



**ZONING BOARD OF ADJUSTMENTS
AGENDA**

**Tuesday, March 17, 2020 - 4:00 PM
Council Chambers, 2nd Floor, City Hall
209 Pearl Street**

- 1. CALL TO ORDER**
- 2. ROLL CALL**
- 3. PLEDGE OF ALLEGIANCE**
- 4. ADOPTION OF AGENDA**
- 5. APPROVAL OF MINUTES**
- 6. PROOF OF PUBLICATION/POSTING**
- 7. REVIEW OF MEETING PROCEDURES**
- 8. PUBLIC HEARINGS**

A. CASE #CU-20-002

Public hearing on the request of TDJ Holdings to reconsider a conditional use permit that allows a 'greenhouse, commercial' in an A-2/Parks, Estates, and Agricultural District on property legally described as the being the NW ¼ SE ¼, excluding the south 10.01 acres, all in Section 10-74-44, City of Council Bluffs, Pottawattamie County, Iowa. Location: Directly north of 2802 Twin City Drive

B. CASE #CU-20-004

Public hearing on the request of Omaha Central Telephone Company d/b/a Verizon Wireless, represented by Grady Wahlquist, for a conditional use permit to allow a 142 foot-tall communication tower in a C-2/Commercial District on property legally described Lots 139-145, Belmont Addition. Location: Northeast corner of 1520 Avenue 'M'.

9. OTHER BUSINESS

- A. 2019 Zoning Board of Adjustment Annual Report**
- B. Election of Officers**

10. ADJOURNMENT

Any questions or concerns regarding this agenda and/or requests for special accommodations at this meeting should be directed to the Community Development Department at (712) 328-4629 or email at cgibbons@councilbluffs-ia.gov.

Zoning Board of Adjustment Communication

Department: Community
Development

Case/Project No.: CU-20-002

CASE #CU-20-002

Council Action: 3/17/2020

Submitted by: Haley Weber, Zoning
Enforcement Officer

Description

Public hearing on the request of TDJ Holdings to reconsider a conditional use permit that allows a 'greenhouse, commercial' in an A-2/Parks, Estates, and Agricultural District on property legally described as the being the NW ¼ SE ¼, excluding the south 10.01 acres, all in Section 10-74-44, City of Council Bluffs, Pottawattamie County, Iowa. Location: Directly north of 2802 Twin City Drive

Background/Discussion

See attachments.

Recommendation

ATTACHMENTS:

Description

Type

Upload Date

Staff Report & Attachments

Other

3/12/2020

TO: Zoning Board of Adjustment
FROM: Community Development Department
DATE: March 17, 2020
RE: **Re-opening of CASE #CU-20-002**
REQUEST: A conditional use permit to allow a ‘greenhouse, commercial’ in an A-2/Parks, Estates and Agricultural District

APPLICABLE

CODE SECTIONS: §15.02.020 – Zoning Board of Adjustment
The Zoning Board of shall have the following powers:
b. To make final decisions on applications for conditional uses.

§15.05.030 – Conditional Uses in a A-2/Parks, Estates and Agricultural District
J. Greenhouse, commercial

LEGAL

DESCRIPTION: The NW ¼ of the SE ¼, excluding the south 10.01 acres, Section 10-74-44, City of Council Bluffs, Pottawattamie County, Iowa.

LOCATION: An undeveloped thirty (30) acre parcel located directly north of 2802 Twin City Drive, Council Bluffs, IA 51501

APPLICANT: TDJ Holdings, LLC, Pete Hult, 2802 Twin City Drive, Council Bluffs, IA 51501

OWNERS: Frank R. Krejci, Trust, 1505 N. 203rd Street, Elkhorn, NE 68022

REPRESENTED BY: Heartland Properties Inc., John Jerkovich, 535 W. Broadway, Suite 100, Council Bluffs, IA 51503

****All new information is highlighted in gray in the report below****

BACKGROUND INFORMATION FOR MARCH 17, 2020 MEETING—On January 21, 2020, the Council Bluffs Zoning Board of Adjustment approved the request of TDJ Holdings, LLC to allow a ‘greenhouse, commercial’ in the A-2/Parks, Estates and Agricultural District, subject to ten (10) conditions. At this time, the applicant is requesting to have condition #10 removed. Condition #10 was included to address noise concerns from surrounding property owners and states:

“10. No trucks shall idle on the subject property between the hours of 10:00 PM and 6:00 AM.”

The noise level on the subject property is subject to the existing Council Bluffs Municipal Code Section 4.50.080, *Sound Levels By Receiving Land Use*, which regulates noise levels within the City, and thus, the applicant is requesting that condition #10 be removed. Section 4.50.080 is enforced by the City's PAR officers and sanitarians and its regulations are outside the purview of the Zoning Board of Adjustment. Section 4.50.080 is included with this report as Attachment 'E' for reference.

BACKGROUND INFORMATION – The Community Development Department has received an application from TDJ Holdings, LLC, represented by John Jerkovich, for a conditional use permit to allow a 'greenhouse, commercial' in an A-2/Parks, Estates and Agricultural District, on property legally described above.

On November 19, 2019, the Council Bluffs Zoning Board of Adjustment approved a conditional use permit (Case #CU-19-005) to allow Dallas Johnson Greenhouse to operate a 'greenhouse, commercial' in the A-2/Parks, Estates and Agricultural District to the immediate south of the subject property, subject to six (6) conditions. At this time, Dallas Johnson Greenhouses is requesting to expand onto the thirty (30) acre parcel located directly north of their existing operation at 2802 Twin City Drive. The subject property is currently under contract to purchase by the applicant, contingent on approval of the present request. The property owner has provided a letter of support, included as Attachment 'D.'

The applicant intends to construct a 396' x 882' (349,272 square foot) open-air greenhouse; a 396' x 756' (299,376 square foot) open-air greenhouse; and a 120' x 396' (47,520 square foot) warehouse on the subject property. Information on the open-air greenhouse structures is included as Attachment 'A.' The submitted site plan shows proposed screening along Richard Downing Avenue to the north and along the southernmost portion of the western property line to supplement the gap in the existing tree line. No specifics on screening material were provided with the application. The applicant is proposing a storm water detention area to be located along the eastern side of the property. The submitted letter of intent states that the proposed greenhouse additions will add a total of 52 employees to Dallas Johnson Greenhouses' existing operation. The applicant has indicated that these employees will be bussed to and from the site on a daily basis.

As stated in the applicant's letter of intent, all structures, including the open-air greenhouses, significantly exceed the ten (10) percent maximum lot coverage allowed in the A-2 District. As part of their request, the applicant is asking that the open-air greenhouses located on the property be considered green space as opposed to structures in order to comply with the ten (10) percent maximum lot coverage requirement, as was granted by the Council Bluffs Zoning Board of Adjustment for the applicant's previous request in Case #CU-19-005. The applicant's letter of intent is included as Attachment 'B.'

The applicant has included a parking analysis as a basis of which to determine the required parking for the subject property. The submitted parking analysis projects that a minimum of sixty-two (62) off-street parking stalls are needed for the proposed thirty (30) acre greenhouse development, based on the number of employees required to operate the proposed additions. The applicant has proposed that the City approve a total of seventy-eight (78) parking stalls as the minimum amount of off-street parking required for the subject property, which accounts for fluctuation in seasonal

employment numbers. The parking analysis is included on page three (3) of the submitted letter of intent, included as Attachment ‘B.’

CURRENT ZONING AND LAND USE – The subject property is zoned A-2/Parks, Estates and Agricultural District. Parcels to the north, east and south are also zoned A-2/Parks, Estates and Agricultural District. Adjacent parcels to the west are zoned R-1/Single-Family Residential District. A location/zoning map is included as Attachment ‘C.’

On November 19, 2019 the Council Bluffs Zoning Board of Adjustment approved a conditional use permit to allow the applicant to operate a ‘greenhouse, commercial’ in the A-2/Parks, Estates and Agricultural District at 2802 Twin City Drive, located immediately south of the subject property. As of the date of this report, the greenhouse addition at 2802 Twin City Drive has not yet been constructed.

Existing land uses in the general vicinity include the Council Bluffs Recreation Complex across Richard Downing Avenue to the north; an undeveloped agricultural property to the east; the applicant’s existing commercial greenhouse facility (Dallas Johnson Greenhouses) to the south; and a single-family residential neighborhood to the west. The future land use map of the Bluffs Tomorrow: 2030 Comprehensive Plan designates the subject property as ‘High Density Residential.’

The following attachments are included with the case staff report:

- Attachment A: Information on Open-Air Greenhouse Structures
- Attachment B: Letter of Intent
- Attachment C: Location/Zoning Map
- Attachment D: Letter of Support from Property Owner
- Attachment E: Section 4.50.080, *Sound Levels By Receiving Land Use*

The following photographs show the existing condition of the subject property and surrounding area.

Exhibit A: Aerial view of the subject property

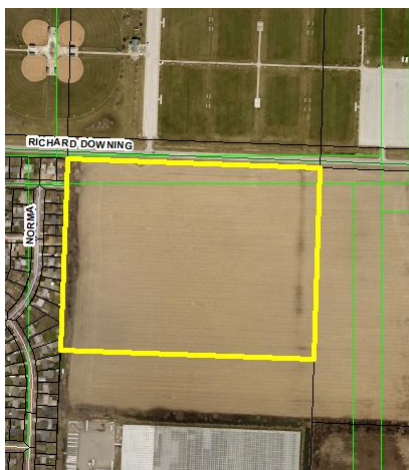


Exhibit B: Looking north at the western property line



Exhibit C: Looking east at southern property line, adjacent to greenhouse additions of Case #CU-19-005 to the south



Exhibit D: Looking northeast at the subject property



Exhibit E: Gap in existing tree line along western property line



Exhibit F: Looking east at existing tree-line screening from 35th Avenue



Exhibit G: Looking east at existing tree line along western property line, behind adjacent houses on Norma Street



Exhibit H: Looking south at existing tree line along western property line from Richard Downing Avenue



CITY DEPARTMENTS AND UTILITIES FOR MARCH 17, 2020 MEETING – All city departments and local utility providers were notified of the re-opening of the conditional use permit request. No comments were received.

CITY DEPARTMENTS AND UTILITIES – All city departments and local utility providers were notified of the proposed conditional use permit request. The following comments were received:

Cox Communications stated that they have no issues with the proposed request.

MidAmerican Energy stated that they have no objections to the proposed request and noted that the developer should contact MidAmerican Energy to directly identify costs associated with relocating or extending electric distribution facilities to serve the proposed development.

Council Bluffs Fire Department stated that they have no comments in regards to the proposed request.

Council Bluffs Public Works Department provided the following comments:

1. Stormwater management will be required for both quantity and quality.
2. The ditch section along Richard Downing Avenue shall have the drainage path maintained at all times.
3. The driveway connection to Richard Downing Avenue shall be constructed to City standards.

Council Bluffs Community Development Department:

1. ‘Greenhouse, commercial’ is defined in Section 15.03.312, Definitions, ‘Greenhouse or Hoop House, Commercial’ of the Council Bluffs Zoning Ordinance as “an establishment engaged in the propagation and growth of plant material for gardening, landscaping and/or food production purposes, intended for wholesale or retail sale.” The proposed commercial greenhouse use falls under this definition.
2. While the proposed commercial greenhouse is industrial in scale, the use is similar in intensity to that of an agricultural field and, therefore, is an appropriate use to be located adjacent to a residential development, provided that all screening requirements discussed in the comments below are met.
3. The Bluffs Tomorrow: 2030 Comprehensive Plan designates the property as ‘High Density Residential.’ The plan defines “High Density Residential” as areas that include “*a series of multi-family structures built as part of the same development. The structures are often arranged around an internal street network or a central courtyard or open space. These developments are often adjacent to neighborhoods, but tend to have their own character.*” The proposed ‘greenhouse, commercial’ use does not align with the ‘High-Density Residential’ designation as there is no residential component of the request.
4. The subject property is zoned A-2/Parks, Estates and Agricultural District and is allowed a maximum ten (10) percent lot coverage per Section 15.05.050, *Site Development Regulations*, of the Municipal Code (Zoning Ordinance). The proposed additional 696,168 square foot greenhouse and warehouse development would put the property at 53% lot coverage. As a part of their request, the applicant is asking that the open-air greenhouses located on the property be considered green space as opposed to structures in order to comply with the maximum ten (10) percent lot coverage requirement of the A-2 District. Eliminating the open-air greenhouses from the lot coverage calculation would put the property at four (4) percent lot coverage, and would therefore meet the lot coverage requirements of the district.

The Community Development Department is supportive of considering all open-air greenhouses on the subject property as open space rather than structures. The open-air greenhouses function as agricultural fields, which have historically been considered open-space. These open-air greenhouses are lightweight, open structures with clear polycarbonate walls and ceilings. Portions of the walls and ceilings of the greenhouses are usually left open during the warmer months of the year, which differentiates these structures from a typical building. This interpretation of the open-air greenhouses as open-space is only applicable from a zoning standpoint. All structures on the property, including all open-air greenhouses, shall meet all applicable building and fire codes. It is important to note that the applicant is not requesting relief for all structures on the property; the proposed warehousing facility will still count towards the total lot coverage. The applicant is requesting this interpretation of the open-air greenhouses to account for the unique nature of the structures and to remain consistent with their previous request for their existing operation (Case #CU-19-005) adjacent to the subject property.

5. The proposed warehouse structure shall comply with all A-2 district site development regulations listed in Section 15.05.050, *Site Development Regulations*, of the Council Bluffs Municipal Code (Zoning Ordinance).
6. The submitted site plan shows utilization of the existing tree line along the western property line as screening. Additional screening is proposed to supplement the lack of tree line along the southernmost portion of the western property line and along Richard Downing Avenue. The applicant did not provide specific information on screening type for the supplemental screening. The Community Development Department recommends that screening be installed as follows:
 - a. The entire length of the existing vegetative buffer along the western property shall maintain 50 percent opaqueness at all times, which shall be consistent with the standards stated in Section 15.24.040(D), *Required Fencing*, of the Council Bluffs Municipal Code (Zoning Ordinance). In areas where the buffer is lacking, it shall be enhanced to achieve the above mentioned level of opaqueness.
 - b. The proposed additional screening along the southernmost portion of the western property line shall be provided in accordance with Section 15.24.040, *Fence regulations*. Section 15.24.040 provides four (4) fencing options, one (1) of which is a ‘vegetation fence.’ If the applicant chooses to install a ‘vegetation fence,’ the following standards shall apply:
 - i. A minimum of one (1) tall, evergreen tree shall be planted every twenty (20) feet, on center, along the southern 140 feet of the western property line for a total of seven (7) trees;
 - ii. Each tree shall reach a minimum of six (6) feet in height within three (3) years of planting; and
 - iii. Each tree shall have a minimum mature height of twelve (12) feet.
 - c. A minimum of one (1) tall, evergreen tree shall be planted every twenty (20) feet, on center, along the northern property line for a total of sixty (60) trees to serve as screening along Richard Downing Avenue. Each tree shall reach a minimum of six

(6) feet in height within three (3) years of planting and shall have a maximum mature height of twelve (12) feet.

A plan identifying all landscape plantings and screening shall be submitted to the Community Development Department for review prior to installation. The required landscape plantings and screening shall be installed prior to issuance of a Certificate of Occupancy.

7. The required parking for the proposed greenhouses and warehouse typically is based on the parking standards listed for “*wholesale and distribution*” in Section 15.23.060, *Parking Spaces Required*. Per Section 15.23.060, “*wholesale and distribution*” uses with “*25,000 square feet or more*” requires “*5 spaces plus 1 for each additional 5,000 square feet above 25,000.*” Based on this calculation, the applicant’s proposed warehouse and greenhouses would require 139 parking spaces.

The applicant has submitted a parking analysis for the City to consider when identifying the number of required parking spaces for the property. The submitted analysis states that the site needs a minimum of 78 parking stalls to operate successfully based on regular and seasonal employment levels. This would be a 56 percent reduction in the amount of off-street parking required under Section 15.23.060, *Parking spaces required*. The Community Development Department is supportive of utilizing the submitted parking analysis as a basis of which to determine the minimum required parking for the site. Dallas Johnson Greenhouses is strictly a wholesale business and does not sell directly to the public. Therefore, the applicant’s primary need for parking is based upon employee numbers. The applicant has indicated that the employees staffing the proposed additions will be bussed to and from the site on a daily basis, further reducing the need for on-site parking. Additionally, the City’s current Zoning Ordinance is deficient in regards to providing a parking calculation for advanced manufacturing uses, such as this one, whose operations occupy significant amounts of space, but require little human labor.

The proposed 78 parking stalls includes the ten (10) spaces required for the proposed warehouse based on the Municipal Code’s (Zoning Ordinance) existing parking standards. Staff feels that the remaining 68 spaces provide adequate parking for the use based on the factors discussed above. Furthermore, the submitted site plan shows hard-surfaced paved areas that will allow for overflow parking if needed. All parking spaces shall be provided in accordance with the standards listed in Section 15.23, *Off-Street Parking, Loading and Unloading*.

8. All off-street parking areas, drive aisles, and circulation routes shall be hard-surface paved in accordance with the standards listed in Section 15.23, *Off-Street Parking, Loading and Unloading*, of the Council Bluffs Municipal Code (Zoning Ordinance).
9. Any future expansion shall require approval from the Zoning Board of Adjustment, as it would be considered a modification to their conditional use permit.

NEIGHBORHOOD RESPONSE FOR MARCH 17, 2020 MEETING – All property owners within 200 feet were re-notified of the re-opening of the conditional use permit request. The following comments were received:

Sharon McMullen, 3502 Norma Street—Ms. McMullen provided the following questions regarding the noise level of the trucks:

- What will the noise level be if more than one truck is running?
- If the trucks need to be running at night, why don't they move them to another location to run?

Susan Vesper, 3601 Norma Street—Ms. Vesper inquired about meeting procedures and stated that she intends to provide a petition signed by neighborhood residents in opposition to the request.

Bernie Colpitts, 3807 Ramelle Drive—Mr. Colpitts called and inquired about meeting procedures.

NEIGHBORHOOD RESPONSE – All property owners within 200 feet were notified of the conditional use permit request. The following comments were received:

Donna Fox, 2706 35th Avenue—Ms. Fox inquired about the location of the proposed parking lot on the subject property and expressed concern regarding how additional semi-truck traffic on site might affect the adjacent residential neighborhood.

Mike and Linda Hoel, 3607 Norma Street—Mr. and Mrs. Hoel provided points of concern regarding the proposal, listed below. The Community Development Department's responses to each point of concern are provided in italics:

1. There is a city noise ordinance which states noise is not to cross property lines. How is this going to be enforced when semis will be sitting there running at all hours? *Council Bluffs Municipal Code Section 4.50.080, Sound Levels By Receiving Land Use, regulates noise levels within the City. This chapter is enforced by the City's Police Area Representative (PAR) officers. Any complaint regarding noise levels within the City should be directed towards the designated PAR officer for the area. Additionally, the Community Development Department's recommended screening requirements aim to address both the aesthetic and noise concerns of the neighboring residential properties.*
2. Where is the run off of water and snow going to go from their parking lots...into our backyards??? We have no storm sewers anywhere in our area (because the City stopped that project when it got to Renner Drive 20 some years ago!) *The applicant's submitted site plan shows dedicated areas on the property for storm water detention. Additionally, the proposed development on the subject property shall conform to all stormwater management quality and quantity requirements of the Council Bluffs Public Works Department as a condition of approval of their request.*
3. We do not need increased semi traffic in the area. There is too much already! With the sports complex directly to the north of the proposed area, just think about the traffic congestion every weekend when there are ballgames. This will be extremely dangerous! *The request was routed to all City Departments. Staff received no comments of concern from the Council Bluffs Public Works or Council Bluffs Police Departments regarding increased truck traffic. Staff will monitor the site for compliance with their conditional use permit to ensure that the operation stays in harmony with the surrounding neighborhood.*

4. Our property values will definitely decrease! We have lived here almost 37 years, and are too old now to relocate. Our taxes increase every year, with no increase in City services, such as storm sewers, etc. Are we going to be compensated in some way for the loss in value of our properties? *The City of Council Bluffs is not involved in matters of property assessment. All questions related to property assessment may be directed to the Pottawattamie County Assessor's Office.*
5. We will no longer be able to enjoy relaxing in our backyard! This will decrease our quality of life as we know it. Would you like to sit in your backyard and listen to semis running, or see workers laying in the grass staring at you? I think not! This is supposed to be a residential area! *The Community Development's recommended screening requirements will provide a physical barrier between the backyards of neighboring residential properties and the subject property.*
6. Will the greenhouse be required to put up a 12 foot privacy fence (not chain link) or a sound barrier to protect the quality of life for the residents who live here? *The City's screening regulations do not require twelve foot privacy fencing. Per Section 15.24.040(D), Required Fences, "A fence shall be required where any conforming commercial or industrial use abuts a residential district. The fence shall be provided at the abutting side and rear property lines. A fence shall also be required for any open storage area in an industrial district which blocks views of all storage area at or beyond the property line. The fence shall be provided by one of the following methods:*
 - a. A wood and/or masonry fence, at least fifty (50) percent opaque, six feet in height;*
 - b. A vegetation fence capable of providing a substantially opaque barrier and attaining a height of six feet within three years of planting;*
 - c. A landscaped earth berm with a maximum slope of three to one vertical/horizontal, no more than six feet above the existing grade of the property line separating the zoning districts; or*
 - d. Any combination of the described methods that achieves a cumulative height of six feet."*

These screening requirements are included in the Community Development Department's recommendation in an effort to protect the quality of life of the adjacent residential properties.

Sharon McMullen, 3502 Norma Street, provided comments in regards to the proposed request, listed below. The Community Development Department's responses to each point of concern are listed in italics:

1. This is not a commercial district, only agricultural, is this going to be rezoned? *A rezoning is not necessary for the proposed use. The property is zoned A-2/Parks, Estates and Agricultural District. Per Section 15.05.030, Conditional Uses, a "greenhouse, commercial" is considered a conditional use in the A-2 District and is allowed with an approved conditional use permit.*
2. Parking of employees on neighborhood streets, causing excessive traffic.

The applicant's submitted site plan and parking analysis shows that adequate parking shall be provided on-site for the proposed development. Additionally, the applicant has indicated that the employees staffing the proposed additions will be bussed to and from the site on a daily basis, further reducing the need for employee parking.

3. Truck traffic on Richard Downing Street which currently in need of repair. *The request was routed to all City Departments. Staff received no comments of concern from the Council Bluffs Public Works or Council Bluffs Police Departments regarding increased truck traffic. Staff will monitor the site for compliance with their conditional use permit to ensure that the operation stays in harmony with the surrounding neighborhood.*
4. Motor noise running which is currently heard from existing location in the summer up on 35th Avenue. *Council Bluffs Municipal Code Section 4.50.080, Sound Levels By Receiving Land Use, regulates noise levels within the City. This chapter is enforced by the City's Police Area Representative (PAR) officers. Any complaint regarding noise levels within the City should be directed towards the designated PAR officer for the area. Additionally, the Community Development Department's recommended screening requirements aim to address both the aesthetic and noise concerns of the neighboring residential properties.*
5. Additional traffic on Richard Downing during summer games with children.
See response to Comment #3.
6. Good neighbor support of clean property.
No outdoor storage of equipment or material is proposed with this request. The applicant shall be required to abide by all City codes and regulations for the site.

COMMENTS

§15.02.090 Conditional Uses: The development and execution of the Ordinance (Title 15) is based upon the division of the City into districts. Within each district the use of land and buildings, and the bulk and location of buildings and structures in relation to the land, are substantially uniform. It is recognized, however, that there are specific uses which, because of their unique characteristics, cannot be properly classified in any particular district or districts without consideration, in each case, of the impact of those uses upon neighboring land and of the public need for the particular use at the particular location. Such uses may be either public or private, and are of such an unusual nature that their operation may give rise to unique problems with respect to their impact upon neighboring property or public facilities.

The Zoning Board of Adjustment shall make findings of fact, based upon the evidence presented at the public hearing, with respect to each of the applicable standards in Section 15.02.090.E (Findings of Fact).

The Zoning Board of Adjustment may impose such conditions and restrictions upon the location, construction, design and use of the property benefitted by a conditional use as may be necessary or appropriate to protect the public interest, adjacent property and property values. Failure to maintain such conditions or restrictions as may be imposed shall constitute grounds for revocation of the conditional use. The terms of relief granted, including any conditions or restrictions, shall

be specifically set forth in the concluding statement separate from the findings of fact. No conditional use shall be approved unless the Zoning Board of Adjustment makes findings of fact based directly on the standards and conditions imposed by this section. The findings of fact are presented below in *italics*:

1. *The proposed conditional use will comply with all applicable regulations of this Ordinance, including lot requirements, bulk regulations, use limitations, and all other standards or conditions contained in the provisions authorizing such use.* The subject property is comprised of 29.99 acres of undeveloped land. The applicant intends to construct a 396' x 882' (349,272 square foot) open-air greenhouse; a 396' x 756' (299,376 square foot) open-air greenhouse; and a 120' x 396' warehouse (47,520 square foot) warehouse on the subject property. The proposed structures would place the property at 53% lot coverage, which exceeds the maximum 10% lot coverage allowed in the A-2/Parks, Estates and Agricultural District per Section 15.05.050, *Site Development Regulations*, of the Municipal Code (Zoning Ordinance). As a part of their request, the applicant is asking that the proposed open-air greenhouses be considered green space as opposed to structures to comply with the maximum 10% lot coverage requirement in the A-2 District.

The open-air greenhouses function as agricultural fields, which have historically been considered open-space. These open-air greenhouses are lightweight, open structures with clear polycarbonate walls and ceilings. Portions of the walls and ceilings of the greenhouses are usually left open during the warmer months of the year, which differentiates these structures from a typical building. This interpretation of the open-air greenhouses as open-space is only applicable from a zoning standpoint. All structures on the property, including all open-air greenhouses, shall meet all applicable building and fire codes. It is important to note that the applicant is not requesting relief for all structures on the property; the proposed warehousing facility will still count towards the total lot coverage. The applicant is requesting this interpretation of the open-air greenhouses to account for the unique nature of the structures and to remain consistent with their previous request for their existing operation (Case #CU-19-005) adjacent to the subject property.

The required parking for the proposed greenhouses and warehouses shall be based on the parking standards listed for "*wholesale and distribution*" in Section 15.23.060, *Parking Spaces Required*. Per Section 15.23.060, "*wholesale and distribution*" uses with "*25,000 square feet or more*" requires "*5 spaces plus 1 for each additional 5,000 square feet above 25,000.*" Based on this calculation, the applicant's proposed warehouse and greenhouses would require 139 parking spaces. The submitted parking analysis is a sufficient basis of which to determine the minimum required parking for the site. Dallas Johnson Greenhouses is strictly a wholesale business and does not sell directly to the public. Therefore, the applicant's primary need for parking is based upon employee numbers. The applicant has indicated that the employees staffing the proposed additions will be bussed to and from the site on a daily basis, further reducing the need for on-site parking. Additionally, the City's current Zoning Ordinance is deficient in regards to providing a parking calculation for advanced manufacturing uses, such as this one, whose operations occupy significant amounts of space, but require little human labor.

The proposed 78 parking stalls includes the ten (10) spaces required for the proposed warehouse based on the Municipal Code's (Zoning Ordinance) existing parking standards. Staff feels that the remaining 68 spaces provide adequate parking for the use based on the factors discussed above. Furthermore, the submitted site plan shows hard-surfaced paved areas that will allow for overflow parking if needed. All parking spaces shall be provided in accordance with the standards listed in Section 15.23, *Off-Street Parking, Loading and Unloading*

2. *Adequate utility, drainage, and other necessary facilities or improvements have been or will be provided.* No utility service extensions and/or infrastructure improvements are necessary for a 'greenhouse, commercial' use to occur at this location. The applicant shall comply with all requirements of the Council Bluffs Public Works Department.
3. *Adequate access roads or entrance and exit drives will be designed and built to prevent traffic hazards and to minimize traffic conflicts and congestion in public streets and alleys.* The applicant has proposed an access drive off of Richard Downing Avenue. The proposed drive shall be constructed to meet City standards.
4. *All necessary permits and licenses required for the operation of the conditional use have been obtained, or it clearly states that such permits are obtainable for the proposed conditional use on the subject property.* The applicant shall secure all necessary permits and licenses for the operation of the conditional use and shall comply with all applicable Federal, State, and local codes.
5. *All exterior lighting shall be shaded as necessary to direct the light away from neighboring residential properties.* No exterior lighting is proposed with this request. Any lighting installed at a future date shall comply with the standards stated in Section 15.24.050, *Lighting Controls*.
6. *The location and size of the conditional use, the nature and intensity of the activities, to be conducted in connection with it, the size of the site, and the relationship of the site to adjacent roadways shall be considered to assure the use is in harmony with the appropriate and orderly development of the district and the neighborhood in which it is located.* The subject property is zoned A-2/Parks, Estates, and Agricultural District and the proposed structures exceed the maximum lot coverage requirement for the A-2 district. As a part of their request, the applicant is asking that the proposed open-air greenhouses be considered green space as opposed to structures to comply with the maximum lot coverage requirement. By considering both proposed open-air greenhouses as open-space rather than structures, the property would be at four (4) percent lot coverage, and therefore, would be compliant with the A-2 District lot coverage requirement.

Existing land uses in the general vicinity include the Council Bluffs Recreation Complex across Richard Downing Avenue to the north; an undeveloped agricultural property to the east; the applicant's existing commercial greenhouse facility (Dallas Johnson Greenhouses) to the south; and a single-family residential neighborhood to the west. While

the proposed commercial greenhouse is industrial in scale, the use is similar in intensity to that of an agricultural field and, therefore, is an appropriate use to be located adjacent to a residential development, provided that all screening requirements discussed in the comments are met.

The submitted site plan shows utilization of the existing tree line along the western property line as screening. Additional screening is proposed to supplement the lack of tree line along the southernmost portion of the western property line and along Richard Downing Avenue. The applicant did not provide specific information on screening type for the supplemental screening. Screening shall be installed as follows:

- a. The entire length of the existing vegetative buffer along the western property shall maintain 50 percent opaqueness at all times, which shall be consistent with the standards stated in Section 15.24.040(D), *Required Fencing*, of the Council Bluffs Municipal Code (Zoning Ordinance). In areas where the buffer is lacking, it shall be enhanced to achieve the above mentioned level of opaqueness.
- b. The proposed additional screening along the southernmost portion of the western property line shall be provided in accordance with Section 15.24.040, *Fence regulations*. Section 15.24.040 provides four (4) fencing options, one (1) of which is a 'vegetation fence.' If the applicant chooses to install a 'vegetation fence,' the following standards shall apply:
 - i. A minimum of one (1) tall, evergreen tree shall be planted every twenty (20) feet, on center, along the southern 140 feet of the western property line for a total of seven (7) trees;
 - ii. Each tree shall reach a minimum of six (6) feet in height within three (3) years of planting; and
 - iii. Each tree shall have a minimum mature height of twelve (12) feet.
- c. A minimum of one (1) tall, evergreen tree shall be planted every twenty (20) feet, on center, along the northern property line for a total of sixty (60) trees to serve as screening along Richard Downing Avenue. Each tree shall reach a minimum of six (6) feet in height within three (3) years of planting and shall have a maximum mature height of twelve (12) feet.

A plan identifying all landscape plantings and screening shall be submitted to the Community Development Department for review prior to installation. The required landscape plantings and screening shall be installed prior to issuance of a Certificate of Occupancy.

7. *The location, nature and height of buildings, structures, walls, and fences on the site, and the nature and extent of landscaping and screening on the site shall be designed so that the use will not reasonably hinder or discourage the appropriate development, use, and enjoyment of the adjacent land, buildings and structures.* The proposed greenhouse and warehouse structures shall meet all height and setback requirements of the A-2 District. The submitted site plan shows utilization of the existing tree line along the western property line as screening. Additional screening is proposed to supplement the lack of tree line along the southernmost portion of the western property line and along Richard Downing Avenue. The applicant did not provide specific information on screening type for the supplemental screening. Screening shall be installed as follows:

- a. The entire length of the existing vegetative buffer along the western property shall maintain 50 percent opaqueness at all times, which shall be consistent with the standards stated in Section 15.24.040(D), *Required Fencing*, of the Council Bluffs Municipal Code (Zoning Ordinance). In areas where the buffer is lacking, it shall be enhanced to achieve the above mentioned level of opaqueness.
- b. The proposed additional screening along the southernmost portion of the western property line shall be provided in accordance with Section 15.24.040, *Fence regulations*. Section 15.24.040 provides four (4) fencing options, one (1) of which is a ‘vegetation fence.’ If the applicant chooses to install a ‘vegetation fence,’ the following standards shall apply:
 - i. A minimum of one (1) tall, evergreen tree shall be planted every twenty (20) feet, on center, along the southern 140 feet of the western property line for a total of seven (7) trees;
 - ii. Each tree shall reach a minimum of six (6) feet in height within three (3) years of planting; and
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A plan identifying all landscape plantings and screening shall be submitted to the Community Development Department for review prior to installation. The required landscape plantings and screening shall be installed prior to issuance of a Certificate of Occupancy.

8. *The proposed conditional use will not cause substantial injury to the value of other property in the neighborhood in which it is located and will contribute to and promote the convenience and welfare of the public.* If developed in full compliance with adopted City requirements, the proposed request is not anticipated to have a negative impact on property values for existing or future land uses in the surrounding area.

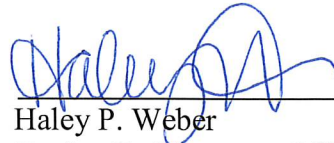
RECOMMENDATION – The Community Development Department recommends approval of the request for a conditional use permit to allow a ‘greenhouse, commercial’ in an A-2/Parks, Estates and Agricultural District on property legally described above, subject to the comments stated above and the following conditions:

1. The applicant shall secure all necessary permits and licenses for the operation of the conditional use and shall comply with all applicable Federal, State and local codes.
2. Any future expansion shall require approval from the Zoning Board of Adjustment, as it would be considered a modification to their conditional use permit.
3. Screening shall be provided along the western property line as discussed in the comments above in accordance with Section 15.24.040(D), *Required Fencing*. The required screening shall be installed prior to issuance of a Certificate of Occupancy.
4. Landscaping shall be installed along the Richard Downing Avenue as discussed in the comments above.

5. A plan identifying all landscaping and screening shall be submitted to the Community Development Department for review prior to installation.
6. The applicant shall provide a minimum of 78 parking spaces in accordance with the standards listed in Section 15.23, *Off-Street Parking, Loading and Unloading* of the Council Bluffs Municipal Code (Zoning Ordinance).
7. All off-street parking areas, drive aisles, and circulation routes shall be hard-surface paved in accordance with the standards listed in Section 15.23, *Off-Street Parking, Loading and Unloading*, of the Council Bluffs Municipal Code (Zoning Ordinance).
8. All open-air greenhouses on the subject property shall be considered open-space from a zoning standpoint; however; all open-air greenhouse structures shall comply with all applicable building and fire codes.
9. The proposed warehouse structure shall comply with all site development regulations listed in Section 15.05.050, *Site Development Regulations*, of the Council Bluffs Municipal Code (Zoning Ordinance).
- ~~10. No trucks shall idle on the subject property between the hours of 10:00 PM and 6:00 AM.~~



Christopher N. Gibbons, AICP
Planning Manager
Community Development Department



Haley P. Weber
Zoning Enforcement Officer
Community Development Department



ATRIUM & DUAL ATRIUM



Optional Side Venting: Exterior Guillotine shown on endwall of Dual Atrium

 **NEXUS**
CORPORATION
LEADERS IN GREENHOUSE SYSTEMS INTEGRATION

How You Can Benefit From The Nexus Atrium & Dual Atrium:

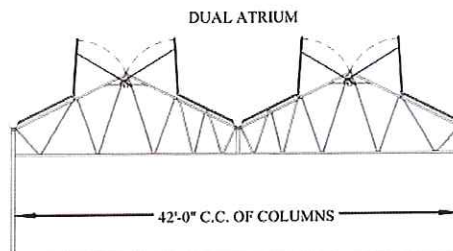
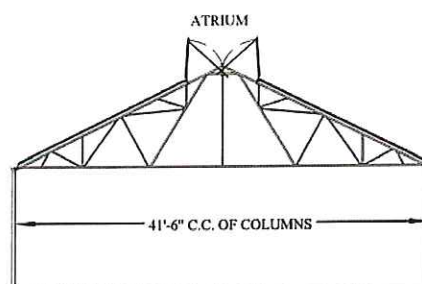
- **Unique ridge vent** that opens outward and upward from near the top of the ridge.
- **Provides natural ventilation** in a system that brings the outdoor environment inside the greenhouse.
- Offers **total versatility for all crops-all stages**.
- **Total growing flexibility** with the patented *Nex-Hood* which allows the roof to partially open during inclement weather and for de-humidification.
- **Less chance of crop loss** in case of sudden inclement weather since the roof closes in less than 3 minutes.
- **Able to vent** with snow in the valley.
- **Fewer obstructions are present** than other open roof style structures leading to **higher light levels**.
- Reduces many government re-entry requirements meaning **faster harvesting, packing & shipping**.
- Growers have experienced **reduced need for chemicals and growth regulators**.
- **Reduces capital and operating costs** by minimizing the need for use of cooling equipment.
- **50% less rack & pinions and 50% less motors** than other open roof style greenhouses, leading to lower initial cost, less maintenance and lower energy consumption.
- **50% less gutters and downspouts** than other open roof style structures leading to lower initial costs.
- Nexus quality design and engineering means that the *Atrium* and *Dual Atrium* are **constructed to meet regional snow and wind load requirements**.
- **Easy to expand** existing range of Nexus structures since it gutter connects to all other style Nexus greenhouses.
- **Covering flexibility** of double poly, polycarbonate or glass depending on your crop needs.
- **Purchasing flexibility**. Lease options available.



Corporate Office:
10983 Leroy Drive, Northglenn, CO 80233
1-800-228-9639
Manufacturing Plants:
Pana, IL, Darlington, SC & Northglenn, CO
www.nexuscorp.com E-mail: answers@nexuscorp.com

Features of the Nexus Atrium & Dual Atrium:

- One piece factory welded trusses
- High Strength Tenzaloy column caps and gutter saddles.
- Standard sizes-Widths:
Atrium: 15', 24', 30', 35' 6", 41' 6"
Dual Atrium: 36', 42'
- Superior Nexus rubber gasketing system.
- Optional rubber seal minimizes ice build-up at the hinge point.
- Optional painted frame is available.



New Side Ventilation Option:

Along with our standard venting options of drop curtains or rack and pinion vents for the sides and ends, Nexus can supply our new EDDG vent. The EDDG vent is a drop down exterior guillotine vent that gives the owner the option of a clear vent opening incremented to the desired dimension. The vent can be covered with single or double wall polycarbonate or single or double polyethylene. Ask your **NEXPERT** about the EDDG vent to give you an "edge" over the traditional vent options.

Relax, It's a Nexus.



CONDITIONAL USE PERMIT STATEMENT
December 20, 2019

To: **Mr. Pete Hult**
Dallas Johnson Greenhouse

From: John E. Jorgensen, PE
HGM Associates Inc.

Subject: 30-Acre Parcel - Conditional Use Permit Application
2802 Twin Cities Drive, Council Bluffs, IA
HGM No. 113919



CONDITIONAL USE PERMIT

Dallas Johnson Greenhouse (DJG) is located at 2802 Twin Cities Drive just north of Veterans Memorial Highway. DJG is a wholesale distribution business and they do not sell to the general public. Dallas Johnson built the first greenhouse on this site in 1991 and have continued to expand the greenhouses and added warehouse/office space over the years. **Today the total site is just over 76 acres and they are considering the purchase of an additional 30-acre parcel between their facilities and Richard Downing Avenue to the north, see Exhibit 1.**

When Dallas Johnson Greenhouse was established at this location in 1991, a greenhouse was considered a principal use in the A-2 Zoning District. In August 1996, the Council Bluffs City Council adopted Ordinance #5285 which removed greenhouses as a principle use. At that point Dallas Johnson Greenhouse became a nonconforming use. Then in November 2018 the Council Bluffs City Council adopted Ordinance #6372 which added "greenhouses, commercial" as a conditional use in the A-2 Zoning District. Subsequently, the Zoning Board of Adjustments granted a Conditional Use Permit to DJG for their existing 76-acres in November 2019.

Dallas Johnson Greenhouse requests a conditional use permit be granted for the 30-acre parcel they currently have under contract to purchase. If a conditional use permit is granted Dallas Johnson Greenhouse will complete the purchase of the 30-acre parcel and develop additional greenhouses as shown on Exhibit 2. A 48,000 square foot warehouse is also proposed on the 30-acre parcel as shown.

LOT COVERAGE

The current City code for A-2 Zoning states that the principal structure cannot exceed 10% of the total lot coverage. In order to comply with the maximum 10% lot coverage for the existing 76-acres, in November 2019 the Zoning Board of Adjustments approved classifying the greenhouses as covered agricultural fields as opposed to buildings.

The proposed greenhouse on the 30-acre parcel will be very similar to the existing greenhouses. The following picture is a typical greenhouse during peak season, which shows wall-to-wall flowers and plants, basically a covered farm field.



Dallas Johnson Greenhouse during peak season

As can be seen from the following photograph, the greenhouses are lightweight open structures with clear polycarbonate walls and ceiling. In addition, the walls and roofs of the greenhouses are typically left open during the warmer months of the year. If additional information is desired, the proposed greenhouse construction plans can be provided. See Exhibit 3 for an elevation view of the proposed greenhouses.



Existing Dallas Johnson Greenhouse from Veterans Memorial Highway

As part of this application it is requested that the proposed greenhouses be considered agricultural fields and be excluded when calculating the lot coverage. The proposed lot coverage is approximately 4% based on the proposed 48,000 square foot warehouse.

OFF-STREET PARKING

The required amount of off-street parking is determined by the current parking standards stated in Section 15.23, Off-Street Parking, Loading and Unloading, of the Council Bluffs Municipal Code (Zoning Ordinance). There is not a specific parking category for Wholesale Greenhouse, but the City indicated that this development is considered Manufacturing, Indoor Warehousing which specifies 1 space per 5,000 square feet. This equates to 153 parking spaces based on the proposed greenhouse/warehouse square footage shown in Exhibit 2.

DJG contends that this parking requirement is more than required by demand, and they completed a parking analysis for their existing facilities in October 2019. Based on City Parking Code a total of 364 off-street parking stalls are needed for their existing facilities. The study concluded that 176 parking stalls provides adequate off-street parking based on actual demand, or approximately 50% of the number based on City Code. The Zoning Board of Adjustments approved a minimum of 176 parking stalls in conjunction with the Conditional Use Permit in November 2019.

Pete Hult (CFO for Dallas Johnson Greenhouse) indicated that the new greenhouses will be automated using robots for the day-to-day greenhouse operations, which reduces the amount of human labor needed. Mr. Hult provided the following employment projection for the full buildout of the greenhouses on the 30-acre parcel:

Greenhouse Only

8 growers/greenhouse supervisors
2 maintenance staff
42 hourly employees
TOTAL = 52 Employees

Indoor Warehousing

47,520 square feet x 1 space/5,000 sf = 10 parking spaces

It is projected that a minimum of 62 off-street parking stalls are needed for the proposed 30-acre greenhouse development. It should be noted that a significant number of existing hourly employees carpool on a daily basis, which will reduce the parking demand. **It is proposed that the calculated 62 parking stalls be increased by 25% for a buffer and to cover seasonal fluctuations in employment, for a total of 78 parking stalls.** This equates to roughly a 50% reduction in the amount of parking based on City code, similar to the existing facility.

SUMMARY

Dallas Johnson Greenhouse requests a Conditional Use Permit be granted for the construction of additional greenhouses on this 30-acre parcel.

In addition, it is requested that the proposed greenhouses be considered agricultural fields and be excluded when calculating the lot coverage. The building lot coverage, excluding the greenhouses, will comply with the maximum 10% coverage.

It is also requested that 78 parking spaces be designated as the minimum amount of off-street parking required for this 30-acre parcel based on the proposed site layout and this parking analysis.



project no. 113919
date DEC.'19
sheet EXHIBIT 1

project 30 ACRE PARCEL
113919
client DALLAS JOHNSON GREENHOUSES
sheet LOCATION MAP

TBJ
drawn
TBJ
designed
JEJ
approved

hgm
ASSOCIATES INC.
640 FIFTH AVENUE COUNCIL BLUFFS, IA
PHONE: 712-323-0530



PROPOSED
GREENHOUSE AREAS



PROPOSED
WAREHOUSE AREAS

project no. 113919

date DEC.'19

sheet EXHIBIT 2

project

30 ACRE PARCEL

113919

client

DALLAS JOHNSON GREENHOUSES

sheet


CONCEPTUAL SITE PLAN


TBJ
drawn
TBJ
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approved

hgm
ASSOCIATES INC.
640 FIFTH AVENUE COUNCIL BLUFFS, IA
PHONE: 712-323-0530

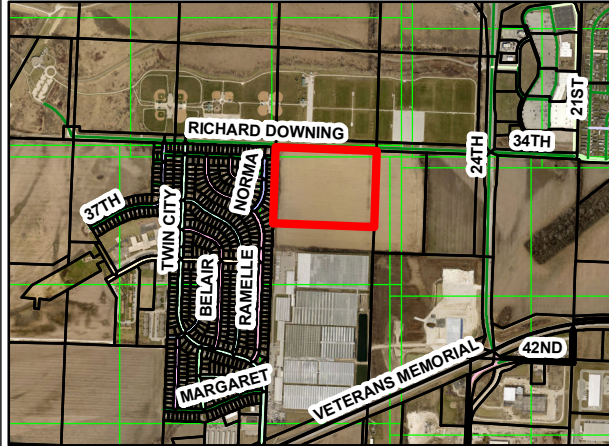
CITY OF COUNCIL BLUFFS - ZONING BOARD OF ADJUSTMENT LOCATION/ZONING MAP CASE # CU-20-002

Map Legend

 Case #CU-20-002 Subject Property

 Parcels

0 265 530
1 inch = 2,500 feet



Note: Subject property is highlighted in red.



Last Amended: 12/26/19

Council Bluffs Community
Development Department
209 Pearl Street
Council Bluffs, IA 51503
Telephone: (712) 328.4629

DISCLAIMER
This map is prepared and compiled from City documents, plans and other public records data. Users of this map are hereby notified that the City expressly denies any and all responsibilities for errors, if any, in the information contained on this map of the nature of the same by the user or anyone else. The user should verify the accuracy of information/data contained on this map before using it. The City assumes no legal responsibility for the information contained on this map.



Subject Property for proposed
"Greenhouse, Commercial" Use

LETTER OF SUPPORT

January 14, 2020

Mr. Christopher Gibbons
City Hall
209 Pearl Street
Council Bluffs, IA

Re: Zoning Board of Adjustment Hearing, January 21, 2020
29.99 Acres Richard Downing Blvd

Dear Mr. Gibbons:

Please accept this letter in support of the conditional use permit that has been submitted to the Zoning Board of Adjustment.

I am majority owner of the subject property. I am also majority owner of the abutting 20 acres to the east, which is currently being offered for sale. Being a developer myself, and having developed a multitude of properties, TDJ Holdings, LLC request for greenhouse/wholesale use will not affect for future development of the abutting properties to the east.

In conclusion, I fully support the efforts of TDJ Holdings, LLC as they seek approval of a conditional use permit for their greenhouse/wholesale use.

Sincerely,

A handwritten signature in black ink, appearing to read "Frank Krejci". The signature is stylized with a cursive script.

Frank Krejci
Owner

4.50.080 Sound Levels By Receiving Land Use

8.1 Maximum Permissible Sound Levels by Receiving Land Use. It is unlawful for any person to operate or cause to be operated on private property any source of sound in such a manner as to create a sound level which exceeds the limits set forth for the receiving land use category in Table 1 as follows, unless otherwise provided in this chapter, when measured at or within the property boundary of the receiving land use; provided, however, that no measurement of sound levels shall be made less than fifteen (15) meters (fifty (50) feet), or equivalent (CBMC 4.50.110, Noise measurement procedures), from such source of sound.

Table 1
Sound Levels by Receiving Land Use

Sound Emitting Land-Use Category	Sound Receiving Land-Use Category	Sound Level Time of Day	Sound Level Limit, dBA Leq(1)
Residential	Residential	Daytime	55
		Nighttime	45
Business/Commercial	Residential	Daytime	60
		Nighttime	50
Industrial	Residential	Daytime	65
		Nighttime	55
Residential	Business/Commercial	Anytime	60
Business/Commercial	Business/Commercial	Anytime	65
Industrial	Business/Commercial	Anytime	65
Industrial	Industrial	Anytime	75

8.2 Correction for Character of Sound. For any source of sound which emits a pure tone or impulsive sound, the L eq (1) sound level limits set forth in paragraph 8.1 of this section, shall be reduced by five dBA for any pure tone or impulsive sound. Special instrumentation and measurement techniques are required if a pure tone or impulsive sound is less than five dBA above the background noise level.

8.3 Exemptions. The provisions of this section shall not apply to:

- A. Any of the paragraphs in CBMC 4.50.060, except as noted in CBMC 4.50.060;
- B. Interstate railway locomotives and cars;
- C. Undeveloped land, farm land and nonstationary farming equipment and all normal agricultural activities; and
- D. Notwithstanding Table 1 above, an electric utility generation facility, as defined in CBMC 15.03, may generate a decibel reading not to exceed sixty-five (65) dBA at any time (day or night) to a receiving land use that is residential. The level of sound for an electric utility generation facility shall be measured by using an L90 measurement technique, and for a one-hour average. Sound from sources other than the electric utility generation facility, including, but not limited to, streets, highways, seasonal insects and other uses, shall not be counted against the ordinance limits.

Zoning Board of Adjustment Communication

Department: Community

Development

Case/Project No.: CU-20-004

CASE #CU-20-004

Council Action: 3/17/2020

Submitted by: Christopher N.

Gibbons, AICP, Planning Manager

Description

Public hearing on the request of Omaha Central Telephone Company d/b/a Verizon Wireless, represented by Grady Wahlquist, for a conditional use permit to allow a 142 foot-tall communication tower in a C-2/Commercial District on property legally described Lots 139-145, Belmont Addition. Location: Northeast corner of 1520 Avenue 'M'.

Background/Discussion

See attachments.

Recommendation

ATTACHMENTS:

Description

Type

Upload Date

Staff Report & Attachments

Other

3/12/2020

TO: Zoning Board of Adjustment
FROM: Community Development Department
DATE: March 17, 2020

RE: **CASE #CU-20-004**
REQUEST: A conditional use permit to allow construction of a 142' tall communication tower within a 50' x 50' lease along with related equipment and accessory shelters in a C-2/Commercial District.

APPLICABLE
CODE SECTION: §15.31.050 Communication Towers – Standards and Conditions for Approval

LOCATION: Northeast corner of 1520 Avenue 'M'.

LEGAL
DESCRIPTION: Lots 139 through 145, Belmont Addition

OWNER: League of Human Dignity Inc.
1520 Avenue M, Council Bluffs, IA 51501

APPLICANT: Omaha Central Telephone Company, d/b/a Verizon Wireless
10801 Bush Lake Road, Bloomington, MN 55438

REPRESENTATIVE: Grady L. Wahlquist
2018 East Mimosa, Springfield, MO 65804

BACKGROUND – The Community Development Department has received an application from Omaha Central Telephone Company d/b/a Verizon Wireless requesting a conditional use permit for a communication tower at 1520 Avenue 'M' (see Attachment A). The proposed tower measures 142 feet tall to the top of the lighting rod and will be located in the northeast corner of the property commonly known as the League of Human Dignity. The tower will be centrally located within a 50' x 50' lease area and will be accessible from the abutting alley to the north. The lease area will be enclosed by a six foot-tall chain-link fence with barbwire strands on top and will contain a diesel generator, equipment cabinets, and other ancillary structures to support the tower's operational needs (see Attachment B). The tower base and associated equipment will be screened from public view by a combination of White Fir evergreen trees planted every 15 feet on-center and a chain-link fence with vinyl inserts that are color-coated to match the surrounding area.

CURRENT ZONING AND LAND USE - The subject property is zoned C-2/Commercial District. Surrounding zoning includes C-2 District to the north, south, and west along with I-2/General Industrial District and R-3/Low Density Multi-family Residential District to the east (see Attachment C). Per Section 15.31.020, *Applicability* of the Council Bluffs Municipal Code (Zoning Ordinance) "communication towers exceeding the maximum height allowed in the underlying zoning district to a maximum height of 200 feet are permitted in all zoning districts, subject to approval of a conditional use permit as set forth in Chapter 15.02 and the additional minimum standards in this Chapter".

The future land use plan of the Bluffs Tomorrow: 2030 Plan designates the subject property as 'Low-Density Residential'. Existing land uses in the area includes: Hoy-Kulongoski Funeral Home and Crematory to the south; an office and contractor shop to the north; a single-family residential dwelling

and North 16th Street to the west; along with New Visions Homeless Shelter, single-family residential dwellings, Union Pacific railroad, and Ganeeden Salvage to the east.

Section 15.31.050, Communication Towers, Standards and conditions for approval. Conditional use permits for the purpose of installing communication towers shall be evaluated based on the following information.

- 1. Compliance with Chapter 15.02 “Administration and Enforcement” authorizing the Zoning Board of Adjustment to make final decisions on applications for conditional uses and the process as described in that Chapter. (Ord. 6053, Sec. 3, 3/8/10)**
- 2. The type and purpose of the tower.** The proposed tower is comprised of a 142’ tall monopole that will be used to provide wireless telecommunication services (Verizon Wireless) to the public. The tower and lease area also have extra capacity to support additional carrier antennas, if needed.
- 3. The height of the proposed tower as measured from the natural undisturbed ground surface below the center of the base of the tower to the tip of the highest antenna or piece of equipment attached.** The proposed tower is 137 feet tall with a 5-foot tall lightning rod giving it an overall height of 142 feet from grade to the height point of the tower structure.
- 4. Minimum setbacks from all adjoining property equal to:**
 - a. One hundred percent of the tower height from the base of the tower to any adjoining residential dwelling, whether located upon residentially zoned property or not.** There are four residential properties located within the general vicinity of the request that are addressed as 1522 Avenue ‘M’ (single-family dwelling), 1433 Avenue ‘M’ (single-family dwelling), 1416 Avenue ‘M’ (single-family dwelling, and 1435 North 15th Street (homeless shelter). Based on measurements taken from Pottawattamie County GIS none of the aforementioned residential dwellings are located at or within 142 feet of the base of the communication tower (see Attachment D).
 - b. Twenty (20) feet from the base of the tower to any adjoining lot which is not zoned for residential use.** The site plan provided shows the proposed tower will be located in the center of a 50’ x 50’ lease area which is greater than 20’ from any adjoining nonresidential property line.
 - c. The Zoning Board of Adjustment may reduce the required setbacks on a finding that such reduction will not adversely effect adjacent properties and is consistent with the purpose and intent of this Chapter.** Reduced tower setbacks have not been requested by the applicant.
- 5. Operational characteristics of the facility including maintenance routines, employee access and security requirements.** This request is for an unmanned communication tower facility. The tower will be located within a 50’ x 50’ lease area of which 42’ x 42’ area will be secured by a 6-foot tall chain-link fence with three strands of barbed wire and vinyl covered insert slats. The proposed fence type is allowed in a C-2 District; however, the fence height exceeds the maximum four feet allowed within a C-2 District street side yard setback (10 feet). The applicant has expressed a need to allow a taller fence height around their tower compound area in order to provide adequate site security for the tower and their electronic equipment that supports the tower’s functions. The Community Development Department agrees with the applicant’s rationale for allowing a taller fence within the required 10 foot street- side yard setback and recommends that the Zoning Board of Adjustment allow

a six-foot tall chain link fence around the 42' x 42' compound area, as per the submitted tower construction plans.

The tower compound area will be accessed via a 12 foot-wide asphalt paved driveway from the abutting alley to the north. The asphalt thickness is not stated on the plans but shall comply with the applicable standards stated in Chapter 15.23.030 Off-Street Parking and Loading.

6. Landscaping and other buffers proposed to screen the base of the tower from residential or commercial uses, streets, parks or other public property. The submitted plans show the tower base and associated equipment will be screened from public view by a combination of White Fir evergreen trees planted every 15 feet on-center and a chain-link fence with vinyl inserts that are color-coated to match the surrounding area.

7. Other proposed measures to minimize the adverse visual effects on adjacent land including lighting, non-interference with radio and television reception or other mitigating factors. One exterior light will be provided to illuminate the on-ground radio equipment will provided at this tower site. The location, size, and height of the exterior light are not shown on the submitted plans. All exterior lighting shall comply with the standards stated in Section 15.24.050, Lighting Controls, of the Municipal Code (Zoning Ordinance).

An email addressed to the Community Development Department dated February 25, 2020, from Robert Andersen, Director of Communications, Pottawattamie County Sheriff's Office, stated the proposed communication tower will not cause any interference or problems with the County's emergency communication system(s).

8. Proximity to other towers and documentation of incompatibility with those towers, attempts to co-locate and/or accommodate other providers on the proposed tower. Matthew Smith, Verizon Wireless RF Engineering, provided a letter explaining the need for the new tower on the subject property (see Attachment E). The nearest communication tower is located at Woodrow Wilson Junior High School's Gale Wickersham Athletic Complex and is approximately 1,500 feet from the proposed tower location. Per Mr. Smith's letter the existing tower currently supports two other carriers (US Cellular and T-Mobile) and the space available on the tower for Verizon to co-locate upon it is at or below their desired height threshold for providing wireless communication coverage. His letter also states that the proposed tower is needed to meet Verizon's coverage and network objectives for areas along North 16th Street from Walmart to Broadway and to strengthen Verizon's connecting coverage to other existing sites in the areas of 1st and Pearl Street, 28th and Broadway, and the Lewis and Clark Monument.

9. Towers requiring painting or lighting to meet Federal Aviation Administration requirements are permitted in any zoning district. The applicant provided documentation from the Federal Aviation Administration (FAA) that the proposed tower will not be a hazard to air navigation and will not require obstruction lighting (see Attachment F).

CITY DEPARTMENTS AND UTILITIES – All City departments and local utility providers were notified of the proposed conditional use permit request. The following comments were received:

- Council Bluffs Fire Department stated they have no comments for the proposed conditional use permit request.
- Council Bluffs Water Works stated they have no comments for the proposed conditional use permit request.

- Cox Communication stated they have no issues for the proposed conditional use permit request.

NEIGHBORHOOD RESPONSE – All property owners within 200 feet of the subject property were notified of the proposed conditional use permit request. The Community Development Department has not received any responses regarding this request as of the date of this report.

COMMENTS

§15.02.090 Conditional Uses: The development and execution of the Ordinance (Title 15) is based upon the division of the City into districts. Within each district the use of land and buildings, and the bulk and location of buildings and structures in relation to the land, are substantially uniform. It is recognized, however, that there are specific uses which, because of their unique characteristics, cannot be properly classified in any particular district or districts without consideration, in each case, of the impact of those uses upon neighboring land and of the public need for the particular use at the particular location. Such uses may be either public or private, and are of such an unusual nature that their operation may give rise to unique problems with respect to their impact upon neighboring property or public facilities.

The Zoning Board of Adjustment shall make findings of fact, based upon the evidence presented at the public hearing, with respect to each of the applicable standards in Section 15.02.090.E (Findings of Fact).

The Zoning Board of Adjustment may impose such conditions and restrictions upon the location, construction, design and use of the property benefited by a conditional use as may be necessary or appropriate to protect the public interest, adjacent property and property values. Failure to maintain such conditions or restrictions as may be imposed shall constitute grounds for revocation of the conditional use. The terms of relief granted, including any conditions or restrictions, shall be specifically set forth in the concluding statement separate from the findings of fact. No conditional use shall be approved unless the Zoning Board of Adjustment makes findings of fact based directly on the standards and conditions imposed by this section. The findings of fact are presented below *in italics*:

1. **The proposed conditional use will comply with all applicable regulations of this Ordinance, including lot requirements, bulk regulations, use limitations and all other standards or conditions contained in the provisions authorizing such use.** *The proposed tower will be located within a 50' x 50' lease area located in the northeast corner of property owned by League of Human Dignity. Based on the site plan submitted, the proposed tower will comply with the requirements stated in Section 15.31.050 Communication Towers, 'Standards and conditions for approval' of the Municipal Code (Zoning Ordinance) regarding the proposed tower.*
2. **Adequate utility, drainage and other necessary facilities or improvements have been or will be provided.** *This is an unmanned facility therefore water and sanitary sewer are not required. The applicant shall comply with any required stormwater regulations for development of the site.*
3. **Adequate access roads or entrance and exit drives will be designed and built to prevent traffic hazards and to minimize traffic conflicts and congestion in public streets and alleys.** *The tower compound area will be accessed via a 12 foot-wide asphalt paved driveway from the abutting alley to the north. The asphalt thickness shall comply with the applicable standards stated in Chapter 15.23.030 Off-Street Parking and Loading, of the Municipal Code (Zoning Ordinance).*
4. **All necessary permits and licenses required for the operation of the conditional use have been obtained, or it clearly appears that such permits are obtainable for the proposed conditional use on the subject property.** *The applicant shall obtain a building permit from the City of Council Bluffs for*

the construction of the proposed tower. Additionally, the tower shall remain in compliance with all applicable Federal, State, and local codes.

5. All exterior lighting shall be shaded as necessary to direct the light away from neighboring residential properties. *One exterior light to illuminate the on-ground radio equipment will be installed at this tower location. The proposed lighting shall comply with the standards stated in Section 15.24.050, Lighting Controls, of the Municipal Code (Zoning Ordinance).*

6. The location and size of the conditional use, the nature and intensity of the activities to be conducted in connection with it, the size of the site, and the relationship of the site to adjacent roadways shall be considered to assure the use is in harmony with the appropriate and orderly development of the district and the neighborhood in which it is located. *This request is for an unmanned communication tower site within a 50' x 50' lease area in the northeast corner of property owned by the League of Human Dignity. Surrounding land uses consist of a combination of residential, commercial, and industrial land uses; however the urban fabric of this area is more commercial in nature due to its close proximity to North 16th Street, which is a north/south commercial corridor that intersects with I-29 and West Broadway. The submitted plans show the 142-foot tall communication tower complies with all of the site development standards (e.g., setbacks from residential/commercial properties, screening, FAA review, paved access, etc.) stated in Section 15.31.050, Communication Towers, Standards and conditions for approval, of the Municipal Code (Zoning Ordinance). Appropriate hard-surfaced access to the lease area and screening around the perimeter of the fenced area will result in an appropriate use of the area.*

7. The location, nature and height of buildings, structures, walls and fences on the site, and the nature and extent of landscaping and screening on the site shall be designed so that the use will not reasonably hinder or discourage the appropriate development, use and enjoyment of the adjacent land, buildings and structures. *The submitted plans show the 142 foot-tall tower and equipment compound are designed to comply with the standards stated in Section 15.31.050, Communication Towers, Standards and conditions for approval, of the Municipal Code (Zoning Ordinance). The applicant proposes to install a six-foot tall chain-link fence with three strands of barbed-wire on-top and vinyl colored inserts that are compatible with the appearance of the surrounding area to safely screen and secure the site from the public. Additionally, the submitted landscape plan shows a four foot-wide landscape buffer around the 42' x 42' equipment compound area will be planted with White Fir evergreen trees every 15 feet on-center to buffer and screen the visual aesthetics of the site from adjacent properties and rights-of-way.*

8. The proposed conditional use will not cause substantial injury to the value of other property in the neighborhood in which it is located and will contribute to and promote the convenience and welfare of the public. *If developed in full compliance with the adopted City requirements, the proposed communication tower is not anticipated to have a negative impact on property values for existing or future land uses in the surrounding area.*

RECOMMENDATION

The Community Development Department recommends approval of the request for a conditional use permit to allow a 142' tall communication tower within a 50' x 50' lease along with related equipment and accessory shelters, in a C-2/Commercial District, on property legally described as Lots 139 through 145, Belmont Addition, subject to the following conditions:

1. All applicable Federal, State and Local codes and laws shall be met, including those not expressly discussed above.
2. The size, location, and access to the communication tower and associated 50' x 50' lease area shall be limited to the area of the subject property legally described on Page 3 of 3, Land, Space and R.O.W. Exhibit of the submitted tower plans.
3. A landscaping plan shall be submitted as part of the building permit review process and said landscaping shall completely screen the base of the tower from public view within three years of planting.
4. A six-foot tall chain link fence with vinyl colored inserts that are compatible with the appearance of the surrounding area shall be installed around the perimeter of the 42' x 42' equipment compound to safely screen and secure the tower site from the public.
5. The proposed access driveway and associated approach shall be paved in accordance with current City standards prior to tower completion.
6. Tower siting shall meet OSHA and the National Electric Safety Code minimum standards for placement in relation to existing power lines. All relocation costs shall be at the owner's expense.
7. All exterior lighting shall comply with the standards stated in Section 15.24.050, Lighting Controls, of the Municipal Code (Zoning Ordinance).
8. Exterior storage is not permitted on the site.



Christopher N. Gibbons, AICP
Planning Manager

List of Attachments:

- Attachment A: Letter of intent from Grady Wahlquist
- Attachment B: Tower plans
- Attachment C: Location and zoning map
- Attachment D: Tower separation distance from residential dwellings
- Attachment E: Verizon Wireless statement
- Attachment F: FAA Determination of No Hazard to Air Navigation letter

February, 4, 2020

City of Council Bluffs, Iowa
209 Pearl Street
Council Bluffs, Iowa 51503

RE: Application – Zoning Board of Adjustments, 1415 N 15TH ST., Council Bluffs, IA – Verizon
142' Monopole

To Whom It May Concern:

This letter is to respond to item #8 of the application.

The communication tower will operate 24 x 7. However, once construction is complete, there will be very minimal activity at the site. There may be occasional maintenance work at the site.

Per FCC requirements, a small sign will be posted with the site information and contact in case of emergency.

FAA does not require lighting on the monopole because the tower does not obstruct flight paths. An outdoor light near the on-ground radio equipment is installed that can be used in the event of maintenance work is required due to an emergency.

Parking is provided at the access gate.

Thank you,

Grady L. Wahlquist, Agent
Pamcorp, LLC



NEW SITE DEVELOPMENT

SITE NAME: OMA PIRATES COVE
LOCATION CODE: 490078
STRUCTURE TYPE: 142' OVERALL STRUCTURE HEIGHT

CERTIFICATION AND SEAL:
I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS
PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND
THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER
THE LAWS OF THE STATE OF IOWA
DATE: 02/03/2020
(SIGNATURE) M.H. CATALINA MARTINEZ
LICENSE NUMBER: 23482
MY LICENSE RENEWAL DATE IS: DEC. 31ST, 2021



PAGES OR SHEETS COVERED BY THIS SEAL:



KGI WIRELESS, INC.
ENGINEERING
805 LAS CIMAS PKWY
BUILDING THREE, SUITE 370
AUSTIN, TX 78746
TEL: 512.345.9595

SITE NAME:
OMA PIRATES COVE

LOCATION CODE:
490078
SITE ADDRESS:
1415 N 15TH ST
COUNCIL BLUFFS, IA 51501

THESE DRAWINGS ARE THE PROPERTY OF
VERIZON WIRELESS. THEY ARE INTENDED FOR
THE EXCLUSIVE USE OF THIS PROJECT ONLY.
ANY RE-USE OF THESE PLANS (DRAWINGS)
WITHOUT THE EXPRESS WRITTEN CONSENT OF
VERIZON WIRELESS IS PROHIBITED.

ISSUED FOR: DATE
CONSTRUCTION REV 0 12/11/2019
SITE SKETCH REV V.2 12/16/2019
CONSTRUCTION REV 1 01/20/2020
CONSTRUCTION REV 2 02/03/2020

REVISION			
NO	DESCRIPTION	BY	DATE
1	TOWER HT	CM	01/15/20
2	UPDATED HEIGHT	SS	02/03/20

SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
T1

ATTACHMENT B

PROJECT SUMMARY	CONTACTS	VICINITY MAP	DRAWINGS INDEX																																																																																	
<p>LATITUDE: 41° 16' 25.58" N LONGITUDE: 95° 51' 57.95" W</p> <p>GROUND ELEVATION: 983.7' AMSL (NAVD88)</p> <p>SITE ADDRESS: 1415 N 15TH ST COUNCIL BLUFFS, IA 51501 POTTAWATTAMIE COUNTY</p> <p>CONSTRUCTION TYPE: UNMANNED TELECOMMUNICATIONS</p> <p>JURISDICTION: CITY OF COUNCIL BLUFFS</p>	<p><u>APPLICANT:</u> VERIZON WIRELESS 10801 BUSH LAKE ROAD BLOOMINGTON, MN 55348 CONTACT: REAL ESTATE</p> <p><u>ENGINEER:</u> KGI WIRELESS, INC. BUILDING THREE, SUITE 370 805 LAS CIMAS PKWY. AUSTIN, TX 78746 CONTACT: TYLER B. BOLINGER, P.E. PRINCIPAL ENGINEER PHONE: 512.334.3256</p> <p><u>SITE ACQUISITION:</u> KGI WIRELESS, INC. BUILDING THREE, SUITE 370 805 LAS CIMAS PKWY. AUSTIN, TX 78746 PHONE: 512.345.9595</p> <p><u>LAND OWNER:</u> LEAGUE OF HUMAN DIGNITY, INC KATHY KAY, CEO 1701 P STREET LINCOLN, NE 68508 402-441-7650</p> <p><u>SURVEYOR:</u> HUSKER SURVEYING 4535 NORMAL BLVD, SUITE 165 LINCOLN, NE 68506 402.429.2632</p> <p><u>UTILITY PROVIDER:</u> MID AMERICA 800-329-6261</p> <p><u>TELCO PROVIDER:</u> QWEST 402-422-3559</p>		<table><thead><tr><th colspan="2">GENERAL SHEETS</th><th>REVISION</th></tr></thead><tbody><tr><td>T1</td><td>TITLE SHEET</td><td>2</td></tr><tr><td>SP1</td><td>SITE PHOTOS</td><td>0</td></tr><tr><td>SUR1</td><td>SITE SURVEY</td><td>0</td></tr><tr><td colspan="2">CIVIL PLANS</td><td></td></tr><tr><td>C1</td><td>OVERALL SITE PLAN</td><td>2</td></tr><tr><td>C1.1</td><td>DETAILED SITE PLAN</td><td>2</td></tr><tr><td>C2</td><td>GRADING PLAN</td><td>0</td></tr><tr><td>C3</td><td>CIVIL DETAILS</td><td>0</td></tr><tr><td>C4</td><td>TOWER ELEVATION AND ANTENNA PLAN</td><td>1</td></tr><tr><td>LS1</td><td>LANDSCAPE PLAN</td><td>0</td></tr><tr><td colspan="2">RF DATA</td><td></td></tr><tr><td>RF1</td><td>ANTENNA PLANS, RFDS</td><td>1</td></tr><tr><td colspan="2">ELECTRICAL PLANS</td><td></td></tr><tr><td>UC1</td><td>UTILITY ROUTING</td><td>0</td></tr><tr><td>E1</td><td>SITE UTILITY PLAN</td><td>0</td></tr><tr><td>E2</td><td>GROUNDING PLAN</td><td>0</td></tr><tr><td>E3</td><td>GROUNDING DETAILS</td><td>0</td></tr><tr><td colspan="2">NOTES</td><td></td></tr><tr><td>N1</td><td>GENERAL NOTES</td><td>0</td></tr><tr><td>N1.1</td><td>GENERAL NOTES</td><td>0</td></tr><tr><td>N1.2</td><td>SYMBOLS AND ABBREVIATIONS</td><td>0</td></tr><tr><td>N2</td><td>CIVIL NOTES</td><td>0</td></tr><tr><td>N2.1</td><td>CIVIL NOTES</td><td>0</td></tr><tr><td>N3</td><td>RF NOTES</td><td>0</td></tr><tr><td>N4</td><td>ELECTRICAL NOTES</td><td>0</td></tr><tr><td>N4.1</td><td>GROUNDING NOTES</td><td>0</td></tr></tbody></table>	GENERAL SHEETS		REVISION	T1	TITLE SHEET	2	SP1	SITE PHOTOS	0	SUR1	SITE SURVEY	0	CIVIL PLANS			C1	OVERALL SITE PLAN	2	C1.1	DETAILED SITE PLAN	2	C2	GRADING PLAN	0	C3	CIVIL DETAILS	0	C4	TOWER ELEVATION AND ANTENNA PLAN	1	LS1	LANDSCAPE PLAN	0	RF DATA			RF1	ANTENNA PLANS, RFDS	1	ELECTRICAL PLANS			UC1	UTILITY ROUTING	0	E1	SITE UTILITY PLAN	0	E2	GROUNDING PLAN	0	E3	GROUNDING DETAILS	0	NOTES			N1	GENERAL NOTES	0	N1.1	GENERAL NOTES	0	N1.2	SYMBOLS AND ABBREVIATIONS	0	N2	CIVIL NOTES	0	N2.1	CIVIL NOTES	0	N3	RF NOTES	0	N4	ELECTRICAL NOTES	0	N4.1	GROUNDING NOTES	0
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<p>SCOPE OF WORK</p> <p>1) THIS WIRELESS COMMUNICATIONS FACILITY IS NOT INTENDED FOR HUMAN OCCUPANCY</p> <p>2) THIS FACILITY DOES NOT REQUIRE POTABLE WATER AND WILL NOT PRODUCE ANY SEWAGE.</p> <p>3) THE SCOPE OF WORK CONSISTS OF CONSTRUCTING A RAWLAND CELL SITE INCLUDING:</p> <p>A. FENCED COMPOUND</p> <p>B. GRAVEL ACCESS DRIVE</p> <p>C. GROUND EQUIPMENT</p> <p>D. CELLULAR TOWER</p> <p>E. ANTENNAS AND LINE WORK</p> <p>4) RFDS/SDF DATED: 06/18/2019</p> <p>5) LEASE AREA 50X50 (2500 SFT)</p>	<p>TEAM SIGN-OFF</p> <table><tbody><tr><td>LESSOR/LICENSOR</td><td>DATE</td></tr><tr><td>CONSTRUCTION SUPERVISOR</td><td>DATE</td></tr><tr><td>RF ENGINEERING</td><td>DATE</td></tr><tr><td>CONSTRUCTION MANAGER</td><td>DATE</td></tr></tbody></table> <p>THE ABOVE PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE CONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND MAY IMPOSE CHANGES OR MODIFICATIONS.</p>	LESSOR/LICENSOR	DATE	CONSTRUCTION SUPERVISOR	DATE	RF ENGINEERING	DATE	CONSTRUCTION MANAGER	DATE																																																																											
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<p>HTTP://WWW.KGIWIRELESS.COM/ESREPORTCARD.HTML</p>																																																																																				

PARENT PARCEL DESCRIPTION:

ALL THAT PARCEL OF LAND IN THE CITY OF COUNCIL BLUFFS IN THE COUNTY OF POTTAWATTAMIE AND STATE OF IOWA AS MORE FULLY DESCRIBED IN DEED BOOK 105 PAGE 22238 AND BOOK 105 PAGE 18992 AND PARCEL # 754426213006, BEING KNOWN AND DESIGNATED AS:

LOTS 139 THROUGH 145 IN BELMONT ADDITION TO THE CITY OF COUNCIL BLUFFS, POTTAWATTAMIE COUNTY, IOWA.

PARCEL NUMBER: 754426213006

BEING THE SAME PROPERTY ACQUIRED BY LEAGUE OF HUMAN DIGNITY, INC. BY DEED OF KEITH SKINNER AS EXECUTOR OF THE CLAYTON DALE HARDIMAN ESTATE AKA DALE HARDIMAN ESTATE, DATED 05/20/2005 AND RECORDED 05/31/2005 IN BOOK / PAGE : 105 / 22238

BEING THE SAME PROPERTY ACQUIRED BY LEAGUE OF HUMAN DIGNITY, INC. BY DEED OF KENNETH W. OWENS AND JOYCE A. OWENS, HUSBAND AND WIFE, DATED 04/04/2005 AND RECORDED 04/12/2005 IN BOOK / PAGE : 105 / 18992

SURVEYORS NOTES

- 1.) All Bearings Based on Iowa State Plane Coordinate System, South Zone (NAD-83).
 - 2.) Not intended to represent a survey for the entire parent parcel shown, but to be used only for the purposes shown hereon.
 - 3.) The Lessee's proposed Land Space and Access & Utility Right of Way are within the Parent Parcel Description.
 - 4.) No wetland areas have been investigated by this survey.
- Zoning Information: C-2 Commercial
- Flood Information: Property falls within Zone "AH" as determined by FEMA Flood Rate Map No. 19155C0413E, with an effective date of 02/04/2005.

VICINITY MAP



KGI WIRELESS, INC.
ENGINEERING
805 LAS CIMAS PKWY
BUILDING THREE, SUITE 370
AUSTIN, TX 78746
512.345.9595

REVISION

DESCRIPTION	BY	DATE
1 PRELIMINARY	TH	07.18.19
2 REVISE A/U R.O.W.	PD	07.22.19
3 COMMENTS	PD	07.30.19
4 UPDATE A/U ESMNT	PD	08.16.19
5 UPDATE A/U ESMNT & FINAL	PD	10.15.19

SITE NAME:

OMA PIRATES COVE

LOCATION CODE

490078

5991



4535 Normal Blvd. Ste #101
Lincoln, Ne 68505
(402)423-5202
(402)423-5211
www.huskersurveying.com

SHEET TITLE:

LAND SPACE &
R.O.W. EXHIBIT

SHEET NUMBER:

1 of 3



I hereby certify that this land surveying document was prepared and the related survey work was performed by me or under my direct personal supervision and that I am a duly licensed Professional Land Surveyor under the laws of the State of Iowa.

Jayme M. Malone 10-15-19
(signature) (date)

Jayme M. Malone

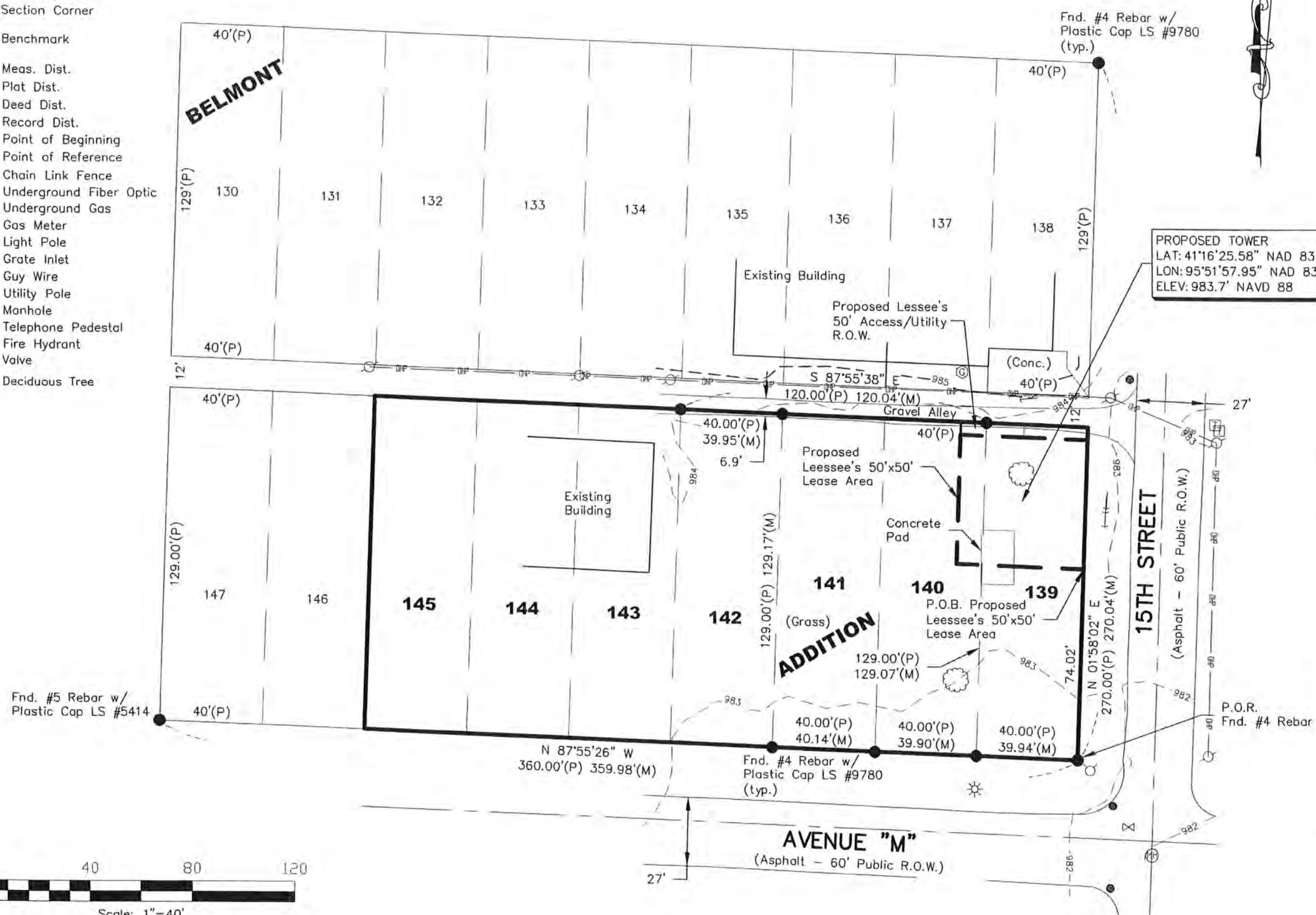
License number 11807

My license renewal date is December 31, 2019

Pages or sheets covered by this seal: Sheets 1, 2 & 3

Legend

- = Cor. Fnd
- = Cor. Set #5
- Rebar w/cap
- ⊕ = Section Corner
- Ⓟ = Benchmark
- (M) = Meas. Dist.
- (P) = Plat Dist.
- (D) = Deed Dist.
- (R) = Record Dist.
- P.O.B. = Point of Beginning
- P.O.R. = Point of Reference
- = Chain Link Fence
- FD— = Underground Fiber Optic
- G— = Underground Gas
- Ⓢ = Gas Meter
- ☀ = Light Pole
- = Grate Inlet
- ⌵ = Guy Wire
- Ⓢ = Utility Pole
- Ⓜ = Manhole
- Ⓢ = Telephone Pedestal
- Ⓢ = Fire Hydrant
- Ⓢ = Valve
- ☁ = Deciduous Tree



verizon

KGI

KGI WIRELESS, INC.
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805 LAS CIMAS PKWY
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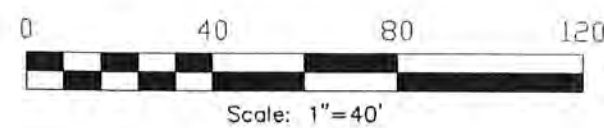
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H
HUSKER SURVEYING

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(402)423-5211
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SHEET TITLE:
LAND SPACE & R.O.W. EXHIBIT

SHEET NUMBER:
2 of 3



That part of Lots 139 and 140 in Belmont Addition to the City of Council Bluffs, Pottawattamie County, Iowa and being more particularly described as follows:

Containing a total calculated area of 2,500 square feet or 0.057 acres, more or less.

An Access Right of Way, 50 feet in width, located in that part of Lot 139 in Belmont Addition to the City of Council Bluffs, Pottawattamie County, Iowa and the centerline being more particularly described as follows:

Containing a total calculated area of 250 square feet or 0.006 acres, more or less.

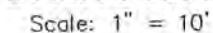
Parallel lines described from the centerline of the easement, are intended to lengthen or shorten to intersect the lines described.

Based on Title Report, provided by AMC Settlement Services, Order No. 50004637, with an effective date of May 13, 2019, the following are of survey matters.

8. SUBJECT TO PLAT OF BELMONT, AN ADDITION TO COUNCIL BLUFFS IN BOOK 458, PAGE 14, POTTAWATTAMIE COUNTY RECORDS. Affects as Parent Parcel. No easements of record shown on Plat.
10. SUBJECT TO PLAT OF LOTS 140 THROUGH 145 RECORDED 2/24/1989 IN BOOK 89, PAGE 17239, POTTAWATTAMIE COUNTY RECORDS. Affects as Parent Parcel. No easements of record shown on Plat.
21. SUBJECT TO PLAT OF LOTS 140 THROUGH 142 RECORDED 6/22/2006 IN BOOK 106, PAGE 24360, POTTAWATTAMIE COUNTY RECORDS. Affects as Parent Parcel. No easements of record shown on Plat.



Scale: 1" = 20'



REVISION

[illegible]

SITE NAME.

LOCATION CODE
490078

5991



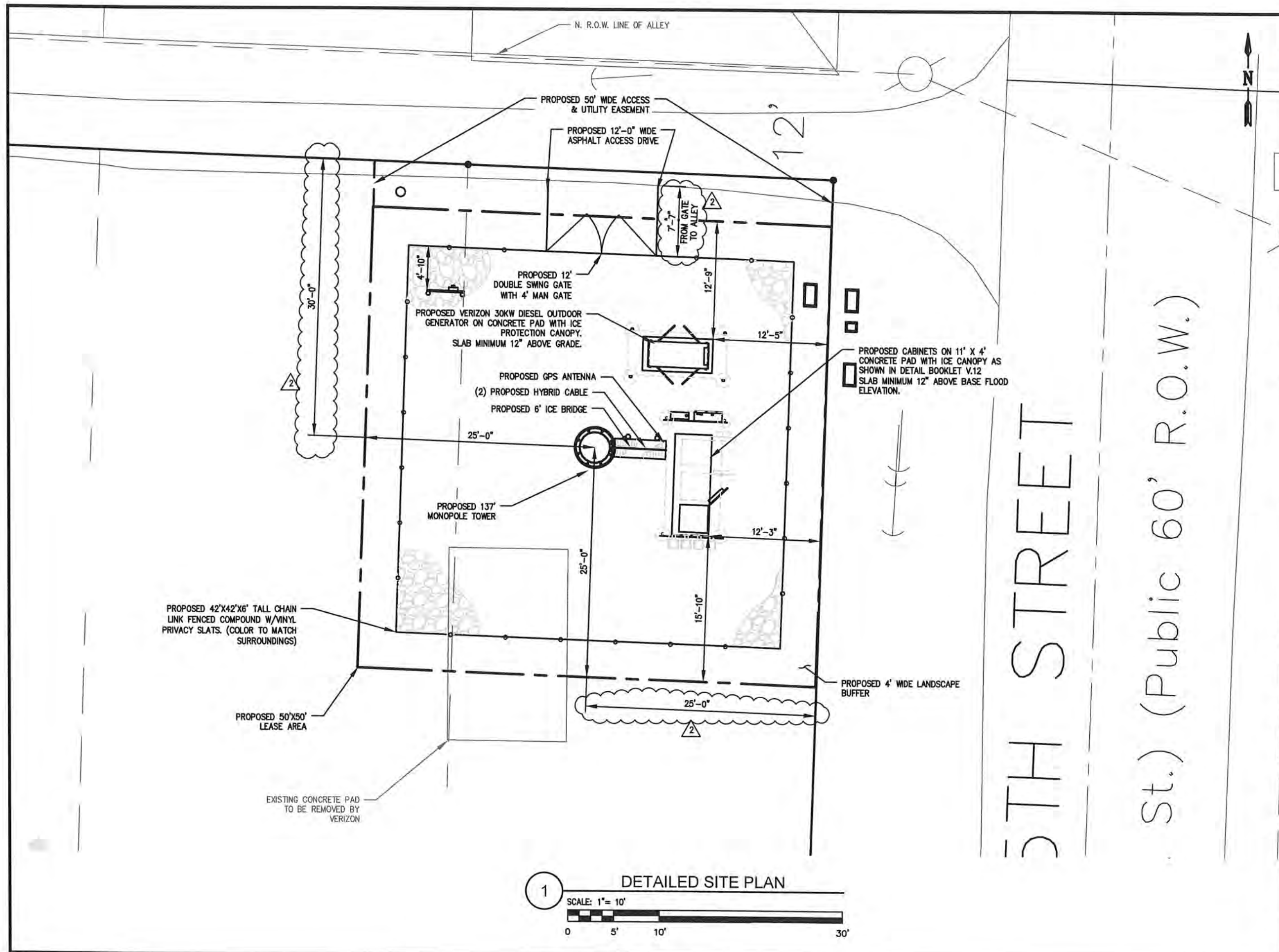
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**LAND SPACE &
R.O.W. EXHIBIT**

SHEET NUMBER:

3 of 3



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

(SIGNATURE) *Tyler B. Bolinger* DATE 02/03/2020
TYLER B. BOLINGER
LICENSE NUMBER 23306
MY LICENSE RENEWAL DATE IS: DEC. 31ST, 2021



PAGES OR SHEETS COVERED BY THIS SEAL:

verizon

KGI

KGI WIRELESS, INC.
ENGINEERING
805 LAS CIMAS PKWY
BUILDING THREE, SUITE 370
AUSTIN, TX 78746
TEL: 512.345.9595

SITE NAME:

OMA PIRATES COVE

LOCATION CODE:

490078

SITE ADDRESS:

1415 N 15TH ST
COUNCIL BLUFFS, IA 51501

THESE DRAWINGS ARE THE PROPERTY OF
VERIZON WIRELESS. THEY ARE INTENDED FOR
THE EXCLUSIVE USE OF THIS PROJECT ONLY.
ANY RE-USE OF THESE PLANS (DRAWINGS)
WITHOUT THE EXPRESS WRITTEN CONSENT OF
VERIZON WIRELESS IS PROHIBITED.

ISSUED FOR:	DATE
CONSTRUCTION REV 0	12/11/2019
SITE SKETCH REV V.2	12/16/2019
CONSTRUCTION REV 1	01/20/2020
CONSTRUCTION REV 2	02/03/2020

REVISION			
NO	DESCRIPTION	BY	DATE
1	TOWER HT	CM	01/15/20
2	DIMENSIONS ADDED	SS	02/03/20

SHEET TITLE:

DETAILED SITE PLAN

SHEET NUMBER:

C1.1



NOTES:

NORTH ARROW SHOWN ON PLANS REFERS TO TRUE NORTH. CONTRACTOR SHALL VERIFY NORTH AND INFORM ARCHITECT/ENGINEER OF ANY DISCREPANCY BEFORE STARTING CONSTRUCTION.

AT THE TIME THIS DRAWING WAS COMPLETED, KGI DID NOT HAVE A COPY OF THE TOWER/FOUNDATION DESIGN DRAWINGS. THE SIZES SHOWN ARE APPROXIMATE.

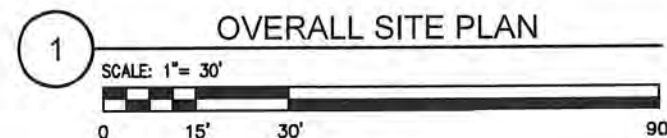
THIS EQUIPMENT DIAGRAM SHOWS THE TYPICAL CONFIGURATION OF THE CABINETS, WAVEGUIDE BRIDGE, EQUIPMENT AND PAD. ACTUAL SITE CONDITIONS AND ORIENTATION MAY VARY.

THE CONTRACTOR MUST FIELD VERIFY ALL MEASUREMENTS AND FIELD CONDITIONS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

NO PARKING ALLOWED IN THE ALLEYWAY AT ALL TIMES.



Know what's below.
Call before you dig.



INDEX - DETAILS INCORPORATED FROM VERIZON STANDARD DETAIL BOOK (V12_04/12/2018)	
SLAB - 3 CABINETS - MODIFIED NSTD123	
GEN 1.4	30RE02K: DIESEL GENERATOR W/ICE SHIELD
STD 2.1	FENCE SECTION
STD 3.1	CABLE BRIDGE SECTION
STD 4.1	CABLE BRIDGE ELEVATION
STD 5.1	ROAD SECTION
STD 6.1	SNOW/MAN GATE DETAIL
STD 7.1	GPS MOUNTING DETAIL

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(SIGNATURE) DATE 02/03/2020

TYLER B. BOLINGER
LICENSE NUMBER 23306
MY LICENSE RENEWAL DATE IS: DECS 31ST, 2021

LICENSED PROFESSIONAL ENGINEER
TYLER B. BOLINGER
23306
IOWA

PAGES OR SHEETS COVERED BY THIS SEAL:

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KGI WIRELESS, INC.
ENGINEERING
805 LAS CIMAS PKWY
BUILDING THREE, SUITE 370
AUSTIN, TX 78746
TEL: 512.345.9595

SITE NAME:
OMA PIRATES COVE

LOCATION CODE:
490078

SITE ADDRESS:
1415 N 15TH ST
COUNCIL BLUFFS, IA 51501

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CONSTRUCTION REV 1		01/20/2020
CONSTRUCTION REV 2		02/03/2020

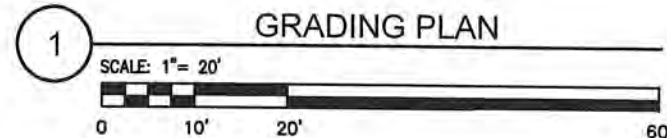
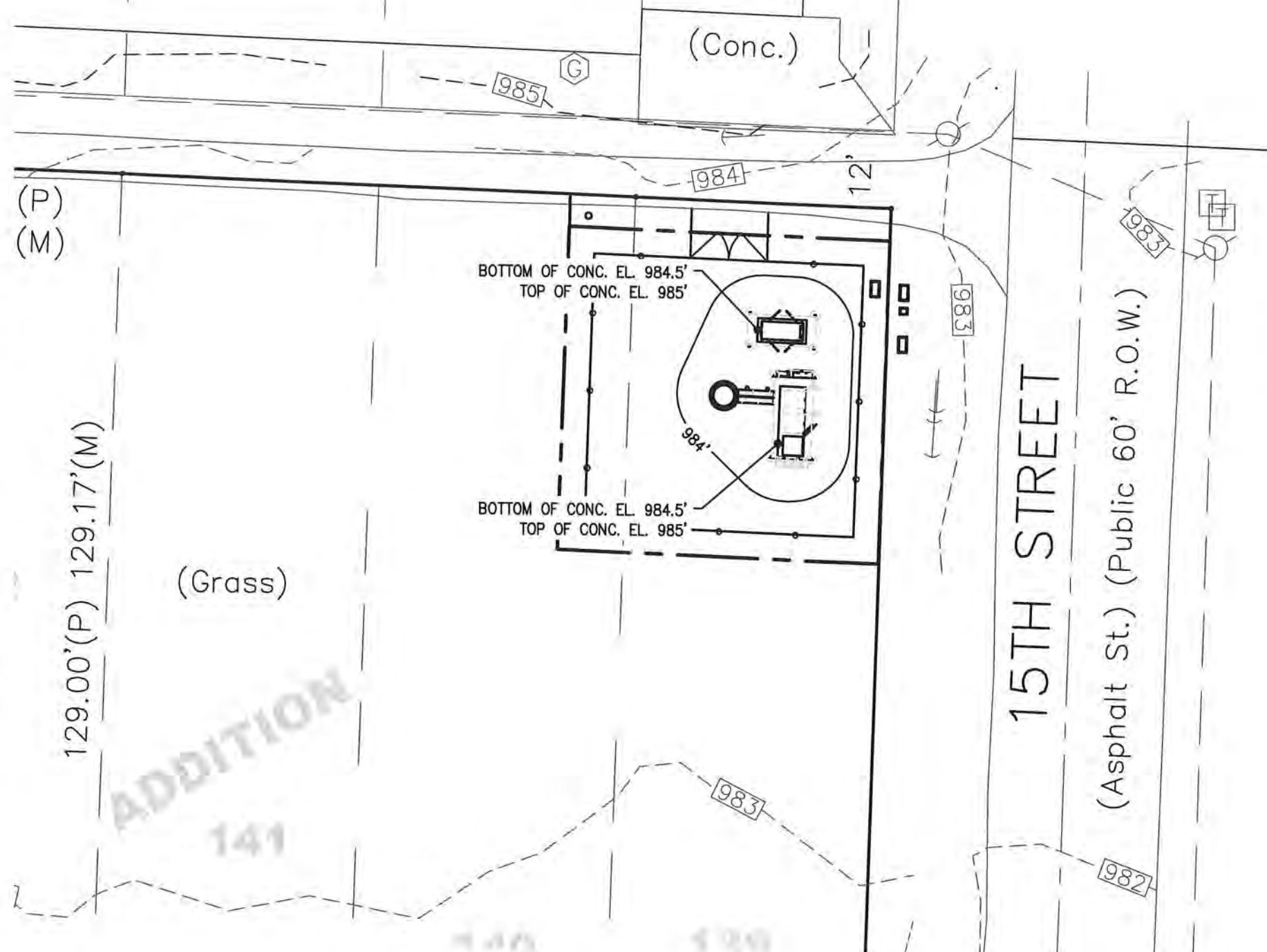
REVISION			
NO	DESCRIPTION	BY	DATE
1	TOWER HT	CM	01/15/20
2	NOTE ADDED	SS	02/03/20

SHEET TITLE:
OVERALL SITE PLAN

SHEET NUMBER:
C1

GRADING AND EROSION CONTROL NOTES

1. EXCAVATE AND FILL TO LINES AND GRADES SHOWN. EG=EXISTING GRADE, FG=FINISH GRADE, FL=FLOW LINE. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS ARE TO FINISH GRADE UNLESS NOTED OTHERWISE.
2. COMPACTION AND MOISTURE CONTENT FOR FILL MATERIAL SHALL BE COMPLETED IN ACCORDANCE WITH THE GENERAL NOTES AND GEOTECH REPORT
3. EXCESS MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS
4. THE CONTRACTOR SHALL SEED ALL DISTURBED AREAS WITH LOW MAINTENANCE GRASS AND COVER WITH APPROVED STRAW UNLESS OTHERWISE NOTED.
5. CONTRACTOR SHALL PROVIDE ALL EROSION CONTROL TECHNIQUES AND BEST MANAGEMENT PRACTICES (BMPs) PER LOCAL AND STATE REQUIREMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF EROSION CONTROLS DURING CONSTRUCTION. INSTALL SILT FENCE ON THE DOWNHILL SIDE OF THE DISTURBED AREA AND ADDITIONALLY FOR PROTECTION OF ADJACENT PROPERTIES, ROADWAYS AND WATERWAYS. THE EROSION CONTROL DEVICES SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL PERMANENT STABILIZATION IS ESTABLISHED.
6. CONTRACTOR SHALL INSPECT INSTALLED EROSION CONTROL DEVICES WEEKLY DURING CONSTRUCTION AND AFTER HEAVY RAINS FOR DAMAGE OR EXCESSIVE SILTATION. MAINTENANCE SHALL INCLUDE CLEANING BUILT UP SEDIMENT BEHIND THE BARRIERS AND/OR REPLACING DAMAGED SECTIONS.
7. CONTRACTOR IS RESPONSIBLE FOR PROVIDING SITE FREE OF DRAINAGE PROBLEMS.
8. CONTRACTOR SHALL PREVENT TRACKING OF SEDIMENT OUTSIDE THE CONSTRUCTION LIMITS. THIS MAY REQUIRE CLEANING AND/OR WASHING OF DEBRIS AND SEDIMENT FROM ALL VEHICLES PRIOR TO EXISTING THE SITE. ANY SEDIMENT DEPOSITED OF THE ROADWAY SHALL BE SWEEPED AS NECESSARY THROUGHOUT THE DAY OR AT THE END OF EVERY DAY AND DISPOSED OF IN AN APPROPRIATE MANNER. SEDIMENT SHALL NOT BE WASHED INTO STORM SEWER SYSTEM.
9. ANY DEBRIS AND/OR SEDIMENT EXITING THE SITE DUE TO TRACKING OR FAILURE OF A SITE BMP SHALL BE CLEANED IMMEDIATELY BY THE CONTRACTOR BY A METHOD OTHER THAN FLUSHING. CONTRACTOR SHALL ALSO IMMEDIATELY REPAIR ANY BMPs THAT HAVE FAILED AND/OR INTALL ADDITIONAL BMPs TO ENSURE SEDIMENT DOES NOT LEAVE THE SITE.



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02/03/2020
DATE
TYLER B. BOLINGER
LICENSE NUMBER: 23306
MY LICENSE RENEWAL DATE IS: DEC. 31ST, 2021



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ENGINEERING
805 LAS CIMAS PKWY
BUILDING THREE, SUITE 370
AUSTIN, TX 78746
TEL: 512.345.9595

SITE NAME:

OMA PIRATES COVE

LOCATION CODE:

490078

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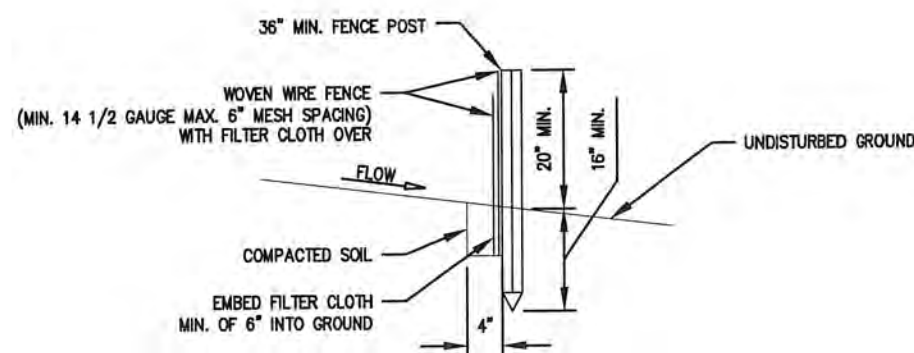
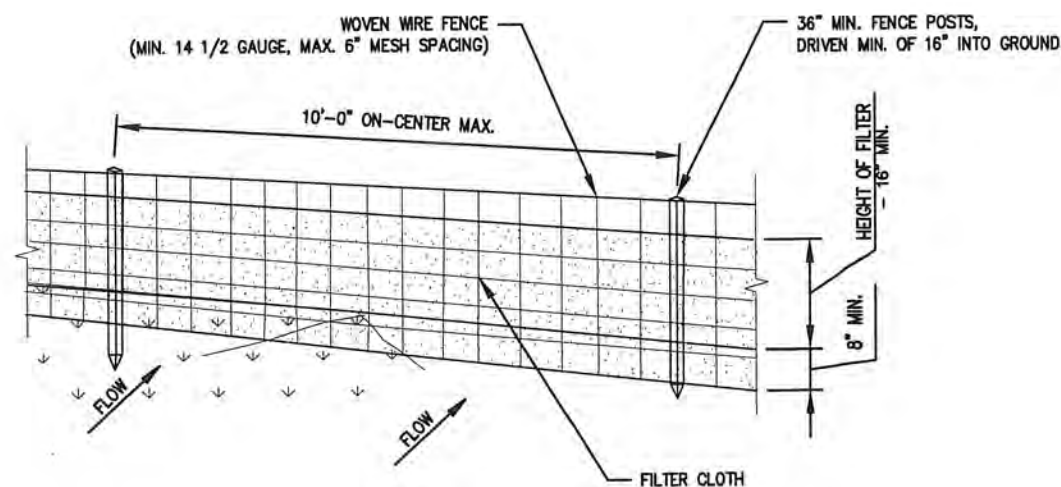
ISSUED FOR: DATE
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CONSTRUCTION REV 1 01/20/2020
CONSTRUCTION REV 2 02/03/2020

REVISION

NO	DESCRIPTION	BY	DATE
2	ADDRESS CHANGE	SS	02/03/20

SHEET TITLE:
GRADING PLAN

SHEET NUMBER:
C2



POSTS: STEEL EITHER "I" OR "U" TYPE OR 2" HARDWOOD
FENCE: WOVEN WIRE, 14 1/2 GA., 6" MAX. MESH OPENING

FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N
OR APPROVED EQUAL
PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED
EQUAL

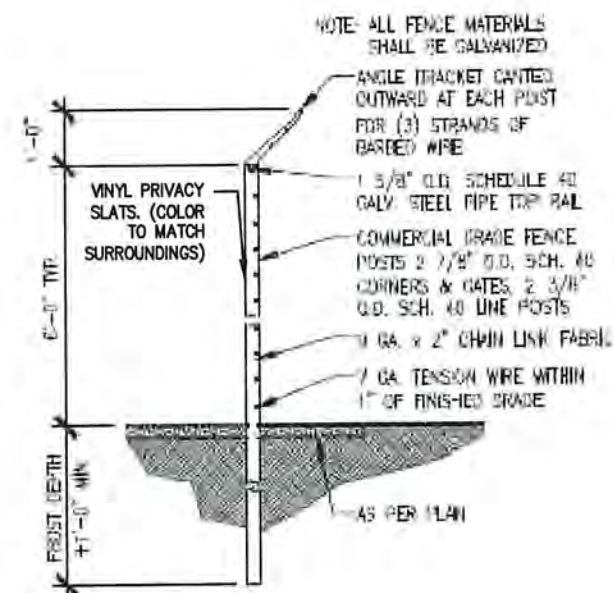
CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

1

SILT FENCE DETAIL

SCALE: N.T.S.



FENCE SECTION (6' - 0")

SCALE: NONE

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805 LAS CIMAS PKWY
BUILDING THREE, SUITE 370
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TEL: 512.345.9595

SITE NAME:

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LOCATION CODE:

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COUNCIL BLUFFS, IA 51501

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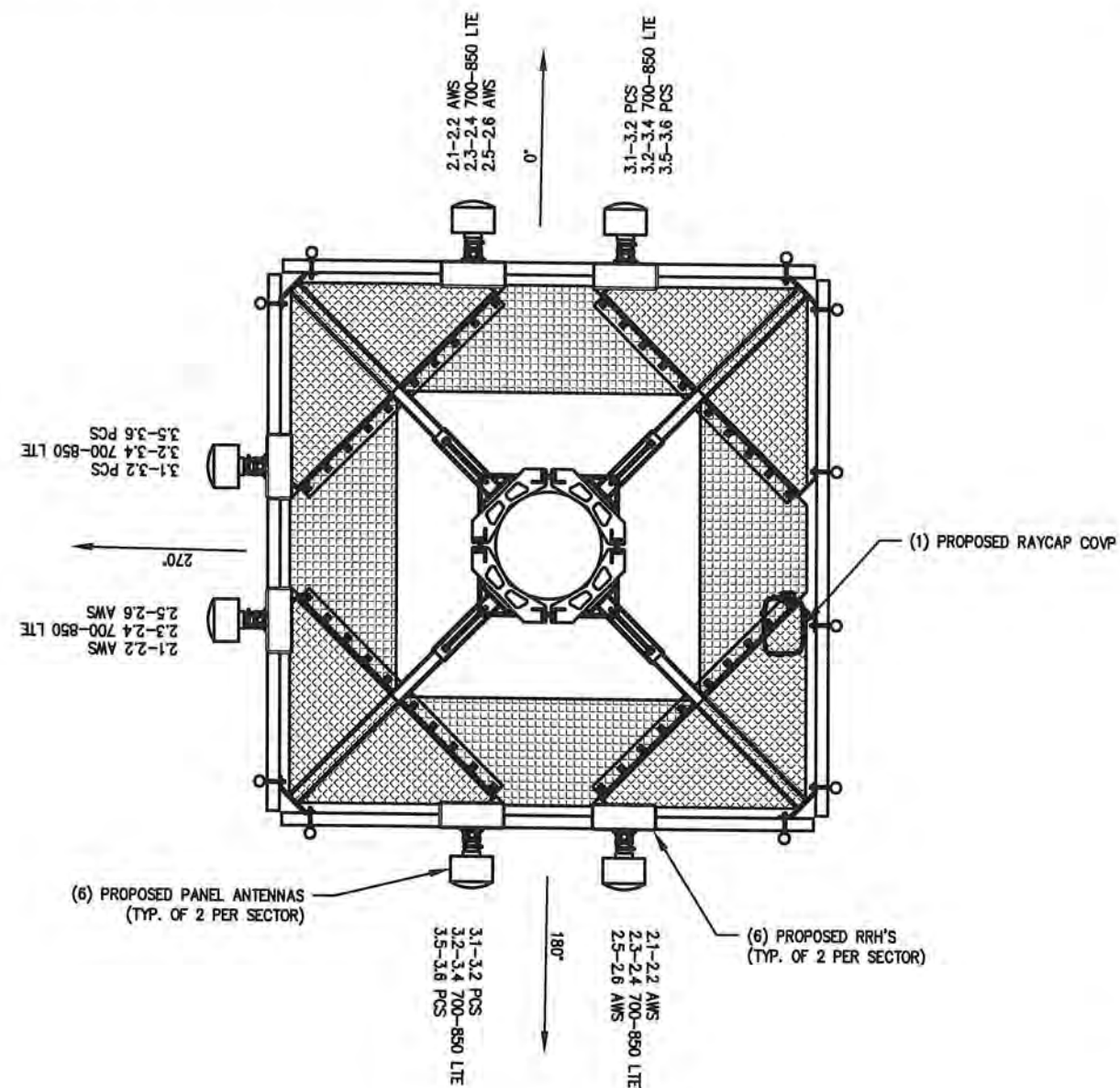
REVISION			
NO	DESCRIPTION	BY	DATE
2	ADDRESS CHANGE	SS	02/03/20

SHEET TITLE:
CIVIL DETAILS

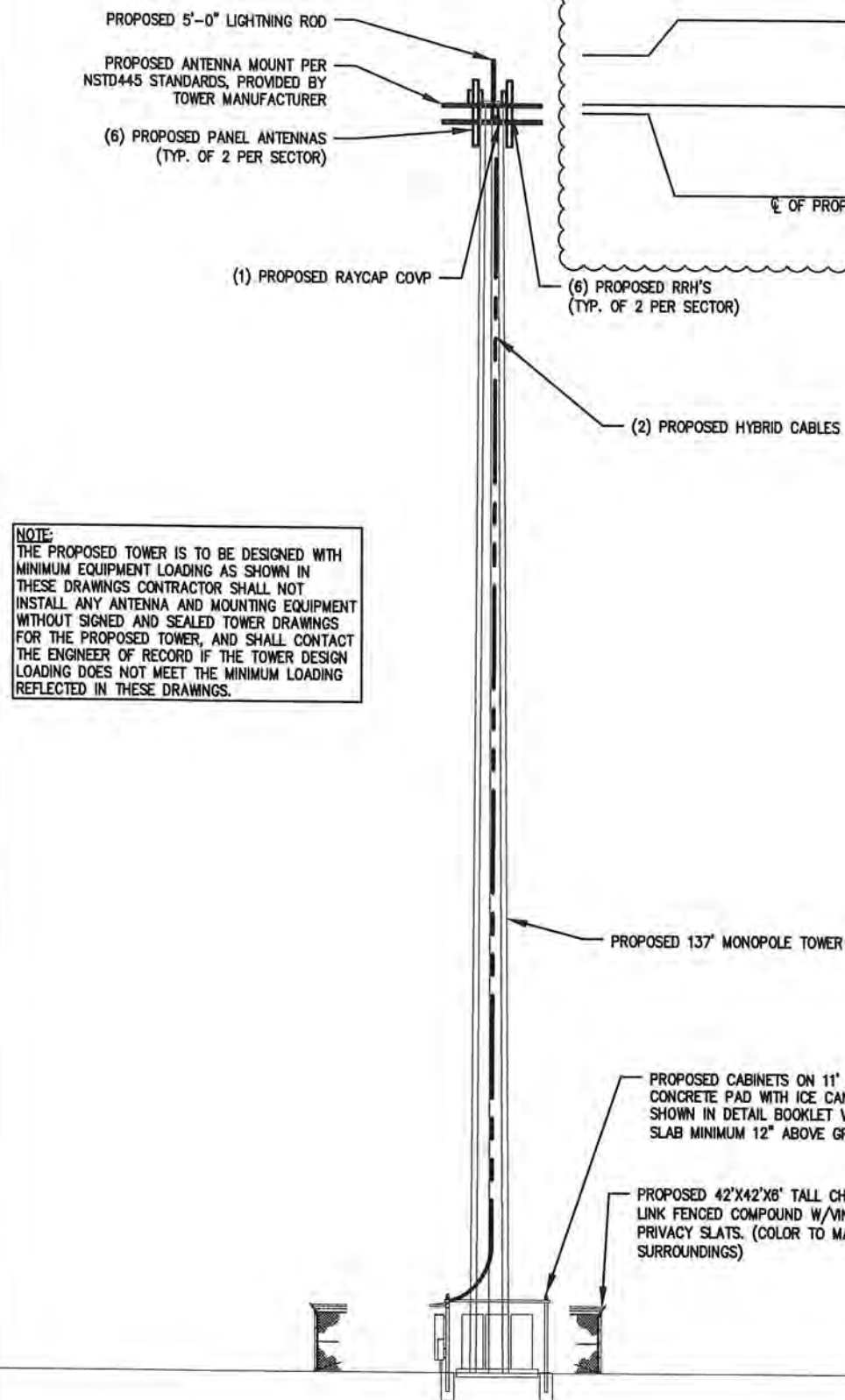
SHEET NUMBER:
C3

NOTES:

1. CONTRACTOR TO ENSURE TIP OF ANTENNAS ARE BELOW OF OBSTRUCTION LIGHT PER FAA/FCC STANDARDS.
2. ALL VERIZON PROPOSED ANTENNAS WILL BE MOUNTED TO PROPOSED ANTENNA PIPE MOUNT WITH INCLUDED HARDWARE
3. REFERENCE SHEET RF1 FOR DETAILED EQUIPMENT INFORMATION



2 ANTENNA PLAN
SCALE: N.T.S.



1 TOWER ELEVATION
SCALE: N.T.S.

NOTE:
THE PROPOSED TOWER IS TO BE DESIGNED WITH MINIMUM EQUIPMENT LOADING AS SHOWN IN THESE DRAWINGS. CONTRACTOR SHALL NOT INSTALL ANY ANTENNA AND MOUNTING EQUIPMENT WITHOUT SIGNED AND SEALED TOWER DRAWINGS FOR THE PROPOSED TOWER, AND SHALL CONTACT THE ENGINEER OF RECORD IF THE TOWER DESIGN LOADING DOES NOT MEET THE MINIMUM LOADING REFLECTED IN THESE DRAWINGS.

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DATE: 02/03/2020
SIGNATURE: TYLER B. BOLINGER
LICENSE NUMBER: 23306
MY LICENSE RENEWAL DATE IS: DEC. 31ST, 2021.



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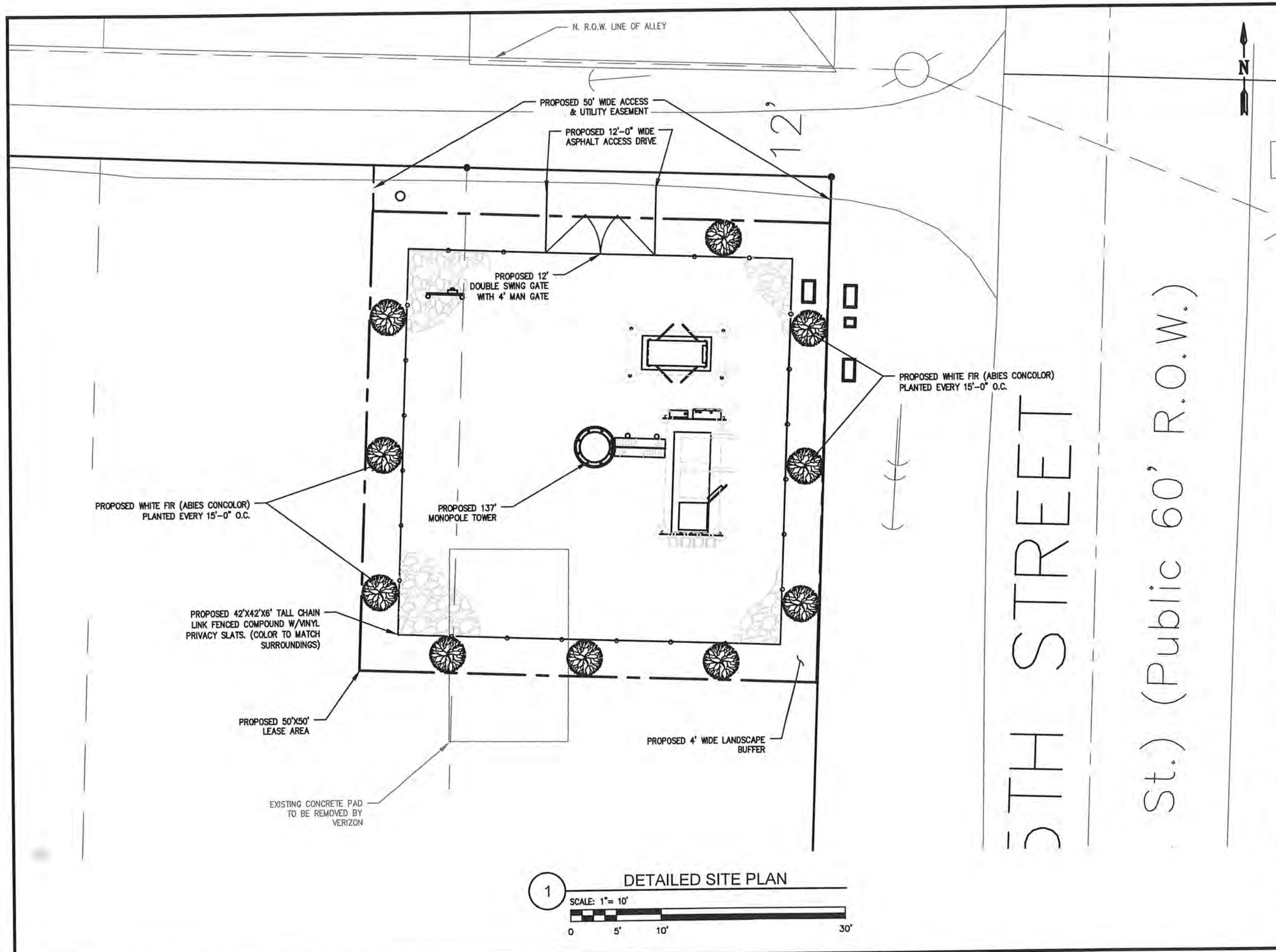
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CONSTRUCTION REV 2	02/03/2020

NO	DESCRIPTION	BY	DATE
1	TOWER HT	CM	01/15/20
2	ADDRESS CHANGE	SS	02/03/20

SHEET TITLE:
TOWER ELEVATION &
ANTENNA PLAN

SHEET NUMBER:
C4



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(SIGNATURE) *Tyler B. Bolinger* DATE 02/03/2020
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LICENSE NUMBER: 23306
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LICENSED PROFESSIONAL ENGINEER
TYLER B. BOLINGER
23306
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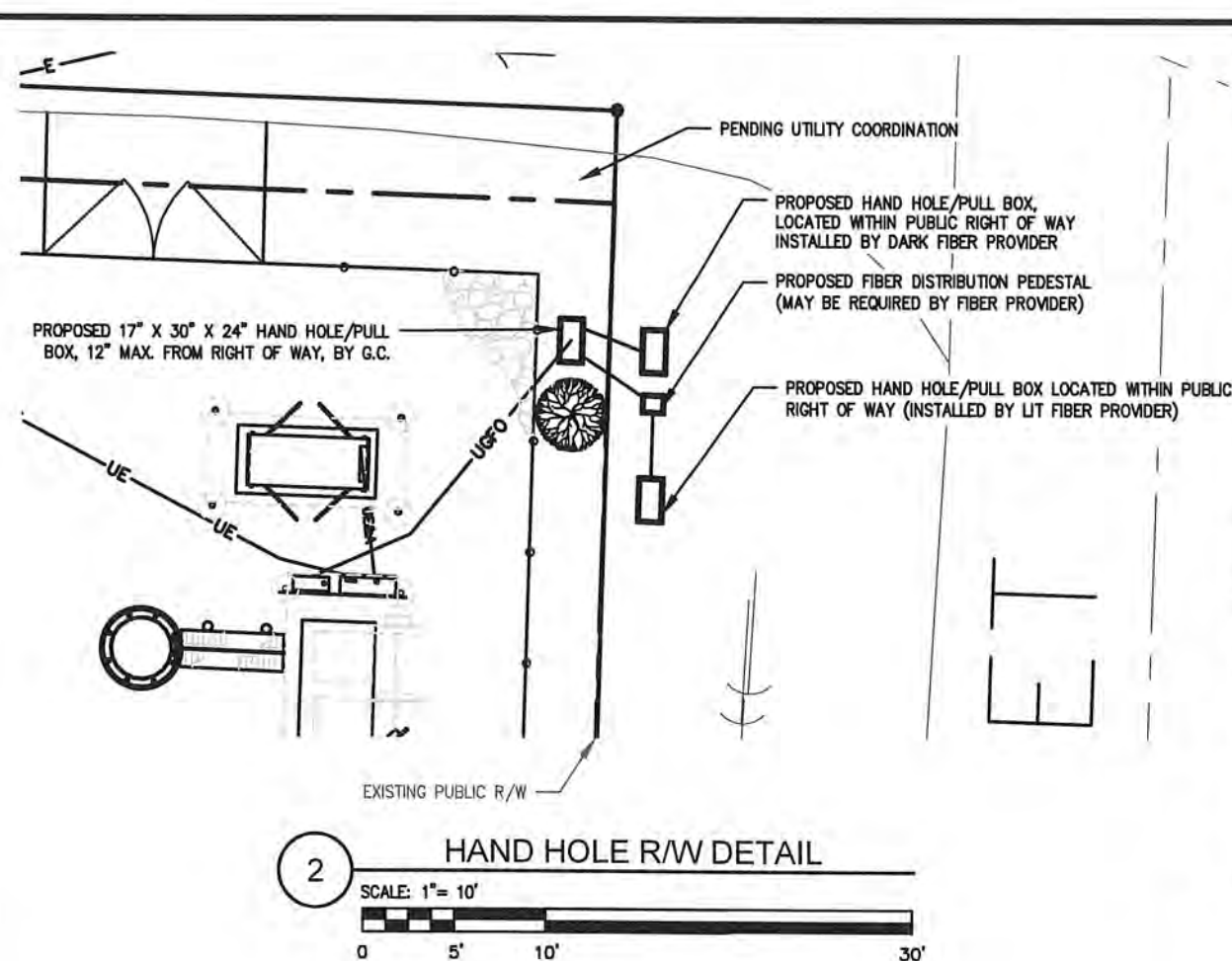
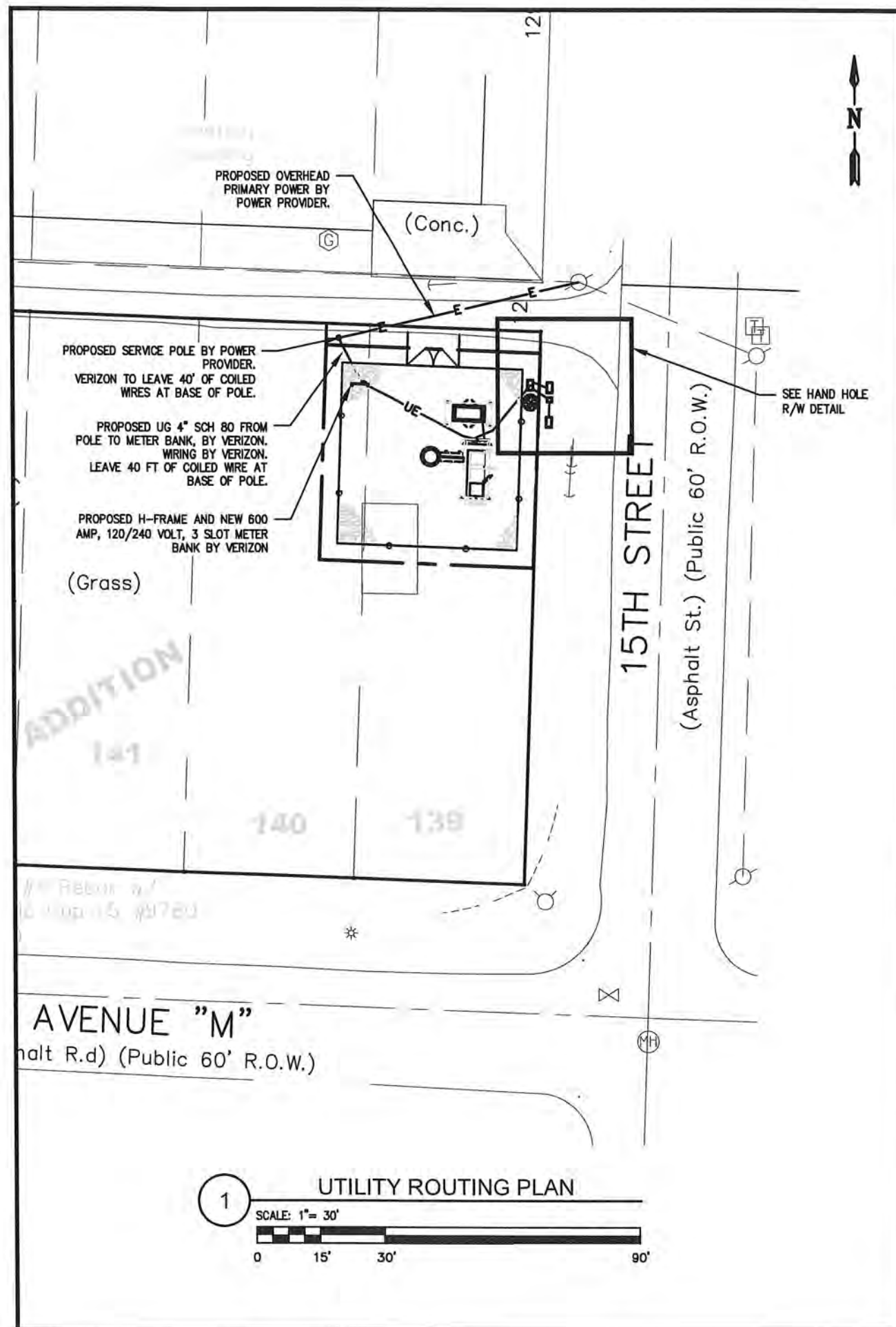
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REVISION			
NO	DESCRIPTION	BY	DATE
2	ADDRESS CHANGE	SS	02/03/20

SHEET TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
LS1



INDEX - DETAILS INCORPORATED FROM VERIZON STANDARD DETAIL BOOK (V12_04/12/2018)
SLAB - 3 CABINETS - MODIFIED NSTD123
GEN 1.4 30RE0ZK: DIESEL GENERATOR W/ICE SHIELD
STD 8.1 TELCO ENTRY DETAIL/WEATHER TIGHT ENCLOSURE
STD 9.1 CMPH DETAIL
STD 10.8 ONE-LINE RISER DIAGRAM
STD 12.1 H-FRAME DETAILS

SITE POWER
SINGLE PHASE
120 / 240 VAC
3 WIRE, 60 HZ
200 AMPS



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M. H. CATALINA MARTINEZ
LICENSE NUMBER: 23482



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REVISION		
NO	DESCRIPTION	BY DATE
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SHEET TITLE:
UTILITY ROUTING

SHEET NUMBER:
UC1

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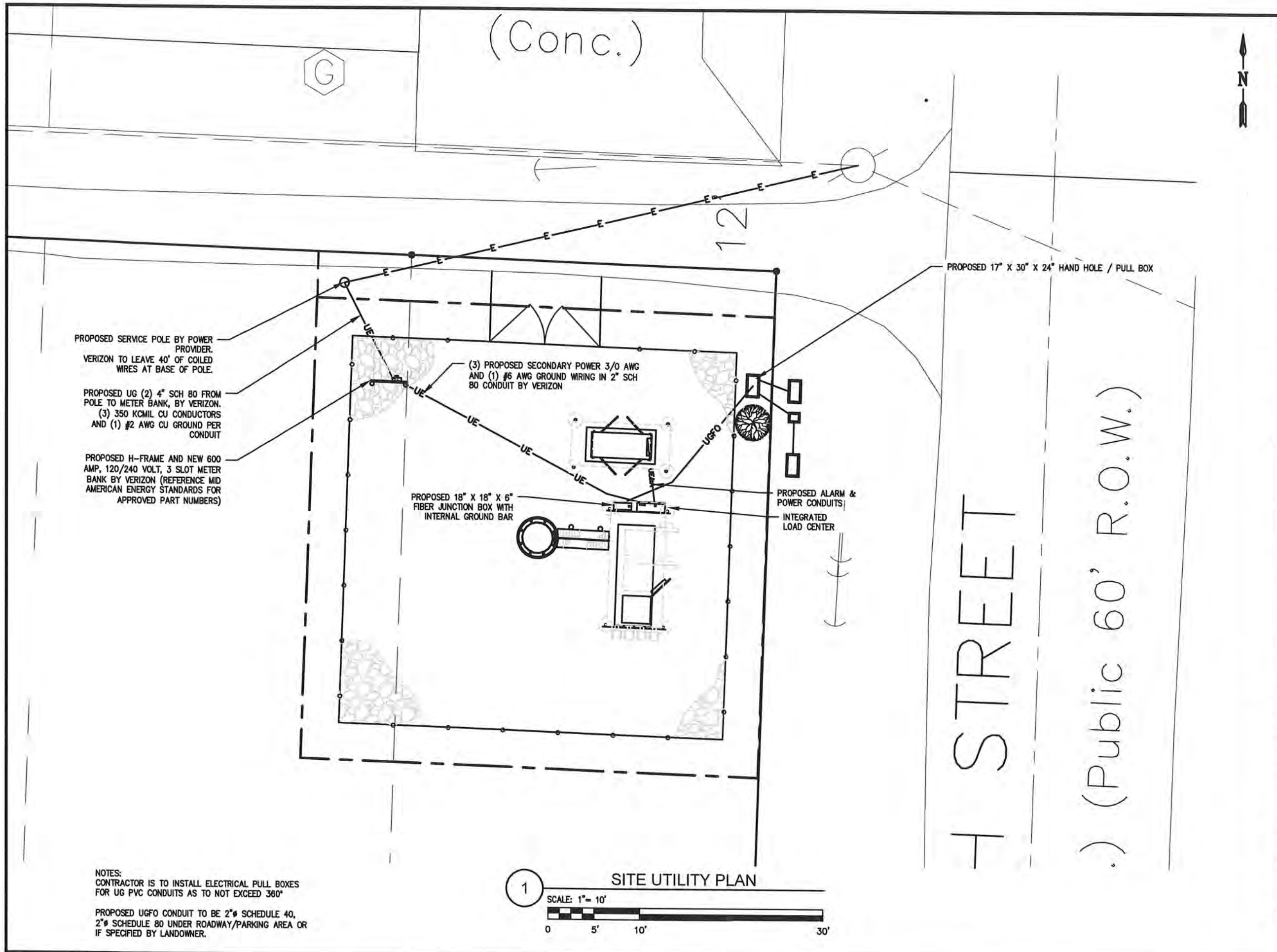
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SHEET TITLE:
SITE DESIGN FORM

SHEET NUMBER:
RF1

ANTENNA KEY														COAX / HYBRID KEY								EQUIPMENT KEY					
SECTOR	AZIMUTH	POSITION	PORT	QTY	STATUS	MANUFACTURER	MODEL	TYPE	ANTENNA LENGTH	ANTENNA TIP	ANTENNA CENTER	ELEC DOWNTILT	MECH DOWNTILT	QTY	STATUS	COAX TYPE	MANUFACTURER	MODEL	DIELECTRIC	DIAMETER (INCH)	RUN (FEET)	QTY	MODEL	STATUS			
ALPHA SECTOR	0	1.1	TX/RX 0	1	PROPOSED	COMMSCOPE	NHH 45C R2B	700 LTE / 850 LTE	96	140	136	TBD	0	1	PROPOSED	JUMPER	COMMSCOPE	HFT412-4529	HYBRID	.62	15	1	4449	PROPOSED			
		1.2	TX/RX 1					700 LTE / 850 LTE						2	PROPOSED	JUMPER	ANDREW	LDF4-50A	FOAM	1/2	10						
		1.3	TX/RX 0					LTE AWS																			
		1.4	TX/RX 1					LTE AWS						4	PROPOSED	JUMPER	ANDREW	LDF4-50A	FOAM	1/2	10				-	8843	SHARED
		1.5	TX/RX 2					LTE AWS																			
		2.1	TX/RX 2	1	PROPOSED	COMMSCOPE	NHH 45C R2B	700 LTE / 850 LTE	96	140	136	TBD	0	2	PROPOSED	JUMPER	ANDREW	LDF4-50A	HYBRID	1/2	15	-	4449	SHARED			
		2.2	TX/RX 3					700 LTE / 850 LTE						1	PROPOSED	JUMPER	COMMSCOPE	HFT412-4529	FOAM	.62	10						
		2.3	TX/RX 0					LTE PCS																			
		2.4	TX/RX 1					LTE PCS						4	PROPOSED	JUMPER	ANDREW	LDF4-50A	FOAM	1/2	10				1	8843	PROPOSED
		2.5	TX/RX 2					LTE PCS																			
2.6	TX/RX 3	LTE PCS																									
BETA SECTOR	180	1.1	TX/RX 0	1	PROPOSED	COMMSCOPE	NHH 45C R2B	700 LTE / 850 LTE	96	140	136	TBD	0	1	PROPOSED	JUMPER	COMMSCOPE	HFT412-4529	HYBRID	.62	15	1	4449	PROPOSED			
		1.2	TX/RX 1					700 LTE / 850 LTE						2	PROPOSED	JUMPER	ANDREW	LDF4-50A	FOAM	1/2	10						
		1.3	TX/RX 0					LTE AWS																			
		1.4	TX/RX 1					LTE AWS						4	PROPOSED	JUMPER	ANDREW	LDF4-50A	FOAM	1/2	10				-	8843	SHARED
		1.5	TX/RX 2					LTE AWS																			
		2.1	TX/RX 2	1	PROPOSED	COMMSCOPE	NHH 45C R2B	700 LTE / 850 LTE	96	140	136	TBD	0	2	PROPOSED	JUMPER	ANDREW	LDF4-50A	HYBRID	1/2	15	-	4449	SHARED			
		2.2	TX/RX 3					700 LTE / 850 LTE						1	PROPOSED	JUMPER	COMMSCOPE	HFT412-4529	FOAM	.62	10						
		2.3	TX/RX 0					LTE PCS																			
		2.4	TX/RX 1					LTE PCS						4	PROPOSED	JUMPER	ANDREW	LDF4-50A	FOAM	1/2	10				1	8843	PROPOSED
		2.5	TX/RX 2					LTE PCS																			
2.6	TX/RX 3	LTE PCS																									
GAMMA SECTOR	270	1.1	TX/RX 0	1	PROPOSED	COMMSCOPE	NHH 45C R2B	700 LTE / 850 LTE	96	140	136	TBD	0	1	PROPOSED	JUMPER	COMMSCOPE	HFT412-4529	HYBRID	.62	15	1	4449	PROPOSED			
		1.2	TX/RX 1					700 LTE / 850 LTE						2	PROPOSED	JUMPER	ANDREW	LDF4-50A	FOAM	1/2	10						
		1.3	TX/RX 0					LTE AWS																			
		1.4	TX/RX 1					LTE AWS						4	PROPOSED	JUMPER	ANDREW	LDF4-50A	FOAM	1/2	10				-	8843	SHARED
		1.5	TX/RX 2					LTE AWS																			
		2.1	TX/RX 2	1	PROPOSED	COMMSCOPE	NHH 45C R2B	700 LTE / 850 LTE	96	140	136	TBD	0	2	PROPOSED	JUMPER	ANDREW	LDF4-50A	HYBRID	1/2	15	-	4449	SHARED			
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		2.3	TX/RX 0					LTE PCS																			
		2.4	TX/RX 1					LTE PCS						4	PROPOSED	JUMPER	ANDREW	LDF4-50A	FOAM	1/2	10				1	8843	PROPOSED
		2.5	TX/RX 2					LTE PCS																			
2.6	TX/RX 3	LTE PCS																									
ADDITIONAL: (2) DISTRIBUTION BOXES RXXDC-6627-PF-48 (1) ON TOWER & (1) ON GROUND (2) COMMSCOPE HFT1206 HYBRID CABLES									ANTENNA CL 136 ICE BRIDGE 6 PAD 10 SLACK 10 HYBRID CABLE LENGTH 162									PROPOSED JUMPERS. 36 FUTURE JUMPERS 0 PROPOSED HYBRID JUMPERS 6 FUTURE HYBRID JUMPERS 0									
														CONTRACTOR TO CONTACT RF TO OBTAIN LATEST RFDS FOR FINAL TILT SETTINGS													



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LICENSED PROFESSIONAL ENGINEER
M.H.CATALINA MARTINEZ
23482
IOWA

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AUSTIN, TX 78748
TEL: 512.345.9595

SITE NAME:
OMA PIRATES COVE

LOCATION CODE:
490078

SITE ADDRESS:
1415 N 15TH ST
COUNCIL BLUFFS, IA 51501

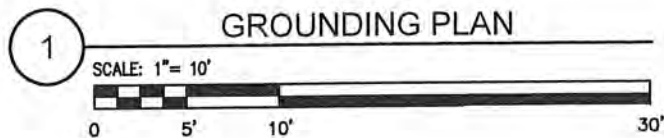
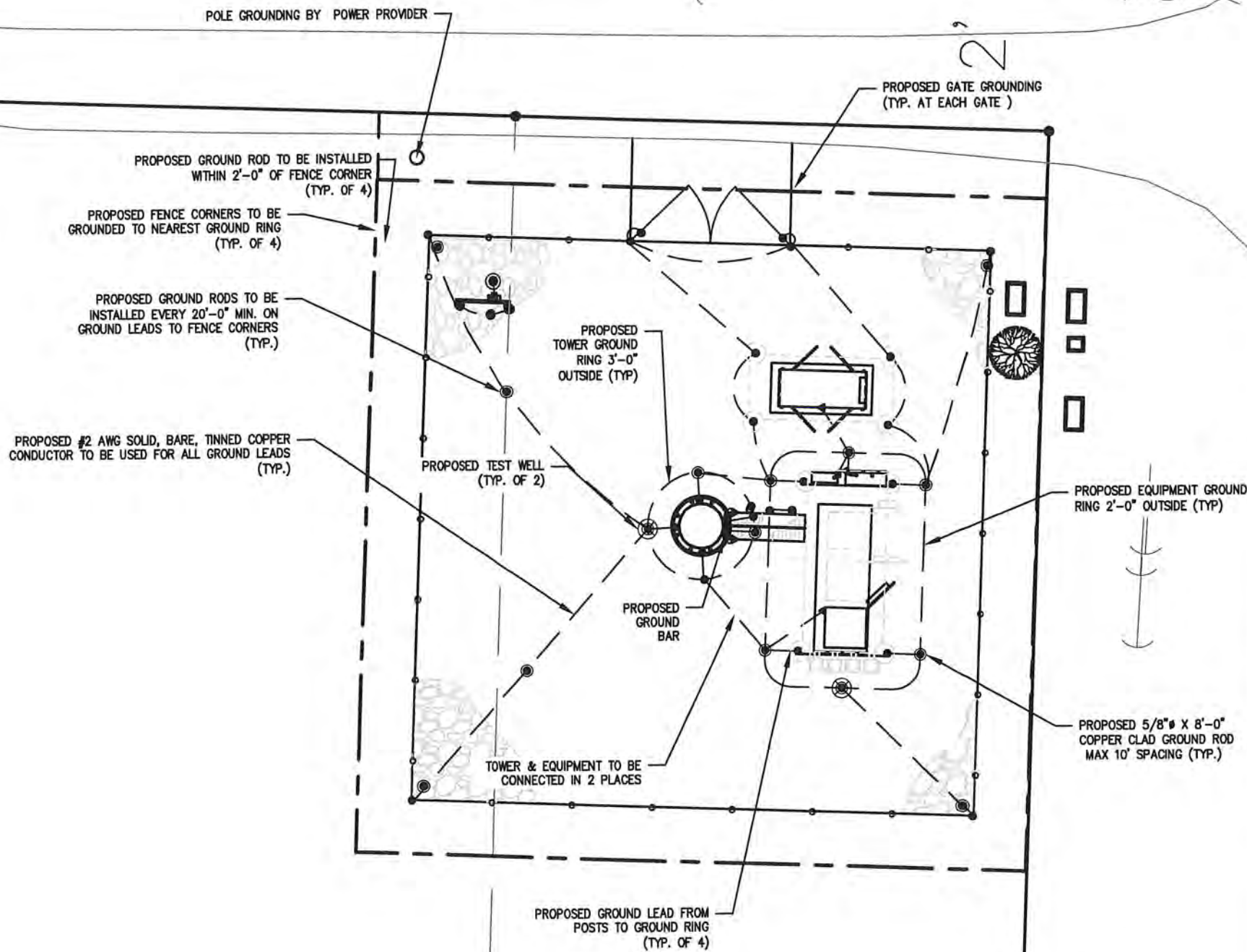
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ISSUED FOR:	DATE
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SITE SKETCH REV V.2	12/16/2019
CONSTRUCTION REV 1	01/20/2020
CONSTRUCTION REV 2	02/03/2020

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2	ADDRESS CHANGE	SS	02/03/20

SHEET TITLE:
SITE UTILITY PLAN

SHEET NUMBER:
E1



INDEX - DETAILS INCORPORATED FROM VERIZON STANDARD DETAIL BOOK (V12_04/12/2018)	
SLAB - 3 CABINETS - MODIFIED NSTD123	
STD 10.8 ONE-LINE RISER DIAGRAM	
STD 11.1 TEST WELL DETAIL & GROUND RING & ROD DETAIL	
STD 11.3 REBAR GROUNDING DETAIL	
STD 11.4 CONDUIT DETAIL (#1)	
STD 11.5 TYPICAL GROUNDING CABLE BRIDGE DETAIL	
STD 11.6 TYPICAL TOWER GROUNDING DETAIL	

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

DATE: 02/03/2020

(SIGNATURE) M. H. CATALINA MARTINEZ
LICENSE NUMBER: 23482
MY LICENSE RENEWAL DATE IS: DEC. 31ST, 2021



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verizon

KGI

KGI WIRELESS, INC.
ENGINEERING
805 LAS CIMAS PKWY
BUILDING THREE, SUITE 370
AUSTIN, TX 78746
TEL: 512.345.9595

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GROUNDING PLAN

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E2

GN1 GENERAL NOTES

PART 1 GENERAL

1.1 SUMMARY OF WORK

- A. THE WORK SHALL CONSIST OF, BUT NOT LIMITED TO, THE INSTALLATION OF COMMUNICATION SITES, TOWER, ANTENNAS AND LINES, GROUNDING, ELECTRICAL WORK, ETC., AS INDICATED ON DRAWINGS AND AS SPECIFIED HEREIN.
- B. CONTRACTOR SHALL SUPPLY ALL MATERIALS/EQUIPMENT REQUIRED AND ALL LABOR, TOOLS, UTILITIES, MINOR HARDWARE/MATERIALS, TRANSPORTATION AND FACILITIES NECESSARY FOR PROPER EXECUTION AND COMPLETION OF SERVICES AND INSTALL WORK.
- C. CONTRACTOR SHALL BE OBLIGATED TO PERFORM ALL WORK IN THESE DRAWINGS IN ACCORDANCE WITH THE CONTRACT AGREEMENT, FEDERAL REGULATIONS, STATE REQUIREMENTS, LOCAL CODES, AND INDUSTRY STANDARDS.
- D. MINOR DEVIATIONS FROM THE DESIGN LAYOUT ARE ANTICIPATED AND SHALL BE CONSIDERED AS PART OF THE WORK. NO CHANGES THAT ALTER THE CHARACTER OF THE WORK WILL BE MADE OR PERMITTED WITHOUT ISSUANCE OF A CHANGE ORDER.
- E. ALL SYMBOLS AND ABBREVIATIONS USED IN THE DRAWINGS ARE CONSIDERED CONSTRUCTION STANDARDS. CONTRACTOR SHALL NOTIFY KGI WIRELESS FOR CLARIFICATION IF ANY QUESTION EXISTS REGARDING EXACT MEANINGS BEFORE PROCEEDING WITH THE WORK.
- F. THIS SCOPE OF WORK DOES NOT INCLUDE STRUCTURAL EVALUATIONS OF THE SITE, APPURTENANCES, EQUIPMENT, AND COAXIAL CABLES SHOWN IN THESE DRAWINGS ARE SCHEMATIC AND FOR REFERENCE ONLY. A STRUCTURAL EVALUATION OF THE SITE STRUCTURE, ANTENNA MOUNTINGS AND HARDWARE SHOULD BE PERFORMED AND RECOMMENDATIONS INDICATED IN THE STRUCTURAL ANALYSIS REGARDING FINAL APPURTENANCE, EQUIPMENT, CABLE ARRANGEMENT AND DETAILS SUPERSEDES THESE DRAWINGS. IN THE CASE OF A NEW TOWER, MANUFACTURER'S DRAWINGS.

1.2 CONFLICTS

- A. IN CASE OF CONFLICT BETWEEN DOCUMENTS LISTED IN 1.1.C REGARDING STANDARDS OF WORK, THE MORE STRINGENT CRITERIA SHALL APPLY.
- B. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL MEASUREMENTS AND LAYOUT AT THE SITE BEFORE ORDERING ANY MATERIALS OR STARTING WORK. ANY ADDITIONAL COSTS RESULTING FROM DIFFERENCE FROM ACTUAL DIMENSIONS AS INDICATED ON DRAWINGS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY SUCH DISCREPANCY WHICH MAY BE FOUND SHALL BE SUBMITTED TO THE CONSTRUCTION MANAGER FOR CONSIDERATION BEFORE THE CONTRACTOR PROCEEDS WITH THE WORK IN THE AFFECTED AREAS.
- C. ANY ADDITIONAL COSTS OR DELAYS RESULTING FROM CORRECTION OF THE WORK TO COMPLY WITH THE ABOVE REQUIREMENT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

1.3 SITE FAMILIARITY

- A. CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING SITE WALKS PRIOR TO CONSTRUCTION TO FAMILIARIZE HIMSELF WITH THE FOLLOWING, INCLUDING BUT NOT LIMITED TO SITE CONDITIONS, CONSTRAINTS, SITE ACCESS, DIMENSIONS, MECHANICAL, AND ELECTRICAL/UTILITY SERVICE.
- B. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO SUBMITTING THE PROJECT BID. ANY DISCREPANCIES, CONFLICTS, OR OMISSIONS SHALL BE REPORTED BEFORE ACCEPTING OR PROCEEDING WITH THE WORK.

1.4 DOCUMENTS REQUIRED AT JOB SITE

- A. CONTRACTOR SHALL MAINTAIN A FULL SET OF DRAWINGS ON-SITE FROM MOBILIZATION THROUGH CONSTRUCTION COMPLETION.
- B. DETAILS ARE INTENDED TO SHOW DESIGN, MATERIALS AND LABOR AS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONING SYSTEM.
- C. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED IN THE AS-BUILT REDLINES USING RED INK AND PROVIDED AT CONTRACT COMPLETION.
- D. CONTRACTOR SHALL POST BUILDING PERMIT ISSUED BY LOCAL JURISDICTION ON EXISTING SITE FENCING (COLLOCATION SITE) OR A CONTRACTOR PROVIDED POST (RAW LAND SITE) CLEAR OF OBSTRUCTIONS.

1.5 ON-SITE SUPERVISION

- A. CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK ON A DAILY BASIS DURING CONSTRUCTION.
- B. CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING HIS BEST SKILL AND ATTENTION.
- C. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES IN ACCORDANCE WITH CONTRACT DOCUMENTS AND INDUSTRY STANDARDS.

1.6 SITE CLEANUP

- A. THE CONTRACTOR MUST CLEAN UP AND REMOVE FROM THE WORK SITE ON A DAILY BASIS (OR SOONER IF DIRECTED BY THE CONSTRUCTION MANAGER) ALL RUBBISH, CONSTRUCTION DEBRIS, AND SURPLUS MATERIALS RESULTING FROM HIS OWN WORK.
- B. THE CONTRACTOR MUST SUPPLY A DUMPSTER OR SIMILAR TRASH STORAGE/REMOVAL DEVICE AT JOB SITES WHERE CONSTRUCTION DEBRIS OR GARBAGE IS GENERATED.
- C. UPON COMPLETION OF THE WORK, THE ENTIRE JOB SITE AREAS MUST BE LEFT CLEAN AND FREE OF TRASH, DEBRIS, MUD, DIRT, DUST, SCRAP METALS, AND EXCESS MATERIALS.
- D. UPON COMPLETION OF INSTALLATION AND CONSTRUCTION WORK, THE EQUIPMENT CABINET PLATFORM/SHELTER SHALL BE THOROUGHLY CLEANED TO THE SATISFACTION OF THE OWNER.

1.7 STANDARDS AND CODES (LATEST EDITION)

ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. THESE SHALL INCLUDE BUT NOT BE LIMITED TO THE LATEST VERSION OF THE FOLLOWING:

- A. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI):
 - ANSI/TIA -222-G-2006
 - ANSI/TIA -222-G-2006 TELECOMMUNICATIONS STANDARDS
 - ANSI Z359 REQUIREMENTS FOR PERSONAL FALL ARREST SYSTEM, SUBSYSTEMS AND COMPONENTS
 - ANSI Z87.1 OCCUPATIONAL AND EDUCATIONAL EYE AND FACE PROTECTION
 - ANSI Z89.1 PROTECTIVE HEADWEAR FOR INDUSTRIAL WORKERS - REQUIREMENTS
 - ANSI/IEEE C95.1 SAFETY LEVELS WITH RESPECT TO HUMAN EXPOSURE AND RADIO FREQUENCY ENERGY
 - ANSI/TIA/EIA STANDARD 222: STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES
- B. AMERICAN CONCRETE INSTITUTE:
 - ACI 301 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS
 - ACI 305 HOT WEATHER CONCRETING
 - ACI 306 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
 - ACI 318 RECOMMENDED PRACTICE FOR CONCRETE INSPECTION
 - ACI 311 RECOMMENDED PRACTICE FOR CONCRETE INSPECTION
 - ACI 315 MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES
 - ACI 813 RECOMMENDED PRACTICE FOR SELECTING PROPORTIONS FOR CONCRETE
 - ACI 614 RECOMMENDED PRACTICE FOR MEASURING, MIXING AND PLACING CONCRETE
- C. AMERICAN INSTITUTE OF STEEL CONSTRUCTION:
 - AISC MANUAL OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION: LATEST EDITION
- D. AMERICAN SOCIETY FOR TESTING AND MATERIALS
 - ASTM A615 SPECIFICATION FOR DEFORMED AND PLAIN BILLET STEEL BARS FOR CONCRETE REINFORCEMENT
 - ASTM C33 SPECIFICATION FOR CONCRETE AGGREGATES
 - ASTM C39-77 SPECIFICATION FOR TEST FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMEN
 - ASTM C94-80 SPECIFICATION FOR READY-MIX CONCRETE
 - ASTM C150 SPECIFICATION FOR PORTLAND CEMENT CONCRETE
 - ASTM C172 SAMPLING FRESH CONCRETE
 - ASTM D698-91 TEST METHOD FOR LABORATORY COMPACTION CHARACTERISTICS OF SOIL USING STANDARD EFFORT
 - ASTM 1556-64 DENSITY OF SOIL IN PLACE BY THE SAND-CONE METHOD
 - ASTM 1557 TEST FOR MOISTURE-UNIT WEIGHT RELATIONS OF SOILS AND SOIL-AGGREGATE MIXTURES USING 10-LB HAMMER AND 18 INCH DROP (PROCEDURE C)
 - ASTM D2922 DENSITY OF SOIL AND SOIL IN PLACE BY NUCLEAR METHODS SHALLOW DEPTH
- E. AMERICAN WELDING SOCIETY:
 - AWS D12.1 RECOMMENDED PRACTICES FOR WELDING STEEL, METAL, INSERTS AND CONNECTIONS IN REINFORCED CONCRETE CONSTRUCTION
- F. CONCRETE REINFORCING STEEL INSTITUTE:
 - MANUAL OF STANDARD PRACTICE
- G. FEDERAL AVIATION ADMINISTRATION (FAA):
 - DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION ADVISORY CIRCULAR, AC 70/7460-1G: OBSTRUCTION MARKING AND LIGHTING
 - DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION ADVISORY CIRCULAR, 150-5345-43, FAA/DOD SPECIFICATION L-856: HIGH INTENSITY OBSTRUCTION LIGHTING SYSTEMS
- H. FEDERAL COMMUNICATIONS COMMISSION (FCC):
 - FEDERAL COMMUNICATIONS COMMISSION-RULES AND REGULATIONS PART 17: CONSTRUCTION, MARKING AND LIGHTING OF ANTENNA STRUCTURES
- I. STRUCTURAL STEEL PAINTING COUNCIL:
 - SSPC-SP-1-63: SPECIFICATION FOR PAINTING STEEL STRUCTURES
- J. NATIONAL FIRE PROTECTION ASSOCIATION:
 - NFPA 1 - FIRE PREVENTION CODE
 - NFPA 70 - NATIONAL ELECTRIC CODE
 - NFPA 101 - LIFE SAFETY CODE
 - NFPA 111 - STANDARD ON STORED ELECTRICAL ENERGY, EMERGENCY AND STANDBY POWER SYSTEMS
 - NFPA 780 - STANDARD FOR THE INSTALLATION FOR LIGHTNING PROTECTION SYSTEMS
- K. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA):
 - OSHA 1926
 - OSHA DIRECTIVES CPL 2-1.29 - INTERIM INSPECTION PROCEDURES DURING COMMUNICATIONS TOWER CONSTRUCTION ACTIVITIES

L. STANDARD BUILDING CODE:

- SEE T1 OF THIS DRAWING SET FOR THE PROPER VERSION OF THE IBC.

M. NATIONAL ELECTRIC CODE:

- SEE T1 OF THIS DRAWING SET FOR THE PROPER VERSION OF THE NEC.

N. INTERNATIONAL FIRE CODE: 2009 EDITION

O. LIFE SAFETY CODE: 2009 EDITION

P. UNIFORM PLUMBING CODE: 2009 EDITION

Q. AMERICAN DISABILITIES ACT

1.8 NOTICE TO PROCEED

- A. WHEN THE SITE IS AVAILABLE FOR CONSTRUCTION START, VERIZON SHALL ISSUE A NOTICE TO PROCEED.
- B. CONTRACTOR SHALL NOT COMMENCE WORK PRIOR TO RECEIVING WRITTEN NOTICE TO PROCEED AND ISSUANCE OF PURCHASE ORDER.

1.9 VERIZON REPRESENTATIVE

- A. VERIZON SHALL DESIGNATE A PROJECT REPRESENTATIVE. THIS PERSON IS THE ONLY CONTACT POINT AUTHORIZED TO MAKE ANY CHANGES TO THE CONTRACT PROVISIONS, CONSTRUCTION DRAWINGS, OR SPECIFICATIONS. ANY CHANGES MADE BY THE CONTRACTOR WITHOUT THE VERIZON REPRESENTATIVE'S PRIOR APPROVAL SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

1.10 CONTRACTORS RESPONSIBILITIES

- A. CONTRACTOR SHALL ASSIGN A PROJECT MANAGER WHO WILL ACT AS A SINGLE POINT OF CONTACT FOR ALL PERSONNEL INVOLVED IN THE PROJECT.
- B. THE CONTRACTOR SHALL SUBMIT A SCHEDULE REFLECTING THE WORK PLAN. THE SCHEDULE SHALL BE SUBMITTED PRIOR TO COMMENCING ANY WORK.
- C. CONTRACTOR SHALL BE EQUIPPED WITH SOME MEANS OF COMMUNICATIONS SUCH AS A MOBILE PHONE. THIS EQUIPMENT WILL NOT BE SUPPLIED NOR WILL CELLULAR SERVICE BE ARRANGED.
- D. CONTRACTOR SHALL PROVIDE DAILY UPDATES ON SITE WORK PROGRESS, WRITTEN IN A FORM OF DAILY FIELD REPORT
- E. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OF CONCRETE POURS, TOWER ERECTIONS, AND CABINET PLATFORM SETUP NO LESS THAN 48 HOURS IN ADVANCE AND IN WRITING.

1.11 PROJECT MEETINGS

- A. CONTRACTOR SHALL PROVIDE PROGRESS SCHEDULE UPDATES ON A DAILY BASIS.
- B. CONTRACTOR MAY BE REQUIRED TO ATTEND WEEKLY STATUS MEETINGS AND/OR CONFERENCE CALLS AS SCHEDULED.

1.12 AS-BUILT DRAWINGS

- A. CONTRACTOR SHALL KEEP UP-TO-DATE MARKED-UP DRAWINGS. UPON COMPLETION AT THE JOB SITE, THE CONTRACTOR SHALL REVIEW THE COMPLETE AS-BUILT DRAWINGS, AND ASCERTAIN THAT ALL DATA FURNISHED ON THE DRAWINGS IS ACCURATE AND TRULY REPRESENTS THE WORK AS ACTUALLY PERFORMED. MARKINGS INDICATING CHANGES SHALL BE MADE IN RED INK AND CLEARLY VISIBLE.
- B. UPON COMPLETION AT THE JOB SITE, THE CONTRACTOR SHALL PROVIDE ALL OPERATION AND MAINTENANCE MANUALS FOR THE SUPPLIED SITE EQUIPMENT (CABINET PLATFORM, UPS, GENERATOR, HVAC, ETC.) AND ALL AS-BUILT DRAWINGS, WHICH FULLY DESCRIBE THE ACTUAL INSTALLED EQUIPMENT.

1.13 CLOSEOUT DOCUMENTATION

- A. TESTING RESULTS AS IDENTIFIED IN THESE CONSTRUCTION DRAWINGS.
- B. AZIMUTH, DOWN TILT, TAPE DROP TEST FORM.
- C. ANTENNA SWEEP TESTING/COAXIAL CABLE SWEEP TESTING AS IDENTIFIED IN THESE CONSTRUCTION DRAWINGS.
- D. LABELED AND DATE STAMPED PHOTOGRAPHS OF MATERIALS AND EQUIPMENT SERIAL NUMBERS, SUBSTANTIAL INSTALLATION AND FINAL INSTALLATION.
- E. PERMIT CLOSEOUTS AND CERTIFICATE OF OCCUPANCY.
- F. A COLOR SCANNED PDF OF REDLINES PRODUCED ON-SITE.
- G. MILESTONE LIEN WAIVERS AND FINAL ACCEPTANCE LIEN WAIVERS.
- H. FINAL ACCEPTANCE INVOICE.
- I. PUNCH LIST CHECKLIST COMPLETE WITH NO PENDING ITEMS AND PHOTOS OF CORRECTED ITEMS.
- J. OTHER DOCUMENTS IDENTIFIED IN THE CONTRACT DOCUMENTS.

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02/03/2020
DATE
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LICENSE NUMBER: 23482
MY LICENSE RENEWAL DATE IS: DEC. 31ST, 2021



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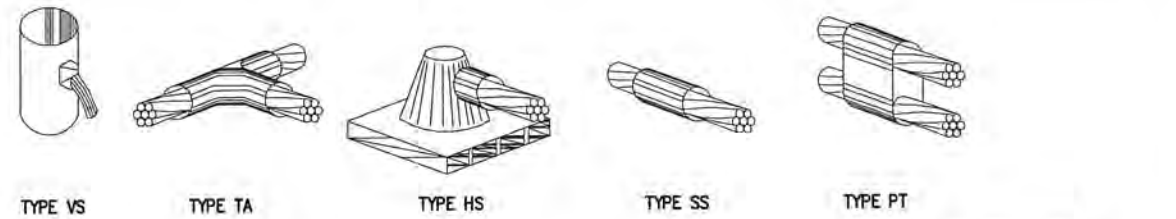
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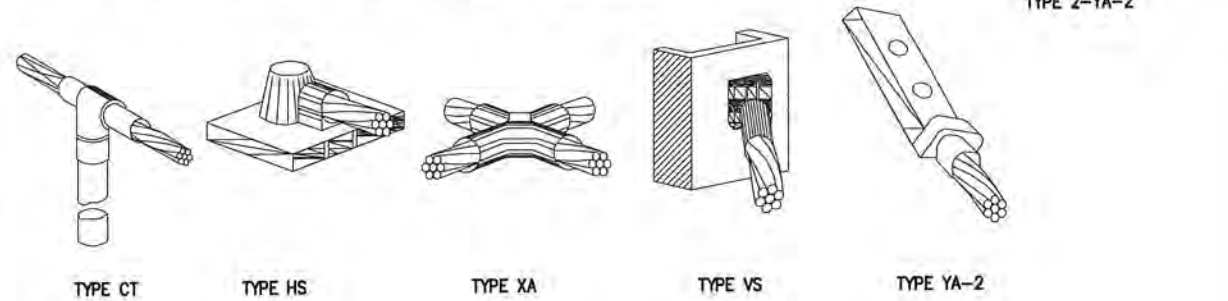
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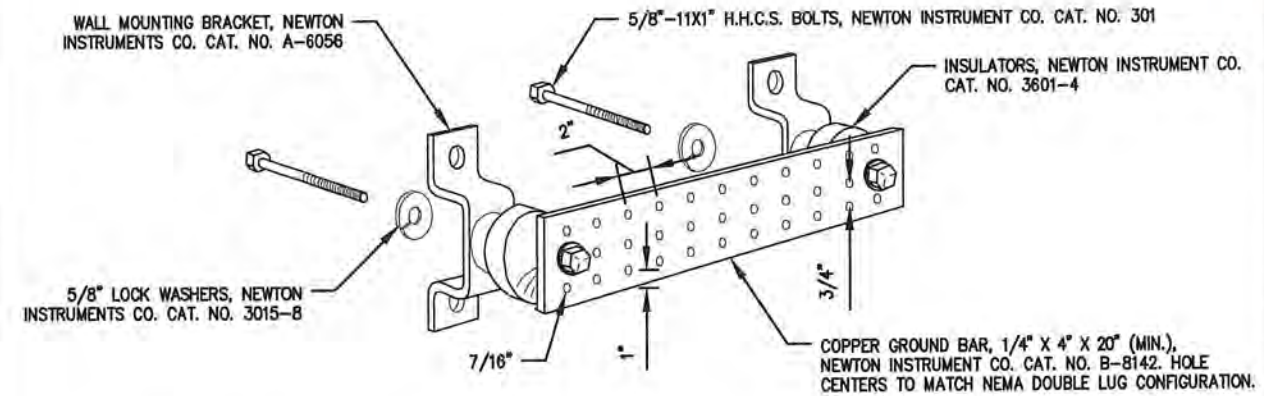
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N1



NOTE: ERICO CADWELD "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH PROJECT MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.

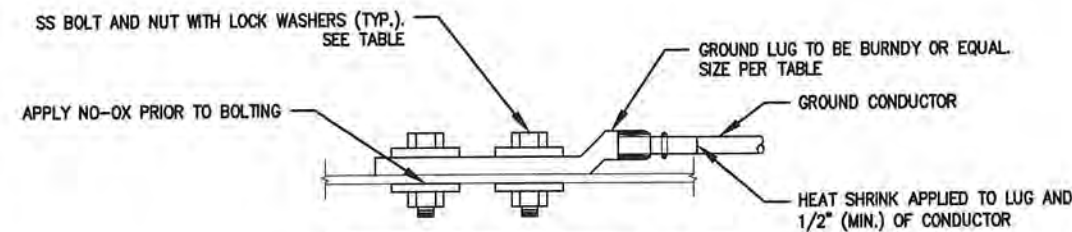


1 TYPICAL DETAILS
SCALE: N.T.S.



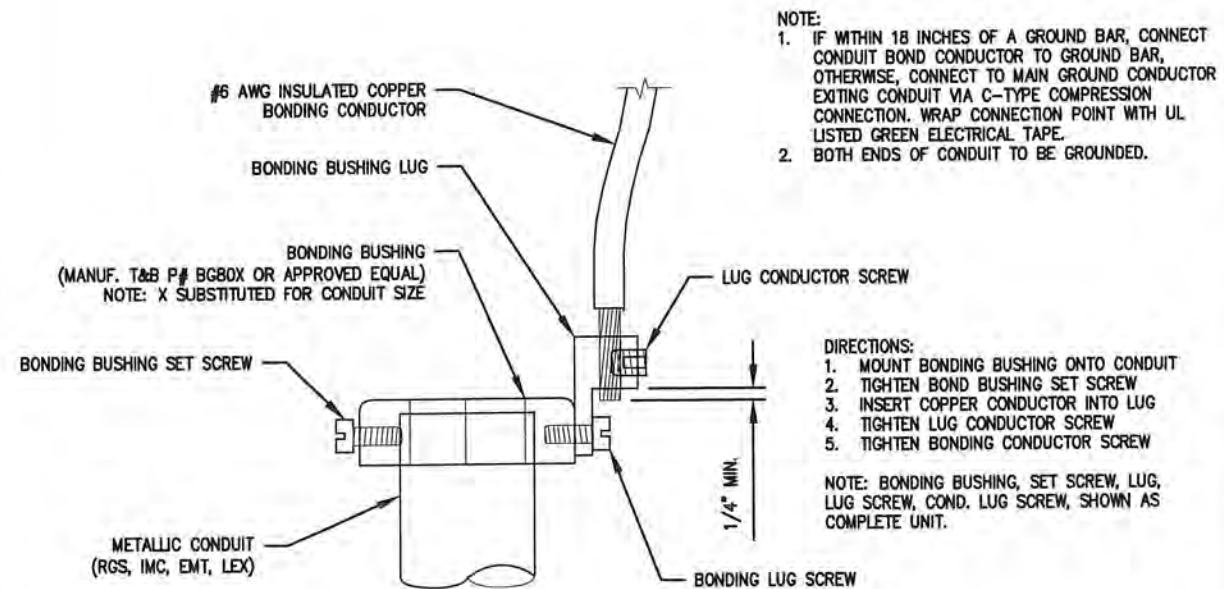
- NOTES:
1. GROUND BAR SHALL BE SIZED TO ACCOMMODATE ALL GROUNDING CONNECTIONS REQUIRED PLUS PROVIDE 50% SPARE CAPACITY.
 2. GROUND BAR SHALL BE NEITHER FIELD FABRICATED NOR NEW HOLES DRILLED.
 3. GROUND LUGS SHALL MATCH THE HOLE SPACING ON THE BAR.
 4. HARDWARE DIAMETER SHALL BE A MINIMUM 3/8\"

2 TYP. GROUND BAR DETAIL
SCALE: N.T.S.



WIRE SIZE	LUG #	BOLT DIA.
#6 AWG	YA6C2TC14E2	1/4"
#2 AWG	YA2CL-2TC14	1/4"
#2 AWG SOLID	YA3C2TC38	3/8"
#2/O AWG	YA262LN	1/2"
#4/O AWG	YA262LN	1/2"

3 TYP. TWO-HOLE LUG DETAIL
SCALE: N.T.S.



- NOTE:
1. IF WITHIN 18 INCHES OF A GROUND BAR, CONNECT CONDUIT BOND CONDUCTOR TO GROUND BAR, OTHERWISE, CONNECT TO MAIN GROUND CONDUCTOR EXITING CONDUIT VIA C-TYPE COMPRESSION CONNECTION. WRAP CONNECTION POINT WITH UL LISTED GREEN ELECTRICAL TAPE.
 2. BOTH ENDS OF CONDUIT TO BE GROUNDED.

- DIRECTIONS:
1. MOUNT BONDING BUSHING ONTO CONDUIT
 2. TIGHTEN BOND BUSHING SET SCREW
 3. INSERT COPPER CONDUCTOR INTO LUG
 4. TIGHTEN LUG CONDUCTOR SCREW
 5. TIGHTEN BONDING CONDUCTOR SCREW

NOTE: BONDING BUSHING, SET SCREW, LUG, LUG SCREW, COND. LUG SCREW, SHOWN AS COMPLETE UNIT.

4 TYP. CONDUIT GROUNDING DETAIL
SCALE: N.T.S.

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1.15 QUALITY ASSURANCE

- A. CONTRACTOR SHALL PROTECT AREAS FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO NEW AND EXISTING CONSTRUCTION, STRUCTURE, OR EQUIPMENT SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF THE TENANT OR BUILDING OWNER, OR OWNER'S REPRESENTATIVE AT THE EXPENSE OF THE CONTRACTOR.
- B. CONTRACTOR SHALL BE RESPONSIBLE FOR, AND SHALL REPLACE OR REMEDY ANY FAULTY, IMPROPER, OR INFERIOR MATERIALS OR WORKMANSHIP OR ANY DAMAGE WHICH SHALL APPEAR WITHIN ONE YEAR AFTER THE COMPLETION AND ACCEPTANCE OF THE WORK UNDER THIS CONTRACT.
- C. CONTRACTOR SHALL NOTIFY VERIZON IF DRAWING DETAILS ARE CONSIDERED UNSOUND, UNSAFE, NOT WATERPROOF, NOT CHEMICAL PROOF, OR NOT WITHIN CUSTOMARY TRADE PRACTICES. IF CONTRACTOR BEGINS CONSTRUCTION UNDER THESE CONDITIONS, VERIZON ASSUMES THAT THERE IS NO OBJECTION TO DRAWING DETAILS.

1.16 TEMPORARY FACILITIES

- A. CONTRACTOR SHALL PROVIDE TEMPORARY WATER, POWER, AND TOILET FACILITIES AS REQUIRED BY THE CITY OF GOVERNING AGENCIES.

1.17 PERMITS

- A. CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK.
- B. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY AS REQUESTED BY VERIZON.
- C. WORK PERFORMED AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.
- D. CONTRACTOR SHALL MEET ALL OF THE REGULATORY REQUIREMENTS OF THE JURISDICTION GOVERNING CONSTRUCTION; SUCH AS TOWER CONSTRUCTION, EQUIPMENT SETUP, GENERATOR SETUP, AND FINAL CONSTRUCTION.

1.18 SAFETY

- A. CONTRACTOR, HIS EMPLOYEES, ANY THIRD PARTY SUBCONTRACTORS, VENDORS, THEIR RESPECTIVE EMPLOYEES AND CONTRACTOR'S VISITORS SHALL COMPLY WITH ALL SAFETY STANDARDS, ACCIDENT PREVENTION REGULATIONS AND ENVIRONMENTAL REGULATIONS TO AVOID THE RISK OF BODILY HARM TO ANY PERSON AND THE RISK OF DAMAGE TO ANY PROPERTY, EQUIPMENT, OR MATERIAL.
- B. CONTRACTOR SHALL ALSO COMPLY WITH ANY SAFETY AND HEALTH PROGRAMS AND/OR RULES PROMULGATED BY VERIZON.
- C. CONTRACTOR SHALL PERFORM DAILY SAFETY TAILGATE MEETINGS PRIOR TO COMMENCING WORK. THE TOPIC, DISCUSSION AND ATTENDANCE OF EACH MEETING SHALL BE LOGGED IN THE DAILY FIELD REPORT TO BE PROVIDED TO VERIZON AFTER DAILY WORK COMPLETION.

1.19 STARTUP AND COMMISSIONING

- A. CONTRACTOR AND/OR SUBCONTRACTORS SHALL DEMONSTRATE TO VERIZON THAT ALL SYSTEMS AND SUB-SYSTEMS INSTALLED UNDER THIS CONTRACT OPERATE PROPERLY AND IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
- B. CONTRACTOR IS REQUIRED TO SUBMIT THE RESULTS OF ALL TESTS REQUIRED BY THE PROJECT REQUIREMENTS AND DRAWINGS THAT FALL WITHIN THE SCOPE OF WORK TO VERIZON WITHIN (5) DAYS OF THE TEST. AT A MINIMUM, THE FOLLOWING TESTS RESULTS SHALL BE INCLUDED:
- COAXIAL CABLE SWEEP TESTING (VSWR, RETURN LOSS, AND DISTANCE-TO-FAULT FORMATS PERFORMED IN SHORT, WITH LOAD, AND WITH ANTENNA)
 - FIBER TESTS PER VERIZON STANDARDS.
 - TAPE DROP TESTS TO VERIFY ANTENNA MOUNTING HEIGHT (AGL), AZIMUTH, AND DOWN TILT. INSTALLED AZIMUTH, CENTERLINE, AND DOWN TILT MUST CONFORM TO RF CONFIGURATION DATA IN THE DRAWINGS.
 - CONCRETE COMPRESSION TESTS.
 - FUEL LEAKAGE TEST FOR FUEL TANK AND PIPING INSTALLATION WORK.
 - GROUND RESISTANCE TEST FOR CONCRETE WORK.
 - SOIL/BACKFILL COMPRESSION TESTING.
 - ANY OTHER TEST THAT MAY BE JURISDICTIONALLY OR OTHERWISE REQUIRED.
 - UPS SYSTEM STARTUP.
 - GENERATOR SYSTEM STARTUP.
- C. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL CORRECTIONS TO ANY WORK IDENTIFIED AS UNACCEPTABLE IN SITE INSPECTION ACTIVITIES, INSPECTIONS, AND/OR TESTING RESULTS.
- D. VERIZON WILL PROVIDE A CERTIFICATE OF COMPLETION AND APPROVE ALL FINAL PAYMENTS WHEN ALL PUNCH-LIST ITEMS HAVE BEEN CORRECTED AND ALL SYSTEMS ARE ACCEPTABLE AND IN OPERATION PER MANUFACTURER SPECIFICATIONS AND THE SCOPE OF WORK IN THESE CONSTRUCTION DRAWINGS AND ANY ADDITIONAL IDENTIFIED SCOPE OF WORK.

CERTIFICATION AND SEAL:
I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS
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THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER
THE LAWS OF THE STATE OF IOWA

02/03/2020

(SIGNATURE) DATE
M. H. CATALINA MARTINEZ
LICENSE NUMBER: 23482
MY LICENSE RENEWAL DATE IS: DEC. 31ST, 2021



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GENERAL NOTES

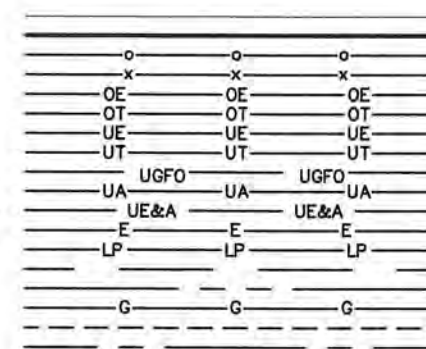
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ABBREVIATION	DEFINITION	ABBREVIATION	DEFINITION
AAV	ACCELERATED ACCESS VENDOR	MECH	MECHANICAL
AB	ANCHOR BOLT	MFR	MANUFACTURER
ABV	ABOVE	MGB	MASTER GROUND BAR
ACCA	ANTENNA CABLE COVER ASSEMBLY	MIN	MINIMUM
ADD'L	ADDITIONAL	MISC	MISCELLANEOUS
AFF	ABOVE FINISHED FLOOR	MTL	METAL
AFG	ABOVE FINISHED GRADE	(N)	NEW
AGL	ABOVE GRADE LEVEL	NO (#)	NUMBER
ALT	ALTERNATE	NTS	NOT TO SCALE
ALUM	ALUMINUM	OC	ON CENTER
AMSL	ABOVE MEAN SEA LEVEL	OE/OT	OVERHEAD ELECTRIC/TELCO
ANT	ANTENNA	OPNG	OPENING
APPROX	APPROXIMATE	(P)	PROPOSED
ARCH	ARCHITECT(URAL)	R	PLATE OR PROPERTY LINE
AWG	AMERICAN WIRE GAUGE	P/C	PRECAST CONCRETE
B/U	BACK-UP CABINET	PCS	PERSONAL COMMUNICATION SERVICES
BBS	BATTERY BACK UP STATION	PLY	PLYWOOD
BLK	BLOCK	PPC	POWER PROTECTION CABINET
BLDG	BUILDING	PRC	PRIMARY RADIO CABINET
BLKG	BLOCKING	PSI	POUNDS PER SQUARE INCH
BTCW	BARE TINNED COPPER WIRE	PSF	POUNDS PER SQUARE FOOT
BTS	BASE TRANSMISSION STATION	PT	PRESSURE TREATED
BM	BEAM	PWR	POWER (CABINET)
BOF	BOTTOM OF FOOTING	QTY	QUANTITY
BN	BOUNDARY NAILING	RAD (R)	RADIUS
@	CENTERLINE	RBS	RADIO BASED STATION
CAB	CABINET	REF	REFERENCE
CANT	CANTILEVER(ED)	REQ'D	REQUIRED
CIP	CAST IN PLACE	REINF	REINFORCEMENT(ING)
CLG	CEILING	RGS	RIGID GALVANIZED STEEL
CLR	CLEAR	RRH	REMOTE RADIO HEAD
CND	CONDUIT	RRU	REMOTE RADIO UNIT
COL	COLUMN	SCH	SCHEDULE
CONC	CONCRETE	SF	SQUARE FOOT
CONN	CONNECTION(OR)	SHT	SHEET
CONT	CONTINUOUS	SIM	SIMILAR
d	PENNY (NAILS)	SPEC	SPECIFICATION(S)
DEPT	DEPARTMENT	SQ	SQUARE
DIA	DIAMETER	SS	STAINLESS STEEL
DIAG	DIAGONAL	STD	STANDARD
DIM	DIMENSION	STL	STEEL
DBL	DOUBLE	STRUC	STRUCTURAL
DF	DOUGLAS FIR	TC	TOWERCLOUD
DWG	DRAWING(S)	TEMP	TEMPORARY
(E)	EXISTING	THK	THICK(NESS)
EA	EACH	TMA	TOWER MOUNTED AMPLIFIER
EGS	EQUIPMENT GROUND BAR	TN	TOE NAIL
ELEC	ELECTRICAL	TOA	TOP OF ANTENNA
ELEV (EL)	ELEVATION	TOC	TOP OF CURB
EN	EDGE NAIL	TOF	TOP OF FOUNDATION
ENGR	ENGINEER	TOP	TOP OF PLATE (PARAPET)
EMT	ELECTRICAL METALLIC TUBING	TOS	TOP OF STEEL
EQ	EQUAL	TOW	TOP OF WALL
EQUIP	EQUIPMENT	XFMR	TRANSFORMER
EXP	EXPANSION	TYP	TYPICAL
EXT	EXTERIOR	UE/UT	UNDERGROUND ELECTRIC/TELCO
F	FIBER	UG	UNDERGROUND
FAB	FABRICATION(OR)	UL	UNDERWRITERS LABORATORY
FF	FINISH FLOOR	UNO	UNLESS NOTED OTHERWISE
FG	FINISH GRADE	VIF	VERIFY IN FIELD
FN	FIBERNET	W	WIDE(WIDTH)
FOC	FACE OF CONCRETE	W/	WITH
FOM	FACE OF MASONRY	WD	WOOD
FOS	FACE OF STUD	WP	WEATHERPROOF
FOW	FACE OF WALL	WT	WEIGHT
FS	FINISH SURFACE		
FIN	FINISH(ED)		
FLR	FLOOR		
FT (')	FOOT(FEET)		
FTG	FOOTING		
FND	FOUNDATION		
G	GROWTH (CABINET)		
GA	GAUGE		
GALV	GALVANIZED		
GC	GENERAL CONTRACTOR		
GLB (GLU LAM)	GLUE LAMINATED BEAM		
GND	GROUND		
GFI	GROUND FAULT CIRCUIT INTERRUPTER		
GPS	GLOBAL POSITIONING SYSTEM		
HGR	HANGER		
HDR	HEADER		
HT	HEIGHT		
ICGB	ISOLATED COPPER GROUND BUS		
IN (")	INCH(ES)		
INT	INTERIOR		
L	LONG(ITUDINAL)		
LB	LAG BOLTS		
LB(S) or #	POUND(S)		
LF	LINEAR FEET (FOOT)		
LTE	LONG TERM EVOLUTION		
MAS	MASONRY		
MAX	MAXIMUM		
MB	MACHINE BOLT		

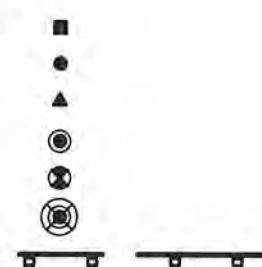
LINE TYPES

EXISTING LAYER
PROPOSED LAYER
CHAIN-LINK FENCE
BARBED-WIRE FENCE
OVERHEAD POWER
OVERHEAD TELCO
UNDERGROUND POWER
UNDERGROUND TELCO
UNDERGROUND FIBER
UNDERGROUND ALARM
UNDERGROUND POWER & ALARM
INTERIOR ELECTRICAL CONDUIT
UNDERGROUND LP FUEL
COAX CABLE
HYBRID CABLE
INTERIOR GROUND LINE
EXTERIOR GROUND LINE
PROPERTY LEASE LINE



GROUNDING SYMBOLS

IRREVERSIBLE CONNECTION
EXOTHERMIC
MECHANICAL CONNECTION
COPPER GROUND ROD
CHEM ROD
GROUND ROD TEST-WELL
12"/20" GROUND BAR



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CIVIL NOTES
PART 1 WORK AND DRAINAGE

1.1 SUMMARY OF WORK

- A. REFER TO COMPLETE DRAWING SET AND REFERENCED SPECIFICATIONS, STANDARDS, AND PERMITTING JURISDICTION REGULATIONS FOR WORK INCLUDED.
- B. APPLY SOIL STERILIZER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- C. VEGETATION AND LANDSCAPING, IF INCLUDED IN THE SCOPE OF WORK, WILL BE PLACED AND MAINTAINED AS RECOMMENDED BY NURSERY INDUSTRY STANDARDS.
- D. EARTH FILL COMPACTION SHALL BE ACCOMPLISHED BY MECHANICAL MEANS.

1.2 RELATED WORK

- A. CONSTRUCTION OF SHELTER/EQUIPMENT CABINET PLATFORM FOUNDATION.
- B. EQUIPMENT PLATFORM OFFLOADING AND SETUP.
- C. INSTALLATION OF GROUNDING AND ELECTRICAL SYSTEM.
- D. INSTALLATION OF ANTENNA SYSTEMS.

1.3 DESCRIPTION

- A. ACCESS ROADS, TURNAROUND AREAS, AND COMPOUND AREAS SHALL BE CONSTRUCTED TO PROVIDE A WELL-DRAINED, EASILY MAINTAINED, EVEN SURFACE FOR MATERIAL AND EQUIPMENT DELIVERIES, AND SITE PERSONNEL ACCESS.

1.4 MATERIALS

- A. ACCESS ROAD AND SITE MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND PERMITTING REGULATIONS.
- B. SOIL HERBICIDE SHALL BE EPA REGISTERED OF LIQUID COMPOSITION AND OF PRE-EMERGENCE DESIGN.
- C. SOIL STABILIZER FABRIC SHALL BE MIRAFI-100X.

1.5 INSTALLATION

- A. CONFIRM SITE SURVEY AND INSTALLATION OF CONSTRUCTION STAKES IN TOWER CENTER, FOUNDATION CORNERS (SHELTER/CABINET PROTECTION, GENERATOR, FUEL TANK), AND FENCE CORNERS PRIOR TO CONSTRUCTION.
- B. INSTALL SILT FENCE OR OTHER REQUIRED EROSION CONTROL MATERIALS DOWN GRADIENT OF CONSTRUCTION AREA.
- C. PERFORM CLEARING OF HEAVY GROWTH OF GRASS, TREES, SHRUBS, AND TOPSOIL OF THE COMPLETE ACCESS ROAD RIGHT OF WAYS AND SITE AREA PRIOR TO FOUNDATION CONSTRUCTION OR PLACEMENT OF BACKFILL.
- D. CONSTRUCT TEMPORARY CONSTRUCTION ZONE ALONG ACCESS DRIVE WHEN REQUIRED FOR NEW TOWERS.
- E. THE SITE AREA WILL BE BROUGHT TO SUB-BASE COURSE ELEVATION AND THE ACCESS ROAD TO BASE COURSE ELEVATION PRIOR TO FORMING AND POURING FOUNDATIONS.
- F. APPLY SOIL HERBICIDE PRIOR TO PLACING BASE MATERIALS.
- G. IF REQUIRED, GRADE, SEED, FERTILIZE AND MULCH DISTURBED AREAS IMMEDIATELY AFTER BRINING THE SITE AND ACCESS ROAD TO BASE COURSE ELEVATION. WATER TO ENSURE GROWTH.
- H. REMOVE GRAVEL FROM TEMPORARY CONSTRUCTION ROAD FOR HEAVY DUTY EQUIPMENT ACCESS.
- I. AFTER APPLICATION OF FINAL SURFACES, APPLY SOIL HERBICIDES TO THE STONE SURFACE.

PART 2 SITE PREPARATION

2.1 INSPECTIONS

- A. LOCAL BUILDING INSPECTIONS SHALL BE SCHEDULED IN ADVANCE PER REGULATORY JURISDICTION REQUIREMENTS FOR CONCRETE POURS, TOWER ERECTIONS, AND CABINET PLATFORM PLACEMENTS.

2.2 SITE CLEARING

- A. PERFORM CLEARING AS PER 1.5.C.
- B. PRIOR TO CONSTRUCTION EFFORTS, CLEAR THE SITE AREA OF ORGANIC MATERIALS TO A MINIMUM OF 6 FEET BELOW GROUND LEVEL.
- C. CONSULT WITH VERIZON CONSTRUCTION MANAGER AND OWNER REPRESENTATIVE PRIOR TO THE REMOVAL OF LARGE TREES, BRUSH OR DEBRIS FROM THE PROPERTY.
- D. CONTRACTOR SHALL PROOF ROLL THE SOIL PRIOR TO PLACEMENT OF SITE EARTH FILL OR BASE MATERIALS.
- E. WHERE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, COVER CLEARED AREAS WITH STABILIZER MAT PRIOR TO PLACEMENT OF FILL OR BASE MATERIAL.


2.3 SOIL AND EROSION CONTROL

- A. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL, AND OTHER REQUIREMENTS OF GOVERNMENTAL AUTHORITIES HAVING JURISDICTION.
- B. EROSION CONTROL DEVICES SHALL BE INSTALLED BEFORE GROUND DISTURBANCE OCCURS. CONTRACTOR IS RESPONSIBLE OF ACCOMPLISHING EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE CONSTRUCTION MANAGER IMMEDIATELY.
- C. CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES UNTIL PERMANENT VEGETATION HAS BEEN ESTABLISHED.
- D. CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
- E. FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES MAY RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED.
- F. ALL SILT BARRIERS MUST BE PLACED AS ACCESS IS OBTAINED DURING CLEARING.
- G. GRADING SHALL NOT BEGIN UNTIL SILT BARRIER IS INSTALLED.
- H. ANY AREA OF DISTURBANCE LEFT EXPOSED OR THAT IS ANTICIPATED TO BE EXPOSED BEYOND THE EXPOSURE PERIOD REQUIRED BY LOCAL AUTHORITIES SHALL BE STABILIZED WITH TEMPORARY SEEDING.
- I. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROVIDED IF REQUIRED UPON INSPECTION BY AND DIRECTION FROM LOCAL AUTHORITIES.
- J. UPON COMPLETION OF WORK, OR AS DIRECTED BY EROSION CONTROL AUTHORITIES, ALL DISTURBED AREAS NOT IMPROVED WITH GRAVEL SHALL BE SEEDED WITH PERMANENT SEEDING MATERIAL SUITABLE FOR THE LOCAL GROWING AREA.
- K. A COPY OF THE APPROVED LAND DISTURBANCE PLAN AND PERMIT, IF REQUIRED, SHALL BE PLACED ON SITE WHENEVER LAND DISTURBANCE ACTIVITY IS IN PROGRESS.

2.4 INSTALLATION

- A. THE COMPOUND AND TURNAROUND AREAS SHALL BE AT THE SUB BASE COURSE ELEVATION PRIOR TO FORMING FOUNDATIONS.
- B. GRADE OR FILL THE SITE AND ACCESS ROAD AS REQUIRED RESULTING FROM FOUNDATION INSTALLATIONS.
- C. IF ANY, EXCESS SPOILS WILL BE CLEARED FROM THE JOB SITE AND NOT SPREAD BEYOND THE LIMITS OF THE OWNER OR LEASED PROPERTY.
- D. THE ACCESS ROAD SHALL BE BROUGHT TO BASE COURSE ELEVATION PRIOR TO FOUNDATION FORMING, CONSTRUCTION AND POURING TO PERMIT USE. COMPACTION SHALL BE DONE DURING CONSTRUCTION OF THE SITE.
- E. GRADE OR FILL THE AREAS WHERE WATER MAY POND AND BRING TO GROUND LEVEL.
- F. THE FINISH GRADE AND GRAVEL AREA SHALL EXTEND ONE FOOT BEYOND THE SITE FENCE BOUNDARIES AND SHALL COVER THE SITE COMPOUND AS INDICATED IN THESE DRAWINGS.
- G. RIP RAP SHALL BE APPLIED TO THE SIDES OF DITCHES OR DRAINAGE, SWALES.
- H. RIP RAP ENTIRE DITCH FOR 6'-0" IN ALL DIRECTIONS AT CULVERT OPENINGS OR AS INDICATED IN THESE DRAWINGS.
- I. SEED, FERTILIZER AND STRAW COVER SHALL BE APPLIED TO ALL OTHER DISTURBED AREAS AND DITCHES, DRAINAGE, SWALES NOT OTHERWISE RIP RAPPED.
- J. DITCHES, SWALES, OR CULVERTS WILL NOT BE PLACED SO THEY DIRECT WATER TOWARDS THE SITE OR PERMIT STANDING WATER AT OR SURROUNDING THE SITE. REFERENCE SITE GRADING PLAN IN THESE CONSTRUCTION DRAWINGS. IF CONFLICTS EXIST, CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER IMMEDIATELY.
- K. SEED AND FERTILIZER SHALL BE APPLIED TO SURFACE CONDITIONS, WHICH WILL ENCOURAGE ROOTING.
- L. CONTRACTOR SHALL PLACE SEEDS AS DIRECTED BY THE SEED PRODUCER.
- M. CONTRACTOR SHALL ENSURE GROWTH OF SEEDED AREAS AND LANDSCAPED AREAS BY WATERING NEW SEEDS AND LANDSCAPING UP TO THE POINT OF CONTRACT FINAL ACCEPTANCE.
- N. COMPACTION SHALL BE AT LEAST 95% OF MAXIMUM DENSITY AND WITHIN THE RANGE OF -1% TO +3% OF OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557.
- O. CONTRACTOR SHALL WRAP, TIE WITH HOSE-PROTECTED WIRE, AND SECURE ALL TREES PLACED UNDER THE LANDSCAPING SCOPE OF THE CONTRACT.
- P. ALL EXPOSED AREAS SHALL BE PROTECTED AGAINST WASHOUTS AND SOIL EROSION.

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(SIGNATURE)  DATE 02/03/2020
TYLER B. BOLINGER
LICENSE NUMBER: 23306
MY LICENSE RENEWAL DATE IS: DEC. 31ST, 2021



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CIVIL NOTES CONTINUED

PART 3 EXCAVATIONS & FOUNDATIONS

CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SUBSURFACE AND EXISTING CONDITIONS BEFORE COMMENCING WORK.

3.1 STRUCTURAL BACKFILL

- A. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL SUPERFICIAL VEGETATION, ANY DELETERIOUS MATERIALS WHICH MAY BE PRESENT AND ALL SOIL REQUIRED TO PROVIDE THE STRUCTURAL FILL PAD OF UNIFORM THICKNESS. FOR SLAB-ON-GRADE, AT LEAST 12 INCHES BELOW THE BOTTOM OF THE SLAB.
- B. IF SOFT, WEAK, OR UNSTABLE SOIL CONDITIONS ARE REVEALED, EXCAVATE THE AREA TO DEEPER DEPTH AND BRING BACK TO GRADE USING STRUCTURAL FILL.
- C. CONTRACTOR SHALL REMOVE ALL DEBRIS, WET, AND UNSATISFACTORY SOIL MATERIALS FROM GROUND SURFACE PRIOR TO PLACING STRUCTURAL BACKFILLS.
- D. ALL STRUCTURAL BACKFILL AND SUB-BASE UNDER SLABS SHALL BE SELECT STRUCTURAL FILL MEETING THE GRADATION AND SOUNDNESS REQUIREMENTS IN ACCORDANCE TO THE FOLLOWING:
- E. THE MATERIAL SHALL HAVE THE FOLLOWING GRADATION:
- | SIEVE SIZE | % PASSING BY WEIGHT |
|------------|---------------------|
| 2 INCH | 100 |
| 1/4 INCH | 30 TO 85 |
| NO. 200 | 0 TO 10 |
- F. MATERIALS SHALL BE SUBSTANTIALLY FREE OF SHALE OR OTHER SOFT, POOR DURABILITY PARTICLES. IF TESTING IS SELECTED BY VERIZON, MATERIAL WITH A MAGNESIUM SULFATE SOUNDNESS LOSS EXCEEDING 30% WILL BE REJECTED.
- G. STRUCTURAL BACKFILL SHALL BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY PER ASTM D1557, UNLESS NOTED OTHERWISE.
- H. NON STRUCTURAL BACKFILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY PER ASTM D-698.
- I. ALL LOOSE AND/OR ORGANIC MATERIAL SHALL BE REMOVED PRIOR TO PREPARATION OF THE AREA FOR PLACEMENT OF STRUCTURAL BACKFILL.
- J. EXCAVATE ALL TOPSOIL TO STABLE SUB GRADE AND RE-COMPACT USING A PLATE TAMPER. ANY SOFT AREAS SHALL BE OVER-EXCAVATED TO STABLE MATERIAL AND BACKFILLED WITH MATERIALS AND COMPACTION REQUIREMENTS SHOWN IN THE DRAWINGS.
- K. PLACEMENT AND COMPACTION OF STRUCTURAL BACKFILL AND SUB BASE SHALL BE DONE IN 8 INCH LIFTS.
- L. CONTRACTOR SHALL GRADE SITE LEVEL A MINIMUM OF 2'-0" BEYOND PROPOSED EQUIPMENT COMPOUND FOOTPRINT. THEN, TAPER TO EXISTING GRADE IF REQUIRED AT A MINIMUM OF 3:1 SLOPE UNLESS SHOWN OTHERWISE ON THE SITE PLAN.

3.2 CONCRETE

- A. DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF THE FOLLOWING APPLICABLE CODES: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"; ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
- B. CONCRETE BREAK TESTS FOR THE PRELIMINARY DESIGN MIX PREPARED BY AN APPROVED LABORATORY MUST BE SUBMITTED TO THE CONSTRUCTION MANAGER FOR REVIEW AND APPROVAL. CONTRACTOR SHALL NOT PLACE CONCRETE WITHOUT THE APPROVED DESIGN MIX.
- C. MIX DESIGN SHALL BE APPROVED BY THE VERIZON REPRESENTATIVE PRIOR TO PLACING CONCRETE.
- D. CONCRETE SHALL BE NORMAL WEIGHT, 6% AIR ENTRAINED (+/- 1.5%) WITH A MAXIMUM 4 INCH SLUMP.
- E. UNLESS OTHERWISE NOTED, ALL CONCRETE SHALL BE NORMAL WEIGHT WITH A MINIMUM OF 4000 PSI AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH.
- | FOOTINGS | 4000 PSI |
|---------------|----------|
| SLAB-ON-GRADE | 4000 PSI |
- F. MAXIMUM AGGREGATE SIZE SHALL BE 1 INCH.
- G. THE FOLLOWING MATERIALS SHALL BE USED:
- | | |
|--------------------------|-------------------------|
| PORTLAND CEMENT: | ASTM C 150, TYPE 1 |
| REINFORCEMENT: | ASTM A 615, GRADE 60 |
| NORMAL WEIGHT AGGREGATE: | ASTM C 33 |
| WATER: | DRINKABLE |
| ADMIXTURES: | NON-CHLORIDE CONTAINING |
- H. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
- | | |
|---|--------------|
| CONCRETE CAST AGAINST EARTH | 3 INCHES |
| CONCRETE EXPOSED TO EARTH OR WEATHER: | |
| #5 AND LARGER | 2 INCHES |
| #5 AND SMALLER & WWR | 1-1/2 INCHES |
| CONCRETE NOT EXPOSED TO EARTH OR NOT CAST AGAINST THE GROUND: | |
| SLAB AND WALL | 3/4 INCHES |
| BEAMS AND COLUMNS | 1-1/2 INCHES |
- I. CURING COMPOUNDS SHALL CONFORM TO ASTM C-309.
- J. ADMIXTURES SHALL CONFORM TO ASTM STANDARD AS REFERENCED IN ACI-301.
- K. DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.

- L. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR SHALL BE PER MANUFACTURER WRITTEN RECOMMENDATIONS. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE.
- M. FOR COLD WEATHER AND HOT WEATHER CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS MINIMUM.
- N. DO NOT PLACE CONCRETE IN WATER, ICE, OR IN FROZEN GROUND.
- O. DO NOT ALLOW CONCRETE SUB-BASE TO FREEZE DURING CONCRETE CURING AND SETTING PERIOD, OR FOR A MINIMUM OF 14 DAYS AFTER PLACEMENT.
- P. POUR CONCRETE IN A UNIFORM MANNER TO PREVENT THE FORMATION OF COLD JOINTS AND OTHER PLANES OF WEAKNESS. VIBRATE THE CONCRETE TO FULLY EMBED REINFORCING. DO NOT USE VIBRATORS TO TRANSPORT CONCRETE THROUGH CHUTES OR FORM WORK.

3.3 REINFORCEMENTS

- A. REINFORCING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 315.
- B. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60 (FY=60,000 PSI), DEFORMED UNLESS NOTED OTHERWISE.
- C. ALL REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A-706. CONTRACTOR SHALL PROVIDE VERIZON WITH AN AFFIDAVIT OF THE PRODUCER CERTIFYING THAT THE STEEL MEETS THE REQUIREMENTS OF THE ASTM.
- D. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE.
- E. WELDING OF REINFORCEMENT BARS, WHEN ACCEPTED BY THE STRUCTURAL ENGINEER, SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STANDARD D1.4; ELECTRODES FOR SHOP AND FIELD WELDING FOR REINFORCEMENT BARS SHALL CONFORM TO ASTM A233, CLASS E90XX.
- F. REINFORCEMENT BARS SHALL NOT BE TACK WELDED, WELDED, HEATED OR CUT UNLESS INDICATED ON THE CONTRACT DOCUMENTS AND APPROVED BY THE STRUCTURAL ENGINEER.
- G. SPLICES SHALL BE CLASS B AND ALL HOOKS SHALL BE STANDARD, UNO.
- H. HORIZONTAL FOOTING AND HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS AND SHALL HAVE 90-DEGREE BENDS AND EXTENSIONS, OR CORNER BARS OF EQUIVALENT SIZE LAPPED 36 BAR DIAMETERS, AT CORNERS AND INTERSECTIONS.
- I. ALL REINFORCEMENT SHALL BE SECURELY HELD IN PLACE WHILE PLACING CONCRETE. IF REQUIRED, CONTRACTOR SHALL PROVIDE ADDITIONAL BARS OR STIRRUPS NECESSARY TO SUPPORT ALL BARS AS REQUIRED TO COMPLETE THE WORK.

3.4 FOUNDATIONS

- A. SUB GRADE BELOW FOUNDATIONS SHALL BE REVIEWED AND ACCEPTED BY A GEOTECHNICAL ENGINEER BEFORE CONCRETE SLAB PLACEMENT.
- B. FOUNDATION EXCAVATION SHALL BE HAND-TRIMMED TO REMOVE LOOSE MATERIALS.
- C. DO NOT ALLOW GROUND BENEATH FOOTINGS TO FREEZE. PROVIDE DEWATERING AS REQUIRED.
- D. A RIGID TEMPLATE SHALL BE USED TO INSTALL ALL FOUNDATIONS.
- E. SLAB-ON-GRADE FOUNDATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ENGINEERING DESIGN.
- F. PLACE A 10 MIL POLYOLEFIN, ASTM E 1745 (CLASS A), VAPOR BARRIER OVER COMPACTED SOIL PRIOR TO PLACING FOUNDATION SLABS.
- G. THE TROWELED FINISHED CONCRETE SLAB-ON-GRADE FLOOR PROFILE SHALL COMPLY WITH FLATNESS AND LEVELNESS VALUES AS PER ASTM E 1155.

3.5 UTILITY LOCATE

- H. CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES.
- I. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.

3.6 MISCELLANEOUS

- A. ALL GROUT FOR STEEL BEARING AND LEVELING SHALL BE NON-METALLIC, NO SHRINK WITH A MINIMUM STRENGTH OF 5,000 PSI AT 28-DAY.
- B. GROUT SHALL CONFORM TO ASTM C827.
- C. PRE-GROUTING OF BASE PLATES WILL NOT BE ALLOWED.
- D. EVERY EFFORT SHALL BE MADE TO KEEP EXCAVATIONS DRY SHOULD GROUNDWATER BE ENCOUNTERED.
- E. TRAFFIC OF HEAVY EQUIPMENT (INCLUDING HEAVY COMPACTION EQUIPMENT) MAY CREATE PUMPING AND GENERAL DETERIORATION OF THE SHALLOWER SOILS.
- F. IF NECESSARY, RUBBISH, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- A. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION.
- B. EROSION CONTROL MEASURES, IF REQUIRED, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
- C. CONTRACTOR SHALL GRADE THE SITE TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE COMPOUND AND OTHER SITE IMPROVEMENT AREAS.
- D. SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- E. ALL AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE SITE IMPROVEMENTS SHALL BE GRADED BY THE CONTRACTOR TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED IN THE DRAWINGS.

PART 4 FENCING

4.1 SUMMARY OF WORK

- A. CONTRACTOR SHALL INSTALL FENCING AS INDICATED IN THE DRAWINGS, INCLUDING SIZE AND LOCATION OF FENCE AND GATES. ANY ALTERNATE CONFIGURATION MUST BE APPROVED BY VERIZON. CONTRACTOR SHALL NOT INSTALL FENCING UNLESS HE IS PROVIDED A PURCHASE ORDER.
- B. ACCESS ROAD GATES SHALL BE INSTALLED AS INDICATED IN THE DRAWINGS.

4.2 DESCRIPTION

- A. SECURITY FENCING INHIBITS UNAUTHORIZED ACCESS TO THE SITE COMPOUND AREA.

4.3 SEQUENCING

- A. CONTRACTOR SHALL NOT BEGIN FENCING INSTALLATION AND ERECTION BEFORE FINAL GRADING IS COMPLETED, UNLESS OTHERWISE PERMITTED.
- B. DRILL OR HAND-EXCAVATE (USING POST-HOLE DIGGER) HOLES FOR POSTS TO DIAMETERS AND SPACING INDICATED, IN FIRM, UNDISTURBED OR COMPACTED SOIL. ALL POST HOLE EXCAVATION SHALL BE BY USE OF MECHANICAL AUGER EQUIPMENT. 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.
- C. REMOVE POST HOLE SPOILS FROM SITE. DO NOT SET SPOILS ON AGGREGATE WITHOUT ADEQUATE PROTECTION.
- D. PROTECT PORTION OF POSTS ABOVE GROUND FROM CONCRETE SPLATTER. PLACE CONCRETE AROUND POSTS AND VIBRATE OR TAMP FOR CONSOLIDATED.
- E. CHECK EACH POST FOR VERTICAL AND TOP ALIGNMENT AND HOLD IN POSITION DURING PLACEMENT AND FINISHING OPERATIONS.
- F. UNLESS OTHERWISE SHOWN IN THE DRAWINGS, EXTEND CONCRETE FOOTING 1 INCH ABOVE GRADE AND TROWEL TO A CROWN TO SHED WATER.
- G. INSTALL FENCING, SWING GATES AND ACCESSORIES.
- H. INSTALL BARBED WIRE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- I. APPLY FABRIC TO OUTSIDE OF FRAMEWORK.

4.4 SPECIFICATIONS

- A. FENCE FABRIC SHALL CONFORM TO CHAIN LINK FENCE MANUFACTURERS INSTITUTE (CLFMI) PRODUCT MANUAL.
- B. FENCE INSTALLATION SHALL BE IN COMPLIANCE WITH ASTM F 567.
- C. SWING GATE INSTALLATION SHALL BE IN COMPLIANCE ASTM F 900.

4.5 MATERIALS

- A. ALL FABRIC WIRE, RAILS, POLES, HARDWARE AND OTHER STEEL MATERIALS SHALL BE HOT-DIPPED GALVANIZED.
- B. CONTRACTOR SHALL INSTALL ANGLE BRACKETS CANTED OUTWARD AT EACH POST FOR THREE STRANDS OF BARBED WIRE AND ONE FOOT WIDE.
- C. TOP RAIL PIPE SHALL BE GALVANIZED SCHEDULE 40, 1-5/8" OD.
- D. FABRIC SHALL EXTEND VERTICALLY SEVEN FEET ABOVE GRADE AND BE TWO-INCH CHAIN LINK ZINC-COATED MESH OF NO. 9 GAUGE (0.148") WIRE. FABRIC SHALL CONFORM TO THE SPECIFICATIONS OF ASTM A-392 CLASS 1.
- E. CORNER AND GATE POSTS SHALL BE COMMERCIAL GRADE 2-7/8" OD SCHEDULE 40.
- F. ALL FENCE LINE POSTS SHALL BE COMMERCIAL GRADE 2-3/8" OD SCHEDULE 40.
- G. A ZINC COATED MARCELLED TENSION WIRE ASTM A824, TYPE LL, SHALL BE INSTALLED AT THE BOTTOM OF THE FABRIC WITHIN 1 INCH OF FINISHED GRADE, TERMINATED WITH BAND CLIPS AT CORNER AND GATE POSTS.
- H. CONCRETE SHALL BE A MINIMUM OF 3,000 PSI.

4.6 INSTALLATION

- A. CONTRACTOR SHALL INSTALL FENCING TO COMPLY WITH ASTM F567.
- B. ALL FENCE POSTS AND GATE POSTS SHALL BE SET IN A VERTICAL POSITION AND PLUMB.
- C. AT CORNER POSTS, GATE POSTS AND SIDES OF GATE, FABRIC SHALL BE ATTACHED WITH STRETCHES AND TENSION BAND CLIPS AT 15 INCH INTERVALS.
- D. AT LINE POSTS, FABRIC SHALL BE ATTACHED WITH TIE-CLIPS AT 15 INCH INTERVALS.
- E. FABRIC SHALL BE ATTACHED TO BRACE RAILS, TENSION WIRE, AND TRUSS RODS WITH TIE-CLIPS AT TWO FOOT INTERVALS.
- F. A MAXIMUM GAP OF 1 INCH WILL BE PERMITTED BETWEEN THE CHAIN LINK FABRIC AND THE FINAL GRADE.

4.7 INSPECTION

- A. ALL POST HOLES SHALL BE EXCAVATED AS PER CONSTRUCTION DOCUMENTS TO CONFORM TO PROPER DEPTH AND DIAMETER.

PART 5 TENANT IMPROVEMENTS

5.1 FIRE PROTECTION

- A. CONTRACTOR SHALL PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2A OR 2A:10B; C WITHIN 75 FEET OF TRAVEL DISTANCE TO THE JOB SITE DURING CONSTRUCTION.
- B. ANY ALTERATION TO EXISTING FIRE PROTECTION FACILITIES WILL REQUIRE CLEARANCE AND PERMITS FROM THE GOVERNING FIRE DEPARTMENT AND OTHER AGENCIES BY A LICENSED FIRE PROTECTION CONTRACTOR.

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

02/03/2020
DATE

(SIGNATURE) TYLER B. BOLINGER
LICENSE NUMBER 23306
MY LICENSE RENEWAL DATE IS: DEC. 31ST, 2021

LICENSED PROFESSIONAL ENGINEER
TYLER B. BOLINGER
23306
IOWA

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ISSUED FOR: DATE
CONSTRUCTION REV 0 12/11/2019
SITE SKETCH REV V.2 12/16/2019
CONSTRUCTION REV 1 01/20/2020
CONSTRUCTION REV 2 02/03/2020

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RF1 RF NOTES
PART 1 ANTENNA SYSTEMS

1.1 SUMMARY OF WORK

- A. INSTALL ANTENNAS AND COAXIAL LINES, REMOTE RADIO HEADS (RRH'S), COAXIAL CABLE, FIBER CABLE, INSTALLATION AND SWEEP TESTING AS INDICATED ON DRAWINGS.
- B. INSTALL ICE BRIDGE AS INDICATED ON DRAWINGS.
- C. LABEL COAXIAL CABLES AND HYBRIFLEX FIBER CABLES.
- D. ANTENNA COAXIAL CABLES AND FIBER LENGTHS INDICATED ARE APPROXIMATE.

1.2 RELATED WORK

FURNISH THE FOLLOWING WORK AS SPECIFIED UNDER THESE CONSTRUCTION DRAWINGS, BUT COORDINATE WITH VERIZON PRIOR TO EXECUTION:

- A. PERFORMING EQUIPMENT SHELTER/CABINET PLATFORM CORING.
- B. SEALING AND CAULKING EXISTING OPENINGS OR THOSE RESULTING FROM CONSTRUCTION.
- C. PAINTING OF NEW OR EXISTING EQUIPMENT.
- D. CUTTING AND PATCHING OF NEW OR EXISTING EQUIPMENT.
- E. ENTRY PORT INSTALLATION.
- F. PERFORMING ANTENNA AND COAXIAL CABLES GROUNDING.

1.3 REQUIREMENTS OF REGULATORY AGENCIES

- A. FURNISH ONLY UL LISTED EQUIPMENT AND INSTALL IN CONFORMANCE TO UL STANDARDS, WHERE APPLICABLE.
- B. INSTALL ANTENNA CABLES AND GROUNDING SYSTEMS IN ACCORDANCE WITH THESE DRAWINGS AND RECOMMENDATIONS OR REQUIREMENTS FROM STATE AND LOCAL BUILDING CODES, SPECIAL CODES HAVING JURISDICTION OVER SPECIFIC PORTIONS OF THE WORK. CODES INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:
 - EIA - ELECTRICAL INDUSTRIES ASSOCIATION RS-222
 - FAA - FEDERAL AVIATION ADMINISTRATION, OBSTRUCTION MARKING AND LIGHTING
 - AISI - AMERICAN INSTITUTE OF STEEL CONSTRUCTION SPECIFICATION FOR STRUCTURAL JOINTS
 - NEC - NATIONAL ELECTRICAL CODE
 - UL - UNDERWRITERS' LABORATORIES APPROVED
 - FAA PART 77 RULES AND FCC PART 17 AND 22 RULES ARE APPLICABLE IN ALL CASES AND SUPERSEDE ANY OTHER STANDARD OF SPECIFICATION.

1.4 MATERIALS

CONTRACTOR SHALL PROVIDE AND INSTALL ANTENNA MOUNTS FOR THE SPECIFIED ANTENNAS, COAXIAL CABLE MOUNTING HARDWARE INCLUDING BUT NOT LIMITED TO HOISTING GRIPS, CABLE WEATHERPROOFING KITS, SNAP-IN HANGERS, GROUNDING KITS, ANGLE ADAPTERS (IF NECESSARY REFERENCE STRUCTURAL ANALYSIS FOR COAXIAL CABLE INSTALLATION REQUIREMENTS), CONNECTORS, AND OTHER MATERIALS AS INDICATED IN THESE CONSTRUCTION DRAWINGS.

- A. ANTENNAS AND RRH'S
 - INSTALL ANTENNAS AND RRH'S AS INDICATED ON DRAWINGS.
 - CONTRACTOR SHALL ASSEMBLE ALL ANTENNAS ON SITE IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
 - ANTENNA HEIGHT, AZIMUTH, AND FEED ORIENTATION INFORMATION SHALL BE INSTALLED AS INDICATED ON THESE DRAWINGS.
- B. HYBRIFLEX CABLE
 - HYBRIFLEX CABLE WILL BE DC/FIBER AND PROVIDED BY VERIZON AT EACH SITE. CABLE SHALL BE INSTALLED AS INDICATED ON THESE DRAWINGS AND MANUFACTURER SPECIFICATIONS.
- C. JUMPERS AND CONNECTORS
 - CONTRACTOR SHALL FURNISH AND INSTALL 1/2 INCH LDF COAX JUMPER CABLES BETWEEN THE RRH'S AND ANTENNAS.
 - JUMPERS SHALL BE FOAM DIELECTRIC. PART NUMBERS: LDF4-50A, FLC 12-50, CR 540, OR FXL 540. SUPERFLEX CABLES ARE NOT ACCEPTABLE.
 - JUMPER CABLES SHALL HAVE A MINIMUM LENGTH OF 6'-0".

1.5 ANTENNA INSTALLATION

- A. CONTRACTOR SHALL ASSEMBLE ALL ANTENNAS ON-SITE IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS. REFERENCE THESE CONSTRUCTION DRAWINGS FOR MOUNTING HEIGHT, AZIMUTH, AND FEED ORIENTATION PRIOR TO INSTALLATION.
- B. CONTRACTOR SHALL POSITION THE ANTENNA ON TOWER PIPE MOUNTS AND ENSURE THE BOTTOM STRUT IS LEVELED. PIPE MOUNTS SHALL BE PLUMB TO WITHIN 1 DEGREE.
- C. CONTRACTOR SHALL TERMINATE UNUSED ANTENNA PORTS WITH CONNECTOR CAP AND WEATHERPROOF THOROUGHLY.
- D. CONTRACTOR SHALL WEATHERPROOF UNUSED TMA AND RADIO UNIT PORTS.
- E. ALL ANTENNA AZIMUTHS TO BE FROM TRUE NORTH.

1.6 HYBRIFLEX CABLE INSTALLATION

- A. CONTRACTOR SHALL ROUTE, TEST, AND INSTALL ALL CABLES AS INDICATED ON THESE DRAWINGS AND IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- B. THE INSTALLED RADIUS OF THE CABLES SHALL NOT BE LESS THAN THE MANUFACTURER'S SPECIFICATIONS FOR BENDING RADIUS.

- C. ALL HYBRIFLEX CABLES SHALL BE INSTALLED INSIDE MONOPOLE, IF APPLICABLE WITH SITE TOWER STRUCTURE, WITH CABLE SUPPORT GRIPS.

- CONTRACTOR SHALL FURNISH AND INSTALL 1/2 INCH COAX JUMPER CABLES BETWEEN THE RRH'S AND ANTENNAS. SUPPORT FIBER BUNDLES USING 1/2 INCH VELCRO STRAPS OF THE REQUIRED LENGTH AT 18 INCHES ON CENTER STRAPS SHALL BE UV, OIL AND WATER RESISTANT AND SUITABLE FOR INDUSTRIAL INSTALLATIONS AS MANUFACTURED BY TEXTOL OR APPROVED EQUAL.
- DC: SUPPORT DC BUNDLES WITH UV RATED ZIP TIES OF ADEQUATE LENGTH. ZIP TIES SHALL BE BLACK NYLON WITH TENSILE STRENGTH AT 12,000 PSI AS MANUFACTURED BY NELCO PRODUCTS OR EQUAL.

1.7 JUMPER INSTALLATION

- A. CONTRACTOR SHALL SECURE JUMPERS TO THE SIDE ARMS OR HEAD FRAMES USING STAINLESS STEEL TIE WRAPS OR STAINLESS STEEL SNAP-IN HANGERS.

1.8 COAXIAL CABLE INSTALLATION

- A. CONTRACTOR SHALL PERFORM GROUND SWEEP TESTING ON COAXIAL CABLES TO INSPECT FOR DAMAGE PRIOR TO USE. IN CASE OF DAMAGE IDENTIFICATION, CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER IMMEDIATELY AND COAXIAL CABLES SHALL NOT BE INSTALLED UNTIL A REPLACEMENT HAS BEEN ISSUED.
- B. COAXIAL CABLE INSTALLATION SHALL BE PLANNED TO ENSURE THAT THE LINES ARE PROPERLY ROUTED IN THE CABLE ENVELOP AS INDICATED ON THESE CONSTRUCTION DRAWINGS. AVOID TWISTING AND CROSSOVERS.
- C. COAXIAL CABLES SHALL BE MOUNTED ON TOWER STRUCTURES OR FACILITIES USING APPROPRIATELY SIZED HOISTING GRIPS. EXCEEDING MANUFACTURER'S SPECIFICATIONS FOR BENDING RADIUS IS NOT ALLOWED.

1.9 COAXIAL CABLE COLOR CODING & LABELING

CONTRACTOR SHALL PROVIDE UNIFORM IDENTIFICATION MARKINGS OF NEW COAXIAL CABLES AND OTHER CABLES PER THE FOLLOWING INSTRUCTIONS.

- A. ALL COAXIAL CABLES SHALL BE MARKED WITH APPROPRIATE COLOR TAPE BANDS, ONE INCH WIDE, FOR IDENTIFICATION NEAR ANTENNA MOUNTING LOCATION, BEFORE ENTERING THE SHELTER/CABINET PLATFORM, AND AFTER ENTERING THE CABINET PLATFORM.
- B. ALL HYBRIFLEX CABLES SHALL BE MARKED WITH APPROPRIATE COLOR TAPE BANDS AS REQUIRED BY TS 0200 REV4.
- C. COLOR TAPES SHALL BE PLACED WITHIN 24" OF THE ENTRY PORT (INTERIOR AND EXTERIOR).
- D. TAPE SHALL BE WEATHER RESISTANT, UV RESISTANT AND CHEMICAL RESISTANT. REFERENCE HH-1-595C().
- E. WHERE VISIBILITY IS OBSTRUCTED, ADDITIONAL COLOR BANDS SHALL BE INSTALLED.
- F. ALL HYBRIFLEX CABLES AND DC BUNDLES SHALL BE LABELED ALPHA-NUMERICALLY ACCORDING TO VERIZON CELL SITE ENGINEERING REQUIREMENTS.

1.10 GROUNDING

- A. ALL ANTENNAS AND COAXIAL CABLES SHALL BE GROUNDED AS INDICATED IN THESE CONSTRUCTION DRAWINGS.
- B. ANTENNA AND COAXIAL CABLE GROUNDING SHALL BE INSTALLED IN CONJUNCTION WITH EQUIPMENT INSTALLATION.
- C. COAXIAL CABLES SHALL NOT BE CONNECTED TO EQUIPMENT PRIOR TO GROUNDING KIT INSTALLATION.

1.11 TESTING

- A. CONTRACTOR IS REQUIRED TO SUBMIT THE RESULTS OF ALL RF ANTENNA SYSTEM TESTS REQUIRED BY THE PROJECT REQUIREMENTS AND DRAWINGS THAT FALL WITHIN THE SCOPE OF WORK TO VERIZON WITHIN (5) DAYS OF THE TEST. AT A MINIMUM, THE FOLLOWING TESTS RESULTS SHALL BE INCLUDED:
 - COAXIAL CABLE SWEEP TESTING (VSWR, RETURN LOSS, AND DISTANCE-TO-FAULT FORMATS PERFORMED IN SHORT, WITH LOAD, AND WITH ANTENNA)
 - FIBER TESTS PER VERIZON STANDARDS.
 - TAPE DROP TESTS TO VERIFY ANTENNA MOUNTING HEIGHT (AGL), AZIMUTH, AND DOWN TILT INSTALLED AZIMUTH, CENTERLINE, AND DOWN TILT MUST CONFORM TO RF CONFIGURATION DATA IN THE DRAWINGS.
- B. CONTRACTOR IS REQUIRED TO PERFORM COAXIAL CABLE SWEEP TESTING, DTF FORMAT ONLY, PRIOR TO INSTALLATION TO VERIFY FUNCTIONALITY OF THE CABLE. FAILURE TO PERFORM TESTING AND VERIFY FUNCTIONALITY MAY RESULT IN ADDITIONAL EFFORT BY THE CONTRACTOR TO REMOVE AND REPLACE CABLE ONCE INSTALLED. CONTRACTOR SHALL BEAR ALL COSTS RELATED TO REMOVAL AND INSTALLATION OF REPLACEMENT CABLES DUE TO MANUFACTURER DEFECTS OR CONTRACTOR MISHANDLE.

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

02/03/2020

(SIGNATURE) DATE
M. H. CATALINA MARTINEZ
LICENSE NUMBER: 23482
MY LICENSE RENEWAL DATE IS: DEC. 31ST, 2021.



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RF NOTES

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N3

PART 1. ELECTRICAL SPECIFICATIONS

1.1 GENERAL

- A. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND ALL APPLICABLE LOCAL AND NATIONAL CODES. ANY DISCREPANCY BETWEEN THE DRAWINGS AND CODE WILL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
- B. CONDUIT ROUTINGS ARE REPRESENTATIVE ONLY. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.
- C. CONTRACTOR SHALL BE AWARE AND AVOID OTHER UNDERGROUND UTILITY RUNS WITHIN THE SITE COMPOUND AND SURROUNDING AREAS.
- D. CONTRACTOR SHALL COORDINATE UTILITY METER PLACEMENT WITH VERIZON STANDARD EQUIPMENT MANUFACTURER.
- E. THE CONTRACTOR SHALL PROVIDE ALL ITEMS OF LABOR AND MATERIALS TO MAKE A COMPLETE AND FUNCTIONAL INSTALLATION OF ELECTRICAL WORK AS SHOWN ON DRAWINGS AND AS NECESSARY, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
- MAIN POWER BRANCH/FEEDERS AS REQUIRED.
 - BRANCH FEEDER FOR POWER AND LIGHTING.
 - ALL ELECTRICAL CONDUCTORS AND CONDUIT.
 - ALL WIRING DEVICES, SAFETY SWITCHES.
 - ALL LIGHTING FIXTURES AND LAMPS.
 - ALL COMMUNICATION EMPTY CONDUIT SYSTEMS.
 - LIGHTNING SURGE PROTECTION DEVICES.
 - ANTENNA AND EQUIPMENT GROUNDING.

1.2 ELECTRICAL REQUIREMENTS

- A. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL LOCAL AND NATIONAL ELECTRICAL CODES.
- B. ALL WORK SHALL BE COMPLETED BY A CERTIFIED MASTER ELECTRICIAN.
- C. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN A MINIMUM CABLE SEPARATION AS REQUIRED BY NEC.
- D. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- E. RACEWAYS, CABLE TRAYS, CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
- F. WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND NEMA 1 RATED (OR BETTER) FOR INDOOR USE, AND NEMA 3R RATED (OR BETTER) FOR OUTDOOR USE.
- G. ALL POWER CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90° IF AVAILABLE).
- H. ALL CONDUCTORS SHALL BE TESTED FOR SHORTS AND GROUNDS BEFORE ENERGIZING.

1.3 GUARANTEE

- A. THE CONTRACTOR SHALL FURNISH A WRITTEN CERTIFICATE, GUARANTEEING ALL MATERIALS, EQUIPMENT AND LABOR FURNISHED BY CONTRACTOR TO BE FREE OF ALL DEFECTS FOR A PERIOD OF ONE YEAR FROM AND AFTER THE DATE OF FINAL ACCEPTANCE OF SITE WORK. THE CONTRACTOR SHALL FURTHER GUARANTEE THAT IF ANY DEFECTS APPEAR WITHIN THE STIPULATED GUARANTEED PERIOD, SUCH WORK SHALL BE REPLACED AT NO COST TO THE OWNER.

1.4 FEEDERS, SWITCHES, AND METERING EQUIPMENT

- A. CONTRACTOR SHALL MAKE ARRANGEMENTS WITH OWNERS AS NEEDED TO BRING IN BRANCH FEEDERS FOR ELECTRICAL SERVICE AS SHOWN ON DRAWINGS.
- B. CONTRACTOR SHALL BEAR ALL COSTS ASSOCIATED WITH PROVIDING SITE WITH ELECTRICAL SERVICE.
- C. CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS FOR A COMPLETE AND FUNCTIONAL SYSTEM INCLUDING BUT NOT LIMITED TO FEEDER WIRE TO DISTRIBUTION PANEL AND METER.

1.5 PANELBOARDS

- A. PANELBOARDS SHALL CONSIST OF A CAN, FRONT, INTERIOR AND CIRCUIT PROTECTIVE DEVICES AND SHALL BE UL LISTED. THE GAUGE OF METAL USED AND THE GUTTER SPACE SHALL BE IN ACCORDANCE WITH APPLICABLE UL STANDARDS.
- B. PANELBOARDS SHALL HAVE A DOOR MOUNTED ON A SEMI-CONCEALED HINGES WITH A CYLINDER LOCK, INDEX CARD HOLDER PROPERLY FILLED IN AS TO CIRCUIT; ALL PANELS OPEN WITH A MASTER KEY.
- C. PANELBOARDS SHALL BE FINISHED WITH BAKED-ON GRAY ENAMEL, OVER RUST INHIBITOR COAT.
- D. APPROVED PANELBOARD MANUFACTURERS INCLUDE SQUARE D, GE, SIEMENS/ITE OR EATON/CUTLER HAMMER.
- E. PANELBOARDS AND INTERNAL CIRCUIT BREAKERS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
- F. PANELBOARDS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT NUMBERS (REFERENCE 1.5A).
- G. EACH END OF EVERY POWER PHASE CONDUCTOR, GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA STANDARDS AND REGULATIONS.

1.6 MISCELLANEOUS EQUIPMENT

- A. 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) FOR INTERIOR USE, AND NEMA 3R (OR BETTER) FOR EXTERIOR USE.
- B. METAL RECEPTACLES, 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) FOR INTERIOR USE, AND NEMA 3R (OR BETTER) WEATHER PROTECTED FOR OUTDOOR USE.
- C. NON METALLIC RECEPTACLES, SWITCHES, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND NEMA 1 (OR BETTER) FOR INTERIOR USE, OR NEMA 3R (OR BETTER) WEATHER PROTECTED FOR OUTDOOR USE.
- D. ELECTRICAL EQUIPMENT SHALL COMPLY WITH NEC AS TO SIZE AND CONSTRUCTION.
- E. JUNCTION AND PULL BOXES SHALL BE GALVANIZED, AND NOT BE LESS THAN 4 INCHES SQUARE AND 1-1/2 INCHES DEEP WITH REMOVABLE COVERS. CAST ALUMINUM OR CAST IRON BOXES WITH THREADED HUBS AND GASKETED COVERS MUST BE USE IN OUTDOOR APPLICATIONS.
- F. JUNCTION AND PULL BOXES SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS WHERE COVERS CAN BE REMOVED FOR ACCESS.
- G. JUNCTION AND PULL BOXES SHALL BE INSTALLED ON CONCEALED CONDUITS WITH COVERS FLUSH WITH FINISH.

1.7 WIRING

- A. CONDUCTORS SHALL BE TYPE "THHN/THWN" INSULATION.
- B. CONTRACTOR SHALL INSTALL CONDUCTORS IN CLEAN, DRY CONDUITS. USE UL APPROVED PULLING LUBRICANT WHERE REQUIRED.
- C. POWER SYSTEMS SHALL USE #12 AWG CONDUCTOR AT A MINIMUM.
- D. ALL CONTROL WIRES SHALL BE STRANDED AND TERMINATED WITH CRIMPED-ON LUGS.
- E. CONTRACTOR SHALL MAKE CONNECTION, SPLICES AND TAPS ONLY IN APPROVED BOXES AND FITTINGS. FOR SMALL BRANCH CIRCUIT CONDUCTORS, FIRST TWIST CONDUCTORS TOGETHER. THEN INSTALL A "SCOTCHLOK" OR EQUAL SPRING CONNECTOR OF PROPER SIZE. FOR LARGE CONDUCTORS USE SPLIT-BOLT OR HYDRAULICALLY COMPRESSED CONNECTIONS, THEN APPLY ENOUGH LAYERS OF VINYL ELECTRICAL TAPE TO EQUAL THE INSULATION VALUE OF THE CONDUCTOR INSULATION.
- F. CONTRACTOR SHALL INSTALL BANDS OF COLORED VINYL PLASTIC TAPE AT EACH END OF EACH CONDUCTOR WHERE FACTORY COLOR CODED CONDUCTORS ARE NOT AVAILABLE.

1.8 CONDUITS AND CONDUCTOR INSTALLATION

- A. CONTRACTOR SHALL PROVIDE A COMPLETE ASSEMBLY OF CONDUIT, TUBING OR DUCT WITH FITTINGS, INCLUDING, BUT NOT LIMITED TO, CONNECTORS, NIPPLES, COUPLINGS, LOCKNUTS, BUSHINGS, EXPANSION FITTINGS, OTHER COMPONENTS AND ACCESSORIES AS NEEDED. CONNECTIONS AND COUPLINGS MUST BE COMPRESSION TYPE.
- B. RIGID GALVANIZED STEEL CONDUIT (RGS) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
- C. UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC UNLESS NOTED OTHERWISE.
- D. ELECTRICAL METALLIC TUBING (EMT) SHALL BE USED FOR ALL INDOOR LOCATIONS.
- E. RIGID NON-METALLIC CONDUIT SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
- F. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- G. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
- H. AS A MINIMUM, CONDUIT SIZES SHALL BE IN ACCORDANCE WITH NEC CONDUIT FILL AND BEND REQUIREMENTS, REGARDLESS OF SIZE SCHEDULE OR INDICATED. IF LARGER SIZE IS SCHEDULED OR INDICATED, THE LARGER SIZE SHALL BE USED.

1.9 INSTALLATION

- A. CONTRACTOR SHALL ANCHOR CONDUITS WITH HANGERS, CONDUIT STRAPS OR OTHER DEVICES SPECIFICALLY DESIGNED FOR THE PURPOSE. WIRE TIES ARE NOT PERMITTED. TRAPEZE HANGERS SHALL BE USED FOR MULTIPLE PARALLEL CONDUIT RUNS.
- B. ALL CONCRETE INSERTS SHALL BE GALVANIZED OR CADMIUM PLATED; INDIVIDUAL HANGERS, TRAPEZE HANGERS AND RODS SHALL BE PRIMER COATED.
- C. CONTRACTOR SHALL INSTALL HORIZONTAL RUNS OF CONDUIT TO PROVIDE A NATURAL DRAIN TO PREVENT MOISTURE COLLECTING IN THE POCKETS OR TRAPS.
- D. CONTRACTOR SHALL CAP CONDUIT ENDS UNTIL CONDUCTOR IS INSTALLED TO PREVENT FOREIGN OBJECTS FROM ENTERING CONDUIT.
- E. FITTINGS AND CONDUITS SHALL BE APPROVED FOR GROUNDING PURPOSES OR SHALL BE JUMPERED WITH A COPPER GROUNDING CONDUCTOR OF PROPER AMPACITY. CONTRACTOR SHALL LEAVE TERMINATION OF SUCH JUMPERS EXPOSED.
- F. INSTALL (2) 200 POUND NYLON PULL CORDS IN ROUGH-IN RACEWAYS.
- G. INSTALL OFFSETS, PULL BOXES AND ELBOWS AS REQUIRED ACCOMPLISHING A HARMONIOUS ROUTING OF THE SYSTEMS.
- H. OPENINGS AROUND ELECTRICAL PENETRATIONS THROUGH FIRE RESISTANT RATED CONSTRUCTION SHALL BE FIR-STOPPED USING APPROVED METHODS TO MAINTAIN THE FIRE RESISTANT RATING.

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02/03/2020

(SIGNATURE) M. H. CATALINA MARTINEZ
DATE
LICENSE NUMBER 23482
LICENSE RENEWAL DATE IS: DEC. 31ST, 2021



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verizon

KGI

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TEL: 512.345.9595

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LOCATION CODE:

490078

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PART 2. GROUNDING SPECIFICATIONS

2.1 GENERAL

- A. A RESISTANCE TO GROUND OF FIVE (5) OHMS OR LESS IS REQUIRED FOR ALL VERIZON SITES. CONTRACTOR SHALL RETAIN TESTER AT HIS OWN EXPENSE.
- B. ALL GROUNDING CABLE IN CONCRETE OR THROUGH WALLS SHALL BE IN 3/4 INCH PVC CONDUIT. METALLIC CONDUIT IS NOT PERMITTED FOR GROUNDING CONDUCTOR SLEEVES.
- C. CONTRACTOR SHALL GROUND ALL EXPOSED METALLIC OBJECTS ON MULTI-TENANT METER/TELCO CENTER USING A TWO-HOLE NEMA DRILLED CONNECTOR SUCH AS THOMAS & BETTS #32207 OR APPROVED EQUAL.
- D. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER WHEN THE GROUNDING RING IS INSTALLED SO THE CONSTRUCTION MANAGER CAN PERFORM AN INSPECTION OF THE GROUNDING RING BEFORE TRENCHING IS BACKFILLED.
- E. ALL EXTERIOR GROUNDING CONDUCTORS INCLUDING GROUNDING RING SHALL BE #2 BARE, TINNED, SOLID COPPER WIRE. ALL GROUND CONNECTIONS SHALL BE AS SHORT AND DIRECT AS POSSIBLE. SHARP BENDS ARE TO BE AVOIDED. THE RADIUS OF ANY BEND SHALL NOT BE LESS THAN 8 INCHES AND THE INCLUSIVE ANGLE OF ANY BEND SHALL NOT EXCEED 90 DEGREES.
- F. GROUNDING CONDUCTORS SHALL BE ROUTED DOWNWARD TOWARD THE BURIED GROUND RING.
- G. ALL BELOW GROUND EXTERNAL CONNECTIONS SHALL BE EXOTHERMICALLY WELDED. ALL EXOTHERMIC WELDS TO BURIED GROUND RING SHALL BE THE PARALLEL-TYPE. EXCEPT FOR THE GROUND RODS WHICH ARE TEE-TYPE EXOTHERMIC WELDS.
- H. CONTRACTOR SHALL REPAIR ALL GALVANIZED SURFACES THAT HAVE BEEN DAMAGED BY EXOTHERMIC WELDING.
- I. GROUND WIRES SHALL BE RUN STRAIGHT FOR MINIMUM INDUCTANCE AND VOLTAGE DROP. CABLE BENDS INCREASE INDUCTANCE. THE MINIMUM REQUIRED BENDING RADIUS IS 8 INCHES WHEN BENDS ARE UNAVOIDABLE.
- J. ALL METAL WITHIN 6 FEET OF THE GROUND RING SHALL BE DIRECTLY BONDED, CAD WELDED TO THE SITE GROUNDING SYSTEM, WITHOUT USING SERIES OR DAISY CHAIN CONNECTION ARRANGEMENTS.
- K. ALL BELOW GRADE GROUND SYSTEM CONDUCTORS SHALL BE A MINIMUM DEPTH OF 30 INCHES (OR 6 INCHES BELOW FROST LINE, WHICHEVER IS GREATER).

2.2 CONNECTIONS

- A. ALL EXTERNAL GROUNDING CONNECTIONS SHALL BE MADE BY THE EXOTHERMIC PROCESS, BY IRREVERSIBLE HIGH COMPRESSION, AND/OR BY 2-HOLE LONG BARREL LUGS. NO SINGLE-HOLE, CRIMP-ON, OR SOLDER CONNECTIONS SHALL BE USED. CONNECTIONS SHALL INCLUDE ALL CABLE TO CABLE SPLICE. ALL MATERIALS USED (MOLDS, WELDING METAL, TOOLS, ETC.) SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND PROCEDURES.
- B. ALL INTERIOR GROUNDING AND BONDING CONDUCTORS SHALL BE CONNECTED BY TWO HOLE-TYPE (COMPRESSION) CONNECTIONS. MECHANICAL CONNECTIONS, FITTINGS OR CONNECTIONS THAT DEPEND SOLELY ON SOLDER SHALL NOT BE USED.

2.3 GROUND RODS

- A. ALL GROUND RODS SHALL BE COPPER-CLAD STEEL 5/8" DIAMETER X 8' -0" LONG AND OF THE NUMBER AND AT LOCATIONS INDICATED UNLESS OTHERWISE INDICATED IN THE DRAWINGS. GROUND RODS SHALL BE DRIVEN FULL LENGTH VERTICALLY IN UNDISTURBED EARTH.
- B. IF ROCK IS ENCOUNTERED, GROUND RODS MAY BE DRIVEN AT AN OBLIQUE ANGLE OF NOT GREATER THAN 45 DEGREES FROM VERTICAL OR MAY BE BURIED HORIZONTAL AND PERPENDICULAR TO THE BUILDING, IN A TRENCH AT LEAST 36" DEEP (OR 12 INCHES BELOW FROST LINE, WHICHEVER IS GREATER).
- C. GROUND RODS SHALL BE INSTALLED NO MORE THAN TWICE ITS LENGTH APART AND NO LESS THAN ITS ACTUAL LENGTH APART.

2.4 GROUND BARS

- A. ALL GROUND BARS SHALL BE 1/4" THICK BARE COPPER PLATES AND OF SUFFICIENT SIZE TO GROUND ATTACHMENTS INDICATED IN THE DRAWINGS (MINIMUM 2" X 12"). HOLES SHALL BE 7/16" DIAMETER ON 3/4" CENTERS TO PERMIT THE CONVENIENT USE OF TWO-HOLE LUGS.
- B. THE METHOD OF ATTACHMENT OF THE GROUNDING ELECTRODE CONDUCTOR TO EXTERIOR AND TOWER GROUND BARS SHALL BE EXOTHERMIC OR IRREVERSIBLE HIGH COMPRESSION. TOWER GROUND BARS SHOULD BE TINNED. TOWER GROUND BARS SHOULD BE DIRECT TO TOWER STEEL, NOT INSTALLED WITH INSULATORS.

2.5 CABLES

- A. ALL EXTERIOR GROUNDING CABLES SHALL BE STANDARD #2 AWG TINNED SOLID BARE COPPER WIRE UNLESS INDICATED OTHERWISE ON DRAWINGS.
- B. WHEN THE DIRECTION OF THE CONDUCTOR MUST CHANGE, IT SHALL BE DONE GRADUALLY. ALL BENDS SHALL BE MADE WITH THE GREATEST PRACTICAL RADIUS AND SHALL NOT BE LESS THAN 8".
- C. ALL CONDUITS SHALL BE METALLICALLY SUPPORTED.
- D. ALL METALLIC CONDUIT SHALL USE GROUND-BUSHING CONNECTIONS.
- E. ALL CONDUITS USED AS RACEWAYS FOR GROUNDING CONDUCTORS SHALL BE BONDED AT BOTH ENDS IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC).
- F. PROVIDE WIRE PROTECTION PIPES AT ALL GROUND WIRES AT GRADE LEVEL PER DETAIL.

2.6 GROUNDING RING

- A. THE GROUND RING ENCIROCLING THE BUILDING SHALL BE A MINIMUM SIZE OF #2 AWG BARE TINNED SOLID COPPER CONDUCTOR IN DIRECT CONTACT WITH THE EARTH AT A MINIMUM DEPTH OF 36". CONDUCTOR BENDS SHALL HAVE A MINIMUM RADIUS OF 8".
- B. ALL EXTERNAL GROUND RINGS ARE TO BE JOINED TOGETHER AND ALL CONNECTIONS SHALL BE EXOTHERMIC OR IRREVERSIBLE HIGH COMPRESSION. NO LUGS OR CLAMPS WILL BE ACCEPTED.

2.7 FENCE AND GATE

- A. CONTRACTOR SHALL GROUND ALL SECTIONS OF FENCE AND GATE AS INDICATED ON DRAWINGS. GROUND EACH GATE POST AND CORNER POST TO A GROUND RING. ALL CONNECTIONS FOR THE FENCE GROUND SYSTEM SHALL BE EXOTHERMIC WELD AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND PROCEDURES.

2.8 DISSIMILAR METALS

- A. CONNECTIONS BETWEEN DISSIMILAR METALS SHALL NOT BE MADE UNLESS THE CONDUCTORS ARE SEPARATED BY A SUITABLE MATERIAL THAT IS PART OF THE ATTACHMENT DEVICE.
- B. ONLY ATTACHMENT DEVICES LISTED AND APPROVED FOR USE WITH THE SPECIFIC DISSIMILAR METALS MAY BE USED FOR THIS PURPOSE.
- C. THE SAME METAL SHALL BE USED THROUGHOUT THE SYSTEM WHEN POSSIBLE.
- D. EXOTHERMICALLY WELD CONNECTIONS OF DIFFERENT METALS WHEN WELD MATERIAL IS AVAILABLE FOR THE METALS BEING BONDED.
- E. COPPER SHALL NOT COME IN CONTACT WITH GALVANIZED STEEL.
- F. TINNED COPPER SHALL BE USED WHEN CONNECTING TO A GALVANIZED STRUCTURE.

2.9 ANTI-OXIDANT COMPOUND

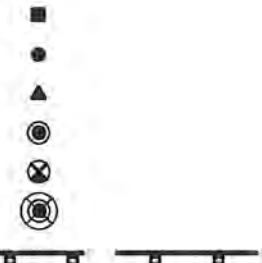
- A. ANTI-OXIDANT COMPOUND SHALL BE USED BETWEEN ALL EXTERNAL MECHANICAL CONNECTIONS. CARE SHALL BE TAKEN TO USE THE APPROPRIATE ANTI-OXIDANT TYPE ZINC ANTI-OXIDANT (GRAY COLOR) SHALL BE USED WHEN CONNECTING TO GALVANIZED AND ALUMINUM OBJECTS AND COPPER ANTI-OXIDANT (COPPER COLOR) SHALL BE USED WHEN CONNECTING TO COPPER OBJECTS.

2.10 TEST PROCEDURE

- A. THE GROUND SYSTEM RESISTANCE SHALL NOT EXCEED FIVE (5) OHMS.
- B. GROUND TEST MUST BE PERFORMED PRIOR TO UTILITY CONNECTION AND GROUND CONNECTION TO EXISTING SITE COMMON GROUNDING ELECTRODE SYSTEM.
- C. GROUND TEST MUST BE PERFORMED PRIOR TO BACKFILL (2.1.D)

GROUNDING SYMBOLS

- IRREVERSIBLE CONNECTION
- EXOTHERMIC
- MECHANICAL CONNECTION
- COPPER GROUND ROD
- CHEM ROD
- GROUND ROD TEST-WELL
- 12"/20" GROUND BAR



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ENGINEERING
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SITE NAME:

OMA PIRATES COVE

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490078

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1 | EXISTING SITE PHOTO - LOOKING EAST



2 | PROPOSED SITE PHOTO - LOOKING EAST



3 | EXISTING SITE PHOTO - LOOKING WEST



4 | PROPOSED SITE PHOTO - LOOKING WEST

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TEXAS PROFESSIONAL ENGINEER
REGISTRATION NUMBER 121520
RENEWAL DATE SEPTEMBER 30, 2020
KGI WIRELESS, INC. TEXAS FIRM NO. F-15692
RENEWAL DATE DECEMBER 31, 2020



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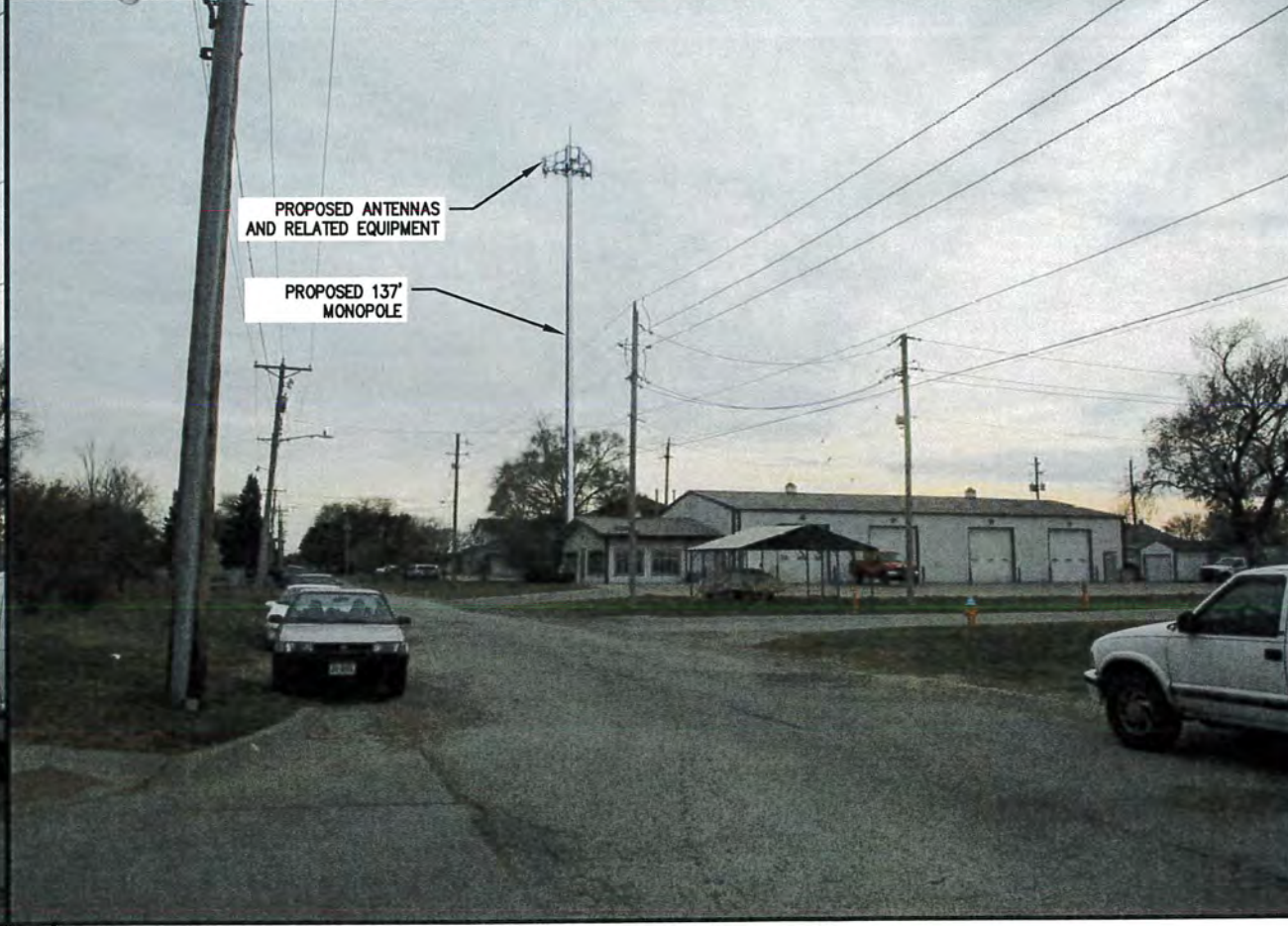
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2 PROPOSED SITE PHOTO - LOOKING NORTH



3 EXISTING SITE PHOTO - LOOKING SOUTH



4 PROPOSED SITE PHOTO - LOOKING SOUTH

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CITY OF COUNCIL BLUFFS - ZONING BOARD OF ADJUSTMENT LOCATION/ZONING MAP CASE # CU-20-004

Map Legend

Subject Property Case #CU-20-004

 Parcels

0 45 90



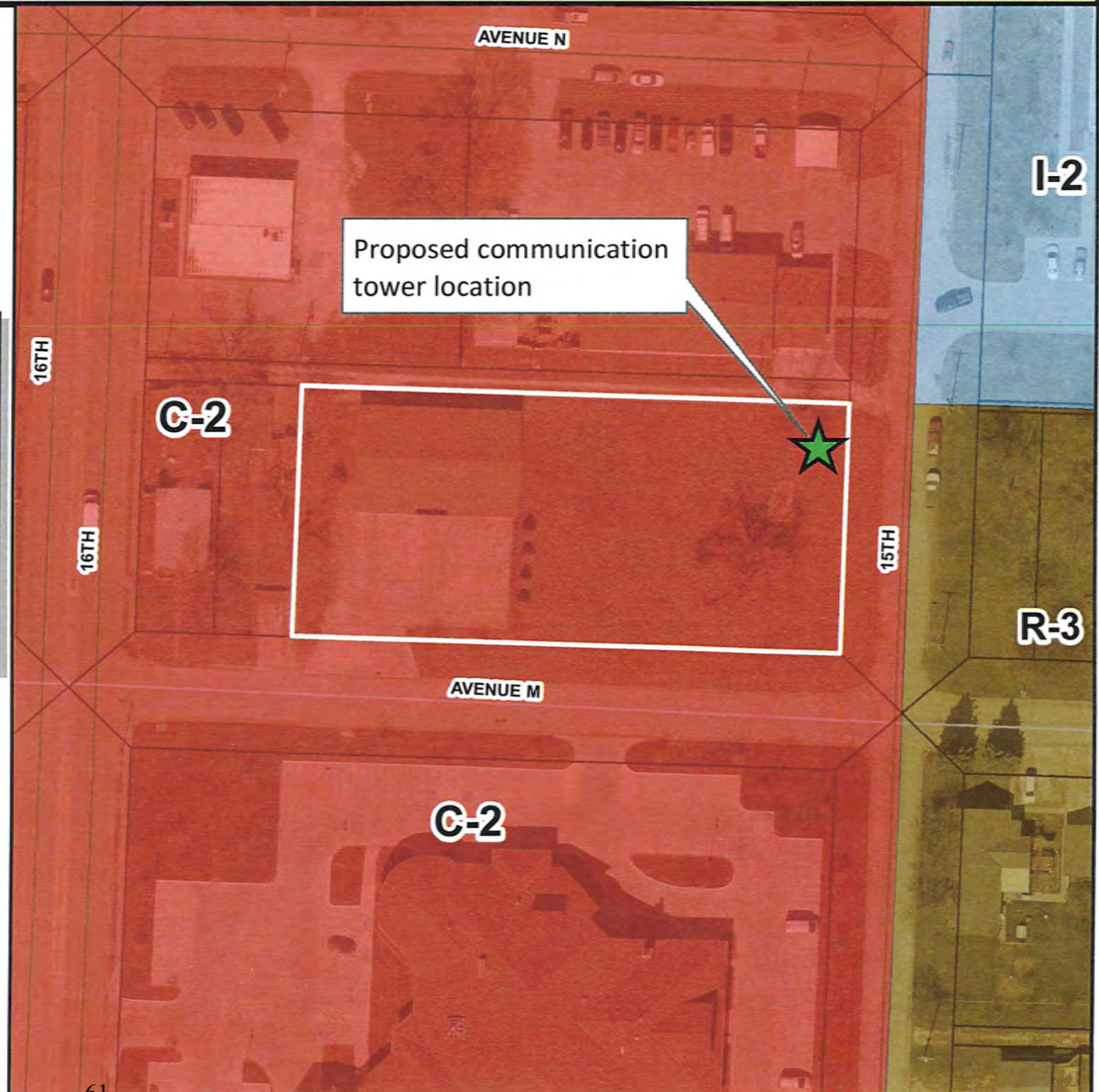

Note: Subject property is highlighted in red.



Last Amended: 2/20/20

Council Bluffs Community
Development Department
209 Pearl Street
Council Bluffs, IA 51503
Telephone: (712) 328.4629

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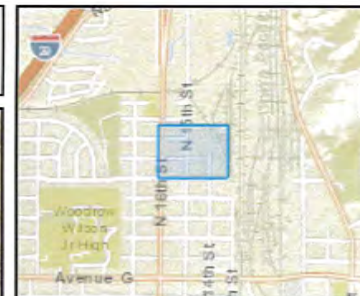
Communication Tower Setbacks from Residential Dwellings



2204

0 150 300
ft

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Legend

ToggleLayers

Parcel Address Label

2018

CLR18



ESRI World Imagery

World Imagery

Low Resolution 15m Imagery

High Resolution 60cm Imagery

High Resolution 30cm Imagery

Citations

Pottawattamie County GIS

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Council Bluffs, IA 51501

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<https://gis.pottcounty-ia.gov>



3/10/2020



Council Bluffs, Iowa
Proposed site: *OMA PIRATES COVE*

To Whom It May Concern,

Verizon Wireless is proposing a new tower build in Council Bluffs, Iowa near North 16th Street. The proposed location will provide additional coverage and capacity to the Verizon Network currently operating in the Council Bluffs area. Verizon Wireless's Radio Frequency Engineering team has selected the proposed location after a careful study of the existing network coverage, future capacity needs, and consideration of other alternate locations.

With increasing capabilities of cellular devices—including smart phones, tablets, and WiFi hotspots—wireless networks are under constant pressure to provide reliable service with faster data speeds for more devices and larger amounts of data. As a result, Verizon Wireless is working to increase wireless network coverage and capacity like the site being proposed herein.

As a result, Verizon Wireless must make upgrades to its network in this area to maintain reliable data and voice service for its customers who live and work there, many of whom rely exclusively on wireless communications services and do not have landline phone service. Most critically, many local and state public safety and emergency service providers rely on our network every day to ensure the safety of your community. Verizon Wireless is committed to best-in-class network reliability for all of these customers, and the proposed site at *OMA PIRATES COVE* will allow Verizon to maintain this commitment.

The current location of the proposed new site in Council Bluffs near North 16th Street has been carefully selected in order to achieve these network objectives over existing tower structures in the area for the following reasons:

- Proximity to coverage deficiencies in areas along N 16th St.— The proposed site is located approximately at Avenue M & N 15th Street. 0.5 miles south of the Walmart along I-29 and 0.8 miles north of the intersection of Broadway and N. 16th. The proposed location will provide strong coverage in these areas that have existing known coverage problems, resulting in better network reliability, faster data speeds, and increased capacity to the population of this area.
- Connecting coverage to the existing Verizon Wireless network. — The proposed location geographically fits well in the existing network, approximately equidistant from the existing Verizon Wireless sites in the area, providing strong connecting coverage to the other existing sites in the area at 1st & Pearl, 28th & Broadway, and at the Lewis and Clark Monument.
- US Cellular tower at Woodrow Wilson Jr High. 41 16 17.5N 95 52 16.0W - When Verizon first identifies areas for new wireless sites, co-location on existing towers are always considered as the primary option to evaluate. Collocations tend to be easier to acquire and cheaper to build. The USCC tower at the Jr High School was the first candidate evaluated for co-location however, the tower has two existing carriers (US Cellular & Tmobile) which pushes the available centerline to 90' or below. Unfortunately this lower antenna mounting height will significantly reduce the coverage footprint of the proposed site and will not meet the objectives given the geography and targeted coverage enhancements. In addition to the limited height available for antenna mounting, there is limited ground space for the equipment feeding the antennas which can create many construction issues.
- 142' tower need. - In order to meet the coverage and network improvement objectives in the area and be on a competitive equal footing with US Cellular a 142' tower is needed. This is especially important for completely solving the coverage and service issues along North 16th - from Walmart to Broadway.

Your approval of this project will enable Verizon Wireless to continue to maintain the best, most reliable wireless service in Council Bluffs. The proposed upgrade to our network in this area will provide businesses and residential customers with the reliable wireless service on which they have come to rely, and will ensure that emergency service and public safety customers can continue to ensure public safety for all of Council Bluffs' citizens and visitors.

Sincerely,

Matthew Smith
Verizon Wireless
RF Engineering



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

Aeronautical Study No.
2019-ACE-6224-OE

Issued Date: 12/10/2019

Network Regulatory
Omaha Cellular Telephone Company
5055 North Point Pkwy
NP2NE Network Engineering
Alpharetta, GA 30022

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

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

Structure:	Monopole OMA PIRATES COVE - A - 15104833
Location:	Council Bluffs, IA
Latitude:	41-16-25.58N NAD 83
Longitude:	95-51-57.95W
Heights:	984 feet site elevation (SE) 142 feet above ground level (AGL) 1126 feet above mean sea level (AMSL)

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

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

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

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 L Change 2.

This determination expires on 06/10/2021 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

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

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

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

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

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

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

If we can be of further assistance, please contact our office at (816) 329-2508, or vee.stewart@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2019-ACE-6224-OE.

Signature Control No: 414184341-424844037

(DNE)

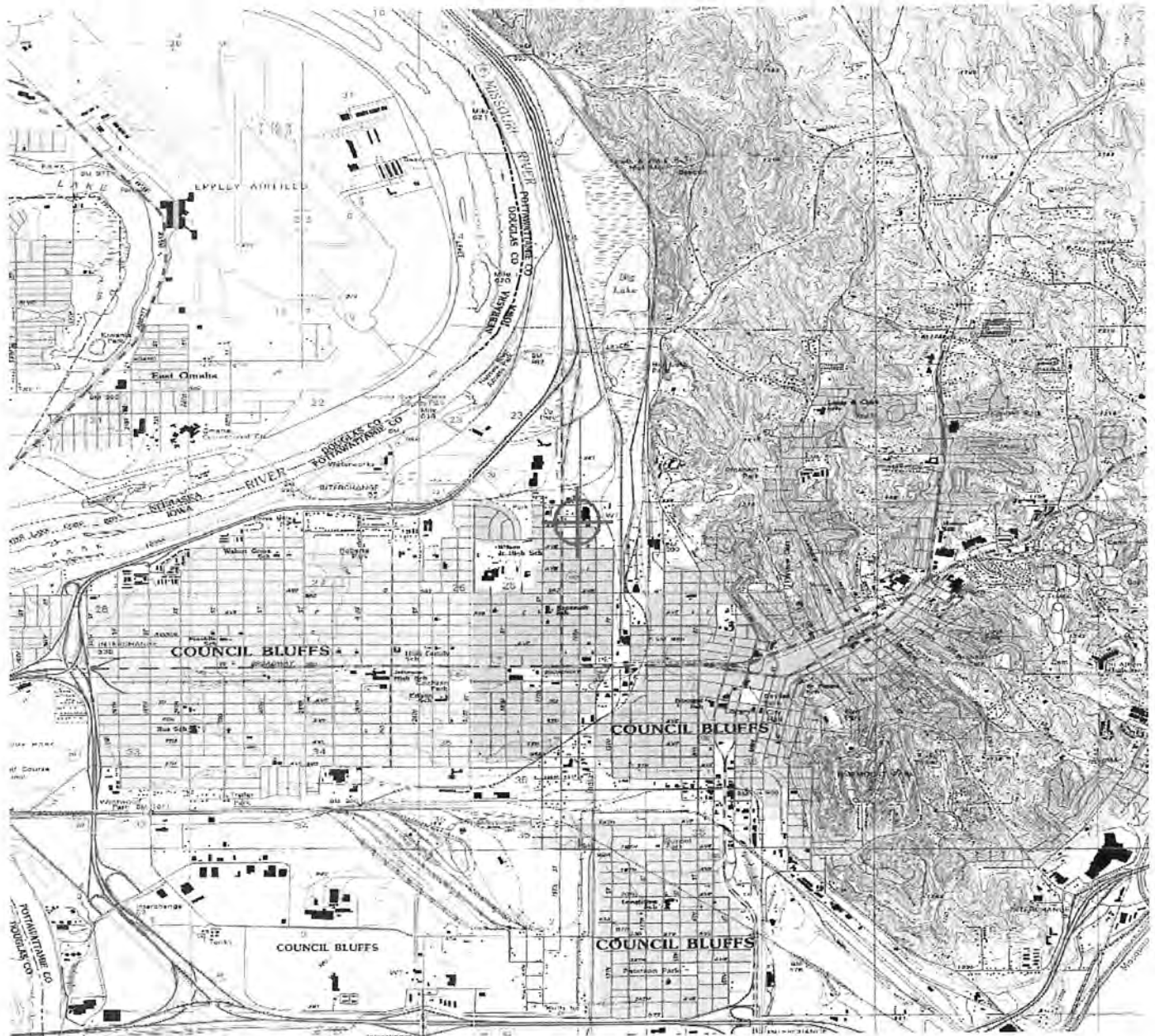
Vee Stewart
Specialist

Attachment(s)
Frequency Data
Map(s)

cc: FCC

Frequency Data for ASN 2019-ACE-6224-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
6	7	GHz	55	dBW
6	7	GHz	42	dBW
10	11.7	GHz	55	dBW
10	11.7	GHz	42	dBW
17.7	19.7	GHz	55	dBW
17.7	19.7	GHz	42	dBW
21.2	23.6	GHz	55	dBW
21.2	23.6	GHz	42	dBW
614	698	MHz	2000	W
614	698	MHz	1000	W
698	806	MHz	1000	W
806	824	MHz	500	W
806	901	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
929	932	MHz	3500	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1670	1675	MHz	500	W
1710	1755	MHz	500	W
1850	1990	MHz	1640	W
1850	1910	MHz	1640	W
1930	1990	MHz	1640	W
1990	2025	MHz	500	W
2110	2200	MHz	500	W
2305	2360	MHz	2000	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W
2496	2690	MHz	500	W
27500	28350	MHz	75	dBm
29100	29250	MHz	75	dBm
31000	31225	MHz	75	dBm
31225	31300	MHz	75	dBm
38600	40000	MHz	75	dBm

TOPO Map for ASN 2019-ACE-6224-OE



Zoning Board of Adjustment Communication

Department: Community
Development

Case/Project No.: 2019 Zoning
Board of Adjustment Annual
Reports

2019 Zoning Board of Adjustment
Annual Report

Council Action: 3/17/2020

Submitted by: Haley Weber, Zoning
Enforcement Officer

Description

Background/Discussion

See attachments.

Recommendation

ATTACHMENTS:

Description	Type	Upload Date
Annual Reports	Other	3/12/2020

2019

Zoning Board of Adjustment Annual Report

City of Council Bluffs, Iowa

Prepared by: Community Development Department
Address: 209 Pearl Street, Council Bluffs, IA 51503
Date: 3/17/2020



March 17, 2020

The Honorable Matthew J. Walsh, Mayor
and Members of the City Council

Mayor and Members of the City Council:

The Zoning Board of Adjustment forwards this copy of the 2019 Annual Report for your information. This report contains a summary of the actions taken by the Board in handling various cases referred to them during the year.

I would like to take this opportunity to thank the City Council and Community Development Department staff for their effort and support during the past year. I hope that together we can continue to serve the City of Council Bluffs in a program of progressive community development.

Respectfully Submitted,

Pedro Vargas, Chair
Zoning Board of Adjustment
City of Council Bluffs, Iowa

MAYOR
Matthew J. Walsh

2019 CITY COUNCIL

Melissa Head
Mike Wolf
Roger Sandau
Nate Watson
Sharon White

2019 ZONING BOARD OF ADJUSTMENT

Pedro Vargas, Chair
Bobbette Behrens
Memory Mescher
Jared Olson
David Tritsch

COMMUNITY DEVELOPMENT DEPARTMENT

Planning Division

Cindy Clark, Administrative Secretary*
Brandon Garrett, Director
Christopher Gibbons, Planning Manager
Christopher Meeks, Planner
Moises Monrroy, Planner
Tiffany Schmitt, Community Development Technician*
Haley Weber, Zoning Enforcement Officer

*Partial Year of Service

2019 ZONING BOARD OF ADJUSTMENT MEMBERS, TERMS AND ATTENDANCE

2019 ZBA Attendance Table

Member	Board Term	Meeting Attendance		
		Present	Absent	Attendance %
Bobbette Behrens	May 8, 2017 - April 1, 2022	8	0	100%
Memory Mescher	March 28, 2016 - April 1, 2021	8	0	100%
Jared Olson	February 25, 2019 - April 1, 2024	7	1	88%
David Tritsch	October 8, 2018 - April 1, 2023	7	1	88%
Pedro Vargas	July 13, 2015 - April 1, 2020	8	0	100%

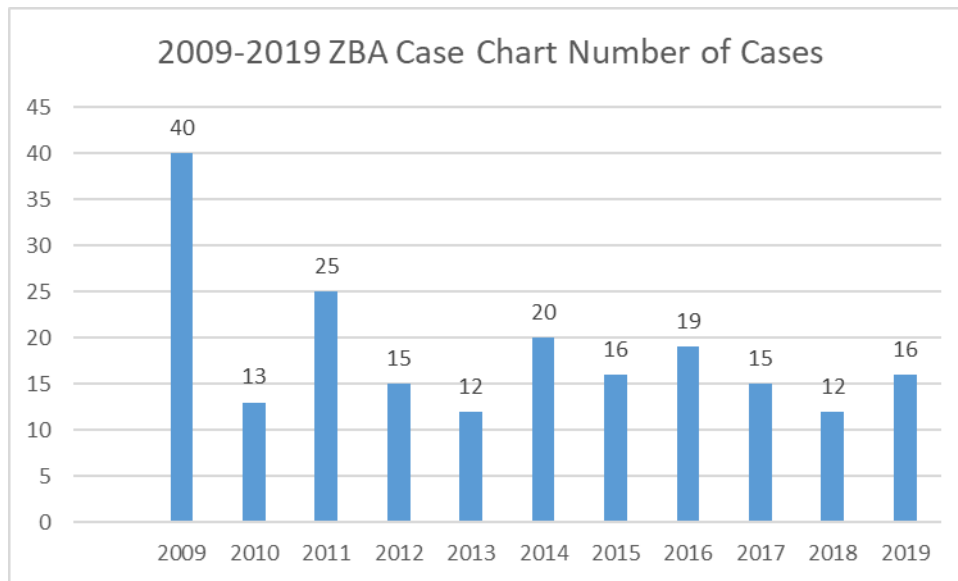
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David Tritsch	October 8, 2018 - April 1, 2023	7	1	88%
Pedro Vargas	July 13, 2015 - April 1, 2020	8	0	100%

SUMMARY OF ACTIVITIES

The Zoning Board of Adjustment consists of five members appointed by the Mayor to staggered five-year terms. The Board has the power to hear and decide appeals where there is alleged to be an error in any order, requirement, decision or determination made in the enforcement of Title 15 of the Municipal Code (Zoning Ordinance). Appeals to the Board may be taken by any person or organization that believes that they have been aggrieved by an officer, department, or board of the municipality. Persons may apply to the Board in an effort to seek relief from any requirement of the Zoning Ordinance as set forth by State law. The Board also hears and decides requests for conditional use permits.

The chart below represents the total of number of cases heard by the Zoning Board of Adjustment beginning in 2009 through 2019. In 2019, the Board heard a total of 16 cases at eight regularly scheduled meetings.



Source: Community Development Department

Administrative Appeals:

One administrative appeal was considered by the Zoning Board of Adjustment in 2019. The Board concurred with the staff recommendation to deny the appeal.

Variances:

Nine cases requesting variances were considered by the Zoning Board of Adjustment in 2019. The Board concurred with the staff recommendation on seven of these cases, with one additional case being withdrawn by the applicant.

Conditional Use Permits:

Six requests for new conditional use permits were considered by the Zoning Board of Adjustment in 2019. The Board concurred with the staff recommendation approving all six requests.

SUMMARY OF ACTIVITIES

Administrative Appeals – 2019

Case #	Request	Recommended Action	Zoning Board Action
		CD Staff	
AP-19-001	Applicant: Broadway Plaza, LLC Location: 1702 West Broadway Request: Appeal of an administrative decision by Staff to require a building undergoing renovations and re-occupancy to comply with the architectural standards of the CDO/Corridor Design Overlay District.	Denial	Denied

Variances - 2019

Case #	Request	Recommended Action	ZBA Decision
		CD Staff	
BA-19-001	Applicant: Habitat for Humanity Location: 635 West Graham Avenue Request: Variance to allow a home to be constructed with a front yard setback of 16 feet as opposed to the required 25 feet in the R-1 District.	Approval	Approved
BA-19-002	Applicant: Habitat for Humanity Location: 635 West Graham Avenue Request: Variance to allow one of the two required parking spaces for a single family dwelling to be located within the front yard setback in the R-1 District.	Denial	No Action Request withdrawn after a continued public hearing
BA-19-003	Applicant: David Wolfe Location: 500 College Road Request: Variance to allow an accessory structure to be constructed closer to the front property line than the principal structure in the A-2 Zoning District.	Denial	Approved
BA-19-004	Applicant: HAZA Bell of Nebraska, LLC Location: 1114 Woodbury Avenue Request: Variance to reduce the required 5 foot setback between a commercial parking lot and a property line in the C-2 District.	Approval	Approved
BA-19-005	Applicant: Auto Finance Super Store Location: 3444 West Broadway Request: Variance to allow a second principal structure to be constructed with an interior side yard setback of one foot as opposed to the required five feet in the C-2 District.	Denial	Denied

SUMMARY OF ACTIVITIES

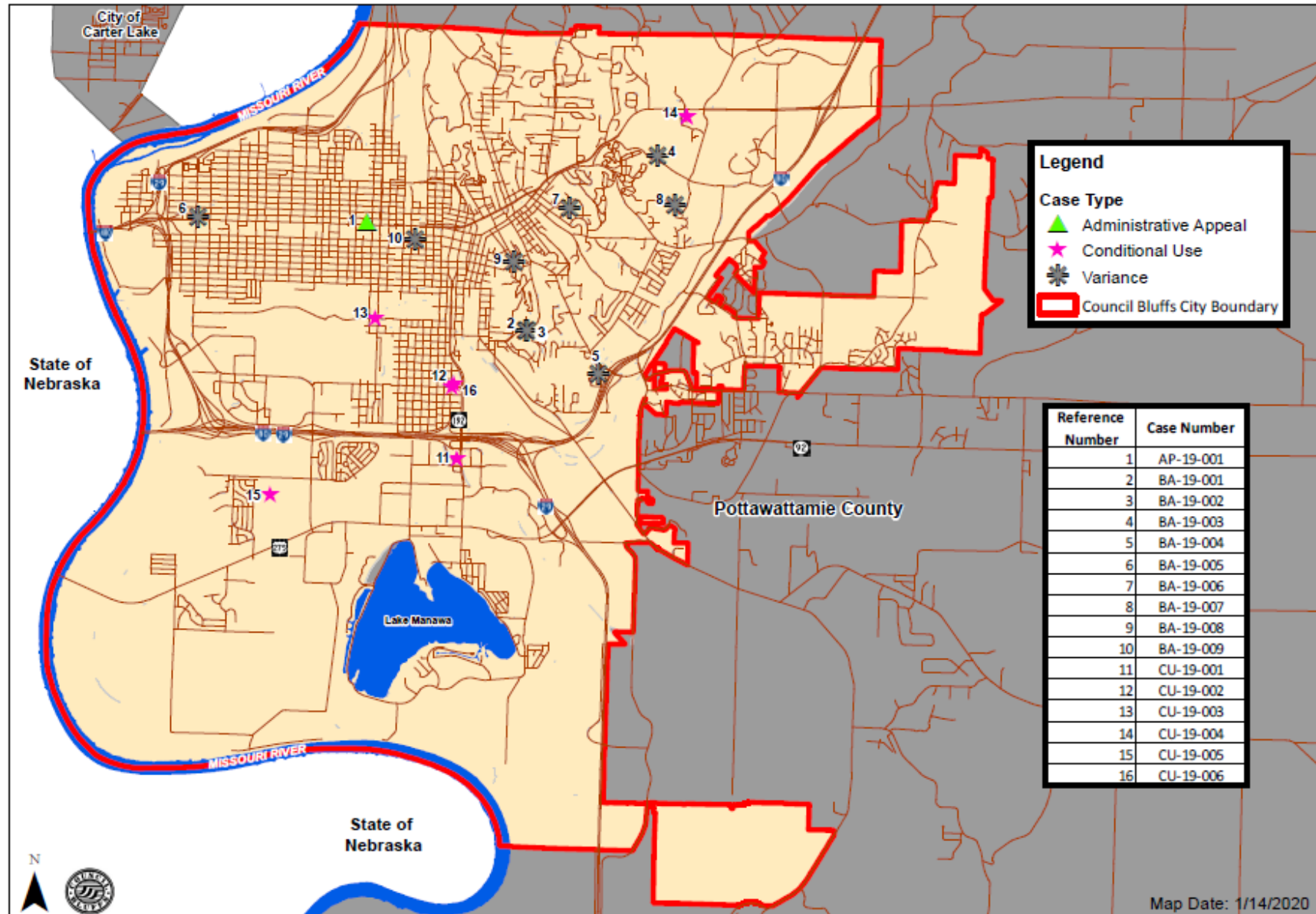
Variances (continued) -2019

Case #	Request	Recommended Action	ZBA Decision
		CD Staff	
BA-19-006	Applicant: Brandon Ramsey Location: 504 Forest Drive Request: Variance to allow an accessory structure to exceed the 18 foot maximum height by 10 ¾ inches in the R-1 District.	Denial	Denied
BA-19-007	Applicant: Daniel and Sandy Velasquez Location: 1500 Indian Hills Road Request: Variance to allow an accessory structure to be constructed closer to the front property line than the principal structure in the R-1 District.	Approval	Approved
BA-19-008	Applicant: Yoder Construction Location: Six lots on the East side of Park Avenue located South of Pomona Street Request: Variances to allow one of two required parking spaces for each unit of a duplex to be located within the front yard setback in the R-2 District.	Approval	Approved
BA-19-009	Applicant: Decker Plastics Corp. Location: 1102 2 nd Avenue Request: Variance to allow additions to the principal structure with a front yard setback of 17 feet as opposed to the required 25 feet and a street side yard setback of 7 feet as opposed to the required 15 feet in the I-1 District.	Approval	Approved

Conditional Use Permits – 2019

Case #	Request	Recommended Action	Zoning Board Action
		CD Staff	
CU-19-001	Applicant: Eveloff Properties, LLC Location: 3250 South Expressway Request: Conditional use permit to allow “automobile sales and rentals” in the C-2 District.	Approval, with conditions	Approved with conditions
CU-19-002	Applicant: All Makes Collision Center Location: 524 23 rd Avenue Request: Conditional use permit to allow “automotive repair, major” in the C-2 District.	Approval, with conditions	Approved with conditions
CU-19-003	Applicant: John Rapaich Location: 1608 14 th Avenue Request: Conditional use permit to allow a “contractor yard” in the I-2 District.	Approval, with conditions	Approved with conditions
CU-19-004	Applicant: Sherwood Plaza, LLC Location: 2703 East Kanesville Boulevard Request: Conditional use permit to allow “commercial storage” in the C-2 District.	Approval, with conditions	Approved with conditions
CU-19-005	Applicant: Dallas Johnson Greenhouse Location: 2802 Twin City Drive Request: Conditional use permit to allow a “greenhouse, commercial” in the A-2 District.	Approval, with conditions	Approved with conditions
CU-19-006	Applicant: Thrifty Auto Sales Location: 524 23 rd Avenue Request: Conditional use permit to allow “automobile sales and rental” in the C-2 District.	Approval, with conditions	Approved with conditions

Zoning Board of Adjustment (ZBA) - 2019 Case Location Map





ZONING ENFORCEMENT SUMMARY REPORT

Prepared by: Community Development Department
Address: 209 Pearl Street, Council Bluffs, IA 51503

OVERVIEW

The 2019 Zoning Enforcement Summary Report provides an update on enforcement of the City's Zoning Ordinance. Zoning code enforcement is carried out by the City's Zoning Enforcement Officer who oversees compliance with Title 15: Zoning of the Municipal Code. Some of the most common violation categories include: sign, parking, lighting, fence, and land use.

On January 28, 2019, the City Council adopted Ordinance No. 6378 which established new processes and procedures for zoning code enforcement within the City of Council Bluffs. In addition to the updated ordinance, the Community Development Department created a system for regular, proactive zoning code enforcement patrol across the entire City. The proactive patrolling began on April 1, 2019. The entire city was patrolled twice from April through December 2019.

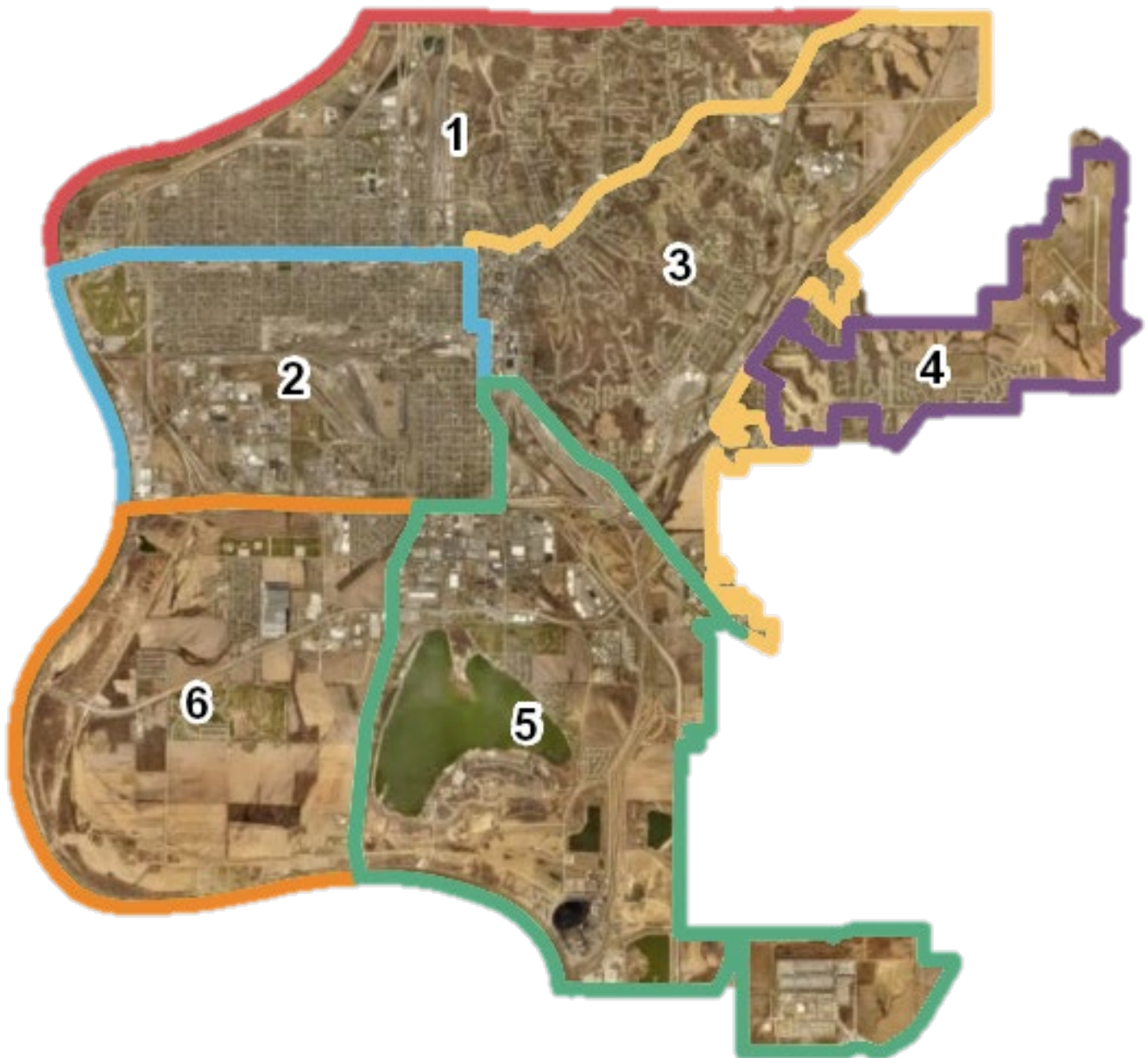
This document provides a summary of all zoning code enforcement cases in 2019, including all cases resulting from the implementation of the newly adopted Ordinance and proactive patrolling system.

ENFORCEMENT ZONES

In an effort to patrol Council Bluffs in an organized and systematic manner, the city has been divided into six enforcement zones, which can be seen on the map on page 3.

ZONE	AREA (SQUARE MILES)	LOCATION
1	7.3	Geographically bounded by the city limits to the north, East Kaneshville Boulevard and Railroad Highway to the east, West Broadway to the south and the Missouri River to the west
2	6.3	Geographically bounded by West Broadway to the north, the South Expressway and South 8 th Street to the east, Interstate 29 to the south and the Missouri River to the west
3	8.5	Geographically bounded by the city limits to the north, city limits and portions of Interstate 80 to the east, Harry Langdon Boulevard and 16 th Avenue to the south and East Kaneshville Boulevard and Railroad Highway to the west
4	2.8	Geographically bounded by city limits to the north, east, and south and by Interstate 80 to the west
5	10.7	Geographically bounded by Harry Langdon Boulevard to the north; city limits to the east and south; and Indian Creek and the South Expressway to the west
6	8.0	Geographically bounded by Interstate 29 and Interstate 80 to the north; Indian Creek to the east; and the Missouri River to the south and west

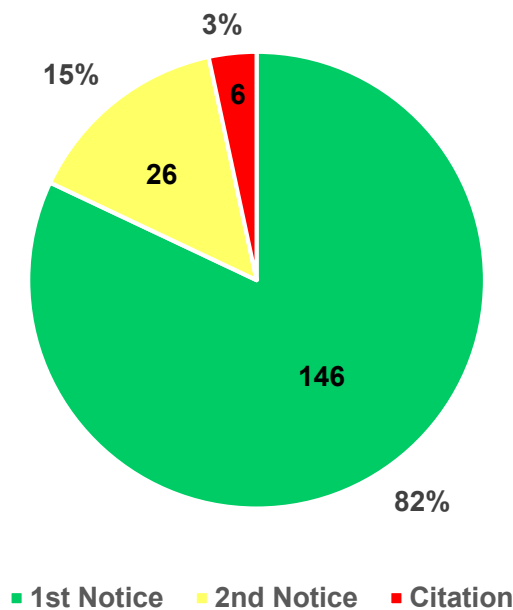
MAP OF ENFORCEMENT ZONES



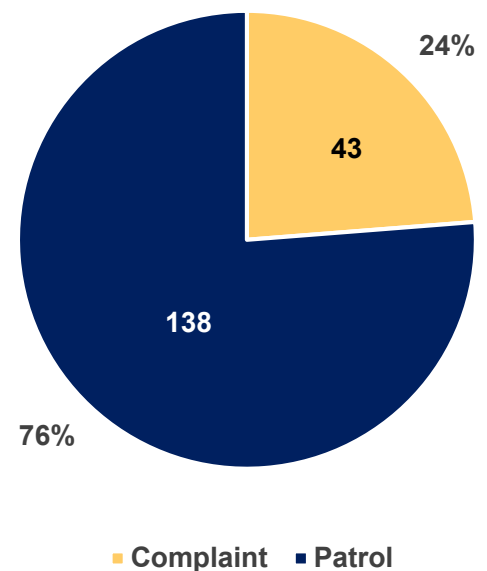
SUMMARY OF ENFORCEMENT

The figures below summarize the results of all zoning enforcement cases that were opened from January 1, 2019 through December 31, 2019. A total of 181 cases were opened, 97% of which were closed.

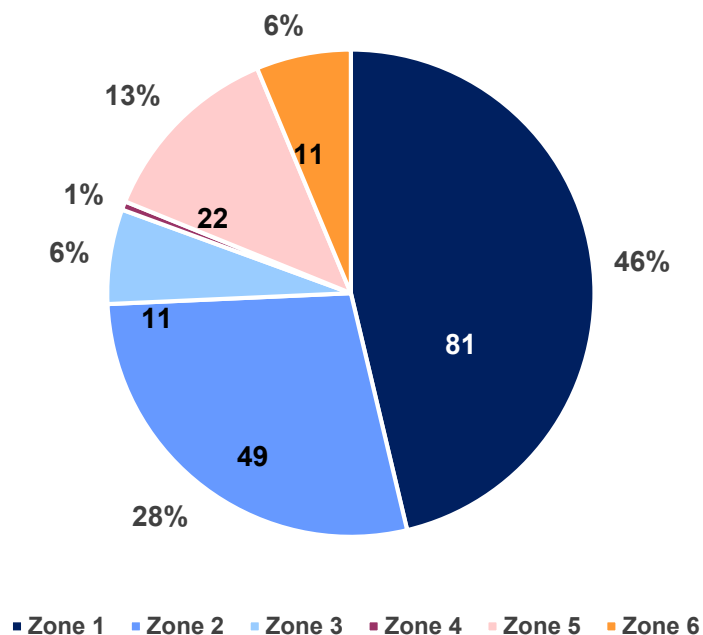
HIGHEST ENFORCEMENT ACTION TAKEN FOR COMPLIANCE



COMPLAINT V. PATROL



PERCENTAGE OF ENFORCEMENT CASES BY ZONE



SUMMARY OF CASES BY VIOLATION TYPE

Of the 178 cases that were closed, the majority of cases (82%) were closed after the first notice of violation. 15% were closed after the second notice of violation. Only 5 citations were issued, resulting in a **97% voluntary compliance rate**.

The 178 cases spanned over nine violation types, referred to throughout this report as: boat, container, fence, illegal use, light, occupying RV, RV, sign, and vehicle. These violation types are defined below:

Boat—a boat violation occurs when a boat is parked on an unpaved surface and/or in the front yard setback.

Container—a container violation occurs when portable storage containers are used as permanent storage.

Fence—a fence violation occurs when a fence exceeds the maximum height allowed; uses barbed wire or is electrically charged outside of the allowed zoning districts; is placed inside a sight triangle; has the finished side facing inward; or has not been properly maintained.

Illegal Use—an illegal use violation occurs when any use outside those listed as principal or conditional in any given zoning district is present. Violations of conditional use permits are also included in this category.

Light—a light violation occurs when outdoor lighting is arranged so that the light is directed towards neighboring residential properties.

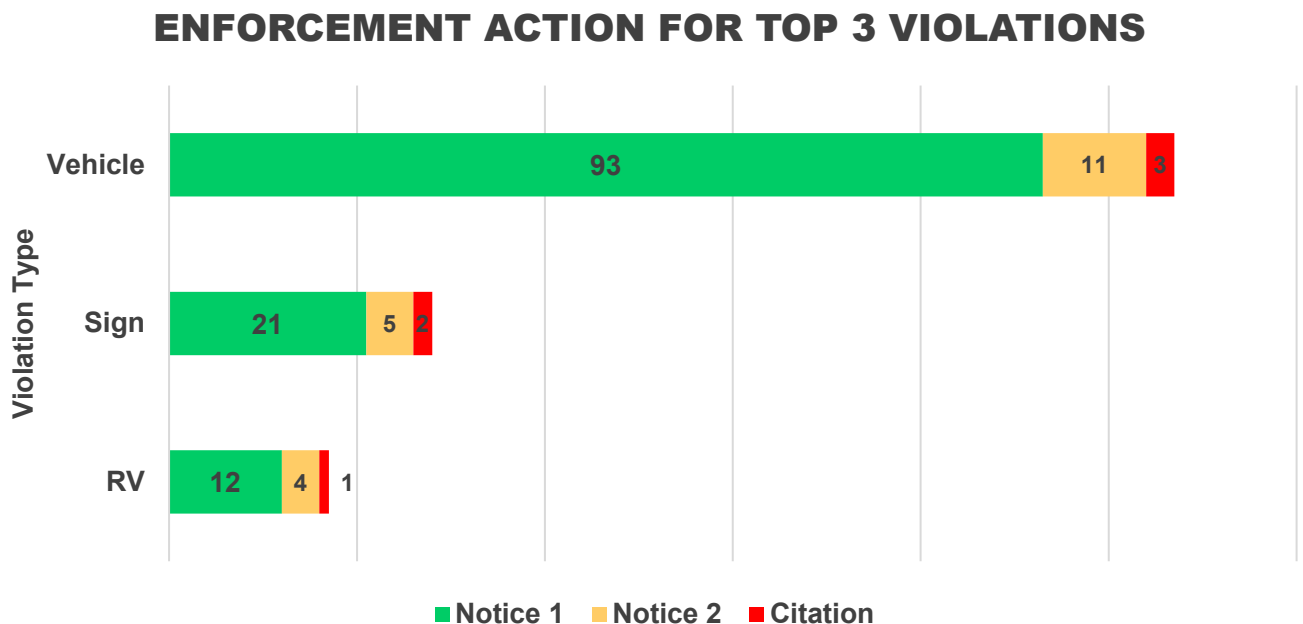
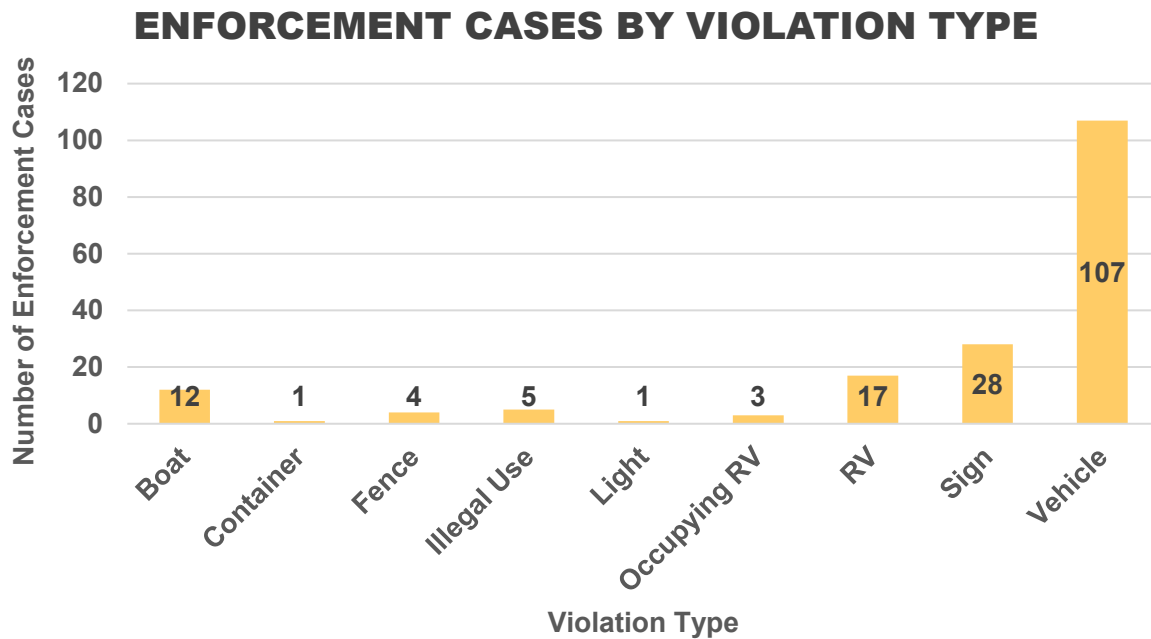
Occupying RV—an occupation of a recreational vehicle (RV) violation occurs when an RV is used or occupied for living, sleeping, or housekeeping purposes for a period exceeding seventy-two (72) consecutive hours or more than fourteen (14) days in any calendar year.

RV—a recreational vehicle (RV) violation occurs when a RV is parked on an unpaved surface and/or in the front yard setback.

Sign—a sign violation includes the use of prohibited sign types (i.e. portable, above peak roof, off-premises, inflatable, etc.) and the installation of a sign without an approved permit.

Vehicle—a vehicle violation occurs when a vehicle is parked on an unpaved surface and/or in the front yard setback.

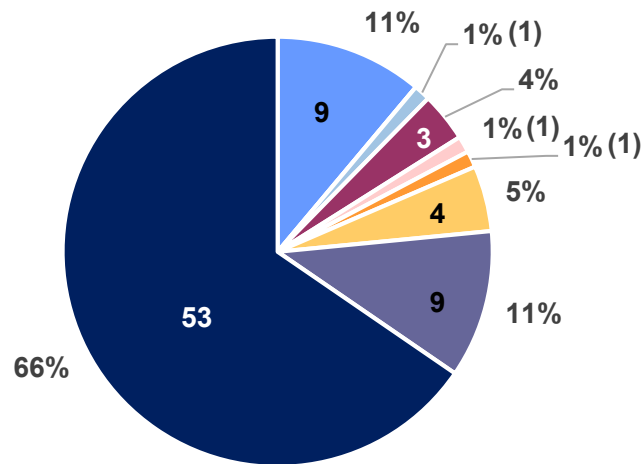
The top three violations were: 1) parking of a vehicle (60%), 2) signs (16%) and 3) parking of a RV (10%).



BREAKDOWN OF CASES BY ZONE

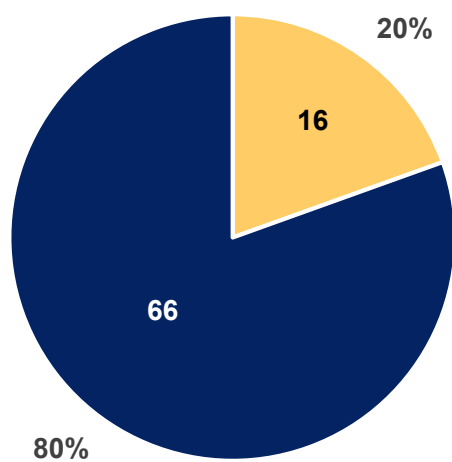
ZONE 1 82 cases total | 81 cases closed | 1 case open

CASES BY VIOLATION TYPE



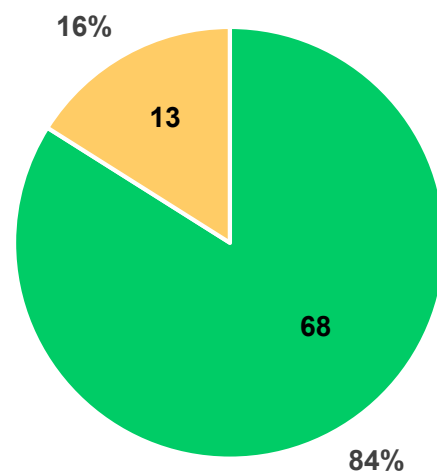
Boat Container Fence Illegal Use Light Occupying RV RV Sign Vehicle

COMPLAINT V. PATROL



Complaint Patrol

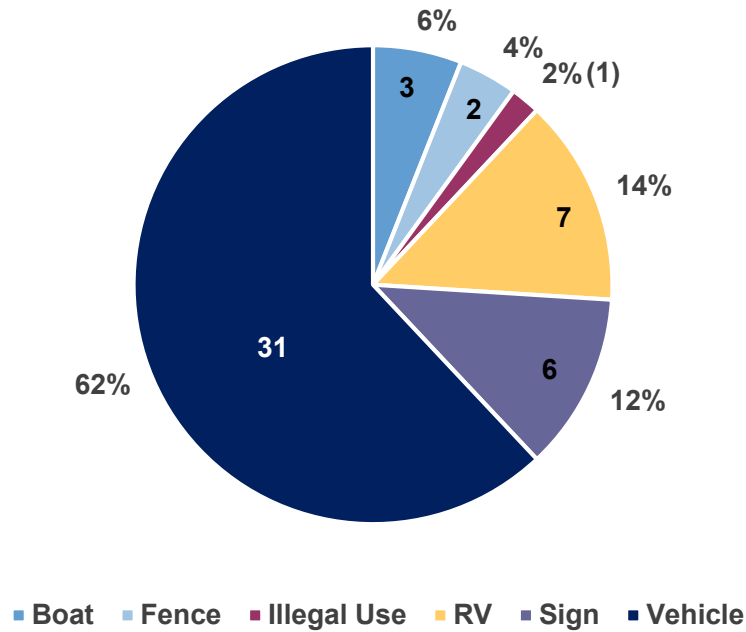
HIGHEST ENFORCEMENT ACTION TAKEN FOR COMPLIANCE



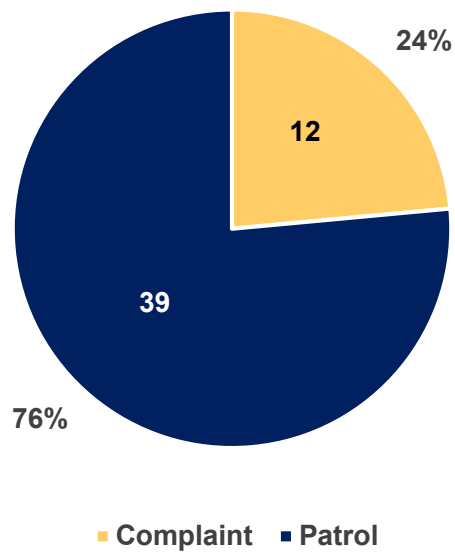
1st Notice 2nd Notice

ZONE 2 51 cases total | 50 cases closed | 1 case open

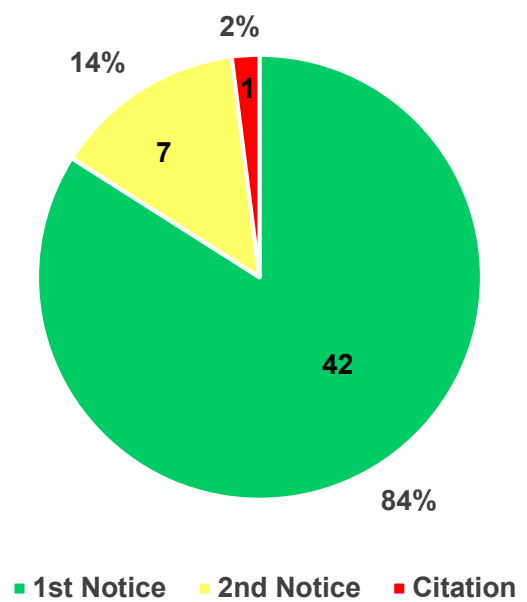
CASES BY VIOLATION TYPE



COMPLAINT V. PATROL

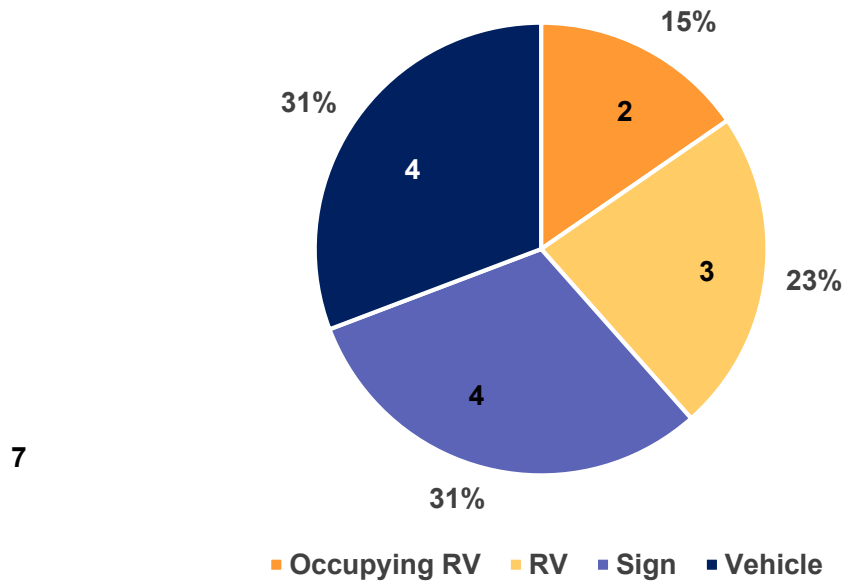


HIGHEST ENFORCEMENT ACTION TAKEN FOR COMPLIANCE

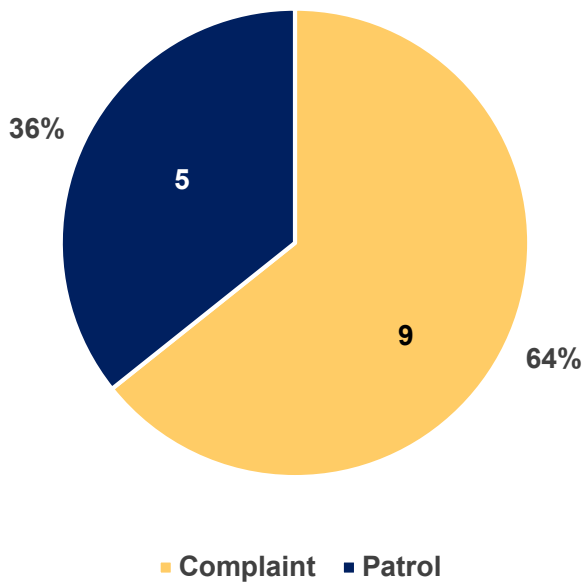


ZONE 3 14 cases total | 13 cases closed | 1 case open

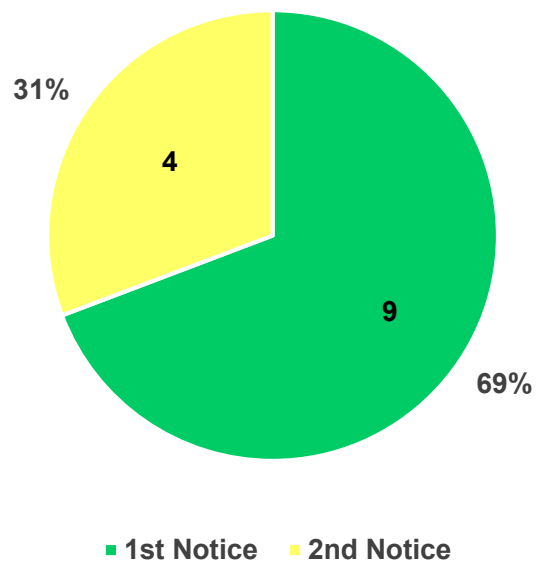
CASES BY VIOLATION TYPE



COMPLAINT V. PATROL



HIGHEST ENFORCEMENT ACTION TAKEN FOR COMPLIANCE

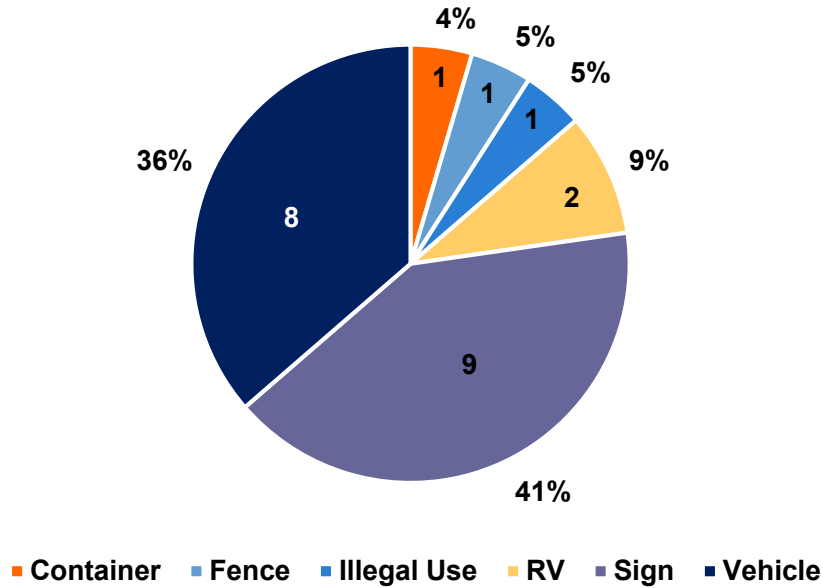


ZONE 4 1 case total (closed)

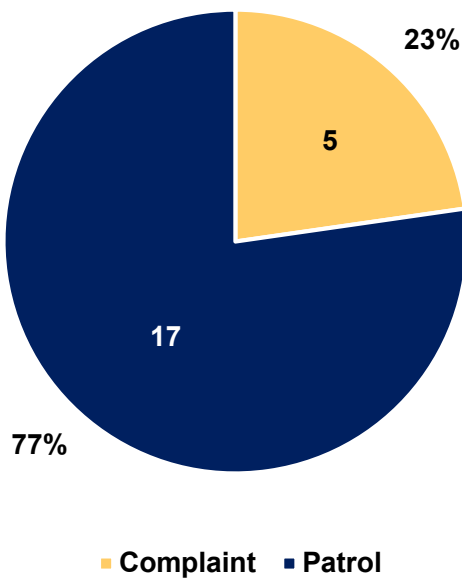
Zone 4 had one case for a vehicle parked on an unpaved surface which resulted from a complaint. This violation was remedied after the first notice of violation.

ZONE 5 22 cases total (all closed)

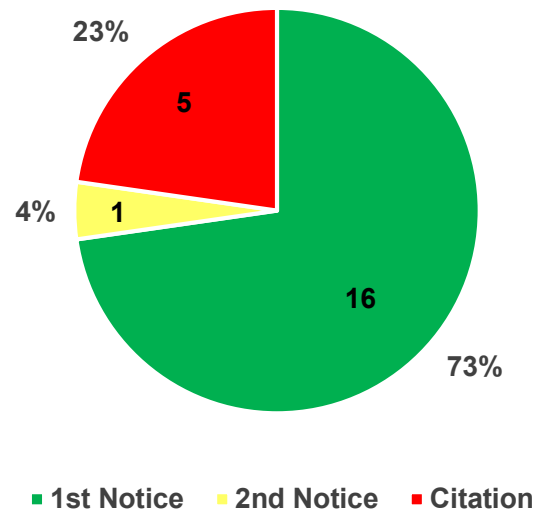
CASES BY VIOLATION TYPE



COMPLAINT V. PATROL

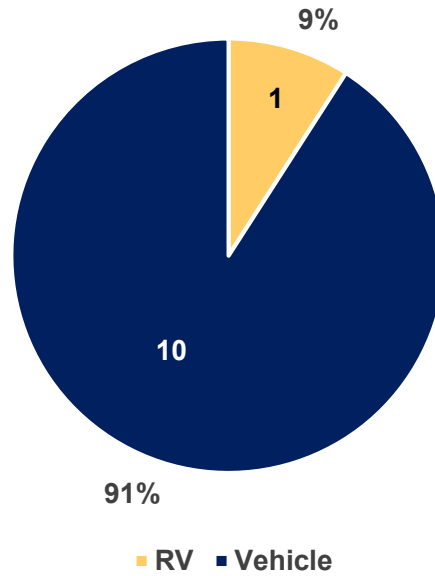


HIGHEST ENFORCEMENT ACTION TAKEN FOR COMPLIANCE

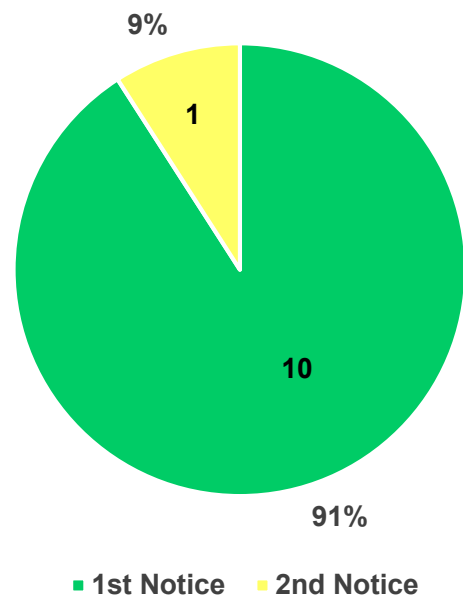


ZONE 6 11 cases total (all closed)

CASES BY VIOLATION TYPE



**HIGHEST ENFORCEMENT ACTION
TAKEN FOR COMPLIANCE**



**ALL CASES IN ZONE 6
RESULTED FROM
PATROLLING**