Planning Commission Regular Meeting

May 17, 2023 6:30PM

Big Rapids City Hall 226 N Michigan Ave

- 1. Call to Order
- 2. Pledge of Allegiance
- 3. Roll Call
- 4. Approval of Minutes
 - a. April 19, 2023
- 5. Public Comment Unrelated to Items on the Agenda
- 6. Public Hearing
 - a. Appeal of Revocation of Marihuana Retail Establishment Operating Permit, Kzoo420, LLC d/b/a Big Rapids Treehouse Club, 217 Maple Street
 - b. Special Land Use Request for 301 N Bronson Ave for a Communications Tower
 - c. Site Plan Review for 301 N Bronson Ave for a Communications Tower
- 7. General Business
- 8. Unscheduled Business
- 9. Adjourn

CITY OF BIG RAPIDS PLANNING COMMISSION MINUTES April 19, 2023

Unapproved

Acting Chair Montgomery called the April 19, 2023 of the Planning Commission, to order at 6:30 p.m.

PLEDGE OF ALLEGIANCE

PRESENT Tim Vogel, Kate McLeod, Tim Vogel and Sarah Montgomery

EXCUSED Jacob Buse, Kasey Thompson, and Rory Ruddick

ABSENT None

ALSO PRESENT Michelle Stenger, Community Development Director

There were 8 people in attendance.

APPROVAL OF MINUTES

Motion was made by Tim Vogel seconded by Kate McLeod, to approve the minutes of the March 15, 2023 meeting of the Planning Commission as presented.

Motion was passed with all in favor.

PUBLIC COMMENT NOT RELATED TO ITEMS ON THE AGENDA

None

PUBLIC HEARINGS

Proposed Amendments to Zoning Ordinance, Section 4.1:25 Single Family Dwellings

Stenger provided an overview of the process that had led us to this point and went over the changes in the ordinance, highlighting the language that had been added and what those changes would mean. Stating that the goal of the changes is to ensure quality housing for those that are living in Big Rapids. Acting Chair Montgomery then asked if there were questions or comments from the public.

Jana Farrier had a question about the rules of a garage or storage shed. Concerns that one at Marion and Bellevue currently doesn't have one and it has become a storage issue with totes. The Board and Stenger informed her that there is a requirement of 15% of the structure or 200 square feet (whichever is higher) of storage already within the ordinance but the ordinance does not specify how the property owner achieves that storage. Excepted ways are closets, basements, under the structure, garages, and accessory structures.

The Board further explained that a shed or garage is not a requirement of the ordinance.

Commissioner McLeod asked for clarification on the new and certified portion (#1) of the Ordinance. Stenger stated that the ordinance is written to require new manufactured homes and the language about the Certificate is because when being built all Manufactured Homes are required to have a title and HUD Certificate and HUD is the agency that is responsible for the inspection of the building process. The ordinance does allow for used houses, in which a person could go through a process with a Building Inspector to ensure that the structure is in excellent condition and meets all the standards required.

Greg Denny asked if manufactured homes could be placed in any residential zone. Stenger informed them that is correct.

Dan Spedowski requested clarification between skirting or block foundation. Commissioner McLeod read the ordinance as written.

No further comments were received so the Chair closed the public portion of the meeting.

Commissioner Vogel asked for clarification on what residential design standards, aesthetically compatible design (#9), mainly porches and how the Zoning Administrator will determine compatibility. Commissioner Vogel also had a question on the foundation language and what type of foundations would be permittable.

Stenger responded that the ordinance gave some direction to the Zoning Administrator in what would be appropriate to look for when reviewing and that although it says attached, many porches are only attached to the ground and not to the structure because of frost, but that the intent of the ordinance is to have a permanent porch or stairway and not the temporary stoops that are just placed against the house. Stenger also discussed that manufactured homes are typically placed on a concrete or poured wall foundation and that they would need to meet all building code requirements.

Stenger was unsure if wood foundations would be considered to meet building code requirements as a foundation for manufactured homes. Stenger also explained the building permit process and HUD certificate process to the Board.

Commissioner Montgomery provided her view on the manufactured home ordinance and that it addressed the concerns with houses within the City.

With no further discussion Commissioner McLeod recommended approval of the Ordinance change to Section 4.1:25, seconded by Commissioner Vogel.

Motion was passed with all in favor.

Site Plan Review for a parking lot alteration at 1020 S State Street (McDonald's)

Stenger summarized the Staff Report for McDonald's at 1020 S State Street (PIN 17-15-481-006) for a parking lot reconfiguration. Stenger stated that the applicant is moving some parking from the back of lot to in front of the store. This is being done to help alleviate a congestion problem that frequently occurs. The new configuration will make it easier for vehicles to move around the drive-through lines. Stenger stated that several City staff reviewed the plans and have no concerns about the proposed changes. In regard to zoning, the proposed project meets all standards of the City's Zoning Ordinance.

Jeff Brinks with Venture Engineering, representative of McDonalds, introduced details of the proposed changes to the parking lot. Brinks stated that the changes were not only to alleviate congestion issues but would also provide a quick and close parking spot for mobile food orders or food delivery services. Those customers would be able to pull quickly in and park, grab the food, and go directly to the exit without having to be integrated into the rest of the site's traffic.

Those Who Spoke in Favor of the Request:

None

Those Who Spoke in Opposition of the Request:

None

Telephonic or Written Correspondence Received by Staff:

Staff had not received any correspondence.

Acting Chair Montgomery closed the Public Hearing and the Commission entered Fact Finding.

The conversation ensued over the following topics:

- Commissioner Vogel had questions if the front lane in front of the restaurant is meant to be a two way. Brinks responded that it is meant to be a one way with angled parking.
- Commissioner Vogel also questioned what the blocked-out area on the northside of the property was. Brinks responded that the property is owned by the property to the north, but that McDonald's has an easement to use that property.
- Commissioner Vogel stated that people often park their larger vehicles along the north curbs.
- Commissioner Schwettman asked if the trees changing were going to be replaced or moved and saving the existing tree. Brinks stated that they will try to be saved, but it just depends on the landscaper and what they are able to do.

Motion was made by Tim Vogel seconded by Kate McLeod to move that the Site Plan Review Application for a parking reconfiguration at 1020 S State Street (PIN 17-15-481-006) be approved as presented as it meets the Criteria for Review found in Section 9.6 of the Zoning Ordinance.

Motion was passed with all in favor.

General Business

Short Term Rentals

Stenger gave an overview on what the Planning Commission had looked at during the last meeting and the direction they provided to Staff in moving forward with Ordinance creation. She then provided a draft copy of a prepared ordinance for the Board to discuss, going over each item and providing the reasoning behind the wording. Stenger stated that within the R-1 District there was a discussion needed on what does the Board want to mean as far as owner occupied structure, occupied at time of rental, or occupied regularly by owner but not necessarily during time of rental.

Chair Montgomery opened the discussion up to those from the public.

Greg Denny had questions about the maximum number of people per house and how that would relate to the number of bedrooms, for example if it is only one bedroom can they still have 12 people? Stenger informed him that she could look into what the code has on occupancy limits and possible ways we could address this.

Pam Bosler had questions on the definition of family. Stenger read the definition of family from the ordinance and stated that sorority and fraternity houses would not meet the definition of family in the ordinance so they would not be able to stay within the R-1 district.

More discussion was had on the number of people that would be allowed as a whole as a rental (Staff had the number at 12). The board expressed that that was a starting point which was still up for discussion and consideration.

Commissioner Schwettman related how she looked at the ordinance in regard to family visiting and that this would provide an opportunity for a larger family to easily stay together and visit.

Jana Farrier had concerns addressing parking in the wintertime, those parking on the street. Commissioner McLeod expressed that they would be required to follow parking. Stenger mentioned that we could add language to the ordinance requiring houses to follow current parking regulations.

Greg Denny said that we should have a packet that makes the information easily accessible for those who are interested in doing rentals. Stenger stated that we can make a packet that is more user friendly for those wanting to do rentals or short-term rentals in the community.

Commissioner Vogel stated that the ordinance is a work in progress and the comments are good to hear as the Commission moves forward to try and make it better. That typically Big Rapids isn't usually thought about with AirBnB, but with Ferris here and all their activities it is something we probably should look at.

Commissioner Montgomery stated that she has friends with an AirBnB and that it is booked every weekend, mainly because it is a good halfway distance between Traverse City and Grand Rapids.

John Ward lived near an AirBnB for a while, and it was terrible with college students. Recommended providing realtors educational material on our rentals.

Commissioner Vogel asked if there was a fee associated with the program. Stenger explained that they would be included in our rental program so there is a fee associated with that process. Paying for a rental inspection every year.

Commissioner Vogel asked if there was a need to inspect every time someone comes in. Stenger explained that different places set it up differently but doing an inspection after every rental would be difficult to keep up with.

Commissioner Montgomery asked the board members how they felt about short-term rentals.

Commissioner McLeod stated that she has no problem putting in an ordinance that allows them and puts some guidance around it. She has some concerns about owner occupied and parking requirements.

Commissioner Vogel stated anything that could help within the R-1 district and other areas. Good exercise to go through and make it better.

Commissioner Schwettman has concerns about the length of time because of the eviction process. Stenger said she would research what the eviction timeline is.

Commissioner Montgomery stated that she is still trying to figure out what her thoughts are and where to go from here.

Stenger stated that there needs to be more discussion on owner occupancy as she is still unclear on how the Board would like to approach it.

Greg Denny asked about the noise ordinance with rentals and padlock ordinance. Stenger stated that noise complaints go through the police department. Would like the padlock ordinance included in the short-term rentals. Stenger indicated that the short-term rentals would be included under the rental codes.

Commissioner Vogel is not sure about his opinion of owner occupancy and would like staff to do more research. Stenger said that she would reach out to staff in communities that have owner occupancy requirements and see how it is enforced and done.

Commissioner McLeod said owner occupancy seemed reasonable in the R-1 district.

Commissioner Montgomery stated that the owner being there would create less rentals, which she is not in favor of short-term rentals in the R-1 district.

Commissioner Schwettman stated that her house was a single room rental while living on the property. Stated with it being a primary home for people, they tend to care more about the property and do a better job of keeping an eye on things while they are away.

Stenger stated that she could formulate several different options for the Board to look at since it appears they are still struggling with which way to move forward.

UNSCHEDULED BUSINESS

Election of Board Chair

As there is not currently a Planning Commission Chair the Board needs to elect a chair and any positions which open up with that election.

Commission Vogel made a motion for Commissioner Montgomery to be Chair, seconded by Commissioner McLeod

Motion passed with all in favor.

As Commissioner Montgomery was serving as Secretary, Commissioner Vogel made a motion for Commission McLeod to be Secretary, seconded by Commissioner Schwettman.

Motion passed with all in favor.

There being no further business, Acting Chair Montgomery adjourned the meeting at 7:40 PM with all in favor.

Respectfully submitted,

Michelle Stenger Director of Community Development



City of Big Rapids

Department of Neighborhood Services Application to Planning Commission for Zoning Request

Phone: (231) 592-4035 Website: www.ci.big-rapids.mi.us

The City of Big Rapids Planning Commission meets in a regular session on the third Wednesday of each month at 6:30 p.m. at City Hall, 226 N. Michigan Avenue, Big Rapids MI.

Materials related to requests for Commission action, including any required fees, must be filed with the Neighborhood Services Department.

Filing requests which are not complete or which are not filed by the meeting deadline, as determined by the Neighborhood Services Department, will not be placed on the agenda of the respective Commission meeting, nor will they be considered at the respective Commission meeting.

Applicant attendance is required at the public hearing, be prepared to speak on your behalf. Please note: The Planning Commission makes a decision based on your application and information you have supplied based on criteria in the Big Rapids Zoning Ordinance.

Filing Deadlines are established at **21 calendar days** prior to the Commission meetings:

Filing Deadline		Meeting Date	
December January February March April May June July August September October	29, 2022 26, 2023 23, 2023 30, 2023 27, 2023 31, 2023 29, 2023 27, 2023 31, 2023 28, 2023 26, 2023	January February March April May June July August September October November	18, 2023 15, 2023 15, 2023 19, 2023 17, 2023 21, 2023 19, 2023 16, 2023 20, 2023 18, 2023 15, 2023
November December	30, 2023 28, 2023	December January	20, 2023 17, 2024



City of Big Rapids

Department of Neighborhood Services Application to the Planning Commission for Zoning Request

Application Date: 4/25/2023

Applicant Information:

Name: Vertical Bridge REIT, LLC Address: 750 Park of Commerce Dr., Ste 200, Boca Raton, FL, 33487 Phone Number: (630) 946-7741 **Property Zoning: Industrial** Request Property Address: 301 N Bronson Avenue, Big Rapids, MI Explanation of Request: Site Plan and Special Land Use Permit approval to construct a new cellular antenna tower on an Industrial Zoned District

Please check one of the following:

☑Conditional Use Permit, Please include the following information

- 1. A legal description of the property.
- 2. Twelve (12) copies of a site plan meeting the requirements of Section 9.4 of the Big Rapid Zoning Ordinance as amended.
- 3. A written description of the use.
- 4. Address use standards set forth in Section 10.3:8.
- 5. \$200.00 Application Fee
- ☐ Zoning Amendment Review, Please include the following information:

☐ Rezoning

- 1. A legal description of the property.
- 2. A written description of reasons for rezoning and proposed new zoning classification.
- 3. Address the requirements set forth in Section 14.2:4. (posting of notification)
- 4. A location map.
- 5. \$200.00 Application Fee

☐ Text or Map Amendment

- 1. A written description of proposed changes and reasons why.
- 2. In the case of a text amendment, proposed new text shall be submitted.
- 3. In the case of a map amendment, proposed new map shall be submitted.
- 4. Address the requirements set forth in Section 14.2:2.
- 5. \$200.00 Application Fee

Signature of applicant or property owner (Date)



Proposed New Cellular Antenna Tower Application Presented To: City of Big Rapids, MI Planning Commission

Presented By: Brett Blackhurst – Fortune Wireless Filing Date: 4/25/2023

Applicant:

VB BTS, LLC (Vertical Bridge)
750 Park of Commerce Drive, Suite 200
Boca Raton, FL 33487

Applicant Site No. / Name: US-MI-5290 / Gypsy Nickel

Proposed Tower Location:

301 N Bronson Avenue Big Rapids, MI 49307

Parcel #:

17-11-400-022

Latitude:

43.7044294

Longitude:

-85.4640615





RE: Letter of Intent/Uniform Application for Authorization to Place and Construct a New Cellular Antenna Tower near: Bronson Avenue, Big Rapids, MI 49307 on Parcel #: 17-11-400-022 with the tower located at Latitude/ Longitude: (43.7044294, -85.4640615). The E-911 Address: (TBD)

Dear Members of the Planning Commission,

Please accept this Letter of Intent, along with the enclosed supporting documents, as the uniform application from VB BTS, LLC (Vertical Bridge) to place and construct a new 125' monopole tower (tower height - 125' + 10' lighting rod), within a 50' x 50' ground compound located on a 10.63-acre parcel near at 301 N Bronson Avenue, Big Rapids, MI 49307.

VB BTS, LLC (Vertical Bridge REIT, LLC) is seeking authorization and Site Plan and Special Land Use Permit Approval to place and construct a new cellular antenna tower from the City of Big Rapids Planning Commission. The parcel on which the proposed new cellular antenna tower is to be located is on an Industrial Zoned District. Communication towers affixed directly to the ground are permitted in Industrial districts within the City of Big Rapid, MI. The proposed facility will consist of a 50' x 50' fenced compound with a 125' monopole tower (135' overall structure height with 10' lightning rod) located off N. Bronson Avenue in the southeast corner of a vacant 10.63-acre Industrial Zoned District parcel surrounded by parcels currently Zoned Industrial Districts.

VB BTS, LLC (Vertical Bridge REIT, LLC) is trying to expand its infrastructure so wireless communications carriers can enhance their networks to bring more reliable, higher speed data & voice services to the residents, students, and travelers in the area, specifically within the City of Big Rapids. T-Mobile will be the anchor tenant on the proposed new tower, with space available for at least two additional carriers to co-locate. The proposed tower would help with the 5G expansion in the area, as that technology comes online. In an effort to meet T-Mobile's and future carrier's goals of enhancing their networks, we are requesting Site Plan Approval from the Big Rapids Planning Commission for the placement and installation of the proposed new 125' Monopole Tower (135' overall structure height with 10' lightning rod).

The communication facility will not affect current traffic as this is an unmanned, unstaffed facility, and may only be visited once a month or as needed for servicing. Access to the facility will come off Wallace Park Road via an existing gravel access road back to the communication facility.

In conclusion, the communication facility will operate in a clean and quiet manner. The facility is unstaffed, completely automated and does not create air, water or noise pollution, unsanitary conditions, surface drainage problems, environmental nuisances, traffic congestion, threats to morality or public safety, or other objectionable characteristics offensive to the community. To the contrary, the facility will contribute to the improved safety, convenience, comfort, and general welfare of the community by providing enhanced communications capabilities.





- (4) That adequate utilities, access roads, drainage and necessary facilities have been or are being provided.
 - Adequate utilities and access drive are being proposed to the facility. See enclosed site plan, specifically sheet E-0 for utilities and sheets C-1, C-2, along with survey within the enclosed site plan.
- (5) That adequate measures have been or will be taken to provide ingress or egress so designed as to minimize traffic congestion in the public street.
 - The proposed site will be an unmanned operated facility. Access to the site will be minimal, about once every two months for technical issues and repairs, if necessary.
- That the special land use shall conform to the applicable regulations of the district in which it is located, any specific requirements established for that use in Article 11.
 - See below comments for specific requirements established for this use in Article 11.

ARTICLE 11

Section 11.1:7 Communication towers affixed directly to the ground shall be permitted in the I district, subject to the following conditions:

- > (1) The tower is located no closer to any Residential District than the height of the tower.
 - The closest Residential District (R-1) to the proposed tower location is approx.
 914 ft to the south. The proposed tower height is 125' monopole with a 10' lightening rod total overall structure height of 135'.
- (2) The tower is located no closer to any structure not associated with the operation of the tower than the height of the tower. This requirement can be modified by the Planning Commission if it can be demonstrated by the applicant that the tower is collapsible in design.
 - The closest structure not associated with the operation of the tower is located on the south adjoining parcel. The existing structure is approx. 102 ft from the proposed tower location. Please see enclosed the fall zone letter for the proposed tower indicating the tower will collapse within the subject parcel where the tower is proposed to be located and will not pose any danger to the existing structure to the south if it were to collapse.

Legal Description

LEGAL DESCRIPTION

PARENT PARCEL (PER TITLE COMMITMENT)
The real property in the City of Big Rapids, Mecosta County, Michigan, described as:

Parcel of land in the Northeast 1/4 of the Southeast 1/4 of Section 11, Town 15 North, Range 10 West, City of Big Rapids, Mecosta County, Michigan described as commencing at the intersection of the North line of Maple Street and the East line of Section 11. thence North 00 degrees 09 minutes 49 seconds East along the East section line 741.00 feet, thence North 89 degrees 28 minutes 47 seconds West parallel with the North line of Hanchett Drive 33.00 feet, to the point of beginning, thence North 89 degrees 28 minutes 47 seconds West parallel with the North line of Hanchett Drive 300.00 feet, thence South 00 degrees 09 minutes 49 seconds West parallel with the East section line 75.00 feet, North 89 degrees 28 minutes 50 seconds West (recorded as West) 250.00 feet, thence South 00 degrees 09 minutes 49 seconds West parallel with the East section line 300.00 feet to the North line of Hanchett Drive, thence North 89 degrees 28 minutes 47 seconds West along the North line of Hanchett Drive 174.34 feet, thence North 00 degrees 09 minutes 49 seconds East parallel with the East section line 880.15 feet, to the South line of an undeveloped street, thence North 87 degrees 40 minutes 00 seconds East parallel with the East-West 1/4 line 725.00 feet to the West line of Bronson Street, thence South 00 degrees 09 minutes 49 seconds West along the West line of Bronson Street 541.24 feet to the point of beginning.

Parcel No. 17-11-400-022

This being the same property conveyed to 1315 Hanchette Drive, LLC, a Michigan limited liability company from John J.C. LLC, a Michigan limited liability company in deed dated February 26, 2021 and recorded June 17, 2021 in Book 912 Page 810 as Instrument No. 202100006013.

LEGAL DESCRIPTION

VERTICAL BRIDGE 75'x75' LAND SPACE TO BE RECORDED

All that part of the Northeast 1/4 of the Southeast 1/4 of Section 11, Town 15 North, Range 10 West, City of Big Rapids, Mecosta County, Michigan described as: Commencing at the East 1/4 corner of said Section 11; thence South 00'54'46" West 566.17 feet along the East line of said Section 11 to a point 751.00' North of the intersection of the North line of Maple Street and said East line; thence North 88'42'48" West parallel with the North line of Hanchett Drive 83.86 feet TO THE PLACE OF BEGINNING OF THIS DESCRIPTION; thence continuing North 88'42'48" West parallel with the North line of Hanchett Drive 75.00 feet; thence North 01"17"12" East 75.00 feet; thence South 88"42"48" East 75.00 feet; thence South 01'17'12" West 75.00 feet for the place of beginning of this description. Containing 5,625 square feet more or less.

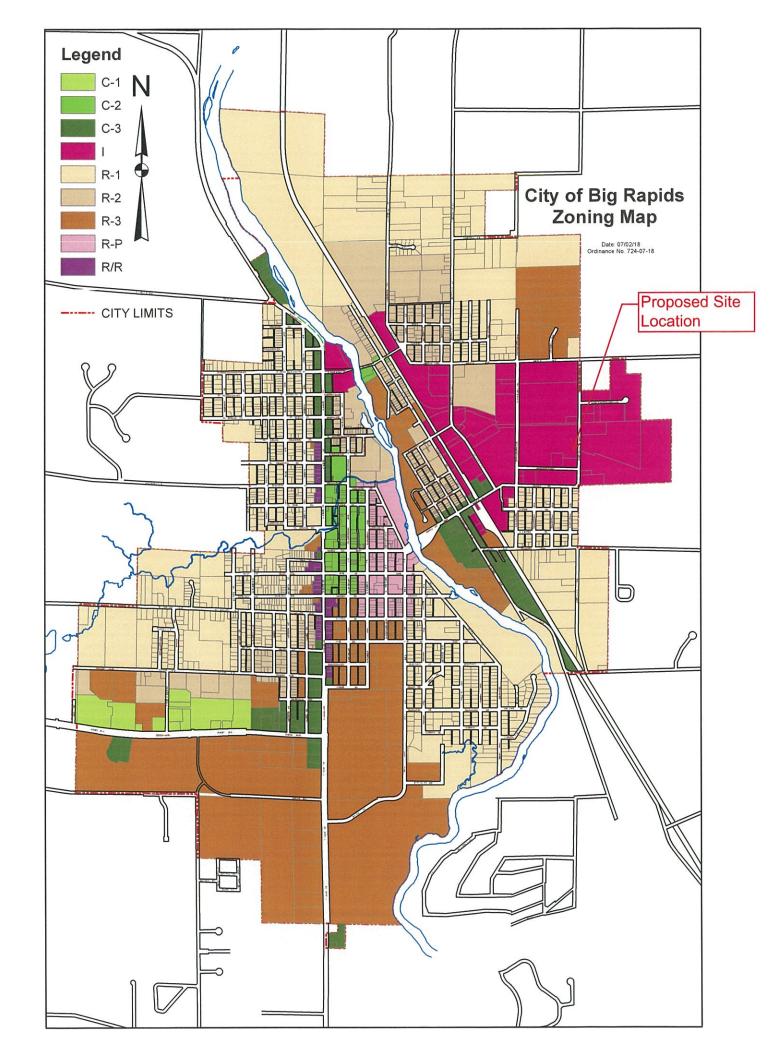
LEGAL DESCRIPTION

VERTICAL BRIDGE 20.00' & 30.00' WIDE ACCESS AND UTILITY EASEMENT TO BE RECORDED

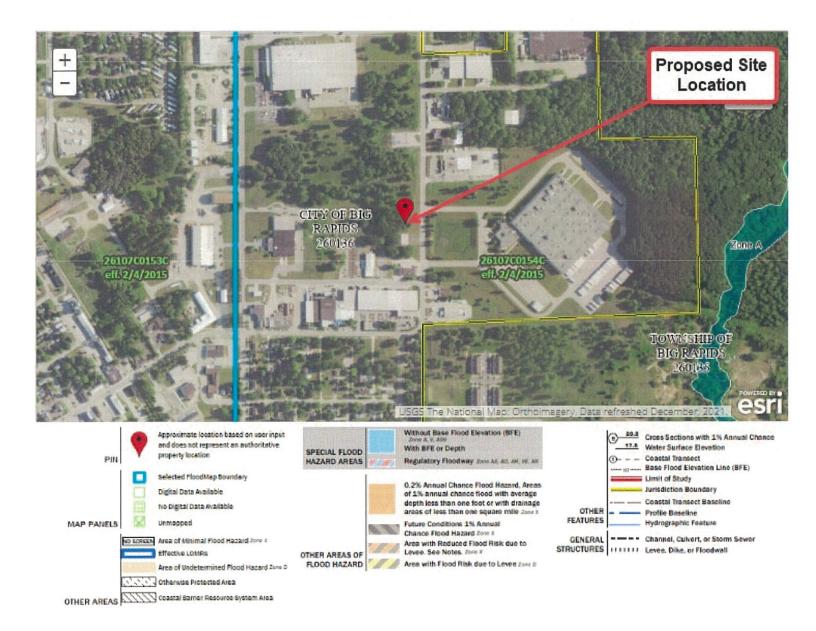
A 20.00 foot wide and 30.00 foot wide Access and Utility easement in that part of the Northeast 1/4 of the Southeast 1/4 of Section 11, Town 15 North, Range 10 West, City of Big Rapids, Mecosta County, Michigan, the centerline of which is described as; Commencing at the East 1/4 corner of said Section 11; thence South 00'54'46" West 566.17 feet along the East line of said Section 11 to a point 751.00' North of the intersection of the North line of Maple Street and said East line; thence North 88'42'48" West parallel with the North line c Hanchett Drive 73.86 feet TO THE PLACE OF BEGINNING OF THIS 20.00 FOOT WIDE CENTERLINE DESCRIPTION; thence North 0117'12" East 35.50 feet to a POINT "A"; thence continuing North 0117'12" East 39.50 feet to the place of ending of this centerline description; thence recommencing at the aforedescribed Point "A" AND THE PLACE OF BEGINNING OF THIS 30.00 FOOT WIDE CENTERLINE DESCRIPTION; thence South 88'42'48" East 40.63 feet to the westerly right of way line of North Bronson Avenue (66.00 feet) for the place of ending of this centerline description.

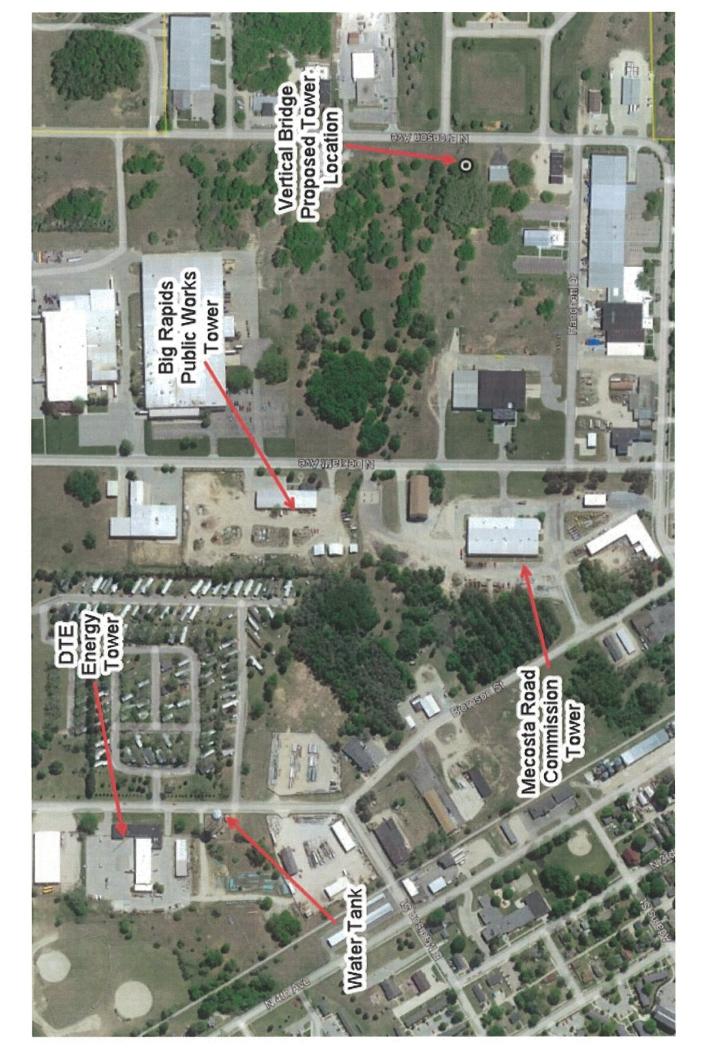
SUBJECT PARCEL WITH PROPOSED SITE LOCATION



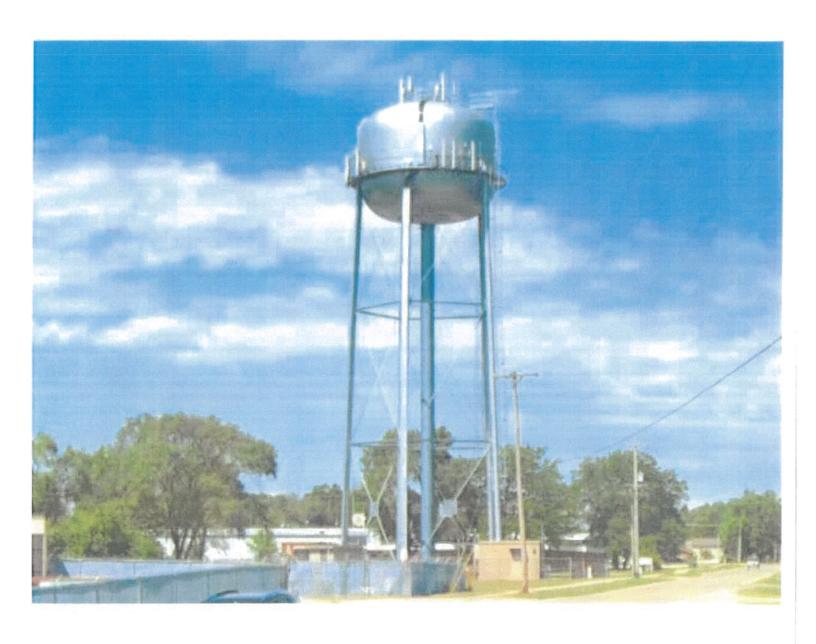


FEMA FLOOD MAP WITH PROPOSED SITE LOCATION





WATER TANK APPROX. 0.55 MILES FROM PROPOSED SITE



DTE ENERGY APPROX. 0.58 MILES FROM PROPOSED SITE



MECOSTA COUNTY ROAD COMMISSION APPROX. 0.31 MILES FROM PROPOSED SITE



BIG RAPIDS DEPT OF PUBLIC WORKS APPROX. 0.29 MILES FROM PROPOSED SITE





Phone: 574-288-3632 Fax: 574-288-5860 www.nelloinc.com

April 25, 2023

VB BTS II, LLC 750 Park of Commerce Dr, Ste 200 Boca Raton, FL 33487

Re:

Proposed 125' Nello NTP Tower Nello Quote #: RFQ85377/ SO30405 Site: US-MI-5290 / Gypsy Nickel

To Whom It May Concern:

This letter is regarding your inquiry about the expected performance of your proposed tower that will be quoted by Nello based on site-specific criteria.

Our towers are designed to meet or exceed industry standards defined by TIA-222-G, "Structural Standards for Antenna Supporting Structures and Antennas" (TIA Standard). It is our opinion that the possibility of a tower collapse is very unlikely. The tower is designed using extreme wind and ice conditions. In fact, wind speeds specified by the TIA Standard are 50-year wind speeds. That is, they have only a 2% statistical chance of occurring in any given year.

This tower will be designed using the following wind conditions as a minimum: a 106 mph 3-second gust ultimate wind speed with no ice and a 40 mph 3-second gust wind with 3/4" ice. The TIA Standard specifies 106 mph as the ultimate wind speed required for this site in Mecosta County, MI. The "3-second gust wind speed" refers to a wind measured at 33 feet above the ground. Equations in the TIA Standard take into account that wind speed escalates with increasing height of the tower.

Although we cannot guarantee exactly how a tower would fall if it were to fail, the most likely mode of failure would be a buckling failure of one of the tower sections due to excessive wind loading. Nello will design the tower to stay within a fall radius of 45 feet based on design stress levels in accordance with the TIA-222-G Standard and the currently adopted IBC.

The fall radius statement above assumes proper foundation construction and tower installation. The foundation design should be reviewed to ensure that no foundation limit state governs the entire structural system and negates the fall radius design. The fall radius expectancy requires that the foundation be designed with a capacity greater than that of the tower capacity. If the foundation design used in association with this tower is performed by a third party then Nello must be provided the opportunity to review the design in order to confirm that the fall radius remains satisfactory. If for some reason Nello does not provide the tower design or is not given the opportunity to design or review the foundation for this specific project then the content of this letter becomes void.

We hope this has given you a greater degree of comfort regarding the design of your structure. If you have any other questions or concerns regarding the design of your site-specific tower, please contact our engineering or sales department.

Sincerely,

Jason M. Lambert, PE Vice President of Engineering Nello



ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING:

- 2017 NATIONAL ELECTRIC CODE
- 2018 NFPA101 LIFE SAFETY CODE
- AMERICAN CONCRETE INSTITUTE
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION
- MANUAL OF STEEL CONSTRUCTION, 13TH EDITION
- 8. ANSI/TIA/EIA-222-G
- 10. INSTITUTE FOR ELECTRICAL & ELECTRONICS ENGINEER 81 11. IEEE C2 NATIONAL ELECTRIC SAFETY CODE, LATEST EDITION
- 12. TELECORDIA GR-1275
- 13. ANSI/T 311
- 14. UNIFORM MECHANICAL CODE
- 15. UNIFORM PLUMBING CODE
- 16. LOCAL BUILDING CODE
- 17. CITY/COUNTY ORDINANCES
- 18. STATE BUILDING CODE

CODE COMPLIANCE



VERTICAL BRIDGE DEPARTMENT APPROVALS



MECOSTA COUNTY =CURRENT ISSUE DATE:=

BIG RAPIDS, MI 49307

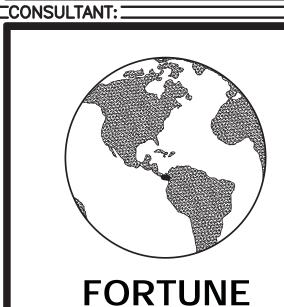
12/28/22

=ISSUED FOR:=

ZONING

=REV.:==DATE:==ISSUED_FOR:==BY: 12/28/22

REV.



WIRELESS INC.

5511 WEST 79TH STREET INDIANAPOLIS, IN 46278 (317) 532-1374STATE OF INDIANA PE CERTIFICATE OF AUTHORIZATION # RC50800096

EDRAWN BY:==CHK.:= DEK DEK =LICENSER: ==



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T-1

VERTICAL BRIDGE: HATCHETT DRIVE, LLC / US-MI-5290 T-MOBILE: MU01340D

BOCA RATON, FL 33487

SITE ADDRESS

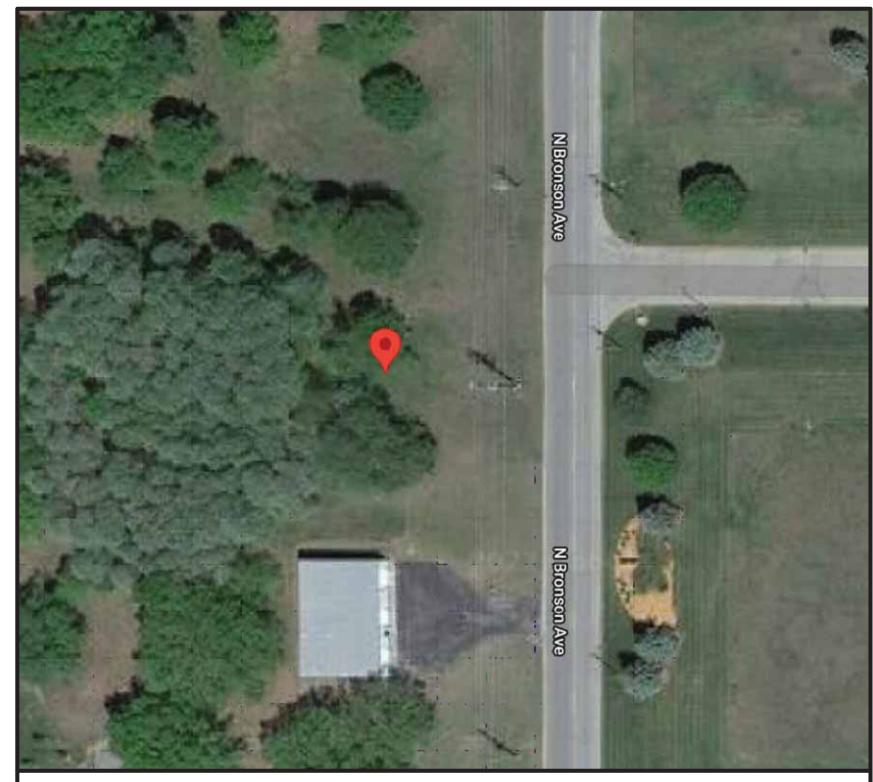
304 N BRONSON AVE. BIG RAPIDS, MI 49307 MECOSTA COUNTY

LATITUDE: 43° 42′ 15.95″ (43.7044294) N LONGITUDE: 85° 27' 50.62" (-85.4640615) W



PROPOSED 75'x75' LEASE AREA WITH A 50'x50' FENCED COMPOUND. PROPOSED 125' MONOPOLE TOWER WITH (6) ANTENNAS, (3) AHLOA'S, (3) AHFIG'S & (2) HYBRID CABLES.

PROJECT DESCRIPTION



VICINITY MAP

MUNICIPALITY: BIG RAPIDS, MI

STATE: **MICHIGAN**

TOWER TYPE: MONOPOLE

TOWER HEIGHT:

125' (135' TO HIGHEST APPURTENANCE)

NUMBER OF CARRIERS: 0 EXISTING, 1 PROPOSED

PROPOSED TELECOMMUNICATIONS TOWER AND UNMANNED EQUIPMENT

CONSULTANT

FORTUNE WIRELESS 5511 WEST 79TH STREET INDIANAPOLIS, IN 46278 PHONE: (317) 532-1374 ATTN.: DAVID KASPER



PROJECT SUMMARY

DEVELOPER

VB BTS, LLC

750 PARK OF COMMERCE DRIVE, STE 200

SHEET

COVER SHEET

SITE SURVEY

CIVIL DETAILS

UTILITY SITE PLAN

GN2 GENERAL NOTES

GENERAL NOTES

OVERALL SITE PLAN

ENLARGED SITE PLAN

EROSION CONTROL DETAIL

TOWER ELEVATION DETAIL

BOCA RATON, FL 33487 PHONE: (630) 946-7741 ATTN: DANIEL KALINA

T-MOBILE

6215 MORENCI TRAIL INDIANAPOLIS, IN 46268

PHONE: (317) 347-7083 ATTN: MELISSA MORENO

POWER COMPANY **CONSUMERS ENERGY**

PHONE: 231-250-6477

CONTACT: MICHAEL NEWBERRY EMAIL: Michael.Newberry@cmsenergy.com

TELEPHONE COMPANY REFERENCE ONLY

AT&T

PROPERTY OWNER JOHN CHAPUT

1313 MAPLE STREET BIG RAPIDS, MI 49307 PHONE: (231) 796-9066 ATTN.: JOHN CHAPUT

CONTACTS

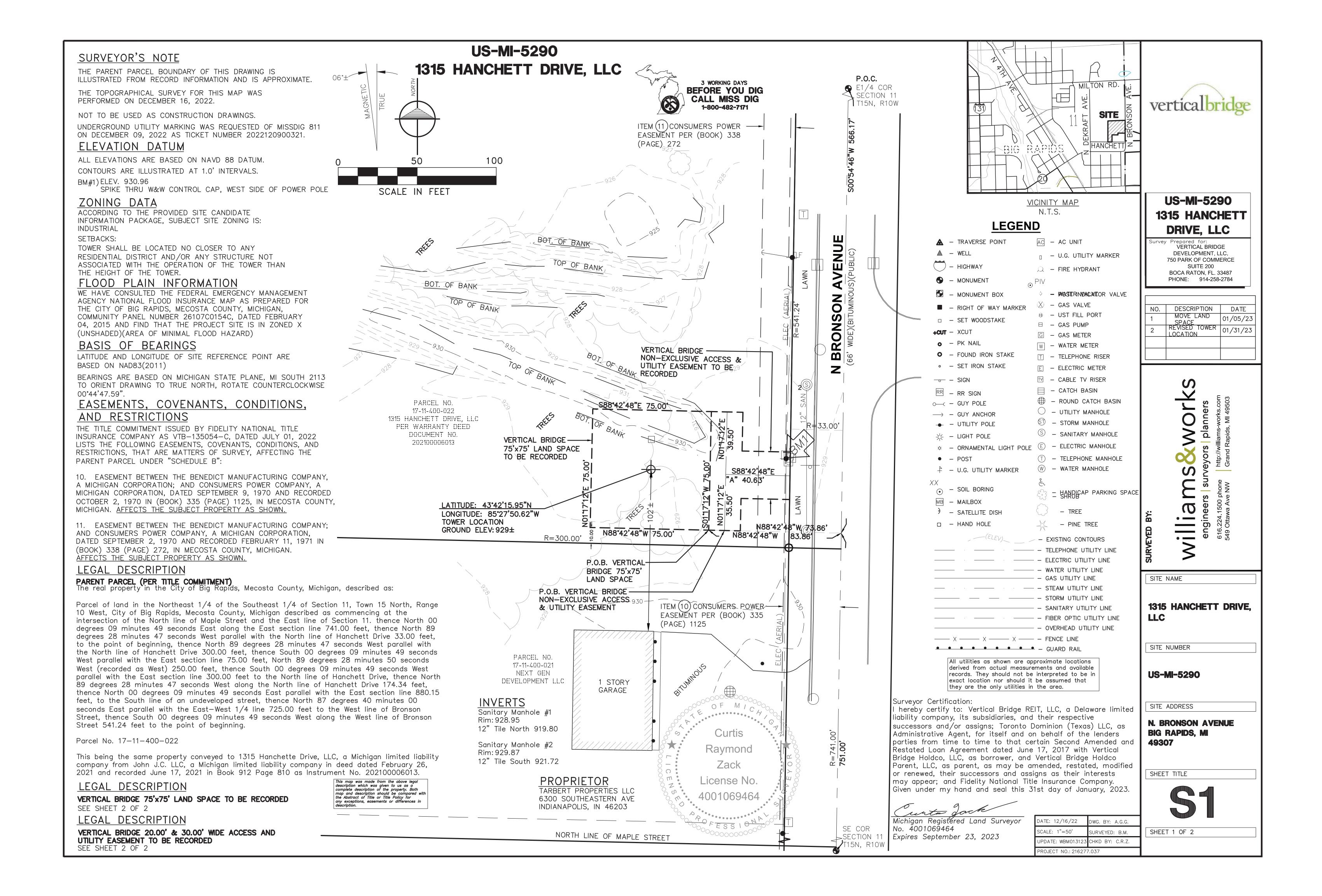
SHEET INDEX BUILDING DEPARTMENT BIG RAPIDS, MI PHONE: (231) 592-4035 ATTN.: CITY CLERK PERMIT INFORMATION

FENCE, GATE, & COMPOUND DETAILS

GRADING & EROSION CONTROL PLAN

DESCRIPTION

=REVISION:=



SURVEYOR'S NOTE THE PARENT PARCEL BOUNDARY OF THIS DRAWING IS ILLUSTRATED FROM RECORD INFORMATION AND IS APPROXIMATE. THE TOPOGRAPHICAL SURVEY FOR THIS MAP WAS PERFORMED ON DECEMBER 16, 2022.

NOT TO BE USED AS CONSTRUCTION DRAWINGS. LEGAL DESCRIPTION

VERTICAL BRIDGE 75'x75' LAND SPACE TO BE RECORDED

All that part of the Northeast 1/4 of the Southeast 1/4 of Section 11, Town 15 North, Range 10 West, City of Big Rapids, Mecosta County, Michigan described as; Commencing at the East 1/4 corner of said Section 11; thence South 00°54'46" West 566.17 feet along the East line of said Section 11 to a point 751.00' North of the intersection of the North line of Maple Street and said East line; thence North 88°42'48" West parallel with the North line of Hanchett Drive 83.86 feet TO THE PLACE OF BEGINNING OF THIS DESCRIPTION; thence continuing North 88°42'48" West parallel with the North line of Hanchett Drive 75.00 feet; thence North 01°17'12" East 75.00 feet; thence South 88°42'48" East 75.00 feet; thence

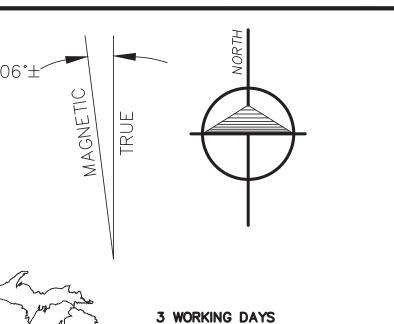
SCALE 1"=200'

US-MI-5290 1315 HANCHETT DRIVE, LLC

LEGAL DESCRIPTION

VERTICAL BRIDGE 20.00' & 30.00' WIDE ACCESS AND UTILITY EASEMENT TO BE RECORDED

A 20.00 foot wide and 30.00 foot wide Access and Utility easement in that part of the Northeast 1/4 of the Southeast 1/4 of Section 11, Town 15 North, Range 10 West, City of Big Rapids, Mecosta County, Michigan, the centerline of which is described as; Commencing at the East 1/4 corner of said Section 11; thence South 00°54'46" West 566.17 feet along the East line of said Section 11 to a point 751.00' North of the intersection of the North line of Maple Street and said East line; thence North 88°42'48" West parallel with the North line of Hanchett Drive 73.86 feet TO THE PLACE OF BEGINNING OF THIS 20.00 FOOT WIDE CENTERLINE DESCRIPTION; thence North 01°17'12" East 35.50 feet to a POINT "A"; thence continuing North 01°17'12" East 39.50 feet to the place of ending of this centerline description; thence recommencing at the aforedescribed Point "A" AND THE PLACE OF BEGINNING OF THIS 30.00 FOOT WIDE CENTERLINE DESCRIPTION; thence South 88°42'48" East 40.63 feet to the westerly right of way line of North Bronson Avenue (66.00 feet) for the place of ending of this centerline description.



BEFORE YOU DIG

CALL MISS DIG

1-800-482-7171

Michigan Registered Land Surveyor

Expires September 23, 2023

No. 4001069464



verticalbridge

US-MI-5290

1315 HANCHETT

DRIVE, LLC

Survey Prepared for:

NO. DESCRIPTION

MOVE LAND

N.T.S.

LEGEND

SPACE REVISED TOWER LOCATION 01/31/23

DATE

01/05/23

SITE NAME

1315 HANCHETT DRIVE,

SITE NUMBER

US-MI-5290

SITE ADDRESS

N. BRONSON AVENUE **BIG RAPIDS. MI** 49307

SHEET TITLE

SHEET 2 OF 2

DATE: 12/16/22

JPDATE: WBM01312

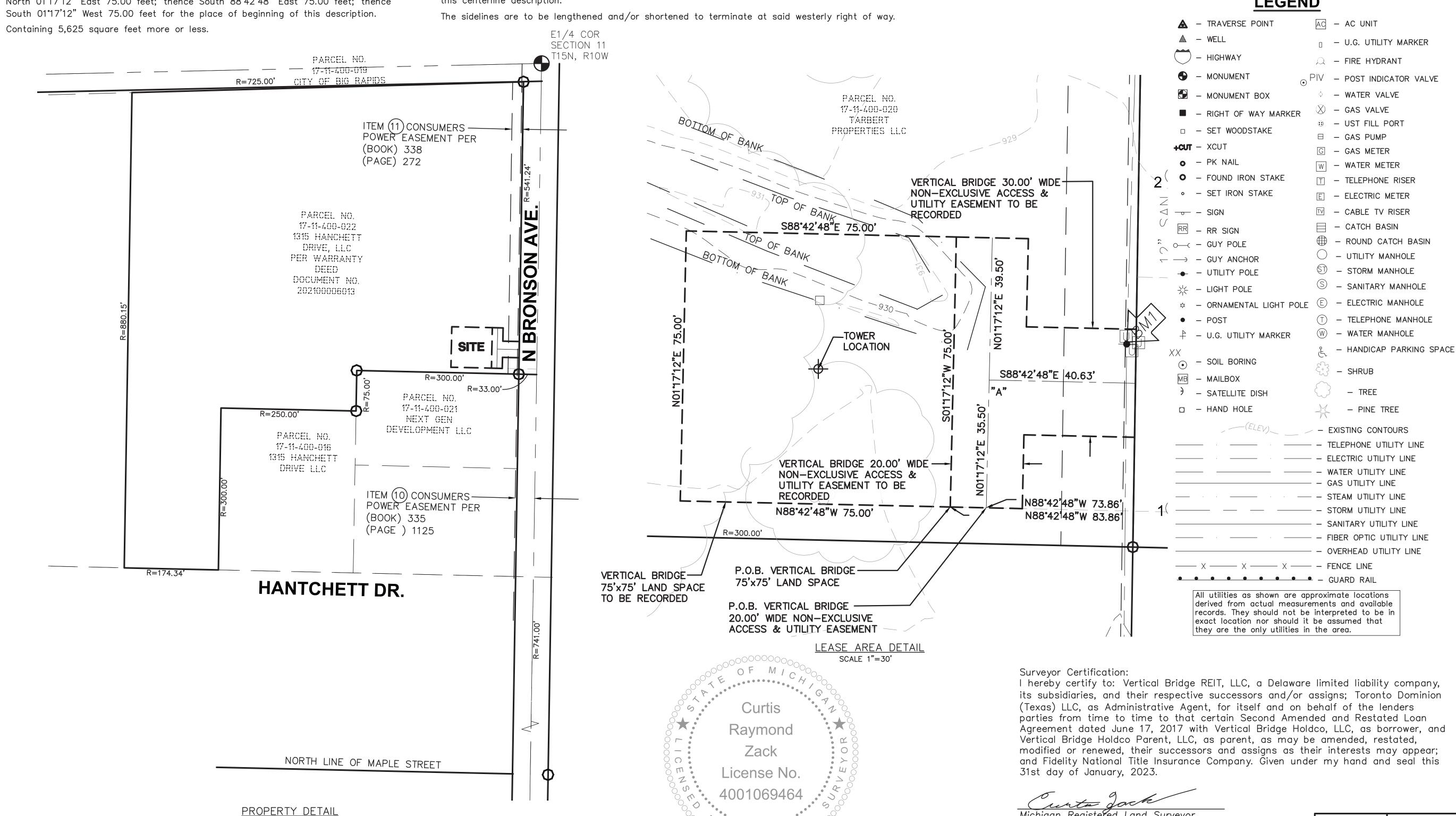
PROJECT NO.: 216277.037

SCALE: N/A

DWG. BY: A.G.G.

JRVEYED: B.M.

HKD BY: C.R.Z.



SITE WORK GENERAL NOTES:

- S: DETAIL 1
 GN-
- 1. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR IS TO POT HOLE UTILITY LOCATES POST MARKING TO VERIFY UTILITY LOCATES ARE CORRECT.
- 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 CONTRACTOR/SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES.
- 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. THE OWNER SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE (TO BE INSTALLED BY CONTRACTOR).
- 7. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
- 8. 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.
- 9. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- 10. 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 ON THE PROJECT SPECIFICATIONS.
- 11. CONTRACTOR 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.
- 12. CONTRACTOR SHALL NOT INSTALL EQUIPMENT THAT WILL IMPEDE DOOR OR ACCESS PANELS.

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 BUSS
EG EQUIPMENT GROUND

BCW BARE COPPER WIRE
SIAD SMART INTEGRATED ACCESS DEVICE
GEN GENERATOR

IGR INTERIOR GROUND RING (HALO)
RBS RADIO BASE STATION
U.N.O. UNLESS NOTED OTHERWISE

SYMBOLS:

S/G SOLID GROUND BUSS BAR

S/N SOLID NEUTRAL BUSS BAR

SUPPLEMENTAL GROUND CONDUCTOR

2-POLE THERMAL-MAGNETIC CIRCUIT BREAKER

SINGLE-POLE THERMAL-MAGNETIC CIRCUIT BREAKER

CHEMICAL GROUND ROD

DISCONNECT SWITCH

METER

EXOTHERMIC WELD (CADWELD) (UNLESS OTHERWISE NOTED)

MECHANICAL WELD

5/8" x 10'-0" COPPER CLAD STEEL GROUND ROD WITH INSPECTION SLEEVE

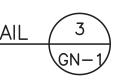
— GROUNDING WIRE

STRUCTURAL STEEL NOTES:



- 1. ALL STEEL WORK SHALL BE PAINTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND IN ACCORDANCE WITH ASTM A36 UNLESS OTHERWISE NOTED.
- 2. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION". PAINTED SURFACES SHALL BE TOUCHED UP.
- 3. BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE (3/4"ø) CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
- 4. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" ASTM A307 BOLTS UNLESS NOTED OTHERWISE.
- 5. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S 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 CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS.

CONCRETE AND REINFORCING STEEL NOTES: DETAIL

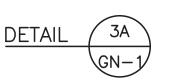


- 1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST—IN—PLACE CONCRETE.
- 2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. SLAB FOUNDATION DESIGN ASSUMING ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF.
- 3. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, U.N.O.
- 4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

SLAB AND WALLS......3/4 IN.
BEAMS AND COLUMNS......1 1/2 IN.

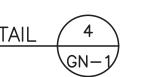
5. A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO. IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

MASONRY NOTES:



- 1. HOLLOW CONCRETE MASONRY UNITS SHALL MEET A.S.T.M. SPECIFICATION C90, GRADE N. TYPE 1. THE SPECIFIED DESIGN COMPRESSIVE STRENGTH OF CONCRETE MASONRY (F'm) SHALL BE 1500 PSI.
- 2. MORTAR SHALL MEET THE PROPERTY SPECIFICATION OF A.S.T.M. C270 TYP. "S" MORTAR AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI.
- 3. GROUT SHALL MEET A.S.T.M. SPECIFICATION C475 AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2000 PSI.
- 4. CONCRETE MASONRY SHALL BE LAID IN RUNNING (COMMON) BOND.
- 5. WALL SHALL RECEIVE TEMPORARY BRACING. TEMPORARY BRACING SHALL NOT BE REMOVED UNTIL GROUT IS FULLY CURED.

GENERAL NOTES:



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

SUBCONTRACTOR— SUBCONTRACTOR HIRED BY GENERAL CONTRACTOR.

OWNER— VERTICAL BRIDGE

OEM— ORIGINAL EQUIPMENT MANUFACTURER

2. PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTOR 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 OWNER.

- 3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- 4. DRAWINGS PROVIDED WERE DESIGNED AND SCALED TO 11x17 FORMAT.
- 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 CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- 7. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE OWNER.
- 8. CONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWINGS.
- 9. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
- 10. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY.
- 11. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
- 12. CONSTRUCTION SHALL COMPLY WITH VERTICAL BRIDGE MASTER SPECIFICATIONS AND THESE DRAWINGS WHERE A CONFLICT EXISTS IT IS CONTRACTORS RESPONSIBILITY TO NOTIFY OWNER.
- 13. NOTHING CONTAINED IN THESE DRAWINGS SHALL CREATE ANY CONTRACTUAL RELATIONSHIP BETWEEN ANY SUBCONTRACTOR(S) AND VERTICAL BRIDGE.
- 14. CONTRACTOR SHALL HOLD HARMLESS VERTICAL BRIDGE AND ITS REPRESENTATIVES FROM ALL SUITS, ACTIONS, OR CLAIMS OF ANY KIND BROUGHT ABOUT AS A RESULT OF ANY INJURIES OR DAMAGES SUSTAINED BY PERSON(S) OR PROPERTY DURING THE CONSTRUCTION OF THIS PROJECT.
- 15. CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS FOR ANY AND ALL PERSONS, INCLUDING SUBCONTRACTORS, ON SITE AS REQUIRED BY CURRENT OSHA STANDARDS; INCLUDING BUT NOT LIMITED TO
 - A) PERSONAL PROTECTIVE & LIFE SAVING EQUIPMENT
 - B) SIGNS SIGNALS & BARRICADES
 - B) SIGNS, SIGNALS, & BARRICADES
 C) TOOLS HAND & POWER
 - D) ELECTRICAL
 - E) FALL PROTECTION
 - F) EXCAVATIONS
 - G) CONCRETE & MASONRY CONSTRUCTION
 - H) STEEL ERECTION
 - I) POWER TRANSMISSION & DISTRIBUTION
 - J) CRANES & DERRICKS IN CONSTRUCTION.
 - 1. THE ENGINEER SHALL BE RESPONSIBLE FOR PROVIDING ALL FIELD LAYOUT ON A ONE TIME BASIS.
 - THE CONTRACTOR SHALL TOPSOIL AND SEED ALL DISTURBED AREAS.
 THE PLANS SHOW SOME KNOWN SUBSURFACE STRUCTURES, ABOVEGROUND STRUCTURES
 AND/OR UTILITIES BELIEVED TO EXIST IN THE WORKING AREA, EXACT LOCATION OF WHICH
 MAY VARY FROM THE LOCATIONS INDICATED. IN PARTICULAR, THE CONTRACTOR IS WARNED
 THAT THE EXACT OR EVEN APPROXIMATE LOCATION OF SUCH PIPELINES, SUBSURFACE
 STRUCTURES AND/OR UTILITIES IN THE AREA MAY BE SHOWN OR MAY NOT BE SHOWN;

AN IT SHALL BE HIS RESPONSIBILITY TO PROCEED WITH GREAT CARE IN EXECUTING ANY

WORK. 48 HOURS BEFORE YOU DIG, DRILL, OR BLAST, CALL 811.

4. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY CONDITIONS THAT VARY FROM THOSE SHOWN ON THE PLANS. THE CONTRACTOR'S WORK SHALL NOT VARY FROM THE PLANS WITHOUT THE EXPRESSED APPROVAL OF THE ENGINEER.



PROJECT INFORMATION:

US-MI-5290 MU01340D 304 N BRONSON AVE BIG RAPIDS, MI 49307 MECOSTA COUNTY

=CURRENT ISSUE DATE:=

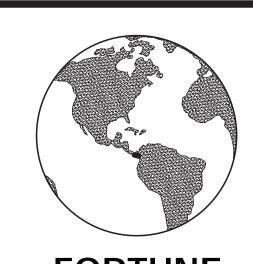
12/28/22

ISSUED FOR:

ZONING

A 12/28/22 GNP

_CONSULTANT:



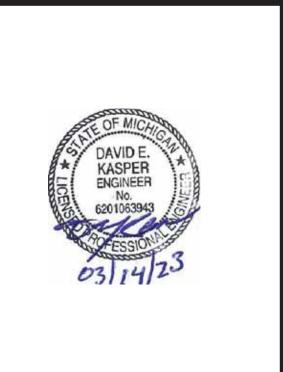
FORTUNE

WIRELESS INC.
5511 WEST 79TH STREET
INDIANAPOLIS. IN 46278

INDIANAPOLIS, IN 46278
(317) 532-1374
STATE OF INDIANA PE CERTIFICATE
OF AUTHORIZATION # RC50800096

F	DRAWN BY:	:==СНК.:===	=APV.:
	GNP	DEK	DEK

=LICENSER: ==



=SHEET TITLE:=

GENERAL NOTES

SHEET NUMBER: _____REVISION:

GN-1

-

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.
- 4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
- 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" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.
- 7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH PLASTIC TAPE PER COLOR SCHEDULE. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (I.E. PANEL BOARD AND CIRCUIT ID'S).
- 8. PANEL BOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
- 9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP FDGFS
- 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 & 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), 600V, 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 WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS 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. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
- 21. CABINETS, BOXES AND WIRE WAYS SHALL BE 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 DOWNWARDS; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER).

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 50 AND RATED NEMA 1 (OR BETTER) INDOORS OR NEMA 3R (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.
- 28. INSTALL PLASTIC LABEL ON THE METER CENTER IDENTIFYING SPECIFIC CARRIER.

DETAIL 2 GN-2

KEYED NOTES: (SEE GROUNDING PLAN DIAGRAM - SHEET E-1)

- 1 TOWER GROUNDING: EXTEND #2 SOLID TINNED CU WIRE FROM BURIED GROUND RING TO EXISTING TOWER AND MAKE EXOTHERMIC CONNECTION.
- (2) <u>HATCH PLATE GROUND BAR:</u> EXTEND #2 SOLID TINNED CU WIRE FROM BURIED GROUND RING UP THROUGH 1/2"ø PVC SLEEVE INTO EQUIPMENT SHELTER FOR CONNECTION TO INTERIOR HALO GROUND RING. TYPICAL AT 4 BUILDING CORNERS.
- (3) GROUNDING OF INTERNAL GROUND RING: EXTEND #2 TINNED CU WIRE FROM BURIED GROUND RING THROUGH 1/2" DIA. PVC SLEEVE INTO EQUIPMENT SHELTER FOR CONNECTION TO INTERIOR HALO GROUND RING. TYPICAL AT (4) BUILDING CORNERS.
- 4 GROUND ROD: COPPER CLAD STEEL, 5/8" TEN (10) FEET LONG.
- (5) <u>ICE BRIDGE SUPPORT POST GROUNDING:</u> EXTEND #2 TINNED CU WIRE FROM BURIED GROUND RING TO ALL ICE BRIDGE SUPPORT POSTS AND EXOTHERMICALLY WELD.
- (6) FENCE GROUNDING: IF FENCE IS WITHIN 6' OF GROUNDING RING, EXTEND #2 TINNED CU WIRE FROM BURIED GROUND RING TO FENCE CORNER POSTS AND EXOTHERMICALLY WELD BOND INTERMEDIATE POST IF REQUIRED TO MAINTAIN 25' MAX. SPACING.
- (7) <u>HVAC GROUNDING:</u> EXTEND #2 TINNED CU WIRE FORM BURIED GROUND RING TO THE HVAC UNIT AND MAKE A MECHANICAL CONNECTION.
- (8) TOWER GROUNDING BAR: EXTEND #2 TINNED CU WIRE FROM BURIED GROUND RING UP TO THE TOWER GROUND BAR AND MAKE A MECHANICAL CONNECTION. SECURE GROUND BAR DIRECTLY TO TOWER WITH ISOLATOR KIT USING STAINLESS STEEL MOUNTING MATERIAL.
- (9) <u>CELL REFERENCE GROUND BAR:</u> EXTEND (2) #2 TINNED CU WIRE FROM BURIED GROUND RING UP TO THE CELL REFERENCE GROUND BAR (INSIDE SHELTER) AND MAKE AN EXOTHERMIC WELD CONNECTION.
- TELCO GROUNDING BAR: EXTEND #2 TINNED CU WIRE FROM BURIED GROUND RING UP TO TELCO GROUND BAR (INSIDE SHELTER) AND MAKE AN EXOTHERMIC WELD CONNECTION.
- ANTENNA GROUND BAR: MOUNT GROUND BAR DIRECTLY TO TOWER AT TOP OF COAX RUNS. SECURE TO TOWER WITH ISOLATOR KIT USING STAINLESS STEEL MOUNTING MATERIAL.
- GATE GROUNDING: EXTEND #2 TINNED CU WIRE FROM BURIED GROUND RING TO GATE POSTS AND EXOTHERMICALLY WELD.
- EXTERIOR GFCI RECEPTACLE GROUNDING: EXTEND #2 TINNED CU WIRE FROM BURIED GROUND RING TO THE EXTERIOR GFCI RECEPTACLE AND MAKE A MECHANICAL CONNECTION.

GREENFIELD 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—POTENTAL 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 AND PROVIDE TESTING RESULTS.
- 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 SOLID TINNED COPPER FOR OUTDOOR BTS.
- 7. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 AWG SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
- 8. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
- 9. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
- 10. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
- 11. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
- 12. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD
- 13. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
- 14. APPROVED ANTIOXIDANT COATINGS (I.E. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
- 15. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WIT A CORROSION RESISTANT
- 16. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
- 17. BOND ALL METALLIC OBJECTS WITHIN 6 FT. OF MAIN GROUND WIRES WITH 1-#2 AWG TIN-PLATED COPPER GROUND CONDUCTOR.
- 18. 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., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.



PROJECT INFORMATION:

US-MI-5290 MU01340D 304 N BRONSON AVE BIG RAPIDS, MI 49307 MECOSTA COUNTY

=CURRENT ISSUE DATE:=

12/28/22

=ISSUED FOR:=

ZONING

A 12/28/22 GNP

CONSULTANT:



FORTUNE

WIRELESS INC.

5511 WEST 79TH STREET
INDIANAPOLIS, IN 46278

(317) 532-1374

STATE OF INDIANA PE CERTIFICATE
OF AUTHORIZATION # RC50800096

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GNP	DEK	DEK

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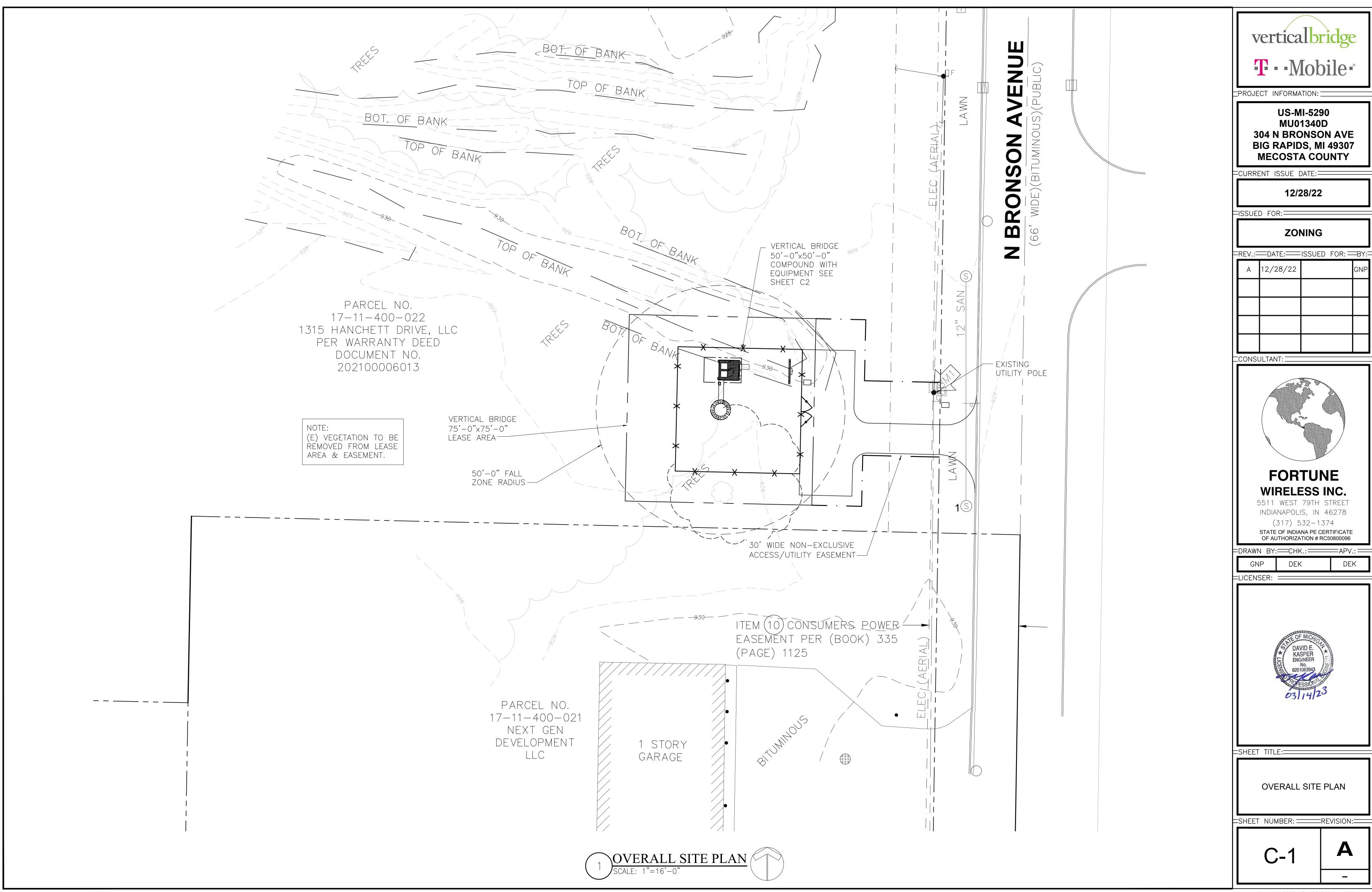


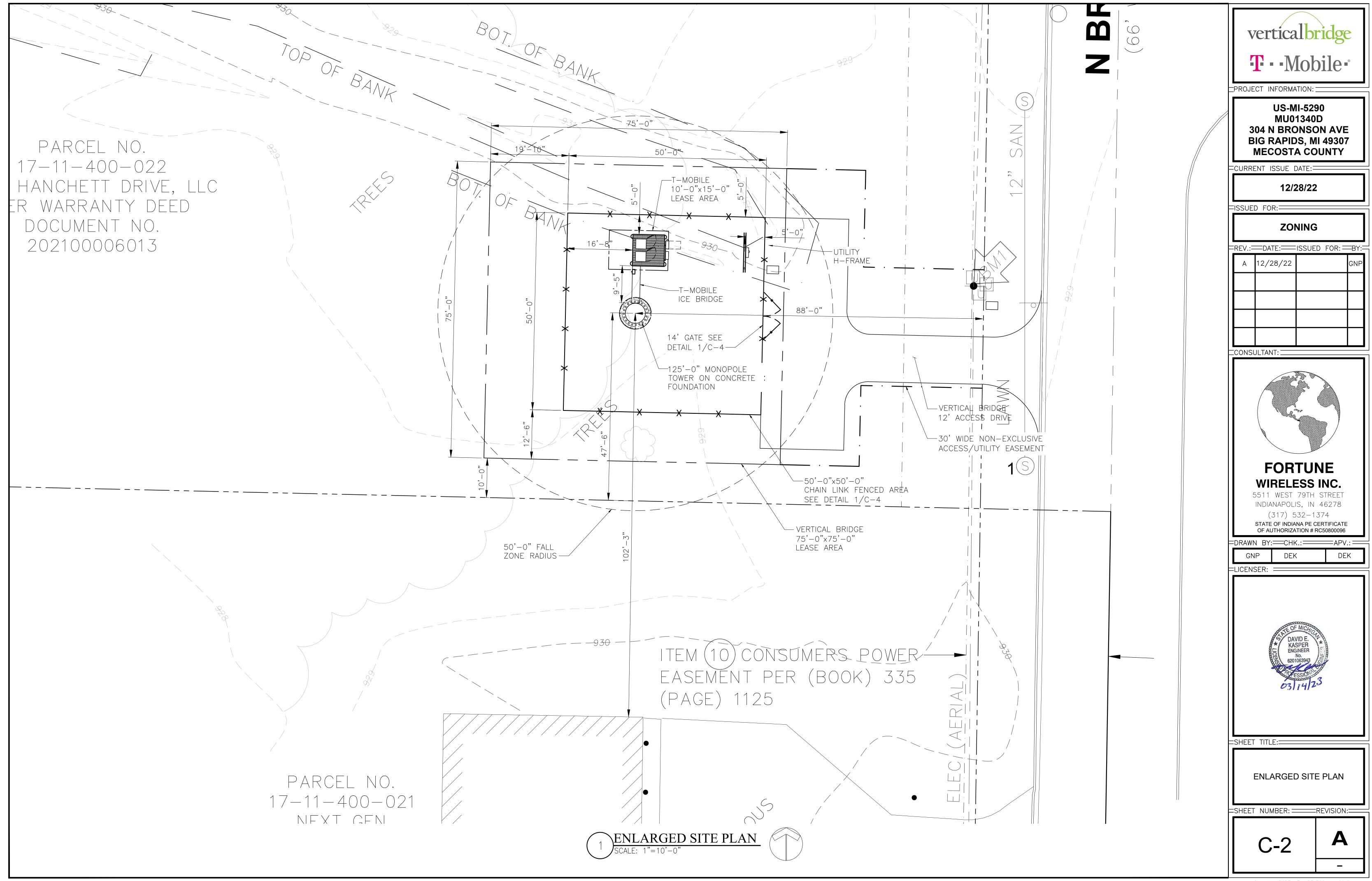
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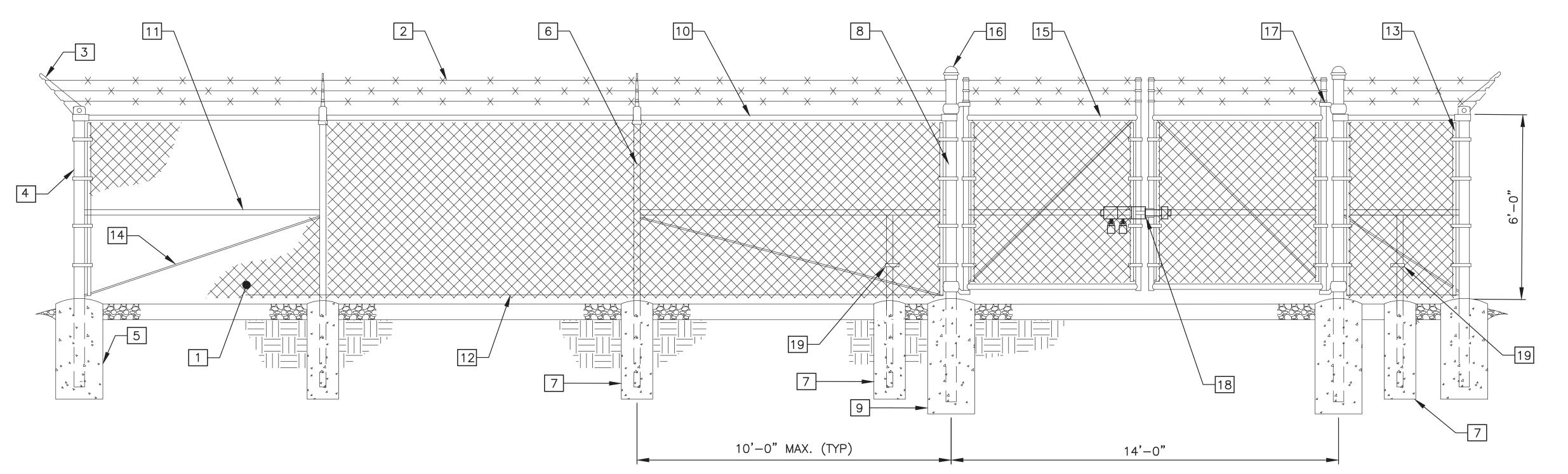
GENERAL NOTES

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TYPICAL FENCE SECTION

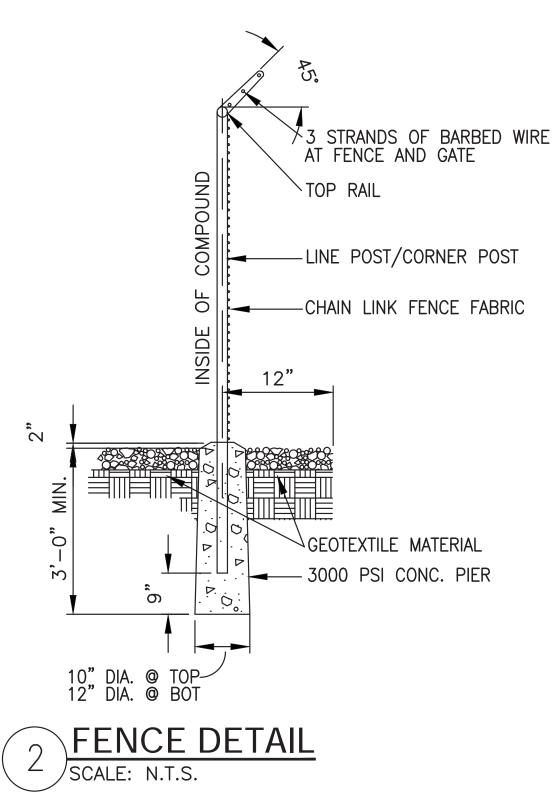
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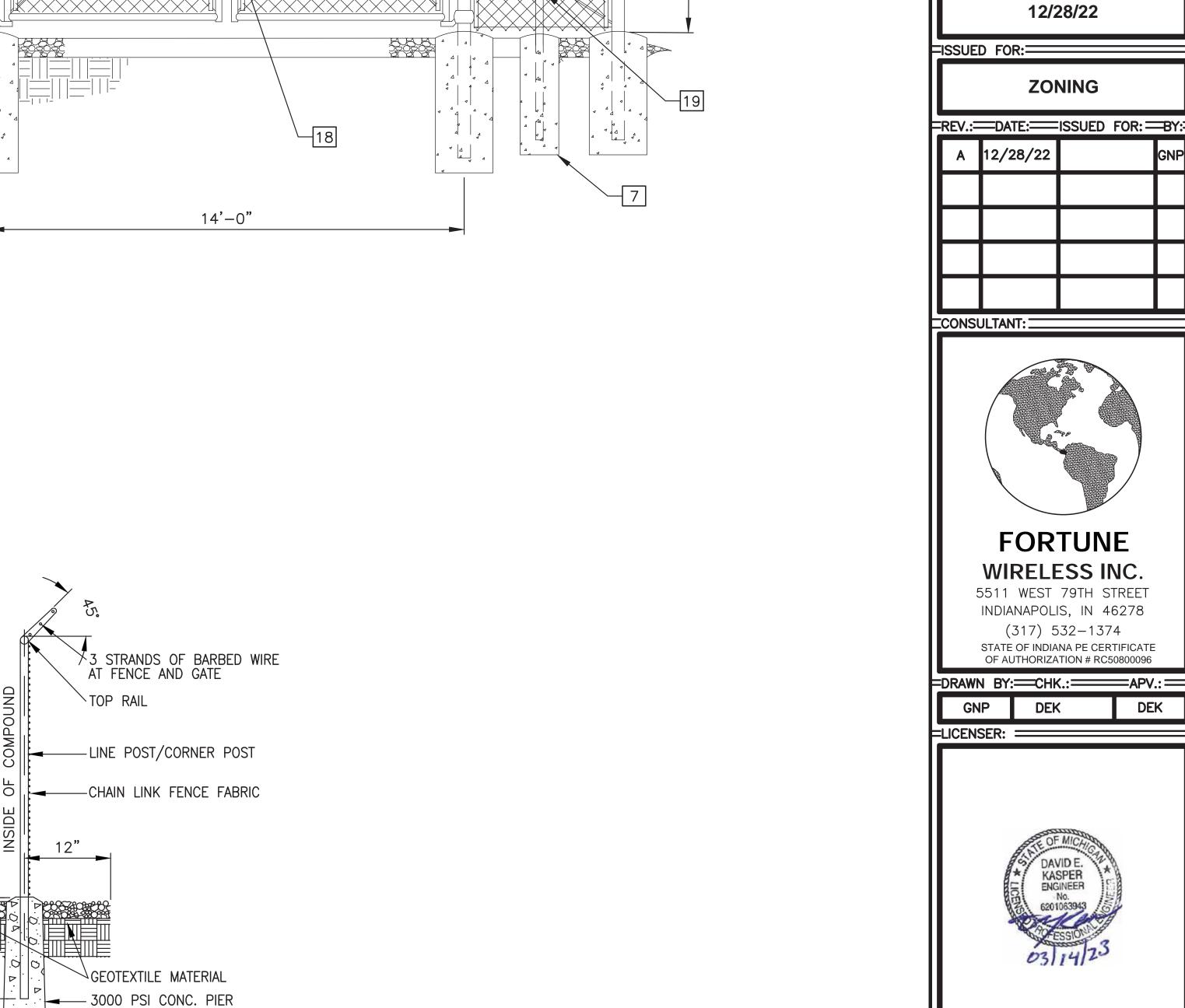
- 1 FABRIC: 6FT. HEIGHT, 9 GAUGE, 2" MESH, ASTM A392.
- BARBED WIRE: 12 GAUGE WIRE, 4 POINT (3 RUNS), FINISH TO MATCH FABRIC, ASTM A121.
- EXTENSION ARMS: STAMPED STEEL WITH MALLEABLE IRON BASE, FINISH TO MATCH FENCE FRAMEWORK, ASTM F626.
- 4 END AND CORNER POSTS: 3"Ø PIPE SCH. 40 (GALV.) ASTM F1083
- 5 CONCRETE FOUNDATION: 36"x12"ø (3000 PSI)
- 6 LINE POSTS: 2"Ø PIPE SCH. 40 (GALV.) ASTM F1083
- 7 CONCRETE FOUNDATION: 36"x10"ø (3000 PSI)
- 8 GATE POSTS: 4"Ø PIPE SCH. 40 (GALV.) ASTM F1083
- 9 CONCRETE FOUNDATION: 48"x12"ø (3000 PSI)
- 10 TOP RAIL & BRACE RAIL: 1-1/2"ø PIPE SCH. 40 (GALV.) ASTM F1083

- MIDDLE RAILS: 1-1/2"ø PIPE SCH. 40 (GALV.) ASTM
- BOTTOM TENSION WIRE: 0.177" METALLIC-COATED STEEL (GALV.), MARCELLED, ASTM A824
- TENSION BARS: 3/16"x3/4", FULL HEIGHT OF FABRIC, FINISH TO MATCH FENCE FRAMEWORK.
- TENSION ROD: 3/8" WITH ADJ. TIGHTNER, FINISH TO MATCH FENCE FRAMEWORK.
- GATE FRAME: 2"ø SCH. 40 (GALV.) ASTM F1083
- POST CAPS: PER POST DIAMETER.
- GATE HINGES: NON-LIFT-OFF TYPE, OFFSET TO PERMIT 180 DEGREE SWING.
- CONTRACTOR TO PROVIDE STYMIE LOCK OR APPROVED EQUIVALENT
- DUCK BILL OPEN GATE HOLDER. VERIFY LOCATION IN FIELD BEFORE INSTALLATION

FENCE NOTES:

- 1. REFER TO PROJECT SPECIFICATIONS FOR INFORMATION NOT SHOWN IN THE DRAWING.
- 2. FENCE FABRIC SHALL COMFORN TO CHAIN LINK FENCE MANUFACTURERS INSTITUTE (CLFMI) PRODUCT MANUAL.
- 3. INSTALL FENCE IN COMPLIANCE WITH ASTM F 567.
- 4. INSTALL SWING GATES IN COMPLIANCE WITH ASTM F 900.
- 5. DO NOT BEGIN INSTALLATION AND ERECTION BEFORE FINAL GRADING IS COMPLETED, UNLESS OTHERWISE PERMITTED. INSTALL FENCING ON BOUNDARY LINES INSIDE OF PROPERTY LINE ESTABLISHED BY SURVEY.
- 6. DRILL OR HAND-EXCAVATE (USING POST HOLE DIGGER) HOLES FOR POSTS TO DIAMETERS AND SPACINGS INDICATED, IN FIRM, UNDISTURBED OR COMPACTED SOIL. IF NOT INDICATED ON DRAWINGS, EXCAVATE HOLES FOR EACH POST TO MINIMUM DIAMETER RECOMMENDED BY FENCE MANUFACTURER, BUT NOT LESS THAN (4) TIMES LARGEST GROSS-SECTION OF POST.
- 7. REMOVE POST HOLE SPOILS FROM SITE. DO NOT SET SPOILS ON AGGREGATE WITHOUT ADEQUATE PROTECTION.
- PROTECT PORTION OF POSTS ABOVE GROUND FROM CONCRETE SPLATTER. PLACE CONCRETE AROUND POSTS AND VIBRATE OR TAMP FOR CONSOLIDATION. CHECK EACH POST FOR VERTICAL AND TOP ALIGNMENT AND HOLD IN POSITION DURING PLACEMENT AND FINISHING OPERATIONS, UNLESS OTHERWISE SHOWN, EXTEND CONCRETE FOOTING 1 INCH ABOVE GRADE AND TROWEL TO A CROWN TO SHED WATER.
- 9. INSTALL BARBED WIRE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- 10. APPLY FABRIC TO OUTSIDE OF FRAMEWORK.





==REVISION:=

verticalbridge

T··Mobile·

US-MI-5290 MU01340D

304 N BRONSON AVE

BIG RAPIDS, MI 49307 MECOSTA COUNTY

12/28/22

ZONING

DEK

DAVIDE KASPER ENGINEER

No. 6201063943

FENCE, GATE, & COUMPOUND

DETAILS

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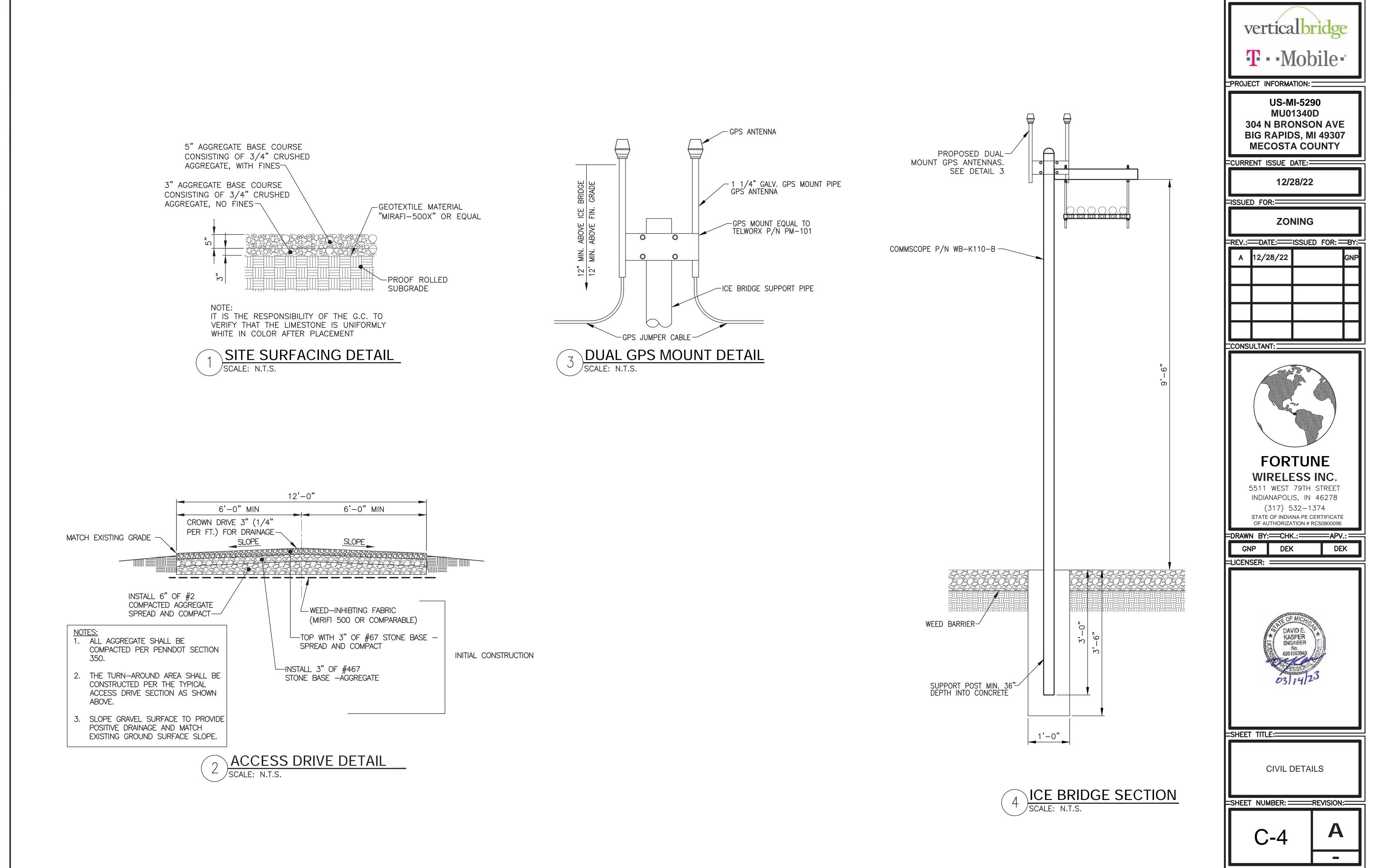
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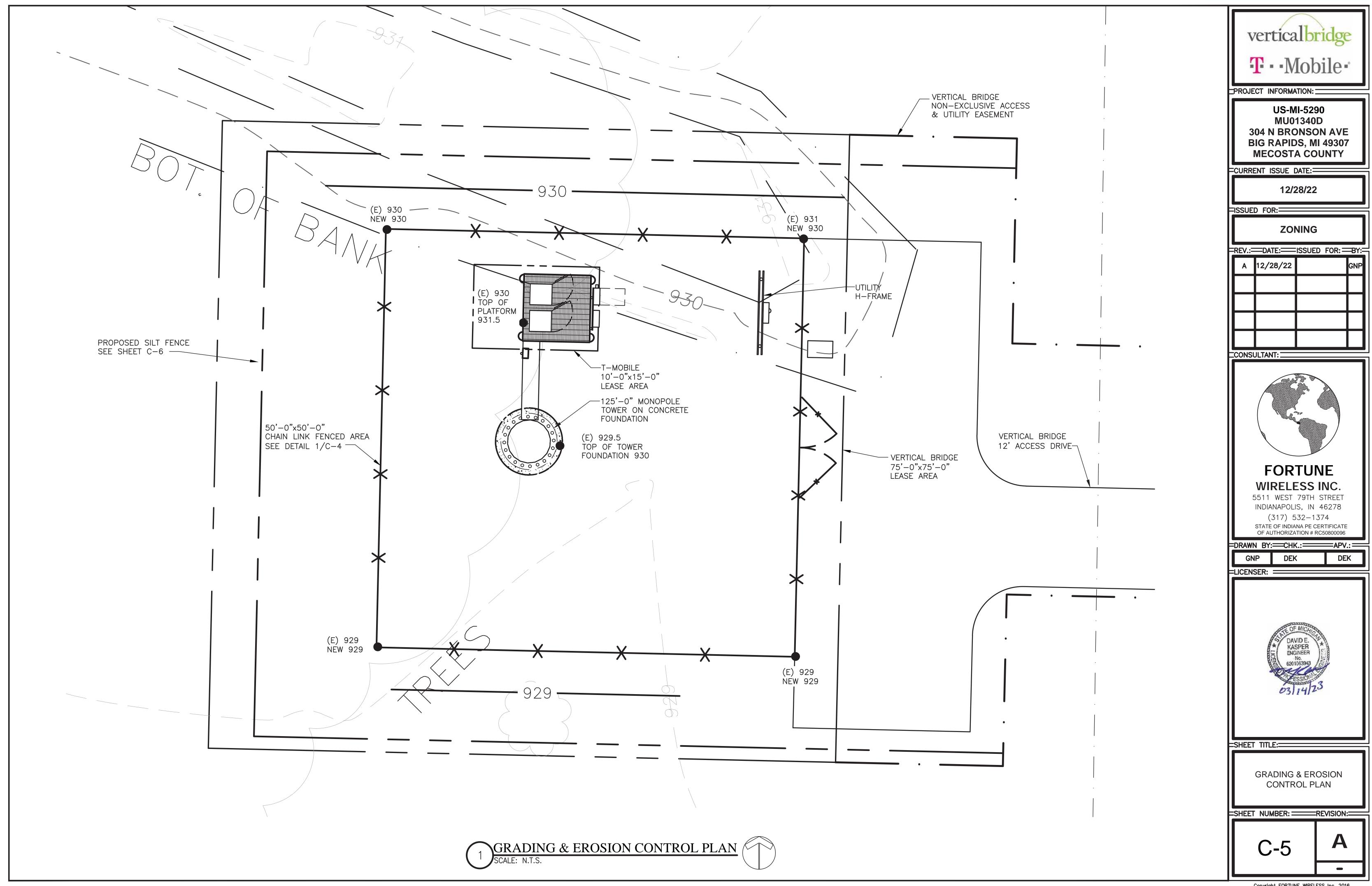
C-3

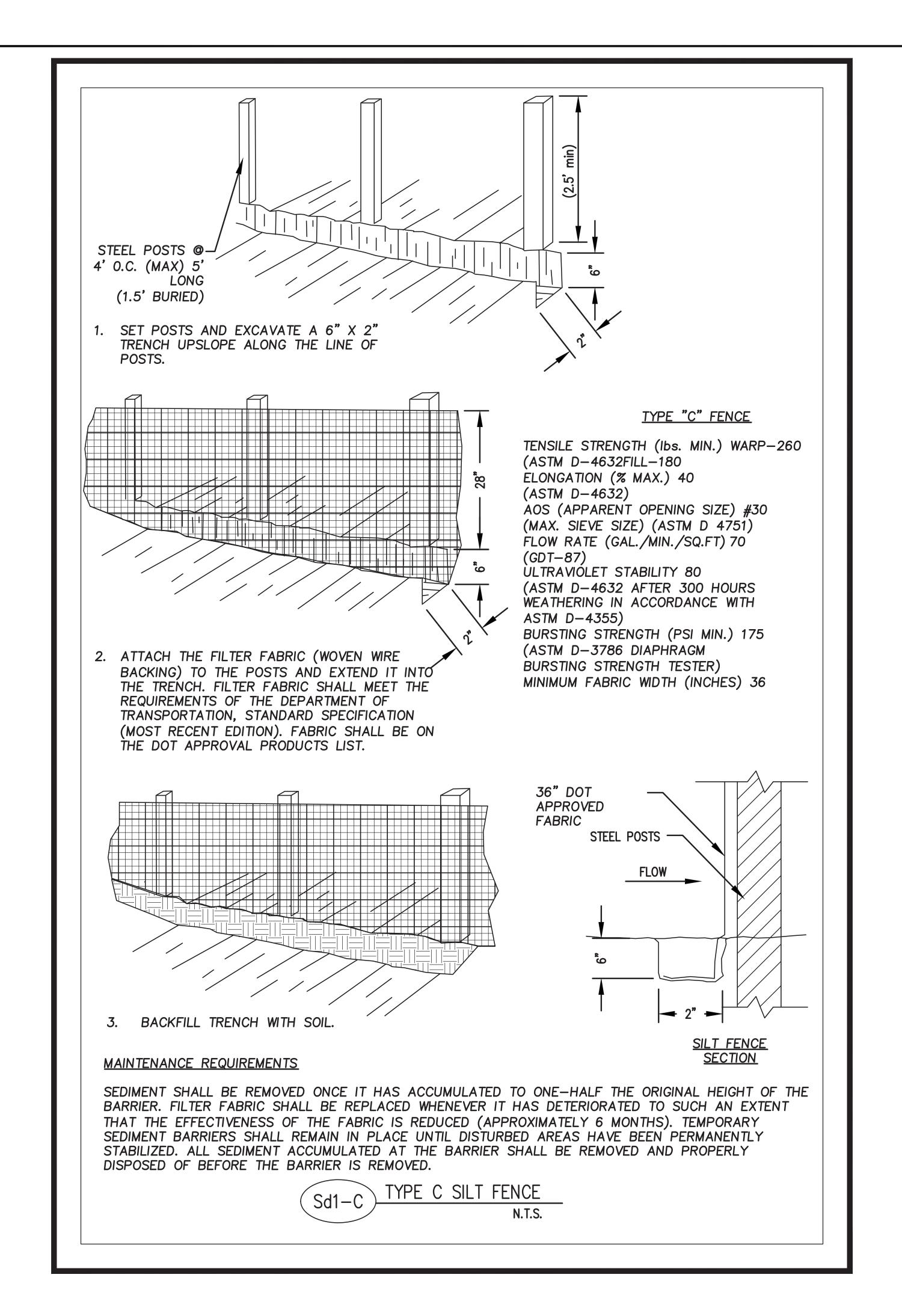
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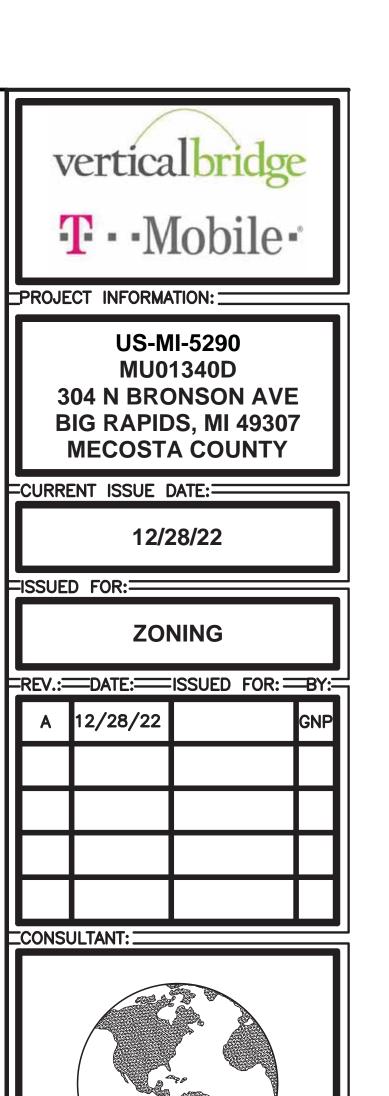
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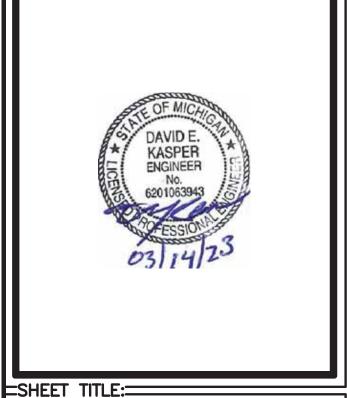




	5511 WEST 79TH STREET INDIANAPOLIS, IN 46278 (317) 532-1374 STATE OF INDIANA PE CERTIFICATE					
ŀ	OF AUTHORIZATION # RC50800096 =DRAWN BY:==CHK.:=APV.:=					
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FORTUNE

WIRELESS INC.

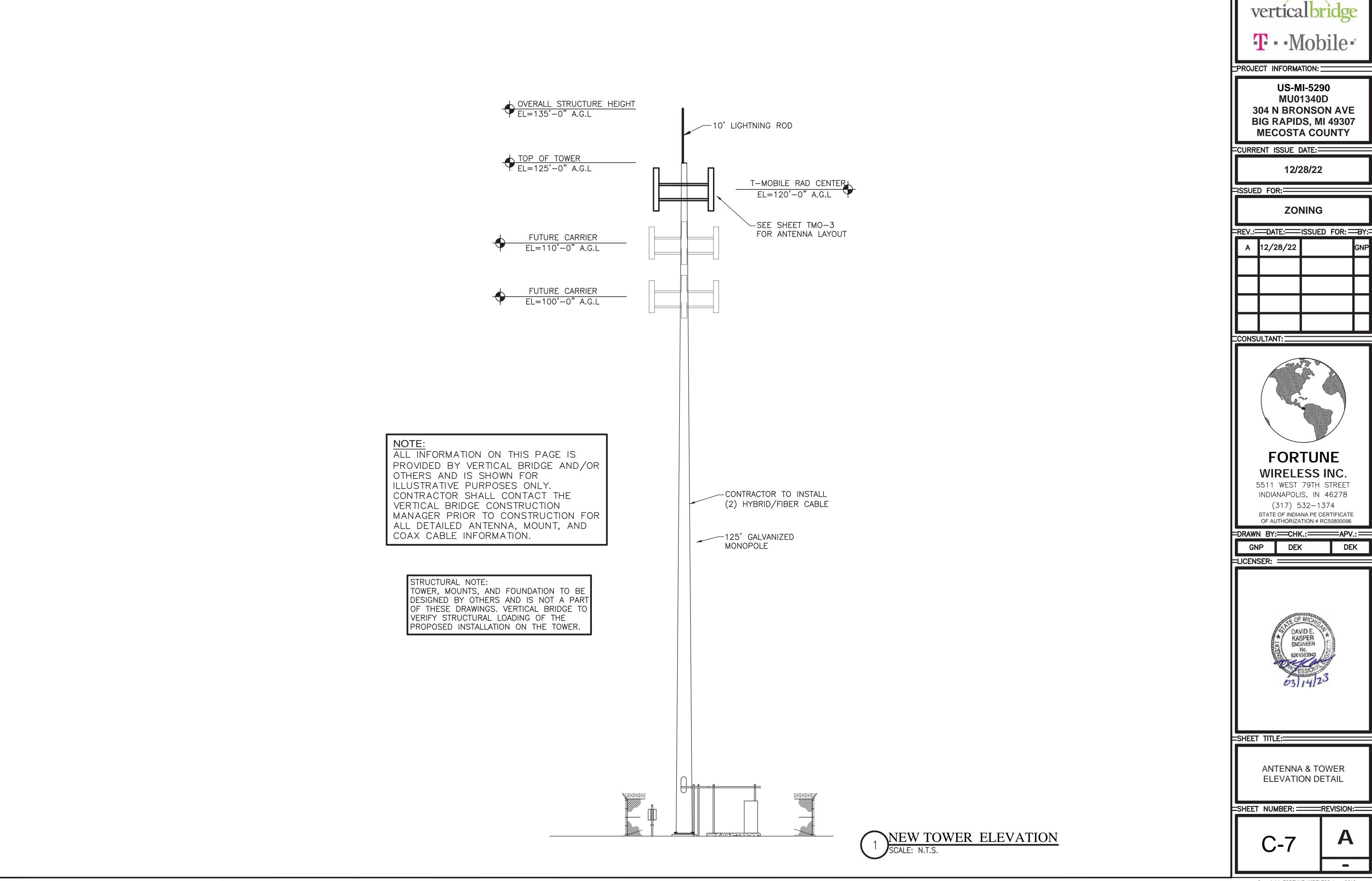


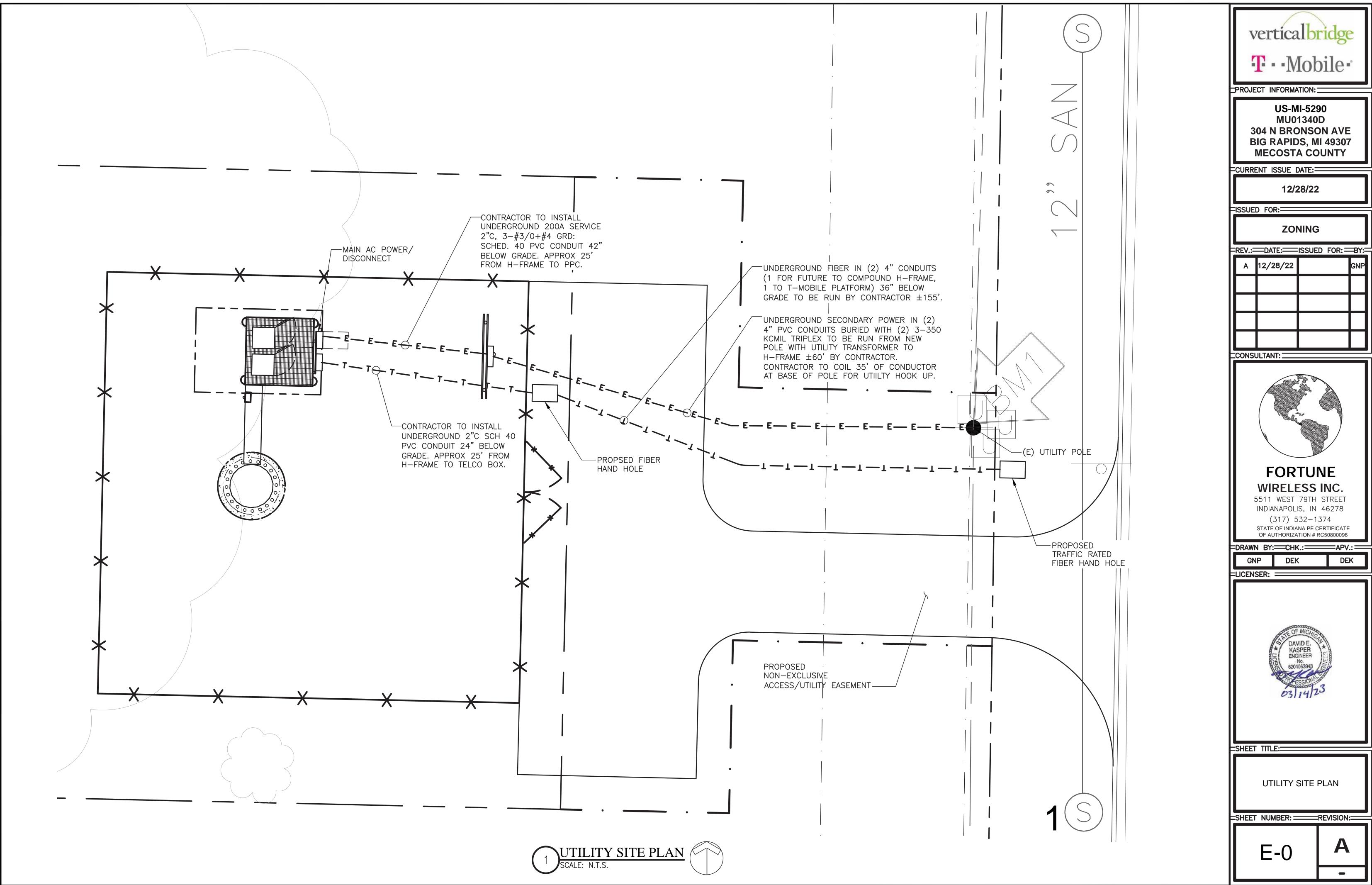
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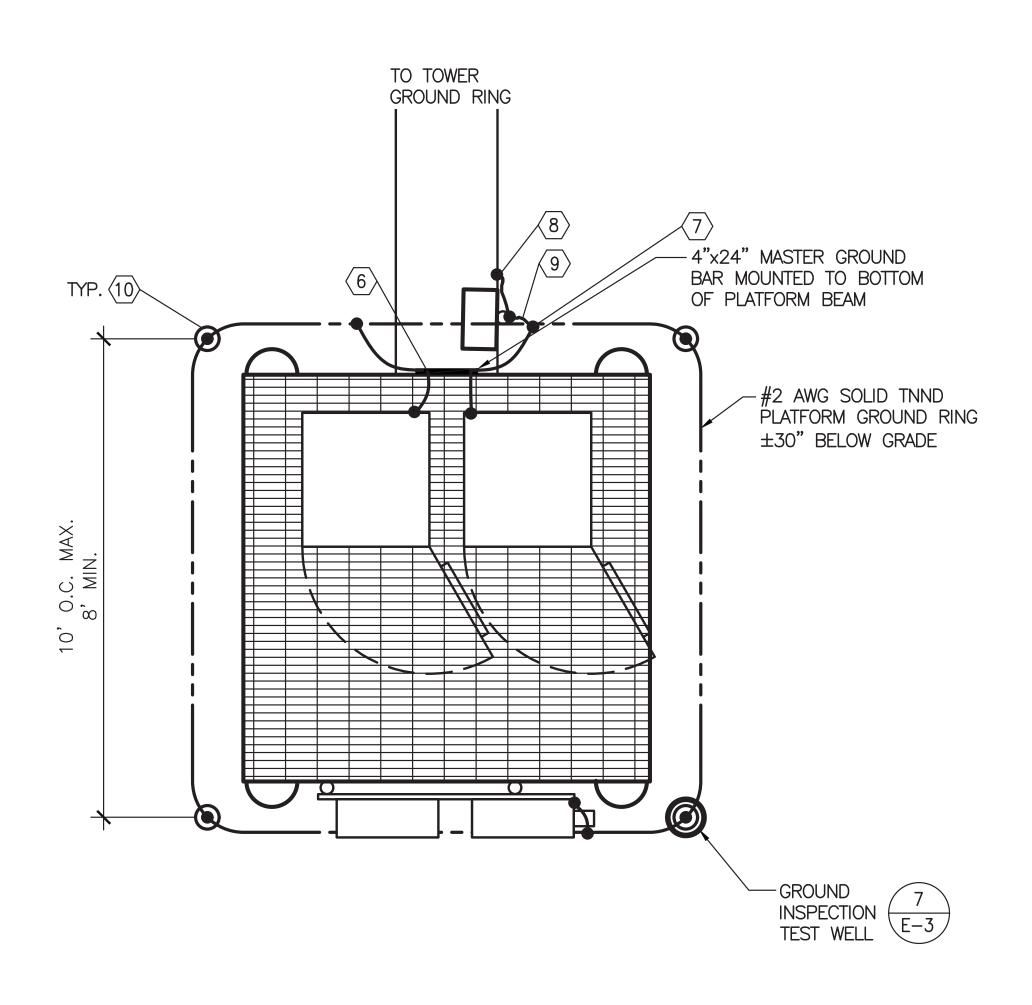
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C-6

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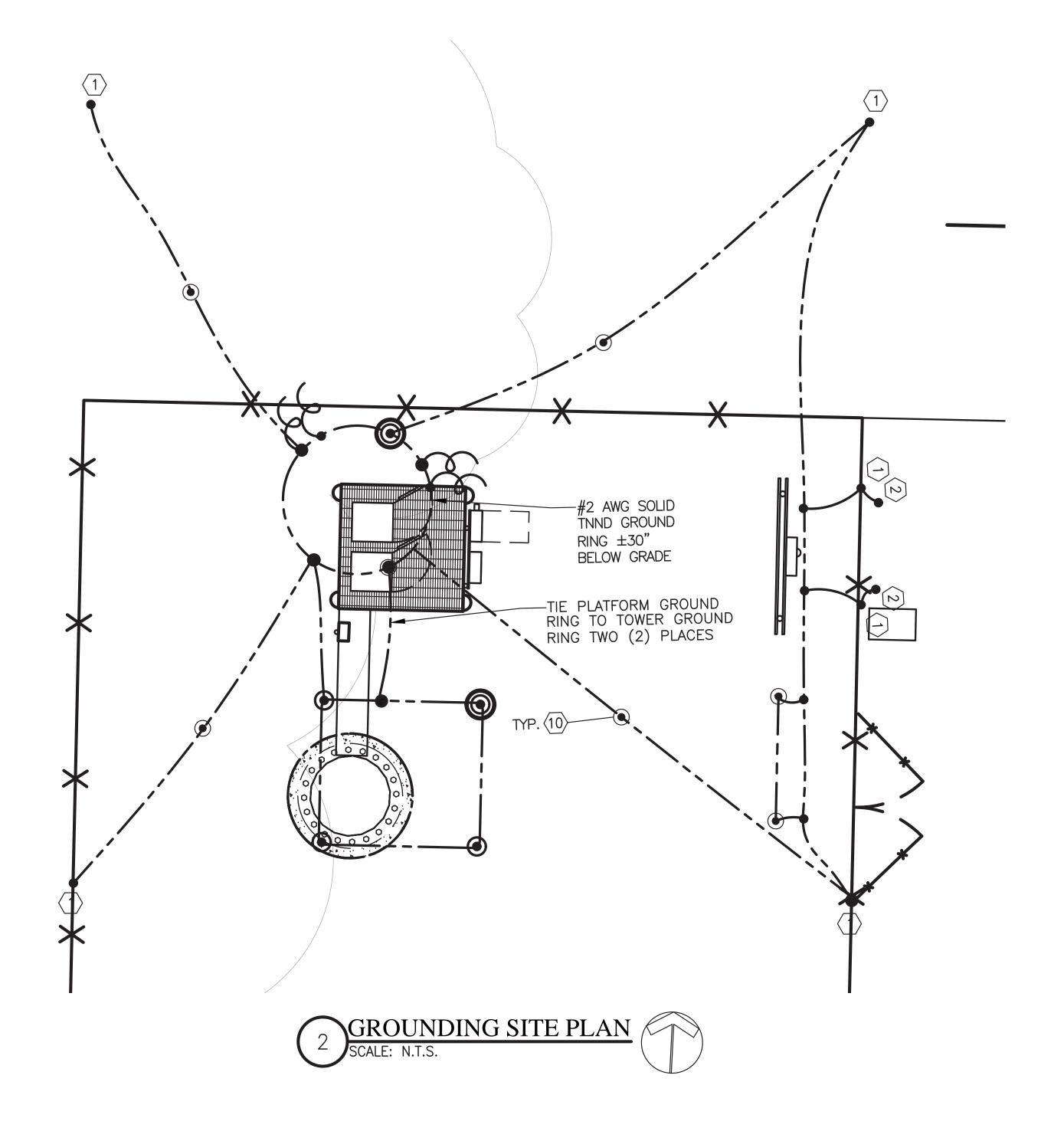








- FENCE GROUND: E.C. TO FURNISH AND INSTALL #2 AWG BARE SOLID TNND COPPER GROUND WIRE AT FENCE POST. GROUND WIRE TO BE ROUTED ALONG FENCE POST AND CADWELDED FOUR (4) PLACES, TOP RAIL, TOP AND BOTTOM OF CORNER POST, AND GROUND RING.
- © GATE GROUND: SIMILAR TO FENCE GROUND (FG), E.C. SHALL ALSO FURNISH AND INSTALL #2 BRAIDED GATE JUMPER WIRE BETWEEN THE GATE FRAME AND THE GATE POST. CONNECTIONS AT GATE FRAME AND GATE POST TO BE CADWELD.
- TOWER GROUND: E.C. TO FURNISH AND INSTALL TWO (2) #2 AWG BARE SOLID TNND COPPER GROUND WIRES FROM BASE OF TOWER OR TOWER LEGS TO TOWER GROUND RING. ALL CONNECTIONS TO BE CADWELD.
- TOWER GROUND BAR: E.C. TO FURNISH AND INSTALL TWO (2) 20"x4"x1/4" TNND COPPER GROUND BARS ON THE TOWER.
 ONE TO BE LOCATED AT ANTENNA MOUNT ELEVATION (ATTACHED TO TOWER STEEL), THE OTHER AT THE BASE OF THE TOWER ADJACENT TO THE ICE BRIDGE (ISOLATED FROM TOWER STEEL).
- 5 TOWER COAX GROUND: E.C. TO FURNISH AND INSTALL TWO (2) #2 AWG BARE SOLID TNND COPPER GROUND WIRES FROM TOWER GROUND BAR (TGB) TO GROUND RING. ALL CONNECTIONS TO BE CADWELD.
- $\langle 6 \rangle$ PLATFORM MASTER GROUND BAR: G.C. FURNISHED AND INSTALLED 24"x4"x1/4" TNND COPPER GROUND BAR ON PLATFORM.
- 7 PLATFORM MASTER GROUND BAR GROUND: E.C. TO EXTEND TWO (2) MANUFACTURER FURNISHED AND INSTALLED #2 AWG BARE SOLID TNND COPPER GROUND WIRES FROM THE MASTER GROUND BAR (MGB) TO GROUND RING. ALL CONNECTIONS TO BE CADWELD.
- 8 ICE BRIDGE CHANNEL GROUND: E.C. TO FURNISH AND INSTALL ONE (1) #2 AWG BARE SOLID TNND COPPER GROUND JUMPER WIRE FROM ICE BRIDGE CHANNEL TO ICE BRIDGE SUPPORT POST. ALL CONNECTIONS TO BE CADWELD.
- 9 ICE BRIDGE SUPPORT GROUND: E.C. TO FURNISH AND INSTALL ONE (1) #2 AWG BARE SOLID TNND COPPER GROUND WIRE FROM ICE BRIDGE SUPPORT POST TO GROUND RING. ALL CONNECTIONS TO BE CADWELD.
- 5/8" DIA. x 10' LONG TNND COPPER CLAD STEEL GROUND ROD DRIVEN VERTICAL TOP OF ROD 30" MIN. BELOW GRADE. SPACING OF GROUND RODS 10' MAX. ALL CONNECTIONS TO BE CADWELD.



NOTES & SPECIFICATIONS:

- 1. THE GROUND RING SHALL CONSIST OF 2 AWG TINNED SOLID BARE COPPER CONDUCTOR, UNLESS NOTED OTHERWISE, BURIED AT 30" BELOW FINISHED GRADE (OR BELOW FROSTLINE). ALL CONNECTIONS SHALL BE MADE USING AN EXOTHERMIC WELD, UNLESS NOTED OTHERWISE.
- 2. GROUND CONDUCTOR BEND RADIUS SHALL NOT BE LESS THAN 8".
- 3. MINIMUM SPACING BETWEEN GROUND RODS SHALL NOT BE LESS THAN 10', UNLESS NOTED OTHERWISE.
- 4. CONTRACTOR SHALL BOND THE TOWER GROUND BAR (TOGB) TO THE GROUND RING USING A 2 AWG TINNED SOLID BARE COPPER CONDUCTOR AND AN EXOTHERMIC WELD.
- 5. CONTRACTOR SHALL BOND THE MAIN GROUND BAR (MGB) & EXTERNAL GROUND BAR (GB2) TO THE GROUND RING USING 2 AWG TINNED SOLID BARE COPPER CONDUCTORS AND EXOTHERMIC WELDS.
- 6. ALL GROUNDING/BONDING CONDUCTORS LOCATED ABOVE FINISHED GRADE SHALL BE RUN IN 1" PVC CONDUIT.
- 7. CONTRACTOR SHALL NOTIFY THE OWNER/TENANT VERTICAL BRIDGE CONSTRUCTION MANAGER TO ALLOW THE OWNER/TENANT VERTICAL BRIDGE CONSTRUCTION MANAGER TO INSPECT THE GROUNDING SYSTEM PRIOR TO BACKFILLING.



PROJECT INFORMATION:

US-MI-5290 MU01340D 304 N BRONSON AVE BIG RAPIDS, MI 49307 MECOSTA COUNTY

=CURRENT ISSUE DATE:=

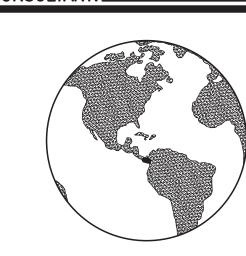
12/28/22

=ISSUED FOR:=

ZONING

A 12/28/22 GNP

CONSULTANT:



FORTUNE

WIRELESS INC.

5511 WEST 79TH STREET
INDIANAPOLIS, IN 46278

(317) 532-1374

STATE OF INDIANA PE CERTIFICATE
OF AUTHORIZATION # RC50800096

=DRAWN BY:==CHK.:==APV.:= GNP DEK DEK

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GROUNDING PLAN & NOTES

=SHEET NUMBER: =====REVISION:=

E-1

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STAFF REPORT TO THE PLANNING COMMISSION

TO: Planning Commission

FROM: Michelle Stenger, Community Development Director

SUBJECT: Special Land Use Permit Application for a new Cell Tower at 301 N Bronson

DATE: May 17, 2023

Introduction

Applicant, Vertical Bridge, is applying for a Special Land Use Permit for a new Cell Tower at 301 N Bronson Avenue (PIN 17-15-300-034). The property is currently zoned I, Industrial. Communication Towers are listed as a Special Land Use under Section 3.12:7(2) in the Industrial District.

This property is located on the far east side of the City. See the attachments for maps and images of the property. The applicant is proposing to build on the east side of the city within the industrial area. The site is 10.63 acres and currently has no improvements. The applicant is seeking to build a 125 foot tower (135 feet if including the lightening rod) on a 75 foot by 75 foot piece of land. The applicant will also have a nonexclusive access and utility easement to reach the proposed property.

Special Land Use Process and Procedure

The Special Land Use Permit Application was received by the Community Development Department on April 27, 2023. The Applicant is also applying for a Site Plan Review, as the project includes new construction.

All Special Use Permit Applications require a Public Hearing. Notice was posted in the Big Rapids Pioneer on Monday, May 1, 2023, and sent to all property owners within 300 feet of 301 N Bronson. Staff received 0 calls from neighboring property owners in advance of the hearing.

Standards for this Special Land Use

Section 10.3:8 of the Zoning Ordinance clearly lays out a series of standards for Special Land Uses, stating as follows:

Standards. No special land use shall be recommended by the Planning Commission unless such Board shall find:

(1) That the establishment, maintenance, or operation of the special land use will not be detrimental to or endanger the public health, safety or general welfare.

Pro Response: There is no detrimental impact on public health, safety, or general welfare as the tower, once built, will only have a visual impact on neighboring properties, which are all used for industrial purposes.

Negative Response: The location of the tower is along the roadway and very visible from neighboring properties. The applicant would decrease the impact on surrounding properties by

moving the tower further back on the
property.

(2) That the special land use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor shall it substantially diminish and impair property values within its neighborhoods.

Pro Response: The neighboring properties should still be able to use their property in the same manner previously as communication towers have little impact besides visual.

Negative Response: The location of the tower is very visible and may be better serviced further back on the property.

(3) That the establishment of the special land use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.

Pro Response: The surrounding property is zoned industrial and will likely be developed in an industrial manner. The tower would still allow for the majority of uses that would be proposed on neighboring properties.

Negative Response: The location of the tower takes up prime real estate in an already limited industrial area of the City. The tower uses valuable road frontage on one of the City's major industrial roads.

(4) That adequate utilities, access roads, drainage and necessary facilities have been or are being provided,

Pro Response: The application has been reviewed by Public Works and there was no comment on drainage. The use will not require any City operated utilities.

Negative Response: None, as communication towers create a minimal impact on utilities in general.

(5) That adequate measures have been or will be taken to provide ingress or egress so designed as to minimize traffic congestion in the public streets.

Pro Response: The applicant is providing a common ingress/egress easement to the property.

Negative Response: The ingress/egress easement into the property is 30 feet wide, but the portion that is parallel to the road is only 20 feet, which is not likely large enough for an ingress or egress for future industrial uses on neighboring property.

(6) That the special land use shall, in all other respects conform to the applicable regulations of the district in which it is located, any specific requirements established

for that use in Article 11 and to any additional conditions or procedures as specified in Section 10.4.

Pro Response: The special use meets the	Negative Response: The location of the
requirements of the ordinance.	tower has a visual impact on
	neighboring properties and
	ingress/egress easement is limiting for
	those adjacent properties owners do to
	the width.

Section 3.12:7 (3) of the Zoning Ordinance lists communication towers as a Special Land Use in the I District, subject to the conditions of Section 11.1:7. Those standards state that "communication towers affixed directly to the ground shall be permitted in the I district, subject to the following conditions:"

- (1) The tower is located no closer to any Residential District than the height of the tower. This requirement can be modified by the Planning Commission if it can be demonstrated by the applicant that the tower is collapsible in design.
 - Staff Response: The structure is located over 125 feet from any residential structure or zoned property.
- (2) The tower is located no closer to any structure not associated with the operation of the tower than the height of the tower. This requirement can be modified by the Planning Commission if it can be demonstrated by the applicant that the tower is collapsible in design.
 - Staff Response: The structure does have a building that is 102 feet from the base of the tower. The applicant has provided a letter from an engineer stating that the tower should collapse within itself if it were to fail.
- (3) All wiring between the tower and other structures shall be placed underground whenever possible.
 - Staff Response: According to the site plan all utilities will be underground.
- (4) The tower, any accessory structures and any guy wires which are fixed to the ground shall be completely enclosed by appropriate fencing as determined by the Planning Commission.
 - Staff Response: The applicant has provided a 6-foot-tall fence that will remain locked except upon inspection by Staff for routine maintenance.
- (5) In order to maximize the efficiency of the telecommunications services, while also minimizing the impact of such facilities on the City, co-location, or the provision of more than one (1) facility in a single location shall be encouraged by the Planning Commission. The applicant shall provide the Planning Commission with information

regarding the feasibility of co-location at proposed sites. Further the Applicant may be required to provide a letter of intent to lease excess space on a facility and commit itself to:

- (a) Respond to any requests for information from another potential shared use applicant;
- (b) Negotiate in good faith and allow for leased shared use if an applicant demonstrates that it is technically possible and
- (c) Make no more than a reasonable charge for a shared use lease.

Staff Response: The applicant has provided information on other locations that were investigated prior to applying for a special use. The applicant did state in the application that there were also available to place future antennas on the property but did not indicate the charge only that they would be considered reasonable rates.

Planning Commissioners are encouraged to review the Application against the Standards in Section 10.3:8 and Section 11.1:20 to decide if they find it meets or fails to meet them and make their decision on this case in accordance.

Recommendation

Staff's biggest concern is the location of the tower on the site. Some consideration should be given to whether the tower can be moved further back on the property so the base of the tower and all the components will not be as noticeable from the road. With that for the Board's consideration Staff recommends **approval** of the Special Land Use Permit Application for a communications tower at 301 N Bronson (PIN 17-11-400-022), as it meets the Standards set in Section 10.3:8 and Section 11.1:70 of the Zoning Ordinance.

Action

Three options lay before the Planning Commission regarding Special Land Use Permit Applications: Approval, Denial, or Table. Explanations and sample motions are included below.

<u>Approval</u>

An approval motion is appropriate when the Application meets the Standards of the Zoning Ordinance and sends the Application to the next step in the process where City Commission has final say in approving or denying the request.

"I move that the Special Land Use Permit Application for a communications tower at 301 N Bronson (PIN 17-11-400-022) be recommended to the City Commission for approval, because it meets the Standards set in Section 10.3:8 and Section 11.1:7 of the Zoning Ordinance. [If any conditions on approval, list them here.]"

Denial

A denial motion is appropriate when the Application fails to meet the Standards of the Zoning Ordinance and ends the application process.

"I move to deny the Special Land Use Permit Application for a communications tower at 301 N Bronson (PIN 17-11-400-022), because it does not meet Standard 10.3:X of the Zoning Ordinance.

(Fill in the X with which number Standard the application does not meet.)"

<u>Table</u>

A Table motion is appropriate when more information is needed before reaching a decision regarding the Application and pauses the process until a later date.

"I move to table a decision on the Special Land Use Permit Application for a communications tower at 301 N Bronson (PIN 17-11-400-022) until the June 21, 2023 meeting of the Planning Commission, because (*list your reason for tabling the decision here*)."

STAFF REPORT TO THE PLANNING COMMISSION

TO: Planning Commission

FROM: Michelle Stenger, Community Development Director SUBJECT: Site Plan Review for a new Cell Tower at 301 N Bronson

DATE: May 17, 2023

Introduction

Applicant, Vertical Bridge, is applying for a Site Plan Review for a new Cell Tower at 301 N Bronson Avenue (PIN 17-15-300-034). The property is currently zoned I, Industrial. Communication Towers are listed as a Special Land Use under Section 3.12:7(2) in the Industrial District.

This property is located on the far east side of the City. See the attachments for maps and images of the property. The applicant is proposing to build on the east side of the city within the industrial area. The site is 10.63 acres and currently has no improvements. The applicant is seeking to build a 125-foot tower (135 feet if including the lightening rod) on a 75 foot by 75 foot piece of land. The applicant will also have a nonexclusive access and utility easement to reach the proposed property.

Site Plan Review Process and Procedure

The Site Plan Review Application was received by the Community Development Department on April 27, 2023, and was deemed in compliance with Section 9.4. of the Zoning Ordinance which stipulates required Site Plan Review application materials. As required by Ordinance, Site Plan Reviews must go through a public hearing process. Notice was posted in the Big Rapids Pioneer on Monday, May 1, 2023, and sent to all property owners within 300 ft of the site.

The Site Plans were shared with the Fire Marshal, Airport Manager, the Public Works Department's Engineering staff, and the Zoning Administrator for their review.

<u>Public Safety</u> – Fire Marshal Jeff Hull reviewed the site plans and found no issues with the Site Plans and preliminary drawings.

<u>Airport Manager</u> – Airport Manager, Steve Schroeder stated that the applicant would need to get a Tall Structures Permit through MDOT.

Public Works -

<u>Zoning</u> – Plans were reviewed by the Community Development Director as to their standings as regards the Zoning Ordinance. This review found that the plans are in compliance with the Ordinance as regards setbacks, parking spaces and drive lanes, landscaping, and lighting.

Criteria for Review of Site Plan Review Applications

Section 9.6 of the Zoning Ordinance sets criteria for reviewing Site Plan Review applications:

9.6:1 That there is a proper relationship between the existing streets and highways within the vicinity and proposed deceleration lanes, service drives, entrance and exit driveways and parking areas to ensure the safety and convenience of pedestrian and vehicular movement. With respect to vehicular and pedestrian circulation, including walkways, interior drives, and parking, the site shall be developed so that access points, general interior traffic circulation, pedestrian circulation, and parking areas are safe and convenient and, insofar as practicable, do not detract from the design of the proposed buildings and existing structures on neighboring properties.

Staff Response: Communication Towers have very little traffic or parking needs as they are only visited about once a month for routine site checks and upgrades. There will be no public at the property.

9.6:2 All elements of the site plan shall be harmoniously and efficiently organized in relation to the topography, the size and type of the lot, the character of adjoining property, and the type and size of buildings. The site shall be developed so as not to impede the normal and orderly development or improvement of surrounding property for uses permitted in this Ordinance.

Staff Response: The surrounding properties are used for industrial uses or vacant. The tower would have little impact on the continued use of the property. The location of the tower will limit future development on the property as the structure is taking road frontage from future development.

9.6:3 That as many natural features of the landscape shall be retained as possible where they furnish a barrier or buffer between the project and adjoining properties used for dissimilar purposes and where they assist in preserving the general appearance of the neighborhood. The landscape shall be preserved in its natural state, insofar as practical, by minimizing tree and soil removal, and by topographic modifications which will result in maximum harmony with adjacent areas.

Staff Response: The location of the tower will require that some natural landscaping be removed from the site. However, there is not a reasonable way to hide cell towers.

9.6:4 That any adverse effects of the proposed development and activities emanating there from which affect adjoining residents or owners shall be minimized by appropriate screening, fencing, landscaping, setback and location of buildings, structures and entryways. All loading and unloading areas and outside storage areas, including areas for the storage of refuse, which face or are visible from residential districts or public thoroughfares, shall be screened by a vertical screen consisting of structural or plant materials no less than six (6) feet in height.

Staff Response: The structure will be fenced to keep people out. Since the property is surrounded by industrial land there is no requirement to have additional landscaping around the structure. There is also no parking or structure to require landscaping around the base of.

9.6:5 That the layout of buildings and improvements will minimize any harmful or adverse effect which the development might otherwise have upon the surrounding neighborhood. Physical improvements including sidewalks, drives and parking areas shall be built to adequate standards to minimize premature deterioration. Sites at which hazardous substances are stored, used or generated shall be designed to prevent spill or discharges to the air, surface of the ground, groundwater, streams, drains or wetlands. Secondary containment for above ground storage of hazardous material shall be provided.

Staff Response: Communications towers typically only have a visual impact on surrounding properties. There are currently no sidewalks in the industrial area. The single access drive is not proposed to be paved, but it also will not be accessed more than once a month.

9.6:6 That all provisions of all local ordinances, including the City Zoning Ordinance, are complied with unless an appropriate variance therefrom has been granted by the Zoning Board of Appeals.

Staff Response: The communication tower has met all of the provisions of the zoning ordinance.

Planning Commissioners are encouraged to review the Application against the Criteria in Section 9.6 to decide if they find it meets or fails to meet them. These Criteria shall be used to decide the Action taken by the Planning Commission.

Recommendation

Staff's biggest concern is the location of the tower on the site. Some consideration should be given to whether the tower can be moved further back on the property so the base of the tower and all the components will not be as noticeable from the road. With that for the Board's consideration Staff recommends **approval** of the Site Plan Review Application for a communications tower at 301 N Bronson, as it meets the Criteria for Review found in Section 9.6.6 of the Zoning Ordinance.

Action

Three options lay before the Planning Commission regarding Site Plan Review Applications: Approval, Denial, or Approval with Conditions. Explanations and sample motions are below.

<u>Approval</u>

An approval motion is appropriate when the Application meets the Standards of the Zoning Ordinance and approves the Application. Sample motion:

"I move that the Site Plan Review Application for a communications tower at 301 N Bronson Avenue (PIN 17-15-300-034), be approved, because it meets all of the Criteria for Review set in Section 9.6 of the Zoning Ordinance."

Approval with Conditions

An approval with conditions motion is appropriate when the Application meets the Standards of the Zoning Ordinance, but the Planning Commissioners believe a few minor conditions or alterations are required. This motion approves the Application contingent upon the listed conditions. Sample motion:

"I move that the Site Plan Review Application for communications tower at 301 N Bronson Avenue (PIN 17-15-300-034), be approved with conditions. The Application meets the Criteria for Review set in Section 9.6 of the Zoning Ordinance, but conditions are required to (*select from the relevant reasons below*)

- (1) Ensure that public services and facilities affected by the proposed land use or activity will be capable of accommodating increased service and facility loads caused by the land use or activity.
- (2) Protect the natural environment and conserve natural resources and energy.
- (3) Ensure compatibility with adjacent uses of land.

(4) Promote the use of land in a socially and economically desirable manner.

The following conditions are required to address this need: (list conditions [such as requiring additional permits, revising plans to show needed changes, demonstrating adequacy of the stormwater detention facilities, among others] here).

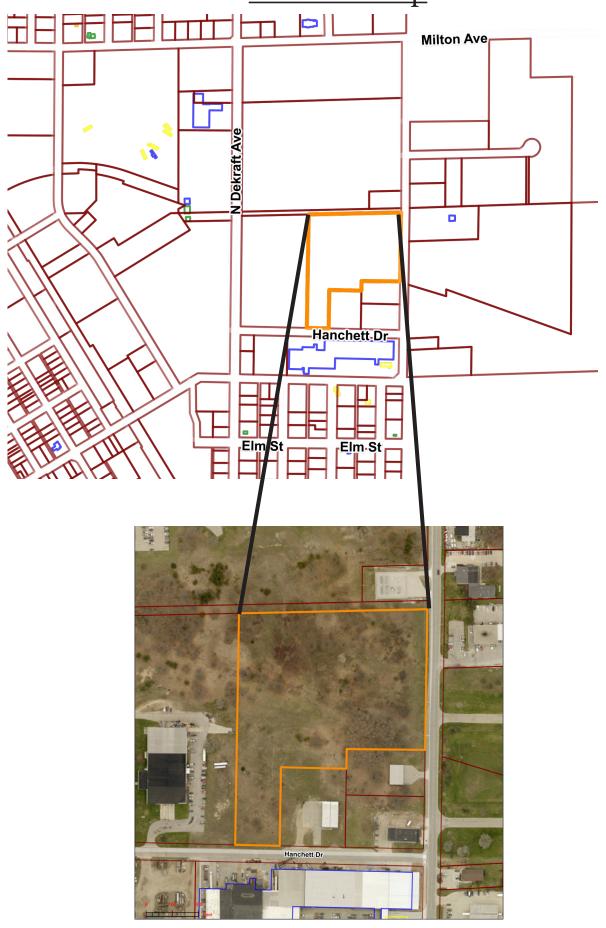
A revised, dated site plan and documents addressing the above shall be submitted for staff approval within 60 days."

Denial

A denial motion is appropriate when the Application fails to meet the Standards of the Zoning Ordinance and ends the application process. Sample motion:

"I move to deny the Site Plan Review Application for a communications tower at 301 N Bronson Avenue (PIN 17-15-300-034)), because it does not meet Criteria 9.6:X of the Zoning Ordinance. (Fill in the X with which number Criteria the application does not meet.)"

Location Map



Site Pictures 301 N Bronson

Standing at the approximate location of the tower looking towards the road.

Standing at the edge of the road looking towards the tower site.



Standing along the south side of the proposed site looking north.

