$ ok # 1127 and REC'D BY: _____
ZONING FEE: \$ ok # 1162 DATE: 10/29/01
TOTAL PAID \$ _____

APPROVED BY: [Signature]
DATE: 10/29/01
PERMIT NO.: 62860



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

Internet: ct.gov/csc

Daniel F. Caruso
Chairman

#22

October 1, 2007

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

5403 - NEWINGTON
1048 > UNION
5453 > UNION
1154 - WEST HARTFORD
1082 - VERNON

RE: **EM-CING-094-145-145-146-155-070914** – New Cingular Wireless PCS, LLC notice of intent to modify existing telecommunications facilities located at 605 Willard Avenue, Newington; 107 Stickney Hill Road, Union; 1050 Buckley Highway, Union; 197 South Street, Vernon; and 3114 Albany Avenue, West Hartford, Connecticut.

Dear Mr. Levine:

At a public meeting held on September 25, 2007, the Connecticut Siting Council (Council) acknowledged your notice to modify these existing telecommunications facilities, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

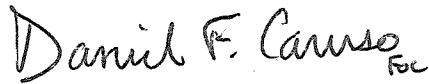
The proposed modifications are to be implemented as specified here and in your notice dated September 12, 2007, including the placement of all necessary equipment and shelters within the tower compounds. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to existing facility sites that would not increase tower heights, extend the boundaries of the tower sites, increase noise levels at the tower site boundaries by six decibels, and increase the total radio frequencies electromagnetic radiation power densities measured at the tower site boundaries to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. These facilities have also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on these towers.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to any of these facilities will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.



Thank you for your attention and cooperation.

Very truly yours,

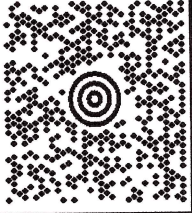

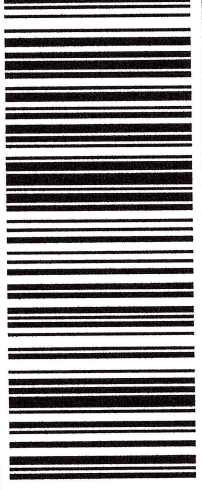

Handwritten signature of Daniel F. Caruso in cursive, with the initials 'DFC' written below the name.

Daniel F. Caruso
Chairman

DFC/MP/cm

- c: The Honorable Rodney Burt Mortensen, Mayor, Town of Newington
- Edmund Meehan, Town Planner, Town of Newington
- The Honorable Ellen L. Marmer, Mayor, Town of Vernon
- Gene F. Bolles, Zoning Enforcement Officer, Town of Vernon
- The Honorable Scott Slifka, Mayor, Town of West Hartford
- Mila Limson, Town Planner, Town of West Hartford
- The Honorable Thomas L. Fitzgerald, First Selectman, Town of Union
- Planning & Zoning Official, Town of Union
- Marcus Group
- Cox Communications
- New England Site Management
- Crown Castle
- Marlin Tower

EXHIBIT 7

| | | |
|---|---|--------------------|
| ALLISON HEBEL 2155887035 CENTERLINE COMMUNICATIONS 6400 GRANBY STREET NORFOLK VA 23505-4432 | 1 LBS DWMT: 12.9,1 | 1 OF 1 |
| SHIP TO: MELANIE BACHMAN, EXECUTIVE DIRECTOR CONNECTICUT SITING COUNCIL 10 FRANKLIN SQUARE NEW BRITAIN CT 06051-2655 | | |
|  |  | CT 067 9-06 |
| UPS GROUND TRACKING #: 1Z 9Y4 503 03 3169 7089 | | |
|  | | |
| BILLING: P/P | | |
| CS 22.0.12 W/INTNS50 39.0A.11/2020* | | |
|  | | |

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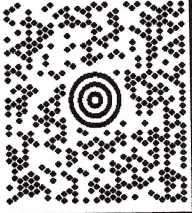

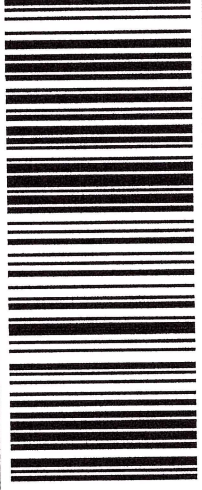

UPS CampussShip: View/Print Label

1. Ensure there are no other shipping or tracking labels attached to your package. Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.
2. Fold the printed label at the solid line below. Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.
3. GETTING YOUR SHIPMENT TO UPS
 - Customers with a Daily Pickup
Your driver will pickup your shipment(s) as usual.
 - Customers without a Daily Pickup
Take your package to any location of The UPS Store®, UPS Access Point™ location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including Via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampussShip and select UPS Locations.
Schedule a same day or future day Pickup to have a UPS driver pickup all your CampussShip packages.
Hand the package to any UPS driver in your area.

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 NORFOLK, VA 23505

UPS Access Point™
 THE UPS STORE
 7870 TIDEWATER DR
 NORFOLK, VA 23505

UPS Access Point™
 VANLICK-LOCKR-CITGO ODU
 3801 HAMPTON BLVD
 NORFOLK, VA 23508

| | | |
|---|---|--------------------|
| ALLISON HEBEL 2155887035 CENTERLINE COMMUNICATIONS 6400 GRANBY STREET NORFOLK VA 23505-4432 | 1 LBS DWGT: 12.9,1 | 1 OF 1 |
| SHIP TO: NEWINGTON HIGH SCHOOL NEWINGTON PUBLIC SCHOOLS 200 GARFIELD STREET NEWINGTON CT 06111 | | |
|  |  | CT 061 9-02 |
| UPS GROUND TRACKING #: 1Z 9Y4 503 03 3483 7305 | | |
|  | | |
| BILLING: P/P | | |
| <small>CS 22.0.12. WINTNVS0 39.0A.11/2020*</small> | | |
|  | | |

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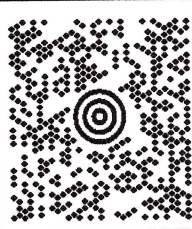

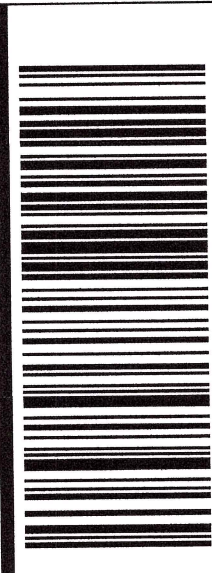
UPS CampusShip: View/Print Label

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.
2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.
3. **GETTING YOUR SHIPMENT TO UPS**
 - Customers with a Daily Pickup**
Your driver will pickup your shipment(s) as usual.
 - Customers without a Daily Pickup**
Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.
Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.
Hand the package to any UPS driver in your area.

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 7525 TIDEWATER DR
 NORFOLK, VA 23505

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 THE UPS STORE
 7870 TIDEWATER DR
 NORFOLK, VA 23505

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 VANLK-LOCKR-CITGO ODU
 3801 HAMPTON BLVD
 NORFOLK, VA 23508

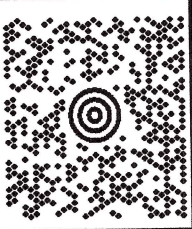
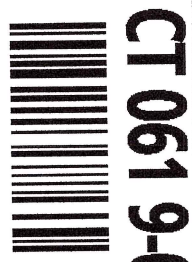
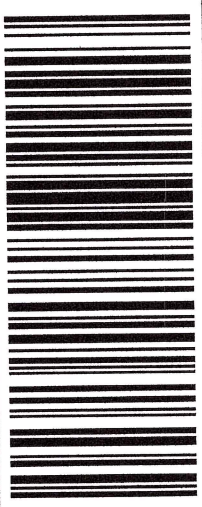

| | | |
|---|---|--------------------|
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| SHIP TO: CRAIG CORBETT AMERICAN TOWER CORPORATION 10 PRESIDENTIAL WAY WOBURN MA 01801-1053 | | |
|  |  | MA 018 9-04 |
| UPS GROUND TRACKING #: 1Z 9Y4 503 03 3792 0692 | | |
|  | | |
| BILLING: P/P | | |
| <small>CS 22.0.12. WNT/INV/SD 39.0A 11/2020*</small> | | |

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2. Fold the printed label at the solid line below. Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.
3. GETTING YOUR SHIPMENT TO UPS
 - Customers with a Daily Pickup
Your driver will pickup your shipment(s) as usual.
 - Customers without a Daily Pickup
Take your package to any location of The UPS Store®, UPS Access Point™ location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.
Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.
Hand the package to any UPS driver in your area.

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 7525 TIDEWATER DR
 NORFOLK, VA 23505
 UPS Access Point™
 THE UPS STORE
 7870 TIDEWATER DR
 NORFOLK, VA 23505
 UPS Access Point™
 VANLICK-LOCKR-CITGO ODU
 3801 HAMPTON BLVD
 NORFOLK, VA 23508

| | | |
|---|---|---------------|
| ALLISON HEBEL 2155887035 CENTERLINE COMMUNICATIONS 6400 GRANBY STREET NORFOLK VA 23505-4432 | 1 LBS DWGT: 12.9,1 | 1 OF 1 |
| SHIP TO: TOWN MANAGER TOWN OF NEWINGTON 200 GARFIELD STREET NEWINGTON CT 06111 | | |
|  | CT 061 9-02  | |
| UPS GROUND TRACKING #: 1Z 9Y4 503 03 2526 6476 | | |
|  | | |
| BILLING: P/P | | |
| CS 22.0.12. WINTNV50 39.0A.11/2020* |  | |

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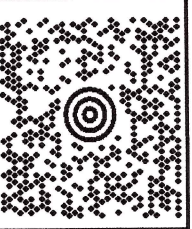
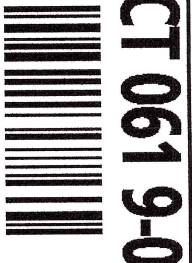
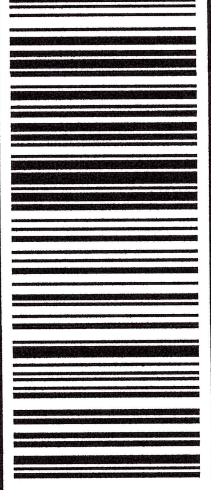

UPS CampusShip: View/Print Label

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.
2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.
3. **GETTING YOUR SHIPMENT TO UPS**
 - Customers with a Daily Pickup**
Your driver will pickup your shipment(s) as usual.
 - Customers without a Daily Pickup**
Take your package to any location of The UPS Store®, UPS Access Point™ location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.
Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.
Hand the package to any UPS driver in your area.

UPS Access Point™
 ADVANCE AUTO PARTS STORE 5482
 7525 TIDEWATER DR
 NORFOLK, VA 23505

UPS Access Point™
 THE UPS STORE
 7870 TIDEWATER DR
 NORFOLK, VA 23505

UPS Access Point™
 VANLK-LOCKR-CITGO ODU
 3801 HAMPTON BLVD
 NORFOLK, VA 23508

| | | |
|---|---|---|
| ALLISON HEBEL 2155887035 CENTERLINE COMMUNICATIONS 6400 GRANBY STREET NORFOLK VA 23505-4432 | 1 LBS DWWT: 12.9,1 | 1 OF 1 |
| SHIP TO: TOWN OF NEWINGTON 200 GARFIELD STREET NEWINGTON CT 06111 |  | CT 061 9-02  |
| UPS GROUND TRACKING #: 1Z 9Y4 503 03 3772 8865 |  | BILLING: P/P CS 22.0.12. WNTNVS0 39.0A 11/2020*  |

FOLD HERE

UPS Campusship: View/Print Label

12/3/2020 UPS Campusship | UPS - United States

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