

Docket Number: 23/12519

Applicant: TowerCo 2013 LLC., represented by David Hockey of TowerCo, 5000 Valleystone Drive, Cary, NC 27519

Property Owners: Del B. Stall and Robyn R. Stall, 2241 NE 142nd Avenue, Elkhart, IA50073

Request: Approval of a Conditional Use Permit for a new 157-foot tall monopole communication tower at 2241 NE 142nd Avenue to serve as the site for T-Mobile radio equipment cabinets and antenna. An Iowa DOT project is requiring the removal of the existing T-Mobile communication tower on the property to the north across NE 142nd Avenue. The proposed tower will replace and fill the coverage gap created by the removal of the existing tower.

Subject Property / Surrounding Land Uses:

The subject property is located at 2241 NE 142nd Avenue, Elkhart, and is legally described as a portion of the Northwest Quarter of Section 19, Township 81 North, Range 23 West of the 5th P.M. (Elkhart Township). The subject property is approximately 155.73 acres in size and is zoned "AG" Agricultural District. The site is owned by Del B. Stall and Robyn R. Stall and is used for agricultural production and contains a home and several buildings used for their operation. In the northeast corner of the property there is an existing U.S. Cellular tower that is contained within a 100' X 100' lease area and takes access from NE 142nd Avenue via a 30' foot wide access and utility easement. The proposed tower is to be located just to the west of the existing tower on site.

The subject property is located at the southeast corner of NE 22nd Street and NE 142nd Avenue. The subject property is approximately three quarters (3/4) of a mile east of the City of Alleman and one (1) mile north of the City of Ankeny corporate limits. Interstate 35 runs parallel to the eastern boundary of the property. Surrounding properties are also zoned "AG" Agricultural District and primarily utilized in row crop production. There are a few residential homes in the surrounding area, which appear to be located on existing area farming operations. See *Attachment A* for a vicinity map of the subject property and surrounding area. The existing communication tower located on the subject was established with an approved Conditional Use Permit and site plan in 2002.

Application

The Polk County Zoning Ordinance, *Article 4: Use Regulations, Division 2, Table 4.1, Table of Uses* permits Communication Towers within the "AG" Agricultural District upon the granting of a Conditional Use Permit by the Polk County Board of Adjustment. The subject property is owned by Del B. Stall and Robyn R. Stall and is used for row crop production while also containing their farmstead. The applicants, TowerCo 2013 LLC represented by David Hockey, are proposing a new 157-foot tall monopole communication tower to be located in the northeast corner of the subject property, just to the west of the existing U.S. Cellular tower. The tower would provide T-Mobile coverage and replace the tower on the property to the north that is to be removed for an Iowa DOT expansion project along Interstate 35. The old tower on the north side of NE 142nd Avenue will be removed by TowerCo four (4) weeks after the new tower is complete and equipment has been transferred. See *Attachment B* at the end of this report for a copy of the application.

In addition to the 157-foot monopole tower, also proposed is fencing, landscaping materials, and a 230 square feet (20' x 11.5') area for T-Mobile equipment cabinets. A proposed 12-foot wide access drive will connect the tower site to the gravel access driveway and entrance in the northeast corner of the property. Under Article 15, Construction Standard, of the Zoning Ordinance the tower drive may be a granular surface, but must maintain a durable and dust free surface. The new gravel access drive will be contained within a 30-foot access and utility easement. The new access will also be extended to provide access to the existing tower to the east, as the current access drive for the exiting tower is now within the expanded Iowa DOT ROW. See *Attachment C* at the end of this report for a copy of the draft site plan showing the proposed location of the tower and associated improvements on the subject property.

The proposed setbacks for the tower are approximately 157 feet from the northern property line/Iowa DOT ROW line along NE 142nd Avenue, 364 feet from the eastern property line parallel to Interstate 35, and over 2000 feet to the southern and western property lines. The proposed tower location meets the minimum nonresidential setback requirements for the "AG" Agricultural District. Also, the tower is setback 157 feet from the property line and all other structures to provide a sufficient radius of clear land and ensure that a tower collapsed will be contained within the property. There is no height limit for communication towers within the "AG" Agricultural District so long as all other provisions can be met. If this Conditional Use Permit application is approved, the applicants are required to submit an engineered site plan to Polk County for review and approval prior to construction. The site plan is required to demonstrate compliance with the standards for commercial communication towers, including minimum setbacks, landscaping, and nonresidential performance standards within the "AG" Agricultural District. Following site plan approval, review of construction plans and issuance of a building permit is also required from Polk County Public Works prior to construction.

Public Testimony

Staff mailed out a total of six (6) notices regarding this request, including the date and time of the public hearing, to surrounding property owners within the 500-foot notification boundary. To-date staff has received zero (0) responses regarding this application.

Natural Resources / Environmental

The subject property is not located within a mapped floodplain, nor does it contain other mapped environmental hazards or features. The site topography contains some minor undulations that are common in row crop production fields with a gradual slope from the northwest corner to the southeast corner of the property. There is a high elevation of approximately 1014 feet within the farmstead in the northwest corner of the property, and a low elevation of approximately 990 feet within a drainage swale in the southeast corner of the property. The site contains some existing mature trees on the farmstead in the northwest corner and some landscaping around the existing tower in the northeast corner. Additional landscaping would be required to screen the communication tower and associated equipment.

Roads / Utilities

The subject property has approximately 2,571 feet of frontage to the north onto NE 142nd

Avenue, and approximately 2,634 feet of frontage to the east onto NE 22nd Street. The site currently has two existing driveway entrances onto NE 142nd Avenue, one for the farmstead and another for the existing communication tower. The tower site will be accessed via a proposed 12-foot wide drive extending north and south to a proposed gravel driveway entrance to be placed within a 30-foot access and utility easement. This proposed gravel entrance will also serve the existing tower to the east, as the existing entrance will become DOT ROW. Both NE 142nd Avenue and NE 22nd Street are hard surface roadways maintained by Polk County. Public water is adjacent to the property along both NE 22nd Street and NE 142nd Avenue through Des Moines Water Works (DMWW). The three (3) inch water line along NE 142nd avenue only extends as far as the farmstead in the northwest corner of the site. The existing home on the site is served by an onsite septic system. The proposed communication tower does not require water or sanitary utilities.

Findings

Conditional Use Permit (23/12519)

Analysis

The Board of Adjustment in reviewing an application for a Conditional Use permit shall consider the proposal in terms of the following:

1. Existing zoning and land use in the vicinity of the uses.

The subject property and surrounding area are zoned "AG" Agricultural District, and primarily dedicated to row crop production with a few rural residences. Interstate 35 runs parallel to the subject properties eastern boundary.

2. Planned and proposed public and private development, which may be adversely affected by the proposed use.

There are no planned or proposed private developments in the area. The tower is being proposed in conjunction with the required removal of an existing tower on an adjacent property due to an Iowa DOT Project. This proposal will support the Iowa DOT in ensuring there are no delays in their progress.

3. Whether and to what extent the proposed use, at the particular location for which it is suggested, is necessary or desirable to provide a development which is in the interest of the public convenience or which will contribute to the general welfare of the area or Polk County.

The proposed wireless communication facility will fill the coverage gap created by the removal of the existing on-air tower on the property to the north to accommodate an Iowa DOT project. Maintaining T-Mobile coverage in the area is in the interest of the public and E911 services.

4. Whether and to what extent all steps possible have been taken by the developer to minimize any adverse effects of the proposed use on the immediate vicinity and on the public health, safety and welfare in general.

If approved, the applicants are required to provide a fully engineered site plan to demonstrate compliance with the County's siting requirements for communication towers.

Furthermore, they have proposed a setback from the property line that will pose no risk to adjacent properties and ROW's in the case of structural failure.

Findings

The application shall be denied if the Board of Adjustment finds any of the following:

- a. **The application and record fail to establish compliance with the standard made applicable to the proposed development by the provision of this Ordinance.**
Following approval of the Conditional Use Permit the applicants are required to provide an engineered site plan, as well as construction plans, for review and approval by Polk County, prior to any construction.
- b. **The proposed use, developed in the proposed manner, and at the proposed location, would be inconsistent with the standards pursuant to the provisions of this Ordinance.**
The proposed site contains an existing utility tower. The proposed communication tower and improvements are compatible with the existing nature of the property. Additionally, required site plan and building permit review will ensure compliance with all County requirements for the use.
- c. **The adverse impacts on the overall public health, safety and welfare are not balanced by the public or private benefits of the proposal. The Board of Adjustment shall include in this balance, any proposals of the applicant and any conditions that it might impose on the development, pursuant to the provisions of this Ordinance, to ameliorate problems associated with the development.**
Future site plan and building permit review will ensure the established standards for communication towers are met, with the intent of protecting the public health, safety and welfare.

In addition, no application for a Conditional Use Permit shall be approved unless the Board of Adjustment specifically finds the proposed conditional use appropriate in the location for which it is proposed. This finding shall be based on the following criteria:

- A. **The proposed use is not in harmony with the general purpose, goals, objectives, and standards of the following:**
 1. **Polk County Comprehensive Plan:** The proposal is consistent with the goals and policies of the 2050 Polk County Comprehensive Plan.
 2. **Polk County Zoning Ordinance:** The Ordinance allows the proposed use pending approval of this Conditional Use Permit by the Board of Adjustment, and pending the following: Future approval of an engineered site plan, building permit review, issuance and inspections, as well as completion of all improvements and issuance of a certificate of use by Polk County Public Works.
 3. **Other plan, program, map, or ordinance adopted, or under consideration pursuant**

to official notice, by the County: None.

B. The proposed location of the use is not consistent with policies or provisions of the following:

- 1. Comprehensive Plan:** The proposed use is consistent with the goals and policies of the 2050 Polk County Comprehensive Plan.
- 2. Polk County Zoning Ordinance:** Communication towers are allowed within the “AG” Agricultural District, subject to approval of a Conditional Use Permit by the Board of Adjustment.
- 3. Other plan, program, map, or ordinance adopted, or under consideration pursuant to official notice, by the County:** None.

C. The proposed use at the proposed location results in a substantial or undue adverse effect on any of the following either as they now exist or as they may in the future be developed as a result of the implementation of provisions and policies of the Comprehensive Plan, this Ordinance, or any other plan, program, map, or ordinance adopted, or under consideration pursuant to official notice, by the County or other governmental agency having jurisdiction to guide growth and development:

- 1. Adjacent property:** Adjacent properties are similarly zoned, and currently used agriculturally in row crop production. Interstate 35 runs along the east border of the subject property. There are a few residences nearby, with the closest over 500 feet away from the proposed tower location. Most of the residences also appear to be located on active farming operations in the area and occupied by area farmers. Property owners within 500 feet were notified of this request, and no comments have been received to-date. The current zoning and future land use of the larger surrounding area is agricultural.
- 2. Character of the neighborhood:** All surrounding property is zoned and utilized agriculturally, with the exception of a few sparse residences and the existing communication tower on site.
- 3. Traffic conditions:** The proposed communication tower use will generate little to no traffic.
- 4. Parking:** The proposed use will not generate additional onsite or offsite parking.
- 5. Public improvements:** No impact upon future public improvements is anticipated. The proposed tower will replace a tower to be removed for an Iowa DOT project.
- 6. Public sites or rights-of-way:** No impact upon public sites or adjacent rights-of-way is anticipated.

7. **Other matters affecting the public health, safety, and general welfare:** None.

D. **The proposed use in the proposed area is not adequately served by or imposes an undue burden on any of the following.**

1. **Public improvements:** Adequate for proposed use.

2. **Public facilities:** Adequate for proposed use.

3. **Public utilities:** Adequate for proposed use.

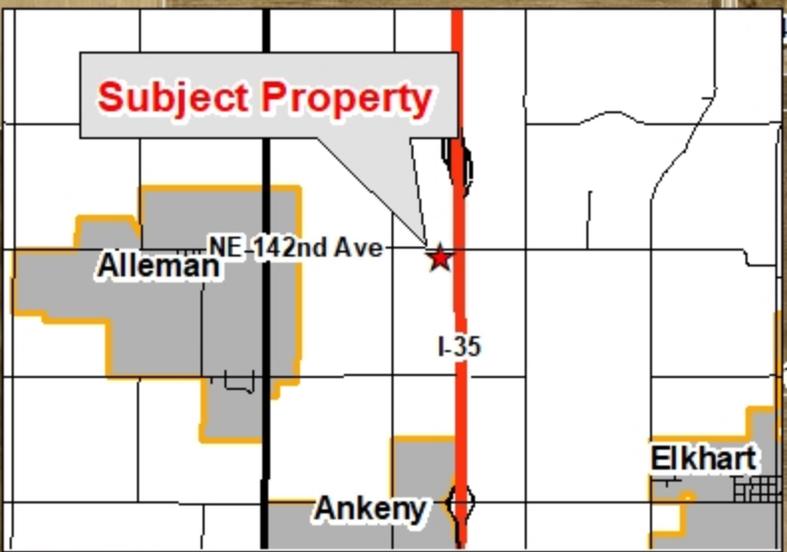
4. **Public services:** Adequate for proposed use.

Recommendation

Staff recommends approval of the Conditional Use Permit to allow for the construction of a new 157-foot tall communication tower and associated improvements on the subject property, subject to the following conditions of approval:

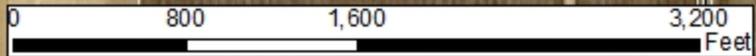
1. The applicants shall submit a Major Site Plan drawing from an Iowa licensed engineer certifying the proposed tower design and associated improvements meet the minimum safety requirements and use standards for communication towers contained within the Polk County Zoning Ordinance. The Major Site Plan drawing shall be approved prior to any construction activity. Prior to issuance of a certificate of use, all required site improvements shall be completed and inspected by Polk County. The applicant shall meet Polk County Air Quality Division construction and operation permit requirements for the generator planned within the lease area.
2. The applicant shall keep any dirt, mud and debris from accumulating on adjacent roads during and after construction of the drive, lease area and tower.
3. Building and electrical permits shall also be obtained after the site plan drawing is approved.
4. The applicant shall submit evidence of meeting FCC and FAA requirements.

Subject Property

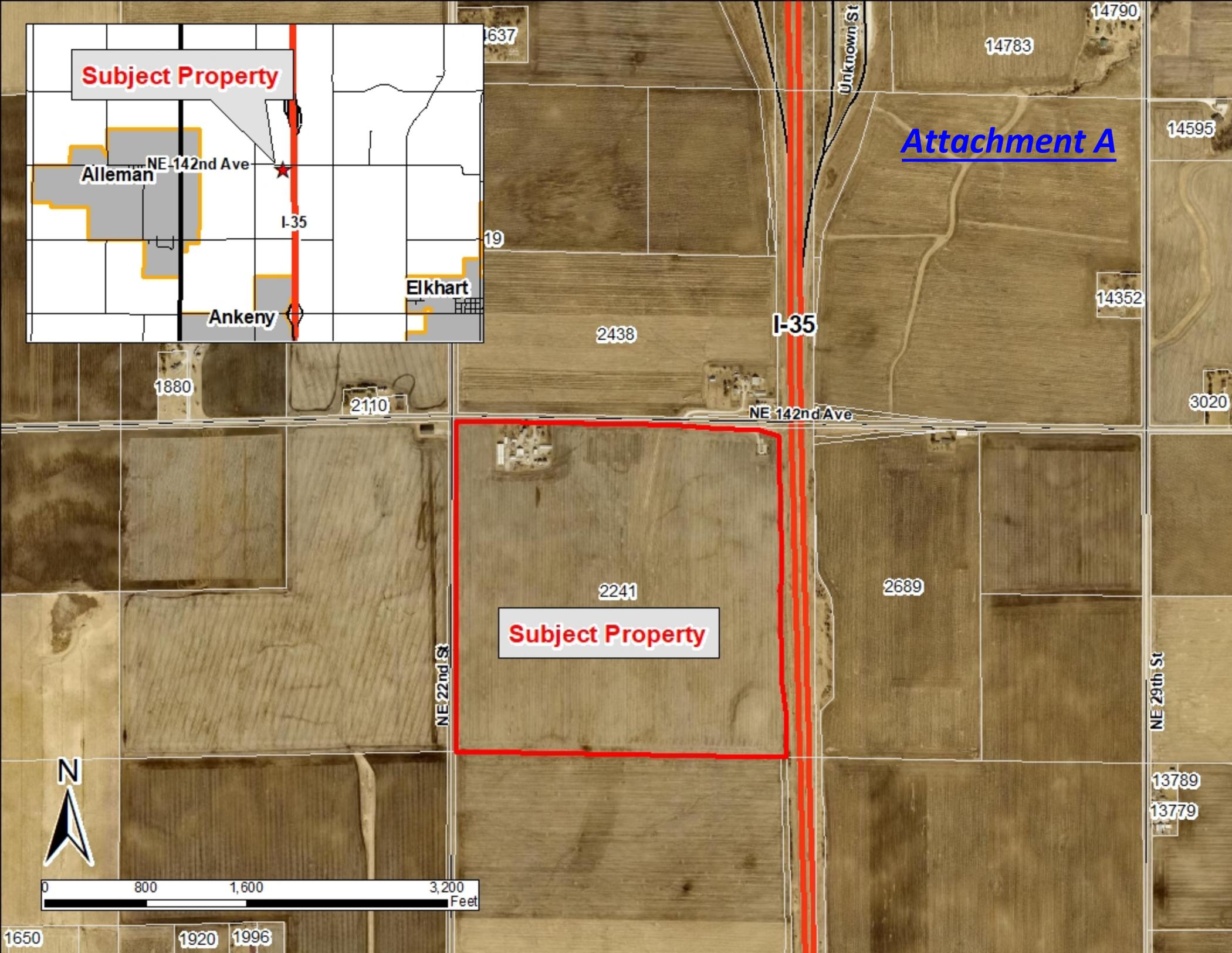


Attachment A

Subject Property



1650 1920 1996



Conditional Use Permit Application



Conditional Uses are those uses which may have a special impact or uniqueness demanding closer scrutiny and analysis to the site and the surrounding environment. When such a use is proposed, a review and report by Planning Division staff of the location, design, configuration, and impact will be conducted, comparing the proposed use to fixed standards and presented to the Board of Adjustment for action at a public hearing. Notices of the request are mailed to all property owners located within 500 feet of the subject property.

Please complete the entire application, submit with fee and review the standards on page 3.

To: **Polk County Board of Adjustment**

1. The undersigned Petitioners request that the Board consider this application for a Conditional Use Permit for the following use: (Describe briefly the nature of the use.)

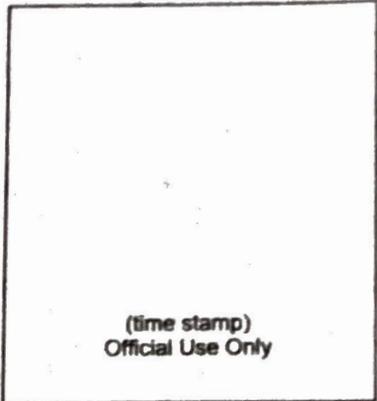
Proposed 150' monopole contained within a 50'x50' fenced compound. Also includes TMobile's radio equipment cabinets within compound as well as their antennas on tower

2. Subject Property Address: 2241 NE 142nd Avenue

3. Subject Property District and Parcel Number: 210-00255-001-000

4. Subject Property Legal Description (attach if necessary):

Legal Description on Page 4 of the accompanying construction drawings



5. Filing Fee: - \$435.00

6. Applicant(s) Information:

TowerCo 2013 LLC

David Hockey
Signature

02/17/23

Date

Applicant (Print Name)

Lease hold interest

dhockey@towerco.com

Interest in Property (owner, renter, perspective buyer, etc.)

Email

5000 Valleystone Drive, Cary, NC 27519

(919) 653-5746

(919) 469-5530

Address, City, State and Zip

Phone

Fax

7. Applicant(s) Representative:

If the appeal is going to be represented by someone other than the applicant please provide that information below.

David Hockey

TowerCo 2013 LLC

Applicant Representative (Print Name)

Firm or Business Name

5000 Valleystone Drive, Cary, NC 27519

Address, City, State and Zip

dhockey@towerco.com

(919) 653-5746

(919) 469-5530

Email

Phone

Fax

8. Property Owner Consent:

The application must be signed by all the Titleholders, Contract Purchasers, or Option Purchasers of the subject property. The application may also be signed by the Registered Agent for a corporation or other person with similar legal authority to sign for a property owner. (if additional signatures are needed please attach)

Del Stall

(Print Name)

Del Stall

Signature

2/20/23

Date

Robyn Stall

(Print Name)

Robyn Stall

Signature

2/20/23

Date

Conditional Use Permit Standards

Section 1. Review Standards

The review determines whether the proposed use should be permitted by weighing public need for and benefits to be derived from the use against the local impact which it may cause. The review shall consider the proposal in terms of:

- (A) Existing zoning and land use in the vicinity of the use; and
- (B) planned and proposed public and private developments which may be adversely affected by the proposed use; and
- (C) whether and to what extent the proposed use, at the particular location for which it is suggested, is necessary or desirable to provide a development which is in the interest of the public or which will contribute to the general welfare of the area or Polk County; and
- (D) whether and to what extent all steps possible have been taken by the developer to minimize any adverse effects of the proposed use on the immediate vicinity and on the public health, safety and welfare in general.

Section 2. General Standards

No application for a conditional use permit shall be approved unless the Board of Adjustment specifically finds the proposed conditional use appropriate in the location for which it is proposed. This finding shall be based on the following criteria:

The proposed use shall be in harmony with the general purpose, goals, objectives, and standards of the Polk County Comprehensive Plan, this Ordinance, or any other plan, program, map, or ordinance adopted, or under consideration pursuant to official notice, by the County.

- (A) The proposed location and use shall be consistent with policies or provisions of the Comprehensive Plan, this Ordinance, or other plans or programs of the County.
- (B) The proposed use at the proposed location shall not result in a substantial or undue adverse effect on adjacent property, the character of the neighborhood, traffic conditions, parking, public improvements, public sites or rights-of-way, or other matters affecting the public health, safety, and general welfare, either as they now exist or as they may in the future be developed as a result of the implementation of provisions and policies of the Comprehensive Plan, this Ordinance, or any other plan, program, map, or ordinance adopted, or under consideration pursuant to official notice, by the County or other governmental agency having jurisdiction to guide growth and development.
- (C) The proposed use in the proposed area will be adequately served by, and will not impose an undue burden on, any public improvements, facilities, utilities, and services. Where any such improvements, facilities, utilities, or services are not available or adequate to service the proposed use in the proposed location, the applicant shall, as part of the application and a condition to approval of the proposed conditional use permit, be responsible for establishing ability, willingness, and binding commitment to provide such improvements, facilities, utilities, and services in sufficient time, and in a manner consistent with the Comprehensive Plan, this Ordinance, and other plans, programs, maps, and ordinances adopted by Polk County to service the development. The approval of the conditional use permit shall be conditioned upon such improvements, facilities, utilities, and services being provided and guaranteed by the applicant.

(K) *Communication Towers.*

Radio or TV broadcasting towers, telecommunications towers, antenna arrays (except residential satellite dishes). All towers shall be located so that they do not interfere with radio and television reception in residential areas. All towers shall meet the Ankeny Regional Airport Tall Structures Zoning Ordinance.

The following regulations apply to all commercial communication towers except for ham and citizen band radios.

- (1) *Height. The maximum height for a commercial communication tower in the HI District and LI District is 350'. The maximum height in the GC and AT Districts is 180'. There is no maximum height for commercial communications towers in the AG District.*

RESPONSE

The proposed tower will be 150' (to top of steel, 157' including the lightning rod). Therefore, this requirement has been satisfied.

- (2) *Setbacks. A commercial communication tower and any accompanying structure must meet the standard nonresidential setbacks for the underlying district. In addition to the setback requirements, there must be sufficient radius of clear land around the tower so that its collapse will be contained on this property. Unless the collapse radius is otherwise specified and certified by an engineer licensed in Iowa, the tower shall be set back from the property line a distance equal to the height of the tower and antenna. Also, there must be enough area for a vehicle doing maintenance to maneuver on the property.*

RESPONSE

The proposed tower is setback 157' from the property line (height of the tower). Therefore, this poses no threat to public safety and complies with the requirement of this section.

- (3) *Lighting. Towers located within one (1) mile of a residential zoning district shall use dual lighting system strobe during the day and red incandescent lighting, at night or only red incandescent lighting, subject to FAA requirements.*

RESPONSE

The proposed tower does not require review by the FAA. Nor does it require lighting and TowerCo does not propose lighting it. Therefore, this requirement is not applicable.

- (4) *Landscaping.*

- (a) *The adverse visual impact of a tower shall be minimized through design, location and landscape screening around the tower base and any associated structures. Innovative camouflaging techniques may also be used to minimize the visual impact of a tower. The landscape screening requirement*

may be waived by the Zoning Administrator under the following situations:

- 1) The tower is located in the midst of a wooded area and the existing vegetation will provide sufficient screening for the duration of the use.*
- 2) The tower is located in a rural district and in a farm field at least 660' away from an existing or known proposed use or public space where the landscape screening will not be visible from the public roadway.*
- (b) All landscaping must consist of evergreens or hedge shrubs located outside of any fenced area but within the leased area. Landscaping materials shall be adequately spaced to provide screening. Minimum plantings shall be six (6) foot minimum height for evergreen or four (4) foot minimum height for hedge shrubs at time of planting.*

RESPONSE

Please refer to Sheet C2 and L1 of included construction drawings. TowerCo is proposing to plant 4' Spartan Junipers surrounding the fenced compound to screen the base from surrounding views. This complies section 2b above allowing four foot hedge shrubs at time of planting. This requirement has been satisfied.

- (5) Signs. No signs bearing advertising will be permitted on the fence surrounding the tower. Warning, danger, high voltage or similar signs are allowed.*

RESPONSE

TowerCo only proposed FCC signage and site labeling identifying site ownership. There will be no advertising signs as part of this proposal. Therefore, this requirement has been satisfied.

- (6) Co-location. An applicant shall provide a certification by a registered engineer licensed in the State of Iowa that the proposed commercial communication tower is designed, structurally and electrically, to permit at a minimum three (3) antenna systems of comparable size to be added to the original tower. A new commercial communication tower shall not be approved unless the communication equipment for the proposed tower cannot be accommodated on an existing or approved tower within a one mile search radius of the proposed tower due to one or more of the following reasons as documented by a licensed engineer in the State of Iowa:*
 - (a) The planned equipment would exceed the structural capacity of the existing or approved tower.*
 - (b) The planned equipment would cause interference materially impacting the usability of other existing or planned equipment at the tower.*
 - (c) Existing or approved towers cannot accommodate the planned equipment at a height necessary to function reasonably.*

(d) *Other unforeseen reasons that make it infeasible to locate the planned communications equipment upon an existing or approved tower.*

RESPONSE

Please find enclosed a copy of the tower designs, signed and sealed by a professional engineer licensed in Iowa. Page 2 of this design confirms through the tower profile as well as design table that the tower will be capable of 3 antenna systems of comparable size. Therefore, this requirement has been satisfied.

TowerCo is proposing to replace our existing tower on the north side of 142nd Ave with a new tower due to the proposed DOT highway project. As a result, we have chosen to pursue a new tower on the south side of 142nd Ave. The existing US Cellular tower on the south side of 142nd has not been selected for collocation of T-Mobile's equipment due to the uncertainty of that tower's ground lease. This lease will terminate in under 10 years with no guarantee of renewal. With no long term certainty for this site, T-Mobile could not collocate in good faith knowing that this tower may not remain on the property in the future. Therefore, this requirement has been satisfied.

(7) *Abandoned or Unused Towers. The applicant shall present a signed lease agreement, a recorded declaration of covenants or other satisfactory evidence showing that the owner/operator of a tower is obligated to promptly remove the tower at the end of the lease term or when the antenna thereon is no longer used, and that the site will be returned to original condition. If a tower is granted a conditional use permit, the conditional use permit will terminate when the lease*

for the site terminates or when the antenna is no longer in use.

RESPONSE

TowerCo has included a redacted copy of the executed ground lease confirming that it contains removal language. Please see page 2, Section 6, subsection (a) which confirms the tower will be removed at TowerCo's expense within 180 days of the termination of the lease. Therefore, this requirement has been satisfied.

(8) *Safety. The tower design and construction must be certified by a registered engineer. The tower must meet all applicable FCC and FAA requirements.*

RESPONSE

TowerCo acknowledges and confirms that the proposed facility will meet all requirements of the FCC and FAA. Additionally, we have included the tower designs and construction drawings signed and sealed by a registered engineer. Therefore, this requirement has been satisfied.

- (9) Equipment Cabinets and buildings. No spacing requirements between equipment cabinets. Equipment buildings must be separated a minimum of 10 feet.

RESPONSE

TowerCo acknowledges and will comply with the requirements of this section.

Conditional Use Permit Standards

Section 1. Review Standards

The review determines whether the proposed use should be permitted by weighing public need for and benefits to be derived from the use against the local impact which it may cause. The review shall consider the proposal in terms of:

Existing zoning and land use in the vicinity of the use; and

RESPONSE:

The property's current zoning is AG being used as a farm field by property owner.

planned and proposed public and private developments which may be adversely affected by the proposed use; and

RESPONSE

The projected is being proposed in response to a DOT project which requires the removal and relocation of the existing tower's location on the north side of 142nd Ave. Therefore, this project is in direct response to assist DOT with their capital improvement project.

whether and to what extent the proposed use, at the particular location for which it is suggested, is necessary or desirable to provide a development which is in the interest of the public or which will contribute to the general welfare of the area or Polk County; and

RESPONSE

The proposed wireless communication facility is necessary due to the fact that it's existing on air site across the street has to be removed in order to accommodate the DOT project. Therefore, it is in the interest and general welfare of the area to maintain wireless communication service by developing this project.

whether and to what extent all steps possible have been taken by the developer to minimize any adverse effects of the proposed use on the immediate vicinity and on the public health, safety and welfare in general.

RESPONSE

The proposed project will not create any noise, pollution, light, or other adverse affects. If T-Mobile were to lose the existing on air site on the north side of NE 142 Ave, without a replacement site, it would create a coverage gap, including any associated E911 services. The height of the tower is such that it will not require lighting. It generates no pollution, and can accommodate additional wireless tenants in the future should they need a structure to collocate.

Additionally, the tower has been sited such that it is equal to or more than tower height from all property lines. Therefore, it poses no structural risk to adjoining land owners or ROWs.

Section 2. General Standards for Conditional Use Permits

No application for a conditional use permit shall be approved unless the Board of Adjustment specifically finds the proposed conditional use appropriate in the location for which it is proposed. This finding shall be based on the following criteria:

The proposed use shall be in harmony with the general purpose, goals, objectives, and standards of the Polk County Comprehensive Plan, this Ordinance, or any other plan, program, map, or ordinance adopted, or under consideration pursuant to official notice, by the County.

The proposed location and use shall be consistent with policies or provisions of the Comprehensive Plan, this Ordinance, or other plans or programs of the County.

RESPONSE

The proposed wireless communication facility supports the goals, policies and provisions of the Polk County 2050 Comprehensive Plan. The small footprint of the tower site will not have a meaningful impact on the preservation of the predominantly agricultural landscape in this area. Additionally, it supports the recommendations and goals of the Infrastructure component of the comprehensive plan. The plan has, as a goal, a resilient infrastructure system. Maintaining wireless communication and E911 services through the approval of the TowerCo facility would support this goal. Therefore, this requirement has been satisfied.

The proposed use at the proposed location shall not result in a substantial or undue adverse effect on adjacent property, the character of the neighborhood, traffic conditions, parking, public improvements, public sites or rights-of-way, or other matters affecting the public health, safety, and general welfare, either as they now exist or as they may in the future be developed as a result of the implementation of

provisions and policies of the Comprehensive Plan, this Ordinance, or any other plan, program, map, or ordinance adopted, or under consideration pursuant to official notice, by the County or other governmental agency having jurisdiction to guide growth and development.

RESPONSE

The proposed 150' monopole will be located in a farm field along NE 142nd Ave. This location will not substantially or adversely affect the adjacent property or character of the neighborhood due to it's low impact characteristics. It does not generate noise, odor, fumes, or light. Additionally, it is located at least the height of the tower from all property lines, providing a significant buffer from surrounding lands and right of ways. It does not generate traffic in an impactful way. The site will also comply with all other applicable requirements of the Polk County Zoning ordinance.

The proposed use in the proposed area will be adequately served by, and will not impose an undue burden on, any public improvements, facilities, utilities, and services. Where any such improvements, facilities, utilities, or services are not available or adequate to service the proposed use in the proposed location, the applicant shall, as part of the application and a condition to approval of the proposed conditional use permit, be responsible for establishing ability, willingness, and binding commitment to provide such improvements, facilities, utilities, and services in sufficient time, and in a manner consistent with the Comprehensive Plan, this Ordinance, and other plans, programs, maps, and ordinances adopted by Polk County to service the development. The approval of the conditional use permit shall be conditioned upon such improvements, facilities, utilities, and services being provided and guaranteed by the applicant.

RESPONSE

The proposed wireless communication facility will be served by existing utilities and not be a burden on these resources. In fact, this project supports public improvements currently being proposed by IOWADOT in the immediate area.

TowerCo acknowledges it's responsibility for any conditioned improvements associated with the project and approvals.

Attachment C



5000 VALLEYSTONE DRIVE
CARY, NC 27519

IA0360 STALL RELO

SITE LOCATION (E-911 ADDRESS TBD)

2241 NE 142ND AVE.
ELKHART, IA 50073
POLK COUNTY

LATITUDE: N41° 49' 11.44" (41.8198452)
LONGITUDE: W93° 34' 22.25" (-93.5728468)
TAX/PIN #: 210-00255-001-000
ZONING: AG



FROM THE DES MOINES INTERNATIONAL AIRPORT AT 5800 FLEUR DR, DES MOINES, IA 50321. GET ON I-235 E FROM FLEUR DR AND MARTIN LUTHER KING JR PKWY. HEAD WEST ON COWLES DR. TURN LEFT ONTO FLEUR DR. CONTINUE ONTO MARTIN LUTHER KING JR PKWY. CONTINUE ONTO 19TH PL. TURN RIGHT ONTO THE RAMP TO I-235 E. KEEP LEFT, FOLLOW SIGNS FOR I-235 E AND MERGE ONTO I-235 E. FOLLOW I-235 E AND I-35 N TO NE 126TH AVE. TAKE EXIT 96 FROM I-35 N. MERGE ONTO I-235 E. CONTINUE ONTO I-35 N. TAKE EXIT 96 TOWARD ELKHART/POLK CITY. TAKE NE 29TH ST TO NE 142ND AVE. TURN RIGHT ONTO NE 126TH AVE. TURN LEFT AT THE 1ST CROSS STREET ONTO NE 29TH ST. TURN LEFT ONTO NE 142ND AVE. DESTINATION WILL BE ON THE LEFT.

DRIVING DIRECTIONS

JURISDICTION
ELKHART TOWNSHIP

STATE
IOWA

TOWER TYPE
MONOPOLE TOWER

TOWER HEIGHT
150' (157' TO HIGHEST APPURTENANCE)

NUMBER OF CARRIERS
1 PROPOSED, 3 FUTURE

USE
PROPOSED TELECOMMUNICATIONS TOWER
AND UNMANNED EQUIPMENT

FLOOD INFORMATION
SITE IS LOCATED WITHIN FEMA FLOOD MAP
AREA 19153C0055F DATED 02/01/19 WITHIN
FLOOD ZONE X.

PROJECT SUMMARY

DEVELOPER
TOWERCO
5000 VALLEYSTONE DRIVE
CARY, NC 27519
PHONE: (919) 653-5710
ATTN: AMANDA FRY

POWER COMPANY
CONSUMERS ENERGY
2074 242ND STREET
MARSHALLTOWN, IA 50158
PHONE: (641) 754-1640
ATTN: JEFF LANNING

PROPERTY OWNER
DEL B STALL
2241 NE 142ND AVE
ELKHART, IA 50073

CONSULTANT
KIMLEY-HORN AND ASSOCIATES, INC.
4201 WINFIELD ROAD, SUITE 600
WARRENVILLE, IL 60555
PHONE: (630) 487-5550
ATTN: KATELYN DRAPEAU, P.E.

PROJECT CONTACTS



I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEERING UNDER THE LAWS OF THE STATE OF IOWA.

(SIGNATURE)
(DATE) 02/20/2023

PRINTED OR TYPED NAME: KATELYN DRAPEAU, P.E.

LICENSE NUMBER: PE27394

MY LICENSE RENEWAL DATE IS 12/31/23

PAGES OF SHEETS COVERED BY THIS SEAL: ALL PAGES (1 - 9)

SHEET NO.:	SHEET DESCRIPTION:
T1	TITLE SHEET
N1	GENERAL NOTES
SURVEY	TOPOGRAPHICAL SURVEY (BY OTHERS)
C1	OVERALL PARCEL AND SITE PLAN
C2	ENLARGED SITE PLAN
C2-1	CARRIER EQUIPMENT PLAN
C3	FENCE, GATE, AND COMPOUND DETAILS
C4	ACCESS ROAD DETAILS
C5	SITE SIGNAGE DETAILS
C6	ANTENNA AND TOWER ELEVATION DETAILS
D1	CARRIER RFDS
D2	CARRIER RF PLUMBING DIAGRAM
L1	LANDSCAPING PLAN

SHEET INDEX

POLK COUNTY SHERIFF DEPARTMENT
5995 NE 14TH STREET
DES MOINES, IA 50313
PHONE: (515) 286-3306
ATTN: DISPATCHER

ELKHART FIRE DEPARTMENT
260 NW MAIN STREET
ELKHART, IA 50073
PHONE: (515) 367-3105
ATTN: DISPATCHER

EMERGENCY INFORMATION

ELKHART TOWNSHIP PLANNING & ZONING
260 NW MAIN STREET
ELKHART, IA 50073
PHONE: (515) 367-4735
ATTN: TBD

PERMIT INFORMATION

PLANS PREPARED FOR:



PROJECT INFORMATION:

SITE ID:
IA0360
SITE NAME:
STALL RELO
SITE LOCATION:
ELKHART, IA
POLK COUNTY

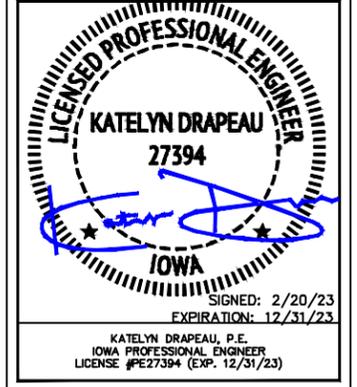
PLANS PREPARED BY:



REV: DATE: ISSUED FOR: BY:

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7			
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5			
4	02/20/23	CARRIER DETAILS	JL
3	12/19/22	CLIENT REVISION	KRB
2	12/13/22	CLIENT REVISION	KRB
1	10/25/22	CLIENT REVISION	KRB
0	10/20/22	REVIEW	KRB

LICENSER:



KH PROJECT NUMBER:

168739009.1.100

DRAWN BY: CHECKED BY:

KRB KLD

SHEET TITLE:

TITLE SHEET

SHEET NUMBER:

T1

1.00 GENERAL NOTES

- 1.01 ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE DRAWINGS AND SPECIFICATIONS. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE, LOCAL AND NATIONAL CODES, ORDINANCES AND OR REGULATIONS APPLICABLE TO THIS PROJECT.
- 1.02 THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE PROJECT MANAGER AND/OR ENGINEER AND BE RESOLVED BEFORE PROCEEDING WITH WORK. WHERE THERE IS A CONFLICT BETWEEN DRAWING AND TOWERCO SPECIFICATIONS, THE TOWERCO REPRESENTATIVE SHOULD BE CONTACTED FOR CLARIFICATION.
- 1.03 ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE PROJECT MANAGER AND/OR ENGINEER SO THAT PROPER REVISIONS MAY BE MADE. MODIFICATION OF DETAILS OF CONSTRUCTION SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE PROJECT MANAGER AND/OR ENGINEER.
- 1.04 CONTRACTOR SHALL REVIEW AND BE FAMILIAR WITH SITE CONDITIONS AS SHOWN ON THE ATTACHED SITE PLAN AND/OR SURVEY DRAWINGS.
- 1.05 WAVEGUIDE BRIDGE AND EQUIPMENT CABINETS ARE SHOWN FOR REFERENCE ONLY. REFER TO SEPARATE DRAWINGS FOR SPECIFIC INFORMATION.
- 1.06 ALL FINISHED GRADES SHALL SLOPE MINIMUM 1/4 IN./FT. AWAY FROM EQUIPMENT IN ALL DIRECTIONS. CONTRACTOR SHALL SLOPE SWALES AS REQUIRED ALONG EXISTING TERRAIN TO DRAIN AWAY FROM COMPOUND AND ACCESS DRIVE.
- 1.07 THE PROPOSED TOWER AND TOWER FOUNDATIONS WERE DESIGNED BY OTHERS. TOWER INFORMATION PROVIDED ON THESE PLANS ARE PROVIDED FOR REFERENCE PURPOSES ONLY. NOTIFY ENGINEER OR PROJECT MANAGER OF ANY CONFLICTS OR DISCREPANCIES. CONTRACTOR TO OBTAIN COPY OF TOWER DESIGN DRAWINGS, IF AVAILABLE, FROM TOWERCO REPRESENTATIVE TO CONFIRM COAX ROUTING AND ANTENNA MOUNT INFORMATION.
- 1.08 THE CONTRACTOR SHALL PROVIDE ADEQUATE EXCAVATION SLOPING, SHORING, BRACING, AND GUYS IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES.
- 1.09 UPON COMPLETION OF CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY CONSTRUCTION ACTIVITIES TO THE EXISTING ACCESS ROAD AND COMPOUND GRAVEL AREAS. ANY NEW FILL MATERIALS SHALL BE COMPACTED.
- 1.10 THE CONTRACTOR IS HEREBY NOTIFIED THAT PRIOR TO COMMENCING CONSTRUCTION, HE IS RESPONSIBLE FOR CONTACTING THE UTILITY COMPANIES INVOLVED AND SHALL REQUEST A VERIFICATION AT THE CONSTRUCTION SITE OF THE LOCATIONS OF THEIR UNDERGROUND UTILITIES AND WHERE THEY MAY POSSIBLY CONFLICT WITH THE PLACEMENT OF IMPROVEMENTS AS SHOWN ON THESE PLANS. THE CONTRACTOR OR ANY SUBCONTRACTOR FOR THIS CONTRACT WILL BE REQUIRED TO NOTIFY "811" 72 HOURS IN ADVANCE OF PERFORMING ANY WORK. ANY UTILITIES DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR, AT NO EXPENSE TO THE OWNER.
- 1.11 CONTRACTOR TO PROVIDE DUMPSTER AND PORTABLE TOILET FACILITY DURING CONSTRUCTION.
- 1.12 CONTRACTOR TO PROVIDE STYMIE LOCK OR EQUIVALENT AS APPROVED BY TOWERCO REPRESENTATIVE.
- 1.13 CONTRACTOR TO PROVIDE ANY NECESSARY SIGNAGE PER T-MOBILE'S INSTRUCTIONS. SEE SITE SIGNAGE DETAILS.

2.00 EQUIPMENT FOUNDATION NOTES

- 2.01 FOUNDATIONS ARE DESIGNED FOR A PRESUMPTIVE ALLOWABLE SOIL BEARING CAPACITY OF 2,000 PSF. CONTRACTOR SHALL VERIFY SOIL CONDITIONS AND BEARING CAPACITY PRIOR TO CONSTRUCTION.
- 2.02 EXCAVATE A MINIMUM 18" BELOW PROPOSED EQUIPMENT FOUNDATIONS OF EXPANSIVE, ORGANIC, UNCONSOLIDATED OR OTHERWISE UNACCEPTABLE MATERIAL AND REPLACE WITH WELL-COMPACTED MATERIAL.
- 2.03 CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, PROTECTING, AND RELOCATING AS REQUIRED ALL SERVICE AND UTILITY LINES IN VICINITY OF THE WORK SITE. ALL EXCAVATIONS NEAR THESE LINES TO BE CARRIED OUT WITH EXTREME CAUTION. COORDINATE ALL RELOCATIONS WITH THE PROPERTY OWNER.
- 2.04 CONTRACTOR TO CUT/FILL EXISTING COMPOUND SUBSOIL TO PROVIDE AN AREA AS LEVEL AS POSSIBLE FOR THE EQUIPMENT FOUNDATIONS. ALL FILL AREAS ARE TO BE FILLED WITH SUITABLE MATERIALS. FILL MATERIALS ARE TO BE PLACED, COMPACTED, AND TESTED IN MAXIMUM LAYERS OF 8". COMPACTION OF ALL FILL MATERIAL SHALL ACHIEVE 95 PERCENT OF MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D 698. ALL TESTS MUST MEET THE MINIMUM SPECIFIED SOIL BEARING CAPACITY. COMPACTION TESTING IS BY THE GEOTECHNICAL TESTING COMPANY DESIGNATED FOR THE PROJECT. SCHEDULING AND COORDINATION IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. REPORTS OF ALL TESTING ARE TO BE PROMPTLY DELIVERED OR FAXED TO THE TOWERCO PROJECT MANAGER.
- 2.05 CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AT 28 DAYS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST REVISION TO ACI-318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
- 2.06 CONCRETE SHALL HAVE A SLUMP BETWEEN 3" AND 6".
- 2.07 FIBERS FOR CONCRETE SHALL BE FIBERMESH 650, 100 PERCENT VIRGIN POLYPROPYLENE FIBRILLATED FIBERS, e3 PATENTED TECHNOLOGY PATENTED TECHNOLOGY, CONTAINING NO REPROCESSED OLEFIN MATERIALS. THE FIBERS SHALL CONFORM TO ASTM C1116 TYPE III AND MANUFACTURED SPECIFICALLY FOR THE SECONDARY REINFORCEMENT OF CONCRETE.
- 2.08 THE FIBERS SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED MANUFACTURING FACILITY. UNLESS OTHERWISE STATED, FIBERMESH 650 MACRO-SYNTHETIC FIBERS SHALL BE ADDED TO THE CONCRETE AT THE BATCHING PLANT AT THE RECOMMENDED APPLICATION RATE OF 3 LBS/YD³ AND MIXED FOR A SUFFICIENT TIME (MINIMUM 5 MINUTES AT FULL MIXING SPEED) TO ENSURE UNIFORM DISTRIBUTION OF THE FIBERS THROUGHOUT THE CONCRETE. FIBROUS CONCRETE REINFORCEMENT SHALL BE MANUFACTURED BY FIBERMESH, 4019 INDUSTRY DRIVE, CHATTANOOGA, TN 37416 USA, TEL: 800 621-1273, WEBSITE: WWW.FIBERMESH.COM
- 2.09 AT THE REQUEST OF THE TOWERCO PROJECT MANAGER, TEST CYLINDERS SHALL BE MOLDED AND LABORATORY CURED IN ACCORDANCE WITH ASTM C31. THREE CYLINDERS SHALL BE TAKEN FOR EACH DAY'S CONCRETE PLACEMENT. CYLINDERS SHALL BE TESTED IN ACCORDANCE WITH THE LATEST REVISION TO ASTM C39.
- 2.10 CHAMFER ALL EXPOSED EXTERNAL CORNERS OF CONCRETE WITH 3/4" x 45° CHAMFER, UNLESS OTHERWISE NOTED.
- 2.11 CONCRETE FORMWORK IS TO BE STRIPPED WITHIN 48 HOURS. VIBRATION OF THE CONCRETE MUST ASSURE THAT HONEYCOMBING WILL BE AT A MINIMUM. MECHANICAL VIBRATION OF ALL CONCRETE IS REQUIRED UNLESS OTHERWISE DIRECTED BY TOWERCO PROJECT MANAGER. ABOVE GRADE CONCRETE IS TO BE RUBBED AND PATCHED TO ASSURE SMOOTH FINISH AT TIME OF FORMS REMOVAL. CONTRACTOR SHALL PROVIDE A BROOM FINISH ON THE TOP SURFACE OF THE EQUIPMENT FOUNDATION UNLESS OTHERWISE DIRECTED BY TOWERCO PROJECT MANAGER.
- 2.12 TOPS OF CONCRETE FOUNDATION MUST BE WITHIN 0.02' OF ELEVATION REQUIRED.
- 2.13 TOP OF FOUNDATION FINISH TO BE LEVEL ±1/8" IN 10'.
- 2.14 TOP OF FOUNDATION TO HAVE MEDIUM BROOM FINISH.
- 2.15 CONTRACTOR SHALL REFER TO DRAWINGS OF OTHER TRADES AND VENDOR DRAWINGS FOR EMBEDDED ITEMS AND RECESSES NOT SHOWN ON THE STRUCTURAL DRAWINGS. CONTRACTOR SHALL VERIFY PLACEMENT OF EQUIPMENT AND LOCATION OF CONDUIT FOR MANUFACTURER'S AND VENDORS SPECIFICATIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL OPENINGS AND SLEEVES FOR PROPER DISTRIBUTION OF ALL UTILITIES.

PLANS PREPARED FOR:



PROJECT INFORMATION:

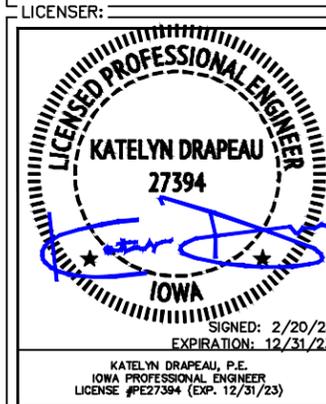
SITE ID:
IA0360
SITE NAME:
STALL RELO
SITE LOCATION:
ELKHART, IA
POLK COUNTY

PLANS PREPARED BY:



REV: DATE: ISSUED FOR: BY:

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4	02/20/23	CARRIER DETAILS	JL
3	12/19/22	CLIENT REVISION	KRB
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1	10/25/22	CLIENT REVISION	KRB
0	10/20/22	REVIEW	KRB



KH PROJECT NUMBER:

168739009.1.100

DRAWN BY: CHECKED BY:

KRB KLD

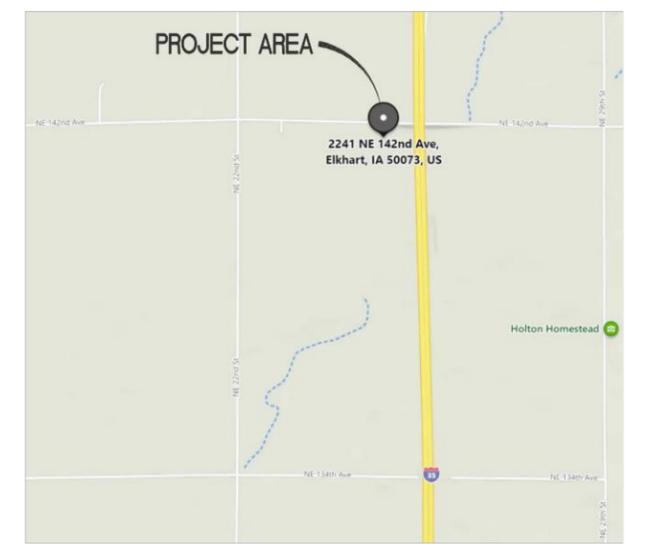
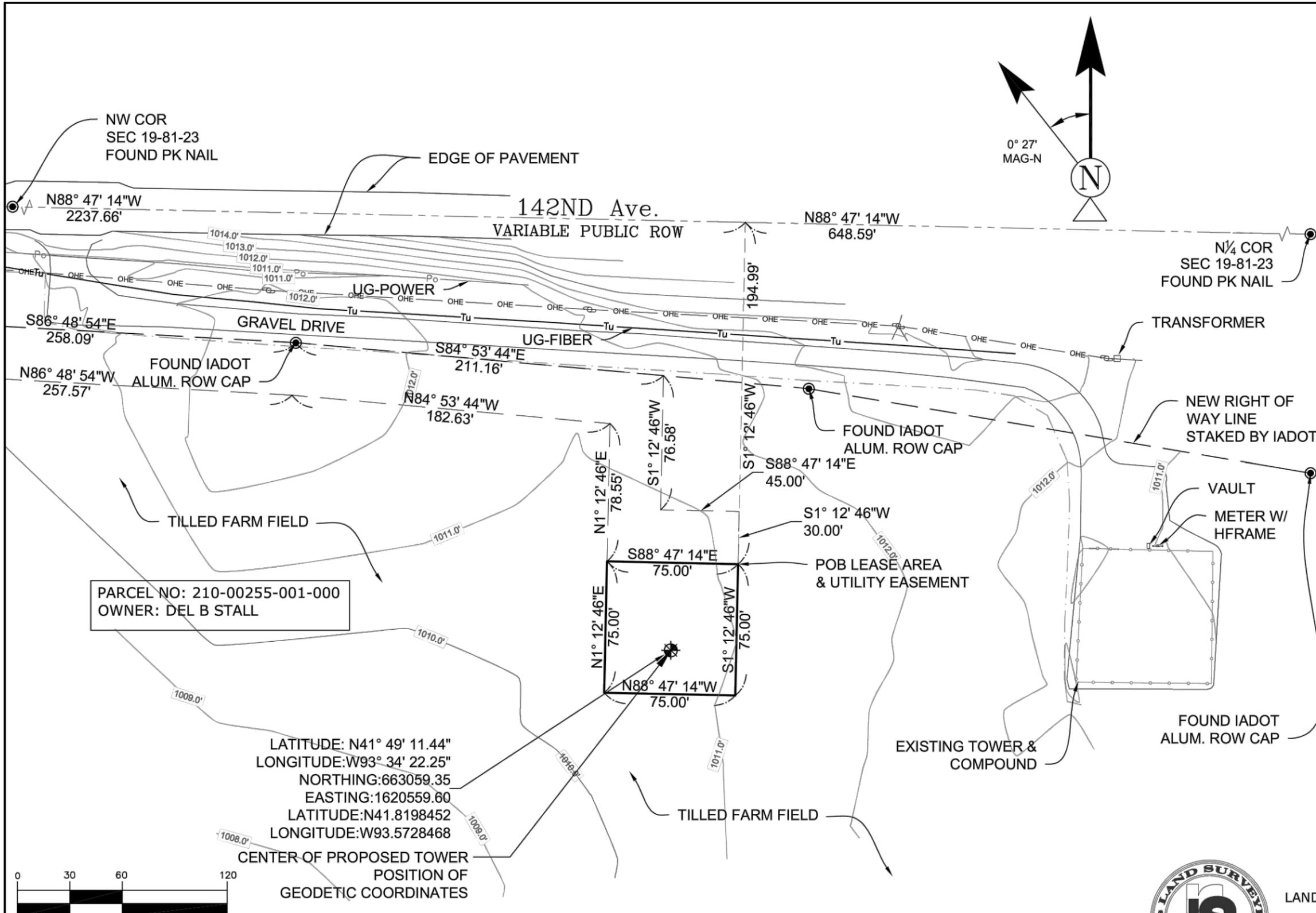
SHEET TITLE:

GENERAL NOTES

SHEET NUMBER:

N1

K:\CHS_Telecom\Workflow\TowerCo\IA0360 Stall Relo 1 - NSB Monopole\CAD\2 - ZD\IA0360_Stall Relo - ZD.dwg by: Katelyn.Drapeau



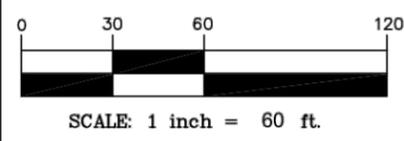
BASIS OF BEARINGS
 BEARINGS SHOWN HEREON ARE BASED UPON U.S. STATE PLANE NAD83 COORDINATE SYSTEM IOWA SOUTH ZONE US FOOT, DETERMINED BY GPS OBSERVATIONS, COMPLETED ON 5.4.2022

UTILITY NOTES
 SURVEYOR DOES NOT GUARANTEE THAT ALL UTILITIES ARE SHOWN OR THEIR LOCATIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND DEVELOPER TO CONTACT LOCAL 811 AND ANY OTHER INVOLVED AGENCIES TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. REMOVAL, RELOCATION AND/OR REPLACEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR.

SURVEYOR NOTES
 NO SEARCH OF PUBLIC RECORDS HAS BEEN COMPLETED TO DETERMINE ANY DEFECTS AND/OR AMBIGUITIES IN THE TITLE OF THE PARENT PARCEL.
 THIS SURVEY IS FOR THE LEASE AREA AND THE ACCESS AND UTILITY EASEMENT ONLY, AND ONLY A PARTIAL BOUNDARY SURVEY OF THE PARENT TRACT HAS BEEN PERFORMED
 THIS PROPERTY IS SUBJECT TO ANY RECORD EASEMENTS AND/OR RIGHT OF WAY SHOWN HEREON OR NOT.
 THIS SURVEY IS NOT INTENDED FOR LAND TRANSFER.
 SURVEYOR HAS NOT PERFORMED A SEARCH OF PUBLIC RECORDS TO DETERMINE ANY DEFECT IN TITLE ISSUED.
 THE BOUNDARY SHOWN HEREON IS PLOTTED FROM RECORD INFORMATION AND DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE PROPERTY.
 AT THE TIME OF THE SURVEY THERE WERE NO ENCROACHMENTS AFFECTING THE LEASE AND AN ACCESS AND UTILITY EASEMENT AREAS.

PARCEL NO: 210-00255-001-000
 OWNER: DEL B STALL

LATITUDE: N41° 49' 11.44"
 LONGITUDE: W93° 34' 22.25"
 NORTHING: 663059.35
 EASTING: 1620559.60
 LATITUDE: N41.8198452
 LONGITUDE: W93.5728468



CENTER OF PROPOSED TOWER
 POSITION OF
 GEODETIC COORDINATES

LAND SURVEYOR'S CERTIFICATE



I HEREBY CERTIFY THAT THIS LAND SURVEYING DOCUMENT WAS PREPARED AND THE RELATED SURVEY WORK WAS PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF IOWA.

SIGNED  9.15.2022
 GREGORY L. ROSS Iowa Reg. No. 13286 Date
 My License renewal date is December 31, 2022



ross
 LAND SURVEYING inc.
 PO Box 336,
 Johnston, Iowa 50131
 PH 515 254 2567
 rosslandsurveying.com



1-A ACCURACY CERTIFICATION
 THE HORIZONTAL ACCURACY OF THE LATITUDE AND LONGITUDE OF THE GEODETIC COORDINATES FALL WITHIN TWENTY (20) FEET. THE ELEVATIONS (NAVD88) OF THE GROUND AND FIXTURES FALL WITHIN THREE (3) FEET.

FAA COORDINATE POINT  (NAD83)
 CENTER OF PROPOSED TOWER
 LATITUDE 41°49' 11.44 NORTH
 LONGITUDE 93° 34' 22.25" WEST
 GROUND ELEVATION 1010.74' (NAVD88)

NO.	DATE	REVISIONS	BY	APP'D
1	9.15.2022	FINAL	MD	GR
0	5.11.2022	REVIEW	MD	GR

SCALE AS SHOWN JOB NAME: ELKHART IA0360 JOB NO: 8099

LEASE AREA

A PORTION OF THE NORTHWEST QUARTER OF SECTION 19, TOWNSHIP 81 NORTH, RANGE 23 WEST OF THE 5TH P.M. IN POLK COUNTY, IOWA, MORE PARTICULARLY DESCRIBED AS FOLLOWS;

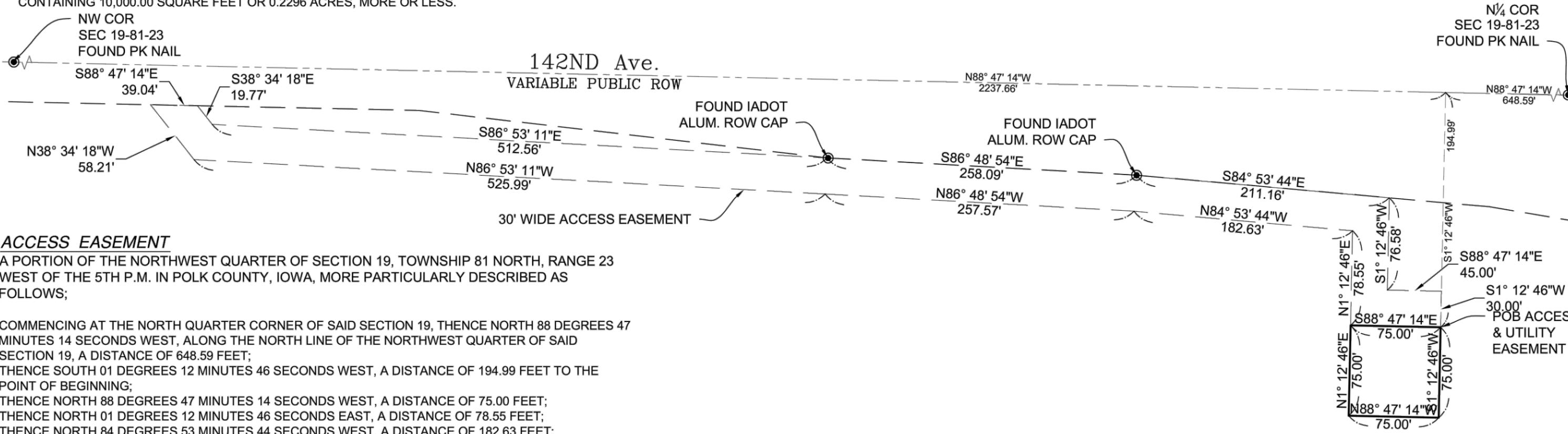
COMMENCING AT THE NORTH QUARTER CORNER OF SAID SECTION 19, THENCE NORTH 88 DEGREES 47 MINUTES 14 SECONDS WEST, ALONG THE NORTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION 19, A DISTANCE OF 648.59 FEET;
 THENCE SOUTH 01 DEGREES 12 MINUTES 46 SECONDS WEST, A DISTANCE OF 194.99 FEET TO THE POINT OF BEGINNING;
 THENCE CONTINUE SOUTHERLY ALONG SAID LINE, A DISTANCE OF 75.00 FEET;
 THENCE NORTH 88 DEGREES 47 MINUTES 14 SECONDS WEST, A DISTANCE OF 75.00 FEET;
 THENCE NORTH 01 DEGREES 12 MINUTES 46 SECONDS EAST, A DISTANCE OF 75.00 FEET;
 THENCE SOUTH 88 DEGREES 47 MINUTES 14 SECONDS EAST, A DISTANCE OF 75.00 FEET TO THE POINT OF BEGINNING.
 CONTAINING 10,000.00 SQUARE FEET OR 0.2296 ACRES, MORE OR LESS.

TITLE REPORT INFO

REFERENCE IS MADE TO THE TITLE REPORT FILE NO: UST71130, ISSUED BY US TITLE SOLUTIONS, DATED 5.3.2022, ALL EASEMENTS CONTAINED WITHIN SAID TITLE REPORT AFFECTING THE IMMEDIATE AREA SURROUNDING THE LEASE HAVE BEEN PLOTTED.

SCHEDULE B ITEMS:

4.1 EASEMENT AGREEMENT BY DEAN M. STALL AND RUTH E. STALL TO SOUTHEAST POLK RURAL WATER DISTRICT, DATED MAY 27, 2003, RECORDED JUNE 12, 2003, IN BOOK 9889, PAGE 404. NOTES: WATERLINE PURPOSES (BLANKET EASEMENT, NOT ABLE TO PLOT)



ACCESS EASEMENT

A PORTION OF THE NORTHWEST QUARTER OF SECTION 19, TOWNSHIP 81 NORTH, RANGE 23 WEST OF THE 5TH P.M. IN POLK COUNTY, IOWA, MORE PARTICULARLY DESCRIBED AS FOLLOWS;

COMMENCING AT THE NORTH QUARTER CORNER OF SAID SECTION 19, THENCE NORTH 88 DEGREES 47 MINUTES 14 SECONDS WEST, ALONG THE NORTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION 19, A DISTANCE OF 648.59 FEET;
 THENCE SOUTH 01 DEGREES 12 MINUTES 46 SECONDS WEST, A DISTANCE OF 194.99 FEET TO THE POINT OF BEGINNING;
 THENCE NORTH 88 DEGREES 47 MINUTES 14 SECONDS WEST, A DISTANCE OF 75.00 FEET;
 THENCE NORTH 01 DEGREES 12 MINUTES 46 SECONDS EAST, A DISTANCE OF 78.55 FEET;
 THENCE NORTH 84 DEGREES 53 MINUTES 44 SECONDS WEST, A DISTANCE OF 182.63 FEET;
 THENCE NORTH 86 DEGREES 48 MINUTES 54 SECONDS WEST, A DISTANCE OF 257.57 FEET;
 THENCE NORTH 86 DEGREES 53 MINUTES 11 SECONDS WEST, A DISTANCE OF 525.99 FEET;
 THENCE NORTH 38 DEGREES 34 MINUTES 18 SECONDS WEST, A DISTANCE OF 58.21 FEET TO A POINT ON THE SOUTHERLY RIGHT OF WAY LINE OF 142ND AVE;
 THENCE SOUTH 88 DEGREES 47 MINUTES 14 SECONDS EAST, ALONG SAID SOUTHERLY LINE, A DISTANCE OF 39.04 FEET;
 THENCE, DEPARTING SAID LINE, SOUTH 38 DEGREES 34 MINUTES 18 SECONDS EAST, A DISTANCE OF 19.77 FEET;
 THENCE SOUTH 86 DEGREES 53 MINUTES 11 SECONDS EAST, A DISTANCE OF 512.56 FEET, TO A POINT ON THE SOUTHERLY RIGHT OF WAY LINE OF 142ND AVE;
 THENCE SOUTH 86 DEGREES 48 MINUTES 54 SECONDS EAST, ALONG SAID LINE, A DISTANCE OF 258.09 FEET;
 THENCE SOUTH 84 DEGREES 53 MINUTES 44 SECONDS EAST, ALONG SAID LINE, A DISTANCE OF 211.16 FEET;
 THENCE, DEPARTING SAID LINE, SOUTH 01 DEGREES 12 MINUTES 46 SECONDS WEST, A DISTANCE OF 76.58 FEET;
 THENCE SOUTH 88 DEGREES 47 MINUTES 14 SECONDS EAST, A DISTANCE OF 45.00 FEET;
 THENCE SOUTH 01 DEGREES 12 MINUTES 46 SECONDS WEST, A DISTANCE OF 30.00 FEET TO THE POINT OF BEGINNING.
 CONTAINING 34,166.56 SQUARE FEET OR 0.7844 ACRES, MORE OR LESS.

PARENT PARCEL LEGAL DESCRIPTION

- a) THE WEST HALF (W1/2) OF THE NORTHWEST FRACTIONAL QUARTER (NW FRL. 1/4) OF SECTION NINETEEN (19), TOWNSHIP EIGHTY-ONE (81) NORTH, RANGE TWENTY-THREE (23), WEST OF THE 5TH POLK COUNTY, IOWA, EXCEPT LEGALLY ESTABLISHED HIGHWAYS;
- b) THE SOUTHEAST 1/4 OF THE NORTHWEST FRACTIONAL QUARTER OF SECTION 19, TOWNSHIP 81 NORTH, RANGE 23 WEST OF THE 5TH P.M., POLK COUNTY, IOWA, EXCEPT LEGALLY ESTABLISHED HIGHWAYS;
- c) THE NORTHEAST 1/4 OF THE NORTHWEST FRACTIONAL QUARTER OF SECTION 19, TOWNSHIP 81 NORTH, RANGE 23 WEST OF THE 5TH P.M., POLK COUNTY, IOWA;

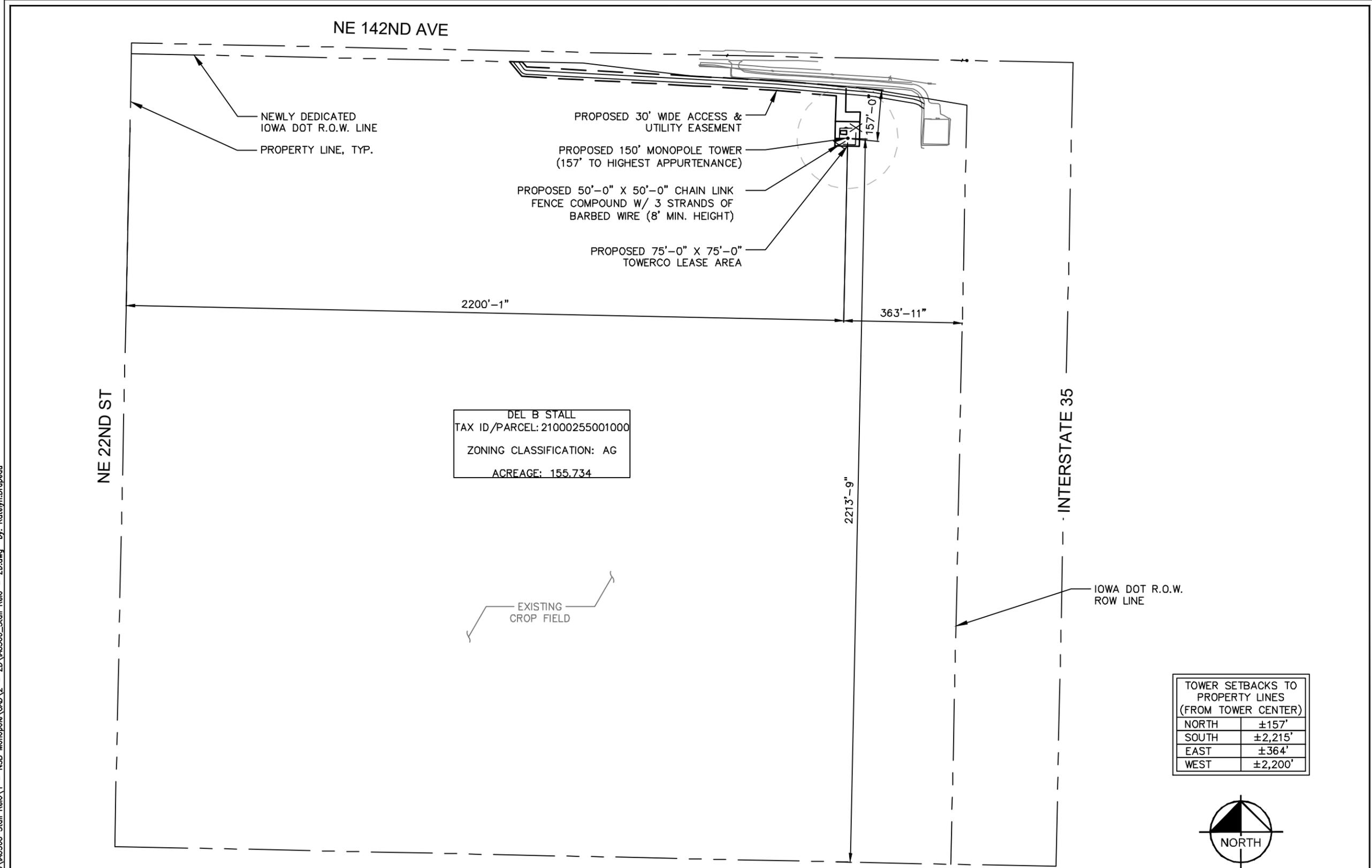
FLOOD INFORMATION

THE LEASE AREA SHOWN HEREON IS NOT LOCATED IN A 100-YEAR FLOOD PLAIN PER FLOOD HAZARD BOUNDARY MAP, COMMUNITY-PANEL NO. 19153C0055F, DATED 02.01.2019. THE LEASE AREA IS LOCATED IN ZONE "X".

LEGEND

POB	POINT OF BEGINNING		SPOT ELEVATION
POT	POINT OF TERMINUS		POSITION OF GEODETIC COORDINATES
PUE	PUBLIC UTILITY EASEMENT		WATER CONTROL VALVE
ROW	RIGHT OF WAY		FIRE HYDRANT
DW	DRIVEWAY		POWER POLE
SW	SIDEWALK		ELECTRIC MANHOLE
⊙	FOUND AS NOTED		TELCO MANHOLE
	OVERHEAD ELECTRIC		PROPERTY LINE
	BARBED WIRE FENCE		

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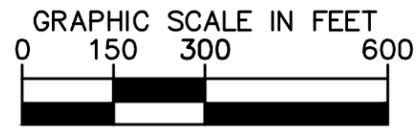


SURVEY NOTE:

1. TOWERCO STAFF SHALL COORDINATE WITH THE PROPERTY OWNER TO OBTAIN THE PROPER EASEMENT AGREEMENTS TO CONSTRUCT AND MAINTAIN EQUIPMENT IN AND AROUND THE TOWER COMPOUND.
2. PROPOSED COMPOUND LAYOUT BASED ON SURVEY PROVIDED BY DUVE CONSULTING SERVICES DATED 09/15/22 AND SITE VISIT ON 05/04/22.

1 OVERALL PARCEL AND SITE PLAN
C1 SCALE: 1" = 300'

TOWER SETBACKS TO PROPERTY LINES (FROM TOWER CENTER)	
NORTH	±157'
SOUTH	±2,215'
EAST	±364'
WEST	±2,200'



PLANS PREPARED FOR:



PROJECT INFORMATION:

SITE ID:
IA0360

SITE NAME:
STALL RELO

SITE LOCATION:
ELKHART, IA
POLK COUNTY

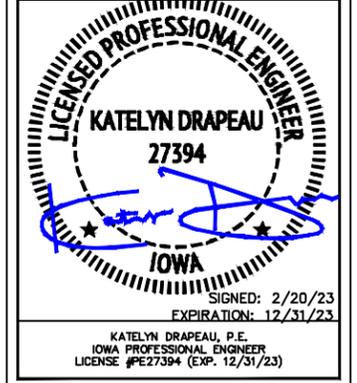
PLANS PREPARED BY:



REV: DATE: ISSUED FOR: BY:

10			
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4	02/20/23	CARRIER DETAILS	JL
3	12/19/22	CLIENT REVISION	KRB
2	12/13/22	CLIENT REVISION	KRB
1	10/25/22	CLIENT REVISION	KRB
0	10/20/22	REVIEW	KRB

LICENSER:



KH PROJECT NUMBER:

168739009.1.100

DRAWN BY: CHECKED BY:

KRB KLD

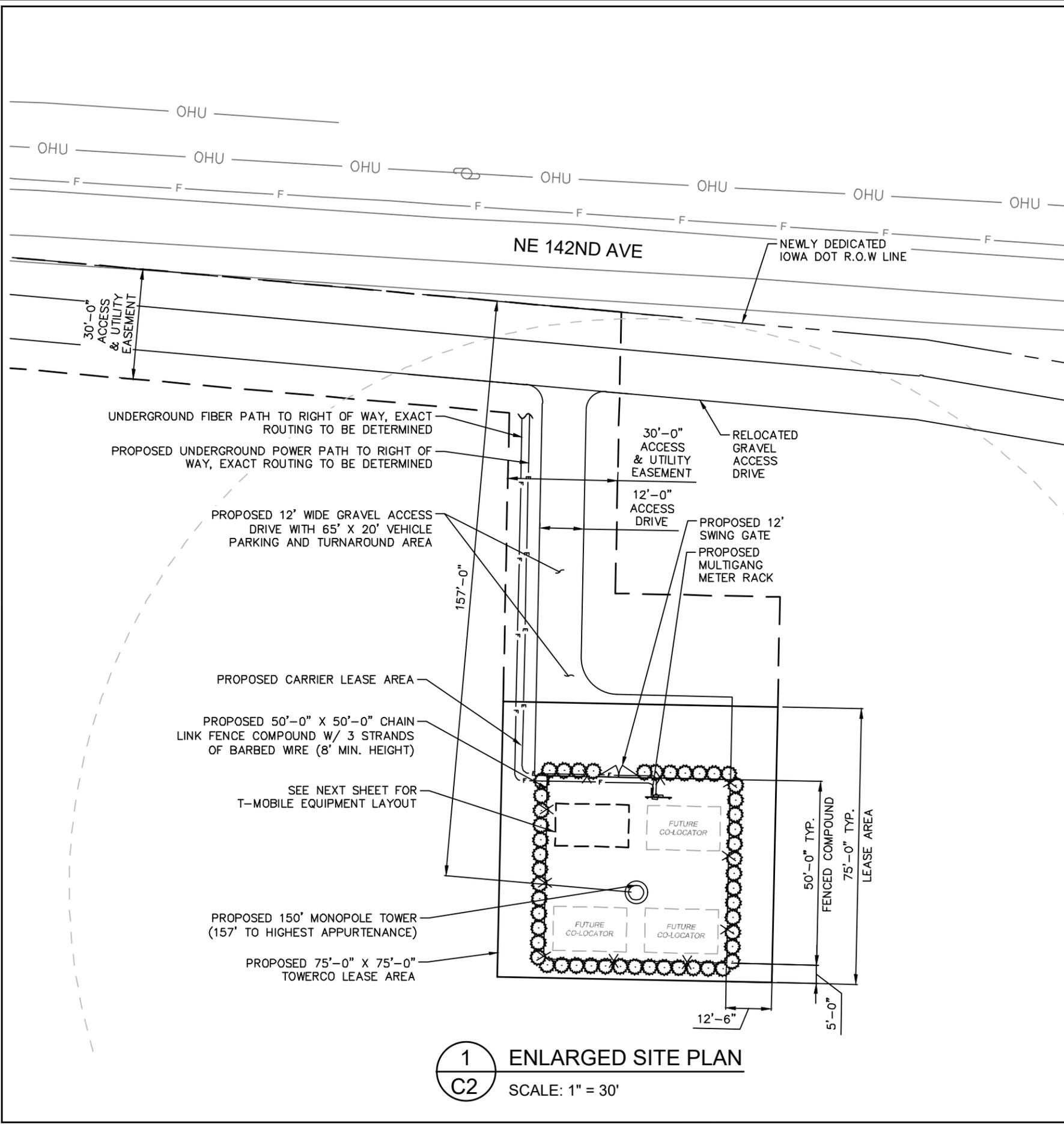
SHEET TITLE:

OVERALL PARCEL AND SITE PLAN

SHEET NUMBER:

C1

K:\CHS_Telecom\Workflow\TowerCo\IA0360_Stall Relo\1 - NSB Monopole\TowerCo\IA0360_Stall Relo\2 - ZD\IA0360_Stall Relo - ZD.dwg by: Katelyn.Drapeau

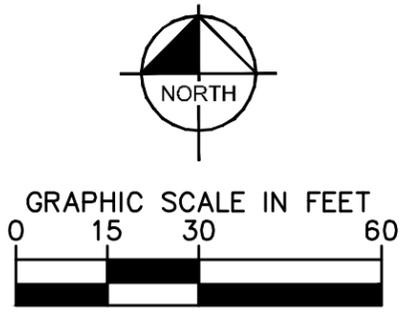


- SITE NOTES:**
1. TOWERCO STAFF SHALL COORDINATE WITH THE PROPERTY OWNER TO OBTAIN THE PROPER EASEMENT AGREEMENTS TO CONSTRUCT AND MAINTAIN EQUIPMENT IN AND AROUND THE TOWER COMPOUND.
 2. PROPOSED COMPOUND LAYOUT BASED ON SURVEY PROVIDED BY DUVE CONSULTING SERVICES DATED 09/15/22 AND SITE VISIT ON 05/04/22.
 3. CONTRACTOR TO CONFIRM WITH TOWERCO CONSTRUCTION MANAGER THAT THE SHELTER/EQUIPMENT SHOWN HAS BEEN ORDERED/SCHEDULED FOR DELIVERY TO THIS SITE.
 4. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND MODIFYING SCOPE OF WORK TO ACCOMMODATE ANY CHANGES IN THE EXACT EQUIPMENT PROCURED BY T-MOBILE. COORDINATE ANY CHANGES WITH TOWERCO CONSTRUCTION MANAGER.
 5. ROUTE COAX/FIBER UP TOWER PER STRUCTURAL ANALYSIS.
 6. TOWER DIMENSIONS SHOWN ON THIS PLAN ARE FOR TOWER CENTER LOCATION. CONTRACTOR TO OBTAIN COPY OF TOWER ERECTION DRAWINGS FROM TOWERCO CONSTRUCTION MANAGER PRIOR TO DRILLING TOWER FOUNDATIONS. CAISSONS AND TOWER SHOWN ON THIS PLAN ARE ILLUSTRATIVE, SEE DESIGN DRAWING BY OTHERS. DO NOT SCALE.

TOWER CENTER LOCATION:
 LAT: N41° 49' 11.44"
 (41.8198452)
 LONG: W93° 34' 22.25"
 (-93.5728468)

APPROXIMATE
 DISTURBED AREA:
 ±10,203 SQ. FT.

1 ENLARGED SITE PLAN
 C2 SCALE: 1" = 30'



PLANS PREPARED FOR:

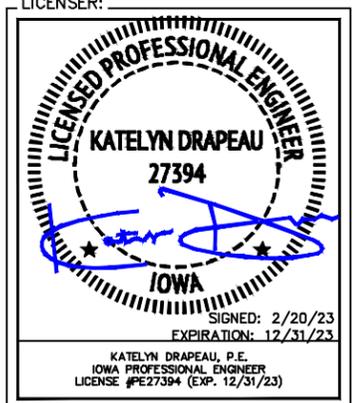


PROJECT INFORMATION:
SITE ID:
 IA0360
SITE NAME:
 STALL RELO
SITE LOCATION:
 ELKHART, IA
 POLK COUNTY



REV: DATE: ISSUED FOR: BY:

10			
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4	02/20/23	CARRIER DETAILS	JL
3	12/19/22	CLIENT REVISION	KRB
2	12/13/22	CLIENT REVISION	KRB
1	10/25/22	CLIENT REVISION	KRB
0	10/20/22	REVIEW	KRB

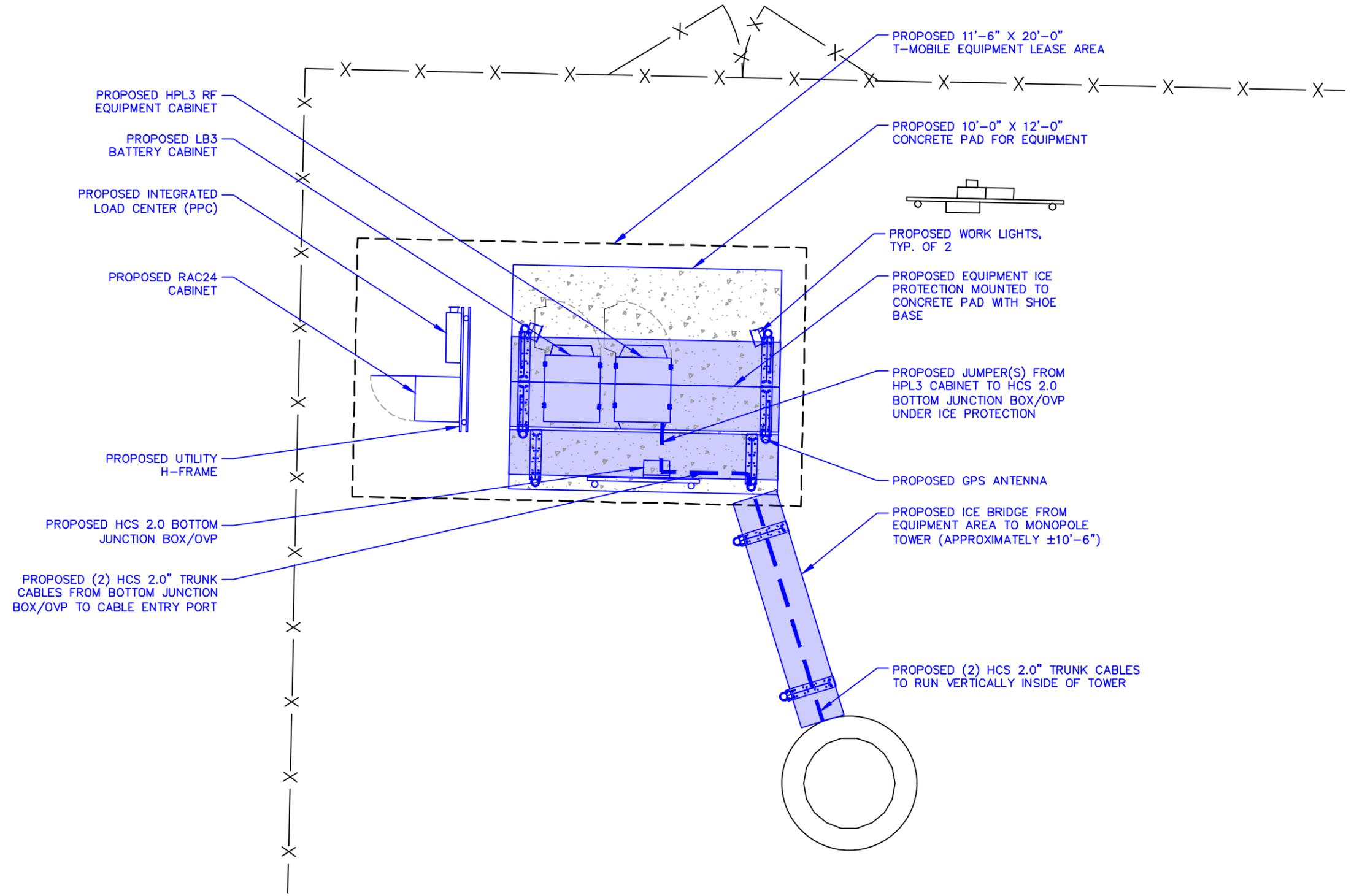


KH PROJECT NUMBER:
 168739009.1.100
 DRAWN BY: KRB CHECKED BY: KLD

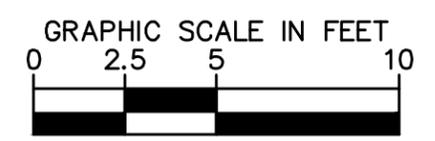
SHEET TITLE:
ENLARGED SITE PLAN

SHEET NUMBER:
 C2

K:\CHS_Telecom\Workflow\TowerCo\IA0360_Stall Relo\1 - NSB Monopole\CAD\2 - ZD\IA0360_Stall Relo - ZD.dwg by: Katelyn.Drapeau



1 CARRIER EQUIPMENT PLAN
 C2-1 SCALE: 1" = 5'



PLANS PREPARED FOR:



5000 VALLEYSTONE DRIVE
 CARY, NC 27519

PROJECT INFORMATION:

SITE ID:
IA0360

SITE NAME:
STALL RELO

SITE LOCATION:
ELKHART, IA
POLK COUNTY

PLANS PREPARED BY:



4201 WINFIELD ROAD, SUITE 600
 WARRENVILLE, IL 60555
 PHONE: 630-487-5550
 WWW.KIMLEY-HORN.COM

REV: _____ DATE: _____ ISSUED FOR: _____ BY: _____

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4	02/20/23	CARRIER DETAILS	JL
3	12/19/22	CLIENT REVISION	KRB
2	12/13/22	CLIENT REVISION	KRB
1	10/25/22	CLIENT REVISION	KRB
0	10/20/22	REVIEW	KRB

LICENSER:



SIGNED: 2/20/23
 EXPIRATION: 12/31/23

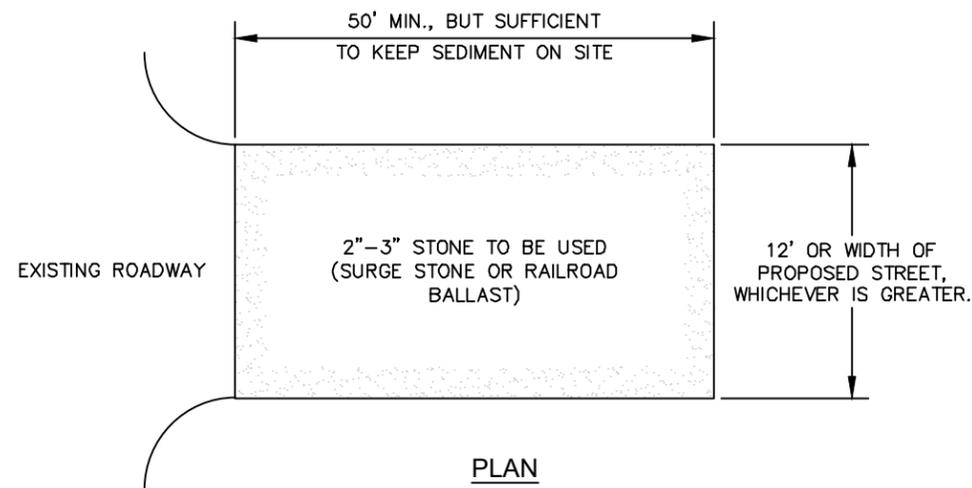
KATELYN DRAPEAU, P.E.
 IOWA PROFESSIONAL ENGINEER
 LICENSE #27394 (EXP. 12/31/23)

KH PROJECT NUMBER:
168739009.1.100

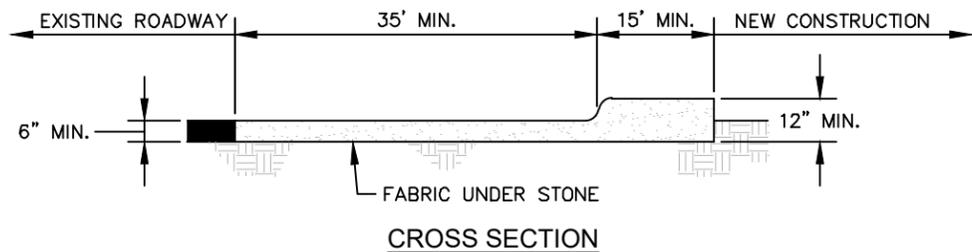
DRAWN BY: _____ CHECKED BY: _____
 KRB KLD

SHEET TITLE:
CARRIER EQUIPMENT PLAN

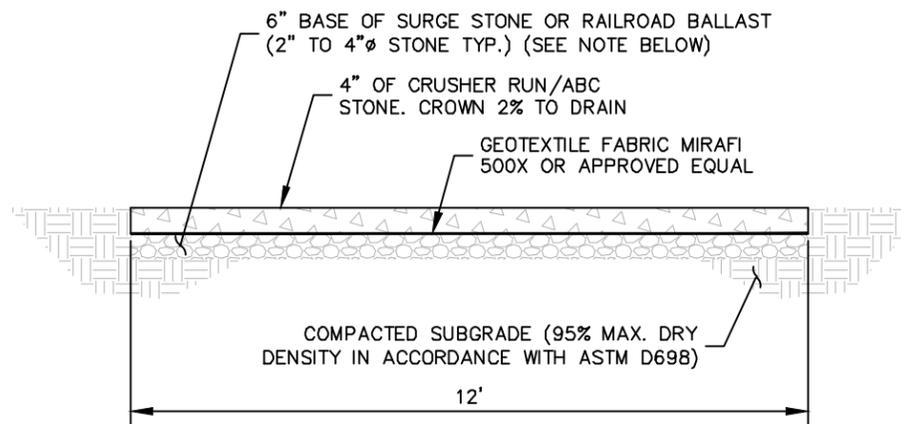
SHEET NUMBER:
 C2-1



- NOTES:**
1. PUT SILT FENCE OR TREE PROTECTION FENCE UP TO ENSURE CONSTRUCTION ENTRANCE IS USED.
 2. IF CONSTRUCTION ON THE SITES ARE SUCH THAT THE MUD IS NOT REMOVED BY THE VEHICLE TRAVELING OVER THE STONE, THEN THE TIRES OF THE VEHICLES MUST BE WASHED BEFORE ENTERING THE PUBLIC ROAD.
 3. IF A PROJECT CONTINUES TO PULL MUD AND DEBRIS ON TO THE PUBLIC ROAD, THE GOVERNING AUTHORITY WILL CLEAN THE AREA AND INVOICE THE FINANCIALLY RESPONSIBLE PERSON AS INDICATED ON THE FINANCIAL RESPONSIBILITY FORM.



1 CONSTRUCTION ENTRANCE
C4 NOT TO SCALE



NOTE:
IF DETERMINED NECESSARY DURING GRADING AND CONSTRUCTION OF THE ACCESS ROAD BY THE PROJECT MANAGER, THE CONTRACTOR SHALL INSTALL 6" BASE OF SURGE STONE OR RAILROAD BALLAST (2" TO 4"Ø STONE TYP.)

2 STANDARD ACCESS ROAD AND TURNAROUND DETAIL
C4 NOT TO SCALE

PLANS PREPARED FOR:



PROJECT INFORMATION:

SITE ID:
IA0360

SITE NAME:
STALL RELO

SITE LOCATION:
ELKHART, IA
POLK COUNTY

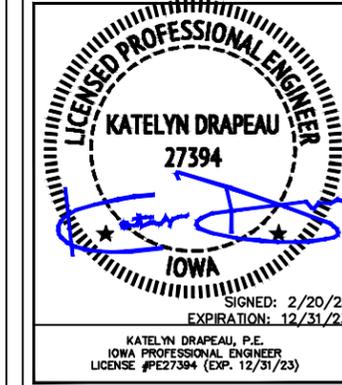
PLANS PREPARED BY:



REV: DATE: ISSUED FOR: BY:

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4	02/20/23	CARRIER DETAILS	JL
3	12/19/22	CLIENT REVISION	KRB
2	12/13/22	CLIENT REVISION	KRB
1	10/25/22	CLIENT REVISION	KRB
0	10/20/22	REVIEW	KRB

LICENSER:



KH PROJECT NUMBER:

168739009.1.100

DRAWN BY: CHECKED BY:

KRB KLD

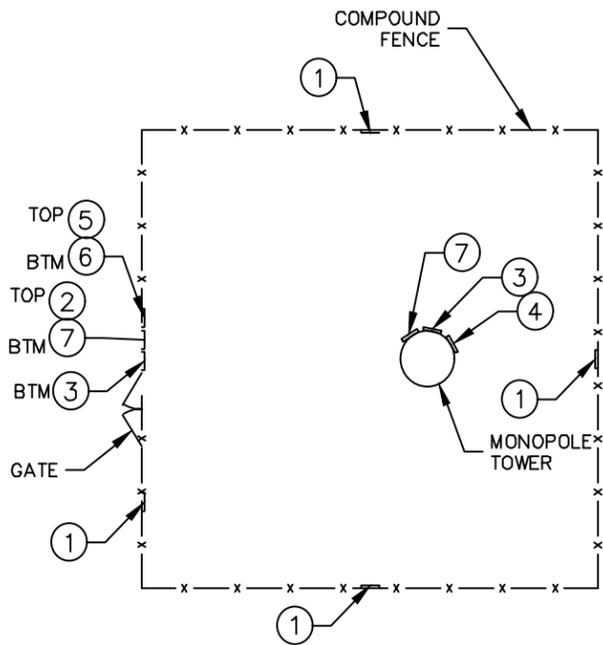
SHEET TITLE:

ACCESS ROAD
DETAILS

SHEET NUMBER:

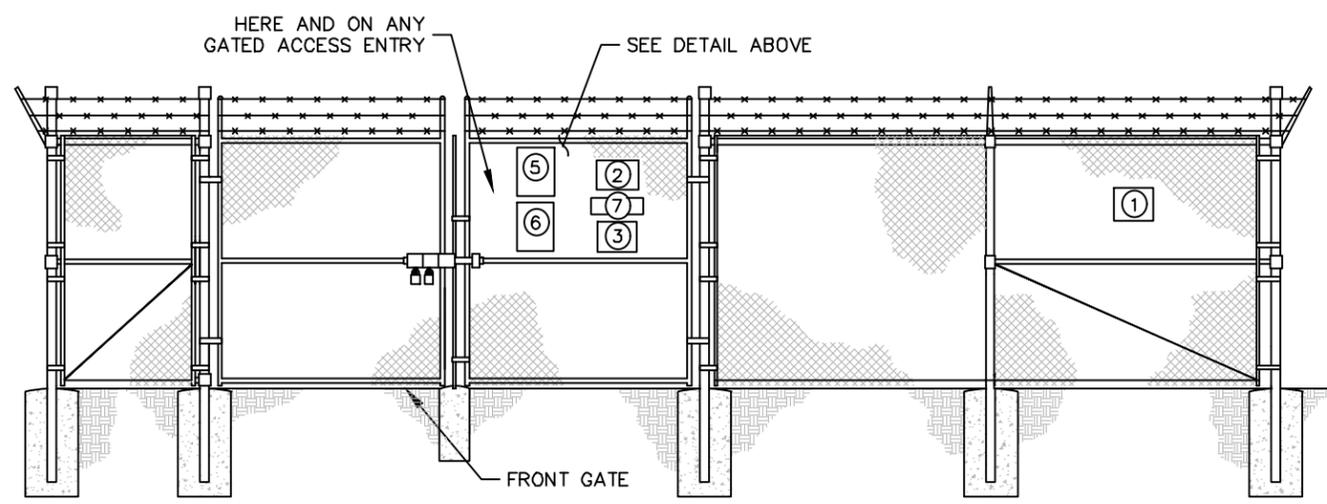
C4

K:\CHS_Telecom_Workflow_TowerCo\IA0360_Stall_Relo\1 - NSB Monopole_CAD\2 - ZD\IA0360_Stall_Relo - ZD.dwg by: Katelyn.Drapeau



NOTE: SEE TYPICAL SIGNS AND SPECIFICATIONS
DETAIL ON THIS SHEET FOR SIGN DESIGNATIONS.

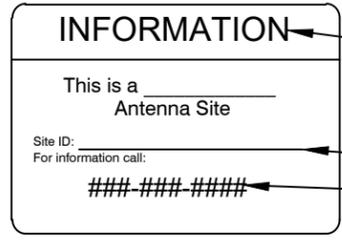
1 SIGN PLACEMENT PLAN VIEW
C5 NOT TO SCALE



3 SIGN PLACEMENT FRONT GATE VIEW
C5 NOT TO SCALE



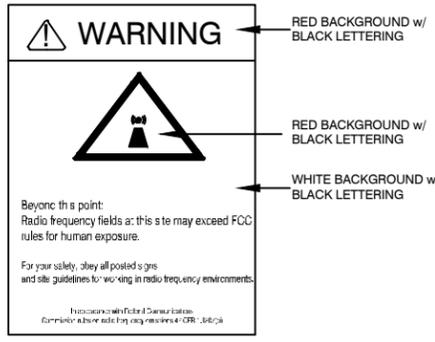
1 NO-TRESPASSING SIGN
18" HIGH X 24" WIDE
(OPERATIONS PROVIDED)



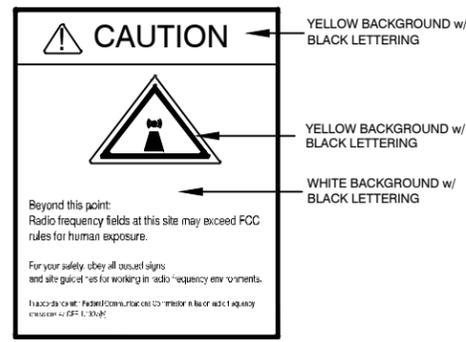
2 FUTURE CARRIER - SITE ID SIGN
15" HIGH X 23" WIDE
(OPERATIONS PROVIDED)



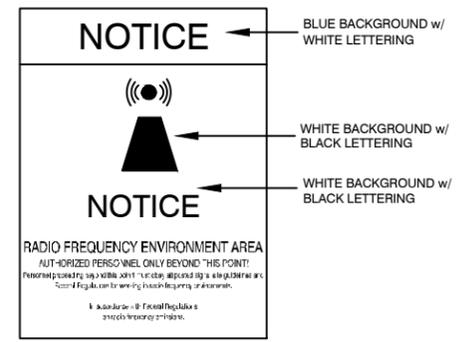
3 NOTICE-RFE SIGN
12" WIDE X 18" HIGH
(OPERATIONS PROVIDED)



4 WARNING-RF SIGN (RED)
12" WIDE X 18" HIGH



5 CAUTION-RF SIGN (YELLOW)
12" WIDE X 18" HIGH



6 NOTICE-RF SIGN (BLUE)
12" WIDE X 18" HIGH



7 FCC REGISTRATION SIGN
20 WIDE X 4" HIGH

NOTE:
A SIGN WITH COUNTY REGISTRATION #
(IF # IS PROVIDED BY THE COUNTY)

2 TYPICAL SIGNS AND SPECIFICATIONS
C5 NOT TO SCALE

SIGNAGE NOTES:
1. SIGNS SHALL BE FABRICATED FROM CORROSION RESISTANT PRESSED METAL, AND PAINTED WITH LONG LASTING UV RESISTANT COATINGS.
2. SIGNS (EXCEPT WHERE NOTED OTHERWISE) SHALL BE MOUNTED TO THE TOWER, GATE, AND FENCE USING A MINIMUM OF 9 GAUGE ALUMINUM WIRE, HOG RINGS (AS UTILIZED IN FENCE INSTALLATIONS) OR BRACKETS WHERE NECESSARY. BRACKETS SHALL BE OF SIMILAR METAL AS THE STRUCTURE TO AVOID GALVANIC CORROSION.

PLANS PREPARED FOR:

5000 VALLEYSTONE DRIVE
CARY, NC 27519

PROJECT INFORMATION:

SITE ID:
IA0360

SITE NAME:
STALL RELO

SITE LOCATION:
ELKHART, IA
POLK COUNTY

PLANS PREPARED BY:

4201 WINFIELD ROAD, SUITE 600
WARRENVILLE, IL 60555
PHONE: 630-487-5550
WWW.KIMLEY-HORN.COM

REV: _____ DATE: _____ ISSUED FOR: _____ BY: _____

10			
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4	02/20/23	CARRIER DETAILS	JL
3	12/19/22	CLIENT REVISION	KRB
2	12/13/22	CLIENT REVISION	KRB
1	10/25/22	CLIENT REVISION	KRB
0	10/20/22	REVIEW	KRB

LICENSER:

SIGNED: 2/20/23
EXPIRATION: 12/31/23

KATELYN DRAPEAU, P.E.
IOWA PROFESSIONAL ENGINEER
LICENSE #PE27394 (EXP. 12/31/23)

KH PROJECT NUMBER:
168739009.1.100

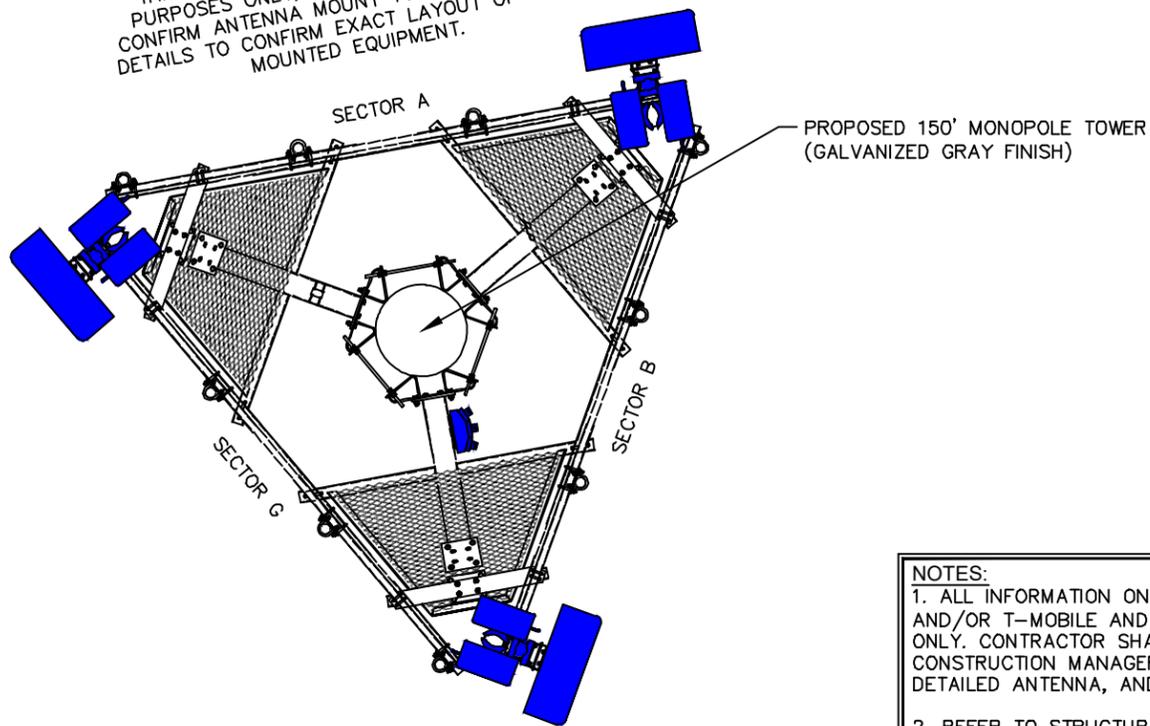
DRAWN BY: _____ CHECKED BY: _____
KRB KLD

SHEET TITLE:
SITE SIGNAGE
DETAILS

SHEET NUMBER:
C5

K:\CHS_Telecom\Workflow\TowerCo\IA0360_Stall Relo\2 - ZD\IA0360_Stall Relo - ZD.dwg by: Katelyn Drapeau

THIS DETAIL IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE MOUNT ANALYSIS TO CONFIRM ANTENNA MOUNT TYPE. SEE CARRIER DETAILS TO CONFIRM EXACT LAYOUT OF TOWER MOUNTED EQUIPMENT.



HYBRID CABLE LENGTH		
LENGTH FROM LOWER COVP TO UPPER BREAKOUT FEATURE/PENDANT		±189' (57.6m)
DC/FIBER JUMPER CABLE LENGTH		
PROPOSED UPPER PENDANT TO AHLOA		
ALPHA SECTOR:	±21' (6.4m)	
BETA SECTOR:	±17' (5.2m)	
GAMMA SECTOR:	±22' (6.7m)	
DC/FIBER JUMPER CABLE LENGTH		
PROPOSED UPPER PENDANT TO AHFIG		
ALPHA SECTOR:	±21' (6.4m)	
BETA SECTOR:	±17' (5.2m)	
GAMMA SECTOR:	±22' (6.7m)	
COAX JUMPER CABLE INFO		
	AHFIG TO ANTENNA	CABLE QTY.
ALPHA SECTOR:	±8' (2.5m)	4
BETA SECTOR:	±8' (2.5m)	4
GAMMA SECTOR:	±8' (2.5m)	4
COAX JUMPER CABLE INFO		
	AHLOA TO ANTENNA	CABLE QTY.
ALPHA SECTOR:	±8' (2.5m)	4
BETA SECTOR:	±8' (2.5m)	4
GAMMA SECTOR:	±8' (2.5m)	4

* CABLE LENGTHS PROVIDED ARE APPROXIMATE

NOTES:
 1. ALL INFORMATION ON THIS PAGE IS PROVIDED BY TOWERCO AND/OR T-MOBILE AND IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. CONTRACTOR SHALL CONTACT THE TOWERCO CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION FOR ALL DETAILED ANTENNA, AND COAX CABLE INFORMATION.
 2. REFER TO STRUCTURAL ANALYSIS BY OTHERS FOR ANALYSIS OF PROPOSED TOWER.
 3. IT IS UNDERSTOOD THAT KIMLEY-HORN MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, FINDINGS, DESIGNS, RECOMMENDATIONS, SPECIFICATIONS, OPINION, OR PROFESSIONAL ADVICE RELATING TO THE STRUCTURAL ADEQUACY OF THE PROPOSED TOWER OR ATTACHMENT OF ANTENNAS OR OTHER APPURTENANCES.

SHRUB HEIGHT SHALL BE 4' MIN. AT TIME OF PLANTING

PROPOSED CHAIN LINK FENCE COMPOUND W/ 3 STRANDS OF BARBED WIRE (8' MIN. HEIGHT)

PROPOSED LANDSCAPE BUFFER

PROPOSED T-MOBILE EQUIPMENT AREA

TOP OF TOWER
EL. 150' A.G.L.

TOP OF LIGHTNING ROD
EL. 157' A.G.L.

PROPOSED T-MOBILE ANTENNAS
EL. 148' A.G.L.

PROPOSED T-MOBILE MICROWAVE
EL. 135' A.G.L.

PROPOSED T-MOBILE MICROWAVE
EL. 125' A.G.L.

FUTURE ANTENNAS
EL. 115' A.G.L.

FUTURE ANTENNAS
EL. 105' A.G.L.

PROPOSED 150' MONOPOLE TOWER

NOTES:

- ALL PROPOSED ATTACHMENTS TO TOWER BASED ON TOWER DESIGN DRAWINGS BY OTHERS.
- THE TOWER ELEVATION SHOWN IS FOR REFERENCE ONLY.
- COAX/FIBER CABLE LENGTHS ARE APPROXIMATE. CONTRACTOR TO VERIFY CORRECT LENGTH IN FIELD AT TIME OF CONSTRUCTION.

1 ANTENNA ORIENTATION PLAN
C6 NOT TO SCALE

2 MONOPOLE TOWER ELEVATION - VIEW FACING EAST
C6 NOT TO SCALE

PLANS PREPARED FOR:



PROJECT INFORMATION:

SITE ID:
IA0360
SITE NAME:
STALL RELO
SITE LOCATION:
ELKHART, IA
POLK COUNTY

PLANS PREPARED BY:



REV: DATE: ISSUED FOR: BY:

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4	02/20/23	CARRIER DETAILS	JL
3	12/19/22	CLIENT REVISION	KRB
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1	10/25/22	CLIENT REVISION	KRB
0	10/20/22	REVIEW	KRB

LICENSER:

FOR ILLUSTRATIVE PURPOSES ONLY

(NO SIGNATURE REQUIRED)

KATELYN DRAPEAU, P.E.
IOWA PROFESSIONAL ENGINEER
LICENSE #PE27394 (EXP. 12/31/23)

KH PROJECT NUMBER:

168739009.1.100

DRAWN BY: CHECKED BY:

KRB KLD

SHEET TITLE:

ANTENNA AND TOWER ELEVATION DETAILS

SHEET NUMBER:

C6

Section 1 - Site Information

Site ID: DM01162A
 Status: Final
 Version: 3
 Project Type: Equipment Upgrade
 Approved: 10/14/2022 11:42:05 AM
 Approved By: Jon.Palmersheim40@T-Mobile.com
 Last Modified: 10/14/2022 11:42:05 AM
 Last Modified By: Jon.Palmersheim40@T-Mobile.com

Site Name: Stall
 Site Class: Monopole
 Site Type: Structure Non Building
 Plan Year:
 Market: DES MOINES IA
 Vendor: Nokia
 Landlord: Netedgenetworks

Latitude: ~~41.8202~~
 Longitude: ~~-93.5714~~
 Address: ~~6100 NE 142nd Ave~~
 City, State: Elkhart, IA
 Region: CENTRAL

RAN Template: 6790S_SR_T AL Template: 6790S_SR_T

Sector Count: 3 Antenna Count: 3 Coax Line Count: 0 TMA Count: 0 RRU Count: 6

Proposed RAN Equipment

Template: 6790S_SR_T

Enclosure	1	2	3	4
Enclosure Type	Tower Top Mount (Nokia)	Delta HPL3 600A Site Support Cabinet	Ancillary Equipment (Nokia)	Delta LB3 Battery Cabinet (4 strings)
Radio	AHFIG (x3) N1900 N2100 (DARK) L1900 L2100 G1900 AHLOA (x3) N600 L600			
Baseband		ASIA L600 L1900 L2100 ASIK N600 N1900 N2100 (DARK) FSMF G1900		
Hybrid Cable System		Delta BOOST Voltage Booster w/ 4 Modules Extra Module for Delta Voltage Booster	175' HCS 2.0 Trunk - 12#6AWG 24 SM FIBER PR	
Baseband Submodule		ABIA L600 ABIA (x2) L1900 L2100 ABIL N600 ABIL (x2) N1900 N2100 (DARK)		
Baseband Subrack		AMIA (x2) N600		

<https://reapp-rfcs-ui-prd01.geo.mesh.t-mobile.com/datasheet/printout/57f5bb6-70fa-4fcf-9eda-e358a21218aa/c4bb2888-52a2-4ba8-972f-f29b2b5b6...> 6/1

NOTE:
 FINAL RF CONFIGURATION SHALL BE CONFIRMED
 w/ T-MOBILE RF/CM PRIOR TO START OF
 CONSTRUCTION.

**REFERENCE
 ONLY**

Sector 1 (Proposed) view from front (Note: the images show view from behind)

Coverage Type	A - Outdoor Macro			
Antenna	1			
Antenna Model	Commscope - FFHH-65C-R3 (Octo)			
Azimuth	110			
M. Tilt	0			
Height	152			
Ports	P1	P2	P3	P4
Active Tech	L600 N600	L600 N600	L2100 L1900 N1900 G1900	L2100 L1900 N1900 G1900
Dark Tech			N2100	N2100
Restricted Tech				
Decomm. Tech				
E. Tilt	4	4	2	2

Sector 2 (Proposed) view from front (Note: the images show view from behind)

Coverage Type	A - Outdoor Macro			
Antenna	1			
Antenna Model	Commscope - FFHH-65C-R3 (Octo)			
Azimuth	230			
M. Tilt	0			
Height	152			
Ports	P1	P2	P3	P4
Active Tech	L600 N600	L600 N600	L2100 L1900 N1900 G1900	L2100 L1900 N1900 G1900
Dark Tech			N2100	N2100
Restricted Tech				
Decomm. Tech				
E. Tilt	4	4	2	2

Sector 3 (Proposed) view from front (Note: the images show view from behind)

Coverage Type	A - Outdoor Macro			
Antenna	1			
Antenna Model	Commscope - FFHH-65C-R3 (Octo)			
Azimuth	350			
M. Tilt	0			
Height	152			
Ports	P1	P2	P3	P4
Active Tech	L600 N600	L600 N600	L2100 L1900 N1900 G1900	L2100 L1900 N1900 G1900
Dark Tech			N2100	N2100
Restricted Tech				
Decomm. Tech				
E. Tilt	4	4	2	2

PLANS PREPARED FOR:



PROJECT INFORMATION:

SITE ID:
 IA0360
 SITE NAME:
 STALL RELO
 SITE LOCATION:
 ELKHART, IA
 POLK COUNTY

PLANS PREPARED BY:



REV: DATE: ISSUED FOR: BY:

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1	10/25/22	CLIENT REVISION	KRB
0	10/20/22	REVIEW	KRB

LICENSER:

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 PURPOSES ONLY
 (NO SIGNATURE
 REQUIRED)

KATELYN DRAPEAU, P.E.
 IOWA PROFESSIONAL ENGINEER
 LICENSE #PE27394 (EXP. 12/31/23)

KH PROJECT NUMBER:

168739009.1.100

DRAWN BY: CHECKED BY:

KRB KLD

SHEET TITLE:

CARRIER RFDS

SHEET NUMBER:

D1

Configuration 6790S_SR_T (Alpha, Beta & Gamma)

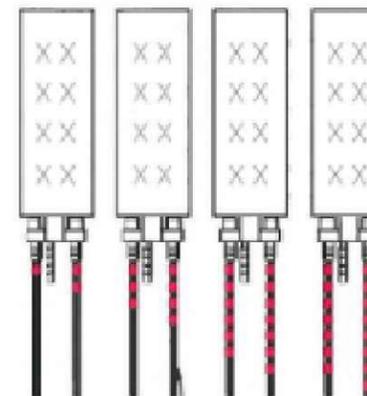
*For 5G and LTE Airscale BB dimensioning refer to fiber port matrices

REFERENCE ONLY



- Lowband**
 L700 – 5 MHz
 L600 – 10 MHz
 N600 – 15 MHz
- Midband**
 L2100 – 20 MHz
 B66 (AWS3) – 5MHz
 B66 (N2100) – 20 MHz
 L1900 – 20 MHz
 B25 (N1900) – 20 MHz

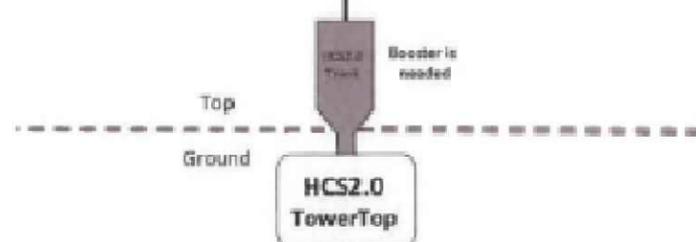
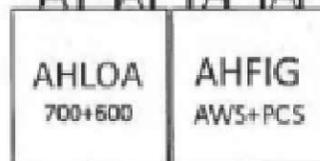
NOTE:
 FINAL RF CONFIGURATION SHALL BE CONFIRMED w/ T-MOBILE RF/CM PRIOR TO START OF CONSTRUCTION.



EXAMPLE: COAX WITH FOUR BANDS OF RED TAPE WILL REPRESENT ALPHA SECTOR AND THE 4TH PORT OF ANTENNA

SECTOR A	RED
SECTOR B	GREEN
SECTOR C	BLUE
SECTOR D	YELLOW
SECTOR E	WHITE
SECTOR F	PURPLE
LMU	BROWN – SECTOR COLOR BANDS (1,2)
FIBER ID	GRAY
UNUSED COAX	PINK
MICROWAVE	ORANGE
PWR T-1'S & GPS DOWNLINK CABLE	ID/LABEL MAKER

- Color Coding per technology:
 U2100 – GREEN
 U1900 – PURPLE
 L2100 – ORANGE
 L1900 – YELLOW
 L700 – GRAY
 L600 – BROWN
 GSM – Just the sector color coding



1 RF PLUMBING DIAGRAM
 SCALE: NONE

2 COAX COLOR CODING
 SCALE: NONE

PLANS PREPARED FOR:



PROJECT INFORMATION:

SITE ID:
IA0360

SITE NAME:
STALL RELO

SITE LOCATION:
ELKHART, IA
POLK COUNTY

PLANS PREPARED BY:



REV: DATE: ISSUED FOR: BY:

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1	10/25/22	CLIENT REVISION	KRB
0	10/20/22	REVIEW	KRB

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(NO SIGNATURE REQUIRED)

KATELYN DRAPEAU, P.E.
 IOWA PROFESSIONAL ENGINEER
 LICENSE #PE27394 (EXP. 12/31/23)

KH PROJECT NUMBER:

168739009.1.100

DRAWN BY: CHECKED BY:

KRB KLD

SHEET TITLE:

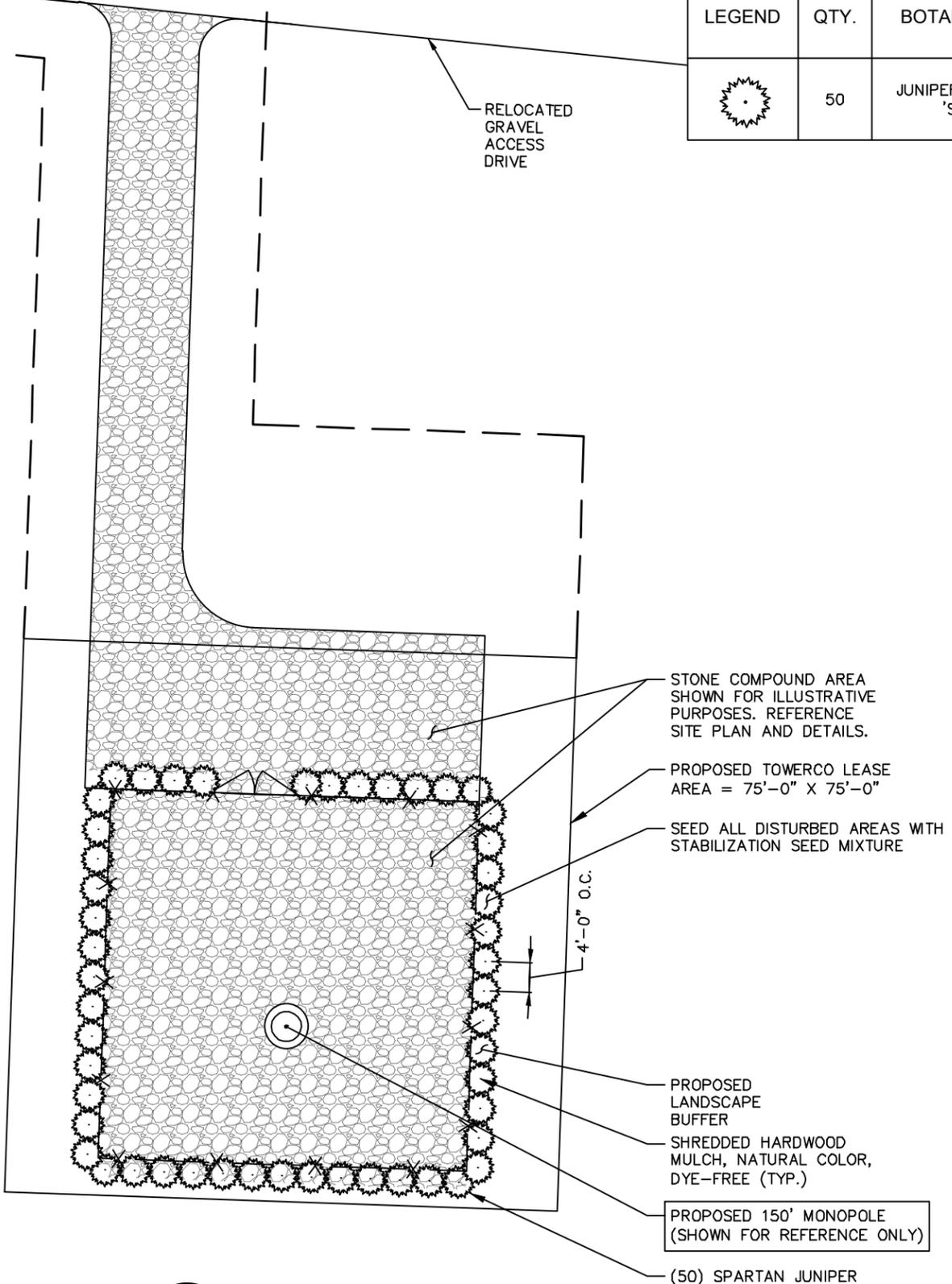
CARRIER RF PLUMBING DIAGRAM

SHEET NUMBER:

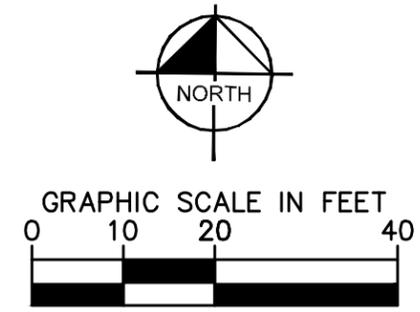
D2

K:\CHS_Telecom\Workflow\TowerCo\IA0360_Stall Relo\1 - NSB Monopole\CAD\2 - ZD\IA0360_Stall Relo - ZD.dwg by: Katelyn.Drapeau

PLANT SCHEDULE						
LEGEND	QTY.	BOTANICAL NAME	COMMON NAME	SPECIFICATION		
				ROOT	SIZE MIN.	SPACING
	50	JUNIPERUS CHINENSIS 'SPARTAN'	SPARTAN JUNIPER	5' HEIGHT, B&B	4' MIN. PLANTING HEIGHT	4'-0" O.C. FOR PRIVACY SCREEN



1 LANDSCAPING PLAN
L1 SCALE: 1" = 20'



PLANS PREPARED FOR:



5000 VALLEYSTONE DRIVE
 CARY, NC 27519

PROJECT INFORMATION:

SITE ID:
IA0360

SITE NAME:
STALL RELO

SITE LOCATION:
ELKHART, IA
POLK COUNTY

PLANS PREPARED BY:

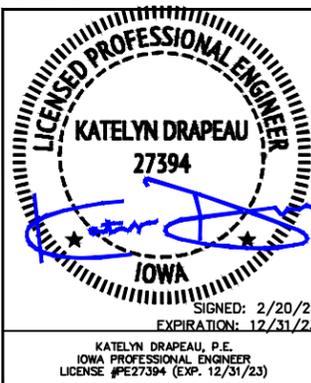


4201 WINFIELD ROAD, SUITE 600
 WARRENVILLE, IL 60555
 PHONE: 630-487-5550
 WWW.KIMLEY-HORN.COM

REV: DATE: ISSUED FOR: BY:

10			
9			
8			
7			
6			
5			
4	02/20/23	CARRIER DETAILS	JL
3	12/19/22	CLIENT REVISION	KRB
2	12/13/22	CLIENT REVISION	KRB
1	10/25/22	CLIENT REVISION	KRB
0	10/20/22	REVIEW	KRB

LICENSER:



SIGNED: 2/20/23
 EXPIRATION: 12/31/23

KATELYN DRAPEAU, P.E.
 IOWA PROFESSIONAL ENGINEER
 LICENSE #27394 (EXP. 12/31/23)

KH PROJECT NUMBER:

168739009.1.100

DRAWN BY: KRB CHECKED BY: KLD

SHEET TITLE:

LANDSCAPING PLAN

SHEET NUMBER:

L1