# Connecticut Siting Council

APPLICATION OF CELLCO PARTNERSHIP
D/B/A VERIZON WIRELESS



NORWICH 4
110 YANTIC LANE
NORWICH, CONNECTICUT

DOCKET NO.

JULY 8, 2020

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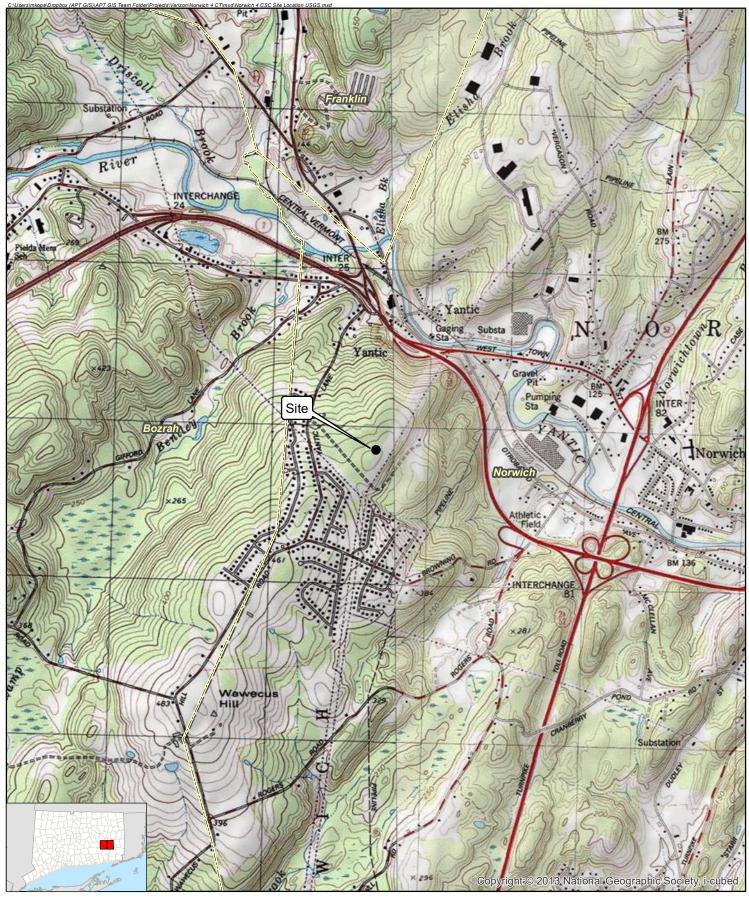
# LIST OF ATTACHMENTS

- 1. Norwich 4 Facility Factual Summary and Project Plans
- 2. Certificate of Service of Application on Government Officials; and List of Officials Served
- 3. Legal Notice in the *Norwich Bulletin*
- 4. Notice to Landowners; List of Abutting Landowners; Certificate of Service
- 5. Federal Communications Commission Licenses
- 6. Coverage Maps Location of Norwich 4 and Surrounding Cell Sites
- 7. Antenna and Equipment Specifications
- 8. Site Search Summary
- 9. Visibility Analysis
- 10. USFWS and NDDB Compliance Determination
- 11. Wetlands Inspection Report
- 12. Preliminary Historic Resources Determination
- 13. Farmland Soils Map
- 14. General Power Density Table
- 15. FEMA Flood Insurance Rate Map
- 16. Public Information Meeting Legal Notice and Abutters List
- 17. Federal Airways & Airspace Report
- 18. Land Lease Agreement Redacted

#### **EXECUTIVE SUMMARY**

Cellco Partnership d/b/a Verizon Wireless ("Cellco") ("Applicant") proposes to construct a wireless telecommunications facility on a 115-acre parcel at 110 Yantic Lane in Norwich, Connecticut (collectively the "Property"). The Property is owned by Robert W. Larsen and is largely undeveloped. Norwich Public Utilities ("NPU") maintains a 190-foot tall water tank in the easterly portion of the Property. An Eversource electric transmission line traverses the Property from north to south just to the east of the NPU water tank. Cellco refers to this cell site as its "Norwich 4 Facility". The Norwich 4 Facility will provide improved wireless voice and data services in Norwich and portions of Bozrah and Franklin, Connecticut.

Cellco proposes to construct a 110-foot tall monopole tower within a 50' x 50' fenced compound (100' x 100' leased area) in the eastern portion of the Property, approximately 400 feet south of the NPU water tank. Cellco would install six (6) panel-type antennas and two (2) remote radio heads on an antenna-mounting platform at the top of the tower. The top of Cellco's antennas will extend above the top of the tower to a height of approximately 113 feet above ground level. A radio equipment cabinet and a propane-fueled back-up generator would be located on a concrete pad within the facility compound. Vehicular access to the Norwich 4 Facility would extend from Yantic Lane over a portion of an existing access driveway to the cell site. Alternative vehicular access may also be available from Philanne Drive. Utilities would extend underground from existing service along Philanne Drive.



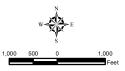
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Map Notes: Base Map Source: USGS 7.5 Minute Topographic Quadrangle Maps, Fitchville, CT (1983) and Norwich, CT (1983) Map Scale: 1:24,000 Map Date: February 2020

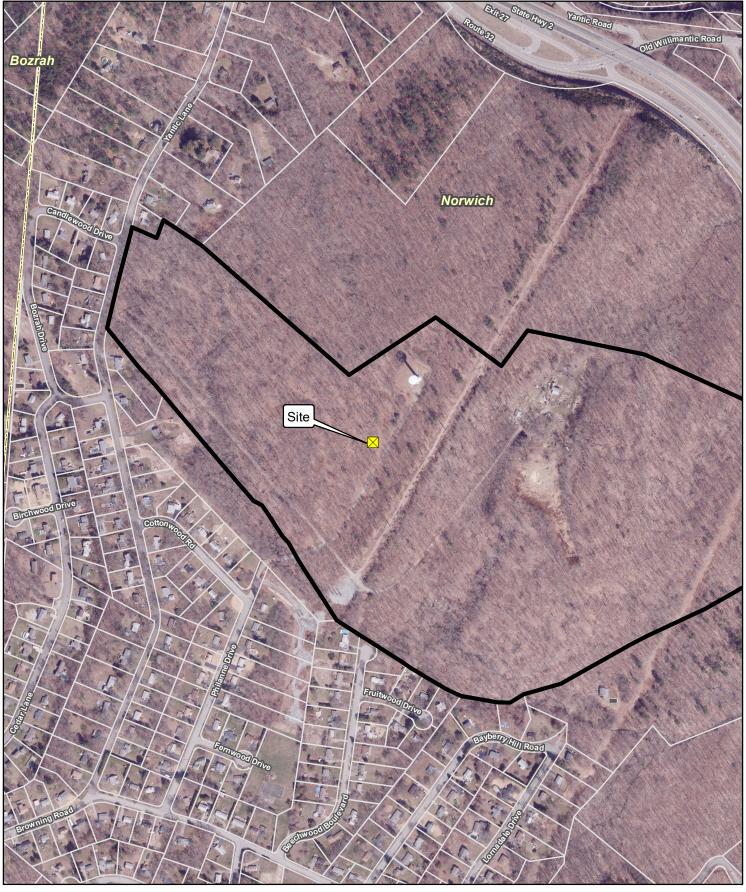


# **Site Location Map**

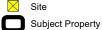
Proposed Wireless
Telecommunications Facility
Norwich 4 CT
110 Yantic Lane
Norwich, Connecticut







#### Legend



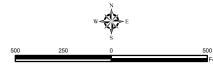
Site

Approximate Parcel Boundary (CTDEEP GIS)



Municipal Boundary

Map Notes:
Base Map Source: CT ECO 2019 Imagery
Map Scale:1 inch = 500 feet
Map Date: February 2020



# **Site Location Map**

**Proposed Wireless** Telecommunications Facility Norwich 4 CT 110 Yantic Lane Norwich, Connecticut





# STATE OF CONNECTICUT CONNECTICUT SITING COUNCIL

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APPLICATION OF CELLCO PARTNERSHIP : DOCKET NO. \_\_\_\_

D/B/A VERIZON WIRELESS FOR A

CERTIFICATE OF ENVIRONMENTAL :

COMPATIBILITY AND PUBLIC NEED FOR :

THE CONSTRUCTION, MAINTENANCE :

AND OPERATION OF A WIRELESS :

TELECOMMUNICATIONS FACILITY AT

110 YANTIC LANE IN NORWICH,

CONNECTICUT : JULY 8, 2020

# APPLICATION FOR CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

# I. INTRODUCTION

# A. Authority and Purpose

This Application and the accompanying attachments (collectively, the "Application") is submitted by Cellco Partnership d/b/a Verizon Wireless ("Cellco" or the "Applicant"), pursuant to Chapter 277a, Sections 16-50g et seq. of the Connecticut General Statutes ("C.G.S."), as amended, and Sections 16-50j-1 et seq. of the Regulations of Connecticut State Agencies ("R.C.S.A."), as amended. The Application requests that the Connecticut Siting Council ("Council") issue a Certificate of Environmental Compatibility and Public Need ("Certificate") for the construction, maintenance, and operation of a wireless telecommunications facility at 110 Yantic Lane in Norwich, Connecticut (collectively the "Property"). Cellco identifies this cell site as its "Norwich 4 Facility". The proposed Norwich 4 Facility will consist of a 110-foot monopole tower in the easterly portion of the Property. Cellco would install antennas and remote radio heads on an antenna platform at the top of the tower. The tower, Cellco's equipment

cabinet and a 25-kilowatt ("kW") propane-fueled generator will be installed within a 50' x 50' fenced compound (100' x 100' leased area).

Included in this Application, as <u>Attachment 1</u> is a factual summary and project plans for the proposed Norwich 4 Facility. This summary, along with the other attachments submitted as part of this Application, contain all of the site-specific information required by statute and the regulations of the Council.

# B. The Applicant

Cellco is a Delaware Partnership with an administrative office located at 20 Alexander Drive, Wallingford, CT 06492. Cellco is licensed by the Federal Communications Commission ("FCC") to operate a wireless telecommunications system in the State of Connecticut within the meaning of C.G.S. Section 16-50i(a)(6). Cellco has extensive national experience in the development, construction and operation of wireless telecommunications systems and the provision of wireless telecommunications service to the public. Operation of the wireless telecommunications systems and related activities are Cellco's sole business in the State of Connecticut.

Correspondence and/or communications regarding this Application may be addressed to:

Cellco Partnership d/b/a Verizon Wireless 20 Alexander Drive Wallingford, Connecticut 06492 Attention: Andrew Candiello – Sr. Manager - Real Estate/Regulatory

A copy of all such correspondence or communications should also be sent to:

Robinson & Cole LLP 280 Trumbull Street Hartford, Connecticut 06103-3597 (860) 275-8200 Attention: Kenneth C. Baldwin, Esq.

# C. Application Fee

The estimated total construction cost for the Norwich 4 Facility would be less than \$5,000,000. Therefore, pursuant to Section 16-50v-1a(b) of the Regulations of Connecticut State Agencies, an application fee of \$1,250 accompanies this Application in the form of a check payable to the Council.

# II. SERVICE AND NOTICE REQUIRED BY C.G.S. SECTION 16-50*l*(b)

Copies of this Application have been mailed to municipal, regional, state and federal officials, pursuant to C.G.S. Section 16-50*l*(b). A certificate of service, along with a list of the officials served with a copy of the Application, is included as Attachment 2.

Notice of Cellco's intent to submit this Application was published on July 2 and July 3, 2020, by Cellco in the *Norwich Bulletin* pursuant to C.G.S. Section 16-50*l*(b). A copy of the legal notice is included in <u>Attachment 3</u>. A copy of an Affidavit of Publication will be forwarded to the Council as soon as it is available.

Attachment 4 contains a certification that notice of Cellco's intent to file this Application was sent to each person appearing of record as an owner of land that may be considered to abut the Property in accordance with C.G.S. Section 16-50*l*(b), as well as a list of the property owners to whom such notice was sent and a sample notice letter, including attachments.

# III. STATEMENT OF NEED AND BENEFITS FOR THE PROVISION OF ADVANCED AND RELIABLE WIRELESS SERVICES

The purpose of this section is to provide an overview and general description of the proposed Norwich 4 Facility.

# A. Federal Policy

In 1996, the United States Congress adopted the federal Telecommunications Act (the

"Act"). (Pub. L. No. 104-104, 110 Stat. 56). The Act recognized, among other things, an important nationwide need for high-quality wireless telecommunication services of all varieties. The Act also expressly promotes competition and seeks to reduce federal, state and local government regulation in all aspects of the telecommunications industry to foster lower prices for consumers and to encourage the rapid deployment of new and advanced wireless service and technologies.

Because the FCC and the United States Congress have determined that there is a pressing public need for high-quality wireless telecommunications service nationwide, the federal government has preempted the determination of public need by states and municipalities, including the Council, with respect to public need for the service to be provided by the facility described in this Application. In addition, the FCC has promulgated regulations containing technical standards for wireless systems, including design standards, to ensure the technical integrity of each system and nationwide compatibility among all systems. State and local regulation of these matters is likewise preempted. The FCC has also exercised its jurisdiction over and preempted state and local regulation with respect to radio frequency emission and interference issues by establishing regulations and requirement in these areas as well.

Pursuant to FCC authorizations, Cellco has constructed and currently operates a wireless system throughout Connecticut. This system, together with Cellco's system throughout its New England and national markets, has been designed and constructed to operate as one integrated, contiguous system, consistent with Cellco's business policy of developing compatibility and continuity of service on a regional and national basis.

Recognizing the public safety benefits that enhanced wireless telecommunications networks can provide, the United States, Congress also enacted the Wireless Communications and Public

Safety Act of 1999 to promote and enhance public safety by making 911 the universal emergency assistance number, furthering the deployment of wireless 911 capabilities and further encouraging the construction and operation of seamless, ubiquitous and reliable wireless networks. In 2004, Congress enacted the Enhanced 911 (E-911) Act for the specific purpose of enhancing and promoting Homeland Security, public safety and citizen activated emergency response capabilities. These goals and other related responsibilities imposed on wireless service providers can only be satisfied if Cellco maintains a ubiquitous and reliable wireless network.

In December of 2009, President Obama issued Presidential Proclamation No. 8460 (74 C.F.R. 234 (2009)), which recognizes the need to protect the nation's "critical infrastructure", including, among others, "cellular phone towers". In 2010, the FCC developed a national broadband policy<sup>1</sup> to 1) ensure that all Americans would have access to broadband capability, whether wired or wireless, 2) establish the United States as a leader in wireless service innovation, and 3) establish, in America, the fastest and most extensive wireless network. In an effort to encourage a more timely review and approval of wireless facility siting applications, the FCC, in 2011, established specific time limits for local and State land use decisions on wireless facilities.<sup>2</sup>

In 2012, Congress passed the Middle Class Tax Relief and Job Creation Act which included a provision (Section 6409) which mandates the approval of certain eligible wireless facility modifications. The provisions of Section 6409 were further clarified in the FCC's October 17, 2014 Report and Order (FCC-14-153) and again on June 9, 2020 (FCC-20-75) and were specifically designed to accelerate broadband deployment by improving wireless siting policies.

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<sup>&</sup>lt;sup>1</sup> Connecting America: The National Broadband Plan, Federal Communications Commission (2010).

<sup>&</sup>lt;sup>2</sup> FCC Declaratory Ruling WT Docket No. 08-165.

Included as <u>Attachment 5</u> is a copy of the FCC's authorization issued to Cellco for its 700, 850, 1900 and 2100 MHz wireless services in Connecticut. The FCC's rules permit a licensee to modify its system, including the addition of new cell sites, without prior approval by the FCC, as long as the licensee's authorized service area is not enlarged. The Norwich 4 Facility would not enlarge Cellco's authorized service area.

# B. Public Need and System Design

# 1. Need for the Norwich 4 Facility

As noted above, the Act has pre-empted any state or local determination of public need for wireless services. In Connecticut, Cellco holds FCC Licenses to provide wireless services in the 700 MHz, 850 MHz, 1900 MHz and 2100 MHz frequency ranges. Cellco will deploy its 700 MHz, 850 MHz, 1900 MHz and 2100 MHz frequencies at the Norwich 4 Facility. Pursuant to its FCC Licenses, Cellco has developed and continues to develop a network of cell sites to serve the demand for enhanced wireless services throughout the nation and more specifically, the State of Connecticut.

Cellco currently provides wireless service in westerly portions of Norwich as well as portions of Bozrah and Franklin from six (6) existing cell sites. These surrounding sites are identified as Cellco's Norwich, Norwich 6, Norwich West, Bozrah East and Franklin macro-cell sites and the Franklin SC2-A small cell facility. Wireless service plots showing the extent of reliable wireless service in the area around the proposed Norwich 4 cell site reveal significant gaps in reliable service in Cellco's 700 MHz, 850 MHz, 1900 MHz and 2100 MHz operating frequencies particularly along Route 2 and the area around the Route 2 and I-395 interchange. Significant improvement in the level of reliable service in these areas will occur once the

proposed Norwich 4 Facility is constructed and activated. Coverage plots showing Cellco's "existing" wireless service in the area around the Property and its wireless service with the proposed Norwich 4 Facility are included in Attachment 6.

Please note that none of Cellco's existing surrounding cell sites currently provide 850 MHz LTE service. For this reason, an 850 MHz coverage plot for "existing" Cellco sites has not been provided.

In addition to the coverage benefits, the Norwich 4 Facility will also provide capacity relief to Cellco's existing Franklin Facility (Beta sector) which is currently operating at or its existing capacity limits.

# 2. Proposed Cell Site Information

The proposed Norwich 4 Facility would be located in the easterly portion of an approximately 115-acre parcel at 110 Yantic Lane. The Property is owned by Robert W. Larsen. The Property is largely undeveloped but for utility infrastructure, including a 190-foot tall water tank owned and operated by Norwich Public Utilities ("NPU") and an Eversource electric transmission line that traverses the Property to the east of the NPU water tank. At this site, Cellco would construct a 110-foot self-supporting monopole telecommunications tower within a 50' x 50' fenced compound (100' x 100' leased area). Cellco would install a total of six (6) panel-type antennas and six (6) remote radio heads on an antenna platform at the top of the tower. Cellco's antennas will extend approximately three (3) feet above the top of the tower. Equipment associated with Cellco's antennas, including an equipment cabinet and a 25-kW propane-fueled will be installed on a concrete pad, under a steel canopy structure within the fenced compound. A 1,000-gallon propane fuel tank would also be located within the fenced

compound. Cellco's equipment cabinet would house radio receiving, transmitting, switching, processing and performance monitoring equipment. The back-up battery system and generator will allow the facility to remain operational if and when commercial power to the facility is interrupted. The equipment would remain unstaffed, except as required for maintenance. Once the cell site is operational, Cellco technicians will visit the cell site periodically for maintenance purposes. Cellco's back-up generator is exercised once every two (2) weeks for approximately 30 minutes, and always during daytime hours.

Vehicular access to the proposed cell site would extend from Yantic Lane over an existing access driveway a distance of approximately 2,300 feet. Alternative vehicular access may also be available off Philanne Drive a distance of approximately 900 feet. Utilities will extend from existing service along Philanne Drive.

Cellco will deploy its 700 MHz, 850 MHz, 1900 MHz and 2100 MHz wireless services at the Norwich 4 Facility. The proposed Norwich 4 Facility would provide reliable wireless service to a 3.5 mile portion of Route 2; a 2.0 mile portion of Route 32; a 2.5 mile portion of Route 87; a 3.0 mile portion of I-395; and an overall area of 32 square miles at 700 MHz frequencies; a 3.5 mile portion of Route 2; a 2.0 mile portion of Route 32; a 3.0 mile portion of Route 87; a 3.0 mile portion of I-395; and an overall area of 32 square miles at 850 MHz frequencies; a 2.0 mile portion of Route 2; a 0.5 mile portion of Route 32; a 0.5 mile portion of Route 87; a 1.5 mile portion of Route 395; and an overall area of 9.0 square miles at 1900 MHz frequencies; and a 2.0 mile portion of Route 2; a 0.5 mile portion of Route 32; a 0.5 mile portion of Route 87; a 1.0 mile portion of I-395; and an overall area of 6.0 square miles at 2100 MHz frequencies;

Cellco's existing surrounding cell sites that will interact with the proposed Norwich 4

approximately 1.5 miles west of the proposed Norwich 4 Facility. *Franklin* - antennas on a tower at 89 Dr. Nott Road in Franklin, located approximately 3.5 miles north of the proposed Norwich 4 Facility. *Norwich* - antennas on the tower at 292 Plain Hill Road in Norwich, located approximately 2.0 miles north of the proposed Norwich 4 Facility. *Norwich* 6 - antennas on the tower at 50 Clinton Avenue in Norwich, located approximately 1.0 miles east of the proposed Norwich 4 Facility. *Norwich* 2 - antennas attached to a building at 101 High Street in Norwich, located approximately 3.0 miles southeast of the proposed Norwich 4 Facility. *Norwich West* - antennas on the tower at 202 North Wawecus Hill Road in Norwich, located approximately 2.0 miles south of the proposed Norwich 4 Facility. *North Franklin SC2-A* – a small cell antenna on a stub-tower attached to an existing grain elevator at 140 Route 32 in Franklin, located approximately 2.0 miles north of the proposed Norwich 4 Facility.

# 3. System Design and Cell Site Equipment

# a. <u>System Design</u>

Cellco's wireless system in general and the proposed Norwich 4 Facility, in particular, have been designed and developed to allow Cellco to achieve and to maintain high quality, reliable wireless service. The system design is capable of orderly expansion and is compatible with other wireless systems. The resulting quality of service compares favorably with the quality of service provided by conventional wireline telephone service. The wireless system is designed to assure a true cellular configuration of base transmitters and receivers in order to cover the proposed service area effectively while providing the highest quality of service possible.

Mobile telephone switching offices ("MTSOs") in Windsor and Wallingford are

interconnected and operate Cellco's wireless systems in Connecticut as a single network, offering the subscriber uninterrupted use of the system while traveling throughout the State. This network is further interconnected with the local exchange company and long-distance carrier networks.

Cellco has designed its wireless system in conformity with applicable standards and constraints for wireless systems. Cellco's system is also designed to minimize the need for additional cell sites in the absence of additional demand or unforeseen circumstances.

# b. <u>Cell Site Equipment</u>

The key elements of the cellular system are the two MTSOs located in Windsor and Wallingford and the various connector cell sites around the state. The major electronic components of each cell site are radio frequency transmission and receiving equipment and cell site controller equipment. This equipment is capable of expanding in modules to meet system growth needs. The cell site equipment primarily provides for: message control on the calling channel; call setup and supervision; radio frequency equipment control; internal diagnostics; response to remote and local test commands; data from the mobile or portable unit in both directions and on all channels; scan receiver control; transmission of power control commands; rescanning of all timing; and commands and voice channel assignment.

In addition to the ground-mounted radio equipment, Cellco intends to install six (6) panel-type transmit/receive antennas; six (6) RRHs; two (2) HYBRIFLEX<sup>TM</sup> fiber optic antenna cables; and a GPS antenna. Back-up power to the Norwich 4 Facility will be provided by a back-up battery system and a 25-kW propane-fueled generator. Specifications for Cellco's antennas, RRHs, antenna cables and generator are included in <u>Attachment 7</u>.

#### 4. Technological Alternatives

Pursuant to authorization by the FCC, Cellco is authorized to provide wireless telecommunications services throughout the State of Connecticut. Cellco submits that there are no equally effective technological alternatives to the proposal contained herein. In fact, Cellco's wireless system represents state-of-the-art technology offering high-quality service. Cellco is aware of no viable and currently available alternatives to its system design for carriers licensed by the FCC.

# C. Site Selection and Tower Sharing

# 1. <u>Cell Site Selection</u>

Cellco's goal in selecting cell sites, like the ones described above, is to locate a facility in such a manner as to allow it to build and to operate a high-quality wireless system with the least environmental impact. Cellco has determined that the proposed Norwich 4 Facility would satisfy this goal and provide high-quality reliable wireless service along portions of Routes 2, 32, 87 and I-395 and local roads, as well as residential, commercial and industrial land uses in the area.

Cellco also regularly investigates the use of existing, non-tower structures in an area, when available, as an alternative to building a new tower. No such non-tower structures of suitable height were available in westerly portions of Norwich<sup>3</sup>. Cellco initiated a site search process for the Norwich 4 cell site in March of 2017 and identified the Property as a viable candidate for a cell site. Cellco determined that an antenna centerline height of 110 feet at this location would satisfy its wireless service objectives in the area. The Site Search Summary (Attachment 8) together with the site information contained in Attachment 1 support Cellco's position that the site selected represents the most feasible alternative of the sites investigated.

# 2. Tower Sharing

The Applicant will design the proposed tower and facility compound to be shared by a minimum of four (4) wireless carriers, the City, and local emergency service providers, if a need exists. The tower itself could also be designed to be extended up to 20 feet in accordance with past requests from the Council. This type of tower sharing arrangement would reduce, if not eliminate, the need for these other carriers or municipal entities to develop a separate tower in this same area in the future. As of the date of this filing, no other wireless carrier nor the City of Norwich has expressed any interest in the Norwich 4 Facility.

#### 3. Overall Costs and Benefits

Aside from the limited visual impacts discussed further below, the Applicant believes that there are no significant costs attendant to the construction, maintenance, and operation of the proposed cell site. In fact, the public will benefit substantially from its increased ability to receive

<sup>&</sup>lt;sup>3</sup> The existing water tank located on the Property was investigated for shared use. NPU would not allow Cellco to use the tank for telecommunications purposes.

high-quality, reliable wireless service in Norwich and portions of Bozrah and Franklin.<sup>4</sup> The Norwich 4 Facility would be a part of a communications system that addresses the public need identified by the FCC and the United States Congress for high-quality, competitive mobile and portable wireless service. Moreover, the proposed cell site would be part of a system designed to limit the need for additional cell sites in the future. The overall costs to the Applicant for development of the proposed cell site are set forth in Section III.D. of the Application.

# 4. Environmental Compatibility

Pursuant to Section 16-50p of the General Statutes, in its review of the Application, the Council is required to find and to determine, among other things, the nature of the probable environmental impact, including a specification of every significant adverse effect, whether alone or cumulatively with other effects, on, and conflicting with the policies of the state concerning the natural environment, ecological balance, public health and safety, scenic, historic and recreational values, forests and parks, air and water purity and fish and wildlife.

#### a. Primary Facility Impact is Visual

The wireless system of which the proposed Norwich 4 Facility would be a part has been designed to meet the public need for high-quality, reliable wireless service while minimizing, to the extent possible, any potential adverse environmental impacts. In part because there are few, if any other adverse impacts, the primary impact of facilities such as this is visual. This visual impact will vary from location to location around a proposed tower site, depending upon factors such as

<sup>&</sup>lt;sup>4</sup> Businesses and individuals across the country have become much more dependent on wireless services especially in emergency situations. The public safety benefits of wireless telephone service are illustrated by the Connecticut State Police Enhanced 911 emergency calling system. The E-911 emergency calling system is available statewide to all wireless telephone users. Numerous other emergency service organizations have turned to wireless telephone service for use during natural disasters and severe storms when wireline service is interrupted or unavailable.

vegetation, topography, the distance of nearby properties from the tower and the location of buildings and roadways in a "sight line" toward the tower. Similarly, visual impact of a tower facility can be further reduced through the use of alternative tower structures; so-called "stealth installations" in appropriate circumstances. <u>Attachment 9</u> contains a Visibility Analysis prepared by All-Points Technology Corporation ("APT") for the Norwich 4 Facility. The Visibility Analysis assesses the visual impact of the tower on the surrounding areas and includes photo simulations for the Council's review and consideration.

According to the Visibility Analysis, areas where the monopole tower would be visible above the tree canopy comprise approximately 44 acres. The nearest year-round visibility of the Norwich 4 Facility tower would be from neighborhoods to the south of the Property, within approximately 0.43 miles of the tower. The existing water tank and electric transmission line support structures are also visible from many of these same areas. More prominent views of the top portion of the Norwich 4 Facility tower would occur from more distant locations, (approximately one mile or more) to the east and north. The combination of area topography and the significant wooded nature of the landscape in the area help to minimize the visual impact of the proposed tower. Areas of seasonal views (including views through trees in the winter months) would comprise approximately 26 additional acres. Together, year-round and seasonal views of the tower represent less than one percent of the 8,042-acre study area.

There are four (4) residences (nine (9) residential parcels) within 1,000 feet of the Norwich 4 Facility. The closest off-site residence is located at 24 Cottonwood Road, approximately 940 feet to the southwest and is owned by Johanna M. Jowarsky. Weather permitting, the Applicant may be asked to raise a balloon with a diameter of at least three (3) feet at the Norwich 4 Facility location

on the day of the Council's hearing on this Application, or at a time otherwise specified by the Council.<sup>5</sup>

# b. Environmental Reviews and Agency Comments

Section 16-50j of the General Statutes requires the Council to consult with and to solicit comments on the Application from the Commissioners of the Departments of Energy and Environmental Protection, Public Health, Public Utility Regulatory Authority, Economic Development, and Transportation, the Council on Environmental Quality, and the Office of Policy and Management, Energy Division. In addition to the Council's solicitation of comments, Cellco, as a part of the National Environmental Policy Act ("NEPA") Checklist, solicits comments on the proposed Norwich 4 Facility from the U.S. Department of the Interior, Fish and Wildlife Service ("USFWS"), Environmental and Geographic Information Center of the Connecticut Department of Energy Environmental Protection ("DEEP") and the Connecticut Historical Commission, State Historic Preservation Officer ("SHPO").

# (1) <u>USFWS & NDDB Reviews</u>

According to the USFWS, Migratory Birds & NDDB Compliance Determination prepared by APT, one federally-listed threatened species is known to occur in the vicinity of the Property, documented as the *Northern Long-Eared Bat* ("NLEB"). For the reasons discussed in the compliance determination, Cellco submits that the proposed Norwich 4 Facility will not adversely affect the NLEB.

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<sup>&</sup>lt;sup>5</sup> Balloon float and site visit practices of the Council may be adjusted to be consistent with executive orders designed to prevent the spread of COVID-19.

The proposed Norwich 4 Facility would also comply with the USFWS recommended guidelines for reducing impacts to migratory birds. Finally, no known areas of State-listed species are currently depicted on or within 0.25 miles of the most recent DEEP/NDDB maps of the Property. (See Attachment 10).

# (2) Wetlands Inspection Report

As discussed in Section III.C.5.d. below, Cellco identified seven (7) individual wetland areas on the Property, the closest of which is approximately 460 feet (Wetland No. 3) to the southwest of the Norwich 4 Facility compound. Five of the seven wetland areas are proximate to the existing gravel access driveway on the Property that extends from Yantic Lane. The two remaining wetland areas (Wetlands Nos. 2 and 7) are located on either side of an existing access driveway that extends into the Property from Philanne Drive. Due to the distance from the facility compound to the nearest wetland area, we do not anticipate that facility construction will impact these wetland areas. Site access driveway improvements would need to be carefully constructed and proper soil erosion control measures would need to be properly installed and maintained along the site access driveway to avoid significant impacts to adjacent wetland areas. Alternative means of access to the Property, from Philanne Drive, would help to reduce the likelihood that site development activities would cause impacts to on-site wetland areas. Cellco is pursuing an access easement over an adjacent parcel that would allow for an alternative means of vehicular access to the tower site off Philanne Drive. NPU and Eversource currently use Philanne Drive to access the Property. (See Wetlands Inspection Report – Attachment 11).

#### (3) State Historic Preservation Officer

According to a Preliminary Historic Resources Determination prepared by APT for the

Norwich 4 Facility, there are no historic resources listed on or eligible for listing on the National Register of Historic Places located within one-half mile of the proposed Norwich 4 Facility.

Further, no state-registered sites are located proximate to the Property. (See Attachment 12).

# (4) Agriculture

Farmland soils suitable for agricultural use includes land that is defined as prime or farmland of Statewide or local importance, based on soil type. It identifies the location and extent of the most suitable land for producing food, feed, fiber, forage, and oilseed crops and is available for these uses. According to the National Cooperative Soil Survey (U.S. Department of Agriculture, Natural Resources Conservation Service), there are no areas of Prime Farmland or Statewide important farmland soils on the Property. The nearest farmland soils are located in the developed residential area to south of the Property. (See Farmland Soils Map included in Attachment 13).

# c. Radio Frequency Emissions

The FCC has adopted standards for exposure to Radio Frequency ("RF") emissions from telecommunications facilities like those proposed in the Application. To ensure compliance with the applicable standards, Cellco has performed a general power density calculation for the proposed Norwich 4 Facility according to the methodology prescribed by the FCC Office of Engineering and Technology Bulletin No. 65, Edition 97-01 (August 1997) ("OET Bulletin 65"). The calculation is a conservative, worst-case approximation for RF emissions at the closest accessible point to the antennas, in this case the base of the tower, and assumes that all antennas are transmitting simultaneously, on all channels, at full power. Even under these absolute worst-case conditions, the

-17-

<sup>&</sup>lt;sup>6</sup> Connecticut Environmental Conditions Online (CTECO Resource Guide) www.cteco.uconn.edu.

calculations indicate that the maximum permissible exposure level for Cellco's antennas at the proposed Norwich 4 Facility would remain well below (58.63%) the FCC's Standard. Actual RF emissions levels from the proposed facility would be far below these "worst-case" calculations. A worst-case General Power Density table is included in Attachment 14.

# d. Other Environmental Issues

No sanitary facilities are required for the Norwich 4 Facility. The operations at the Norwich 4 Facility will not cause any significant air, water, noise or other environmental impacts, or hazard to human health.

Based on agency comments received and field investigations by the Cellco project team, the Applicant submits that the proposed Norwich 4 Facility will have no significant adverse effect on scenic, natural, historic or recreational features, and that none of the potential effects alone or cumulatively with other effects is sufficient reason to deny this Application.

# 5. Consistency with Local Land Use Controls

The Council Application Guide for Community Antenna Television and

Telecommunication Facilities, as amended in July 2012, requires the inclusion of a narrative
summary of the project's consistency with the Municipality's Plan of Conservation and

Development (the "Plan"), Zoning Regulations, and Wetlands Regulations as well as a description
of planned and existing uses of the site location and surrounding properties.

#### a. Planned and Existing Land Uses

The proposed Norwich 4 Facility would be located on an approximately 115-acre parcel owned by Robert W. Larson. The Property is zoned R-80 (Residential) and is used for residential purposes and public utility purposes. The Property is surrounded by undeveloped land to the

north, residential uses to the south and west and Route 2 and commercial uses to the east.

#### b. Plan of Conservation and Development

The City of Norwich 2013 Plan of Conservation & Development (the "Plan"), does not identify telecommunications facilities as a land use consistent or inconsistent with the general planning and conservation principles or policies of the City. The Plan does, however, recognize the need for improved utility infrastructure to support development patterns and objectives of the City. One of these "strategies" recognizes that the City should "embrace wireless communication systems to take advantage of smart phone technology [and] wi-fi systems". (*See* Manage Utility Infrastructure Strategy B. 6. p. 34 of the Plan). Four (4) copies of the Plan were filed, in bulk, with the Council.

# c. **Zoning Regulations**

According to the Norwich Zoning Map (effective August 25, 2015), the Property is located in the City's R-80 Residential zone. Wireless telecommunications facilities, involving the development of a new tower site are permitted in the R-80 zone subject to the approval of a Special Permit by the Norwich Zoning Commission. The Norwich Zoning Regulations encourage the use of existing towers and other non-residential structures when available.

Notwithstanding these regulatory provisions, the Norwich Zoning Regulations state very clearly that the City "does not regulate wireless communications towers which are within the exclusive jurisdictions of the Connecticut Siting Council". *See* Zoning Regulations Section 6.9.2.

#### d. <u>Inland Wetlands and Watercourses Regulations</u>

The Norwich Inland Wetlands and Watercourses Regulations ("Wetlands Regulations")

define Regulated Activity as any operation within or use of a wetland or watercourse or any upland area within 100 feet from a wetland, involving removal or deposition of material, or any obstruction, construction, alteration or pollution, of such wetlands or watercourses. (*See* Section 2.1 of the Wetlands Regulations). Four (4) copies of the Norwich Wetlands Regulations were filed, in bulk, with the Council. APT completed a thorough wetlands investigation to assess and evaluate potential impacts of the proposed facility. A copy of a Wetlands Inspection Report is included in Attachment 11.

According to the Federal Emergency Management Agency Flood Insurance Rate Map ("FIRM"), Community Panel Number 09011C0192G (Effective July 18, 2011) the Norwich 4 Facility would be located in Flood Zone X, an area outside the 500-year flood zone. A copy of the FIRM is also included in Attachment 15.

# 6. Local Input

Section 16-50<u>l</u>(e) of the Connecticut General Statutes, as amended, requires local input on matters before the Council. On March 4, 2020, Cellco representatives met with Mayor Peter Nystrom and Zoning Enforcement Officer Richard Shuck to commence the ninety (90) day municipal consultation process. Mayor Nystrom and Mr. Shuck received a copy of technical information summarizing Cellco's plans to establish a telecommunications facility as described above. At this meeting, Cellco discussed, in detail, the aspects of the proposed Norwich 4 Facility, the need for wireless service in western portions of Norwich and the Connecticut Siting Council application process. Four (4) copies of Cellco's Technical Report were filed in bulk with the Council.

At the request of the City, Cellco hosted a Public Information Meeting ("PIM") on April 30,

2020. Due to the State of Emergency and restrictions on public gatherings due to COVID 19, the PIM was held via tele-conference. Notice of the PIM was published in the *Norwich Bulletin* on April 14, 2020 and was sent to abutting landowners. A list of abutting landowners notified of the PIM, a copy of the notice letter to abutters and a copy of the Legal Notice of the PIM is included in Attachment 16.

During the PIM, Cellco discussed the need for the Norwich 4 Facility and the Council's application process. The PIM was attended by Nora and Ronald Brine, abutting land owners to the southwest of the Property, representatives from Norwich Public Utilities, Richard Shuck, Norwich's Zoning Enforcement Officer and members of Cellco's Project Team.

# 7. Consultations With State and Federal Officials

Attachments 10, 11, 12, 13, 15 and 17 and Section III.C.7. of the Application describes consultations with state and federal officials regarding the proposed Norwich 4 Facility.

#### a. Federal Communications Commission

The FCC did not review this particular tower proposal. As discussed above, FCC approval is not required where the authorized service area is not enlarged.

#### b. Federal Aviation Administration (FAA)

Cellco completed a Federal Airways & Airspace Analysis, consistent with FAA Regulations Part 77 Sub-Part C Obstruction Analysis Report, for the proposed Norwich 4 Facility to determine if the proposed tower would constitute an obstruction or hazard to air navigation. This analysis has confirmed, pursuant to FAA standards and guidelines, that the proposed tower would not constitute an obstruction or hazard to air navigation. Therefore, no obstruction marking or lighting would be required. A copy of the Federal Airways & Airspace Analysis report is included in <u>Attachment 17</u>.

# c. <u>United States Fish and Wildlife Service</u>

See Section III.C.4.b.(1) above.

# d. <u>Connecticut Department of Energy and Environmental</u>

#### **Protection**

# (1) Natural Diversity Data Base

See Section III.C.4.b.(1) above.

# (2) Bureau of Air Management

Under normal operating conditions, Cellco's equipment at the Norwich 4 Facility would generate no air emissions. During the loss of commercial power and periodically for maintenance purposes, Cellco would utilize a propane-fueled generator to provide emergency back-up power to the proposed cell site. Cellco's back-up generator will be managed to comply with the "permit by rule" criteria established by the Connecticut Department of Energy and Environmental Protection ("DEEP") Bureau of Air Management pursuant to R.C.S.A. § 22a-174-3b.

# e. Connecticut State Historic Preservation Officer

See Section III.C.4.b.(3) above.

# D. Estimated Cost and Schedule

# 1. Overall Estimated Costs

The total estimated cost of construction for the Norwich 4 Facility is approximately \$425,000. This estimate includes:

 (1) Cell site radio equipment
 \$150,000

 (2) Tower
 50,000

 (3) Generator
 25,000

 (4) Miscellaneous (e.g. site preparation, access, grading, utilities)
 200,000

# 2. Overall Scheduling

Site preparation and engineering would commence following Council approval of Cellco's Development and Maintenance ("D&M") Plan and are expected to be completed within two to four weeks. Equipment installation is expected to take an additional four weeks after installation of the building and installation of the tower. Cell site integration and system testing is expected to require two weeks after equipment installation.

# IV. <u>CONCLUSION</u>

Based on the facts contained in this Application, Cellco submits that the establishment of the Norwich 4 Facility will not have any substantial adverse environmental effects. A public need exists for high quality reliable wireless service in the City of Norwich as determined by the FCC and the United States Congress, and a competitive framework for providing such service has been established by the FCC and the Telecommunications Act of 1996. Cellco submits that the need far outweighs any possible environmental effects resulting from the construction of the proposed cell site.

WHEREFORE, Cellco respectfully requests that the Council grant this Application for a Certificate of Environmental Compatibility and Public Need for the proposed Norwich 4 Facility.

Respectfully submitted,

# CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS

By:\_\_\_\_\_

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, Connecticut 06103-3597
(860) 275-8200
Attorneys for the Applicant

# **NORWICH 4**

110 Yantic Lane Norwich, Connecticut

Description of Proposed Cell Site

Cellco Partnership d/b/a Verizon Wireless 20 Alexander Drive Wallingford, CT 06492

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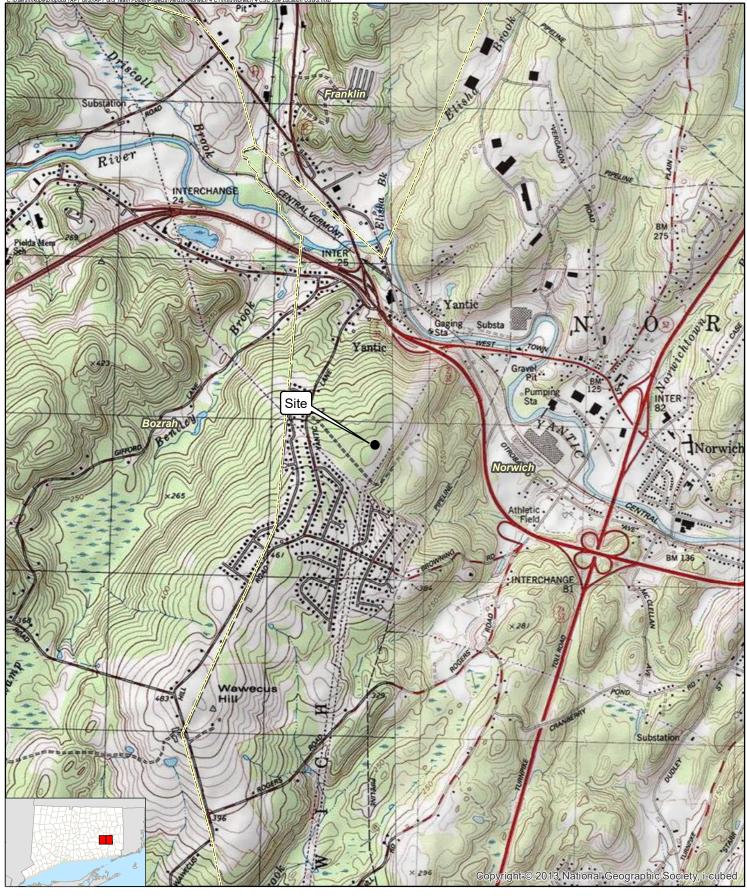
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GENERAL CELL SITE DESCRIPTION	1
U.S.G.S. TOPOGRAPHIC MAP	2
AERIAL PHOTOGRAPH	3
SITE EVALUATION REPORT	4
FACILITIES AND EQUIPMENT SPECIFICATION	6
ENVIRONMENTAL ASSESSMENT STATEMENT	7

SITE NAME: NORWICH 4 – 110 YANTIC LANE, NORWICH, CT

# GENERAL CELL SITE DESCRIPTION

The proposed Norwich 4 cell site would be located in the easterly portion of an approximately 115-acre parcel owned by Robert W. Larsen. The facility would consist of a 110-foot telecommunications tower and associated equipment located within a 50' x 50' fenced compound and 100' x 100' leased area. Cellco will install one equipment cabinet and a propane-fueled generator on concrete pad near the base of the tower.

Cellco would attach six (6) antennas and six (6) remote radio heads to an antenna platform at a centerline height of 110 feet above ground level. The top of Cellco's antennas will extend above the top of the tower to a height of 113 feet. Vehicular access to the facility would extend from Yantic Lane or Philanne Drive over existing dirt and gravel access driveways to the facility compound. Utility service would also extend from Philanne Drive to the cell site.



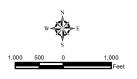
#### Legend





Municipal Boundary

Map Notes: Base Map Source: USGS 7.5 Minute Topographic Quadrangle Maps, Fitchville, CT (1983) and Norwich, CT (1983) Map Scale: 1:24,000 Map Date: February 2020

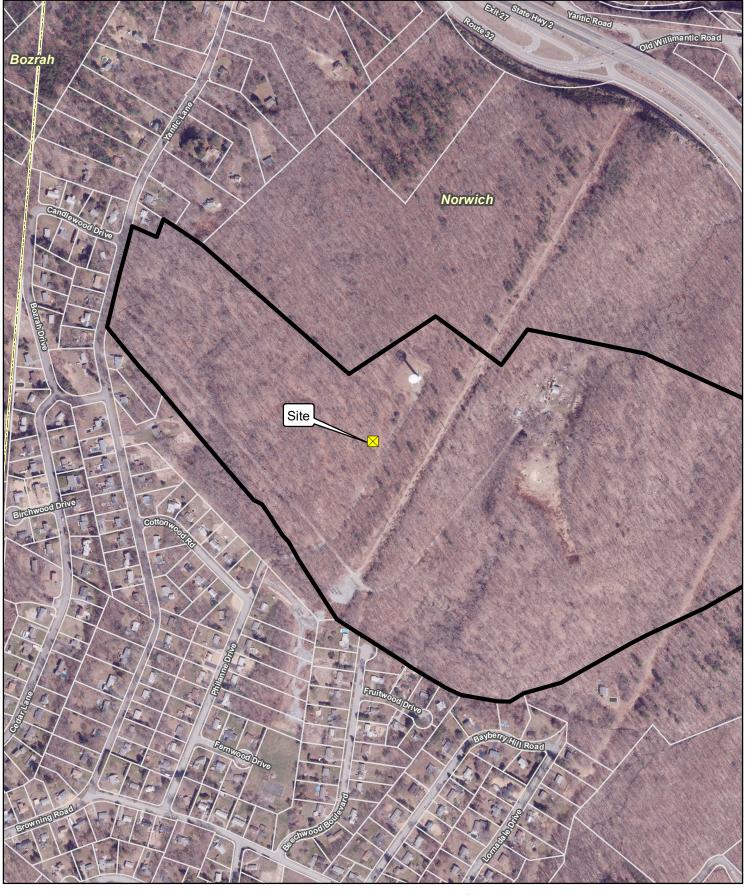


# **Site Location Map**

Proposed Wireless Telecommunications Facility Norwich 4 CT 110 Yantic Lane Norwich, Connecticut







#### Legend



Site

Subject Property



Municipal Boundary





Approximate Parcel Boundary (CTDEEP GIS)



# **Site Location Map**

**Proposed Wireless** Telecommunications Facility Norwich 4 CT 110 Yantic Lane Norwich, Connecticut





#### SITE EVALUATION REPORT

SITE NAME: NORWICH 4 – 110 YANTIC LANE, NORWICH, CT

# I. TOWER LOCATION

- A. COORDINATES: 41°-33'-08.50" N 72°-07'-33.20" W
- B. GROUND ELEVATION: Approximately 390± feet AMSL
- C. U.S.G.S. QUADRANGLE MAP: Fitchville CT and Norwich, CT
- D. <u>SITE ADDRESS</u>: 110 Yantic Lane, Norwich, CT
- E. <u>ZONING WITHIN 1/4 MILE OF SITE</u>: Land within ½ mile of the cell site is in Norwich's R-80 Residential and R-20 Residential zoning districts.

# II. DESCRIPTION

- A. <u>SITE SIZE</u>: 50' x 50' Fenced Compound 100' x 100' Leased Parcel
- B. LESSOR'S PARCEL: Approximately 115 acres
- C. <u>TOWER TYPE/HEIGHT</u>: 110' Monopole Tower
- D. <u>SITE TOPOGRAPHY AND SURFACE</u>: Topography in the area slopes gently down from east to west. Cellco will utilize a portion of the Property owner's existing dirt and gravel driveway from Yantic Lane (2,300 feet) or a portion of an existing gravel driveway from Philanne Drive (900) to the cell site. Minimal clearing and grading will be required to prepare the use of either access driveway by Cellco.
- E. <u>SURROUNDING TERRAIN, VEGETATION, WETLANDS, OR WATER</u>: The tower would be located in the easterly portion of an approximately 115-acre parcel used for residential and utility infrastructure purposes. A majority of the Property is and will remain undeveloped. The closest wetland area to the facility compound (Wetland 3) is located approximately 460 feet to the southwest. Two additional wetland areas (Wetlands 2 and 7) are located near the access driveway extending from Philanne Drive on an adjacent parcel. Several other wetland areas (Wetlands 1, 4, 5 and 6) are adjacent to the owners existing access driveway from Yantic Lane. No direct impact to these wetlands is anticipated from the development of the facility compound. Several of these wetland areas may be

impacted by improvements that may need to be made to the Yantic Lane access drive.

F. <u>LAND USE WITHIN 1/4 MILE OF SITE</u>: The 115-acre subject parcel is surrounded by residential and undeveloped land. (*See* Aerial Photograph and U.S.G.S. Topographic Map at pp. 2 and 3).

# III. FACILITIES

- A. POWER COMPANY: Eversource
- B. <u>POWER PROXIMITY TO SITE</u>: Approximately 900 feet at Philanne Drive to the south of the facility compound.
- C. TELEPHONE COMPANY: Frontier Communications
- D. PHONE SERVICE PROXIMITY: Same as power
- E. <u>VEHICLE ACCESS TO SITE</u>: Vehicle access to the site would extend from Yantic Lane <u>or</u> from Philanne Drive over portions of existing dirt and gravel driveways on the Property.
- F. <u>CLEARING AND FILL REQUIRED</u>: Minimal tree clearing, and grading would be required for construction of the facility compound and short gravel driveway extension. Detailed construction plans would be developed if this location is approved by the Siting Council.

# IV. LEGAL

- A. PURCHASE [ ] LEASE [X]
- B. OWNER: Robert W. Larsen
- C. ADDRESS: 110 Yantic Lane, Norwich, CT
- D. DEED ON FILE AT:

Town of Norwich, CT Land Records

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# FACILITIES AND EQUIPMENT SPECIFICATION (NEW TOWER & EQUIPMENT)

SITE NAME: NORWICH 4 – 110 YANTIC LANE, NORWICH, CT

# I. TOWER SPECIFICATIONS:

A. MANUFACTURER: To be determined

B. TYPE: Self-supporting monopole

C. TOWER HEIGHT: 110'

TOWER DIMENSIONS: Approx. 50" base

Approx. 24" top

# II. TOWER LOADING:

# A. CELLCO EQUIPMENT:

- 1. Panel Antennas Six (6) Model JAHH-65B-R3B
- 2. Remote Radio Heads (RRH)
  Three (3) B5/B13 RRH- BR04C
  Three (3) B2/B66A RRH-BR049
- 3. GPS Antenna: Attached to the equipment canopy
- 4. Transmission Lines:
  - a. Two (2) Model: HS 85016661 HYBRIFLEX™ fiber optic antenna cables inside the monopole

# III. ENGINEERING ANALYSIS AND CERTIFICATION:

The towers will be designed in accordance with Electronic Industries Association Standard EIA/TIA-222-G "Structural Standards for Steel Antenna Towers and Antenna Support Structures." The foundation designs would be based on soil conditions at the site. Details for the towers and foundation designs will be provided as a part of the final D&M Plan.

### ENVIRONMENTAL ASSESSMENT STATEMENT

SITE NAME: NORWICH 4 – 110 YANTIC LANE, NORWICH, CT

# I. PHYSICAL IMPACT

### A. WATER FLOW AND QUALITY

No water flow and/or water quality changes are anticipated as a result of the construction or operation of the facility. There are no lakes, ponds, rivers, streams, wetlands or other regulated bodies of water located in the area to be used for the access drive, tower or related facility improvements. Temporary wetland impacts necessary for the installation of utilities and driveway upgrades may occur along the access drive from Yantic Lane. Cell site equipment used will not discharge any pollutants to area surface or groundwater systems. The closest wetland area to the facility compound (Wetland 3) is located approximately 460 feet to the southwest. (*See* also <u>Attachment 11</u>).

# B. AIR QUALITY

Under ordinary operating conditions, Cellco's equipment at the Norwich 4 Facility would generate no air emissions. During power outages and periodically for maintenance purposes, Cellco would utilize a propane-fueled generator to provide emergency back-up power to the facility. Cellco's back-up generator will be managed to comply with the "permit by rule" criteria established by the Connecticut Department of Energy and Environmental Protection ("DEEP") Bureau of Air Management, pursuant to R.C.S.A. § 22a-174-3b.

#### C. LAND

Some trees or vegetation will need to be cleared and minimal grading of the tower compound will be required to construct the facility. Minimal grading and tree trimming may be required to utilize either of the proposed accessway to the tower site. The remaining land of the Lessor would remain unchanged by the construction and operation of the cell site.

# D. NOISE

The equipment to be in operation at the site after construction would emit no noise of any kind, except for the occasional operation of the back-up generator which would only run when power to the facility is interrupted and periodically for maintenance purposes. Some noise is anticipated during cell site construction.

# E. POWER DENSITY

The worst-case calculation of power density for Cellco's 700 MHz, 850 MHz, 1900 MHz and 2100 MHz antennas at the Norwich 4 Facility would be 58.63% of the FCC Safety Standard. (*See Attachment 14*).

# F. <u>VISIBILITY</u>

See Visibility Report included as Attachment 9.

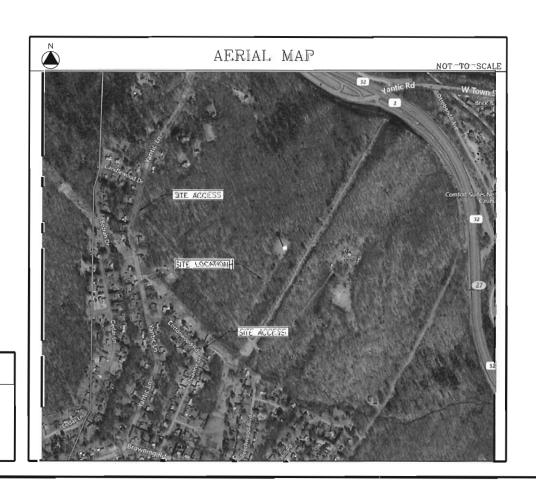


# WIRELESS COMMUNICATIONS FACILITY

SITE NAME: NORWICH 4 CT

# 110 YANTIC LANE NORWICH, CT 06360

PRO.	JECT SUMMARY
SITE NAME:	NORWICH 4 CT
SITE ADDRESS:	110 YANTIC LANE NORWICH, CT 06360
PROPERTY OWNER:	ROBERT W LARSEN LIO YANTIC LANE NORWICH, CT 06360
PARCEL ID:	65-2-1
TOWER COORDINATES:	41° 33' 08.50" N 72° 07' 33.20" W
APPLICANT:	CELLCO PARTNERSHIP d.b.a. VERIZON WIRELESS 20 ALEXANDER DR. WALLINGFORD, CT 06492
VERIZON WIRELESS CONTACTS:	MIKE HUMPHREYS - CONSTRUCTION STRUCTURE CONSULTING - SITE ACQUISITION
LEGAL/REGULATORY COUNSEL:	KENNETH C. BALDWIN, ESQ. ROBINSON & COLE, LLP (860) 275-8345

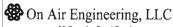


	DRAWING SCHEDULE				
SHEET NO.	SHEET DESCRIPTION				
T-1	TITLE SHEET				
C-0	ABUTTERS MAP, PROPERTY OWNER LIST & MUNICIPALITY MAP				
C-1	SITE PLAN				
C-2	ENLARGED SITE PLANS				
C-3	ENVIRONMENTAL NOTES & DETAILS				
C-4	COMPOUND PLAN, NORTH ELEVATION & EQUIPMENT PLAN				
C-5	ANTENNA PLAN & DETAILS				
C-6	STRUCTURAL EQUIPMENT PLAN & ELEVATIONS				
C-7	STRUCTURAL DETAILS				
C-8	SITE DETAILS				

Cellco Partnership d/b/a Verizon Wireless



WIRELESS COMMUNICATIONS FACILITY 20 ALEXANDER DRIVE



88 Foundry Pond Road Cold Spring, NY 10516 onair@optonline.ne 201-456-4624

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**NEW BUILD** MACRO

NORWICH 4 CT

110 YANTIC LANE NORWICH, CT 06360

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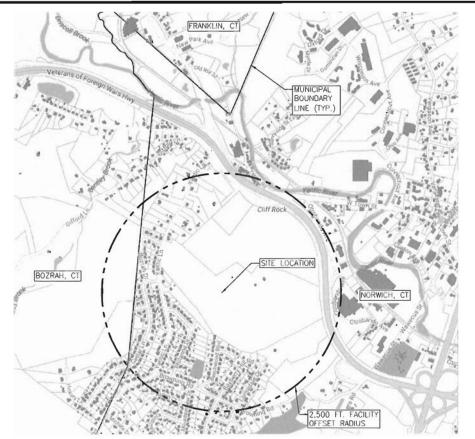
TITLE SHEET

T-1

PROJECT	DESCRIPTION
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- INSTALUATION OF A 110 FI. MONOPOLE/TOWER AND FENCES-IN COMPOUND AT GRADE INSTALLIATION OF OUTDOOR CABINETS AND A PROPARE IFJECTED BACK-UP EMERGENCY
- GENERATOR ON A 18' -0"x10' -0" EQUIPMENT PAD WITHIN THE COMPOUND INSTALLATION OF (6) PANEL ANTENNAS AND ASSOCIATED DEVICES ON THE MONOPOLE INSTALLATION OF CABLING FROM ROUP CABINETS TO ANTENNAS.

  ELECTRICAL & "LS-LEPHONE CONNECTIONS TO EXISTING UNIL IN DIEMARCATION POINTES

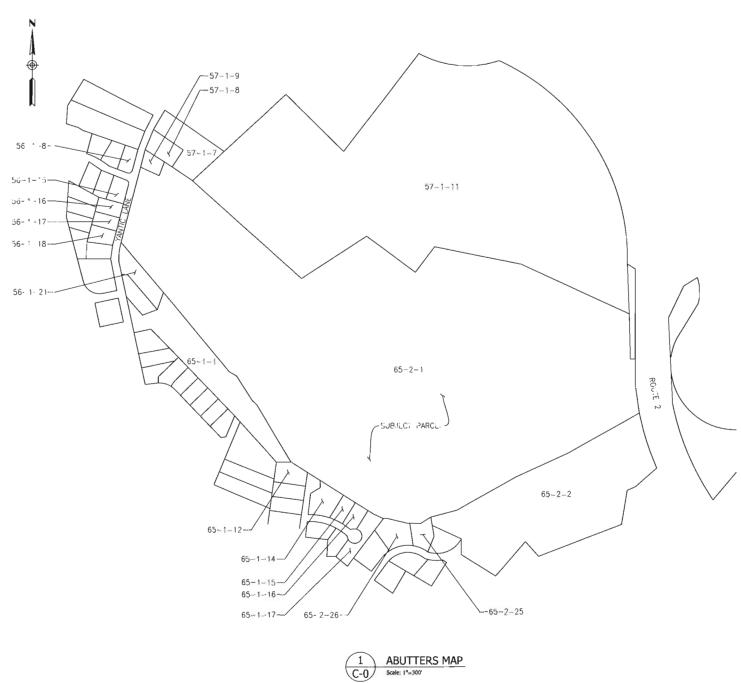


MUNICIPALITY NOTIFICATION MAP Scale: N.T.S.

	ABUTTERS LIST FROM PARCEL 65-2-1					
PARCEL#	OWNER NAME	OWNER MAILING ADDRESS	PROPERTY ADDRESS			
57-1-9	MCINTYRE JEFFREY M	86 YANTIC LANE, NORWICH, CT 06360	86 YANTIC LN			
57-1-8	MORRISON EDWARD G & SANEA	80 YANTIC LANE, NORWICH, CT 06360	80 YANTIC LN			
57-1-7	SHIRK KYLE	74 YANTIC LANE, NORWICH, CT 06360	74 YANTIC LN			
57-1-11	STATE OF CT DEPARTMENT OF TRANSPORATION	YANTIC RD REAR, NORWICH, CT 06360	YANTIC RD REAR			
65-2-2	RODERICK EDMUND P JR & GAIL S	51 LORNADALE DR, NORWICH, CT 06360	51 LORNADALE DR			
65-2-25	ALFIERO ANNA	43 BAYBERRY HILL RD, NORWICH, CT 06360	48 BAYBERRY HILL RD			
65-2-26	STONE JANET M	44 BAYBERRY HILL RD, NORWICH, CT 06360	44 BAYBERRY HILL RD			
65-1-17	LABRIE ROBERT C TR & LABRIE CONSTANCE E TR	10 FRUITWOOD DR, NORWICH, CT 06360	10 FRUITWOOD DR			
65-1-16	SOMAROO ARJUNE	8 FRUITWOOD DR, NORWICH, CT 06360	8 FRUITWOOD DR			
65-1-15	SALLS JAMES E JR	6 FRUITWOOD DR, NORWICH, CT 06360	6 FRUITWOOD DR			
65-1-14	COOK CHASE E	2 FRUITWOOD DR, NORWICH, CT 06360	2 FRUITWOOD DR			
65-1-12	LATHROP RAYMOND A	34 BEECHWOOD BLVD, NORWICH, CT 06360	34 BEECHWOOD BLVD			
65-1-1	BRINE RONALD P & NORA	132 YANTIC LANE, NORWICH, CT 06360	132 YANTIC LN			
56-1-21	ONEAL PAUL B	114 YANTIC LANE, NORWICH, CT 06360	114 YANTIC LN			
56-1-18	EXLEY DONALD P & EXLEY PATRICIA A M	109 YANTIC LANE, NORWICH, CT 06360	109 YANTIC LN			
56-1-17	HECK JEFFREY W & HECK JANET E	105 YANTIC LANE, NORWICH, CT 06360	105 YANTIC LN			
56-1-16	BECK MICHAEL J	101 YANTIC LANE, NORWICH, CT 06360	101 YANTIC LN			
56-1-15	CHESNEY STEPHEN & CHESNEY BROOKE	95 YANTIC LANE, NORWICH, CT 06360	95 YANTIC LN			
56-1-8	APPADWEDULA VENKATA R	87 YANTIC LANE, NORWICH, CT 06360	87 YANTIC LN			

NOTES TO ABUTTERS MAP & OWNERS LIST:

1. ALL INFORMATION TAKEN FROM THE CITY OF NORWICH ONLINE "GIS" DATABASE, JUNE 2020.



Cellco Partnership d/b/a Verizon Wireless

verizon<sup>v</sup>

WIRELESS COMMUNICATIONS FACILITY 20 ALEXANDER DRIVE WALLINGFORD, CT 06492



On Air Engineering, LLC

88 Foundry Pond Road
Cold Spring, NY 10516
onair@optonline.net
201-456-4624

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> **NEW BUILD** MACRO

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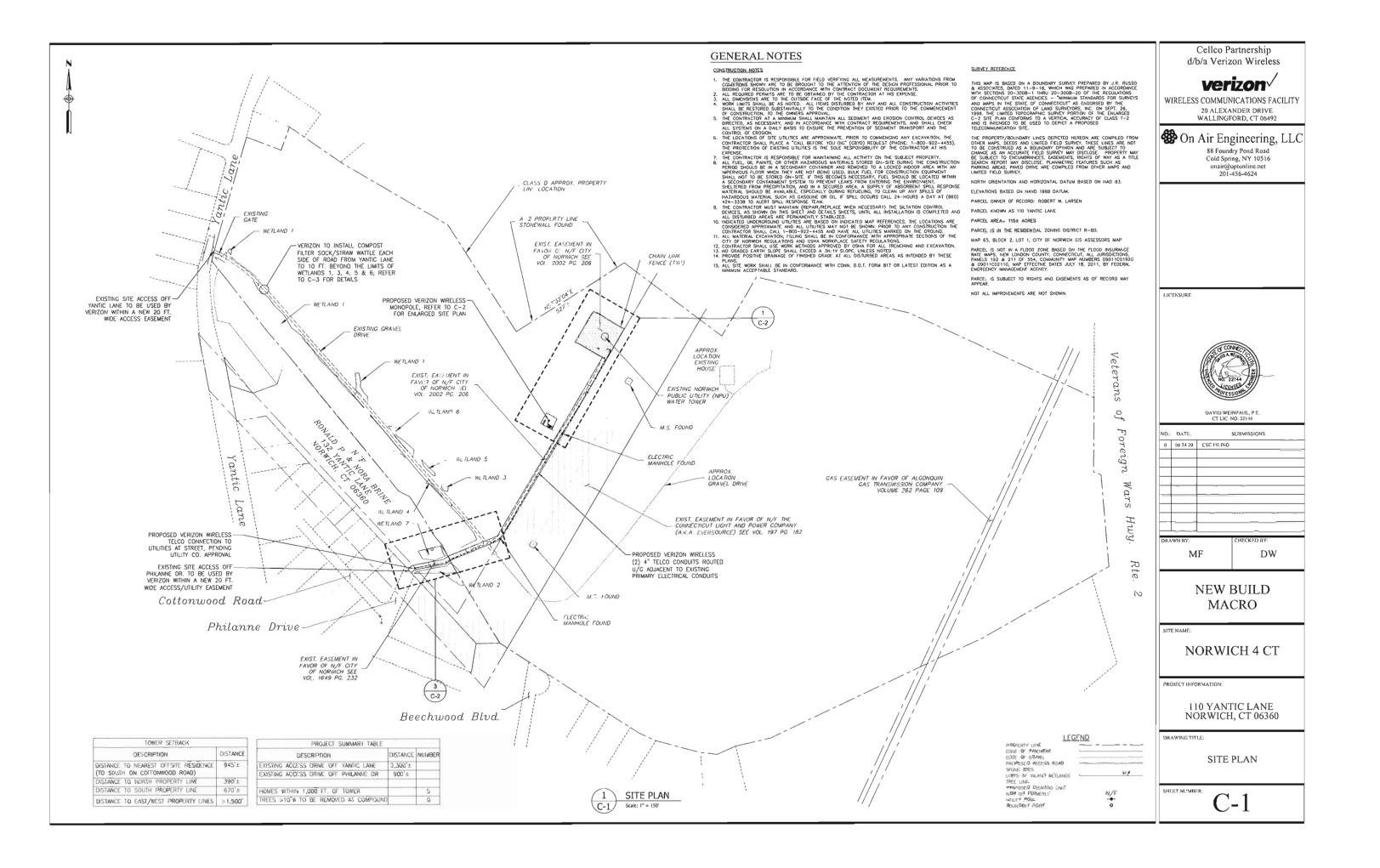
NORWICH 4 CT

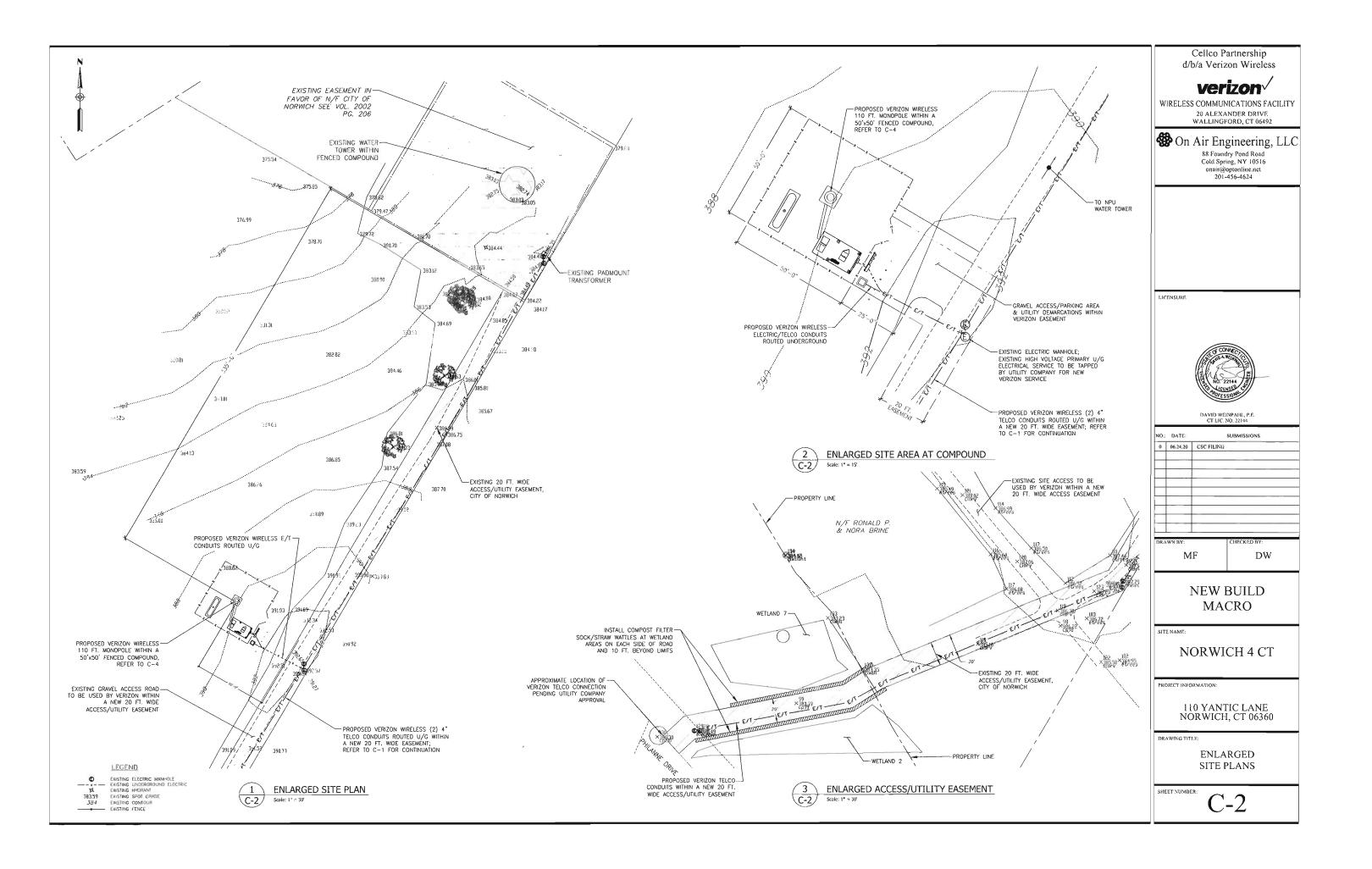
PROJECT INFORMATION:

110 YANTIC LANE NORWICH, CT 06360

ABUTTERS MAP, PROPERTY OWNER LIST & MUNICIPALITY MAP

SHEET NUMBER:





#### ENVIRONMENTAL NOTES

#### WETLAND PROTECTION PLAN

AS A RESULT OF THE PROPOSED DEVELOPMENT'S LOCATION IN THE VICINITY OF WETLANDS, THE FOLLOWING BEST MANAGEMENT PRACTICES ("BMPS") ARE RECOMMENDED TO AVOID UNINTENTIONAL IMPACT TO WETLAND HABITATS DURING CONSTRUCTION ACTIVITIES.

A WETLAND SCIENTIST FROM ALL-POINTS TECHNOLOGY CORP. (APT) EXPERIENCED IN COMPLIANCE MONITORING OF CONSTRUCTION ACTIVITIES WILL SERVE AS THE ENVIRONMENTAL MONITOR FOR THIS PROJECT TO ENSURE THAT THE FOLLOWING BMPS ARE IMPLEMENTED PROPERLY. THIS PROTECTION PROGRAM SHALL BE IMPLEMENTED REGARDLESS OF TIME OF YEAR THE CONSTRUCTION ACTIVITIES OCCUR. ALL-POINTS TECHNOLOGY CORPORATION, P.C. (APT) WILL SERVE AS THE ENVIRONMENTAL MONITOR FOR THIS PROJECT TO ENSURE THAT WELLAND PROTECTION MEASURES ARE IMPLEMENTED PROPERLY. THE CONTRACTOR SHALL CONTACT DEAN GUSTAFSON, SENIOR WETLAND SCIENTIST AT APT, AT LEAST 5 BUSINESS DAYS PRIOR TO THE PRE-CONSTRUCTION MEETING. MR. GUSTAFSON CAN BE REACHED BY PHONE AT (860) 552-2033 OR VIA EMAIL AT DGUSTAFSON@ALLPOINTSTECH.COM.

THE PROPOSED WETLAND PROTECTION PROGRAM CONSISTS OF SEVERAL COMPONENTS INCLUDING: EDUCATION OF ALL CONTRACTORS AND SUB-CONTRACTORS PRIOR TO INITIATION OF WORK ON THE SITE; USE OF APPROPRIATE EROSION CONTROL MEASURES TO CONTROL AND CONTAIN EROSION WHILE AVOIDING/MINIMIZING WILDLIFE ENTANGLEMENT: PERIODIC INSPECTION AND MAINTENANCE OF EROSION CONTROLS FOR THE PURPOSES OF ENSURING PROTECTION OF WETLAND RESOURCES; AND, REPORTING.

#### 1. CONTRACTOR EDUCATION:

- o PRIOR TO WORK ON SITE AND INITIAL DEPLOYMENT/MOBILIZATION OF COUPMENT AND MATERIALS, THE CONTRACTOR SHALL ATTEND AN EDUCATIONAL SESSION AT THE PRE-CONSTRUCTION MEETING WITH THE ENVIRONMENTAL MONITOR. THIS ORIENTATION AND EDUCATIONAL SESSION WILL CONSIST OF INFORMATION STRESSING THE ENVIRONMENTALLY SENSITIVE NATURE OF THE PROJECT AND PROXIMITY TO WETLAND RESOURCES AND THE NEED TO ENSURE THEIR PROTECTION THROUGHOUT THE DURATION OF THE CONSTRUCTION.
- b.THE ENVIRONMENTAL MONITOR WILL ALSO POST CAUTION SIGNS THROUGHOUT THE PROJECT SITE AND MAINTAIN THEM FOR DURATION OF CONSTRUCTION TO PROVIDE NOTICE OF THE ENVIRONMENTALLY SENSITIVE NATURE OF THE WORK AREA.
- C.THE CONTRACTOR WILL BE PROVIDED WITH THE ENVIRONMENTAL MONITOR'S CELL PHONE AND EMAIL CONTACT INFORMATION TO IMMEDIATELY REPORT ANY FAILURES OF EROSION CONTROLS OR RELEASES OF SEDIMENT INTO NEARBY WETLANDS

#### 2. EROSION AND SEDIMENTATION CONTROLS

- a.PLASTIC NETTING WITH LARGE MESH OPENINGS (> 1/4") USED IN A VARIETY OF EROSION CONTROL PRODUCTS (I.E., EROSION CONTROL VARIETY OF EROSION CONTROL PRODUCTS (I.E., EROSION CONTROL BLANKETS, FIBER ROLLS [WATTLES], REINFORCED SILT FENCE) HAS BEEN FOUND TO ENTANGLE WILDUTE, INCLUDING REPTILES, AMPHIBIANS, BIRDS AND SMALL MAMMALS. NO PERMANENT EROSION CONTROL PRODUCTS OR REINFORCED SILT FENCE WILL BE USED ON THE PROJECT. TEMPORARY EROSION CONTROL PRODUCTS THAT WILL BE EXPOSED AT THE GROUND SURFACE REPRESENT A POTENTIAL FOR WILDLIFE ENTANGLEMENT WILL USE EITHER EROSION CONTROL BLANKETS AND FIBER ROLLS COMPOSED OF PROCESSED FIBERS MECHANICALLY BOUND TOGETHER TO FORM A CONTINUOUS MATRIX (NETLESS) OR NETTING WITH A MESH SIZE < 1/4" SUCH AS THAT TYPICALLY USED IN COMPOST FILTER SOCKS TO AVOID/MINIMIZE WILDLIFE ENTANGLEMENT
- BUNSTALLATION OF EROSION AND SEDIMENTATION CONTROLS, REQUIRED FOR EROSION CONTROL COMPLIANCE, SHALL BE PERFORMED BY CONTRACTOR FOLLOWING CLEARING ACTIVITIES AND PRIOR TO ANY EARTHWORK IN ACCORDANCE WITH THE PROJECT SITE PLANS. THE ENVIRONMENTAL MONITOR WILL INSPECT THE WORK ZONE AREA PRIOR TO AND FOLLOWING EROSION CONTROL BARRIER INSTALLATION TO ENSURE IT HAS BEEN SATISFACTORILY INSTALLED PRIOR TO THI INITIATION OF EARTHWORK.
- c.THE CONTRACTOR SHALL HAVE ADDITIONAL EROSION AND SEDIMENTATION CONTROLS SHOULD FIELD CONDITIONS WARRANT EXTENDING THE CONTROLS AS RECOMMENDED BY THE ENVIRONMENTAL MONITOR
- d.in addition to required daily inspection by the contractor. The ...M ADDITION TO REQUIRED DALY INSPECTION BY THE CONTRACTOR, THE REGISTON AND SEDIMENTATION CONTROLS WILL BE INSPECTED BY THE CONTRACTOR FOR TEARS OR BREECHES IN THE FABRIC FOLLOWING INSTALLATION AND FOLLOWING STORM EVENTS THAT PRODUCE A DISCHARGE. INSPECTIONS WILL BE CONDUCTED PERIODICALLY BY THE ENVIRONMENTAL MONITOR THROUGHOUT THE COURSE OF THE CONSTRUCTION PROJECT.
- e.ALL EROSION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS OF COMPLETION OF WORK AND PERMANENT STABILIZATION OF SITE SOILS. IF FIBER ROLLS/WATTLES, STRAW BALES, OR OTHER NATURAL MATERIAL FIRST ROLLS/WHITES, STOWN BALES, SUCH DEVICES WILL NOT BE EROSION CONTROL PRODUCTS ARE USED, SUCH DEVICES WILL NOT BE LEFT IN PLACE TO BIODEGRADE AND SHALL BE PROMPTLY REMOVED AFTER SOILS ARE STABLE SO AS NOT TO CREATE A BARRIER TO MIGRATING WILDLIFE. SEED FROM SEEDING OF SOILS SHALL NOT BE SPREAD OVER FIBER ROLLS/WATTLES AS IT MAKES THEM HARDER TO REMOVE ONCE SOILS ARE STABILIZED BY VEGETATION.

#### 3 PETROLEUM MATERIALS STORAGE AND SPILL PREVENTION

- o. CERTAIN PRECAUTIONS ARE NECESSARY TO STORE PETROLEUM MATERIALS, REFUEL AND CONTAIN AND PROPERLY CLEAN UP ANY INADVERTENT FUEL OR PETROLEUM (I.E., OIL, HYDRAULIC FLUID, ETC.) SPILL DUE TO THE PROJECT'S LOCATION IN PROXIMITY TO SENSITIVE WETLAND RESOURCES
- b. A SPILL CONTAINMENT KIT CONSISTING OF A SUFFICIENT SUPPLY OF . A SPILL CONTAINMENT RIT CONSISTING OF A SUFFICIENT SUPPLY OF A BOSORBENT MATERIAL WILL BE MAINTAINED BY THE CONTRACTOR AT THE CONSTRUCTION SITE THROUGHOUT THE DURATION OF THE PROJECT IN ADDITION, A WASTE DRUM WILL BE KEPT ON SITE TO CONTAIN ANY USED ABSORBENT PADS/MATERIAL FOR PROPER AND TIMELY DISPOSAL OFF SITE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL LAWS.
- c. THE FOLLOWING PETROLEUM AND HAZARDOUS MATERIALS STORAGE AND REFUELING RESTRICTIONS AND SPILL RESPONSE PROCEDURES WILL BE ADHERED TO BY THE CONTRACTOR
- I PETROLEUM AND HAZARDOUS MATERIALS STORAGE AND REFUELING
- REFUELING OF VEHICLES OR MACHINERY SHALL TAKE PLACE ON AN IMPERVIOUS PAD WITH SECONDARY CONTAINMENT DESIGNED TO CONTAIN FUELS.
- 2. ANY REFUELING DRUMS/TANKS OR HAZARDOUS MATERIALS THAT MUST BE KEPT ON SITE SHALL BE STORED ON AN IMPERVIOUS SURFACE UTILIZING SECONDARY CONTAINMENT A MINIMUM OF 100 FEET FROM WETLANDS OR WATERCOURSES.
- II. INITIAL SPILL RESPONSE PROCEDURES
- 1. STOP OPERATIONS AND SHUT OFF EQUIPMENT.
- 2. REMOVE ANY SOURCES OF SPARK OR FLAME.
- 3. CONTAIN THE SOURCE OF THE SPILL.
- 4. DETERMINE THE APPROXIMATE VOLUME OF THE SPILL
- 5. IDENTIFY THE LOCATION OF NATURAL FLOW PATHS TO PREVENT THE RELEASE OF THE SPILL TO SENSITIVE NEARBY WATERWAYS OR WETLANDS.
- 6. ENSURE THAT FELLOW WORKERS ARE NOTIFIED OF THE SPILL.
- SPILL CLEAN UP & CONTAINMENT
- 1. OBTAIN SPILL RESPONSE MATERIALS FROM THE ON-SITE SPILL RESPONSE KIT. PLACE ABSORBENT MATERIALS DIRECTLY ON THE RELEASE AREA.
- 2. LIMIT THE SPREAD OF THE SPILL BY PLACING ABSORBENT MATERIALS AROUND THE PERIMETER OF THE SPILI
- 3. ISOLATE AND ELIMINATE THE SPILL SOURCE.
- 4. CONTACT THE APPROPRIATE LOCAL, STATE AND/OR FEDERAL AGENCIES, AS
- 5. CONTACT A DISPOSAL COMPANY TO PROPERLY DISPOSE OF CONTAMINATED
- iv. REPORTING
- 1. COMPLETE AN INCIDENT REPORT.
- SUBMIT A COMPLETED INCIDENT REPORT TO LOCAL, STATE, AND FEDERAL AGENCIES, AS REQUIRED.REPORTING

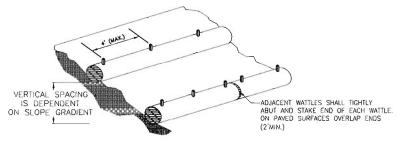
#### 4 REPORTING

- INSPECTION: OJNSPECTION REPORTS (BRIEF NARRATIVE AND APPLICABLE PHOTOS) WILL BE PREPARED BY THE ENVIRONMENTAL MONITOR DOCUMENTING EACH INSPECTION AND SUBMITTED TO THE PERMITTEE FOR COMPLIANCE VERRICATION. ANY NON-COMPLIANCE OBSERVATIONS OF EROSION CONTROL MEASURES OR EVIDENCE OF EROSION OR SEDIMENT RELEASE WILL BE IMMEDIATELY REPORTED TO THE PERMITTEE AND ITS CONTRACTOR AND INCLUDED IN THE REPORTS.
- 6.ANY INCIDENTS OF SIGNIFICANT RELEASE OF SEDIMENT OR OTHER MATERIALS INTO WETLAND RESOURCE AREAS SHALL BE REPORTED BY THE PERMITTEE WITHIN 24 HOURS TO THE CONNECTICUT SITING COUNCIL.

  C.ANY OBSERVATIONS OF RARE SPECIES WILL BE REPORTED TO THE
- CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION'S NATURAL DIVERSITY DATA BASE PROGRAM.
- d.FOLLOWING COMPLETION OF THE PROJECT, A SUMMARY REPORT WILL BE PREPARED BY THE ENVIRONMENTAL MONITOR DOCUMENTING COMPLIANCE WITH THE WETLAND PROTECTION PLAN AND SUBMITTED TO THE PERMITTEE. WHO SHALL SUBMIT A COPY TO THE CONNECTICUT SITING COUNCIL.

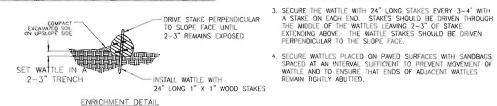
#### SEEDING SPECIFICATIONS

- A. IF GROUND HAS BEEN PREVIOUSLY MULCHED, MULCH MUST BE REMOVED ADDITIONAL NITROGEN MUST BE ADDED
- B. REMOVE ALL SURFACE STONES 2" OR LARGER AS WELL AS ALL DEBRIS. SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLOUS, CLUMPS, OR OTHER UNSUITABLE MATERIAL.
- C. APPLY FERTILIZER AT 7.5 POUNDS PER 1.000 SQUARE FEET AND LIME AT 200 POUNDS PER 1,000 SQUARE FEET UNLESS SOIL TESTING FOR REQUIREMENTS IS PERFORMED.
- D. NO MOWING IS TO BE UNDERTAKEN UNTIL THE MAJORITY OF THE VEGETATION IS AT LEAST 6" HIGH. MOWING SHOULD CUT THE TOP 1/3 OF VEGETATION. DO NOT UNDER ANY CIRCUMSTANCES CUT VEGETATION
- E. DO NOT APPLY ANY FORM OF WEED CONTROL UNTIL GRASS HAS BEEN MOWED AT LEAST 4 TIMES.
- F. THESE SEEDING MEASURES ARE NOT TO BE USED ON SLOPES IN EXCESS
- G. PERMANENT SEEDING MEASURES ARE TO BE USED INSTEAD OF TEMPORARY SEEDING MEASURES WHERE WORK IS TO BE SUSPENDED FOR A PERIOD OF TIME LONGER THAN 1 YEAR.
- H. IF THERE IS NO EROSION, BUT SEED SURVIVAL IS LESS THAN 100 PLANTS PER SQUARE FOOT AFTER 4 WEEKS OF GROWTH, RE-SEED AS PLANTING SEASON ALLOWS.
- ALL DISTURBED AREAS OUTSIDE THE PAVEMENT AREA SHALL BE LOAMED AND SEEDED IN ACCORDANCE WITH THE SUGGESTED SEEDING MIXTURES TABLE.



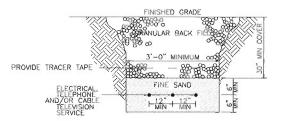
#### TYPICAL WATTLE INSTALLATION GUIDE

TYPICAL WATTLE SPACING BASED ON SLOPE GRADIENT

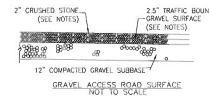


STRAW WATTLE INSTALLATION

STRAW WATTLE NOTES:



BURIED CABLE TRENCH CROSS SECTION



- 1, TRAFFIC BOUND GRAVEL SURFACE SHALL MEET CT DOT STANDARD SPECIFICATIONS M.02.06 GRADATION, GRADING "C"
- 2. CRUSHED STONE SHALL MEET CT DOT STANDARD

4" CRUSHED STONE (SEE NOTE) 7888 æ 6" COMPACTED GRAVEL SUBBASE

BEGIN AT THE LOCATION WHERE THE WATTLE IS TO BE.
INSTALLED BY EXCAVATING A 2-3" DEEP BY 9" WIDE TRENCH
ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL.
SHOULD BE PLACED UP—SLOPE FROM THE ANCHOR TRENCH.

2. PLACE THE WATTLE IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT THE SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UPHILL SIDE. ADJACENT

WATTLES SHOULD TIGHTLY ABOUT

REMAIN TIGHTLY ABUTTED.

GRAVEL COMPOUND SURFACE NOT TO SCALE

NOTE:

1. CRUSHED STONE SHALL MEET CT DOT STANDARD SPECIFICATIONS M.01.01 NO.3.

#### SUGGESTED SEEDING MIXTURES AND PRACTICES

AREAS WHERE SEED MIX APPLIES	SEEDING MIXTURES BY WEIG	НТ	RATE PER 1,000 SQ. FT.	SEEDING DATES
ALL LAWN AREAS	RED FESCUES KENTUCKY BLUEGRASS	45% 45%	1 LBS.	APRIL 1 - JUNE 15 OR
	PERENNIAL RYEGRASS	10%		AUG, 15 - OCT, 1
ROAD CUTS, FILLS,	KENTUCKY TALL FESCUE	47%	0.95 LBS.	APRIL 1 - JUNE 15
DIVERSION DITCHES, &	REDTOP	6%		OR
STORMWATER BASINS	CREEPING RED FESCUE	47%		AUG. 15 - OCT, 1

WHERE TREES ARE TO BE RETAINED. THE SEED MIXTURE SHOULD BE ADAPTED FOR SHADY CONDITIONS.

TEMPORARY SEEDING 1-1/2 LBS. WITHIN 7 DAYS AFTER PERENNIAL RYEGRASS SUSPENSION OF GRADING WORK

Cellco Partnership d/b/a Verizon Wireless



WIRELESS COMMUNICATIONS FACILITY 20 ALEXANDER DRIVE



😘 On Air Engineering, LLC

88 Foundry Pond Road Cold Spring, NY 10516 201-456-4624



DAVID WEINPAHL, P.E.

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> **NEW BUILD MACRO**

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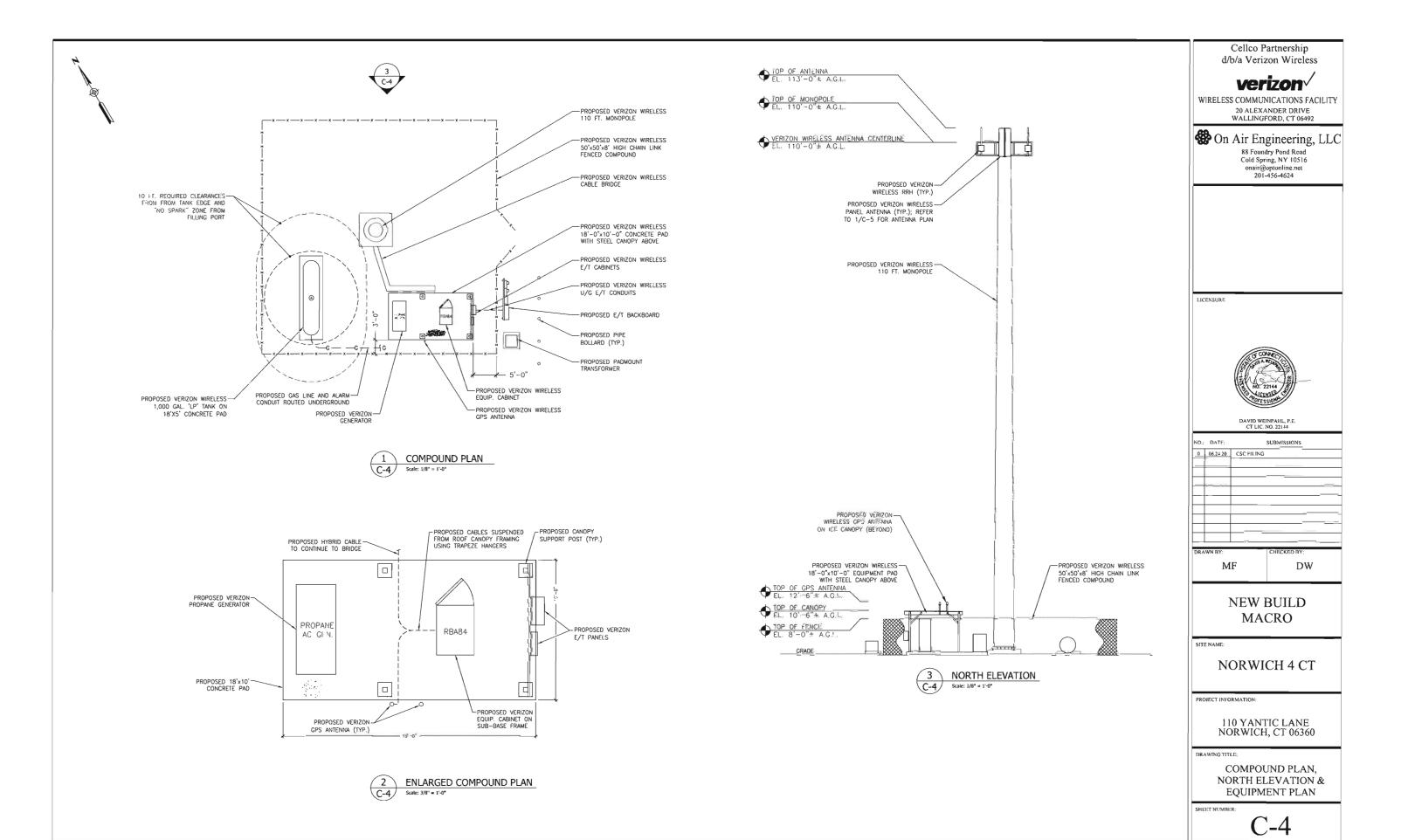
NORWICH 4 CT

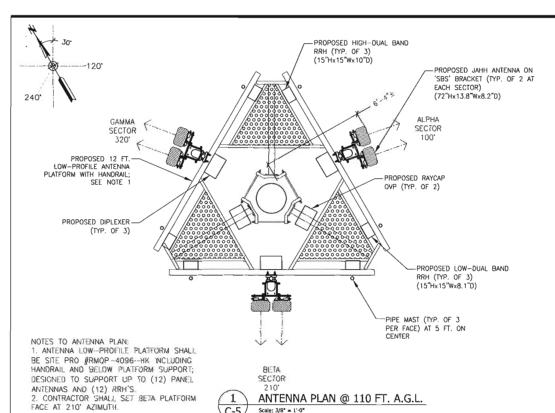
PROJECT INFORMATION

110 YANTIC LANE NORWICH, CT 06360

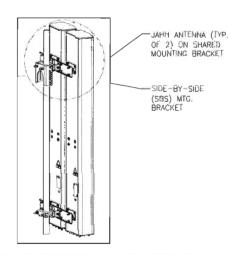
DRAWING TITLE

**ENVIRONMENTAL NOTES & DETAILS** 





Scale: 3/8" = 1'-0"



	ANTENNA SPECIFICATIO	NS
MODEL #	SIZE	ACCESSORY EQUIPMENT
JAHH-658-R38	72"Hx13.8"Wx8.2"D; 80 LBS.	SIDE-BY-SIDE MOUNTING BRACKET

ANTENNA DETAIL C-5 Scale: N.T.S.



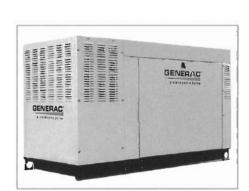
RRH	DIMENS	ONS AWS	/PCS (866/	/B2)
HEIGHT	WIDTH	DEPTH	WEIGHT	COLOR
15"	15"	10"	84.4 1.83	OFF WI-ITE





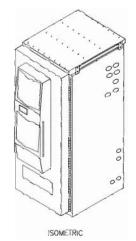
RRH	DIMENSI	ONS 700	/850 (B13/	B5)
HEIGHT	WIDTH	DEPTH	WEIGHT	COLOR
15"	15"	8.1"	70.3 LBS	OFF WHITE

RRH DETAIL - 700/850 C-5 Scale: N.T.S



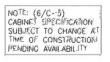
	EQUIPME	ENT SPEC	IFICATIONS	
MODEL #	LENGTH	WIDTH	HEIGHT	WEIGRHI
QT025A 25kW	77"	34°	46"	1,414 LBS

5 25kW NAT. GAS GENERATOR C-5 Scale: N.T.S.



	EQUIP M	ENT SPEC	FICATIONS	
MODEL #	HEIGHT	WID:TH	DEPSH	WEIGHT
RBA84	85.2"	32.0"	35.4"	1,955 LBS

RBA84 EQUIPMENT CABINET Scale: 3/8" = 1'-0"

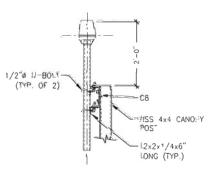




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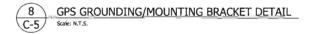
	FOULPM	ENT SPEC	CATIONS		
MODEL # HEIGHT WICHT DEPTH WEIGHT					
760238731	6"	32"	36.63"	2	

RBA84 CABINET SUB-BASE (PLINTH) Scale: 3/63" = 12-07"



#### NOTES:

- THE GPS ANTENNA MOUNT IS DESIGNED TO FASTEN TO A STANDARD 2-1/2\* DIAMETER, SCHEDULE 40, GALVANIZED STEEL OR STAINLESS STEEL PIPE. THE PIPE MUST NOT BE THREADED AT THE ANTENNA MOUNT END. THE PIPE SHALL BE CUT TO THE REQUIRED LENGTH (MINIMUM OF 72 INCHES) USING A HAND OR ROTARY PIPE CUTTER TO ASSURE A SMOOTH AND PERPENDICULAR CUT. A HACK SAW SHALL NOT BE USED. THE CUT PIPE END SHALL BE DEBURRED AND SMOOTH IN ORDER TO SEAL AGAINST THE NEOPRENE GASKET ATTACHED TO THE ANTENNA MOUNT.
- 2. ATTACH TO POST NEAREST EQUIPMENT WITH CLEAN VIEW OF SKY.
- PRIOR TO INSTALLATION CONTRACTOR SHALL TEST GPS LOCATION WITH HAND HELD AND MOVE GPS ANTENNA TO OTHER ICE BRIDGE POSTS AS REQUIRED TO ACHIEVE ADEQUATE SIGNAL, FAILURE TO ACHIEVE ADEQUATE SIGNAL WITH A HAND HELD GPS SHALL BE REPORTED TO CONSTRUCTION MANAGER AND ENGINEER TO DETERMINE ALTERNATE INSTALLATION LOCATION FOR GPS ANTENNA.



Cellco Partnership d/b/a Verizon Wireless



WIRELESS COMMUNICATIONS FACILITY 20 ALEXANDER DRIVE WALLINGFORD, CT 06492



On Air Engineering, LLC

88 Foundry Pond Road Cold Spring, NY 10516 onair@optonline.net 201-456-4624

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**NEW BUILD** 

MACRO

SITE NAME:

NORWICH 4 CT

PROJECT INFORMATION:

110 YANTIC LANE NORWICH, CT 06360

DRAWING TITLE:

ANTENNA PLAN & DETAILS

#### **GENERAL STRUCTURAL NOTES:**

- 1. ALL EQUIPMENT SHALL BE INSTALLED PLUMB AND LEVEL
- 2. ALL WIDE FLANGE STRUCTURAL STELL SHALL CONFORM WITH A992 SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST AISC CODE AND ASTM SPECIFICATION. STEEL SHALL CONFORM TO ASTM A-36, PIPE SHALL CONFORM TO ASTM A-501 OR ASTM TYPE EOR \$ A-53 (GRADE B).
- 3. ALL CONNECTIONS OF STRUCTURAL STEEL MEMBERS SHALL 8E MADE USING SPECIFIED WELDS WITH WELDING ELECTRODES E-70XX OR SPECIFIED HIGH STRENGTH BOLTS TO BE ASTM A325, THREAD EXCLUDED FROM SHEAR PLANE.
- 4. ALL STEEL EXPOSED TO MOISTURE SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION PER ASTM A-123. ALL DAMAGED SURFACES, WELDED AREAS AND AUTHORIZED NON-GALVANIZED MEMBERS OR PARTS (EXISTING OR NEW) SHALL BE PAINTED WITH 2 COATS OF ZRC COLD GALVANIZING COMPOUND MANUFACTURED BY ZRC CHEMICAL PRODUCTS CO. QUINCY, MA, OR USE THERMAL SPRAYING WITH PLATITING 85/15 AS MANUFACTURED BY PLATI BROTHERS & COMPANY, WATERBURY, CT 1-800-752-8276.
- 5. ALL SHOP AND FIELD WELDING SHALL BE DONE BY WELDERS QUALIFIED AS DESCRIBED IN THE "AMERICAN WELDING SOCIETY'S STANDARD QUALIFICATION PROCEDURE" TO PERFORM THE TYPE OF WORK REQUIRED.
- 6. ALL PIPE SIZES ARE NOMINAL DIAMETER (INSIDE DIAMETER).

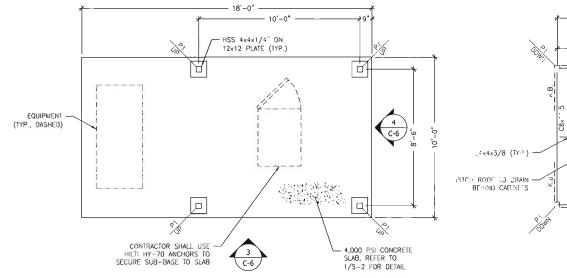
#### CAST-IN-PLACE CONCRETE:

- 1. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST EDITION OF THE ACI BUILDING CODE.
- 2. ALL CONCRETE SHALL ATTAIN 4000 PSI COMPRESSIVE STRENGTH AT 28 DAYS
- 3. READY MIX: COMPLY WITH ACI-301 AND ASTM C-94. ALL CONCRETE EXPOSED TO THE GROUND OR WEATHER SHALL BE AIR ENTRAINED.
- 4. COLD WEATHER CONCRETE POURING SHALL BE IN ACCORDANCE WITH ACI-306.
- 5. THROUGHOUT CONSTRUCTION THE CONCRETE WORK SHALL BE ADEQUATELY PROTECTED AGAINST DAMAGE DUE TO EXCESSIVE LOADING, CONSTRUCTION EQUIPMENT MATERIALS OR THODS, ICE, RAIN, SNOW, EXCESSIVE HEAT AND FREEZING TEMPERATURES.
- 6. EARLY DRYING OUT OF CONCRETE, ESPECIALLY DURING THE FIRST 24 HOURS, SHALL BE CAREFULLY GUARDED AGAINST ALL SURFACES SHALL BE PROTECTED USING MOIST CURING OR A MEMBRANE CURING AGENT APPLIED AS SOON AS FORMS ARE REMOVED OR FINISHING OPERATIONS ARE COMPLETE. CARE SHALL BE EXERCISED SO AS NOT TO DAMAGE
- 7. APPLY NON-SLIP BROOM FINISH IMMEDIATELY AFTER
- 8. CONTRACTOR TO COORDINATE REQUIREMENTS OF STRUCTURAL, CIVIL, MECHANICAL AND ELECTRICAL DRAWINGS INCLUDING ANY AND ALL PENETRATIONS SPECIFIED PRIOR TO POURING CONCRETE.
- 9. CONTRACTOR SHALL PROVIDE A 3/4" CHAMFER ON ALL CONCRETE SLABS.

- 1. ALL REINFORCING BAR SHALL CONFORM TO THE LATEST ACI. CODE AND DETAILING MANUAL.
- 2. WHERE REINFORCING IS CALLED OUT IN THE CONSTRUCTION DOCUMENTS IT SHALL 8E 3" CLEAR COVER (MINIMUM UNLESS OTHERWISE NOTED).
- 3. ALL BARS SHALL BE ASTM A-615, GRADE 60.
- 4. WELDED WIRE FABRIC SHALL BE ASTM A-185.
- 5. WHERE CONTINUOUS BARS ARE CALLED FOR, THEY SHALL BE RUN CONTINUOUSLY AROUND CORNERS AND LAPPED AT NECESSARY SPLICES OR HOOKED AT DISCONTINUOUS ENDS. LAP SHALL BE 40 BAR DIAMETERS

#### **FOUNDATION**

FOOTINGS SHALL BEAR ON UNDISTURBED SOIL AND JOR SUPERVISED COMPACTED FILL, FREE OF FROST, HAVING A MINIMUM ALLOWABLE BEARING CAPACITY OF 1 1/2 TONS PER



EQUIPMENT PLAN

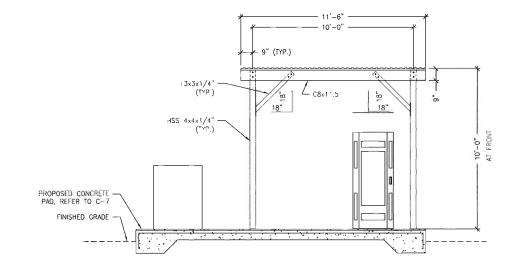
Scale: 1/4" = 1'-0"

EQUIPMENT CANOPY ROOF FRAMING PLAN

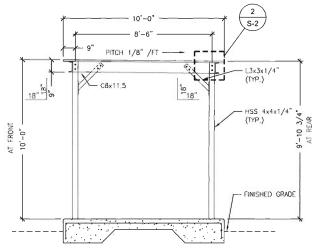
I" TYPE "E" ROOF DECK MANUFACTURES

BY VULCROFT OR APPROVED EQUAL 22 GUAGE FORM DECK (GALV) PITCHED 1/8"/FT AND MECHANICALLY FASTENED

TO ANGLES WITH HILTI X-HSN 24 DECK FASTENERS IN A 36/4 PATTERN



EQUIPMENT PAD AND CANOPY REAR ELEVATION C-6 Scale: 3/8" = 1'-0"



EQUIPMENT PAD AND CANOPY SIDE ELEVATION C-6/

#### PLAN NOTES

VERIFY ALL DIMENSIONS, ELEVATIONS, EXISTING FRAMING MEMBER SIZES AND GENERAL CONDITIONS PRIOR TO COMMENCEMENT OF WORK NOTIFY ENGINEER OF RECORD OF ANY DISCREPANCIES BETWEEN THESE DRAWINGS AND EXISTING

LEGEND	
SYMBOL	DESCRIPTION
2	INDICATES HSS4x4x1/4 ASTM ASOO GR. B (Fy=48ker) STEEL POST.
<u></u>	INDICATES SPAN DIRECTION
K.B.	INDICATES L3x3x1/4 ASTM A36 (Ev=36ksi) STEEL ANGLE

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> **NEW BUILD MACRO**

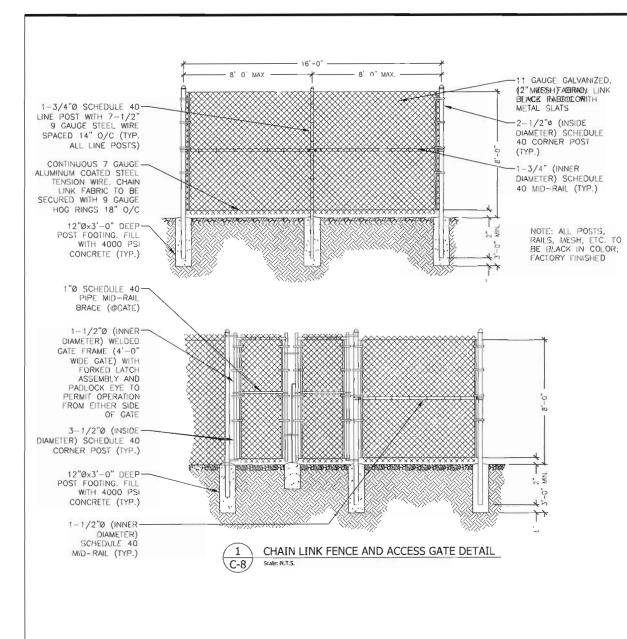
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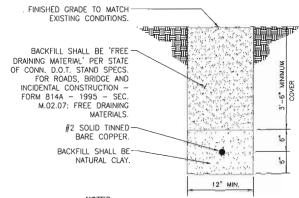
**NORWICH 4 CT** 

PROJECT INFORMATION:

110 YANTIC LANE NORWICH, CT 06360

STRUCTURAL EQUIPMENT PLAN & ELEVATIONS



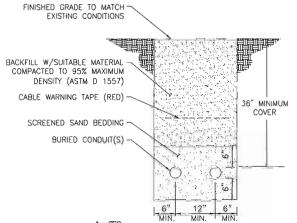


#### NOTES:

- ENGINEER SHALL INSPECT PLACEMENT OF EGR CONDUCTOR PRIOR TO BACKFILLING.
- MAINTAIN MIN. 2'-0" LINEAR CLEARANCE BETWEEN NATURAL CLAY BACKFILL AND THE FOLLOWING: FOUNDATION, UNDERGROUND PIPING/CONDUIT, UNDERGROUND SERVICES. IN THE CLEARANCE AREAS, USE EARTH BACKFILL INSTEAD.
- EXERCISE HANDLING AND USE PRECAUTION OF BACKFILL MATERIAL PER MFR'S REQUIREMENTS.

2 C-8

EGR TRENCH/BACKFILL DETAIL
Scale: N.T.S.



NOTES

- THE CLEAN FILL SHALL PASS THROUGH A 3/8" MESH SCREEN AND SHALL NOT CONTAIN SHARP STONES. OTHER BACKFILL SHALL NOT CONTAIN ASHES, CINDERS, SHELLS, FROZEN MATERIAL, LOOSE OEBRIS OR STONES LARGER THAN 2" IN MAXIMUM DIMENSION.
- WHERE EXISTING UTILITIES ARE LIKELY TO BE ENCOUNTERED, CONTRACTOR SHALL HAND DIG AND PROTECT EXISTING UTILITIES.
- REFER TO PLANS FOR FINAL QUANTITY OF CONDUITS (POWER & TELCO).
   AL CONDUITS SEPARATIONS SHALL BE IN ACCORDANCE WITH MEC & UTILITY CO, REQUIREMENTS.

3 TYPICAL ELECTRICAL TRENCH DETAIL C-8 Scale: N.T.S.

Cellco Partnership d/b/a Verizon Wireless

verizon<sup>v</sup>

WIRELESS COMMUNICATIONS FACILITY 20 ALEXANDER DRIVE WALLINGFORD, CT 06492

**\$** On Air Engineering, LLC

88 Foundry Pond Road Cold Spring, NY 10516 onair@optonline.net 201-456-4624

LICENSURE



CT LIC. NO. 22144

0 06 24 20 CSC FILING	# T
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DRAWN BY CHECKED

MF DW

NEW BUILD MACRO

SITE NAME.

NORWICH 4 CT

PROJECT INFORMATION:

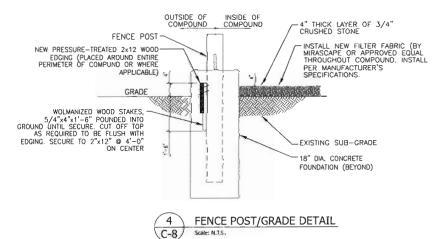
110 YANTIC LANE NORWICH, CT 06360

DRAWING TITE

SITE DETAILS

SHEET NUMBER.

C-8



# **CERTIFICATION OF SERVICE**

I hereby certify that on this graded day of July 2020, copies of the Application and attachments were sent first class mail, postage prepaid, to the following:

# **STATE OFFICIALS:**

The Honorable William Tong Attorney General Office of the Attorney General 165 Capitol Avenue Hartford, CT 06106

James C. Rovella, Commissioner
Department of Emergency Services and Public Protection
Emergency Management and Homeland Security Division
1111 Country Club Road
Middletown, CT 06457

Katie Dykes, Commissioner Department of Energy and Environmental Protection 79 Elm Street Hartford, CT 06106

Deidre S Gifford, M.D., M.P.H., Acting Commissioner Department of Public Health 410 Capitol Avenue P.O. Box 340308 Hartford, CT 06134-0308

Susan D. Merrow, Chair Council on Environmental Quality 79 Elm Street P.O. Box 5066 Hartford, CT 06106

Marissa Paslick Gillett, Chair Public Utilities Regulatory Authority Ten Franklin Square New Britain, CT 06051

Melissa McCaw, Secretary Office of Policy and Management 450 Capitol Avenue Hartford, CT 06106 David Lehman, Commissioner
Department of Economic and Community Development
450 Columbus Boulevard
Hartford, CT 06103

Joseph Giulietti, Commissioner Department of Transportation P.O. Box 317546 2800 Berlin Turnpike Newington, CT 06131-7546

Mary Dunne, Director of Culture State Historic Preservation Officer Connecticut Commission on Culture & Tourism 450 Columbus Boulevard, Suite 5 Hartford, CT 06103

Bryan P. Hurlburt, Commissioner Department of Agriculture 450 Columbus Boulevard, Suite 701 Hartford, CT 06103

Michelle H. Seagull, Commissioner Department of Consumer Protection 450 Columbus Boulevard, Suite 901 Hartford, CT 06103

Kurt Westby, Commissioner Department of Labor 200 Folly Brook Boulevard Wethersfield, CT 06109

Josh Geballe, Commissioner Department of Administrative Services 450 Columbus Boulevard Hartford, CT 06103

# **NORWICH CITY OFFICIALS:**

Peter A. Nystrom, Mayor City of Norwich 100 Broadway Norwich, CT 06360 The Honorable Cathy Osten Senator – 19<sup>th</sup> District Legislative Office Building Room 3300 300 Capitol Avenue Hartford, CT 06106-1591

The Honorable Emmett D. Riley Representative – 46<sup>th</sup> District Legislative Office Building Room 4114 300 Capitol Avenue Hartford, CT 06106-1591

The Honorable Doug Dubitsky Representative – 47<sup>th</sup> District Legislative Office Building Room 4200 300 Capitol Avenue Hartford, CT 06106-1591

The Honorable Kevin Ryan Representative – 139<sup>th</sup> District Legislative Office Building Room 4108 300 Capitol Avenue Hartford, CT 06106-1591

Betsy Barrett, City Clerk City of Norwich 100 Broadway Norwich, CT 06360

Deanna Rhodes, City Planner City of Norwich 23 Union Street Norwich, CT 06360

Richard Shuck, Zoning Enforcement Officer City of Norwich 23 Union Street Norwich, CT 06360

Frank Manfredi, Chair Commission on the City Plan City of Norwich 23 Union Street Norwich, CT 06360

Richard Morell, Chairman Inland Wetlands, Water Courses & Conservation Commission City of Norwich 23 Union Street Norwich, CT 06360

# **BOZRAH TOWN OFFICIALS:**

Carl L. Zorn, First Selectman Town of Bozrah 1 River Road Bozrah, CT 06334

The Honorable Paul Formica Senator – 20<sup>th</sup> District Legislative Office Building Room 3400 300 Capitol Avenue Hartford, CT 06106

The Honorable Kevin Ryan Representative – 139<sup>th</sup> District Legislative Office Building Room 4108 300 Capitol Avenue Hartford, CT 06106-1591

Lynne A. Skinner, Town Clerk Town of Bozrah 1 River Road Bozrah, CT 06334

Katey DeCarli, PE, Land Use Agent Town of Bozrah 1 River Road Bozrah, CT 06334

Stephen Seder, Chair Planning & Zoning Commission Town of Bozrah 1 River Road Bozrah, CT 06334 Scott Taylor, Chair Inland Wetlands Commission Town of Bozrah 1 River Road Bozrah, CT 06334

# **REGIONAL COUNCIL OF GOVERNMENTS:**

Southeastern Connecticut Council of Governments 5 Connecticut Avenue Norwich, Connecticut 06360-4592

# **FEDERAL AGENCY:**

Federal Communications Commission 445 12<sup>th</sup> Street SW Washington, DC 20554

> Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103

Kun of JM

Telephone: (860) 275-8200

Attorneys for Cellco Partnership d/b/a Verizon Wireless

#### LEGAL NOTICE

Notice is hereby given, pursuant to Section 16-50*l*(b) of the Connecticut General Statutes and Regulations pertaining thereto, of an Application to be submitted to the Connecticut Siting Council ("Council") on or about July 8, 2020, by Cellco Partnership d/b/a Verizon Wireless ("Cellco" or the "Applicant"). The Application proposes the installation of a wireless telecommunications tower and related facility in the eastern portion of an approximately 115 acre parcel at 110 Yantic Lane in Norwich, Connecticut. Cellco proposes to construct a 110-foot monopole tower within a 50' x 50' fenced compound. Access to the facility will extend from Yantic Lane or from Philanne Drive over a portion of an existing gravel driveway to the cell site. Cellco will also install equipment cabinets, a propane-fueled back-up generator and a propane fuel tank within the fenced compound. The location and other features of the proposed facility are subject to change under provisions of Connecticut General Statutes § 16-50g et. seq.

On the day of the Siting Council public hearing on this proposal, Cellco may be asked to fly a balloon at the height of the proposed tower described above. Interested parties and residents of the City of Norwich are invited to review the Application during normal business hours at any of the following offices or electronically at <a href="https://www.ct.gov/csc">www.ct.gov/csc</a>:

Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Norwich Mayor Norwich City Hall 100 Broadway

Norwich, CT 06360

Cellco Partnership d/b/a Verizon Wireless

20 Alexander Drive Wallingford, CT 06492 Attn: Andrew Candiello

Norwich City Clerk Norwich City Hall 100 Broadway Norwich, CT 06360 or the offices of the undersigned. All inquiries should be addressed to the Connecticut Siting Council or to the undersigned.

CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS

Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103-3597 (860) 275-8200 Its Attorneys

KENNETH C. BALDWIN

280 Trumbull Street Hartford, CT 06103-3597 Main (860) 275-8200 Fax (860) 275-8299 kbaldwin@rc.com Direct (860) 275-8345

Also admitted in Massachusetts and New York

July 2, 2020

# Via Certified Mail Return Receipt Requested

«Name and Address»

Re: Cellco Partnership d/b/a Verizon Wireless – Proposed Telecommunications Facility at 110 Yantic Lane, Norwich, Connecticut

Dear «Salutation»:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") will be submitting an application to the Connecticut Siting Council ("Council") on or about July 8, 2020, for the construction of a new telecommunications facility in the City of Norwich, Connecticut.

The proposed facility would consist of a new 110-foot monopole tower in the eastern portion of a 115-acre parcel at 110 Yantic Lane in Norwich (the "Property"). The tower, radio equipment, a backup generator and a propane fuel tank will be installed within a 50' x 50' fenced facility compound. Access to the facility would extend from either Yantic Lane or Philanne Drive along existing gravel access driveways. Site plan drawings for the proposed facility are attached for your review. The location and other features of the proposed facility, including tower height, are subject to change under the provisions of Connecticut General Statutes § 16-50g et seq. and 47 U.S.C. § 1455e.

State law provides that owners of record of property which abuts a parcel on which a facility is proposed to be located must receive notice of the submission of this application. This notice is directed to you either because you may be an abutting land owner or as a courtesy notice.

July 2, 2020 Page 2

If you have any questions concerning the application, please direct them to either the Connecticut Siting Council or me. My address and telephone number are listed above. The Siting Council may be reached at its New Britain, Connecticut office at (860) 827-2935.

Very truly yours,

Kenneth C. Baldwin

Kunie mu

KCB/kmd Attachment

# **ADJACENT PROPERTY OWNERS**

SITE NAME: NORWICH 4

OWNER NAME: ROBERT W. LARSEN

PROPERTY ADDRESS: 110 YANTIC LANE NORWICH, CT

PARCEL IDENTIFICATION: 065-002-001

THE FOLLOWING INFORMATION WAS COLLECTED FROM THE CITY'S ONLINE GIS

AND TAX ASSESSOR'S RECORDS ON JUNE 24, 2020.

THE PARCEL IS ZONED RESIDENCE-80

	Property Address	Owner and Mailing Address
1.	86 Yantic Lane	Jeffrey M. McIntyre 86 Yantic Lane Norwich, CT 06360
2.	80 Yantic Lane	Edward G. and Sanea Morrison 80 Yantic Lane Norwich, CT 06360
3.	74 Yantic Lane	Kyle Shirk 74 Yantic Lane Norwich, CT 06360
4.	Yantic Lane (Rear)	Connecticut Department of Transportation 2800 Berlin Turnpike Newington, CT 06111
5.	51 Lornadale Drive	Edmund and Gail Roderick, Jr. 51 Lornadale Drive Norwich, CT 06360
6.	44 Bayberry Hill Road	Janet Stone 44 Bayberry Hill Road Norwich, CT 06360
7.	48 Bayberry Hill Road	Anna Alfiero 48 Bayberry Hill Road Norwich, CT 06360

	Property Address	Owner and Mailing Address
8.	10 Fruitwood Drive	Robert and Constance Labrie 10 Fruitwood Drive Norwich, CT 06360
9.	8 Fruitwood Drive	Arjune Somaroo 8 Fruitwood Drive Norwich, CT 06360
10.	6 Fruitwood Drive	James E. Salls 6 Fruitwood Drive Norwich, CT 06360
11.	2 Fruitwood Drive	Matthew W. LaFlash 2 Fruitwood Drive Norwich, CT 06360
12.	34 Beechwood Boulevard	Raymond A. Lathrop 34 Beechwood Boulevard Norwich, CT 06360
13.	132 Yantic Lane	Ronald and Nora Brine 132 Yantic Lane Norwich, CT 06360
14.	114 Yantic Lane	Paul B. Oneal 114 Yantic Lane Norwich, CT 06360
15.	109 Yantic Lane	Donald and Patricia Exley 109 Yantic Lane Norwich, CT 06360
16.	105 Yantic Lane	Jeffrey and Janet Heck 105 Yantic Lane Norwich, CT 06360
17.	101 Yantic Lane	Michael J. Beck 101 Yantic Lane Norwich, CT 06360
18.	95 Yantic Lane	Stephen and Brooke Chesney 95 Yantic Lane Norwich, CT 06360

	Property Address	Owner and Mailing Address
19.	87 Yantic Lane	Estate of Venkata R. Appadwedula 87 Yantic Lane Norwich, CT 06360

# **CERTIFICATION OF SERVICE**

I hereby certify that a copy of the foregoing letter was sent by certified mail, return receipt requested, to each of the parties on the attached list of abutting landowners.

July 2, 2020

Date

Kenneth C. Baldwin, Esq.

Robinson & Cole LLP 280 Trumbull Street

Hartford, CT 06103

Attorneys for Cellco Partnership d/b/a Verizon Wireless

#### REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



# Federal Communications Commission Wireless Telecommunications Bureau

# RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

WQJQ689				
Radio Service WU - 700 MHz Upper Band (Block C)				

FCC Registration Number (FRN): 0003290673

<b>Grant Date</b> 09-11-2019	Effective Date 09-11-2019	Expiration Date 06-13-2029	<b>Print Date</b> 09-13-2019	
Market Number REA001	Channe C	l Block	Sub-Market Designate	or 

Market Name	
war ket Panie	
Northeast	

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
06-13-2013	06-13-2019		

#### Waivers/Conditions:

If the facilities authorized herein are used to provide broadcast operations, whether exclusively or in combination with other services, the licensee must seek renewal of the license either within eight years from the commencement of the broadcast service or within the term of the license had the broadcast service not been provided, whichever period is shorter in length. See 47 CFR §27.13(b).

This authorization is conditioned upon compliance with section 27.16 of the Commission's rules

#### **Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: CELLCO PARTNERSHIP

Call Sign: WQJQ689 File Number: 0008587211 Print Date: 09-13-2019

700 MHz Relicensed Area Information:

Market Market Name Buildout Deadline Buildout Notification Status

#### REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



# Federal Communications Commission Wireless Telecommunications Bureau

#### RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY CELLCO PARTNERSHIP 5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING ALPHARETTA, GA 30022

Call Sign	File Number				
KNKA745	0007969808				
	Radio Service CL - Cellular				
Market Numer	Channel Block				
CMA154	A				
Sub-Market Designator					

FCC Registration Number (FRN): 0003290673

Market Name

New London-Norwich, CT

		Si desirati		
<b>Grant Date</b> 02-02-2018	Effective Date 02-02-2018	Expiration Date 01-22-2028	Five Yr Build-Out Date	<b>Print Date</b> 02-03-2018

#### **Site Information:**

LocationLatitudeLongitudeGround Elevation (meters)Structure Hgt to Tip (meters)Antenna Structure Registration No.141-27-39.4 N071-55-44.3 W134.1107.61044706

Address: STORER GEOTON CATV FACILITY OFF WINTECHOG HILL RD.

City: NORTH STONINGTON County: NEW LONDON State: CT Construction Deadline:

Antenna: 4 Maximum Transmitting ERP in Watts:	140.820				1.4.10			
Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts)	0 110.700 0.200	<b>45</b> 63.600 1.450	90 125.900 24.550	135 157.100 91.200	180 154.600 72.440	225 132.800 12.020	<b>270</b> 129.400 0.500	315 125.800 0.200
Antenna: 5 Maximum Transmitting ERP in Watts: Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 6	140.820 0 110.700 4.790	<b>45</b> 63.600 0.200	<b>90</b> 125.900 0.200	135 157.100 0.200	<b>180</b> 154.600 4.170	225 132.800 44.670	<b>270</b> 129.400 100.000	<b>315</b> 125.800 47.860
Maximum Transmitting ERP in Watts: Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts)	140.820 0 110.700 69.180	<b>45</b> 63.600 93.330	90 125.900 26.300	135 157.100 1.660	180 154.600 0.200	<b>225</b> 132.800 0.200	270 129.400 0.520	<b>315</b> 125.800 10.960

#### **Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKA745 File Number: 0007969808 Print Date: 02-03-2018

	J. M. W.	194								
Location	Latitude	Loi	ngitude		round Elev eters)		ructure Hg ieters)	t to Tip	Antenna St Registratio	
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Transmittin	ng ERP (watts		0.100	0.650	11.540	36.480	30.340	5.780	0.160	0.100
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	nuth(from true)		0	45	90	135	180	225	270	315
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	Transmitting	ERP in Wat	ts: 140.820	~17.43°E						
Azim	nuth(from true	north)	0	45	90	135	180	225	270	315
	eight AAT (mo ng ERP (watts		73.600	120.600	131.000	106.700	115.800	125.100	119.700	105.000
A I MINGHILLECTI	HE WALK I THEFTO									
		<u> </u>	28.980	37.330	12.080	0.680	0.100	0.100	0.150	5.520
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Address: A City: EAS  Antenna: 7 Maximum Azim Antenna He Transmittit Antenna: 8 Maximum Azim Azim Antenna He Transmittit Antenna: 9 Maximum	41-20-08.4 N Approximately T LYME C  Transmitting the from true of the companies of the com	Lor 072 y 0.7 mile S County: NE  ERP in Waters)  ERP in Waters)  ERP in Waters)  ERP in Waters)	ngitude 2-13-18.3 W Southeast of E W LONDON ts: 140.820 0 41.000 79.430 ts: 140.820 0 0.200 ts: 140.820	Gi (m 51 xit #73 on State: 0 45 56.000 93.330 45 56.000 5.210	90 86.100 25.540	ation Str (m 50 truction D 135 96.000 4.570 135 96.000 25.270	ructure Hg neters) .0  leadline:  180 95.700 0.200  180 95.700 27.850	225 90.000 0.200 225 90.000 17.540	270 71.700 2.140  270 71.700 1.420	315 51.200 19.050 315 51.200 0.200
Address: A City: EAS  Antenna: 7 Maximum Azim Antenna: 8 Maximum Azim Antenna: 9 Maximum Azim Antenna He Transmittii Antenna: 9 Maximum Azim Antenna: He Azim Antenna He Azim Antenna He	41-20-08.4 N Approximately T LYME C  Transmitting south (from true reight AAT (mong ERP (watts) Transmitting south (from true reight AAT (mong ERP (watts) Transmitting south (from true reight AAT (mong ERP (watts)	Lor 072 y 0.7 mile S County: NE  ERP in Waters)  ERP in Waters)  ERP in Waters)  ERP in Waters)  ERP in Waters)	2-13-18.3 W Southeast of E W LONDON ts: 140.820 0 41.000 79.430 ts: 140.820 0 41.000 0.200	Gi (m) 51 2xit #73 on State: 0 45 56.000 93.330	round Elevieters) .8 1-95 CT Cons  90 86.100 36.310  90 86.100	ation Str (m 50 truction D 135 96.000 4.570	ructure Hg neters) .0  leadline:  180 95.700 0.200  180 95.700	225 90.000 0.200 225 90.000	270 71.700 2.140  270 71.700	315 51.200 19.050

Licensee Name: CELLCO PARTNERSHIP

**Call Sign:** KNKA745 File Number: 0007969808 Print Date: 02-03-2018

File Number: 0007969808		Pı	int Date	e: 02-03-2018			
Longitude	(m	eters)	on	(meters)	to Tip	Antenna S Registratio	
	51	.5		45.7		1014221	
POINT ROAD							
EW LONDON S	tate: CT	Construction	on D	eadline:			
Wotter 140 820							
0	45			180	225	270	315
25.700 2.140	44.300 19.050				94.700 4.570	77.000 0.210	52.600 0.200
Watts: 140.820							
0	45			180	225	270	315
1.950	0.200			93.500 35.480	94.700 95.500	77.000 79.430	52.600 19.500
Watts: 140.820	772						
0 25.700 100.000	<b>45</b> 44.300 57.540	89.800 84	4.000	180 93.500 0.200	94.700 0.760	<b>270</b> 77.000 9.770	<b>315</b> 52.600 57.540
Longitude	,875 E.B	532	on	Structure Hgt	to Tip	Antenna S Registratio	
072-11-56.2 W	10	8.8		55.5			
	6			_			
W LONDON S	tate: CT	Construction	n D	eadline:			
		43.5 \$ \$ 5 4s					
	Longitude  072-00-34.8 W POINT ROAD EW LONDON S  Watts: 140.820 0 25.700 2.140  Watts: 140.820 0 25.700 1.950  Watts: 140.820 0 1.950  Longitude  072-11-56.2 W	Longitude (m 072-00-34.8 W 51 POINT ROAD WE LONDON State: CT  Watts: 140.820 0 45 25.700 44.300 2.140 19.050  Watts: 140.820 0 45 25.700 44.300 1.950 0.200  Watts: 140.820 0 45 25.700 44.300 1.950 0.200  Longitude Gr 072-11-56.2 W 10	Longitude Ground Elevation (meters)  072-00-34.8 W 51.5  POINT ROAD  EW LONDON State: CT Construction  Watts: 140.820  0 45 90 1 25.700 44.300 89.900 8 2.140 19.050 79.430 9  Watts: 140.820  0 45 90 1 25.700 44.300 89.800 8 1.950 0.200 0.200 5  Watts: 140.820  0 45 90 1 25.700 44.300 89.800 8 1.950 0.200 0.200 5  Watts: 140.820  0 45 90 1 25.700 44.300 89.800 8 100.000 57.540 9.770 0  Longitude Ground Elevation  072-11-56.2 W 108.8	Longitude         Ground Elevation (meters)           072-00-34.8 W         51.5           POINT ROAD         State: CT Construction D           3W LONDON State: CT Construction D         Construction D           Watts: 140.820         90 135           25.700 44.300 89.900 84.000         2.140 19.050 79.430 93.330           Watts: 140.820         90 135           25.700 44.300 89.800 84.000         1.950 0.200 0.200 5.620           Watts: 140.820         45 90 135           25.700 44.300 89.800 84.000         25.700 84.300 89.800 84.000           100.000 57.540 9.770 0.810           Longitude         Ground Elevation (meters)           072-11-56.2 W         108.8	Longitude         Ground Elevation (meters)         Structure Hgt (meters)           072-00-34.8 W         51.5         45.7           POINT ROAD         State: CT   Construction Deadline:           Watts: 140.820         0         45         90         135         180           25.700   44.300   89.900   84.000   93.500         2.140   19.050   79.430   93.330   36.310           Watts: 140.820         0         45         90   135   180           25.700   44.300   89.800   84.000   93.500   1.950   0.200   0.200   5.620   35.480           Watts: 140.820         0         45   90   135   180           25.700   44.300   89.800   84.000   93.500   100.000   57.540   9.770   0.810   0.200           Longitude         Ground Elevation (meters)         Structure Hgt (meters)           072-11-56.2 W         108.8         55.5	Longitude         Ground Elevation (meters)         Structure Hgt to Tip (meters)           072-00-34.8 W         51.5         45.7           POINT ROAD         Watts: 140.820           Watts: 140.820         Watts: 140.820           0         45         90         135         180         225           25.700         44.300         89.900         84.000         93.500         94.700           2.140         19.050         79.430         93.330         36.310         4.570           Watts: 140.820         0         45         90         135         180         225           25.700         44.300         89.800         84.000         93.500         94.700           1.950         0.200         0.200         5.620         35.480         95.500           Watts: 140.820         45         90         135         180         225           25.700         44.300         89.800         84.000         93.500         94.700           100.000         57.540         9.770         0.810         0.200         0.760           Longitude         Ground Elevation (meters)         Structure Hgt to Tip (meters)	Longitude         Ground Elevation (meters)         Structure Hgt to Tip (meters)         Antenna S Registration           072-00-34.8 W         51.5         45.7         1014221           POINT ROAD         3W LONDON         State: CT Construction Deadline:           Watts: 140.820           0         45         90         135         180         225         270           25.700         44.300         89.900         84.000         93.500         94.700         77.000           2.140         19.050         79.430         93.330         36.310         4.570         0.210           Watts: 140.820           0         45         90         135         180         225         270           25.700         44.300         89.800         84.000         93.500         94.700         77.000           1.950         0.200         0.200         5.620         35.480         95.500         79.430           Watts: 140.820           0         45         90         135         180         225         270           25.700         44.300         89.800         84.000         93.500         94.700         77.000

Antenna: 1								
<b>Maximum Transmitting ERP in Watts:</b>	140.820			199				
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	39.400	60.400	75.500	104.000	22,600	12.000	30.600	-12.000
Transmitting ERP (watts) Antenna: 2	67.610	91.200	23.440	0.810	0.200	0.200	0.200	9.330
Maximum Transmitting ERP in Watts:	140.820			al Time				
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	39.400	60.400	75.500	104.000	22,600	12.000	30.600	-12.000
Transmitting ERP (watts) Antenna: 3	0.200	0.760	22.390	91.200	69.180	9.550	0.200	0.200
Maximum Transmitting ERP in Watts:	140.820					4. A.		
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	39.400	60.400	75.500	104.000	22.600	12.000	30,600	-12.000
Transmitting ERP (watts)	3.310	0.200	0.200	0.200	3.240	42.660	97.720	45.710

# **Control Points:**

Control Pt. No. 1

Address: 500 West Dove Rd.

City: Southlake County: TARRANT State: TX Telephone Number: (800)264-6620

ll Sign: KNKA745	File Number: 0007969808	<b>Print Date:</b> 02-03-2018
aivers/Conditions:		
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8s.		
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Page 4 of 4

FCC 601-C

March 2018

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# Federal Communications Commission

#### **Wireless Telecommunications Bureau**

#### RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY CELLCO PARTNERSHIP 5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING ALPHARETTA, GA 30022

<b>Call Sign</b> WREE836	File Number					
	Radio Service					
UU - Upper Microwave Flexible Use Service						

FCC Registration Number (FRN): 0003290673

<b>Grant Date</b> 10-02-2019	Effective Date 10-02-2019	Expiration Date 10-02-2029	Print Date
Market Number C09011	Channe L	el Block 2	Sub-Market Designator
· · · · · · · · · · · · · · · · · · ·	Market NEW LON		
1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

#### Waivers/Conditions:

NONE

#### **Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Sign: WREE836	File N	Number:	Print Date:	
MHz Relicensed A	Area Information:			
rket	Market Name	Buildout Deadline	Buildout Notification	Status

Page 2 of 2

October 2017

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# **Federal Communications Commission**

#### **Wireless Telecommunications Bureau**

#### RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY CELLCO PARTNERSHIP

5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING

ALPHARETTA, GA 30022

<b>Call Sign</b> WQDU931	File Number
Radio	Service
CW - PCS	Broadband

FCC Registration Number (FRN): 0003290673

Grant Date         Effective Date           10-08-2015         11-01-2016	Expiration Date 11-04-2025	Print Date
---	-------------------------------	------------

Market Number	Channel Block	Sub-Market Designator
BTA319	C	7

Market Name	Market Name	
New London-Norwig	ch, Cl	

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
11-04-2010			

#### Waivers/Conditions:

NONE

#### **Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Call Sign: WQDU931 File Number: Print Date:

700 MHz Relicensed Area Information:

Market Market Name Buildout Deadline Buildout Notification Status

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# **Federal Communications Commission**

#### Wireless Telecommunications Bureau

#### RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

<b>Call Sign</b> KNLH263	<b>File Number</b> 0007716973			
Radio Service CW - PCS Broadband				

FCC Registration Number (FRN): 0003290673

<b>Grant Date</b> 06-02-2017	Effective Date 06-02-2017 Expiration Date 06-27-2027		Print Date 06-06-2017	
Market Number BTA319	Channe F	l Block	Sub-Market Designator	
	Market I New London-N	orwich, CT		
st Build-out Date 06-27-2002	2nd Build-out Date	3rd Build-out Date	4th Build-out Date	

#### Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

This authorization is conditioned upon the full and timely payment of all monies due pursuant to Sections 1.2110 and 24.716 of the Commission's Rules and the terms of the Commission's installment plan as set forth in the Note and Security Agreement executed by the licensee. Failure to comply with this condition will result in the automatic cancellation of this authorization.

#### Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNLH263 File Number: 0007716973 Print Date: 06-06-2017

700 MHz Relicensed Area Information:

Market Market Name Buildout Deadline Buildout Notification Status

#### REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



## **Federal Communications Commission**

Wireless Telecommunications Bureau

#### RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING

ALPHARETTA, GA 30022

File Number
Service 0-1755 MHz and 55 MHz)

Call Cian

FCC Registration Number (FRN): 0003290673

<b>Grant Date</b> 12-18-2006	Effective Date 01-06-2017	Expiration Date 12-18-2021	Print Date
Market Number CMA154	Channe A	el Block	Sub-Market Designator
	Market New London-N		
t Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

#### Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006

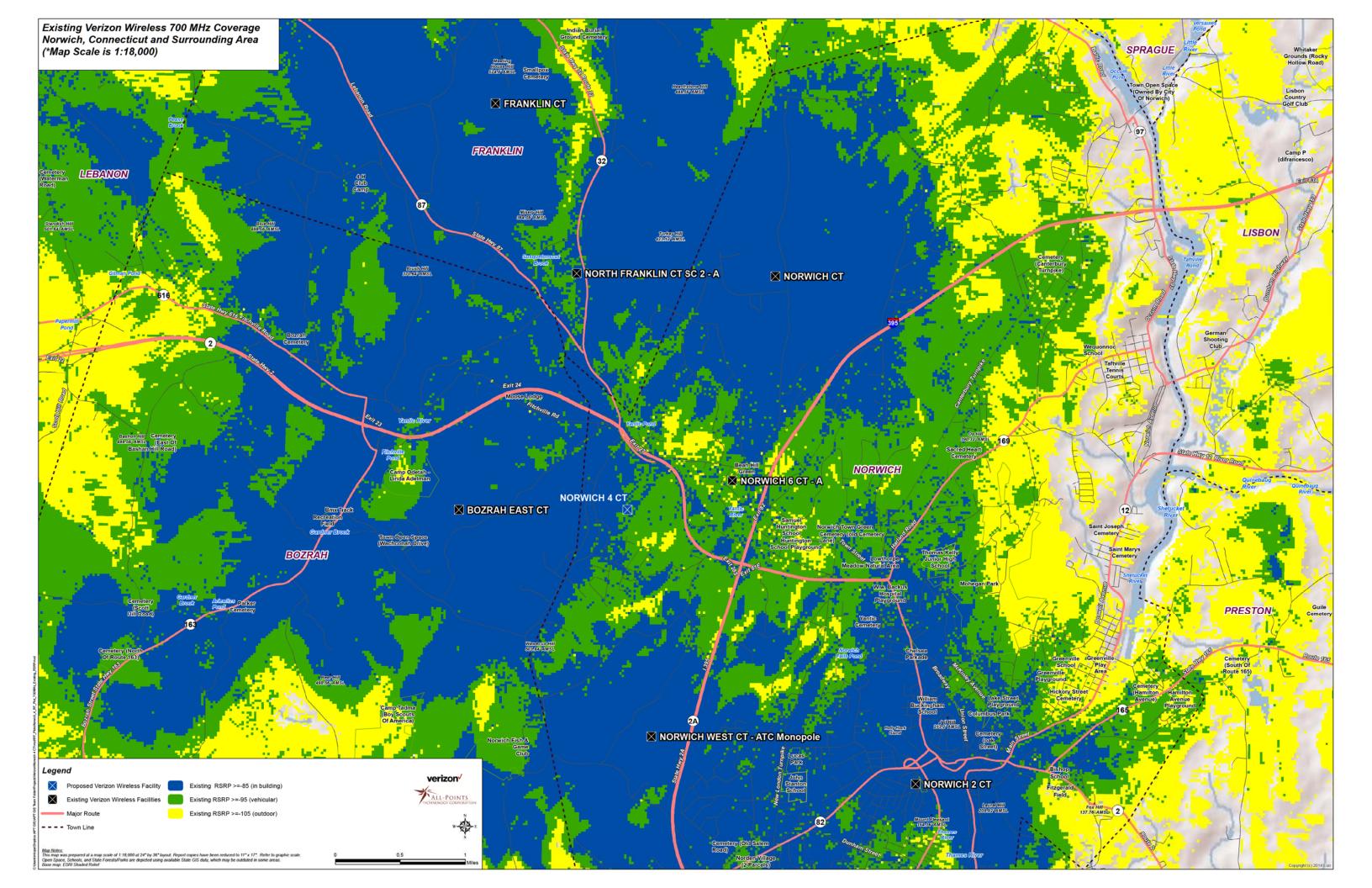
Grant of the request to update licensee name is conditioned on it not reflecting an assignment or transfer of control (see Rule 1.948); if an assignment or transfer occurred without proper notification or FCC approval, the grant is void and the station is licensed under the prior name.

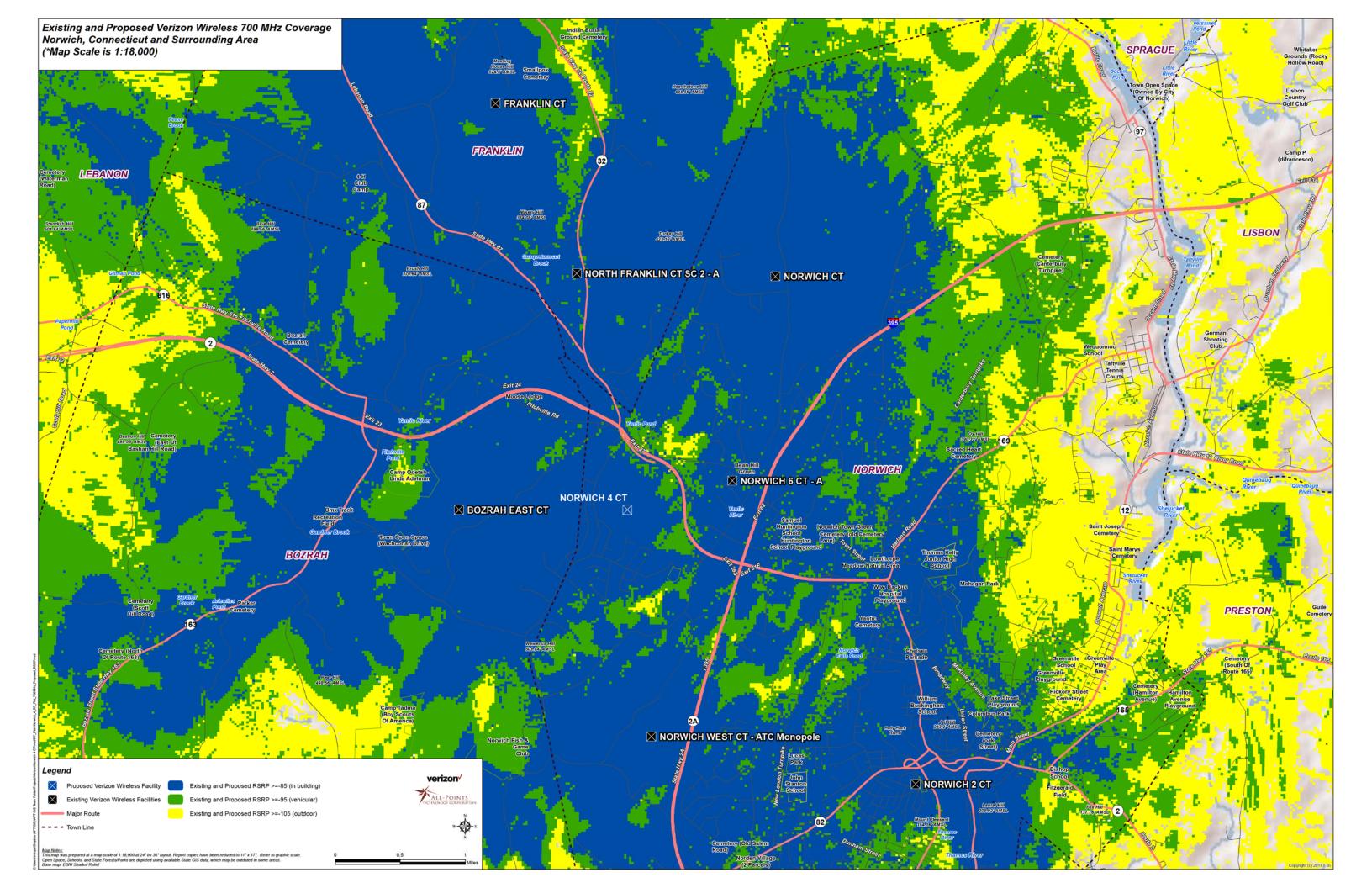
#### **Conditions:**

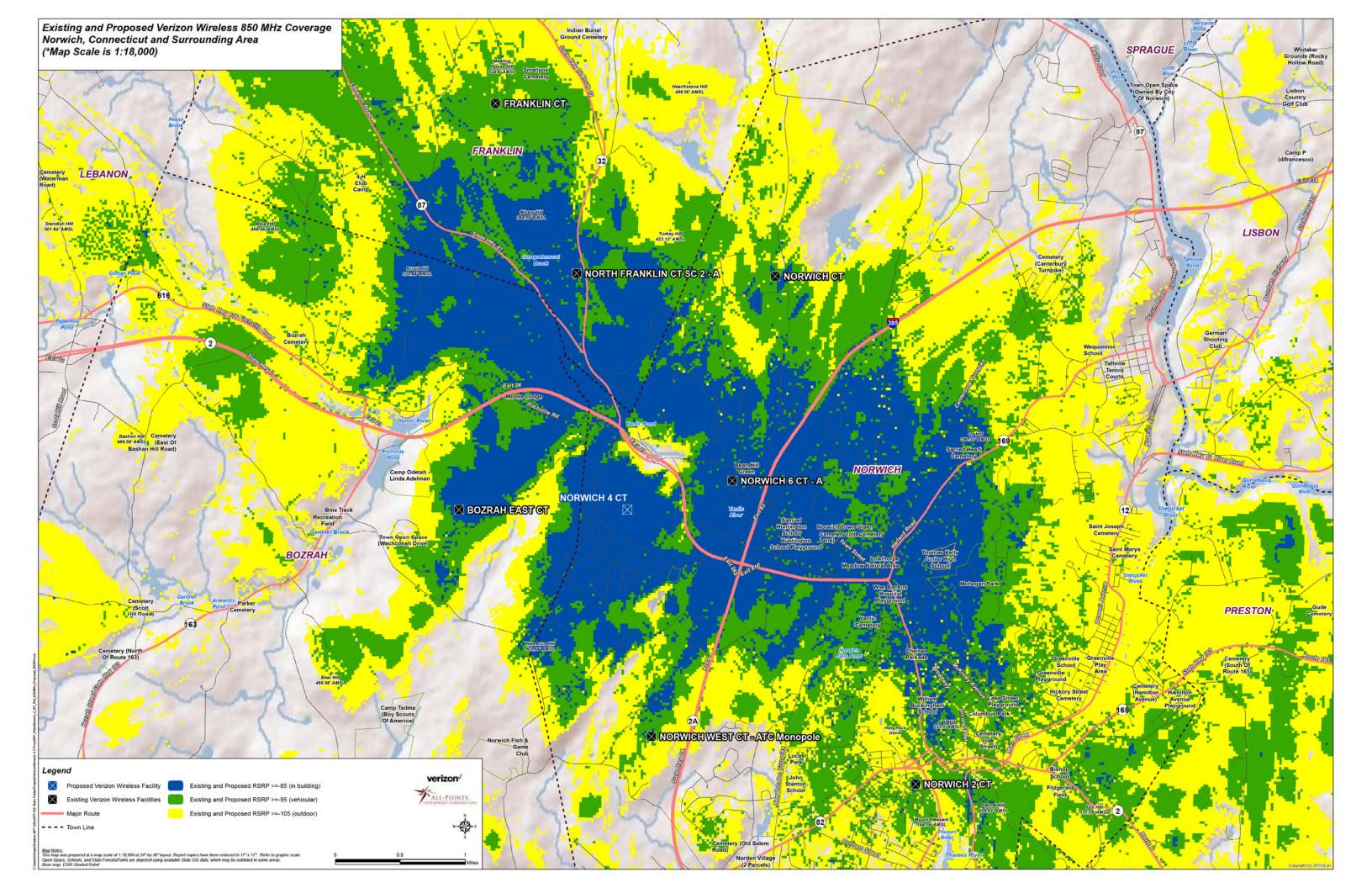
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

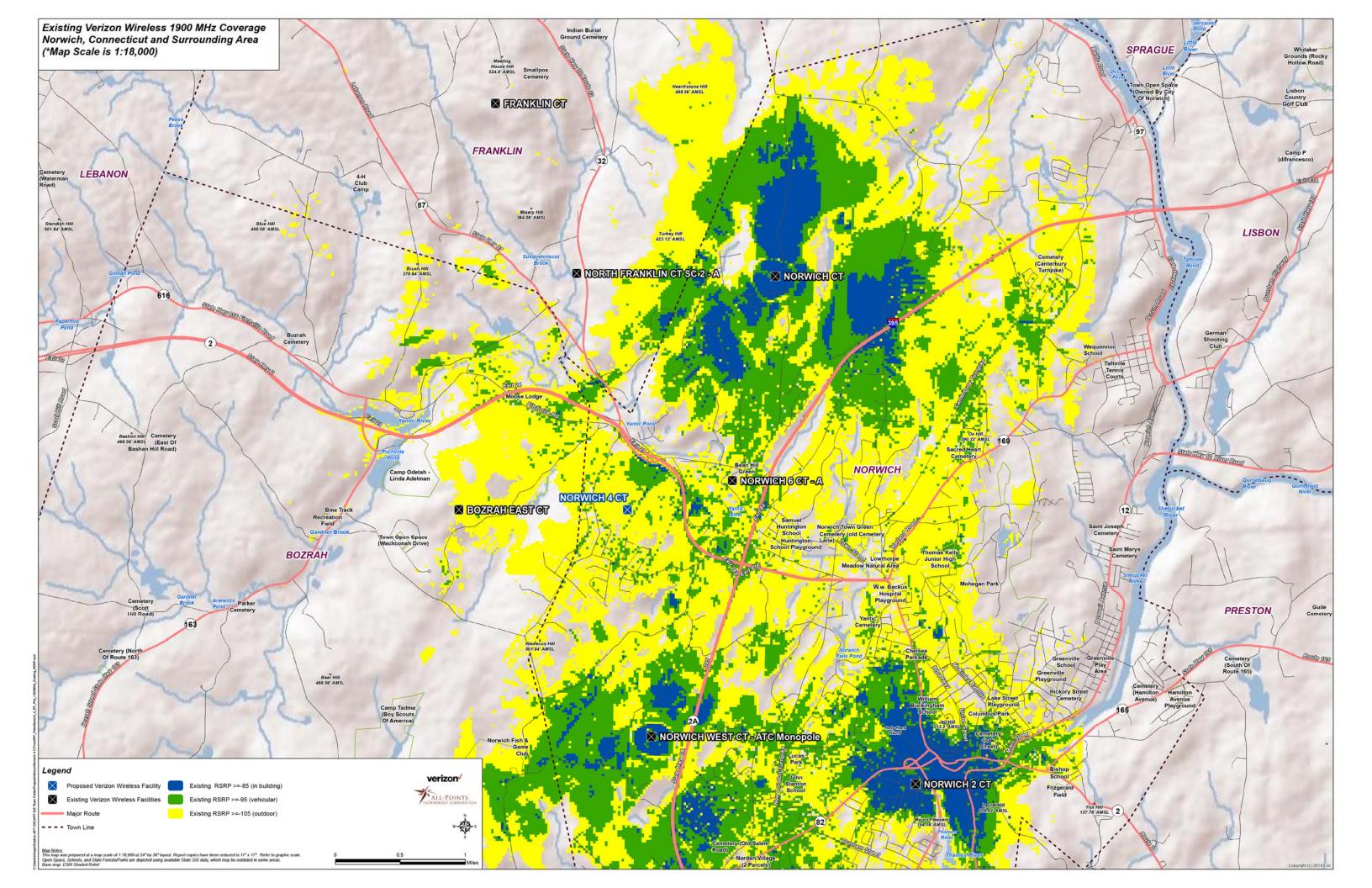
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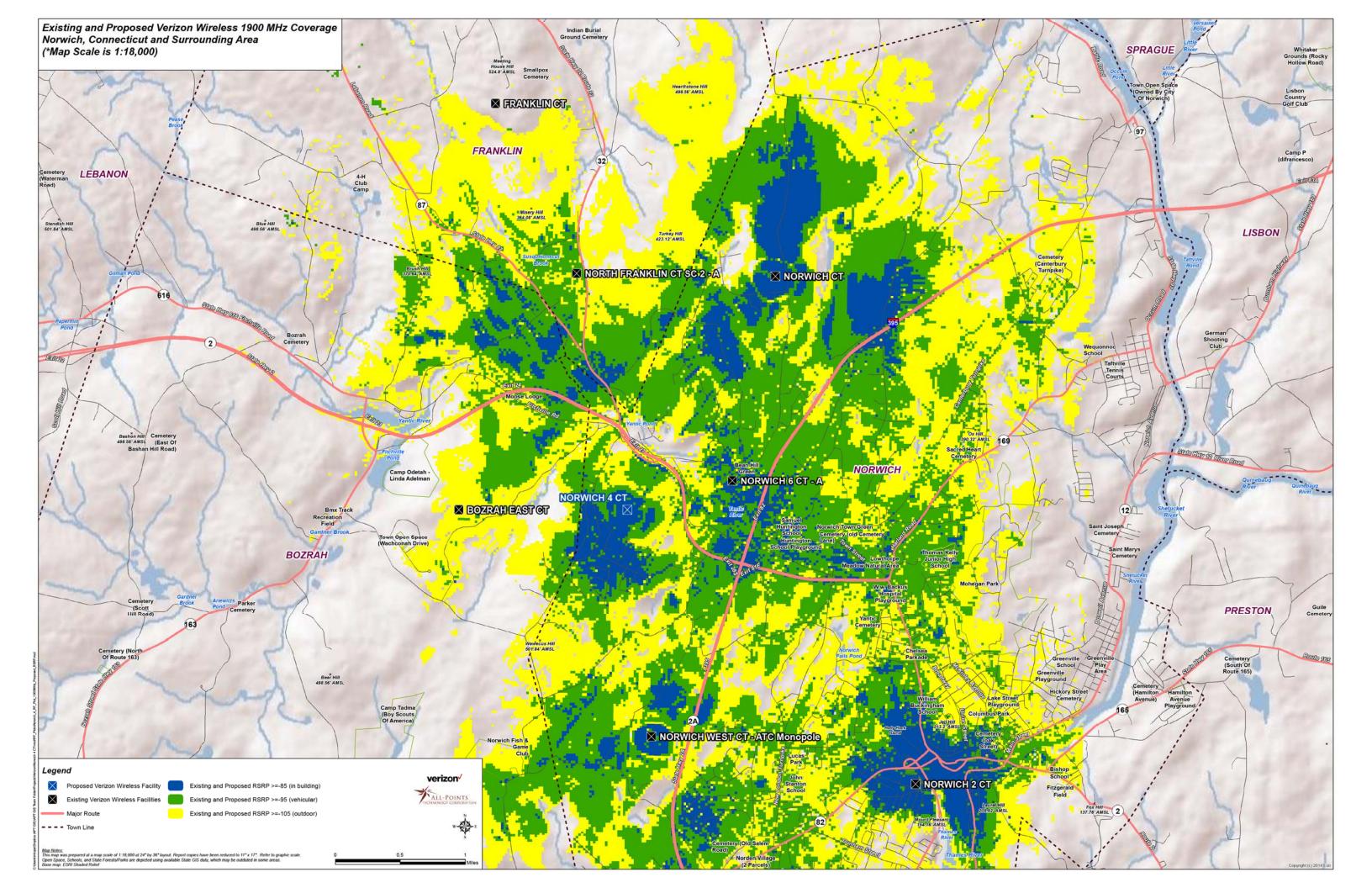
all Sign: WQGD494	File N	umber:	Print Date:	
00 MHz Relicensed Are	ea Information:			
larket )	Market Name	Buildout Deadline	Buildout Notification	Status
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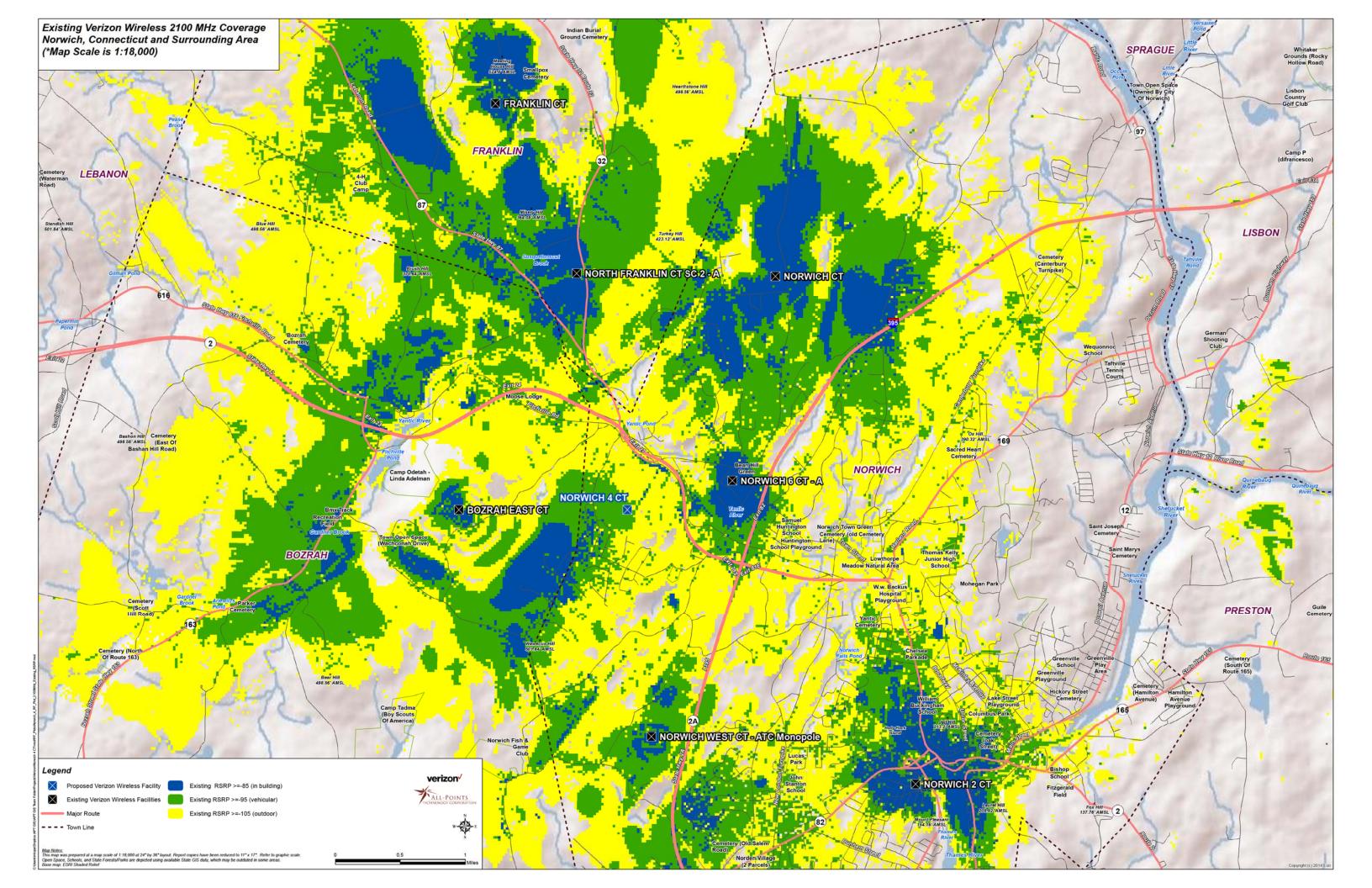


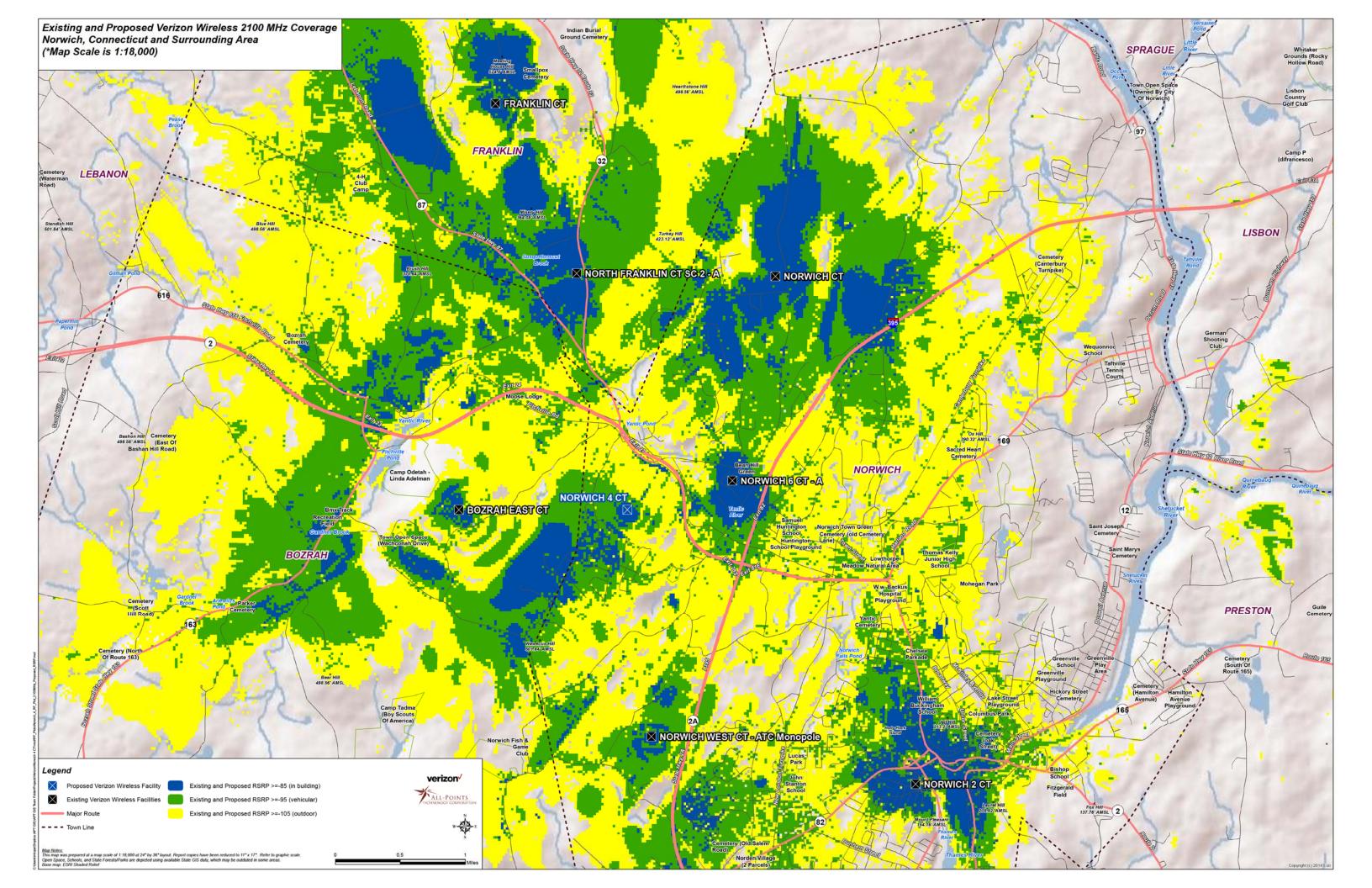














8-port sector antenna, 2x 698–787, 2x 824-894 and 4x 1695–2360 MHz, 65° HPBW, 3x RET and low bands have diplexers. Internal SBT's on first LB(Port 1) and first HB(Port 5).

- Internal SBT on low and high band allow remote RET control from the radio over the RF jumper cable
- One RET for 700MHz, one RET for 850MHz, and one RET for both high bands to ensure same tilt level for 4x Rx or 4x MIMO
- Internal filter on low band and interleaved dipole technology providing for attractive, low wind load mechanical package
- Separate RS-485 RET input/output for low and high band

# General Specifications

Antenna Type Sector

Band / Multiband
Color Light gray

Effective Projective Area (EPA), frontal 0.28 m<sup>2</sup> | 3.014 ft<sup>2</sup> Effective Projective Area (EPA), lateral 0.24 m<sup>2</sup> | 2.583 ft<sup>2</sup>

Grounding Type RF connector body grounded to reflector and mounting bracket

Performance Note Outdoor usage | Wind loading figures are validated by wind tunnel

measurements described in white paper WP-112534-EN

Radome Material Fiberglass, UV resistant

Radiator Material Aluminum | Low loss circuit board

Reflector Material Aluminum

**RF Connector Interface** 4.3-10 Female

RF Connector Location Bottom

RF Connector Quantity, high band 4
RF Connector Quantity, low band 4

RF Connector Quantity, total

# Remote Electrical Tilt (RET) Information, General

RET Interface 8-pin DIN Female | 8-pin DIN Male

RET Interface, quantity 2 female | 2 male

Dimensions

**Width** 350 mm | 13.78 in

Page 1 of 4

Length

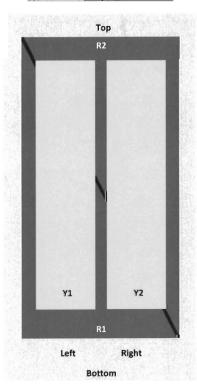
1828 mm | 71.969 in

Depth

208 mm | 8.189 in

# Array Layout

#### JAHH-65A-R3B JAHH-65B-R3B JAHH-65C-R38



Array	Freq (MHz)	Conns	(SRET)	AISG RET UID
RI	698-798	1-2	1	ANIMARIAMANA
R2	824-894	3-4	2	Almanananan
YI	1695-2360	5-6	3	Armmunn
Y2	1695-2360	7-8	1	

View from the front of the antenna (Sizes of colored boxes are not true depictions of array sizes)

# Electrical Specifications

Impedance

50 ohm

**Operating Frequency Band** 

1695 – 2360 MHz | 698 – 787 MHz | 824 – 894 MHz

**Polarization** 

±45°

# Remote Electrical Tilt (RET) Information, Electrical

**Protocol** 

3GPP/AISG 2.0 (Single RET)

Power Consumption, idle state, maximum

2 W

Page 2 of 4



Power Consumption,		conditions	no o vino uno
Power Consumption,	noma	Conditions	maximum

**Input Voltage** 

**Internal Bias Tee** 

**Internal RET** 

13 W

10-30 Vdc

Port 1 | Port 5

High band (1) | Low band (2)

# Electrical Specifications

Frequency Band, MHz	698787	824–894	1695–1880	1850-1990	1920-2200	2300-2360
Gain, dBi	14.5	15.8	18	18.4	18.5	18.8
Beamwidth, Horizontal, degrees	67	65	63	63	65	68
Beamwidth, Vertical, degrees	12.4	10.5	5.7	5.2	4.9	4.4
Beam Tilt, degrees	2–14	2–14	0–10	0–10	0-10	0–10
USLS (First Lobe), dB	18	18	20	20	21	23
Front-to-Back Ratio at 180°, dB	32	34	31	35	36	38
Isolation, Cross Polarization, dB	25	25	25	25	25	25 .
Isolation, Inter-band, dB	30	30	30	30	30	30
VSWR   Return loss, dB	1.5   14.0	1.5   14.0	1.5   14.0	1.5   14.0	1.5   14.0	1.5   14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port at 50° C, maximum, watts	200	200	300	300	300	250

# Electrical Specifications, BASTA

60

Page 3 of 4



CPR at Sector, dB	11	12	11	11	11	8
Mochanical Specif	ications					

# Mechanical Specifications

 Wind Loading at Velocity, frontal
 301.0 N @ 150 km/h
 67.7 lbf @ 150 km/h

 Wind Loading at Velocity, lateral
 254.0 N @ 150 km/h
 57.1 lbf @ 150 km/h

 Wind Loading at Velocity, maximum
 143.4 lbf @ 150 km/h
 638.0 N @ 150 km/h

Wind Speed, maximum 241 km/h | 149.75 mph

# Packaging and Weights

 Width, packed
 456 mm | 17.953 in

 Depth, packed
 357 mm | 14.055 in

 Length, packed
 1975 mm | 77.756 in

 Net Weight, without mounting kit
 29.2 kg | 64.375 lb

 Weight, gross
 42.5 kg | 93.696 lb

# Regulatory Compliance/Certifications

Agency	Classifica	tion
regulatory	Combilances	Certifications

CHINA-ROHS Above maximum concentration value

ISO 9001:2015 Designed, manufactured and/or distributed under this quality management system

ROHS Compliant/Exempted



## Included Products

BSAMNT- \_\_\_ 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

Performance Note Severe environmental conditions may degrade optimum performance



Page 4 of 4

# **SAMSUNG**

# Dual-Band Radio Unit AWS/PCS (B66/B2)

RFV01U-D1A

Samsung's RFV01U-D1A is a compact remote Radio Unit (RU) designed for deployments that require flexibility in installation and rapid onlining, without compromising on coverage, capacity or operational expenses.



The RFV01U-D1A RU targets dual-band support across Band 66 (AWS) and Band 2 (PCS), making it an ideal product for broad coverage footprints across multiple common mid-range frequencies.

The RU handles all Radio Frequency (RF) processing in a single, compact unit, and is designed to interface via CPRI with Samsung's CDU baseband offerings, in both distributed-and central-RAN configurations.

In addition to its minimal footprint and ease of installation, the RU is also designed to reduce cost of ownership through its integrated spectrum analyzer, which allows for remote RF monitoring, greatly reducing the need for on-site maintenance visits.

#### Features and Benefits

- Dual-band support for broad frequency coverage
- Minimal footprint reduces site costs
- Rapid, easy installation
- Flexibly deployable in any location
- Remote RF monitoring capability
- Convection cooled, silent operation
- Built-in Broadcast Auxiliary Services (BAS) filter ensures compliant AWS operation without impacting footprint

### Key Technical Specifications

Duplex Type: FDD Operating Frequencies:

B66: DL(2,110-2,180MHz)/UL(1,710-1,780MHz) B2: DL(1,930-1,990MHz)/UL(1,850-1,910MHz)

Instantaneous Bandwidth:

70MHz(B66) + 60MHz(B2)

RF Chain: 4T4R/2T4R/2T2R

Output Power: Total 320W

DU-RU Interface: CPRI (10Gbps)

Dimensions: 380 x 380 x 255mm (36.8L)

Weight: 38.3kg

Input Power: -48V DC

Operating Temp.: -40 - 55°(w/o solar load)

Cooling: Natural convection

# SAMSUNG

# Dual-Band Radio Unit 700/850MHz (B13/B5)

RFV01U-D2A

Samsung's RFV01U-D2A is a compact remote Radio Unit (RU) designed for deployments that require flexibility in installation and rapid onlining, without compromising on coverage, capacity or operational expenses.



The RFV01U-D2A RU targets dual-band support across Band 13 (700MHz) and Band 5 (850MHz), making it an ideal product for broad coverage footprints across multiple common low-end, long-range frequencies.

The RU handles all Radio Frequency (RF) processing in a single, compact unit, and is designed to interface via CPRI with Samsung's CDU baseband offerings, in both distributed-and central-RAN configurations.

In addition to its minimal footprint and ease of installation, the RU is also designed to reduce cost of ownership through its integrated spectrum analyzer, which allows for remote RF monitoring, greatly reducing the need for on-site maintenance visits.

#### Features and Benefits

- Dual-band support for broad frequency coverage
- · Minimal footprint reduces site costs
- Rapid, easy installation
- Flexibly deployable in any location
- Remote RF monitoring capability
- · Convection cooled, silent operation

Key Technical Specifications

Duplex Type: FDD Operating Frequencies:

B13: DL(746-756MHz)/UL(777-787MHz) B5: DL(869-894MHz)/UL(824-849MHz) Instantaneous Bandwidth: 10MHz(B13) + 25MHz(B5)

RF Chain: 4T4R/2T4R/2T2R Output Power: Total 320W DU-RU Interface: CPRI (10Gbps) Dimensions: 380 x 380 x 207mm (29.9L)

Weight: 31.9kg

Input Power: -48V DC

Operating Temp.: -40 - 55°(w/o solar load)

Cooling: Natural convection

# QT025A | 2.4L | 25 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

**EPA Certified Stationary Emergency** 



#### **STANDBY POWER RATING**

25 kW, 31 kVA, 60 Hz





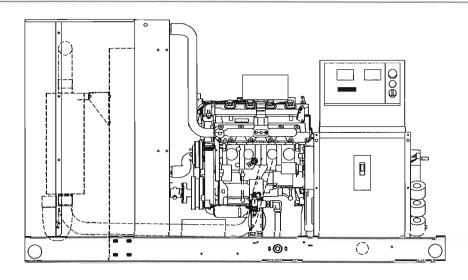
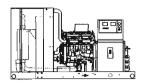
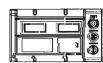


Image used for illustration purposes only









# **Features**

# Generator Set \_\_\_\_\_

- PROTOTYPE & TORSIONALLY TESTED
- UL2200 TESTED
- RHINOCOAT PAINT SYSTEM

#### Engine \_

- EPA COMPLIANT
- INDUSTRIAL TESTED, GENERAC APPROVED
- POWER-MATCHED OUTPUT
- INDUSTRIAL GRADE

## Alternator \_\_

- TWO-THIRDS PITCH
- LAYER WOUND ROTOR & STATOR
- CLASS H MATERIALS
- DIGITAL 3-PHASE VOLTAGE CONTROL

# Controls \_

- ENCAPSULATED BOARD W/ SEALED HARNESS
- 4-20mA VOLTAGE-TO-CURRENT SENSORS
- SURFACE-MOUNT TECHNOLOGY
- ADVANCED DIAGNOSTICS & COMMUNICATIONS

# Benefits

## PROVIDES A PROVEN UNIT

- ENSURES A QUALITY PRODUCT
- IMPROVES RESISTANCE TO ELEMENTS
- ENVIRONMENTALLY FRIENDLY
- ENSURES INDUSTRIAL STANDARDS
- ENGINEERED FOR PERFORMANCE
- IMPROVES LONGEVITY AND RELIABILITY
- ELIMINATES HARMFUL 3RD HARMONIC
- IMPROVES COOLING
- HEAT TOLERANT DESIGN
- TIEAT TOLETIANT DESIGN
- FAST AND ACCURATE RESPONSE
- EASY, AFFORDABLE REPLACEMENT
- ▶ NOISE RESISTANT 24/7 MONITORING
- PROVIDES VIBRATION RESISTANCE
- HARDENED RELIABILITY

#### **2.4L** | 25 kW QT025A

## INDUSTRIAL SPARK-IGNITED GENERATOR SET

**EPA Certified Stationary Emergency** 

#### **APPLICATION AND ENGINEERING DATA**

ENGINE SPECIFICATIONS			
General		Lubrication System	
Make	Generac	Oil Pump Type	Gear
EPA Emissions Compliance	Stationary Emergency	Oil Filter Type	Full-Flow sping-on Cartridge
EPA Emissions Engine Reference	See Emissions Data Sheet	Crankcase Capacity - L. (qts)	3.8 (4)
Cylinder #	4	•	
Туре	In-line	Cooling System	
Displacement - L (cu In)	2.4		
Bore - mm (in)	86.61 (3.41)	Cooling System Type	Pressurized Closed
Stroke - mm (in)	100.08 (3.94)	Water Pump Flow -gal/min	11
Compression Ratio	9.5:1	Fan Type	Pusher
Intake Air Method	Nuturally Aspirated	Fan Speed (rpm)	2150
Number of Main Bearings	5	Fan Diameter mm (in)	457 (18)
Connecting Rods	Forged	Coolant Heater Wattage	1500
Cylinder Head	Aluminum	Coolant Heater Standard Voltage	120 VAC
Cylinder Liners	No		
Ignition	High Energy	Fuel System	
Piston Type	Aluminum Alloy	-	
Crankshaft Type	Cast	Fuel Type	Natural Gas, Propane Vapor
Lifter Type	Overhead Cam	Carburetor	Down Draft
ntake Valve Material	Steel Alloy	Secondary Fuel Regulator	Standard
Exhaust Valve Material	Hardened Steel	Fuel Shut Off Solenoid	Standard
Hardened Valve Seats	yes	Operating Fuel Pressure (Standard)	5" - 14" H <sub>2</sub> 0*
		Engine Electrical System	
Engine Governing		System Voltage	12 VDC
Governor	Electronic	Battery Charging Alternator (Amps)	30
Frequency Regulation (Steady State)	+/- 0.25%	Battery Size	See Battery Index Q161970SBY
Fuel pressure must remain within specified rang	an and not dran more than 1	Battery Voltage	12 VDC
in. w.c from static (no-load) to full load.	ge and not drop more than 1	Ground Polarity	Negative
ALTERNATOR SPECIFICATIONS			
Standard Model	390mm	Standard Excitation	Brush Type
Poles:	4	Bearings	Sealed Ball
Field Type	Revolving	Coupling	Flexible Disc
hsulation Chass - Rotor	H	Load Capacity - Standby	100%
nsulation Class - Statur	H	Prototype Short Circuit Test	Yes
Fotal Harmonic Distortion	<5%	Voltage Regulator Type	Full Di gital
elephone Interference Factor (TIF)	<50	Number of Sensed Phases	3
***		Regulation Accuracy (Steady State)	±0\25%
		, (,	

# **CODES AND STANDARDS COMPLIANCE (WHERE APPLICABLE)**

NFPA 99 NFPA 110 BS5514

ISO 8528-5

SAE J1349

ISO 1708A.5

DIN6271

IEEE C62.41 TESTING

ISO 3046

NEMA ICS 1

UL2200

## INDUSTRIAL SPARK-IGNITED GENERATOR SET

**EPA Certified Stationary Emergency** 

#### **OPERATING DATA**

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		Natural Gas	Propane Vapor
Single-Phase 120/240 VAC @1.0pf	25 kW	Amps: 104	Amps: 104
Three-Phase 120/208 VAC @0.8pf	25 kW	Amps: 87	Amps: 87
Three-Phase 120/240 VAC @0.8pf	25 kW	Amps: 75	Amps: 75
Three-Phase 277/480 VAC @0.8pf	25 kW	Amps: 38	Amps: 38

STARTING	CAPAB	ILITIES (s	KVA)				sKVA vs. V	oltage Dip					
				480	VAC					208/2	40 VAC		
Alternator	kW	10%	15%	20%	25%	30%	35%	10%	15%	20%	25%	30%	35%
Standard	25	16	25	33	41	49	57	12	19	25	31	37	43

### **FUEL CONSUMPTION RATES\***

Natural Gas			Prop	ane Vapor	
Percent Load	ft³/hr	m³/hr	Percent Load	ft³/hr	m³/hr
25%	140	3.9	25%	56	1.6
50%	220	6.2	50%	87	2.5
75%	300	8.5	75%	119	3.4
100%	380	10.8	100%	151	4.3

Fuel supply installation must accommodate fuel consumption rates at 100% load.

#### **COOLING**

		Standby	
Air Flow (inlet air combustion and radiator)	ft³/min(m ³/min)	1500 (42.48)	
System Coolant Capacity	gal (Liters)	2.5 (9.46)	
Heat Rejection to Coolant	BTU/hr	95,000	
Max. Operating Ambient Temperature	°F (°C)	122 (50)	
Max. Ambient Temperature	°F (°C)	104 (40)	
Maximum Radiator Backpressure	in H <sub>2</sub> 0	0.5	

### **COMBUSTION AIR REQUIREMENT**

		Standby
Flow at Rated Power cfm	(mp³/min)	70

ENGINE			EXHAUST		
		Standby			Standby
Rated Engine Speed	rpm	1800	Exhaust Flow (Rated Output)	cfm (m³/min)	220 (6.2)
Horsepower at Retetick N***	th pp	40	Max. Backpressure (Post Turbo)	inHg (Kpa)	1.5 (5.1)
Piston Speed	ft/min	1182	Exhaust Temp (Rated Output - post Stenner)	°F (°C)	975 (524)
BMEP	psi	120	Exhaust Outlet Size (Open Set)	mm (in)	63.5 (2.5)

<sup>\*\*</sup> Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQ.MD permitting purposes.

# **QT025A** | **2.4L** | 25 kW

# INDUSTRIAL SPARK-IGNITED GENERATOR SET

**EPA Certified Stationary Emergency** 

## STANDARD FEATURES AND OPTIONS



GEN	ERATOR SET	
•	Genset Vibration Isolation	Std
0	Extended warranty	Opt
0	Gen-Link™ Communications Software	Opt
0	Steel Enclosure	Opt
0	Aluminum Enclosure	Opt
ENG	INE SYSTEM	
	General	
•	Oil Drain Extension	SId
•	Critical Exhaust Silencer	Std
•	Air cleaner	Std
•	Fan guard	Std
•	Radiator duct adapter	Sid
	Fuel System	
•	Fuel lockoff solenoid	Std
•	Secondary Fuel Regulator	Std
•	Flexible fuel lines	Std
	Cooling System	
•	120VAC Coolant Heater	Std
•	Closed Coolant Recovery System	Std
•	UV/Ozone resistant hoses	Std
•	Factory-Installed Radiator	Std
•	Radiator Drain Extension	Std
	Engine Electrical System	
	Battery charging alternator	Sld
•	Battery cables	Std
	Baltery tray	Std
•	Solenoid activated starter motor	Std
•	10A UL float/equalize battery charger	Std
•	Rubber-booted engine electrical connections	Std
ALTE	ERNATOR SYSTEM	
•	UL2200 GENprotect™	Std
•	Main Line Circuit Breaker	Std

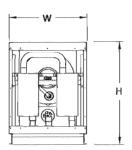
CON	TROL SYSTEM	
	Control Panel	
•	Digital H Control Panel - Dual 4x20 Display	Std
•	Programmable Crank Limiter	Std
0	21-Light Remote Annunciator	Opt
0	Remote Relay Panel (8 or 16)	Opt
•	7-Day Programmable Exerciser	Sld
•	Special Applications Programmable PLC	Std
•	RS-232 Communications	Std
•	RS-485 Communications	Std
•	All-Phase Sensing DVR	Sld
•	Full System Status	Std
•	Utility Monitoring (Req. H-Transfer Switch)	Std
•	2-Wire Slart Compatible	Std
•	Power Output (kW)	Std
•	Power Factor	Std
•	Reactive Power	Std
•	All phase AC Vollage	Std
•	All phase Currents	Std
•	Oil Pressure	Std
•	Coolant Temperature	Std
•	Coolant Level	Std
•	Fuel Pressure	Std
•	Engine Speed	Std
•	Ballery Vollage	Std
•	Frequency	Std
•	Isochronous Governor Control	Std
•	-40deg C - 70deg C Operation	Std
•	Walerproof Plug-In Connectors	Sld
•	Audible Alarms and Shutdowns	Std
•	Not in Auto (Flashing Light)	Std
•	Auto/Off/Manual Switch	Std
•	E-Stop (Red Mushroom-Type)	Std
•	NFPA 110 Level I and II (Programmable)	Std
•	Remote Communication - RS232	Std
	Alarms (Programmable Tolerances, Pre-Alarms and Shutdowns)	
	Low Fuel Pressure	Std
	Oil Pressure (Pre-programmed Low Pressure Shutdown)	Std
•	Coolant Temperature (Pre-programmed High Temp Shuldown)	SId
•	Coolant Level (Pre-programmed Low Level Shutdown)	Std
•	Engine Speed (Pre-programmed Overspeed Shutdown)	Std
•	Voltage (Pre-programmed Overvoltage Shutdown)	Std
•	Batlery Voltage	Sld

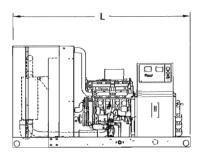
# INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency

# GENERAC INDUSTRIAL

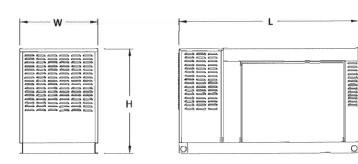
### **DIMENSIONS AND WEIGHTS\***





## **OPEN SET (Includes Exhaust Flex)**

LxWxHin (mm)	77 (1956) x 34 (864) x 43 (1092)
Weight (lbs)	1163
dBA*	83



### **LEVEL 1 ACOUSTIC ENCLOSURE**

LxWxHin (mm)	77 (1956) x 34 (864) x 46 (1168)
Weight (lbs)	1414
dBA*	60

\*All measurements are approximate and for estimation purposes only. Sound levels measured at 23ft (7m) under normal operation and do not account for ambient site conditions.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

Specification characteristics may change without notice. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.

5 OF 5

# Cellco Partnership d/b/a Verizon Wireless 110 Yantic Lane Norwich, Connecticut

# **Norwich 4 Facility**

# **Site Search Summary**

Section 16-50j-74(j) of the Regulations of Connecticut State Agencies requires the submission of a statement that describes "the narrowing process by which other possible sites were considered and eliminated." In accordance with this requirement, descriptions of the general site search process, the identification of the applicable search area and the alternative locations considered for development of the proposed telecommunications facility in western Norwich are provided below.

## Site Search Process

To initiate its site selection process in an area where wireless service problems have been identified, Cellco first establishes a "site search ring" or "site search area". In any search ring or search area, Cellco seeks to avoid the unnecessary proliferation of towers and to reduce the potential adverse environmental effects of the cell site, while at the same time maximizing the quality of service provided from a facility. These objectives are achieved by initially locating existing towers and other sufficiently tall structures within and near the site search area. If any are found, they are evaluated to determine whether they can support Cellco's telecommunications antennas and related equipment at a location and elevation that satisfies its technical requirements.

The list of available locations may be further reduced if, after preliminary discussions, the property owners withdraw a site from consideration. From among the remaining locations, the proposed sites are selected by eliminating those that have greater potential for adverse environmental effects and fewer benefits to the public (i.e., those requiring taller towers; those with substantial adverse environmental impacts, or in densely populated residential areas; and those with limited ability to share space with other public or private telecommunications service providers). It should be noted that in any given site search, the weight afforded to factors considered in the selection process will vary depending upon the availability and nature of sites within the search area.

#### Need for the Norwich 4 Facility

Within approximately four (4) miles of the proposed Norwich 4 Facility, Cellco maintains six (6) macro-cell and one (1) small cell telecommunications facilities. The macro-cell facilities are identified as Cellco's Bozrah East, Franklin, Norwich, Norwich 6, Norwich 2 and Norwich West cell sites. The one (1) small cell facility is identified as North Franklin SC2-A. Cellco's Bozrah East facility consists of antennas on a tower at 131 Gifford Lane in Bozrah.

Cellco's Franklin facility consists of antennas on a tower at 89 Dr. Nott Road in Franklin. Cellco's Norwich facility consists of antennas on the tower at 292 Plain Hill Road in Norwich. Cellco's Norwich 6 facility consists of antennas on the tower at 50 Clinton Avenue in Norwich. Cellco's Norwich 2 facility consists of antennas attached to a building at 101 High Street in Norwich. Cellco's Norwich West facility consists of antennas on the tower at 202 North Wawecus Hill Road in Norwich. Cellco's North Franklin SC2-A small cell facility consists of a stub-tower attached to an existing grain elevator at 140 Route 32 in Franklin.

These existing facilities currently provide some wireless service in the area around the proposed Norwich 4 Facility location. Significant gaps in reliable wireless service persist, however, particularly along Route 2 and the area around the Route 2 - I-395 interchange. In addition, Cellco's existing Franklin facility (Beta sector antennas)<sup>1</sup> are currently operating at or near their capacity limits, resulting in a significant reduction in reliable wireless service to the south of Franklin facility. In addition to its coverage benefits, the Norwich 4 facility will help provide capacity relief to the Franklin facility.

## Sites Investigated

The Norwich 4 site search was initiated in March of 2017. Cellco identified and investigated a total of five (5) sites in western Norwich. A listing of the sites investigated is provided below.

- 1. <u>110 Yantic Lane, Norwich CT</u>: Cellco entered into a lease agreement with Robert Larsen, the owner of this parcel, for the development of the Norwich 4 Facility.
- 2. <u>140 Yantic Road, Norwich CT</u>: Cellco explored the installation of antennas on an old industrial smoke stack on this parcel. This site, while capable of offloading capacity from Cellco's Franklin cell site, it would not provide coverage along Route 2 and the Route 2 I-395 interchange, to the south and east, at a level comparable to the proposed tower site at 110 Yantic Lane.
- 3. <u>170 Yantic Road, Norwich CT</u>: Cellco explored the development of a new tower on this parcel. Like the smoke stack at 140 Yantic Road, a tower at this site would not satisfy Cellco's coverage objective to the south and east.
- 4. <u>275 Otrobando Avenue, Norwich CT</u>: Cellco explored the installation of antennas on the roof of the five-story Comfort Suites hotel. Due to the low ground elevation and relatively low roof elevation, a roof-top facility here would not satisfy Cellco's wireless service objectives.
- 5. <u>110 Yantic Lane, Norwich, CT</u>: Cellco explored use of the existing water tank located on this parcel and was told by the owner, Norwich Public Utilities, that the tank was not available for use by wireless carries.

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<sup>&</sup>lt;sup>1</sup> Cellco's Beta sector antennas at its Franklin cell site are directed to the south, toward the proposed Norwich 4 cell site.



#### Legend

Site Investigated

\_\_\_ Approximate Parcel Boundary

# Sites Investigated:

- 1 110 Yantic Lane, Norwich, CT
- 2 140 Yantic Road, Norwich, CT
- 3 170 Yantic Road, Norwich, CT
- 4 275 Otrobando Avenue, Norwich, CT
- 5 110 Yantic Lane, Norwich, CT

# Site Search Summary Map

Proposed Wireless Telecommunications Facility Norwich 4 CT 110 Yantic Lane Norwich, Connecticut



