

Cover Letter and Statement of Need

- Applicant: Iron Mountain Towers, LLC (“IMT”)
- Jurisdiction: LaPorte County, Indiana
- Facility: 440' tower + 9' lightning rod (449' total)
- User: A private, FCC-licensed network
- Signal Path: Several miles east-west

1. COVER LETTER

01/23/2026

LaPorte County Office of Planning & Zoning LaPorte County Complex

Re: Application for Communications Tower – Iron Mountain Towers, LLC Project: 449' Communications Structure (440' tower + 9' lightning rod) Location: 344 W 1000N, Parcel ID 4602132000009000062, LaPorte County, Indiana

To Whom It May Concern:

Iron Mountain Towers, LLC (“IMT”) respectfully submits this application for approval to construct a 440-foot communications tower with a 9-foot lightning rod at the above-referenced location in LaPorte County, Indiana. The facility will support a private FCC-licensed communications network that requires reliable east-west signal propagation across several miles.

This packet includes all materials required under the LaPorte County zoning ordinance, including site plans, structural documentation, equipment specifications, and a narrative demonstrating the technical need for the facility. The proposed tower is designed to meet all applicable federal, state, and local requirements, including FAA and FCC regulations.

IMT appreciates the County’s review and looks forward to working cooperatively with staff throughout the process. Please contact me with any questions or requests for clarification.

Respectfully, Derek McGrew, On behalf of Iron Mountain Towers, LLC {derek@cellusite.net / 317-507-4541}

2. PROJECT NARRATIVE

Project Overview

Iron Mountain Towers, LLC (“IMT”) proposes to construct a 440-foot self-supporting lattice tower topped with a 9-foot lightning rod (total height 449 feet) on privately owned land in LaPorte County,

Indiana. The facility will include a fenced equipment compound, grounding system, access improvements, and all associated infrastructure.

The tower will support a private FCC-licensed communications network that requires long-distance east-west signal transmission. The facility is designed to ensure reliable coverage, operational continuity, and compliance with federal licensing requirements.

Regulatory Framework

Because the user is an FCC-licensed operator, the project is governed by:

- Telecommunications Act of 1996 (47 U.S.C. § 332(c)(7))
- FCC licensing and technical rules
- FAA obstruction evaluation requirements
- LaPorte County zoning ordinance

Under the Telecommunications Act, local governments may regulate tower placement and construction, but may not:

- Unreasonably discriminate among providers
- Prohibit or effectively prohibit wireless service
- Base decisions on RF emissions (FCC preemption)
- Delay decisions beyond a reasonable period

IMT's application is structured to comply with all local requirements while preserving the federal protections afforded to licensed communications providers.

Site Selection

The proposed location was selected based on:

- Required east-west signal path
- Elevation and terrain considerations
- Adequate parcel size for a 449' structure
- Compliance with setbacks and zoning standards
- Distance from incompatible land uses
- Availability of secure access and utility routing

A review of existing towers and structures within the required propagation corridor confirmed that no existing structure meets the height, location, or structural requirements necessary to support the licensed network.

Facility Design

The tower is engineered to:

- Meet or exceed TIA-222 structural standards
- Support the licensed user's equipment at the required elevation
- Allow future collocation where structurally feasible
- Minimize ground disturbance
- Comply with FAA lighting/marketing requirements (if applicable)

All equipment will be enclosed within a secure fenced compound with controlled access.

Compatibility with Surrounding Area

The site is located in an area where communications infrastructure is compatible with existing land uses. The facility is screened by natural vegetation and topography, and the tower's finish will comply with FAA requirements or local standards as applicable.

3. STATEMENT OF NEED

The proposed 449-foot communications structure is necessary to support the operational requirements of a private FCC-licensed network that relies on long-distance east-west signal propagation. The following factors establish the need for the facility:

1. Required Signal Path

The licensed network requires a clear, reliable east-west transmission path spanning several miles. Terrain, vegetation, and curvature of the earth necessitate a structure of 440 feet to achieve the required line-of-sight performance.

2. No Suitable Existing Structures

A review of existing towers, silos, utility structures, and buildings within the required corridor found:

- Insufficient height
- Inadequate structural capacity
- Incompatible locations

- No feasible modification options

Therefore, a new purpose-built structure is required.

3. Operational Reliability

The licensed network supports critical operational functions that require:

- Consistent signal strength
- Minimal interference
- High reliability
- Compliance with FCC technical rules

The proposed tower ensures these requirements are met.

4. Federal Licensing Obligations

As an FCC-licensed operator, the user must maintain:

- Reliable coverage within its authorized service area
- Minimum signal thresholds
- Compliance with technical parameters

The proposed facility enables the operator to meet these federal obligations.

5. Future Capacity

The tower is designed to support additional equipment or users where feasible, reducing the need for additional structures in the region.

(c) **Wireless Communication Facilities and Services**

(1) **Purpose and Intent.** The regulations of this Section are intended to conform to federal laws and administrative rules governing facilities needed to operate wireless communication systems and to set forth procedures and standards for review and approval for the location of such facilities within the county or city.

- a. It is the intent to reasonably regulate the location and design of such facilities to retain the integrity of neighborhoods and the character, property values and aesthetic quality of the county or city.
- b. Given the increase in the number of wireless communication facilities requested as a result of the new technology and the Federal Telecommunications Act of 1996, it is the policy that all users should collocate attached wireless communication facilities and wireless communication towers, where practicable. Collocation is proposed in order to assure the most economic use of land and to prevent the proliferation of duplicative structures.
- c. In recognition of the concern that technological advances may render certain wireless communication facilities obsolete or unnecessary in the future, requirements are set forth for the removal of unused or unnecessary facilities in a timely manner and provide security for removal.

(2) **Zoning Districts and Approval Process for Wireless Communication Facilities.** Wireless Communication Facilities may be located, as follows:

Table 9.15		
Wireless Communication Facilities		
Type/Location of Wireless	Districts Permitted	Approval Procedure

Communication Facilities		
Attached Wireless Communication Facilities on Existing Structures		
Attached to an existing building or structure that will not be materially altered or changed in appearance	All districts, except on lots occupied by a single family residential use	Approval by the enforcement official
Attached to an existing utility structure that will not be modified or materially alter the pole or impair sight lines or compromise safety	All districts	Approval by the enforcement official
Collocation upon an existing wireless communication facility	All districts	Approval by the enforcement official
New Wireless Communication Tower		
Monopole up to 150 feet in height	A district or on civic, educational, public, and religious sites in all districts, except AP	Special exception and site plan by the board of zoning appeals
Monopole up to 199 feet in height	B1, B2, B3, O1, MD, M1 and M2	Special exception and site plan by the board of zoning appeals
Lattice tower up to 199 feet in height where it can be demonstrated that a monopole is not feasible	M1 and M2 districts	Special exception and site plan by the board of zoning appeals

(3) **Application Requirements - Collocation.** The following information shall be provided with the application, in addition to other site plan submittal requirements for an attached wireless communication facility collocated on an existing structure:

- a. The name, address and phone number of the person to contact for engineering, maintenance and other notice purposes. This information shall be continuously updated during all times the facility is on the premises.
- b. The owner and/or operator of the existing tower or structure.
- c. Legal description of the parent tract and leased parcel (if applicable).
- d. Elevation drawings and construction details of all existing and proposed wireless communication facilities, including accessory structures and equipment shelters.
- e. The reason or purpose for the wireless communication facility with specific reference to the provider's coverage, capacity and/or quality needs, goals and objectives.
- f. Identification of the entities providing the backhaul network for the tower described in the application and other cellular sites owned or operated by the applicant in the county or city.
- g. The structural capacity and whether it can accommodate the facility, as proposed or modified.
- h. Limits and type of fencing, the method of screening and location and type of illumination.
- i. A description of compliance with this section and all applicable federal, state or local laws.
- j. A description of performance guarantee to be posted upon issuance of a building permit to ensure removal of the facility if it is abandoned or is no longer needed.

(4) **Application Requirements for New Wireless Communication Tower.** The following information shall be provided with the application to construct any new wireless communication tower, in addition to the submittal requirements in subsection (3) above:

- a. A description of performance guarantee to be posted at the time of receiving a permit for the facility to ensure removal of the facility when it is abandoned or is no longer needed. The applicant shall demonstrate that funds will be available to the county or city for removal of

any structure used for wireless communication in an amount which reasonably reflects the cost of removal of the facility and restoration of the property or structure upon which the facility is located or placed. Adequate funds shall also be provided to cover the county or city's administrative costs in the event that the applicant or its successor does not remove the Wireless Communication Facility in a timely manner.

1. Applicant agrees to discuss options for ensuring the removal of the facility.

- b. Inventory all existing towers, antennas, or sites approved for towers that are within three (3) miles of the proposed site, including specific information about the location, height, and design of each tower.

1. Please See Exhibit A – Tower Map

- c. In recognition of the policy to promote collocation, a written agreement, transferable to all successors and assigns, that the operator shall make space available on the facility for collocation.

1. Please see Exhibit B – Collocation Affidavit

- d. A description of the suitability of the use of existing towers, other structures or alternative technology not requiring the use of towers or structures to provide the services to be provided through the use of the proposed new tower.

1. There are no options available which would remove the necessity for this new wireless communications facility.

- e. Prior to issuing an improvement location permit, a signed certification by a professional structural engineer licensed by the State of Indiana shall be provided to the county or city that describes the manner in which the proposed structure will fall in the event of damage, accident or injury (i.e. "fall zone"), and that the designated setback area shall accommodate the structure in the event it falls or breaks and will provide a reasonable buffer in the event the structure fails.

1. Applicant agrees to provide letter as described.

- f. The La Porte Airport Authority Board and the Michigan City Board of Aviation Commissioners shall be given written notice at least 60 days prior to the hearing that a permit has been filed requesting the approval of a new wireless communication tower.

1. Applicant has notified LaPorte Airport Authority Board and Michigan City Board of Aviation Commissioners on DATE

- g. A determination of no hazard letter issued by the FAA shall demonstrate that lighting is not required prior to approval of the special exception. If construction, and or use of the telecommunications requires FAA or Indiana Department of Aviation approval or review, then a final decision must be provided before the Board of Zoning Appeals may conduct any public hearing on a request for special exception.

1. Lighting will be required by the FAA for this wireless communications facility.

- (5) **Design Standards Applicable to All Facilities.** All wireless communication facilities shall be constructed and maintained in accordance with the following standards:

- a. Facilities shall be located and designed to be harmonious with the surrounding areas.

1. The facility is placed well away from any residential structures and is adjacent to vacant properties on the nearest two sides.

- b. Minimum six (6) foot tall fencing shall be provided for protection of the tower and associated equipment and for security from children and other persons who may otherwise access the facilities. A brick wall may be substituted for the required fencing.

1. Fencing is proposed as required.

- c. Landscaping shall be provided to screen the structure base, accessory buildings and enclosure from adjacent uses and public rights-of-way.

Article 14

1. Applicant is not proposing landscaping as the site is not visible from any adjacent property.

- d. Accessory buildings shall be a maximum of 14 feet high and shall be set back in accordance with the requirements for principal buildings in the respective zoning district.

1. Applicant agrees.

~~e. All attached wireless communication facilities proposed on the roof of a building shall be designed, constructed and maintained to be architecturally compatible with the principal building. The height of the wireless communication facilities shall not exceed the maximum height of the district plus the allowable exceptions to the height limits contained in Section 15.02. The equipment enclosure may be located within the principal building or may be an accessory building. If proposed as an accessory building, it shall conform to all district requirements for principal buildings, including yard setbacks.~~

- f. The requirements of the Federal Aviation Administration, local airport and Federal Communication Commission shall be noted.

1. Please see Exhibit C – FAA Determination

~~g. If an antenna is installed on a structure other than a tower, the antenna and supporting electrical and mechanical equipment must be of a neutral color that is identical to, or closely compatible with, the color of the supporting structure so as to make the antenna and related equipment as visually unobtrusive as possible.~~

(6) **Design Standards Applicable to New Towers.** In addition to the design standards in subsection (5) above, all wireless communication towers shall be constructed and maintained in accordance with the following standards:

- a. **Feasible Collocation.** Siting or placement of new wireless communications facilities or towers shall be in accordance with the following hierarchy. The order of ranking shall be: (1) co-location first, (2) existing structure or building utilization, (3) new wireless communications facility tower location last. If a new tower is proposed, the applicant must have substantial evidence that a higher ranked alternative is not feasible or available. A permit for the construction and use of a new wireless communication facility shall not be granted until the applicant demonstrates a feasible collocation is not available for the coverage area and capacity needs.
- b. **Tower in County.** Any tower located in the unincorporated areas of the county outside of cities shall be separated a minimum of two (2) miles from any existing tower. This separation requirement shall not apply to a tower that is proposed to be located in an M-1 or M-2 industrial district.

1. There are no towers within 2 miles of this proposed tower.

- c. **Collocation Agreement.** All new and modified wireless communication facilities shall be designed and constructed to accommodate collocation, with a written agreement in a format approved by the county or city attorney. Any tower that is 150 feet or taller shall be capable of co-location of at least four (4) additional users. Any tower that is less than 150 feet shall be capable of co-location of at least two (2) additional users. The tower owner shall make space available for collocation of emergency communication equipment if requested by the county or city.

d. **Height.**

1. The maximum height for a new wireless communication tower shall be 199 feet.

- A tower of this height is not sufficient for this technology. Applicant has provided signal maps as Exhibit D which proves that the height applied for is the minimum height necessary.

2. A new wireless communication tower shall be designed at a height that will not require aviation hazard lighting by the FAA.

- All towers over 199' require tower lighting per the Federal Aviation Administration, so unfortunately, applicant cannot agree to this stipulation.

-
3. Any new tower within the Airport Overlay District shall comply with the height limits of the overlay district, measured relative to the airport elevation.
 - Tower is not within Airport Overlay District.
 4. The applicant shall demonstrate that the requested height of the new or modified tower and antenna shall be the minimum height necessary for reasonable communication, including additional height to accommodate future collocation where appropriate.
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 - e. **Tower Setbacks.** The wireless communication tower shall be setback from all non-residential property lines a distance at least equal to one-half ($\frac{1}{2}$) the height of the tower, from all residential property lines a distance at least equal to the height of the tower and from all street right-of-way lines a distance at least equal to the height of the tower.
 - The tower is placed to meet the required setbacks
 - f. **Guy Wires.** All towers shall be self-supporting and guy wires shall be prohibited.
 - Guy Wires are necessary for a tower of this height.
 - g. **Accessory Structure Setback.** Accessory structures must satisfy the minimum zoning district building setback requirements. **Access.** There shall be unobstructed access to the tower, for operation, maintenance, repair and inspection purposes, which may be provided through or over an easement. This access shall have a width and location determined by such factors as: the location of adjacent thoroughfares and traffic and circulation within the site; utilities needed to service the tower and any attendant facilities; the location of buildings and parking facilities; proximity to residential districts and minimizing disturbance to the natural landscape; and the type of equipment which will need to access the site.
 - Site plan meets all of these requirements.
 - i. **Soils Report.** The tower shall be constructed in accordance with all applicable building codes and shall include the submission of a soils report from a geotechnical engineer, licensed in the State of Indiana. This soils report shall include soil borings and statements confirming the suitability of soil conditions for the proposed use.
 - Applicant will gladly supply a soils report before an Improvement Location Permit is issued.
 - J. **Color.** Towers shall be painted a neutral color so as to reduce visual obtrusiveness or be constructed of galvanized steel.
 - Tower will be galvanized steel similarly to all towers in LaPorte County.
 - k. **Lighting.** Towers shall not be artificially lighted and shall not exceed a height that requires aviation hazard lighting.
 - Applicant is requesting height variance.

(7) Collocation

- a. **Statement of Policy.** It is the policy to minimize the overall number of newly established locations for wireless communication facilities and towers throughout the county by encouraging the use of existing structures. If a provider fails or refuses to permit collocation on a facility owned or controlled by it, where collocation is feasible, the result will be that a new and unnecessary additional structure will be required, in contradiction with policy. Collocation shall be required unless an applicant demonstrates that collocation is not feasible.
 - Applicant has agreements with all of the major wireless providers.
- b. ~~**Antennas on Existing Towers.** An antenna which is attached to an existing tower may be approved by the enforcement official and, to minimize adverse visual impacts associated with the proliferation and clustering of towers, collocation of antennas by more than one carrier on existing towers shall take precedence over the construction of new towers, provided such collocation is accomplished in a manner consistent with the following:~~

- ~~1. A tower which is modified or reconstructed to accommodate the collocation of an additional antenna shall be of the same tower type as the existing tower, unless the enforcement official allows reconstruction as a monopole.~~
 - ~~2. An existing tower may be modified or rebuilt to a taller height, not to exceed 15 feet over the tower's existing height, to accommodate the collocation of an additional antenna with approval by the enforcement official. A height increase of more than 15 feet shall require approval by the Board of Zoning Appeals.~~
 - ~~e. **Antennas Mounted on Structures or Rooftops.** Wireless communication antennas placed on the roofs of buildings may be approved by the enforcement official, if the principal use is a conforming use and the building is a conforming structure. The antenna shall not exceed the height of its supporting structure by more than 12 feet.~~
 - ~~d. **Antennas Mounted on Utility Structures.** Wireless communication antennas attached to utility structures such as water towers or electrical transmission line towers may be approved by the enforcement official. The equipment cabinet or structure used in association with antennas shall be located in accordance with the Ordinance requirements for accessory structures.~~
- (8) **Variances.** The Board of Zoning Appeals may consider a variance from the standards of this Section, based upon a finding that one or more of the following factors exist, as appropriate for the type of variance requested:
- a. **Location.** The applicant must demonstrate that a location within a district or location in accordance with the standards of this Section cannot reasonably meet the coverage or capacity needs of the applicant.
 1. **Not applicable.**
 - b. **Tower Setback.** The applicant has provided engineering information documenting that the tower is self-collapsing and that the setback designated area would accommodate the structure should it fall or break and would provide a reasonable buffer in the event the structure fails.
 - c. **Not applicable.**
 - d. **Height.** The height requested is due to signal interference due to topography, tall buildings, masses of trees, or other obstructions, or would reduce the number of towers to the benefit of the cities and county. The granting of the variance would not have a negative impact on any public use airport.
 - e. **Applicant is providing evidence which supports the need for the additional height.**
 - f. **Mitigation.** The applicant has proposed means to mitigate any negative impacts through provision for future collocation, if found to be appropriate by the county or city and special design of the facility and site.
 1. **Not applicable.**
 - g. **Design.** The wireless communication and accessory facilities shall be designed to be compatible with the existing character of the proposed site, neighborhood and general area such as a steeple, bell tower, or similar form.
 1. **Applicant agrees.**
- (9) **Removal.** Wireless communication facilities shall be removed by the owner if the facility is no longer in use. The facilities must be removed within a year of the end of use. A performance guarantee shall be provided to the county or city at the time of receiving an improvement location permit for the facility to ensure removal of the facility when it is abandoned or is no longer needed. The applicant shall demonstrate that funds will be available to the county or city for removal of any structure used for wireless communication in an amount which reasonably reflects the cost of removal of the facility and restoration of the property or structure upon which the facility is located or placed. Adequate funds shall also be provided to cover the county or city's administrative costs in the event that the applicant or its successor does not remove the Wireless Communication Facility in a timely manner.

EXHIBIT A

Tower Map/Location Map

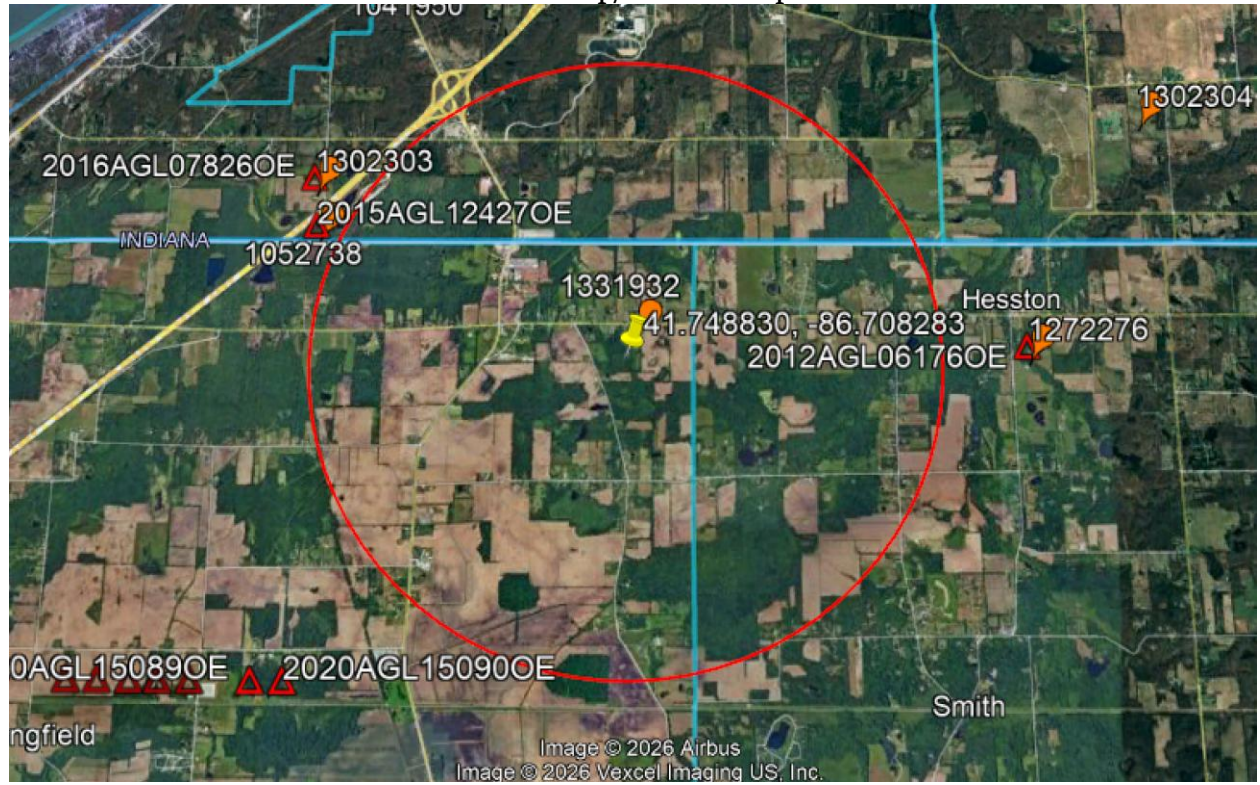
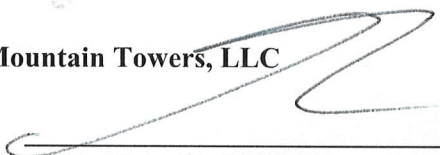


Exhibit B
AFFIDAVIT
Iron Mountain Towers, LLC
WIRELESS TELECOMMUNICATION FACILITY

I, Grant A. Phillips, President of Iron Mountain Towers, LLC (hereinafter "IMT"), being duly sworn states the following:

1. I have the authority to speak of and commit to the actions set forth in the Affidavit on behalf of IMT.
2. This Affidavit will transfer, if necessary, to all assignees of this wireless communications facility
3. IMT is seeking to proposed a new wireless telecommunications facility at 344 W 1000 N, LaPorte, IN.
4. IMT has agreements with all of the major wireless providers as well as others. IMT will accommodate co-location of additional antennas for future users at market rental rates.

Iron Mountain Towers, LLC

A handwritten signature in black ink, appearing to read 'Grant A. Phillips', is written over a horizontal line.

By Grant A. Phillips
President



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Exhibit C

Aeronautical Study No.
2025-AGL-9500-OE

Issued Date: 08/27/2025

RESCOM ENVIRONMENTAL CORP
ANDREW SMITH
PO Box 361
Petoskey, MI 49770

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Antenna Tower LaPointe
County, State: LaPorte, Indiana

Collected Point(s):

Label	Latitude	Longitude	SE	DET AGL	AMSL
pt-1	41-45-01.17N	86-42-26.21W	673 Ft	449 Ft	1122 Ft

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 M Change 1, Obstruction Marking and Lighting, a med-dual system-Chapters 4,8(M-Dual),&15.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- ☐ At least 10 days prior to start of construction (7460-2, Part 1)
☒ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

This determination expires on 02/27/2027 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.

- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact teresa.ctr.johnson@faa.gov, at 1-404-305-5540, or teresa.ctr.johnson@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2025-AGL-9500-OE.

Signature Control No: 665292444-674996484

(DNE)

Julie A. Morgan

Manager, Obstruction Evaluation Group

Attachment(s)

Case Description

Frequency Data

Map(s)

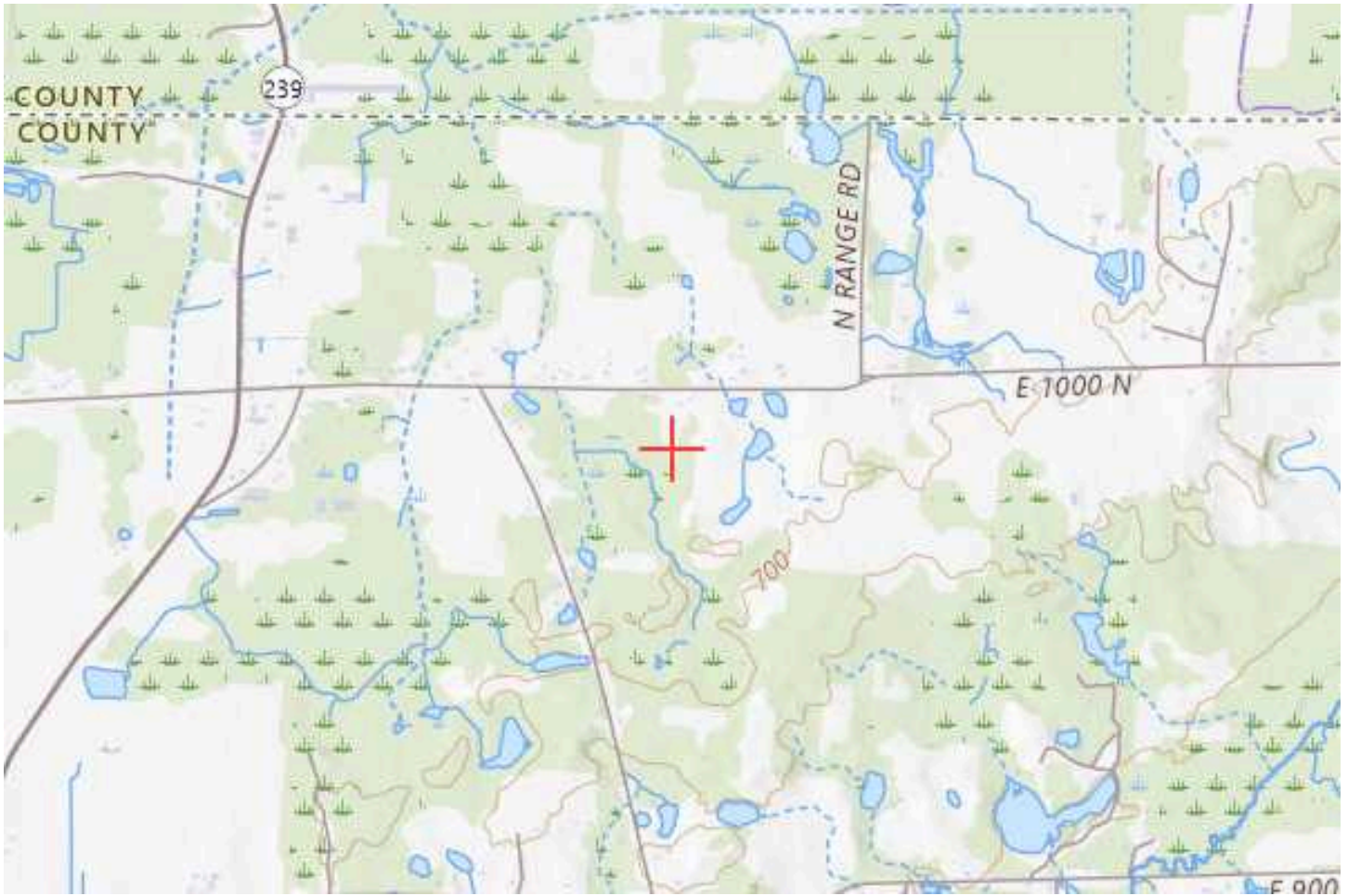
cc: FCC

Case Description for ASN 2025-AGL-9500-OE

Construction of a guyed style telecommunications tower.

Frequency Data for ASN 2025-AGL-9500-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
6	7	GHz	42	dBW
6	7	GHz	55	dBW
10	11.7	GHz	42	dBW
10	11.7	GHz	55	dBW
17.7	19.7	GHz	42	dBW
17.7	19.7	GHz	55	dBW
21.2	23.6	GHz	42	dBW
21.2	23.6	GHz	55	dBW
614	698	MHz	1000	W
614	698	MHz	2000	W
698	806	MHz	1000	W
806	824	MHz	500	W
806	901	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
929	932	MHz	3500	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1670	1675	MHz	500	W
1710	1755	MHz	500	W
1850	1910	MHz	1640	W
1850	1990	MHz	1640	W
1930	1990	MHz	1640	W
1990	2025	MHz	500	W
2110	2200	MHz	500	W
2305	2360	MHz	2000	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W
2496	2690	MHz	500	W



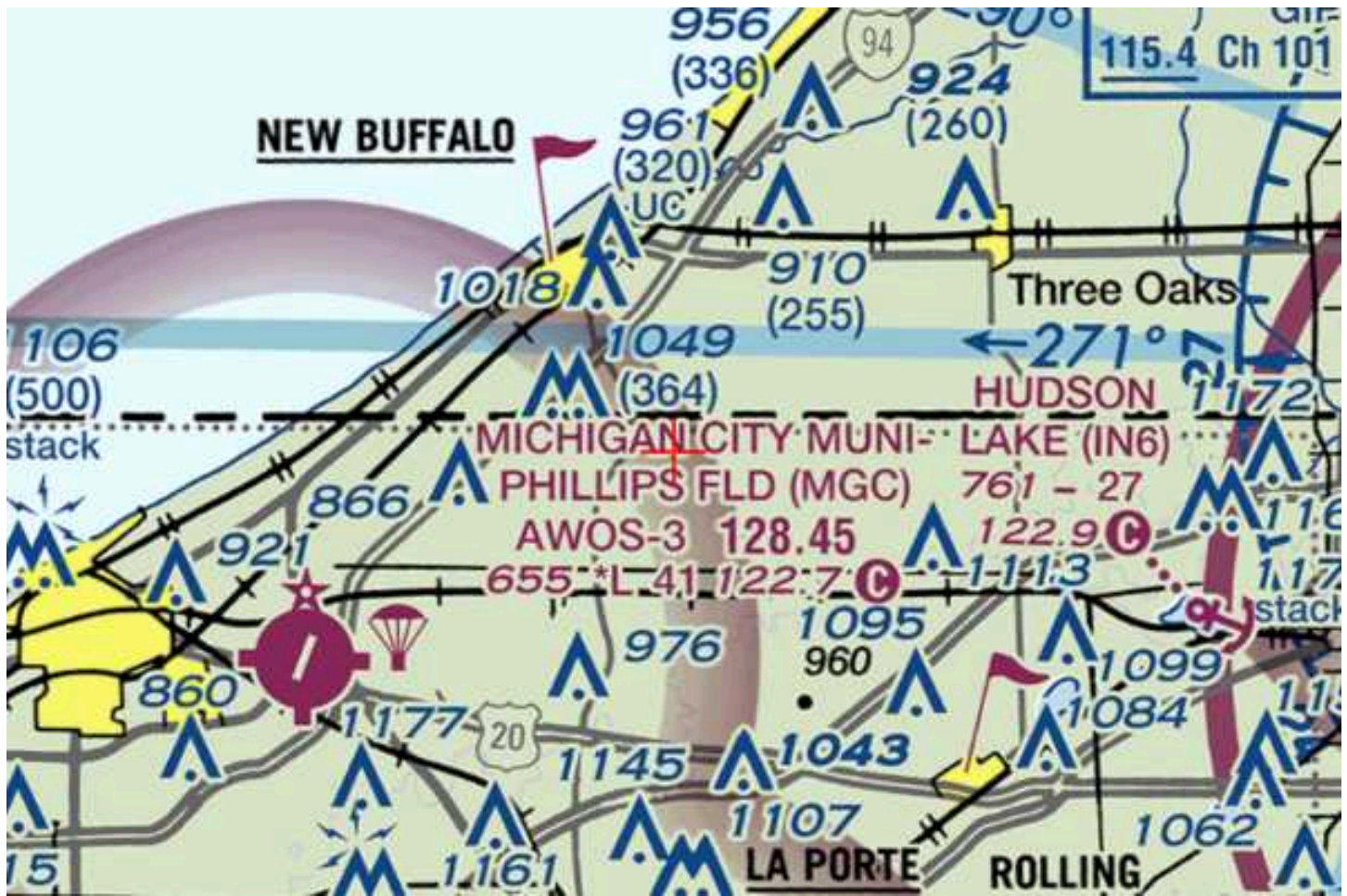
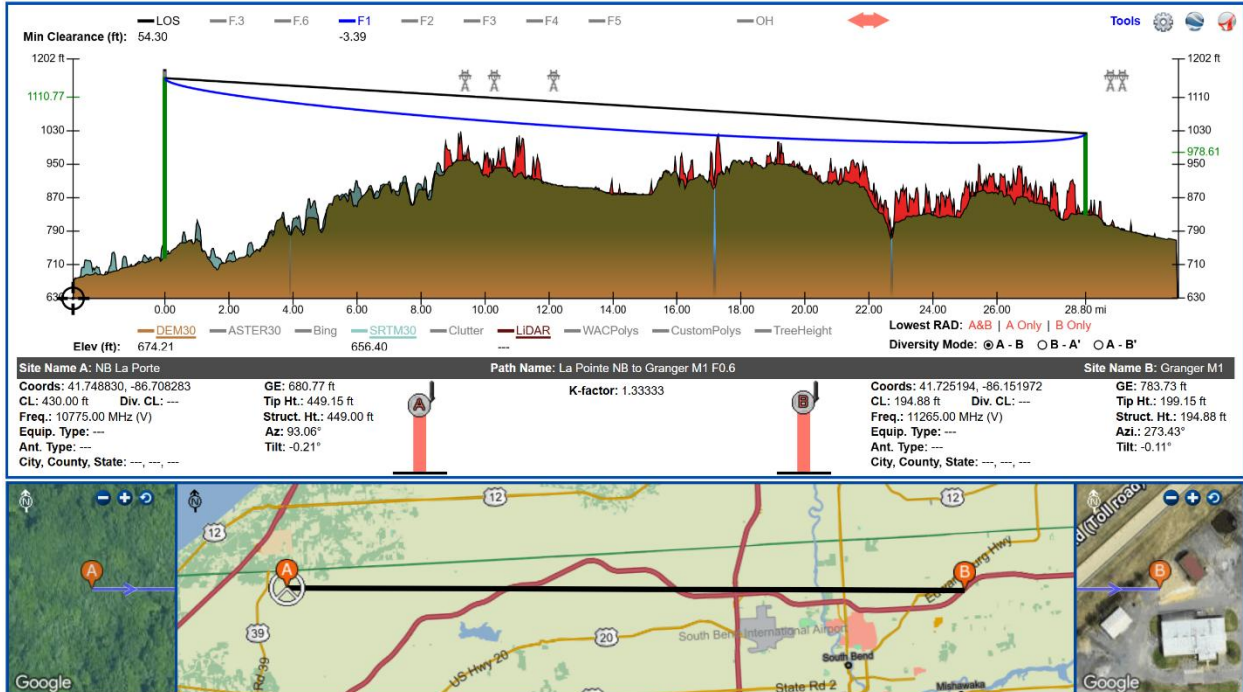
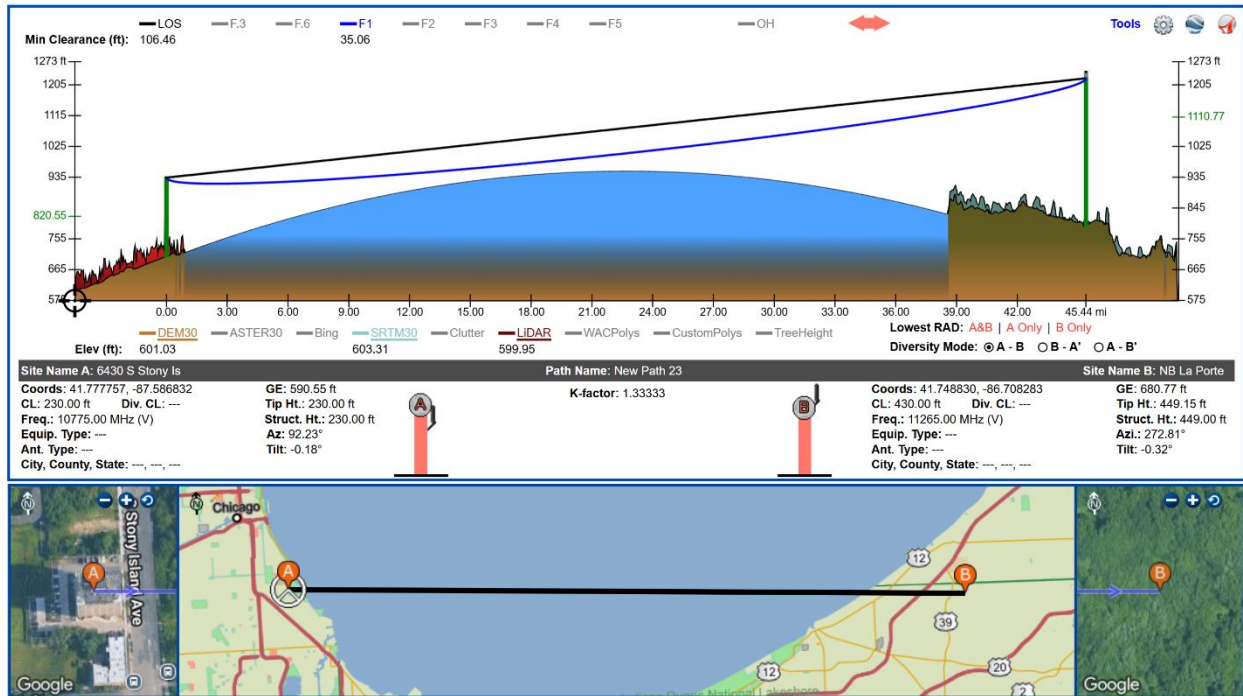


Exhibit D

Signal Maps



2-2-2026

Grant A. Phillips
TowerKing

Reference: Proposed 440' Guyed Tower Design
La Porte, IN
WTC C2601-014 R1



World Tower
COMPANY, INC.

The proposed structure will be designed by a licensed professional engineer to safely support the specified loading in accordance with the Indiana Building Code and TIA-222-H Tower Standard for a 107 mph design wind gust Vult. Ice accumulation will be considered on the tower (1.5") with a reduced wind loading of 40 mph per the Building Code Requirements.

The structure will be designed based on standard steel design techniques and procedures including all applicable safety factors, therefore, the structure is considered "safe" at its design wind loading. If an extreme wind event were to occur, failure would not be expected at the instant the design wind speed is exceeded. Any wind loading that occurs over and above the design wind loading would begin to overcome the design safety factors before a failure could occur. Safety factors for tower members vary based on failure mode, but all tower members can support a minimum of 1.25 times their design load without permanent deformation.

Steel towers are constructed of many small leg, diagonal and horizontal members of known strength. Guyed towers are slender structures subjected to both lateral and vertical loads. Lateral loads are produced by the wind while tower weight, ice, and vertical components of the guy wires produce vertical loads. These combined forces produce buckling in the shaft in the unlikely event of a collapse, but history has shown with guyed towers that the mast tends to collapse on itself due to the vertical loads, rather than lay straight out. Variables which have an impact on the orientation of the collapsed debris include, but are not limited to, member sizes, guy wire sizes, face dimensions, bracing scheme, guy anchor distance, type of loading and failure, and wind direction. For this reason, exact fall radius cannot be calculated for a guyed tower.

Although it cannot be calculated, historical collapse data indicates that this type of tower generally collapses with debris landing less than 48% of the tower height away from the tower base. See attached historical data sheet. Using this historical data, the maximum theoretical fall radius for this tower would be about 212' or less.

Please contact us should you have further questions concerning the safety of tower structures or other aspects of tower design.

Sincerely,

Kirk R. Hall, P.E.
World Tower Company, Inc.



2-2-2026

Fabrication, Installation, and Maintenance of TV, AM, FM, & Wireless Communications Towers

1213 Compressor Drive

P.O. Box 508

Mayfield, KY 42066

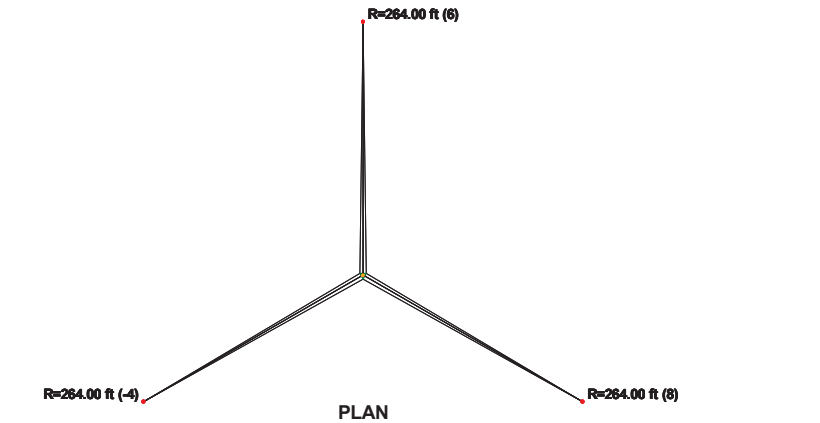
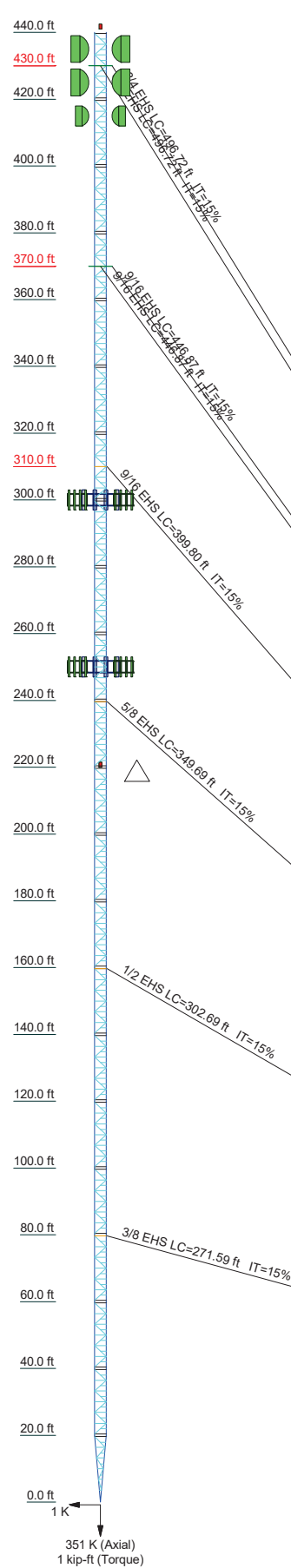
270-247-3642

FAX: 270-247-0909

E-mail: worldtower@worldtower.com

Web: www.worldtower.com

Section	T22	T21	T20	T19	T18	T17	T16	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
Legs	SR 2 1/2											SR 2 1/4										SR 1 3/4
Leg Grade	SR 7/8											SR 1										SR 1
Diagonals	SR 7/8											SR 1										SR 1
Diagonal Grade	SR 7/8											SR 1										SR 1
Top Girts	SR 7/8											SR 1										SR 1
Bottom Girts	SR 7/8											SR 1										SR 1
Horizontal	SR 7/8											SR 1										SR 1
Sec. Horizontal	SR 7/8											SR 1										SR 1
Top Guy Pull-Offs	SR 7/8											SR 1										SR 1
Face Width (ft)	SR 7/8											SR 1										SR 1
# Panels @ (ft)	SR 7/8											SR 1										SR 1
Weight (K)	SR 7/8											SR 1										SR 1

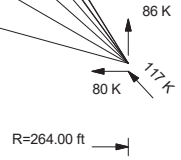


DESIGNED APPURTENANCE LOADING			
TYPE	ELEVATION	TYPE	ELEVATION
Beacon Lighting	440	8 FT DISH	425
Lightning Rod 5/8x4'	440	8 FT DISH	425
Dish Mount	435	Dish Mount	415
Dish Mount	435	Dish Mount	415
(2) RTPDC-1776-PF-48	435	(2) RTPDC-1776-PF-48	415
(2) RTPDC-1776-PF-48	435	(2) RTPDC-1776-PF-48	415
8 FT DISH	435	6 FT DISH	415
8 FT DISH	435	6 FT DISH	415
Dish Mount	425	Carrier 1 - 30,000 sq in	300
Dish Mount	425	Carrier 2 - 30,000 sq in	250
(2) RTPDC-1776-PF-48	425	Beacon Lighting	220
(2) RTPDC-1776-PF-48	425	Beacon Lighting	220

MATERIAL STRENGTH					
GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

- TOWER DESIGN NOTES**
1. Tower is located in La Porte County, Indiana.
 2. Tower designed for Exposure C to the TIA-222-H Standard.
 3. Tower designed for a 107.00 mph basic wind in accordance with the TIA-222-H Standard.
 4. Tower is also designed for a 40.00 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
 5. Deflections are based upon a 60.00 mph wind.
 6. Tower Risk Category II.
 7. Topographic Category 1 with Crest Height of 0 ft
 8. TOWER RATING: 96.9%

ALL REACTIONS ARE FACTORED



World Tower Company, Inc.

1213 Compressor Dr
Mayfield, KY 42066
Phone: 270-247-3642
FAX: 270-247-0909

Job: **440' 42SR / Run C2601-014**

Project: **La Pointe**

Client: TowerKing	Drawn by: Cort Walker	App'd:
Code: TIA-222-H	Date: 01/23/26	Scale: NTS
Path:		Dwg No. E-1



WORLD TOWER
COMPANY, INC.

P.O. Box 405
2578 State Route 45N
Mayfield, KY 42066
502-247-3642
FAX: 502-247-0909
E-mail: worldtow@ldd.net

FALL RADIUS FOR GUYED TOWERS

AVERAGE = 24%
MAXIMUM = 48%

LOCATION	TOWER HEIGHT (feet)	MAXIMUM DISTANCE from base to debris (feet)	FALL RADIUS TO HEIGHT (%)
KCRG - TV Cedar Rapids, IA	2000	300	15
KWWL - TV Waterloo, IA	2000	500	25
WNFY - TV Palatka FL	949	300	32
Senior Road Antenna Project Houston TX	2000	300	15
KANU - FM Lawrence KS	605	290	48
KSLA - TV Shreveport LA	1830	125	7
KLDH - TV Topeka KS	1440.5	350	24.3
*	528	225	42.6
*	1406	410	29.2
*	1795	460	25.6
*	1910	300	15.7
*	1334	250	18.7
**	920	599	65.2
*	370	75	20.3

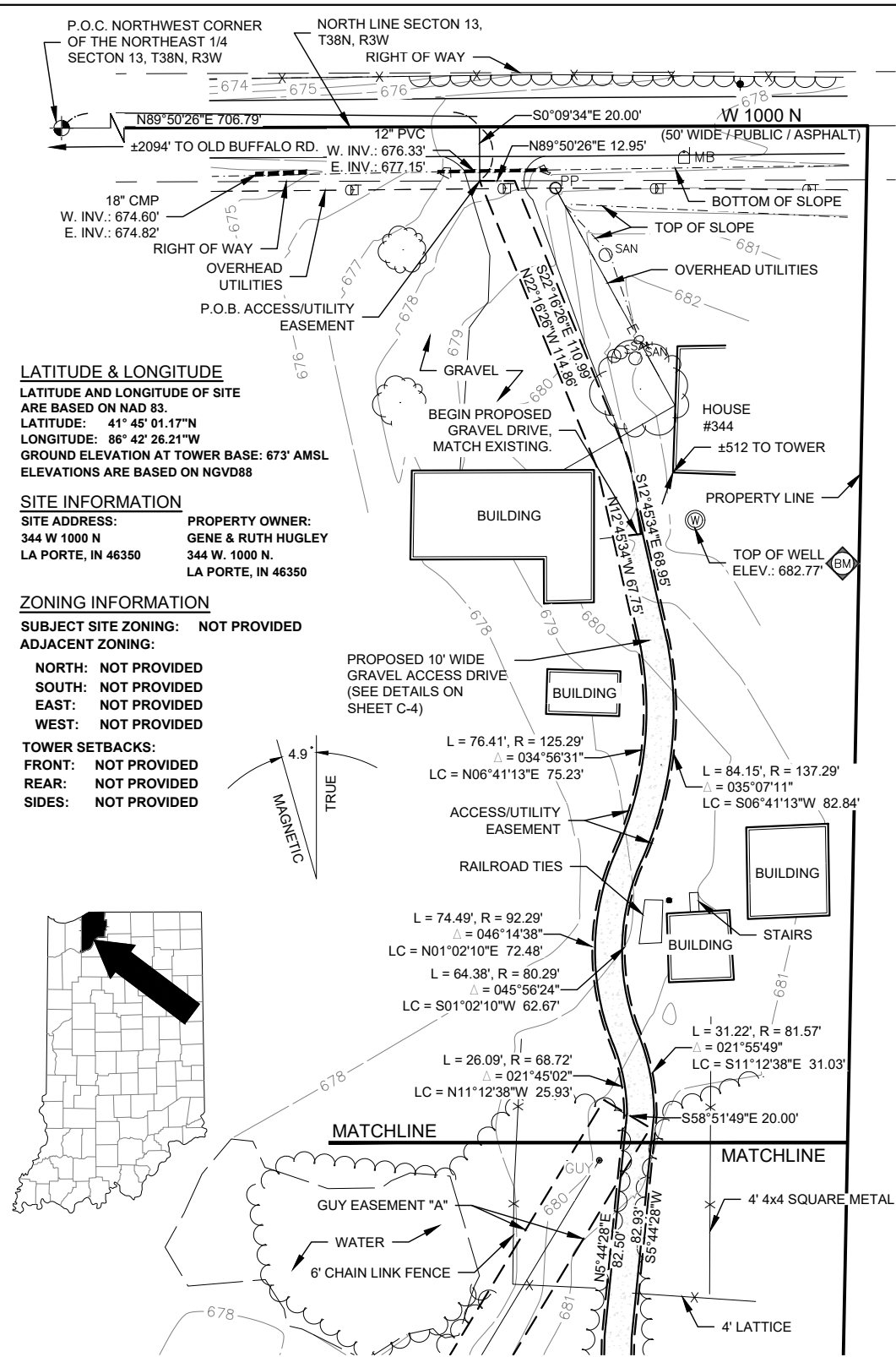
- * Data obtained from Stainless, Inc., North Wales, Pennsylvania; LeBlanc & Royle Communications, Inc., Oakville, Ontario; Utility Tower Company, Oklahoma City, Oklahoma.
- ** Of total data relating to 14 actual collapse radii for guyed towers, only (1) had a fall radius to height over 50% and this was a controlled fall to develop engineering data. (Nine guys on one side were connected to one guy and one anchor, and this single guy wire was then cut, freeing support at all nine levels on one side of the tower.)

NOTE:
FOR SITES WHERE A CRANE IS NECESSARY, THE CONTRACTOR SHALL CONFIRM AN UNOBSTRUCTED ROUTE FOR THE CRANE FROM PUBLIC ROAD TO TOWER SITE PRIOR TO CONSTRUCTION. NO AERIAL OBSTRUCTIONS UNDER FIFTEEN FEET ABOVE GRADE, INCLUDING AERIAL UTILITY LINES, ARE ALLOWED ALONG SAID CRANE ROUTE.



La Pointe

DRAWING INDEX		CIVIL ENGINEER LANDTECH PROFESSIONAL SURVEYING AND ENGINEERING 1275 MCGREGOR WAY GRAWN, MI 49637 P.O. BOX 193 PHONE: (231) 943-0050	SURVEYOR LANDTECH PROFESSIONAL SURVEYING AND ENGINEERING 1275 MCGREGOR WAY GRAWN, MI 49637 P.O. BOX 193 PHONE: (231) 943-0050	PROJECT INFORMATION																																								
T-1 S-1 S-2 C-1 C-3 C-4 E-1 E-2 E-3 E-4 E-5	TITLE SHEET	DIRECTIONS TO SITE: DEPART LA PORTE MUNICIPAL AIRPORT [2341 S STATE ROAD 39, LA PORTE IN 46350, UNITED STATES,TURN ON IN-39 [S STATE ROAD 39] (NORTH) 1.0 MI KEEP STRAIGHT ONTO IN-39 [LONGWOOD DR] 1.0 MI BEAR RIGHT (NORTH-EAST) ONTO IN-2 [IN-39] 1.3 MI TURN LEFT (NORTH) ONTO US-35 [IN-39] 1.9 MI TURN RIGHT (NORTH) ONTO IN-39 [N STATE ROAD 39] 8.6 MI TURN RIGHT (EAST) ONTO W COUNTY ROAD 1000 N [W 1000 N] SITE IS ON THE SOUTH SIDE OF W COUNTY ROAD 1000 N [W 1000 N]	 VICINITY MAP NOT TO SCALE	<u>SCOPE OF WORK:</u> UNMANNED TELECOMMUNICATIONS FACILITY																																								
	SURVEY PLAN			<u>TYPE OF CONSTRUCTION</u> PROJECT TYPE: PROPOSED 445' GUY TOWER																																								
	ENLARGED SITE PLAN			<u>SITE ADDRESS:</u> 344 W. 1000 N La Porte, IN 46350																																								
	TOWER ELEVATION & DETAILS			<u>TOWER INFORMATION:</u> (LATITUDE & LONGITUDE BASED ON NAD1983) LATITUDE: 41° 45' 01.17"N LONGITUDE: 86° 42' 26.21"W GROUND ELEVATION AT TOWER BASE: 673' AMSL PROPOSED RAD CENTER HEIGHT: 445' AGL.																																								
	ICE BRIDGE & FENCE DETAILS			<u>SQUARE FOOTAGE:</u> PROPOSED LEASE AREA: 10,000 SQ. FT.																																								
GENERAL NOTES				<u>PROPERTY OWNERS:</u> GENE & RUTH HUGLEY 344 W 1000 N La Porte, IN 46350																																								
ELECTRICAL NOTES & DETAILS				<u>PARCEL NUMBER (TAX I.D.):</u> 46-02-13-200-009.000-062																																								
SINGLE LINE DIAGRAM & DETAILS				<u>OCCUPANT LOAD:</u> UNOCCUPIED																																								
GROUNDING DETAILS				<u>PARKING REQUIREMENTS:</u> ADDITIONAL PARKING REQUIRED: NONE EXISTING PARKING MODIFICATIONS: NONE REQUIRED																																								
GROUNDING DETAILS																																												
GROUNDING NOTES & DETAILS																																												
NOTES																																												
CONCRETE AND REINFORCING STEEL NOTES APPLICABLE BUILDING CODES AND STANDARDS SITE WORK GENERAL NOTES STRUCTURAL STEEL NOTES GROUNDING NOTES ELECTRICAL INSTALLATION NOTES GENERAL NOTES		(SEE PAGE C-5) (SEE PAGE C-5) (SEE PAGE C-5) (SEE PAGE C-5) (SEE PAGE E-5) (SEE PAGE E-1) (SEE PAGE C-5)																																										
				TOWER KING 23434 ELLIOTT ROAD, DEFIANCE, OH 43512 PH: (419) 782-8591		LaPointe W. 1000 N. LaPorte, IN 46350		<table><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td>02/05/26</td><td>TENANTS AND ANTENNA HEIGHTS</td><td>RJH</td><td>MM</td><td>MM</td></tr><tr><td>1</td><td>01/21/26</td><td>SCALE CORRECTION</td><td>RJH</td><td>MM</td><td>MM</td></tr><tr><td>0</td><td>04/03/24</td><td>ISSUED FOR REVIEW</td><td>RJH</td><td>MM</td><td>MM</td></tr><tr><td>NO.</td><td>DATE</td><td>REVISIONS</td><td>BY</td><td>CHK</td><td>APP'D</td></tr><tr><td colspan="2">SCALE: AS SHOWN</td><td>DESIGNED BY: MM</td><td colspan="3">DRAWN BY: RJH</td></tr></table>							2	02/05/26	TENANTS AND ANTENNA HEIGHTS	RJH	MM	MM	1	01/21/26	SCALE CORRECTION	RJH	MM	MM	0	04/03/24	ISSUED FOR REVIEW	RJH	MM	MM	NO.	DATE	REVISIONS	BY	CHK	APP'D	SCALE: AS SHOWN		DESIGNED BY: MM	DRAWN BY: RJH		
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						TITLE SHEET																																						
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						24359002																																						



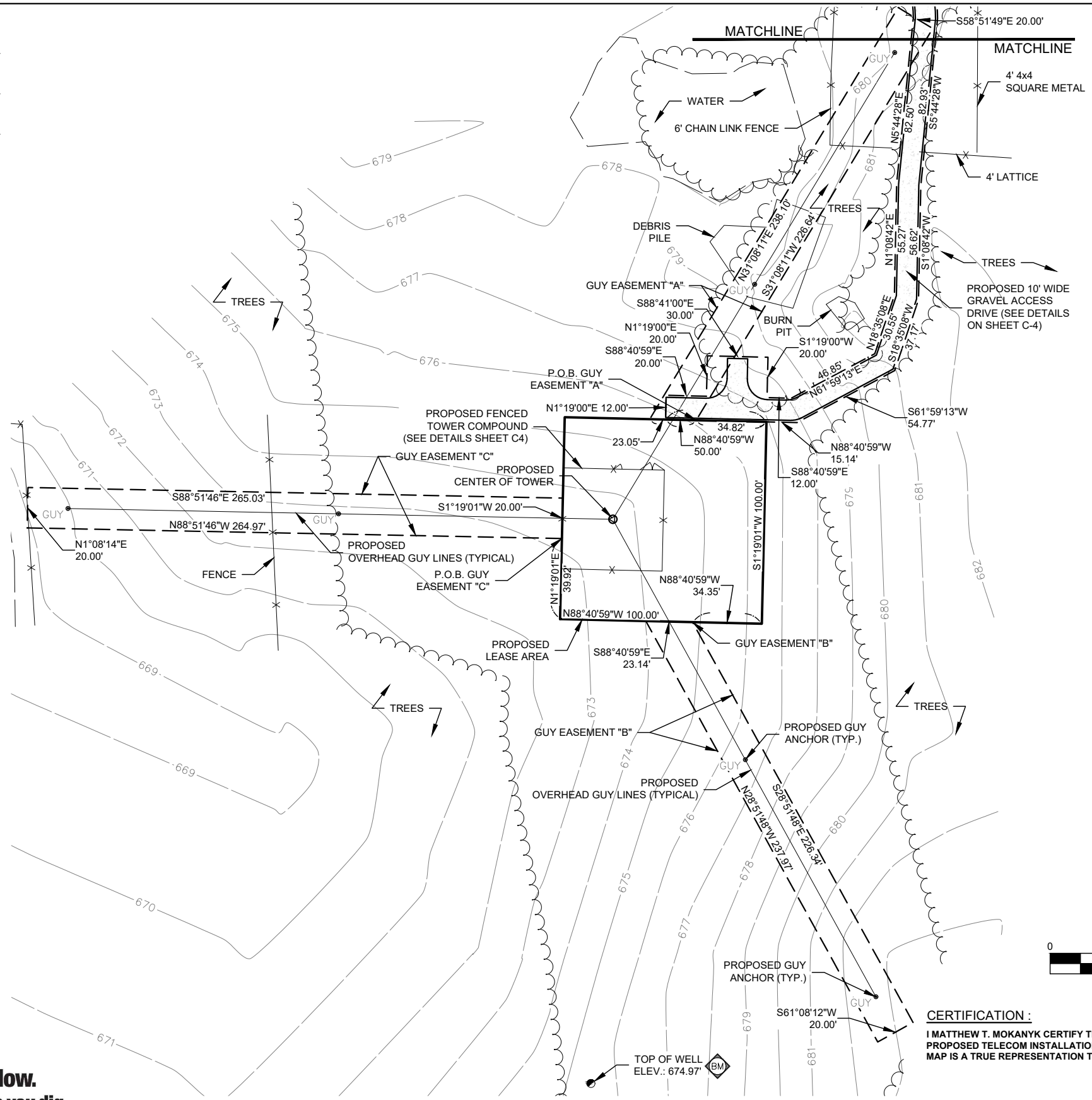
LATITUDE & LONGITUDE
LATITUDE AND LONGITUDE OF SITE
ARE BASED ON NAD 83.
LATITUDE: 41° 45' 01.17"N
LONGITUDE: 86° 42' 26.21"W
GROUND ELEVATION AT TOWER BASE: 673' AMSL
ELEVATIONS ARE BASED ON NGVD88

SITE INFORMATION
SITE ADDRESS:
344 W 1000 N
LA PORTE, IN 46350
PROPERTY OWNER:
GENE & RUTH HUGLEY
344 W. 1000 N.
LA PORTE, IN 46350

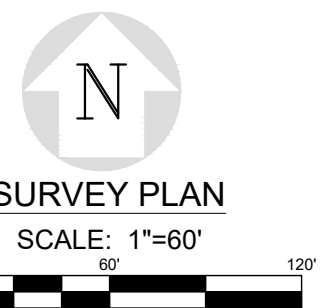
ZONING INFORMATION
SUBJECT SITE ZONING: NOT PROVIDED
ADJACENT ZONING:
NORTH: NOT PROVIDED
SOUTH: NOT PROVIDED
EAST: NOT PROVIDED
WEST: NOT PROVIDED
TOWER SETBACKS:
FRONT: NOT PROVIDED
REAR: NOT PROVIDED
SIDES: NOT PROVIDED



- GENERAL NOTES**
- NO PROPOSED MUNICIPAL SEWER OR WATER UTILITIES ARE REQUIRED FOR THIS SITE.
 - FINISH GRADE WILL MATCH EXISTING CONTOUR.
 - THERE WILL BE NO CHANGE IN DRAINAGE PATTERN DUE TO THE PROPOSED INSTALLATION.
 - NO SIGNIFICANT RUNOFF IS GENERATED BY THE PROPOSED INSTALLATION.
 - NO HAZARDOUS MATERIALS WILL BE USED, PROCESSED OR STORED AT THE SITE.
 - TOWER LIGHTING SHALL CONFORM TO FAA STANDARDS AS REQUIRED.
 - ALL WORK SHALL CONFORM TO FAA & FCC REGULATIONS.
 - THIS IS NOT AN 865 IAC RULE 12 SURVEY.



- LEGEND**
- IRON FOUND
 - IRON SET
 - ▲ P.K. NAIL FOUND
 - ▲ P.K. NAIL SET
 - ⊙ GPS MONUMENT
 - ⊙ MONUMENT BOX FOUND
 - ⊙ MONUMENT FOUND
 - ⊙ MONUMENT SET
 - (R) RECORD
 - (M) MEASURED
 - ^{STS} STORM MANHOLE
 - ⊕ CATCH BASIN
 - ⊕ SQUARE CATCH BASIN
 - ^{SNS} SANITARY MANHOLE
 - ⊕ SANITARY CLEAN-OUT
 - ⊕ MONITOR WELL
 - TELCO. MANHOLE
 - PP POWER POLE
 - GUY GUY
 - ⊕ LIGHT POLE
 - ⊕ ELECTRIC TRANSFORMER
 - EM ELECTRIC METER
 - EH ELECTRIC HANDHOLE
 - WV WATER VALVE
 - HYDRANT
 - GAS METER
 - GAS MARKER
 - GV GAS VALVE
 - TP TELEPHONE PEDESTAL
 - SP SIGN POST
 - FL FENCE LINE
 - BM BENCHMARK
 - POST



CERTIFICATION:
I MATTHEW T. MOKANYK CERTIFY THAT I HAVE SURVEYED AND MARKED THE PROPOSED TELECOM INSTALLATION AND EXISTING FEATURES AND THAT THIS MAP IS A TRUE REPRESENTATION THEREOF.

Matthew T. Mokanyk, P.S., P.E.
Indiana P.S. No. LS20100015

04/05/24
Date

BEARING BASIS: INDIANA STATE PLANE COORDINATES, WEST ZONE. NAD 83.



TOWER KING
23434 ELLIOTT ROAD,
DEFIANCE, OH 43512
PH: (419) 782-8591

LaPointe
W. 1000 N.
LaPorte, IN 46350

NO.	DATE	REVISIONS	BY	CHK	APP'D
2	02/05/26	TENANTS AND ANTENNA HEIGHTS	RJH	MM	MM
1	01/21/26	SCALE CORRECTION	RJH	MM	MM
0	04/03/24	ISSUED FOR REVIEW	RJH	MM	MM

SHEET S-1
SURVEY PLAN
DRAWING NUMBER
24359002

GENERAL NOTES

1. NO PROPOSED MUNICIPAL SEWER OR WATER UTILITIES ARE REQUIRED FOR THIS SITE. FINISH GRADE WILL MATCH EXISTING CONTOURS.
2. THERE WILL BE NO CHANGE IN DRAINAGE PATTERN DUE TO THE PROPOSED INSTALLATION. NO SIGNIFICANT RUNOFF IS GENERATED BY THE PROPOSED INSTALLATION.
3. NO HAZARDOUS MATERIALS WILL BE USED, PROCESSED OR STORED AT THE SITE.
4. ALL WORK SHALL CONFORM TO FAA & FCC REGULATIONS.
5. SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ARE DEEMED UNNECESSARY FOR THIS PROJECT DUE TO THE LIMITED SCOPE OF EARTH DISRUPTION IN CONJUNCTION WITH EROSION CONTROL CHARACTERISTICS OF THE EXISTING SURFACE VEGETATION COVERAGE.
6. THIS IS NOT AN 865 IAC RULE 12 SURVEY.

PARENT PARCEL DESCRIPTION (as provided)

65-02-13-200-009 PCE ON W SD OF N 3/4 W 1/2 NE 1/4 EX 11.12 A S13 T38 R3. 30.201 A.

TOWER KING LEASE AREA DESCRIPTION

PART OF THE NORTHEAST 1/4 OF SECTION 13, TOWN 38 NORTH, RANGE 3 WEST, SPRINGFIELD TOWNSHIP, LaPORTE COUNTY, INDIANA, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF THE NORTHEAST 1/4 OF SAID SECTION; THENCE NORTH 89°50'26" EAST ALONG THE NORTH LINE OF SAID SECTION 13 A DISTANCE OF 706.79 FEET; THENCE SOUTH 00°09'34" EAST A DISTANCE OF 20.00 FEET TO THE SOUTH RIGHT OF WAY OF W. 1000 N. (50'WIDE/PUBLIC); THENCE NORTH 89°50'26" EAST ALONG SAID RIGHT OF WAY A DISTANCE OF 12.95 FEET; THENCE THENCE SOUTH 22°16'26" EAST A DISTANCE OF 110.99 FEET; THENCE SOUTH 12°45'34" EAST A DISTANCE OF 68.95 FEET; THENCE SOUTHERLY 84.15 FEET ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 137.29 FEET, A CENTRAL ANGLE OF 35°07'11", AND CHORD BEARING SOUTH 06°41'13" WEST 82.84 FEET; THENCE SOUTHERLY 64.38 FEET ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 80.29 FEET, A CENTRAL ANGLE OF 45°56'24", AND CHORD BEARING SOUTH 01°02'10" WEST 62.67 FEET; THENCE SOUTHERLY 31.22 FEET ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 81.57 FEET, A CENTRAL ANGLE OF 21°55'49", AND CHORD BEARING SOUTH 11°12'38" EAST 31.03 FEET; THENCE SOUTH 05°44'28" WEST A DISTANCE OF 82.93 FEET; THENCE SOUTH 01°08'42" WEST A DISTANCE OF 56.62 FEET; THENCE SOUTH 18°35'08" WEST A DISTANCE OF 37.17 FEET; THENCE SOUTH 61°59'13" WEST A DISTANCE OF 54.77 FEET; THENCE NORTH 88°40'59" WEST A DISTANCE OF 15.14 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 01°19'01" WEST A DISTANCE OF 100.00 FEET; THENCE NORTH 88°40'59" WEST A DISTANCE OF 100.00 FEET; THENCE NORTH 01°19'01" EAST A DISTANCE OF 100.00 FEET; THENCE SOUTH 88°40'59" EAST A DISTANCE OF 100.00 FEET TO THE POINT OF BEGINNING. CONTAINING 10,000 SQUARE FEET OR 0.230 ACRES.

TOWER KING ACCESS/UTILITY EASEMENT DESCRIPTION

A THIRTY (30) FOOT WIDE EASEMENT FOR INGRESS/EGRESS AND THE INSTALLATION AND MAINTENANCE OF UTILITIES OVER/UNDER AND ACROSS ALL THAT PART OF THE NORTHEAST 1/4 OF SECTION 13, TOWN 38 NORTH, RANGE 3 WEST, SPRINGFIELD TOWNSHIP, LAPORTE COUNTY, INDIANA, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF THE NORTHEAST 1/4 OF SAID SECTION; THENCE NORTH 89°50'26" EAST ALONG THE NORTH LINE OF SAID SECTION 13 A DISTANCE OF 706.79 FEET; THENCE SOUTH 00°09'34" EAST A DISTANCE OF 20.00 FEET TO THE SOUTH RIGHT OF WAY OF W. 1000 N. (50'WIDE/PUBLIC) AND THE POINT OF BEGINNING; THENCE NORTH 89°50'26" EAST ALONG SAID RIGHT OF WAY A DISTANCE OF 12.95 FEET; THENCE THENCE SOUTH 22°16'26" EAST A DISTANCE OF 110.99 FEET; THENCE SOUTH 12°45'34" EAST A DISTANCE OF 68.95 FEET; THENCE SOUTHERLY 84.15 FEET ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 137.29 FEET, A CENTRAL ANGLE OF 35°07'11", AND CHORD BEARING SOUTH 06°41'13" WEST 82.84 FEET; THENCE SOUTHERLY 64.38 FEET ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 80.29 FEET, A CENTRAL ANGLE OF 45°56'24", AND CHORD BEARING SOUTH 01°02'10" WEST 62.67 FEET; THENCE SOUTHERLY 31.22 FEET ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 81.57 FEET, A CENTRAL ANGLE OF 21°55'49", AND CHORD BEARING SOUTH 11°12'38" EAST 31.03 FEET; THENCE SOUTH 05°44'28" WEST A DISTANCE OF 82.93 FEET; THENCE SOUTH 01°08'42" WEST A DISTANCE OF 56.62 FEET; THENCE SOUTH 18°35'08" WEST A DISTANCE OF 37.17 FEET; THENCE SOUTH 61°59'13" WEST A DISTANCE OF 54.77 FEET; THENCE NORTH 88°40'59" WEST A DISTANCE OF 15.14 FEET TO THE NORTHEAST CORNER OF A LEASE AREA; THENCE CONTINUING NORTH 88°40'59" WEST ALONG THE NORTH LINE OF SAID LEASE AREA A DISTANCE OF 50.00 FEET; THENCE NORTH 01°19'00" EAST A DISTANCE OF 12.00 FEET; THENCE SOUTH 88°40'59" EAST A DISTANCE OF 20.00 FEET; THENCE NORTH 01°19'00" EAST A DISTANCE OF 20.00 FEET; THENCE SOUTH 88°41'00" EAST A DISTANCE OF 30.00 FEET; THENCE SOUTH 01°19'00" WEST A DISTANCE OF 20.00 FEET; SOUTH 88°40'59" WEST A DISTANCE OF 12.00 FEET; THENCE NORTH 61°59'13" EAST A DISTANCE OF 46.85 FEET; THENCE NORTH 18°35'08" EAST A DISTANCE OF 30.55 FEET; THENCE NORTH 01°08'42" EAST A DISTANCE OF 55.27 FEET; THENCE NORTH 05°44'28" EAST A DISTANCE OF 82.50 FEET; THENCE NORTHERLY 26.09 FEET ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 68.72 FEET, A CENTRAL ANGLE OF 21°45'02", AND CHORD BEARING NORTH 11°12'38" WEST 25.93 FEET; THENCE NORTHERLY 74.49 FEET ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 92.29 FEET, A CENTRAL ANGLE OF 46°14'38", AND CHORD BEARING NORTH 01°02'10" EAST 72.48 FEET; THENCE NORTHERLY 76.41 FEET ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 125.29 FEET, A CENTRAL ANGLE OF 34°56'31", AND CHORD BEARING NORTH 06°41'13" EAST 75.23 FEET; THENCE NORTH 12°45'34" WEST A DISTANCE OF 67.75 FEET; THENCE NORTH 22°16'26" WEST A DISTANCE OF 114.86 FEET TO THE POINT OF BEGINNING.

TOWER KING GUY WIRE EASEMENT "A" DESCRIPTION

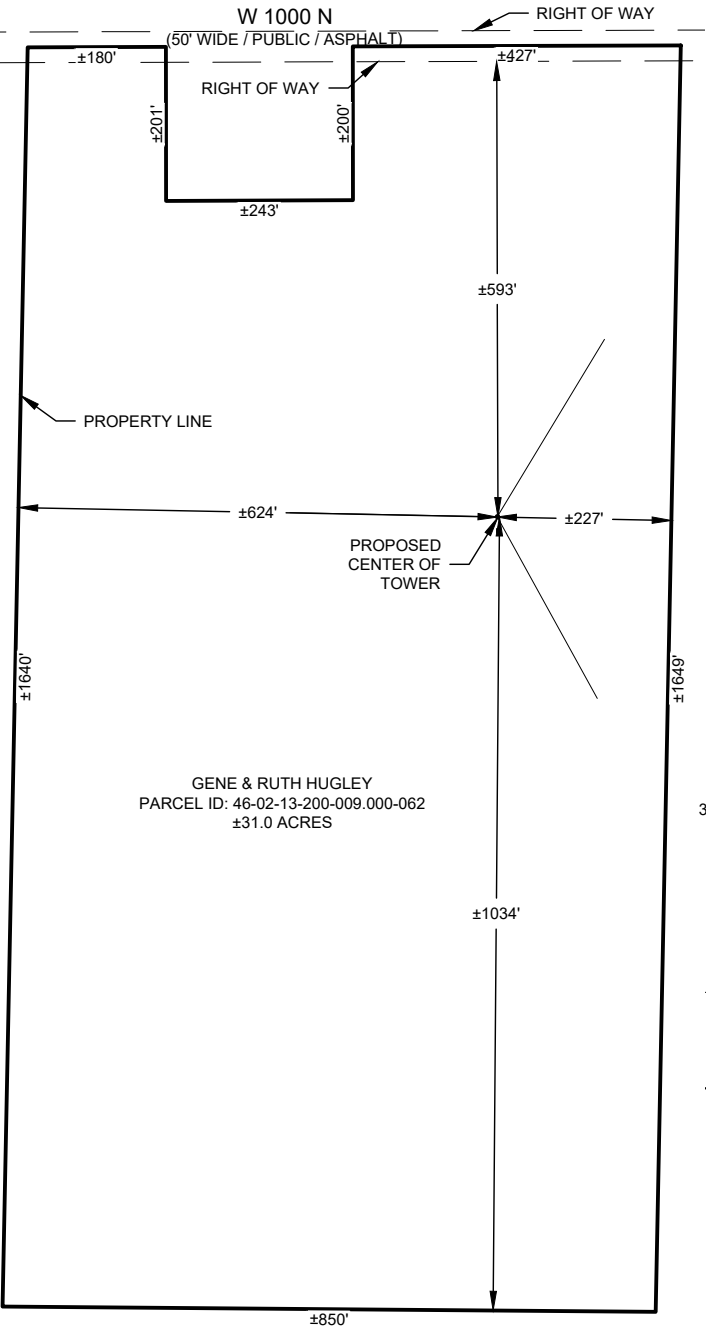
AN EASEMENT FOR INGRESS/EGRESS AND THE INSTALLATION AND MAINTENANCE OF GUY LINES AND ASSOCIATED APPURTENANCES OVER/UNDER AND ACROSS ALL THAT PART OF THE NORTHEAST 1/4 OF SECTION 13, TOWN 38 NORTH, RANGE 3 WEST, SPRINGFIELD TOWNSHIP, LaPORTE COUNTY, INDIANA, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF THE NORTHEAST 1/4 OF SAID SECTION; THENCE NORTH 89°50'26" EAST ALONG THE NORTH LINE OF SAID SECTION 13 A DISTANCE OF 706.79 FEET; THENCE SOUTH 00°09'34" EAST A DISTANCE OF 20.00 FEET TO THE SOUTH RIGHT OF WAY OF W. 1000 N. (50'WIDE/PUBLIC); THENCE NORTH 89°50'26" EAST ALONG SAID RIGHT OF WAY A DISTANCE OF 12.95 FEET; THENCE THENCE SOUTH 22°16'26" EAST A DISTANCE OF 110.99 FEET; THENCE SOUTH 12°45'34" EAST A DISTANCE OF 68.95 FEET; THENCE SOUTHERLY 84.15 FEET ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 137.29 FEET, A CENTRAL ANGLE OF 35°07'11", AND CHORD BEARING SOUTH 06°41'13" WEST 82.84 FEET; THENCE SOUTHERLY 64.38 FEET ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 80.29 FEET, A CENTRAL ANGLE OF 45°56'24", AND CHORD BEARING SOUTH 01°02'10" WEST 62.67 FEET; THENCE SOUTHERLY 31.22 FEET ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 81.57 FEET, A CENTRAL ANGLE OF 21°55'49", AND CHORD BEARING SOUTH 11°12'38" EAST 31.03 FEET; THENCE SOUTH 05°44'28" WEST A DISTANCE OF 82.93 FEET; THENCE SOUTH 01°08'42" WEST A DISTANCE OF 56.62 FEET; THENCE SOUTH 18°35'08" WEST A DISTANCE OF 37.17 FEET; THENCE SOUTH 61°59'13" WEST A DISTANCE OF 54.77 FEET; THENCE NORTH 88°40'59" WEST A DISTANCE OF 15.14 FEET TO THE NORTHEAST CORNER OF A LEASE AREA; THENCE CONTINUING NORTH 88°40'59" WEST A DISTANCE OF 34.82 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING NORTH 88°40'59" WEST ALONG SAID NORTH LINE A DISTANCE OF 23.05 FEET; THENCE NORTH 31°08'11" EAST A DISTANCE OF 238.10 FEET; THENCE SOUTH 58°51'49" EAST A DISTANCE OF 20.00 FEET; THENCE SOUTH 31°08'11" WEST A DISTANCE OF 226.64 FEET TO THE POINT OF BEGINNING.

TOWER KING GUY WIRE EASEMENT "B" DESCRIPTION

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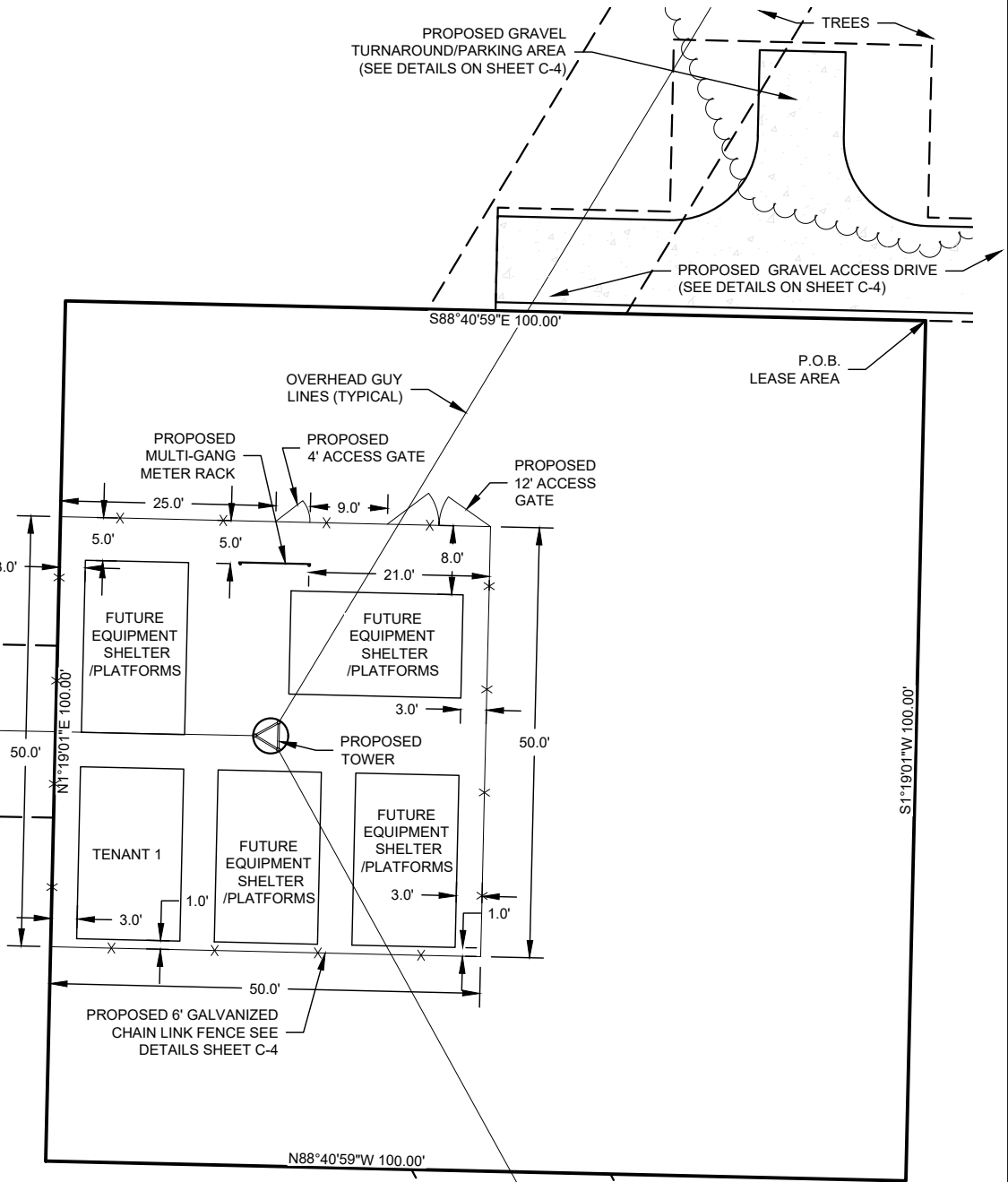
TOWER KING GUY WIRE EASEMENT "C" DESCRIPTION

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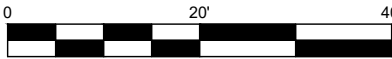
PARENT PARCEL DETAIL

SCALE: 1"=250'



ENLARGED SITE PLAN

SCALE: 1"=20'



NOTE:
ACTUAL EQUIPMENT SIZE, TYPE
AND LOCATION WITHIN COMPOUND
WILL VARY PER CARRIER.



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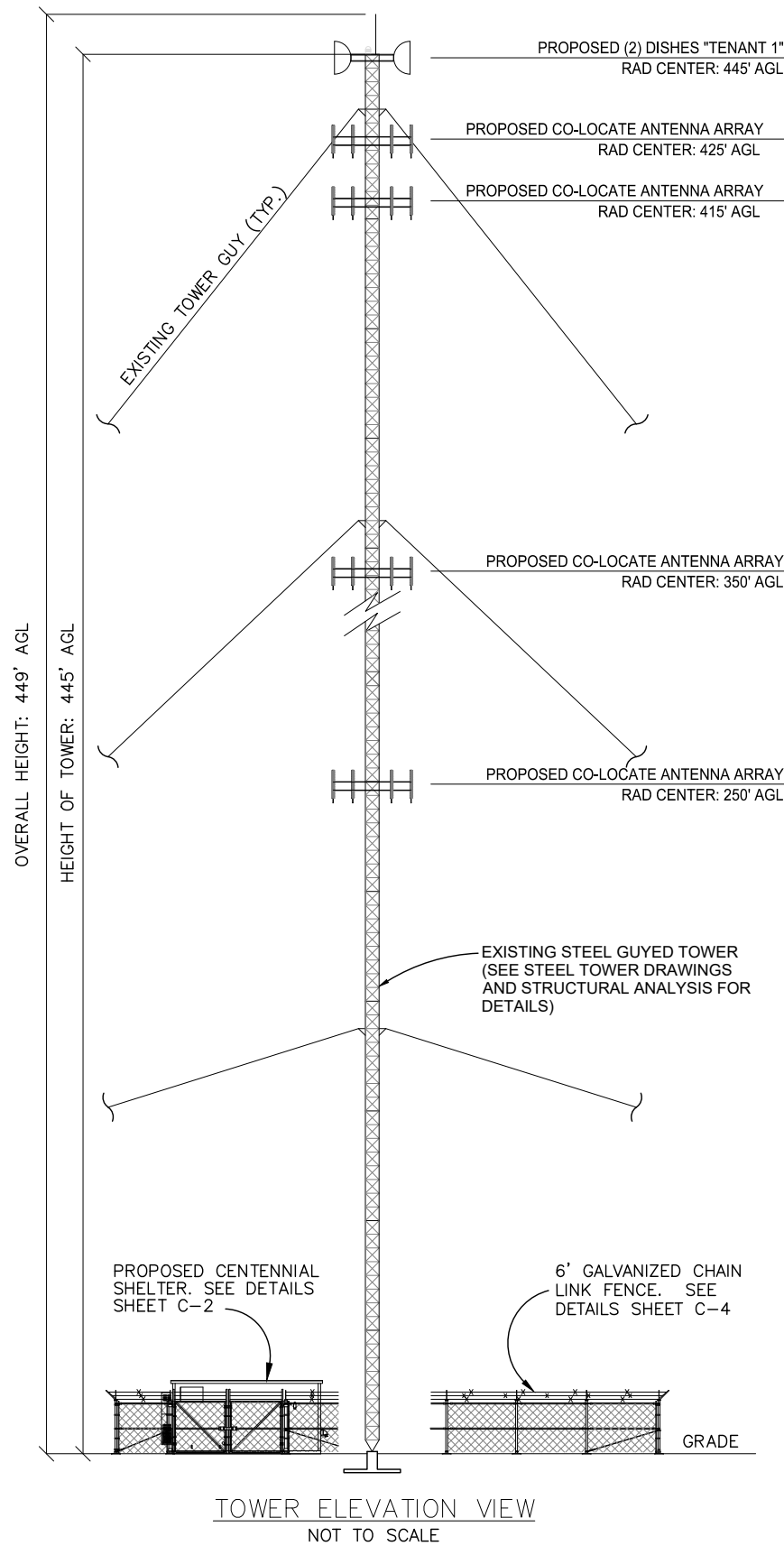
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1	01/21/26	SCALE CORRECTION	RJH	MM	MM
0	04/03/24	ISSUED FOR REVIEW	RJH	MM	MM
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: MM	DRAWN BY: RJH		

SHEET S-2

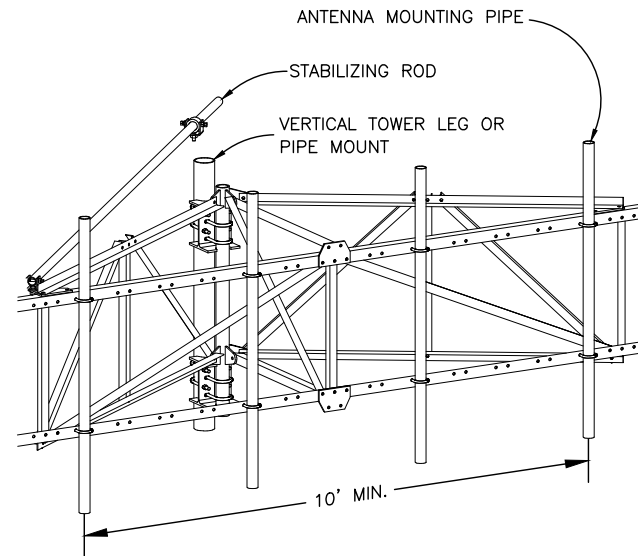
ENLARGED SITE PLAN

DRAWING NUMBER

24359002

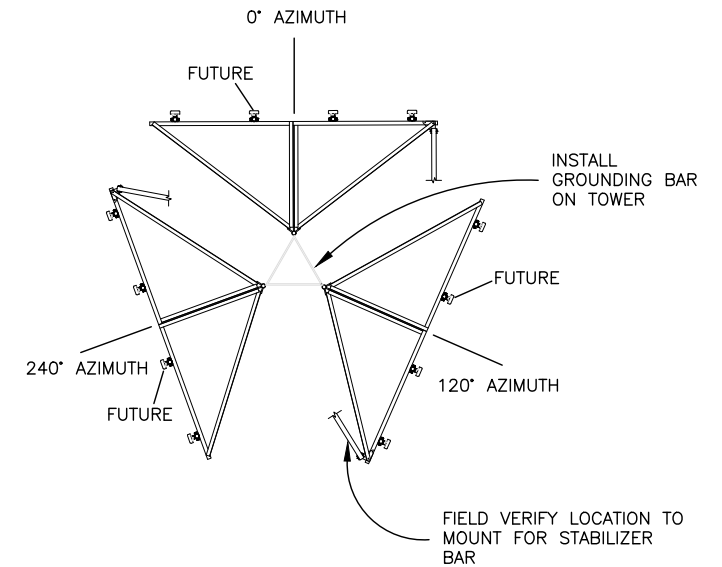


NOTE: SEE MOUNT ANALYSIS FOR MOUNT SPECIFICATIONS AND MAX. LOAD RATINGS.

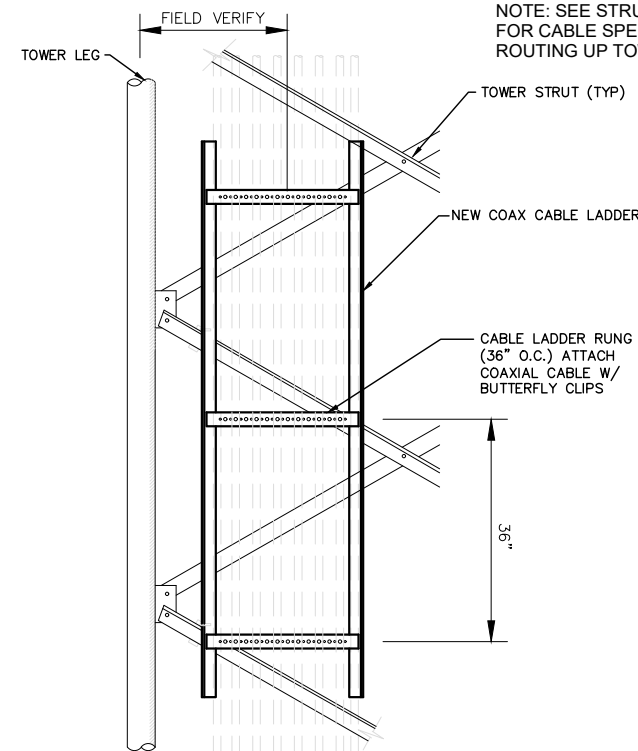


STANDOFF WIRELESS FRAME
NOT TO SCALE

NOTE: SEE MOUNT ANALYSIS FOR PROPOSED APPURTENANCE SPECIFICATIONS AND LOCATIONS.



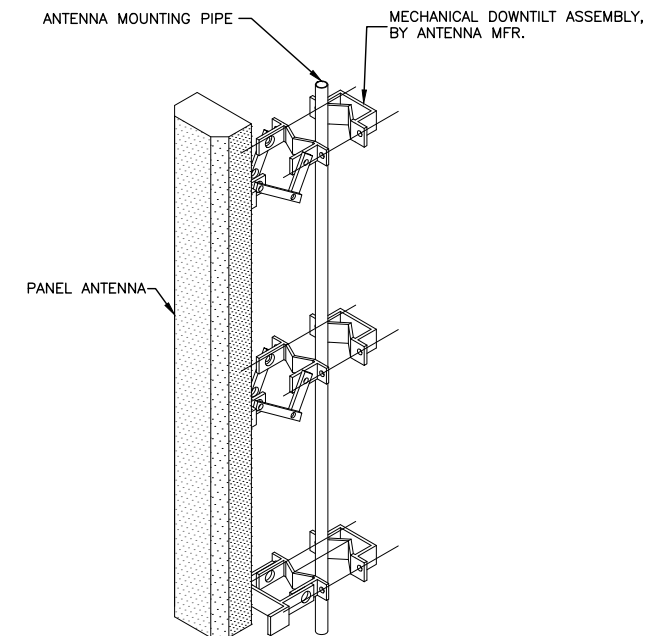
TYPICAL SECTORIZED ANTENNA CONFIGURATION
NOT TO SCALE



CABLE LADDER DETAIL
NOT TO SCALE

NOTE: SEE STRUCTURAL ANALYSIS FOR CABLE SPECIFICATIONS AND ROUTING UP TOWER

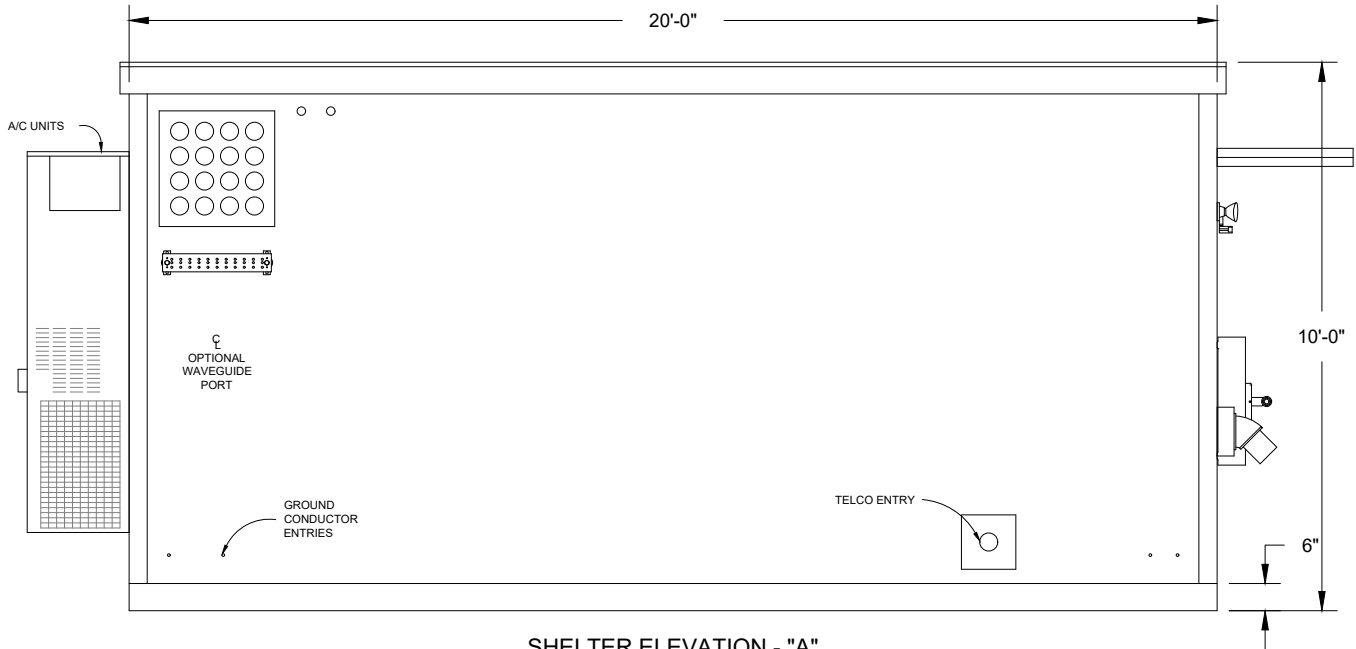
NOTE: SEE MOUNT ANALYSIS FOR PROPOSED ANTENNA QUANTITY, SIZE AND LOCATIONS.



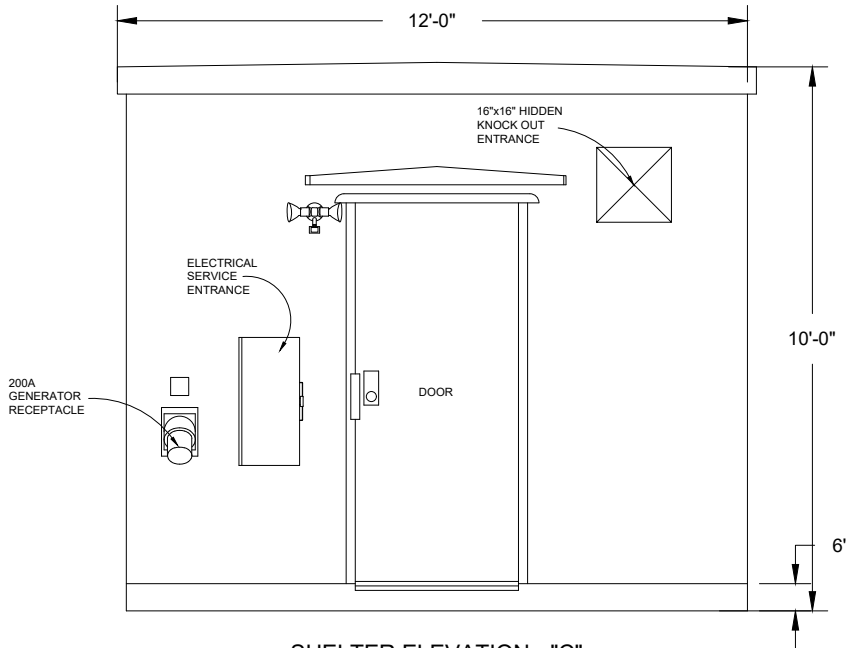
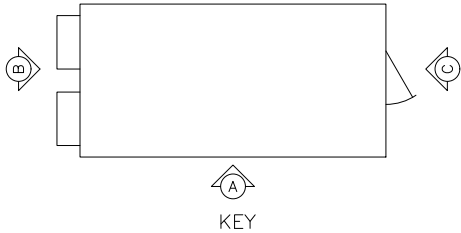
ANTENNA MOUNTING DETAIL
NOT TO SCALE

NO.	DATE	REVISIONS	BY	CHK	APP'D
2	02/05/26	TENANTS AND ANTENNA HEIGHTS	RJH	MM	MM
1	01/21/26	SCALE CORRECTION	RJH	MM	MM
0	04/03/24	ISSUED FOR REVIEW	RJH	MM	MM
SCALE:	AS SHOWN	DESIGNED BY:	MM	DRAWN BY:	RJH

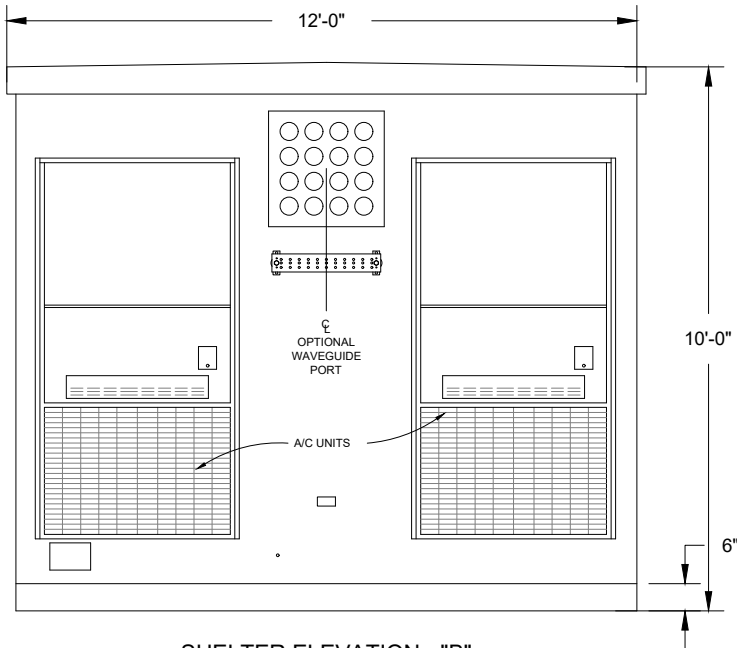
NOTE: SHELTER AND PLATFORM SHOWN ARE TYPICAL OF COMMUNICATION EQUIPMENT INSTALLATIONS AND ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. INDIVIDUAL EQUIPMENT PROVIDED BY CARRIERS MAY VARY FROM THESE DRAWINGS. DESIGN OF SUCH EQUIPMENT INSTALLATIONS AND THEIR FOUNDATIONS ARE BY OTHERS.



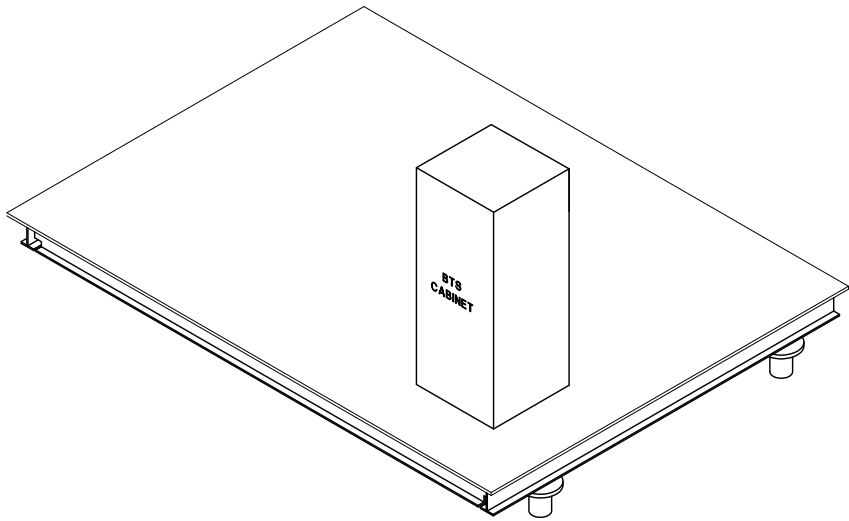
SHELTER ELEVATION - "A"
NOT TO SCALE



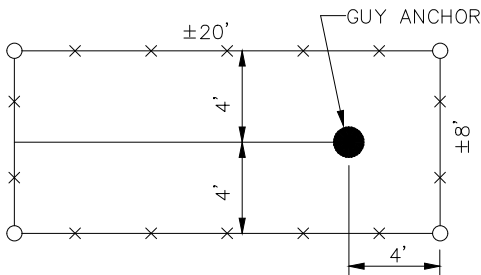
SHELTER ELEVATION - "C"
NOT TO SCALE



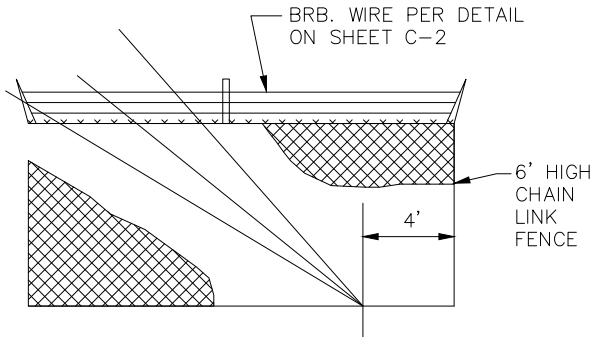
SHELTER ELEVATION - "B"
NOT TO SCALE



TYPICAL EQUIPMENT PLATFORM
NOT TO SCALE



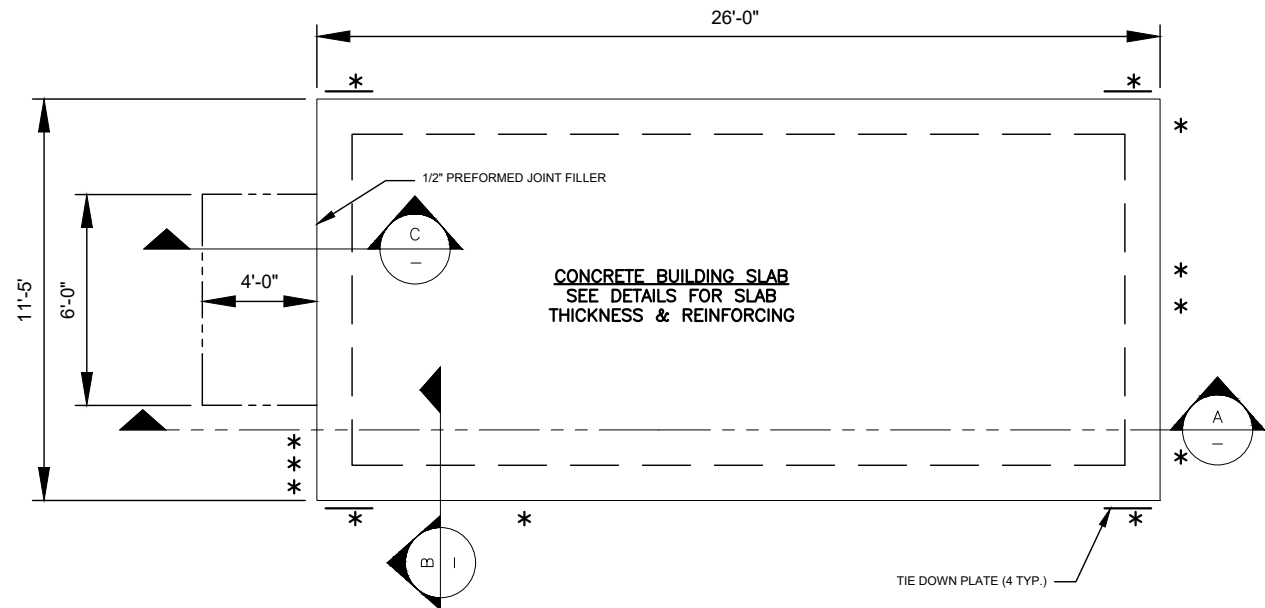
PLAN VIEW



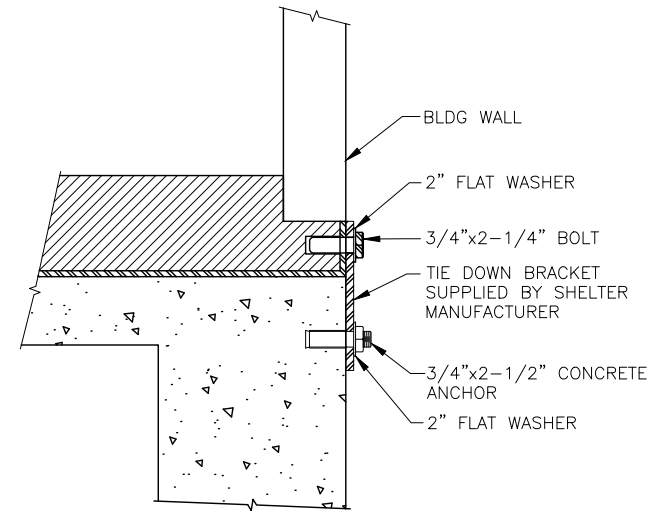
PROFILE

TYPICAL GUY ANCHOR ENCLOSURE
NOT TO SCALE

NO.	DATE	REVISIONS	BY	CHK	APP'D
2	02/05/26	TENANTS AND ANTENNA HEIGHTS	RJH	MM	MM
1	01/21/26	SCALE CORRECTION	RJH	MM	MM
0	04/03/24	ISSUED FOR REVIEW	RJH	MM	MM
SCALE: AS SHOWN			DESIGNED BY: MM		DRAWN BY: RJH



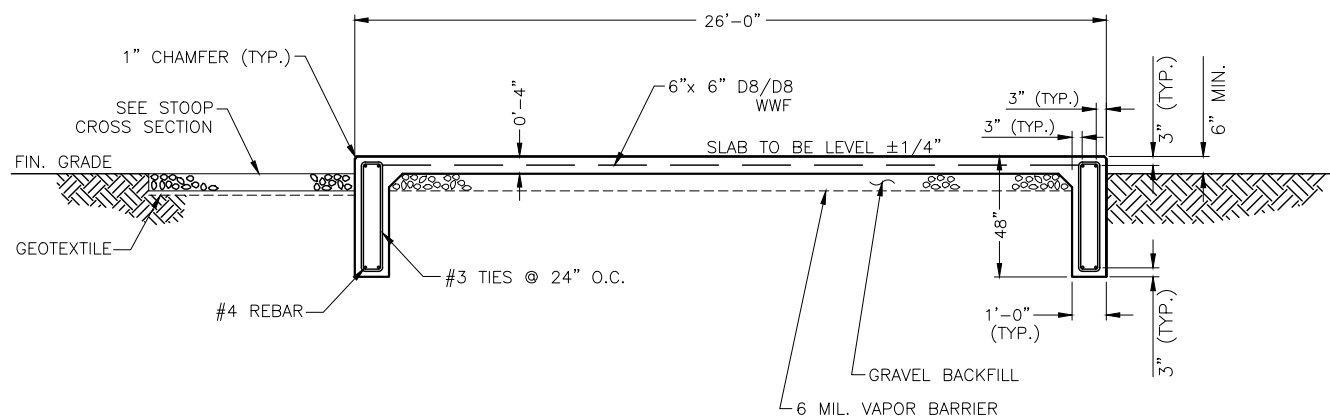
SHELTER FOUNDATION PLAN
NOT TO SCALE



BLDG/FND ATTACHMENT DETAIL B-B
NOT TO SCALE

FOUNDATION GENERAL NOTES:

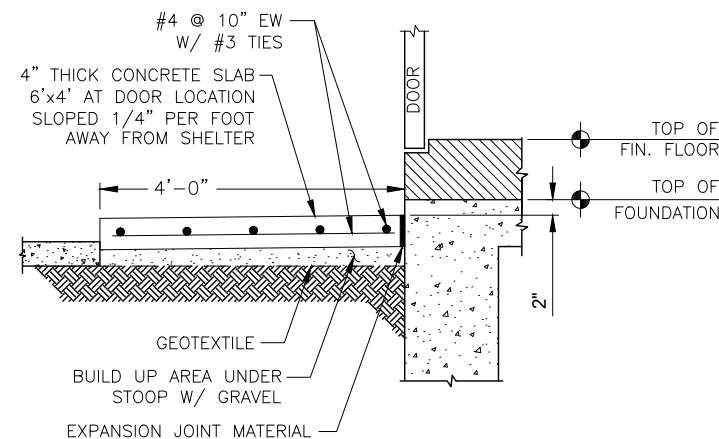
1. THE SITE SHALL BE STRIPPED OF ALL VEGETATION PRIOR TO FILL OR CONSTRUCTION OF THE FOUNDATION PAD.
2. ALL FILL SAND SHALL BE 0-15 P.I. WITH A COMPACTION TEST RUN ON EACH 6" LIFT - COMPACTED TO 90% MODIFIED PROCTOR.
3. ANY SOFT AREAS (TREE STUMP HOLES, ETC.) SHALL BE CUT OUT AND RECOMPACTED TO SAID PROCTOR.
4. THE SUBCONTRACTOR SHALL KEEP THE SITE SO IT WILL HAVE POSITIVE DRAINAGE AT ALL TIMES.
5. ALL EXCAVATIONS SHALL BE FREE OF WATER BEFORE POURING CONCRETE.
6. MINIMUM SOIL BEARING CAPACITY OF 2,000 PSF IN ALL FOUNDATION AND SLAB AREAS.



NOTES:

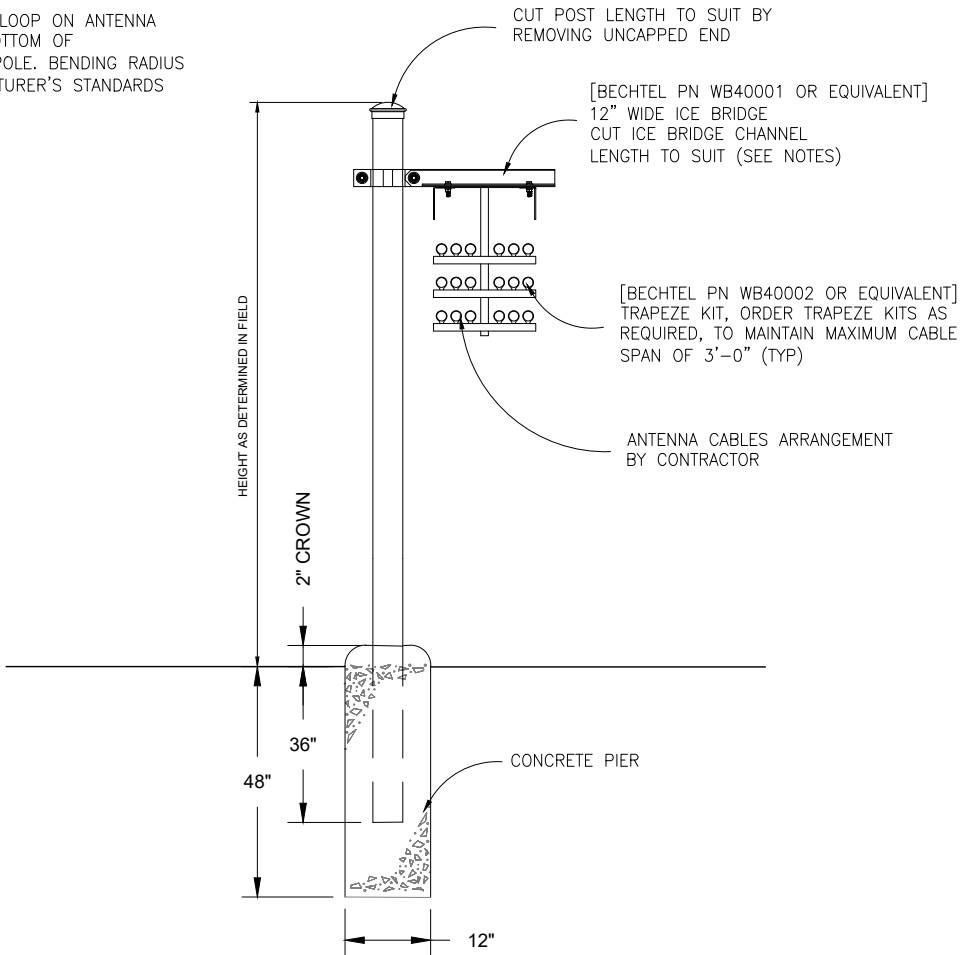
1. CONCRETE FINISH TO BE CLASS A TOLERANCE.
2. TEST FOR 3000 PSI AT 7, 14, & 28 DAYS PER POUR BY INDEPENDENT LAB.
3. ALL CONCRETE TO BE SIX SACK MIX.
4. PERFORM CONCRETE SLUMP TEST (4" MAX). NO WATER TO BE ADDED TO CONCRETE MIX AFTER 4" SLUMP HAS BEEN ESTABLISHED.

BLDG/FND ATTACHMENT SECTION A-A
NOT TO SCALE



STOOP DETAIL C-C
NOT TO SCALE

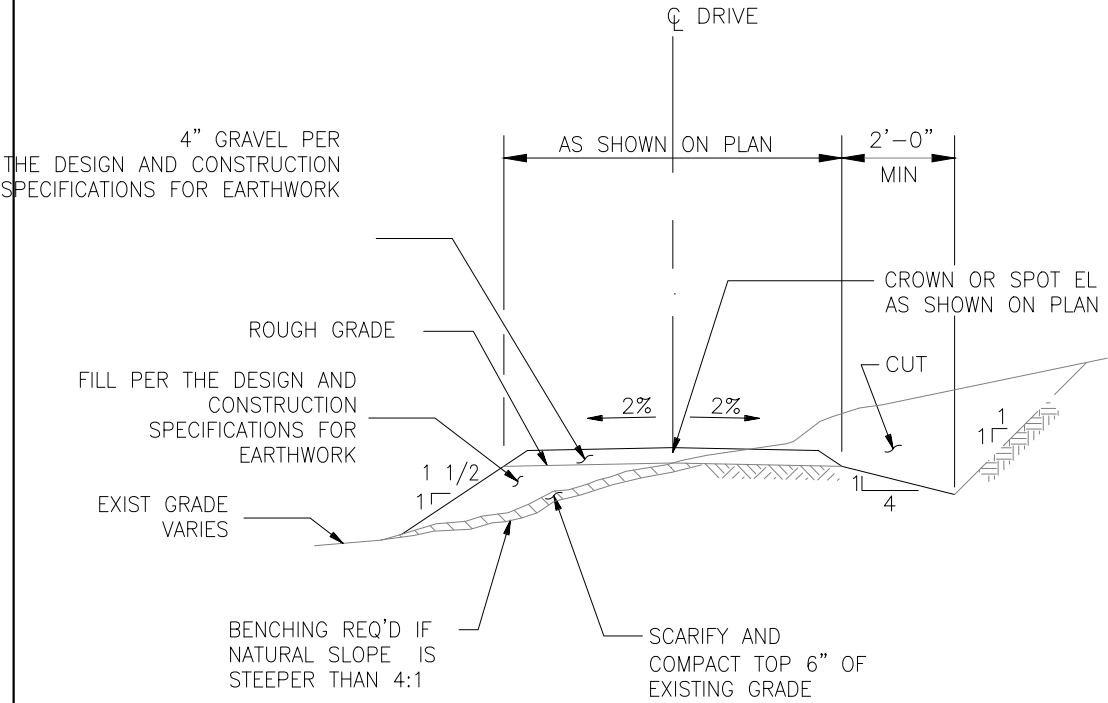
* INSTALL DRIP LOOP ON ANTENNA CABLES AT BOTTOM OF TOWER/MONOPOLE. BENDING RADIUS PER MANUFACTURER'S STANDARDS



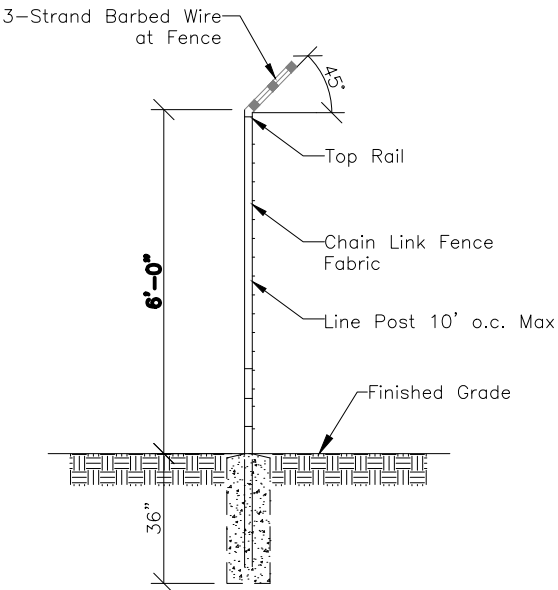
BECHTEL SC:	ROHN PN:	MTS PN:
WB40001		WB-K110-B
WB40002		WB-T12-3

- NOTES:
1. WHEN USING COMPONENTS AS SHOWN IN STANDARD DETAILS, MAXIMUM ALLOWABLE SPAN BETWEEN SUPPORTS ON A CONTINUOUS SINGLE SECTION OF BRIDGE CHANNEL SHALL BE 9 FEET FOR 10 FEET BRIDGE CHANNEL.
 2. WHEN USING COMPONENTS FOR SPLICING BRIDGE CHANNEL SECTIONS, THE SPLICE SHOULD BE PROVIDED AT THE SUPPORT, IF POSSIBLE, OR AT A MAXIMUM OF 2 FEET FROM THE SUPPORT.
 3. WHEN USING COMPONENTS, SUPPORT SHOULD BE PROVIDED AS CLOSE AS POSSIBLE TO THE ENDS OF ICE BRIDGES, WITH A MAXIMUM CANTILVER DISTANCE OF 2 FEET FROM THE SUPPORT TO THE FREE END OF THE ICE BRIDGE.
 4. CUT BRIDGE CHANNEL SECTIONS SHALL HAVE RAW EDGES TREATED WITH A MATERIAL TO RESTORE THESE EDGES TO THE ORIGINAL CHANNEL, OR EQUIVALENT, FINISH.
 5. ICE BRIDGES MAY BE CONSTRUCTED WITH COMPONENTS FROM OTHER MANUFACTURERS, PROVIDED THE MANUFACTURER'S INSTALLATION GUIDELINES ARE FOLLOWED.
 6. DEVIATIONS FROM STANDARDS FOR COMPONENT INSTALLATIONS ARE PERMITTED WITH THE RESPECTIVE MANUFACTURER'S APPROVAL.
 7. DEVIATIONS FROM ICE BRIDGE FOUNDATIONS REQUIRE ENGINEERING APPROVAL.

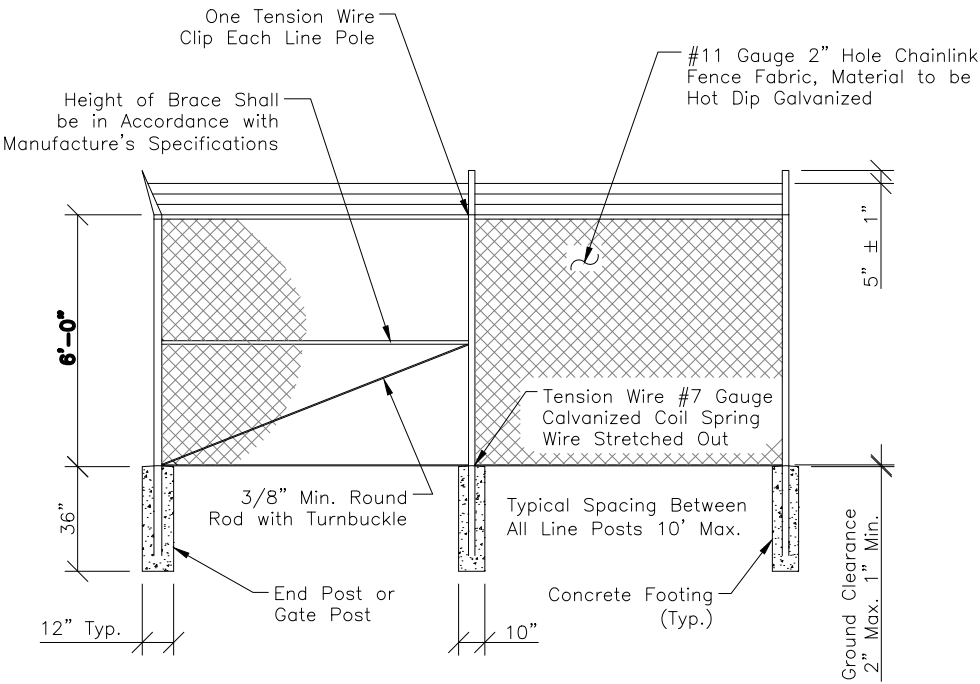
TYPICAL ICE BRIDGE DETAIL
NOT TO SCALE



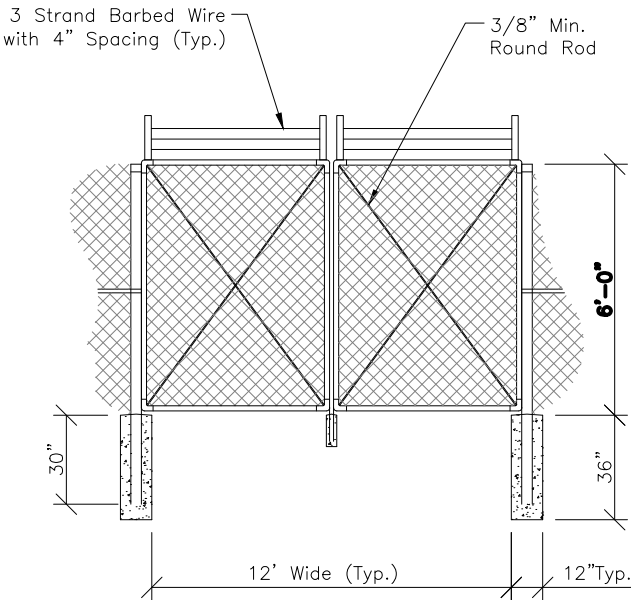
TYPICAL GRAVEL DRIVE
NOT TO SCALE



FENCE / BARBED WIRE ARM DETAIL
NOT TO SCALE



TYPICAL FENCE ELEVATION DETAIL
NOT TO SCALE



NOTE:
FENCING ELEVATIONS ARE ONLY EXAMPLES.
FOLLOW CONSTRUCTION CONTRACT.

TYPICAL SWING GATE DETAIL
NOT TO SCALE

SITE WORK GENERAL NOTES:

1. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING & EXCAVATION.
3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
5. 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 CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.
6. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION.
7. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE.
8. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
9. 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.
10. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
11. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
12. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

CONCRETE CAST AGAINST EARTH.....3 IN.

CONCRETE EXPOSED TO EARTH OR WEATHER:

#6 AND LARGER2 IN.

#5 AND SMALLER & WWF1 1/2 IN.

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

SLAB AND WALL3/4 IN.

BEAMS AND COLUMNS1 1/2 IN.

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

6. 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 ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD OR APPROVED EQUAL.

GENERAL NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:

CONTRACTOR -

SUBCONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)

OWNER -

OEM - ORIGINAL EQUIPMENT MANUFACTURE

2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.

3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE RFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

4. DRAWINGS PROVIDED HERE ARE NOT TO SCALE AND ARE INTENDED TO SHOW OUTLINE ONLY.

5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

6. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

7. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.

8. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING.

9. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT UBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.

10. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

11. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.

APPLICABLE BUILDING CODES AND STANDARDS:

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

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES:

1. INTERNATIONAL BUILDING CODE

2. INTERNATIONAL MECHANICAL CODE

3. INTERNATIONAL RESIDENTIAL CODE

4.UNIFORM PLUMBING CODE

5. NATIONAL ELECTRICAL CODE

6. LOCAL BUILDING CODE

7. STATE BUILDING CODE

8. CITY/COUNTY ORDINANCES

UnderWriter Laboratories Approved Electrical Products
Life Safety Code NFPA - 101

SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING

AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ASD,

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) EIA-222-F, STRUCTURAL STANDARD FOR STRUCTURAL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES

INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM

IEEE 1100 (2005) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC

IEEE C62.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE")

TIA 607 COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR

TELCORDIA GR-1503 COAXIAL CABLE CONNECTIONS

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

ABBREVIATIONS AND SYMBOLS

ABBREVIATIONS

AGL ABOVE GRADE LEVEL

BTS BASE TRANSCEIVER STATION

(E) EXISTING

MIN MINIMUM

N.T.S. NOT TO SCALE

REF REFERENCE

RF RADIO FREQUENCY

T.B.D. TO BE DETERMINED

T.B.R. TO BE RESOLVED

TYP TYPICAL

REQ REQUIRED

EGR EQUIPMENT GROUND RING

AWG AMERICAN WIRE GAUGE

MGB MASTER GROUND BUS

EG EQUIPMENT GROUND

BCW BARE COPPER WIRE

SIAD SMART INTEGRATED ACCESS DEVICE

GEN GENERATOR

IGR INTERIOR GROUND RING (HALO)

RBS RADIO BASE STATION

SYMBOLS

S/G

SOLID GROUND BUS BAR

S/N

SOLID NEUTRAL BUS BAR

⚡

SUPPLEMENTAL GROUND CONDUCTOR

⚡

2-POLE THERMAL-MAGNETIC CIRCUIT BREAKER

⚡

SINGLE-POLE THERMAL-MAGNETIC CIRCUIT BREAKER

⚡

CHEMICAL GROUND ROD

⚡

GROUND ROD

⚡

DISCONNECT SWITCH

⚡

METER

⚡

CADWELD TYPE CONNECTION

⚡

COMPRESSION TYPE CONNECTION

⚡

GROUNDING WIRE

SHEET C-5

GENERAL NOTES

DRAWING NUMBER

24359002

ELECTRICAL INSTALLATION NOTES

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

2. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.

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

4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.

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

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

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

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

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

10. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.

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

12. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.

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

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

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

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

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

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

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

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

21. CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.

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

ELECTRICAL INSTALLATION NOTES (cont.)

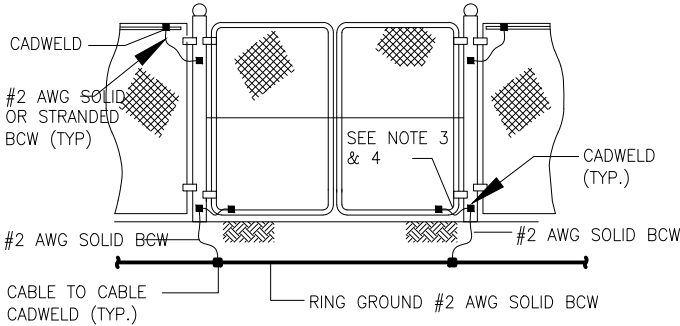
23. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.

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

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

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

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



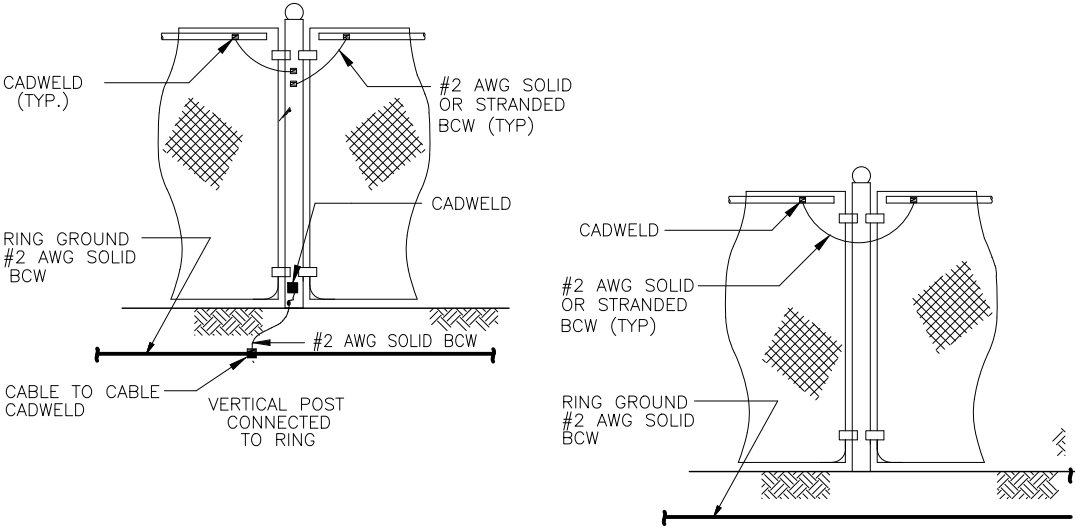
NOTES:

1. THE #2 AWG, BCW, FROM THE RING GROUND SHALL BE CADWELDED TO THE POST ABOVE GRADE.
2. BOND EACH HORIZONTAL POLE/BRACE TO EACH OTHER AND TO EACH VERTICAL POLE BONDED TO THE EXTERIOR GROUND RING
3. GATE JUMPER SHALL BE #4/0 AWG WELDING CABLE OR FLEXIBLE COPPER BRAID BURNDY TYPE B WITH SLEEVES ON EACH END DESIGNED FOR EXOTHERMIC WELDING.
4. GATE JUMPER SHALL BE INSTALLED SO THAT IT WILL NOT BE SUBJECTED TO DAMAGING STRAIN WHEN GATE IS FULLY OPEN IN EITHER DIRECTION.

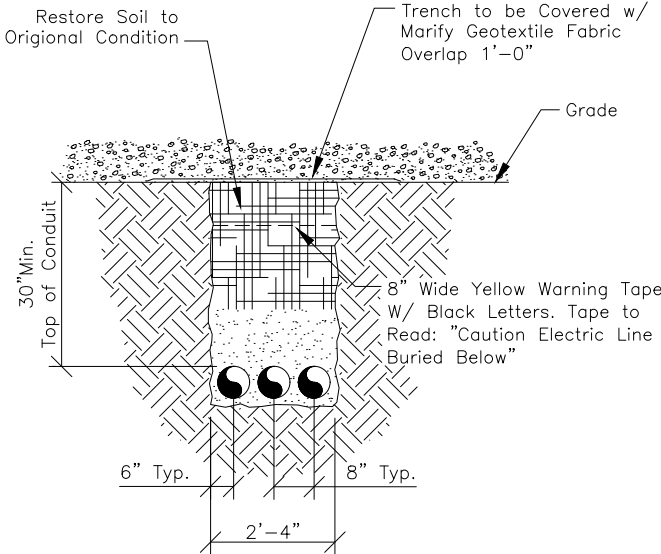
FENCE GATE GROUNDING DETAIL
NOT TO SCALE

NOTE:

1. VERTICAL POSTS SHALL BE BONDED TO THE RING AT EACH CORNER AND AT EACH GATE POST. AS A MINIMUM ONE VERTICAL POST SHALL BE BONDED TO THE GROUND RING IN EVERY 100 FOOT STRAIGHT RUN OF FENCE.
2. HORIZONTAL POLES SHALL BE BONDED TO EACH OTHER.
3. BOND EACH HORIZONTAL POLE / BRACE TO EACH OTHER AND TO EACH VERTICAL POST THAT IS BONDED TO THE EXTERIOR GROUND RING



FENCE GROUNDING DETAIL
NOT TO SCALE

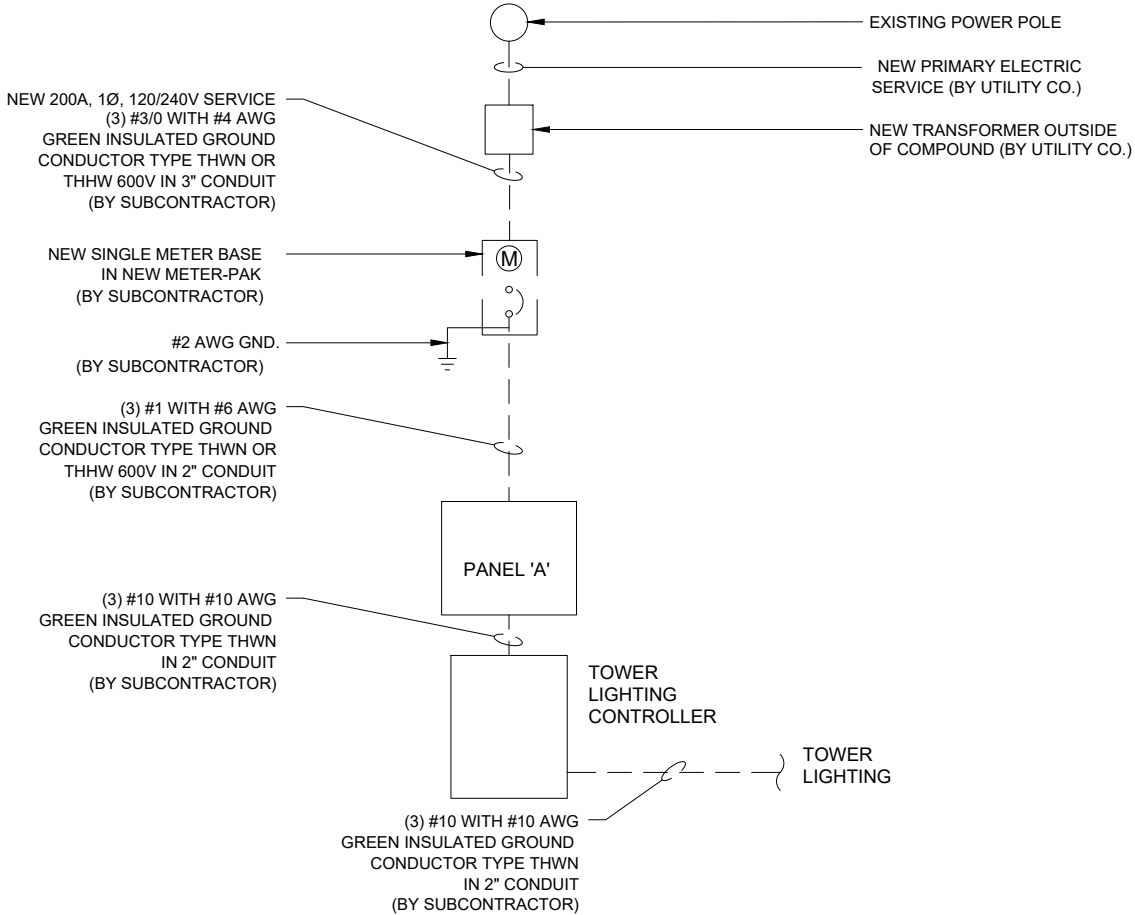


TYPICAL TRENCH DETAIL
NOT TO SCALE

NO.	DATE	REVISIONS	BY	CHK	APP'D
2	02/05/26	TENANTS AND ANTENNA HEIGHTS	RJH	MM	MM
1	01/21/26	SCALE CORRECTION	RJH	MM	MM
0	04/03/24	ISSUED FOR REVIEW	RJH	MM	MM
SCALE: AS SHOWN			DESIGNED BY: MM		DRAWN BY: RJH

ELECTRICAL NOTES:

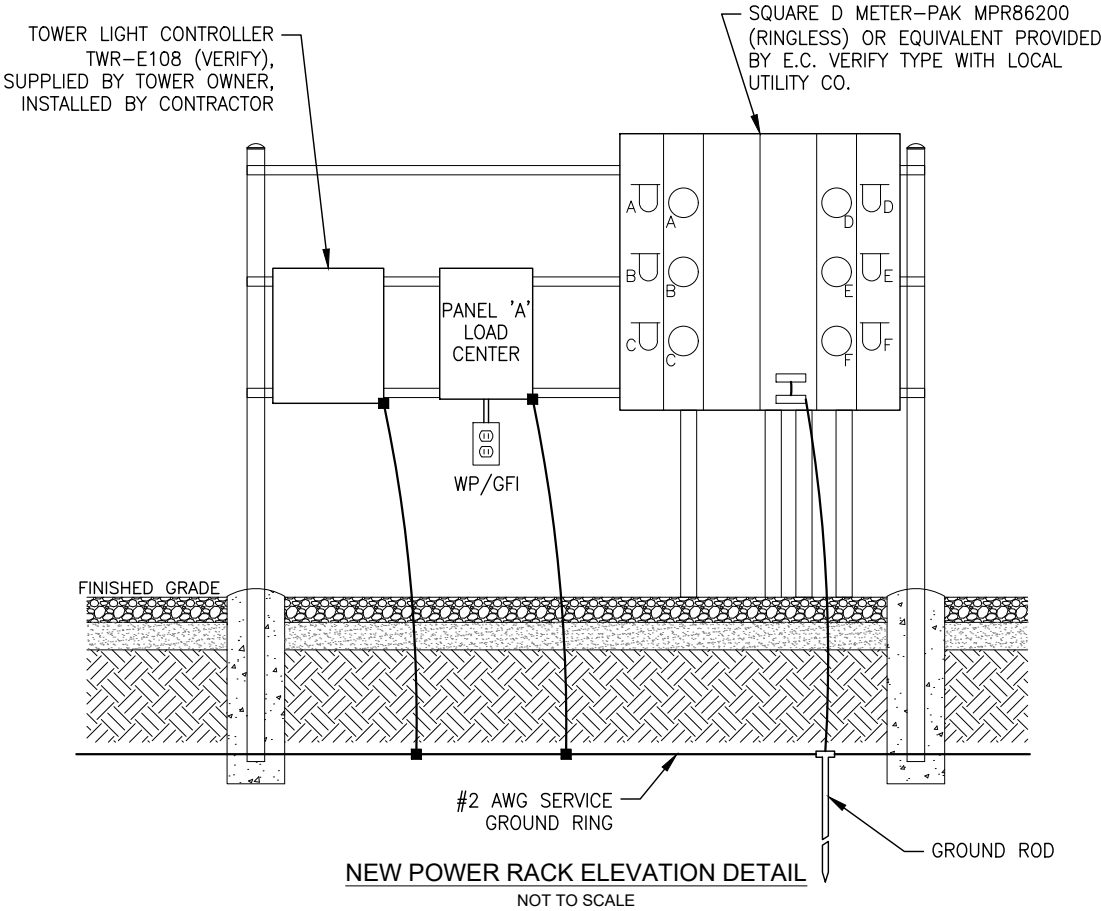
1. SUBCONTRACTOR SHALL PROVIDE 200AMP, SINGLE PHASE, 120/240 VAC, 60HZ SERVICE FOR SITE.
2. SUBCONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY BEFORE THE START OF CONSTRUCTION. POWER AND TELEPHONE CONDUIT SHALL BE PROVIDED AND INSTALLED PER UTILITY REQUIREMENTS.
3. FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT REFER TO DRAWINGS PROVIDED BY PANEL MANUFACTURER.
4. SUBCONTRACTOR SHALL INSTALL SUFFICIENT LENGTHS OF LFMC INCLUDING ALL CONDUIT FITTINGS (NUTS, REDUCING BUSHINGS, ELBOWS, COUPLINGS, ETC) NECESSARY FOR CONNECTION FROM IMC CONDUIT TO THE INTERIOR OF THE BTS CABINET.
5. SUBCONTRACTOR SHALL PROVIDE ELECTRICAL SERVICE EQUIPMENT WITH FAULT CURRENT RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY.
6. CUT, COIL AND TAPE A 3 FOOT PIGTAIL FROM END OF LFMC FOR TERMINATING BY BTS EQUIPMENT MANUFACTURER.
7. SUBCONTRACTOR SHALL VERIFY THAT THE MAIN BONDING JUMPER AND GROUNDING ELECTRODE CONDUCTOR IS INSTALLED PROPERLY WHEN PANEL IS SERVICE ENTRANCE EQUIPMENT.



100 AMP SINGLE LINE DIAGRAM
NOT TO SCALE

PANEL 'A' SCHEDULE											
POS.	SERVING	BREAKER	WIRE SIZE AND TYPE	LOAD		POS.	SERVING	BREAKER	WIRE SIZE AND TYPE	LOAD	
				A	B					A	B
1	TOWER LIGHTING CONTROLLER	30A/2P	2-#10 / #10 GND, 2" C.		2400	2	EQUIP. RACK RECEPT.	15A/1P	2-#10 / #10 GND, 3/4" C.	180	
3						4					
5	TELCO BOX RECEPT.	15A/1P	2-#10 / #10 GND, 3/4" C.	180		6					
7						8					
9						10					
11	BLANK					12					
TOTAL				360	2400						
TOTAL AMPS				11.5							

1. FROM TAP BOX: THE TWO (2) FOUR-INCH (4") CONDUIT WILL RETURN TO THE LOCATION DETERMINED BY "DETROIT EDISON" AND EXTEND OUT OF THE FINISHED GRADE 12" AND 36" RESPECTIVELY (SEE DETAIL). BOTH CONDUITS SHALL BE INSTALLED WITH PULL-STRINGS AND WATERPROOF CAPS.
2. CABINET AND CONDUCTORS FURNISHED & INSTALLED BY CUSTOMER. 350 KCMIL SERVICE CONDUCTORS FURNISHED & INSTALLED BY UTILITY.
3. EQUIPMENT ASSEMBLY DRAWINGS AND RISER DIAGRAMS MUST BE SUBMITTED TO A UTILITY PLANNER FOR ACCEPTANCE PRIOR TO INSTALLATION.
4. CABINETS AND CONDUITS SHOWN SHALL CONTAIN ONLY UNMETERED LINE CONDUCTORS. CABINET SHALL BE SEALABLE WITH ACCEPTABLE SEALING HASP.
5. TRANSMISSION TOWER SERVICES WILL UTILIZE A STANDARD 200 AMP SERVICE W/ CONTINUOUS CONDUIT TO THE SOURCE.
6. SUBSTATION CELLULAR SERVICES WILL BE A SINGLE 200-AMP SERVICE OR BUILT TO THIS SPECIFICATION. NO SERVICE SHALL BE TAKEN OUT OF THE SUBSTATION HOUSE SERVICE.
7. ALL CONDUIT AND NIPPLE ENTRIES TO CABINET AND METER BOXES WILL BE MADE WITH WEATHERPROOF HUBS, CONNECTORS OR LOCKNUTS LISTED FOR THE APPLICATIONS. NON-METALLIC BUSHINGS.
8. FOR INACCESSIBLE LOCATIONS CONSULT WITH METER ENGINEERING FOR POSSIBLE ERT METER INSTALLATION.
9. ONLY ONE SERVICE ALLOWED PER LUG. ALL GROUNDING AND BONDING MUST COMPLY WITH NEC 250 REQUIRED.

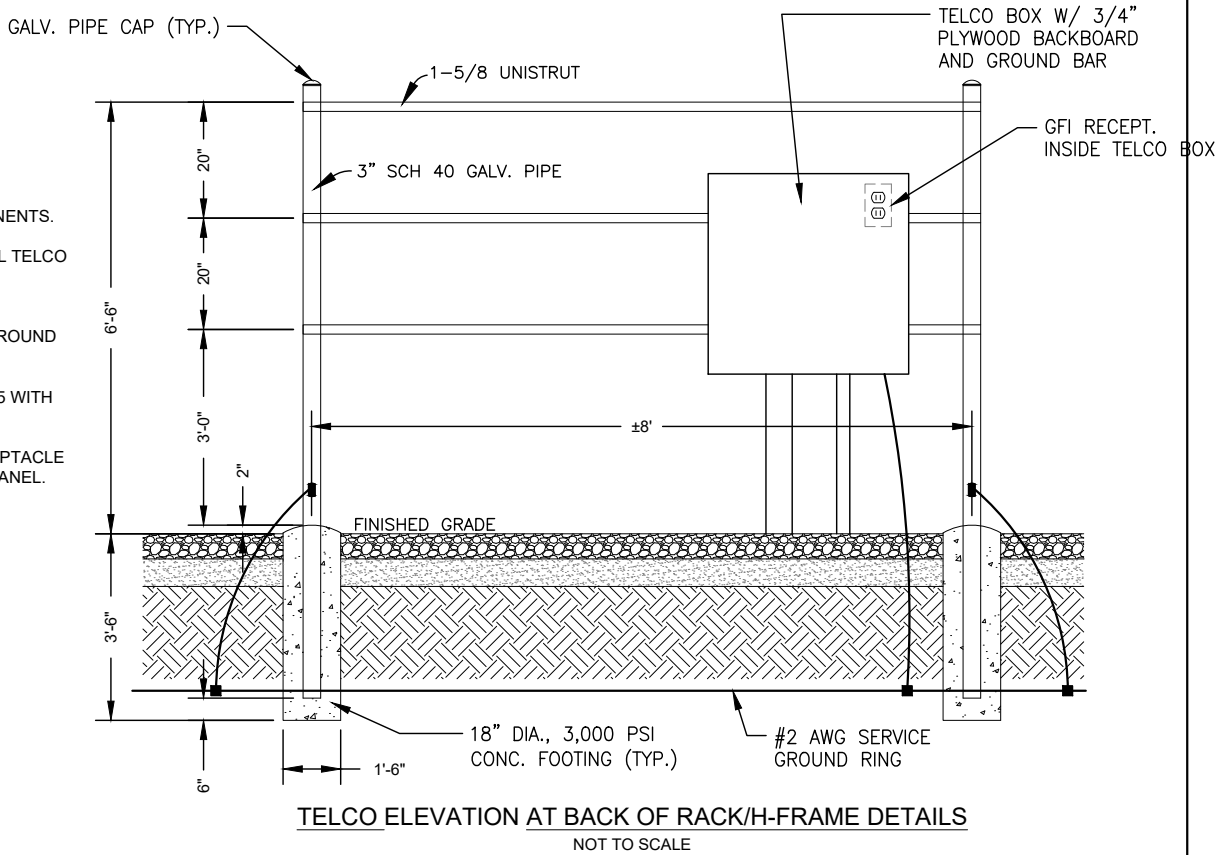


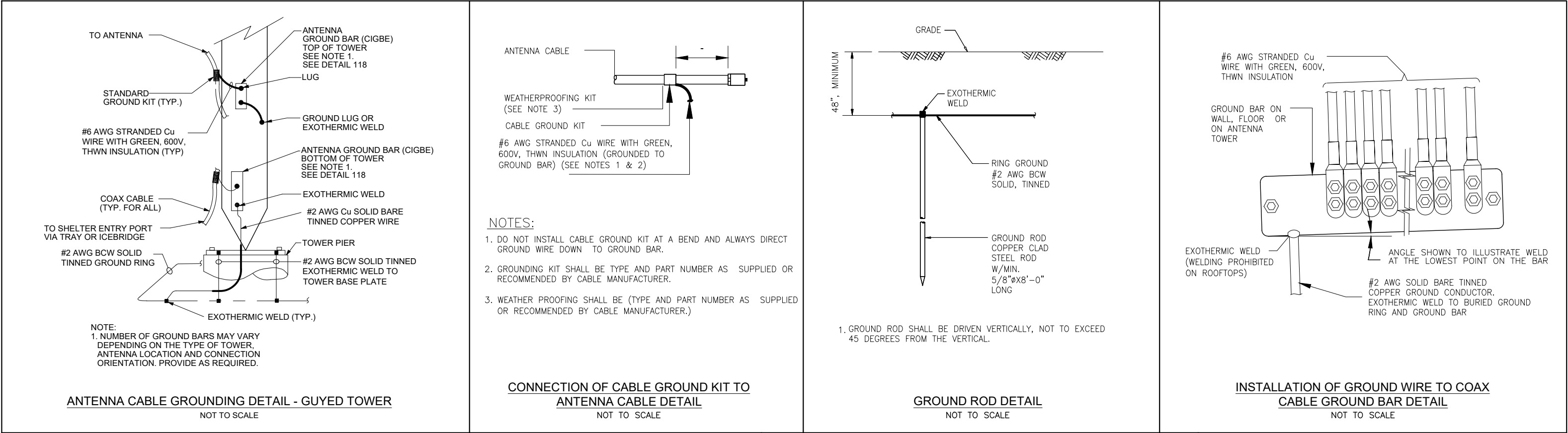
NOTES:

1. COORDINATE WITH LOCAL TELCO UTILITY PRIOR TO PROCURING AND INSTALLATION OF BOX AND COMPONENTS.
2. ALL MATERIAL SHALL MEET REQUIREMENTS OF LOCAL TELCO UTILITY.
3. ITEM #4 SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR. BOND SURGE PROTECTION UNIT TO GROUND BAR WITH #6 AWG INSULATED WIRE.
4. COORDINATE SIZE, TYPE AND QUANTITY OF ITEM(S) #5 WITH LOCAL UTILITY.
- INSTALL ITEM #6 ONLY IF REQUIRED BY UTILITY. RECEPTACLE POWERED FROM SPARE BREAKER IN DISTRIBUTION PANEL.

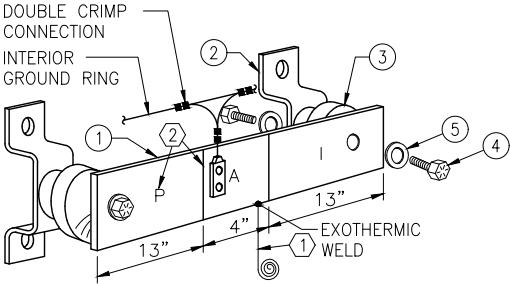
MATERIAL LIST:

- ① 36" X 36" X 10" NEMA 3R ENCLOSURE (HOFFMAN A36R3610HCR OR SIMILAR)





NEWTON INSTRUMENT COMPANY, INC. BUTNER, N.C.			
NO.	REQ.	PART NO.	DESCRIPTION
①	1	1/4"x4"x30"	SOLID GND. BAR
②	2	A-6056	WALL MTG. BRKT.
③	2	3061-4	INSULATORS
④	4	3012-1	5/8"-11x1" H.H.C.S.
⑤	4	3015-8	5/8 LOCKWASHER



(RGB) REFERENCE GROUND BAR DETAIL
NOT TO SCALE

EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" – SURGE PROTECTORS

CABLE ENTRY PORTS (HATCH PLATES) (#2)
GENERATOR FRAMEWORK (IF AVAILABLE) (#2)
TELCO GROUND BAR (#2)
COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2)
+24V POWER SUPPLY RETURN BAR (#2)
-48V POWER SUPPLY RETURN BAR (#2)
RECTIFIER FRAMES.
COAX SUPPRESSION

SECTION "A" – SURGE ABSORBERS

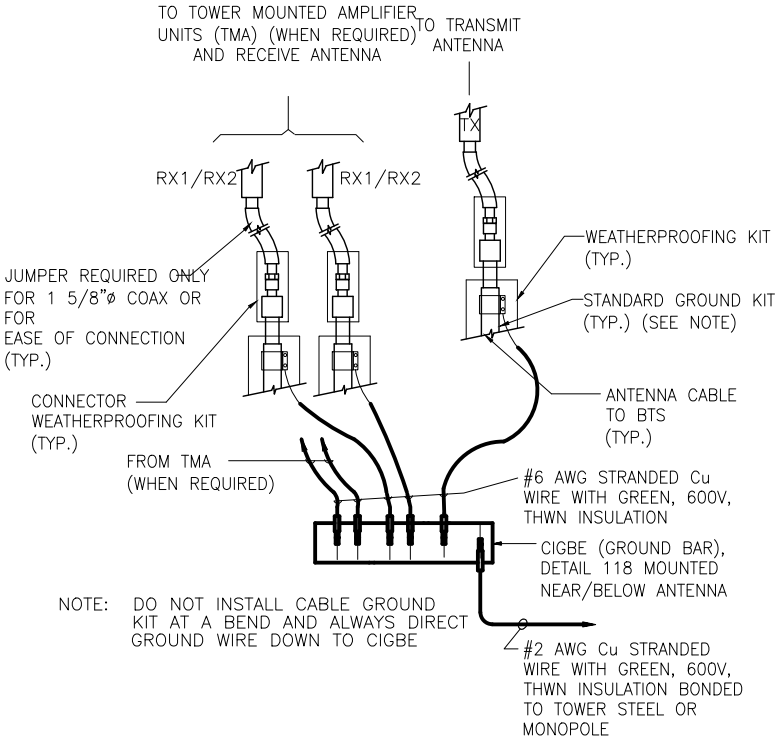
INTERIOR GROUND RING (#2)
EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2)
METALLIC COLD WATER PIPE (IF AVAILABLE) (#2)
BUILDING STEEL (IF AVAILABLE) (#2)

SECTION "I" – ISOLATED GROUND ZONE

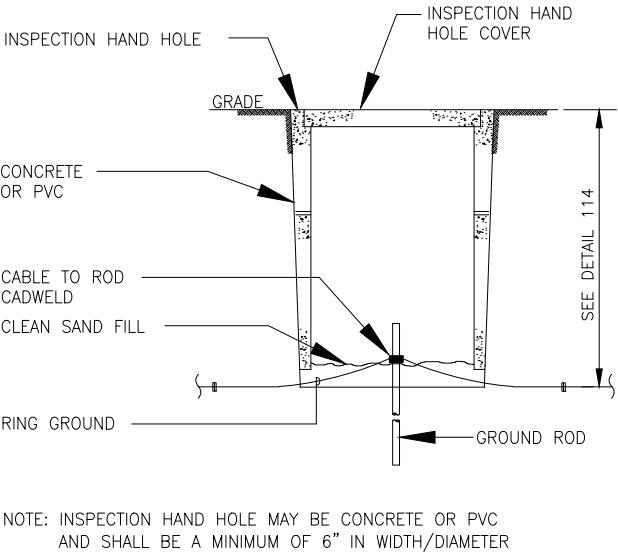
ALL COMMUNICATIONS EQUIPMENT FRAMES.
ISOLATED GROUND BAR – IGB (#2)

DETAIL NOTES:

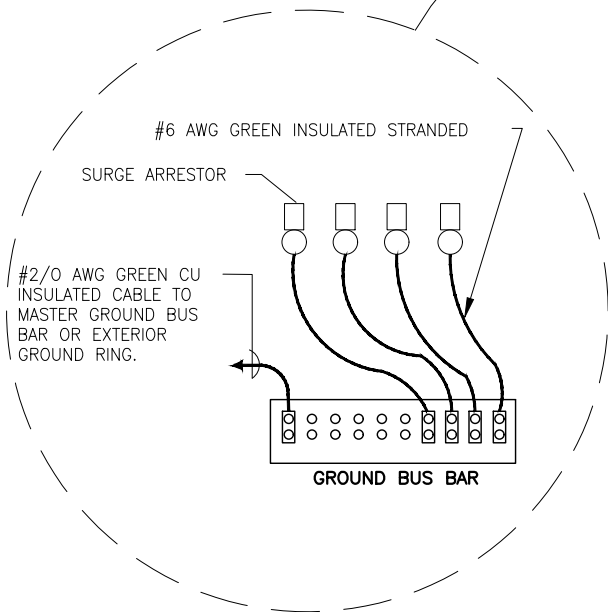
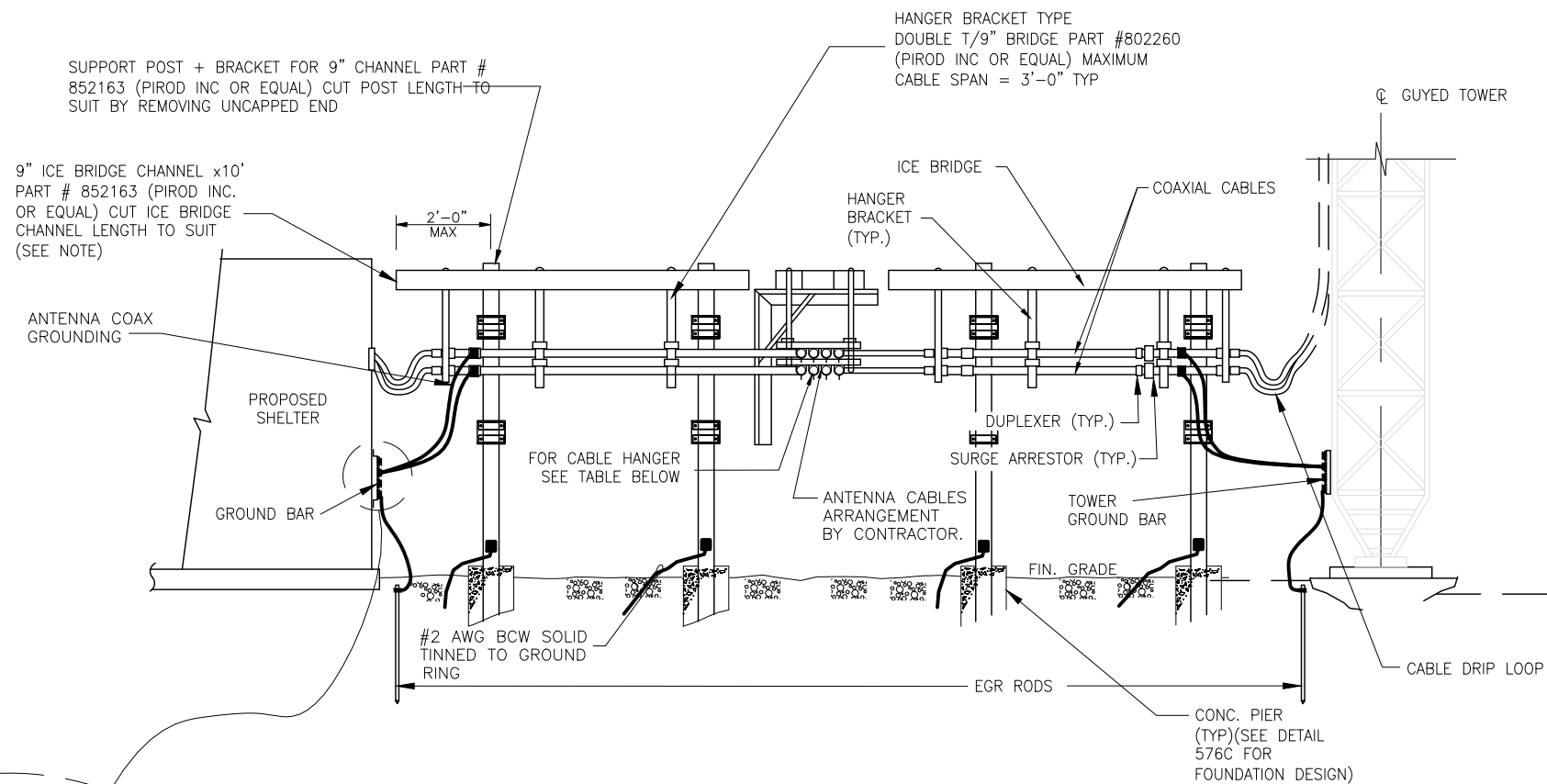
- EXOTHERMICALLY WELD #2 AWG BARE TINNED SOLID COPPER CONDUCTOR TO GROUND BAR. ROUTE CONDUCTOR TO BURIED GROUND RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
- USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION ("P", "A", "I") WITH 1" HIGH LETTERS.



CONNECTION OF GROUND WIRE TO GROUNDING BAR (CIGBE)
TOWER / MONOPOLE / ROOFTOP
NOT TO SCALE

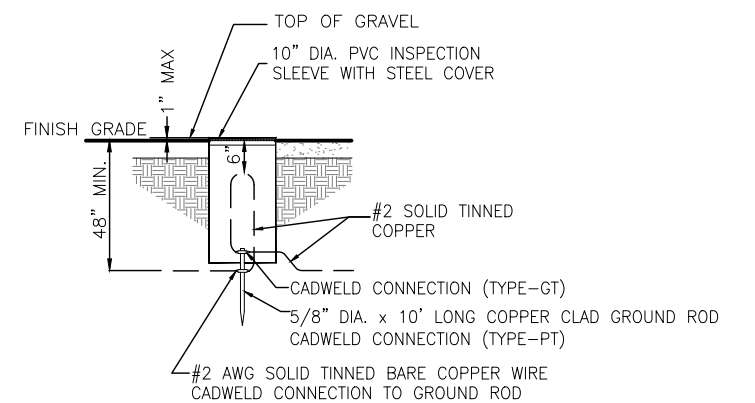


GROUND ROD WITH ACCESS AREA DETAIL
NOT TO SCALE

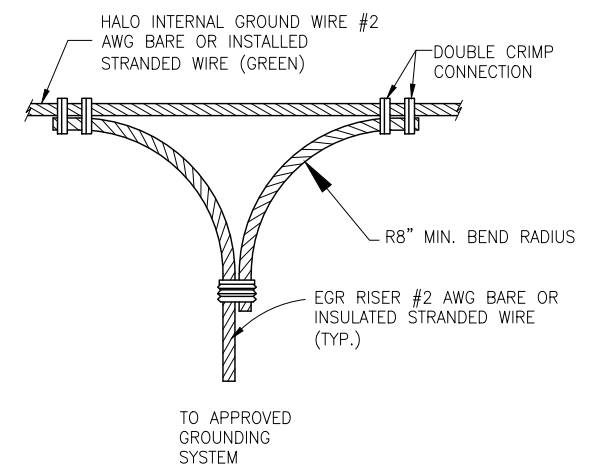


NOMINAL CABLE SIZE	CABLE TYPE NUMBER	CABLE HANGER TYPE NUMBER	MANUF. MIN. BEND RADIUS	MAX NO. OF CABLES/CND
1/2"	LDF4-50A	206706-1	5"	9
1/2"	FSJ4-50B	206706-1	1.25"	9
7/8"	LDF5-50A	206706-2	10"	3
1 1/4"	LDF6-50	206706-3	15"	1
1 5/8"	LDF7-50A	206706-4	20"	1

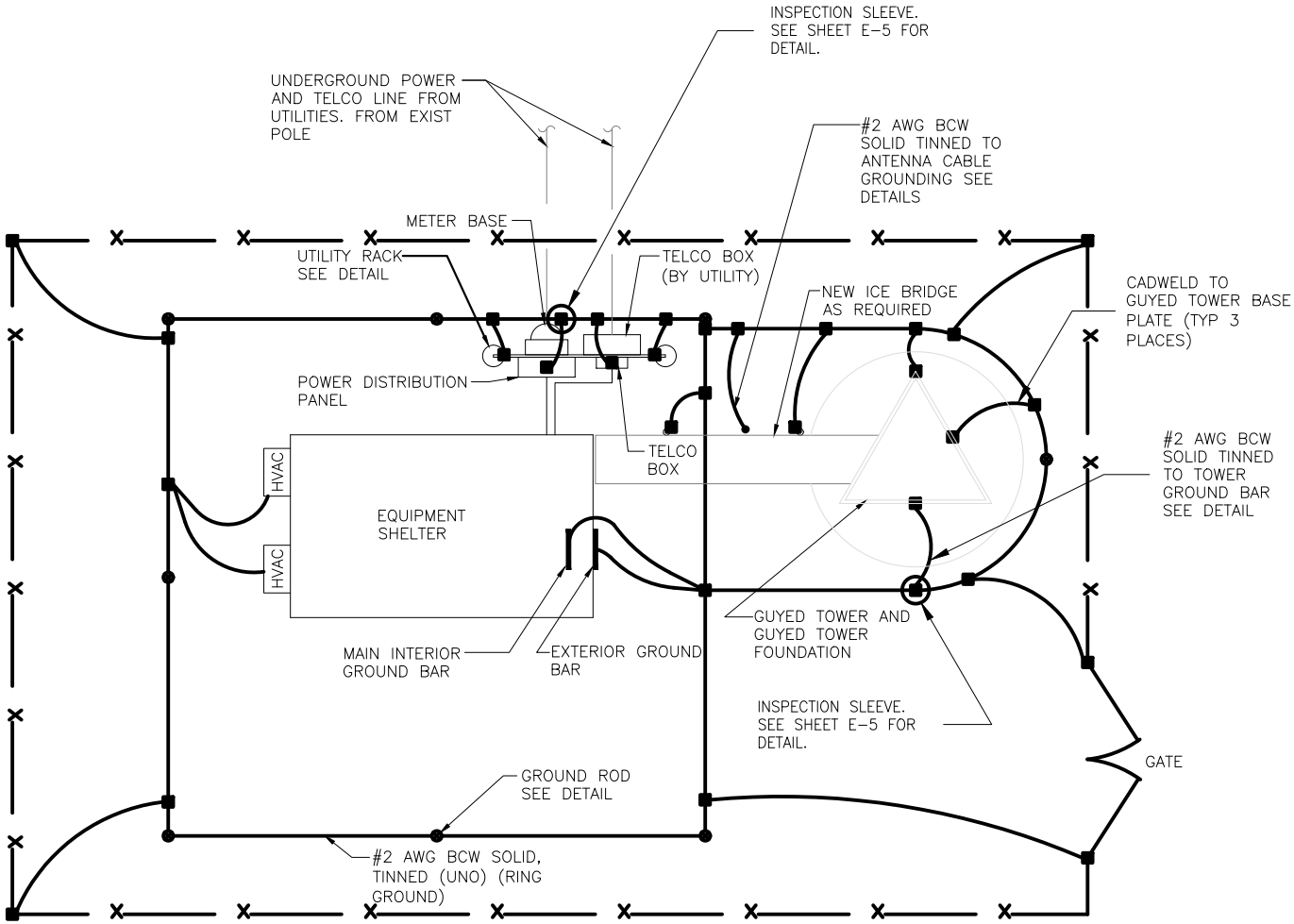
ICE BRIDGE W/ SHELTER DETAIL
NOT TO SCALE



INSPECTION SLEEVE DETAIL
NOT TO SCALE



HALO NON-DIRECTIONAL GROUND
RING SPLICE DETAIL
NOT TO SCALE

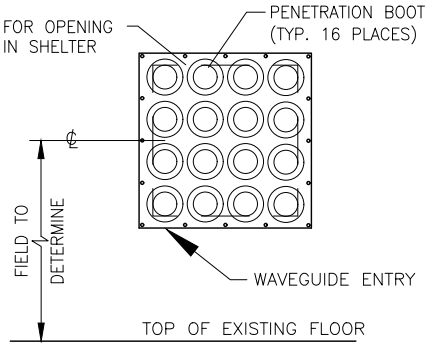


NOTE:
THIS GROUNDING PLAN IS TYPICAL. SEE
SHEET S-2 FOR ACTUAL EQUIPMENT
LAYOUT.

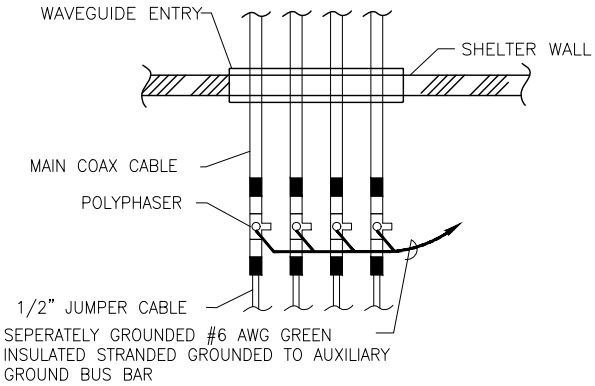
TYPICAL MONOPOLE SITE GROUNDING PLAN
NOT TO SCALE

GROUNDING NOTES

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
2. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
3. THE SUBCONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT.
4. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
5. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
6. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS; 2 AWG STRANDED COPPER FOR OUTDOOR BTS.
7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED. BACK TO BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITTED.
8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING, SHALL BE #2 AWG SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR & EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
15. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
17. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
18. BOND ALL METALLIC OBJECTS WITHIN 6 FT OF MAIN GROUND WIRES WITH 1-#2 AWG TIN-PLATED COPPER GROUND CONDUCTOR.
19. GROUND CONDUCTORS USED IN THE FACILITY GROUND AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC PLASTIC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (E.G., NON-METALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
20. INSTALL GROUND RODS FOR THE NEW GROUND RING. SEPARATION BETWEEN GROUND RODS SHOULD NOT BE LESS THAN THE LENGTH OF THE RODS NOR BE MORE THAN ONE AND ONE-HALF TIMES THE LENGTH OF THE RODS. CONNECT THE NEW RING TO EXISTING GROUND RING IN AT LEAST TWO SEPARATE PLACES.

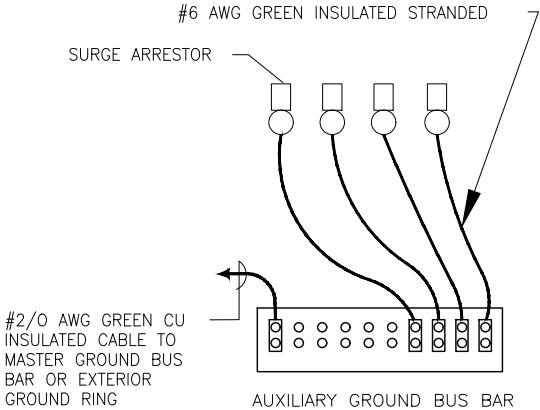


ELEVATION



PLAN

POLYPHASER GROUNDING INSIDE SHELTER
NOT TO SCALE



2	02/05/26	TENANTS AND ANTENNA HEIGHTS	RJH	MM	MM
1	01/21/26	SCALE CORRECTION	RJH	MM	MM
0	04/03/24	ISSUED FOR REVIEW	RJH	MM	MM
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: MM	DRAWN BY: RJH		