

# 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 4, 2022

Jeffrey Barbadora
Site Acquisition Specialist
Crown Castle
1800 W. Park Drive
Westborough, MA 01581
jeff.barbadora@crowncastle.com

RE: **EM-T-MOBILE-045-211117** – T-Mobile notice of intent to modify an existing telecommunications facility located at 93 Roxbury Road, East Lyme, Connecticut.

Dear Mr. Barbadora:

The Connecticut Siting Council (Council) is in receipt of your correspondence of December 29, 2021 submitted in response to the Council's December 28, 2021 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,

Melanie A. Bachman Executive Director

MilikeRul

MAB/FOC/emr

# T--Mobile---

T-MOBILE SITE NUMBER: CTNL037A

T-MOBILE SITE NAME: CTNL037A

**SELF SUPPORT TOWER** SITE TYPE:

SHEET#

151'-4" **TOWER HEIGHT:** 

**BUSINESS UNIT #:806384** 93 ROXBURY ROAD

**SITE ADDRESS:** EAST LYME, CT 06357

**COUNTY:** 

**JURISDICTION:** T-MOBILE SPRINT RETAIN SITE CONFIGURATION: 67E5998E 1XAIR+10P

**LOCATION MAP** 

**NEW LONDON NEW LONDON COUNTY** 

**CROWN** CASTLE

BLOOMFIELD, CT 06002

the solutions are endless 1033 Watervliet Shaker Rd | Albany, NY 12205 Phone: 518-690-0790 | Fax: 518-690-0793

# T-MOBILE SITE NUMBER: CTNL037A

BU #: **806384** NLN 136 943455

93 ROXBURY ROAD EAST LYME, CT 06357

EXISTING 151'-4" SELF SUPPORT TOWER

ISSUED FOR:									
REV	DATE	DRWN	DESCRIPTION	DES./QA					
1	06/01/21	RCD	FINAL	SS					
2	09/10/21	HL	RFDS UPDATE	SS					
3	10/07/21	TJ	DETAILS UPDATE	SS					
- C				100					

# 10/7/2021

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.

3

# SITE INFORMATION

CROWN CASTLE USA INC.

SITE ADDRESS

LATITUDE

NLN 136 943455

93 ROXBURY ROAD EAST LYME, CT 06357 NEW LONDON

COUNTY: MAP/PARCEL# 45-15.0 2 AREA OF CONSTRUCTION: EXISTING 41 33583300° (41° 20' 8 35")

LONGITUDE -72.22194400° (-72° 13' 18.28") LAT/LONG TYPE: NAD83 GROUND ELEVATION: 177.16 FT

CURRENT ZONING: IURISDICTION: NEW LONDON COUNTY

OCCUPANCY CLASSIFICATION: U TYPE OF CONSTRUCTION:

A.D.A. COMPLIANCE: FACILITY IS UNMANNED AND NOT FOR

HUMAN HABITATION

EAST LYME TOWN OF TRANSFER STATION

PO BOX 519

NIANTIC, CT 06357-0519

TOWER OWNER: CROWN CASTLE

 $2000\ CORPORATE\ DRIVE$ CANONSBURG, PA 15317

CARRIER/APPLICANT:

A&E FIRM:

CROWN CASTLE

USA INC. DISTRICT

PROPERTY OWNER:

T-MOBILE 35 GRIFFIN ROAD

PROJECT TEAM

INFINIGY 1033 WATERVLIET SHAKER RD. ALBANY, NY 12205

TRICIA PELON - PROJECT MANAGER

TRICIA.PELON@CROWNCASTLE.COM

JASON.DAMICO@CROWNCASTLE.COM

JASON D'AMICO - CONSTRUCTION MANAGER

1500 CORPORATE DRIVE

CANONSBURG, PA 15317

BLOOMFIELD, CT 06002

ELECTRIC PROVIDER TBD

TELCO PROVIDER: TBD

E-1	AC PANEL SCHEDULES & ONE LINE DIAGRAM
G-1	ANTENNA GROUNDING DIAGRAM
G-2	GROUNDING DETAILS

**DRAWING INDEX** 

SITE PLAN & ENLARGED SITE PLAN

ANTENNA & CABLE SCHEDULE

FINAL ELEVATION & ANTENNA PLANS

TITLE SHEET

GENERAL NOTES

PLUMBING DIAGRAM

EQUIPMENT SPECS

EQUIPMENT SPECS

SHEET DESCRIPTION

ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR ---. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE IOB SITE AND SHALI IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME

# PROJECT DESCRIPTION

THE PURPOSE OF THIS PROJECT IS TO ENHANCE BROADBAND CONNECTIVITY AND CAPACITY TO THE EXISTING ELIGIBLE WIRELESS FACILITY.

# TOWER SCOPE OF WORK:

- REMOVE (6) ANTENNAS
- REMOVE (9) RRHs
- REMOVE (4) HYBRID CABLES
- INSTALL (6) ANTENNAS • INSTALL (6) RRHs
- INSTALL (3) HYBRID CABLES

# ROUND SCOPE OF WORK:

- REMOVE (1) MMBS EQUIPMENT CABINET
- REMOVE (1) BBU EQUIPMENT CABINET • INSTALL (1) 6160 & (1) B160 BATTERY CABINETS
- INSTALL (3) BB 6648
- INSTALL (1) DUG20 W/ RBS 6601 UNIT • INSTALL (1) PSU 4813
- INSTALL (1) CSR IXRe V2 (GEN2)
- UPGRADÈ SERVICE TO 200AMP

PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN NOC AT (800) 788-7011 & CROWN CONSTRUCTION MANAGER.

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES

CODE TYPE 2018 CT STATE BUILDING CODE MECHANICAI 2015 IMC 2017 NEC ELECTRICAL

# REFERENCE DOCUMENTS:

STRUCTURAL ANALYSIS: MORRISON HERSHFIELD DATED: 09/01/2021

MOUNT ANALYSIS: INFINIGY DATED: 09/01/2021 RFDS REVISION: REV1 - DRAFT DATED: 07/09/2021 ORDER ID: 557902 REVISION: (

CALL CONNECTICUT ONE CALL (800) 922-4455 CBYD.COM CALL 2 WORKING DAYS

# SIGNATURE APPROVAL DATE PROPERTY OWNER OR REP LAND USE PLANNER T-MOBILE **OPERATIONS** NETWORK BACKHAIII CONSTRUCTION MANAGER

**APPROVALS** 

THE PARTIES ABOVE HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE CONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL CONSTRUCTION DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND ANY CHANGES AND MODIFICATIONS THEY MAY IMPOSE

# NO SCALE APPLICABLE CODES/REFERENCE **DOCUMENTS**

## CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:

- 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 JURISDICTIONA
- 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).
- 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."
- THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR HALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY CROWN CASTLE USA INC. PRIOR TO ROCEEDING 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 AGRICED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND AGRICED OUT CASE. 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 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 LITHLITIES 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 ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
- 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.

  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 O EQUIPMENT, ROOMS, AND SHELTERS.
- 15. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT
- 16. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION. 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. 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. 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. 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.

# GENERAL NOTES:

- FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
  CONTRACTOR: GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION
  CARRIER: THOOBILE
- FOWER OWNER: CROWN CASTLE USA INC. 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
- 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 MISCELLANDARD REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. HICKORY FOR 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 DISCREPANGLES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED CONTRACT 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 VERHEY THE DIMENSIONS, MEASUREMENTS AND/OR CLEARANCES SHOWN IN THE
- SUBSIANTIAL FLYORI 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 CUITING OF ANY NEW OR EXISTING CONSTRUCTION DRAWINGS. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.

  PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL WISIT 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 CONN CASTLE.

  ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND FORNIANCES, CONTRACTOR SHALL INSTEAD ALL ALL WHORK CARRIED OUT SHALL COMERY WITH ALL APPLICABLE CODES, ORDINANCES, RULES, REGULATIONS 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 RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

  IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROTECT EXISTING MAPPOVAL BY THE CARRIER AND CROWN CASTLE PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION OF APPROVAL BY THE CARRIER AND CROWN CASTLE PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION OF APPROVAL BY THE CARRIER AND CROWN CASTLE PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION OF APPROVAL BY THE CARRIER AND CROWN CASTLE PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION AS SHOWN IN THE POWER, TELCO, AND GROUNDING FLAN

- 10.
- DRAWINGS. THE CONTRACTOR SHALL PROTECT <mark>EXIST<mark>ING IMPROVEMENTS, PAVEMENTS,</mark> CURBS, LANDSCAPING AND STRUCTURES. ANY</mark>
- DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF CROWN CASTLE USA INC. 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
- CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION, TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS

## CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

DESIGNATED LOCATION.

- 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
- TO BE 1000 psf
- CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 3000 psi AT 28 DAYS, UNLESS NOTED ERWISE. NO MORE THAN 90 MINUTES SHALL ELAPSE FROM BATCH TIME TO TIME OF PLACEMENT UNLESS ROVED 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 TYPE II PORTLAND CEMENT WITH A MAXIMUM WATER—TO—CEMENT RATIO (W/C) OF 0.45.
- ALL STEEL REINFORCING SHALL CONFO<mark>RM TO ASTM</mark> A615. ALL WELDED WIKE 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 (FV) OF STANDARD DEFORMED BARS ARE AS FOLLOWS #4 BARS AND SMALLER..
- EXPOSED TO EARTH
- CONCRETE CAST AGAINST AND PERMANENTLY CONCRETE EXPOSED TO EARTH OR WEATHER: #6 BARS AND LARGER.....
- SLAB AND WALLS... BEAMS AND COLUMNS
- A TOOLED EDGE OR A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

## **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
- 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.
- 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
- 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 CUAMPS.

  WETAL 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.
  ALLMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL BOT BE USED FOR GROUNDING CONNECTIONS.
  USE OF 90' BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45' BENDS CAN BE ADEQUATELY SUPPORTED.
  EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.

LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY).

- EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELLOW GRADE.

  ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIORS) SHALL BE FORMED USING HIGH PRESS CRIMPS.

  COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.

  ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.

  APPROVED ANTIOXIDANT COATINGS (i.e. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.

  ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.

- ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.

  MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.

  BOND ALL METALLIC OBJECTS WITHIN 6 ft OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.

  GROUND CONDUCTORS USED FOR THE FACILITY GROUNDING AND LICHTMING 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.

  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 EXPONED FOR DOT THE CONDUIT WHET PRE-SECRED 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 EXPONED FOR DOT THE CONDUIT WHITE PRE-SECRED 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 EXPONED FOR DOT THE PROPERTY OF THE METAL CONDUIT.
- 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/O COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS,

## **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 FLIMINATED

- AND TRIP HAZAROS 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.

  1. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.

  2. 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 WITH UV PROTECTION. OR FOLIAL). THE IDENTIFICATION METHOD. SHALL CONFORM WITH NEC AND OSHA. 4.2.
- PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.

  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
- PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
  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, INSULATION UNLESS OTHERWISE SPECIFIED. 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.
- POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI-CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS
- POWER AND CONTROL WIRING FOR USE IN CABLE TRAY SHALL BE MULTI-CONDUCTOR, TYPE TO CABLE (#14 OR LARGER), WITH
- TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
  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).
- RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
- ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR
- EXPOSED INDOOR LOCATIONS.

  ELECTRICAL METALLIC TUBING (EMT) OR METAL—CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS
- SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE
- 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
- 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
- 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 TEMPORARILY CAPPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE. COUPPMENT 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 PETTER) COR EXCEED LOCATIONS.
- 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.
- (WP OR BETTER) FOR EXTERIOR LOCATIONS.

  6. 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.

  7. 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.

  7. 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.

  7. INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "T-MOBILE".
- 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		
120/240V, 1Ø	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		
DC VOLTAGE	POS (+)	RED**		
DC VOLIAGE	NEG (-)	BLACK**		

SEE NEC 210.5(C)(1) AND (2) \*\* POLARITY MARKÈĎ ÁT TERMÍNÁTION

WHITE PROPOSED EXCAVATION

POTABLE WATER

RECLAIMED WATER, IRRIGATION, AND SLURRY LINES

## APWA UNIFORM COLOR CODE:

TEMPORARY SURVEY MARKINGS

GAS. OIL. STEAM. PETROLEUM. OR

CABLES, OR CONDUIT AND TRAFFIC LOOPS

## **ABBREVIATIONS:** ANTENNA

EXISTING FACILITY INTERFACE FRAME GENERATOR GLOBAL POSITIONING SYSTEM GPS GSM LTE MGB MW GLOBAL SYSTEM FOR MOBILE LONG TERM EVOLUTION MASTER GROUND BAR (N) NEC NEW NATIONAL ELECTRIC CODE PROPOSET QTY RECT RECTIFIER RADIO BASE STATION REMOTE FLECTRIC TILT RADIO FREQUENCY DATA SHEET REMOTE RADIO HEAD REMOTE RADIO UNIT SMART INTEGRATED DEVICE

SIAD TMA TYP TOWER MOUNTED AMPLIFIER UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM

ELECTRIC POWER LINES, CABLES, CONDUIT, AND LIGHTING CABLES

YELLOW GASEOUS MATERIALS COMMUNICATION, ALARM OR SIGNAL LINES.

SEWERS AND DRAIN LINES

OF CONNECTION SAKATICA 34916 CENSED. SS/ONAL WWW. 10/7/2021

T··Mobile···

35 GRIFFIN ROAD

BLOOMFIELD, CT 06002

1500 CORPORATE DRIVE

CANONSBURG, PA 15317

NFINIGY8

FROM ZERO TO INFINIGY

1033 Watervliet Shaker Rd | Albany, NY 12205

Phone: 518-690-0790 | Fax: 518-690-0793

www.infinigy.com

T-MOBILE SITE NUMBER:

CTNL037A

BU #: **806384** 

NLN 136 943455

93 ROXBURY ROAD EAST LYME, CT 06357

EXISTING 151'-4" SELF

SUPPORT TOWER

**ISSUED FOR:** 

DRWN

RCD

DATE

0/07/21

DESCRIPTION

FINAL

RFDS UPDATE

DETAILS UPDATE

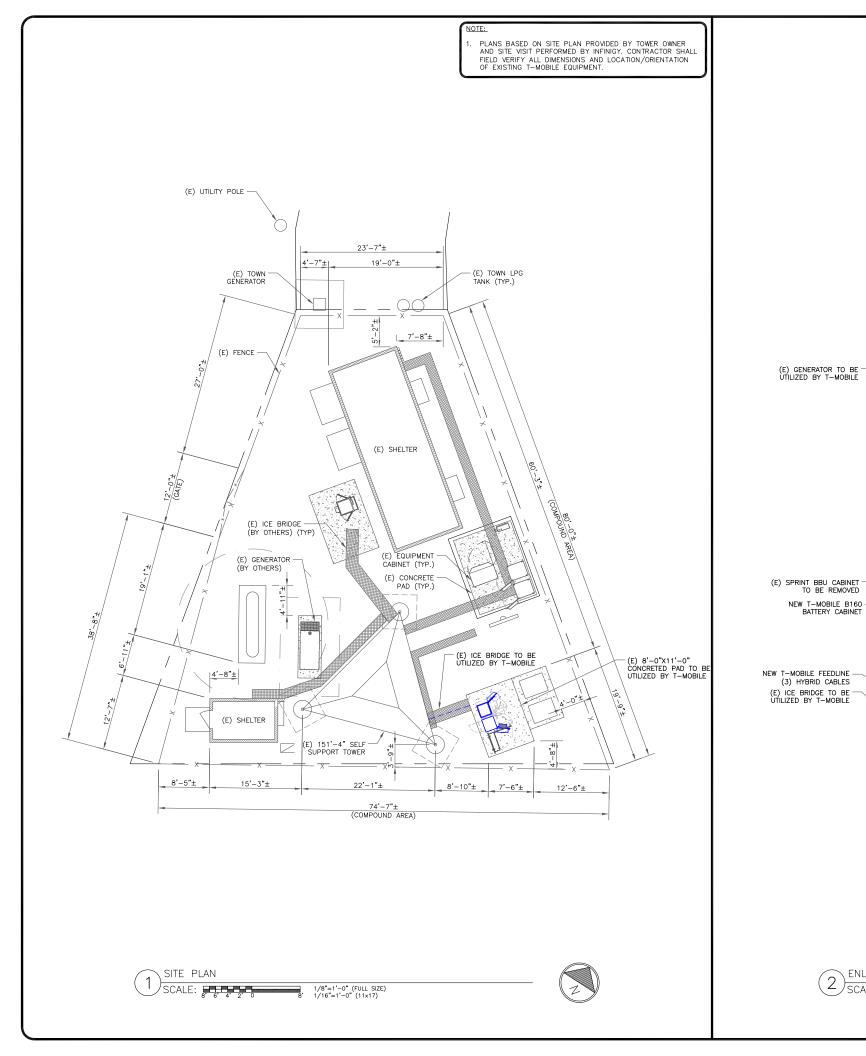
the solutions are endless

**CROWN** 

CASTLE

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:



NOTES:

(E) 6'-0"X9'-0" GENERATOR CONCRETED PAD TO BE UTILIZED BY T-MOBILE

- NEW T-MOBILE 6160 CABINET W/
- INSTALL (3) BB 6648
- INSTALL (1) DUC20 W/ RBS 6601 UNIT
- INSTALL (1) PSU 4813
- INSTALL (1) CSR IXRe V2

(E) SPRINT MMBS CABINET TO BE REMOVED

(E) 8'-0"X11'-0" CONCRETED PAD TO BE UTILIZED BY T-MOBILE

- NEW T-MOBILE CONDUITS: (1) 2" LFTC BET. 6160 & B160 (2) 2" PVC BET. 6160 & EXISTING CABINET (1) 2" UNDERGROUND PVC BET. 6160 & PPC (1) 2" UNDERGROUND PVC BET. 6160 & CIENA

(E) FIBER MANAGEMENT BOX TO BE UPGRADED TO 200AMP SERVICE

THE POWER DESIGN FOR ANY AC ELECTRICAL POWER CHANGES IS TO BE PERFORMED BY OTHERS AND IS SHOWN HERE FOR REFERENCE PURPOSES ONLY. T-MOBILE IS SOLELY RESPONSIBLE FOR THE ELECTRICAL POWER DESIGN.

T··Mobile··

BLOOMFIELD, CT 06002



CANONSBURG, PA 15317

FROM ZERO TO INFINIGY

the solutions are endless 1033 Watervliet Shaker Rd | Albany, NY 12205 Phone: 518-690-0790 | Fax: 518-690-0793 www.infinigy.com

T-MOBILE SITE NUMBER: CTNL037A

> BU #: **806384** NLN 136 943455

93 ROXBURY ROAD EAST LYME, CT 06357

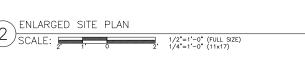
EXISTING 151'-4" SELF SUPPORT TOWER

ISSUED FOR:									
REV	DATE	DRWN	DESCRIPTION	DES./QA					
1	06/01/21	RCD	FINAL	SS					
2	09/10/21	HL	RFDS UPDATE	SS					
3	10/07/21	TJ	DETAILS UPDATE	SS					

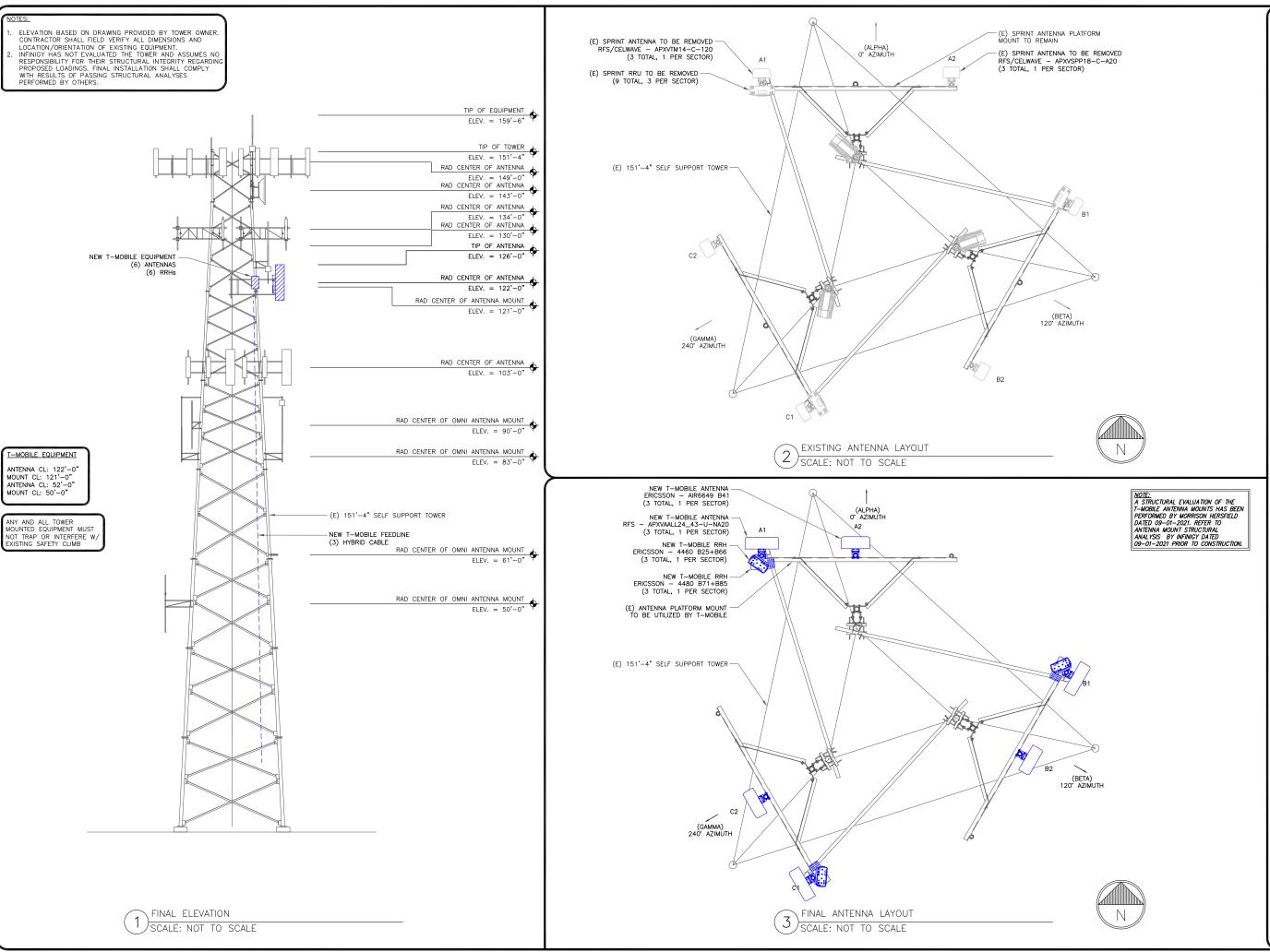


IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

3



2'-3"± b





EOOMFIELD, C1 06002



# INFINIGY FROM ZERO TO INFINIGY

the solutions are endless
1033 Watervliet Shaker Rd | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com

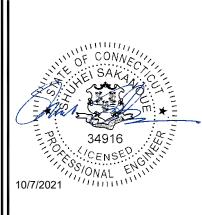
T-MOBILE SITE NUMBER: **CTNL037A** 

BU #: **806384 NLN 136 943455** 

93 ROXBURY ROAD EAST LYME, CT 06357

EXISTING 151'-4" SELF SUPPORT TOWER

ISSUED FOR:									
REV	DATE	DRWN	DESCRIPTION	DES./QA					
1	06/01/21	RCD	FINAL	SS					
2	09/10/21	HL	RFDS UPDATE	SS					
3	10/07/21	TJ	DETAILS UPDATE	SS					



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:

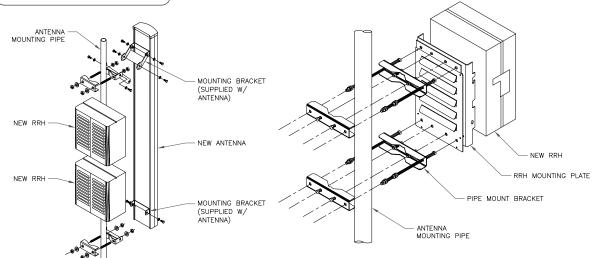
C-2

	ANTENNA SCHEDULE										
SECTOR	POS.	TECHNOLOGY	RAD CENTER	AZIMUTH	ANTENNA MANUFACTURER	ANTENNA MODEL	MECH. TILT	ELECT. TILT	TOWER MOUNTED EQUIPMENT	FEEDLINE TYPE	
ALPHA	A1	L600/L700/N600 L2100/L1900/G1900	122'-0"	0•	RFS	APXVAALL24_43-U-NA20	0,	2./5./5./5.	(1) ERICSSON - RRUS 4480 B71+B85 (1) ERICSSON - RRUS 4460 B25+B66	(1) 6X24 HCS	
ALPHA	A2	L2500/N2500	122'-0"	0•	ERICSSON	AIR6649 B41	0.	2*/2*		HYBRID	
BETA	B1	L600/L700/N600 L2100/L1900/G1900	122'-0"	120°	RFS	APXVAALL24_43-U-NA20	0,	2./5./5./5.	(1) ERICSSON - RRUS 4480 B71+B85 (1) ERICSSON - RRUS 4460 B25+B66	(1) 6X24 HCS	
BETA	B2	L2500/N2500	122'-0"	120°	ERICSSON	AIR6649 B41	0.	2./2.		HYBRID	
GAMMA	G1	L600/L700/N600 L2100/L1900/G1900	122'-0"	240°	RFS	APXVAALL24_43-U-NA20	0,	2*/2*/2*/2*	(1) ERICSSON - RRUS 4480 B71+B85 (1) ERICSSON - RRUS 4460 B25+B66	(1) 6X24 HCS	
GAMMA	G2	L2500/N2500	122'-0"	240°	ERICSSON	AIR6649 B41	0,	2./5.		` HYBRID	

ANTENNA AND CABLE SCHEDULE SCALE: NOT TO SCALE

# INSTALLER NOTES:

- 1. COMPLY WITH MANUFACTURERS
  INSTRUCTIONS TO ENSURE THAT ALL RRHS
  RECEIVE ELECTRICAL POWER WITHIN 24
  HOURS OF BEING REMOVED FROM THE
  MANUFACTURER'S PACKAGING.
  2. DO NOT OPEN RRH PACKAGES IN THE RAIN.
  3. ALL PIPES, BRACKETS, AND MISCELLANEOUS
  HARDWARE TO BE GALVANIZED UNLESS
  NOTED OTHERWISE.



CONTRACTOR SHALL INSTALL 3RD DUAL RRH MOUNT TO ACCOMMODATE ALL RRH BRACKETS HOLES IF NECESSARY.

ANTENNA WITH RRHs MOUNTING DETAIL (2) SCALE: NOT TO SCALE





# FROM ZERO TO INFINIGY the solutions are endless

1033 Watervliet Shaker Rd | Albany, NY 12205 Phone: 518-690-0790 | Fax: 518-690-0793 www.infinigy.com

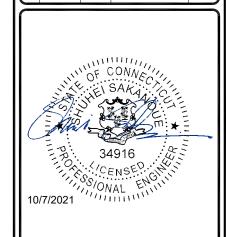
T-MOBILE SITE NUMBER: CTNL037A

> BU #: **806384** NLN 136 943455

93 ROXBURY ROAD EAST LYME, CT 06357

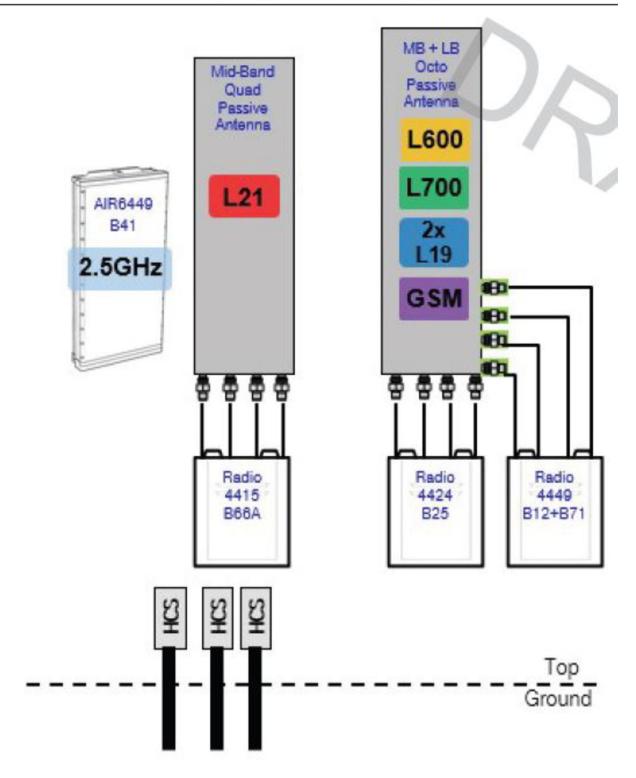
EXISTING 151'-4" SELF SUPPORT TOWER

ISSUED FOR:									
REV	DATE	DRWN	DESCRIPTION	DES./QA					
1	06/01/21	RCD	FINAL	SS					
2	09/10/21	HL	RFDS UPDATE	SS					
3	10/07/21	TJ	DETAILS UPDATE	SS					



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.

# 67D5A998C\_1xAIR+1xQP+1xOP.jpg







# INFINIGY FROM ZERO TO INFINIGY

the solutions are endless
1033 Watervliet Shaker Rd | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com

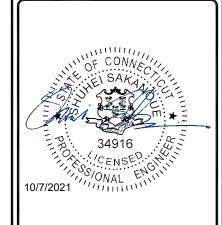
T-MOBILE SITE NUMBER: CTNL037A

BU #: **806384 NLN 136 943455** 

93 ROXBURY ROAD EAST LYME, CT 06357

EXISTING 151'-4" SELF SUPPORT TOWER

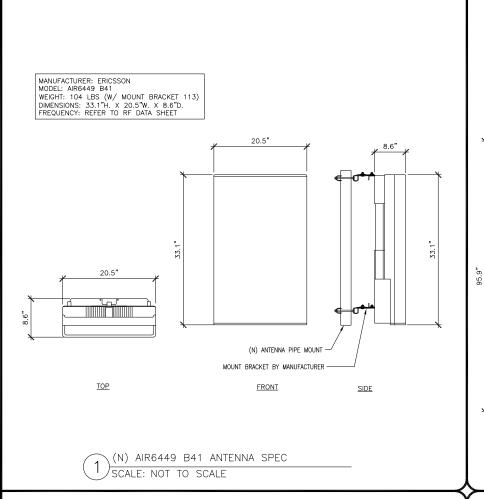
ISSUED FOR:								
REV	DATE	DRWN	DESCRIPTION	DES./QA				
1	06/01/21	RCD	FINAL	SS				
2	09/10/21	HL	RFDS UPDATE	SS				
3	10/07/21	TJ	DETAILS UPDATE	SS				

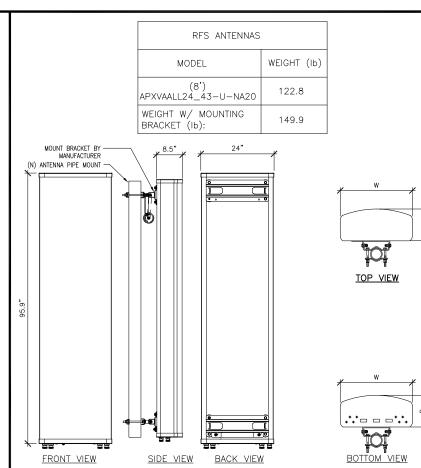


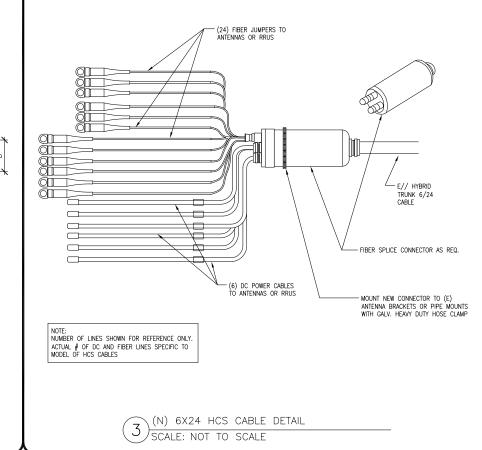
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

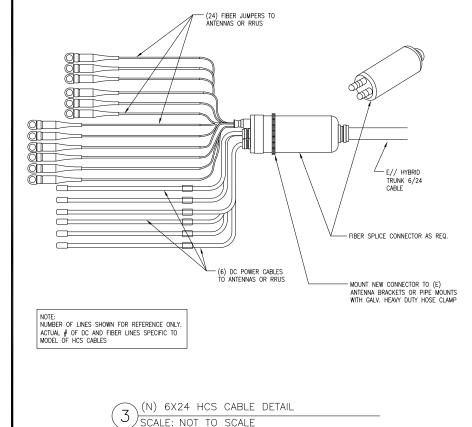
SHEET NUMBER:

C-4









× × ×

63" 57"

19U 63"x25.6"x25.6" (W/ 6" PLINTH)

SIDE VIEW





# FROM ZERO TO INFINIGY

the solutions are endless 1033 Watervliet Shaker Rd | Albany, NY 12205 Phone: 518-690-0790 | Fax: 518-690-0793 www.infinigy.com

T-MOBILE SITE NUMBER:

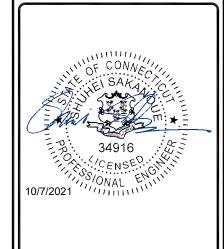
CTNL037A

BU #: **806384** NLN 136 943455

93 ROXBURY ROAD EAST LYME, CT 06357

EXISTING 151'-4" SELF SUPPORT TOWER

REV	DATE	DRWN	DESCRIPTION	DES./QA
1	06/01/21	RCD	FINAL	SS
2	09/10/21	HL	RFDS UPDATE	SS
3	10/07/21	TJ	DETAILS UPDATE	SS



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.

3

% (€ 63" FRONT VIEW SIDE VIEW TOP VIEW ERICSSON MODEL NO.: B160 RACK SPACE: 19U 63"x26"x26" (W/ 6" PLINTH) DIMENSIONS, HXWXD: CABINET WEIGHT, EMPTY: MAXIMUM WEIGHT:

(N) APXVAAL24\_43-UNA20 ANTENNA SPEC

2) SCALE: NOT TO SCALE

(N) B160 BATTERY CABINET DETAIL SCALE: NOT TO SCALE

(N) 6160 EQUIPMENT CABINET DETAIL SCALE: NOT TO SCALE

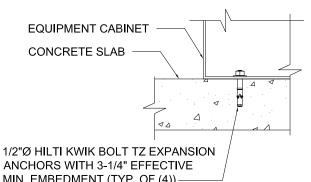
FRONT VIEW

TOP VIEW

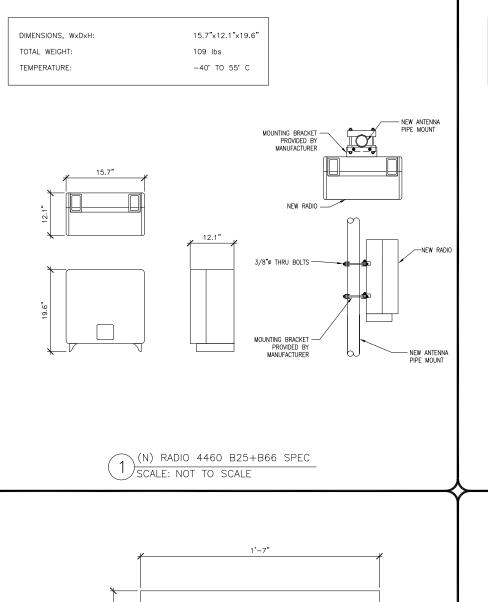
RACK SPACE:

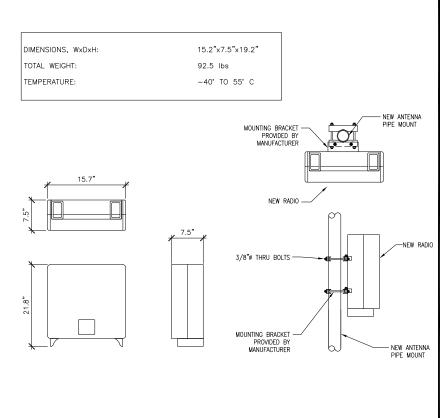
ERICSSON MODEL NO.: 6160

DIMENSIONS, HXWXD: CABINET WEIGHT, EMPTY: MAXIMUM WEIGHT:



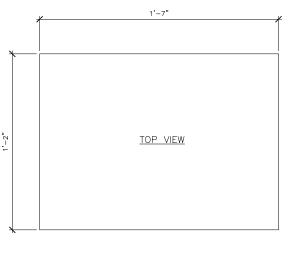
MIN. EMBEDMENT (TYP. OF (4)) (N) EQUIPMENT CABINET MOUNTING DETAIL (4) SCALE: NOT TO SCALE

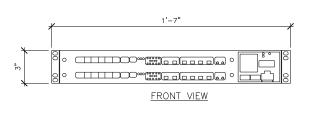




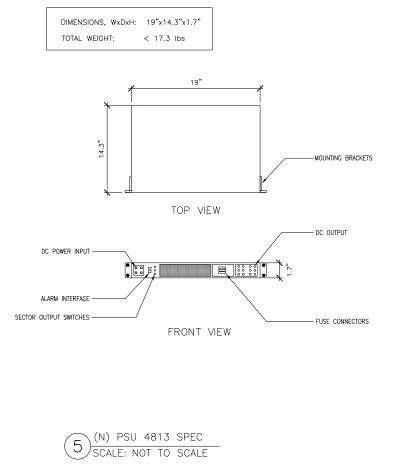
(N) RADIO 4480 B71+B85 SPEC (2) (N) KADIO 4400 B/17 SCALE: NOT TO SCALE

(N) DUG20 SPEC SCALE: NOT TO SCALE





(N) RBS 6601 MAIN UNIT SPEC (4) SCALE: NOT TO SCALE



(19"x13.78"x1.75") DIMENSIONS, WxDxH: MAX POWER CONSUMPTION: 180 W BREAKER SIZE: MIN 10 A, MAX 30 A TOTAL WEIGHT: ± 14.33 lbs

DIGITAL UNIT FOR GSM
THE DIGITAL UNIT GSM, DUG 20 CAN CONTROL UP TO 12 GSM CARRIERS. IF MORE THAN
12 TRXS ARE REQUIRED, THEN AN ADDITIONAL DUG CAN BE INSTALLED IN THE RBS
6601 MAIN UNIT AND SYNCHRONIZED WITH THE OTHER DUG IN THE MAIN UNIT.
THE DUG SUPPORTS THE CROSS—CONNECTION OF INDIVIDUAL TIME SLOTS TO SPECIFIC
TRXS AND EXTRACTS THE SYNCHRONIZATION INFORMATION FROM THE PULSE—CODE

E1/T1 transmission interface

 Link Access Procedures on D-Channel (LAPD) concentration / multiplexing

· Transceiver Group (TG) synchronization

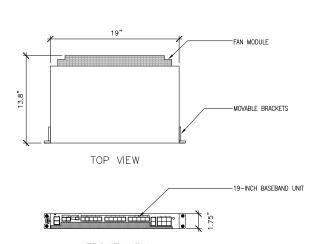
Synchronized radio network, through an external GPS

Baseband processing

Multi-drop (cascading)

Site LAN

MODULATION (PCM) LINK TO GENERATE A TIMING REFERENCE FOR THE RBS. THE DUG 20 SUPPORTS:



FRONT VIEW

(N) BASEBAND 6648 SPEC (N) BASES.....

SCALE: NOT TO SCALE

T··Mobile··

35 GRIFFIN ROAD BLOOMFIELD, CT 06002



# FROM ZERO TO INFINIGY the solutions are endless

CANONSBURG, PA 15317

1033 Watervliet Shaker Rd | Albany, NY 12205 Phone: 518-690-0790 | Fax: 518-690-0793 www.infinigy.com

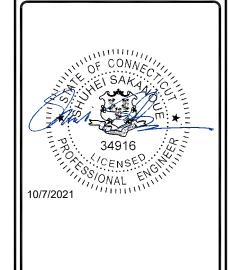
T-MOBILE SITE NUMBER: CTNL037A

> BU #: **806384** NLN 136 943455

93 ROXBURY ROAD EAST LYME, CT 06357

EXISTING 151'-4" SELF SUPPORT TOWER

ISSUED FOR:									
REV	DATE	DRWN	DESCRIPTION	DES./QA					
1	06/01/21	RCD	FINAL	SS					
2	09/10/21	HL	RFDS UPDATE	SS					
3	10/07/21	TJ	DETAILS UPDATE	SS					

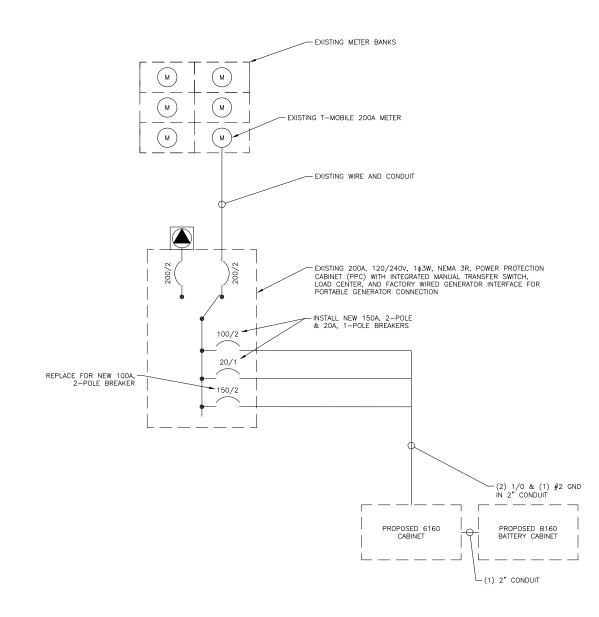


IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

T-MOBILE PANEL SCHEDULE											
1-WOBILE PANEL SCHEDULE											
MAIN: 200A MAIN BREAKER VOTAGE/PHASE: 120/2						40V, 1-PHASE, 3-WIRE SHORT CIRCUIT CURRENT RATING:				ENT RATING:	
MOUNTING: INSIDE PPC ENC	LOSURE		ENCLOSUR	RE: NEMA 3	R				SURGE PR	OTECTION D	DEVICE: YES
					PHASE LO	ADS (VA)					
DESCRIPTION	LOAD (VA)	CorNC	C/B	CIR No.	Α	В	CIR No.	C/B	CorNC	LOAD (VA)	DESCRIPTION
RBS 6601	1000	С	100	1	1000		2	30	NC	0	GENERATOR
VP3 0001	1000	С	100	3		1000	4	30	NC	0	GENERATOR
6160	7000	С	100	5	7200		6	20	NC	200	TOWER LIGHTS
0100	7000	С	100	7		7200	8	20	NC	200	TOWEREIGITIS
6160 GFI	180	NC	20	9	360		10	20	NC	180	TELCO GFCI
				11		0	12				
				13	0		14				
				15		0	16				
BLANK				17	0		18				BLANK
				19		0	20				
				21	0		22				
				23		0	24				
BASE LOAD (VA) =						8200	*11	NDICATES N	IEW LOAD.	ALL OTHER I	OADS ARE EXISTING.
25% OF CONTINUOUS LOAD (VA) =						2050	NEW E	REAKER TO	BE SAME 1	TYPE AND HA	AVE SAME AIC RATING AS
TOTAL LOAD (VA) =						10250	EXISTIN	EXISTING. CUSTOMER HAS NOT PROVIDED LOADS FOR EQUIPMENT			
TOTAL LOAD (A) = 89 8							CABINETS THEREFORE THE CABINET LOADS SHOWN ARE ESTIMATED				
							VALUES.				

### NOTES

- ALL NEW CONDUCTORS TO BE INSTALLED SHALL BE COPPER. ALL CONDUCTORS SHALL BE THHW, THWN, THWN-2, XHHW, OR XHHW-2 UNLESS NOTED OTHERWISE.
- CONTRACTOR IS TO FIELD VERIFY ALL EXISTING ITEMS SHOWN ON THE ELECTRICAL ONE—LINE DIAGRAM AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- 3. ALL GROUNDING AND BONDING PER THE NEC.







# FROM ZERO TO INFINIGY the solutions are endless

1033 Watervliet Shaker Rd | Albany, NY 12205 Phone: 518-690-0790 | Fax: 518-690-0793 www.infinigy.com

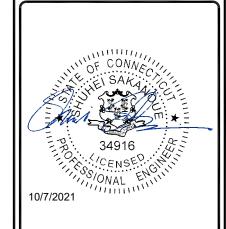
T-MOBILE SITE NUMBER: **CTNL037A** 

BU #: 806384 NLN 136 943455

93 ROXBURY ROAD EAST LYME, CT 06357

EXISTING 151'-4" SELF SUPPORT TOWER

ISSUED FOR:									
REV	DATE	DRWN	DESCRIPTION	DES./Q					
1	06/01/21	RCD	FINAL	SS					
2	09/10/21	HL	RFDS UPDATE	SS					
3	10/07/21	TJ	DETAILS UPDATE	SS					

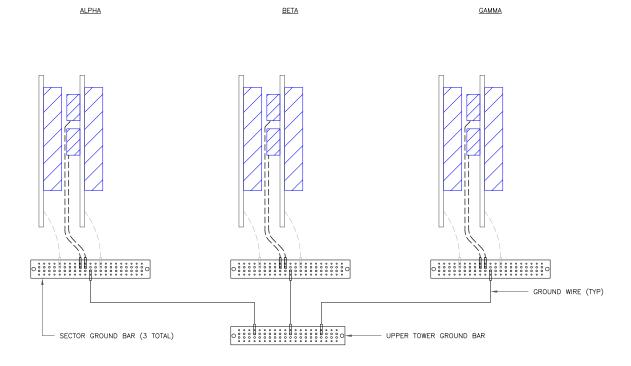


IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER:

3

ONE LINE DIAGRAM
SCALE: NOT TO SCALE



NOTE

ALL NEW GROUNDS TO BE #6 STRANDED COPPER WITH GREEN INSULATION UNLESS NOTED OTHERWISE.

ANTENNA GROUNDING DIAGRAM
SCALE: NOT TO SCALE





# FROM ZERO TO INFINIGY the solutions are endless

1033 Watervliet Shaker Rd | Albany, NY 12205 Phone: 518-690-0790 | Fax: 518-690-0793 www.infinigy.com

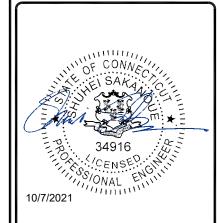
T-MOBILE SITE NUMBER: **CTNL037A** 

BU #: **806384 NLN 136 943455** 

93 ROXBURY ROAD EAST LYME, CT 06357

EXISTING 151'-4" SELF SUPPORT TOWER

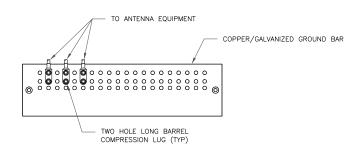
ISSUED FOR:					
REV	DATE	DRWN	DESCRIPTION	DES./QA	
1	06/01/21	RCD	FINAL	SS	
2	09/10/21	HL	RFDS UPDATE	SS	
3	10/07/21	TJ	DETAILS UPDATE	SS	



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

G-1

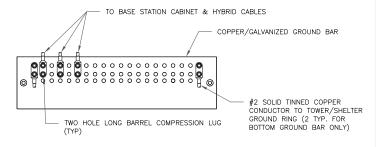


## NOTES:

- 1. DOUBLING UP "OR STACKING" OF CONNECTIONS IS NOT PERMITTED.
- 2. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
- 3. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER, MOUNT DIRECTLY TO ANTENNA MOUNT STEEL.

STAINLESS STEEL BOLT

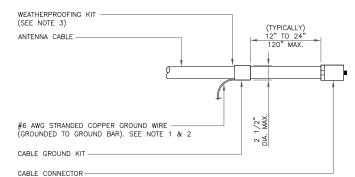
ANTENNA SECTOR GROUND BAR DETAIL SCALE: NOT TO SCALE



## NOTES:

- 1. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
- 2. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL (TOWER ONLY).
- 3. GROUND BAR SHALL BE ISOLATED FROM BUILDING OR SHELTER.

TOWER/SHELTER GROUND BAR DETAIL
SCALE: NOT TO SCALE



# NOTES:

- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
- 2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
- 3. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT

CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE





# FROM ZERO TO INFINIGY the solutions are endless

1033 Watervliet Shaker Rd | Albany, NY 12205 Phone: 518-690-0790 | Fax: 518-690-0793 www.infinigy.com

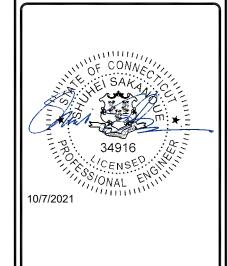
T-MOBILE SITE NUMBER: **CTNL037A** 

BU #: **806384 NLN 136 943455** 

93 ROXBURY ROAD EAST LYME, CT 06357

EXISTING 151'-4" SELF SUPPORT TOWER

ISSUED FOR:						
REV	DATE	DRWN	DESCRIPTION	DES./QA		
1	06/01/21	RCD	FINAL	SS		
2	09/10/21	HL	RFDS UPDATE	SS		
3	10/07/21	TJ	DETAILS UPDATE	SS		

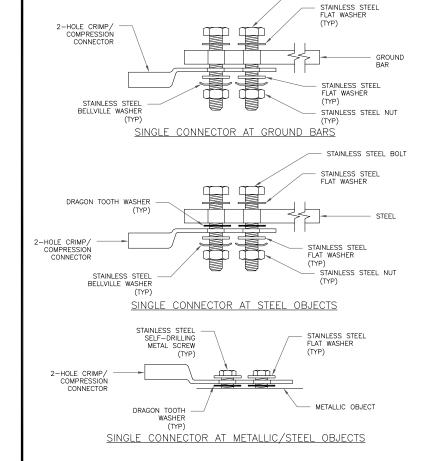


IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

FET NUMBER:

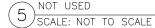
 $\frac{1}{1}$ 

3



HARDWARE DETAIL FOR EXTERIOR CONNECTIONS

SCALE: NOT TO SCALE



6) NOT USED
SCALE: NOT TO SCALE