

September 20, 2023

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

Re: **Notice of Exempt Modification – Facility Modifications
Cellco Partnership d/b/a Verizon Wireless**

P2P Project - 667 Main Street, Cromwell, Connecticut

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently holds a license, issued by the Federal Communications Commission (“FCC”), to provide wireless communications services in the 28 GHz frequency range. To meet its FCC license requirements for frequency use and deployment, Cellco plans to deploy a new, “Point to Point” (“P2P”) 28 GHz microwave system at numerous cell sites in Connecticut. Initially, these frequencies will help Cellco maintain certain security systems currently used to monitor cell site equipment. This notice pertains to the P2P system that will be deployed at Cellco’s existing cell site at 667 Main Street in Cromwell, Connecticut (the “Cromwell N2 Cell Site”).

To establish the referenced P2P system, Cellco will install two (2) point to point microwave dish antennas on the antenna cable ice bridge from the equipment cabinets to the tower at the Cromwell N2 Cell Site. Unlike the broadcast antennas on the tower, the P2P dish antennas will communicate only with each other. The dish antennas will be installed on the ice bridge, approximately eight (8) feet apart, at a height of approximately nine (9) feet above grade. The antennas would be attached to the ice bridge posts. A copy of the project plans showing the location of the dish antennas and dish antenna specifications are included in Attachment 1.

Melanie A. Bachman, Esq.
September 20, 2023
Page 2

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Chief Elected Officials and Land Use Officers in the Town of Cromwell. A copy of this filing will also be sent to the property owner at the Cromwell N2 Cell Site facility location.

The planned modifications to the listed facilities fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing tower. The proposed 28 GHz antennas will be installed on roof of the existing antenna cable ice bridge at the cell site, approximately nine (9) feet above grade.
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The installation of the 28 GHz antennas will not increase radio frequency (“RF”) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. Included in Attachment 2 is a Calculated Radio Frequency Emissions Report verifying that RF emissions from the Cromwell N2 Cell Site with the P2P system installed will comply with the FCC Standards.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. According to the attached August 16, 2023, letter from Dewberry Engineers Incorporated, Cellco’s existing ice bridge can support the proposed 28 GHz antenna installations. A copy of the Dewberry letter is included in Attachment 3.

A Certificate of Mailing verifying that this filing was sent to the municipal officials and the property owner for each location is included in Attachment 4.

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

Robinson+Cole

Melanie A. Bachman, Esq.
September 20, 2023
Page 3

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth C. Baldwin". The signature is fluid and cursive, with a long horizontal stroke at the end.

Kenneth C. Baldwin

Enclosures

Copy to:

Anthony Salvatore, Cromwell Town Manager
Stuart Popper, Director of Planning and Development
Cromwell Concrete Products Inc., Property Owner
Aleksy Tyurin, Verizon Wireless

ATTACHMENT 1

GENERAL CONSTRUCTION NOTES :

1. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, AND COMPLY WITH VERIZON WIRELESS SPECIFICATIONS.
2. CONTRACTOR SHALL CONTACT "DIG SAFE" (888-344-7233) FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
4. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
5. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
6. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
7. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
9. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
10. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING.
11. EACH CONTRACTOR SHALL COOPERATE WITH THE OWNER'S REPRESENTATIVE, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
12. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE VERIZON WIRELESS CONSTRUCTION MANAGER.
13. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
14. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR WILL NOTIFY ENGINEER, VERIZON WIRELESS PROJECT CONSTRUCTION MANAGER, AND LANDLORD IMMEDIATELY.
15. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
16. ALL ROOF WORK SHALL BE DONE BY A QUALIFIED AND EXPERIENCED ROOFING CONTRACTOR IN COORDINATION WITH ANY CONTRACTOR WARRANTING THE ROOF TO ENSURE THAT THE WARRANTY IS MAINTAINED.
17. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
18. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH LANDLORD AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
19. CONTRACTOR SHALL FURNISH VERIZON WIRELESS WITH THREE AS-BUILT SETS OF DRAWINGS UPON COMPLETION OF WORK.
20. ANTENNAS AND CABLES ARE TYPICALLY PROVIDED BY VERIZON WIRELESS. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH PROJECT MANAGER TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED BY VERIZON WIRELESS. ALL ITEMS NOT PROVIDED BY VERIZON WIRELESS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED BY VERIZON WIRELESS.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR WILL COORDINATE WITH VERIZON WIRELESS PROJECT MANAGER TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY VERIZON WIRELESS. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON WIRELESS MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
22. GENERAL CONTRACTOR SHALL HAVE A LICENSED HVAC CONTRACTOR START THE HVAC UNITS, SYNCHRONIZE THE THERMOSTATS, ADJUST ALL SETTINGS ON EACH UNIT ACCORDING TO VERIZON WIRELESS CONSTRUCTION MANAGER'S SPECIFICATIONS, AND THOROUGHLY TEST AND BALANCE EACH UNIT TO ENSURE PROPER OPERATION PRIOR TO TURNING THE SITE OVER TO OWNER.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON WIRELESS SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. UNLESS OTHERWISE NOTED VERIZON WIRELESS SHALL PROVIDE ALL REQUIRED RF MATERIAL FOR CONTRACTOR TO INSTALL, INCLUDING ANTENNAS, TMA'S, BIAS-T'S, COMBINERS, PDU, DC BLOCKS, SURGE ARRESTORS, GPS ANTENNA, GPS SURGE ARRESTOR, COAXIAL CABLE.
26. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL VERIFY ALL EQUIPMENT TO BE PROVIDED BY VERIZON WIRELESS FOR INSTALLATION BY CONTRACTOR.
27. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON WIRELESS SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
28. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
29. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
30. CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 48 HOURS IN ADVANCE PRIOR TO CONSTRUCTION START, MORE SPECIFICALLY BEFORE SEALING ANY FLOOR, WALL OR ROOF PENETRATION, FINAL UTILITY CONNECTIONS, POURING CONCRETE, BACKFILLING UTILITY TRENCHES AND STRUCTURAL POST OR MOUNTING CONNECTIONS, FOR ENGINEERING REVIEW AND INSPECTION.
31. SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED D FIRE CODE APPROVED MATERIALS.
32. REPAIR ANY DAMAGE DURING CONSTRUCTION TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE CONSTRUCTION MANAGER AND LANDLORD.
33. ALL DISRUPTIVE WORK AND WORK WITHIN TENANT SPACES TO BE COORDINATED WITH BUILDING REPRESENTATIVE.

CODE SPECIFICATIONS:

1. ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:
 2022 CONNECTICUT STATE BUILDING CODE WITH THE FOLLOWING APPLICABLE CODES:
 2021 INTERNATIONAL RESIDENTIAL CODE (IRC)
 2021 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
 2021 INTERNATIONAL BUILDING CODE (IBC)
 2021 INTERNATIONAL MECHANICAL CODE (IMC)
 2020 NATIONAL ELECTRICAL CODE (NEC) (NFPA 70)
 2021 INTERNATIONAL PLUMBING CODE (IPC)
 2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)

IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL.

2. ALL STRUCTURAL WORK TO BE DONE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL, 13TH EDITION (AISC 13TH ED.)
3. ALL CONCRETE WORK TO BE DONE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI 301) SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 318) AND BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
4. ALL REINFORCING STEEL WORK TO BE DONE IN ACCORDANCE WITH THE (ACI 315) MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES.

GROUNDING NOTES:

1. GROUNDING SHALL COMPLY WITH NEC ART. 250.
2. GROUNDING CONDUCTORS SHALL BE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR INDOOR USE.
3. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
4. ROUTE GROUNDING CONNECTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NOT BE BENT AT RIGHT ANGLE. ALWAYS MAKE 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 8" RADIUS WHEN NECESSARY.
5. CONNECTIONS TO GROUNDING BAR SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
6. TEST COMPLETED GROUNDING SYSTEM AND RECORD RESISTANCE VALUES FOR PROJECT CLOSE-OUT DOCUMENTATION. GROUND RESISTANCE SHALL NOT EXCEED 5 OHMS.
7. GROUNDING CONDUCTORS BETWEEN MGB AND WATERMAIN SHALL BE #2/0. BONDING JUMPERS FROM METALLIC SURFACES SHALL BE #2 MINIMUM. ALL GROUND CONDUCTORS AND BONDING JUMPERS SHALL BE SOFT DRAWN ANNEALED, TINNED, BARE STRANDED COPPER WIRE. COAXIAL CABLES SHALL BE GROUNDED AT A MINIMUM OF TWO LOCATIONS USING VERIZON PROVIDED GROUNDING KITS. EXACT LOCATIONS SHALL BE FINALIZED IN THE FIELD BY THE CONSTRUCTION MANAGER.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
2. STRUCTURAL STEEL ROLLED SHAPES, PLATES, AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:
 ASTM A-992, GRADE 50 ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE.
 ASTM A-36 ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.
 ASTM A-500, GRADE B HSS SECTION (SQUARE, RECTANGULAR, ROUND)
 ASTM A-325, TYPE SC OR N ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS.
 F1554, GRADE 36 ALL ANCHORS BOLTS, UNLESS NOTED OTHERWISE.
 ASTM A-53, GRADE B STEEL PIPE
3. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1 WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 14TH EDITION. WHERE WELD LENGTH IS NOT INDICATED, USE FULL LENGTH WELD. AT THE COMPLETION OF ALL WELDING, ALL DAMAGE TO GALVANIZED COATING SHALL BE REPAIRED.
4. BOLTED CONNECTIONS SHALL USE BEARING TYPE GALVANIZED ASTM A325 BOLTS (3/4" DIA.) SUPPLIED WITH A NUT AND WASHER UNDER TURNED END AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. GALVANIZED ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
7. USE PRECAUTIONS & PROCEDURES PER AWS D1.1 WHEN WELDING GALVANIZED METALS.
8. ALL EXISTING BEAM AND COLUMN DIMENSIONS SHALL BE FIELD VERIFY BY CONTRACTOR PRIOR TO FABRICATION. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THOSE SHOWN SHALL BE REPORTED TO DEWBERRY ENGINEER IMMEDIATELY.
9. CONNECTION DESIGN BY FABRICATOR WILL BE SUBJECT TO REVIEW AND APPROVAL BY ENGINEER.
10. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH SPECIFICATION ASTM A123/A123M-00 HOT-DIP GALVANIZED FINISH UNLESS OTHERWISE NOTED. GALVANIZING SHALL BE PERFORMED AFTER SHOP FABRICATION TO THE GREATEST EXTENT POSSIBLE. ALL DINGS, SCRAPES, MARKS, AND WELDS IN THE GALVANIZED AREAS SHALL BE REPAIRED. REPAIR DAMAGED GALVANIZED COATINGS ON GALVANIZED ITEMS WITH GALVANIZED REPAIR PAINT ACCORDING TO ASTM A780 AND MANUFACTURER'S WRITTEN INSTRUCTIONS, PRIOR TO COMPLETION OF WORK. TOUCHUP ALL DAMAGED GALVANIZED STEEL WITH APPROVED COLD ZINC, "GALVANOX", "DRY GALV", "ZINC-IT", OR APPROVED EQUIVALENT, IN ACCORDANCE WITH MANUFACTURERS GUIDELINES. TOUCHUP DAMAGED NON GALVANIZED STEEL WITH SAME PAINT APPLIED IN SHOP OR FIELD.
11. ALL WELDED COMPONENTS TO BE SHOP WELDED PRIOR TO INSTALLATION. NO WELDING ACTIVITIES IS PERMITTED DURING INSTALLATION OF PROPOSED EQUIPMENTS AND/OR HARDWARE ON SITE.



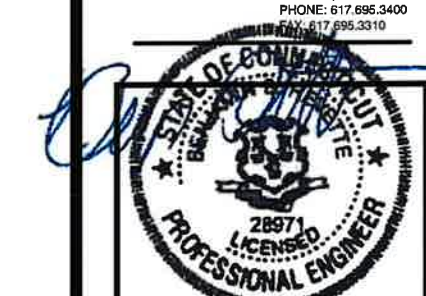
VERIZON WIRELESS
 900 CHELMSFORD STREET
 TOWER 2 FLOOR 5
 LOWELL, MA 01851

**CROMWELL N 2 CT
 MW**

CONSTRUCTION DRAWINGS		
0	06/14/23	FOR SUBMITTAL



Dewberry Engineers Inc.
 99 SUMMER ST.
 SUITE 700
 BOSTON, MA 02110
 PHONE: 617.695.3400
 FAX: 617.695.3310



06/14/2023

DRAWN BY: JG

REVIEWED BY: CDH

CHECKED BY: BBR

PROJECT NUMBER: 50121487

JOB NUMBER: 50164399

SITE NUMBER:

469424

SITE ADDRESS

667 MAIN STREET
 CROMWELL, CT 06416

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-1



VERIZON WIRELESS
 900 CHELMSFORD STREET
 TOWER 2 FLOOR 5
 LOWELL, MA 01851

**CROMWELL N 2 CT
 MW**

CONSTRUCTION DRAWINGS

0	06/14/23 FOR SUBMITTAL



Dewberry Engineers Inc.
 99 SUMMER ST.
 SUITE 700
 BOSTON, MA 02110
 PHONE: 617.695.3400
 FAX: 617.695.3310



06/14/2023

DRAWN BY:	JG
REVIEWED BY:	CDH
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50164399
SITE NUMBER:	

469424

SITE ADDRESS

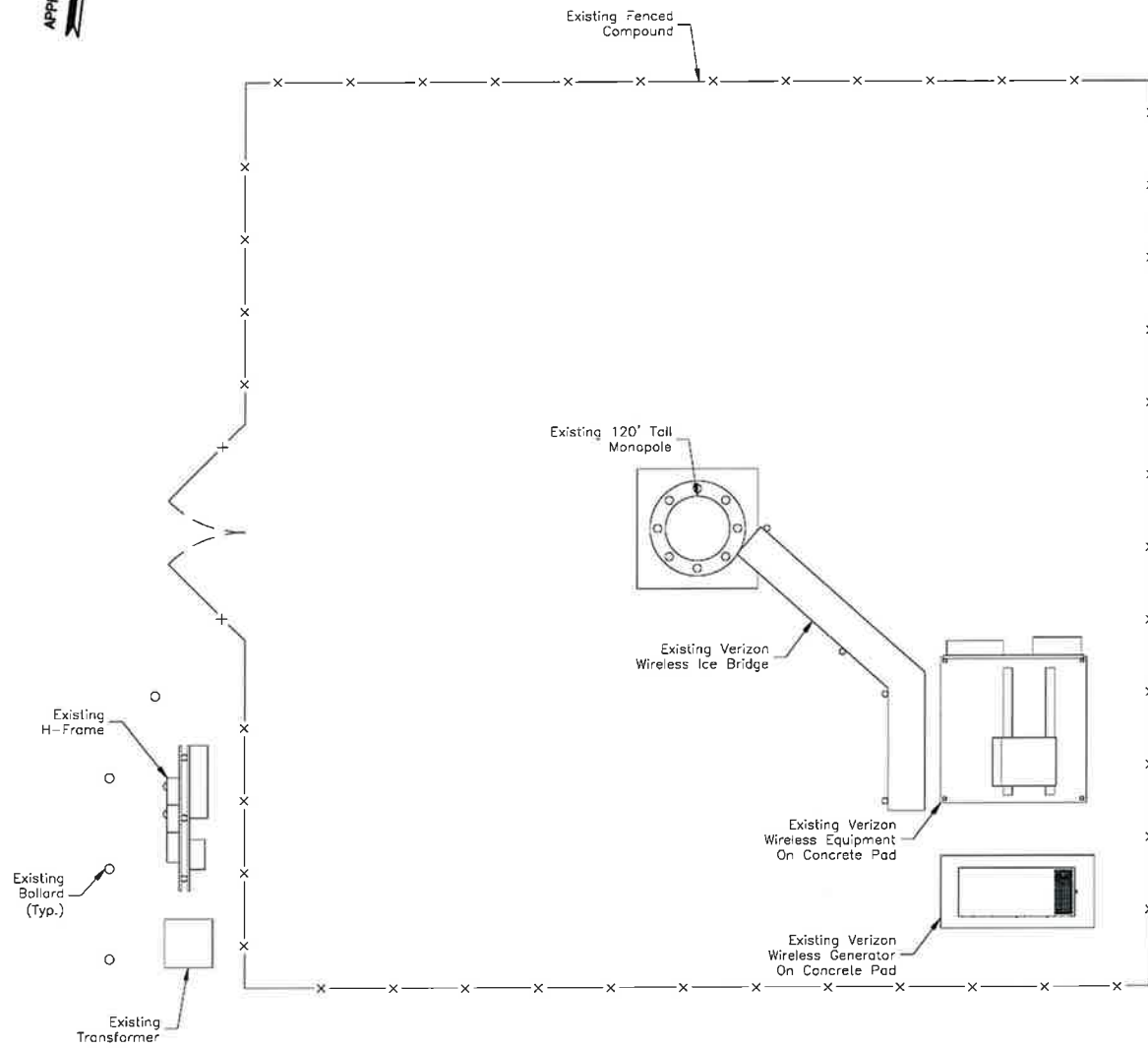
667 MAIN STREET
 CROMWELL, CT 06416

SHEET TITLE

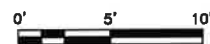
EXISTING & PROPOSED
 COMPOUND PLANS

SHEET NUMBER

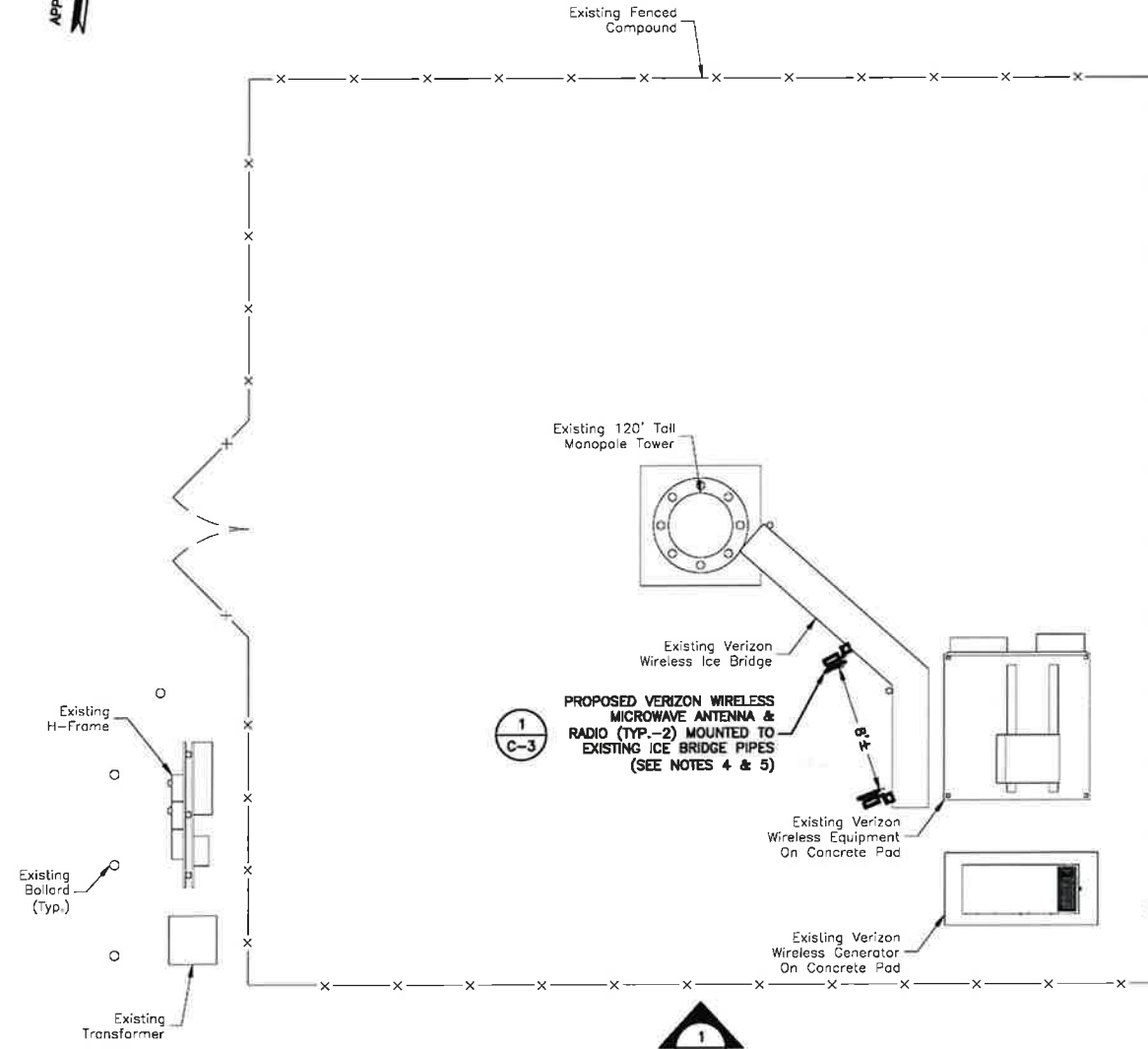
C-1



EXISTING COMPOUND PLAN (1)
 SCALE: 1"=10' FOR 11"x17"
 1"=5' FOR 22"x34"



- NOTES:**
- SOME PROPOSED AND EXISTING INFORMATION NOT SHOWN FOR CLARITY.
 - NORTH ARROW SHOWN AS APPROXIMATE.
 - CONTRACTOR TO VERIFY FIELD VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
 - CONTRACTOR TO SECURE CABLES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS & VERIZON CM DIRECTION.
 - ALL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.



PROPOSED COMPOUND PLAN (2)
 SCALE: 1"=10' FOR 11"x17"
 1"=5' FOR 22"x34"





VERIZON WIRELESS
900 CHELMSFORD STREET
TOWER 2 FLOOR 5
LOWELL, MA 01851

**CROMWELL N 2 CT
MW**

CONSTRUCTION DRAWINGS	
0	06/14/23 FOR SUBMITTAL



Dewberry Engineers Inc.
99 SUMMER ST.
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310



06/14/2023

DRAWN BY:	JG
REVIEWED BY:	CDH
CHECKED BY:	BRR
PROJECT NUMBER:	50121487
JOB NUMBER:	50164389
SITE NUMBER:	

469424

SITE ADDRESS

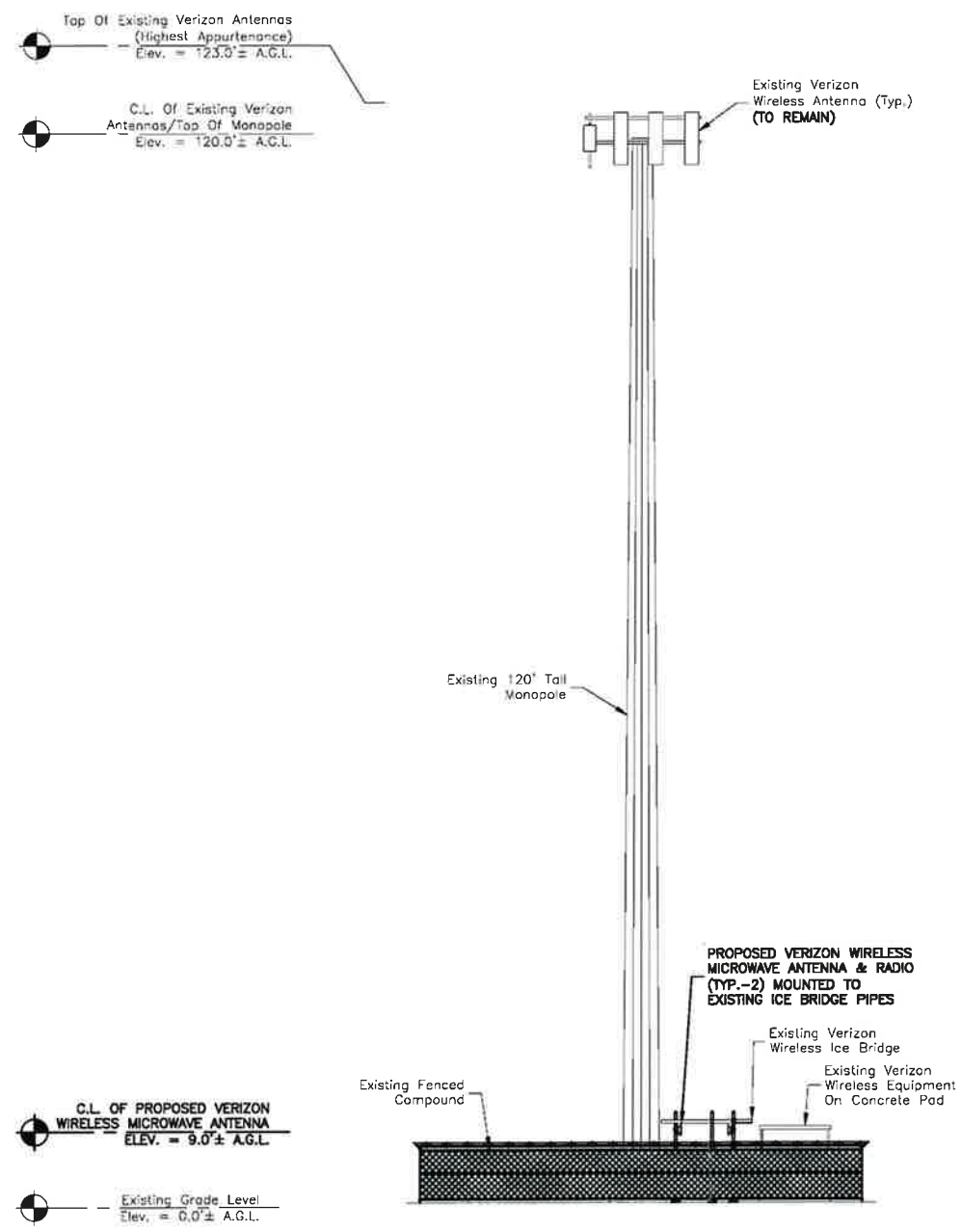
667 MAIN STREET
CROMWELL, CT 06416

SHEET TITLE

PROPOSED
ELEVATION

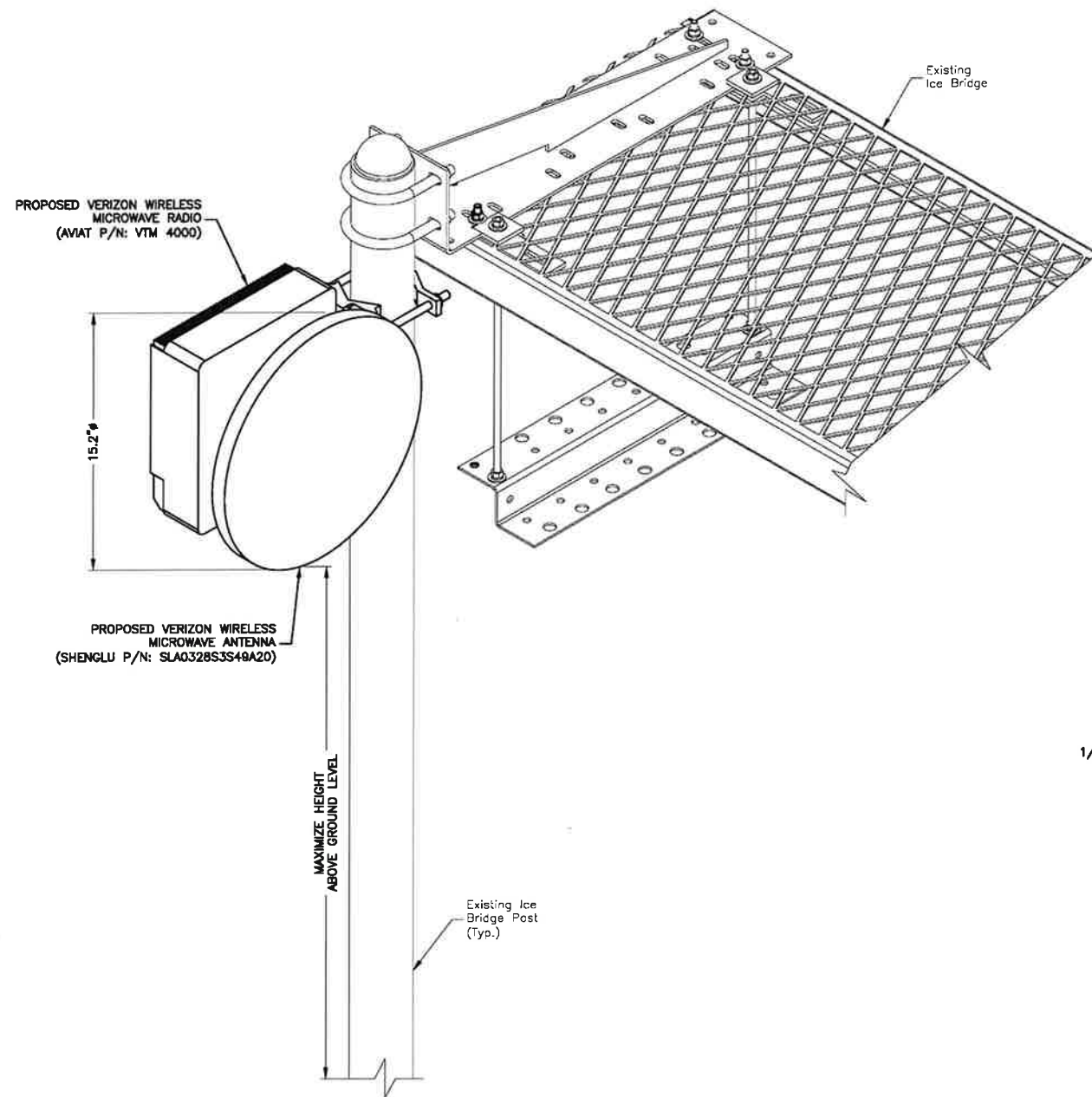
SHEET NUMBER

C-2



PROPOSED ELEVATION ①
 SCALE: 1"=20' FOR 11"x17"
 1"=10' FOR 22"x34"
 0' 10' 20'

- NOTES:**
1. SOME PROPOSED AND EXISTING INFORMATION NOT SHOWN FOR CLARITY.
 2. ELEVATION SHOWN AS APPROXIMATE.
 3. CONTRACTOR TO VERIFY FIELD VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
 4. ALL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.



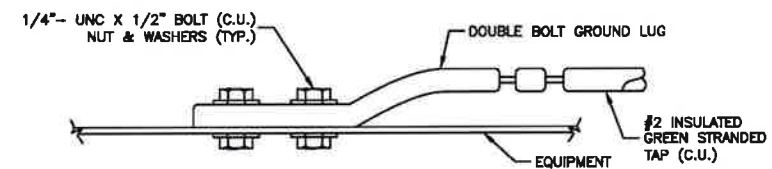
NOTES:

1. INSTALL PROPOSED MICROWAVE ANTENNA IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. VERIZON TO SECURE CABLES TO ICE BRIDGE PER VERIZON CM DIRECTION.
3. ALL EQUIPMENT SHALL BE GROUNDED PER VERIZON WIRELESS STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
4. DETAIL IS SCHEMATIC.
5. ALL MOUNTING HARDWARE TO BE GALVANIZED.

MICROWAVE ANTENNA DETAIL

SCALE: N.T.S.

1



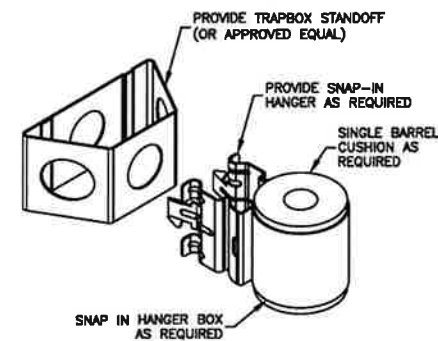
NOTES:

1. TIE GROUNDING INTO EXISTING VERIZON WIRELESS GROUNDING SYSTEM.

GROUNING DETAIL

SCALE: N.T.S.

2



JUMPER MOUNT

SCALE: N.T.S.

3



VERIZON WIRELESS
900 CHELMSFORD STREET
TOWER 2 FLOOR 5
LOWELL, MA 01851

**CROMWELL N 2 CT
MW**

CONSTRUCTION DRAWINGS

0	06/14/23	FOR SUBMITTAL



Dewberry Engineers Inc.
89 SUMMER ST.
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310



06/14/2023

DRAWN BY: JG

REVIEWED BY: CDH

CHECKED BY: BBR

PROJECT NUMBER: 50121487

JOB NUMBER: 50184399

SITE NUMBER:

469424

SITE ADDRESS

667 MAIN STREET
CROMWELL, CT 06416

SHEET TITLE

MICROWAVE
ANTENNA DETAILS

SHEET NUMBER

C-3



Technical Specifications

WTM 4100

ANSI with A2C+ Operation



General Specifications

General		
Frequency Bands		5 - 38 GHz
Physical Configurations		1+0, 2+0 ACCP (via A2C+), 2+0 XPIC (via external OMT)
Modulation and Coding	<i>Fixed or Adaptive</i>	QPSK to 4096 QAM / Hitless AM
Channel Sizes		3.75, 5, 10, 20, 25, 30, 40, 50, 60, 80 and 100 MHz
Capacity (standard single channel)	<i>Airlink Capacity</i>	up to 918 Mbit/s*
Capacity (A2C mode)	<i>Airlink Capacity</i>	up to 1836 Mbit/s*
Encryption		256-bit AES Payload Encryption
Design Tools	<i>Recommended Supported</i>	Aviat Design™ on aviatcloud.com (includes MIMO, Multi-band) Pathloss 5 (basic support only)

Power Supply		
Voltage	<i>DC</i>	±20 to 57V
	<i>PoE</i>	48Vdc (44 to 58Vdc)
Consumption		50 Watts nominal 65 Watts maximum

Physical		
Size (h-w-d), including antenna interfaces		11.5in x 10.5in x 4in (295mm x 270mm x 95mm)
Weight, including antenna interfaces		12lbs (5.5 kg)
Operating Temperature	<i>Guaranteed</i>	-27 to +131°F (-33° to +55°C)
	<i>Extended</i>	-49 to +159°F (-45° to +65°C) ^[1]
Humidity	<i>Guaranteed</i>	100%
Altitude	<i>Guaranteed</i>	15,000 ft (4500m)

Standards Compliance		
EMC		FCC CFR 47, Part 15, ICES-003
Operation		EN 300 019-2-4, Class 4.1
Safety		UL 60950-1, UL 60950-22, UL 62368-1
RF Performance	<i>All Federal Frequencies</i>	FCC CFR 47, Part 101 Manual of Regulations for Federal Radio Frequency Management
Maximum Permissible Exposure		EN 50385
Water Ingress		IEC 60529, IP66
Lightning Protection		Internal, compliant to IEC 61000-4-5, Class 5
Security		FIPS 197 validated (Certificate A980)

Transmitter / Receiver

Transmitter		
Transmit Power Tolerance	<i>5-28 GHz</i>	± 2.0 dB
	<i>38 GHz</i>	± 2.5 dB
Transmitter Source		Synthesized
Frequency Stability		± 5 ppm
Manual Transmitter Power Control Range		Configurable in 0.1 dB steps from min to max power levels
Automatic Transmitter Power Control Range		Configurable over the 20dB attenuation range
	<i>Resolution / Speed</i>	0.1 dB steps / 50dB/s
Synthesizer Resolution		250 KHz
Transmitter Mute		> 50 dB

*[1] See notes in last page

Transmitter / Receiver

Receiver

Receiver Source		Synthesized
Frequency Stability		± 5 ppm
Receiver Overload	<i>BER = 1E-6</i>	-20 dBm
Residual (Background) Bit Error Rate		Better than 1E-13
RSSI Accuracy [4]	-30 to -70 dBm, -27 to +131°F (-33° to +55°C)	Better than ± 2.5dB
	-20 to -30 dBm, -27 to +131°F (-33° to +55°C)	Better than ± 3.5dB
	-20 to -30 dBm, -49 to +149°F (-45° to +65°C)	Better than ± 4.5dB

Networking

CE/L2

Switch capability		50 Gbps non-blocking
Quality of Service (QoS)		8 COS, Scheduling, Policing, Storm Control, Shaping
QoS Mapping		PCP (802.1p), DSCP, H-QoS
VLANs		IEEE 802.1Q and IEEE 802.1ad (Q-in-Q)
Spanning Tree		Rapid and multiple protocols (RSTP, MSTP)
Ethernet OAM		IEEE 802.3ah, IEEE 802.1ag, ITU-T Y.1731
Congestion Avoidance		WRED, per queue
		Packet Buffer – 180 Mbyte
Jumbo frames		Up to 9600 bytes

Synchronisation

Precision Time Protocol		IEEE 1588v2 TC or BC
-------------------------	--	----------------------

General Specifications

Interfaces

Traffic	<i>2x fixed RJ45</i>	10/100/1000BT Electrical
	<i>2x optional SFP</i>	1, 2.5 & 10Gbps speeds, both Optical (Single and Multi-mode) and Electrical
Power	<i>Direct</i>	24Vdc or 48Vdc
	<i>Power over Ethernet</i>	Via 10/100/1000BT Electrical port
USB support	<i>Management</i>	Local setup, sw/fw upgrade, config backup
Wireless connection		via Wifi
RSSI		Dual voltmeter pins

Management

Local Management		Configuration save & load
		Wireless USB dongle to support Wifi
		Aviat OS software upgrade
Event Capture		Event and Alarm capture, time stamp and logging
Statistics		RMON 1 Ethernet and radio performance statistics
Network Management		SNMPv2c ProVision or MIB interface support
		IPv4 addressing with an In-Band Management VLAN. Telnet or SSH access
		Aviat Cloud – Manage Advanced
Clock		Simple Network Time Protocol (SNTP V4), embedded real time clock

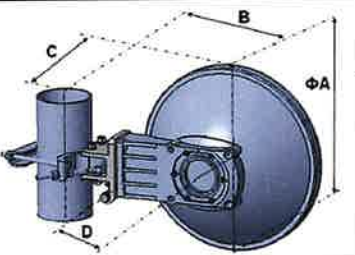
*[] See notes in last page



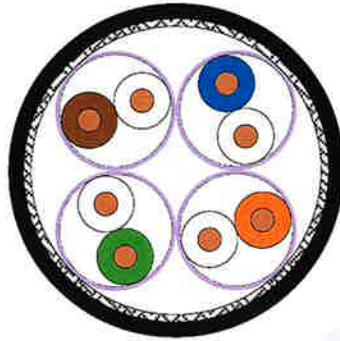
Microwave Antenna Specifications

SLA0328S3S49A20 0.3m Ultra High Performance Antenna Flange Type Rectangular



Electrical Specifications					
Frequency (GHz)	27.5~29.5				
Polarization	Single(V or H)				
Gain , Low(dBi)	37.7				
Gain, Mid(dBi)	38				
Gain, Top(dBi)	38.3				
Beam Width	2.0°				
Cross-pol. Discrimination_XPD (dB)	30				
F/B Ratio (dB)	64				
VSWR / RL (dB)	1.3/17.7				
Regulatory Compliance	ETSI EN 302217 Range 4 Class 3				
Mechanical Specifications					
Diameter (m)	0.3				
Antenna Color	Cool Gray 1C				
Radome Options	Foam				
Interface Type	UBR320 OR Customized				
Side Struts, Included	0				
Azimuth Adjustment	Coarse : 360 ° Fine : ±15 °				
Elevation Adjustment	Fine : ±15 °				
Diameter of Mounting Pole (mm)	Φ51~Φ114				
Wind Velocity Survival Rating (km/h)	252				
Wind Velocity Operational (km/h)	200				
Ice-load (mm)	25.4				
Operational Temperature (°C)	-45~+60				
Packaging	Carton				
LxWxH (mm)	480*480*267				
Wind Load Specifications					
Axial Force (N) @ survival wind speed	444				
Side Force (N) @ survival wind speed	219				
Twisting Moment (N•m) @ survival wind speed	141				
	Dimensions	ΦA	B	C	D
	(mm)	386	318	137	180
Note: 1. The values of B and C are measured at the pole diameter of 114mm 2. The thickness of the radome is not included in the dimensions of A and C					

02YSCH 4X2X0.62/1.5-100 PIMF BK Cat 6A



Design:

Wire

Bare copper wire (22AWG)
Insulation of foamed Polyethylene (PE) with skin

Ø 0.62 mm (0,024 in dia)
Ø 1.50 mm (0,059 in dia)

Screened pair

2 wires twisted to a pair
Alulaminat foil overlapped, applied longitudinally

Core:

4 screened pairs
Sequence of colors: WH/BL, WH/OR, WH/GN, WH/BR
Shield braiding of tinned copper wires
Coverage about 80%

Jacket:

Thermoplastic copolymer (FRNC)BK
Wall thickness about 0.80 mm

Ø (8.8±0.3) mm (0.346 ±0.012 in dia)

Inkjet -marking: "sequential length in metres" LEONI L * S/FTP CAT 6A SOLID CABLE 22AWG 4PR
"internal lot number"

Electrical data at 20° C

Conductor resistance	≤	65	Ohm/km
Insulation resistance	≥	5	GOhm*km
Capacitance (1kHz)		46	pF/m
Phase delay		460	ns/100 m
Skew at 100 MHz		10	ns/100 m
Characteristic impedance 100 MHz		100±10	Ohm
Operating voltage (peak)		125	V
Test voltage		1000	V

ATTACHMENT 2



C Squared Systems, LLC
65 Dartmouth Drive
Auburn, NH 03032
(603) 644-2800
support@csquaredsystems.com

Calculated Radio Frequency Emissions Report



Cromwell N 2
667 Main Street, Cromwell, CT 06416

September 19, 2023

Table of Contents

1. Introduction.....	1
2. FCC Guidelines for Evaluating RF Radiation Exposure Limits	1
3. RF Exposure Prediction Methods	2
4. Antenna Inventory	3
5. Calculation Results.....	4
6. Conclusion.....	6
7. Statement of Certification.....	6
Attachment A: References.....	7
Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)	8
Attachment C: Verizon Antenna Model Data Sheets and Electrical Patterns.....	10
Attachment D: Far Field Calculation Sheet.....	12

List of Figures

Figure 1: Graph of General Population % MPE vs. Distance.....	4
Figure 2: Graph of FCC Limits for Maximum Permissible Exposure (MPE).....	9

List of Tables

Table 1: Proposed Antenna Inventory	3
Table 2: Maximum Percent of General Population Exposure Values	5
Table 3: FCC Limits for Maximum Permissible Exposure	8

1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed installation of Verizon's 28 GHz microwave antenna to be mounted at 9' AGL on an existing ice bridge located at 667 Main Street in Cromwell, CT. The coordinates of the monopole tower are 41° 37' 56.63" N, 72° 39' 10.73" W.

Verizon is proposing the following:

- 1) Install one (1) 28 GHz point-to-point microwave system.

This report considers the planned¹ and existing² antenna configuration for Verizon to derive the resulting % MPE of its proposed installation.

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

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

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

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm²). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment C of this report.

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

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

¹ As referenced to Verizon's Far Field Calculation sheet updated 06/07/2023 included in Attachment D.

² As referenced to Connecticut Siting Council Notice of Exempt Modification – 667 Main Street, Cromwell, Connecticut, dated 06/10/2021

3. RF Exposure Prediction Methods

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

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

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial Distance = $\sqrt{(H^2 + V^2)}$

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

Off Beam Loss is determined by the selected antenna patterns

Ground reflection factor (GRF) of 1.6

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

4. Antenna Inventory

Table 1 below outlines Verizon’s existing antenna configuration for the site. The associated data sheets and antenna patterns for these specific antenna models are included in Attachment C.

Operator		TX Freq (MHz)	Power at Antenna (Watts)	Ant Gain (dBi)	Power EIRP (Watts)	Antenna Model	Beam Width	Mech. Tilt	Length (ft)	Antenna Centerline Height (ft)	
Verizon	Alpha	700	160	14.9	4944	NNHH-65B-R4-V1	65	0	5.99	120	
		850	100	15.0	3162		60				
		1900	160	17.9	9866		69				
		2100	160	18.4	11069		64				
		3700	200	25.5	70963	MT6407-77A	-	0	2.92	120	
	Beta	700	160	16.8	7658	NHH-45B-R2B	48	0	6.0	120	
		850	100	17.5	5623		43				
		1900	160	19.9	15636		43				
		2100	160	20.3	17144		41				
		3700	200	25.5	70963	MT6407-77A	-	0	2.92		
	Gamma	700	160	14.9	4944	NNHH-65B-R4-V1	65	0	5.99	120	
		850	100	15.0	3162		60				
		1900	160	17.9	9866		69				
		2100	160	18.4	11069		64				
		3700	200	25.5	70963	MT6407-77A	-	0	2.92	120	
	P2P		28000	0.2	38	1287	SLA0328S3S49A20	2.0	0	1	9

Table 1: Proposed Antenna Inventory

5. Calculation Results

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

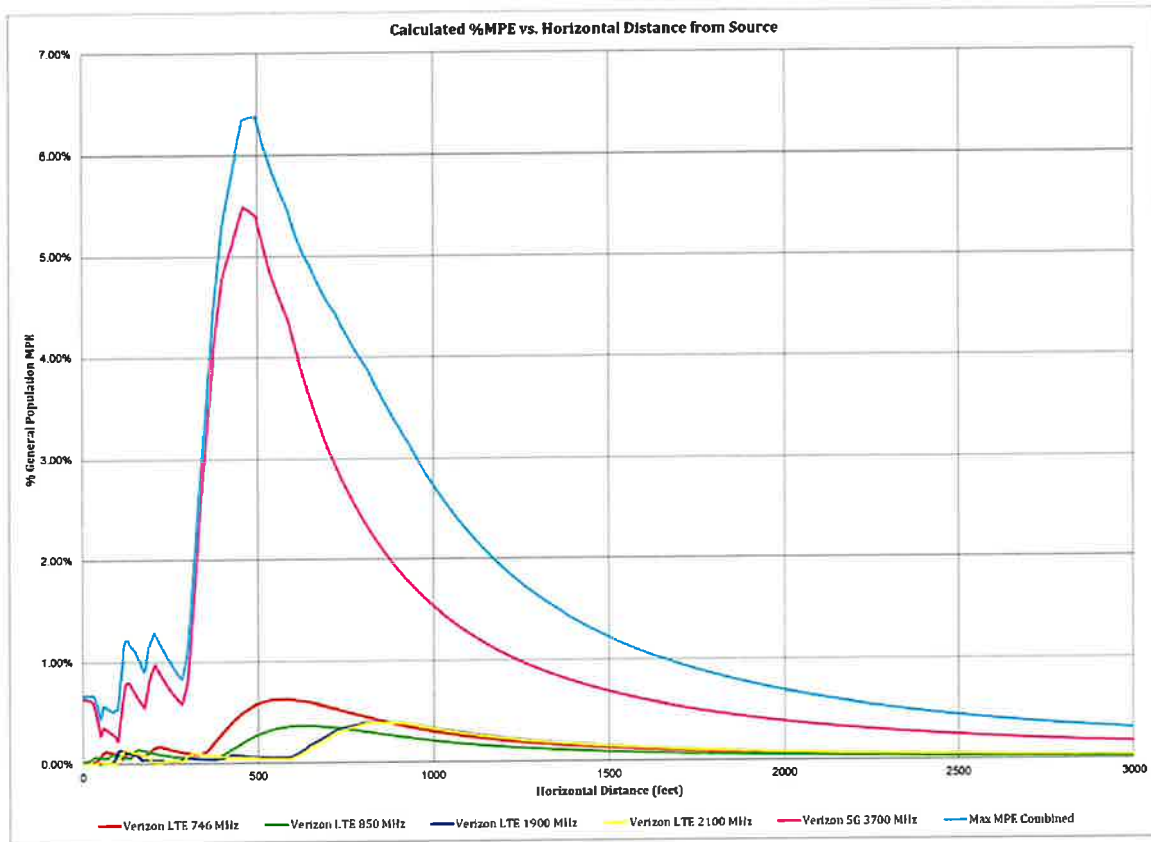


Figure 1: Graph of General Population % MPE vs. Distance

The highest combined value for % MPE for existing emitters (6.37% of the General Population limit) is calculated to occur at a horizontal distance of 493 feet from antennas. The maximum %MPE generated by the proposed 28 GHz microwave system is 0.50% and occurs at the distance of 172 feet. While the peak % MPE generated by the proposed 28 GHz microwave system does not occur at the same point as the peak cumulative %MPE for all existing emitters, as a very conservative calculation of the total %MPE, we add the 6.37% predicted at 493 feet to the 0.50% predicted for the 28 GHz system at 172 feet to arrive at a total maximum % MPE of 6.87%.

Please note that the percent of MPE calculations close to the site take into account off beam loss, which is determined from the vertical pattern of the antennas used. Therefore, RF power density levels may increase as the distance from the site increases. At distances of approximately 1500 feet and beyond, one would now be in the main beam of the antenna pattern and off beam loss is no longer considered. Beyond this point, RF levels become calculated solely on distance from the site and the percent of MPE decreases significantly as distance from the site increases.

Table 2 below lists percent of MPE values as well as the associated parameters that were included in the calculations. The highest percent of MPE value was calculated to occur at a horizontal distance of 493 feet from the site (reference Figure 1).

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

Carrier	Number of Transmitters	Power out of Base Station Per Transmitter (Watts)	Antenna Height (Feet)	Distance to the Base of Antennas (Feet)	Power Density (mW/cm ²)	Limit (mW/cm ²)	% MPE
Verizon 5G 3700 MHz	1	200.0	120.0	493	0.054024	1.000	5.40%
Verizon LTE 1900 MHz	4	40.0	120.0	493	0.000627	1.000	0.06%
Verizon LTE 2100 MHz	4	40.0	120.0	493	0.000534	1.000	0.05%
Verizon LTE 746 MHz	4	40.0	120.0	493	0.002887	0.497	0.58%
Verizon LTE 850 MHz	4	25.0	120.0	493	0.001556	0.567	0.27%
						Sub Total	6.37%
Verizon LTE 28GHz	1	0.2	9.0	172	0.001248	1.000	0.50%
						Grand Total	6.87%

Table 2: Maximum Percent of General Population Exposure Values

Attachment A: References

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

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

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

Verizon's Radio Frequency Design Sheet updated 10/21/2022

AT&T's filing, Connecticut Siting Council Notice of Exempt Modification – Antenna Add - 667 Main Street (aka 1 Service Road) Cromwell, CT, dated 9/23/2022

As referenced to Dish Wireless LLC's filing, Connecticut Siting Council Tower Share Application – 667 Main Street , Cromwell, CT, dated 11/19/2021

T-Mobile's filing, Connecticut Siting Council Notice of Exempt Modification – 667 Main Street , Cromwell, CT, dated 10/1/2020

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

(A) Limits for Occupational/Controlled Exposure³

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

(B) Limits for General Population/Uncontrolled Exposure⁴

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

f = frequency in MHz * Plane-wave equivalent power density

Table 3: FCC Limits for Maximum Permissible Exposure

³ Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

⁴ General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

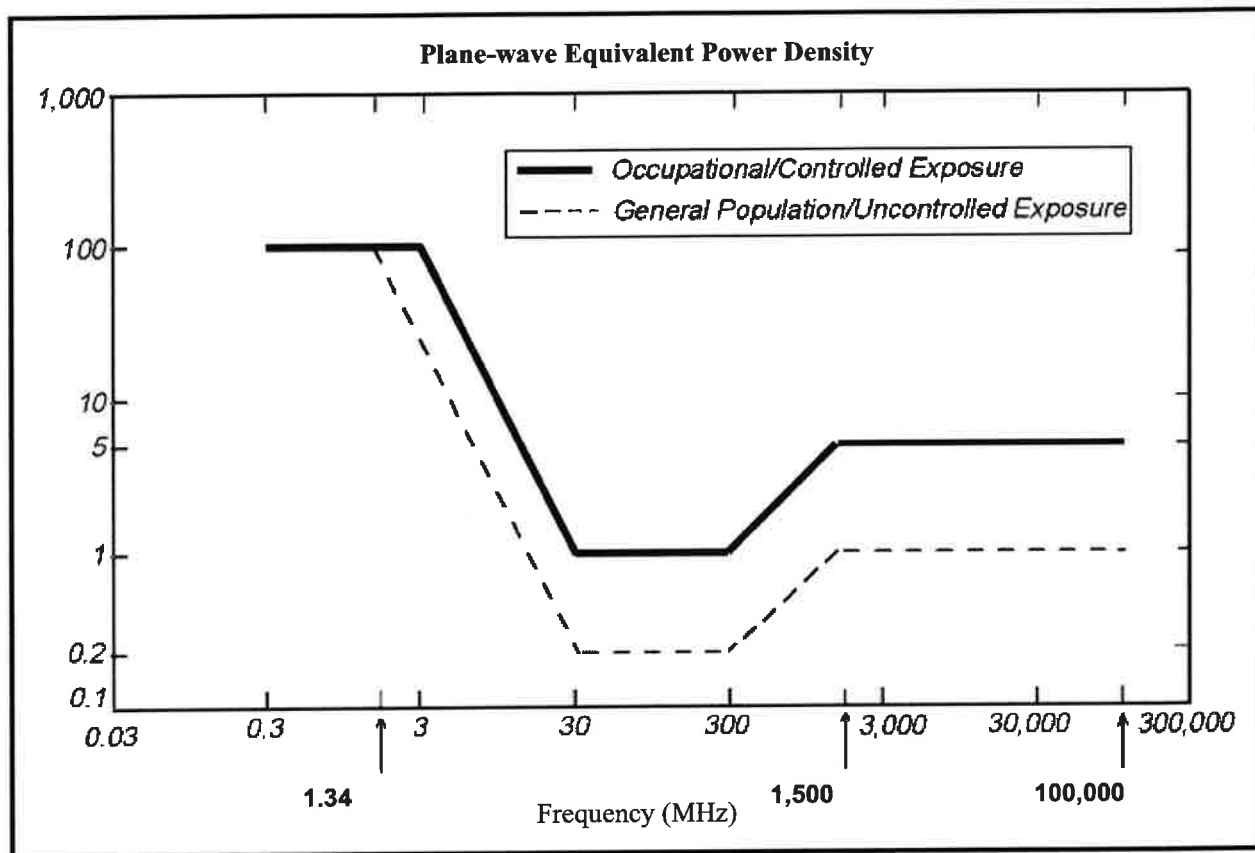
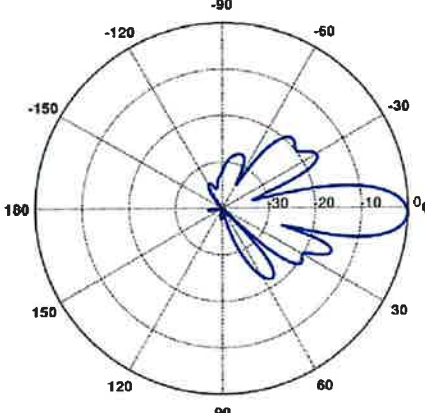
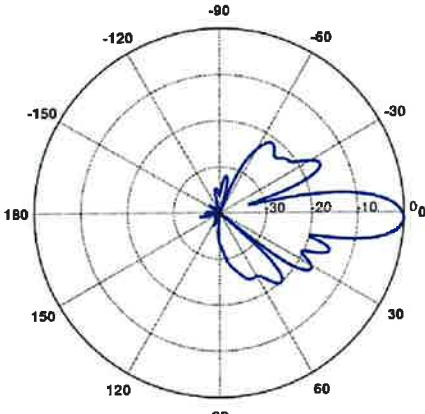
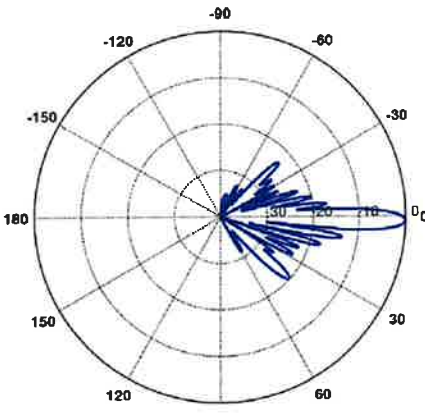


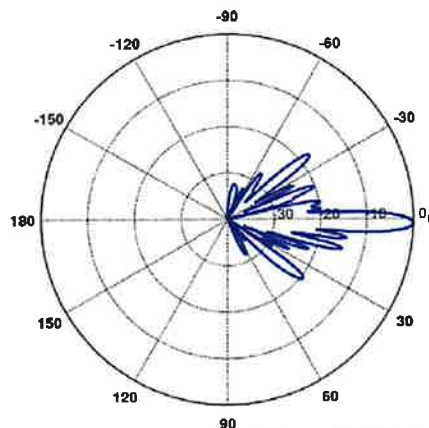
Figure 2: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: Verizon Antenna Model Data Sheets and Electrical Patterns

<p>LTE 750 MHz</p> <p>Manufacturer: COMMSCOPE Model #: NHH-45B-R2B Frequency Band: 698-806 MHz Gain: 16.8 dBi Vertical Beamwidth: 12.5° Horizontal Beamwidth: 48° Polarization: ±45° Dimensions (L x W x D): 72.01" x 17.99" x 8.01"</p>	
<p>LTE 850 MHz</p> <p>Manufacturer: COMMSCOPE Model #: NHH-45B-R2B Frequency Band: 806-896 MHz Gain: 17.5 dBi Vertical Beamwidth: 11.4° Horizontal Beamwidth: 43° Polarization: ±45° Dimensions (L x W x D): 72.01" x 17.99" x 8.01"</p>	
<p>LTE 1900 MHz</p> <p>Manufacturer: COMMSCOPE Model #: NHH-45B-R2B Frequency Band: 1850-1990 MHz Gain: 19.9 dBi Vertical Beamwidth: 5.4° Horizontal Beamwidth: 43° Polarization: ±45° Dimensions (L x W x D): 72.01" x 17.99" x 8.01"</p>	

LTE 2100 MHz

Manufacturer: COMMSCOPE
Model #: NHH-45B-R2B
Frequency Band: 1920-2200 MHz
Gain: 20.3 dBi
Vertical Beamwidth: 5.0°
Horizontal Beamwidth: 41°
Polarization: ±45°
Dimensions (L x W x D): 72.01" x 17.99" x 8.01"



Attachment D: Far Field Calculation Sheet

Band	28 GHz
Operating Frequency (MHz)	27,500
General Population MPE (mW/cm²)	1.000
ERP Per Transmitter (Watts)	785
Number of Transmitters	1
Antenna Centerline (feet)	12
Total ERP (Watts)	785
Total ERP (dBm)	59
Maximum % of General Population Limit	0.12%
Distance to Maximum % of General Population Limit (feet)	344

ATTACHMENT 3



Dewberry Engineers Inc. | 617.695.3400
99 Summer Street, Suite 700 | 617.695.3310 fax
Boston, MA 02110-1200 | www.dewberry.com

August 16, 2023

Andrew Leone
Verizon Wireless
900 Chelmsford Street
Tower 2 Floor 5
Lowell, MA 01851

Re: Cromwell N 2 CT MW (Rev 1)
PSLC: 469424
Fuze #: 16927515
667 Main Street
Cromwell, CT 06416

Dear Mr. Leone:

Verizon Wireless has proposed to install (2) microwave antennas (Shenglu P/N: SLA0328S3S49A20) and (2) RRHs (Aviat P/N: VTM 4000) at the above referenced site. The proposed microwave antennas and RRHs will be mounted on the existing ice bridge posts at grade.

Dewberry Engineers Inc. (Dewberry) has reviewed the antenna design provided by Verizon Wireless and has determined that the existing ice bridge posts and proposed antenna mounts have adequate capacity to support the proposed equipment configuration. The maximum utilization of the existing ice bridge posts is 14.6%. Dewberry assumes that the new antennas, RRHs and associated equipment are installed per the latest Construction Drawings by Dewberry.

This assessment is based on our visual inspection that the existing ice bridge posts is in good condition and was constructed in accordance with ANSI/TIA-222-H standards and the 2022 CT State Building Code. If, during construction, any damage, deterioration, and/or discrepancies are noticed, Dewberry is to be notified to assess any deviation from the assumed condition. Any alteration in equipment loading described above and on the associated plans will void any conclusions expressed herein and will require further analysis and design. No structural qualification is made or implied by this structural letter for existing structural members not supporting the proposed installation.

If you have any questions, please do not hesitate to call me at 617-531-0744.

Sincerely,
Dewberry Engineers Inc.

Brandon Kelsey, P.E.
Structural Project Engineer
CT License No.: 36967

ATTACHMENT 4

Certificate of Mailing — Firm



Name and Address of Sender Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	TOTAL NO. of Pieces Listed by Sender 3	TOTAL NO. of Pieces Received at Post Office™ 3	Affix Stamp Here Postmark with Date of Receipt. neopost 09/20/2023 US POSTAGE \$003.19 ZIP 06103 041L1220393
	Postmaster, per (name of receiving employee) 		

USPS® Tracking Number Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Anthony Salvatore, Town Manager Town of Cromwell 41 West Street Cromwell, CT 06416				
2.	Stuart Popper, Director of Planning and Development Town of Cromwell 41 West Street Cromwell, CT 06416				
3.	Cromwell Concrete Products Inc. 667 Main Street Cromwell, CT 06416				
4.					
5.					
6.					