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Also admitted in Massachusetts

January 7, 2020

Via Federal Express

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

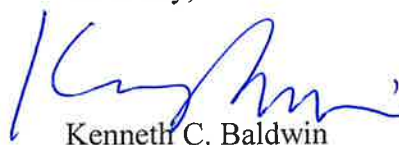
Re: **Petition No. 1390 – Petition of Cellco Partnership d/b/a Verizon Wireless for a Declaratory Ruling on the Need to Obtain a Siting Council Certificate for the Installation of a Wireless Telecommunications Facility and Centralized Radio Access Network Hub Facility at 951 Bank Street, New London, Connecticut**

Dear Ms. Bachman:

On behalf of Cellco Partnership d/b/a Verizon Wireless (“Cellco”), enclosed please find the original and fifteen (15) copies of Cellco’s Responses to the Siting Council’s Interrogatories related to Petition No. 1390.

If you have any questions or need any additional information please do not hesitate to contact me.

Sincerely,



Kenneth C. Baldwin

KCB/kmd
Enclosure

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:	:	
	:	
A PETITION OF CELLCO PARTNERSHIP	:	PETITION NO. 1390
D/B/A VERIZON WIRELESS FOR A	:	
DECLARATORY RULING ON THE NEED TO	:	
OBTAIN A SITING COUNCIL CERTIFICATE	:	
FOR THE INSTALLATION OF A WIRELESS	:	
TELECOMMUNICATIONS FACILITY AND	:	
CENTRALIZED RADIO ACCESS NETWORK	:	
HUB FACILITY AT 951 BANK STREET,	:	
NEW LONDON, CONNECTICUT	:	JANUARY 7, 2020

RESPONSES OF CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS
TO CONNECTICUT SITING COUNCIL INTERROGATORIES

On December 20, 2019, the Connecticut Siting Council (“Council”) issued Interrogatories to Cellco Partnership d/b/a Verizon Wireless (“Cellco”), relating to Petition No. 1390 (the “Petition”). Below are Cellco’s responses.

Question No. 1

Would the relocation of Cellco’s facility from the 59 Westwood Avenue tower to the proposed tower enhance wireless service or simply replace existing service?

Response

The new tower location will replace the wireless service that Cellco provides from the existing 59 Westwood Avenue facility and allow for the installation of certain system performance upgrades that will enhance wireless service from the new facility at the same time.

Question No. 2

Are any frequencies being installed to improve capacity to the area? If yes, for which frequency bands (e.g. 700, 850, 1900 and 2100 MHz)?

Response

Yes. The existing 59 Westwood Avenue facility currently provides service using only Cellco's 700 MHz and 2100 MHz frequencies. At the proposed 951 Bank Street facility, Cellco will deploy 700 MHz and 2100 MHz frequencies and add 850 MHz and 1900 MHz frequencies.

Question No. 3

Does Cellco intend to deploy 3500 MHz service at the proposed site?

Response

No. Cellco does not plan to deploy its 3500 MHz frequencies at the proposed facility at this time.

Question No. 4

Are there other wireless facilities listed in the FCC's licensing database in close proximity to the site? Would operation of Cellco's facility cause interference issues to these facilities? Would Cellco's antenna orientation, tilt angle and operating frequencies affect operation of these other wireless facilities?

Response

Yes. Cellco was able to identify FCC licensed frequencies on an adjacent parcel to the north (Callsign: KTI521); a license held by Jeffrey H. Suntup – 35.82 MHz and 35.86 MHz. It is our understanding that Mr. Suntup is a member of Slick LLC, an abutting property owner at 49 Westwood Avenue.

The frequencies deployed at the existing 59 Westwood Avenue facility (700 MHz and 2100 MHz) and those Cellco intends to deploy at the proposed 951 Bank Street Facility (700 MHz, 850 MHz 1900 MHz and 2100 MHz) are not close enough, on the radio spectrum, to the 35 MHz frequencies licensed to Mr. Suntup to cause interference. Cellco currently complies

with all the applicable FCC guidelines and regulations that are designed to prevent interference regardless of the orientation or tilt angle of the antennas on the proposed roof-top tower.

It is important to note that Cellco has been operating its existing wireless facility at 59 Westwood Avenue for nearly 30 years and is not aware of any issues or concerns being raised about interference by any other FCC licensed radio operators in the area around the Property.

Question No. 5

Would operation of Cellco's emergency generator create interference issues with other existing wireless communications systems in the vicinity of the site?

Response

Cellco is not aware of any situation where the operation of one of its back-up generators caused radio frequency interference with a wireless communications system. If such interference occurs, Cellco will take the necessary steps to address the issue. It is also important to remember that the backup generator will only run at times when commercial power to the cell site and C-RAN is unavailable.

Question No. 6

What is the nearest point of uncontrolled radio frequency exposure from the tower?
Provide a worst-case power density analysis for this location.

Response

The nearest point of uncontrolled access to the tower is a point on the ground adjacent to the subject building, approximately 48 feet to the east of the tower on the parcel owned by VAM Realty, LLC.

The Far Field Approximation tables included in the Petition, provide estimated RF emissions levels at various distances from the base of the tower. The tables illustrate that the

highest percentage of the FCC General Population Standard for RF emissions, varies based on frequency range and the overall distance from the tower. For example, for Cellco's LTE-700 MHz and LTE-850 MHz frequencies, the worst-case emissions level estimated will be 2.6% and 3.0% respectively, at a distance of 223.9 feet away from the tower. At CDMA-850 MHz, the worst-case emissions level is 0.1% of the FCC standard at a distance of 162.4 feet from the tower. At LTE-AWS (2100 MHz) frequencies, the worst-case emissions level is 0.8% of the FCC standard at a distance of 414.1 feet from the tower. At LTE-PCS (1900 MHz), the worst-case emissions level is 1.1% of the FCC standard at a distance of 45.1 feet from the tower. In each case, the worst-case emissions levels is significantly below the FCC standard. (See Attachment 1).

Question No. 7

Provide a diagram that shows both the existing 59 Westwood Avenue facility and the proposed facility. What is the distance between the existing tower facility and proposed tower facility?

Response

See Attachment 2. The distance between the 59 Westwood Avenue facility and proposed facility at 951 Bank Street is approximately 290 feet.

Question No. 8

Regarding the existing 59 Westwood Avenue tower;

- a) What is the height of the tower?
- b) Who owns the tower?
- c) Would the tower be removed after Cellco transfers its equipment to the proposed site, if the proposed site is approved?

Response

- a) According to the Siting Council's Telecommunications Database, the existing tower at 59 Westwood Avenue extends to a height of 80 feet above ground level.
- b) The existing tower at 59 Westwood Avenue is owned by Atlantic Broadband, a cable television company with headquarters in Quincy MA.
- c) Cellco does not know if Atlantic Broadband intends to remove the tower after Cellco relocates to the new roof-top tower at 951 Bank Street.

Question No. 9

Is it possible to utilize the existing facility at the 59 Westwood Avenue site for the proposed installation?

Response

No. The existing tower at 59 Westwood Avenue is not structurally capable of supporting the important antenna and equipment upgrades needed to provide Cellco customers and emergency service providers with enhanced wireless services in the area around the New London Relo Facility.

Question No. 10

Is it possible to utilize the existing tower at 951 Bank Street (referenced in footnote 1 on page 1) for Cellco's antenna installation?

Response

No. The existing roof-top tower at 951 Bank Street is not structurally capable of supporting Cellco's antennas and related equipment.

Question No. 11

Petition p. 4 states notice to the Federal Aviation Administration (FAA) is required.

Provide the following:

- a) Is it expected that tower lighting and/or marking is required?
- b) Does the existing 59 Westwood Avenue tower have FAA lighting?
- c) Does the existing 951 Bank Street tower have FAA lighting?
- d) If FAA lighting is required for the proposed facility, would Cellco be amenable to lowering the proposed facility height to avoid FAA lighting?

Response

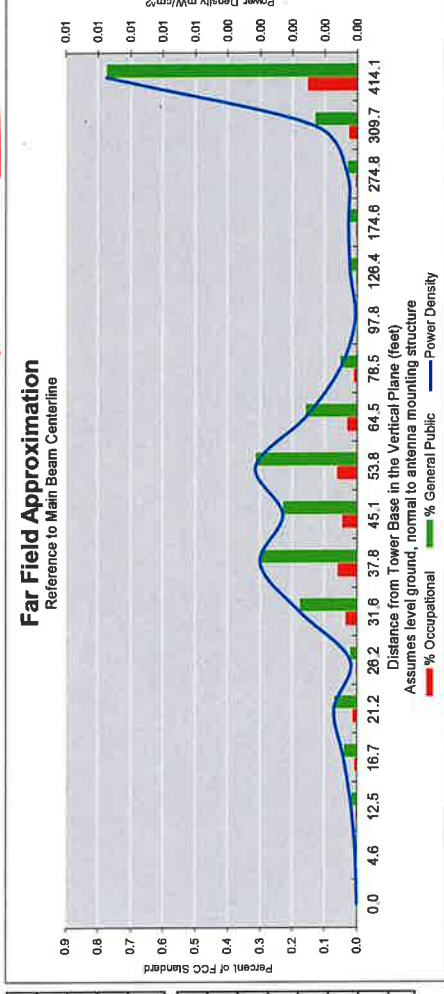
- a) Cellco does not anticipate that marking or lighting of the new roof-top tower will be required by the FAA. The existing tower at 59 Westwood Avenue is slightly taller than the proposed tower and does not currently maintain any FAA marking or lighting.
- b) No.
- c) No.
- d) In the unlikely event that FAA marking, or lighting of the proposed roof-top tower is required, Cellco would commit to investigate the possibility of lowering the height to avoid this marking and/or lighting requirement.

ATTACHMENT 1

Far Field Approximation
with downtilt variation

**Estimated Radiated Emission
Single Emitter Far Field Model
Dipole/Wire/Yagi Antenna Types**

Location:	New London CT
Site #:	2-0133
Date:	11/11/19
Name:	Wesley Stevens
File Name:	New London CT - FF POWER (LTE-AWS)
Operating Freq. (MHz):	2145.0
Antenna Height (ft):	46.5
Antenna Gain (dBi):	18.5
Antenna Size (in.):	72.0
Downtilt (degrees):	4.0
Feedline Loss (dB):	0.0
Tx Power (W):	160.0
No. of Channels:	1



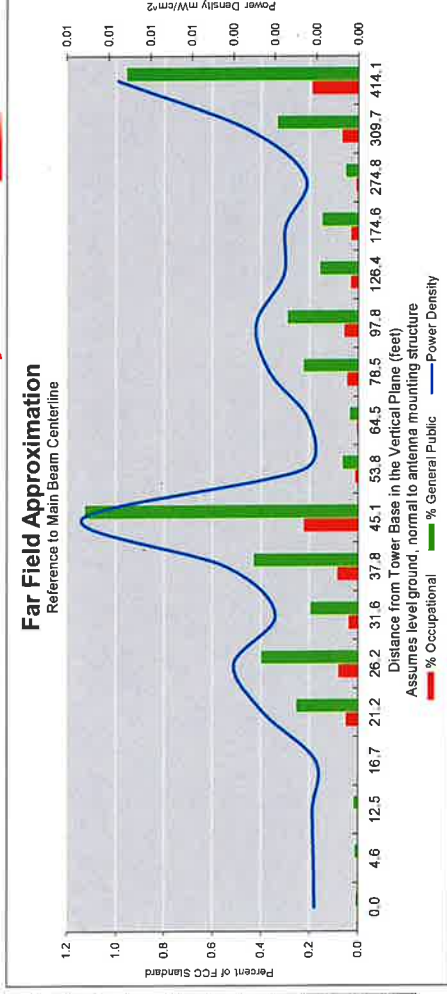
Calc Angle	30.0	34.0	38.0	42.0	46.0	50.0	54.0	58.0	62.0	66.0	70.0	74.0	78.0	82.0	86.0	90.0	94.0	98.0	100.0
Solve for r, dx to antenna	43.5	43.7	43.9	44.1	44.3	44.5	44.7	44.9	45.1	45.3	45.5	45.7	45.9	46.1	46.3	46.5	46.7	46.9	47.1
Distance from Antenna Structure Base in Horizontal plane	0.0	4.6	9.2	13.8	18.4	23.0	27.6	32.2	36.8	41.4	46.0	50.6	55.2	59.8	64.4	69.0	73.6	78.2	82.8
Angle from Main Beam (reference to horizontal plane)	90	80	70	60	50	40	30	20	10	0	10	20	30	40	50	60	70	80	90
dB down from centerline (referenced to centerline)	50.27	44.18	38.23	32.34	26.44	20.54	14.64	8.74	2.84	-3.06	-8.96	-14.86	-20.76	-26.66	-32.56	-38.46	-44.36	-50.26	-56.16
Reflection Coefficient (1 to 4, 2.56 typical)	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56
Power Density (mW/cm²)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percent of Occupational Standard	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percent of General Population Standard	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Antenna Type: JAH-65B-R3B
Max%: 0.78%

Far Field Approximation
with downtilt variation

Estimated Radiated Emission Single Emitter Far Field Model Dipole/Wire/Yagi Antenna Types

Location:	New London CT
Site #:	2-0133
Date:	11/11/19
Name:	Wesley Stevens
File Name:	New London CT - FF POWER (LTE-PCS)
Operating Freq. (MHz):	1970.0
Antenna Height (ft):	46.5
Antenna Gain (dBi):	18.5
Antenna Size (in.):	72.0
Downtilt (degrees):	4.0
Feedline Loss (dB):	0.0
Tx Power (W):	160.0
No. of Channels:	1



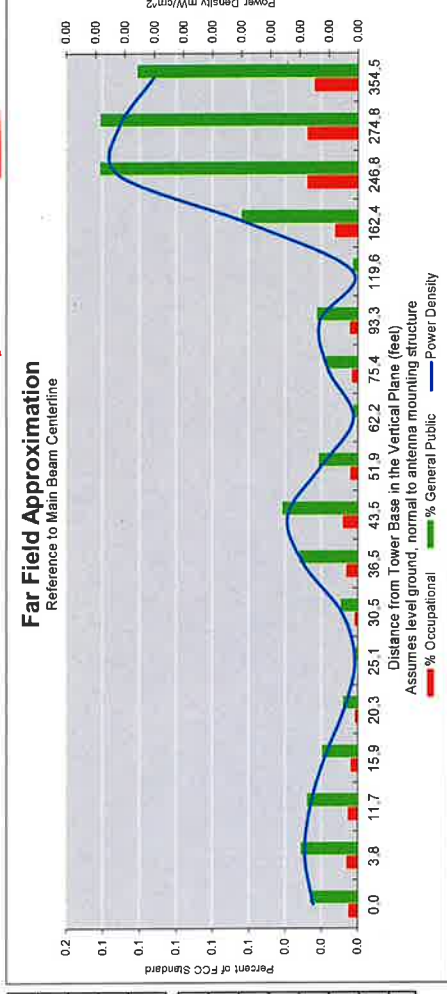
Calc Angle	90.0	84.0	74.0	69.0	64.0	59.0	54.0	49.0	44.0	39.0	34.0	29.0	24.0	19.0	14.0	9.0	8.0	5.0
Solve for r, dx to antenna	43.5	43.7	45.3	46.6	48.4	50.8	53.8	57.7	62.6	69.2	77.8	89.8	107.0	133.7	179.9	278.2	312.7	416.4
Distance from Antenna Structure Base in Horizontal plane	0.0	4.6	12.5	16.7	21.2	26.2	31.6	37.8	45.1	53.8	64.5	78.5	97.8	126.4	174.6	274.8	309.7	414.1
Angle from Main Beam (reference to horizontal plane)	90	80	70	65	60	55	50	45	40	35	30	25	20	15	10	5	4	2
dB down from centerline (referenced to centerline)	40.95	39.81	38	47.86	26.2	23.82	26.39	22.37	17.5	29.09	30.61	21.35	18.71	19.44	17.09	17.83	8.81	1.75
Reflection Coefficient (1 to 4, 2.56 typical)	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56
Power Density (mW/cm ²)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Percent of Occupational Standard	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.2
Percent of General Population Standard	0.0	0.0	0.0	0.0	0.3	0.4	0.2	0.4	1.1	0.1	0.0	0.2	0.3	0.2	0.2	0.1	0.3	1.0

Antenna Type: JAH-655-R3B
MaxX: 1.13%

Far Field Approximation
with downtilt variation

Estimated Radiated Emission Single Emitter Far Field Model Dipole/Wire/Yagi Antenna Types

Location:	New London CT
Site #:	2-0133
Date:	11/11/19
Name:	Wesley Stevens
File Name:	New London CT - FF POWER (CDMA-850)
Operating Freq. (MHz):	869.0
Antenna Height (ft):	46.5
Antenna Gain (dBi):	15.2
Antenna Size (in.):	47.4
Downtilt (degrees):	5.0
Feedline Loss (dB):	0.0
Tx Power (W):	20.0
No. of Channels:	2



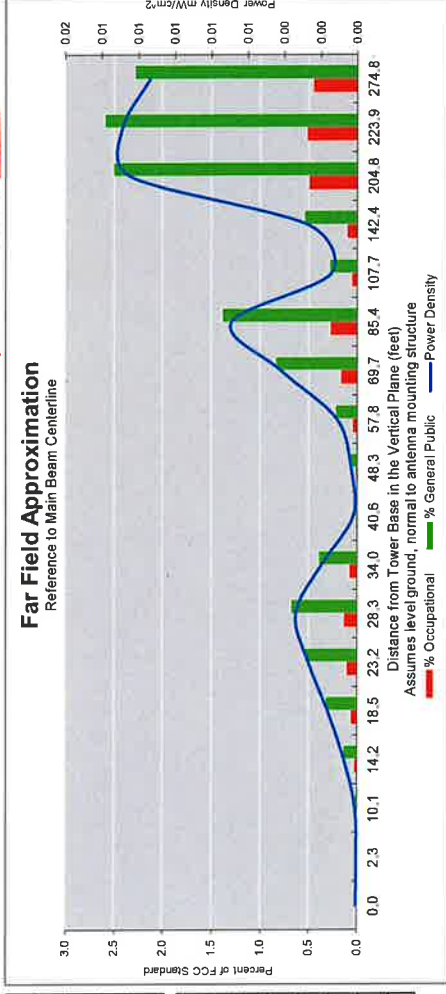
Calc Angle	90.0	85.0	75.0	70.0	65.0	60.0	55.0	50.0	45.0	40.0	35.0	30.0	25.0	20.0	15.0	10.0	9.0	7.0
Solve for r, dx to antenna	43.5	43.7	45.0	46.3	48.0	50.2	53.1	56.8	61.5	67.7	75.9	87.0	103.0	127.2	168.2	250.6	278.2	357.1
Distance from Antenna Structure Base in Horizontal plane	0.0	3.8	11.7	15.9	20.3	25.1	30.5	36.5	43.5	51.9	62.2	75.4	93.3	119.6	162.4	246.8	274.8	354.5
Angle from Main Beam (reference to horizontal plane)	90	80	70	65	60	55	50	45	40	35	30	25	20	15	10	5	4	2
dB down from centerline (referenced to centerline)	27	26.2	26.4	27.7	31.2	37.6	29.7	23.8	22	24	32.2	22.7	20.2	27.2	11.4	4.5	3.6	2.1
Reflection Coefficient (1 to 4, 2.56 typical)	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56
Power Density (mW/cm²)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percent of Occupational Standard	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percent of General Population Standard	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1

Antenna Type: BXA-80063-4CF
Max%: 0.14%

Far Field Approximation
with downtilt variation

Estimated Radiated Emission
Single Emitter Far Field Model
Dipole/Wire/Yagi Antenna Types

Location:	New London CT
Site #:	2-0133
Date:	11/11/19
Name:	Wesley Stevens
File Name:	New London CT - FF POWER (LTE-700)
Operating Freq. (MHz):	746.0
Antenna Height (ft):	46.5
Antenna Gain (dBi):	14.5
Antenna Size (in.):	72.0
Downtilt (degrees):	7.0
Feedline Loss (dB):	0.0
Tx Power (W):	160.0
No. of Channels:	1



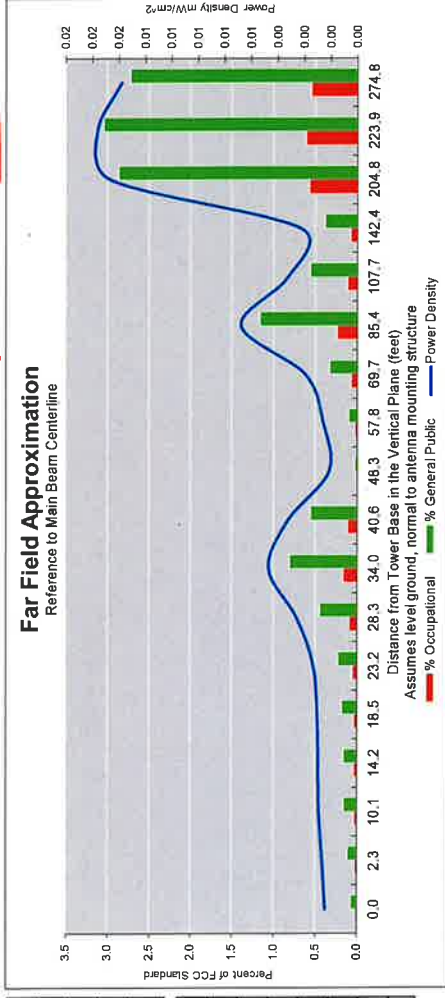
Calc Angle	90.0	87.0	77.0	72.0	67.0	62.0	57.0	52.0	47.0	42.0	37.0	32.0	27.0	22.0	17.0	12.0	11.0	9.0
Solve for r, dx to antenna	43.5	43.6	44.7	45.7	47.3	49.3	51.9	55.2	59.5	65.0	72.3	82.1	95.9	116.2	148.9	209.3	228.1	278.2
Distance from Antenna Structure Base in Horizontal plane	0.0	2.3	10.1	14.2	18.5	23.2	28.3	34.0	40.6	48.3	57.8	69.7	85.4	107.7	142.4	204.8	223.9	274.8
Angle from Main Beam (reference to horizontal plane)	90	80	70	65	60	55	50	45	40	35	30	25	20	15	10	5	4	2
dB down from centerline (referenced to centerline)	39.26	41.9	36.86	28.19	24.35	21.81	20.37	22.16	31.11	28.33	22.25	15.45	11.93	17.07	12.18	2.58	1.69	0.51
Reflection Coefficient (1 to 4, 2.56 typical)	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56
Power Density [mW/cm^2]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
Percent of Occupational Standard	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.3	0.1	0.1	0.5	0.5	0.5
Percent of General Population Standard	0.0	0.0	0.0	0.1	0.3	0.5	0.7	0.4	0.0	0.1	0.2	0.8	1.4	0.3	0.5	2.5	2.6	2.3

Antenna Type: JAH4-65B-R3B
Max%: 2.59%

Far Field Approximation
with downtilt variation

Estimated Radiated Emission Single Emitter Far Field Model Dipole/Wire/Yagi Antenna Types

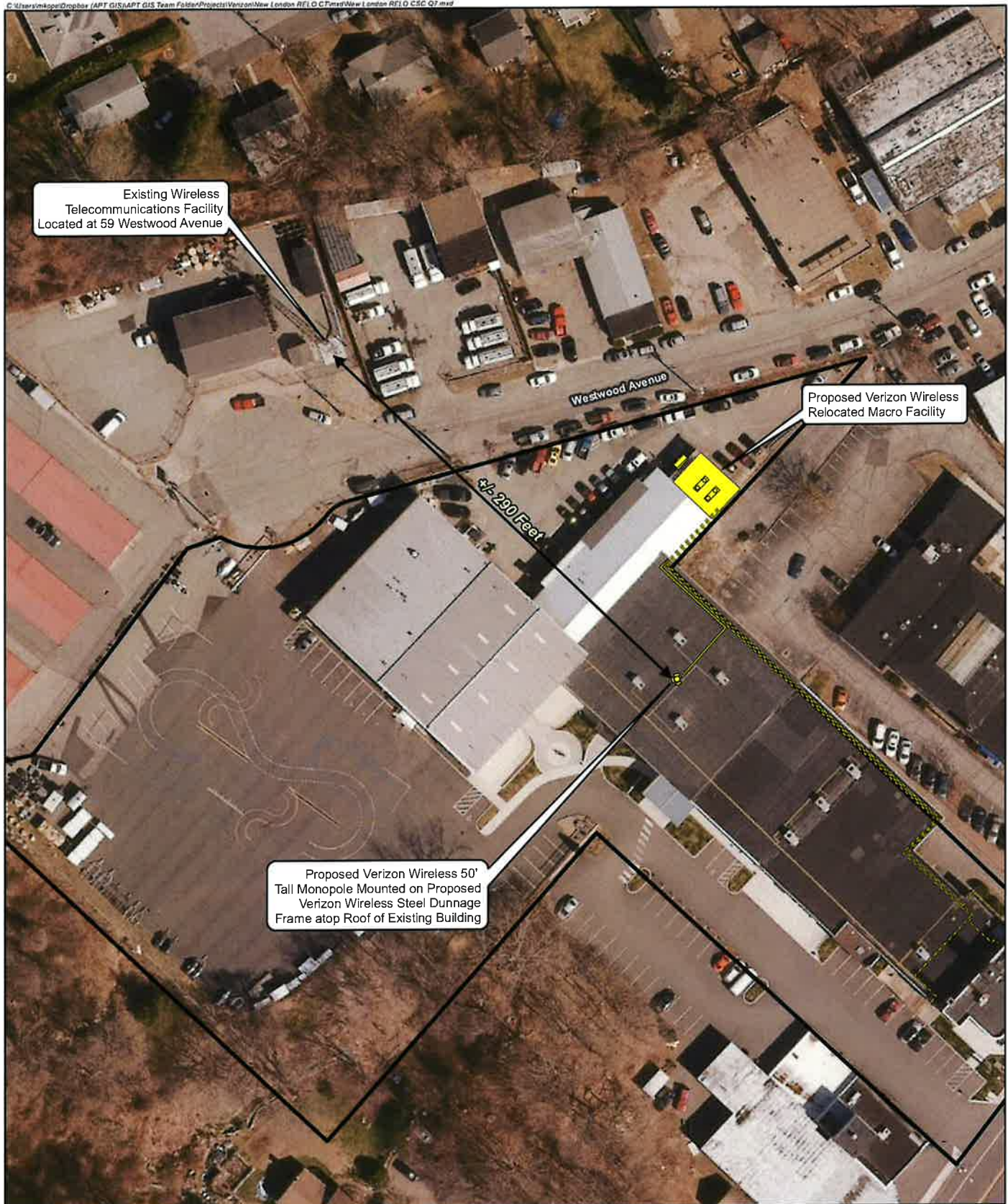
Location:	New London CT
Site #:	2-0133
Date:	11/11/19
Name:	Wesley Stevens
File Name:	New London CT - FF POWER (LTE-850)
Operating Freq. (MHz):	869.0
Antenna Height (ft):	46.5
Antenna Gain (dBi):	15.8
Antenna Size (in.):	72.0
Downtilt (degrees):	7.0
Feedline Loss (dB):	0.0
Tx Power (W):	160.0
No. of Channels:	1



Calc Angle	90.0	87.0	77.0	72.0	67.0	62.0	57.0	52.0	47.0	42.0	37.0	32.0	27.0	22.0	17.0	12.0	11.0	9.0
Solve for r, dx to antenna	43.5	43.6	44.7	45.7	47.3	49.3	51.9	55.2	59.5	65.0	72.3	82.1	95.9	116.2	148.9	209.3	226.1	278.2
Distance from Antenna Structure Base in Horizontal plane	0.0	2.3	10.1	14.2	18.5	23.2	28.3	34.0	40.6	48.3	57.8	69.7	85.4	107.7	142.4	204.8	223.9	274.8
Angle from Main Beam (reference to horizontal plane)	90	80	70	65	60	55	50	45	40	35	30	25	20	15	10	5	4	2
dB down from centerline (referenced to centerline)	32.49	30.54	28.77	28.39	27.71	26.3	22.85	19.71	20.71	33.81	26.58	20.16	13.33	14.86	14.34	2.64	1.63	0.38
Reflection Coefficient (1 to 4, 2.56 typical)	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56
Power Density (mW/cm²)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02	0.02	0.02
Percent of Occupational Standard	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.1	0.2	0.1	0.1	0.6	0.6	0.5
Percent of General Population Standard	0.1	0.1	0.2	0.2	0.2	0.2	0.4	0.8	0.6	0.0	0.1	0.3	1.2	0.6	0.4	2.9	3.0	2.7

Antenna Type: JAHH-65B-R3B
Max%: 3.04%

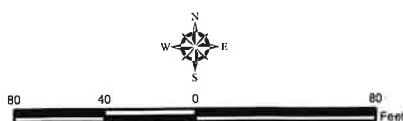
ATTACHMENT 2



Legend

-  Proposed Verizon Wireless Equipment
 Proposed Verizon Wireless Conduits
 Proposed Verizon Wireless Hybrid Cable
 Subject Property

Map Notes:
Base Map Source: 2016 CT ECO Imagery
Map Scale: 1 inch = 80 feet
Map Date: January 2020



Connecticut Siting Council Petition No. 1390
Interrogatory Question No. 7 Response

Proposed Wireless
Telecommunications Facility
New London Relo CT
951 Bank Street
New London, Connecticut

