



January 8, 2018

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

Re: Notice of Exempt Modification – Antenna Swap
Property Address: 26 Commerce Drive, North Branford, CT 06471
Applicant: AT&T Mobility, LLC

Dear Ms. Bachman:

On behalf of AT&T, 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).

AT&T currently maintains a wireless telecommunications facility consisting of nine (9) wireless telecommunication antennas at an antenna centerline height of 143-feet on an existing 159-foot monopole, owned by SBA Communications Corporation, at 8051 Congress Ave, Boca Raton, FL 33481. AT&T now intends to remove (3) KMW AM-X-CD-16-65-00T-RET panel antennas and replace them with (3) CCI HPA-65R-BUU-H6 panel antennas. AT&T also intends to install (3) RRUS-32 B2 (for a total of (9) panel antennas, (3) RRUS-32 B2), at the 143-foot level.

This facility was unanimously approved on June 24th, 2005, by the Connecticut Siting Council with stipulations in the request of Tower Ventures II, LLC for a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes section 16-50k, for the construction, maintenance and operation of a wireless telecommunications facility located at 26 Commerce Drive, North Branford, Connecticut. Conditions of the structure approval by the Connecticut Siting Council were as follows: A. the tower shall be designed as a monopole and shall [be] constructed no taller than 155 feet above the ground level to provide proposed telecommunications services to both public and private entities. B. the Certificate Holder shall prepare a Development and a Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. C. the certificate holder shall, prior to the commencement of operations, provide the Council worst-case modeling of electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. D. Upon the establishment of any new State or Federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.



E. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic. F. The Certificate Holder shall provide reasonable space on the tower for no compensation for any municipal antennas, provided such antennas are compatible with the structural integrity of the tower. reasons precluding such tower sharing. G. If the facility does not initially provide wireless services within one year of completion of construction or ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. H. Any antenna that becomes obsolete and ceases to function shall be removed within 60 days after such antennas become obsolete and cease to function. I. Unless otherwise approved by the Council, this Decision and Order shall be void if the facility authorized herein is not operational within one year of the effective date of this Decision and Order or within one year after all appeals to this Decision and Order have been resolved. J. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with notice in writing two weeks prior to the commencement of construction activities at the approved site. In addition the Certificate Holder shall provide the Council with written notice of the completion of construction.

The following is a list of subsequent decisions by the Connecticut Siting Council: **EM-CING-099-120726A.**

Please accept this letter pursuant to Regulation of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-510j-72(b) (2). In accordance with R.C.S.A., a copy of this letter is being sent to Michael T. Paulhus, Town Manager of North Branford, Town of North Branford, 909 Foxon Road, North Branford, CT 06471. A copy of this letter is also being sent to Artec Properties LLC, 26 Commerce Drive North Branford, CT 06471, owner of the property where the tower is located and the tower owner, SBA Communications Corporations at 8051 Congress Avenue, Boca Raton, FL 33487. The Zoning Enforcement Official for the Town of North Branford, Tom Hogarty, 909 Foxon Road, North Branford, CT 06471 will also be receiving a copy.

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 proposed modifications will not result in an increase in the height of the existing tower. AT&T's replacement antennas will be installed at the 143-foot level of the 159-foot monopole.
2. The proposed modifications will not involve any changes to ground-mounted equipment and, therefore, will not require and extension of the site boundary.
3. The proposed modifications will not increase the noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the modified facility will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative worst-case RF emissions calculation for AT&T's



modified facility is provided in the RF Emissions Compliance Report, included in Tab 2.

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. (See Structural Analysis Report included in Tab 3).

For the foregoing reasons, AT&T respectfully submits that the proposed modifications to the above referenced telecommunications facility constitutes an exempt modification under R.C.S.A. §16-50j-72(b) (2).

Sincerely,

A handwritten signature in blue ink, appearing to read 'Haleluya Haile'.

Haleluya Haile

Enclosures

CC w/enclosures:

Town Manager - Michael T. Paulhus
Zoning Officer - Tom Hogarty
Property Owner – Artec Properties LLC
Structure Owner - SBA Communications Corporation

Ben Proto - (203) 378-9595
C.E.II - (203) 260-2121

DOCKET NO. 295 -- Tower Ventures II, LLC application for a) Connecticut
Certificate of Environmental Compatibility and Public Need for)
the construction, maintenance and operation of a wireless) Siting
telecommunications facility in North Branford, Connecticut.) Council
June 28, 2005

Development and Management Plan Staff Report

On January 24, 2005, the Council issued a Certificate of Environmental Compatibility and Public Need to Tower Ventures, now GridCom, for the construction, maintenance, and operation of a cellular telecommunications facility at 26 Commerce Drive, North Branford, Connecticut. As required in the Council's Decision and Order, GridCom submitted a Development and Management (D&M) Plan for this facility on May 27, 2005.

The approved site is located on the same property occupied by ARTEC Machinery Corporation (ARTEC) and several smaller industries. At this location, GridCom would lease a 75-foot by 40-foot parcel within which it would erect a 155-foot monopole tower. The tower would be within a 73-foot by 38-foot equipment compound that would be enclosed by an 8-foot high chain link fence. The surface of the compound would be covered with 3" gravel. Equipment cabinets would be located on concrete pads or within prefab equipment shelters, depending on the preference of carriers locating antennas on the tower.

The D&M plans show T-Mobile antennas to be located at a centerline of 147 feet and Cingular antennas to be located at a centerline of 137 feet.

Utilities would be brought to the compound via existing overhead utility lines that run down the property line. The last 30 to 40 feet to the compound would be underground from the nearest existing utility pole.

Site plan for the tower indicate that it would be built to the Council-approved height of 155 feet. The D&M plans, however, show a 150-foot tower. In conversations with Council staff, GridCom representatives stated the tower would be 155 feet. Revised plans will be submitted to depict this height.

Update: GridCom submitted revised site plans that show a monopole tower to be built at 155 feet. This is the height approved by the Council and the height shown on the tower's engineering drawings. The plans have also been revised to show T-bar mounts instead of the platform mounts indicated on the original plans. The new plans indicate that T-Mobile's antennas would be mounted at a centerline height of 152 feet with the tops of the antennas at 155 feet. Cingular's antennas would be moved up to a centerline height of 142 feet. With these revisions, GridCom's plans are in conformance with the conditions of the Council's Decision and Order.

DOCKET NO. 295 – Tower Ventures II, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a wireless telecommunications facility in North Branford, Connecticut.)	Connecticut
)	Siting
)	Council
)	January 24, 2005

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Tower Ventures II, LLC for the construction, maintenance and operation of a wireless telecommunications facility at 26 Commerce Drive, North Branford, Connecticut.

The facility shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The tower shall be designed as a monopole and shall be constructed no taller than 155 feet above ground level to provide telecommunications services to both public and private entities.
2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on all parties and intervenors, as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
 - a. a final site plan(s) of site development to include specifications for the tower, tower foundation, T-bar mounted antennas, equipment building, access road, utility line, and landscaping; and
 - b) construction plans for site clearing, water drainage, and erosion and sedimentation control consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.
3. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of electromagnetic radio frequency power density is submitted to the Council in the event other carriers locate at this facility or if circumstances in

operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.

4. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.

5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.

6. The Certificate Holder shall provide reasonable space on the tower for no compensation for any municipal antennas, provided such antennas are compatible with the structural integrity of the tower.

7. If the facility does not initially provide wireless services within one year of completion of construction or ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.

8. Any antenna that becomes obsolete and ceases to function shall be removed within 60 days after such antennas become obsolete and cease to function.

9. Unless otherwise approved by the Council, this Decision and Order shall be void if the facility authorized herein is not operational within one year of the effective date of this Decision and Order or within one year after all appeals to this Decision and Order have been resolved. Any request for extensions of the period shall be filed with the Council not later than sixty days prior to expiration date of the Certificate and shall be served on all parties and intervenors, as listed in the service list. Any proposed modifications to this Decision and Order shall likewise be so served.

10. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with notice in writing two weeks prior to the commencement of construction activities at the approved site. In addition, the Certificate Holder shall provide the Council with written notice of the completion of construction.

Pursuant to General Statutes § 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in the New Haven Register and the Totoket Times.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with Section 16-50j-17 of the Regulations of Connecticut State Agencies.

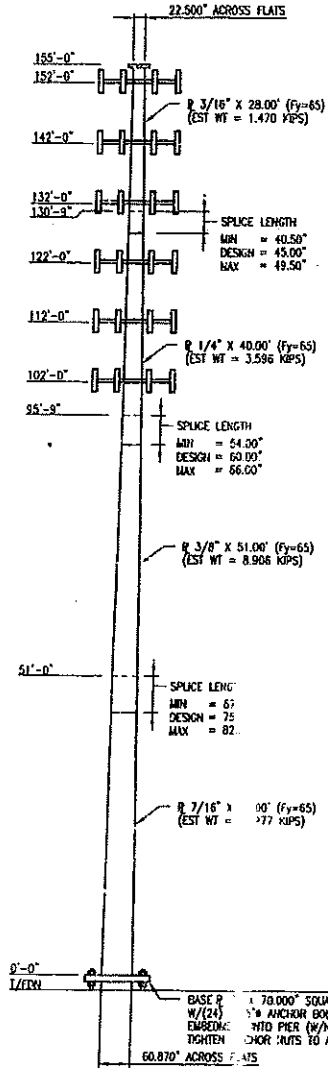
The parties and intervenors to this proceeding are:

Applicant	Its Representative
Tower Ventures II, LLC	Benjamin S. Proto, Jr., Esq. 2090 Cutspring Road Stratford, CT 06614 (203) 378-9595
Intervenor Southwestern Bell Mobile Systems, LLC d/b/a Cingular Wireless, LLC	Kenneth I. Spigle, Esq. Tower Ventures II, LLC 170 Westminster Street, Suite 701

Providence, RI 02903

Its Representative

Wendell G. Davis
Blackwell, Davis & Spadacinni,
LLC
158 East Center Street
Manchester, CT 06040
(860) 432-0676
(860) 432-2926 fax



JOB DATA			
Page 1 of 2	Job No.	29205-0112	
By	Design No.	#24457	
Chk'd By	Date		
	Rev. No. 1	Rev. Date	03-31-2005
Pole: 155-FT MONOPOLE			
Site: NORTH BRADFORD, NEW HAVEN CO., CT			
Owner: ATLANTIC WESTERN CONSULTING			
Ref. No.:			
Design: 85 MPH / 74 MPH + 1/2" RADIAL ICE ACCORDING TO TIA/EA-222-F 1998			

LOAD CASES			
CASE 1	85 MPH WITH NO ICE	DESIGN WIND	
CASE 2	74 MPH WITH 1/2" RADIAL ICE	REDUCED WIND WITH ICE	
CASE 3	50 MPH WITH NO ICE	OPERATIONAL WIND	

POLE SPECIFICATIONS	
Pole Shape	Type: 16-SIDED POLYGON
Upper:	0.258032 W/F
Shaft Steel:	ASTM A572 GRADE 65
Base PL Steel:	ASTM A572 GRADE 50 (50 KSI)
Anchor Bolts:	2 1/4" x 7'-0" LONG #18 ASTM A615 GRADE 75

ANTENNA LIST		
No.	Elev.	Description
-	TOP	5/8" LIGHTNING ROD
1-12	152.00	(12) 72" X 12" X 8" PANEL ANTENNA
-	152.00	14" LOW PROFILE PLATFORM
13-24	142.00	(12) 72" X 12" X 8" PANEL ANTENNA
-	142.00	14" LOW PROFILE PLATFORM
25-36	132.00	(12) 72" X 12" X 8" PANEL ANTENNA
-	132.00	14" LOW PROFILE PLATFORM
37-48	122.00	(12) 72" X 12" X 8" PANEL ANTENNA
-	122.00	14" LOW PROFILE PLATFORM
49-60	112.00	(12) 72" X 12" X 8" PANEL ANTENNA
-	112.00	14" LOW PROFILE PLATFORM
61-72	102.00	(12) 72" X 12" X 8" PANEL ANTENNA
-	102.00	14" LOW PROFILE PLATFORM

STEP BOLTS FULL HEIGHT.
 ANTENNA FEED LINES RUN INSIDE OF POLE.



Elevation	85 MPH WIND		50 MPH WIND	
	Lateral Deflection (Inches)	Rotation (sway) (degrees)	Lateral Deflection (Inches)	Rotation (sway) (degrees)
TOP	106.1	5.964	36.7	2.064

SHAFT SECTION DATA					
Shaft Section	Section Length (feet)	Plate Thickness (in.)	Lap Splice (in.)	Diameter Across Flats (inches)	
				Top	Bottom
1	28.00	0.1875	45.00	22.500	29.725
2	40.00	0.2500	60.00	28.382	38.704
3	51.00	0.3750	75.00	36.913	50.073
4	51.00	0.4375		47.710	60.870

NOTE: DIMENSIONS SHOWN DO NOT INCLUDE GALVANIZING TOLERANCES

BASE REACTIONS FOR FOUNDATION DESIGN
 MOMENT = 4800 ft-kips
 SHEAR = 43 kips
 AXIAL = 39 kips



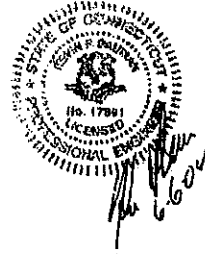
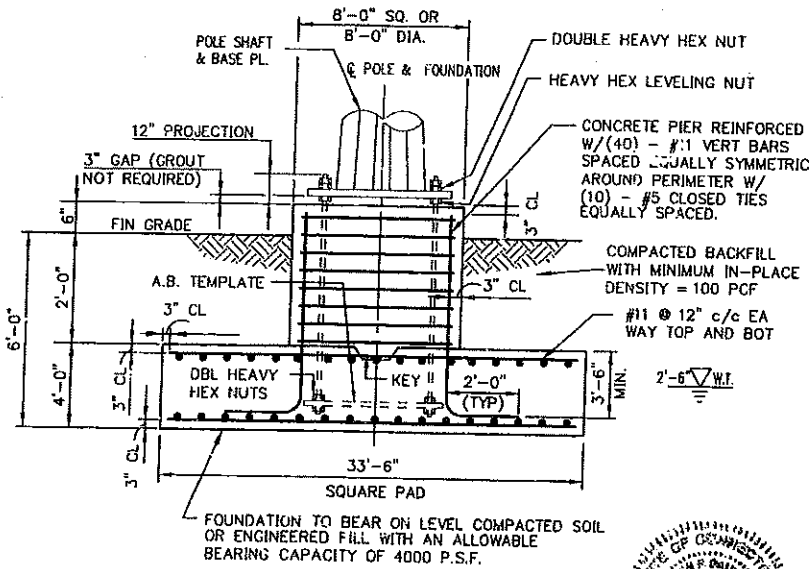
NOTES:

1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
2. REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-615 (GRADE 60) EXCEPT THAT PIER TIES MAY BE ASTM A-615 (GRADE 40).
3. SEE PAGE 1 FOR ANCHOR BOLT QUANTITY, SIZE, LENGTH, AND BOLT CIRCLE.
4. CONTRACTOR SHALL READ THE GEOTECHNICAL REPORT AND CONSULT THE GEOTECHNICAL ENGINEER AS NECESSARY PRIOR TO CONSTRUCTION.
5. GEOTECHNICAL REPORT INDICATES GROUNDWATER WAS ENCOUNTERED AT 2'-6" BELOW GRADE.

JOB DATA			
Page 2 of 2	Job No.	29205-0112	
By: MFP	Design No.	224457	
CR'D By: MFP	Date	05-31-2005	
	Rev. No.	Rev. Date	
Pole	155-FT MONOPOLE		
Site	NORTH BRADFORD, NEW HAVEN CO., CT		
Owner	ATLANTIC WESTERN CONSULTING		
Rel. No.			
Design	65 MPH / 74 MPH + 1/2" RADIAL ICE ACCORDING TO TA/EIA-222-F 1996		

FOUNDATION SPECIFICATIONS	
Volume - Concrete	Required: 173 CUBIC YARDS (APPROXIMATE)
Soils Report:	JOE EASTERN, INC. #052676 05-16-2005

DESIGN CRITERIA	
Moment:	5050 FT-KIPS
Shear:	45 KIPS
Axial:	39 KIPS



PAD AND PIER FOUNDATION

5021

North Branford Planning & Zoning Commission

ZONING PERMIT

This is to certify that the 155' Cell Tower
Located at 26 Commerce Drive
Owned by Artec Machinery Corp.

has been examined by me as required by the ZONING REGULATIONS OF THE TOWN OF NORTH BRANFORD, CONNECTICUT and I am satisfied that the same complies with the requirements of said ZONING REGULATIONS and authorize commencement of building construction and site development.

Signed *Robert J. Allen*
Zoning Enforcement Officer

Date 8-11-05

Signed _____
Planning & Zoning Administrator

Date _____

Notes:

1. This is not a Building Permit.
2. Any Zoning Permit that involves approval of a SITE DEVELOPMENT PLAN or SPECIAL USE PERMIT by Commission, or other action of the commission, shall be countersigned by the Planning and Zoning Administrator.

National Grid Communications/Atlantic Western Consulting
800 West Cummings Park, Suite 6950
Woburn, MA 01801
Sean Gormley

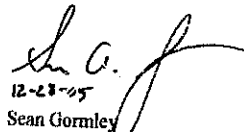
Town of North Branford
909 Foxon Rd
North Branford, CT 06471
Attn: Building Inspector's Office

Re: Gridcom Tower Site on 20 Commerce Drive- Permit #8156

To Whom it May Concern,

National Grid has completed its construction of the above mentioned site. Our permit included the tower portion and the installation of Cingular on the tower. Please find attached the Statement of Special Inspections (which you would already have on file) and the final Report of Special Inspections. Please let me know if you require anything else from us or our engineering inspectors. Please forward your final sign offs to myself at the address above. Thank you and please feel free to call if you have any questions.

Sincerely,


12-23-05
Sean Gormley
Construction Manager
Cell: 978-833-8668

**STRUCTURAL
ENGINEERS
COALITION**

Statement of Special Inspections

CONNECTICUT ENGINEERS
IN PRIVATE PRACTICE

Project: Gridcom Telecommunications Facility, Site Number CT-03390A
Location: 26 Commerce Drive, North Branford, CT 06471
Owner: Gridcom
Owner's Address: 25 Research Drive
Westborough, MA 01582
Architect of Record:
Engineer of Record: Westcott and Maspey, Inc.

This *Statement of Special Inspections* is submitted as a condition for permit issuance in accordance with the Special Inspection requirements of the BOCA National Building Code. It includes a Schedule of Special Inspection Services applicable to this project as well as the name of the Special Inspector and the identity of other approved agencies intended to be retained for conducting these inspections.

The Special Inspector shall keep records of inspections and shall furnish inspection reports to the Building Official, Structural Engineer and Architect of Record. Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official, Engineer and Architect of Record. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

A *Final Report of Special Inspections* documenting completion of all required Special Inspections and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy.

Job site safety and means and methods of construction are solely the responsibility of the Contractor.

Prepared by:

Ryan R. Roy, P.E.

(type or print name)



07/14/05

Signature

Date



Design Professional Seal

Owners Authorization:

Building Official's Acceptance:

Signature

Date

Signature

Date

Schedule of Special Inspection Services

The following sheets comprise the required schedule of special inspections for this project. The construction divisions which require special inspections for this project are as follows:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Soils and Foundations
<input checked="" type="checkbox"/> Cast-in-Place Concrete
<input type="checkbox"/> Precast Concrete
<input type="checkbox"/> Masonry
<input checked="" type="checkbox"/> Structural Steel | <input type="checkbox"/> Cold-Formed Steel Framing
<input type="checkbox"/> Spray Fire Resistant Material
<input type="checkbox"/> Wood Construction
<input type="checkbox"/> Exterior Insulation and Finish System
<input type="checkbox"/> Special Cases |
|--|--|

Inspection Agents	Firm	Address
1. Special Inspector Ryan R. Roy, P.E.	JGI EASTERN, Inc.	114 Woodlawn Road Berlin, CT 06037
2. Testing Laboratory	JGI EASTERN, Inc.	114 Woodlawn Road Berlin, CT 06037
3. Testing Laboratory		
4. Other		

Note: The qualifications of all personnel performing Special Inspection activities are subject to the approval of the Building Official.

The inspection and testing agent shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflicts of interest must be disclosed to the Building Official, prior to commencing work.

The credentials of inspectors and testing technicians shall be provided if requested.

It is recommended that the person administering the Special Inspections program be a Professional Engineer experienced in the design of buildings.

Key for Minimum Qualifications of Inspection Agents (where indicated on Schedules)	
PE	Professional Engineer
EIT	Engineer in Training
ACI	American Concrete Institute Certified Concrete Field Testing Technician
AWS	American Welding Society Certified Welding Inspector
ASNT	American Society of Non-Destructive Testing - Level II or III

Qualifications of inspection agents may be indicated on the Schedule in instances where the Structural Engineer deems such requirements are appropriate.

Soils and Foundations

Project: Gridcom Telecommunications Facility, Site Number CT-03390A

Sheet 3 of 6

Item	Agent No. (Qualif.)	Scope
1. Shallow Foundations	1,2	Review subgrade preparations and soil bearing capacity for conformance with the geotechnical report and project plans.
2. Controlled Structural Fill	2	Monitor placement of compacted fill in accordance with project specifications.
3. Deep Foundations		N/A
4. Other		N/A

Cast-in-Place Concrete

Project: Gridcom T Communications Facility, Site Number CT-03390A

Sheet 4 of 6

Item	Agent No. (Qualif.)	Scope
1. Mix Design	1, 2	Review concrete mix design for compliance with project specifications.
2. Material Certification	1, 2	Review material certifications for compliance with project specifications.
3. Reinforcement Installation	2	Visual review of reinforcing steel for conformance with project plans.
4. Post-Tensioning Operations		N/A
5. Batching Plant		N/A
6. Formwork Geometry	2	Review formwork for general conformance with the specified dimensions.
7. Concrete Placement	2	Conduct concrete slump and air test on every 50 cy of concrete placed.
8. Evaluation of Concrete Strength	2	Prepare four (4) test cylinders on every 50 cy of concrete placed.
9. Curing and Protection	1,2	Review curing and protection techniques for compliance with ACI 318-95
10. Other		N/A

Schedule of Special Inspection Services
Structural Steel

Project: Gridcom Telecommunications Facility, Site Number CT-03390A

Sheet 5 of 6

Item	Agent No. (Qualif.)	Scope
1. Fabricator Certification/ Quality Control Procedures		N/A
2. Material Certification	1,2	Review material certification test reports for bolts and structural steel.
3. Open Web Steel Joists		N/A
4. Bolting	2	Review bolted connections in accordance with AISC specifications and project drawings. Confirm that anchor bolts are installed per manufacturer's installation procedures.
5. Welding	2	Review welder certifications. Visual inspection of welds. Confirm that weld areas are prepared per project specifications.
6. Shear Connectors		N/A
7. Structural Details		N/A
8. Metal Deck		N/A
9. Other	2	Confirm that galvanizing has been applied in accordance with manufacturer's Recommendations.

**STRUCTURAL
ENGINEERS
COALITION**

Final Report of Special Inspections

CONNECTICUT ENGINEERS
IN PRIVATE PRACTICE

Project: Gridcom Telecommunications Facility, Site Number CT-03390A
Location: 26 Commerce Drive, North Branford, CT 06471
Owner: Gridcom
Owner's Address: 25 Research Drive
Westborough, MA 01582
Architect of Record:
Engineer of Record: Westcott and Mapes, Inc.

To the best of my information, knowledge and belief, the Special Inspections required for this project, and itemized in the *Statement of Special Inspections* submitted for permit, have been performed and all discovered discrepancies have been reported and resolved other than the following:

Comments:

(Attach continuation sheets if required to complete the description of corrections)

Respectfully submitted:
Special Inspector

Ryan R. Roy, P.E.
(type or print name)



Signature

12-19-05
Date



FIELD COPY

BUILDING PERMIT

APPLICANT National Grid Communications 8/8/05 25 Research Dr., Westborough, MA 5156
THE ADDRESS (NO. (STREET) (CITY OR TOWN) (STATE) (ZIP CODE))

PERMIT TO Cell Tower NO 1 STORY NO PROPOSED USE 01502
(TYPE OF IMPROVEMENT) (NO.) (STREET) (CITY OR TOWN) (STATE) (ZIP CODE)

AT (LOCATION) 26 Commerce Drive, North Brankford NO 1 STORY NO PROPOSED USE 01502
(NO.) (STREET) (CITY OR TOWN) (STATE) (ZIP CODE)

BETWEEN _____ AND _____
(CROSS STREET) (CROSS STREET)

SUBDIVISION _____ LOT 13-5 19 LOT _____
(CROSS STREET) (LOT) (BLOCK) (LOT SIZE)

BUILDING IS TO BE _____ FT. WIDE BY _____ FT. LONG BY _____ FT. IN HEIGHT AND SHALL CONFORM IN CONSTRUCTION TO TYPE _____ USE GROUP _____ BASEMENT WALLS OR FOUNDATION _____ (TYPE)

REMARKS Erect a 155' cellular telephone tower. Per all applicable codes.

AREA OR VOLUME _____ (CUBIC/SQUARE FEET) ESTIMATED COST \$ 121,000. PERMIT FEE 1236. (+60)
(CUBIC/SQUARE FEET) (ESTIMATED COST) (PERMIT FEE)

OWNER Artec Machinery Corp. ADDRESS _____ BUILDING DEPT. BY R. J. Galli
(OWNER) (ADDRESS) (BUILDING DEPT.) (BY)

FIELD COPY

BUILDING PERMIT

APPLICANT National Grid DATE 10/26/05 PERMIT NO. 8226
 ADDRESS 800 W. Cummings Park Woburn, MA 01801

PERMIT TO T Mobil Installation (CONTR'S LICENSE)
Cell Tower NO STORY (PROPOSED USE) NUMBER OF DWELLING UNITS

AT (LOCATION) 26 Commerce Drive, North Branford ZONING DISTRICT
 BETWEEN _____ (CROSS STREET) AND _____ (CROSS STREET)

SUBDIVISION _____ LOT 13-5 BLOCK 19 LOT SIZE _____

BUILDING IS TO BE _____ FT WIDE BY 4 FT LONG BY _____ FT. IN HEIGHT AND SHALL CONFORM IN CONSTRUCTION

TO TYPE _____ USE GROUP _____ BASEMENT WALLS OR FOUNDATION _____ (TYPE)

REMARKS Installation of T-Mobil to existing 155' Cellular Tower.
Per 1999 Connecticut State Building Code.

AREA OR VOLUME _____ (CUBIC/SQUARE FEET) ESTIMATED COST \$ 30,000 PERMIT FEE \$ 360
 (+4.00% State Ed Fee)

OWNER Artec Machinery BUILDING DEPT. [Signature]
 ADDRESS 26 Commerce Drive, North Branford

FORM NO. T.C.G. - BP 2000

CERTIFICATE ISSUED

DATE

BUILDING PERMIT - CERTIFICATE OF OCCUPANCY

APPLICANT National Grid Communications DATE 8/2/05 PERMIT NO. 0156
ADDRESS 75 Research Rd., Northampton, MA ZONING DISTRICT 01502

PERMIT TO Cell Tower (NO.) (STREET) NUMBER OF DWELLING UNITS

AT (LOCATION) 26 Comroe Drive, Northampton (NO.) (STREET) ZONING DISTRICT

BETWEEN (CROSS STREET) AND (CROSS STREET)

SUBDIVISION LOT 19-1 BLOCK 10 LOT SIZE

BUILDING IS TO BE _____ FT. WIDE BY _____ FT. LONG BY _____ FT. IN HEIGHT AND SHALL CONFORM IN CONSTRUCTION

TO TYPE _____ USE GROUP _____ BASEMENT WALLS OR FOUNDATION _____ (TYPE)

REMARKS: Erect a 155' cellular telephone tower. Per all applicable codes.

AREA OR VOLUME (CUBIC/SQUARE FEET) _____
OWNER Artec Machinery Corp.
ADDRESS _____

TO BE PASTER ON PERMITS
SEE REVERSE SIDE FOR CONDITIONS OF CERTIFICATE

FORM NO. ICC - 9P - 2003

5021

Town of North Branford

CERTIFICATE OF ZONING COMPLIANCE

This is to certify that the 155' Cell Tower

Located at 26 Commerce Drive

Owned by Artec Machinery Corp.

has been examined by me as required by the ZONING REGULATIONS OF THE TOWN OF NORTH BRANFORD, CONNECTICUT and I am satisfied that the same complies with the requirements of said ZONING REGULATIONS and may be used and/or occupied because --

It conforms to the Zoning Regulations

It is a lawfully existing nonconforming parcel, use, building or other structure, which may be continued in accordance with the provisions of Paragraph 5.6.1 -- 5.6.5 and Section 5 of the ZONING REGULATIONS; or

It is in the process of improvement and completion in accordance with an approved APPLICATION FOR A ZONING PERMIT and is entitled to a temporary PERMIT in accordance with Paragraph 62.7.5 PERMIT terminating on

X Other State CT Siting Council approval 1-24-05 (outside local zoning jurisdiction)

Signed [Signature] ACTING Zoning Enforcement Officer

Date 01-12-06

Signed Planning & Zoning Administrator

Date

Notes:

- 1. This is not a Certificate of Occupancy.
2. Any Certificate that pertains to a use, building structure or site development for which a SITE DEVELOPMENT PLAN or SPECIAL USE PERMIT has been approved by the Commission shall be countersigned by the Planning and Zoning Administrator.

**TOWN OF NORTH BRANFORD
BUILDING DEPARTMENT**

909 FOXON ROAD · P.O. BOX 287
NORTH BRANFORD, CT 06471
TELEPHONE (203) 484-6008 · FAX (203) 484-6018

CERTIFICATE OF CODE COMPLIANCE

NO. 2630

DATE: January 12, 2006

THIS IS TO CERTIFY THAT WORK SPECIFIED BY BUILDING PERMIT # 8156 ISSUED ON 6/8/05
LOCATED AT 26 Commerce Drive FOR 155' cellular telephone tower IS
FOUND TO SUBSTANTIALLY COMPLY WITH THE PROVISIONS OF THE BUILDING AND / OR ZONING
ORDINANCES OF THE TOWN OF NORTH BRANFORD AND HAS BEEN COMPLETED TO THE
SATISFACTION OF THE NORTH BRANFORD BUILDING DEPARTMENT.

- A) USE GROUP B IN ACCORDANCE WITH PROVISIONS OF ARTICLE 3
B) Construction Type 1B AS DEFINED IN ARTICLE 4 AND TABLE 401

SPECIAL STIPULATIONS OR CONDITIONS: Per 2003 International Residential Code

J. Cowell
INSPECTED BY

Thomas Cowell
BUILDING OFFICIAL

KAF

CC: ASSESSOR'S OFFICE
FILE
BK

From: [Dave Ambrose](#)
To: [Haleluya Haile](#)
Subject: Requested Data
Date: Monday, January 8, 2018 10:37:26 AM

ARTEC PROPERTIES LLC
26 COMMERCE DR
North Branford, CT 06471

Map/Block/Parcel = 19/C/13-5

Regards,
Dave Ambrose
Town Assessor

909 Foxon Rd
North Branford, CT 06471
Phone: (203) 484-6013
Fax: (203) 484-6025
Email: assessor@townofnorthbranfordct.com



Tower Engineering Solutions

Phone (972) 483-0607, Fax (972) 975-9615
8445 Freepoint Parkway, Suite 375, Irving, Texas 75063

Structural Analysis Report

Existing 155 ft PennSummit Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT13610-A

Customer Site Name: ARTEC

Carrier Name: AT&T

Carrier Site ID / Name: CT2270 / North Branford Commerce Dr

Site Location: 26 Commerce Drive

N. Branford, Connecticut

New Haven County

Latitude: 41.322138

Longitude: -72.773277

Analysis Result:

Max Structural Usage: 50.9% [Pass]

Max Foundation Usage: 30.0% [Pass]

Report Prepared By : Manoj Kandel





Tower Engineering Solutions

Phone (972) 483-0607, Fax (972) 975-9615
8445 Freeport Parkway, Suite 375, Irving, Texas 75063

Structural Analysis Report

Existing 155 ft PennSummit Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT13610-A

Customer Site Name: ARTEC

Carrier Name: AT&T

Carrier Site ID / Name: CT2270 / North Branford Commerce Dr

Site Location: 26 Commerce Drive

N. Branford, Connecticut

New Haven County

Latitude: 41.322138

Longitude: -72.773277

Analysis Result:

Max Structural Usage: 50.9% [Pass]

Max Foundation Usage: 30.0% [Pass]

Report Prepared By : Manoj Kandel

Introduction

The purpose of this report is to summarize the analysis results on the 155 ft PennSummit Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Paul J. Ford and Company, Job #29205-0112 Rev 1 dated March 3, 2005
Foundation Drawing	Paul J. Ford and Company, Job #29205-0112 dated May 31, 2005
Geotechnical Report	JGI Eastern, Inc., Project #05267G dated May 16, 2005
Modification Drawings	N/A

Analysis Criteria

The rigorous analysis was performed in accordance with the requirements and stipulations of the ANSI/TIA/EIA 222-G. In accordance with this standard, the structure was analyzed using **TESPoles**, a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed $V_{ult} = 127$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 98.0$ mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 3/4" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	ANSI/TIA/EIA 222-G / 2012 IBC / 2016 Connecticut State Building Code
Exposure Category:	C
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	$S_S = 0.179$, $S_1 = 0.061$

This structural analysis is based upon the tower being classified as a Structure Class II; however, if a different classification is required subsequent to the date hereof, the tower classification will be changed to meet such requirement and a new structural analysis will be run.

Existing Antennas, Mounts and Transmission Lines

The table below summarizes the antennas, mounts and transmission lines that were considered in the analysis as existing on the tower.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	154.0	3	Ericsson - AIR 21 B2A/B4P - Panel	(3) T-Arm	(12) 1 5/8" (1) 1 5/8" Fiber	T-Mobile
2		3	Ericsson - AIR 21 B4A B2P - Panel			
3		3	Ericsson - KRY 112 144/1 - TMA			
-	143.0	6	Powerwave - 7770.00 - Panel	(3) T-Arm	(12) 1 5/8" (2) 1/2" DC (1) 3/8" Fiber	New Cingular*
-		3	KMW - AM-X-CD-16-65-00T - Panel			
-		1	Raycap DC6-48-60-18-8F – DC Surge			
-		6	Powerwave - LGP13519 - TMA			
-		6	Powerwave - LGP21401 - TMA			
-		6	Ericsson - RRUS 11 - RRU			
11	133.0	6	Andrew - SBNHH-1D65B - Panel	(3) T-Arm	(12) 1 5/8" (1) 1 5/8" Fiber	Verizon
12		6	Antel - LPA-80080-6CF - Panel			
13		3	Antel - BXA-171063-12CF - Panel			
14		3	Alcatel Lucent RRH2X60-700 – RRH			
15		3	Alcatel Lucent RRH2X60-AWS - RRH			
16		2	RFS Celwave DB-T1-6Z-8AB-0Z			
17	85.0	1	Andrew - DB408 - Whip	Pipe	(6) 7/8"	Town of North Branford
18		2	Sinclair - SD222 - Whip			
19		1	Radio Waves - SP4-4.7NS RD4 - Dish			

* DC Power and Fiber lines inside (1) 3" Innerduct.

Proposed Carrier's Final Configuration of Antennas, Mounts and Transmission Lines

Information pertaining to the proposed carrier's final configuration of antennas and transmission lines was provided by SBA Communications Corp. The proposed antennas and lines are listed below.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
4	143.0	6	Powerwave 7770 - Panel	(3) T-Arm	(12) 1 5/8" (2) 1/2" DC power (1) 3/8" Fiber	AT&T
5		3	Cci HPA-65R-BUU-H6 – Panel			
6		6	Powerwave LGP21401 TMA			
7		6	Powerwave LGP13519 Diplexer			
8		6	Ericsson RRUS 11			
9		3	Ericsson RRUS 32 B2			
10		1	Raycap DC6-48-60-18-8F			

All the proposed transmission lines are considered running inside of the pole shafts.

Analysis Results

The results of the structural analysis, performed for the wind and ice loading and antenna equipment as defined above, are summarized as the following:

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	50.9%	38.6%	43.6%
Pass/Fail	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)
Original Design Reactions	5060.0	45.0
Analysis Reactions	3227.2	31.1
Factored Reactions*	6831.0	60.8
% of Design Reactions	47.2%	51.2%

* Per section 15.5.1 of the TIA-222-G standard, factored reactions were obtained by multiplying a 1.35 factor to the original design reactions.

The foundation has been investigated using the supplied documents and soils report and was found adequate. Therefore, no modification to the foundation will be required.

Operational Condition (Rigidity)

The maximum twist and sway of the microwave dishes under the operational wind speed as specified in the Analysis Criteria are listed in the table below:

Elevation (ft)	Antenna / Dish	Carrier	Twist (deg)	Sway (deg)
143.0	Various Panels	AT&T	0.000	0.874
85.0	Radio Waves - SP4-4.7NS RD4 - Dish	Town of North Branfo	0.000	0.518

It is recommended that the carriers review the twist and sway values of the microwave dishes.

Conclusions

Based on the analysis results, the existing structure and its foundation were found to be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the ANSI/TIA/EIA 222-G Standard under the design basic wind speed as specified in the Analysis Criteria.



PROJECT: LTE 2C
SITE NUMBER: CTL02270
FA NUMBER: 10105782
PTN NUMBER: 2051A0DB5S
PACE NUMBER: MRCTB025482
SBA#: CT13610
SITE NAME: NORTH BRANFORD
SITE ADDRESS: 26 COMMERCE DRIVE
 NORTH BRANFORD, CT 06471



PROJECT INFORMATION

SITE NAME: NORTH BRANFORD
SITE NUMBER: CTL02270
SITE ADDRESS: 26 COMMERCE DRIVE, NORTH BRANFORD, CT 06471
FA NUMBER: 10105782
PTN NUMBER: 2051A0DB5S
PACE NUMBER: MRCTB025482
USID NUMBER: 82712
SBA NUMBER: CT13610
APPLICANT: AT&T WIRELESS, 550 COCHITUATE ROAD SUITE 550 13 AND 14, FRAMINGHAM, MA 01701
TOWER OWNER: SBA COMMUNICATIONS CORPORATION, 8051 CONGRESS AVENUE, BOCA RATON, FL 33487
JURISDICTION: TOWN OF NORTH BRANFORD
COUNTY: NEW HAVEN
SITE COORDINATES FROM (RFDS): LATITUDE: 41.3221669°, LONGITUDE: -72.7732661', GROUND ELEV.: 146'
PROPOSED USE: TELECOMMUNICATIONS FACILITY
AT&T RF MANAGER: DEEPAK RATHORE, (860) 965-3068, dr701e@att.com

SCOPE OF WORK

LTE 1900 WILL BE 2C AT THE SITE WITH BRONZE CONFIGURATION. PROPOSED 2C PROJECT SCOPE HEREIN BASED ON FINAL RFDS ID # 1847660, VERSION 1.00 LAST UPDATED 11/10/17.

- (3) NEW ANTENNAS TO REPLACE (3) EXISTING ANTENNAS
- (3) NEW RRUS-32 B2
- UPGRADE BASEBAND TO 5216
- (1) XMU CARD

- CONTRACTOR SHALL FURNISH ALL MATERIAL WITH THE EXCEPTION OF AT&T SUPPLIED MATERIAL.
- ALL MATERIAL SHALL BE INSTALLED BY THE CONTRACTOR, UNLESS STATED OTHERWISE.

APPLICABLE BUILDING CODES AND STANDARDS

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES.

BUILDING CODE: 2012 INTERNATIONAL BUILDING CODE
 2016 CONNECTICUT STATE BUILDING CODE SUPPLEMENT

ELECTRICAL CODE: 2014 NATIONAL ELECTRIC CODE

- FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.
- ADA ACCESS REQUIREMENTS ARE NOT REQUIRED.
- THIS FACILITY DOES NOT REQUIRE POTABLE WATER AND WILL NOT PRODUCE ANY SEWAGE

REV	DATE	DESCRIPTION	BY
0	10/23/17	90% REVIEW	EB
1	12/21/17	FINAL	KC

I HEREBY CERTIFY THAT THESE DRAWINGS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND CONTROL, AND TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODES.

SITE LOCATION MAP



NO SCALE

DRAWING INDEX

T1	TITLE SHEET
SP1	NOTES AND SPECIFICATIONS
SP2	NOTES AND SPECIFICATIONS
A1	COMPOUND PLAN
A2	EQUIPMENT PLAN
A3	ELEVATIONS
A4	ANTENNA PLANS
A5	EQUIPMENT DETAILS
A6	ANTENNA & CABLE CONFIGURATION
A7	CABLE NOTES AND COLOR CODING
A8	GROUNDING DETAILS

PROJECT CONSULTANTS

PROJECT MANAGER: SMARTLINK, 85 RANGWAY ROAD, SUITE 102, NORTH BILLERICA, MA 01862, EDWARD WEISSMAN (917) 528-1857, Edward.Weissman@smartlinkllc.com
CONTACT: EDWARD WEISSMAN (917) 528-1857, Edward.Weissman@smartlinkllc.com
SITE ACQUISITION: SMARTLINK, 85 RANGWAY ROAD, SUITE 102, NORTH BILLERICA, MA 01862, SHARON KEEFE (978) 930-3918, Sharon.Keefe@smartlinkllc.com
CONTACT: SHARON KEEFE (978) 930-3918, Sharon.Keefe@smartlinkllc.com
ENGINEER/ARCHITECT: FULLERTON ENGINEERING, 1100 E. WOODFIELD ROAD, SUITE 500, SCHAUMBURG, IL 60173, MILEN DIMITROV (847) 908-8439, MDimitrov@FullertonEngineering.com
CONTACT: MILEN DIMITROV (847) 908-8439, MDimitrov@FullertonEngineering.com
CONSTRUCTION: SMARTLINK, 85 RANGWAY ROAD, SUITE 102, NORTH BILLERICA, MA 01862, MARK DONNELLY (617) 515-2080, mark.donnelly@smartlinkllc.com
CONTACT: MARK DONNELLY (617) 515-2080, mark.donnelly@smartlinkllc.com

DIRECTIONS

SCAN QR CODE FOR LINK TO SITE LOCATION MAP



NOTE: DRAWING SCALES ARE FOR 11"x17" SHEETS UNLESS OTHERWISE NOTED

SITE NAME
NORTH BRANFORD

SITE NUMBER:
CTL02270

SITE ADDRESS
26 COMMERCE DRIVE
NORTH BRANFORD, CT 06471

SHEET NAME
TITLE SHEET

SHEET NUMBER
T1

THESE DRAWINGS ARE THE PROPERTY OF FULLERTON ENGINEERING CONSULTANTS, INC. IT IS FOR THE EXCLUSIVE USE OF THIS PROJECT. ANY RE-USE OF THIS PROJECT, ANY RE-USE OF THIS DRAWING WITHOUT THE EXPRESSED WRITTEN CONSENT OF FULLERTON ENGINEERING CONSULTANTS, INC. IS PROHIBITED.

GENERAL CONSTRUCTION

- FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
CONTRACTOR/CM – SMARTLINK
OWNER – AT&T WIRELESS
- ALL SITE WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS AND AT&T PROJECT SPECIFICATIONS.
- GENERAL CONTRACTOR SHALL VISIT THE SITE AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS, DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. GENERAL CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF WORK.
- ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS THE MINIMUM REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS, SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF WORK AND PREPARED BY THE ENGINEER PRIOR TO PROCEEDING WITH WORK.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE ENGINEER PRIOR TO PROCEEDING.
- GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFIRM TO ALL OSHA REQUIREMENTS AND THE LOCAL JURISDICTION.
- GENERAL CONTRACTOR SHALL COORDINATE WORK AND SCHEDULE WORK ACTIVITIES WITH OTHER DISCIPLINES.
- ERECTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMAN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST ACCEPTED PRACTICE. ALL MEMBERS SHALL BE LAID PLUMB AND TRUE AS INDICATED ON THE DRAWINGS.
- SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED MATERIALS APPROVED BY LOCAL JURISDICTION. CONTRACTOR SHALL KEEP AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DEBRIS.
- WORK PREVIOUSLY COMPLETED IS REPRESENTED BY LIGHT SHADED LINES AND NOTES. THE SCOPE OF WORK FOR THIS PROJECT IS REPRESENTED BY DARK SHADED LINES AND NOTES. CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR OF ANY EXISTING CONDITIONS THAT DEVIATE FROM THE DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CONSTRUCTION MANAGER 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
- THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- GENERAL CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS FOR ALL TRADES AND CONTRACTORS TO THE SITE AND/OR BUILDING.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY OF THE SITE FOR THE DURATION OF CONSTRUCTION UNTIL JOB COMPLETION.

- THE GENERAL CONTRACTOR SHALL MAINTAIN IN GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES.
- THE GENERAL CONTRACTOR SHALL PROVIDE PORTABLE FIRE EXTINGUISHERS WITH A RATING OF NOT LESS THAN 2-A OR 2-A-10-B-C AND SHALL BE WITHIN 25 FEET OF TRAVEL DISTANCE TO ALL PORTIONS OF WHERE THE WORK IS BEING COMPLETED DURING CONSTRUCTION.
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS SHALL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION, B) CONFINED SPACE, C) ELECTRICAL SAFETY, AND D) TRENCHING & EXCAVATION.
- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED, CAPPED, PLUGGED OR OTHERWISE DISCONNECTED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE RESPONSIBLE ENGINEER, AND SUBJECT TO THE APPROVAL OF THE OWNER AND/OR LOCAL UTILITIES.
- THE AREAS OF THE OWNER'S PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.
- CONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE FEDERAL AND LOCAL JURISDICTION FOR EROSION AND SEDIMENT CONTROL.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUNDING. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- THE SUBGRADE SHALL BE BROUGHT TO A SMOOTH UNIFORM GRADE AND COMPACTED TO 95 PERCENT STANDARD PROCTOR DENSITY UNDER PAVEMENT AND STRUCTURES AND 80 PERCENT STANDARD PROCTOR DENSITY IN OPEN SPACE. ALL TRENCHES IN PUBLIC RIGHT OF WAY SHALL BE BACKFILLED WITH FLOWABLE FILL OR OTHER MATERIAL PRE-APPROVED BY THE LOCAL JURISDICTION.
- ALL NECESSARY RUBBISH, STUMPS, DEBRIS, STICKS, STONES, AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LAWFUL MANNER.
- ALL BROCHURES, OPERATING AND MAINTENANCE MANUALS, CATALOGS, SHOP DRAWINGS, AND OTHER DOCUMENTS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR AT COMPLETION OF CONSTRUCTION AND PRIOR TO PAYMENT.
- CONTRACTOR SHALL SUBMIT A COMPLETE SET OF AS-BUILT REDLINES TO THE GENERAL CONTRACTOR UPON COMPLETION OF PROJECT AND PRIOR TO FINAL PAYMENT.
- CONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION.
- THE PROPOSED FACILITY WILL BE UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SEWER SERVICE, AND IS NOT FOR HUMAN HABITAT (NO HANDICAP ACCESS REQUIRED).
- OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION, APPROXIMATELY 2 TIMES PER MONTH, BY AT&T TECHNICIANS.
- NO OUTDOOR STORAGE OR SOLID WASTE CONTAINERS ARE PROPOSED.
- ALL MATERIAL SHALL BE FURNISHED AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST REVISION AT&T MOBILITY GROUNDING STANDARD "TECHNICAL SPECIFICATION FOR CONSTRUCTION OF GSM/GPRS WIRELESS SITES" AND "TECHNICAL SPECIFICATION FOR FACILITY GROUNDING". IN CASE OF A CONFLICT BETWEEN THE CONSTRUCTION SPECIFICATION AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.
- CONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR CONSTRUCTION. IF CONTRACTOR CANNOT OBTAIN A PERMIT, THEY MUST NOTIFY THE GENERAL CONTRACTOR IMMEDIATELY.
- CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
- INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM SITE VISITS AND/OR DRAWINGS PROVIDED BY THE SITE OWNER. CONTRACTORS SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
- NO WHITE STROBE LIGHTS ARE PERMITTED. LIGHTING IF REQUIRED, WILL MEET FAA STANDARDS AND REQUIREMENTS.

ANTENNA MOUNTING

- DESIGN AND CONSTRUCTION OF ANTENNA SUPPORTS SHALL

CONFORM TO CURRENT ANSI/TIA-222 OR APPLICABLE LOCAL CODES.

- ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS NOTED OTHERWISE.
- ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS NOTED OTHERWISE.
- DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY COLD GALVANIZING IN ACCORDANCE WITH ASTM A780.
- ALL ANTENNA MOUNTS SHALL BE INSTALLED WITH LOCK NUTS, DOUBLE NUTS AND SHALL BE TORQUED TO MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR SHALL INSTALL ANTENNA PER MANUFACTURER'S RECOMMENDATION FOR INSTALLATION AND GROUNDING.
- ALL UNUSED PORTS ON ANY ANTENNAS SHALL BE TERMINATED WITH A 50-OHM LOAD TO ENSURE ANTENNAS PERFORM AS DESIGNED.
- PRIOR TO SETTING ANTENNA AZIMUTHS AND DOWNTILTS, ANTENNA CONTRACTOR SHALL CHECK THE ANTENNA MOUNT FOR TIGHTNESS AND ENSURE THAT THEY ARE PLUMB. ANTENNA AZIMUTHS SHALL BE SET FROM TRUE NORTH AND BE ORIENTED WITHIN +/- 5% AS DEFINED BY THE RFDS. ANTENNA DOWNTILTS SHALL BE WITHIN +/- 0.5% AS DEFINED BY THE RFDS. REFER TO ND-00246.
- JUMPERS FROM THE TMA'S MUST TERMINATE TO OPPOSITE POLARIZATION'S IN EACH SECTOR.
- CONTRACTOR SHALL RECORD THE SERIAL #, SECTOR, AND POSITION OF EACH ACTUATOR INSTALLED AT THE ANTENNAS AND PROVIDE THE INFORMATION TO AT&T.
- TMA'S SHALL BE MOUNTED ON PIPE DIRECTLY BEHIND ANTENNAS AS CLOSE TO ANTENNA AS FEASIBLE IN A VERTICAL POSITION.

TORQUE REQUIREMENTS

- ALL RF CONNECTIONS SHALL BE TIGHTENED BY A TORQUE WRENCH.
- ALL RF CONNECTIONS, GROUNDING HARDWARE AND ANTENNA HARDWARE SHALL HAVE A TORQUE MARK INSTALLED IN A CONTINUOUS STRAIGHT LINE FROM BOTH SIDES OF THE CONNECTION.
A. RF CONNECTION BOTH SIDES OF THE CONNECTOR.
B. GROUNDING AND ANTENNA HARDWARE ON THE NUT SIDE STARTING FROM THE THREADS TO THE SOLID SURFACE. EXAMPLE OF SOLID SURFACE: GROUND BAR, ANTENNA BRACKET METAL.

FIBER & POWER CABLE MOUNTING

- THE FIBER OPTIC TRUNK CABLES SHALL BE INSTALLED INTO CONDUITS, CHANNEL CABLE TRAYS, OR CABLE TRAY. WHEN INSTALLING FIBER OPTIC TRUNK CABLES INTO A CABLE TRAY SYSTEM, THEY SHALL BE INSTALLED INTO AN INTER DUCT AND A PARTITION BARRIER SHALL BE INSTALLED BETWEEN THE 600 VOLT CABLES AND THE INTER DUCT IN ORDER TO SEGREGATE CABLE TYPES. OPTIC FIBER TRUNK CABLES SHALL HAVE APPROVED CABLE RESTRAINTS EVERY (60) SIXTY FEET AND SECURELY FASTENED TO THE CABLE TRAY SYSTEM. NFPA 70 (NEC) ARTICLE 770 RULES SHALL APPLY.
- THE TYPE TC-ER CABLES SHALL BE INSTALLED INTO CONDUITS, CHANNEL CABLE TRAYS, OR CABLE TRAY AND SHALL BE SECURED AT INTERVALS NOT EXCEEDING (6) SIX FEET. AN EXCEPTION; WHERE TYPE TC-ER CABLES ARE NOT SUBJECT TO PHYSICAL DAMAGE, CABLES SHALL BE PERMITTED TO MAKE A TRANSITION BETWEEN CONDUITS, CHANNEL CABLE TRAYS, OR CABLE TRAY WHICH ARE SERVING UTILIZATION EQUIPMENT OR DEVICES, A DISTANCE (6) SIX FEET SHALL NOT BE EXCEEDED WITHOUT CONTINUOUS SUPPORTING. NFPA 70 (NEC) ARTICLES 336 AND 392 RULES SHALL APPLY.
- WHEN INSTALLING OPTIC FIBER TRUNK CABLES OR TYPE TC-ER CABLES INTO CONDUITS, NFPA 70 (NEC) ARTICLE 300 RULES SHALL APPLY.

COAXIAL CABLE NOTES

- TYPES AND SIZES OF THE ANTENNA CABLE ARE BASED ON ESTIMATED LENGTHS. PRIOR TO ORDERING CABLE, CONTRACTOR SHALL VERIFY ACTUAL LENGTH BASED ON CONSTRUCTION LAYOUT AND NOTIFY THE PROJECT MANAGER IF ACTUAL LENGTHS EXCEED ESTIMATED LENGTHS.
- CONTRACTOR SHALL VERIFY THE DOWN-TILT OF EACH ANTENNA WITH A DIGITAL LEVEL.
- CONTRACTOR SHALL CONFIRM COAX COLOR CODING PRIOR TO CONSTRUCTION.
- ALL JUMPERS TO THE ANTENNAS FROM THE MAIN

TRANSMISSION LINE SHALL BE 1/2" DIA. LDF AND SHALL NOT EXCEED 6'-0".

- ALL COAXIAL CABLE SHALL BE SECURED TO THE DESIGNED SUPPORT STRUCTURE, IN AN APPROVED MANNER, AT DISTANCES NOT TO EXCEED 4'-0" OC.
- CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS REGARDING BOTH THE INSTALLATION AND GROUNDING OF ALL COAXIAL CABLES, CONNECTORS, ANTENNAS, AND ALL OTHER EQUIPMENT.
- CONTRACTOR SHALL GROUND ALL EQUIPMENT, INCLUDING ANTENNAS, RET MOTORS, TMA'S, COAX CABLES, AND RET CONTROL CABLES AS A COMPLETE SYSTEM. GROUNDING SHALL BE EXECUTED BY QUALIFIED WIREMEN IN COMPLIANCE WITH MANUFACTURER'S SPECIFICATION AND RECOMMENDATION.
- CONTRACTOR SHALL PROVIDE STRAIN-RELIEF AND CABLE SUPPORTS FOR ALL CABLE ASSEMBLIES, COAX CABLES, AND RET CONTROL CABLES. CABLE STRAIN-RELIEFS AND CABLE SUPPORTS SHALL BE APPROVED FOR THE PURPOSE. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
- CONTRACTOR TO VERIFY THAT EXISTING COAX HANGERS ARE STACKABLE SNAP IN HANGERS. IF EXISTING HANGERS ARE NOT STACKABLE SNAP IN HANGERS THE CONTRACTOR SHALL REPLACE EXISTING HANGERS WITH NEW SNAP IN HANGERS IF APPLICABLE.

GENERAL CABLE AND EQUIPMENT NOTES

- CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ANTENNA, TMAS, DIPLEXERS, AND COAX CONFIGURATION, MAKE AND MODELS PRIOR TO INSTALLATION.
- ALL CONNECTIONS FOR HANGERS, SUPPORTS, BRACING, ETC. SHALL BE INSTALLED PER TOWER MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR SHALL REFERENCE THE TOWER STRUCTURAL ANALYSIS/DESIGN DRAWINGS FOR DIRECTIONS ON CABLE DISTRIBUTION/ROUTING.
- ALL OUTDOOR RF CONNECTORS/CONNECTIONS SHALL BE WEATHERPROOFED, EXCEPT THE RET CONNECTORS, USING BUTYL TAPE AFTER INSTALLATION AND FINAL CONNECTIONS ARE MADE. BUTYL TAPE SHALL HAVE A MINIMUM OF ONE-HALF TAPE WIDTH OVERLAP ON EACH TURN AND EACH LAYER SHALL BE WRAPPED THREE TIMES. WEATHERPROOFING SHALL BE SMOOTH WITHOUT BUCKLING. BUTYL BLEEDING IS NOT ALLOWED.
- IF REQUIRED TO PAINT ANTENNAS AND/OR COAX:
A. TEMPERATURE SHALL BE ABOVE 50° F.
B. PAINT COLOR MUST BE APPROVED BY BUILDING OWNER/LANDLORD.
C. FOR REGULATED TOWERS, FAA/FCC APPROVED PAINT IS REQUIRED.
D. DO NOT PAINT OVER COLOR CODING OR ON EQUIPMENT MODEL NUMBERS
- ALL CABLES SHALL BE GROUNDING WITH COAXIAL CABLE GROUND KITS. FOLLOW THE MANUFACTURER'S RECOMMENDATIONS.
A. GROUNDING AT THE ANTENNA LEVEL.
B. GROUNDING AT MID LEVEL, TOWERS WHICH ARE OVER 200'-0", ADDITIONAL CABLE GROUNDING REQUIRED.
C. GROUNDING AT BASE OF TOWER PRIOR TO TURNING HORIZONTAL.
D. GROUNDING OUTSIDE THE EQUIPMENT SHELTER AT ENTRY PORT.
E. GROUNDING INSIDE THE EQUIPMENT SHELTER AT THE ENTRY PORT.
- ALL PROPOSED GROUND BAR DOWNLEADS ARE TO BE TERMINATED TO THE EXISTING ADJACENT GROUND BAR DOWNLEADS A MINIMUM DISTANCE OF 4'-0" BELOW GROUND BAR. TERMINATIONS MAY BE EXOTHERMIC OR COMPRESSION.



550 COCHITUATE ROAD
SUITE 550 13 AND 14
FRAMINGHAM, MA 01701



1362 MELLON ROAD
SUITE 140
HANOVER, MD 21076



1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
COA# PEC.0001444
www.FullertonEngineering.com

REV	DATE	DESCRIPTION	BY
0	10/23/17	90% REVIEW	EB
1	12/21/17	FINAL	KC

I HEREBY CERTIFY THAT THESE DRAWINGS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND CONTROL, AND TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODES.



SITE NAME
NORTH BRANFORD

SITE NUMBER:
CTL02270

SITE ADDRESS
**26 COMMERCE DRIVE
NORTH BRANFORD, CT 06471**

SHEET NAME
NOTES AND SPECIFICATIONS

SHEET NUMBER
SP1

NOTICE

Beyond This Point you are entering a controlled area where RF emissions *may exceed* the FCC General Population Exposure Limits.

Follow all posted signs and site guidelines for working in a RF environment.

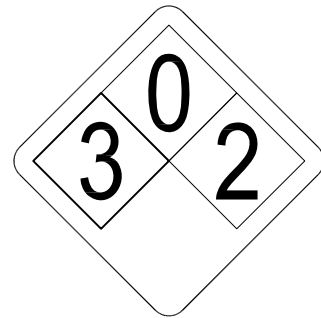
Ref: 47CFR 1.1307(b)

CAUTION

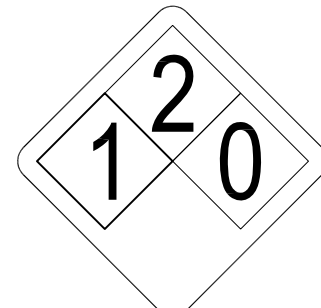
Beyond This Point you are entering a controlled area where RF emissions *may exceed* the FCC Occupational Exposure Limits.

Obey all posted signs and site guidelines for working in a RF environment.

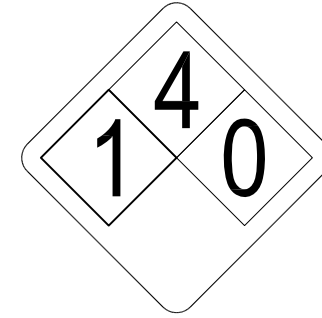
Ref: 47CFR 1.1307(b)



ALERTING SIGN
(FOR CELL SITE BATTERIES)



ALERTING SIGN
(FOR DIESEL FUEL)



ALERTING SIGN
(FOR PROPANE)



550 COCHITUATE ROAD
SUITE 550 13 AND 14
FRAMINGHAM, MA 01701



1362 MELLON ROAD
SUITE 140
HANOVER, MD 21076



1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
COA# PEC.0001444
www.FullertonEngineering.com

REV	DATE	DESCRIPTION	BY
0	10/23/17	90% REVIEW	EB
1	12/21/17	FINAL	KC

I HEREBY CERTIFY THAT THESE DRAWINGS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND CONTROL, AND TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODES.



ALERTING SIGNS

WARNING!

DANGER DO NOT TOUCH TOWER!
SERIOUS "RF" BURN HAZARD!
MAINTAIN AN ADEQUATE CLEARANCE BETWEEN TOWER SUPPORTS AND GUY WIRES

FAILURE TO OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN A RADIO FREQUENCY ENVIRONMENT COULD RESULT IN SERIOUS INJURY. CONTACT CURRENT MAY EXCEED LIMITS PRESCRIBED IN ANSI/IEEE C95.1-1992 FOR CONTROLLED ENVIRONMENTS.

PROPERTY OF AT&T

AUTHORIZED PERSONNEL ONLY

IN CASE OF EMERGENCY, OR PRIOR TO PERFORMING MAINTENANCE ON THIS SITE, CALL 800-638-2822 AND REFERENCE CELL SITE NUMBER _____

ALERTING SIGN

INFO SIGN #4

INFORMATION

AT&T operates telecommunications antennas at this location. Remain at least 3 feet away from any antenna and obey all posted signs.

Contact the owner(s) of the antenna(s) before working closer than 3 feet from the antenna.

Contact AT&T at _____ prior to performing any maintenance or repairs near AT&T antennas. This is Site # _____

Contact the management office if this door/hatch/gate is found unlocked.

INFORMACION

En esta propiedad se ubican antenas de telecomunicaciones operadas por AT&T. Favor mantener una distancia de no menos de 3 pies y obedecer todos los avisos.

Comuníquese con el propietario o los propietarios de las antenas antes de trabajar o caminar a una distancia de menos de 3 pies de la antena.

Comuníquese con AT&T _____ antes de realizar cualquier mantenimiento o reparaciones cerca de la antena de AT&T.

Esta es la estación base número _____

Favor comunicarse con la oficina de la administración del edificio si esta puerta o compuerta se encuentra sin candado.

INFORMATION

ACTIVE ANTENNAS ARE MOUNTED

ON THE OUTSIDE OF THIS BUILDING

BEHIND THIS PANEL

ON THIS STRUCTURE

STAY BACK A MINIMUM OF 3 FEET FROM THESE ANTENNAS

Contact AT&T at _____ and follow their instructions prior to performing any maintenance or repairs closer than 3 feet from the antennas.

This is AT&T site # _____

STAY BACK 3 FEET FROM ANTENNA



GENERAL SIGNAGE GUIDELINES

STRUCTURE TYPE	INFO SIGN #1	INFO SIGN #2	INFO SIGN #3	INFO SIGN #4	STRIPING	NOTICE SIGN	CAUTION SIGN
TOWERS							
MONOPOLE/MONOPINE/MONOPALM	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS	CLIMBING SIDE OF THE TOWER	ON BACKSIDE OF ANTENNAS	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS			AT THE HEIGHT OF THE FIRST CLIMBING STEP, MIN 9 FT ABOVE GROUND
SEC TOWERS/TOWERS WITH HIGH VOLTAGE	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS	CLIMBING SIDE OF THE TOWER	ON BACKSIDE OF ANTENNAS	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS			
LIGHT POLES/FLAG POLES	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS	ON THE POLE, NO LESS THAN 3FT BELOW THE ANTENNA AND LESS THAN 9FT ABOVE GROUND	ON BACKSIDE OF ANTENNAS	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS			
UTILITY WOOD POLES (JPA)	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS	ON THE POLE, NO LESS THAN 3FT BELOW THE ANTENNA AND LESS THAN 9FT ABOVE GROUND	ON BACKSIDE OF ANTENNAS	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS		IF GP MAX VALUE OF MPE AT ANTENNA LEVEL IS: 0-99%; NOTICE SIGN; OVER 99%: CAUTION SIGN AT NO LESS THAN 3FT BELOW ANTENNA AND 9FT ABOVE GROUND	
MICROCELLS MOUNTED ON NON-JPA POLES	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS	ON THE POLE, NO LESS THAN 3FT BELOW THE ANTENNA AND LESS THAN 9FT ABOVE GROUND	ON BACKSIDE OF ANTENNAS	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS		NOTICE OR CAUTION SIGN AT NO LESS THAN 9FT ABOVE GROUND; ONLY IF THE EXPOSURE EXCEEDS 90% OF THE GENERAL PUBLIC EXPOSURE AT EXPOSURE AT 6FT ABOVE GROUND OR AT OUTSIDE OF SURFACE OF ADJACENT BUILDING	
TOWERS							
AT ALL ACCESS POINTS TO THE ROOF	X			X			
ON ANTENNAS	X		X	X			
CONCEALED ANTENNAS	X	X		X			
ANTENNAS MOUNTED FACING OUTSIDE THE BUILDING	X	X		X			
ANTENNAS ON SUPPORT STRUCTURE	X	X		X			
ROOFVIEW GRAPH							
RADIATION AREA IS WITHIN 3FT FROM ANTENNA	X	ADJACENT TO EACH ANTENNA		X			
RADIATION AREA IS BEYOND 3FT FROM ANTENNA	X	ADJACENT TO EACH ANTENNA		X	DIAGONAL, YELLOW STRIPING AS TO ROOFVIEW GRAPH		EITHER NOTICE OR CAUTION SIGN (BASED ON ROOFVIEW RESULTS) AT ANTENNA /BARRIER
CHURCH STEEPLES	ACCESS TO STEEPLE	ADJACENT TO ANTENNAS IF ANTENNAS ARE CONCEALED	ON BACKSIDE OF ANTENNAS	ACCESS TO STEEPLE			CAUTION SIGN AT THE ANTENNAS
WATER STATIONS	ACCESS TO LADDER	ADJACENT TO ANTENNAS IF ANTENNAS ARE CONCEALED	ON BACKSIDE OF ANTENNAS	ACCESS TO LADDER			CAUTION SIGN BESIDE INFO SIGN #1, MIN. 9FT ABOVE GROUND

NOTES FOR ROOFTOP SITES:

- EITHER NOTICE OR CAUTION SIGNS NEED TO BE POSTED AT EACH SECTOR AS CLOSE AS POSSIBLE TO: THE OUTER EDGE OF THE STRIPED OFF AREA OR THE OUTER ANTENNAS OF THE SECTOR
- IF ROOFVIEWS SHOWS: ONLY BLUE = NOTICE SIGN, BLUE AND YELLOW = CAUTION SIGN, ONLY YELLOW = CAUTION SIGN TO BE INSTALLED
- SHOULD THE REQUIRED STRIPING AREAS INTERFERE WITH ANY STRUCTURE OR EQUIPMENT (A/C, VENTS, ROOF HATCH, DOORS, OTHER ANTENNAS, DISHES, ETC.). PLEASE NOTIFY AT&T TO MODIFY THE STRIPING AREA, PRIOR TO STARTING THE WORK.

INFO SIGN #1

INFO SIGN #2

INFO SIGN #3

SIGNAGE GUIDELINES CHART

SITE NAME
NORTH BRANFORD

SITE NUMBER:
CTL02270

SITE ADDRESS
**26 COMMERCE DRIVE
NORTH BRANFORD, CT 06471**

SHEET NAME
NOTES AND SPECIFICATIONS

SHEET NUMBER
SP2



550 COCHITUATE ROAD
SUITE 550 13 AND 14
FRAMINGHAM, MA 01701



1362 MELLON ROAD
SUITE 140
HANOVER, MD 21076



1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
COA# PEC.0001444
www.FullertonEngineering.com

REV	DATE	DESCRIPTION	BY
0	10/23/17	90% REVIEW	EB
1	12/21/17	FINAL	KC

I HEREBY CERTIFY THAT THESE DRAWINGS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND CONTROL, AND TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODES.



SITE NAME
NORTH BRANFORD

SITE NUMBER:
CTL02270

SITE ADDRESS
**26 COMMERCE DRIVE
NORTH BRANFORD, CT 06471**

SHEET NAME
COMPOUND PLAN

SHEET NUMBER
A1

ABBREVIATIONS

- AFF ABOVE FINISHED FLOOR
- AGL ABOVE GRADE LEVEL
- AMSL ABOVE MEAN SEA LEVEL
- APPROX APPROXIMATE
- ATS AUTOMATIC TRANSFER SWITCH
- AWG AMERICAN WIRE GAUGE
- BLDG BUILDING
- BTS BASE TRANSMISSION STATION
- C CENTERLINE
- CLR CLEAR
- COL COLUMN
- CONC CONCRETE
- CND CONDUIT
- DWG DRAWING
- FT FOOT(FEET)
- EGB EQUIPMENT GROUND BAR
- ELEC ELECTRICAL
- EMT ELECTRICAL METALLIC TUBING
- ELEV ELEVATION
- EQUIP EQUIPMENT
- (E) EXISTING
- EXT EXTERIOR
- FND FOUNDATION
- F FIBER
- FIF FACILITY INTERFACE FRAME
- GA GAUGE
- GALV GALVANIZED
- GPS GLOBAL POSITIONING SYSTEM
- GND GROUND
- GSM GLOBAL SYSTEM FOR MOBILE COMMUNICATION
- LTE LONG TERM EVOLUTION
- MAX MAXIMUM
- MCPA MULTI-CARRIER POWER AMPLIFIER
- MFR MANUFACTURER
- MGB MASTER GROUND BAR
- MIN MINIMUM
- MTS MANUAL TRANSFER SWITCH
- N.T.S. NOT TO SCALE
- O.C. ON CENTER
- OE/OT OVERHEAD ELECTRIC/TELCO
- PPC POWER PROTECTION CABINET
- PL PROPERTY LINE
- RBS RADIO BASED STATION
- RET REMOTE ELECTRIC TILT
- RRU REMOTE RADIO UNIT
- RGS RIGID GALVANIZED STEEL
- IN INCH(ES)
- INT INTERIOR
- LB(S), # POUND(S)
- SF SQUARE FOOT
- STL STEEL
- TMA TOWER MOUNTED AMPLIFIER
- TYP TYPICAL
- UE/UT UNDERGROUND ELECTRIC/TELCO
- UNO UNLESS NOTED OTHERWISE
- UMTS UNIVERSAL MOBILE TELE-COMMUNICATION SYSTEM
- VIF VERIFY IN FIELD
- W/ WITH
- XFMR TRANSFORMER

SYMBOLS

- REVISION
- WORK POINT
- UTILITY POLE
- COMPRESSED STONE
- BRICK
- CONCRETE
- EARTH
- GRAVEL
- MASONRY
- STEEL
- CENTERLINE
- PROPERTY LINE
- LEASE LINE
- EASEMENT LINE
- CHAIN LINK FENCE
- WOOD FENCE
- BELOW GRADE ELECTRIC
- BELOW GRADE TELEPHONE
- OVERHEAD ELECTRIC/TELEPHONE
- SECTION REFERENCE

NEW AND EXISTING AT&T EQUIPMENT WITHIN EXISTING 11'-6"x20'-0" EQUIPMENT SHELTER SEE A2 FOR DETAIL

EXISTING ICE BRIDGE (TYP.)

EXISTING UTILITY H-FRAME

EXISTING MONOPOLE

(6) EXISTING AT&T ANTENNAS
(3) EXISTING RRU UNITS
(1) EXISTING RAYCAP UNIT ON EXISTING MONOPOLE TO REMAIN

EXISTING ACCESS GATE

EXISTING BOLLARD (TYP.)

EXISTING GRAVEL AREA

EXISTING SHELTER

EXISTING CHAIN LINK FENCE (TYP.)

EXISTING EQUIPMENT CABINETS ON CONCRETE PAD (TYP.)

REPLACE (3) EXISTING AT&T ANTENNAS WITH (3) NEW ANTENNAS
(3) NEW RRU-32 B2 UNITS ON EXISTING MONOPOLE SEE A4 FOR DETAILS



COMPOUND PLAN

SCALE: 3/32" = 1'-0" 1



SITE PHOTO 1 SCALE: N.T.S. 2



SITE PHOTO 2 SCALE: N.T.S. 3

THESE DRAWINGS ARE THE PROPERTY OF FULLERTON ENGINEERING CONSULTANTS, INC. IT IS FOR THE EXCLUSIVE USE OF THIS PROJECT. ANY RE-USE OF THIS DRAWING WITHOUT THE EXPRESSED WRITTEN CONSENT OF FULLERTON ENGINEERING CONSULTANTS, INC. IS PROHIBITED.



550 COCHITUATE ROAD
SUITE 550 13 AND 14
FRAMINGHAM, MA 01701



1362 MELLON ROAD
SUITE 140
HANOVER, MD 21076



1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
COA# PEC.0001444
www.FullertonEngineering.com

REV	DATE	DESCRIPTION	BY
0	10/23/17	90% REVIEW	EB
1	12/21/17	FINAL	KC

I HEREBY CERTIFY THAT THESE DRAWINGS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND CONTROL, AND TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODES.



SITE NAME

**NORTH
BRANFORD**

SITE NUMBER:

CTL02270

SITE ADDRESS

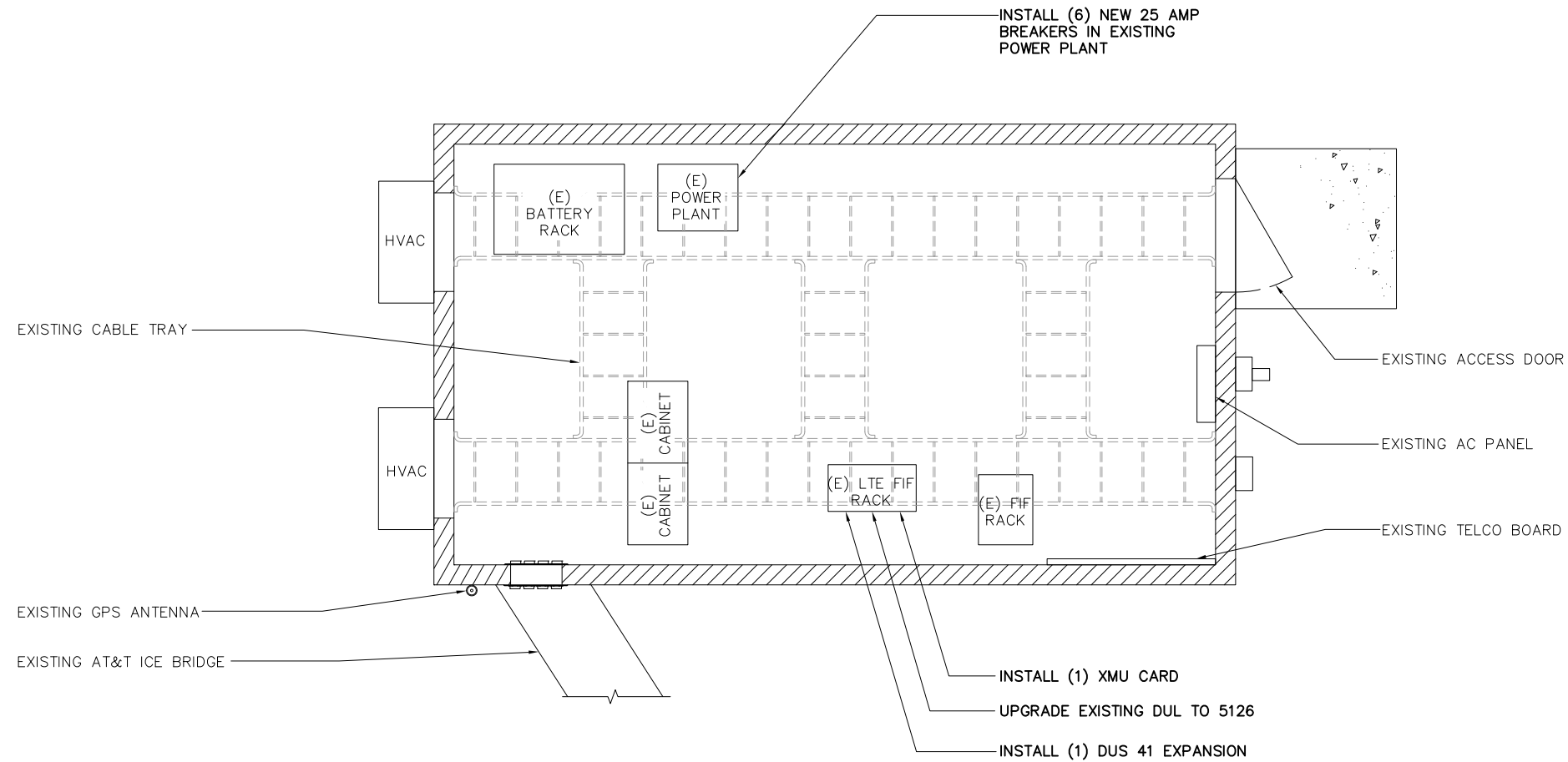
**26 COMMERCE DRIVE
NORTH BRANFORD, CT 06471**

SHEET NAME

**EQUIPMENT
PLAN**

SHEET NUMBER

A2





550 COCHITUATE ROAD
SUITE 550 13 AND 14
FRAMINGHAM, MA 01701



1362 MELLON ROAD
SUITE 140
HANOVER, MD 21076



1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
COA# PEC.0001444
www.FullertonEngineering.com

REV	DATE	DESCRIPTION	BY
0	10/23/17	90% REVIEW	EB
1	12/21/17	FINAL	KC

I HEREBY CERTIFY THAT THESE DRAWINGS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND CONTROL, AND TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODES.



SITE NAME

**NORTH
BRANFORD**

SITE NUMBER:

CTL02270

SITE ADDRESS

**26 COMMERCE DRIVE
NORTH BRANFORD, CT 06471**

SHEET NAME

ELEVATIONS

SHEET NUMBER

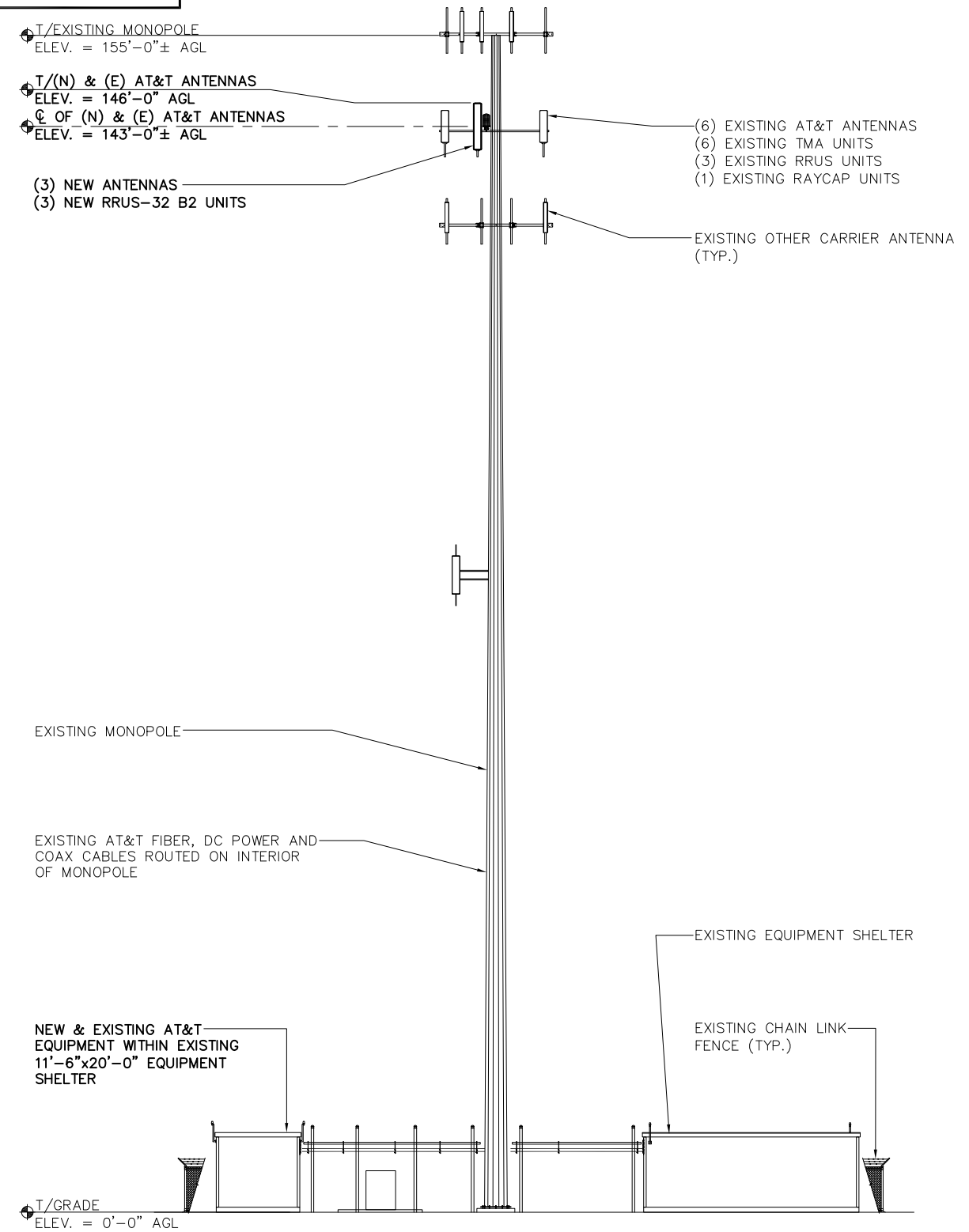
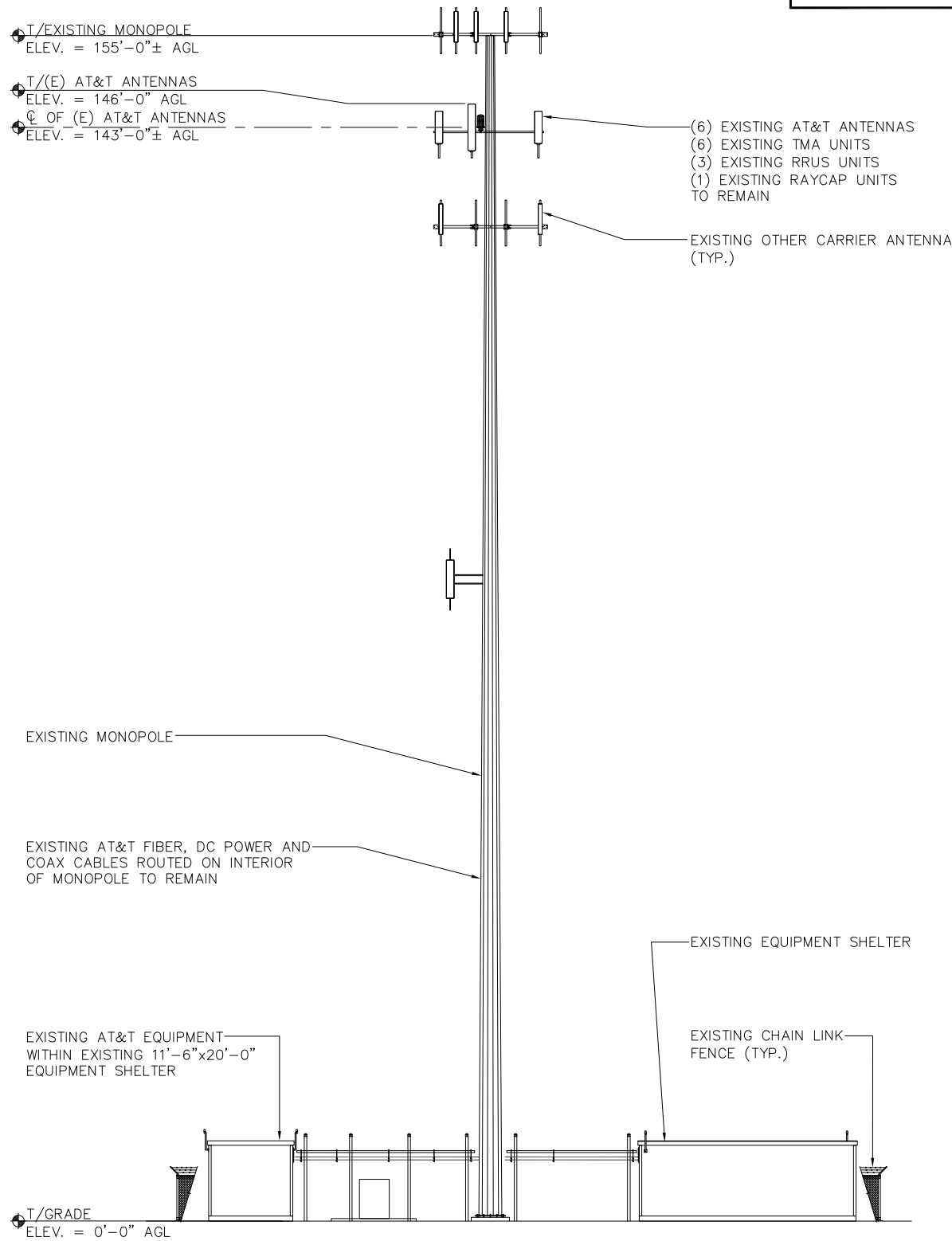
A3

NOTES:

1. CALCULATIONS FOR THE STRUCTURE WERE PREPARED BY OTHERS AND THOSE CALCULATIONS CERTIFY THE CAPACITY OF THE STRUCTURE TO SUPPORT THE NEW EQUIPMENT
2. CALCULATIONS FOR THE ANTENNA MOUNTS WERE PREPARED BY FULLERTON AND THOSE CALCULATIONS CERTIFY THE CAPACITY OF THE STRUCTURE TO SUPPORT THE NEW EQUIPMENT
3. CABLES NOT SHOWN FOR CLARITY

NOTES:

1. 3 FEET MINIMUM SEPARATION BETWEEN LTE ANTENNAS
2. 6 FEET MINIMUM SEPARATION BETWEEN 700DE & 700BC



EXISTING ELEVATION

SCALE: 1/16" = 1'-0" 1

NEW ELEVATION

SCALE: 1/16" = 1'-0" 2



550 COCHITUATE ROAD
SUITE 550 13 AND 14
FRAMINGHAM, MA 01701



1362 MELLON ROAD
SUITE 140
HANOVER, MD 21076



1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
COA# PEC.0001444
www.FullertonEngineering.com

REV	DATE	DESCRIPTION	BY
0	10/23/17	90% REVIEW	EB
1	12/21/17	FINAL	KC

I HEREBY CERTIFY THAT THESE DRAWINGS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND CONTROL, AND TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODES.



SITE NAME
NORTH BRANFORD

SITE NUMBER:
CTL02270

SITE ADDRESS
**26 COMMERCE DRIVE
NORTH BRANFORD, CT 06471**

SHEET NAME
ANTENNA PLANS

SHEET NUMBER
A4

SECTOR: ALPHA
AZIMUTH: 20°

(6) EXISTING TMA UNITS TO REMAIN
(TYP. 2 PER SECTOR)

(3) EXISTING ANTENNAS
TO BE REMOVED
(TYP. 1 PER SECTOR)

(3) EXISTING RRUS-11 UNITS
TO REMAIN
(TYP. 1 PER SECTOR)

EXISTING RAYCAP UNIT
(TYP. OF 1)

EXISTING MONOPOLE

(6) EXISTING ANTENNAS TO REMAIN
(TYP. 2 PER SECTOR)

SECTOR: GAMMA
AZIMUTH: 260°

EXISTING ANTENNA SECTOR
ARM (TYP.)

SECTOR: BETA
AZIMUTH: 140°

EXISTING ANTENNA PLAN

SCALE: 3/16" = 1'-0" 1

NOTES:
1. EXISTING ANTENNA MOUNTING PIPE TO BE REUSED, RELOCATED OR REPLACED AS REQUIRED
2. IF REQUIRED INSTALL NEW GALV. MOUNTING PIPE(S) 2.5 STD. (2-7/8" O.D.)

NOTES:
1. 3 FEET MINIMUM SEPARATION BETWEEN LTE ANTENNAS
2. 6 FEET MINIMUM SEPARATION BETWEEN 700DE & 700BC

SECTOR: ALPHA
AZIMUTH: 20°

(6) EXISTING TMA UNITS
(TYP. 2 PER SECTOR)

(3) EXISTING RRUS-11 UNITS
(TYP. 1 PER SECTOR)

SECTOR: GAMMA
AZIMUTH: 260°

EXISTING RAYCAP UNIT
(TYP. OF 1)

EXISTING MONOPOLE

(6) EXISTING ANTENNAS
(TYP. 2 PER SECTOR)

(3) NEW ANTENNAS
(TYP. 1 PER SECTOR)
SEE A5 FOR DETAILS

EXISTING ANTENNA SECTOR
ARM (TYP.)

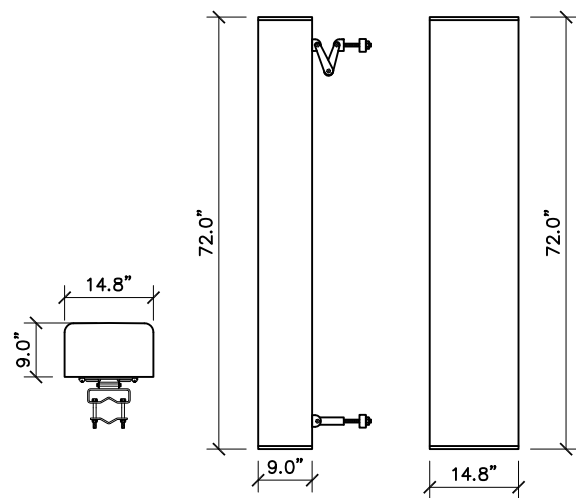
(3) NEW RRUS-32 B2 UNITS
(TYP. 1 PER SECTOR)
SEE A5 FOR DETAILS

SECTOR: BETA
AZIMUTH: 140°



FINAL ANTENNA PLAN

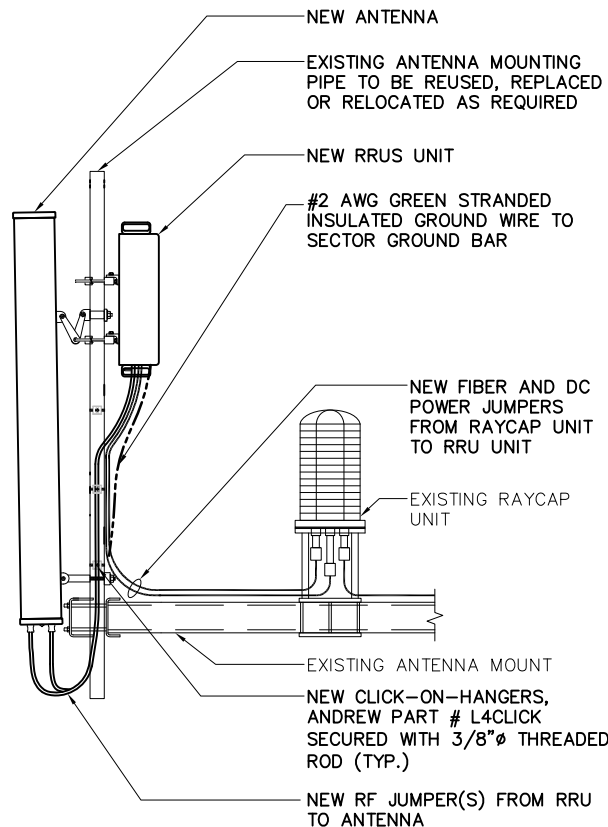
SCALE: 3/16" = 1'-0" 2



PLAN VIEW SIDE VIEW FRONT VIEW

CCI – HPA-65R-BUU-H6

HEXPORT MULTI-BAND ANTENNA
 FREQUENCY RANGE 698-806 MHz
 824-894 MHz
 1850-1990 MHz
 1710-1755/2110-2170 MHz
 2305-2360 MHz
 ANTENNA WITH BRACKET 51 Lbs
 61 Lbs



ANTENNA SCHEMATIC

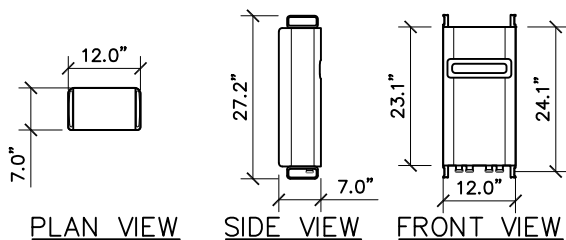
SCALE: N.T.S. 2

NOT USED

SCALE: N.T.S. 3

NOT USED

SCALE: N.T.S. 4



PLAN VIEW SIDE VIEW FRONT VIEW

ERICSSON – RRUS 32 B2

TECHNOLOGIES: FDD, LTE, GSM & WCDMA
 FREQUENCY RANGE: UPLINK 1850-1910 MHz
 DOWNLINK 1930-1990 MHz
 WEIGHT w/SOLAR SHIELD & HANDLE 53 Lbs

NOT USED

SCALE: N.T.S. 6

NOT USED

SCALE: N.T.S. 7

NOT USED

SCALE: N.T.S. 8



550 COCHITUATE ROAD
 SUITE 550 13 AND 14
 FRAMINGHAM, MA 01701



1362 MELLON ROAD
 SUITE 140
 HANOVER, MD 21076



1100 E. WOODFIELD ROAD, SUITE 500
 SCHAUMBURG, ILLINOIS 60173
 TEL: 847-908-8400
 COA# PEC.0001444
 www.FullertonEngineering.com

REV	DATE	DESCRIPTION	BY
0	10/23/17	90% REVIEW	EB
1	12/21/17	FINAL	KC

I HEREBY CERTIFY THAT THESE DRAWINGS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND CONTROL, AND TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODES.



SITE NAME
NORTH BRANFORD

SITE NUMBER:
CTL02270

SITE ADDRESS
 26 COMMERCE DRIVE
 NORTH BRANFORD, CT 06471

SHEET NAME
EQUIPMENT DETAILS

SHEET NUMBER
A5

THESE DRAWINGS ARE THE PROPERTY OF FULLERTON ENGINEERING CONSULTANTS, INC. IT IS FOR THE EXCLUSIVE USE OF THIS PROJECT. ANY RE-USE OF THIS DRAWING WITHOUT THE EXPRESSED WRITTEN CONSENT OF FULLERTON ENGINEERING CONSULTANTS, INC. IS PROHIBITED.



550 COCHITUATE ROAD
SUITE 550 13 AND 14
FRAMINGHAM, MA 01701



1362 MELLON ROAD
SUITE 140
HANOVER, MD 21076



1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
COA# PEC.0001444
www.FullertonEngineering.com

REV	DATE	DESCRIPTION	BY
0	10/23/17	90% REVIEW	EB
1	12/21/17	FINAL	KC

I HEREBY CERTIFY THAT THESE DRAWINGS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND CONTROL, AND TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODES.



SITE NAME

**NORTH
BRANFORD**

SITE NUMBER:

CTL02270

SITE ADDRESS

**26 COMMERCE DRIVE
NORTH BRANFORD, CT 06471**

SHEET NAME

**ANTENNA &
CABLE
CONFIGURATION**

SHEET NUMBER

A6

**FINAL ANTENNA CONFIGURATION AND CABLE SCHEDULE
SUPPLIED BY AT&T WIRELESS, FROM RF CONFIG. DATED (11/10/17)**

SECTOR	ANTENNA NUMBER	ANTENNA STATUS & TYPE	ANTENNA MODEL NUMBER	ANTENNA VENDOR	TMA/RRU UNIT	AZIMUTH	ANTENNA CL FROM GROUND	CABLE FEEDER		RAYCAP UNIT
								TYPE	LENGTH	
ALPHA	A-1	(E) UMTS ANTENNA	7770	POWERWAVE	(2) EXISTING TMA UNITS	20°	143'-0"	1-5/8"φ LDF7-50A	200'-0"	(1) (E) DC6-48-60-18-8F UNIT
	A-1	(E) UMTS ANTENNA	7770	POWERWAVE	(2) EXISTING TMA UNITS	20°	143'-0"	1-5/8"φ LDF7-50A	200'-0"	
	A-2	(N) LTE1C/2C ANTENNA	HPA-65R-BUU-H6	CCI	(1) EXISTING RRUS-11 UNIT (1) NEW RRUS-32 UNIT	20°	143'-0"	(1) EXISTING FIBER CABLE	200'-0"	
	A-2	(N) LTE1C/2C ANTENNA	HPA-65R-BUU-H6	CCI	(1) EXISTING RRUS-11 UNIT (1) NEW RRUS-32 UNIT	20°	143'-0"	(2) EXISTING DC POWER CABLES	200'-0"	
A-3	-	-	-	-	-	-	-	-		
A-4	(E) GSM ANTENNA	7770	POWERWAVE	-	-	-	-	-	-	
A-4	(E) GSM ANTENNA	7770	POWERWAVE	-	-	-	-	1-5/8"φ LDF7-50A	200'-0"	
A-4	(E) GSM ANTENNA	7770	POWERWAVE	-	-	-	-	1-5/8"φ LDF7-50A	200'-0"	
BETA	B-1	(E) UMTS ANTENNA	7770	POWERWAVE	(2) EXISTING TMA UNITS	140°	143'-0"	1-5/8"φ LDF7-50A	200'-0"	
	B-1	(E) UMTS ANTENNA	7770	POWERWAVE	(2) EXISTING TMA UNITS	140°	143'-0"	1-5/8"φ LDF7-50A	200'-0"	
	B-2	(N) LTE1C/2C ANTENNA	HPA-65R-BUU-H6	CCI	(1) EXISTING RRUS-11 UNIT (1) NEW RRUS-32 UNIT	140°	143'-0"	SEE ANTENNA A-3 FOR CABLE TYPE AND LENGTH		
	B-2	(N) LTE1C/2C ANTENNA	HPA-65R-BUU-H6	CCI	(1) EXISTING RRUS-11 UNIT (1) NEW RRUS-32 UNIT	140°	143'-0"	SEE ANTENNA A-3 FOR CABLE TYPE AND LENGTH		
B-3	-	-	-	-	-	-	-	-		
B-4	(E) GSM ANTENNA	7770	POWERWAVE	-	-	-	-	1-5/8"φ LDF7-50A	200'-0"	
B-4	(E) GSM ANTENNA	7770	POWERWAVE	-	-	-	-	1-5/8"φ LDF7-50A	200'-0"	
GAMMA	C-1	(E) UMTS ANTENNA	7770	POWERWAVE	(2) EXISTING TMA UNITS	260°	143'-0"	1-5/8"φ LDF7-50A	200'-0"	
	C-1	(E) UMTS ANTENNA	7770	POWERWAVE	(2) EXISTING TMA UNITS	260°	143'-0"	1-5/8"φ LDF7-50A	200'-0"	
	C-2	(N) LTE1C/2C ANTENNA	HPA-65R-BUU-H6	CCI	(1) EXISTING RRUS-11 UNIT (1) NEW RRUS-32 UNIT	260°	143'-0"	SEE ANTENNA A-3 FOR CABLE TYPE AND LENGTH		
	C-2	(N) LTE1C/2C ANTENNA	HPA-65R-BUU-H6	CCI	(1) EXISTING RRUS-11 UNIT (1) NEW RRUS-32 UNIT	260°	143'-0"	SEE ANTENNA A-3 FOR CABLE TYPE AND LENGTH		
C-3	-	-	-	-	-	-	-	-		
C-4	(E) GSM ANTENNA	7770	POWERWAVE	-	-	-	-	1-5/8"φ LDF7-50A	200'-0"	
C-4	(E) GSM ANTENNA	7770	POWERWAVE	-	-	-	-	1-5/8"φ LDF7-50A	200'-0"	

1. CONTRACTOR IS TO REFER TO AT&T'S MOST CURRENT RADIO FREQUENCY DATA SHEET (RFDS) PRIOR TO CONSTRUCTION.
2. THE SIZE, HEIGHT, AND DIRECTION OF THE ANTENNAS SHALL BE ADJUSTED TO ACHIEVE THE AZIMUTHS SPECIFIED AND LIMIT SHADOWING AND TO MEET THE SYSTEM REQUIREMENTS.
3. CONTRACTOR SHALL VERIFY THE HEIGHT OF THE ANTENNA WITH THE AT&T WIRELESS PROJECT MANAGER.
4. VERIFY TYPE AND SIZE OF TOWER LEG PRIOR TO ORDERING ANY ANTENNA MOUNT.
5. UNLESS NOTED OTHERWISE THE CONTRACTOR MUST PROVIDE ALL MATERIAL NECESSARY.
6. ANTENNA AZIMUTHS ARE DEGREES OFF OF TRUE NORTH, BEARING CLOCKWISE, IN WHICH ANTENNA FACE IS DIRECTED. ALL ANTENNAS (AND SUPPORTING STRUCTURES AS PRACTICAL) SHALL BE ACCURATELY ORIENTED IN THE SPECIFIED DIRECTION.
7. CONTRACTOR SHALL VERIFY ALL RF INFORMATION PRIOR TO CONSTRUCTION.
8. SWEEP TEST SHALL BE PERFORMED BY GENERAL CONTRACTOR AND SUBMITTED TO AT&T WIRELESS CONSTRUCTION SPECIALIST. TEST SHALL BE PERFORMED PER AT&T WIRELESS STANDARDS.
9. CABLE LENGTHS WERE DETERMINED BASED ON THE DESIGN DRAWING. CONTRACTOR TO VERIFY ACTUAL LENGTH DURING PRE-CONSTRUCTION WALK.
10. CONTRACTOR TO USE ROSENBERGER FIBER LINE HANGER COMPONENTS (OR ENGINEER APPROVED EQUAL).

ANTENNA AND CABLING NOTES

SCALE: N.T.S. 1

RF, DC, & COAX CABLE MARKING LOCATIONS TABLE	
NO	LOCATIONS
1	EACH TOP-JUMPER SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS.
2	EACH MAIN COAX SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS NEAR THE TOP-JUMPER CONNECTION AND WITH (1) SET OF 3/4" WIDE COLOR BANDS JUST PRIOR TO ENTERING THE BTS OR TRANSMITTER BUILDING.
3	CABLE ENTRY PORT ON THE INTERIOR OF THE SHELTER.
4	ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER.
5	ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER.

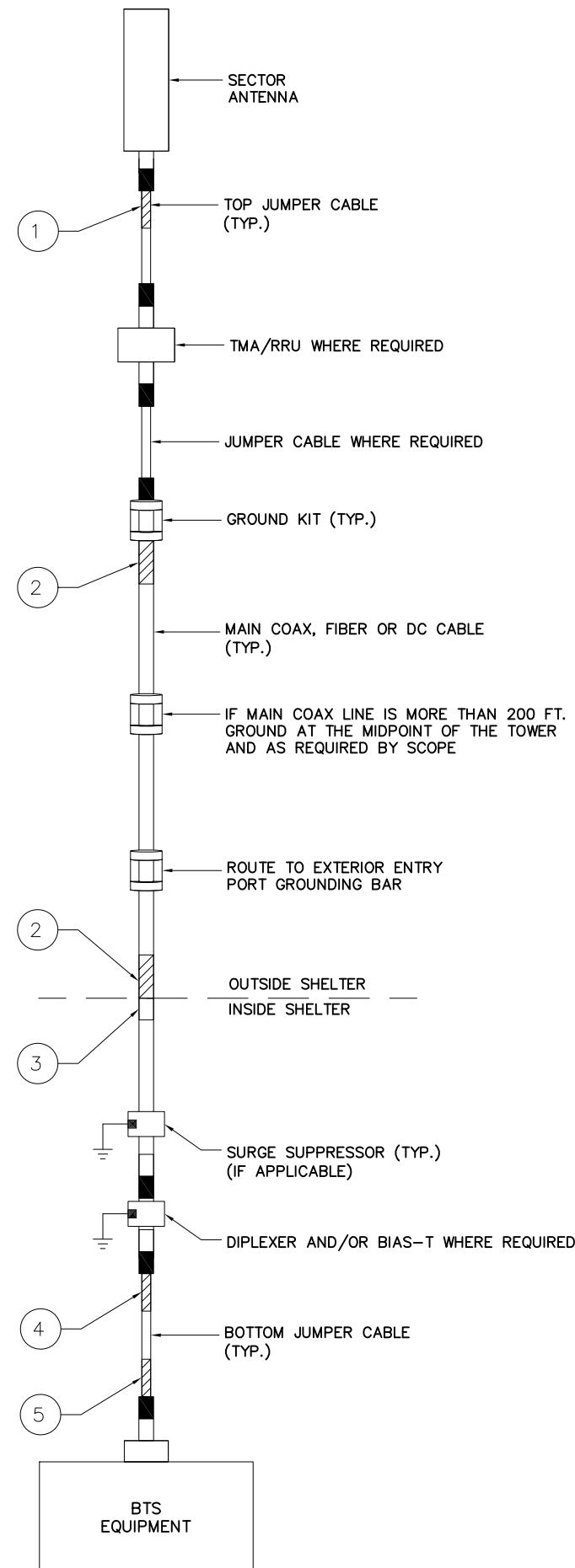
CABLE MARKING DIAGRAM

SCALE: N.T.S. 2

1. THE ANTENNA SYSTEM COAX SHALL BE LABELED WITH VINYL TAPE.
2. THE STANDARD IS BASED ON EIGHT COLORED TAPES-RED, BLUE, GREEN, YELLOW, ORANGE, BROWN, WHITE, AND VIOLET. THESE TAPES MUST BE 3/4" WIDE & UV RESISTANT SUCH AS SCOTCH 35 VINYL ELECTRICAL COLOR CODING TAPE AND SHOULD BE READILY AVAILABLE TO THE ELECTRICIAN OR CONTRACTOR ON SITE.
3. USING COLOR BANDS ON THE CABLES, MARK ALL RF CABLE BY SECTOR AND CABLE NUMBER AS SHOWN ON "CABLE COLOR CHART".
4. WHEN AN EXISTING COAXIAL LINE THAT IS INTENDED TO BE A SHARED LINE BETWEEN TECHNOLOGIES IS ENCOUNTERED, THE CONTRACTOR SHALL REMOVE THE EXISTING COLOR CODING SCHEME AND REPLACE IT WITH THE COLOR CODING STANDARD. IN THE ABSENCE OF AN EXISTING COLOR CODING AND TAGGING SCHEME, OR WHEN INSTALLING PROPOSED COAXIAL CABLES, THIS GUIDELINE SHALL BE IMPLEMENTED AT THAT SITE REGARDLESS OF TECHNOLOGY.
5. ALL COLOR CODE TAPE SHALL BE 3M-35 AND SHALL BE INSTALLED USING A MINIMUM OF (3) THREE WRAPS OF TAPE AND SHALL BE NEATLY TRIMMED AND SMOOTHED OUT SO AS TO AVOID UNRAVELING.
6. ALL COLOR BANDS INSTALLED AT THE TOP OF THE TOWER SHALL BE A MINIMUM OF 3" WIDE, AND SHALL HAVE A MINIMUM OF 3/4" OF SPACE BETWEEN EACH COLOR.
7. ALL COLOR CODES SHALL BE INSTALLED SO AS TO ALIGN NEATLY WITH ONE ANOTHER FROM SIDE-TO-SIDE.
8. IF EXISTING CABLES AT THE SITE ALREADY HAVE A COLOR CODING SCHEME AND THEY ARE NOT INTENDED TO BE REUSED OR SHARED WITH THE NEW TECHNOLOGY, THE EXISTING COLOR CODING SCHEME SHALL REMAIN UNTOUCHED.

CABLE MARKING NOTES

SCALE: N.T.S. 3



CABLE COLOR CODING DIAGRAM

SCALE: N.T.S. 4



550 COCHITUATE ROAD
SUITE 550 13 AND 14
FRAMINGHAM, MA 01701



1362 MELLON ROAD
SUITE 140
HANOVER, MD 21076



1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
COA# PEC.0001444
www.FullertonEngineering.com

REV	DATE	DESCRIPTION	BY
0	10/23/17	90% REVIEW	EB
1	12/21/17	FINAL	KC

I HEREBY CERTIFY THAT THESE DRAWINGS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND CONTROL, AND TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODES.



SITE NAME
NORTH BRANFORD

SITE NUMBER:
CTL02270

SITE ADDRESS
**26 COMMERCE DRIVE
NORTH BRANFORD, CT 06471**

SHEET NAME
**CABLE NOTES
AND COLOR
CODING**

SHEET NUMBER
A7



550 COCHITUATE ROAD
SUITE 550 13 AND 14
FRAMINGHAM, MA 01701



1362 MELLON ROAD
SUITE 140
HANOVER, MD 21076



1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
COA# PEC.0001444
www.FullertonEngineering.com

REV	DATE	DESCRIPTION	BY
0	10/23/17	90% REVIEW	EB
1	12/21/17	FINAL	KC

I HEREBY CERTIFY THAT THESE DRAWINGS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND CONTROL, AND TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODES.



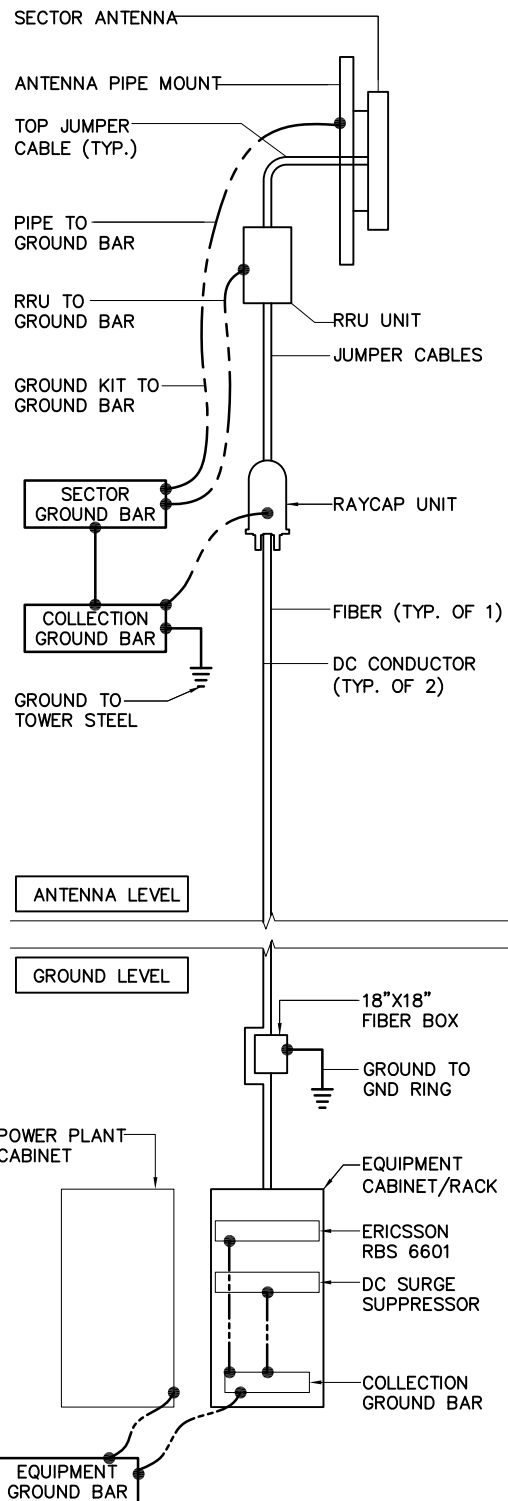
SITE NAME
NORTH BRANFORD

SITE NUMBER:
CTL02270

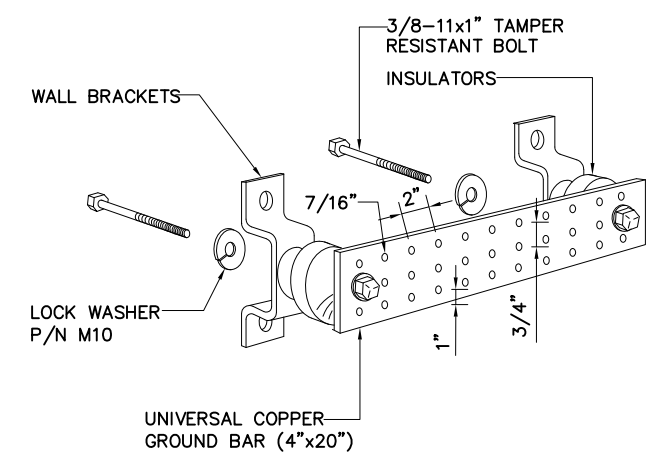
SITE ADDRESS
**26 COMMERCE DRIVE
NORTH BRANFORD, CT 06471**

SHEET NAME
GROUNDING DETAILS

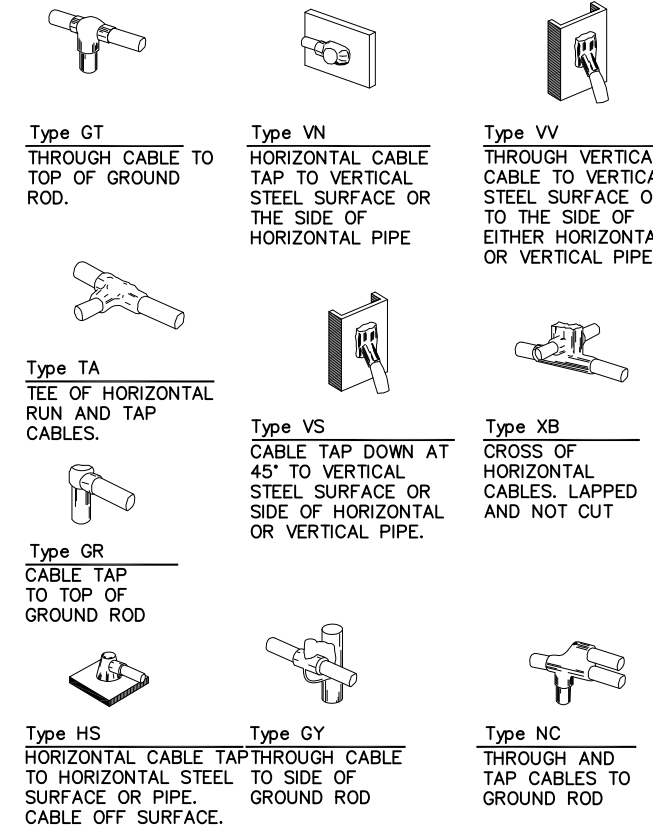
SHEET NUMBER
A8



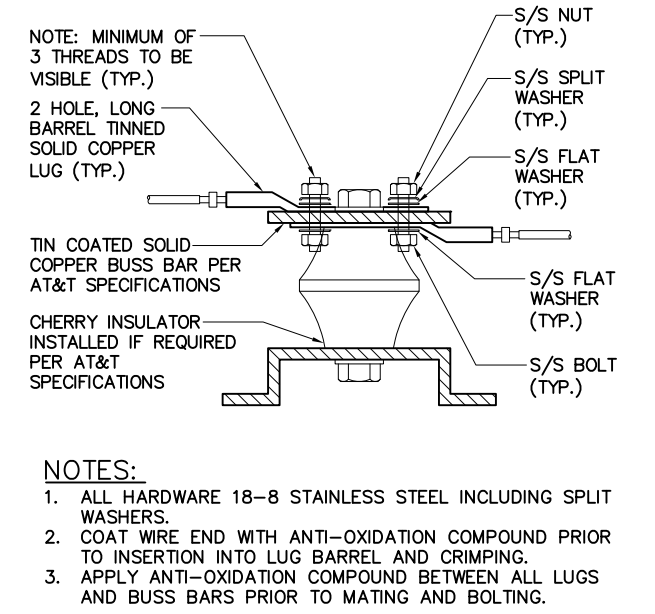
GROUNDING SCHEMATIC SCALE: N.T.S. 1



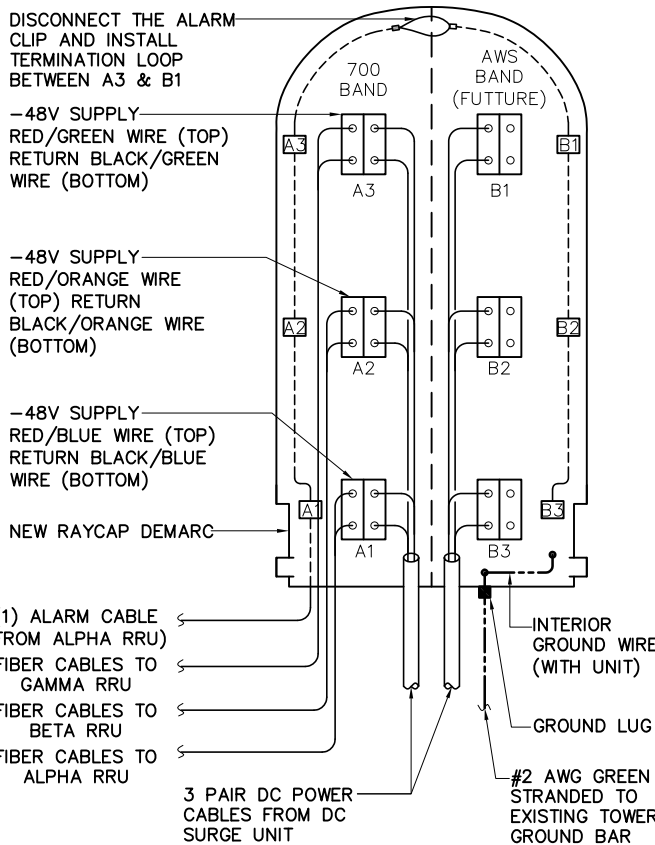
GROUND BAR DETAIL SCALE: N.T.S. 2



EXOTHERMIC WELD DETAILS SCALE: N.T.S. 4



LUG DETAIL SCALE: N.T.S. 3



RAYCAP DC POWER AND ALARM DET. SCALE: N.T.S. 5

NOT USED SCALE: N.T.S. 6

THESE DRAWINGS ARE THE PROPERTY OF FULLERTON ENGINEERING CONSULTANTS, INC. IT IS FOR THE EXCLUSIVE USE OF THIS PROJECT. ANY RE-USE OF THIS DRAWING WITHOUT THE EXPRESSED WRITTEN CONSENT OF FULLERTON ENGINEERING CONSULTANTS, INC. IS PROHIBITED.



200 North Glebe Road, Suite 1000, Arlington, VA 22203-3728
703.276.1100 • 703.276.1169 fax
info@sitesafe.com • www.sitesafe.com



**SmartLink, LLC on behalf of
AT&T Mobility, LLC
Site FA – 10105782
Site ID – CT2270 (MRCTB025482)
USID – 82712
Site Name – North Branford
Commerce Drive
Site Compliance Report**

**26 Commerce Drive
North Brandford, CT 06471**

Latitude: N41-19-19.80
Longitude: W72-46-23.76
Structure Type: Monopole

Report generated date: December 27, 2017
Report by: Sam Cosgrove
Customer Contact: Haleluya Haile

**AT&T Mobility, LLC will be compliant when the
remediation recommended in Section 5.2 or
other appropriate remediation is implemented.**

Sitesafe logo is a registered trademark of Site Safe, Inc. All rights reserved.

Table of Contents

1	GENERAL SITE SUMMARY.....	2
1.1	REPORT SUMMARY.....	2
2	SCALE MAPS OF SITE.....	3
3	ANTENNA INVENTORY	5
4	EMISSION PREDICTIONS	6
5	SITE COMPLIANCE	9
5.1	SITE COMPLIANCE STATEMENT	9
5.2	ACTIONS FOR SITE COMPLIANCE	9
6	REVIEWER CERTIFICATION	10
	APPENDIX A – STATEMENT OF LIMITING CONDITIONS	11
	APPENDIX B – REGULATORY BACKGROUND INFORMATION	12
	FCC RULES AND REGULATIONS	12
	OSHA STATEMENT.....	13
	APPENDIX C – SAFETY PLAN AND PROCEDURES.....	14
	APPENDIX D – RF EMISSIONS.....	15
	APPENDIX E – ASSUMPTIONS AND DEFINITIONS	16
	GENERAL MODEL ASSUMPTIONS	16
	USE OF GENERIC ANTENNAS.....	16
	DEFINITIONS	17
	APPENDIX F – REFERENCES	19

1 General Site Summary

1.1 Report Summary

AT&T Mobility, LLC	Summary
Access to Antennas Locked?	Yes
RF Sign(s) @ access point(s)	None
RF Sign(s) @ antennas	None
Barrier(s) @ sectors	None
Max cumulative simulated RFE level on the Ground Level	<1% General Public Limit
FCC & AT&T Compliant?	Will Be Compliant

The following documents were provided by the client and were utilized to create this report:

RFDS: NEW-ENGLAND_CONNECTICUT_CTV2270_2018-LTE-Next-Carrier_LTE-2C_mm093q_2051...

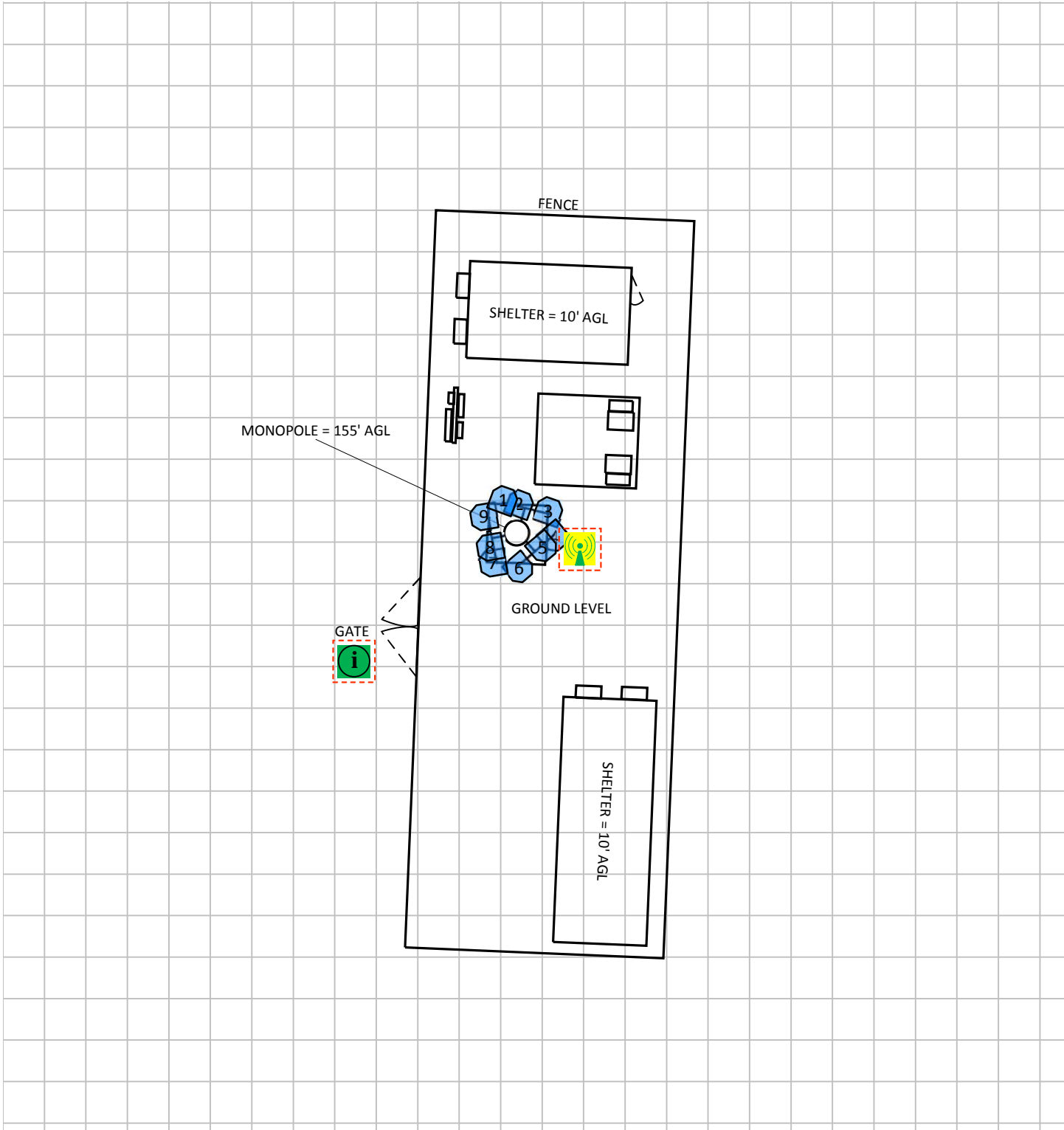
CD's: 10105782_AE201_171023_CTL02270_REV0.JMRL

2 Scale Maps of Site

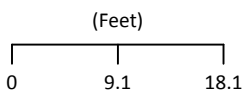
The following diagrams are included:

- Site Scale Map
- RF Exposure Diagram
- Elevation View

Site Scale Map For: North Branford Commerce Drive



% of FCC Public Exposure Limit
Spatial average 0' - 6'



www.sitesafe.com
Site Name: North Branford Commerce Drive
12/27/2017 12:09:23 PM

Carrier Identification													
	AT&T MOBILITY LLC		VERIZON WIRELESS		T-MOBILE		SPRINT		UNKNOWN CARRIER				
Sign Legend													
	Caution 2		Notice 2		Warning		Info 1		Info 2		Caution 1		Notice 1
Barrier					Proposed Barriers/ Signs								
—————					- - - - -								

3 Antenna Inventory

The following antenna inventory on this and the following page, were obtained by the customer and were utilized to create the site model diagrams:

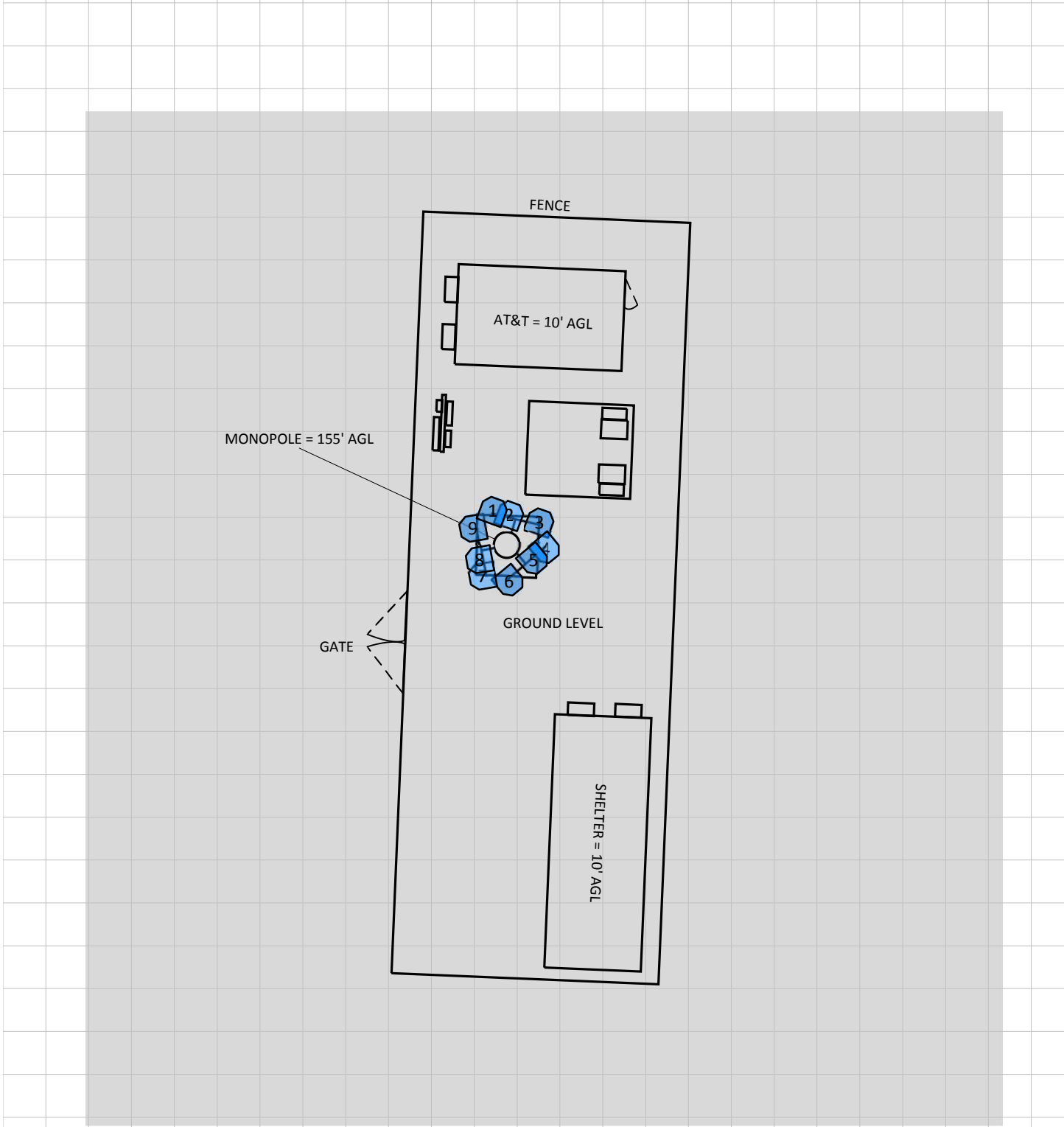
Ant ID	Operator	Antenna Make & Model	Type	TX Freq (MHz)	Az (Deg)	Hor BW (Deg)	Ant Len (ft)	Ant Gain (dBd)	2G GSM Radio(s)	3G UMTS Radio(s)	4G Radio(s)	Total ERP (Watts)	X	Y	Z (AGL)
1	AT&T MOBILITY LLC	Powerwave 7770	Panel	850	20	82	4.6	11.51	0	2	0	1132.6	54.1'	88.7'	140.7'
2	AT&T MOBILITY LLC (Proposed)	CCI Antennas HPA-65R-BUU-H6	Panel	737	20	66.2	6	11.68	0	0	1	1475.7	56'	88.2'	140'
2	AT&T MOBILITY LLC (Proposed)	CCI Antennas HPA-65R-BUU-H6	Panel	1900	20	61.1	6	14.53	0	0	1	4842.1	56'	88.2'	140'
3	AT&T MOBILITY LLC (Decommissioned)	Powerwave 7770	Panel	850	20	82	4.6	11.51	0	0	0	0	59.6'	87.4'	140.7'
4	AT&T MOBILITY LLC	Powerwave 7770	Panel	850	140	82	4.6	11.51	0	2	0	1132.6	60.2'	84.2'	140.7'
5	AT&T MOBILITY LLC (Proposed)	CCI Antennas HPA-65R-BUU-H6	Panel	737	140	66.2	6	11.68	0	0	1	1475.7	58.9'	83'	140'
5	AT&T MOBILITY LLC (Proposed)	CCI Antennas HPA-65R-BUU-H6	Panel	1900	140	61.1	6	14.53	0	0	1	4842.1	58.9'	83'	140'
6	AT&T MOBILITY LLC (Decommissioned)	Powerwave 7770	Panel	850	140	82	4.6	11.51	0	0	0	0	56'	80.4'	140.7'
7	AT&T MOBILITY LLC	Powerwave 7770	Panel	850	260	82	4.6	11.51	0	2	0	1132.6	52.9'	81.1'	140.7'
8	AT&T MOBILITY LLC (Proposed)	CCI Antennas HPA-65R-BUU-H6	Panel	737	260	66.2	6	11.68	0	0	1	1475.7	52.5'	83'	140'
8	AT&T MOBILITY LLC (Proposed)	CCI Antennas HPA-65R-BUU-H6	Panel	1900	260	61.1	6	14.53	0	0	1	4842.1	52.5'	83'	140'
9	AT&T MOBILITY LLC (Decommissioned)	Powerwave 7770	Panel	850	260	82	4.6	11.51	0	0	0	0	51.8'	86.7'	140.7'

NOTE: X, Y and Z indicate relative position of the bottom of the antenna to the origin location on the site, displayed in the model results diagram. Specifically, the Z reference indicates the bottom of the antenna height above the main site level unless otherwise indicated. The distance to the bottom of the antenna is calculated by subtracting half of the length of the antenna from the antenna centerline. Effective Radiated Power (ERP) is provided by the operator or based on Sitesafe experience. The values used in the modeling may be greater than are currently deployed. For other operators at this site the use of "Generic" as an antenna model or "Unknown" for a wireless operator means the information with regard to operator, their FCC license and/or antenna information was not available nor could it be secured while on site. Other operator's equipment, antenna models and powers used for modeling are based on obtained information or Sitesafe experience.

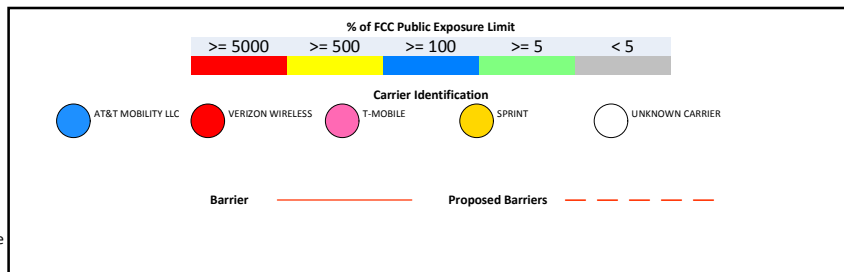
4 Emission Predictions

In the RF Exposure Simulations below all heights are reflected with respect to main site level. In most rooftop cases this is the height of the main rooftop and in other cases this can be ground level. Each different height area, rooftop, or platform level is labeled with its height relative to the main site level. Emissions are calculated appropriately based on the relative height and location of that area to all antennas.

The Antenna Inventory heights are referenced to the same level.

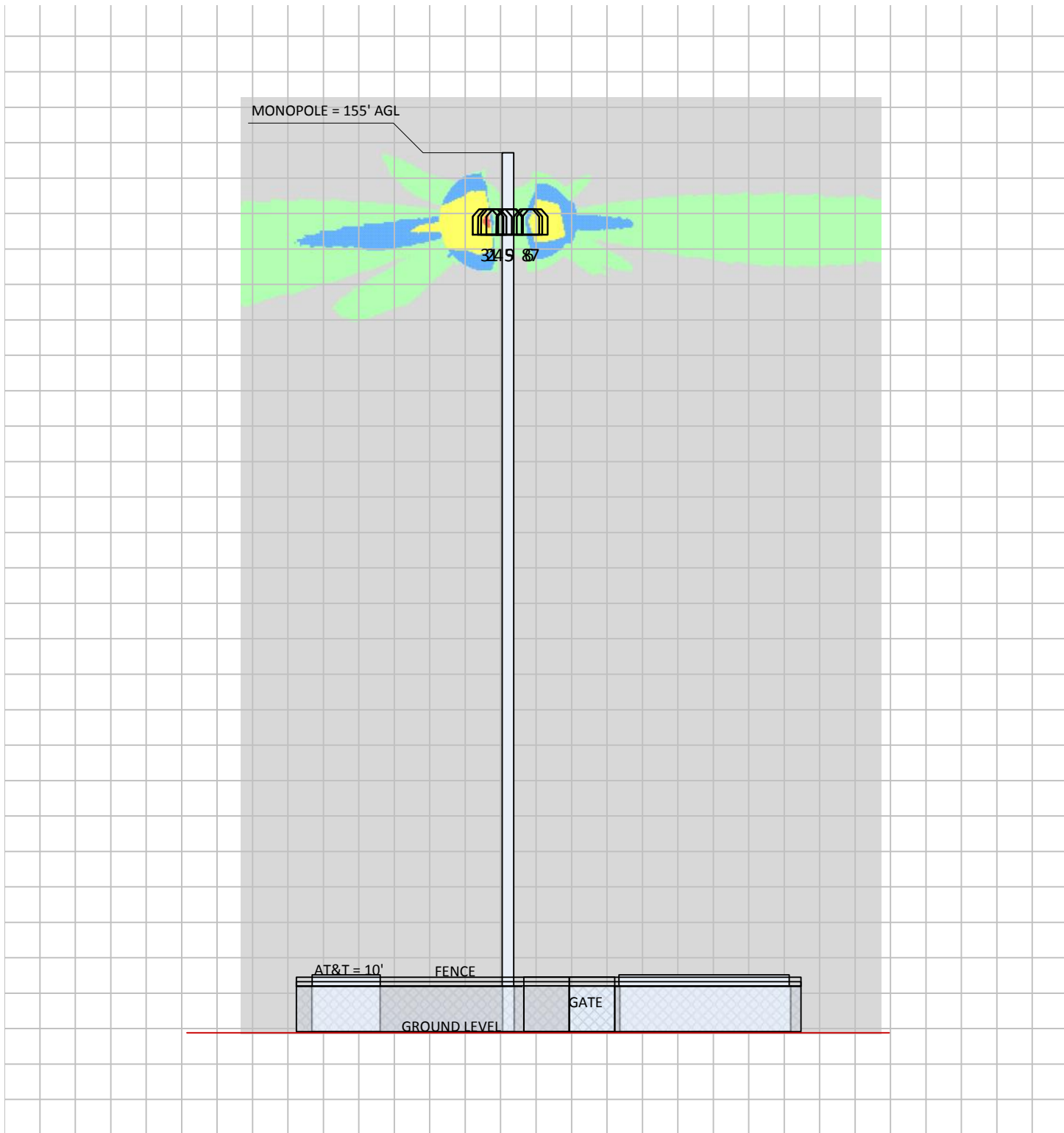


% of FCC Public Exposure Limit
Spatial average 0' - 6'

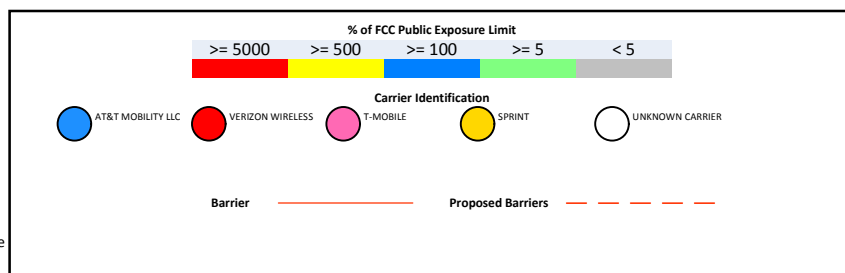


(Feet)
0 8.8 17.5
www.sitesafe.com
Site Name:North Branford Commerce Drive
12/27/2017 11:54:41 AM

RF Exposure Simulation For: North Branford Commerce Drive Elevation View



% of FCC Public Exposure Limit
Spatial average 0' - 6'



(Feet)
0 13.2 26.5
www.sitesafe.com
Site Name: North Branford Commerce Drive
12/27/2017 12:06:33 PM

SitesafeTC Version: 1.0.0.0 - 0.0.0.266
Sitesafe OET-65 Model
Near Field Boundary: 1.5 * Aperture
Reflection Factor: 1
Single Level (0)

5 Site Compliance

5.1 Site Compliance Statement

Upon evaluation of the cumulative RF emission levels from all operators at this site, RF hazard signage and antenna locations, Sitesafe has determined that:

AT&T Mobility, LLC will be compliant when the remediation recommended in Section 5.2 or other appropriate remediation is implemented.

The compliance determination is based on General Public RFE levels derived from theoretical modeling, RF signage placement, proposed antenna inventory and the level of restricted access to the antennas at the site. Any deviation from the AT&T Mobility, LLC's proposed deployment plan could result in the site being rendered non-compliant.

Modeling is used for determining compliance and the percentage of MPE contribution.

5.2 Actions for Site Compliance

Based on FCC regulations, common industry practice, and our understanding of AT&T Mobility, LLC RF Safety Policy requirements, this section provides a statement of recommendations for site compliance. Recommendations have been proposed based on our understanding of existing access restrictions, signage, and an analysis of predicted RFE levels.

AT&T Mobility, LLC will be made compliant if the following changes are implemented:

Site Access Locations

Information 1 sign required at the gate.

Yellow caution 2 sign required at the monopole base.

6 Reviewer Certification

The reviewer whose signature appears below hereby certifies and affirms:

That I am an employee of Sitesafe, Inc., in Arlington, Virginia, at which place the staff and I provide RF compliance services to clients in the wireless communications industry; and

That I am thoroughly familiar with the Rules and Regulations of the Federal Communications Commission (FCC) as well as the regulations of the Occupational Safety and Health Administration (OSHA), both in general and specifically as they apply to the FCC Guidelines for Human Exposure to Radio-frequency Radiation; and

That I have thoroughly reviewed this Site Compliance Report and believe it to be true and accurate to the best of my knowledge as assembled by and attested to by Sam Cosgrove.

December 27, 2017

Appendix A – Statement of Limiting Conditions

Sitesafe has provided computer generated model(s) in this Site Compliance Report to show approximate dimensions of the site, and the model is included to assist the reader of the compliance report to visualize the site area, and to provide supporting documentation for Sitesafe's recommendations.

Sitesafe may note in the Site Compliance Report any adverse physical conditions, such as needed repairs, that Sitesafe became aware of during the normal research involved in creating this report. Sitesafe will not be responsible for any such conditions that do exist or for any engineering or testing that might be required to discover whether such conditions exist. Because Sitesafe is not an expert in the field of mechanical engineering or building maintenance, the Site Compliance Report must not be considered a structural or physical engineering report.

Sitesafe obtained information used in this Site Compliance Report from sources that Sitesafe considers reliable and believes them to be true and correct. Sitesafe does not assume any responsibility for the accuracy of such items that were furnished by other parties. When conflicts in information occur between data collected by Sitesafe provided by a second party and data collected by Sitesafe, the data will be used.

Appendix B – Regulatory Background Information

FCC Rules and Regulations

In 1996, the Federal Communications Commission (FCC) adopted regulations for the evaluating of the effects of RF emissions in 47 CFR § 1.1307 and 1.1310. The guideline from the FCC Office of Engineering and Technology is Bulletin 65 (“OET Bulletin 65”), *Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields*, Edition 97-01, published August 1997. Since 1996 the FCC periodically reviews these rules and regulations as per their congressional mandate.

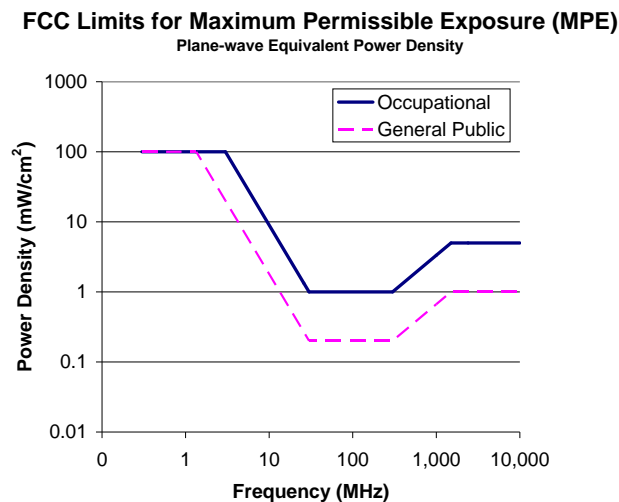
FCC regulations define two separate tiers of exposure limits: Occupational or “Controlled environment” and General Public or “Uncontrolled environment”. The General Public limits are generally five times more conservative or restrictive than the Occupational limit. These limits apply to *accessible* areas where workers or the general public may be exposed to Radio Frequency (RF) electromagnetic fields.

Occupational or Controlled limits apply in situations in which persons are exposed as a consequence of their employment and where those persons exposed have been made fully aware of the potential for exposure and can exercise control over their exposure.

An area is considered a Controlled environment when access is limited to these aware personnel. Typical criteria are restricted access (i.e. locked or alarmed doors, barriers, etc.) to the areas where antennas are located coupled with proper RF warning signage. A site with Controlled environments is evaluated with Occupational limits.

All other areas are considered Uncontrolled environments. If a site has no access controls or no RF warning signage it is evaluated with General Public limits.

The theoretical modeling of the RF electromagnetic fields has been performed in accordance with OET Bulletin 65. The Maximum Permissible Exposure (MPE) limits utilized in this analysis are outlined in the following diagram:



Limits for Occupational/Controlled Exposure (MPE)

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

Limits for General Population/Uncontrolled Exposure (MPE)

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

f = frequency in MHz

*Plane-wave equivalent power density

OSHA Statement

The General Duty clause of the OSHA Act (Section 5) outlines the occupational safety and health responsibilities of the employer and employee. The General Duty clause in Section 5 states:

(a) Each employer –

- (1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;
- (2) shall comply with occupational safety and health standards promulgated under this Act.

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.

OSHA has defined Radiofrequency and Microwave Radiation safety standards for workers who may enter hazardous RF areas. Regulation Standards 29 CFR § 1910.147 identify a generic Lock Out Tag Out procedure aimed to control the unexpected energization or start up of machines when maintenance or service is being performed.

Appendix C – Safety Plan and Procedures

The following items are general safety recommendations that should be administered on a site by site basis as needed by the carrier.

General Maintenance Work: Any maintenance personnel required to work immediately in front of antennas and / or in areas indicated as above 100% of the Occupational MPE limits should coordinate with the wireless operators to disable transmitters during their work activities.

Training and Qualification Verification: All personnel accessing areas indicated as exceeding the General Population MPE limits should have a basic understanding of EME awareness and RF Safety procedures when working around transmitting antennas. Awareness training increases a workers understanding to potential RF exposure scenarios. Awareness can be achieved in a number of ways (e.g. videos, formal classroom lecture or internet based courses).

Physical Access Control: Access restrictions to transmitting antennas locations is the primary element in a site safety plan. Examples of access restrictions are as follows:

- Locked door or gate
- Alarmed door
- Locked ladder access
- Restrictive Barrier at antenna (e.g. Chain link with posted RF Sign)

RF Signage: Everyone should obey all posted signs at all times. RF signs play an important role in properly warning a worker prior to entering into a potential RF Exposure area.

Assume all antennas are active: Due to the nature of telecommunications transmissions, an antenna transmits intermittently. Always assume an antenna is transmitting. Never stop in front of an antenna. If you have to pass by an antenna, move through as quickly and safely as possible thereby reducing any exposure to a minimum.

Maintain a 3 foot clearance from all antennas: There is a direct correlation between the strength of an EME field and the distance from the transmitting antenna. The further away from an antenna, the lower the corresponding EME field is.

Site RF Emissions Diagram: Section 4 of this report contains an RF Diagram that outlines various theoretical Maximum Permissible Exposure (MPE) areas at the site. The modeling is a worst case scenario assuming a duty cycle of 100% for each transmitting antenna at full power. This analysis is based on one of two access control criteria: General Public criteria means the access to the site is uncontrolled and anyone can gain access. Occupational criteria means the access is restricted and only properly trained individuals can gain access to the antenna locations.

Appendix D – RF Emissions

The RF Emissions Simulation(s) in this report display theoretical spatially averaged percentage of the Maximum Permissible Exposure for all systems at the site unless otherwise noted. These diagrams use modeling as prescribed in OET Bulletin 65 and assumptions detailed in Appendix E.

The key at the bottom of each RF Emissions Simulation indicates percentages displayed referenced to FCC General Public Maximum Permissible Exposure (MPE) limits. Color coding on the diagram is as follows:

- Areas indicated as Gray are predicted to be below 5% of the MPE limits. **Gray represents areas more than 20 times below the most conservative exposure limit.**
- Green represents areas are predicted to be between 5% and 100% of the MPE limits. **Green areas are accessible to anyone.**
- Blue represents areas predicted to exceed the General Public MPE limits but are less than Occupational limits. **Blue areas should be accessible only to RF trained workers.**
- Yellow represents areas predicted to exceed Occupational MPE limits. **Yellow areas should be accessible only to RF trained workers able to assess current exposure levels.**
- Red represents areas predicted to have exposure more than 10 times the Occupational MPE limits. **Red indicates that the RF levels must be reduced prior to access.** An RF Safety Plan is required which outlines how to reduce the RF energy in these areas prior to access.

Appendix E – Assumptions and Definitions

General Model Assumptions

In this site compliance report, it is assumed that all antennas are operating at **full power at all times**. Software modeling was performed for all transmitting antennas located on the site. Sitesafe has further assumed a 100% duty cycle and maximum radiated power.

The modeling is based on recommendations from the FCC's OET-65 bulletin with the following variances per AT&T guidance. Reflection has not been considered in the modeling, i.e. the reflection factor is 1.0. The near / far field boundary has been set to 1.5 times the aperture height of the antenna and modeling beyond that point is the lesser of the near field cylindrical model and the far field model taking into account the gain of the antenna.

The site has been modeled with these assumptions to show the maximum RF energy density. Areas modeled with exposure greater than 100% of the General Public MPE level may not actually occur, but are shown as a prediction that could be realized. Sitesafe believes these areas to be safe for entry by occupationally trained personnel utilizing appropriate personal protective equipment (in most cases, a personal monitor).

Use of Generic Antennas

For the purposes of this report, the use of "Generic" as an antenna model, or "Unknown" for an operator means the information about a carrier, their FCC license and/or antenna information was not provided and could not be obtained while on site. In the event of unknown information, Sitesafe will use our industry specific knowledge of equipment, antenna models, and transmit power to model the site. If more specific information can be obtained for the unknown measurement criteria, Sitesafe recommends remodeling of the site utilizing the more complete and accurate data. Information about similar facilities is used when the service is identified and associated with a particular antenna. If no information is available regarding the transmitting service associated with an unidentified antenna, using the antenna manufacturer's published data regarding the antenna's physical characteristics makes more conservative assumptions.

Where the frequency is unknown, Sitesafe uses the closest frequency in the antenna's range that corresponds to the highest Maximum Permissible Exposure (MPE), resulting in a conservative analysis.

Definitions

5% Rule – The rules adopted by the FCC specify that, in general, at multiple transmitter sites actions necessary to bring the area into compliance with the guidelines are the shared responsibility of all licensees whose transmitters produce field strengths or power density levels at the area in question in excess of 5% of the exposure limits. In other words, any wireless operator that contributes 5% or greater of the MPE limit in an area that is identified to be greater than 100% of the MPE limit is responsible taking corrective actions to bring the site into compliance.

Compliance – The determination of whether a site is safe or not with regards to Human Exposure to Radio Frequency Radiation from transmitting antennas.

Decibel (dB) – A unit for measuring power or strength of a signal.

Duty Cycle – The percent of pulse duration to the pulse period of a periodic pulse train. Also, may be a measure of the temporal transmission characteristic of an intermittently transmitting RF source such as a paging antenna by dividing average transmission duration by the average period for transmission. A duty cycle of 100% corresponds to continuous operation.

Effective (or Equivalent) Isotropic Radiated Power (EIRP) – The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna.

Effective Radiated Power (ERP) – In a given direction, the relative gain of a transmitting antenna with respect to the maximum directivity of a half wave dipole multiplied by the net power accepted by the antenna from the connecting transmitter.

Gain (of an antenna) – The ratio of the maximum intensity in a given direction to the maximum radiation in the same direction from an isotropic radiator. Gain is a measure of the relative efficiency of a directional antennas as compared to an omni directional antenna.

General Population/Uncontrolled Environment – Defined by the FCC, as an area where exposure to RF energy may occur to persons who are **unaware** of the potential for exposure and who have no control of their exposure. General Population is also referenced as General Public.

Generic Antenna – For the purposes of this report, the use of "Generic" as an antenna model means the antenna information was not provided and could not be obtained while on site. In the event of unknown information, Sitesafe will use our industry specific knowledge of antenna models to select a worst case scenario antenna to model the site.

Isotropic Antenna – An antenna that is completely non-directional. In other words, an antenna that radiates energy equally in all directions.

Maximum Measurement – This measurement represents the single largest measurement recorded when performing a spatial average measurement.

Maximum Permissible Exposure (MPE) – The maximum levels of RF exposure a person may be exposed to without harmful effect and with acceptable safety factor.

Occupational/Controlled Environment – Defined by the FCC, as an area where Radio Frequency Radiation (RFR) exposure may occur to persons who are **aware** of the

potential for exposure as a condition of employment or specific activity and can exercise control over their exposure.

OET Bulletin 65 – Technical guideline developed by the FCC's Office of Engineering and Technology to determine the impact of Radio Frequency radiation on Humans. The guideline was published in August 1997.

OSHA (Occupational Safety and Health Administration) – Under the Occupational Safety and Health Act of 1970, employers are responsible for providing a safe and healthy workplace for their employees. OSHA's role is to promote the safety and health of America's working men and women by setting and enforcing standards; providing training, outreach and education; establishing partnerships; and encouraging continual process improvement in workplace safety and health. For more information, visit www.osha.gov.

Radio Frequency (RF) – The frequencies of electromagnetic waves which are used for radio communications. Approximately 3 kHz to 300 GHz.

Radio Frequency Exposure (RFE) – The amount of RF power density that a person is or might be exposed to.

Spatial Average Measurement – A technique used to average a minimum of ten (10) measurements taken in a ten (10) second interval from zero (0) to six (6) feet. This measurement is intended to model the average power density an average sized human will be exposed to at a location.

Transmitter Power Output (TPO) – The radio frequency output power of a transmitter's final radio frequency stage as measured at the output terminal while connected to a load.

Appendix F – References

The following references can be followed for further information about RF Health and Safety.

Sitesafe, Inc.

<http://www.sitesafe.com>

FCC Radio Frequency Safety

<http://www.fcc.gov/encyclopedia/radio-frequency-safety>

National Council on Radiation Protection and Measurements (NCRP)

<http://www.ncrponline.org>

Institute of Electrical and Electronics Engineers, Inc., (IEEE)

<http://www.ieee.org>

American National Standards Institute (ANSI)

<http://www.ansi.org>

Environmental Protection Agency (EPA)

<http://www.epa.gov/radtown/wireless-tech.html>

National Institutes of Health (NIH)

<http://www.niehs.nih.gov/health/topics/agents/emf/>

Occupational Safety and Health Agency (OSHA)

<http://www.osha.gov/SLTC/radiofrequencyradiation/>

International Commission on Non-Ionizing Radiation Protection (ICNIRP)

<http://www.icnirp.org>

World Health Organization (WHO)

<http://www.who.int/peh-emf/en/>

National Cancer Institute

<http://www.cancer.gov/cancertopics/factsheet/Risk/cellphones>

American Cancer Society (ACS)

http://www.cancer.org/docroot/PED/content/PED_1_3X_Cellular_Phone_Towers.asp?sitearea=PED

European Commission Scientific Committee on Emerging and Newly Identified Health Risks

http://ec.europa.eu/health/ph_risk/committees/04_scenihp/docs/scenihp_o_022.pdf

Fairfax County, Virginia Public School Survey

<http://www.fcps.edu/fts/safety-security/RFEESurvey/>

UK Health Protection Agency Advisory Group on Non-ionising Radiation

http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1317133826368

Norwegian Institute of Public Health

<http://www.fhi.no/dokumenter/545eea7147.pdf>

IMPORTANT!

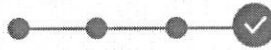


771231510630

Ship date:

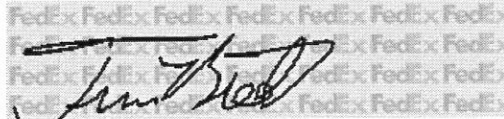
Tue 1/16/2018

Smartlink LLC
Haleluya Hall
Bldg #3, Suite 102
85 Rangeway Rd
NORTH BILLERICA, MA US 01862
978 235-6131



Delivered

Signed for by: J.BROCKETT



Actual delivery:

Thu 1/18/2018 1:21 pm

26 Commerce Drive
NORTH BRANFORD, CT US 06471

Travel History

Date/Time	Activity	Location
- 1/18/2018 - Thursday		
1:21 pm	Delivered	NORTH BRANFORD, CT
10:27 am	On FedEx vehicle for delivery	NORTH HAVEN, CT
10:12 am	At local FedEx facility	NORTH HAVEN, CT
8:42 am	At destination sort facility	EAST GRANBY, CT
5:15 am	Departed FedEx location	MEMPHIS, TN
- 1/17/2018 - Wednesday		
12:29 pm	Arrived at FedEx location	MEMPHIS, TN
- 1/16/2018 - Tuesday		
8:20 pm	Left FedEx origin facility	WILMINGTON, MA
6:59 pm	Picked up	WILMINGTON, MA
4:03 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking Number	771231510630	Service	FedEx 2Day
Reference	CTL02270	Weight	1 lbs / 0.45 kgs
Delivery attempts	1	Delivered To	Shipping/Receiving
Total pieces	1	Total shipment weight	1 lbs / 0.45 kgs
Terms	Not Available	Shipper reference	CTL02270
Packaging	FedEx Envelope	Special handling section	Deliver Weekday
Standard transit	1/18/2018 by 4:30 pm		

IMPORTANT!
Ex

771226342230

Ship date:

Tue 1/16/2018

Smartlink LLC
Haleluya Haile
Bldg #3, Suite 102
85 Rangeway Rd
NORTH BILLERICA, MA US 01862
978 235-6131



Delivered

Signed for by: G.COX

Actual delivery:

Thu 1/18/2018 1:02 pm

909 Foxon Road
NORTH BRANFORD, CT US 06471

Travel History

▲ Date/Time	Activity	Location
■ 1/18/2018 - Thursday		
1:02 pm	Delivered	NORTH BRANFORD, CT
10:27 am	On FedEx vehicle for delivery	NORTH HAVEN, CT
10:15 am	At local FedEx facility	NORTH HAVEN, CT
8:42 am	At destination sort facility	EAST GRANBY, CT
5:15 am	Departed FedEx location	MEMPHIS, TN
■ 1/17/2018 - Wednesday		
12:29 pm	Arrived at FedEx location	MEMPHIS, TN
■ 1/16/2018 - Tuesday		
8:20 pm	Left FedEx origin facility	WILMINGTON, MA
6:59 pm	Picked up	WILMINGTON, MA
11:11 am	Shipment information sent to FedEx	

Shipment Facts

Tracking Number	771226342230	Service	FedEx 2Day
Reference	CTL02270	Weight	1 lbs / 0.45 kgs
Delivery attempts	1	Delivered To	Receptionist/Front Desk
Total pieces	1	Total shipment weight	1 lbs / 0.45 kgs
Terms	Not Available	Shipper reference	CTL02270
Packaging	FedEx Envelope	Special handling section	Deliver Weekday
Standard transit	1/18/2018 by 4:30 pm		

IMPORTANT!



771226416144

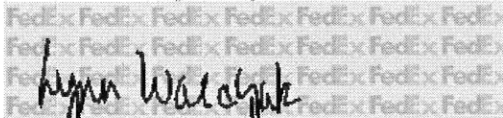
Ship date:
Tue 1/16/2018

Smartlink LLC
Halekuya Hall
Bldg #3, Suite 102
85 Rangeway Rd
NORTH BILLERICA, MA US 01862
978 235-6131



Delivered

Signed for by: L.LYNN W



Actual delivery:
Thu 1/18/2018 1:03 pm

909 Foxon Road
NORTH BRANFORD, CT US 06471

Travel History

▲ Date/Time	Activity	Location
■ 1/18/2018 - Thursday		
1:03 pm	Delivered	NORTH BRANFORD, CT
10:27 am	On FedEx vehicle for delivery	NORTH HAVEN, CT
10:12 am	At local FedEx facility	NORTH HAVEN, CT
8:42 am	At destination sort facility	EAST GRANBY, CT
5:15 am	Departed FedEx location	MEMPHIS, TN
■ 1/17/2018 - Wednesday		
12:29 pm	Arrived at FedEx location	MEMPHIS, TN
■ 1/16/2018 - Tuesday		
8:20 pm	Left FedEx origin facility	WILMINGTON, MA
6:59 pm	Picked up	WILMINGTON, MA
11:21 am	Shipment information sent to FedEx	

Shipment Facts

Tracking Number	771226416144	Service	FedEx 2Day
Reference	CTL02270	Weight	1 lbs / 0.45 kgs
Delivery attempts	1	Delivered To	Receptionist/Front Desk
Total pieces	1	Total shipment weight	1 lbs / 0.45 kgs
Terms	Not Available	Shipper reference	CTL02270
Packaging	FedEx Envelope	Special handling section	Deliver Weekday
Standard transit	1/18/2018 by 4:30 pm		

IMPORTANT!

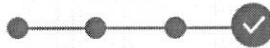


771226386034

Ship date:

Tue 1/16/2018

Smartlink LLC
Haleiyua Hoile
Bldg #3, Suite 102
85 Rangeway Rd
NORTH BILLERICA, MA US 01862
978 235-6131



Delivered

Signed for by: B BERRY



Actual delivery:

Thu 1/18/2018 2:12 pm

8051 Congress Avenue
BOCA RATON, FL US 33487

Travel History

Date/Time	Activity	Location
- 1/18/2018 - Thursday		
2:12 pm	Delivered	BOCA RATON, FL
12:36 pm	Delivery exception	BOCA RATON, FL
	Package at station, arrived after courier dispatch	
12:09 pm	On FedEx vehicle for delivery	BOCA RATON, FL
11:50 am	At local FedEx facility	BOCA RATON, FL
9:00 am	At destination sort facility	FORT LAUDERDALE, FL
6:01 am	Departed FedEx location	MEMPHIS, TN
- 1/17/2018 - Wednesday		
12:29 pm	Arrived at FedEx location	MEMPHIS, TN
- 1/16/2018 - Tuesday		
8:20 pm	Left FedEx origin facility	WILMINGTON, MA
6:59 pm	Picked up	WILMINGTON, MA
11:21 am	Shipment information sent to FedEx	

Shipment Facts

Tracking Number	771226386034	Service	FedEx 2Day
Reference	CTL02270	Weight	1 lbs / 0.45 kgs
Delivery attempts	1	Delivered To	Receptionist/Front Desk
Total pieces	1	Total shipment weight	1 lbs / 0.45 kgs
Terms	Not Available	Shipper reference	CTL02270
Packaging	FedEx Envelope	Special handling section	Deliver Weekday
Standard transit	1/18/2018 by 4:30 pm		