

SAI Group
12 Industrial Way
Salem, NH 03079
603-421-0470

May 26, 2023

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

Notice of Exempt Modification - New Cingular Wireless PCS, LLC (AT\&T) - CT2124
39 West Street, Danbury, CT 06451
N 41.392905
W 73.454113

Dear Ms. Bachman:
AT\&T currently maintains nine antennas on the rooftop self-support tower located at 39 West Street, Danbury, CT (a/k/a 41 West Street per City of Danbury GIS). Three (3) antennas are at the 69 , level, three (3) antennas at the $63^{\prime}$ level and three (3) antennas at the 54 ' level of the tower. All antenna heights referenced herein are "Above Ground Level" or AGL. The tower is owned by Everest Infrastructure and the property is owned by SNET. AT\&T now intends to replace six (6) antennas and add three (3) antennas. This modification may include B2, B5, B17, B14, B29, B30, B66 \& n77 hardware that is 4 G (LTE) and/or 5GNR capable through remote software configuration and either or both services may be turned on or off at various times. The two (2) existing shroud sections on the upper tower will be replaced by one uniform shroud concealing both upper clusters of antennas per the Tower Structural Report by TEP Northeast dated February 16, 2023.

AT\&T Planned Modifications:
Remove:
(3) Ericsson RRUS-11 B12
(6) Diplexers
(6) TMA
(6) COAX

## Remove and Replace:

(3) ANDREW 7770 Antennas (REMOVE) - (3) Ericsson AIR 6419 B77G Antennas (REPLACE)
(3) QUINTEL QS66512-2 Antennas (REMOVE) - (3) Ericsson AIR 6449 B77D Antennas (REPLACE)

Install New:
(1) CCI DMP65R-BU4EA-K Antennas
(3) Ericsson 4478 B14 RRU

## Existing to Remain:

(3) KATHREIN 800-10964 Antennas
(3) Ericsson 8843 B2/B66A RRU
(3) Ericsson 4449 B5/B12 RRU
(3) Ericsson RRUS-32 B30
(3) Raycap Surge Units
(6) DC Lines
(3) Fiber Lines

AT\&T's use of this facility was first approved by the Connecticut Siting Council, Docket No. 75 on May 13, 1987 and the tower's current height was approved in Petition No. 448 on April 12, 2000. This modification complies with the aforementioned approvals.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16-50j73, 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 Mayor Dean Esposito and Sharon Calitro, Director of Planning \& Zoning for the City of Danbury, as well as the 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).

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require the 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 replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading.

For the foregoing reasons, AT\&T respectfully submits that the proposed modifications to the abovereferenced telecommunications facility constitute an exempt modification under R.C.S.A. § 16-50j72(b)(2).

Please feel free to call me at (860) 670-9068 with any questions regarding this matter. Thank you for your consideration.

Sincerely,

## Mare Roberts

Mark Roberts
Consultant for SAI
Mark.Roberts@QCDevelopment.net
Attachments
Cc: Mayor Dean Esposito - Elected Official
Sharon Calitro - Director of Planning \& Zoning
SNET - Property Owner
Everest Infrastructure - Tower Owner

## Exhibit A

## Original Facility Approval

DOCKET NO. 75
AN APPIICATION OF THE SOUTHERN NEW ENGLAND : CONNECIICUT SITING
TELEPHONE COMPANY FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBIITTY AND PUBLIC NEED FOR CELLULAR TETEPHONE FACIITITIES IN IHE CIIY OF DANBURY AND EITHER IHE TOWN OF BROOKFIETD OR TOWN OF NEWIOWN, CONNECIICUT.
: COUNCIL MAY 13, 1987

## DECISIONANDORDER

Pursuant to the foregoing opinion, the Connecticut siting Council (Council) hereby directs that a Certificate of Envirommental Compatibility and Public Need, as provided by Section 16-50k of the General Statutes of Connecticut (OGS), be issued to Southern New England Telephone Cellular, Inc., (SNET) for the construction, operation, and maintenance of cellular mobile telephone facilities in the City of Danbury and Town of Newtown, Connecticut. The proposed Brookfield site is rejected.

The facilities shall be constructed, operated, and maintained as specified in the Council's record on this matter, and subject to the following conditions.

1. The Danbury tower, including antennas, shall be no taller than necessary to provide the proposed service, and in no event shall exceed 37 feet.
2. Unless necessary to comply with condition number three, below, no lights shall be installed on these towers.
3. The facilities shall be constructed in accordance with all applicable federal, state, and municipal laws and regulations.
4. The Newtown tower, including antennas, shall be no taller than necessary to provide the proposed service, and in no event shall exceed 167 feet.
5. The certificate holder shall prepare a development and management (D\&M) plan for the Newtown site in compliance with sections 16-50j-75 through 16-50j-77 of the Regulations of State Agencies. The D\&M plan shall provide for evergreen screening around the outside perimeter of the eight-foot chain link fence which will surround this site.
6. No construction activities shall take place outside the hours of 7:00 A.M. to 7:00 P.M., Monday through Saturday.
7. The certificate holder or its successor shall notify the Council if and when directional antennas or any equipment other than that listed in this application is added to these facilities.
8. The certificate holder or it successor shall permit public or private entities to share space on the Newtown tower, for due consideration, or shall provide any requesting entity with specific legal, technical, enviromental, or economic reasons precluding such tower sharing.
9. If these facilities do not provide or permanently cease to provide cellular service following the completion of construction, this Decision and Order shall be void, and the tower and all associated equipment in this application shall be dismantled and removed or reapplication for any new use shall be made to the Council before any such new use is made.
10. Unless otherwise approved by the Council, this Decision and Order shall be void if all construction authorized herein is not completed within three years of the issuance of this Decision and Order, or within three years of the completion of any appeal taken in this Decision.
11. The certificate holder shall comply with any future radio frequency (RF) standards promulgated by state or federal regulatory agencies. Upon the establishment of any new govermental RF standards, the Certificate holder shall bring the facilities granted approval in this Decision into compliance with such standards.

Pursuant to OGS section 16-50p, we hereby direct that a copy of the Decision and Order be served on each person listed below. A notice of the issuance shall be published in the Danbury News-Times, the Brookfield Journal, and the Newtown Bee.

The parties to the proceeding are:

SNET Cellular, Inc. c/o Peter J. Tyrrell Senior Attorney Room 1021<br>227 Church Street<br>New Haven, Connecticut 06506<br>Town of Newtown<br>Planning and Zoning Commission<br>Metro Mobile CTS of Fairfield County (INIERVENOR)<br>Fergus W. O'Donnell<br>28 Whisconier Road<br>Brookfield, Center, Connecticut 06805

The undersigned members of the Connecticut Siting Council hereby certify that they have heard this case or read the record thereof, and that we voted as follows:

Dated at New Britain, Connecticut, this 13th day of May 1987.

Council Members


Vote Cast

## Yes



Yes

## Yes

Mortimer A. Gelston


Yes

Yes

Colin C. Tait

Petition 448<br>Springwich Cellular Limited Partnership (SCLP)<br>Staff Report<br>April 12, 2000

On March 24, 2000, Connecticut Siting Council (Council) member Gerald J. Heffernan and Council staff Paul M. Aresta met SNET representatives Paul C. Brann and George Pendleton for a field review of this petition. SCLP is petitioning the Council for a declaratory ruling that no amendment to a Certificate of Environmental Compatibility and Public Need issued on May 13, 1987 (Docket 75), would be required for modifications to an existing telecommunications facility located at 39 West Street, in Danbury.

The existing telecommunications facility consists of a 20 -foot self-supporting lattice tower with six panel type antennas mounted to a five-foot high by 12 -foot wide triangular platform. SCLP proposes to remove the six panel antennas and triangular platform and install a ten-foot, five-inch tall extension pipe, eight inches in diameter above the existing 20 -foot self-supporting tower. SCLP would also install three, eightfoot tall antennas within an RF-transparent "barrel", 36 inches in diameter atop the proposed pipe extension. The proposed modification would result in a net increase in height of 13 feet for the tower with appurtenances; however, the width of the platform structure would be reduced from twelve feet to three feet. The radio equipment would continue to be housed in the basement of the building. SCLP is proposing this modification to eliminate signal interference caused by an office building recently constructed adjacent to the existing tower.

The proposed antennas would transmit at a height of 70 feet above ground level ( 63.44 feet above pedestrian) for a predicted maximum electromagnetic power density of 28.94 percent of the applicable ANSI standard for the general population. SCLP contends that a person inside the building would experience an emission level that is six times less due to the attenuation caused by the roofing material. SCLP further contends that the existing tower is structurally capable of supporting the proposed pipe extension and antennas; that the proposed modification would not present any environmental or safety concerns; and that the proposed antennas encased in the RF-transparent barrel would have less of a visual impact than the existing platform.

## Exhibit B

## Property Card

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 2022.

## DANBURY •ст

## ASSESSOR'S OFFICE

Information on the Property Records for the Municipality of Danbury was last updated on 5/23/2023.

Parcel Information

| Location: | 41 WEST ST | Property Use: | Office | Primary Use: | Office Building |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Unique ID: | I14045 | Map Block Lot: | I14 45 | Acres: | 0.5000 |
| 490 Acres: | 0.00 | Zone: | CL10 | Volume / <br> Page: | $0203 / 0005$ |
| Developers <br> Map / Lot: |  | Census: | 2101 |  |  |

Value Information

|  | Appraised Value | Assessed Value |
| :--- | :--- | :--- |
| Land | 152,600 | 106,820 |
| Buildings | $3,818,000$ | $2,672,600$ |
| Detached Outbuildings | 9,000 | 6,300 |
| Total | $3,979,600$ | $2,785,720$ |

## Owner's Information

| Owner's Data |
| :---: | :---: |
| SOUTHERN NEW ENGLAND TELEPHONE CO |
| FRONTIER COMMUNICATIONS |
| C/O DUFF \& PHELPS LLC |
| P O BOX 2629 |
| ADDISON, TX 75001 |

## Building 1



| Heating: | Steam | Fuel: | Oil | Cooling <br> Percent: | 100 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Siding: | Brick/Masonry | Roof Material: | Tar and Gravel | Beds/Units: | 0 |

## Special Features

Dry Sprinklers

## Attached Components

## Detached Outbuildings

| Type: | Year Built: | Length: | Width: | Area: |
| :--- | :--- | :--- | :--- | :--- |
| Paving | 1999 | 0.00 | 0.00 | 9,000 |

Owner History-Sales

| Owner Name | Volume | Page | Sale Date | Deed Type | Sale Price |
| :--- | :--- | :--- | :--- | :--- | :--- |
| SOUTHERN NEW ENGLAND TELEPHONE CO | 0203 | 0005 | $08 / 20 / 1938$ |  | $\$ 0$ |

Building Permits

| Permit Number | Permit Type | Date Opened | Reason |
| :--- | :--- | :--- | :--- |
| 42199 | Miscellaneous | $09 / 28 / 2006$ | PERSONAL PROPERTY |



## 39 WEST STREET

Danbury, CT
CAI Technologies
1 inch $=70$ Feet
www.cai-tech.com
May 23, 2023
70


Data shown on this map is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this map.

## Exhibit C

## Construction Drawings



## GROUNDING NOTES





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4. MEAL RACEWAY SHALL NOT BE UEED AS THE NEC REQURED EOUPMENT GROUND

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7. APproved antioxdan coatnge (l.e. conouctive oel or paste) shall be used on all
8. ICE brodg bonang conouctors shall be exothermically bonoed or bolted to
9. ALUMNUM CONOUCTor or COPPER CLAD STEEL CONOUctor Shall Not be USED FOR
10. MISEELANEOUS ELECTRICAL AND NON-ELECTRRCAL METAL BOXES. FRAMES AND SUPPORTS
 OR BV OONONG ACROSS THE DIISCO
CROUNONG TPE CONOUTT CAMPS.
12. ALL NEW STRUCTURES WTH A FOUNDATON AND/OR FOOTNG HAVNG 20 eT. OR MORE OF


## GENERAL NOTES

for the purpose of construction drawing, the following defintions shall apply CONTRACTOR - SAl
SUBCOATRACTOR SUBCONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)
OWNER - ATET MOBLLITP
2. PRIOR TO THE SUBMISION OF BIDS, THE BIDDING SUBCONTRACTOR SHAL VISTT THE CELL STIE TO FAMLIARIE WITH THE EXXSTING CONDTIIONS AND TO CONFIRM THAT THE WORK CAN
BE ACOMMLSED AS SHOWN ON THE COSTTUCTIN DRAWINGS. ANY DISREPANCY FOUND BE ACCOMPLSHED AS SHOWN ON THE CONSTRUCTON D
SHALL BE BROUGHT TO THE ATENTION OF CONTRACTOR.
3. ALL MATERILLS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL

 COMPANY SP.
REGULATIONS.
4. drawngs provided here are not to be scaled and are intended to show outline
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHNG MATERIALS, EQUIPMENT,
APPUTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTFIES ITEMS THAT WLL BE SUPPLIED BY SUPPLIED BY THE SUBCONTRACTOR.
THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALL IN ACCORDANCE WITH
MANUFACTURER'S RECOMMENDATOLS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFED EQUPMENT CANNOT BE INSTALED AS SHOWN ON THESE DRAWINGS, THE
SUBCONTRACTOR SHALL PROPOSE AN ALTERNATVE INSTALLATION SPACE FOR APPROVAL BY SUBCONTRACTOR
THE CONTRACTOR.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUT, POWER AND T1 CABLES,
GROUNOING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTLIIZE EXILTING TRAYS AND/OR SHALL ADD NEW TRAYS AS
NECESSARY. SUBCONTRACTOR SHALL CONFRM THE ACTUAL ROUTNG WTH THE CONTRACTOR.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS,
LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REARED AT LABCAPTRACTOR'S EXPENSE TO THE SATISACTTON OF OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERRALS SUCH AS
COAXIAL CABLLES AND OTHER ITEMS REMOVED FROM THE EXISTNG FACLITTY. ANTENNAS

12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. ALL CONCRETE REPAR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE
INSTIUTE (ACI) 301 .
14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL ACCORDANCE WITH ACI 318 CODE REQUREMENTS.
15. ALL STRUCTURAL STEEL WORK SHALL BE DETALLED, FABRLCATED AND ERECTED IN ACCORDANCE
WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy $=36$ ksi) WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy $=36 \mathrm{ksi})$
UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE (Fy $=36$ ksi). ALL STEE

16. CONSTRUCTION SHALL COMMLY WTH SPCCIFCATIONS AND "GENERAL CONSTRUCTION SERVICES
FOR CONTRUCTION OF AT\&T STTTS." 17. For construction of atat sties.
17. SUBCONTRACTOR SHALL VERIF ALL EXISTING DIMENSIONS AND CONDTIUNS PRIOR TO DRAWINGS MUST BE VERFIFED. SUBCONTRACTOR SHALL NOTIF THE CONTRACTOR OF AI
DISCREPANIIES PRIOR TO ORDERING MATERAL OR PROCEDNG WTH CONSTRUCTON.
18. THE EXISTING CELL SITE IS IN FULL COMMERCILL OPERATION. ANY CONSTRUCTION WORK BY
SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATON. ANY WORK ON
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ATER MIDNGHT.
19. SINCE THE CELL SIEL IS ACTVE ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING PROR TO PERFORMNG ANY WORK THAT COULD EXPOS E THE WORKERS TO DANGER
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EXPOSURE LEVELS.
20. applicable building codes

CODES AS ADOPTED BY THE LOCAL AUY WTH ALL APPLICABLE NATIONAL, STATE, AND LOCAL


## bullding code: ibc 2021 with 2022 ct state bullding code amendment

ELECTRICAL CODE: 2020 NATIONAL ELECTRICAL CODE (NFPA 70-2020)
SUBCONTRACTOR'S WORK SHALL COMPLY WTH THE LATEST EDITION OF THE FOLLOWING
STANDARDS: AMERICAN CONCRETE INSTITUTE (ACI) 318; BULLDING CODE REQUIREMENTS FOR
STRUCTURAL CONCRETE; AMERICAN INSTITUTE OF STERL CONSTRUCTION (AISC) MANUAL OF STEEL
CONSTRUCTION, ASD, FOURTEENTH EDITION; TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) $222-H$,
STRUCTURAL STANDARDS FOR STEL

FOR ANY CONFLCTS BETWEEN SECTIONS OF LSTED CODES AND STANDARDS REGARDING
MATERAL, METHODS OF CONSTRUCTION, OR OTHER REQUREMENTS. THE MOST RESTRCTIUE


OO DRVE NORHH ANDOVER. MA 18445 SITE NUMBER: CTLO2124
TE NAME: DANBURY CENTRAL SBC CO 39 WEST STREET
DABUUR, CT 0810
FARFIE







PROPOSED AT\&T LTE AND C-BAND ANTENNAS MOUNTING DETAILS



REEER TO THE FINAL RF DATA SHEET
FOR FINAL ANTENNA SETINGS.
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NOTE:

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ALLOW HEAT TO CIRCULATE OUT.
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SITE NAME: DANBURY CENTRAL SBC CO 39 WEST STREET
DANBURY, CT 06810
12 INDUSTRAL WAY
SALEM, NH 03079 DANBURY, CT 06810
FARFIELD COUNTY

EXISTING AT\&T LTE ANTENNA \& PROPOSED RRUS
MOUNT



SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):
GENERAL: WHERE APPLICATION IS MADE FOR CONSTRUCTION, THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL INERSPR INSPECTIONS DURING CONSTRUCTION ON THE TTPES OF WORK LISTED IN THE INSPECTION CHECLLIST ABOVE
PERFRM

 QUALIFICATION REQUIREMENTS.
 BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE IN ACCORDANCE WTHH S
CONDTION FOR ISSUANCE. THIS STATEMENT SHALL BE IN ACCORDANCE WITH SECTIN 1705 .
REPORT REQUREMENT: SPECIAL INSPECTORS SHALL KEEP RECORD OF INSECTIONS. THE SPECIAL INSPECTOR SHAL
FURNSH INSPECTION REPORTS TO THE BUILING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN





| SPECIAL INSPECTION CHECKLIST |  |
| :---: | :---: |
| BEFORE CONSTRUCTION |  |
| CONSTRUCTION/INSTALLATION INSPECTIONS AND TEST NG REQUIRED (COMPLETED BY ENGINEER OF RECORD | report tem |
| N/A | ENGINEER OF RECORD APPROVED SHOP DRAWINGS |
| N/A | MATERAL REPORT 2 |
| N/A | FABRICATOR NDE INSPECTION |
| REQuired | PACKING SLIPs ${ }^{3}$ |
| ADOITIONAL TESTNG AND INSPECTIONS: |  |
| DURING CONSTRUCTION |  |
| CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTNG REQUIRED (COMPLETED BY ENGINER OF ENGINER OF RECORD | REPORT TTEM |
| Required | STEEL INSPECTIONS |
| N/A | HIGH STRENGTH BOLT <br> INSPECTIONS |
| N/A | HIGH WIND ZONE INSPECTIONS ${ }^{4}$ |
| N/A | Foundation Inspections |
| N/A | CONCRETE COMP. STRENGTH, <br> SUMP TESTS AND PLACEMENT |
| N/A | POST INSTALLED ANCHOR VERIFICATION |
| N/A | Grout verification |
| N/A | CERTIFED WELD INSPECTON |
| N/A | EARTHWORK: LIf And densitr |
| N/A | ON SITE COLD GALVANIZING VERFICATION |
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| AFTER CONSTRUCTION |  |
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| N/A | POST INSTALLED ANCHOR <br> PUL-OUT TESTING |
| reauired | PHOTOCRAPHS |
| ADDITIONAL TESTTNG AND INSPECTIONS: |  |




PROPOSED 54" $\varnothing$ CANISTER MOUNT DETAIL
22x34 SCALE: $1-1 / 2^{\prime \prime}=11^{\prime}-0$
$11 \times 17$ SCALE: $3 / 4^{\prime \prime}=1^{\prime}-0^{\prime \prime}$



CONNECTION DETAIL


REEER TO THE FINAL RF DATA SHEET
FOR FINAL ANTENNA SETINGS.
№TE:
TEP NORTHEAST WAS RESPONSIBLE FOR ANALYEING THE EESTINGG
CANISTER ASSEMBLY SUPPORTED

 IREPARED BY OTHERS, SEEE NOTE
RELOW). PLEASE REFERENGE TE STRUCTURAL ANALYSIS ON THE CANISTER/SHROUD


NOTE:
THE EXISTING LATTICE TOWER THAT SUPPoRTS THE CANISTER/SHROUD
 NOTE TO GENERAL CONTRACTOR PRIOR TO CONSTRUCTIO COMPLETION)

TEP NORTHEAST (TEP OPCO, LlC) To PERFORM POST/CIMB AD TO PERFORM POST/CLIMB AND
INSPECTION TO CONERM PROPOS INSTALLATON COMPLIES WTH THE RECORD STAMPED DRAWINGS AN
STRUCTURAL REPORTS PRIOR TO SUBMITTNG FCCA (FINAL CONSTRUCTION CONTROL AFFIDAVIT).
GC IS RESPONSBL GC IS RESPONSIBLE FOR
COORDINATNG INSPECTIONS TEP NORTHEAST (EEP OPCO, LLC) RIOR TO CONSTPUCTINCO, LLC. COMPLETED

## №TE:

DO NOT CAP THE TOP OF THE
CANITER AND
IEAVE ALlow heat to circulate out.
(2) $1 / 2^{\prime \prime}$ BOLTS (TPP)

SELF DRILLING \#12 GALV. SCREWS
© 4" O.C. (TP) (USE\#F DILL PT)






## Exhibit D

## Structural Analysis Report

January 19, 2023
Thomas L. Rigg Jr.
Everest Infrastructure Partners
Two Allegheny Center, Nova Tower 2, Suite 703
1

Pittsburgh, PA 15212
(603) 498-7462

Tower Engineering Professionals
326 Tryon Road
Raleigh, NC 27603
(919) 661-6351

Structures@tepgroup.net

Subject: Structural Analysis Report

## Carrier Designation:

## Client Designation:

Engineering Firm Designation:
Site Data:

AT\&T Mobility Reconfiguration
Carrier Site Number: CT2124
Carrier Site Name: Danbury Central SBC CO
EIP Site Number:
EIP Site Name:
701815
Danbury CO
TEP Project Number: 263235.810812
39 West Street, Danbury, Fairfield County, CT 06810 Latitude $41^{\circ} 23^{\prime} 34.00$ ", Longitude $-73^{\circ} 27^{\prime} 14.00^{\prime \prime}$
$38.5 \pm$ Foot - Self-Support Tower

## Dear Thomas L. Rigg Jr.,

Tower Engineering Professionals is pleased to submit this "Structural Analysis Report" to determine the structural integrity of the above-mentioned tower.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the stress level for the tower and foundation structure, under the following load case, to be:

LC1: Existing + Proposed + Reserved Loading
Sufficient Capacity
Note: See Table 1 for the existing, proposed, and reserved loading

| Structure Capacity | Foundation Capacity |
| :---: | :---: |
| $31.5 \%$ | - |

The analysis has been performed in accordance with the ANSI/TIA-222-H Structural Standard for Antenna Supporting Structures, Antennas, and Small Wind Turbine Support Structures and the 2022 Connecticut State Building Code.

All modifications and equipment proposed in this report shall be installed in accordance with the appurtenances listed in Table 1 for the determined available structural capacity to be effective.

We at Tower Engineering Professionals appreciate the opportunity of providing our continuing professional services to you and Everest Infrastructure Partners. If you have any questions or need further assistance on this or any other projects, please give us a call.

Structural analysis prepared by: Gautam Sopal, E.I. /
Respectfully submitted by:

Aaron T. Rucker, P.E.


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3.2) Assumptions

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tnxTower Output

## 1) INTRODUCTION

The tower is a $38.5 \pm$ Foot Self-Support Tower. The original design standard and wind speed were unavailable for review. All information provided to TEP was assumed to be accurate and complete.

## 2) ANALYSIS CRITERIA

TIA-222 Revision:
Type of Analysis:
Risk Category:
Wind Speed:
Exposure Category:
Topographic Procedure: Method $1(\mathrm{Kzt}=1.0)$
Ice Thickness: $\quad 1.00$ in
Wind Speed with Ice: $\quad 50 \mathrm{mph}$
Seismic Design Category: B
Seismic Ss: 0.226
Seismic S1: 0.056
Service Wind Speed: 60 mph

Table 1 - Existing, Proposed, and Reserved Antenna and Cable Information

| Existing/ Proposed/ Reserved | Mount Level (ft) | Ant CL <br> (ft) | Qty | Antenna Model | Mount Type | Qty Coax | Coax Size | Coax Location | Owner/ Tenant |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Proposed | 69.0 | 69.0 | 3 | CCI DMP65R-BU4EA-K | Pipe Mount | - | - | - | AT\&T |
| Proposed | 65.0 | 65.0 | 3 | Ericsson AIR 6419 B77G | Pipe Mount | - | - | - | AT\&T |
| Proposed | 61.0 | 61.0 | 3 | Ericsson AIR 6449 B77D | Pipe Mount | - | - | - | AT\&T |
| Existing | 54.5 | 54.5 | 3 | Kathrein 800-10964 | Pipe Mount | 6 | 5/8" DC | BC Face | AT\&T |
| Existing | 50.0 | 50.0 | 3 | Ericsson RRUS-32 | (3) Pipe Mounts |  |  |  | AT\&T |
| Proposed | 47.5 | 47.5 | 3 | Ericsson 4478-B14 |  | - | - | - | AT\&T |
| Existing | 47.5 | 47.5 | 3 | Ericsson 8843 B2/B66 |  | 3 | $\begin{aligned} & 3 / 8^{\prime \prime} \\ & \text { Fiber } \end{aligned}$ | BC Face | AT\&T |
|  |  |  | 3 | Ericsson 4449 B5/B12 |  |  |  |  |  |
| Existing | 45.0 | 45.0 | 3 | Raycap DC6-48-60-18-8C |  |  |  |  |  |

## 3) ANALYSIS PROCEDURE

Table 2 - Documents Provided
$\left.\begin{array}{|c|c|c|}\hline \text { Document } & \text { Remarks } & \text { Source } \\ \hline \text { Previous Structural Analysis } & \text { Hudson Design Group LLC, dated April 04, 2019 } \\ \text { Job No. CT2124 }\end{array}\right)$

## 3.1) Analysis Method

tnxTower (version 8.1.1.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

## 3.2) Analysis Assumptions

1) The tower and foundation were built and maintained in accordance with the manufacturer's specification.
2) The configuration of existing antennas, transmission cables, mounts and other appurtenances are as specified in the tower mapping report by TEP.
3) Unless specified by the client or tower mapping, the location of the existing and proposed coax is assumed by TEP and listed in Table 1.
4) All tower components are in sufficient condition to carry their full design capacity.
5) Serviceability with respect to antenna twist, tilt, roll, or lateral translation, is not checked and is left to the carrier or tower owner to ensure conformance.
6) All antenna mounts and mounting hardware are structurally sufficient to carry the full design capacity requirements of appurtenance wind area and weight as provided by the original manufacturer specifications. It is the carrier's responsibility to ensure compliance to the structural limitations of the existing and/or proposed antenna mounts. TEP did not perform a site visit to verify the size, condition or capacity of the antenna mounts and did not analyze antenna supporting mounts as part of this structural analysis report.
7) All tower information was taken from the previous structural analyses listed in Table 2 for this analysis. TEP assumed this information to be accurate and complete.
8) The following material grades were assumed:
a) Tower Leg Grade: ASTM A36
b) Tower Bracing Grade: ASTM A36
c) Tower Pole Grade: ASTM A53-B-35

This analysis may be affected if any assumptions are not valid or have been made in error. Tower Engineering Professionals should be notified to determine the effect on the structural integrity of the tower.

## 4) ANALYSIS RESULTS

Table 3 - Section Capacity (Summary)

| Section No. | Elevation (ft) | Component Type | Size | Critical Element | P (k) | ø $\mathrm{Pallow}^{(k)}$ | Capacity | Pass / Fail |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| L1 | 74-66 | Pole | P4x. 337 | 1 | -1.56 | 145.78 | 9.7 | Pass |
| L2 | 66-55.5 | Pole | P8x. 322 | 2 | -3.51 | 277.81 | 13.5 | Pass |
| T1 | 55.5-35.5 | Leg | L3x3×1/4 | 6 | -11.47 | 36.43 | 31.5 | Pass |
| T1 | 55.5-35.5 | Diagonal | L2 1/2x2 1/2x3/16 | 13 | -2.62 | 16.14 | 16.2 | Pass |
| T1 | 55.5-35.5 | Horizontal | L2 1/2x2 1/2x3/16 | 17 | -1.27 | 29.34 | 4.3 | Pass |
| T1 | 55.5-35.5 | Top Girt | L3 $\times 3 \times 1 / 4$ | 9 | -0.18 | 48.99 | 0.4 | Pass |
|  |  |  |  |  |  |  | Summary |  |
|  |  |  |  |  |  | Pole (L2) | 13.5 | Pass |
|  |  |  |  |  |  | Leg (T1) | 31.5 | Pass |
|  |  |  |  |  |  | Diagonal (T1) | 16.2 | Pass |
|  |  |  |  |  |  | Horizontal (T1) | 4.3 | Pass |
|  |  |  |  |  |  | Top Girt (T1) | 0.4 | Pass |
|  |  |  |  |  |  | RATING = | 31.5 | Pass |


| Structure Rating (max from all components) $=$ | $31.5 \%$ |
| :--- | :--- |

Table 5 - Dish Twist/Sway Results for 60 mph Service Wind Speed

| Elevation <br> (ft) | Dish Model | Beam Deflection |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Deflection (in) | Tilt (deg) | Twist (deg) |
| - | - | - | - | - |

## 4.1) Recommendations

1) If the load differs from that described in Table 1 of this report or the provisions of this analysis are found to be invalid, another structural analysis should be performed.
2) The tower has sufficient capacity to carry the existing, proposed, and reserved loading. No modifications are required at this time.

## Exhibit E

## Mount Analysis

(REVISED)

## STRUCTURAL ANALYSIS REPORT

For

## AT\&T SITE NUMBER: CT2124

TEP PROJECT NUMBER: 354184
AT\&T SITE NAME: DANBURY CENTRAL SBC CO
39 West Street
Danbury, CT 06810

## Antennas Mounted within FRP Enclosure on <br> Tower on Roof



Prepared for:

Dated: February 16, 2023 (Rev. 3) December 9, 2022 (Rev. 2) September 13, 2022 (Rev. 1 ) June 29, 2022

Prepared by:

(TEP OPCO, LLC)
45 Beechwood Drive
North Andover, MA 01845
(P) 978.557.5553
www.tepgroup.net

## SCOPE OF WORK:

TEP Northeast (TEP NE) has been authorized by AT\&T to conduct a structural evaluation of the pole structure supporting the proposed equipment located in the areas depicted in the latest TEP NE construction drawings.

This report represents this office's findings, conclusions and recommendations pertaining to the support of AT\&T's proposed antennas listed below.

The following documents were used for our reference:

- Structural Analysis Report prepared by Hudson Design Group LLC dated April 4, 2019.


## CONCLUSION SUMMARY:

Based on our evaluation, we have determined that the existing pole section is in conformance with the ANSI/TIA-222-H Standard for the loading considered under the criteria listed in this report. The tower structure is rated at $39.0 \%$ - (Pole Section 1 from EL.55.5' to EL.65' Controlling).

ANALYSIS RESULTS SUMMARY:

| Component | Max. Stress <br> Ratio | Elev. of <br> Component (ft) | Pass/Fail | Comments |
| :---: | :---: | :---: | :---: | :---: |
| Pole Section 1 | $39.0 \%$ | $55.5-65^{\prime}$ | PASS | Controlling |
| Pole Section 2 | $28.0 \%$ | $65^{\prime}-74^{\prime}$ | PASS |  |

POLE STRUCTURE REACTION SUMMARY:

|  | Factored Reaction |
| :---: | :---: |
| Axial | 2978 lbs. |
| Shear | 882 lbs. |
| Moment | $10221 \mathrm{lb} .-\mathrm{ft}$ |

## APPURTENANCES CONFIGURATION:

| Tenant | Appurtenances | Elev. | Mount |
| :---: | :--- | :---: | :--- |
| AT\&T | (3) FRP Ring Mounts | Varies | Tower Leg |
| AT\&T | (3) DMP655R-BU4EA-K Antennas | $69^{\prime}-2^{\prime \prime}$ | Tower Leg |
| AT\&T | (3) AIR6419 Antennas | $62^{\prime}-10^{\prime \prime}$ | Tower Leg |
| AT\&T | (3) AIR6449 Antennas | $59^{\prime}-4^{\prime \prime}$ | Tower Leg |

* Proposed equipment shown in bold.
** Elevation to antenna centerline.

Note: This analysis only analyzes the existing pipe mast above the existing latticed structure that will support the proposed FRP enclosure and equipment within. The existing tower, steel platform, and building connections are to be analyzed by others.

## DESIGN CRITERIA:

1. EIA/TIA-222-H Structural Standards for Steel Antenna Towers and Antenna Supporting Structures

County: Fairfield
Ultimate Wind Speed: 120 mph
Structural Class: ॥
Exposure Category: B
Topographic Category: 1
Nominal Ice Thickness: 1 inch
2. Approximate height above grade to proposed antennas: 69' $-2^{\prime \prime}, 62^{\prime}-10^{\prime \prime}$, and 59'-4."

## *Calculations and referenced documents are attached.

## ASSUMPTIONS:

1. Reference the latest TEP NE construction drawings for all the equipment locations and details.
2. The pole structure is properly constructed and maintained. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities.
3. TEP NE is not responsible for any modifications completed prior to and hereafter which TEP NE was not directly involved.
4. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer's requirements.
5. If field conditions differ from what is assumed in this report, then the engineer of record is to be notified as soon as possible.

## SUPPORT RECOMMENDATIONS:

TEP NE recommends the proposed antennas are to be mounted on proposed pipe masts with the proposed FRP Enclosure secured to the existing pole structure with clamps and threaded rods. The existing pole structure is mounted on an existing self-support tower. The existing self-support tower is to be analyzed by others to account for the proposed loading.


Photo 1: Sample photo illustrating the existing upper section antenna mounts (to be removed and replaced).

## Exhibit F

## Power Density/RF Emissions Report

## Calculated Radio Frequency Emissions Report

## at\&t

CT2124

39 West Street, Danbury, CT

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## 1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed installation of AT\&T antenna arrays to be mounted at $54.5^{\prime}, 59.3^{\prime}, 62.8^{\prime}$ and $69.1^{\prime}$ AGL on top of a rooftop located at 39 West Street in Danbury, CT. The coordinates of the rooftop are $41^{\circ} 23^{\prime} 33.67^{\prime \prime} \mathrm{N}, 73^{\circ} 27^{\prime} 14.60^{\prime \prime} \mathrm{W}$.

AT\&T is proposing the following:

1) Install nine (9) multi-band antennas (three per sector) to support its commercial LTE network and the FirstNet National Public Safety Broadband Network ("NPSBN").
2) Maintain one (1) existing multi-band antenna per sector.

This report considers the planned antenna configuration for $\mathrm{AT}_{\mathrm{T}} \mathrm{T}^{1}$ to derive the resulting \% MPE of its proposed installation.

## 2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

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

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

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

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

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

[^0]
## 3. RF Exposure Prediction Methods

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

$$
\text { Power Density }=\left(\frac{G R F \times 1.64 \times \text { ERP }}{4 \pi \times R^{2}}\right) \times \text { Off Beam Loss }
$$

Where:
EIRP $=$ Effective Isotropic Radiated Power
$\mathrm{R}=$ Radial Distance $=\sqrt{\left(H^{2}+V^{2}\right)}$
$\mathrm{H}=$ Horizontal Distance from antenna in meters
$\mathrm{V}=$ Vertical Distance from radiation center of antenna in meters
Off Beam Loss is determined by the selected antenna patterns
GRF $=$ Ground Reflection Factor of 1.6

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

## 4. Antenna Inventory

Table 1 below outlines AT\&T's proposed antenna configuration for the site. The associated data sheets and antenna patterns for these specific antenna models are included in Attachments C.

| Operator | Sector / Call Sign | $\begin{gathered} \text { TX } \\ \text { Freq } \\ (\mathrm{MHz}) \end{gathered}$ | Power at Antenna (Watts) | Ant Gain (dBi) | Power EIRP (Watts) | Antenna Model | Beam Width | Mech. Tilt | Length <br> (ft) | Antenna Centerline Height (ft) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AT\&T | $\begin{gathered} \text { Alpha / } \\ 30^{\circ} \end{gathered}$ | 739 | 160 | 12.9 | 3119 | DMP65-BU4EA-K | 74 | 0 | 4.0 | 69.16 |
|  |  | 850 | 160 | 13.3 | 3420 |  | 63 |  |  |  |
|  |  | 1900 | 160 | 16.7 | 7483 |  | 71 |  |  |  |
|  |  | 2100 | 240 | 16.7 | 11225 |  | 71 |  |  |  |
|  |  | 763 | 160 | 13.6 | 3665 | 80010964 | 60.7 | 0 | 4.9 | 54.5 |
|  |  | 2300 | 160 | 17.6 | 9207 |  | 54.6 |  |  |  |
|  |  | 3500 | 86.5 | 25.65 | 31770 | AIR 6419 | 11 | 0 | 2.5 | 62.83 |
|  |  | 3500 | 86.5 | 25.65 | 31770 | AIR 6449 | 11 | 0 | 2.5 | 59.33 |
|  | $\begin{gathered} \text { Beta / } \\ 150^{\circ} \end{gathered}$ | 739 | 160 | 12.9 | 3119 | DMP65-BU4EA-K | 74 | 0 | 4.0 | 69.166 |
|  |  | 850 | 160 | 13.3 | 3420 |  | 63 |  |  |  |
|  |  | 1900 | 160 | 16.7 | 7483 |  | 71 |  |  |  |
|  |  | 2100 | 240 | 16.7 | 11225 |  | 71 |  |  |  |
|  |  | 763 | 160 | 17.3 | 8592 | 80010964 | 60.7 | 0 | 4.9 | 54.5 |
|  |  | 763 | 160 | 13.6 | 3665 |  | 54.6 |  |  |  |
|  |  | 2300 | 160 | 17.6 | 9207 | AIR 6419 | 11 | 0 | 2.5 | 64.83 |
|  |  | 3500 | 86.5 | 25.65 | 31770 | AIR 6449 | 11 | 0 | 2.5 | 61.33 |
|  | $\begin{gathered} \text { Gamma / } \\ 270^{\circ} \end{gathered}$ | 739 | 160 | 12.9 | 3119 | DMP65-BU4EA-K | 74 | 0 | 4.0 | 69.16 |
|  |  | 850 | 160 | 13.3 | 3420 |  | 63 |  |  |  |
|  |  | 1900 | 160 | 16.7 | 7483 |  | 71 |  |  |  |
|  |  | 2100 | 240 | 16.7 | 11225 |  | 71 |  |  |  |
|  |  | 763 | 160 | 13.6 | 3665 | 80010964 | 60.7 | 0 | 4.9 | 54.5 |
|  |  | 2300 | 160 | 17.6 | 9207 |  | 54.6 |  |  |  |
|  |  | 3500 | 86.5 | 25.65 | 31770 | AIR 6419 | 11 | 0 | 2.5 | 64.83 |
|  |  | 3500 | 86.5 | 25.65 | 31770 | AIR 6449 | 11 | 0 | 2.5 | 61.33 |

Table 1: Proposed Antenna Inventory ${ }^{23}$

[^1]
## 5. Calculation Results

The calculated power density results are shown in Figure 1 below. For completeness, the calculations for this analysis range from 0 feet horizontal distance (directly below the antennas) to a value of 3,000 feet horizontal distance from the site. In addition to the other worst-case scenario considerations that were previously mentioned, the power density calculations to each horizontal distance point away from the antennas was completed using a local maximum off beam antenna gain (within $\pm 5$ degrees of the true mathematical angle) to incorporate a realistic worst-case scenario.


Figure 1: Graph of General Population \% MPE vs. Distance
The highest percent of MPE ( $27.41 \%$ of the General Population limit) is calculated to occur at a horizontal distance of 251 feet from antennas. Please note that the percent of MPE calculations close to the site take into account off beam loss, which is determined from the vertical pattern of the antennas used. Therefore, RF power density levels may increase as the distance from the site increases. At distances of approximately 1500 feet and beyond, one would now be in the main beam of the antenna pattern and off beam loss is no longer considered. Beyond this point, RF levels become calculated solely on distance from the site and the percent of MPE decreases significantly as distance from the site increases.

Table 2 below lists percent of MPE values as well as the associated parameters that were included in the calculations. The highest percent of MPE value was calculated to occur at a horizontal distance of 251 feet from the site (reference Figure 1).

As stated in Section 3, all calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. In addition, a six-foot height offset was considered in this analysis to account for average human height. As a result, the predicted signal levels are significantly higher than the actual signal levels will be from the final configuration. The results presented in Figure 1 and Table 2 assume level ground elevation from the base of the tower out to the horizontal distances calculated.

| Carrier | Number of <br> Transmitters | Power out of <br> Base Station Per <br> Transmitter <br> (Watts) | Antenna <br> Height <br> (Feet) | Distance to <br> the Base of <br> Antennas <br> (Feet) | Power <br> Density <br> $\left(\mathbf{m W} / \mathbf{c m}^{2}\right)$ | Limit <br> $\left(\mathbf{m W} / \mathrm{cm}^{2}\right)$ | \% MPE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AT\&T 3500MHz | 1 | 86.5 | 59.3 | 251 | 0.102955 | 1.000 | $10.30 \%$ |
| AT\&T 3700 MHz | 1 | 86.5 | 62.8 | 251 | 0.087577 | 1.000 | $8.76 \%$ |
| AT\&T LTE 1900 MHz | 1 | 160.0 | 69.1 | 251 | 0.002193 | 1.000 | $0.22 \%$ |
| AT\&T LTE 2100 MHz | 1 | 240.0 | 69.1 | 251 | 0.011264 | 1.000 | $1.13 \%$ |
| AT\&T LTE 2300 MHz | 1 | 160.0 | 54.5 | 251 | 0.017811 | 1.000 | $1.78 \%$ |
| AT\&T LTE 739 MHz | 1 | 160.0 | 69.1 | 251 | 0.006492 | 0.493 | $1.32 \%$ |
| AT\&T LTE 763 MHz | 1 | 160.0 | 54.5 | 251 | 0.011009 | 0.509 | $2.16 \%$ |
| AT\&T LTE 885 MHz | 1 | 160.0 | 69.1 | 251 | 0.007548 | 0.590 | $1.28 \%$ |
| Frontier Microwave Dish | 1 | 1.0 | 35.5 | 251 | 0.004706 | 1.000 | $0.47 \%$ |

Table 2: Maximum Percent of General Population Exposure Values

## 6. Conclusion

The above analysis verifies that RF exposure levels from the site with AT\&T's proposed antenna configuration will be well below the maximum permissible levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Using the conservative calculation methods and parameters detailed above, the maximum cumulative percent of MPE in consideration of all transmitters is calculated to be $27.41 \%$ of the FCC limit (General Population/Uncontrolled). This maximum cumulative percent of MPE value is calculated to occur 251 feet away from the site.

## 7. Statement of Certification

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


May 18, 2023
Date
RF Engineer 1
C Squared Systems, LLC


Reviewed/Approved By:

[^2]May 19, 2023
Date
C Squared Systems, LLC

## Attachment A: References

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

IEEE C95.1-2005, IEEE Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz IEEE-SA Standards Board

IEEE C95.3-2002 (R2008), IEEE Recommended Practice for Measurements and Computations of Radio Frequency Electromagnetic Fields With Respect to Human Exposure to Such Fields, $100 \mathrm{kHz}-300 \mathrm{GHz}$ IEEE-SA Standards Board

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

(A) Limits for Occupational/Controlled Exposure ${ }^{4}$

| Frequency <br> Range <br> $(\mathrm{MHz})$ | Electric Field <br> Strength $(\mathrm{E})$ <br> $(\mathrm{V} / \mathrm{m})$ | Magnetic Field <br> Strength $(\mathrm{E})$ <br> $(\mathrm{A} / \mathrm{m})$ | Power Density $(\mathrm{S})$ <br> $\left(\mathrm{mW} / \mathrm{cm}^{2}\right)$ | Averaging Time <br> $\|\mathrm{E}\|^{2},\|\mathrm{H}\|^{2}$ or S (minutes) |
| :---: | :---: | :---: | :---: | :---: |
| $0.3-3.0$ | 614 | 1.63 | $(100)^{*}$ | 6 |
| $3.0-30$ | $1842 / \mathrm{f}$ | $4.89 / \mathrm{f}$ | $\left(900 / \mathrm{f}^{2}\right)^{*}$ | 6 |
| $30-300$ | 61.4 | 0.163 | 1.0 | 6 |
| $300-1500$ | - | - | $\mathrm{f} / 300$ | 6 |
| $1500-100,000$ | - | - | 5 | 6 |

(B) Limits for General Population/Uncontrolled Exposure ${ }^{5}$

| Frequency <br> Range <br> $(\mathrm{MHz})$ | Electric Field <br> Strength $(\mathrm{E})$ <br> $(\mathrm{V} / \mathrm{m})$ | Magnetic Field <br> Strength $(\mathrm{E})$ <br> $(\mathrm{A} / \mathrm{m})$ | Power Density $(\mathrm{S})$ <br> $\left(\mathrm{mW} / \mathrm{cm}^{2}\right)$ | Averaging Time <br> $\|\mathrm{E}\|^{2},\|\mathrm{H}\|^{2}$ or S (minutes) |
| :---: | :---: | :---: | :---: | :---: |
| $0.3-1.34$ | 614 | 1.63 | $(100)^{*}$ | 30 |
| $1.34-30$ | $824 / \mathrm{f}$ | $2.19 / \mathrm{f}$ | $\left(180 / \mathrm{f}^{2}\right)^{*}$ | 30 |
| $30-300$ | 27.5 | 0.073 | 0.2 | 30 |
| $300-1500$ | - | - | $\mathrm{f} / 1500$ | 30 |
| $1500-100,000$ | - | - | 1.0 | 30 |
|  |  |  |  |  |
| $\mathrm{f}=$ frequency in MHz * Plane-wave equivalent power density |  |  |  |  |

Table 3: FCC Limits for Maximum Permissible Exposure

[^3]

Figure 2: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: AT\&T Mobility Antenna Model Data Sheets and Electrical Patterns

| 739 MHz |  |
| :---: | :---: |
| 763 MHz |  |
| 885 MHz |  |


| 1900 MHz |  |
| :---: | :---: |
| $\mathbf{2 1 0 0} \mathbf{~ M H z}$  <br> Manufacturer: CCI <br> Model \#: DMP65R-BU4EA-K <br> Frequency Band: $1920-2180 \mathrm{MHz}$ <br> Gain: 16.7 dBi <br> Vertical Beamwidth: $6.8^{\circ}$ <br> Horizontal Beamwidth: $71^{\circ}$ <br> Polarization: Dual Linear 45 <br> Dimensions (L x W x D): $48^{\circ} \times 20.7 " \times 9.7 "$ |  |
| 2300 MHz |  |

## Exhibit G

## Recipient Mailings




## Instructions

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

## Click-N-Ship® Label Record

| USPS TRACKING \# :$9405503699300549965296$ |  |  |  |
| :---: | :---: | :---: | :---: |
|  | 588880618 | Priority Mail® Postage: | \$9.65 |
|  | : 05/23/2023 |  | \$9.65 |
|  | : 05/26/2023 |  |  |
|  | Date: 05/30/2023 |  |  |
| From: | QC DEVELOPMENT |  |  |
|  | 5900 BALCONES DR STE 8148 |  |  |
|  | AUSTIN TX 78731-4257 |  |  |
|  | MAYOR DEAN ESPOSITO |  |  |
|  | CITY OF DANBURY |  |  |
|  | CC: SHARON CALITRO, DIR P \& Z |  |  |
|  | 155 DEER HILL AV |  |  |
|  | DANBURY CT 06810-7726 |  |  |
| * Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date |  |  |  |

## USPS Tracking ${ }^{\circledR}$

Tracking Number:
9405503699300549965296
Copy Add to Informed Delivery (https://informeddelivery.usps.com/)

Expected Delivery on
TUESDAY
$30 \begin{aligned} & \text { May } \\ & 2023 \text { (i) }\end{aligned}$ 6:15am and 10:15am © (i)
Your item arrived at the hub at 9:48 am on May 29, 2023 in DANBURY, CT 06810.

Get More Out of USPS Tracking:
USPS Tracking Plus ${ }^{\circledR}$

Delivered

Out for Delivery

Preparing for Delivery
Arrived at Hub
DANBURY, CT 06810
May 29, 2023, 9:48 am

Arrived at USPS Facility
DANBURY, CT 06810
May 29, 2023, 5:47 am

See All Tracking History

$\stackrel{\circ}{\circ}-\quad-\quad-\quad-\quad-\overline{\text { Cut on }} \overline{\text { dotted }} \overline{\text { line. }}$

## Instructions

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

## Click-N-Ship® Label Record

| USPS TRACKING \# :$9405503699300549965302$ |  |  |  |
| :---: | :---: | :---: | :---: |
| Trans. \# Print DaShip Da Expected Delivery | 588880618 | Priority Mail® Postage: | \$9.65 |
|  | : 05/23/2023 |  | \$9.65 |
|  | : 05/26/2023 |  |  |
|  | Date: 05/30/2023 |  |  |
| From: | QC DEVELOPMENT |  |  |
|  | 5900 BALCONES DR STE 8148 |  |  |
|  | AUSTIN TX 78731-4257 |  |  |
|  | SOUTHERN NEW ENGLAND TELEPHONE |  |  |
|  | C/O FRONTIER COMMUNICATIONS |  |  |
|  | DUFF \& PHELPS LLC |  |  |
|  | PO BOX 2629 |  |  |
|  | ADDISON TX 75001-2629 |  |  |
| * Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date |  |  |  |

## USPS Tracking ${ }^{\circledR}$

Tracking Number:

Copy Add to Informed Delivery (https://informeddelivery.usps.com/)

Expected Delivery by
TUESDAY


Your item arrived at our COPPELL TX DISTRIBUTION CENTER destination facility on May 29, 2023 at 9:23 am. The item is currently in transit to the destination.

Get More Out of USPS Tracking:
USPS Tracking Plus ${ }^{\circledR}$

Delivered

Out for Delivery

Preparing for Delivery

## Processing at Destination

Arrived at USPS Regional Destination Facility
COPPELL TX DISTRIBUTION CENTER
May 29, 2023, 9:23 am

In Transit to Next Facility
May 28, 2023


[^0]:    ${ }^{1}$ As referenced to TEP North East's Construction Drawings dated 04/24/2023.

[^1]:    ${ }^{2}$ Antenna heights are in reference to the Hudson Design Group LLC. Construction Drawings, dated 04/24/2023.
    ${ }^{3}$ Transmit power assumes 0 dB of cable loss.

[^2]:    Martin J. Lavin
    Senior RF Engineer

[^3]:    ${ }^{4}$ 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.
    ${ }^{5}$ 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.

