



August 22, 2017

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

Regarding: Notice of Exempt Modification – Swap of 3 Antennas and addition of 3 Remote Radios
Property Address: 82 Lovely Street, Farmington, CT (the “Property”)
Applicant: AT&T Mobility (“AT&T”, Site # CT1061)

Dear Ms. Bachman:

AT&T currently maintains a wireless telecommunications facility on an existing 102 foot Monopole tower (“tower”) at the above-referenced address, latitude 41.76138611, longitude - 72.8875472. AT&T’s facility consists of six (9) wireless telecommunications antennas at 102 feet. The tower is controlled and owned by Frontier Communications. Assessor’s information is attached hereto.

AT&T desires to modify its existing telecommunications facility by swapping (3) antennas and adding (3) remote radios. The centerline height of said antennas is and will remain at 102 feet.

Please accept this application as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72 (b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to the Town Manager of the Town of Farmington, The Building Official of the Town of Farmington and the Zoning Enforcement/Development Specialist of the Town of Farmington. A copy of this letter is also being sent to Frontier Communications, the owner of the structure that AT&T is located.

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

1. The planned modifications will not result in an increase in the height of the existing structure. AT&T’s antennas and associated lines will be installed at the 102 foot level of the 102 foot Monopole tower.
2. The proposed modifications will not involve any changes to ground-mounted equipment and, therefore will not require an extension of the site boundary.
3. The proposed modification will not increase the noise level at the facility by six decibel or more, or to levels that exceed state and local criteria.



4. The operation of the modified facility will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. An RF emissions calculation is attached.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The tower and its foundation can support AT&T's proposed modifications. (Please see attached Structural analysis completed by Malouf Engineering Intl., Inc. dated August 2, 2017).

For the foregoing reasons AT&T respectfully requests that the proposed swap of antennas and addition of radios be allowed within the exempt modifications under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Nicole Caplan
Site Acquisition Specialist
Empire Telecom

CC: Kathleen A. Eagen, Town Manager, Town of Farmington
Christopher P. Foryan, Building Official, Town of Farmington
Bruce C. Cyr, Zoning Enforcement/Development Specialist, Town of Farmington
Frontier Communications, c/o Kelley Stewart

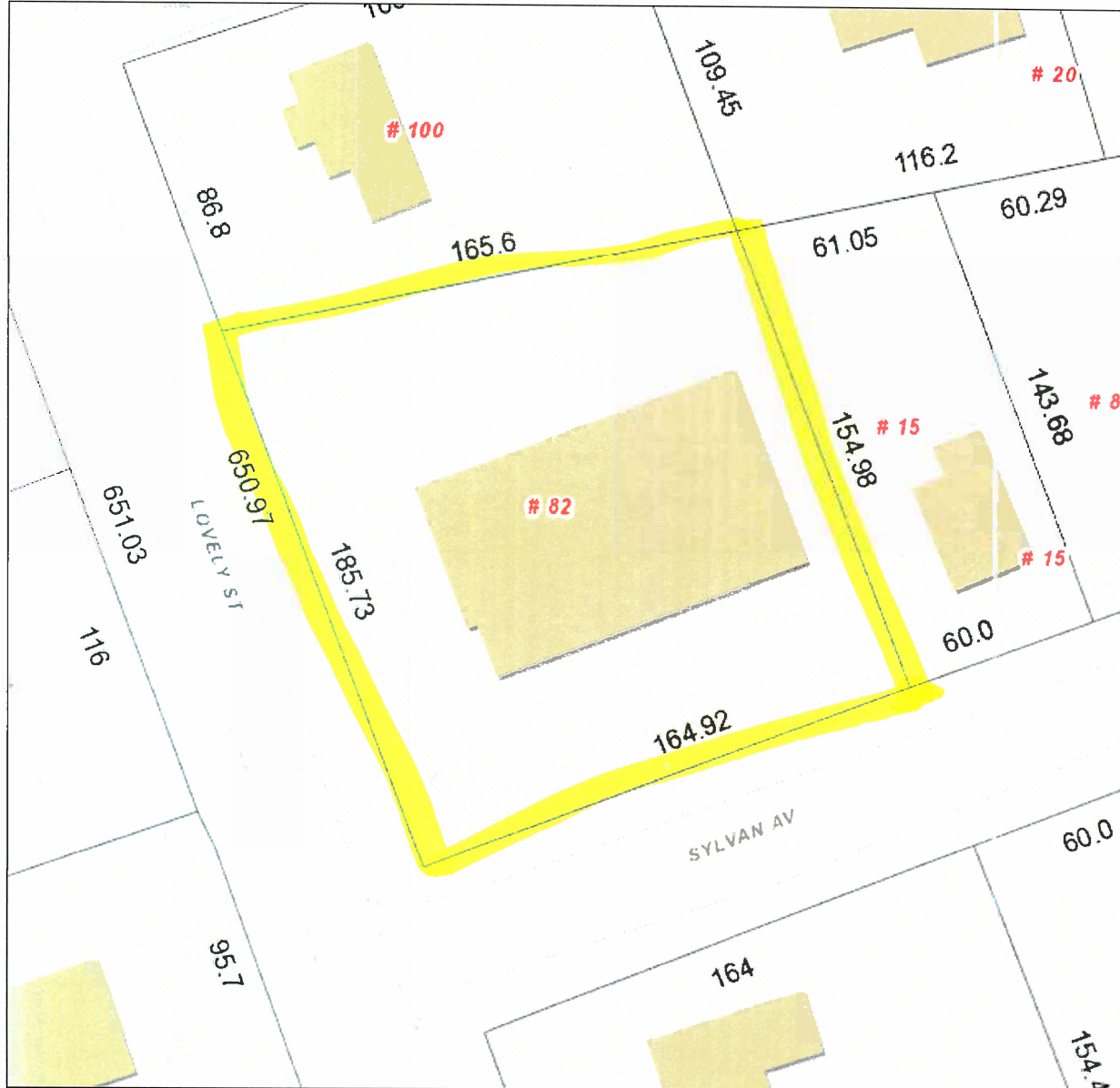
16 Esquire Road, Billerica, MA 01862 Phone 978-284-3906 Email: ncaplan@empiretelecomm.com

Town of Farmington

Geographic Information System (GIS)



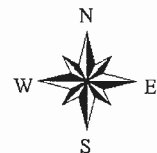
Date Printed: 8/22/2017



MAP DISCLAIMER - NOTICE OF LIABILITY

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

Approximate Scale: 1 inch = 50 feet



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 2012.



Information on the Property Records for the Municipality of Farmington was last updated on 8/21/2017.

Parcel Information

| | | | | | |
|-----------------------|--------------|----------------|------------|----------------|------------------|
| Location: | 82 LOVELY ST | Property Use: | Industrial | Primary Use: | Utility Building |
| Unique ID: | 11350082 | Map Block Lot: | 0006 1 | Acres: | 0.67 |
| 490 Acres: | 0.00 | Zone: | R20 | Volume / Page: | 0114/0169 |
| Developers Map / Lot: | | Census: | 4603-00 | | |

Value Information

| | Appraised Value | 70% Assessed Value |
|------|-----------------|--------------------|
| Land | 255,000 | 178,500 |

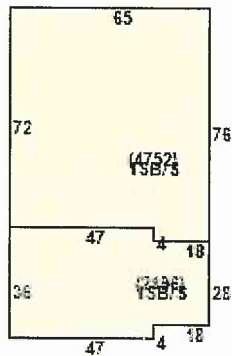
| | Appraised Value | 70% Assessed Value |
|-----------------------|-----------------|--------------------|
| Buildings | 317,426 | 222,200 |
| Detached Outbuildings | 0 | 0 |
| Total | 572,426 | 400,700 |

Owner's Information

| Owner's Data |
|---|
| SOUTHERN NEW ENGLAND FRONTIER COMMUNICATIONS 401 MERRITT 7 - TAX DEPT NORWALK CT 06851 |

Building 1

Photo Not Available



| | | | | | |
|-----------|------------|----------------|------------------|------------------|-------|
| Category: | Industrial | Use: | Utility Building | GLA: | 6,948 |
| Stories: | 1.00 | Construction: | Fire Proof | Year Built: | 1965 |
| Heating: | | Fuel: | | Cooling Percent: | 0 |
| Siding: | | Roof Material: | | Beds/Units: | 0 |

Special Features

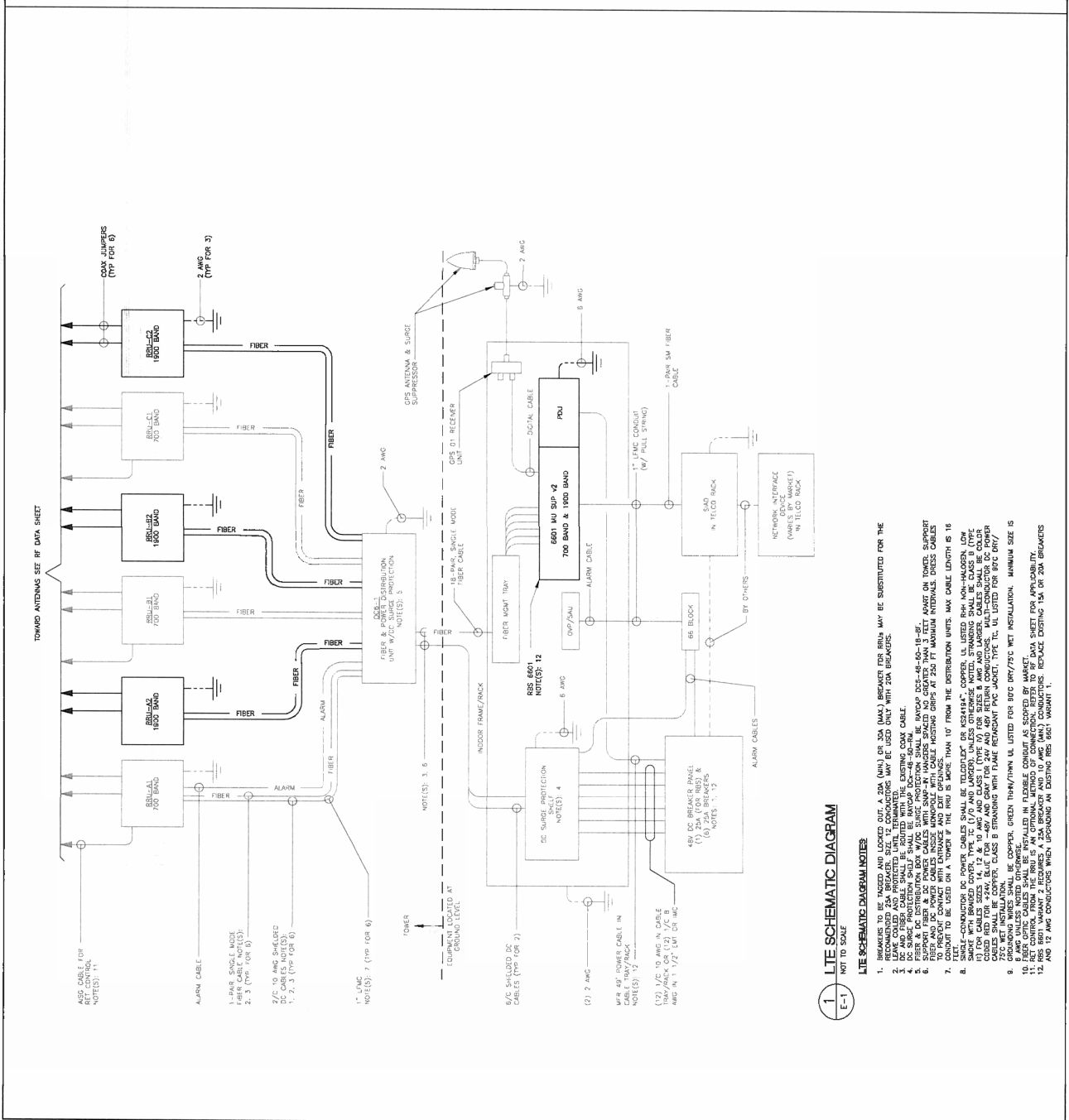
Attached Components

Owner History - Sales

| Owner Name | Volume | Page | Sale Date | Deed Type | Valid Sale | Sale Price |
|----------------------|--------|------|-----------|-----------|------------|------------|
| SOUTHERN NEW ENGLAND | 0114 | 0169 | | | No | \$0 |

Information Published With Permission From The Assessor

- ### ELECTRICAL NOTES
- FROM TO START OF CONSTRUCTION CONTRACTOR SHALL COORDINATE WITH OWNER FOR ALL PERMITS, INSURANCE, AND ALL MANUFACTURER DOCUMENTATION FOR ALL EQUIPMENT TO BE INSTALLED.
 - INSTALL ALL EQUIPMENT IN ACCORDANCE WITH LOCAL BUILDING CODE, NATIONAL ELECTRIC CODE, OWNER AND MANUFACTURER'S SPECIFICATIONS.
 - CONNECT ALL NEW EQUIPMENT TO EXISTING TIE-OUT AS REQUIRED BY MANUFACTURER.
 - MAINTAIN ALL CLEARANCES REQUIRED BY NEC AND EQUIPMENT MANUFACTURER.
 - FROM TO INSTALLATION CONTRACTOR SHALL MEASURE EXISTING ELECTRICAL LOAD AND VERIFY CAPACITY AGAINST LOAD. CONTRACTOR SHALL PROVIDE INSTALLATION IN ACCORDANCE WITH LOCAL BUILDING CODE AND NATIONAL ELECTRIC CODE WITH LOCAL ELECTRIC UTILITY COMPANY TO UPGRADE EXISTING SERVICE.
 - CONTRACTOR SHALL INSPECT EXISTING GROUNDING AND LEAKING PROTECTION. CONTRACTOR SHALL VERIFY ALL ELECTRICAL SYSTEMS ARE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND MANUFACTURER'S SPECIFICATIONS. THE RESULTS OF THIS INSPECTION SHALL BE SUBMITTED TO OWNER'S REPRESENTATIVE, AND ANY DEFICIENCIES SHALL BE CORRECTED.
 - ALL COMMUNICATION TOWER SITES CONTAIN ALL EXTERNAL BURIED GROUNDING SYSTEMS AND ALL EXISTING GROUNDING SYSTEMS SHALL BE IDENTIFIED AND THE OWNER'S SITE REPRESENTATIVE. ALL OF THE TOWER OWNER'S SPECIFICATIONS MUST BE STRICTLY FOLLOWED.
 - CONTRACTOR SHALL VERIFY ALL NEW PERMANENT CONDUCTORS ARE INSTALLED EXISTING GROUNDING SYSTEM PER OWNER'S SPECIFICATIONS AND NEC.
 - ALL CONDUCTORS SHALL BE THE THIN (NET APPLICATION AND XMM (EXT. APPLICATION), 75 DEGREE C, 600 VOLT INSULATION, SOFT ANNEALED STRANDED COPPER, 1/2" DIA. CONDUCTORS, 1/2" DIA. AND LARGER SHALL BE SPACED USING COMPRESSION SPLIT-BOLT TYPE CONNECTORS. 1/2" DIA. SHALL BE SPACED USING COMPRESSION SPLIT-BOLT TYPE CONNECTORS. CONDUCTORS SHALL BE SPACED SCHEDULE FOR BRANCH CIRCUIT CONDUCTOR SIZES. CONDUCTORS SHALL BE SPACED TO PROVIDE FOR CONSISTENT PHASE DISTRIBUTION.
 - CONTRACTOR SHALL VERIFY ALL CONDUCTORS SHALL BE 12 TIMES THE LARGEST DIAMETER OF BRANCH CIRCUIT CONDUCTOR.
 - THE ENTIRE ELECTRICAL INSTALLATION SHALL BE MADE IN STRICT ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES AND REGULATIONS WHICH MAY APPLY AND REPRESENTATIVE OF SUCH CODES OR REGULATIONS.
 - THE ELECTRICAL CONTRACTOR IS TO BE RESPONSIBLE FOR THE COMPLETE ELECTRICAL DESIGN AND INSTALLATION OF ALL ELECTRICAL SYSTEMS. THE ELECTRICAL DESIGNER, ENGINEER AND OTHER AUTHORITIES HAVING JURISDICTION OF TRADES.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND PAY ALL FEES AND COSTS ASSOCIATED WITH THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INSPECTIONS AS MAY BE REQUIRED BY THE LOCAL AUTHORITY.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE SITE OWNER AND/OR BUILDING OWNER FOR NEW ANY/OPTION WORK INVOLVED.
 - THE CONTRACTOR SHALL GUARANTEE ALL NEW WORK FOR A PERIOD OF ONE YEAR FROM THE DATE OF COMPLETION OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING WARRANTIES FROM ALL EQUIPMENT MANUFACTURERS FOR SUBMISSION TO THE OWNER.
 - CONTRACTOR SHALL VERIFY ALL EQUIPMENT IS LISTED IN COMPLIANCE WITH ALL APPLICABLE CODES AND REGULATIONS. CONTRACTOR SHALL VERIFY ALL EQUIPMENT IS LISTED IN COMPLIANCE WITH ALL APPLICABLE CODES AND REGULATIONS. CONTRACTOR SHALL VERIFY ALL EQUIPMENT IS LISTED IN COMPLIANCE WITH ALL APPLICABLE CODES AND REGULATIONS. CONTRACTOR SHALL VERIFY ALL EQUIPMENT IS LISTED IN COMPLIANCE WITH ALL APPLICABLE CODES AND REGULATIONS.
 - ALL NON-CURRENT CARRYING PARTS OF THE ELECTRICAL AND TELEPHONE CONTROL SYSTEMS SHALL BE MECHANICALLY AND ELECTRICALLY CONNECTED TO PROVIDE AN INDEPENDENT RETURN PATH TO THE EQUIPMENT GROUNDING SOURCES.
 - CONTRACTOR SHALL VERIFY ALL EQUIPMENT IS LISTED IN COMPLIANCE WITH ALL APPLICABLE CODES AND REGULATIONS. CONTRACTOR SHALL VERIFY ALL EQUIPMENT IS LISTED IN COMPLIANCE WITH ALL APPLICABLE CODES AND REGULATIONS. CONTRACTOR SHALL VERIFY ALL EQUIPMENT IS LISTED IN COMPLIANCE WITH ALL APPLICABLE CODES AND REGULATIONS.
 - EACH COMPONENT GROUNDING CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH THE NEC, ARTICLE 250-122 (4a), (7) AND (8).
 - CONTRACTOR SHALL VERIFY ALL EQUIPMENT IS LISTED IN COMPLIANCE WITH ALL APPLICABLE CODES AND REGULATIONS. CONTRACTOR SHALL VERIFY ALL EQUIPMENT IS LISTED IN COMPLIANCE WITH ALL APPLICABLE CODES AND REGULATIONS. CONTRACTOR SHALL VERIFY ALL EQUIPMENT IS LISTED IN COMPLIANCE WITH ALL APPLICABLE CODES AND REGULATIONS.
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1. BREAKERS TO BE TUGED AND LOCKED OUT. A 20A (MIN.) OR 30A (MAX.) BREAKER FOR RACKS MAY BE SUBSTITUTED FOR THE 20A BREAKER.

2. LEAVE COILED AND PROTECTED UNTIL TERMINATED.

3. DC SUPPLY DISTRIBUTION SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.

4. DC SUPPLY DISTRIBUTION SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.

5. FIBER & DC DISTRIBUTION BOX W/NO SURGE PROTECTION SHALL BE INVOICED 600-48-600-18-BF.

6. FIBER AND DC SUPPLY DISTRIBUTION SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.

7. CONDUIT TO BE USED ON A TOWER IF THE RACK IS MORE THAN 10' FROM THE DISTRIBUTION UNITS. MAX CABLE LENGTH IS 16 FEET WITH BRIGHT COVER, TYPE TC (1/2" AND LARGER), UNLESS OTHERWISE NOTED. STRANDING SHALL BE CLASS B (TYPE 1) OR CLASS B (TYPE 2) UNLESS OTHERWISE NOTED. MINIMUM SIZE IS 1/2" UNLESS OTHERWISE NOTED.

8. SINGLE-CONDUCTOR DC POWER CABLES SHALL BE TELECOM-OR 454184*, COPPER, UL LISTED RHM NON-HALOGEN LOW SMOKE WITH BRIGHT COVER, TYPE TC (1/2" AND LARGER), UNLESS OTHERWISE NOTED. STRANDING SHALL BE CLASS B (TYPE 1) OR CLASS B (TYPE 2) UNLESS OTHERWISE NOTED. MINIMUM SIZE IS 1/2" UNLESS OTHERWISE NOTED.

9. GROUNDING WIRES SHALL BE COPPER, GREEN THIN/THIN UL LISTED FOR 80°C DRY/75°C WET INSTALLATION. MINIMUM SIZE IS 1/2" UNLESS OTHERWISE NOTED.

10. FIBER OPTIC CABLES SHALL BE INSTALLED IN FLEXIBLE CONDUIT AS SCOPED BY MARKET.

11. FIBER OPTIC CABLES SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.

12. RACKS 600-48-600-18-BF REQUIRES A 25A BREAKER AND 10 AWG (MAX.) CONDUCTORS. REPLACE EXISTING 15A OR 20A BREAKERS AND 12 AWG CONDUCTORS WHEN UPGRADEING AN EXISTING RACK 600-48-600-18-BF.

| REV. | DATE | DRWN | BY | CHKD | BY | DESCRIPTION |
|------|----------|------|-----|------|----|--|
| 0 | 08/09/17 | KAMR | CMJ | | | CONSTRUCTION DOCUMENTS - ISSUED FOR CONSTRUCTION |



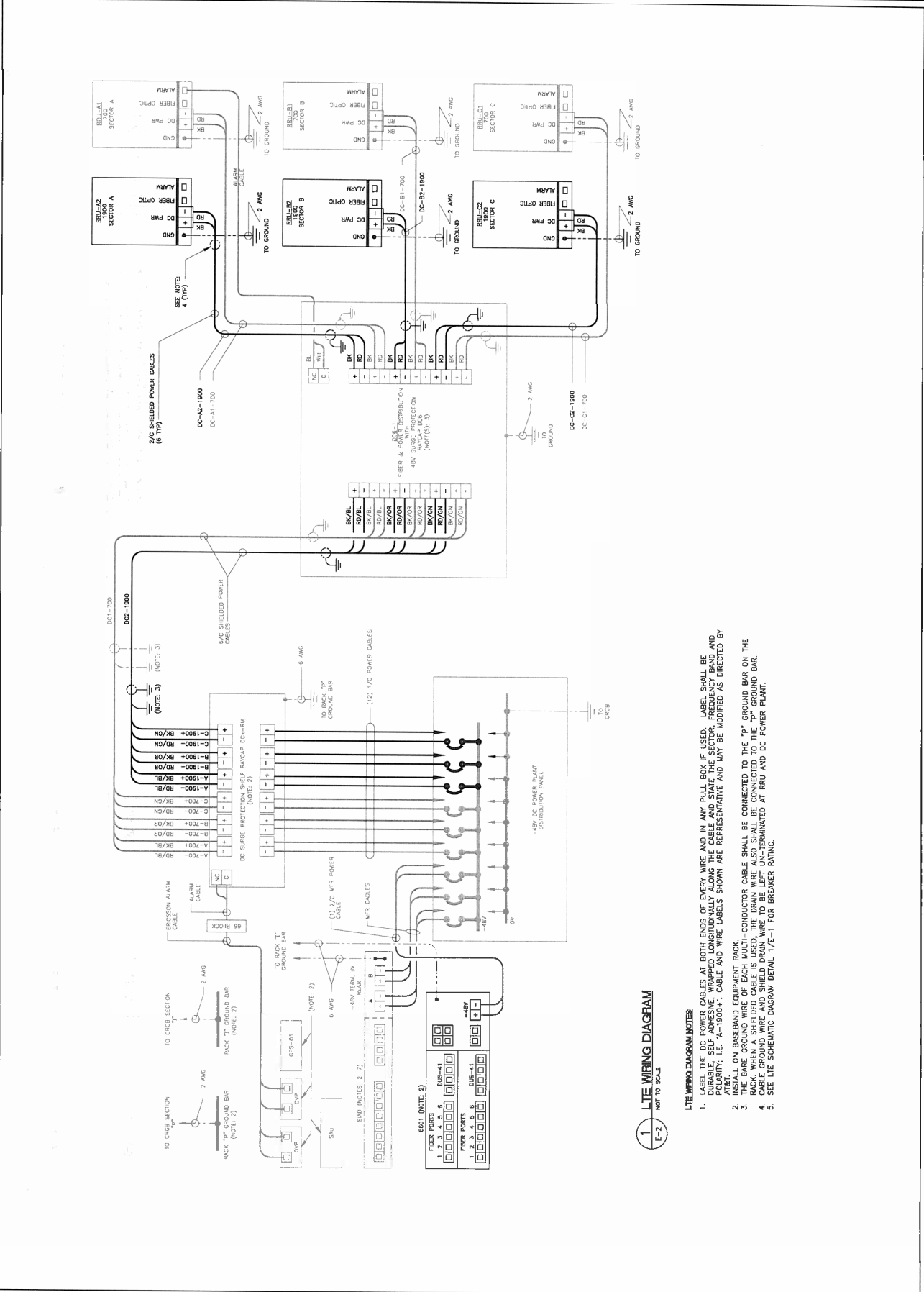
www.centex.com
 2000 485 GARDEN
 STREET, SUITE 100
 FARMINGTON, CT 06030
 CENTEX CORPORATION

AT&T MOBILITY
 WIRELESS COMMUNICATIONS FACILITY
 UNIONVILLE
 CT1061 - LTE 2C
 82 LOWLEY STREET
 FARMINGTON, CT 06085

DATE: 08/13/18
 SCALE: AS NOTED
 JOB NO. 18071.41

LTE WIRING
 DIAGRAM

E-2
 SHEET NO. 2 OF 3

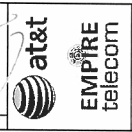


1 LTE WIRING DIAGRAM
 NOT TO SCALE

LTE WIRING DIAGRAM NOTES:

1. LABEL THE DC POWER CABLES AT BOTH ENDS OF EVERY WIRE AND IN ANY FULL BOX IF USED. LABEL SHALL BE IDENTICAL TO THE DC POWER CABLES AT THE OTHER END OF THE CABLE. THE WIRING SHALL BE IDENTICAL TO THE WIRING AND POLARITY; I.E. A-1900A+ BK/BN AND WIRE LABELS SHOWN ARE REPRESENTATIVE AND MAY BE MODIFIED AS DIRECTED BY AT&T.
2. INSTALL ON BASED/IND EQUIPMENT RACK. CONDUCTOR CABLE SHALL BE CONNECTED TO THE "P" GROUND BAR ON THE RACK. WHEN A SHIELDED CABLE IS USED, THE DRAIN WIRE ALSO SHALL BE CONNECTED TO THE "P" GROUND BAR.
3. CABLE GROUND WIRE AND SHIELD DRAIN WIRE TO BE LEFT UN-TERMINATED AT RRU AND DC POWER PLANT.
4. SEE LTE SCHEMATIC DIAGRAM DETAIL 1/E-1 FOR BREAKER RATING.

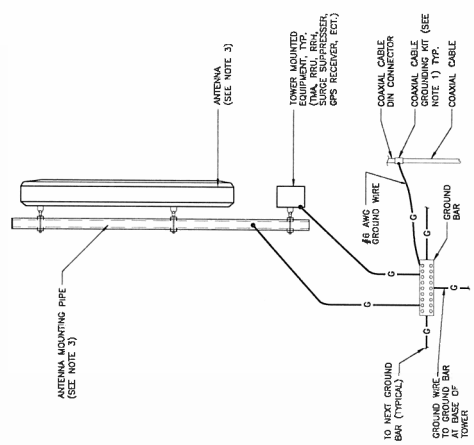
| REV. | DATE | BY | CHK'D BY | DESCRIPTION |
|------|----------|------|----------|--|
| 0 | 08/09/17 | KAMR | CAG | CONSTRUCTION DOCUMENTS - ISSUED FOR CONSTRUCTION |



AT&T MOBILITY
 WIRELESS COMMUNICATIONS FACILITY
 UNIONVILLE
 CT 06081 - LTE 2C
 82 LOWEY STREET
 FARMINGTON, CT 06035

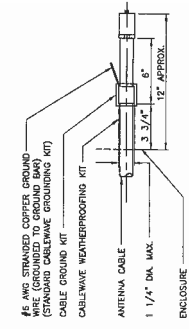
DATE: 08/15/16
 SCALE: AS NOTED
 JOB NO. 1607.41

TYPICAL ELECTRICAL DETAILS
E-3
 Sheet No. 3 of 3



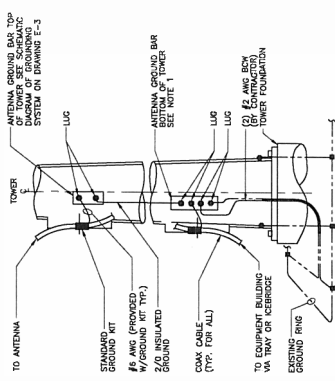
- NOTES:**
1. BOND COAXIAL CABLE GROUND KITS TO EACH MANUFACTURER'S GROUNDING KIT. ENTIRE COAX RUN FROM ANTENNA TO SHIELD.
 2. BOND ALL EQUIPMENT TO GROUND PER NEC AND MANUFACTURER'S SPECIFICATIONS.
 3. DETAIL IS TYPICAL FOR ALL ANTENNA SECTORS, INCLUDING GPS ANTENNA.

1 TYPICAL ANTENNA GROUNDING DETAIL
 E-3 NOT TO SCALE



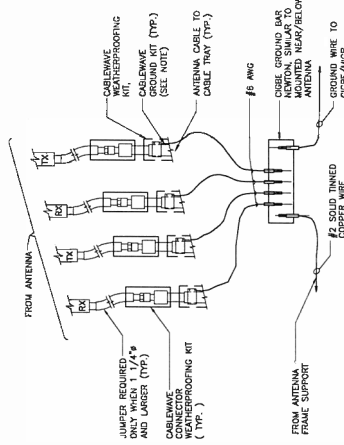
- NOTE:**
1. DO NOT INSTALL CABLE GROUND KIT AT A DEEP BUS. ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.

4 ANTENNA CABLE GROUNDING DETAIL
 E-3 NOT TO SCALE



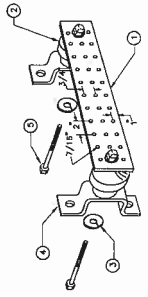
- NOTES:**
1. NUMBER OF GROUND BARS MAY VARY DEPENDENT ON THE TYPE OF TOWER. CONSULT MANUFACTURER'S SPECIFICATION. PROVIDE AS REQUIRED.
 2. A SEPARATE GROUND BAR TO BE USED FOR GPS ANTENNA IF REQUIRED.

2 ANTENNA CABLE GROUNDING - TOWER
 E-3 NOT TO SCALE



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

5 CONNECTION OF GROUND WIRES TO GROUND BAR
 E-3 NOT TO SCALE



- LEGEND**
1. TINNED COPPER GROUND BAR, 1/4"x 4"x 20", NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEW DOUBLE LUG.
 2. INSULATORS, NEWTON INSTRUMENT CAT. NO. 2.
 3. 5/8" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8.
 4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT. NO. A-606.
 5. STAINLESS STEEL SECURITY SCREWS.

3 GROUND BAR DETAIL
 E-3 NOT TO SCALE

Rigorous Structural Analysis Report



AT&T - Unionville SBC Co Site #59358 /FA 10035037
Owner: Frontier Communications - Unionville CO Site
Unionville, Connecticut

August 02, 2017

MEI PROJECT ID: CT05229M-17V0

MALOUF ENGINEERING INTL., INC.



17950 PRESTON ROAD, SUITE 720 ■ DALLAS, TEXAS 75252 ■ TEL. 972-783-2578 FAX 972-783-2583
www.maloufengineering.com





August 02, 2017

Ms. Nicole Caplan
Empire Telecom
 Billerica, MA 01862

RIGOROUS STRUCTURAL ANALYSIS

| | | |
|-----------------------|---|--|
| Structure/Make/Model: | 100 ft Monopole | Engineered Endeavors Inc. / 18-Sided |
| Client/Site Name/#: | Empire Telecom / AT&T | Unionville SBC Co #59358 /FA 10035037 |
| Owner/Site Name/#: | Frontier Communications | Unionville CO |
| MEI Project ID: | CT05229M-17V0 | |
| Location: | 82 Lovely St Unionville, Connecticut 06085 | Hartford County FCC #N/A |
| | LAT 41-45-40.97 N | LON 72-53-15.1 W |

EXECUTIVE SUMMARY:

Malouf Engineering Int'l (MEI), as requested, has performed a tower mapping and rigorous structural analysis of the above mentioned structure to assess the impact of the changed condition as noted in Table 1.

Based on the stress analysis performed, the existing structure **is in conformance** with the Int'l Building Code (IBC) / ANSI/TIA-222-G Standard for the loading considered under the criteria listed and referenced in the report sections – tower rated at 74.2% (Base Plate).

The installation of the proposed changed condition as noted in Table 1 is structurally acceptable. Please refer to Appendix 1 for Schematic Lines Layout.

MEI appreciates the opportunity of providing our continuing professional services to you. If you have any questions or need further assistance on this or other projects please contact us.

Respectfully submitted,

MALOUF ENGINEERING INT'L, INC.

Analysis performed by:

Luan Nguyen, PE
 Sr. Project Engineer

Reviewed & Approved by:


 E. Mark Malouf, PE
 Connecticut #17715
 972-783-2578 ext. 106
 mmalouf@maloufengineering.com



8/2/2017

TABLE OF CONTENTS

1. INTRODUCTION & SCOPE _____ **4**

2. SOURCE OF DATA _____ **4**

 Background Information: ----- **4**

3. ANALYSIS CRITERIA _____ **5**

 Appurtenances Configuration ----- **5**

4. ANALYSIS PROCEDURE _____ **6**

 Analysis Program ----- **6**

 Assumptions ----- **6**

5. ANALYSIS RESULTS _____ **7**

6. FINDINGS & RECOMMENDATIONS _____ **8**

7. REPORT DISCLAIMER _____ **9**

APPENDIX 1 - ANALYSIS PRINTOUT & GRAPHICS _____ **10**

APPENDIX 2 – SOURCE / CHANGED CONDITION _____ **11**



1. INTRODUCTION & SCOPE

A rigorous structural analysis was performed by Malouf Engineering Int'l (MEI), as requested and authorized by Ms. Nicole Caplan, Empire Telecom, on behalf of AT&T, to determine the acceptance of the proposed changed conditions in conformance with the IBC / ANSI/TIA-222-G Standard, "Structural Standard for Antenna Supporting Structures and Antennas".

The scope of this independent analysis is to determine the overall stability and the adequacy of structural members, foundations, and member connections, as available and stated. This analysis considers the structure to have been properly installed and maintained with no structural defects. Installation procedures and related loading are not within the scope of this analysis and should be performed and evaluated by a competent person of the erection contractor.

The different report sections detail the applicable information used in this evaluation, relating to the tower data, the appurtenances configuration and the wind and ice loading considered.

2. SOURCE OF DATA

The following information has been used in this evaluation as source data that accurately represent the existing structure and the related appurtenances:

| | Source | Information | Reference |
|------------------------------|---|-------------------------------------|---|
| STRUCTURE | | | |
| Tower | MEI Mapping | Mapping Report [Sub: HTS] | Dated 07/27/2017 |
| | Frontier Comm. / Ms. Elissa McOmber | Limited Original Design Drawings | Engineered Endeavors Inc. Dated 05/12/1998 |
| Foundation | Frontier Comm. / Ms. Elissa McOmber | Foundation Mapping | WEI Report Dated 02/16/2010 |
| | | Geotechnical Report | WEI Report Dated 02/16/2010 |
| Material Grade | Available from supplied documents noted above-refer to Appendix | | |
| CURRENT APPURTENANCES | | | |
| | MEI Mapping | Mapping Report [Sub: HTS] | Dated 07/27/2017 |
| | Frontier Comm. / Ms. Elissa McOmber | AT&T PDQ | Dated 06/09/2017 |
| CHANGED CONDITION | | | |
| | Empire Telecom / Ms. Nicole Caplan | AT&T PDQ | Dated 06/09/2017 |

Background Information:

Based on available information, the following is known regarding this structure:

| | |
|---------------------------------------|--------------------------------------|
| DESIGNER / FABRICATOR | Engineered Endeavors Inc. / 18-Sided |
| ORIGINAL DESIGN CRITERIA | TIA/EIA 222-F- 85 Mph + 0.50" Ice |
| PRIOR STRUCTURAL MODIFICATIONS | Not Known |

3. ANALYSIS CRITERIA

The structural analysis performed used the following criteria:

| | | |
|---------------------------|--|--|
| CODE / STANDARD | 2016 CT Building Code / 2012 Int'l Building Code / ANSI/TIA-222-G-2 Standard | |
| LOADING CASES | Full Wind: | 125 Mph Ultimate gust [equiv. 97 Mph (3-sec gust)] w/No Radial Ice** |
| | Iced Case: | 40 Mph + 1" Radial Ice |
| | Service: | 60 Mph |
| | Seismic: | S _s = 0.181 / S ₁ = 0.064 / Site Class: D – Stiff Soil |
| STRUCTURE CRITERIA | Risk Category (Structural Class): Class II | |
| | Exposure Category: 'B' – Topographic Category: 1 | |

Appurtenances Configuration

The following appurtenances configuration is denoted by the *summation of Tables 1 & 2*:

Table 1: Tenant with Changed Condition Appurtenances Configuration

| Elev (ft) | Tenant | Ants Qty | Appurtenance Model / Description | Mount Description | Lines Qty | Line size & Location |
|--|--------|----------|-------------------------------------|--------------------------|-----------|----------------------|
| 98.25 | AT&T | 2 | HPA-65R-BUU-H8 Panel Antennas | [Re-use existing Mounts] | | |
| | | 1 | HPA-65R-BUU-H6 Panel Antenna | | | |
| | | 3 | RRUS-12 w/ A2 Backpack Boxes | | | |
| Appurtenances To Be Removed (See Below) | | | | | | |
| 98.5 | AT&T | 1 | SBNH-1D6565C Panel Antenna | | | |
| 98.25 | | 1 | AM-X-CD-16-65-00T-RET Panel Antenna | | | |
| | | 1 | P65E-17-XLH-RR Panel Antenna | | | |

Table 2: Other Current and Reserved/Future Appurtenances

| *Elev (ft) | Tenant | Ants Qty | Appurtenance Model / Description | Mount Description | Lines Qty | Line size & Location |
|------------|--------|----------|-----------------------------------|------------------------|-----------|---------------------------|
| 99.25 | AT&T | 1 | Raycap DC6-48-60-18-8F SUPPRESSOR | (3) 10' LP T-Arm Mount | 1 | 5/8" Fiber Cable - (I) |
| 98.75 | AT&T | 3 | RRUS11 boxes | | 2 | 3/4" DC Power Cable - (I) |
| | | | | | 2 | 2.32" FLEX Conduit - (I) |
| 98.25 | AT&T | 6 | P65-15-XLH-RR Panel Antennas | | 12 | ^1 1/4 - (I) |
| | | 6 | TT19-08BP111-001 TMA's | | | |

Notes:

- *Elevation adjusted as per mapping report.
- ^TX-Line size adjusted as per mapping report.
- **As per 2012 IBC for ultimate 3-sec gust wind speed converted to nominal 3-sec gust wind speed as per Sect. 1609.3.1 as required to be used in ANSI/TIA-222-G Standard per exception 5 of Sect. 1609.1.1.
- Please note appurtenances not listed above are to be removed/not present as per data supplied.
- (I) = Internal; (E) = External; (FZ) = Within Face Zone; (OFZ) = Outside Face Zone - as per TIA-222-G.
- The above appurtenances represent MEI's understanding of the appurtenances configuration. If different than above, the analysis is invalid. Please contact MEI if any discrepancies are found.



4. ANALYSIS PROCEDURE

The subject structure is analyzed for feasibility of the installation of the proposed changed condition previously noted. The data records furnished were reviewed and a computer stress analysis was performed in accordance with the TIA-222 Standard provisions and with the agreed scope of work terms and the results of this analysis are reported.

Analysis Program

The computer program used to model the structure is a rigorous Finite Element Analysis program, trnTower (ver. 7.07), a commercially available program by Tower Numerics Inc. The latticed structures members are modeled using beam/truss and cable members and the pole members using tubular beam elements. The structural parameters and geometry of the members are included in the model. The dead and temperature loads and the wind loads are internally calculated by the program for the different wind directions and then applied as external loads on the structure. Any applicable exemptions, as per Section 15.6 of the TIA-222-G Standard for existing structures originally designed in accordance with a previous revision of the TIA-222 Standard, have been taken.

Assumptions

This engineering study is based on the theoretical capacity of the members and is not a condition assessment of the structure. This analysis is based on information supplied, and therefore, its results are based on and as accurate as that supplied data. MEI has made no independent determination, nor is it required to, of its accuracy. The following assumptions were made for this structural stress analysis:

- This existing tower is assumed, for the purpose of this analysis, to have been properly maintained and to be in good condition with no structural defects and with no deterioration to its member capacities ('as-new' condition).
- The tower member sizes and configuration are considered accurate as supplied. The material grade is as per data supplied and/or as assumed and as stated.
- The appurtenances configuration is as supplied and/or as stated in the report. It is assumed to be complete and accurate. All antennas, mounts, coax and waveguides are assumed to be properly installed and supported as per manufacturer requirements.
- Some assumptions are made regarding antennas and mounts sizes and their projected areas based on best interpretation of data supplied and of best knowledge of antenna type & industry practice.
- Mounts/Platforms are considered adequate to support the loading. No actual analysis of the platform/mount itself is performed, with the analysis being limited to analyzing the structure.
- The soil parameters are as per data supplied or as assumed and stated in the calculations. Refer to the Appendix. If no data is available, the foundation system is assumed to support the structure with its new reactions:
- All welds and connections are assumed to develop at least the member capacity, unless determined otherwise and explicitly stated in this report.
- All prior structural modifications, if any, are assumed to be as per data supplied/available, and to have been properly installed and to be fully effective.

If any of the above assumptions are not valid or have been made in error, this analysis results may be invalidated, MEI should be contacted to review any contradictory information to determine its effect.

5. ANALYSIS RESULTS

The results of the structural stress analysis based on data available and with the previous listed criteria, indicated the following:

Note: The Wind loading controls over the Seismic loading as per TIA Section 2.7.

Table 3: Stress Analysis Results

| Component Type | Maximum Stress Ratio | Controlling Elev. (ft) / Component | Pass/Fail | Comment |
|----------------|----------------------|------------------------------------|-----------|---------|
| POLE | 51.2% | 45.5209 - 0 | Pass | |
| BASE PLATE | 74.2% | Bending | Pass | |
| ANCHOR RODS | 20.1% | Tension | Pass | |
| FOUNDATION | 16.2% | OTM | Pass | |

Table 4: Serviceability Requirements

| | Maximum Value | TIA Requirement (10dB) | Pass/Fail | Comment |
|-------------------------|-----------------------------|----------------------------------|-----------|---------|
| TWIST/SWAY | 1.1667 Deg. | 4 Deg. from Vert. or Horiz. Axis | Pass | |
| HORIZONTAL DISPLACEMENT | 13.879 In./ 1.15% of Ht. | 3.0% of Height | Pass | |

Notes:

1. The Maximum Stress Ratio is the percentage that the maximum load in the member is relative to the allowable load as determined by Code requirements.
2. Refer to the Appendix 1 for more details on the member loads.
3. A maximum stress ratio between 100% and 105% may be considered as *Acceptable* according to industry standard practice.



6. FINDINGS & RECOMMENDATIONS

- Based on the rigorous stress analysis results, the subject structure is **rated at 74.2%** of its support capacity (controlling component: Base Plate) with the proposed changed condition considered. Please refer to Table 3 and to Appendix 1 for more details of the analysis results.
- Based on the stress analysis performed, the existing structure **is in conformance** with the IBC / ANSI/TIA **222-G** Standard for the loading considered under the criteria listed and referenced in the report sections.
- **The installation of the proposed changed condition as noted in Table 1 is structurally acceptable.** Please refer to Appendix 1 for Schematic Lines Layout.
- The limited tower mapping was performed for the sole purpose of obtaining the data required for the tower structural analysis modeling. *It was found that trees are growing close to the pole structure and are rubbing on it – clearance of branches touching the pole is recommended.*
- This structure has additional support capacity for the appurtenances and loading criteria considered. However, no changes to the configuration considered should be made without performing a new proper evaluation.

Rigging and temporary supports required for the erection/modification shall be determined, documented, furnished and installed by the erector/contractor accounting for the loads imposed on the structure due to the proposed construction method.

7. REPORT DISCLAIMER

The engineering services rendered by Malouf Engineering International, Inc. ('MEI') in connection with this Structural Analysis are limited to a computer analysis of the tower structure, size and capacity of its members. MEI does not analyze the fabrication, including welding and connection capacities, except as included in this Report.

The analysis performed and the conclusions contained herein are based on the assumption that the tower has been properly installed and maintained, including, but not limited to the following:

1. Proper alignment and plumbness.
2. Correct guy tensions, as applicable.
3. Correct bolt tightness or slip jacking of sleeved connections.
4. No significant deterioration or damage to any structural component.

Furthermore, the information and conclusions contained in this Report were determined by application of the current "state-of-the-art" engineering and analysis procedures and formulae. MALOUF ENGINEERING INTERNATIONAL, INC. assumes no obligation to revise any of the information or conclusions contained in this Report in the event that such engineering and analysis procedures and formulae are hereafter modified or revised. In addition, under no circumstances will MALOUF ENGINEERING INTERNATIONAL, INC. have any obligation or responsibility whatsoever for or on account of consequential or incidental damages sustained by any person, firm or organization as a result of any information or conclusions contained in the Report, and the maximum liability of MALOUF ENGINEERING INTERNATIONAL, INC., if any, pursuant to this Report shall be limited to the total funds actually received by MALOUF ENGINEERING INTERNATIONAL, INC. for preparation of this Report.

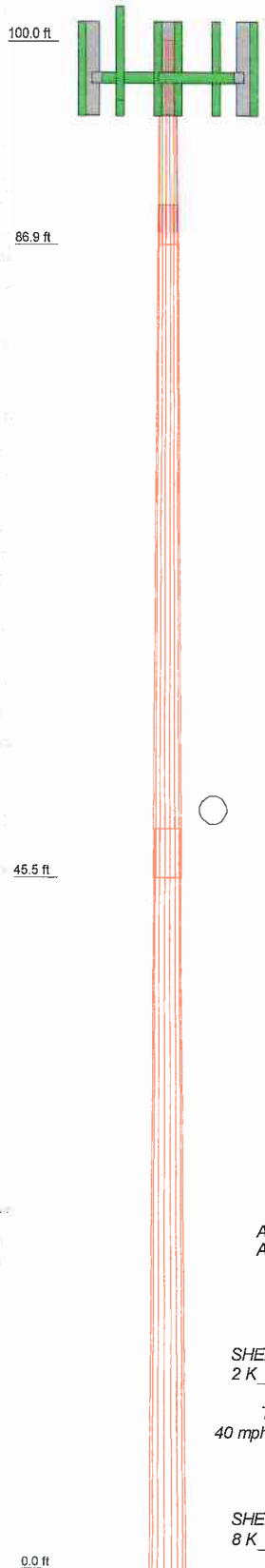
Customer has requested MALOUF ENGINEERING INTERNATIONAL, INC. to prepare and submit to Customer an engineering analysis with respect to the Subject Tower and has further requested MALOUF ENGINEERING INTERNATIONAL, INC. to make appropriate recommendations regarding suggested structural modifications and changes to the Subject Tower. In making such request of MALOUF ENGINEERING INTERNATIONAL, INC., Customer has informed MALOUF ENGINEERING INTERNATIONAL, INC. that Customer will make a determination as to whether or not to implement any of the changes or modifications which may be suggested by MALOUF ENGINEERING INTERNATIONAL, INC. and that Customer will have any such changes or modifications made by riggers, erectors and other subcontractors of Customer's choice. MALOUF ENGINEERING INTERNATIONAL, INC. shall have the right to rely upon the accuracy of the information supplied by the customer and shall not be held responsible for the Customer's misrepresentation or omission of relevant fact whether intentional or otherwise.

Customer hereby agrees and acknowledges that MALOUF ENGINEERING INTERNATIONAL, INC. shall have no liability whatsoever to Customer or to others for any work or services performed by any persons other than MALOUF ENGINEERING INTERNATIONAL, INC. in connection with the implementation of services including but not limited to any services rendered for Customer or for others by riggers, erectors or other subcontractors. Customer acknowledges and agrees that any riggers, erectors or subcontractors retained or employed by Customer shall be solely responsible to Customer and to others for the quality of work performed by them and that MALOUF ENGINEERING INTERNATIONAL, INC. shall have no liability or responsibility whatsoever as a result of any negligence or breach of contract by any such rigger, erector or subcontractor and that Customer and rigger, erector, or subcontractor will provide MALOUF ENGINEERING INTERNATIONAL, INC. with a Certificate of Insurance naming MALOUF ENGINEERING INTERNATIONAL, INC. as additional insured.

APPENDIX 1 - ANALYSIS PRINTOUT & GRAPHICS



| | | | |
|--------------------|---------|---------|---------|
| Section | 1 | 2 | 3 |
| Length (ft) | 13.15 | 43.88 | 48.73 |
| Number of Sides | 18 | 18 | 18 |
| Thickness (in) | 0.1875 | 0.2500 | 0.3125 |
| Socket Length (ft) | 2.54 | 3.21 | 20.7688 |
| Top Dia (in) | 14.5000 | 15.6169 | 27.5000 |
| Bot Dia (in) | 16.3487 | 21.7155 | 27.5000 |
| Grade | | A572-65 | |
| Weight (K) | 0.4 | 2.2 | 3.9 |



DESIGNED APPURTENANCE LOADING

| TYPE | ELEVATION | TYPE | ELEVATION |
|--|-----------|---|-----------|
| Raycap DC6-48-60-18-8F SUPPRESSOR (ATI / E (#6)) | 99.25 | (2) TT19-08BP111-001 (ATI / E (#2)) | 98.25 |
| RRUS-11 (ATI / E (#5)) | 98.75 | HPA-65R-BUU-H8 w/ Pipe Mounts (ATI / P) | 98.25 |
| RRUS-11 (ATI / E (#5)) | 98.75 | HPA-65R-BUU-H8 w/ Pipe Mounts (ATI / P) | 98.25 |
| RRUS-11 (ATI / E (#5)) | 98.75 | HPA-65R-BUU-H6 w/ Pipe Mounts (ATI / P) | 98.25 |
| (2) P65-15-XLH-RR w/ Pipe Mount (ATI / E (#2)) | 98.25 | RRUS-12 w/ A2 Backpack (ATI / P) | 98.25 |
| (2) P65-15-XLH-RR w/ Pipe Mount (ATI / E (#2)) | 98.25 | RRUS-12 w/ A2 Backpack (ATI / P) | 98.25 |
| (2) P65-15-XLH-RR w/ Pipe Mount (ATI / E (#2)) | 98.25 | RRUS-12 w/ A2 Backpack (ATI / P) | 98.25 |
| (2) TT19-08BP111-001 (ATI / E (#2)) | 98.25 | 10' LP T-Arm Mount (ATI / E) | 98 |
| (2) TT19-08BP111-001 (ATI / E (#2)) | 98.25 | 10' LP T-Arm Mount (ATI / E) | 98 |

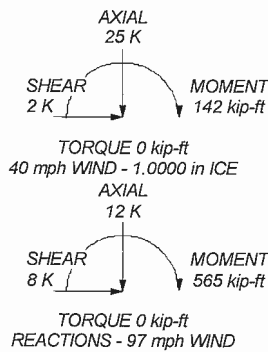
MATERIAL STRENGTH

| GRADE | Fy | Fu | GRADE | Fy | Fu |
|---------|--------|--------|-------|----|----|
| A572-65 | 65 ksi | 80 ksi | | | |

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-G Standard.
3. Tower designed for a 97 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 40 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 74.2%

ALL REACTIONS ARE FACTORED



| | | | |
|--|--|--|------------|
| <p>MALOUF ENGINEERING INT'L, INC. STRUCTURAL CONSULTANTS maloufengineering.com</p> | <p>Malouf Engineering Int'l, Inc. 17950 Preston Road, Suite #720 Dallas, TX 75252 Phone: (972) 783-2578 FAX: (972) 783-2583</p> | <p>Job: 100 FT MNP, UNIONVILLE SBC CO SITE Project: CT05229M-17V0</p> | |
| | Client: EMPIRE TELECOM / AT&T | Drawn by: L.Nguyen | App'd: |
| | Code: TIA-222-G | Date: 08/02/17 | Scale: NTS |
| | Path: D:\WEI\Projects\17 DAT\AIM\PROJECT\05229M-17\VD\CT05229M-17V0.dwg | Dwg No. E-1 | |
| | | | |

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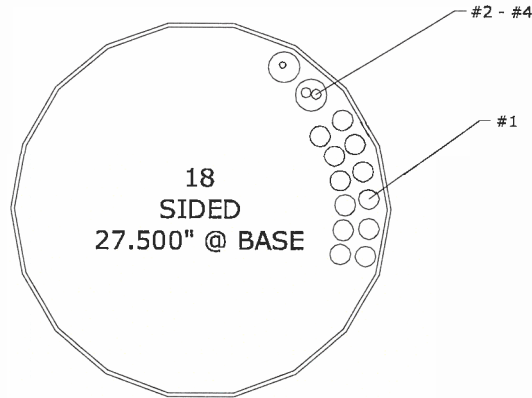
| No. | QTY. | DESCRIPTION | ELEV. | TENANT |
|-----|------|-----------------------------------|-------|----------|
| 1 | 12 | 1 1/4" | 98' | AT&T / E |
| 2 | 1 | 2.32" Flex Conduit | 98' | AT&T / E |
| 3 | 2 | 3/4" DC Power Cable (Inside Flex) | 98' | AT&T / E |
| 4 | 1 | 5/8" Fiber Cable (Inside Flex) | 98' | AT&T / E |

CONTACT MEI IF LINE LAYOUT IS DIFFERENT FROM WHAT IS SHOWN BELOW.

LEGEND:

- E = EXISTING #X
- P = PROPOSED #X
- F = FUTURE #X
- R = REMOVE #X
- TO RELOCATE

NOTE:
NO NEW LINES ADDED



101

PLAN: SCHEMATIC Tx-LINE LAYOUT
SCALE: NOT TO SCALE

NOTES:

1. Tx LINE LAYOUT IS SCHEMATIC ONLY, BASED UPON MEI MAPPING (SUB: HTS) DATED 07/27/17 .
2. NEW BRACKET SUPPORT SPECIFICATION BY OTHERS..

AUG 02, 2017

MALOUF ENGINEERING INTERNATIONAL, INC.



STRUCTURAL CONSULTANTS

17950 PRESTON ROAD SUITE 720
DALLAS, TEXAS 75252-5635
972-783-2578 (fax: 2583)
www.maloufengineering.com

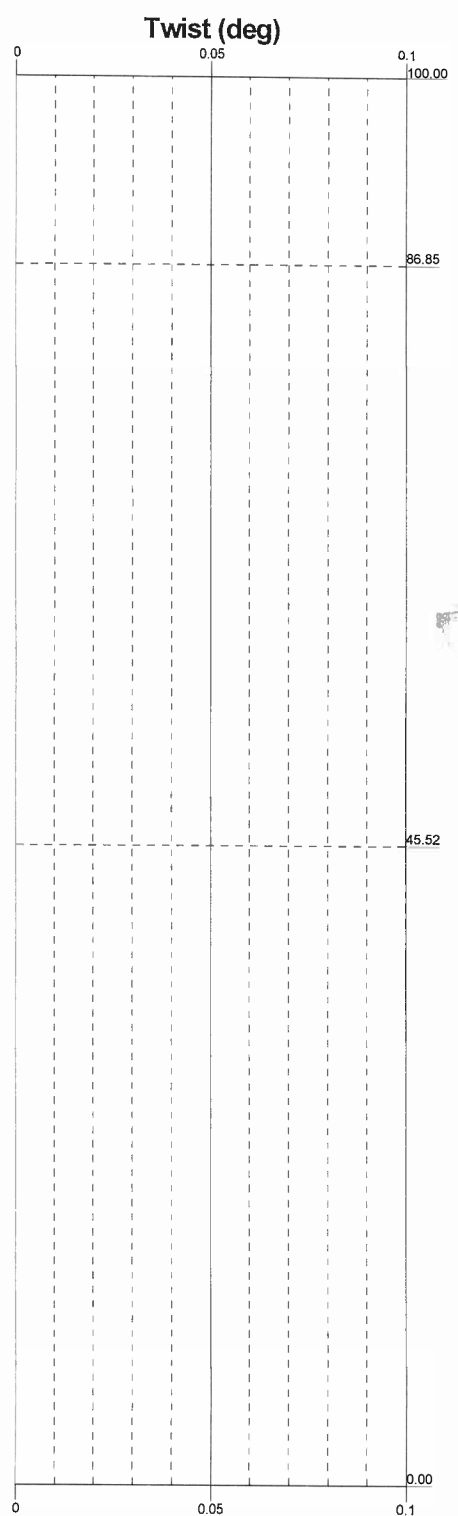
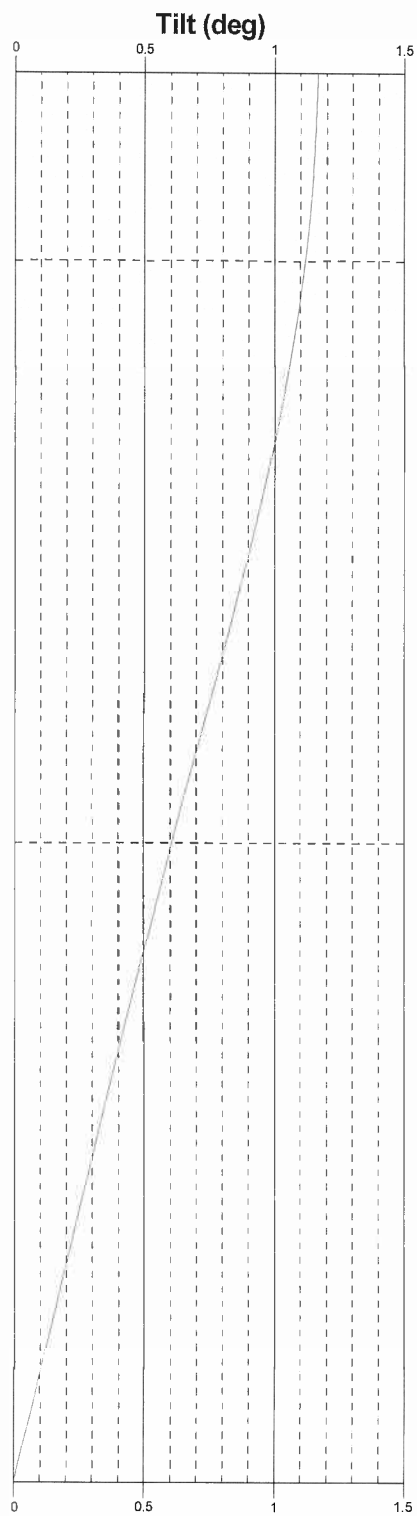
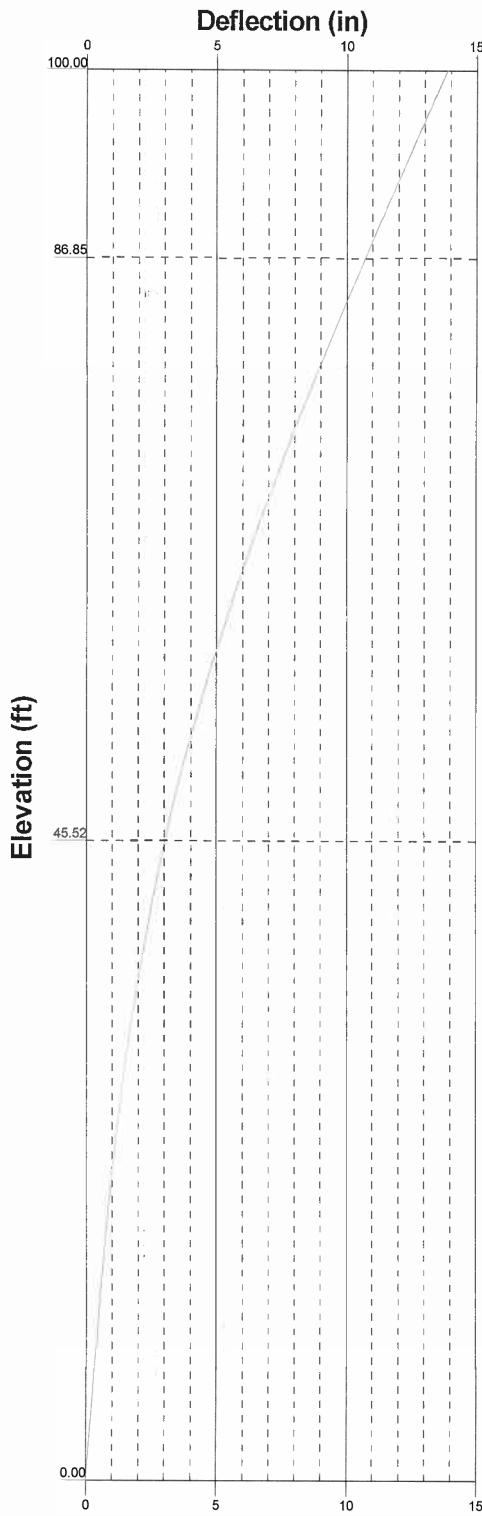
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100 FT MNP, UNIONVILLE SBC CO SITE

MONOPOLE TxLINE LAYOUT

| MEI PROJECT ID | SHEET NUMBER | REV. |
|----------------|--------------|----------|
| CT05229M-17V0 | L01 | 0 |



| | | | | |
|--|---|--|---|--|
|  MALOUF ENGINEERING INT'L, INC. STRUCTURAL CONSULTANTS maloufengineering.com | Malouf Engineering Int'l, Inc. 17950 Preston Road, Suite #720 Dallas, TX 75252 Phone: (972) 783-2578 FAX: (972) 783-2583 | | Job: 100 FT MNP, UNIONVILLE SBC CO SITE Project: CT05229M-17V0 Client: EMPIRE TELECOM / AT&T Code: TIA-222-G Path: D:\EIP\Projects\17 DATAMNP\CT05229M-17V0\CT05229M-17V0.en | |
| | Drawn by: LNguyen Date: 08/02/17 | | App'd. Scale: NTS Dwg No. E-5 | |
| | | | | |
| | | | | |
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| | | |
|--|--|----------------------------------|
| tnxTower Malouf Engineering Int'l, Inc. 17950 Preston Road, Suite #720 Dallas, TX 75252 Phone: (972) 783-2578 FAX: (972) 783-2583 | Job 100 FT MNP, UNIONVILLE SBC CO SITE | Page 1 of 4 |
| | Project CT05229M-17V0 | Date 15:07:20 08/02/17 |
| | Client EMPIRE TELECOM / AT&T | Designed by LNguyen |

Tower Input Data

There is a pole section.

This tower is designed using the TIA-222-G standard.

The following design criteria apply:

- Tower is located in Hartford County, Connecticut.
- ASCE 7-10 Wind Data is used (wind speeds converted to nominal values).
- Basic wind speed of 97 mph.
- Structure Class II.
- Exposure Category B.
- Topographic Category 1.
- Crest Height 0.00 ft.
- Nominal ice thickness of 1.0000 in.
- Ice thickness is considered to increase with height.
- Ice density of 56 pcf.
- A wind speed of 40 mph is used in combination with ice.
- Temperature drop of 50 °F.
- Deflections calculated using a wind speed of 60 mph.
- A non-linear (P-delta) analysis was used.
- Pressures are calculated at each section.
- Stress ratio used in pole design is 1.
- Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Feed Line/Linear Appurtenances - Entered As Area

| Description | Placement | Total Number | Description | Placement | Total Number |
|---------------------|---------------|--------------|--|--------------|--------------|
| | <i>ft</i> | | | <i>ft</i> | |
| Step Bolts (E) | 100.00 - 0.00 | 1 | (AT&T / E) | | |
| Safety Line 3/8 (E) | 100.00 - 0.00 | 1 | 3/4" DC Power Cable (Inside Flex Conduit) (AT&T / E) | 98.25 - 0.00 | 2 |
| 1 1/4" (AT&T / E) | 98.25 - 0.00 | 12 | 5/8" Fiber Cable (Inside Flex Conduit) (AT&T / E) | 98.25 - 0.00 | 1 |
| 2.32" FLEX Conduit | 98.25 - 0.00 | 1 | | | |

Discrete Tower Loads

| Description | Placement | Weight | Description | Placement | Weight |
|---|-----------|----------|---|-----------|----------|
| | <i>ft</i> | <i>K</i> | | <i>ft</i> | <i>K</i> |
| Raycap DC6-48-60-18-8F SUPPRESSOR (AT&T / E (#6)) | 99.25 | 0.02 | (2) P65-15-XLH-RR w/ Pipe Mount (AT&T / E (#2)) | 98.25 | 0.07 |
| RRUS-11 (AT&T / E (#5)) | 98.75 | 0.05 | (2) P65-15-XLH-RR w/ Pipe Mount (AT&T / E (#2)) | 98.25 | 0.12 |
| RRUS-11 (AT&T / E (#5)) | 98.75 | 0.05 | (2) P65-15-XLH-RR w/ Pipe Mount (AT&T / E (#2)) | 98.25 | 0.18 |
| RRUS-11 (AT&T / E (#5)) | 98.75 | 0.07 | (2) P65-15-XLH-RR w/ Pipe Mount (AT&T / E (#2)) | 98.25 | 0.07 |
| RRUS-11 (AT&T / E (#5)) | 98.75 | 0.10 | (2) P65-15-XLH-RR w/ Pipe Mount (AT&T / E (#2)) | 98.25 | 0.12 |
| RRUS-11 (AT&T / E (#5)) | 98.75 | 0.05 | (2) P65-15-XLH-RR w/ Pipe Mount (AT&T / E (#2)) | 98.25 | 0.18 |
| RRUS-11 (AT&T / E (#5)) | 98.75 | 0.07 | (2) TT19-08BP111-001 (AT&T / E (#2)) | 98.25 | 0.02 |
| RRUS-11 (AT&T / E (#5)) | 98.75 | 0.10 | | | 0.03 |

| | | |
|--|--|----------------------------------|
| tnxTower Malouf Engineering Int'l, Inc. 17950 Preston Road, Suite #720 Dallas, TX 75252 Phone: (972) 783-2578 FAX: (972) 783-2583 | Job 100 FT MNP, UNIONVILLE SBC CO SITE | Page 2 of 4 |
| | Project CT05229M-17V0 | Date 15:07:20 08/02/17 |
| | Client EMPIRE TELECOM / AT&T | Designed by LNgyuen |

| Description | Placement | Weight | Description | Placement | Weight |
|--|-----------|----------------------|--------------------------------------|-----------|----------------------|
| | ft | K | | ft | K |
| (2) TT19-08BP111-001 (AT&T / E (#2)) | 98.25 | 0.02 0.03 0.03 | RRUS-12 w/ A2 Backpack (AT&T / P) | 98.25 | 0.14 0.08 0.11 |
| (2) TT19-08BP111-001 (AT&T / E (#2)) | 98.25 | 0.02 0.03 0.03 | RRUS-12 w/ A2 Backpack (AT&T / P) | 98.25 | 0.14 0.08 0.11 |
| HPA-65R-BUU-H8 w/ Pipe Mounts (AT&T / P) | 98.25 | 0.09 0.18 0.28 | 10' LP T-Arm Mount (AT&T / E) | 98.00 | 0.14 0.30 0.42 |
| HPA-65R-BUU-H8 w/ Pipe Mounts (AT&T / P) | 98.25 | 0.09 0.18 0.28 | 10' LP T-Arm Mount (AT&T / E) | 98.00 | 0.55 0.30 0.42 |
| HPA-65R-BUU-H6 w/ Pipe Mounts (AT&T / P) | 98.25 | 0.09 0.17 0.26 | 10' LP T-Arm Mount (AT&T / E) | 98.00 | 0.55 0.30 0.42 |
| RRUS-12 w/ A2 Backpack (AT&T / P) | 98.25 | 0.08 0.11 | | | 0.55 |

Maximum Reactions

| Location | Condition | Gov. Load Comb. | Vertical K | Horizontal, X K | Horizontal, Z K |
|----------|---------------------|-----------------|------------|-----------------|-----------------|
| Pole | Max. Vert | 26 | 24.50 | -0.00 | 0.00 |
| | Max. H _x | 21 | 8.78 | 7.51 | 0.02 |
| | Max. H _y | 3 | 8.78 | 0.02 | 7.54 |
| | Max. M _x | 2 | 563.19 | 0.02 | 7.54 |
| | Max. M _y | 8 | 560.44 | -7.51 | -0.02 |
| | Max. Torsion | 12 | 0.02 | -3.78 | -6.54 |
| | Min. Vert | 15 | 8.78 | -0.02 | -7.54 |
| | Min. H _x | 9 | 8.78 | -7.51 | -0.02 |
| | Min. H _y | 15 | 8.78 | -0.02 | -7.54 |
| | Min. M _x | 14 | -563.29 | -0.02 | -7.54 |
| | Min. M _y | 20 | -560.61 | 7.51 | 0.02 |
| | Min. Torsion | 24 | -0.02 | 3.78 | 6.54 |

Maximum Tower Deflections - Service Wind

| Section No. | Elevation ft | Horz. Deflection in | Gov. Load Comb. | Tilt ° | Twist ° |
|-------------|-------------------|---------------------|-----------------|--------|---------|
| L1 | 100 - 86.8542 | 13.879 | 44 | 1.1667 | 0.0002 |
| L2 | 89.3985 - 45.5209 | 11.310 | 44 | 1.1333 | 0.0001 |
| L3 | 48.7344 - 0 | 3.422 | 44 | 0.6508 | 0.0000 |

Critical Deflections and Radius of Curvature - Service Wind

| Elevation ft | Appurtenance | Gov. Load Comb. | Deflection in | Tilt ° | Twist ° | Radius of Curvature ft |
|--------------|----------------------------------|-----------------|---------------|--------|---------|------------------------|
| 99.25 | Raycap DC6-48-60-18-8F SUPRESSOR | 44 | 13.696 | 1.1651 | 0.0002 | 19606 |
| 98.75 | RRUS-11 | 44 | 13.574 | 1.1640 | 0.0002 | 19606 |

| | | |
|--|--|----------------------------------|
| tnxTower Malouf Engineering Int'l, Inc. 17950 Preston Road, Suite #720 Dallas, TX 75252 Phone: (972) 783-2578 FAX: (972) 783-2583 | Job 100 FT MNP, UNIONVILLE SBC CO SITE | Page 3 of 4 |
| | Project CT05229M-17V0 | Date 15:07:20 08/02/17 |
| | Client EMPIRE TELECOM / AT&T | Designed by L.Nguyen |

| Elevation | Appurtenance | Gov. Load Comb. | Deflection | Tilt | Twist | Radius of Curvature |
|-----------|---------------------------------|-----------------|------------|--------|--------|---------------------|
| ft | | | in | ° | ° | ft |
| 98.25 | (2) P65-15-XLH-RR w/ Pipe Mount | 44 | 13.451 | 1.1628 | 0.0002 | 19606 |
| 98.00 | 10' LP T-Arm Mount | 44 | 13.390 | 1.1623 | 0.0002 | 19606 |

Base Plate Design Data

| Plate Thickness | Number of Anchor Bolts | Anchor Bolt Size | Actual Allowable Ratio Bolt Tension K | Actual Allowable Ratio Concrete Stress ksi | Actual Allowable Ratio Plate Stress ksi | Actual Allowable Ratio Stiffener Stress ksi | Controlling Condition | Critical Ratio |
|-----------------|------------------------|------------------|---------------------------------------|--|---|---|-----------------------|----------------|
| in | | in | | | | | | |
| 2.5000 | 8 | 2.2500 | 44.90 | 0.676 | 40.088 | | Plate | 0.74 |
| | | | 223.65 | 4.080 | 54.000 | | | ✓ |
| | | | 0.20 | 0.17 | 0.74 | | | |

Compression Checks

Pole Design Data

| Section No. | Elevation | Size | L | L _u | Kl/r | A | P _u | φP _n | Ratio P _u / φP _n |
|-------------|-----------------------|------------------------|-------|----------------|------|-----------------|----------------|-----------------|--|
| | ft | | ft | ft | | in ² | K | K | |
| L1 | 100 - 86.8542 (1) | TP16.3487x14.5x0.1875 | 13.15 | 0.00 | 0.0 | 9.4050 | -2.69 | 698.74 | 0.004 |
| L2 | 86.8542 - 45.5209 (2) | TP21.7155x15.6159x0.25 | 43.88 | 0.00 | 0.0 | 16.6784 | -5.80 | 1239.12 | 0.005 |
| L3 | 45.5209 - 0 (3) | TP27.5x20.7688x0.3125 | 48.73 | 0.00 | 0.0 | 26.9666 | -11.69 | 2003.48 | 0.006 |

Pole Bending Design Data

| Section No. | Elevation | Size | M _{ux} | φM _{ux} | Ratio M _{ux} / φM _{ux} | M _{uy} | φM _{uy} | Ratio M _{uy} / φM _{uy} |
|-------------|-----------------------|------------------------|-----------------|------------------|--|-----------------|------------------|--|
| | ft | | kip-ft | kip-ft | | kip-ft | kip-ft | |
| L1 | 100 - 86.8542 (1) | TP16.3487x14.5x0.1875 | 34.81 | 226.17 | 0.154 | 0.00 | 226.17 | 0.000 |
| L2 | 86.8542 - 45.5209 (2) | TP21.7155x15.6159x0.25 | 237.37 | 533.43 | 0.445 | 0.00 | 533.43 | 0.000 |
| L3 | 45.5209 - 0 (3) | TP27.5x20.7688x0.3125 | 564.73 | 1116.05 | 0.506 | 0.00 | 1116.05 | 0.000 |

Pole Shear Design Data

| Section No. | Elevation | Size | Actual V _u K | φV _n K | Ratio V _u / φV _n | Actual T _u kip-ft | φT _n kip-ft | Ratio T _u / φT _n |
|-------------|-----------------------|------------------------|-------------------------|-------------------|--|------------------------------|------------------------|--|
| | ft | | | | | | | |
| L1 | 100 - 86.8542 (1) | TP16.3487x14.5x0.1875 | 4.12 | 349.37 | 0.012 | 0.02 | 452.90 | 0.000 |
| L2 | 86.8542 - 45.5209 (2) | TP21.7155x15.6159x0.25 | 5.83 | 619.56 | 0.009 | 0.02 | 1068.17 | 0.000 |
| L3 | 45.5209 - 0 (3) | TP27.5x20.7688x0.3125 | 7.57 | 1001.74 | 0.008 | 0.02 | 2234.83 | 0.000 |

| | | |
|--|--|----------------------------------|
| tnxTower Malouf Engineering Int'l, Inc. 17950 Preston Road, Suite #720 Dallas, TX 75252 Phone: (972) 783-2578 FAX: (972) 783-2583 | Job 100 FT MNP, UNIONVILLE SBC CO SITE | Page 4 of 4 |
| | Project CT05229M-17V0 | Date 15:07:20 08/02/17 |
| | Client EMPIRE TELECOM / AT&T | Designed by LNguyen |

| Section No. | Elevation ft | Size | Actual V_u K | ϕV_n K | Ratio $\frac{V_u}{\phi V_n}$ | Actual T_u kip-ft | ϕT_n kip-ft | Ratio $\frac{T_u}{\phi T_n}$ |
|-------------|-----------------|------|----------------------|-----------------|---------------------------------|---------------------------|----------------------|---------------------------------|
|-------------|-----------------|------|----------------------|-----------------|---------------------------------|---------------------------|----------------------|---------------------------------|

Pole Interaction Design Data

| Section No. | Elevation ft | Ratio P_u ϕP_n | Ratio M_{ux} ϕM_{nx} | Ratio M_{uy} ϕM_{ny} | Ratio V_u ϕV_n | Ratio T_u ϕT_n | Comb. Stress Ratio | Allow. Stress Ratio | Criteria |
|-------------|--------------------------|------------------------------|------------------------------------|------------------------------------|------------------------------|------------------------------|--------------------------|---------------------------|----------|
| L1 | 100 - 86.8542 (1) | 0.004 | 0.154 | 0.000 | 0.012 | 0.000 | 0.158 | 1.000 | 4.8.2 ✓ |
| L2 | 86.8542 - 45.5209 (2) | 0.005 | 0.445 | 0.000 | 0.009 | 0.000 | 0.450 | 1.000 | 4.8.2 ✓ |
| L3 | 45.5209 - 0 (3) | 0.006 | 0.506 | 0.000 | 0.008 | 0.000 | 0.512 | 1.000 | 4.8.2 ✓ |

Section Capacity Table

| Section No. | Elevation ft | Component Type | Size | Critical Element | P K | ϕP_{allow} K | % Capacity | Pass Fail | |
|-------------|----------------------|-------------------|------------------------|---------------------|--------|-----------------------|-----------------|--------------|-------------|
| L1 | 100 - 86.8542 | Pole | TP16.3487x14.5x0.1875 | 1 | -2.69 | 698.74 | 15.8 | Pass | |
| L2 | 86.8542 - 45.5209 | Pole | TP21.7155x15.6159x0.25 | 2 | -5.80 | 1239.12 | 45.0 | Pass | |
| L3 | 45.5209 - 0 | Pole | TP27.5x20.7688x0.3125 | 3 | -11.69 | 2003.48 | 51.2 | Pass | |
| | | | | | | | Summary | | |
| | | | | | | | Pole (L3) | 51.2 | Pass |
| | | | | | | | Base Plate | 74.2 | Pass |
| | | | | | | | RATING = | 74.2 | Pass |

APPENDIX 2 – SOURCE / CHANGED CONDITION





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

AT&T Existing Facility

Site ID: CT1061

Unionville
82 Lovely Street
Farmington, CT 06085

October 18, 2016

EBI Project Number: 6216004646

| Site Compliance Summary | |
|--|------------------|
| Compliance Status: | COMPLIANT |
| Site total MPE% of FCC general public allowable limit: | 7.34 % |

October 18, 2016

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

Emissions Analysis for Site: **CT1061 – Unionville**

EBI Consulting was directed to analyze the proposed AT&T facility located at **82 Lovely Street, Farmington, CT**, for the purpose of determining whether the emissions from the Proposed AT&T Antenna Installation located on this property are within specified federal limits.

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

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

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

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



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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed AT&T Wireless antenna facility located at **82 Lovely Street, Farmington, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since AT&T is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

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

- 1) 2 UMTS channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 2) 2 UMTS channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 3) 2 GSM channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 4) 2 LTE channels (700 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 5) 2 LTE channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.



- 6) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 7) For the following calculations the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 8) The antennas used in this modeling are the **CCI HPA-65R-BUU-H6, CCI HPA-65R-BUU-H8 and the Powerwave P65-15-XLH-RR** for transmission in the 700 MHz, 850 MHz and 1900 MHz (PCS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 9) The antenna mounting height centerlines of the proposed antennas are **102 feet** above ground level (AGL) for **Sector A**, **102 feet** above ground level (AGL) for **Sector B** and **102 feet** above ground level (AGL) for Sector C.
- 10) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

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

AT&T Site Inventory and Power Data by Antenna

| Sector: | A | Sector: | B | Sector: | C |
|--------------------|-----------------------------|--------------------|-----------------------------|--------------------|-----------------------------|
| Antenna #: | 1 | Antenna #: | 1 | Antenna #: | 1 |
| Make / Model: | Powerwave P65-15-XLH-RR | Make / Model: | Powerwave P65-15-XLH-RR | Make / Model: | Powerwave P65-15-XLH-RR |
| Gain: | 12.6 / 14.6 dBd | Gain: | 12.6 / 14.6 dBd | Gain: | 12.6 / 14.6 dBd |
| Height (AGL): | 102 feet | Height (AGL): | 102 feet | Height (AGL): | 102 feet |
| Frequency Bands | 850 MHz / 1900 MHz (PCS) | Frequency Bands | 850 MHz / 1900 MHz (PCS) | Frequency Bands | 850 MHz / 1900 MHz (PCS) |
| Channel Count | 4 | Channel Count | 4 | Channel Count | 4 |
| Total TX Power(W): | 120 Watts | Total TX Power(W): | 120 Watts | Total TX Power(W): | 120 Watts |
| ERP (W): | 2,822.24 | ERP (W): | 2,822.24 | ERP (W): | 2,822.24 |
| Antenna A1 MPE% | 1.43 % | Antenna B1 MPE% | 1.43 % | Antenna C1 MPE% | 1.43 % |
| Antenna #: | 2 | Antenna #: | 2 | Antenna #: | 2 |
| Make / Model: | Powerwave P65-15-XLH-RR | Make / Model: | Powerwave P65-15-XLH-RR | Make / Model: | Powerwave P65-15-XLH-RR |
| Gain: | 12.6 dBd | Gain: | 12.6 dBd | Gain: | 12.6 dBd |
| Height (AGL): | 102 feet | Height (AGL): | 102 feet | Height (AGL): | 102 feet |
| Frequency Bands | 850 MHz | Frequency Bands | 850 MHz | Frequency Bands | 850 MHz |
| Channel Count | 2 | Channel Count | 2 | Channel Count | 2 |
| Total TX Power(W): | 60 Watts | Total TX Power(W): | 60 Watts | Total TX Power(W): | 60 Watts |
| ERP (W): | 1,091.82 | ERP (W): | 1,091.82 | ERP (W): | 1,091.82 |
| Antenna A2 MPE% | 0.75 % | Antenna B2 MPE% | 0.75 % | Antenna C2 MPE% | 0.75 % |
| Antenna #: | 3 | Antenna #: | 3 | Antenna #: | 3 |
| Make / Model: | CCI HPA-65R-BUU-H8 | Make / Model: | CCI HPA-65R-BUU-H8 | Make / Model: | CCI HPA-65R-BUU-H6 |
| Gain: | 13.15 / 14.05 dBd | Gain: | 13.15 / 14.05 dBd | Gain: | 11.95 / 12.65 dBd |
| Height (AGL): | 102 feet | Height (AGL): | 102 feet | Height (AGL): | 102 feet |
| Frequency Bands | 700 MHz / 850 MHz | Frequency Bands | 700 MHz / 850 MHz | Frequency Bands | 700 MHz / 850 MHz |
| Channel Count | 4 | Channel Count | 4 | Channel Count | 4 |
| Total TX Power(W): | 240 Watts | Total TX Power(W): | 240 Watts | Total TX Power(W): | 240 Watts |
| ERP (W): | 5,527.62 | ERP (W): | 5,527.62 | ERP (W): | 4,089.03 |
| Antenna A3 MPE% | 4.17 % | Antenna B3 MPE% | 4.17 % | Antenna C3 MPE% | 3.09 % |

| Site Composite MPE% | |
|--------------------------|---------------|
| Carrier | MPE% |
| AT&T – Max per sector | 6.35 % |
| Nextel | 0.99 % |
| Site Total MPE %: | 7.34 % |

| | |
|----------------------|---------------|
| AT&T Sector A Total: | 6.35 % |
| AT&T Sector B Total: | 6.35 % |
| AT&T Sector C Total: | 5.27 % |
| Site Total: | 7.34 % |

| AT&T _ Frequency Band / Technology Max Values (Sectors A & B) | # Channels | Watts ERP (Per Channel) | Height (feet) | Total Power Density (µW/cm ²) | Frequency (MHz) | Allowable MPE (µW/cm ²) | Calculated % MPE |
|---|------------|-------------------------|---------------|---|-----------------|-------------------------------------|------------------|
| AT&T 850 MHz UMTS | 2 | 545.91 | 102 | 4.26 | 850 MHz | 567 | 0.75% |
| AT&T 1900 MHz (PCS) UMTS | 2 | 865.21 | 102 | 6.75 | 1900 MHz (PCS) | 1000 | 0.68% |
| AT&T 850 MHz GSM | 2 | 545.91 | 102 | 4.26 | 850 MHz | 567 | 0.75% |
| AT&T 700 MHz LTE | 2 | 1,239.23 | 102 | 9.67 | 700 MHz | 467 | 2.07% |
| AT&T 850 MHz LTE | 2 | 1,524.58 | 102 | 11.89 | 850 MHz | 567 | 2.10% |
| | | | | | | Total: | 6.35% |

Summary

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

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

| AT&T Sector | Power Density Value (%) |
|-------------------------------------|-------------------------|
| Sector A: | 6.35 % |
| Sector B: | 6.35 % |
| Sector C: | 5.27 % |
| AT&T Maximum Total (per sector): | 6.35 % |
| Site Total: | 7.34 % |
| Site Compliance Status: | COMPLIANT |

The anticipated composite MPE value for this site assuming all carriers present is **7.34 %** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Bruce C. Cyr, Zoning Specialist
 Town of Farmington
 Planning and Zoning Dept.
 1 Monticott Drive
 Farmington, CT 06032



9590 9402 1271 5246 8903 00

2. Article Number (Transfer from service label)

7015 1520 0002 7639 5968

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

[Handwritten Signature]

- Agent
- Addressee

B. Received by (Printed Name)

Sandy Michas

C. Date of Delivery

D. Is delivery address different from item 1? Yes
 If YES, enter delivery address below: No

3. Service Type
- Adult Signature
 - Adult Signature Restricted Delivery
 - Certified Mail®
 - Certified Mail Restricted Delivery
 - Collect on Delivery
 - Collect on Delivery Restricted Delivery
 - Insured Mail
 - Insured Mail Restricted Delivery (over \$500)
 - Priority Mail Express®
 - Registered Mail™
 - Registered Mail Restricted Delivery
 - Return Receipt for Merchandise
 - Signature Confirmation™
 - Signature Confirmation Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Frontier Communications
 Attn: Kelley Stewart
 805 Central Expressway South
 Allen, TX 75013



9590 9402 1271 5246 8902 87

2. Article Number (Transfer from service label)

7016 1370 0000 4741 1909

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

[Handwritten Signature]

- Agent
- Addressee

B. Received by (Printed Name)

Jim Jones

C. Date of Delivery

D. Is delivery address different from item 1? Yes
 If YES, enter delivery address below: No

3. Service Type
- Adult Signature
 - Adult Signature Restricted Delivery
 - Certified Mail®
 - Certified Mail Restricted Delivery
 - Collect on Delivery
 - Collect on Delivery Restricted Delivery
 - Insured Mail
 - Insured Mail Restricted Delivery (over \$500)
 - Priority Mail Express®
 - Registered Mail™
 - Registered Mail Restricted Delivery
 - Return Receipt for Merchandise
 - Signature Confirmation™
 - Signature Confirmation Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Kathleen Eagen, Town Manager
Town of Farmington
Town Manager's Office
1 Monteth Drive
Farmington, CT 06032



9590 9402 1271 5246 8903 24

2. Article Number (Transfer from service label)

7016 1370 0000 4741 1992

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

Anna Savastano

-
- Agent
-
-
- Addressee

B. Received by (Printed Name)

ANNA SAVASTANO

C. Date of Delivery

8/24/17

D. Is delivery address different from item 1?

If YES, enter delivery address below:

-
- Yes
-
-
- No

3. Service Type

-
- Adult Signature
-
-
- Adult Signature Restricted Delivery
-
-
- Certified Mail®
-
-
- Certified Mail Restricted Delivery
-
-
- Collect on Delivery
-
-
- Collect on Delivery Restricted Delivery
-
-
- Insured Mail
-
-
- Insured Mail Restricted Delivery (over \$500)

 Priority Mail Express® Registered Mail™ Registered Mail Restricted

Delivery

 Return Receipt for

Merchandise

 Signature Confirmation™ Signature Confirmation

Restricted Delivery

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Christopher Forgan, Building Official
Town of Farmington
Building Division
1 Monteth Drive
Farmington, CT 06032



9590 9402 1271 5246 8903 17

2. Article Number (Transfer from service label)

7016 1370 0000 4741 2005

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

Nicole Primich

-
- Agent
-
-
- Addressee

B. Received by (Printed Name)

Nicole Primich

C. Date of Delivery

8/24/17

D. Is delivery address different from item 1?

If YES, enter delivery address below:

-
- Yes
-
-
- No

3. Service Type

-
- Adult Signature
-
-
- Adult Signature Restricted Delivery
-
-
- Certified Mail®
-
-
- Certified Mail Restricted Delivery
-
-
- Collect on Delivery
-
-
- Collect on Delivery Restricted Delivery
-
-
- Insured Mail
-
-
- Insured Mail Restricted Delivery (over \$500)

 Priority Mail Express® Registered Mail™ Registered Mail Restricted

Delivery

 Return Receipt for

Merchandise

 Signature Confirmation™ Signature Confirmation

Restricted Delivery

Domestic Return Receipt