

August 3, 2023

*Via Electronic Mail and Hand Delivery*

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

Re: **Notice of Exempt Modification**  
**Bridgewater Country Fair – Temporary Telecommunications Facility**  
**110 Main Street South, Bridgewater, Connecticut**

Dear Attorney Bachman:

Pursuant to R.C.S.A. Section 16-50j-72(d), this letter will serve as notice that Cellco Partnership d/b/a Verizon Wireless (“Cellco”) intends to install a temporary wireless facility (a/k/a “Cell on Wheels” or “COW”) for use during this year’s Bridgewater Country Fair scheduled for August 18-20, 2023.

Cellco intends to install the COW in a grassy area adjacent to the house (owned by the Bridgewater Fire Department) at 110 Main Street South (the “Property”). Included in Attachment 1 is a letter from the Bridgewater Fire Department authorizing the filing of this notice. In accordance with R.C.S.A. Section 16-50j-73, a copy of this filing has been sent to Curtis Read, First Selectman, Meg Khare, Land Use Coordinator, and Bridgewater Fire Department.

The COW that Cellco intends to install at the Property is a trailer-mounted wireless facility with a retractable mast extending to a height of 45 feet above ground level (“AGL”). Cellco will attach seven (7) panel antennas to the mast, four (4) at a centerline height of 35 feet AGL and three (3) at a centerline height of 29 feet AGL. The COW will be powered by a portable generator. Included in Attachment 2 is a Lease Exhibit showing the proposed COW and specifications for the antennas and radios that Cellco intends to use at the Property.

# Robinson+Cole

Melanie A. Bachman, Esq.  
August 3, 2023  
Page 2

The proposed temporary telecommunications facility satisfies the criteria set forth in R.C.S.A. Section 16-50j-72(d), as a facility that will provide temporary wireless service for an event of State-wide significance. The COW will provide additional network capacity to accommodate increased wireless voice and data services needed during the event. Cellco expects that the COW will be brought to the site immediately prior to the start of the event and will be removed immediately after the event.

The operation of the COW will not result in a total radio frequency (RF) emissions level that exceed the Federal Communications Commission (FCC) safety standard. Included in Attachment 3 are Far Field Approximation Tables for the frequencies Cellco intends to deploy at this temporary facility. These tables demonstrate that the temporary facility will operate well within the FCC standard.

Finally, in Attachment 4 is a copy of the Town Assessor's parcel map including owner information for the Property. In accordance with R.C.S.A. Section 16-50j-73, a copy of this filing has been sent to Curtis Read, Meg Khare and Bridgewater Fire Department. (See Attachment 5).

Based on the foregoing, Cellco respectfully requests acknowledgement of this notice for the installation of a temporary wireless facility at the Property. Please feel free to contact me if you have any questions or need any additional information.

Sincerely,



Kenneth C. Baldwin

## Attachments

Copy to:

Curtis Read, First Selectman  
Meg Khare, Land Use Coordinator  
Bridgewater Fire Department  
Daniel Fitzpatrick, Verizon Wireless  
Shiva Gadasu, RF Engineer

# **ATTACHMENT 1**

THE BRIDGEWATER FIRE DEPARTMENT, INC  
100 Main Street South  
Bridgewater, CT 06752

**RE: Evidence of Agreement and Landowner's Consent to File for  
Permits/Approvals to be Granted to Cellco Partnership d/b/a Verizon  
Wireless**

To Whom It May Concern:

The Bridgewater Fire Department, Inc is the owner of certain real property located in the Town of Bridgewater at 110 Main Street South and identified as Map/Block 35/38 on the tax map of the Town of Bridgewater ("Subject Property").

Please be advised that The Bridgewater Fire Department, Inc has entered into an agreement with Cellco Partnership d/b/a Verizon Wireless ("Applicant") to install a temporary wireless communications facility on a portion of the Subject Property, and permission is hereby granted to Applicant to make application for Building, Zoning, Planning, or any other Land Use or Regulatory Permit(s) required to effectuate the installation of said wireless facility.

The Applicant, or its agent, is hereby authorized to execute the required application(s) regarding this matter. Permission is also hereby granted for public officials and Board, Commission or Council members, as required, to enter upon the Subject Property for the limited purpose of inspecting the specific site and access that are the subject of Applicant's proposed installation.

Sincerely,

THE BRIDGEWATER FIRE DEPARTMENT, INC

By:                       
Name: SCOTT SHAIL  
Title: TREASURER  
Date: 8/2/23

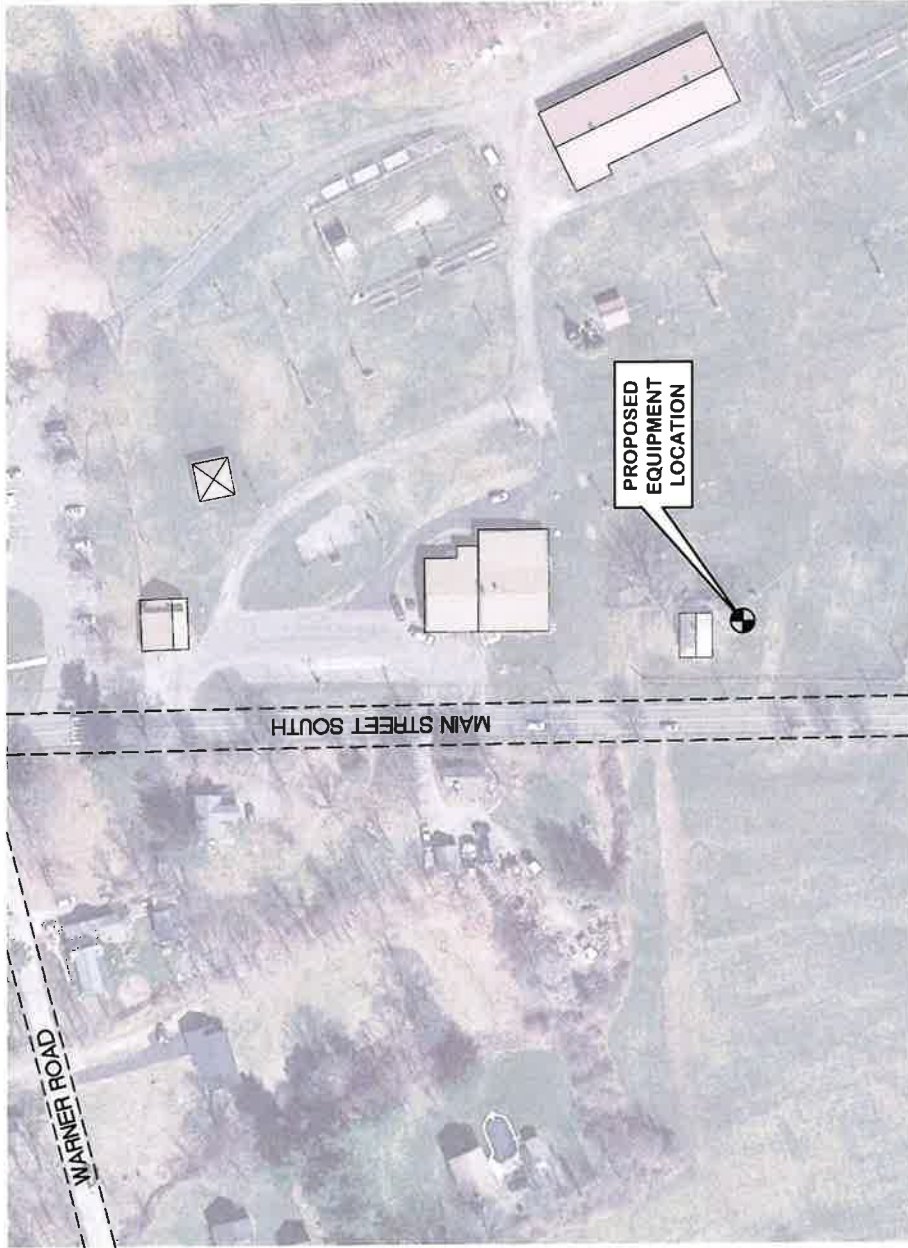
# **ATTACHMENT 2**

**LEASE EXHIBIT**

THIS LEASE PLAN IS DIAGRAMMATIC IN NATURE AND IS INTENDED TO PROVIDE GENERAL INFORMATION REGARDING THE LOCATION AND SIZE OF THE PROPOSED LESSEE WIRELESS COMMUNICATION FACILITY. THE SITE LAYOUT WILL BE FINALIZED UPON COMPLETION OF SITE SURVEY AND FACILITY DESIGN.

PRELIM. SITE COORDINATES: 41° 31' 50.02"N  
73° 21' 53.71"W

GROUND ELEVATION: 676.50 ± A.M.S.L.  
COORDINATES AND GROUND ELEVATION REFERENCED FROM FAA 2C SURVEY, PREPARED BY CENTEK ENGINEERING, DATED 07/19/2023.



1 SITE LOCATION MAP  
SCALE: NOT TO SCALE

REV	DATE	BY	DESCRIPTION
A	06/22/23	SPR	ISSUED FOR CLIENT REVIEW
B	07/19/23	SPR	ISSUED FOR CLIENT COMMENTS
C	07/19/23	SPR	ISSUED FOR CLIENT COMMENTS



**CEN TEK** engineering  
Centered on solutions  
www.centekeing.com  
2031 455-0580  
2031 455-6997 Fax  
55-2 North Farmers Road, Fairfield, CT 06425

Calico Partnership d/b/a Verizon Wireless  
BRIDGEWATER FAIR  
110 MAIN STREET SOUTH  
COW CT 23  
BRIDGEWATER, CT 06752

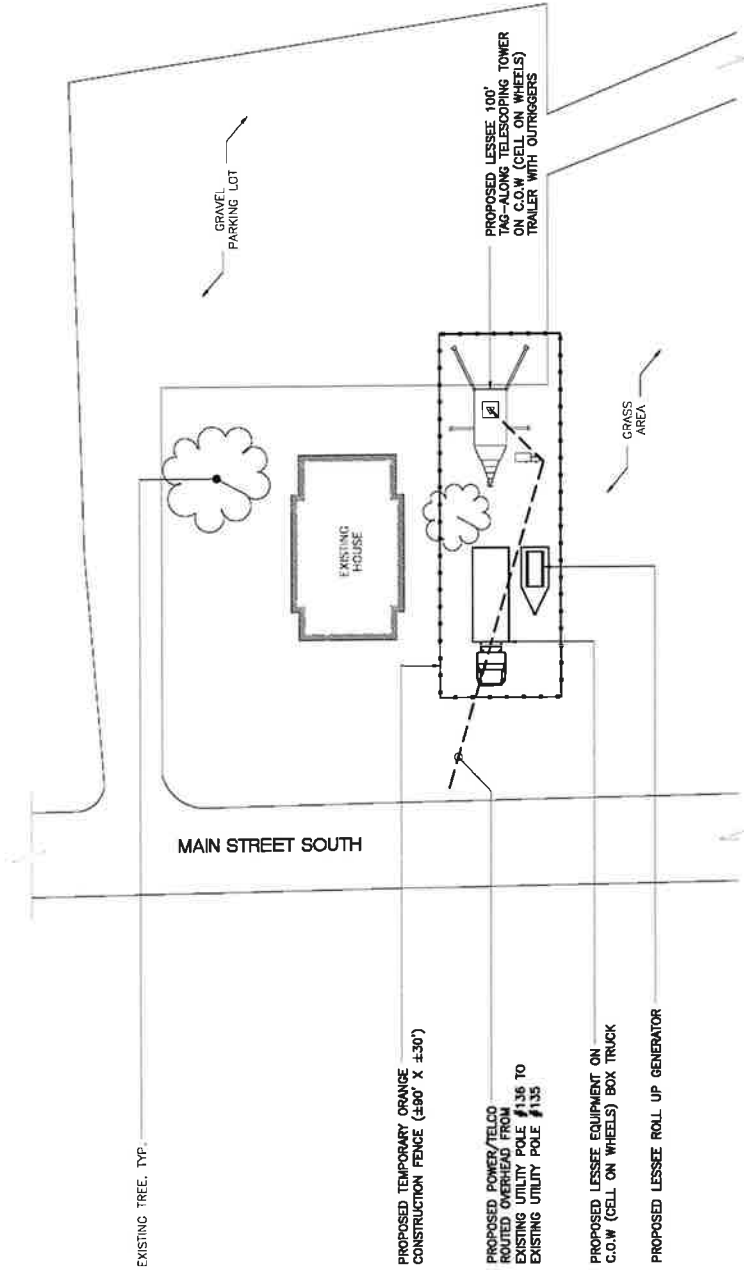
DATE: 06/22/23  
SCALE: AS SHOWN  
JOB NO.: 23015L11  
SHEET NO. **L-1**

**SCOPE OF WORK NOTES:**

1. THE PROPOSED LESSEE ANTENNA INSTALLATION TO CONSIST OF A TOTAL OF (7) PANEL ANTENNAS, ASSOCIATED RRH APPURTENANCES & CABLING, CABLING TO FOLLOW EXISTING ROUTING PATH.
2. LESSEE POWER AND TELCO UTILITIES SHALL BE ROUTED FROM EXISTING DEMARKS LOCATED WITHIN OR ADJACENT TO THE PROPOSED COMMUNICATIONS FACILITY.
3. THE PROPOSED LESSEE GROUND INSTALLATION TO CONSIST OF A ROLL-UP GENERATOR, CELL ON WHEELS BOX TRUCK, AND A CELL ON WHEELS 100' TAG-ALONG TELESCOPING TOWER WITH OUTRIGGERS SURROUNDED BY A TEMPORARY ORANGE CONSTRUCTION FENCE.

**LEASE EXHIBIT**

THIS LEASE PLAN IS DIAGRAMMATIC IN NATURE AND IS INTENDED TO PROVIDE GENERAL INFORMATION REGARDING THE LOCATION AND SIZE OF THE PROPOSED LESSEE WIRELESS COMMUNICATION FACILITY. THE SITE LAYOUT WILL BE FINALIZED UPON COMPLETION OF SITE SURVEY AND FACILITY DESIGN.



1  
L-2  
PROPOSED PARTIAL SITE PLAN  
SCALE: 1" = 30'-0"

NO.	DATE	REVISIONS	BY	CHKD.
A	04/22/23	ISSUE FOR PERMITS BY ARCHITECT	SPR	SPR
B	07/18/23	ISSUE FOR CLIENT COMMENTS	TMR	SPR
C	07/24/23	ISSUE FOR CLIENT COMMENTS	TMR	SPR



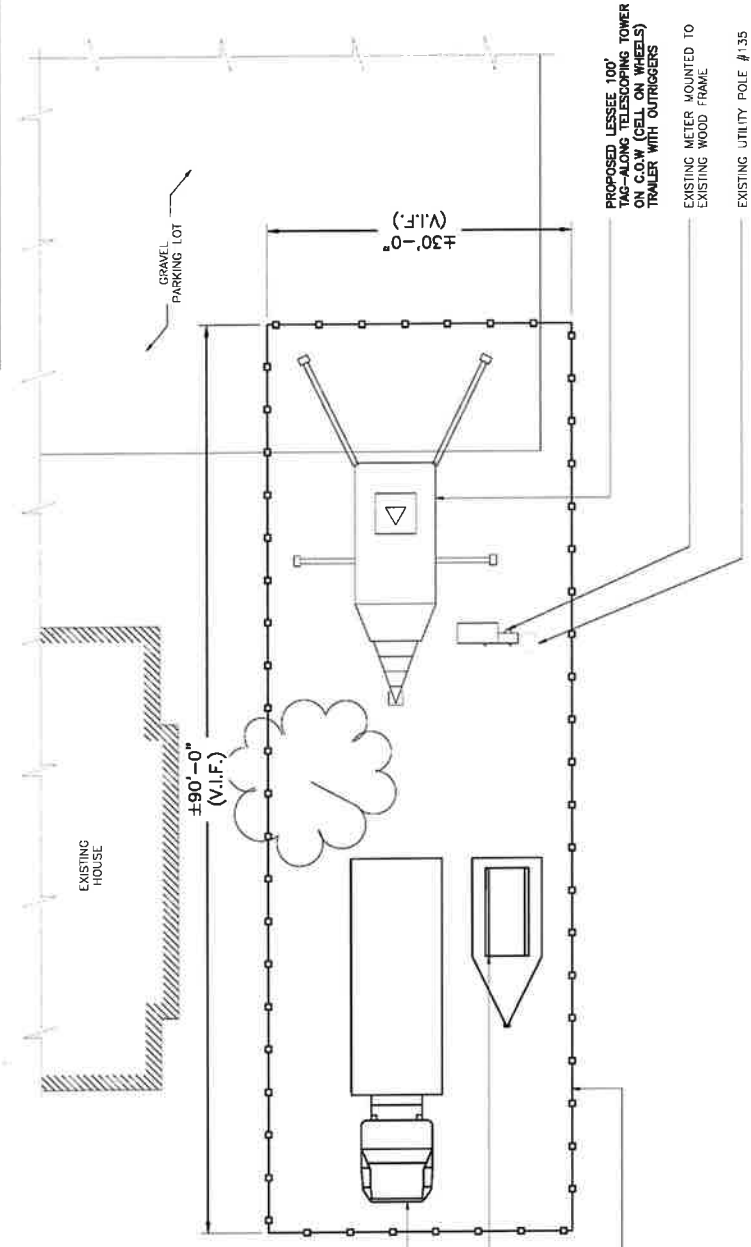
**CENTEK** engineering  
 Centered on Solutions™  
 www.CenterkEng.com  
 (203) 468-0380  
 (203) 468-6587 Fax  
 63-2 North Benton Road, Portland, CT 06405

Colco Partnership d/b/a Verizon Wireless  
 BRIDGEWATER FAIR  
 COW CT 23  
 110 MAIN STREET SOUTH  
 BRIDGEWATER, CT 06752

PROJECT NO.  
**L-2**

**LEASE EXHIBIT**

THIS LEASE PLAN IS DIAGRAMMATIC IN NATURE AND IS INTENDED TO PROVIDE GENERAL INFORMATION REGARDING THE LOCATION AND SIZE OF THE PROPOSED LESSEE WIRELESS COMMUNICATION FACILITY. THE SITE LAYOUT WILL BE FINALIZED UPON COMPLETION OF SITE SURVEY AND FACILITY DESIGN.



**1**  
L-3  
**PROPOSED EQUIPMENT PLAN**  
SCALE: 1" = 12'-0"  
JAN2011

REV	DATE	BY	DESCRIPTION
A	08/22/13	SPB	ISSUED FOR CLIENT REVIEW
B	07/18/13	SPB	ISSUED FOR CLIENT COMMENTS
C	07/24/13	SPB	ISSUED FOR CLIENT COMMENTS



**CENTEK** engineering  
Centered on Solutions  
www.Centerk.com  
(203) 456-0590  
(203) 456-4597 Fax  
63-2 North Branch Road, Branford, CT 06405

Calco Partnership d/b/a Verticon Wireless  
BRIDGEWATER FAIR  
110 MAIN STREET SOUTH  
COW CT 23  
BRIDGEWATER, CT 06752

PROJECT NO.  
**L-3**





# NHH-45A-R2B



6-port sector antenna, 2x 698–896 and 4x 1695–2360 MHz, 45° HPBW, 2x RETs and 2x SBTs. Both high bands share the same electrical tilt.

- Internal SBT on low and high band allow remote RET control from the radio over the RF jumper cable
- Narrow beamwidth capacity antenna for higher level of densification and enhanced data throughput
- One LB RET and one HB RET. Both high bands are controlled by one RET to ensure same tilt level for 4x Rx or 4x MIMO
- Separate RS-485 RET input/output for low and high band

## General Specifications

<b>Antenna Type</b>	Sector
<b>Band</b>	Multiband
<b>Color</b>	Light gray
<b>Grounding Type</b>	RF connector body grounded to reflector and mounting bracket
<b>Performance Note</b>	Outdoor usage   Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
<b>Radome Material</b>	Fiberglass, UV resistant
<b>Radiator Material</b>	Copper   Low loss circuit board
<b>Reflector Material</b>	Aluminum
<b>RF Connector Interface</b>	4.3-10 Female
<b>RF Connector Location</b>	Bottom
<b>RF Connector Quantity, high band</b>	4
<b>RF Connector Quantity, low band</b>	2
<b>RF Connector Quantity, total</b>	6

## Remote Electrical Tilt (RET) Information

<b>RET Hardware</b>	CommRET v2
<b>RET Interface</b>	8-pin DIN Female   8-pin DIN Male
<b>RET Interface, quantity</b>	2 female   2 male
<b>Input Voltage</b>	10–30 Vdc
<b>Internal Bias Tee</b>	Port 1   Port 3

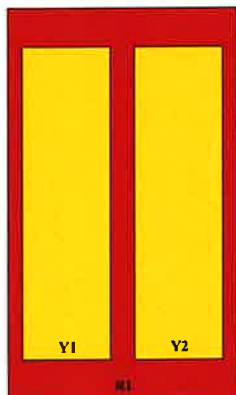
# NHH-45A-R2B

<b>Internal RET</b>	High band (1)   Low band (1)
<b>Power Consumption, active state, maximum</b>	10 W
<b>Power Consumption, idle state, maximum</b>	2 W
<b>Protocol</b>	3GPP/AISG 2.0 (Single RET)

## Dimensions

<b>Width</b>	457 mm   17.992 in
<b>Depth</b>	178 mm   7.008 in
<b>Length</b>	1220 mm   48.032 in
<b>Net Weight, without mounting kit</b>	21 kg   46.297 lb

## Array Layout

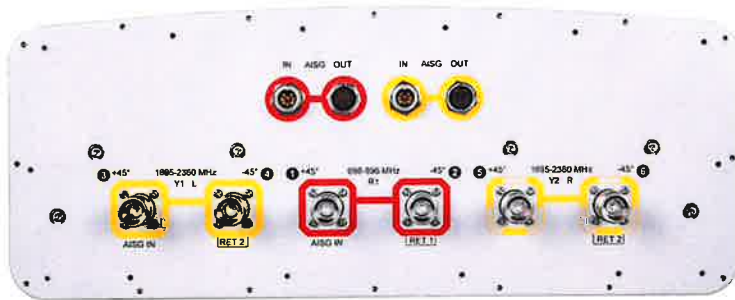


Array ID	Frequency (MHz)	RF Connector	RET (SRET)	AISG No.	AISG RET UID
R1	698-896	1 - 2	1	AISG1	CPxxxxxxxxxxxxxxxxR1
Y1	1695-2360	3 - 4	2	AISG2	CPxxxxxxxxxxxxxxxxY1
Y2	1695-2360	5 - 6			

(Sizes of colored boxes are not true depictions of array sizes)

## Port Configuration

# NHH-45A-R2B



## Electrical Specifications

<b>Impedance</b>	50 ohm
<b>Operating Frequency Band</b>	1695 – 2360 MHz   698 – 896 MHz
<b>Polarization</b>	±45°
<b>Total Input Power, maximum</b>	600 W @ 50 °C

## Electrical Specifications

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
<b>Gain, dBi</b>	15.5	16.2	18.3	19	19.2	20
<b>Beamwidth, Horizontal, degrees</b>	48	44	44	44	43	39
<b>Beamwidth, Vertical, degrees</b>	18.5	16.8	7.9	7.3	6.8	6
<b>Beam Tilt, degrees</b>	2–18	2–18	1–9	1–9	1–9	1–9
<b>USLS (First Lobe), dB</b>	16	17	17	16	15	15
<b>Front-to-Back Ratio at 180°, dB</b>	32	33	36	36	36	35
<b>Isolation, Cross Polarization, dB</b>	25	25	25	25	25	25
<b>Isolation, Inter-band, dB</b>	25	25	25	25	25	25
<b>VSWR   Return loss, dB</b>	1.5   14.0	1.5   14.0	1.5   14.0	1.5   14.0	1.5   14.0	1.5   14.0

# NHH-45A-R2B

<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-153	-153	-153	-153	-153	-153
<b>Input Power per Port at 50°C, maximum, watts</b>	300	300	250	250	250	200

## Electrical Specifications, BASTA

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
<b>Gain by all Beam Tilts, average, dBi</b>	15.1	15.9	17.9	18.7	19	19.8
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.5	±0.4	±0.6	±0.4	±0.3	±0.4
<b>Beamwidth, Horizontal Tolerance, degrees</b>	±1.8	±3	±1.9	±1.3	±2.1	±1.6
<b>Beamwidth, Vertical Tolerance, degrees</b>	±1	±0.9	±0.3	±0.3	±0.5	±0.2
<b>USLS, beampeak to 20° above beampeak, dB</b>	17	22	12	13	14	15
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	24	24	27	29	30	30
<b>CPR at Boresight, dB</b>	24	25	15	18	19	20
<b>CPR at Sector, dB</b>	18	17	11	13	15	16

## Mechanical Specifications

<b>Wind Loading @ Velocity, frontal</b>	677.0 N @ 150 km/h (152.2 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	135.0 N @ 150 km/h (30.3 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	677.0 N @ 150 km/h (152.2 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	595.0 N @ 150 km/h (133.8 lbf @ 150 km/h)
<b>Wind Speed, maximum</b>	241 km/h   149.75 mph

## Packaging and Weights

<b>Width, packed</b>	563 mm   22.165 in
<b>Depth, packed</b>	355 mm   13.976 in
<b>Length, packed</b>	1393 mm   54.843 in
<b>Weight, gross</b>	32.1 kg   70.768 lb

## Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Above maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

# NHH-45A-R2B

---

REACH-SVHC	Compliant as per SVHC revision on <a href="http://www.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a>
ROHS	Compliant/Exempted
UK-ROHS	Compliant/Exempted



## Included Products

BSAMNT-3	-	Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.
----------	---	--

## \* Footnotes

<b>Performance Note</b>	Severe environmental conditions may degrade optimum performance
-------------------------	---

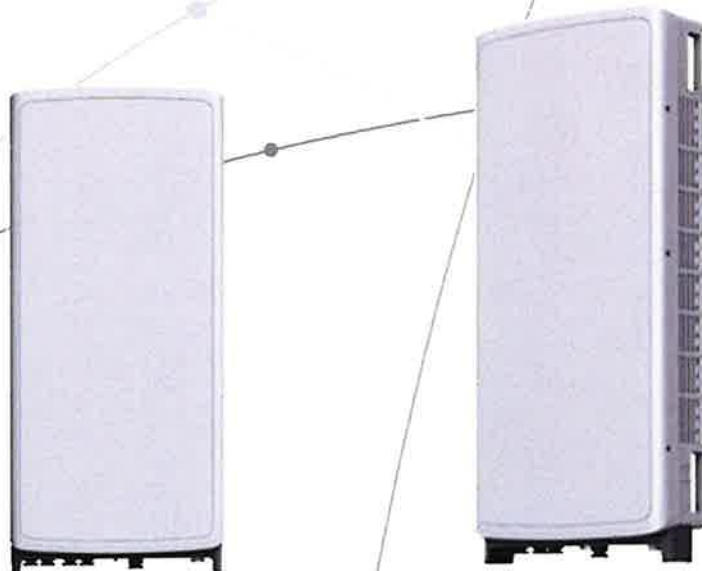
**SAMSUNG**

# **SAMSUNG** C-Band 64T64R Massive MIMO Radio

for High Capacity and Wide Coverage

Samsung C-Band 64T64R Massive MIMO Radio enables mobile operators to increase coverage range, boost data speeds and ultimately offer enriched 5G experiences to users in the U.S..

**Model Code:** MT6407-77A



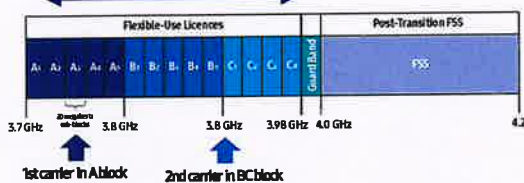
## Points of Differentiation

### Wide Bandwidth

With capability to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

Samsung C-Band massive MIMO Radio covers the entire C-Band 280 MHz spectrum, so it can meet the operator's needs in current A block and future B/C blocks

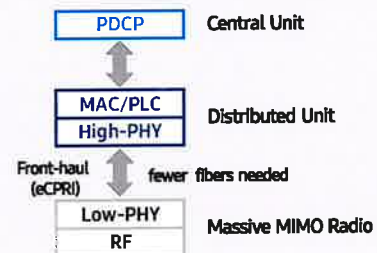
C-Band spectrum supported by Massive MIMO Radio



### Future Proof Product

Samsung C-Band 64T64R Massive MIMO radio supports not only CPRI but also eCPRI as front-haul interface.

It enables operators can cut down on OPEX/CAPEX by reducing front-haul bandwidth through low layer split and using ethernet based higher efficient line.



### Enhanced Performance

C-Band massive MIMO Radio creates sharp beams and extends networks' coverage on the critical mid-band spectrum using a large number of antenna elements and high output power to boost data speeds.

This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

Furthermore, as C-Band massive MIMO Radio supports MU-MIMO (Multi-user MIMO), it enables to increase user throughput by minimizing interference.



### Well Matched Design

Samsung C-Band Massive MIMO radio utilizes 64 antennas, supports up to 280MHz bandwidth, and delivers a 200W output power. Despite the above advanced performance, the Radio has a compact size of 50.9L and 79.4lbs. This makes it easy to install the Radio.

It is designed to look solid and compact, with a low profile appearance so that, when installed, harmonizes well with the surrounding environment.



## Technical Specifications

Item	Specification
Tech	NR
Band	n77
Frequency Band	3700 - 3980 MHz
EIRP	78.5dBm (53.0 dBm+25.5 dBi)
IBW/OBW	280 MHz / 200 MHz
Installation	Pole/Wall
Size/Weight	16.06 x 35.06 x 5.51 inch (50.86L) / 79.4 lbs



# SAMSUNG



## **About Samsung Electronics Co., Ltd.**

Samsung inspires the world and shapes the future with transformative ideas and technologies. The company is redefining the worlds of TVs, smartphones, wearable devices, tablets, digital appliances, network systems, and memory, system LSI, foundry and LED solutions.

129 Samsung-ro, Yeongtong-gu, Suwon-si Gyeonggi-do, Korea

## **© 2021 Samsung Electronics Co., Ltd.**

All rights reserved. Information in this leaflet is proprietary to Samsung Electronics Co., Ltd. and is subject to change without notice. No information contained here may be copied, translated, transcribed or duplicated by any form without the prior written consent of Samsung Electronics.

# SAMSUNG

## AWS/PCS MACRO RADIO

### DUAL-BAND AND HIGH POWER FOR MACRO COVERAGE

Samsung's future proof dual-band radio is designed to help effectively increase the coverage areas in wireless networks. This AWS/PCS 4T4R dual-band radio has 4Tx/4Rx to 2Tx/2Rx RF chains options and a total output power of 320W, making it ideal for macro sites.

**Model Code**    RF4439d-25A



Homepage  
[samsungnetworks.com](http://samsungnetworks.com)

PHOTO: SAMSUNG

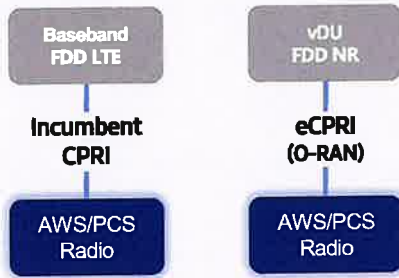


Youtube  
[www.youtube.com/samsung5g](http://www.youtube.com/samsung5g)

## Points of Differentiation

### Continuous Migration

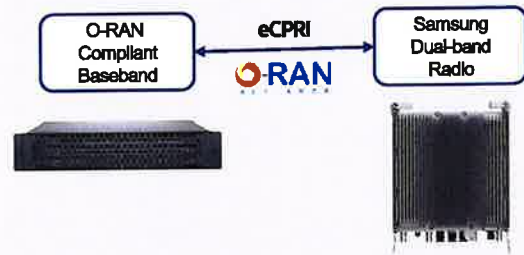
Samsung's AWS/PCS macro radio can support each incumbent CPRI interface as well as advanced eCPRI interfaces. This feature provides installable options for both legacy LTE networks and added NR networks.



### O-RAN Compliant

A standardized O-RAN radio can help in implementing cost-effective networks, which are capable of sending more data without compromising additional investments.

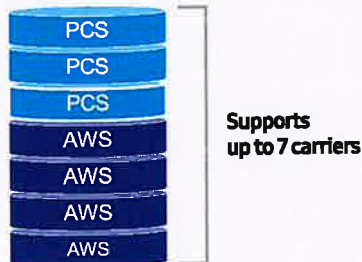
Samsung's state-of-the-art O-RAN technology will help accelerate the effort toward constructing a solid O-RAN ecosystem.



### Optimum Spectrum Utilization

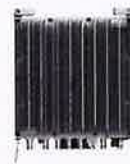
The number of required carriers varies according to site (region). Supporting many carriers is essential for using all frequencies that the operator has available.

The new AWS/PCS dual-band radio can support up to 3 carriers in the PCS (1.9GHz) band and 4 carriers in the AWS (2.1GHz) band, respectively.



### Brand New Features in a Compact Size

Samsung's AWS/PCS macro radio offers several features, such as dual connectivity for baseband for both CDU and vDU, O-RAN capability, more carriers and an enlarged PCS spectrum, combined into an incumbent radio volume of 36.8L.



- 2 FH connectivity
- O-RAN capability
- More carriers and spectrum

Same as an incumbent radio volume

## Technical Specifications

Item	Specification
Tech	LTE / NR
Brand	B25(PCS), B66(AWS)
Frequency Band	DL: 1930 – 1995MHz, UL: 1850 – 1915MHz DL: 2110 – 2200MHz, UL: 1710 – 1780MHz
RF Power	(B25) 4 × 40W or 2 × 60W (B66) 4 × 60W or 2 × 80W
IBW/OBW	(B25) 65MHz / 30MHz (B66) DL 90MHz, UL 70MHz / 60MHz
Installation	Pole, Wall
Size/Weight	14.96 x 14.96 x 10.04inch (36.8L) / 74.7lb

**SAMSUNG**

# 700/850MHZ MACRO RADIO

DUAL-BAND AND HIGH POWER  
FOR MACRO COVERAGE

Samsung's future proof dual-band radio is designed to help effectively increase the coverage areas in wireless networks. This 700/850MHz 4T4R dual-band radio has 4Tx/4Rx to 2Tx/2Rx RF chains options and a total output power of 320W, making it ideal for macro sites.

**Model Code** RF4440d-13A



Homepage  
[samsungnetworks.com](http://samsungnetworks.com)

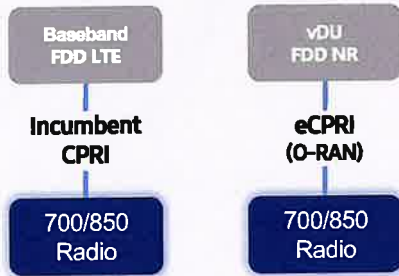


Youtube  
[www.youtube.com/samsung5g](http://www.youtube.com/samsung5g)

## Points of Differentiation

### Continuous Migration

Samsung's 700/850MHz macro radio can support each incumbent CPRI interface as well as an advanced eCPRI interface. This feature provides installable options for both legacy LTE networks and added NR networks.



### O-RAN Compliant

A standardized O-RAN radio can help when implementing cost-effective networks because it is capable of sending more data without compromising additional investments.

Samsung's state-of-the-art O-RAN technology will help accelerate the effort toward constructing a solid O-RAN ecosystem.



### Optimum Spectrum Utilization

The number of required carriers varies according to site (region). The ability to support many carriers is essential for using all frequencies that the operator has available.

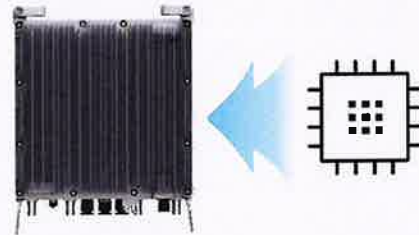
The new 700/850MHz dual-band radio can support up to 2 carriers in the B13 (700MHz) band and 3 carriers in the B5 (850MHz) band, respectively.



### Secured Integrity

Access to sensitive data is allowed only to authorized software.

The Samsung radio's CPU can protect root of trust, which is credential information to verify SW integrity, and secure storage provides access control to sensitive data by using dedicated hardware (TPM).

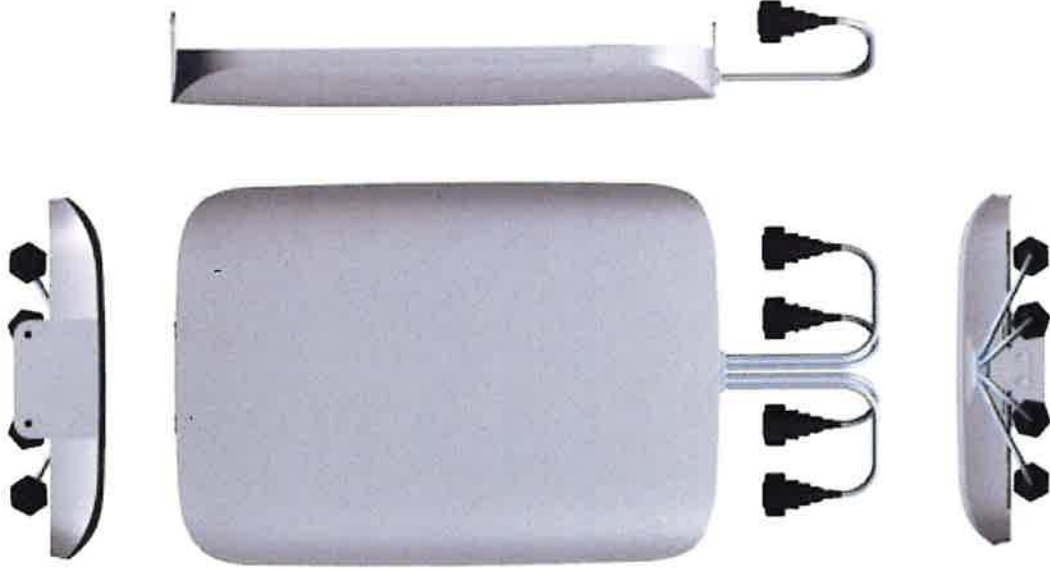


## Technical Specifications

Item	Specification
Tech	LTE / NR
Brand	B13(700MHz), B5(850MHz)
Frequency Band	DL: 746 – 756MHz, UL: 777 – 787MHz DL: 869 – 894MHz, UL: 824 – 849MHz
RF Power	(B13) 4 × 40W or 2 × 60W (B5) 4 × 40W or 2 × 60W
IBW/OBW	(B13) 10MHz / 10MHz (B5) 25MHz / 25MHz
Installation	Pole, Wall
Size/ Weight	14.96 x 14.96 x 9.05inch (33.2L) / 70.33 lb

# [CBRS] Clip-on Antenna Specifications

VzW accepted IP45 in FLD, but IP55 is Samsung Spec.



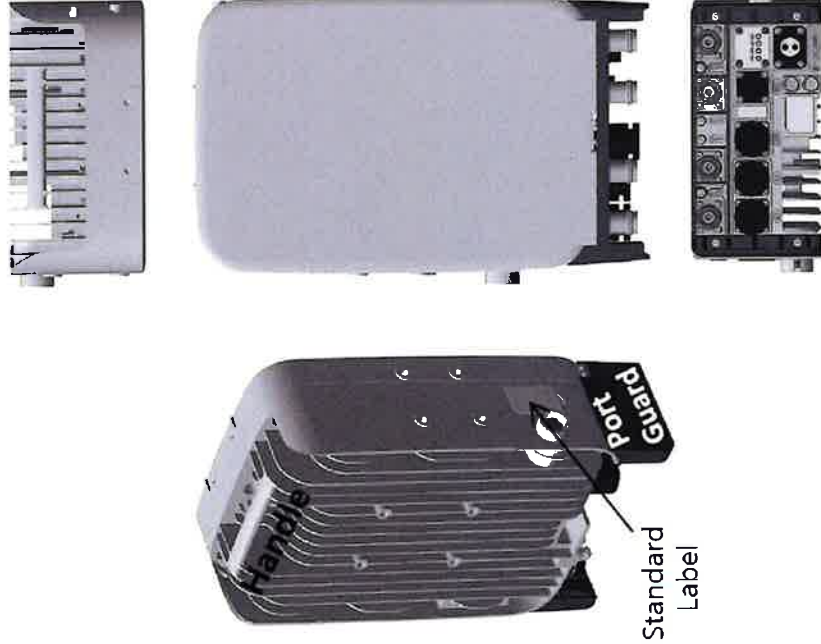
Items	Clip-on Antenna, <b>BASTA**</b>
Antenna Gain	12.5 ± 0.5 dBi (Max 13 dBi)
Horizontal BW (-3dB)	65° ± 5°
Vertical BW (-3dB)	17° ± 3°
Electrical Tilt	8° (fixed) ± 2°
Front-to-Back Ratio	> 25 dB
Port-to-Port Tracking	< 3 dB
VSWR	< 1.5
Isolation	> 25 dB
<b>Ingress Protection</b>	<b>IP55</b>
Size	220(W)×313(H)×34.3(D) mm (*) (8.7 x 12.3 x 1.4 inch.)
Weight	< 2.0 kg [Typ. 1.3 kg]
It is required that the radio should be weatherproofed properly with JMA WPS Boot with external antenna or with Weatherproof Boot for clip-on antennas.	

Antenna includes integrated cable with connector  
 \* Design is subject to minor change

\*\* Ant. spec. follows NGMN recommendations on Base Station Antenna Standards (BASTA). For example, 'mean ± tolerance of 86.6%' is applied to double-sided specification of statistical RF parameters.



# [CBRS RRH] Spec.



Standard Label

Current Size: 216 x 307 x 105.5 mm (6.99L)  
 (8.5 x 12.1 x 4.1 inch., excluding Port Guard)

Design is subject to minor change

Item	Specification
Band	Band 48 (3.5 GHz)
Frequency	3550~3700 MHz
IBW	150 MHz
OBW	80 MHz
# of Carriers	5/10/15/20 MHz x 4 carriers
RF Chain	4TX / 4RX
RF Output Power & EIRP	4 path x 5 W (Total: 20 W = 43 dBm) (EIRP: 47 dBm / 10 MHz)
RX Sensitivity	Typical : -101.5 dBm @ 1 Rx (3GPP 36.104, Wide Area)
Modulation	256-QAM support (1024-QAM with 1~2dB power back-off) -48 VDC (-38 to -57 VDC, 1 SKU), with clip-on AC-DC converter (Option)
Input Power	with clip-on AC-DC converter (Option)
Power Consumption	About 160 Watt @ 100% RF load, typical conditions
Volume	<b>Under 7L</b> (w/o Antenna), Under 9.6L (with antenna)
Weight	<b>Under 8.0 kg (18.64 lb)</b> (w/o Antenna), Under 10.5 Kg (with ant.)
Operating Temperature	-40°C (-40°F) ~ 55°C (131°F) (W/o solar load)
Cooling	Natural convection
Unwanted Emission	3GPP 36.104 Category A [B48] : FCC47 CFR 96.41 e)
Optic Interface	20km, 2 ports (9.8Gbps x 2), SFP, single mode, duplex or Bi-Di
CPRI Cascade	Not supported
# of Antenna Port	4
External Alarm (UDA)	4
RET	AISG 2.2
TMA & built-in Bias-T I//F and PIM cancellation	Not supported
Mounting Options	Pole, wall, tower, back to back, side by side (for external ant), <b>3 RRH with Clip-on Antenna on the pole</b>
Antenna Type	Integrated (Clip-on) antenna (Option), External antenna (Option)
NB-IoT	Not Supported (HW Resource reserved for 1 Guard Band NB-IoT per LTE carrier)
Spectrum Analyzer	TX/RX Support
External Alarm (UDA)	4
5G NR	Support with S/W upgrade
<b>XRAN</b>	Support with S/W upgrade

# Specifications

The table below outlines the main specifications of the RRH.

**Table 1. Specifications**

Item	RT4401-48A
Air Technology	LTE
Band	Band 48 (3.5 GHz)
Operating Frequency (MHz)	3550 to 3700
RF Chain	4TX/4RX
Input Power	-48 V DC (-38 to -57 V DC, 1 SKU), with clip-on AC-DC converter (Option)
Dimension (W × D × H) (mm)	8.55 in. (217.4) × 4.15 in. (105.5) × 13.91 in. (353.5) * RRH only 11.39 in. (289.4) × 5.45 in. (138.5) × 16.16 in. (410.5) * with Clip-on antenna, AC-DC power unit
Cooling	Natural convection
Unwanted Emission	3GPP 36.104 Category A [B48]: FCC 47 CFR 96.41 e)
Spectrum Analyzer	TX/RX Support
Antenna Type	Integrated (Clip-on) antenna (Option), External antenna (Option)
Operating Humidity	5 to 100 [%] (RH), condensing, not to exceed 30 g/m <sup>3</sup> absolute humidity
Altitude	-60 to 1,800 m
Earthquake	Telcordia Earthquake Risk Zone4 (Telcordia GR-63-CORE)
Vibration in Use Transportation Vibration	Office Vibration Transportation Vibration
Noise	Fanless (natural convection cooling)
Wind Resistance	Telcordia GR-487-CORE, Section 3.34
EMC	FCC Title 47, CFR Part 96
Safety	UL 60950-1 2nd ED



---

Item	RT4401-48A
	UL 62368-1 UL 60950-22
RF	FCC Title 47, CFR Part 96

---

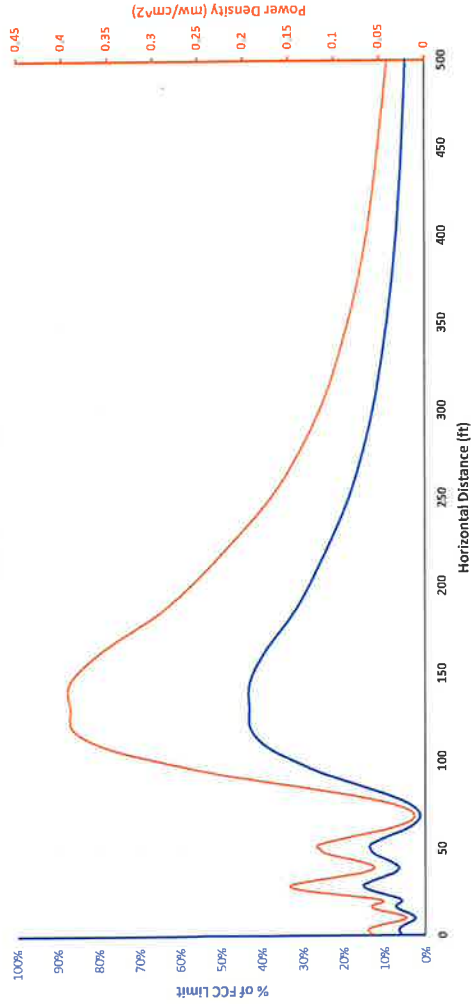
The table below outlines the AC/DC power unit specifications of the RRH system.

# **ATTACHMENT 3**

Band	G-Band	CBRS	AWS	PCS	700
Operating Frequency (MHz)	3,700	3,550	2,145	1,970	746
General Population MPE (mW/cm <sup>2</sup> )	1	1	1	0.586666667	0.497333333
ERP Per Transmitter (Watts)	13,335	53	1,156	1,018	925
Number of Transmitters	2	2	4	4	2
Antenna Configuration (feet)	35	35	29	29	29
Total ERP (Watts)	26,670	107	4,624	4,072	1,848
Total ERP (dBm)	74	50	67	66	63
Percentage of General Population Served	43.1%				

### Far Field Calculations (per FCC OET65)

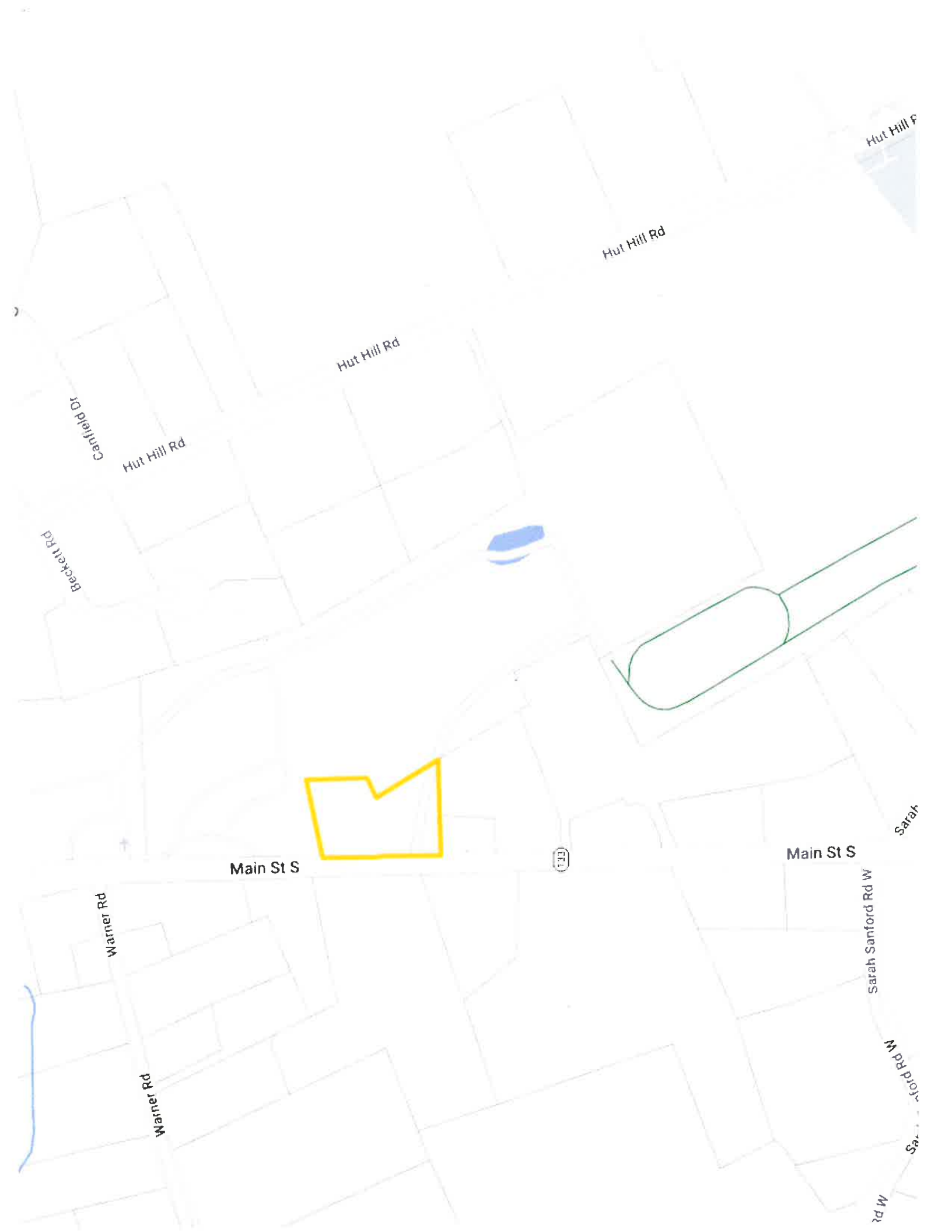
— Total % General Pop MPE  
— Total Pwr Density (mW/cm<sup>2</sup>)



Angle Below Horizon	Percent of General Population MPE										Total % General Pop MPE			
	C-Band	CBRS	AWS	PCS	Cellular	CDMA	700 MHz	Distance	Total Pwr Density (mW/cm <sup>2</sup> )	Total % General Pop MPE				
90	0.05637385	1.65565E-05	1.66897E-05	4.7232E-06	0.000725135	0.000203526	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.057340481	5.81%	
89	0.056363048	1.99015E-05	3.01519E-05	8.20568E-07	0.000909363	0.000178438	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.057401991	5.82%	
88	0.05764275	2.13125E-05	7.16008E-05	3.93294E-06	0.000939485	0.000155271	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.058834353	5.97%	
87	0.058388597	2.33463E-05	0.000137169	1.51077E-05	0.00114879	0.000127224	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.059816318	6.07%	
86	0.058668303	2.55643E-05	0.000202048	2.99315E-05	0.001304059	0.000123221	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.061355029	6.24%	
85	0.058565082	2.9301E-05	0.000244983	4.5913E-05	0.001482885	0.000105757	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.061473921	6.26%	
84	0.060623955	3.1529E-05	0.000236416	7.11999E-05	0.00160934	8.52804E-05	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.062607045	6.41%	
83	0.060679653	4.84026E-05	0.000189632	0.000113697	0.001670784	6.19344E-05	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.062748565	6.46%	
82	0.060494407	6.81719E-05	0.000119111	0.000165489	0.001663124	3.66083E-05	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.062546365	6.38%	
81	0.060294595	9.37926E-05	7.95586E-05	0.00020582	0.001601987	2.06948E-05	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.062842127	6.34%	
80	0.058703809	0.000123185	8.03804E-05	0.000278008	0.001527995	1.85055E-05	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.062552056	6.18%	
79	0.057131655	0.00015804	0.000103119	0.000246116	0.001466602	2.74482E-05	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.061532981	6.02%	
78	0.054313477	0.000158061	0.000116213	0.000275458	0.001442872	5.35093E-05	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.060996896	5.75%	
77	0.049337795	0.000205899	0.000103967	0.00031893	0.001456367	8.9757E-05	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.059274029	5.15%	
76	0.04289254	0.000205899	0.000205899	0.000380238	0.001507396	0.000129547	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.056403666	5.38%	
75	0.04452322	0.000301846	4.74608E-05	0.000488804	0.001563365	0.000169632	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.052640366	5.38%	
74	0.04288199	0.000328903	3.08412E-05	0.000693515	0.001663804	0.000292713	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.047047111	6.02%	
73	0.035666949	0.000342102	3.05939E-05	0.001290558	0.00176248	0.000365438	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.045814387	4.73%	
72	0.030140804	0.000396611	4.9075E-05	0.001484772	0.001781688	0.000533376	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.04321276	4.08%	
71	0.025167511	0.000321907	7.79526E-05	0.002025757	0.001789613	0.000746381	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.039429376	3.61%	
													0.030128221	3.21%



# **ATTACHMENT 4**



Hut Hill F

Hut Hill Rd

Hut Hill Rd

Hut Hill Rd

Carfield Dr

Beckett Rd



Main St S



Main St S

Sarah

Sarah Sanford Rd W

Sarah Sanford Rd W

Sarah Sanford Rd W

Warner Rd

Warner Rd



# 110 MAIN ST SOUTH

**Location** 110 MAIN ST SOUTH

**Mblu** 35/ 38/ //

**Acct#** 00008800

**Owner** BRIDGEWATER FIRE DEPT INC

**Assessment** \$157,800

**Appraisal** \$225,500

**PID** 863

**Building Count** 1

## Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2022	\$100,300	\$125,200	\$225,500

Assessment			
Valuation Year	Improvements	Land	Total
2022	\$70,200	\$87,600	\$157,800

## Owner of Record

**Owner** BRIDGEWATER FIRE DEPT INC  
**Co-Owner** 100 MAIN ST SOUTH

**Sale Price** \$0  
**Certificate** C  
**Book & Page** 23/ 753  
**Sale Date** 02/22/1980

## Ownership History

Ownership History				
Owner	Sale Price	Certificate	Book & Page	Sale Date
BRIDGEWATER FIRE DEPT INC	\$0	C	23/ 753	02/22/1980

## Building Information

### Building 1 : Section 1

**Year Built:** 1900  
**Living Area:** 1,040  
**Replacement Cost:** \$167,182  
**Building Percent Good:** 60  
**Replacement Cost**  
**Less Depreciation:** \$100,300

**Building Attributes**



Field	Description
Style	Conventional
Model	Residential
Grade:	D+
Stories:	1 1/2 Stories
Occupancy	1
Exterior Wall 1	Aluminum Sidng
Exterior Wall 2	
Roof Structure:	Gable
Roof Cover	Asphalt Shingl
Interior Wall 1	Plastered
Interior Wall 2	
Interior Flr 1	Carpet
Interior Flr 2	
Heat Fuel	Oil
Heat Type:	Hot Water
AC Type:	None
Total Bedrooms:	2 Bedrooms
Total Full Bathrms	1 Full Bath
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Fireplaces	0
Whirlpool Tubs	
Fin Basement	
Fin Bsmt Qual	
Bsmt. Garages	

### Building Photo



(<https://images.vgsi.com/photos/BridgewaterCTPhotos/\00\00\17\46.jpg>)

### Building Layout



([https://images.vgsi.com/photos/BridgewaterCTPhotos//Sketches/863\\_863](https://images.vgsi.com/photos/BridgewaterCTPhotos//Sketches/863_863))

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	650	650
FHS	Finished Half Story	650	390
BSM	Basement Area	650	0
FEP	Framed Enclosed Porch	180	0
FOP	Framed Open Porch	184	0
		2,314	1,040

### Extra Features

Extra Features	Legend
No Data for Extra Features	

### Land



**Land Use**

**Use Code** 926  
**Description** Vol Fire Dept Hse  
**Zone** TG  
**Alt Land Appr** No  
**Category**

**Land Line Valuation**

**Size (Acres)** 1.37  
**Frontage** 0  
**Depth** 0  
**Assessed Value** \$87,600  
**Appraised Value** \$125,200

**Outbuildings**

Outbuildings	<u>Legend</u>
No Data for Outbuildings	

**Valuation History**

Appraisal			
Valuation Year	Improvements	Land	Total
2022	\$100,300	\$125,200	\$225,500
2021	\$64,400	\$148,100	\$212,500

Assessment			
Valuation Year	Improvements	Land	Total
2022	\$70,200	\$87,600	\$157,800
2021	\$45,100	\$103,700	\$148,800

# **ATTACHMENT 5**

**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  <p style="text-align: center; font-size: 2em;">3</p>	TOTAL NO. of Pieces Received at Post Office™  <p style="text-align: center; font-size: 2em;">3</p>	Affix Stamp Here Postmark with Date of Receipt.  <div style="text-align: right;">                     neopost<sup>SM</sup>                      08/03/2023  <b>US POSTAGE \$003.19</b>                         ZIP 06103                      041L12203037                 </div>			
	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.	Curtis Read, First Selectman Town of Bridgewater 44 Main Street South Bridgewater, CT 06752					
2.	Meg Khare, Land Use Coordinator Town of Bridgewater 44 Main Street South Bridgewater, CT 06752					
3.	Bridgewater Fire Department 100 Main Street South Bridgewater, CT 06752					
4.						
5.						
6.						

