

G. Scott Shepherd, Sr. Property Specialist - SBA Communications 134 Flanders Rd., Suite 125, Westborough, MA 01581 508.251.0720 x 3807 - GShepherd@sbasite.com

November 4, 2021

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

RE: Notice of Exempt Modification 160 West St., Cromwell, CT Latitude: 41.606000 Longitude: -72.670400 T-Mobile Site #: CTHA521A\_Hardening

Dear Ms. Bachman:

T-Mobile currently maintains six (6) antennas at the 75-foot level of the existing 76-foot Monopole Tower at **160 West St., Cromwell, CT.** The tower is owned by SBA Towers IV, LLC. The property is owned by 160 West St., LLC. T-Mobile now intends to add one (1) Generac RD025 Diesel generator and 4' x 10' concrete pad, within a 58' x 30' fenced compound lease area. The proposed generator and concrete pad will sit fully within the leased area of the compound and will not require additional space for the supplementary tank.

### Ground

Install New:

- (1) Generac RD0 25kw Diesel generator
- (1) 4' x 10' concrete pad
- (1) 2" RGS conduit for Ethernet cable for generator & Alarms from exist. Equip. cabinet to prop. generator
- (1) 2" RGS conduit for emergency power from prop. generator to prop. ATS
- (1) 1-1/2" RGS conduit for generator heater & Battery from exist. PPC to prop. generator
- (1) 2" RGS conduit for emergency power from proposed ATS to existing PPC



• Generac 200A, 120/240v automatic transfer switch mounted to proposed Unistrut

### Remaining:

- T-Mobile Emerson Nextend Compact 2416 fiber cabinet
- T-Mobile GPS antenna mounted to exist. Ice bridge
- T-Mobile cables routed along exist. Ice bridge
- T-Mobile Ice Bridge
- T-Mobile Ericsson RBS6201 ODE cabinet
- T-Mobile Battery cabinet
- T-Mobile Ericsson B160 cabinet
- T-Mobile Ericsson 6160 equip. Cabinet
- Existing 10' x 16' concrete pad

### Reason for Request / Change in Generator Size and Fuel

In an effort to further enhance network reliability, T-Mobile is proposing to install a diesel-based backup generator, the Generac RD025 25kw Diesel Generator. T-Mobile is currently in the middle of a National Hardening Project.

The proposed diesel generator measures  $84.2'' \times 35'' \times 91.7''$  (w/fuel tank:  $103.4'' \times 35'' \times 91.7''$ ). It will sit fully within the leased area of the compound and will not require additional space for the supplementary tank.

Generac's RD025 25kw Diesel Generator carries up to 98 hours of run time with 100% load, 125 hours of run time with a 75% load and 161 hours of run time with a 50% load. It can operate in temperatures of 122 degrees Fahrenheit.

### **Monitoring, Prevention and Containment Measures**

It will be filled by a licensed fuel filling company. The Generac's RD025 25kw Diesel Generator is fuel efficient, rodent and corrosion resistant, and has a sound attenuated aluminum enclosure with a Rated Load Sound Output at 23ft. of -65dB. It further supports advanced, remote monitoring for diagnostics and control and is installed with a tank alarm system. The Sound Output from the Generac RD025kw meets/exceeds the allowable noise emissions levels for the Town of Cromwell, CT which is as follows:

### Maximum Continuous Noise Levels (measured in dBA):

Chapter 168. Noise

§ 168-5 . Noise zone standards.



A. A-weighted noise level standards. It shall be unlawful for any person to emit or cause to be emitted any noise beyond the property lines of his/her premises in excess of the following noise levels:

<b>Receptor Noise Zone Class</b>
(dBA)

Emitter Noise Zone	С	В	A-Day	A-Night
Class C	70	66	61	51
C Class B	72	62	55	45
Class A	62	55	55	45

The proposed modification will remain within the existing  $58' \times 30'$  fenced compound. The new generator and tank will be surrounded by the existing security fence and 12' 6'' wide double leaf gate and will be placed on a plinth secured to a proposed  $4' \times 10'$  concrete pad.

Additional safety specifications:

- Automatic Voltage Regulation with Over and Under Protection
- Overspeed Shutdown
- High Tempature Shutdown
- Meets ANSI/IEEE C62.41, SA CSA 22.2, SAE J1349, NFPA 37, 70 99

### Revised Construction Drawings and Full Spec Sheets referencing the above are attached herewith.

The revised ground configuration continues to meet all requirements for a Notice of Exempt Modifications. The request remains technically, legally, environmentally, and economically feasible and meets public safety concerns per Connecticut General Statute Section 16-50aa.

There is no environmental impact associated with the revised ground configuration, including, but not limited to, visibility, wetlands and water resources, air quality or noise.

T-Mobile's revised ground configuration:

- Will not have any significant adverse visual impact on the surrounding areas
- Does not affect or alter the existing site with regard to wetlands, water resources or air quality
- The generator would only be used in cases of emergency and would provide backup time of approximately 60 hours in time of need.

The proposed work is not thought to have any substantial adverse environmental impact. Public Need for the additional coverage outweighs any minor environmental effects that would result from the construction, operation, and maintenance of the proposed collocation.



### A Map of the Site Showing Nearest Wetlands, depicted in feet, is attached herewith.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16.50j-72(b)(2). In accordance with R.C.S.A. § 16.50j-73, a copy of this letter is being sent to the Town of Cromwell's Town Manager, Anthony J. Salvatore and Director Planning & Development, Stuart Popper, as well as to the property owner. (Separate notice is not being sent to tower owner, as it belongs to SBA.)

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. §16.50j-72(b)(2).

- 1. The proposed modifications will not result in an increase in the height of the existing structure.
- 2. The proposed modification will not require the extension of the site boundary.
- 3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
- 4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
- 5. The proposed modification will not cause a change or alteration in the physical or environmental characteristics of the site.
- 6. The existing structure and its foundation can support the proposed loading.

For the foregoing reasons, T-Mobile respectfully submits that the proposed modifications to the above-referenced telecommunication facility constitute an exempt modifications under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

G. Scott Shepherd Sr. Property Specialist SBA COMMUNICATIONS CORPORATION 134 Flanders Rd., Suite 125 Westborough, MA 01581 508.251.0720 x3807 + T 508.366.2610 + F 508.868.6000 + C GShepherd@sbasite.com

Attachments



 cc: Anthony J. Salvatore, Town Manager / with attachments Town Hall, 41 West St., Cromwell, CT 06416
 Stuart Popper, Director Planning & Development / with attachments Town Hall, 41 West St., Cromwell, CT 06416
 160 West St., LLC / with attachments 162 West St., Cromwell, CT 06416 {SBA remit to address on file}

### Exhibit List

Exhibit 1	Check Copy	x		
Exhibit 2	FedEx Labels	x		
Exhibit 3	3 Property Card x			
Exhibit 4	Property Map	x		
Exhibit 5	Zoning Documents	CSC Docket No. 338 (11/29/07)		
Exhibit 6	Construction Drawings	Chappell 10/19/21		
Exhibit 7	Generator Specifications	x		
Exhibit 8	Wetlands Map	х		

### EXHIBIT 1

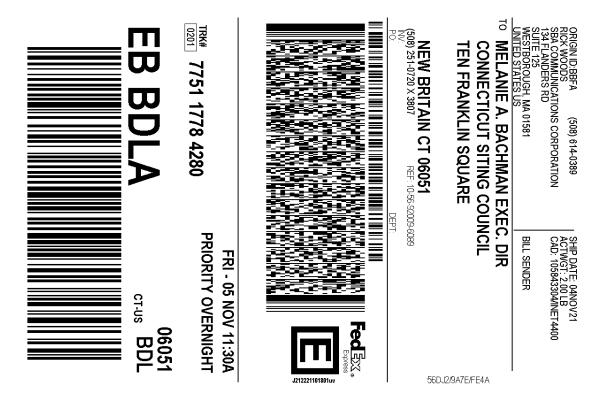
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# Copy of Check for filing fee.

## EXHIBIT 2

### FedEx Labels



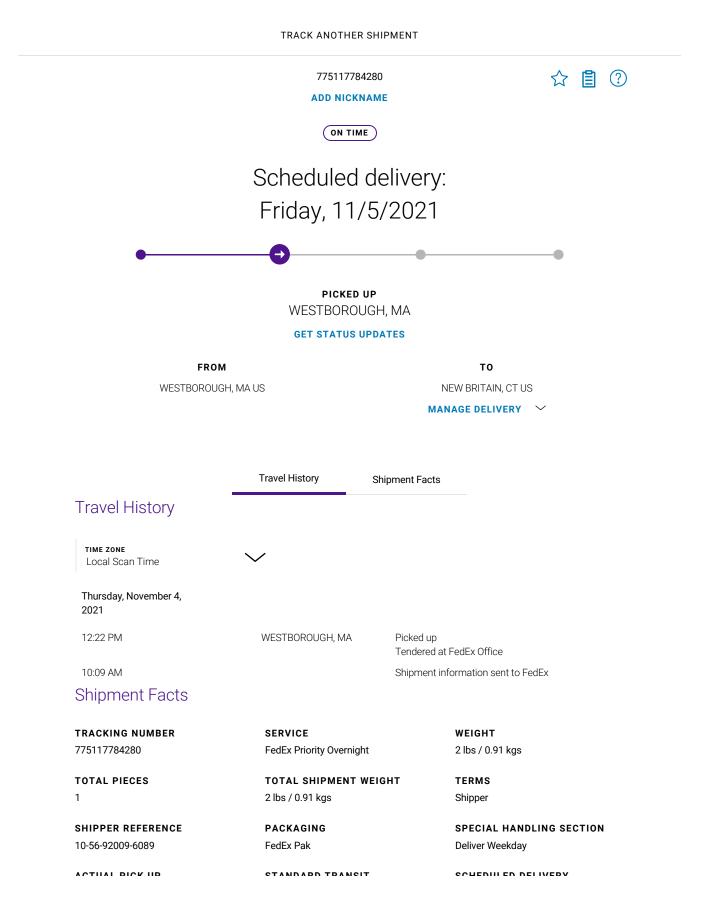
### After printing this label:

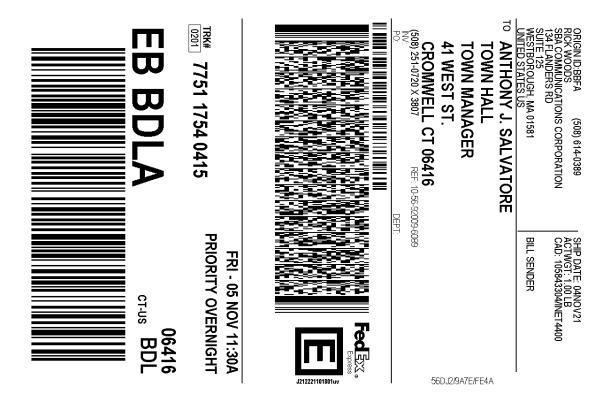
- 1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
- 2. Fold the printed page along the horizontal line.
- 3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

**Warning**: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

### FedEx.





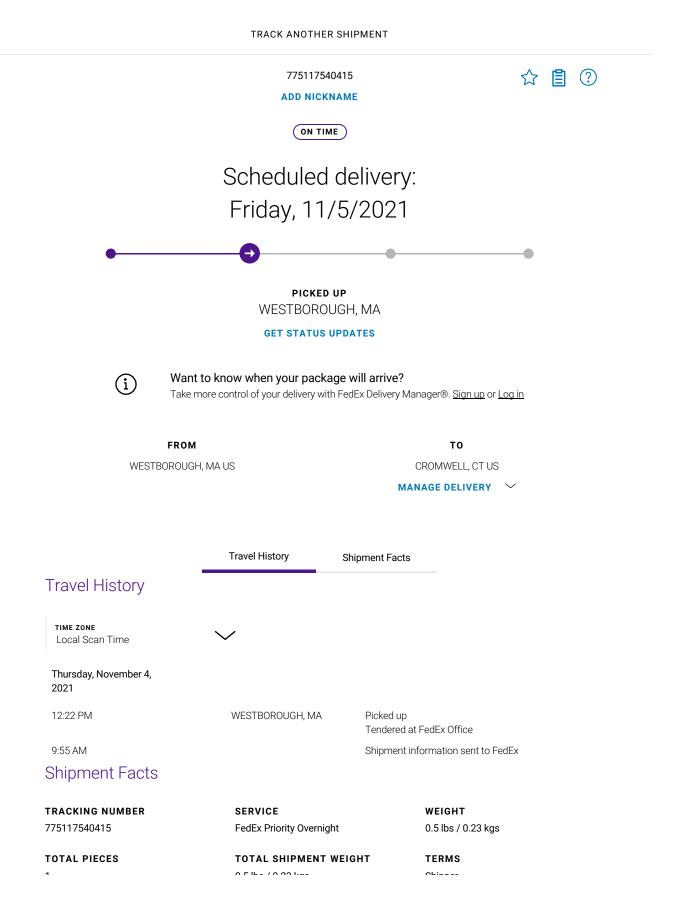
### After printing this label:

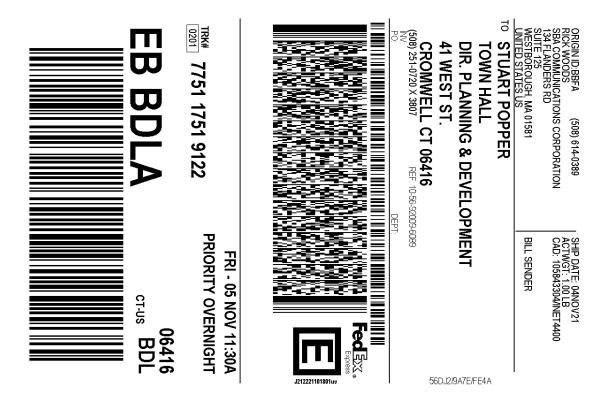
- 1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
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### **FedEx**.





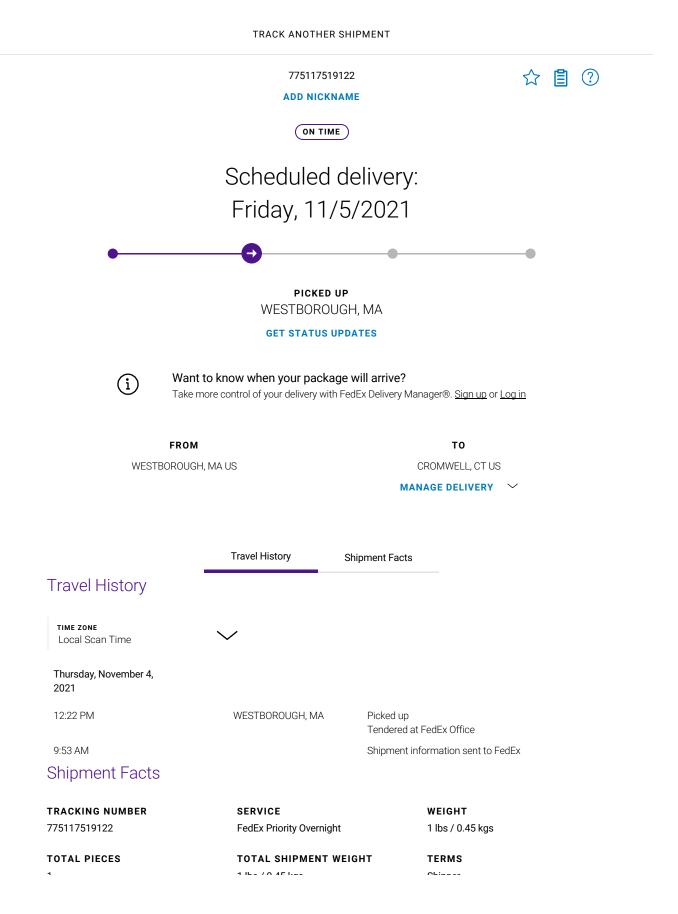
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### **FedEx**.





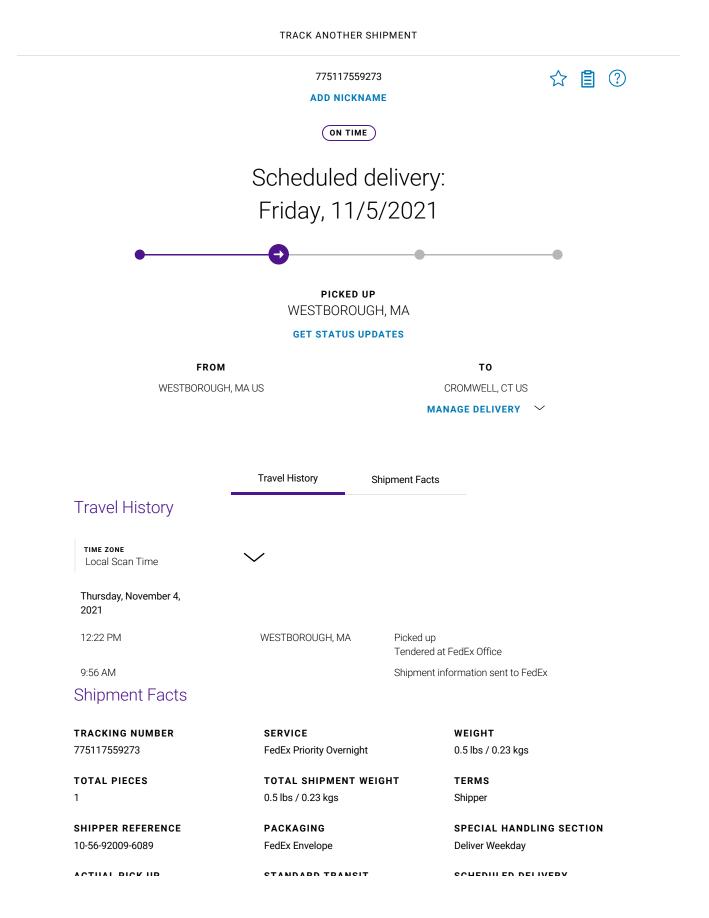
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### FedEx.



# EXHIBIT 3 Property Card

TOWN OF CROMWELL					F	Printed By:	Shawna	04/06/2018	3:41:00PM			
Parcel ID: 00033900	Location:	160 WEST S	TREET	<u> </u>	<u>    31-14</u> A		<u>La</u> s <u>t R</u> evalua	tion - <mark>Octol</mark>	ber 1, 2017			
Current Owner	Percent	Current V	alue Information	In	ic (appr)							
160 WEST STREET LLC	100	Use Code	Land Value	PA 490 Value	Building Value	Outbu	•	al Value	Total Assessed			
	100	201	241,800	0	2,122,40			74,200	1,731,940		Patriot	
213 COURT STREET		TOTAL	241,800	0	2,122,40	D 1	10,000 2,4	474,200	1,731,940	Prop	perties Inc.	
MIDDLETOWN CT (	06457									Prop	erty Factor	
		Previous	Value Informatio	n						Census	5702	
Previous Owner(s)		Tax Yr	Land Value	Bldg Value	(	Dutbuildings	Total Val		al Assessmen	Flood:		
160 WEST STREET LIMITED PART		2018	241,800	2,122,400		110,000	2,474,2		1,731,940	Торо:		
RSHIP		2017	241,800	2,122,400		110,000	2,474,2		1,731,940	Street:	Paved	
Konir		2016	356,290	1,635,220		43,320	2,034,8		1,424,390	Dev. Map		
General Notes		2015	356,290	1,635,220		43,320	2,034,8		1,424,390	Dev. Map		
IEDICAL OFFICE;		2014	356,290	1,635,220		43,320	2,034,8		1,424,390	70	ning Data	
		2013	356,290	1,635,220		43,320	2,034,8	330	1,424,390	20	ning Data	
										Desc.	% 100.00	
8ldg #1 Middlesex Home Care + Supplies INC, Fami	ly Eye Care,	Sales Info								LB	100.00	
eet First		Grantee	Vol-Pa			alePrice		GeneralNotes				
		160 WEST ST			27/2003	0 Other 0 Other					Utilities	
dg # 2 Wildwood Property management, Great Blue	e Research,	160 WEST ST	REET LIMITED F 546-32	2 12/.	29/1993	0 Other	I				ublic Water	
eacon Services of CT										3 P	ublic Sewer	
											BAA	
										17K		
		_										
Activity Informa	ition		Building Permit Information									
Date Results	Visited By	Date	Permit # Description	Amou	nt % Comp	Visit Date	CO Date	GeneralNo	otes			
27/2017 Informal Review No Change	John Valente	08/15/2014	22787 Electric	9	00 100	09/11/2014		Reception	area			
11/2017 Change - Value Change Company	John Valente	08/13/2014	22776 Other	4,8	00 100	09/09/2014	09/09/2014	Emrgncy re	epair to drywall			
18/2017 No Change - Field Review	Dave Stannard	12/12/2011	20377 Other	3,0	00 100	09/11/2012	09/11/2012	Run gas lir	ne to new gener			
/11/2014 Permit- Miscellaneous /11/2014 Permit- Drive By	AO MM	11/16/2011	20315 Other	10,0	00 100	09/11/2012	09/11/2012	New cell si	te for Metro P			
TI/2014 Femile Drive by	IVIIVI	00/00/00/14	00400 B T			00/14/00/10	00/11/0010		· ·			

#### 09/11/2014 ву IVIIVI 09/28/2011 2,850 20183 Propane Tank 100 09/11/2012 09/11/2012 Undergrounf gas line 09/09/2014 Permit- Miscellaneous AO 35,000 09/19/2011 20156 100 09/11/2012 01/12/2012 Inst of cell site antenna 09/11/2012 Permit - Int & Ext Inspect 09/11/2012 Permit- Miscellaneous AO 03/21/2006 33,000 03/28/2006 15920 100 off & bth reno Remodel 09/11/2012 Permit- Miscellaneous AO 03/21/2006 15921 0 100 03/28/2006 Electric wire new area,rfd exstg m 09/11/2012 Permit- Miscellaneous AO Land Data

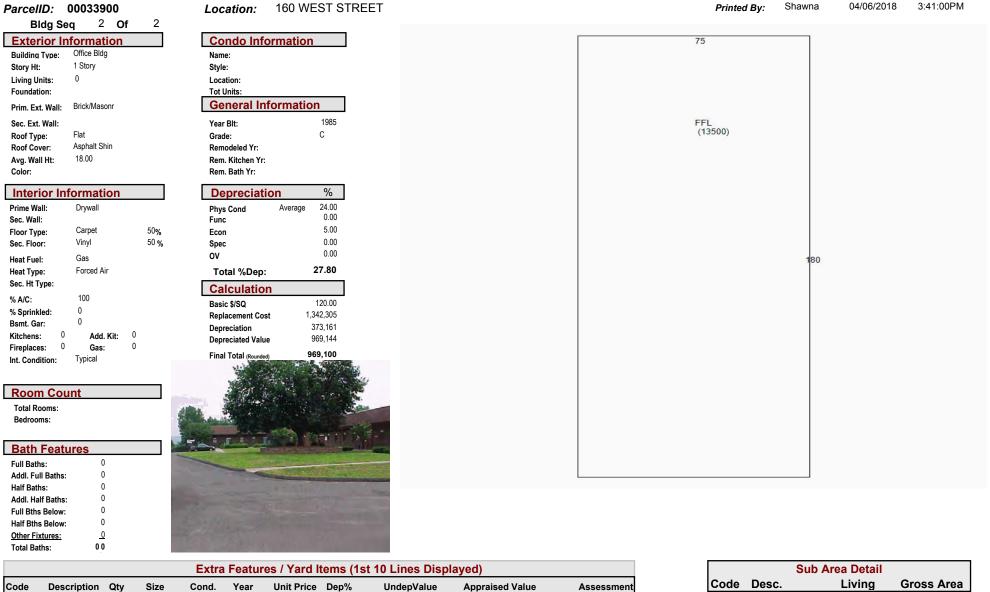
	Unit						Special	Appraised	PA 490	Neigh	
Use	Description	Units	Tvpe	Neiah		Land Adjustments	Land Calc	Value	Asmt	Order	Notes
201	Commercial	43,560	SF	CJ				178,500	0	1200	
201	Commercial	2.530	AC	CJ				63,300	0	1200	
		Total Area:	3.53	PA	490 Use Asmt: 0	Total Appraised: 241,800	Assessed Value: 169,260				

<b>ParceIID: 00033900</b> Bldg Seq 1 Of 2	Location: 160 WEST STREET	<b>Printed By:</b> Shawna 04/06/2018 3:41:00	РМ
Exterior Information       Building Type:     Office Bldg       Story Ht:     1 Story       Living Units:     0       Foundation:     Brick/Masonr	Condo Information Name: Style: Location: Tot Units: General Information		
Sec. Ext. Wall: Roof Type: Flat Roof Cover: Asphalt Shin Avg. Wall Ht: 18.00 Color:	Year Bit: 1985 Grade: C Remodeled Yr: Rem. Kitchen Yr: Rem. Bath Yr:	180	
Interior Information           Prime Wall:         Drywall           Sec. Wall:         Floor Type:         Carpet         50%           Sec. Floor:         Vinyl         50 %	Depreciation%Phys CondAverage24.00Func0.00Econ5.00Spec0.00OV0.00		
Heat Fuel:     Gas       Heat Type:     Forced Air       Sec. Ht Type:       % A/C:     100       % Sprinkled:     0       Bsmt. Gar:     0       Kitchens:     0       Add. Kit:     0	OV 0.00 Total %Dep: 27.80 Calculation Basic \$/SQ 120.00 Replacement Cost 1,342,305 Depreciation 373,161 Depreciated Value 969,144	FFL (13500)	75
Fireplaces: 0 Gas: 0 Int. Condition: Typical           Room Count           Total Rooms:           Bedrooms:	Final Total (Rounded) 969,100		
Bath Features       Full Baths:     0       Addl. Full Baths:     0			
Half Baths:0Addl. Half Baths:0Full Bths Below:0Half Bths Below:0Other Fixtures:0Total Baths:0			

	Extra Features / Yard Items (1st 10 Lines Displayed)										
Code	Description	Qty	Size	Cond.	Year	Unit Price	Dep%	UndepValue	Appraised Value	Assessment	
LT1	Light 1	1	6	AV	2002	1,000.00	13	7,200	6,300	4,410	
PAV1	Paving Asph.	1	38,400	AV	1985	3.00	25	138,240	103,700	72,590	
Total Sp	o. Features:		Tota	I Yard Ite	ms	110,000	Total Apprai	sed: 110,000	Total Assessed Value	77,000	

Sub Area Detail							
Code	Desc.	Living	Gross Area				
FFL	First Floor	13,500	13,500				
Total		13,500	13,500				

75



Code	Description	Qty	Size	Cond.	Year	Unit Price	Dep%	UndepValue	Appraised Value	Assessme
Total Sp	o. Features:		Tot	al Yard Iter	ms		Total A	ppraised:	Total Assessed \	/alue

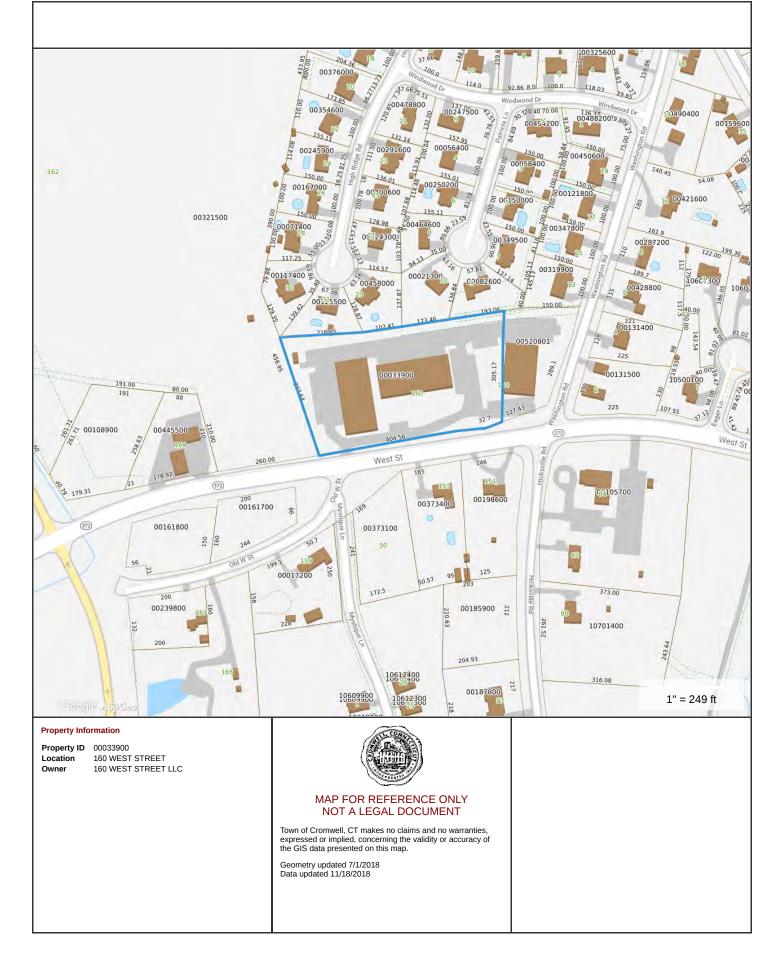
 Sub Area Detail

 Code
 Desc.
 Living
 Gross Area

 FFL
 First Floor
 13,500
 13,500

 Total
 13,500
 13,500

# EXHIBIT 4 Property Map



### Google Maps 160 West St



Imagery ©2021 Maxar Technologies, Map data ©2021 20 ft

# EXHIBIT 5 Zoning Documents

### WIRELESS PLANNING SERVICES, LLC

PLANNING & ZONING SERVICES FOR THE WIRELESS INDUSTRY 306 East Main Street, Suite 202, Lakeland, FL 33801 PHONE 863-838-9686 E-MAIL jim@wiley-malless.com

Site Name / #:	CT0004 Middletown North	
Site Address:	160 West Street, Cromwell, CT	Structure Type: Stealth Tree
Jurisdiction:	Connecticut Siting Council	Website Address: www.ct.gov\csc
Contact Person/		Phone No.: 860-827-2935
Is the Zoning Co	ode available online? X Yes	L. No
	tact: 9/9/08 Tower received zoning approval id for 18 months and an extension can be at	I from Connecticut Siting Council on 11/29/07. Itained if necessary.
DOCUMENTS P	PROVIDED BY CLIENT	
	Zoning Approval Zoning Ordinance	Planning Commission Meeting Minutes Board of Adjustment Meeting Minutes
	Other:	Other Minutes Specify:
ANALYSIS OF	TOWER ZONING APPROVAL	
	Date tower received zoning approval: Date current tower zoning ordinance adopted: Did the tower receive zoning approval under the current or a previous zoning code? Current status of tower:	November 29, 2007 March 7, 1989 Current Previous
	Conforming Use	Legal Non-Conforming Use
	If Nonconforming use (Legal/Illegal) identify/ex tenants/future site development.	plain any restrictions including any against adding

Has the zoning a	approval expired?	Yes	X No		
	<ul> <li>A. If zoning approval has expired: <ol> <li>Can it be re-instated?</li> <li>If it can be re-instated, is there a cost associated with reinst</li> <li>Do we need to start over?</li> </ol> </li> <li>B. If we need to start over, what is the process and timeline for</li> <li>C. If zoning approval is still valid: <ol> <li>When does it expire? 6/6/09</li> <li>What needs to be done prior to expiration date- does BP ne</li> </ol> </li> <li>1) File for an extension 60 days prior to expiration of zoning company letterhead and reason extension is requested to C Option 2) File a D &amp; M Plan (Development Management) application of zoning still plans, staff review and planning council will review plans.</li> </ul>	approval? eed to be filed fo g approval by Connecticut Si plication, inclu	or? Pulled? Option sending request on iting Council. iding 20 copies of		
	This process takes approximately 2 weeks to 1 month. process at link: http://www.ct.gov/csc/cwp/view.asp?a=960	&q=248928#75	Details of 5.		
Was the tower ap time of approval' Are there any an	pproved consistent with the zoning code in place at the	Yes Yes	No No		
If yes, are all filings current as of the date of this report?					

### CERTIFICATION

This report was prepared for and may be relied upon by TowerCo, LLC, its respective Subsidiaries, and their respective successors and assigns. Any rating agency or issuer or purchaser of any security collateralized or otherwise backed by the property or any loans placed upon the property may further rely upon the report. We also consent to the inclusion of this report in any form, whether in paper or digital format, including any electronic media such as CD-ROM or the internet, in the Prospectus Supplement relating to any TowerCo securitization, and we consent to the reference to our firm under the caption "Experts" in such Prospectus Supplement.

Wireless Planning Services, LLC BY James B. Malless, AICP Signature/Date



Daniel F, Caruso Chairman STATE OF CONNECTICUT CONNECTICUT SITING COUNCIL Ten Franklin Square, New Britain, CT 06051 Phone: (860) 827-2935 Fax: (860) 827-2950 E-Mail: siting.council@ct.gov Internet: ct.gov/csc

### CERTIFICATE

### OF

### ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED DOCKET NO. 338

Pursuant to General Statutes § 16-50k, as amended, the Connecticut Siting Council hereby issues a Certificate of Environmental Compatibility and Public Need to Sprint Nextel Corporation for the construction, maintenance and operation of a telecommunications facility located at 160 West Street, Cromwell, Connecticut. This Certificate is issued in accordance with and subject to the terms and conditions set forth in the Decision and Order of the Council on November 29, 2007.

By order of the Council,

November 29, 2007

Daniel F. Caruso, Chairman





Daniel F. Caruse Chuirman

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL Ten Franklin Square, New Britain, CT 06051 Phone: (360) \$27-2935 Fax: (860) \$27-2950 E-Mail: siting.comeil@ct.gov Internet: ct.gov/ese

December 4, 2007

TO: Parties and Intervenors

FROM:

RE:

S. Derek Phelps, Executive Director

DOCKET NO. 338 - Sprint Nextel Corporation application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located at 160 West Street, Cromwell, Connecticut,

By its Decision and Order dated November 29, 2007, the Connecticut Siting Council granted a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located at 160 West Street, Cromwell, Connecticut.

Enclosed are the Council's Findings of Fact, Opinion, and Decision and Order.

### SDP/RDM/laf

Enclosures (3)

c: State Documents Librarian



DOCKET NO. 338 – Sprint Nextel Corporation application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located at 160 West Street, Cromwell, Connecticut. Connecticut Siting Council

November 29, 2007

### **Findings of Fact**

### Introduction

- Sprint Nextel Corporation (Sprint) in accordance with provisions of General Statutes §§ 16-50g through 16-50aa, applied to the Connecticut Siting Council (Council) on May 23, 2007 for the construction, operation, and maintenance of a wireless telecommunications facility located at 160 West Street, Cromwell, Connecticut. (Sprint 1, p. 3)
- 2. Sprint is a Delaware corporation with its principal office in Mahwah, New Jersey. (Sprint 1, p. 3)
- The party in this proceeding is the Applicant. The intervenor is Cellco Partnership d/b/a Verizon Wireless (Verizon). (Transcript 1 – 09/20/07, 4:00 p.m. [Tr. 1], p. 5)
- The purpose of the proposed facility is to provide wireless service to Routes 3, 9, 99 and 372 in the Cromwell/Middletown area. (Sprint 1, p. 5, Tab 9)
- Pursuant to General Statutes § 16-50m, the Council, after giving due notice thereof, held a public hearing on September 20, 2007, beginning at 4:00 p.m. and continuing at 7:00 p.m. at the Cromwell Town Hall, Cromwell, Connecticut. (Council's Hearing Notice dated August 10, 2007; Tr. 1, p. 3; Transcript 2 – 09/20/07, 7:00 p.m. [Tr. 2], p. 3)
- 6. The Council and its staff conducted an inspection of the proposed site on September 20, 2007, beginning at 3:00 p.m. The applicant flew a balloon from 12:00 p.m. to 6:00 p.m. at the site to simulate the height of the proposed tower. The balloon reached the desired height of 80 feet above ground level (agl). (Tr. 1, pp. 65-66)
- Notice of the application was sent to all abutting property owners by certified mail. Public notice of the application was published in the <u>Hartford Courant</u> on December 27, 2006 and January 4, 2007, and in <u>The Middletown Press</u> on December 26, 2006 and January 3, 2007. (Sprint 1, Tab 3)
- Sprint installed a six-foot by four-foot sign describing the proposed project and the hearing date/location at the entrance to the property on September 4, 2007. (Sprint 1, p. 21; Tr. 1, p. 66)
- Pursuant to CGS § 16-50I (b), the Applicant provided notice to all federal, state and local officials and agencies listed therein. (Sprint 1, Tab 5)

### State Agency Comment

- 10. Pursuant to General Statutes § 16-50j (h), on August 10, 2007 and September 21, 2007, the following State agencies were solicited to submit written comments regarding the proposed facility: Department of Environmental Protection (DEP), Department of Public Health (DPH), Council on Environmental Quality (CEQ), Department of Public Utility Control (DPUC), Office of Policy and Management (OPM), Department of Economic and Community Development (DECD), and the Department of Transportation (DOT). (Record)
- 11. No responses were received from the respective State agencies. (Record)

### **Municipal Consultation**

- 12. Sprint submitted a technical report describing the proposed project to the Town of Cromwell on September 7, 2007. The City of Middletown, approximately 2,400 feet south of the site, was also notified of the project on September 7, 2007. Sprint, in accordance with CGS § 16-501 (b), is required to notify all municipalities within 2,500 feet of the site. (Sprint 1, p. 9)
- Sprint representatives met with the Cromwell Town Planner, Craig Minor, on November 2, 2006 to discuss the project. Mr. Minor subsequently discussed the project with the Cromwell Planning and Zoning Commission. (Sprint 1, p. 9)
- 14. The Town of Cromwell and the City of Middletown did not comment on the proposal. (Sprint 1, p. 9)
- The First Selectman of the Town of Cromwell, Paul Beaulieu, made a limited appearance statement into the record at the September 20, 2007 hearing stating the Town does not have an objection to the proposal. (Tr. 1, p. 9)

### Public Need for Service

- 16. In 1996, the United States Congress recognized a nationwide need for high quality wireless telecommunications services, including cellular telephone service. Through the Federal Telecommunications Act of 1996, Congress seeks to promote competition, encourage technical innovations, and foster lower prices for telecommunications services. (Council Administrative Notice Item No. 7)
- 17. In issuing cellular licenses, the Federal government has preempted the determination of public need for cellular service by the states, and has established design standards to ensure technical integrity and nationwide compatibility among all systems. Sprint is licensed by the FCC to provide wireless service in Connecticut. (Council Administrative Notice Item No. 7; Sprint 1, p. 3)
- The Telecommunications Act of 1996 prohibits local and state entities from discriminating among providers of functionally equivalent services. (Council Administrative Notice Item No. 7)

19. The Telecommunications Act of 1996, a Federal law passed by the United States Congress, prohibits any state or local entity from regulating telecommunications towers on the basis of the environmental effects of radio frequency emissions to the extent that such towers and equipment comply with FCC's regulations concerning such emissions. This Act also blocks the Council from prohibiting or acting with the effect of prohibiting the provision of personal wireless service. (Council Administrative Notice Item No. 7)

### Site Selection

- Sprint established a search ring for the target service area in June of 2003. The search ring covered two separate areas of high ground east and west of Route 9. (Sprint 2, Q. 3)
- 21. Before selecting the site, Sprint searched for tall buildings, existing towers, utility transmission structures or other structures to locate telecommunications equipment. No such structures were identified in the search area. The nearest existing tower facility to the site is a 170-foot lattice tower approximately 1.26 miles to the north. Another tower facility, a 125-foot monopole, is located approximately 1.9 miles to the south. Neither facility provides Sprint or Verizon adequate coverage to the target service area. (Sprint 1, Tab 9; Verizon 1, Q. 4)
- 22. A church at the corner of West Street and Hicksville Road, 0.1-mile from the site, was not considered since Cingular is already utilizing the steeple. The steeple is small and has space limitations for additional equipment. Sprint did not consider erecting a tower facility at this location. (Tr. 1, pp. 24-25)
- 23. After determining there were no viable structures within the search area, Sprint searched for properties suitable for tower development. Sprint investigated five parcels and selected one for tower development. The four rejected parcels and reasons for their rejection are as follows:
  - a) Highridge Road/Patricia Lane condominium association not interested;
  - b) 80 Shunpike Road owner not interested, other property development plans;
  - c) 154 West Street owner not interested, property too small; and
  - d) 159 West Street owner not interested.

(Sprint 1, p. 8)

### Site Description

- The proposed site is located on a 3.53-acre parcel at 160 West Street in Cromwell. The property, owned by One-Sixty West Street LLC, is developed with two single-story office buildings. (Sprint 1, p. 9)
- 25. The property is zoned for business. (Sprint 1, p. 9)
- 26. The proposed tower site is located in a lawn and paved area in the northwest corner of the parcel, adjacent to a row of pine trees along the north property line. (Sprint 1, pp. 9; 17, Tab 7; Tr. 1, p. 65; Tr. 2, p. 12)
- 27. Abutting property includes a residential neighborhood to the north, an undeveloped, wooded parcel to the west, an office building to the east, and existing residences and a residential development under construction to the south (refer to Figure 1). (Sprint 1, Tab 7; Tr. 1, pp. 28, 30, 67)

28. The tower site is located at an elevation of 132 feet above mean sea level (amsl). (Sprint 1, Tab 7)

29. Sprint proposes to construct an 80-foot monopole, designed as a flagpole, at the site. (Sprint 1, p. 11)

- 30. The flagpole would have a base diameter of 36 inches tapering to 30 inches at the antenna mounting locations. RF transparent material would conceal the antennas. (Tr. 1, pp. 8, 16-17, 58)
- 31. The flagpole would be designed to support three levels of antennas. Sprint would install three panel antennas at the 75-foot level and three panel antennas at the 69-foot level. Verizon would install three panel antennas at the 59-foot level of the tower. (Sprint 1, p. 11; Verizon 1, Q. 3)
- The tower could not accommodate additional antennas or a third carrier due to limited space for additional cables within the flagpole. (Tr. 1, pp. 33-36)
- 33. The Town of Cromwell would consider using the tower for future safety communication antennas but, at present, considers the proposed site as not critical to the needs of the Town's safety services.
- 34. Typically, safety service antennas are of a whip design. A whip antenna could be mounted on the top of the tower but not within the flagpole itself. A whip antenna could be problematic since the flag could possibly be blown upward and wrap around the whip antenna. (Tr. 1, pp. 9, 43, 47-48, 54, 58-61)
- In accordance with the lease agreement, a 12-foot by 20-foot flag would be flown from the pole. (Tr. 1, pp. 10, 17, 22)
- 36. Sprint intends to maintain the flag in accordance with the United States Flag Code, including provisions regarding lighting or lowering the flag. Sprint prefers not to light the flag due to the proximity of an adjacent residential neighborhood. If the flag were not lit, it would have to be lowered each night; Sprint has not determined who would be responsible for this task. If the flag were lit, it would be illuminated from three directions by lights placed 12 to 15 feet from the center of the pole. (Tr. 1, pp. 19-23)
- The flag would not interfere with radio frequency characteristics under dry conditions. A wet flag
  that wraps around the pole could cause a signal loss of 2 to 3 dB. (Tr. 1, pp. 19-22)
- Sprint would be willing to construct an 80-foot monopole designed as a pine tree at the site. The landowner is amenable to this design. (Tr. 2, pp. 8, 9, 14)
- 39. A pine tree design would allow for greater flexibility in antenna configurations and network growth. Sprint would only need one antenna height on the tower rather than two, as necessitated by the flagpole design, allowing Verizon to move up 10 feet higher on the monopole. A third carrier could locate below Verizon or possibly above Sprint if the tower was extended in the future. A tree design also allows for placement of a whip antenna with few mounting issues. (Tr. 2, pp. 12-13, 25)
- 40. A tree design would eliminate issues relating to lighting or daily lowering of the flag. (Tr. 2, p. 9)
- 41. A tree design in this location would be consistent with the surrounding landscape. Pine trees in this area could attain heights of 70 to 90 feet. The pine trees along the north property boundary, adjacent to the site, are approximately 45 feet in height and could reach 70 to 80 feet in 20 to 25 years. (Tr. 2, pp. 10-11)
- 42. The proposed tree tower would extend above the existing treeline by 30 to 35 feet. (Tr. 2, p. 12)

- 43. Sprint proposes to construct a 30-foot by 54-foot equipment compound at the base of the tower (refer to Figure 2). An eight-foot high stockade fence would enclose the compound. Within the compound, Sprint would install a 12-foot by 20-foot equipment shelter with a brick façade to match the existing office buildings on the property. Verizon would also place an equipment shelter within the compound and would be willing to install a brick façade. (Sprint 1, p. 12; Tr. 2, p. 26-27)
- Sprint would be willing to construct a single building to house Sprint and Verizon's equipment. (Tr. 1, p. 62)
- 45. Access to the site would be from an existing parking lot serving the office buildings. The parking lot is accessed from the north side of West Street. (Sprint 1, Tab 7)
- 46. Underground utilities would service the site. The utilities would be installed along a lawn area on the west side of the existing parking lot. (Sprint 1, Tab 7)
- 47. The nearest abutting property to the tower site is approximately 30 feet to the west, owned by Stephen Chenock, Jr., et al. The southwest corner of the compound would be three feet from the property line. (Sprint 1, Tab 7)
- 48. The tower radius would extend onto the Chernock Jr. property by 50 feet. (Sprint 1, Tab 7)
- 49. There are 41 residences within a 1,000-foot radius of the tower site. (Sprint 2, Q. 8)
- The nearest residence to the proposed tower site is approximately 145 feet to the north, owned by Mary Ann Davis. (Sprint 1, Tab 7)
- Land use within a quarter-mile of the site is primarily residential with some commercial uses along Route 372. Route 9 is located west of the site. A church is located to the southeast. (Sprint I, p. 10; Tr. 1, 24-25)
- 52. The estimated cost of construction, excluding Verizon's equipment, is:

a.	Flagpole tower	30,000.
b.	Foundation	30,000.
c.	Site work	15,000.
d.	Utilities	20,000.
e.	Radio equipment/antennas	90,000.
÷p.	a to a to a to a to a	\$195,000

Total estimated cost (Sprint 1, Tab 8; Sprint 2, Q. 6)

#### \$185,000.

### **Environmental** Concerns

- 53. The proposed facility would have no effect on historic, architectural, or archaeological resources listed on or eligible for the National Register of Historic Places. (Sprint 1, Tab 14)
- 54. The proposed site contains no known existing populations of Federal or State Endangered, Threatened or Special Concern Species. (Sprint 1, p. 24)
- 55. Construction of the site would not require the removal of any trees. (Sprint 1, Tab 7)

- 56. Construction of the site would not impact any wetlands or watercourses. No wetlands were identified on the property. The nearest wetland is is approximately 225 feet west of the site. (Sprint 1, p. 16)
- 57. The tower would not be an aviation hazard. (Sprint 2, Q. 12)
- 58. The cumulative maximum power density from the radio frequency emissions of the proposed Sprint and Verizon antennas is calculated to be 30.75 % of the standard for Maximum Permissible Exposure, as adopted by the FCC, at the base of either proposed tower. This calculation was based on methodology prescribed by the FCC Office of Engineering and Technology Bulletin No. 65E, Edition 97-01 (August 1997) that assumes all antennas would be pointed at the base of the tower and all channels would be operating simultaneously. (Sprint 1, Tab 13; Verizon 1, Q. 3)

### Visibility

- 59. The tower would be visible year-round above the tree canopy from approximately 112 acres within a two mile radius of the site (refer to Figure 3). This includes approximately 57 acres of tidal marsh along the Mattabessett River 1.8 miles south of the site, and 16 acres of parking lots associated with two shopping centers a half-mile west of the site. The tower would be seasonally visible from an additional 15 acres. (Sprint 1, Tab 12)
- 60. The upper half of the tower would be visible from the Highridge Road/Patricia Lane neighborhood immediately north of the site. Approximately 21 residential properties in this area would have year-round views of the tower. A majority of the 15 acres of seasonal visibility is within this neighborhood. (Sprint 1, Tab 12; Tr. 1, pp. 28-30)
- The upper 20 to 40 feet of the tower would be visible from a new subdivision under construction south of the site. (Tr. 1, p. 30)
- Approximately 75% of the tower would be visible from the West Street Hicksville Road intersection area, 0.1 mile east of the site. Three residences on the south side of West Street and a church are present in this area. (Sprint 1, Tab 12; Tr. 1, pp, 28-29, pp. 64-65)
- There are no hiking trails maintained by the DEP or the Connecticut Forest and Parks Association within a two-mile radius of the site. (Sprint 1, Tab 12)

64,	Visibility of	f the tower t	from specific	locations wi	thin a two-mile	radius of the	site is as follows:
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Location	Visible	Approximate Portion of Tower Visible	Distance from Tower
Highridge Road neighborhood	Yes	40 feet unobstructed	0.1 to 0.3 miles north
Patricia Lane cul-de-sac	Yes	15 feet unobstructed.	0.1 miles north
Arrowhead Drive	Yes	At treeline	0.75 miles north
West Street - Washington Street intersection	Yes	50 feet unobstructed.	0.1 miles east
Hicksville Road	Yes	60 feet unobstructed.	0.1 miles south east
West Street	Yes	15 feet unobstructed	0.5 miles west
Route 3 near Berlin Road	Yes	10 feet - unobstructed	0.5 miles southwest

(Sprint 1, Tab 12; Tr. 1, pp. 28-30)

### Sprint - Existing and Proposed Wireless Coverage

- 65. Sprint proposes to operate Integrated Digital Enhanced Network (iDEN) equipment at this site. iDEN operates in the 800 MHz and 900 MHz frequencies. Although Sprint is licensed to operate in the 1900 MHz frequencies (PCS), Sprint does not propose to install PCS equipment at this site. (Sprint 2, Q, 5; Tr. 1, pp. 25-28)
- 66. Sprint is designing the site with a signal level threshold of -81 dBm for in-vehicle coverage and -71 dBm for in-building coverage. (Sprint 1, p. 12; Tr. 1, p. 12)
- 67. Sprint's existing signal level in the Routes 3, 9, 99 and 372 area is between -82 and -91 dBm (refer to Figure 4). The dropped call rate at surrounding Sprint sites is 1.2% to 2.7%. Incomplete call attempts are not included in these statistics. (Sprint 1, Tab 9; Sprint 2, Q, 7)
- Sprint proposes to install iDEN antennas at 75 feet and 69 feet agl. Coverage from the proposed site would adequately serve all major roads except for a 0.6-mile section of Route 99 east of the site (refer to Figure 5). (Sprint 1, Tab 9)
- 69. Lowering the height of the iDEN antennas to 65 feet and 59 feet agl would degrade coverage on Route 372 and residential neighborhoods east, and residential neighborhoods east and west of the site (refer to Figure 6). (Sprint 2, Q, 9)

### Verizon - Existing and Proposed Wireless Coverage

- Verizon proposes to operate 800 MHz (cellular) and PCS equipment at the site. Verizon proposes to
  install three dual band antennas at the 59-foot level of the flagpole tower. (Verizon 1, Q. 2, Q. 3)
- 71. Verizon is designing the site with a signal level threshold of -85 dBm. (Verizon 1, Q. 2)
- 72. The site would provide PCS service to coverage gaps on Routes 3, 9 and 372 in the south Cromwell area (refer to Figures 7 & 8) and cellular capacity relief to the surrounding area. (Verizon 1, Q. 1, Q. 4)
- If the tower was designed as a simulated tree, Verizon could install a full antenna array at the 69-foot level, thereby increasing coverage by 2 to 3 dB. (Tr. 2, pp. 8, 12, 20, 25)

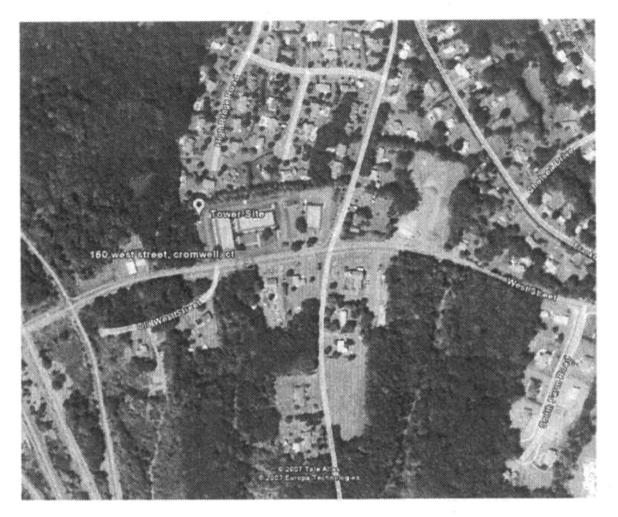


Figure 1: Location of the Site - 160 West Street, Cronswell.

(Sprint 1, Tab 1)

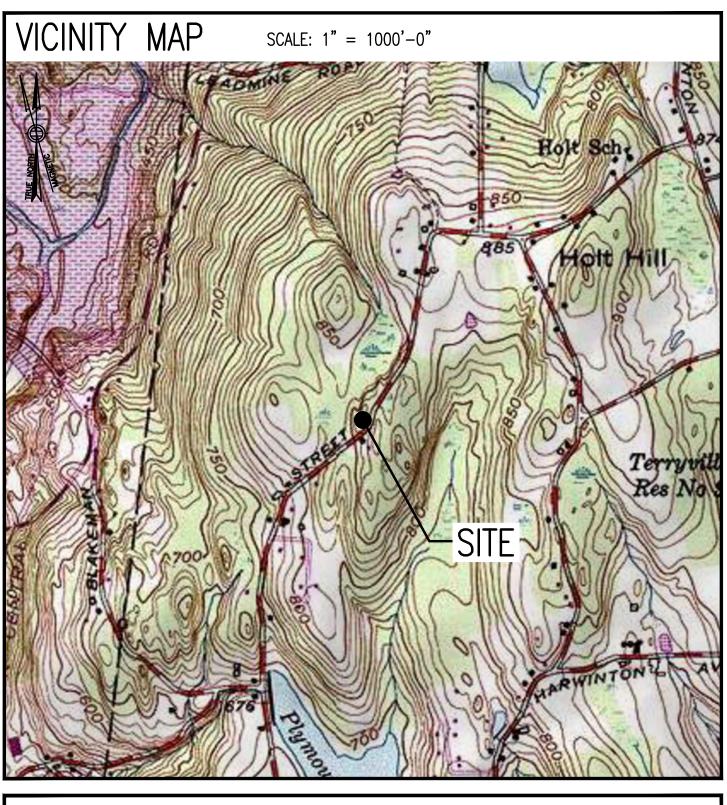
# EXHIBIT 6

# **Constrcution Drawings**



# By Stephen Roth at 5:01:24 AM, 10/19/2021

APPROVALS			
PROJECT MANAGER:	DATE:	ZONING/SITE ACQ.:	DATE:
CONSTRUCTION:	DATE:	OPERATIONS:	DATE:
<u>RF ENGINEERING:</u>	DATE:	TOWER OWNER:	DATE:
T-MOBILE TECHNI	CIAN SITE	SAFETY NOTES	
SECTOR A:ACCESSSECTOR B:ACCESSSECTOR C:ACCESSSECTOR D:ACCESSGPS/LMU:UNRESTRADIO CABINETS:UNRESTPPC DISCONNECT:UNRESTMAIN CIRCUIT D/C:UNREST	AL RESTRICTIONS BY CERTIFIED BY CERTIFIED BY CERTIFIED BY CERTIFIED FRICTED FRICTED FRICTED FRICTED FRICTED	CLIMBER CLIMBER CLIMBER	
GENERAL NOTES			
<ol> <li>THE CONTRACTOR SHALL GIVE ALL NOTICES LAWS, ORDINANCES, RULES, REGULATIONS AL ANY PUBLIC AUTHORITY, MUNICIPAL AND UTI SPECIFICATIONS, AND LOCAL AND STATE JUF BEARING ON THE PERFORMANCE OF THE WO PERFORMED ON THE PROJECT AND THE WA BE IN STRICT ACCORDANCE WITH ALL APPLIE REGULATIONS, AND ORDINANCES.</li> <li>THE ARCHITECT/ENGINEER HAVE MADE EVER IN THE CONSTRUCTION AND CONTRACT DOCI SCOPE OF WORK. THE CONTRACTOR BIDDING NEVERTHELESS CAUTIONED THAT MINOR OMIS THE DRAWINGS AND OR SPECIFICATIONS SHA CONTRACTOR FROM COMPLETING THE PROJE</li> </ol>	ND LAWFUL ORDERS OF ILITY COMPANY RISDICTIONAL CODES ORK. THE WORK TERIALS INSTALLED SHALL CABLE CODES, Y EFFORT TO SET FORTH JMENTS THE COMPLETE G THE JOB IS SSIONS OR ERRORS IN ALL NOT EXCUSE SAID CT AND IMPROVEMENTS IN	<ul> <li>SHALL REPAIR ANY DAMAGE THAT MAY HAY CONSTRUCTION ON OR ABOUT THE PROPE</li> <li>13. THE CONTRACTOR SHALL KEEP THE GENER HAZARD FREE DURING CONSTRUCTION AND DEBRIS, RUBBISH AND REMOVE EQUIPMENT REMAINING ON THE PROPERTY. PREMISES CONDITION AND FREE FROM PAINT SPOTS, ANY NATURE.</li> <li>14. THE CONTRACTOR SHALL COMPLY WITH AL THEY APPLY TO THIS PROJECT.</li> <li>15. THE CONTRACTOR SHALL NOTIFY THE PROVE REPRESENTATIVE WHERE A CONFLICT OCCURATION OF THE PROPERTY.</li> </ul>	RTY. RAL WORK AREA CLEAN AND DISPOSE OF ALL DIRT, T NOT SPECIFIED AS SHALL BE LEFT IN CLEAN DUST, OR SMUDGES OF L OSHA REQUIREMENTS AS JECT OWNER'S IRS ON ANY OF THE
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<ol> <li>THE SCOPE OF WORK SHALL INCLUDE FURM EQUIPMENT, LABOR AND ALL OTHER MATERIA NECESSARY TO COMPLETE THE WORK/PROJECTION</li> </ol>	ALS AND LABOR DEEMED	SURFACE INVESTIGATIONS AND EXISTING PL CONTRACTOR SHALL LOCATE ALL UNDERGR FIELD PRIOR TO ANY SITE WORK.	ANS OF RECORD. THE
5. THE CONTRACTOR SHALL VISIT THE JOB SIT SUBMISSION OF BIDS OR PERFORMING WOR WITH THE FIELD CONDITIONS AND TO VERIFY BE CONSTRUCTED IN ACCORDANCE WITH TH	K TO FAMILIARIZE HIMSELF / THAT THE PROJECT CAN		
6. THE CONTRACTOR SHALL OBTAIN AUTHORIZA CONSTRUCTION PRIOR TO STARTING WORK O DEFINED BY THE CONSTRUCTION DRAWINGS/	ON ANY ITEM NOT CLEARLY CONTRACT DOCUMENTS.		
7. THE CONTRACTOR SHALL INSTALL ALL EQUIF ACCORDING TO THE MANUFACTURER'S/VENDU UNLESS NOTED OTHERWISE OR WHERE LOCA TAKE PRECEDENCE.	OR'S SPECIFICATIONS	AT LEAST 72 HOURS F DIGGING, THE CONTRA REQUIRED TO CALL DIG S	ACTOR IS
8. THE CONTRACTOR SHALL PROVIDE A FULL S DOCUMENTS AT THE SITE UPDATED WITH TH ADDENDUMS OR CLARIFICATIONS AVAILABLE PERSONNEL INVOLVED WITH THE PROJECT.	e latest revisions and		
9. THE CONTRACTOR SHALL SUPERVISE AND DI DESCRIBED HEREIN. THE CONTRACTOR SHALL RESPONSIBLE FOR ALL CONSTRUCTION MEAN TECHNIQUES, SEQUENCES AND PROCEDURES ALL PORTIONS OF THE WORK UNDER THE C	L BE SOLELY IS, METHODS, 5 AND FOR COORDINATING		June
10. THE CONTRACTOR IS RESPONSIBLE FOR PRO CONSTRUCTION CONTROL SURVEYS, ESTABLIS ALL LINES AND GRADES REQUIRED TO CONS AS SHOWN HEREIN.	SHING AND MAINTAINING	Williamantic	
11. THE CONTRACTOR SHALL BE RESPONSIBLE PERMITS AND INSPECTIONS WHICH MAY BE BY THE ARCHITECT/ENGINEER, THE STATE, C GOVERNMENT AUTHORITY.	REQUIRED FOR THE WORK		
12. THE CONTRACTOR SHALL MAKE NECESSARY EXISTING IMPROVEMENTS, EASEMENTS, PAVIN CONSTRUCTION. UPON COMPLETION OF WOR	G, CURBING, ETC. DURING		



JRN LEFT ONTO S WASHINGTON ST. TURN RIGHT ONTO MA-123 E. TURN LEFT TO MERGE NTO I-495 NORTH TOWARD MANSFIELD/MARLBORO. MERGE ONTO I-495 NORTH. TAKE EXIT 22 MERGE ONTO I-90 WEST TOWARD ALBANY. TAKE EXIT 9 FOR I-84 TOWARD HARTFORD T/NEW YORK CITY. CONTINUE ONTO I-84. TAKE EXIT 57 ON THE LEFT FOR CT-15 SOUTH WARD I-91 SOUTH/CHARTER OAK BRIDGE/N.Y. CITY. CONTINUE ONTO CT-15 SOUTH. TAKE XIT 86 TO MERGE ONTO I-91 SOUTH TOWARD NEW HAVEN/NEW YORK CITY. TAKE EXIT 22S THE LEFT TO MERGE ONTO CT-9 SOUTH TOWARD MIDDLETOWN/OLD SAYBROOK. TAKE EXIT FOR CT-372/WEST STREET TOWARD CROMWELL. TURN LEFT ONTO CT-372 EAST. SITE WILL ON THE LEFT.

# SBA CROMWELL MONOPINE

# 160 WEST STREET CROMWELL, CT 06416 MIDDLESEX COUNTY

# SITE NO.: CTHA521A

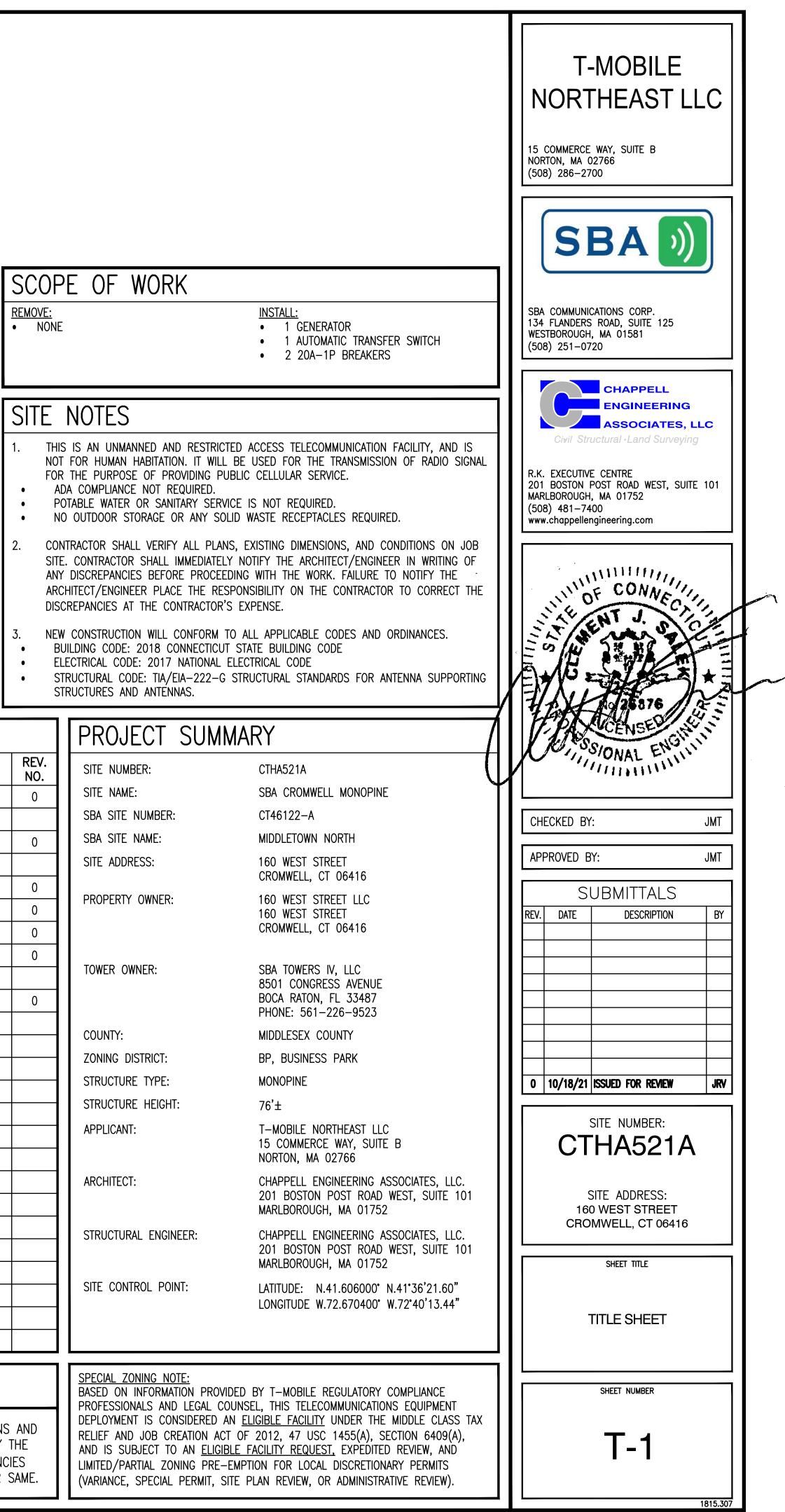
# SITE TYPE: $76' \pm$ MONOPINE

# PROJECT TYPE: NATIONAL HARDENING PROJECT

# DIRECTIONS

ET INDEX	
DESCRIPTION	REV. NO.
TITLE SHEET	0
GENERAL NOTES	0
COMPOUND & EQUIPMENT PLANS	0
GENERATOR DETAILS	0
GENERATOR SPECIFICATIONS 1	0
GENERATOR SPECIFICATIONS 2	0
ELECTRIC & GROUNDING DETAILS	0
	DESCRIPTION TITLE SHEET GENERAL NOTES COMPOUND & EQUIPMENT PLANS GENERATOR DETAILS GENERATOR SPECIFICATIONS 1 GENERATOR SPECIFICATIONS 2

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE PROJECT OWNER'S REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.



1. FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:	
CONTRACTOR – T–MOBILE SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)	
OWNER — T-MOBILE OEM — ORIGINAL EQUIPMENT MANUFACTURER	
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS	
SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.	
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.	
4. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL, STATE AND FEDERAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.	
5. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.	
6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.	
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S	
RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE. 8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR	
SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.	
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER, T1 CABLES AND GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR AND/OR LANDLORD PRIOR TO CONSTRUCTION.	
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND	
STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.	
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY.	
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION AND RETURN DISTURBED AREAS TO ORIGINAL CONDITIONS.	
13. THE SUBCONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE SUBCONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE SUBCONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.	
14. SUBCONTRACTOR SHALL NOTIFY CHAPPELL ENGINEERING ASSOCIATES, LLC 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING TRENCHES, SEALING ROOF AND WALL PENETRATIONS AND POST DOWNS, FINISHING NEW WALLS OR FINAL ELECTRICAL CONNECTIONS FOR ENGINEERING REVIEW.	
15. CONSTRUCTION SHALL COMPLY WITH ALL T-MOBILE STANDARDS AND SPECIFICATIONS.	
16. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED.	
SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION. 17. THE EXISTING CELL SITES ARE IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY	
SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.	
18. IF THE EXISTING CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.	
SITE WORK GENERAL NOTES:	
1. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.	
2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS	
DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION.	
3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.	
4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.	
5. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.	
6. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.	
7. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.	
8. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF ENGINEERING, OWNER AND/OR LOCAL UTILITIES.	
9. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE AND STABILIZED TO PREVENT EROSION AS SPECIFIED IN THE PROJECT SPECIFICATIONS.	
10. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.	
11. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE T-MOBILE SPECIFICATION FOR SITE SIGNAGE.	

### ETE AND REINFORCING STEEL NOTES:

INCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE ND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.

NCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. A RENGTH (400PSI) MAY BE USED. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 381 CODE ENTS

RCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE IALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS ALL HOOKS SHALL BE STANDARD, UNO.

DLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON

CRETE EXPOSED TO EARTH OR WEATHER: \$6 AND LARGER .....2 IN. #5 AND SMALLER & WWF ......1½ IN. RETE NOT EXPOSED TO EARTH OR WEATHER

NOT CAST AGAINST THE GROUND: SLAB AND WALL ..... 

MFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION

ATION OF CONCRETE EXPANSION/WEDGE ANCHORS SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED E. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO THE MANUFACTURERS RECOMMENDATION FOR EMBEDMENT AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN URER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED . EXPANSION BOLTS SHALL BE PROVIDED BY SIMPSON OR APPROVED EQUAL.

TE CYLINDER TIES ARE NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS 6.2.3) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER; SULTS OF CONCRETE CYLINDER TEST PERFORMED AT THE SUPPLIERS PLANT. RTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED. TER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST.

ALTERNATIVE TO ITEM 7. TEST CYLINDERS SHALL BE TAKEN INITIALLY AND THEREAFTER FOR EVERY 50 YARDS OF FROM EACH DIFFERENT BATCH PLANT.

IENT SHALL NOT BE PLACED ON NEW PADS FOR SEVEN DAYS AFTER PAD IS POURED, UNLESS IT IS VERIFIED BY TESTS THAT COMPRESSIVE STRENGTH HAS BEEN ATTAINED.

### **TURAL STEEL NOTES:**

EEL WORK SHALL BE PAINTED OR GALVANIZED IN ACCORDANCE WITH THE DRAWINGS AND T-MOBILE SPECIFICATIONS THERWISE NOTED. STRUCTURAL STEEL SHALL BE ASTM-A-36 UNLESS OTHERWISE NOTED ON THE SITE SPECIFIC STEEL DESIGN, INSTALLATION AND BOLTING SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL TION (AISC) "MANUAL OF STEEL CONSTRUCTION".

LDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1. LET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL TION", 9TH EDITION. PAINTED SURFACES SHALL BE TOUCHED UP.

CONNECTIONS SHALL USE BEARING TYPE ASTM A325 BOLTS (3/4 ") AND SHALL HAVE MINIMUM OF TWO BOLTS OTED OTHERWISE. ALL BOLTS SHALL BE GALVANIZED OR STAINLESS STEEL.

TRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE  $\frac{5}{8}$ " DIA. ASTM A 307 BOLTS (GALV) UNLESS NOTED

CTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW & APPROVAL ON PROJECTS REQUIRING STRUCTURAL

RUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.

### <u>OMPACTION NOTES FOR SLAB ON GRADE:</u>

TE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL TO EXPOSE NATURAL SUBGRADE AND PLACE CRUSHED STONE

CTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR IS ACCEPTABLE.

ALTERNATE TO INSPECTION AND WRITTEN CERTIFICATION, THE "UNDISTURBED SOIL" BASE SHALL BE COMPACTED WITH ION EQUIPMENT", LISTED BELOW, TO AT LEAST 90% MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM D 1557

CTED SUBBASE SHALL BE UNIFORM AND LEVELED. PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED IN ABOVE COMPACTED SOIL, GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING #1 SIEVE.

ALTERNATE TO ITEMS 2 AND 3, THE SUBGRADE SOILS WITH 5 PASSES OR A MEDIUM SIZED VIBRATORY PLATE R (SUCH AS BOMAG BPR 30/38) OR HAND-OPERATED SINGLE DRUM VIBRATORY ROLLER (SUCH AS BOMAG BW 55E). AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL-GRADED GRANULAR FILL AND D AS STATED ABOVE.

### CTION EQUIPMENT:

DPERATED DOUBLE DRUN, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.

### RUCTION NOTES:

ERIFICATION:

ACTOR SHALL FIELD VERIFY SCOPE OF WORK, T-MOBILE ANTENNA PLATFORM LOCATION AND UTILITY TRENCHWORK.

INATION OF WORK: ACTOR SHALL COORDINATE RF WORK AND PROCEDURES WITH CONTRACTOR.

LADDER RACK:

ACTOR SHALL FURNISH AND INSTALL CABLE LADDER RACK, CABLE TRAY AND/OR ICE BRIDGE, AND CONDUIT AS TO SUPPORT CABLES TO THE NEW BTS LOCATION.

# **ELECTRICAL INSTALLATION NOTES:**

1. WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.

2. SUBCONTRACTOR SHALL MODIFY OR INSTALL CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLING TO THE NEW BTS EQUIPMENT. SUBCONTRACTOR SHALL SUBMIT MODIFICATIONS TO CONTRACTOR FOR APPROVAL. 3. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND

TELCORDIA.

4. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.

5. EACH END OF EVERY POWER, GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND. 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION. OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA, AND MATCH INSTALLATION REQUIREMENTS.

6. POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, ½ INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC AND OSHA.

7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).

8. PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.

9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.

10. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.

11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.

12. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #2 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.

13. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#34 AWG OR LARGER). 600 V. OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.

14. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY HARGER (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).

15. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.

16. NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.

17. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.

18. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.

19. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.

20. RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.

VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.

USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.

UL. ANSI/IEEE AND NEC.

25. WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.

26. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.

27. METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED, OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.

28. NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.

29. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.

30. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.

31. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.

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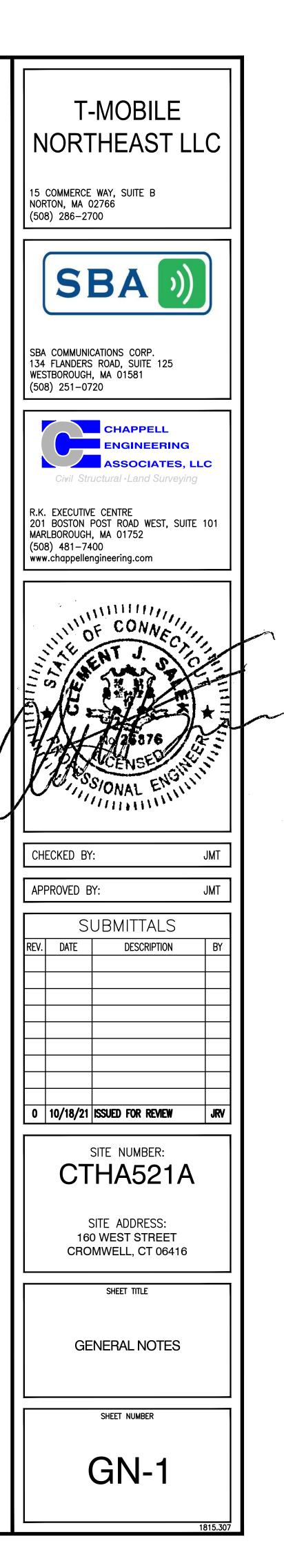
21. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE

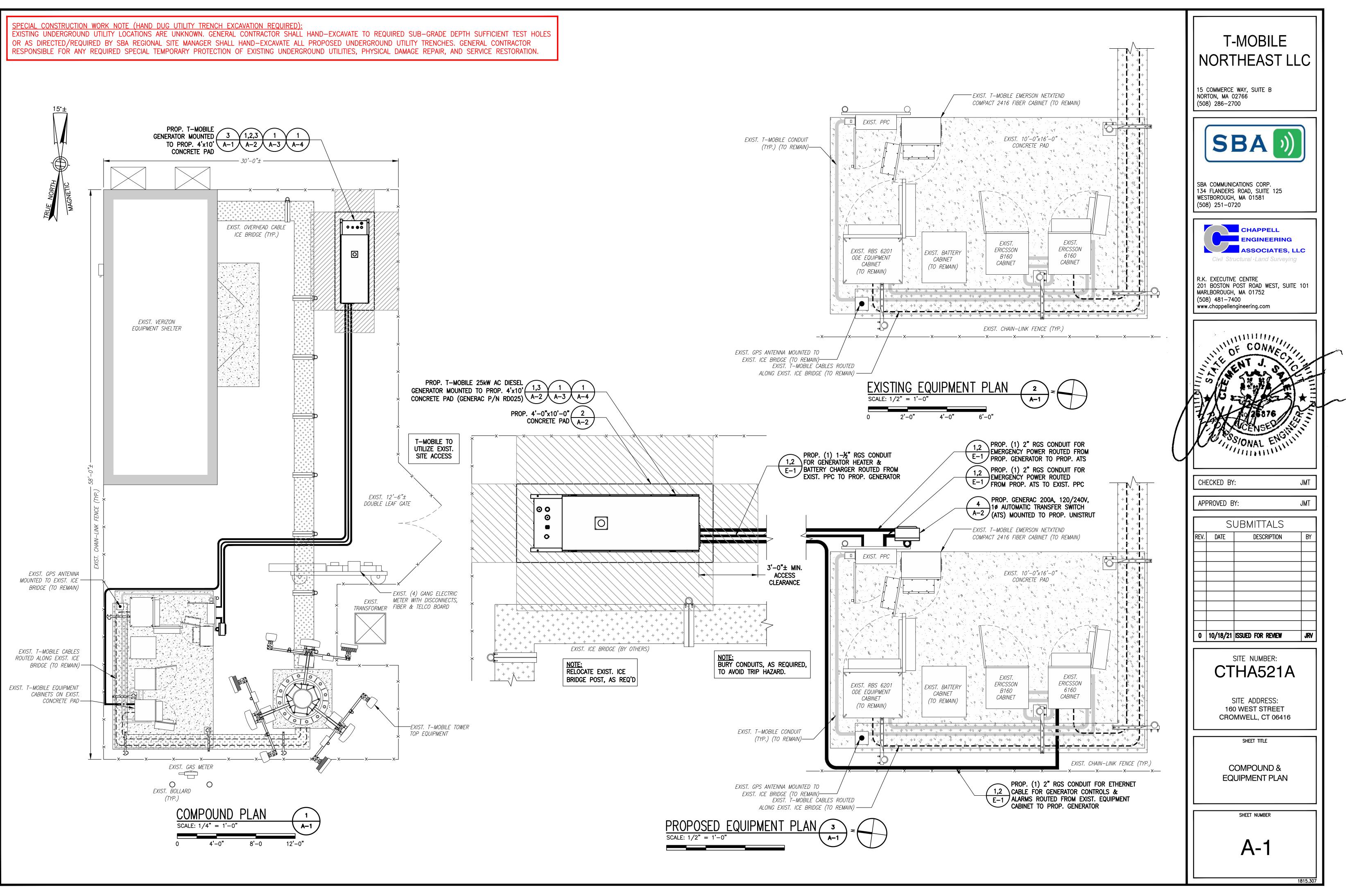
22. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION

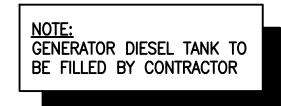
23. CABINETS, BOXES AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA,

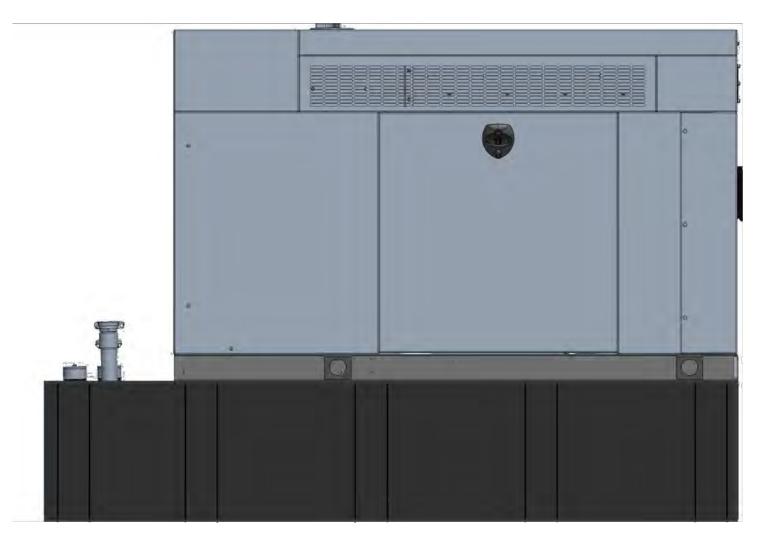
24. CABINETS, BOXES AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.

32. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS

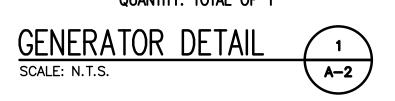


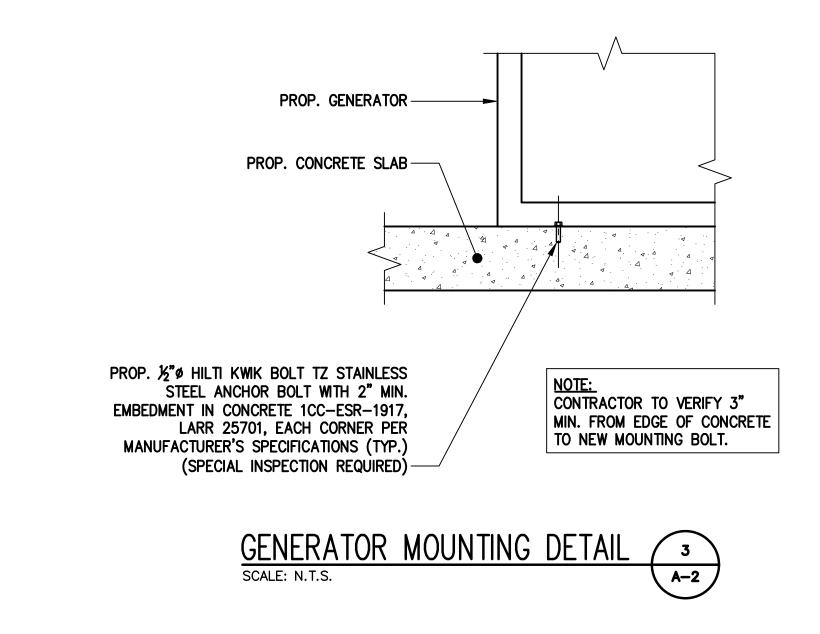


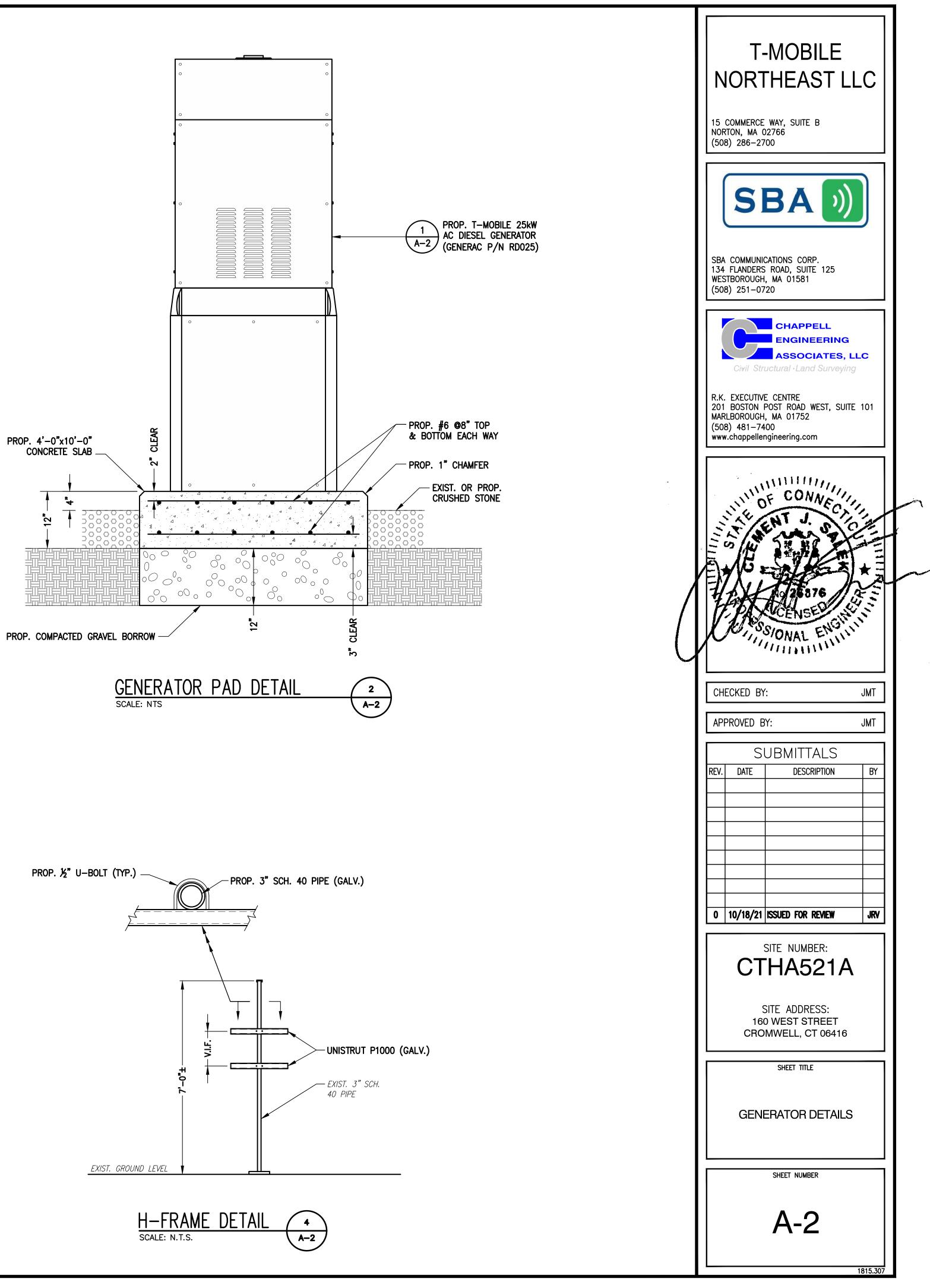




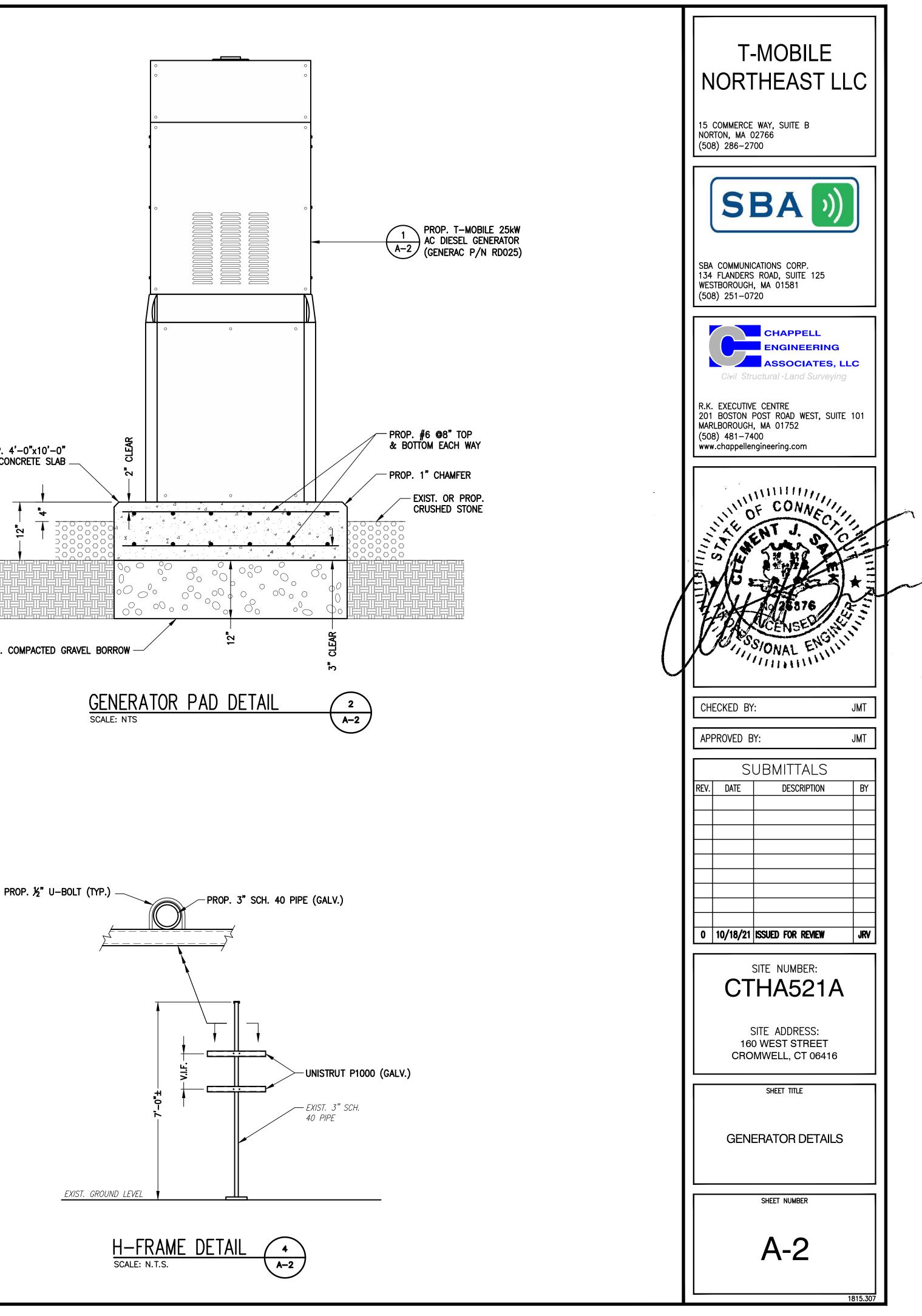
GENERAC RD025 25kW AC DIESEL GENERATOR DIMENSIONS: 103.4"L x 35.0"W x 91.7"H WEIGHT: 2,946 lbs QUANTITY: TOTAL OF 1

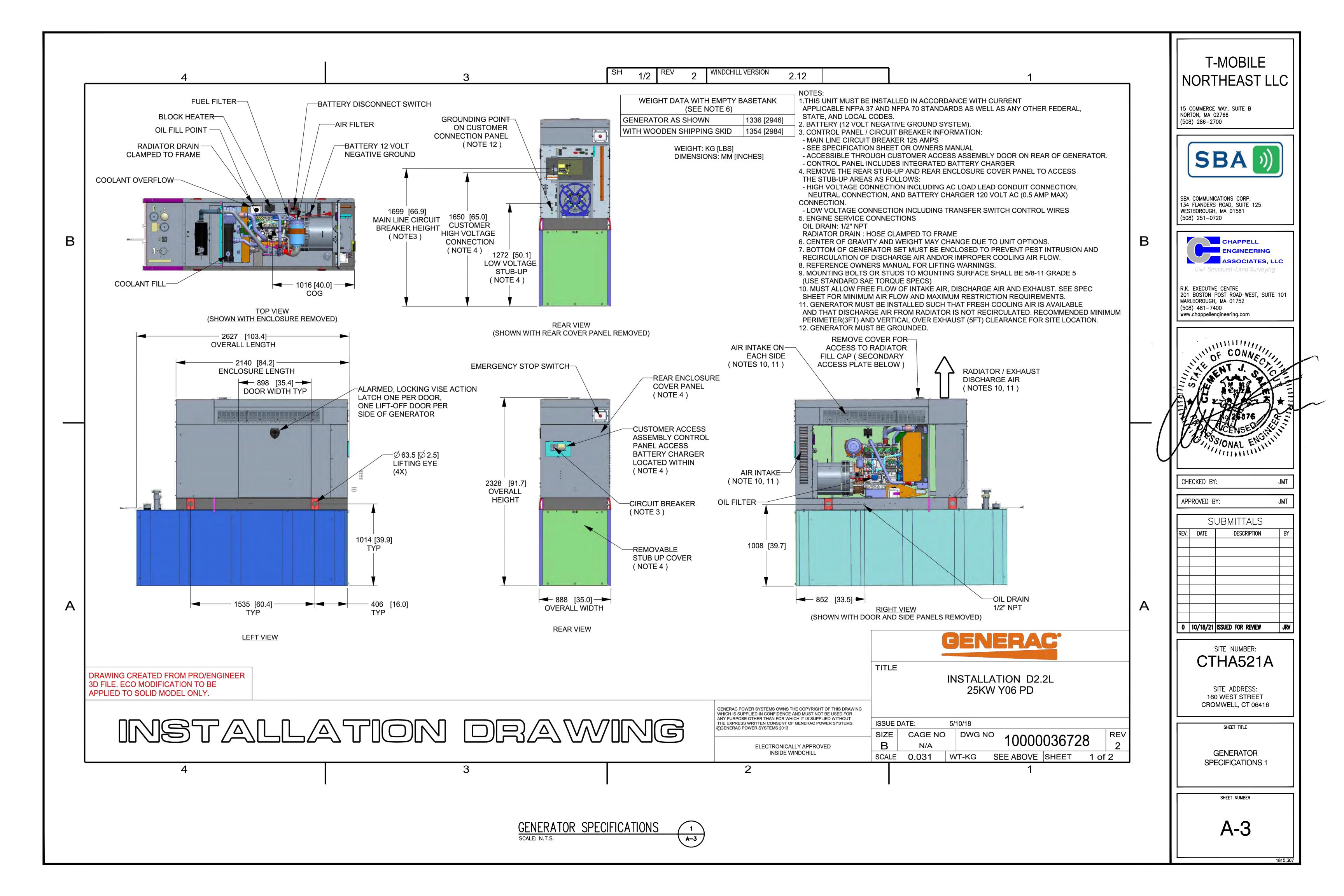


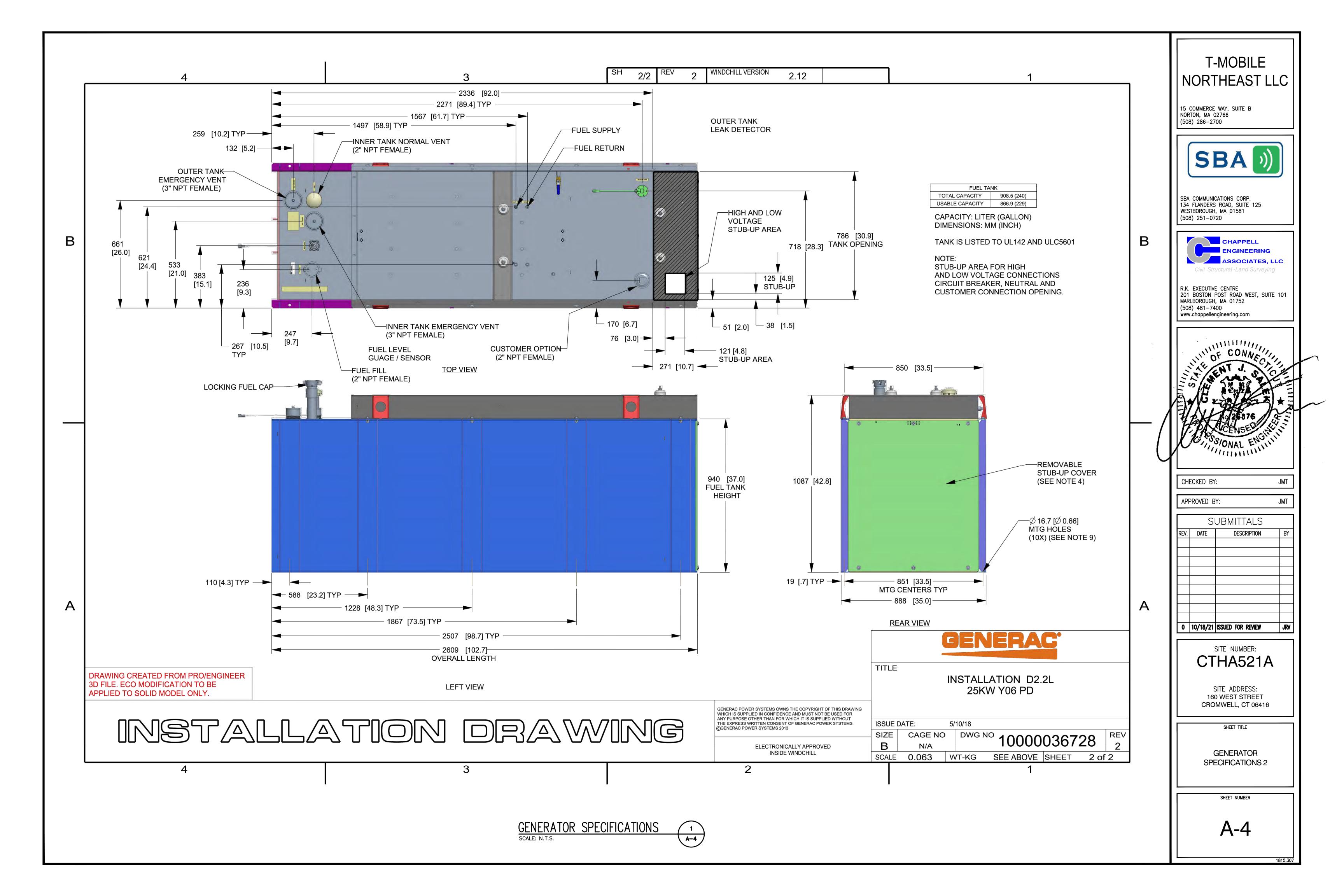


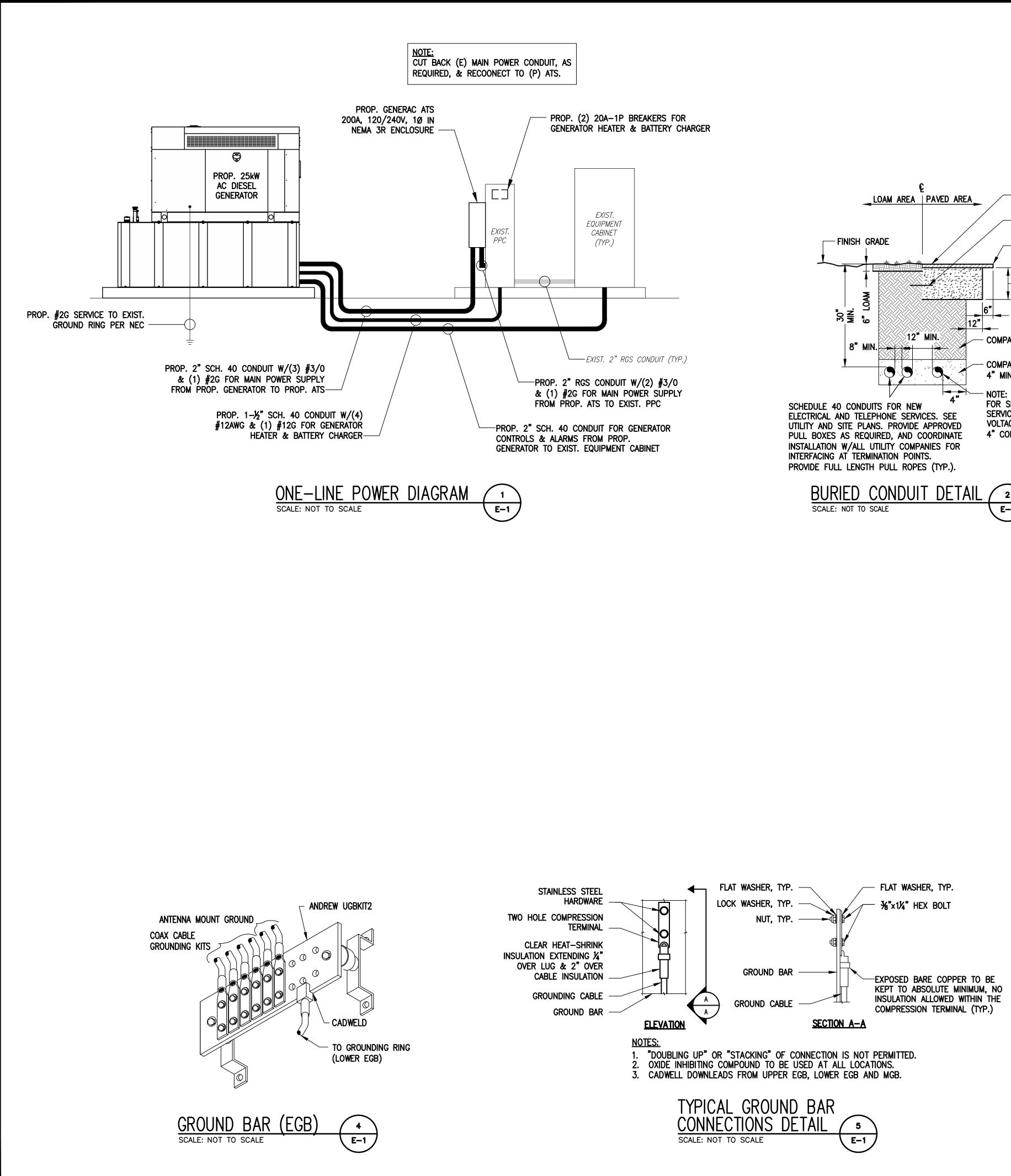


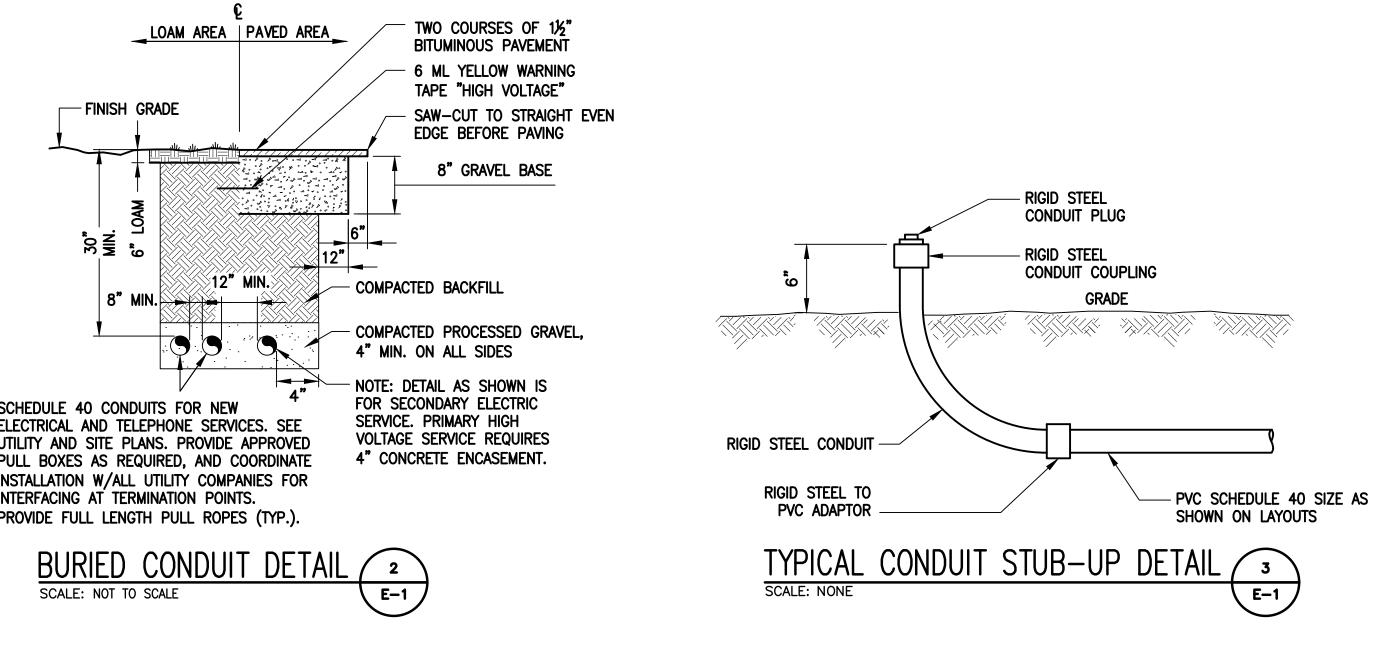








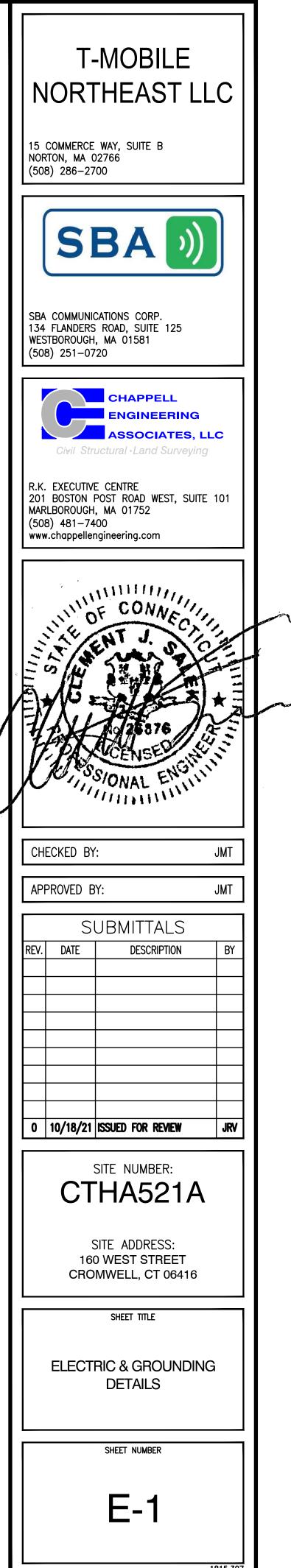




# ELECTRICAL AND GROUNDING NOTES

- AND LOCAL CODES.

- 4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF
- INSPECTIONS.
- 6. BURIED CONDUIT SHALL BE SCHEDULE 40 PVC. 7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THININSULATION.
- 9. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS MEASURING TAPE AT EACH END.
- 11. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
- 12. PPC SUPPLIED BY PROJECT OWNER.
- ACCORDANCE WITH "T-MOBILE BTS SITE GROUNDING STANDARDS".
- OWNER.
- BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
- RING
- ALL LOCATIONS.
- 19. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
- RESISTANCE REQUIRED.
- RECORD RESULTS FOR PROJECT CLOSE OUT.



1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE

2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.

3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.

5. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.

8. RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.

CABINET AS INDICATED ON THIS DRAWING PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT

10. WHERE CONDUIT BETWEEN BTS AND PROJECT OWNER CELL SITE PPC AND BETWEEN BTS AND PROJECT OWNER CELL SITE TELCO SERVICE CABINET ARE UNDERGROUND USE PVC, SCHEDULE 40 CONDUIT. ABOVE THE GROUND PORTION OF THESE CONDUITS SHALL BE PVC CONDUIT.

13. GROUNDING SHALL COMPLY WITH NEC ART. 250. ADDITIONALLY, GROUNDING, BONDING AND LIGHTNING PROTECTION SHALL BE DONE IN

14. GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT

15. USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING. 16. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW

17. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF PROJECT OWNER EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING

18. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO

20. CONTRACTOR SHALL PROVIDE AND INSTALL OMNI DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALLS OVER EACH GROUND ROD AND BONDING POINT BETWEEN EXIST. TOWER/ MONOPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING. 21. CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMNS MINIMUM

22. CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN-LOSS AND DISTANCE- TO-FAULT MEASUREMENTS (SWEEP TESTS) AND

# EXHIBIT 7

Generac RD025 25 KW 25kw Diesel Specifications

# RD025 | 2.2L | 25 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

Standby Power Rating 25 kW, 31.25 kVA, 60 Hz



GENERAC

Image used for illustration purposes only

INDUSTRIAL

### **Codes and Standards**

ANSI

Not all codes and standards apply to all configurations. Contact factory for details.



### **Powering Ahead**

For over 50 years, Generac has led the industry with innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac's gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial application under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

#### RD025 | 2.2L | 25 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

#### **Standard Features**

#### **ENGINE SYSTEM**

- Cold Weather Kit
- Oil Drain Extension
- Heavy Duty Air Cleaner
- Fan Guard
- Stainless Steel Flexible Exhaust Connection •
- Factory Filled Oil & Coolant
- Critical Exhaust Silencer •

#### **GENERATOR SET**

- Sound Attenuated Aluminum Enclosure
- Internal Genset Vibration Isolation
- Separation of Circuits High/Low Voltage
- Wrapped Exhaust Piping
- Standard Factory Testing •
- 5 Year Limited Warranty
- Ready to Accept Full Load in <10 Seconds
- E-Stop

#### **CONTROL SYSTEM**



#### **Electrical System**

- Battery Charging Alternator
- Battery Cables
- Battery Tray •
  - **Rubber-Booted Engine Electrical Connections**
- Solenoid Activated Starter Motor ٠
- Smart Battery Charger

#### ALTERNATOR SYSTEM

- Class H Insulation Material
- 2/3 Pitch
- Skewed Stator
- Sealed Bearings
- Low Temperature Rise (>120°C)
- Low THD (<5%)

#### **Cooling System**

- Closed Coolant Recovery System
- Factory-Installed Radiator
- 50/50 Ethylene Glycol Antifreeze
- Radiator Drain Extension
- Can Operate at up to 122°F (50°C) Ambient Temperature

#### **Fuel System**

- · Fuel Lockoff Solenoid
- Primary Fuel Filter
- Stainless Steel Fuel Lines

#### TANKS

- 24 Hour Run Time Tank
- UL142 Listed Tank

#### Evolution <sup>™</sup> Controller

- Two-Line Plain Text LCD Display
- Programmable Start Delay Between 10-30 seconds
- 10 second Engine Start Sequence ۰
- 5 second Engine Warm Up
- 1 minute Engine Cool-Down
- Starter Lock-Out
- Smart Battery Charger
- Automatic Voltage Regulation with Over and **Under Protection**
- Automatic Low Oil Pressure Shutdown
- Overspeed Shutdown
- High Temperature Shutdown

- Overcrank Protection
- · Safety Fused
- · Failure to Transfer Protection
- Low Battery Protection
- 50 Even Run Log
- Future Set Capable Exerciser
- Incorrect Wiring Protection
- Internal Fault Protection
- · Common External Fault Capability
- · Governor Failure Protection

#### Optional Shipped Loose and Field Install Kits

#### **ENGINE SYSTEM**

Base Plug Kit

#### **GENERATOR SET**

- Paint Kit
- Scheduled Maintance Kit

#### **CONTROL SYSTEM**

○ Mobile Link <sup>™</sup> and Adapter Kit

#### TANKS

- Spill Box
- 90% Fuel Alarm
- Tank Risers
- Spill Box Drainback Kit
- Vent Extension Support Kit
- 5 Day Run Time Tank

SPEC SHEET





EPA Certified Stationary Emergency

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

#### **ENGINE SPECIFICATIONS**

#### General

Make	Perkins
EPA Emission Compliance	Tier 4 Interim
Cylinder #	4
Туре	In-Line
Displacement - in <sup>3</sup> (L)	2.22 (135)
Bore - in (mm)	3.3 (84.0)
Stroke - in (mm)	3.9 (100.0)
Compression Ratio	23.3:1
Intake Air Method	Turbocharged/Aftercooled
Piston Type	Aluminum
Crankshaft Type	Forged Steel
Engine Block Type	Cast Iron
51	0
Engine Governing	

#### **Cooling System**

Cooling System Type	Closed Recovery
Fan Type	Pusher
Fan Speed- rpm	1,980
Fan Diameter - in (mm)	18.0 (457.2)

**GENERAC**<sup>®</sup>

#### Fuel System

Fuel Type Ultra Low Sulfur Diesel Fuel	
Fuel Specification	ASTM
Fuel Pump Type	Mechanical Engine Driven Gear
Injector Type	Mechanical
Fuel Supply Lin (mm/in)	7.94/0.31 (ID)
Fuel Return Line (mm/in)	4.76/.19 (ID)
Fuel Filtering (microns)	25

#### Engine Governing

Governor	Electronic
Frequency Regulation (Steady State)	±0.25%
Lubrication System	
Oil Pump Type	Gear
Oil Filter Type	Full Flow Cartridge

11.2 (10.6)

# **ALTERNATOR SPECIFICATIONS**

Crankcase Capacity with Filters- qt (L)

Standard Model	Generac	Standard Excitation	Direct
Poles	4	Bearings	Single Sealed
Field Type	Rotating	Coupling	Flexible Disc
Insulation Class - Rotor	H	Prototype Short Circuit Test	Yes
Insulation Class - Stator	Н	Voltage Regulator Type	Full Digital
Total Harmonic Distortion	<5%	Number of Sensed Phases	2
Telephone Interference Factor (TIF)	<50	Regulation Accuracy (Steady State)	±1%

INDUSTRIAL

Fuel Type	Ultra Low Sulfur Diesel Fuel
Fuel Specification	ASTM
Fuel Pump Type	Mechanical Engine Driven Gea
Injector Type	Mechanical
Fuel Supply Lin (mm/in)	7.94/0.31 (ID)
Fuel Return Line (mm/in)	4.76/.19 (ID)
Fuel Filtering (microns)	25

#### Engine Electrical System

System Voltage	12 VDC
Battery Charger Alternator	Standard
Battery Size	See Battery Index 0161970SBY
Battery Voltage	12 VDC
Ground Polarity	Negative

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

#### **OPERATING DATA**

#### **POWER RATINGS**

	Standby	
Single-Phase 120/480 VAC @0.1pf	25 kW	Amps: 104
Three-Phase 120/208 VAC @0.8pf	25 kW	Amps: 87
Three-Phase 120/240 VAC @0.8pf	25 kW	Amps: 75
Three-Phase 277/480 VAC @0.8pf	25 kW	Amps: 37

#### **MOTOR STARTING CAPABILITIES (sKVA)**

#### sKVA vs. Voltage Dip at 30%

120/240 V, S	Single-Phase at 0.4pf	168
120/208 V, T	Three-Phase at 0.4pf	144
120/240 V, T	Three-Phase at 0.4pf	125
120/240 V, T	Three-Phase at 0.4pf	64

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

Percent Load	Diesel gal/hr (L/hr)		
25%	0.97 (3.67)		
50%	1.37 (5.19)		
75%	1.97 (7.46)		
100%	2.77 (10.49)		

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

#### COOLING

		Standby
Air Flow (Radiator and Alternator)	ft <sup>3</sup> /min (m <sup>3</sup> /min)	2800 (79)
Coolant System Capacity	gal (L)	2.5 (9.5)
Heat Rejection to Coolant	BTU/hr (MJ/hr)	128,638 (135.7)
Max. Operating Ambient Temperature	°F (°C)	122 (50)
Maximum Operating Ambient Temperature (Before Derate)	See Bulletin No. 0199270SSD	
Maximum Radiator Backpressure	in H <sub>2</sub> O (kPa)	0.50 (0.12)

#### **COMBUSTION AIR REQUIREMENTS**

Flow at Rated Power ft<sup>3</sup>/min (m<sup>3</sup>/min)

### Standby

88 (2.5)

ENGINE			EXHAUST		
		Standby			Standby
Rated Engine Speed	rpm	1,800	Exhaust Flow (Rated Output)	ft <sup>3</sup> /min (m <sup>3</sup> /min)	296.6 (8.4)
			Exhaust Temp (Rated Output - Post Silencer)	°F (°C)	930 (499)

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions. Please consult a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528 and DIN6271 standards. Standby - See Bulletin 0187500SSB



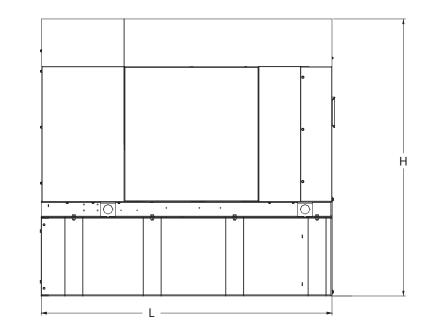


# RD025 | 2.2L | 25kW

#### INDUSTRIAL DIESEL GENERATOR SET

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



#### Weights and Dimensions

– W –

Unit Weight - Ibs	Unit Weight with Skid - Ibs		Dimensions (L x	W x H) in
2,811	1 2,849		84.2 x 35.0 x 91.7	
	25kW Fuel Consumptio		with fuel ta 103.4" 35"	
Fuel Tank Gross To	tal Capacity	240		
Fuel Tank Gross Usable Capacity		229		
Fuel Tank Net Usable Capacity (Run Hours Based on Net Usable Capacity)		206		
Run Hours 100% Load		98		
Run Hours 75% Load		125		
Run Hours 50% Load		161		
	0 IF · · B ·			

Sound Emission Data

Rated Load Sound Output at 23ft - dB(A) 65

\* All measurements are approximate and for estimation purposes only. Drawing is for illustration purposes only, not to scale.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.



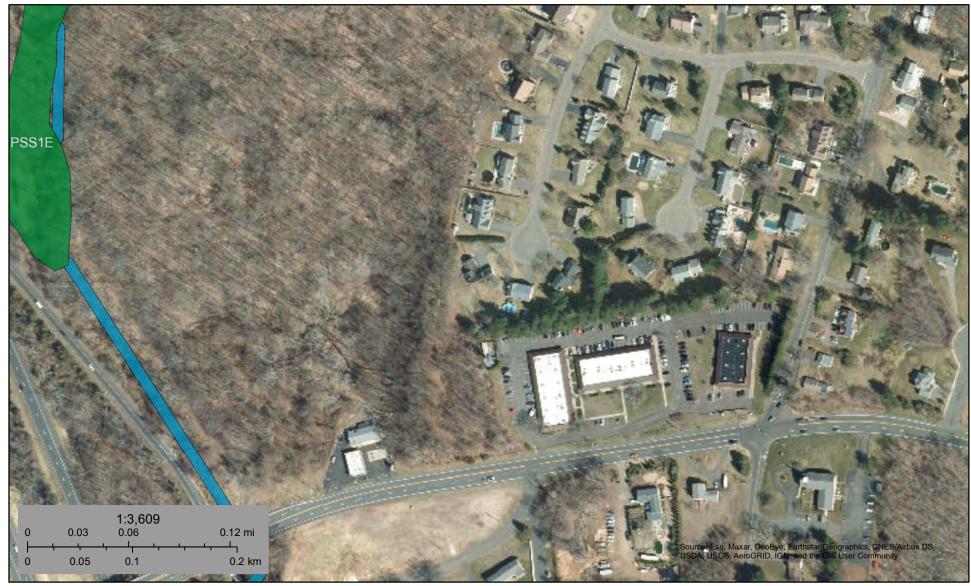
# EXHIBIT 8

Map showing nearest wetlands



## U.S. Fish and Wildlife Service **National Wetlands Inventory**

# 160 West St



#### November 1, 2021

#### Wetlands

- Estuarine and Marine Wetland

Estuarine and Marine Deepwater

- Freshwater Pond

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Lake Other Riverine This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.