

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

September 30, 2021

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

RE: Notice of Exempt Modification 220 Winthrop Rd., Deep River, CT Latitude: 41.365818 Longitude: -72.474929 T-Mobile Site #: CT11408A_Hardening

Dear Ms. Bachman:

T-Mobile currently maintains six (6) antennas at the 137-foot level of the existing 155-foot Monopole Tower at 246 East Franklin St., Danielson, CT. The tower is owned by SBA 2012 TC Assets, LLC. The property is owned by The Town of Deep River. T-Mobile now intends to add one (1) Generac RD025 Diesel generator and 4' x 10' concrete pad, within a 49' 8" x 50' 7" 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) RGS conduit for Ethernet cable for generator & Alarms
- (1) 2" RGS conduit for emergency power
- (1) 1-1/2" RGS conduit for generator heater & Battery
- (1) 4' x 10' concrete pad
- (1) 2" RGS conduit for emergency power from proposed ATS & existing PPC
- Generac 200A, 120/240v automatic transfer switch to existing H-Frame (install additional P1000 Unistruct posts



Remaining:

- Emerson Nextend compact 2416 fiber cabinet
- T-Mobile cables along existing Ice Bridge
- Existing T-Mobile Ice Bridge
- Exist. AT&T backboard
- Existing 28' 1" x 28' 1" concrete tower foundation
- T-Mobile GPS antenna
- T-Mobile radios mounted to existing post
- Electrical panel
- Ericsson RBS6201 equipment cabinet

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" x 35" x 91.7" (w/fuel tank: 103.4" x 35" x 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 Deep River, Middlesex County, which is as follows:

Maximum Continuous Noise Levels (measured in dBA):

Unable to obtain noise ordinance/regulations that specifically pertain to the Town of Deep River or Middlesex County. Neither the Town of Deep River's website nor the Connecticut Siting Council's Noise Pollution Control database listed any information pertaining to the Town of Deep River or Middlesex county.



	<u>dBA</u>	<u>dBA</u>	<u>dBA</u>	<u>dBA</u>
Industrial:	70	66	61	51
Business:	62	62	55	45
Residential:	62	55	55	45

The proposed modification will remain within the existing 49' 8" x 50' 7" fenced compound. The new generator and tank will be surrounded by the existing security fence and 4' x 6' wide main gate and a 11' wide double swing gate and will be placed on a plinth secured to a proposed 4' x 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 Deep River's First Selectman, Angus L. McDonald Jr., and Co Zoning Enforcement Officer, Mike D'Amato. The property is owned by the Town of Deep River. (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 <u>GShepherd@sbasite.com</u> Attachments
- cc: Angus L. McDonald Jr., First Selectman / with attachments Deep River Town Hall 174 Main St., Deep River, CT 06417
 Mike D'Amato Co Zoning Enforcement Officer / with attachments Deep River Town Hall 174 Main St., Deep River, CT 06417

Exhibit List

Exhibit 1	Check Copy	х
Exhibit 2	FedEx Labels	x
Exhibit 3	Property Card	x
Exhibit 4	Property Map	x
Exhibit 5	Zoning Documents	Town of Deep River 8/4/98
Exhibit 6	Construction Drawings	Chappell 8/27/21
Exhibit 7	Generator Specifications	x
Exhibit 8	Wetlands Map	X

EXHIBIT 1

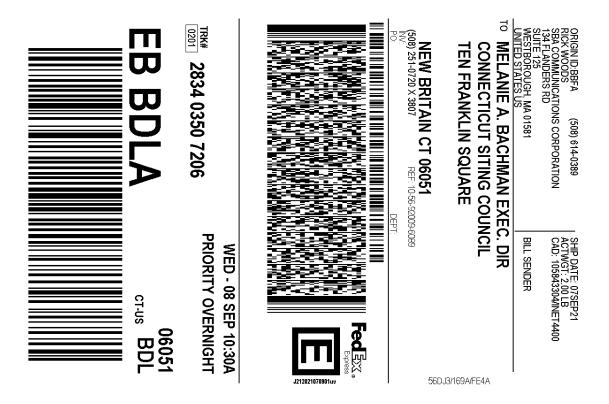
2

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Copy of Check for filing fee.

EXHIBIT 2

FedEx Labels



After printing this label:

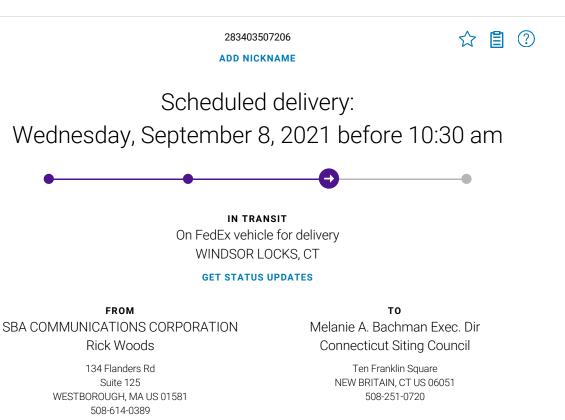
- 1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
- 2. Fold the printed page along the horizontal line.
- 3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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.

TRACK ANOTHER SHIPMENT



MANAGE DELIVERY \sim

Travel History

TIME ZONE Local Scan Time

 \sim

Wednesday, September 8, 2021

8:38 AM	WINDSOR LOCKS, CT	On FedEx vehicle for delivery
7:38 AM	WINDSOR LOCKS, CT	At local FedEx facility
5:57 AM	EAST GRANBY, CT	At destination sort facility
5:07 AM	NEWARK, NJ	Departed FedEx hub

Tuesday, September 7, 2021

8:04 PM	FRAMINGHAM, MA	Left FedEx origin facility
4:27 PM	FRAMINGHAM, MA	Picked up
1:42 PM		Shipment information sent to FedEx

Shipment Facts

https://www.fedex.com/fedextrack/?trknbr=283403507206&trkqual=2459465000~2834035... 9/8/2021

TRACKING NUMBER 283403507206

TOTAL PIECES

SHIPPER REFERENCE 10-56-92009-6089

SHIP DATE 9/7/21 ⑦ SERVICE FedEx Priority Overnight

TOTAL SHIPMENT WEIGHT 2 lbs / 0.91 kgs

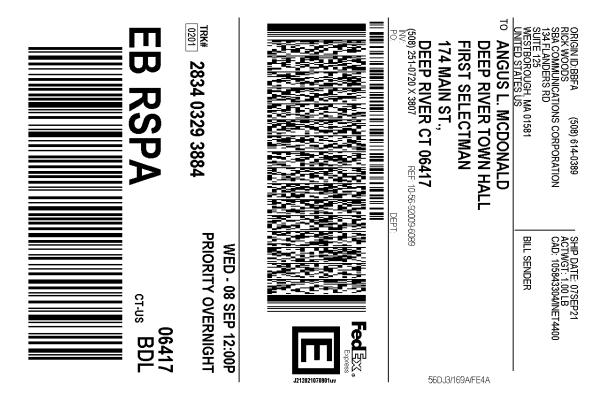
PACKAGING FedEx Pak

STANDARD TRANSIT 9/8/21 before 10:30 am ? **WEIGHT** 2 lbs / 0.91 kgs

TERMS Shipper

> SPECIAL HANDLING SECTION Deliver Weekday

SCHEDULED DELIVERY 9/8/21 before 10:30 am



After printing this label:

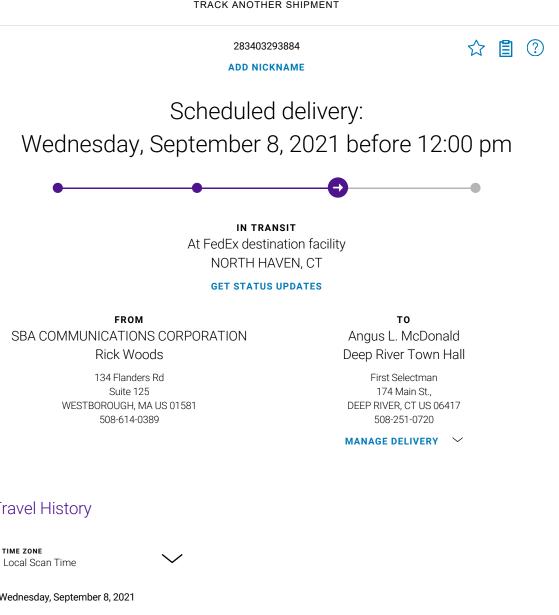
- 1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
- 2. Fold the printed page along the horizontal line.
- 3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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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

TRACK ANOTHER SHIPMENT



Travel History

Wednesday, September 8, 2021			
8:41 AM	NORTH HAVEN, CT	At local FedEx facility	
4:09 AM	NEWARK, NJ	Departed FedEx hub	
Tuesday, September	7, 2021		
8:04 PM	FRAMINGHAM, MA	Left FedEx origin facility	
4:27 PM	FRAMINGHAM, MA	Picked up	
1:41 PM		Shipment information sent to FedEx	
Shinment Fac	te		

Shipment Facts

TRACKING NUMBER	SERVICE	WEIGHT
283403293884	FedEx Priority Overnight	1 lbs / 0.45 kgs

https://www.fedex.com/fedextrack/?trknbr=283403293884&trkqual=2459465000~2834032... 9/8/2021



After printing this label:

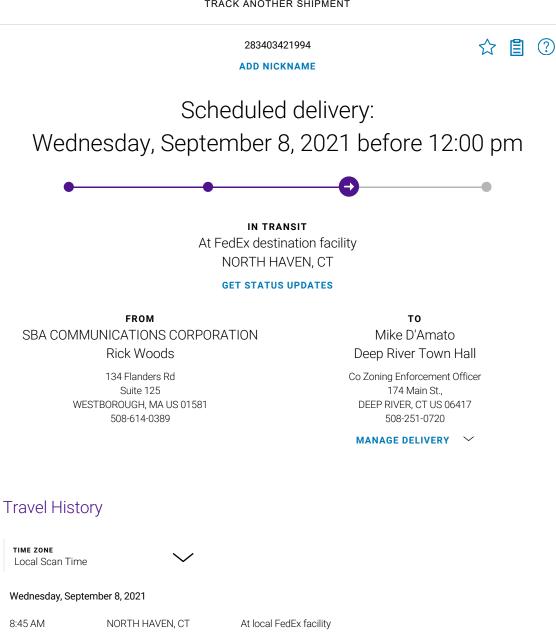
- 1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
- 2. Fold the printed page along the horizontal line.
- 3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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.

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FedEx

TRACK ANOTHER SHIPMENT



8:45 AM	NORTH HAVEN, CT	At local FedEx facility
4:09 AM	NEWARK, NJ	Departed FedEx hub

Tuesday, September 7, 2021

8:04 PM	FRAMINGHAM, MA
4:27 PM	FRAMINGHAM, MA
1:42 PM	

Left FedEx origin facility Picked up Shipment information sent to FedEx

Shipment Facts

TRACKING NUMBER	SERVICE	WEIGHT
283403421994	FedEx Priority Overnight	1 lbs / 0.45 kgs

Detailed Tracking

EXHIBIT 3

Property Card

220 WINTHROP RD

Location	220 WINTHROP RD	Mblu	33/ / 1A/ /
Acct#	00047000	Owner	TOWN OF DEEP RIVER
Assessment	\$239,260	Appraisal	\$341,800
PID	546	Building Count	1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2015	\$185,000	\$156,800	\$341,800
Assessment			
Valuation Year	Improvements	Land	Total
2015	\$129,500	\$109,760	\$239,260

Owner of Record

Owner Co-Owner	TOWN OF DEEP RIVER	Sale Price Certificate	\$0
Address	174 MAIN ST	Book & Page	0093/0797
	DEEP RIVER, CT 06417	Sale Date	12/27/1977

Ownership History

Ownership History Owner Sale Price Certificate Book & Page Sale Date						

Building Information

Building 1 : Section 1

Year Built:19Living Area:24	79 7		
Building Attributes			
Field	Description		
STYLE	Commercial		
MODEL	Commercial		
Stories:	1		
Occupancy	1		

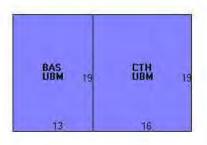
Exterior Wall 1	Aluminum Sidng
Exterior Wall 2	
Roof Structure	Gambrel
Roof Cover	Asph/F Gls/Cmp
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Inlaid Sht Gds
Interior Floor 2	
Heating Fuel	Electric
Heating Type	Electr Basebrd
АС Туре	None
Bldg Use	MUNICIPAL MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	9031
Heat/AC	NONE
Frame Type	WOOD FRAME
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	LIGHT
Wall Height	9
% Comn Wall	0

Building Photo



(http://images.vgsi.com/photos/DeepRiverCTPhotos//\00\00\72/

Building Layout



(http://images.vgsi.com/photos/DeepRiverCTPhotos//Sketches/5

Building Sub-Areas (sq ft) Legend						
Code	Description	Gross Area	Living Area			
BAS	First Floor	247	247			
СТН	Cath Ceiling	304	0			
UBM	Basement, Unfinished	551	0			
		1,102	247			

•

Extra Features

Extra Features No Data for Extra Features Land Land Line Valuation

Land Use		Land Line Valuation		
Use Code	9030	Size (Acres)	9.94	

DescriptionMUNICIPAL MDL-94Neighborhood0002

 Depth
 \$109,760

 Appraised Value
 \$156,800

Outbuildings

Outbuildings <u>Lege</u>						
Code	Description	Size	Bidg #			
PAV1	PAVING-ASPHALT	30000 S.F.	1			
PAV2	PAVING-CONC	1400 S.F.	1			
SHD1	SHED FRAME	45 S.F.	1			
SHD1	SHED FRAME	100 S.F.	1			
FN3	FENCE-6' CHAIN	200 L.F.	1			
	COMPACTOR	1	1			

Valuation History

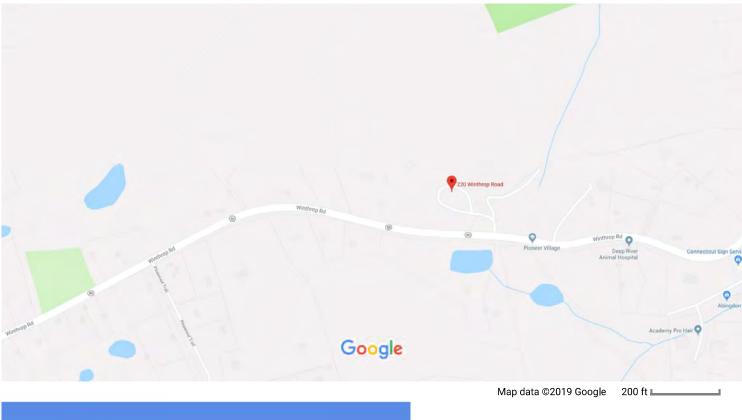
Appraisal					
Valuation Year	Land	Total			
2018	\$185,000	\$156,800	\$341,800		

Assessment					
Valuation Year	Land	Total			
2018	\$129,500	\$109,760	\$239,260		

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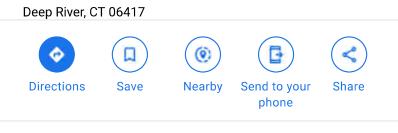
EXHIBIT 4 Property Map

Google Maps 220 Winthrop Rd





220 Winthrop Rd



9G8F+4P Deep River, CT

At this location

5/15/2019

Deep River Transfer Station

5.0 ★★★★★ (4)

City government office · 220 Winthrop Rd Open until 4:00 PM

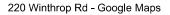




EXHIBIT 5 Zoning Documents

Apr. 28. 201	1 9:26AM	town of	deep	river
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~~No. 4245~~ P. 2

VALIDATION

APPLICANT TIM BONANNO ADDRESS PO BOX 83, QUAKER HILL 59502 (STREET) (STREET)(STR
PERMIT TO
AT (LOCATION) 220 WINTHROP ROAD (TOWN TRANSFER STATION PROPRTY) ZONING (NO.) (STREET) ZONING
BETWEEN AND (CROSE STREET) (CROSE STREET)
SUBDIVISION LOT BLOCK \$12E
BUILDING IS TO BE FT. WIDE BY FT. LONG BY FT. IN HEIGHT AND SHALL CONFORM IN CONSYRUCTION
TO TYPE USE GROUP BASEMENT WALLS OR FOUNDATION (TYPE)
REMARKS: PERMIT ISSUED FOR THE ERECTION OF COMMUNICATIONS TOWER. PRMIT INCLUDES ELECTRICAL WORK.
AREA OR
ADDRESS 220 WINTHROP ROAD. DEEP RIVER

(Affidavit on reverse side of application to be completed by authorized agent of owner)

Town of Deep River 174 Main Street Deep River, CT. 06417

Certificate of Occupancy and Zoning Compliance

MAP....43......LOT.....1A......ZONE......R-40......

BUILDING PERMIT #..00-1-238

OWNER(s): Town of Deep River - Tri-State Telecom

This is to certify that the communications tower and/or land at conforms substantially to the requirements of the Connecticut State Building Code, Connecticut Fire Code (if applicable), Connecticut Health Codes and the Zoning Regulations of the Town of Deep River and is hereby **APPROVED FOR OCCUPANCY OR USE** as indicated and limited as follows:

BOCA Building Code Edition:...... '96......Use group:..S-1...Construction type...... Special

Automatic Sprinkler Hazard Classification:N/A..... Aisle width (not applicable)

Automatic sprinkler demand at base of rise.....not applicable.....

Approved for Occupancy or Use:

BUILDI	NG DEPARTMEN	T: Communi	cation Tow	er - Compl	ance with 1609.0 a	nd 1510.0 Required
ZONIN		and the second sec	F.S.	A. C.		کی ہوتے ہیں اور
FIRE M	ARSHAL'S OFFIC	E: N/A				الي
	<i>M</i>	, - 31	12/01			Ma-
Building	g Official		Date		Fire Marshal	Date
	ΓΕ×Ε.	nPT		HT.		NIK
Zoning	Enforcement Ager	nt	Date	1년 :	Sanitarian	Date
cc:	ZEO Fire Marshal Assessor Property File		7	¹⁰ M. Kamp, C. J. & K. K. Wayne, "Community of Million Composition of Computer Vision of Computer Vision Computer Vision of Computer Vision on Computer Vision Computer Vision of Computer Vision on Computer Vision of Computer Vision of Computer Vision of C		
		t.	5	果实的原则	22	

EXHIBIT 6

Construction Drawings

				_
APPROVALS				
PROJECT MANAGER:	DATE:	ZONING/SITE ACQ.:	DATE:	
CONSTRUCTION:	DATE:	OPERATIONS:	DATE:	
<u>RF ENGINEERING:</u>	DATE:	TOWER OWNER:	DATE:	
T-MOBILE TECHNIC	CIAN SITE	SAFETY NOTES]
LOCATION SPECIA	L RESTRICTIO	NS		
	BY CERTIFIED C BY CERTIFIED C			
	BY CERTIFIED C BY CERTIFIED C			
GPS/LMU: UNREST	RICTED			
RADIO CABINETS: UNRESTR PPC DISCONNECT: UNRESTR				
MAIN CIRCUIT D/C: UNRESTENU/T DEMARC: UNRESTE				
OTHER/SPECIAL: NONE				
GENERAL NOTES				VICINITY
1. THE CONTRACTOR SHALL GIVE ALL NOTICES A LAWS, ORDINANCES, RULES, REGULATIONS AND		SHALL REPAIR ANY DAMAGE THAT MAY HAVE CONSTRUCTION ON OR ABOUT THE PROPERTY		Mestre M
ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILI SPECIFICATIONS, AND LOCAL AND STATE JURIS BEARING ON THE PERFORMANCE OF THE WOR	TY COMPANY DICTIONAL CODES	13. THE CONTRACTOR SHALL KEEP THE GENERAL HAZARD FREE DURING CONSTRUCTION AND DI	WORK AREA CLEAN AND	
PERFORMED ON THE PROJECT AND THE MATER BE IN STRICT ACCORDANCE WITH ALL APPLICA REGULATIONS, AND ORDINANCES.	RIALS INSTALLED SHALL	DEBRIS, RUBBISH AND REMOVE EQUIPMENT N REMAINING ON THE PROPERTY. PREMISES SH CONDITION AND FREE FROM PAINT SPOTS, DU	IOT SPECIFIED AS ALL BE LEFT IN CLEAN	
2. THE ARCHITECT/ENGINEER HAVE MADE EVERY IN THE CONSTRUCTION AND CONTRACT DOCUM		ANY NATURE. 14. THE CONTRACTOR SHALL COMPLY WITH ALL C		Jane?
SCOPE OF WORK. THE CONTRACTOR BIDDING NEVERTHELESS CAUTIONED THAT MINOR OMISS THE DRAWINGS AND OR SPECIFICATIONS SHALL	the Job IS Ions or Errors In	THEY APPLY TO THIS PROJECT. 15. THE CONTRACTOR SHALL NOTIFY THE PROJEC	et owner's	6 AV
CONTRACTOR FROM COMPLETING THE PROJECT ACCORDANCE WITH THE INTENT OF THESE DO	CUMENTS.	REPRESENTATIVE WHERE A CONFLICT OCCURS CONTRACT DOCUMENTS. THE CONTRACTOR IS MATERIAL OR CONSTRUCT ANY PORTION OF T	NOT TO ORDER THE WORK THAT IS IN	
3. THE CONTRACTOR OR BIDDER SHALL BEAR TH NOTIFYING (IN WRITING) THE OMNIPOINT REPRI CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO	ESENTATIVE OF ANY) THE SUBMISSION OF	CONFLICT UNTIL CONFLICT IS RESOLVED BY T REPRESENTATIVE.	·	Nr 1
CONTRACTOR'S PROPOSAL OR PERFORMANCE OF DISCREPANCIES THE CONTRACTOR SHALL F OR EXTENSIVE WORK, UNLESS DIRECTED IN W	PRICE THE MORE COSTLY	 THE CONTRACTOR SHALL VERIFY ALL DIMENSI PROPERTY LINES, ETC. ON THE JOB. ALL UNDERGROUND UTILITY INFORMATION WAS 		X4030-
4. THE SCOPE OF WORK SHALL INCLUDE FURNIS EQUIPMENT, LABOR AND ALL OTHER MATERIALS NECESSARY TO COMPLETE THE WORK/PROJECT HEREIN.	S AND LABOR DEEMED	SURFACE INVESTIGATIONS AND EXISTING PLAN CONTRACTOR SHALL LOCATE ALL UNDERGROU FIELD PRIOR TO ANY SITE WORK.	S OF RECORD. THE	Cem
5. THE CONTRACTOR SHALL VISIT THE JOB SITE SUBMISSION OF BIDS OR PERFORMING WORK WITH THE FIELD CONDITIONS AND TO VERIFY BE CONSTRUCTED IN ACCORDANCE WITH THE	TO FAMILIARIZE HIMSELF THAT THE PROJECT CAN			Winthrop
6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATIC CONSTRUCTION PRIOR TO STARTING WORK ON DEFINED BY THE CONSTRUCTION DRAWINGS/CO	ANY ITEM NOT CLEARLY			YRAX
 THE CONTRACTOR SHALL INSTALL ALL EQUIPM ACCORDING TO THE MANUFACTURER'S/VENDOR UNLESS NOTED OTHERWISE OR WHERE LOCAL TAKE PRECEDENCE. 	's specifications	AT LEAST 72 HOURS PRI DIGGING, THE CONTRAC	TOR IS	1 Star
8. THE CONTRACTOR SHALL PROVIDE A FULL SET DOCUMENTS AT THE SITE UPDATED WITH THE ADDENDUMS OR CLARIFICATIONS AVAILABLE FO PERSONNEL INVOLVED WITH THE PROJECT.	LATEST REVISIONS AND	REQUIRED TO CALL DIG SA		Sitt
 THE CONTRACTOR SHALL SUPERVISE AND DIRE DESCRIBED HEREIN. THE CONTRACTOR SHALL RESPONSIBLE FOR ALL CONSTRUCTION MEANS, TECHNIQUES, SEQUENCES AND PROCEDURES A ALL PORTIONS OF THE WORK UNDER THE CON 	BE SOLELY , METHODS, AND FOR COORDINATING			MERGE ONTO 1-49
10. THE CONTRACTOR IS RESPONSIBLE FOR PROV CONSTRUCTION CONTROL SURVEYS, ESTABLISH ALL LINES AND GRADES REQUIRED TO CONST AS SHOWN HEREIN.	ING AND MAINTAINING	Williamantie		TOWARD PROVIDEN TO TAKE EXIT 69 TAKE EXIT 4 TOWA KELSEY HILL ROAD
11. THE CONTRACTOR SHALL BE RESPONSIBLE FO PERMITS AND INSPECTIONS WHICH MAY BE RE BY THE ARCHITECT/ENGINEER, THE STATE, CO GOVERNMENT AUTHORITY.	QUIRED FOR THE WORK			TURN RIGHT ONTO SITE IS LOCATED /
12. THE CONTRACTOR SHALL MAKE NECESSARY PE EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CONSTRUCTION. UPON COMPLETION OF WORK,	CURBING, ETC. DURING			

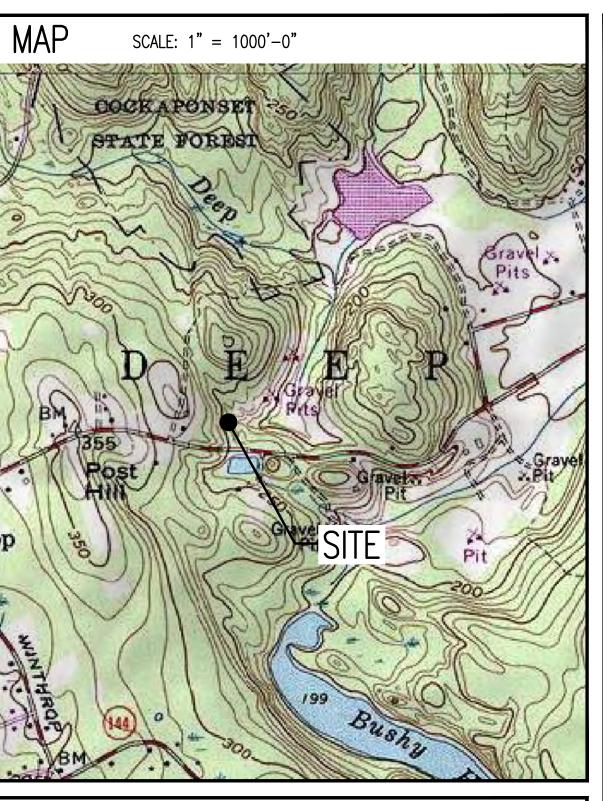
) \vdash \vdash \vdash \dashv \dashv \vdash \vdash WINTHROP ROAD

220 WINTHROP ROAD DEEP RIVER, CT 06417 MIDDLESEX COUNTY

SITE NO.: CT11408A

SITE TYPE: 180'± MONOPOLE

PROJECT TYPE: NATIONAL HARDENING PROJECT



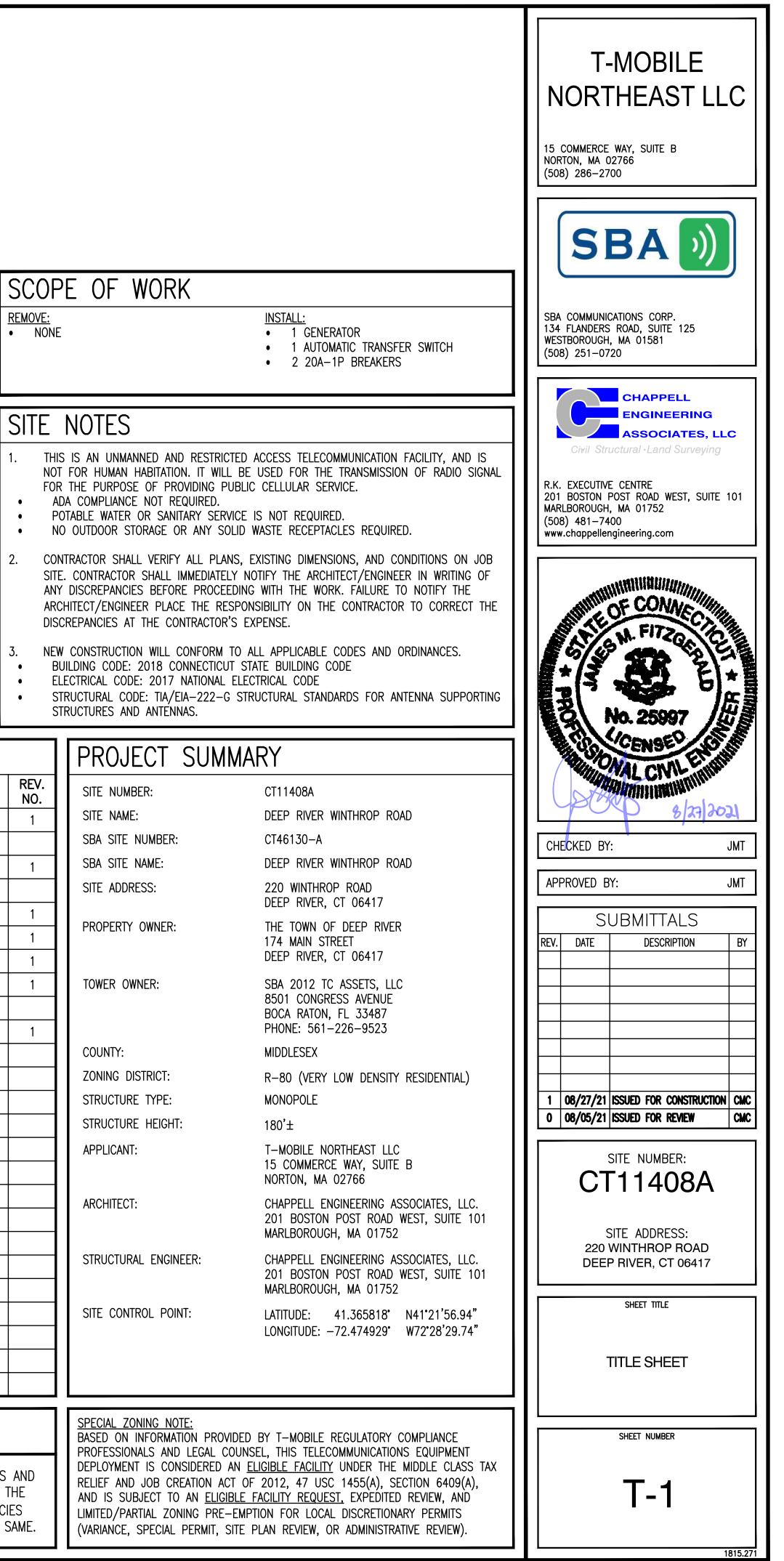
DIRECTIONS

-495 NORTH TOWARD MANSFIELD/MARLBORO. TAKE EXIT 33B FOR I-95 SOUTH IDENCE RI. KEEP RIGHT AT FORK TO STAY ON I-95 SOUTH. USE RIGHT 2 LANES 69 FOR CT-9 NORTH TOWARD ESSEX/HARTFORD. CONTINUE ONTO CT-9 NORTH. FOWARD CT-154 NORTH. TURN LEFT ONTO CT-154 NORTH. TURN LEFT ONTO ROAD. TURN RIGHT ONTO STATE HIGHWAY 602. CONTINUE ONTO CT-80 WEST. ONTO TRANSFER STATION ROAD. BEAR LEFT TO STAY ON TRANSFER HILL ROAD. FED AT THE END OF THE ROAD.

SHE	ET INDEX	
SHEET NO.	DESCRIPTION	REV. NO.
T-1	TITLE SHEET	1
GN-1	GENERAL NOTES	1
A-1	COMPOUND & EQUIPMENT PLANS	1
A-2	GENERATOR DETAILS	1
A-3	GENERATOR SPECIFICATIONS 1	1
A-4	GENERATOR SPECIFICATIONS 2	1
E-1	ELECTRIC & GROUNDING DETAILS	1

DO NOT SCALE DRAWINGS

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 DURDASE OF CONSTRUCTION DRAWINGS THE FOULOWING DEFINITIONS SHALL ARRIVE	
 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 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:

NCRETE 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 FRENGTH (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 LARGER2 IN. ≸5 AND SMALLER & WWF1½ IN.

CRETE NOT EXPOSED TO EARTH OR WEATHER NOT CAST AGAINST THE GROUND:

SLAB AND WALL%/ IN.

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 D. EXPANSION BOLTS SHALL BE PROVIDED BY SIMPSON OR APPROVED EQUAL.

ETE CYLINDER TIES ARE NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS 3.2.3) 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.

<u>TURAL STEEL NOTES:</u>

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 $(\frac{3}{4})^{\circ}$ and shall have minimum of two bolts OTED OTHERWISE. ALL BOLTS SHALL BE GALVANIZED OR STAINLESS STEEL.

TRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE $\frac{5}{6}$ " DIA. ASTM A 307 BOLTS (GALV) UNLESS NOTED

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

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

COMPACTION NOTES FOR SLAB ON GRADE:

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 ON 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 GRADF.

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.

21. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.

22. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.

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

UL, ANSI/IEEE AND NEC. 24. CABINETS, BOXES AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.

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.

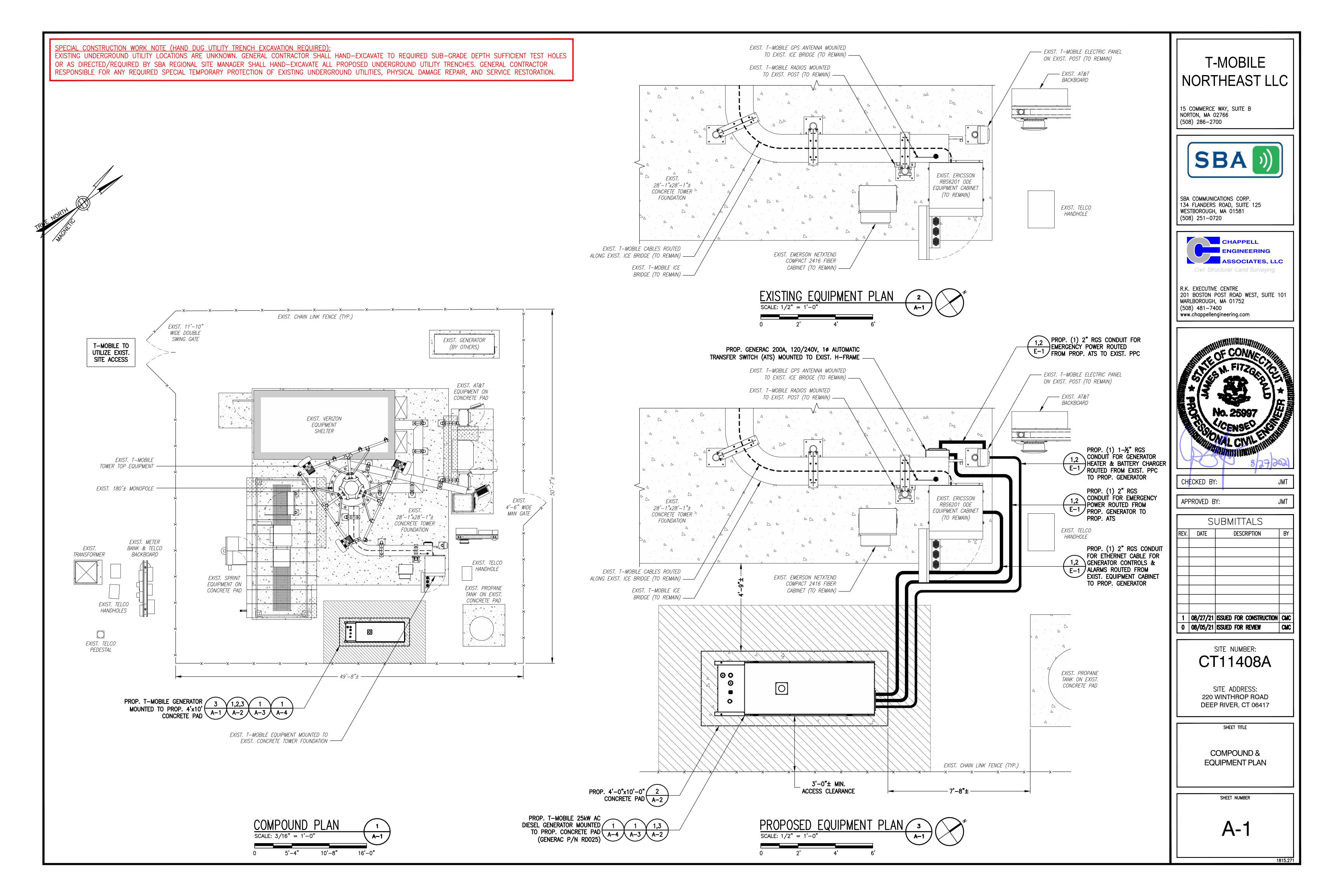
31. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL

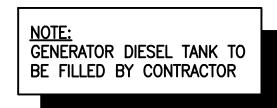
APPLICABLE LOCAL CODES.

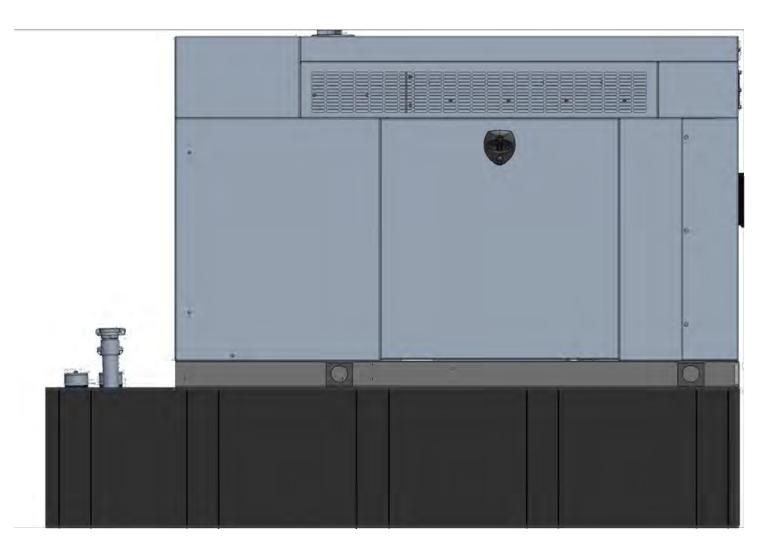
NOT BLOCKED.

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



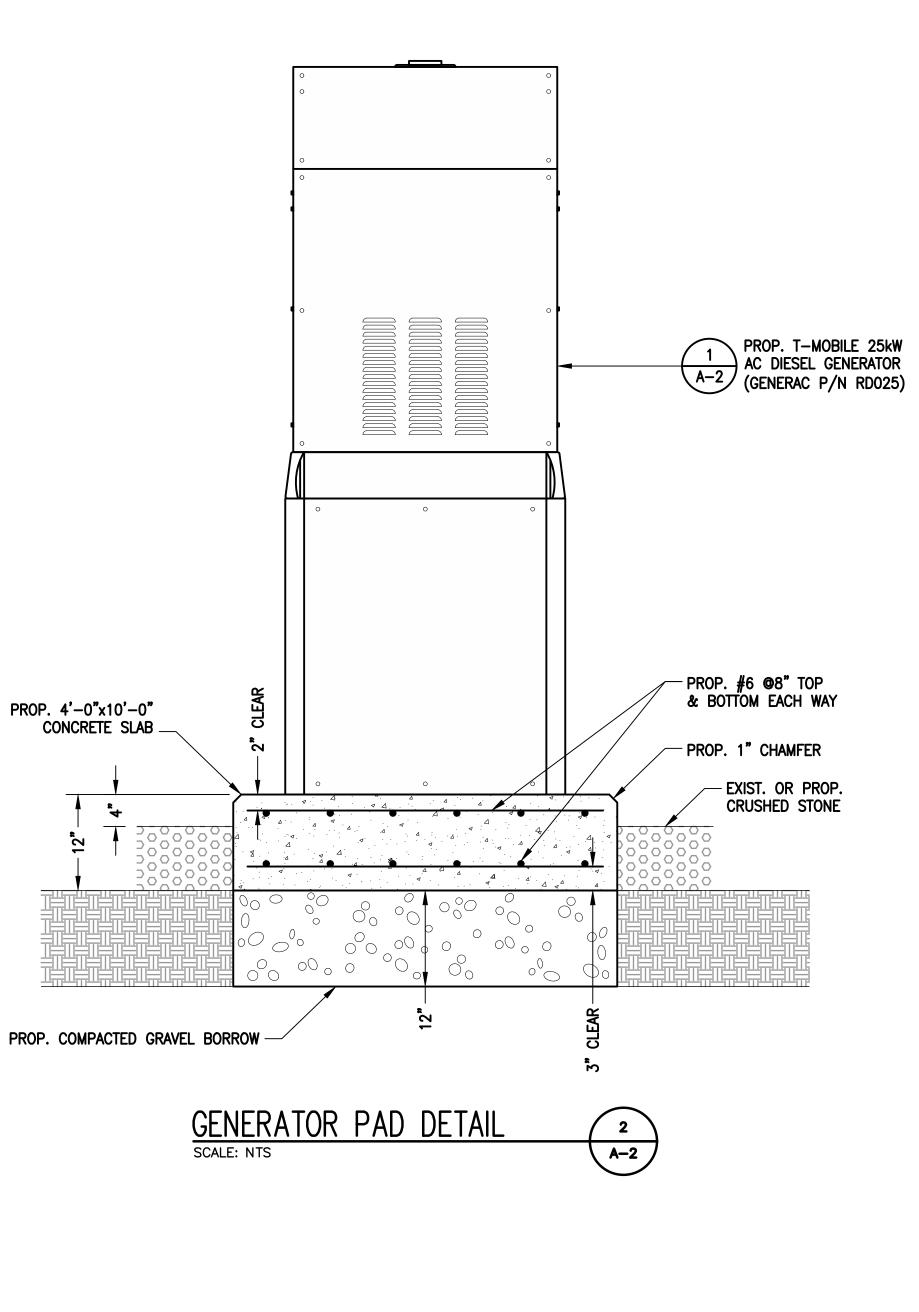


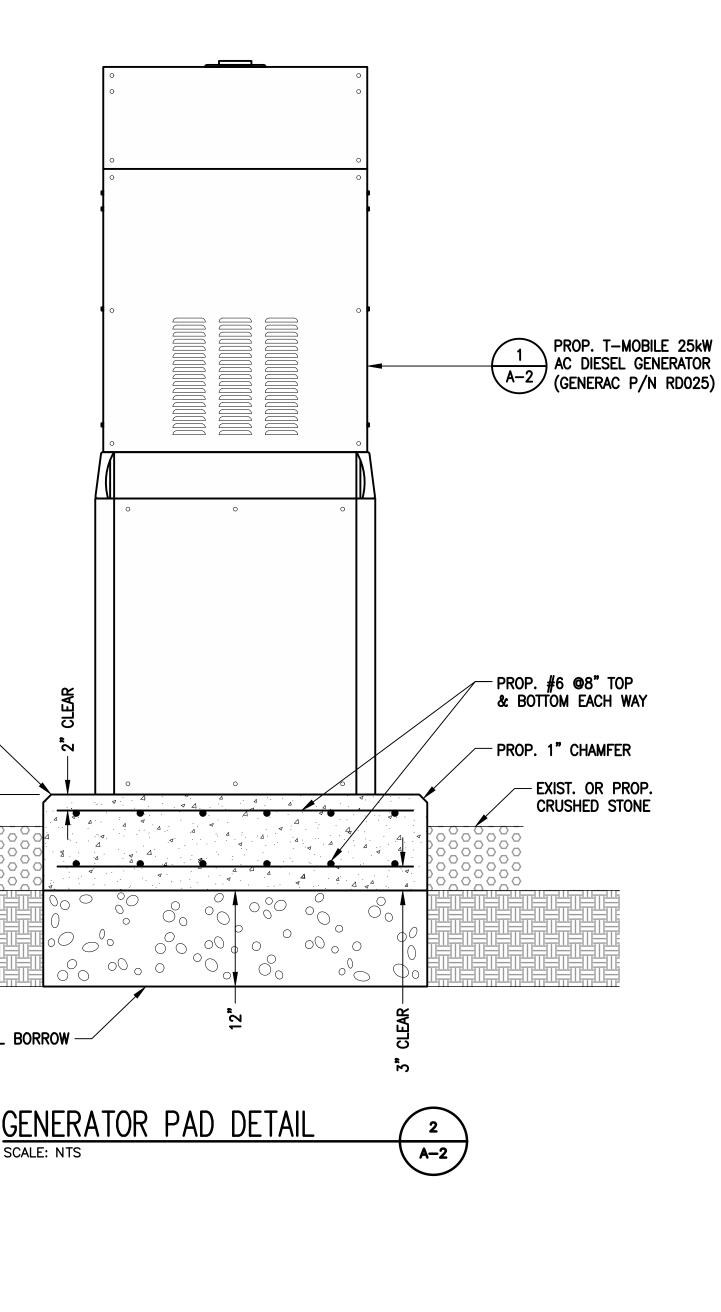


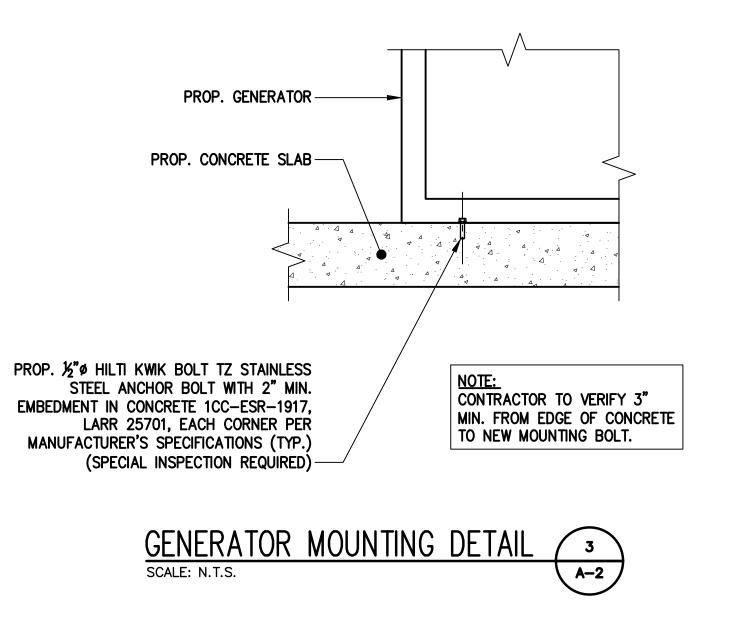


GENERAC RD025 25kW AC DIESEL GENERATOR DIMENSIONS: 103.4"L x 35.0"W x 91.7"H WEIGHT: 2,946 lbs QUANTITY: TOTAL OF 1 GENERATOR DETAIL SCALE: N.T.S.

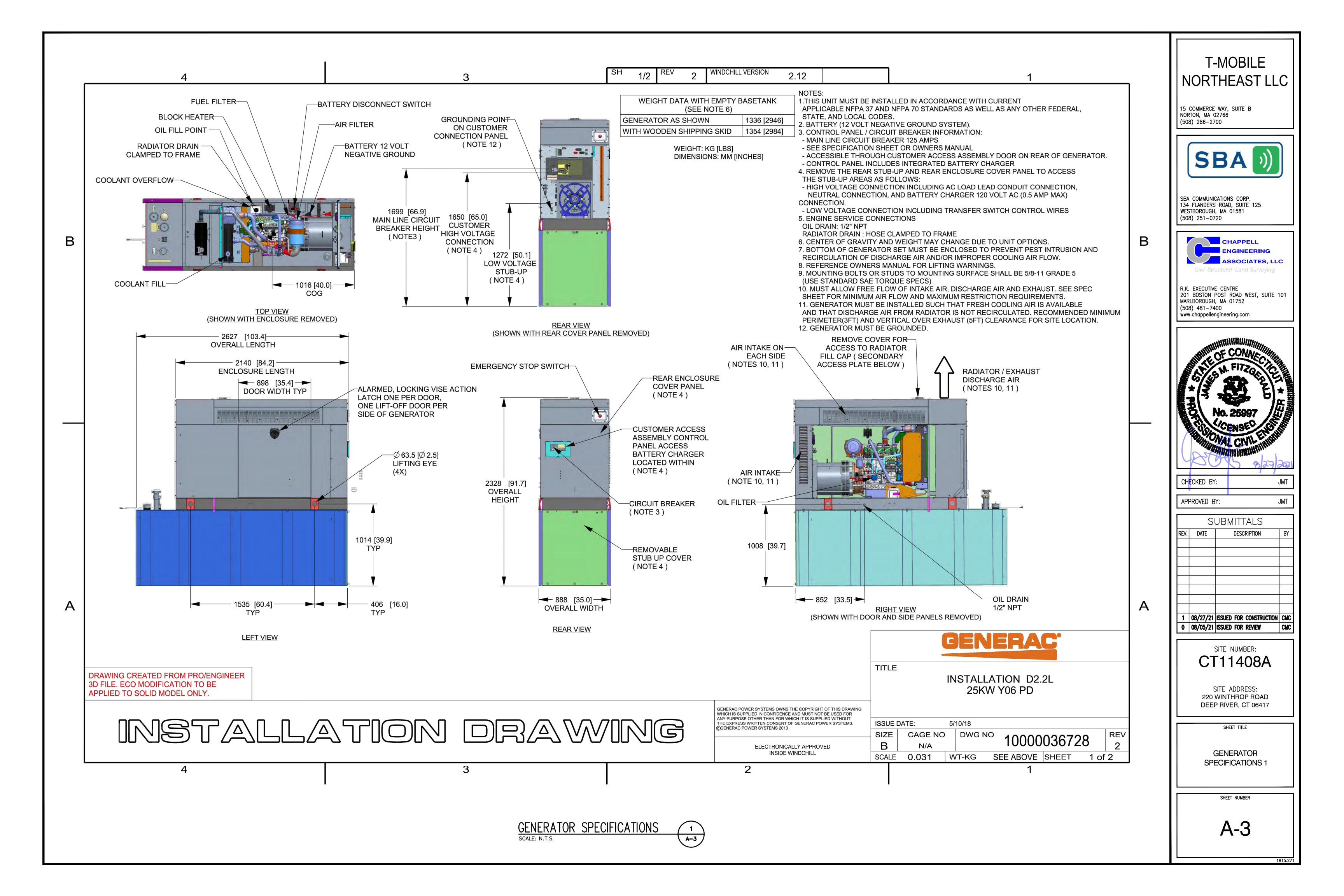
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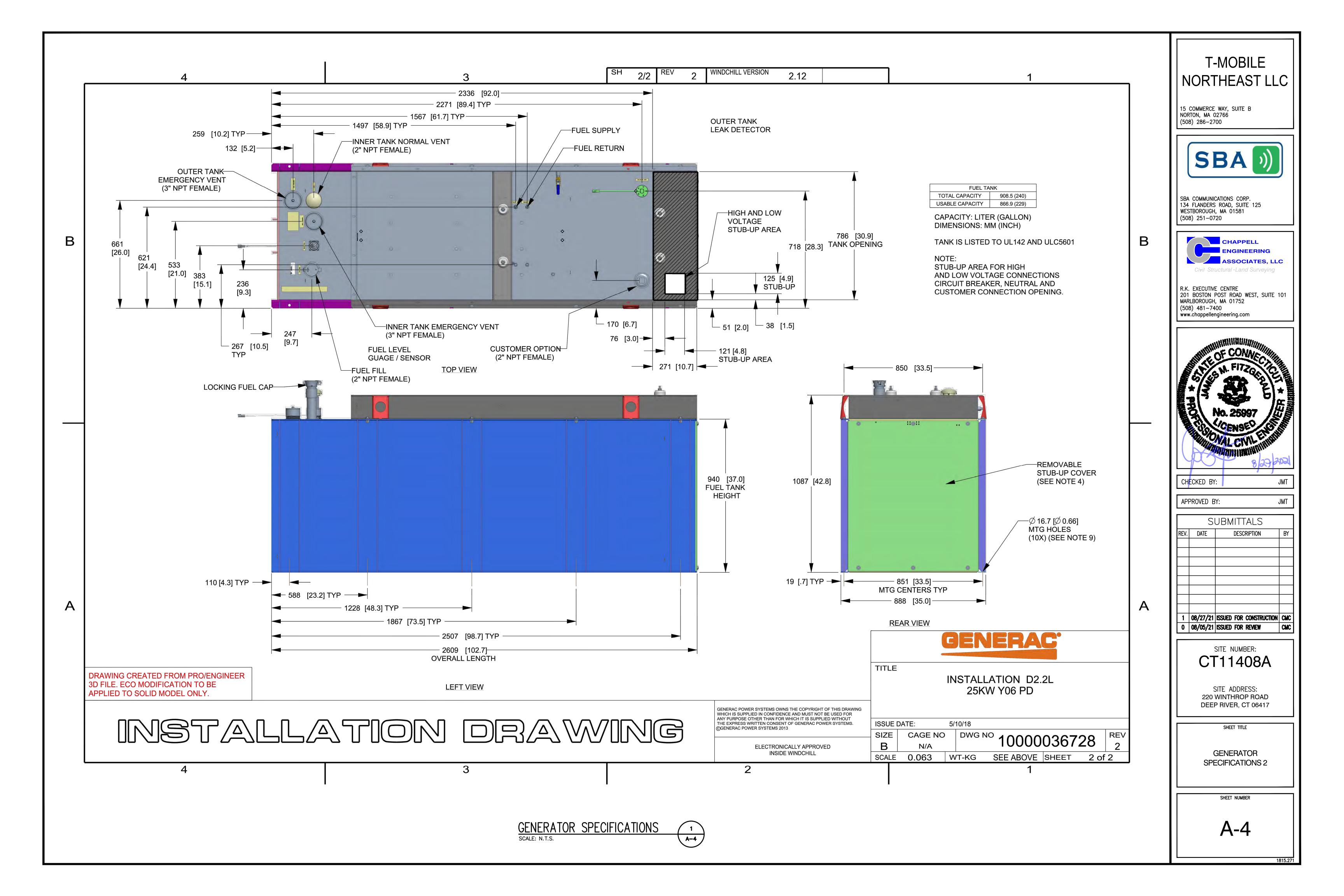


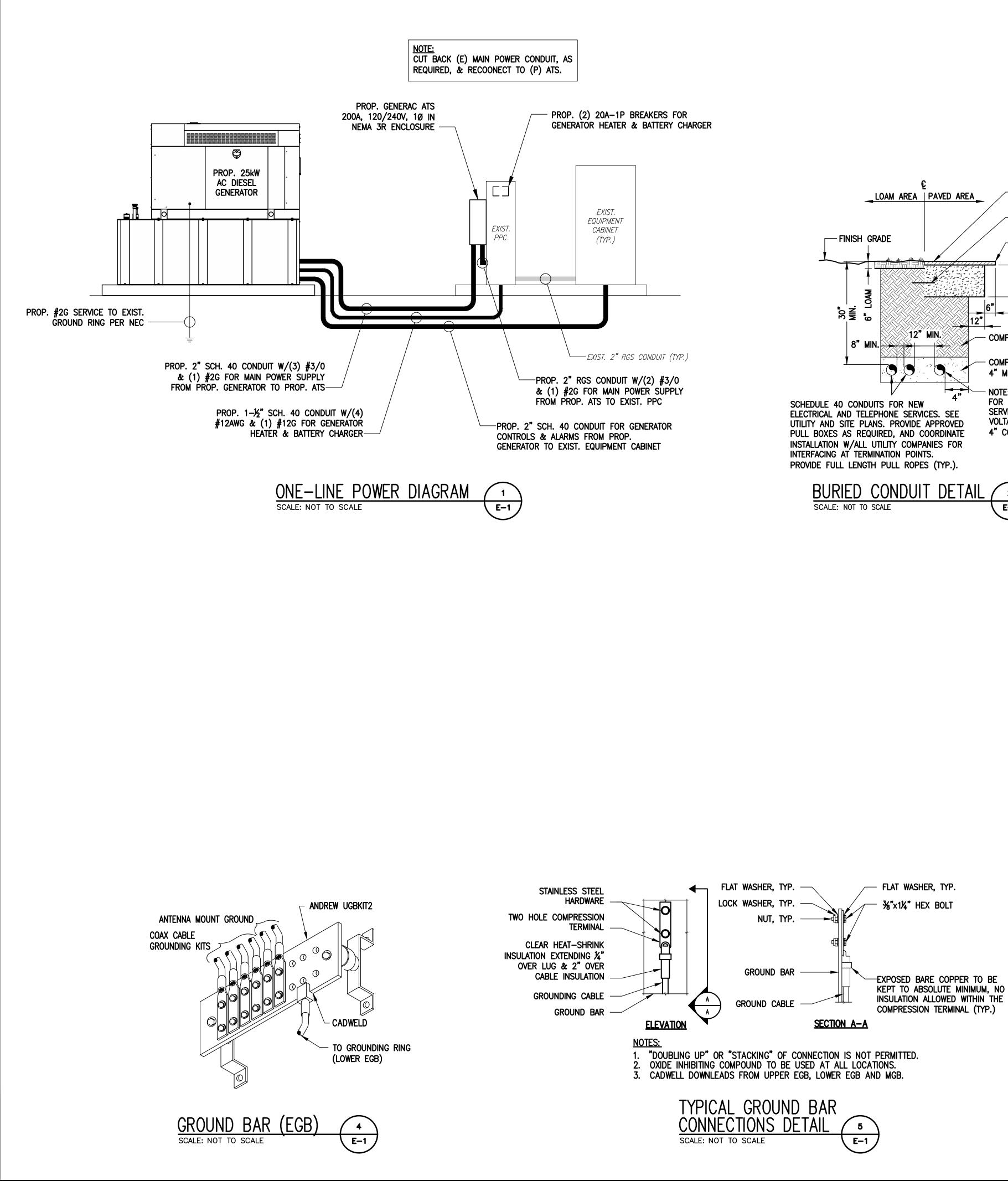


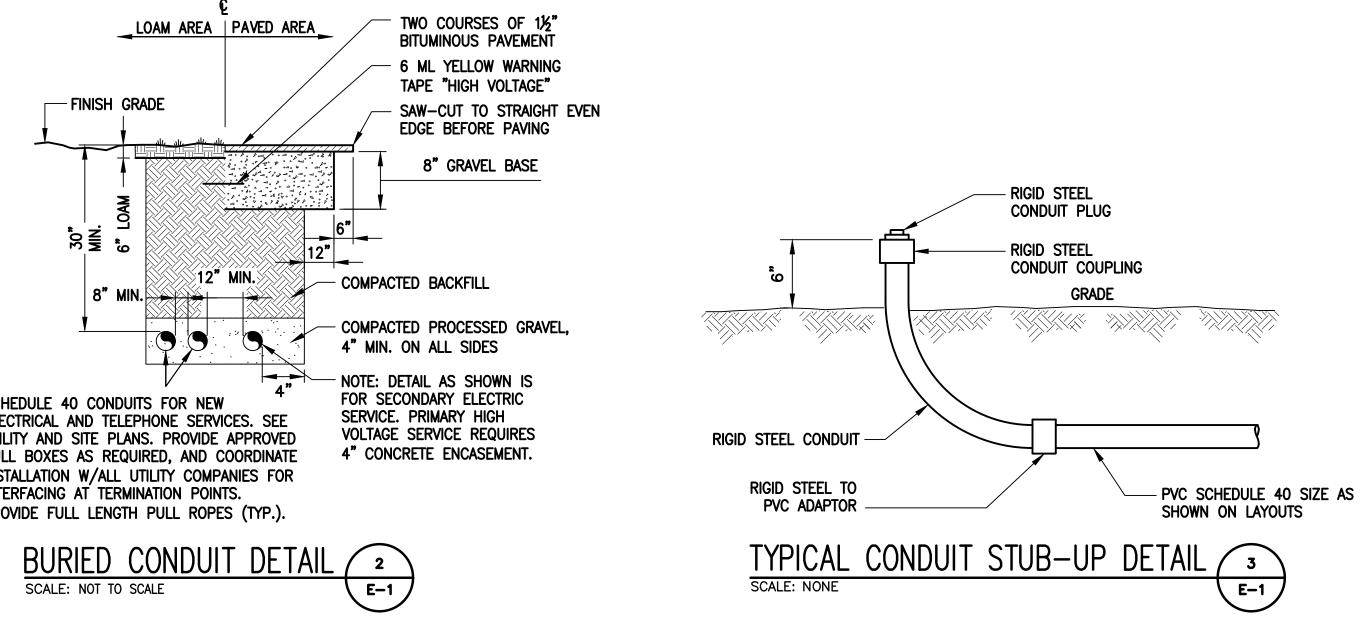














- AND LOCAL CODES.
- 4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF
- INSPECTIONS.
- 6. BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
- 7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THININSULATION.
- 9. RUN TELCO CONDUIT 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.

ELECTRICAL AND GROUNDING NOTES

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 4

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
- 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 [™] Controller

- Two-Line Plain Text LCD Display
- Programmable Start Delay Between 10-30 seconds
- 10 second Engine Start Sequence
- 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

 $\, \odot \,$ Mobile Link $^{\rm TM}$ and Adapter Kit

TANKS

- Spill Box
- 90% Fuel Alarm
- Tank Risers
- Spill Box Drainback Kit
- Vent Extension Support Kit
- O 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 ³ (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
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)

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

Oil Filter Type

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

Full Flow Cartridge

11.2 (10.6)

Engine Electrical System

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

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	Н	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 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 ³ /min (m ³ /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 ₂ O (kPa)	0.50 (0.12)

COMBUSTION AIR REQUIREMENTS

Flow at Rated Power ft³/min (m³/min)

Standby

88 (2.5)

ENGINE			EXHAUST		
		Standby			Standby
Rated Engine Speed	rpm	1,800	Exhaust Flow (Rated Output)	ft ³ /min (m ³ /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



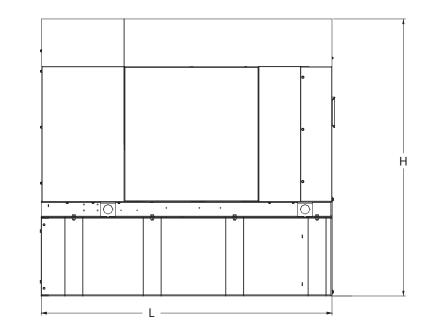


RD025 | 2.2L | 25kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

DIMENSIONS AND WEIGHTS*



Weights and Dimensions

– W –

Unit Weight - Ibs	nit Weight - Ibs Unit Weight with Skid -		Dimensions (L x W x H) in		
2,811 2,849			84.2 x 35.0 x 91.7		
25kW Fuel Consumption		on 240	with fuel tank 103.4" 35" x 91.7"		
Fuel Tank Gross Total Capacity					
Fuel Tank Gross Usable Capacity					
Fuel Tank Net Usable Capacity (Run Hours Based on Net Usable Capacity)				-	
Run Hours 100% Load				-	
Run Hours 75% Load				•	
Run Hours 50% Load				-	
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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 5

Map showing nearest wetlands

