GEHRING & ASSOCIATES, LLC
Wireless Planning & Zoning

Post Office Box 98 *860-536-0675*
West Mystic, CT 06388 *wireless@gehringzone.com*

May 13, 2019

Melanie Bachman, Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: NOTICE OF AN EXEMPT MODIFICATION AT 6 SHIRLEY STREET (A/K/A 0 SHIRLEY ST), NORWALK, CT, LAT: 41-06-55.73, LONG: 73-26-3.64

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Verizon") is pleased to submit this Notice pursuant to R.C.S.A. §16-50j-73 of intent to perform exempt modifications to an existing site located at 6 Shirley Street (a/k/a 0 Shirley St.), Norwalk, CT ("Subject Property"). The Subject Property is a 6.39-acre parcel that is host to three (3) guyed lattice radio towers, one of which also hosts conventional personal wireless service co-locators.

Verizon currently operates one such co-location having received CSC approval for a tower-share request on May 15, 2014 (TS-VER-103-140416). The original permitting for the Subject Site, which broadcasts WNLK radio, took place in the 1950s and then again when a variance for the taller tower was obtained in 1983 (see attached decisions). The FCC ASR database lists the towers having been in place at least since 1984. There are no conditions in the prior permitting that would prohibit what is now being proposed.

In the present instance, Verizon intends to place a new shelter at the base of the existing tower facility, next to its existing shelter, to serve as a Centralized Radio Access Network ("CRAN") hub for Verizon's wireless network in the surrounding area.

The modifications will consist of a new 17-foot by 38-foot shelter on-grade, fitted with three (3) HVAC units and one 60kW diesel-fueled emergency stand-by power generator. The generator will sit on a double-walled fuel tank inside a room fitted with spill containment to ensure redundancy against any accidental leaks or releases of diesel fuel. Placement of this new shelter will necessitate a minor expansion of the existing compound fence line but will remain within the confines of the greater "site" as defined in R.C.S.A. §16-50j-2a(29) so that the site itself will not be expanded.

Access to this new shelter will remain via the existing access drive in from Shirley Street so that no new curb cut or driveway will be required. Utilities to serve the new shelter will come in from an existing utility pole on site; but new fiber lines will also be brought in underground from Rockmeadow Road to the north to connect to existing fiber networks.

No new attachments of any kind will be made to the existing towers on site. No additional stress or loading will be placed on the existing towers' foundations. No changes to the existing RF emissions on site will occur as a result of this fiber-based installation. No significant change or alteration in the general physical characteristics of the site shall occur (C.G.S. §16-50i(d)).

The proposed work complies with R.C.S.A. §16-50j-72(b)(2)(A-F) as follows:

A) No tower height increase is proposed. In fact, the tower(s) will not be touched. (See attached Plans.)

B) The site boundaries will not be extended in any dimension. Only the fence line will be moved slightly, still within the site. (See attached Tax Map and Plans.)

C) Noise levels will not increase by 6 decibels or more, or to levels that exceed state and local criteria. (See attached Sound Assessment.)

D) No RF emissions changes will occur because the new shelter will be serviced by underground fiber cable. (See attached Plans.)

E) No significant adverse change or alteration in the physical or environmental characteristics of the site will occur. The area is already disturbed and developed and no wetlands or other environmental resources will be impacted by this minor expansion of the existing fence line to accept a new shelter on-grade. (See attached Plans.)

F) The existing tower(s) and their respective foundations will not be touched and hence will not be impaired by the proposed installation of a new shelter on-grade nearby. (See attached Plans.)

The above demonstrate the proposed work fully qualifies as an exempt modification and hence should be allowed to proceed as shown on the submitted plans.

Enclosed for your review and consideration are the following which are incorporated into and made part of this Notice:

1) Landowner & Tower Owner Authorization (Same entity owns both)
2) Subject Property Field Card
3) Subject Property Tax Map
4) Subject Property Deed
5) Prior City Variance Decisions
6) FCC ASR Registration
7) Facility Sound Assessment
8) Site Plans and Elevation Drawings

Verizon Wireless respectfully requests your concurrence that the changes proposed constitute an exempt modification requiring no further procedural review on behalf of the Connecticut Siting Council. Verizon Wireless looks forward to applying for a building permit to complete this modification so that it may improve its wireless services for the benefit of the residents, businesses and visitors in the City of Norwalk.

Thank you.

Sincerely,

Gehring & Associates, LLC

By _____
Carl W. Gehring, on behalf of Cellco Partnership d/b/a Verizon Wireless

Attachments & Enclosures

cc: Mayor Harry Rilling - City of Norwalk (Full Copy by USPS)
Mr. Steven Kleppin - Director of Planning, City of Norwalk (Full Copy by USPS)
CTI Towers Assets II, LLC - Landowner & Tower Owner (Full Copy by USPS)

LETTER OF AUTHORIZATION

CTI Towers Assets II, LLC
5000 CentreGreen Way, Suite 325
Cary, NC, 27513

February 21, 2019

Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Building and Code Enforcement
Zoning Commission
Zoning Enforcement and Zoning Board of Appeals
Planning Committee
125 East Avenue
Norwalk, CT, 06851

Re: Authorization of Cellco Partnership d/b/a Verizon Wireless

Dear Ladies and Gentlemen:

The undersigned, as owner of premises in the City of Norwalk, located on Shirley Street, further described in the Norwalk Office of the Town Clerk at Volume 8425, Page 253 (the "Property"), hereby authorizes Verizon Wireless and Gehring & Associates, LLC and its employees, agents, and consultants, to seek approval from the Connecticut Siting Council and the City of Norwalk (including, but not limited to, building permit, zoning relief, site plan review, and special permit) in connection with the construction and installation of a wireless communications facility on the Property.

Sincerely,

By_____
CTI Towers Assets II, LLC
Name: Anthony F. Peduto
Title:Chief Executive Officer

Property Location SHIRLEY ST | Map ID 5/ 58/ 43/ 0/ | Bldg Name | Valuation Method C
Vision ID 20292 | Parcel Status: Active | Bldg # 1 of 1 | Sec # 1 of 1 | Card # 1 of 1 | Print Date 3/13/2019 12:36:02 P

CURRENT OWNER

CTI TOWERS ASSETS II LLC

38 POND ST SUITE 305

FRANKLIN MA 02038

TOPO		UTILITIES		STRT / ROAD		LAND INFL.	
1	Level	2	Sewer	9	Paved with Cu		
		3	Water	4	Medium		
		9	Gas & El				

SUPPLEMENTAL DATA

Alt Parcel I		Tax D #1	4 - 100%
Assr Map	14SW	Tax D #2	
Survey Ma	3131	Mixed Use	N
Dev Map		Grbge P/U	U:Unknown
Minor Flag		Sewer Bill	2:Sewer
Census	438		
Gis ID	5-58-43-0	Associated P	

CURRENT ASSESSMENT

Description	Code	Appraised	Assessed
Utility-B	401	19600	13,720
Utility-L	401	939420	657,590
UtilityOB	401	1589160	1,112,410
	Total	2,548,180	1,783,720

Norwalk, CT

RECORD OF OWNERSHIP

RECORD OF OWNERSHIP	BK-VOL/PAGE		SALE DATE	Q/U	V/I	SALE PRICE	VC
CTI TOWERS ASSETS II LLC	8425	253	10-24-2016	Q	I	1,062,373	0
CONNOISSEUR MEDIA OF CONNECTICUT	7826	111	05-15-2013	Q	I	896,700	
C R B OF NORWALK INC	3225	304	06-27-1996	U	I	0	
COMMODORE MEDIA OF NORWALK INC	3225	304	06-27-1996	U	I	0	25
HANSON COMMUNICATIONS INC	0	0		U	I	0	

PREVIOUS ASSESSMENTS (HISTORY)

Year	Use	I/F	Total Assesse	Outbuilding	Land	Total Value
2018	401	I	13720	1112410	657590	1783720
2017	401	F	15110	456580	657590	1129280
2016	401	F	15110	456580	657590	1129280
2015	401	F	15110	456580	657590	1129280
2014	401	F	15110	196630	657590	869330

EXEMPTIONS

Year	Code	Description	Amount
		Total	0.00

OTHER ASSESSMENTS

Code	Description	Number	Amount	Comm Int

This signature acknowledges a visit by a Data Collector or Assessor

ASSESSING NEIGHBORHOOD

NBHD	NBHD Name	Neighborhood	Nbhd.	
0001			C344	W. VAN BUREN

NOTES

RADIO RELAY + TOWER.2012 G.L CHANGE TO
ACRES S/B 6.39 SEE ABOVE MAP AND MAP
#2779
NEXTEL SITE # CT-1002
AT&T SITE # 2138
CELL-2

APPRAISED VALUE SUMMARY

Appraised Bldg. Value (Card)	19,600
Appraised XF (B) Value (Bldg)	0
Appraised OB (B) Value (Bldg)	1,589,160
Appraised Land Value (Bldg)	939,420
Special Land Value	0
Total Appraised Parcel Value	2,548,180
Valuation Method	C
Exemption	0
Adjustment	
Total Appraised Parcel Value	2,548,180

BUILDING PERMIT RECORD

Permit ID	Issue Date	Type	Description	Est. Cost	Asr. Insp Da	Asr. % Cmp	Comments
B18-0537	05-31-2018	ALT	3 antennas to exist.	15,000		100	3 antennas to exist. t
B17-0637	06-28-2017	ALT	3 antenna replacem	40,000		100	3 antenna replaceme
B14-0973	10-17-2014	IA	Add to exist. anchor	326,000	09-25-2015	100	Add to exist. anchors
B14-0634	07-16-2014	IA	Add 12 antennas to	42,000	09-25-2015	100	Add 12 antennas to
B11-0757	09-13-2011	OT	Other	35,000			ALTERATION TO E
B98-0485	05-08-1998	OT	Other	40,000	05-08-1999	100	12 PANEL ANTENN
19-94	01-07-1994	OT	Other	50,000	08-18-1994	100	

VISIT / CHANGE HISTORY

Date	Type	IS	ID	Cd	Purpost/Result
11-01-2018			JV	86	Commercial Final Revi
06-07-2018			SB	01	Measured
09-25-2015			225	2	Permit Visit
01-23-2013			120	15	Map Filed Acreage Ch
12-18-2012			MJF	01	Measured
12-18-2012			M JF	02	Callback
12-18-2012			MJF	03	Callback 2

LAND LINE VALUATION SECTION

B	Use co	Description	Zone	D	Land	Land Type	Units		Unit Price	Sz. A	S.A.	Ac Di	Inf. Fac	Nbhd.	Adj	Notes	Special Pricing					Land Value
																	Special Pri		Special Calcs			
1	401	Utility	B	4	P	SITE	278,348	SF	3.00	1.000	0	1.000	0.75	C344	1.50	CELL TOWER		0			0.000	939,420
1	401	Utility	B	4	P	SITE	50	FF	0.00	1.000	0	1.000	1.00		1.00			0			0.000	0
						Total Card Land Units	6.390	AC	Parcel Total Land Area			6.3900									Total Land Value	939,420

Property Location SHIRLEY ST | Map ID 5/ 58/ 43/ 0/ | Bldg Name | Valuation Method C
Vision ID 20292 | Parcel Status: Active | Bldg # 1 of 1 | Sec # 1 of 1 | Card # 1 of 1 | Print Date 3/13/2019 12:36:02 P

CONSTRUCTION DETAIL

Element	Cd	Description
Style	48	Warehouse
Model	96	Industrial
Grade	08	C
Stories:	1.00	
Occupancy	1.00	
Exterior Wall 1	15	Concrete
Exterior Wall 2		
Roof Structure	03	Gable
Roof Cover	07	Arch. Shingles
Interior Wall 1	01	Minimum
Interior Wall 2		
Interior Floor 1	03	Concrete
Interior Floor 2		
Heating Fuel	03	Gas
Heating Type	04	Forced Air
AC Percent	100	
Heat Percent	100	
Bldg Use	401	Utility
Total Rooms	0	
Bedrooms	0	
Full Baths	0	
	0	
	0	
Heat/AC	01	Heat/AC Pkg
Frame	03	Masonry
Plumbing	02	Average
Foundation	08	Poured Conc
Partitions	02	Average
Wall Height	7.00	
% Sprinkler	0.00	

CONSTRUCTION DETAIL (CONTINUED)

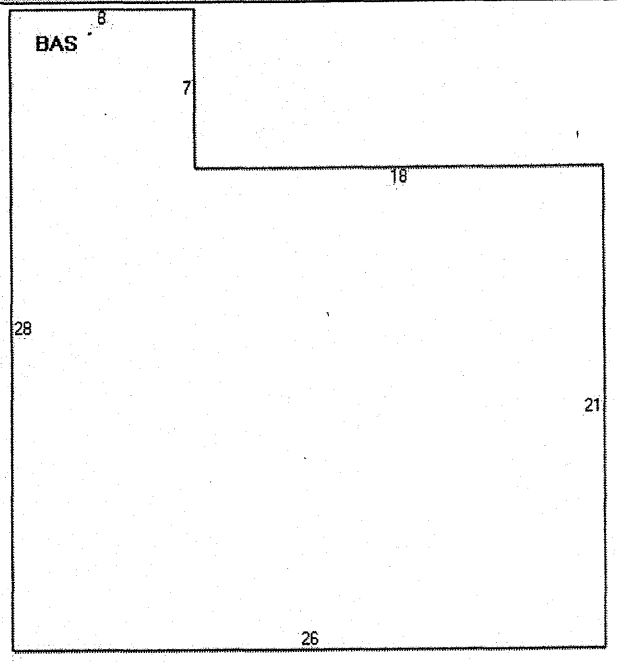
Element	Cd	Description
# of Heat Syste	1	
Insulation	2	Typical

MIXED USE

Code	Description	Percentage
401	Utility	100
		0
		0

COST / MARKET VALUATION

Adjusted Base Rate	59.21
Section RCN	
Net Other Adj	
Replacement Cost	
Actual Year Built	1948
Effective Year Built	1973
Depreciation Code	A
Remodel Rating	
Year Remodeled	
Depreciation %	45
Functional Obsolescence	
External Obsolescence	
Cost Trend Factor	1
Condition	
% Complete	
	55
Deprec Value	19,600
Dep % Ovr	
Dep Ovr Comment	
Misc Imp Ovr	
Misc Imp Ovr Comment	
Cost to Cure Ovr	
Cost to Cure Ovr Comment	

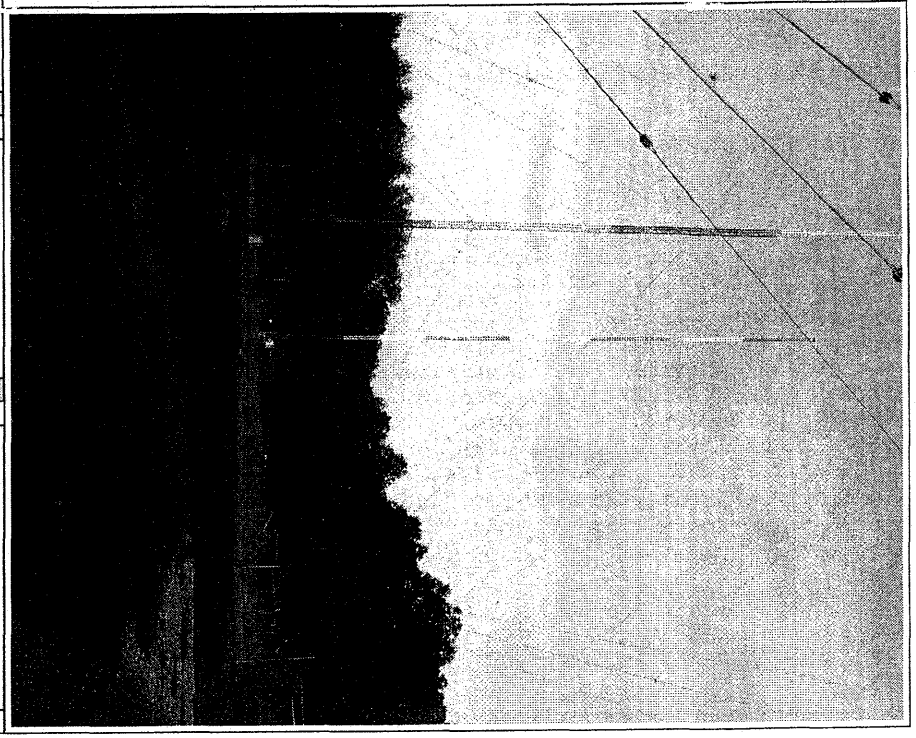


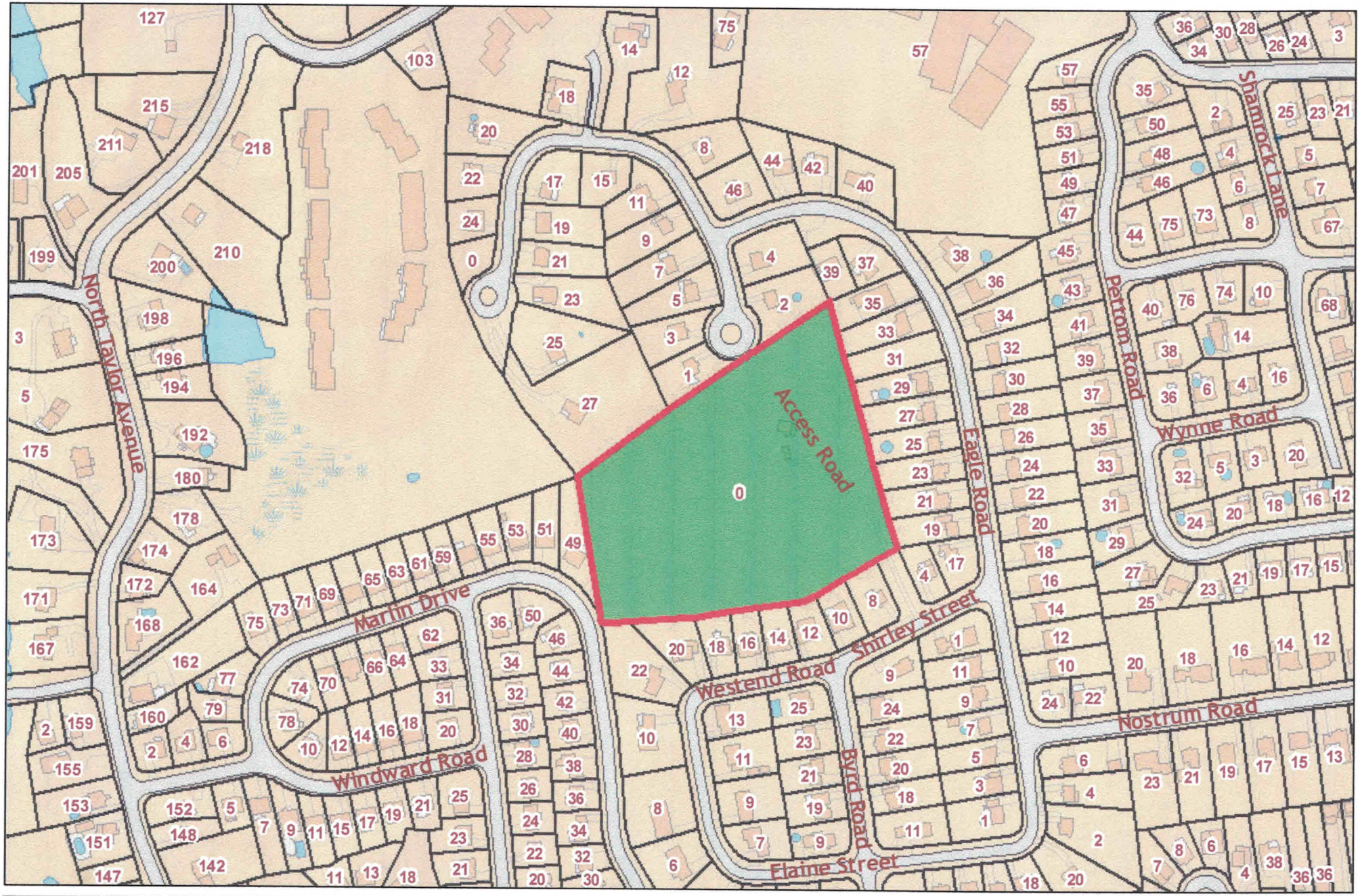
OB - OUTBUILDING & YARD ITEMS(L) / XF - BUILDING EXTRA FEATURES(B)

Code	Description	Su	Sub Type	L/B	Units	Unit Price	Year	Pct	Depre	Cnd.	Qu	Qual	Apprais Va
FN6	Fence 6'			L	2,70	18.18	1960	50	0.00	5	3	0.00	24,540
SHD4	Cell Equip	FR	Frame	L	260	200.00	2012	75	0.00	6	4	1.10	42,900
SHD4	Cell Equip	FR	Frame	L	180	200.00	2012	75	0.00	6	4	1.10	29,700
CELL	Cell Site Carr		Steel	L	3	300000.0	2012	75	0.00	6	4	1.10	742,500
CELL	Cell Site Carr		Steel	L	12	3500.00	2015	90	0.00	7	5	1.20	45,360
ANT	Self Support	AT	Tower	L	326	1000.00	2015	90	0.00	7	5	1.20	704,160

BUILDING SUB-AREA SUMMARY SECTION

Subarea	Description	Liv./Leasable	Gross	Eff Area	Unit Cost	Undeprec Value
BAS	First Floor	602	602	602	59.21	35,644
	Ttl Gross Liv / Lease Area	602	602	602		





N
W E
S

Norwalk, CT

0 245 490 980 Feet

1 inch = 357 feet

SEAL OF THE CITY OF NORWALK · E PLURIBUS UNUM · INCORPORATED 1913 ·

4-23-19

INSTR # 2016012747
VOL 8425 PG 253
RECORDED 10/24/2016 10:47:26 AM
RICHARD A. MCQUAID
TOWN CLERK NORWALK CT
TOWN CONVEYANCE TAX $5,311.87
STATE CONVEYANCE TAX $13,279.66

Prepared by:
~~After recording, return to:~~
CTI Towers Assets II, LLC
Attn: Carrie Larson
38 Pond Street, Suite 305
Franklin, MA 02038

AFTER RECORDING, RETURN TO:
Fidelity National Title Group
7130 Glen Forest Dr., Ste. 300
Richmond, VA 23226
Attn: D.Carter

Special Warranty Deed

On August 19, 2016, **CONNOISSEUR MEDIA OF CONNECTICUT, LLC**, a Delaware limited liability company ("Grantor") with an address of 180 Post Road East, Suite 201, Westport, CT 06880 for the consideration paid, grants to **CTI TOWERS ASSETS II, LLC**, a Delaware limited liability company ("Grantee") with an address of 38 Pond Street, Suite 305, Franklin, MA 02038, with SPECIAL WARRANTY COVENANTS:

All the certain tract, piece or parcel of land, with the buildings, transmission towers, appurtenant equipment, and other improvements thereon, and all appurtenances thereof, situated in the Town of Norwalk, County of Fairfield and State of Connecticut, containing in area 6.329 acres and consisting of two contiguous tracts.

THE FIRST of said tracts is fully shown and delineated as "Area = 5.91 acres" on a certain map or survey entitled, "Map Showing Survey of Property being Conveyed by Frank J. Murphy to The Norwalk Broadcasting Company at Norwalk, Conn." certified substantially correct Walter K. Goodhue, Civil Engineer, Darien, Conn., January 23, 1947, and one file in the office of the Town Clerk of the Town of Norwalk as Map #2779.

THE SECOND tract is fully shown and delineated as "Area = 0.419 Acres" on a certain map or survey entitled "Map Showing Survey of Property Being Conveyed to Norwalk Broadcasting Company, Norwalk, Connecticut" certified substantially correct, Walter K. Goodhue, Civil Engineer, New Canaan, Conn. May 02, 1949, and on file on the Office of the Town Clerk of the Town of Norwalk as Map #3131.

TOGETHER with a right of way for all lawful purposes in, over, and upon a certain roadway shown on a certain map entitled, "Map Showing Right of Way of Norwalk Broadcasting Company, Inc., Acquired from Patsy Cutrone, Samuel W. Hoyt, Jr., Co., Inc., June, 1949" which said map is on file in the Office of the said Town Clerk of

23092664

Norwalk as Map #3132. Said right of way being in common with the original grantor and others to whom a similar right of way has been or may hereafter be granted, as set forth in a Right of Way Agreement executed by Patsy Cutrone and recorded on July 15, 1949 in Book 344 at Page 85 of the Norwalk Land Records.

Tax Parcel No. 5-58-43-0

The Grantor does covenant with Grantee that Grantor is lawfully seized in fee simple of the above Property, and has the right to sell and convey the same, and that Grantor shall warrant and defend title unto the Grantee, and his heirs and assigns, against all claims by or through Grantor.

Witnessed by:

Ellen C. Rossi

CONNOISSEUR MEDIA OF CONNECTICUT, LLC

Name: Michael O. Driscoll
Title: Executive Vice President and Chief Financial Officer

State of Connecticut:

County of Fairfield:

Personally appeared, Michael O. Driscoll, as aforesaid, signer of the foregoing instrument and acknowledged the same to be his/her free act and deed as such EVP/CFO the free act and deed of said limited liability company, before me.

Commissioner of the Superior Court
Notary Public

Grantee's Address:

CTI Towers Assets II, LLC
38 Pond Street, Suite 305
Franklin, MA 02038

LENORE HERMANN
NOTARY PUBLIC
MY COMMISSION EXPIRES FEB. 28, 2021

ZONING BOARD OF APPEALS
CERTIFICATE OF VARIANCE

Variance Number 83-0707-01

I, **Martin Maier,** Zoning Inspector for the City of Norwalk do hereby certify that a public hearing was held on July 7, 19 83 by the Zoning Board of Appeals on the following application.

HANSON COMMUNICATIONS, INC. for a variance of the use and height restrictions of the "B" Residence zone regulations in order to allow the erection of a 336 foot radio transmission tower with a 30' pole thereby expanding an existing non-conforming use. Property located at Shirley Street. Tax map District 5, Block 58C, Lot 43.

The owner of the land affected is **Hanson Communications, Inc.**

In determination of the above matter the Zoning Board of Appeals adopted the following resolution effective **July 29,** 19 83

WHEREAS, the applicant's radio station renders a very valuable community service recognized in prior variances and Court decisions as well as by members of the Board since the 1950's; and WHEREAS, the applicant owns a parcel of property 6+ acres in size where two radio towers are now constructed; and WHEREAS it would be virtually impossible to find a big enough piece of property within the limited window within which the antenna must be located to comply with FCC limits, I would find a hardship would exist if the applicant were prohibited from putting up a tower that is needed for its operation and I, therefore, move for the granting of the variance on the condition that the applicant erect fencing around the base of the new tower as well as the existing towers which is more adequately designed to keep access away from the towers especially for children and vandals and with the fact being noted in the record that the applicant has agreed to be adsolutely responsible for any injury or damage the tower might cause.

Executed at Norwalk this **17th** day of **October** 19 83

Zoning Inspector

THE ZONING BOARD OF APPEALS

OF THE CITY OF NORWALK

File # 83-0707-01

At a meeting of the Board held on July 7, 1983 the application of Hanson Communications, Inc. which was heard at the public hearing held by the Zoning Board of Appeals on July 7, 1983 was:

- ☐ Granted. Effective date _____.
- ☒ Granted with conditions. Effective date July 29, 1983.
- ☐ Appeal upheld.
- ☐ Denied.
- ☐ Denied without prejudice.
- ☐ Reserved. Pending decision on _____.
- ☐ Postponed to _____.
- ☐ Continued to _____.
- ☐ Withdrawn.
- ☐ Extension granted to _____.
- ☐ Other. _____

Conditions (where applicable): The applicant must erect fencing around the base of the new tower, as well as the existing towers, which is more adequately designed to keep access away from the towers especially for children and vandals. Noted on the record is the fact that the applicant has agreed to be absolutely responsible for any injury or damage the tower might cause.

ZONING BOARD OF APPEALS

Mathew Caiati
Chairman

cc: Atty. Harry H. Hefferan, Jr.

IMPORTANT: Necessary permits must be obtained within 180 days of the date of action of this Board in granting the petition. Please read enclosed letter about recording fee.

Form #22 - 12/81

An executive meeting of the Zoning Board of Appeals of the City of Norwalk, Conn., was held on April 16, 1956, in the office of the Building Inspector, City Hall, South Norwalk, Conn., with Chairman Ernest C. Albin presiding. The meeting was called to order at 8:00 p.m. (EST), and at roll call the following members were present: Chairman Albin and Messrs. John Howard, Rolf Hurup, Reginald Smith, and Alois Weber.

The meeting was called with reference to the

APPLICATION OF NORWALK BROADCASTING CO., INC., owner, for a permit to extend a variance heretofore granted on this property by erecting an addition of 30 ft. by 40 ft. to the present building to house complete radio broadcasting facilities, including studios, record storage, lavatories and executive offices; all in accordance with maps and plans to be filed herein prior to the hearing. Premise situated off Shirley Street, West Norwalk, in a Residence "B" Zone, shown on the Fifth District Tax Map as Block 500 Lot 43.

Mr. Howard presented a resolution granting the application. Various amendments were offered by other members of the Board.

Mr. Weber: "I move that the applicant's request to have the application amended to conform to the plan submitted be approved." The motion was seconded by Mr. Howard, and on roll call the vote was as follows:

Yea	Nay
Mr. Howard	
Mr. Hurup	
Mr. Smith	
Mr. Weber	
Mr. Albin	

Chairman Albin declared the application amended to conform to the plan submitted on March 19, 1956.

Further amendments were suggested to Mr. Howard's resolution, and were accepted by him as maker of the motion. The final resolution read as follows:

WHEREAS, this matter was originally before this Board on an application dated October 24, 1955, and after public hearing this Board granted by unanimous vote on December 1, 1955, the variance with an effective date of December 14, 1955, subject to specific restrictions. Subsequently on appeal the Board's action was reviewed by the Court of Common Pleas and reversed because of a defect in the original application. The Court's opinion read in part, "The Board granted the variance with laudable conditions," and "it would appear from the record that the hardship qualification has been satisfied."

During the pendency of the present hearing a defect in the new application was noted in that the building as applied for was approximately 200 square feet smaller than the plan proposed. Despite objection, Counsel for the opposition stated that his clients were equally opposed to either size building. The board has unanimously approved amendment of the application to conform with plan submitted on March 19, 1956.

During the current hearing no new evidence was offered to alter the Board's opinion as concurred in by the Court of Common Pleas.

In consequence, we reaffirm, effective April 20, 1956, our unanimous resolution of December 1, 1955, as follows:

"Whereas radio is an essential community service not contemplated by our zoning regulations, unnecessary hardship exists. The proposed

site has, by virtue of a prior variance, been used for some years for the transmission towers and engineering work of the radio station. Therefore the erection of an attractive addition to the present building to make it resemble a residence will be an improvement in sightliness, and in harmony with the neighborhood. The existing drainage problem in the area will not be substantially increased by this use, but any attempt to utilize the land under the Residence "B" definition would seriously aggravate the drainage problem. Approval of the application is granted subject to the following restrictions:

1. Completion of Landscaping by October 1, 1956, according to plan as submitted -- trees shall be 6 feet high or more at time of planting, and trees dying before October 1, 1957, shall be replaced.

2. There shall be no subdivision of the existing tract while used for radio transmission.

3. The proposed building shall be of the residence type in exterior appearance and size."

The resolution was seconded by Mr. Hurup, and on roll call the vote was as follows:

Yea	Nay
Mr. Howard	
Mr. Hurup	
Mr. Smith	
Mr. Weber	
Mr. Albin	

Mr. Howard further moved that the memorandum of the decision of the Court of Common Pleas be made a part of the record. The motion was seconded by Mr. Weber, and on roll call the vote was as follows:

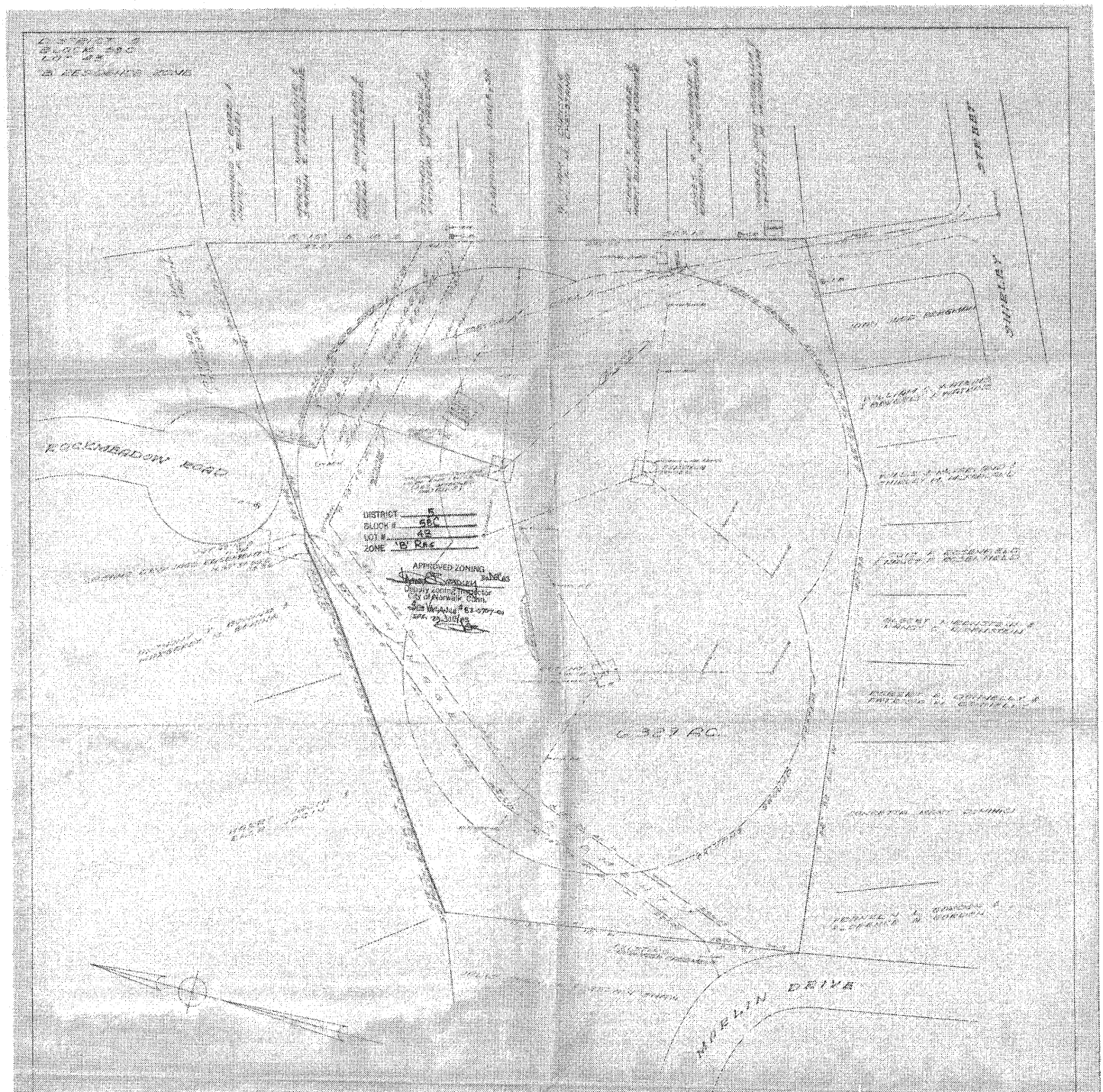
Yea	Nay
Mr. Howard	
Mr. Hurup	
Mr. Smith	
Mr. Weber	
Mr. Albin	

Chairman Albin declared the application granted, effective April 20, 1956, and the memorandum of decision of the Court of Common Pleas made a part of the record.

On motion duly made by Mr. Howard, seconded by Mr. Hurup, and carried unanimously, the meeting was adjourned at 8:55 p.m. (EST).

ATTEST: [signature]

Secretary



MAP

SHOWING PROPERTY OWNED BY

HANSON COMMUNICATIONS INCORPORATED

NORWALK, CONNECTICUT

SCALE: 1" = 40'

Facility Sound Assessment

CRAN Hub

6 Shirley Street

Norwalk, Connecticut

March 30, 2019

Prepared For:

Verizon Wireless New England
20 Alexander Drive
Wallingford, CT 06492

Prepared By:

Modeling Specialties
30 Maple Road
Westford, MA 01886

Environmental Sound Assessment
Norwalk CT CRAN Hub

Background

A Wireless Telecommunications Hub Facility is proposed at an existing utility parcel off Shirley Street in Norwalk, Connecticut. The proposed project involves construction of a new shelter at this site to support future CRAN equipment deployments in the area. The following assessment supports a petition to the Connecticut Siting Council and is based on the standards provided by the Connecticut Department of Energy & Environmental Protection (CDEEP). Sound levels from the proposed equipment were estimated based on vendor design and measured sound from similar equipment configurations. Sound level modeling techniques were used to estimate the potential impacts at receiving locations. What follows is an analysis of the facility sound using measured ambient data, estimates of the existing equipment sound and detailed proposed equipment configuration using the 3-dimensional noise modeling software package CadnaA by Datakustic.

Overview of Project and Site Vicinity

The Project is located at an existing utility (Commodore Media of Norwell Inc.) 6.39-acre parcel off Shirley Street in Norwalk, CT. Existing facilities at this site include three broadcast transmission guyed towers. One tower hosts two wireless carrier's panel antennas. The proposed project is not directly related to the antennas at this site. It will be used as a Hub for future CRAN facilities that are developed in the area. Figure 1 shows an aerial view of the site and surrounding area. Existing sources of sound in the area include distant traffic and residential activities. While the field survey identified existing mechanical equipment at the site, no sound was noted from the existing equipment at the time of either daytime or nighttime surveys. The proposal represents an exempt modification to an existing telecommunications site, which requires a demonstration of compliance with R.C.S.A. §16-50j-72(b)(2)(C) that the proposed modifications will not "increase noise levels at the site boundary by 6 decibels or more, or to levels that exceed state and local criteria." These criteria are used to evaluate the facility sounds.

The project will be adding a 60-kW emergency standby generator inside a separate room of the proposed shelter. There are currently three smaller generators deployed at the site. All of the generators (individually and combined) are below the 5-mW threshold that would trigger CSC review according to the CSC Generator Filing Requirements Guide (re: C.G.S. §§ 16-50i (f). and 16-50i(a)(3)). Nevertheless, a modeling scenario is provided in this study to address the occasional daytime testing of the four generators.

Figure 1: **Aerial Overview of the Site, Measurement Locations, Receptors and Surrounding Area**

Noise Analysis: Discussion of Analysis Methods

There are a number of ways in which sound (noise) levels are measured and quantified. All of them use the logarithmic decibel (dB) scale. Following is a brief introduction to the noise measurement terminology used in this assessment.

Noise Metrics

The Sound Level Meter used to measure noise is a standardized instrument.[1] It contains "weighting networks" to adjust the frequency response of the instrument to approximate that of the human ear under various circumstances. One of these is the *A-weighting* network. A-weighted sound levels emphasize the middle frequency sounds and de-emphasize lower and higher frequency sounds; they are reported in decibels designated as "dBA." Figure 2 illustrates typical sound levels produced by sources that are familiar from everyday experience.

The sounds in our environment usually vary with time, so they cannot simply be described with a single number. Two methods are used for describing variable sounds. These are *exceedance levels* and *equivalent levels.* Both are derived from a large number of moment-to-moment A-weighted sound level measurements. Exceedance levels are designated L_n, where "n" can have any value from 0 to 100 percent. For example:

- L_{90} is the sound level in dBA exceeded 90 percent of the time during the measurement period. The L_{90} is close to the lowest sound level observed. It is essentially the same as the *residual* sound level, which is the sound level observed when there are no loud, transient noises.
- L_{50} is the median sound level in dBA exceeded 50 percent of the time during the measurement period.
- L_{10} is the sound level in dBA exceeded only 10 percent of the time. It is close to the maximum level observed during the measurement period. The L_{10} is sometimes called the *intrusive* sound level because it is caused by occasional louder noises like those from passing motor vehicles. By using exceedance levels, it is possible to separate prevailing, steady noises (L_{90}) from occasional, louder noises (L_{10}) in the environment.
- The *equivalent level* is the level of a hypothetical steady sound that has the same energy as the actual fluctuating sound observed. The equivalent level is designated L_{eq}, and is also A-weighted. The equivalent level is strongly influenced by occasional loud, intrusive noises.

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[1] *American National Standard Specification for Sound Level Meters,* ANSI S1.4-1983, published by the Standards Secretariat of the Acoustical Society of America, Melville, NY.

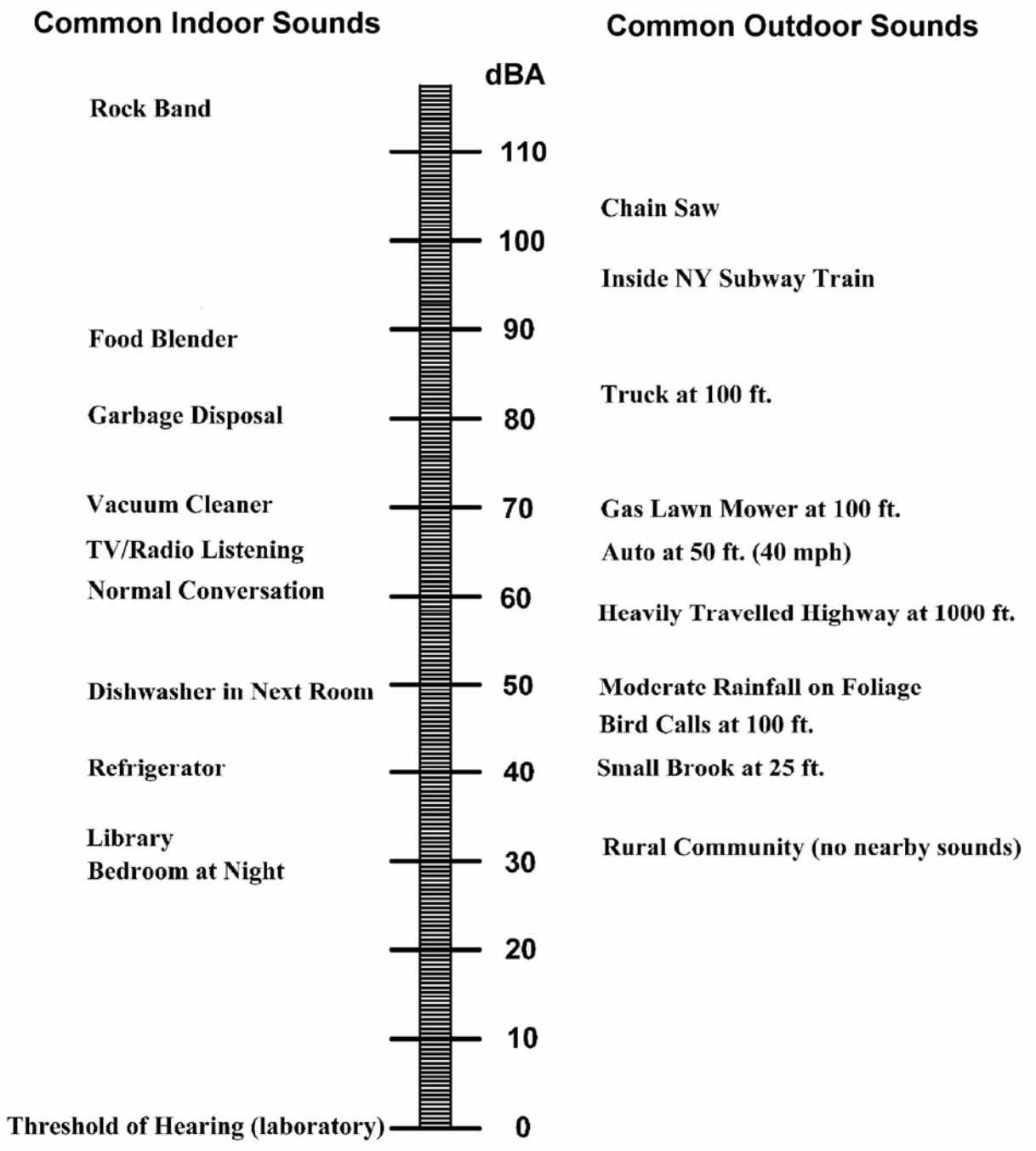

Figure 2: **Typical Sound Levels from Everyday Experience**

When a steady sound is observed, all of the L_n and L_{eq} are equal. This analysis is based on the background or L_{90} metric. All broadband levels represented in this study are weighted using the A-weighting scale.

In the design of noise control treatments, it is essential to know something about the frequency spectrum of the sound of interest. Noise control treatments do not function like the human ear, so simple A-weighted levels are not useful for noise-control design or the identification of tones. The frequency spectra of sounds are usually stated in terms of *octave band sound pressure levels*, in dB, with the octave frequency bands being those established by standard.[2] The sounds in the community were measured in 1/3 octave band levels. The sounds expected as a result of this project have been evaluated with respect to the octave band sound pressure levels as well as the A-weighted equivalent sound level. For simplicity they are summarized in this report as A-weighted levels.

Noise Regulations and Criteria

Sound compliance is evaluated on two bases: the extent to which Federal and State regulations or guidelines are met, and the extent to which it is estimated that the community is protected from excessive sound levels. The governmental regulations that may be applicable to sound produced by activities at the Site are summarized below.

- ***Federal***

Occupational noise exposure standards: 29 CFR 1910.95. This regulation restricts the noise exposure of employees at the workplace as referred to in Occupational Safety and Health Administration requirements. The facility will emit only occasional sounds of modest levels, as demonstrated by this study.

- ***State***

The state of Connecticut (Connecticut Department of Energy & Environmental Protection or CDEEP) regulates noise at Regulation Title 22a, Sections 69-1 through 69-7.4, Control of Noise. The project is a Class B (Utility- Communications) emitter. The land use is Utility in a residential Zone B. The site is surrounded by residential land uses whose property lines were evaluated as Class A Noise Receptors. An excerpt from the City of Norwalk Zoning Map is shown in Figure 3. The details of the CDEEP performance criteria are shown in Table 1 based on the source and receiving land uses.

The proposal represents an exempt modification to an existing telecommunications site under Regulations of Connecticut State Agencies, specifically R.C.S.A. §16-50j-72(b)(2)(C), which requires a demonstration that the proposed modifications will not "increase noise levels at the site boundary by 6 decibels or more, or to levels that exceed state and local criteria."

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[2] *American National Standard Specification for Octave, Half-octave and Third-octave Band Filter Sets*, ANSI S1.11-1966 (R1975).

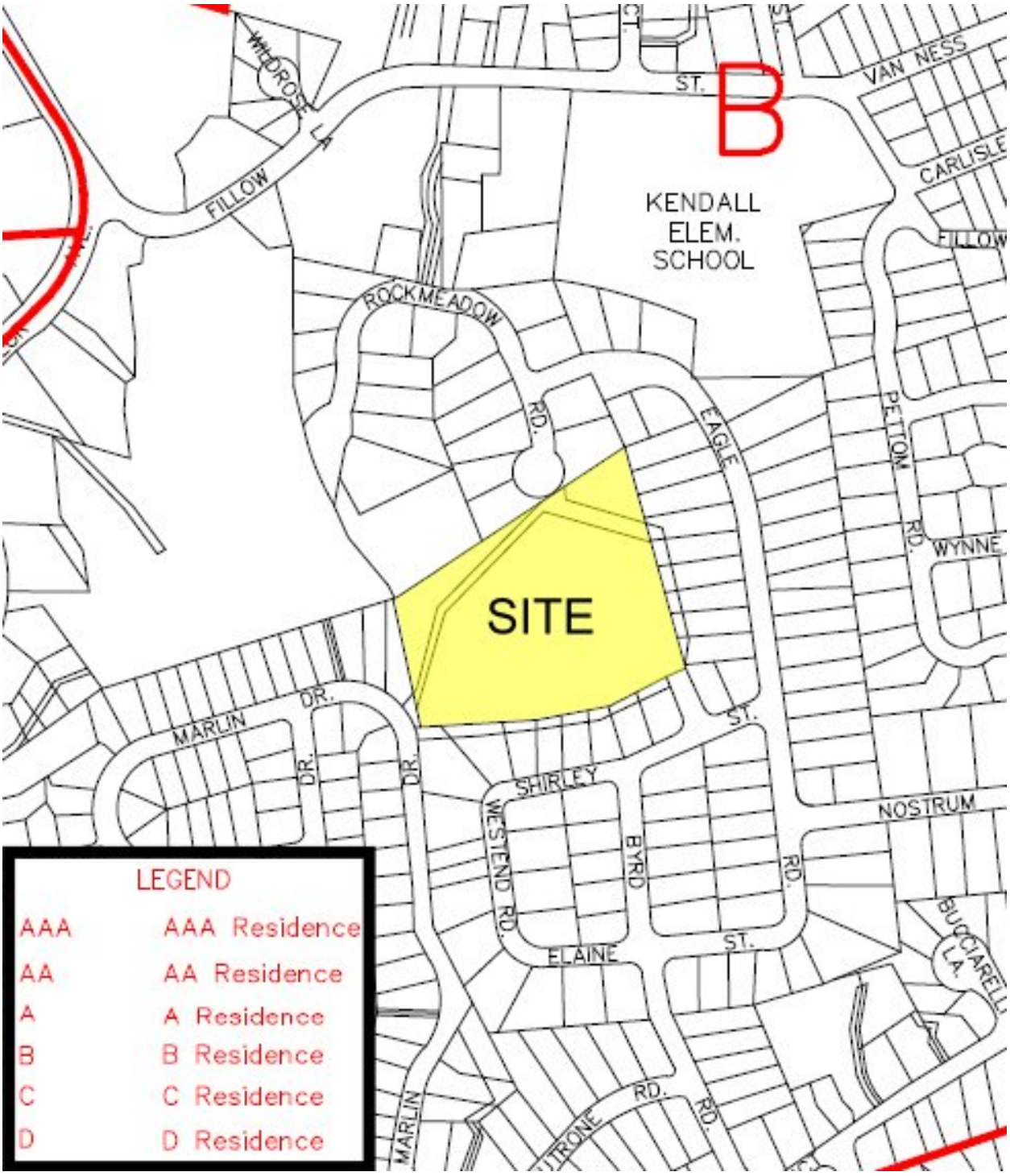


Figure 3: **Excerpt from the City of Norwalk Zoning Map**

Table 1: Connecticut DEEP Noise Standards, by Zoning District

	Receptor's Zone			
Emitter's Zone	Industrial	Commercial	Residential/Day	Residential/Night
Residential	62 dBA	55 dBA	55 dBA	45 dBA
Commercial	62 dBA	62 dBA	55 dBA	45 dBA
Industrial	70 dBA	66 dBA	61 dBA	51 dBA

Adjustments for high background noise levels or impulse sounds.

1. In those individual cases where the background noise levels caused by sources not subject to these regulations exceed the standards contained in this chapter, a source shall be considered to cause excessive noise if the noise emitted by such source exceeds the background noise levels by five dBA, provided that no source subject to the provisions of this chapter shall emit noise in excess of eighty (80) dBA at any time, and provided that this section does not decrease the permissible levels of other sections of this chapter.

2. No person shall cause or allow the emission of impulse noise in excess of eighty (80) dB peak sound pressure level during the nighttime to any residential noise zone.

3. No person shall cause or allow the emission of impulse noise in excess of one hundred (100) dB peak sound pressure level at any time to any zone.

- ***Local***

The City of Norwalk regulates noise regulation at Chapter 127 to protect, preserve, and promote the health, safety, welfare, and quality of life for the citizens of Norwalk through the reduction, control, and prevention of noise. While no quantitative criteria were identified, certain activities like construction, were limited. Daytime periods are defined as:

Monday - Friday: 7:00 am - 8:00 pm
Saturday: 8:00 am - 8:00 pm
Sunday: 9:00 am - 8:00 pm
Federal and state holidays: 9:00 am - 8:00 pm

Existing Community Sound Levels

A site survey and noise measurement study were conducted for the facility on March 1, 2019. The ambient sound fluctuates through the day and night so measurements were made during the daytime and in the quietest hours of the night (usually midnight to 5:00 am). A new source of sound tends to be noticed most during conditions that are otherwise quiet. Because of this, the ambient sound survey was scheduled under conditions that represented quiet sound levels for the area.

Attended sound level measurements were made using Rion NA-28 sound level meters. The measurements create a baseline community sound level and captured the frequency-specific character of the sound. The meter was mounted on a tripod approximately 5 feet above the ground. The microphone was fitted with factory recommended foam windscreen. The meter was programmed to take measurements for 20 minutes and then store processed statistical levels. The meter meets the requirements of ANSI S1.4 Type 1 – Precision specification for sound level meters. The meter was calibrated in the field using a Larsen Davis Cal-250 acoustical calibrator before and after the sessions. The field calibrations indicated that the meters did not drift during the study. The spectrum analyzer complies with the requirements of the ANSI S1-11 for octave band filters.

Results of the Ambient Survey

The results of the ambient sound level measurements are summarized in Table 2. The Leq represents the "average" sound level while the L_{90} represents the "background" sound level. Both are shown in this study to characterize the existing sound field. Comparing the Leq levels (including all sounds) to the L90 levels (quietest 10% of samples) illustrates the sound character of the area. Baseline levels are affected by community conditions, meteorology, seasons, insects and traffic patterns. Because the measured levels are dominated by distant traffic patterns, they can be expected to fluctuate. The measurements indicate that the existing nighttime sound levels are currently within the residential target levels of the Connecticut DEEP standards for nighttime sounds (45 dBA). The daytime sound levels exceed the standards for daytime sounds without any contribution from the existing site equipment. Because of the seasonal and weather conditions selected for the survey, the measured levels exclude precipitation, significant wind, insects and traffic peaks.

Table 2: Ambient Sound Levels Measured on March 1, 2019

Location	Time	Period	L_{eq}	L_{90}
Shirley Gate	11:25 AM	Day	56 dBA	40 dBA
Rockmeadow P/L	11:49 AM	Day	56 dBA	42 dBA
Shirley Gate	4:03 AM	Night	38 dBA	33 dBA
Rockmeadow P/L	4:35 AM	Night	39 dBA	33 dBA

Consistent with most residential communities, the daytime is affected by elevated traffic volumes on local and distant roadways along with local daytime activities. Nighttime levels tend to be lower because of lower traffic volumes and the lack of neighborhood activities.

Existing Sounds from the Current Utility Facilities

The existing facility includes the broadcast equipment and two separate wireless carrier packages of equipment. There are no continuous sources of sound at the facility. No sources were observed at the time of the field survey. The routine sources that are expected at the facility were identified as part of the survey. The existing broadcast shelter had what appeared to be 2 residential style window air conditioners. One unit appeared to be sized at about 12,000 btu which is on file (from field measurements at another site) to be 59 dBA at a distance of 23 feet. Another unit appeared to be sized at about 6,000 btu which is also on file to be about 56 dBA at 23 feet. The units are on the north side of the existing broadcast shelter.

The broadcast shelter is also supported by a YORK split system condenser. These units typically have variable speed fans which operate under full load at a sound level of 60 dBA at a distance of 23 feet. Two of these units are located on the east side of the broadcast shelter. As redundant units, they are not expected to both operate at any given time.

The AT&T Wireless shelter is cooled by two Bard wall-mount air conditioners, one mounted on the north end and one mounted on the south end of the shelter. These units have been measured under full load to emit 63 dBA at a distance of 23 feet.

The Verizon Wireless existing shelter is also fitted with wall-mount air conditioners. They are similar to the Bard units but are model Marvair II, manufactured by Marvair. They have been measured to operate at a sound level of 61 dBA at 23 feet.

Each of these HVAC sources operate on an as-needed basis for their respective shelter. The heat loading within a shelter is a function of the ambient temperature, solar radiation and heat from electrical equipment. For these reasons, the need for cooling is usually limited to daytime periods. Only rarely on the hottest nights of the summer is the cooling equipment needed to cycle on during the night to protect the electronics.

Expected Sounds from the Proposed Installation

The proposed installation has been designed with significant attention to protecting the community sound environment. Most of the equipment associated with the facility produces no significant sound. This analysis represents the most likely sound levels to be expected as a result of the normal operation of the facility using manufacturer's data and measurements of similar equipment at other wireless installations. The facility layout and elevation plans are shown in Figures 4 and 5.

Sources of Project Sound

There are several routine sources of modest sound at the facility. The wall-mount HVAC units have fans that cycle filtered ambient air through the shelter to provide efficient cooling. The fan-only and the fan with heater sound is typically not noticed outside of the shelter area. The ventilation system is part of an advanced system of air management that optimizes the use of direct ambient ventilation (DAV). The upgraded configuration is termed "Next Gen" or "Fusion Tec" by the manufacturer. The system increases efficiency, reducing the cooling cycle by providing cooling with ambient air whenever it is practical. When the cooling cycle is needed, the system engages a part load (67%) cooling feature that allows it to operate more quietly and save additional energy. Full load is reserved for the periods when it is needed to protect the shelter electronics.

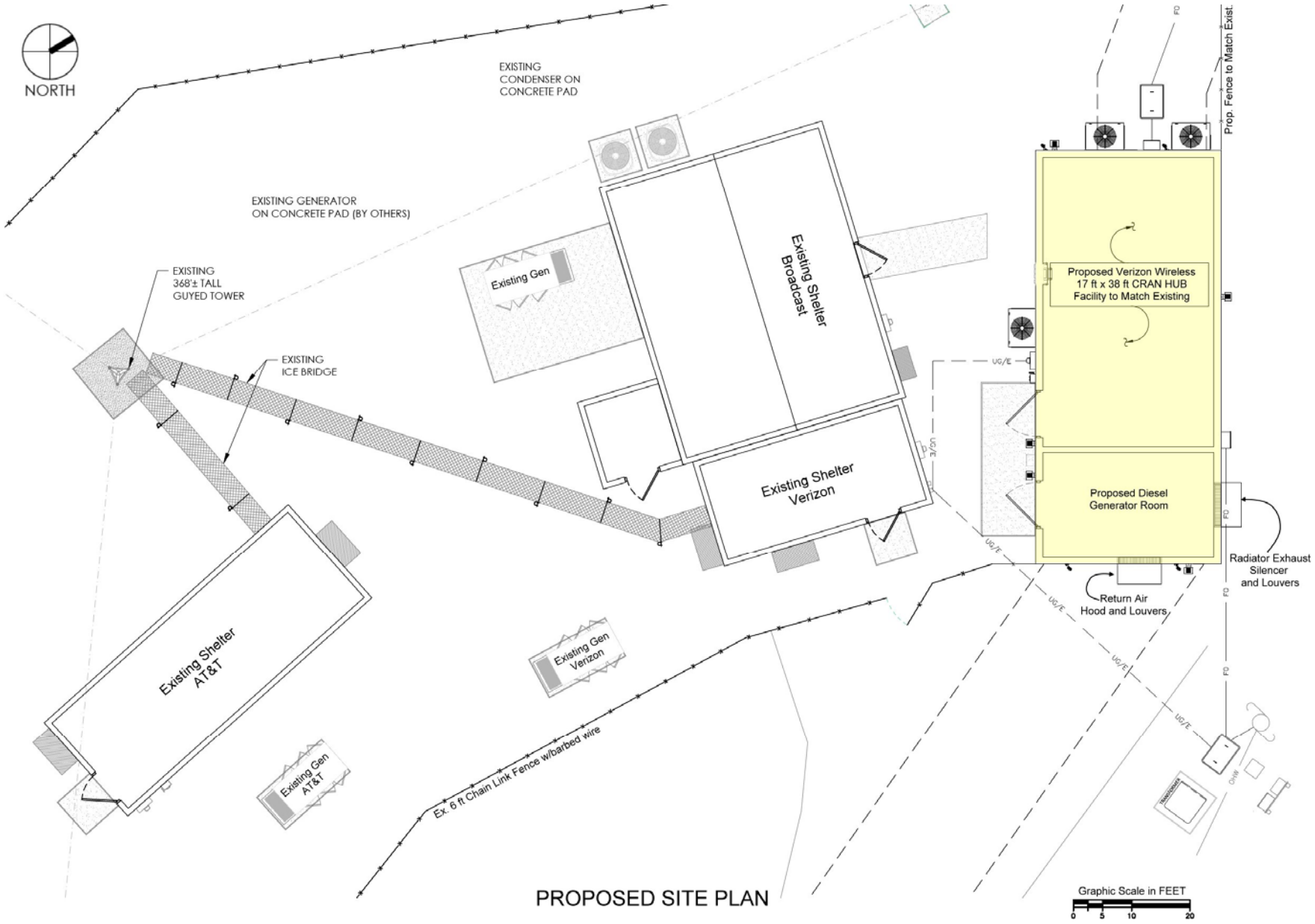


Figure 4: **Layout of the Existing and Proposed Ground Equipment at the Facility**

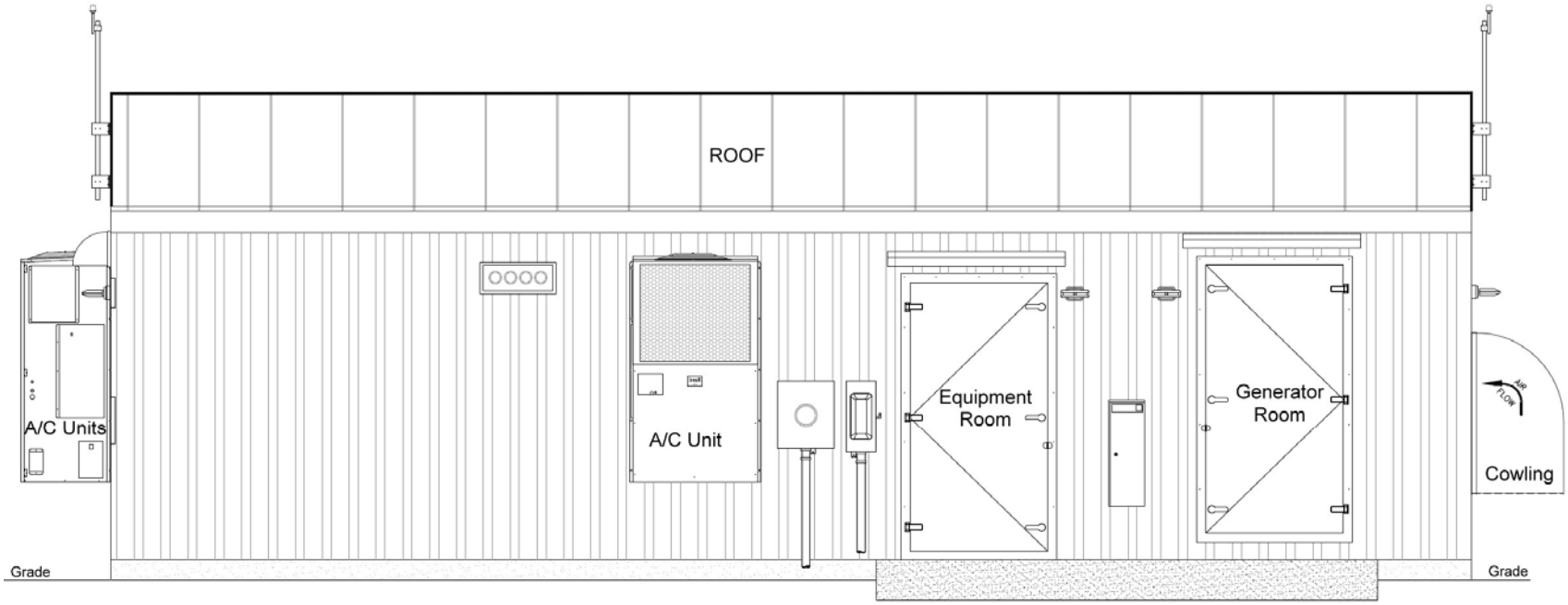


Figure 5: **Elevation Sketch of the Proposed Shelter Showing the Vertical Character of the Proposed Shelter**

The direct result of the optimized DAV features is a more energy efficient operation. The configuration also reduces the sound emissions in two ways. The cooling compressor is expected to cycle on less frequently. When it cycles on, it often operates at a reduced load with a corresponding lower sound level. Even at full load, it is configured to produce less sound than a traditional wall mount unit. The proposed shelter will be supported by three of the upgraded wall mount units.

A computer model was developed for the facility's sound levels based on conservative sound propagation principles prescribed in the acoustics literature. Each of the facility's potential sources during routine operation was identified. The sound from each source is estimated at the source and at the community receptors. The sum of the contributing sources is used to represent the predicted sound level at the modeled location. Identifying specific receiving locations is a key element of the noise modeling since sound levels decrease exponentially with increasing distance. The distances used in this study represent the distance between the nearest source(s) and the nearest representative sensitive property.

The analysis of sound is based on the contributions of individual sources and propagation losses to the analyzed receptors in representative directions from the facility. As noted, there are usually no nighttime sounds. Only during the warmest summer nights are the existing HVAC units expected to cycle on from time to time at night. This conservative modeling accounts for the equipment that could operate at night to all operate simultaneously. This includes one condenser unit at the existing Broadcast shelter, one window air conditioner at the Broadcast shelter, one wall-mount unit at the existing Verizon shelter, one wall-mount unit at the existing AT&T shelter along with two wall-mount units at the proposed shelter operating on partial load. Results of the modeling are shown in Table 3 and are provided in graphic form in Figure 6. The model accounts for both the shielding from the shelters and also the reflection from the shelters. The residential receptors to the north are closer to the sources and correspondingly higher sound levels.

Table 3: Summary of Noise Modeling Results: Potential Nighttime Sources

Receptor	Distance (ft)	Facility Nighttime Sound (dBA)	Criterion (dBA)	Compliance?
Property line, NE1	185	37	45	Yes
Property line, NE2	135	43	45	Yes
Property line, SE	280	40	45	Yes
Property line, South	370	39	45	Yes
Property line, SW1	480	33	45	Yes
Property line, SW2	510	36	45	Yes
Property line, NW1	370	40	45	Yes
Property line, NW2	190	44	45	Yes
Property line, NW3	160	39	45	Yes

Infrequently, the generators will be tested to assure their readiness. They are typically remotely tested about one half hour per week. These tests only occur during daytime conditions. The various owners of standby generators test the units on their own schedules. However, in this

conservative analysis, it is assumed that the four backup generators all operate at the same time. Moreover, the full complement of HVAC cooling is also assumed to occur at that time. This represents the facility worst-case sound emissions analyzed at the receptors in representative directions from the facility. Results of the daytime modeling are shown in Table 4 and are provided in graphical summary form in Figure 7. This model also accounts for the shielding and reflection from shelters at the facility.

Table 4: Summary of Noise Modeling Results: Routine Sources plus Generators

Receptor	Distance (ft)	Worst-Case Facility (dBA)	Criterion (dBA)	Compliance?
Property line, NE1	185	45	55	Yes
Property line, NE2	135	53	55	Yes
Property line, SE	280	49	55	Yes
Property line, South	370	46	55	Yes
Property line, SW1	480	41	55	Yes
Property line, SW2	510	41	55	Yes
Property line, NW1	370	45	55	Yes
Property line, NW2	190	50	55	Yes
Property line, NW3	160	47	55	Yes

Mitigation Measures

Most of the proposed equipment has no potential of emitting sound. Specific mitigation is needed for the two proposed sources to meet the CDEEP performance goals. The wall-mount HVAC units are of a design that optimizes the use of ambient ventilation air. It also operates at a part load cooling unless full load is needed to protect the shelter equipment. These features significantly reduce the sound from the unit operation. More importantly, the full load cooling is never expected to operate at night. (existing HVAC units only rarely operate at night). Therefore, the proposed shelter is not expected to affect the nighttime sound levels. The proposed generator will be installed inside the shelter. While operating louvers must open to allow radiator cooling air to exhaust and ambient return air to enter. The radiator air louvers will be fitted with a cowling silencer to allow cooling with a reduced sound emission. The return air louver will be fitted with a lined cowling. This is less aggressive treatment than the radiator louver but will reduce the sound of the intake louver. The generator exhaust will also be fitted with a critical grade silencer.

Conclusions

The ambient levels were measured at times that represented quiet conditions for the area. The potential sources of sound at the existing facility were identified and quantified. Sound level modeling techniques were employed to estimate the sound levels at the nearest receptor locations. The proposed communication facility inherently lacks any heavy mechanical equipment that are commonly associated utility or industrial uses. Most of the equipment has no potential to emit sound. There will be several sources of modest sound such as fans and HVAC units. The size of the equipment and character of the sound are similar to HVAC units that support residential uses. Mitigation measures are engineered into the proposed equipment configuration to allow their operation in sensitive environments.

Occasionally, the existing and proposed generators will be tested during the daytime. Each generator will be tested per its owner's maintenance policies. It is common for these to be remotely tested about one half-hour each week. In this conservative analysis, it is assumed that all of the generators will be tested simultaneously. The daytime modeling represents worst-case sound emissions by including all generators along with all shelters being cooled at the same time.

The results of the modeling indicate that the facility cooling systems are expected to meet CDEEP community noise standards even in the rare events that would require nighttime cooling. Therefore, the existing and proposed facility are expected to operate within the standards under all conditions.

The existing generators nor the proposed generator are subject to review by the CSC due to their individual and collective generating capacity well below 5 mW. The daytime testing of the facility units was modeled to assess their potential for substantial adverse environmental effect. The modeling addressed the worst case where all facility cooling plus simultaneous generator operation was compared to the CDEEP noise standards. The facility is expected to operate within the standards even under this worst-case scenario, so no substantial adverse environmental sound effects are expected.

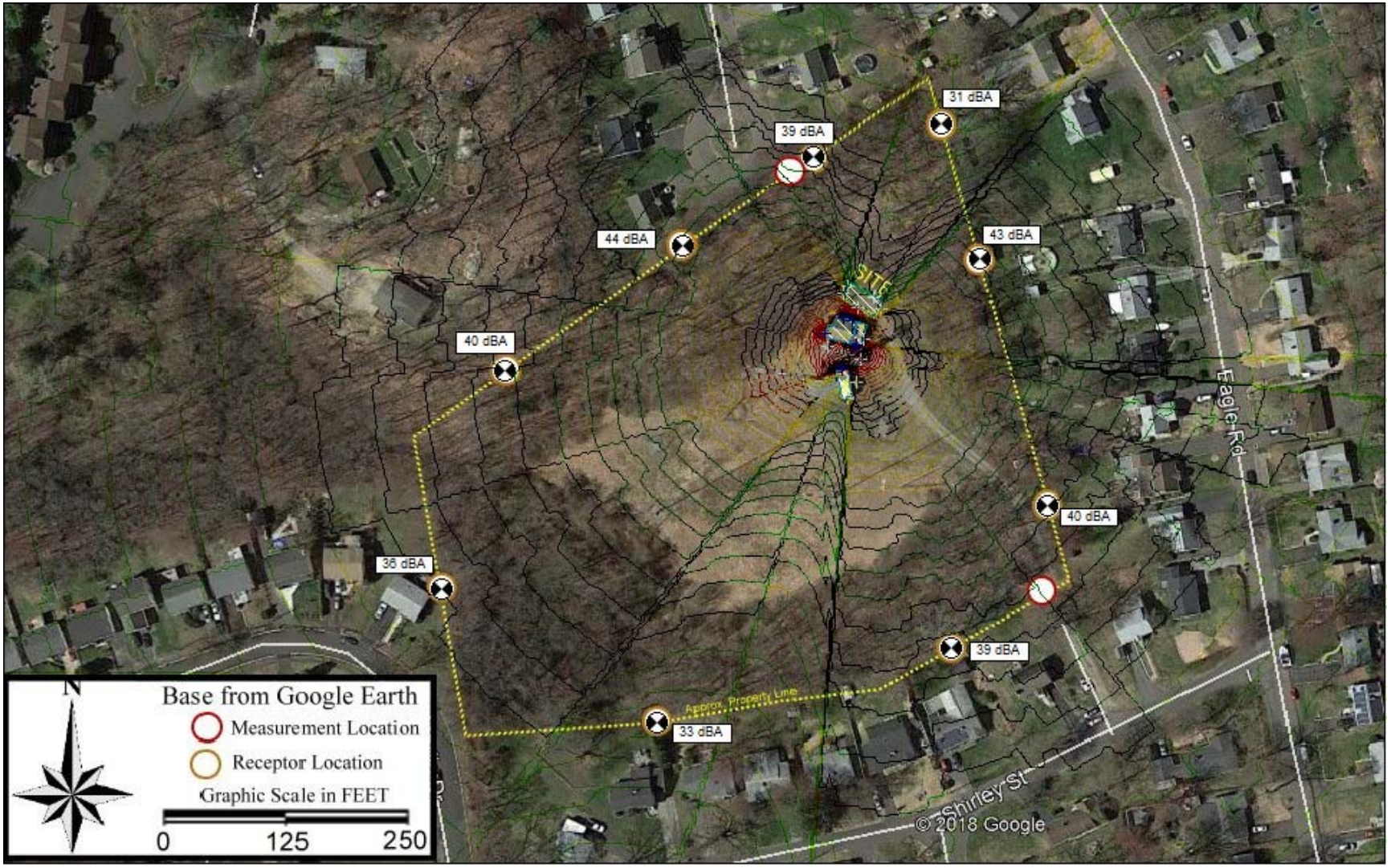


Figure 6: **Graphical Summary of the Facility Routine Sound Sources at Receptor Locations**

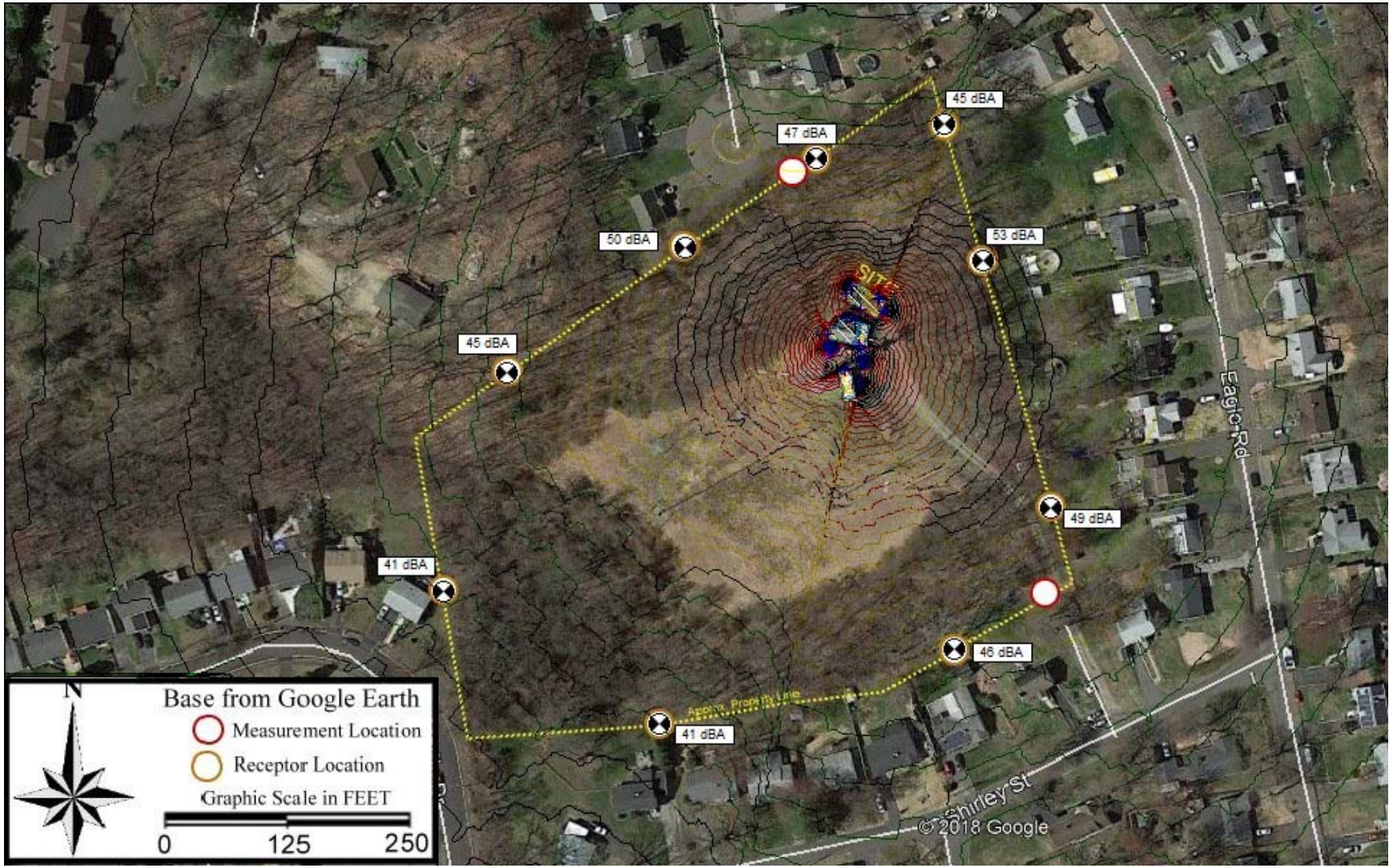


Figure 7: **Graphical Summary of the Combined Facility Sound Sources (Routine plus Generators) at Receptor Locations**

ASR Registration Search

Registration 1057290

Map Registration

Registration Detail

Reg Number	1057290	Status	Constructed
File Number	A1047810	Constructed	01/01/1984
EMI	No	Dismantled	
NEPA	No		

Antenna Structure

Structure Type TOWER - Free standing or Guyed Structure used for Commu

Location (in NAD83 Coordinates)

Lat/Long	41-06-56.0 N 073-26-04.0 W	Address	6 SHIRLEY ST
City, State	NORWALK , CT		
Zip	06850	County	FAIRFIELD
Center of AM Array		Position of Tower in Array	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
35.0	114.0
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
149.0	102.0

Painting and Lighting Specifications

FCC Paragraphs 1, 3, 12, 21

FAA Notification

FAA Study	2004-ANE-508-OE	FAA Issue Date	06/30/2004

Owner & Contact Information

FRN	0022509178	Owner Entity Type	Limited Liability Company
Assignor FRN	0022419329	Assignor ID	L01787809

Owner

CTI Towers Assets II, LLC
Attention To: Loren Stearns
38 Pond Street
Suite 305
Franklin , MA 02038

P: (508)440-5780
F: (508)440-5765
E: lstearns@ctitowers.com

Contact

Stearns , Loren
Attention To: Loren Stearns
38 Pond Street
Suite 305
Franklin , MA 02038

P: (508)440-5780
F: (508)440-5765
E: lstearns@ctitowers.com

Last Action Status

Status	Constructed	Received	08/19/2016
Purpose	Change Owner	Entered	08/19/2016
Mode	Interactive		

Related Applications

03/30/2018	A1100583	- Modification (MD)
08/19/2016	A1047810	- Change Owner (OC)
10/07/2014	A0923845	- Admin Update (AU)

Related applications (13)

Comments

Comments

None

History

Date	Event
08/20/2016	Registration Printed
08/20/2016	Change of Ownership Letter Sent
08/19/2016	Change of Ownership Received

All History (32)

Automated Letters

08/20/2016	Authorization, Reference
08/20/2016	Ownership Change, Reference 924298
10/08/2014	Authorization, Reference

All letters (14)

CLOSE WINDOW

verizon

NORWALK CT CRAN HUB

6 SHIRLEY STREET
NORWALK, CT 06850

ZONING DRAWINGS

MAY 7, 2019

LOCATION MAP (NTS)

SITE ADDRESS:	6 SHIRLEY STREET NORWALK, CT 06850
PROPERTY OWNER:	CTI TOWERS ASSETS II, LLC 5000 CENTREGREEN WAY, SUITE 325 CARY, NC 27513
APPLICANT:	VERIZON WIRELESS
LATITUDE:	41° 06' 56.74"± N (NAD 83)
LONGITUDE:	73° 26' 03.11"± W (NAD 83)
ELEVATION:	126'± AMSL
JURISDICTION:	CITY OF NORWALK
PARCEL ID NO.:	5-58-43-0
ZONING DISTRICT:	B

VICINITY MAP (NTS)

ARCHITECTURAL & ENGINEERING FIRM
TECTONIC ENGINEERING
CONSULTANTS P.C.
1279 ROUTE 300
NEWBURGH, NY 12550
PHONE: (845)567-6656
CONTACT: EDWARD IAMICELI, P.E.

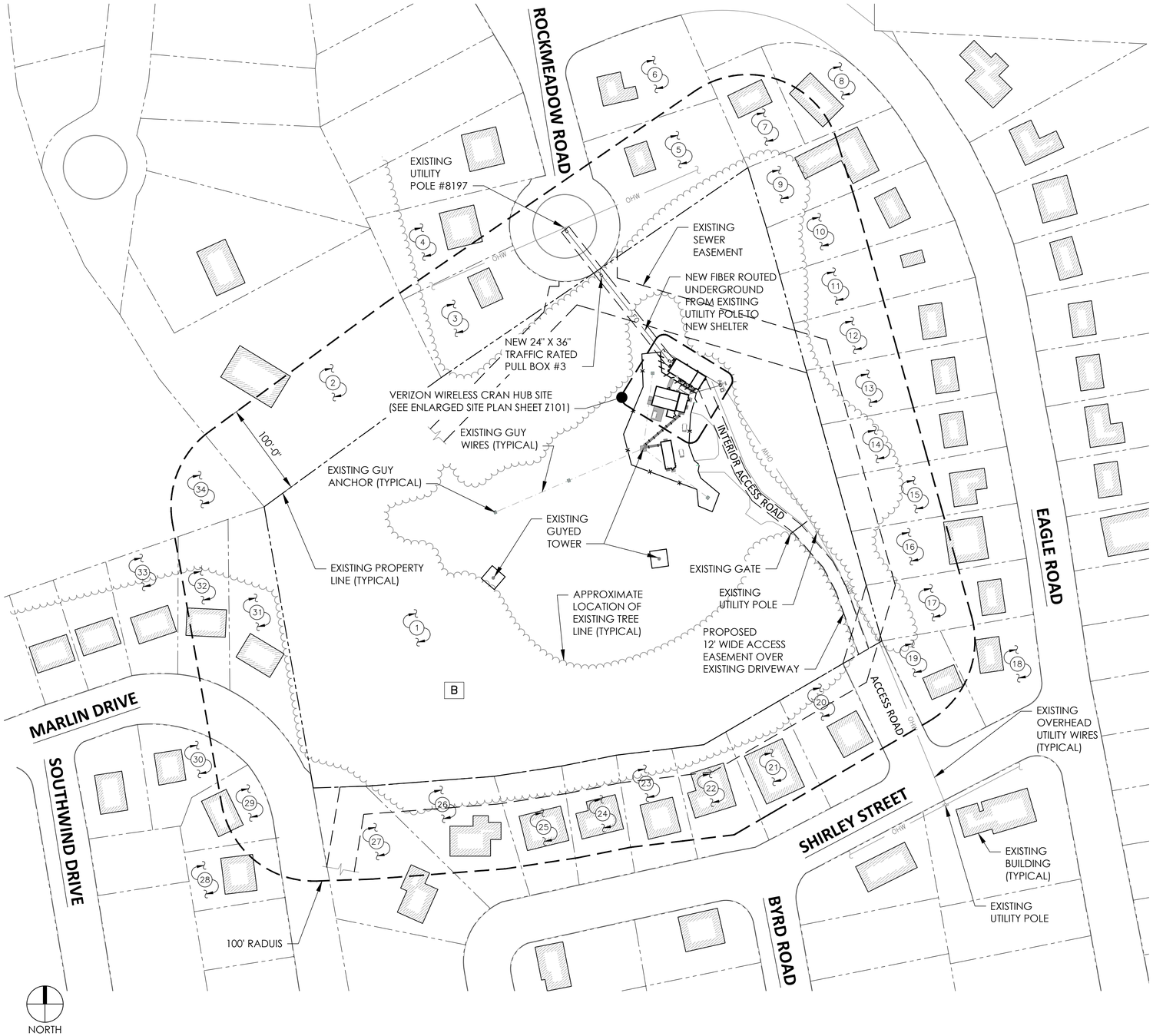
VERIZON WIRELESS PROJECT MANAGER
JOHN P. ROMANO
ENGINEER III - SPEC-CONSTRUCTION
VERIZON - NEW ENGLAND
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492
PHONE: (203) 858-5500
JOHN.ROMANO@VERIZONWIRELESS.COM

ELECTRIC COMPANY
EVERSOURCE (CL&P)
107 SELDEN STREET
BERLIN, CT 06037
PHONE: (888)544-4826

LANDLINE TELEPHONE COMPANY
FRONTIER COMMUNICATIONS
401 MAIN AVENUE
NORWALK, CT 06851
PHONE: (800)921-8101

LANDOWNER OF PARCEL
CTI TOWERS ASSETS II, LLC
5000 CENTREGREEN WAY, SUITE 325
CARY, NC 27513

ZONING DRAWINGS



1 OVERALL SITE PLAN/ABUTTERS PLAN
22" x 34" SCALE: 1:750
11" x 17" SCALE: 1:1500

LIST OF ADJACENT PROPERTY OWNERS WITHIN 100' RADIUS:

#	PARCEL ID#:	OWNER:	PARCEL ADDRESS:
1	5-58-43-0	CTI TOWERS ASSETS II, LLC	0 SHIRLEY ST, NORWALK, CT 06850
2	5-58-238-0	SOLENG BARD & CHRISTINA D	27 ROCKMEADOW RD, NORWALK, CT 06850
3	5-58-286-0	MCGRATH EILEEN R	1 ROCKMEADOW RD, NORWALK, CT 06850
4	5-58-285-0	SMITH JOHN L & RITA A	3 ROCKMEADOW RD, NORWALK, CT 06850
5	5-58-287-0	COTRONE ANITA	2 ROCKMEADOW RD, NORWALK, CT 06850
6	5-58-288-0	COTE ROLAND G	4 ROCKMEADOW RD, NORWALK, CT 06850
7	5-58-169-0	STRONG JEAN M	39 EAGLE RD, NORWALK, CT 06850
8	5-58-168-0	TREMONTE SAUNDO S & LUCY M	37 EAGLE RD, NORWALK, CT 06850
9	5-58-167-0	BUZZI ARMANDO J & NANCY F	35 EAGLE RD, NORWALK, CT 06850
10	5-58-166-0	NAPOLEONE MARIO JR/VICTORIA	33 EAGLE RD, NORWALK, CT 06850
11	5-58-165-0	NAPOLEONE MARIO JR/VICTORIA	31 EAGLE RD, NORWALK, CT 06850
12	5-58-164-0	CZERNEE VOLODYMYR/SVITLANA	29 EAGLE RD, NORWALK, CT 06850
13	5-58-157-0	FOGLE JULIA C	27 EAGLE RD, NORWALK, CT 06850
14	5-58-156-0	CHRISTIANO W & JACQUELYN D	25 EAGLE RD, NORWALK, CT 06850
15	5-58-155-0	KRAMER ROBERT T	23 EAGLE RD, NORWALK, CT 06850
16	5-58-154-0	DEMOTT AMANDA M	21 EAGLE RD, NORWALK, CT 06851
17	5-58-153-0	MCCALLIUM JEANETTE W CO-TR	19 EAGLE RD, NORWALK, CT 06851
18	5-58-185-0	ANTERA MORRIS A & TERESA N	17 EAGLE RD, NORWALK, CT 06850
19	5-58-186-0	DIXON DANIELLE & MARYOU W	4 SHIRLEY ST, NORWALK, CT 06850
20	5-58-187-0	JUDD CHASE JOAN ANN	8 SHIRLEY ST, NORWALK, CT 06850
21	5-58-176-0	OWENS RANDY & CATHERINE	10 SHIRLEY ST, NORWALK, CT 06850
22	5-58-177-0	NAVARRO HECTOR A & LUPE	12 SHIRLEY ST, NORWALK, CT 06850
23	5-58-178-0	MUCCI PATRICIA A	14 SHIRLEY ST, NORWALK, CT 06850
24	5-58-188-0	LEFORT LOUIS E & NANCY C	16 SHIRLEY ST, NORWALK, CT 06850
25	5-58-199-0	DONNELLY ROBERT E/PATRICIA W	18 SHIRLEY ST, NORWALK, CT 06850
26	5-58-200-0	DOMINICI SHOR CHRISTIN N	20 SHIRLEY ST, NORWALK, CT 06850
27	5-58-201-0	FLORENCE P GORDON REV TRUST	22 SHIRLEY ST, NORWALK, CT 06850
28	5-58-390-0	SMITH ALTON L	44 MARLIN DR, NORWALK, CT 06854
29	5-58-389-0	SHAW CANE & VIOLA	46 MARLIN DR, NORWALK, CT 06854
30	5-58-388-0	SUMMERVILLE THELMA B	50 MARLIN DR, NORWALK, CT 06854
31	5-58-347-0	DINGLASAN OLIVER L & LISETTE P	49 MARLIN DR, NORWALK, CT 06854
32	5-58-346-0	LEWIS ROBERT W & ROSANNE M	51 MARLIN DR, NORWALK, CT 06854
33	5-58-345-0	KORECKI MAREK/KORECKA EWA	53 MARLIN DR, NORWALK, CT 06854
34	5-58-12-0	CONDOMINIUM TOWNHOUSE	115 FILLOW ST, NORWALK, CT 06850

LEGEND:

- PROPERTY LINE
- ADJOINING PROPERTY LINE
- 100' RADIUS OFFSET
- L1 — ZONING DISTRICT

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NORWALK CT CRAN HUB
LOCATION CODE: 470037
6 SHIRLEY STREET
NORWALK, CT 06850

NO.	DESCRIPTION	DATE
0	ISSUED FOR 100% E.O.S. REVIEW	05-07-2019

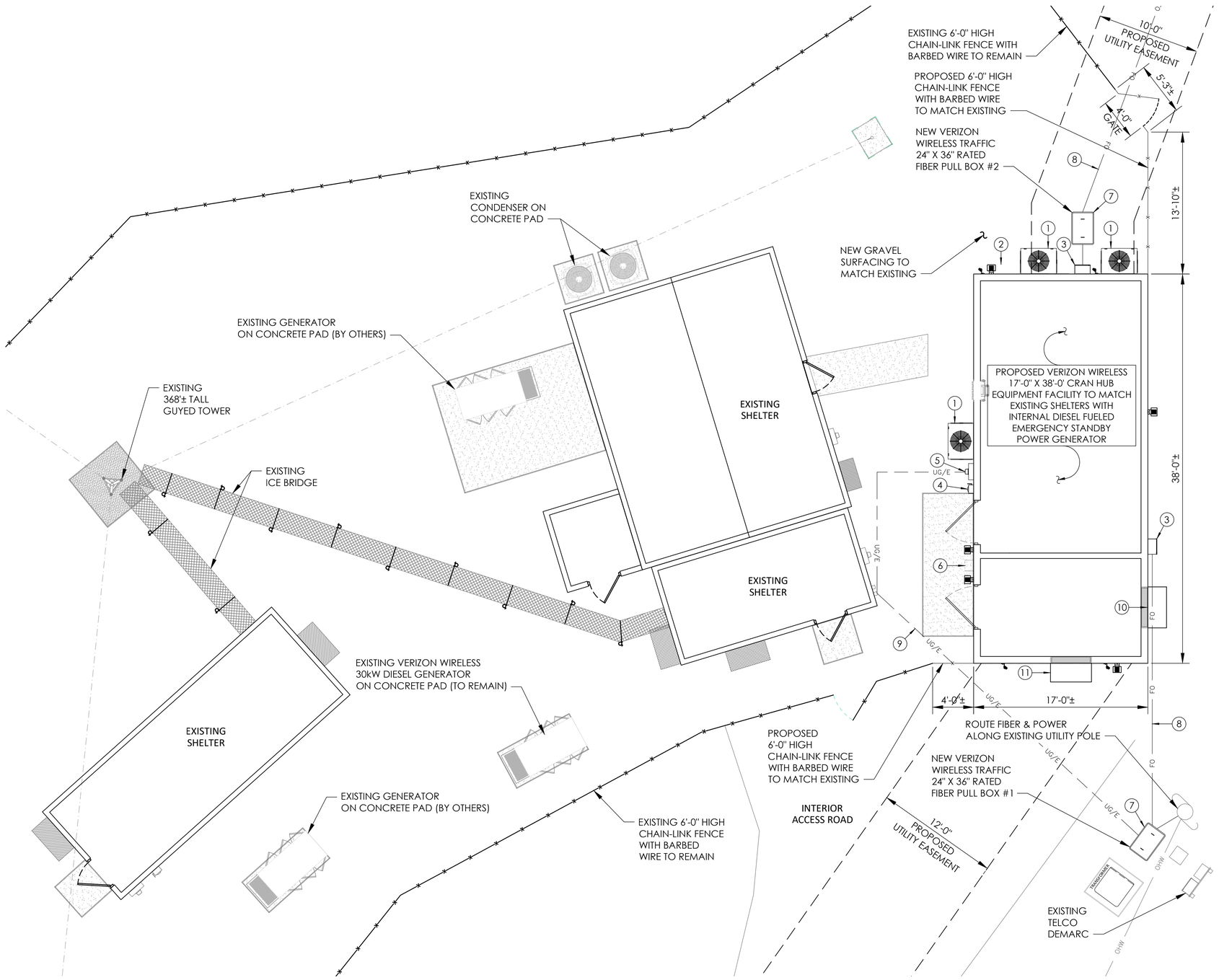
NETWORK COMPLIANCE SUBMITTALS	DATE
100% SUBMISSION	-
ZONING DRAWING SUBMISSION	-
RECORD SET (AS-BUILTS)	-

PROJECT #: TEC PROJECT NO: 8814.14 (NORWALK)
CAD DWG FILE #:
DESIGNED BY: EI
DRAWN BY: BWY
CHECKED BY: EI

STATE OF CONNECTICUT
EDWARD N. INGRELL
26473
LICENSED PROFESSIONAL ENGINEER

OVERALL SITE PLAN /ABUTTERS PLAN

Z100



1 PROPOSED SITE PLAN

22" x 34" SCALE: 3/16" = 1'-0"
11" x 17" SCALE: 3/32" = 1'-0"

3/16" = 1'-0" SF: 64
0 5 10 20

NOTES:

1. SITE GROUNDING SHALL COMPLY WITH VERIZON WIRELESS GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH VERIZON WIRELESS GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.
2. ANY DAMAGE TO ADJACENT PROPERTIES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
3. CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES WITHIN CONSTRUCTION LIMITS PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE ON THE SITE AT ALL TIMES. SILT AND EROSION CONTROL SHALL BE MAINTAINED ON THE DOWNSTREAM SIDE IF THE SITE AT ALL TIMES. ANY DAMAGE TO ADJACENT PROPERTIES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
5. CLEARING OF TREES AND VEGETATION ON THE SITE SHOULD BE HELD TO A MINIMUM. ONLY THE TREES NECESSARY FOR CONSTRUCTION OF THE FACILITIES SHALL BE REMOVED. ANY DAMAGE TO PROPERTY OUTSIDE THE LEASE PROPERTY SHALL BE REPAIRED BY THE CONTRACTOR.
6. ALL SUITABLE BORROW MATERIAL FOR BACK FILL OF THE SITE SHALL BE INCLUDED IN THE BID. EXCESS TOPSOIL AND UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF SITE AT LOCATIONS APPROVED BY GOVERNING AGENCIES PRIOR TO DISPOSAL.
7. SEEDING AND MULCHING OF THE SITE SHALL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER COMPLETION OF THE SITE DEVELOPMENT. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING AN ADEQUATE COVER OF VEGETATION OVER THE SITE FOR A ONE YEAR PERIOD.
8. THE CONTRACTOR SHALL VISIT THE SITE BEFORE BIDDING ON THE WORK CONTAINED IN THIS DESIGN PACKAGE.

KEY NOTES:

1. NEW VERIZON WIRELESS 5 TON WALL MOUNT HVAC UNIT
2. NEW VERIZON WIRELESS EXTERIOR EXHAUST FAN W/ METAL HOOD
3. NEW VERIZON WIRELESS PENTAR 18" X 18" JUNCTION BOX
4. NEW VERIZON WIRELESS DISCONNECT
5. NEW VERIZON WIRELESS METER
6. NEW VERIZON WIRELESS GENERATOR TAP BOX
7. NEW VERIZON WIRELESS 24" X 36" TRAFFIC GRADE PULL BOX
8. NEW VERIZON WIRELESS DARK FIBER ROUTED UNDERGROUND (LOCATION TO BE DETERMINED)
9. NEW VERIZON WIRELESS POWER ROUTED UNDERGROUND (LOCATION TO BE DETERMINED)
10. NEW VERIZON WIRELESS RADIATOR EXHAUST COWLING SILENCER BY DB NOISE REDUCTION INC.
11. NEW VERIZON WIRELESS DOWNTURNED BEND LINED COWLING BY DB NOISE REDUCTION INC.

PROPOSED CONDUIT LOCATIONS ARE SHOWN SCHEMATICALLY. CONTRACTOR SHALL FIELD VERIFY LOCATIONS PRIOR TO CONSTRUCTION.

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NORWALK CT CRAN HUB
LOCATION CODE: 470037
6 SHIRLEY STREET
NORWALK, CT 06850

NO.	DESCRIPTION	DATE
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NETWORK COMPLIANCE SUBMITTALS	DATE
100% SUBMISSION	-
ZONING DRAWING SUBMISSION	-
RECORD SET (AS-BUILTS)	-

PROJECT #: TEC PROJECT NO: 8814.14 (NORWALK)
CAD DWG FILE #:
DESIGNED BY: EI
DRAWN BY: BWY
CHECKED BY: EI

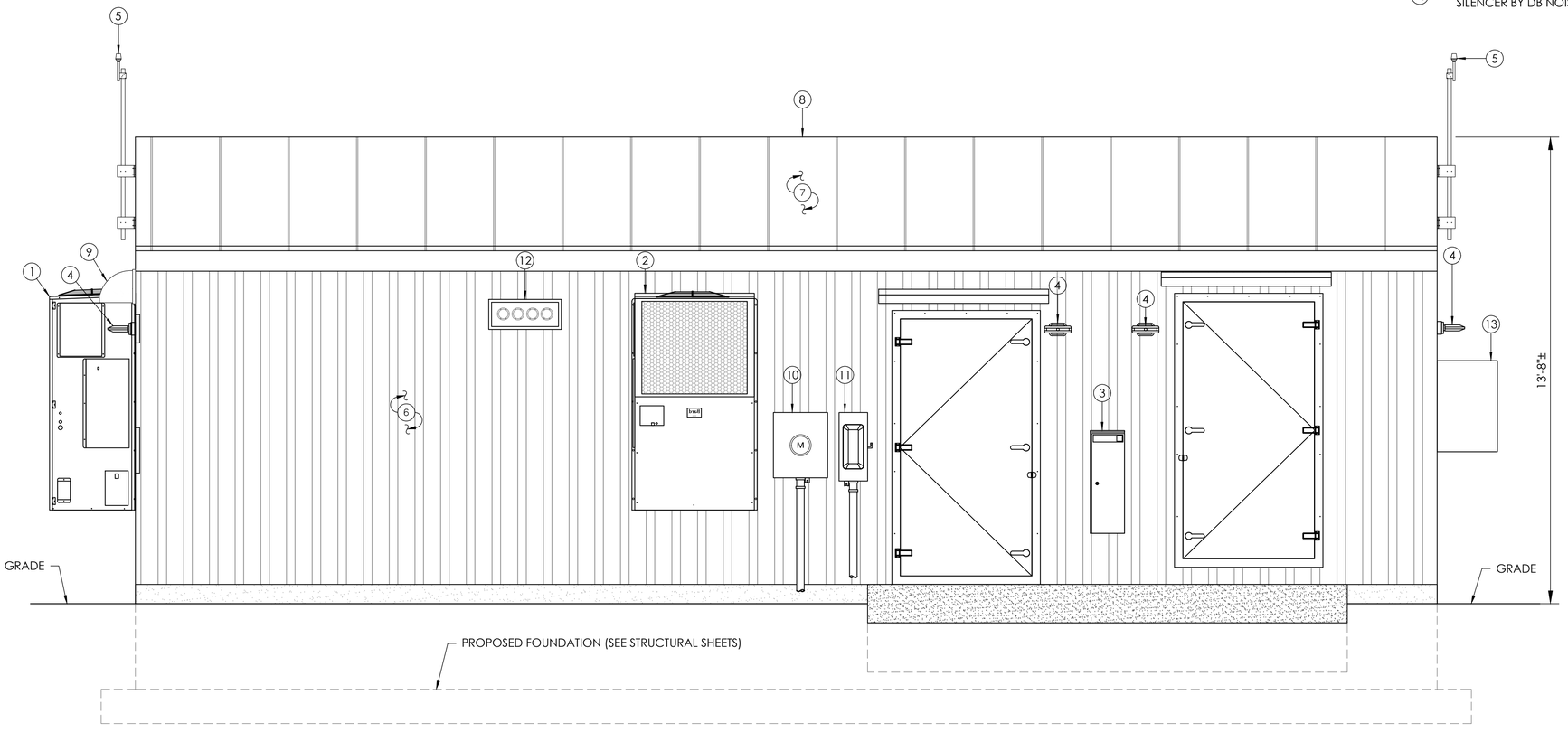
STATE OF CONNECTICUT
EDWARD N. INGELI
26473
LICENSED PROFESSIONAL ENGINEER

PROPOSED SITE PLAN

Z101

KEY NOTES:

1. NEW VERIZON WIRELESS AC UNIT #2
2. NEW VERIZON WIRELESS AC UNIT #3
3. NEW VERIZON WIRELESS PORTABLE GENERATOR TAP BOX
4. PROPOSED VERIZON WIRELESS EXTERIOR LIGHTING
5. PROPOSED VERIZON WIRELESS GPS ANTENNAS
6. PROPOSED JAMES HARDIE SMOOTH VERICAL SIDING
7. PROPOSED STANDING SEAM ROOF
8. PROPOSED VERIZON WIRELESS EQUIPMENT SHELTER
9. NEW VERIZON WIRELESS EXHAUST FAN
10. NEW VERIZON WIRELESS METER
11. NEW VERIZON WIRELESS DISCONNECT
12. NEW VERIZON WIRELESS CABLE PORT
13. NEW VERIZON WIRELESS RADIATOR EXHAUST COWLING SILENCER BY DB NOISE REDUCTION INC.



1 BUILDING ELEVATION
22" x 34" SCALE: 1/2" = 1'-0"
11" x 17" SCALE: 1/4" = 1'-0"

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NORWALK CT CRAN HUB
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6 SHIRLEY STREET
NORWALK, CT 06850

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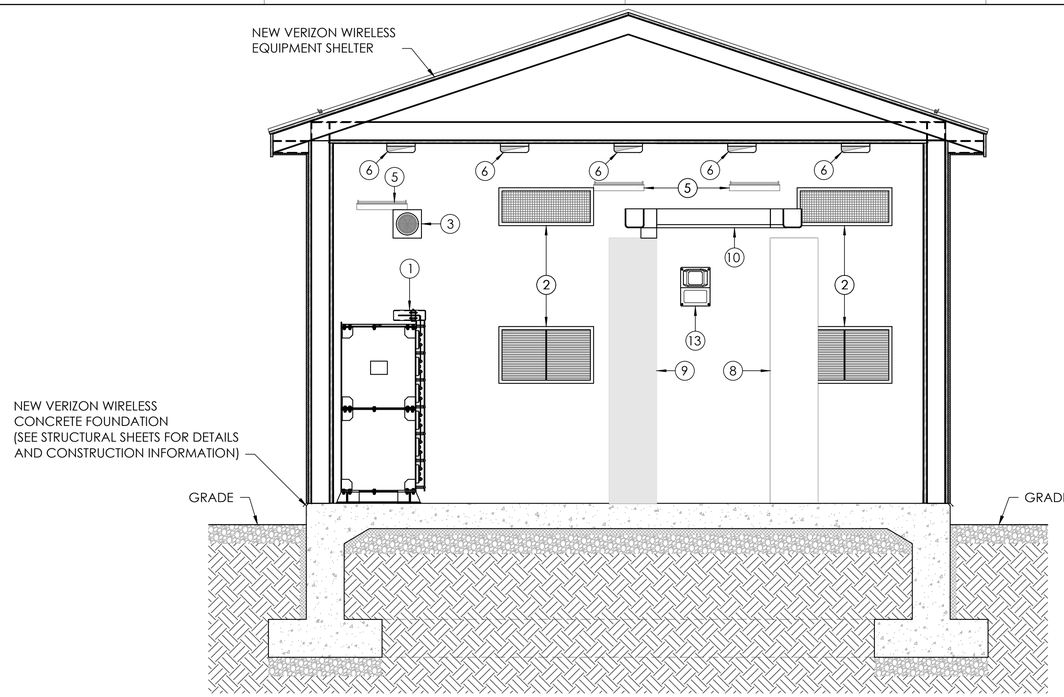
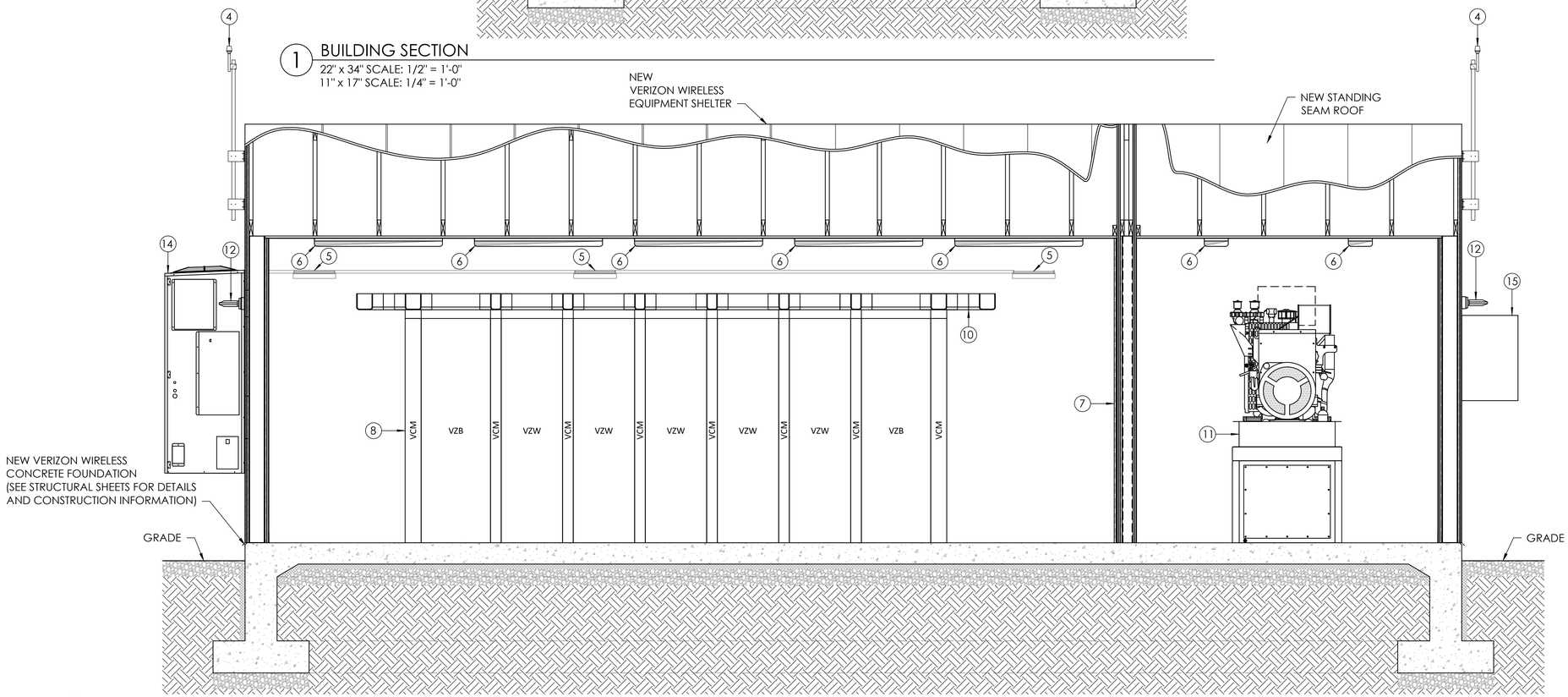
BUILDING ELEVATION

Z301



1 BUILDING SECTION

22" x 34" SCALE: 1/2" = 1'-0"
11" x 17" SCALE: 1/4" = 1'-0"



2 BUILDING SECTION

22" x 34" SCALE: 1/2" = 1'-0"
11" x 17" SCALE: 1/4" = 1'-0"

KEY NOTES:

1. NEW VERIZON WIRELESS BATTERY RACK
2. NEW VERIZON WIRELESS WALL MOUNTED HVAC UNIT SUPPLY & RETURN GRILLS (BY OWNER)
3. NEW VERIZON WIRELESS EXHAUST FAN
4. PROPOSED VERIZON WIRELESS GPS ANTENNAS
5. NEW VERIZON WIRELESS CABLE TRAY
6. NEW VERIZON WIRELESS LIGHTING (SEE ELECTRICAL SHEETS FOR FURTHER INFORMATION).
7. NEW VERIZON WIRELESS TELCO BOARD
8. NEW VERIZON WIRELESS NETWORK EQUIPMENT
9. FUTURE VERIZON WIRELESS NETWORK EQUIPMENT
10. NEW VERIZON WIRELESS FIBER TROUGHS TO BE INSTALLED ABOVE NEW NETWORK EQUIPMENT. TOP OF TROUGH @ 7'-8" A.F.G.F. NOT TO INTERFERE WITH EXISTING CABLE TRAYS OR LIGHTING LAYOUT TO BE DETERMINED BY OWNER).
11. NEW VERIZON WIRELESS STANDBY GENERATOR (SEE PRE-PURCHASE SCHEDULE FOR SIZE/CONFIGURATION).
12. PROPOSED VERIZON WIRELESS EXTERIOR LIGHTING
13. NEW VERIZON WIRELESS HVAC CONTROLLER #1
14. NEW VERIZON WIRELESS AC UNIT #2
15. NEW VERIZON WIRELESS RADIATOR EXHAUST COWLING SILENCER BY DB NOISE REDUCTION INC.

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NORWALK CT CRAN HUB

LOCATION CODE: 470037
6 SHIRLEY STREET
NORWALK, CT 06850

NO.	DESCRIPTION	DATE
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ZONING DRAWING SUBMISSION	-
RECORD SET (AS-BUILTS)	-

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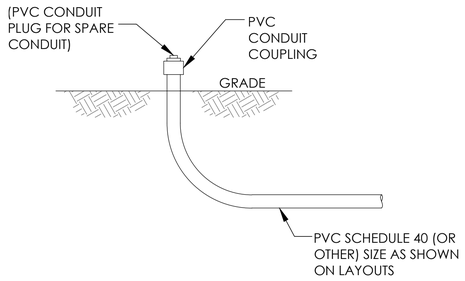
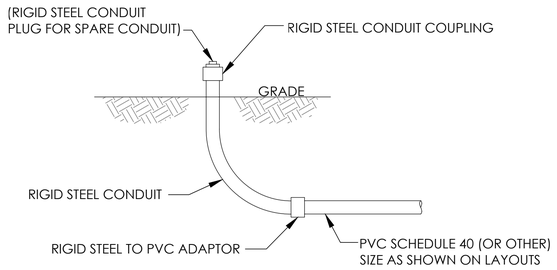
EDWARD N. IANNELLI
26479
LICENSED
PROFESSIONAL ENGINEER

BUILDING SECTIONS

Z302

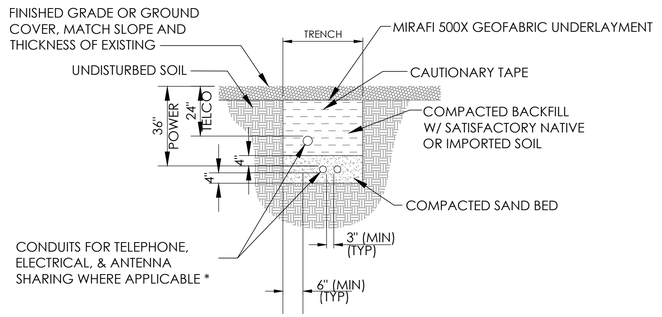


5 UNDERGROUND PVC CONDUIT STUB-UP
N.T.S.



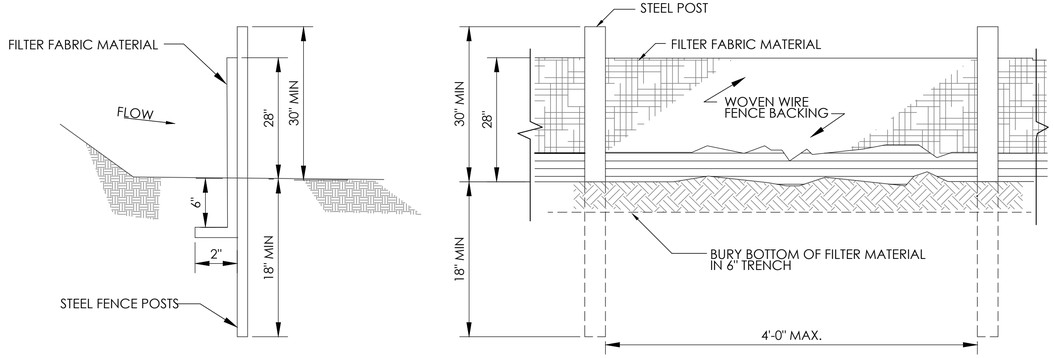
3 UNDERGROUND PVC TO STEEL STUB-UP
N.T.S.

NOTES: 1. LEAN CONCRETE, RED-COLORED TOP, MAY BE USED IN PLACE OF COMPACTED SAND.



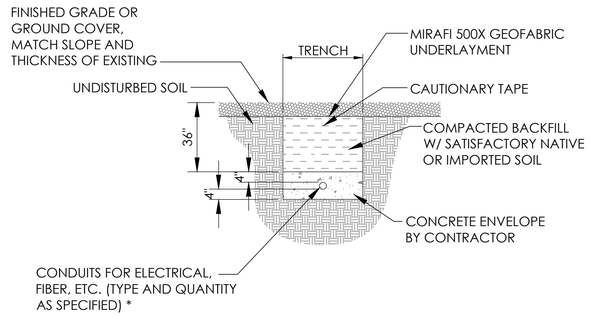
* CONDUIT SIZE, TYPE, QUANTITY AND SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS

2 DIRECT BURIED CONDUIT
N.T.S.



NOTE: USE 36" DOT APPROVED FABRIC
USE STEEL POSTS

4 SILT FENCE, TYPE-C DETAIL
N.T.S.



* CONDUIT SIZE, TYPE, QUANTITY AND SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS

1 TYPICAL DUCTBANK DETAIL
N.T.S.

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NORWALK CT CRAN HUB
LOCATION CODE: 470037
6 SHIRLEY STREET
NORWALK, CT 06850

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RECORD SET (AS-BUILTS)	-

PROJECT #: TEC PROJECT NO: 8814.14 (NORWALK)
CAD DWG FILE #:
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EDWARD N. INGELI
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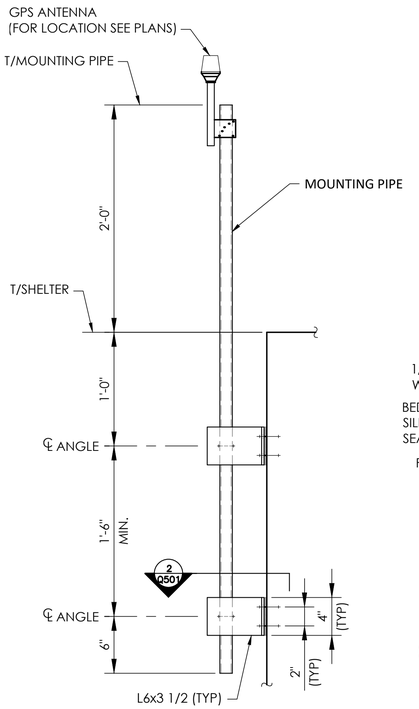
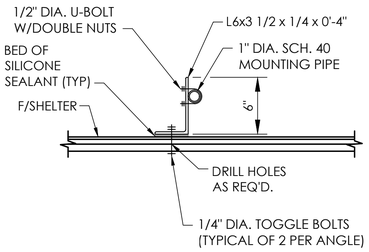
LICENSED PROFESSIONAL ENGINEER

CIVIL DETAILS

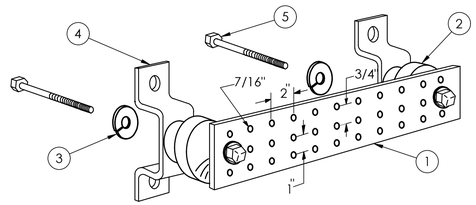
Z501



1 GPS ANTENNA MOUNT DETAIL
NOT TO SCALE



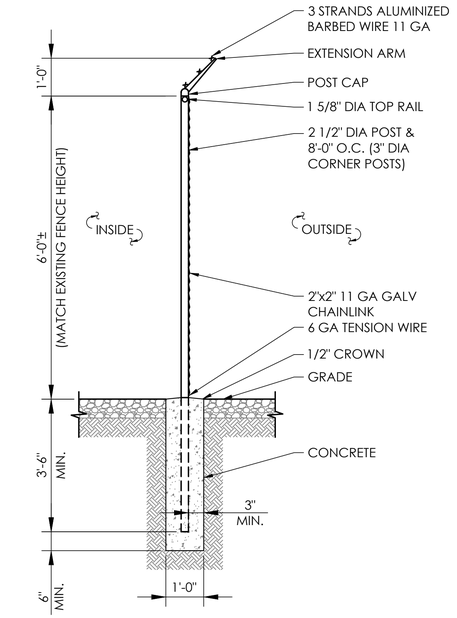
2 GPS ANTENNA MOUNT SECTION
NOT TO SCALE



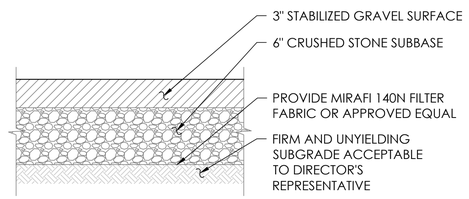
LEGEND

1- COPPER GROUND BAR, 1/4"x 4"x20", NEWTON INSTRUMENT CO. CAT. NO. B-6142. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION
2- INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4
3- 5/8" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8
4- WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056
5- 5/8-11 x 1" H.H.C.S.BOLTS, NEWTON INSTRUMENT CO. CAT NO. 3012-1

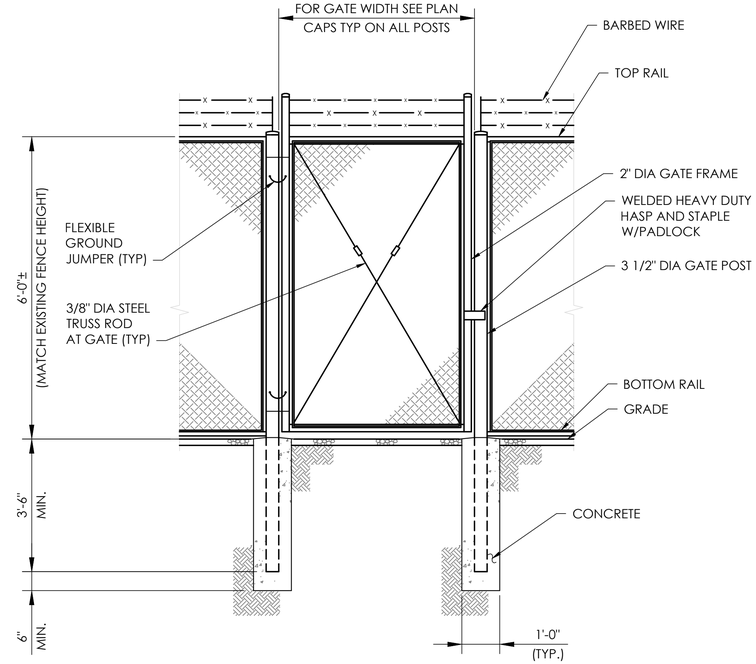
3 GROUNDING BAR DETAIL
NOT TO SCALE



4 FENCE FOUNDATION SECTION
NOT TO SCALE



5 GRAVEL SURFACE DETAIL
NOT TO SCALE



6 GATE DETAIL
NOT TO SCALE

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NORWALK CT CRAN HUB

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6 SHIRLEY STREET
NORWALK, CT 06850

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100% SUBMISSION	-
ZONING DRAWING SUBMISSION	-
RECORD SET (AS-BUILTS)	-

PROJECT #: TEC PROJECT NO: 8814.14 (NORWALK)
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DRAWN BY: BWY
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STATE OF CONNECTICUT
EDWARD I. INCELI
26473
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PROFESSIONAL ENGINEER

STANDARD DETAILS

Z502

VERIZON WIRELESS - NORWALK CRAN HUB
6 Shirley Street, Norwalk, CT

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$		

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City, State, ZIP+4®: NORWALK, CT 06856-5125

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$		05/14/2019
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City, State, ZIP+4®: NORWALK, CT 06856

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☐ Return Receipt (electronic)	$ $0.00	
☐ Certified Mail Restricted Delivery	$ $0.00	Postmark Here
☐ Adult Signature Required	$ $0.00	
☐ Adult Signature Restricted Delivery	$	
Postage	$7.35	
$		05/14/2019
Total Postage and Fees	$13.65	
$		

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City, State, ZIP+4®: CARY, NC 27513

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