

STATE OF CONNECTICUT *CONNECTICUT SITING COUNCIL* Ten Franklin Square, New Britain, CT 06051 Phone: (860) 827-2935 Fax: (860) 827-2950 E-Mail: siting.council@ct.gov Web Site: portal.ct.gov/csc

### VIA ELECTRONIC MAIL

January 6, 2023

Domenica Tatasciore Site Acquisition Specialist Crown Castle 1800 W. Park Drive Westborough, MA 01581 Domenica.Tatasciore@crowncastle.com

**RE:** EM-AT&T-034-221109 – AT&T notice of intent to modify an existing telecommunications facility located at 66 Sugar Hollow Road, Danbury, Connecticut.

Dear Domenica Tatasciore:

The Connecticut Siting Council (Council) is in receipt of your correspondence of January 5, 2023 submitted in response to the Council's November 16, 2022 notification of an incomplete request for exempt modification with regard to the above-referenced matter.

The submission renders the request for exempt modification complete and the Council will process the request in accordance with the Federal Communications Commission 60-day timeframe.

Thank you for your attention and cooperation.

Sincerely,

Maluikhael

Melanie A. Bachman Executive Director

MAB/ANM/lm

From: Tatasciore, Domenica <Domenica.Tatasciore@crowncastle.com>
Sent: Thursday, January 5, 2023 11:39 AM
To: Robidoux, Evan <Evan.Robidoux@ct.gov>
Cc: CSC-DL Siting Council <Siting.Council@ct.gov>; Chapman, Veronica

Veronica.Chapman@crowncastle.com>
Subject: RE: Council Extension Letter for EM-AT&T-034-221109 (Sugar Hollow Road, Danbury)
Importance: High

Good morning,

With reference to the documents cited in the Council's Incomplete Letter, dated November 16, 2022, please find attached the following revised documents that the letter asked me to send electronically prior to the January 9 deadline:

- 1. Construction Drawings;
- 2. Structural Analysis;
- 3. Mount Analysis;
- 4. EME.

Please advise if you have any questions.

Also, please note that out of the 3 submissions deemed incomplete and that received extensions, this marks the last remaining application that addresses the outstanding items as the previous 2 were already submitted to your office via email.

Take care,

#### DOMENICA TATASCIORE

Site Acquisition Specialist T: 508-621-9161

#### **CROWN CASTLE**

1800 West Park Drive, Westborough, MA 01581 CrownCastle.com



**AT&T SITE NUMBER: AT&T SITE NAME:** AT&T FA CODE: **AT&T PACE NUMBER: AT&T PROJECT:** 

**CTL05069 BENNETT POND** 10070924 MRCTB062143, MRCTB062175, MRCTB066614, MRCTB066596 LTE 4C, LTE 3C

SI	TE II	NFORMATION	7	DRAWING IND
CROWN CASTLE USA	INC.	BENNETT POND	SHEET #	SHEET DESCRIP
SITE NAME:			T-1	TITLE SHEET
SITE ADDRESS:		66 SUGAR HOLLOW ROAD DANBURY, CT 06810	T-2	GENERAL NOTES
COUNTY:		FAIRFIELD	C-1.1	SITE PLAN
MAP/PARCEL #:		G250100000	C-1.2	EQUIPMENT PLANS
AREA OF CONSTRUCT	TION:	EXISTING	C-2	TOWER ELEVATION & ANTENNA
LATITUDE: Longitude:		41.336110	C-3	ANTENNA SCHEDULE
LAT/LONG TYPE:		NAD83	C-4	EQUIPMENT DETAILS
GROUND ELEVATION	J:	534'	C-5	EQUIPMENT SPECS.
CURRENT ZONING:		LCI-40	G-1	GROUNDING DETAILS
JURISDICTION:	ICATION	U	G-2	GROUNDING DETAILS
TYPE OF CONSTRUCT	ION:	IIB	ATTACHED	PLUMBING DIAGRAM
A.D.A. COMPLIANCE:		FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION	ATTACHED	AHCP CORNER PLATE KIT
PROPERTY OWNER:		SUGAR HOLLOW HOLDING LLC PEATT LUCILLE, 202-3 MAMANASCO RD RIDGEFIELD, CT 06877		
TOWER OWNER:		CROWN CASTLE USA INC 2000 CORPORATE DRIVE CANONSBURG, PA 15317		
CARRIER/APPLICANT	:	AT&T TOWER ASSET GROUP 575 MOROSGO DRIVE ATLANTA, GA 30324-3300		
ELECTRIC PROVIDER	:	NORTHEAST UTILITIES 800-286-2000		
TELCO PROVIDER:		LIGHTOWER 888-583-4237		
	PRO	JECT TEAM		
A&E FIRM:	B+T GRO 1717 S. BO TULSA, O MARVIN marvin.ph	DUP DULDER AVE. DK 74119 PHILLIPS iillips@btgrp.com		
CROWN CASTLE USA INC. DISTRICT CONTACTS:	3 CORPC CLIFTON	DRATE PARK DRIVE, SUITE 101 N PARK, NY 12065		
	VERONI VERONI	CA CHAPMAN - PROJECT MANAGER CA.CHAPMAN@CROWNCASTLE.COM		
	JASON E JASON.E	O'AMICO - CONSTRUCTION MANAGER DAMICO@CROWNCASTLE.COM		
	НЕАТНЕ НЕАТНЕ	ER MILLER - AES ER.MILLER@CROWNCASTLE.COM	ALL DRAY SIZE. C DIMEN IMMEI DISCREF	WINGS CONTAINED HEREIN ARE F ONTRACTOR SHALL VERIFY ALL PI SIONS AND CONDITIONS ON THE DIATELY NOTIFY THE ENGINEER I PANCIES BEFORE PROCEEDING WI RESPONSIBLE FOR SAM
<u>NOTE:</u> PRIOR TO ACCESSING CROWN NOC AT (800)	/ENTERIN 788-7011 &	IG THE SITE YOU MUST CONTACT THE CROWN CONSTRUCTION MANAGER.		CALL CONNECTICUT ONE C. (800) 922-4455 CBYD.COM CALL 2 WORKING DAYS BEFORE YOU DIG!



# CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS

- 1. NOTICE TO PROCEED- NO WORK SHALL COMMENCE PRIOR TO CROWN CASTLE USA INC. WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN CASTLE USA INC. NOC AT 800-788-7011 & THE CROWN CASTLE USA INC. CONSTRUCTION MANAGER.
- "LOOK UP" CROWN CASTLE USA INC. SAFETY CLIMB REQUIREMENT: THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR. IMPACT TO THE ANCHORAGE POINTS IN ANY WAY. OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR CROWN CASTLE USA INC. POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.
- PRIOR TO THE START OF CONSTRUCTION, ALL REQUIRED JURISDICTIONAL PERMITS SHALL BE OBTAINED. THIS INCLUDES, BUT IS NOT LIMITED TO, BUILDING, ELECTRICAL, MECHANICAL, FIRE, FLOOD ZONE, ENVIRONMENTAL, AND ZONING. AFTER ONSITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS SHALL BE SATISFIED AND CLOSED OUT ACCORDING TO LOCAL JURISDICTIONAL REQUIREMENTS
- ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN, AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND CROWN CASTLE USA INC STANDARD CED-STD-10253, INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION, TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH ANSI/TIA-322 (LATEST EDITION).
- 5. ALL SITE WORK TO COMPLY WITH QAS-STD-10068 "INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON CROWN CASTLE USA INC. TOWER SITE," CED-STD-10294 "STANDARD FOR INSTALLATION OF MOUNTS AND APPURTENANCES," AND LATEST VERSION OF ANSI/TIA-1019-A-2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS.
- IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY CROWN CASTLE USA INC. PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. 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 THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES. ORDINANCES AND APPLICABLE REGULATIONS.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION. 10. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK. SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. 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 WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION E) CONSTRUCTION SAFETY PROCEDURES.
- 11. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
- 12. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- 13. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, TOWER OWNER, CROWN CASTLE USA INC., AND/OR LOCAL UTILITIES.
- 14. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.
- 15. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
- 16. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED URFACE APPLICATION. 17. THE AREAS OF THE OWNERS 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 AS SPECIFIED ON THE CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS. 18. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES
- FOR EROSION AND SEDIMENT CONTROL. 19. 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 OWNER. 20. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL
- CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION. 21. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED
- FROM SITE ON A DAILY BASIS.
- 22. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

# GREENFIELD GROUNDING NOTES:

- ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC. THE CONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND
- ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.
- 4. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS
- METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT. EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 BARE SOLID TINNED
- COPPER FOR OUTDOOR BTS. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED BACK TO BACK CONNECTIONS ON OPPOSITE SIDE OF THE GROUND BUS ARE PERMITTED. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
- USE OF 90' BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45' BENDS CAN BE ADEQUATELY SUPPORTED 11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
- 12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
- 13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
- 14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR. 15. APPROVED ANTIOXIDANT COATINGS (i.e. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS. 16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
- 17. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC. 18. BOND ALL METALLIC OBJECTS WITHIN 6 ft OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR. 19. GROUND CONDUCTORS USED FOR THE FACILITY GROUNDING AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS,
- METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (i.e., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT. 20. ALL GROUNDS THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 BARE SOLID TINNED COPPER IN 3/4" NON-METALLIC, FLEXIBLE CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD-WELD TERMINATION POINT. THE EXPOSED END OF THE CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).
- 21. BUILDINGS WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY).

# GENERAL NOTES:

- CONTRACTOR: CARRIER: AT&T TOWER OWNER: CROWN CASTLE USA INC.
- MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
- ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.

- RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- WITH ANY SUCH CHANGE OF INSTALLATION.
- DRAWINGS
- DESIGNATED LOCATION.
- A DAILY BASIS.

# CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

- TO BE 1000 psf.
- PLACEMENT
- TYPE II PORTLAND CEMENT WITH A MAXIMUM WATER-TO-CEMENT RATIO (W/C) OF 0.45.
- AS FOLLOWS:
- #4 BARS AND SMALLER.... #5 BARS AND LARGER ....
- ON DRAWINGS: CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH ...
- CONCRETE EXPOSED TO EARTH OR WEATHER: #6 BARS AND LARGER... #5 BARS AND SMALLER ... CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
- SLAB AND WALLS ..... BEAMS AND COLUMNS ...
- OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

### FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY: GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION

THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. IT IS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKPEOPLE WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR

THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, FORMWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER OR HIS REPRESENTATIVE WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF THE FINISHED STRUCTURE ONLY. NOTES AND DETAILS IN THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT,

AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED CONTACT THE ENGINEER OF RECORD. SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO

ASSIST IN THE FABRICATION AND/OR PLACEMENT OF CONSTRUCTION ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION OR CUTTING OF ANY NEW OR EXISTING CONSTRUCTION ELEMENTS. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE

PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CROWN CASTLE.

ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. 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 THE 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.

THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S

10. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CARRIER AND CROWN CASTLE PRIOR TO PROCEEDING

CONTRACTOR IS TO PERFORM A SITE INVESTIGATION AND IS TO DETERMINE THE BEST ROUTING OF ALL CONDUITS FOR POWER, AND TELCO AND FOR GROUNDING CABLES AS SHOWN IN THE POWER, TELCO, AND GROUNDING PLAN

12. 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 CROWN CASTLE USA INC. 13. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S

14. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON

ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE. UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED

3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 3000 psi AT 28 DAYS, UNLESS NOTED OTHERWISE. NO MORE THAN 90 MINUTES SHALL ELAPSE FROM BATCH TIME TO TIME OF PLACEMENT UNLESS APPROVED BY THE ENGINEER OF RECORD. TEMPERATURE OF CONCRETE SHALL NOT EXCEED 90° f AT TIME OF

CONCRETE EXPOSED TO FREEZE-THAW CYCLES SHALL CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE

ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. ALL SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS NOTED OTHERWISE. ALL HOOKS SHALL BE STANDARD 90 DEGREE HOOKS, UNLESS NOTED OTHERWISE. YIELD STRENGTH (Fy) OF STANDARD DEFORMED BARS ARE

.40 ksi ..60 ksi THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE

..1 - 1/2"A TOOLED EDGE OR A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED

.1-1/2"

# ELECTRICAL INSTALLATION NOTES:

- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
- CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
- WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
- 4.1. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING THAT SHALL BE GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 22,000 AIC MINIMUM. VERYIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110.24 NEC OR THE MOST CURRENT ADOPTED CODE PRE THE GOVERNING JURISDICTION.
- EACH END OF EVERY POWER PHASE CONDUCTOR, GROUNDING CONDUCTOR, AND TELCO CONDUCTOR OR CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.
- 6. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH LAMICOID TAGS SHOWING THEIR RATED VOLTAGE, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (i.e. PANEL BOARD AND CIRCUIT ID'S).
- PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS 8. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES
- ). ALL POWER AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE COPPER CONDUCTOR (#14 OR LARGER) WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
- 10. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE COPPER CONDUCTOR (#6 OR LARGER) WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
- 11. POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI-CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED
- 12. POWER AND CONTROL WIRING FOR USE IN CABLE TRAY SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 OR LARGER), WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
- 13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION NOT LESS THAN 75° C (90° C IF AVAILABLE).
- 14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
- 15. ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- 16. ELECTRICAL METALLIC TUBING (EMT) OR METAL-CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS. 17. SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT
- 18. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- 19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
- 20. CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND THE NEC. 21. WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS
- (WIREMOLD SPECMATE WIREWAY).
- 22. SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL) 23. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES (i.e. POWDER-ACTUATED) FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE
- 24. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL. SHALL MEET OR EXCEED UL 50 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND NEMA 3R (OR BETTER) FOR EXTERIOR LOCATIONS.
- METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
- 26. NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2 (NEWEST REVISION) AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
- 27. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CARRIER AND/OR CROWN CASTLE USA INC. BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- 28. THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
- 29. INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "AT&T". 30. ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.

COND	_OR CODE							
SYSTEM	CONDUCTOR	COLOR						
	A PHASE	BLACK						
120/2401/100	B PHASE	RED						
120/2400, 10	NEUTRAL	WHITE						
	GROUND	GREEN						
	A PHASE	BLACK						
	B PHASE	RED						
120/208V, 3Ø	C PHASE	BLUE						
	NEUTRAL	WHITE						
	GROUND	GREEN						
	A PHASE	BROWN						
	B PHASE	ORANGE OR PURPLE						
277/480V, 3Ø	C PHASE	YELLOW						
	NEUTRAL	GREY						
	GROUND	GREEN						
	POS (+)	RED**						
DC VOLTAGE	NEG (-)	BLACK**						



\* SEE NEC 210.5(C)(1) AND (2) \*\* POLARITY MARKED AT TERMINATION

# ABBREVIATIONS:

ANT	ANTENNA
(E)	EXISTING
FIF	FACILITY INTERFACE FRAME
GEN	GENERATOR
GPS	GLOBAL POSITIONING SYSTEM
GSM	GLUBAL SYSTEM FOR MUBILE
	LUNG TERM EVOLUTION
	MICROWAVE
	NATIONAL FLECTRIC CODE
(P)	PROPOSED
	POWER PLANT
OTY	OUANTITY
RECT	RECTIFIER
RBS	RADIO BASE STATION
RET	REMOTE ELECTRIC TILT
RFDS	RADIO FREQUENCY DATA SHEET
RRH	REMOTE RADIO HEAD
RRU	REMOTE RADIO UNIT
SIAD	SMART INTEGRATED DEVICE
IMA	IOWER MOUNIED AMPLIFIER

JINIVERSAL MUBILE TELECOMMUNICATIONS SYSTEM WORK POINT W.P.

# APWA UNIFORM COLOR CODE:

WHITE	PROPOSED EXCAVATION
PINK	TEMPORARY SURVEY MARKINGS
RED	ELECTRIC POWER LINES, CABLES, CONDUIT, AND LIGHTING CABLES
YELLOW	GAS, OIL, STEAM, PETROLEUM, OR GASEOUS MATERIALS
ORANGE	COMMUNICATION, ALARM OR SIGNAL LINES, CABLES, OR CONDUIT AND TRAFFIC LOOPS
BLUE	POTABLE WATER
PURPLE	RECLAIMED WATER, IRRIGATION, AND SLURRY LINES
GREEN	SEWERS AND DRAIN LINES



DANBURY, CT 06810

EXISTING 106'-0" MONOPOLE

# ISSUED FOR.

		10001		
REV	DATE	DRWN	DESCRIPTION	DES./QA
А	8/29/22	TDG	PRELIMINARY REVIEW	MTJ
0	10/17/22	MEH	CONSTRUCTION	MTJ
1	12/28/22	TDG	CONSTRUCTION	MTJ



MTS ENGINEERING P.L.L.C. BER:2386985 Expires 3/31/23

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER:

**REVISION:** 



SITE PLAN SCALE:

![](_page_4_Picture_4.jpeg)

![](_page_4_Picture_5.jpeg)

![](_page_5_Figure_0.jpeg)

8154.004.01.0001\_842857\_BENNETT POND.dwg - Sheet:C-1.2 - User: mjones - Dec 28, 2022 -

![](_page_6_Figure_0.jpeg)

ALPHA						FINAL (VERIF	_ EQU Fy Wit	IPN H	AENT SC Curren	CHEDU NT RF	JLE DS	)						
		ANTENNA				RADIO			DIPLEXER			TMA		SURGE PROTECTION		CABL	ËS	
POSITION	TECH.	STATUS/MANUFACTURER MODEL	AZIMUTH	RAD CENTER	QTY.	STATUS/MODEL	LOCATION	QTY.	STATUS	LOCATION	QTY.	STATUS/MANUFACTURER MODEL	QTY.	STATUS/MODEL	QTY.	STATUS/TYPE	SIZE	LENG
					1	(N) RADIO 4478 B14	TOWER								2		13/16"	158'
A2	LTE/5G	(N) CCI – TPA65R-BU6DA-K	0°	108'-0"	1	(N) 8843 B2/B66A	TOWER	_	_	_	_	_	_	(N)	2			
	,					(N) Y CABLE								DC9-48-60-24-8C-EV	1	(N) DC (N) FIBER	7/8" 3/8"	158'- 158'-
						_	_											
Δ.1	LTE /5G	(N) CCI - OPA65R-BU6DA	0°	108' 0"	1	(E) RADIO 4449 B5/B12	TOWER								-	_	-	-
A4				100 -0	1	(N) Y CABLE	TOWER								_	_	_	-
					1 1												<u> </u>	

BETA													
					1	(N) RADIO 4478 B14	TOWER						
B2	LTE/5G	(N) CCI – TPA65R–BU6DA–K	120°	108'-0"	1 1	(N) 8843 B2/B66A (N) Y CABLE	TOWER -	_	_	_	 _	 _	-
					-	_	_						
RA		(N) CCI - OPA65R-BU6DA	120°	108' 0"	1	(N) RADIO 4449 B5/B12			_	_		 _	-
04			120	100 -0	1	(N) Y CABLE		_	_			 _	-

# GAMMA

					1	(N) RADIO 4478 B14	TOWER											
C2	LTE/5G	(N) CCI – TPA65R–BU6DA–K	240°	108'-0"	1 1	(N) 8843 B2/B66A (N) Y CABLE	TOWER	_	-	_	_	_	-	_	-	_	—	_
					-	Ι	_											1
C4	LTE / 5G	(N) CCI – OPA65R-BU6DA	240°	108'-0"	1	(E) RADIO 4449 B5/B12	TOWER	_	_	_	_	_	_		_	_	_	
			210	100 0	1	(N) Y CABLE	TOWER								_	_	_	
														UNUSED FEEDLINES:	6	COAX	1-5/8"	158'-
													l					L

 $\frown$  FINAL ANTENNA AND FEEDLINE SCHEDULE

![](_page_7_Picture_9.jpeg)

![](_page_7_Figure_10.jpeg)

![](_page_8_Figure_0.jpeg)

![](_page_9_Figure_0.jpeg)

3154.004.01.0001\_842857\_BENNETT POND.dwg - Sheet:G-1 - User: mjones - Dec 28, 2022 - 9:56am

![](_page_10_Figure_1.jpeg)

![](_page_10_Picture_2.jpeg)

![](_page_10_Picture_3.jpeg)

![](_page_10_Picture_4.jpeg)

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**REVISION:** 

SHEET NUMBER:

![](_page_11_Figure_0.jpeg)

![](_page_12_Figure_0.jpeg)

![](_page_12_Picture_1.jpeg)

Antenna 1

Empty

![](_page_12_Picture_2.jpeg)

			PARTS LIST			
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	3	X-AHCP	ANGLE HANDRAIL CORNER PLATE		12.92	38.76
2	12	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.73	8.78
2	12	X-UB1300	1/2" X 3" X 5" X 2" U-BOLT (HDG.)		0.73	8.78
2	12	X-UB1358	1/2" X 3-5/8" X 5-1/2" X 3" U-BOLT (HDG.)		0.73	8.78
3	24	G12FW	1/2" HDG USS FLATWASHER		0.03	0.82
4	24	G12LW	1/2" HDG LOCKWASHER		0.01	0.33
5	24	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	1.72
					TOTAL WT. #	66.76

![](_page_13_Figure_1.jpeg)

TOLERANCE NOTES TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE: SAWED, SHEARED AND GAS CUT EDGES (# 0.0307) DRILLED AND GAS CUT HOLES (# 0.0307) - NO CONING OF HOLES LASER CUT EDGES AND HOLES (# 0.0107) - NO CONING OF HOLES BENDS ARE ± 1/2 DEGREE		CRIPTIC	ANGLE HANDF CORNER PLATE	RAIL E KIT		STIE 1	Engineering Support Team: 1-888-753-7446	Locations: New York, NY Atlanta, GA Los Angeles, CA Plymouth, IN Salem, OR Dallas, TX	
ALL OTHER MACHINING (± 0.030") ALL OTHER ASSEMBLY (± 0.060")	CPD N	0.	DRAWN BY CEK 5/13/2014	ENG. APPROVAL	PA	ART NO.	ICP		- 0 }
PROPRIETARY NOTE: THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT MUDISTRIES IS STRUCTLY PROHIBITED.	CLASS 81	sub 01	DRAWING USAGE CUSTOMER	снескед ву ВМС 5/23/2014	D١	wg. no. АН	ICP		т <u></u> 1

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

![](_page_14_Picture_2.jpeg)

Site Name:	BENNETT POND
Crown Castle Site#:	842857
Site ID:	CTV5069
Project Name:	LTE 4C
Address:	66 SUGAR HOLLOW ROAD, DANBURY, CT 06810
County:	FAIRFIELD
Latitude:	41.3366919
Longitude:	-73.4710989
Structure Type:	MONOPOLE
Property Owner:	SUGAR HOLLOW HOLDING LLC
Property Contact:	VERONICA CHAPMAN

# **AT&T Existing Facility**

**Report Information** 

**Report Writer:** 

Monti Kumar

Report Generated Date:

11-28-2022

## Site Compliance Statement

Compliance Status	Compliant
Cumulative General Population % MPE (Ground Level)	0.3473%

![](_page_15_Picture_0.jpeg)

November 28, 2022

#### Emissions Analysis for Site: CTV5069- BENNETT POND

MobileComm Professionals, Inc was directed to analyze the proposed AT&T facility located at **66 SUGAR HOLLOW ROAD**, **DANBURY**, **CT 06810**, for the purpose of determining whether the emissions from the Proposed AT&T Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of milliwatts per square centimeter ( $mW/cm^2$ ) or microwatts per square centimeter ( $\mu W/cm2$ ). The number of  $mW/cm^2$  or  $\mu W/cm2$  calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

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

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

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm<sup>2</sup>). The general population exposure limits for the 700 and 850 MHz Bands are approximately 0.467 mW/cm<sup>2</sup> and 0.567 mW/cm<sup>2</sup> respectively or 466.667  $\mu$ W/cm<sup>2</sup> and 566.667  $\mu$ W/cm<sup>2</sup> respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS), 2300 MHz (WCS), 3540 MHz (DoD Band) and 3840 MHz (C-Band) bands is 1 mW/cm<sup>2</sup> or 1000  $\mu$ W/cm<sup>2</sup>. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

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

Additional details can be found in FCC OET 65.

![](_page_16_Picture_0.jpeg)

### **1.** Theoretical Calculations: Methods and Procedures

MobileComm Professionals, Inc has performed theoretical modeling of the site using a software tool, RoofMaster® Version 35.5.26.2022, which incorporates calculation methodologies detailed in FCC OET 65. RoofMaster® uses a cylindrical model for conservative power density predictions within the near field of the antenna where the antenna pattern has not truly formed yet. Within this area power density values tend to decrease based upon an inverse distance function. At the point where it is appropriate for modeling to change from near-field calculations to far-field calculations, the power decreases inversely with the square of the distance. The modeling is based on worst-case assumptions in terms of transmitter power and duty cycle. No losses were included in the power calculations unless they were specifically provided for the project.

In OET 65, a far field model is presented to calculate the spatial peak power density. The RoofMaster® implementation of this model incorporates antenna manufacturer's horizontal and vertical pattern data to determine the power density in all directions. This model yields the power density at a single point in space. In order to determine the spatial power density for comparison to the FCC limits, the average of several points calculated within the human profile (0-6') must be conducted. RoofMaster® calculates seven power density values between 0-6' above the specified study plane and performs a linear spatial average.

The following table details the antennas and operating parameters for the AT&T antenna system as well as any other antenna systems at the site. This is based on antenna information provided by the client and data compiled from other sources where necessary. The data below was input into Roofmaster® to perform the theoretical exposure calculations at the ground.

The theoretical calculations performed in Roofmaster® determine the cumulative exposure at all sample points at ground level (0-6' spatial average). The results from highest cumulative sample point at ground level surrounding the site are displayed in the table below. The contribution from directional antennas to the maximum cumulative totals varies greatly depending on location; therefore, the contribution from one antenna sector at the highest calculated exposure point may be greater or less than other sectors since sectorized directional antennas are pointed in different directions and there is not much overlapping exposure.

The contribution to the cumulative power density and % MPE for each antenna/frequency band is listed in the table. The cumulative power density and cumulative % MPE are displayed at the bottom of the table.

![](_page_17_Picture_0.jpeg)

### 2. Antenna Inventory & Power Data

Sector	Ant ID	Operator	Antenna Mfg	Antenna Model	Antenna Type	FREQ. (MHz)	TECH.	AZ. (°)	н в w (°)	Antenna Gain (dBd)	Antenna Aperture (ft)	#of Channels	Transmitter Power Per Channel (Watts)	Total ERP (Watts)	Total EIRP (Watts)	Height (ft)	Calculated Power Density (µW/cm <sup>2</sup> )	Allowable MPE (µW/cm <sup>2</sup> )	Calculated MPE%
А	1	AT&T	CCI	TPA65R-BU6D	Panel	700	LTE(B14)	0	73	12.35	6	4	40.00	2749.64	4509.41	108.00	0.000017	466.67	0.000004
Α	1	AT&T	CCI	TPA65R-BU6D	Panel	1900	LTE/5G	0	66	15.95	6	4	40.00	6299.07	10330.47	108.00	0.000016	1000.00	0.000002
Α	1	AT&T	CCI	TPA65R-BU6D	Panel	2100	LTE/5G	0	66	16.25	6	4	40.00	6749.57	11069.30	108.00	0.000019	1000.00	0.000002
А	2	AT&T	CCI	OPA65R-BU6D	Panel	700	LTE(B12)	0	73	12.15	6	4	40.00	2625.89	4306.46	108.00	0.000078	466.67	0.000017
Α	2	AT&T	CCI	OPA65R-BU6D	Panel	850	5G	0	64	13.05	6	4	40.00	3230.55	5298.10	108.00	0.000032	566.67	0.000006
В	3	AT&T	CCI	TPA65R-BU6D	Panel	700	LTE(B14)	120	73	12.35	6	4	40.00	2749.64	4509.41	108.00	0.113609	466.67	0.024345
В	3	AT&T	CCI	TPA65R-BU6D	Panel	1900	LTE/5G	120	66	15.95	6	4	40.00	6299.07	10330.47	108.00	0.074394	1000.00	0.007439
В	3	AT&T	CCI	TPA65R-BU6D	Panel	2100	LTE/5G	120	66	16.25	6	4	40.00	6749.57	11069.30	108.00	0.120745	1000.00	0.012075
В	4	AT&T	CCI	OPA65R-BU6D	Panel	700	LTE(B12)	120	73	12.15	6	4	40.00	2625.89	4306.46	108.00	0.125866	466.67	0.026971
В	4	AT&T	CCI	OPA65R-BU6D	Panel	850	5G	120	64	13.05	6	4	40.00	3230.55	5298.10	108.00	0.130960	566.67	0.023111
C	5	AT&T	CCI	TPA65R-BU6D	Panel	700	LTE(B14)	240	73	12.35	6	4	40.00	2749.64	4509.41	108.00	0.000015	466.67	0.000003
C	5	AT&T	CCI	TPA65R-BU6D	Panel	1900	LTE/5G	240	66	15.95	6	4	40.00	6299.07	10330.47	108.00	0.000006	1000.00	0.000001
C	5	AT&T	CCI	TPA65R-BU6D	Panel	2100	LTE/5G	240	66	16.25	6	4	40.00	6749.57	11069.30	108.00	0.000087	1000.00	0.000009
С	6	AT&T	CCI	OPA65R-BU6D	Panel	700	LTE(B12)	240	73	12.15	6	4	40.00	2625.89	4306.46	108.00	0.000022	466.67	0.000005
С	6	AT&T	CCI	OPA65R-BU6D	Panel	850	5G	240	64	13.05	6	4	40.00	3230.55	5298.10	108.00	0.000023	566.67	0.000004
A	7	Sprint	RFS	APXVSPP18-C-A20	Panel	850	CDMA/LTE	10	65	13.40	6	1	20.00	390.11	639.78	90.33	0.000096	566.67	0.000017
A	7	Sprint	RFS	APXVSPP18-C-A20	Panel	1900	CDMA/LTE	10	65	15.90	6	2	20.00	1387.45	2275.41	90.33	0.000004	1000.00	0.000000
В	8	Sprint	RFS	APXVSPP18-C-A20	Panel	850	CDMA/LTE	130	65	13.40	6	1	20.00	390.11	639.78	90.33	0.016993	566.67	0.002999
В	8	Sprint	RFS	APXVSPP18-C-A20	Panel	1900	CDMA/LTE	130	65	15.90	6	2	20.00	1387.45	2275.41	90.33	0.036784	1000.00	0.003678
C	9	Sprint	RFS	APXVSPP18-C-A20	Panel	850	CDMA/LTE	250	65	13.40	6	1	20.00	390.11	639.78	90.33	0.000018	566.67	0.000003
С	9	Sprint	RFS	APXVSPP18-C-A20	Panel	1900	CDMA/LTE	250	65	15.90	6	2	20.00	1387.45	2275.41	90.33	0.000022	1000.00	0.000002
Α	10	Dish	JMA	MX08FRO665-21	Panel	600	5G	0	68	11.45	6	4	30.00	1676.24	2749.04	59.00	0.000305	400.00	0.000076
Α	10	Dish	JMA	MX08FRO665-21	Panel	1900	5G	0	62	16.15	6	4	40.00	6595.93	10817.33	59.00	0.000196	1000.00	0.000020
A	10	Dish	JMA	MX08FRO665-21	Panel	2100	5G	0	64	16.65	6	4	40.00	7400.76	12137.24	59.00	0.000073	1000.00	0.000007
В	11	Dish	JMA	MX08FRO665-21	Panel	600	5G	120	68	11.45	6	4	30.00	1676.24	2749.04	59.00	0.494222	400.00	0.123556
В	11	Dish	JMA	MX08FRO665-21	Panel	1900	5G	120	62	16.15	6	4	40.00	6595.93	10817.33	59.00	0.66371	1000.00	0.066371
В	11	Dish	JMA	MX08FRO665-21	Panel	2100	5G	120	64	16.65	6	4	40.00	7400.76	12137.24	59.00	0.564137	1000.00	0.056414
C	12	Dish	JMA	MX08FRO665-21	Panel	600	5G	240	68	11.45	6	4	30.00	1676.24	2749.04	59.00	0.000238	400.00	0.000060
C	12	Dish	JMA	MX08FRO665-21	Panel	1900	5G	240	62	16.15	6	4	40.00	6595.93	10817.33	59.00	0.001038	1000.00	0.000104
С	12	Dish	JMA	MX08FRO665-21	Panel	2100	5G	240	64	16.65	6	4	40.00	7400.76	12137.24	59.00	0.000004	1000.00	0.000000
																Calculated Power Density (µW/cm <sup>2</sup> )	2.343729	Calculated MPE%	0.3473

Table 2: Antenna Inventory & Power Data

![](_page_18_Picture_0.jpeg)

### **3. Compliance Summary**

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

The anticipated composite MPE value for this site assuming all carriers present is 0.3473% of the allowable FCC established general public limit sampled at the ground level.

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