



Filed by:

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

December 7, 2021

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

**RE: Notice of Exempt Modification**  
**49 Brainerd Rd., Niantic (East Lyme), CT 06357**  
**Latitude: 41.307583**  
**Longitude: -72.223916**  
**T-Mobile Site #: CTNL805B\_Hardening**

Dear Ms. Bachman:

T-Mobile currently maintains nine (9) antennas currently installed at the 160-foot level of the existing 169-foot Monopole Tower at **49 Brainerd Rd., Niantic, CT**. The tower is owned by SBA Towers V, LLC. The property is owned by Christopher Samuelson. T-Mobile now intends to add one (1) Generac RD025 Diesel generator mounted to an existing 10' x 15' concrete pad within a 50' x 100' 6" 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) 2" RGS conduit for Ethernet cable for generator controls & Alarms routed from exist. Equipment cabinet to Prop. Generator
- (1) 2" RGS conduit for emergency power routed from Prop. ATS to exist. PPC
- (1) 1-1/2" RGS conduit for generator heater & Battery charger from exist. PPC to Prop. Generator
- (1) 2" RGS conduit for emergency power from proposed generator to proposed ATS
- Generac 200A, 120/240v automatic transfer switch to prop. H-Frame



Remaining:

- Existing PPC (To be relocated)
- T-Mobile AAV Cabinet (To be relocated)
- T-Mobile GPS Antenna mounted to Existing Ice Bridge
- T-Mobile cables routed along existing Ice Bridge
- Existing Ice Bridge
- 10' x 15' 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" 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 East Lyme, New London County, which is as follows:

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

- A. Noise Levels: It shall be unlawful for any person or cause to be emitted any noise beyond the boundaries of his/her premises.



	Day	Night/Day	Night
Residential Zone Emitter to:	55dBA	45dBA	55dBA/45dBA
Non-residential Zone Emitter to:	55dBA	45dBA	55dBA/45dBA

The proposed modification will remain within the existing 50' x 100' 6" fenced compound. The new generator and tank will be surrounded by the existing security fence and 12' wide double swing gate and 4' wide swing gate and will be placed on an existing 10' x 15' concrete pad.

Additional safety specifications:

- Automatic Voltage Regulation with Over and Under Protection
- Overspeed Shutdown
- High Temperature 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 East Lyme's (Niantic)First Selectman, Kevin A. Seery and Chief Building Official, Steven E. Way, as well as to the property owner, Christopher Samuelson. (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@sbsite.com](mailto:GShepherd@sbsite.com)

#### Attachments

cc: Kevin A. Seery, First Selectman / with attachments  
East Lyme Town Hall, 108 Pennsylvania Ave, Niantic, CT 06357  
Steven E. Way, Chief Building Official / with attachments  
East Lyme Town Hall, 108 Pennsylvania Ave, Niantic, CT 06357  
Christopher Samuelson / with attachments  
*49 Brainerd Rd., Niantic, CT 06357 (SBA address on file)*



#### Exhibit List

Exhibit 1	Check Copy	x
Exhibit 2	FedEx Labels	x
Exhibit 3	Property Card	x
Exhibit 4	Property Map	x
Exhibit 5	Zoning Documents	CSC Docket No. 396 3/3/11
Exhibit 6	Construction Drawings	Chappell 10/29/21
Exhibit 7	Generator Specifications	x
Exhibit 8	Wetlands Map	x

# EXHIBIT 1

Copy of Check for filing fee.

# EXHIBIT 2

## FedEx Labels

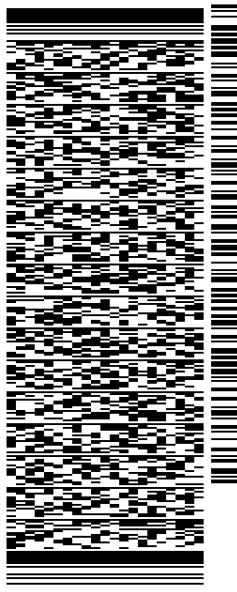
ORIGIN ID:BBFA (508) 614-0389  
RICK WOODS  
SBA COMMUNICATIONS CORPORATION  
134 FLANDERS RD  
SUITE 125  
WESTBOROUGH, MA 01581  
UNITED STATES US

SHIP DATE: 07DEC21  
ACTWGT: 2.00 LB  
CAD: 105843304/NET4400  
BILL SENDER

TO **MELANIE A. BACHMAN EXEC. DIR**  
**CONNECTICUT SITING COUNCIL**  
**TEN FRANKLIN SQUARE**

**NEW BRITAIN CT 06051**

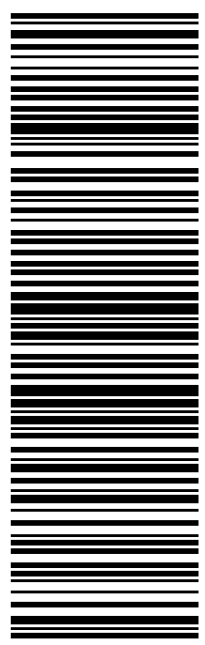
(508) 251-0720 X.3807 REF: 105692009-6089  
INV. PO. DEPT:



J212221101801uv

TRK# 7754 1919 3831  
0201  
WED - 08 DEC 11:30A  
PRIORITY OVERNIGHT

**EB BDLA**  
06051  
CT:US BDL



56D.J3/E934/FE4A

**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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**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.





TRACK ANOTHER SHIPMENT

775419193831



ADD NICKNAME

ON TIME

Scheduled delivery:  
Wednesday, 12/8/2021 before 11:30 am



PICKED UP  
WESTBOROUGH, MA

GET STATUS UPDATES

**FROM**  
SBA COMMUNICATIONS CORPORATION  
Rick Woods  
134 Flanders Rd  
Suite 125  
WESTBOROUGH, MA US 01581  
508-614-0389

**TO**  
Melanie A. Bachman Exec. Dir  
Connecticut Siting Council  
Ten Franklin Square  
NEW BRITAIN, CT US 06051  
508-251-0720

MANAGE DELIVERY

Travel History

Shipment Facts

### Travel History

TIME ZONE  
Local Scan Time



Tuesday, December 7,  
2021

4:29 PM

WESTBOROUGH, MA

Picked up  
Tendered at FedEx Office

2:02 PM

Shipment information sent to FedEx

### Shipment Facts

**TRACKING NUMBER**  
775419193831

**SERVICE**  
FedEx Priority Overnight

**WEIGHT**  
2 lbs / 0.91 kgs

**TOTAL PIECES**  
1

**TOTAL SHIPMENT WEIGHT**  
2 lbs / 0.91 kgs

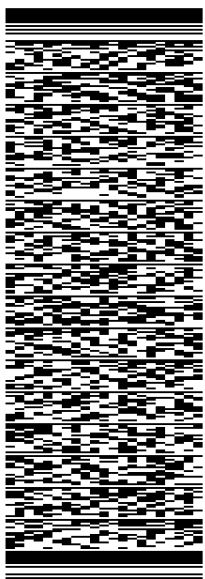
**TERMS**  
Standard

ORIGIN ID:BFBA (508) 614-0389  
RICK WOODS  
SBA COMMUNICATIONS CORPORATION  
134 FLANDERS RD  
SUITE 125  
WESTBOROUGH, MA 01581  
UNITED STATES US

SHIP DATE: 07DEC21  
ACTWGT: 1.00 LB  
CAD: 105843304/NET4400  
BILL SENDER

TO KEVIN A. SEERY  
EAST LYME TOWN HALL  
FIRST SELECTMAN  
108 PENNSYLVANIA AVE  
NANTIC CT 06357  
(508) 251-0720 X.3807  
REF: 105692009-6089  
INV#  
PO: DEPT:

56DJ3IE934/FE4A

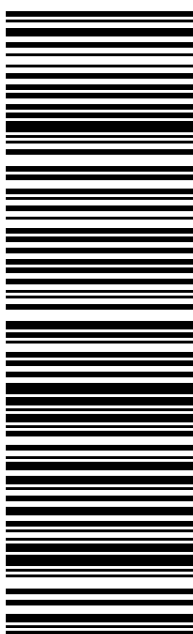


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EB SKKA

06357  
BDL  
CT:US



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WESTBOROUGH, MA

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**FROM**  
SBA COMMUNICATIONS CORPORATION  
Rick Woods  
134 Flanders Rd  
Suite 125  
WESTBOROUGH, MA US 01581  
508-614-0389

**TO**  
Kevin A. Seery  
East Lyme Town Hall  
First Selectman  
108 Pennsylvania Ave  
NIANTIC, CT US 06357  
508-251-0720

MANAGE DELIVERY

Travel History

Shipment Facts

### Travel History

TIME ZONE  
Local Scan Time



Tuesday, December 7,  
2021

4:29 PM

WESTBOROUGH, MA

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Tendered at FedEx Office

2:04 PM

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### Shipment Facts

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**SERVICE**  
FedEx Priority Overnight

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**TOTAL PIECES**  
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**TOTAL SHIPMENT WEIGHT**  
1 lbs / 0.45 kgs

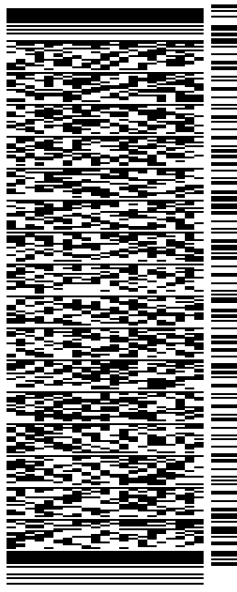
**TERMS**  
Shipper

ORIGIN ID: BFEA (508) 614-0389  
RICK WOODS  
SBA COMMUNICATIONS CORPORATION  
134 FLANDERS RD  
SUITE 125  
WESTBOROUGH, MA 01581  
UNITED STATES US

SHIP DATE: 07DEC21  
ACTWGT: 1.00 LB  
CAD: 105843304/NET4400  
BILL SENDER

TO STEVEN E. WAY  
EAST LYME TOWN HALL  
CHIEF BUILDING OFFICIAL  
108 PENNSYLVANIA AVE  
NANTIC CT 06357  
REF: 105692009-6089  
PO: DEPT:  
INV: (508) 251-0720 X 3807

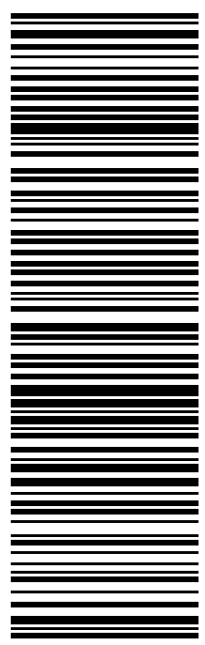
56D.J3/E934/FE4A



J212221101801uv

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PRIORITY OVERNIGHT

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06357  
CT:US BDL



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TRACK ANOTHER SHIPMENT

775419266110



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ON TIME

Scheduled delivery:  
Wednesday, 12/8/2021 before 11:30 am



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WESTBOROUGH, MA

GET STATUS UPDATES

**FROM**  
SBA COMMUNICATIONS CORPORATION  
Rick Woods  
134 Flanders Rd  
Suite 125  
WESTBOROUGH, MA US 01581  
508-614-0389

**TO**  
Steven E. Way  
East Lyme Town Hall  
Chief Building Official  
108 Pennsylvania Ave  
NIANTIC, CT US 06357  
508-251-0720

MANAGE DELIVERY

Travel History

Shipment Facts

### Travel History

TIME ZONE  
Local Scan Time



Tuesday, December 7,  
2021

4:29 PM

WESTBOROUGH, MA

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2:05 PM

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### Shipment Facts

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**SERVICE**  
FedEx Priority Overnight

**WEIGHT**  
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**TOTAL PIECES**  
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**TOTAL SHIPMENT WEIGHT**  
1 lbs / 0.45 kgs

**TERMS**  
Standard

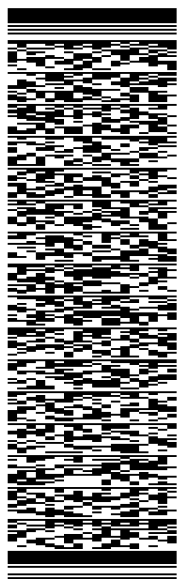
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RICK WOODS  
SBA COMMUNICATIONS CORPORATION  
134 FLANDERS RD  
SUITE 125  
WESTBOROUGH, MA 01581  
UNITED STATES US

SHIP DATE: 07DEC21  
ACTWGT: 1.00 LB  
CAD: 105843304/NET4400  
BILL SENDER

TO CHRISTOPHER SAMUELSON  
49 BRAINERD RD.

NIANTIC CT 06357  
(508) 251-0720 X 3807  
INV#  
PO: DEPT:  
REF: 105692009-6089

56DJ3IE934/FE4A



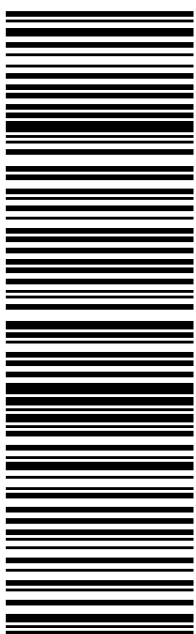
J212221101801uv

TRK# 7754 1934 0204  
0201

WED - 08 DEC 11:30A  
PRIORITY OVERNIGHT

EB SKKA

06357  
BDL  
CT:US



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TRACK ANOTHER SHIPMENT

775419340204



[ADD NICKNAME](#)

ON TIME

Scheduled delivery:  
Pending



**PICKED UP**  
WESTBOROUGH, MA

[GET STATUS UPDATES](#)

**FROM**  
SBA COMMUNICATIONS CORPORATION  
Rick Woods  
134 Flanders Rd  
Suite 125  
WESTBOROUGH, MA US 01581  
508-614-0389

**TO**  
Christopher Samuelson  
49 Brainerd Rd.  
NIANTIC, CT US 06357  
508-251-0720

[MANAGE DELIVERY](#)

Travel History

Shipment Facts

### Travel History

**TIME ZONE**  
Local Scan Time



Tuesday, December 7,  
2021

4:29 PM

WESTBOROUGH, MA

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Tendered at FedEx Office

2:09 PM

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### Shipment Facts

**TRACKING NUMBER**  
775419340204

**SERVICE**  
FedEx Priority Overnight

**WEIGHT**  
1 lbs / 0.45 kgs

**TOTAL PIECES**  
1

**TOTAL SHIPMENT WEIGHT**  
1 lbs / 0.45 kgs

**TERMS**  
Shipper

## EXHIBIT 3

# Property Card



# 49 BRAINERD RD

**Location** 49 BRAINERD RD

**Mblu** 07.4/ 21/ / /

**Acct#** 005680

**Owner** SAMUELSEN CHRISTOPHER

**Assessment** \$359,810

**Appraisal** \$667,600

**PID** 5939

**Building Count** 1

## Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2016	\$231,700	\$435,900	\$667,600

Assessment			
Valuation Year	Improvements	Land	Total
2016	\$162,190	\$197,620	\$359,810

## Owner of Record

**Owner** SAMUELSEN CHRISTOPHER

**Sale Price** \$0

**Co-Owner**

**Certificate**

**Address** 49 BRAINERD RD  
NIANTIC, CT 06357

**Book & Page** 0831/0222

**Sale Date** 07/10/2009

**Instrument** 04

## Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
SAMUELSEN CHRISTOPHER &	\$0		0788/0266	04	10/24/2007
SAMUELSEN CHRISTOPHER	\$560,000		0748/0207	07	07/13/2006
BOUTIN WYNN R	\$0		0737/0532	01	04/03/2006
BOUTIN ZACHARY H OR WYNN R	\$0		0542/0147	08	10/01/2001

## Building Information

### Building 1 : Section 1

**Year Built:** 1890  
**Living Area:** 2,485  
**Replacement Cost:** \$284,098

Building Percent Good: 67

Replacement Cost

Less Depreciation: \$190,300

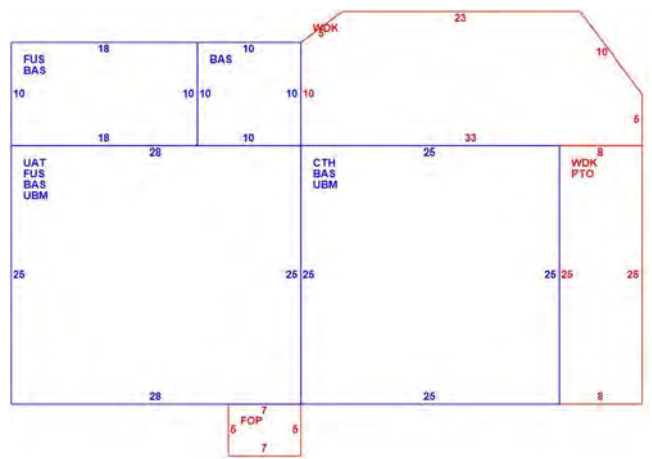
Building Attributes	
Field	Description
Style:	Conventional
Model	Residential
Grade:	Good
Stories:	2 Stories
Occupancy	1
Exterior Wall 1	Wood Shingle
Exterior Wall 2	
Roof Structure:	Gable/Hip
Roof Cover	Asph/F Gls/Cmp
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Flr 1	Hardwood
Interior Flr 2	Ceram Clay Til
Heat Fuel	Oil
Heat Type:	Hot Water
AC Type:	Central
Total Bedrooms:	4 Bedrooms
Total Bthrms:	2
Total Half Baths:	1
Total Xtra Fixtrs:	
Total Rooms:	8 Rooms
Bath Style:	Modern
Kitchen Style:	Modern
Num Kitchens	01
Cndtn	
Num Park	
Fireplaces	
Fndtn Cndtn	
Basement	

**Building Photo**



(http://images.vgsi.com/photos2/EastLymeCTPhotos/\01\00\60\94.jpg)

**Building Layout**



(ParcelSketch.ashx?pid=5939&bid=6060)

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	1,605	1,605
FUS	Upper Story, Finished	880	880
CTH	Cathedral Ceiling	625	0
FOP	Porch, Open, Finished	35	0
PTO	Patio	200	0
UAT	Attic, Unfinished	700	0
UBM	Basement, Unfinished	1,325	0
WDK	Deck, Wood	599	0
		5,969	2,485

**Extra Features**

Extra Features	Legend
No Data for Extra Features	

**Land****Land Use**

**Use Code** 1010  
**Description** Single Fam M-01  
**Zone** R40  
**Neighborhood** 0060  
**Alt Land Appr** No  
**Category**

**Land Line Valuation**

**Size (Acres)** 51.31  
**Frontage** 0  
**Depth** 0  
**Assessed Value** \$197,620  
**Appraised Value** \$435,900

**Outbuildings**

Outbuildings						Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
BRN4	1 STY LFT&BSMT			378.00 S.F.	\$3,400	1
SHP1	WORK SHOP AVE			841.00 S.F.	\$21,000	1
FGR2	GARAGE-GOOD			841.00 S.F.	\$16,800	1
SHD1	SHED FRAME			45.00 S.F.	\$200	1

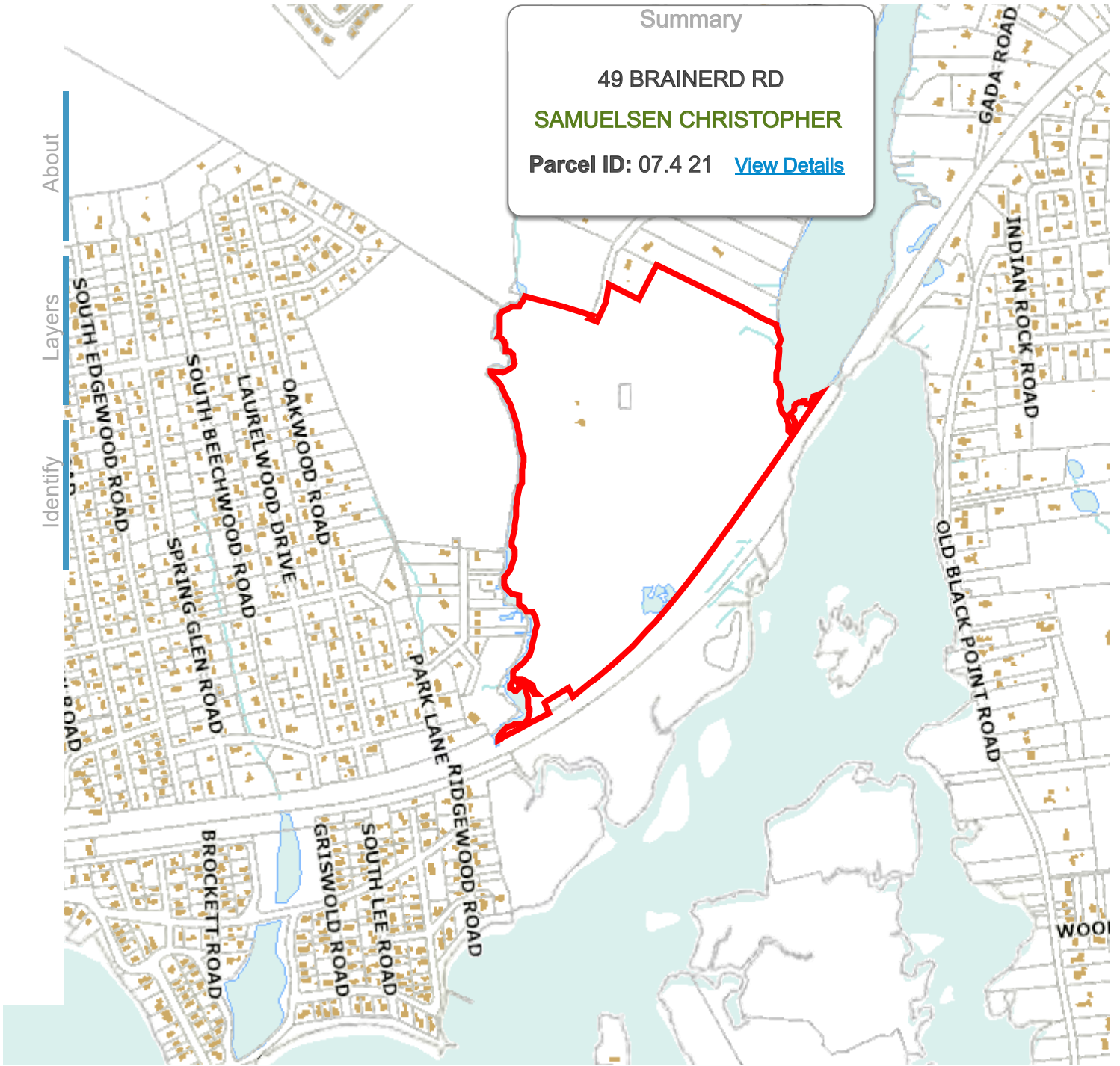
**Valuation History**

Appraisal			
Valuation Year	Improvements	Land	Total
2020	\$231,700	\$435,900	\$667,600
2019	\$231,700	\$435,900	\$667,600
2018	\$231,700	\$435,900	\$667,600

Assessment			
Valuation Year	Improvements	Land	Total
2020	\$162,190	\$197,620	\$359,810
2019	\$162,190	\$197,620	\$359,810
2018	\$162,190	\$197,620	\$359,810

**EXHIBIT 4**  
**Property Map**

49 Brainerd



Summary

**49 BRAINERD RD**

**SAMUELSEN CHRISTOPHER**

Parcel ID: 07.4 21 [View Details](#)

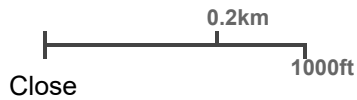
About

Layers

Identify

Email Map Link

Copy and paste the following string into an email to link to the current map view:

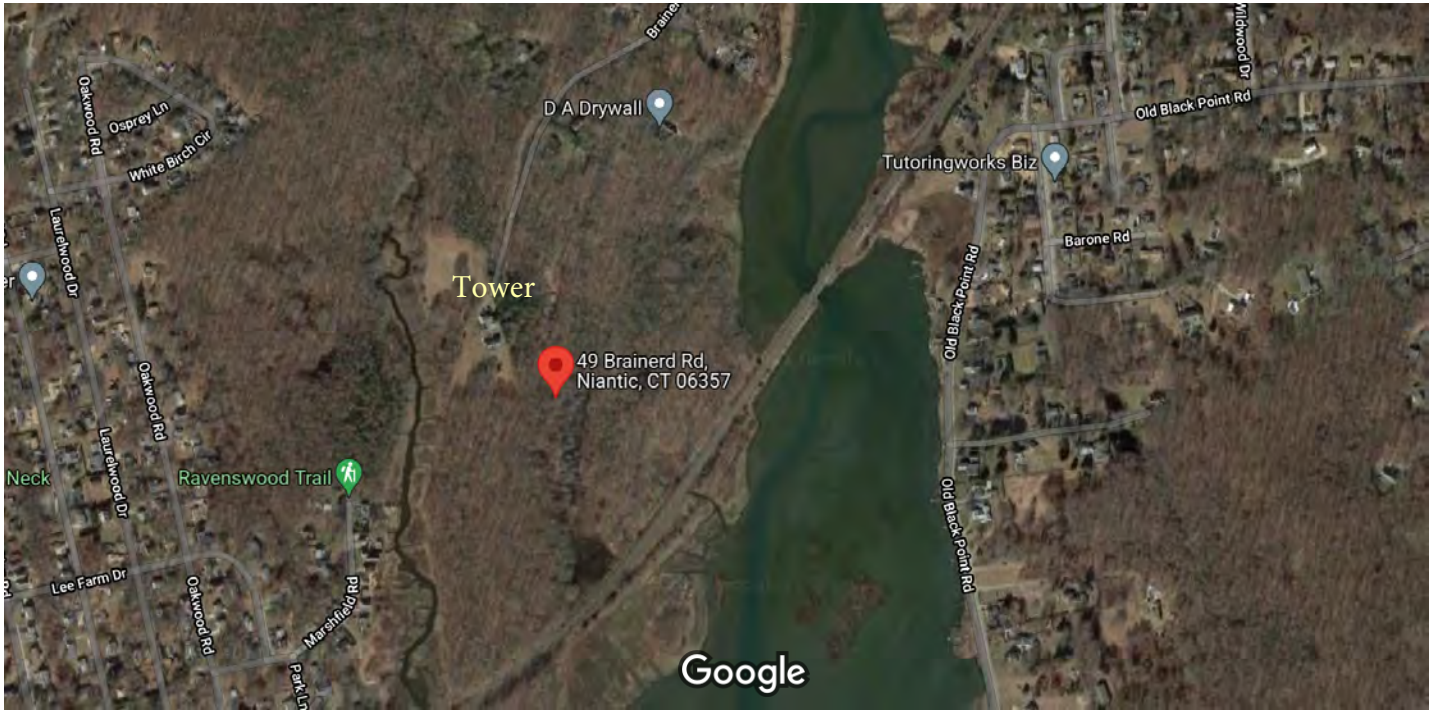


Print Map

Tighe&Bond

lat:41.3926, long:-72.2134

Google Maps 49 Brainerd Rd



Imagery ©2021 CNES / Airbus, Maxar Technologies, New York GIS, U.S. Geological Survey, USDA Farm Service Agency, Map data ©2021

500 ft 

# EXHIBIT 5

## Zoning Documents

SITE NAME: East Lyme 1 SITE ID: CT 11794-S

**ZONING/PERMITTING COMPLETION FORM**

Address: 49 Brainerd Road, East Lyme (Miantic)

Jurisdiction: Comm. Acting Council Zoning District: \_\_\_\_\_

Zoning Approval Type: Certificate of Public Need Case #: 396

Approval Date: 3/3/2011 Approved Height: 170' monopole

Conditions of Approval:	Yes	No	N/A
Removal Bond _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Site Plan Submittal _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fall Zone _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Periodic Inspections _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Periodic Reporting _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Approval Renewal _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Landscaping Required _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Lighting Required _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Additional Conditions _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Space to be provided to Town of East Lyme emergency communication services at no cost
- All commercial antennas attached via T-arms

**TO BE COMPLETED BY CORPORATE**

	Yes	No	N/A	
Zoning Approval Attached (required)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Building Permit Attached (required)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Date Recd
<u># B110505-3</u>				<u>5/31/2011</u>

Zoning Manager Approval: Diane E. Borchardt Date 5/31/2011  
Diane E. Borchardt, AICP





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](mailto:siting.council@ct.gov)

Internet: [ct.gov/csc](http://ct.gov/csc)

March 22, 2011

TO: Parties and Intervenors

FROM: Linda Roberts, Executive Director *LR*

RE: **DOCKET NO. 396** – SBA Towers II, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and management of a telecommunications facility located at 49 Brainerd Road, Niantic (East Lyme), Connecticut.

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By its Decision and Order dated March 3, 2011, the Connecticut Siting Council granted a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and management of a telecommunications facility located at the SBA Hybrid Site (i.e. approximately 310 feet to the south of the proposed location), 49 Brainerd Road, Niantic (East Lyme), Connecticut.

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

LR/MP/laf

Enclosures (3)

c: State Documents Librarian

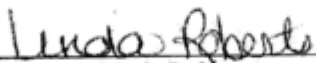
STATE OF CONNECTICUT )

ss. New Britain, Connecticut :

COUNTY OF HARTFORD )

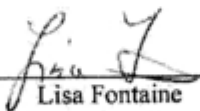
I hereby certify that the foregoing is a true and correct copy of the Findings of Fact, Opinion, and Decision and Order issued by the Connecticut Siting Council, State of Connecticut.

ATTEST:

  
\_\_\_\_\_  
Linda Roberts  
Executive Director  
Connecticut Siting Council

I certify that a copy of the Findings of Fact, Opinion, and Decision and Order in Docket No. 396 has been forwarded by Certified First Class Return Receipt Requested mail, on March 22, 2011, to all parties and intervenors of record as listed on the attached service list, dated February 16, 2010.

ATTEST:

  
\_\_\_\_\_  
Lisa Fontaine  
Fiscal Administrative Officer  
Connecticut Siting Council

**DOCKET NO. 396** – SBA Towers II, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and management of a telecommunications facility located at 49 Brainerd Road, Niantic (East Lyme), Connecticut. }

Connecticut

Siting

Council

March 3, 2011

## **Findings of Fact**

### **Introduction**

1. SBA Towers II LLC (SBA), in accordance with provisions of Connecticut General Statutes (C.G.S.) § 16-50g through 16-50aa, applied to the Connecticut Siting Council (Council) on December 7, 2009 for the construction, maintenance, and management of a 170-foot wireless telecommunications facility, which would include a 170-foot tall monopole tower, to be located at 49 Brainerd Road in the Town of East Lyme, Connecticut. (SBA 1, pp. 1-2)
2. SBA is a Delaware limited liability company and a subsidiary of SBA Communications Corporation, a publicly traded company that owns and operates wireless infrastructure facilities nationwide. Its offices are at One Research Drive, Suite 200C, Westborough, Massachusetts. (SBA 1, p. 3)
3. The parties in this proceeding are SBA, Town of East Lyme, and Friends of the Pataganett Trust. The intervenors to this proceeding are Cellco Partnership d/b/a Verizon Wireless (Cellco), New Cingular Wireless PCS, LLC (AT&T), Russell Brown, and Joseph Raia. (Transcript, February 23, 2010, 3:10 p.m. [Tr. 1], pp. 6-7)
4. Intervenors Cellco and AT&T are licensed by the Federal Communications Commission to provide wireless telecommunications services in New London County, Connecticut. (AT&T 1; Cellco 1)
5. The purpose of the proposed facility would be to provide service along Route 156 and the Amtrak corridor in East Lyme, as well as adjacent areas. (AT&T 1, p. 1)
6. Pursuant to C.G.S. § 16-50m, the Council, after giving due notice thereof, held a public hearing on February 23, 2010, beginning at 3:10 p.m. and continuing at 7:03 p.m. at Camp Rell, Nett Hall, Smith Street, East Lyme. (Council's Hearing Notice dated January 14, 2010; Tr. 1, p. 3; Transcript 2 – 7:03 p.m. [Tr. 2], p. 3)
7. The Council held continued public hearings in New Britain on March 23, 2010 and April 22, 2010. (Transcript 3 – March 23, 2010 at 1:30 p.m. [Tr. 3], p. 3; Transcript 4 – April 22, 2010 at 2:05 p.m. [Tr. 4], p. 4)
8. The Council and its staff conducted an inspection of the proposed site on February 23, 2010, beginning at 2:00 p.m. During the field inspection, the applicant flew a balloon at the proposed site to simulate the height of the proposed tower. Weather conditions during the field review were not conducive to a balloon flight and included a 10 mile-per-hour wind with rain and sleet. The balloon was tethered at 170 feet above ground level to simulate the height of the tower. It could not be maintained at the proposed height for any significant amount of time due to the weather conditions. The balloon was aloft from 7:00 a.m. to 9:00 a.m. and from 1:00 p.m. to approximately 5:00 p.m. for the convenience of the public. (Council's Hearing Notice dated January 14, 2010; Tr. 1, p. 16)

9. Pursuant to C.G.S. § 16-50I (b), public notice of the application was published in The Day on November 18, 2009 and November 20, 2009. (SBA 1, p. 4)
10. Pursuant to C.G.S. § 16-50I(b), notice of the application was provided to all abutting property owners by certified mail. SBA received return receipts from all abutters. (SBA 1, p. 4; SBA 3, response 2)
11. Pursuant to C.G.S. § 16-50I (b), SBA provided notice to all federal, state and local officials and agencies listed therein. (SBA 1, p. 3)
12. On July 26, 2010, SBA filed a motion to reopen the evidentiary record limited to wetland issues. (SBA Motion to Reopen dated July 26, 2010)
13. On July 29, 2010, the Council granted the motion to reopen the evidentiary record limited to wetland issues. (Council Memo dated July 30, 2010)
14. On October 7, 2010, SBA filed a motion to reopen the evidentiary record with respect to T-Mobile's lease with SBA. (SBA Motion to Reopen dated October 7, 2010)
15. On October 7, 2010, the Council granted SBA's motion to reopen the evidentiary record. However, the Council ruled that the reopening would not be limited to the lease with T-Mobile. (Council Memo dated October 12, 2010)
16. On October 21, 2010, the Council closed the evidentiary record, denied the application without prejudice, and reopened the decision to deny the application without prejudice on its own motion under CGS §4-181a(b). (Council Memo dated October 25, 2010)
17. Pursuant to C.G.S. § 16-50m, the Council, after giving due notice thereof, held a public hearing on December 21, 2010, beginning at 2:05 p.m. in Hearing Room 1, 10 Franklin Square, New Britain, Connecticut. (Council's Hearing Notice dated November 10, 2010; Transcript 5 – 2:05 p.m. [Tr. 5], p. 3)

#### State Agency Comment

18. Pursuant to C.G.S. § 16-50j (h), on January 14, 2010 and May 20, 2010, the following State agencies were solicited by the Council 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); Department of Agriculture (DOAg); Department of Transportation (DOT); and Department of Emergency Management and Homeland Security (DEMHS). (Record)
19. The DOT's Bureau of Engineering and Highway Operations responded to the Council's solicitation for comments on February 10, 2010, but had no comments. (DOT Comments dated February 10, 2010)
20. The DPH's Drinking Water Section responded to the Council's solicitation for comments on February 10, 2010. The DPH indicated that it had reviewed the application for potential impacts to any sources of public drinking water supply. The project does not appear to be in a public water supply source water area. DPH had no further comments. (DPH Comments dated February 17, 2010)

21. The DEP's Office of Long Island Sound Programs responded to the Council's solicitation for comments on February 17, 2010 and May 12, 2010 with concerns regarding visual impact on coastal resources. (DEP Comments dated February 17, 2010 and May 12, 2010)
22. The CEQ responded to the Council's solicitation for comments on March 12, 2010. The CEQ is concerned about adverse impacts per the Connecticut Coastal Management Act (CCMA) and impacts to birds. (CEQ Comments dated March 12, 2010)
23. The CEQ also notes that the visual impact of the proposed tower cannot be fully assessed without a virtual simulation of its appearance when viewed from the waters of Long Island Sound, a major recreational resource. (CEQ Comments dated March 12, 2010)
24. The following agencies did not respond with comments on the application: DPUC, OPM, DECD, DOAg, and DEMHS. (Record)

#### **Municipal Consultation**

25. SBA notified the Town of East Lyme (Town) of the proposal on September 10, 2009 by sending a technical report to First Selectman Paul Formica. SBA met with First Selectman Formica, Chris Taylor – Deputy Fire Marshal, and Brooks Gianakos – Town Emergency Services Consultant on September 24, 2009 to discuss the proposed facility. (SBA 1, p. 16)
26. SBA representatives also attended a public informational meeting with the East Lyme Board of Selectman on November 18, 2009. (SBA 1, pp. 16-17)
27. The Board of Selectman (Board) voted unanimously to become a party in the Council proceeding to express their opposition to the proposed site. The Board's various concerns included the site's proximity to the Pattagansett River, which is considered a sensitive estuary, and Raven's Woods, a 26-acre nature preserve owned by East Lyme Land Trust. (Town 1)
28. At a public hearing held on February 23, 2010, First Selectman Formica provided a limited appearance statement. Mr. Formica noted that many East Lyme citizens and their legislative representatives are concerned that the tower would be located within a coastal boundary and is not consistent with the Town's Plan of Development and Conservation. Mr. Formica also expressed concerns about adverse effects to the coastal landscape. Mr. Formica encouraged the exploration of alternative sites to find one more suitable for all those involved. (Tr. 1, pp. 9-11)
29. The Town's Plan of Development and Conservation does not specifically refer to telecommunications facilities, but does adopt the CCMA. (Tr. 1, pp. 87-89)
30. SBA would provide space on the tower for the Town's emergency communication services for no compensation. The Town is interested in co-locating emergency services antennas on the proposed tower, but the details have been not finalized. (SBA 1, p. 5; Tr. 1, p. 48)

#### **Federal Designation for Public Need**

31. 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)

32. 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. (Council Administrative Notice Item No. 7)
33. The Telecommunications Act of 1996 prohibits local and state entities from discriminating among providers of functionally equivalent services. (Council Administrative Notice Item No. 7)
34. 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, which include human health 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)
35. The Wireless Communications and Public Safety Act of 1999 (E911 Act) was enacted by Congress to promote and enhance public safety by making 9-1-1 the universal emergency assistance number, by furthering deployment of wireless 9-1-1 capabilities, and by encouraging construction and operation of seamless ubiquitous and reliable networks for wireless services. (SBA 1, pp. 5-6)
36. In 1999, Congress passed the Wireless Communications and Public Safety Act (the 911 Act) to facilitate and encourage the prompt deployment of a nationwide, seamless communication infrastructure for emergency services. SBA's facility would be in compliance with the requirements of the 911 Act. (SBA 1, p. 6)

#### **Existing and Proposed Wireless Coverage – AT&T**

37. AT&T seeks to provide coverage to Route 156 to the north, the Amtrak corridor and shoreline areas to the south, Black Point to the east, Giant's Neck to the west, as well as adjacent areas. (SBA 1, Tab F)
38. AT&T operates in the 850 MHz (cellular) band and the 1900 MHz (PCS) band at a signal level service design of -74 dBm for this area, sufficient for in-building coverage. The signal level threshold for in-vehicle coverage is -82 dBm. (AT&T 3, responses 3, 4, 8)
39. AT&T would initially provide cellular service and would expand to PCS service as needed in the future. AT&T also plans to deploy 700 MHz (LTE) service on its network beginning in 2011. (AT&T 3, responses 7, 8)
40. AT&T currently experiences a coverage gap on Route 156 of 0.5 miles. (AT&T 3, response 1)
41. The minimum height at which AT&T could achieve its coverage objective from the proposed site is 167 feet. (AT&T 3, response 5; AT&T 9; Tr. 5, p. 60)
42. AT&T's antennas at the proposed site at 167 feet would provide cellular coverage on Route 156 for 1.6 miles. AT&T's antennas would also provide about 2.2 miles of cellular coverage on the Amtrak corridor. AT&T's cellular coverage area at this antenna height would be 3.29 square miles. (SBA 1, Tab F; AT&T 3, responses 10, 12 and 13; Tr. 3, p. 137)

# EXHIBIT 6

## Construction Drawings

# AMTRAK EAST LYME

49 BRAINERD ROAD  
NIANTIC, CT 06357  
NEW LONDON COUNTY

## SITE NO.: CTNL805B

SITE TYPE: 169'± MONOPOLE

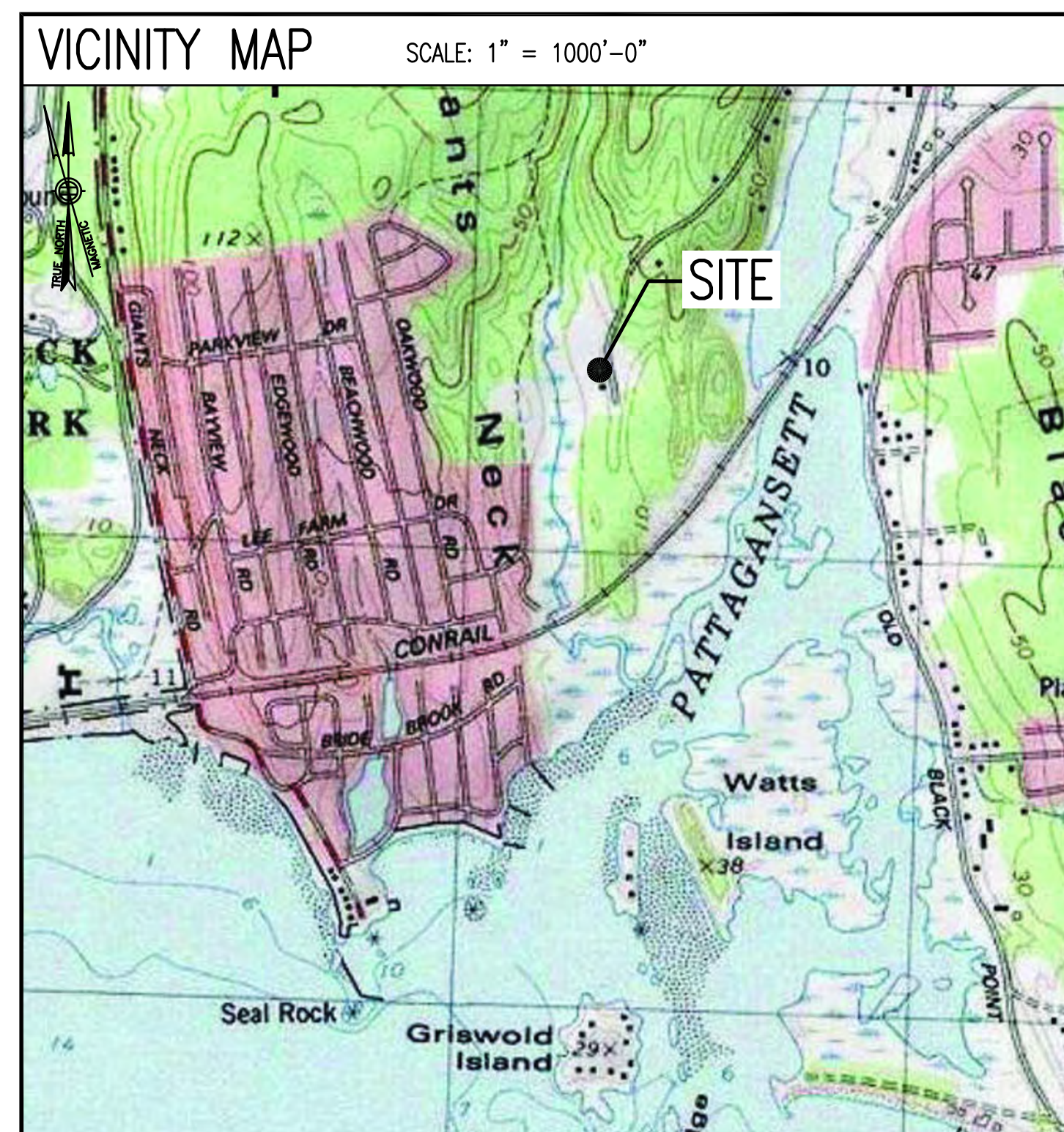
PROJECT TYPE: NATIONAL HARDENING PROJECT

APPROVALS			
PROJECT MANAGER:	DATE:	ZONING/SITE ACQ.:	DATE:
CONSTRUCTION:	DATE:	OPERATIONS:	DATE:
RF ENGINEERING:	DATE:	TOWER OWNER:	DATE:

T-MOBILE TECHNICIAN SITE SAFETY NOTES	
LOCATION	SPECIAL RESTRICTIONS
SECTOR A:	ACCESS BY CERTIFIED CLIMBER
SECTOR B:	ACCESS BY CERTIFIED CLIMBER
SECTOR C:	ACCESS BY CERTIFIED CLIMBER
SECTOR D:	ACCESS BY CERTIFIED CLIMBER
GPS/LMU:	UNRESTRICTED
RADIO CABINETS:	UNRESTRICTED
PPC DISCONNECT:	UNRESTRICTED
MAIN CIRCUIT D/C:	UNRESTRICTED
NIU/T DEMARC:	UNRESTRICTED
OTHER/SPECIAL:	NONE

GENERAL NOTES	
1. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.	11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.
2. THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.	12. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE OMNIPOTENT REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.	13. THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
4. THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.	14. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
5. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.	15. THE CONTRACTOR SHALL NOTIFY THE PROJECT OWNER'S REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE LESSEE/LICENSEE REPRESENTATIVE.
6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/CONTRACT DOCUMENTS.	16. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.
7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S/VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.	17. ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK.
8. THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDENDUMS OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.	
9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.	
10. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS, ESTABLISHING AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS AS SHOWN HEREIN.	

AT LEAST 72 HOURS PRIOR TO DIGGING, THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 811



### DIRECTIONS

MERGE ONTO I-495 NORTH TOWARD MANSFIELD/MARLBORO. TAKE EXIT 33B FOR I-95 SOUTH TOWARD PROVIDENCE RI. TAKE EXIT 6 FOR I-295 S TOWARD WOONSOCKET/WARWICK. USE THE RIGHT LANE TO EXIT 9C-A FOR US 6 W TOWARD HARTFORD CT. KEEP RIGHT AT THE, FOLLOW SIGNS FOR JOHNSTON/SCITUATE/FOSTER. MERGE ONTO US 6 W. SLIGHT LEFT ONTO DANIELSON PIKE. MERGE ONTO US 6 W. SLIGHT LEFT ONTO CONNECTICUT TURNPIKE/GOVERNOR JOHN DAVIS LODGE TURNPIKE (SIGNS FOR I-395 S. TAKE EXIT 72 TOWARD ROCKY NCK/STATE PK. CONTINUE ONTO ROCKY NECK CON. USE ANY LANE TO TURN LEFT ONTO CT-156 E. TURN RIGHT ONTO FAIRHAVEN RD. TURN RIGHT ONTO BRAINERD RD. . DESTINATION WILL BE ON THE LEFT.

SHEET 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.

SCOPE OF WORK	
REMOVE:	INSTALL:
• NONE	• 1 GENERATOR
	• 1 AUTOMATIC TRANSFER SWITCH
	• 2 20A-1P BREAKERS

SITE NOTES	
1.	THIS IS AN UNMANNED AND RESTRICTED ACCESS TELECOMMUNICATION FACILITY, AND IS NOT FOR HUMAN HABITATION. IT WILL BE USED FOR THE TRANSMISSION OF RADIO SIGNAL FOR THE PURPOSE OF PROVIDING PUBLIC CELLULAR SERVICE. <ul style="list-style-type: none"> <li>• ADA COMPLIANCE NOT REQUIRED.</li> <li>• POTABLE WATER OR SANITARY SERVICE IS NOT REQUIRED.</li> <li>• NO OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES REQUIRED.</li> </ul>
2.	CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON JOB SITE. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK. FAILURE TO NOTIFY THE ARCHITECT/ENGINEER PLACE THE RESPONSIBILITY ON THE CONTRACTOR TO CORRECT THE DISCREPANCIES AT THE CONTRACTOR'S EXPENSE.
3.	NEW CONSTRUCTION WILL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES. <ul style="list-style-type: none"> <li>• BUILDING CODE: 2018 CONNECTICUT STATE BUILDING CODE</li> <li>• ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE</li> <li>• STRUCTURAL CODE: TIA/EIA-222-G STRUCTURAL STANDARDS FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS.</li> </ul>

PROJECT SUMMARY	
SITE NUMBER:	CTNL805B
SITE NAME:	AMTRAK_EAST LYME
SBA SITE NUMBER:	CT11794-S
SBA SITE NAME:	EAST LYME 1
SITE ADDRESS:	49 BRAINERD ROAD NIANTIC, CT 06357
PROPERTY OWNER:	CHRISTOPHER SAMUELSEN 49 BRAINERD ROAD NIANTIC, CT 06357
TOWER OWNER:	SBA TOWERS V, LLC 8501 CONGRESS AVENUE BOCA RATON, FL 33487 PHONE: 561-226-9523
COUNTY:	NEW LONDON
ZONING DISTRICT:	R40
STRUCTURE TYPE:	MONOPOLE
STRUCTURE HEIGHT:	169'±
APPLICANT:	T-MOBILE NORTHEAST LLC 15 COMMERCE WAY, SUITE B NORTON, MA 02766
ARCHITECT:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
STRUCTURAL ENGINEER:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
SITE CONTROL POINT:	LATITUDE: 41.3076° N41°18'27.3" LONGITUDE: -72.2239° W72°13'26.1"

**SPECIAL ZONING NOTE:**  
BASED ON INFORMATION PROVIDED BY T-MOBILE REGULATORY COMPLIANCE PROFESSIONALS AND LEGAL COUNSEL, THIS TELECOMMUNICATIONS EQUIPMENT DEPLOYMENT IS CONSIDERED AN ELIGIBLE FACILITY UNDER THE MIDDLE CLASS TAX RELIEF AND JOB CREATION ACT OF 2012, 47 USC 1455(A), SECTION 6409(A), AND IS SUBJECT TO AN ELIGIBLE FACILITY REQUEST, EXPEDITED REVIEW, AND LIMITED/PARTIAL ZONING PRE-EMPTION FOR LOCAL DISCRETIONARY PERMITS (VARIANCE, SPECIAL PERMIT, SITE PLAN REVIEW, OR ADMINISTRATIVE REVIEW).

**T-MOBILE  
NORTHEAST LLC**

15 COMMERCE WAY, SUITE B  
NORTON, MA 02766  
(508) 286-2700

**SBA**

SBA COMMUNICATIONS CORP.  
134 FLANDERS ROAD, SUITE 125  
WESTBOROUGH, MA 01581  
(508) 251-0720

**CHAPPELL  
ENGINEERING  
ASSOCIATES, LLC**  
*Civil Structural Land Surveying*

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SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
1	10/29/21	ISSUED FOR CONSTRUCTION	BJJ
0	10/15/21	ISSUED FOR REVIEW	BJJ

SITE NUMBER:  
**CTNL805B**

SITE ADDRESS:  
49 BRAINERD ROAD  
NIANTIC, CT 06357

SHEET TITLE  
**TITLE SHEET**

SHEET NUMBER  
**T-1**



**GENERAL NOTES:**

- 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
- 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.
- 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.
- 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.
- DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.
- 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.
- 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.
- SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY.
- SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION AND RETURN DISTURBED AREAS TO ORIGINAL CONDITIONS.
- 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.
- 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.
- CONSTRUCTION SHALL COMPLY WITH ALL T-MOBILE STANDARDS AND SPECIFICATIONS.
- 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.
- 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.
- 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:**

- THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- 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.
- ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
- IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
- 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.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- 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.
- 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.
- 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.
- THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE T-MOBILE SPECIFICATION FOR SITE SIGNAGE.

**CONCRETE AND REINFORCING STEEL NOTES:**

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. A HIGHER STRENGTH (400PSI) MAY BE USED. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 381 CODE REQUIREMENTS
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:  
CONCRETE CAST AGAINST EARTH.....3 IN.  
CONCRETE EXPOSED TO EARTH OR WEATHER:  
#6 AND LARGER .....2 IN.  
#5 AND SMALLER & WWF .....1½ IN.  
CONCRETE NOT EXPOSED TO EARTH OR WEATHER  
OR NOT CAST AGAINST THE GROUND:  
SLAB AND WALL .....¾ IN.  
BEAMS AND COLUMNS .....½ IN.
- A CHAMFER ¾" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHORS SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO THE MANUFACTURERS RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY SIMPSON OR APPROVED EQUAL.
- CONCRETE CYLINDER TIES ARE NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (IBC1905.6.2.3) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER;  
(A) RESULTS OF CONCRETE CYLINDER TEST PERFORMED AT THE SUPPLIERS PLANT.  
(B) CERTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED.  
FOR GREATER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST.
- AS AN ALTERNATIVE TO ITEM 7. TEST CYLINDERS SHALL BE TAKEN INITIALLY AND THEREAFTER FOR EVERY 50 YARDS OF CONCRETE FROM EACH DIFFERENT BATCH PLANT.
- EQUIPMENT SHALL NOT BE PLACED ON NEW PADS FOR SEVEN DAYS AFTER PAD IS POURED, UNLESS IT IS VERIFIED BY CYLINDER TESTS THAT COMPRESSIVE STRENGTH HAS BEEN ATTAINED.

**STRUCTURAL STEEL NOTES:**

- ALL STEEL WORK SHALL BE PAINTED OR GALVANIZED IN ACCORDANCE WITH THE DRAWINGS AND T-MOBILE SPECIFICATIONS UNLESS OTHERWISE NOTED. STRUCTURAL STEEL SHALL BE ASTM-A-36 UNLESS OTHERWISE NOTED ON THE SITE SPECIFIC DRAWINGS. STEEL DESIGN, INSTALLATION AND BOLTING SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION".
- ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 9TH EDITION. PAINTED SURFACES SHALL BE TOUCHED UP.
- BOLTED CONNECTIONS SHALL USE BEARING TYPE ASTM A325 BOLTS (¾") AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE. ALL BOLTS SHALL BE GALVANIZED OR STAINLESS STEEL.
- NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE ¾" DIA. ASTM A 307 BOLTS (GALV) UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW & APPROVAL ON PROJECTS REQUIRING STRUCTURAL STEEL
- ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.

**SOIL COMPACTION NOTES FOR SLAB ON GRADE:**

- EXCAVATE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL TO EXPOSE NATURAL SUBGRADE AND PLACE CRUSHED STONE AS REQUIRED.
- COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR ENGINEER IS ACCEPTABLE.
- AS AN ALTERNATE TO INSPECTION AND WRITTEN CERTIFICATION, THE "UNDISTURBED SOIL" BASE SHALL BE COMPACTED WITH "COMPACTION EQUIPMENT", LISTED BELOW, TO AT LEAST 90% MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM D 1557 METHOD C.
- COMPACTED SUBBASE SHALL BE UNIFORM AND LEVELED. PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED IN 3" LIFTS ABOVE COMPACTED SOIL. GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING #1 SIEVE.
- AS AN ALTERNATE TO ITEMS 2 AND 3, THE SUBGRADE SOILS WITH 5 PASSES OR A MEDIUM SIZED VIBRATORY PLATE COMPACTOR (SUCH AS BOMAG BPR 30/38) OR HAND-OPERATED SINGLE DRUM VIBRATORY ROLLER (SUCH AS BOMAG BW 55E). AND SOFT AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL-GRADED GRANULAR FILL AND COMPACTED AS STATED ABOVE.

**COMPACTION EQUIPMENT:**

- HAND OPERATED DOUBLE DRUM, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.

**CONSTRUCTION NOTES:**

- FIELD VERIFICATION: SUBCONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, T-MOBILE ANTENNA PLATFORM LOCATION AND UTILITY TRENCHWORK.
- COORDINATION OF WORK: SUBCONTRACTOR SHALL COORDINATE RF WORK AND PROCEDURES WITH CONTRACTOR.
- CABLE LADDER RACK: SUBCONTRACTOR SHALL FURNISH AND INSTALL CABLE LADDER RACK, CABLE TRAY AND/OR ICE BRIDGE, AND CONDUIT AS REQUIRED TO SUPPORT CABLES TO THE NEW BTS LOCATION.

**ELECTRICAL INSTALLATION NOTES:**

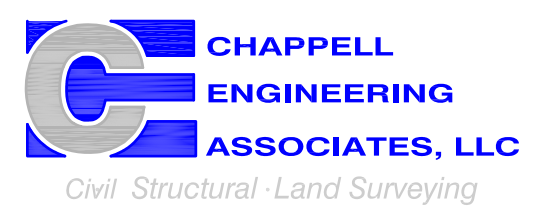
- WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.
- SUBCONTRACTOR SHALL MODIFY OR INSTALL CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLING TO THE NEW BTS EQUIPMENT. SUBCONTRACTOR SHALL SUBMIT MODIFICATIONS TO CONTRACTOR FOR APPROVAL.
- ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.
- CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
- 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.
- 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.
- ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATINGS, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).
- PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
- ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- 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.
- 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.
- SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #2 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.
- 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.
- 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).
- RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
- NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
- 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.
- ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
- 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.
- LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
- CABINETS, BOXES AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
- CABINETS, BOXES AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
- 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.
- 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.
- 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.
- 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.
- THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- 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.
- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.
- CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.

**T-MOBILE  
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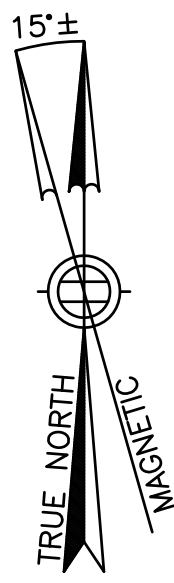
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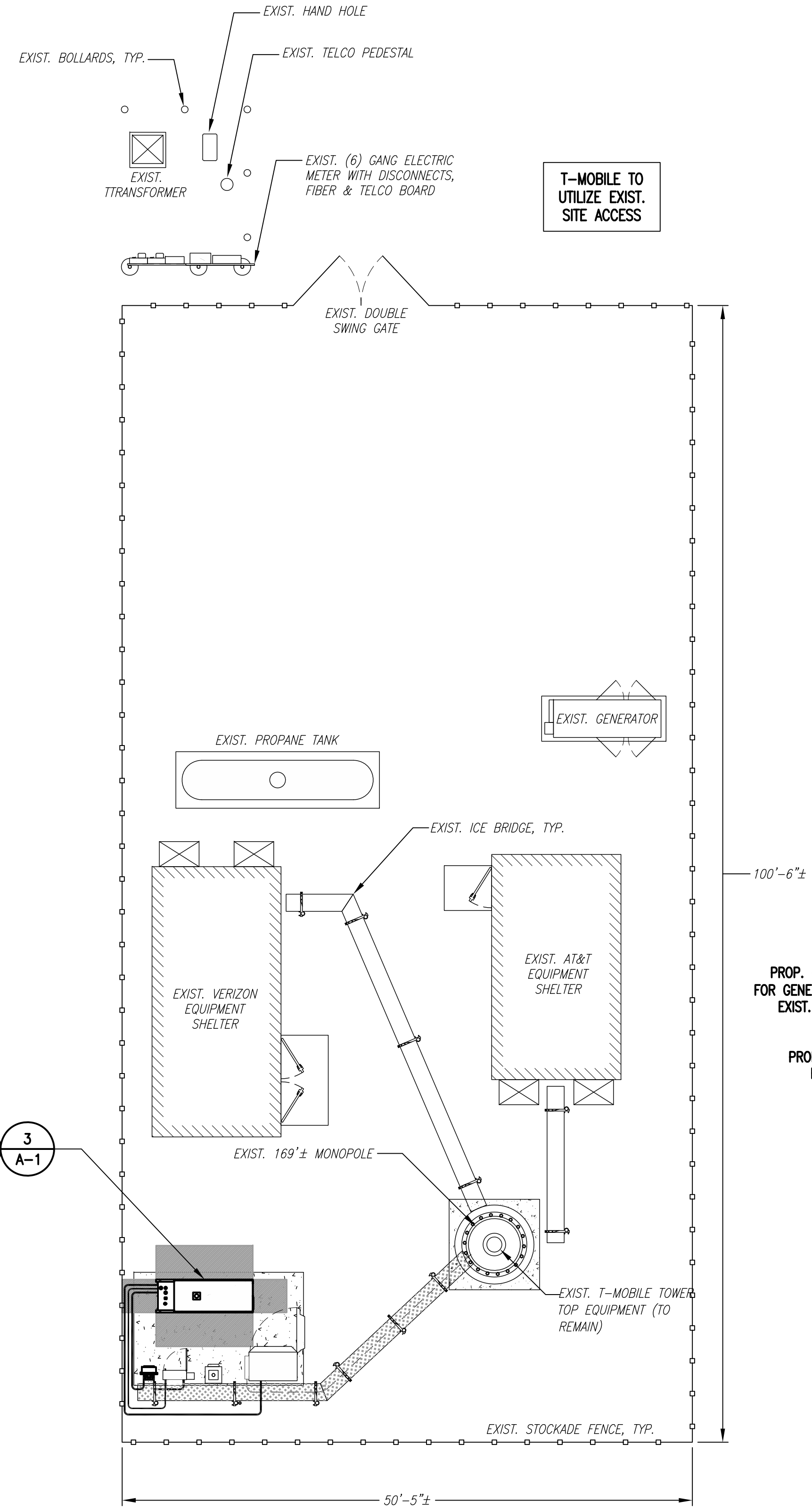
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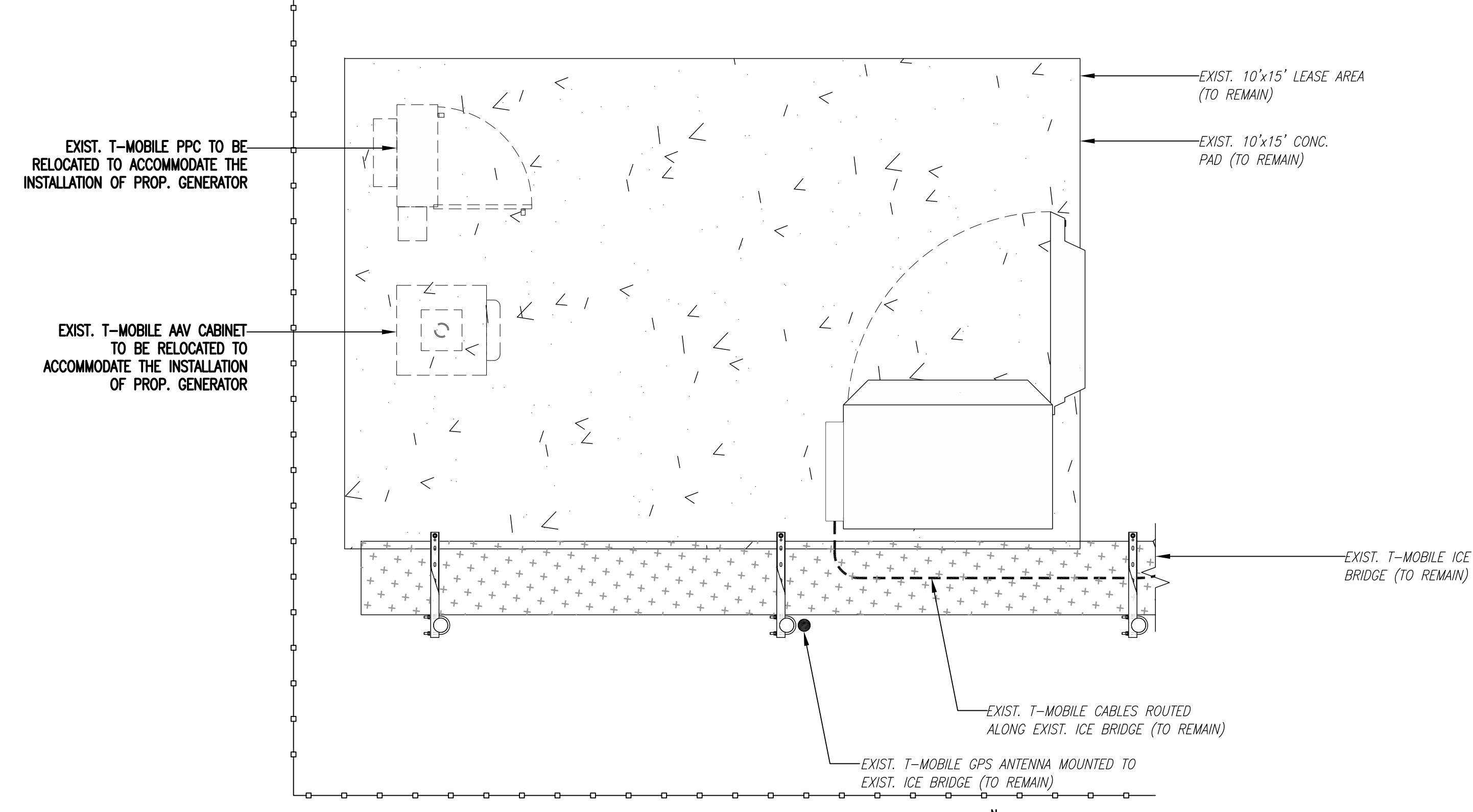
**SPECIAL CONSTRUCTION WORK NOTE (HAND DUG UTILITY TRENCH EXCAVATION REQUIRED):**  
 EXISTING UNDERGROUND UTILITY LOCATIONS ARE UNKNOWN. GENERAL CONTRACTOR SHALL HAND-EXCAVATE TO REQUIRED SUB-GRADE DEPTH SUFFICIENT TEST HOLES OR AS DIRECTED/REQUIRED BY SBA REGIONAL SITE MANAGER SHALL HAND-EXCAVATE ALL PROPOSED UNDERGROUND UTILITY TRENCHES. GENERAL CONTRACTOR RESPONSIBLE FOR ANY REQUIRED SPECIAL TEMPORARY PROTECTION OF EXISTING UNDERGROUND UTILITIES, PHYSICAL DAMAGE REPAIR, AND SERVICE RESTORATION.



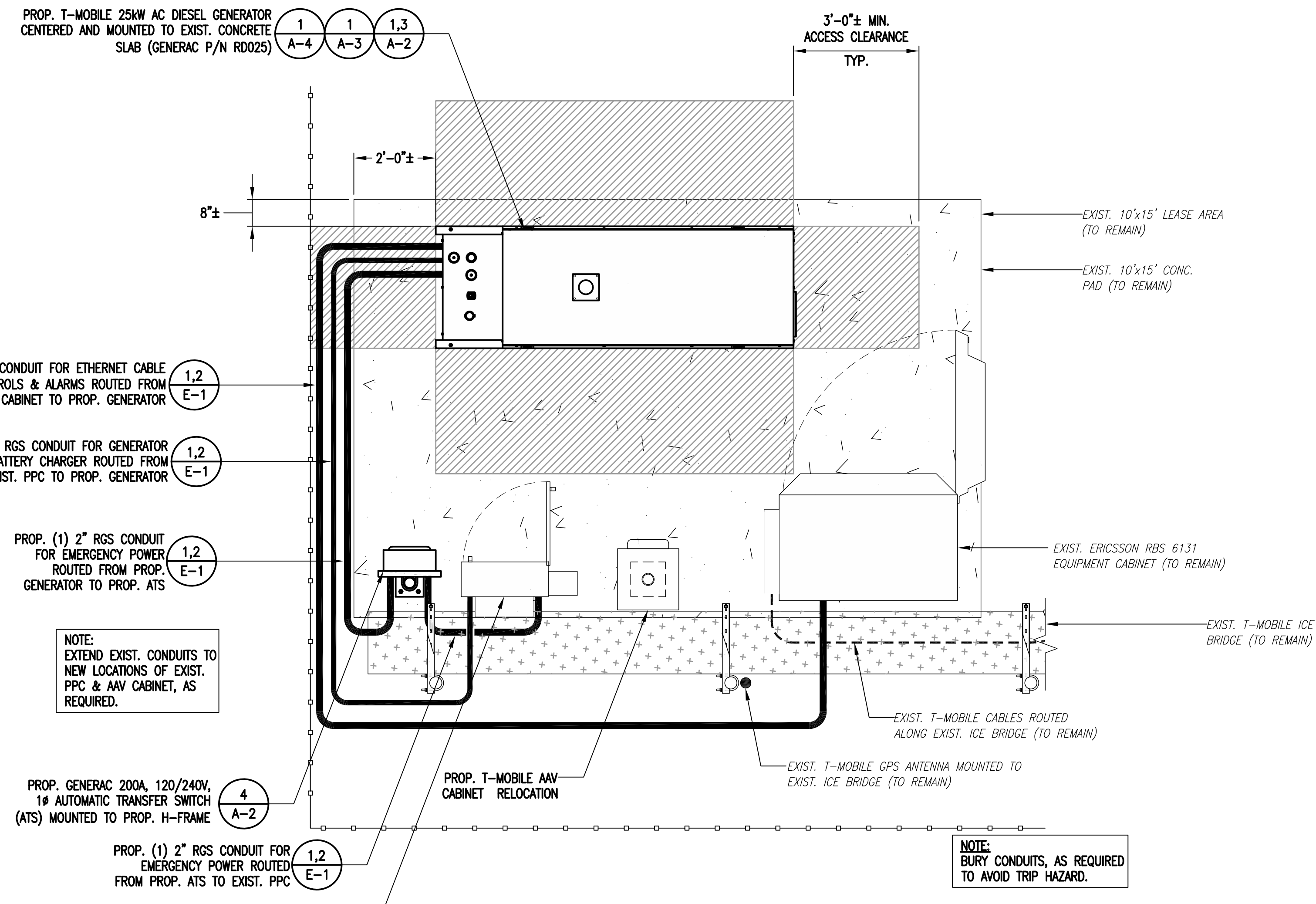
CONSTRUCTION NOTE:  
 CONTRACTOR TO REPAIR FENCE AS REQUIRED.



**COMPOUND PLAN**  
 SCALE: 1" = 8'-0"  
 1  
 A-1



**EXISTING EQUIPMENT PLAN**  
 SCALE: 1" = 2'-0"  
 2  
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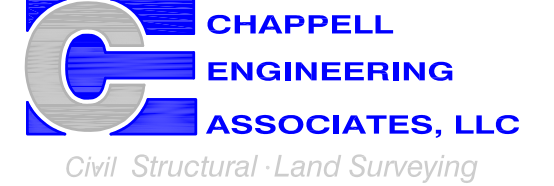
**PROPOSED EQUIPMENT PLAN**  
 SCALE: 1" = 2'-0"  
 3  
 A-1

**T-MOBILE  
 NORTHEAST LLC**

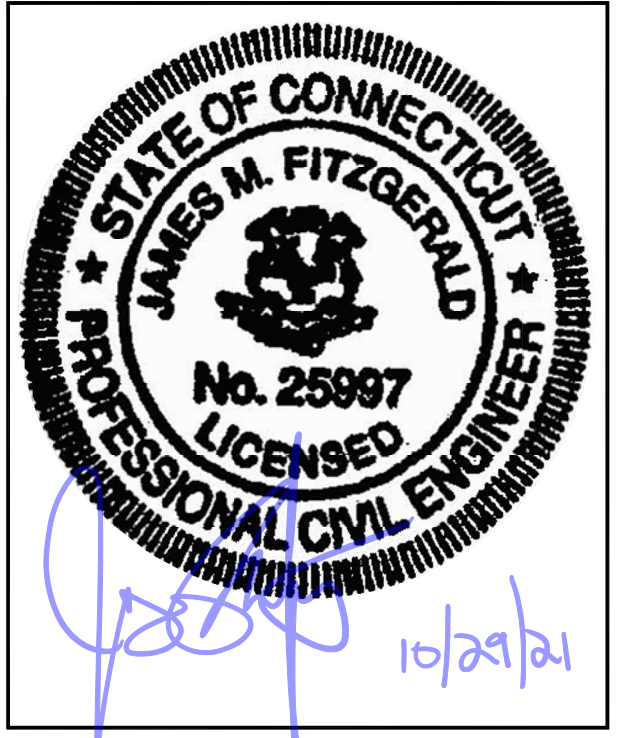
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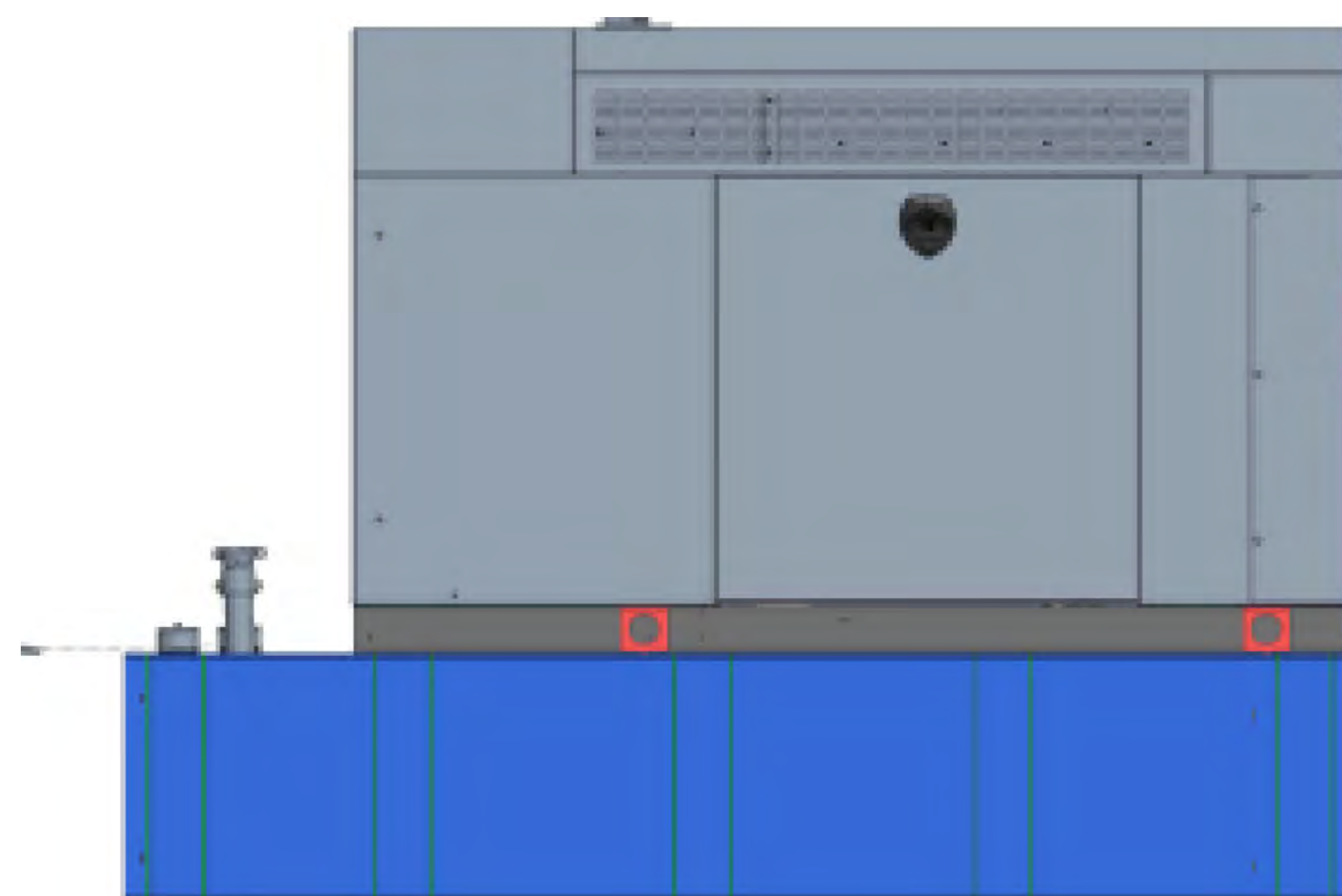
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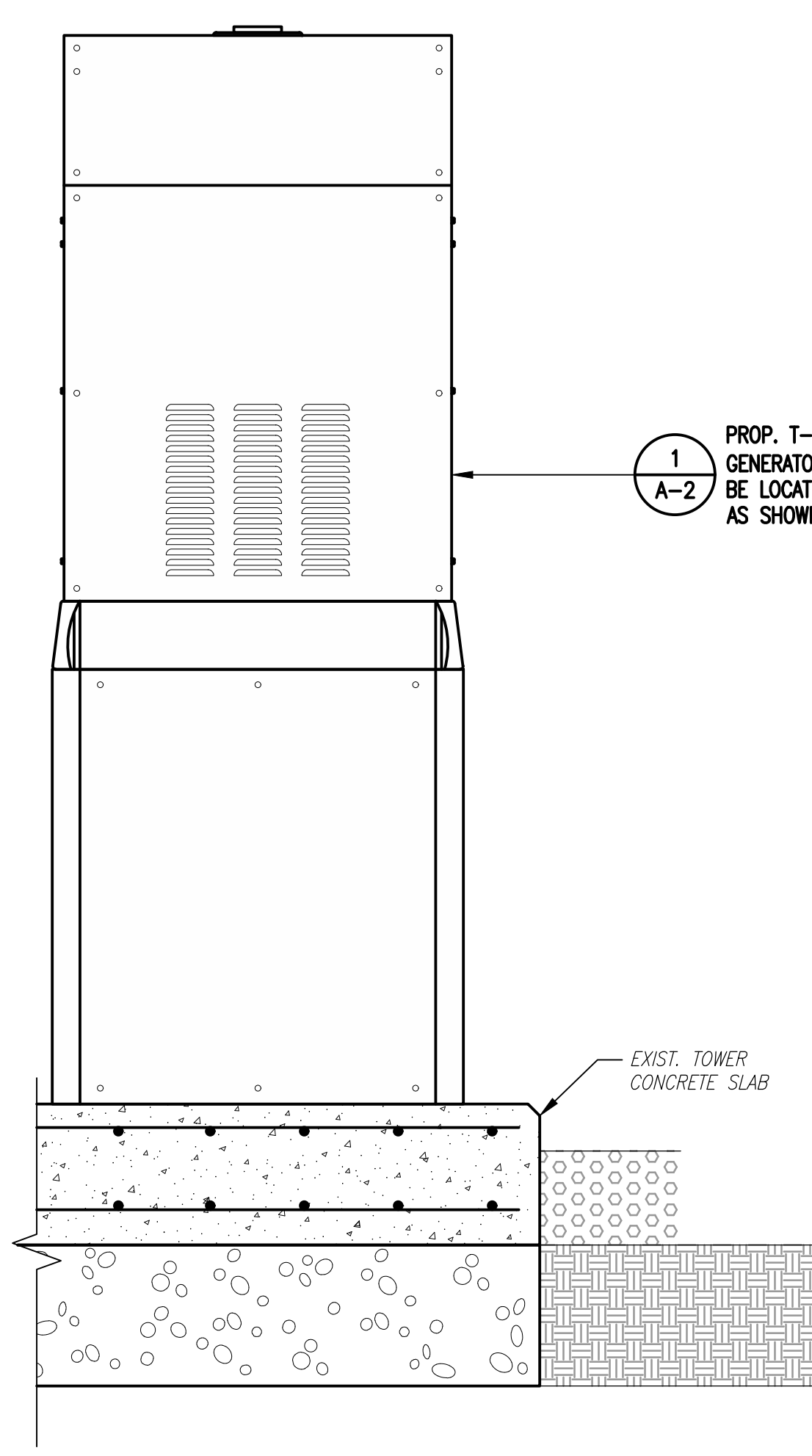
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NOTE:  
GENERATOR DIESEL TANK TO BE  
FILLED BY CONTRACTOR



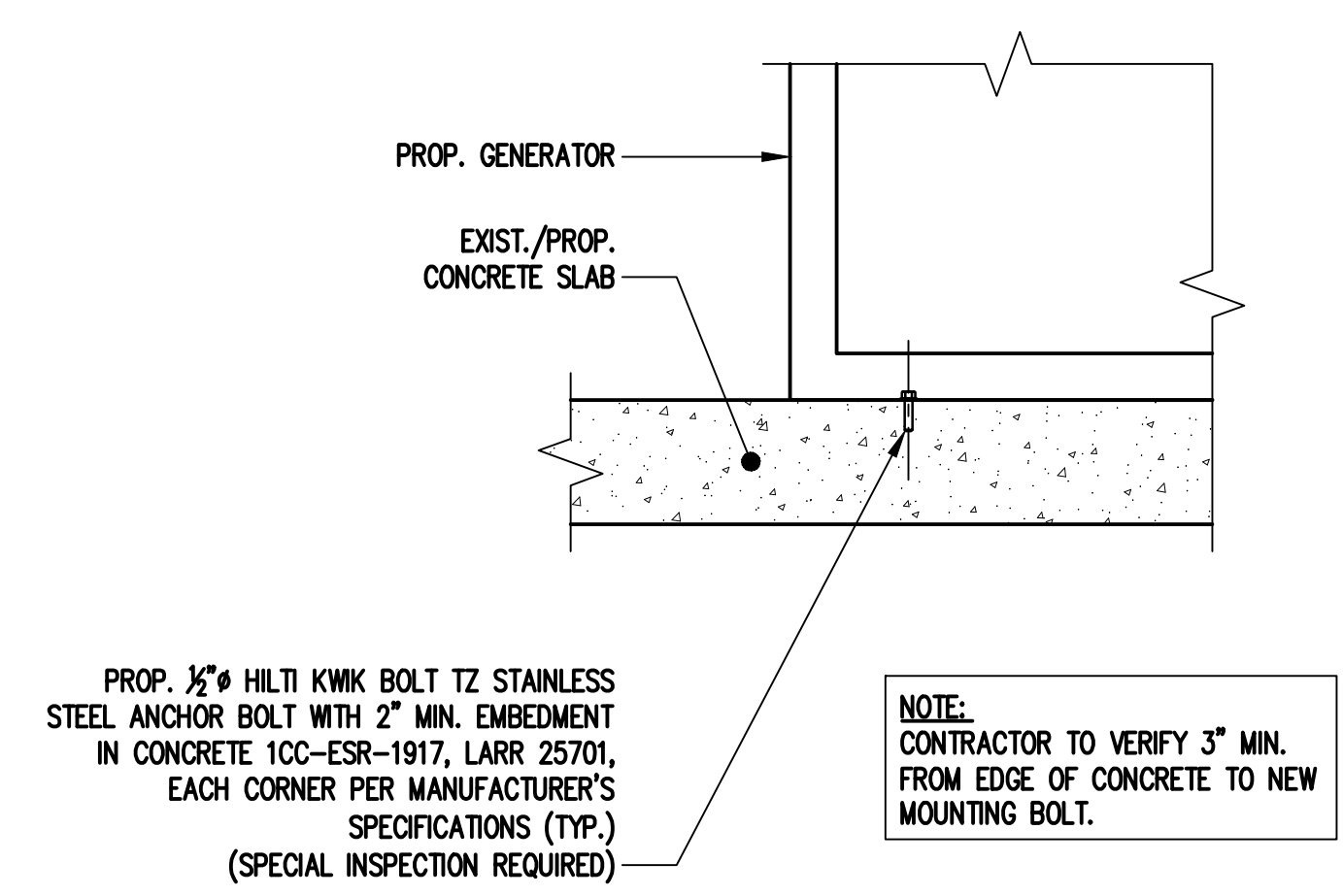
**GENERAC RD025 25kW AC DIESEL GENERATOR**  
 DIMENSIONS: 103.4"L x 35.0"W x 91.7"H  
 WEIGHT: 2,946 lbs  
 QUANTITY: TOTAL OF 1

**GENERATOR DETAIL** 1  
A-2  
 SCALE: N.T.S.



1  
A-2 PROP. T-MOBILE 25KW AC DIESEL  
GENERATOR (GENERAC P/N RD025) TO  
BE LOCATED ON EXIST. CONCRETE SLAB  
AS SHOWN IN DETAIL 3 ON SHEET A-1

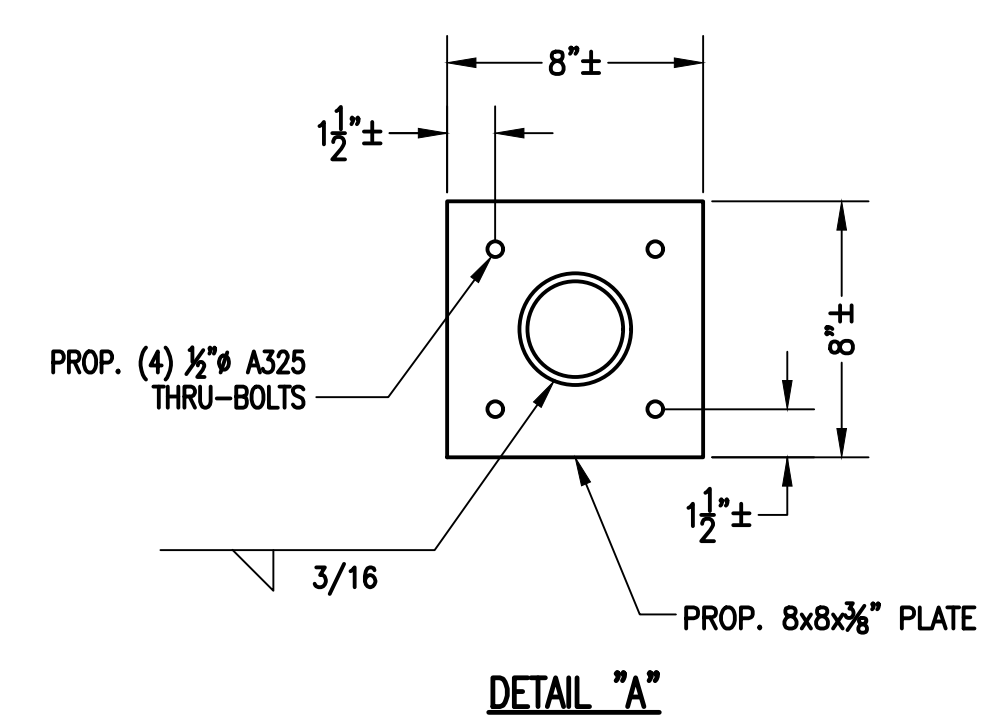
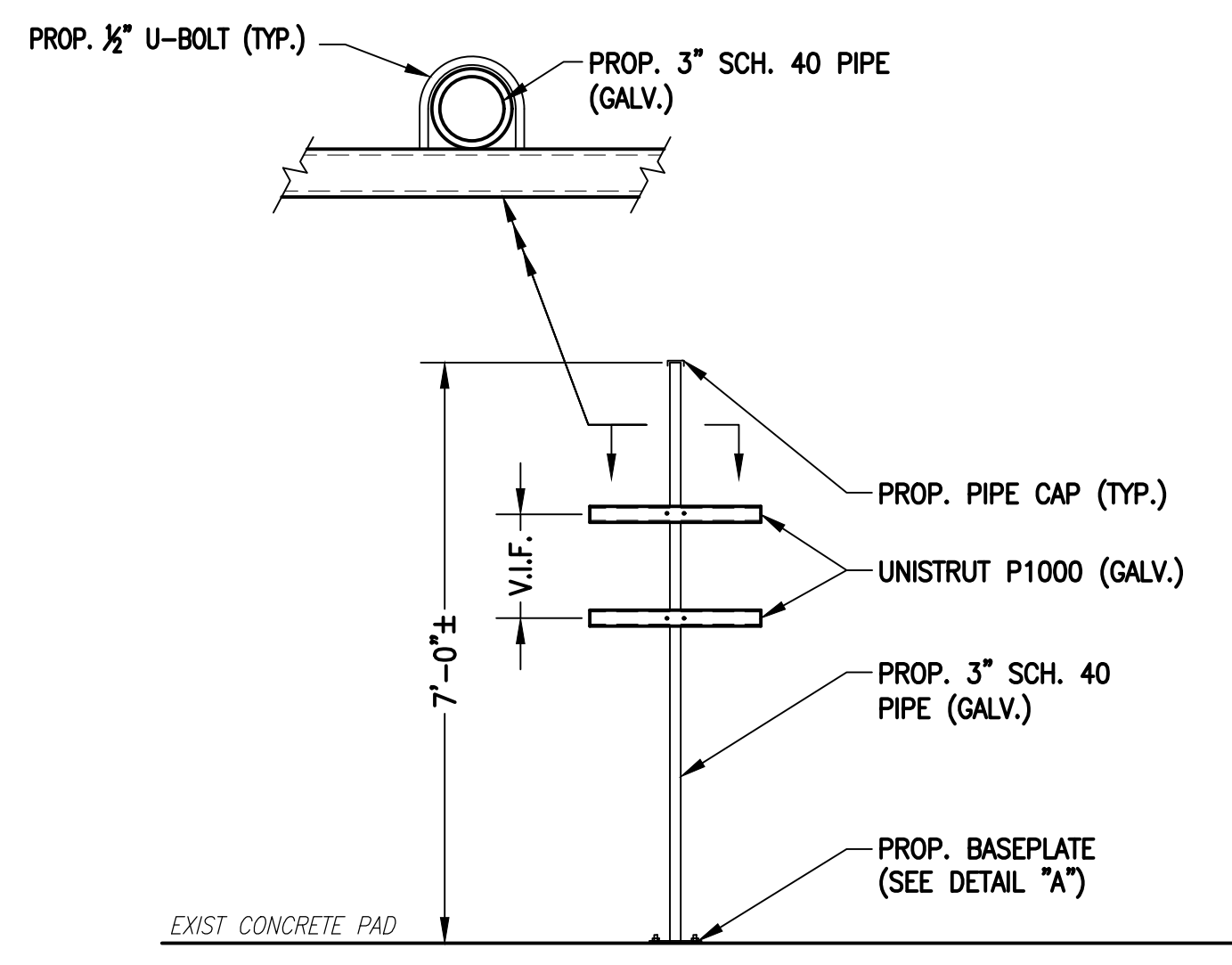
**GENERATOR PAD DETAIL** 2  
A-2  
 SCALE: NTS



PROP. 1/2" HILTI KWIK BOLT TZ STAINLESS  
STEEL ANCHOR BOLT WITH 2" MIN. EMBEDMENT  
IN CONCRETE 1CC-ESR-1917, LARR 25701,  
EACH CORNER PER MANUFACTURER'S  
SPECIFICATIONS (TYP.)  
(SPECIAL INSPECTION REQUIRED)

NOTE:  
CONTRACTOR TO VERIFY 3" MIN.  
FROM EDGE OF CONCRETE TO NEW  
MOUNTING BOLT.

**GENERATOR MOUNTING DETAIL** 3  
A-2  
 SCALE: N.T.S.



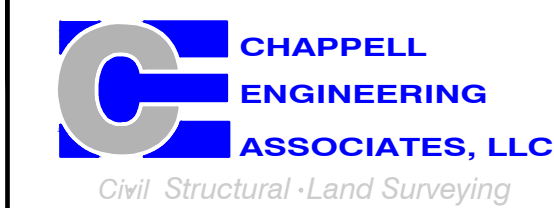
**H-FRAME DETAIL** 4  
A-2  
 SCALE: N.T.S.

**T-MOBILE  
NORTHEAST LLC**

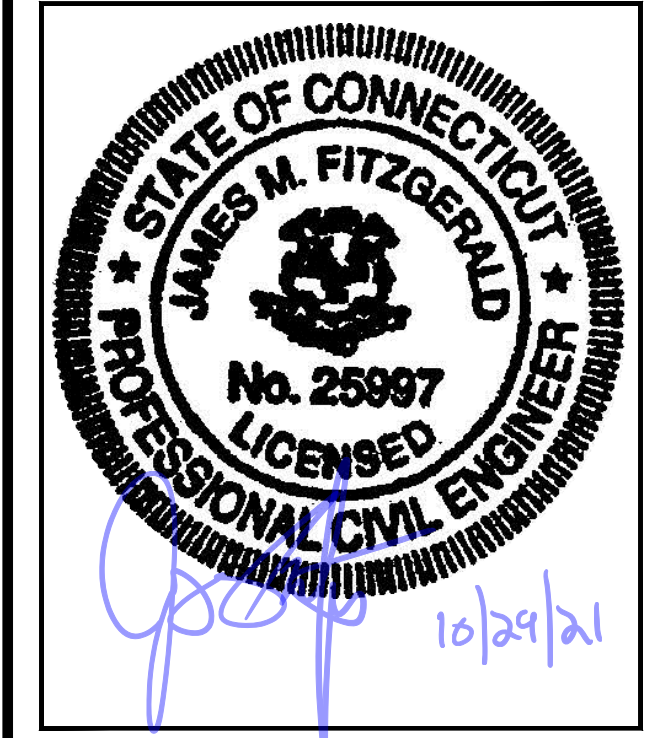
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0	10/15/21	ISSUED FOR REVIEW	BDJ

SITE NUMBER:  
**CTNL805B**  
 SITE ADDRESS:  
49 BRAINERD ROAD  
NIANTIC, CT 06357

SHEET TITLE  
**GENERATOR DETAILS**

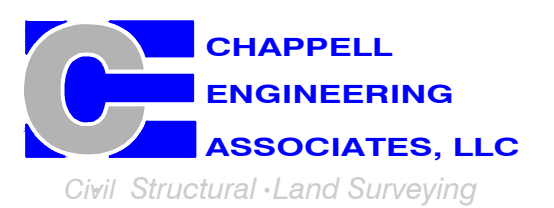
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**A-2**

T-MOBILE  
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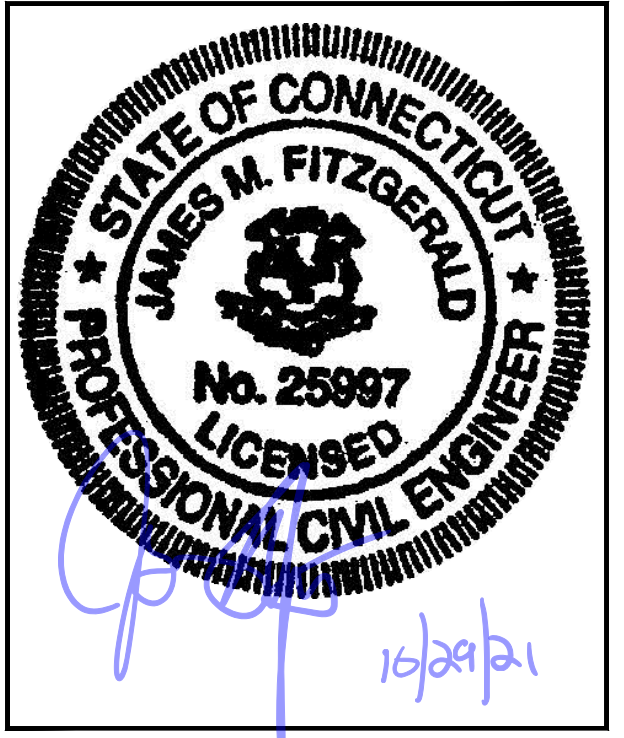
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SHEET TITLE  
GENERATOR SPECIFICATIONS 1

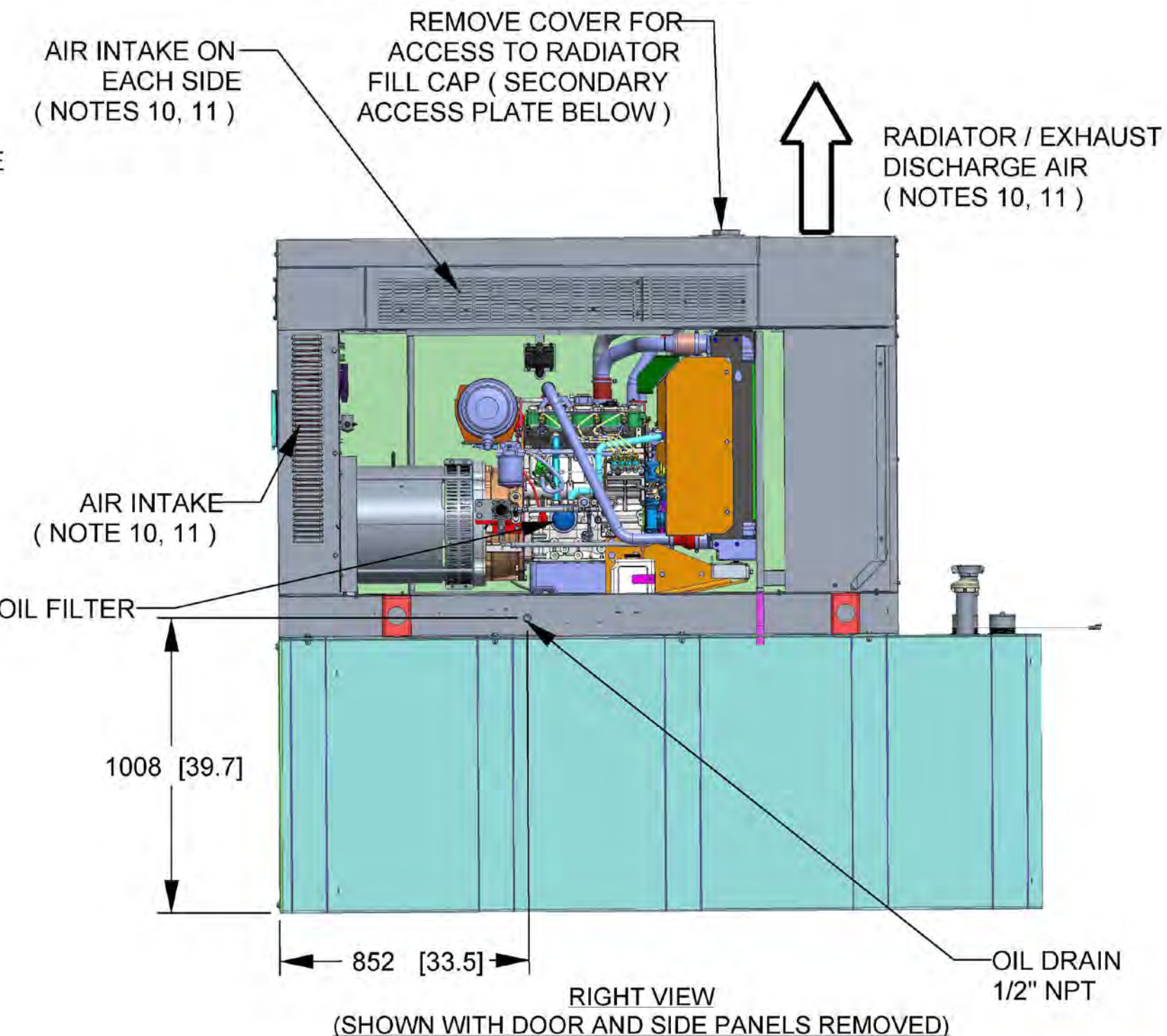
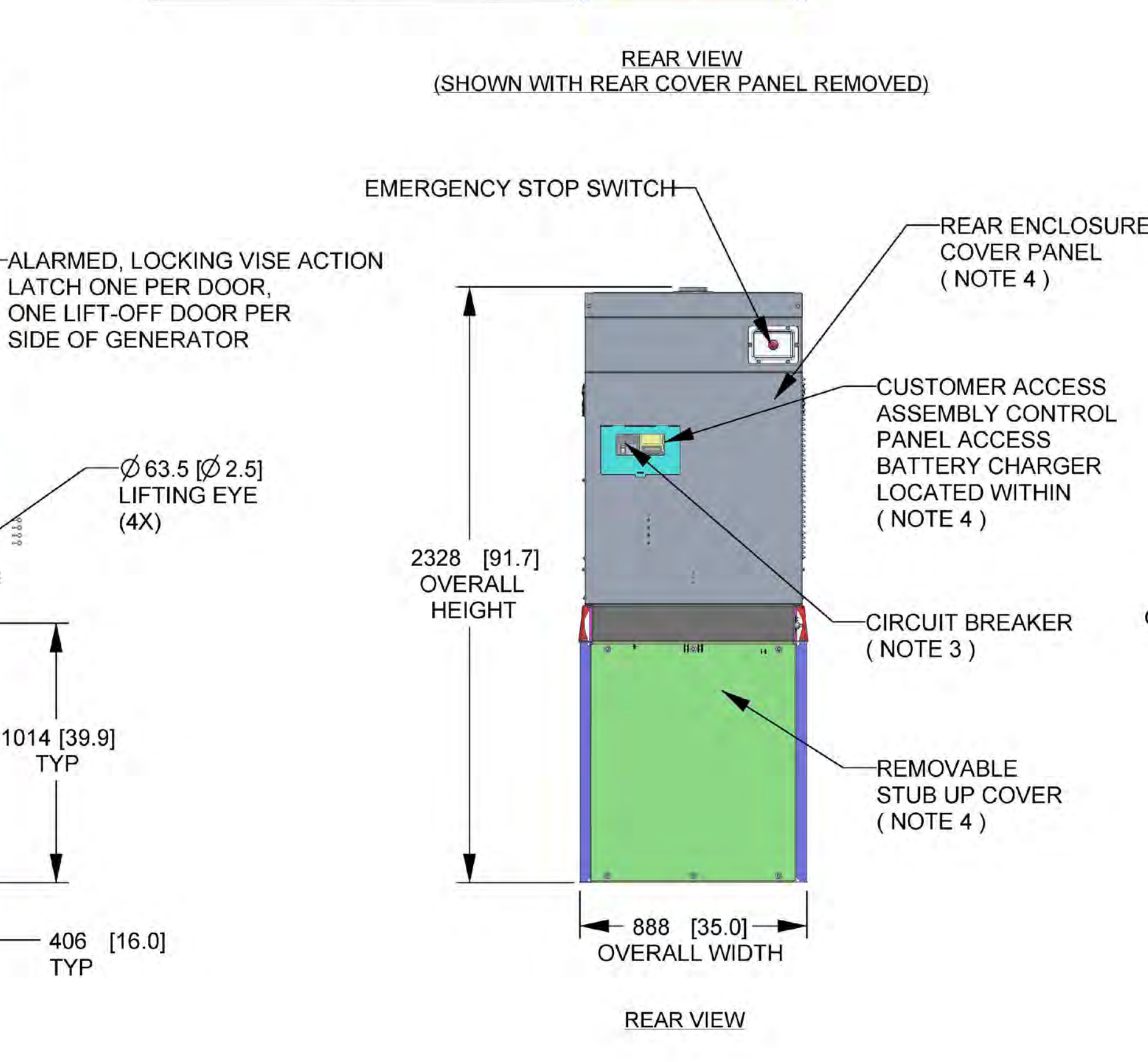
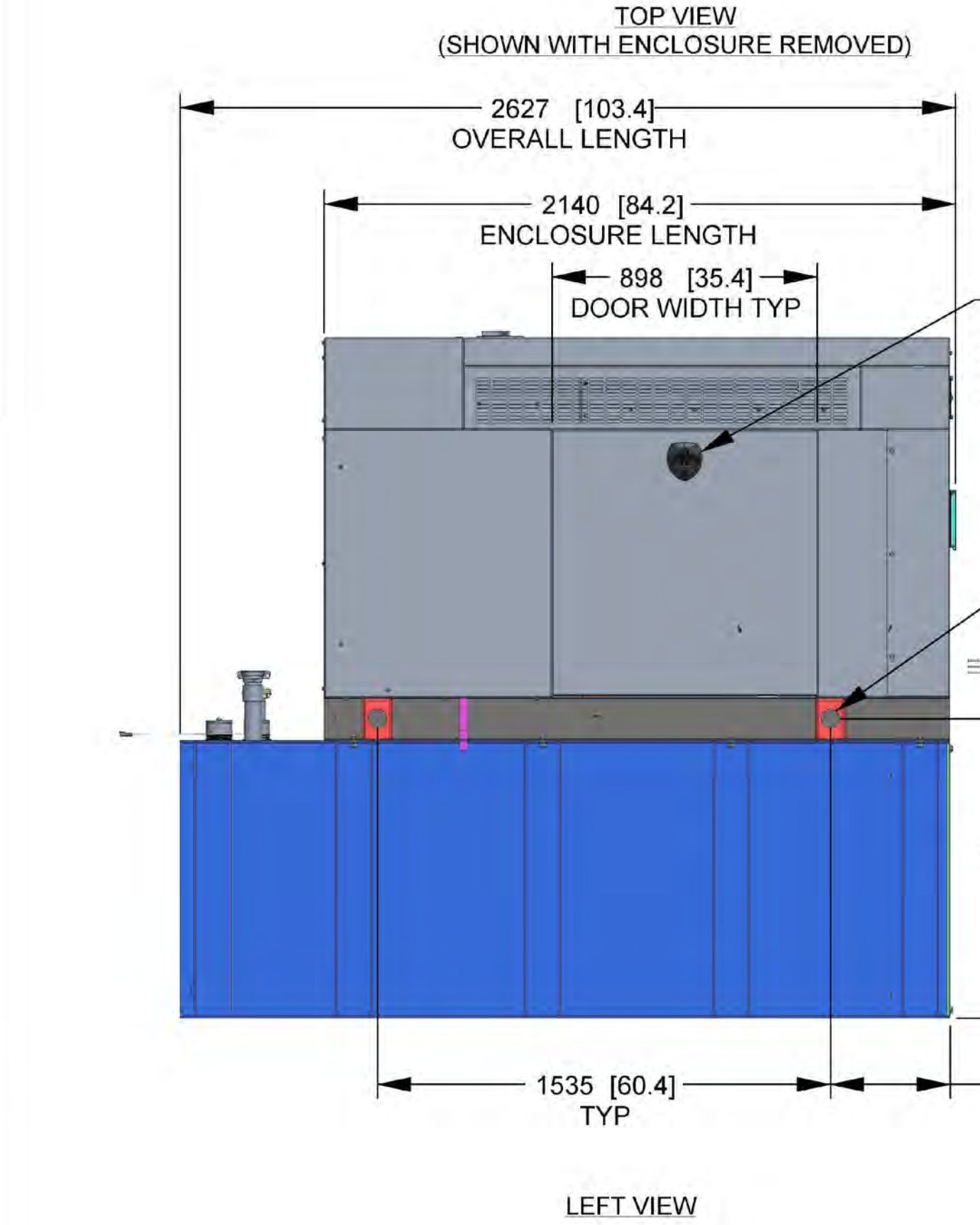
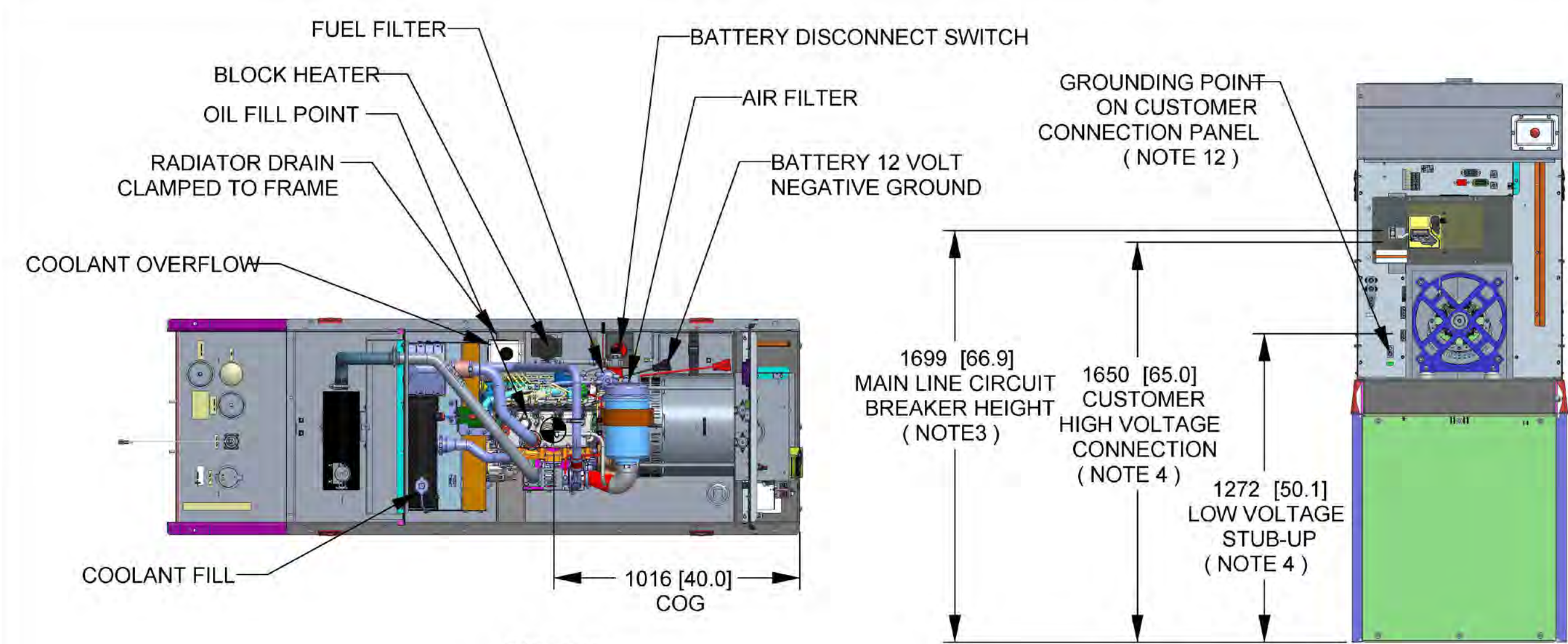
SHEET NUMBER  
**A-3**

SH	1/2	REV	2	WINDCHILL VERSION	2.12
----	-----	-----	---	-------------------	------

WEIGHT DATA WITH EMPTY BASETANK (SEE NOTE 6)	
GENERATOR AS SHOWN	1336 [2946]
WITH WOODEN SHIPPING SKID	1354 [2984]

WEIGHT: KG [LBS]  
DIMENSIONS: MM [INCHES]

- NOTES:
- THIS UNIT MUST BE INSTALLED IN ACCORDANCE WITH CURRENT APPLICABLE NFPA 37 AND NFPA 70 STANDARDS AS WELL AS ANY OTHER FEDERAL, STATE, AND LOCAL CODES.
  - BATTERY (12 VOLT NEGATIVE GROUND SYSTEM).
  - CONTROL PANEL / CIRCUIT BREAKER INFORMATION:
    - MAIN LINE CIRCUIT BREAKER 125 AMPS
    - SEE SPECIFICATION SHEET OR OWNERS MANUAL
    - ACCESSIBLE THROUGH CUSTOMER ACCESS ASSEMBLY DOOR ON REAR OF GENERATOR.
    - CONTROL PANEL INCLUDES INTEGRATED BATTERY CHARGER
  - REMOVE THE REAR STUB-UP AND REAR ENCLOSURE COVER PANEL TO ACCESS THE STUB-UP AREAS AS FOLLOWS:
    - HIGH VOLTAGE CONNECTION INCLUDING AC LOAD LEAD CONDUIT CONNECTION, NEUTRAL CONNECTION, AND BATTERY CHARGER 120 VOLT AC (0.5 AMP MAX) CONNECTION.
    - LOW VOLTAGE CONNECTION INCLUDING TRANSFER SWITCH CONTROL WIRES
  - ENGINE SERVICE CONNECTIONS
    - OIL DRAIN: 1/2" NPT
    - RADIATOR DRAIN: HOSE CLAMPED TO FRAME
  - CENTER OF GRAVITY AND WEIGHT MAY CHANGE DUE TO UNIT OPTIONS.
  - BOTTOM OF GENERATOR SET MUST BE ENCLOSED TO PREVENT PEST INTRUSION AND RECIRCULATION OF DISCHARGE AIR AND/OR IMPROPER COOLING AIR FLOW.
  - REFERENCE OWNERS MANUAL FOR LIFTING WARNINGS.
  - MOUNTING BOLTS OR STUDS TO MOUNTING SURFACE SHALL BE 5/8-11 GRADE 5 (USE STANDARD SAE TORQUE SPECS)
  - MUST ALLOW FREE FLOW OF INTAKE AIR, DISCHARGE AIR AND EXHAUST. SEE SPEC SHEET FOR MINIMUM AIR FLOW AND MAXIMUM RESTRICTION REQUIREMENTS.
  - GENERATOR MUST BE INSTALLED SUCH THAT FRESH COOLING AIR IS AVAILABLE AND THAT DISCHARGE AIR FROM RADIATOR IS NOT RECIRCULATED. RECOMMENDED MINIMUM PERIMETER(3FT) AND VERTICAL OVER EXHAUST (5FT) CLEARANCE FOR SITE LOCATION.
  - GENERATOR MUST BE GROUNDED.



DRAWING CREATED FROM PRO/ENGINEER 3D FILE. ECO MODIFICATION TO BE APPLIED TO SOLID MODEL ONLY.

# INSTALLATION DRAWING

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ELECTRONICALLY APPROVED INSIDE WINDCHILL

**GENERAC**

TITLE: **INSTALLATION D2.2L 25KW Y06 PD**

ISSUE DATE: 5/10/18

SIZE	CAGE NO	DWG NO	REV
B	N/A	10000036728	2

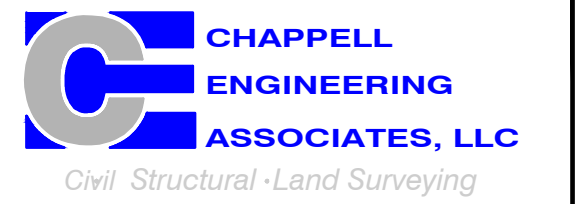
SCALE: 0.031 WT-KG SEE ABOVE SHEET 1 of 2

T-MOBILE  
NORTHEAST LLC

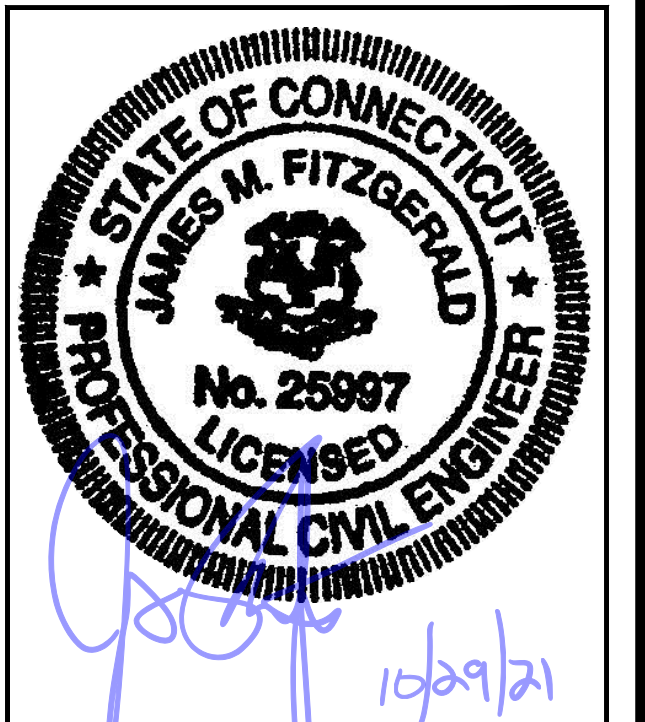
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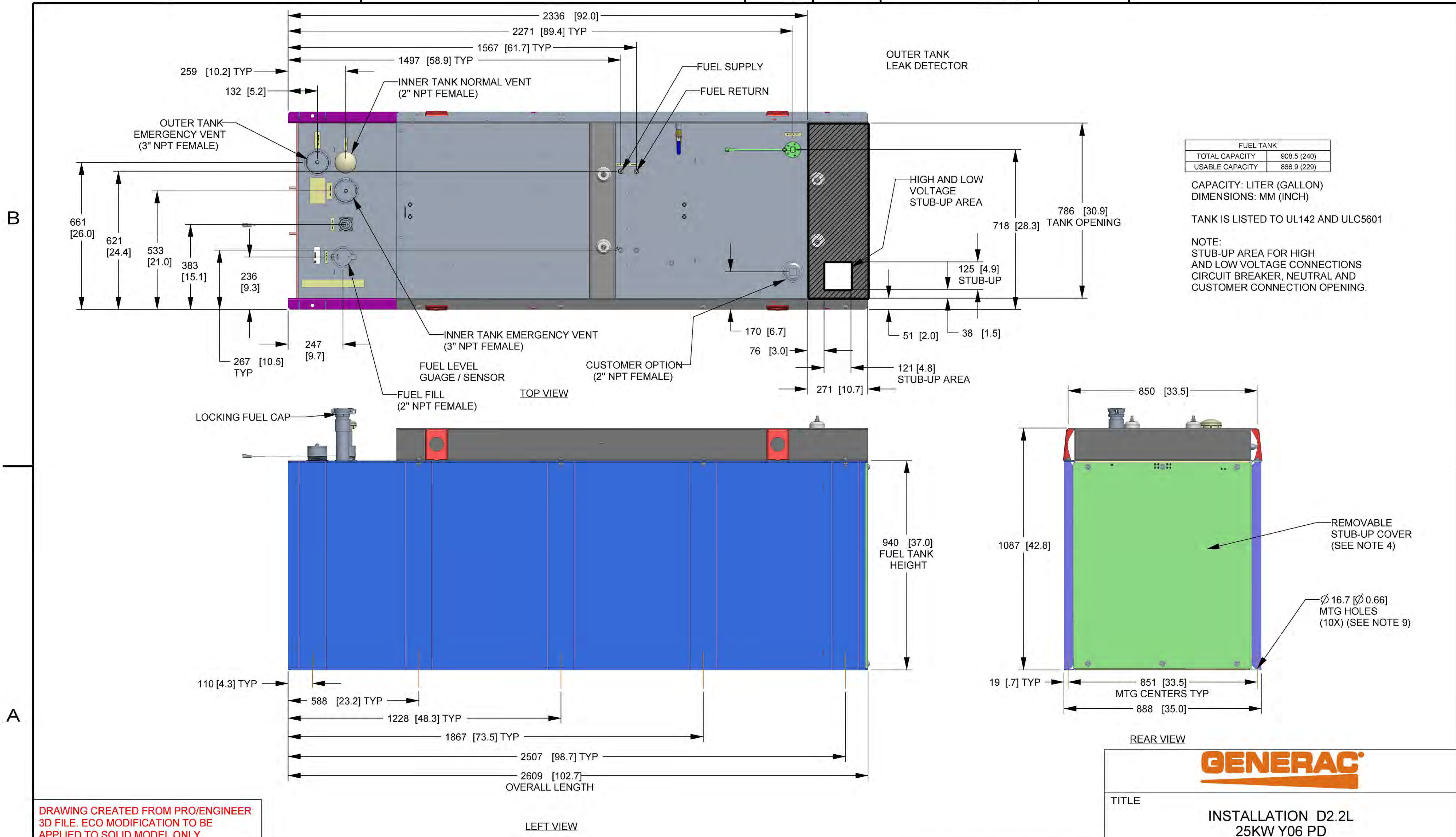
SITE NUMBER:  
**CTNL805B**

SITE ADDRESS:  
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NIANTIC, CT 06357

SHEET TITLE  
**GENERATOR SPECIFICATIONS 2**

SHEET NUMBER  
**A-4**

SH 2/2 REV 2 WINDCHILL VERSION 2.12



FUEL TANK	
TOTAL CAPACITY	908.5 (240)
USABLE CAPACITY	886.9 (229)

CAPACITY: LITER (GALLON)  
DIMENSIONS: MM (INCH)

TANK IS LISTED TO UL142 AND ULC5601

NOTE:  
STUB-UP AREA FOR HIGH AND LOW VOLTAGE CONNECTIONS CIRCUIT BREAKER, NEUTRAL AND CUSTOMER CONNECTION OPENING.

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ELECTRONICALLY APPROVED INSIDE WINDCHILL

**GENERAC**

TITLE  
**INSTALLATION D2.2L  
25KW Y06 PD**

ISSUE DATE: 5/10/18

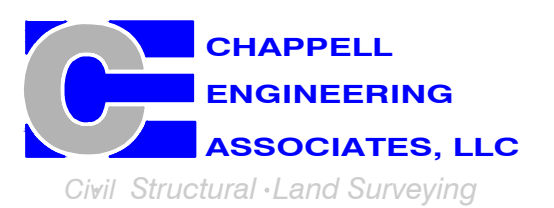
SIZE	CAGE NO	DWG NO	REV
B	N/A	10000036728	2
SCALE	WT-KG	SEE ABOVE	SHEET 2 of 2
0.063			

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SUBMITTALS			
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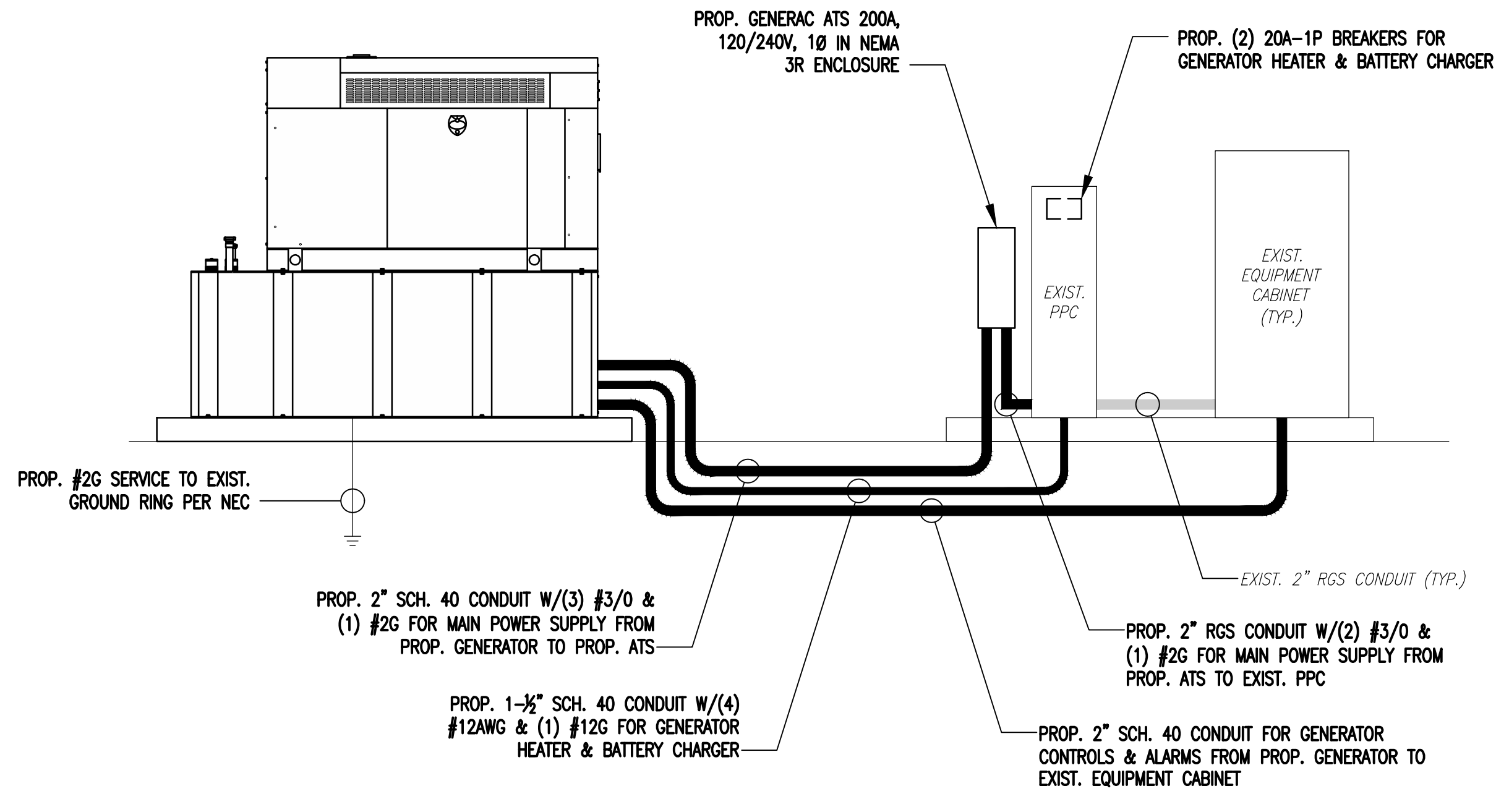
SITE NUMBER:  
**CTNL805B**

SITE ADDRESS:  
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NIANTIC, CT 06357

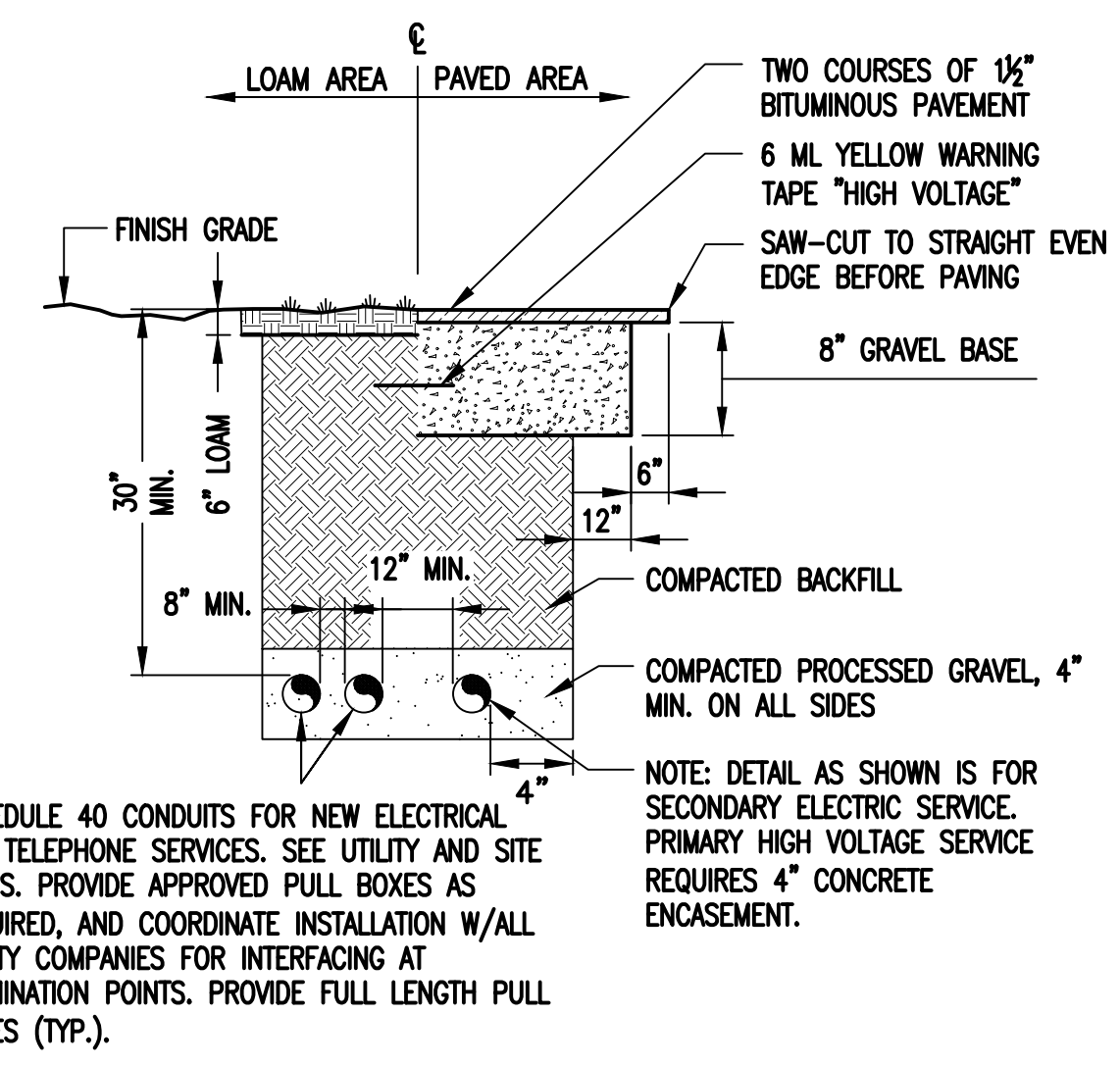
SHEET TITLE  
**ELECTRIC & GROUNDING  
DETAILS**

SHEET NUMBER  
**E-1**

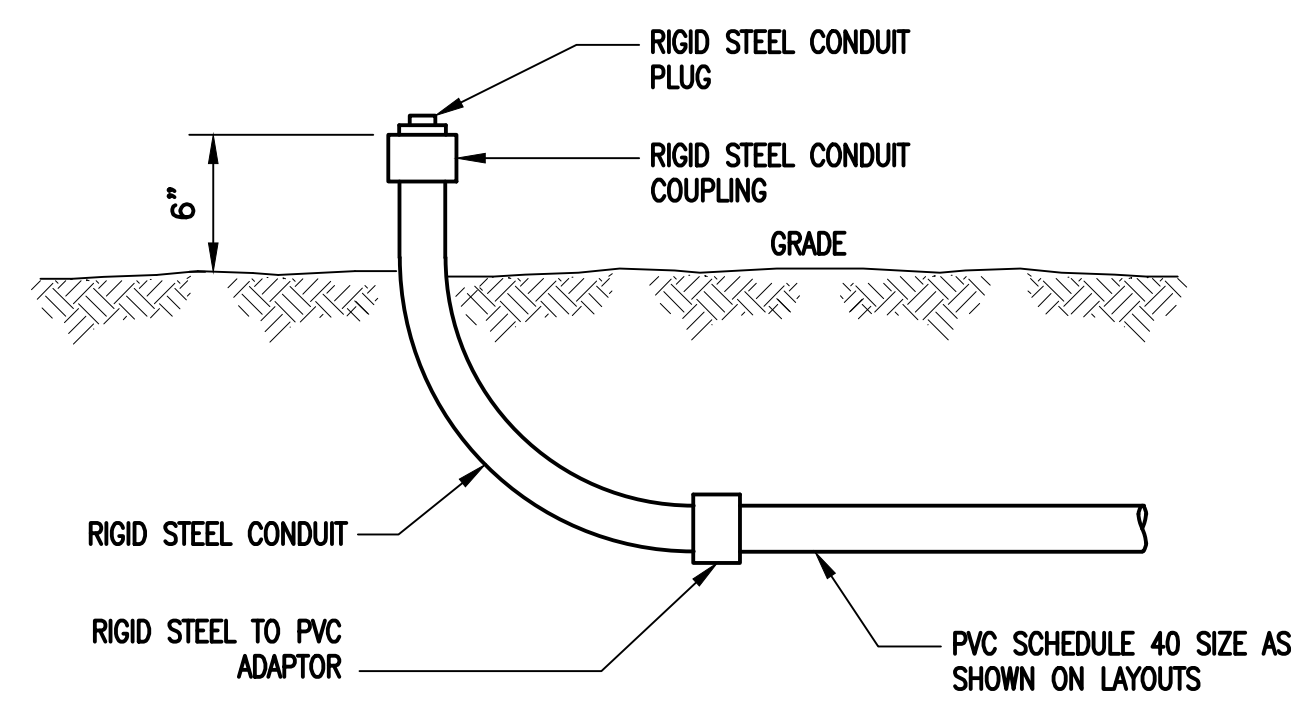
NOTE:  
CUT BACK (E) MAIN POWER CONDUIT, AS  
REQUIRED, & RECONNECT TO (P) ATS.



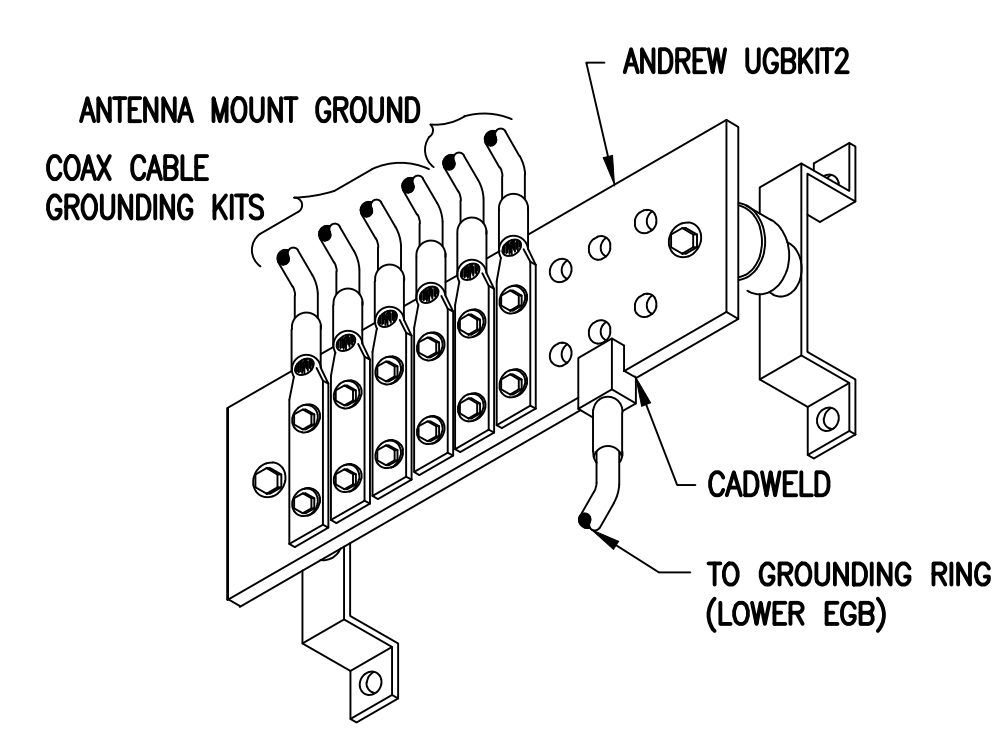
**ONE-LINE POWER DIAGRAM**  
SCALE: NOT TO SCALE



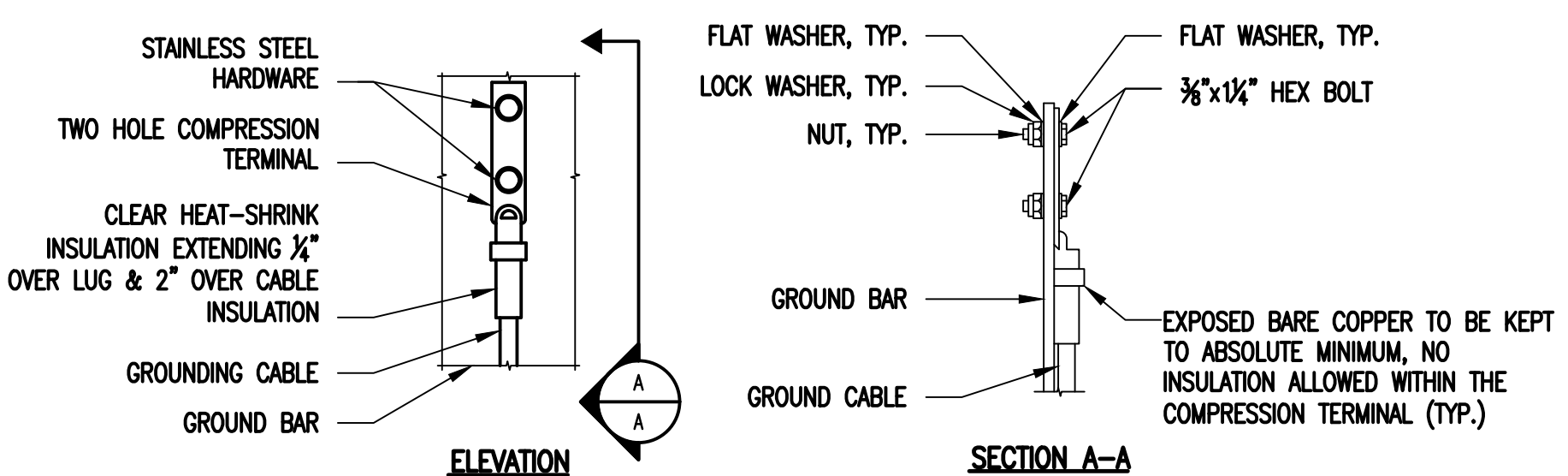
**BURIED CONDUIT DETAIL**  
SCALE: NOT TO SCALE



**TYPICAL CONDUIT STUB-UP DETAIL**  
SCALE: NONE



**GROUND BAR (EGB)**  
SCALE: NOT TO SCALE



- NOTES:
- "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
  - OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
  - CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB AND MGB.

**TYPICAL GROUND BAR CONNECTIONS DETAIL**  
SCALE: NOT TO SCALE

## ELECTRICAL AND GROUNDING NOTES

- ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
- ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
- THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
- GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
- 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.
- BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
- ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THININSULATION.
- 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.
- RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
- 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.
- ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
- PPC SUPPLIED BY PROJECT OWNER.
- GROUNDING SHALL COMPLY WITH NEC ART. 250. ADDITIONALLY, GROUNDING, BONDING AND LIGHTNING PROTECTION SHALL BE DONE IN ACCORDANCE WITH "T-MOBILE BTS SITE GROUNDING STANDARDS".
- GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
- 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.
- ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
- 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 RING.
- CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
- APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
- 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.
- CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMS MINIMUM RESISTANCE REQUIRED.
- CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN-LOSS AND DISTANCE- TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE OUT.

# 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



Image used for illustration purposes only




**Codes and Standards**

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


 UL2200, UL508, UL489, UL142


 CSA 22.2

 BS5514 and DIN 6271

 SAE J1349

 NFPA 37, 70, 99

 ISO 3046, 8528, 9001

 NEMA ICS1, ICS10, MG1, 250, ICS6, AB1

 ANSI/IEEE C62.41  
American National Standards Institute

**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.



## 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

### 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

## CONTROL SYSTEM



### 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 Maintenance Kit

### CONTROL SYSTEM

- Mobile Link™ and Adapter Kit

### TANKS

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

**APPLICATION AND ENGINEERING DATA**

**ENGINE SPECIFICATIONS**

General

Make	Perkins
EPA Emission Compliance	Tier 4 Interim
Cylinder #	4
Type	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

Engine Governing

Governor	Electronic
Frequency Regulation (Steady State)	±0.25%

Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Full Flow Cartridge
Crankcase Capacity with Filters- qt (L)	11.2 (10.6)

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 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**

Standard Model	Generac
Poles	4
Field Type	Rotating
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<5%
Telephone Interference Factor (TIF)	<50

Standard Excitation	Direct
Bearings	Single Sealed
Coupling	Flexible Disc
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Full Digital
Number of Sensed Phases	2
Regulation Accuracy (Steady State)	±1%

# RD025 | 2.2L | 25 kW

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

	Standby
Flow at Rated Power ft <sup>3</sup> /min (m <sup>3</sup> /min)	88 (2.5)

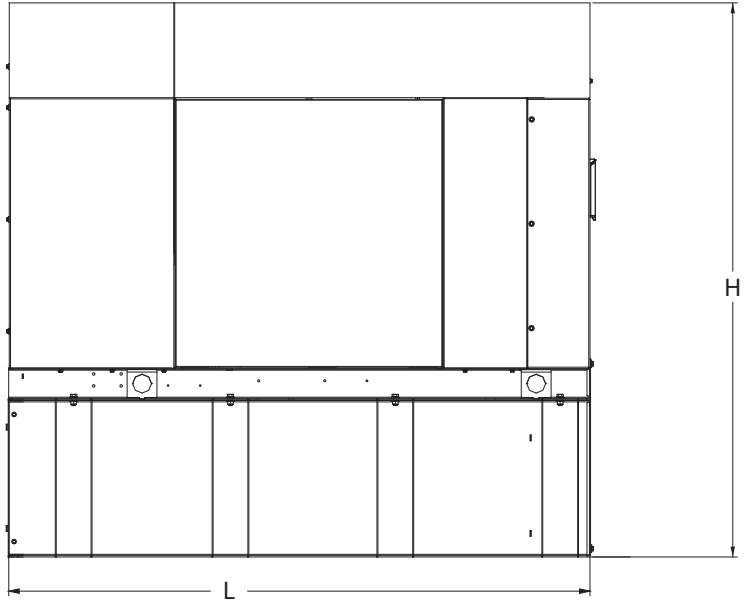
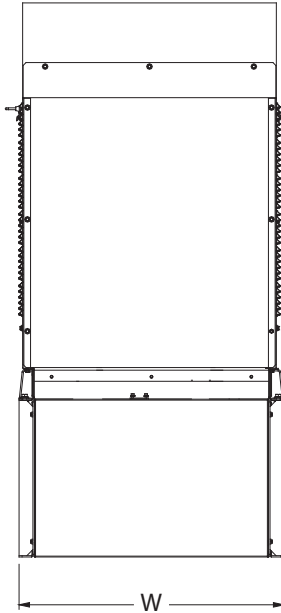
#### ENGINE

#### EXHAUST

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

**DIMENSIONS AND WEIGHTS\***



**Weights and Dimensions**

Unit Weight - lbs	Unit Weight with Skid - lbs	Dimensions (L x W x H) in
2,811	2,849	84.2 x 35.0 x 91.7

**25kW Fuel Consumption**

Fuel Tank Gross Total 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

**with fuel tank  
103.4" 35" x 91.7"**

**Sound Emission Data**

Rated Load Sound Output at 23ft - dB(A)	65
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\* All measurements are approximate and for estimation purposes only. Drawing is for illustration purposes only, not to scale.

<b>YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER</b>

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

- BASEMAPS >
- MAP LAYERS >
- Wetlands
- Riparian
- Riparian Mapping Areas
- Data Source
  - Source Type
  - Image Scale
  - Image Year
- Areas of Interest
- FWS Managed Lands
- Historic Wetland Data

