

10 INDUSTRIAL AVE,  
SUITE 3  
MAHWAH NJ 07430

PHONE: 201.684.0055  
FAX: 201.684.0066



July 7, 2023

Members of the Siting Council  
Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051

RE: Notice of Exempt Modification  
201 Granite Road, Guilford, CT 06437  
Latitude: 41.291900  
Longitude: -72.7327800  
T-Mobile Site#: CTNH510A - Hardening

Dear Ms. Bachman:

T-Mobile currently maintains nine (9) antennas at the 84-foot level of the existing 110-foot Monopole at 201 Granite Road, Guilford, CT. The 110-foot Monopole is owned and operated by the Crown Castle. The property is owned by Winterfell Gables (CT) Owner LLC. T-Mobile now intends to add a 48Kw generator to a proposed 9'x4' concrete pad within the existing compound.

**Planned Modifications:**

**Ground:**

Install New:

- (1) Generac RD048 48 Kw AC Diesel Generator
- (1) 9' x 4' Concrete Pad

This facility was approved by the Connecticut Siting Council in Docket No. 252 on October 14, 2003. A copy of the decision attached. This modification complies with the exempt conditions.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16- SOj-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-SOj-73, a copy of this letter is being sent to First Selectman Matthew T. Hoey III, Elected Official, and Jamie Stein, Town Planner, as well as the tower and property owner.

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 modifications 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 modifications 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 telecommunications facility constitute an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

**Eric Breun**

Transcend Wireless

Cell: 201-658-7728

Email: [ebreun@transcendwireless.com](mailto:ebreun@transcendwireless.com)

Attachments

cc: Matthew T. Hoey III - First Selectman of Guilford

Jamie Stein - Town Planner

Crown Castle - Tower Owner

DDR Guilford LLC - Property Owner

ERIC BREJUN  
2016587728  
1 INTERNATIONAL BLVD.  
MAHWAH NJ 07495

1 LBS

1 OF 1

**SHIP TO:**  
TOWN PLANNER  
JAMIE STEIN  
50 BOSTON STREET  
GUILFORD CENTER CT 06437



**CT 065 2-03**



**UPS GROUND**

TRACKING #: 1Z V25 742 03 9440 2418



BILLING: P/P

Reference #: CTNH510A

XOL 23.06.01 NV19 23.04.06/2023\*



TM

ERIC BREJUN  
2016587728  
1 INTERNATIONAL BLVD.  
MAHWAH NJ 07495

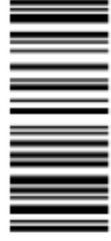
1 LBS

1 OF 1

**SHIP TO:**  
FIRST SELECTMAN  
MATTHEW T HOEY III  
31 PARK STREET  
GUILFORD CENTER CT 06437

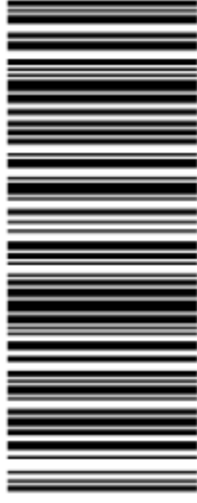


**CT 065 2-03**



**UPS GROUND**

TRACKING #: 1Z V25 742 03 9555 0060



BILLING: P/P

Reference #: CTNH510A

XOL 23.05.22 NV19 23.04.06/2023\*



TM

ERIC BREUN  
2016587728  
1 INTERNATIONAL BLVD.  
MAHWAH NJ 07495

1 LBS

1 OF 1

**SHIP TO:**

WINTERFELL GABLES (CT) OWNER LLC  
FLOOR 34  
590 MADISON AVENUE  
NEW YORK NY 10022

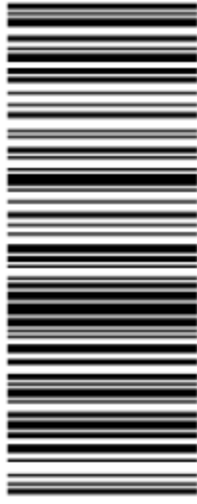


**NY 100 9-44**



**UPS GROUND**

TRACKING #: 1Z V25 742 03 9434 6435



BILLING: P/P

Reference #1: CTNH510A

XOL 23.06.01

NV-19 23.0A 06/2023\*



TM

ERIC BREUN  
2016587728  
1 INTERNATIONAL BLVD.  
MAHWAH NJ 07495

1 LBS

1 OF 1

**SHIP TO:**

CROWN CASTLE USA  
2000 CORPORATE DRIVE  
CANONSBURG PA 15317



**PA 153 0-10**



**UPS GROUND**

TRACKING #: 1Z V25 742 03 9037 2422



BILLING: P/P

Reference #1: CTNH510A

XOL 23.06.01

NV-19 23.0A 06/2023\*



TM



**Hello, your package has been delivered.**

**Delivery Date:** Friday, 06/09/2023

**Delivery Time:** 10:26 AM

**Left At:** FRONT DESK

**Signed by:** TODD

**TRANSCEND WIRELESS**

**Tracking Number:** [1ZV257420390372422](#)

**Ship To:** CROWN CASTLE USA  
2000 CORPORATE DRIVE  
CANONSBURG, PA 15317  
US

**Number of Packages:** 1

**UPS Service:** UPS Ground

**Package Weight:** 1.0 LBS

**Reference Number:** [CTNH510A](#)

**Hello, your package has been delivered.**

**Delivery Date:** Thursday, 06/08/2023

**Delivery Time:** 4:35 PM

**Signed by:** FRONTDOOR

**TRANSCEND WIRELESS**

**Tracking Number:** [1ZV257420394346435](#)

**Ship To:** WINTERFELL GABLES (CT) OWNER LLC  
590 MADISON AVENUE  
FLOOR 34  
NEW YORK, NY 10022  
US

**Number of Packages:** 1

**UPS Service:** UPS Ground

**Package Weight:** 1.0 LBS

**Reference Number:** [CTNH510A](#)

**Hello, your package has been delivered.**

**Delivery Date:** Thursday, 06/08/2023

**Delivery Time:** 10:49 AM

**Signed by:** CARLE

## TRANSCEND WIRELESS

**Tracking Number:** [1ZV257420395550060](#)

**Ship To:** MATTHEW T HOEY III  
31 PARK STREET  
GUILFORD CENTER, CT 06437  
US

**Number of Packages:** 1

**UPS Service:** UPS Ground

**Package Weight:** 1.0 LBS

**Reference Number:** [CTNH510A](#)

**Hello, your package has been delivered.**

**Delivery Date:** Thursday, 06/08/2023

**Delivery Time:** 10:43 AM

**Signed by:** HOK

## TRANSCEND WIRELESS

**Tracking Number:** [1ZV257420394402418](#)

**Ship To:** JAMIE STEIN  
50 BOSTON STREET  
GUILFORD CENTER, CT 06437  
US

**Number of Packages:** 1

**UPS Service:** UPS Ground

**Package Weight:** 1.0 LBS

**Reference Number:** [CTNH510A](#)



# Town of Guilford, CT

## Property Listing Report

Map Block Lot **071011**

Building # **1** Unique Identifier **6477**

### Property Information

Property Location	<b>201 GRANITE RD</b>
Mailing Address	<b>399 PARK AVENUE 18TH FL NEW YORK NY 10022</b>
Land Use	<b>Nursing Home</b>
Zoning Code	<b>R-8</b>
Neighborhood	<b>E</b>

Owner	<b>WINTERFELL GABLES (CT) OWNER LLC</b>
Co-Owner	
Book / Page	<b>0884/0672</b>
Land Class	<b>Commercial</b>
Census Tract	<b>1902</b>
Acreage	<b>58.31</b>

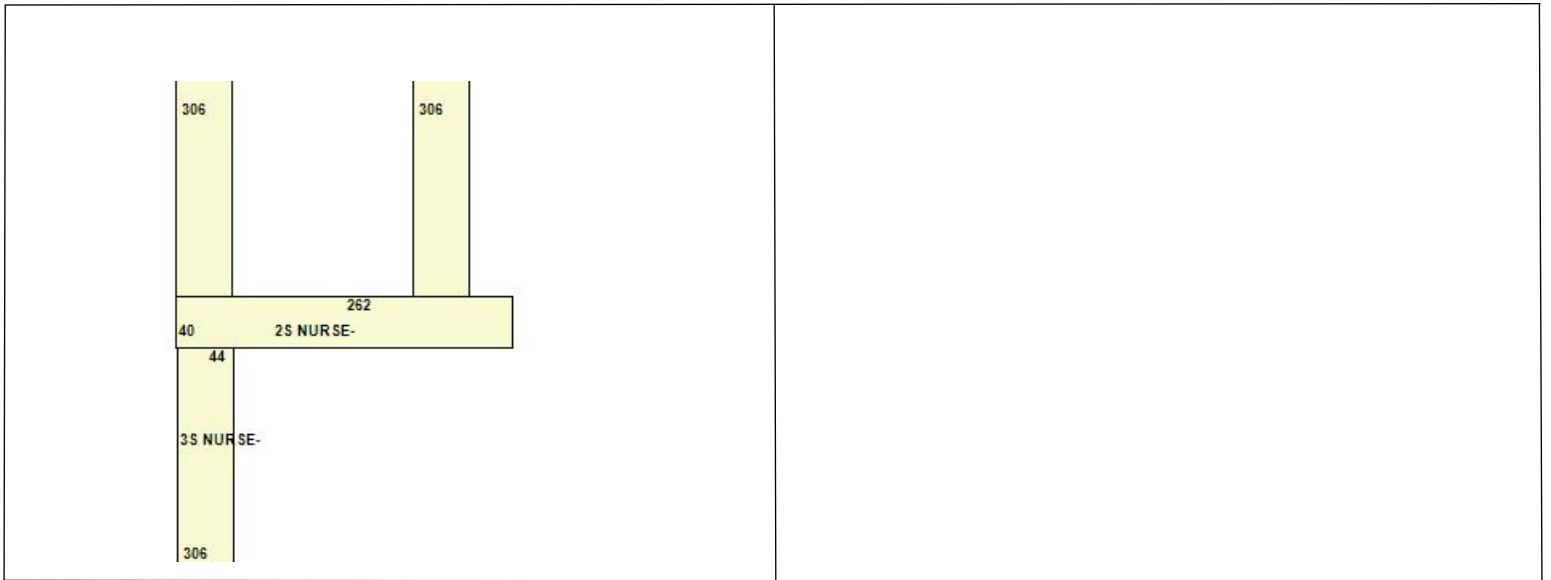
### Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	<b>1.51925e+007</b>	<b>1.06348e+007</b>
Outbuildings	<b>311200</b>	<b>217840</b>
Land	<b>1.008e+006</b>	<b>705600</b>
<b>Total</b>	<b>15655400</b>	<b>10958780</b>

### Utility Information

Electric	
Gas	
Sewer	
Public Water	
Well	



### Primary Construction Details

Year Built	<b>1993</b>
Building Desc.	<b>COMMERCIAL</b>
Building Style	
Stories	<b>2</b>
Exterior Walls	<b>STUCCO</b>
Exterior Walls 2	
Interior Walls	<b>DRYWALL</b>
Interior Walls 2	
Interior Floors 1	<b>CARPET</b>
Interior Floors 2	

Heating Fuel	<b>GAS</b>
Heating Type	<b>FHA</b>
AC Type	<b>CENTRAL</b>
Bedrooms	<b>0</b>
Full Bathrooms	<b>0</b>
Half Bathrooms	<b>0</b>
Extra Fixtures	
Total Rooms	<b>0</b>
Bath Style	
Kitchen Style	
Occupancy	

Building Use	<b>NURSING HOME</b>
Building Condition	<b>AVERAGE</b>
Frame Type	
Fireplaces	
Bsmt Gar	
Fin Bsmt Area	
Fin Bsmt Quality	
Building Grade	
Roof Style	<b>HIP</b>
Roof Cover	<b>METAL</b>

Report Created On

**6/7/2023**

# Town of Guilford, CT

Property Listing Report

Map Block Lot **071011**

Building # **1** Unique Identifier **6477**

## Detached Outbuildings

Type	Description	Area (sq ft)	Condition	Year Built
PAVING	PAVING	8000	AVERAGE	1993

## Attached Extra Features

Type	Description	Area (sq ft)	Condition	Year Built

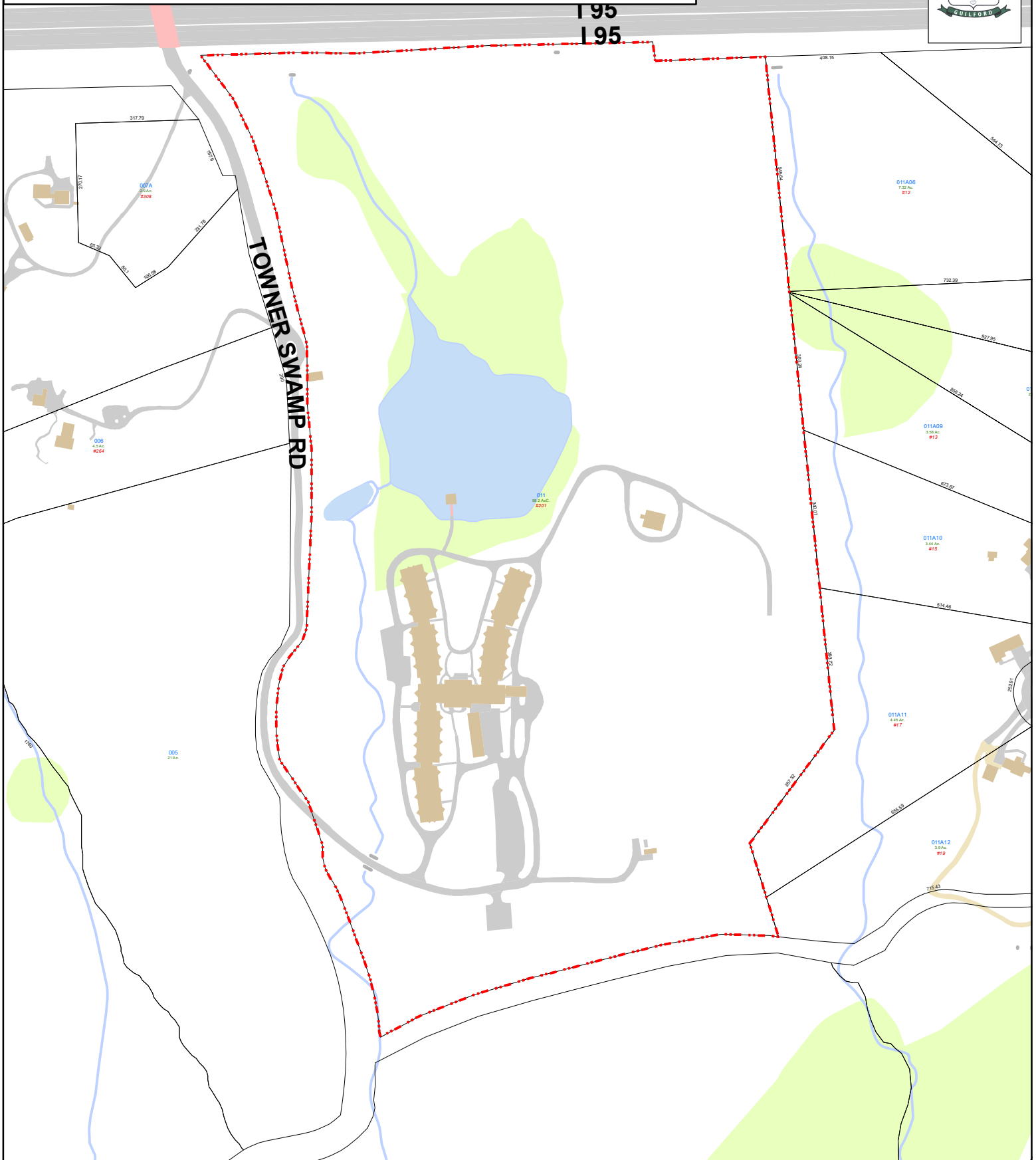
## Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
WINTERFELL GABLES (CT) OWNER LLC	0884/0672	5/26/2015	32535600
HARVEST GUILFORD RET RES LLC	0741/1146	3/23/2007	15751149

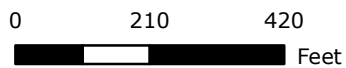
# Town of Guilford, Connecticut - Assessment Parcel Map

Unique ID: 6477

Address: 201 GRANITE RD



Approximate Scale: 1 inch = 300 feet



Map Produced:  
July 2022

**Disclaimer:**  
This map is for informational purposes only.  
All information is subject to verification by any user.  
The Town of Guilford and its mapping contractors  
assume no legal responsibility  
for the information contained herein.

**DOCKET NO. 252** - AT&T Wireless PCS, LLC d/b/a AT&T Wireless application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a wireless telecommunications facility at one of two sites at 201 Granite Road, Guilford, Connecticut.

} Connecticut  
}  
} Siting  
}  
} Council

October 14, 2003

### **Decision and Order**

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to AT&T Wireless PCS d/b/a AT&T Wireless for the construction, maintenance and operation of a wireless telecommunications facility at Site B, located at 201 Granite Road, Guilford, Connecticut. The Council denies certification of Site A, also located at 201 Granite Road, Guilford, Connecticut.

The facility shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The tower shall be constructed as a monopole, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of AT&T Wireless and other entities, both public and private, but such tower shall not exceed a height of 100 feet above ground level. The tower and foundation shall be designed and constructed capable of being extended from 100 feet above ground level to 140 feet above ground level, subject to Council approval by a Petition for a Declaratory Ruling pursuant to Sections 16-50j-38 through 16-50j-40 of the Regulations of Connecticut State Agencies.

2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be submitted to and approved by the Council prior to the commencement of facility construction and shall include:

- a. a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment building, access road, utility line, and landscaping, methods to reduce tree clearing at the site compound and access road; and
- b. construction plans for site clearing, water drainage, and erosion and sedimentation control consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

3. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of electromagnetic radio frequency power density is submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.

4. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.

5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing. The Certificate Holder shall provide space on the tower for no compensation for any municipal antennas, provided such antennas are compatible with the structural integrity of the tower.
6. If the facility does not initially provide wireless services within one year of completion of construction or ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.
7. Any antenna that becomes obsolete and ceases to function shall be removed within 60 days after such antennas become obsolete and cease to function.
8. Unless otherwise approved by the Council, this Decision and Order shall be void if the facility authorized herein is not operational within one year of the effective date of this Decision and Order or within one year after all appeals to this Decision and Order have been resolved.

Pursuant to General Statutes § 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in the [Hartford Courant](#), the [New Haven Register](#), the [Shoreline Times](#), and the [Guilford Courier](#).

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with Section 16-50j-17 of the Regulations of Connecticut State Agencies.

The parties and intervenors to this proceeding are:

<p><b><u>Applicant</u></b></p> <p>AT&amp;T Wireless PCS, LLC d/b/a AT&amp;T Wireless (AT&amp;T)</p>	<p><b><u>Its Representative</u></b></p> <p>Christopher B. Fisher, Esq. Cuddy &amp; Feder LLP 90 Maple Avenue White Plains, New York 10601 (914) 761-1300</p>
<p><b><u>Intervenor</u></b></p> <p>Guilford Land Conservation Trust, Inc.</p>	<p><b><u>Its Representative</u></b></p> <p>William M. Bloss, Esq. Jacobs, Grudberg, Belt &amp; Dow, P.C. 350 Orange Street PO Box 606 New Haven, Connecticut 06503 (203) 772-3100</p>





**T-MOBILE NORTHEAST LLC**

**GENERATOR ADD**

**SITE #: CTNH510A**  
**SITE NAME: AT&T GUILFORD MONOPOLE**  
**201 GRANITE ROAD**  
**GUILFORD, CT 06437**  
**NEW HAVEN COUNTY**

**CONSTRUCTION DRAWINGS**  
 ALL SCALES RELATIVE TO 24"X36" PAGE SIZE



**ELEVATED**  
**ENGINEERING**


976 TABOR ROAD, UNIT 6  
 MORRIS PLAINS, NJ 07950  
 862-242-8050

Documents prepared by Elevated Engineering, including this document, are to be used only for the specific project and specific use for which they were intended. Any extension of use to any other projects, by owner or by any other party, without the expressed written consent of Elevated Engineering, is done unlawfully and at the users own risk. If used in a way other than that specifically intended, user will hold Elevated Engineering, harmless from all claims and losses.

SCHEDULE OF REVISIONS		
REV NO.	DATE	DESCRIPTION OF CHANGES
7		
6		
5		
4	05/12/23	PER UPDATED CODE
3	09/26/22	REVISED GENERATOR LOCATION
2	08/22/22	REVISED PER CLIENT COMMENTS
1	08/16/22	ISSUED FOR CONSTRUCTION
0	08/03/22	INITIAL SUBMISSION

**DRAWN BY:** HMM  
**CHECKED BY:** NDB  
**SCALE:** AS NOTED  
**JOB NO:** 22005-TRN

INFORMATION ON THIS SET OF DRAWINGS IS NOT FOR OFFICIAL USE UNLESS ACCOMPANIED BY THE STAMPED SEAL & SIGNATURE OF A PROFESSIONAL ENGINEER



**NICHOLAS D. BARILE**  
 PROFESSIONAL ENGINEER, CT LIC. No. 28643

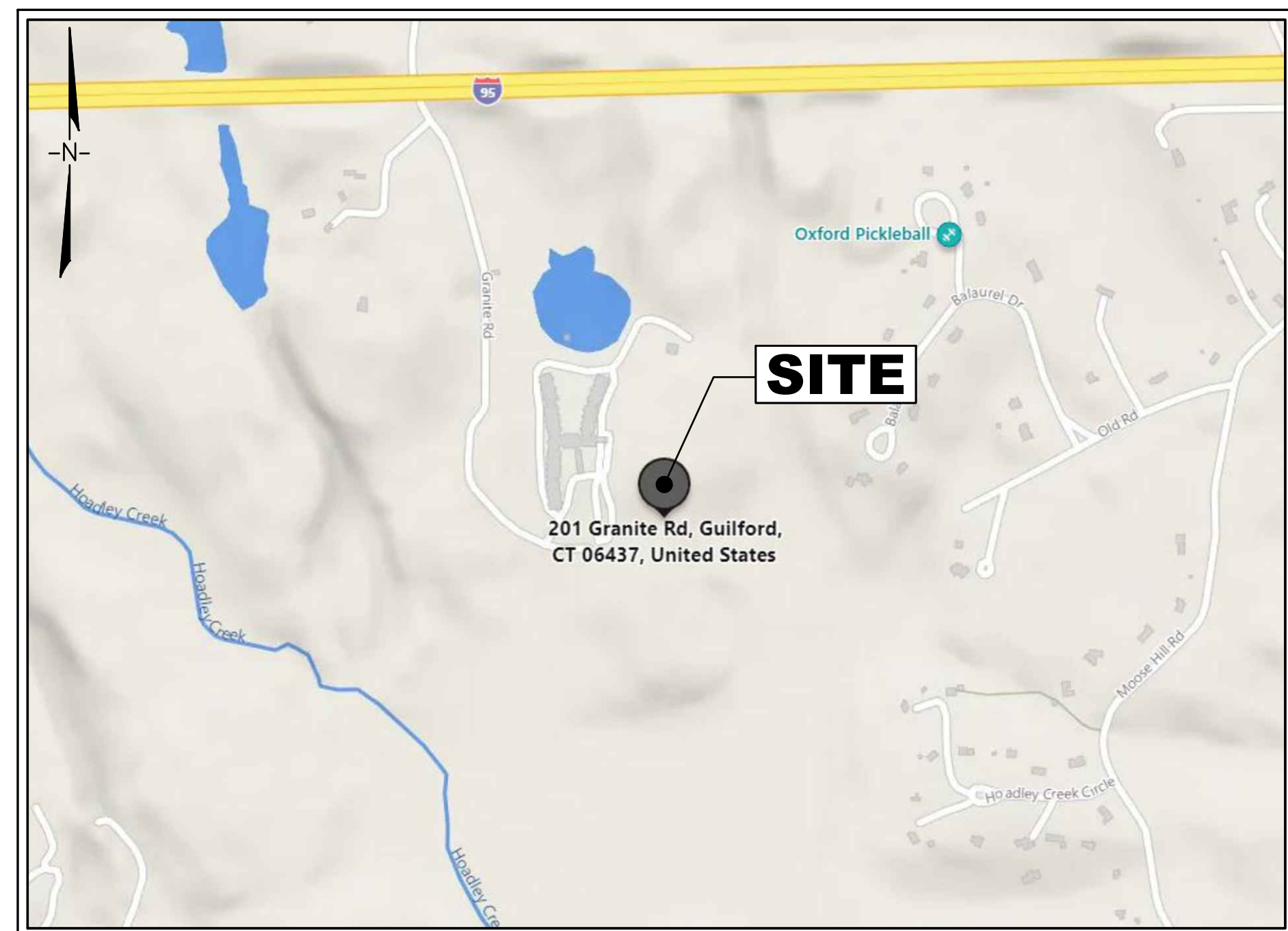
**SITE ID: CTNH510A**  
**AT&T GUILFORD MONOPOLE**  
**201 GRANITE ROAD**  
**GUILFORD, CT 06437**  
**NEW HAVEN HOUNTY**

**DRAWING TITLE:**

**TITLE SHEET**

**DRAWING SHEET:**

**T-1**



**KEY MAP**  
 SCALE = N.T.S.

**SITE LOCATION INFORMATION**

SITE NUMBER: CTNH510A  
 SITE ADDRESS: 201 GRANITE ROAD  
 GUILFORD, CT 06437  
 COUNTY: NEW HAVEN COUNTY  
 MAP/PARCEL#: 071011  
 CROWN CASTLE BU#: 842864  
 CROWN CASTLE SITE NAME: GUILFORD SW  
 TOWER OWNER: CROWN CASTLE  
 2000 CORPORATE DRIVE  
 CANONSBURG, PA 15317  
 PROPERTY OWNER: WINTERFELL GABLES (CT) OWNER LLC  
 590 MADISON AVE, 34TH FLOOR  
 NEW YORK, NY 10022  
 APPLICANT: T-MOBILE NORTHEAST LLC  
 4 SYLVAN WAY  
 PARSIPPANY, NJ 07054

**SITE CHARACTERISTICS**

LATITUDE: 41.29190000'  
 LONGITUDE: -72.73278000'  
 STRUCTURE TYPE: MONOPOLE TOWER  
 LOCATION OF PROPOSED EQUIPMENT: EXISTING COMPOUND

**SHEET INDEX**

SHEET NO.	SHEET DESCRIPTION
T-1	TITLE SHEET
GN-1	GENERAL NOTES
C-1	COMPOUND PLAN
C-2	EQUIPMENT PLANS
C-3	EQUIPMENT DETAILS
E-1	ONE-LINE DIAGRAM
E-2	ELECTRICAL NOTES
G-1	GROUNDING PLAN & NOTES

**UNDERGROUND SERVICE ALERT**



CONNECTICUT LAW REQUIRES TWO WORKING DAYS NOTICE PRIOR TO ANY EARTH MOVING ACTIVITIES BY CALLING 800-922-4455 OR DIAL 811



## GENERAL NOTES

- FOR THE PURPOSE OF THE CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:  
 CONTRACTORS – TO BE DETERMINED  
 SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)  
 OWNER – T-MOBILE
- 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 THE 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 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.
- "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE PROVIDED BY THE SUBCONTRACTOR.
- THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSED AND ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY CONTRACTOR.
- SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, 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.
- THE SUBCONTRACTOR SHALL PROTECT THE EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTORS EXPENSE TO THE SATISFACTION OF OWNER.
- SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIAL SUCH AS COAXIAL CABLE AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNERS DESIGNATED LOCATION.
- SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
- ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.
- ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
- ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCH UP ALL SCRATCHED AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
- CONSTRUCTION SHALL COMPLY WITH UMS SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF T-MOBILE SITES."
- SUBCONTRACTORS 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 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 ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

### 19. APPLICABLE BUILDING CODES:

SUBCONTRACTORS WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

- BUILDING CODE: 2022 CONNECTICUT STATE BUILDING CODE
- ELECTRICAL CODE: NFPA 70 NATIONAL ELECTRICAL CODE, 2020 EDITION
- LIGHTNING CODE: NFPA 780-2014 LIGHTNING PROTECTION CODE

SUBCONTRACTORS WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

- AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENT FOR STRUCTURAL CONCRETE
- AMERICAN INSTITUTE FOR STEEL CONSTRUCTION (AISC)
- MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION
- TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-H, STRUCTURAL STANDARDS FOR STEEL
- ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS A CONFLICT BETWEEN A GENERAL REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

## ELECTRICAL & GROUNDING NOTES

- THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE SPECIFIC (UL, LPI, OR NFPA) LIGHTNING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
- ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO LIGHTNING PROTECTION AND AS POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
- THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
- METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO THE BTS EQUIPMENT.
- EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS 2 AWG STRANDED COPPER FOR OUTDOOR BTS.
- EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
- APPROVED ANTIOXIDANT COATING (I.E. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
- ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
- ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
- MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
- METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWS COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
- ALL NEW STRUCTURE WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2 IN. OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50.
- 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 SPECIFICATIONS 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.
- RIGID STEEL CONDUITS SHALL BE GROUNDED AT BOTH ENDS.
- ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN OR THIN INSULATION.
- RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL ROOM AND PROPOSED CELL SITE POWER PEDESTAL 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 PROPOSED CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON DRAWING A-1. PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
- ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
- GROUNDING SHALL COMPLY WITH NEW ART. 250.
- 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 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 7 FEET OF PROPOSED EQUIPMENT OR CABINET TO MASTER GROUND BAR.
- CONNECTIONS TO MGB SHALL BE ARRANGED IN THREE MAIN GROUPS: SURGE PRODUCERS (COAXIAL CABLE GROUND KITS, TELCO AND POWER PANEL GROUND); (GROUNDING ELECTRODE RING OR BUILDING STEEL); NON-SURGING OBJECTS (EGB GROUND IN BTS UNIT)
- CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
- BOND ANTENNA MOUNTING BRACKETS. COAXIAL CABLE GROUND KITS AND ALNA TO EGB PLACES NEAR THE ANTENNA LOCATION.
- BOND ANTENNA EGB'S AND MGB TO WATER MAIN.
- TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION.
- BOND ANY METAL OBJECTS WITHIN 7 FEET OF PROPOSED EQUIPMENT OR CABINET TO MASTER GROUND BAR.
- VERIFY PROPOSED SERVICE UPGRADE WITH LOCAL UTILITY COMPANY PRIOR TO CONSTRUCTION.

## ABBREVIATIONS

AGL	ABOVE GRADE LEVEL	G.C.	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
AWG	AMERICAN WIRE GAUGE	MGB	MASTER GROUND BUS		
BCW	BARE COPPER WIRE	MIN	MINIMUM	TBD	TO BE DETERMINED
BTS	BASE TRANSCEIVER STATION	PROPOSED	NEW	TBR	TO BE REMOVED
EXISTING	EXISTING	N.T.S.	NOT TO SCALE	TBRR	TO BE REMOVED AND REPLACED
EG	EQUIPMENT GROUND	REF	REFERENCE	TYP	TYPICAL
EGR	EQUIPMENT GROUND RING	REQ	REQUIRED		

**T-Mobile**

**ELEVATED  
ENGINEERING**

976 TABOR ROAD, UNIT 6  
MORRIS PLAINS, NJ 07950  
862-242-8050

Documents prepared by Elevated Engineering, including this document, are to be used only for the specific project and specific use for which they were intended. Any extension of use to any other projects, by owner or by any other party, without the expressed written consent of Elevated Engineering, is done unlawfully and at the users own risk. If used in a way other than that specifically intended, user will hold Elevated Engineering, harmless from all claims and losses.

### SCHEDULE OF REVISIONS

7		
6		
5		
4	05/12/23	PER UPDATED CODE
3	09/28/22	REVISED GENERATOR LOCATION
2	08/22/22	REVISED PER CLIENT COMMENTS
1	08/16/22	ISSUED FOR CONSTRUCTION
0	08/03/22	INITIAL SUBMISSION

REV NO.	DATE	DESCRIPTION OF CHANGES
---------	------	------------------------

**DRAWN BY:** HMM

**CHECKED BY:** NDB

**SCALE:** AS NOTED

**JOB NO:** 22005-TRN

INFORMATION ON THIS SET OF DRAWINGS IS NOT FOR OFFICIAL USE UNLESS ACCOMPANIED BY THE STAMPED SEAL & SIGNATURE OF A PROFESSIONAL ENGINEER

**NICHOLAS D. BARILE**  
PROFESSIONAL ENGINEER, CT LIC. No. 28643

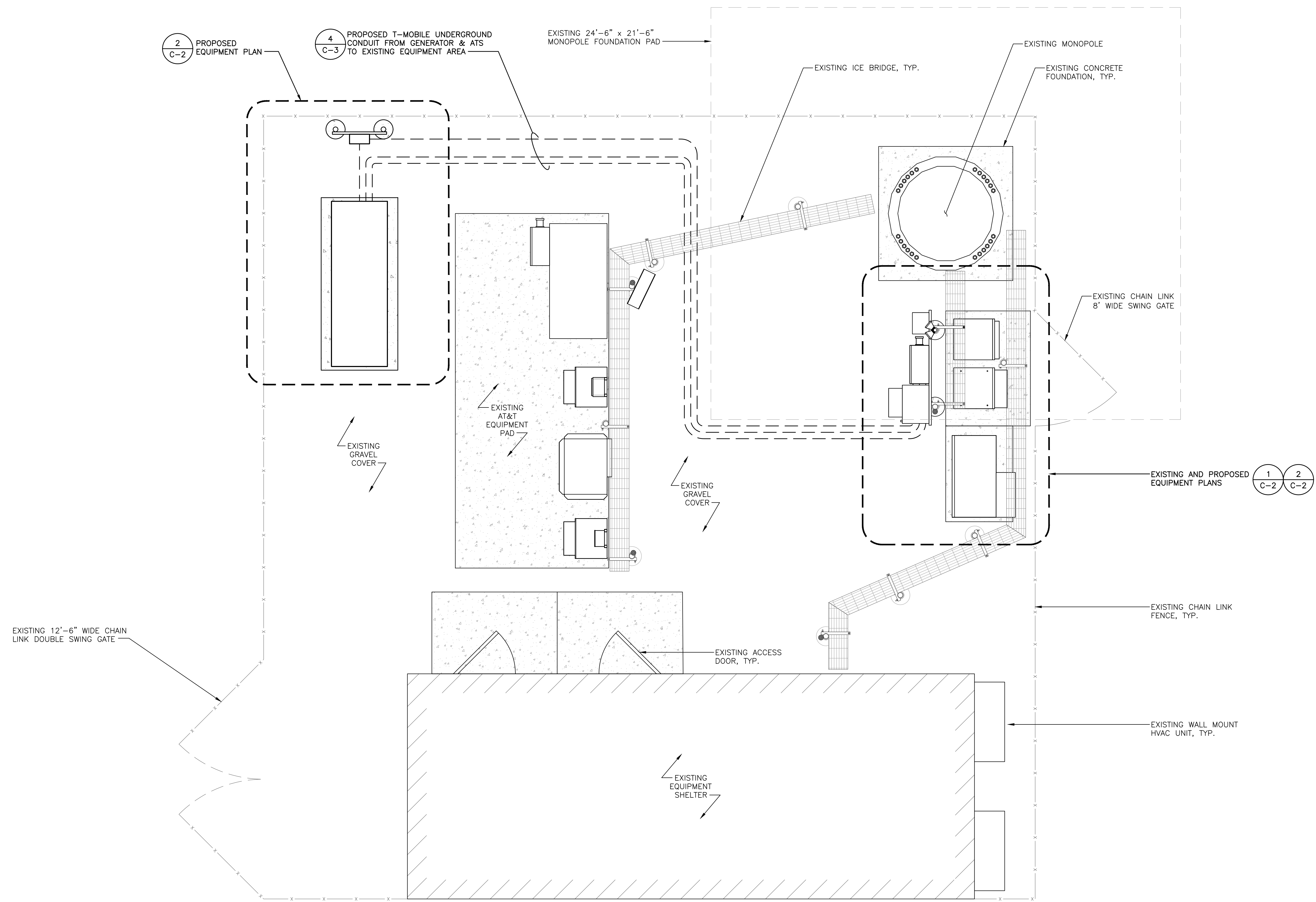
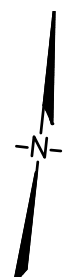
**SITE ID: CTNH510A  
AT&T GUILFORD MONOPOLE  
201 GRANITE ROAD  
GUILFORD, CT 06437  
NEW HAVEN HOUNTY**

**DRAWING TITLE:**

**GENERAL  
NOTES**

**DRAWING SHEET:**

**GN-1**



1  
C-1

**COMPOUND PLAN**  
SCALE: 3/8"=1'-0" (24"x36" SHEET)

0 1'-4" 2'-8" 5'-4"  
GRAPHIC SCALE: 3/8"=1'-0"



**ELEVATED ENGINEERING**

976 TABOR ROAD, UNIT 6  
MORRIS PLAINS, NJ 07950  
862-242-8050

Documents prepared by Elevated Engineering, including this document, are to be used only for the specific project and specific use for which they were intended. Any extension of use to any other projects, by owner or by any other party, without the expressed written consent of Elevated Engineering, is done unlawfully and at the users own risk. If used in a way other than that specifically intended, user will hold Elevated Engineering, harmless from all claims and losses.

**SCHEDULE OF REVISIONS**

REV NO.	DATE	DESCRIPTION OF CHANGES
7		
6		
5		
4	05/12/23	PER UPDATED CODE
3	09/26/22	REVISED GENERATOR LOCATION
2	08/22/22	REVISED PER CLIENT COMMENTS
1	08/16/22	ISSUED FOR CONSTRUCTION
0	08/03/22	INITIAL SUBMISSION

<b>DRAWN BY:</b>	HMM
<b>CHECKED BY:</b>	NDB
<b>SCALE:</b>	AS NOTED
<b>JOB NO:</b>	22005-TRN

INFORMATION ON THIS SET OF DRAWINGS IS NOT FOR OFFICIAL USE UNLESS ACCOMPANIED BY THE STAMPED SEAL & SIGNATURE OF A PROFESSIONAL ENGINEER

**NICHOLAS D. BARILE**  
PROFESSIONAL ENGINEER, CT LIC. No. 28643

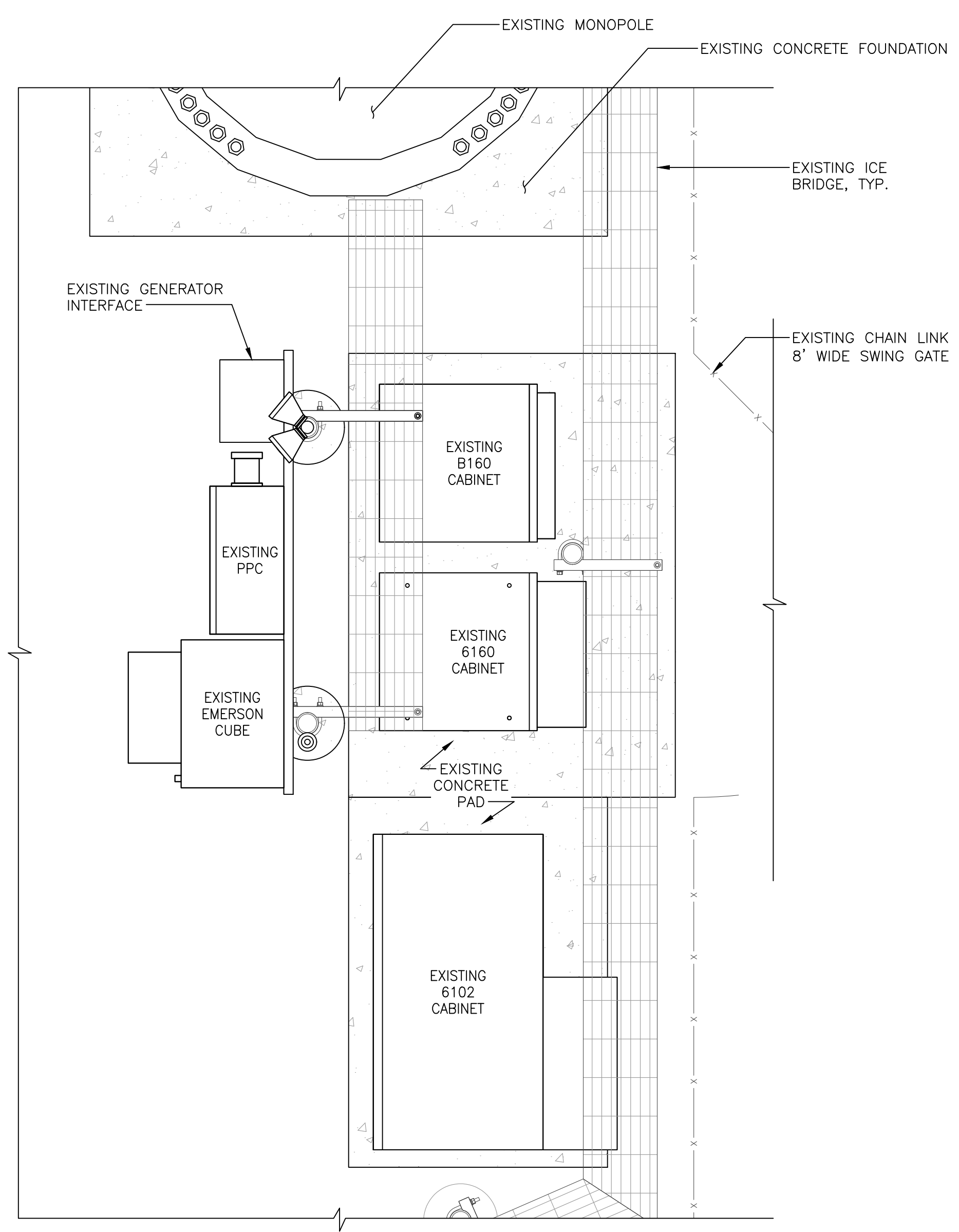
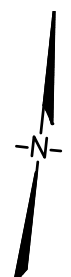
**SITE ID: CTNH510A**  
**AT&T GUILFORD MONOPOLE**  
**201 GRANITE ROAD**  
**GUILFORD, CT 06437**  
**NEW HAVEN HOUNTY**

**DRAWING TITLE:**

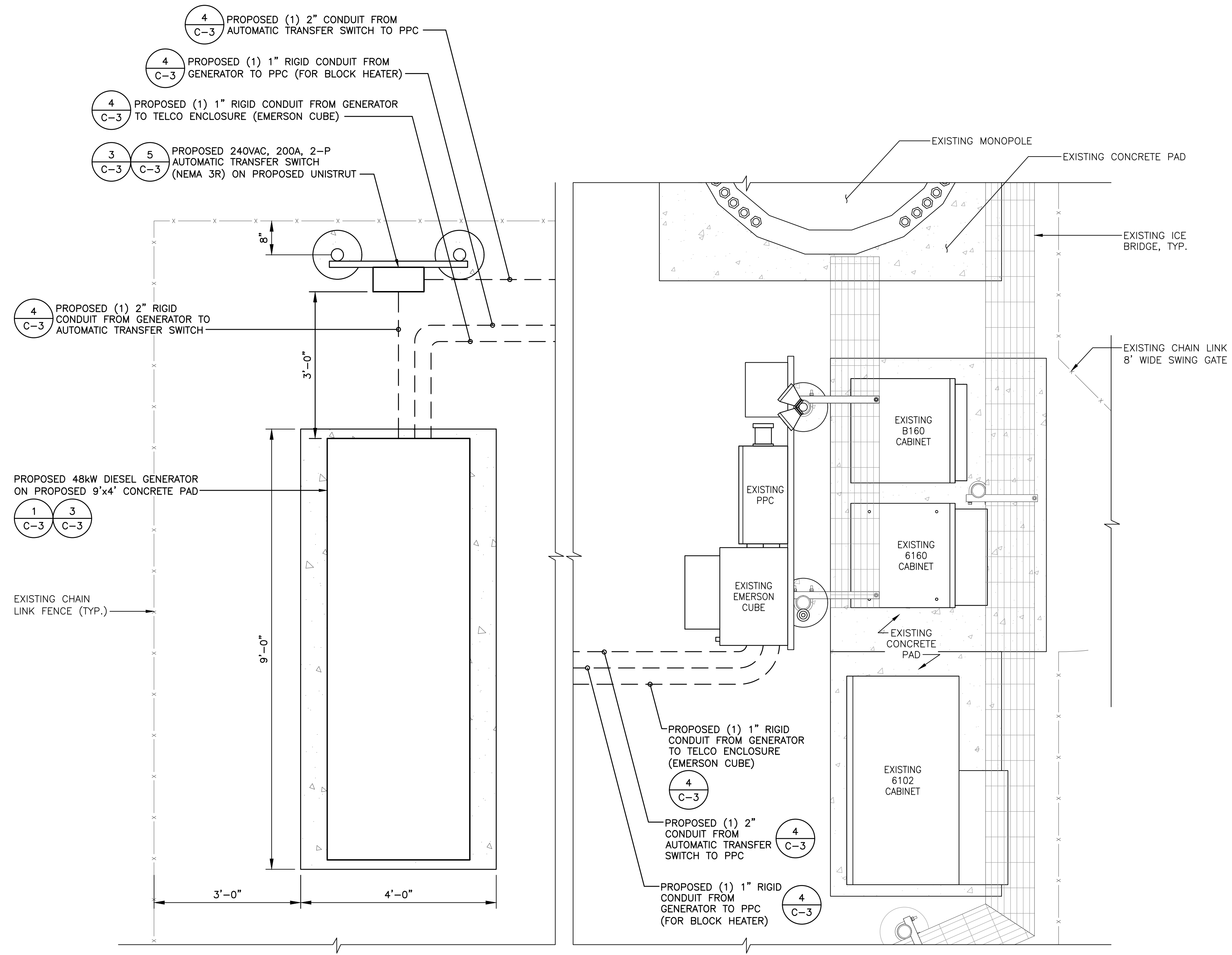
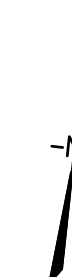
**COMPOUND PLAN**

**DRAWING SHEET:**

**C-1**



1  
C-2 EXISTING EQUIPMENT PLAN  
SCALE: 3/4"=1'-0" (24"x36" SHEET)



2  
C-2 PROPOSED EQUIPMENT PLAN  
SCALE: 3/4"=1'-0" (24"x36" SHEET)

**T-Mobile**

**ELEVATED ENGINEERING**

976 TABOR ROAD, UNIT 6  
MORRIS PLAINS, NJ 07950  
862-242-8050

Documents prepared by Elevated Engineering, including this document, are to be used only for the specific project and specific use for which they were intended. Any extension of use to any other projects, by owner or by any other party, without the expressed written consent of Elevated Engineering, is done unlawfully and at the users own risk. If used in a way other than that specifically intended, user will hold Elevated Engineering, harmless from all claims and losses.

**SCHEDULE OF REVISIONS**

REV NO.	DATE	DESCRIPTION OF CHANGES
7		
6		
5		
4	05/12/23	PER UPDATED CODE
3	09/26/22	REVISED GENERATOR LOCATION
2	08/22/22	REVISED PER CLIENT COMMENTS
1	08/16/22	ISSUED FOR CONSTRUCTION
0	08/03/22	INITIAL SUBMISSION

**DRAWN BY:** HMM  
**CHECKED BY:** NDB  
**SCALE:** AS NOTED  
**JOB NO:** 22005-TRN

INFORMATION ON THIS SET OF DRAWINGS IS NOT FOR OFFICIAL USE UNLESS ACCOMPANIED BY THE STAMPED SEAL & SIGNATURE OF A PROFESSIONAL ENGINEER

**NICHOLAS D. BARILE**  
PROFESSIONAL ENGINEER, CT LIC. No. 28643

**SITE ID: CTNH510A**  
**AT&T GUILFORD MONOPOLE**  
**201 GRANITE ROAD**  
**GUILFORD, CT 06437**  
**NEW HAVEN HOUNTY**

**DRAWING TITLE:**

**EQUIPMENT PLANS**

**DRAWING SHEET:**

**C-2**



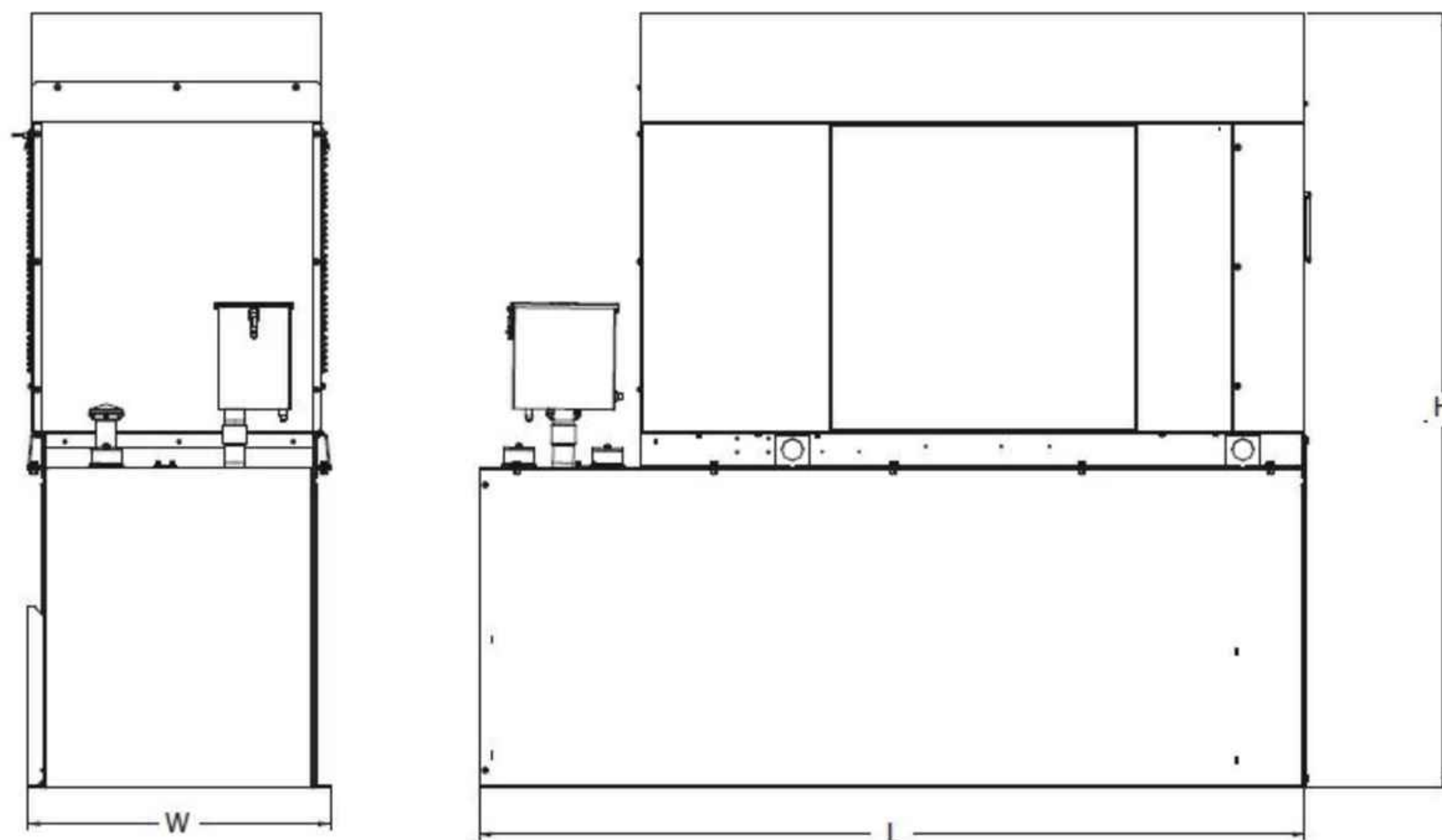
**RD048 | 3.4L | 48kW**

**INDUSTRIAL DIESEL GENERATOR SET**

EPA Certified Stationary Emergency

**GENERAC** INDUSTRIAL POWER

Model Number  
48kW: G0071940



**Weights and Dimensions**

Unit Weight - lbs	Unit Weight with Skid - lbs	Dimensions (L x W x H) - in
2,915	2,954	103.4 (2,625) x 35.0 (888) x 90.0 (2,286)

**1 GENERATOR DETAILS**  
C-3 SCALE: 1/2"=1'-0" (24"x36" SHEET)

**48kW 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	52
Run Hours 75% Load	67
Run Hours 50% Load	96

**Sound Emission Data**

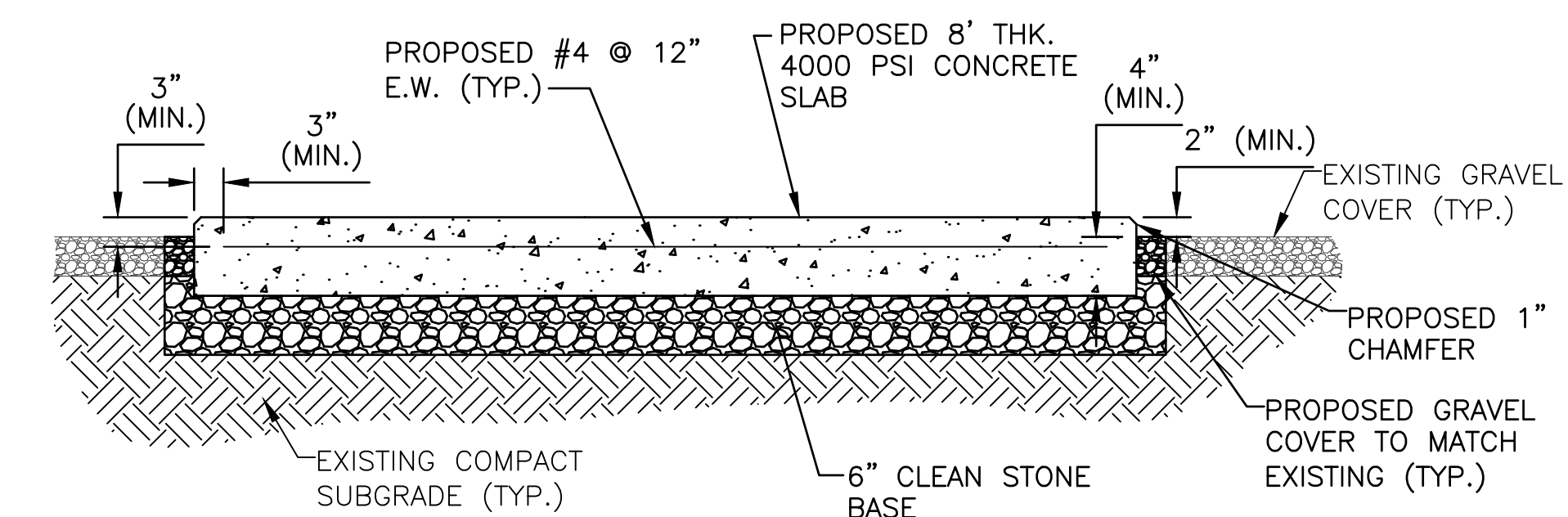
Rated Load Sound Output at 23ft - dB(A)	65
---	----

\* All measurements are approximate and for estimation purposes only.

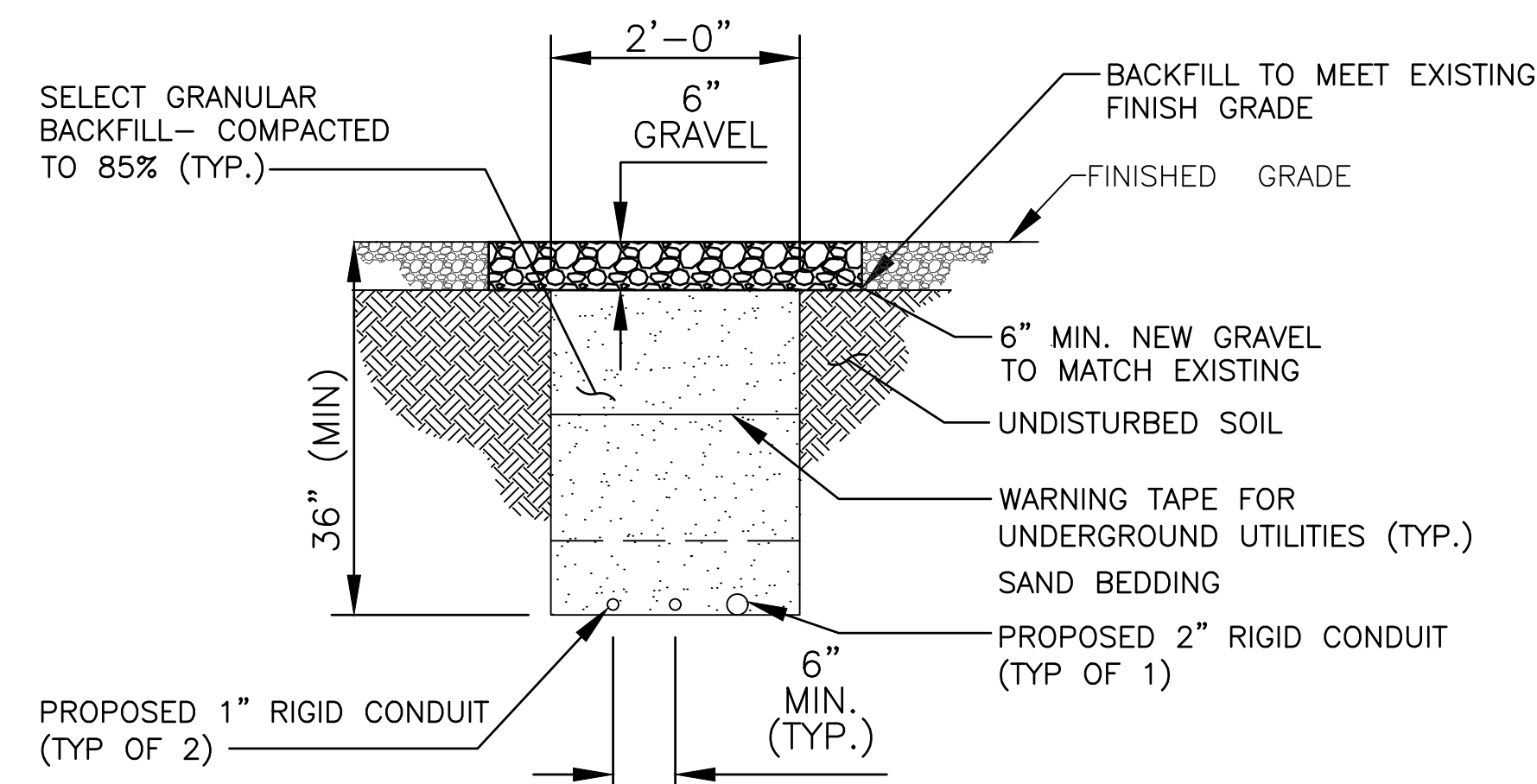


GENERAC RXSC200A43 AUTOMATIC TRANSFER SWITCH	
PHASE	1-PHASE
VOLTAGE	120/240
ENCLOSURE TYPE	NEMA 3R
AMPS	200
DIMENSIONS	17.3"(L) x 12.5"(W)

**2 PROPOSED ATS**  
C-3 SCALE: 1/2"=1'-0" (24"x36" SHEET)



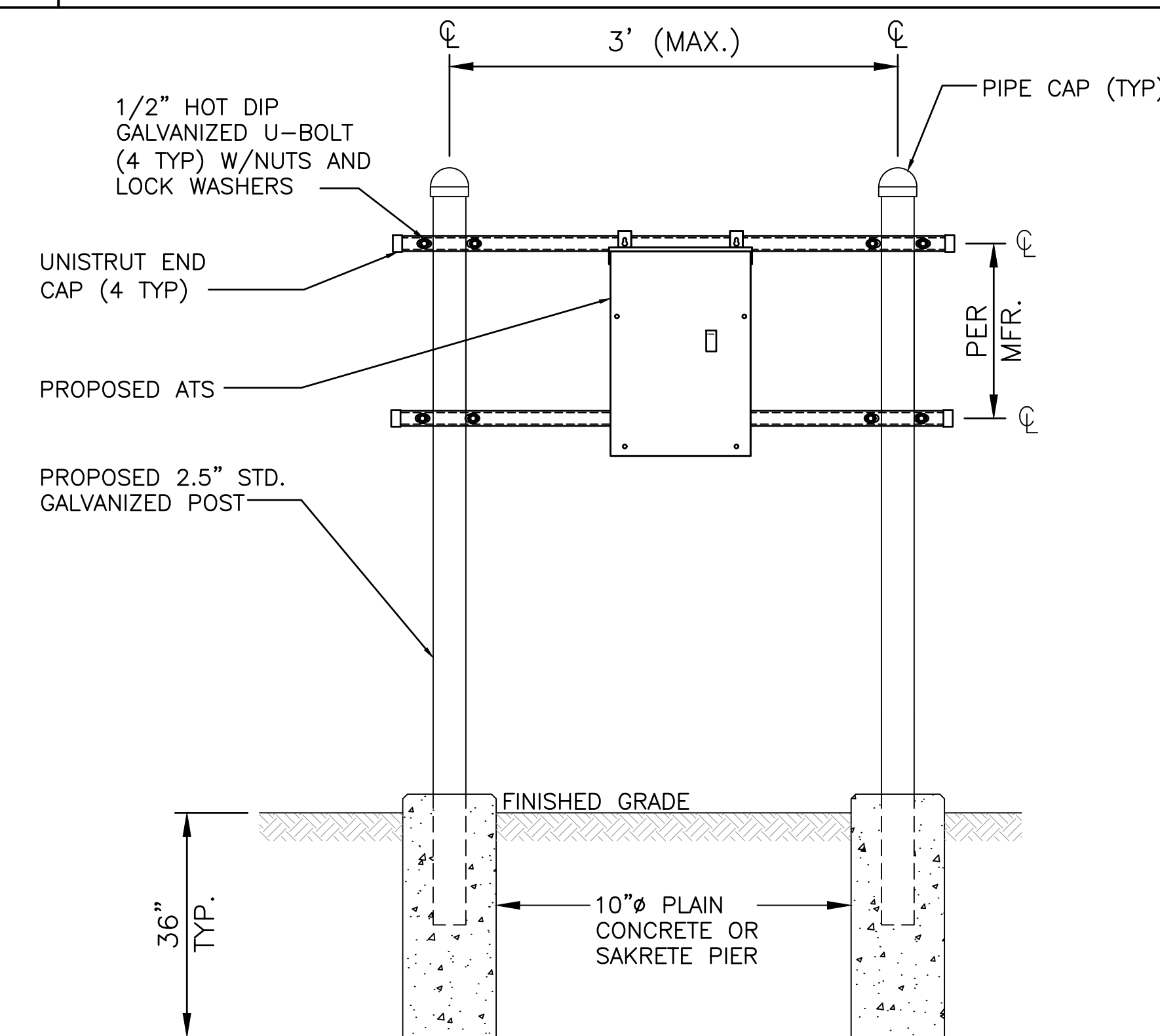
**3 PROPOSED CONCRETE PAD**  
C-3 SCALE: 1/2"=1'-0" (24"x36" SHEET)



**NOTE:**

- EXCAVATE EXISTING SUBGRADE AS REQUIRED TO INSTALL CONDUITS IN ACCORDANCE WITH OSHA AND ALL APPLICABLE CODES.

**4 PROPOSED TRENCH DETAIL**  
C-3 SCALE: 1/2"=1'-0" (24"x36" SHEET)



**5 PROPOSED ATS MOUNT**  
C-3 SCALE: 3/4"=1'-0" (24"x36" SHEET)

**T-Mobile**

**ELEVATED ENGINEERING**

976 TABOR ROAD, UNIT 6  
MORRIS PLAINS, NJ 07950  
862-242-8050

Documents prepared by Elevated Engineering, including this document, are to be used only for the specific project and specific use for which they were intended. Any extension of use to any other projects, by owner or by any other party, without the expressed written consent of Elevated Engineering, is done unlawfully and at the users own risk. If used in a way other than that specifically intended, user will hold Elevated Engineering, harmless from all claims and losses.

**SCHEDULE OF REVISIONS**

REV NO.	DATE	DESCRIPTION OF CHANGES
7		
6		
5		
4	05/12/23	PER UPDATED CODE
3	09/26/22	REVISED GENERATOR LOCATION
2	08/22/22	REVISED PER CLIENT COMMENTS
1	08/16/22	ISSUED FOR CONSTRUCTION
0	08/03/22	INITIAL SUBMISSION

**DRAWN BY:** HMM

**CHECKED BY:** NDB

**SCALE:** AS NOTED

**JOB NO:** 22005-TRN

INFORMATION ON THIS SET OF DRAWINGS IS NOT FOR OFFICIAL USE UNLESS ACCOMPANIED BY THE STAMPED SEAL & SIGNATURE OF A PROFESSIONAL ENGINEER

**NICHOLAS D. BARILE**  
PROFESSIONAL ENGINEER, CT LIC. No. 28643

**SITE ID: CTNH510A**  
**AT&T GUILFORD MONOPOLE**  
**201 GRANITE ROAD**  
**GUILFORD, CT 06437**  
**NEW HAVEN HOUNTY**

**DRAWING TITLE:**

**EQUIPMENT DETAILS**

**DRAWING SHEET:**

**C-3**

Documents prepared by Elevated Engineering, including this document, are to be used only for the specific project and specific use for which they were intended. Any extension of use to any other projects, by owner or by any other party, without the expressed written consent of Elevated Engineering, is done unlawfully and at the users own risk. If used in a way other than that specifically intended, user will hold Elevated Engineering, harmless from all claims and losses.

**SCHEDULE OF REVISIONS**

REV NO.	DATE	DESCRIPTION OF CHANGES
7		
6		
5		
4	05/12/23	PER UPDATED CODE
3	09/26/22	REVISED GENERATOR LOCATION
2	08/22/22	REVISED PER CLIENT COMMENTS
1	08/16/22	ISSUED FOR CONSTRUCTION
0	08/03/22	INITIAL SUBMISSION

<b>DRAWN BY:</b>	HMM
<b>CHECKED BY:</b>	NDB
<b>SCALE:</b>	AS NOTED
<b>JOB NO:</b>	22005-TRN

INFORMATION ON THIS SET OF DRAWINGS IS NOT FOR OFFICIAL USE UNLESS ACCOMPANIED BY THE STAMPED SEAL & SIGNATURE OF A PROFESSIONAL ENGINEER

**NICHOLAS D. BARILE**  
PROFESSIONAL ENGINEER, CT LIC. No. 28643

**SITE ID: CTNH510A**  
**AT&T GUILFORD MONOPOLE**  
**201 GRANITE ROAD**  
**GUILFORD, CT 06437**  
**NEW HAVEN HOUNTY**

**DRAWING TITLE:**

**ONE-LINE DIAGRAM**

**DRAWING SHEET:**

**E-1**

**ELECTRICAL POWER SYMBOLS**

SYMBOL	DESCRIPTION
	ELECTRICAL PANELBOARD/ENCLOSURE
	GENERATOR
	CIRCUIT BREAKER
	GROUNDING ELECTRODE

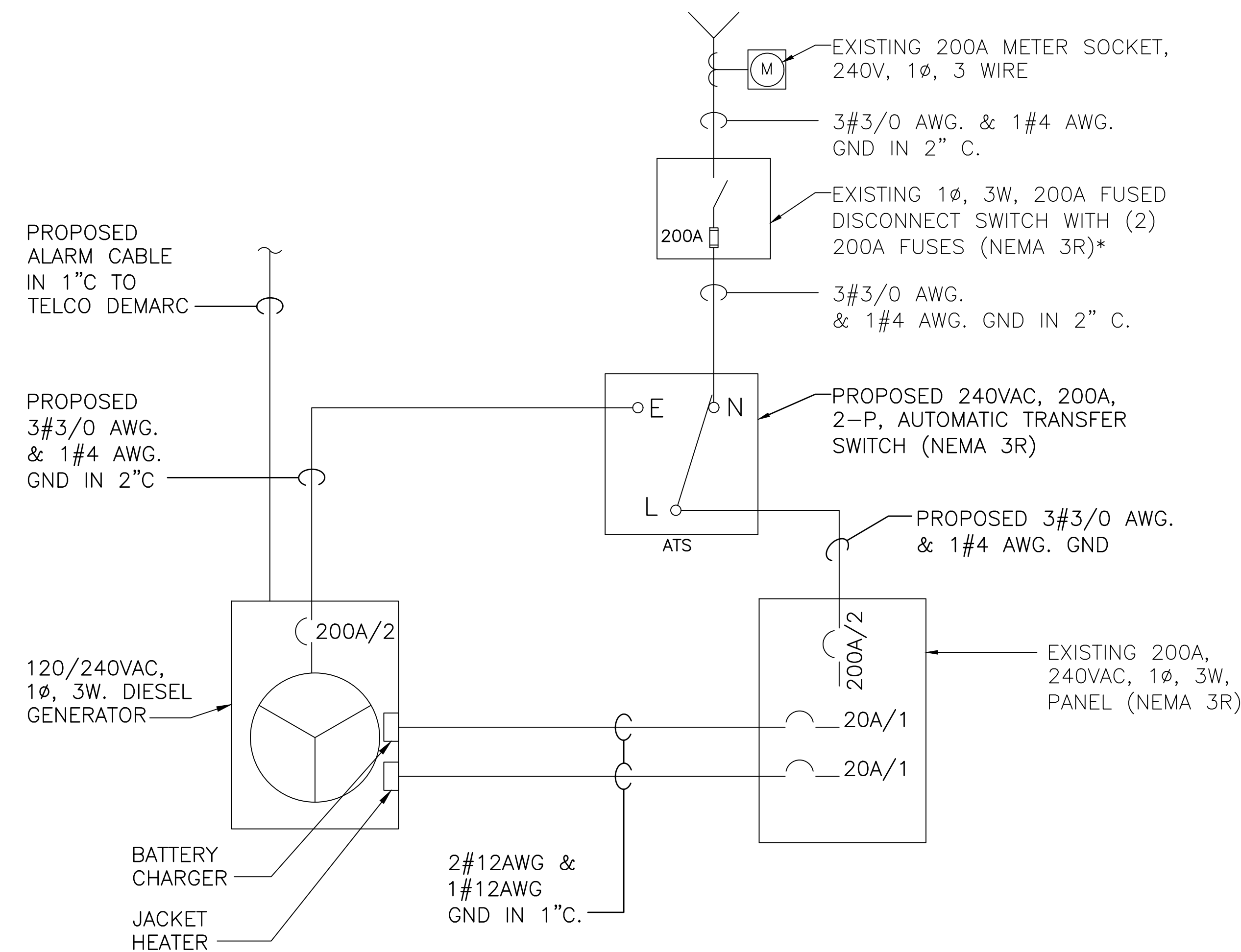
**ABBREVIATIONS**

A	AMPERE
AC	ALTERNATING CURRENT
AFCI	ARC FLASH CIRCUIT INTERRUPTER
AWG	AMERICAN WIRE GAUGE
C	CONDUIT, CORRIDOR
CT	CURRENT TRANSFORMER
EX	EXISTING
GND	GROUND
GFI	GROUND FAULT INTERRUPTER
KW	KILOWATT
MSB	MAIN SWITCHBOARD
N.T.S.	NOT TO SCALE
OCPPD	OVERCURRENT PROTECTIVE DEVICE
P	POLE(S)
PH, φ	PHASE
PNL	PANEL
SE	SERVICE ENTRANCE
SW	SWITCH
TYP	TYPICAL
UNOT	UNLESS OTHERWISE NOTED
V	VOLT
W	WATT, WIRE
WP	WATERPROOF
G	GENERATOR
M	METER
CB	CIRCUIT BREAKER

**NOTES:**

- CONTRACTOR IS TO FIELD VERIFY ALL EXISTING ITEMS SHOWN ON THE ELECTRICAL ONE-LINE DIAGRAM AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- ALL NEW WIRING SHALL BE COPPER. ALL CONDUCTORS LARGER THAN #10 AWG SHALL BE THWN-2, THW-2, RHW-2, OR XHHW-2 WIRE UNLESS NOTED OTHERWISE.

FINAL ELECTRICAL SERVICE LAYOUT SUBJECT TO UTILITY COORDINATION



1 ONE-LINE DIAGRAM  
E-1 SCALE: N.T.S.





Documents prepared by Elevated Engineering, including this document, are to be used only for the specific project and specific use for which they were intended. Any extension of use to any other projects, by owner or by any other party, without the expressed written consent of Elevated Engineering, is done unlawfully and at the users own risk. If used in a way other than that specifically intended, user will hold Elevated Engineering, harmless from all claims and losses.

**SCHEDULE OF REVISIONS**

7		
6		
5		
4	05/12/23	PER UPDATED CODE
3	09/26/22	REVISED GENERATOR LOCATION
2	08/22/22	REVISED PER CLIENT COMMENTS
1	08/16/22	ISSUED FOR CONSTRUCTION
0	08/03/22	INITIAL SUBMISSION

REV NO.	DATE	DESCRIPTION OF CHANGES
---------	------	------------------------

**DRAWN BY:** HMM

**CHECKED BY:** NDB

**SCALE:** AS NOTED

**JOB NO:** 22005-TRN

INFORMATION ON THIS SET OF DRAWINGS IS NOT FOR OFFICIAL USE UNLESS ACCOMPANIED BY THE STAMPED SEAL & SIGNATURE OF A PROFESSIONAL ENGINEER

**NICHOLAS D. BARILE**  
PROFESSIONAL ENGINEER, CT LIC. No. 28643

**SITE ID: CTNH510A**  
**AT&T GUILFORD MONOPOLE**  
**201 GRANITE ROAD**  
**GUILFORD, CT 06437**  
**NEW HAVEN HOUNTY**

**DRAWING TITLE:**

**GROUNDING  
PLAN & NOTES**

**DRAWING SHEET:**

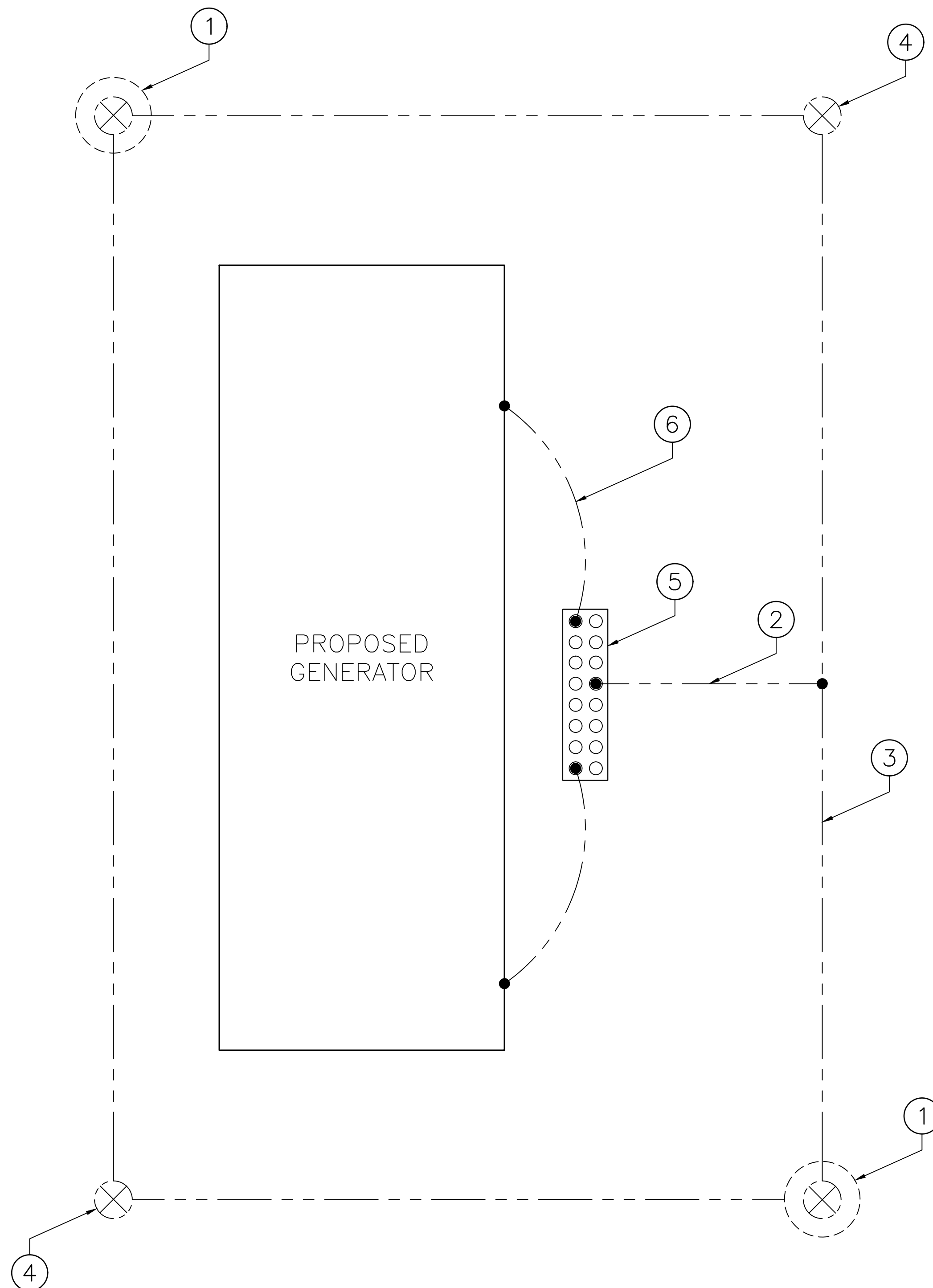
**G-1**

**GROUNDING NOTES:**

- ① GROUND ROD INSPECTION WELL (TYP. 2)
- ② #2 AWG, SOLID TINNED CU. TO BOND MAIN GROUND BAR TO GROUND RING (TYP. 2)
- ③ #2 AWG, SOLID TINNED CU. 30" BELOW GRADE (GROUND RING)
- ④ 5/8"Ø x 10' CU. CLAD GROUND ROD (TYP. 6)
- ⑤ MAIN GROUND BAR INSTALLED ON EQUIPMENT FRAME
- ⑥ #2 AWG, STRANDED INSULATED CU. TO BOND GENERATOR TO MAIN GROUND BAR (TYP.)
- ⑦ #2 AWG, SOLID TINNED CU. TO BOND EQUIPMENT STEEL

**GROUNDING NOTES:**

1. THE EQUIPMENT BONDING JUMPER SHALL BE PERMITTED TO BE INSTALLED INSIDE OR OUTSIDE OF A RACEWAY OR ENCLOSURE. WHERE INSTALLED ON OUTSIDE, THE LENGTH OF THE EQUIPMENT BONDING JUMPER SHALL NOT EXCEED 6 FEET AND SHALL BE ROUTED WITH THE RACEWAY OR ENCLOSURE. REFER TO NEC 2008 - 250.102 (E)
2. ALL GROUNDING DEVICES SHALL BE U.L. APPROVED OR LISTED FOR THEIR INTENDED USE.
3. ALL WIRES SHALL BE AWG THHN/THWN COPPER UNLESS NOTED OTHERWISE.
4. GROUNDING CONNECTIONS TO GROUND RODS, GROUND RING WIRE, TOWER BASE AND FENCE POSTS SHALL BE EXOTHERMIC ("CADWELDS") UNLESS NOTED OTHERWISE. CLEAN SURFACES TO SHINY METAL. WHERE GROUND WIRES ARE CADWELDED TO GALVANIZED SURFACES, SPRAY CADWELD WITH GALVANIZING PAINT.
5. GROUNDING CONNECTIONS TO GROUND BARS ARE TO BE TWO-HOLE BRASS MECHANICAL CONNECTORS WITH STAINLESS STEEL HARDWARE (INCLUDING SCREW SET.) CLEAN GROUND BAR TO SHINY METAL. AFTER MECHANICAL CONNECTION, TREAT WITH PROTECTIVE ANTIOXIDANT COATING.
6. GROUND COAXIAL CABLE SHIELDS AT BOTH ENDS WITH MANUFACTURER'S GROUNDING KITS.
7. ROUTE GROUNDING CONDUCTORS THE SHORTEST AND STRAIGHTEST PATH POSSIBLE. BEND GROUNDING LEADS WITH A MINIMUM 12" RADIUS.
8. INSTALL #2 AWG GREEN-INSULATED STRANDED WIRE FOR ABOVE GRADE GROUNDING AND #2 BARE TINNED COPPER WIRE FOR BELOW GRADE GROUNDING UNLESS OTHERWISE NOTED.
9. GROUNDING CONNECTIONS SHALL BE EXOTHERMIC TYPE ("CADWELDS") TO ANTENNA MOUNTS AND GROUND RING. REMAINING GROUNDING CONNECTIONS SHALL BE COMPRESSION FITTINGS. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO-HOLE LUGS.
10. EXOTHERMIC WELDS SHALL BE MADE IN ACCORDANCE WITH ERICO PRODUCTS BULLETIN A-A.
11. CONSTRUCTION OF GROUND RING AND CONNECTIONS TO EXISTING GROUND RING SYSTEM SHALL BE DOCUMENTED WITH PHOTOGRAPHS PRIOR TO BACKFILLING SITE. PROVIDE PHOTOS TO CARRIER'S CONSTRUCTION MANAGER.
12. ALL GROUND LEADS EXCEPT THOSE TO THE EQUIPMENT ARE TO BE #2/0 TINNED. ALL EXTERIOR GROUND BARS TINNED COPPER.
13. PRIOR TO INSTALLING LUGS ON GROUND WIRES, APPLY THOMAS & BETTS KOPR-SHIELD (TM OF JET LUBE INC.). PRIOR TO BOLTING GROUND WIRE LUGS TO GROUND BARS, APPLY KOPR-SHIELD OR EQUAL.
14. ENGAGE AN INDEPENDENT ELECTRICAL TESTING FIRM TO TEST AND VERIFY THAT IMPEDANCE DOES NOT EXCEED FIVE OHMS TO GROUND BY MEANS OF "FALL OF POTENTIAL TEST". TEST SHALL BE WITNESSED BY CARRIER REPRESENTATIVE, AND RECORDED ON CARRIER'S "GROUND RESISTANCE TEST" FORM.
15. WHERE BARE COPPER GROUND WIRES ARE ROUTED FROM ANY CONNECTION ABOVE GRADE TO GROUND RING, INSTALL WIRE IN 3/4" PVC SLEEVE, FROM 1' BELOW GRADE AND SEAL TOP WITH SILICONE MATERIAL.
16. PREPARE ALL BONDING SURFACES FOR GROUNDING CONNECTIONS BY REMOVING ALL PAINT AND CORROSION DOWN TO SHINY METAL. FOLLOWING CONNECTION, APPLY APPROPRIATE ANTI-OXIDIZATION PAINT.
17. ANY SITE WHERE THE EQUIPMENT (BTS, CABLE BRIDGE, PPC, GENERATOR, ETC.) IS LOCATED WITHIN 6 FEET OF METAL FENCING, THE BGR SHALL BE BONDED TO THE NEAREST FENCE POST USING (2) RUNS OF #2 BARE TINNED COPPER WIRE.



1 GROUNDING PLAN  
G-1 SCALE: NTS



## Protector™ Series

### Diesel Generator Set

#### INCLUDES:

- Two Line LCD Multilingual Digital Evolution™ Controller (English/Spanish/French/Portuguese) with external viewing window for easy indication of generator status and breaker position.
- Isochronous Electronic Governor
- Sound Attenuated Aluminum Enclosure
- Smart Battery Charger
- UV/Ozone Resistant Hoses
- ±1% Voltage Regulation
- Integrated Base Tank Provides Up to 40 Hours of Run Time
- 5 Year Limited Warranty\*
- UL 2200 / UL142 / ULC S601 Listed
- Meets code requirements for External Vent and Fill

#### Standby Power Rating

- Model RD015 - 15 kW 60 Hz
- Model RD020 - 20 kW 60 Hz
- Model RD030 - 30 kW 60 Hz
- Model RD048 - 48 kW 60 Hz (single phase only)
- Model RD050 - 50 kW 60 Hz (three phase only)



QUIET-TEST™



\*Built in the USA using domestic and foreign parts

Meets EPA Emission Regulations  
CA/MA Emissions Compliant

\* 5 year warranty applicable to U.S. and Territories/Canada. International warranty is 3 year limited.

## FEATURES

- **INNOVATIVE DESIGN & PROTOTYPE TESTING** are key components of GENERAC'S success in "IMPROVING POWER BY DESIGN." But it doesn't stop there. Total commitment to component testing, reliability testing, environmental testing, destruction and life testing, plus testing to applicable CSA, NEMA, EGSA, and other standards, allows you to choose GENERAC POWER SYSTEMS with the confidence that these systems will provide superior performance.
- **SOLID-STATE, FREQUENCY COMPENSATED VOLTAGE REGULATION.** This state-of-the-art power maximizing regulation system is standard on all Generac models. It provides optimized FAST RESPONSE to changing load conditions and MAXIMUM MOTOR STARTING CAPABILITY by electronically torque-matching the surge loads to the engine. Digital voltage regulation at ±1%.
- **TEST CRITERIA:**
  - ✓ PROTOTYPE TESTED
  - ✓ SYSTEM TORSIONAL TESTED
  - ✓ NEMA MG1-22 EVALUATION
  - ✓ MOTOR STARTING ABILITY
- **SINGLE SOURCE SERVICE RESPONSE** from Generac's extensive dealer network provides parts and service know-how for the entire unit, from the engine to the smallest electronic component.
- **GENERAC TRANSFER SWITCHES.** Long life and reliability are synonymous with GENERAC POWER SYSTEMS. One reason for this confidence is that the GENERAC product line includes its own transfer systems and controls for total system compatibility.

**15 • 20 • 30 • 48 • 50 kW****application & engineering data****GENERATOR SPECIFICATIONS**

Type	Synchronous
Rotor Insulation Class	H (15 & 20 kW) or F (30, 48 & 50 kW)
Stator Insulation Class	H
Telephone Interference Factor (TIF)	<50
Alternator Output Leads 1-Phase	3 wire
Alternator Output Leads 3-Phase	6 wire
Bearings	Single Sealed Cartridge
Coupling	Direct, Flexible Disc
Excitation System	Direct

**VOLTAGE REGULATION**

Type	Electronic
Sensing	Single Phase
Regulation	± 1%
Features	Adjustable Voltage & Gain

**GOVERNOR SPECIFICATIONS**

Type	Electronic Isochronous
Steady State Regulation	± 0.25%

**ELECTRICAL SYSTEM**

Battery Charge Alternator	50 Amp (15 & 20 kW) or 70 Amp (30, 48 & 50 kW)
Smart Battery Charger	2 Amp
Recommended Battery (battery not included)	Group 27F, 700 CCA
System Voltage	12 Volts

**GENERATOR FEATURES**

<p>Revolving field heavy duty generator          Directly connected to the engine          Operating temperature rise 120°C above a 40°C ambient          Class H insulation is NEMA rated          Class F insulation is NEMA rated          All models fully prototype tested</p>
---

**ENCLOSURE FEATURES**

Aluminum weather protective enclosure	Ensures protection against mother nature. Electrostatically applied textured epoxy paint for added durability.
Enclosed critical grade muffler	Quiet, critical grade muffler is mounted inside the unit to prevent injuries and maximize sound dampening.
Small, compact, attractive	Makes for an easy, eye appealing installation.
SAE	Sound attenuated enclosure ensures quiet operation.

(All ratings in accordance with BS5514, ISO3046, ISO8528, SAE J1349 and DIN6271)

## 15 • 20 • 30 • 48 • 50 kW

## application & engineering data

### ENGINE SPECIFICATIONS: 15 & 20 kW

Make	Generac
Model	In-line
Cylinders	4
Displacement (Liters)	2.28
Bore (in./mm)	3.46/88
Stroke (in./mm)	3.70/94
Compression Ratio	21.3:1
Intake Air System	Naturally Aspirated
Cylinder Head Type	Cast Iron OHV
Piston Type	Aluminum
EPA Emissions Compliance	Emergency Stationary

### ENGINE SPECIFICATIONS: 30 kW

Make	Generac
Model	In-line
Cylinders	4
Displacement (Liters)	2.4
Bore (in./mm)	3.54/90
Stroke (in./mm)	3.70/94
Compression Ratio	21.3:1
Intake Air System	Turbocharged
Cylinder Head Type	Cast Iron OHV
Piston Type	Aluminum
EPA Emissions Compliance	Emergency Stationary

### ENGINE SPECIFICATIONS: 48/50 kW

Make	Generac
Model	In-Line
Cylinders	4
Displacement (Liters)	3.4
Bore in/mm	3.86/98
Stroke in/mm	4.45/113
Compression Ratio	18.5:1
Intake Air System	Turbocharged/Aftercooled
Cylinder Head Type	Cast Iron OHV
Piston Type	Aluminum
EPA Emissions Compliance	Emergency Stationary

### WEIGHTS AND DIMENSIONS

	15 kW	20 kW	30 kW	48 kW	50 kW
Weight (lb/kg)	1380/626		1927/874	2197/997	
Dimensions (LxWxH) (in/cm)	81 x 31 x 50/205 x 78 x 128		95 x 35 x 57/242 x 89 x 145		

### ENGINE LUBRICATION SYSTEM

Oil Pump Type	Gear
Oil Filter Type	Full flow spin-on canister
Crankcase Capacity (quarts/liters)	6.87/6.5 - 15 & 20 kW
	6.8/6.4 - 30 kW
	7.4/7 - 48 & 50 kW

### ENGINE COOLING SYSTEM

Type	Pressurized radiator - 15 & 20 kW Closed recovery - 30, 48 & 50 kW
Water Pump	Pre-lubed, self-sealing
Fan Speed (rpm)	1800 - 15 & 20 kW
	2061 - 30 kW
	2029 - 48 & 50 kW
Fan Diameter (in./mm)	18.11/460 (15 & 20 kW) 22/559 (30, 48 & 50 kW)
Fan Mode	Pusher

### FUEL SYSTEM

Fuel Type	Ultra Low Sulfur Diesel Fuel
Fuel Pump Type	Mechanical Engine Driven Gear
Injector Type	Mechanical
Fuel Supply Line (mm/in)	7.94/0.31 (ID)
Fuel Return Line (mm/in)	7.94/0.31 (ID)
Fuel Specification	ASTM
Fuel Filtering (microns)	5 - 15, 20 & 30 kW
	10 - 48 & 50 kW

### TANK SPECIFICATIONS

Total Size (gallons/liters)	34/128.7 - 15 & 20 kW
	62/234.7 - 30, 48 & 50 kW
Usable Size (gallons/liters)	32/121.1 - 15 & 20 kW
	57/215.8 - 30, 48 & 50 kW
Run Time @ 1/2 Load (hrs)	41 - 15 kW
	31 - 20 kW
	38 - 30 kW
	25 - 48 & 50 kW
Listings	UL142
	ULC-S601

## 15 • 20 • 30 • 48 • 50 kW

## GENERATOR OUTPUT VOLTAGE/kW - 60 Hz

		kW (Standby)	Amp (Standby)	CB Size
RD015	120/240 V, 1Ø, 1.0 pf	15	62	70
	120/208 V, 3Ø, 0.8 pf	15	52	60
	120/240 V, 3Ø, 0.8 pf	15	45	50
RD020	120/240 V, 1Ø, 1.0 pf	20	83	100
	120/208 V, 3Ø, 0.8 pf	20	69	80
	120/240 V, 3Ø, 0.8 pf	20	60	70
RD030	120/240 V, 1Ø, 1.0 pf	30	125	150
	120/208 V, 3Ø, 0.8 pf	30	104	125
	120/240 V, 3Ø, 0.8 pf	30	90	100
	277/480 V, 3Ø, 0.8 pf	30	45	50
RD048/ RD050	120/240 V, 1Ø, 1.0 pf	48	200	200
	120/208 V, 3Ø, 0.8 pf	50	173	200
	120/240 V, 3Ø, 0.8 pf	50	150	175
	277/480 V, 3Ø, 0.8 pf	50	75	90

## SURGE CAPACITY IN AMPS

		Voltage Dip @ < .4 pf	
		15%	30%
RD015	120/240 V, 1Ø	53	129
	120/208 V, 3Ø	37	90
	120/240 V, 3Ø	32	78
RD020	120/240 V, 1Ø	87	211
	120/208 V, 3Ø	59	143
	120/240 V, 3Ø	51	124
RD030	120/240 V, 1Ø	66	168
	120/208 V, 3Ø	59	144
	120/240 V, 3Ø	51	125
RD048/ RD050	277/480 V, 3Ø	26	64
	120/240 V, 1Ø	69	189
	120/208 V, 3Ø	90	218
RD048/ RD050	120/240 V, 3Ø	78	189
	277/480 V, 3Ø	36	87

## ENGINE FUEL CONSUMPTION

		gal/hr	L/hr
RD015	25% of rated load	0.51	1.93
	50% of rated load	0.79	2.99
	75% of rated load	1.14	4.31
	100% of rated load	1.48	5.58
RD020	25% of rated load	0.67	2.6
	50% of rated load	1.05	3.97
	75% of rated load	1.52	5.32
	100% of rated load	1.98	7.48
RD030	25% of rated load	0.92	3.5
	50% of rated load	1.45	5.5
	75% of rated load	1.96	7.4
	100% of rated load	2.74	10.4
RD048/ RD050	25% of rated load	1.35	5.11
	50% of rated load	2.15	8.14
	75% of rated load	3.06	11.58
	100% of rated load	3.98	15.07

STANDBY RATING: Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046-1. Design and specifications are subject to change without notice.

**15 • 20 • 30 • 48 • 50 kW**

**operating data**

**ENGINE COOLING**

	15 kW	20 kW	30 kW	48/50 kW
Air flow (inlet air including alternator and combustion air in cfm/cmm)	2824/80	2824/80	3038/86	2824/80
System coolant capacity (gal/liters)	2.8/10.6	2.8/10.6	2.8/10.6	2.8/10.6
Heat rejection to coolant (BTU per hr/MJ per hr)	63,535/67	63,535/67	111,000/117.1	135,900/143.4
Maximum operation air temperature on radiator (°C/°F)	50/122			
Maximum ambient temperature (°C/°F)	50/122			

**COMBUSTION REQUIREMENTS**

Flow at rated power (cfm/cmm)	84.76/2.4	84.76/2.4	90/2.55	190/5.38
-------------------------------	-----------	-----------	---------	----------

**SOUND EMISSIONS**

Sound output in dB(A) at 23 ft (7 m) with generator in exercise mode*	65
Sound output in dB(A) at 23 ft (7 m) with generator operating at normal load*	70

\*Sound levels are taken from the front of the generator. Sound levels taken from other sides of the generator may be higher depending on installation parameters.

**EXHAUST**

Exhaust flow at rated output (cfm/cmm)	98.88/2.8	98.88/2.8	230/6.51	448/12.7
Exhaust temperature at rated output (°C/°F)	604.4/1120	604.4/1120	454.4/850	604.4/1120

**ENGINE PARAMETERS**

Rated Synchronous RPM	1800			
HP at rated kW	26.4	33.5	49	85

**POWER ADJUSTMENT FOR AMBIENT CONDITIONS**

Temperature Deration .....	3% for every 5 °C above 25 °C or 1.7% for every 5 °F above 77 °F
Altitude Deration (15, 30, 48 & 50 kW) .....	1% for every 100 m above 915 m or 3% for every 1000 ft above 3000 ft
Altitude Deration (20 kW) .....	1% for every 100 m above 305 m or 3% for every 1000 ft above 1000 ft

**CONTROLLER FEATURES**

2-Line Plain Text Multilingual LCD Display .....	Simple user interface for ease of operation.
Mode Buttons: Auto .....	Automatic Start on Utility failure. Programmable 7 day exerciser.
Manual .....	Start with starter control, unit stays on. If utility fails, transfer to load takes place.
Off .....	Stops unit. Power is removed. Control and charger still operate.
Ready to Run/Maintenance Messages .....	Standard
Engine Run Hours Indication .....	Standard
Programmable start delay between 2-1500 seconds .....	Standard (programmable by dealer only)
Utility Voltage Loss/Return to Utility Adjustable .....	From 140-171 V/190-216 V
Future Set Capable Exerciser/Exercise Set Error Warning .....	Standard
Run/Alarm/Maintenance Logs .....	50 Events Each
Engine Start Sequence .....	Cyclic cranking: 16 sec on, 7 rest (90 sec maximum duration).
Starter Lock-out .....	Starter cannot re-engage until 5 sec after engine has stopped.
Smart Battery Charger .....	Standard
Charger Fault/Missing AC Warning .....	Standard
Low Battery/Battery Problem Protection and Battery Condition Indication .....	Standard
Automatic Voltage Regulation with Over and Under Voltage Protection .....	Standard
Under-Frequency/Overload/Stepper Overcurrent Protection .....	Standard
Safety Fused/Fuse Problem Protection .....	Standard
Automatic Low Oil Pressure/High Oil Temperature Shutdown .....	Standard
Overcrank/Overspeed (@ 72 Hz)/RPM Sense Loss Shutdown .....	Standard
High Engine Temperature Shutdown .....	Standard
Internal Fault/Incorrect Wiring Protection .....	Standard
Common External Fault Capability .....	Standard
Field Upgradable Firmware .....	Standard

15 & 20 kW

Drawing #0K7025-C (1 of 2)

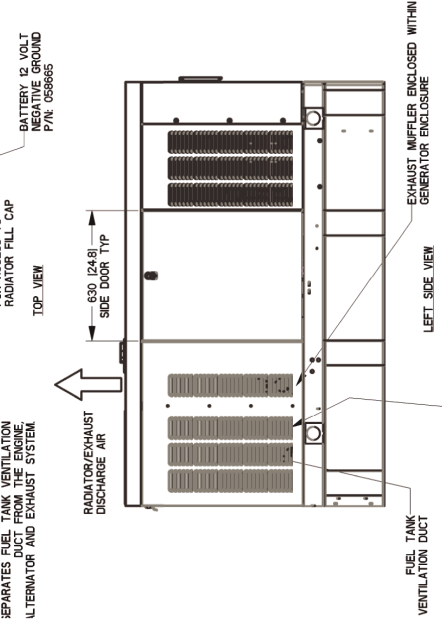
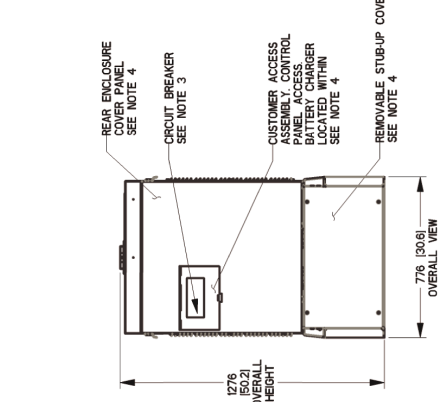
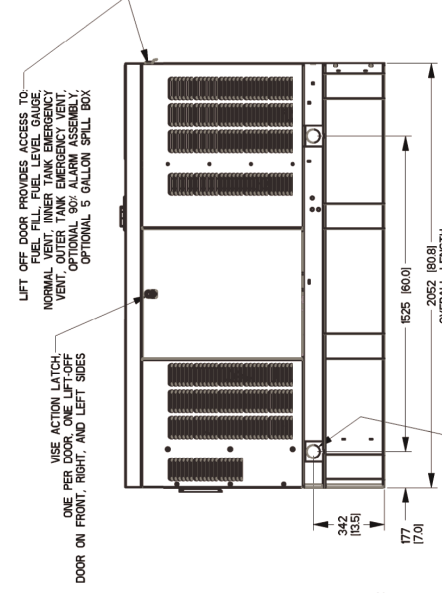
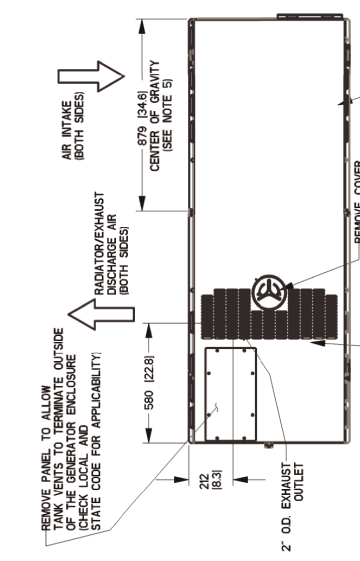
- NOTES:**
- MINIMUM RECOMMENDED CONCRETE PAD SIZE: 1082 (457) WIDE X .2865 (837) LONG. REFERENCE INSTALLATION GUIDE SUPPLIED WITH UNIT FOR CONCRETE PAD GUIDELINES.
  - ALLOW SUFFICIENT ROOM ON ALL SIDES OF THE GENERATOR FOR MAINTENANCE AND SERVICING. THIS UNIT MUST BE INSTALLED IN ACCORDANCE WITH CURRENT STATE AND LOCAL CODES.
  - CONTROL PANEL / CIRCUIT BREAKER INFORMATION
    - SEE SPECIFICATION SHEET OR OWNERS MANUAL
    - SEE SPECIFICATION SHEET OR OWNERS MANUAL FOR ACCESS TO REAR ENCLOSURE COVER PANEL TO ACCESS THE STUBUP AREAS AS FOLLOWS:
      - HIGH VOLTAGE CONNECTION INCLUDING AC LOAD LEAD CONDUIT CONNECTION, NEUTRAL CONNECTION, AND BATTERY CHARGER 120 VOLT AC (105 AMP MAX) CONNECTION
      - REMOVE THE REAR STUBUP AND REAR ENCLOSURE COVER PANEL TO ACCESS THE STUBUP AREAS AS FOLLOWS:
        - LOADING AND ACCESSORY RELAY CONNECTION (RTY 4)
        - AND ACCESSORY RELAY CONNECTION (RTY 4)
    - BOTTOM OF GENERATOR SET MUST BE ENCLOSED TO PREVENT PEST INTRUSION AND EXHAUST SYSTEM MAINTENANCE BACK PRESSURE. SEE OWNERS MANUAL FOR LIFTING WARNINGS.
    - 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).
    - FOR FRESH AIR INTAKE, AIR DISCHARGE, AIR AND EXHAUST. SEE SPEC SHEET FOR MINIMUM AIR FLOW RESTRICTION REQUIREMENTS.
    - GENERATOR MUST BE INSTALLED SUCH THAT FRESH COOLING AIR IS AVAILABLE AND THAT DISCHARGE AIR FROM RADATOR IS NOT RECIRCULATED.

SERVICE ITEM	23L
OIL FILL CAP	RIGHT SIDE
OIL DIP STICK	RIGHT SIDE
OIL FILTER	RIGHT SIDE
OIL DRAIN HOSE	RIGHT SIDE
RADIATOR DRAIN HOSE	LEFT SIDE
COOLANT RECOVERY BOTTLE	LEFT SIDE
RADIATOR FILL CAP ACCESS	ROOF TOP
AIR CLEANER ELEMENT	EITHER SIDE
MUFFLER	FRONT
FAN BELT	EITHER SIDE
BATTERY	LEFT SIDE

WEIGHT DATA WITH EMPTY BASE TANK (SEE NOTE 5)

GENERATOR AS SHOWN	626 (1560)
WITH WOODEN SHIPPING SKID	666 (1685)
WEIGHT: KG (LBS)	
DIMENSIONS: MM (INCH)	

REFERENCE OWNERS MANUAL FOR PERIODIC REPLACEMENT PART LISTINGS.



REMOVE PANEL TO ALLOW FRESH AIR INTAKE ON BOTH SIDES OF THE GENERATOR ENCLOSURE (CHECK LOCAL AND STATE CODE FOR APPLICABILITY)

INTERNAL DIVIDER PANEL SEPARATES FUEL TANK VENTILATION FROM EXHAUST SYSTEM

REMOVE COVER FOR ACCESS TO RADIATOR FILL CAP

BATTERY 12 VOLT (SEE NOTE 5) P/N: US6665

580 (228)

70 (83)

2' O.D. EXHAUST OUTLET

INTERNAL DIVIDER PANEL SEPARATES FUEL TANK VENTILATION FROM EXHAUST SYSTEM

REMOVE COVER FOR ACCESS TO RADIATOR FILL CAP

BATTERY 12 VOLT (SEE NOTE 5) P/N: US6665

AIR INTAKE (BOTH SIDES)

RADIATOR/EXHAUST DISCHARGE AIR (BOTH SIDES)

CENTER OF GRAVITY (SEE NOTE 5)

DOOR ON FRONT, RIGHT, AND LEFT SIDES

ONE PER SIDE ON FRONT, RIGHT, AND LEFT SIDES

LIFT OFF DOOR PROVIDES ACCESS TO REAR ENCLOSURE COVER PANEL TO ACCESS THE STUBUP AREAS AS FOLLOWS: HIGH VOLTAGE CONNECTION INCLUDING AC LOAD LEAD CONDUIT CONNECTION, NEUTRAL CONNECTION, AND BATTERY CHARGER 120 VOLT AC (105 AMP MAX) CONNECTION REMOVE THE REAR STUBUP AND REAR ENCLOSURE COVER PANEL TO ACCESS THE STUBUP AREAS AS FOLLOWS: LOADING AND ACCESSORY RELAY CONNECTION (RTY 4) AND ACCESSORY RELAY CONNECTION (RTY 4) BOTTOM OF GENERATOR SET MUST BE ENCLOSED TO PREVENT PEST INTRUSION AND EXHAUST SYSTEM MAINTENANCE BACK PRESSURE. SEE OWNERS MANUAL FOR LIFTING WARNINGS. 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). FOR FRESH AIR INTAKE, AIR DISCHARGE, AIR AND EXHAUST. SEE SPEC SHEET FOR MINIMUM AIR FLOW RESTRICTION REQUIREMENTS. GENERATOR MUST BE INSTALLED SUCH THAT FRESH COOLING AIR IS AVAILABLE AND THAT DISCHARGE AIR FROM RADATOR IS NOT RECIRCULATED.

SEE ACTION LATCH; SEE NOTE 3

SEE NOTE 4

SEE NOTE 5, 8 AND CENTER OF GRAVITY DIMENSIONS

342 (13.5)

177 (7.0)

525 (16.0)

2052 (80.8)

OVERALL LENGTH

RIGHT SIDE VIEW

REAR VIEW

776 (30.6)

OVERALL WIDTH

REAR ENCLOSURE COVER PANEL SEE NOTE 4

CIRCUIT BREAKER SEE NOTE 3

CUSTOMER ACCESS ASSEMBLY, CONTROL PANEL, ACCESS BATTERY CHARGER BUILT INTO UNIT WITHIN SEE NOTE 4

REMOVABLE STUB-UP COVER SEE NOTE 4

1276 (50.2)

OVERALL HEIGHT

LEFT SIDE VIEW

630 (24.8)

SIDE DOOR TYP

RADIATOR/EXHAUST DISCHARGE AIR

EXHAUST MUFFLER ENCLOSED WITHIN GENERATOR ENCLOSURE

FUEL TANK VENTILATION DUCT

OPEN PUNCHED LOUVERS TYPICAL ON BOTH SIDES OF FUEL TANK VENTILATION DUCT TO PROVIDE ADEQUATE CROSS-FLOW OF AIR VENTILATION

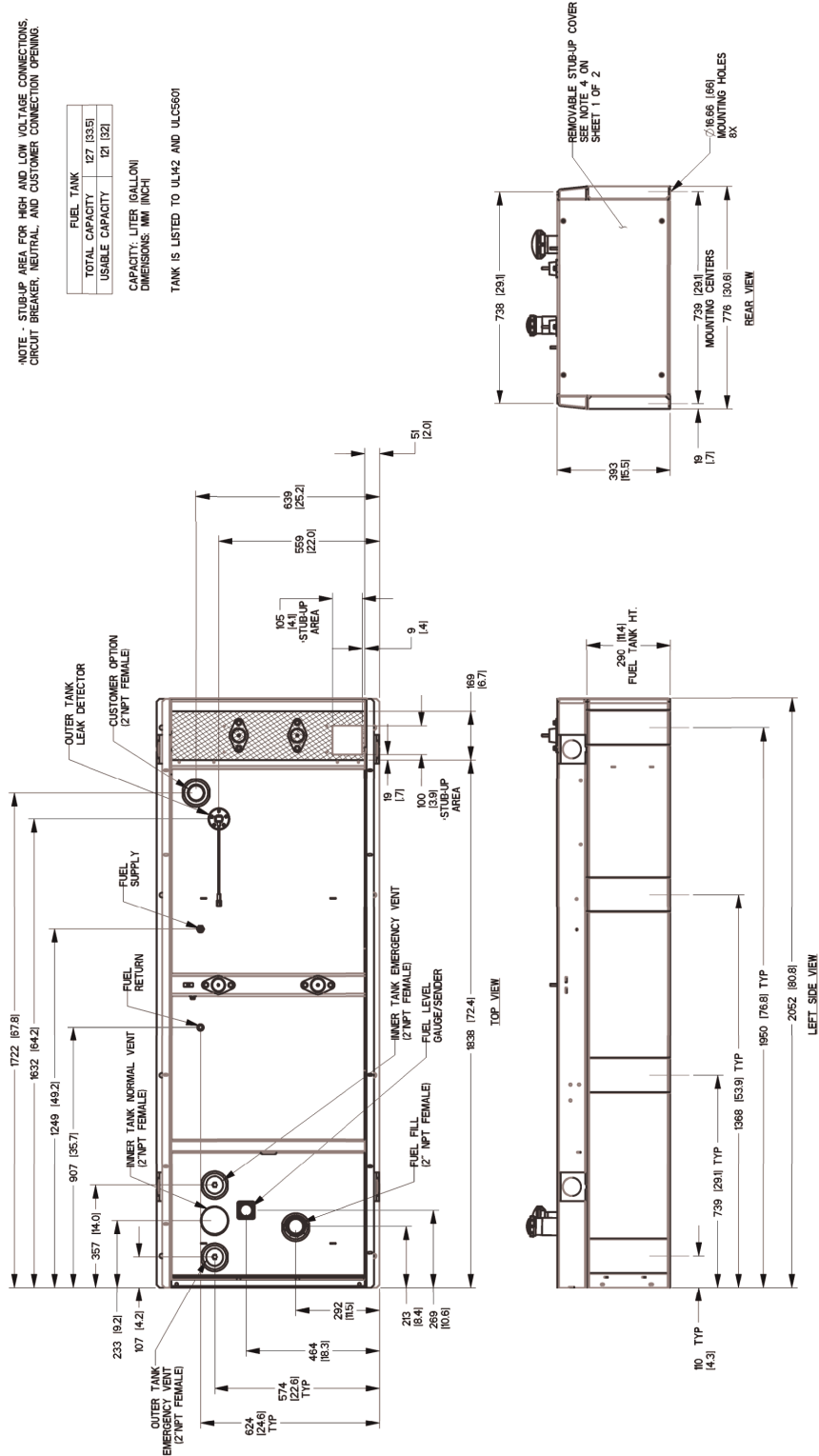
### 15 & 20 kW

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

FUEL TANK	
TOTAL CAPACITY	127 [33.5]
USABLE CAPACITY	121 [32]

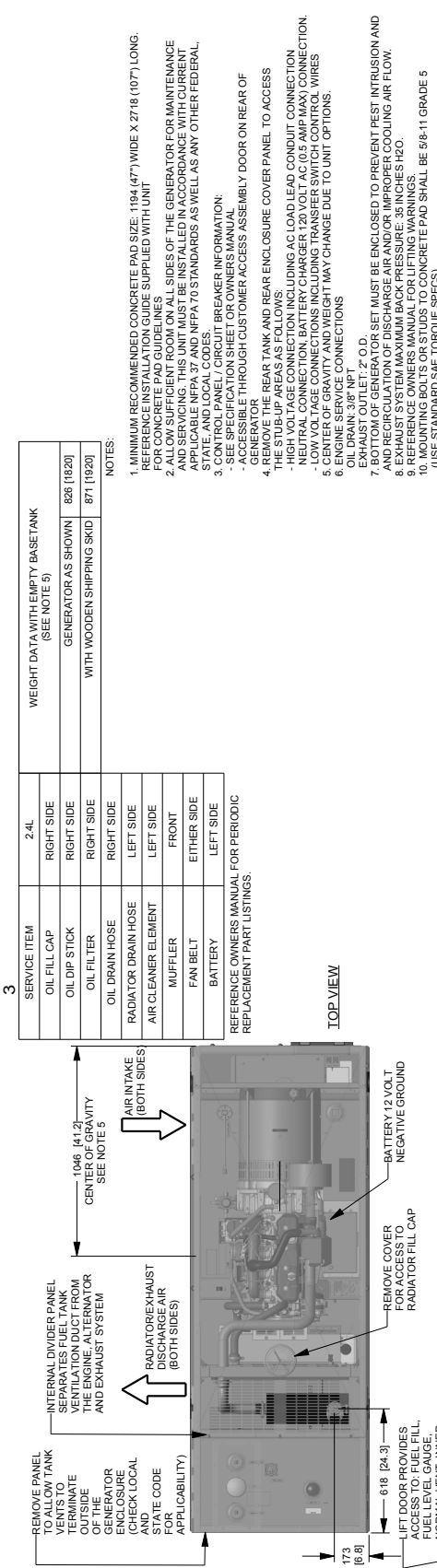
CAPACITY: LITER (GALLON)  
DIMENSIONS: MM (INCH)

TANK IS LISTED TO UL142 AND ULCS601



30 kW

Drawing #0K7002-C (1 of 2)

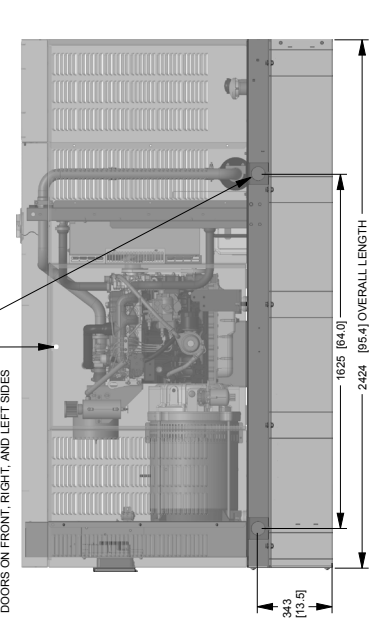


**3**

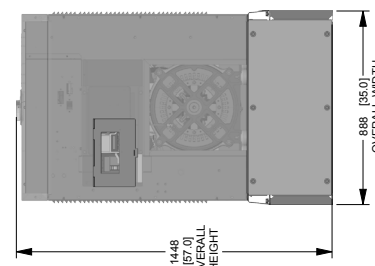
SERVICE ITEM	2.4L	WEIGHT DATA WITH EMPTY BASE/TANK (SEE NOTE 5)
OIL FILL CAP	RIGHT SIDE	GENERATOR AS SHOWN 826 [1820]
OIL DIP STICK	RIGHT SIDE	WITH WOODEN SHIPPING SKID 871 [1920]
OIL FILTER	RIGHT SIDE	
OIL DRAIN HOSE	RIGHT SIDE	
RADIATOR DRAIN HOSE	LEFT SIDE	
AIR CLEANER ELEMENT	LEFT SIDE	
MUFFLER	FRONT	
FAN BELT	EITHER SIDE	
BATTERY	LEFT SIDE	

REFERENCE OWNERS MANUAL FOR PERIODIC REPLACEMENT PART LISTINGS.

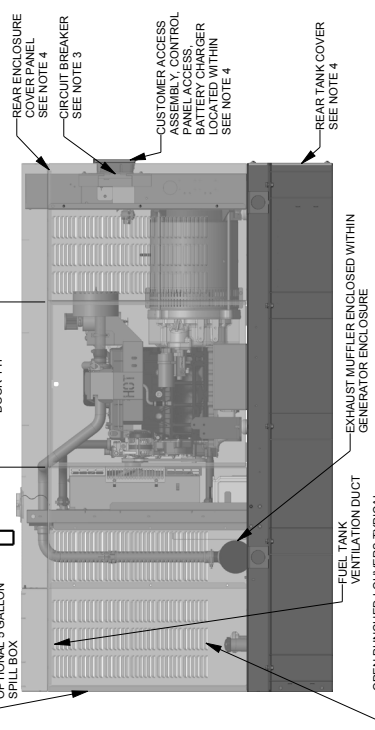
TOP VIEW



RIGHT SIDE VIEW



REAR VIEW



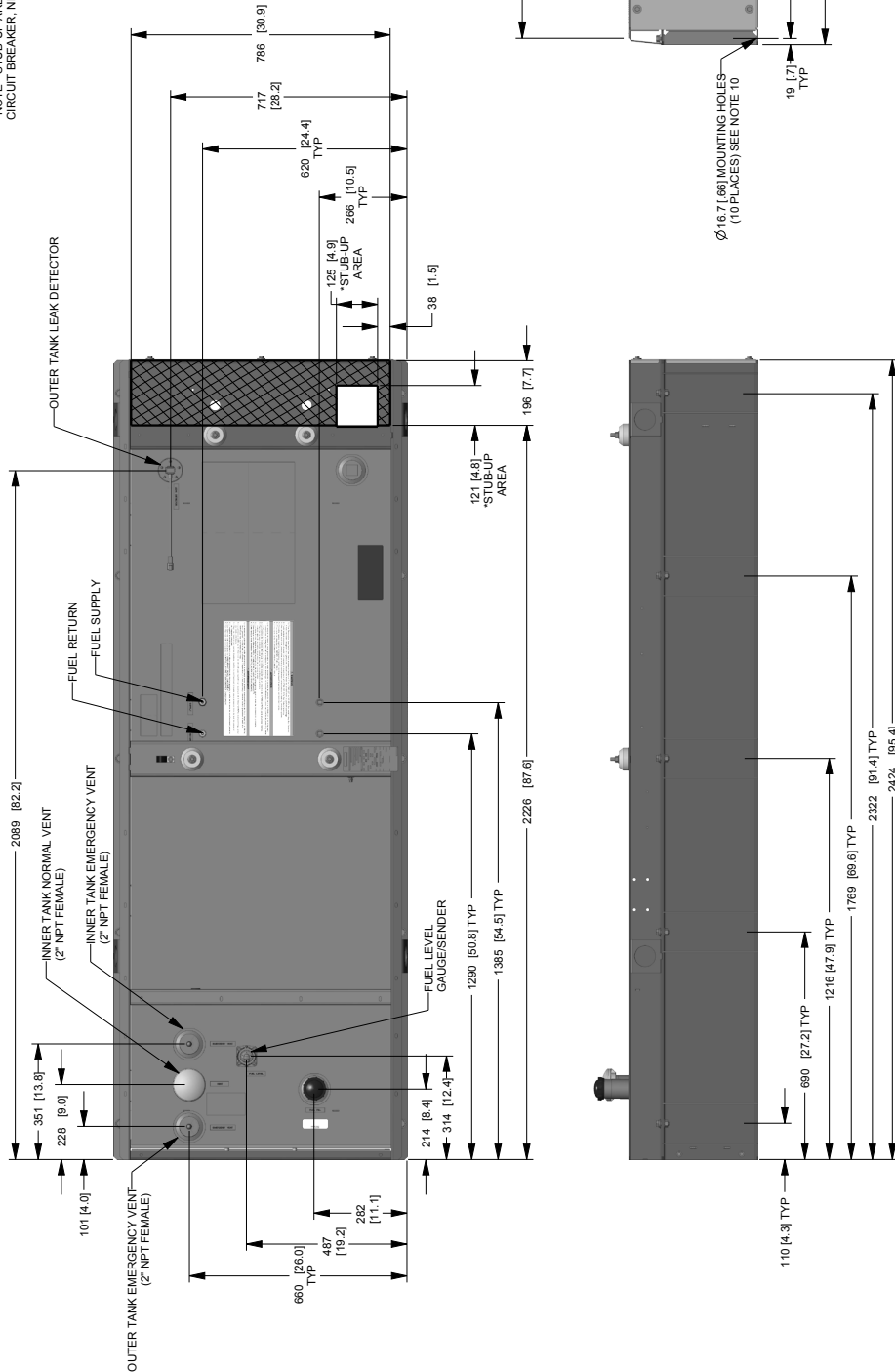
LEFT SIDE VIEW

- NOTES:
1. MINIMUM RECOMMENDED CONCRETE PAD SIZE: 1194 (47") WIDE X 2718 (107") LONG. REFERENCE INSTALLATION GUIDE SUPPLIED WITH UNIT.
  2. ALLOW SUFFICIENT ROOM ON ALL SIDES OF THE GENERATOR FOR MAINTENANCE AND SERVICING. THIS UNIT MUST BE INSTALLED IN ACCORDANCE WITH CURRENT NATIONAL ELECTRICAL CODE (NEC) AND LOCAL CODES AS WELL AS ANY OTHER FEDERAL, STATE, AND LOCAL CODES.
  3. CONTROL PANEL / CIRCUIT BREAKER INFORMATION:
    - SEE SPECIFICATION SHEET OR OWNERS MANUAL.
    - ACCESSIBLE THROUGH CUSTOMER ACCESS ASSEMBLY DOOR ON REAR OF THE UNIT.
  4. REMOVE THE REAR TANK AND REAR ENCLOSURE COVER PANEL TO ACCESS THE STUB-UP AREAS AS FOLLOWS:
    - HIGH VOLTAGE CONNECTION INCLUDING AC LOAD LEAD CONDUIT CONNECTION
    - NEUTRAL CONNECTION, BATTERY CHARGER 120 VOLT AC (0.5 AMP MAX) CONNECTION
    - LOW VOLTAGE CONNECTIONS INCLUDING TRANSFER SWITCH CONTROL WIRES
    - EXHAUST SYSTEM INCLUDING EXHAUST MUFFLER
    - ENGINE SERVICE CONNECTIONS
    - OIL DRAIN, 3/8" NPT.
  5. EXHAUST OUTLET: 2" O.D.
  6. BOTTOM OF GENERATOR SET MUST BE ENCLOSED TO PREVENT PEST INTRUSION AND AIR FLOW THROUGH THE UNIT.
  7. EXHAUST SYSTEM MAXIMUM BACK PRESSURE: 38 INCHES H<sub>2</sub>O.
  8. EXHAUST SYSTEM MAXIMUM BACK PRESSURE: 38 INCHES H<sub>2</sub>O.
  9. REFERENCE OWNERS MANUAL FOR LIFTING WARNINGS.
  10. MOUNTING BOLTS OR STUDS TO CONCRETE PAD SHALL BE 5/8-11 GRADE 5 (USE STANDARD SAE TORQUE SPECS)



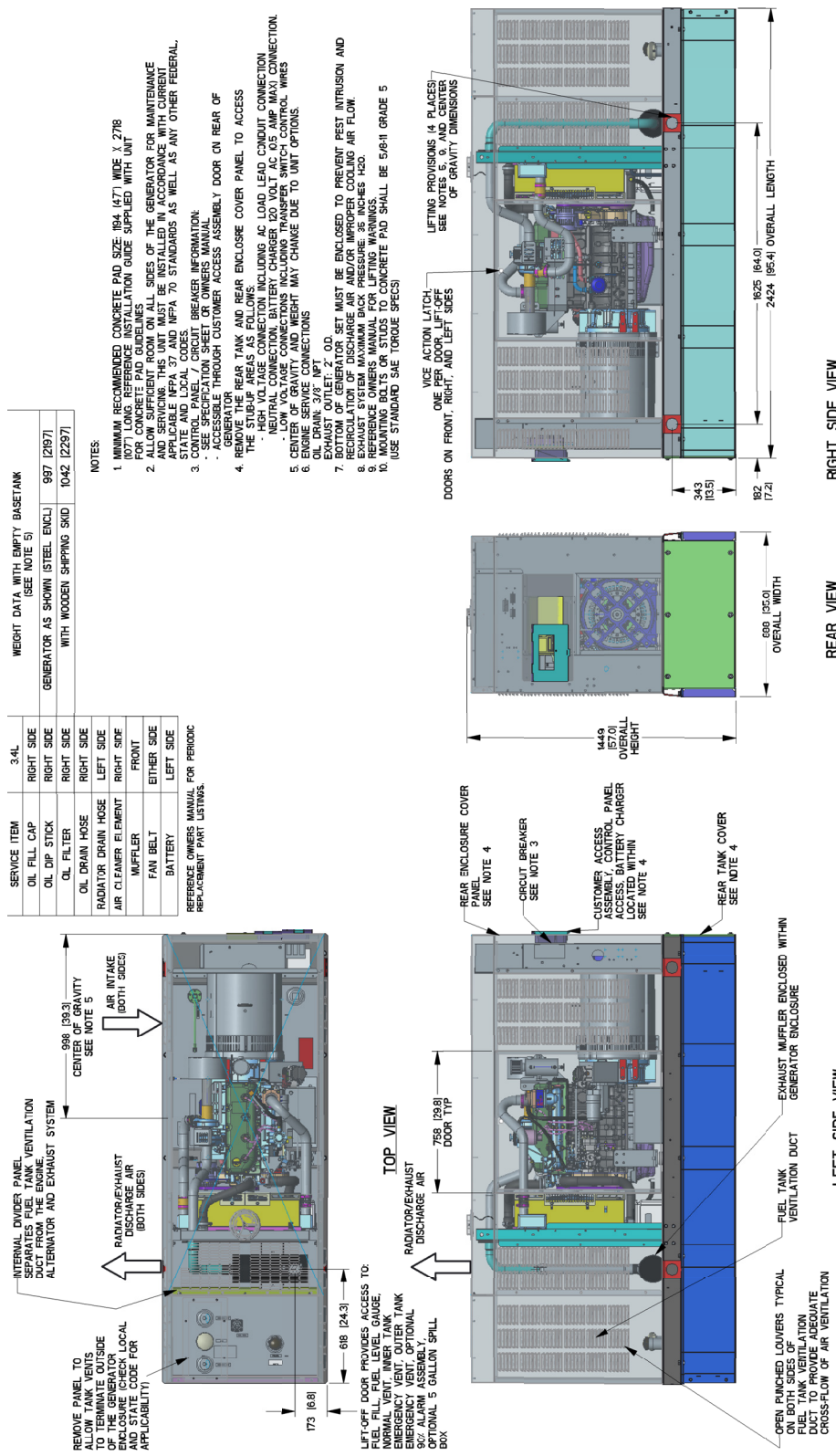
\*NOTE - STUB-UP AREA FOR HIGH AND LOW VOLTAGE CONNECTIONS, CIRCUIT BREAKER, NEUTRAL AND CUSTOMER CONNECTION OPENING.

FUEL TANK	
TOTAL CAPACITY	233 [6.1]
USABLE CAPACITY	203 [5.5]
CAPACITY, LITER [GALLON]	
DIMENSIONS: MM [INCH]	
TANK IS LISTED TO UL142 AND ULCORD C142.18	



48 & 50 kW

Drawing #0K6968-C (1 of 2)



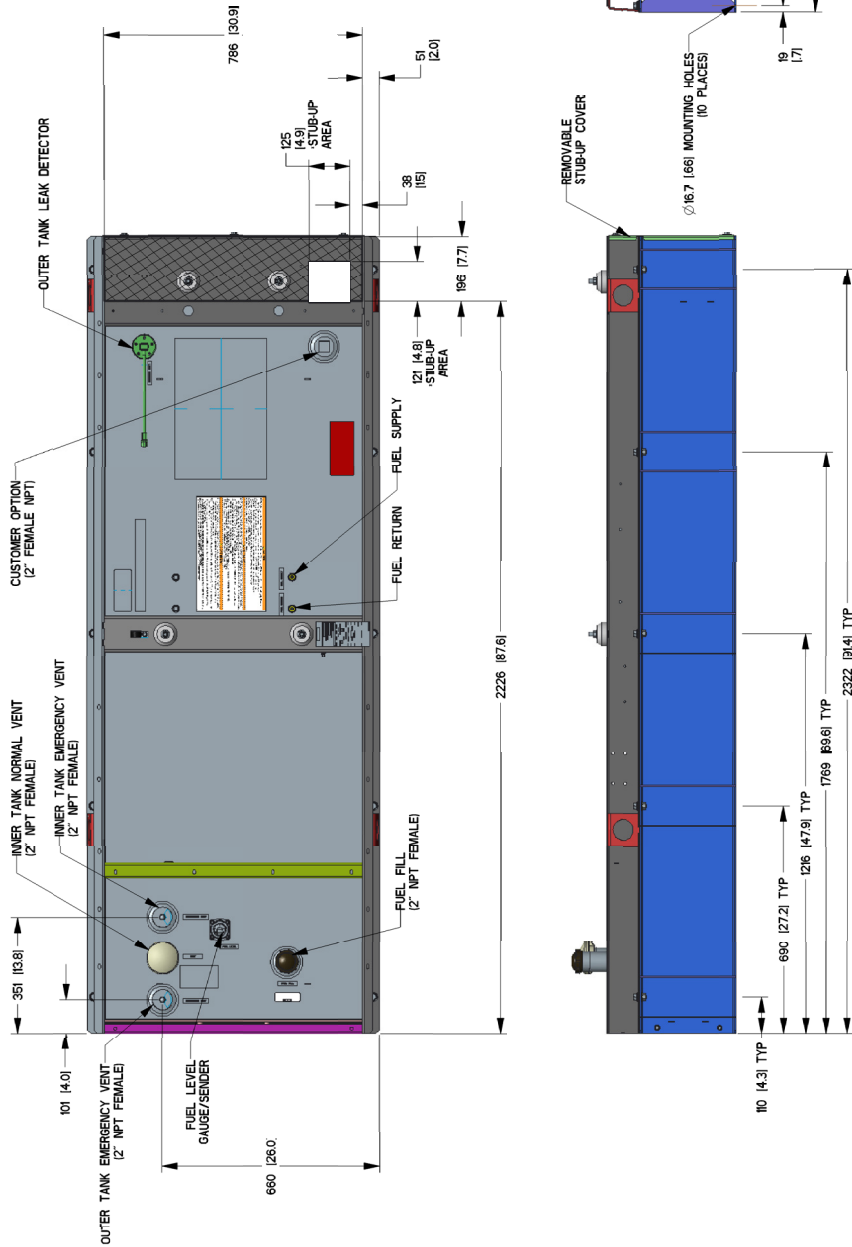
# 48 & 50 kW

## installation layout

Drawing #0K6968-A (2 of 2)

FUEL TANK	
TOTAL CAPACITY	233 [61]
USABLE CAPACITY	209 [55]
CAPACITY: LITER (GALLONS)	
DIMENSIONS: MM (INCH)	
THIS TANK IS LISTED TO UL142 AND ULCS90	

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



**15 • 20 • 30 • 48 • 50 kW****available accessories**

Model #	Product	Description
G006463-4	Mobile Link™	Generac's Mobile Link allows you to check the status of your generator from anywhere that you have access to an Internet connection from a PC or with any smart device. You will even be notified when a change in the generator's status occurs via e-mail or text message. Note: Harness Adapter Kit required. Available in the U.S. only.
G006478-0	Harness Adapter Kit	The Harness Adapter Kit is required to make liquid-cooled units compatible with Mobile Link™.
G006502-0	Spill Box	The 5-gallon spill box screws into the existing fuel fill port of the base tank. It captures and contains fuel if over fueling or spilling occurs during the fill process.
G006504-0	90% Fuel Level Alarm	The 90% fuel level alarm alerts the fuel fill operator when the tank reaches a 90% fill level by sounding an audible alarm and triggering an LED warning light.
G006505-0 - 15 & 20 kW G006506-0 - 30, 48 & 50 kW	Tank Risers	Tank risers are required in some municipalities to help avoid potential base tank corrosion caused by mounting on rough surfaces.
G006507-0	Fuel Fill Drop Tube	A powder coat painted, steel fuel fill drop tube is required in some municipalities to prevent sparking due to static electricity buildup, which can be caused by the fuel dropping into the tank from the fill area. Using a drop tube also results in submerged filling, which increases the fuel delivery flow rate and reduces vapors, foam and potential tank evaporation.
G006513-0 - 15 & 20 kW G006517-0 - 30 kW G006516-0 - 48 & 50 kW	Stainless Steel Fuel Lines	Some municipalities require the use of stainless steel fuel lines instead of the standard hoses provided with the diesel generator products. These stainless steel lines are fire resistant for additional safety.
G006510-0	E-Stop	E-stop allows for immediate fuel shutoff and generator shutdown in the event of an emergency.
006511-0	Spill Box Drainback Kit	The spill box drainback kit allows fuel that was captured in the 5-gallon spill box to be drained directly back into the fuel tank to avoid vapors.
G006588-1	Vent Extension Support Kit	The vent extension support kit consists of two aluminum plates with the appropriate pipe cutouts to secure the vent extension pipes coming through the top of the generator enclosure. It helps to minimize stress on the NPT fittings integrated on the tank and also helps protect against pests.
G006512-0	Lockable Fuel Cap	The cast iron, lockable fuel cap provides the ability to lock the fuel system to prevent unwanted fuel tampering or fuel siphoning.
G006572-0 - 15 & 20 kW G006571-0 - 30 kW G006570-0 - 48 & 50 kW	Maintenance Kits	The Protector Maintenance Kits offer all the hardware necessary to perform complete maintenance on Generac Protector generators.
G006560-0 - 15 & 20 kW G006559-0 - 30 kW G006558-0 - 48 & 50 kW	Cold Weather Kits	Recommended for generators installed in regions where the temperature regularly falls below 32 °F (0 °C). The Cold Weather Kits consist of a block heater with all necessary mounting hardware and a battery warmer with a thermostat built into the battery wrap.
G005704-0	Paint Kit	If the generator enclosure is scratched or damaged, it is important to touch-up the paint to protect from future corrosion. The paint kit includes the necessary paint to properly maintain or touch-up a generator enclosure.
G006664-0	Local Wireless Remote	Completely wireless and battery powered, Generac's wireless remote monitor provides you with instant status information without ever leaving the house.
G006665-0	Wireless Remote Extension Harness	Recommended for use with the Wireless Remote on units up to 60 kW, required for use on units 70 kW or greater.
G006873-0	Smart Management Module (50 Amps)	Manage large loads by utilizing up to 8 individual Smart Management modules. These devices are installed directly in line with existing appliance wiring for easy installation.