



300 Westage Business Center, Suite 380
Fishkill, New York 12524
T 845 896 2229
F 845 896 3672
cuddyfeder.com

Alec R. Gladd, Esq.
agladd@cuddyfeder.com

August 28, 2026

BY EMAIL and FEDEX

Bruce Flower, Chair
And Members of the Planning Board
Town of Wappinger
20 Middlebush Road
Wappingers Falls, New York 12590

RE:	Applicant:	T-Mobile Northeast LLC
		Eligible Facilities Request
	Property/Site:	26 Don Bosco Blvd, Wappingers Falls, NY 12590
	Tax Parcel:	6259-04-647405
	Tower Owner:	American Tower

Dear Chair Flower and Members of the Planning Board:

On behalf of our client, T-Mobile Northeast LLC ("T-Mobile" or "Applicant"), we respectfully submit this letter and attachments in connection with T-Mobile's proposed collocation of antenna at the existing American Tower facility located at the captioned Property.

As detailed in the enclosed drawings, T-Mobile is proposing to collocate 9 antennas at a centerline height of 85' which will be accomplished by extending the existing 79' tower by 8' and expanding the existing fenced compound at grade by no more than 16'. T-Mobile's proposed collocation will not increase the height of the existing tower by more than 20 feet nor will there be an expansion of the existing fenced compound beyond 30 feet in any direction. See 47 C.F.R. § 1.6100(b)(7).

Since this project involves eligible modifications as defined in Federal Communications Commission ("FCC") regulations, the nature of any land use and discretionary permitting reviews are fairly limited.¹ Typically, only a building permit is required because federal regulations require the issuance of all municipal permits within 60 days of filing for sites involving eligible modifications like the above described facility. We therefore request that the Planning Board schedule a public hearing to appropriately continue the review.

Response to Outstanding May 16, 2025 Lawrence J. Paggi, PE, PC Comments

Comment: *Provide prior site plan.*

¹ See FCC Report and Order, adopted October 17, 2014 (FCC 14-153) adopting regulations at 47 C.F.R. § 1.6100 and implementing Section 6409(a) of the Spectrum Act.



August 28, 2026
Page 2

Response: The original resolution of approval was provided as Exhibit 5 to the Applicant's September 9, 2024 submission. Original site plan drawings were submitted as Exhibit 1 to the Applicant's February 25, 2025 submission. Both documents are within the possession of the Town, but are nonetheless attached for ease of reference.

Comment: Plans should address construction of proposed improvements.

Response: Enclosed please find updated Plans. To the extent that any provisions of Town Code require any further information beyond demonstrating that T-Mobile's upgrade is an eligible facilities request, T-Mobile respectfully requests a waiver given that the requirements of Section 6409(a) and FCC regulations.

The Applicant is also providing coverage plots to confirm the proposed facility will remedy gaps in coverage/service. Note these are being provided for informational purposes only as they are explicitly not required by 47 C.F.R. § 1.6100(c)(1).

Materials Submitted in Furtherance of the Review of the Eligible Facilities Request:

Enclosed please find twelve (12) hard copies and one (1) electronic of the following:

- Exhibit A: Original Approval Documents.
- Exhibit B: Updated Plans, revised August 14, 2026.
- Exhibit C: Coverage Plots.

We respectfully request that this matter be placed on the next available Planning Board agenda for a public hearing in accordance with the applicable federal timeframes for review of this Eligible Facilities Request. Please do not hesitate to contact me should you have any questions. Thank you for your assistance.

Very truly yours,

A handwritten signature in blue ink that reads "Alec Gladd".

Alec R. Gladd

Enclosures

cc: T-Mobile Northeast LLC

EXHIBIT A

Special Use Permit

Town of Wappinger
20 Middlebush Road
Wappinger Falls, New York 12590

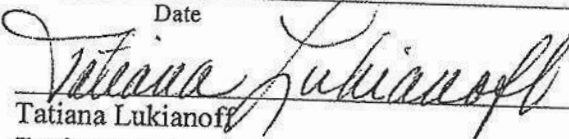
APPLICATION / PERMIT NO. 05-3111 & 05-4026
GRID NO. 6259-04-647405

Pursuant to Section 240-40 of the Town of Wappinger Zoning Ordinance, Permission is hereby granted to Verizon/ORP New Hackensack
Name

For the construction of a 80 ft. monopole and a 12' X 12' base tower
at Airport Drive
(Address)

in a AI zone, in the Town of Wappinger, Dutchess County, New York, in accordance with the Site Plan contained in Application Nos. 05-3111 & 05-4026 filed in the office of the Zoning Administrator, Town of Wappinger, New York.

Special Use Permit approval was granted on March 19, 2007
Date


Tatiana Lukianoff
Zoning Administrator, Town of Wappinger, NY

August 30, 2007

3/21/07

**RESOLUTION
TOWN OF WAPPINGER PLANNING BOARD**

**RE: ORP NEW HACKENSACK/VERIZON
RESOLUTION OF SPECIAL PERMIT and SITE PLAN APPROVAL**

At a regular meeting of the Planning Board of the Town of Wappinger, Dutchess County, New York, held at Town Hall, 20 Middlebush Road, Wappingers Falls, New York on the 19 day of March, 2007 at 7:30 PM.

The meeting was called to order by Chairman Philip J. DiNonno and upon roll being called, the following were:

PRESENT: Chairman	-	Philip J. DiNonno
Boardmembers	-	Guy Gagne
	-	Rick Harrison
	-	William Kickham
	-	Regina Pace
	-	Ronald Roberts
	-	Alan Weitlich

The following resolution was moved by Mrs. Pace and seconded by Mr. Gagne.

WHEREAS, the Town of Wappinger Planning Board has received the application of Orange County-Poughkeepsie Limited Partnership d/b/a Verizon Wireless (the "Applicant") for site plan and special use permit approval involving the construction of a 80-foot monopole tower equipped with 12 panel antennas and ground structures including a 30-foot by 12-foot base equipment shelter, a service cabinet, and fencing for a 12-foot by 12-foot area around the base tower (the "Project") situated within a 6,400 square foot leased area on a 33.44-acre parcel owned by MJD & Sons, Inc. located on the south side of Airport Drive in the AI Airport Industry Zoning District known as Tax Lot 6259-04-647405 on the Town of Wappinger Tax Maps (the "Property"); and

WHEREAS, there are two principal factors in providing adequate and reliable wireless telecommunications service – adequate coverage, the area to and from which a signal or call can be made, and adequate capacity, the number of calls which a given facility or system can accommodate simultaneously; and

WHEREAS, the Applicant has demonstrated the need for the proposed tower and antennas to provide coverage and increase capacity within the Town, as further detailed in documentation submitted with the special use permit application on August 30, 2005

ORP NEW HACKENSACK/VERIZON
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which included coverage maps depicting existing conditions and the improved conditions with the proposed tower; and

WHEREAS, additional new towers are necessary to increase capacity, and the existing towers and antenna arrays which cover Wappinger cannot be further expanded to meet existing or proposed capacity needs; and

WHEREAS, the need for the proposed tower and antennas has been confirmed separately by a radio frequency engineer retained separately by the Planning Board to advise them regarding the proposed action; and

WHEREAS, The Applicant has submitted an extensive package of materials including, but not limited to: an EAF (Parts 1 and 2); radio frequency propagation plots prepared by and Dominick Pinti; an Inventory Report of all possible sites within the five-mile radius, prepared by Tectonic Engineering & Surveying Consultants, P.C.; a project narrative; an RF safety analysis prepared by Millennium Engineering, P.C.; a copy of the Applicant's FCC "Radio Station Authorization"; and

WHEREAS, the application includes the following sheets of plans prepared by Tectonic Engineering & Land Surveying Consultants, P.C., last revised November 2, 2006:

1. Sheet T-1 Title Sheet
2. Sheet SU-1 Partial Topographic Survey
3. Sheet P-1 Property Plan
4. Sheet C-1 Site Plan & Notes
5. Sheet C-1A Grading, Sediment & Erosion Control Plan
6. Sheet C-1B Combined Site Development Plan
7. Sheet C-2 Site Detail Plan, Elevation, Details & Notes
8. Sheet C-3 Details
9. Sheet C-4 Shelter Elevations
10. Sheet C-5 Profiles

WHEREAS, in accordance with Section 239 of the New York State General Municipal Law, the Planning Board referred the applications to the Dutchess County Department of Planning and Development for their review and comment; and

WHEREAS, the Dutchess County Department of Planning and Development responded that the Project is a "matter of local concern" and offered no additional comments by memorandum dated December 4, 2006; and

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WHEREAS, the Planning Board is familiar with the Site and all aspects of the Project and has been satisfied that the Project will comply with the Special Permit and Site Development Plan standards of Articles VII and VIII, the Special Standards of Section 240-81, and the Performance Standards of Article XI of the Zoning Law, except as otherwise noted; and

WHEREAS, the Planning Board determined that the Project is an Unlisted Action with respect to the Wappinger Environmental Quality Review regulations; and

WHEREAS, an alternative site using the airport beacon tower at an elevation of between 70 and 76 feet above ground level was examined, but the coverage provided by the alternative was approximately 6 square miles versus the coverage at the proposed site which was 17 square miles, and the alternative site was clearly inferior to the proposed site for the purpose of providing adequate telecommunication service to the Town; and

WHEREAS, no other alternative sites are available that could be used with less disturbance that are in compliance of the Town Code, which provides location and siting objectives in order of preference in Section 240-81G(4)(b) of the Town Code; and

WHEREAS, the proposed facility meets all the F.C.C. standards with regard to emission for wireless facilities as well as those of the New York State Department of Health; and

WHEREAS, the tower location will be set as far away from surrounding residences and educational facilities as possible, more than 750 and 1,500 feet, respectively, except for six residences on Hackensack Heights Road that are less than 750 feet of the proposed tower, the closest being approximately 596 feet from the proposed tower; and

WHEREAS, on December 14, 2005, the Zoning Board of Appeals granted six variances from Section 240-81.G(4)(c)[2] for the siting of the proposed tower less than 750 feet from six existing residences, the closest being approximately 596 feet from the proposed tower; and

WHEREAS, the subject site best achieves the siting objectives in accordance with the Zoning Law while meeting the technical locational requirements of Verizon Wireless; and

WHEREAS, the project will not be detrimental to nearby properties by reason of radio emissions, since the proposed tower complies with all federal requirements with regard to RF emission standards; and

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WHEREAS, a duly advertised public hearing on the Preliminary Subdivision Plat was held on September 6, 2007 at the Wappinger Town Hall, 20 Middlebush Road, Wappingers Falls, New York, at which time all those wishing to be heard were given the opportunity to be heard and the hearing was closed on that date; and

WHEREAS, the Applicant has provided, via a letter dated October 10, 2006 from Randy Wilson, Real Estate Manager, a written commitment to accommodating the co-location of other carriers, and specifically including the facilities necessary to accommodate the communications needs of the Town, the State Police and other local emergency services providers; and

WHEREAS, the Applicant voluntarily extended the 62 day decision period from the close of the public hearing until March 21, 2007 so that the Planning Board could render a decision on the applications; and

WHEREAS, additional facilities may be required in the future based on coverage and/or capacity needs of Verizon Wireless or other carriers, but the proposed facility has been designed to allow and encourage co-location to minimize the need for additional facilities in the Town; and

WHEREAS, the proposed antennas will improve the availability and quality of cellular phone service for customers in the Town of Wappinger; and

NOW, THEREFORE, BE IT RESOLVED, AS FOLLOWS:

1. The Planning Board hereby adopts and incorporates the recitations and statements set forth above as if fully set forth and resolved herein.
2. In accordance with Article 8 of the State Environmental Conservation Law and 6 NYCRR Part 617, including without limitations the criteria set forth in 6 NYCRR Part 617.7 (c) and the Wappinger Environmental Quality Review Law (WEQR), and based upon the existing and past use of the property and upon review of the EAF and all other application materials that were prepared for the Proposed Action, and the comments received at the public hearing, the Planning Board hereby determines that the Proposed Action is an Unlisted Action that will not have a significant impact on the environment, and hereby makes the following determinations of significance for the Proposed Action involving the granting the special use permit and site development plan approval for the proposed construction of a wireless telecommunication services facility as shown on the submitted plans as revised and amended, and adopts a Negative Declaration:

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- The proposed action will not have a significant adverse environmental impact as a result of physical change to the project site since the physical alterations to the land will be less than that required for a single family house.
- The proposed action will not have a significant adverse environmental impact on any unique or unusual land forms found on the site since none exist in the area to be disturbed and the physical alterations to the land will be less than that required for a single family house.
- The proposed action will not have a significant adverse environmental impact on any water body designated as protected.
- The proposed action will not have a significant adverse environmental impact on any non-protected existing or new body of water since none exist within 100 feet of the area to be disturbed and the physical alterations to the land will be less than that required for a single family house.
- The proposed action will not have a significant adverse environmental impact on surface or groundwater quality or quantity since there will be no surface or subsurface discharge of wastes of any kind, and very little impervious surface and no alteration to the drainage patterns, and the physical alterations to the land will be less than that required for a single family house.
- The proposed action will not have a significant adverse environmental impact as a result of altered drainage flow or patterns, or surface water runoff since there will be very little impervious surface, no alteration to the drainage patterns, and the physical alterations to the land will be less than that required for a single family house.
- The proposed action will not have a significant adverse environmental impact on air quality since there will be no emissions generated by the facility and less vehicular traffic than that for a single family residence.
- The proposed action will not have a significant adverse environmental impact on any threatened or endangered species as none were expected or identified in or around the project area.
- The proposed action will not have a significant adverse environmental impact on non-threatened or non-endangered species as none were expected or identified in or around the project area.

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- The proposed action will not have a significant adverse environmental impact on agricultural land resources.
- The proposed action will not have a significant adverse environmental impact on aesthetic resources based upon the visual assessment materials submitted as part of the project including maps identifying zones of visibility and photographs of balloon tests on the site from various thoroughfares, important viewsheds and vantage points and surrounding properties.
- The proposed action will not have a significant adverse environmental impact on any site or structure of historic, prehistoric or paleontological importance as none were expected or identified in or around the project area, and the physical alterations to the land will be less than that required for a single family house.
- The proposed action will not have a significant adverse environmental impact on the quantity or quality of existing or future open spaces or recreational opportunities.
- The proposed action will not have a significant adverse environmental impact on existing transportation systems since there will only be one or two visits to the site per carrier per month, there is excellent access from existing roadways, and the traffic generated will be less than that required for a single family house.
- The proposed action will not have a significant adverse environmental impact on the community's sources of fuel or energy supply due to the nature of the facility and the resulting minor energy demands.
- The proposed action will not have a significant adverse environmental impact as a result of objectionable odors, noise, or vibration since all mechanical equipment is electronic, enclosed within a building and there will be no noise generated greater than that required for a single family house.
- The proposed action will not have a significant adverse environmental impact on the public health, safety and welfare since the construction site is distant from existing residences.

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- The proposed action will not have a significant adverse environmental impact on the character of the existing community since the proposed use is a permitted use, the impact has been minimized through the selection of a site which will minimize the need for additional facilities in the area and thereby minimizes the cumulative impacts, which site has few existing residences in the surrounding area, and which properties are wooded, and the impacts have been mitigated to the maximum extent practicable consistent with the mandate of applicable federal law.
 - There are no potentially significant adverse environmental impacts related to the proposed project.
 - The Proposed Action will not result in any significant cumulative impacts or induce the potential for any secondary growth.
3. The Planning Board, in reliance on all application materials and representations made by the Applicant/Owner or representatives thereof, hereby makes the following findings in accordance with Section 240-44 of the Zoning Law:
- a. The location and size of the Project, the nature and intensity of the operations involved in, or conducted in connection with it, the size of the Site in relation to it, and the location of the Site with respect to streets giving access to it, are such that the Project will be in harmony with the appropriate and orderly development of the district in which it is located.
 - b. The location, nature and height of buildings, walls, fences and the nature and extent of existing and proposed plantings on the Site are such that the Project will not hinder or discourage the appropriate development and use of adjacent land and buildings.
 - c. Operations in connection with the Project will not be more objectionable to nearby properties in terms of their characteristics than would be the operations of any permitted use not requiring a Special Permit.
 - d. Parking areas will be of adequate size for the Project, they will be properly located and suitably screened from adjoining uses, and the entrance and exit drive has been laid out so as to achieve maximum safety.
4. The Planning Board hereby finds that the proposed use will conform with the special requirements of Section 240-81 of the Zoning Law.

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5. The Planning Board hereby grants Special Permit and Site Plan Approval to allow the construction of a 80-foot tall monopole tower equipped with 12 panel antennas and ground structures including a 30-foot by 12-foot base equipment shelter, a service cabinet, and fencing for a 12-foot by 12-foot area around the base tower, as defined as the Project in accordance with the provisions of Article VII of the Zoning Law subject to the following conditions:
- a. The Property Owner and Applicant shall endorse a copy of this Resolution and shall submit same to the Zoning Administrator for filing.
 - b. The Applicant shall submit a statement signed by the Town's Tax Collector that all taxes due on the subject property have been paid.
 - c. The locations and method of connection of all underground utilities shall be shown on the plans, to the satisfaction of the Town Engineer.
 - d. All easements shall be submitted to the Town Engineer and Town Attorney for their review and approval.
 - e. The Applicants and tenants of the Subject Property shall operate the facility in conformance with the requirements of Section 240-81 of the Zoning Law, the representations and limitations on the use of the property as noted in this resolution and application materials. Any regular, repeated or substantial deviation from the parameters specified in Section 240-81, as set forth in this resolution, or the application materials shall constitute a violation of this Special Use Permit Approval. Any changes to such parameters, representations or limitations shall require amended Special Permit Approval from the Planning Board.
 - f. Prior to the issuance of the certificate of occupancy, said access shall be reviewed by the Fire Prevention Bureau and the Applicant shall provide certification by a Professional Engineer that the access drive will accommodate a 30-ton emergency vehicle.
 - g. The proposed action shall meet the performance standards of Section 240-103 of Town Code, and the future use of the facility shall be in conformance with Sections 240-81.J, K, L, and M of Town Code.
 - h. The site plan drawings shall be revised to address the comments contained in the January 17, 2007 and any subsequent review letter(s) from Paggi, Martin & Del Bene, LLP, and the February 28, 2007 memorandum from

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Frederick P. Clark Associates, Inc. to the satisfaction of the Planning Board, Town Engineer and Town Planner.

- i. The proposed pole shall be a grey monopole.
 - j. The discrepancy between the ground elevations and tower heights described in the Jeppesen report dated September 30, 2005 and the FAA Aeronautical Study dated March 12, 2006 shall be resolved to the satisfaction of the Town Engineer and the Town Planner.
6. In accordance with the Town's Schedule of Fees, the Applicant shall be responsible for the payment of all application review fees incurred by the Planning Board in the review of this Project which are in excess of the application review fees paid by the Applicant to-date. Such fees shall be paid within thirty (30) days of the notification to the Applicant that such fees are due. If such fees are not paid within this thirty (30) day period and an extension therefor has not been granted by the Planning Board, this Resolution shall be rendered null and void. Refunds of any remaining funds within the escrow account for the applications will not be made until six (6) months after the issuance of the Building Permit for the Project.
 7. In accordance with Section 240-46 of the Zoning Law, this Special Permit Approval shall expire and become void one (1) year from the date of the adoption of this Resolution if work on this Project is not initiated within a one-year period of this Resolution, or if the proposed uses shall cease for more than one (1) year for any reason, or if all such required improvements are not maintained and all conditions and standards are not complied with throughout the duration of the subject use.
 8. The Planning Board Chairman shall endorse a copy of this resolution certifying its correctness. The Applicant shall also sign a copy of this resolution after it has been initially endorsed by the Chairman acknowledging his receipt of a copy of the resolution. When all of the conditions set forth in conditions 5 and 6 above have been satisfied the Chairman shall endorse this resolution in the space provided below, certifying that the applicant has complied with the above conditions of approval and that the issuance of a building permit is authorized for the improvements set forth in the project.
 9. The Applicant must return for approval from the Planning Board if any changes to this resolution of approval are subsequently desired. Any action involving future co-location on the tower must separately certify that, with respect to a structural analysis of the tower to accommodate additional antennas, and with respect to the

ORP NEW HACKENSACK/VERIZON
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RF exposure analysis, the cumulative effect of all existing and proposed antennas have been taken into consideration.

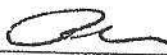
The question of adoption of the foregoing resolution was duly put to a vote on roll call, which resulted as follows:

Philip J. DiNonno, Chairman
Guy Gagne
Rick Harrison
William Kickham
Regina Pace
Ronald Roberts
Alan Weitlich

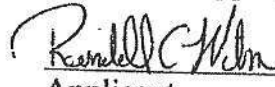
Voting: Aye.
Voting: Aye.
Voting: Aye.
Voting: Aye.
Voting: Aye.
Voting: Absent
Voting: Absent

The resolution is hereby duly declared adopted.

Dated: March 19, 2007
Wappingers Falls, New York


Philip J. DiNonno, Chairman
Town of Wappinger Planning Board

8/30/07
Date


Applicant
Verizon Wireless

Verizon Wireless
REAL ESTATE MANAGER

3/26/07
Date

The following endorsement hereby confirms that the Applicant has fulfilled all of the conditions of this resolution of Site Plan and Special Permit approval necessary for the issuance of a building permit and other permission for site improvements for the Project.


Philip J. DiNonno, Chairman
Town of Wappinger Planning Board

8/30/07
Date

ORANGE COUNTY-POUGHKEEPSIE LIMITED PARTNERSHIP,
d/b/a

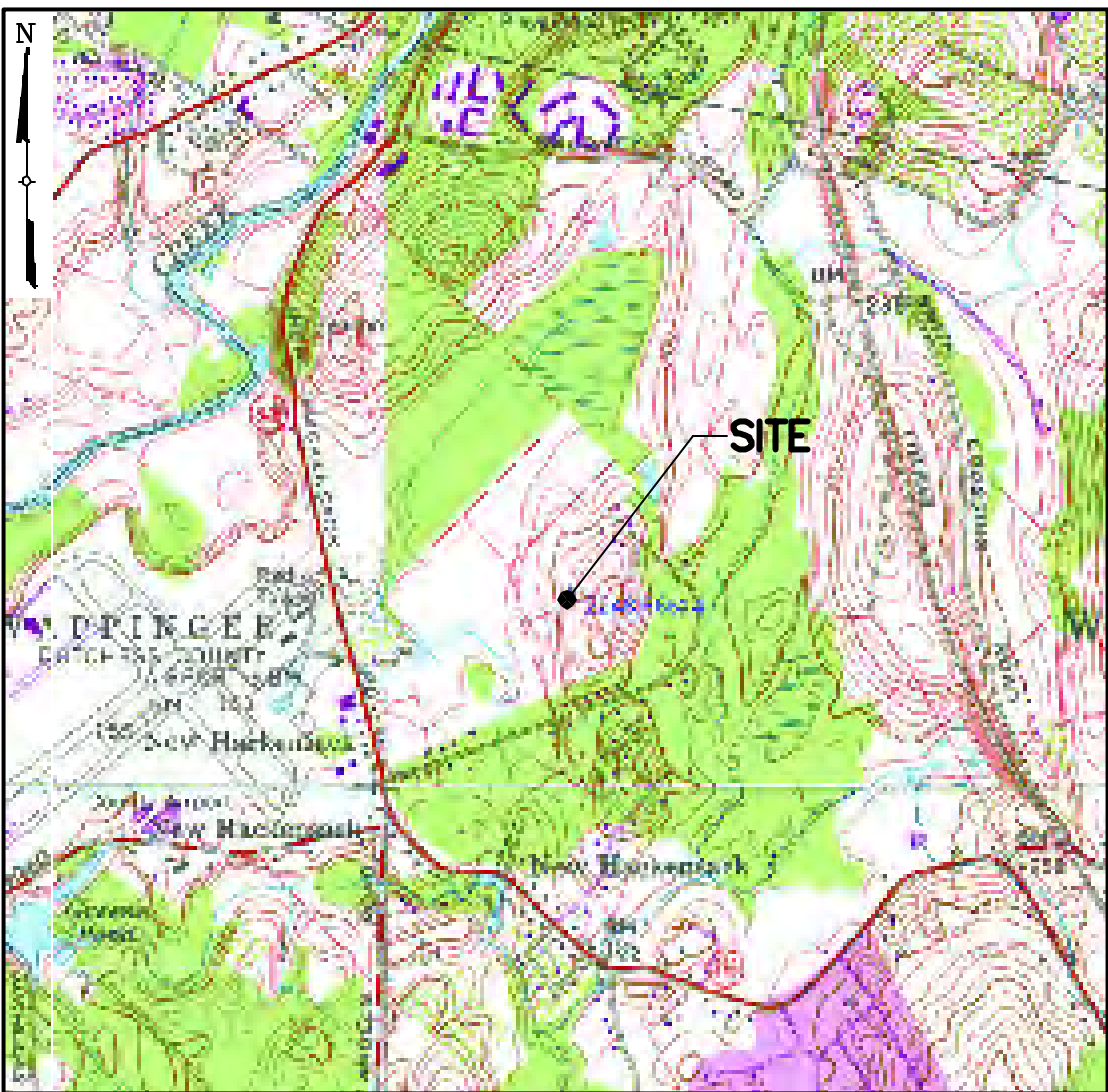


PROJECT NUMBER: 2004066514

LOCATION CODE: 157019

SITE NAME:

NEW HACKENSACK



DIRECTIONS TO SITE:
FROM ALBANY, TAKE I-87 SOUTH TO EXIT 18 (NEW PALTZ). FOLLOW ROUTE 299 EAST TO 9W. TAKE A RIGHT ONTO 9W/ROUTE 218 AND FOLLOW FOR APPROX. 2.5 MILES. TAKE ROUTE 55 EAST, ACROSS THE RIVER FOR APPROX. 4 MILES TO ROUTE 376 (RAYMOND AVENUE). PROCEED APPROX. 5 MILES AND TAKE A LEFT ONTO AIRPORT DRIVE. PROCEED APPROX. .3 MILES AND SITE WILL BE ON THE RIGHT SIDE.

VICINITY MAP

PROJECT NUMBER:	2004066514
SITE NAME:	NEW HACKENSACK
SITE ADDRESS:	AIRPORT DRIVE WAPPINGER, NEW YORK
TOWN:	TOWN OF WAPPINGER
COUNTY:	DUTCHESS COUNTY
TAX MAP NUMBER:	6259-4-647405
TOWER COORDINATES:	N 41° 37' 47.2"± W 073° 52' 05.7"±
GROUND ELEVATION:	227±
PROPERTY OWNER:	MJD AND SONS, INC. 8 ANDREAS COURT HOLMES, NEW YORK 12531
APPLICANT:	VERIZON WIRELESS 175 CALKINS ROAD ROCHESTER, NEW YORK 14623
CONTACT PERSON:	RANDY WILSON
CONTACT PHONE:	(585) 321-5461

PROJECT SUMMARY

MUNICIPALITY:	TOWN OF WAPPINGER
ZONING DISTRICT:	AI - AIRPORT INDUSTRY
GENERAL SETBACKS:	
FRONT:	75 FEET
SIDE:	50 FEET
REAR:	50 FEET
TOWER SET BACK:	1 1/2 TIMES TOWER HEIGHT
MINIMUM LOT SIZE:	N/A
OTHER:	N/A

ZONING TABLE

Before You Dig, Drill Or Blast!

Dig Safely.
New York

UNDERGROUND FACILITIES
PROTECTIVE ORGANIZATION

CALL US TOLL FREE 1-800-962-7962

NY industrial code rule 753 requires no less than two working days notice, but not more than ten days notice.

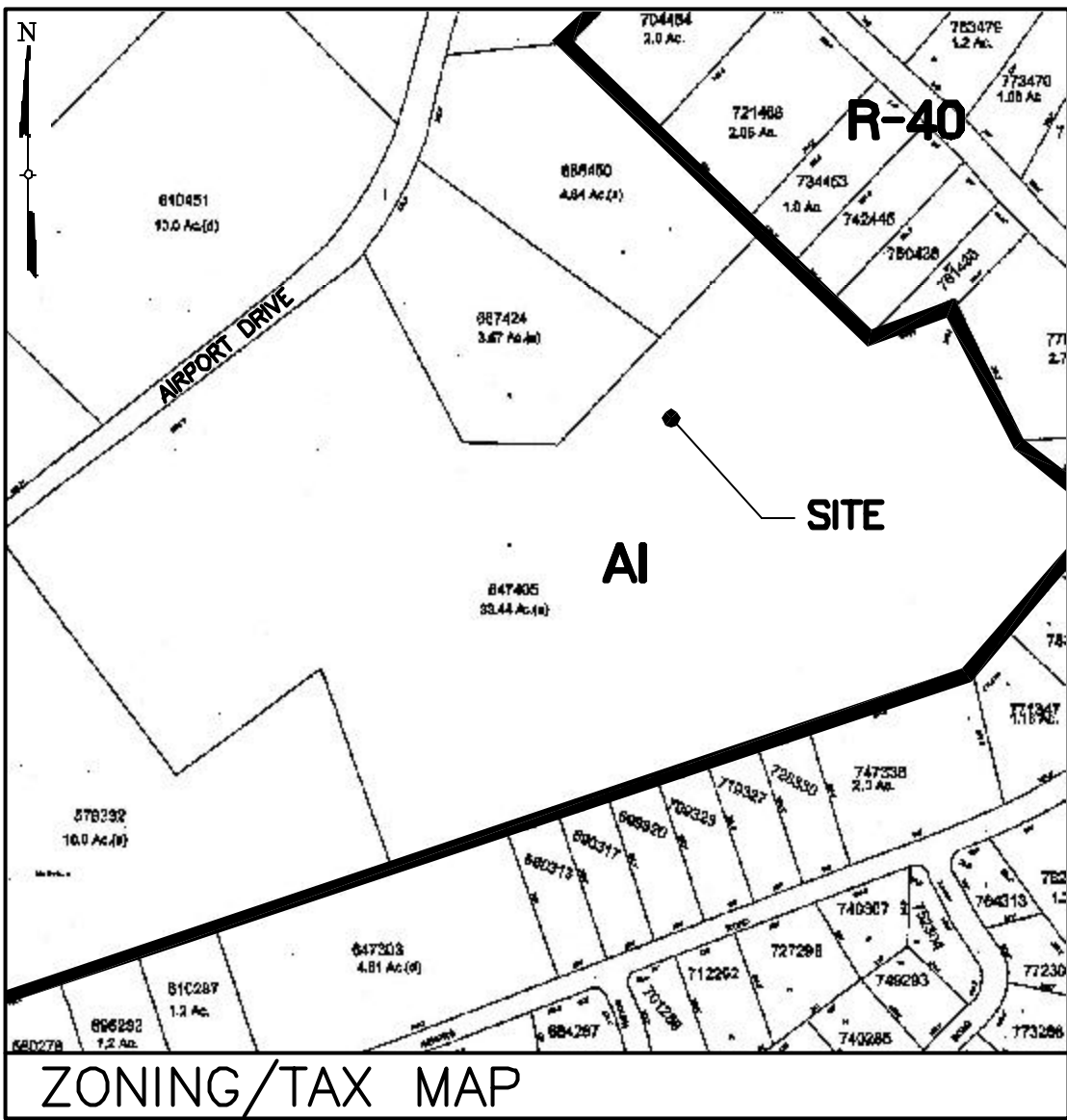
DIG SAFELY — NEW YORK

SHT. NO.	DESCRIPTION	REV NO	REVISION DATE
T-1	TITLE SHEET	7	12/4/07
SU-1	PARTIAL TOPOGRAPHIC SURVEY	11	11/14/07
P-1	PROPERTY PLAN	2	11/14/07
C-1	SITE PLAN & NOTES	6	1/15/08
C-1A	GRADING, SEDIMENT & EROSION CONTROL PLAN	6	1/15/08
C-1B	COMBINED SITE DEVELOPMENT PLAN	6	1/15/08
C-2	SITE DETAIL PLAN, ELEVATION, DETAILS, & NOTES	7	1/15/08
C-3	DETAILS	3	1/15/08
C-4	SHELTER ELEVATIONS	3	1/15/08
C-5	PROFILES	4	1/15/08
C-5A	ACCESS DRIVE ALIGNMENT PLAN	4	1/15/08
C-5B	ACCESS DRIVE PROFILE	4	1/15/08
C-6	FOUNDATION PLAN, SECTIONS, & NOTES	3	1/15/08
E-1	ELECTRICAL DIAGRAMS & DETAILS	3	1/15/08
E-2	GROUNDING PLAN & NOTES	3	1/15/08
E-3	GROUNDING DETAILS	3	1/15/08
E-4	ELECTRICAL NOTES	3	1/15/08

SHEET INDEX

THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL ITEMS OF CONCERN HAVE BEEN ADDRESSED AND EACH OF THE DRAWINGS HAS BEEN REVISED AND ISSUED "FOR CONSTRUCTION"

AS BUILT ARE BASED ON REDLINES PROVIDED BY CONTRACTOR AND NOTED IN AND SITE SURVEY OF NOVEMBER 12, 2007



175 CALKINS ROAD
ROCHESTER, NEW YORK 14623

TECTONIC

TECTONIC Engineering & Surveying Consultants P.C.
12 Cornell Road
Latham, NY 12110
Phone: (518) 783-1630
Fax: (518) 783-1544
www.tectoniceengineering.com

DESIGN APPROVAL

PRELIMINARY/CONSTRUCTION

RF ENG.	DATE:
EQPT. ENG.	DATE:
OPERATIONS.	DATE:
CONST. MGR.	DATE:
NETWORK ENG.	DATE:
REAL ESTATE	DATE:

WORK ORDER NUMBER	DRAWN BY
2248.66514	RDD

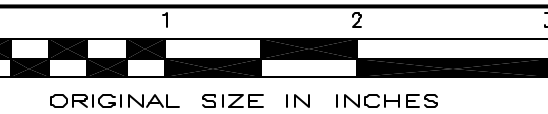
NO.	DATE	ISSUE
0	5/3/07	FOR CONSTRUCTION
1	8/8/07	REV PER ZONING
2	9/4/07	FOR BP APPLICATION
3	11/14/07	PER COMMENTS FOR CONSTRUCTION
4	11/15/07	PER TOWN COMMENTS FOR CONSTRUCTION
5	11/30/07	PER TOWN COMMENTS FOR CONSTRUCTION
6	12/4/07	PER COMMENTS FOR CONSTRUCTION
7	1/15/08	AS BUILT

RELEASED BY	DATE



UNAUTHORIZED ALTERATION OR ADDITIONS TO A PLAN BEARING THE SEAL OF A LICENSED ENGINEER OR LAND SURVEYOR IS A VIOLATION OF SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

COPIES OF THIS DOCUMENT WITHOUT A FACSIMILE OF THE SIGNATURE AND AN ORIGINAL EMBOSSED SEAL OR ORIGINAL STAMP IN BLUE OR RED INK OF THE PROFESSIONAL ENGINEER OR LAND SURVEYOR SHALL NOT BE CONSIDERED VALID COPIES.



ORIGINAL SIZE IN INCHES

SITE INFORMATION

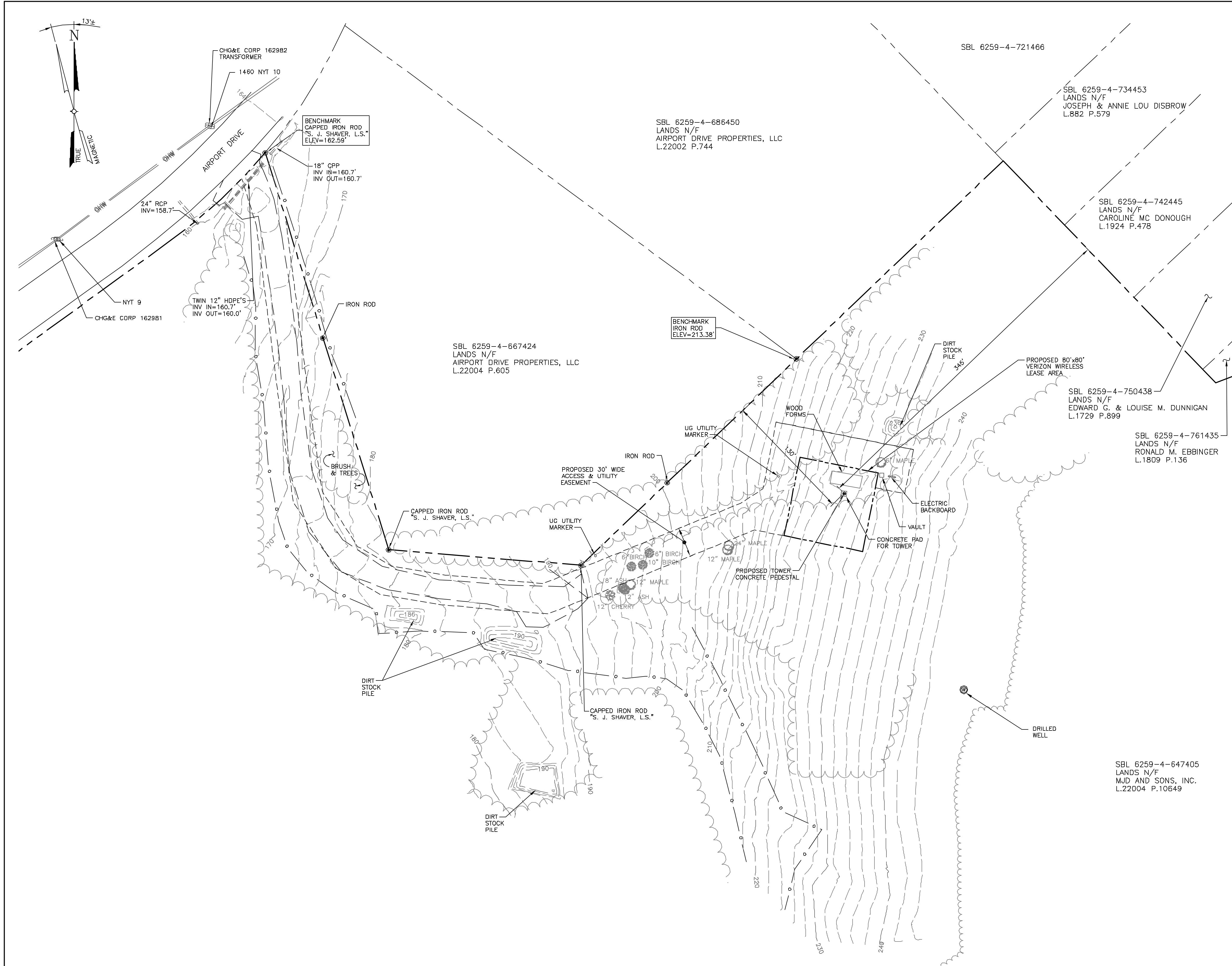
2004066514
NEW HACKENSACK
AIRPORT DRIVE
TOWN OF WAPPINGER
DUTCHESS COUNTY
NEW YORK

SHEET TITLE

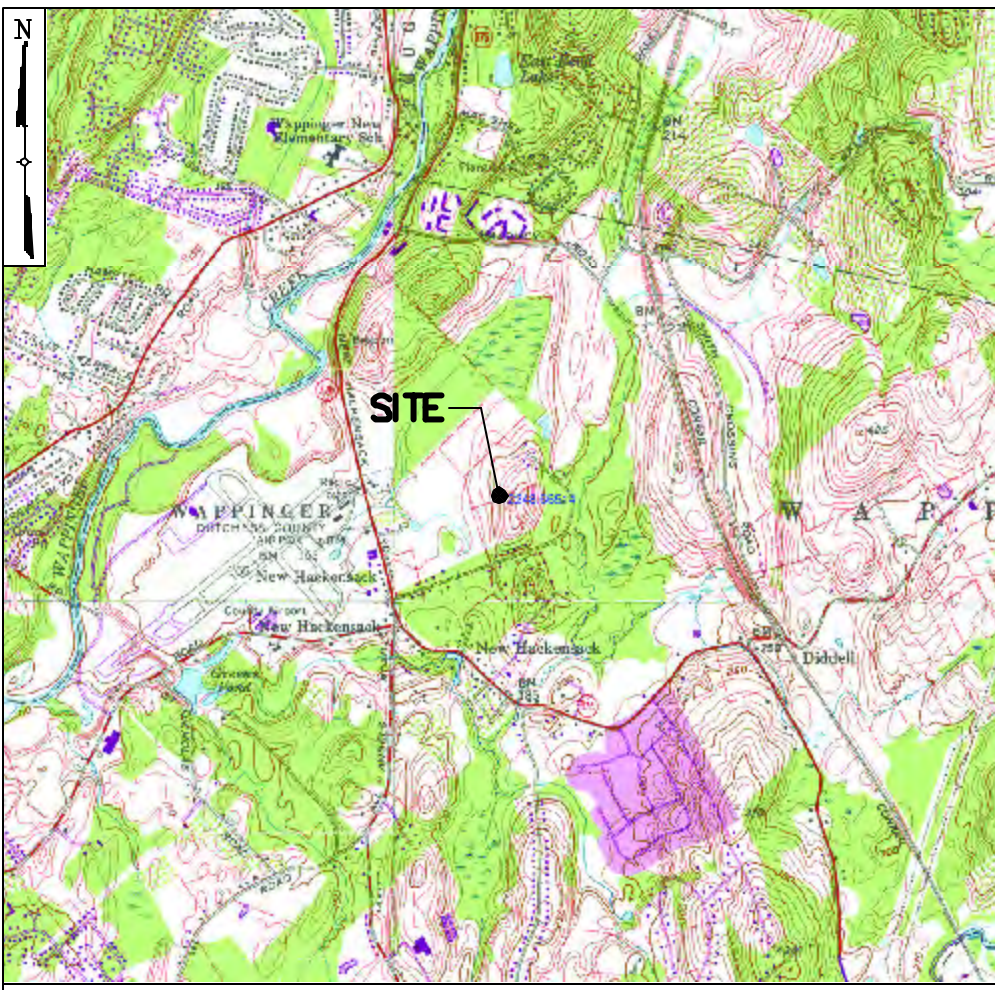
TITLE
SHEET

SHEET NUMBER

T-1



PARTIAL TOPOGRAPHIC SURVEY
SCALE: 1" = 50'



VICINITY MAP

GENERAL NOTES

- THIS MAP HAS BEEN PREPARED FROM A FIELD SURVEY PERFORMED BY TECTONIC ENGINEERING & SURVEYING CONSULTANTS, P.C. ON MARCH 3, 2005 AND OCTOBER 30, 2006 AND NOVEMBER 6, 2007.
- REFERENCES:
 - A: MJD AND SONS, INC. (L.22004 P.10649) OBTAINED AT THE DUTCHESS COUNTY CLERKS OFFICE.
 - B: MAP REFERENCE: "MAP OF SURVEY FOR MJD & SONS, INC.", PREPARED BY PETER R. HUSTIS, LLS, COMPLETED DECEMBER 30, 2003.
 - C: MAP REFERENCE: "LOTLINE REALIGNMENT SUBDIVISION PLAT FOR EMSLEY SUBDIVISION-SECTION 2", PREPARED BY PETER R. HUSTIS, LLS, LAST REVISED 6/19/01. FILED IN THE DUTCHESS COUNTY CLERKS OFFICE AS MAP NO. 11243.
- VERTICAL DATUM:
NATIONAL GEODETIC VERTICAL DATUM OF 1929.
- NORTH ORIENTATION IS TRUE NORTH BY SOLAR OBSERVATION.
- LOCATIONS OF ALL UTILITIES AND SUBSTRUCTURES ARE APPROXIMATE ONLY BASED ON SURFACE EVIDENCE AND EXISTING PLANS. THE INFORMATION GIVEN ON THE SURVEY PERTAINING TO UTILITIES AND SUBSTRUCTURES IS NOT CERTIFIED TO ACCURACY OR COMPLETENESS. CONSULT WITH THE APPROPRIATE COMPANY OR AGENCY BEFORE DESIGNING OF CONSTRUCTING IMPROVEMENTS. TECTONIC ENGINEERING AND SURVEYING CONSULTANTS, P.C. WILL NOT BE RESPONSIBLE FOR ANY DAMAGE SUBSEQUENTLY CAUSED TO PERSONNEL, STRUCTURES OR UTILITIES.
- THIS SURVEY IS SUBJECT TO A COMPLETE AND UP TO DATE ABSTRACT OF TITLE, COVENANTS, EASEMENTS, GRANTS AND RIGHTS-OF-WAY NOT VISIBLE AND NOT REFERENCED ARE NOT SHOWN. TECTONIC ENGINEERING AND SURVEYING CONSULTANTS, P.C. SHALL NOT BE LIABLE FOR THE DISTURBANCE OF ANY UTILITIES NOT SHOWN OR REFERENCED ON THIS SURVEY PLAT.
- THIS SURVEY PLAN IS FOR SITE PLAN/ENGINEERING PURPOSES ONLY AND IS NOT INTENDED TO BE USED FOR THE TRANSFER OF TITLE.
- NOT ALL IMPROVEMENTS ON THE PARCEL BEING SURVEYED HAVE BEEN SHOWN.
- THIS SURVEY WAS PERFORMED WITH APPROXIMATELY 12" OF SNOW COVER. SOME PHYSICAL FEATURES MAY HAVE BEEN OBSOURED.

LEGEND

---	PROPERTY LINE
---	ADJOINING PROPERTY LINE
---	LEASE LINE
---	EASEMENT LINE
---	EDGE OF PAVEMENT
---	EDGE OF GRAVEL
---	CONTOUR
---	INDEX CONTOUR
●	IRON ROD
□	STAKE-CENTERLINE PROPOSED RD
○	UTILITY POLE
---	OVERHEAD WIRES
---	SILT FENCE
---	TREE LINE
---	BRUSH LINE

FAA 1-A CERTIFICATION

CENTER OF PROPOSED TOWER

LATITUDE: N 41°37'47.2" NAD 1983
LONGITUDE: W 073°52'05.7" NAD 1983

GROUND ELEVATION: 227 (IN FEET)
(NGVD 1929 DATUM)

THIS IS TO CERTIFY THAT THE ABOVE INFORMATION IS PROVIDED TO THE FOLLOWING ACCURACY:

± TWENTY (20) FEET IN THE HORIZONTAL
± THREE (3) FEET IN THE VERTICAL

GARY M. REED, P.L.S. #50557

STATE OF NEW YORK DATE: _____



175 CALKINS ROAD
ROCHESTER, NEW YORK 14623

TECTONIC

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12 Cornell Road
Latham, NY 12110
Phone: (518) 783-1630
Fax: (518) 783-1544
www.tectoniceengineering.com

DESIGN APPROVAL

PRELIMINARY/CONSTRUCTION

RF ENG. _____ DATE: _____
EQPT. ENG. _____ DATE: _____
OPERATIONS _____ DATE: _____
CONST. MGR _____ DATE: _____
NETWORK ENG. _____ DATE: _____
REAL ESTATE _____ DATE: _____

WORK ORDER NUMBER 2248.66514
DRAWN BY GMR

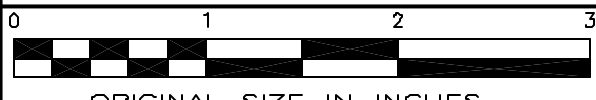
NO.	DATE	ISSUE
0	3/8/05	FOR COMMENT
1	3/25/05	REVISED SITE LAYOUT
2	4/4/05	REVISED EASEMENT
3	4/25/05	REVISED EASEMENT
4	11/3/05	REVISED LEASE/EASEMENT
5	10/31/06	ADDITIONAL TOPOGRAPHY
6	11/2/06	PER VZW COMMENTS
7	4/10/07	PER VZW COMMENTS
8	6/19/07	LEGAL DESCRIPTION ADDED
9	7/18/07	AS PER COMMENTS
10	11/12/07	ADDITIONAL SURVEY
11	11/14/07	REVISED EASEMENT

RELEASED BY _____ DATE _____

GARY M. REED, P.L.S. #50557

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COPIES OF THIS DOCUMENT WITHOUT A FACSIMILE OF THE SIGNATURE AND AN ORIGINAL EMBOSSED SEAL OR ORIGINAL STAMP IN BLUE OR RED INK OF THE PROFESSIONAL ENGINEER OR LAND SURVEYOR SHALL NOT BE CONSIDERED VALID COPIES.



SITE INFORMATION

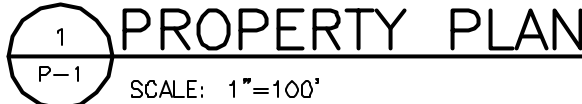
2004066514
NEW HACKENSACK
AIRPORT DRIVE
TOWN OF WAPPINGER
DUTCHESS COUNTY
NEW YORK

SHEET TITLE

PARTIAL
TOPOGRAPHIC
SURVEY

SHEET NUMBER

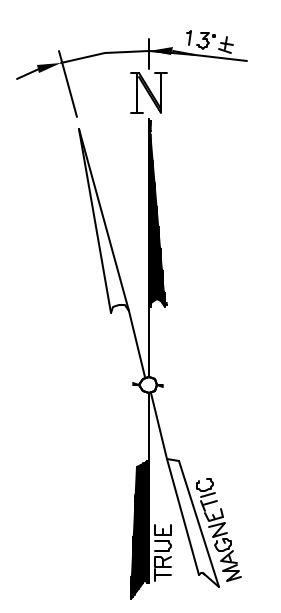
SU-1



- P-1**

NOTES:

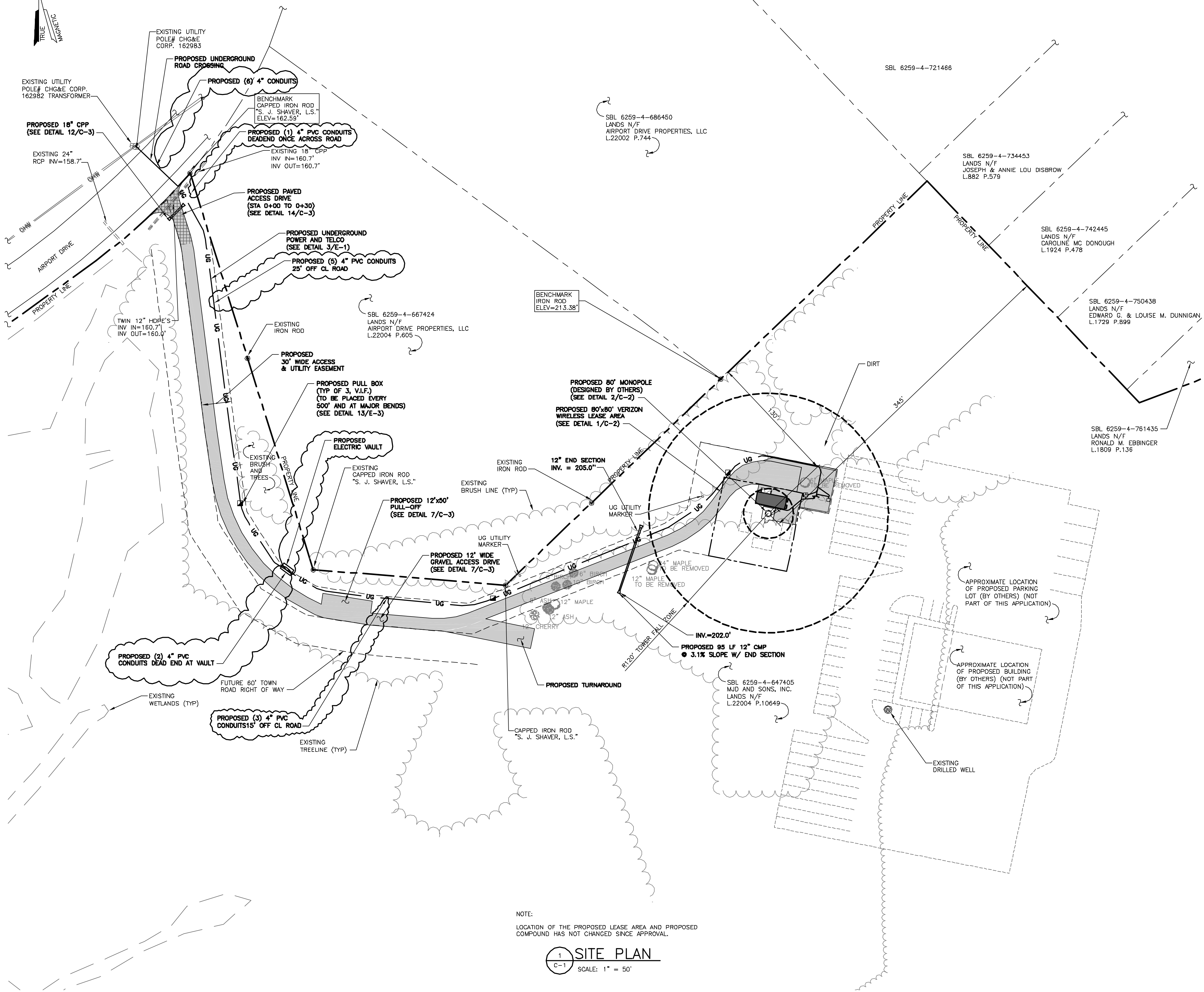
1. THERE IS NO SCHOOL (PUBLIC OR PRIVATE) LOCATED CLOSER THAN 1,500 FEET OF THE PROPOSED WIRELESS SERVICE FACILITY.
2. THERE IS NO DAY-CARE CENTER, HOSPITAL, NURSING HOME, CHURCH, SYNAGOGUE, OR OTHER PLACES OF WORSHIP LOCATED CLOSER THAN 750 FEET OF THE PROPOSED WIRELESS SERVICE FACILITY.
3. THERE ARE SIX RESIDENCES WITHIN 750' OF THE PROPOSED WIRELESS TELECOMMUNICATIONS FACILITY, THE CLOSEST BEING APPROXIMATELY 595'. SIX VARIANCES WERE GRANTED BY THE TOWN ON DECEMBER 14, 2005.



NORTH ORIENTATION

1. TRUE NORTH ORIENTATION ESTABLISHED BY A SITE SURVEY PERFORMED BY TECTONIC ENGINEERING CONSULTANTS, P.C., ENTITLED, "PARTIAL TOPOGRAPHIC SURVEY", DATED 3/8/05.

2. DECLINATION OBTAINED FROM THE NATIONAL GEOPHYSICAL DATA CENTER DURING THE MONTH OF APRIL, 2005.



NOTE:
LOCATION OF THE PROPOSED LEASE AREA AND PROPOSED COMPOUND HAS NOT CHANGED SINCE APPROVAL.

1 SITE PLAN
C-1
SCALE: 1" = 50'

GENERAL NOTES

1. THE PROJECT IS THE COMMERCIAL INSTALLATION OF AN UNMANNED WIRELESS COMMUNICATION FACILITY.
2. THE PROPOSED DEVELOPMENT IS UNMANNED AND DOES NOT REQUIRE A MEANS OF WATER SUPPLY, SEWAGE DISPOSAL, OR HANDICAPPED ACCESS.
3. THE PROPOSED DEVELOPMENT IS MINIMAL, WILL CREATE NEGLIGIBLE ADDITIONAL STORMWATER RUNOFF, AND WILL, THEREFORE, NOT IMPACT THE EXISTING STORMWATER DRAINAGE SYSTEM.
4. THE PROPOSED DEVELOPMENT DOES NOT INCLUDE OUTDOOR STORAGE, SOLID WASTE RECEPTACLES, OR PLUMBING.
5. ADEQUATE PARKING EXISTS FOR ONE VEHICLE FOR MAINTENANCE OR EMERGENCY SERVICE ONCE A MONTH.
6. THERE ARE NO NEW STREETS, CURBS, SIDEWALKS, OR WALKWAYS PROPOSED.
7. THERE ARE NO COMMERCIAL SIGNS PROPOSED FOR THIS INSTALLATION.

SITE NOTES

1. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWING.
2. RUBBISH, STUMPS, DEBRIS, STICKS, STONES, AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
3. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE EQUIPMENT AND TOWER AREAS.
4. 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.
5. THE SUBGRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
6. 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 THE ENGINEER. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES.
7. 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 THE ENGINEER.
8. THE AREAS DISTURBED DUE TO CONSTRUCTION ACTIVITY SHALL BE GRADED TO A UNIFORM SLOPE, FERTILIZED, SEEDED, AND COVERED WITH MULCH.
9. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE NEW YORK STATE GUIDELINES FOR EROSION AND SEDIMENT CONTROL, AND COORDINATED WITH THE TOWN.

LEGEND

---	PROPERTY LINE
---	ADJOINING PROPERTY LINE
---	PROPOSED LEASE LINE
---	PROPOSED EASEMENT LINE
---	SETBACK LINE
---	EDGE OF EXISTING PAVED DRIVE
---	EXISTING WETLANDS
---	EXISTING UTILITY POLE
---	PROPOSED UTILITY POLE
---	EXISTING OVERHEAD WIRES
---	PROPOSED OVERHEAD WIRES
---	EXISTING UNDERGROUND UTILITIES
---	PROPOSED UNDERGROUND UTILITIES
---	EXISTING CONTOUR
---	EXISTING INDEX CONTOUR
---	EXISTING IRON ROD/PIPE
---	PROPOSED SILT FENCE
---	EXISTING CHAINLINK FENCE
---	PROPOSED CHAINLINK FENCE
---	CENTERLINE OF DITCH
---	EXISTING BRUSH LINE
---	EXISTING TREE LINE
---	EXISTING STONE WALL & FENCE
---	EXISTING STORM SEWER
---	EXISTING CATCH BASIN
---	PROPOSED PULL BOX

- CONTRACTOR SHALL NOTIFY UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION AT TELEPHONE NUMBER 1-800-962-7982 PRIOR TO EXCAVATION AT SITE
- CONTRACTOR TO LOCATE AND VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATION
- ALL EXCAVATION WORK WITHIN 36" OF EITHER SIDE OF UNDERGROUND UTILITIES MUST BE DONE BY HAND EXCAVATION METHODS



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DESIGN APPROVAL

PRELIMINARY/CONSTRUCTION	
RF. ENG. _____	DATE: _____
EQPT. ENG. _____	DATE: _____
OPERATIONS _____	DATE: _____
CONST. MGR. _____	DATE: _____
NETWORK ENG. _____	DATE: _____
REAL ESTATE _____	DATE: _____

WORK ORDER NUMBER	DRAWN BY
2248.66514	JRF

NO.	DATE	ISSUE
0	5/3/07	FOR CONSTRUCTION
1	8/8/07	REV PER ZONING
2	9/4/07	FOR BP APPLICATION
3	11/14/07	PER COMMENTS FOR CONSTRUCTION
4	11/15/07	PER TOWN COMMENTS FOR CONSTRUCTION
5	11/30/07	PER TOWN COMMENTS FOR CONSTRUCTION
6	1/15/08	AS BUILT

RELEASED BY	DATE

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ORIGINAL SIZE IN INCHES

SITE INFORMATION

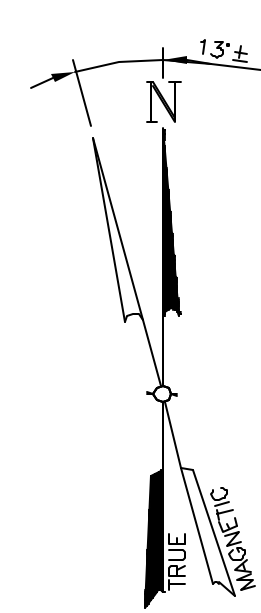
2004066514
NEW HACKENSACK
AIRPORT DRIVE
TOWN OF WAPPINGER
DUTCHESS COUNTY
NEW YORK

SHEET TITLE

**SITE PLAN
& NOTES**

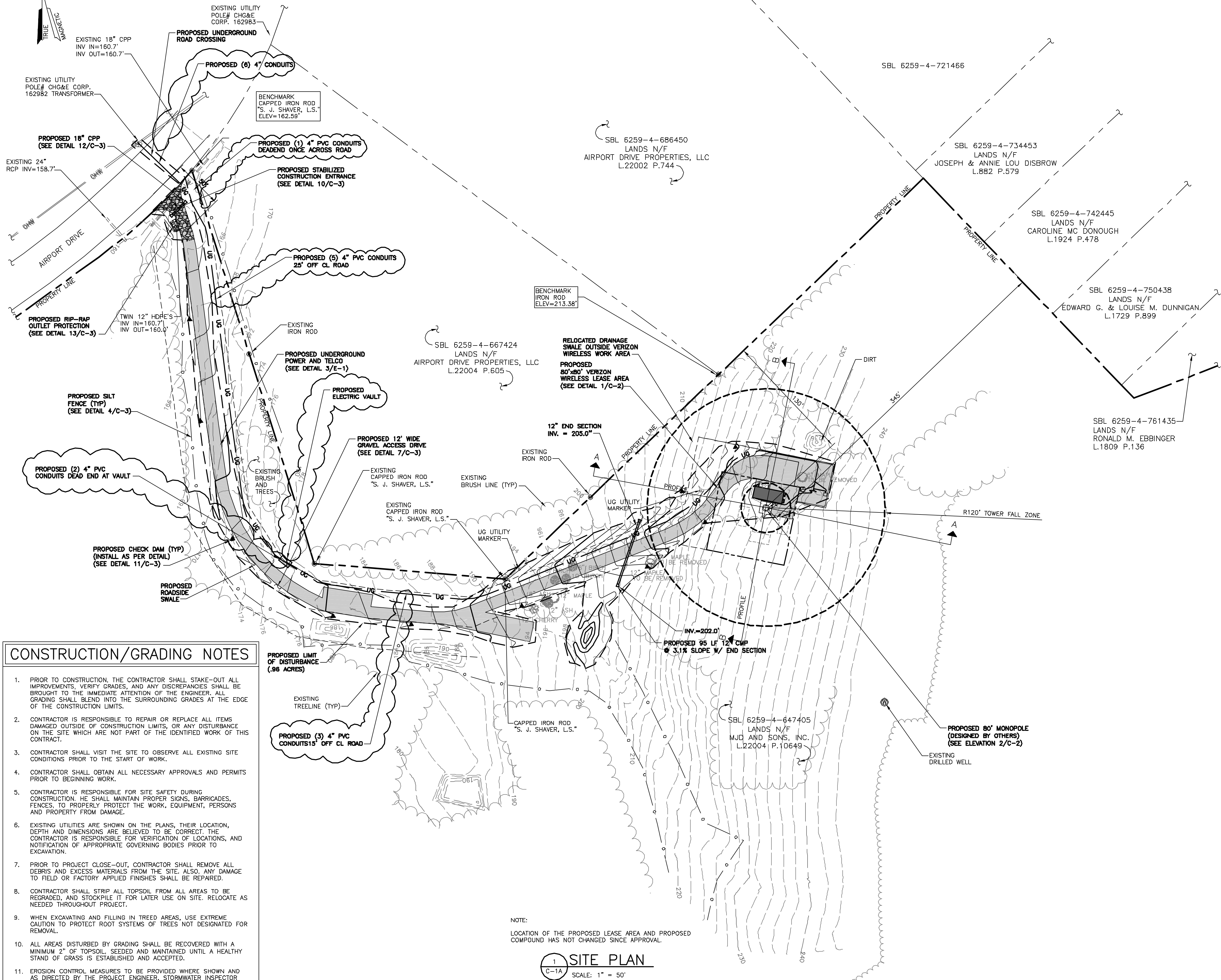
SHEET NUMBER

C-1



NORTH ORIENTATION

1. TRUE NORTH ORIENTATION ESTABLISHED BY A SITE SURVEY PERFORMED BY TECTONIC ENGINEERING CONSULTANTS, P.C., ENTITLED, "PARTIAL TOPOGRAPHIC SURVEY", DATED 3/8/05
2. DECLINATION OBTAINED FROM THE NATIONAL GEOPHYSICAL DATA CENTER DURING THE MONTH OF APRIL, 2005



CONSTRUCTION/GRADING NOTES

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL STAKE-OUT ALL IMPROVEMENTS, VERIFY GRADES, AND ANY DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. ALL GRADING SHALL BLEND INTO THE SURROUNDING GRADES AT THE EDGE OF THE CONSTRUCTION LIMITS.
2. CONTRACTOR IS RESPONSIBLE TO REPAIR OR REPLACE ALL ITEMS DAMAGED OUTSIDE OF CONSTRUCTION LIMITS, OR ANY DISTURBANCE ON THE SITE WHICH ARE NOT PART OF THE IDENTIFIED WORK OF THIS CONTRACT.
3. CONTRACTOR SHALL VISIT THE SITE TO OBSERVE ALL EXISTING SITE CONDITIONS PRIOR TO THE START OF WORK.
4. CONTRACTOR SHALL OBTAIN ALL NECESSARY APPROVALS AND PERMITS PRIOR TO BEGINNING WORK.
5. CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY DURING CONSTRUCTION. HE SHALL MAINTAIN PROPER SIGNS, BARRICADES, FENCES, TO PROPERLY PROTECT THE WORK, EQUIPMENT, PERSONS AND PROPERTY FROM DAMAGE.
6. EXISTING UTILITIES ARE SHOWN ON THE PLANS, THEIR LOCATION, DEPTH AND DIMENSIONS ARE BELIEVED TO BE CORRECT. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF LOCATIONS, AND NOTIFICATION OF APPROPRIATE GOVERNING BODIES PRIOR TO EXCAVATION.
7. PRIOR TO PROJECT CLOSE-OUT, CONTRACTOR SHALL REMOVE ALL DEBRIS AND EXCESS MATERIALS FROM THE SITE. ALSO, ANY DAMAGE TO FIELD OR FACTORY APPLIED FINISHES SHALL BE REPAIRED.
8. CONTRACTOR SHALL STRIP ALL TOPSOIL FROM ALL AREAS TO BE REGRADED, AND STOCKPILE IT FOR LATER USE ON SITE. RELOCATE AS NEEDED THROUGHOUT PROJECT.
9. WHEN EXCAVATING AND FILLING IN TREED AREAS, USE EXTREME CAUTION TO PROTECT ROOT SYSTEMS OF TREES NOT DESIGNATED FOR REMOVAL.
10. ALL AREAS DISTURBED BY GRADING SHALL BE RECOVERED WITH A MINIMUM 2" OF TOPSOIL, SEEDED AND MAINTAINED UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED AND ACCEPTED.
11. EROSION CONTROL MEASURES TO BE PROVIDED WHERE SHOWN AND AS DIRECTED BY THE PROJECT ENGINEER, STORMWATER INSPECTOR AND/OR MUNICIPALITY.

NOTE:

LOCATION OF THE PROPOSED LEASE AREA AND PROPOSED COMPOUND HAS NOT CHANGED SINCE APPROVAL.

1 SITE PLAN

C-1A SCALE: 1" = 50'

GENERAL NOTES

1. THE PROJECT IS THE COMMERCIAL INSTALLATION OF AN UNMANNED WIRELESS COMMUNICATION FACILITY.
2. THE PROPOSED DEVELOPMENT IS UNMANNED AND DOES NOT REQUIRE A MEANS OF WATER SUPPLY, SEWAGE DISPOSAL, OR HANDCAPPED ACCESS.
3. THE PROPOSED DEVELOPMENT IS MINIMAL, WILL CREATE NEGLECTIBLE ADDITIONAL STORMWATER RUNOFF, AND WILL THEREFORE, NOT IMPACT THE EXISTING STORMWATER DRAINAGE SYSTEM.
4. THE PROPOSED DEVELOPMENT DOES NOT INCLUDE OUTDOOR STORAGE, SOLID WASTE RECEPTACLES, OR PLUMBING.
5. ADEQUATE PARKING EXISTS FOR ONE VEHICLE FOR MAINTENANCE OR EMERGENCY SERVICE ONCE A MONTH.
6. THERE ARE NO NEW STREETS, CURBS, SIDEWALKS, OR WALKWAYS PROPOSED.
7. THERE ARE NO COMMERCIAL SIGNS PROPOSED FOR THIS INSTALLATION.

SITE NOTES

1. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWING.
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3. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE EQUIPMENT AND TOWER AREAS.
4. 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.
5. THE SUBGRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
6. 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 THE ENGINEER. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES.
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LEGEND

---	PROPERTY LINE
---	ADJOINING PROPERTY LINE
---	PROPOSED LEASE LINE
---	PROPOSED EASEMENT LINE
---	SETBACK LINE
---	EDGE OF EXISTING PAVED DRIVE
---	EXISTING UTILITY POLE
---	PROPOSED UTILITY POLE
---	EXISTING OVERHEAD WIRES
---	PROPOSED OVERHEAD WIRES
---	EXISTING UNDERGROUND UTILITIES
---	PROPOSED UNDERGROUND UTILITIES
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---	PROPOSED CHAINLINK FENCE
---	CENTERLINE OF DITCH
---	EXISTING BRUSH LINE
---	EXISTING TREE LINE
---	EXISTING STONE WALL & FENCE
---	EXISTING STORM SEWER
---	PROPOSED STORM SEWER
---	PROPOSED CHECK DAM
---	PROPOSED LIMIT OF DISTURBANCE

ACCESS DRIVE NOTES

1. PRIOR TO COMMENCEMENT OF CONSTRUCTION, CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AS REQUIRED BY THE TOWN AND STATE.
2. PRIOR TO INSTALLATION OF ACCESS DRIVE, THE CONTRACTOR SHALL NOTIFY THE TOWN HIGHWAY SUPERINTENDENT SO HE/SHE MAY HAVE THE OPPORTUNITY TO INSPECT THE LOCATION OF THE ACCESS DRIVE ENTRANCE WITH RESPECT TO THE TOWN RIGHT OF WAY.
3. CONTRACTOR SHALL VERIFY THAT NO PONDING OCCURS AT THE POINT OF CONNECTION TO THE PAVED ROADWAY.
4. ACCESS DRIVE SHALL BE ALIGNED IN SUCH A WAY AS TO CREATE THE MINIMUM POSSIBLE TRAFFIC HAZARD. CLEAR VISIBILITY SHALL BE PROVIDED IN BOTH DIRECTIONS AT THE INTERSECTION OF THE PROPOSED ACCESS DRIVE AND THE PAVED ROADWAY.
5. CONTRACTOR TO ENSURE ACCESS DRIVE BE CONSTRUCTED TO PROVIDE FIRE DEPARTMENT APPARATUS ACCESS TO WITHIN 75 FEET OF THE PROPOSED FENCED COMPOUND & LEASE AREA.
6. CONTRACTOR TO CONSTRUCT ACCESS DRIVE IN ACCORDANCE WITH APPROVED PLANS TO ACCOMMODATE A 30-TON EMERGENCY VEHICLE.
7. CONTRACTOR TO PROVIDE A MINIMUM OVERHEAD CLEARANCE OF 15 FEET ALONG ENTIRE LENGTH OF THE ACCESS DRIVE.

- CONTRACTOR SHALL NOTIFY UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION AT TELEPHONE NUMBER 1-800-962-7982 PRIOR TO EXCAVATION AT SITE
- CONTRACTOR TO LOCATE AND VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATION
- ALL EXCAVATION WORK WITHIN 36" OF EITHER SIDE OF UNDERGROUND UTILITIES MUST BE DONE BY HAND EXCAVATION METHODS



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DESIGN APPROVAL

PRELIMINARY/CONSTRUCTION

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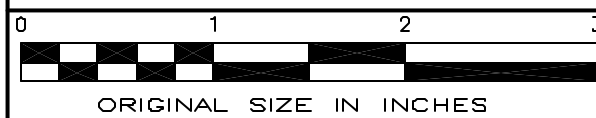
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RELEASED BY _____ DATE _____

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ORIGINAL SIZE IN INCHES

SITE INFORMATION

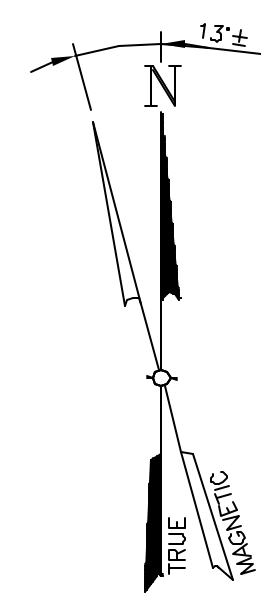
2004066514
NEW HACKENSACK
AIRPORT DRIVE
TOWN OF WAPPINGER
DUTCHESS COUNTY
NEW YORK

SHEET TITLE

GRADING, SEDIMENT
& EROSION CONTROL
PLAN

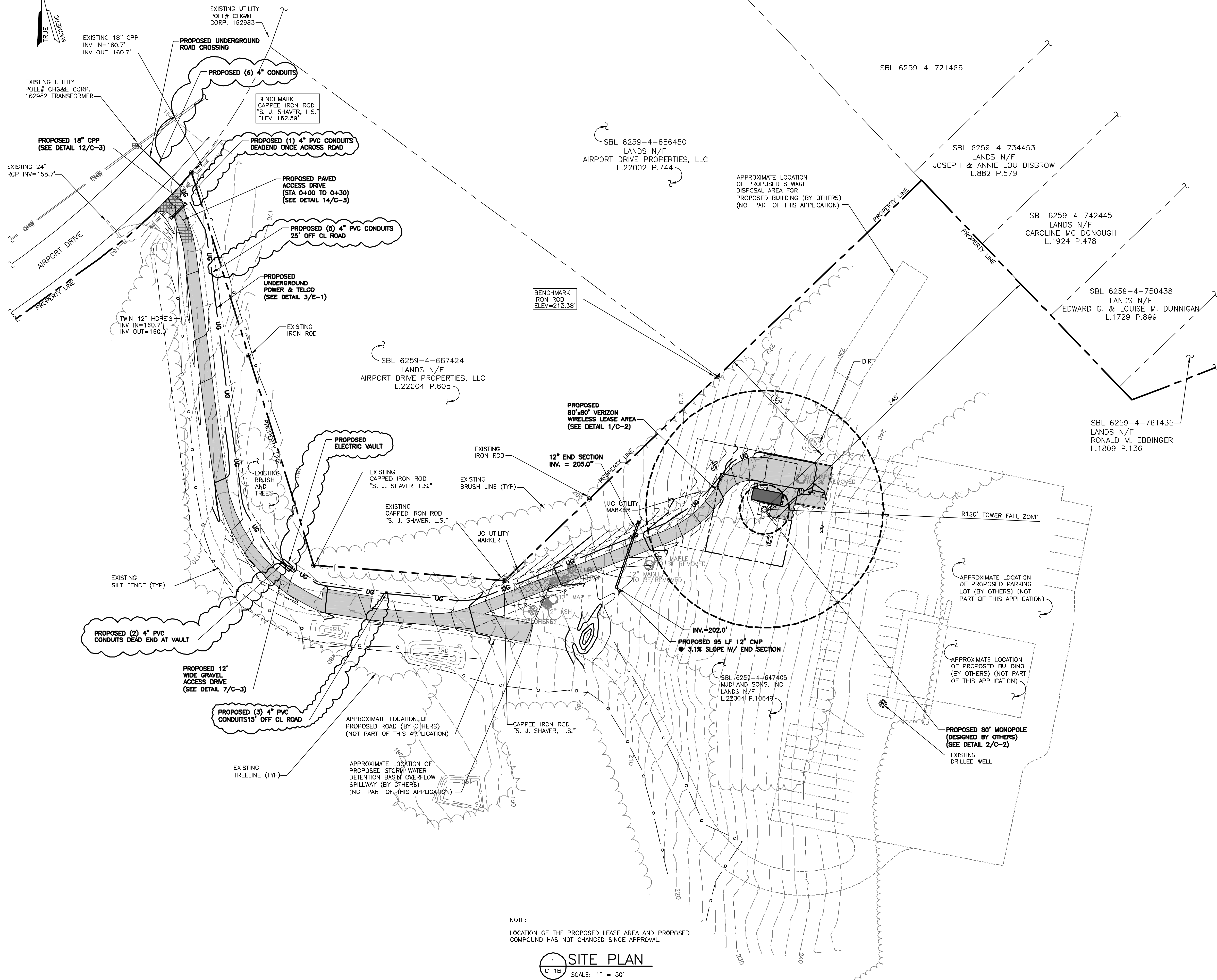
SHEET NUMBER

C-1A



NORTH ORIENTATION

1. TRUE NORTH ORIENTATION ESTABLISHED BY A SITE SURVEY PERFORMED BY TECTONIC ENGINEERING CONSULTANTS, P.C., ENTITLED, "PARTIAL TOPOGRAPHIC SURVEY", DATED 3/8/05
2. DECLINATION OBTAINED FROM THE NATIONAL GEOPHYSICAL DATA CENTER DURING THE MONTH OF APRIL, 2005



NOTE:

LOCATION OF THE PROPOSED LEASE AREA AND PROPOSED COMPOUND HAS NOT CHANGED SINCE APPROVAL.

1 SITE PLAN
C-1B SCALE: 1" = 50'

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SITE NOTES

1. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWING.
2. RUBBISH, STUMPS, DEBRIS, STICKS, STONES, AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
3. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE EQUIPMENT AND TOWER AREAS.
4. 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.
5. THE SUBGRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
6. 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 THE ENGINEER. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES.
7. 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 THE ENGINEER.
8. THE AREAS DISTURBED DUE TO CONSTRUCTION ACTIVITY SHALL BE GRADED TO A UNIFORM SLOPE, FERTILIZED, SEEDED, AND COVERED WITH MULCH.
9. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE NEW YORK STATE GUIDELINES FOR EROSION AND SEDIMENT CONTROL, AND COORDINATED WITH THE TOWN.

LEGEND

---	PROPERTY LINE
---	ADJOINING PROPERTY LINE
---	PROPOSED LEASE LINE
---	PROPOSED EASEMENT LINE
---	SETBACK LINE
---	EDGE OF EXISTING PAVED DRIVE
---	EXISTING UTILITY POLE
---	PROPOSED UTILITY POLE
---	EXISTING OVERHEAD WIRES
---	PROPOSED OVERHEAD WIRES
---	EXISTING UNDERGROUND UTILITIES
---	PROPOSED UNDERGROUND UTILITIES
---	EXISTING CONTOUR
---	EXISTING INDEX CONTOUR
---	EXISTING IRON ROD/PIPE
---	PROPOSED SILT FENCE
---	EXISTING CHAINLINK FENCE
---	PROPOSED CHAINLINK FENCE
---	CENTERLINE OF DITCH
---	EXISTING BRUSH LINE
---	EXISTING TREE LINE
---	EXISTING STONE WALL & FENCE
---	EXISTING STORM SEWER
---	EXISTING CATCH BASIN

- CONTRACTOR SHALL NOTIFY UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION AT TELEPHONE NUMBER 1-800-962-7982 PRIOR TO EXCAVATION AT SITE
- CONTRACTOR TO LOCATE AND VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATION
- ALL EXCAVATION WORK WITHIN 36" OF EITHER SIDE OF UNDERGROUND UTILITIES MUST BE DONE BY HAND EXCAVATION METHODS



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ROCHESTER, NEW YORK 14623

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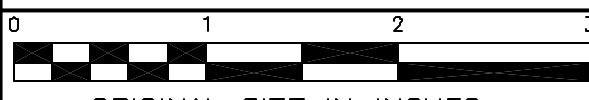
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SITE INFORMATION

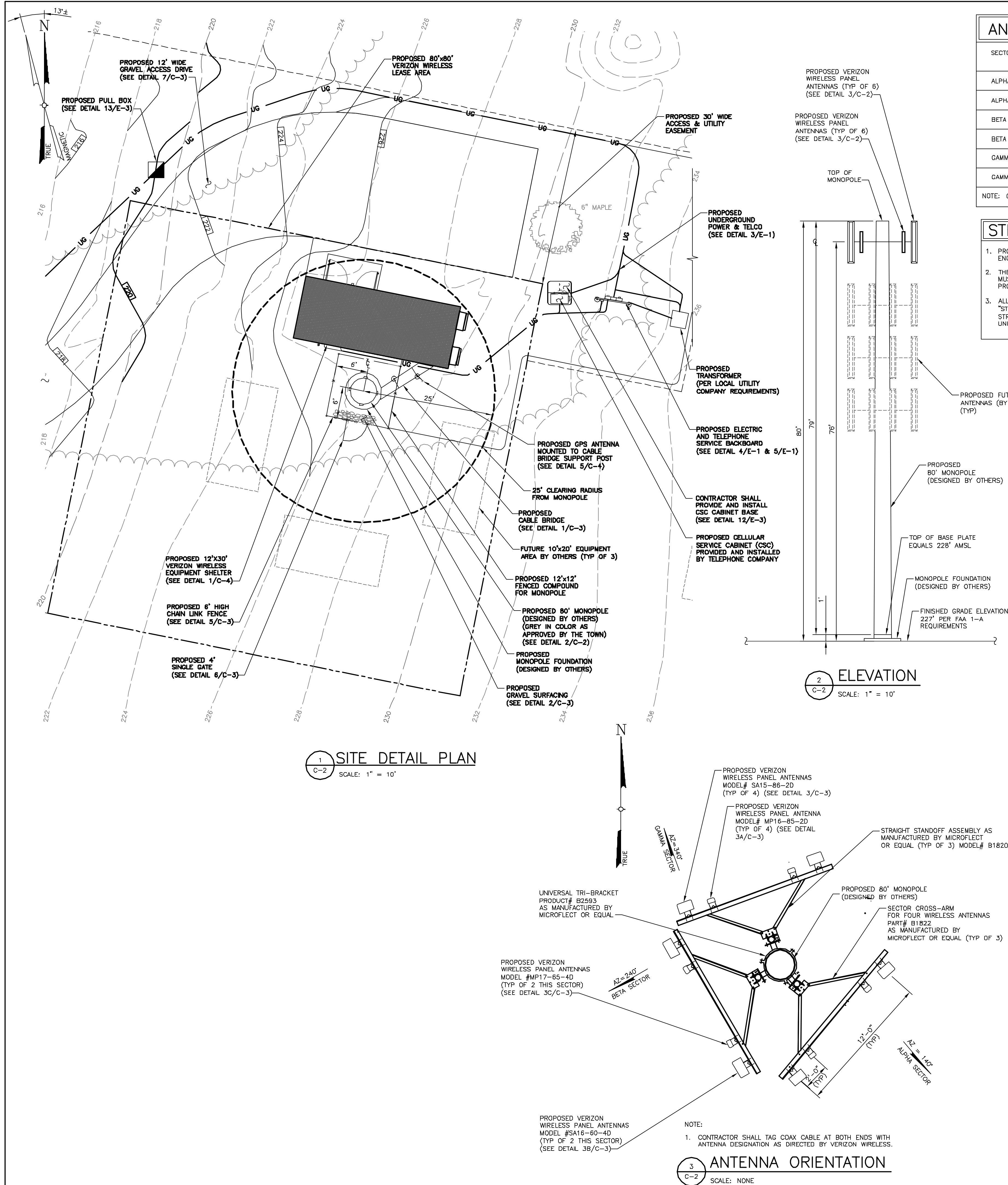
2004066514
NEW HACKENSACK
AIRPORT DRIVE
TOWN OF WAPPINGER
DUTCHESS COUNTY
NEW YORK

SHEET TITLE

COMBINED SITE
DEVELOPEMENT PLAN

SHEET NUMBER

C-1B



ANTENNA AND COAXIAL SCHEDULE

SECTOR	ANTENNA	ANTENNA DATA	MECHANICAL DOWN TILT	AZIMUTH	# OF ANTENNAS PER SECTOR	ANTENNA Q ₁ HEIGHT (AGL)	COAXIAL CABLE
ALPHA	SA15-86-2D	96.4" x 14" x 9", 42.5 LBS	0°	140°	2	76'±	1 5/8" DIA
ALPHA	MP16-85-2D	47.1" x 6.7" x 4.1", 10 LBS	0°	140°	2	76'±	1 5/8" DIA
BETA	SA16-60-4D	96.4" x 16.7" x 9", 46.5 LBS	0°	240°	2	76'±	1 5/8" DIA
BETA	MP17-65-4D	48" x 6.7" x 1.7", 10 LBS	0°	240°	2	76'±	1 5/8" DIA
GAMMA	SA15-86-2D	96.4" x 14" x 9", 42.5 LBS	0°	340°	2	76'±	1 5/8" DIA
GAMMA	MP16-85-2D	47.1" x 6.7" x 4.1", 10 LBS	0°	340°	2	76'±	1 5/8" DIA

NOTE: CONTRACTOR TO TAG COAX CABLE AT BOTH ENDS WITH ANTENNA DESIGNATION AS DIRECTED BY VERIZON WIRELESS.

STRUCTURAL NOTE:

- PROPOSED TOWER AND TOWER FOUNDATION TO BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK.
- THE VERIFICATION OF STRUCTURAL ADEQUACY AND DESIGN OF THE ATTACHMENTS MUST BE PERFORMED, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK.
- ALL WORK SHOULD CONFORM TO THE CURRENT STANDARD (ANSI/TIA-222-G "STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES"), NEW YORK STATE BUILDING CODE, LATEST EDITION, NEW YORK STATE UNIFORM FIRE PREVENTION AND ITS REFERENCED STANDARDS.

ANTENNA MOUNTING NOTES

- DESIGN AND CONSTRUCTION OF ANTENNA SUPPORTS SHALL CONFORM TO ANSI/TIA-222-G "STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES". DESIGN WIND SPEED (3 SECOND GUST) = 90 MPH. (DUTCHESS COUNTY, NEW YORK) (40 MPH IN CONJUNCTION WITH 0.75 INCHES OF DESIGN ICE THICKNESS)
- ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
- ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
- DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY COLD GALVANIZING IN ACCORDANCE WITH ASTM A780.
- ALL ANTENNA MOUNTS SHALL BE INSTALLED WITH DOUBLE NUTS AND SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- DESIGN OF THE ANTENNA MOUNTING BRACKETS, SUPPORTS, AND ALL COMPONENTS THEREOF AND ATTACHMENT THERETO SHALL BE THE RESPONSIBILITY OF THE MANUFACTURER. THE MANUFACTURER SHALL PROVIDE THE OWNER DRAWINGS DETAILING ALL COMPONENTS OF THE ASSEMBLY, INCLUDING CONNECTIONS, DESIGN LOADS, AND ALL OTHER PERTINENT DATA. MANUFACTURER SHALL ALSO PROVIDE THE OWNER WITH A STATEMENT OF COMPLIANCE, INDICATING THAT THE ANTENNA SUPPORTS HAVE BEEN DESIGNED IN ACCORDANCE WITH ANSI/TIA-222-G STANDARDS. ALL SUBMISSIONS SHALL BEAR THE SIGNATURE AND SEAL OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK.

EROSION AND SEDIMENT CONTROL MEASURES

TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES

GENERAL MEASURES:

- AS MUCH AS IS PRACTICAL, EXISTING VEGETATION SHALL BE PRESERVED. FOLLOWING THE COMPLETION OF CONSTRUCTION ACTIVITIES IN ANY PORTION OF THE SITE, PERMANENT VEGETATION SHALL BE ESTABLISHED ON ALL EXPOSED SOILS.
 - SITE PREPARATION ACTIVITIES SHALL BE PLANNED TO MINIMIZE THE SCOPE AND DURATION OF SOIL DISRUPTION.
- #### PARTICULAR MEASURES:
- DRAINAGE DITCH SEDIMENT FILTERS: UNTIL SUCH TIME AS FINAL SITE STABILIZATION IS COMPLETED, DITCHES SHALL RECEIVE TREATMENT WITH STRAW BALE WEIRS SO AS TO EFFECTIVELY TRAP SEDIMENT AND MINIMIZE ITS RELEASE OFF-SITE. STRAW BALE FILTERS SHALL BE CONSTRUCTED WITHIN EACH DITCH BEGINNING AT ITS DOWNSTREAM TERMINUS AND SHOULD BE PLACED AT INTERVALS OF LESS THAN 50 FEET.
 - STRAW BALE BERMS OR SILT FENCES: STRAW BALE BERMS OR SILT FENCES SHALL BE CONSTRUCTED AROUND ALL STOCKPILES OF FILL, TOPSOIL, AND EXCAVATED OVERBURDEN THAT ARE TO REMAIN EXPOSED FOR PERIODS LESS THAN 30 DAYS. STRAW BALE BERMS AND SILT FENCES SHALL BE ANCHORED AND MAINTAINED IN GOOD CONDITION UNTIL SUCH TIME AS SAID STOCKPILES ARE REMOVED AND STOCKPILING AREAS ARE BROUGHT TO FINAL GRADE AND PERMANENTLY STABILIZED.
 - TOPSOIL AND FILL THAT IS TO REMAIN STOCKPILED ON-SITE FOR PERIODS GREATER THAN 30 DAYS SHALL BE STABILIZED BY SEEDING. PRIOR TO THE SEEDING OPERATION, THE STOCKPILED MATERIAL SHALL BE GRADED AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.
 - IN NO CASE SHALL ERODIBLE MATERIALS BE STOCKPILED WITHIN 25 FEET OF ANY DITCH, STREAM, OR OTHER SURFACE WATER BODY.

PERMANENT AND TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:

- PERMANENT AND TEMPORARY VEGETATIVE COVER: IMMEDIATELY FOLLOWING THE COMPLETION OF CONSTRUCTION ACTIVITY OR WHERE WORK IS DELAYED AND WILL NOT BE DISTURBED FOR 21 DAYS OR MORE IN ANY PORTION OF THE SITE, PERMANENT OR TEMPORARY VEGETATION SHALL BE ESTABLISHED WITHIN 14 DAYS ON ALL EXPOSED SOILS. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED AS SOON AS PRACTICAL FOLLOWING DISTURBANCE TO STABILIZE BARE SOIL AND PROMOTE THE PROMPT RE-ESTABLISHMENT OF VEGETATION:
 - AN ADEQUATE SEEDBED SHALL BE PREPARED BY SCARIFYING, COMPACTED SOIL, AND REMOVING SURFACE DEBRIS AND OBSTACLES.
 - LIME SHALL BE APPLIED SUFFICIENTLY TO ATTAIN A SOIL ACIDITY pH OF 6.0 TO 7.0.
 - FERTILIZER (5-10-10 MIXTURE OR EQUIVALENT) SHALL BE APPLIED PER SOIL TEST RESULTS OR AT A RATE OF 600 LBS. PER ACRE.
 - TEMPORARY GROUND COVER: 30 LBS. RYEGRASS (ANNUAL OR PERENNIAL) PER ACRE. DURING THE WINTER, USE 100 LBS. CERTIFIED "AROOSTOOK" WINTER RYE (CERIAL RYE) PER ACRE.
 - PERMANENT SEEDING SHALL BE APPLIED ON 4" MIN TOPSOIL AT THE FOLLOWING RATE FOR ROUGH OR OCCASIONAL MOWING AREAS:
 - 8 LBS EMPIRE BIRDSFOOT TREFOIL OR COMMON WHITE CLOVER PER ACRE
 - 20 LBS TALL FESCUE PER ACRE PLUS
 - 2 LBS REDTOP OR 5 LBS RYEGRASS (PERENNIAL) PER ACRE
 - FOR MOWED AREAS:
 - 65 LBS KENTUCKY BLUEGRASS PER ACRE
 - 65 LBS RYEGRASS (PERENNIAL) PER ACRE
 - ALL SEEDING SHALL BE PERFORMED USING THE BROADCAST METHOD OR HYDROSEEDING, UNLESS OTHERWISE APPROVED.
 - ALL DISTURBED AREAS SHALL BE STABILIZED SUBSEQUENT TO SEEDING BY APPLYING 2 TONS OF STRAW MULCH PER ACRE. STRAW MULCH SHALL BE ANCHORED BY APPLYING 750 LBS OF WOOD FIBER MULCH PER ACRE WITH A HYDROSEEDER, OR TUCKING THE MULCH WITH SMOOTH DISCS OR OTHER MULCH ANCHORING TOOLS TO A DEPTH OF 3". MULCH ANCHORING TOOLS SHALL BE PULLED ACROSS SLOPES ALONG TOPOGRAPHIC CONTOURS.
- ALL UNNECESSARY REMOVAL OF HEALTHY TREES SHALL BE AVOIDED. MATERIALS SHALL NOT BE STORED NOR MACHINERY OPERATED WITHIN THE DRIP-LINE OF THE TREES TO REMAIN.

MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES:

- THE CONTRACTOR SHALL ON A DAILY BASIS INSPECT AND MAINTAIN THE INTEGRITY AND FUNCTION OF ALL TEMPORARY EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE CONSTRUCTION PROCESS.
- TO ASSURE PROPER FUNCTION, SILTATION BARRIERS SHALL BE MAINTAINED IN GOOD CONDITION AND REINFORCED, EXTENDED, REPAIRED, OR REPLACED AS NECESSARY. WASHOUTS SHALL BE IMMEDIATELY REPAIRED, RE-SEEDED, AND PROTECTED FROM FURTHER EROSION.
- SEDIMENT SHALL BE REMOVED FROM BEHIND THE SEDIMENT FENCE WHEN IT BECOMES ABOUT 0.5 FT DEEP AT THE FENCE. THE SEDIMENT FENCE SHALL BE REPAIRED AS NECESSARY TO MAINTAIN BARRIER.
- ALL SEEDED AREAS SHALL BE FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN IN ORDER TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.

LITTER AND CONSTRUCTION DEBRIS CONTROL MEASURES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH THE FOLLOWING LITTER AND CONSTRUCTION DEBRIS CONTROL MEASURES:

- CONTRACTOR SHALL DISPOSE OF ALL CONSTRUCTION DEBRIS OFF-SITE AT A FACILITY APPROVED FOR THE TYPE OF MATERIAL GENERATED AT THE SITE.
- NO BURNING OR BURIAL PITS WILL BE PERMITTED ON-SITE.
- TEMPORARY STORAGE CONTAINERS SHALL BE PROVIDED AS NECESSARY TO CONTROL LITTER AND CONSTRUCTION DEBRIS FROM ENTERING ON-SITE STORM WATER DISCHARGES.
- PRIOR TO LEAVING THE SITE EACH DAY, THE CONTRACTOR SHALL INSPECT THE PROJECT SITE AND PLACE ALL LITTER AND CONSTRUCTION DEBRIS IN APPROPRIATE STORAGE CONTAINERS.

- CONTRACTOR SHALL NOTIFY UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION AT TELEPHONE NUMBER 1-800-982-7882 PRIOR TO EXCAVATION AT SITE
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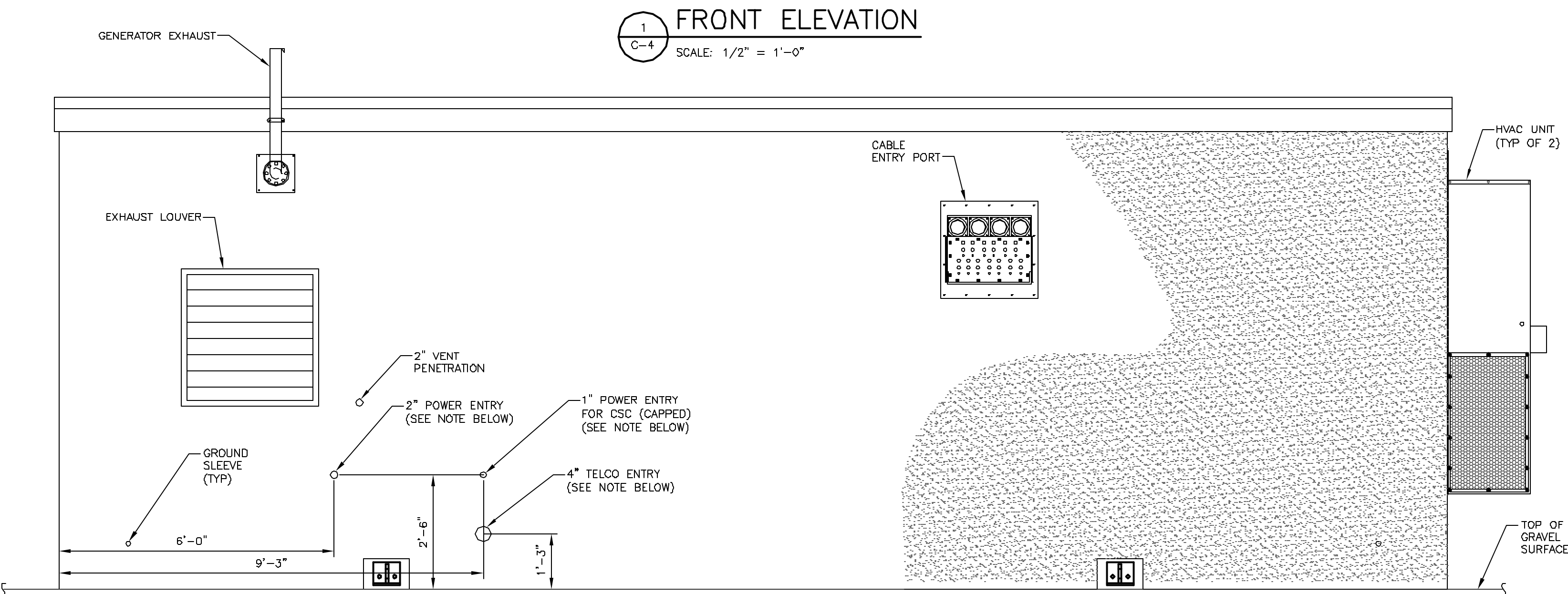
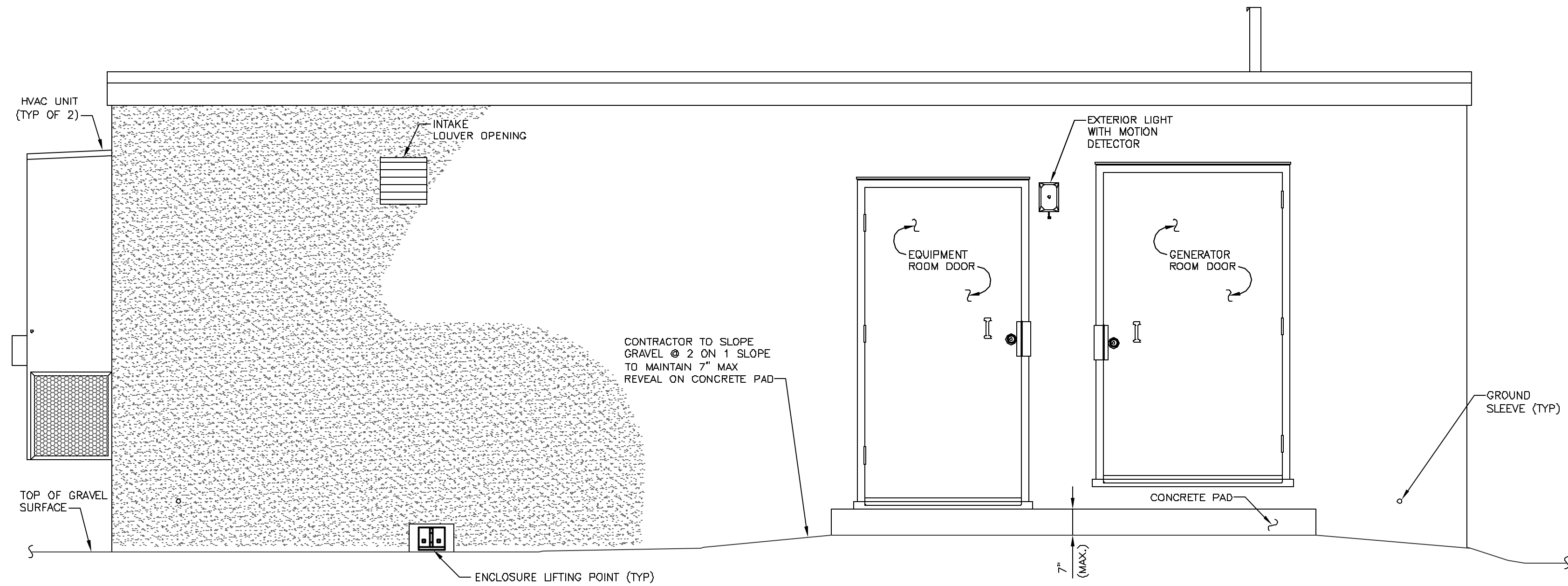
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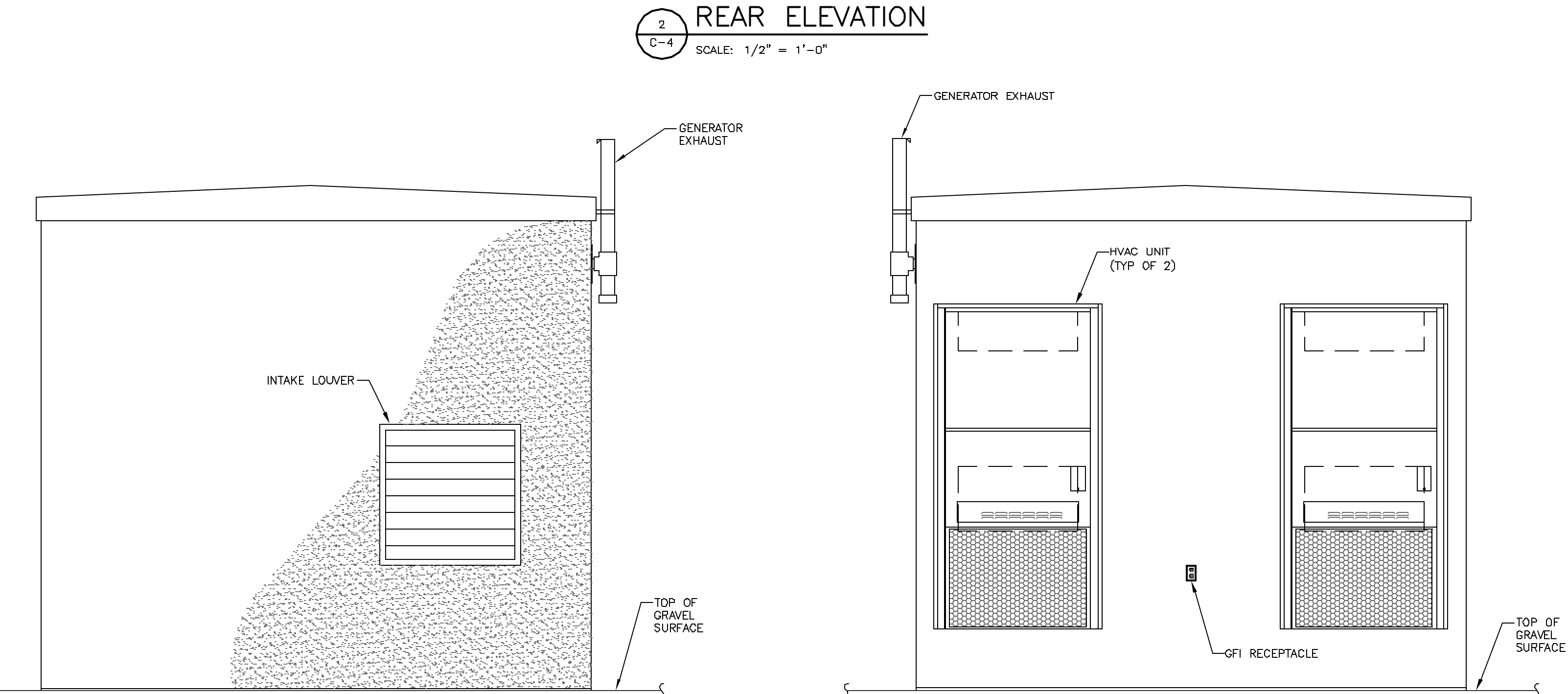
SITE DETAIL PLAN,
ELEVATION, DETAILS
& NOTES

SHEET NUMBER

C-2

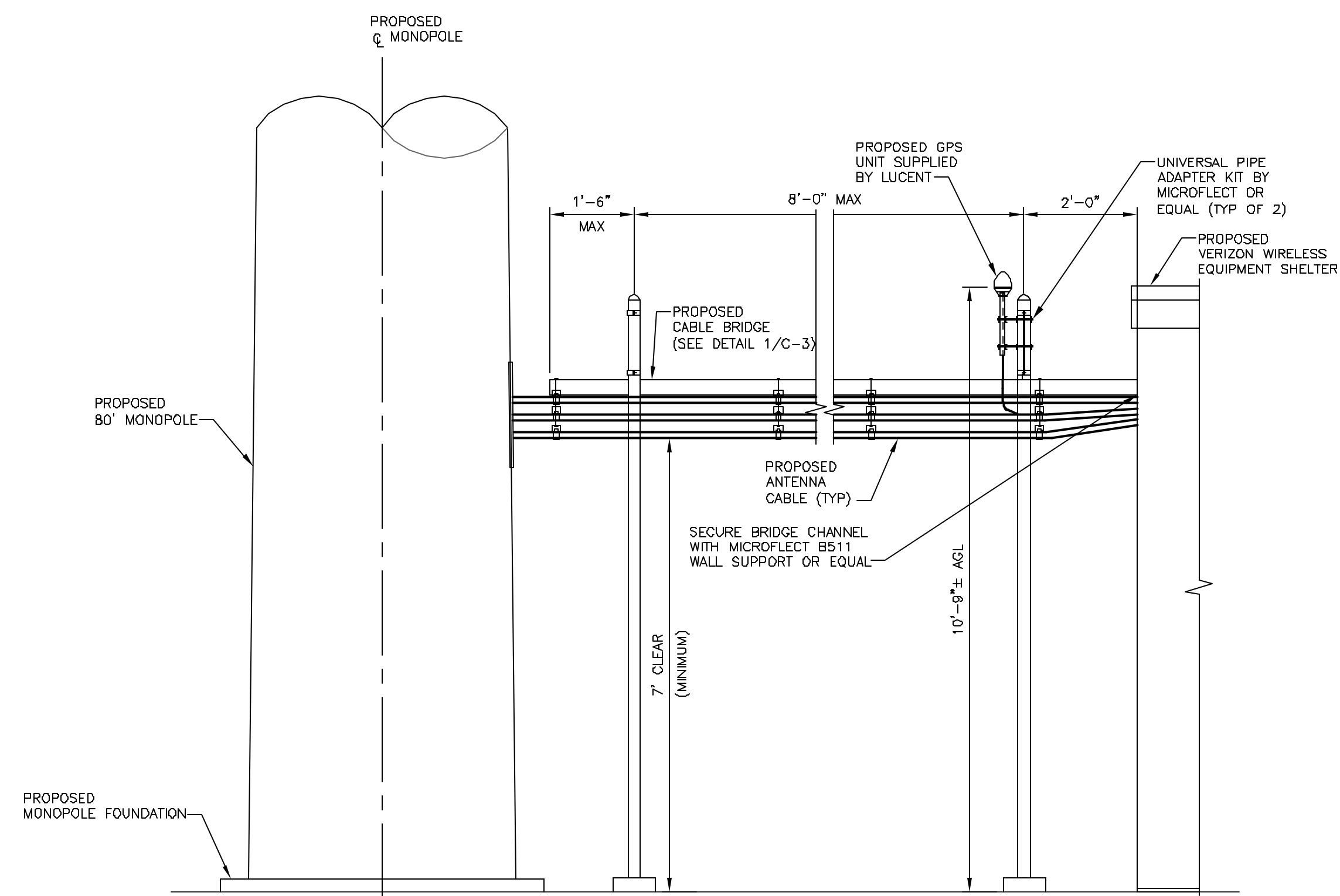


NOTE:
SEE SHELTER SPECIFICATION DRAWINGS FOR POWER & TELCO ENTRY POINTS



CONSTRUCTION NOTES

- ALL WORK SHALL COMPLY WITH THE NEW YORK STATE BUILDING CODE, LATEST EDITION, AND THE NEW YORK STATE UNIFORM FIRE PREVENTION AND ITS REFERENCED STANDARDS, AS WELL AS OTHER APPLICABLE CODES AND APPLICABLE LOCAL ORDINANCES. CONTRACTOR SHALL VISIT THE JOB SITE AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF.
- CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS, AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE ENGINEER.
- ERECTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMEN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST ACCEPTED PRACTICE. ALL MEMBERS SHALL BE LAID PLUMB AND TRUE AS INDICATED ON THE DRAWINGS.
- PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. THE WORK SHALL INCLUDE FURNISHING ALL LABOR, EQUIPMENT, MATERIALS, AND APPURTENANCES NECESSARY TO EFFECT ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS REQUIRED CLEARANCE. IT IS, THEREFORE, CRITICAL TO FIELD VERIFY DIMENSIONS. SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS, AND/OR DESIGN INTENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE CLIENT'S AUTHORIZED REPRESENTATIVE OR THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
- DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
- CONTRACTOR SHALL RECEIVE CLARIFICATION IN WRITING, AND SHALL RECEIVE IN WRITING AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEMS NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL NOTIFY THE CLIENT OF ALL PRODUCTS OR ITEMS NOTED AS "EXISTING" WHICH ARE NOT FOUND TO EXIST IN THE FIELD.
- CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING THE BEST CONSTRUCTION SKILLS AND ATTENTION.
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER CONTRACT, UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS AND INSPECTIONS AND PAY ALL REQUIRED FEES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE WORK AREA, ADJACENT AREAS, AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH THE WORK OF OTHERS AS IT MAY RELATE TO RADIO EQUIPMENT, ANTENNAS, AND ANY OTHER PORTIONS OF THE WORK.
- CONTRACTOR SHALL COORDINATE HIS WORK AND SCHEDULE HIS ACTIVITIES AND WORKING HOURS IN ACCORDANCE WITH THE REQUIREMENTS OF THE OWNER. CONTRACTOR SHALL PROVIDE ACCESS TO THE SITE AND ASSIST THE RADIO EQUIPMENT VENDOR AND THE ANTENNA INSTALLATION CONTRACTOR AS THEY MAY REQUIRE.
- CONTRACTOR SHALL PROVIDE 48 HOURS WRITTEN NOTICE TO THE ENGINEER AND CLIENT PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR SHALL MAINTAIN LIABILITY INSURANCE TO PROTECT THE OWNER AND CLIENT.
- CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
- CONTRACTOR SHALL VERIFY FINAL EQUIPMENT LOCATIONS WITH CLIENT.
- CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING SURFACES, EQUIPMENT, IMPROVEMENTS, PIPING, ETC.; AND IMMEDIATELY REPAIR ANY DAMAGE THAT OCCURS DURING CONSTRUCTION.
- ALL BROCHURES, OPERATING AND MAINTENANCE MANUALS, CATALOGS, SHOP DRAWINGS, AND OTHER DOCUMENTATION SHALL BE TURNED OVER TO CLIENT AT COMPLETION OF WORK.
- COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF ACCEPTANCE BY OWNER. ANY WORK, MATERIALS, OR EQUIPMENT FOUND TO BE DEFECTIVE DURING THAT PERIOD SHALL BE CORRECTED IMMEDIATELY, UPON WRITTEN NOTIFICATION, AT NO ADDITIONAL COST TO CLIENT.
- MINIMUM BEND RADIUS OF ANTENNA CABLES SHALL BE IN ACCORDANCE WITH CABLE MANUFACTURER'S RECOMMENDATIONS.
- REPAIR ALL EXISTING SURFACES DAMAGED DURING CONSTRUCTION SUCH THAT THEY MATCH AND BLEND WITH ADJACENT SURFACES.
- CONTRACTOR SHALL KEEP CONTRACT AREA CLEAN AND HAZARD FREE AND DISPOSE OF ALL DEBRIS AND RUBBISH. EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY OF THE OWNER SHALL BE REMOVED. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ITEMS UNTIL COMPLETION OF CONSTRUCTION.
- CABLE ROUTING SHOWN IS DIAGRAMMATIC. ACTUAL ROUTE OF ANTENNA CABLES SHALL BE DETERMINED IN THE FIELD. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.



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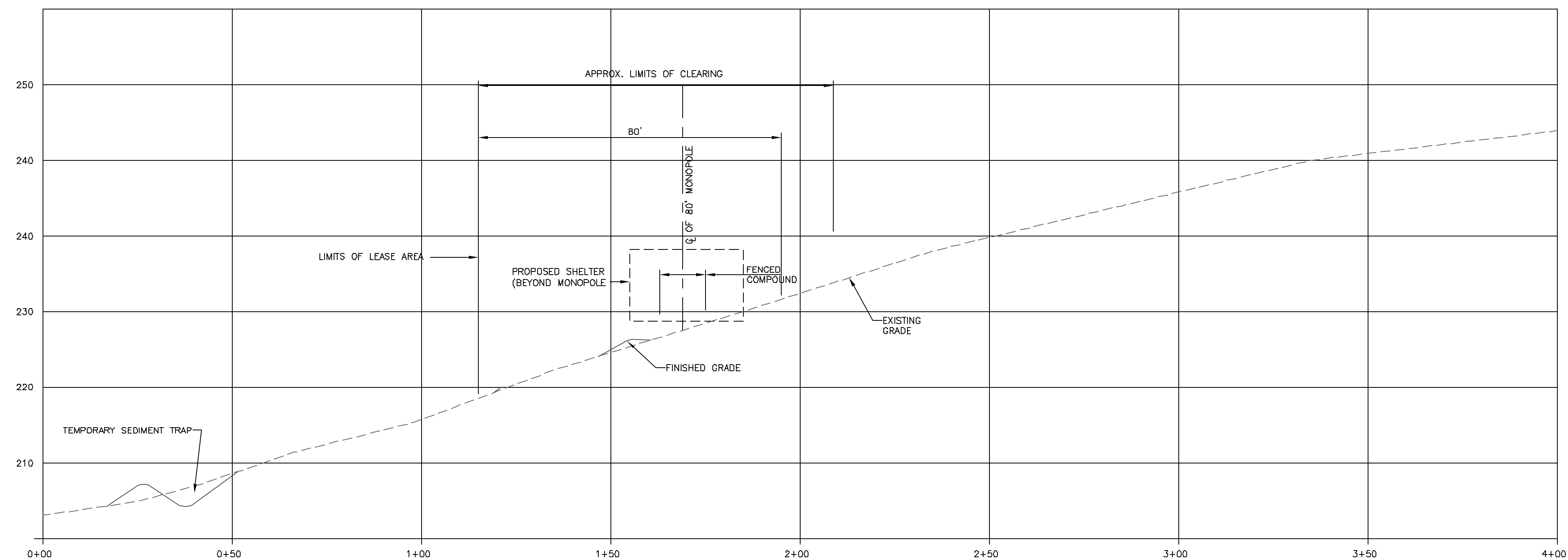
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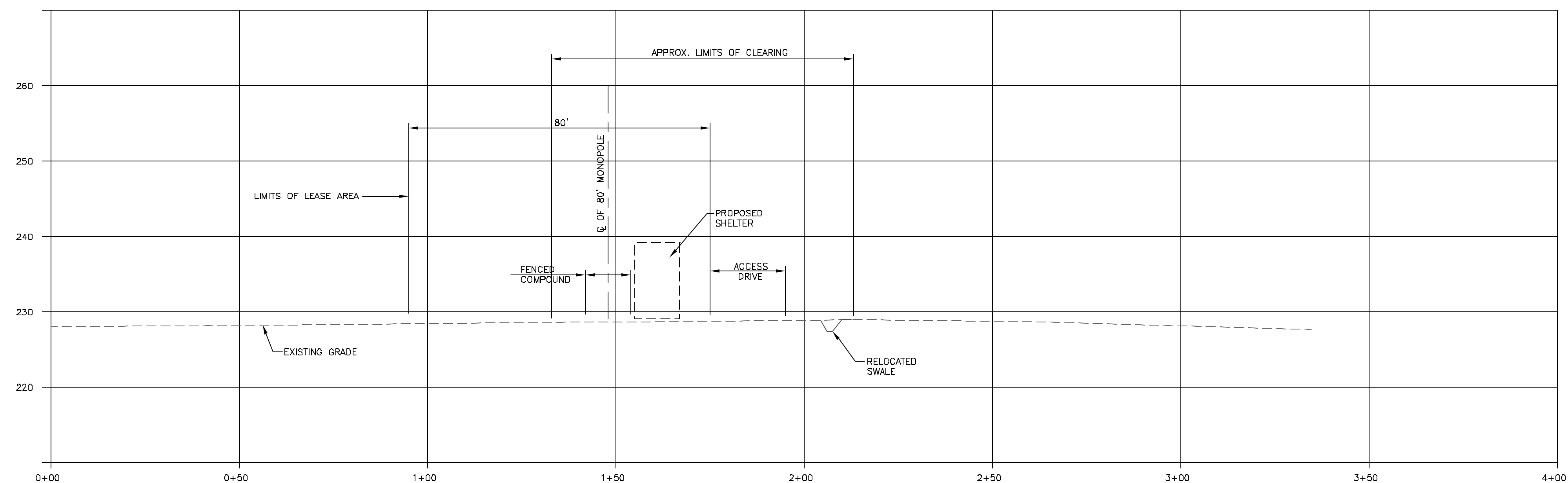
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C-4



1
C-5 SECTION A-A
SCALE: 1" = 20' HORIZ.
1" = 10' VERT.



2
C-5 SECTION B-B
SCALE: 1" = 20' HORIZ.
1" = 10' VERT.



175 DALKINS ROAD
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Fax: (518) 783-1544
www.tectoniceengineering.com

DESIGN APPROVAL

PRELIMINARY/CONSTRUCTION

RF ENG. _____ DATE: _____
EQPT. ENG. _____ DATE: _____
OPERATIONS _____ DATE: _____
CONST. MGR _____ DATE: _____
NETWORK ENG. _____ DATE: _____
REAL ESTATE _____ DATE: _____

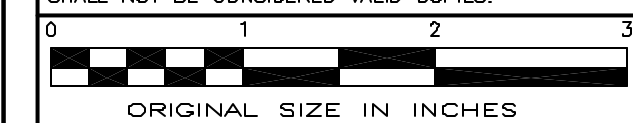
WORK ORDER NUMBER 2248.66514 **DRAWN BY** JRF

NO.	DATE	ISSUE
0	5/3/07	FOR CONSTRUCTION
1	8/8/07	REV PER ZONING
2	9/4/07	FOR BP APPLICATION
3	11/30/07	PER TOWN COMMENTS FOR CONSTRUCTION
4	1/15/08	AS BUILT

RELEASED BY _____ **DATE** _____

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ORIGINAL SIZE IN INCHES

SITE INFORMATION

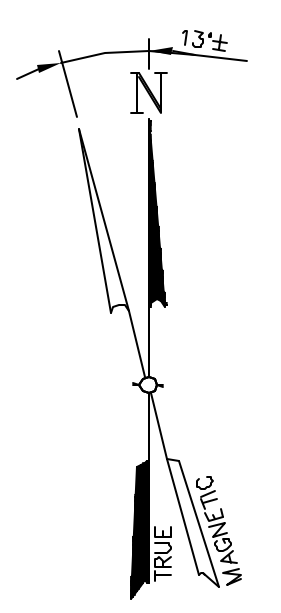
2004066514
NEW HACKENSACK
AIRPORT DRIVE
TOWN OF WAPPINGER
DUTCHESS COUNTY
NEW YORK

SHEET TITLE

PROFILES

SHEET NUMBER

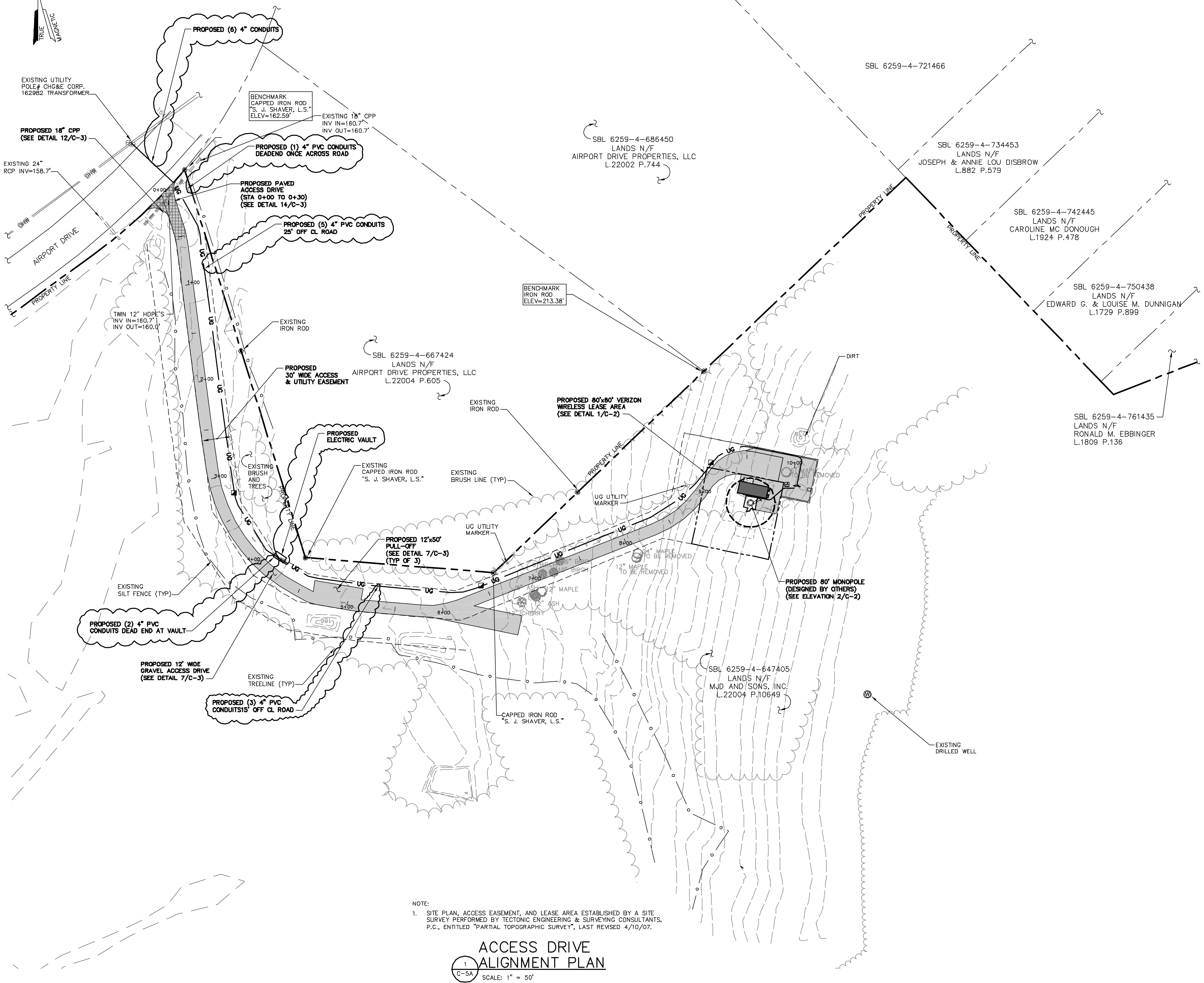
C-5



NORTH ORIENTATION

1. TRUE NORTH ORIENTATION ESTABLISHED BY A SITE SURVEY PERFORMED BY TECTONIC ENGINEERING CONSULTANTS, P.C., ENTITLED, "PARTIAL TOPOGRAPHIC SURVEY", DATED 3/8/05.

2. DECLINATION OBTAINED FROM THE NATIONAL GEOPHYSICAL DATA CENTER DURING THE MONTH OF APRIL, 2005.



NOTE:

1. SITE PLAN, ACCESS EASEMENT, AND LEASE AREA ESTABLISHED BY A SITE SURVEY PERFORMED BY TECTONIC ENGINEERING & SURVEYING CONSULTANTS, P.C., ENTITLED "PARTIAL TOPOGRAPHIC SURVEY", LAST REVISED 4/10/07.

**ACCESS DRIVE
ALIGNMENT PLAN**

1
C-5A

SCALE: 1" = 50'

• CONTRACTOR SHALL NOTIFY UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION AT TELEPHONE NUMBER 1-800-962-7962 PRIOR TO EXCAVATION AT SITE.

• CONTRACTOR TO LOCATE AND VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATION.

• ALL EXCAVATION WORK WITHIN 36" OF EITHER SIDE OF UNDERGROUND UTILITIES MUST BE DONE BY HAND EXCAVATION METHODS.



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DESIGN APPROVAL

PRELIMINARY/CONSTRUCTION	
RF. ENG.	DATE:
EQPT. ENG.	DATE:
OPERATIONS	DATE:
CONST. MGR.	DATE:
NETWORK ENG.	DATE:
REAL ESTATE	DATE:

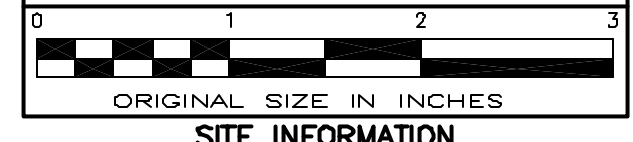
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2248.66514	JRF

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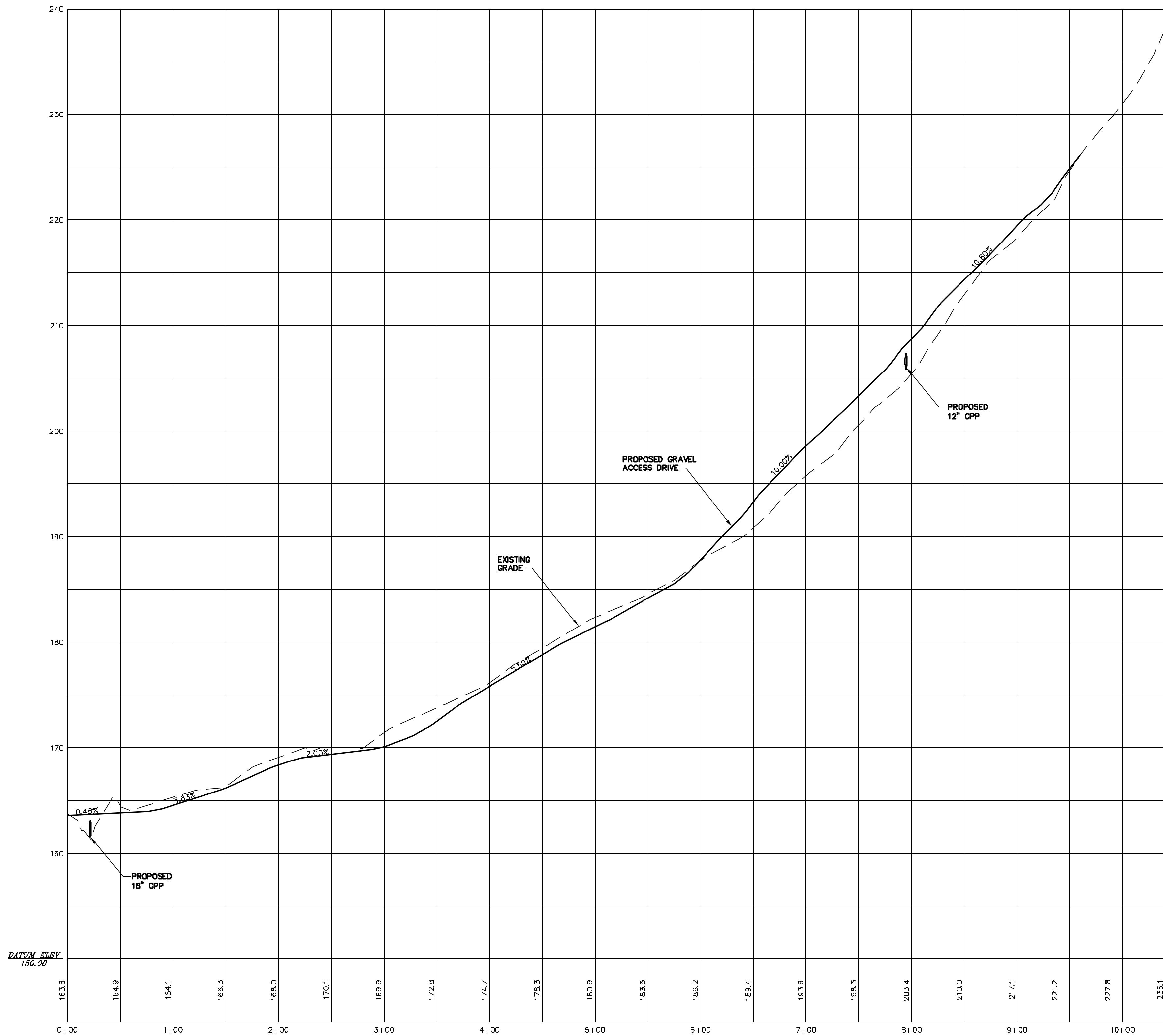
2004066514
NEW HACKENSACK
AIRPORT DRIVE
TOWN OF WAPPINGER
DUTCHESS COUNTY
NEW YORK

SHEET TITLE

ACCESS DRIVE
ALIGNMENT PLAN

SHEET NUMBER

C-5A



1
C-5B
ACCESS
DRIVE PROFILE
SCALE: 1" = 60' HORIZ.
1" = 6' VERT.

- CONTRACTOR SHALL NOTIFY UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION AT TELEPHONE NUMBER 1-800-962-7962 PRIOR TO EXCAVATION AT SITE
- CONTRACTOR TO LOCATE AND VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATION
- ALL EXCAVATION WORK WITHIN 36" OF EITHER SIDE OF UNDERGROUND UTILITIES MUST BE DONE BY HAND EXCAVATION METHODS



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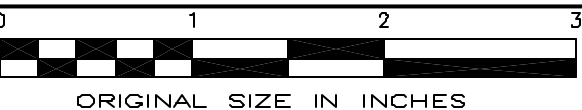
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ORIGINAL SIZE IN INCHES

SITE INFORMATION

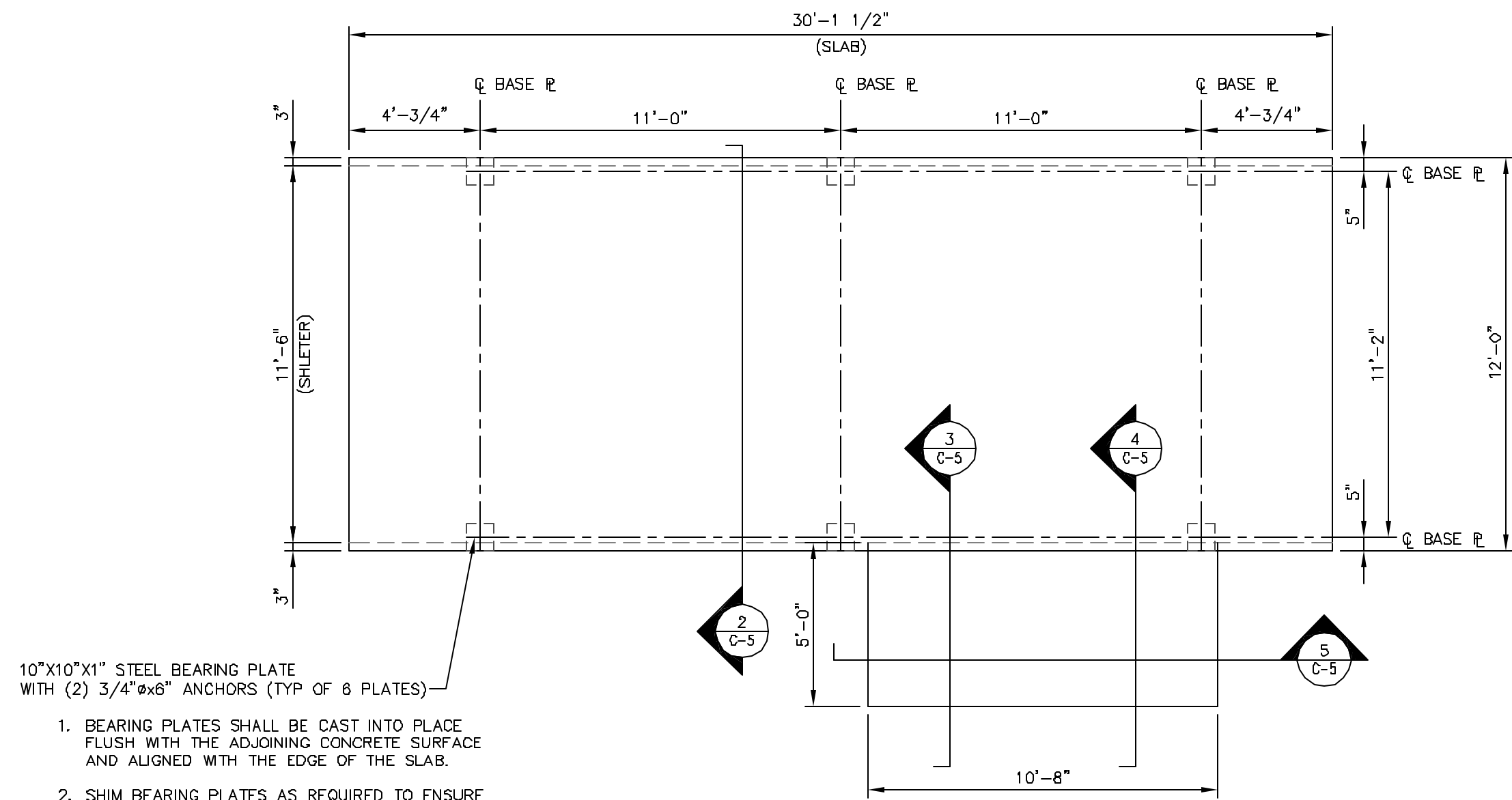
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AIRPORT DRIVE
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DUTCHESS COUNTY
NEW YORK

SHEET TITLE

ACCESS
DRIVE
PROFILE

SHEET NUMBER

C-5B



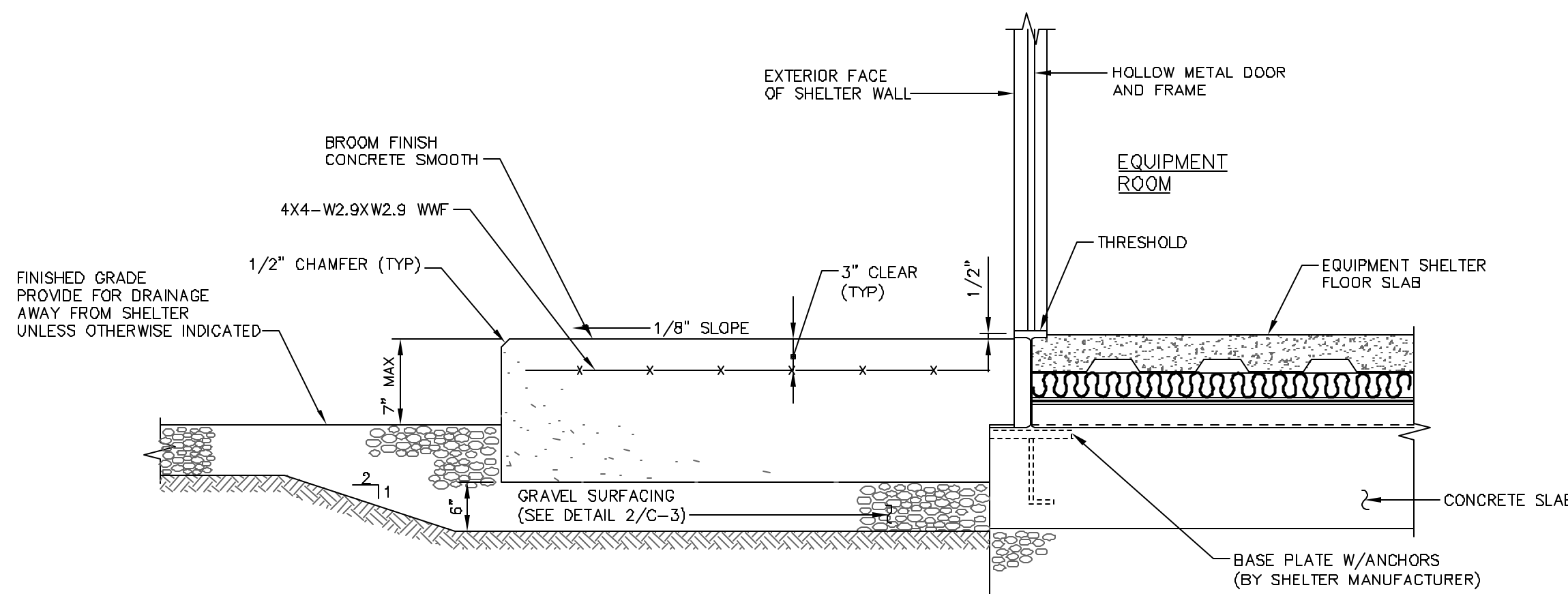
- BEARING PLATES SHALL BE CAST INTO PLACE FLUSH WITH THE ADJOINING CONCRETE SURFACE AND ALIGNED WITH THE EDGE OF THE SLAB.
- SHIM BEARING PLATES AS REQUIRED TO ENSURE CONTACT WITH BEAMS SUPPORTING THE EQUIPMENT SHELTER. SHIMMING SHALL NOT PREVENT BEAMS FROM BEARING UNIFORMLY ON THE CONCRETE ALONG THEIR ENTIRE LENGTH.
- WELD BEAMS TO THE (6) BEARING PLATES TO PROVIDE FOR CONNECTION OF EQUIPMENT SHELTER TO FOUNDATION.

NOTES:

- REFER TO EQUIPMENT SHELTER DRAWINGS (BY OTHERS) FOR ADDITIONAL INFORMATION.
- VERIFY ALL DIMENSIONS WITH SHELTER MANUFACTURER'S DRAWINGS BEFORE CONSTRUCTION.
- REFER TO 5/C-5 FOR PAD LOCATION.

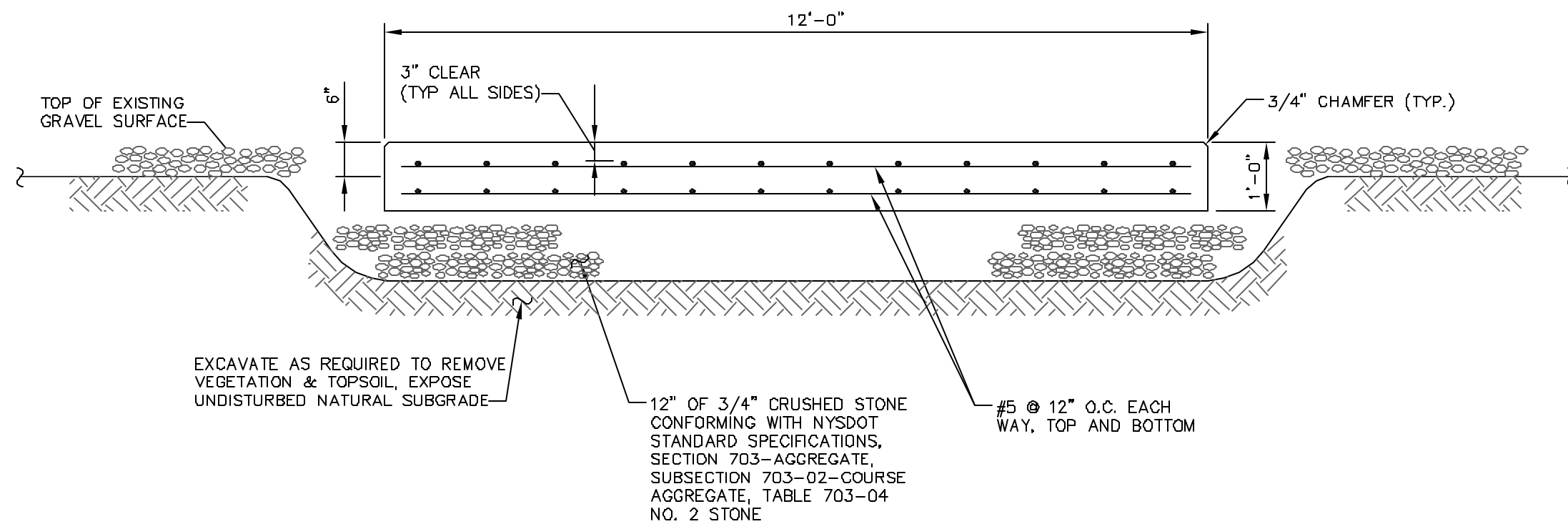
FOUNDATION PLAN

SCALE: 1/4" = 1'-0"



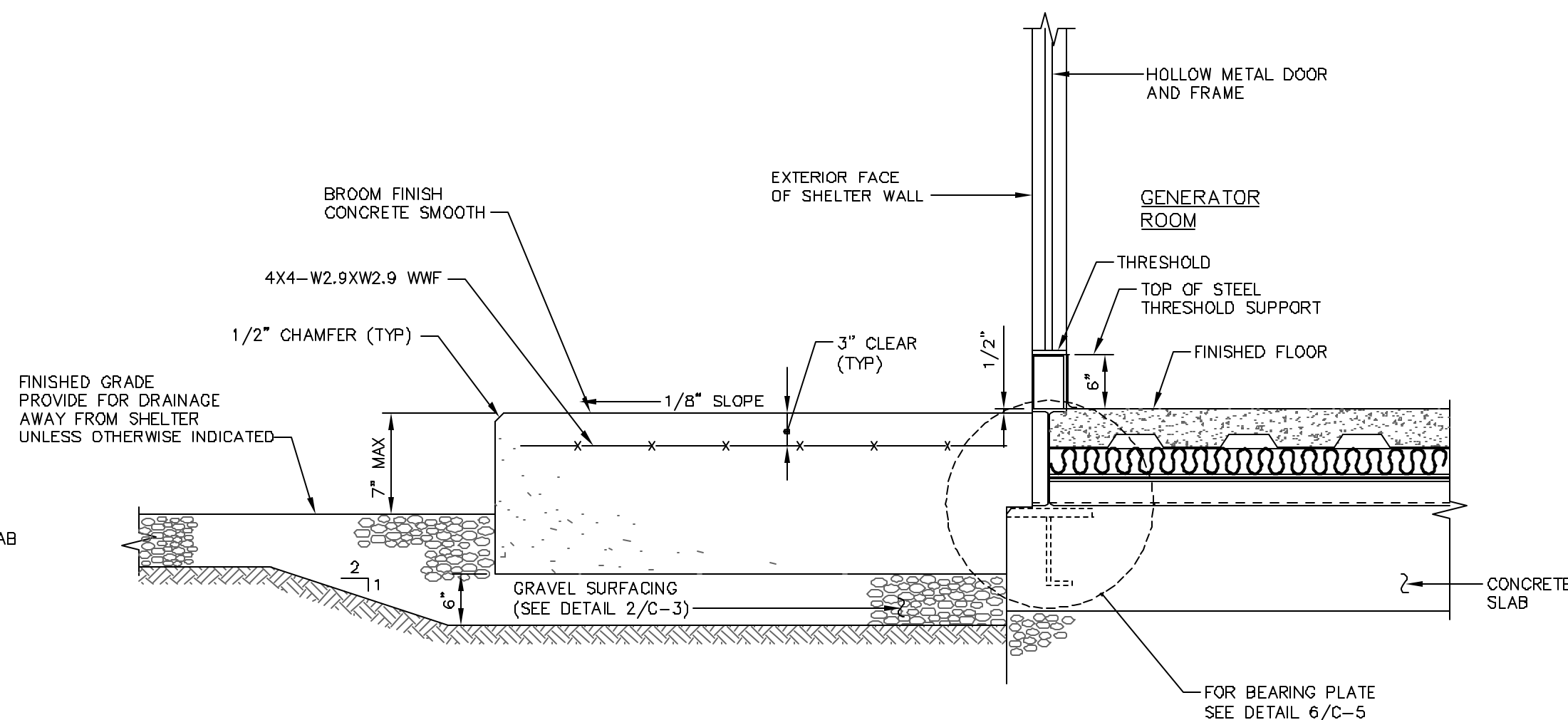
CONCRETE PAD DETAIL (EQUIPMENT ROOM)

SCALE: 3/4" = 1'-0"



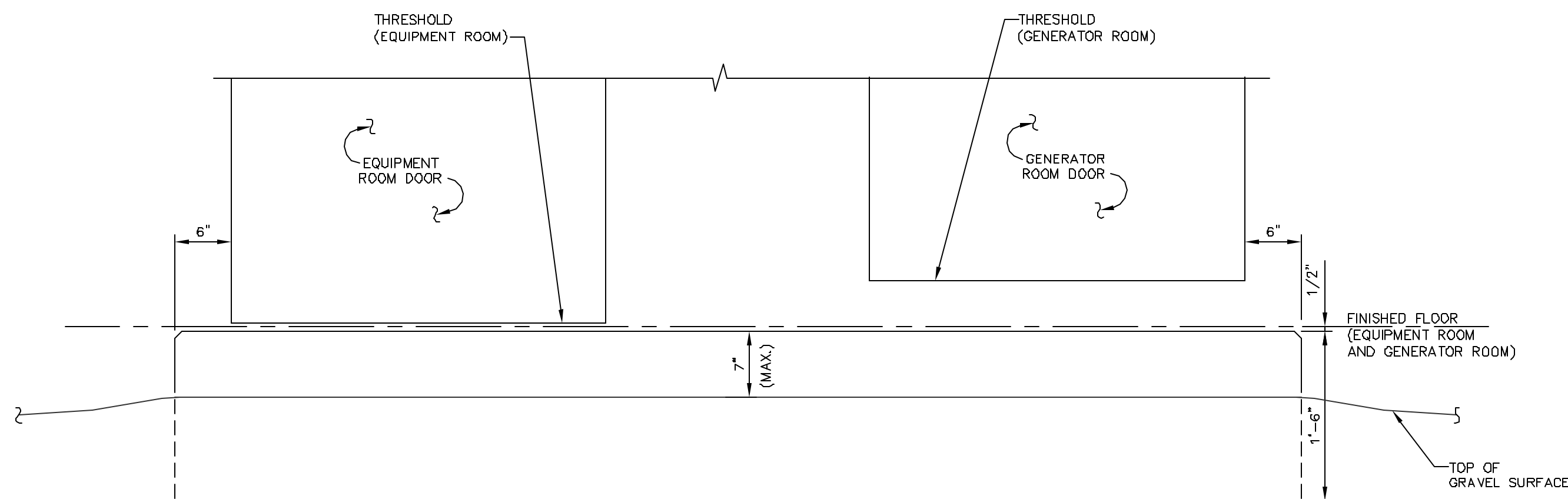
SECTION

SCALE: 1/2" = 1'-0"



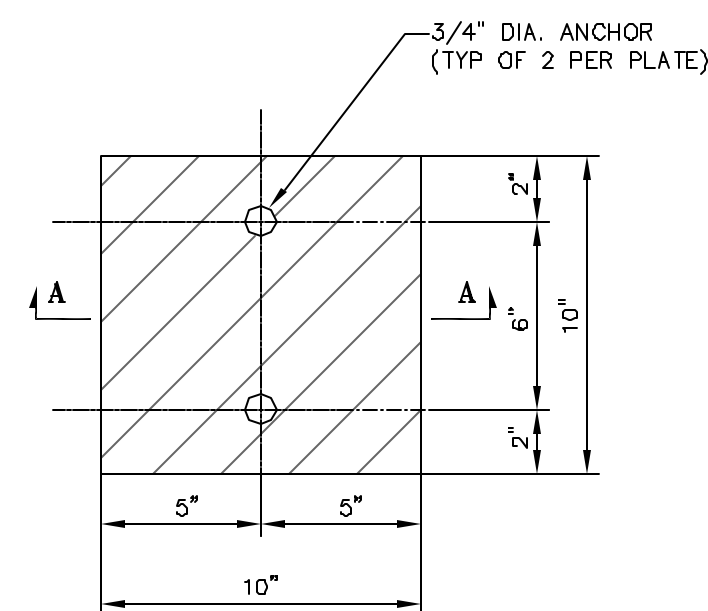
CONCRETE PAD DETAIL (GENERATOR ROOM)

SCALE: 3/4" = 1'-0"



SECTION

SCALE: 1" = 1'-0"



BEARING PLATE DETAIL

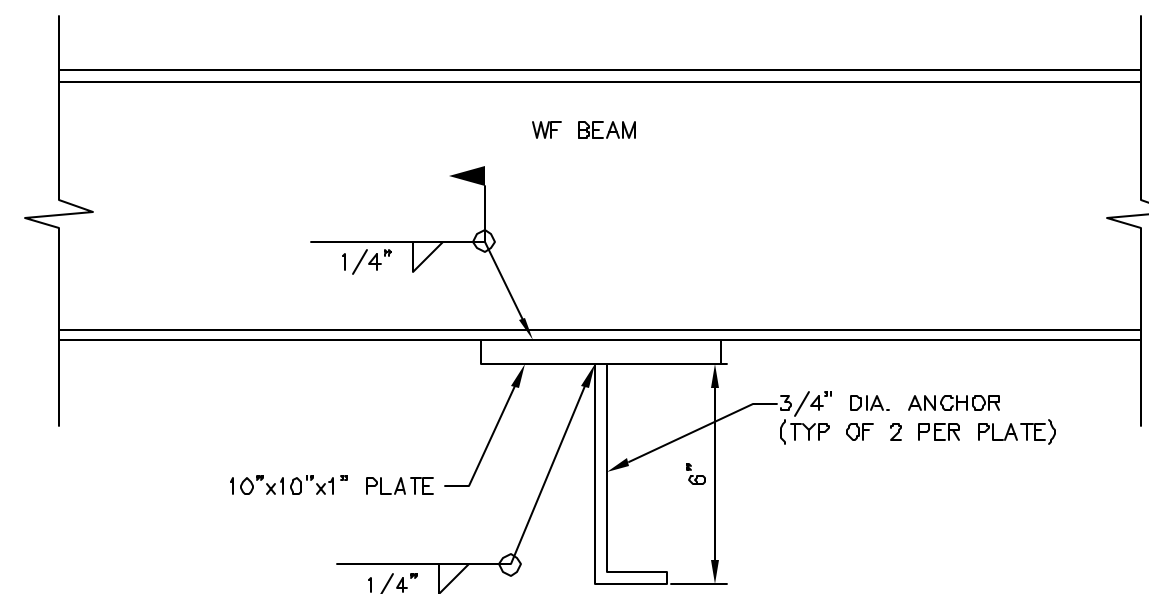
SCALE: NTS

CONCRETE NOTES

- DESIGN AND CONSTRUCTION SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" ACI 318.
- ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS SHALL BE 3000 PSI.
- SUBMIT CONCRETE MIX DESIGN AND REINFORCING STEEL SHOP DRAWINGS FOR REVIEW, AS DIRECTED BY THE CONSTRUCTION MANAGER, NOT LESS THAN 7 DAYS PRIOR TO START OF CONSTRUCTION.
- CONCRETE WORK AND MATERIALS SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", ACI 301.
- CEMENT SHALL BE PORTLAND CEMENT CONFORMING TO ASTM C150 TYPE II, REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615-GR 60, "DEFORMED AND PLAIN BILLET STEEL BARS FOR CONCRETE REINFORCEMENT."
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185, "WELDED STEEL WIRE FABRIC FOR CONCRETE REINFORCEMENT".
- JOINT FILLER SHALL BE PREFORMED RESILIENT BITUMINOUS EXPANSION JOINT FILLER CONFORMING TO ASTM D1751.
- CONCRETE SLUMP SHALL NOT EXCEED 5 INCHES UNLESS SPECIFICALLY AUTHORIZED BY THE ENGINEER. SLUMP SHALL BE DETERMINED IN ACCORDANCE WITH ASTM C143.
- READY MIX CONCRETE SHALL COMPLY WITH ACI-308 AND ASTM C-94 WITH A MAXIMUM WATER CEMENT RATIO OF 0.50. TIME BETWEEN INTRODUCTION OF WATER AND THE PLACEMENT OF CONCRETE SHALL NOT EXCEED 1-1/2 HOURS. TESTING OF CONCRETE SHALL BE PERFORMED UNDER THE DIRECTION OF THE CONSTRUCTION MANAGER. CONTRACTOR SHALL HAVE 6 CYLINDERS PREPARED FOR EVERY 50 CY OF CONCRETE. CAST OR FRACTION THEREOF. CYLINDERS SHALL BE TESTED AT A CERTIFIED TESTING FACILITY W/ 2 @ 3 DAYS, 2 @ 7 DAYS, AND 2 @ 28 DAYS. SUBMIT TEST RESULTS TO THE CONSTRUCTION MANAGER.
- PROVIDE AIR ENTRAINMENT IN EXTERIOR EXPOSED CONCRETE TO OBTAIN TOTAL AIR CONTENT OF 5% ± 1% IN ACCORDANCE WITH ACI 301.
- CONCRETE AGGREGATES SHALL BE NORMAL WEIGHT, CONFORMING TO ASTM C33. MAXIMUM SIZE OF COARSE AGGREGATE SHALL BE 1".
- PROVIDE A 3/4" CHAMFER AT ALL EXPOSED EDGES OF CONCRETE, UNLESS OTHERWISE NOTED. PROVIDE NOT LESS THAN 48 HOURS NOTICE TO THE CLIENT FIELD REPRESENTATIVE PRIOR TO PLACEMENT OF CONCRETE.
- WHEN AMBIENT TEMPERATURE IS BELOW 50 DEGREES F, CONCRETE MATERIALS AND PLACEMENT SHALL CONFORM TO THE RECOMMENDATIONS OF ACI 308R "COLD WEATHER CONCRETING".
- WHEN AMBIENT TEMPERATURE IS ABOVE 90 DEGREES F, CONCRETE MATERIALS AND PLACEMENT SHALL CONFORM TO THE RECOMMENDATIONS OF ACI 308R "HOT WEATHER CONCRETING".
- CONCRETE COVER FOR REINFORCING STEEL SHALL BE 3 INCHES FOR CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH. AT ALL OTHER CONCRETE SURFACES, MINIMUM COVER SHALL BE 2 INCHES FOR #6 AND LARGER BARS, AND 1 1/2 INCHES FOR #5 AND SMALLER BARS.
- WELDING OF REINFORCING STEEL IS SPECIFICALLY PROHIBITED.
- ALL REINFORCING, ANCHOR BOLTS, EMBEDDED STEEL, INSERTS AND ALL OTHER EMBEDDED ITEMS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.
- LAP SPLICES FOR REINFORCING STEEL SHALL BE 40 BAR DIAMETERS.
- REMOVE ALL LOOSE MATERIAL AND DEBRIS FROM COMPACTED SUBGRADE SURFACE PRIOR TO PLACING CONCRETE.
- THE TOP OF ALL FOUNDATIONS SHALL BE SQUARE AND LEVEL WITH A SMOOTH FLOAT FINISH. ALL DIMENSIONS SHALL BE WITHIN ± 1/8 INCH.
- EXTERIOR WALKING SURFACES SHALL RECEIVE A BROOM FINISH.
- THROUGHOUT CONSTRUCTION, THE CONCRETE WORK SHALL BE ADEQUATELY PROTECTED AGAINST DAMAGE DUE TO EXCESSIVE LOADING, CONSTRUCTION EQUIPMENT, MATERIALS OR METHODS, ICE, RAIN, SNOW, EXCESSIVE HEAT, AND FREEZING.
- CONTRACTOR SHALL TAKE SPECIAL MEASURES TO PREVENT DRYING OUT OF CONCRETE FOLLOWING ITS PLACEMENT; ESPECIALLY DURING THE INITIAL 24 HOURS FOLLOWING PLACEMENT. ALL SURFACES SHALL BE MOIST CURED OR PROTECTED USING A MEMBRANE CURING AGENT APPLIED AS SOON AS FORMS ARE REMOVED. IF MEMBRANE CURING AGENT IS USED, EXERCISE CARE NOT TO DAMAGE SURFACE.
- CONTRACTOR SHALL BRING TO THE IMMEDIATE ATTENTION OF THE CONSTRUCTION MANAGER ANY DEFECTS OR ERRORS IN THE WORK, PRIOR TO MAKING REPAIRS. CONTRACTOR SHALL OBTAIN PERMISSION FROM THE CONSTRUCTION MANAGER TO PATCH OR REPAIR DEFECTS OTHER THAN MINOR HONEYCOMBING.
- CONCRETE ANCHORS SHALL BE HEADED STEEL STUDS MEETING THE REQUIREMENTS OF ASTM A108 "STEEL BARS, CARBON, COLD FINISHED, STANDARD QUALITY".
- GROUT SHALL BE NON METALLIC, NON SHRINK PREPACKAGED GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI AT 28 DAYS. GROUT SHALL BE FIVE STAR GROUT AS MANUFACTURED BY US GROUT CORP., FAIRFIELD, CT OR APPROVED EQUAL.

FOUNDATION DESIGN CRITERIA

- SHELTER FOUNDATION DESIGN IS BASED ON INFORMATION PROVIDED BY KULLMAN INDUSTRIES INC. AND VERIZON WIRELESS WITH AN ASSUMED TOTAL WEIGHT OF 40,350 LBS, A MAXIMUM FLAT ROOF SNOW LOAD OF 90 PSF, AND A MAXIMUM FLOOR LIVE LOAD OF 150 PSF.
- SHELTER FOUNDATION DESIGN IS BASED UPON AN ASSUMED ALLOWABLE SOIL BEARING CAPACITY OF 1,000 PSF.
- DESIGN AND CONSTRUCTION OF THE EQUIPMENT SHELTER SHALL BE IN ACCORDANCE WITH THE NEW YORK STATE BUILDING CODE, LATEST EDITION, AND THE NEW YORK STATE UNIFORM FIRE PREVENTION AND ITS REFERENCED STANDARDS.



SECTION A-A



175 CALKINS ROAD
ROCHESTER, NEW YORK 14623

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www.tectonicingineering.com

DESIGN APPROVAL

PRELIMINARY/CONSTRUCTION

RF ENG. _____ DATE: _____
EQPT. ENG. _____ DATE: _____
OPERATIONS. _____ DATE: _____
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REAL ESTATE _____ DATE: _____

WORK ORDER NUMBER 2248.66514
DRAWN BY RDD

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0 1 2 3
ORIGINAL SIZE IN INCHES

SITE INFORMATION

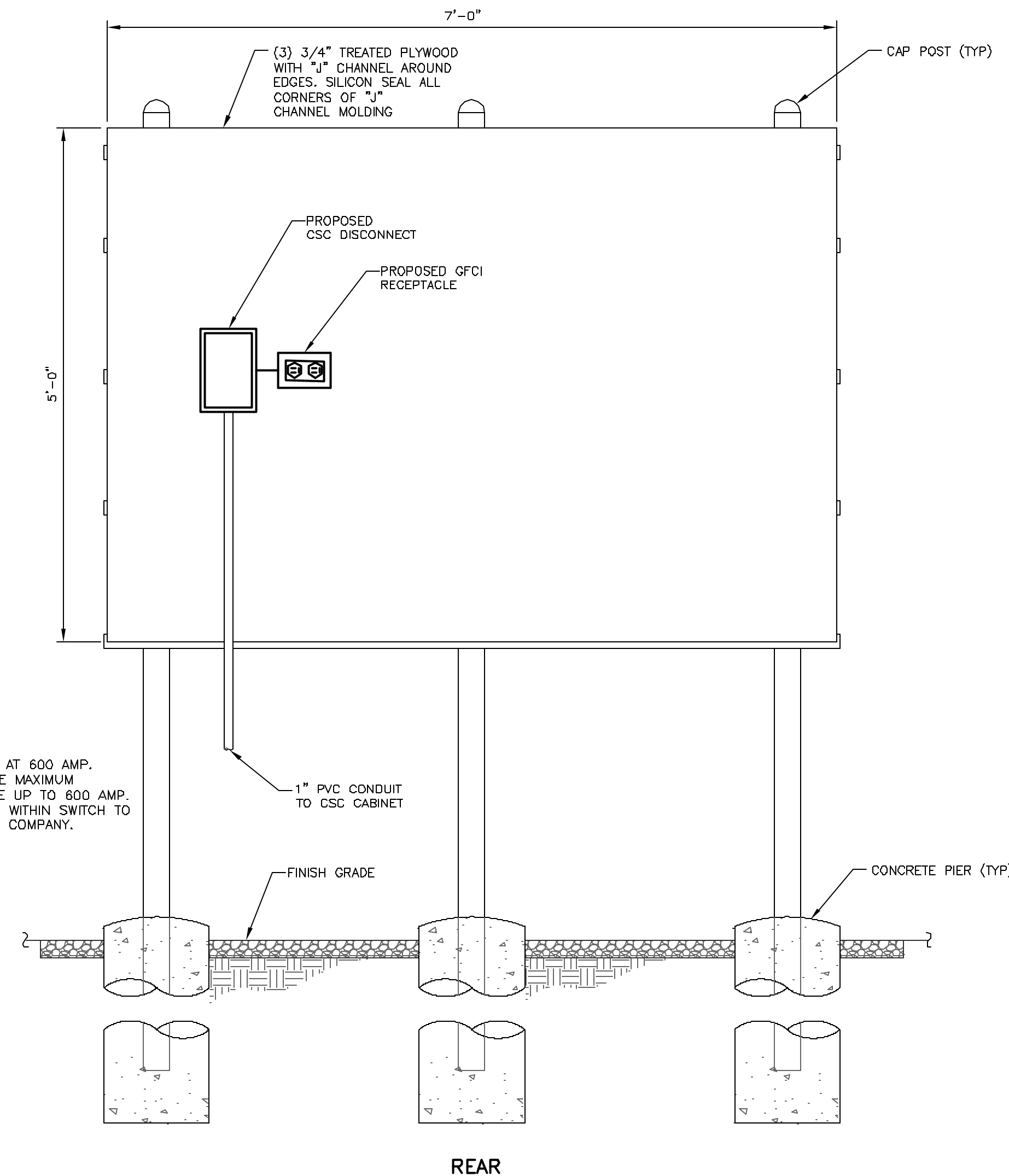
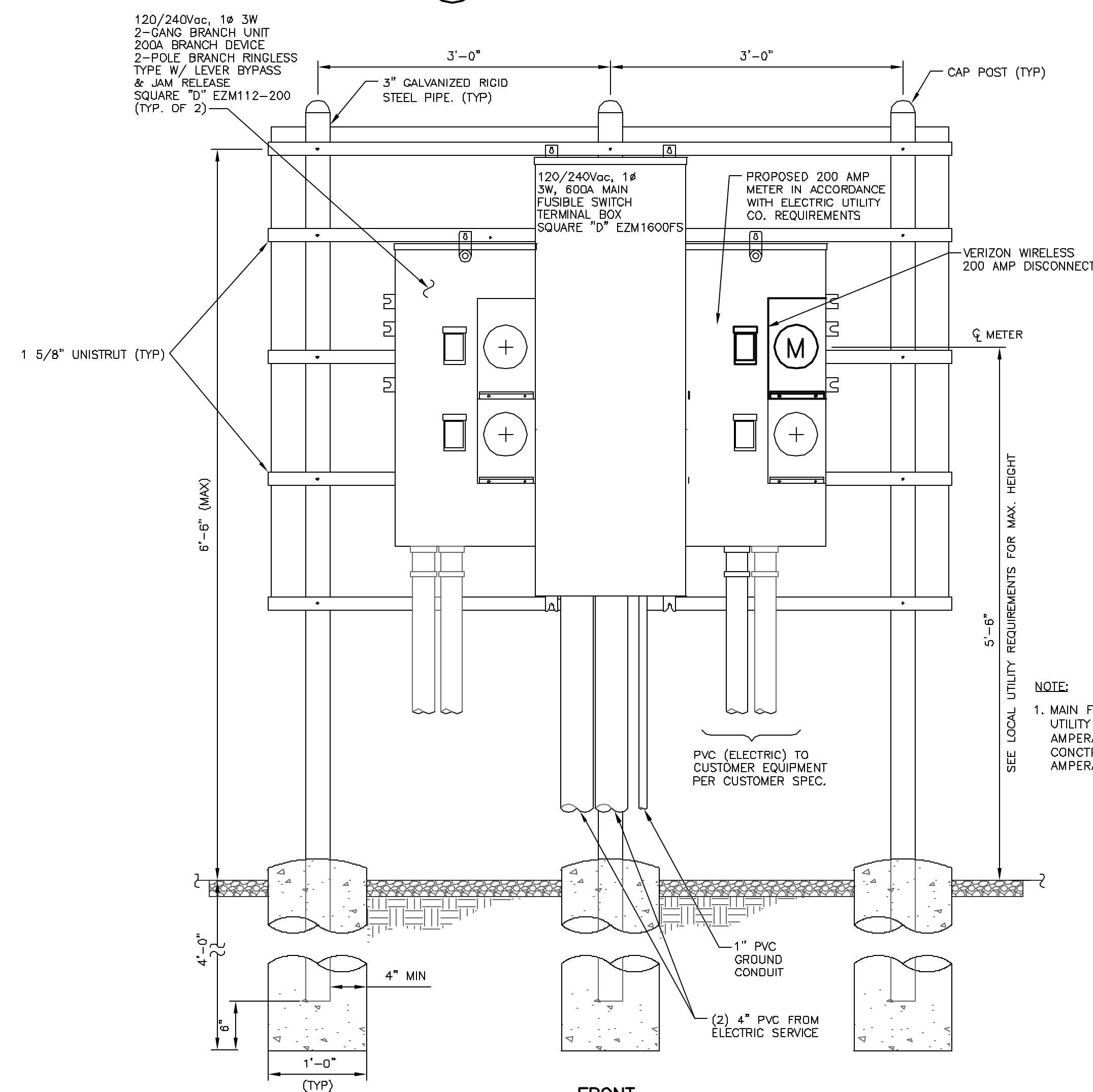
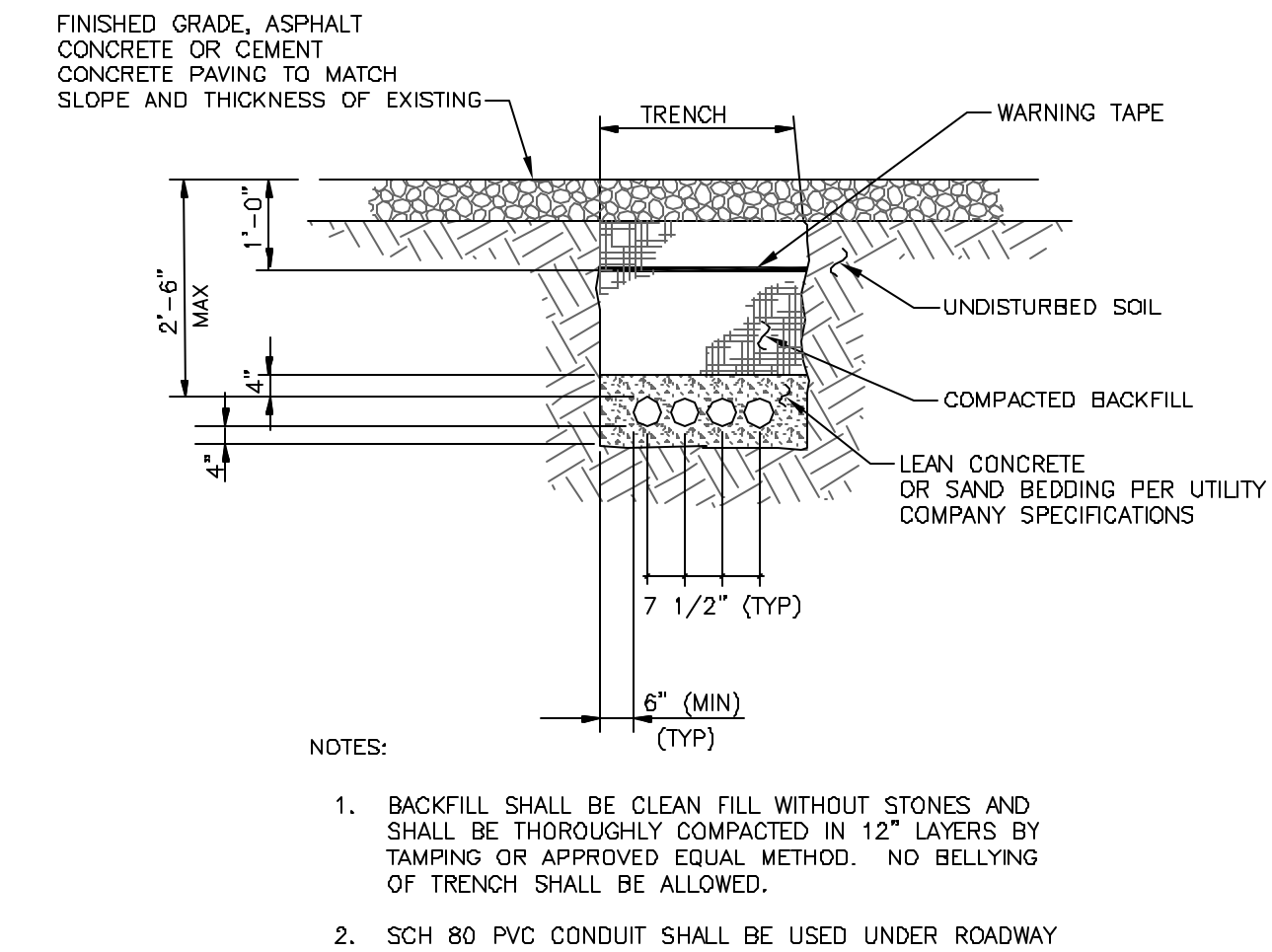
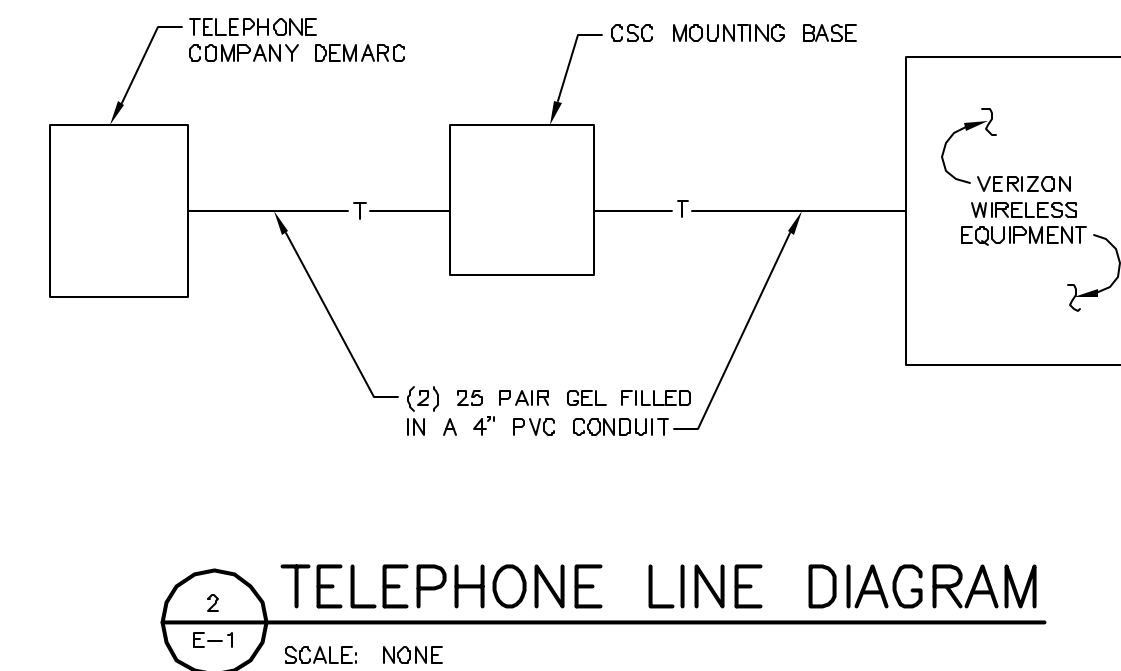
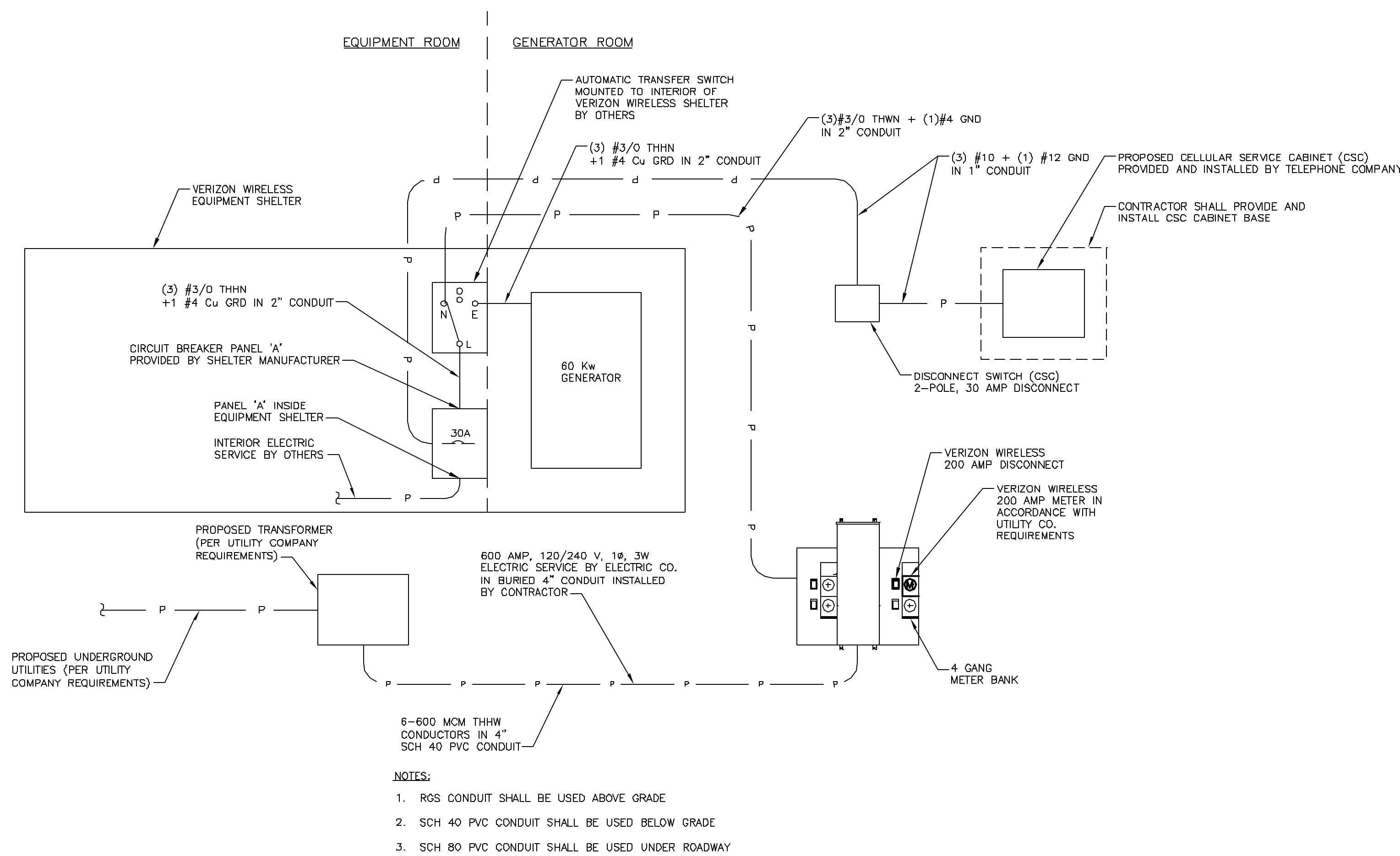
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NEW HACKENSACK
AIRPORT DRIVE
TOWN OF WAPPINGER
DUTCHESS COUNTY
NEW YORK

SHEET TITLE

FOUNDATION PLAN,
SECTIONS & NOTES

SHEET NUMBER

C-6



175 CALKINS ROAD
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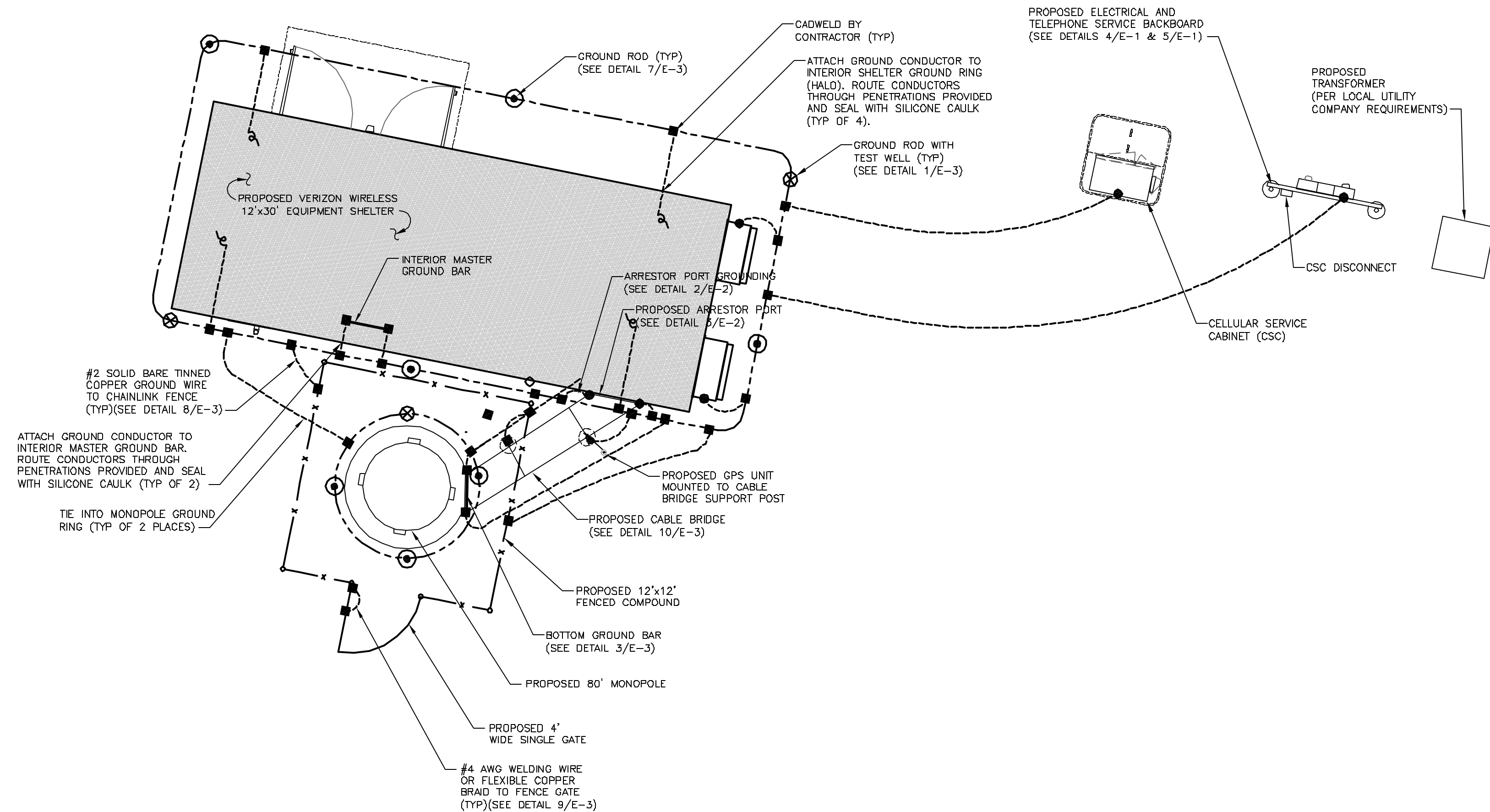
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SHEET TITLE

ELECTRICAL
DIAGRAMS
& DETAILS

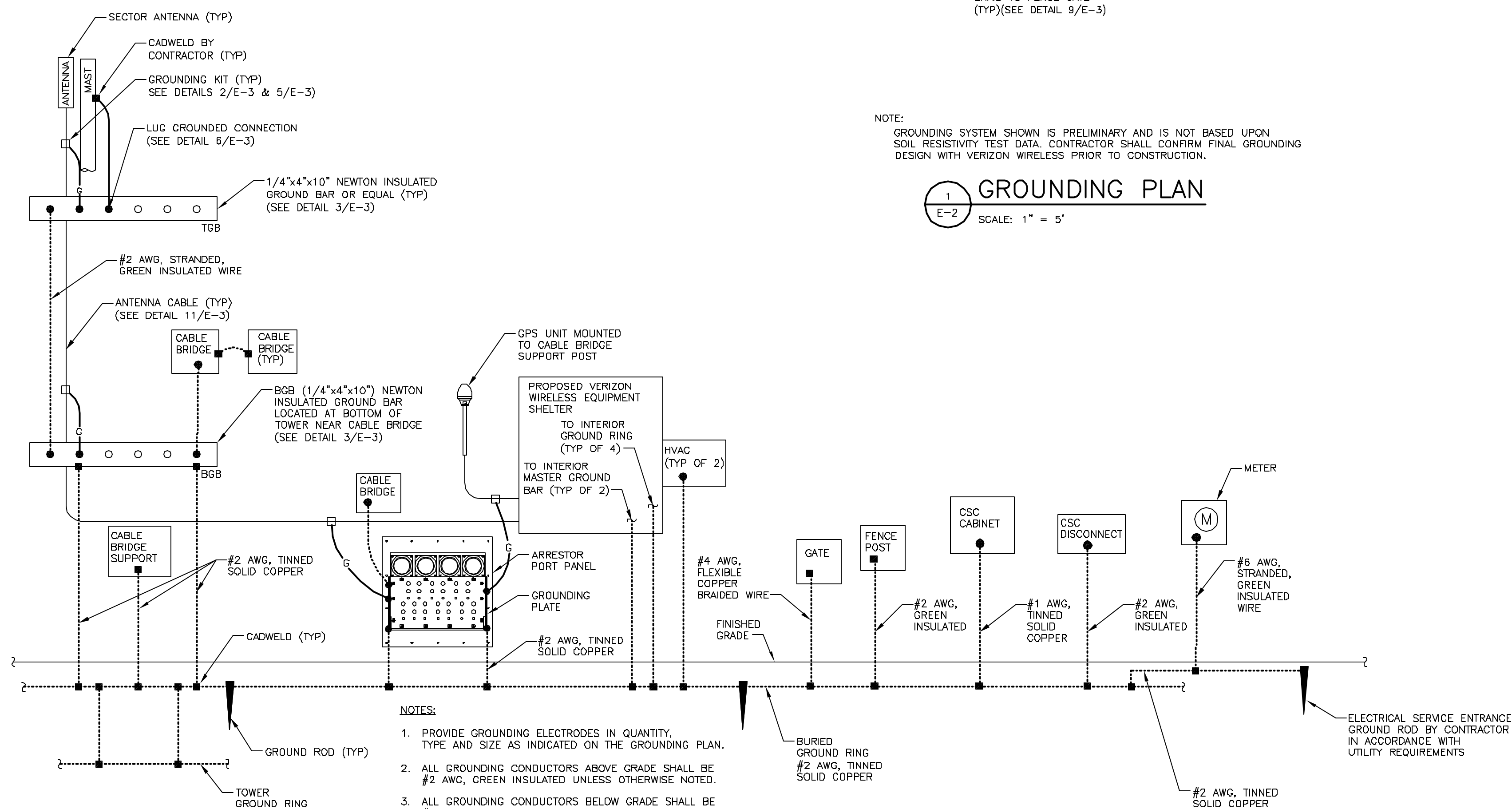
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E-1

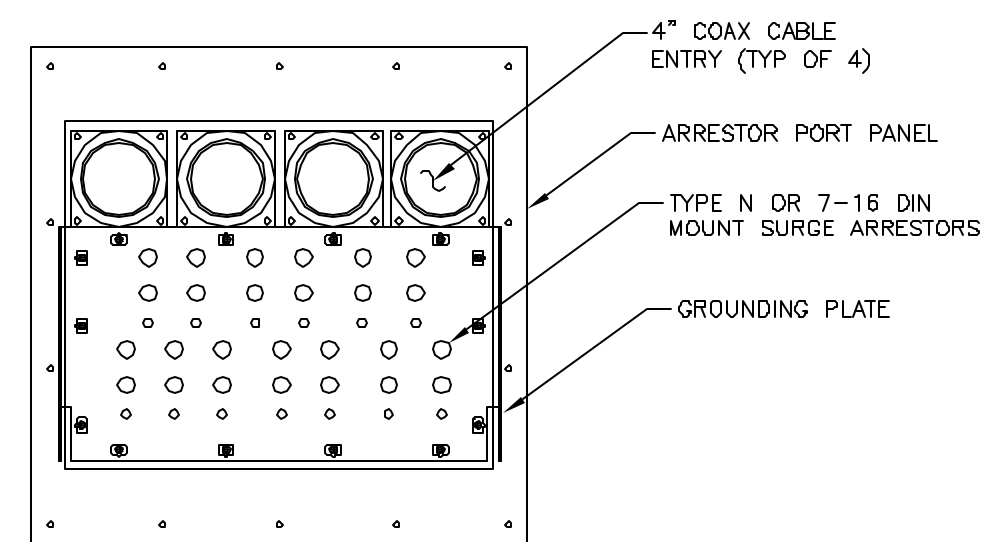


NOTE:
GROUNDING SYSTEM SHOWN IS PRELIMINARY AND IS NOT BASED UPON
SOIL RESISTIVITY TEST DATA. CONTRACTOR SHALL CONFIRM FINAL GROUNDING
DESIGN WITH VERIZON WIRELESS PRIOR TO CONSTRUCTION.

1
E-2
GROUNDING PLAN
SCALE: 1" = 5'



2
E-2
GROUNDING RISER DIAGRAM
SCALE: NONE



3
E-2
ARRESTOR PORT DETAIL
SCALE: NONE

GROUNDING NOTES

GROUND TESTING AFTER CONSTRUCTION

- AFTER COMPLETION OF CONSTRUCTION OF THE CELL SITE GROUND SYSTEM, A QUALIFIED INDEPENDENT ELECTRICAL TESTING FIRM WITH A QUALIFIED TECHNICIAN USING APPROVED TEST EQUIPMENT, SHALL TEST THE SITE TO ASCERTAIN THE RESISTANCE TO EARTH AS SPECIFIED IN THE VERIZON WIRELESS STANDARDS & NATIONAL ELECTRICAL CODE.
- TESTING METHOD TO BE THREE (3) POINT FALL OF POTENTIAL GROUND RESISTANCE TESTING, WITH A DESIRED RESULT LIMIT OF FIVE (5) OHMS OR LESS.

NOTE: GROUNDING TEST TO BE TAKEN BEFORE A/C POWER NEUTRAL / GROUND BOND IS CONNECTED.

- A GROUNDING RESISTANCE TEST REPORT SHALL BE PREPARED UPON COMPLETION OF THE TESTING. THE TEST REPORT SHALL SHOW THE RESISTANCE IN OHMS AT 62% SPACING AND WITH AUXILIARY POTENTIAL ELECTRODES READINGS AT 10% INTERVALS WITH A TOTAL DISTANCE OF AT LEAST 250 FT. OR UNTIL THE AVERAGE RESISTANCE STARTS INCREASING. TESTING SHOULD BE COMPLETED IN A MINIMUM OF TWO (2) DIFFERENT DIRECTIONS AT 90 DEGREES APART.
- TEST REPORT SHALL CONTAIN 10 TO 15 PHOTOGRAPHS TAKEN DURING CONSTRUCTION TO PROVIDE PROOF THAT THE ENTIRE EXTERNAL GROUND RING SYSTEM WAS COMPLETE BEFORE BACKFILLING. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION SUPERVISOR NO LESS THAN 48 HOURS IN ADVANCE OF BACKFILL.
- REPORT: CONTRACTOR SHALL PREPARE THREE (3) TEST REPORTS, CERTIFIED BY THE TESTING ORGANIZATION, INCLUDE OBSERVATIONS OF WEATHER, SOIL CONDITIONS, AND OTHER PHENOMENA THAT MAY AFFECT TEST RESULTS. DESCRIBE MEASURES TO IMPROVE TEST RESULTS. REPORTS SHALL BE SUBMITTED TO CLIENT WITHIN ONE WEEK OF TEST COMPLETION FOR SITE.
- WIRELESS SHELTER SHALL BE FURNISHED WITH AN INTERIOR SHELTER GROUND RING (HALO).

LEGEND

	METER		COPPER GROUND BAR
	CIRCUIT BREAKER		GROUND CONDUCTOR BY CONTRACTOR
	CADWELD TYPE CONNECTION BY CONTRACTOR		GROUND RING BY CONTRACTOR
	COAXIAL CABLE SHIELD GROUND KIT CONNECTION		GROUND ROD WITH TEST WELL
	COMPRESSION FITTING GROUND CONNECTION		GROUND ROD

ABBREVIATIONS

A	AMPERE	W	WIRE
C	CONDUIT	WP	WEATHERPROOF
GND	GROUND	#	PHASE
KWH	KILOWATT HOUR	TGB	TOP GROUND BAR
P	POLE	MGB	MASTER GROUND BAR
SN	SOLID NEUTRAL	BGB	BOTTOM GROUND BAR
SW	SWITCH	EGB	EXISTING GROUND BAR
V	VOLT		

POWER COMPANY

CH&E: 1-800-527-2714



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EQPT. ENG. _____ DATE: _____
OPERATIONS _____ DATE: _____
CONST. MGR _____ DATE: _____
NETWORK ENG. _____ DATE: _____
REAL ESTATE _____ DATE: _____

WORK ORDER NUMBER 2248.66514
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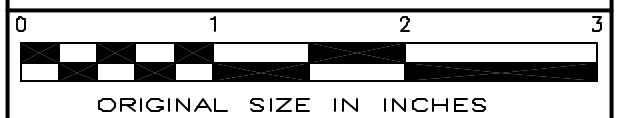
NO.	DATE	ISSUE
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1	8/8/07	REV PER ZONING
2	9/4/07	FOR BP APPLICATION
3	1/15/08	AS BUILTS

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DATE

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ORIGINAL SIZE IN INCHES

SITE INFORMATION

2004066514
NEW HACKENSACK
AIRPORT DRIVE
TOWN OF WAPPINGER
DUTCHESS COUNTY
NEW YORK

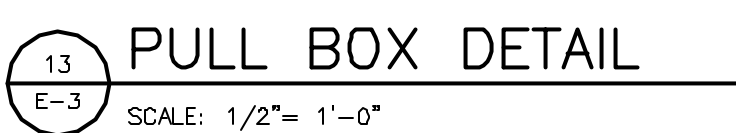
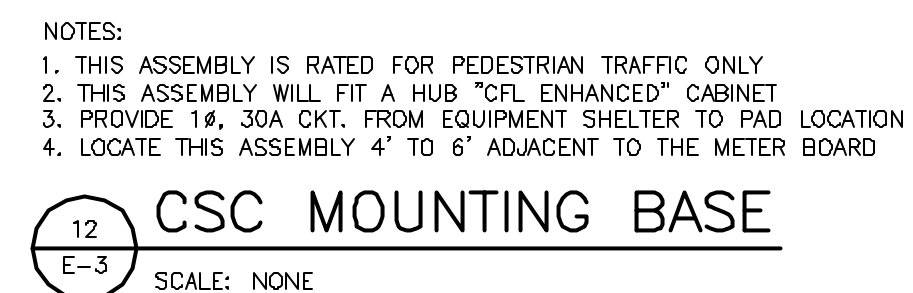
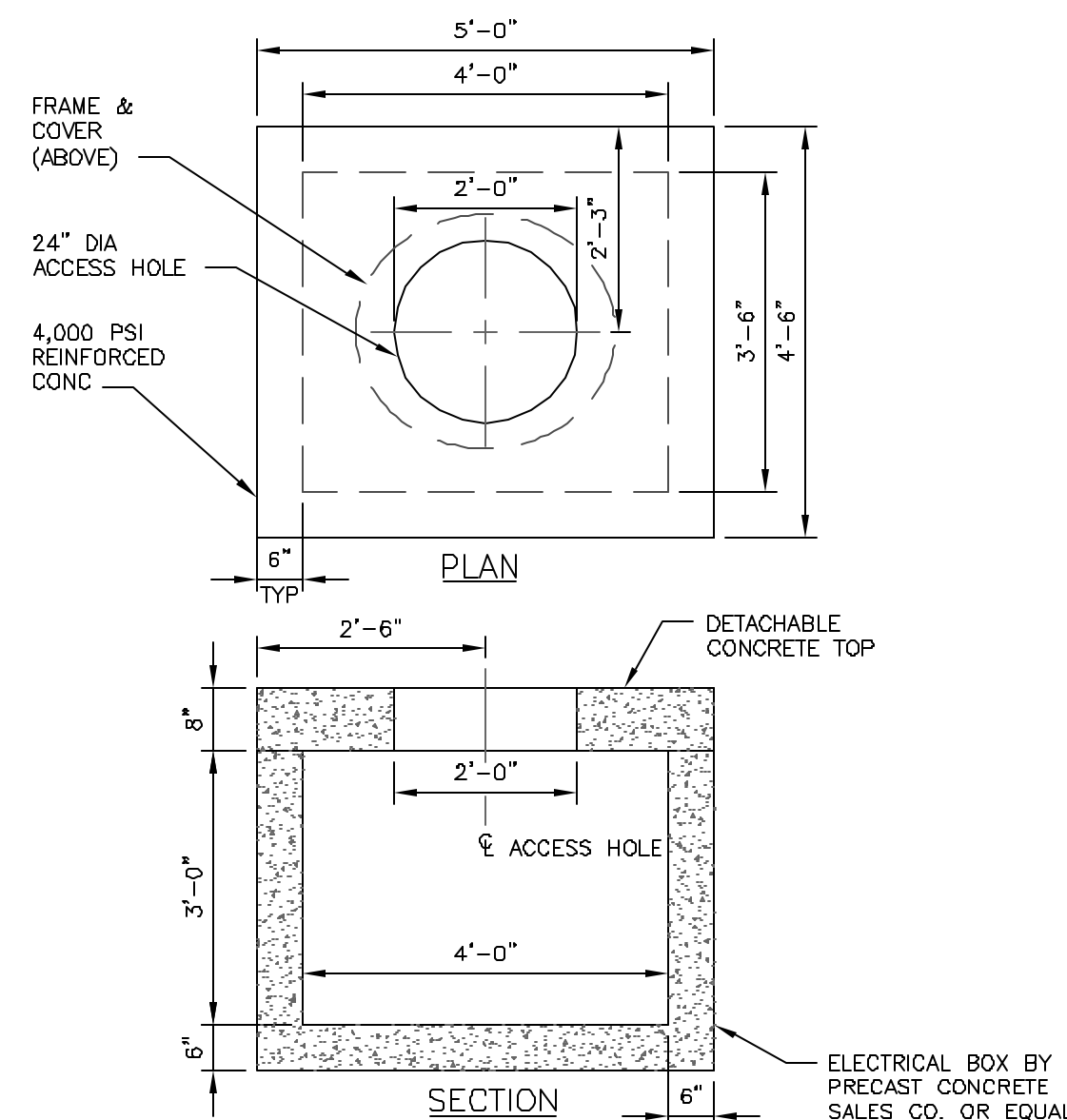
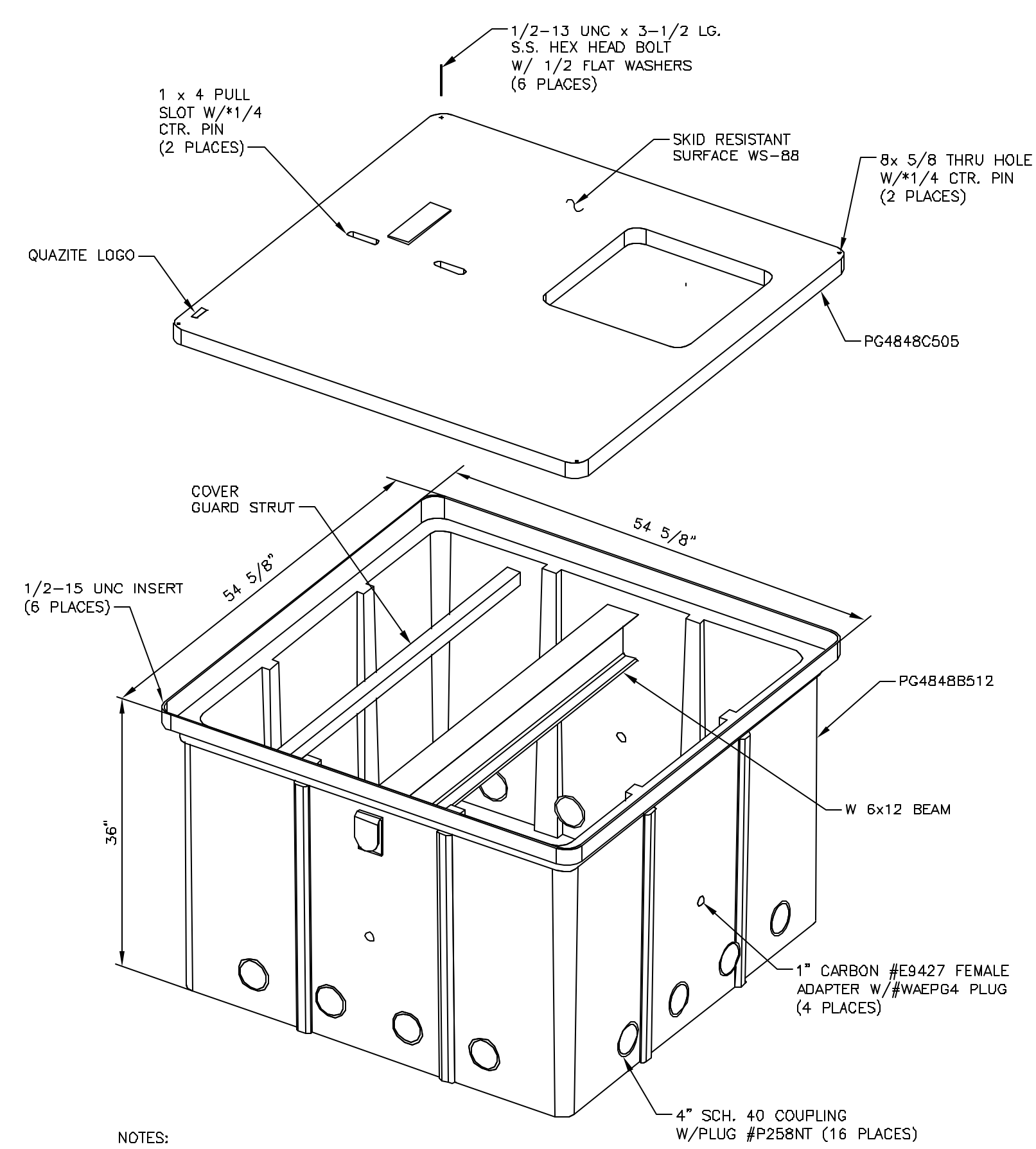
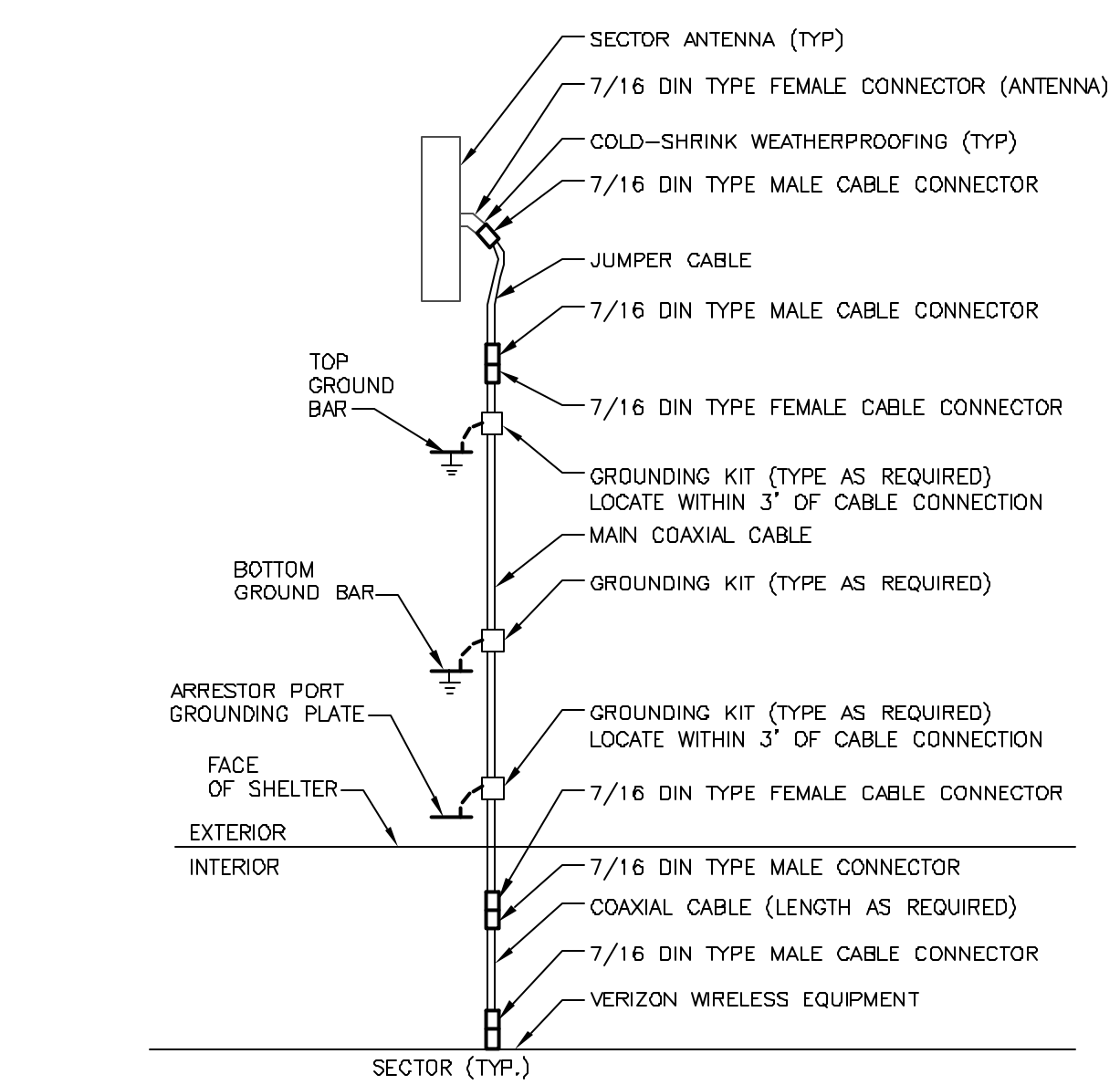
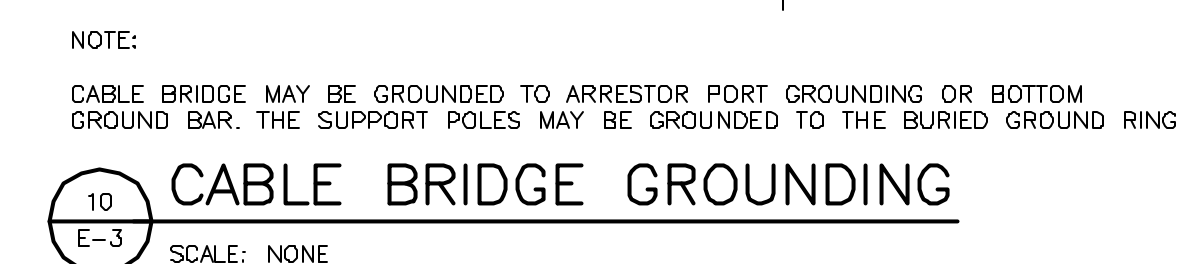
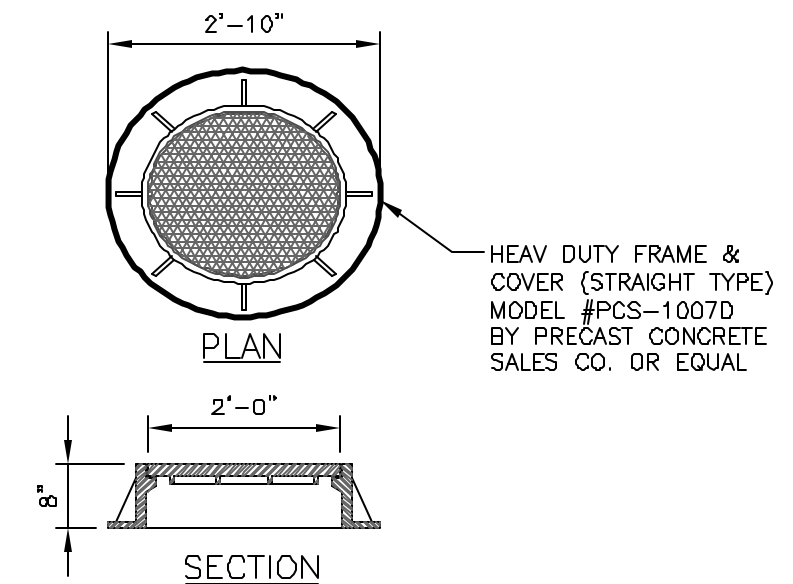
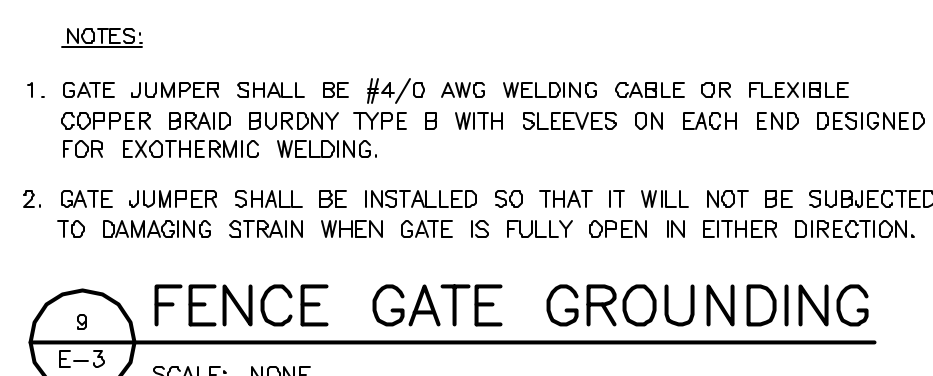
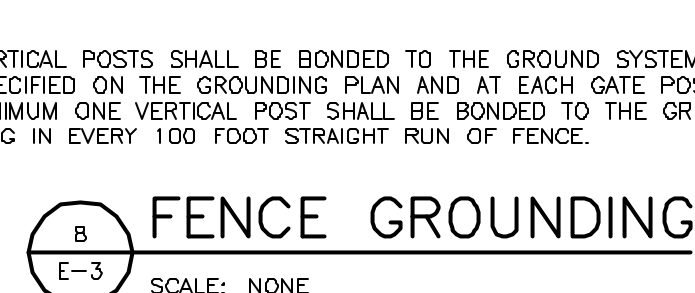
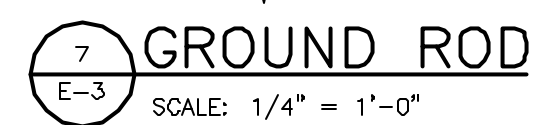
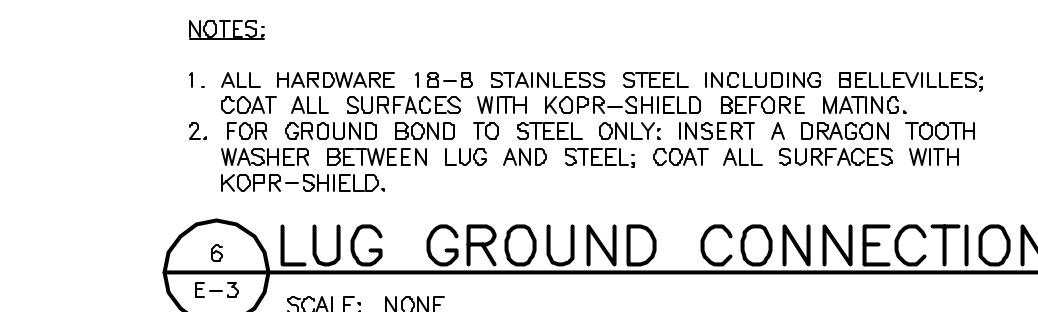
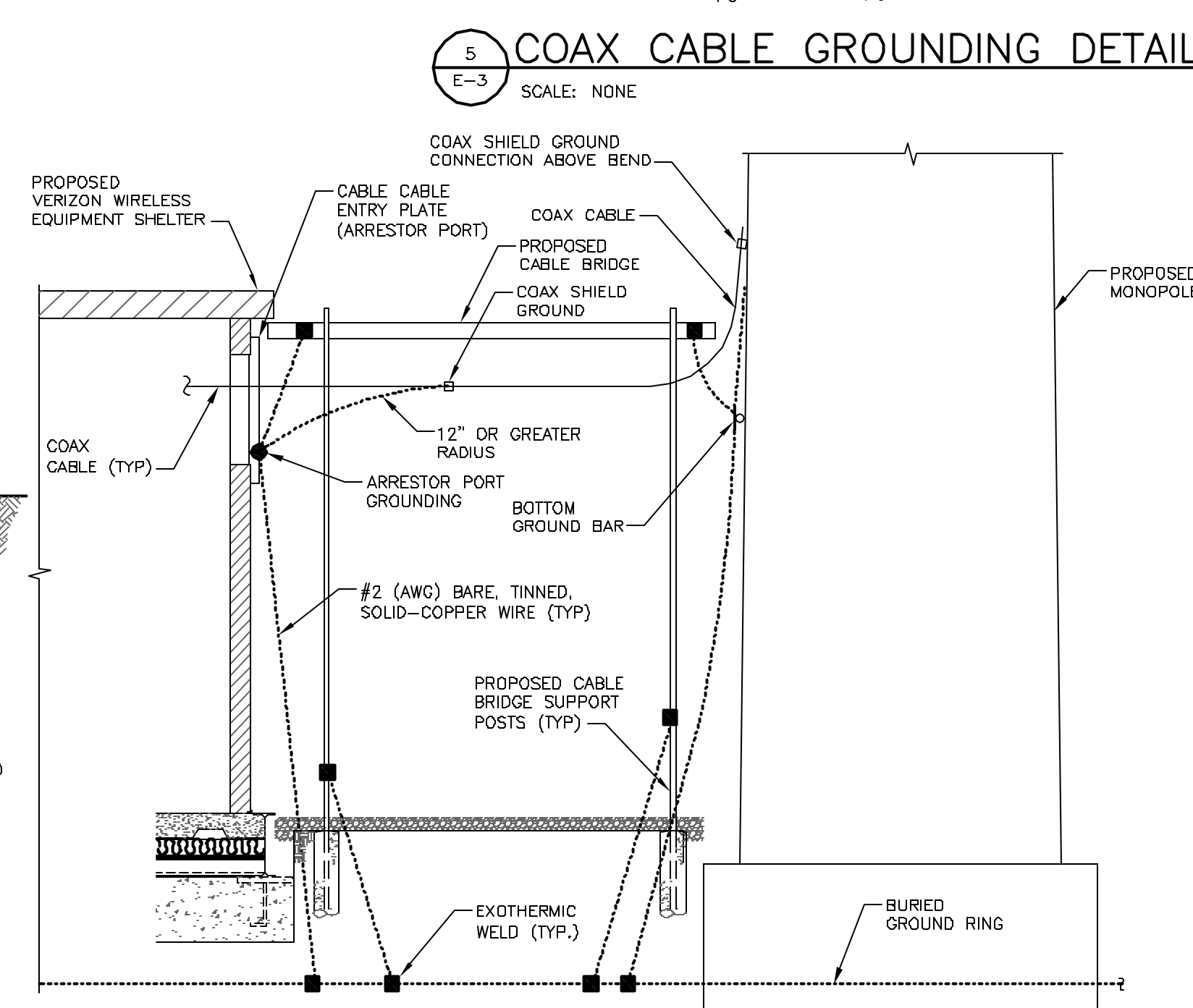
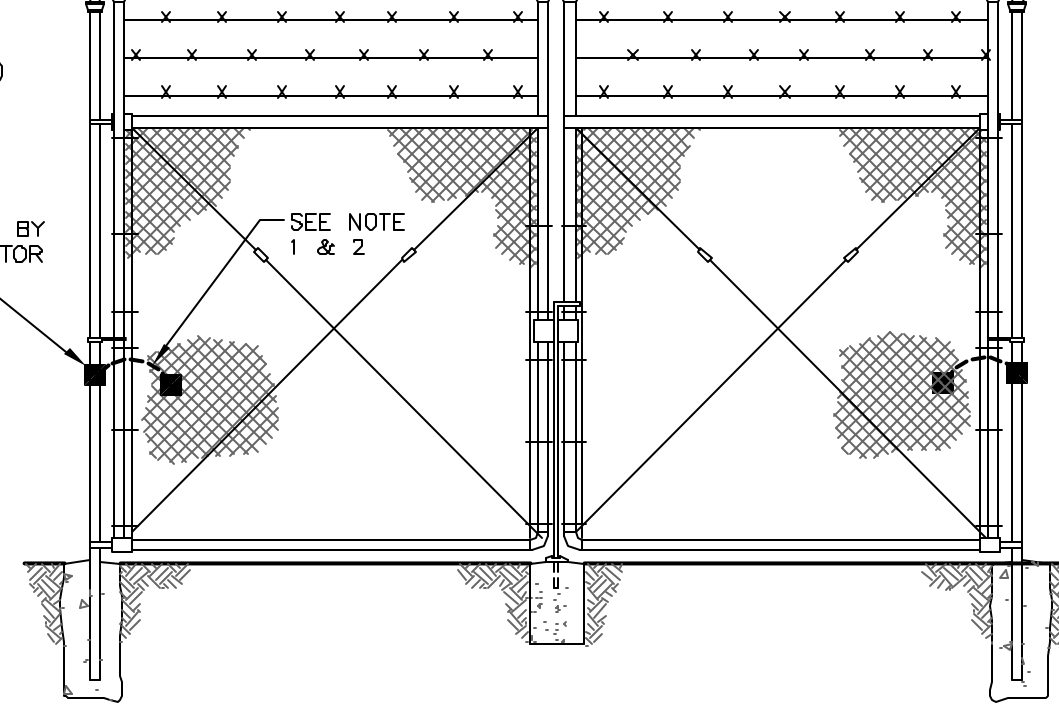
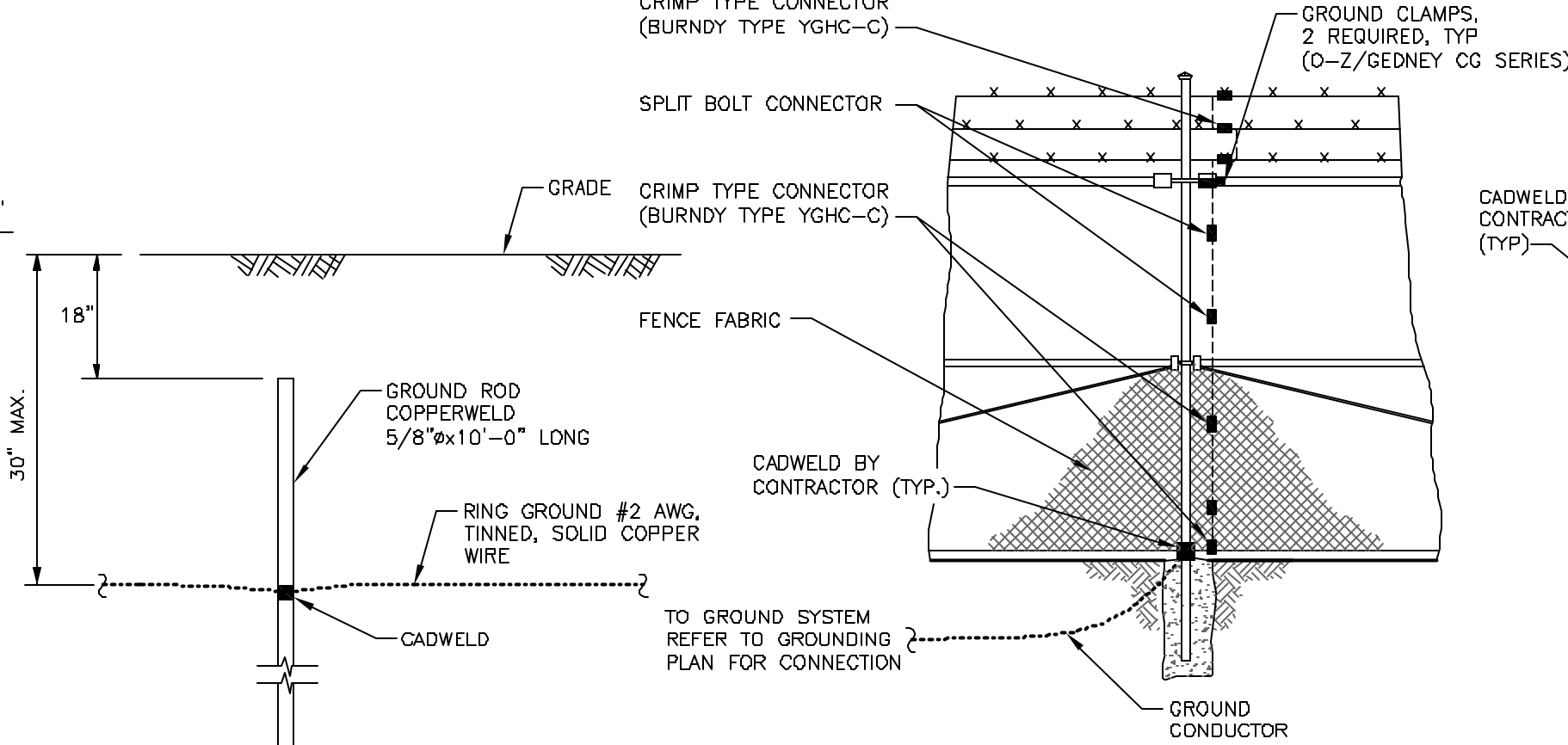
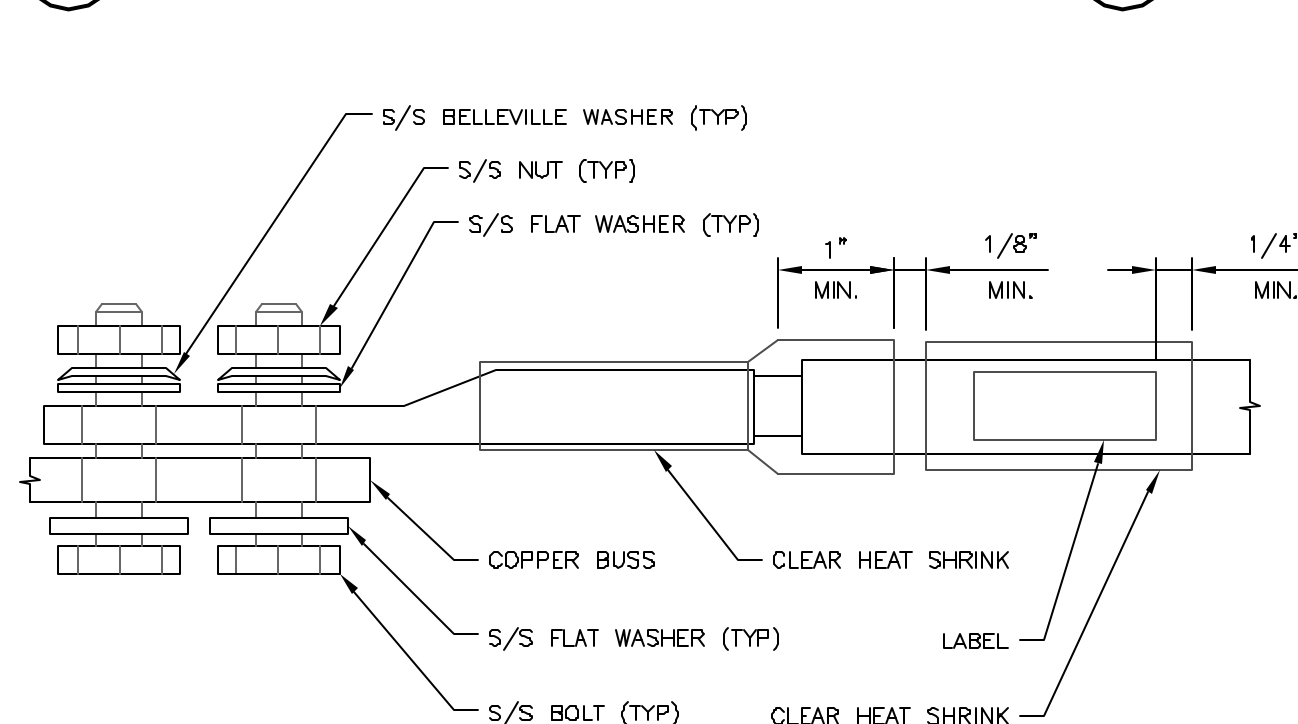
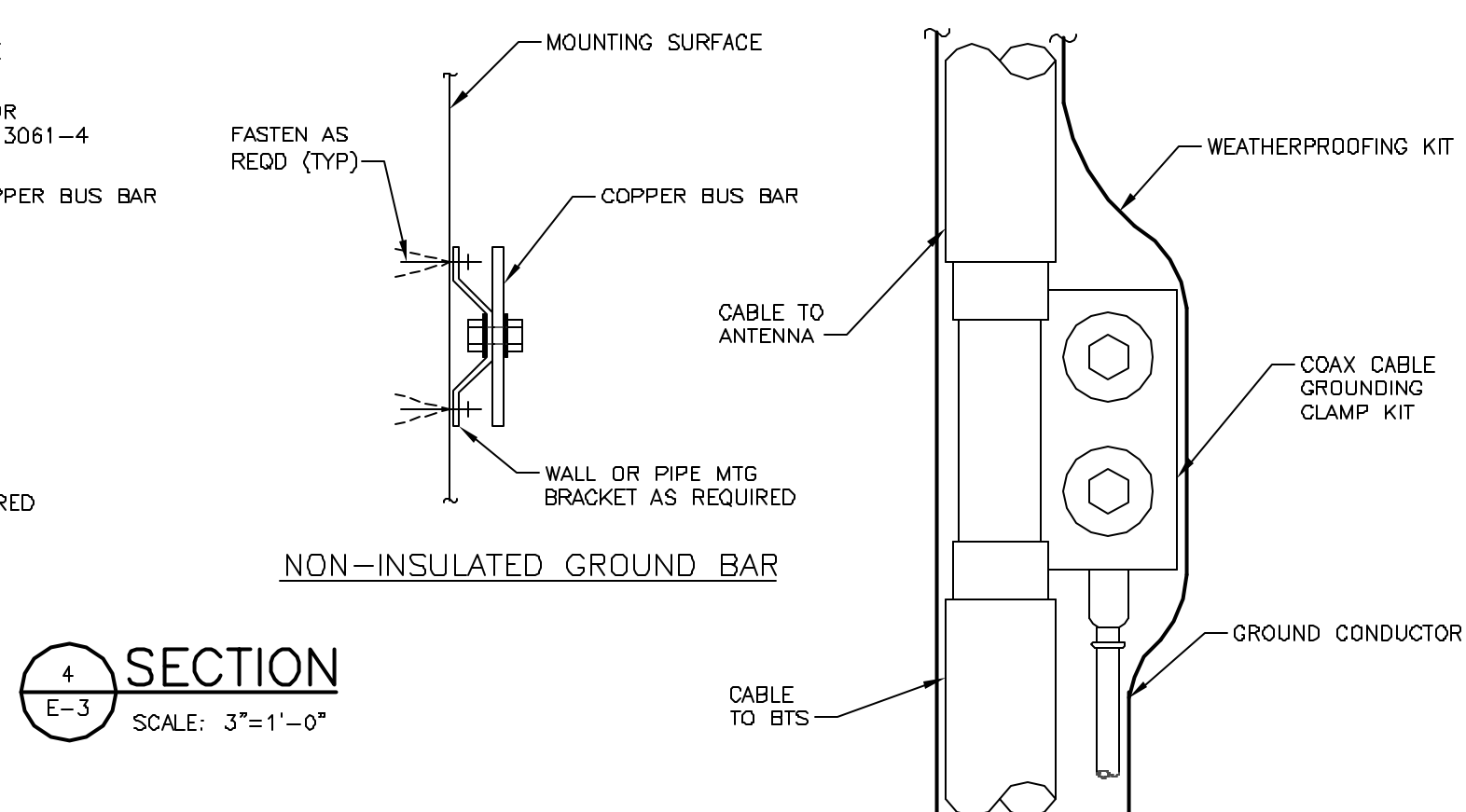
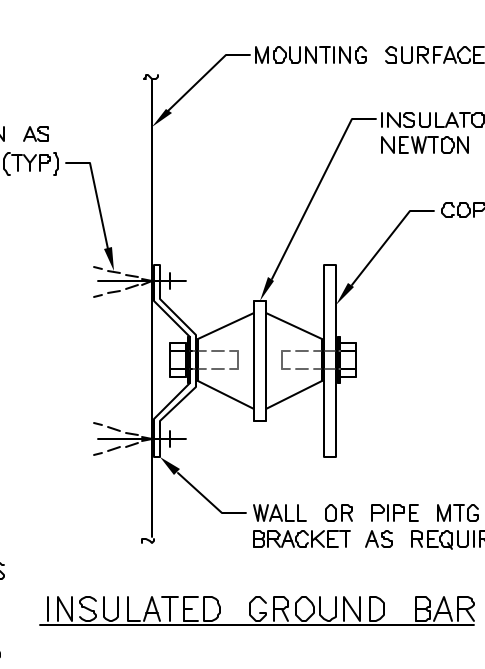
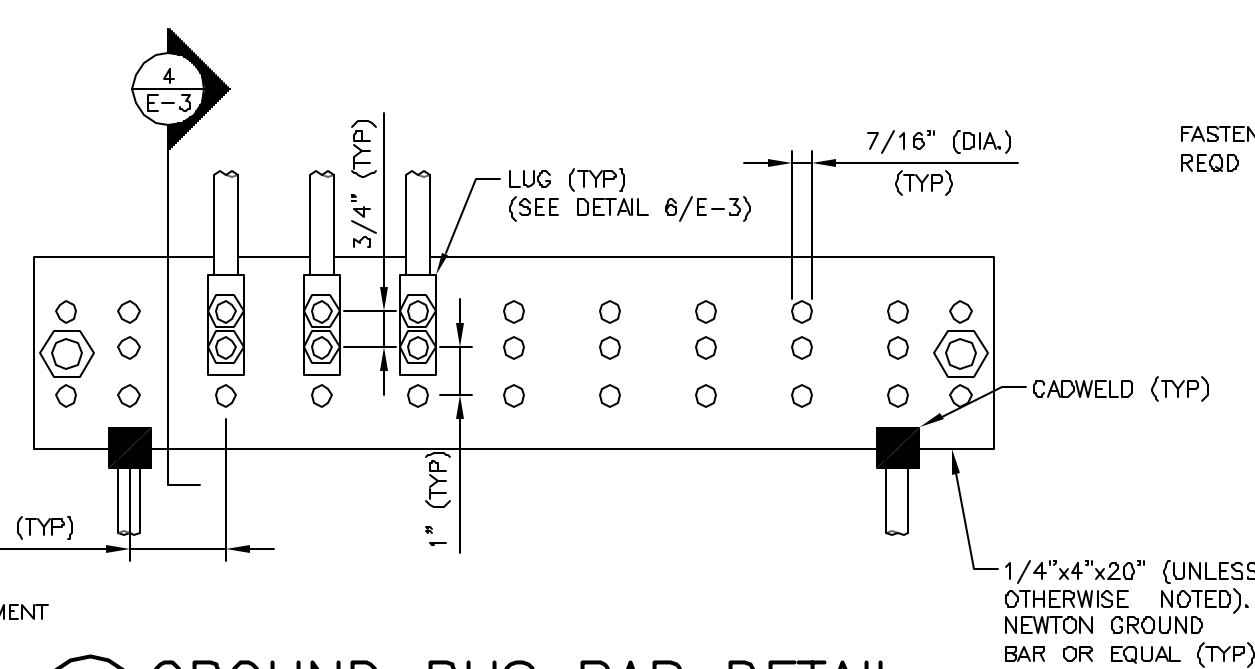
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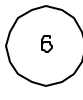
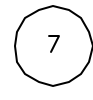
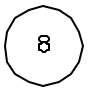
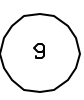
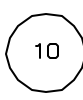
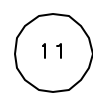
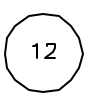
GROUNDING PLAN
& NOTES

SHEET NUMBER

E-2

- CONTRACTOR SHALL NOTIFY UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION AT TELEPHONE NUMBER 1-800-962-7962 PRIOR TO EXCAVATION AT SITE
- CONTRACTOR TO LOCATE AND VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATION
- ALL EXCAVATION WORK WITHIN 36" OF EITHER SIDE OF UNDERGROUND UTILITIES MUST BE DONE BY HAND EXCAVATION METHODS



STANDARD ANTENNA COLOR CODES				
ENTRY PORT POSITION (LOOKING FROM THE INSIDE OF THE EQUIPMENT SHELTER)				
SECTOR SITE				
ALPHA				
FREQUENCY	850 TX/RX	1900 TX/RX	1900 RX	850 RX
COLOR STRIPE	1 RED	1 RED & 1 WHITE	2 RED & 1 WHITE	2 RED
TAG	ANT 1, RXO	ANT 2, RX1	ANT 3, TXO, TXS	ANT 4, TX1
BETA				
FREQUENCY	850 TX/RX	1900 TX/RX	1900 RX	850 RX
COLOR STRIPE	1 BLUE	1 BLUE & 1 WHITE	2 BLUE & 1 WHITE	2 BLUE
TAG	ANT 5, RXO	ANT 6, RX1	ANT 7, TXO, TXS	ANT 8, TX1
GAMMA				
FREQUENCY	850 TX/RX	1900 TX/RX	1900 RX	850 RX
COLOR STRIPE	1 GREEN	1 GREEN & 1 WHITE	2 GREEN & 1 WHITE	2 GREEN
TAG	ANT 9, RXO	ANT 10, RX1	ANT 11, TXO, TXS	ANT 12, TX1
				
	OPEN	OPEN	OPEN	GPS

NOTE: VERIZON WILL COLOR CODE AND TAG THE COAX AT BOTH THE TOP OF THE TOWER AND INSIDE THE CELL SITE BUILDING AT THE CABLE ENTRY PORT. THE MARKING SYSTEM WILL BE COMPRISED OF EQUIVALENT TAPE WITH A MINIMUM WIDTH OF 3/4 INCHES, 7 MIL VINYL PLASTIC TAPE, SCOTCH 35 OR COLOR TAPE.

THE TAGGING WILL BE DONE WITH METAL "DOG" TAGS. A TAG WILL BE PLACED ON THE COAX AT THE ANTENNA AND ON THE COAX IN THE CELL SITE BUILDING. THE TAG WILL IDENTIFY THE ANTENNA NUMBER AND FUNCTION: TX, RX, ETC.

THE ENTRY PORT ASSIGNMENT SHOULD BE FOLLOWED WHERE POSSIBLE. THE STANDARD ARRESTOR PORT CONSISTS OF 3 OPENINGS FOR TYPE N OR 7-16 DIN BULKHEAD MOUNT SURGE ARRESTORS AND ONE ROW OF FOUR 4" HOLES FOR STANDARD WAVEGUIDE BOOT. INTEGRATED UNIVERSAL GROUNDING BARS HAVE PROVISIONS FOR EIGHT TWO-HOLE GROUNDING LEADS ON EACH SIDE OF THE



175 CALKINS ROAD
ROCHESTER, NEW YORK 14621



TETONIC Engineering & Surveying Consultants P.C.
12 Cornell Road
Latham, NY 12110
Phone: (518) 783-1630
Fax: (518) 783-1544
www.tectonicengineering.com

DESIGN APPROVAL

PRELIMINARY/CONSTRUCTION

RF ENG. _____ DATE: _____
EQPT. ENG. _____ DATE: _____
OPERATIONS _____ DATE: _____
CONST. MGR _____ DATE: _____
NETWORK ENG _____ DATE: _____
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2248.66514	RDD

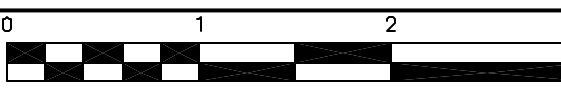
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SITE INFORMATION

2004066514
NEW HACKENSACK
AIRPORT DRIVE
TOWN OF WAPPINGER
DUTCHESS COUNTY
NEW YORK

SHEET TITLE

GROUNDING DETAILS

SHEET NUMBER

E-3

PART 1 – GENERAL

- 1.1 VERIFICATION
- A. CONTRACTOR SHALL PERFORM ALL VERIFICATION, OBSERVATION, TESTS, AND EXAMINATION WORK PRIOR TO THE ORDERING OF THE ELECTRICAL EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE ENGINEER LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
- 1.2 COMPLETE SYSTEMS
- A. GENERAL:
1. FURNISH AND INSTALL ALL MATERIALS AS REQUIRED FOR COMPLETE SYSTEMS, INCLUDING ALL PARTS OBVIOUSLY OR REASONABLY INCIDENTAL TO A COMPLETE INSTALLATION, WHETHER SPECIFICALLY INDICATED OR NOT. ALL SYSTEMS SHALL BE COMPLETELY ASSEMBLED, TESTED, ADJUSTED AND DEMONSTRATED TO BE READY FOR OPERATION PRIOR TO OWNER'S ACCEPTANCE.
- B. DRAWINGS, PLANS AND DETAILS ARE DIAGRAMMATIC AND DO NOT SHOW ALL INTERFERENCES AND CONDITIONS VISIBLE AND/OR HIDDEN THAT MAY EXIST. THE CONTRACTOR MUST VISIT THE JOB SITE TO BECOME FAMILIAR WITH CONDITIONS AND ASSUME RESPONSIBILITY FOR CONDITIONS THEREOF, BEFORE BIDDING AND DURING THE CONDUCT OF THE WORK.
- 1.3 CODES AND REGULATIONS
- A. GENERAL:
1. COMPLY WITH THE NATIONAL ELECTRIC CODE (NEC) AND ALL GOVERNING FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES, CODES, RULES, AND REGULATIONS WHERE THE CONTRACT DOCUMENTS HAVE EXCEEDED THESE REQUIREMENTS. THE CONTRACT DOCUMENTS SHALL GOVERN. IN NO CASE SHALL WORK BE INSTALLED CONTRARY TO OR BELOW MINIMUM LEGAL STANDARDS.
- B. UTILITIES:
1. COMPLY WITH ALL APPLICABLE RULES, RESTRICTIONS, AND REQUIREMENTS OF THE UTILITY COMPANIES SERVING THE PROJECT SITE/FACILITIES.
- C. NON-COMPLIANCE:
1. SHOULD ANY WORK BE PERFORMED WHICH IS FOUND NOT TO COMPLY WITH ANY OF THE ABOVE CODES AND REGULATIONS, PROVIDE ALL WORK AND PAY ALL COSTS NECESSARY TO CORRECT THE DEFICIENCIES.
- D. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND ARRANGE FOR ALL REQUIRED INSPECTIONS IN ACCORDANCE WITH STATE AND LOCAL GOVERNING AUTHORITIES.
- 1.4 QUALITY ASSURANCE
- A. INCIDENTAL WORK:
1. PAINTING, PATCHING, WELDING, CARPENTRY, MECHANICAL WORK AND THE LIKE WORK SHALL BE PERFORMED BY CRAFTSMEN SKILLED IN THE APPROPRIATE TRADE.
- B. WARRANTIES:
1. GENERAL:
1. CONTRACTOR SHALL PROVIDE WARRANTIES FOR ALL WORK AS STATED IN THE CONTRACT.
2. ROOF WARRANTIES:
1. ALL WORK AFFECTING THE INTEGRITY OF THE ROOF SHALL BE COMPLETED IN ACCORDANCE WITH THE ROOF MANUFACTURER'S INSTRUCTIONS SO AS TO MAINTAIN THE INTEGRITY AND ALL WARRANTIES OF THE ROOF. CONTRACTOR IS RESPONSIBLE TO IDENTIFY PRE-EXISTING ROOF INTEGRITY PROBLEMS PRIOR TO THE START OF WORK.
- C. SUPPLY TWO (2) COPIES OF THE WARRANTIES COUNTERSIGNED AND GUARANTEED BY THE CONTRACTOR STATING THAT IMPERFECT SYSTEM OPERATION AND ALL DEFECTS IN LABOR AND MATERIALS OF WORK WILL BE REPAIRED WITHOUT COST TO THE OWNER FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION, AND STATING THAT ALL EQUIPMENT HAS BEEN FULLY SERVICED AND LEFT IN PROPER OPERATING CONDITION. ALSO GUARANTEE THAT ANY ADDITIONAL SERVICING REQUIRED WILL BE PROVIDED WITHOUT COST DURING THE GUARANTEE PERIOD.
- 1.5 INSPECTIONS
- A. GENERAL:
1. DURING AND UPON COMPLETION OF THE WORK, ARRANGE AND PAY ALL ASSOCIATED COSTS FOR INSPECTIONS OF ALL ELECTRICAL WORK INSTALLED UNDER THIS CONTRACT, IN ACCORDANCE WITH THE CONDITIONS OF THE CONTRACT.
- B. INSPECTIONS REQUIRED:
1. AS PER THE LAWS AND REGULATIONS OF THE LOCAL AND/OR STATE AGENCIES HAVING JURISDICTION AT THE PROJECT SITE.
- C. INSPECTION AGENCY:
1. APPROVED BY THE LOCAL AND/OR STATE AGENCIES HAVING JURISDICTION AT THE PROJECT SITE.
- D. CERTIFICATES:
1. SUBMIT ALL REQUIRED INSPECTION CERTIFICATES.
- 1.6 DEFINITIONS
- A. THE TERM "INDICATED" SHALL MEAN "AS SHOWN ON THE CONTRACT DOCUMENTS, SPECIFICATIONS, DRAWINGS AND RELATED ATTACHMENT(S)".
- B. THE TERM "PROVIDE" SHALL MEAN "TO FURNISH, INSTALL AND CONNECT COMPLETELY, AND MAKE OPERABLE".
- C. THE TERM "REMOVE" SHALL MEAN "TO DISCONNECT, REMOVE AND LEGALLY DISPOSE OF BACK TO THE LAST ACTIVE DEVICE, IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS".
- D. THE DEFINITION OF ELECTRICAL TERMS USED SHALL BE AS DEFINED IN THE 1999 EDITION OF THE NATIONAL ELECTRIC CODE (NEC).
- E. THE TERM "SIZE" SHALL MEAN ONE OR MORE OF THE FOLLOWING: LENGTH, CURRENT AND VOLTAGE RATING, NUMBER OF POLES, NEMA SIZE AND OTHER SIMILAR ELECTRICAL CHARACTERISTICS".
- 1.7 COORDINATION
- A. WRITTEN REQUESTS FOR APPROVAL FOR PLANNED SHUTDOWNS OR INTERRUPTIONS OF OWNER'S EXISTING SYSTEMS AND EQUIPMENT SHALL BE MADE 72 HOURS PRIOR TO START OF REQUESTED SHUTDOWN PERIODS.
- B. THE CONTRACTOR SHALL VERIFY ALL MANUFACTURERS CATALOG NUMBERS WITH THE MANUFACTURER FOR CURRENT CONFIGURATIONS AND FUNCTIONS.
- C. BEFORE SELECTING MATERIAL AND EQUIPMENT TO BE INSTALLED CHECK NEEDED SPACE FOR PLACEMENT, CLEARANCES AND INTERCONNECTIONS, TO INSURE SUITABILITY.

PART 2 – PRODUCTS

- 2.1 GENERAL
- A. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OF EQUIPMENT. MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORIES (U.L.) AND SHALL BEAR THE INSPECTION LABEL "I" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF ALL GOVERNING BODIES HAVING JURISDICTION AND SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA AND NFPA.
- B. COMMON ITEMS:
1. WHERE MORE THAN ONE OF ANY SPECIFIC ITEM IS REQUIRED, ALL SHALL BE OF THE SAME TYPE AND MANUFACTURER.
- C. UL LISTING:
1. ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE UNDERWRITER'S LABORATORIES (UL) LISTED AND LABELED, WHERE UL STANDARDS AND LISTINGS EXIST FOR SUCH MATERIALS OR EQUIPMENT.
- 2.2 SOIL MATERIALS
- A. BACKFILL AND FILL MATERIALS:
1. MATERIALS COMPLYING WITH ASTM D2487 SOIL CLASSIFICATION GROUPS GW, GP, GM, SM, SW, AND SP, FREE OF CLAY, ROCK, OR GRAVEL LARGER THAN 2 INCHES IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS, VEGETABLE, AND OTHER DELETERIOUS MATTER.
- 2.3 RACEWAY SYSTEMS
- A. RACEWAY SIZING:
1. AS REQUIRED BY THE NEC (MINIMUM) WITH OVERSIZED RACEWAYS AS INDICATED AND WHERE REQUIRED FOR EASE OF PULLING CABLE. MINIMUM CONDUIT SIZE: 1/2-INCH, UNLESS INDICATED OTHERWISE.
- B. RACEWAY TYPES:
1. RIGID GALVANIZED STEEL CONDUIT, ELECTRICAL METALLIC TUBING (EMT), FLEXIBLE STEEL CONDUIT, LIQUID-TIGHT FLEXIBLE STEEL CONDUIT AND SCHEDULE 40 HEAVYWALL AND SCHEDULE 80 EXTRA-HEAVYWALL RIGID NON-METALLIC (PVC) CONDUIT, CONFORMING TO APPLICABLE ANSL, NEMA AND UL STANDARDS.
- C. FITTINGS:
1. ALL RACEWAY FITTINGS (EXCEPT FOR RIGID NON-METALLIC CONDUIT) TO BE STEEL OR MALLEABLE IRON, AND UL-LISTED FOR THE INTENDED APPLICATION. EMT FITTINGS TO BE COMPRESSION TYPE.
- D. OUTLET BOXES (CONCEALED IN WALLS):
1. NON-GANGABLE, GALVANIZED STEEL, WITH SQUARE CORNERED TILE (OR MASONRY) TYPE EXTENSION RINGS OR COVER. MINIMUM SIZE: TWO-GANG MASONRY BOX OR 4" SQUARE BOX WITH SINGLE-GANG EXTENSION RING. MINIMUM DEPTH: 1-1/2". MINIMUM CAPACITY: 21 CUBIC INCHES.
- E. OUTLET BOXES (SURFACE MOUNTED):
1. CADDUM PLATED CAST OR MALLEABLE IRON.
- F. PULL AND JUNCTION BOXES, AND WIREWAYS:
1. USE AS INDICATED AND REQUIRED. JUNCTION AND PULL BOXES FOR GENERAL INDOOR USE (DRY LOCATIONS) TO BE OF GALVANIZED CODE GAUGE STEEL CONSTRUCTION, MINIMUM 4" SQUARE BY 1-1/2" DEEP, WITH SCREW-ON COVERS. WIREWAYS TO BE UL LISTED, SHEET STEEL CONSTRUCTION WITH SCREW-ON COVERS, FOR EXTERIOR AND DAMP OR WET INDOOR LOCATIONS, USE BOXES AND WIREWAYS APPROVED FOR SUCH USE.
- G. PIPE SLEEVES:
1. RIGID STEEL CONDUIT OR IRON PIPE.
- H. CONDUIT SEALS:
1. FOR CAST-IN-PLACE CONCRETE APPLICATIONS: ACCEPTABLE MANUFACTURERS: Q-Z/GEDEYNE TYPE "TSK"; THUNDERLINE CORP. "LINK SEAL" WITH "LINK SEAL" COVERS. FOR EXTERIOR AND DAMP OR CORE DRILLED AND PRE-CAST OPENING APPLICATIONS: ACCEPTABLE MANUFACTURERS: Q-Z/GEDEYNE TYPE "CSML"; THUNDERLINE CORP. "LINK SEAL."
- I. SWEEPS:
1. ALL SWEEPS FOR COMMUNICATION EQUIPMENT OR INTO CONCRETE PAD SHALL BE 24" RADII.
- 2.4 CLASS WIRE CONDUCTORS – 600 VOLT AND BELOW
- A. GENERAL:
1. SINGLE-CONDUCTOR, 98% CONDUCTIVITY, ANNEALED, UNCOATED COPPER CONDUCTORS WITH 600-VOLT RATED TYPE "THHN/THWN" INSULATION. ALUMINUM CONDUCTORS ARE NOT ALLOWED.
- B. CONNECTORS:
1. NYLON SHELL INSULATED METALLIC SCREW-ON CONNECTORS FOR #14-10 AWG, AND BOLTED PRESSURE OR COMPRESSION TYPE LUGS AND CONNECTORS WITH INSULATING COVERS FOR #8 AWG AND LARGER.
- 2.5 HANGERS AND SUPPORTS
- A. GENERAL:
1. ALL HANGERS, SUPPORTS, FASTENERS AND HARDWARE SHALL BE ZINC-COATED OR OF EQUIVALENT CORROSION RESISTANCE BY TREATMENT OR INHERENT PROPERTY, AND SHALL BE MANUFACTURED PRODUCTS DESIGNATED BY THE MANUFACTURER. PRODUCTS FOR OUTDOOR USE SHALL BE HOT DIP GALVANIZED.
- B. TYPES:
1. HANGERS, STRAPS, RISER SUPPORTS, CLAMPS, U-CHANNEL, THREADED RODS, ETC. AS INDICATED OR REQUIRED.
- 2.6 ELECTRICAL IDENTIFICATION
- A. NAMEPLATES:
1. THREE-LAYER LAMINATED PLASTIC WITH MINIMUM 3/16" HIGH WHITE ENGRAVED CHARACTERS ON BLACK BACKGROUND, AND PUNCHED FOR MECHANICAL FASTENING. FASTENERS: SELF-TAPPING STAINLESS-STEEL SCREWS OR NUMBER 10-32 STAINLESS STEEL MACHINE SCREWS WITH NUTS AND FLAT AND LOCK WASHERS.
- B. UNDERGROUND WARNING TAPE:
1. SIX-INCH WIDE POLYETHYLENE TAPE, PERMANENTLY BRIGHT COLORED WITH CONTINUOUS-PRINTED LEGEND INDICATING GENERAL TYPE OF UNDERGROUND LINE BELOW AND "CAUTION." COLORS AS FOLLOWS:
1. RED – ELECTRIC
2. ORANGE – COMMUNICATIONS
- C. MARKING PENS:
1. PERMANENT WATERPROOF, QUICK DRYING BLACK INK. ACCEPTABLE MANUFACTURERS: SANFORD FINE POINT "SHARPIE," OR EQUAL.
- D. WIRE TAGS:
1. VINYL OR VINYL-CLOTH SELF-ADHESIVE WRAPAROUND TYPE INDICATING APPROPRIATE CIRCUIT NUMBER, ETC.
- 2.7 SAFETY SWITCHES
- A. GENERAL:
1. HEAVY DUTY, HORSEPOWER RATED, FULLY ENCLOSED, FUSIBLE (WITH REJECTION FUSE CLIPS) OR NON-FUSED AS INDICATED, QUICK-MAKE, QUICK BREAK SWITCHING MECHANISM INTERLOCKED WITH COVER, AND NEMA-1 ENCLOSURE FOR DRY LOCATIONS, AND NEMA-3R ENCLOSURE FOR OUTDOOR LOCATIONS, UNLESS INDICATED OTHERWISE. SWITCHES TO BE LABELED AS "SUITABLE FOR USE AS SERVICE ENTRANCE EQUIPMENT," WHERE REQUIRED.
- B. RATINGS:
1. VOLTAGE, PHASES, AMPERAGES AND FUSING AS INDICATED.
- C. IN THE FUSED CONFIGURATION, SWITCHES SHALL HAVE AN INTERRUPTING CAPACITY OF AT LEAST 100,000 AMPS SYMMETRICAL AT SIX HUNDRED (600) VOLTS WHEN USED WITH CLASS RK-5 TIME DELAY CURRENT LIMITING FUSES, AND 200,000 AMPERES SYMMETRICAL AT 600 VOLTS WHEN USED WITH CLASS RK-1 CURRENT LIMITING FUSES.
- D. GUARDS:
1. LIFE SHIELD GUARDS TO PREVENT CONTACT WITH LIVE PARTS.
- E. CONTACTS:
1. SILVER ALLOY, SWITCH BLADES SHALL BE DE-ENERGIZED IN THE OPEN POSITION.
- F. LUGS:
1. SOLDERLESS TYPE.
- G. REJECTION FUSE CLIPS:
1. PROVIDE FOR FUSIBLE SWITCHES (30-600A) TO PREVENT THE INSTALLATION OF CLASS H AND CLASS K NON-CURRENT-LIMITING FUSES.
- H. ACCEPTABLE MANUFACTURER:
1. GENERAL ELECTRIC, SQUARE D, SIEMENS.
- 2.8 GROUNDING
- A. GENERAL:
1. GROUNDING SHALL COMPLY WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.
- B. SYSTEM DESCRIPTION:
1. GROUNDING NETWORK SYSTEM SHALL ESTABLISH A EARTH RESISTANCE TO THE REFERENCE GROUND POINT NOT TO EXCEED 5 OHMS, CONSISTING OF BONDING OF STRUCTURE AND OTHER METAL OBJECTS: GROUNDING ELECTRODES; AND INTERCONNECTING CONDUCTORS.
- C. MATERIAL:
1. INDICATED AS FOLLOWING.
1. GROUND RODS:
1. 5/8" DIA. X 10'-0" LONG COPPER CLAD GROUND ROD TREATED WITH EXCITE.
2. PROTECTIVE BOX:
1. 8" DIA. X 42" LONG SCHEDULE 40 PVC PIPE WITH THREADED CAP.
3. CONDUCTORS:
1. INSTALL #2 AWG GREEN-INSULATED STRANDED WIRE FOR ABOVE GRADE GROUNDING AND #2 BARE SOLID TIN-COATED WIRE FOR BELOW GRADE GROUNDING UNLESS OTHERWISE NOTED.
4. GROUND WIRE CLAMPS:
1. HEAVY DUTY CLAMPS AS MANUFACTURED BY BURNDY.
3. WELDS:
1. GROUNDING CONNECTIONS SHALL BE EXOTHERMIC TYPE ("CADDWELDS") TO EMT, FLEXIBLE STEEL CONDUIT, LIQUID-TIGHT FLEXIBLE STEEL CONDUIT CONNECTIONS SHALL BE COMPRESSION FITTINGS. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE LUGS. WELDS SHALL BE PROTECTED FROM CORROSION WITH ZRC COLD GALVANIZING COMPOUND AS MANUFACTURED BY ZRC CHEMICAL PRODUCTS CO.
4. LENGTH AND TYPE AS INDICATED.
5. ROUTING:
1. RIGID GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE. BEND GROUNDING LEADS WITH A MINIMUM 12" RADIUS.
6. TESTING:
1. TEST AND VERIFY THAT THE RESISTANCE DOES NOT EXCEED 5 OHMS TO GROUND USING AN EARTH/GROUND RESISTANCE TESTER, GROUNDING AND OTHER OPERATIONAL TESTING SHALL BE WITNESSED BY OWNER'S REPRESENTATIVE.
2. SYSTEM TESTING SHALL BE PERFORMED PRIOR TO CONNECTING ELECTRICAL SYSTEM GROUND TO GROUND RING.
- 2.9 PANELBOARDS
- A. GENERAL:
1. PANELBOARD RATING, MAINS, MOUNTING, AND COMPLEMENT OF BREAKERS TO BE INDICATED ON THE PANELBOARD SCHEDULE.
- B. CONSTRUCTION:
1. CODE GAUGE GALVANIZED STEEL, WITH INTURNED FLANGES ON ALL SIDES OF FRONT, MINIMUM 20 INCHES WIDE.
- C. FRONT COVERS:
1. DEAD FRONT, SHEET STEEL, WITH RUST INHIBITIVE PRIMER AND BAKED LIGHT GREY ENAMEL INSIDE AND OUT FOR SURFACE MOUNTED PANELBOARDS. DOORS OVER PROTECTIVE DEVICES WITH HINGES CONCEALED AND WELDED TO THE BACK OF THE DOOR AND COVER WITH DOOR STOPS ON THE OTHER THREE SIDES.
- D. LATCHES:
1. PROVIDE ALL CUTTING, DRILLING, CHASING, FITTING AND PATCHING NECESSARY FOR ACCOMPLISHING THE WORK.
- E. INTERIORS AND BUSING:
1. PANELS TO BE DESIGNED SO THAT REMOVAL OF ANY BRANCH CIRCUIT DEVICE DOES NOT DISTURB ADJACENT DEVICES.
2. BUSING:
1. COPPER ONLY. BUSING TO BE ARRANGED FOR ALTERNATING PHASE CONNECTION OF BRANCH DEVICES, ALL SPACES EQUIPPED TO RECEIVE BRANCH CIRCUIT DEVICES. PHASE BUS AMPACITY AS INDICATED WITH NEUTRAL BUSING HAVING AMPACITY EQUAL TO PHASE BUS AMPACITY.
3. EQUIPMENT GROUND BUS:
1. COPPER ONLY. FOR BRANCH CIRCUIT PANELBOARDS PROVIDE TERMINALS FOR AT LEAST (20) #14 – #8 CONDUCTORS AND A LUG FOR THE FEEDER EQUIPMENT GROUNDING CONDUCTOR. FOR DISTRIBUTION PANELS PROVIDE TERMINALS FOR ALL GROUNDING CONDUCTORS PRESENT, PLUS 25% SPARES.
- F. SHORT CIRCUIT RATINGS:
1. EACH PANELBOARD SHALL BE LABELED WITH THE REQUIRED SHORT CIRCUIT RATING, TAKING INTO ACCOUNT THE BUS BRACING AND OVERCURRENT PROTECTIVE DEVICE INTERRUPTING RATINGS. ALL DEVICES SHALL BE FULLY RATED. LOWER RATED OVER-CURRENT PROTECTIVE DEVICES BASED ON SERIES RATING WITH UPSTREAM DEVICES WILL NOT BE ACCEPTABLE.
- 2.10 CIRCUIT BREAKERS
- A. GENERAL:
1. MOLDED CASE WITH THERMAL AND MAGNETIC TRIPS UNLESS INDICATED OTHERWISE. MINIMUM 14,000 AMPS INTERRUPTING CAPACITY, HIGHER RATINGS AS INDICATED OR REQUIRED BY AVAILABLE FAULT CURRENT.
- 2.11 FUSES
- A. UL CLASS RK-1, 250 VOLT OR 600 VOLT AS REQUIRED FOR SYSTEM VOLTAGE, DUAL ELEMENT, TIME DELAY, CURRENT LIMITING, 200,000 AC, AMPERE RATINGS AS INDICATED.
- B. ACCEPTABLE MANUFACTURERS: BUSSMANN "FUSETRON"; OR EQUAL BY GOLD SHAWMUT.

PART 3 – EXECUTION

- 3.1 GENERAL
- A. INSTALLATION REQUIREMENTS:
1. ALL MATERIALS AND EQUIPMENT SHALL BE INSTALLED AS RECOMMENDED BY THE RESPECTIVE MANUFACTURERS, BY MECHANICS EXPERIENCED AND SKILLED IN THEIR PARTICULAR TRADE, IN A NEAT AND WORKMANLIKE MANNER, IN ACCORDANCE WITH THE STANDARDS OF THE TRADE, AND SO AS NOT TO VOID ANY WARRANTY OR UL LISTING.
- 3.2 EXAMINATION
- A. CONDITIONS VERIFICATION:
1. EXAMINE THE AREAS AND CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED, AND IDENTIFY ANY CONDITIONS DETRIMENTAL TO THE PROPER AND TIMELY COMPLETION OF THE WORK. DO NOT PROCEED UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
- 3.3 COORDINATION
- A. CHASES, SLOTS, AND OPENINGS:
1. ARRANGE FOR CHASES, SLOTS, AND OPENINGS DURING THE PROGRESS OF CONSTRUCTION, AS REQUIRED TO ALLOW FOR INSTALLATION OF THE ELECTRICAL WORK.
- B. SUPPORTS AND SLEEVES:
1. PROVIDE THE INSTALLATION OF REQUIRED SUPPORTING DEVICES AND SLEEVES TO BE SET IN POURED-IN-PLACE CONCRETE AND OTHER STRUCTURAL COMPONENTS, AS THEY ARE CONSTRUCTED.
- C. OBSTACLES AND INTERFERENCES:
1. WHEN INSTALLING EQUIPMENT AND RACEWAYS, PROVIDE OFFSETS, FITTINGS, ACCESSORIES AND CHANGES IN ELEVATION OR LOCATION AS NECESSARY TO AVOID OBSTACLES AND INTERFERENCES, PER ACTUAL FIELD CONDITIONS.
- 3.4 ELECTRICAL INSTALLATION – GENERAL
- A. UNFINISHED AND FINISHED AREAS:
1. FOR THE PURPOSES OF THESE ELECTRICAL SPECIFICATIONS, "UNFINISHED" AREAS SHALL INCLUDE MECHANICAL, ELECTRICAL AND TELEPHONE EQUIPMENT ROOMS. ALL OTHER AREAS SHALL BE CONSIDERED "FINISHED" SPACES, UNLESS INDICATED OR APPROVED OTHERWISE.
- B. IN UNFINISHED AREAS:
1. RACEWAYS, EQUIPMENT AND DEVICES MAY BE INSTALLED CONCEALED OR EXPOSED, UNLESS INDICATED OTHERWISE.
- C. IN FINISHED AREAS:
1. CONCEAL ALL RACEWAY AND FLUSH MOUNT ALL ELECTRICAL BOXES, EQUIPMENT, AND DEVICES UNLESS INDICATED OR APPROVED OTHERWISE. THE SPACE ABOVE SUSPENDED CEILINGS OR BEHIND FURRED SPACES IS CONSIDERED OUTSIDE FINISHED AREAS AND ELECTRICAL MATERIALS INSTALLED WITHIN THESE AREAS ARE CONSIDERED CONCEALED.
- D. MINIMUM MOUNTING HEIGHT:
1. INSTALL EXPOSED RACEWAY AND ALL OTHER ELECTRICAL EQUIPMENT (E.G., LIGHTING FIXTURES) WITH NOT LESS THAN 7'-6" CLEAR TO FINISHED FLOOR, UNLESS INDICATED OR APPROVED OTHERWISE, AND EXCLUDING RACEWAY AND EQUIPMENT MOUNTED ON WALLS.
- E. DIMENSIONS AND CLEARANCES:
1. FIELD MEASURE ALL DIMENSIONS AND CLEARANCES AFFECTING THE INSTALLATION OF ELECTRICAL WORK. IN RELATION TO ESTABLISHED DATUM, BUILDING OPENINGS AND CLEARANCES, AND WORK OF OTHER TRADES, AS CONSTRUCTION PROGRESSES.
- F. ROUGH-IN LOCATIONS:
1. VERIFY FINAL LOCATIONS FOR ROUGH-INS WITH FIELD MEASUREMENTS AND REQUIREMENTS OF ACTUAL EQUIPMENT BEING INSTALLED.
- G. ALL CONDUIT ABOVE GRADE SHALL BE SCHEDULE 80 EXTRA-HEAVYWALL RIGID NON-METALLIC, UNLESS INDICATED OR APPROVED OTHERWISE.
- 3.5 LAYOUT
- A. GENERAL:
1. ELECTRICAL SYSTEMS, MATERIALS AND EQUIPMENT LEVEL AND PLUMB, AND PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS, WHERE INSTALLED EXPOSED.
- B. SERVICEABILITY:
1. INSTALL ELECTRICAL EQUIPMENT AND RACEWAYS, ETC. TO READILY FACILITATE SERVICING, MAINTENANCE AND REPAIR OR REPLACEMENT OF COMPONENTS, AND SO AS TO MINIMIZE INTERFERENCE WITH OTHER EQUIPMENT AND INSTALLATIONS.
- 3.6 MOUNTING HEIGHTS
- A. GENERAL:
1. INDICATED HEIGHTS ARE MEASURED FROM THE CENTER OF THE DEVICE OUTLET BOX TO FINISHED FLOOR OR GRADE, UNLESS INDICATED OTHERWISE. REQUEST INSTRUCTIONS FOR MOUNTING HEIGHTS NOT INDICATED.
- 3.7 HOLES, SLEEVES, AND OPENINGS
- A. GENERAL:
1. PROVIDE ALL HOLES, SLEEVES, AND OPENINGS REQUIRED FOR THE COMPLETION OF THE WORK AND RESTORE ALL SURFACES DAMAGED, TO MATCH SURROUNDING SURFACES. MAINTAIN INTEGRITY OF ALL FIRE AND SMOKE RATED BARRIERS USING APPROVED FIRESTOPPING SYSTEMS. WHEN CUTTING HOLES OR OPENINGS, OR INSTALLING SLEEVES, DO NOT CUT, DAMAGE OR DISTURB STRUCTURAL ELEMENTS OR REINFORCING STEEL, UNLESS APPROVED, IN WRITING, BY THE PROJECT STRUCTURAL ENGINEER.
- B. CONDUIT PENETRATIONS:
1. SIZE CORE DRILLED HOLES SO THAT AN ANNUAL SPACE OF NOT LESS THAN 1/4" AND NOT MORE THAN 1" IS LEFT AROUND THE CONDUIT WHEN OPENINGS ARE CUT IN LIEU OF CORE DRILLED, PROVIDE SLEEVE IN ROUGH OPENING. SIZE SLEEVES TO PROVIDE AN ANNUAL SPACE OF NOT LESS THAN 1/4" AND NOT MORE THAN 1" AROUND THE CONDUIT. PATCH AROUND SLEEVE TO MATCH SURROUNDING SURFACES.
- 3.8 CUTTING AND PATCHING
- A. GENERAL:
1. PROVIDE ALL CUTTING, DRILLING, CHASING, FITTING AND PATCHING NECESSARY FOR ACCOMPLISHING THE WORK.
- B. BUILDING STRUCTURE:
1. DO NOT ENDANGER THE INTEGRITY OF THE BUILDING STRUCTURE BY CUTTING, DRILLING OR OTHERWISE MODIFYING ANY STRUCTURAL MEMBER, WITHOUT SPECIFIC APPROVAL. DO NOT PROCEED WITH ANY STRUCTURAL MODIFICATIONS WITHOUT WRITTEN PERMISSION OF THE PROJECT STRUCTURAL ENGINEER.
- C. REPAIRS:
1. REPAIR ANY AND ALL DAMAGE TO WORK OF OTHER TRADES CAUSED BY CUTTING AND PATCHING OPERATIONS, USING SKILLED MECHANICS OF THE TRADES INVOLVED.
- 3.9 UNDERGROUND ELECTRICAL WORK
- A. GENERAL:
1. PERFORM ALL EXCAVATING, TRENCHING AND BACKFILLING, ETC. AS INDICATED OR REQUIRED FOR THE INSTALLATION OF ALL UNDERGROUND ELECTRICAL WORK. COORDINATE WORK WITH OTHER TRADES AND VERIFY EXISTING UNDERGROUND SERVICES AND CONDITIONS.
- B. CONDUIT BURIAL DEPTH: 30" BELOW FINISHED GRADE, UNLESS INDICATED OTHERWISE. ALL EXCAVATION AND BURIAL DEPTHS INDICATED ARE BELOW FINISHED GRADE.
- C. EXCAVATING: DO NOT EXCAVATE BELOW REQUIRED DEPTH, EXCEPT AS NECESSARY FOR REMOVAL OF UNSTABLE SOIL OR WHEN ROCK IS ENCOUNTERED. WHEN ROCK IS ENCOUNTERED, EXCAVATE SIX INCHES BELOW THE REQUIRED DEPTH AND BACKFILL WITH A MINIMUM 6" LAYER OF CRUSHED STONE OR GRAVEL BETWEEN ROCK BEARING SURFACE AND THE ELECTRICAL INSTALLATION. STOCKPILE SATISFACTORY EXCAVATED MATERIALS WHERE DIRECTED, UNTIL REQUIRED FOR BACKFILLING. REMOVE AND LEGALLY DISPOSE OF EXCESS EXCAVATED MATERIALS AND MATERIALS NOT SUITABLE FOR BACKFILL USE. SHORE AND BRACE AS REQUIRED FOR STABILITY OF EXCAVATION. REMOVE SHORING AND BRACING WHEN NO LONGER REQUIRED. WHERE SHEETING IS ALLOWED TO REMAIN, CUT TOP OF SHEETING OFF AT AN ELEVATION OF 30" BELOW FINISHED GRADE.
- D. TRENCHING: CUT ALL TRENCHES NEATLY AND UNIFORMLY AND SO AS TO PROVIDE AMPLE WORKING ROOM AND AT LEAST SIX INCHES CLEARANCE ON BOTH SIDES OF RACEWAYS, ETC. TAKE NECESSARY PRECAUTIONS WHEN WORKING NEAR EXISTING UNDERGROUND UTILITIES, AND COORDINATE WITH THE INSTALLATION OF CONCURRENT UTILITIES BY OTHER TRADES. UNLESS INDICATED OTHERWISE, PITCH ALL ELECTRICAL CONDUIT RUNS DOWNWARD AWAY FROM BUILDINGS, MANHOLES, AND PAD MOUNTED EQUIPMENT. EXCAVATE TRENCHES TO DEPTH INDICATED OR REQUIRED. LIMIT LENGTH OF OPEN TRENCH TO THAT IN WHICH INSTALLATIONS CAN BE MADE AND TRENCHES BACKFILLED WITHIN THE SAME DAY.
- E. SAND ENVELOPE: INSTALL A MINIMUM ENVELOPE OF THREE INCHES (TOP, BOTTOM AND SIDES; THREE INCHES EACH) OF FINE GRAIN SAND 1/2" AROUND ALL ELECTRICAL CABLES AND CONDUITS INSTALLED BELOW GRADE UNLESS INDICATED OTHERWISE.
- F. PREPARATION FOR BACKFILLING: BACKFILLING EXCAVATIONS AS PROMPTLY AS WORK PERMITS, BUT NOT UNTIL COMPLETION OF INSPECTION, TESTING, APPROVALS AND RECORDING OF UNDERGROUND UTILITY LOCATIONS. PRIOR TO BACKFILLING, REMOVE ALL CONCRETE FORM WORK, SHORING, BRACING, TRASH AND DEBRIS.
- G. BACKFILLING:
1. USE ONLY APPROVED MATERIALS FREE FROM BOULDERS, SHARP OBJECTS AND OTHER UNSUITABLE MATERIALS. MATCH THE FINAL ELEVATIONS AND MATERIALS OF AREAS AFFECTED BY ELECTRICAL EXCAVATING, TRENCHING AND BACKFILLING. REPLACE CONDUIT AND CABLES DAMAGED BY IMPROPER BACKFILLING. REPLACE SURFACE MATERIALS TO MATCH EXISTING SURFACE MATERIALS IF NO OTHER UTILITY OR SITE WORK IS BEING DONE IN AREA. PLACE SPECIFIED SOIL MATERIALS IN 4" – 8" LAYERS TO REQUIRED SUBGRADE ELEVATIONS.
- H. BACKFILL PLACEMENT:
1. PLACE BACKFILL AND FILL MATERIALS IN LAYERS OF NOT MORE THAN 8" IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY EQUIPMENT, AND NOT MORE THAN 4" IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS. BEFORE COMPACTION, MOISTEN OR AERATE EACH LAYER AS NECESSARY TO PROVIDE OPTIMUM MOISTURE CONTENT. COMPACT EACH LAYER TO REQUIRED PERCENTAGE OF MAXIMUM DRY DENSITY OR RELATIVE DRY DENSITY FOR EACH AREA CLASSIFICATION SPECIFIED BELOW. DO NOT PLACE BACKFILL OR FILL MATERIAL ON SURFACES THAT ARE MUDDY, FROZEN, OR CONTAIN FROST OR ICE. PLACE BACKFILL AND FILL MATERIALS EVENLY ADJACENT TO STRUCTURES, PIPING, AND EQUIPMENT TO REQUIRED ELEVATIONS. PREVENT DISPLACEMENT OF RACEWAYS AND EQUIPMENT BY CARRYING MATERIAL UNIFORMLY AROUND THEM TO APPROXIMATELY SAME ELEVATION IN EACH LIFT.
- 3.10 RACEWAY SYSTEMS
- A. RACEWAY TYPES:
1. UNLESS INDICATED OTHERWISE, USE RACEWAY TYPES AS FOLLOWS:
1. INDOORS, CONCEALED IN WALLS OR ABOVE CEILINGS: EMT.
2. INDOORS, EXPOSED: USE RIGID GALVANIZED STEEL CONDUIT BELOW TEN FEET ABOVE FINISHED FLOOR. EMT MAY BE USED ABOVE TEN FEET.
3. INDOORS, BELOW FLOOR SLAB: (MINIMUM 3/4 INCH SIZE). SCHEDULE 80 RIGID NON-METALLIC CONDUIT. STUB UP USING RIGID GALVANIZED STEEL ELBOWS.
4. OUTDOORS, BELOW GRADE: (MINIMUM 1-INCH SIZE). SCHEDULE 40 RIGID NON-METALLIC CONDUIT. STUB UP USING RIGID GALVANIZED STEEL ELBOWS.
5. OUTDOORS, EXPOSED: RIGID GALVANIZED STEEL CONDUIT.
- B. FLEXIBLE STEEL CONDUIT:
1. USE (IN DRY LOCATIONS ONLY) FOR CONNECTIONS TO TRANSFORMERS, VIBRATING EQUIPMENT, AND EQUIPMENT REQUIRING MINOR ADJUSTMENTS IN POSITIONS FOR FINAL CONNECTIONS TO RECESSED LIGHTING FIXTURES, AND BETWEEN OUTLET BOXES IN METAL STUD PARTITIONS.
7. LIQUID-TIGHT FLEXIBLE STEEL CONDUIT:
1. USE WHERE FLEXIBLE STEEL CONDUIT CONNECTIONS ARE REQUIRED IN DAMP, WET OR OILY LOCATIONS, AND FOR FINAL CONNECTIONS TO ALL

- B. RACEWAY ROUTING:
1. AS REQUIRED BY JOB CONDITIONS UNLESS SPECIFIC ROUTES OR INTERFERENCES ARE INDICATED ON THE DRAWINGS. INSTALL TIGHT TO SLABS, BEAMS AND JOISTS WHEREVER POSSIBLE. ROUTE EXPOSED CONDUIT, AND CONDUIT INSTALLED ABOVE CEILINGS, PARALLEL OR PERPENDICULAR TO WALLS CEILINGS AND STRUCTURAL MEMBERS. INSTALL TO MAINTAIN MINIMUM HEADROOM AND TO PRESENT A NEAT APPEARANCE. RUN PARALLEL RACEWAYS TOGETHER WITH BENDS MADE FROM SAME CENTER LINE. VERIFY EXACT LOCATIONS OF ALL RACEWAYS, PULL BOXES, JUNCTION BOXES. RESOLVE ANY CONFLICTS BEFORE INSTALLATION.

- C. BOXES:
1. INSTALL ALL OUTLET, PULL AND JUNCTION BOXES RIGIDLY, PLUMB AND LEVEL. SUPPORT AND SECURE BOXES INDEPENDENTLY FROM CONDUITS TERMINATING AT BOX. INSTALL ALL BOXES SO AS TO BE ACCESSIBLE AND SO THAT COVERS MAY BE EASILY REMOVED.

- D. CONDUIT SEALS:
1. INSTALL CONDUIT SEAL FOR EACH CONDUIT PENETRATING AN EXTERIOR BUILDING WALL BELOW GRADE (UNLESS PENETRATION IS BELOW LOWEST BUILDING FLOOR SLAB), AND ELSEWHERE AS INDICATED, AND SO AS TO ACHIEVE A SEALED WATERTIGHT INSTALLATION.

- 3.11 CONDUCTORS – 600 VOLT AND BELOW
- A. MINIMUM CONDUCTOR SIZE:
1. ALL BRANCH CIRCUIT WIRING SHALL BE MINIMUM #12 AWG. ALL CONTROL CIRCUIT WIRING SHALL BE MINIMUM #14 AWG, UNLESS INDICATED OTHERWISE. PROVIDE LARGER SIZES AS INDICATED OR REQUIRED.

- B. IN RACEWAY:
1. INSTALL ALL WIRING IN CONDUIT OR OTHER SPECIFIED RACEWAY, UNLESS INDICATED OTHERWISE.

- 3.12 HANGERS AND SUPPORTS
- A. GENERAL:
1. RIGIDLY SUPPORT AND SECURE ALL ELECTRICAL MATERIALS, RACEWAY AND EQUIPMENT TO BUILDING STRUCTURE USING HANGERS, SUPPORTS AND FASTENERS, SUITABLE FOR THE USE, MATERIALS AND LOADS ENCOUNTERED. PROVIDE ALL NECESSARY HARDWARE.
- B. STRUCTURAL MEMBERS:
1. DO NOT CUT, DRILL OR WELD ANY STRUCTURAL MEMBER EXCEPT AS SPECIFICALLY APPROVED BY THE ENGINEER.

- C. INDEPENDENT SUPPORT:
1. DO NOT SUPPORT ELECTRICAL MATERIALS OR EQUIPMENT FROM OTHER EQUIPMENT, PIPING, DUCTWORK OR SUPPORTS FOR SAME.

- D. BACKBOARD:
1. IF EXISTING SPACE IS NOT AVAILABLE, PROVIDE 5/8" PLYWOOD BACKBOARD FOR TELCO TERMINATION EQUIPMENT IN ACCORDANCE WITH TELCO COMPANY REQUIREMENTS AS NECESSARY.

- 3.13 ELECTRICAL IDENTIFICATION
- A. GENERAL:
1. LOCATE NAMEPLATE, MARKING, OR OTHER IDENTIFICATION MEANS ON OUTSIDE OF EQUIPMENT OR BOX FRONT COVERS WHEN ABOVE CEILINGS AND WHEN IN MECHANICAL OR ELECTRICAL EQUIPMENT ROOMS OR OTHER UNFINISHED AREAS, AND ON INSIDE OF FRONT COVER WHEN IN FINISHED ROOMS/AREAS. USE CONTRACT DOCUMENT DESIGNATIONS FOR IDENTIFICATION UNLESS INDICATED OTHERWISE.

- B. NAMEPLATES:
1. PROVIDE NAMEPLATE ENGRAVED WITH EQUIPMENT DESIGNATION FOR EACH SAFETY SWITCH, PANELBOARD, TRANSFORMER, MOTOR STARTER, AND ALL OTHER ELECTRICAL CABINETS, ETC.

- C. UNDERGROUND WARNING TAPE:
1. DURING TRENCH BACKFILLING FOR EACH UNDERGROUND ELECTRICAL, TELEPHONE, SIGNAL AND COMMUNICATIONS LINE, PROVIDE A CONTINUOUS UNDERGROUND WARNING TAPE LOCATED DIRECTLY ABOVE LINE, AT SIX TO EIGHT INCHES BELOW FINISHED GRADE.

- D. MARKING PEN LABELING:
1. MARK EACH JUNCTION AND PULL BOX INDICATING SOURCE DESIGNATION AND CIRCUIT NUMBER(S) FOR THE ENCLOSED CONDUCTORS.

- E. WIRE TAGS:
1. FOR POWER CIRCUITS, APPLY WIRE TAG INDICATING APPROPRIATE CIRCUIT OR FEEDER NUMBER TO EACH CONDUCTOR PRESENT IN DISTRIBUTION PANEL AND PANELBOARD GUTTERS, AND TO EACH CONDUCTOR IN PULL AND JUNCTION BOXES WHERE MORE THAN ONE FEEDER OR MULTI-WIRE BRANCH CIRCUIT IS PRESENT. WHERE ONLY A SINGLE FEEDER OR MULTI-WIRE BRANCH CIRCUIT IS PRESENT, BOX COVER LABELING AND CONDUCTOR COLOR CODING IS SUFFICIENT. FOR CONTROL, COMMUNICATIONS AND SIGNAL CIRCUITS, APPLY WIRE TAG INDICATING CIRCUIT OR TERMINATION NUMBER AT ALL TERMINATIONS AND AT ALL INTERMEDIATE LOCATIONS AND BOXES WHERE MORE THAN ONE CIRCUIT IS PRESENT.

- F. PANELBOARD CIRCUIT DIRECTORIES:
1. AT COMPLETION OF PROJECT, ACCURATELY COMPLETE EACH PANELBOARD CIRCUIT DIRECTORY CARD, IDENTIFYING LOAD SERVED OR "SPARE" OR "SPACE" FOR EACH CIRCUIT POLE. WHEN MODIFYING, ADDING OR DELETING CIRCUITS AT AN EXISTING PANELBOARD, UPDATE THE EXISTING (OR PROVIDE NEW) CIRCUIT DIRECTORY CARD TO ACCURATELY REFLECT FINAL CONDITIONS.

- 3.14 ELECTRIC SERVICE
- A. GENERAL:
1. ARRANGE WITH THE LOCAL ELECTRIC UTILITY COMPANY, AND PAY ALL COSTS FOR PROVIDING TEMPORARY ELECTRIC SERVICE (IF REQUIRED) AND PERMANENT ELECTRIC SERVICE FOR THE PROJECT AS INDICATED AND REQUIRED. COMPLY WITH AND COORDINATE ALL REQUIREMENTS OF THE UTILITY COMPANY.
- B. GROUNDING:
1. PROVIDE GROUNDING ELECTRODE SYSTEM FOR THE SERVICE, PER THE NEC AND UTILITY COMPANY REQUIREMENTS.

- 3.15 TELEPHONE SERVICE
- A. GENERAL:
1. ARRANGE WITH THE LOCAL TELEPHONE COMPANY, AND PAY ALL COSTS FOR PROVIDING TELEPHONE SERVICE FOR THE PROJECT. INDICATED AND REQUIRED. COMPLY WITH AND COORDINATE ALL REQUIREMENTS OF THE TELEPHONE COMPANY.

- B. PROVIDE UNDERGROUND TELEPHONE CONDUIT(S) WITH PULL WIRE(S) BETWEEN EXISTING UTILITY POLE AND TELCO BOX MOUNTED ON ELECTRICAL / TELCO BOARD.

- 3.16 GROUNDING SYSTEM
- A. GENERAL:
1. INSTALL MATERIALS AND EQUIPMENT AS INDICATED AND IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S INSTRUCTIONS.

- A. FIELD QUALITY CONTROL:
1. THE CONTRACTOR SHALL VERIFY THAT THE SYSTEM IS EFFECTIVELY GROUND, MEETS NEC ARTICLE 250 REQUIREMENTS, IS ACCEPTABLE TO THE LOCAL UTILITY COMPANY AND LOCAL AUTHORITIES HAVING JURISDICTION AND MEETS THE OWNER'S ELECTRICAL AND GROUNDING SPECIFICATIONS.
2. THE CONTRACTOR SHALL MAKE ALL MEASUREMENTS REQUIRED TO TEST THE GROUNDING NETWORK SYSTEM. SYSTEM SHALL BE TESTED AT THE TIME OF INSTALLATION.



175 CALKINS ROAD
ROCHESTER, NEW YORK 14823

TECTONIC

TECTONIC Engineering & Surveying Consultants P.C.
12 Cornell Road
Latham, NY 12110

Phone: (518) 783-1630
Fax: (518) 783-1544

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- PLANNING
- ENGINEERING
- SURVEYING
- CONSTRUCTION MANAGEMENT

DESIGN APPROVAL

PRELIMINARY/CONSTRUCTION

RF ENG. _____ DATE: _____
EQPT. ENG. _____ DATE: _____
OPERATIONS _____ DATE: _____
CONST. MGR _____ DATE: _____
NETWORK ENG. _____ DATE: _____
REAL ESTATE _____ DATE: _____

WORK ORDER NUMBER 2248.66514
DRAWN BY RDD

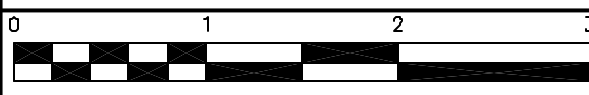
NO.	DATE	ISSUE
0	5/3/07	FOR CONSTRUCTION
1	8/8/07	REV PER ZONING
2	9/4/07	FOR BP APPLICATION
3	1/15/08	AS BUILTS

RELEASED BY

DATE

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ORIGINAL SIZE IN INCHES

SITE INFORMATION

2004066514
NEW HACKENSACK
AIRPORT DRIVE
TOWN OF WAPPINGER
DUTCHESS COUNTY
NEW YORK

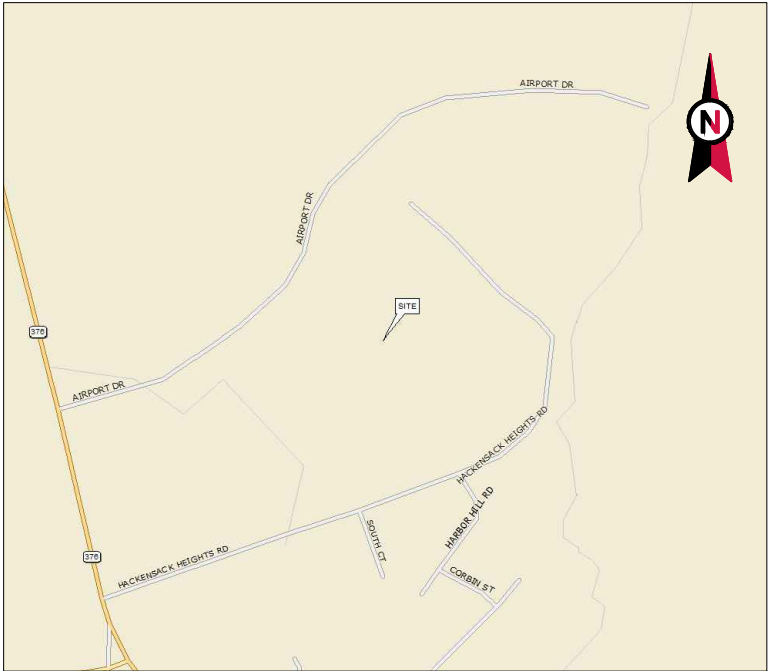
SHEET TITLE

ELECTRICAL
NOTES

SHEET NUMBER

E-4

EXHIBIT B



VICINITY MAP



AMERICAN TOWER®

ATC SITE NAME: NEW HACKENSACK NY

ATC SITE NUMBER: 420597

T-MOBILE SITE NAME: ATC_420597

T-MOBILE SITE NUMBER: UP50700A

SITE ADDRESS: 26 DON BOSCO BLVD

WAPPINGERS FALLS, NY 12590-6183

SITE CLASS: MONOPOLE



LOCATION MAP

T-MOBILE COVERAGE STRATEGY COLLOCATION PLAN
67E5D998E 6160 CONFIGURATION

COMPLIANCE CODE		PROJECT SUMMARY		PROJECT DESCRIPTION	SHEET INDEX				
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES. 1. 2020 NEW YORK BUILDING CODE (2018 IBC) 2. 2017 NATIONAL ELECTRIC CODE (NEC) 3. LOCAL BUILDING CODE 4. CITY/COUNTY ORDINANCES		<u>SITE ADDRESS:</u> 26 DON BOSCO BLVD WAPPINGERS FALLS, NY 12590-6183 COUNTY: DUTCHESS <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.62977 LONGITUDE: -73.86825 GROUND ELEVATION: 227' AMSL <u>ZONING INFORMATION:</u> JURISDICTION: TOWN OF WAPPINGER PARCEL ID: 6259-04-647405-0000		THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: <u>TOWER WORK:</u> INSTALL 8' TOWER EXTENSION(S), (1) RMQP-4096-HK PLATFORM(S), (3) ERICSSON AIR 6419 B41 ANTENNA(S), (3) RFS APXVAALL18_43-U-NA20 ANTENNA(S), (3) COMMSCOPE VV-65B-R1B ANTENNA(S), (3) RADIO 4480 B71+B85A RRU(s), (3) RADIO 4460 B25+B66 RRU(s), AND (3) 6/24 4AWG HYBRID TRUNK(S). <u>GROUND WORK:</u> INSTALL (1) CONCRETE PAD, (1) ICE CANOPY, (4) LED LUMINARES, (1) ICE BRIDGE, (1) AC V1 CABINET, (1) B160 CABINET, (1) H-FRAME, (1) GPS ANTENNA, (1) PTLC, (1) WESTELL CABINET, (1) METER, (1) DISCONNECT, (1) 48KW GENERATOR, (2) RP6651, (1) CSR IXRE V2, AND UNDERGROUND CONDUIT(S) IN JOINT TRENCH.	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
		G-001	TITLE SHEET		4	08/14/26	PSC		
		G-002	GENERAL NOTES		3	10/23/24	PSC		
			SITE SURVEY						
		C-001	OVERALL SITE PLAN		3	10/23/24	PSC		
		C-101	DETAILED SITE PLAN		3	10/23/24	PSC		
		C-102	DETAILED EQUIPMENT LAYOUT		3	10/23/24	PSC		
		C-201	TOWER ELEVATION		3	10/23/24	PSC		
		C-401	ANTENNA INFORMATION & SCHEDULE		3	10/23/24	PSC		
		C-501	CONSTRUCTION DETAILS		3	10/23/24	PSC		
C-502	CONSTRUCTION DETAILS	3	10/23/24	PSC					
C-503	CONSTRUCTION DETAILS	3	10/23/24	PSC					
C-601	EROSION CONTROL PLAN	4	08/14/26	RJB					
C-602	EROSION CONTROL DETAILS	4	08/14/26	RJB					
E-101	GROUNDING PLAN AND NOTES	3	10/23/24	PSC					
E-501	GROUNDING DETAILS	3	10/23/24	PSC					
E-601	PANEL SCHEDULE & ONE-LINE DIAGRAM	3	10/23/24	PSC					
R-601 - R-617	SUPPLEMENTAL								

GENERAL CONSTRUCTION NOTES:

1.

OWNER FURNISHED MATERIALS, T-MOBILE "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL

A.

B.

C.

D.

E.

F.

G.

H.

I.

J.

K.

L.

M.

N.

O.

BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)

AC/TELCO INTERFACE BOX (PPC)

ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)

TOWERS, MONOPOLES

TOWER LIGHTING

GENERATORS & LIQUID PROPANE TANK

ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING

ANTENNAS (INSTALLED BY OTHERS)

TRANSMISSION LINE

TRANSMISSION LINE JUMPERS

TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS

TRANSMISSION LINE GROUND KITS

HANGERS

HOISTING GRIPS

BTS EQUIPMENT
2.

THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF T-MOBILE TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3.

ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4.

CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5.

CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6.

ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7.

DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8.

DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9.

THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10.

CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11.

CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12.

INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE T-MOBILE REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE T-MOBILE REP PRIOR TO PROCEEDING.
13.

EACH CONTRACTOR SHALL COOPERATE WITH THE T-MOBILE REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14.

CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE T-MOBILE CONSTRUCTION MANAGER.
15.

ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16.

WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE T-MOBILE REP AND ENGINEER OF RECORD IMMEDIATELY.
17.

CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18.

CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19.

CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20.

CONTRACTOR SHALL FURNISH T-MOBILE AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21.

PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.

22.

PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY T-MOBILE MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23.

CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH T-MOBILE SPECIFICATIONS AND REQUIREMENTS.
24.

CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO T-MOBILE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25.

ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO T-MOBILE SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26.

THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27.

CONTRACTOR SHALL NOTIFY T-MOBILE REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28.

CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
29.

THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
30.

ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE T-MOBILE REP. ANY WORK FURNED BY THE T-MOBILE REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
31.

IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
32.

T-MOBILE FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE T-MOBILE WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
33.

T-MOBILE OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO T-MOBILE OR THEIR ARCHITECT/ENGINEER.

STRUCTURAL STEEL NOTES:

1.

STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."
2.

STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:

A.

B.

C.

D.

E.

ASTM A-572, GRADE 50 - ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE

ASTM A-36 - ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.

ASTM A-500, GRADE B - HSS SECTION (SQUARE, RECTANGULAR, AND ROUND)

ASTM A-325, TYPE SC OR N - ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS

ASTM F-1554 07 - ALL ANCHOR BOLTS, UNLESS NOTED OTHERWISE
3.

ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
4.

ALL FIELD CUT SURFACES, FIELD DRILLED HOLES AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.
5.

DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6.

CONNECTIONS:

A.

ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.

- B.

ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
- C.

INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
- D.

IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE BURNING/WELDING PERMITS AS REQUIRED BY LOCAL GOVERNING AUTHORITY AND IF REQUIRED SHALL HAVE FIRE DEPARTMENT DETAIL FOR ANY WELDING ACTIVITY.
- E.

ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
- F.

MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.
- G.

PRIOR TO FIELD WELDING GALVANIZING MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING ½" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.
- H.

THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE REQUIRED DURING CONSTRUCTION UNTIL ALL CONNECTIONS ARE COMPLETE.
- I.

ANY FIELD CHANGES OR SUBSTITUTIONS SHALL HAVE PRIOR APPROVAL FROM THE ENGINEER, AND T-MOBILE PROJECT MANAGER IN WRITING

SPECIAL CONSTRUCTION
ANTENNA INSTALLATION NOTES:

1.

WORK INCLUDED:

A.

B.

C.

D.

E.

F.

G.

ANTENNA AND COAXIAL CABLES ARE FURNISHED BY T-MOBILE UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL

INSTALL ANTENNAS AS INDICATED ON DRAWINGS AND T-MOBILE SPECIFICATIONS.

INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.

INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE AND PROVIDE PRINTOUT OF THAT TEST.

CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.

INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.

ANTENNA AND COAXIAL CABLE GROUNDING:
2.

ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPlice WEATHERPROOFING KIT #221213 OR EQUAL.
3.

ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS).

CONCRETE AND REINFORCING STEEL NOTES:

1.

DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF ALL APPLICABLE CODES INCLUDING: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", ACI 117 "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS", AND ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."
2.

MIX DESIGN SHALL BE APPROVED BY T-MOBILE REP PRIOR TO PLACING CONCRETE.
3.

CONCRETE SHALL BE NORMAL WEIGHT, 6 % AIR ENTRAINED (+/- 1.5%) WITH A SLUMP RANGE OF 3-6" AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI UNLESS OTHERWISE NOTED.
4.

THE FOLLOWING MATERIALS SHALL BE USED:

PORTLAND CEMENT:

REINFORCEMENT:

REINFORCEMENT BARS:

NORMAL WEIGHT AGGREGATE:

WATER:

WELDED WIRE FABRIC:

ADMIXTURES:

-WATER-REDUCING AGENT:

-AIR-ENTERING AGENT:

-SUPERPLASTICIZER:

ASTM C150, TYPE 2

ASTM A185, PLAIN STEEL WELDED WIRE FABRIC

ASTM A615, GRADE 60, DEFORMED

ASTM C33

ASTM C 94/C 94M

ASTM A185

ASTM C 494/C 494M, TYPE A

ASTM C 260/C 260M

ASTM C494, TYPE F OR TYPE G

- RETARDING:

ASTM C 494/C 494M, TYPE B
5.

MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE NO LESS THAN 3".
6.

A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE IN ACCORDANCE WITH ACI 301 SECTION 4.2.4, UNLESS NOTED OTHERWISE.
7.

INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR APPROVAL FROM AN ATC ENGINEER WHEN DRILLING HOLES IN CONCRETE.
8.

ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN "METHOD 1" OF ACI 301.
9.

DO NOT WELD OR TACK WELD REINFORCING STEEL.
10.

ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.
11.

REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
12.

DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.
13.

FOR COLD-WEATHER (ACI 306) AND HOT-WEATHER (ACI 301M) CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS, MINIMUM.
14.

ALL CONCRETE SHALL HAVE A "SMOOTH FORM FINISH."
15.

SPlicing OF REINFORCEMENT IS PERMITTED ONLY AT LOCATIONS SHOWN IN THE CONTRACT DRAWINGS OR AS ACCEPTED BY THE ENGINEER. UNLESS OTHERWISE SHOWN OR NOTED REINFORCING STEEL SHALL BE SPliced TO DEVELOP ITS FULL TENSILE CAPACITY (CLASS A) IN ACCORDANCE WITH ACI 318.
16.

DETAILING OF REINFORCING STEEL SHALL CONFORM TO "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315).
17.

ALL SLAB CONSTRUCTION SHALL BE CAST MONOLITHICALLY WITHOUT HORIZONTAL CONSTRUCTION JOINTS, UNLESS SHOWN IN THE CONTRACT DRAWINGS.
18.

LOCATION OF ALL CONSTRUCTION JOINTS ARE SUBJECT TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, CONFORMANCE WITH ACI 318, AND ACCEPTANCE OF THE ENGINEER. DRAWINGS SHOWING LOCATION OF DETAILS OF THE PROPOSED CONSTRUCTION JOINTS SHALL BE SUBMITTED WITH REINFORCING STEEL PLACEMENT DRAWINGS.
19.

SPlices OF WWF, AT ALL SPliced EDGES, SHALL BE SUCH THAT THE OVERLAP MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRE PLUS 2 INCHES, NOR LESS THAN 6".
20.

BAR SUPPORTS SHALL BE ALL-GALVANIZED METAL WITH PLASTIC TIPS.
21.

ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE TO PREVENT DISPLACEMENT BY CONSTRUCTION TRAFFIC OR CONCRETE. THE WIRE SHALL BE OF SUFFICIENT STRENGTH FOR INTENDED PURPOSE, BUT NOT LESS THAN NO. 18 GAUGE.
22.

SLAB ON GROUND: COMPACT STRUCTURAL FILL TO 95% DENSITY AND THEN PLACE 6" GRAVEL BENEATH SLAB.

ELECTRICAL NOTES:

1.

ELECTRICAL WORK SHALL BE PERFORMED BY ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL ENSURE THAT ALL WORK COMPLIES WITH ALL APPLICABLE LOCAL AND STATE CODES AND NATIONAL ELECTRICAL CODE.
2.

ALL SUGGESTED ELECTRICAL ELEMENTS (SUCH AS BREAKER SIZES, WIRE SIZES, CONDUITS SIZES) ARE FOR ZONING PURPOSES ONLY. IT IS THE RESPONSIBILITY TO OF THE ELECTRICAL CONTRACTOR TO CONFIRM COMPLIANCE WITH LOCAL ELECTRICAL CODES AND PASS ALL APPLICABLE AND NECESSARY INSPECTIONS. IN SOME EVENTS, IT MAY BE NECESSARY TO PERFORM AN ELECTRICAL LOAD STUDY TO VERIFY THE CAPACITY OF THE EXISTING SERVICE. THIS IS NOT THE RESPONSIBILITY OF ATC. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
3.

CONTRACTOR SHALL FIELD LOCATE ALL BELOW GRADE GROUNDING CABLES AND UTILITY LINES PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR RELOCATION OF ALL UTILITIES AND GROUNDING LINES THAT MAY BECOME DISTURBED OR CONFLICTING IN THE COURSE OF CONSTRUCTION.

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

AMERICAN TOWER.

PLANS PREPARED BY:

TEP

M&H ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

TEP IS A FAMILY OF COMPANIES LICENSED TO PROVIDE DIFFERENT SERVICES IN DIFFERENT JURISDICTIONS. DEPENDING ON THE JURISDICTION, PROFESSIONAL ENGINEERING AND LAND SURVEYING SERVICES ARE PROVIDED BY TEP OPCO LLC, A DELAWARE LIMITED LIABILITY COMPANY, TEP ENGINEERING, LLC, A NORTH CAROLINA PROFESSIONAL LIMITED LIABILITY COMPANY, OR M&H ENGINEERING, LLC, A NEW YORK PROFESSIONAL LIMITED LIABILITY COMPANY. GENERAL CONTRACTOR SERVICES ARE PROVIDED BY TEP OPCO LLC, A DELAWARE LIMITED LIABILITY COMPANY. WE ACQUIRE THE REQUISITE LICENSES IN EACH STATE. ADDITIONAL INFORMATION CAN BE OBTAINED FROM THE COMPANY.

REV.	DESCRIPTION	BY	DATE
△	PRELIMINARY	PVW	11/08/22
△	FINALS	SD	12/27/22
△	FINALS	RMJ	11/23/23
△	FINALS	SAS	12/22/23
△	FINALS	PSC	10/23/24

ATC SITE NUMBER:
420597

ATC SITE NAME:
NEW HACKENSACK NY

T-MOBILE SITE NAME:
ATC_420597

SITE ADDRESS:
26 DON BOSCO BLVD
WAPPINGERS FALLS, NY 12590-6183

M&H Engineering, PLLC16867

SEAL:

10/23/24

DATE DRAWN:	10/23/24
ATC JOB NO:	14178236
CUSTOMER NAME:	ATC_420597
CUSTOMER ID:	UP50700A

GENERAL NOTES

SHEET NUMBER:
G-002

REVISION:
3

AS-BUILT SURVEY

420597

NEW HACKENSACK NY

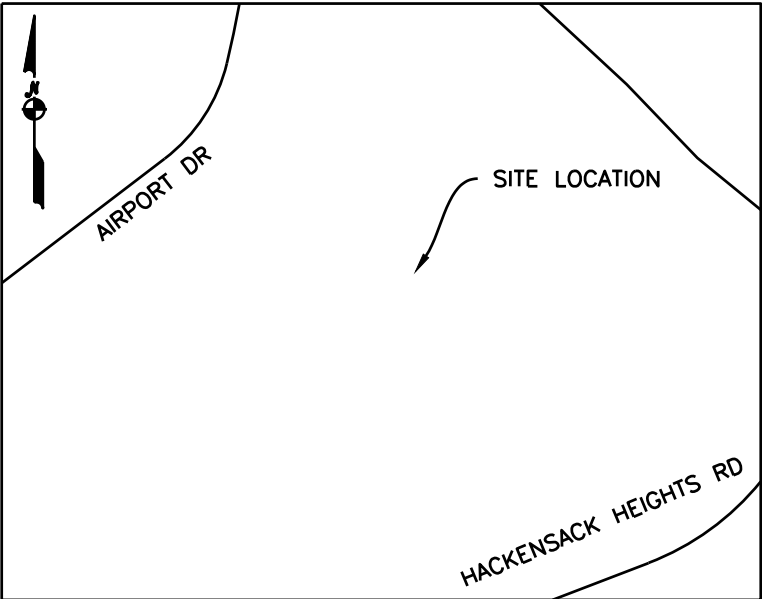
26 DON BOSCO BLVD
WAPPINGERS FALLS, NY 12590
DUTCHESS COUNTY

LEGEND

---	:PARENT PARCEL LINE
---	:ADJOINER PARCEL LINE
— □ — □ — □ —	:FENCE AS NOTED
— □ — □ — □ —	:FENCE AS NOTED
— x — x — x —	:FENCE AS NOTED
— OH — OH — OH —	:OVER HEAD UTILITY LINES
R/W-LINE	:RIGHT OF WAY LINE
●	:SET 5/8" REBAR, OR AS NOTED
○	:FOUND 1/2" REBAR, OR AS NOTED
■	:FOUND MONUMENT, OR AS NOTED
(---)	:RECORD DESCRIPTION DATA
P.O.T.	:POINT OF TERMINUS
P.O.B.	:POINT OF BEGINNING
P.O.C.	:POINT OF COMMENCEMENT
⌋	:WOOD UTILITY POLE
⊠	:ELECTRIC TRANSFORMER
T	:TELCO PEDESTAL
HH	:HAND HOLE
N/A	:NOT AVAILABLE
N/F	:LANDS NOW/FORMERLY
▼	:FLOOD LIGHT
◇	:UNDERGROUND FIBER MARKER

VICINITY MAP

NOT TO SCALE



AREA SUMMARY

AREA	SQ. FT.	ACRES
PARENT PARCEL	1456646	33.44

UTILITY NOTE

BURIED UTILITIES, IF DEPICTED HEREON, WERE DETECTED AND MARKED BY OTHERS USING INDIRECT METHODS. NO SUBSURFACE EXCAVATION WAS PERFORMED TO VERIFY THE TYPE AND LOCATION OF THE BURIED UTILITIES. IT IS POSSIBLE THAT OTHER UTILITIES SERVICING, AS WELL AS NOT SERVICING THE SUBJECT SITE, EXIST, BUT WENT UNDETECTED AS A RESULT OF THE SCOPE OF WORK AT TIME OF SURVEY. CONTACT YOUR LOCAL PUBLIC UTILITY SERVICE BEFORE ANY DIGGING/EXCAVATION.

SHEET CONTENTS

1	COVER SHEET
2	PROPERTY OVERVIEW
3	ACCESS OVERVIEW
4	SITE OVERVIEW

SURVEY PROCEDURES & EQUIPMENT

THE ACCURACY OF THIS SURVEY MEETS OR EXCEEDS THE MINIMUM STANDARDS AS REQUIRED BY [STATE REQUIREMENTS FOR BOUNDARY SURVEYS].
INSTRUMENTS USED:

-TOPCON GT500
-CARLSON BR6

ABBREVIATIONS

POC	POINT OF COMMENCEMENT
POB	POINT OF BEGINNING
ROW	RIGHT OF WAY

SURVEY PERFORMED FOR:

TEP

SURVEY COORDINATED BY:

GEOLINE SURVEYING, INC.
13430 NW 10th Terrace, Suite A, Alachua, FL 32615
Tele: (386) 418-0500 | Fax: (386) 462-9986

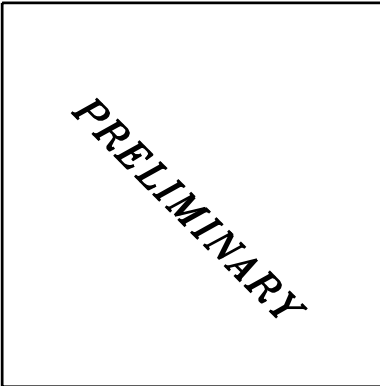
SURVEY PERFORMED BY:

JONATHAN MURPHY PROFESSIONAL LAND SURVEYING
4650 PARAGON PARK RD, RALEIGH, NC 27616
TELE: (919) 787-7873 | FAX: (919) 400-4442

DRAWN BY: EMC | CHK BY: AMB | SITE NO.: 420597

I hereby certify to...

SURVEYOR NAME: JONATHAN MURPHY



SIGNATURE

XX/XX/2026

DATE

ZONING:

AI

FLOOD NOTE:

THIS PARCEL OF LAND LIES WITHIN FLOOD ZONE X WHICH IS NOT A SPECIAL FLOOD HAZARD AREA AS PER F.I.R.M. PANEL NUMBER: 36027C0388E, EFFECTIVE DATE: 05/02/2012

BEARING BASIS:

NY GRID (EAST ZONE) NAD83

NOTES:

1. SURVEY PERFORMED ON 08/05/2026.
2. NO SUBSURFACE INVESTIGATION WAS PERFORMED TO LOCATE UNDERGROUND UTILITIES. UTILITIES SHOWN HEREON ARE LIMITED TO AND ARE PER OBSERVED EVIDENCE ONLY.
3. THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL.
4. ALL VISIBLE TELECOM EQUIPMENT AND IMPROVEMENTS ARE CONTAINED WITHIN THE DESCRIBED AREA.
5. ALL SYMBOLS SHOWN HEREON NOT DEPICTED TO SCALE.

REV	DATE	DESCRIPTION	DRWN

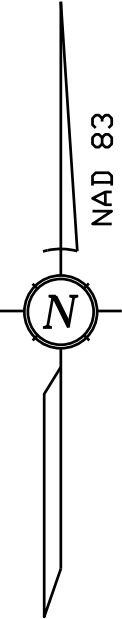
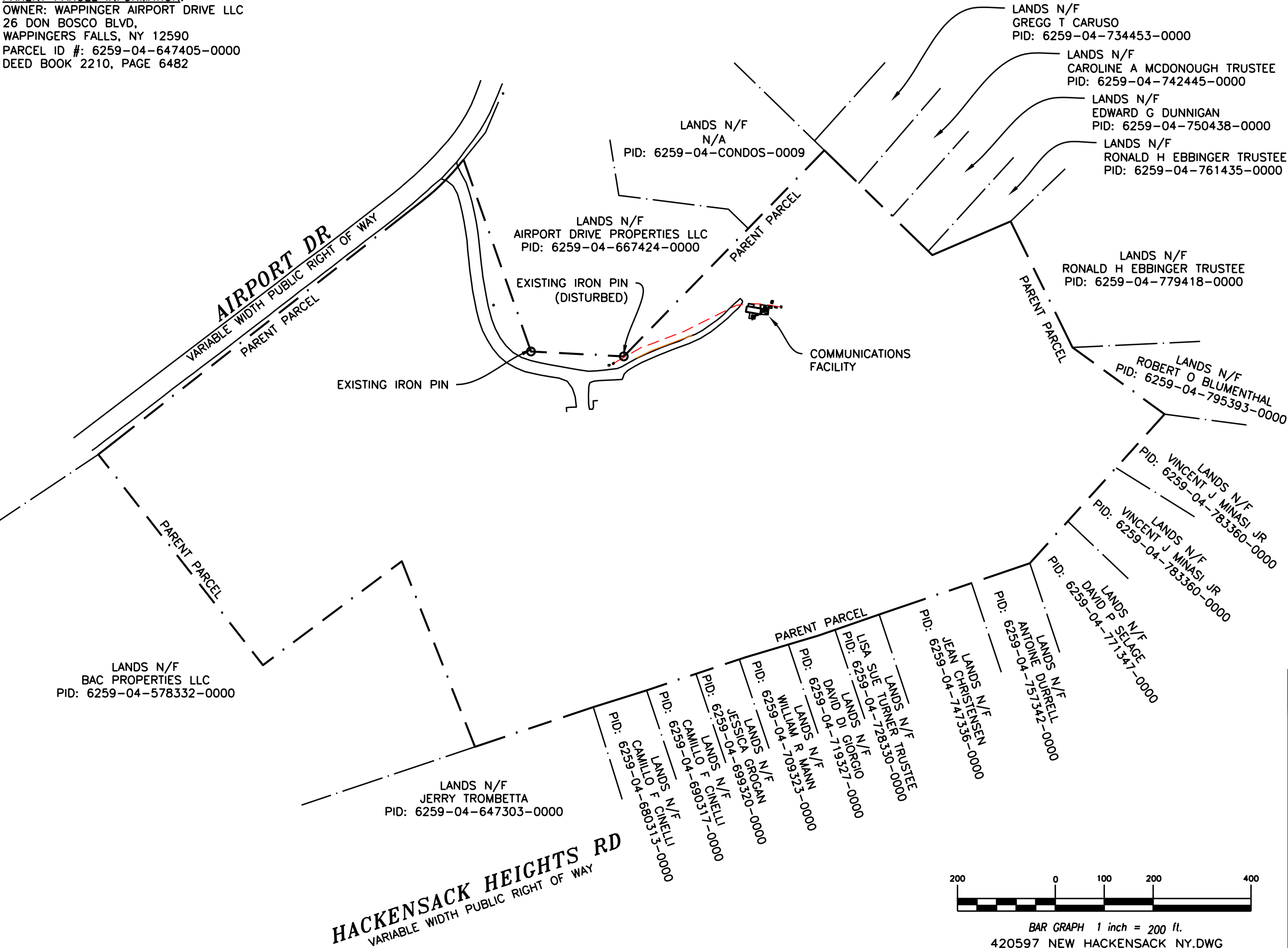
SITE INFORMATION:

Name	NEW HACKENSACK NY
Site No.	420597
Address	26 DON BOSCO BLVD WAPPINGERS FALLS, NY 12590
County	DUTCHESS COUNTY

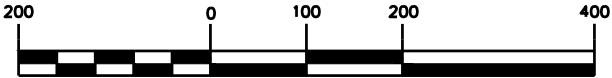
AS-BUILT SURVEY

SHEET: 1 COVER SHEET

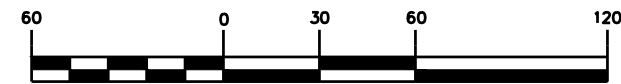
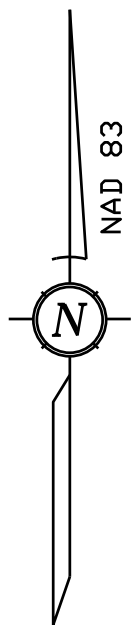
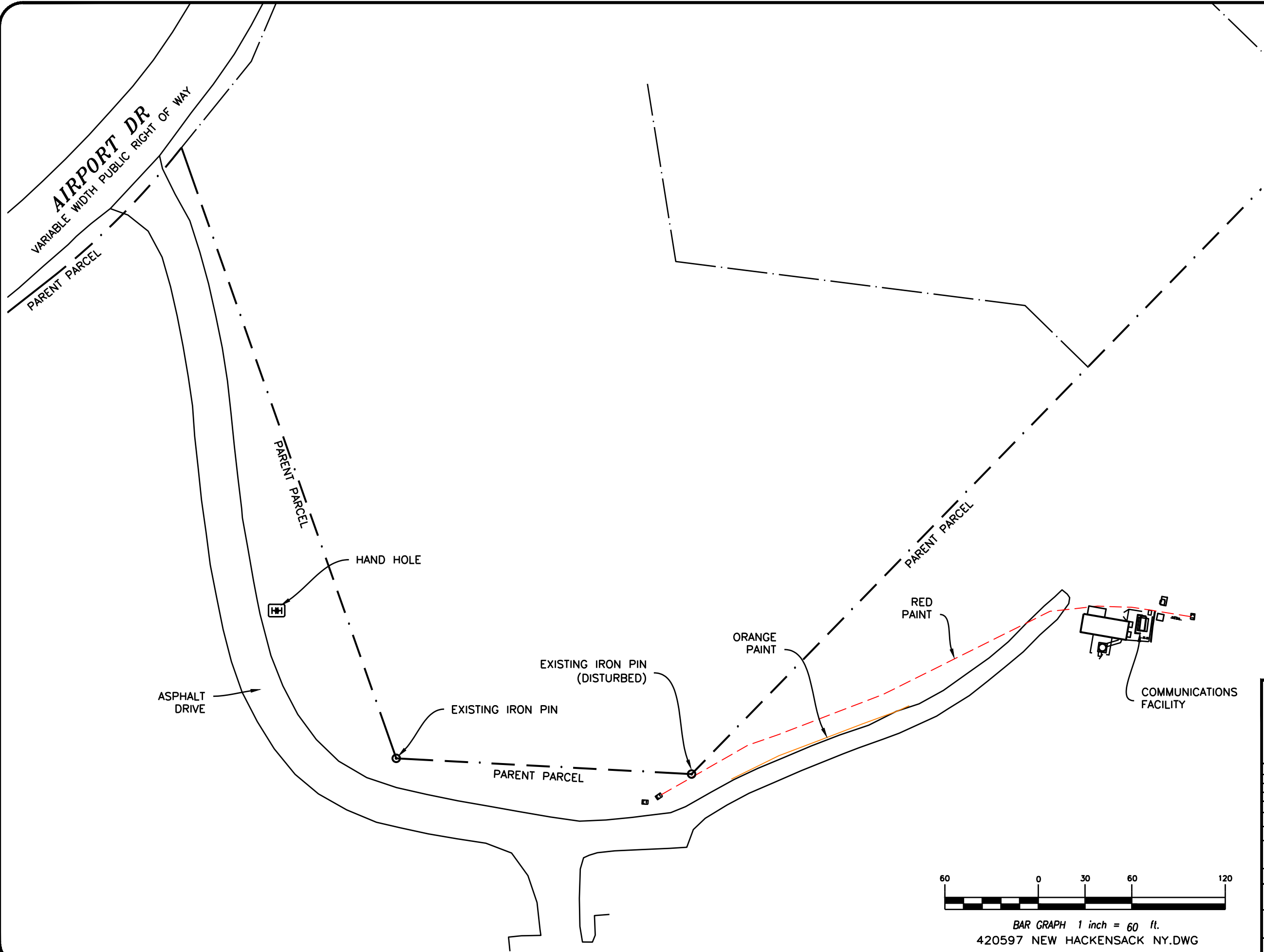
PARENT PARCEL INFORMATION:
OWNER: WAPPINGER AIRPORT DRIVE LLC
26 DON BOSCO BLVD,
WAPPINGERS FALLS, NY 12590
PARCEL ID #: 6259-04-647405-0000
DEED BOOK 2210, PAGE 6482



SURVEY PERFORMED FOR:			
REV	DATE	DESCRIPTION	DRWN
SITE INFORMATION:			
Name	NEW HACKENSACK NY		
Site No.	420597		
Address	26 DON BOSCO BLVD WAPPINGERS FALLS, NY 12590		
County	DUTCHESS COUNTY		
AS-BUILT SURVEY			
SHEET: 2 PROPERTY OVERVIEW			

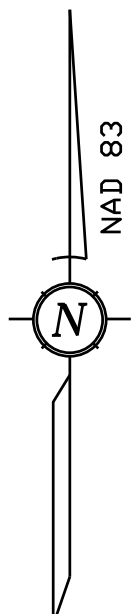
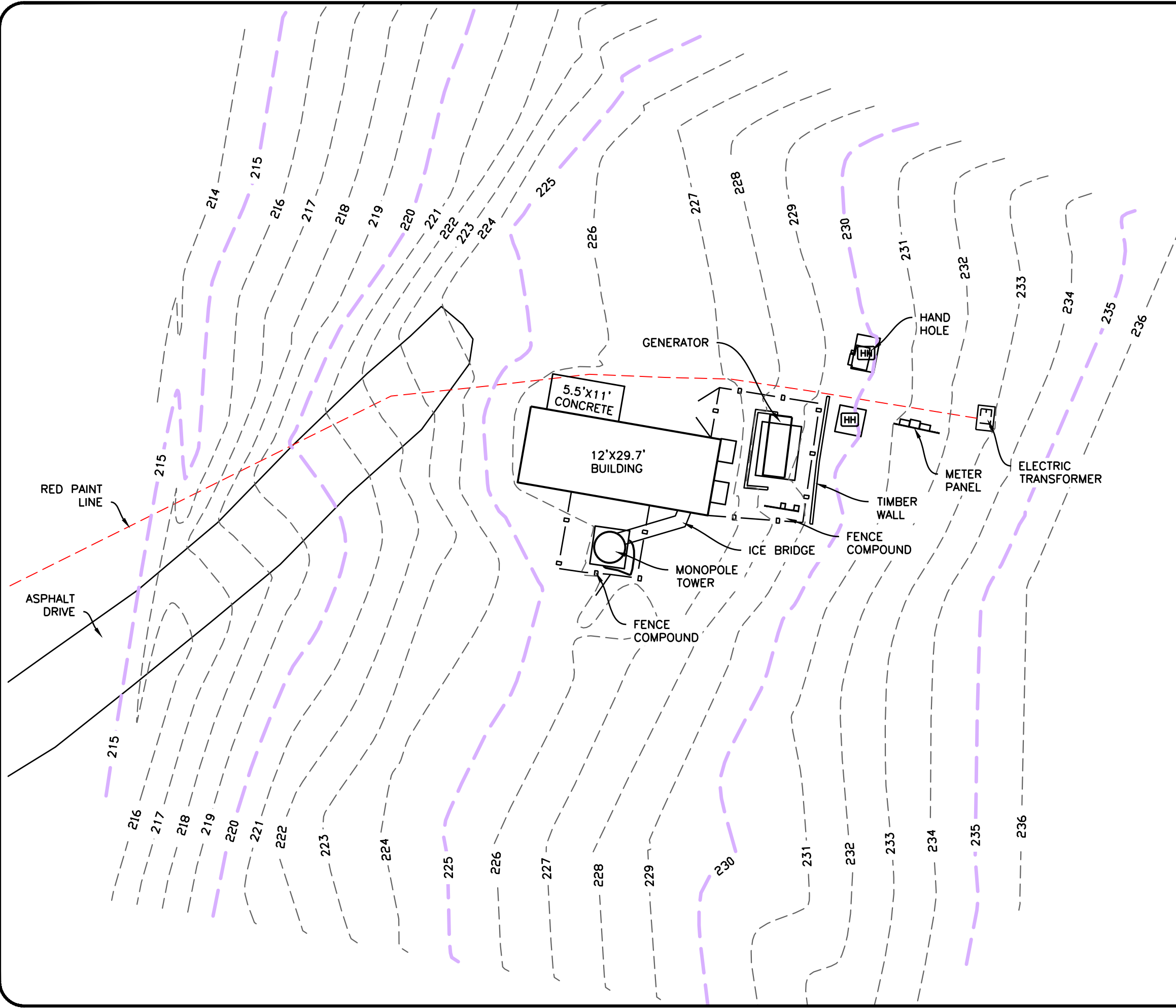


BAR GRAPH 1 inch = 200 ft.
420597 NEW HACKENSACK NY.DWG



BAR GRAPH 1 inch = 60 ft.
420597 NEW HACKENSACK NY.DWG

SURVEY PERFORMED FOR:			
REV	DATE	DESCRIPTION	DRWN
SITE INFORMATION:			
Name	NEW HACKENSACK NY		
Site No.	420597		
Address	26 DON BOSCO BLVD WAPPINGERS FALLS, NY 12590		
County	DUTCHESS COUNTY		
AS-BUILT SURVEY			
SHEET: 3 ACCESS OVERVIEW			

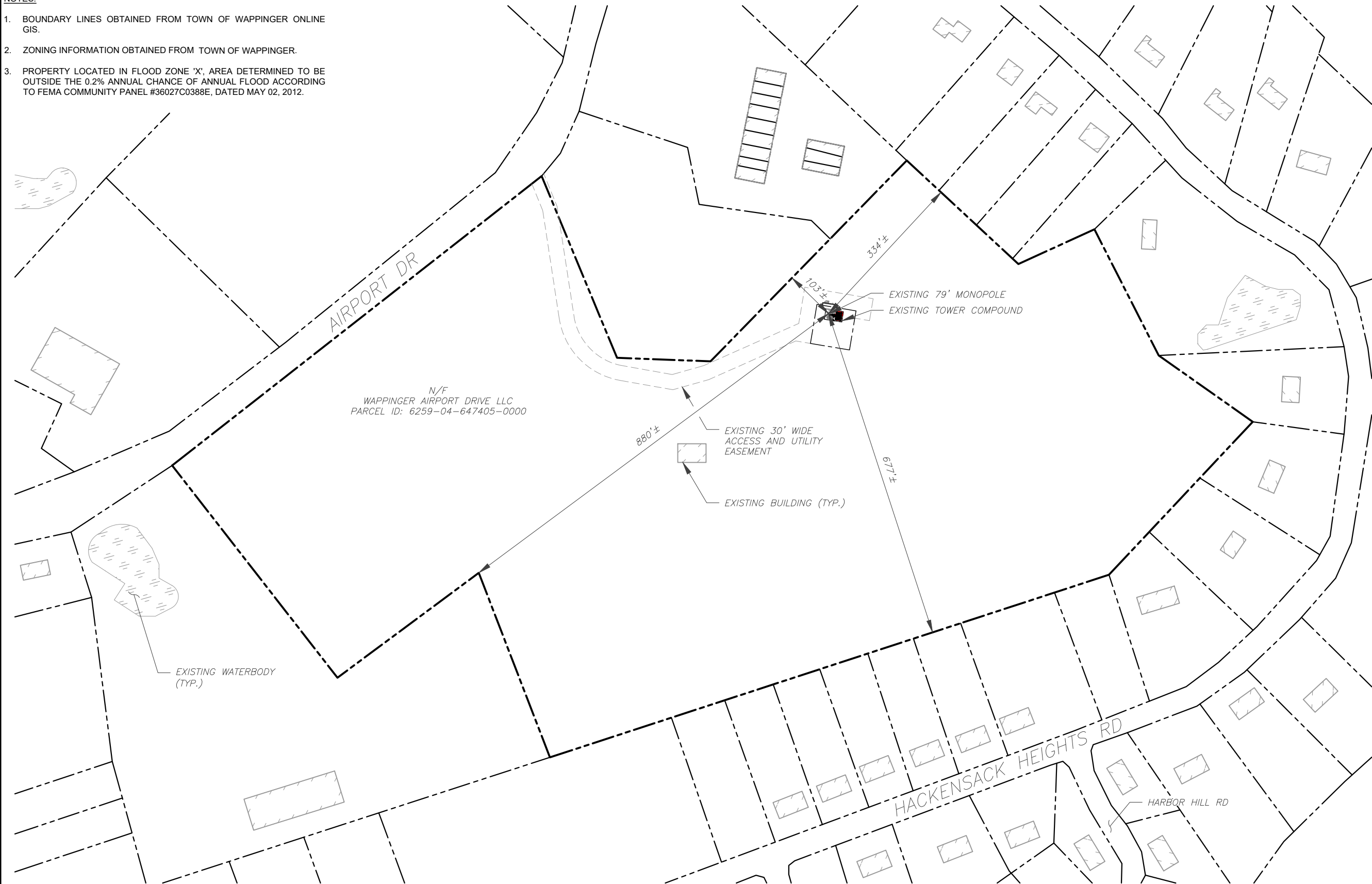


BAR GRAPH 1 inch = 15 ft.
420597 NEW HACKENSACK NY.DWG

SURVEY PERFORMED FOR:			
REV	DATE	DESCRIPTION	DRWN
SITE INFORMATION:			
Name	NEW HACKENSACK NY		
Site No.	420597		
Address	26 DON BOSCO BLVD WAPPINGERS FALLS, NY 12590		
County	DUTCHESS COUNTY		
AS-BUILT SURVEY			
SHEET: 4 SITE OVERVIEW			

NOTES:

1. BOUNDARY LINES OBTAINED FROM TOWN OF WAPPINGER ONLINE GIS.
2. ZONING INFORMATION OBTAINED FROM TOWN OF WAPPINGER.
3. PROPERTY LOCATED IN FLOOD ZONE 'X', AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE OF ANNUAL FLOOD ACCORDING TO FEMA COMMUNITY PANEL #36027C0388E, DATED MAY 02, 2012.



LEGEND

EXISTING PROPERTY LINE

EXISTING ADJACENT PROPERTY LINE

EXISTING LEASE AREA

1 OVERALL SITE PLAN

SCALE 1" = 200'

0200'400'

SCALE: 1"=200' (11X17)
1"=100' (22X34)

N

AMERICAN TOWER.

PLANS PREPARED BY:

TEP

M&H ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

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1	FINALS	RMJ	11/23/23
2	FINALS	SAS	12/22/23
3	FINALS	PSC	10/23/24

ATC SITE NUMBER:
420597

ATC SITE NAME:
NEW HACKENSACK NY

T-MOBILE SITE NAME:
ATC_420597

SITE ADDRESS:
26 DON BOSCO BLVD
WAPPINGERS FALLS, NY 12590-6183

M&H Engineering, PLLC16887

STATE OF NEW YORK
SCOTT G. BRANTLEY
105653
PROFESSIONAL ENGINEER

SEAL:10/23/24

T-Mobile

DATE DRAWN:10/23/24

ATC JOB NO:14178236

CUSTOMER NAME:ATC_420597

CUSTOMER ID:UP50700A

OVERALL SITE PLAN

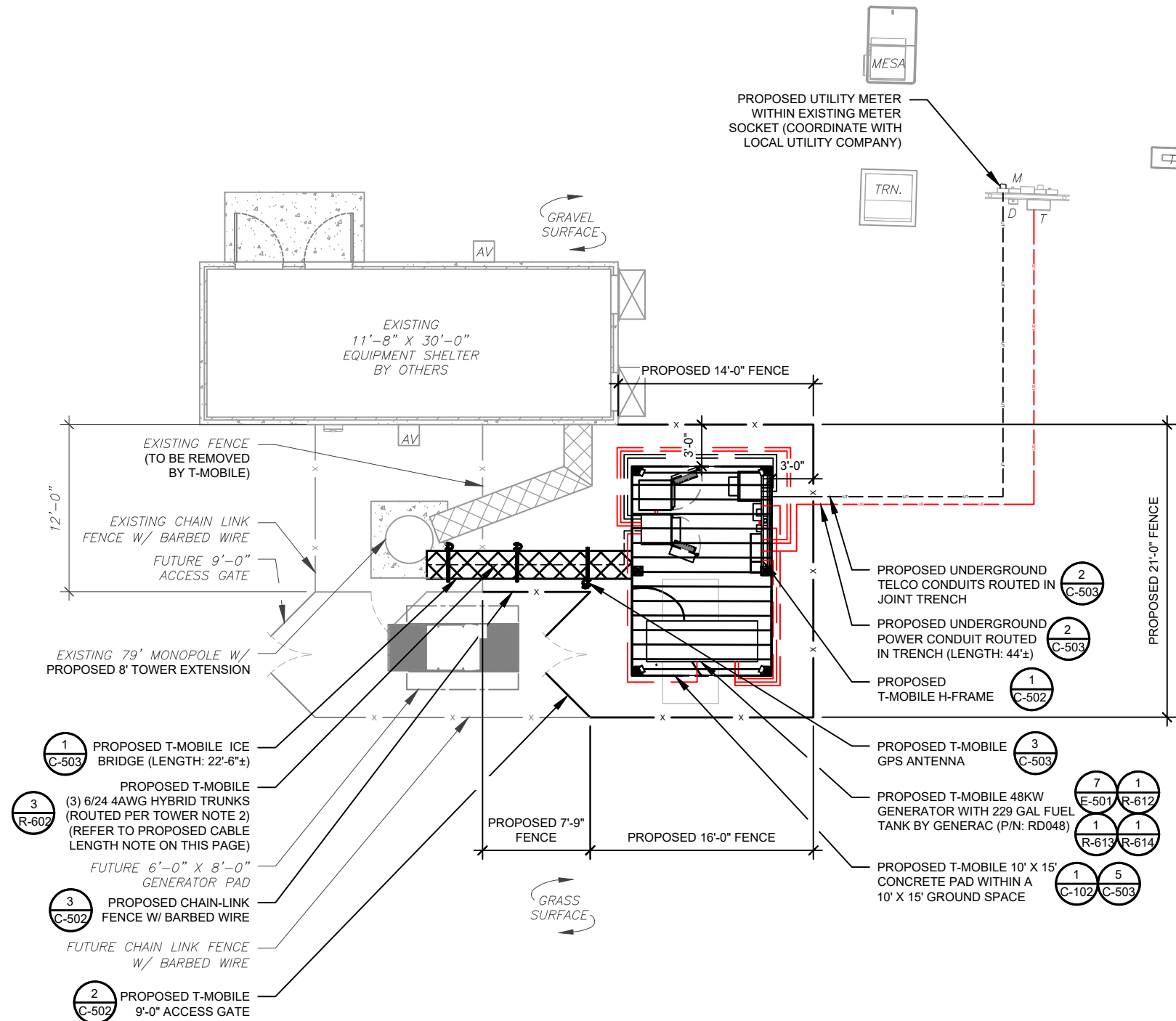
SHEET NUMBER:
C-001

REVISION:
3

1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.

⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACLE
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
- x ———	CHAINLINK FENCE

1. ESTIMATED LENGTH OF PROPOSED CABLE IS 30m. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES), CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.



SCALE: 1"=10' (11X17)
1"=5' (22X34)





AMERICAN TOWER.

PLANS PREPARED BY:



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326 TRYON ROAD
RALEIGH, NC 27603-3530
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www.tepgroup.net

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1	FINALS	RMJ	11/23/23
2	FINALS	SAS	12/22/23
3	FINALS	PSC	10/23/24

ATC SITE NUMBER:

420597

ATC SITE NAME:

NEW HACKENSACK NY

T-MOBILE SITE NAME:

ATC_420597

SITE ADDRESS:

26 DON BOSCO BLVD
WAPPINGERS FALLS, NY 12590-6183

M&H Engineering, PLLC

16867



SEAL:

10/23/24

T-Mobile

DATE DRAWN:	10/23/24
ATC JOB NO:	14178236
CUSTOMER NAME:	ATC_420597
CUSTOMER ID:	UP50700A

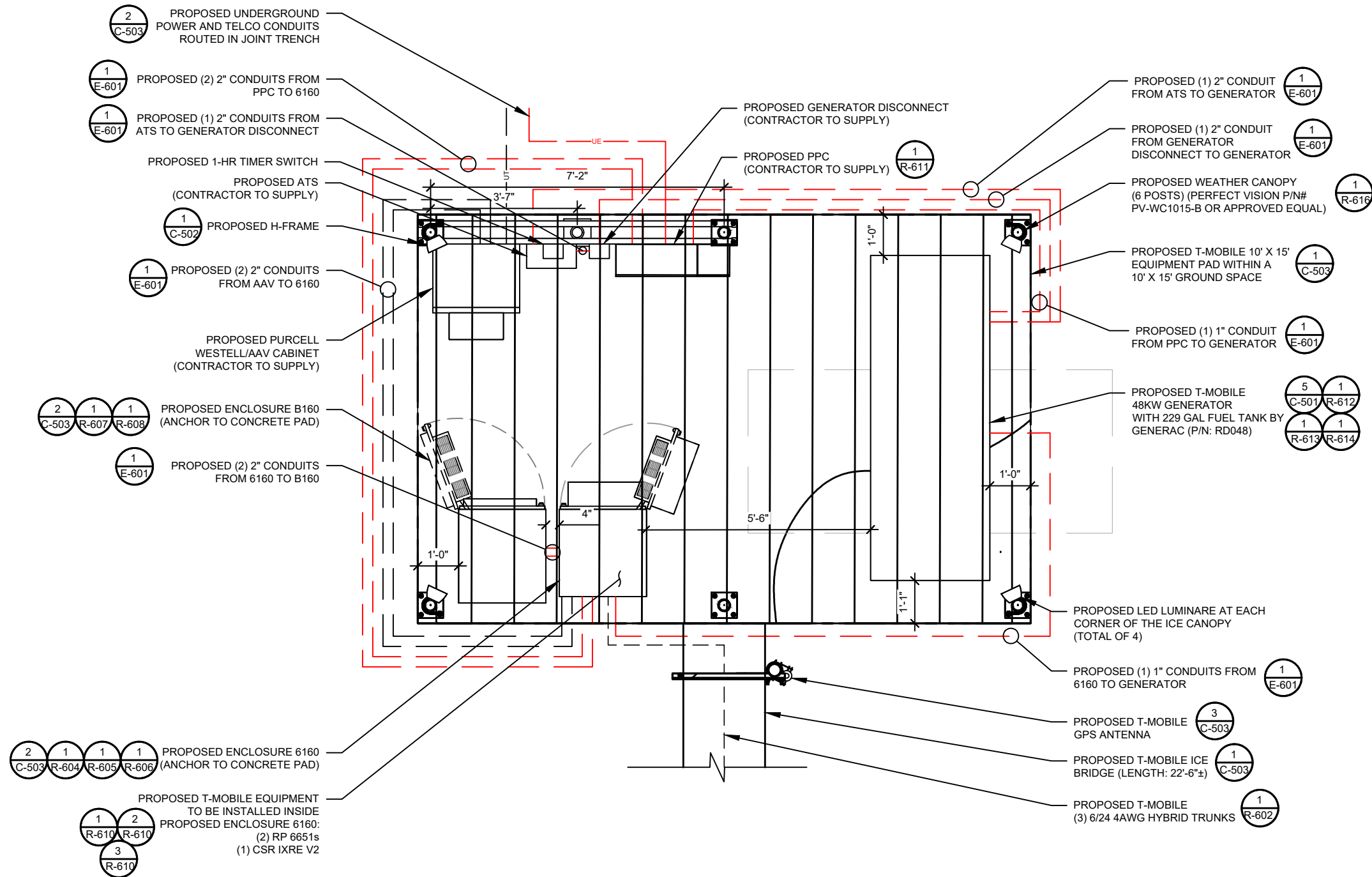
DETAILED EQUIPMENT LAYOUT

SHEET NUMBER:

C-102

REVISION:

3



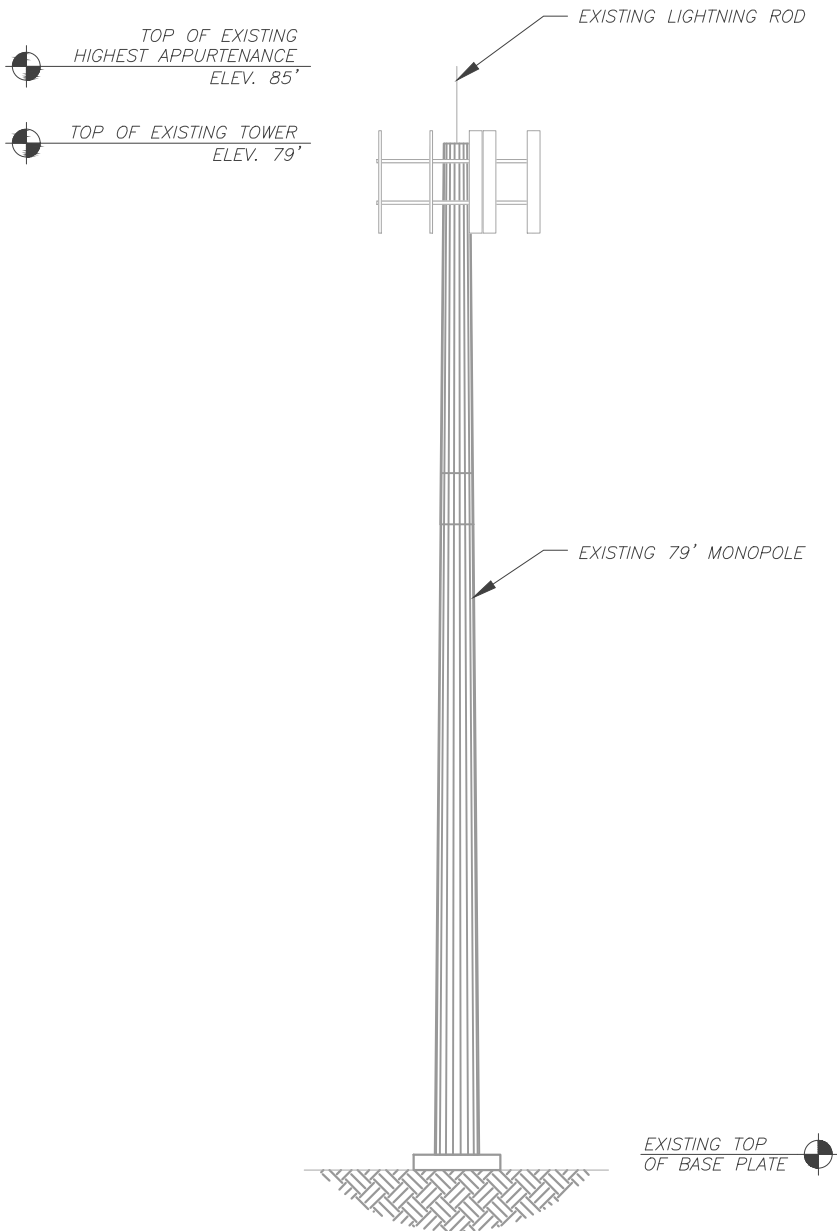
1 PROPOSED GROUND EQUIPMENT LAYOUT

SCALE: 1" = 3'

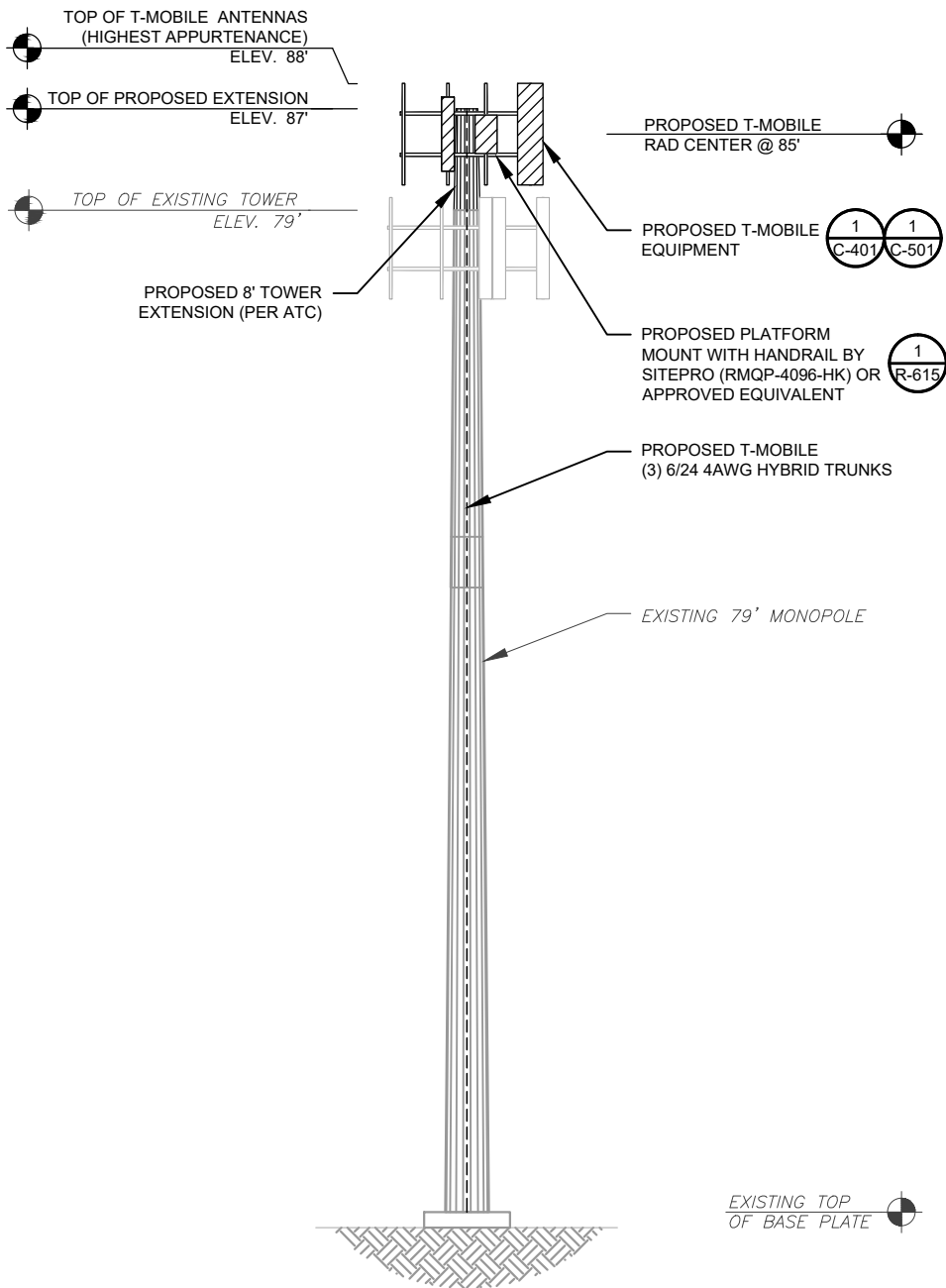


SCALE: 1"=3' (11X17)
1"=1.5' (22X34)





1 EXISTING TOWER ELEVATION
SCALE: N.T.S.



2 PROPOSED TOWER ELEVATION
SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY AMERICAN TOWER CORPORATION, DATED NOVEMBER 16, 2023, THE PROPOSED MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.

- TOWER NOTES:
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
 - WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
 - ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.
 - TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.).
 - TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.



AMERICAN TOWER.

PLANS PREPARED BY:



M&H ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
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ATC SITE NUMBER:
420597

ATC SITE NAME:
NEW HACKENSACK NY

T-MOBILE SITE NAME:
ATC_420597

SITE ADDRESS:
26 DON BOSCO BLVD
WAPPINGERS FALLS, NY 12590-6183

M&H Engineering, PLLC16887

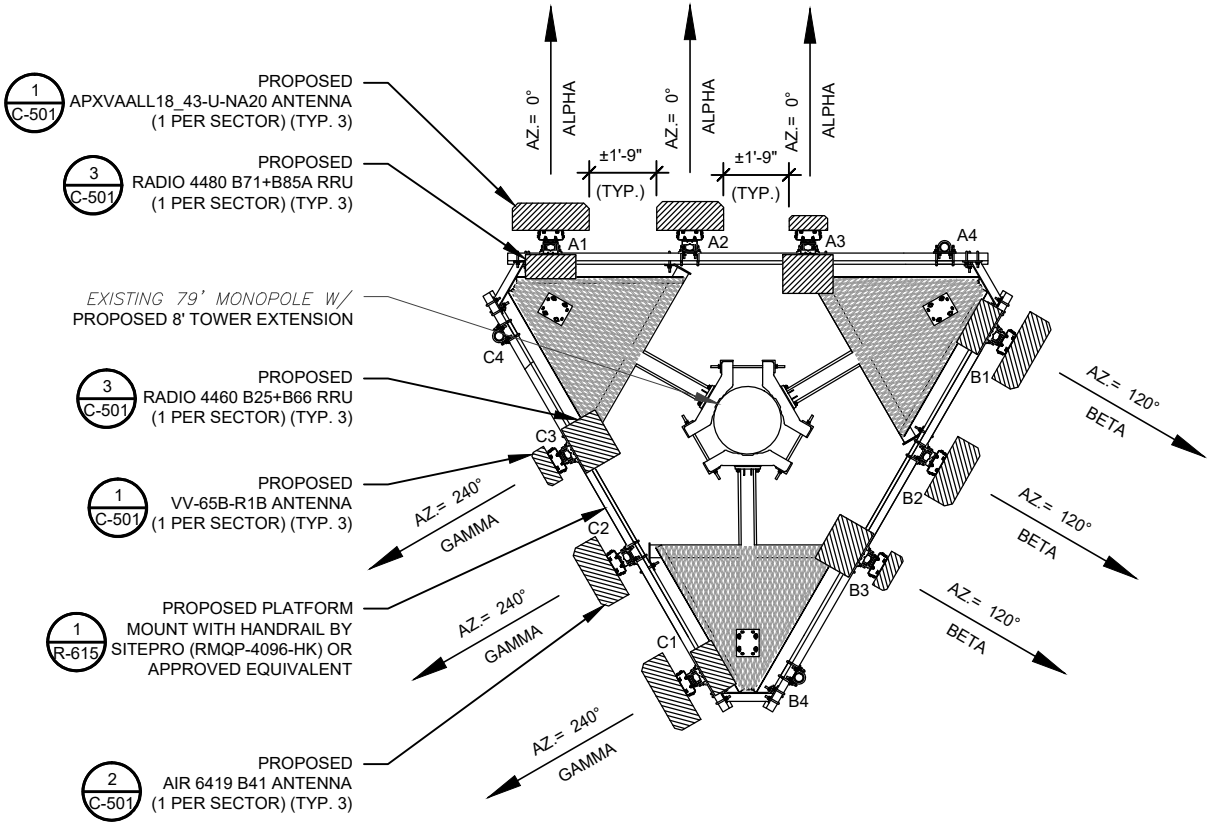


SEAL:10/23/24

T-Mobile	
DATE DRAWN:	10/23/24
ATC JOB NO:	14178236
CUSTOMER NAME:	ATC_420597
CUSTOMER ID:	UP50700A

TOWER ELEVATION	
SHEET NUMBER: C-201	REVISION: 3

PER MOUNT ANALYSIS COMPLETED BY AMERICAN TOWER CORPORATION, DATED NOVEMBER 16, 2023, THE PROPOSED MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.



1 FINAL ANTENNA PLAN
SCALE: N.T.S.

FINAL ANTENNA SCHEDULE									
LOCATION			ANTENNA SUMMARY					NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	85°	0°	A1	APXVAALL18_43-U-NA20	L600/N600/L700	0°/2.2°	ADD	(1) RADIO 4480 B71+B85A	ADD
			A2	AIR 6419 B41	L2500/N2500	0°/2.2°	ADD	-	-
			A3	VV-65B-R1B	N1900/L2100/L1900	0°/2.2°	ADD	(1) RADIO 4460 B25+B66	ADD
			A4	-	-	-	-	-	-
BETA	85°	120°	B1	APXVAALL18_43-U-NA20	L600/N600/L700	0°/2.2°	ADD	(1) RADIO 4480 B71+B85A	ADD
			B2	AIR 6419 B41	L2500/N2500	0°/2.2°	ADD	-	-
			B3	VV-65B-R1B	N1900/L2100/L1900	0°/2.2°	ADD	(1) RADIO 4460 B25+B66	ADD
			B4	-	-	-	-	-	-
GAMMA	85°	240°	C1	APXVAALL18_43-U-NA20	L600/N600/L700	0°/2.2°	ADD	(1) RADIO 4480 B71+B85A	ADD
			C2	AIR 6419 B41	L2500/N2500	0°/2.2°	ADD	-	-
			C3	VV-65B-R1B	N1900/L2100/L1900	0°/2.2°	ADD	(1) RADIO 4460 B25+B66	ADD
			C4	-	-	-	-	-	-
1. BASED ON APPROVED ATC APPLICATION 14178236, DATED NOVEMBER 01, 2022. CONFIRM WITH T-MOBILE REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS. 2. CONFIRM SPACING OF PROPOSED EQUIPMENT DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.									

2 ANTENNA SCHEDULE

PROPOSED FIBER DISTRIBUTION/OVP BOX		PROPOSED CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
-	-	-	(3) 6/24 HCS 4AWG (30m)	ADD



AMERICAN TOWER.

PLANS PREPARED BY:



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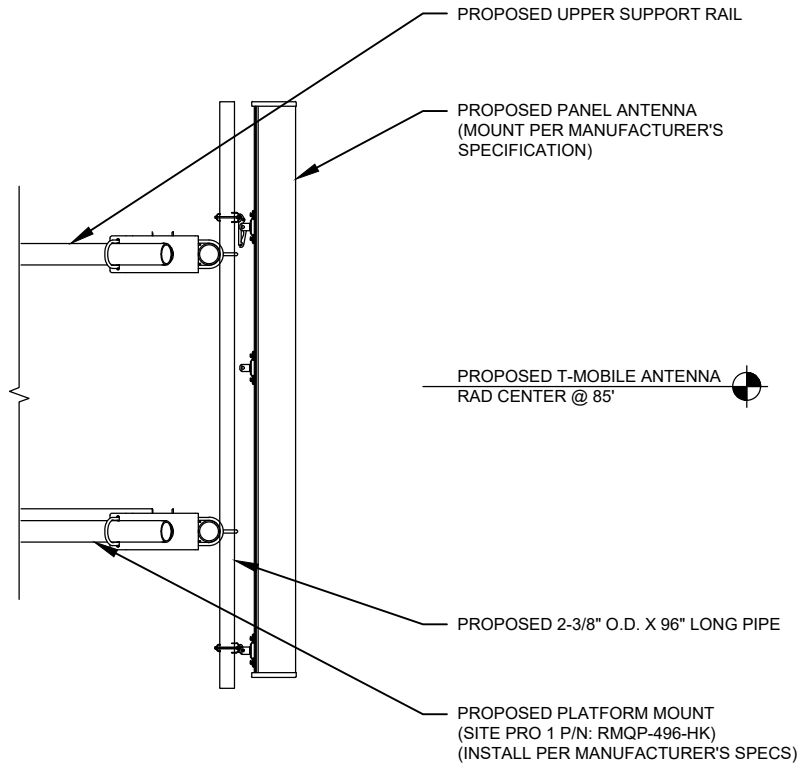
SEAL:10/23/24



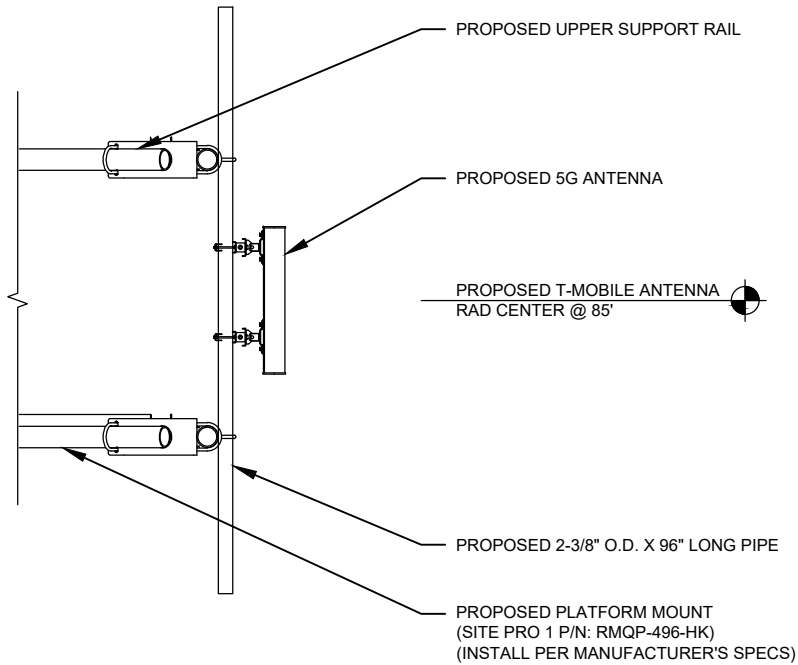
DATE DRAWN:	10/23/24
ATC JOB NO:	14178236
CUSTOMER NAME:	ATC_420597
CUSTOMER ID:	UP50700A

ANTENNA INFORMATION & SCHEDULE

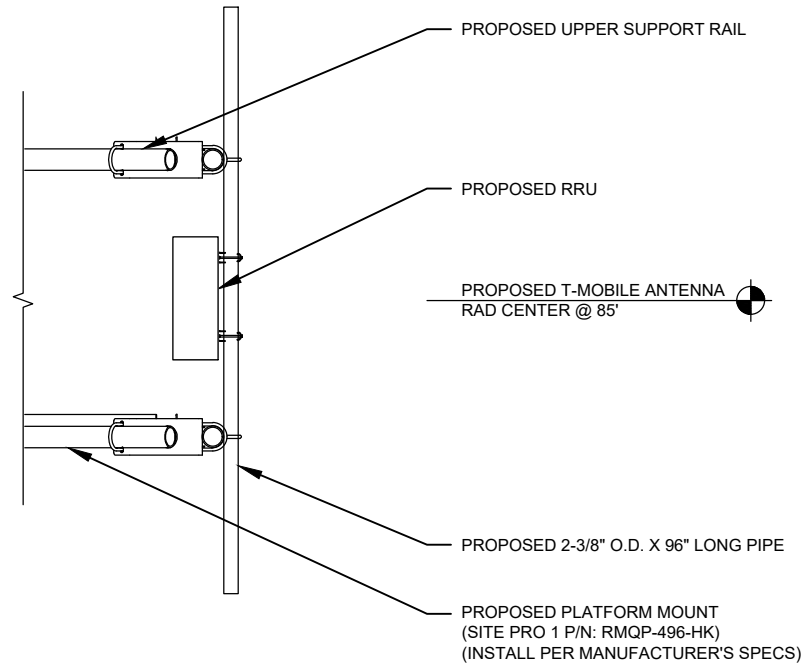
SHEET NUMBER: C-401	REVISION: 3
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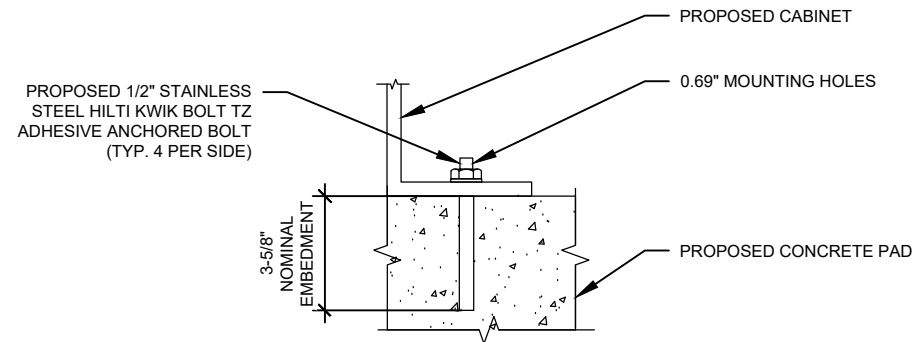
1 PROPOSED ANTENNA MOUNTING DETAIL
SCALE: N.T.S.



2 PROPOSED 5G ANTENNA MOUNTING DETAIL
SCALE: N.T.S.

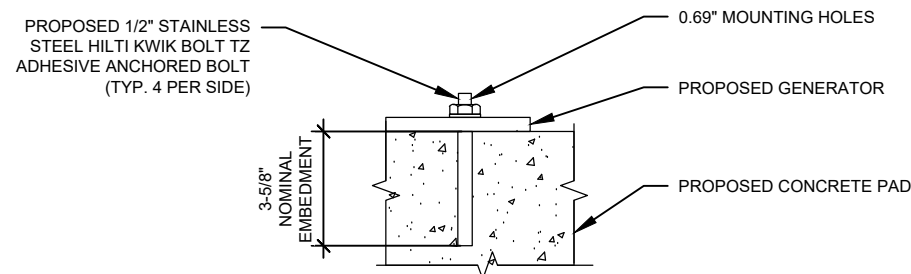


3 PROPOSED RRU MOUNTING DETAIL
SCALE: N.T.S.



NOTE:
INSTALL HILTI KWIK BOLT TZ ANCHOR(S) STRICTLY PER
INSTALLATION INSTRUCTIONS INCLUDED WITH PRODUCT
OR FOUND ONLINE AT WWW.US.HILTI.COM. PROPER
INSTALLATION IS CRITICAL FOR FULL PERFORMANCE.

4 PROPOSED CABINET ATTACHMENT DETAIL
SCALE: N.T.S.



NOTE:
INSTALL HILTI KWIK BOLT TZ ANCHOR(S) STRICTLY PER
INSTALLATION INSTRUCTIONS INCLUDED WITH PRODUCT
OR FOUND ONLINE AT WWW.US.HILTI.COM. PROPER
INSTALLATION IS CRITICAL FOR FULL PERFORMANCE.

5 PROPOSED GENERATOR ATTACHMENT DETAIL
SCALE: N.T.S.



PLANS PREPARED BY:



M&H ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

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REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	PVW	11/08/22
0	FINALS	SD	12/27/22
1	FINALS	RMJ	11/23/23
2	FINALS	SAS	12/22/23
3	FINALS	PSC	10/23/24

ATC SITE NUMBER:

420597

ATC SITE NAME:

NEW HACKENSACK NY

T-MOBILE SITE NAME:

ATC_420597

SITE ADDRESS:

26 DON BOSCO BLVD
WAPPINGERS FALLS, NY 12590-6183

M&H Engineering, PLLC

16887



SEAL:

10/23/24

T-Mobile

DATE DRAWN:	10/23/24
ATC JOB NO:	14178236
CUSTOMER NAME:	ATC_420597
CUSTOMER ID:	UP50700A

CONSTRUCTION
DETAILS

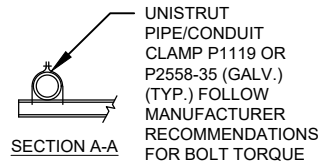
SHEET NUMBER:

C-501

REVISION:

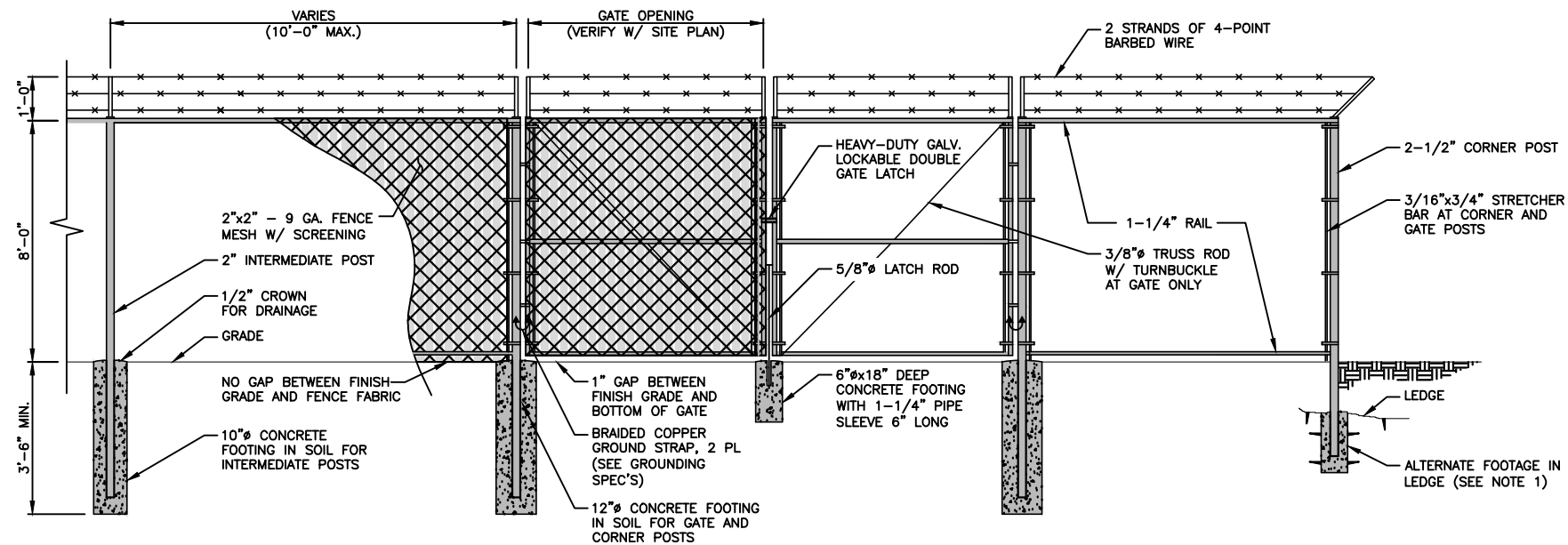
3

1. IF IT IS NECESSARY TO EXTEND THE H-FRAME, AN ADDITIONAL POST WILL ALWAYS BE REQUIRED.
2. PROPOSED UNISTRUTS TO BE FIELD CUT AND SHOULD NOT EXTEND MORE THAN 6 INCHES BEYOND THE LAST POST.
3. SPRAY ENDS OF UNISTRUT WITH COLD GALVANIZING SPRAY PAINT, ALLOW TO DRY, THEN COVER WITH RUBBER PROTECTIVE CAPS FOR SAFETY.
4. UNISTRUT TO BE CUT FLUSH WITH NO SHARP OR JAGGED EDGES.
5. ALL PROPOSED HARDWARE TO BE MOUNTED PER MANUFACTURERS SPECS.



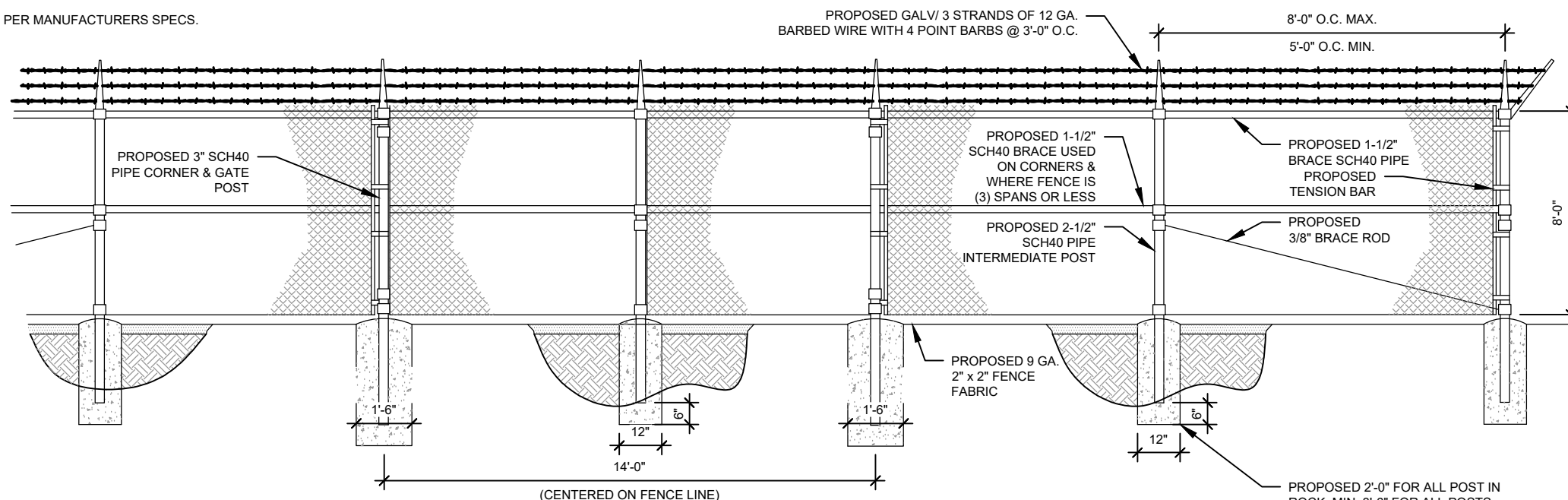
1. ALTERNATE FOOTINGS OR ALL FENCE POSTS IN LEDGE: IF LEDGE IS ENCOUNTERED AT GRADE, OR AT A DEPTH SHALLOWER THAN 3"-6", CORE DRILL AN 8" DIA HOLE 18" INTO THE LEDGE. CENTER POST IN THE HOLE AND FILL WITH CONCRETE OR GROUT. IF LEDGE IS BELOW FINISH GRADE, COAT BACKFILLED SECTION OF POST WITH COAL TAR, AND BACKFILL WITH WELL-DRAINING GRAVEL.

2. ATTACH EACH GATE WITH 1-1/2 PAIR OF NON-LIFT-OFF TYPE, MALLEABLE IRON OR FORGING, PIN-TYPE HINGES. ASSEMBLIES SHALL ALLOW FOR 180° OF GATE TRAVEL.



SCALE: N.T.S.

SCALE: NOT TO SCALE



SCALE: N.T.S



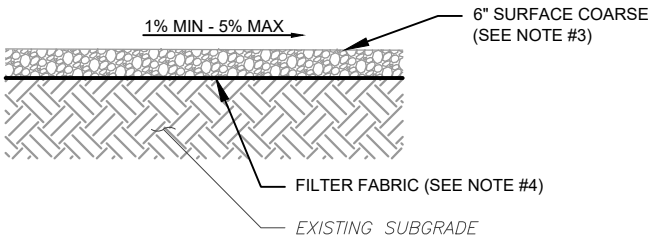
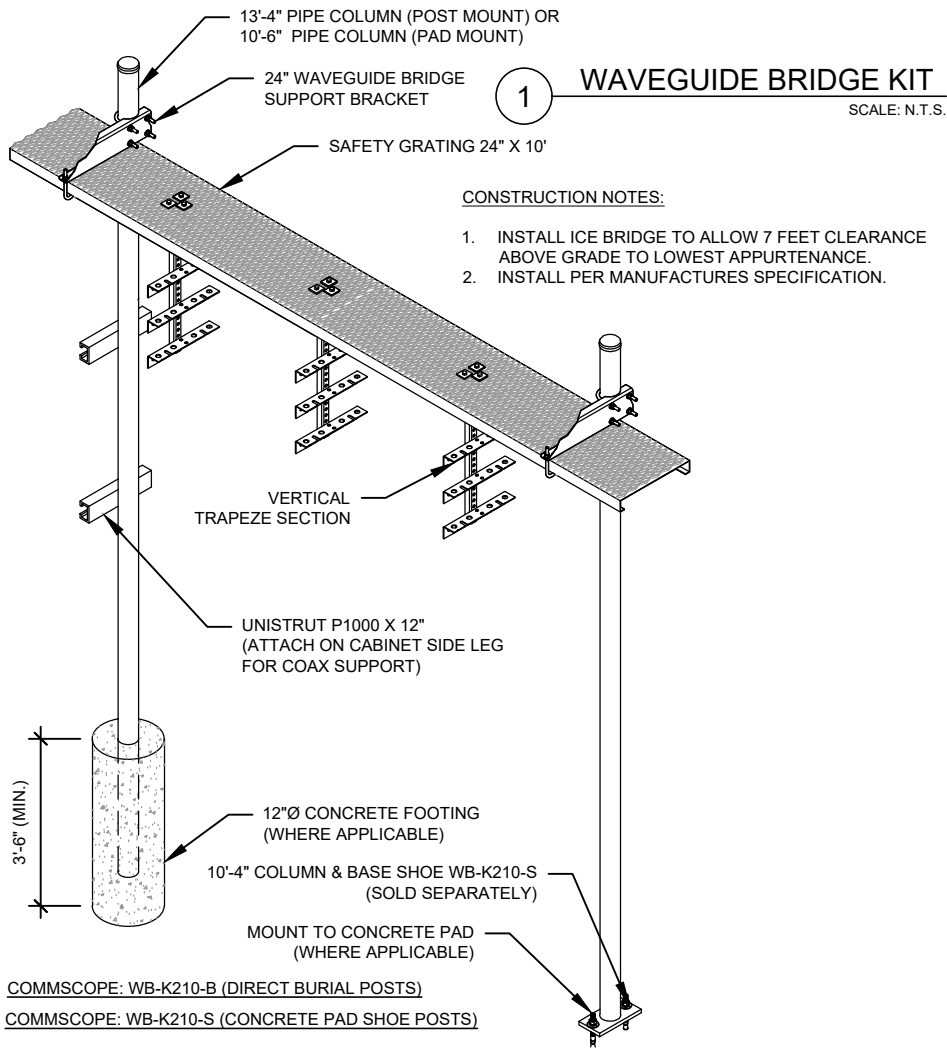
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M&H Engineering, PLLC 16987

10/23/24

T-Mobile

3

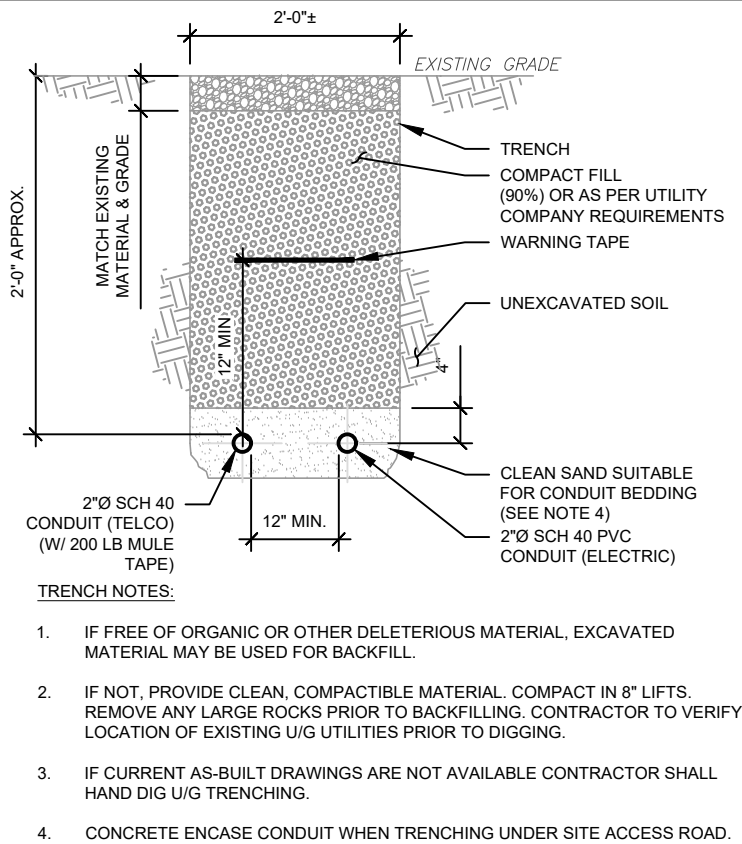


NOTES:

1. CONTRACTOR TO CONTACT ALL UTILITIES FOR LOCATION OF UNDERGROUND SERVICES. SERVICE LOCATIONS TO BE CONFIRMED PRIOR TO CONSTRUCTION.
2. REMOVE ALL UNSUITABLE OR DELETERIOUS MATERIAL AS REQUIRED. COMPACT UNDERLYING SOIL TO 90% OF MAXIMUM DENSITY. REPLACE REMOVED SOIL WITH 8" LIFTS OF GRANULAR "B" MATERIAL TO A DEPTH OF 4" BELOW PROPOSED GRADE. COMPACT TO MINIMUM 95% OF MAXIMUM DRY DENSITY ALL COMPACTION SHALL BE IN ACCORDANCE WITH THE MOST RECENT IBC. REVIEW WITH PROJECT MANAGER AND GEOTECT PRIOR TO CONSTRUCTION.
3. SURFACE COARSE OF GRANULAR "A" MATERIAL SHALL CONSIST OF EVENLY GRADED MIXTURE OF CRUSHED STONE OR GRAVEL, WITH 100% PASSING THROUGH 3/4" SIEVE AND NOT MORE THAN 5% PASSING THROUGH #4 SIEVE.
4. PROVIDE GEOTEXTILE FABRIC UNDER WASHED CHIPPED STONE COMPOUND UNLESS NOTED OTHERWISE. WOVEN GEOTEXTILE:US FABRICS: US 230 OR APPROVED EQUIVALENT. CONTRACTOR MAY SUBMIT DESIGN ALTERNATIVE AS OUTLINED IN THE AMERICAN TOWER MASTER SPECIFICATIONS.

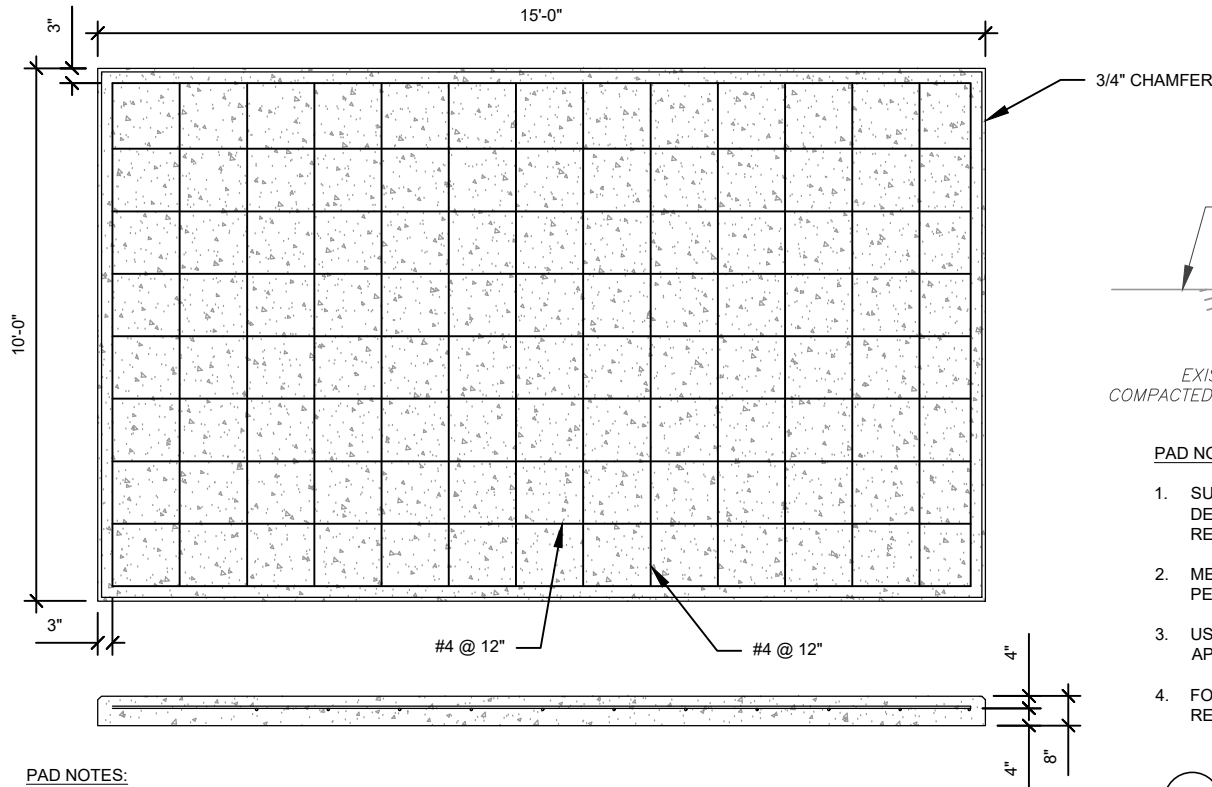
4 COMPOUND CROSS SECTION

SCALE: N.T.S.



2 TELCO AND POWER CONDUIT JOINT TRENCH

SCALE: N.T.S.

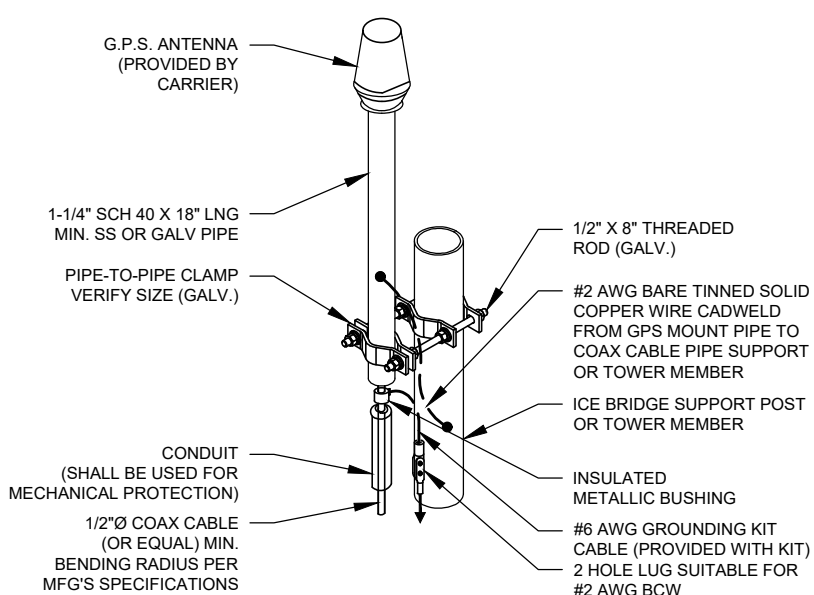


PAD NOTES:

1. PADS SHALL BE PRE-CAST MATCHING THIS DESIGN WHERE ALLOWED BY LOCAL JURISDICTION.
2. REFER TO CONCRETE & REINFORCED STEEL NOTES ON SHEET G-002 & ATC SPEC 033000 FOR CAST-IN-PLACE PADS.

5 REINFORCED PAD LAYOUT

SCALE: N.T.S.

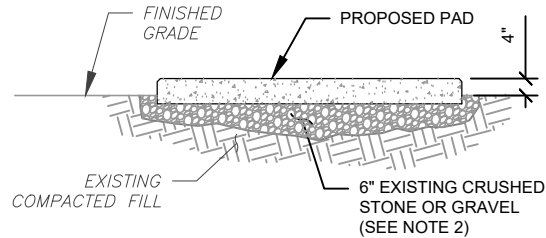


NOTES:

1. GPS SHALL BE PLACED WITH CLEAR SIGHT LINE TO THE SOUTHERN SKY.
2. CONTRACTOR TO SUPPLY COAX FOR GPS UNIT.

3 GPS ANTENNA ATTACHMENT DETAIL

SCALE: N.T.S.



PAD NOTES:

1. SUBGRADE AND FILL SHALL CONSIST OF CLEAN SOIL. DELETRIOUS MATERIAL AND ORGANICS SHALL BE REMOVED.
2. MECHANICALLY COMPACT FOOTPRINT OF PAD PLUS 2' PERIMETER.
3. USE GALVANIZED HILTI EXPANSION ANCHORS OR, APPROVED EQUAL, FOR EQUIPMENT ANCHORAGE.
4. FOR SIZE AND LOCATION OF ANCHORS AND OTHER REQUIREMENT, SEE EQUIPMENT VENDOR DRAWINGS.

6 GRAVEL PREPARATION

SCALE: N.T.S.

AMERICAN TOWER.

PLANS PREPARED BY:

TEP

M&H ENGINEERING, PLLC

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RALEIGH, NC 27603-3530

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420597

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SITE ADDRESS:
26 DON BOSCO BLVD
WAPPINGERS FALLS, NY 12590-6183

M&H Engineering, PLLC 16887

STATE OF NEW YORK

SCOTT G. BRANTLEY

105653

PROFESSIONAL ENGINEER

SEAL: 10/23/24

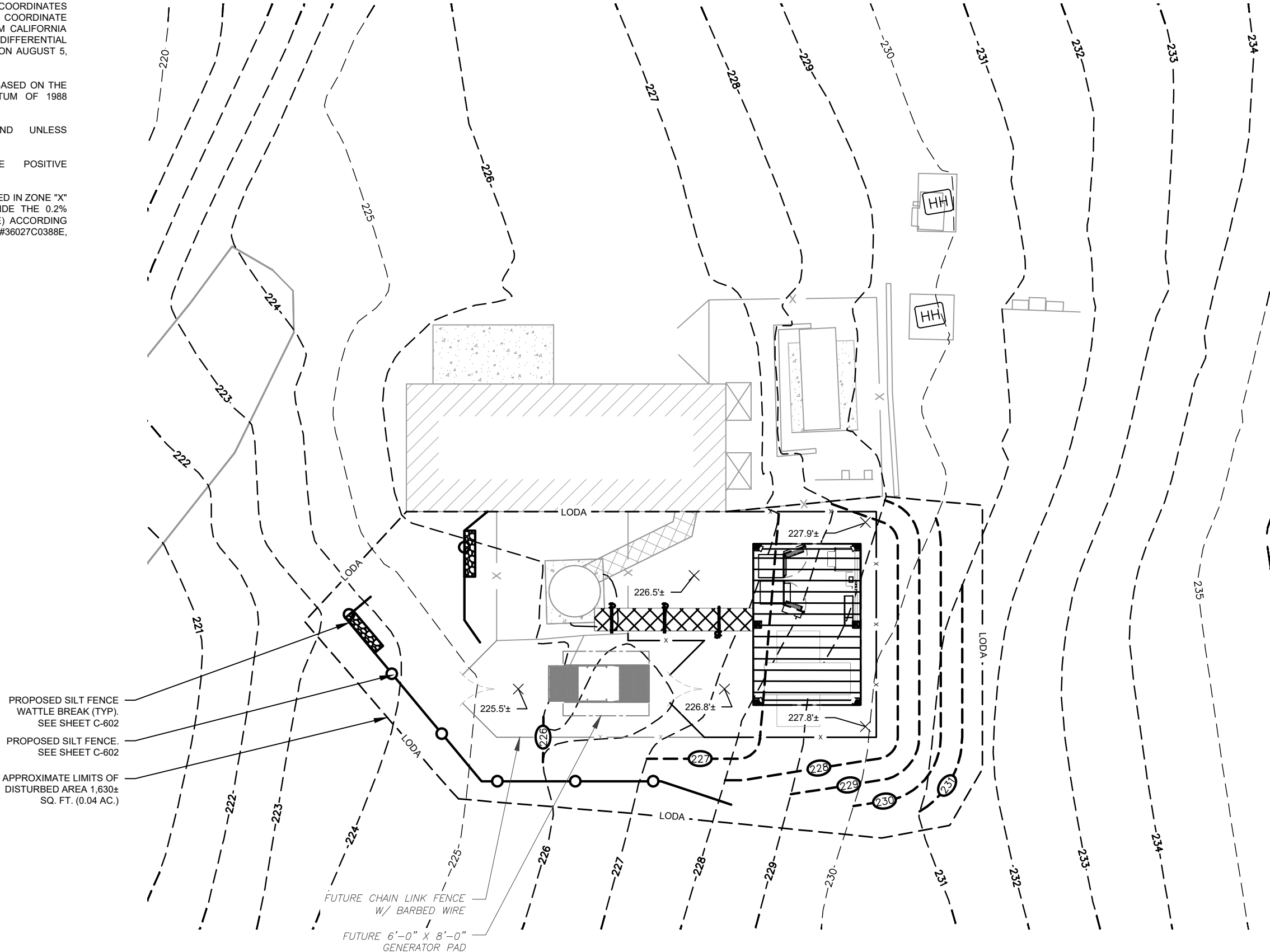
T-Mobile

DATE DRAWN:	10/23/24
ATC JOB NO:	14178236
CUSTOMER NAME:	ATC_420597
CUSTOMER ID:	UP50700A

CONSTRUCTION DETAILS	
SHEET NUMBER: C-503	REVISION: 3

NOTES:

1. THE BASIS OF THE BEARINGS AND COORDINATES IS NEW YORK STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM CALIFORNIA GRID NORTH (NAD 83) BASED ON DIFFERENTIAL GPS OBSERVATIONS PERFORMED ON AUGUST 5, 2026.
2. VERTICAL INFORMATION SHOWN, BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88), IS EXPRESSED IN FEET.
3. ALL DISTANCES ARE GROUND UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE ACROSS COMPOUND.
5. THE SUBJECT PROPERTY IS LOCATED IN ZONE "X" (AREA DETERMINED TO BE OUTSIDE THE 0.2% CHANCE OF ANNUAL FLOOD ZONE) ACCORDING TO FEMA COMMUNITY PANEL #36027C0388E, EFFECTIVE MAY 2, 2012.



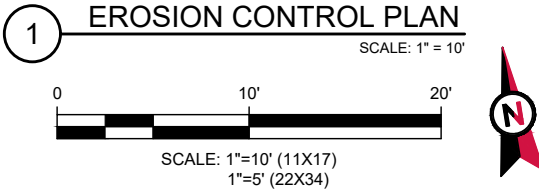
PROPOSED SILT FENCE
WATTLE BREAK (TYP.)
SEE SHEET C-602

PROPOSED SILT FENCE
SEE SHEET C-602

APPROXIMATE LIMITS OF
DISTURBED AREA 1,630±
SQ. FT. (0.04 AC.)

FUTURE CHAIN LINK FENCE
W/ BARBED WIRE

FUTURE 6'-0" X 8'-0"
GENERATOR PAD





AMERICAN TOWER.

PLANS PREPARED BY:



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4	FINALS	RJB	08/14/26

ATC SITE NUMBER:
420597

ATC SITE NAME:
NEW HACKENSACK NY

T-MOBILE SITE NAME:
ATC_420597

SITE ADDRESS:
26 DON BOSCO BLVD
WAPPINGERS FALLS, NY 12590-6183

M&H Engineering, PLLC 18687



SEAL: 08/14/26

T-Mobile

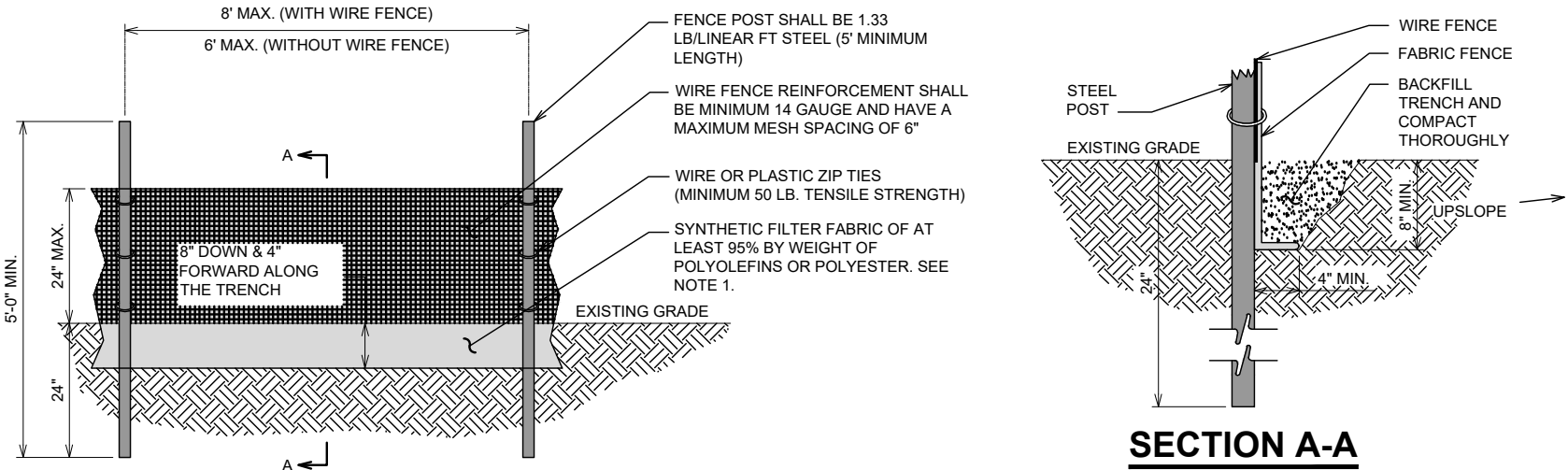
DATE DRAWN:	08/14/26
ATC JOB NO:	14178236
CUSTOMER NAME:	ATC_420597
CUSTOMER ID:	UP50700A

EROSION CONTROL PLAN

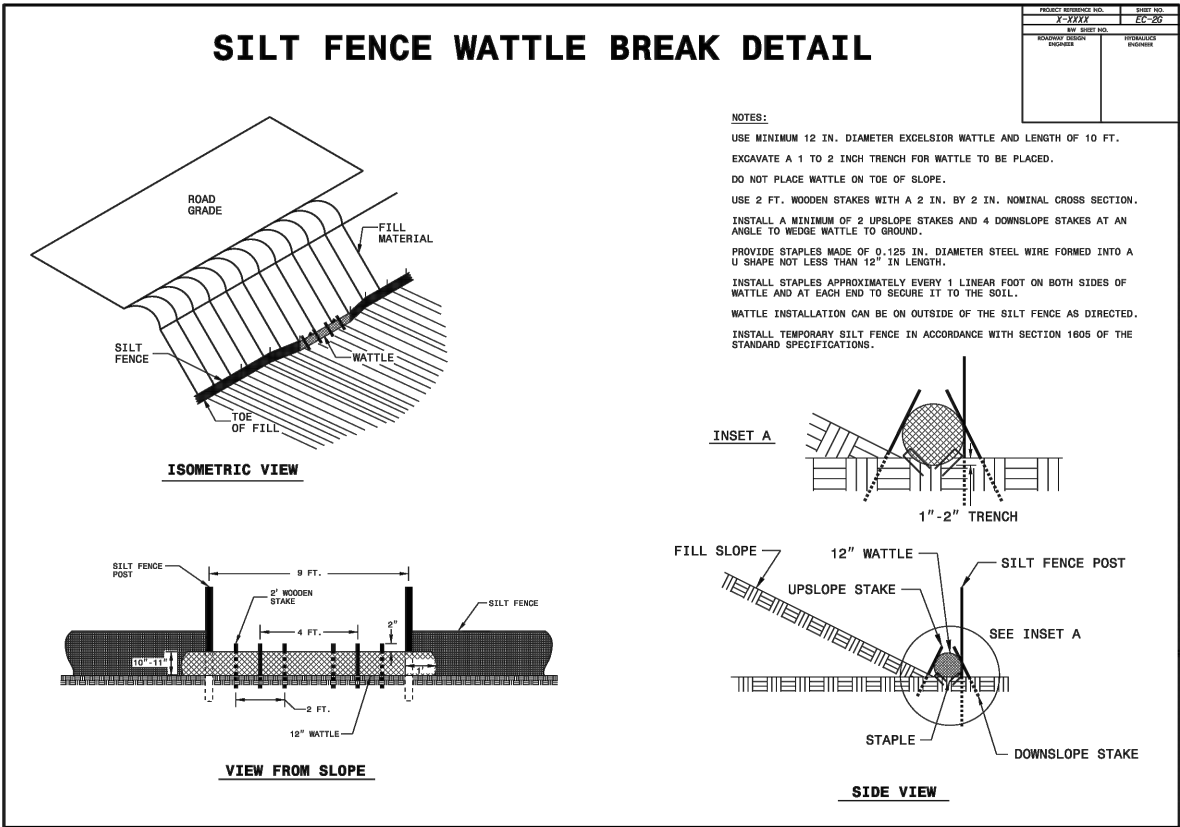
SHEET NUMBER: C-601	REVISION: 4
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NOTES:

1. FILTER FABRIC SHALL CONFORM TO THE REQUIREMENTS LISTED IN ASTM D 6461.
2. ENDS OF INDIVIDUAL FILTER FABRIC SHALL BE SECURELY FASTENED AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP TO THE NEXT POST.
3. PLACE 10 INCHES OF FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.
4. INSPECT SEDIMENT FENCE(S) AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL.
5. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE.
6. AFTER CONSTRUCTION IS COMPLETE, THE CONTRACTOR SHALL REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE AND PROPERLY STABILIZE THE SITE.



1 SILT FENCE DETAIL



2 STANDARD SILT FENCE WATTLE BREAK DETAIL

AMERICAN TOWER.

PLANS PREPARED BY:

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3	FINALS	PSC	10/23/24
4	FINALS	RJB	08/14/26

ATC SITE NUMBER:
420597

ATC SITE NAME:
NEW HACKENSACK NY

T-MOBILE SITE NAME:
ATC_420597

SITE ADDRESS:
26 DON BOSCO BLVD
WAPPINGERS FALLS, NY 12590-6183

M&H Engineering, PLLC 18887

SEAL: 08/14/26

STATE OF NEW YORK
SCOTT G. BRANTLEY
LICENSED PROFESSIONAL ENGINEER
105853

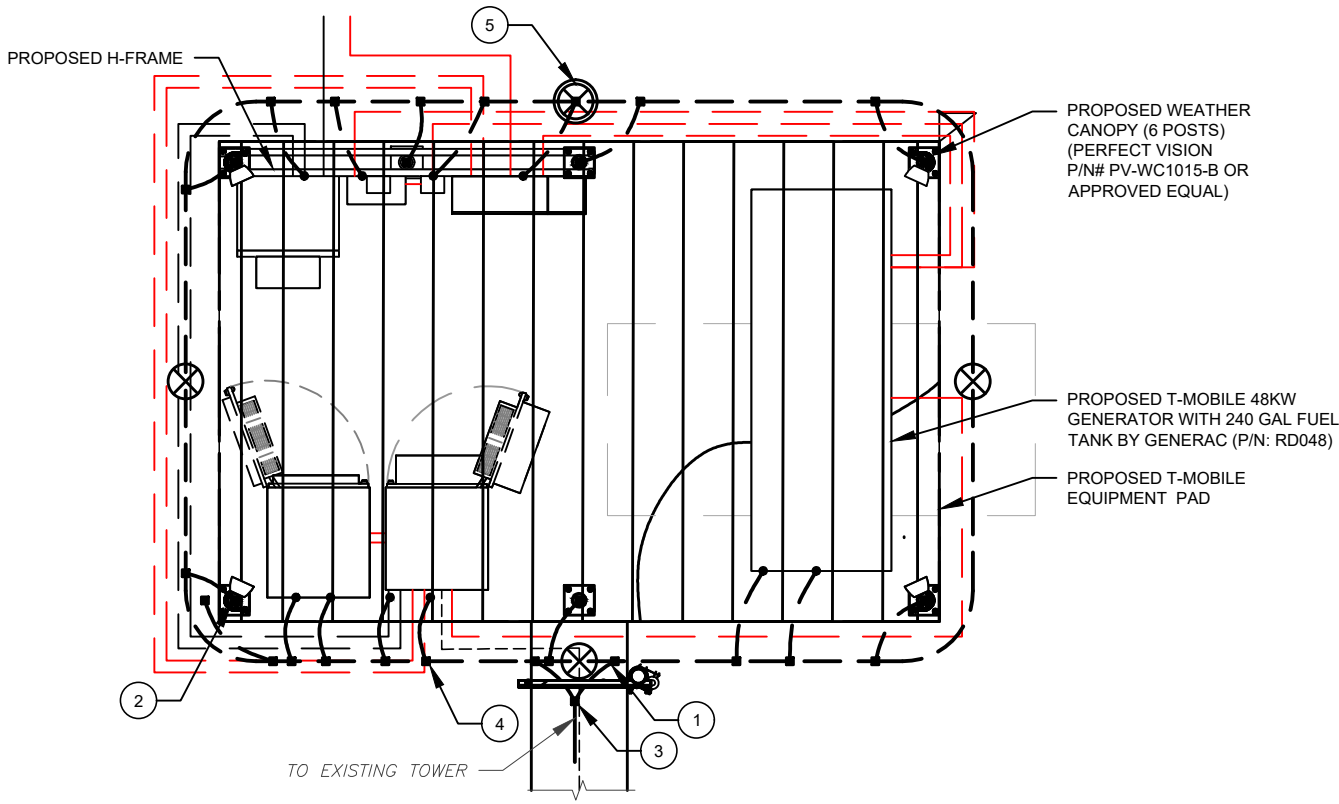
T-Mobile

DATE DRAWN:	08/14/26
ATC JOB NO:	14178236
CUSTOMER NAME:	ATC_420597
CUSTOMER ID:	UP50700A

EROSION CONTROL DETAILS	
SHEET NUMBER: C-602	REVISION: 4

GROUNDING NOTES:

1. ALL EQUIPMENT ENCLOSURES, DEVICES AND CONDUITS SHALL BE GROUNDED TO CONFORM WITH THE LATEST REQUIREMENTS OF THE NEC BY THE INSTALLATION OF A SEPARATE, GREEN, INSULATED GROUND CONDUCTOR FOR ALL FEEDER AND BRANCH CIRCUITS. GROUND CONDUCTORS SHALL BE OF THE SIZE INDICATED ON THE DRAWINGS. GROUND CONDUCTORS SHALL BE CONTINUOUS IN LENGTH AND SHALL BE BONDED TO EACH ENCLOSURE THEY PASS THROUGH. CONDUIT SHALL NOT BE USED AS A GROUNDING CONDUCTOR.
2. GROUNDING CONDUCTORS SHALL:
- A. BE #2 AWG SOLID BARE TINNED COPPER (SBTC) FOR ALL GROUNDING SYSTEM WIRE UNLESS OTHERWISE NOTED, OR OTHERWISE REQUIRED BY CODE.
 - B. BE MINIMUM 12" BEND RADIUS. KEEP NUMBER OF BENDS TO A MINIMUM.
 - C. AVOID LONG BONDING CONNECTION RUNS. MAKE DIRECT AS POSSIBLE.
 - D. NOT HAVE ANY U-SHAPED RUNS.
 - E. BE IN NON-METALLIC CONDUIT ONLY, IF IN CONDUIT.
 - F. BE PLACED THROUGH NON-METALLIC SLEEVES IN FLOORS, WALLS, CEILINGS, ETC.
 - G. PROTECTED IN NON-METALLIC CONDUIT WHERE EXPOSED ABOVE GRADE.
3. INSTALL ALL GROUNDING RINGS AND RADIALS WITH CONDUCTIVE CEMENT, SANKOSHA AS DISTRIBUTED BY ELECTRIC MOTION COMPANY, INC., WINSTED, CT 06098, OR AS SPECIFICALLY INDICATED. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
4. GROUND RINGS SHALL BE:
- A. MINIMUM 30" BELOW GRADE, OR BELOW FROST LINE WHICHEVER IS DEEPER.
 - B. MINIMUM 2' FROM FOUNDATIONS, FOOTINGS, OTHER GROUNDING SYSTEMS AND ALL CONDUCTIVE OBJECTS.
 - C. WITH MINIMUM 12" BEND RADII.
 - D. WITH ALL CONNECTIONS IN CONTACT WITH EARTH, BONDED BY EXOTHERMIC WELDING.
 - E. BONDED TO A SINGLE POINT GROUND (SPG) WITH A SINGLE WIRE AS INDICATED ON DRAWINGS.
5. GROUND RODS SHALL BE:
- A. MINIMUM 5/8" DIAMETER.
 - B. MINIMUM 10' LONG.
 - C. COPPER-CLAD GALVANIZED STEEL OR STAINLESS STEEL.
 - D. PLACED IN UNDISTURBED SOIL AND BELOW THE FROST LINE.
 - E. INSTALLED WITH MINIMUM SEPARATION DISTANCE OF TWICE THE DEPTH OF THE ROD(S), OR AS INDICATED ON DRAWINGS.
 - F. MINIMUM TWO (2) RODS ON THE TOWER RING OR ONE (1) PER LEG WHICHEVER IS LARGER, MINIMUM FOUR (4) RODS ON VERY EQUIPMENT BUILDING RING WITH ONE AT EACH CORNER OR AS INDICATED, MINIMUM ONE (1) ROD FOR POWER SERVICE GROUNDING ELECTRODE, AND MINIMUM ONE (1) ROD AT END OF EACH RADIAL.
6. CONDUCTIVE OBJECTS, SUCH AS FENCES, SHALL BE BONDED TO THE GROUNDING SYSTEM IF WITHIN 20' OF THE TOWER GROUNDING SYSTEM, OR 5' OF ANY OTHER GROUNDED COMPONENT.



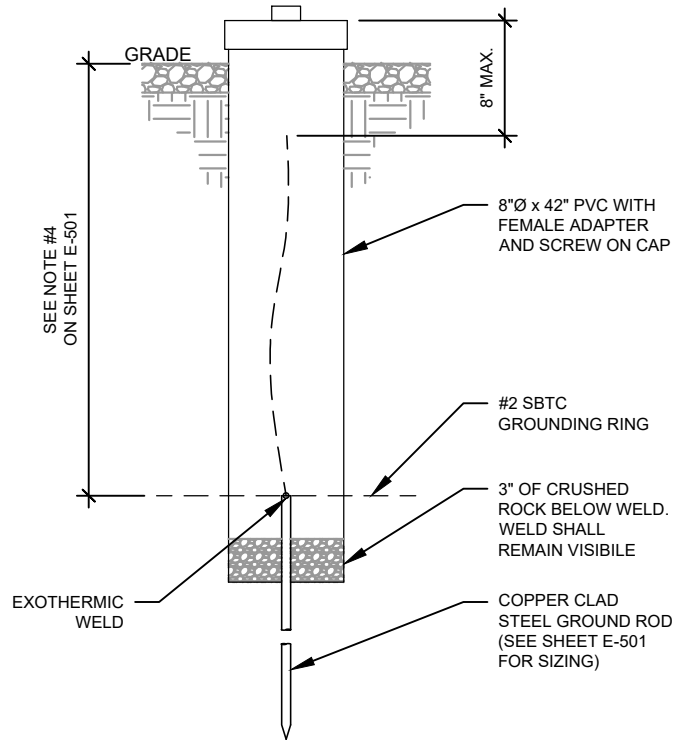
1 DETAILED GROUNDING PLAN
SCALE: NOT TO SCALE

GROUNDING PLAN LEGEND:

—	EXISTING GROUND WIRE	⊗	COPPER GROUND ROD
—	GROUND WIRE	⊗	TEST WELL
■	EXOTHERMIC WELD		
●	MECHANICAL WELD		

GROUNDING KEYED NOTES:

- 1 BOND TO TOWER GROUND RING
- 2 #2 AWG BOND FROM VERTICAL H-FRAME AND ICE BRIDGE POST TO EXTERNAL GROUND RING (TYP. EVERY POST).
- 3 #2 AWG SBTC BOND FROM GROUND RING TO EQUIPMENT.
- 4 EQUIPMENT BOND TO GROUND RING (TYP.)
- 5 5/8" X 10 FT GROUND ROD.



2 TEST WELL DETAIL
SCALE: N.T.S.



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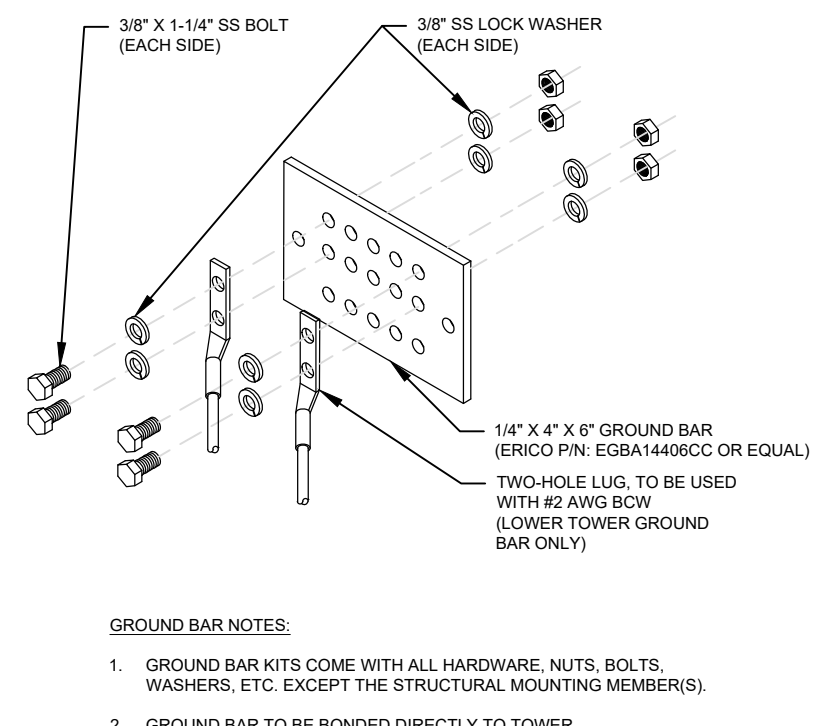
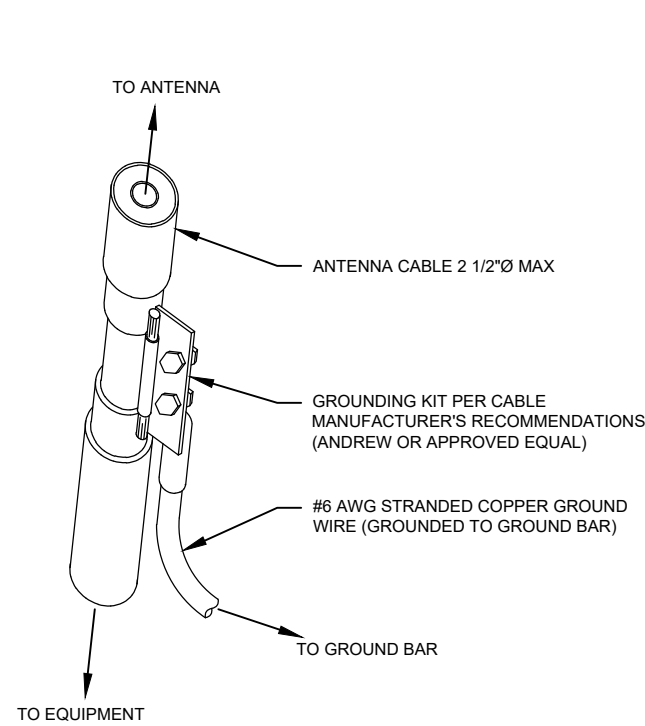
GROUNDING PLAN
AND NOTES

SHEET NUMBER:

E-101

REVISION:

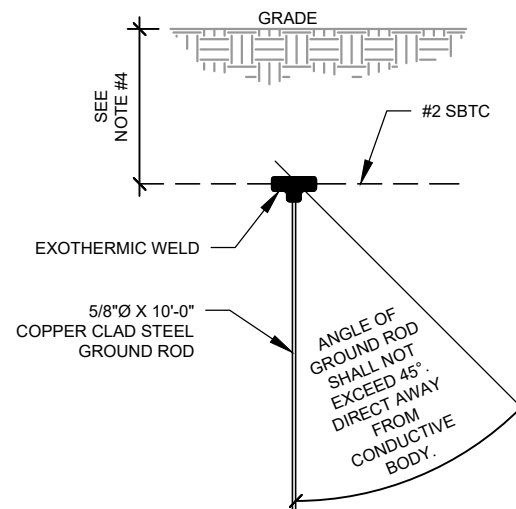
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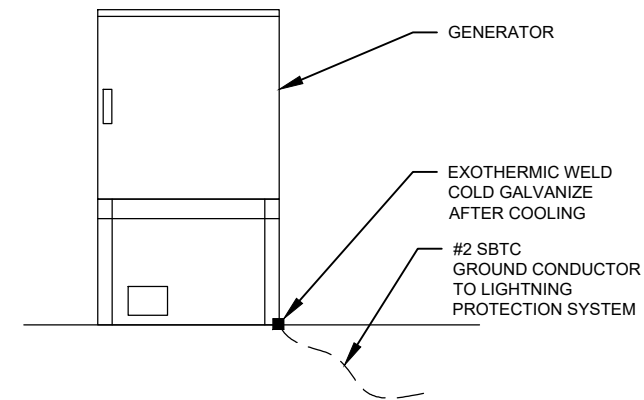
- GROUND KIT NOTES:
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
 2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

2 CABLE GROUND KIT CONNECTION DETAIL
SCALE: N.T.S.

3 TOWER GROUND BAR DETAIL
SCALE: N.T.S.



1. SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS.
2. COORDINATE UTILITY, LOCATE BEFORE DIGGING.
3. CONDUIT TRENCHING DEPTHS AT 36" OR 6" BELOW FROST LINE, WHICHEVER IS GREATER.
4. ALL RING AND RADIAL DEPTHS AT 30" OR 6" BELOW FROST LINE, WHICHEVER IS GREATER.



- INSTALL GENERATOR AND TRANSFER SWITCH WITH ALL SUPPLIED ACCESSORIES PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SPECIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, ACCESSORIES FOR THE EXHAUST SYSTEM, FUEL SYSTEM, ENCLOSURE INTEGRITY (CAPS, PLUGS, COVERS, ETC.), ELECTRICAL CONNECTIONS, AND GROUNDING CONNECTIONS.

5 GROUND ROD DETAIL

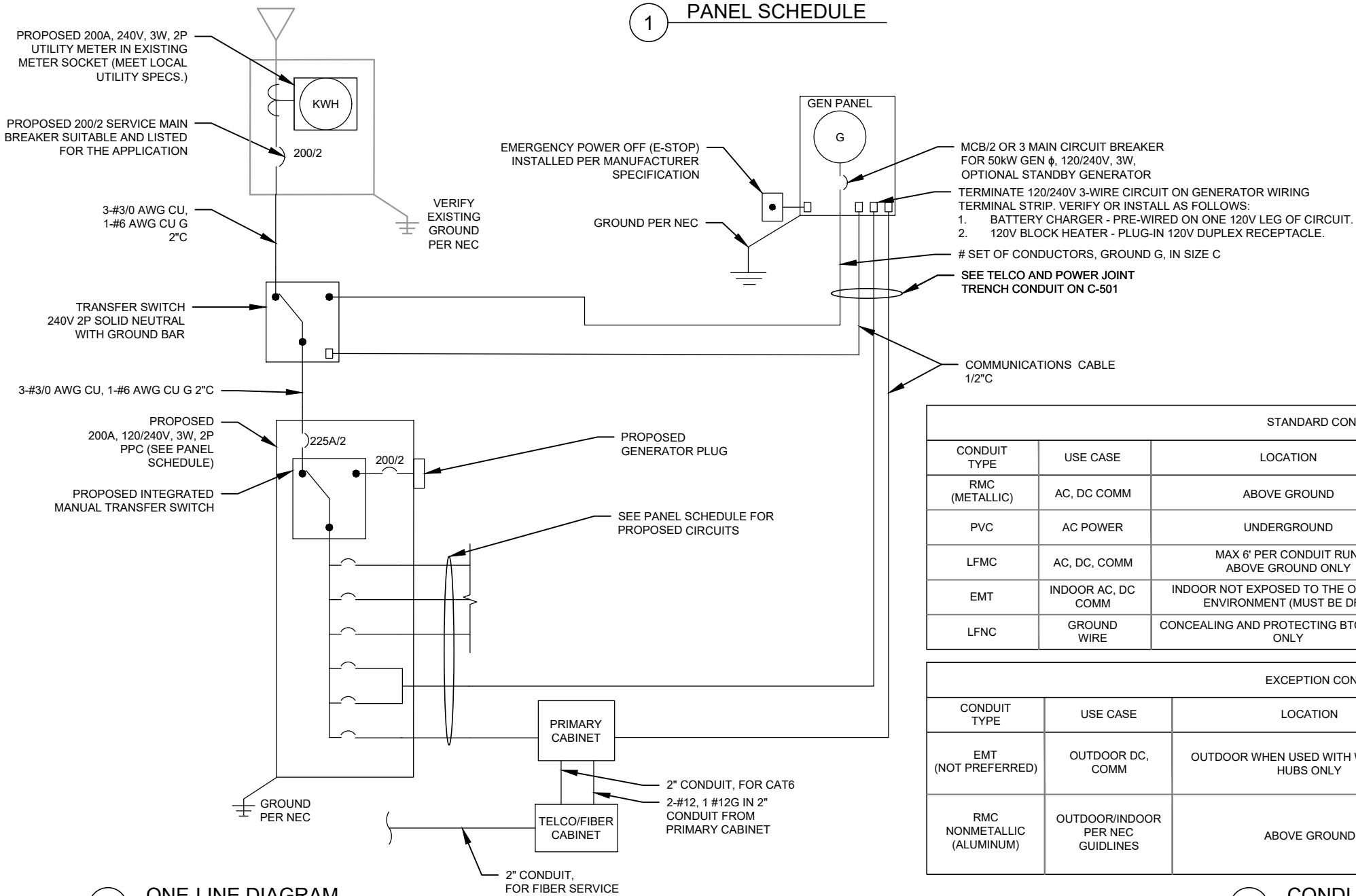
6 TIE CONNECTION DETAIL
SCALE: N.T.S.

7 GENERATOR GROUNDING



PANEL DESIGNATION: TMO		TYPE MOUNTING: ENCLOSURE		LIGHTING & APPLIANCE SURFACE NEMA 3R				SYSTEM: 120/240V, 1Ø, 3W, 24 CKT MAIN BREAKER (MB): 225A MAIN BUS RATING: 200A MIN. A.I.C. RATING: N/A		LOCATION: TMO LEASE EQUIPMENT AREA PANEL NOTES: FROPOSED													
CONNECTED LOAD (KVA)		BRIEF DESCRIPTION		FEEDER OR BRANCH CIRCUIT								FEEDER OR BRANCH CIRCUIT						CONNECTED LOAD (KVA)					
A B				BREAKER		CIRCUIT		POLE NO.		CIRC. NOTES				CIRC. NOTES		POLE NO.		CIRCUIT		BREAKER		A B	
0.01 0.01		SURGE		60	2	3-#6	#10	1"	1				2	1/2"	#12	2-#12	1	20	GH		0.18		
7.50 7.50		ENCLOSURE 6160		150	2	2-#3/0	#6	2"	3				4	1/2"	#12	2-#12	1	20	LIGHT			0.50	
0.18 0.00		6160 GH		20	1	2-#12	#12		5				6	1/2"	#12	2-#12	1	20	AAV GH		0.15		
0.00 0.00									7				8	1/2"	#12	2-#12	1	20	GEN BLOCK HEATER			1.50	
0.00 0.00									9				10	1/2"	#12	2-#12	1	20	GEN BATTERY CHARGER		0.50		
0.00 0.00									11				12									0.00	
0.00 0.00									13				14								0.00	0.00	
0.00 0.00									15				16									0.00	
0.00 0.00									17				18								0.00	0.00	
0.00 0.00									19				20									0.00	
7.7 7.5									21				22								0.00	0.00	
									23				24									0.00	
								A B		TOTAL										0.8 2.0			
								8.5 9.5		18.0										CONNECTED LOAD (KVA)			
								8.5 9.5		18.0										DEMAND LOAD (KVA)			
																				DERATING FACTOR (80%)			
																				DEMAND LOAD SIZING: 94 AMPS			

- NOTES:
- ALL EQUIPMENTS' SHORT-CIRCUIT CURRENT RATING SHALL EXCEED AVAILABLE FAULT CURRENT PER UTILITY
 - CONTRACTOR TO INSTALL HANDHOLES AT EVERY 3RD 90° TURN



STANDARD CONDUIT USE TABLE			
CONDUIT TYPE	USE CASE	LOCATION	USE CASE EXAMPLE
RMC (METALLIC)	AC, DC COMM	ABOVE GROUND	ABOVE GROUND PPC TO SSC
PVC	AC POWER	UNDERGROUND	UNDERGROUND PPC TO SSC OR BACKHAUL TRANSPORT HUB TO SSC
LFMC	AC, DC, COMM	MAX 6' PER CONDUIT RUN, ABOVE GROUND ONLY	TIGHT LOCATIONS BETWEEN HUB AND CONDUIT BUT NOT TO BE USED WHERE IT CAN BE STEPPED ON
EMT	INDOOR AC, DC COMM	INDOOR NOT EXPOSED TO THE OUTDOOR ENVIRONMENT (MUST BE DRY)	CIRCUIT PANEL TO JUNCTION BOX
LFNC	GROUND WIRE	CONCEALING AND PROTECTING BTCW RISERS ONLY	GROUND RING TO MGB OR SSC

EXCEPTION CONDUIT USE TABLE			
CONDUIT TYPE	USE CASE	LOCATION	USE CASE EXAMPLE
EMT (NOT PREFERRED)	OUTDOOR DC, COMM	OUTDOOR WHEN USED WITH WATERTIGHT HUBS ONLY	BETWEEN EQUIPMENT AND BATTERY CABINET OR EQUIPMENT TO EQUIPMENT CABINETS FOR INTER CABINET CONNECTION
RMC NONMETALLIC (ALUMINUM)	OUTDOOR/INDOOR PER NEC GUIDLINES	ABOVE GROUND	MAY BE USED AS A LOWER COST ALTERNATIVE TO METALLIC RMC, MUST MEET OR EXCEED FEDERAL SPEC: WW-C-540C, UL-6A, ANSI C80.5, NEC 344.10 (A) ALLOWS THE USE OF EITHER ALUMINUM OR GALVANIZED FITTINGS



PLANS PREPARED BY:



M&H ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

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REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	PVW	11/08/22
B	FINALS	SD	12/27/22
1	FINALS	RMJ	11/23/23
2	FINALS	SAS	12/22/23
3	FINALS	PSC	10/23/24

ATC SITE NUMBER:
420597

ATC SITE NAME:

NEW HACKENSACK NY

T-MOBILE SITE NAME:

ATC_420597

SITE ADDRESS:
26 DON BOSCO BLVD
WAPPINGERS FALLS, NY 12590-6183



DATE DRAWN:	10/23/24
ATC JOB NO:	14178236
CUSTOMER NAME:	ATC_420597
CUSTOMER ID:	UP50700A

PANEL SCHEDULE & ONE-LINE DIAGRAM

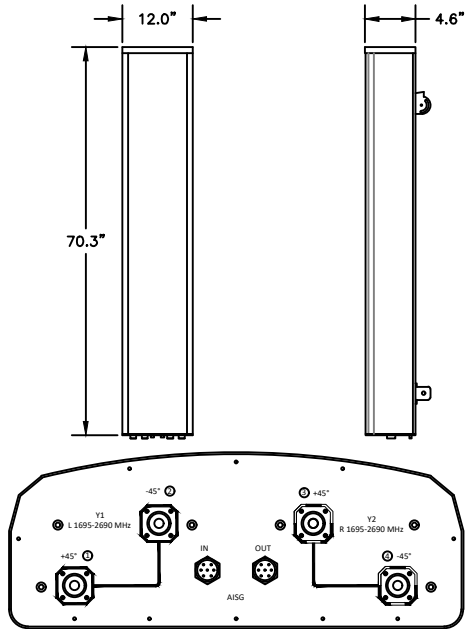
SHEET NUMBER:

E-601

REVISION:

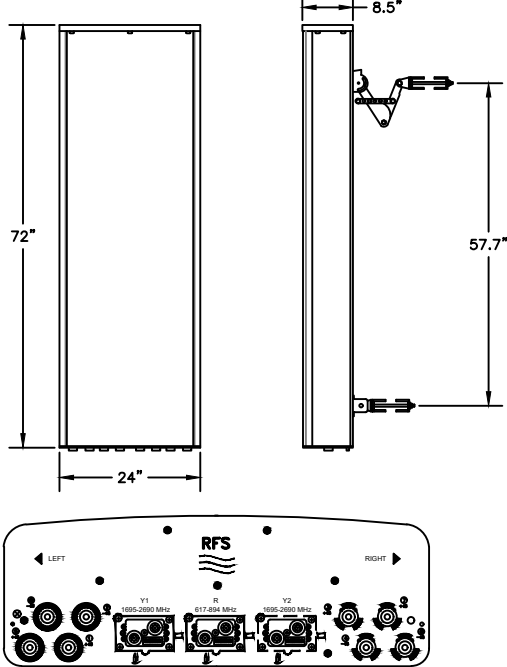
3

MANUFACTURER:	COMMSCOPE
MODEL:	VV-65B-R1
DIMENSIONS:	70.3" x 12.0" x 4.6" (H x W x D)
WEIGHT:	29.5 LB
INTERFACE:	4-PORT 4.3-10 FEMALE
MOUNTING KIT:	600899A-2 (INCLUDED) WEIGHT: 8.6 LB



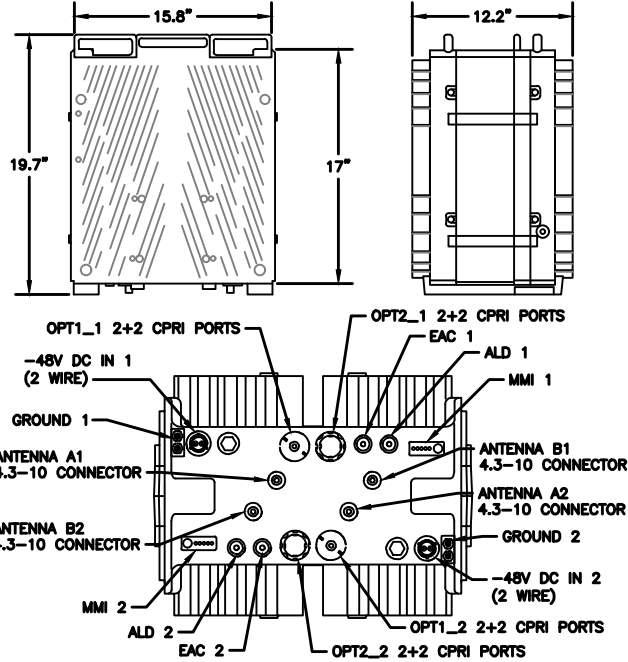
1 34401 - COMMSCOPE VV-65B-R1
SCALE: N.T.S.

MANUFACTURER:	RFS
MODEL:	APXVAALL18_43-U-NA20
DIMENSIONS:	72" x 24" x 8.5"
WEIGHT:	92.6 LB
BAND:	QUAD BAND (8 PORT)
MOUNTING KIT:	APM40-10E BEAM TILT KIT (INCLUDED) (16.53 LBS)



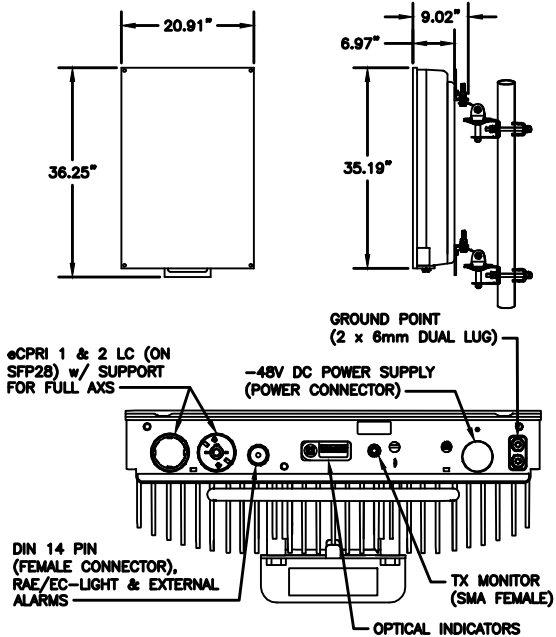
2 34086 - RFS APXVAALL18_43-U-NA20
SCALE: N.T.S.

MANUFACTURER:	ERICSSON
MODEL:	4460 RADIO B2/25 B66 (KRC 161 912/3)
DIMENSIONS:	19.7" x 15.8" x 12.2" (H" x W" x D")
WEIGHT:	109 LBS
BRACKET WEIGHT:	4.8 LBS (ERS HEAVY #SXX1255993/1)

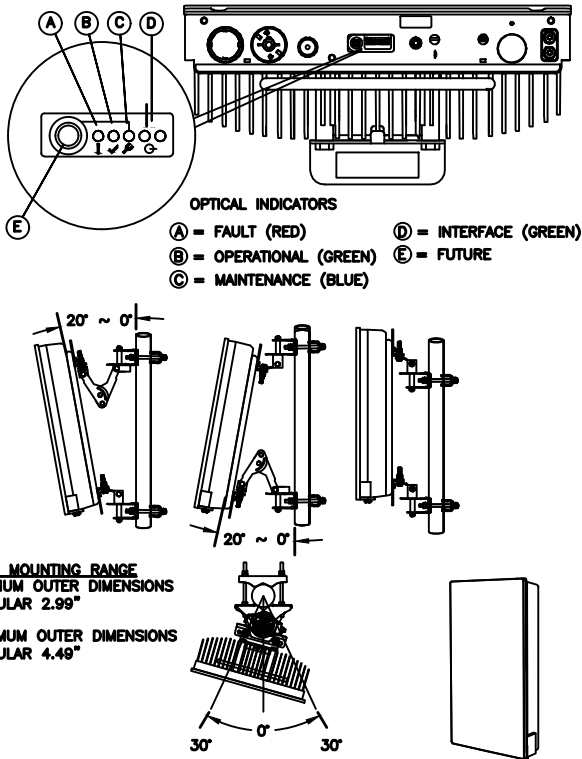


3 34373 - ERICSSON 4460 RADIO B2/25 B66
SCALE: N.T.S.

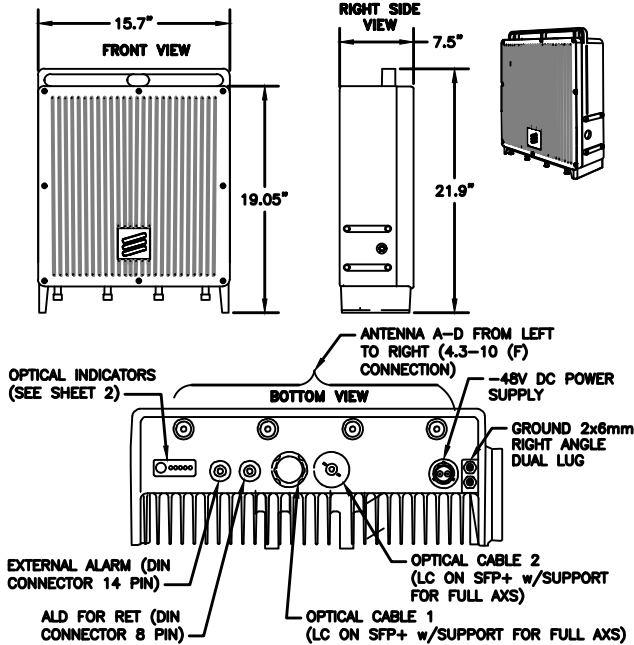
MANUFACTURER:	ERICSSON
MODEL:	AIR 6419 B41 (2.5GHz M-MIMO)
DIMENSIONS:	36.25" x 20.91" x 9.02" NOT TO EXCEED (H x W x D)
WEIGHT:	83 LBS (EXCLUDING MOUNTING KIT)
MOUNT WEIGHT:	13.5 LBS (SXX109 2016/1)



4 34552 - ERICSSON AIR 6419 BAND 41
SCALE: N.T.S.



MANUFACTURER:	ERICSSON
MODEL:	4480 RADIO (KRC 161 922/1)
DIMENSIONS:	21.9" x 15.7" x 7.5" (H x W x D)
MODEL BAND:	B71, B85 FOR NR AND LTE
WEIGHT:	81 LBS
BRACKET WEIGHT:	3.75 LBS (MULTI ERS #109 1973/2)



5 34372 - ERICSSON 4480 RADIO
SCALE: N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER:

R-601

REVISION:

-

10/17/23, 10:47 PM		UPS0700A_Coverage Strategy_1_2023-10-17									
NAK Template: 67E50Q06E 6160	A&L Template: 67E50G06E_1AJR+1OP+1OP	UPS0700A_Coverage Strategy_1 Print Name: Standard (Final-RTD) PDFs: Coverage Strategy_Regional Coverage									
Section 1 - Site Information											
Site ID: UPS0700A Status: Final Version: 1 Project Type: Coverage Strategy Approved: 10/17/2023 10:45:40 PM Approved By: Athanashek Singh307@T-Mobile.com Last Modified: 10/17/2023 10:46:43 PM Last Modified By: Athanashek Singh307@T-Mobile.com	Site Name: atc_420597 Site Class: Monopole Site Type: Structure Non Building Plan Year: 2022 Market: UPGSTATE NY Vendor: Ericsson Landlord: American Tower	Latitude: 41.626778 Longitude: -73.88625 Address: 26 Don Bosco Blvd City, State: Weingarten Falls, NY Region: NORTHEAST									
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"> RAN Template: 67E50Q06E 6160 </td> <td style="width: 50%;"> AL Template: 67E50G06E_1AJR+1OP+1OP </td> </tr> <tr> <td> Sector Count: 3 </td> <td> Antenna Count: 9 </td> </tr> <tr> <td> Coax List Count: 0 </td> <td> TMA Count: 0 </td> </tr> <tr> <td colspan="2" style="text-align: right;"> RRU Count: 9 </td> </tr> </table>				RAN Template: 67E50Q06E 6160	AL Template: 67E50G06E_1AJR+1OP+1OP	Sector Count: 3	Antenna Count: 9	Coax List Count: 0	TMA Count: 0	RRU Count: 9	
RAN Template: 67E50Q06E 6160	AL Template: 67E50G06E_1AJR+1OP+1OP										
Sector Count: 3	Antenna Count: 9										
Coax List Count: 0	TMA Count: 0										
RRU Count: 9											
Section 2 - Existing Template Images											
— This section is intentionally blank —											

10/17/23, 10:47 PM

UP50700A_Coverage Strategy_1_2023-10-17

Section 3 - Proposed Template Images

67E5A988E.JPG

The diagram illustrates the internal components of the 67E5A988E.JPG device. It features a central processing unit (CPU) with a 2.5GHz NR-LTE interface. To the left is a 4G LTE radio module, and to the right is a 4G LTE radio module. Below the CPU are two power management ICs: a PMIC (4450) and a PMIC (4450). The diagram also shows various connectors and interfaces, including a USB port, a micro-USB port, and a micro-SD card slot. The device is labeled with '67E5A988E.JPG' and '67E5A988E.JPG'.

Notes:

10/17/23, 10:47 PM RAN Template: 67E5D00AE 6160	ABL Template: 67E598AE_1A1R+1OP+1QP	UP50700A_Coverage Strategy_1_2023-10-17	UP50700A_Coverage Strategy_1 Print Name: Standard Final-RP DS POFile: Coverage Strategy_Regional Coverage
Section 5 - RAN Equipment Existing RAN Equipment — This section is intentionally blank. —			
Proposed RAN Equipment Template: 67E5D00AE 6160			
Enclosure	1	2	
Enclosure Type	Enclosure 6160 AC V1	(B160)	
Baseband	RP 0651 IN2600 RP 0651 NE600 N1800 L600 L1700 L1900 L2100		
Transport System	CSR DRe V2 (Gen2)		
Hybrid Cable System	Hybrid Trunk 6/24 4AWG 40m (x3)		
RAN Scope of Work: NBD with Config 67ESA998E_1OP+1A1R+1QP. PR1: LB+MB Odr; Radio 4450 B71+B85 for MM L700/L600/N600 to LB ports. PR2: A1R6440 B41 for MM L2500/N2500. PR3: MB Quad; Radio 4450 B25+B66 for MM L2100/2dL1900s/GSM. 12/08/2022: Removed PSU. 10/17/2023: updated the RFDS to 85' w/ octo port			

RAM Template: 67E5D986E190	A&L Template: 67E596B6_1AIR+1OP+1CP
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USP0700A_Coverage Strategy_1_Q23-10-17

UP50700A_Coverage Strategy_1
Print Name: Standard / Print PDFS
PDFs: Coverage Strategy_Regional Coverage

Section 6 - A&L Equipment

Existing Template: Custom
Proposed Template: 67E596B6_1AIR+1OP+1CP

Sector 1 (Proposed) view from behind

Coverage Type	(A - Outdoor Macro)							
	1				2		3	
Antenna								
Antenna Model	RFS - APXVALL18_43-U-N420 (Octo)				AIR 6419 B41 (Active Antenna - Massive MIMO)		Commscope_VV-65B-R1 (Quad)	
Azimuth	0				0		0	
M. Tilt	0				0		0	
Height (ft)	85				86		86	
Ports	P1	P2	P3	P4	P6	P6	P7	P8
Active Tech	L700 L600 N600	L700 L600 N600			N2500	N2500	L1900 L2100 N1900	L2100 L1900 N1900
Dash Tech								
Restricted Tech								
Decomm. Tech								
E. Tilt	2			2	2		2	
Cables	Cable Jumper (M)	Cable Jumper (M)					Cable Jumper (M)	Cable Jumper (M)
TMA's								
Dispenser/ Connectors								
Radio	(Radio A460) B77+B8 B85(A) AirMesh (M)	(Radio) A460 B77+B8 B77+B8 B85 (A) AirMesh (M)					(Radio A460) B77+B85 (A) AirMesh	(Radio A460) B77+B85 (A) AirMesh(A)
Sector Equipment								

Unconnected Equipment:

Scope of Work:

*A dashed border indicates shared connected equipment. Any shared equipment, besides the first, is denoted with the SHARED keyword.

10/17/23, 10:47 PM		UP50700A_Coverage Strategy_1_2023-10-17	
RAW Template 67E0D0596E.6160		A&L Template 67E0D0596E_0A1R11D1+1QP	
UP50700A_Coverage Strategy_1			
PDR: Coverage Strategy_Regional Coverage			
Sector 2 (Proposed) view from behind			
Coverage Type	A - Outdoor Macro		
Antenna	1		2
Antenna Model	RFS-APXWALL18_43-U-NA20 (Odo)		ARR 6419 B41 (Active Antenna - Massive MIMO)
Azimuth	120		120
M. Tilt	0		0
Height (ft)	85		90
Ports	P1	P2	P3
Active Tech	P4	P5	P6
	P7	P8	
	L700 L800 N600	L700 L800 N600	N2500
		N2500	L2100 L1900 N1900
			L2100 L1900 N1900
Dark Tech			
Restricted Tech			
Decomm. Tech			
E. Tilt	0	0	0
Cables	Coxax Jumper (d)	Coxax Jumper (d)	Coxax Jumper (d)
TMA			
Diplexer / Combiners			
Radio	Radio 4460 B25+H00 (A) Antenna 1	Radio 4460 B25+H00 (A) Antenna 1	Radio 4460 B25+H00 (A) Antenna 1
Sector Equipment			
Unconnected Equipment:			
Scope of Work:			

01/17/23, 10:47 PM
UP50700A_Coverage Strategy_1_2023-10-17

RAM Template: 67ES098E 6160

AML Template: 67E5968E_sAaR+1OP+1OP

Print Name: Standard (Pba-RF06)
 POR#: Coverage Strategy_Regional Coverage

Sector 3 (Proposed) view from behind

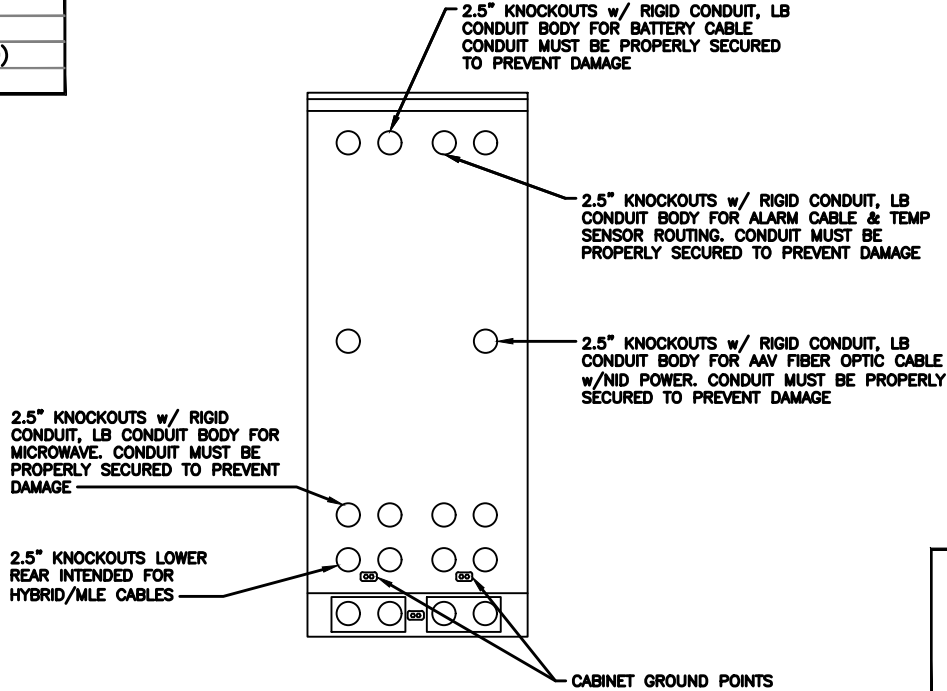
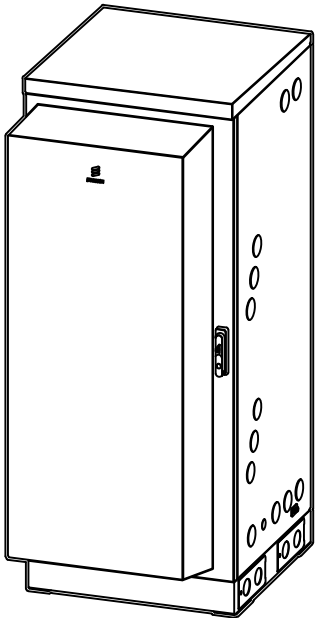
Coverage Type	Sector 3 (Proposed) view from behind											
	1				2				3			
Antenna												
Antenna Model	RFS - APXVAALL18_43-U-NA20 (Octo)				AIR 5419 B41 (Active Antenna - Massive MIMO)				Commscope_VV-65B-R1 (Quad)			
Azimuth	240				240				240			
M. Tilt	0				0				0			
Height (ft)	93				96				90			
Ports	P1	P2	P3	P4	P5	P6	P7	P8				
Active Tech	L700 L600 N600	L700 L600 N600			N2500	N2500		L2100 L1900 N1900	L2100 L1900 N1900			
Dark Tech												
Restricted Tech												
Decomm. Tech												
E. Tilt	2	2		2	2		2	2				
Cables	Coax Jumper (x2)	Coax Jumper (x2)					Coax Jumper (x2)	Coax Jumper (x2)				
TMA's												
Duplexer / Combiners												
Radio	Radio 4460 B25+H00 RS (A1) Antenna (A)	Radio 4460 B25+H00 RS (A1) Antenna (A)					Radio 4460 B25+H00 (A1) Antenna	Radio 4460 B25+H00 (A1) Antenna				
Sector Equipment												

Unconnected Equipment:

Scope of Work:

*A dashed border indicates shared connected equipment. Any shared equipment, besides the first, is denoted with the SHARED keyword.

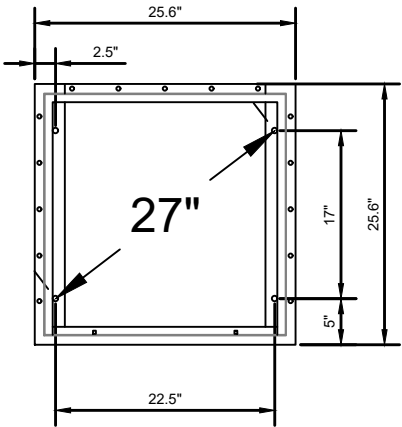
MANUFACTURER:	ERICSSON
MODEL:	6160 SITE SUPPORT CABINET
DIMENSIONS:	63" x 25.6" x 33.6" (H x W x D)
WEIGHT:	373 LBS



REAR VIEW

NOTE:

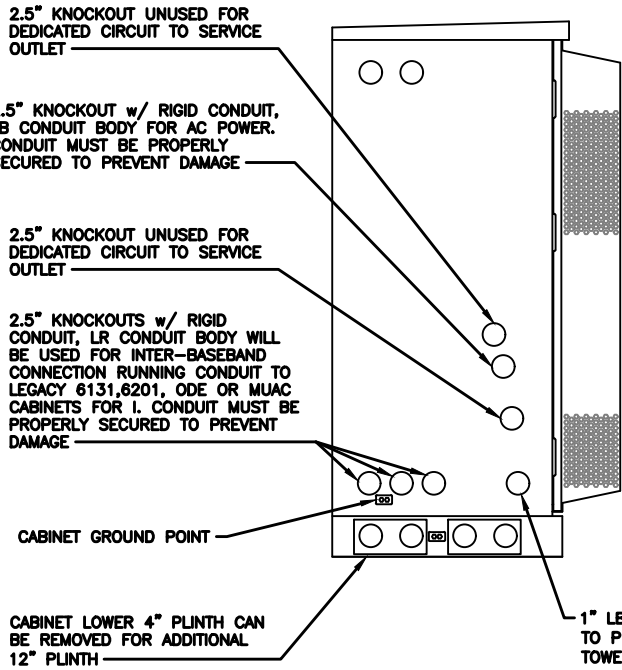
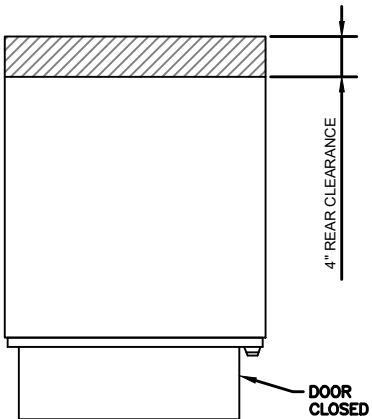
- CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS. DO NOT DRILL THROUGH KNOCKOUTS
- CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND OR CABLING



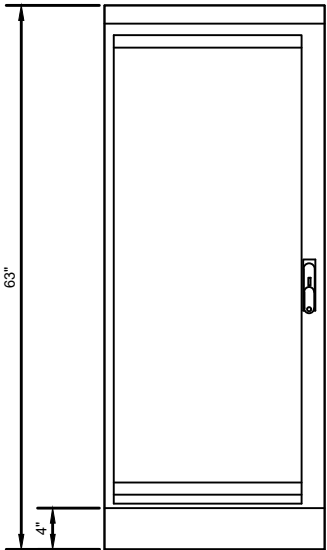
BOLT DOWN PATTERN

GROUNDING NOTE:

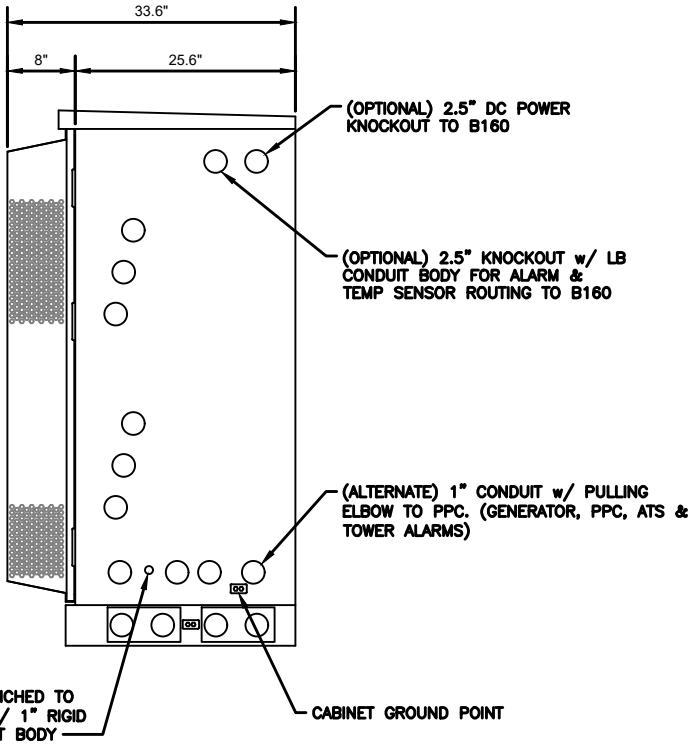
"CABINET GROUNDING TO USE A SINGLE, #2 BTCW CONDUCTOR, W/ 2-HOLE, 1" C-C, LONG BARREL, WINDOW LUG, IN 3/4" LFNC TO GROUND RING. PLINTH GROUNDING IS NOT REQUIRED."



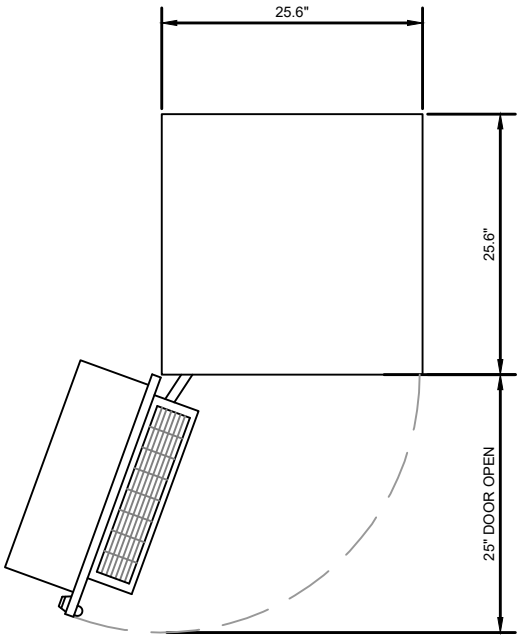
LEFT VIEW



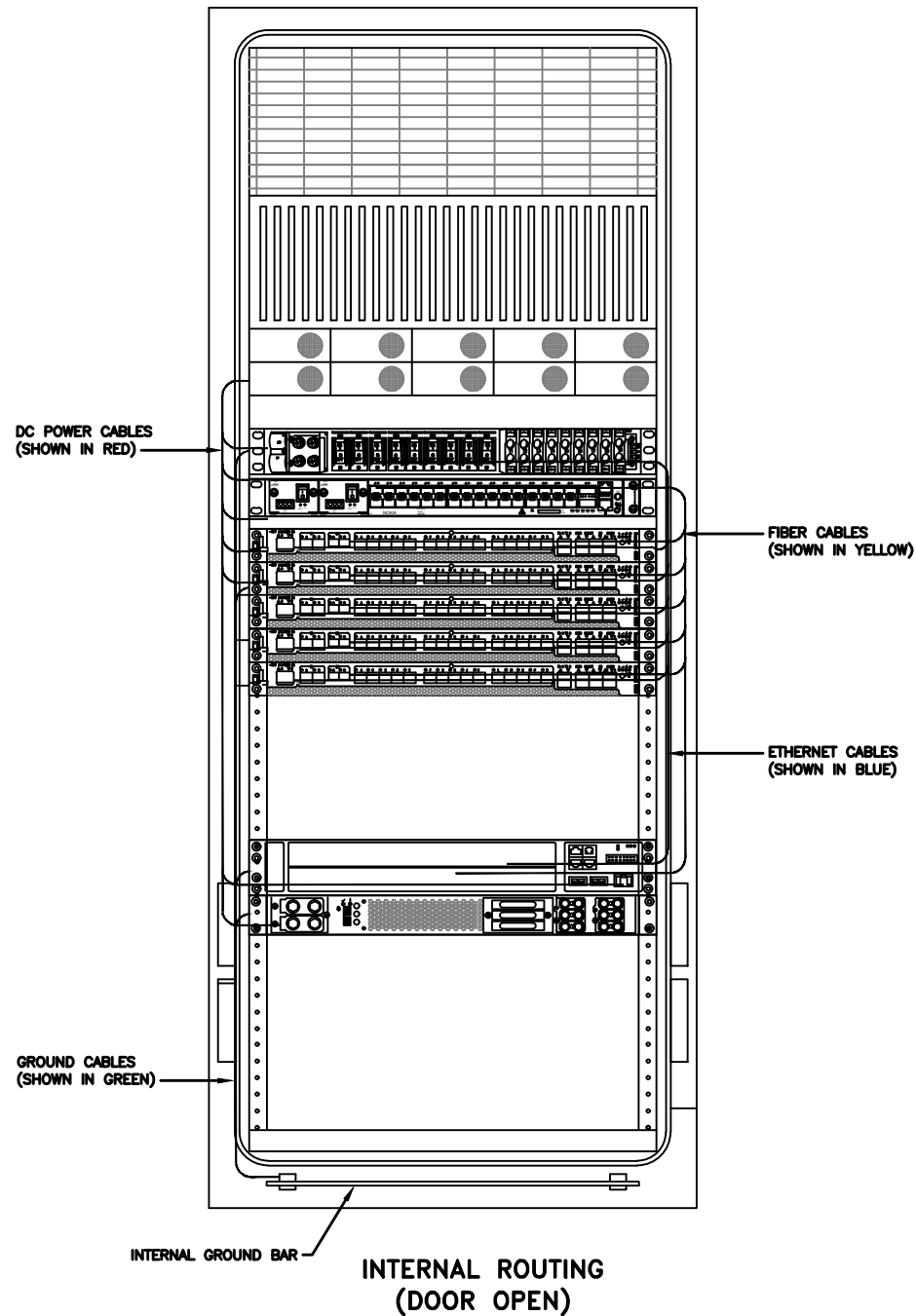
FRONT VIEW



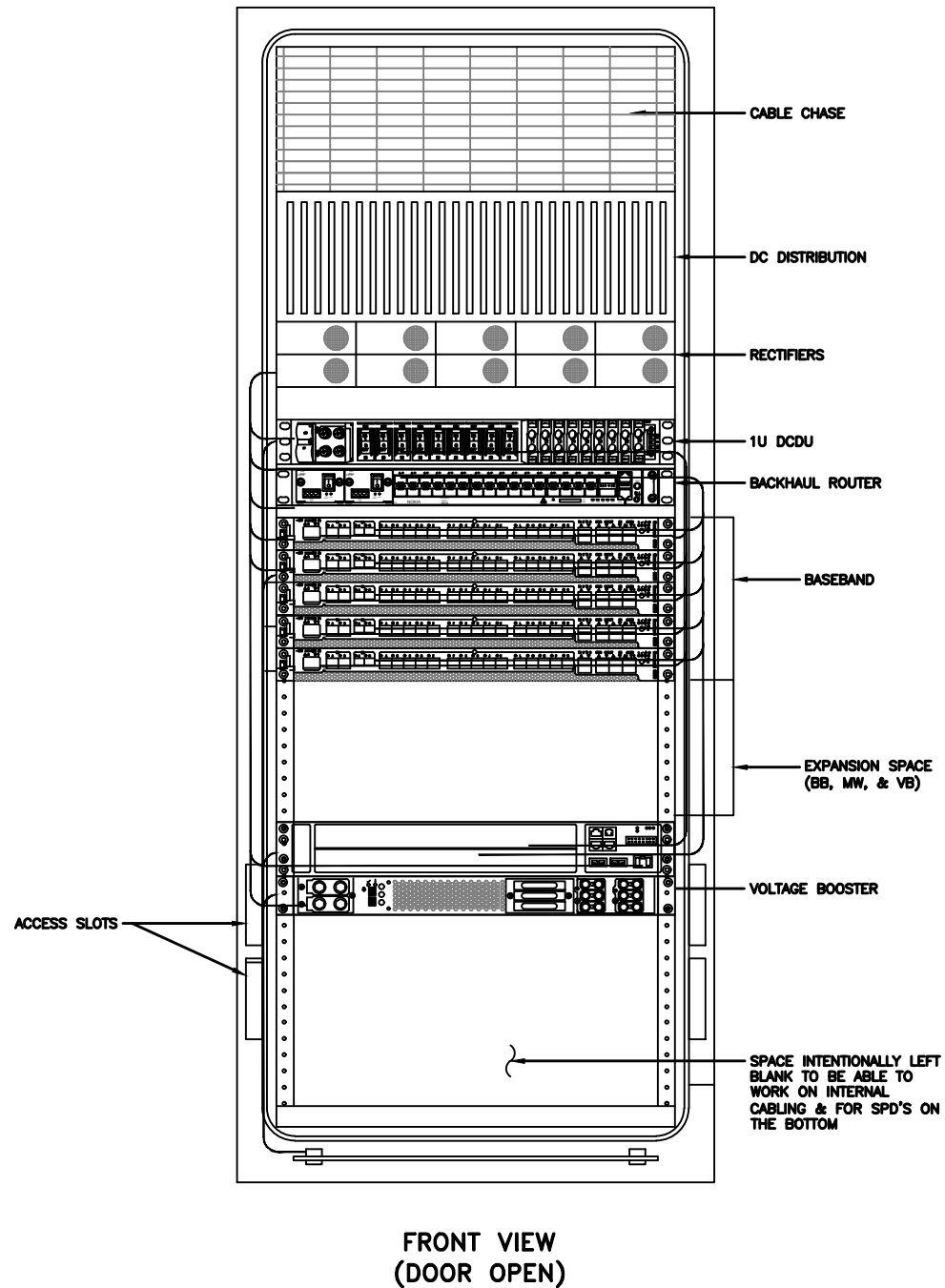
RIGHT VIEW



PLAN VIEW

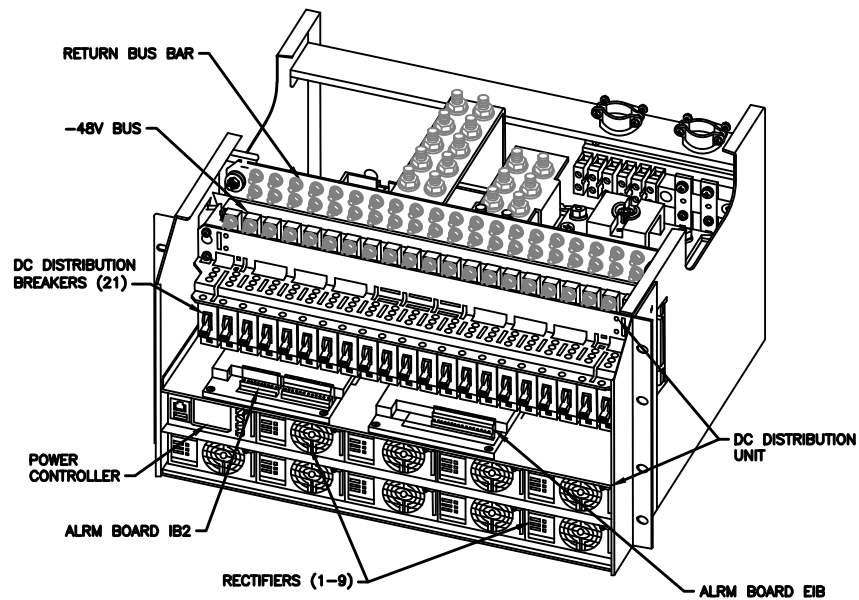


RACK ASSIGNMENTS	
RU SLOTS	DESCRIPTION
1	DC DISTRIBUTION
2	
3	
4	
5	RECTIFIER SHELF
6	
7	FIBER BOX
8	DCDU
9	BACKHAUL ROUTER
10	
11	1ST BASEBAND
12	2ND BASEBAND
13	3RD BASEBAND
14	4TH BASEBAND
15	5TH BASEBAND
16	EXPANSION
17	
18	
19	EXPANSION / LEGACY BASEBAND / VOLTAGE BOOSTER
20	
21	VOLTAGE BOOSTER
22	
23	OPEN SPACE FOR SPD ACCESS
24	
25	

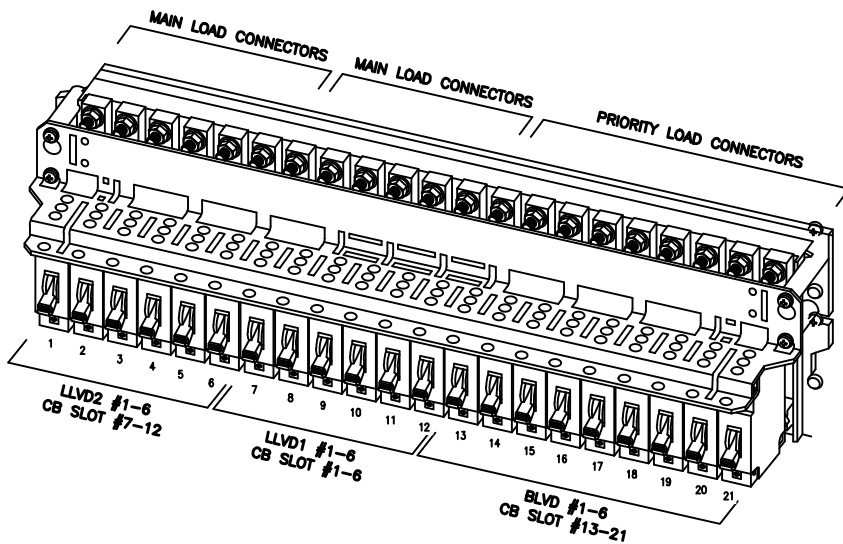


NOTE:
THIS IS FOR REFERENCE ONLY, CHECK
FOR SPECIFIC DETAIL IN T-MOBILE
CABINET SPECIFIC INSTALLATION GUIDES

Breaker Allocation for E6160					
CB SLOT	Ckt #		w/ DCDU Prior to availability of the 4460 and 4480	w/ DCDU Later Design Post-4460 and Post-4480	w/ DCDU 4 and 6 Sector designs
1	LVD1 47.0V	1	Router PS-2*/Future		Radio 4460 B25/66 ζ-1
2		2	Future		Radio 4460 B25/66 ζ-2
3		3	PSU 4813 feeding B25/66 α, β and γ (AIR 1641s)		PSU 4813 feeding B41-δ & B71/12-δ (Air 6449s and Radio 4480s)
4		4			
5		5	PSU 4813 feeding B41 α, β and γ (AIR 6449s)		
6		6			
7	LVD2 45.1V	1	PSU 4813 feeding B71/12 α, β and γ (Radio 4449s)	PSU 4813 feeding B71/12 α, β and γ (Radio 4480s)	
8		2			
9		3	Future		Radio 4460 B25/66 δ-1
10		4	Future		Radio 4460 B25/66 δ-2
11		5	Future		Radio 4460 B25/66 ε-1
12		6	Future		Radio 4460 B25/66 ε-2
13	BLVD 43.2V	1	Router PS-1		
14		2	Radio 4415 B25/66 α	Radio 4460 B25/66 α-1	
15		3	Radio 4415 B25/66 β	Radio 4460 B25/66 α-2	
16		4	Radio 4415 B25/66 γ	Radio 4460 B25/66 β-1	
17		5	PSU 4813 feeding B2/25 α, β and γ (Radio 4424s)	Radio 4460 B25/66 β-2	
18		6		Radio 4460 B25/66 γ-1	
19		7	Future	Radio 4460 B25/66 γ-2	
20		8	DCDU		
21		9	AAV		
Sector Identification α = Alpha, β = Beta, γ = Gamma, δ = Delta, ε = Epsilon, ζ = Zeta					



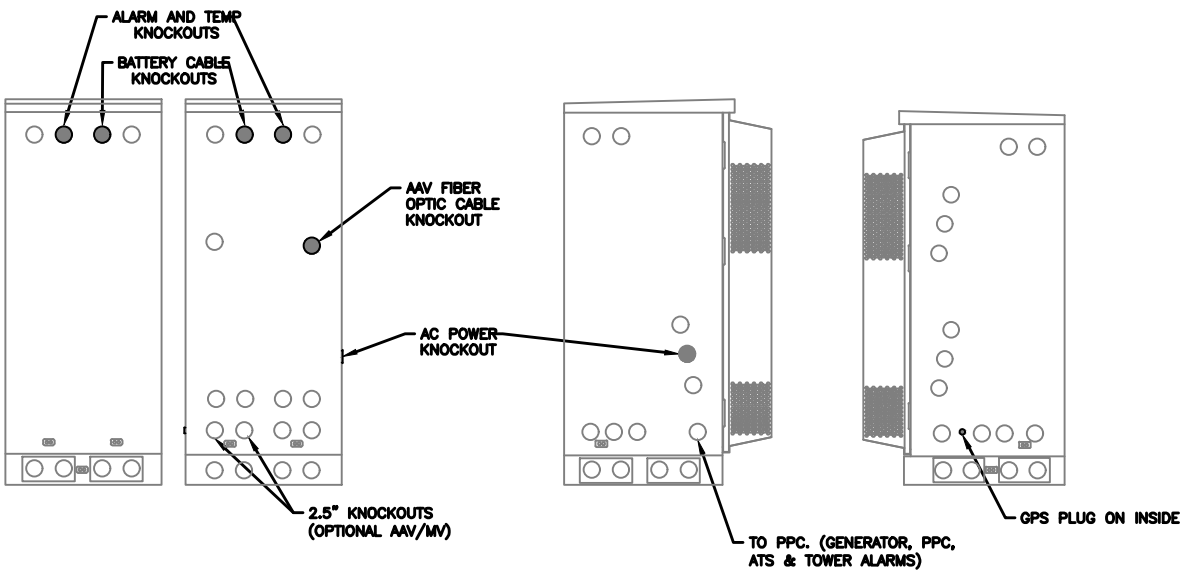
POWER SUBRACK



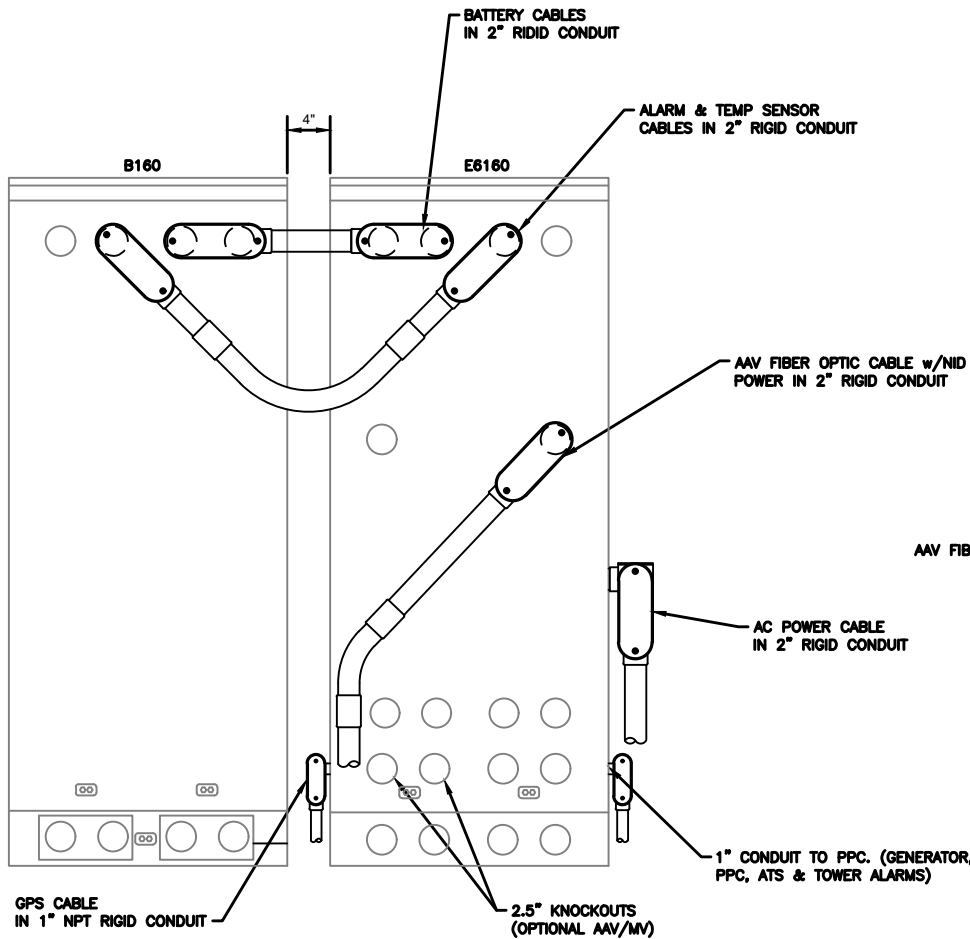
DC DISTRIBUTION

NOTE:

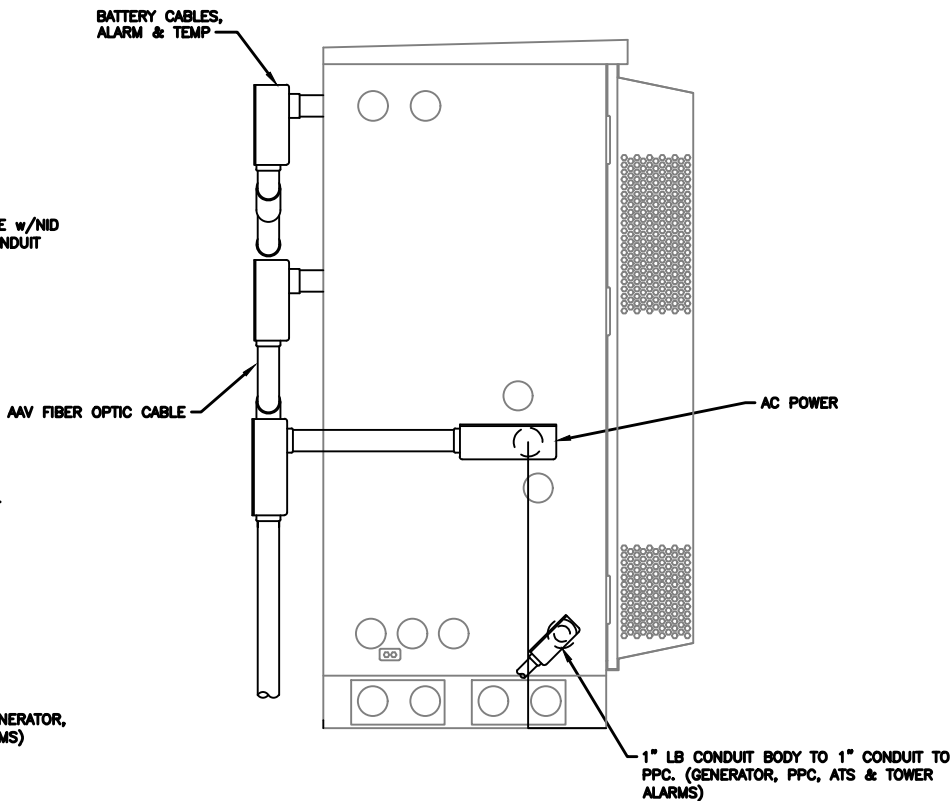
- 1. ALL CONDUIT AND FITTING ENTRANCES INTO CABINETS AND ENCLOSURES MUST UTILIZE MYERS OR EQUIVALENT HUBS OR SEALING WASHERS TO PREVENT WATER ENTRY/SEEPAGE INTO CABINETS AND ENCLOSURES.
- 2. (LIQUIDFLEX) FLEXIBLE METALLIC CONDUIT (LFMC) & ASSOCIATED FITTINGS CAN BE USED AS NEEDED BUT ONLY FOR TIGHT CONDUIT BENDS AND RUNS SUBJECT TO UL AND NEC LIMITATIONS. 6' MAX PER CONDUIT RUN.
- 3. POWER CONDUIT BODY ATTACHED WITH SHORT NIPPLE AND SEALING WASHER INSIDE & OUT. (FOR DOOR HOOD CLEARANCE)
- 4. PULLING ELBOWS MAY BE USED IN LIEU OF A CONDUIT BODIES WHEN CLEARANCE IS LIMITED.
- 5. ALL EXTERNAL ALARM CONDUITS ARE TOO TERMINATE AT THE PPC WITH A SINGLE 1" ALARM CONDUIT TO THE 6160.
- 6. (DO NOT USE CHASE NIPPLES) CONDUIT SHOULD HAVE SEALING WASHERS INSIDE AND OUT w/ LOCK NUT AND CAP.



CONDUIT LOCATIONS

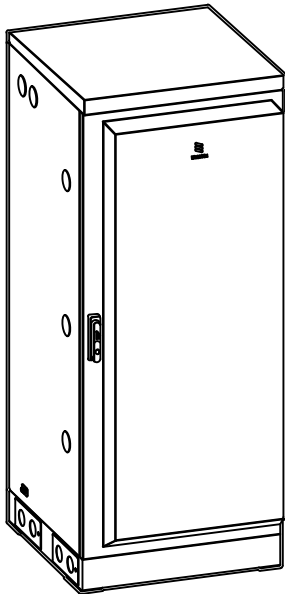


REAR VIEW



SIDE VIEW

MANUFACTURER:	ERICSSON
MODEL:	B160 BATTERY CABINET
DIMENSIONS:	63" x 25.6" x 29.5" (H x W x D)
WEIGHT:	295 LBS (WITHOUT BATTERIES)



2.5" KNOCKOUTS w/ RIGID CONDUIT, LB CONDUIT BODY FOR ALARM CABLE & TEMP SENSOR ROUTING. CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE

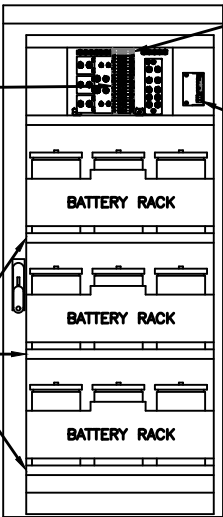
CABINET GROUND POINTS

REAR VIEW

2.5" KNOCKOUTS w/ RIGID CONDUIT, LB CONDUIT BODY FOR BATTERY CABLE CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE

3 x 300A BREAKERS

BATTERY VIBRATION MOUNTS



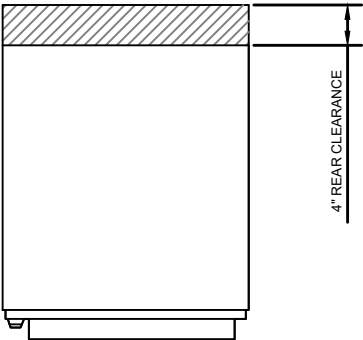
25A AUX BREAKERS, FANS, LIGHTS, ETC.

ALARM BOX, PRELABELED

3X BATTERY SHELVES, UP TO 200A HR, w/ PREINSTALLED HEATERS

FRONT VIEW (DOOR OPEN)

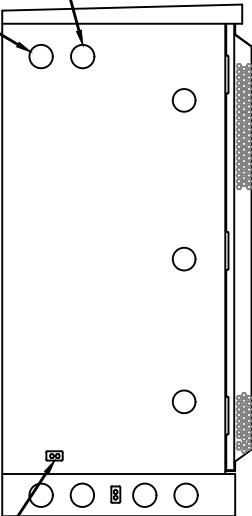
- NOTE:
- CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS. DO NOT DRILL THROUGH KNOCKOUTS
 - CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND OR CABLING



4" REAR CLEARANCE

(OPTIONAL) 2.5" KNOCKOUTS FOR ALARM & TEMP SENSOR ROUTING TO 6160

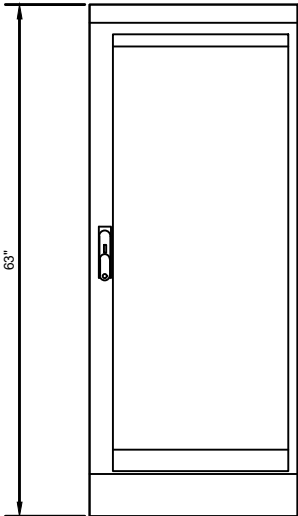
(OPTIONAL) 2.5" DC POWER KNOCKOUTS TO 6160



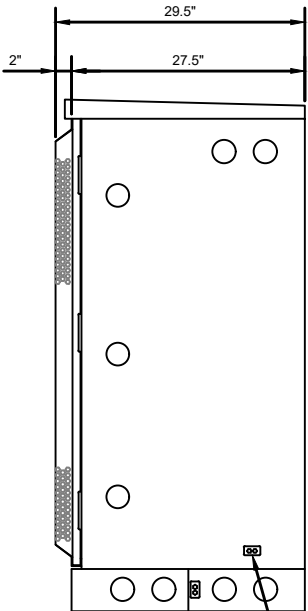
CABINET GROUND POINT

LEFT VIEW

GROUNDING NOTE:
"CABINET GROUNDING TO USE A SINGLE, #2 BTCW CONDUCTOR, W/ 2-HOLE, 1" C-C, LONG BARREL, WINDOW LUG, IN 3/4" LFNC TO GROUND RING. PLINTH GROUNDING IS NOT REQUIRED."

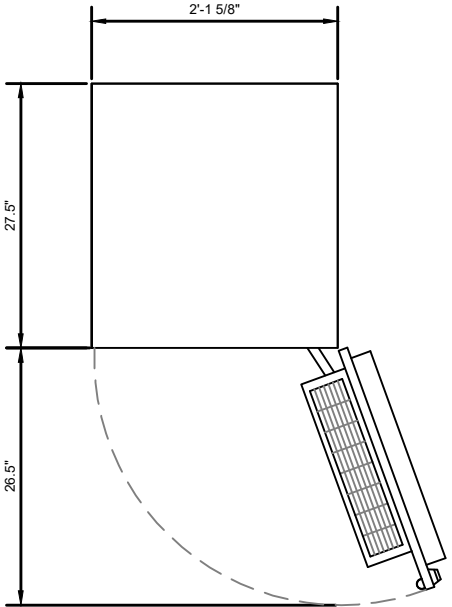


FRONT VIEW



CABINET GROUND POINT

RIGHT VIEW



PLAN VIEW

B160 ERICSSON SITE SUPPORT BATTERY CABINET

SUPPLEMENTAL

SHEET NUMBER:

R-608

REVISION:

-

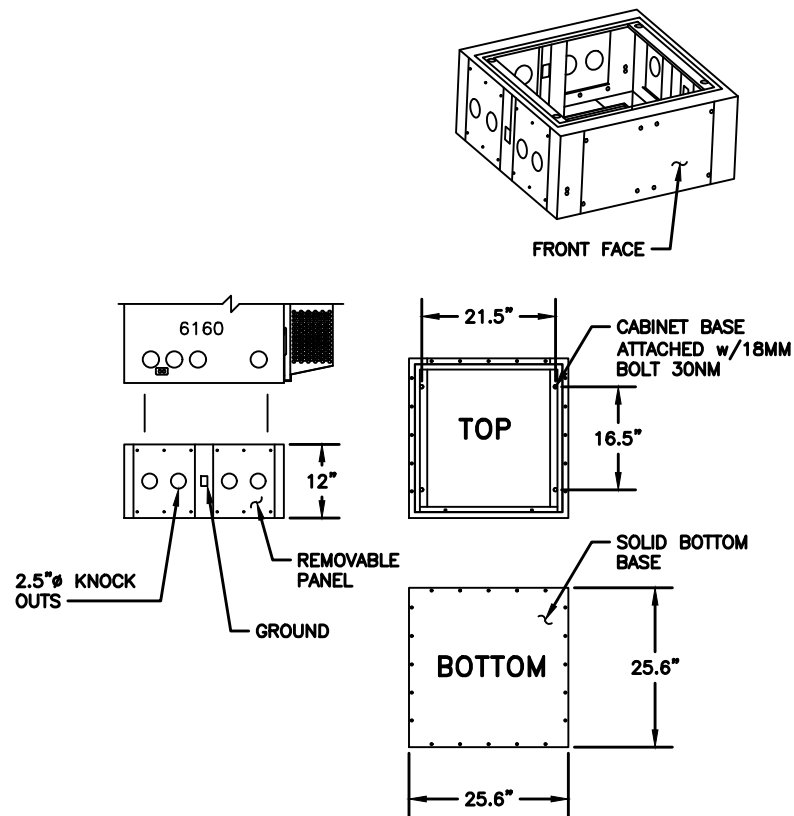
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ERICSSON B160 BATTERY CABINET SPECIFICATIONS

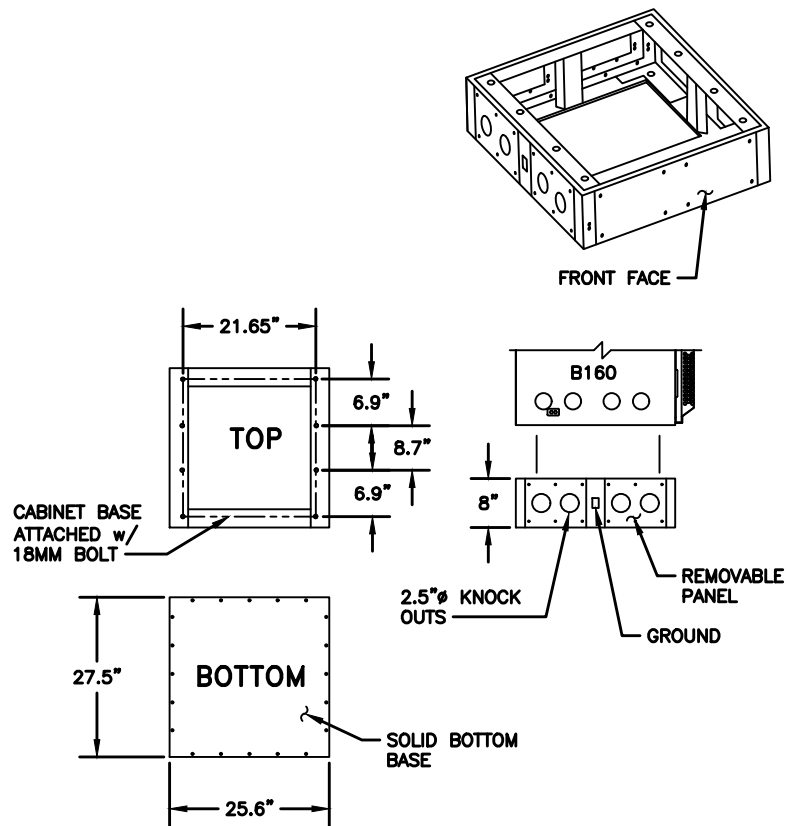
SCALE: N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

MANUFACTURER:	ERICSSON
MODEL:	6160 12" BASE FRAME (SXK 125 5009/1)
DIMENSIONS:	12" x 25.6" x 25.6" (H x D x W)
WEIGHT:	73 LBS



MANUFACTURER:	ERICSSON
MODEL:	B160 8" BASE FRAME (SXK 125 5010/1)
DIMENSIONS:	8" x 27.5" x 25.6" (H x W x D)
WEIGHT:	60 LBS



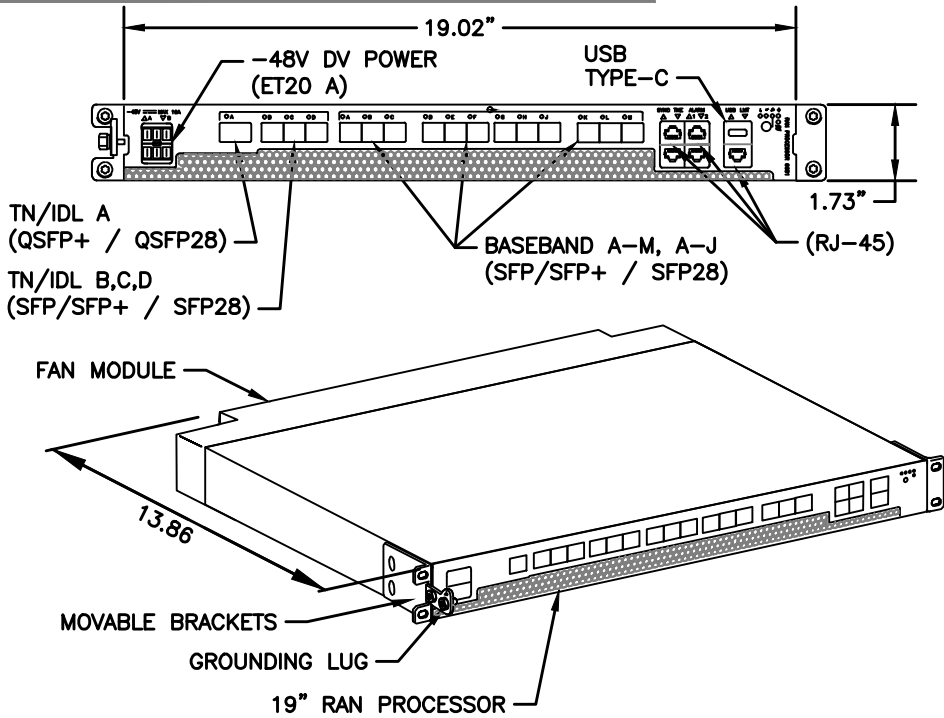
1 1 UTHPM-TALL-BF-KIT (BASE FRAMES)
SCALE: N.T.S

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

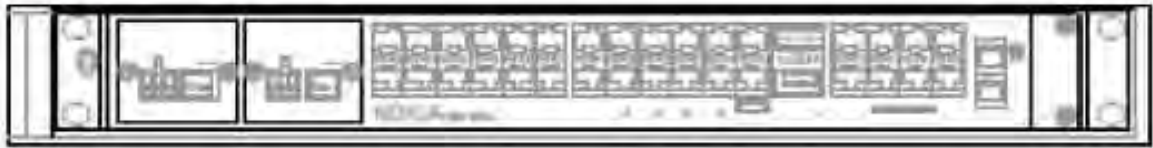
SHEET NUMBER:	REVISION:
R-609	-

MANUFACTURER:	ERICSSON
MODEL:	6651 RAN PROCESSOR (KDU1370093/11)
DIMENSIONS:	1.73" X 19.02" X 13.86" (H" X W" X D")
WEIGHT:	16.98 LBS



1 34553 - ERICSSON 6651 RAN PROCESSOR
SCALE: N.T.S.

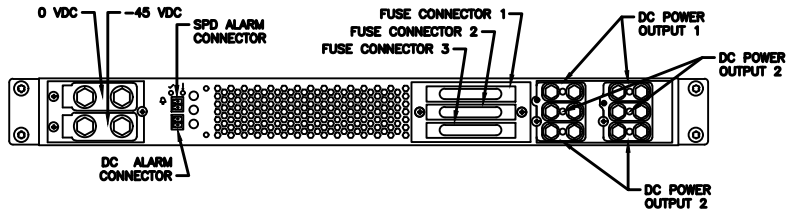
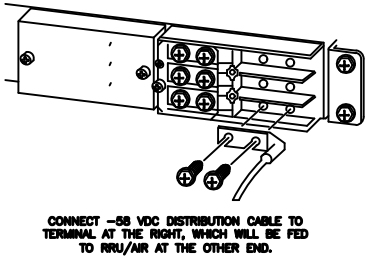
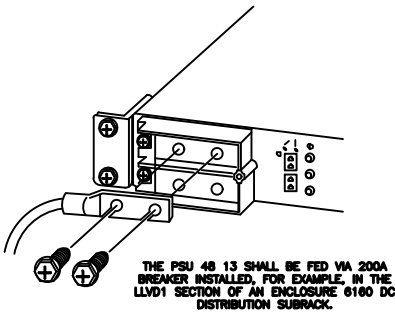
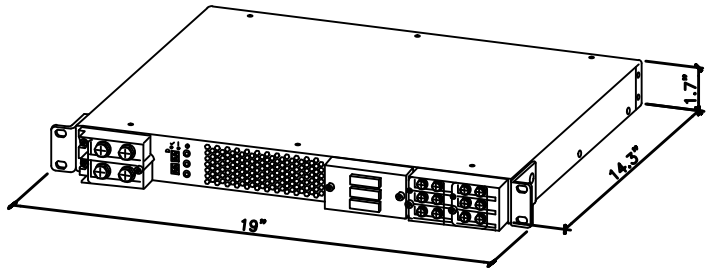
MANUFACTURER:	NOKIA
MODEL:	IXR-e
DIMENSIONS:	17.25"x10.0"x1.75"
WEIGHT:	TBD



2 PROPOSED CSR IXRE V2 DETAIL
SCALE: N.T.S.

MANUFACTURER:	ERICSSON
MODEL:	PSU 48 13
WEIGHT:	17.1 LBS
DIMENSIONS:	19"x 1.7"x 14.3"

NEEDED INSTALL KIT (PICK 1)
34133 PSU4813 INSTALL KIT FOR RBS61XX
34134 PSU4813 INSTALL KIT FOR PBC6200
34135 PSU4813 INSTALL KIT FOR 6X60/RBS6230



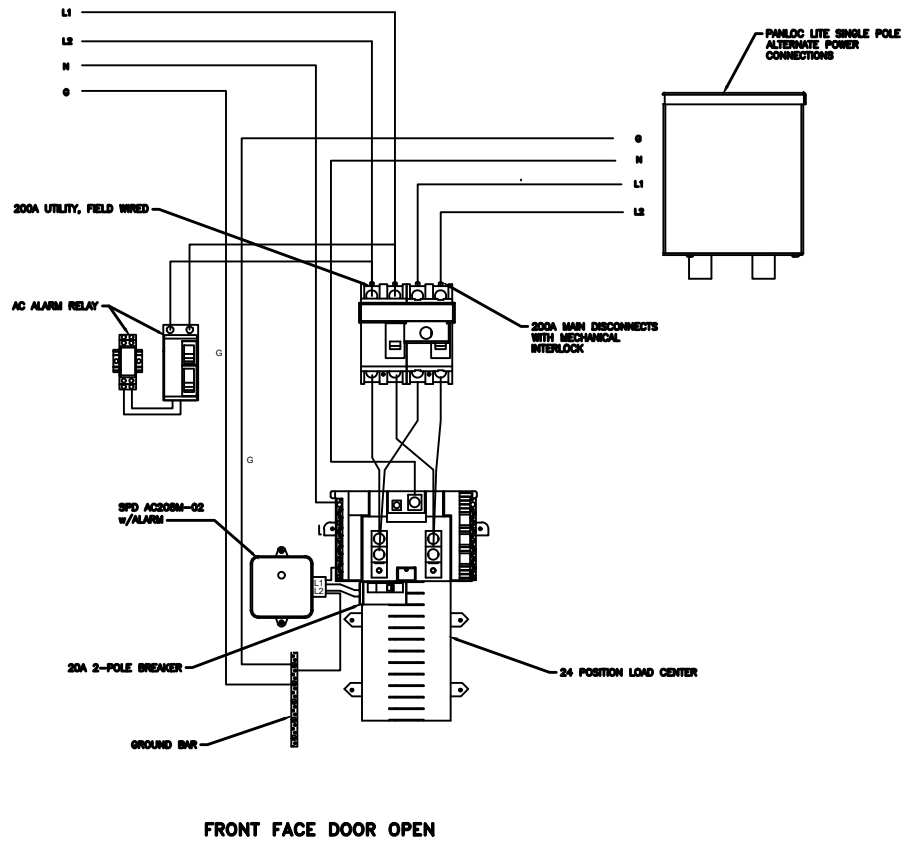
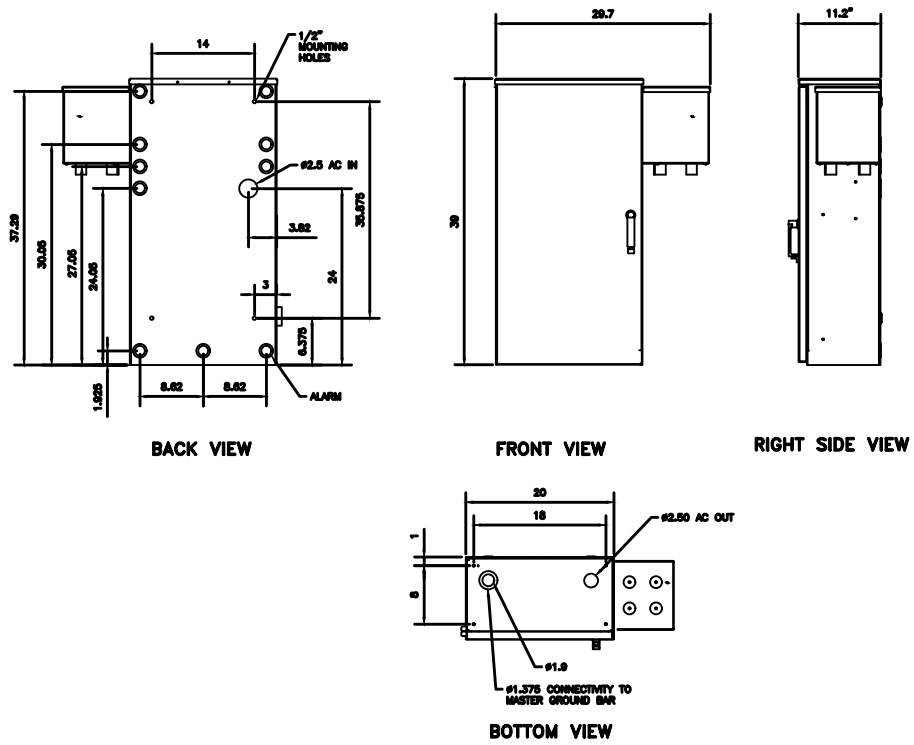
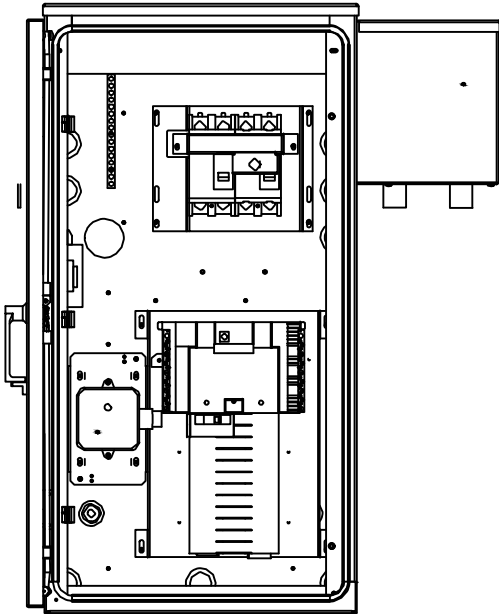
3 SKU# 34132 - PSU 48 13
SCALE: N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-610	-

MANUFACTURER:	DELTA
MODEL:	4910163600 225AMP MINI PPC CAMLOCK w/ALARM
DIMENSIONS:	29.7" x 39" x 11.2" (W x H x D)
WEIGHT:	71 LBS



RD048 | 3.4L | 48 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency



Standby Power Rating
48 kW, 60 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

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.

RD048 | 3.4L | 48 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency



Standard Features

- ENGINE SYSTEM**

 - Cold Weather Kit
 - Oil Drain Extension
 - Fan Guard
 - Stainless Steel Flexible Exhaust Connection
 - Factory Filled Oil & Coolant

Fuel System

 - Primary Fuel Filter

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
- 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%)
- 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

TANKS

 - 48 Hour Run Time Tank
 - UL 142 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

- 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
 - Overfill Prevention Valve
 - Fuel Fill Drop Tube
 - Lockable Fuel Cap

SPEC SHEET

SPEC SHEET

SUPPLEMENTAL

RD048 | 3.4L | 48 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency



APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General		Cooling System	
Make	Generac	Cooling System Type	Closed Recovery
Cylinder #	4	Fan Type	Pusher
Type	In-Line	Fan Speed- rpm	2,029
Displacement - in ³ (L)	3.4 (207.48)	Fan Diameter - in (mm)	22 (559)
Bore - in (mm)	3.86 (98)	Fuel System	
Stroke - in (mm)	4.45 (113)	Fuel Type	Ultra Low Sulfur Diesel Fuel
Compression Ratio	18.5:1	Fuel Specification	ASTM
Intake Air Method	Turbocharged/Aftercooled	Fuel Pump Type	Mechanical Engine Driven Gear
Cylinder Head	Cast Iron OHV	Injector Type	Mechanical
Piston Type	Aluminum	Fuel Supply Lin (mm/in)	7.94/0.31 (ID)
Engine Governing		Fuel Return Line (mm/in)	7.94/0.31 (ID)
Governor	Electronic	Fuel Filtering (microns)	25
Frequency Regulation (Steady State)	±0.25%	Engine Electrical System	
Lubrication System		System Voltage	12 VDC
Oil Pump Type	Gear	Battery Charger Alternator	Standard
Oil Filter Type	Full Flow Spin-On Canister	Battery Size	Group 27F
Crankcase Capacity with Filters- qt (L)	7.4 (7.0)	Battery Voltage	12 VDC
		Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Standard Model	Generac	Standard Excitation	Direct
Poles	4	Bearings	Single Sealed
Field Type	Rotating	Coupling	Flexible Disc
Insulation Class - Rotor	H	Prototype Short Circuit Test	Yes
Insulation Class - Stator	H	Voltage Regulator Type	Full Digital
Total Harmonic Distortion	<5%	Number of Sensed Phases	2
Telephone Interference Factor (TIF)	<50	Regulation Accuracy (Steady State)	±1.0%

RD048 | 3.4L | 48 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency



OPERATING DATA

POWER RATINGS

		Standby	
Single-Phase 120/480 VAC @0.1pf	48 kW	Amps: 200	

MOTOR STARTING CAPABILITIES (sKVA)

sKVA vs. Voltage Dip at 30%	
120/240 V, Single-Phase at 0.4pf	189

FUEL CONSUMPTION RATES*

	Percent Load	Diesel gal/hr (L/hr)
	25%	1.35 (5.11)
	50%	2.15 (8.14)
	75%	3.06 (11.58)
	100%	3.98 (15.07)
* Fuel supply installation must accommodate fuel consumption rates at 100% load.		

COOLING

		Standby
Air Flow (Radiator and Alternator)	ft ³ /min (m ³ /min)	2824 (80)
Coolant System Capacity	gal (L)	2.8 (10.6)
Heat Rejection to Coolant	BTU/hr (MJ/hr)	135,900 (143.4)
Temperature Deration	3% for every 5°C above 25°C or 1.7% for every 5°F over 77°F	
Altitude Deration	1% for every 100 m above 915 or 3% for every 1000 ft over 3000 ft	
Maximum Radiator Backpressure	in H ₂ O (kPa)	0.50 (0.12)

COMBUSTION AIR REQUIREMENTS

	Standby
Flow at Rated Power ft ³ /min (m ³ /min)	190 (5.38)

ENGINE

		Standby		Standby
Rated Engine Speed	rpm	1,800	Exhaust Flow (Rated Output)	ft ³ /min (m ³ /min) 448 (12.7)
Horsepower at rated kW	HP	85	Exhaust Temp (Rated Output - Post Silencer)	°F (°C) 1120 (604.4)

EXHAUST

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

SPEC SHEET

SPEC SHEET

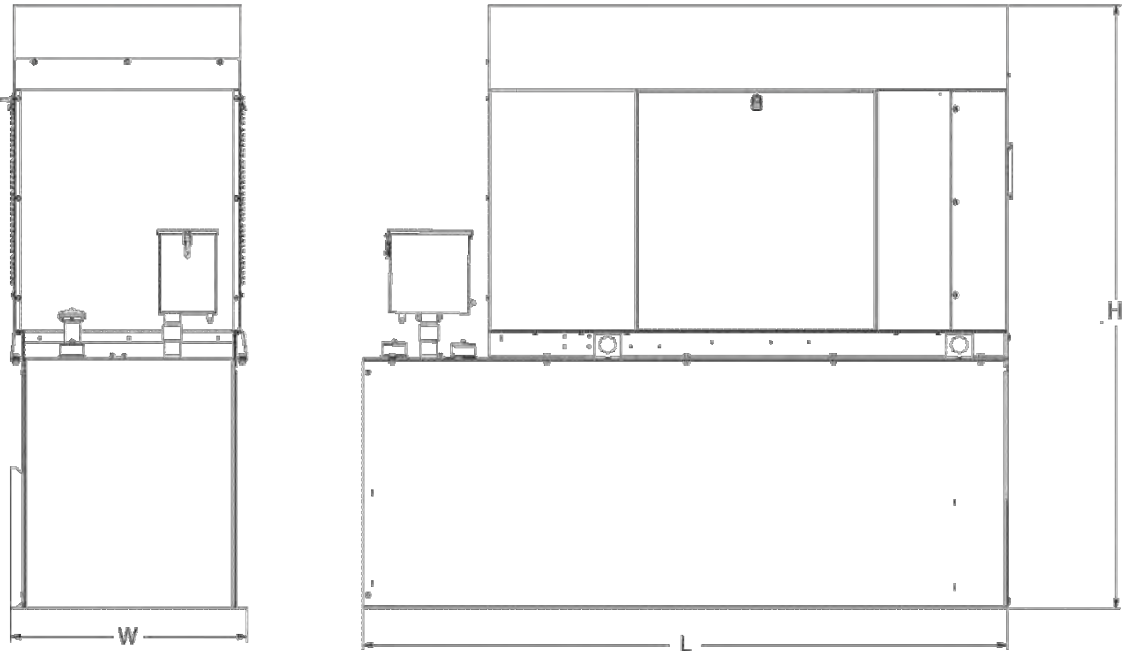
SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-613	-

RD048 | 3.4L | 48 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency



DIMENSIONS AND WEIGHTS*



ENCLOSED UNIT with 48hour Tank

L x W x H in (mm)	95.4 (2,422) x 35.0 (880) x 89.3 (2,269)
Sound output in dB(A) at 23ft with generator operating at normal Load	65

* All measurements are approximate and for estimation purposes only.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

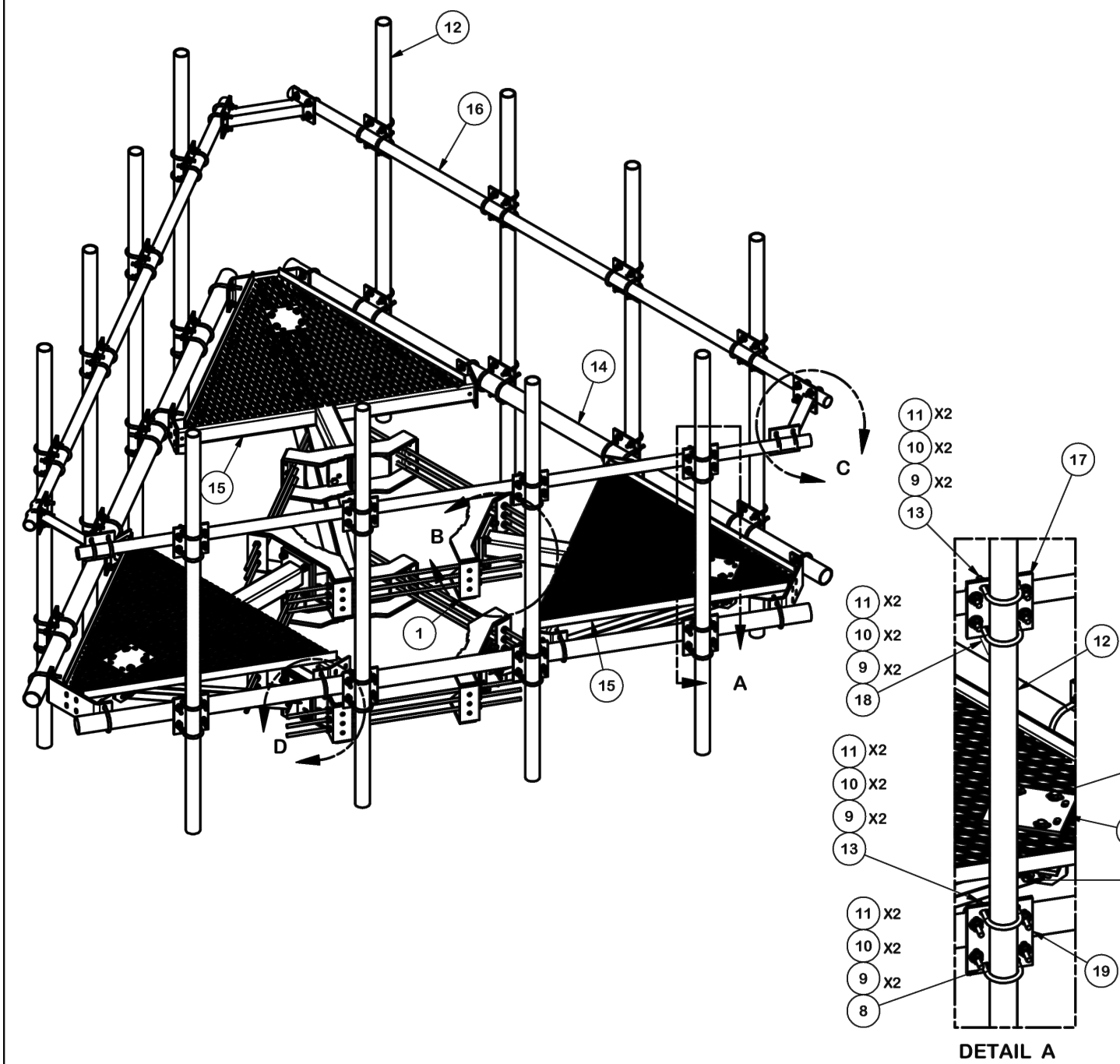
Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.

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Part No 10000032700
Rev. B 04/06/18

SPEC SHEET

5 of 5



PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	6	X-LWRM	RING MOUNT WELDMENT		68.81	412.85
2	66	G58LW	5/8" HDG LOCKWASHER		0.03	1.72
3	60	A58NUT	5/8" HDG A325 HEX NUT		0.13	7.79
4	18	G58R-24	5/8" x 24" THREADED ROD (HDG.)		2.09	37.63
5	18	G58R-48	5/8" x 48" THREADED ROD (HDG.)		4.18	75.27
6	24	A58234	5/8" x 2-3/4" HDG A325 HEX BOLT	2 3/4 in	0.36	8.54
7	24	A58FW	5/8" HDG A325 FLATWASHER		0.03	0.82
8	36	X-UB1306	1/2" X 3-5/8" X 6" X 3" U-BOLT (HDG.)		0.83	29.82
9	264	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	9.00
10	252	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	3.50
11	252	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	18.05
12	12	P3096	2-7/8" OD X 96" SCH 40 GALVANIZED PIPE	96 in	49.24	590.88
13	48	X-UB1300	1/2" X 3" X 5" X 2" U-BOLT (HDG.)		0.67	32.11
14	3	P3150	3-1/2" X 150" (3" SCH 40) GALVANIZED PIPE	150 in	94.80	284.40
15	3	X-SV196	LOW PROFILE PLATFORM CORNER		212.10	636.31
16	3	P2150	2-3/8" O.D. X 150" SCH 40 GALVANIZED PIPE	150 in	45.77	137.31
17	12	SCX2	CROSSOVER PLATE	7 in	4.80	57.56
18	36	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.60	21.50
19	15	SCX4	CROSSOVER PLATE	8 1/2 in	6.02	90.32
20	6	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	0.78
21	6	X-253993	PLATFORM REINFORCEMENT KIT ANGLE	52 25/32 in	14.33	85.99
22	6	X-TBW	T-BRACKET WELDMENT		13.60	81.60
23	6	G5802	5/8" x 2" HDG HEX BOLT GR5		0.27	1.62
24	12	G12065	1/2" x 6-1/2" HDG HEX BOLT GR5 FULL THREAD	5 1/2 in	0.41	4.91
25	3	X-AHCP	ANGLE HANDRAIL CORNER PLATE		12.92	38.76
TOTAL WT. #						2669.03

				TOLERANCE NOTES		DESCRIPTION		Locations: New York, NY Atlanta, GA Los Angeles, CA Plymouth, IN Salem, OR Dallas, TX	
				TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE: SAWED, SHEARED AND GAS CUT EDGES ($\pm 0.030"$) DRILLED AND GAS CUT HOLES ($\pm 0.030"$) - NO CONING OF HOLES LASER CUT EDGES AND HOLES ($\pm 0.010"$) - NO CONING OF HOLES BENDS ARE $\pm 1/2$ DEGREE ALL OTHER MACHINING ($\pm 0.030"$) ALL OTHER ASSEMBLY ($\pm 0.060"$)		12' 6" LOW PROFILE PLATFORM WITH TWELVE 2-7/8" ANTENNA MOUTING PIPES, AND HANDRAIL		Engineering Support Team: 1-888-753-7446	
B	CHANGED X-253992 TO X-TBW		CEK	9/20/2018		CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
A	REPLACED HCP WITH X-AHCP	4488	CEK	7/14/2014		4488	CEK	3/24/2014	RMQP-4096-HK
REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE	PROPRIETARY NOTE: THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.	CLASS	SUB	DRAWING USAGE	CHECKED BY
	REVISION HISTORY					81	02	CUSTOMER	BMC 7/14/2014
						DWG. NO.		RMQP-4096-HK	
								PAGE 1 OF 3	

1 PROPOSED PLATFORM MOUNT WITH HANDRAIL DETAIL

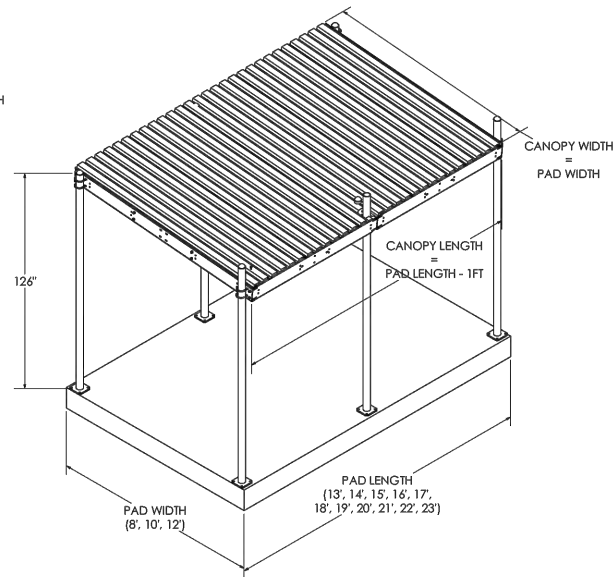
SCALE: N.T.S

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SUPPLEMENTAL

SHEET NUMBER: R-615
REVISION: -

SERIES OVERVIEW



4 POST WEATHER CANOPY

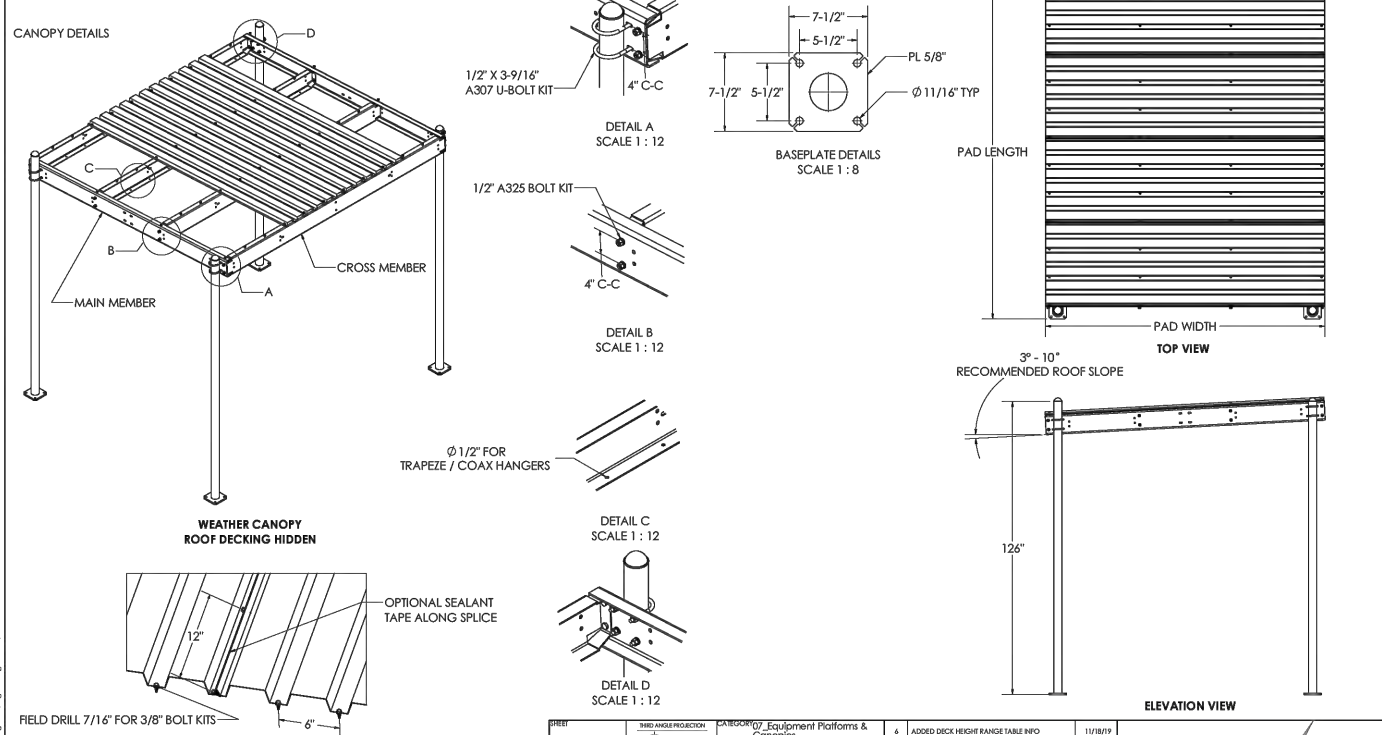
6 POST WEATHER CANOPY

Weather Canopy Size Options							
		Pad Width (Roof Slope Direction)					
		8'		10'		12'	
Pad Length	7'	PV-WC0807-8	655 lbs	PV-WC1007-8	830 lbs	PV-WC1207-8	1005 lbs
	8'	PV-WC0808-8	735 lbs	PV-WC1008-8	930 lbs	PV-WC1208-8	1125 lbs
	9'	PV-WC0809-8	815 lbs	PV-WC1009-8	1035 lbs	PV-WC1209-8	1255 lbs
	10'	PV-WC0810-8	895 lbs	PV-WC1010-8	1135 lbs	PV-WC1210-8	1375 lbs
	11'	PV-WC0811-8	975 lbs	PV-WC1011-8	1235 lbs	PV-WC1211-8	1495 lbs
	12'	PV-WC0812-8	1055 lbs	PV-WC1012-8	1340 lbs	PV-WC1212-8	1625 lbs
	13'	PV-WC0813-8	1221 lbs	PV-WC1013-8	1549 lbs	PV-WC1213-8	1878 lbs
	14'	PV-WC0814-8	1289 lbs	PV-WC1014-8	1649 lbs	PV-WC1214-8	1999 lbs
	15'	PV-WC0815-8	1322 lbs	PV-WC1015-8	1755 lbs	PV-WC1215-8	2128 lbs
	16'	PV-WC0816-8	1460 lbs	PV-WC1016-8	1854 lbs	PV-WC1216-8	2249 lbs
	17'	PV-WC0817-8	1538 lbs	PV-WC1017-8	1954 lbs	PV-WC1217-8	2370 lbs
	18'	PV-WC0818-8	1620 lbs	PV-WC1018-8	2059 lbs	PV-WC1218-8	2499 lbs
	19'	PV-WC0819-8	1698 lbs	PV-WC1019-8	2159 lbs	PV-WC1219-8	2619 lbs
	20'	PV-WC0820-8	1776 lbs	PV-WC1020-8	2258 lbs	PV-WC1220-8	2741 lbs
21'	PV-WC0821-8	1859 lbs	PV-WC1021-8	2364 lbs	PV-WC1221-8	2869 lbs	
22'	PV-WC0822-8	1937 lbs	PV-WC1022-8	2464 lbs	PV-WC1222-8	2991 lbs	
23'	PV-WC0823-8	2016 lbs	PV-WC1023-8	2564 lbs	PV-WC1223-8	3113 lbs	

1 OF 12		THIRD ANGLE PROJECTION 		CATEGORY 07 Equipment Platforms & Canopies		4 ADDED DECK HEIGHT RANGE TABLE INFO		11/16/19	
5/5/2021		SCALE 1:40		SITES 02 Equipment Platforms & Canopies		5 UPDATED MEMBER LAYOUTS, ADDED PLATFORM TEEL, ADDED JACK I/O		2/18/18	
DIMENSIONS ARE IN INCHES TOLERANCES U.N.O. HOLES: +1/16 - 1/32 ANGULAR: PROFILE: 1/4" BEND: 2" ALL OTHERS: ±1/16"		TYPE PV-WC / PV-EQ Series		4 EQUIRABLE AREA TABLE		2/20/17			
		DUN		3 ADDED PV-EQ STEP		12/20/17			
		SJS		2 UPDATED PV-WC BRACE		9/19/16			
		STATUS APPROVED		REV DESCRIPTION DATE					
				EQUIPMENT PLATFORM AND CANOPY		DOCUMENT NUMBER		REV	
				WCEQ-ENG-01-R6		6			

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CANOPY DETAILS



2 OF 12 		CATEGORY 07 Equipment Platforms & Canopies D1 Equipment Platforms & Canopies		4 ADDED CHECK HEIGHT RANGE TABLE INFO 5 UPDATED MINIMUM TABLE ADDED PLATFORM SEES ADDED JACK LUGS 6 FQ USABLE AREA TABLE	11/18/19 2/15/18 2/20/17	
5/5/2021 SCALE 1:36	TYPE PV-WC / PV-EQ Series DET D/JN CHECKED SJS STATUS APPROVED	3 ADDED PV-SQ-SEP 2 UPDATED PV-WC BRIDGE	1/28/17 9/19/16	EQUIPMENT PLATFORMS AND CANOPY DOCUMENT NUMBER WCEQ-ENG-01-R6	REV 6	

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C:\Program Files\Autodesk\SW Working Files\Engineering Details\

C:\PWSSteel\Catalog\SW Working Files\Engineering Details\

1

SCALE: NOT TO SCALE

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SHEET NUMBER:
R-616

REVISION:



Mount Analysis Report

ATC Asset Name : NEW HACKENSACK NY
ATC Asset Number : 420597
Engineering Number : 14178236_C8_05
Mount Elevation : 85 ft
Proposed Carrier : T-Mobile
Carrier Site Name : atc_420597
Carrier Site Number : UP50700A
Site Location : 26 Don Bosco Boulevard
WAPPINGERS FALLS, NY 12590-6183
41.629778, -73.86825

County : Dutchess
Date : November 16, 2023
Max Usage : 60%
Analysis Result : Pass

Prepared By:
Joseph Swier
Structural Engineer I

Joseph Swier



Michael Berger
Digitally signed by Michael Berger
Date: 2023.11.17 16:06:27 -05'00'

Introduction

The purpose of this report is to summarize results of the mount analysis performed for T-Mobile at 85 ft.

Supporting Documents

Specifications Sheet:	Site Pro 1 RMQP-4096, dated September 20, 2018
Radio Frequency Data Sheet:	RFDS ID #UP50700A, dated October 17, 2023
Reference Photos:	Site photos from 2023

Analysis

This mount was analyzed using American Tower Corporation’s Mount Analysis Program and RISA-3D

Basic Wind Speed:	113 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	40 mph (3-Second Gust) w/ 1.00" radial ice concurrent
Codes:	ANSI/TIA-222-H / 2018 IBC / 2020 New York Building Code
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 2
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	Ss = 0.208, S1 = 0.055
Site Class:	D - Stiff Soil - Default
Live Loads:	Lm = 500 lbs

* Based on experience, it has been determined that the Lv load cases will not control over Lm load cases in platform mount analyses. Therefore, these load cases have been excluded from this analysis.

Conclusion

Based on the analysis results, the antenna mount meets the requirements per the applicable codes listed above. The mount can support the equipment as described in this report.

- Analysis based on new installation of Site Pro 1 RMQP-4096 Platform w/ Handrails(s) (M2050R(2500)-4[6]).

If you have any questions or require additional information, please reach out to your American Tower contact. If you do not have an American Tower contact and have an Engineering question, please contact MountAnalysis@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

COA: 0012746

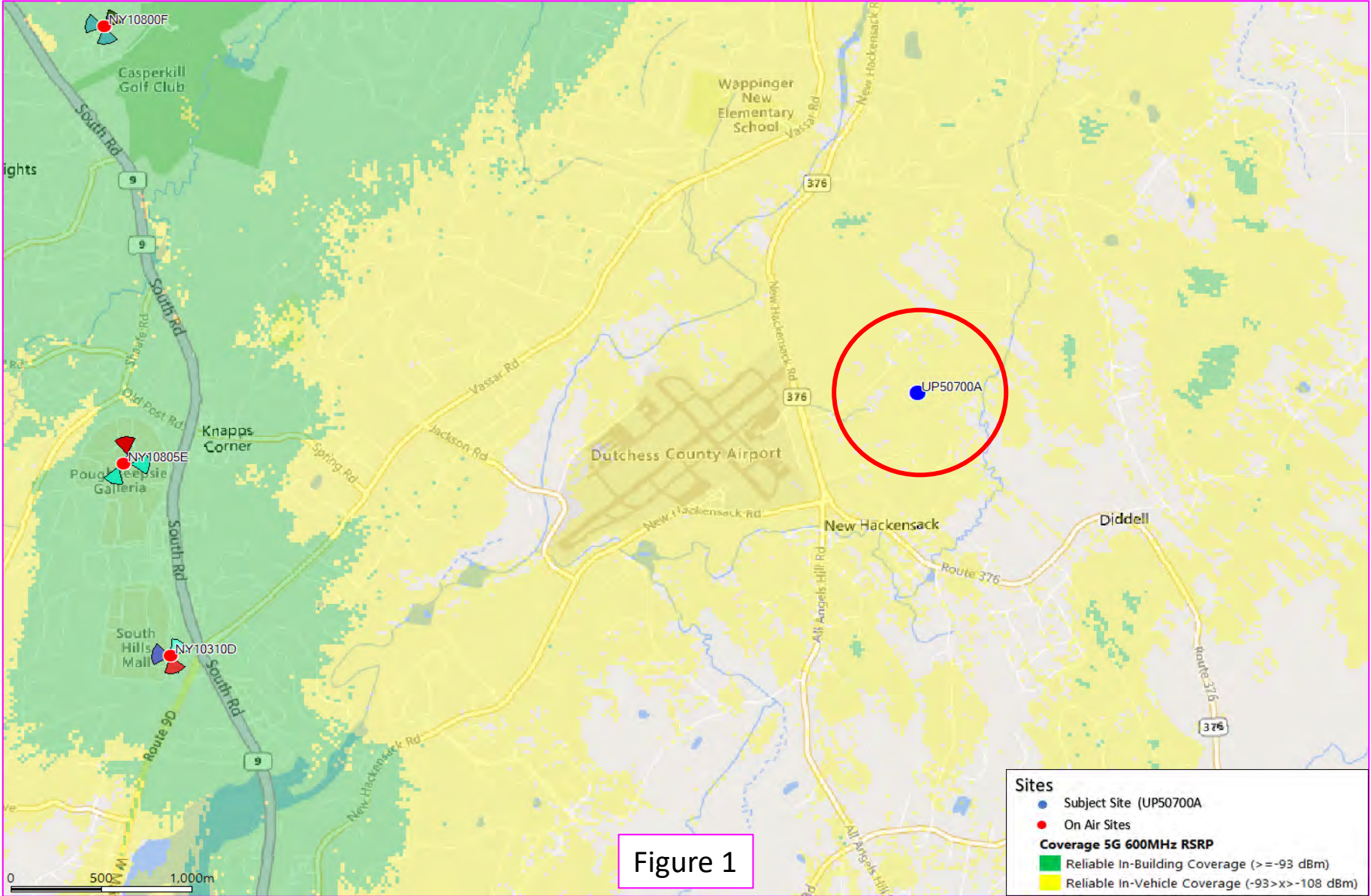
NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONSTRUCTION.

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-617	-

EXHIBIT C

Existing T-Mobile Coverage without the Proposed Site (UP50700A)



Existing T-Mobile Coverage with UP50700A @85'

