



Meeting Agenda

Plan and Zoning Commission

Tuesday, November 22, 2022

6:30 PM

Ankeny City Council Chambers

1250 SW District Drive, Second Floor, Ankeny, Iowa

Glenn Hunter, Chair

Ted Rapp, Vice Chair

Trina Flack
Randall Weisheit

Lisa West

Annette Renaud
Todd Ripper

Plan and Zoning Commission regular meetings are held at 6:30 p.m. on the first and third Tuesdays of each month, following the Monday City Council meetings. All Plan and Zoning meetings are open to the public. Assistive Listening Devices (ALD) are available for persons with impaired hearing.

CALL TO ORDER:

A. ROLL CALL:

B. AMENDMENTS TO AGENDA:

Consider MOTION to approve and accept the November 22, 2022 agenda with/without amendments.

C. COMMUNICATIONS:

D. CITIZEN'S REQUEST:

E. CONSENT AGENDA ITEMS:

1. Minutes

Consider MOTION to approve and accept the November 8, 2022 minutes of the Plan and Zoning Commission meeting.

2. 315 SW Cherry Street - The Anker Site Plan

Consider MOTION to approve the site plan for 315 SW Cherry Street, The Anker; subject to City Council approval of the sanitary sewer easement, subject to City Council approval of the public improvements and the contracts and bonds, and subject to City Council approval of the Development Easement and Maintenance Agreement.

3. 3950 N Ankeny Blvd - Stealth Monopole Site Plan

Consider MOTION to approve the site plan for 3950 N Ankeny Blvd, Stealth Monopole, associated equipment and driveway access.

Consider MOTION to approve the recommendations for Consent Agenda Item(s) #1 - #3.

F. REMOVED CONSENT AGENDA ITEMS:

G. PUBLIC HEARINGS:

H. BUSINESS ITEMS:

I. OLD BUSINESS:

J. REPORTS:

1. November 21, 2022 City Council Report - Staff

2. Director's Report

Tentative agenda items for December 6, 2022

Public Hearing(s): Set hearings for December 6, 2022 at 6:30 p.m. to consider:

- Request by NGR, Inc. to rezone property from R-1 to M-1.
- Amendment to the Ankeny Plan 2040 Future Land Use Map; and Rezone property owned by Bricktowne Piper, LC from R-3 to C-2.

3. Commissioner's Reports

K. MISCELLANEOUS ITEMS:

December 5, 2022 - 5:30 p.m. City Council Representative: Staff

L. ADJOURNMENT:

Consider MOTION to adjourn the meeting.



PLAN AND ZONING COMMISSION

November 22, 2022

6 : 30 PM

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ORIGINATING DEPARTMENT:

Planning and Building

COUNCIL GOAL:

Ensure Economic Vitality

ACTION REQUESTED:

Motion

LEGAL:

SUBJECT:

Minutes

EXECUTIVE SUMMARY:

FISCAL IMPACT: **No**

STAFF RECOMMENDATIONS:

PREVIOUS COUNCIL/COMMISSION/BOARD ACTION(S):

PUBLIC OUTREACH EFFORTS:

ACTION REQUESTED:

Action: Consider MOTION to approve and accept the November 8, 2022 minutes of the Plan and Zoning Commission meeting.

ADDITIONAL INFORMATION:

ATTACHMENTS:

[Click to download](#)

Meeting Minutes

Plan & Zoning Commission Meeting

Tuesday, November 8, 2022

Ankeny City Council Chambers, Second Floor
1250 SW District Drive, Ankeny, Iowa

CALL TO ORDER

Chair G.Hunter called the November 8, 2022 meeting of the Plan & Zoning Commission to order at 6:30 p.m.

ROLL CALL

Members present: Glenn Hunter, Ted Rapp, Trina Flack, Todd Ripper, Lisa West and Randy Weisheit. Absent: Annette Renaud. Staff present: E.Jensen, R.Kirschman, B.Fuglsang

AMENDMENTS TO THE AGENDA

Motion by T.Flack to approve the November 8, 2022 agenda without amendments. Second by T.Rapp. All voted aye. Motion carried 6 – 0.

COMMUNICATIONS

There were no communications.

CITIZEN'S REQUEST

There were no requests.

CONSENT AGENDA ITEMS

Item #1. Minutes

Motion to approve and accept the October 4, 2022 minutes of the Plan and Zoning Commission meeting.

Item #2. Christian Juon Estates Plat 3 Final Plat

Motion to recommend City Council approval of Christian Juon Estates Plat 3 Final Plat, subject to applicable Polk County Subdivision Requirements in lieu of the City of Ankeny Subdivision Regulations.

Motion by T.Rapp to approve the recommendations for Consent Agenda Item #1 - #2. Second by R.Weisheit. All voted aye. Motion carried 6 – 0.

PUBLIC HEARINGS

There were no public hearings.

BUSINESS ITEMS

There were no business items.

REPORTS

City Council Meeting

E.Jensen reported on the November 7, 2022 City Council meeting and provided information to the Commission on the letter that Mayor Holm and the Ankeny City Council has sent to Alleman City officials regarding their proposed annexation.

Director's Report

E.Jensen presented the tentative agenda items for the November 22, 2022 Plan and Zoning Commission meeting and the October 2022 Building Permit Report.

Commissioner's Reports

T.Ripper asked if there are parking concerns in Uptown Ankeny with the amount of growth that is happening. E.Jensen commented that there is a large parking area at the AMP in Uptown for citizens to utilize. He believes

that there was a parking study done that was managed by the city's Economic Development Department and said he would forward that information to the Commission.

R.Weisheit commented that it is taking a long time for the Ramada Inn to be redeveloped into the Wyndham Garden hotel and questioned the exterior building materials.

T.Flack said thanks to Eric Jensen, Ankeny will be hosting the American Planning Association Chapter Conference in 2025.

MISCELLANEOUS ITEMS

November 21, 2022 – 5:30 p.m. City Council Meeting Representative: Staff

ADJOURNMENT

There being no further business, motion by T.Rapp to adjourn the meeting. Meeting adjourned at 6:48 p.m.



Submitted by Brenda Fuglsang, Secretary
Plan & Zoning Commission



PLAN AND ZONING COMMISSION

November 22, 2022

6 : 30 PM

 [Print](#)

ORIGINATING DEPARTMENT:

Planning and Building

COUNCIL GOAL:

Ensure Economic Vitality

ACTION REQUESTED:

Motion

LEGAL:

SUBJECT:

315 SW Cherry Street - The Anker Site Plan

EXECUTIVE SUMMARY:

See attached staff report.

FISCAL IMPACT: **No**

STAFF RECOMMENDATIONS:

PREVIOUS COUNCIL/COMMISSION/BOARD ACTION(S):

PUBLIC OUTREACH EFFORTS:

ACTION REQUESTED:

Action: Consider MOTION to approve the site plan for 315 SW Cherry Street, The Anker; subject to City Council approval of the sanitary sewer easement, subject to City Council approval of the public improvements and the contracts and bonds, and subject to City Council approval of the Development Easement and Maintenance Agreement.

ADDITIONAL INFORMATION:

ATTACHMENTS:

Click to download	
	Aerial Map
	Staff Report
	Applicant Letter
	Site Plan
	Elevations



1 inch = 100 feet
Date: 11/17/2022

315 SW Cherry Street
The Anker





*Plan and Zoning Commission
Staff Report*

Meeting Date: November 22, 2022

Agenda Item: 315 SW Cherry Street – The Anker
Report Date: November 17, 2022
Prepared by: Jake Heil
Associate Planner

ESC

Staff Recommendation:

That the Plan and Zoning Commission approve the site plan for 315 SW Cherry Street, The Anker; subject to City Council approval of the sanitary sewer easement, subject to City Council approval of the public improvements and the contracts and bonds, and subject to City Council approval of the Development Easement and Maintenance Agreement.

Project Summary:

The subject property at 315 SW Cherry Street totals 0.51 acres (+/-), and is located south of SW 3rd Street and east of SW Cherry Street. The site is zoned C-2A, Central Business Commercial District; and is surrounded by properties to the north, south, east and west which are zoned the same. The proposed development includes a two-story 7,700 sf bike shop and restaurant with additional parking, alleyway paving, pedestrian connections, landscaping, utility service connections and associated site improvements.

The proposed building will have a maximum height of 30' to the uppermost point and will be constructed primarily of dark grey brick, dark grey and pumpkin colored fiber cement lap siding and glass. The landscaping shown on the proposed site plan generally complies with all applicable regulations. The site will be accessed directly from SW Cherry Street via the existing and proposed on-street parking. There are no parking or open space requirements within the C-2A zoning district. However, the adjacent alley, along the east side of the site, will be paved, leading to six off-street parking stalls with one ADA parking stall. Sidewalk connections are provided on the site, along with providing access to the High Trestle Trail just to the south.

New public utility improvements and service connections will be installed with this development. The site will extend the existing 8-inch water main south along SW Cherry Street, from the SW Cherry St and SW 3rd Street intersection and extend a 6-inch water line east to the site. The site will access the existing 18-inch sanitary sewer main along SW Cherry Street with an 8-inch sanitary sewer line. The north portion of the site generally drains towards SW Cherry Street and to the north, with the northeast part of the site draining to the existing alley and the only storm sewer intake in the area. With the proposed impervious area being less than the previous existing impervious area, and the site utilizing the existing storm drain along the alley and with the large vegetated areas on the southern portion of the site that will allow water to drain, no storm water detention has been proposed for this site.

**Site Plan Worksheet
315 SW Cherry Street
The Anker Site Plan**

The site plan regulations in the zoning code have a variety of design standards and factors for review. The following worksheet is intended to provide staff's comments related to this project and those items.

A. Site Development

- 1. The orientation, alignment, spacing, and placement of a building, driveway, parking area and/or service area on the site shall be compatible with and complimentary to buildings and sites in the neighboring area.**

The primary building facade will face west towards SW Cherry Street. The site will be accessed directly from SW Cherry Street. The adjacent alley to the east will be paved, leading to six parking stalls. The proposed building, parking and trash enclosure meet all setbacks required by code. The proposed site is complimentary to the existing buildings in the Uptown Ankeny area.

- 2. The site shall be planned to be compatible with the streetscape that is prevalent in the area.**

The site plan conforms with the open space and parking requirements of the Code, and enhances the existing streetscape in the Uptown area.

- 3. The site shall provide for adequate parking and circulation for vehicles, bicycles and pedestrians. This includes safe bicycle and pedestrian movement from public walks to the building and from parking areas to the building.**

The site provides for adequate parking and circulation. The C-2A zoning district does not require any parking. The adjacent alley will be paved, leading to six parking spaces, including one ADA space, located behind the proposed building. The site additionally provides nine on-street angled parking along SW Cherry St. The proposed site provides sidewalk connections to the High Trestle Trail which runs along the southern border of the site.

- 4. The site shall have such entrances and exits upon adjacent streets and such internal traffic circulation pattern as will not unduly increase congestion or decrease safety on the site or surrounding public streets. Studies of the traffic impact shall be provided if deemed necessary by the Community Development Director.**

The proposed site provides one access via the adjacent alley, which will be paved to accommodate six parking stalls, including one ADA parking stall.

- 5. Parking areas shall be treated with decorative elements, building wall extensions, plantings, berms, or other means so as to reduce their impact on public ways and adjoining properties.**

There are no minimum parking requirements for off-street parking and loading in the C-2A District; however, the applicant is proposing six parking stalls behind the building.

6. **Service areas; loading and unloading docks, delivery areas, dumpsters, outside storage areas and large storm water detention basins shall be treated with decorative elements, building wall extensions, plantings, berms, or other means so as to screen from view from public ways and adjoining properties.**

There is a proposed dumpster that is located behind the proposed building and is screened from view with an enclosure that matches the building.

7. **All newly installed utility lines shall be underground and entry fixtures located away from high use areas or screened in an approved manner.**

All services will be underground.

8. **Exterior lighting, when used, shall enhance the building design and the adjoining landscape. All lighting should be appropriate to the use of the building and surrounding properties with intensity of illumination limited to its intended use and not as an attraction to the site. Lighting shall be directed to eliminate impacts on adjoining sites.**

Site lighting will be directed away from adjoining property and downward.

9. **The design shall provide adequate provisions for surface and subsurface drainage. Storm water detention, drainage and storm sewer improvements shall be designed to reduce the danger of erosion, flooding, landslide or other endangerment of surrounding property.**

With the proposed impervious area being less than the previous existing impervious area, and the site utilizing the existing storm drain along the alley and with the large vegetated areas on the southern portion of the site that will allow water to drain, no storm water detention has been proposed for this site.

10. **Utility connections to water and sanitary sewer lines shall be designed so as to not overload existing public utility lines. Studies of system loading shall be provided if deemed necessary by the Community Development Director.**

The site will extend the existing 8-inch water main south along SW Cherry Street, from the SW Cherry St and SW 3rd Street intersection and extend a 6-inch water line east to the site. The site will access the existing 18-inch sanitary sewer main along SW Cherry Street with an 8-inch sanitary sewer line.

11. **Site design should provide open space in areas visible to the public. A majority of the required open space should be located in front and side yards.**

There is no minimum requirement for open space in the C-2A District.

12. **Landscaping shall enhance architectural features and contribute to the beauty and utility of a development. Existing trees should be protected whenever possible to maintain the maturity of the site.**

The proposed parking lot shading landscaping generally conform to the landscape requirements of the code. Existing trees on site were kept whenever it was possible.

B. Building Design

- 1. Buildings shall have good scale and maintain or enhance the established scale of buildings and sites of neighboring buildings and sites.**

The proposed 7,700 square-foot building will be a maximum height of 30 feet to the uppermost point. The scale and position of the proposed building is appropriate for its proximity to neighboring properties.

- 2. Materials selected for buildings shall provide compatible textures and colors as those of neighboring buildings.**

The proposed building material consists of dark grey brick, dark grey and pumpkin colored fiber cement lap siding and glass. The proposed materials complement adjacent development in the Uptown District.

- 3. All mechanical equipment or other utility hardware on roof, ground, or buildings, refuse and waste removal areas, service yards, storage yards, and exterior work areas shall be screened from or located as not to be visible from public view, using materials consistent with the building and site.**

There are no rooftop mechanical equipment and the proposed dumpster is located behind the building and is screened from view with an enclosure that utilizes materials matching the building.

- 4. Multiple buildings on the same site shall provide for compatible and complimentary design and materials.**

There is only one proposed building on this site, and the submitted elevations complement adjacent developments.

C. Signs

Locations of signs have been shown on the submitted plans; however final design and allowances will be determined with future sign permits.

D. Factors for Evaluation

The following factors and characteristics, which affect the function and appearance of a development, should govern the Plan and Zoning Commission's evaluation of a site plan submission:

- 1. Conformance to Design Standards and other applicable code requirements.**

The plans submitted generally conform to the written regulations of the City.

- 2. Location of the building(s), and the relationship to the development site and neighboring buildings and sites.**

The building meets all setbacks required by Code, and is complementary to adjacent development.

3. Layout and utilization of building, parking, drive-ways, and open spaces.

The paved alleyway and parking stalls are appropriate for the site, and will not adversely affect traffic flow of vehicles and pedestrians.

4. Architectural character, including scale, style, color and type of material, of the building and signage as it relates to the neighborhood.

The proposed 7,700 square-foot building will be a maximum height of 30 feet to the uppermost point. The proposed materials consist of dark grey brick, dark grey and pumpkin colored fiber cement lap siding and glass. The proposed materials complement adjacent development in the Uptown District.

5. Impact on sanitary sewer, storm sewer, drainage, water, and street systems.

It appears that the impacts on these utility systems can be accommodated adequately.

October 7, 2022

Honorable Mayor, City Council and Plan and Zoning Commission
410 West First Street
Ankeny, Iowa 50023
ATTN: Jake Heil



Re: The Anker – Site Plan
315 SW Cherry Street (BE #220388)

Dear Honorable Mayor, City Council and Plan and Zoning Commission Members:

On behalf of Ankeny Futures LLC and Accurate Commercial, we respectfully request approval consideration for a Site Plan including a new joint restaurant/shop consisting of two stories. The total area of the proposed building will be approximately 5,000 square feet and will be located immediately north of the High Trestle Trail at SW Cherry Street. The project is to serve as a destination for bicyclists including easy access from the trail with plenty of bicycle parking. There will also be some off-street parking for vehicles on the west along SW Cherry Street and also on the east with access from the existing Alley.

We appreciate your time and consideration of this request and look forward to any further discussion at your regular meetings. Please do not hesitate to contact me if you have any questions or concerns.

Respectfully Submitted,

A handwritten signature in blue ink, appearing to read "Brad Kuehl", is written over a faint, light blue circular stamp.

Brad Kuehl, Project Manager
Bishop Engineering

Cc: Marcus Pitts, Ankeny Futures LLC
John Taylor, Accurate Commercial

THE ANKER - ANKENY, IOWA

SITE PLAN

SHEET INDEX:

- C0.1 COVER SHEET
- C1.1 EXISTING CONDITIONS / REMOVALS
- C2.1 LAYOUT AND LANDSCAPE PLAN
- C3.1 GRADING PLAN
- C4.1 UTILITY PLAN

PROPERTY DESCRIPTION:

(WARRANTY DEED BOOK 1858, PAGE 273)
THE SOUTH 2/3 OF LOT NINE, AND ALL THAT PART OF LOTS SIX, SEVEN, AND EIGHT LYING NORTHEASTERLY OF AND 15 FEET DISTANT, MEASURED AT RIGHT ANGLES FROM THE FORT DODGE, DES MONES AND SOUTHERN RAILWAY COMPANY'S MAIN LINE TRACK, IN BLOCK SIX, IN TOWN OF ANKENY, NOW INCLUDED IN AND FORMING A PART OF THE CITY OF ANKENY, POLK COUNTY, IOWA

SUBJECT TO AND TOGETHER WITH ANY AND ALL EASEMENTS AND RESTRICTIONS OF RECORD.

AREA:

22377.76 SQUARE FEET - 0.514 ACRES

ADDRESS:

315 SW CHERRY ST.
ANKENY, IA 50023

OWNER:

ANKENY FUTURES LLC
2614 NE BELLAGIO DR.
ANKENY, IA 50021-6814
MARCUS PITTS
515-619-9067

PREPARED FOR:

ANKENY FUTURES LLC

ZONING:

INFORMATION OBTAINED FROM POLK COUNTY ASSESSORS
C-2A CENTRAL BUSINESS COMMERCIAL DISTRICT
FOR AN OFFICIAL ZONING REPORT PLEASE CALL CITY OF ANKENY
AT 515-963-3550

BULK REGULATIONS:

SETBACKS:	
FRONT YARD	NONE
SIDE YARD	NONE, EXCEPT ADJOINING ANY R DISTRICT
REAR YARD	NONE, EXCEPT ADJOINING ANY R DISTRICT

MAXIMUM HEIGHT	45 FEET
MAX. # OF STORIES	3 STORIES, 4 FOR MULTIPLE DWELLING
OFF-STREET PARKING	NO MINIMUM REQUIREMENTS
OPEN SPACE	NO MINIMUM REQUIREMENTS

PARKING REQUIREMENTS:

NO MINIMUM REQUIREMENTS IN C-2A DISTRICT
OFF-STREET PARKING PROVIDED = 6 STALLS (INC. 1 HC STALL)
STREET PARKING PROVIDED = 9 STALLS

OPEN SPACE REQUIREMENTS:

NO MINIMUM REQUIREMENTS IN C-2A DISTRICT
TOTAL SITE AREA = 22,378 SF (0.51 AC)
OPEN SPACE PROVIDED = 10,708 SF (48%)

IMPERVIOUS SURFACE:

TOTAL SITE AREA = 22,378 SF	
EXISTING IMPERVIOUS	= 7,700 SF BUILDING = 4,800 SF DRIVE/PARKING (GRAVEL) = 12,500 SF TOTAL
PROPOSED IMPERVIOUS	= 4,270 SF BUILDING FOOTPRINT = 6,200 SF DRIVE/PARKING = 1,200 SF SIDEWALK = 11,670 SF TOTAL
TOTAL SITE IMPERVIOUS	= 11,670 SF (52%) (-830 SF)

ERU CALCULATION:

TOTAL SITE IMPERVIOUS AREA (11,670 SF)/4,000 SF (2.9)= 3

GENERAL NOTES:

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH ANKENY SUPPLEMENTAL SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND 2022 SUDAS STANDARD SPECIFICATIONS AND ANY AND ALL CITY/COUNTY SUPPLEMENTAL SPECIFICATIONS. THE CITY OF ANKENY MUST BE NOTIFIED BY ALL CONTRACTORS 48 HOURS PRIOR TO COMMENCING WORK.
- IN EVENT OF A DISCREPANCY BETWEEN THE QUANTITY ESTIMATES AND THE DETAILED PLANS, THE DETAILED PLANS SHALL GOVERN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL UTILITIES. ANY DAMAGE TO SAID UTILITIES SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT O.S.H.A. CODES AND STANDARDS. NOTHING INDICATED ON THESE PLANS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE APPROPRIATE SAFETY REGULATIONS.
- ALL NECESSARY CONSTRUCTION SIGNS, BARRICADES AND OTHER TRAFFIC CONTROL DEVICES REQUIRED DURING CONSTRUCTION WILL BE FURNISHED BY THE CONTRACTOR. SIGNS, BARRICADES AND OTHER TRAFFIC CONTROL DEVICES MUST BE IN CONFORMANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS."
- BISHOP ENGINEERING SHALL NOT BE LIABLE FOR ANY INJURIES THAT HAPPEN ON SITE. THIS SHALL INCLUDE BUT NOT BE LIMITED TO TRENCH COLLAPSES FROM VARYING SOIL CONDITIONS OR INJURIES CAUSED BY UNDERGROUND UTILITIES INCLUDING UTILITIES THAT ARE NOT SHOWN ON PLAN.
- THE CONTRACTOR IS LIABLE FOR ALL DAMAGES TO PUBLIC OR PRIVATE PROPERTY CAUSED BY THEIR ACTION OR INACTION IN PROVIDING FOR STORM WATER FLOW DURING CONSTRUCTION. DO NOT RESTRICT FLOWS IN EXISTING DRAINAGE CHANNELS, STORM SEWER, OR FACILITIES.
- THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A SCHEDULE FOR PERFORMANCE OF WORK ITEMS. THIS SCHEDULE SHALL BE PROVIDED BY THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. NO WORK SHALL BEGIN UNTIL A SCHEDULE HAS BEEN SUBMITTED AND ACCEPTED. THE CONTRACTOR SHALL THEN PERFORM WORK TO CONFORM TO THE ACCEPTED SCHEDULE.
- LABORATORY TESTS SHALL BE PERFORMED BY THE OWNER UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL PROVIDE SAMPLES OF MATERIAL REQUIRED FOR LABORATORY TESTS AND TESTING IN ACCORDANCE WITH THE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS.
- SOIL IMPORT OR EXPORT ON THIS PROJECT SHALL BE CONSIDERED INCIDENTAL AND WILL NOT BE MEASURED OR PAID FOR SEPARATELY.
- THE CONTRACTOR SHALL PROTECT ALL STRUCTURES NOT SHOWN AS REMOVALS ON THE PLANS.
- THE CONTRACTOR SHALL OBTAIN ANY AND ALL NECESSARY PERMITS PRIOR TO ANY CONSTRUCTION. CONTRACTOR SHALL WORK WITH OWNER OR OWNERS REPRESENTATIVE ON ALL REQUIRED STORM WATER DISCHARGE PERMITS FROM THE IOWA DEPARTMENT OF NATURAL RESOURCES AND THE CITY OF ANKENY.
- GRADING AND EROSION CONTROL SHALL BE DONE IN ACCORDANCE WITH THE APPROVED GRADING PLAN, SWPPP, NPDES DOCUMENTS, AND IOWA DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS.
- THE CONTRACTOR SHALL PICK UP ANY DEBRIS SPILLED ONTO THE ADJACENT RIGHT OF WAY OR ABUTTING PROPERTIES AS THE RESULT OF CONSTRUCTION, AT THE END OF EACH WORK DAY AND PRIOR TO A RAIN EVENT.
- THE CONTRACTOR IS RESPONSIBLE FOR THE PROMPT REMOVAL OF ALL MUD THAT HAS BEEN TRACKED OR WASHED UNTO ADJACENT PROPERTY OR RIGHT OF WAY UNTIL SUCH TIME THAT PERMANENT VEGETATION HAS BEEN ESTABLISHED.
- DISPOSE OF ALL EXCESS MATERIALS AND TRASH IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REQUIREMENTS. PROVIDE WASTE AREAS OR DISPOSAL SITES FOR EXCESS MATERIALS NOT DESIRABLE FOR INCORPORATION INTO THE PROJECT.

PAVING NOTES:

- THE PAVING/ GRADING CONTRACTOR SHALL BACKFILL THE PAVING SLAB AND FINE GRADE THE RIGHT OF WAY AS SOON AFTER THE PAVING AS POSSIBLE. ALL AREAS SHALL BE SODDED IN ACCORDANCE WITH CITY OF ANKENY SUPPLEMENTAL SPECIFICATIONS AND THE 2022 VERSION OF SUDAS.
- SUBGRADE PREPARATION AND PAVEMENTS WILL BE CONSTRUCTED FOLLOWING RECOMMENDATIONS IN THE SOILS REPORT. APPROVED SOILS ENGINEER MUST SIGN OFF ON SUBASE PRIOR TO ANY PAVEMENT BEING PLACED.
- SEE DETAILS FOR ALL PAVEMENT THICKNESS.
- ALL PEDESTRIAN WALKWAYS THAT UNLOAD INTO A VEHICLES TRAVELED PATH MUST HAVE A.D.A. DETECTABLE WARNING PANEL(S) AS PER A.D.A. REGULATIONS. PANEL TYPE & COLOR SHALL BE PER CITY STANDARD.
- ALL WALKS, PARKING LOTS, HANDICAP PARKING, RAMPS, ETC. SHALL COMPLY WITH ALL A.D.A. AND CITY CODES. HANDICAP PARKING SIGNAGE IS REQUIRED FOR ALL HANDICAP STALLS AND SHALL BE CONSIDERED INCIDENTAL. IN EVENT OF A DISCREPANCY BETWEEN THE PLANS AND THE A.D.A./CITY CODES THE A.D.A./CITY CODES SHALL GOVERN. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING A.D.A. CODES ARE MET.

UTILITY NOTES:

- QUANTITY CALLOUTS ON PIPE LENGTHS ARE APPROXIMATE AND SHOULD BE USED FOR REFERENCE ONLY.
- THE CONTRACTOR SHALL PROVIDE AS-BUILTS OF ALL UTILITIES, INCLUDING DEPTH AND LOCATION OF ALL SERVICES.
- THE CONTRACTOR SHALL COORDINATE THE ADJUSTMENT OF ANY AND ALL EXISTING AND PROPOSED UTILITIES TO PROPOSED GRADES. EXISTING UTILITIES SHALL BE RAISED OR LOWERED IN ACCORDANCE WITH THE UTILITY OWNER REQUIREMENTS. ANY NECESSARY ADJUSTMENTS SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
- ACTIVE EXISTING FIELD TILES ENCOUNTERED DURING CONSTRUCTION SHALL BE REPAIRED, REROUTED, OR CONNECTED TO PUBLIC OR PRIVATE STORM SEWER TO REMAIN IN SERVICE.
- SANITARY SEWER SERVICE CONNECTIONS SHALL BE PLACED AT A SLOPE OF NO LESS THAN 2%. SERVICES SHALL MAINTAIN 18" OF VERTICAL SEPARATION FROM THE WATERMAIN WITH 18" OF COMPACTED LOW PERMEABILITY SOIL BETWEEN THE UTILITIES WITHIN 10' OF THE CROSSING.
- MANDREL AND PRESSURE TESTS SHALL BE REQUIRED FOR ALL PROPOSED SANITARY LINES. TELEVISIONING OF THE SANITARY SEWER SYSTEM SHALL BE COMPLETED PRIOR TO PAVING UNLESS OTHERWISE APPROVED BY JURISDICTION.
- WATERMAINS SHALL BE C-900. SIZE OF WATERMAIN AS SHOWN ON PLANS.
- THRUST BLOCKS SHALL BE INSTALLED AS REQUIRED AND SHALL BE CONSIDERED INCIDENTAL TO WATERMAIN CONSTRUCTION.
- PROPOSED WATERMAIN SHALL BE PRESSURE TESTED, BACTERIA TESTED AND CHLORINATED. THE FILLING OF THE WATER MAIN SHALL BE DONE BY THE CITY.
- TRACER WIRE SHALL BE ADDED TO ALL WATER MAIN, AND BROUGHT TO THE SURFACE AT EVERY HYDRANT, VALVE AND AT FACE OF BUILDING
- ALL HYDRANT ASSEMBLIES SHALL BE AMERICAN DARLING, DELIVERED TO THE SITE YELLOW IN COLOR AND WILL IMMEDIATELY BE COVERED WITH A BLACK PLASTIC BAG (OR EQUIVALENT) ONCE THE HYDRANT IS INSTALLED. THE CITY WILL NOTIFY THE CONTRACTOR WHEN THE BAGS CAN BE REMOVED.
- THE MINIMUM HYDRANT LEAD SHALL BE 3.5 FEET

UTILITY CONFLICT NOTES:

- UTILITY CONFLICTS MAY EXIST ACROSS THE SITE WITH NEW UTILITIES, GRADING, PAVING ETC. MOST UTILITY CONFLICTS HAVE BEEN CALLED OUT FOR CONTRACTOR CONVENIENCE.
- CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY CONFLICTS THAT ARE EITHER CALLED OUT ON THE PLANS OR THAT CAN BE SEEN ON THE PLANS BETWEEN AN EXISTING UTILITY AND PROPOSED CONSTRUCTION

WETLAND NOTES:

- BISHOP ENGINEERING DOES NOT PERFORM WETLAND STUDIES OR WETLAND MITIGATION. IT IS THE OWNER'S RESPONSIBILITY TO DETERMINE IF ANY WETLANDS ARE LOCATED ON THE PROJECT SITE AND PERFORM ANY NECESSARY MITIGATION PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

SURVEY NOTES:

- SURVEY WORK WAS COMPLETED BY BISHOP ENGINEERING ON 9/01/2022. SEE SITE SURVEY PROVIDED AS PART OF THIS SET OF PLANS FOR EXISTING SITE CONDITIONS AND BOUNDARY INFORMATION.

EARTHWORK BALANCE NOTES:

- SOIL IMPORT OR EXPORT ON THIS PROJECT SHALL BE CONSIDERED INCIDENTAL AND WILL NOT BE MEASURED OR PAID FOR SEPARATELY. CONTRACTOR RESPONSIBLE FOR MAKING THE SITE EARTHWORK BALANCE.
- THIS INCLUDES BUT IS NOT LIMITED TO TOPSOIL, POOR SOILS AND STRUCTURAL FILL NECESSARY TO MEET PROJECT PLANS AND SPECIFICATIONS.

FIELD TILE NOTES:

- ACTIVE EXISTING FIELD TILES ENCOUNTERED DURING CONSTRUCTION SHALL BE REPAIRED, REROUTED, OR CONNECTED TO PUBLIC OR PRIVATE STORM SEWER TO REMAIN IN SERVICE. CONNECT TO STORM SEWER WITH AN INSERT-A-TEE OR DIRECTLY TO A STORM STRUCTURE.
- IT IS ANTICIPATED THAT THE SITE CONTAINS FIELD TILES, HOWEVER, LIMITED INFORMATION IS AVAILABLE.
- THIS WORK WILL BE ELIGIBLE FOR A CHANGE ORDER IF, AND ONLY IF, PROPOSED SITE STORM SEWER IS NOT WITHIN 50 FEET OF THE FIELD TILE.
- CONTRACTOR SHALL PROVIDE AS-BUILTS OF FIELD TILES TO BISHOP ENGINEERING.

PAVEMENT SAWCUT NOTES:

- CONTRACTOR TO PROVIDE SAWCUT JOINTING PLAN TO BRAD KUEHL, BISHOP ENGINEERING (515-276-0467 OR BKUEHL@BISHOPENGR.COM) PRIOR TO ANY CONCRETE PAVEMENT INSTALLATION.
- PAVEMENT MAY BE REQUIRED TO BE REMOVED AND REPLACED IF PLACED WITHOUT AN APPROVED PLAN.
- LONGITUDINAL JOINTS IN DRIVE LANES & THE OUTER MOST JOINT OF ALL PARKING AREAS SHALL BE SUDAS TYPE "L-1" OR "L-2" JOINTS AND HAVE STEEL. INTERIOR PARKING LOT JOINTS, OTHER THAN THE OUTER MOST JOINT, DO NOT NEED STEEL AND SHALL BE SUDAS TYPE "B" OR TYPE "K" JOINTS.
- ALL TRANSVERSE JOINTS SHALL BE SUDAS TYPE "C" OR TYPE "DW" JOINTS WITH STEEL IN THE CASE OF A DAY'S WORK JOINT.
- SAWCUTS WITHIN THE PUBLIC RIGHT-OF-WAY SHALL REQUIRE FINAL APPROVAL FROM THE CITY

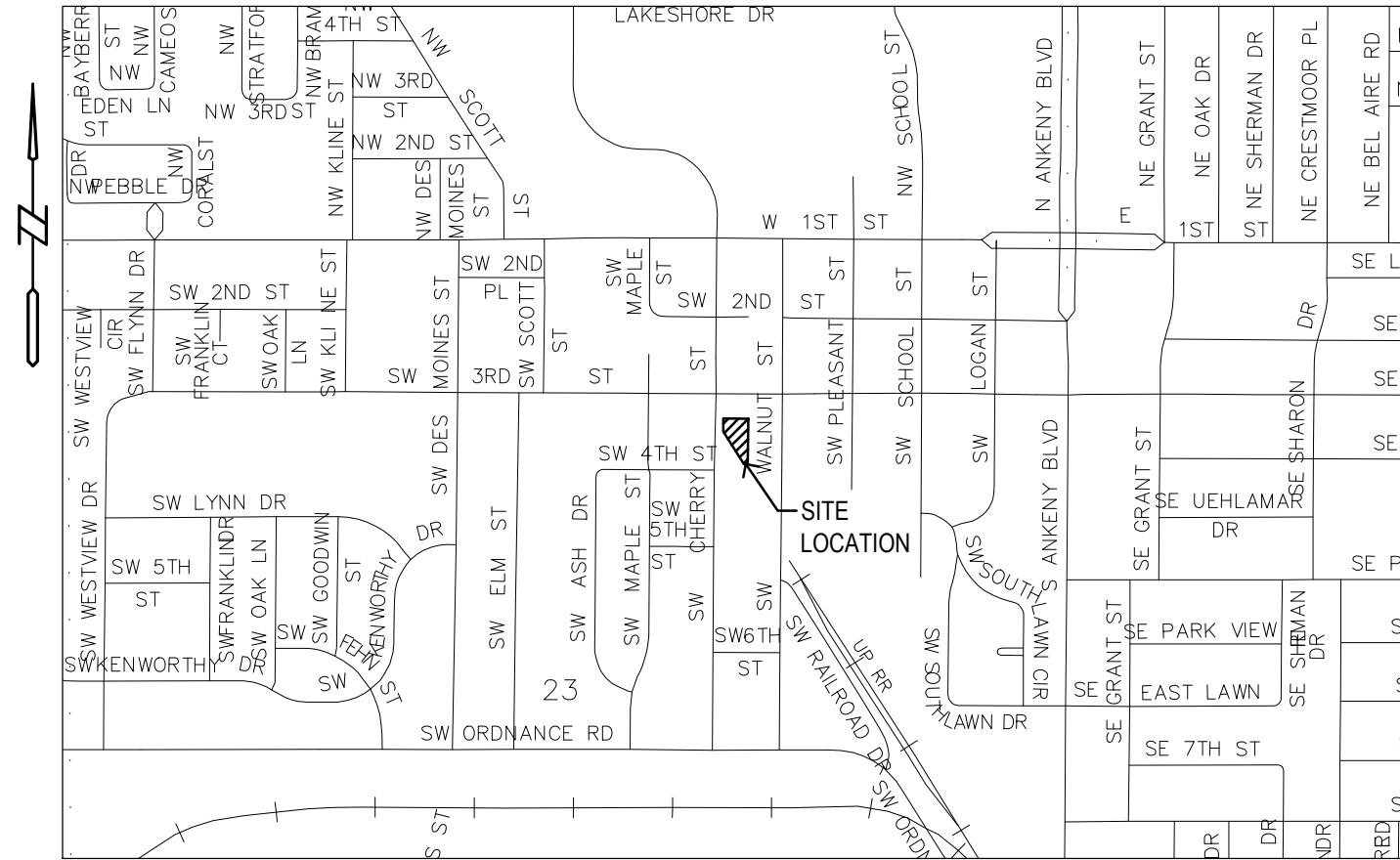
SITE CONTROL AND BENCHMARKS:

BASIS OF BEARING OBTAINED FROM GPS OBSERVATIONS
DATUM = NAD 83, IOWA SOUTH
BENCHMARK DATUM = NAVD83, GEOID 12A)

POINT #9000
NORTHING = 629987.88
EASTING = 161133.70
ELEVATION = 987.20
DESCRIPTION: IRON ROD WITH RPC
CENTER OF WEST PROPERTY LINE LOT 3

UTILITY MAPS PROVIDED BY:

- ELECTRIC (MIDAMERICAN / MECDSMDESIGNLOCATES@MIDAMERICAN.COM)
- SANITARY (CITY OF ANKENY / ROGER MCFARLAND, 515-965-6483, RMCFARLAND@ANKENYIOWA.GOV)
- FIBER OPTIC (LUMEN / SADIE.HULL@LUMEN.COM)
- CABLE (MEDIACOM / KCOLLINS@MEDIACOMCC.COM)
- GAS (MIDAMERICAN / MECDSMDESIGNLOCATES@MIDAMERICAN.COM)
- WATER (CITY OF ANKENY / SHAWN BUCKNER, 515-963-3524, SBUCKNER@ANKENYIOWA.GOV)
- STORM (CITY OF ANKENY / JARED BRIGHT, 515-963-3534, JBRIGHT@ANKENYIOWA.GOV)



VICINITY MAP
SCALE: 1" = 1,000'

ABBREVIATIONS:

AC ACRES
ASPH ASPHALT
BK BOOK
CONC CONCRETE
D DEEDED DISTANCE
EX EXISTING
ENCL ENCLOSURE
FF FINISHED FLOOR
FL FLOW LINE
FRAC FRACTIONAL
M MEASURED DISTANCE
MH MANHOLE
OPC ORANGE PLASTIC CAP
P PLATTED DISTANCE
PG PAGE
POB POINT OF BEGINNING
POC POINT OF COMMENCEMENT
PRA PREVIOUSLY RECORDED AS
PUE PUBLIC UTILITY EASEMENT
ROW RIGHT OF WAY
RPC RED PLASTIC CAP
SF SQUARE FEET
SAN SANITARY
TYP TYPICAL
YPC YELLOW PLASTIC CAP
N NORTH
S SOUTH
E EAST
W WEST

LEGEND:

— SAN — SANITARY SEWER
— ST — STORM SEWER
— W — WATER LINE
— G — GAS LINE
— U/E — UNDERGROUND ELECTRIC
— O/E — OVERHEAD ELECTRIC
— TELE — TELEPHONE LINE
— F/O — FIBER OPTIC
— CATV — CABLE TV
① STORM MANHOLE
CURB INTAKE
● SURFACE INTAKE
△ FLARED END SECTION
⑤ SANITARY MANHOLE
CLEANOUT
⊕ FIRE HYDRANT
⊕ SPRINKLER
⊕ IRRIGATION CONTROL VALVE
⑥ WATER MANHOLE
⑥ WELL
⊕ WATER VALVE
⊕ WATER SHUT OFF
⊕ YARD HYDRANT
⑥ ELECTRIC MANHOLE
⊕ ELECTRIC METER
⊕ ELECTRIC RISER
⊕ ELECTRIC VAULT
⊕ POWER POLE
⊕ TRANSFORMER POLE
☆ LIGHT POLE
⊕ ELECTRIC JUNCTION BOX
⊕ ELECTRIC PANEL
⊕ TRANSFORMER
⊕ GROUND LIGHT
⊕ GUY WIRE
⊕ ELECTRIC HANDHOLE
⊕ GAS METER
⊕ GAS VALVE
⊕ AIR CONDITIONING UNIT
⊕ TELEPHONE RISER
⊕ TELEPHONE VAULT
① TELEPHONE MANHOLE
⑤ TRAFFIC SIGNAL MANHOLE
⊕ FIBER OPTIC RISER
⊕ FIBER OPTIC FAULT
⊕ CABLE TV RISER
⊕ SIGN
⑦ DENOTES NUMBER OF PARKING STALLS
● PROPERTY CORNER - FOUND AS NOTED
○ PROPERTY CORNER- PLACED 3/4" IRON PIPE WITH YELLOW PLASTIC CAP ID #14775
⊕ SECTION CORNER - FOUND AS NOTED

THE ANKER

315 SW CHERRY STREET, ANKENY, IOWA

Bishop Engineering

"Planning Your Successful Development"

3501 104th Street

Des Moines, Iowa 50322-3825

Phone: (515)276-0467 Fax: (515)276-0217

Civil Engineering & Land Surveying

Established 1959

REFERENCE NUMBER:

DRAWN BY:

BK

CHECKED BY:

DB

REVISION DATE:

09/12/2022 CHECK
09/16/2022 CITY
10/07/2022 CITY
10/28/2022 CITY
11/08/2022 CITY

PROJECT NUMBER:

220388

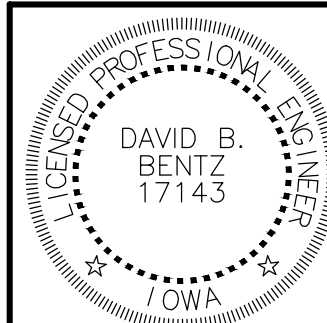
SHEET NUMBER:

C0.1

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

SIGNED: DAVID B. BENTZ, PE. 17143 DATE:

LICENSE RENEWAL DATE: DEC. 31, 2023
PAGES OR SHEETS COVERED BY THIS SEAL: C0.1, C1.1-C4.1



UTILITY NOTE:

THE LOCATION OF THE UTILITIES INDICATED ON THE PLANS HAVE BEEN TAKEN FROM THE FIELD SURVEY, EXISTING PUBLIC RECORDS, AND PLANS PROVIDED BY OTHERS. SURFACE UTILITY LOCATIONS HAVE BEEN FIELD LOCATED BY BISHOP ENGINEERING, UNLESS OTHERWISE NOTED. ALL UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE LOCATIONS ONLY. BISHOP ENGINEERING DOES NOT GUARANTEE THE UNDERGROUND LOCATION OF ANY UTILITIES SHOWN. IT SHALL BE THE DUTY OF THE CONTRACTOR TO DETERMINE THE LOCATION AND DEPTH OF ANY UNDERGROUND UTILITIES SHOWN AND IF ANY ADDITIONAL UTILITIES, OTHER THAN THOSE SHOWN ON THE PLANS, MAY BE PRESENT, A REQUEST WAS MADE TO IOWA ONE CALL FOR UTILITY PROVIDERS TO VERIFY, LOCATE, AND MARK THEIR UTILITIES IN THE FIELD.

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315 SW CHERRY STREET EXISTING CONDITIONS / REMOVALS

- REMOVAL NOTES:**
1. SAWCUT & REMOVE ALL PAVEMENT TO FULL DEPTH OF SLAB.
 2. PROTECT ALL TREES NOT CALLED OUT FOR REMOVAL WITH ORANGE CONSTRUCTION FENCE AT THE DRIP LINE
 3. CONTRACTOR TO COORDINATE SIGNAGE AND PERMITS WITH THE CITY FOR ANY WORK WITHIN THE ROAD RIGHT-OF-WAY
 4. CONTRACTOR TO COORDINATE WITH UTILITY PROVIDERS FOR ANY DISCONNECT AND REMOVAL OF EXISTING UTILITY SERVICES ASSOCIATED WITH THE BUILDING STRUCTURE DEMOLITION/REMOVAL
 5. CONTRACTOR TO PROTECT ALL UTILITIES, PAVEMENTS AND STRUCTURES THAT ARE NOT SCHEDULED FOR REMOVAL. CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DAMAGED UTILITIES, PAVEMENTS AND STRUCTURES NOT SCHEDULED FOR REMOVAL AT THE CONTRACTORS EXPENSE
 6. CONTRACTOR TO LOCATE AND VERIFY DEPTH OF EXISTING UTILITIES PRIOR TO CONSTRUCTION AND CONTACT THE OWNER/ENGINEER IF DIFFERENT FROM THE PLANS OR IN CONFLICT WITH PROPOSED IMPROVEMENTS

- UTILITY MAPS PROVIDED BY:**
1. ELECTRIC (MIDAMERICAN / MECDSMDESIGNLOCATES@MIDAMERICAN.COM)
 2. SANITARY (CITY OF ANKENY / ROGER MCFARLAND, 515-965-6483, RMCFARLAND@ANKENYIOWA.GOV)
 3. FIBER OPTIC (LUMEN / SADIE.HULL@LUMEN.COM)
 4. CABLE (MEDIACOM / KCOLLINS@MEDIACOMCC.COM)
 5. GAS (MIDAMERICAN / MECDSMDESIGNLOCATES@MIDAMERICAN.COM)
 6. WATER (CITY OF ANKENY / SHAWN BUCKNER, 515-963-3524, SBUCKNER@ANKENYIOWA.GOV)
 7. STORM (CITY OF ANKENY / JARED BRIGHT, 515-963-3534, JBRIGHT@ANKENYIOWA.GOV)

UTILITY NOTE:

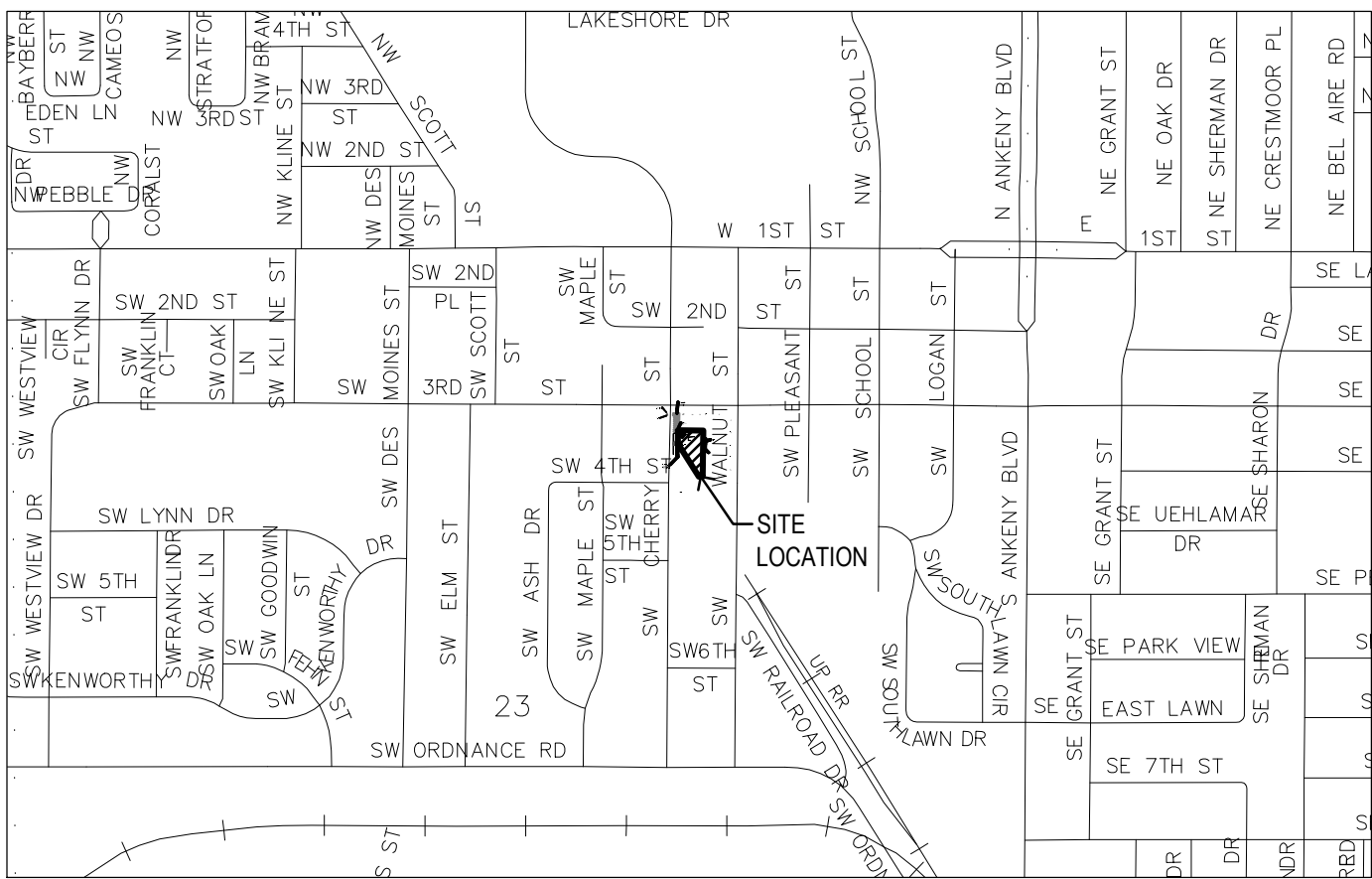
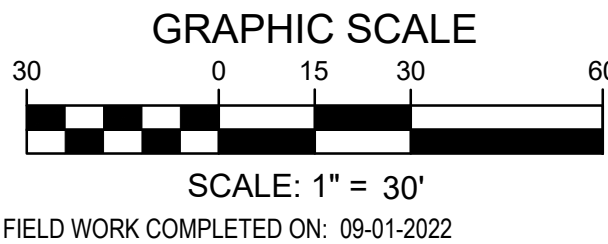
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NOTES:

1. ADJACENT PROPERTY OWNER INFORMATION OBTAINED FROM POLK COUNTY ASSESSORS WEB PAGE
2. PARENTHESIS () DENOTES PREVIOUSLY RECORDED BEARINGS AND DISTANCES

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VICINITY MAP
SCALE: 1" = 1,000'

PROPERTY DESCRIPTION:

(WARRANTY DEED BOOK 18558, PAGE 273)
THE SOUTH 2/3 OF LOT NINE, AND ALL THAT PART OF LOTS SIX, SEVEN, AND EIGHT LYING NORTHEASTERLY OF AND 15 FEET DISTANT, MEASURED AT RIGHT ANGLES FROM THE FORT DODGE, DES MONES AND SOUTHERN RAILWAY COMPANY'S MAIN LINE TRACK, IN BLOCK SIX, IN TOWN OF ANKENY, NOW INCLUDED IN AND FORMING A PART OF THE CITY OF ANKENY, POLK COUNTY, IOWA

SUBJECT TO AND TOGETHER WITH ANY AND ALL EASEMENTS AND RESTRICTIONS OF RECORD.

AREA:
22377.76 SQUARE FEET - 0.514 ACRES

ADDRESS:
315 SW CHERRY ST.
ANKENY, IA 50023

OWNER:
ANKENY FUTURES LLC
2614 NE BELLARIO DR.
ANKENY, IA 50021-6814

PREPARED FOR:
ANKENY FUTURES LLC

ZONING:
INFORMATION OBTAINED FROM POLK COUNTY ASSESSORS
C-2A CENTRAL BUSINESS COMMERCIAL DISTRICT
FOR AN OFFICIAL ZONING REPORT PLEASE CALL CITY OF ANKENY AT 515-963-3550

SITE CONTROL AND BENCHMARKS:
BASIS OF BEARING OBTAINED FROM GPS OBSERVATIONS
DATUM = NAD 83, IOWA SOUTH
BENCHMARK DATUM = NAVD88, GEOID 12A)

POINT #9000
NORTHING = 629987.88
EASTING = 1611333.70
ELEVATION = 997.20
DESCRIPTION: IRON ROD WITH RPC
CENTER OF WEST PROPERTY LINE LOT 3

ABBREVIATIONS:

AC ACRES
ASPH ASPHALT
BK BOOK
CONC CONCRETE
D DEEDED DISTANCE
EX EXISTING
ENCL ENCLOSURE
FF FINISHED FLOOR
FL FLOW LINE
FRAC FRACTIONAL
M MEASURED DISTANCE
MH MANHOLE
OPC ORANGE PLASTIC CAP
P PLATTED DISTANCE
PG PAGE
POB POINT OF BEGINNING
POC POINT OF COMMENCEMENT
PRA PREVIOUSLY RECORDED AS
PUE PUBLIC UTILITY EASEMENT
ROW RIGHT OF WAY
RPC RED PLASTIC CAP
SF SQUARE FEET
SAN SANITARY
TYP TYPICAL
YPC YELLOW PLASTIC CAP
N NORTH
S SOUTH
E EAST
W WEST

LEGEND:

- SAN — SANITARY SEWER
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- W — WATER LINE
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- F/O — FIBER OPTIC
- CATV — CABLE TV
- ⊙ STORM MANHOLE
- ⊙ CURB INTAKE
- ⊙ SURFACE INTAKE
- ⊙ FLARED END SECTION
- ⊙ ROOF DRAIN
- ⊙ DOWNSPOUT
- ⊙ SANITARY MANHOLE
- ⊙ CLEANOUT
- ⊙ FIRE HYDRANT
- ⊙ SPRINKLER
- ⊙ IRRIGATION CONTROL VALVE
- ⊙ WATER MANHOLE
- ⊙ WELL
- ⊙ WATER VALVE
- ⊙ WATER SHUT OFF
- ⊙ YARD HYDRANT
- ⊙ ELECTRIC MANHOLE
- ⊙ ELECTRIC METER
- ⊙ ELECTRIC RISER
- ⊙ ELECTRIC VAULT
- ⊙ POWER POLE
- ⊙ TRANSFORMER POLE
- ⊙ LIGHT POLE
- ⊙ ELECTRIC JUNCTION BOX
- ⊙ ELECTRIC PANEL
- ⊙ TRANSFORMER
- ⊙ GROUND LIGHT
- ⊙ GUY WIRE
- ⊙ ELECTRIC HANDHOLE
- ⊙ GAS METER
- ⊙ GAS VALVE
- ⊙ AIR CONDITIONING UNIT
- ⊙ TELEPHONE RISER
- ⊙ TELEPHONE VAULT
- ⊙ TELEPHONE MANHOLE
- ⊙ TRAFFIC SIGNAL MANHOLE
- ⊙ FIBER OPTIC MANHOLE
- ⊙ FIBER OPTIC RISER
- ⊙ FIBER OPTIC VAULT
- ⊙ CABLE TV RISER
- ⊙ SIGN
- BOLLARDS
- ⑦ DENOTES NUMBER OF PARKING STALLS
- PROPERTY CORNER - FOUND AS NOTED
- PROPERTY CORNER - PLACED 5/8" IRON ROD WITH YELLOW PLASTIC CAP ID # 14775 OR AS NOTED
- ⊙ SECTION CORNER - FOUND AS NOTED
- ▲ SITE CONTROL POINT - MONUMENT AS NOTED

THE ANKER

315 SW CHERRY STREET, ANKENY, IOWA

EXISTING CONDITIONS / REMOVALS

Bishop Engineering
"Planning Your Successful Development"

3501 104th Street

Des Moines, Iowa 50322-3825

Phone: (515)276-0467 Fax: (515)276-0217

Civil Engineering & Land Surveying

Established 1959

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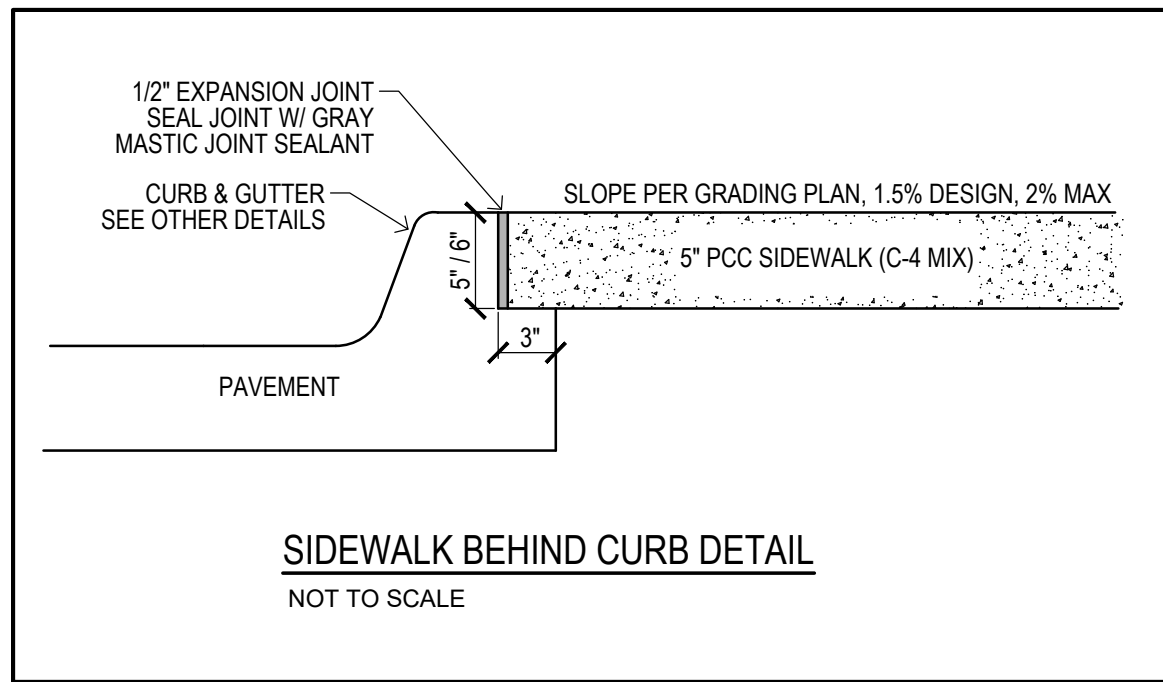
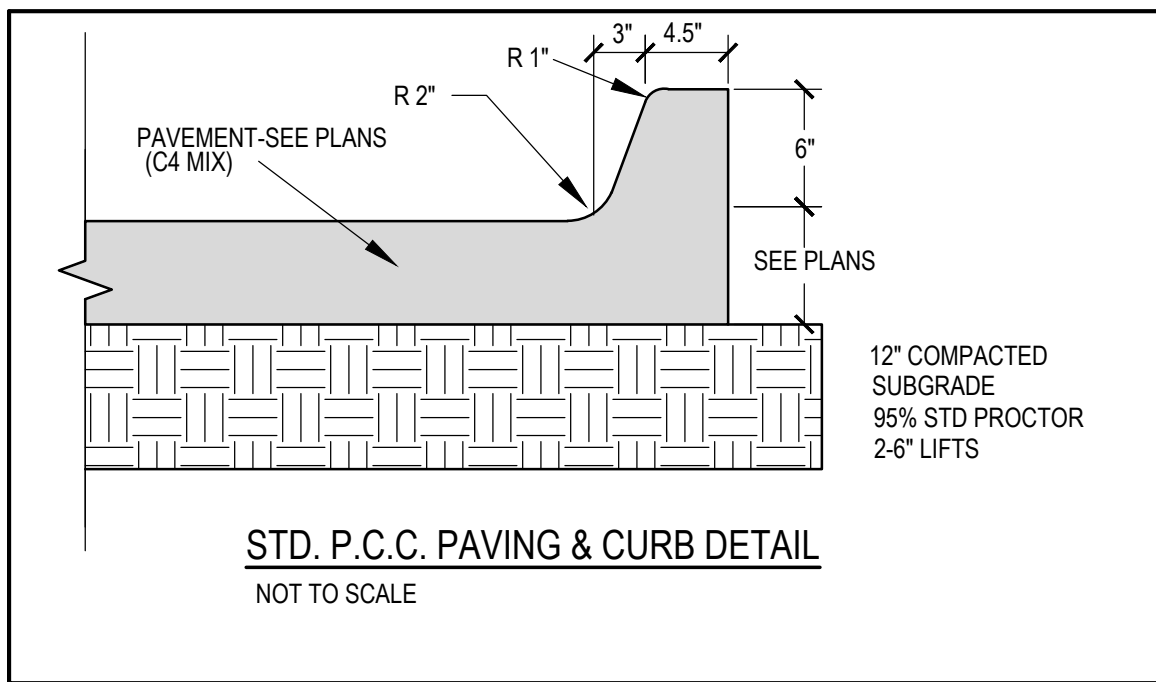
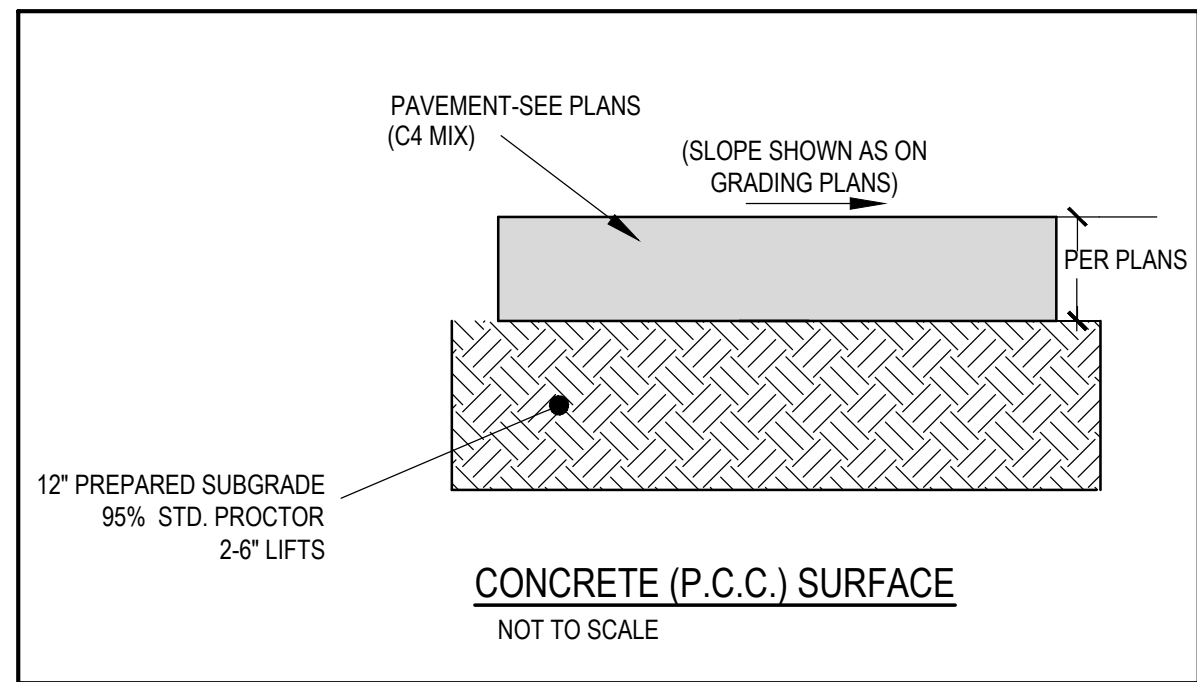
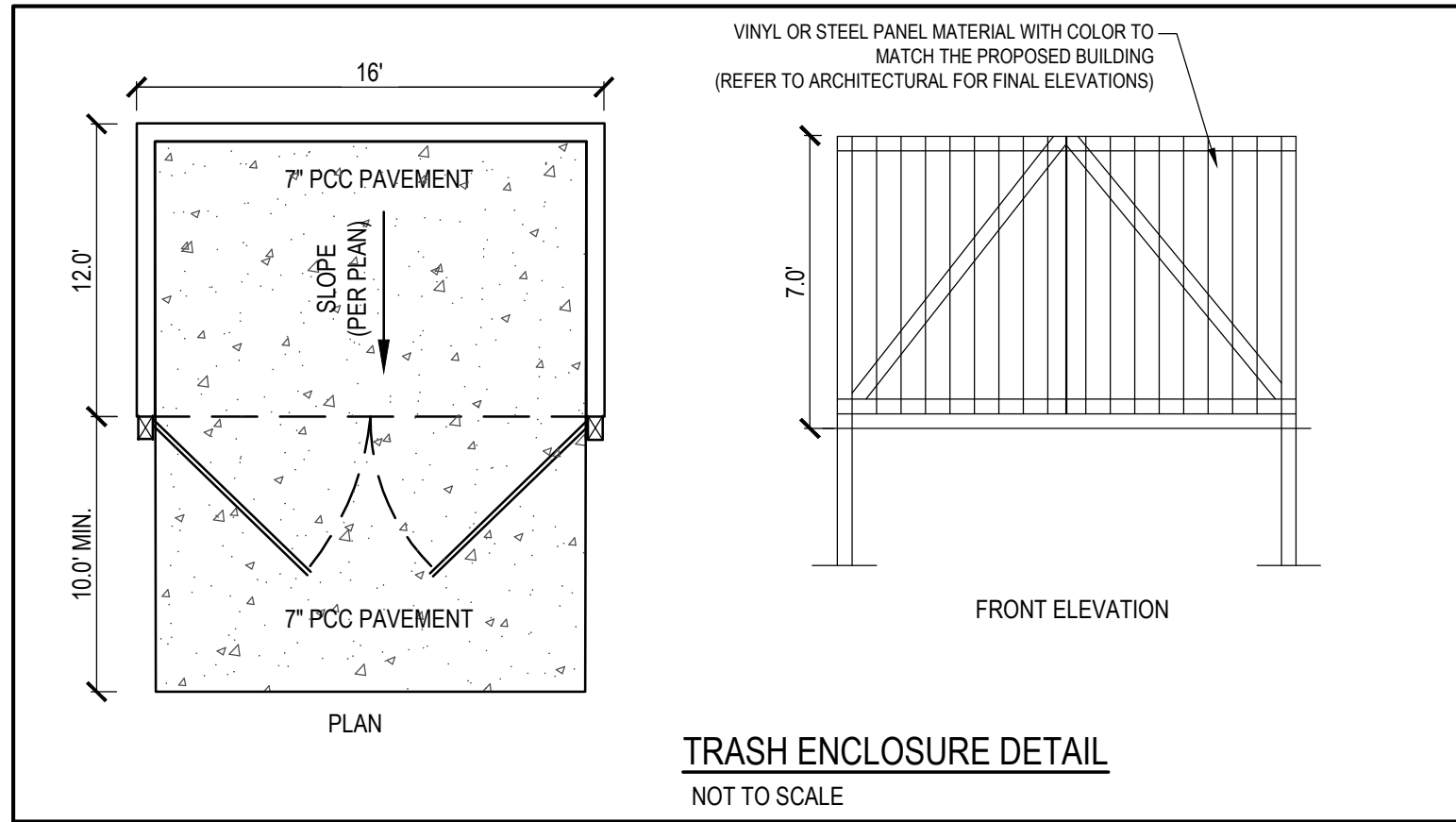
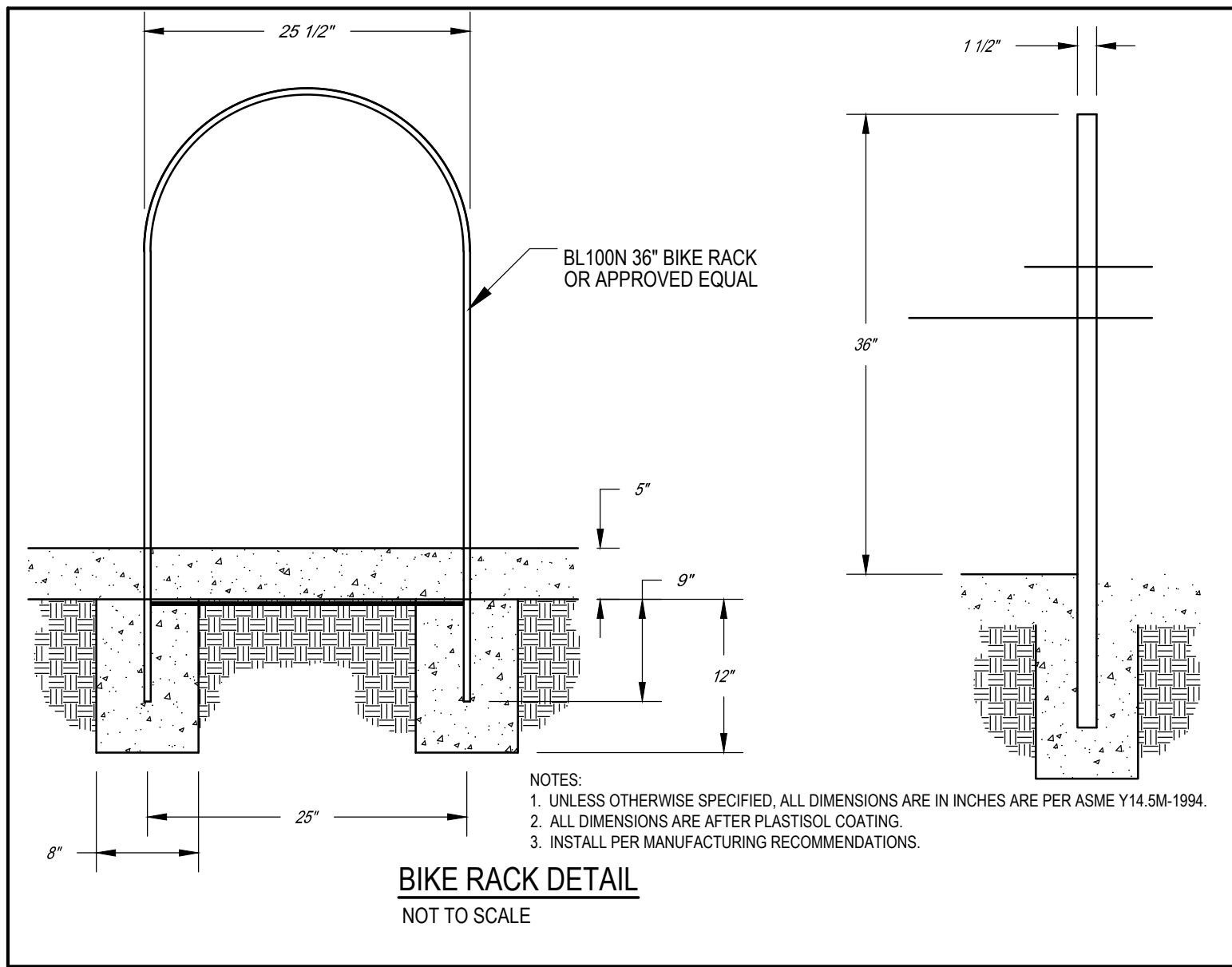
PROJECT NUMBER:
220388

SHEET NUMBER:

C1.1

C0.1

11/8/2022 2:42:16 PM L:\LAND PROJECTS 2022\20388 - ANKER - ANKENY\DWG\02 LAYOUT.DWG



LANDSCAPE REQUIREMENTS:

PARKING LOT LANDSCAPING - SHADING TREE CALCULATION:

REQUIRED SHADING AREA: GROSS PAVED AREA (7,200 SF) x 0.20 = 1,440 SF

SHADING TREES REQUIRED: 1,440 SF / 706 SF = 2 TREES

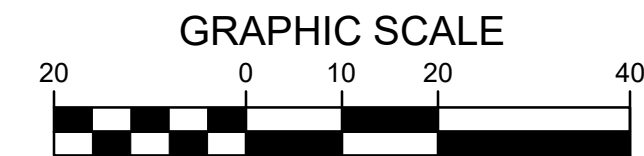
SHADING TREES PROVIDED: = 3 TREES

SOD: AREAS DIRECTLY AROUND BUILDING, PUBLIC RIGHT-OF-WAY AND OFF SIDEWALK APPROXIMATELY 10-FEET. PROVIDE AND INSTALL SOD FROM LOCAL SUPPLIERS. AREAS TO BE SODDED MUST BE FREE OF ALL CONSTRUCTION DEBRIS AND ANY DIRT CLUMPS OVER 1" IN DIAMETER. THOROUGHLY WATER SOD UPON INSTALLATION. CONTRACTOR TO MAINTAIN WATERING UNTIL SOD IS ESTABLISHED (ROOTS KNITTED INTO SUBSURFACE)

SEED - SUDAS TYPE 1: ALL OTHER DISTURBED AREAS NOT SODDED (SOUTH). INSTALL PER SUDAS SPECIFICATIONS

PLANTING SCHEDULE:

CODE	QUAN	COMMON NAME	LATIN NAME	SIZE	ROOT	NOTES
OVERSTORY TREES						
RO	4	RED OAK	QUERCUS RUBRA	2.0" CAL	B&B	MATCHED SPECIMENS
SHRUBS						
GF	20	GOLD FLAME SPIREA	SPIRAEA BUMALDA 'GOLDFLAME'	#5	CONT	FULL FORM - MATCHED



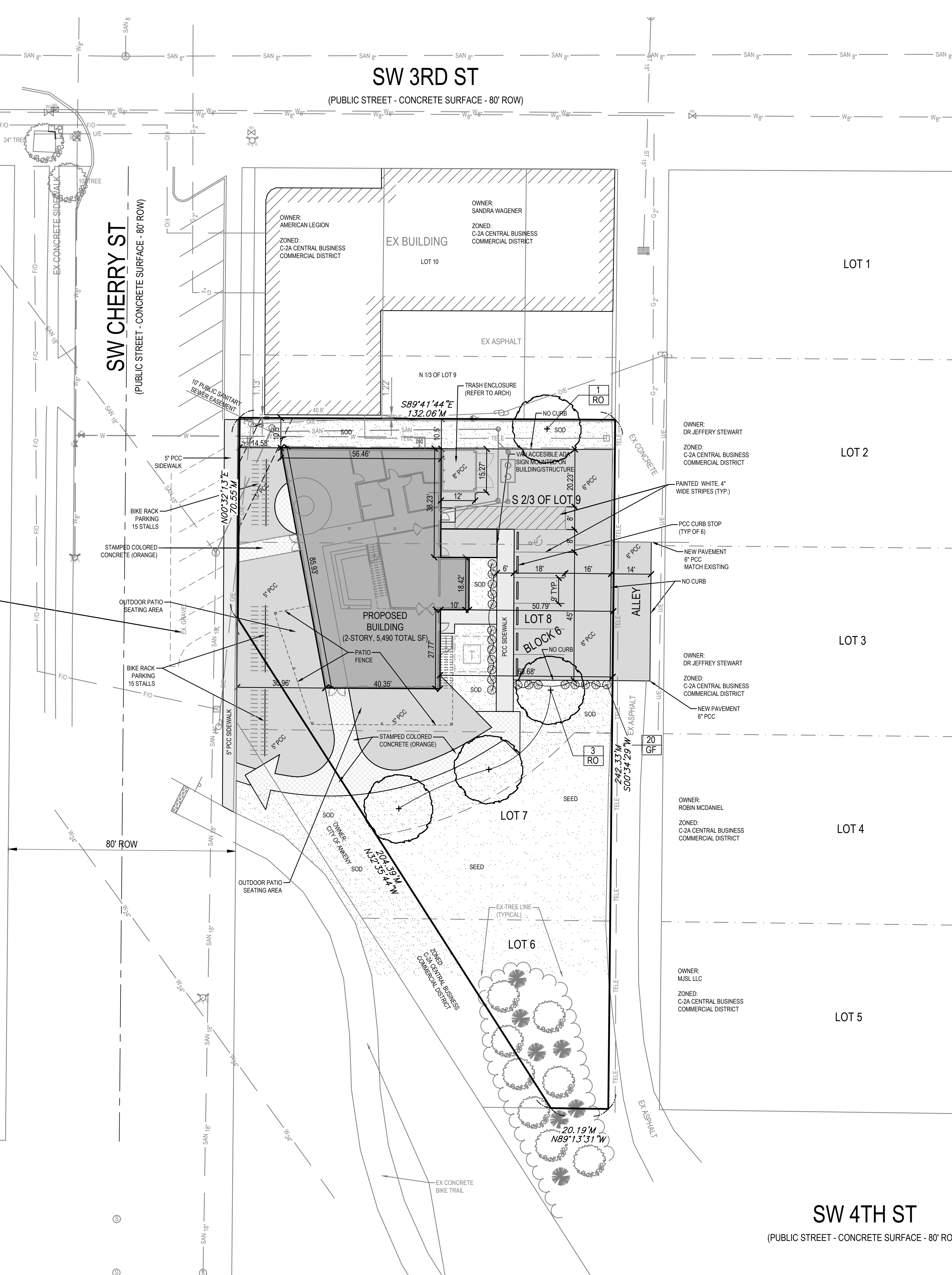
LAYOUT NOTES:

1. SEE FINAL ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS.
2. CONTRACTOR TO REFER TO ARCHITECTURAL PLANS FOR DETAILED BUILDING CONSTRUCTION INFORMATION.
3. CONTRACTOR TO REFER TO STRUCTURAL PLANS FOR DETAILED BUILDING FOUNDATION AND STOOP LOCATIONS AND DETAILED CONSTRUCTION INFORMATION.
4. CONTRACTOR TO CONNECT TO EXISTING PCC PAVEMENTS WITH IOWA SUDAS TYPICAL BT JOINT.

FUTURE PUBLIC STREET PARKING AS PART OF CITY CIP PROJECT DESIGNED BY OTHERS. LAYOUT AND CONNECTING ELEVATIONS TO BE COORDINATED WITH THE CITY OF ANKENY

SW 4TH ST

(PUBLIC STREET - CONCRETE SURFACE - 66' ROW)



SW 4TH ST

(PUBLIC STREET - CONCRETE SURFACE - 80' ROW)

THE ANKER

315 SW CHERRY STREET, ANKENY, IOWA

LAYOUT AND LANDSCAPE PLAN

Bishop Engineering

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Des Moines, Iowa 50322-3825

Phone: (515)276-0467 Fax: (515)276-0217

Civil Engineering & Land Surveying

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SHEET NUMBER:

C2.1

TOPSOIL NOTES:

1. STRIP AND STOCKPILE THE TOP 8" OF SOIL ON ALL DISTURBED AREAS.
2. RESPREAD TOPSOIL TO A MINIMUM DEPTH OF 8" ON ALL GREEN (NON PAVED) AREAS. IMPORT TOPSOIL AS NECESSARY TO ACHIEVE A MINIMUM DEPTH OF 6".
3. **TOPSOIL SHALL BE FREE OF ALL ROCK AND DEBRIS LARGER THAN 3/4" IN SIZE.**
4. TOPSOIL IS DEFINED AS: FERTILE, FRIABLE LOAM, CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH, FROM WELL DRAINED SITE FREE FROM FLOODING, NOT IN FROZEN OR MUDDY CONDITIONS; REASONABLE FREE FROM SUBSOIL, CLAY LUMPS, ROOTS, GRASS, WEEDS, STONES LARGER THAN 3/4 INCH IN DIAMETER, AND FOREIGN MATTER; ACIDITY RANGE (PH) OF 5.5 TO 7.5; CONTAINING MINIMUM 4 PERCENT AND MAXIMUM 20 PERCENT ORGANIC MATTER.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL TOPSOIL REQUIREMENTS OF NPDES GENERAL PERMIT NO. 2 ARE MET.

GRADING LEGEND:

- | | | |
|---------------------------|-----|-----------|
| EXISTING CONTOUR | --- | 150 |
| PROPOSED CONTOUR | --- | 150 |
| FINISHED GROUND ELEVATION | ● | 150.50 |
| TOP OF CURB ELEVATION | ● | 150.50T/C |
| GUTTER ELEVATION | ● | 150.50G |
| TOP OF WALL ELEVATION | ● | 150.50T/W |
| BOTTOM OF WALL ELEVATION | ● | 150.50B/W |
| EDGE OF WALK ELEVATION | ● | 150.50E/W |
| TOP OF STAIR ELEVATION | ● | 150.50T/S |
| BOTTOM OF STAIR ELEVATION | ● | 150.50B/S |

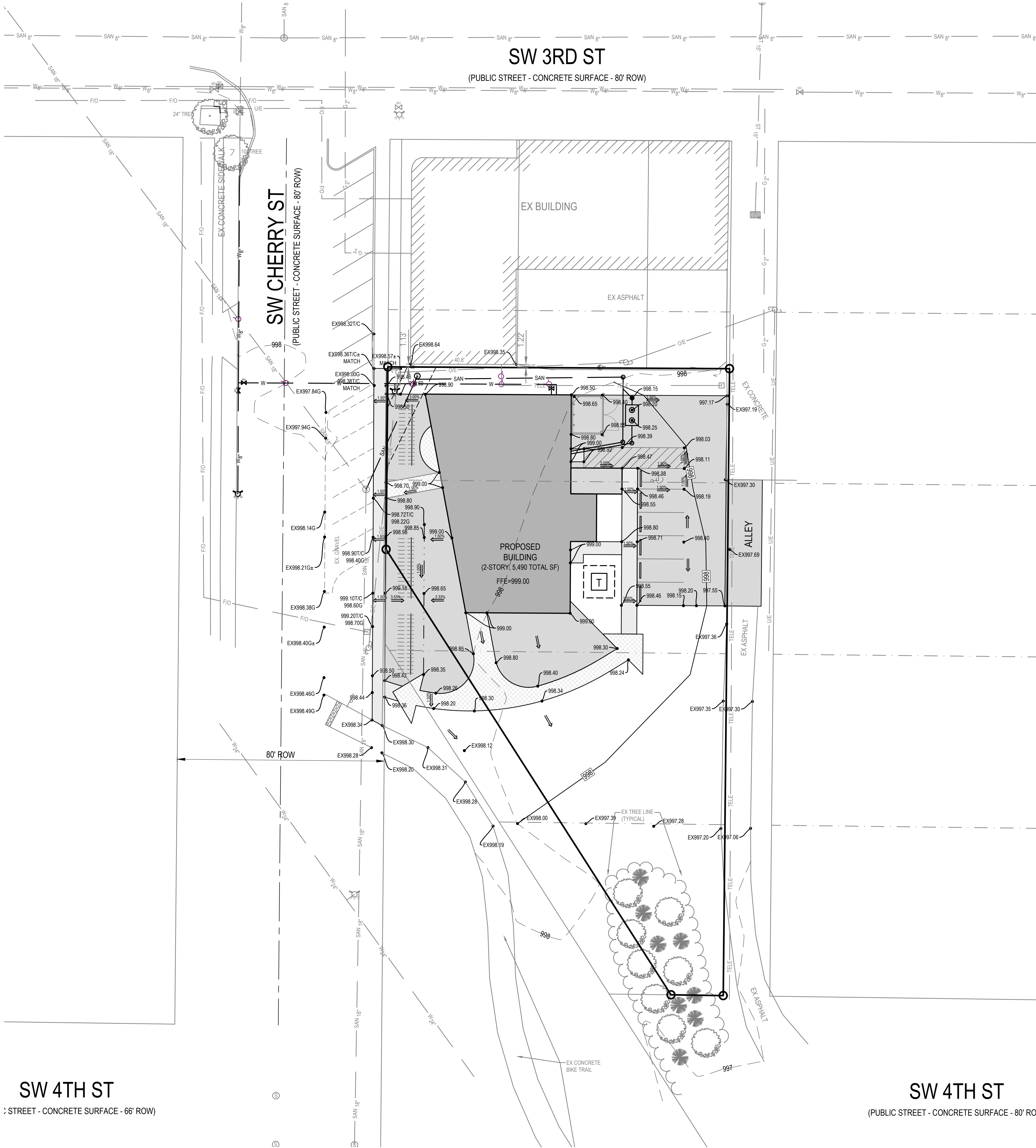
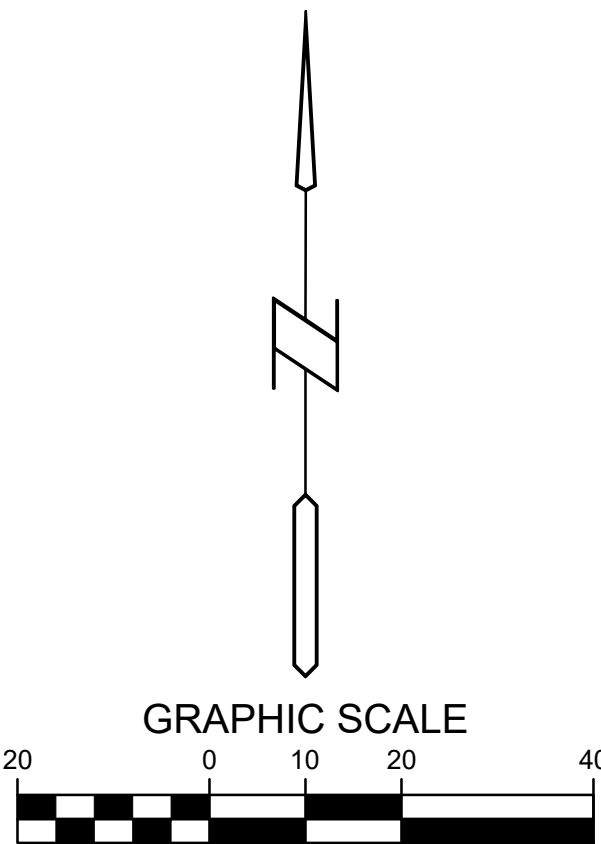
NOTE: WALL ELEVATIONS SHOWN ON PLAN ARE FINISHED GROUND GRADES AT THE TOP AND BOTTOM OF THE WALL.

STORM WATER MANAGEMENT NOTES:

1. THE PROPERTY OWNER IS THE RESPONSIBLE PARTY TO ENSURE THE SITE IMPROVEMENTS, GRADING CHANGES AND SURFACE WATER DRAINAGE FROM THE SITE DOES NOT NEGATIVELY IMPACT ADJACENT OR DRAINAGE SERVIENT PROPERTIES PER IOWA DRAINAGE LAW.

UTILITY NOTE:

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SW 4TH ST
(PUBLIC STREET - CONCRETE SURFACE - 80' ROW)

THE ANKER

315 SW CHERRY STREET, ANKENY, IOWA

REFERENCE NUMBER:

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DB

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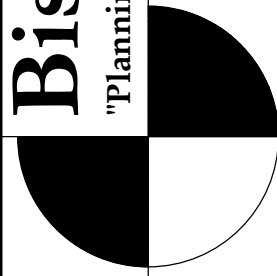
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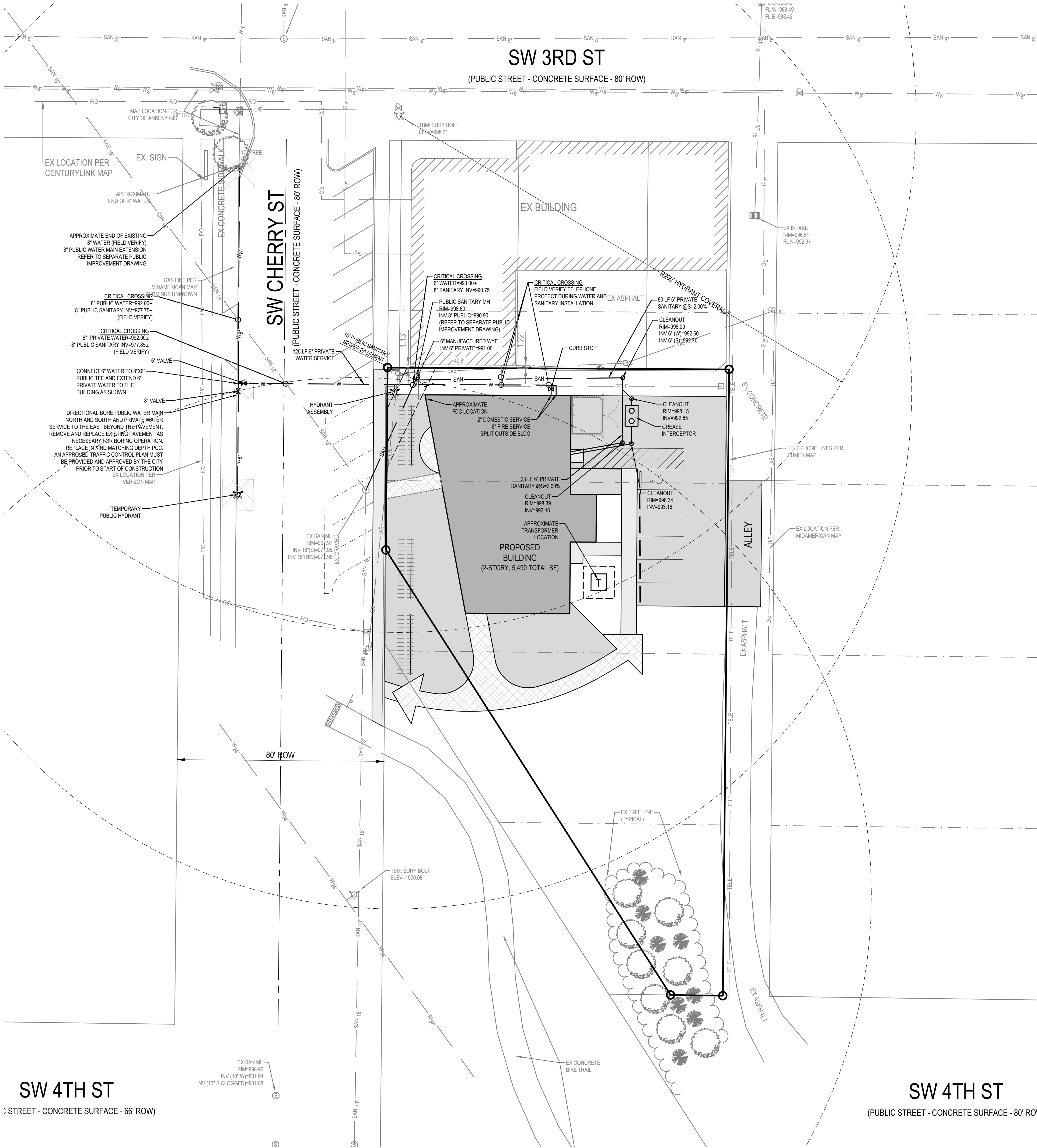
Established 1959



Civil Engineering & Land Surveying

PUBLIC IMPROVEMENT NOTES:

1. REFER TO SEPARATE DRAWING FOR THE ANKER PUBLIC IMPROVEMENTS FOR 8" WATER MAIN AND SANITARY SEWER EXTENSION DETAILS



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Civil Engineering & Land Surveying Established 1959

THE ANKER
315 SW CHERRY STREET, ANKENY, IOWA

UTILITY PLAN

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C4.1

UTILITY NOTE:

THE LOCATION OF THE UTILITIES INDICATED ON THE PLANS HAVE BEEN TAKEN FROM THE FIELD SURVEY, EXISTING PUBLIC RECORDS, AND PLANS PROVIDED BY OTHERS. SURFACE UTILITY LOCATIONS HAVE BEEN FIELD LOCATED BY BISHOP ENGINEERING, UNLESS OTHERWISE NOTED. ALL UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE LOCATIONS ONLY. BISHOP ENGINEERING DOES NOT GUARANTEE THE UNDERGROUND LOCATION OF ANY UTILITIES SHOWN. IT SHALL BE THE DUTY OF THE CONTRACTOR TO DETERMINE THE LOCATION AND DEPTH OF ANY UNDERGROUND UTILITIES SHOWN AND IF ANY ADDITIONAL UTILITIES, OTHER THAN THOSE SHOWN ON THE PLANS, MAY BE PRESENT, A REQUEST WAS MADE TO IOWA ONE CALL FOR UTILITY PROVIDERS TO VERIFY, LOCATE, AND MARK THEIR UTILITIES IN THE FIELD.



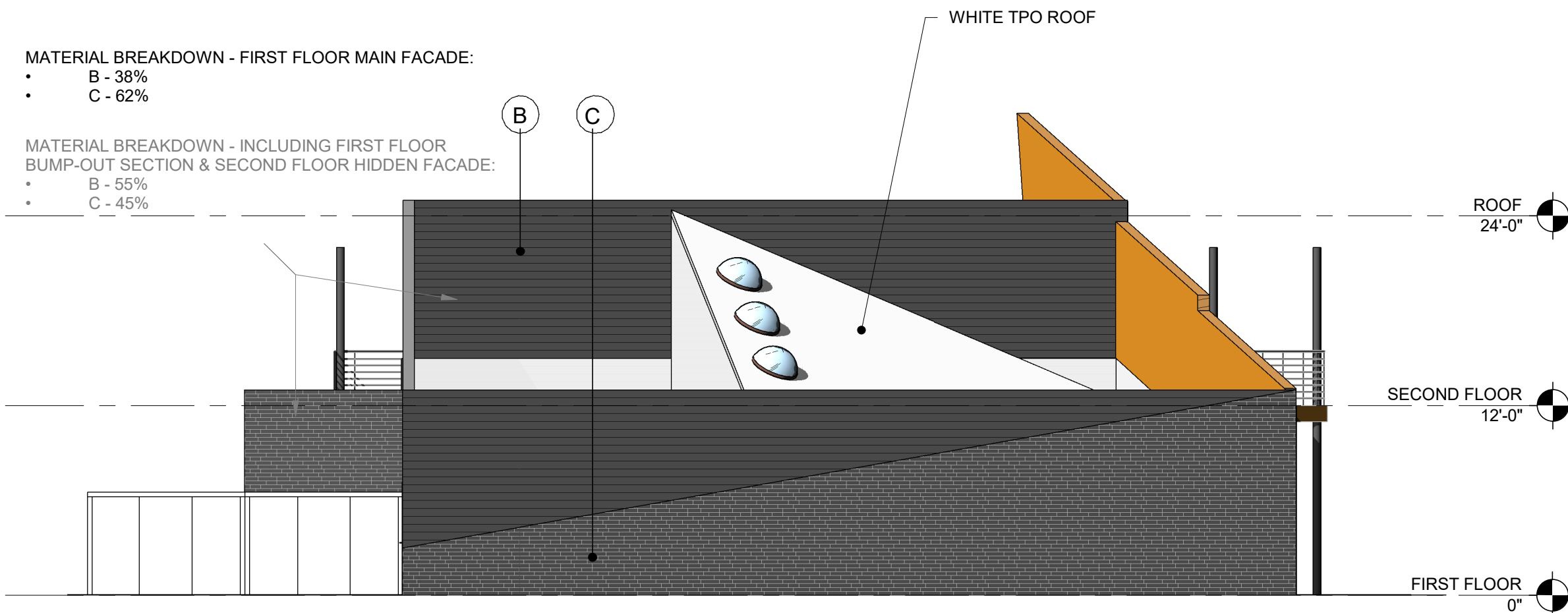
D

C

B

A

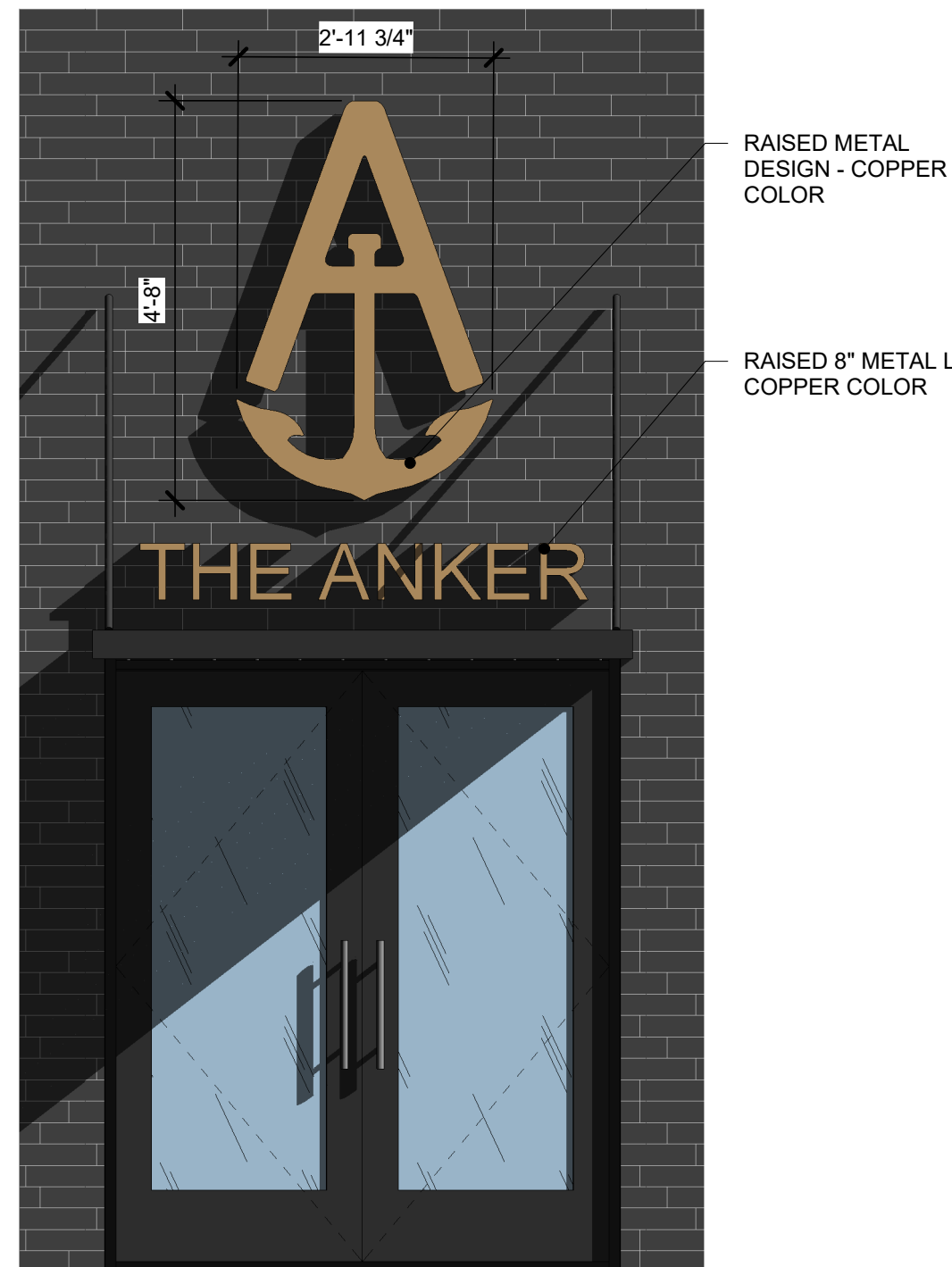
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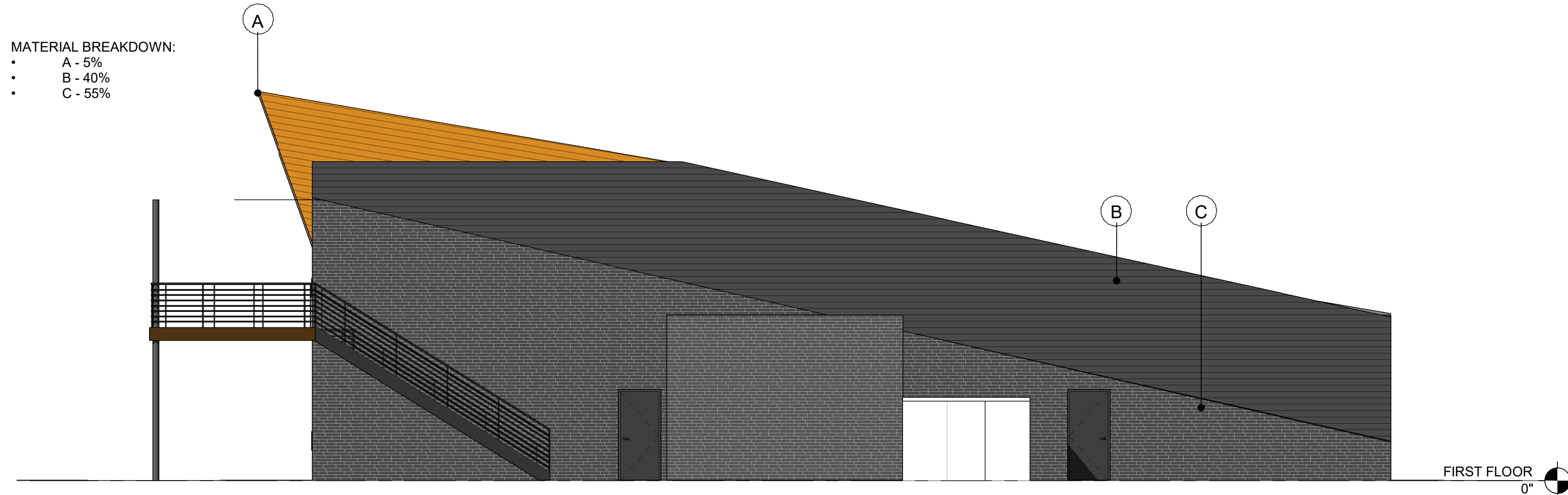
B2 NORTH ELEVATION
SCALE: 1/8" = 1'-0" MIN 50% PRIMARY MATERIALS



A2 SOUTH ELEVATION
SCALE: 1/8" = 1'-0" MIN 70% PRIMARY MATERIALS



C1 EXTERIOR SIGNAGE - FRONT DOOR
SCALE: 1/2" = 1'-0"



B1 EAST ELEVATION
SCALE: 1/8" = 1'-0" MIN 50% PRIMARY MATERIALS



A1 WEST ELEVATION
SCALE: 1/8" = 1'-0" MIN 70% PRIMARY MATERIALS

MATERIAL KEY

SECONDARY MATERIALS

PRIMARY MATERIALS

A

FIBER CEMENT BOARD SIDING:
PUMPKIN COLOR

B

FIBER CEMENT BOARD SIDING:
DARK GRAY - BLACK COLOR

C

MANUFACTURED STONE:
DARK GRAY - BLACK COLOR

D

STOREFRONT WINDOWS:
BLACK ALUMINUM FRAME

ARCHITECTURE INTERIORS PLANNING

3716 Ingersoll Ave., Ste. A, Des Moines, IA 50312 office: 515.277.6707

ARCHITECTS SCHIPER KASNER



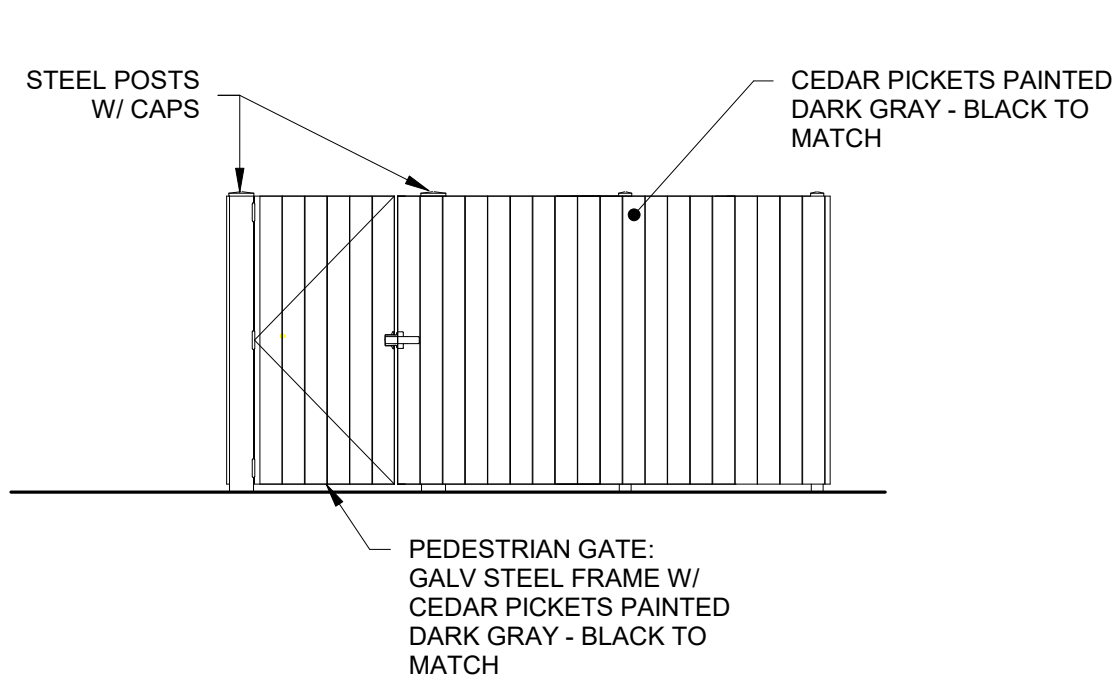
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THE ANKER
ANKENY FUTURES LLC
315 SW CHERRY ST
ANKENY, IA 50023

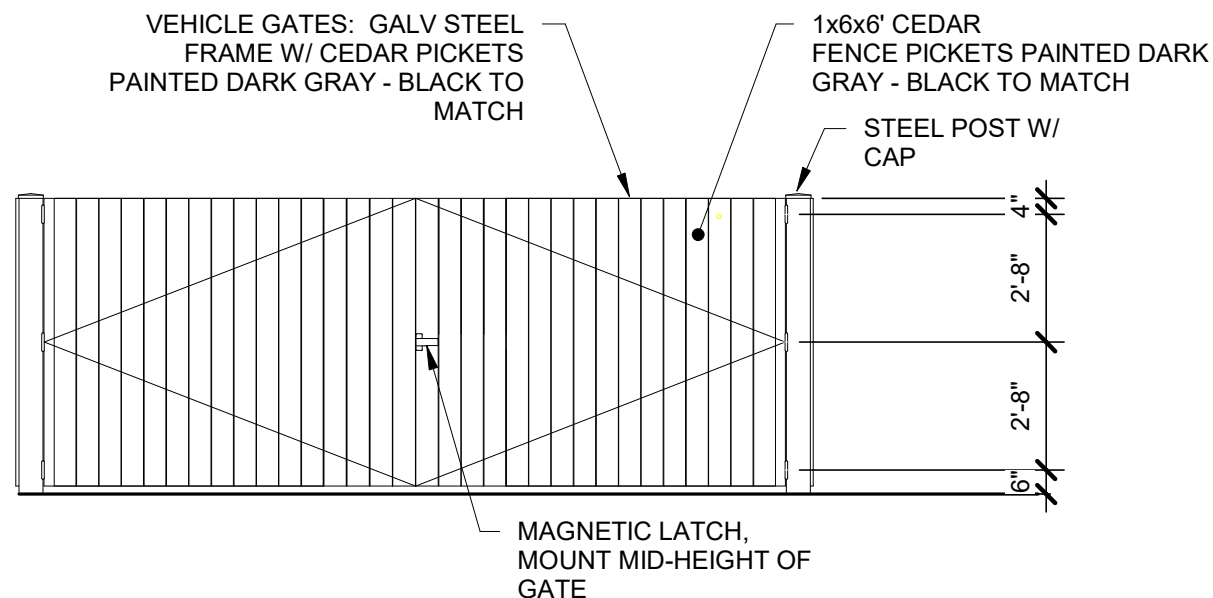
ISSUE DATE:
10.07.2022
REVISIONS:

EXTERIOR
ELEVATIONS

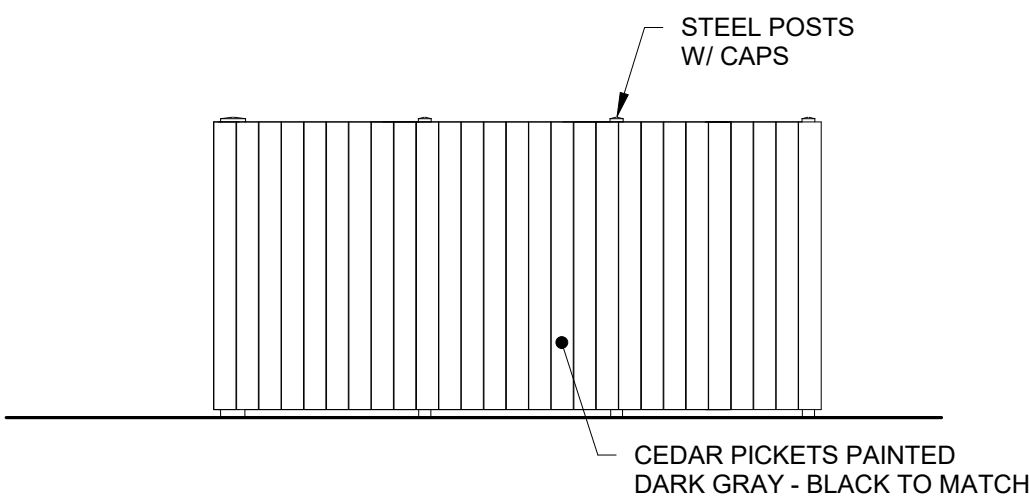
A201
PROJECT 21026



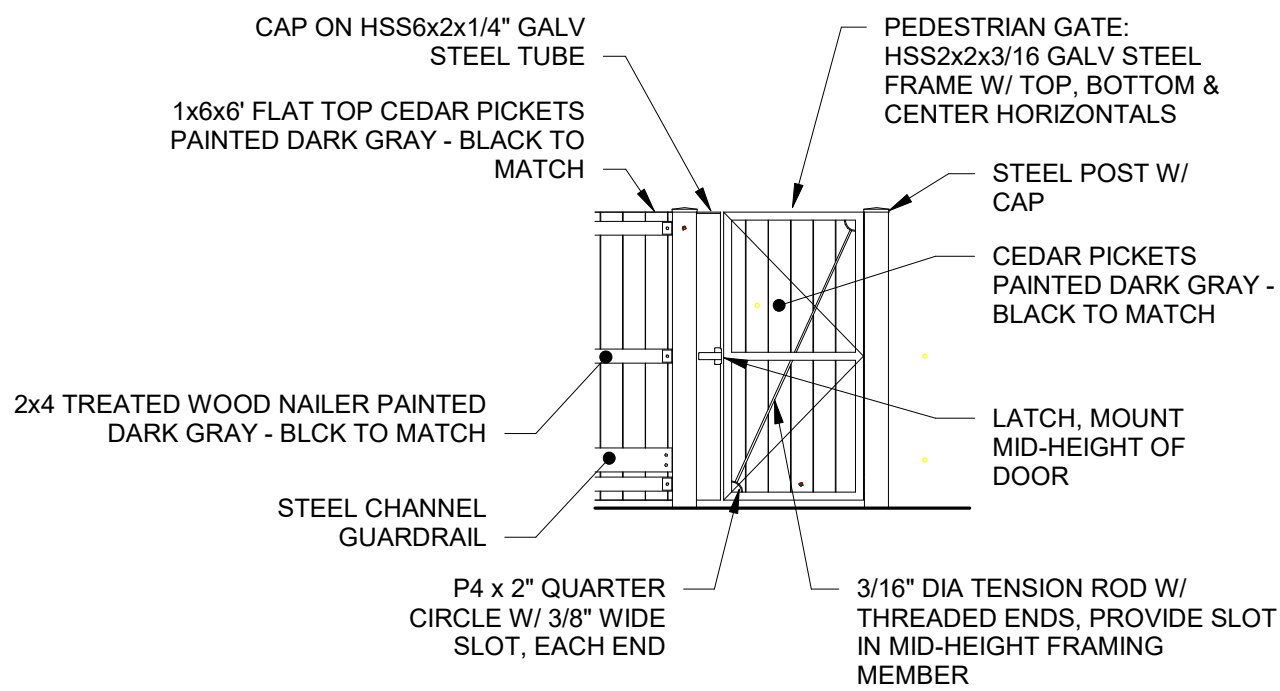
B3 DUMPSTER EAST ELEVATION
SCALE: 1/4" = 1'-0"



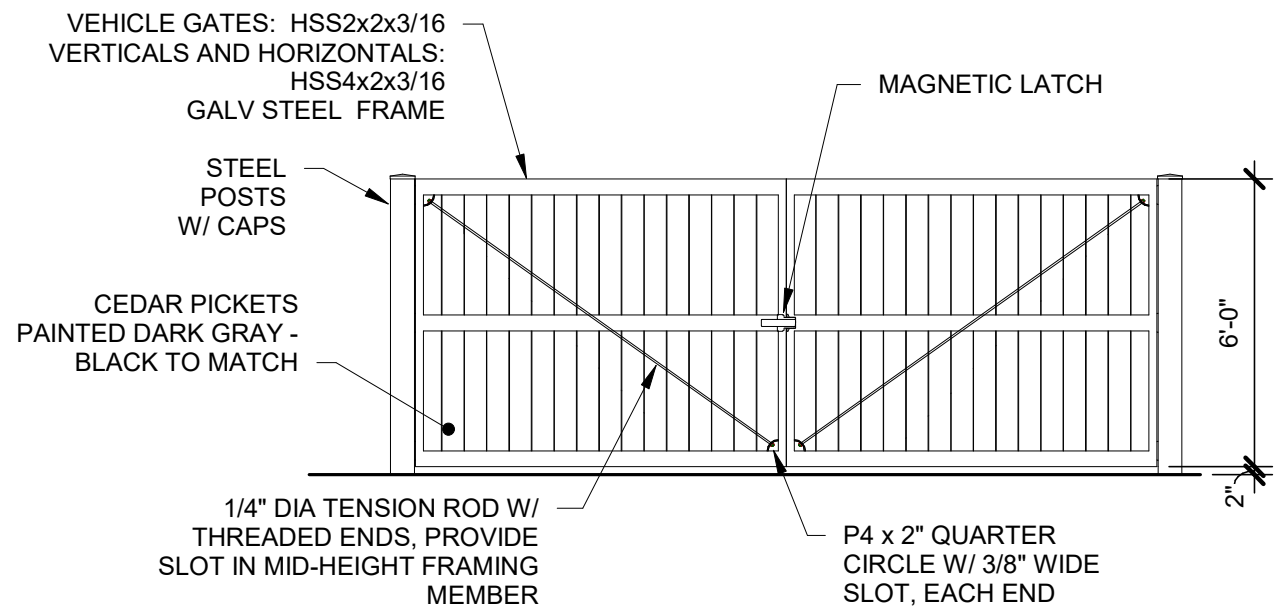
B2 DUMPSTER SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



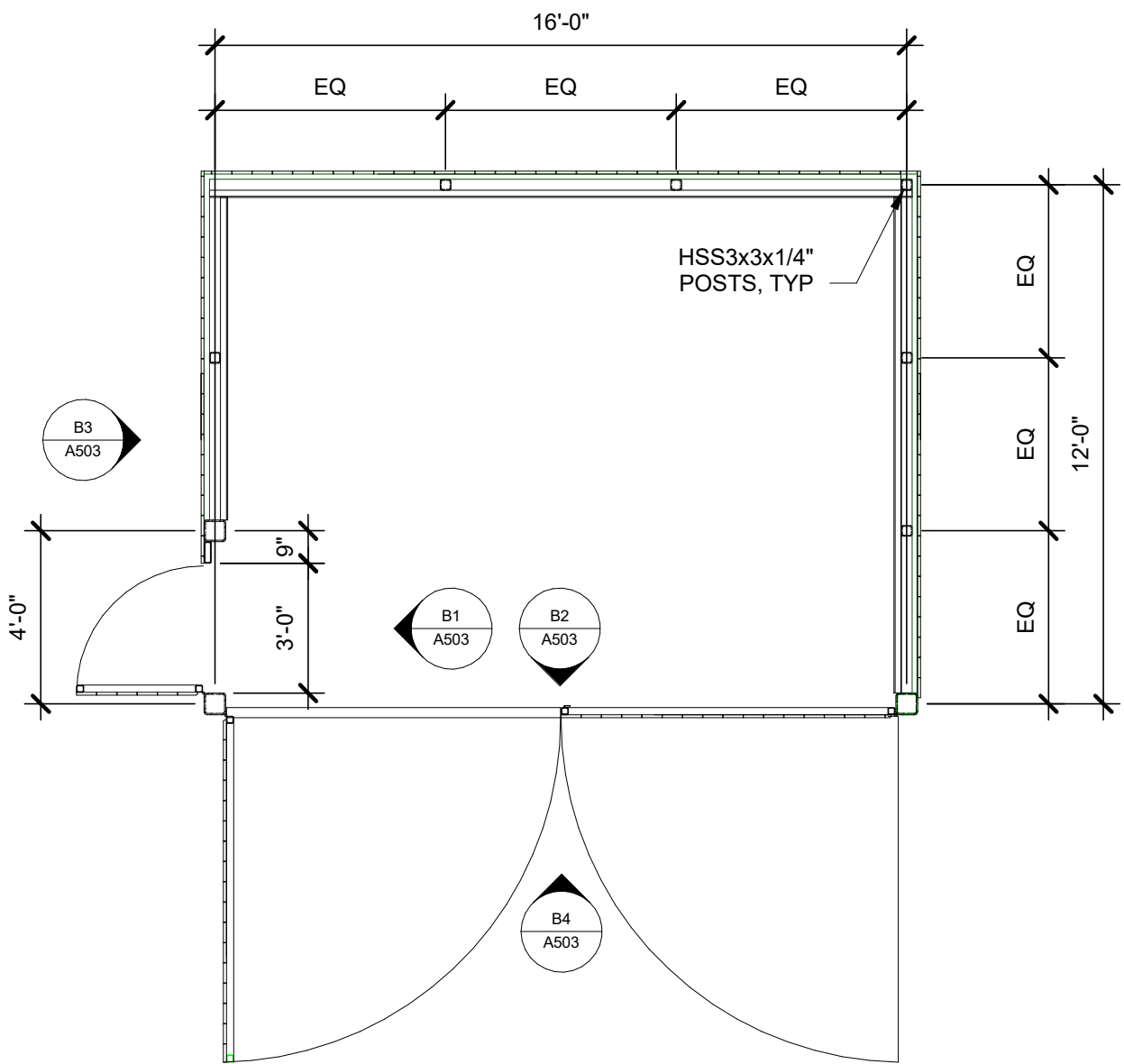
B1 DUMPSTER WEST ELEVATION
SCALE: 1/4" = 1'-0"



A3 DUMPSTER PEDESTRIAN DOOR ELEVATION
SCALE: 1/4" = 1'-0"



A2 DUMPSTER GATE ELEVATION
SCALE: 1/4" = 1'-0"



A1 DUMPSTER ENCLOSURE PLAN
SCALE: 1/4" = 1'-0"



PLAN AND ZONING COMMISSION

November 22, 2022

6 : 30 PM

 [Print](#)

ORIGINATING DEPARTMENT:

Planning and Building

COUNCIL GOAL:

Ensure Economic Vitality

ACTION REQUESTED:

Motion

LEGAL:

SUBJECT:

3950 N Ankeny Blvd - Stealth Monopole Site Plan

EXECUTIVE SUMMARY:

See attached staff report.

FISCAL IMPACT: **No**

STAFF RECOMMENDATIONS:

PREVIOUS COUNCIL/COMMISSION/BOARD ACTION(S):

PUBLIC OUTREACH EFFORTS:

ACTION REQUESTED:

Action: Consider MOTION to approve the site plan for 3950 N Ankeny Blvd, Stealth Monopole, associated equipment and driveway access.

ADDITIONAL INFORMATION:

ATTACHMENTS:

Click to download [Aerial Map](#) [Staff report](#) [Applicant Letter](#) [Site Plan](#) [DNR Letters](#)



NE 41st St

N Ankeny Blvd

NW Autumn Crest Dr

N
1 inch = 80 feet
Date: 11/9/2022

3950 N Ankeny Blvd.
Stealth Monopole





*Plan and Zoning Commission
Staff Report*

Meeting Date: November 22, 2022

Agenda Item: 3950 N Ankeny Blvd – Stealth Monopole

Report Date: November 16, 2022

Prepared by: Laura Hutzell
Associate Planner

EJC

Staff Recommendation:

That the Plan and Zoning Commission approve the site plan for a stealth monopole, associated equipment and driveway access at 3950 N Ankeny Blvd.

Project Summary:

3950 N Ankeny Blvd is zoned C-2, General Retail and Highway Oriented Commercial Business District. The leased area is located on a parcel located approximately 304 feet west of N Ankeny Blvd and 333 feet north of NW Autumn Crest Drive. The proposed cell tower is located within a 30' x 45' leased area on the west side of the existing barn on the property.

The project involves a 6-foot vinyl fence surrounding the lease area, a 120-foot stealth monopole tower with room for additional co-locates, associated ground equipment, and development of a 269-foot, paved access drive and turnaround extending west off of the existing driveway on site with access to N Ankeny Blvd. The site plan shows a 10-foot wide landscape easement to the west of the leased area extending north/south.

Staff is recommending approval of a Special Use Permit with conditions for a 120-foot stealth monopole. The tower proposed is a self-supporting tower for which staff is also recommending approval of a 75-foot height variance, an 8.67-foot rear yard setback variance in a C-2 district, and a Conditional Use Permit for construction of a cell tower in a floodway fringe area. The Zoning Board of Adjustment will review these cases at the upcoming meeting on November 22, 2022.

At the time this staff report was written any approvals and/or conditions of approval were not known.

**Site Plan Worksheet
3950 N Ankeny Blvd.**

The site plan regulations in the zoning code have a variety of design standards and factors for review. The following worksheet is intended to provide staff's comments related to this project and those items.

A. Site Development

- 1. The orientation, alignment, spacing, and placement of a building, driveway, parking area and/or service area on the site shall be compatible with and complimentary to buildings and sites in the neighboring area.**

The project is located in a 30' by 45' leased area at 3950 N Ankeny Blvd. The leased area is located approximately 304 feet west of N Ankeny Blvd and 333 feet north of NW Autumn Crest Drive. Because the project is a monopole/cell tower, the applicant is required to obtain a Special Use Permit. This permit, with conditions, is being sought at the upcoming Zoning Board of Adjustment meeting, which will take place on November 22, 2022.

- 2. The site shall be planned to be compatible with the streetscape that is prevalent in the area.**

The equipment is located within the fenced-in lease area. A 10' landscape easement is shown on the site plan with 14 trees for screening purposes. A six-foot vinyl fence is shown on the plans.

- 3. The site shall provide for adequate parking and circulation for vehicles, bicycles and pedestrians. This includes safe bicycle and pedestrian movement from public walks to the building and from parking areas to the building.**

It is anticipated that one vehicle will be parked for short periods of time while the equipment associated with the tower is checked or adjusted. The 269-foot, paved access drive with turnaround provides adequate space for such use.

- 4. The site shall have such entrances and exits upon adjacent streets and such internal traffic circulation pattern as will not unduly increase congestion or decrease safety on the site or surrounding public streets. Studies of the traffic impact shall be provided if deemed necessary by the Community Development Director.**

Access to the leased area is provided with the paved access drive and turnaround. The use will generate very minimal traffic and should not have an impact on traffic circulation on site.

- 5. Parking areas shall be treated with decorative elements, building wall extensions, plantings, berms, or other means so as to reduce their impact on public ways and adjoining properties.**

The parking area is located on the south side of the lease area.

- 6. Service areas; loading and unloading docks, delivery areas, dumpsters, outside storage areas and large storm water detention basins shall be treated with decorative elements, building wall extensions, plantings, berms, or other means so as to screen from view from public ways and adjoining properties.**

There is no dumpster associated with the site. Fencing will screen the ground equipment.

7. **All newly installed utility lines shall be underground and entry fixtures located away from high use areas or screened in an approved manner.**

The site has no water, sewer, or storm utility needs.

8. **Exterior lighting, when used, shall enhance the building design and the adjoining landscape. All lighting should be appropriate to the use of the building and surrounding properties with intensity of illumination limited to its intended use and not as an attraction to the site. Lighting shall be directed to eliminate impacts on adjoining sites.**

Exterior lighting is not proposed for the site.

9. **The design shall provide adequate provisions for surface and subsurface drainage. Storm water detention, drainage and storm sewer improvements shall be designed to reduce the danger of erosion, flooding, landslide or other endangerment of surrounding property.**

The tower and accompanying equipment will cause minimal amount of storm water runoff. Additional detention is not required for the area.

The proposed monopole location is within the General Floodplain area. Because of this, all ground equipment considered "high damage potential" is required to be elevated one-foot higher than the designated 100-year flood elevation of 946.1' as determined by the Iowa Department of Natural Resources in a letter dated June 13, 2022. The Zoning Board of Adjustment will review the case and consider granting the required Conditional Use Permit at the upcoming meeting on November 22, 2022.

10. **Utility connections to water and sanitary sewer lines shall be designed so as to not overload existing public utility lines. Studies of system loading shall be provided if deemed necessary by the Community Development Director.**

Water, sewer, or storm water utilities are not proposed for the site.

11. **Site design should provide open space in areas visible to the public. A majority of the required open space should be located in front and side yards.**

The property meets the minimum open space requirements.

12. **Landscaping shall enhance architectural features and contribute to the beauty and utility of a development. Existing trees should be protected whenever possible to maintain the maturity of the site.**

There is a 10' landscape easement with 14 trees proposed with this site plan.

B. Building Design

1. **Buildings shall have good scale and maintain or enhance the established scale of buildings and sites of neighboring buildings and sites.**

There are no buildings proposed as part of this project.

2. **Materials selected for buildings shall provide compatible textures and colors as those of neighboring buildings.**

There are no buildings proposed as part of this project.

3. **All mechanical equipment or other utility hardware on roof, ground, or buildings, refuse and waste removal areas, service yards, storage yards, and exterior work areas shall be screened from or located as not to be visible from public view, using materials consistent with the building and site.**

Due to the height of the proposed tower, the applicant is required to obtain a 75-foot Height Variance. This case will be heard at the upcoming Zoning Board of Adjustment meeting on November 22, 2022. As stated above, all associated equipment deemed “high damage potential” within the fenced-in area and will be required to be raised one foot above the designated 100-year flood elevation levels as determined in a letter dated June 13, 2022 from the Iowa Department of Natural Resources.

4. **Multiple buildings on the same site shall provide for compatible and complimentary design and materials.**

There are no buildings being proposed as part of the project. This site plan is for a cell tower.

C. Signs – No signs are proposed with this site plan.

D. Factors for Evaluation

The following factors and characteristics, which affect the function and appearance of a development, should govern the Plan and Zoning Commission's evaluation of a site plan submission:

1. **Conformance to Design Standards and other applicable code requirements**

The plans submitted conform to the written regulations of the City.

2. **Location of the building(s), and the relationship to the development site and neighboring buildings and sites.**

The proposed project should not have a negative impact on the relationship of the site with neighboring development.

3. **Layout and utilization of building, parking, drive-ways, and open spaces.**

This site meets all parking, and open space requirements. As shown on the site plan, the proposed project, which includes the development of a private drive access, and a fenced in leased 30'x45' area, will encroach approximately 8.67' into the required 40' rear yard setback. The Zoning Board of Adjustment will review this case and consider granting an 8.67-foot variance for a rear yard setback at the upcoming meeting on November 22, 2022.

4. Architectural character, including scale, style, color and type of material, of the building and signage as it relates to the neighborhood.

No signage is proposed with this project. The monopole itself will be stealth, and white in color, similar to other cell tower/monopole designs in other areas of the City.

5. Impact on sanitary sewer, storm sewer, drainage, water, and street systems.

There is no impact on the above listed utilities.



City of Ankeny
Plan and Zoning Commission
1210 NW Prairie Ridge Drive
Ankeny, Iowa 50023

Re: Technical Review Comments-Monopole Cell tower

Members of the Plan and Zoning Commission,

GSS Inc, on behalf of US Cellular, is requesting approval to construct a 120-foot stealth monopole cellphone tower at 3950 N. Ankeny BLVD. Included with the tower will be a 30'x45' vinyl fence compound and a 269-foot-long paved access drive. The compound and tower will be screened from residentially zoned parcels with deciduous trees that will have a 10' height at full maturation. Tower is being built in a flood plain BFE is 946'.1 all US Cellular equipment will be raised to 947'.1 to avoid any issues in the flood plain.

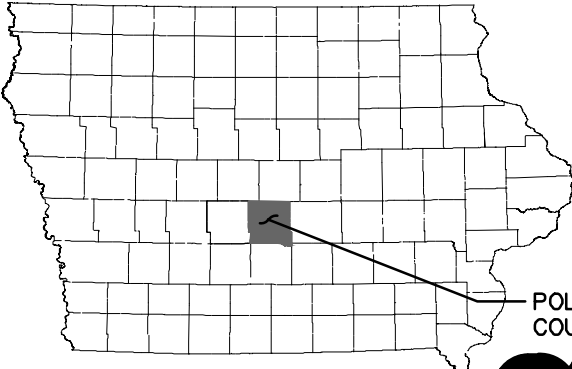
If there are any others question, please feel free to contact me.
My contact details are listed below.

Thank You,
Albert Aguirre
Associate Project Manager



3311 109th Street
Urbandale, IA 50322
515.689.6357 Cell
AAguirre@gssmidwest.com

STATE MAP



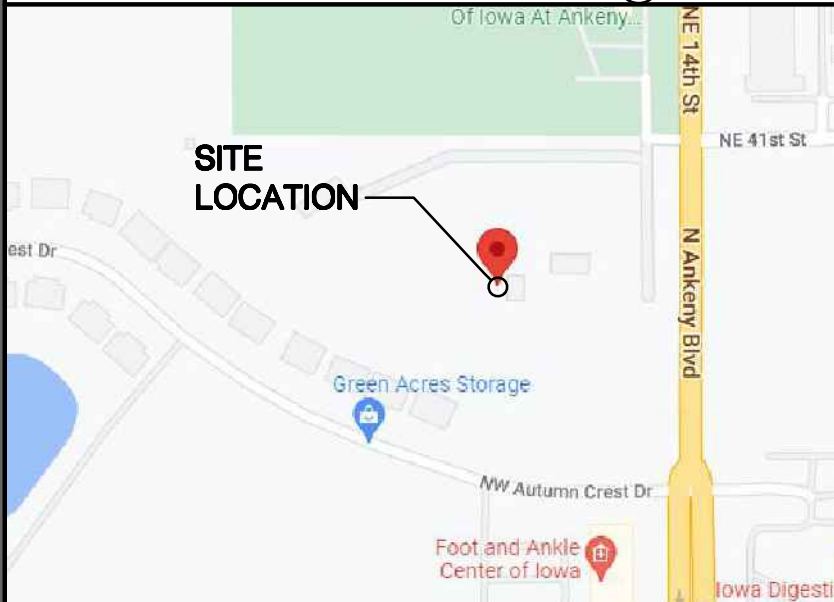
POLK
COUNTY



811

1-800-522-6543

LOCATION MAP



SITE
LOCATION

PROFESSIONAL CERTIFICATION

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

(SIGNATURE) (DATE)

NAME: _____

LICENSE NUMBER: _____

MY LICENSE RENEWAL DATE IS: _____

PAGES OR SHEETS COVERED BY THIS SEAL: T-1, N-1, N-2, N-3, N-4, N-5, N-6, N-7, C-1.0, C-2.0, C-1.2, C-3.0, C-4.0, C-5.0, C-5.1, C-5.2, C-5.3, C-5.4, C-5.5, C-6.0, C-7.0, C-7.1, C-7.2, C-8.0, C-9.0, C-9.1, C-9.2, C-10.0, C-10.1, C-11.0, C-12.0, C-13.0

CONTRACTOR SHALL VERIFY PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE DESIGN FIRM IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.



7601333

ANKENY NE 36TH

3950 N. ANKENY BLVD, ANKENY, IA, 50023 - POLK COUNTY

PROJECT # 22-06-04

NEW SITE BUILD

ACCESS AND LOCATION INFORMATION

LATITUDE: N41° 45' 49.27" (41.763686°)
LONGITUDE: W93° 36' 05.76" (-93.601600°)
ELEVATION AT GRADE: 943'
TOWER TYPE: STEALTH MONOPOLE
SPECIAL ACCESS ISSUES: N / A
GATE COMBO: 8722

SCOPE OF WORK

TOWER SCOPE:
PROPOSED U.S. CELLULAR TOWER EQUIPMENT: W5.1020 (NO B5)
PROPOSED DESIGN: TM-2T2R

- (3) OCT8-2LX2HX-BW65 ANTENNA
- (1) 1-1/4"Ø HYBRID CABLE
- (1) RAYCAP RUSDC-6267-PF-48
- (4) 4480 - RRU
- (1) 30' STEALTH CANISTER

GROUNDING:

- TOP TOWER GROUND BAR
- BOTTOM GROUND BAR

GROUND LEVEL WORK:
PROPOSED U.S. CELLULAR STEALTH MONOPOLE
PROPOSED U.S. CELLULAR ACCESS DRIVE.
PROPOSED U.S. CELLULAR CHAIN LINK FENCE.
PROPOSED U.S. CELLULAR 10'x12' STEEL PLATFORM w/ OUTDOOR EQUIPMENT CABINETS.
PROPOSED U.S. CELLULAR RAYCAP MOUNTED TO PROPOSED H-FRAME
PROPOSED U.S. CELLULAR ICE BRIDGE AND FRAMING.
PROPOSED U.S. CELLULAR ELECTRICAL SERVICE AS OUTLINED IN THE ATTACHED PLANS.
PROPOSED U.S. CELLULAR COMMUNICATION SERVICE AS OUTLINED IN THE ATTACHED PLANS.
PROJECT DESCRIPTION DOES NOT INCLUDE ALL EQUIPMENT & MATERIALS FOR A COMPLETE INSTALLATION

PROJECT TEAM

PROPERTY OWNER:
TONY ALLEN JOHNSON AND
TERRY RAE JOHNSON
REVOCABLE TRUST
CONTACT: TONY AND TERRY
JOHNSON
(515) 988-5880
PROJECT CONTACT:
U.S. CELLULAR
800 CORNERSTONE DR.
KNOXVILLE, TN 37932
STEVE HATMAKER
PROJECT MANAGER:
GSS, INC.
3311 109TH ST
URBANDALE, IA 50322
ALBERT AGUIRRE
(515) 689-6357
DESIGN FIRM:
PBM WIRELESS SERVICES
3620 DEVELOPERS ROAD
INDIANAPOLIS, IN 46227
(815) 931-5288
JEFF PFAFF
POWER PROVIDER:
MID-AMERICAN ENERGY
(888) 427-5632
FIBER PROVIDER:
UPN

PROJECT SUMMARY

JURISDICTION:
ANKENY, IA
CURRENT ZONING:
C-2
PARCEL NUMBER:
181/00219-090-001

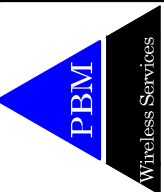
CODE COMPLIANCE

WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE STATE OF IOWA & OTHER GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.
TIA/EIA-222G OR LATEST EDITION IECC (2015) NEC (2014) IFC (2015) IBC (2015)

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N-2	GENERAL NOTES	3
N-3	GENERAL NOTES	3
N-4	GENERAL NOTES	3
N-5	GENERAL NOTES	3
N-6	GENERAL NOTES	3
N-7	SYMBOLS & ABBREVIATIONS	3
C-1.0	PARTIAL SITE PLAN	3
C-2.0	COMPOUND PLAN	3
C-2.1	LANDSCAPE PLAN	3
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-	-	-
-	-	-
-	SITE SURVEY - SHEETS 1 - 5	C



12020 RIDGEMONT DR.
URBANDALE, IA 50323



Wireless Services
Think outside the triangle.

816/16/22 INTERNAL REVIEW JAP

08/19/22 CLIENT REVIEW JAP

10/22/22 CLIENT REVIEW JAP

11/07/22 CITY COMMENTS JAP

311/09/22 CITY COMMENTS JAP

7601333 - ANKENY NE 36TH.

3950 N ANKENY BLVD

ANKENY, IA 50023 - POLK COUNTY

NEW SITE BUILD - STEALTH MONOPOLE

PROJ #: 22-06-04

DWG BY: JAP

CHKD BY: AJK

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

GENERAL NOTES:

1. THE EXISTING TOPOGRAPHY AND VERTICAL GEOMETRY REPRESENTED ON THESE DRAWNGS IS TO BE VERIFIED BY CONTRACTOR. CONTRACTOR SHALL CONTACT UTILITY LOCATE SERVICES A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION TO IDENTIFY THE EXISTENCE AND LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES AND SERVICES. CONTRACTOR IS TO IMMEDIATELY NOTIFY ENGINEER OF DISCREPANCIES OR INTERFERENCE THAT WILL EFFECT THIS PROJECT. EXISTING UTILITIES SHALL BE PROTECTED AND REPAIRED @ THE CONTRACTORS EXPENSE IF DAMAGED, EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW.

2. DAMAGE TO THE EXISTING FACILITY SHALL BE REPAIRED OR REPLACED TO MATCH EXISTING ORIGINAL CONDITIONS AT THE CONTRACTOR’S EXPENSE.

3. EXISTING INACTIVE UTILITIES, WHICH PROHIBIT CONSTRUCTION, SHALL BE REMOVED, CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AS REQUIRED TO ALLOW CONSTRUCTION TO CONTINUE, COORDINATE WITH PROJECT MANAGER, OWNER, AND /OR LOCAL UTILITY COMPANIES FOR APPROVAL.

4. CONTRACTOR SHALL NOTIFY THE PROPERTY OWNER OF THE CONSTRUCTION START WELL IN ADVANCE (MIN. 1 WEEK) OF THE CONSTRUCTION DATE.

5. INFORMATION ON TOWER STRUCTURE, FOUNDATIONS, EQUIPMENT, AND/OR SHELTER SHALL BE PROVIDED BY OTHERS.

6. A 20’ HORIZONTAL CLEARANCE SHALL BE MAINTAINED FROM EXISTING POWER LINES TO PROPOSED TOWER COMPOUND.
7. SURVEY INFORMATION REFERENCED IN THESE DRAWINGS COMPLIES WITH FAA ORDER 8260.19D ACCURACY TOLERANCES.

8. PROVIDE LABOR, MATERIAL, TOOLS, EQUIPMENT, TRANSPORTATION AND TEMPORARY POWER SERVICES NECESSARY FOR, AND INCIDENTAL TO COMPLETION OF WORK AS INDICATED ON THE DRAWINGS AND/OR AS SPECIFIED HEREIN.

9. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND EQUIPMENT UNLESS OTHERWISE INDICATED BY DIMENSIONS OR DETAILS. EXACT EQUIPMENT LOCATIONS SHALL BE GOVERNED BY ACTUAL FIELD CONDITIONS AND/OR INSTRUCTIONS OF THE ENGINEER AND/OR TOWER OWNER’S REPRESENTATIVE.

10. THE CONTRACTOR SHALL FURNISH AND INSTALL MATERIALS AS REQUIRED FOR COMPLETE SYSTEMS, INCLUDING PARTS OBVIOUSLY OR REASONABLY INCIDENTAL TO A COMPLETE INSTALLATION, WHETHER SPECIFICALLY INDICATED OR NOT. SYSTEMS SHALL BE COMPLETELY ASSEMBLED, TESTED, ADJUSTED AND DEMONSTRATED TO BE READY FOR OPERATION PRIOR TO OWNER’S ACCEPTANCE.

11. THE CONTRACTOR SHALL OBTAIN, PAY FOR AND DELIVER REQUIRED PERMITS, CERTIFICATES OF INSPECTION, INCLUDING UTILITY CONNECTION FEES, ETC., REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. DELIVER CERTIFICATES TO THE OWNER PRIOR TO FINAL ACCEPTANCE OF THE WORK.

12. THE CONTRACTOR SHALL MAINTAIN BENCHMARKS, CONSTRUCTION STAKING, AND OTHER ELEVATION CONTROL POINTS AND SHALL REESTABLISH, IF DISTURBED OR DESTROYED, AT NO ADDITIONAL COST TO THE OWNER.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND OR RESTORATION OF DAMAGE TO THE EXISTING ACCESS ROADWAY AND ADJACENT SITE AREAS AS A RESULT OF USE DURING CONSTRUCTION. DISTURBED AND DAMAGED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER UPON COMPLETION OF WORK AT THE EXPENSE OF THE CONTRACTOR.

14. THE CONTRACTOR SHALL REMOVE WASTE, DEBRIS AND TRASH FROM SITE AND DISPOSE OF IN A LEGAL MANNER ON A DAILY BASIS.

15. CONTRACTOR SHALL COORDINATE THE CONSTRUCTION STAGING AREA AND PARKING WITH THE PROPERTY OWNER PRIOR TO THE CONSTRUCTION START DATE.

16. CONTRACTOR SHALL VERIFY WITH THE LOCAL AUTHORITIES (CITY, COUNTY, OR STATE) FOR THE GOVERNING BUILDING CODE.

17. THE CONTRACTOR SHALL NOT INTERFERE w/ THE FACILITY’S NORMAL OPERATIONS. ACCESS TO THE WORK AREA SHALL BE AS DIRECTED BY THE FACILITY’S OWNER.

18. THE CONTRACTOR SHALL CONFINE THEIR OPERATIONS TO THE DESIGNATED AREAS AND SHALL KEEP THE CONSTRUCTION AREA CLEAN. AISLES AND PATHWAYS SHALL BE KEPT UNOBSTRUCTED.

19. THE CONTRACTOR SHALL COORDINATE THE WORK OF VARIOUS TRADES SO AS TO INSURE PROPER SEQUENCING AND INSTALLATION.

20. WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE FOLLOWING DOCUMENTS:

A. GENERAL INSTRUCTION TO BIDDERS.

B. CELL SITE GROUNDING STANDARD.

C. CONSTRUCTION STANDARDS FOR CELL SITE FACILITIES.

D. ANTENNA AND COAX INSTALLATION & LABELING SCHEME.

ELECTRICAL INSTALLATION NOTES:

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

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

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

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

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

6. EACH END OF EVERY POWER, POWER PHASE CONDUCTOR (I.E., HOTS), GROUNDING AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2” PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE FACILITY SHALL BE LABELED IN ACCORDANCE WITH OSHA 1910.335(b)(1) AND SAFETY AND ACCIDENT PREVENTION TAGS SHALL BE USED WHERE NECESSARY TO WARN EMPLOYEES OF ELECTRICAL HAZARDS PER OSHA 1910.145.

7. ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH PLASTIC TAPE PER COLOR SCHEDULE. EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (I.E. PANEL BOARD AND CIRCUIT ID’S).

8. PANEL BOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.

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

10. POWER, CONTROL AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (14 AWG OR LARGER), 600 V, OIL RESISTANT THWN–2, CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET & DRY) OPERATION LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED UNLESS OTHERWISE SPECIFIED.
11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (6 AWG OR LARGER), 600V, OIL RESISTANT THWN–2 GREEN INSULATION CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET AND DRY) OPERATION LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED UNLESS OTHERWISE SPECIFIED.

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

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

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

15. ELECTRICAL METALLIC TUBING (EMT) OR RIGID METALLIC CONDUIT FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.

16. ELECTRICAL METALLIC TUBING (EMT), SHALL BE USED FOR CONCEALED INDOOR LOCATIONS WHERE PERMITTED BY NEC.

17. GALVANIZED STEEL RIGID METAL CONDUIT (RMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.

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

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

20. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION–TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
21. CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.

22. WIREWAYS SHALL BE EPOXY–COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER).

23. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY–COATED SHEET STEEL. SHALL MEET OR EXCEED UL 50 AND RATED NEMA 1 (OR BETTER) INDOORS OR NEMA 3R (OR BETTER) OUTDOORS.

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

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

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

27. UTILITY POLES SHALL BE 35 FT., CLASS 4., UNO OR AS REQUIRED BY LOCAL UTILITY COMPANIES.



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3950 N ANKENY BLVD
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NEW SITE BUILD – STEALTH MONOPOLE

PROJ #: 22-06-04

DWG BY: JAP

CHKD BY: AUK

SHEET TITLE
GENERAL
NOTES

SHEET NUMBER
N-1

SITE WORK GENERAL NOTES

1 SITE AREA

- 1.1

VERIFY THAT SITE LOCATION CONFORMS TO THE SITE PLAN. THE FOUR (4) CORNERS OF THE SITE AREA SHALL BE STAKED AND ADEQUATE PRECAUTIONS SHALL BE TAKEN TO PROTECT THEM DURING THE CLEARING OPERATION. IF THE STAKES ARE MISSING OR DO NOT CONFORM TO INFORMATION ON SITE PLAN, CONSULT WITH THE PROJECT MANAGER.
- 1.2

A REGISTERED LAND SURVEYOR UNDER CONTRACT WITH THE TOWER OWNER SHALL STAKE OUT THE SITE AREA, ROAD AND GUY AREAS. CARELESS REMOVAL OF MARKERS, MONUMENTS OR STAKES SHALL BE REPLACED BY THE SURVEYOR AT COSTS TO THE CONTRACTOR.
- 1.3

THE SITE AREA SHALL BE GRADED TO PROVIDE A MAXIMUM SLOPE OF ONE PERCENT (1%) UNLESS OTHERWISE SPECIFIED & CAUSE SURFACE WATER TO FLOW AWAY FROM SHELTER / EQUIPMENT & TOWER AREAS.
- 1.4

GRADING SHALL NOT EXCEED THE LEASED OR PURCHASED PROPERTY LINES. SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- 1.5

EXISTING INACTIVE UTILITIES WHICH PROHIBIT CONSTRUCTION SHALL BE REMOVED, CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AS REQUIRED TO ALLOW CONSTRUCTION TO CONTINUE. COORDINATE WITH PROJECT MANAGER, OWNER, AND /OR LOCAL UTILITY COMPANIES FOR APPROVAL.
- 1.6

FILL OR EMBANKMENT MATERIAL SHALL NOT BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN FILL OR EMBANKMENT.

2 SPECIAL REQUIREMENTS

- 2.1

VERIFY THAT THE ACCESS ROAD RIGHT-OF-WAY AND SITE LOCATION CONFORM TO THE SITE PLAN AND DO NOT EXCEED LEASED OR PURCHASED PROPERTY LINES.
- 2.2

COMPARE SURVEYOR STAKE POSITIONS WITH EXISTING USE OF AREA FOR CONFLICTS.
- 2.3

IF ACCESS ROAD ENTERS ROAD OR HIGHWAY, DETERMINE LOCAL PERMIT OR ENVIRONMENTAL REQUIREMENTS BEFORE CONSTRUCTION TO ENSURE COMPLIANCE.
- 2.4

CLEARING AND GRUBBING SHALL BE RESTRICTED TO AREAS DETERMINED ON SPECIFIC PLAN FOR SITE. AREAS OF PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE PROJECT SPECIFICATIONS AND PER LOCAL MUNICIPALITY REQUIREMENTS.
- 2.5

DISPOSAL OF ITEMS REMOVED SHALL BE IN ACCORDANCE WITH THE PROJECT MANAGER AND/OR LOCAL ORDINANCES.
- 2.6

SITE SIGNAGE SHALL BE PROVIDED IN ACCORDANCE WITH THE TOWER OWNER TECHNICAL SPECIFICATIONS FOR SITE SIGNAGE & LOCAL SIGN ORDINANCES/REQUIREMENTS.

3 ACCESS ROAD

- 3.1

VERIFY WITH THE LANDOWNER (IF OTHER THAN TOWER OWNER), BEFORE STARTING CONSTRUCTION TO ENSURE THEIR UNDERSTANDING OF CONSTRUCTION ACTIVITY.
- 3.2

ROAD SHALL BE CONSTRUCTED PROPERLY WITH RESPECT TO LINES AND GRADES. EACH SITE SHALL HAVE DIFFERENT CONSIDERATIONS DURING CONSTRUCTION TO AVOID PROBLEMS IN THE FUTURE (I.E. SWAMPS, BOGS, STEEP INCLINES, UNSTABLE SOIL, SOLID ROCK AND LAYERED ROCK). ROAD SHALL BE BUILT-UP AND CROWNED. DEEP INITIAL CUTS SHALL BE AVOIDED. REFERENCE DETAILS FOR TYPICAL CROSS SECTION.
- 3.3

SUITABLE BASE COARSE MATERIALS SHALL BE USED. REFERENCE DETAILS FOR TYPICAL CROSS SECTION SHOWING PREFERRED MATERIALS.

- 3.4

BASE COARSE SHALL BE APPLIED IN MAXIMUM 5” LAYERS AND COMPACTED. THE MATERIAL SHALL BE DAMP FOR GOOD COMPACTING.
- 3.5

IN SITUATIONS WHERE WATER IS PREVALENT NEAR THE SURFACE (SUB-GRADE), THE USE OF 6 OZ. GEOTEXTILE BY TENCATE OR EQUIVALENT TYPE MATERIAL, TO RETAIN SOIL AND PERMIT WATER TO FLOW IS REQUIRED. LARGE BASE MATERIAL MINIMUM 4” SHALL BE USED.
- 3.6

IF THE AREA WHERE THE ACCESS ROAD IS BEING CONSTRUCTED IS BEING USED FOR ANIMAL CONTAINMENT, SAFEGUARDS SHALL BE TAKEN TO PREVENT THEIR ESCAPE UNTIL PERMANENT GUARDS OR FENCING CAN BE INSTALLED.
- 3.7

CHANGES IN METHODS OR MATERIALS MUST BE APPROVED IN ADVANCE BY THE PROJECT MANAGER.

4 DRAINAGE

- 4.1

DRAINAGE DITCHES SHALL BE DEEP AND WIDE ENOUGH TO CONTROL THE WATER RUN OFF. CHECK DAMS SHALL BE INSTALLED IN DITCHES ON SLOPES OF GREATER THAN 10 PERCENT (10%).
- 4.2

DRAINAGE DITCHES SHALL NOT CREATE WATER PROBLEMS WITH THE LANDLORD OR LOCAL RESIDENTS. LOCAL PERMITS AND ENVIRONMENTAL REQUIREMENTS MUST BE VERIFIED PRIOR TO DE-WATERING.
- 4.3

DRAINAGE DITCHES SHALL BE PROTECTED FROM EROSION WITH SEEDING, RIP-RAP OR SOD AS REQUIRED BY LOCAL REQUIREMENTS.
- 4.4

CULVERTS SHALL BE INSTALLED ACCORDING TO THE SITE PLAN AND SITE CONDITIONS. VERIFY WITH THE HIGHWAY DEPARTMENT TO DETERMINE THE TYPE AND SIZE OF CULVERT REQUIRED WHEN THE ACCESS ROAD ENTERS A ROAD OR HIGHWAY. CULVERTS AT THE ENTRANCE TO THE ACCESS ROAD SHALL BE A MINIMUM 18” DIAMETER AND 32’ IN LENGTH.
- 4.5

CULVERTS SHALL HAVE SUFFICIENT COVER OVER THE PIPE SO THAT THE MOUTH OF THE CULVERT IS PROTECTED AGAINST JAMMING OR COLLAPSE.
- 4.6

CULVERTS SHALL HAVE, AT EACH END, A MINIMUM 30 SQ FT LAYER OF 5” ROCK.
- 4.7

ADEQUATE PROVISIONS SHALL BE TAKEN FOR WATER DRAINAGE IN LOW-LYING AREAS.
- 4.8

IN THE OCCURRENCE OF LOCATING EXISTING FIELD TILE: CARE MUST BE TAKEN BY CONTRACTOR NOT TO DESTROY TILE FOR DRAINAGE. FIELD TILE DESTROYED BY CONTRACTOR MUST BE REPAIRED BY SUCH CONTRACTOR AT CONTRACTOR’S EXPENSE.

5 GRADING / SEDIMENT & EROSION CONTROL:

- 5.1

SEDIMENT AND EROSION CONTROL SHALL NOT BE LIMITED TO THE MEASURES SHOWN ON THE PLANS. THE CONTRACTOR, WITH THE APPROVAL OF THE LOCAL INSPECTOR, SHALL UTILIZE BEST MANAGEMENT PRACTICES TO PREVENT SEDIMENT FROM ENTERING ADJACENT PROPERTIES, ROADWAYS, STORM SEWERS, AND DRAINAGEWAYS.
- 5.2

FILLED PLACES UNDER PROPOSED STORM AND SANITARY SEWER LINES AND/OR PAVED AREAS INCLUDING TRENCH BACKFILLS WITHIN AND OFF THE ROAD RIGHT-OF-WAY SHALL BE COMPACTED TO 90 PERCENT OF MAXIMUM DENSITY AS DETERMINED BY THE "MODIFIED AASHTO T-180 COMPACTION TEST" (ASTM D-1557). TESTS SHALL BE VERIFIED BY A SOILS ENGINEER CONCURRENT WITH GRADING AND BACKFILLING OPERATIONS.
- 5.3

DEBRIS AND FOUNDATION MATERIAL FROM EXISTING ON-SITE BUILDING OR STRUCTURE WHICH IS SCHEDULED TO BE REMOVED FOR THIS DEVELOPMENT MUST BE PROPERLY DISPOSED OF OFF-SITE.
- 5.4

SOFT SOILS IN THE BOTTOM AND BANKS OF EXISTING OR FORMER POND SITES OR TRIBUTARIES OR SEDIMENT BASINS OR TRAPS SHOULD BE REMOVED, SPREAD OUT AND PERMITTED TO DRY SUFFICIENTLY TO BE USED AS FILL. NONE OF THIS MATERIAL SHOULD BE PLACED IN PROPOSED PUBLIC RIGHT-OF-WAY LOCATIONS OR ON STORM SEWER LOCATION.

- 5.5

A PRE-CONSTRUCTION REVIEW CONFERENCE MUST BE SCHEDULED WITH THE CONSTRUCTION MANAGER PRIOR TO THE START OF EACH CONSTRUCTION PHASE OF LAND DISTURBANCE ACTIVITY. THE PERMITEE WILL BE RESPONSIBLE FOR NOTIFYING CONTRACTORS, UTILITY CREWS, AND OTHER ENTITIES THAT WILL PERFORM WORK AT THE SITE TO BE IN ATTENDANCE.
- 5.6

NOTIFY THE EROSION CONTROL INSPECTOR OF THE JURISDICTION (IF APPLICABLE), A MINIMUM OF 48 HOURS PRIOR TO THE COMMENCEMENT OF CLEARING, GRADING, AND/OR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION TO ARRANGE FOR AN INSPECTION OF THE SITE.
- 5.7

TEMPORARY SILTATION CONTROL MEASURES (STRUCTURAL) SHALL BE MAINTAINED UNTIL VEGETATIVE COVER IS ESTABLISHED AT A SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON THE SITE.
- 5.8

UPON COMPLETION OF STORM SEWERS, SILTATION CONTROL SHALL BE PROVIDED AROUND OPEN SEWER INLETS AND SHALL REMAIN UNTIL THE DISTURBED DRAINAGE AREAS HAVE BEEN PROPERLY STABILIZED.
- 5.9

WHERE NATURAL VEGETATION IS REMOVED DURING GRADING, VEGETATION SHALL BE RE-ESTABLISHED IN SUCH A DENSITY AS TO PREVENT EROSION.
- 5.10

WHEN GRADING OPERATIONS ARE COMPLETED OR SUSPENDED FOR MORE THAN 30 DAYS, PERMANENT GRASS MUST BE ESTABLISHED AT SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON THE SITE. BETWEEN PERMANENT GRASS SEEDING PERIODS, TEMPORARY COVER SHALL BE PROVIDED ACCORDING TO THE RECOMMENDATION OF THE JURISDICTIONAL REQUIREMENTS (IF APPLICABLE) OR STANDARD STATE ADOPTED PROCEDURE WHERE LOCAL REQUIREMENTS ARE NOT SPECIFIED. FINISHED GRADES IN EXCESS OF 20% SLOPES (5:1) SHALL BE MULCHED AND TACKED AT THE RATE OF 100 POUNDS PER 1,000 SQUARE FEET WHEN SEEDED.



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NEW SITE BUILD - STEALTH MONOPOLE

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SHEET TITLE

GENERAL NOTES

SHEET NUMBER

N-2

CABLE & ANTENNA INSTALLATION NOTES:

SCOPE:
THIS SECTION COVERS THE SPECIFICATIONS FOR ANTENNA & COAX & HYBRID CABLE INSTALLATION. THE AREAS OF FOCUS ARE THE INSTALLATION OF THE ANTENNAS, CABLE CONNECTIONS, AND ICE BRIDGE.

- ANTENNAS:
- DIRECTIONAL ANTENNAS SHALL BE ORIENTED TO PROPER AZIMUTH PROVIDED ON THE RF SPECIFICATION SHEET. NOTE: THE ANTENNA MAY BE ORIENTED USING THE REFLECTOR AS THE REFERENCE, ADJUSTING ITS AZIMUTH 180 DEGREES FROM MAXIMUM ANTENNA RADIATION.
 - A TRANSIT SHALL BE USED TO PROPERLY ALIGN CELLULAR ANTENNAS.
- CABLE:
- CABLE SHALL BE SUPPORTED WITH SNAP IN HANGERS. SNAP IN HANGERS SHOULD BE USED EVERY 3 FEET THE ENTIRE HEIGHT OF TOWER. ANGLE ADAPTERS OR ROUND MEMBER ADAPTERS WITH BUTTERFLY CLAMPS SHALL BE USED ELSEWHERE, I.E. SIDEARMS, PLATFORMS, AND MICROWAVE MOUNTS.
 - CABLE SHALL ALSO BE SUPPORTED WITH HOISTING GRIPS, INSTALLED AT MAXIMUM INTERVALS OF 200 FEET. HOISTING GRIPS SHALL BE ATTACHED WITH SHACKLES, BOLTED IN THE 7/16" HOLE OF WAVEGUIDE LADDER.
 - JUMPERS USED BETWEEN CABLE AND ANTENNA SHALL BE SUPPORTED WITHIN 18 INCHES OF ANTENNA, USING BUTTERFLY CLAMPS WITH ANGLE ADAPTERS OR ROUND MEMBER ADAPTERS AROUND PIPES. CELLULAR ANTENNAS TYPICALLY USE 6' JUMPERS.
 - CABLE SHALL BE NEATLY BENT WHEN REQUIRED, USING A MINIMUM BENDING RADIUS OF 10 TIMES THE DIAMETER OF THE COAXIAL CABLE. DRIP LOOPS SHOULD BEGIN AT THE ICE BRIDGE. THE BEND IN THE CABLE SHOULD BE AT A LOWER HEIGHT THAN THE ENTRY PORT.
 - CABLE SHALL BE SUPPORTED WITH SNAP IN HANGERS ON THE WAVEGUIDE LADDER UNDER ICE BRIDGE. CABLE SHOULD BE NEATLY CUT 16" INSIDE BUILDING AND TERMINATED AT THE QUARTER WAVE SHORTS.
 - CONNECTORS WILL NORMALLY BE PROVIDED FIRST OFF REEL FROM FACTORY. CONNECTORS TERMINATED IN BUILDING SHALL BE NEATLY INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
 - OPENINGS #1, #2, AND #3 SHOULD BE USED FOR THE X SECTOR; OPENINGS #5, #6, AND #7 SHOULD BE USED FOR THE Y SECTOR; OPENINGS #9, #10 AND #11 SHOULD BE USED FOR THE Z SECTOR; OPENINGS #4, #8, AND #12 SHOULD BE RESERVED FOR MICROWAVE WAVEGUIDE.
 - CABLES SHOULD BE LABELED WITH TAGS INSIDE THE BUILDING.
 - THE CABLE BANDING TECHNIQUES WILL NEED TO BE APPLIED AT BOTH TERMINATING ENDS OF CABLE THAT WOULD INTERFACE WITH THE ANTENNAS; THIS MUST ALSO INCLUDE FEEDER OR JUMPER CABLE.
 - BANDING FOR THE CABLE PARAMETERS WILL REQUIRE AT LEAST A DOUBLE WRAP OF TAPE TO ENSURE THE BANDS APPLIED AT CABLE TERMINATION POINTS ON THE TOWER CAN BE VIEWED WITH BINOCULARS FROM A GROUND LOCATION.
 - CONTRACTOR IS RESPONSIBLE FOR OBTAINING PIM (PASSIVE INTERMODULATION) TESTING EQUIPMENT AT CONTRACTOR'S EXPENSE AND PERFORMING THE APPROVED PROCEDURE AFTER THE INSTALLATION OR REPLACEMENT OF TOWER CABLE(S).
 - EXCEPTIONS NEED TO BE VERIFIED WITH THE PROJECT MANAGER.

- CONNECTORS:
- CONNECTIONS, AND GROUNDING KITS SHALL BE WEATHER PROOFED USING COLD SHRINK OR ANDREW APPROVED WEATHER STRIPPING.
NOTE: NO PORTION OF CONNECTOR SHALL BE EXPOSED TO THE ELEMENTS.
 - CABLE SHALL BE GROUNDED USING GROUNDING KITS AT THE TOP, BELOW THE BEND; BOTTOM, ABOVE THE BEND ON TOWER GROUND BAR; AND ON BUILDING GROUND BAR BEFORE ENTRY INTO WAVEGUIDE PORTS. 4" CABLE BOOTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
 - GROUNDING KITS SHALL BE NEATLY INSTALLED SO THAT THE JUMPER RUNS IN THE SAME DIRECTION AS THE CABLE AND GROUND BAR. JUMPER WIRE SHOULD RUN IN A DIRECT PATH TO THE GROUND BAR/TOWER LADDER, BUT HAVE ADEQUATE SLACK FOR EXPANSION, CONTRACTION, AND REPAIR. NO-OX GREASE SHOULD BE APPLIED BETWEEN LUG AND BAR/TOWER.
 - TOWER GROUND BAR SHALL BE INSTALLED ON THE ANGLE BEHIND THE FIRST DIAGONAL WAVEGUIDE LADDER RUNG, ABOVE 8'-6".

- HYBRID CABLES:
- POWER AND FIBER OPTIC CONDUCTORS CONTAINED WITHIN ANY FIBER TRUNK CABLE INSTALLED ON BEHALF OF U.S. CELLULAR MUST CONFORM TO ALL OF THE SPECIFICATIONS AS STATED IN TELCORDIA INDUSTRY STANDARD GR3173 TITLED GENERIC REQUIREMENTS FOR HYBRID OPTICAL AND ELECTRICAL CABLES FOR USE IN WIRELESS OUTDOOR FIBER TO THE ANTENNA (FTTA) APPLICATIONS.
 - GUYED, MONOPOLE, AND SELF-SUPPORTING TOWER SITES MUST USE THE EUPEN HYBRID CABLE CONFIGURATION. EACH SITE WILL NEED TO SELECT AN EUPEN HYBRID CABLE TYPE THAT WILL ACCOMMODATE THE POWER AND FIBER CAPACITIES FOR THAT SITE. AN EXCEPTION TO USE THE ROSENBERGER DISCRETE CABLE CONFIGURATION CAN BE MADE FOR SITES THAT ARE CONFIGURED WITH A WIDE VARIATION OF ANTENNA ELEVATIONS.
 - GUYED, MONOPOLE, AND SELF-SUPPORTING TOWER SITES PRONE TO VANDALISM CAN USE THE ROSENBERGER DISCRETE CABLE CONFIGURATION.
 - ROOFTOP AND WATER TANK LOCATIONS MAY USE A ROSENBERGER DISCRETE CABLE CONFIGURATION IN PLACE OF THE EUPEN HYBRID CABLE TO ALLOW FOR MORE FLEXIBILITY IN THE NUMBER OF FIBER AND COPPER CABLE RUNS.
 - THE POWER CABLE GUAGE IN THE HYBRID CABLE MUST BE ENGINEERED TO ACCOMMODATE AN 8 HOUR BATTERY BACK UP REQUIREMENT; THE CALCULATION MUST BE PERFORMED USING THE COMPANY APPROVED VOLTAGE DROP CALCULATOR.
 - ANY HYBRID CABLE THAT EXCEEDS 400 FT. WILL BE REQUIRED TO USE LOW INDUCTANCE CABLE.
 - BECAUSE OF ICE LOADING CONCERNS, TOWER CREW INSTALLERS CANNOT STACK HYBRID CABLE ON TOP OF COAX CABLE AS PART OF THE FINISHED INSTALLATION.
 - BECAUSE OF ICE LOADING CONCERNS, TOWER CREW INSTALLERS CANNOT STACK HYBRID CABLE ON TOP OF ANOTHER HYBRID CABLE; AN EXCEPTION CAN BE MADE FOR THIS TYPE OF INSTALLATION IF IT HAS BEEN APPROVED BY THE USCC MANAGER IN CHARGE OF THE INSTALLATION
 - THE MAXIMUM LENGTH OF ANY 1/2 COAXIAL JUMPER CABLE BETWEN THE RRU AND THE ANTENNA SHALL BE 15 FEET
 - THE RAYCAP JUNCTION BOX (RCKDC-6140-PF-48 OR EQUIVALENT) MUST BE DEPLOYED AT BOTH A TOWER TOP LOCATION AND AT A GROUND LEVEL LOCATION. SHELTER SITES MUST LOCATE THE GROUND LEVEL RAYCAP INSIDE THE SHELTER.
 - THE TOWER TOP RAYCAP JUNCTION BOX MUST HAVE SURGE PROTECTION FOR EACH POWER PAIR, AND EACH SURGE PROTECTION DEVICE MUST DRAIN DIRECTLY INTO THE TOP TOWER GROUND BAR.
 - THE GROUND LEVEL RAYCAP JUNCTION BOX MUST HAVE SURGE PROTECTION FOR EACH POWER PAIR, AND EACH SURGE PROTECTION DEVICE MUST DRAIN DIRECTLY INTO THE RF GROUNDING SYSTEM.
 - THE FIBER TRUNK SHEATHING MUST BE CONNECTED TO THE RF GROUNDING SYSTEM USING THE VENDOR APPROVED GROUNDING KIT AT THE TOP TOWER GROUND BAR AND AT THE GROUND BAR OUTSIDE THE SHELTER; THE SHEATHING MUST ALSO BE CONNECTED TO THE MIDDLE TOWER GROUND BAR FOR TOWERS OVER 200 FEET
 - POWER CABLES FROM THE TOWER RAYCAP BOX TO THE TOWER RADIO SHOULD NOT EXCEED 20 FT, AND IDEALLY SHOULD BE UNDER 15 FT
 - THE RAYCAP JUNCTION BOX LOCATED AT GROUND LEVEL WILL BE THE DEMARCATION POINT FOR TOWER CREW INSTALLERS.
 - EXCESS FIBER TRUNK CABLE AT OUTDOOR CABINET SITES MUST BE STORED AT GROUND LEVEL IN A GROUNDED, METAL BOX.
 - TOWER CREW INSTALLERS MUST FOLLOW THE USCC APPROVED METHOD OF PROCEDURE FOR INSTALLING AND PERFORMING ACCEPTANCE TESTING AT A FIBER TRUNK CABLE SITE AND MUST INCLUDE PHOTOGRAPHIC PROOF OF PROPER VIP, ODTR, AND PIM TEST RESULTS. USCC REGIONAL PROJECT MANAGERS MUST REVIEW THE VIP, ODTR, AND PIM TEST RESULTS AT THE CLOSEOUT OF THE SITE TO ENSURE THE INSTALLATION WAS PERFORMED CORRECTLY; THEY MUST ALSO ENSURE THE PHOTOGRAPHIC PROOF OF THESE TEST RESULTS HAVE BEEN INCLUDED IN THE CLOSEOUT PACKAGE AND THAT THESE TEST RESULTS HAVE BEEN UPLOADED INTO FILESTAR.
 - TOWER CREW INSTALLERS MUST ALSO COMPLETE A PHOTO LOG THAT WILL PROVIDE PHOTOGRAPHIC PROOF OF PROPER TOWER EQUIPMENT INSTALLATION. THE PHOTO LOG MUST INCLUDE--AT MINIMUM--ALL OF THE TOWER EQUIPMENT AND CABLING INSTALLATION PHOTOS LISTED BELOW. USCC REGIONAL PROJECT MANAGERS MUST REVIEW THE PHOTO LOG AT THE CLOSEOUT OF THE SITE TO ENSURE THE INSTALLATION WAS PERFORMED CORRECTLY; THEY MUST ALSO ENSURE THE PHOTO LOG HAS BEEN INCLUDED IN THE CLOSEOUT PACKAGE AND THAT THESE TEST RESULTS HAVE BEEN UPLOADED INTO MILLENNIA.



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3950 N ANKENY BLVD
ANKENY, IA 50023 - POLK COUNTY
NEW SITE BUILD - STEALTH MONOPOLE

PROJ #: 22-06-04

DWG BY: JAP

CHKD BY: AJK

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
N-3

FIBER OPTIC CABLE INSTALLATION NOTES:

SCOPE:
THIS SECTION COVERS THE SPECIFICATIONS FOR FIBER OPTIC CABLE INSTALLATION.
THE AREAS OF FOCUS ARE THE INSTALLATION OF THE FIBER OPTIC CABLE AND TESTING
REQUIREMENTS. CONTRACTOR SHALL CONFORM TO THESE REQUIREMENTS AND SHALL REFER TO THE
LATEST EDITION OF U.S. CELLULAR STANDARD STD3 TO VERIFY CURRENT REQUIREMENTS.

FIBER OPTIC CABLE INSTALLATION:

1. FIBER OPTIC CABLE MUST TERMINATE USING THE TIA-568-C SCHEME.
2. FIBER OPTIC CABLE MUST BE CONSTRUCTED USING SINGLE MODE OPTICAL FIBER.
3. POWER AND FIBER OPTIC CONDUCTORS CONTAINED WITHIN FIBER TRUNK CABLE INSTALLED ON BEHALF OF U.S. CELLULAR MUST CONFORM TO THE SPECIFICATIONS AS STATED IN TELCORDIA INDUSTRY STANDARD GR3173 TITLED: GENERIC REQUIREMENTS FOR HYBRID OPTICAL AND ELECTRICAL CABLES FOR USE IN WIRELESS OUTDOOR FIBER TO THE ANTENNA (FTTA).
4. FIBER INSTALLATIONS, INCLUDING CABLES AND JUMPERS, MUST BE COMPLETED WITHIN THE MANUFACTURER’S MINIMUM BEND RADIUS INSTALLATION GUIDELINES. AVOIDANCE OF SHARP BENDS ALONG THE INSTALLATION ROUTE IS ABSOLUTELY ESSENTIAL. SHARP BENDS IN CABLE TRAYS OR IN CONDUITS CAN CAUSE MICRO-BENDS IN THE FIBERS AND CAN LEAD TO FIBER BREAKAGE OR ADVERSELY AFFECT SIGNAL ATTENUATION.
5. USE FLEX TUBING WITH THE MATCHING COLOR YELLOW OR ORANGE ONLY TO FEED THE FIBER CABLE INTO VARIOUS FIBER OPTIC TERMINALS OR FIBER DISTRIBUTION FRAMES IN CASES WHERE THE DOWNSPOUTS CANNOT BE POSITIONED DIRECTLY OVER THE FIBER ENTRY POINTS.
6. UNPACKAGED FIBER OPTIC CABLE SHALL BE NEATLY PLACED IN THE DESIGNATED STORAGE AREA; TESTING AND CLEANING IS NOT REQUIRED BEFORE STORING THE CABLE, BUT INSTALLERS SHOULD NEVER COIL FIBER OPTIC CABLES TIGHTER THAN 6 INCHES WHEN PLACING IN STORAGE.
7. FIBER INSULATION SHALL BE PLACED ON HANGER ROD(S) THAT PASSES THROUGH CABLE RACK(S).
8. FIBER OPTIC JUMPERS AND CABLES SHALL NOT BE PULLED, TWISTED OR KINKED. CONTRACTORS MUST VISUALLY INSPECT CABLING KINKS AND/OR TWISTS BEFORE COMPLETION OF THE WORK.
9. FIBER OPTIC JUMPERS SHALL BE WRAPPED WITH TWO LAYERS OF 1/64 INCH SHEET FIBER PROTECTION WHEN THEY ARE SECURED TO CABLE BRACKETS OR OTHER SUPPORTS.
10. UNLESS NOTED OTHERWISE, FIBER OPTIC JUMPERS AND CABLES SHALL BE RUN SEPARATE FROM OTHER TYPES OF CABLE AND PLACED ON OR IN DEDICATED RACK, COMPARTMENT, OR DUCT. NO OTHER TYPES OF CABLES SHALL RUN WITH FIBER OPTIC JUMPERS OR CABLES.
11. FIBER PROTECTION SHALL BE PLACED AT LOCATIONS WHERE CABLES TURN OFF THE CABLE RACK ACROSS THE STRINGER AND DROP 3 INCHES OR MORE, WHETHER OR NOT THE CABLES ARE IN PHYSICAL CONTACT WITH THE STRINGERS INITIALLY.
12. FIBER PROTECTION SHALL BE SECURED TO THE CROSS STRAPS WITH TWINE.
13. SOFT RUBBER JACKETED POWER CABLES (SUPER FLEX) SHALL BE PROTECTED FROM CONTACT WITH CABLE BRACKETS, CABLE RACKS, FRAMEWORK, AND SEWING TWINE BY WRAPPING THE CABLES WITH TWO LAYERS OF 1/64 INCH OR ONE 1/32 INCH SHEET FIBER.
14. SMALL SPLIT DUCT (WIRE LOOM) MAY BE USED TO PROTECT EXPOSED JUMPERS FOR SHORT DISTANCES UP TO 6” WHERE FIBER GUIDE TRANSITIONS ARE NOT FEASIBLE. SPIRAL WRAP IS NOT TO BE USED. FIBER GUIDE RUNS WILL BE CONTINUOUS AND FREE OF GAPS. TRANSITION SECTION (“T” OR ELBOW) WILL BE INSERTED WHERE REQUIRED.
15. VERTICAL AND HORIZONTAL FIBER RUNS BETWEEN CABLE RACK AND EQUIPMENT BAYS OR BETWEEN EQUIPMENT BAYS WILL BE PROTECTED BY SMALL SPLIT DUCT, OR FIBER DUCT.
16. TENSIONS ON THE FIBER OPTIC CABLE SHALL NOT EXCEED THE MAXIMUM ALLOWABLE CABLE TENSION LIMIT SPECIFIED BY THE MANUFACTURER.
17. PLASTIC TIE WRAPS SHALL NOT BE USED TO SECURE COILED FIBER CABLES. VELCRO STRAPS SHALL BE USED INSTEAD. IF VELCRO STRAPS ARE NOT AVAILABLE, THE CABLE SHALL BE PLACED IN A PLASTIC BAG PRIOR TO BEING PLACED IN A STORAGE CABINET.
18. FIBER OPTIC PROBES SHALL BE USED TO INSPECT FIBER OPTIC END-FACES FOR CONTAMINATION OR DAMAGE.

19. IF A FIBER HAS BEEN TERMINATED AND SUBSEQUENTLY UNSEATED FROM IT’S TERMINATION POINT, IT MUST BE CLEANED BEFORE RE-TERMINATION OF THE FIBER.
20. FIBER CONNECTORS MAY BE CLEANED USING ANY OF THESE THREE APPROVED U.S. CELLULAR METHODS:

A. FIBER CLEANING TISSUES

B. FIBER CASSETTE-TYPE CLEANERS

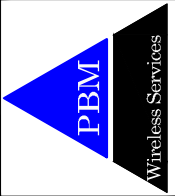
C. FIBER CLEANING PEN
21. THE FIBER MUST EITHER BE COLORED AND FOLLOW AN ETA598-A COLOR SCHEME OR MUST HAVE NUMBERING ENGRAINED ON A HARD PLASTIC AND TIED TO THE CABLE.
22. FIBER CABLES USING EITHER THE ETA598-A COLOR SCHEME OR THE NUMBERING SCHEME MUST BE PLACED ON THE BULKHEAD AS SHOWN ABOVE.
23. U.S. CELLULAR FIBER BULKHEAD WITH REQUIRED FIBER CONNECTOR CABLE COLORS OR NUMBER DESIGNATOR (TX AND RX WILL BE THE SAME COLOR).
24. REFER TO U.S. CELLULAR STANDARD STD72
25. EXCEPTIONS NEED TO BE VERIFIED WITH THE PROJECT MANAGER.

FIBER OPTIC CABLE TESTING:

1. TEST FIBER ON THE REEL FOR CONTINUITY TO ENSURE NO DAMAGE WAS INCURRED DURING SHIPMENT. TESTING CAN BE DONE WITH A VISUAL FAULT LOCATOR OR FIBER TRACER.
2. TEST END-TO-END INSERTION LOSS USING AN OLTS POWER METER AND SOURCE.
3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING OPTICAL FIBER TESTING EQUIPMENT AT CONTRACTOR’S EXPENSE, TESTING AND RECORDING SINGLE-MODE FIBER CABLES PER TIA/EIA 526-7 (SINGLE-MODE).
4. TOTAL LOSS SHALL BE LESS THAN THE CALCULATED MAXIMUM LOSS FOR THE CABLE BASED ON APPROPRIATE STANDARDS OR CUSTOMER SPECIFICATIONS.
5. OPTICAL FIBER INSTALLATIONS SHALL BE TESTED AND SIGNAL STRENGTH SHALL BE RECORDED PER TIA 568.B.
6. A FIBER OPTIC POWER METER (FLUKE FIBER OPTIC METER, JDSU T-BERD 8000 OR EQUIVALENT) SHALL BE USED TO TEST LIGHT LEVELS ON THE FIBER OPTIC CABLE. IF THE CABLE TESTS BAD AND INTEGRITY CANNOT BE RESTORED, THE CABLE SHALL BE APPROPRIATELY DISPOSED OF.
7. FIBER OPTIC CABLE THAT HAS BEEN PREVIOUSLY USED MUST FIRST BE CLEANED, TESTED, CAPPED AND PROPERLY COILED PRIOR TO BEING STORED TO ENSURE CABLE INTEGRITY. BOTH ENDS OF THE FIBER OPTIC CABLE SHALL BE CLEANED (CLETOP-S, IBC BRAND FIBER OPTIC CLEANER OR EQUIVALENT) AND THEN CAPPED FOR PROTECTION FROM DAMAGE AND/OR CONTAMINATION. A LABEL MAKER SHALL BE USED TO CREATE A LABEL THAT INCLUDES THE DATE CABLE WAS TESTED, WHAT ACTION WAS TAKEN, INITIALS OF THE PERSON THAT HANDLED THAT CABLE AND THE APPROXIMATE LENGTH OF THE CABLE.
8. CONTRACTOR IS RESPONSIBLE FOR OBTAINING OPTICAL FIBER TESTING EQUIPMENT AT CONTRACTOR’S EXPENSE AND TESTING AND RECORDING SINGLE-MODE FIBER CABLES PER TIA/EIA 526-7 (SINGLE-MODE).
9. OPTICAL FIBER INSTALLATIONS SHALL BE TESTED AND SIGNAL STRENGTH SHALL BE RECORDED PER TIA 568.B.
10. THE MAXIMUM LENGTH OF ANY HYBRID CABLE SHALL BE 400’.
11. REFER TO U.S. CELLULAR STANDARD STD3 & STD72.



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GENERAL STEEL NOTES:

1. STEEL WORK SHALL BE GALVANIZED UNLESS NOTED OTHERWISE.

2. NON-GALVANIZED STEEL WORK SHALL BE PAINTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND IN ACCORDANCE WITH ASTM A36 UNLESS NOTED OTHERWISE.

3. WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS USING E70XX ELECTRODES. WELDING SHALL CONFORM TO AISC & AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", LATEST EDITION. AT THE COMPLETION OF WELDING, DAMAGE TO GALVANIZED COATING SHALL BE REPAIRED.

4. STEEL BOLTING – ASTM A325–N BOLTS, SEE PLAN/DETAILS FOR DIAMETER, NON SLIP CRITICAL CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.

5. DAMAGE TO THE EXISTING FACILITY SHALL BE REPAIRED OR REPLACED TO MATCH EXISTING ORIGINAL CONDITIONS AT THE CONTRACTOR’S EXPENSE.

6. STEEL DESIGN, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH AISC STANDARDS LATEST EDITION.

7. STEEL W SHAPES SHALL CONFORM TO ASTM A992 (MINIMUM YIELD STRENGTH=50KSI) GRADE 50.

8. SIZE STANDARD BEAM CONNECTIONS BASED ON 3/4 OF THE TOTAL UNIFORM LOAD CAPACITY OF THE BEAM. USE DOUBLE CLIP ANGLES AND AISC TABLE 10–1 UNLESS INDICATED OTHERWISE.
9. STEEL ANGLES AND PLATES – ASTM A36. (MINIMUM YIELD STRENGTH = 36KSI)

10. STEEL TUBE SHAPES – ASTM A500 GRADE B. (MINIMUM YIELD STRENGTH = 46KSI)

11. STEEL PIPES – ASTM A53 TYPE E. (MINIMUM YIELD STRENGTH = 35KSI)

12. CONTRACTOR SHALL COORDINATE AND VERIFY LAYOUT, PLACEMENT, ETC. OF EQUIPMENT PRIOR TO FABRICATION AND ERECTION.

13. VERIFY EQUIPMENT MOUNTING DIMENSIONS PER MANUFACTURER DRAWINGS.

14. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER’S RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER’S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER’S MAXIMUM ALLOWABLE LOADS.

CONCRETE & REINFORCING STEEL NOTES

1. CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318 AND THE SPECIFICATION FOR CAST-IN-PLACE CONCRETE.

2. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS. STRUCTURE MAY BE INSTALLED ON FOUNDATION AT A TIME EARLIER THAN 28 DAYS WITH CONFIRMING CONCRETE CYLINDER TEST RESULTS. AT CONTRACTOR’S OPTION, A HIGH EARLY STRENGTH (TYPE III) CEMENT OR A STRENGTH ACCELERATING ADMIXTURE MAY BE USED. NO CALCIUM CHLORIDE ALLOWED. SUBMIT DESIGN MIX FOR APPROVAL.

3. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL WIRE FABRIC, U.N.O. SPLICES SHALL BE CLASS "B" AND HOOKS SHALL BE STANDARD, U.N.O.

4. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", LATEST EDITION.

5. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

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

CONCRETE EXPOSED TO EARTH OR WEATHER:

#6 AND LARGER.....2 IN.

#5 AND SMALLER & WWF...1 1/2 IN.

6. A 3/4" CHAMFER SHALL BE PROVIDED AT EXPOSED EDGES OF CONCRETE, U.N.O., IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

7. SAMPLES FOR STRENGTH TESTS SHALL BE TAKEN IN ACCORDANCE WITH ASTM C172.

8. CYLINDERS FOR STRENGTH TESTS SHALL BE IN ACCORDANCE WITH ASTM C31 AND TESTED IN ACCORDANCE WITH ASTM C39.

9. SAMPLES FOR STRENGTH TESTS SHALL BE IN ACCORDANCE WITH ACI 318 WITH A MINIMUM OF (4) CYLINDERS. (1) 7 DAY, (1) 14 DAY AND (2) 28 DAY.
10. SCOPE / SUBMITTALS
CONCRETE FOR SHELTER FOUNDATION AND FENCE POST SETTING – SUBMIT PROPOSED MODIFICATIONS TO THESE DRAWINGS AND SPECIFICATIONS FOR APPROVAL BY TOWER OWNER.

11. QUALITY STANDARDS
QUALITY STANDARDS COMPLY WITH THE STANDARDS OF THE AMERICAN CONCRETE INSTITUTE, THE CONCRETE REINFORCING STEEL INSTITUTE, AND APPLICABLE ASTM REQUIREMENTS.

12. FORMWORK MATERIALS
CONCRETE HAS GENERALLY BEEN DESIGNED FOR PLACEMENT AGAINST EARTH OR FILL MATERIALS, HOWEVER, THE TOP 4-FOOT MINIMUM OF SHELTER AND TOWER FOUNDATIONS SHALL BE PLACED USING FORMS. CONSTRUCT FORMWORK TO PROVIDE FINISHED CONCRETE ACCURATE TO LINES AND LEVELS SHOWN ON THE DRAWINGS. CONSTRUCT FORMWORK WITH TIGHT JOINTS TO MINIMIZE LEAKAGE. INCLUDE ACCESSORIES NECESSARY TO SUPPORT EMBEDDED ITEMS DURING PLACEMENT OF CONCRETE.

13. PLACEMENT AND FINISHING
INSTALL FORMWORK AND REINFORCING AS REQUIRED FOR CONFIGURATION OF CONCRETE SHOWN ON THE DRAWINGS. PLACE CONCRETE CONTINUOUSLY IN EACH LOCATION. CONSOLIDATE CONCRETE USING EQUIPMENT APPROPRIATE TO EACH CONDITION, LIMITING THE DURATION TO PREVENT BRINGING AN EXCESS OF FINE AGGREGATE TO THE SURFACE. BRING SURFACES TO CORRECT LEVEL WITH STRAIGHT EDGE, FLOAT SMOOTH AND TROWEL TO A HARD, DENSE FINISH HAVING A TOLERANCE OF 1/8" IN 10'-0". EXTERIOR WALKING SURFACES SHALL BE GIVEN A BROOMED FINISH PERPENDICULAR TO DIRECTION OF TRAVEL. HOT AND COLD WEATHER PLACEMENT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 305 AND 306.



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N-5

GENERAL NOTES:

1.

CONTRACTOR SHALL PROVIDE LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY FOR AND INCIDENTAL TO THE COMPLETE INSTALLATION AND OPERATION OF ELECTRICAL WORK.
2.

CONTRACTOR SHALL CONFORM TO THE REQUIREMENT OF THE RULES, REGULATIONS, AND CODES OF LOCAL, STATE, AND FEDERAL AUTHORITIES HAVING JURISDICTION, AND CONFORM TO THE NATIONAL ELECTRICAL SAFETY CODES, AND NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION LATEST EDITIONS.
3.

CONTRACTOR SHALL NOTE THAT DRAWINGS ARE GENERALLY DIAGRAMMATIC. BENDS, FITTINGS AND ACCESSORIES ARE NOT NECESSARILY SHOWN. PROVIDE SUCH ITEMS AS REQUIRED.
4.

CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION & INSTALLATION OF ELECTRICAL SERVICE CABLE SIZES & RUNS BASED ON LOCAL CODE REQUIREMENTS & OR NEC (LATEST ENFORCED EDITIONS). CONTRACTOR SHALL USE U.S. CELLULAR PREFERRED "KS-24194 POWER WIRE" CABLE OR APPROVED EQUIVALENT; CONTRACTOR SHALL REFER TO LATEST EDITION OF U.S. CELLULAR STANDARD STD42 TO VERIFY COLOR CODING, SIZING, CRIMPING, LABELING, LUG AND INSTALLATION REQUIREMENTS. CHANGE ORDERS WILL NOT BE ACCEPTED DUE TO LACK OF VERIFICATION.
5.

CONTRACTOR SHALL EQUIP CONDUIT WITH A 200-LB (MINIMUM) TEST PULL WIRE/STRING INSTALLED END TO END FOR VERIFICATION AND PULLING PURPOSES.

ELECTRICAL IDENTIFICATION:

1.

GENERAL:
LOCATE NAMEPLATE, MARKING, OR OTHER IDENTIFICATION MEANS ON OUTSIDE EQUIPMENT OR BOX FRONT COVERS.
2.

NAMEPLATES:
PROVIDE NAMEPLATE ENGRAVED WITH EQUIPMENT DESIGNATION FOR EACH SAFETY SWITCH AND OTHER ELECTRICAL CABINETS.
3.

UNDERGROUND WARNING TAPE:
DURING TRENCH BACK-FILLING FOR EACH UNDERGROUND ELECTRICAL, TELEPHONE, SIGNAL AND COMMUNICATIONS LINE, PROVIDE A CONTINUOUS UNDERGROUND WARNING TAPE SIX INCHES BELOW FINISHED GRADE. WARNING TAPE SHALL BE TYPE IID. DETECTABLE THREE LAYER LAMINATE.
4.

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

GROUNDING NOTES:

1.

BENDS SHALL BE MADE WITH THE GREATEST PRACTICAL RADIUS AND SHALL NOT BE LESS THAN 8".
2.

CONDUITS SHALL BE SUPPORTED w/ NON-METALLIC MATERIAL.
3.

METAL CONDUITS USED AS RACEWAYS FOR GROUNDING CONDUCTORS SHALL BE ELECTRICALLY CONTINUOUS AND SHALL BE BONDED AT BOTH ENDS IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC), THE LATEST EDITION.
4.

EXTERIOR CONNECTIONS TO THE ANTENNA MASTS, AND FACILITY STRUCTURAL STEEL FRAME SHALL BE MADE BY EXOTHERMIC WELD.
5.

MECHANICAL LUGS SHALL BE TWO HOLE, STAINLESS STEEL BOLTED COMPRESSION CLAMP FITTING PROPERLY SIZED FOR THE CONDUCTOR USED. MECHANICAL CONNECTIONS SHALL BE SANDED TO BARE METAL AND TREATED WITH ANTI-OXIDANT COMPOUND.
6.

GROUNDING SHALL COMPLY WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE (NEC), THE LATEST EDITION.
7.

SYSTEM GROUND RESISTANCE SHALL NOT EXCEED 5 OHMS.
8.

CLAMP CONNECTIONS SHALL BE MADE ACCESSIBLE FOR INSPECTION.
9.

EXOTHERMIC WELDS ON EXPOSED SURFACES SHALL BE TREATED WITH TWO COATS OF ZINC RICH, COLD GALVANIZING PAINT.
10.

MATERIAL, INDICATED AS FOLLOWING:

A.

CONDUCTORS: COPPER SOLID TINNED BCW AS SHOWN ON THE DRAWINGS.

B.

GROUND WIRE CLAMPS: HEAVY DUTY CLAMPS AS MANUFACTURED BY BURNDY.

C.

WELDS: HEAVY DUTY EXOTHERMIC WELDS AS MANUFACTURED BY EXOTHERMIC WELD. WELDS SHALL BE PROTECTED FROM CORROSION w/ COMPOUND AS MANUFACTURED BY ZRC CHEMICAL PRODUCTS CO.

D.

ATTACHMENT OF GROUND BARS SHALL BE STAINLESS STEEL.

11.

A "FOUR TERMINAL" EARTH RESISTANCE "MEGGER" TEST SHALL BE PERFORMED BY THE CONTRACTOR.

A.

TESTS ARE TO BE PERFORMED IN ACCORDANCE WITH ASTM G 57-06 (2012)

B.

TYPICALLY FIVE (5) TESTS SHALL BE PERFORMED AT EACH SITE. HOWEVER, LOCAL CONDITIONS MAY WARRANT ADDITIONAL TEST RUNS.

C.

PROVIDE A WRITTEN REPORT CONSISTING OF THE FOLLOWING: SITE NAME, ADDRESS, AND IDENTIFICATION NUMBER, DESCRIPTION OF SITE SOIL AND MOISTURE CONDITION, DESCRIPTION OF WEATHER FOR SEVEN DAYS PRECEDING TEST, MODEL OF TEST EQUIPMENT, DATE OF LAST CALIBRATION, SITE SKETCH SHOWING LOCATION OF TESTS, AND FIELD DATA COLLECTED INCLUDING READINGS, RANGE, TEST, MILLIAMPS, ETC. IN TABULAR FORMAT.
12.

GROUND LEADS FROM ABOVE GRADE ROUTED TO BELOW GRADE SHALL BE IN 1/2" FLEX CONDUIT (OR APPROVED EQUIVALENT) AND SEALED w/ SILICONE.
13.

EXTERNAL GROUNDS SHALL BE EXOTHERMIC WELDED OR USE 2 HOLE SS LUGS, EXCEPT FOR (PROPANE TANKS, GENERATOR HOUSING AND IN MOST CASES FENCE POST).
14.

GROUND SURGE ARRESTOR BRACKET TO MAIN GROUND BAR INSIDE SHELTER (MECHANICAL OR EXOTHERMIC WELD.)
15.

GPS COAX SHALL BE GROUNDED TO THE EXTERNAL GROUND BAR AT THE SHELTER ENTRANCE (OUTSIDE.).
16.

CONTRACTOR SHALL RETAIN THE SERVICES OF A THIRD-PARTY VENDOR TO CONDUCT GROUND TEST PRIOR TO UTILITY SERVICE CONNECTIONS AND SHALL PROVIDE WRITTEN CERTIFICATION OF TEST RESULTS TO U.S. CELLULAR PROJECT MANAGER.
17.

CONTRACTOR SHALL GROUND NEW RRU WITH 6 AWG STRANDED INSULATED GREEN CU GROUND WIRE ROUTED TO GROUND BAR, CONNECT WITH 2-HOLE LUG CONNECTION.
18.

CONTRACTOR SHALL GROUND NEW HYBRID CABLE TO EXTERNAL GROUND BAR (EGB), LOWER TOWER GROUND BAR, AND UPPER TOWER COLLECTOR GROUND BAR WITH CABLE MANUFACTURER APPROVED METHOD; CONNECT WITH 2-HOLE LUG CONNECTION
19.

CONTRACTOR SHALL GROUND NEW RAYCAP JUNCTION BOX WITH 6 AWG STRANDED INSULATED GREEN CU GROUND WIRE ROUTED TO EXTERNAL GROUND BAR (EGB) AND CONNECTED WITH 2-HOLE LUG CONNECTION

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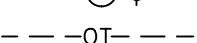
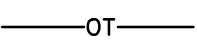
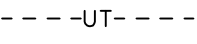
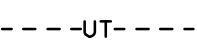
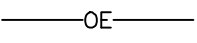
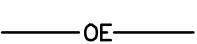
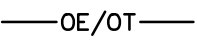
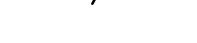
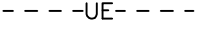
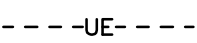
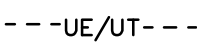
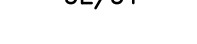
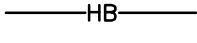
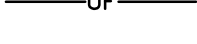
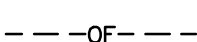
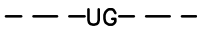
CHKD BY: AJK

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

N-6

PLAN SYMBOLS		UTILITY PLAN SYMBOLS		GROUNDING PLAN SYMBOLS		ABBREVIATIONS			
	NEW ANTENNA		TELEPHONE PEDESTAL		EXOTHERMIC WELD	ADJ	ADJUSTABLE	N.I.C.	NOT IN CONTRACT
	EXISTING ANTENNA		ELECTRIC BOX		BOLTED CONNECTION	APPROX	APPROXIMATE	NTS	NOT TO SCALE
	NEW PARKING BOLLARD		PAD MOUNTED TRANSFORMER		GROUND BAR	BCW	BARE COPPER WIRE	O.C.	ON CENTER
	EXISTING PARKING BOLLARD		EXISTING UTILITY POLE		GROUND ROD	CAB	CABINET	OPP	OPPOSITE
	BENCH MARK		NEW UTILITY POLE		GROUND ACCESS PORT	CLG	CEILING	RMC	RIGID METAL CONDUIT
	TOWER CENTER		GUY ANCHOR		GROUND RING/GROUND CONDUCTOR	CONC	CONCRETE	SF	SQUARE FOOT
	FOUND MONUMENT		MANHOLE		COILED GROUND CONNECTION	CONT	CONTINUOUS	SHT	SHEET
	SPOT ELEVATION		LIGHT POLE			CJ	CONSTRUCTION JOINT	SIM	SIMILAR
	REVISION		EXISTING OVERHEAD TELEPHONE			DIA	DIAMETER	SS	STAINLESS STEEL
	GRID REFERENCE		NEW OVERHEAD TELEPHONE			DWG	DRAWING	STL	STEEL
	DETAIL REFERENCE		EXISTING UNDERGROUND TELEPHONE			EGB	EXTERNAL GROUND BAR	T/C	TOP OF CONCRETE
	ELEVATION		NEW UNDERGROUND TELEPHONE			EA	EACH	T/M	TOP OF MASONRY
	SECTIONS & DETAILS		EXISTING OVERHEAD POWER			ELEC	ELECTRICAL	T/S	TOP OF STEEL
	ELEVATION TAG		NEW OVERHEAD POWER			EL	ELEVATION	(TYP.)	TYPICAL
	CENTER LINE		NEW OVERHEAD POWER & TELEPHONE			EQ	EQUAL	F.V.	FIELD VERIFY
	PROPERTY LINE		EXISTING UNDERGROUND POWER			EQUIP	EQUIPMENT	UNO	UNLESS NOTED OTHERWISE
	COAXIAL CABLE		NEW UNDERGROUND POWER			(E)	EXISTING	WWF	WELDED WIRE FABRIC
	EXISTING CONTOUR LINE		NEW UNDERGROUND POWER & TELEPHONE			EXT	EXTERIOR	w/	WITH
	NEW CONTOUR LINE		EXISTING UNDERGROUND POWER			FF	FINISHED FLOOR	XMFR	TRANSFORMER
	EXISTING FENCE		NEW UNDERGROUND POWER			GA	GAUGE	BTS	BASE TRANSMISSION STATION
	NEW FENCE		NEW UNDERGROUND POWER & TELEPHONE			GALV	GALVANIZED	PCS	PERSONAL COMMUNICATIONS SERVICES
	EXISTING FENCE WOOD/VINYL		NEW UNDERGROUND FIBER HORIZONTAL BORE			GC	GENERAL CONTRACTOR		
	NEW FENCE WOOD/VINYL		EXISTING UNDERGROUND POWER			GRND	GROUND		
	NEW SILT FENCE		NEW UNDERGROUND POWER			LG	LONG		
	NEW RIGHT OF WAY		NEW UNDERGROUND POWER & TELEPHONE			MAX	MAXIMUM	℄	CENTERLINE
	PROPOSED LEASE AREA		EXISTING UNDERGROUND POWER			MECH	MECHANICAL	℞	PLATE
	PROPOSED ACCESS/UTILITY EASEMENTS		NEW UNDERGROUND POWER			MFGR	MANUFACTURER	&	AND
	EXISTING LEASE AREA		NEW UNDERGROUND POWER & TELEPHONE			MGB	MASTER GROUND BAR	@	AT
	EXISTING ACCESS/UTILITY EASEMENTS		EXISTING UNDERGROUND POWER			MIN	MINIMUM		
			NEW UNDERGROUND POWER			MTL	METAL		
			NEW UNDERGROUND POWER & TELEPHONE						
			EXISTING UNDERGROUND POWER						
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			NEW UNDERGROUND POWER						
			NEW UNDERGROUND POWER & TELEPHONE						
			EXISTING UNDERGROUND POWER						
			NEW						



1

PARTIAL SITE PLAN

SCALE: 1"=60'

N

uscellular

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URBANDALE, IA 50323

PBM

Wireless Services
Think outside the triangle.

A	08/16/22	INTERNAL REVIEW	JAP
0	08/19/22	CLIENT REVIEW	JAP
1	09/22/22	CLIENT REVIEW	JAP
2	11/07/22	CITY COMMENTS	JAP
3	11/09/22	CITY COMMENTS	JAP

7601333 - ANKENY NE 36TH.

3950 N ANKENY BLVD
ANKENY, IA 50023 - POLK COUNTY
NEW SITE BUILD - STEALTH MONOPOLE

PROJ #: 22-06-04

DWG BY: JAP

CHKD BY: AJK

SHEET TITLE

PARTIAL SITE PLAN

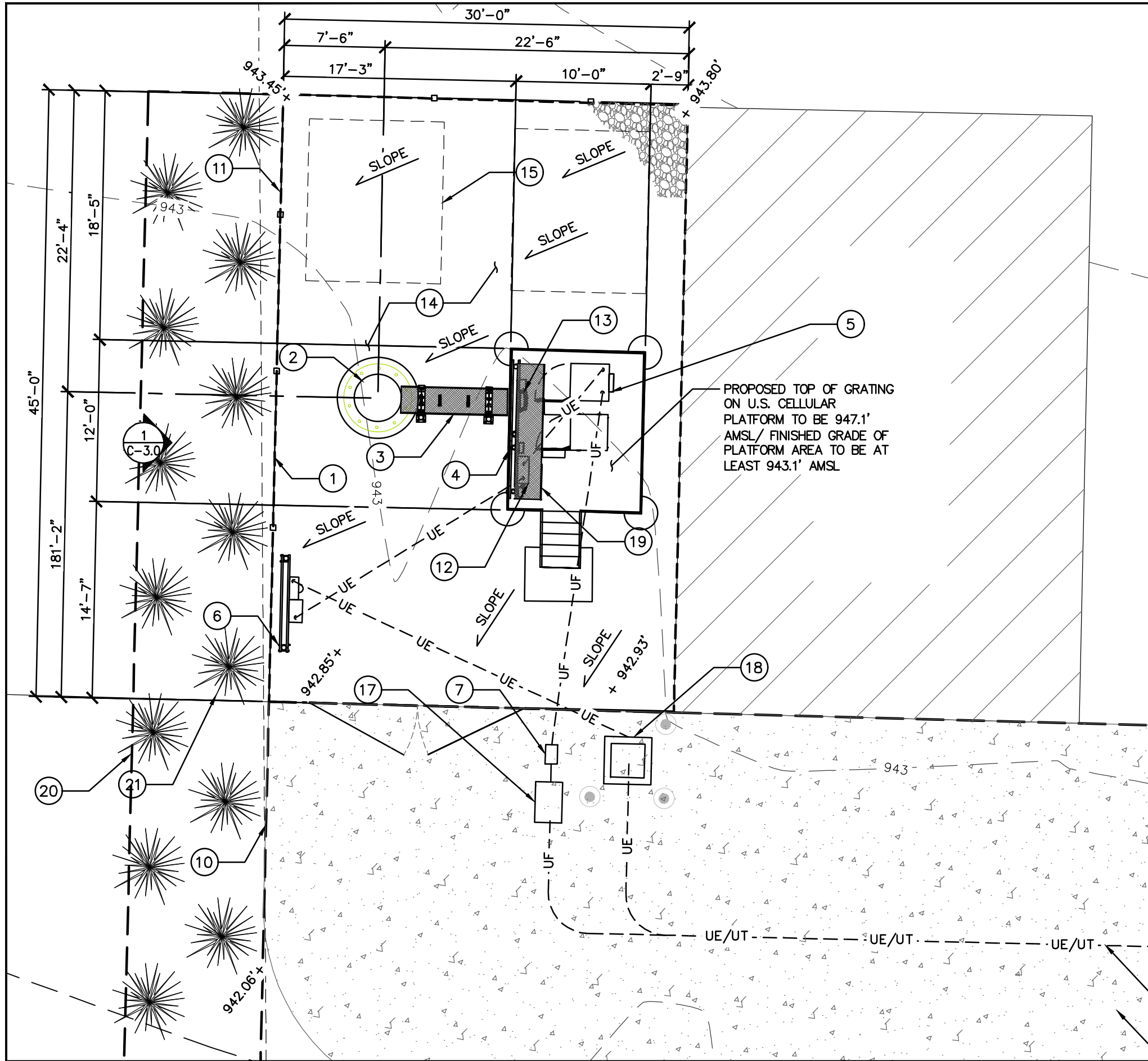
SHEET NUMBER

C-1.0

APPROXIMATE
LOCATION OF
RIGHT-OF-WAY
LINE (TYP.)

PROPOSED 30' WDE
U.S. CELLULAR
ACCESS/UTILITY
EASEMENT

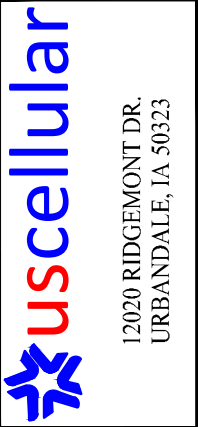
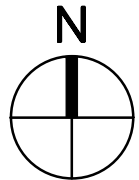
PROPOSED
U.S. CELLULAR SERVICE
CONDUITS ROUTED TO EDGE
OF RIGHT-OF-WAY, CAP,
LABEL, AND STAKE
CONDUITS



KEY NOTES:

- 1 PROPOSED U.S. CELLULAR VINYL FENCE, SEE SHEET C-7.0
- 2 PROPOSED U.S. CELLULAR STEALTH MONOPOLE, (DESIGN BY OTHERS)
- 3 PROPOSED U.S. CELLULAR ICE BRIDGE & FRAMING, SEE SHEET C-6.0
- 4 PROPOSED U.S. CELLULAR GPS ANTENNA, (TYP. 2), MOUNTED TO ICE BRIDGE POST, SEE SHEET C-6.0
- 5 PROPOSED U.S. CELLULAR EQUIPMENT CABINETS ON ELEVATED STEEL PLATFORM, SEE SHEET(S) C-5.0, C-5.1, C-5.2, C-5.3, C-5.4
- 6 PROPOSED U.S. CELLULAR COMPOUND UTILITY RACK, SEE SHEET C-10.0
- 7 PROPOSED U.S. CELLULAR FIBER VAULT, SEE SHEET C-10.0
- 8 PROPOSED U.S. CELLULAR 8' WIDE ACCESS GATES, SEE SHEET C-7.0
- 9 PROPOSED U.S. CELLULAR CONCRETE ACCESS DRIVE, SEE SHEET C-8.0
- 10 PROPOSED U.S. CELLULAR ACCESS/UTILITY EASEMENT
- 11 PROPOSED U.S. CELLULAR LEASE AREA.
- 12 PROPOSED U.S. CELLULAR PPC CABINET RACK, SEE DETAIL 1/C-5.1
- 13 PROPOSED U.S. CELLULAR RRU AND EQUIPMENT RACK, SEE DETAIL 2/C-10.0
- 14 CLEAR & GRUB AREA PRIOR TO CONSTRUCTION. COORDINATE w/ OWNER AND U.S. CELLULAR PROJECT MANAGER.
- 15 PROPOSED FUTURE CARRIER LEASE AREA, EXACT SIZE AND LOCATION TO BE DETERMINED.
- 16 PROPOSED ELECTRICAL & COMMUNICATION SERVICE ROUTED TO EDGE OF R.O.W.
- 17 PROPOSED FIBER PROVIDER VAULT TO BE PLACED BY OTHERS, FIELD VERIFY EXACT LOCATION
- 18 PROPOSED PAD MOUNTED TRANSFORMER w/ BOLLARDS, (BY OTHERS)
- 19 PROPOSED 24"x10' ICE BRIDGE OVER EQUIPMENT
- 20 PROPOSED 10' WIDE U.S. CELLULAR LANDSCAPE EASEMENT
- 21 PROPOSED U.S. CELLULAR LANDSCAPING, SEE SHEET C-2.1

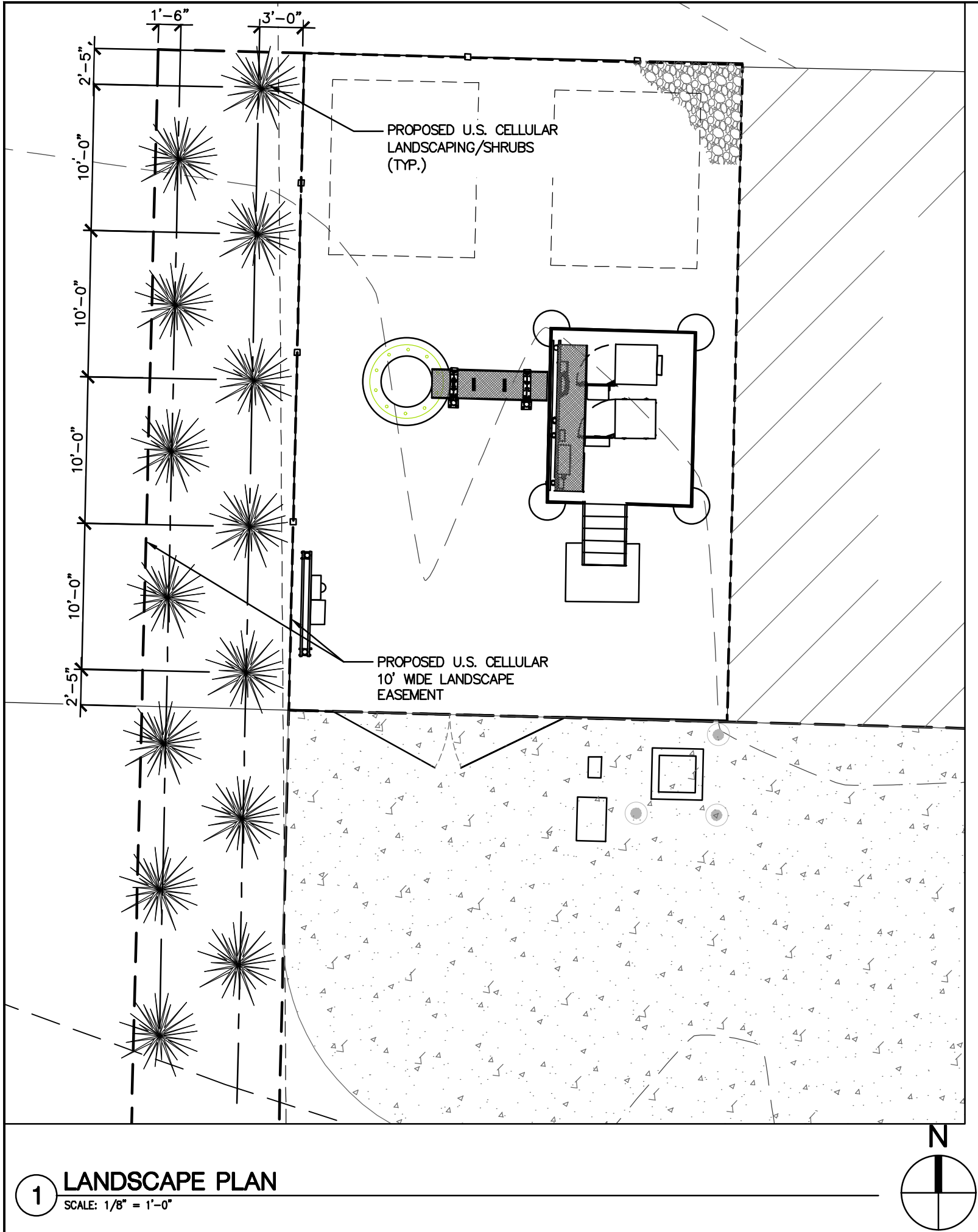
1 COMPOUND PLAN
SCALE: 1/8" = 1'-0"



A	08/16/22	INTERNAL REVIEW	JAP
0	08/19/22	CLIENT REVIEW	JAP
1	09/22/22	CLIENT REVIEW	JAP
2	11/07/22	CITY COMMENTS	JAP
3	11/09/22	CITY COMMENTS	JAP

7601333 - ANKENY NE 36TH. 3950 N ANKENY BLVD ANKENY, IA 50023 - POLK COUNTY NEW SITE BUILD - STEALTH MONOPOLE	PROJ #: 22-06-04	DWG BY: JAP	CHKD BY: AJK
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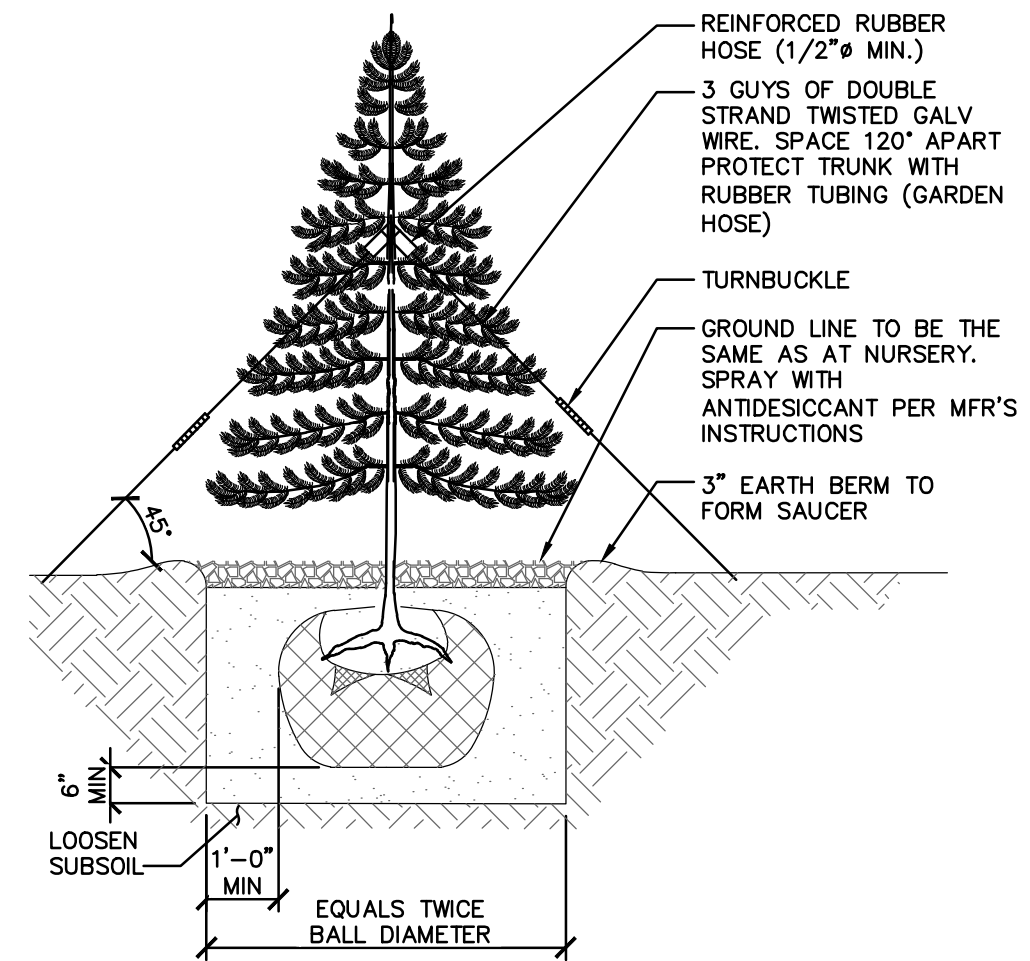
SHEET TITLE COMPOUND PLAN	SHEET NUMBER C-2.0
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PLANTING SCHEDULE							
ITEM	QTY.	BOTANICAL NAME	COMMON NAME	HEIGHT @ PLANTING	HEIGHT @ MATURITY	SPREAD/CALIPER	SPACING
	14	RED-OSIER DOGWOOD	CORNUS STOLONIFERA	6'-0" (MIN)	10'-0" (MIN)	2"	SEE PLAN
	-	-		-	-	-	-

LANDSCAPING NOTES:

1. TOPSOIL TO BE PROVIDED BY SITE CONTRACTOR IN ROUGH GRADE TO WITHIN 1" OF FINISHED GRADE.
2. EACH PLANT TO BE IN THE TOP OF ITS CLASS AFTER SHEARING AND PRUNING
3. EACH PLANT TO BE FREE FROM DISEASE, INSECT INFESTATION, MECHANICAL INJURIES, AND IN RESPECTS BE SUITABLE FOR FIELD PLANTING
4. PLANTS ARE GUARANTEED TO BE INSTALLED PROPERLY AND HEALTHY, HOWEVER CARE AND LONG TERM VIABILITY ARE SUBJECT TO OWNER'S CARE
5. PLANTS SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1-1973, IN REGARD TO SIZING, GROWING AND B&B SPECIFICATIONS
6. THE CONTRACTOR SHALL PROTECT ALL EXISTING TREES AND SHRUBS WITHIN THE CONSTRUCTION AREA IDENTIFIED AS "TO REMAIN" FROM DAMAGE BY EQUIPMENT AND CONSTRUCTION ACTIVITIES



2 PLANTING DETAIL

SCALE: NONE



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URBANDALE, IA 50323



Wireless Services
Think outside the triangle.

08/16/22	INTERNAL REVIEW	JAP
08/19/22	CLIENT REVIEW	JAP
09/22/22	CLIENT REVIEW	JAP
11/07/22	CITY COMMENTS	JAP
11/09/22	CITY COMMENTS	JAP

7601333 - ANKENY NE 36TH.
3950 N ANKENY BLVD
ANKENY, IA 50023 - POLK COUNTY
NEW SITE BUILD - STEALTH MONOPOLE

PROJ #: 22-06-04

DWG BY: JAP

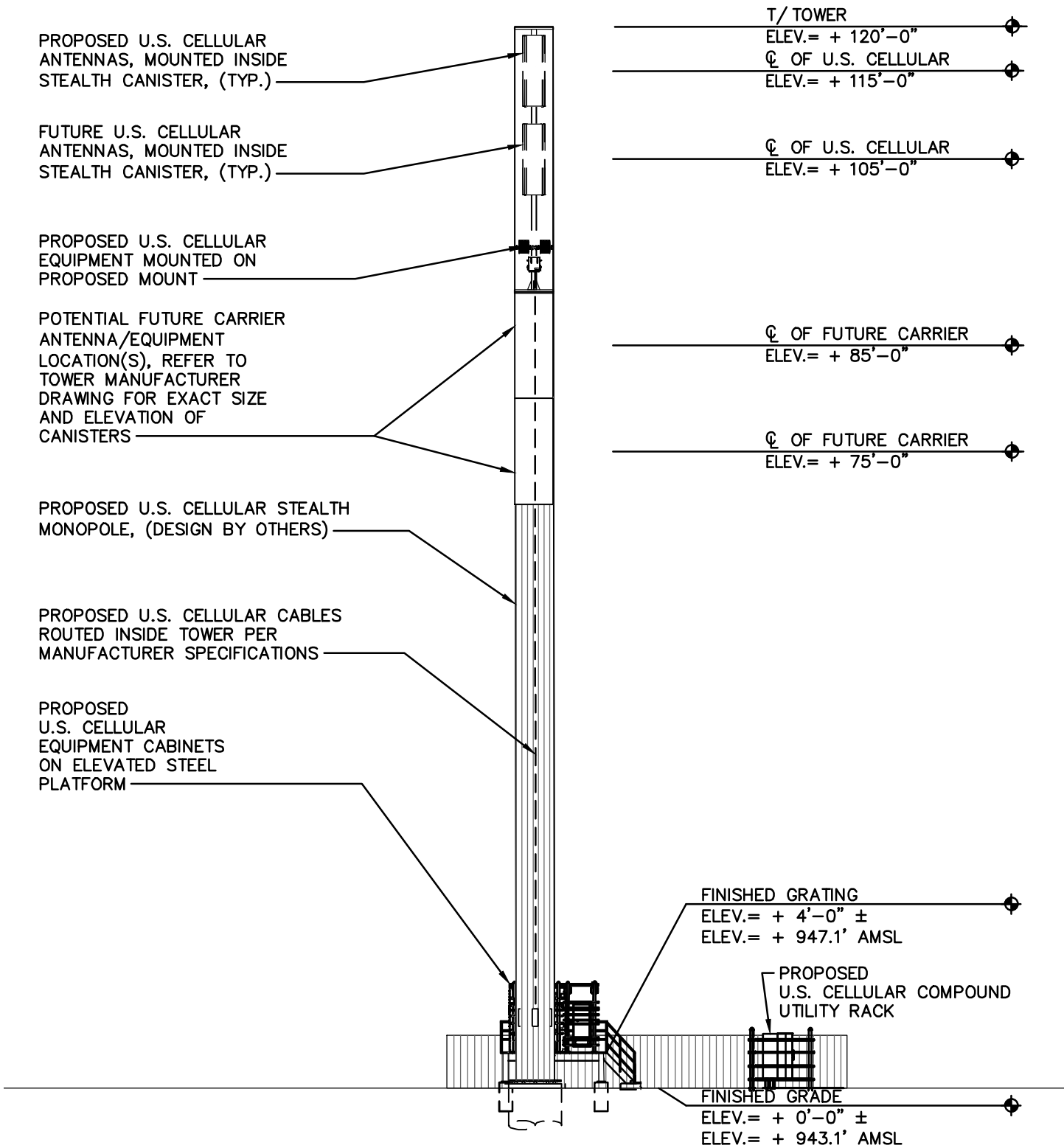
CHKD BY: AJK

SHEET TITLE
LANDSCAPE PLAN

SHEET NUMBER
C-2.1

GENERAL NOTES:

1. CENTERLINE ELEVATION NOTED FOR FUTURE CARRIERS ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. ACTUAL FUTURE CENTERLINES SHALL BE COORDINATED AND APPROVED BY U.S. CELLULAR.
2. FUTURE ANTENNA AND MOUNTING PLATFORMS MAY NOT BE DEPICTED ON TOWER ELEVATION.
3. TOWER DESIGN AND PASSING STRUCTURAL ANALYSIS TO BE THE RESPONSIBILITY OF AND PROVIDED BY TOWER MANUFACTURER SEPARATE FROM THESE CONSTRUCTION DRAWING.



1 ELEVATION (WEST LOOKING EAST)
SCALE: 1/16" = 1'-0"



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URBANDALE, IA 50323



PBM
Wireless Services
Think outside the triangle.

A	08/16/22	INTERNAL REVIEW	JAP
0	08/19/22	CLIENT REVIEW	JAP
1	09/22/22	CLIENT REVIEW	JAP
2	11/07/22	CITY COMMENTS	JAP
3	11/09/22	CITY COMMENTS	JAP

7601333 - ANKENY NE 36TH.
3950 N ANKENY BLVD
ANKENY, IA 50023 - POLK COUNTY
NEW SITE BUILD - STEALTH MONOPOLE

PROJ #: 22-06-04

DWG BY: JAP

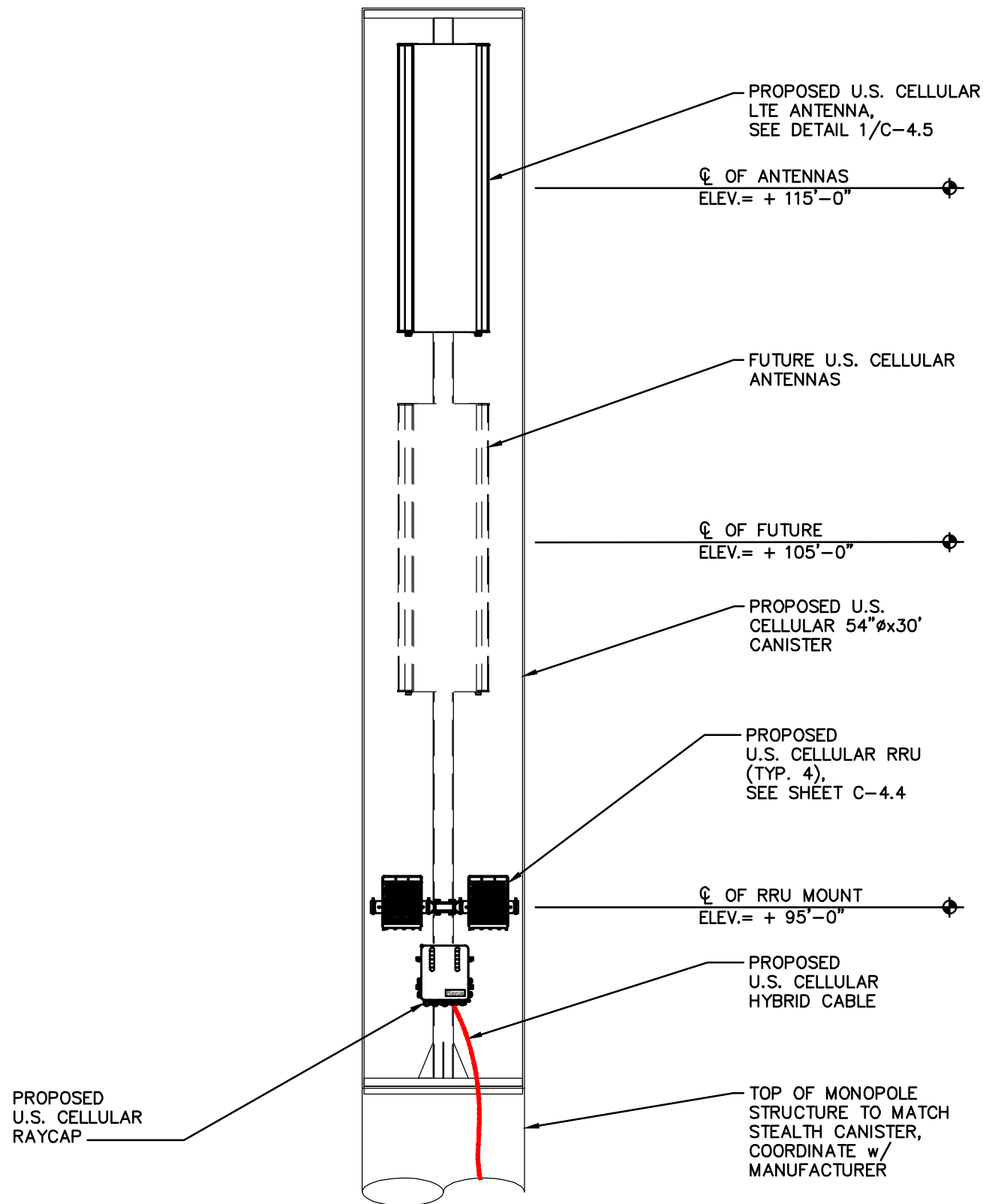
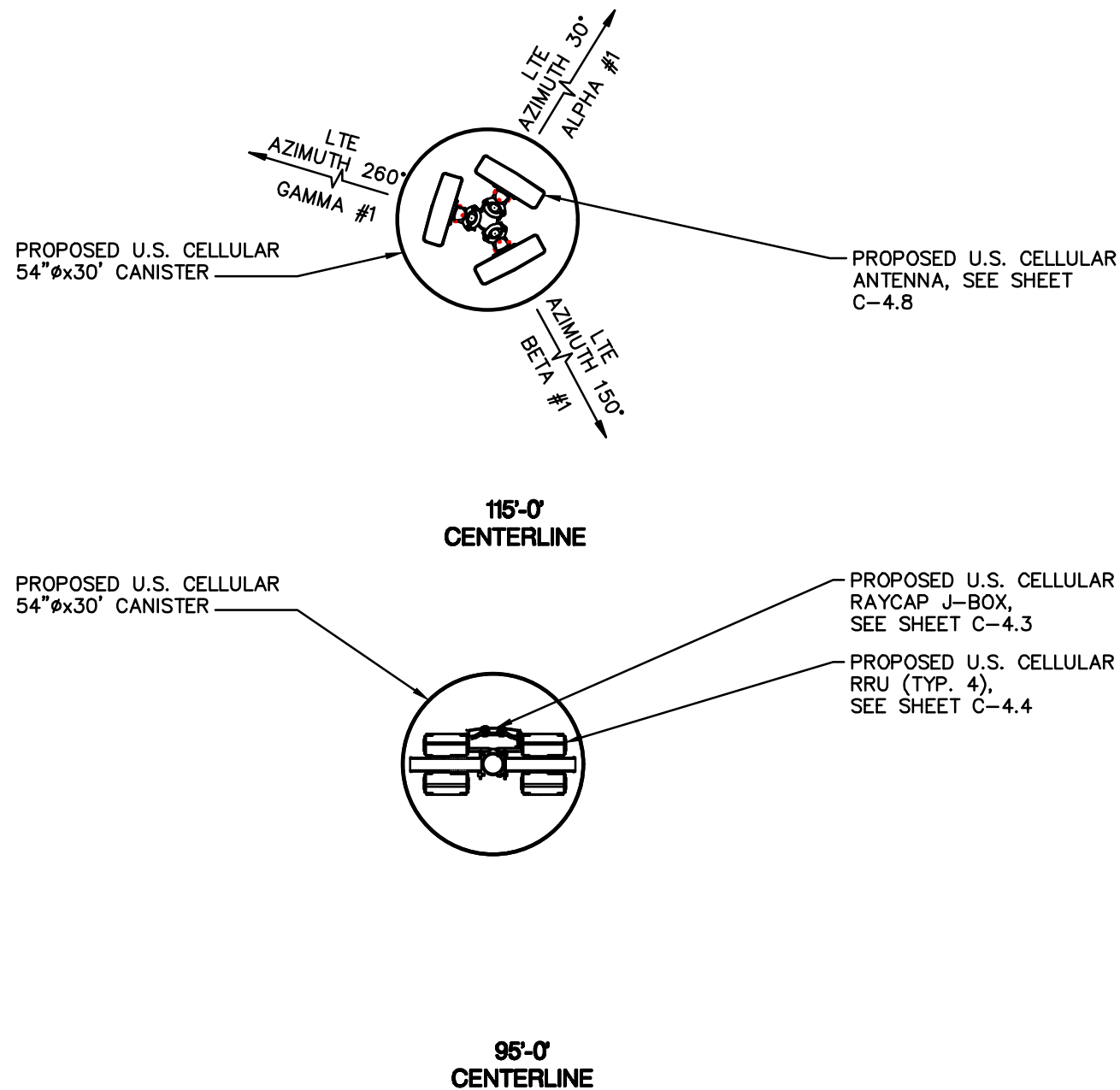
CHKD BY: AJK

SHEET TITLE

ELEVATION

SHEET NUMBER

C-3.0

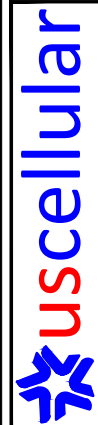


1 PROPOSED ANTENNA ORIENTATION (TOP VIEW)
SCALE: 1/4" = 1'-0"



2 PROPOSED SECTION VIEW AT CANISTER
SCALE: 1/4" = 1'-0"

MP SF ANTENNA PLAN



12020 RIDGEMONT DR.
URBANDALE, IA 50323



DATE	REVIEW	BY
08/16/22	INTERNAL REVIEW	JAP
08/19/22	CLIENT REVIEW	JAP
09/22/22	CLIENT REVIEW	JAP
11/07/22	CITY COMMENTS	JAP
11/09/22	CITY COMMENTS	JAP

7601333 - ANKENY NE 36TH.
3950 N ANKENY BLVD
ANKENY, IA 50023 - POLK COUNTY
NEW SITE BUILD - STEALTH MONOPOLE

PROJ #: 22-06-04 DWG BY: JAP CHKD BY: AJK

SHEET TITLE
**ANTENNA
INFORMATION
& DETAILS**

SHEET NUMBER
C-4.0

PROPOSED LOADING																						
SECTOR	ANTENNA POSITION	TECH.	MANUFACTURER/ MODEL NUMBER	ANT. QTY	RAD CENTER	AZIMUTH	LB ELEC. TILT	HB ELEC. TILT	MECH TILT	RAYCAP	B71/B12 RADIO (RRU)	RADIO QTY.	B5 RADIO (RRU)	RADIO QTY.	B2 RADIO (RRU)	RADIO QTY.	B4 RADIO (RRU)	RADIO QTY.	COMBINER/ DIPLEXER	DIPLEXER QTY	CABLE TYPE	CABLE QTY.
ALPHA	A1	LTE	DENGYO OCT8-2LX2HX-BW65	1	115'	30°	2°	2°	0°	1	4480	1	-	-	4480	1	-	-	-	-	HYBRID 1-1/4"	1
ALPHA	A2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ALPHA	A3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ALPHA	A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BETA	B1	LTE	DENGYO OCT8-2LX2HX-BW65	1	115'	150°	2°	2°	0°	SHARED	-	-	-	-	-	-	-	-	-	-	SHARED	-
BETA	B2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BETA	B3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BETA	B4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GAMMA	G1	LTE	DENGYO OCT8-2LX2HX-BW65	1	115'	260°	2°	2°	0°	SHARED	4480	1	-	-	4480	1	-	-	-	-	SHARED	-
GAMMA	G2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GAMMA	G3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GAMMA	G4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

FIBER JUMPER CABLE INFO		
RAYCAP TO 4480 (B12)		QTY.
ALPHA SECTOR:	32.8' (10m)	2
BETA SECTOR:	32.8' (10m)	-
GAMMA SECTOR:	32.8' (10m)	2
RAYCAP TO 4480 (B2)		QTY.
ALPHA SECTOR:	32.8' (10m)	2
BETA SECTOR:	32.8' (10m)	-
GAMMA SECTOR:	32.8' (10m)	2
N / A		QTY.
ALPHA SECTOR:	32.8' (10m)	N / A
BETA SECTOR:	32.8' (10m)	N / A
GAMMA SECTOR:	32.8' (10m)	N / A

POWER JUMPER CABLE INFO		
RAYCAP TO 4480 (B12)		QTY.
ALPHA SECTOR:	16.4' (5m)	1
BETA SECTOR:	16.4' (5m)	-
GAMMA SECTOR:	16.4' (5m)	1
RAYCAP TO 4480 (B2)		QTY.
ALPHA SECTOR:	16.4' (5m)	1
BETA SECTOR:	16.4' (5m)	-
GAMMA SECTOR:	16.4' (5m)	1
N / A		QTY.
ALPHA SECTOR:	16.4' (5m)	N / A
BETA SECTOR:	16.4' (5m)	N / A
GAMMA SECTOR:	16.4' (5m)	N / A

COAX JUMPER CABLE INFO		
4480 (B12) TO ANTENNA		QTY.
ALPHA SECTOR:	25 FT *	2
BETA SECTOR:	25 FT *	2
GAMMA SECTOR:	25 FT *	4
4480 (B2) TO ANTENNA		QTY.
ALPHA SECTOR:	25 FT *	2
BETA SECTOR:	25 FT *	2
GAMMA SECTOR:	25 FT *	4
N / A		QTY.
ALPHA SECTOR:	-	-
BETA SECTOR:	-	-
GAMMA SECTOR:	-	-
N / A		QTY.
ALPHA SECTOR:	-	-
BETA SECTOR:	-	-
GAMMA SECTOR:	-	-

RET JUMPER CABLE INFO		
4480 (B12) TO ANTENNA		QTY.
ALPHA SECTOR:	32.8' (10m)	1
BETA SECTOR:	32.8' (10m)	-
GAMMA SECTOR:	32.8' (10m)	1
4480 (B2) TO ANTENNA		QTY.
ALPHA SECTOR:	32.8' (10m)	1
BETA SECTOR:	32.8' (10m)	-
GAMMA SECTOR:	32.8' (10m)	1

HYBRID CABLE LENGTH	
HYBRID CABLE QUANTITY FROM GROUND TO RAYCAP	1
POWER CABLE QUANTITY FROM GROUND TO RAYCAP	-
LENGTH FROM GROUND RAYCAP TO ICE BRIDGE	5'
LENGTH ALONG ICE BRIDGE	15'
LENGTH FROM ICE BRIDGE TO TOWER RAYCAP	115'
TOTAL LENGTH OF HYBRID CABLE	135'
ROUNDED HYBRID CABLE LENGTH	200'

FOR
REFERENCE ONLY



E// B12/B71 2T2R / B2/B66 2T2R

ALPHA SECTOR

PCS/AWS/LTE
2100/1900/700/600 MHz
4.3-10 CONNECTORS



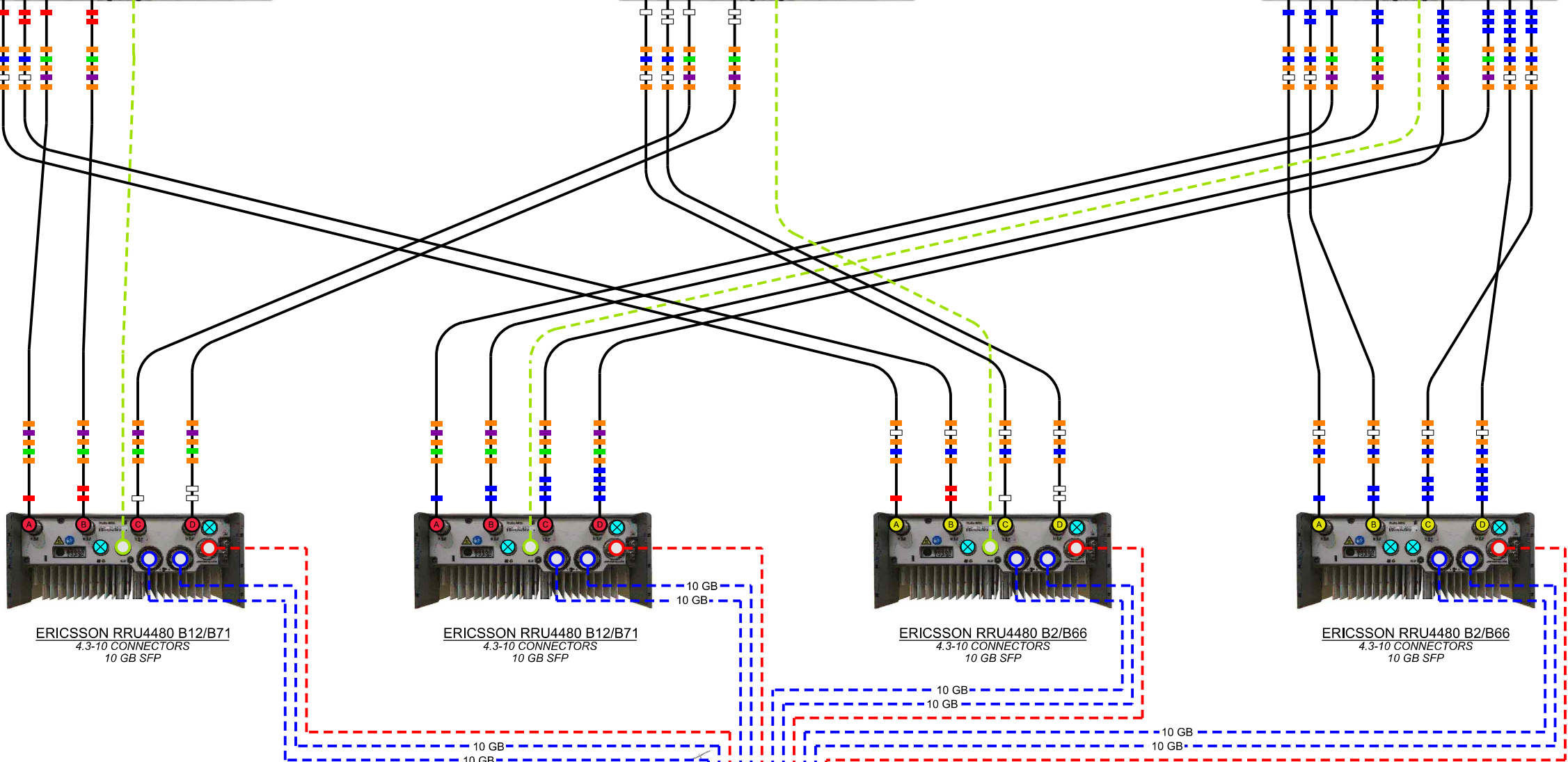
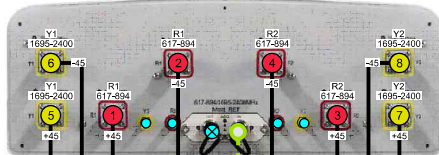
BETA SECTOR

PCS/AWS/LTE
2100/1900/700/600 MHz
4.3-10 CONNECTORS



GAMMA SECTOR

PCS/AWS/LTE
2100/1900/700/600 MHz
4.3-10 CONNECTORS

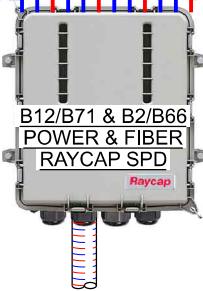


ERICSSON RRU4480 B12/B71
4.3-10 CONNECTORS
10 GB SFP

ERICSSON RRU4480 B12/B71
4.3-10 CONNECTORS
10 GB SFP

ERICSSON RRU4480 B2/B66
4.3-10 CONNECTORS
10 GB SFP

ERICSSON RRU4480 B2/B66
4.3-10 CONNECTORS
10 GB SFP



HYBRID CABLE TO
BASE EQUIPMENT

CABLE LEGEND

- EUPEN HYBRID CABLE
- 1/2" COAX JUMPER
- FIBER JUMPER
- POWER JUMPER
- RET JUMPER
- MID BAND PORT
- LOW BAND PORT
- WEATHERPROOF CAP

DATE CREATED: 01/20/2022

PLUMBING DIAGRAM: W5.DX1020 (No B5)
2T2R DESIGN: Yes-2 - no B5

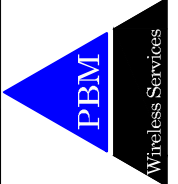
CONTAINS U.S. CELLULAR® CONFIDENTIAL INFORMATION. NOT FOR EXTERNAL USE OR DISCLOSURE WITHOUT PROPER AUTHORIZATION.

NOTES:

- ALL JUMPERS BETWEEN RADIO UNITS & ANTENNAS MUST BE THE SAME LENGTH.
- CONTRACTOR TO INSTALL WEATHERPROOF CAP ON ALL UN-USED PORTS.



12020 RIDGEMONT DR.
URBANDALE, IA 50323



A	08/16/22	INTERNAL REVIEW	JAP
O	08/19/22	CLIENT REVIEW	JAP
1	09/22/22	CLIENT REVIEW	JAP
2	11/07/22	CITY COMMENTS	JAP
3	11/09/22	CITY COMMENTS	JAP

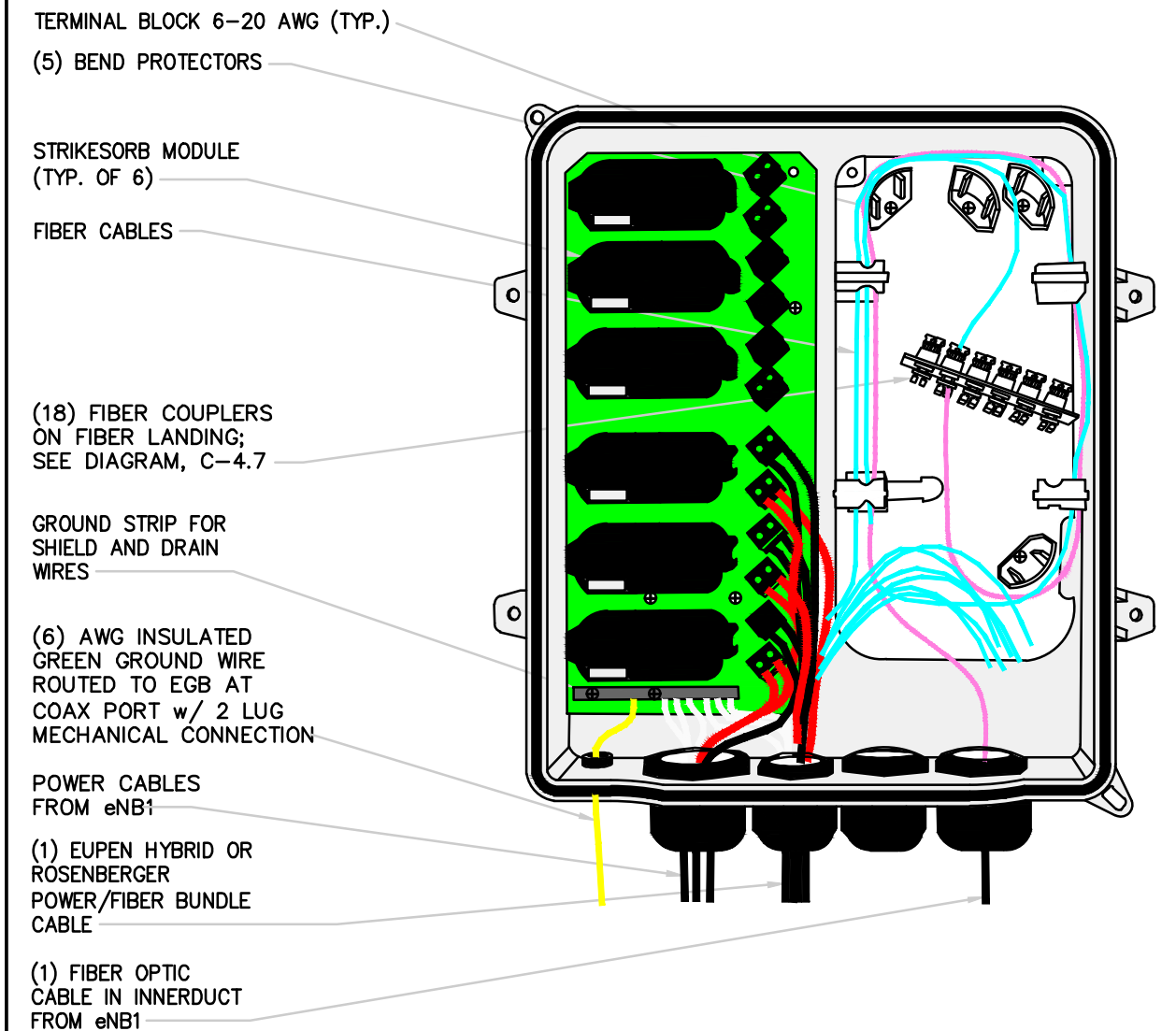
7601333 - ANKENY NE 36TH.

3950 N ANKENY BLVD
ANKENY, IA 50023 - POLK COUNTY
NEW SITE BUILD - STEALTH MONOPOLE

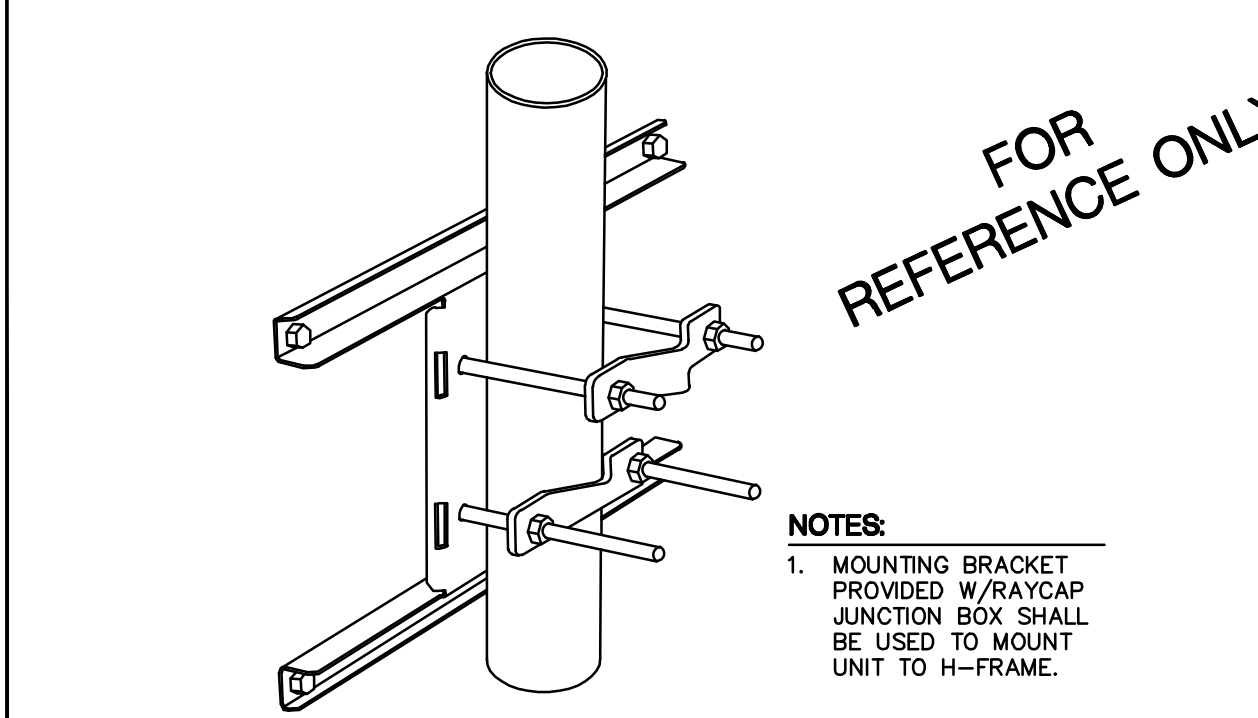
PROJ #: 22-06-04 DWG BY: JAP CHKD BY: AUK

SHEET TITLE
RF PLUMBING
DIAGRAM

SHEET NUMBER
C-4.2



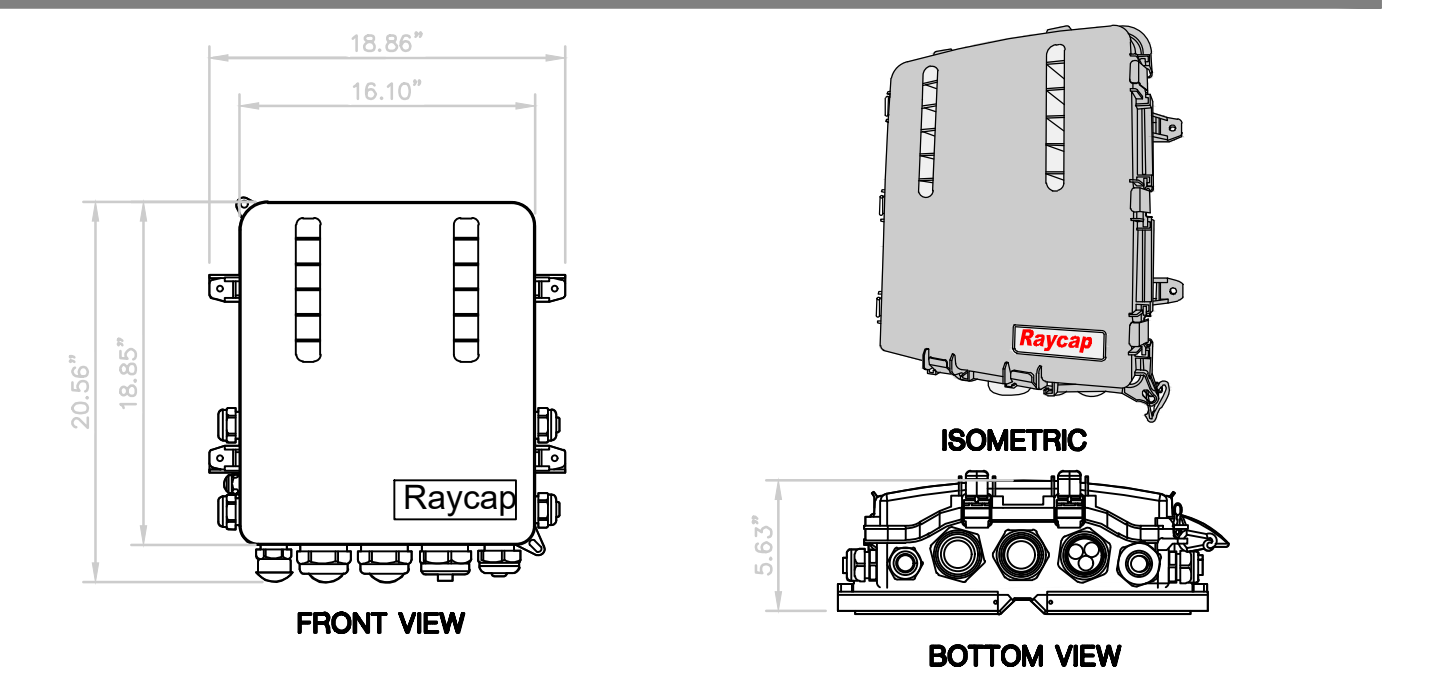
1 RAYCAP CABLING DETAIL
SCALE: NONE
RAYCAP CABLING DETAIL



2 RAYCAP - JUNCTION BOX MOUNTING BRACKET
SCALE: NONE
RAYCAP CABLING DETAIL

ELECTRICAL	
MODEL NUMBERS	RUSDC-6267-PF-48
SURGE PROTECTIVE DEVICE (SPD) CLASS AS PER IEC 61643-11	CLASS I
NORMAL OPERATING VOLTAGE	48VDC
MAXIMUM CONTINUOUS OPERATING VOLTAGE	75 VDC
NOMINAL DISCHARGE CURRENT PER UL 1446 3RD EDITION	20kA 8/20
IMPULSE DISCHARGE CURRENT PER IEC 61643-11	5kA 10/350
MAXIMUM SURGE CURRENT PER NEMA-LS-1	60kA 8/20
VOLTAGE PROTECTION RATING PER UL 1449 3RD EDITION	400V
POWER TRUNK (2)	UP TO .795" [20.2MM]
HYBRID TRUNK	UP TO 1-1/2" [38MM]
STRIKESORB MODULE TYPE	30-V1-HV
PLUGGABLE STRIKESORK MODULES	6

ACCESSORIES	
3 GLAND KITS KIT A: (FACTORY INSTALLED) POWER AND FIBER INPUT FOR UP TO TWO (2) 7/8" HYBRID TRUNKS. POWER OUTPUT TO SUPPORT SIX (6) RRUs AND FIBER OUTPUT TO SUPPORT UP TO NINE (9) FIBER JUMPERS. KIT B: (BAGGED AND LABELED) POWER INPUT TO SUPPORT UP TO TWO (2) 8AWG/6-CONDUCTOR POWER TRUNKS AND ONE (1) 18-PAIR FIBER TRUNK. KIT C: (BAGGED AND LABELED) POWER INPUT TO SUPPORT SINGLE 1.5" HYBRID TRUNK AND TWO (2) 3-HOLE GLANDS TO SUPPORT POWER JUMPERS TO RRU.	



3 RAYCAP SURGE PROTECTOR / JUNCTION BOX
SCALE: NONE
RAYCAP CUT SHEET

MECHANICAL	
SUPPRESSION CONNECTION METHOD	COMPRESSION LUG, #14 -#2/O AWG COPPER; #12-#2/O AWG ALUMINUM
FIBER CONNECTION METHOD	DUPLEX LC TO DUPLEX LC
LC-LC FIBER CONNECTIONS	18 PAIR
ENVIRONMENTAL RATING	IP 67
OPERATING TEMPERATURE	-40°C TO +80°C
UV RESISTANT	YES
WEIGHT	SYSTEM: 15.8 LBS MOUNT: 4.15 LBS TOTAL: 19.95 LBS
COMBINED WIND LOADING	150MPH (SUSTAINED): 135.55 LBS 195MPH (GUST): 176.02 LBS

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Wireless Services
Think outside the triangle.

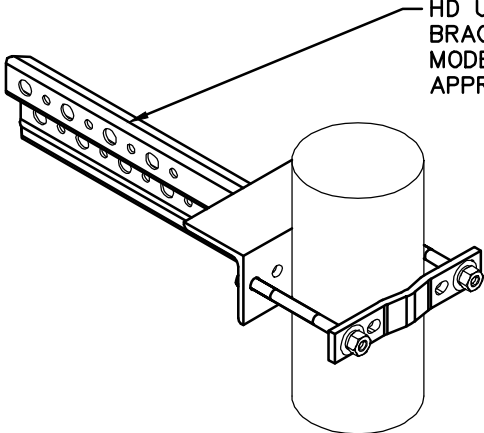
A	08/16/22	INTERNAL REVIEW	JAP
0	08/19/22	CLIENT REVIEW	JAP
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2	11/07/22	CITY COMMENTS	JAP
3	11/09/22	CITY COMMENTS	JAP

7601333 - ANKENY NE 36TH.
3950 N ANKENY BLVD
ANKENY, IA 50023 - POLK COUNTY
NEW SITE BUILD - STEALTH MONOPOLE

PROJ #: 22-06-04
DWG BY: JAP
CHKD BY: AJK

SHEET TITLE
RAYCAP
INFORMATION

SHEET NUMBER
C-4.3



1

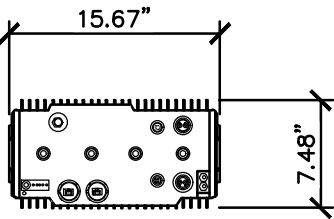
UNIVERSAL CABLE SUPPORT BRACKET

SCALE: NONE

SITEPRO1 – UTL8

REMOTE RADIO UNIT

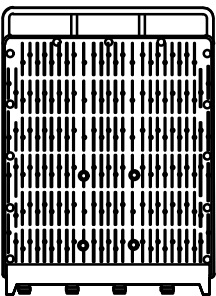
MANUF:	ERICSSON
PART #:	RRU 4480
B12/B71 HEIGHT:	21.77"
WIDTH:	15.67"
DEPTH:	7.48"
WEIGHT:	82.898 LBS



15.67"

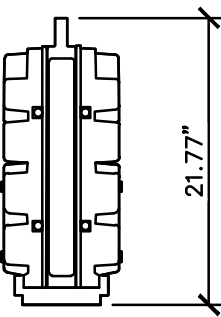
7.48"

BOTTOM



21.77"

FRONT



21.77"

SIDE

- NOTES:
- DO NOT COVER THE WATERPROOF VENT VALVE: THE UNIT IS VENTILATED THROUGH THE WATERPROOF VENT VALVE. THE VALVE MUST NOT BE BLOCKED.
 - THE RRU CAN BE PAINTED IF THE WATERPROOF VALVE IS NOT CLOGGED AND THE CONNECTORS ARE NOT PAINTED.
 - MOUNT THE RRU IN AN UPRIGHT VERTICAL POSITION WITH THE CONNECTORS POINTING DOWNWARDS.

2

ERICSSON (REMOTE RADIO UNIT)

SCALE: NONE

RRU-4480



12020 RIDGEMONT DR.
URBANDALE, IA 50323



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2	11/07/22	CITY COMMENTS	JAP
3	11/09/22	CITY COMMENTS	JAP

7601333 - ANKENY NE 36TH.
3950 N ANKENY BLVD
ANKENY, IA 50023 – POLK COUNTY
NEW SITE BUILD – STEALTH MONOPOLE

PROJ #: 22-06-04

DWG BY: JAP

CHKD BY: AJK

SHEET TITLE

EQUIPMENT INFORMATION

SHEET NUMBER

C-4.4



BASE STATION ANTENNAS

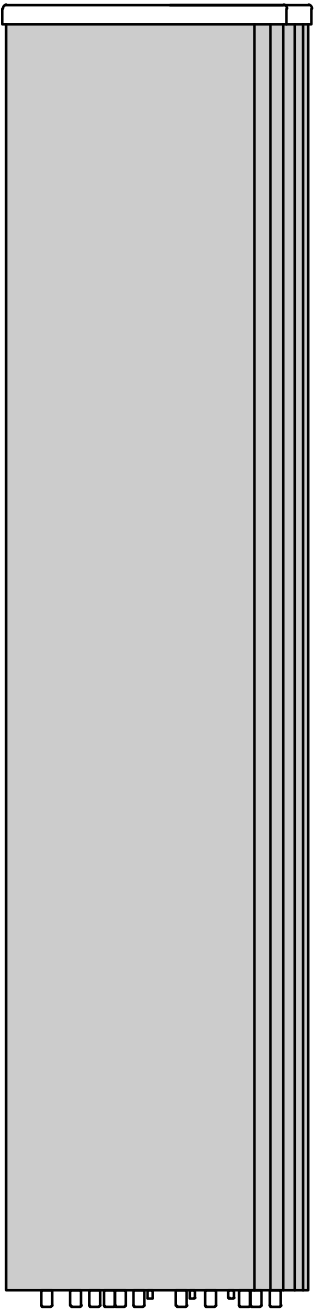
OCT8-2LX2HX-BW65 (8-PORT PANEL / XPOL / 65° / 2438 mm (95.9 IN))

8-PORTS 617-894/ 617-894/ 1695-2400/ 1695-2400MHZ 65°
16/ 16/ 1 8/ 18DBI, 2°-12°/ 2°-12°/ 2°-12°/ 2-12° TILT ANTENNA WITH 4 INTEGRATED RCUS.

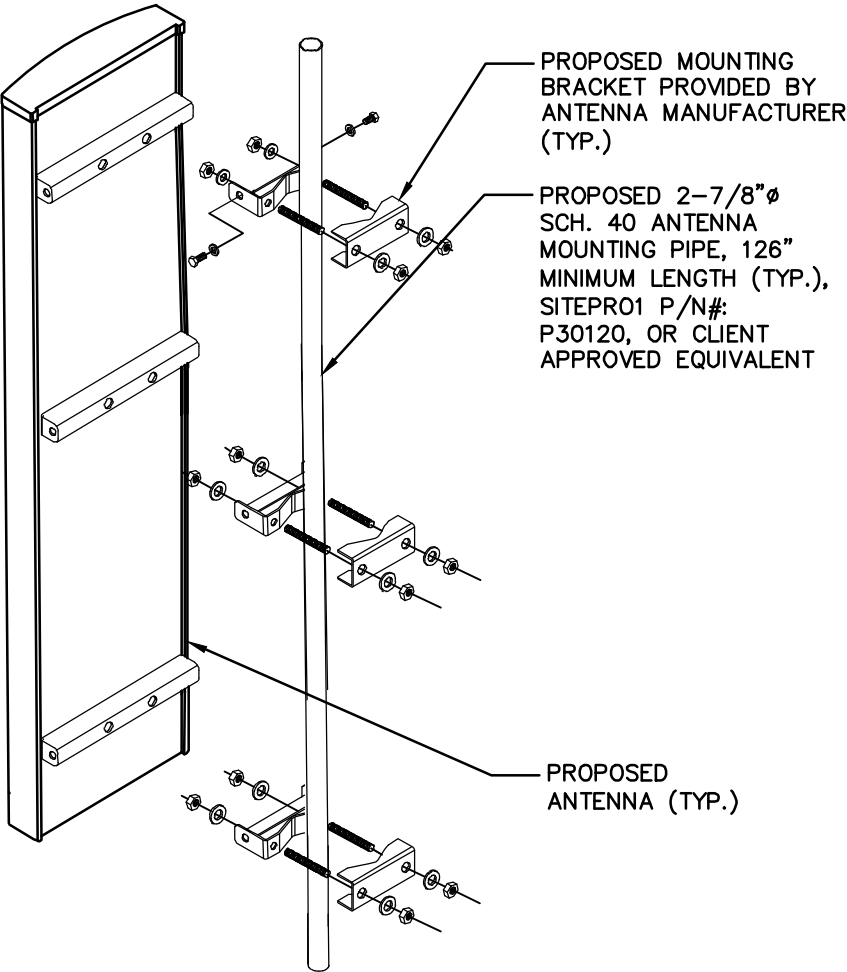
ELECTRICAL CHARACTERISTICS	LOW BAND R1 R2			HIGH BAND Y1 Y2		
FREQUENCY BANDS (MHz)	(2x) 617–894 MHz			(2x) 1695–2400 MHz		
	617–698	698–824	824–894	1695–1920	1920–2180	2300–2400
POLARIZATION	±45°			(2x) ±45°		
AZIMUTH BEAMWIDTH (3dB)	70.0°	65.0°	60.0°	66.0°	63.0°	58.0°
ELEVATION BEAMWIDTH (3dB)	10.4°	9.1°	8.0°	5.5°	5.0°	4.3°
GAIN	15.1 dBi	15.6 dBi	16.0 dBi	17.6 dBi	18.0 dBi	18.1 dBi
ELECTRICAL DOWNTILT (°)	2° – 12°			2° – 12°		
UPPER SIDELobe SUPPRESSION	≥16	≥16	≥16	≥16	≥16	≥16
FRONT–TO–BACK RATIO	≥25	≥25	≥25	≥25	≥25	≥25
CROSS POLAR MAIN DIRECTION RATIO	≥17	≥17	≥17	≥17	≥17	≥17
	±60°	≥ 7	≥ 7	≥ 7	≥ 7	≥ 7
IMPEDANCE	50Ω					
VSWR	< 1.5					
INTERMODULATION IM3	< –150 dBc (2x43dBm carrier)					
ISOLATION PORTS	≥25 dB					
ISOLATION FREQUENCY	≥30 dB					
MAXIMUM POWER PER PORT	500 W			300 W		
CONNECTOR(S)	(4x) 4.3–10 FEMALE LONG NECK			(4x) 4.3–10 FEMALE LONG NECK		

MECHANICAL CHARACTERISTICS		
DIMENSIONS (HEIGHT x WIDTH x DIAMETER)		95.9" x 21.0" x 6.3"
WEIGHT w/o MOUNT BRACKET		88.2 lbs
WEIGHT WITH MOUNT BRACKET		101.4 lbs
SURVIVAL WIND SPEED		> 150 mph
WIND LOAD AT 100MPH	FRONT	1.9 ft²
	LATERAL	1.1 ft²
	REAR SIDE (N)	49 lbf

FOR REFERENCE ONLY



ISOMETRIC VIEW



1 ANTENNA MOUNTING
SCALE: NONE

TYPICAL ANTENNA MOUNT

2 ANTENNA DETAILS
SCALE: NONE



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URBANDALE, IA 50323



Wireless Services
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7601333 - ANKENY NE 36TH.
3950 N ANKENY BLVD
ANKENY, IA 50023 - POLK COUNTY
NEW SITE BUILD - STEALTH MONOPOLE

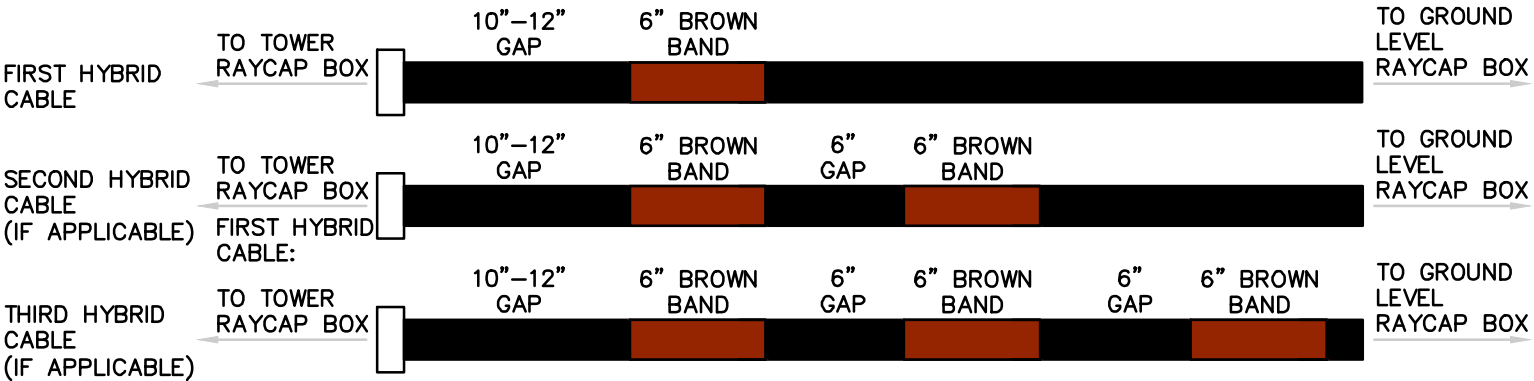
PROJ #: 22-06-04
DWG BY: JAP
CHKD BY: AJK

SHEET TITLE
EQUIPMENT INFORMATION

SHEET NUMBER
C-4.5

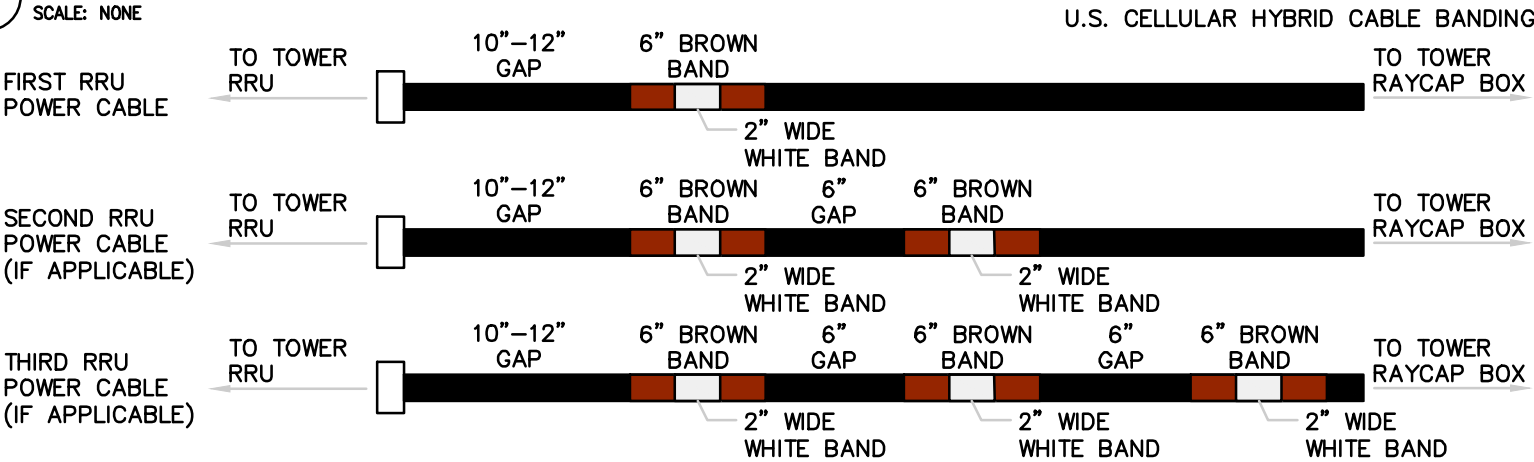
ANTENNA AND CABLING NOTES:

1. CONTRACTOR TO VERIFY FINAL RF CONFIGURATION w/ U.S. CELLULAR RF ENGINEER PRIOR TO START OF CONSTRUCTION.
2. CONTRACTOR TO INSTALL ANTENNAS AT CENTERLINE AND AZIMUTH AS SHOWN ON THE FINAL RF CONFIGURATION SHEET. CABLE ROUTING ON, IN, OR ABOUT SUPPORT STRUCTURES TO BE AS DETAILED IN THE STRUCTURAL ANALYSIS.
3. COAX LENGTHS & SIZES INDICATED ABOVE ARE APPROXIMATE, CONTRACTOR TO VERIFY ACTUAL LENGTHS BEFORE ORDERING.
4. LOCATION OF ANTENNAS AS SHOWN HAVE BEEN APPROVED BY U.S. CELLULAR’S RADIO FREQUENCY ENGINEERS. PBM WIRELESS ASSUMES NO RESPONSIBILITY FOR, NOR HAS PBM WIRELESS PERFORMED ANY INVESTIGATIONS OR STUDIES CONCERNING, THE COMPLIANCE OR NONCOMPLIANCE OF SAID ANTENNA LOCATIONS WITH ANY RADIO FREQUENCY EXPOSURE REGULATIONS.
5. CONTRACTOR TO ADD COLOR CODE BANDING AT CABINET, AND AT TOP OF TOWER FOR EACH COAX/CABLE RUN.
6. CONTRACTOR TO USE "SCOTCH PROFESSIONAL GRADE COLOR CODING VINYL ELECTRICAL TAPE 35" OR APPROVED EQUIVALENT FOR COAXIAL BANDING.

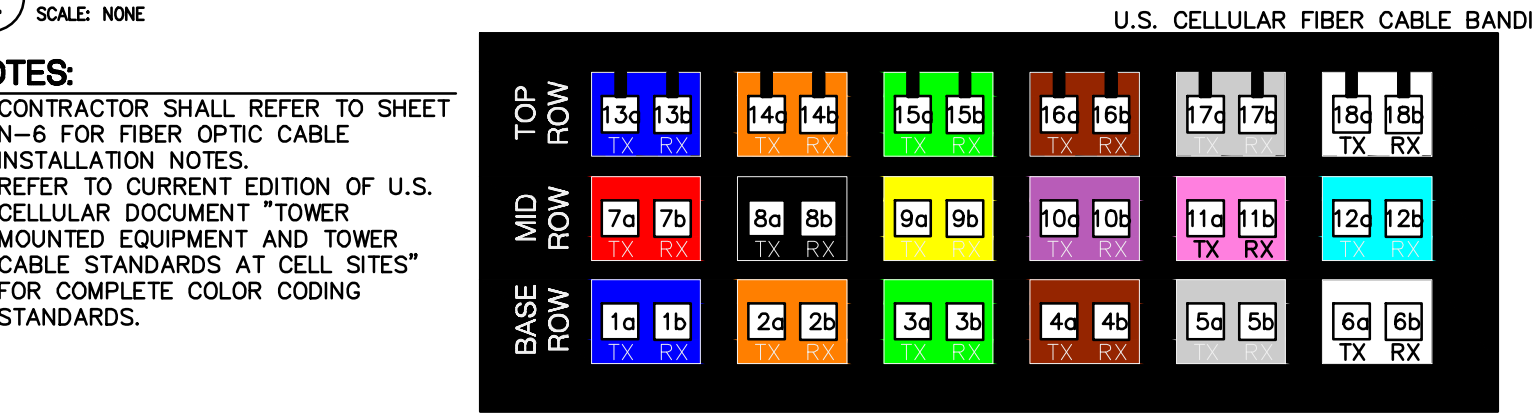


NOTES:
AT THE TOP OF THE TOWER (OR HIGH RISE BUILDING / WATER TOWER) AND ALSO AT THE ENTRY POINT INTO THE GROUND LEVEL JUNCTION BOX, HYBRID / DISCRETE CABLES MUST BE Banded ACCORDING TO THE ILLUSTRATION BELOW. THE ILLUSTRATION SHOWS THE FIRST HYBRID / DISCRETE CABLE INSTALLED ON THE TOWER MUST HAVE ONE BROWN BAND, THE SECOND HYBRID CABLE MUST HAVE TWO BROWN BANDS, AND THE THIRD HYBRID / DISCRETE CABLE MUST HAVE THREE BROWN BANDS

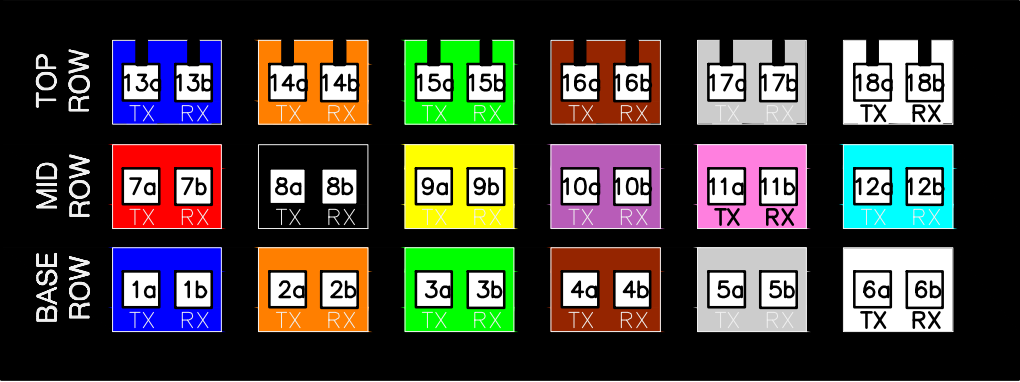
1 TYPICAL HYBRID CABLE BANDING



2 TYPICAL CABLE BANDING



1. CONTRACTOR SHALL REFER TO SHEET N-6 FOR FIBER OPTIC CABLE INSTALLATION NOTES.
2. REFER TO CURRENT EDITION OF U.S. CELLULAR DOCUMENT "TOWER MOUNTED EQUIPMENT AND TOWER CABLE STANDARDS AT CELL SITES" FOR COMPLETE COLOR CODING STANDARDS.

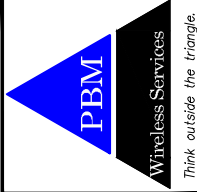


RAYCAP FIBER OPTIC COLOR SCHEDULE

CONNECTOR #13	CONNECTOR #14	CONNECTOR #15	CONNECTOR #16	CONNECTOR #17	CONNECTOR #18
13a: BLUE TX	14a: ORANGE TX	15a: GREEN TX	16a: BROWN TX	17a: SLATE TX	18a: WHITE TX
13b: BLUE RX	14b: ORANGE RX	15b: GREEN RX	16b: BROWN RX	17b: SLATE RX	18b: WHITE RX
CONNECTOR #7	CONNECTOR #8	CONNECTOR #9	CONNECTOR #10	CONNECTOR #11	CONNECTOR #12
7a: RED TX	8a: BLACK TX	9a: YELLOW TX	10a: VIOLET TX	11a: ROSE TX	12a: AQUA TX
7b: RED RX	8b: BLACK RX	9b: YELLOW RX	10b: VIOLET RX	11b: ROSE RX	12b: AQUA RX
CONNECTOR #1	CONNECTOR #2	CONNECTOR #3	CONNECTOR #4	CONNECTOR #5	CONNECTOR #6
1a: BLUE TX	2a: ORANGE TX	3a: GREEN TX	4a: BROWN TX	5a: SLATE TX	6a: WHITE TX
1b: BLUE RX	2b: ORANGE RX	3b: GREEN RX	4b: BROWN RX	5b: SLATE RX	6b: WHITE RX

3 TYPICAL FIBER CABLE LABELING

SCALE: NONE U.S. CELLULAR FIBER CABLE LABELING



A	08/16/22	INTERNAL REVIEW	JAP
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3	11/09/22	CITY COMMENTS	JAP

7601333 - ANKENY NE 36TH.
3950 N ANKENY BLVD
ANKENY, IA 50023 - POLK COUNTY
NEW SITE BUILD - STEALTH MONOPOLE
PROJ #: 22-06-04
DWG BY: JAP
CHKD BY: AJK

SHEET TITLE
HYBRID & CABLE
COLOR CODING

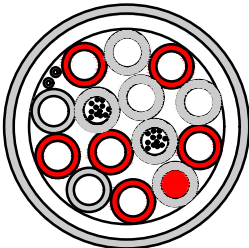
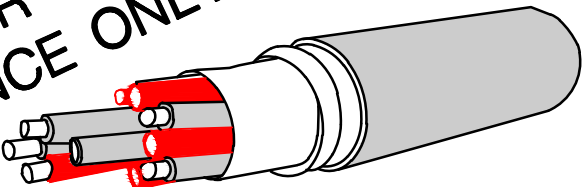
SHEET NUMBER
C-4.6



EUCAHYBRID 114-12AWG6-2x12MM5-CP

EUCAHYBRID 114-12AWG6-2x12SM-CP

FOR
REFERENCE ONLY



1-1/4" HYBRID FIBER OPTIC CABLE WITH 48V ENERGY FEEDER IN A CORRUGATED ALUMINUM SHIELDING WITH UV RESISTANT PE JACKET MULTI MODE AND SINGLE MODE FIBER AVAILABLE

TECHNICAL FEATURES

CONSTRUCTION	MM5	SM
COPPER FEED LINES - QUANTITY - CONDUCTOR - SECTION	12 ELECTROLYTIC COPPER 13,3 MM ²	
DRY CONTACT - QUANTITY - CONDUCTOR MATERIAL - COPPER DIAMETER - OUTER DIAMETER (EACH WIRE)	2 (ONE PAIR) ELECTROLYTIC COPPER 0,8 MM 1,6 MM	
FIBER OPTIC CABLE - QUANTITY - FIBER QUANTITY - FIBER TYPE - FIBER SIZE - REINFORCEMENT	2 12 MULTI MODE 50/125/900 UM ARAMIDE FIBER	SINGLE MODE 9/125/900 UM
RIPCORD - QUANTITY - MATERIAL - DIAMETER	1 STEEL WIRE 0,8 MM	
OUTER SHIELD - MATERIAL - DIAMETER	CORRUGATED ALUMINUM TUBE 36 MM	
JACKET - MATERIAL - THICKNESS - DIAMETER	BLACK POLYETHYLENE 1,5 MM 39 MM	

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3	11/09/22	CITY COMMENTS	JAP

7601333 - ANKENY NE 36TH. 3950 N ANKENY BLVD ANKENY, IA 50023 - POLK COUNTY NEW SITE BUILD - STEALTH MONOPOLE	DWG BY: JAP	CHKD BY: AJK
PROJ #: 22-06-04		

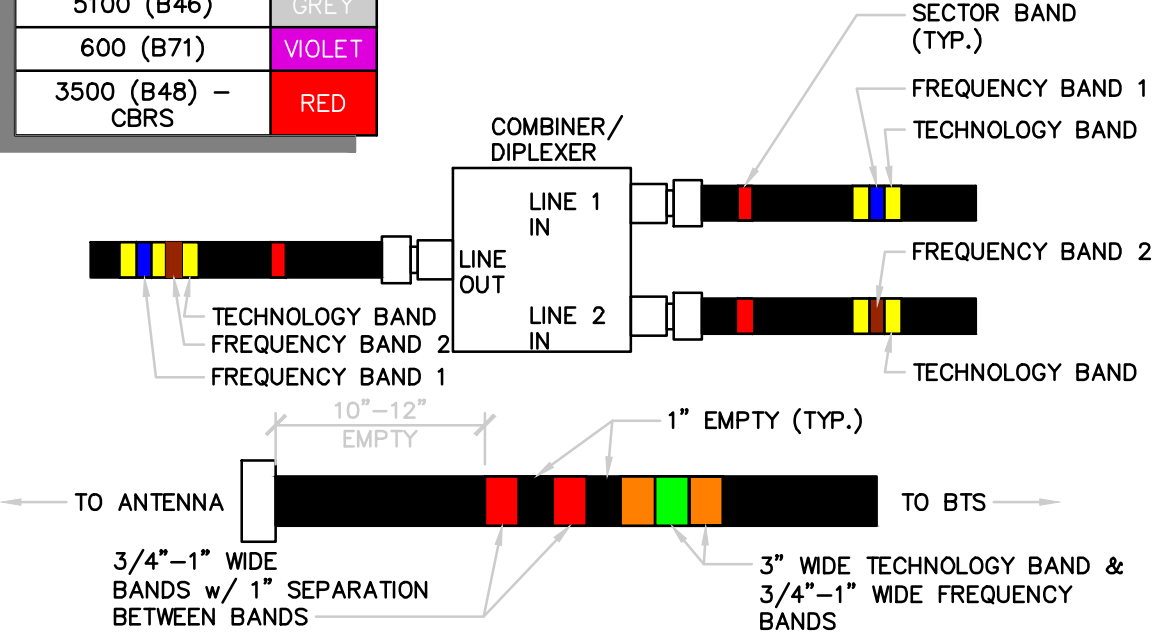
SECTOR BAND ASSIGNMENTS (MOST COMMON CASE: SINGLE TECHNOLOGY WITHIN THE SECTOR)					
SECTOR BAND	ASSIGNED COLOR	LINE 1	LINE 2	LINE 3	LINE 4
ALPHA (SECTOR 1)	RED	1 RED BAND	2 RED BANDS	3 RED BANDS	4 RED BANDS
BETA (SECTOR 2)	WHITE	1 WHITE BAND	2 WHITE BANDS	3 WHITE BANDS	4 WHITE BANDS
GAMMA (SECTOR 3)	BLUE	1 BLUE BAND	2 BLUE BANDS	3 BLUE BANDS	4 BLUE BANDS
DELTA (SECTOR 4, IF APPLICABLE)	GREEN	1 GREEN BAND	2 GREEN BANDS	3 GREEN BANDS	4 GREEN BANDS
EPSILON (SECTOR 5, IF APPLICABLE)	VIOLET	1 VIOLET BAND	2 VIOLET BANDS	3 VIOLET BANDS	4 VIOLET BANDS
ZETA (SECTOR 6, IF APPLICABLE)	BROWN	1 BROWN BAND	2 BROWN BANDS	3 BROWN BANDS	4 BROWN BANDS

SECTOR BAND ASSIGNMENTS (EXCEPTION CASE) ALPHA SECTOR, CDMA ON COAX CABLES ONES AND FOUR, LTE ON COAX CABLE TWO AND THREE					
SECTOR BAND	ASSIGNED COLOR	LINE 1 (CDMA)	LINE 2 (LTE)	LINE 3 (LTE)	LINE 4 (CDMA)
ALPHA (SECTOR 1)	RED	1 RED BAND	1 RED BAND	2 RED BANDS	2 RED BANDS

FREQUENCY BAND	
700 (B12)	GREEN
800 (B5)	BROWN
1900 (B2)	BLUE
2100 (B4 & B66)	WHITE
5100 (B46)	GREY
600 (B71)	VIOLET
3500 (B48) – CBRS	RED

TECHNOLOGY BAND	
CDMA	YELLOW
LTE	ORANGE

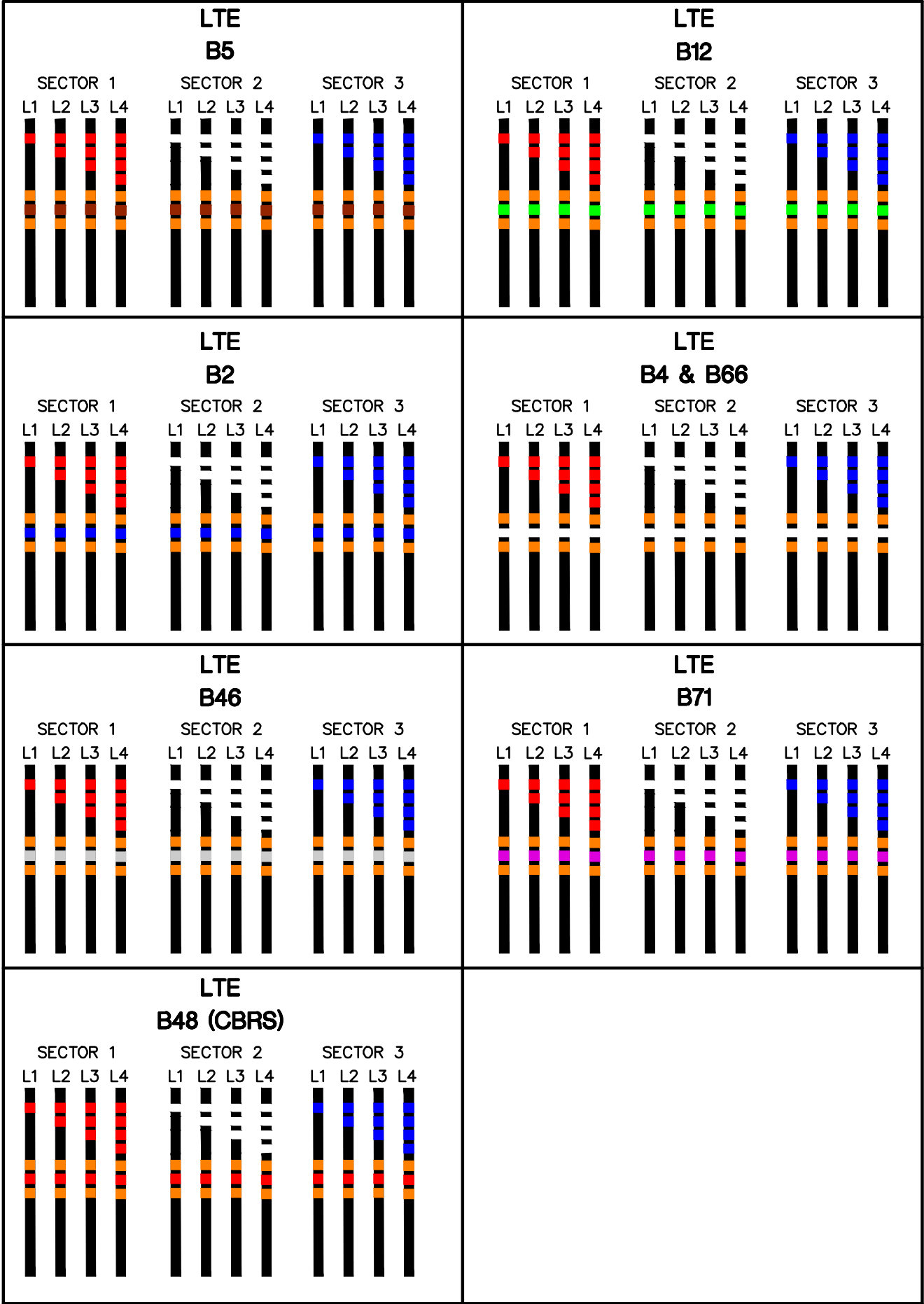
NOTE: REFER TO LATEST EDITION OF U.S. CELLULAR STANDARD; STD72 TO VERIFY CURRENT COLOR CODING



1 TYPICAL COAX CABLE BANDING

SCALE: NONE

U.S. CELLULAR COAX BANDING



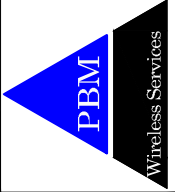
2 U.S. CELLULAR COAX COLOR CODE STANDARD

SCALE: NONE

U.S. CELLULAR COAX COLOR CODE STANDARD



12020 RIDGEMONT DR.
URBANDALE, IA 50323



Wireless Services
Think outside the triangle.

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7601333 - ANKENY NE 36TH.		CHKD BY: AUK
3950 N ANKENY BLVD		DWG BY: JAP
ANKENY, IA 50023 - POLK COUNTY		PROJ #: 22-06-04
NEW SITE BUILD - STEALTH MONOPOLE		

SHEET TITLE
CABLING
INFORMATION
& DETAILS

SHEET NUMBER
C-4.8

KEY NOTES:

- 1

3-1/2" O.D. SCH. 40 STD. PIPE x 10'-0" LONG
- 2

NEMA 3R 20 AMP GFCI DUPLEX RECEPTACLE (TYP.)
- 3

UTILITY CONDUITS, SEE DETAIL 1/C-9.2
- 4

U.S. CELLULAR PPC CABINET
- 5

U.S. CELLULAR RBS CABINET
- 6

P1000 UNISTRUT FRAMING LENGTH AS REQUIRED & SPACING PER EQUIPMENT CABINET SPECIFICATIONS (TYP.)
- 7

FLOOD LIGHT LITHONIA LIGHTING MODEL # OFL-100M-120-LP-BZ OR APPROVED EQUIVALENT
- 8

RAYCAP JUNCTION BOX, SEE SHEET C-4.3
- 9

NEMA 3R LIGHT SWITCH WITH TIMER (TYP.)
- 10

NEMA 3R J-BOX, 12"x12"x6" FOR DC AND FIBER JUMPERS, SEE DETAIL 1/C-9.2
- 11

GROUND LEAD @ POST (TYP.), SEE DETAIL 5/C-13.0
- 12

U.S. CELLULAR ELEVATED EQUIPMENT PLATFORM, SEE SHEET(S) C-5.1, C-5.2, & C-5.3
- 13

NOT USED
- 14

PROPOSED U.S. CELLULAR RRU AND EQUIPMENT RACK
- 15

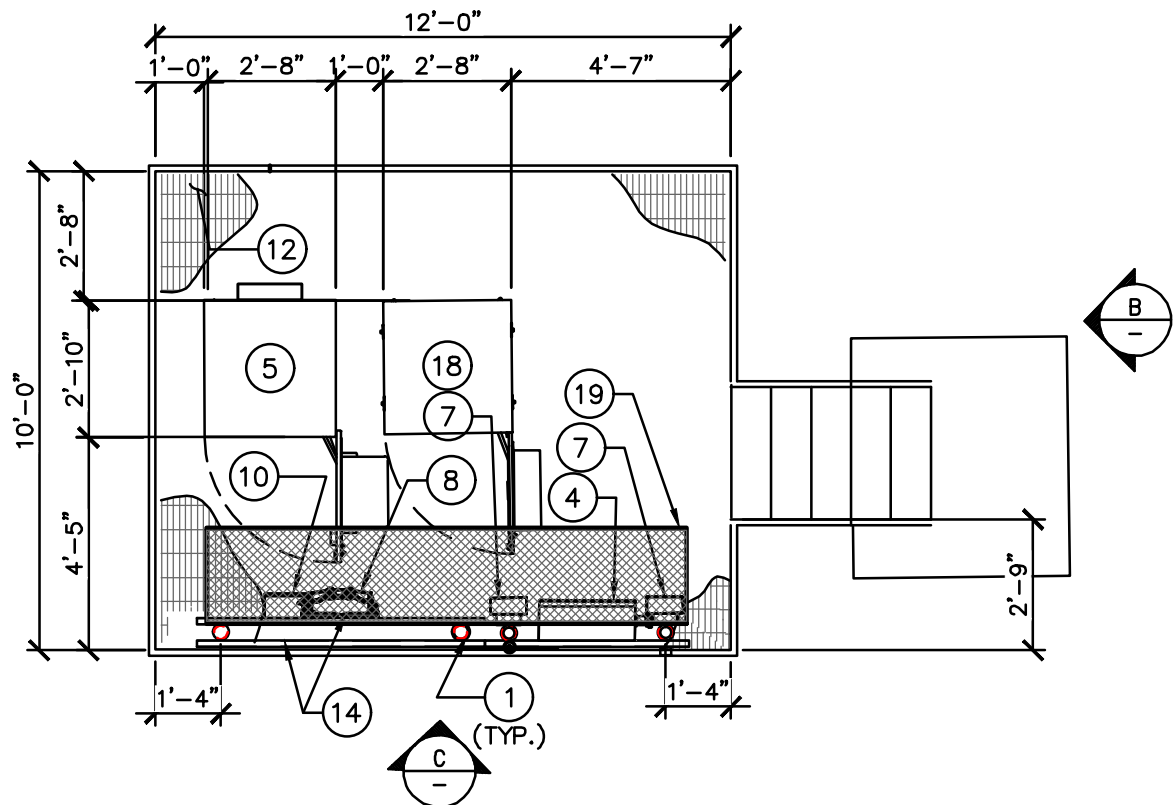
CONDUIT FOR SERVICE TO CHARLES FOR FIBER JUMPERS, SEE DETAIL 1/C-9.2
- 16

CONDUIT FOR SERVICE TO CHARLES FOR DC JUMPERS, SEE DETAIL 1/C-9.2
- 17

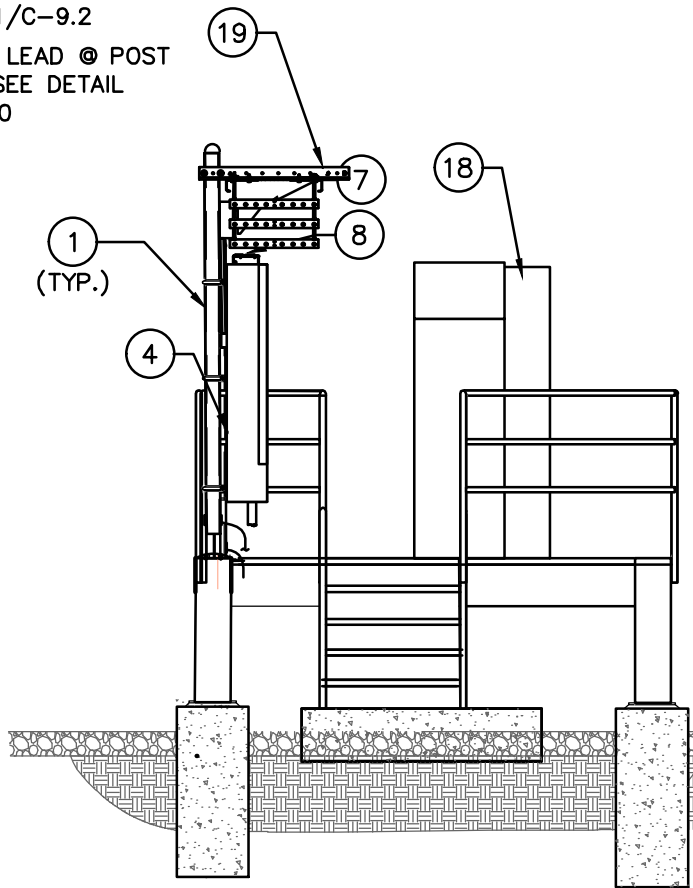
EQUIPMENT GROUND BUS BAR, SEE DETAIL 4/C-11.0
- 18

U.S. CELLULAR BATTERY CABINET
- 19

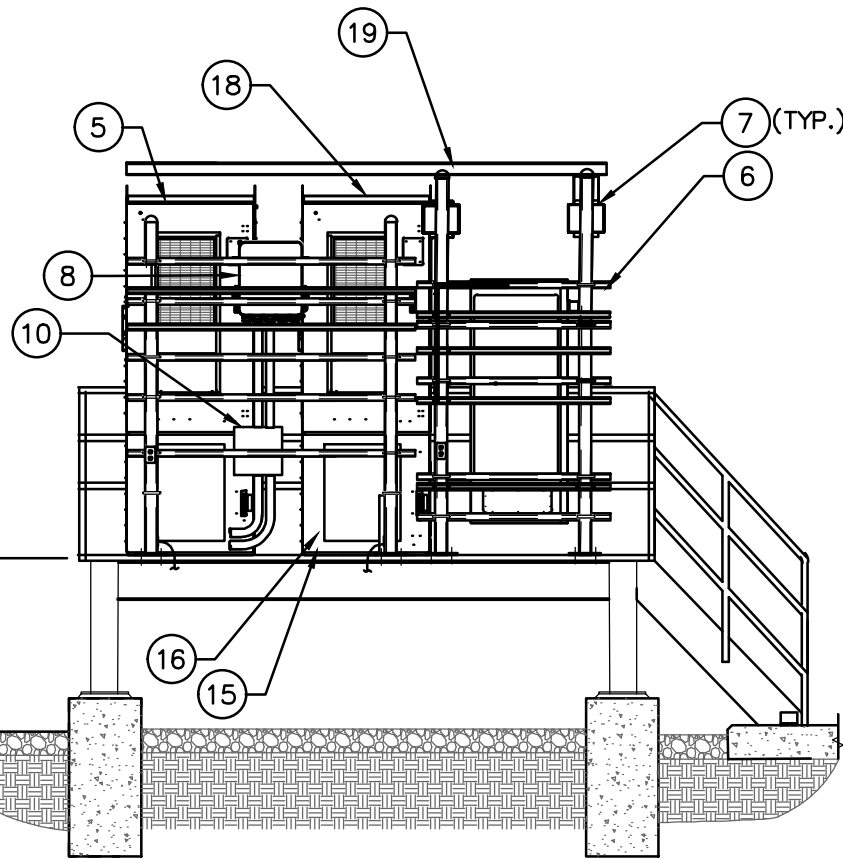
24"x10' ICE BRIDGE SECTION OVER EQUIPMENT



PLAN VIEW



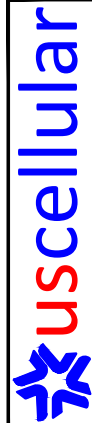
FRONT VIEW - B



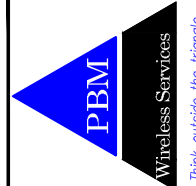
SIDE VIEW - C

1 EQUIPMENT LAYOUT PLANS

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



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A	08/16/22	INTERNAL REVIEW	JAP
0	08/19/22	CLIENT REVIEW	JAP
1	09/22/22	CLIENT REVIEW	JAP
2	11/07/22	CITY COMMENTS	JAP
3	11/09/22	CITY COMMENTS	JAP

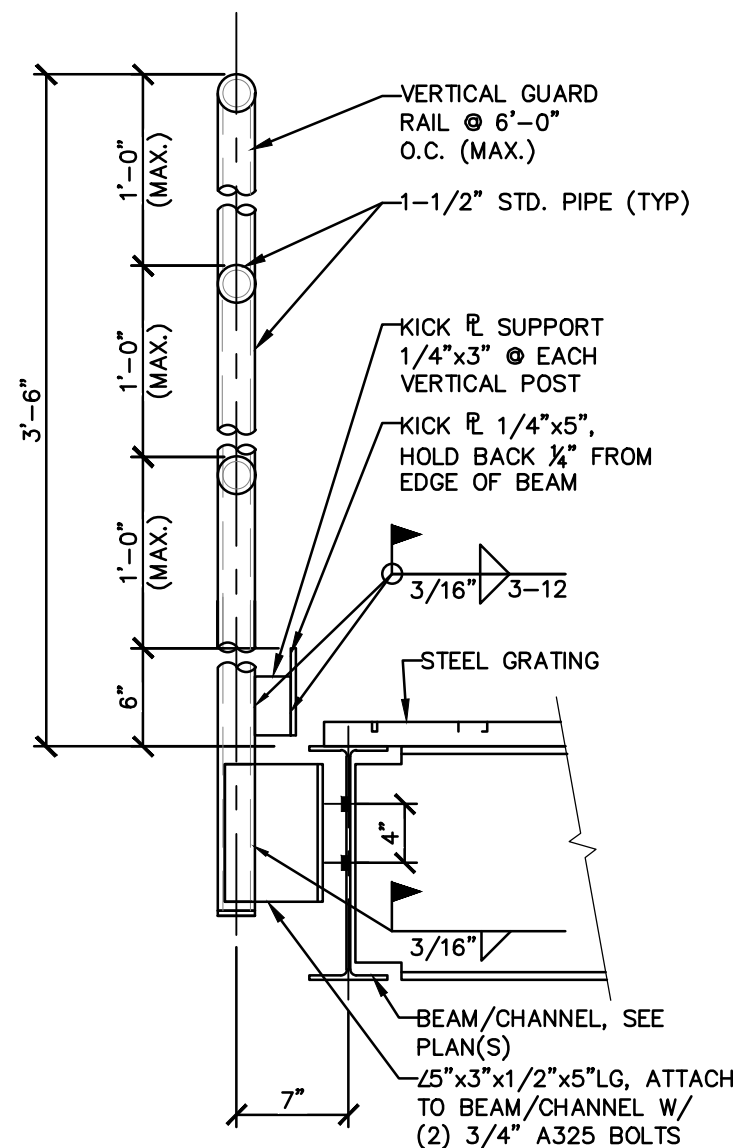
7601333 - ANKENY NE 36TH.

3950 N ANKENY BLVD
ANKENY, IA 50023 - POLK COUNTY
NEW SITE BUILD - STEALTH MONOPOLE

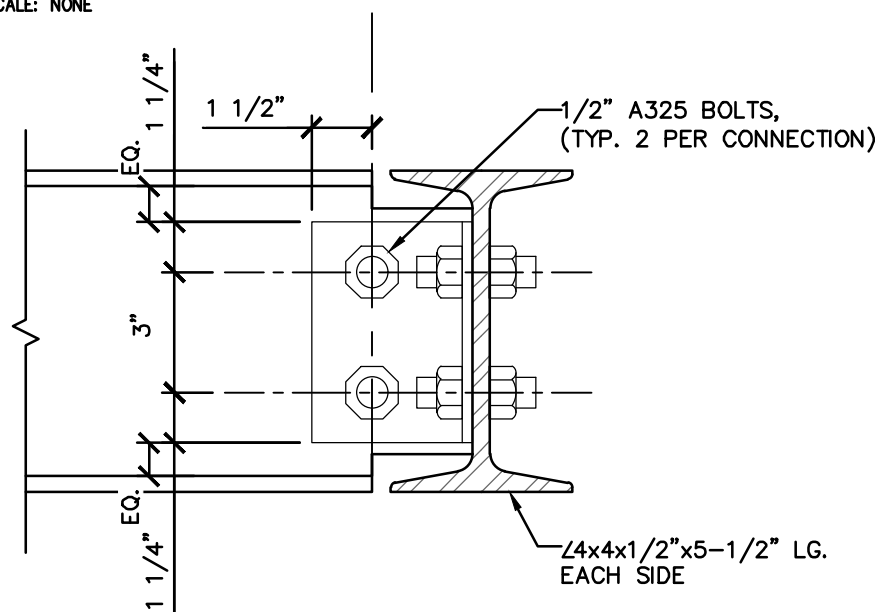
PROJ #: 22-06-04 DWG BY: JAP CHKD BY: AJK

SHEET TITLE
EQUIPMENT PAD
& DETAILS

SHEET NUMBER
C-5.0

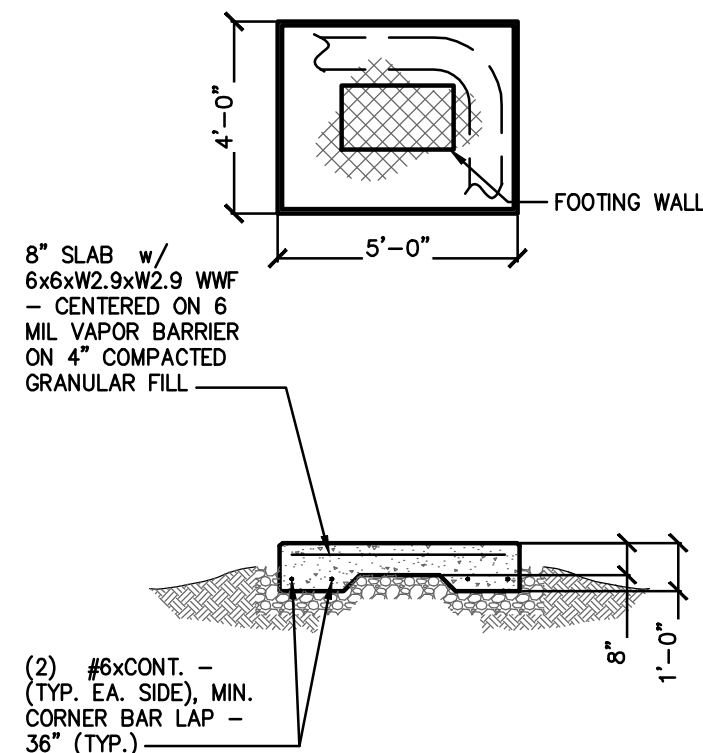
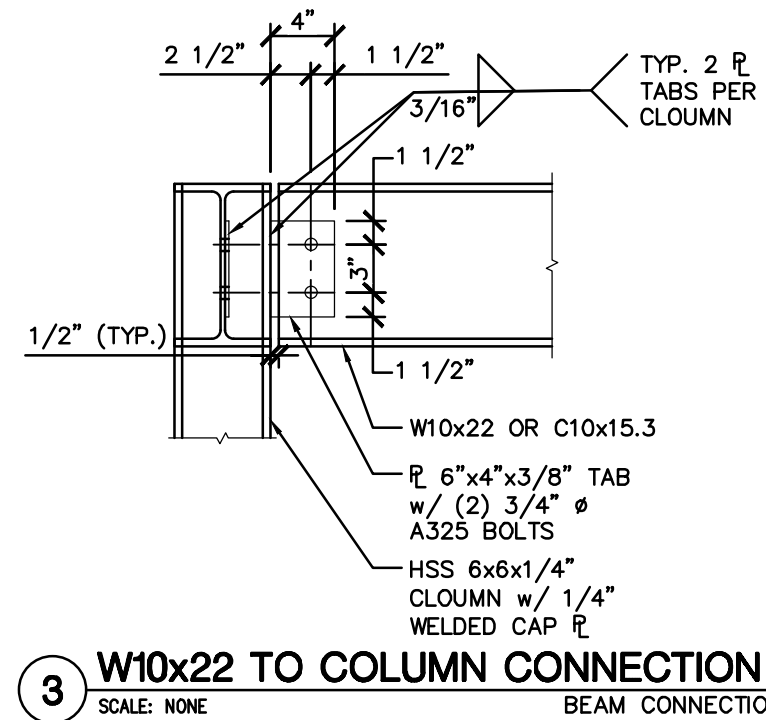
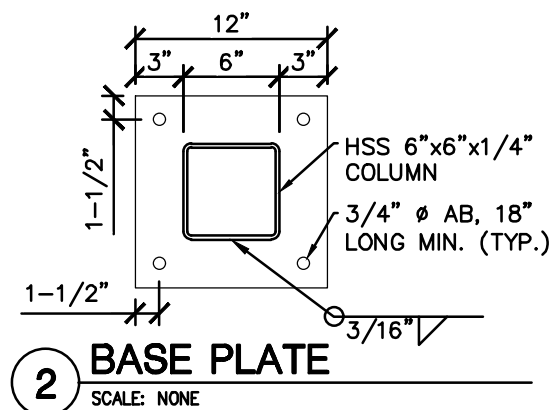


1 GUARDRAIL DETAILS
SCALE: NONE



NOTE:
VERIFY BEAM SIZE PER PLAN, SEE 1/C-5.1

4 TYPICAL CHANNEL TO BEAM CONNECTION
SCALE: NONE



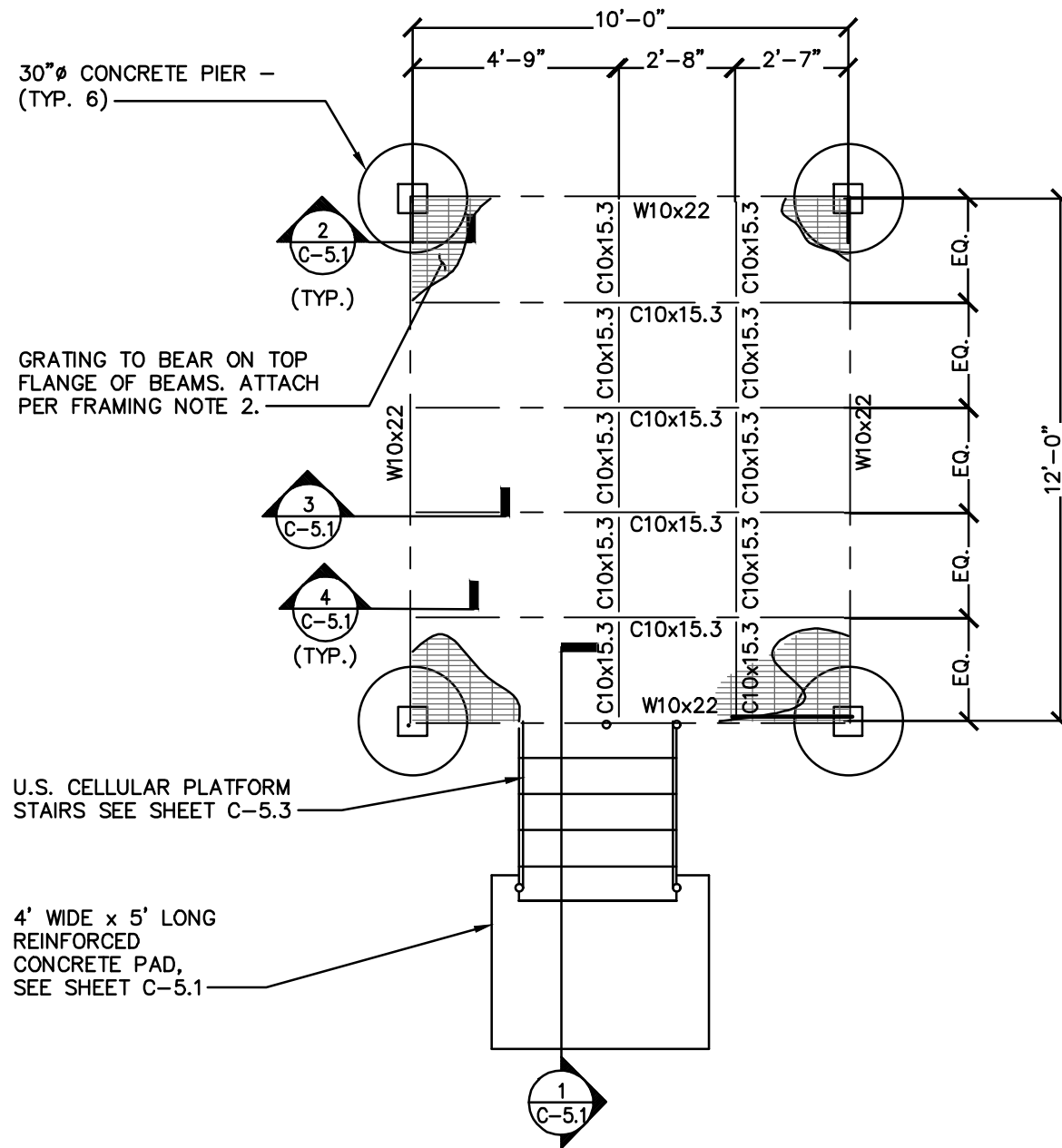
5 STOOP DETAIL
SCALE: NONE

08/16/22	INTERNAL REVIEW	JAP
08/19/22	CLIENT REVIEW	JAP
09/22/22	CLIENT REVIEW	JAP
11/07/22	CITY COMMENTS	JAP
11/09/22	CITY COMMENTS	JAP

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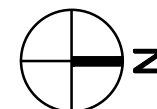
SHEET TITLE PLATFORM DETAILS

SHEET NUMBER C-5.1



FRAMING PLAN NOTES:

1. STEEL HOT-DIP GALVANIZED.
2. WELDED STEEL GRATING BEARING BARS 1 1/4" x 3/16 @ 1 3/16" O.C. w/ CROSS BARS @ 4" O.C.- FULLY BANDED. ATTACH GRATING USING GALV. STEEL SADDLE CLIPS & SELF TAPPING SCREWS INSTALLED PER GRATING MFR. RECOMMENDATIONS.
3. FINISHED GRADE ELEVATION = 943.1'
4. BASE FLOOD ELEVATION = 946.1'
5. T/GRATING = ±4'-0" ABOVE FINISHED GRADE.
6. COORDINATE FINAL SUPPORT FRAMING DIMENSIONS WITH EQUIPMENT / SHELTER PROVIDER,
7. ATTACH EQUIPMENT / SHELTER TO SUPPORT STEEL PER MANUFACTURER INSTALLATION REQUIREMENTS.

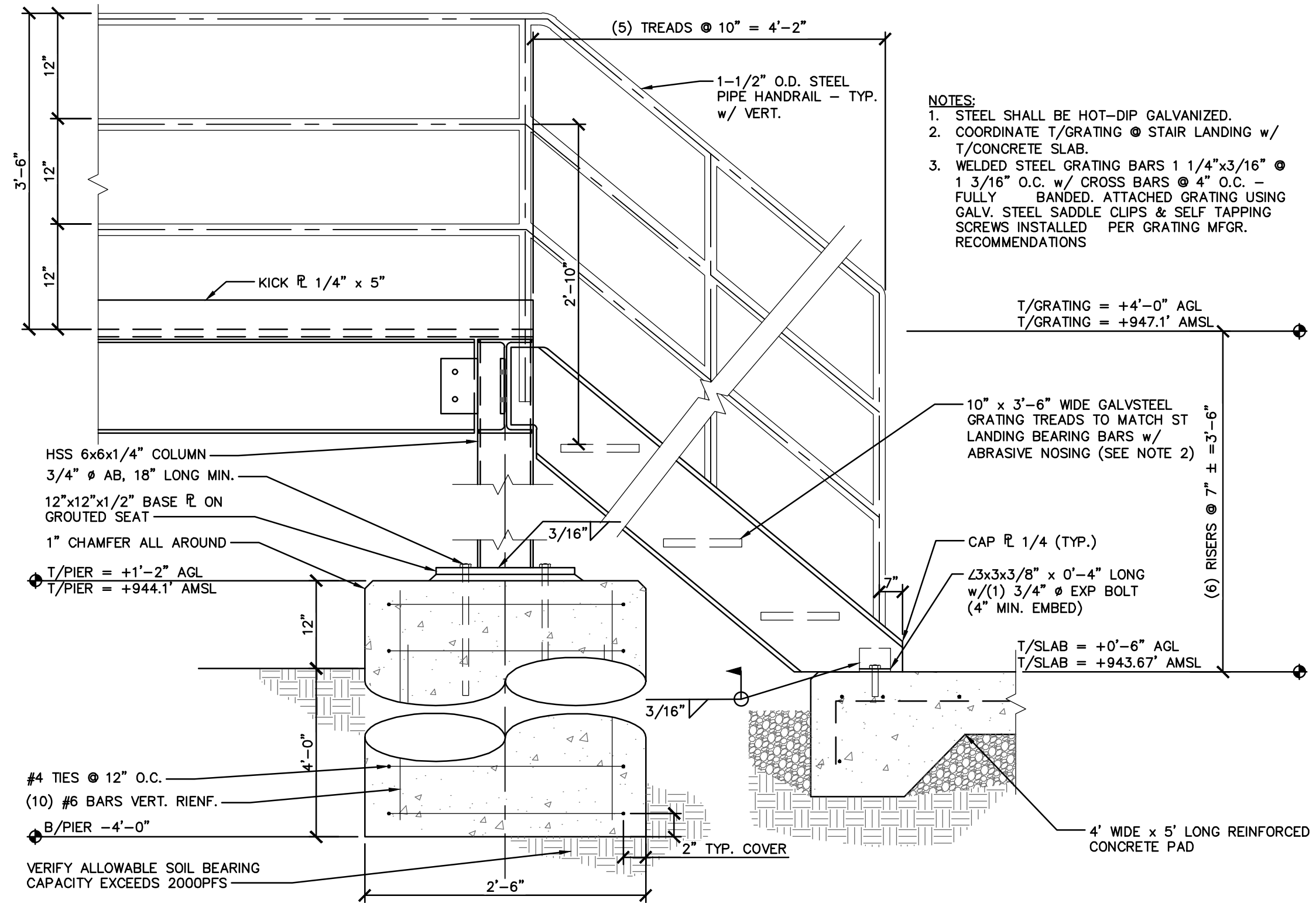


A	08/16/22	INTERNAL REVIEW	JAP
0	08/19/22	CLIENT REVIEW	JAP
1	09/22/22	CLIENT REVIEW	JAP
2	11/07/22	CITY COMMENTS	JAP
3	11/09/22	CITY COMMENTS	JAP

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PROJ #:	22-06-04	DWG BY:	JAP
		CHKD BY:	AJK

SHEET TITLE
**PLATFORM
DETAILS**

SHEET NUMBER
C-5.2



- NOTES:
1. STEEL SHALL BE HOT-DIP GALVANIZED.
 2. COORDINATE T/GRATING @ STAIR LANDING w/ T/CONCRETE SLAB.
 3. WELDED STEEL GRATING BARS 1 1/4"x3/16" @ 1 3/16" O.C. w/ CROSS BARS @ 4" O.C. - FULLY BANDED. ATTACHED GRATING USING GALV. STEEL SADDLE CLIPS & SELF TAPPING SCREWS INSTALLED PER GRATING MFG. RECOMMENDATIONS

1 PLATFORM FRAMING • STAIR SECTION
SCALE: NONE

A	08/16/22	INTERNAL REVIEW	JAP
0	08/19/22	CLIENT REVIEW	JAP
1	09/22/22	CLIENT REVIEW	JAP
2	11/07/22	CITY COMMENTS	JAP
3	11/09/22	CITY COMMENTS	JAP

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SHEET TITLE
PLATFORM
DETAILS

SHEET NUMBER
C-5.3



RBS 6120

Table 5 AC Power

Conditions	Values and Ranges
Nominal voltage ⁽¹⁾	200–250 V AC
Operating voltage ⁽¹⁾	180–275 V AC
Conditions	Values and Ranges
Non-destructive voltage	0–300 V AC
Operating frequency	45–65 Hz
Maximum supported current	125 A single-phase; 63 A three-phase
Maximum cross-sectional cable area ⁽²⁾	50 mm ²

Table 6 Fuse and Circuit Breaker Recommendations (AC-Powered Cabinet)

Voltage Range	PCU AC Type	3 x PSU (A)	4 x PSU (A)	5 x PSU (A)	6 x PSU (A)	7 x PSU (A)
180–275 V AC, single-phase, and two-phase	AC Interface	50	63	80	95	125
180–275 V AC, three-phase	AC Interface	20	32	32	32	63

Table 7 Two-Wire –48 V DC Power Supply

Conditions	Values and Ranges
Nominal voltage	–48 V DC
Operating voltage	–40 to –58.5 V DC
Non-destructive voltage	0 to –60 V DC

Table 8 Fuse and Circuit Breaker Recommendations (DC-Powered Cabinet)

DC Power	Recommended Fuse Ratings for Fully Utilized Power System	Maximum Cross-Sectional Cable Area
–48 V DC, two-wire	450 A (maximum)	120 mm ²

Dimensions (mm)	
Height cabinet (without climate roof module)	1524
Width cabinet	700
Depth Cabinet without door	700
Maximum depth cabinet with DAC door	830
Maximum depth cabinet with heat exchanger door	710
Height Large DAC climate roof module	453
Height heat exchanger climate roof module	758
Height GBF	250
Weight (kg)	
Cabinet (standard equipped ⁽¹⁾) without backup batteries	380
Weight Large DAC climate roof module (with fans)	58
Weight heat exchanger climate roof module (with fans)	104
Color	
Light Gray	Reference number: NCS S 2002-B Gloss <6

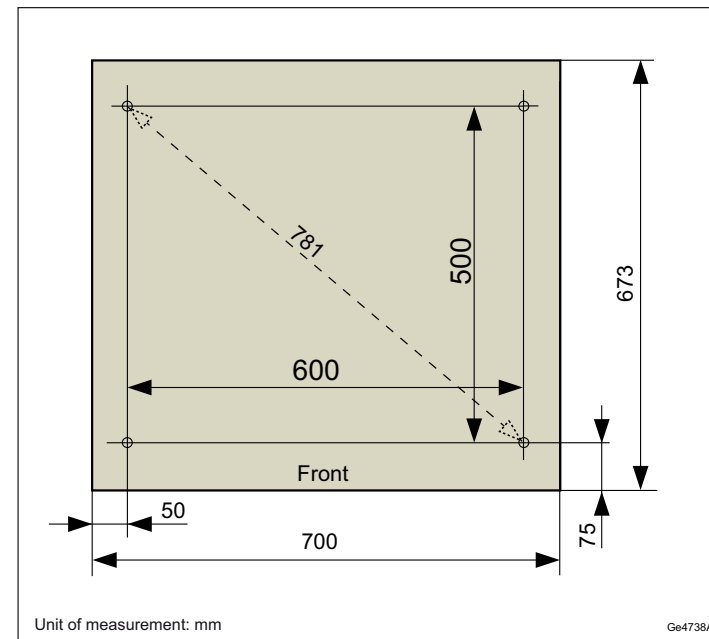


Figure 8 Drilling Pattern (Cabinet without a Door)

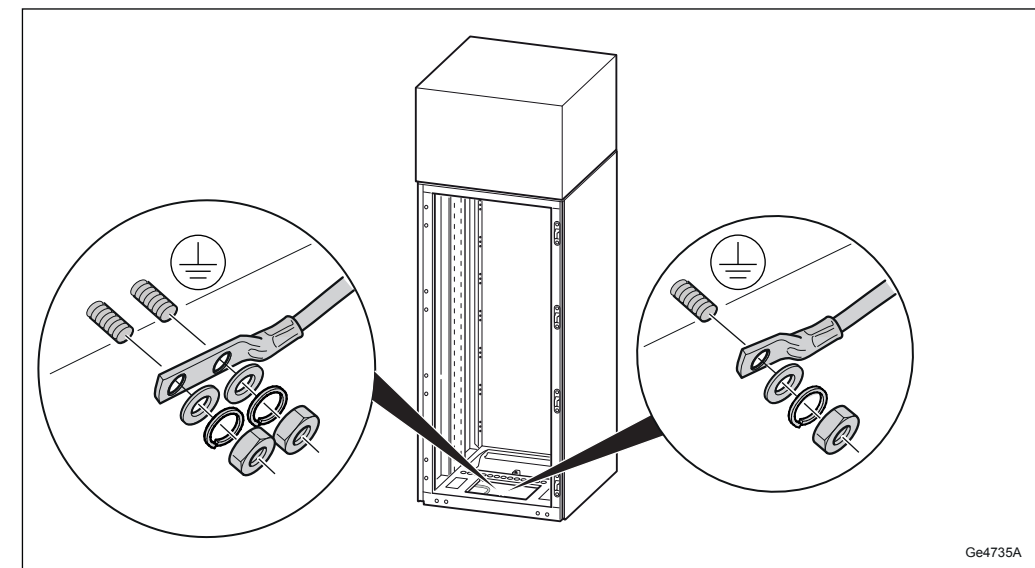
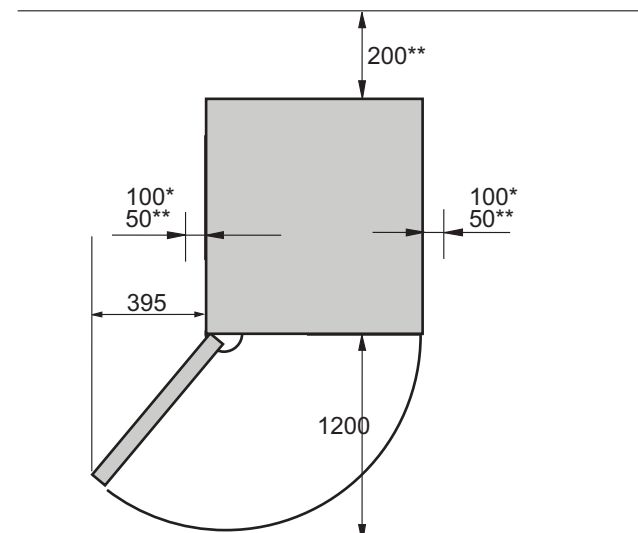
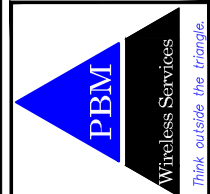
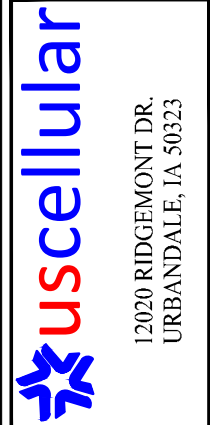


Figure 29 Cabinet Grounding Interface



A	08/16/22	INTERNAL REVIEW	JAP
0	08/19/22	CLIENT REVIEW	JAP
1	09/22/22	CLIENT REVIEW	JAP
2	11/07/22	CITY COMMENTS	JAP
3	11/09/22	CITY COMMENTS	JAP

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SHEET TITLE
EQUIPMENT
CABINET
DETAILS

SHEET NUMBER
C-5.4



Enclosure 6160 AC

MECHANICAL SPECIFICATION

Weight	145 kg (excluding active equipment) 320 lbs (excluding active equipment)
Dimension (H x W x D)	1600 x 650 x 650 mm (incl. Base frame) 63 x 26 x 26 in. (incl. Base frame)
Base frame height	150 mm 6 in.
Mounting position	Ground
Enclosure material	Aluminum
Color	Power paint NCS 2002-B
Door	Front access
Rack type	19" (IEC 60297-3-100)
Locking type	Pad lock or Cylinder

POWER SYSTEM

Input voltage	3P+N+PE: 346/200-415/240 VAC 2P+N+PE: 208/120-220/127 VAC 1P+N+PE: 200-250 VAC
Input power	<33kW
Output load (-48VDC)	24kW
Total capacity (-48VDC)	31.5kW
AC SPD	Class 2/Type 2
DC SPD	Class 2/Type 2
PSU Slots	9x
Service outlet	Optional
Priority load	8x Circuit Breaker
LLVD 1	6x Circuit Breaker
LLVD 2	6x Circuit Breaker
CB ratings	3A / 5A / 10A / 15A / 20A / 25A / 30A / 40A / 50A / 60A / 80A / 100A
Battery Interface	2x Circuit Breaker
Battery Circuit Breaker rating	125A 2pol (200A)

PSU capacity	3500W
PSU efficiency	96%
PSU output voltage (nominal)	-48VDC
PSU rated current	73A
PSU power factor	≥0.99
PSU emissions	EN 55022 Class B
Ingress protection power system	IP20
DC/DC Voltage booster	PSU 48 13 - 3x -58V ports PDU 02 03 - 3x -58V ports/4x -48V ports Both units are optional

CABLE I/O

Entry point	Bottom
Plinth cable access	Rear and side access
AC In	1x Ø16-35mm
DC Out (shielded)	32x Ø10-18mm
DC In (battery feed)	6x Ø19mm
Signal Cable Outlet	10x Ø10mm
Signal Cable Inlet	8x Ø6mm
Optical	32x Ø6mm
Conduits knock-out plates	6x Ø2"
Punched holes	3x Ø26mm



CAPACITY

Rack space user equipment	19U (19" rack)
Hardware capabilities	Power and CPRI support for multi-standard remote radios (RRU or AIR) ERS Baseband and Transport units Li-Ion batteries 3PP equipment Additional power feed available as option



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2	11/07/22	CITY COMMENTS	JAP
3	11/09/22	CITY COMMENTS	JAP

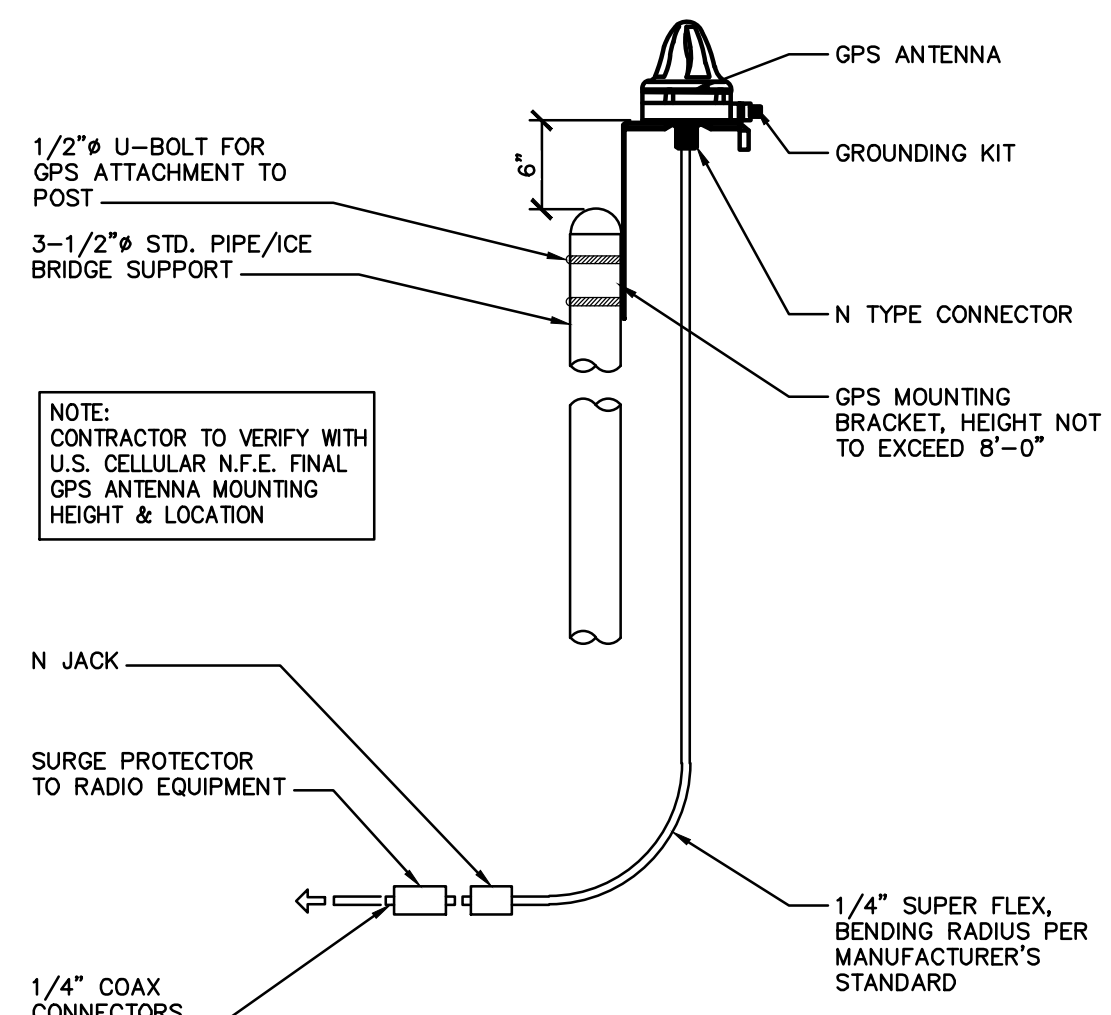
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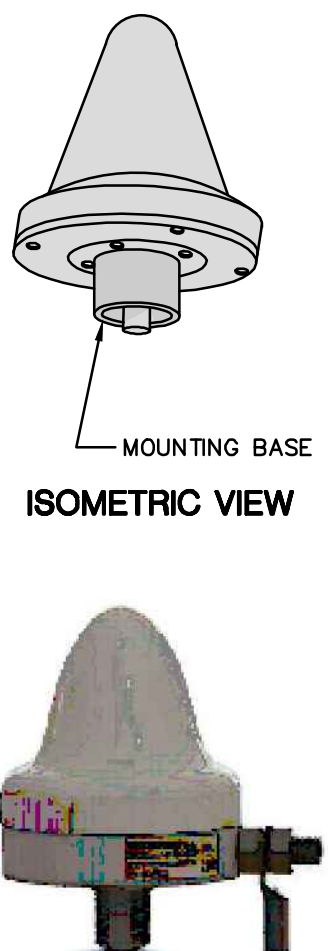
PROJ #: 22-06-04 DWG BY: JAP CHKD BY: AJK

SHEET TITLE
EQUIPMENT
CABINET
DETAILS

SHEET NUMBER
C-5.5



ELEVATION VIEW



ISOMETRIC VIEW

NOTES:

1. THE ELEVATION AND LOCATION OF THE GPS ANTENNA SHALL BE IN ACCORDANCE WITH THE FINAL RF REPORT.

1

GPS ANTENNA MOUNTING - (ROSENBERGER GPS-36-N-SC)
SCALE: NONE

GPS ANTENNA MOUNT – U.S. CELLULAR – ROSENBERGER – GPS-36–N–SC

SABRE 24"x10' ICE BRIDGE w/ TRAPEZE KIT #C20135053DP OR APPROVED EQUIVALENT

T/STEEL
ELEV.= +10'-0"

SABRE UNIVERSAL VERTICAL TRAPEZE #C20145101

3 1/2" O.D. SCH. 40 STD PIPE w/ PIPE CAP (TYP)

GROUND LEAD: DOUBLE HOLE SS LUG w/ 2 AWG SOLID TINNED BCW. (1) EACH POST EXOTHERMIC WELD TO GROUND

SLOPE CONCRETE DOWN 3/4"

T/PIER
ELEV.= +0'-6"

FINISHED GRADE
ELEV.= +0'-0"

12"Ø CONCRETE PIER (TYP.)

B/PIER
ELEV.= 6" BELOW FROST DEPTH

NOTES:

1. *- COORDINATE ELEVATIONS WITH PORT HEIGHT.

2. DO NOT ATTACH ICE BRIDGE TO BUILDING STRUCTURE.

3. ICE BRIDGE TO TERMINATE WITHIN 6" OF BUILDING & TOWER.

4. PROTECTIVE COAX PIECE TO BE INSTALLED AT TOWER END OF ICE BRIDGE TO PROVIDE RADIUS PROTECTION FOR COAX RUNS.

5. STEEL HOT DIP GALVANIZED.

2

COAX SUPPORT / ICE BRIDGE DETAIL
SCALE: 1/2" = 1'-0"

SABRE ICE BRIDGE

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Wireless Services
Think outside the triangle.

A	08/16/22	INTERNAL REVIEW	JAP
0	08/19/22	CLIENT REVIEW	JAP
1	09/22/22	CLIENT REVIEW	JAP
2	11/07/22	CITY COMMENTS	JAP
3	11/09/22	CITY COMMENTS	JAP

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3950 N ANKENY BLVD
ANKENY, IA 50023 - POLK COUNTY
NEW SITE BUILD - STEALTH MONOPOLE

PROJ #: 22-06-04

DWG BY: JAP

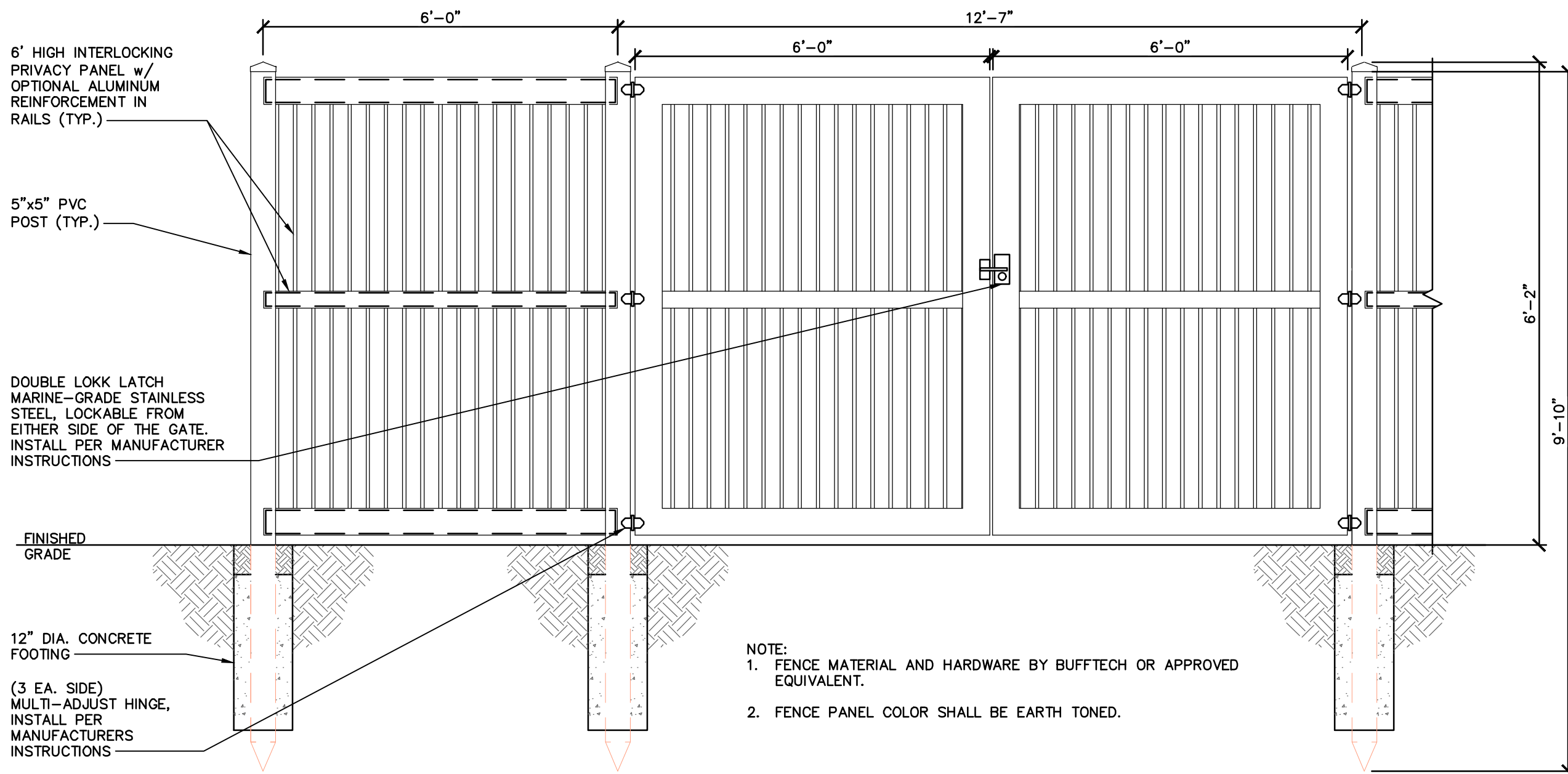
CHKD BY: AJK

SHEET TITLE

ICE BRIDGE & DETAILS

SHEET NUMBER

C-6.0



1 TYPICAL VINYL FENCE SECTION AND GATE
SCALE: 1/2" = 1'-0"

6FT VINYL FENCE DBL GATE

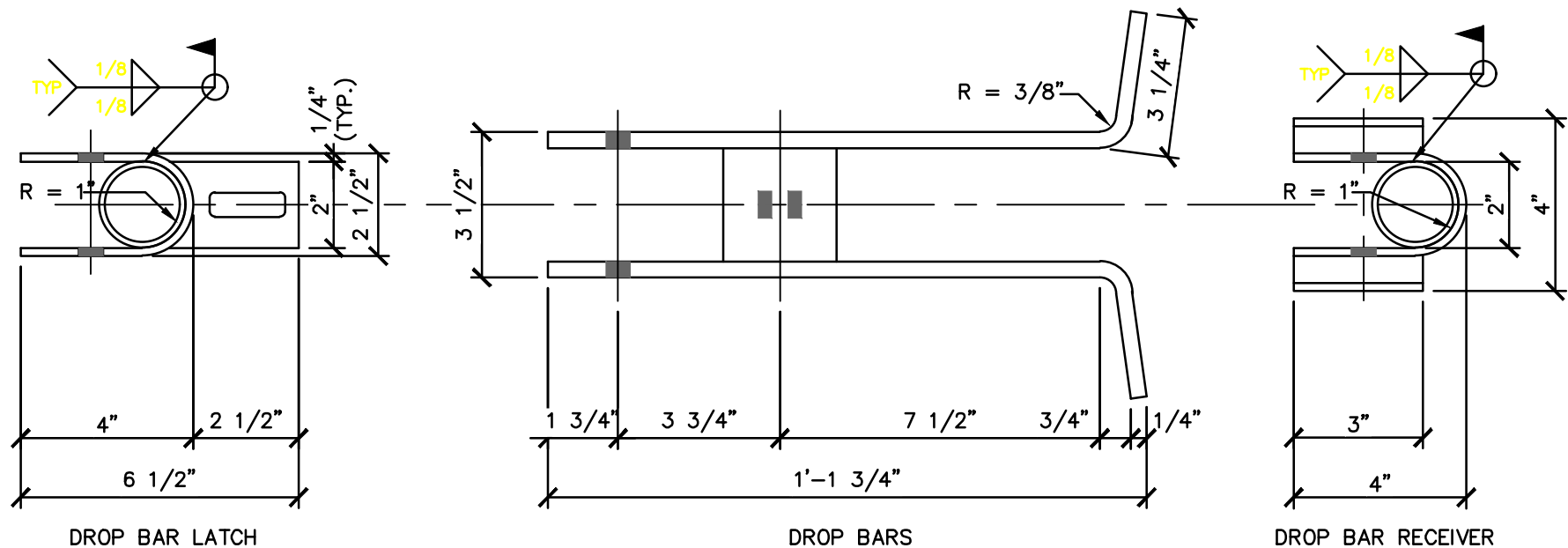
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01/08/19	CLIENT REVIEW	JAP
01/09/22	CLIENT REVIEW	JAP
02/11/07	CITY COMMENTS	JAP
03/11/09	CITY COMMENTS	JAP

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PROJ #: 22-06-04
DWG BY: JAP
CHKD BY: AJK

SHEET TITLE
FENCE DETAILS

SHEET NUMBER
C-7.0



- NOTES:**
1. STEEL SHALL BE HOT DIPPED GALVANIZED, SPOT WELD GATE LATCHES.
 2. DETAIL BASED ON A-1 FENCE COMPANY HEAVY DUTY COMMERCIAL GATE LATCH FOR DOUBLE DRIVE GATES.
 3. VERIFY DIMENSIONS & LATCH MANUFACTURER W/ U.S. CELLULAR PROJECT MANAGER PRIOR TO INSTALLATION.

1 GATE DROP BAR LATCH DETAIL

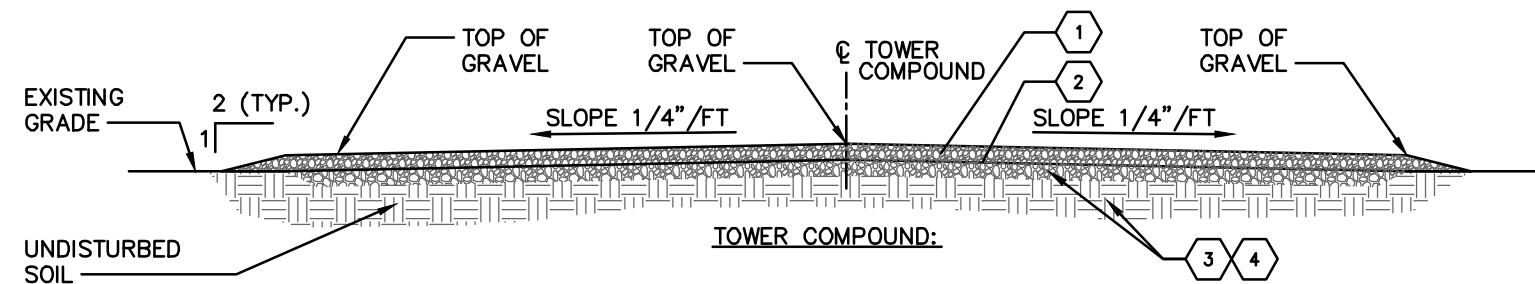
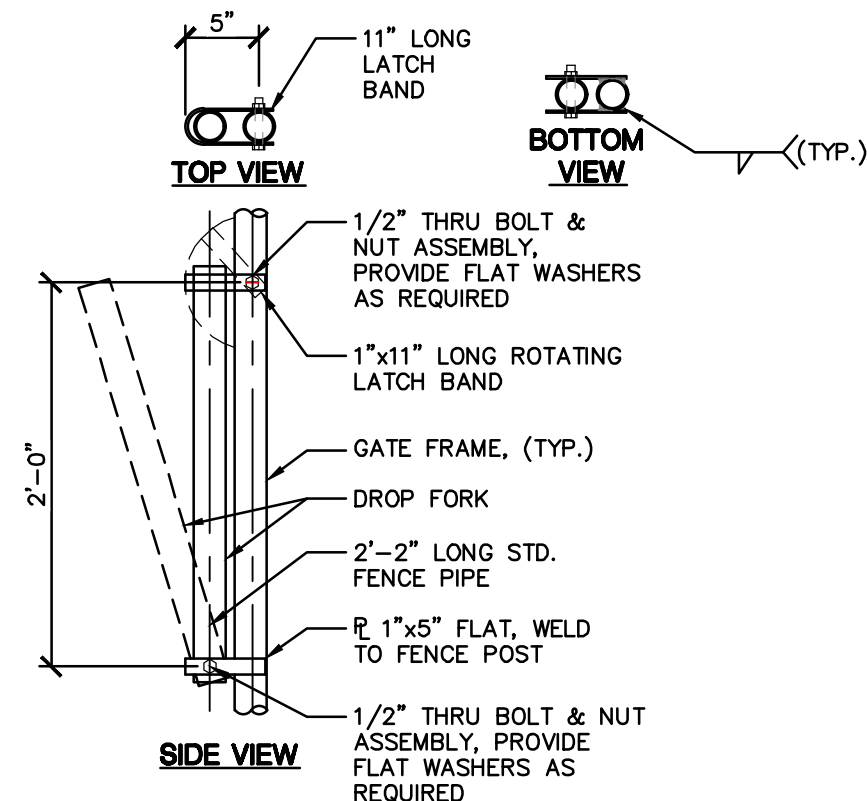
SCALE: 3" = 1'-0"

GATE BAR LATCH DETAIL

2 TYPICAL GATE STOP

SCALE: 1" = 1'-0"

GATE STOP DETAIL



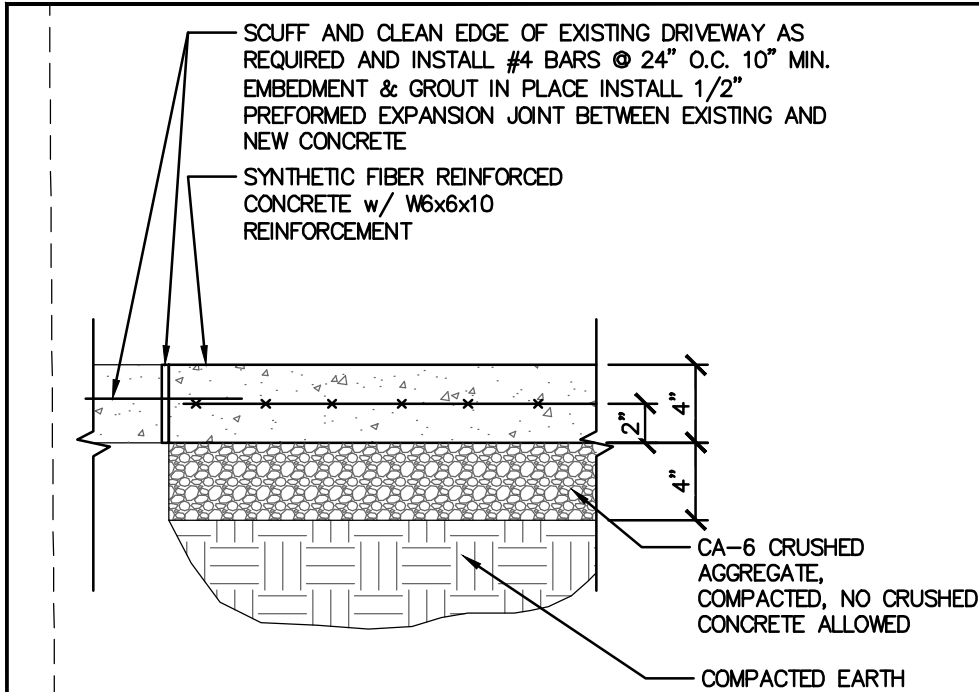
- 1 3" OF 3/4"-1" MINUS (CHRUSHER RUN, FINE) ROCK.
- 2 WEED CONTROL FABRIC - MIRAFI 500X, OR APPROVED EQUIVALENT (WHEN SPECIFIED BY PROJECT MANAGER)
- 3 5" BASE ROCK OF 3" DIA. ROCK (ROAD BASE), PROOF-ROLL PRIOR TO INSTALLATION OF FINISHED GRAVEL.
- 4 SITE SHALL BE CLEARED OF ORGANIC MATERIAL OR UNSUITABLE MATERIAL. SUBGRADE MUST BE COMPACTED TO 90% OF STANDARD PROCTOR DENSITY AND VERIFIED BY PROOF-ROLL OR GEOTECHNICAL RECOMMENDATIONS.
5. SITES WITH NO FENCE SHALL HAVE AN AREA COVERED WITH WEED BARRIER THAT IS A MINIMUM OF 5 FT WIDE AROUND THE SHELTER AND TOWER AREAS; THIS AREA SHALL BE USABLE AS PARKING SPACE OR FOR STORAGE OF A PORTABLE GENERATOR. LOCAL FIRE CODES MIGHT DICTATE MORE STRINGENT REQUIREMENTS.
6. THE FINISHED GRADE SHALL DIRECT WATER AWAY FROM THE SHELTER &/OR TOWER.

3 TYPICAL COMPOUND SECTION

SCALE: NONE

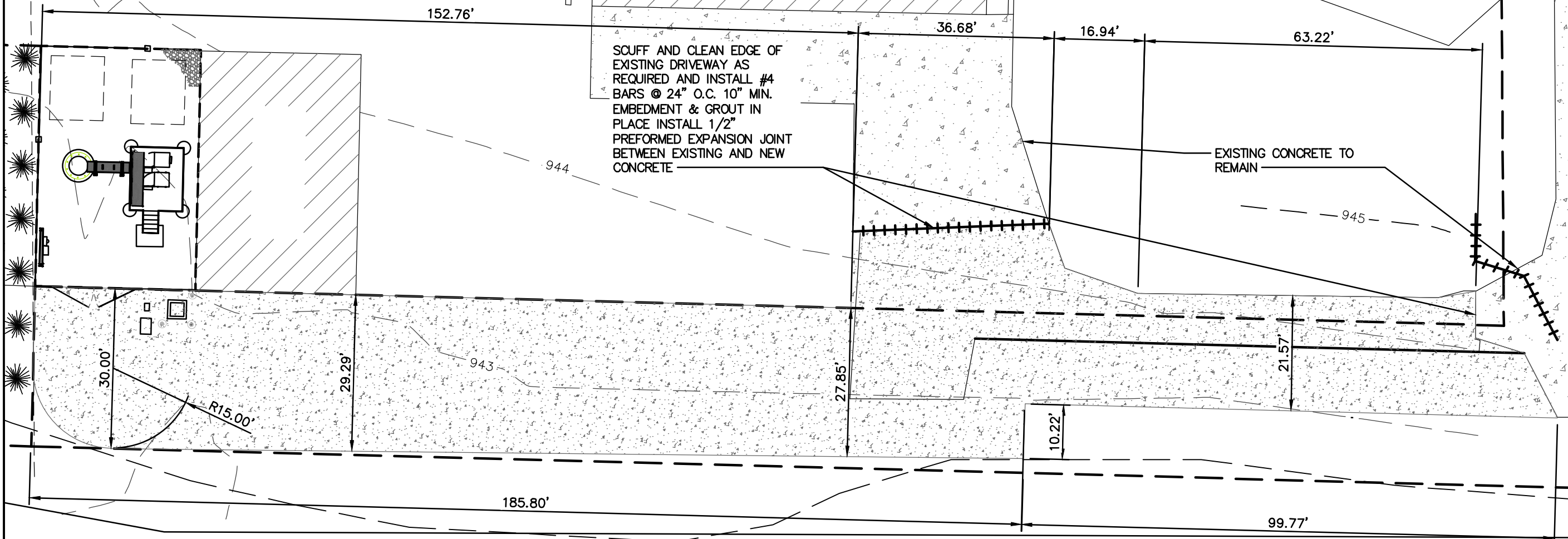
TYPICAL-COMPOUND-SECTION

A	08/16/22	INTERNAL REVIEW	JAP
0	08/19/22	CLIENT REVIEW	JAP
1	09/22/22	CLIENT REVIEW	JAP
2	11/07/22	CITY COMMENTS	JAP
3	11/09/22	CITY COMMENTS	JAP



2 TYPICAL DRIVEWAY SECTION
SCALE: NONE

DRIVEWAY MATERIAL REQUIRED	
SQ. FT. OF CONCRETE DRIVEWAY	8159.16 ft ²
CU FT OF CONCRETE REQ'D	32636.64 ft ³
CU YD OF CONCRETE REQ'D	924.1667 yd ³
CU FT OF CA-6 CRUSHED BASE ROCK REQUIRED.	32636.64 ft ³
CU FT OF CA-6 CRUSHED BASE ROCK REQUIRED.	924.1667 yd ³



1 ACCESS ROAD PLAN
SCALE: 1"=20'

uscellular

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PBM

Wireless Services
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A	08/16/22	INTERNAL REVIEW	JAP
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2	11/07/22	CITY COMMENTS	JAP
3	11/09/22	CITY COMMENTS	JAP

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PROJ #: 22-06-04

DWG BY: JAP

CHKD BY: AJK

SHEET TITLE
ACCESS ROAD PLAN

SHEET NUMBER
C-8.0

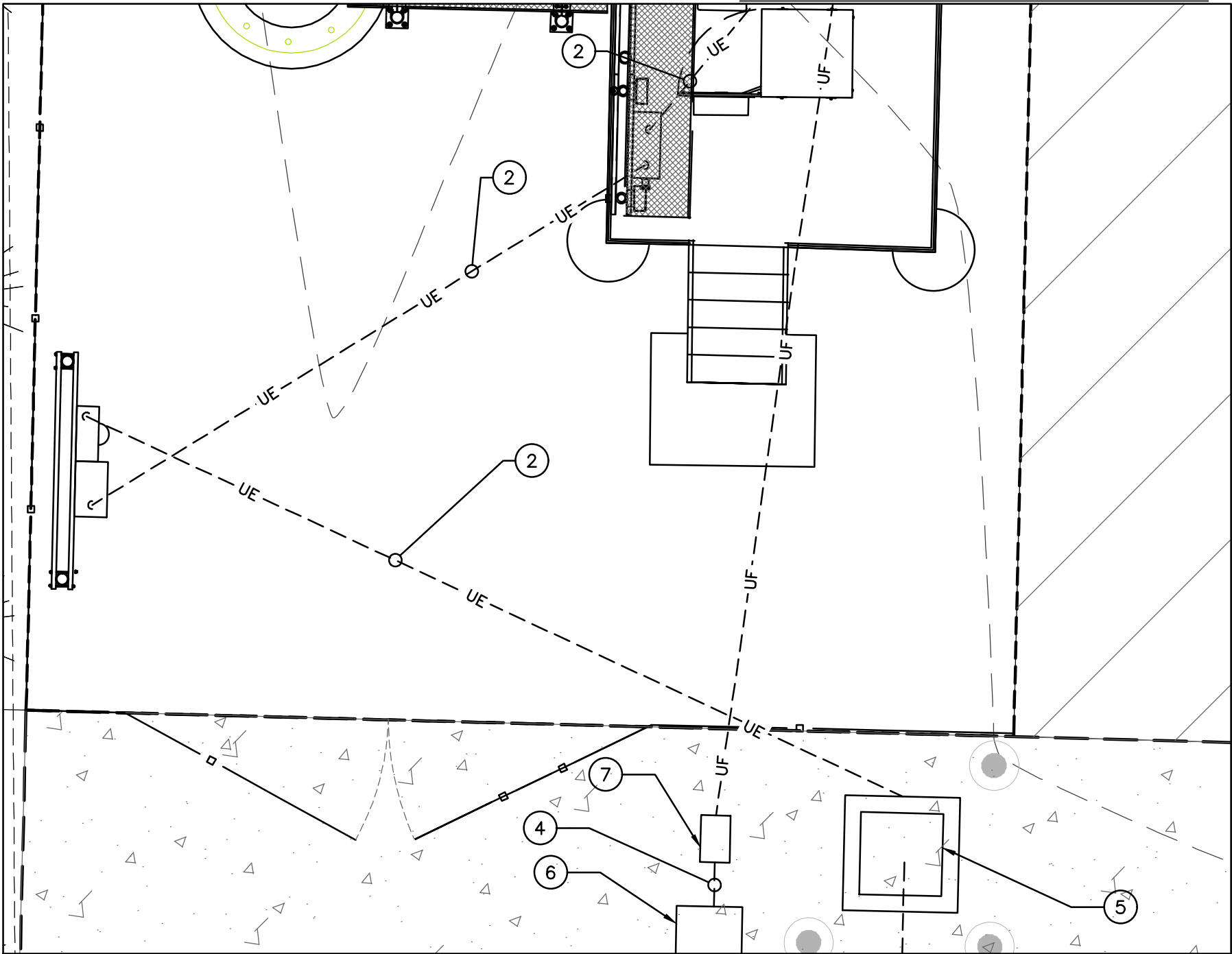
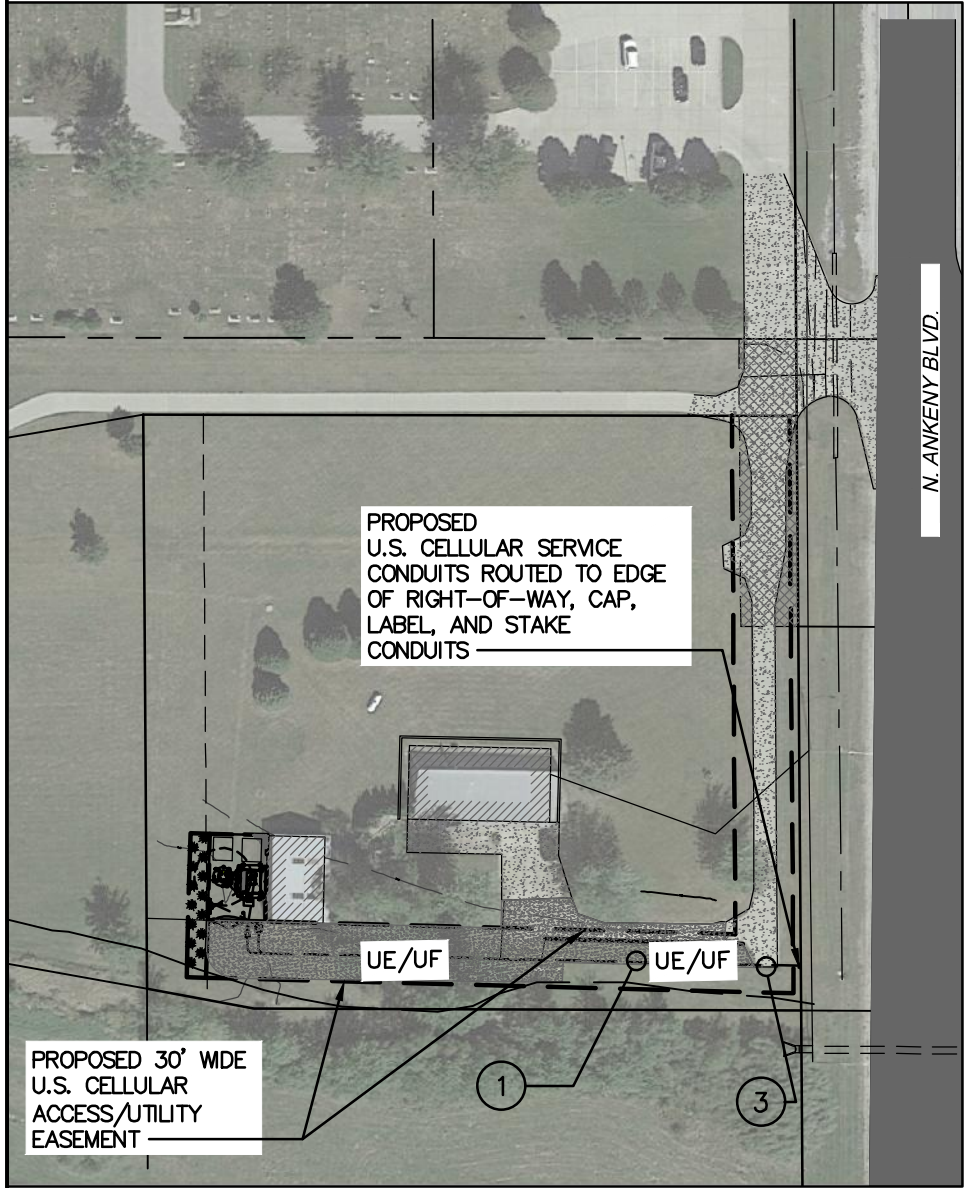
SERVICE NOTES:

- 1. SERVICE POWER SHALL BE (120/240VAC, 800A, 1Ø, 3W) OR (208/120VAC, 800A, 3Ø,4W) CONTRACTOR SHALL ADJUST FEEDER AND CIRCUIT ACCORDINGLY AS PLANS ARE NOTED FOR (120/240VAC, 800A, 1Ø, 3W).
- 2. A 800 AMP, 120/240V, 1Ø METER RACK SHALL BE INSTALLED WHERE IT IS ACCESSIBLE FOR READOUT. THE NUMBER OF JAWS IN THE METER SOCKET AND THEIR ARRANGEMENT WILL DEPEND ON THE VOLTAGE SERVICE.
- 3. CABLE SIZES SHALL BE ADJUSTED TO COMPENSATE FOR VOLTAGE DROP IF LONGER THAN 180FT. VERIFY CONDUIT SIZE WHEN CHANGING CABLE SIZE.
- 4. FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT REFER TO VENDOR PRINTS PROVIDED BY MANUFACTURER.
- 5. CONDUITS ROUTED BELOW GRADE NEAR ACCESS DRIVE OR WITH/IN COMPOUND SHALL BE SCHEDULE 40 PVC (U.N.O.).

UTILITY SERVICE NOTES:

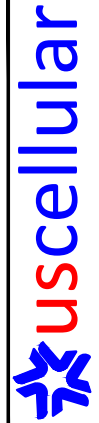
- 1 ELECTRICAL SERVICE: (2) SETS OF (3) 750 KCMIL IN 4" SCH 40 PVC OR DIRECT BURY BY LOCAL ELECTRICAL COMPANY, COORDINATE WITH LOCAL UTILITY COMPANY.
- 2 SECONDARY ELECTRICAL SERVICE: (3) 3/0 AWG CU, 6 AWG CU GND, IN 2" SCH 40 PVC.
- 3 FIBER SERVICE: 2" SCH. 40 PVC CONDUIT w/ MULE TAPE & PULL CORD
- 4 FIBER SERVICE: 2" SCH. 40 PVC CONDUIT OR DIRECT BURY FROM PROVIDER VAULT TO U.S. CELLULAR UTILITY VAULT.
- 5 PROPOSED PAD MOUNTED TRANSFORMER, (BY OTHERS)
- 6 FIBER PROVIDER VAULT, EXACT LOCATION MAY VARY INSTALLED BY OTHERS, FIELD VERIFY
- 7 U.S. CELLULAR FIBER VAULT

UTILITY CONDUIT LENGTH TABLE:			
FROM R.O.W./DEMARC TO VAULT / TRANSFORMER			
UTILITY SERVICE	ELECTRIC	COMMUNICATION	
	±310'	±310'	
FROM TRANSFORMER / VAULT TO METER/VAULT			
UTILITY SERVICE	ELECTRIC	COMMUNICATION	
	±85'	±50'	
FROM UTILITY RACK/VAULT TO EQUIPMENT			
UTILITY SERVICE	ELECTRIC	COMMUNICATION	
	±40'	±30'	

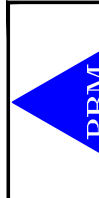


1 UTILITY SITE PLAN
SCALE: 1" = 100'

2 ENLARGED UTILITY PLAN
SCALE: Custom



12020 RIDGEMONT DR.
URBANDALE, IA 50323



PBM
Wireless Services
Think outside the triangle.

DATE	REVIEW	BY
08/16/22	INTERNAL REVIEW	JAP
08/19/22	CLIENT REVIEW	JAP
09/22/22	CLIENT REVIEW	JAP
11/07/22	CITY COMMENTS	JAP
11/09/22	CITY COMMENTS	JAP

7601333 - ANKENY NE 36TH.
3950 N ANKENY BLVD
ANKENY, IA 50023 - POLK COUNTY
NEW SITE BUILD - STEALTH MONOPOLE

PROJ #: 22-06-04
DWG BY: JAP
CHKD BY: AJK

SHEET TITLE
UTILITY SITE PLAN

SHEET NUMBER
C-9.0

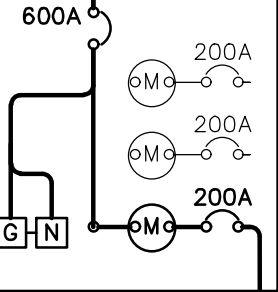
REFERENCE SITE
PLAN/COMPOUND PLAN FOR
EXACT UTILITY ROUTE,
COORDINATE w/ LOCAL
ELECTRIC UTILITY COMPANY

UTILITY/MUNICIPALITY APPROVED
MULTIGANG METER CENTER &
METER SOCKET, PROVIDED AND
INSTALLED BY G.C

SOLID TINNED BCW
GROUND WIRE &
GROUND ROD PER NEC,
LATEST EDITION

SERVICE ENTRANCE
GROUND ROD

ELECTRICAL
SERVICE
FROM
DEMARICATION



METER TO MTS/DISTRIBUTION PANEL
(3) - 3/0 AWG CU
(1) 6 AWG CU GROUND WIRE
2" SCH. 40 PVC

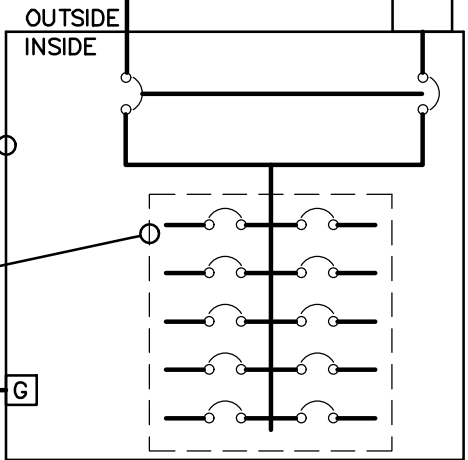
200 AMP MTS/DISTRIBUTION
PANEL, (PROVIDED BY PPC
CABINET MANUFACTURER)

BRANCH CIRCUITS,
(BY PPC CABINET
MANUFACTURER)

TO
GROUND
RING

GENERATOR
PLUG

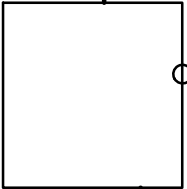
OUTSIDE
INSIDE



FIBER
SERVICE
FROM
DEMARICATION

REFERENCE SITE
PLAN/COMPOUND PLAN
FOR EXACT UTILITY ROUTE,
COORDINATE w/ LOCAL
COMMUNICATION PROVIDER

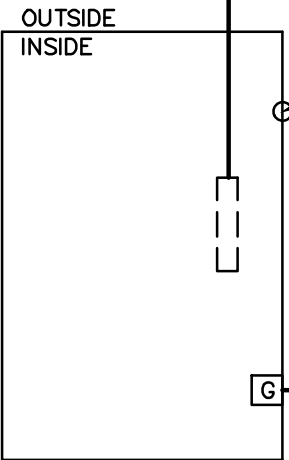
U.S. CELLULAR
COMMUNICATION VAULT



GENERATOR PLUG
MOUNTED ON PPC
CABINET

PROPOSED 2" SCH 40
PVC CONDUIT w/ MULE
TAPE & PULL STRING,
SUBCONTRACTOR TO
COORDINATE
CONNECTION WITH
LOCAL UTILITY COMPANY

OUTSIDE
INSIDE



RACK SPACE FOR
FIBER PROVIDER
INSIDE ERICSSON
CABINET

TO
GROUND
RING

1 ONE-LINE DIAGRAM
SCALE: NONE

200A ONLINE WITH NEW MULTIGANG METER



12020 RIDGEMONT DR.
URBANDALE, IA 50323



AI	08/16/22	INTERNAL REVIEW	JAP
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3	11/09/22	CITY COMMENTS	JAP

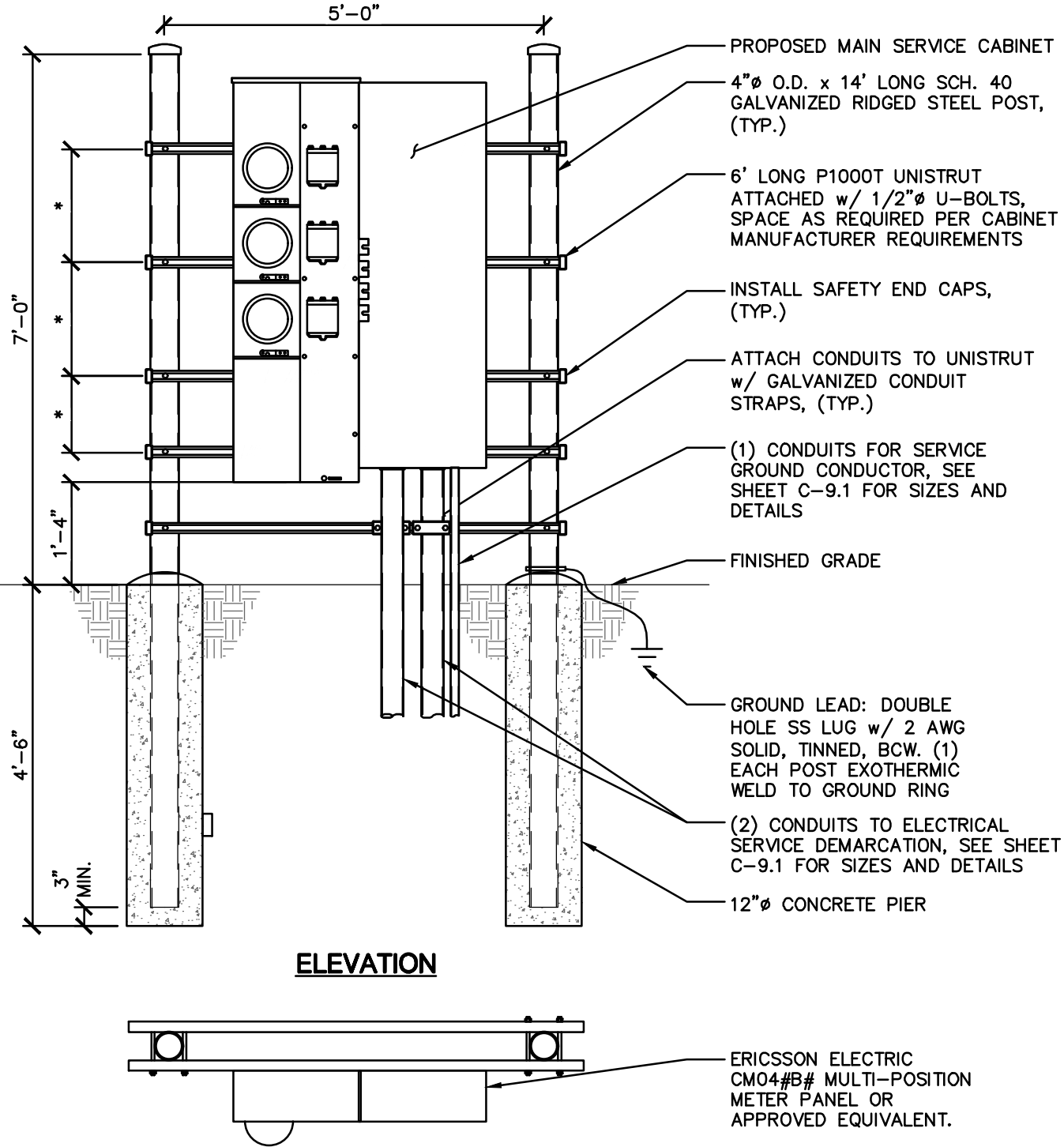
7601333 - ANKENY NE 36TH.

3950 N ANKENY BLVD
ANKENY, IA 50023 - POLK COUNTY
NEW SITE BUILD - STEALTH MONOPOLE

PROJ #: 22-06-04 DWG BY: JAP CHKD BY: AJK

SHEET TITLE
ONE-LINE
DIAGRAM

SHEET NUMBER
C-9.1



- NOTES:
- *- COORDINATE ELEVATIONS WITH EQUIPMENT/MOUNTING HEIGHT.
 - STEEL SHALL BE HOT DIP GALVANIZED.
 - CABINETS SHALL BE MOUNTED WITH STAINLESS STEEL BOLTS.
 - METAL POSTS ARE NOT ALLOWED TO SERVE AS EQUIPMENT GROUNDING CONDUCTOR.
 - UNISTRUT SHALL NOT EXTEND BEYOND POST & MUST HAVE SAFETY END CAPS.
 - METALLIC PARTS SHALL BE BONDED ACCORDING TO THE NEC LATEST EDITION.
 - GROUNDING SHALL CONFORM TO NEC AND SECTION 436-439.
 - FACE OF METER SHALL BE 48" MINIMUM FROM OF FENCE.

1 UTILITY RACK

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

METAL UTILITY RACK

12020 RIDGEMONT DR.
URBANDALE, IA 50323

Wireless Services
Think outside the triangle.

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7601333 - ANKENY NE 36TH.
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NEW SITE BUILD - STEALTH MONOPOLE

PROJ #: 22-06-04

DWG BY: JAP

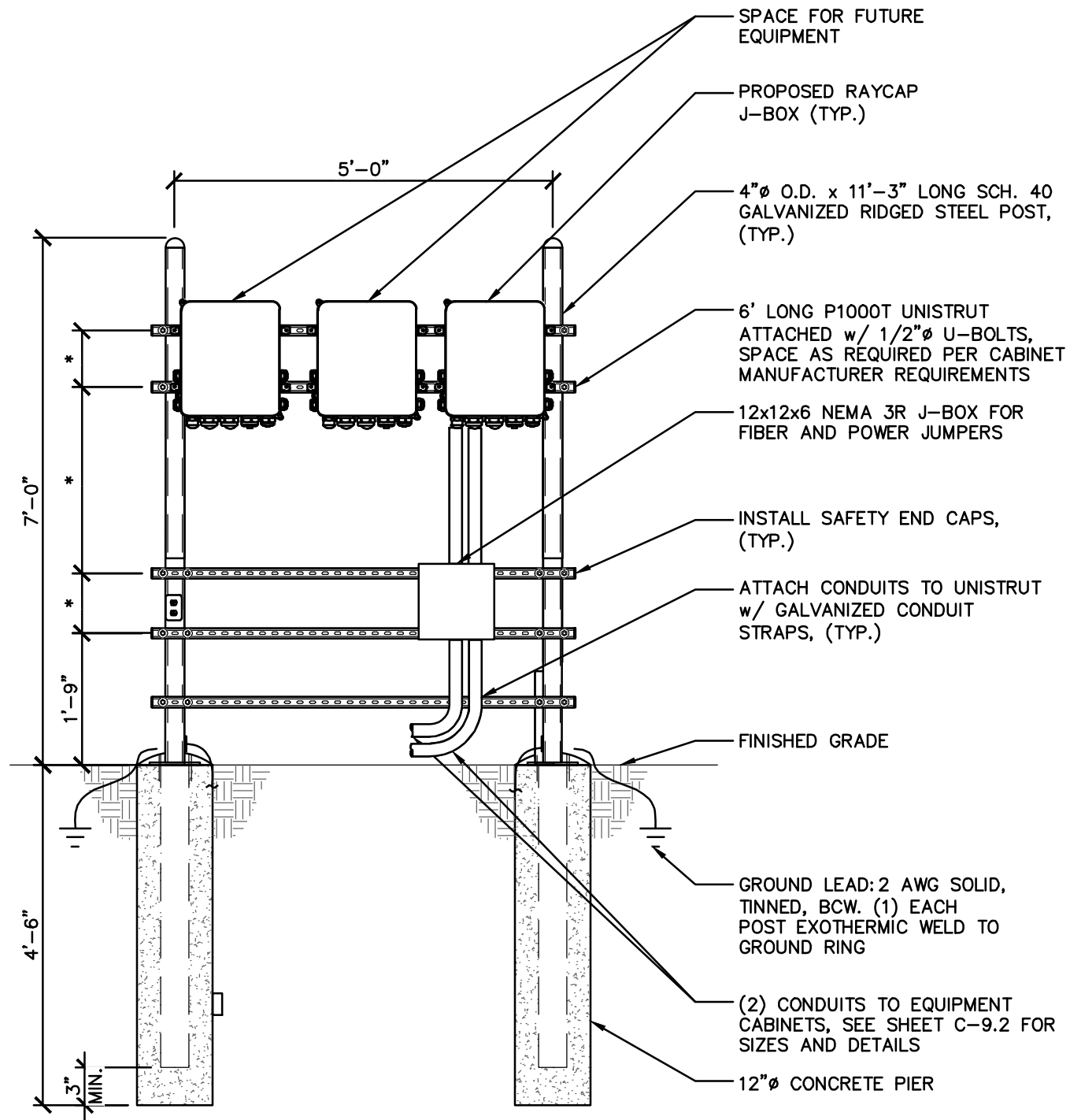
CHKD BY: AJK

SHEET TITLE

**ELECTRICAL
DETAILS**

SHEET NUMBER

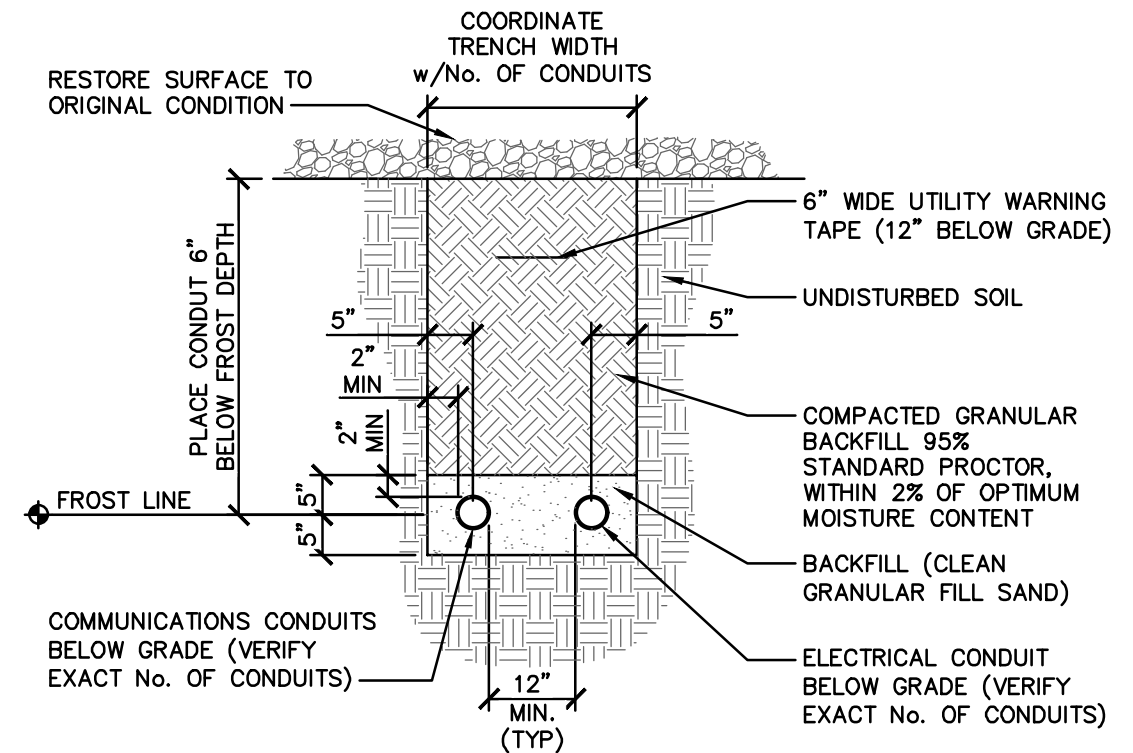
C-10.0



ELEVATION

1 RAYCAP UTILITY RACK
SCALE: 1/2" = 1'-0"

METAL RAYCAP UTILITY RACK

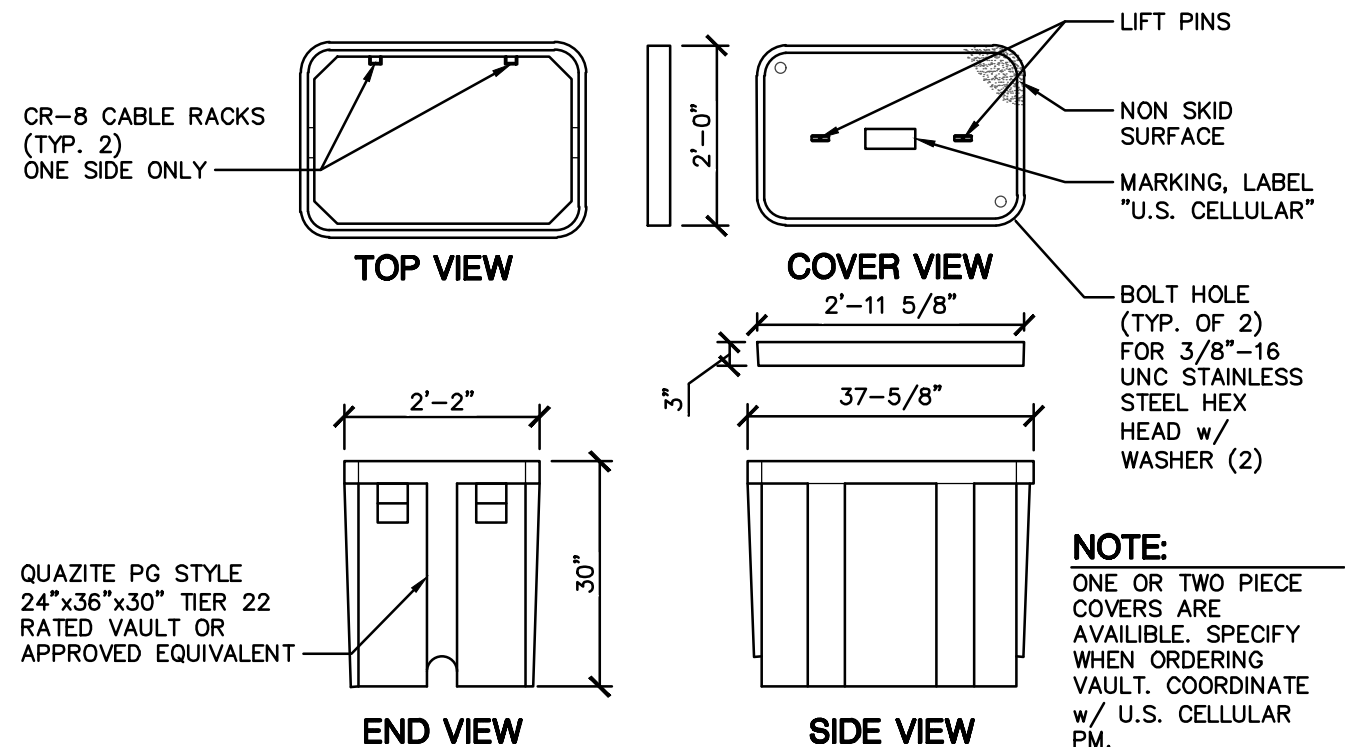


NOTE:

- SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS

2 JOINT TRENCH ELECTRIC/COMMUNICATIONS
SCALE: NONE

JOINT TRENCH DETAIL



3 2'x3' VAULT DETAILS
SCALE: 1" = 1'-0"

UTILITY VAULT - PG STYLE

A	08/16/22	INTERNAL REVIEW	JAP
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1	09/22/22	CLIENT REVIEW	JAP
2	11/07/22	CITY COMMENTS	JAP
3	11/09/22	CITY COMMENTS	JAP

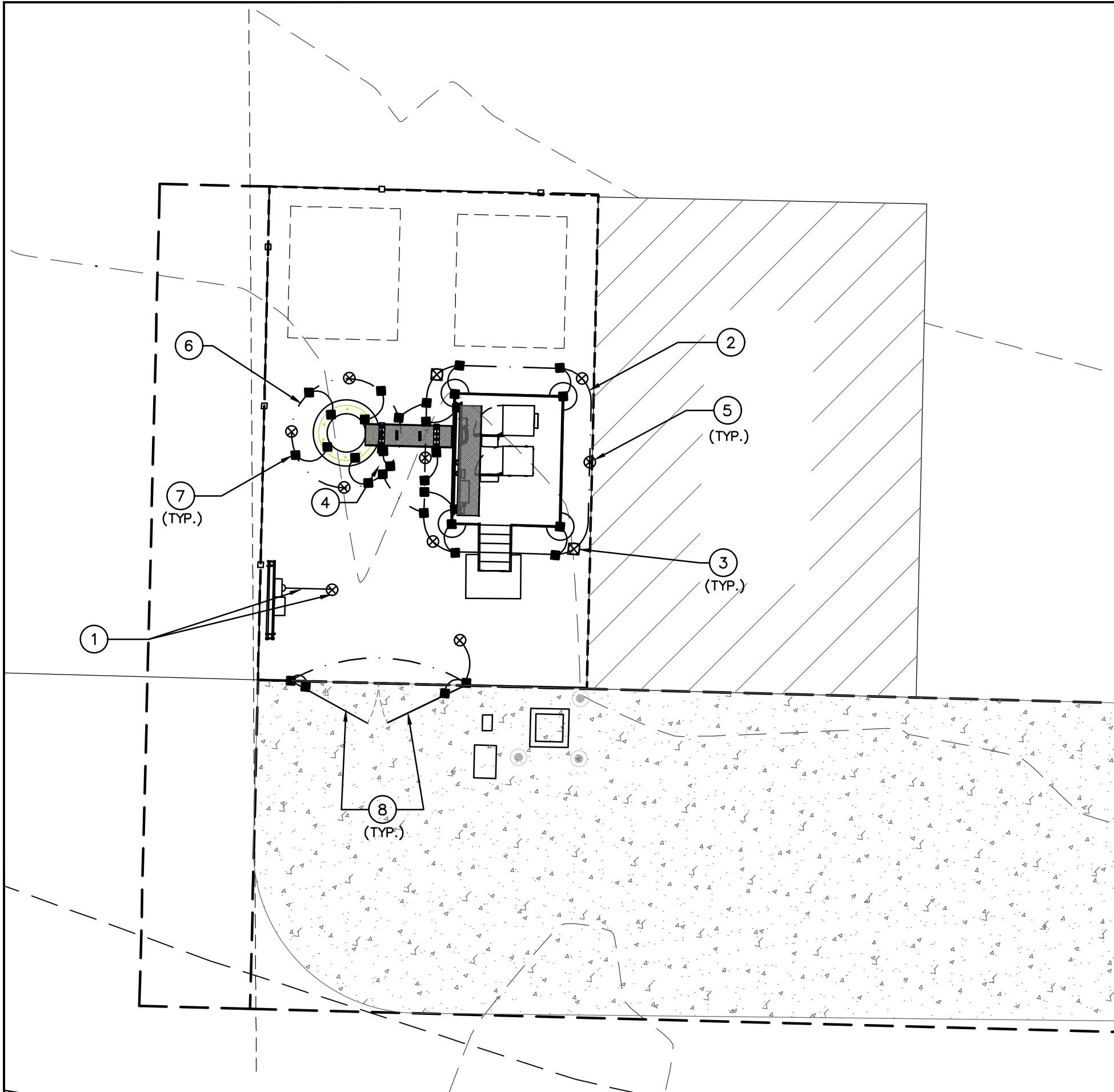
7601333 - ANKENY NE 36TH.

3950 N ANKENY BLVD
ANKENY, IA 50023 - POLK COUNTY
NEW SITE BUILD - STEALTH MONOPOLE

PROJ #: 22-06-04 DWG BY: JAP CHKD BY: AJK

SHEET TITLE
ELECTRICAL DETAILS

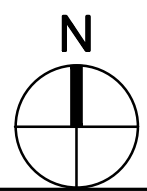
SHEET NUMBER
C-10.1



- NOTES:**
1. GROUND WIRES ARE 2 AWG SOLID TINNED BCW U.N.O.
 2. GROUND RING/RODS SHALL BE 6" BELOW FROST DEPTH, DEPTH MAY VARY.
 3. METALS WITHIN 6' OF THE GROUND RING SHALL BE BONDED TO THE GROUND RING.
 4. EXOTHERMIC WELD, (3) 2 AWG SOLID TINNED BCW, @ TOWER BASE PLATE. CONNECT TO TOWER GROUND RING w/ EXOTHERMIC WELD (TYP. 3 PLACES.)

- KEY NOTES:**
- 1 UTILITY GROUND ROD & WIRE, PER NEC LATEST EDITION
 - 2 FOR DETAILED EQUIPMENT GROUNDING SEE SHEET C-13.0
 - 3 INSPECTION WELL (TYP. 2), SEE SHEET C-13.0
 - 4 2 AWG SOLID TINNED BCW ICE BRIDGE CONNECTION
 - 5 3/4"X10'-0" LONG COPPER CLAD STEEL GROUND ROD @ 10' O.C. (TYP.) SEE SHEET C-13.0
 - 6 2 AWG SOLID TINNED BCW TOWER GROUND RING, MIN. 6" BELOW FROST DEPTH, SEE NOTE 2.
 - 7 EXOTHERMIC WELD CONNECTION (TYP.)
 - 8 FENCED COMPOUND ACCESS GATE (TYP. 2)

1 GROUNDING PLAN
SCALE: 1" = 10'



DATE	REVIEW	BY
08/16/22	INTERNAL REVIEW	JAP
08/19/22	CLIENT REVIEW	JAP
09/22/22	CLIENT REVIEW	JAP
11/07/22	CITY COMMENTS	JAP
11/09/22	CITY COMMENTS	JAP

GROUNDING RISER KEY NOTES:

- 1

2 AWG SOLID TINNED BCW, EXOTHERMIC WELD TO GROUND RING
- 2

2 AWG SOLID TINNED BCW, EXTERNAL GROUND RING, 6" BELOW FROST DEPTH (MIN.)
- 3

3/4" X 10' LONG COPPER CLAD STEEL GROUND ROD, CONNECT TO GROUND RING w/ EXOTHERMIC WELD, (TYP.)
- 4

EQUIPMENT CABINET
- 5

(2) 2 AWG SOLID TINNED INSULATED GREEN CU, GROUND WIRE w/ EXOTHERMIC WELD
- 6

LIGHT FIXTURE
- 7

PPC CABINET
- 8

MASTER GROUND BUS BAR
- 9

2 AWG SOLID TINNED BCW, EQUIPMENT GROUND (TYP.), TO PLINTH, RBS AND BBS
- 10

GPS ANTENNA
- 11

ICE BRIDGE FRAMING AND POST
- 12

CABLE GROUND KIT TO FURNISHED AND INSTALLED BY CONTRACTOR, (TYP. 1 PER CABLE)
- 13

6 AWG STRANDED INSULATED GREEN CU, CONNECT TO EGB w/ 2-HOLE LUG COMPRESSION, (TYP.)
- 14

EXOTHERMIC WELD CONNECTION
- 15

1/4"x4"x20" (TYP.) COLLECTOR GROUND BAR, THE TOP TGB SHALL BE ATTACHED TO TOWER BELOW ANTENNAS USING SS HARDWARE. 2 AWG SOLID TINNED BCW SHALL BE EXOTHERMICALLY WELDED TO THE GROUND BAR. 2 AWG SOLID TINNED BCW FROM THE GROUND BAR SHALL BE BONDED TO THE TOWER USING HARGER CPC CLAMP
- 16

2 AWG STRANDED INSULATED GREEN CU, GROUND SPLICE, 2 HOLE SS COMPRESSION LUG, (TYP.)
- 17

HYBRID/COAXIAL SIGNAL CABLES, (TYP.)
- 18

ANTENNA MOUNTING MAST GROUND WITH 2 AWG SOLID TINNED BCW TO MAST w/ SS HARDWARE, 2 HOLE SS COMPRESSION LUG TO SECTOR BAR, (TYP.)
- 19

AIR TERMINAL, BONDED w/ 2 AWG SOLID TINNED BCW, USE HARGER CPC CLAMP
- 20

NOT USED
- 21

2 AWG SOLID TINNED BCW, EXOTHERMIC WELD TO MAST, 2-HOLE SS COMPRESSION LUG CONNECTION TO SECTOR BUS, (TYP.)
- 22

1/4"x4"x20" (TYP.) LOWER COLLECTOR GROUND BAR. THE BOTTOM TGB SHALL BE ATTACHED TO THE TOWER USING STAINLESS STEEL HARDWARE BELOW THE TRANSMISSION CABLE GROUNDING KITS. (2) 2 AWG SOLID TINNED BCW SHALL BE EXOTHERMICALLY WELDED TO GROUND BAR. (2) 2 AWG SOLID TINNED BCW FROM GROUND BAR SHALL BE BONDED TO GROUND RING
- 23

1/4"x4"x20" (TYP.) COAX GROUND BAR. THE BOTTOM CGB SHALL BE ATTACHED TO THE ICE BRIDGE USING STAINLESS STEEL HARDWARE. THE TRANSMISSION CABLE GROUNDING KITS. (2) 2 AWG SOLID TINNED BCW SHALL BE EXOTHERMICALLY WELDED TO GROUND BAR. (2) 2 AWG SOLID TINNED BCW FROM GROUND BAR SHALL BE BONDED TO GROUND RING
- 24

TOWER FOUNDATION
- 25

PANEL ANTENNA (TYP.)
- 26

TOWER GROUND RING: 2 AWG SOLID TINNED BCW, SPACE @ 2'-0" FROM TOWER FOUNDATION MIN., OF, (3) 3/4"Øx10' LONG COPPER CLAD STEEL GROUND RODS
- 27

1/2" FLEX CONDUIT SEALED w/SILICONE. CONDUIT TO EXTEND 12" ABOVE & BELOW GRADE, (TYP.)
- 28

2 AWG SOLID TINNED BCW, BONDED TO TOWER BASE PLATE w/ SS HARDWARE & EXOTHERMICALLY WELDED TOWER GROUND RING, (TYP. 3, EQUALLY SPACED)
- 29

RAYCAP JUNCTION BOX, GROUNDED w/ 6 AWG STRANDED INSULATED GREEN CU TO EXTERNAL GROUND BAR w/ 2-HOLE LUG CONNECTION.
- 30

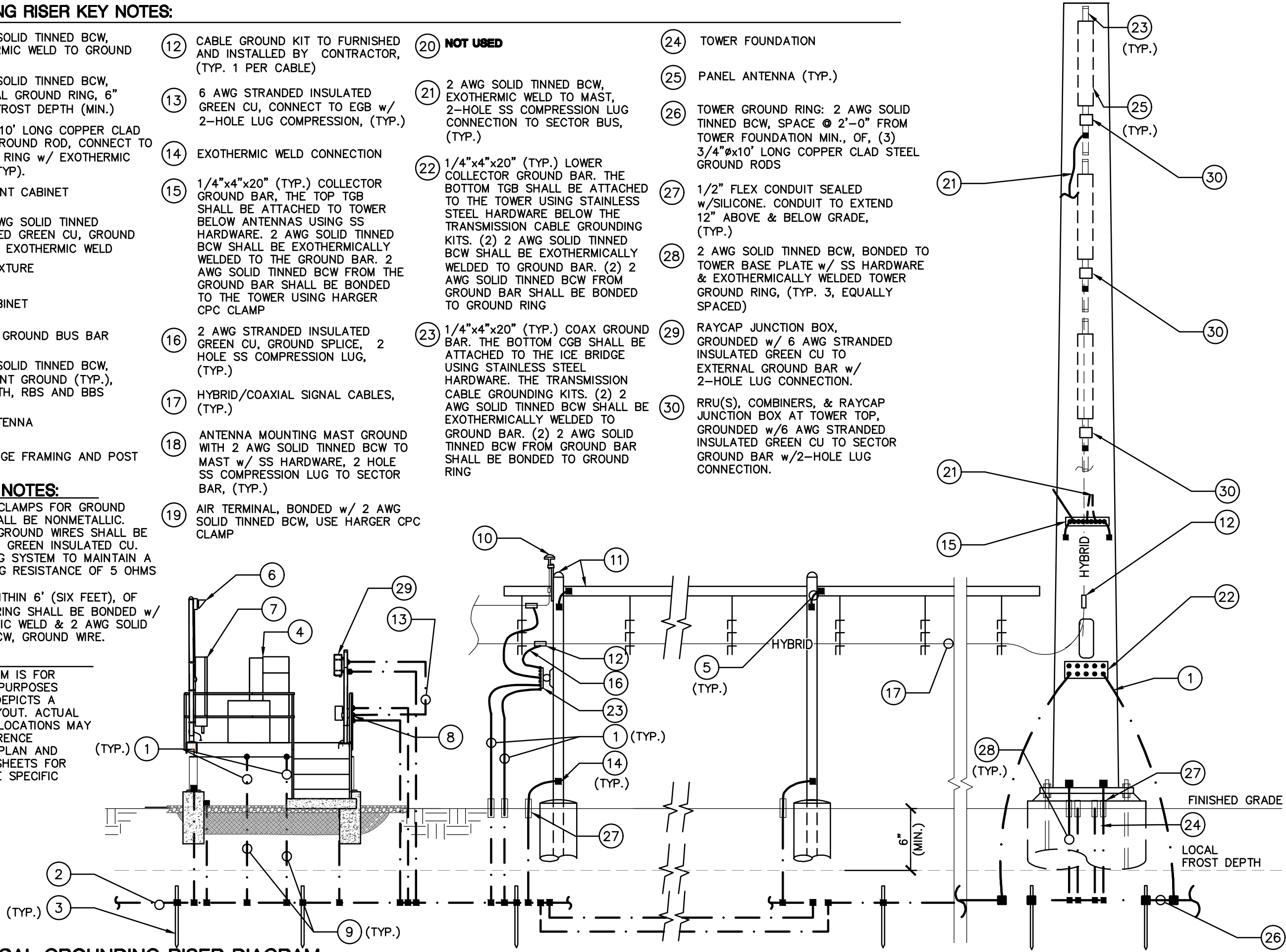
RRU(S), COMBINERS, & RAYCAP JUNCTION BOX AT TOWER TOP, GROUNDED w/6 AWG STRANDED INSULATED GREEN CU TO SECTOR GROUND BAR w/2-HOLE LUG CONNECTION.

GENERAL NOTES:

1. SUPPORT CLAMPS FOR GROUND WIRES SHALL BE NONMETALLIC.
2. INTERIOR GROUND WIRES SHALL BE STRANDED GREEN INSULATED CU.
3. GROUNDING SYSTEM TO MAINTAIN A GROUNDING RESISTANCE OF 5 OHMS OR LESS.
4. METALS WITHIN 6' (SIX FEET), OF GROUND RING SHALL BE BONDED w/ EXOTHERMIC WELD & 2 AWG SOLID TINNED BCW, GROUND WIRE.

NOTE:

THIS DIAGRAM IS FOR SCHEMATIC PURPOSES ONLY AND DEPICTS A TYPICAL LAYOUT. ACTUAL EQUIPMENT LOCATIONS MAY VARY. REFERENCE COMPOUND PLAN AND ELEVATION SHEETS FOR ACTUAL SITE SPECIFIC CONDITIONS.



1 TYPICAL GROUNDING RISER DIAGRAM
SCALE: NONE

PLATFORM STEALTH RISER

uscellular

12020 RIDGEMONT DR.
URBANDALE, IA 50323

PBM

Wireless Services
Think outside the triangle.

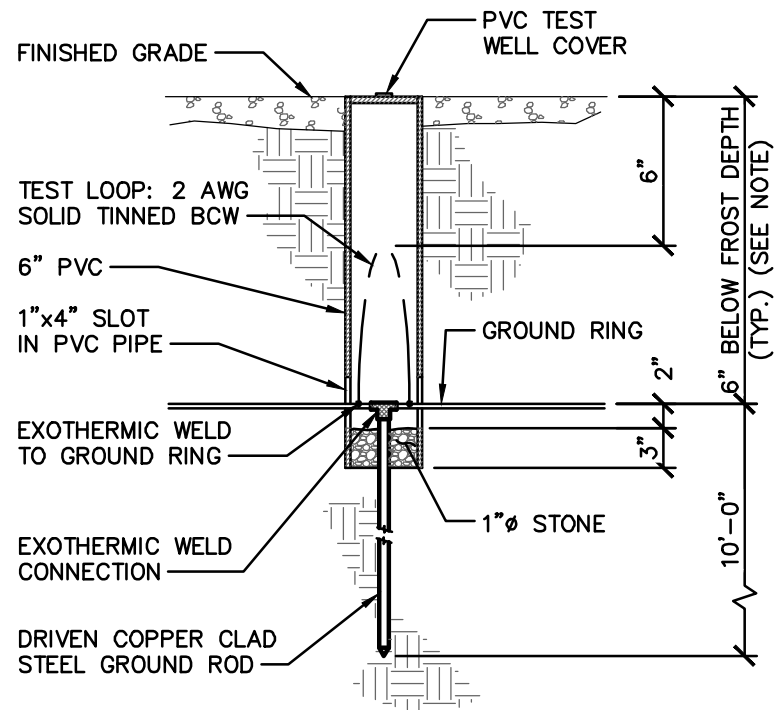
A	08/16/22	INTERNAL REVIEW	JAP
0	08/19/22	CLIENT REVIEW	JAP
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7601333 - ANKENY NE 36TH.
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NEW SITE BUILD - STEALTH MONOPOLE

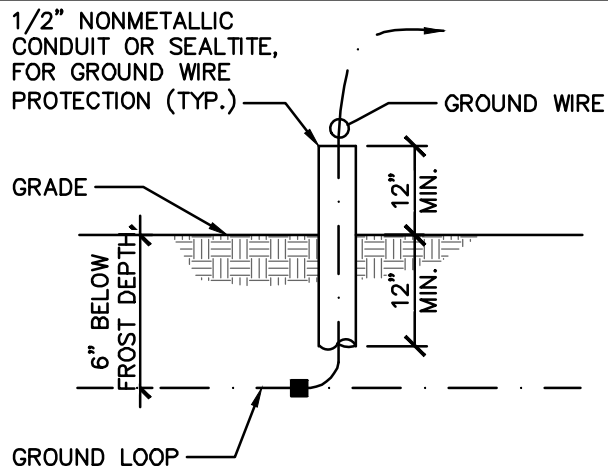
PROJ #: 22-06-04
DWG BY: JAP
CHKD BY: AJK

SHEET TITLE
GROUNDING
RISER

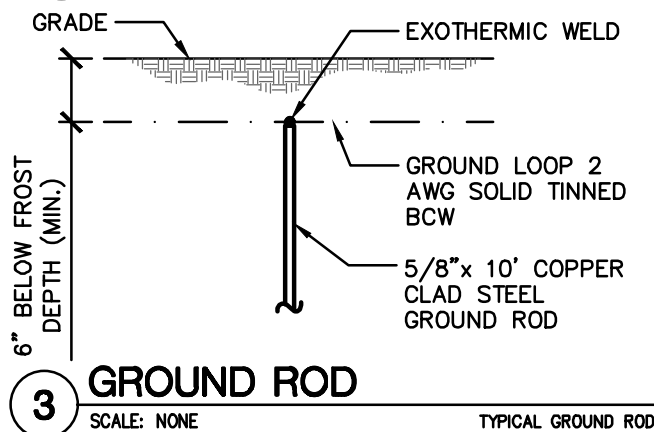
SHEET NUMBER
C-12.0



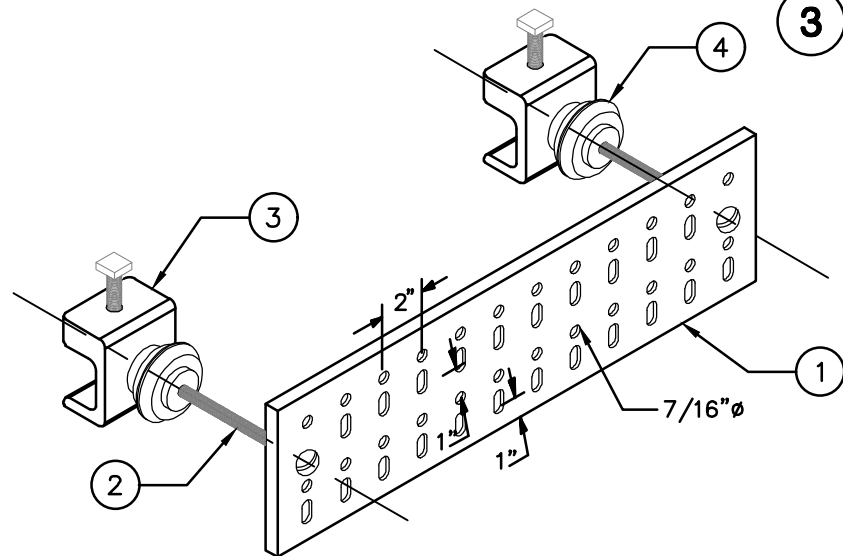
1 INSPECTOIN WELL DETAIL
SCALE: NONE GROUND INSPECTION WELL



TO BE USED WITH GROUND WIRES ENTERING THE EARTH.
2 GROUND WIRE PROTECTION
SCALE: NONE GROUND WIRE PROTECTION



3 GROUND ROD
SCALE: NONE TYPICAL GROUND ROD



KEY LEGEND

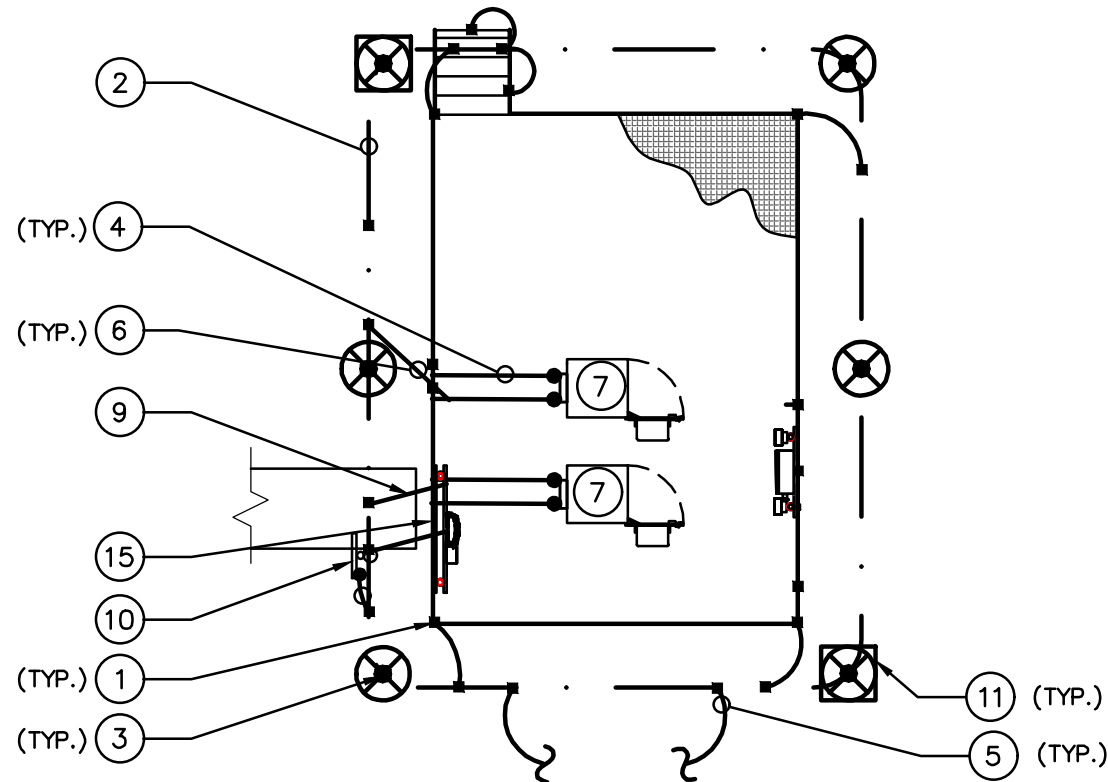
- 1 COPPER GROUND BAR, 1/4"x 4"x 20", HOLE CENTERS TO MATCH NEMA DOUBLE HOLE LUG CONFIGURATION.
- 2 3/8" STAINLESS STEEL BOLT
- 3 STAINLESS STEEL UNIVERSAL CLAMP
- 4 INSULATOR PROVIDED WITH GROUND BAR MOUNTING KIT (TYP. 2)

NOTE:

NO DRILLING, CUTTING OR WELDING SHALL BE DONE ON THE TOWER WHENEVER POSSIBLE, CONNECTIONS MUST BE MADE TO PRE-EXISTING HOLES ALREADY IN THE TOWER OR BY UTILIZING A UNIVERSAL CLAMP AS SHOWN.

4 GROUND BAR DETAIL

SCALE: NONE ISO-GROUND-BAR-20-HOLE



- 1 EXOTHERMIC WELD CONNECTION (TYP.)
- 2 2 AWG SOLID TINNED BCW, EQUIPMENT GROUND RING @ 6" BELOW FROST DEPTH.
- 3 3/4"x10'-0" LONG COPPER CLAD STEEL GROUND ROD, SPACE @ 10'-0" O.C. MAX. (TYP.)
- 4 6 AWG SOLID TINNED BCW, FOR EQUIPMENT FRAMES.
- 5 2 AWG SOLID TINNED BCW, CONNECT TO TOWER GROUND RING (TYP. 2)
- 6 2 AWG SOLID TINNED BCW, TO GROUND RING (TYP.)
- 7 U.S. CELLULAR EQUIPMENT CABINET
- 8 2 AWG SOLID TINNED BCW, FOR UTILITY RACK GROUNDING
- 9 6 AWG INSULATED STRANDED GREEN CU GROUND WIRE FOR COAX CABLE GROUND & RAYCAP JUNCTION BOX GROUND (TYP.).
- 10 COAX GROUND BUS BAR MOUNTED TO ICE BRIDGE POST
- 11 GROUND INSPECTION WELL, SEE DETAIL 1/C-13.0
- 12 MASTER GROUND BUS BAR MOUNTED TO BOTTOM OF UTILITY RACK

NOTES:

1. GROUND LEADS TO BE INSTALLED ON REAR SIDE OF EQUIPMENT.
2. SEE COMPOUND PLAN FOR CORRECT CABINET ORIENTATION (TYP.)

5 TYPICAL CABINET GROUNDING PLAN

SCALE: NONE

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2	11/07/22	CITY COMMENTS	JAP
3	11/09/22	CITY COMMENTS	JAP



6/13/2022

COMPLETE DESIGN SOLUTIONS
C/O DALTON CREACH
637 CORNETT BRANCH RD.
LAKE OZARK, MO 65049

Project Description: Proposed site for monopole and equipment compound. Need BFE to determine equipment platform height. 3950 N Ankeny Blvd. Ankeny, IA 50023.; (Unnamed Stream)

Project Latitude / Longitude Location(s): Buildings and Associated Fill 41.7638/-93.6009; Polk County

Iowa DNR Project ID Number: 2022-0695

Dear Dalton Creach:

This is in reference to your request for determination of the "100-year" flood elevation (a.k.a. the base flood elevation, or BFE) for the existing structure / property identified on your application. The Flood Insurance Rate Map (FIRM) for Polk County shows a portion of this property as being in the Special Flood Hazard Area (SFHA).

Based on the information available, we estimate the current existing condition 100-year flood elevation to be 946.1', NAVD88 at the upstream parcel boundary of the location referenced above. The floodway offset at this upstream boundary is 17 feet from the left (north) top of bank. The minimum elevation for any structures deemed as high-damage potential is 947.1'. You may download additional copies, or verify the Iowa DNR Flood Plain and Dam Safety Section (Department) official response document(s) for this project at the Iowa DNR Flood Plain PERMT website using the tracking number above. (PERMT Website Address: <https://programs.iowadnr.gov/permt/>)

Please be aware when planning future construction that elevating beyond the required 1 foot above the BFE will not only reduce flood risk, but might also result in lower flood insurance rates.

Please contact me by phone at 515-393-1891 or by email at Meesha.Legg@dnr.iowa.gov with any questions.

Sincerely,

Meesha Legg

Digitally signed by
Meesha Legg
Date: 2022.06.13
14:54:50 -05'00'

Meesha Legg

Flood Plain Management and Dam Safety Section



11/7/2022

ALBERT AGUIRRE
GSS INC
3311 109TH ST
URBANDALE, IA 50322

Project Description: Buildings and Associated Fill: 120' monopole cell tower. 30'x45' compound. 269' long access drive.; (Unnamed stream)

Project Latitude / Longitude Location(s): Buildings and Associated Fill 41.7637/-93.6016; Polk County

Iowa DNR Project ID Number: 2022-2251

Dear Albert Aguirre:

This letter is in response to your Flood Plain Development Permit application concerning the above referenced project. Based on the information received, the Iowa Department of Natural Resources has determined that the proposed project does not require a state Flood Plain Development Permit. You may download additional copies, or verify the Iowa DNR Flood Plain and Dam Safety Section (Department) official response document(s) for this project at the Iowa DNR Flood Plain PERMT website using the tracking number above. (PERMT Website Address: <https://programs.iowadnr.gov/permt/>)

The project may require a local flood plain development permit(s) from Ankeny. If you have not yet done so, please contact the following local Flood Plain Manager(s) for assistance in applying for the local flood plain permit(s):

- Ankeny: Deb Gervais , 1210 NW Prairie Ridge DR, Ankeny, IA, 50023-1564, DGervais@ankenyiowa.gov, 515-963-3558

No land or water, under the jurisdiction of the State of Iowa, is involved in the project area; therefore, a Sovereign Lands Construction Permit pursuant to Chapter 461A of the Iowa Code will not be required for this project.

The applicant is responsible for complying with all other local, state, and federal statutes, ordinances, rules, and permit requirements applicable to the construction, operation, and maintenance of the approved works. Approval through the Corps of Engineers Section 404 Permit Program may be required for this project. The Corps of Engineers will contact you separately regarding their approval. Questions can be directed to the Corps by phone at 309-794-5057 or by email at iowaregulatory@usace.army.mil.

Please contact me by phone at 515-393-1891 or by email at Meesha.Legg@dnr.iowa.gov with any questions.

Sincerely,

Meesha Legg

Digitally signed by
Meesha Legg
Date: 2022.11.07
15:34:07 -06'00'

Meesha Legg

Iowa DNR, Flood Plain Management and Dam Safety Section