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KENNETH C. BALDWIN

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Also admitted in Massachusetts
and New York

March 4, 2020

Via Hand Delivery

Peter A. Nystrom, Mayor
City of Norwich
Norwich City Hall
100 Broadway
Norwich, CT 06360

Re: **Submission of Technical Information Concerning a Proposal to Construct a Wireless Telecommunications Facility at 110 Yantic Lane, Norwich, Connecticut**

Dear Mayor Nystrom:

This firm represents Cellco Partnership d/b/a Verizon Wireless ("Cellco"), in its proposal to construct a new wireless telecommunications facility on a 115 acre parcel at 110 Yantic Lane in Norwich, Connecticut (the "Property"). The Property is owned by Robert W. Larsen. Cellco identifies the proposed telecommunications facility as its Cellco's "Norwich 4 Facility".

This Technical Report is submitted pursuant to Connecticut General Statutes ("Conn. Gen. Stat.") § 16-50*l*(g), which establishes local input requirements for the siting of a wireless telecommunications facility under the exclusive jurisdiction of the Connecticut Siting Council (the "Council"). This statutory provision requires the submission of technical information to officials in the municipality where the proposed facility will be located and any municipality within 2,500 feet of the proposed facility location. Portions of the Town of Bozrah ("Bozrah") are located within 2,500 feet of the proposed Norwich 4 Facility. Bozrah municipal officials will also be provided with a copy of this filing.

Correspondence and/or communications regarding the information contained in this report should be addressed to:

Andrew Candiello
Sr. Manager – RE/Regulatory
Cellco Partnership d/b/a Verizon Wireless
20 Alexander Drive
Wallingford, CT 06492

A copy of all such correspondence or communications should also be sent to Cellco's attorneys:

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597

Cellco intends to submit an application to the Council for a Certificate of Environmental Compatibility and Public Need ("Certificate") for the construction, maintenance and operation of a wireless telecommunications facility in the central portion of the Property. The Norwich 4 Facility would provide improved wireless service along portions of Route 2 and I-395 and local roads, and to residential, commercial and industrial land uses in the vicinity of the Route 2/I-395 interchange and the Property. The Norwich 4 Facility will interact with Cellco's existing Bozrah East, Norwich 6, Norwich and Franklin cell sites and will provide capacity relief to the Franklin cell site's Beta sector antennas. *See* Site Schematic and Site Vicinity Map included in Attachment 1. Coverage plots showing Cellco's existing wireless service in the area alone and together with the proposed Norwich 4 Facility at 700 MHz, 1900 MHz and 2100 MHz are included in Attachment 2.

Cell Site Information

Cellco proposes to install a 110-foot monopole tower within a 50' x 50' fenced compound and 100' x 100' leased area on the Property. Cellco would install six (6) panel-type antennas and two (2) remote radio heads on an antenna platform at the top of the tower. The antennas would extend to a height of 113 feet above ground level. Equipment associated with Cellco's antennas, a propane-fueled backup generator and a propane fuel tank would be located within the fenced facility compound. Access to the Norwich 4 Facility would extend from Yantic Lane along an existing driveway to the proposed tower site.[1] Utilities would extend from

[1] The existing driveway is also used for access to an existing Norwich Utilities water tank located on the Property approximately 400 feet north of the proposed tower site.

existing service along Philanne Drive. Included in Attachment 3 is a set of Project Plans and tower elevation drawing.

Connecticut Siting Council Jurisdiction

Municipal jurisdiction over the siting of the proposed telecommunications facility described in this report is pre-empted by provisions of the Public Utilities Environmental Standards Act ("PUESA"), Conn. Gen. Stat. § 16-50g et seq. The PUESA gives exclusive jurisdiction over the location, type and modification of telecommunications towers, to the Council (Conn. Gen. Stat. § 16-50x(a); 16-50i(a)(6)). Accordingly, the telecommunications facility described in this report is exempt from the City's land use (zoning and inland wetlands) regulations.

Upon receipt of an application, the Council will assign a docket number and, following a completeness review, set the schedule for the docket, including a hearing date. At that time, the City may choose to become an intervenor or party in the proceeding. Other procedures followed by the Council include serving the applicant and other participants with interrogatories, holding a pre-hearing conference, and conducting a public hearing. The public hearing would be held at a location in the City. Following the public hearing, the Council will issue findings of fact, an opinion and a decision and order. Prior to construction, the Council will also require the Applicant to submit a development and management plan ("D&M Plan") which is, in essence, a final site development plan showing the details of the facility incorporating any conditions imposed by the Council. These procedures are also outside the scope of the City's jurisdiction and are governed by the Connecticut General Statutes, the Regulations of Connecticut State Agencies, and the Council's Rules of Practice. If the Council approves the cell site described in this report, Cellco will submit to the Building Official an application for approval of a local building permit. Under Section 16-50x of the General Statutes, which provides for the exclusive jurisdiction of the Council, the building official must honor the Council's decision.

Municipal Consultation Process

Pursuant to Section 16-50*l* of the General Statutes, City officials are entitled to receive technical information regarding the proposed telecommunications facility at least ninety (90) days prior to the filing of an application with the Council. This Technical Report is provided to the City in accordance with these provisions and includes information on the need for improved reliable wireless service in the area; the location of existing wireless facilities in and around the area; details of the proposed facility; the location of alternative sites considered and rejected; the location of schools and commercial day care facilities in the area and the aesthetic impacts of the facility on those schools and day care facilities, if any; a description of the site selection process;

and a discussion of potential environmental effects associated with the proposed facility.

Not later than sixty (60) days after the initial consultation meeting, the municipality may, in cooperation with Cellco, hold a public information hearing on the facility proposal. If such a hearing is held, the applicant must notify all abutting landowners and publish notice of the hearing in a newspaper of general circulation in the municipality, at least fifteen (15) days prior to the hearing.

Not later than thirty (30) days after the initial consultation meeting, the municipality may present the prospective applicant with alternative sites, including municipal parcels, for its consideration. If not previously considered, these alternatives will be evaluated and discussed in its application to the Council.

Pursuant to Section 16-50*l*(e) of the General Statutes, Cellco must provide a summary of the City's comments and recommendations, if any, to the Council within fifteen (15) days of the filing of an application.

Need for the Proposed Wireless Facility

The Norwich 4 Facility described in this Technical Report is needed so that Cellco can provide enhanced wireless coverage to significant gaps in service in western portions of Norwich as well as portions of Bozrah and Franklin, Connecticut. More particularly, the Norwich 4 Facility will fill existing gaps in service along portions of Route 2 and the area around the Route 2/I-395 interchange and the area immediately surrounding the Property. The Norwich 4 site will also provide capacity relief to Cellco's Beta sector antennas at the Franklin cell site.

Environmental Effects

In our experience, the primary impact of a wireless facility such as the proposed Norwich 4 Facility is visual. The visual impact of the proposed Norwich 4 Facility tower will vary from place to place around the site location, depending upon factors such as vegetation, topography, distance from the tower, and the location of buildings or other structures (utility infrastructure) in the sight-line of the cell site.

To more fully assess the visual impact of the Norwich 4 Facility, Cellco's consultant, All-Points Technology Corporation ("APT") has prepared a Preliminary Visual Assessment for the proposed tower location. This preliminary assessment indicates that the year-round visibility of the proposed tower would be limited to an area containing approximately 61 acres within the two mile radius study area (less than 1% of the 8,042-acre study area). These areas of year-round

visibility occur on commercial and industrial parcels along Routes 32 and 87, to the northwest of the tower site. Year-round visibility may also extend to areas to the east of the facility near the Route 2/I-395 interchange and commercial property near I-395, in the vicinity of Exit 82. (*See* Attachment 4). A more detailed visual assessment, including a seasonable visual analysis and photosimulations of the tower, will be prepared and included in Cellco's Certificate application to the Council.

Pursuant to the provisions of Conn. Gen. Stat. § 16-50p(a)(3)(G), new telecommunications facilities must be located at least 250 feet from buildings containing schools (defined in C.G.S. §10-154a) and commercial day care facilities (defined in C.G.S. §19a-77(a)(1)) unless the location selected is acceptable to the City's chief elected official or the Council finds that the facility will not have a substantial adverse effect on the aesthetics or scenic quality of the neighborhood where the school or commercial day care use is located. The proposed Norwich 4 Facility is not located within 250 feet of any building containing a school or commercial day care facility.

Based on field surveys, Cellco has determined that the construction of the Norwich 4 Facility will have no direct impact on inland wetlands or watercourses, within or near either of the tower compound. Cellco anticipates that all other physical environmental effects associated with the proposed facility would be minimal.

Radio Frequency Emissions

The Federal Communications Commission ("FCC") has adopted a standard (the "Standard") for exposure of radio frequency ("RF") emissions from telecommunications base stations like the Norwich 4 Facility. To ensure compliance with the Standard, Cellco has performed a worst-case RF emissions calculation for the proposed facility according to the methodology described in FCC Office of Science and Technology Bulletin No. 65 ("OST Bulletin 65"). This calculation is a conservative, worst-case approximation of RF emissions at the closest accessible point to the antenna (i.e., the base of the tower), and assumes that all antennas are transmitting simultaneously, on all channels, at full power. The worst-case calculated RF emissions level would be 58.63% of the FCC Standard for the proposed 110-foot tower. (*See* Attachment 5). Actual RF emissions levels from this facility will be far less than this "worst-case" approximation.

Scenic Natural Historic or Recreational Impacts

To further assess the environmental impacts of the proposed facility, Cellco will be working with its consultant team to prepare a National Environmental Policy Act ("NEPA")

Environmental Screening Checklist (the "NEPA Checklist") and other related environmental reviews to determine if the facility will have any significant adverse environmental effects. The NEPA Checklist will include information from the Environmental and Geographic Information Center of the Connecticut Department of Energy and Environmental Protection ("DEEP"), the U.S. Fish and Wildlife Service ("USFWS") and the State Historic Preservation Officer ("SHPO"). Copies of the DEEP, USFWS and the SHPO determinations will also be submitted as a part of the Council's Certificate Application.

Site Search Process

Cellco conducted a search for suitable cell site locations in Norwich and identified the Property as a site that would satisfy its wireless service objectives in the area. In addition to the proposed location, Cellco identified and investigated four (4) alternative facility locations in the area. Each of the alternative locations were considered and either rejected by the land or structure owner, were eliminated due to some concerns for significant environmental effects or were eliminated due to concerns related to Cellco's ability to satisfy its wireless service objectives. A complete list of other potential cell sites investigated is included in Attachment 6.

Tower Sharing

As stated above, Cellco intends to build a tower that is capable of supporting its antennas and those of other wireless telecommunications providers, the surrounding municipalities, and emergency service providers, if a need exists. The provision to share the tower is consistent with the intent of the General Assembly when it adopted Conn. Gen. Stat. § 16-50aa and with Council policy. The availability of space on the proposed tower may reduce, if not eliminate, the need for additional towers in the area for the foreseeable future.

Conclusion

This Technical Report is submitted in accordance with Conn. Gen. Stat. § 16-50*l* which requires Cellco to supply the City with information regarding its proposed Norwich 4 Facility. This report includes information regarding the site selection process, public need, and the potential environmental impacts of the facility. Cellco submits that its proposed Norwich 4 Facility would not have any significant adverse environmental effects. Moreover, Cellco submits that the public need for high quality wireless service, and a competitive framework for providing such service has been determined by the FCC to be in the public interest and that such public need far outweighs any perceived environmental effects of the proposed facility.

Please contact me if you have any additional questions regarding the proposed facility.

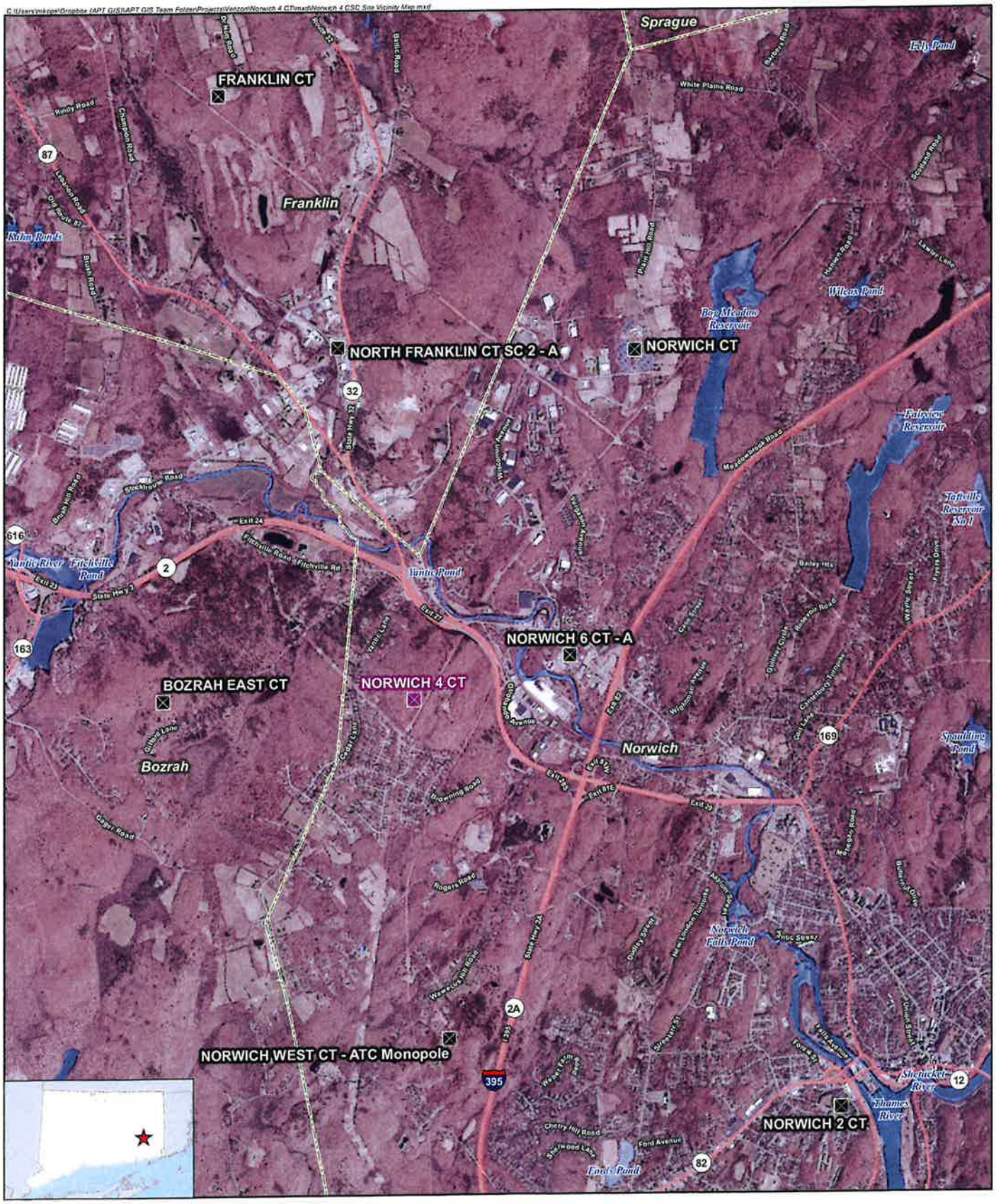
Sincerely,

Kenneth C. Baldwin

KCB/kmd
Enclosures
Copy to:

Frank A. Manfredi, Chair, Norwich City Plan Commission
Morell, Richard, Chairman, Norwich Inland Wetlands, Water Courses & Conservation Commission
Deanna Rhodes, Norwich City Planner
Glenn Pianka, Bozrah First Selectman
Stephen Seder, Chair, Bozrah Planning and Zoning Commission
Scott Taylor, Chair, Bozrah Inland Wetlands Commission
Andrew Candiello
Wesley G. Stevens
Tim Yee

ATTACHMENT 1

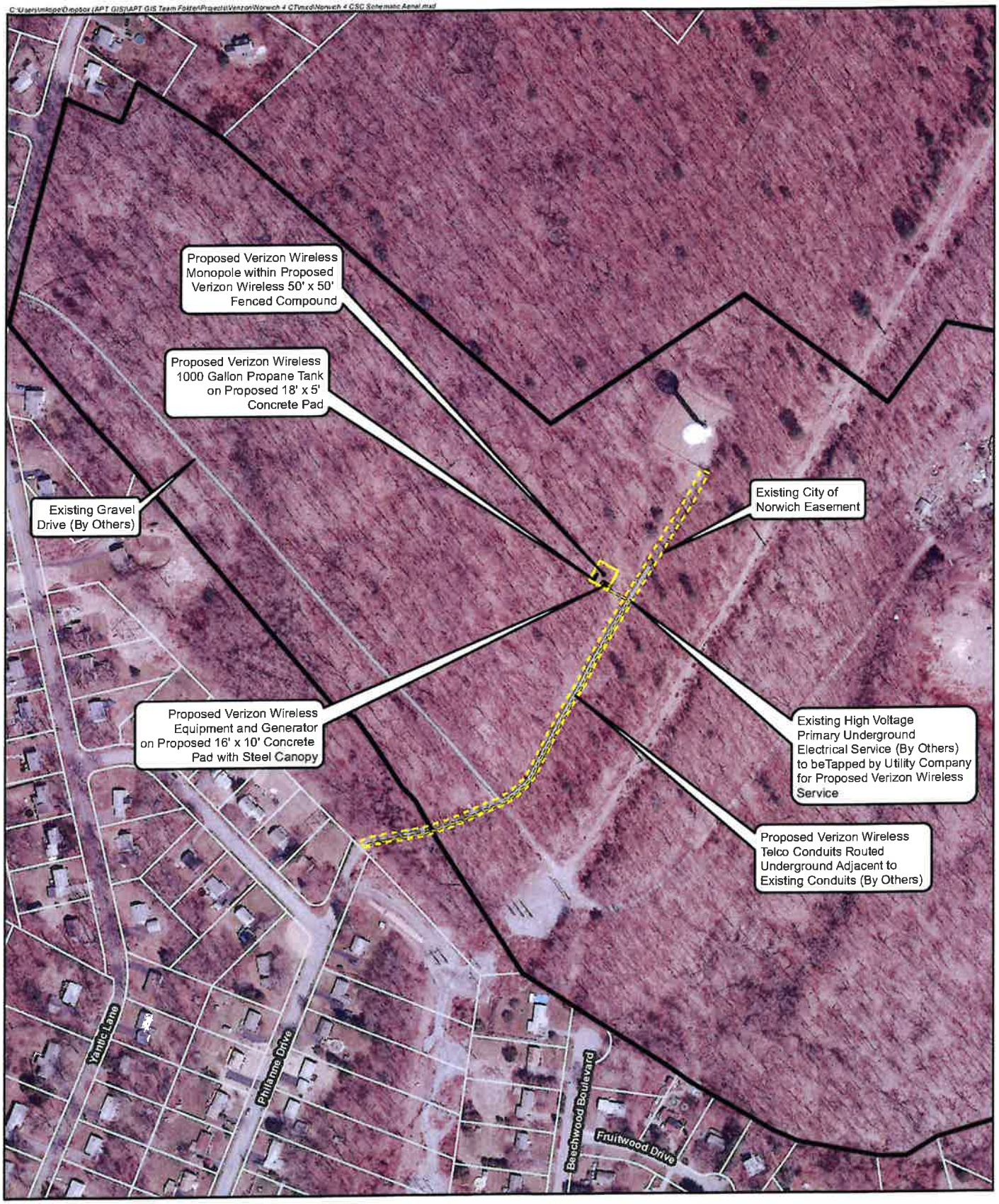


Site Vicinity Map

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

verizon

ALL-POINTS TECHNOLOGY CORPORATION



Legend

- Proposed Verizon Wireless Equipment Compound
- Proposed Verizon Wireless Equipment
- Proposed Verizon Underground Utilites
- Existing Easement (By Others)
- Existing Gravel Road (By Others)
- Subject Property
- Approximate Parcel Boundary (CTDEEP)

N W E S

300 150 0 300 Feet

Map Notes:
Base Map Source: 2019 CT ECO Imagery
Map Scale: 1 inch = 300 feet
Map Date: February 2020

Site Schematic

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

verizon

ALL-POINTS TECHNOLOGY CORPORATION

ATTACHMENT 2

Existing Verizon Wireless 700 MHz Coverage
Norwich, Connecticut and Surrounding Area
(*Map Scale is 1:18,000)

FRANKLIN CT
NORTH FRANKLIN CT SC 2 - A
NORWICH CT
NORWICH 6 CT - A
NORWICH 4 CT
BOZRAH EAST CT
NORWICH WEST CT - ATC Monopole
NORWICH 2 CT
FRANKLIN
LEBANON
BOZRAH
NORWICH
SPRAGUE
LISBON
PRESTON
Indian Burial Ground Cemetery
Smallpox Cemetery
Lebanon Road
Posse Brook
4-H Club Camp
State Hwy 87
Susquetonscut Brook
Gilman Pond
Papermill Pond
State Hwy 516 Fitchville Road
Borrah Cemetery
State Hwy 2
Exit 24
Moose Lodge
Fitchville Rd
Exit 23
Yantic River
Yantic Pond
Exit 22
Bashan Hill Cemetery (East Of Bashan Hill Road)
Fitchville Pond
Camp Ostelah - Linda Adelman
Bmx Track Recreation Field
Gardner Brook
Town Open Space (Washcongh Drive)
Cemetery (Scott Hill Road)
Gardner Brook
Aitkenitz Pond
Parker Cemetery
Cemetery North Of Route 163
Bozrah Street State Hwy 163
Camp Tadma (Boy Scouts Of America)
Norwich Fish & Game Club
Bean Hill Green
Samuel Huntington School - Huntington School Playground
Norwich Town Green Cemetery (Old Cemetery Lane)
Town Street
Lowthorpe Meadow Natural Area
Exit 81E
Exit 79
Yantic River
Yantic Cemetery
Norwich Falls Pond
Chelsea Parkade
Broadway
McKinley Avenue
Lake Street Playground
Columbus Park
William Tennyson School
Union Street
Cemetery (Oak Street)
Main Street
Lucas Park
John Stanton School
New London Turnpike
State Hwy 2A
Cemetery (Old Salem Road)
Norden Village (2 Parcels)
Dunham Street
Thames River
Mount Pleasant
Laurel Hill
Poz Hill
Bishop School - Fitzgerald Field
Route 82
Sacred Heart Cemetery
Thomas Kelly Junior High School
Mohegan Park
Wm. Backus Hospital Playground
Exit 81E
Exit 79
Exit 22
Exit 24
Exit 23
Exit 81W
Exit 80A
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Exit 1
Versailles Pond
Little River
Occum Pond
Occum Road
Town Open Space (Owned By City Of Norwich)
Whitaker Grounds (Rocky Hollow Road)
Lisbon Country Golf Club
Camp P (difrancesco)
Cemetery (Gallantbury Turnpike)
Taftville Pond
Taftville Tennis Courts
Wequonnoc School
German Shooting Club
Gallantbury Turnpike
Scott Hwy (Rt 97)
Gallantbury Turnpike
Broadway Avenue
Quinebaug River
Shetucket River
Saint Joseph Cemetery
Saint Mary's Cemetery
Shetucket River
Broadway Avenue
Greenville School - Greenville Playground
Greenville Play Area
Hickory Street Cemetery
Cemetery Hamilton Avenue
Hamilton Avenue Playground
Cemetery (South Of Route 165)
State Hwy 165
Route 165
Guile Cemetery
Route 2
Thames River
Copyright (c) 2014 [illegible]

Legend

- Proposed Verizon Wireless Facility
- Existing Verizon Wireless Facilities
- Major Route
- Town Line
- Existing RSRP >=-85 (in building)
- Existing RSRP >=-95 (vehicular)
- Existing RSRP >=-105 (outdoor)

verizon
ALL-POINTS

Map Notes:
This map was prepared at a map scale of 1:18,000 at 24" by 36" layout. Report copies have been reduced to 11" x 17". Refer to graphic scale
Open Space, Schools, and State Forests/Parks are depicted using available State GIS data, which may be outdated in some areas
Base map: ESRI Shaded Relief

0 0.5 1 Miles

Existing and Proposed Verizon Wireless 700 MHz Coverage
Norwich, Connecticut and Surrounding Area
(*Map Scale is 1:18,000)

FRANKLIN CT
NORTH FRANKLIN CT SC 2 - A
NORWICH CT
NORWICH 6 CT - A
NORWICH 4 CT
BOZRAH EAST CT
NORWICH WEST CT - ATC Monopole
NORWICH 2 CT

FRANKLIN
LEBANON
BOZRAH
NORWICH
SPRAGUE
LISBON
PRESTON

Indian Burial Ground Cemetery
Meeting House Hill 390.9' AMSL
Smallpox Cemetery
Headstone Hill 486.59' AMSL
Lebanon Road
Pease Brook
Cemetery (Waterman Road)
4-H Club Camp
Hilltop Hill 374.6' AMSL
Shields Hill 361.89' AMSL
Blue Hill 415.59' AMSL
State Hwy 87
Susquetonscut Brook
Bush Hill 378.39' AMSL
Turkey Hill 421.72' AMSL
Gelman Pond
State Hwy 616 Fitchville Road
Papermill Pond
Bozrah Cemetery
Exit 22
Scott Hill Road
State Hwy 2
Exit 24
Moose Lodge
Fitchville Rd
Yantic River
Yantic Pond
Exit 81E
Bashan Hill 458.97' AMSL
Cemetery (East Of Bashan Hill Road)
Fitchville Pond
Camp Odetah - Linda Adelman
Bmx Track Recreation Field
Gardner Brook
Town Open Space (Washoonah Drive)
Cemetery (Scott Hill Road)
Antevitza Pond
Parker Cemetery
Cemetery (North Of Route 163)
Bozrah Street/State Hwy 163
Bear Hill 486.97' AMSL
Camp Tadma (Boy Scouts Of America)
Norwich Fish & Game Club
Bean Hill Green
Samuel Huntington School - Huntington School Playground
Norwich Town Green
Cemetery (Old Cemetery Lane)
Town Street
Lowthorpe Meadow Natural Area
Exit 81S
Exit 82S
Yantic Cemetery
Norwich Falls Pond
Wm. Backus Hospital Playground
Thomas Kelly Junior High School
Mohegan Park
Chelsea Parkade
Broadway
McKinley Avenue
William Buckingham School
Lake Street Playground
Columbus Park
Cemetery (Oak Street)
Union Street
Main Street
Lucas Park
John Stanton School
New London Turnpike
State Hwy 2A
Cemetery (Old Salem Road)
Norden Village (2 Parcels)
Dunham Street
Thames River
Bishop School
Fitzgerald Field
Fox Hill 317.7' AMSL
Laurel Hill 283.97' AMSL
Sacred Heart Cemetery
Oak Hill 430.97' AMSL
Route 2A
State Hwy 32 River Road
Quinebaug River
Shetucket River
Saint Joseph Cemetery
Saint Marys Cemetery
Bozrah Street
Greeneville School - Greeneville Playground
Greeneville Play Area
Hickory Street Cemetery
Cemetery (Hamilton Avenue)
Hamilton Avenue Playground
Cemetery (South Of Route 165)
Route 165
Guile Cemetery
Town Open Space (Owned By City Of Norwich)
Versailles Pond
Little River
Whitaker Grounds (Rocky Hollow Road)
Lisbon Country Golf Club
Camp P (difrancesco)
Exit 82A
State Hwy 169
Scott Swamp Road
Tatnuck Pond
Boswell Avenue
Boundbrook Highway
Cemetery (Canterbury Turnpike)
Wequonnoc School
Tatnuck Tennis Courts
German Shooting Club
Occum Road
Occum Pond
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Legend

- Proposed Verizon Wireless Facility
- Existing Verizon Wireless Facilities
- Major Route
- Town Line
- Existing and Proposed RSRP >=-85 (in building)
- Existing and Proposed RSRP >=-95 (vehicular)
- Existing and Proposed RSRP >=-105 (outdoor)

verizon
ALL POINTS

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Base map: ESRI Shaded Relief

0 0.5 1 Miles

Existing Verizon Wireless 1900 MHz Coverage
Norwich, Connecticut and Surrounding Area
(*Map Scale is 1:18,000)

FRANKLIN CT
NORTH FRANKLIN CT SC-2 -A
NORWICH CT
NORWICH 6 CT - A
NORWICH 4 CT
BOZRAH EAST CT
NORWICH WEST CT - ATC Monopole
NORWICH 2 CT

FRANKLIN
LEBANON
BOZRAH
NORWICH
SPRAGUE
LISBON
PRESTON

Indian Burial Ground Cemetery
Meeting House Hill 524.8' AMSL
Smallpox Cemetery
Hearthstone Hill 498.56' AMSL
Pease Brook
Cemetery (Waterman Road)
4-H Club Camp
Misery Hill 364.06' AMSL
Standish Hill 501.84' AMSL
Blue Hill 498.56' AMSL
Turkey Hill 423.12' AMSL
Susquetonscut Brook
Brush Hill 370.64' AMSL
Gilman Pond
Papermill Pond
Bozrah Cemetery
Exit 22
Exit 23
Exit 24
Moose Lodge
Fitchville Rd
Yantic River
Yantic Pond
Scott Hill Road
Bashan Hill 498.54' AMSL
Cemetery (East Of Bashan Hill Road)
Fitchville Pond
Camp Odetah - Linda Adelman
Bmx Track Recreation Field
Gardner Brook
Town Open Space (Wachcenah Drive)
Cemetery (Scott Hill Road)
Ariewitz Pond
Parker Cemetery
Wawecus Hill 501.84' AMSL
Bear Hill 456.56' AMSL
Camp Tadma (Boy Scouts Of America)
Norwich Fish & Game Club
Bean Hill Green
Samuel Huntington School
Huntington School Playground
Norwich Town Green Cemetery (old Cemetery Lane)
Town Street
Lowthorpe Meadow Natural Area
Thomas Kelly Junior High School
Mohegan Park
W.w. Backus Hospital Playground
Yantic Cemetery
Norwich Falls Pond
Chelsea Parkade
Broadway
Boswell Avenue
Lake Street Playground
Columbus Park
William Buckingham School
Jail Hill 233.2' AMSL
Cemetery (Jail Street)
Lucas Park
John Stanton School
Bishop School
Fitzgerald Field
Fox Hill 137.76' AMSL
Laurel Hill 203.92' AMSL
Mount Pleasant 134.16' AMSL
Thames River
Cemetery (Old Salem Road)
Norden Village (2 Parcels)
Ox Hill 290.37' AMSL
Sacred Heart Cemetery
Cemetery (Canterbury Turnpike)
Wequonnoc School
Taftville Tennis Courts
Taftville Pond
German Shooting Club
Versailles Pond
Little River
Whitaker Grounds (Rocky Hollow Road)
Town Open Space (Owned By City Of Norwich)
Lisbon Country Golf Club
Camp P (difrancesco)
Occum Pond
Occum Road
Norwich Avenue
Hamilton Highway
Exit 82A
State Hwy 82
Taftville Pond
Quinebaug River
Shetucket River
Saint Joseph Cemetery
Saint Marys Cemetery
Guile Cemetery
Cemetery (South Of Route 165)
Cemetery (Hamilton Avenue)
Hamilton Avenue Playground
Greenville School
Greenville Play Area
Greenville Playground
Hickory Street Cemetery
Cemetery (North Of Route 163)
Bozrah Street
State Hwy 163
Route 165
State Hwy 82 River Road
State Hwy 32
State Hwy 87
State Hwy 2
State Hwy 2A
State Hwy 12
Fitchville Road
Route 2
Route 82
Exit 1
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Legend

- Proposed Venzon Wireless Facility
- Existing Verizon Wireless Facilities
- Major Route
- Town Line
- Existing RSRP >=-85 (in building)
- Existing RSRP >=-95 (vehicular)
- Existing RSRP >=-105 (outdoor)

verizon
All-Points Technology Corporation

0 0.5 1 Miles

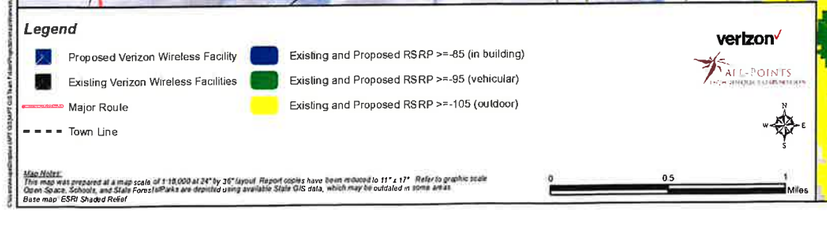
Map Notes:
This map was prepared at a map scale of 1:18,000 at 24" by 36" layout. Report copies have been reduced to 11" x 17". Refer to graphic scale. Open Space, Schools, and State Forests/Parks are depicted using available State GIS data, which may be outdated in some areas. Base map: ESRI Shaded Relief

Existing and Proposed Verizon Wireless 1900 MHz Coverage
Norwich, Connecticut and Surrounding Area
(*Map Scale is 1:18,000)

FRANKLIN CT
NORTH FRANKLIN CT SC.2 - A
NORWICH CT
NORWICH 4 CT
BOZRAH EAST CT
NORWICH 6 CT - A
NORWICH WEST CT - ATC Monopole
NORWICH 2 CT

FRANKLIN
LEBANON
BOZRAH
NORWICH
SPRAGUE
LISBON
PRESTON

Indian Burial Ground Cemetery
Meeting House Hill 524.5' AMSL
Smallpox Cemetery
Hearthstone Hill 498.56' AMSL
Pease Brook
Cemetery (Waterman Road)
4-H Club Camp
Standish Hill 501.84' AMSL
Blue Hill 498.56' AMSL
Misery Hill 384.68' AMSL
Turkey Hill 423.12' AMSL
Susquetonscut Brook
Brush Hill 370.34' AMSL
Gilman Pond
Papermill Pond
Bozrah Cemetery
Exit 22
Exit 24
Moose Lodge
Fitchville Rd
Exit 79
Yantic River
Bashan Hill 498.56' AMSL
Cemetery (East Of Bashan Hill Road)
Fitchville Pond
Camp Odetah - Linda Adelman
Bean Hill Green
Bmx Track Recreation Field
Gardner Brook
Town Open Space (Wachconah Drive)
Exit 81E
Exit 81W
Samuel Huntington School - Huntington School Playground
Norwich Town Green Cemetery (old Cemetery Lane)
Town Street
Lowthorpe Meadow Natural Area
Thomas Kelly Junior High School
Mohegan Park
W.w. Backus Hospital Playground
Yantic Cemetery
Cemetery (Scott Hill Road)
Gardner Brook
Arlewitz Pond
Parker Cemetery
Wawecus Hill 501.84' AMSL
Bear Hill 498.56' AMSL
Cemetery (North Of Route 163)
Camp Tadma (Boy Scouts Of America)
Norwich Fish & Game Club
Norwich Falls Pond
Chelsea Parkade
William Buckingham School
Lake Street Playground
Columbus Park
Cemetery (of Israel)
John Stanton School
Lucas Park
Bishop School
Fitzgerald Field
Fox Hill 137.76' AMSL
Mohegan Pleasant 134.19' AMSL
Thames River
Cemetery (Old Salem Road)
Norden Village (2 Parcels)
Sacred Heart Cemetery
Ox Hill 290.32' AMSL
Saint Joseph Cemetery
Saint Marys Cemetery
Greenville School
Greenville Playground
Greenville Play Area
Hickory Street Cemetery
Cemetery (Hamilton Avenue)
Hamilton Avenue Playground
Cemetery (South Of Route 165)
Guile Cemetery
Wequonnoc School
Taftville Tennis Courts
German Shooting Club
Taftville Pond
Occum Pond
Little River
Versailles Pond
Whitaker Grounds (Rocky Hollow Road)
Town Open Space (Owned By City Of Norwich)
Lisbon Country Golf Club
Camp P (difrancesco)
Exit 83A
Quinebaug River
Shetucket River
Route 165
Route 2
Route 82
Route 12
Route 97
Route 395
Route 169
Route 163
Route 32
Route 87
Route 2A
Route 616
Route 207
Route 165
Route 12 River Road
Fitchville Road
Scott Hill Road
Bozrah Street
Norwich Avenue
Hickory Street
Broadway
Washington Street
Town Street
Main Street
Franklin Street
Thames River
Occum Road
Taftville Road
Quinebaug Highway
Jail Hill Road
Hallville Road
Chamberlain Highway
Fairmont Avenue
Boswell Avenue
Sherman Avenue
Jail Hill
Bean Hill
Holy Hose Hill
Lovers Hill 237.23' AMSL



Existing Verizon Wireless 2100 MHz Coverage
Norwich, Connecticut and Surrounding Area
(*Map Scale is 1:18,000)

FRANKLIN CT
NORTH FRANKLIN CT SC-2 - A
NORWICH CT
NORWICH 6 CT - A
NORWICH 4 CT
BOZRAH EAST CT
NORWICH WEST CT - ATC Monopole
NORWICH 2 CT

FRANKLIN
LEBANON
BOZRAH
NORWICH
SPRAGUE
LISBON
PRESTON

Indian Burial Ground Cemetery
Smallpox Cemetery
Hearthstone Hill 498.56' AMSL
Pease Brook
Cemetery (Waterman Road)
4-H Club Camp
Standish Hill 501.84' AMSL
Blue Hill 498.56' AMSL
Military Hill 378.61' AMSL
Turkey Hill 423.12' AMSL
Susquetonscut Brook
Gilman Pond
Papermill Pond
Bozrah Cemetery
Exit 22
Scott Hill Road
Bashan Hill 498.56' AMSL
Cemetery (East Of Bashan Hill Road)
Exit 23
Moose Lodge
Yantic River
Fitchville Pond
Camp Odetah - Linda Adelman
Bmx Track Recreation Field
Gardner Brook
Town Open Space (Wachconah Drive)
Cemetery (Scott Hill Road)
Ariewetts Pond
Parker Cemetery
Cemetery (North Of Route 163)
Bear Hill 498.56' AMSL
Camp Tadma (Boy Scouts Of America)
Norwich Fish & Game Club
Exit 24
Yantic Pond
Bean Hill Green
Ox Hill 390.32' AMSL
Sacred Heart Cemetery
Samuel Huntington School Playground
Norwich Town Green
Cemetery (old Cemetery Lane)
Thomas Kelly Junior High School
Lowthorpe Meadow Natural Area
Mohegan Park
W.w. Backus Hospital Playground
Yantic Cemetery
Norwich Falls Pond
Chelsea Parkade
William Buckingham School
Lake Street Playground
Columbus Park
Cemetery (Oak Street)
Bishop School
Fitzgerald Field
John Stanton School
Lucas Park
Mount Pleasant 354.18' AMSL
Thames River
Cemetery (Old Salem Road)
Horden Village (2 Parcels)
Laurel Hill 289.92' AMSL
Fort Hill 137.76' AMSL
Versailles Pond
Little River
Occum Pond
Town Open Space (Owned By City Of Norwich)
Whitaker Grounds (Rocky Hollow Road)
Lisbon Country Golf Club
Camp P (difrancesco)
Exit 83A
Taftville Pond
Cemetery (Canterbury Turnpike)
Wequonnoc School
Taftville Tennis Courts
German Shooting Club
Saint Joseph Cemetery
Saint Mary's Cemetery
Shetucket River
Quinebaug River
Boswell Avenue
Greenville School
Greenville Playground
Greenville Play Area
Hickory Street Cemetery
Cemetery (Hamilton Avenue)
Hamilton Avenue Playground
Cemetery (South Of Route 165)
Guile Cemetery
Route 169
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Legend

- Proposed Verizon Wireless Facility
- Existing Verizon Wireless Facilities
- Major Route
- Town Line
- Existing RSRP >=-85 (in building)
- Existing RSRP >=-95 (vehicular)
- Existing RSRP >=-105 (ouldoor)

verizon
ALL-POINTS

N W E S

0 0.5 1 Miles

Map Notes:
This map was prepared at a map scale of 1:18,000 at 24" by 36" layout. Report copies have been reduced to 11" x 17". Refer to graphic scale. Open Space, Schools, and State Forests/Parks are depicted using available State GIS data, which may be outdated in some areas.
Base map: ESRI Shaded Relief

Existing and Proposed Verizon Wireless 2100 MHz Coverage
Norwich, Connecticut and Surrounding Area
(*Map Scale is 1:18,000)

FRANKLIN CT
NORTH FRANKLIN CT SC-2 -A
NORWICH CT
BOZRAH EAST CT
NORWICH 4 CT
NORWICH 6 CT - A
NORWICH WEST CT - ATC Monopole
NORWICH 2 CT

FRANKLIN
LEBANON
BOZRAH
NORWICH
SPRAGUE
LISBON
PRESTON

Indian Burial Ground Cemetery
Smallpox Cemetery
Hearthstone Hill 498.56' AMSL
Pease Brook
Cemetery (Waterman Road)
4-H Club Camp
Standish Hill 501.84' AMSL
Blue Hill 498.56' AMSL
Harry Hill 340.67' AMSL
Turkey Hill 423.12' AMSL
Susquetonscut Brook
Gilman Pond
Bash Hill 376.34' AMSL
Papermill Pond
Bozrah Cemetery
Exit 22
Scott Hill Road
Bashan Hill 498.56' AMSL
Cemetery (East Of Bashan Hill Road)
Yantic River
Exit 23
Moose Lodge
Fitchville Road
Fitchville Pond
Camp Odetah - Linda Adelman
Bear Hill Green
Yantic Pond
Exit 81
Ox Hill 390.32' AMSL
Sacred Heart Cemetery
Versailles Pond
Little River
Whitaker Grounds (Rocky Hollow Road)
Deans Pond
Town Open Space (Owned By City Of Norwich)
Lisbon Country Golf Club
Camp P (difrancesco)
Exit 82A
Cemetery (Canterbury Turnpike)
Taftville Pond
Occum Road
Bunnell Hill Road
German Shooting Club
Wequonnoc School
Taftville Tennis Courts
Bmx Track Recreation Field
Gardner Brook
Town Open Space (Wachconah Drive)
Samuel Huntington School, Huntington School Playground
Norwich Town Green Cemetery (old Cemetery Lane)
Lowthorpe Meadow Natural Area
Thomas Kelly Junior High School
Saint Joseph Cemetery
Saint Marys Cemetery
Shetucket River
Quinebaug River
Mohegan Park
W.W. Backus Hospital Playground
Yantic Cemetery
Cemetery (Scott Hill Road)
Arnewitz's Pond
Parker Cemetery
Cemetery (North Of Route 163)
Wawecus Hill 501.68' AMSL
Bear Hill 496.56' AMSL
Camp Tadma (Boy Scouts Of America)
Norwich Fish & Game Club
Chelsea Parkade
Norwich Falls Pond
Greenville School
Greenville Playground
Greenville Play Area
Hickory Street Cemetery
Cemetery (Hamilton Avenue)
Hamilton Avenue Playground
William Buckingham School
Lake Street Playground
Columbus Park
Cemetery (Oak Street)
Holy Hope Cemetery
Lucas Park
John Stanton School
Bishop School
Fitzgerald Field
Fox Hill 137.16' AMSL
Egypt Hill 308.97' AMSL
Mount Pleasant 354.18' AMSL
Thames River
Cemetery (Old Salem Road)
Norden Village (2 Parcels)
Dodge Street
Route 12
Route 165
Route 82
Route 2A
Route 163
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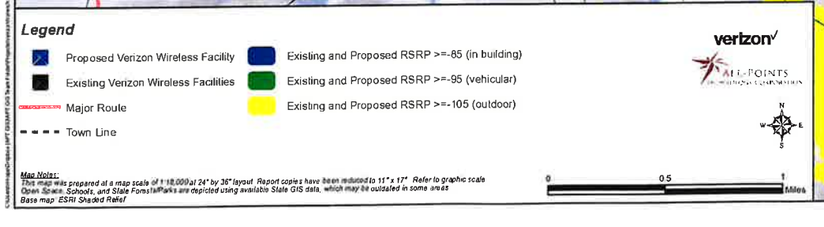


ATTACHMENT 3

verizon

WIRELESS COMMUNICATIONS FACILITY

SITE NAME: NORWICH 4 CT

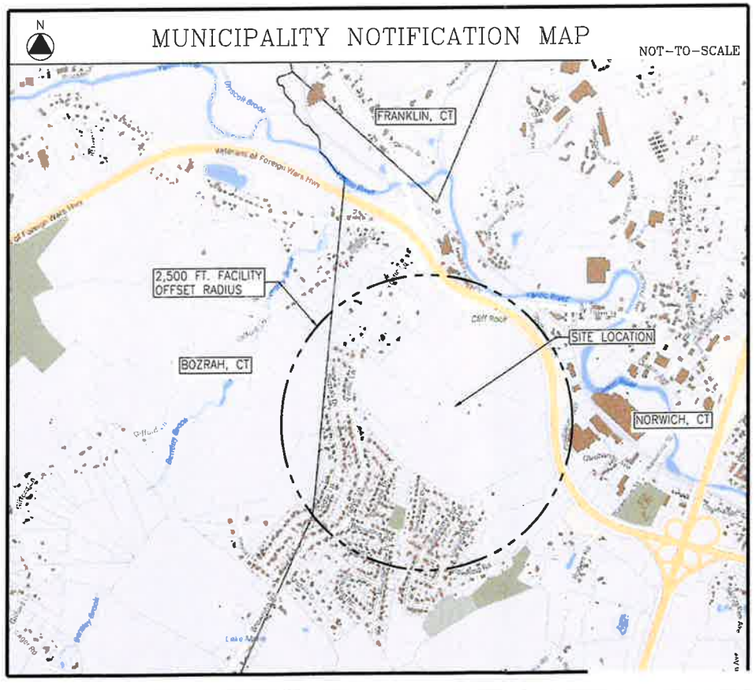
110 YANTIC LANE
NORWICH, CT 06360

PROJECT DESCRIPTION

- INSTALLATION OF A 110 FT. MONOPOLE/TOWER AND FENCED-IN COMPOUND AT GRADE
- INSTALLATION OF OUTDOOR CABINETS AND A PROPANE FUELED BACK-UP EMERGENCY GENERATOR ON A 16'-0"x10'-0" EQUIPMENT PAD WITHIN THE COMPOUND
- INSTALLATION OF (9) PANEL ANTENNAS AND ASSOCIATED DEVICES ON THE MONOPOLE
- INSTALLATION OF CABLING FROM EQUIP. CABINETS TO ANTENNAS
- ELECTRICAL & TELEPHONE CONNECTIONS TO EXISTING UTILITY DEMARCATION POINTS

MUNICIPALITY NOTIFICATION MAP

NOT-TO-SCALE



PROJECT SUMMARY

SITE NAME:	NORWICH 4 CT
SITE ADDRESS:	110 YANTIC LANE NORWICH, CT 06360
PROPERTY OWNER:	ROBERT W LARSEN 110 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 99 EAST RIVER DR., 9TH FL. EAST HARTFORD, CT 06108
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-1	SITE PLAN
C-2	ENLARGED SITE PLAN
C-3	COMPOUND PLAN, NORTH ELEVATION & ANTENNA PLAN

Cellco Partnership
d/b/a Verizon Wireless
verizon
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

DAVID WEINPAHL, P.E.
CT LIC. NO. 22144

NO.:	DATE	SUBMISSIONS
0	02.08.20	REVIEW SET

DRAWN BY: MF
CHECKED BY: DW

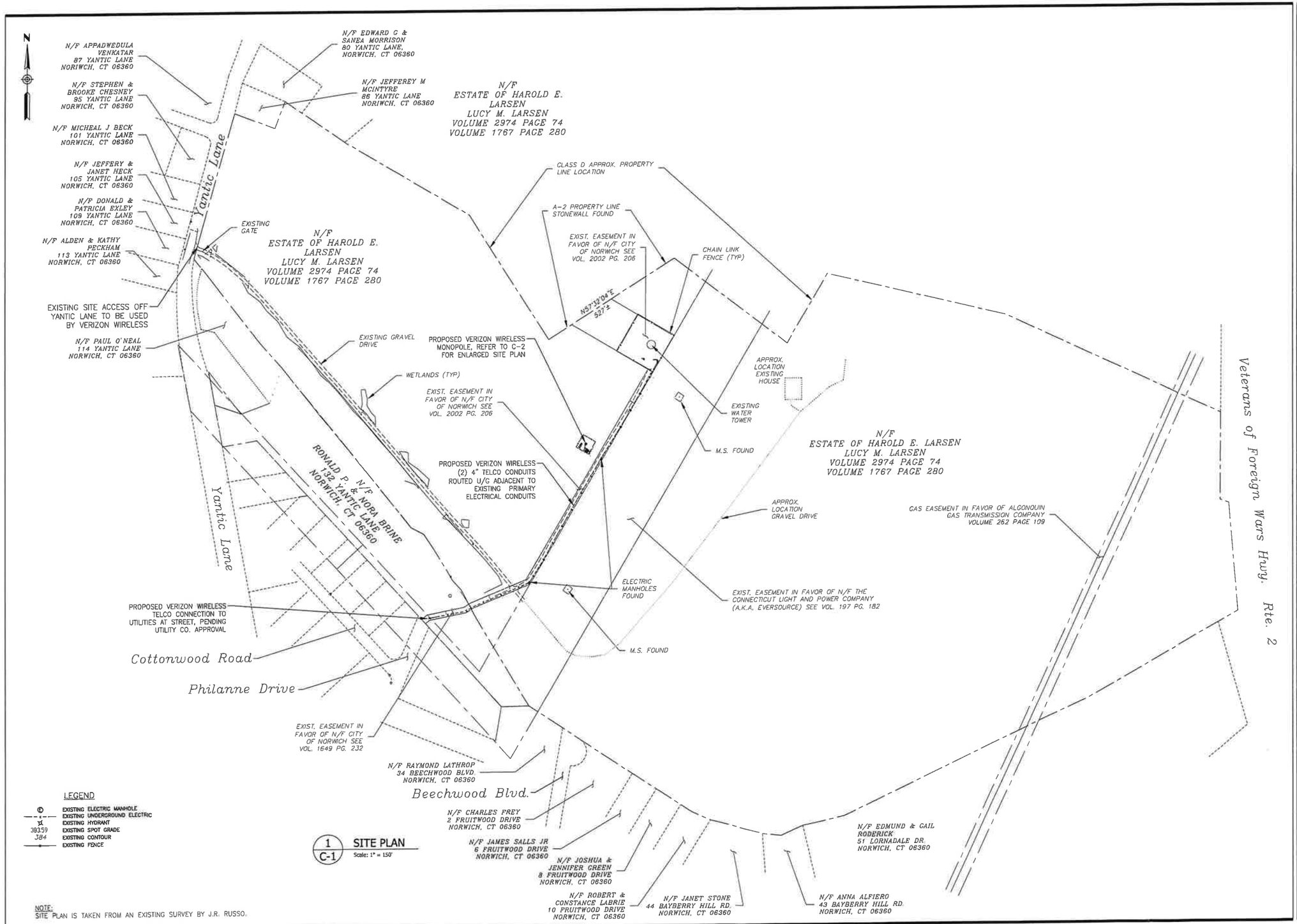
NEW BUILD
MACRO

SITE NAME:
NORWICH 4 CT

PROJECT INFORMATION:
110 YANTIC LANE
NORWICH, CT 06360

DRAWING TITLE:
TITLE SHEET

SHEET NUMBER:
T-1



Cellco Partnership
d/b/a Verizon Wireless
verizon
WIRELESS COMMUNICATIONS FACILITY
20 ALEXANDER DRIVE
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MF	DW

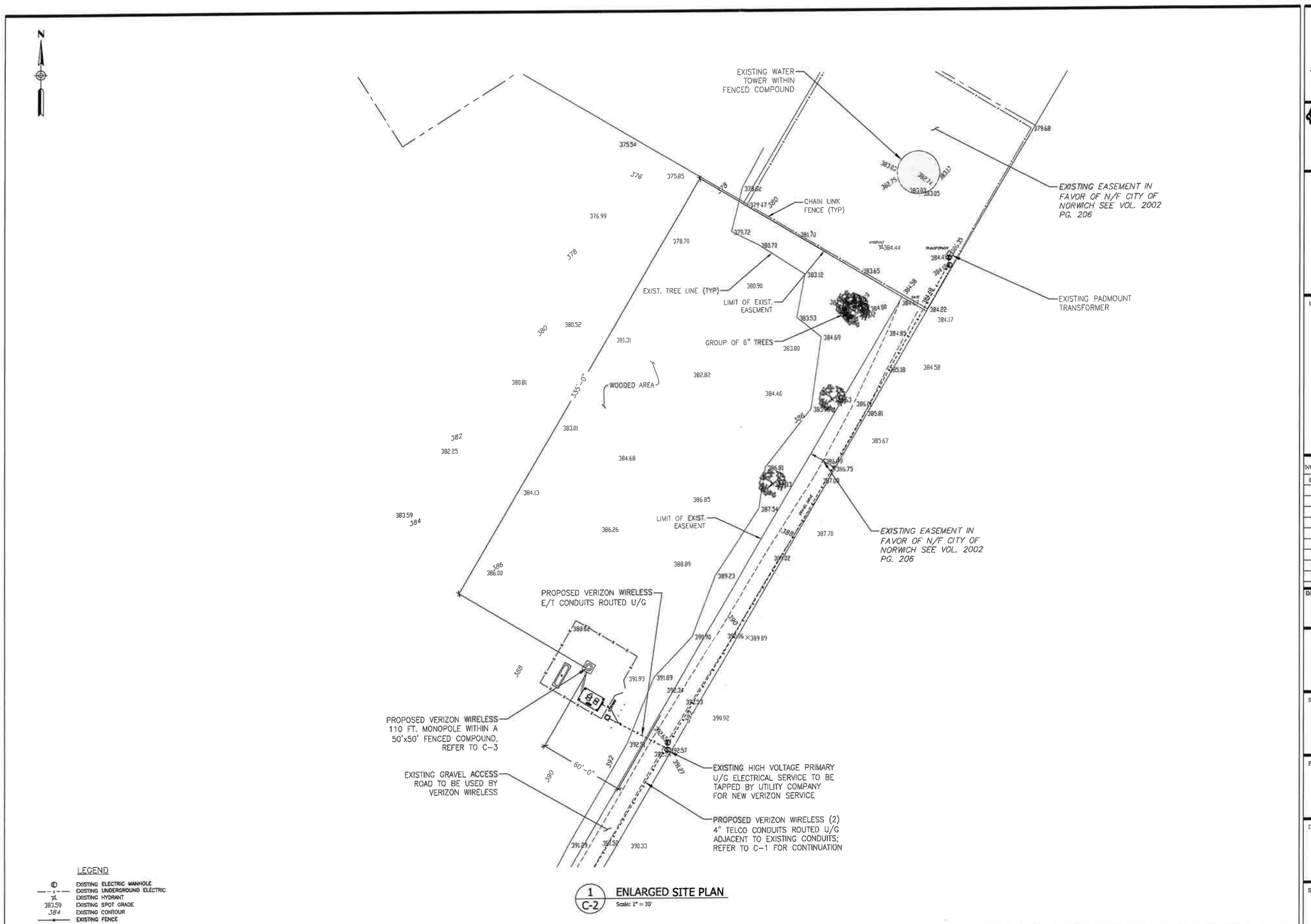
NEW BUILD
MACRO

SITE NAME:
NORWICH 4 CT

PROJECT INFORMATION:
110 YANTIC LANE
NORWICH, CT 06360

DRAWING TITLE:
SITE PLAN

SHEET NUMBER:
C-1



1 / C-2 **ENLARGED SITE PLAN**
Scale: 1" = 30'

LEGEND

- EXISTING ELECTRIC MANHOLE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING HYDRANT
- 383.59 EXISTING SPOT GRADE
- 384 EXISTING CONTOUR
- EXISTING FENCE

Cellco Partnership
d/b/a Verizon Wireless

verizon

WIRELESS COMMUNICATIONS FACILITY
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

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88 Foundry Pond Road
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NO.:	DATE:	SUBMISSIONS
0	02.08.20	REVIEW SET

DRAWN BY:	CHECKED BY:
MF	DW

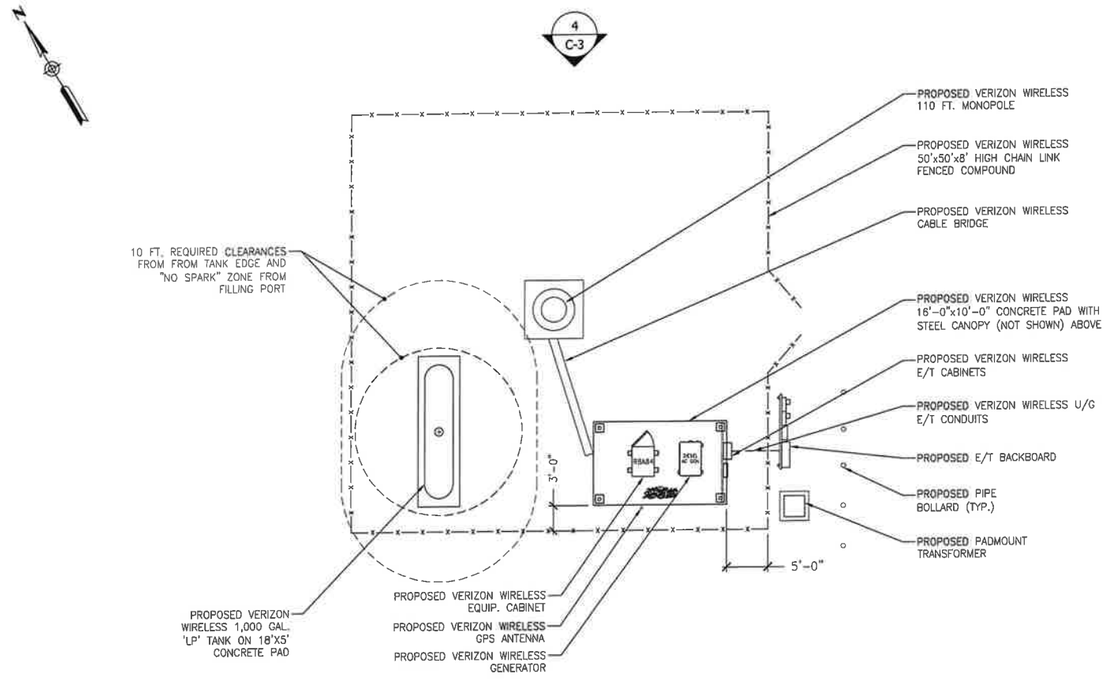
NEW BUILD
MACRO

SITE NAME:
NORWICH 4 CT

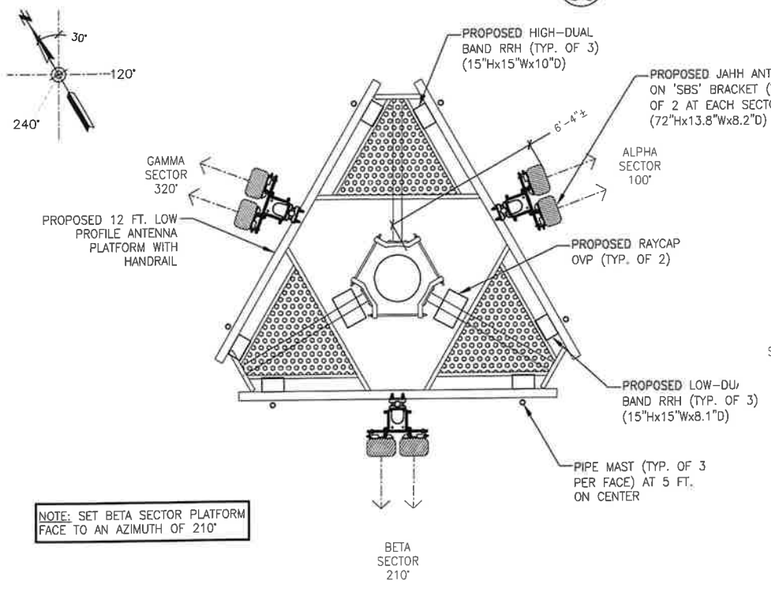
PROJECT INFORMATION:
110 YANTIC LANE
NORWICH, CT 06360

DRAWING TITLE:
ENLARGED
SITE PLAN

SHEET NUMBER:
C-2

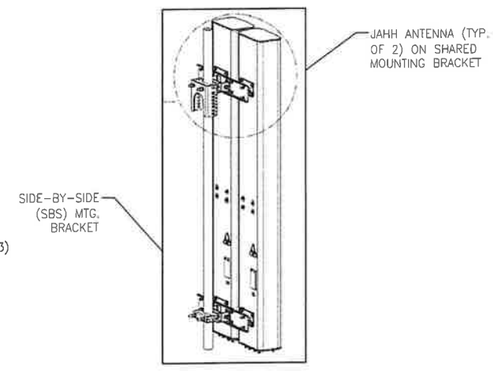


1 C-3 **COMPOUND PLAN**
Scale: 1/8" = 1'-0"

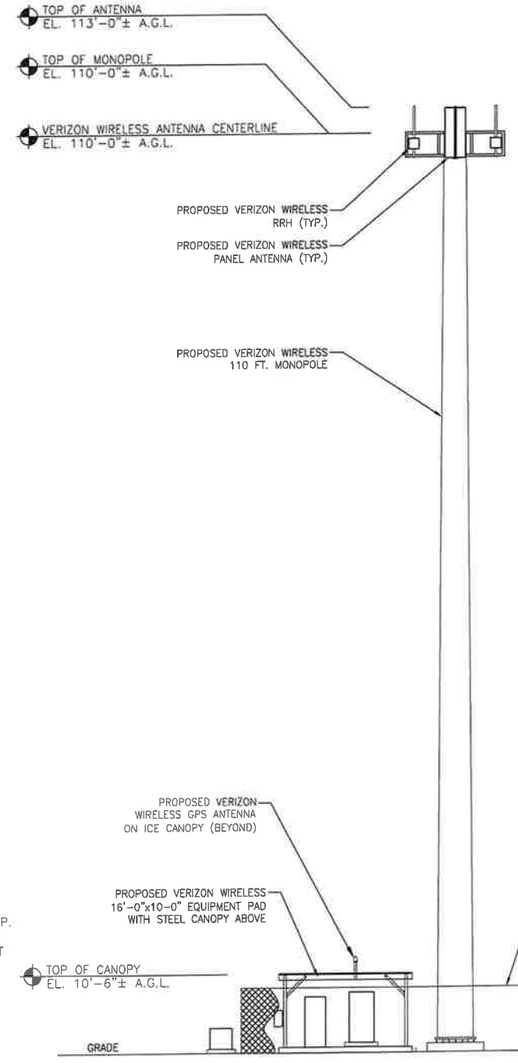


NOTE: SET BETA SECTOR PLATFORM FACE TO AN AZIMUTH OF 210°

2 C-3 **ANTENNA PLAN @ 110 FT. A.G.L.**
Scale: 1/4" = 1'-0"



3 C-3 **TYPICAL ANTENNA ELEVATION**
Scale: N.T.S.



4 C-3 **NORTH ELEVATION**
Scale: 1/8" = 1'-0"

Cellco Partnership
d/b/a Verizon Wireless
verizon
WIRELESS COMMUNICATIONS FACILITY
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

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Cold Spring, NY 10516
onair@optonline.net
201-456-4624

LICENSURE

DAVID WEINPAHL, P.E.
CT LIC. NO. 22144

NO.:	DATE:	SUBMISSIONS
0	02.08.20	REVIEW SET

DRAWN BY:	CHECKED BY:
MF	DW

NEW BUILD
MACRO

SITE NAME:
NORWICH 4 CT

PROJECT INFORMATION:
110 YANTIC LANE
NORWICH, CT 06360

DRAWING TITLE:
COMPOUND PLAN, NORTH ELEVATION & ANTENNA PLAN

SHEET NUMBER:
C-3

ATTACHMENT 4

ALL-POINTS TECHNOLOGY CORPORATION

PRELIMINARY VISUAL ASSESSMENT

Date: February 28, 2020

To: Verizon Wireless
20 Alexander Drive
Wallingford, CT 06492

From: Brian Gaudet

Re: Proposed Telecommunications Facility – Norwich 4
110 Yantic Lane
Norwich, Connecticut

Cellco Partnership d/b/a Verizon Wireless ("Verizon") has identified a proposed location for development of a wireless telecommunications facility at 110 Yantic Lane in Norwich, Connecticut (the "Host Property"). The proposed Facility would include a 110-foot tall steel monopole and equipment within a ±50-foot by ±50-foot fenced compound (the "Facility") located in the central portion of the Host Property

The Host Property consists of a single parcel totaling ±115 acres of land located immediately south and west of Connecticut State Route 2 ("Route 2") and east of Yantic Lane. It is developed with a municipal water supply tank, residence and salvage yard. The remainder of the property is wooded with a transmission line corridor intersecting the parcel. Residential neighborhoods are located west and south of the Host Property. Route 2 is located to the north and west with commercial and industrial development beyond Route 2.

At the request of the Verizon, All-Points Technology Corporation, P.C. ("APT") has prepared initial viewshed mapping to provide a preliminary evaluation of the visibility associated with the proposed Facility. To conduct this assessment, a predictive computer model was developed specifically for this project using ESRI's ArcMap Geographic Information System ("GIS")[1] software and available GIS data. The predictive model provides an initial estimate of potential visibility throughout a pre-defined "Study Area", in this case a two-mile radius surrounding the proposed Facility location.

The predictive model incorporates project and Study Area-specific data, including the Facility location, its ground elevation and the proposed Facility height, as well as the surrounding topography, existing vegetation, and structures (the primary features that can block direct lines of sight). The Study Area extends into the neighboring municipalities of Bozrah to the west and Franklin to the north. Route 2 bisects the Study Area in roughly a northwest to southeast direction. Interstate 395 extends generally north to south in the eastern portion of the Study Area.

---

[1] ArcMap is a Geographic Information System desktop application developed by the Environmental Systems Research Institute for creating maps, performing spatial analysis, and managing geographic data.

A digital surface model ("DSM"), capturing both the natural and built features on the Earth's surface, was generated for the extent of the Study Area utilizing State of Connecticut 2016 LiDAR[2] LAS[3] data points. LiDAR is a remote-sensing technology that develops elevation data by measuring the time it takes for laser light to return from the surface to the instrument's sensors. The varying reflectivity of objects also means that the "returns" can be classified based on the characteristics of the reflected light, normally into categories such as "bare earth," "vegetation," "road," or "building". Derived from the 2016 LiDAR data, the LAS datasets contain the corresponding elevation point data and return classification values. The Study Area DSM incorporates the first return LAS dataset values that are associated with the highest feature in the landscape, typically a treetop, top of a building, and/or the highest point of other tall structures.

Once the DSM was generated, ESRI's Viewshed Tool was utilized to identify locations within the Study Area where the proposed Facility may be visible. ESRI's Viewshed Tool predicts visibility by identifying those cells[4] within the DSM that can be seen from an observer location. Cells where visibility was indicated were extracted and converted from a raster dataset to a polygon feature which was then overlaid onto an aerial photograph and topographic base map. Since the DSM includes the highest relative feature in the landscape, isolated "visible" cells are often indicated within heavily forested areas (e.g., from the top of the highest tree) or on building rooftops during the initial processing. It is recognized that these areas do not represent typical viewer locations and overstate visibility. As such, the resulting polygon feature is further refined by extracting those areas. The viewshed results are also cross-checked against the most current aerial photographs to assess whether significant changes (a new housing development, for example) have occurred since the time the LiDAR-based LAS datasets were captured.

The results of the preliminary analysis are intended to provide a representation of those areas where portions of the Facility may potentially be visible to the human eye without the aid of magnification, based on a viewer eye-height of five (5) feet above the ground and the combination of intervening topography, trees and other vegetation, and structures. However, the Facility may not necessarily be visible from all locations within those areas identified by the predictive model, which has limitations. For instance, it is important to note that the computer model cannot account for mass density, tree diameters and branching variability of trees, or the degradation of views that occurs with distance. As a result, some areas depicted on the viewshed maps as theoretically offering potential visibility of the Facility may be over-predicted because the quality of those views is not sufficient for the human eye to recognize the Facility or discriminate it from other surrounding or intervening objects.

The preliminary viewshed mapping results indicate that predicted year-round visibility associated with the proposed Facility could include up to approximately ±61 acres (less than one percent of the 8,042-acre Study Area). The predicted year-round visibility occurs primarily on commercial and industrial parcels along Connecticut Route 32, Connecticut Route 87 and Stockhouse Road. A second, smaller area of year-round visibility is predicted east of the Facility site near the Route 2 and I-395 Interchange and commercial properties in the vicinity of exit 82 on I-395. Predicted areas of year-round visibility are also depicted to the south along Philanne Drive and Beechwood Boulevard. The proposed Facility would be located approximately 335 feet south of the water tank, which should assist in softening any views of the Facility from this general area. No year-round visibility is predicted to areas west and southwest of the Facility.

---

[2] Light Detection and Ranging.

[3] An LAS file is an industry-standard binary format for storing airborne LiDAR data.

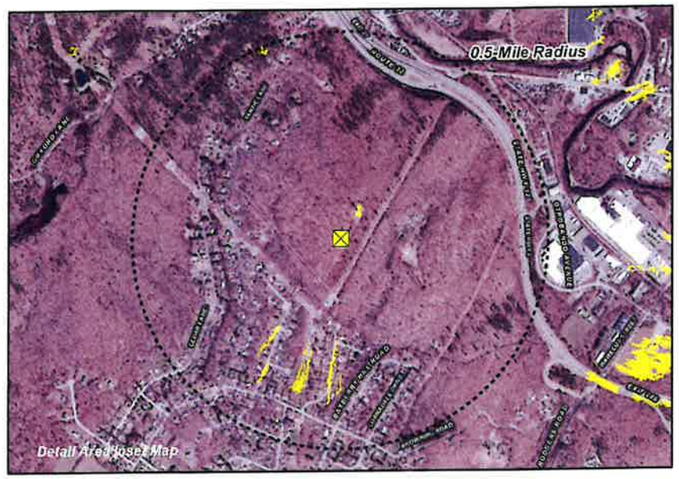
[4] Each DSM cell size is 1 square meter.

The maps provided as attachments offer a preliminary basis for understanding the extent of visibility that may occur throughout the Study Area, but they do not address the character of those potential views. Note also that the results of the computer model have not been field verified. Our experience is that the computer model's sensitivity typically results in the initial mapping being over-predictive of the Facility's viewshed. These initial results will be field-verified and presented in Verizon's application to the Connecticut Siting Council for a Certificate of Environmental Compatibility and Public Need.

Attachments

C:\Users\mkeppel\Dropbox (APT GIS)\APT GIS Team Folder\Projects\Verizon\Norwich 4 CT\mxd\Preliminary Norwich 4 Viewshed Aerial.mxd

Statewide and Regional Overview Map



Detail Area Inset Map

Preliminary Viewshed Analysis Map

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

Proposed facility height is 110 feet AGL.
Forest canopy height is derived from LiDAR data.
Study area encompasses a two-mile radius and includes 8,042 acres.
Information provided on this map has not been field verified
Base Map Source: 2019 Aerial Photograph (CTECO)
Map Date: February 2020

Legend

- Proposed Site
- Study Area (2-Mile Radius)
- Predicted Year-Round Visibility (61 Acres)
- Municipal Boundary
- Trail
- Scenic Highway
- DEEP Boat Launches
- Municipal and Private Open Space Property
- State Forest/Park

Protected Open Space Property

- Federal
- Land Trust
- Municipal
- Private
- State

Data Sources:

Physical Geography / Background Data

A digital surface model (DSM) was created from the State of Connecticut 2016 LiDAR LAS data points. The DSM captures the natural and built features on the Earth's surface.

Municipal Open Space, State Recreation Areas, Trails, County Recreation Areas, and Town Boundary data obtained from CT DEEP. Scenic Roads: CTDOT State Scenic Highways (2015); Municipal Scenic Roads (compiled by APT)

Dedicated Open Space & Recreation Areas

Connecticut Department of Energy and Environmental Protection (DEEP): DEEP Property (May 2007; Federal Open Space (1997); Municipal and Private Open Space (1997); DEEP Boat Launches (1994)

Connecticut Forest & Parks Association, Connecticut Walk Books East & West

Other

CTDOT Scenic Strips (based on Department of Transportation data)

Notes

***Not all the sources listed above appear on the Viewshed Maps. Only those features within the scale of the graphic are shown.*

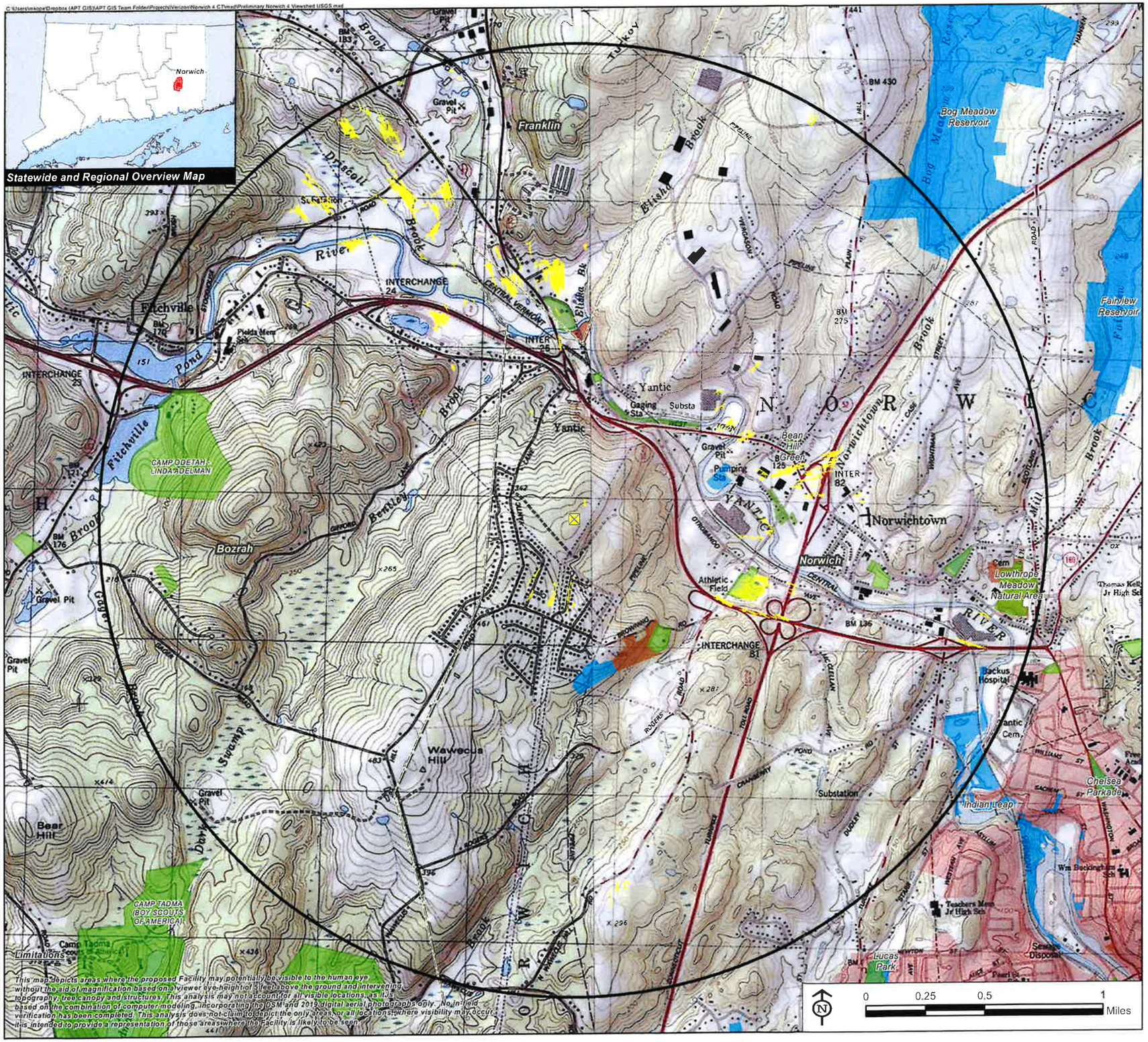
Limitations:

This map depicts areas where the proposed Facility may potentially be visible to the human eye without the aid of magnification based on a viewer eye-height of 5 feet above the ground and intervening topography, tree canopy and structures. This analysis may not account for all visible locations, as it is based on the combination of computer modeling, incorporating the DSM and 2019 digital aerial photographs only. No in-field verification has been completed. This analysis does not claim to depict the only areas or all locations, where visibility may occur. It is intended to provide a representation of those areas where the Facility is likely to be seen.

0 0.25 0.5 1 Miles

verizon

ALL-POINTS TECHNOLOGY CORPORATION



Preliminary Viewshed Analysis Map

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

Proposed facility height is 110 feet AGL.
Forest canopy height is derived from LiDAR data.
Study area encompasses a two-mile radius and includes 8,042 acres.
Information provided on this map has not been field verified
Base Map Source: USGS 7.5 Minute Topographic Quadrangle Maps, Fitchville, CT (1983) and Norwich, CT (1983)
Map Date: February 2020

Legend

- Proposed Site
- Study Area (2-Mile Radius)
- Predicted Year-Round Visibility (61 Acres)
- Municipal Boundary
- Trail
- Scenic Highway
- DEEP Boat Launches
- Municipal and Private Open Space Property
- State Forest/Park

Protected Open Space Property

- Federal
- Land Trust
- Municipal
- Private
- State

Data Sources:

Physical Geography / Background Data

A digital surface model (DSM) was created from the State of Connecticut 2016 LiDAR LAS data points. The DSM captures the natural and built features on the Earth's surface.

Municipal Open Space, State Recreation Areas, Trails, County Recreation Areas, and Town Boundary data obtained from CT DEEP. Scenic Roads: CTDOT State Scenic Highways (2015); Municipal Scenic Roads (compiled by APT)

Dedicated Open Space & Recreation Areas

Connecticut Department of Energy and Environmental Protection (DEEP): DEEP Property (May 2007; Federal Open Space (1997); Municipal and Private Open Space (1997); DEEP Boat Launches (1994)

Connecticut Forest & Parks Association, Connecticut Walk Books East & West

Other

CTDOT Scenic Strips (based on Department of Transportation data)

Notes

***Not all the sources listed above appear on the Viewshed Maps. Only those features within the scale of the graphic are shown.*

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ATTACHMENT 5

Site Name: Norwich 4 CT

Cumulative Power Density

Operator	Operating Frequency	Number of Trans.	ERP Per Trans.	Total ERP	Distance to Target	Calculated Power Density	Maximum Permissible Exposure*	Fraction of MPE
	(MHz)		(watts)	(watts)	(feet)	(mW/cm^2)	(mW/cm^2)	(%)
VZW CBRS	3600	0		0	110	0.0000	2.4	0.00%
VZW PCS	1970	4	1526	6104	110	0.1814	1.0	18.14%
VZW Cellular	869	0		0	110	0.0000	0.579333333	0.00%
VZW Cellular	880	4	381	1524	110	0.0453	0.586666667	7.72%
VZW AWS	2145	4	1494	5976	110	0.1776	1.0	17.76%
VZW 700	746	4	628	2512	110	0.0747	0.497333333	15.01%

Total Percentage of Maximum Permissible Exposure 58.63%

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Section 1.13101 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992

MHz = Megahertz
mW/cm^2 = milliwatts per square centimeter
ERP = Effective Radiated Power

Absolute worst case maximum values used, including the following assumptions:
1. closest accessible point is distance from antenna to base of pole;
2. continuous transmission from all available channels at full power for indefinite time period; and,
3. all RF energy is assumed to be directed solely to the base of the pole.

ATTACHMENT 6

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)[1] 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. **110 Yantic Lane, Norwich CT:** Cellco entered into a lease agreement with Robert Larsen, the owner of this parcel, for the development of the Norwich 4 Facility.

2. **140 Yantic Road, Norwich CT:** Cellco explored the installation of antennas on an old industrial smoke stack on this parcel. This site, while capable of off-loading 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. **170 Yantic Road, Norwich CT:** 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. **275 Otrobando Avenue, Norwich CT:** 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. **110 Yantic Lane, Norwich, CT:** 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.

[1] 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

N
W E
S

800 400 0 800
Feet

verizon

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Map Notes:
Base Map Source: 2019 Aerial Photograph (CT ECO)
Map Scale: 1 inch = 800 feet
Map Date: February 2020