

STAFF REPORT: 8/10/2022 REGULAR MEETING

PREPARED BY: D. RIEDEN

APPLICATION NUMBER: #22-7955

VIOLATION NUMBER: #21-469

ADDRESS: 4440 E. CANFIELD

HISTORIC DISTRICT: SWEETEST HEART OF MARY ROMAN CATHOLIC PARISH

APPLICANT: DAVID SCHOTT

PROPERTY OWNER: CATHOLIC ARCHDIOCESE

DATE OF PROVISIONALLY COMPLETE APPLICATION: 7/29/2022

DATE OF STAFF SITE VISITS: 8/1/2022, 9/30/2021

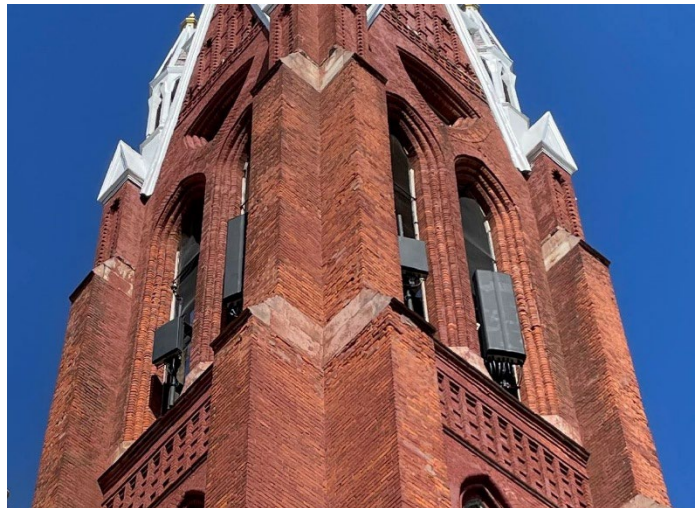
SCOPE: INSTALL TELECOMMUNICATION EQUIPMENT AT STEEPLE (WORK DONE WITHOUT APPROVAL)

EXISTING CONDITIONS

Built in 1893, the property at 4440 E. Canfield is a Victorian cruciform plan church built of red brick with stone trim and a patterned slate roof. The main entrance faces west and is distinguished by a stone base topped by a quatrefoil frieze over the main portal and twin buttressed towers mounted by octagonal spires. The spires house three large bells. A smaller spire intersects the nave with the transept. Ornamented, pointed gables, pinnacled buttresses and angled side entrances provide the nave façades with complexity of line and form. Lancet windows fenestrate the church with circled tracery of the tower and smaller windows of the north and south facades. Previously, HDC approved telecommunications equipment and a new exhaust louver within the south tower's bell tower openings. In 2021 installations have replaced this original equipment, and new, larger equipment is proposed, which is the subject of this application.



Site Photo 1, by Staff August 1, 2022: (West) front side



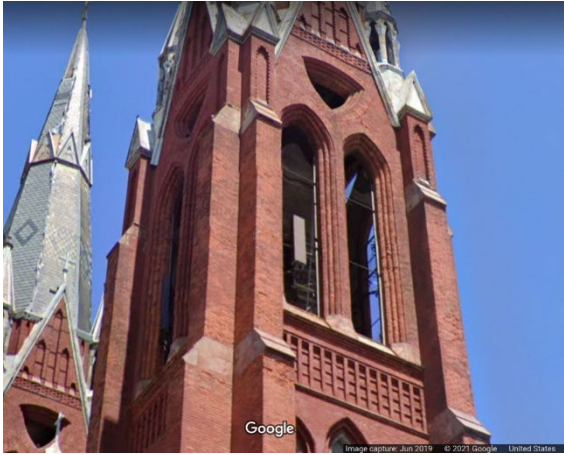
Site Photo 2, by Staff September 30, 2021: Southwest side of south tower showing currently installed telecommunications equipment outside the tower windows.

This property includes the following previous approvals:

- February 2005, COA: Install cell phone antenna equipment inside tower
- April 2016, COA: Replacement of existing TMA units within bell tower with new radio units mounted to interior walls of cell tower
- October 2017, COA: Replace slate with new synthetic roof shingles
- October 2019, COA: Install vents in one window opening

This property has the following outstanding violation for work done without approval:

- June 2021, Work Done Without Approval: Telecom equipment attached to tower exterior.



Site Photo 3, by Google Street 2019: South view of tower before equipment change.



Aerial of Parcel #07001241

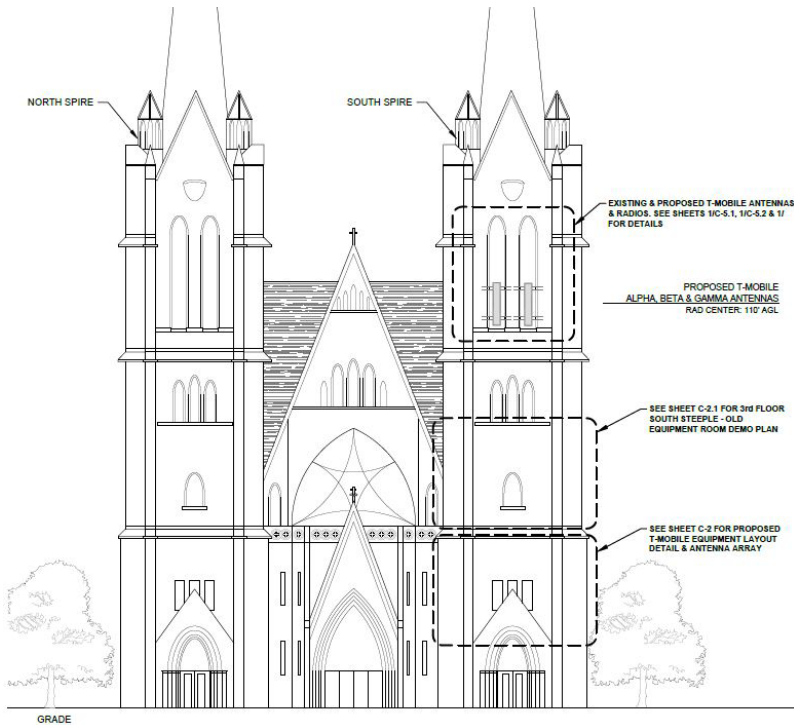


Fig. 1, by Applicant: West elevation depicting locations of antennas and interior equipment, C-5

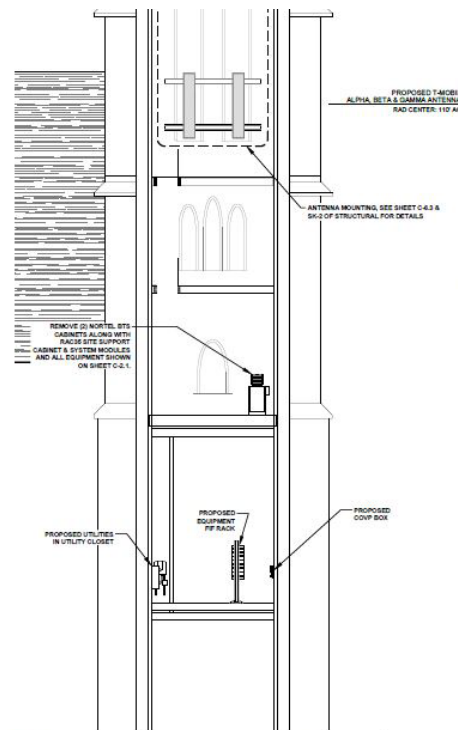


Fig. 2, by Applicant, C-5: Detail of west elevation depicting locations of antennas and interior equipment to be relocated from 3rd floor to 2nd floor (previously approved COA in 2019), C-5

PROPOSAL

The proposed work consists of the relocation and upgrade of telecommunications (T-Mobile) equipment at the existing telecommunication site. Although this work has been previously approved, the work located in the upper south tower has installed antenna equipment in a manner that is not in compliance with the 2016 COA. This proposal attempts to correct this location and proposes replacing existing antennas with new antennas.

The attached work for the installation of the 2nd story louver received a COA in October 2019, however the work of installation of this louver has not yet been executed. (See also applicant photos and attachments):

South Tower, Upper Steeple (Exterior)

- Removal of one (1) Commscope RRVV-33B-R3 antenna (72”l x 25.2”w x 9.3”d) and three (3) Commscope RV4PX306R antennas (63”l x 13.9”w x 8.2”d)
- Removal of several radios, amplifiers and cables as listed in attached drawings.
- Installation of three (3) Commscope FFHH-65C-R3 antennas (95”l x 25.2”w x 9.3d) and three (3) Nokia AAHF (Massive MIMO) antennas (35.4” x 21”w x 8.3”d)
- All proposed antennas require a fabric cover in a color/design approved by the landlord. This fabric is Sunbrella’s 100% acrylic material, black in color, to be placed over each antenna, taped closed.
- Installation of six (6) radios, six (6) diplexers, and support equipment installed interior to the tower as listed and shown in the attached drawings.

STAFF OBSERVATIONS AND RESEARCH

- The Sweetest Heart Of Mary Roman Catholic Parish Historic District was established in 1981.
- Staff identified that the south church tower is a distinctive character-defining feature of this property. The current location of the new antenna equipment breaks the exterior plane of the building by obscuring and negatively altering these character-defining features.
- Staff observed that prior location (2019) of the equipment was located slightly outside or nearly flush to the tower’s openings.
- Staff observed that the current location of the antennas protrudes outside the openings of the south tower steeple, which is in violation of the 2016 HDC Certificate of Appropriateness that permitted the location of the equipment to the tower’s interior walls. (See attached 2016 COA)
- The current proposal of new antenna equipment is also not in compliance with the 2016 COA: the equipment is larger (increasing in height or width), more numerous (increasing from 4 antennae to 6) and still located in a manner that extrudes beyond the tower’s window openings.
- While the proposal includes a cover for the equipment, staff has not seen specific drawings that shows how this cover will work. It is staff’s opinion that screening this equipment in this current proposed configuration is problematic and only introduces more material that is historically inappropriate.
- Staff confirmed that the 2nd Floor interior change of equipment has no effect on the exterior of the building since the HDC approval of the 2nd floor louver.

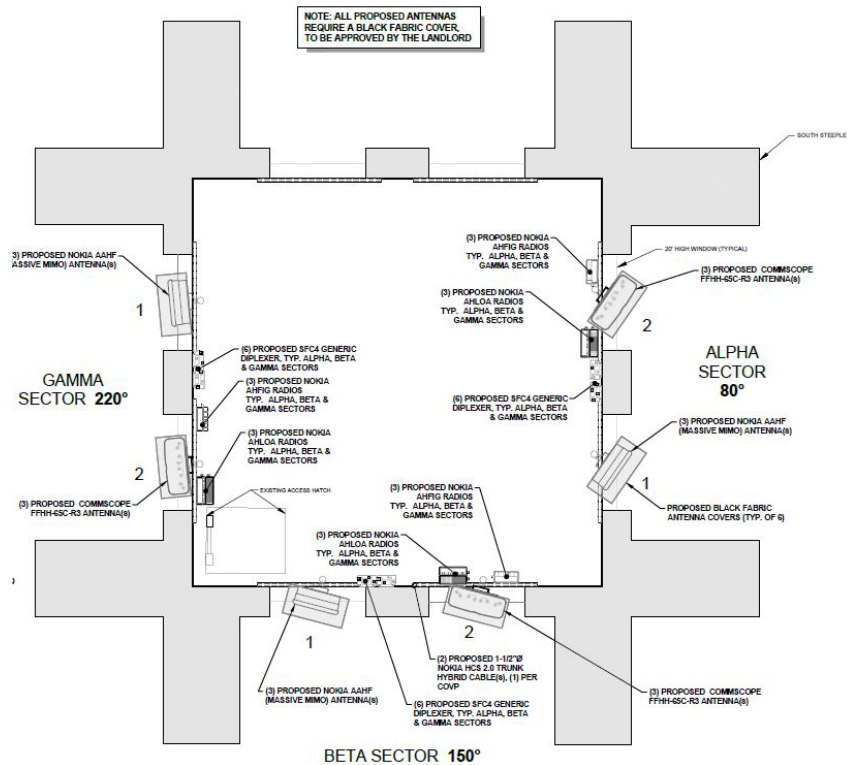


Fig. 3, by Applicant: Detail of South tower antenna plan, C-4, showing proposed new antennas protruding past the exterior plane of the tower wall.

- Staff received confirmation with the applicant that the following timeline of activities since the last meeting with HDC in 2019 is correct:
 - October 2019: HDC approved the installation of a new louver on the 2nd floor of the south tower to allow for the ventilation of the new location of equipment which was moved from the 3rd floor.
 - September 2020: Applicant received BSEED permit to relocate equipment from 3rd floor to 2nd floor of south tower and replace antenna equipment in steeple.
 - October 2020- May 2021: Applicant relocated all equipment from 3rd to 2nd floor, but the louver and exhaust system has not yet been installed.
 - June 2021: HDC staff responded to complaint from the church community regarding the antenna equipment locations by issuing the applicant a Notice of Work Observed letter.
 - October 2021: Applicant withdrew their application from HDC meeting.

ISSUES

- The applicant installed equipment that was not in compliance with the 2016 HDC Certificate of Appropriateness without first seeking approval from the Commission.
- It is staff's opinion that the south church tower is a distinctive, character-defining feature of this property. The current location of the new antenna equipment (i.e., projecting through the tower opening, breaking the plane of the exterior wall surface) detracts from the historic character of the building and therefore inappropriate.
- The proposed location and scale of the new antenna equipment appears to have even a larger negative impact than the current conditions and would further detract from the historic character of the building and therefore is inappropriate, in staff's opinion.
- It is staff's opinion that fabric covering the equipment is not a solution to the protrusion of the equipment, and can cause further issues with wear and tear by weather exposure. Equipment location, scale and color (black) should be the focus of the solution rather than an attempt to screen the equipment with material.

RECOMMENDATION

Section 21-2-78, Determination of Historic District Commission

Recommendation: Install Telecommunication Equipment At Steeple

Staff finds that the relocation of the telecommunication antenna equipment to the exterior, rather than the previously approved interior and the application of screen material, detracts from the historic character of this property and obscures distinctive, character-defining features of the south church tower.

Staff therefore recommends that the Commission issue a Denial for the above work items, as it does not meet the Secretary of the Interior's Standards for Rehabilitation, specifically Standards:

2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.

9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.





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EQUIPMENT RENTALS





S. CECILIA
ROKU 1894



Coleman A. Young Municipal Center
2 Woodward Avenue, Suite 808
Detroit, Michigan 48226

Phone: 313.224.1762
hdviolations@detroitmi.gov
www.detroitmi.gov/hdc

June 30, 2021

Mooney Real Estate Holdings
12 State Street
Detroit, MI 48226-1808

RE: Property at 4440 E. Canfield St.; Sweetest Heart of Mary Roman Catholic Parish Historic District

NOTICE OF WORK OBSERVED

Dear Property Owner,

According to the City of Detroit's records, you are the owner of **4440 E. Canfield St.** which is located in the **Sweetest Heart of Mary Roman Catholic Parish** Historic District. While recently performing routine fieldwork, Historic District Commission staff observed that the following modifications have been made to the exterior of the property, which according to our records, was performed without approval of the Historic District Commission ("Commission"):

- **Installation of cellphone tower equipment on exterior of church tower**

If this work was approved by the Commission, please provide us a copy of the decision letter associated with the work listed above as soon as you are able but no later than **July 30, 2021**.

If this work was not approved by the Commission, you must submit an application so that the Commission will address the work. Please complete and submit the attached Project Review Request form (including all check-list items) along with the supporting documents listed in the enclosed brochure for the above-listed exterior modifications.

If neither a copy of the decision letter nor a completed form and supporting documentation has not been received by the date above, additional enforcement activity will be initiated.

If you are no longer the owner of the property or have questions, please contact HDC staff at HDviolations@detroitmi.gov.

For the Commission:

Daniel Rieden,
Staff
Detroit Historic District Commission

cc: Mr. Lawrence Wilks
4440 E. Canfield St.
Detroit, MI 48207

April 14, 2016

CERTIFICATE OF APPROPRIATENESS

T-Mobile
28505 Schoolcraft Rd, Bldg. #6
Livonia MI 48150

**RE: Application Number 16-4584, 4440 E Canfield; Sweetest Heart of Mary R.C.
Church Historic District**

Dear Mr. Stricker:

Pursuant to Section 5(10) of the Michigan Local Historic District Act, as amended, being MCL 399.205(10), MSA 5-3407(5)(10); Section 25-2-57(b) of the 1984 Detroit City Code; Detroit Historic District Commission Resolution 97-01 (adopted August 13, 1997); Detroit Historic District Commission Resolution 97-02 (adopted October 8, 1997); and Detroit Historic District Commission Resolution 98-01 (adopted February 11, 1998), the staff of the Detroit Historic District Commission has reviewed the above-referenced application for building permit and hereby issues a Certificate of Appropriateness (COA) which is effective as of October 1, 2021.

Staff finds the below-listed work items appropriate for the following reason:

The replacement of existing TMA units with similar units within the bell tower, and the installation of new radio modules to the interior walls of the bell tower meets the “Secretary of the Interior’s Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings” standard number #9) *New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.*

Please retain this COA for your files. You should now proceed to the City of Detroit Buildings Safety and Engineering Department to obtain a building permit. The Detroit Historic District Commission’s approval and issuance of a Certificate of Appropriateness does not waive the applicant's responsibility to comply with any other applicable ordinances or statutes. If you have any questions regarding this letter, please contact me at (313) 224-6543.

For the Commission:

Audra Dye
Staff
Detroit Historic District Commission

11/4/2019

CERTIFICATE OF APPROPRIATENESS

T.J. Garrett
10059 Bergin Road
Howell, MI

RE: Application Number 19-6495; 4440 E. Canfield; Sweetest Heart of Mary Historic District

Dear Mr. Garrett,

At the regular scheduled meeting that was held on 10/9/2019, the Detroit Historic District Commission (“Commission”) reviewed the above-referenced application for building permit. Pursuant to Section 5(10) of the Michigan Local Historic District Act, as amended, being MCL 399.205, MSA 5-3407(5)(10) and Section 21-2-73 of the 2019 Detroit City Code; the Commission has reviewed the above-referenced application for building permit and hereby issues a Certificate of Appropriateness, which is effective as 10/9/2019.

The Commission issued a Certificate of Appropriateness for the following work items because they meet the Secretary of Interior’s Standards for Rehabilitation 9) *New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.*

- At the north elevation, second story window at the tower, remove the lower light from the sash in install. replaced with (2) 13”x22” intake and exhaust louvers. Louver color to match beige stonework (Greenheck manufacturer, color: sierra tan/ color code: GF118)

Please retain this COA for your files. You should now proceed to obtain a building permit from the City of Detroit Buildings, Safety, Engineering and Environmental Department. It is important to note that approval by the Detroit Historic District Commission does not waive the applicant's responsibility to comply with any other applicable ordinances or statutes. If you have any questions regarding the foregoing, please contact me at 313-224-3521.

For the Commission:



Jennifer Ross
Architectural Historian
Detroit Historic District Commission

THIS IS A 3-PAGE FORM - ALL INFORMATION IS REQUIRED FOR PROJECT REVIEW

HISTORIC DISTRICT COMMISSION PROJECT REVIEW REQUEST

City of Detroit - Planning & Development Department
2 Woodward Avenue, Suite 808
Detroit, Michigan 48226

DATE: 7-11-22

PROPERTY INFORMATION

ADDRESS(ES): 4440 E. Canfield St

AKA: 4400 Russell St

PARCEL ID: 07001241.

HISTORIC DISTRICT: Sweetest Heart of Mary Roman Catholic Parish

SCOPE OF WORK: (Check ALL that apply)

<input type="checkbox"/> Windows/ Doors	<input type="checkbox"/> Walls/ Siding	<input type="checkbox"/> Painting	<input type="checkbox"/> Roof/Gutters/ Chimney	<input type="checkbox"/> Porch/Deck/ Balcony	<input type="checkbox"/> Addition
<input type="checkbox"/> Demolition	<input type="checkbox"/> Signage	<input type="checkbox"/> New Building	<input type="checkbox"/> Major Alteration (3+ scope items)	<input checked="" type="checkbox"/> Site Improvements (landscape, trees, fences, patios, etc.)	

BRIEF PROJECT DESCRIPTION: T-Mobile to relocate and cover antennas to bring them back within the boundaries previously set by HDC approvals. Additionally, the previously approved exhaust ductwork in the equipment room will be installed.

APPLICANT IDENTIFICATION

Property Owner/
Homeowner

Contractor

Tenant or
Business Occupant

Architect/Engineer/
Consultant

NAME: David Schott

COMPANY NAME: Haley Law Firm on behalf of T-Mobile

ADDRESS: 10059 Bergin Rd

CITY: Howell

STATE: MI

ZIP: 48843

PHONE: 517-518-8623

MOBILE: 248-978-1562

EMAIL: dschott@haleywirelessgroup.com

PROJECT REVIEW REQUEST CHECKLIST

Please attach the following documentation to your request:

PLEASE KEEP FILE SIZE OF ENTIRE SUBMISSION UNDER 30MB

Completed Building Permit Application
(highlighted portions only)

ePLANS Permit Number (only applicable if you've already applied for permits through ePLANS)

Current Photographs: Including the front of the building & detailed photographs of the area(s) affected by the proposed work. All photographs must be labeled or captioned, e.g. "west wall", "second floor window," etc.

Description of existing conditions (including materials and design)

Description of project (if replacing any existing material(s), include an explanation as to why replacement--rather than repair--of existing and/or construction of new is required)

Detailed scope of work (formatted as bulleted list)

Brochure/cut sheets for proposed replacement material(s) and/or product(s), as applicable

Upon receipt of this documentation, staff will review and inform you of the next steps toward obtaining your building permit from the Buildings, Safety Engineering and Environmental Department (BSEtED) to perform the work.

NOTE:

Based on the scope of work, additional documentation may be required.

See www.detroitmi.gov/hdc for scope-specific requirements.

SUBMIT COMPLETED REQUESTS TO: HDC@DETROITMI.GOV

P2 - BUILDING PERMIT APPLICATION

Date: 7-11-22

PROPERTY INFORMATION

Address: 4440 E. Canfield St Floor: _____ Suite#: _____ Stories: _____

AKA: 4400 Russell St Lot(s): _____ Subdivision: _____

Parcel ID#(s): _____ Total Acres: _____ Lot Width: _____ Lot Depth: _____

Current Legal Use of Property: _____ Proposed Use: _____

Are there any existing buildings or structures on this parcel? Yes No

PROJECT INFORMATION

Permit Type: New Alteration Addition Demolition Correct Violations

Foundation Only Change of Use Temporary Use Other: _____

Revision to Original Permit #: _____ (Original permit has been issued and is active)

Description of Work (Describe in detail proposed work and use of property, attach work list)

T-Mobile to relocate and cover antennas to bring the antennas back within approved HDC boundaries.

Additionally, the previously approved exhaust ductwork in the equipment room will be installed.

MBC use change No MBC use change

Included Improvements (Check all applicable; these trade areas require separate permit applications)

HVAC/Mechanical Electrical Plumbing Fire Sprinkler System Fire Alarm

Structure Type

New Building Existing Structure Tenant Space Garage/Accessory Building

Other: _____ Size of Structure to be Demolished (LxWxH) _____ cubic ft.

Construction involves changes to the floor plan? Yes No

(e.g. interior demolition or construction to new walls)

Use Group: U Type of Construction (per current MI Bldg Code Table 601) II-B

Estimated Cost of Construction \$ 10,000 \$ _____
By Contractor By Department

Structure Use

Residential-Number of Units: _____ Office-Gross Floor Area _____ Industrial-Gross Floor Area _____

Commercial-Gross Floor Area: _____ Institutional-Gross Floor Area _____ Other-Gross Floor Area _____

Proposed No. of Employees: _____ List materials to be stored in the building: _____

PLOT PLAN SHALL BE submitted on separate sheets and shall show all easements and measurements (must be correct and in detail). SHOW ALL streets abutting lot, indicate front of lot, show all buildings, existing and proposed distances to lot lines. (Building Permit Application Continues on Next Page)

For Building Department Use Only

Intake By: _____ Date: _____ Fees Due: _____ DngBld? No

Permit Description:

Permit #:

Current Legal Land Use: _____ Proposed Use: _____

Permit#: _____ Date Permit Issued: _____ Permit Cost: \$ _____

Zoning District: _____ Zoning Grant(s): _____

Lots Combined? Yes No (attach zoning clearance)

Revised Cost (revised permit applications only) Old \$ _____ New \$ _____

Structural: _____ Date: _____ Notes: _____

Zoning: _____ Date: _____ Notes: _____

Other: _____ Date: _____ Notes: _____



IDENTIFICATION (All Fields Required)

Property Owner/Homeowner Property Owner/Homeowner is Permit Applicant

Name: Catholic Archdiocese Company Name: _____
Address: 4400 E. Canfield St City: Detroit State: MI Zip: 48207
Phone: *Contact Applicant: 248-978-1562 Mobile: n/a
Driver's License #: Applicant: S300135887047 Email: Applicant: dschott@haleywirelessgroup.com

Contractor Contractor is Permit Applicant

Representative Name: David Schott Company Name: T-Mobile
Address: 10059 Bergin Rd City: Howell State: MI Zip: 48843
Phone: 517-518-8623 Mobile: 248-978-1562 Email: dschott@haleywirelessgroup.com
City of Detroit License #: n/a - commercial

TENANT OR BUSINESS OCCUPANT Tenant is Permit Applicant

Name: T-Mobile Phone: 248-978-1562 Email: dschott@haleywirelessgroup.com

ARCHITECT/ENGINEER/CONSULTANT Architect/Engineer/Consultant is Permit Applicant

Name: Landtech - Matthew Mokanyk State Registration#: 51424 Expiration Date: _____
Address: 1275 McGregor Way City: Grawn State: MI Zip: 49637
Phone: 231-943-0050 Mobile: n/a Email: n/a

HOMEOWNER AFFIDAVIT (Only required for residential permits obtained by homeowner.)

I hereby certify that I am the legal owner and occupant of the subject property and the work described on this permit application shall be completed by me. I am familiar with the applicable codes and requirements of the City of Detroit and take full responsibility for all code compliance, fees and inspections related to the installation/work herein described. I shall neither hire nor sub-contract to any other person, firm or corporation any portion of the work covered by this building permit.

Print Name: _____ Signature: _____ Date: _____
(Homeowner)

Subscribed and sworn to before me this _____ day of _____ 20____ A.D. _____ County, Michigan

Signature: _____ My Commission Expires: _____
(Notary Public)

PERMIT APPLICANT SIGNATURE

I hereby certify that the information on this application is true and correct. I have reviewed all deed restrictions that may apply to this construction and am aware of my responsibility thereunder. I certify that the proposed work is authorized by the owner of the record and I have been authorized to make this application as the property owner(s) authorized agent. Further I agree to conform to all applicable laws and ordinances of jurisdiction. **I am aware that a permit will expire when no inspections are requested and conducted within 180 days of the date of issuance or the date of the previous inspection and that expired permits cannot be**

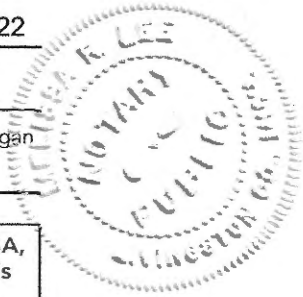
Print Name: David Schott Signature: [Signature] Date: 7-11-22
(Permit Applicant)

Driver's License #: S 300 135 887 047 Expiration: 1-17-2024

Subscribed and sworn to before me this 11th day of July 20 22 A.D. Livingson County, Michigan

Signature: [Signature] My Commission Expires: 10/13/2028
(Notary Public)

Section 23a of the state construction code act of 1972, 1972PA230, MCL 125.1523A, prohibits a person from conspiring to circumvent the licensing requirements of this state relating to persons who are to perform work on a residential building or a residential structure. Visitors of Section 23a are subject to civil fines.



This application can also be completed online. Visit detroitmi.gov/bseed/elaps for more information.



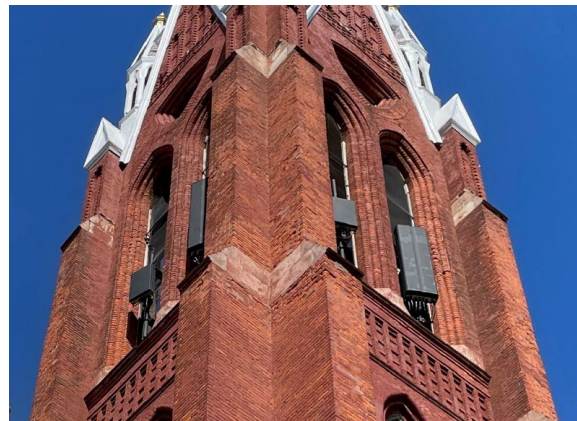
SWEETEST HEART OF MARY CATHOLIC CHURCH

T-Mobile site DE04229B

4440 E Canfield Street, d/b/a 4440 Russell Street
Detroit, Michigan 48207



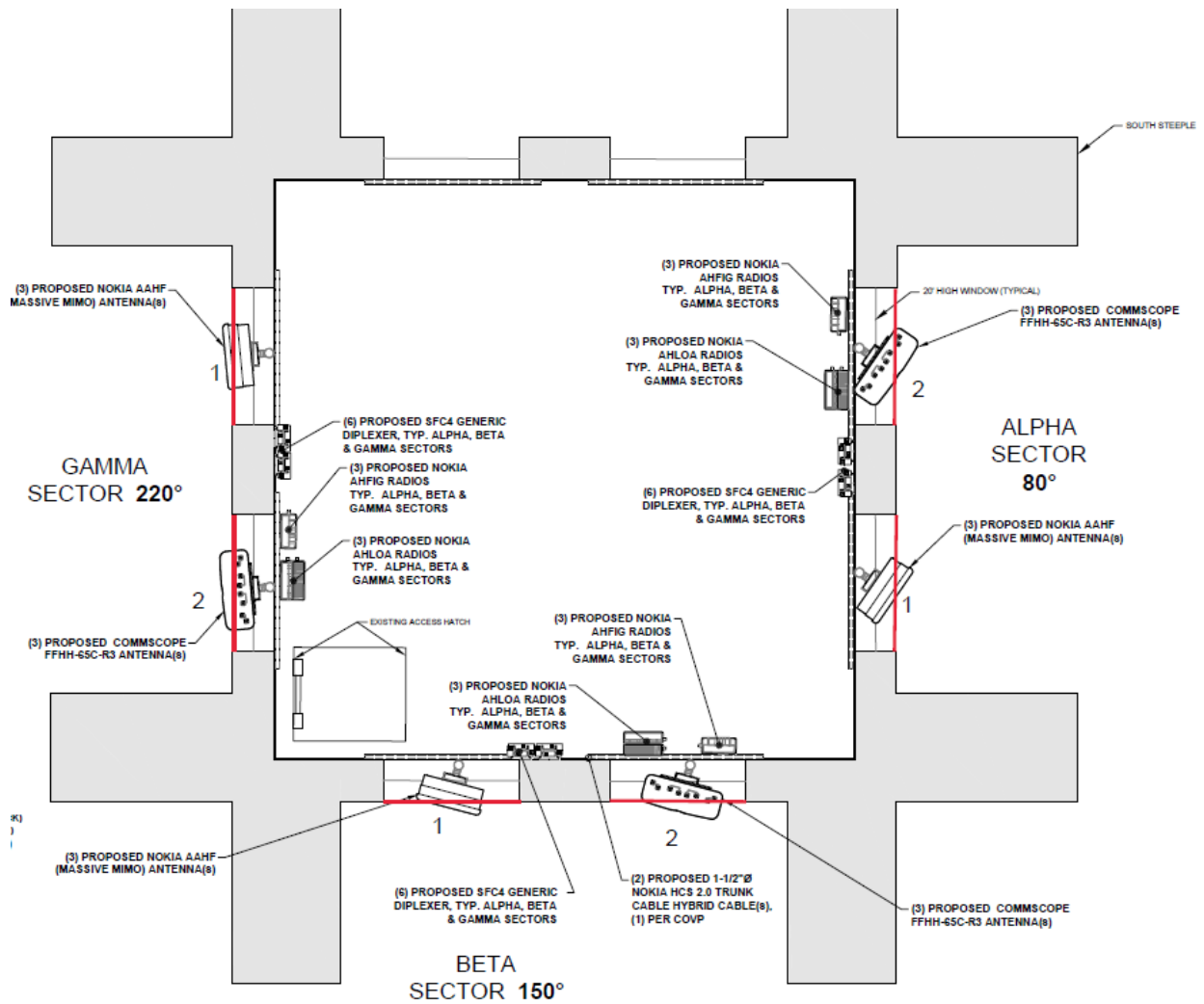
Front of Church (West)



T-Mobile Equipment (Southwest Tower)

Summary:

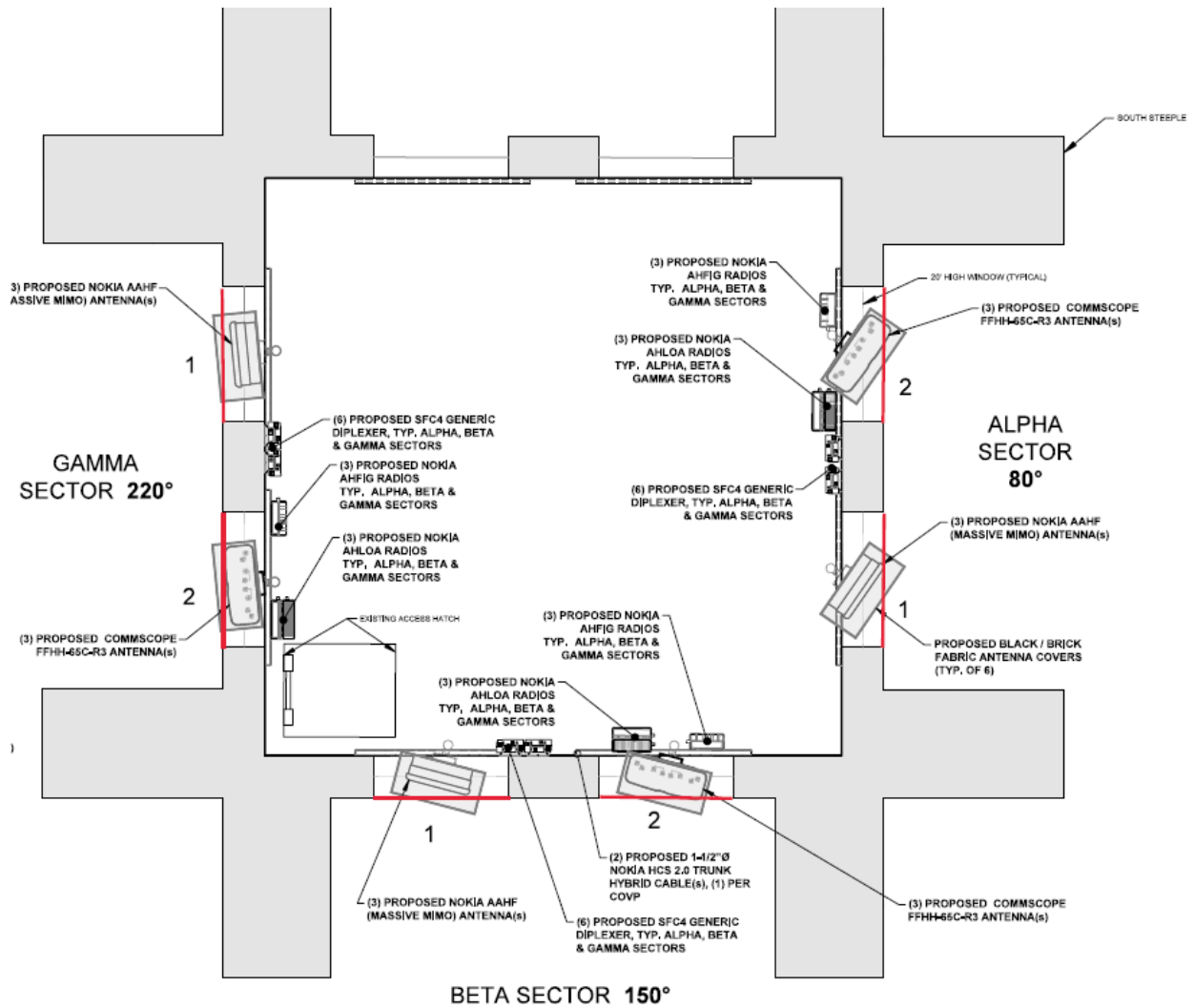
T-Mobile upgraded and relocated telecommunication equipment at an existing site in the southwest steeple of the Sweetest Heart of Mary Roman Catholic Parish. Due to miscommunication, the upgraded antennas were mounted past the exterior wall of the steeple. The exterior of the steeple was previously determined by the HDC to be the plane that the antennas would remain behind. The HDC alerted T-Mobile and Landlord that the antennas were not compliant with the previous approval and that they antennas were easily noticed. The below diagram shows the current placement of the antennas.



In addition, the exhaust system that was previously approved as part of the October 2019 HDC approval was never installed. This system needs to be installed to prevent the telecommunication equipment from overheating in the room. This exhaust system can be seen on page C-5.1 of the submitted drawings and has not changed from the previously approved.

Proposal:

T-Mobile has proposed moving the mounting points to the back of the existing racks that the antennas are mounted to (as seen on the diagram below).



This moves the antennas back inside the previously approved zone behind the exterior of the steeple. In addition, T-Mobile will cover antennas in a waterproof fabric to help blend them into the steeple. These are shown as a grey box on the drawings. However, they will be flush with the antennas and will not break the exterior of the steeple. The church has reviewed the proposed antenna changes and agrees that they will help reduce the visibility of the antennas. The Church is creating a rendering of colors for the antenna covers to see if it would be better to have a black fabric or a color similar to the existing bricks. This rendering will be completed at the end of July 2022. T-Mobile requests that the HDC approve this relocation and covering of the existing antenna.

Respectfully,

David Schott

Haley Law Firm, PLC

On behalf of T-Mobile Central, LLC

From: [David Schott](#)
To: [Dan Rieden](#)
Subject: [EXTERNAL] RE: 4440 E. Canfield - August 10, 2022 Detroit Historic District Commission Meeting
Date: Thursday, August 4, 2022 4:42:06 PM
Attachments: [Sunbrella Specs.pdf](#)

This Message Is From an External Sender

ATTENTION: This email was sent from an external source. Please be extra cautious when opening attachments or clicking links.

Hello Mr. Rieden,

Hope all is well, please see the below comments regarding the follow-up items. Please let me know if you want me to expand on any of them.

1. I have not yet received the renderings of the proposed covers; I have sent a follow-up and will send them over as soon as they are available. They will be made from a waterproof material and be black in color, I have attached the spec sheet for the intended material. They will be like a sock and slip over the top of the antennas. I can request a note be added to the drawings if that is necessary. The covers are the suggestion from the church; the same effect might be achievable through the change of the equipment encasements (if possible).
2. Newer: FFHH-65C-R3 (95.9"x25.2"x9.3")
AAHF (35.4"x21"x8.3")
Previous (before relocation and upgrade): RVV-33B-R3
(72.1"x25.2"x9.3") RV4PX306R (62.9"x13.9"x8.2")

As you can see, the newer FFHH are a little taller than the previous and the newer AAHF are a little shorter. Regarding width, the FFHH and AAHF are similar to the previous RVV antenna. And they are all the same relative width. The reason these newer antennas are less obstructive comes in the proposed mounting location. The newer antennas will be mounted from behind the frame, which brings the antennas themselves towards the tower and behind the exterior of the steeple wall.

3. The previous timeline is correct in the relocation/upgrade. What I meant to convey is that the previously approved exhaust system on pages C-5.1 and C-5.2 of the drawings was not built when the equipment was moved. This is important because the equipment will overheat if the exhaust system does not get installed, leading to poor performance. If you can send a portion of the application that you were questioning about, I can try to better explain.

Hopefully this helps, please let me know of any further questions that I can help with.

Thank you,

David Schott
Haley Law Firm, PLC
10059 Bergin Road
Howell, MI 48843
Office: 517-518-8623
Cell: 248-978-1562

From: Dan Rieden <riedenda@detroitmi.gov>
Sent: Tuesday, August 2, 2022 5:03 PM
To: David Schott <dschott@haleywirelessgroup.com>
Subject: RE: 4440 E. Canfield - August 10, 2022 Detroit Historic District Commission Meeting

Hi David,

I just wanted to reach out and say that I've reviewed your material and visited the site again. I would like to follow-up on a few items, as listed below. Would you be able to have this information ready by end of day Thursday?

1. You mentioned that there may be some renderings for the proposed equipment covers coming. Have you received these yet? We would like to see this material, understanding its materiality, color, placement, and texture. Please provide this information. Please indicate on the drawings how these covers will be applied. Are these covers required? Or could the same effect be achieved by changing the color of the equipment encasements?
2. The new tower equipment appears to be units that are nearly double in size of the original units. These larger size units appear to extend past the plane of the exterior tower wall. Can you describe how these new units are meant to be less obstructive in their location/size than the previous ones?
3. In a previously requested timeline of work, we received the following description. However, in your current application, you state that the equipment in this tower has not yet been moved. Can you please review this timeline and make any necessary edits (add/remove information that is not correct)?
 - a. October 2019: HDC approved the installation of a new louver on the 2nd floor of the south tower to allow for the ventilation of the new location of equipment which was moved from the 3rd floor.
 - b. September 2020: Applicant received BSEED permit to relocate equipment from 3rd floor to 2nd floor of south tower and replace antenna equipment in steeple.
 - c. October 2020- May 2021: Applicant relocated all equipment.

Thanks,

Daniel Rieden PLA/ASLA (he/him)

Lead Landscape Architect | Historic Preservation Team



2020 ANCHOR CONSTRUCTION DRAWINGS

**SITE NAME:
SWEETEST HEART OF MARY**

**SITE NUMBER:
DE04229B**

**STREET ADDRESS:
4440 E. CANFIELD D/B/A 4440 RUSSELL ST.
DETROIT, MICHIGAN 48207**



28505 SCHOOLCRAFT RD, BLDG#6
LIVONIA, MICHIGAN 48150
Phone: 734.367.7200
Fax: 734.367.7242

CONTACT: KEN KALOUSEK
(734) 444-0181

LANDTECH PROJECT NUMBER: 20398031

REV.	DATE	DESCRIPTION	BY
A	07/09/20	PRELIMINARY RELEASE	CJL
B	02/10/22	ADD'D ANT. COVER NOTE	TLR
C	03/30/22	RELOC PROP ANTENNAS	TLR

2020 ANCHOR CONSTRUCTION DRAWINGS

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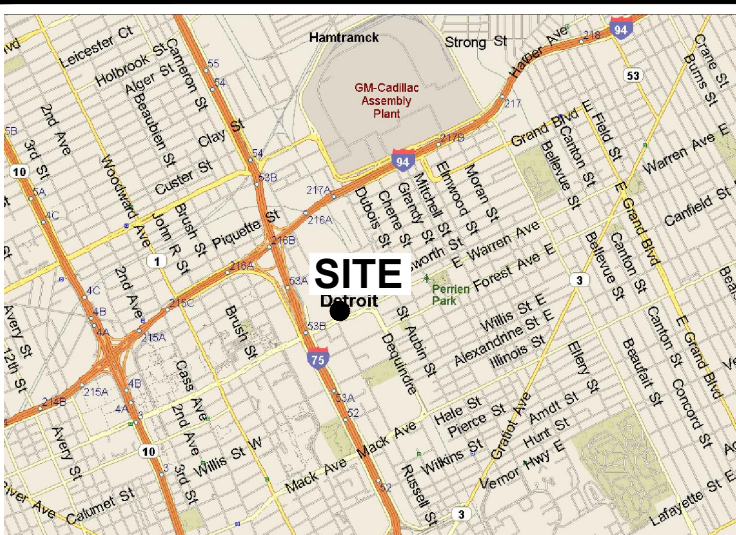
SITE #: DE04229B
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Sheet Title: TITLE SHEET

Sheet Number: T-1

FROM T-MOBILE OFFICE HEAD NORTH ON MERRIMAN ROAD TO I-96; TURN EAST ON I-96 AND CONTINUE TO I-75; TURN SOUTH ON I-75 AND PROCEED TO WARREN AVENUE; TURN EAST ON WARREN AVENUE AND CONTINUE TO RUSSELL STREET; TURN SOUTH ON RUSSELL STREET AND PROCEED TO CANFIELD STREET; SITE IS LOCATED AT THE NORTHEAST CORNER OF RUSSELL STREET AND CANFIELD STREET.

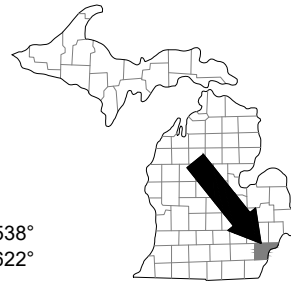
DRIVING DIRECTIONS



LOCATION MAP



**Know what's below.
Call before you dig.**



LATITUDE: 42.35805538°
LONGITUDE: -83.0480622°

FAA INFORMATION

THE UTILITIES SHOWN ON THESE DRAWINGS ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. OTHER UTILITIES THAT ARE NOT SHOWN MAY BE PRESENT AT THE SITE. LANDTECH ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS OF THE UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL UTILITIES WITHIN THE LIMITS OF THE WORK. ALL DAMAGE MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THIS SEAL CERTIFIES ONLY THE CIVIL ENGINEERING DESIGN AND RELATED DETAILS SHOWN ON THESE PLANS. THIS SEAL DOES NOT CERTIFY ANY ARCHITECTURAL, ELECTRICAL, MECHANICAL, STRUCTURAL DESIGN, AND RELATED DETAILS INCLUDED IN THESE PLANS.

UTILITY NOTICE

APPLICANT/LESSEE
NAME: T-MOBILE
ADDRESS: 28505 SCHOOLCRAFT ROAD, BLDG #6 LIVONIA, MI 48150
CONTACT: KEN KALOUSEK
PHONE: (734) 444-0181

PROPERTY INFORMATION
PROPERTY OWNER: CATHOLIC ARCHDIOCESE OF DETROIT
ADDRESS: 12 STATE STREET, DETROIT, MI 48226

CONTACT: PHONE:
AREA OF CONSTRUCTION: 165 SQ. FT.
PRESENT OCCUPANCY TYPE: ASSEMBLY
PROPOSED OCCUPANCY TYPE: ASSEMBLY
CURRENT ZONING:
PARCEL NUMBER: WARD 7, ITEM 001241
HANDICAP REQUIREMENTS: FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS NOT REQUIRED.

CIVIL ENGINEER & SURVEYOR:
NAME: LANDTECH PROFESSIONAL SURVEYING & ENGINEERING
ADDRESS: 1275 MCGREGOR WAY GRAWN, MI 49637
CONTACT: MATTHEW MOKANYK, P.S., P.E.
PHONE: (231) 943-0050

PROJECT SUMMARY

ATTENTION GC: THESE DRAWINGS ARE PREPARED BASED ON RFDS DATED: 06/03/20
GENERAL CONTRACTOR TO CHECK WITH CONSTRUCTION TO VERIFY THAT THE RFDS IS CORRECT.

RFDS DESIGN

TITLE	NAME	DATE
OPERATIONS		
RF ENGINEER		
ZONING ADMINISTRATOR		
CONSTRUCTION MANAGER		
POWER APPROVAL		
FIBER/AAV APPROVAL		

T-MOBILE APPROVALS

SIGNATURE _____ DATE _____
PRINTED NAME _____
 NO CHANGES CHANGES NEEDED SEE COMMENTS

LESSOR APPROVAL

SHEET	DESCRIPTION
T-1	TITLE SHEET
C-1	SITE PLAN
C-1.1	SITE PLAN
C-2	EQUIPMENT ROOM
C-2.1	FLOOR PLANS
C-3	EXISTING ANTENNA PLAN
C-4	PROPOSED ANTENNA PLAN
C-5	ELEVATION VIEW
C-5.1	PICTORIAL VIEWS
C-5.2	PICTORIAL VIEWS
C-6	EQUIPMENT DETAILS
C-6.1	EQUIPMENT DETAILS
C-6.2	ANTENNA DETAILS
C-6.3	MOUNTING DETAILS
SK-1	PLATFORM STRUCTURAL PLAN
SK-2	ANTENNA STRUCTURAL DETAIL
SK-3	PLATFORM STRUCTURAL DETAIL
E-1	CONDUIT CABLE SCHEMATIC
E-1.1	CABLE DETAILS
E-1.2	ELECTRIC DETAILS
E-2	ONE-LINE DIAGRAM
E-3	GROUNDING PLAN
E-3.1	GROUNDING DETAILS
E-3.2	GROUNDING SCHEMATIC
M-1	HVAC DETAILS
M-1.1	HVAC GENERAL NOTES
M-1.2	EXHAUST FAN & LOUVER SCHEDULE
N-1	GENERAL NOTES
N-2	GENERAL NOTES

SHEET INDEX

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

- 2015 MICHIGAN BUILDING CODE
- 2015 MICHIGAN MECHANICAL CODE
- ANSI / TIA-222-H
- NATIONAL ELECTRIC CODE 2017
- LOCAL BUILDING CODE
- CITY/COUNTY ORDINANCES
- 2015 MICHIGAN PLUMBING CODE
- INTERNATIONAL FIRE CODE
- 2015 MICHIGAN UNIFORM ENERGY CODE
- MIOSHA RULES AND REGULATIONS
- NFPA-101 LIFE SAFETY CODE

CITY OF DETROIT HAD ADOPTED MICHIGAN BUILDING CODE 2015 AND MICHIGAN REHABILITATION, PL FOLLOW.

USE GROUP: A-3
CONSTRUCTION TYPE: 1A

CODE COMPLIANCE

LEGEND

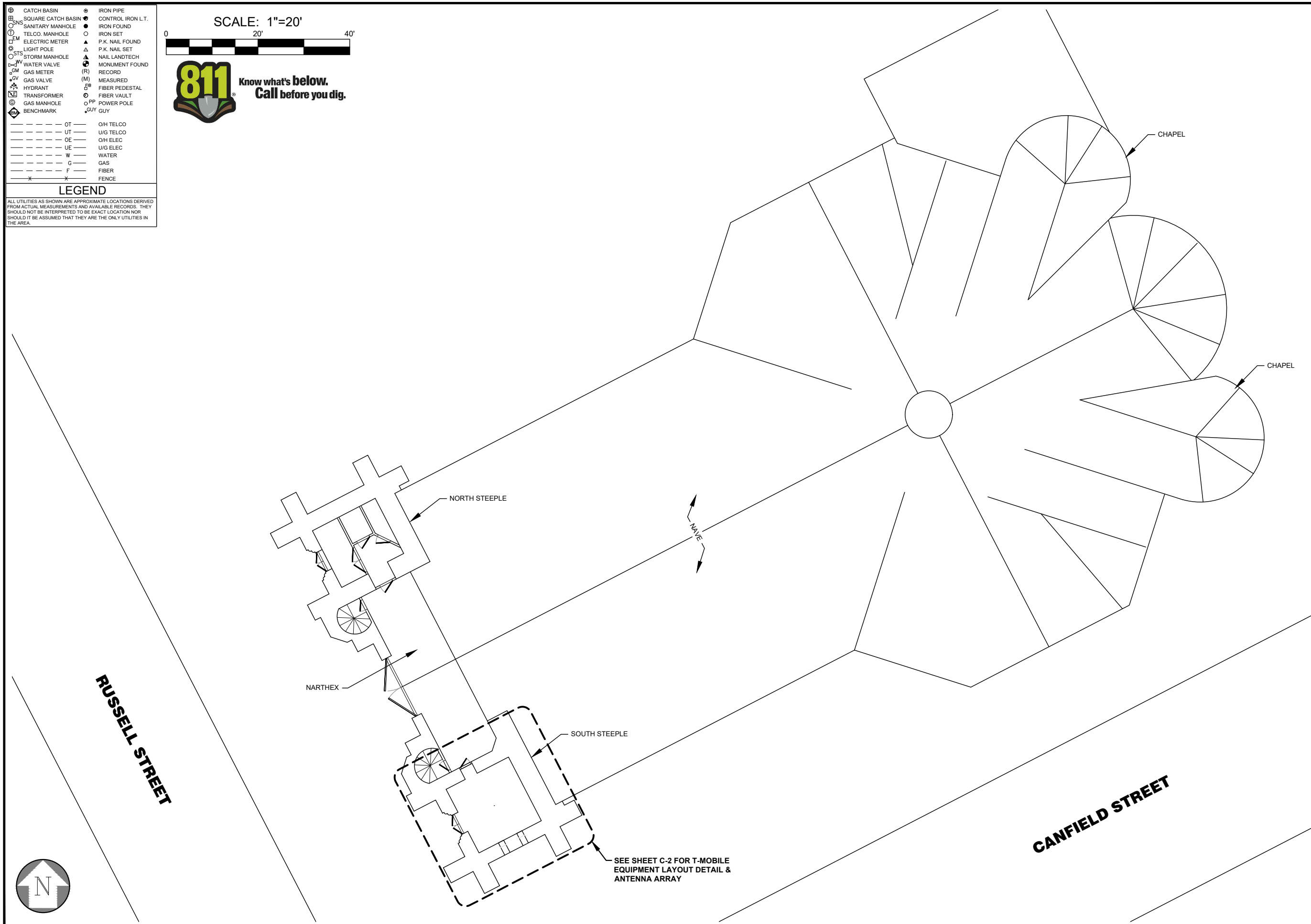
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⊕	SQUARE CATCH BASIN	⊙	CONTROL IRON L.T.
⊕	SANITARY MANHOLE	⊙	IRON FOUND
⊕	TELECO. MANHOLE	⊙	IRON SET
⊕	ELECTRIC METER	▲	P.K. NAIL FOUND
⊕	LIGHT POLE	▲	P.K. NAIL SET
⊕	STORM MANHOLE	▲	NAIL LANDTECH
⊕	WATER VALVE	▲	MONUMENT FOUND
⊕	GAS METER	(R)	RECORD
⊕	GAS VALVE	(M)	MEASURED
⊕	HYDRANT	⊕	FIBER PEDESTAL
⊕	TRANSFORMER	⊕	FIBER VAULT
⊕	GAS MANHOLE	⊕	POWER POLE
⊕	BENCHMARK	⊕	GUY

--- OT --- O/H TELCO
 --- UT --- U/G TELCO
 --- OE --- O/H ELEC
 --- UE --- U/G ELEC
 --- W --- WATER
 --- G --- GAS
 --- F --- FIBER
 --- X --- FENCE

ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THE AREA.

SCALE: 1"=20'

811 Know what's below. Call before you dig.



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B	02/10/22	ADD'D ANT. COVER NOTE	TLR
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Sheet Title:
SITE PLAN

Sheet Number:
C-1

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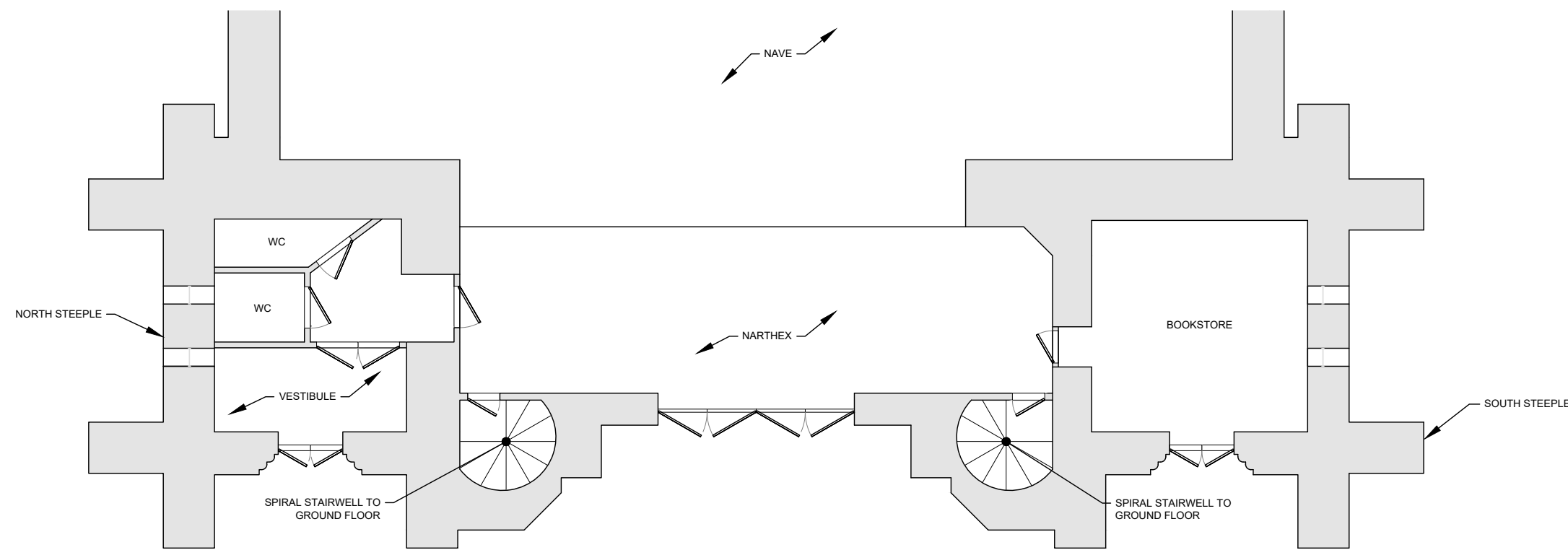
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Sheet Title: **SITE PLAN**

Sheet Number: **C-1.1**



GROUND FLOOR 1"=10'

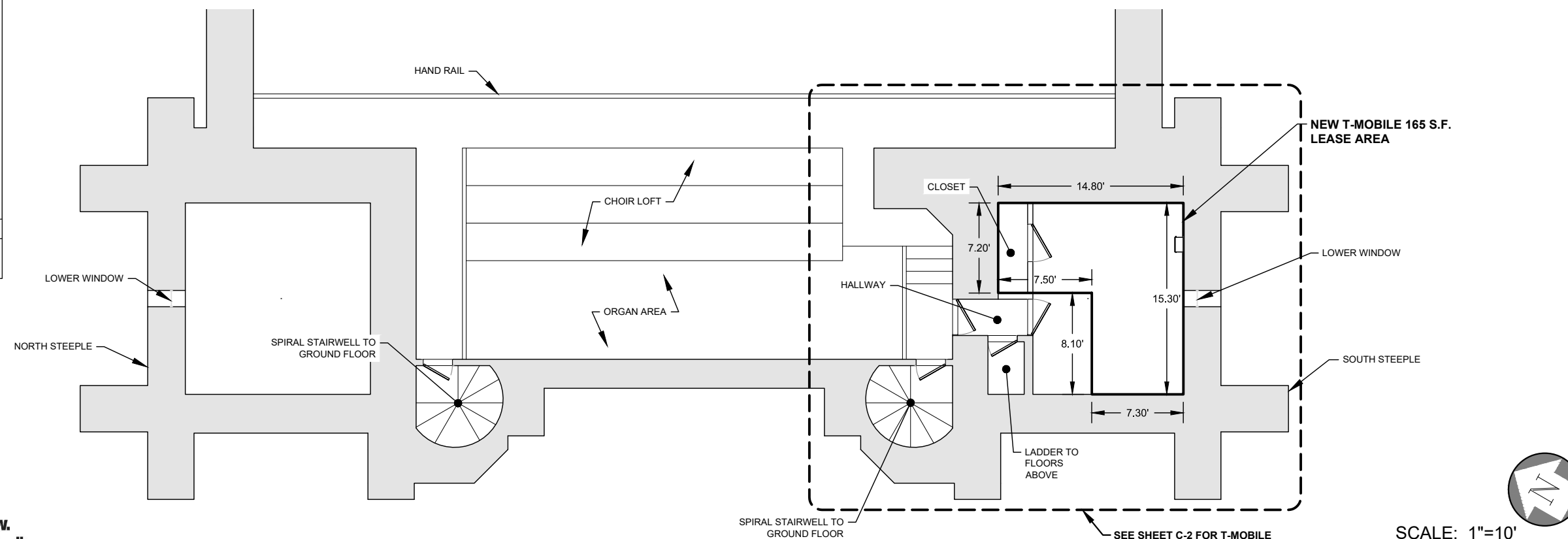
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LEGEND

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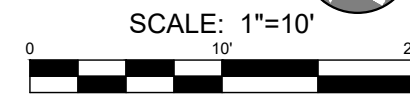
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⊕	SQUARE CATCH BASIN	⊙	CONTROL IRON L.T.
⊕	SANITARY MANHOLE	⊙	IRON FOUND
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⊕	BENCHMARK	⊕	GUY

---	OT	OH TELCO
---	UT	UG TELCO
---	OE	OH ELEC
---	UE	UG ELEC
---	W	WATER
---	G	GAS
---	F	FIBER
---	X	FENCE



SECOND FLOOR LOFT AND STEEPLE PLAN 1"=10'

1



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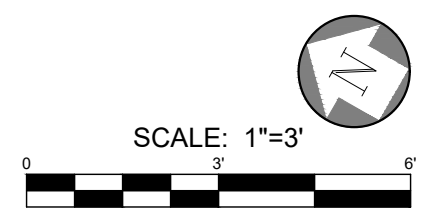
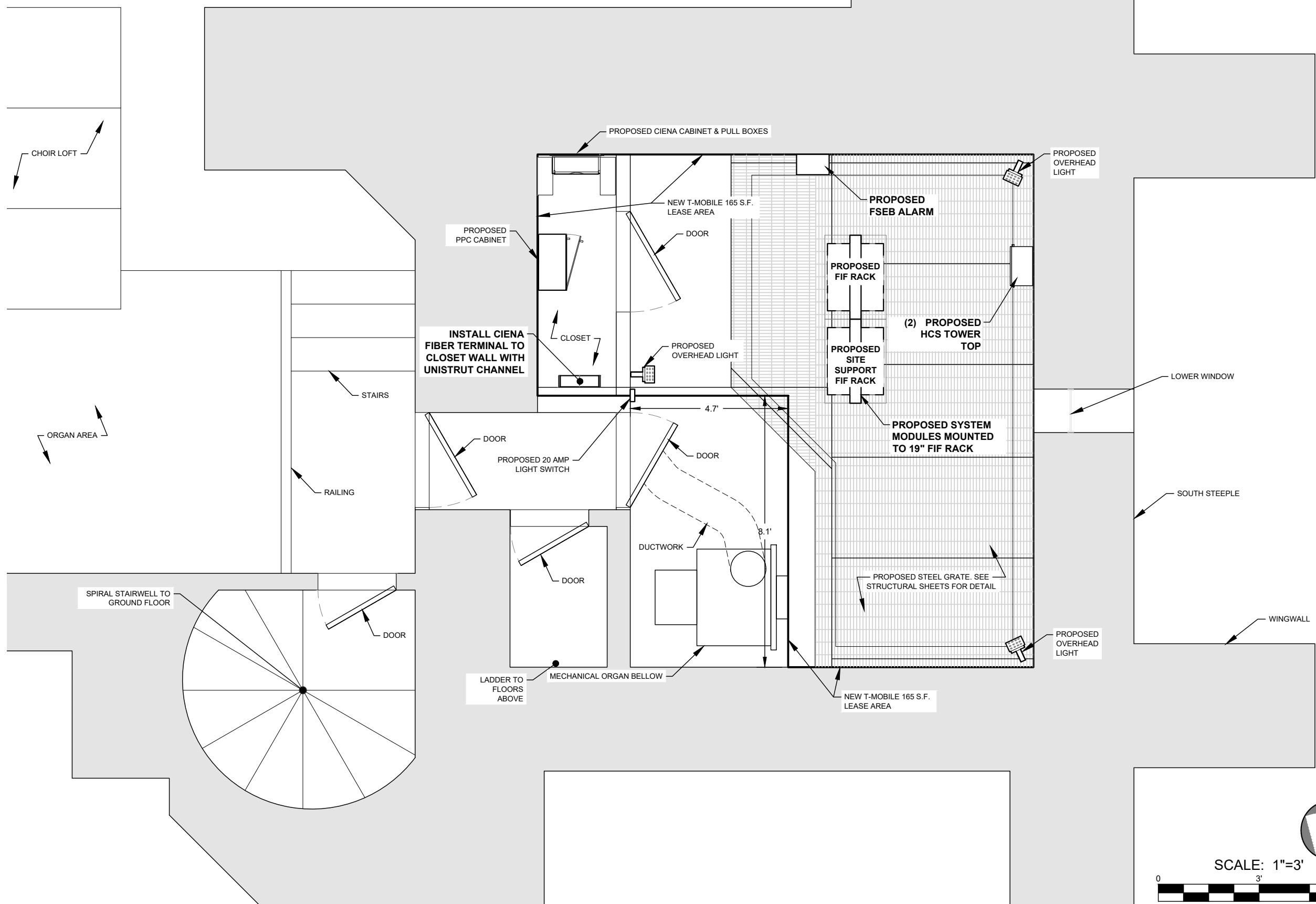
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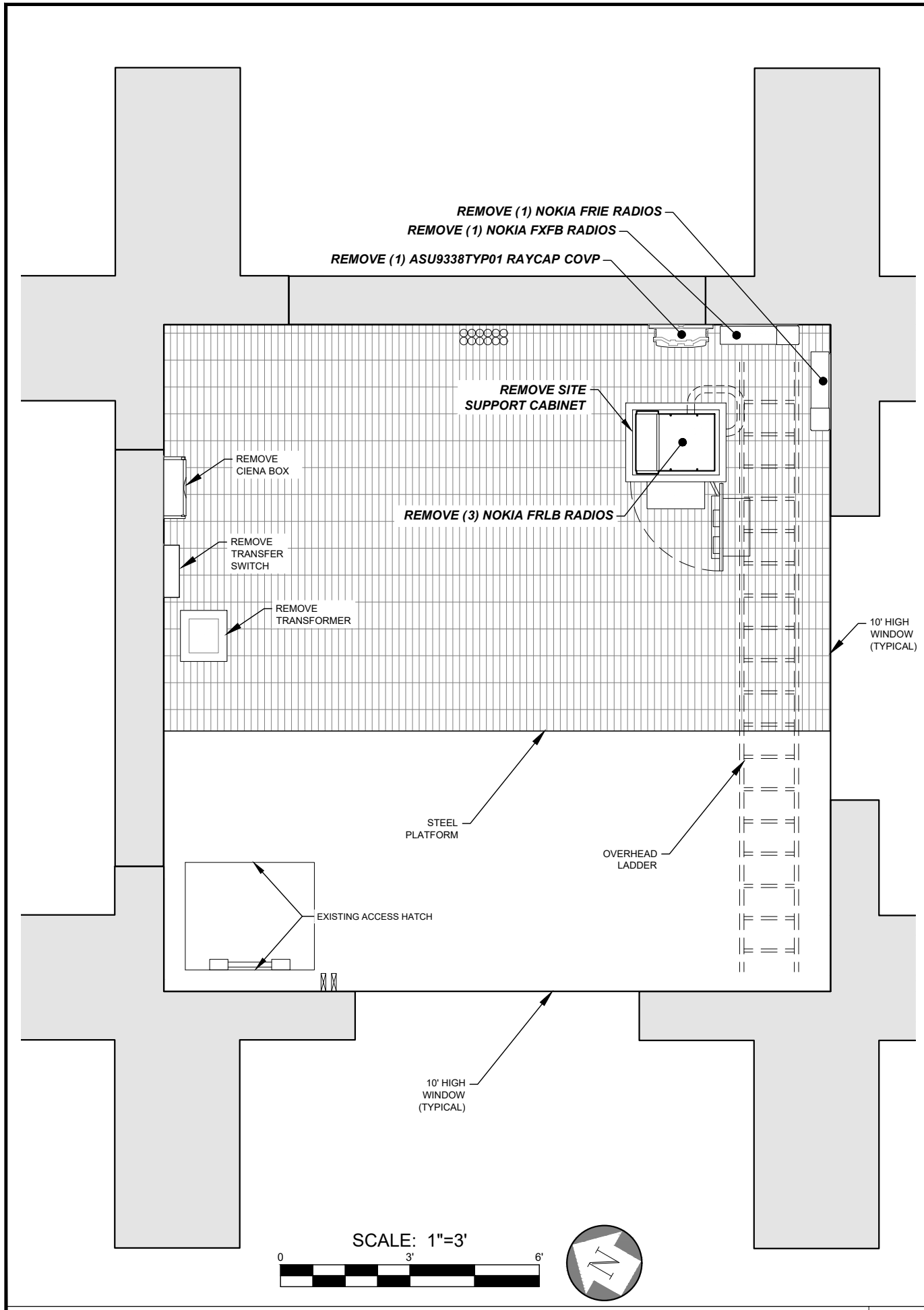
Sheet Number: C-2

CHOIR LOFT

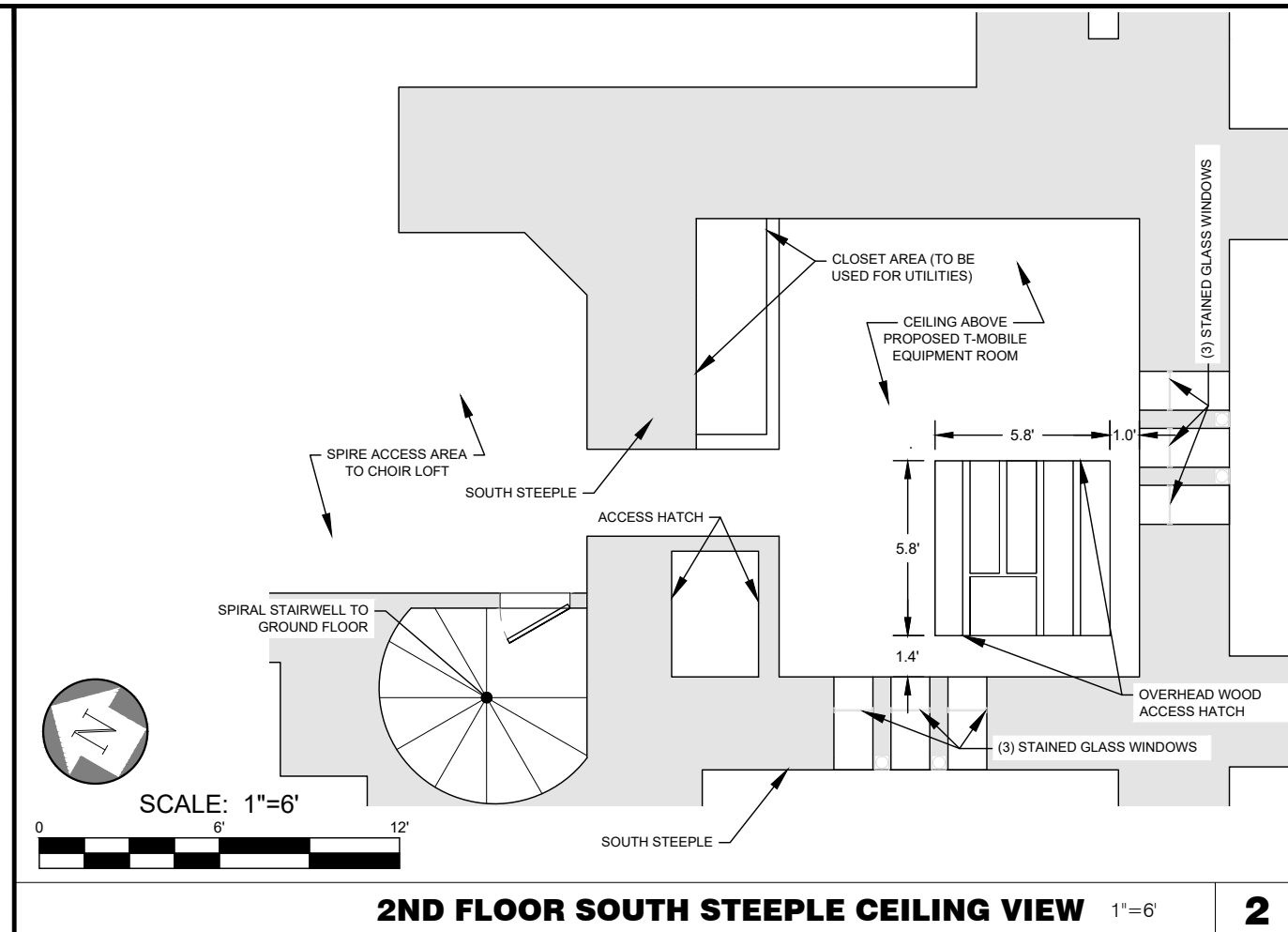
ORGAN AREA

SPIRAL STAIRWELL TO GROUND FLOOR

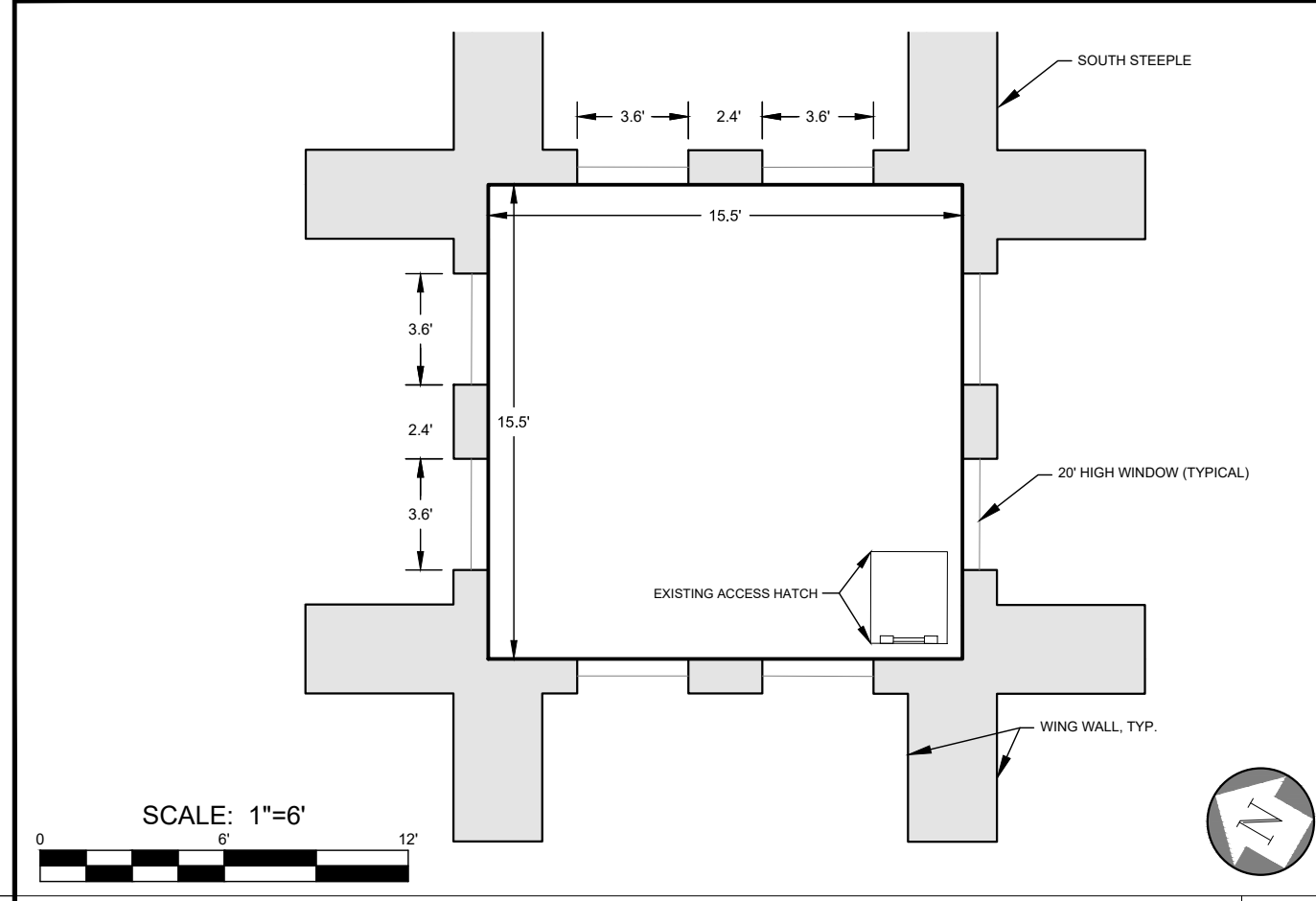




3rd FL. SOUTH STEEPLE - OLD EQUIPMENT ROOM DEMO PLAN 1"=3' **1**



2ND FLOOR SOUTH STEEPLE CEILING VIEW 1"=6' **2**



5th FLOOR SOUTH STEEPLE - ANTENNA ROOM 1"=6' **3**

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Sheet Title: **FLOOR PLANS**

Sheet Number: **C-2.1**

NOTE: ANTENNA AND RADIO LAYOUT AS OBSERVED DURING SITE VISIT DOES NOT MATCH RFDS PROVIDED BY T-MOBILE. FIELD VISIT DATA SHOWN HEREON.

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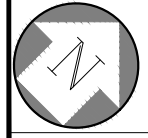
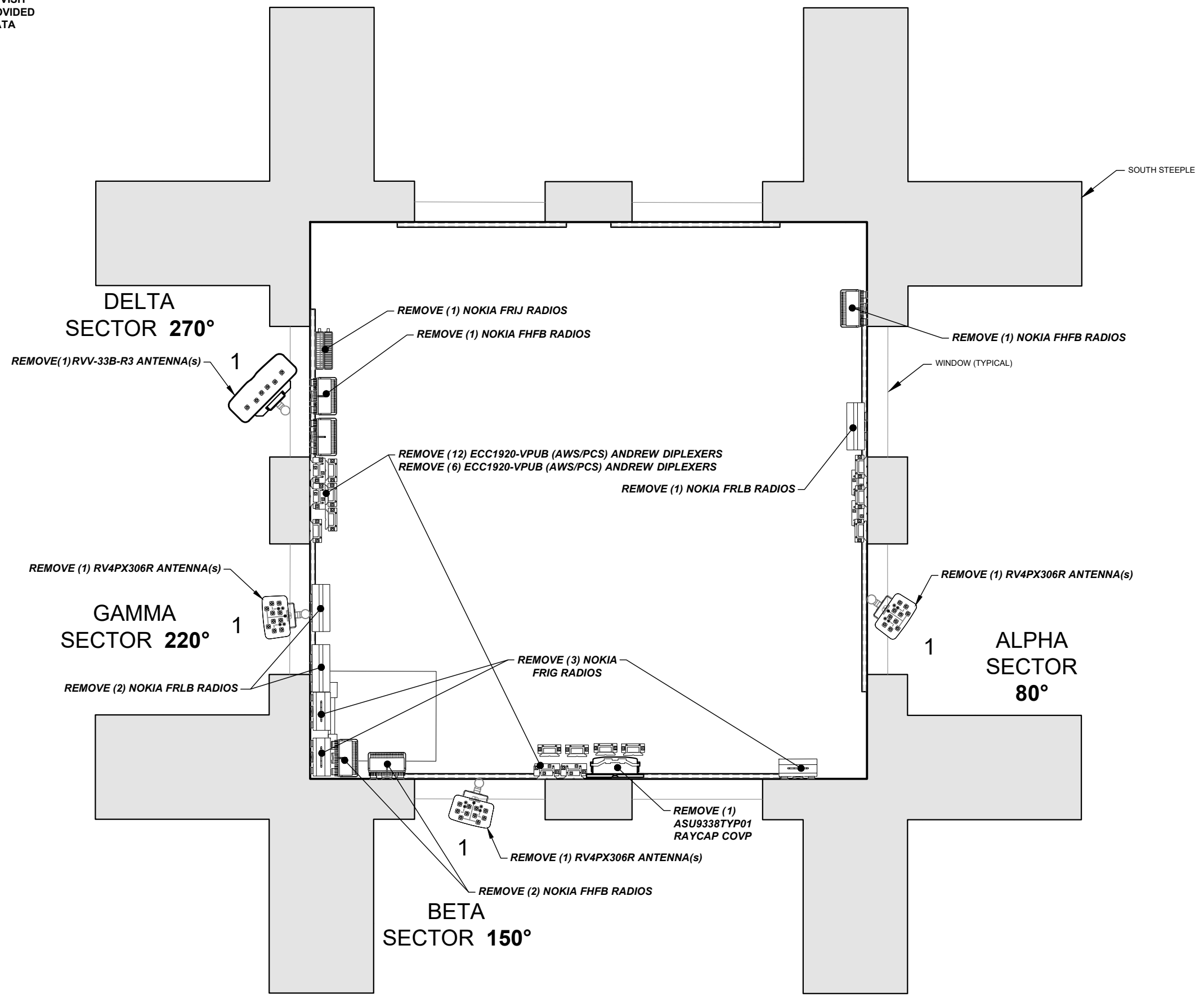
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Sheet Title: EXISTING ANTENNA PLAN

Sheet Number: C-3



ANTENNA SCHEDULE						
SECTOR	ALPHA		BETA		GAMMA	
ANTENNA POSITION	A-1	A-2	B-1	B-2	C-1	C-2
AZIMUTH	80°	80°	150°	150°	220°	220°
RAD CENTER (AGL)	110'	110'	110'	110'	110'	110'
MODEL	FFHH-65C-R3	AAHF (MASSIVE MIMO)	FFHH-65C-R3	AAHF (MASSIVE MIMO)	FFHH-65C-R3	AAHF (MASSIVE MIMO)
FEEDER LENGTH	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"

NOTE: ALL PROPOSED ANTENNAS REQUIRE A BLACK FABRIC COVER, TO BE APPROVED BY THE LANDLORD

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Sheet Title:
PROPOSED ANTENNA PLAN

Sheet Number:
C-4

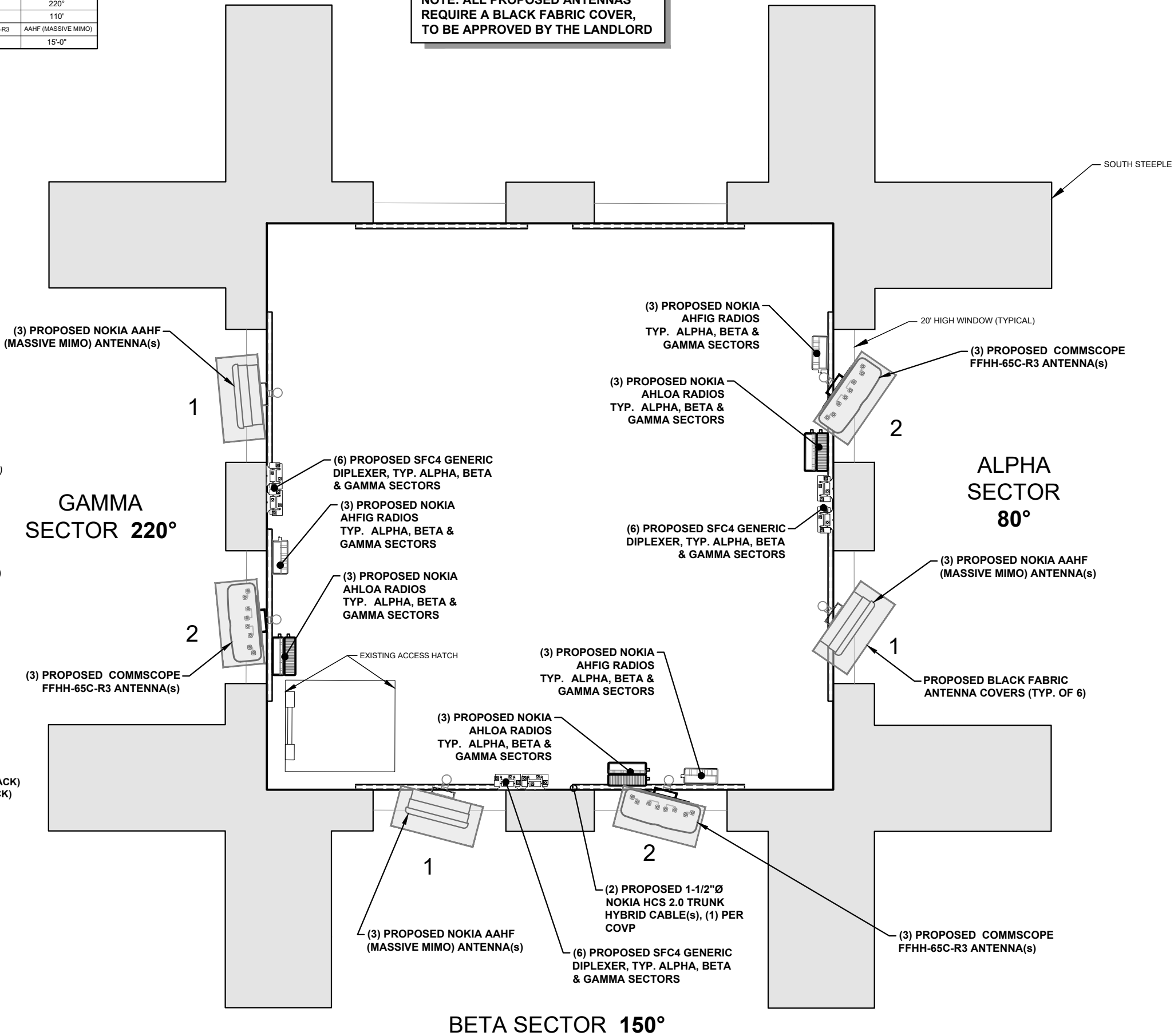
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REMOVING

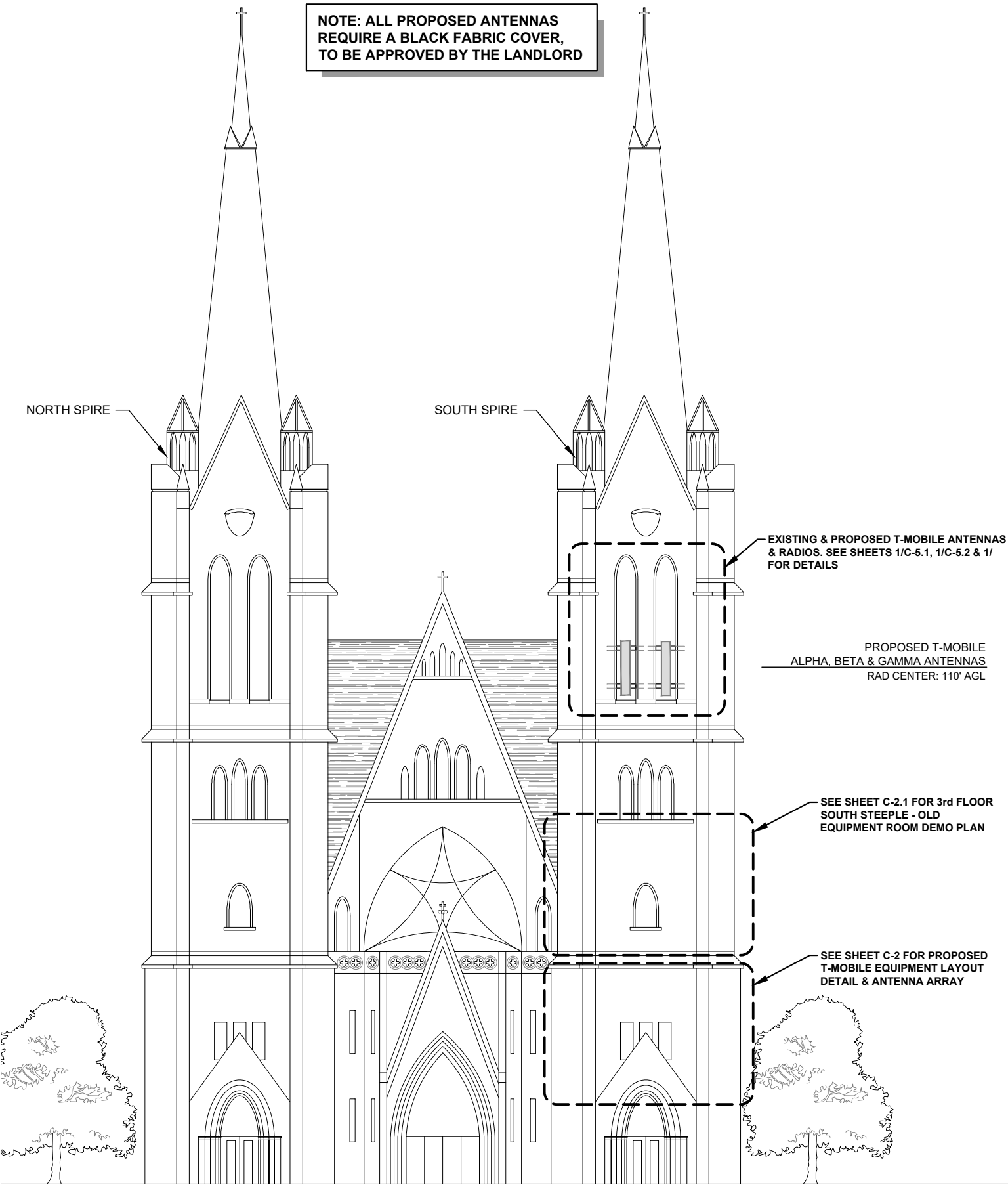
- (3) COMMSCOPE RV4PX306R ANTENNA(s) [63"l x 13.9"w x 8.2"d 52.9lb(s)]
- (1) COMMSCOPE RVV-33B-R3 ANTENNA(s) [72"l x 25.2"w x 9.3"d 94.8lb(s)]
- (3) NOKIA FRLB RADIOS (@SECTOR) [15.75"l x 15.75"w x 5.2"d 52.5lb(s)]
- (1) NOKIA FRIE RADIOS (@SECTOR) [5.2"l x 5.2"w x 22"d 55.1lb(s)]
- (1) NOKIA FXFB RADIOS (@SECTOR) [5.2"l x 19.4"w x 22.1"d 55.1lb(s)]
- (3) NOKIA FRIG RADIOS (@SECTOR) [18.1"l x 15.2"w x 6"d 57.32lb(s)]
- (4) NOKIA FHFB RADIOS (@SECTOR) [34.3"l x 12.6"w x 7.8"d 52.9lb(s)]
- (1) NOKIA FRIJ RADIOS (@SECTOR) [23.1"l x 12.6"w x 5.8"d 46.3lb(s)]
- (6) ETM19V2S12UB (STYLE 4) COMMSCOPE AMPLIFIER (@SECTOR) [10"l x 8.6"w x 2.3"d 11.2lb(s)]
- (1) ASU9338TYP01 RAYCAP COVP (@PLATFORM) [20.38"l x 18.86"w x 5.83"d 19lb(s)]
- (1) ASU9338TYP01 RAYCAP COVP (@SECTOR) [20.38"l x 18.86"w x 5.83"d 19lb(s)]
- (12) ECC1920-VPUB (AWS/PCS) ANDREW DIPLEXERS (@SECTOR) [7.6"l x 7.3"w x 2.6"d 7.9lb(s)]
- (6) ECC1920-VPUB (AWS/PCS) ANDREW DIPLEXERS (@PLATFORM) [7.6"l x 7.3"w x 2.6"d 7.9lb(s)]
- (1) 1-1/4"Ø [1.24"OD] NOKIA MID CAP HCS HYBRID CABLE(s)
- (2) 7/8"Ø [7/8"OD] NOKIA LOW CAP HCS HYBRID CABLE(s)
- (6) 7/8"Ø [1.03"OD] ANDREW LDF5-50A COAX CABLE(s)

INSTALLING

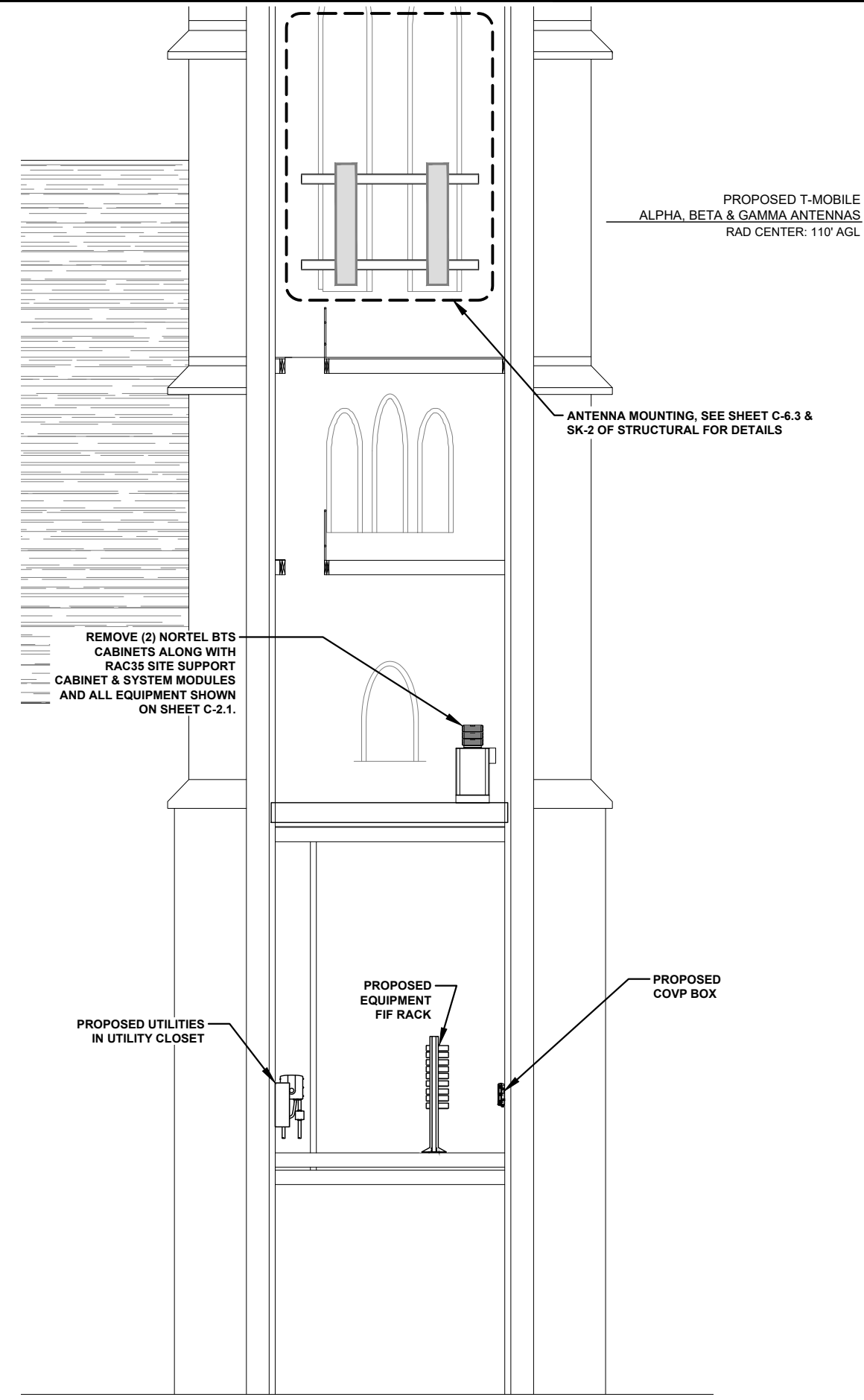
- (3) COMMSCOPE FFHH-65C-R3 ANTENNA(s) [95.9"l x 25.2"w x 9.3"d 127.6lb(s)]
- (3) NOKIA AAHF (MASSIVE MIMO) ANTENNA(s) [35.4"l x 21"w x 8.3"d 104lb(s)]
- (3) NOKIA AHLOA RADIOS (@SECTOR) [22.1"l x 12.2"w x 7.5"d 83.9lb(s)]
- (3) NOKIA AHFIG RADIOS (@SECTOR) [27.4"l x 12.1"w x 5.2"d 79.3lb(s)]
- (6) SFC4 GENERIC DIPLEXER (@SECTOR)
- (1) VOLTAGE BOOSTER POWERPLUS W/ 2 AMPLIFIER RAYCAP (@FIF RACK)
- (1) EXTRA AMPLIFIER FOR POWERPLUS VOLTAGE BOOSTER (@FIF RACK)
- (2) 1-1/2"Ø [1.55"OD] NOKIA HCS 2.0 TRUNK HYBRID CABLE(s)



NOTE: ALL PROPOSED ANTENNAS REQUIRE A BLACK FABRIC COVER, TO BE APPROVED BY THE LANDLORD



WEST ELEVATION VIEW N.T.S. **1**



INTERIOR SOUTH SPIRE ELEVATION N.T.S. **2**

NOTE: SOME EQUIPMENT OMITTED FROM ELEVATION VIEW FOR CLARITY

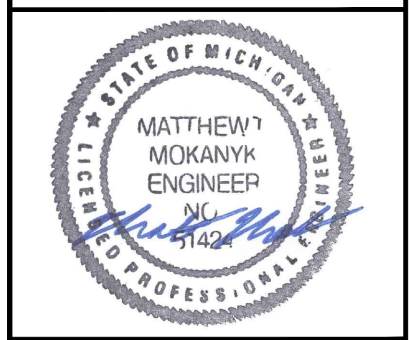
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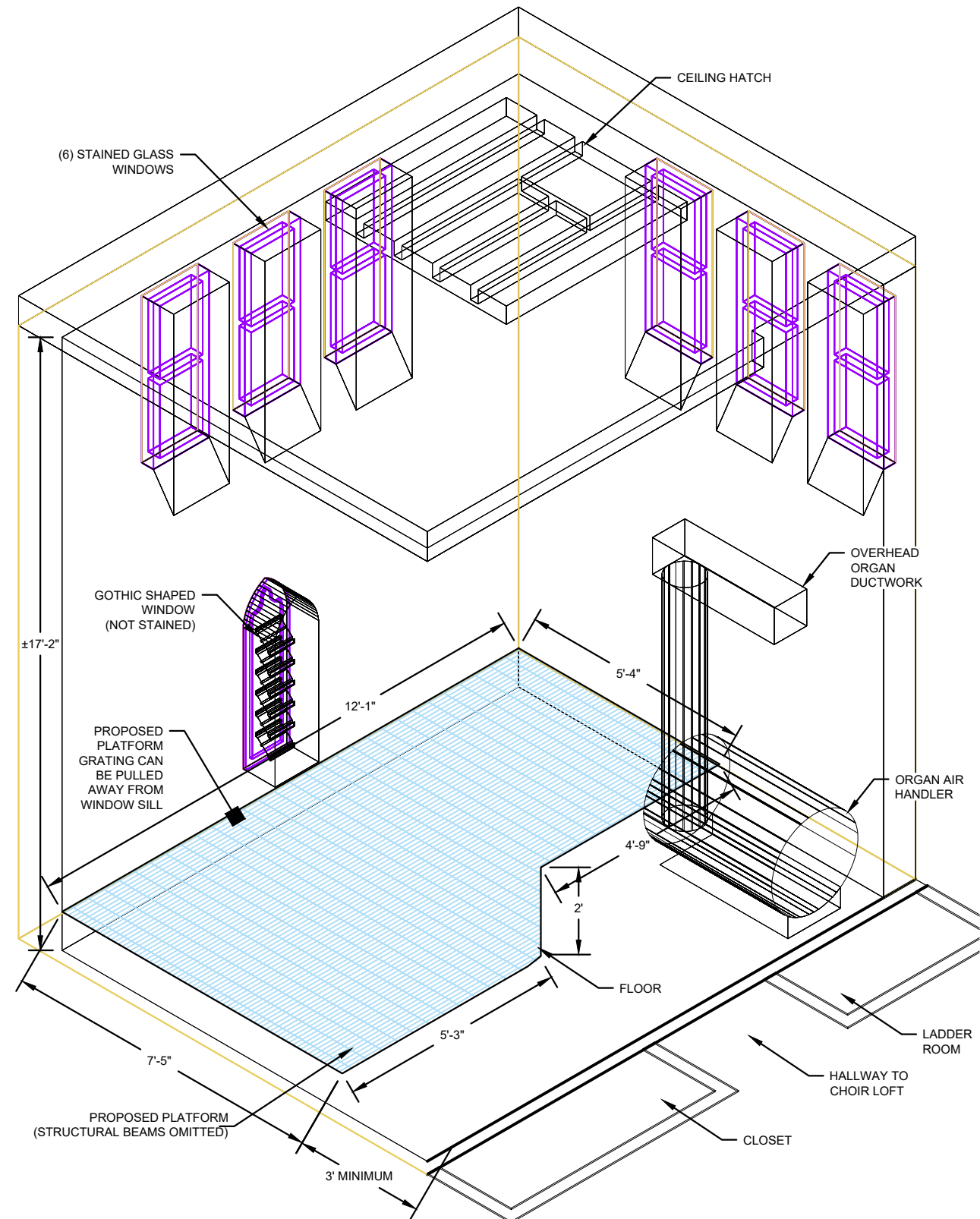
Sheet Title:
ELEVATION VIEW

Sheet Number:
C-5

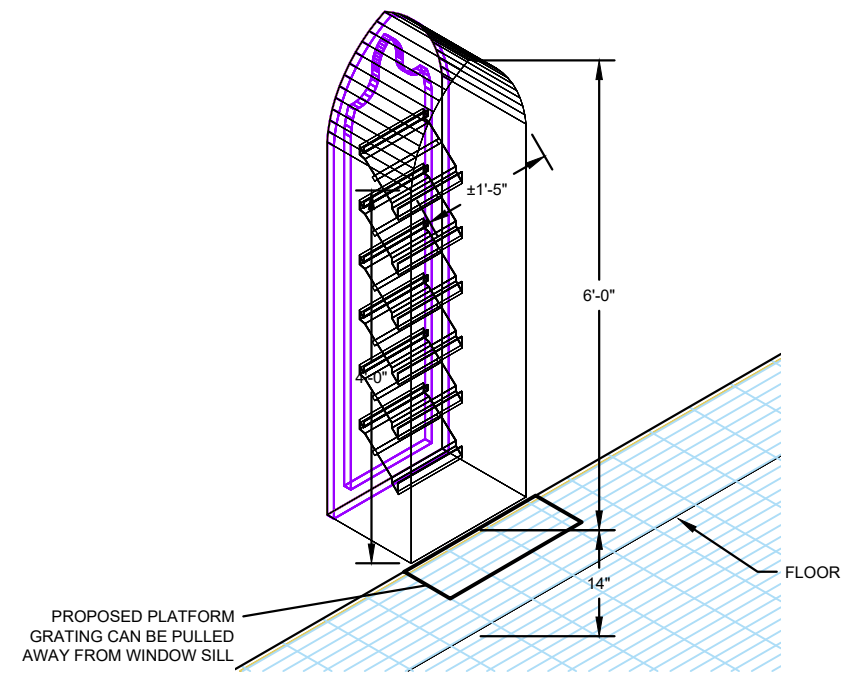
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C	03/30/22	RELOC PROP ANTENNAS	TLR

2020 ANCHOR CONSTRUCTION DRAWINGS

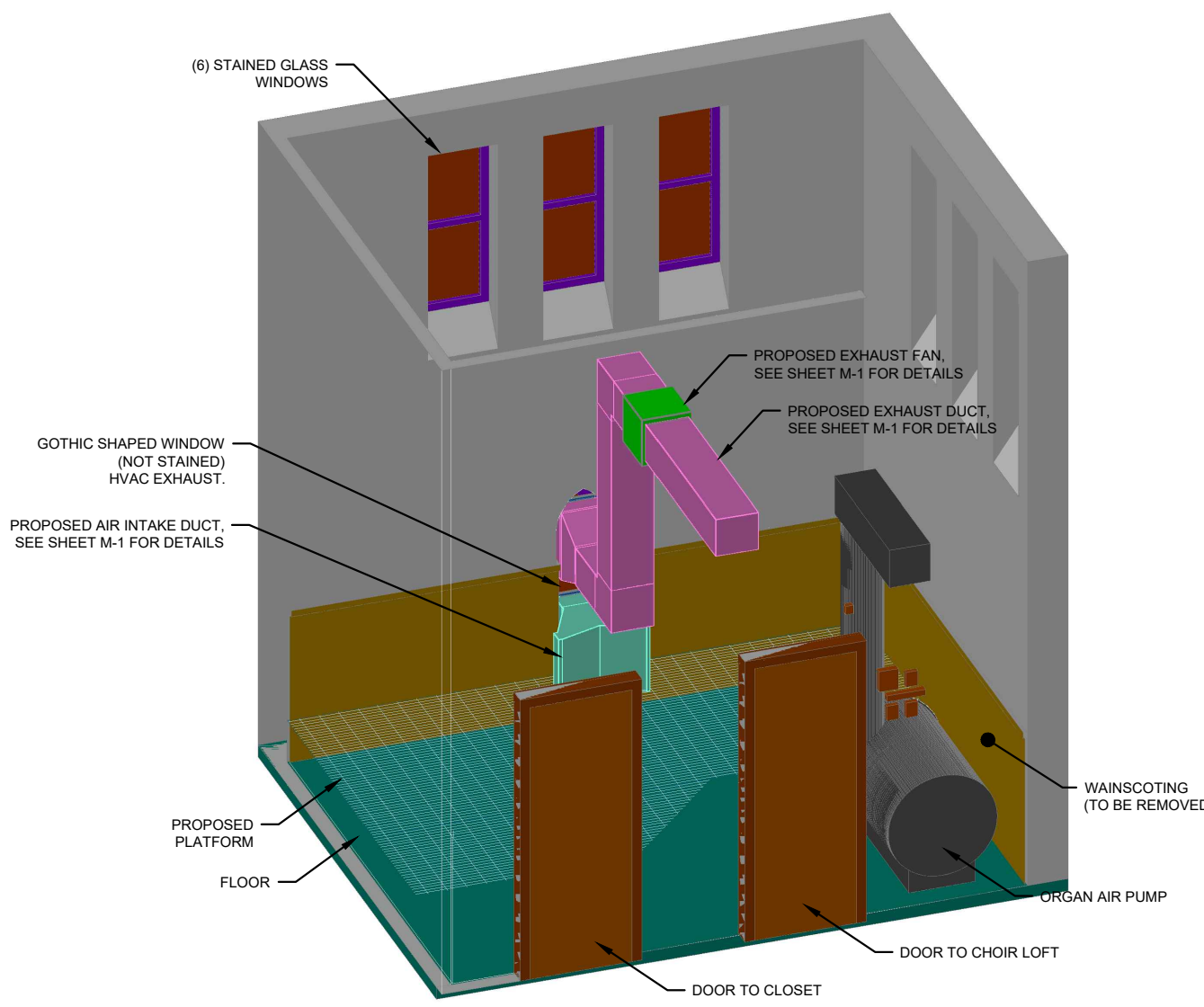
NOTE: THESE DRAWINGS ARE TO SCALE WHEN PLOTTED ON 11"x17" SHEETS. REFER TO GRAPHIC SCALES ON REPRODUCTIONS.



WIREFRAME VIEW N.T.S. **1**



WINDOW DETAIL N.T.S. **2**



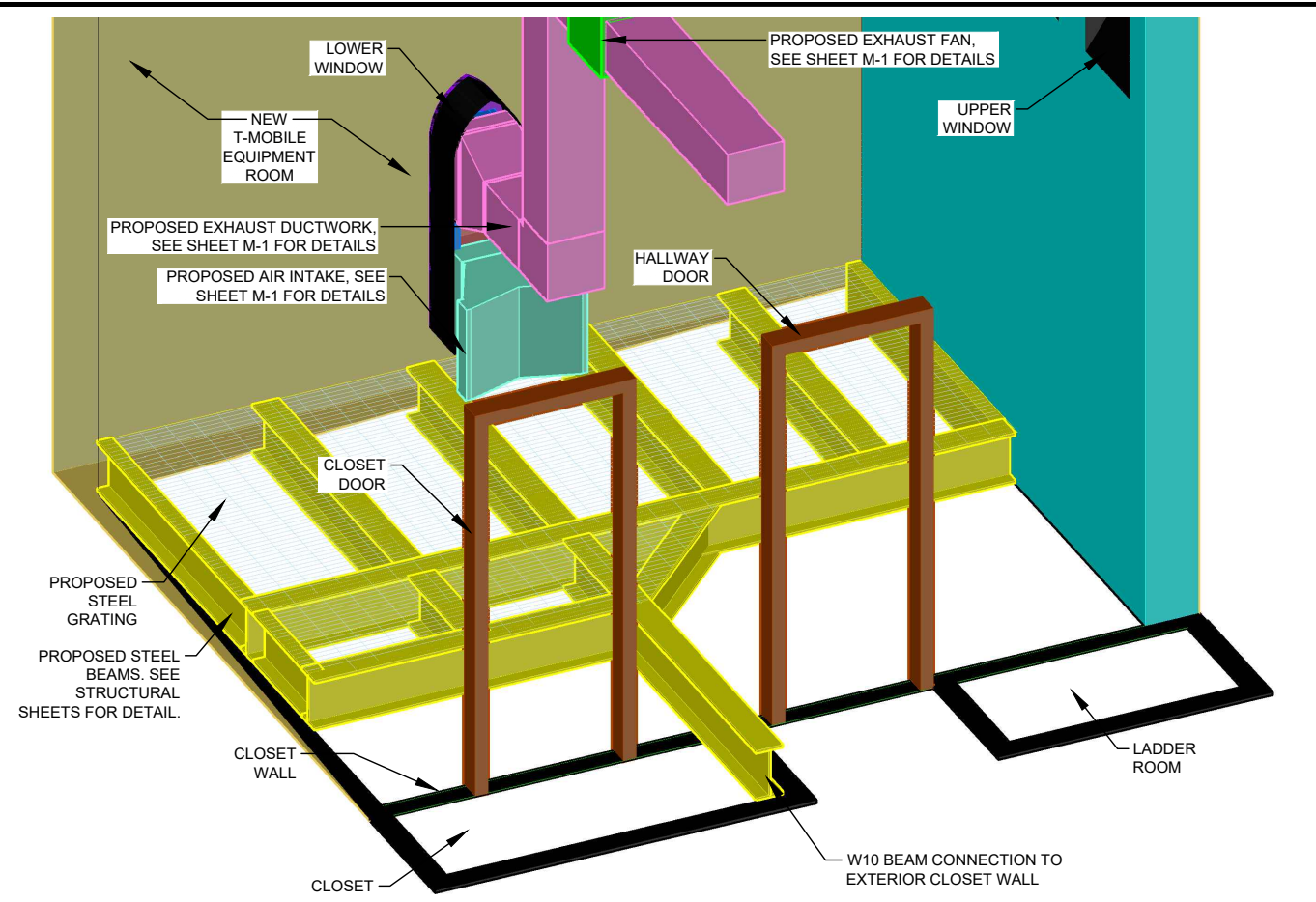
ISOMETRIC VIEW N.T.S. **3**



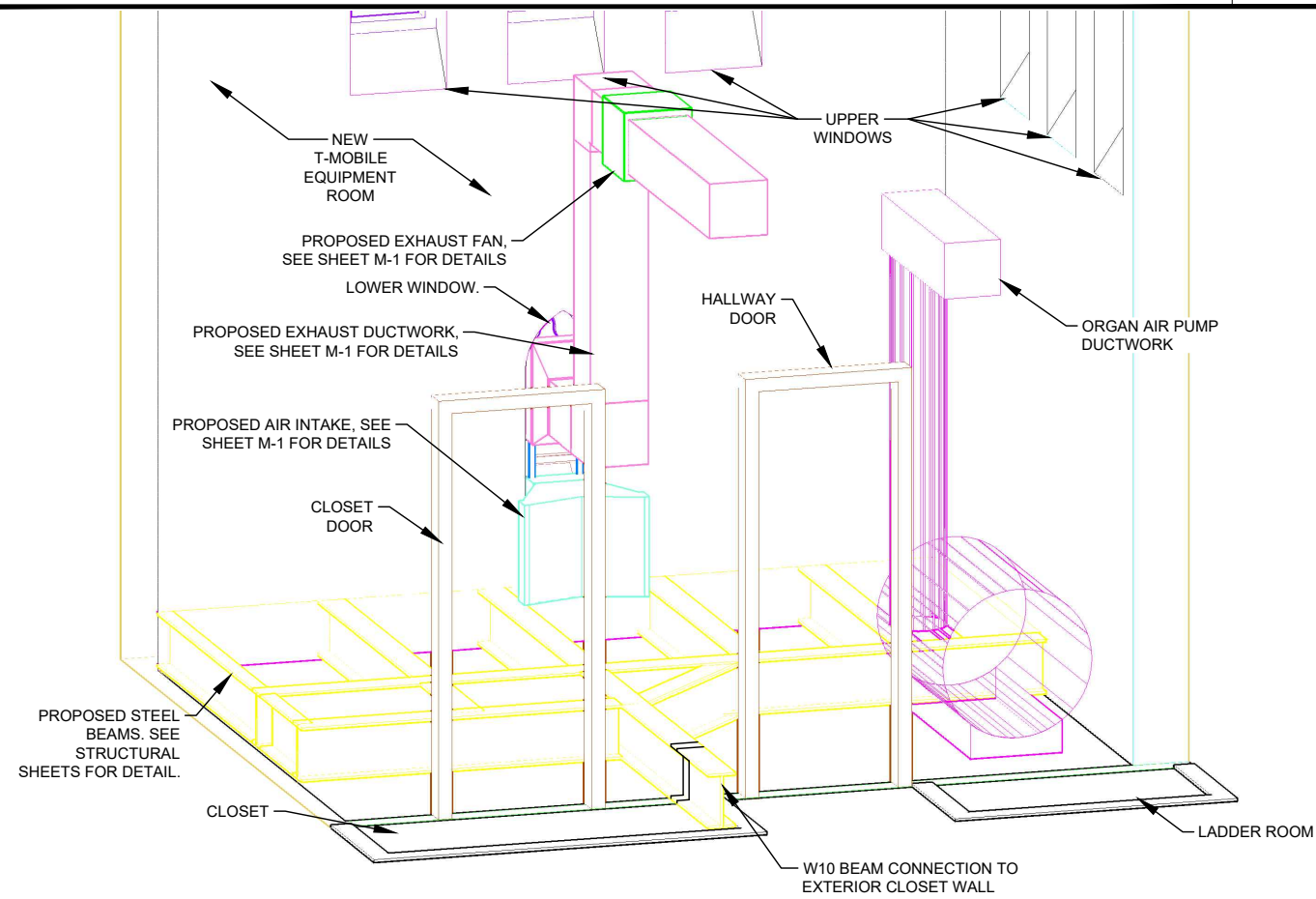
SITE #: DE04229B
SITE NAME: SWEETEST HEART OF MARY
SITE ADDRESS: 4440 E. CANFIELD D/B/A 4440 RUSSELL ST
DETROIT, MICHIGAN 48207

Sheet Title: PICTORIAL VIEWS

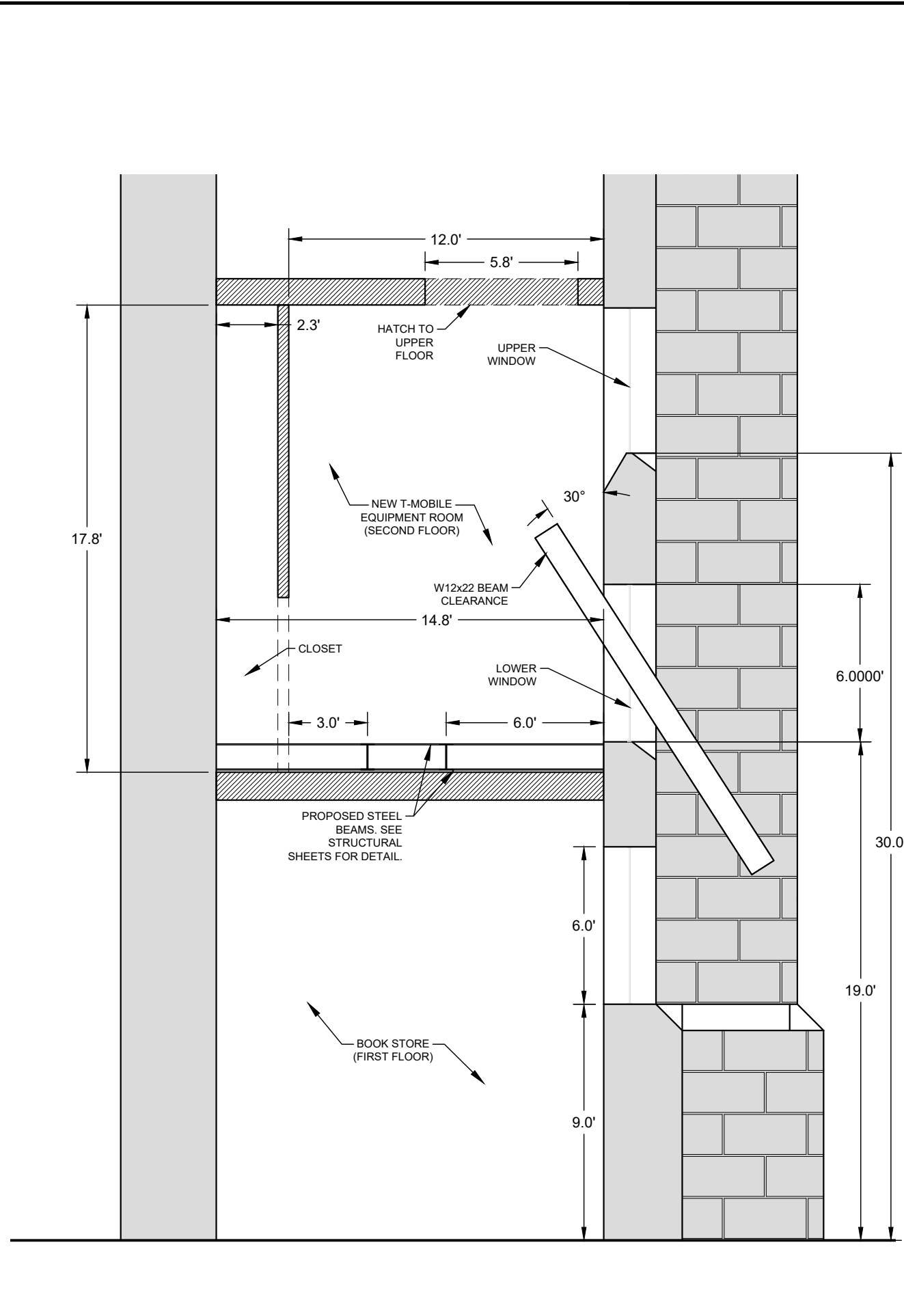
Sheet Number: C-5.1



PLATFORM DETAIL N.T.S. **1**



PLATFORM PICTORIAL N.T.S. **2**



CROSS-SECTION DETAIL A-A 1"=5' **3**

T-Mobile
 28505 SCHOOLCRAFT RD, BLDG#6
 LIVONIA, MICHIGAN 48150
 Phone: 734.367.7200
 Fax: 734.367.7242
 CONTACT: KEN KALOUSEK
 (734) 444-0181

LANDTECH PROJECT NUMBER: 20398031

REV.	DATE	DESCRIPTION	BY
B	02/10/22	ADD'D ANT. COVER NOTE	TLR
C	03/30/22	RELOC PROP ANTENNAS	TLR

2020 ANCHOR CONSTRUCTION DRAWINGS
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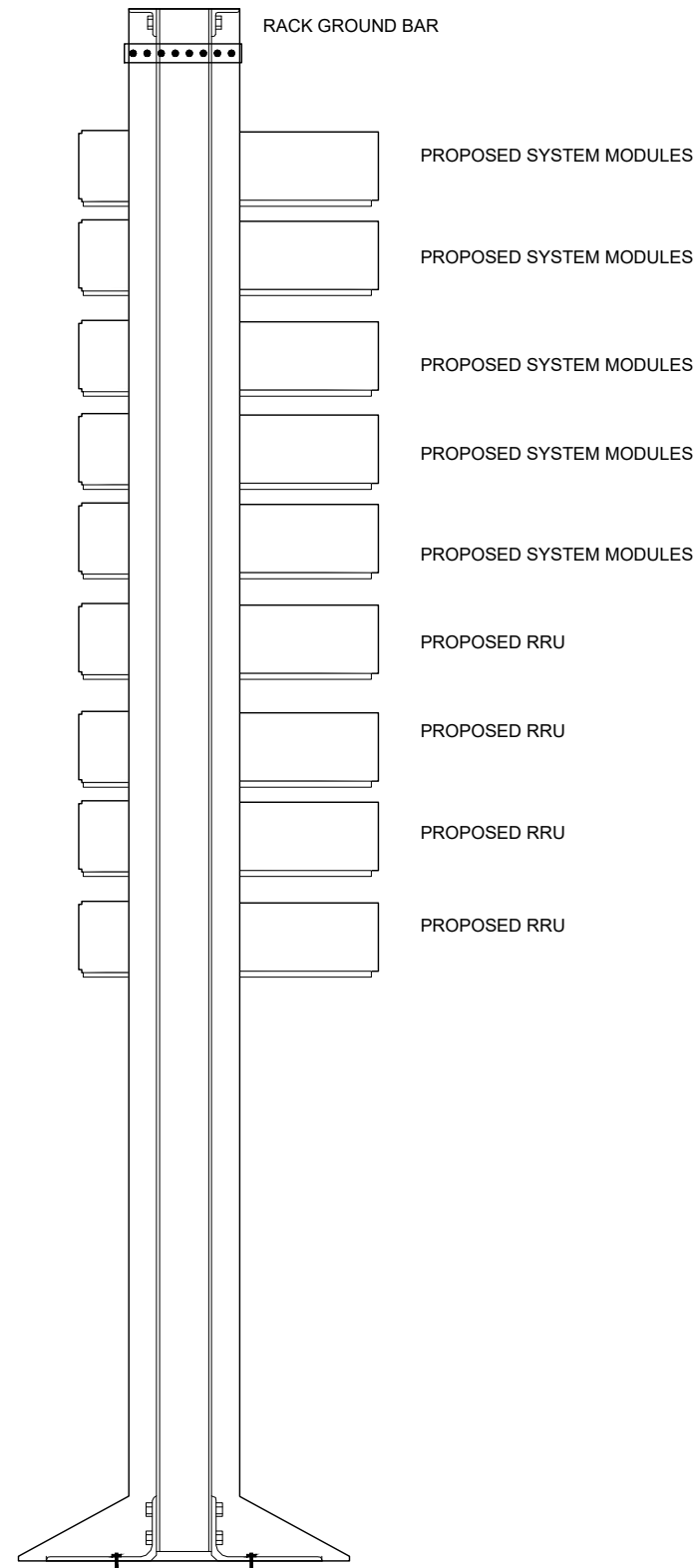
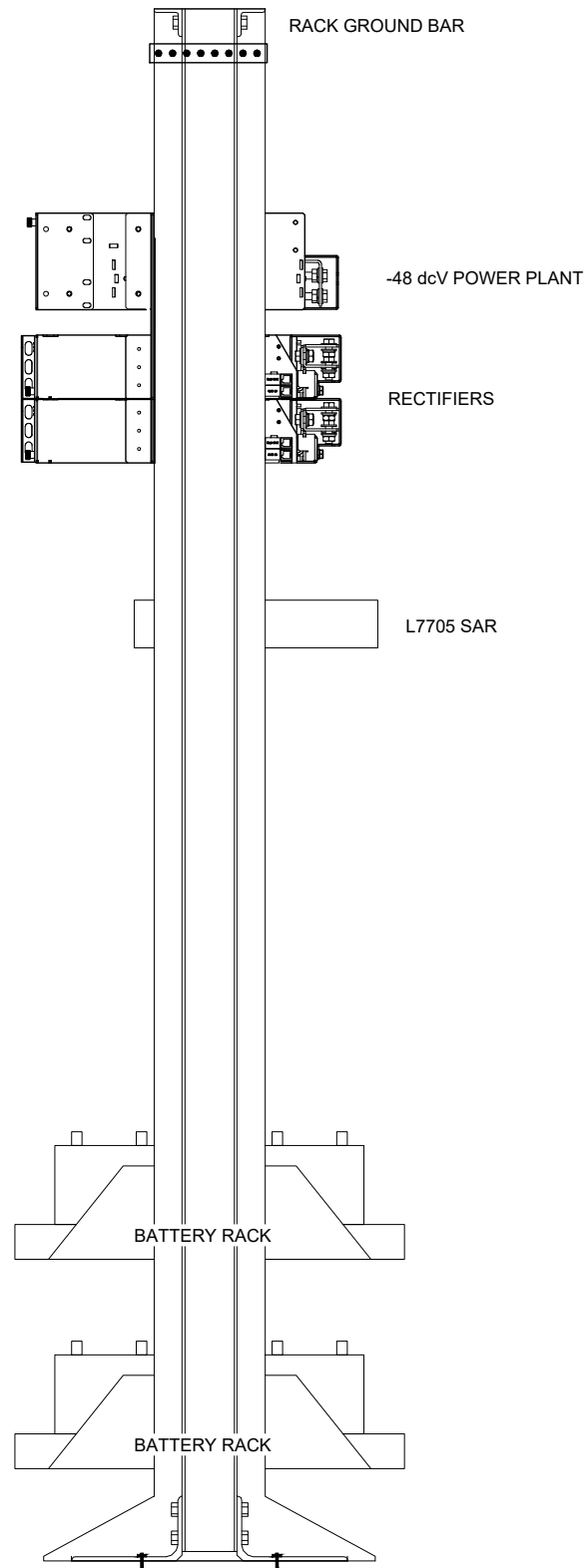


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 SITE ADDRESS: 4440 E. CANFIELD D/B/A 4440 RUSSELL ST. DETROIT, MICHIGAN 48207

Sheet Title:
PICTORIAL VIEWS

Sheet Number:
C-5.2

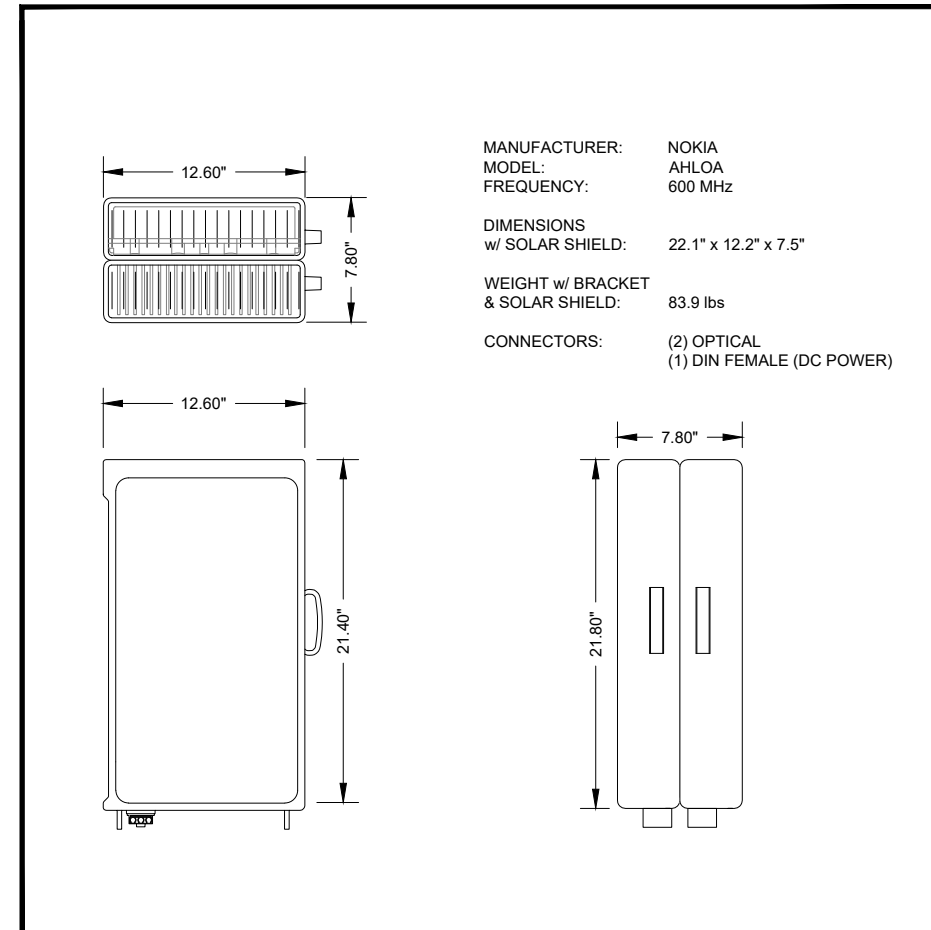
NOTE: GROUND ALL EQUIPMENT ON RACK TO RACK GROUND BAR PER MANUFACTURER'S REQUIREMENTS. MINIMUM 6 AWG SOLID TINNED CU



NOTE: NUMBER OF MODULES/RADIOS VARIES. CONSULT CURRENT RFDS FOR EXACT QUANTITIES.

19" WIDE FIF RACK DETAIL N.T.S.

1



AHLOA RADIO UNIT N.T.S.

3

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 CONTACT: KEN KALOUSEK
 (734) 444-0181

LANDTECH PROJECT NUMBER: 20398031

REV.	DATE	DESCRIPTION	BY
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2020 ANCHOR CONSTRUCTION DRAWINGS

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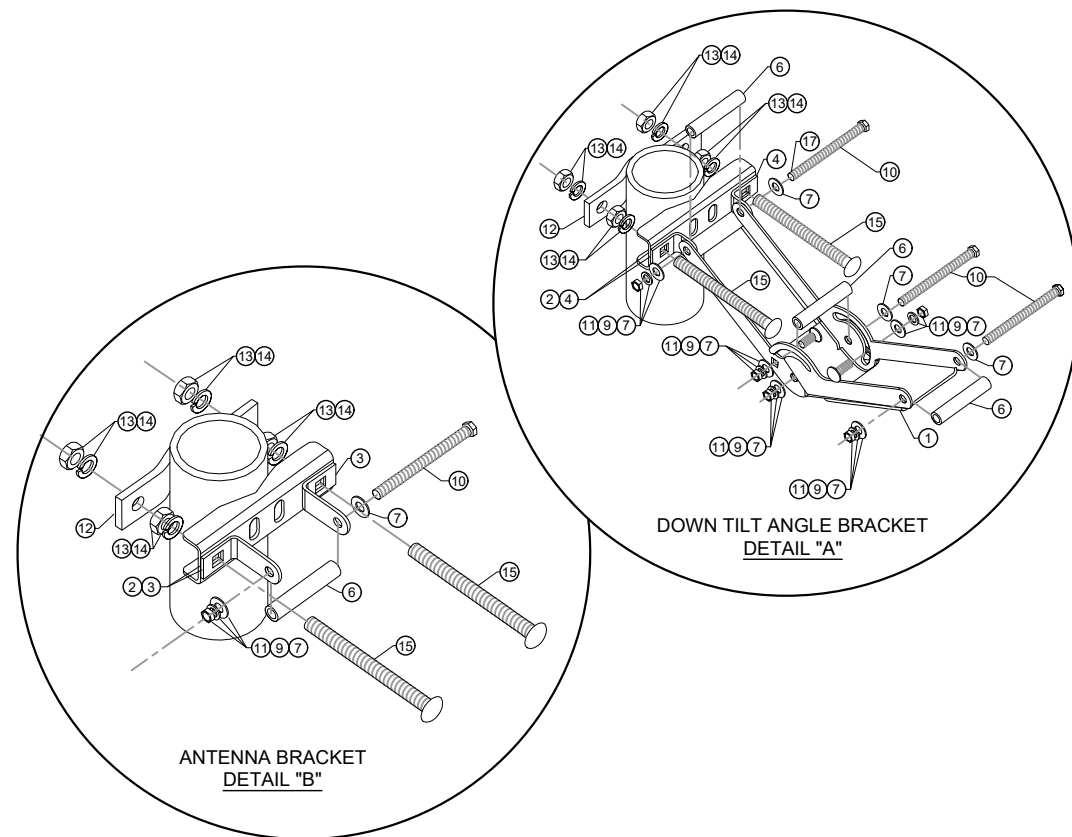
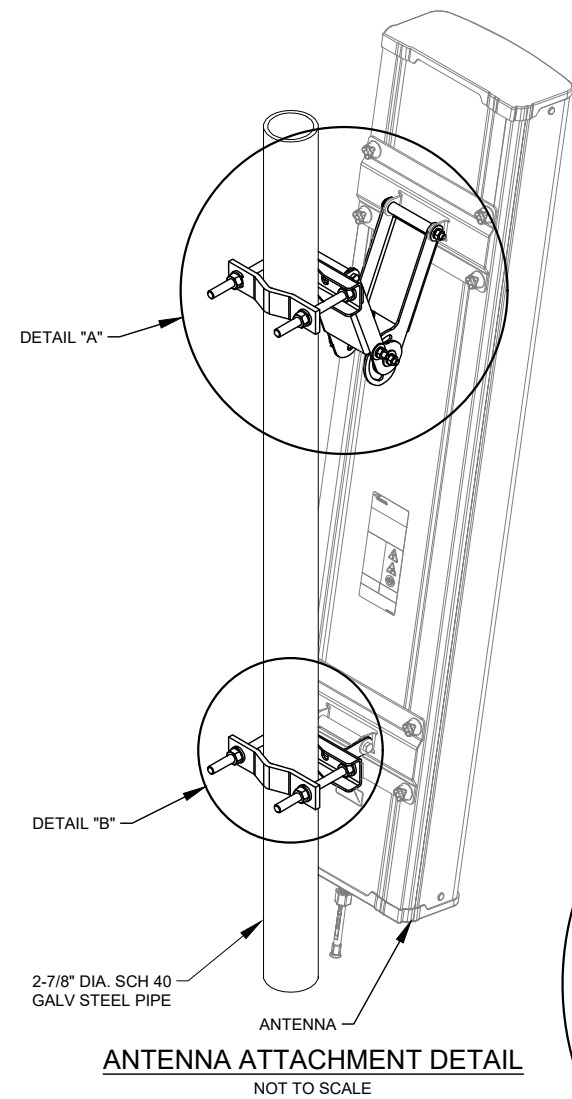


SITE #: DE04229B
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 SITE ADDRESS: 4440 E. CANFIELD D/B/A 4440 RUSSELL ST. DETROIT, MICHIGAN 48207

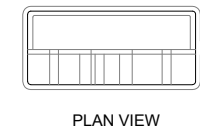
Sheet Title:
EQUIPMENT DETAILS

Sheet Number:
C-6

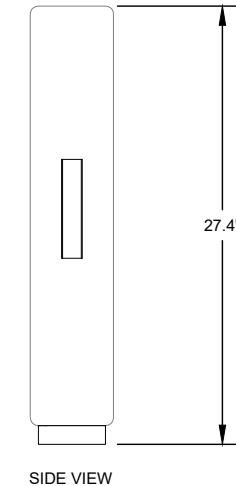
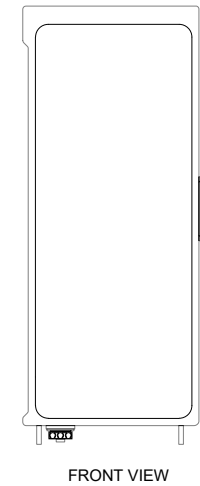
PARTS LIST			
ITEM #	QUANTITY	PART NUMBER	DESCRIPTION
1	2	601257	ANGLE ARM
2	2	601256	MOUNTING CLAMP
3	2	601235-1	BRACKET
4	2	601235-2	BRACKET
5	1	601258	LABEL, ANGLE
6	4	600679-3	SPACER TUBE
7	14	100525-24	ME FLAT WASHER (STAINLESS STEEL)
8	2	600419-8	M8x1.25x25mm LARGE CARRIAGE BOLT (STAINLESS STEEL)
9	6	6/1/7395	M8 LOCK WASHER (STAINLESS STEEL)
10	4	600419-10	M8x1.25x110mm LARGE HEX HEAD SCREW (STAINLESS STEEL)
11	6	204001-15	M8x1.25 HEX NUT (STAINLESS STEEL)
12	2	225244	CLAMP PLATE
13	8	600419-24	LARGE LOCK WASHER (STAINLESS STEEL)
14	8	204001-21	M12x1.75 HEX NUT (STAINLESS STEEL)
15	4	600419-12	M12x1.75x150mm LARGE CARRIAGE BOLT (STAINLESS STEEL)
17	1	601584	MOLYBDENUM DISULFIDE GREASE



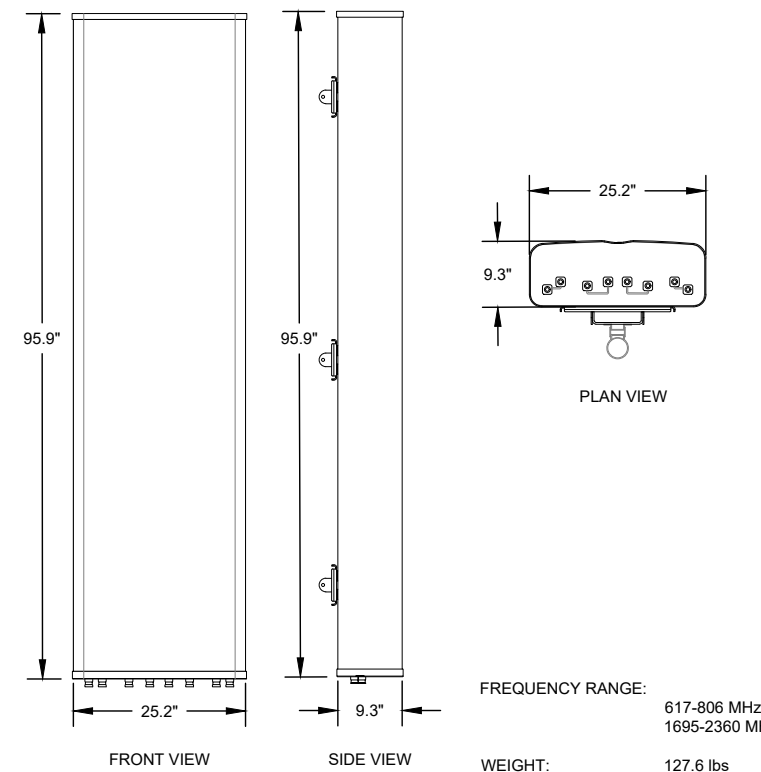
NOTE: TORQUE ALL HARDWARE
M8 HARDWARE: 18 Nm (160 lbf-in.)
M12 HARDWARE: 30 Nm (266 lbf-in.)



MANUFACTURER: NOKIA
MODEL: AHFIG
BANDWIDTH: 65 MHz & 80 MHz
DIMENSIONS: 27.4" x 12.1" x 5.2"
WEIGHT: 79.3 lbs
NO. OF PORTS: 4T4R
FIBER PORTS: 2 X 9.8 Gbps CPRI
RF CONNECTORS: 4.3-10+



NOKIA AHFIG RADIO
NOT TO SCALE



COMMSCOPE FFHH-65C-R3 ANTENNA
NOT TO SCALE

T-Mobile
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Phone: 734.367.7200
Fax: 734.367.7242
CONTACT: KEN KALOUSEK
(734) 444-0181

LANDTECH PROJECT NUMBER: 20398031			
REV.	DATE	DESCRIPTION	BY
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C	03/30/22	RELOC PROP ANTENNAS	TLR

2020 ANCHOR CONSTRUCTION DRAWINGS

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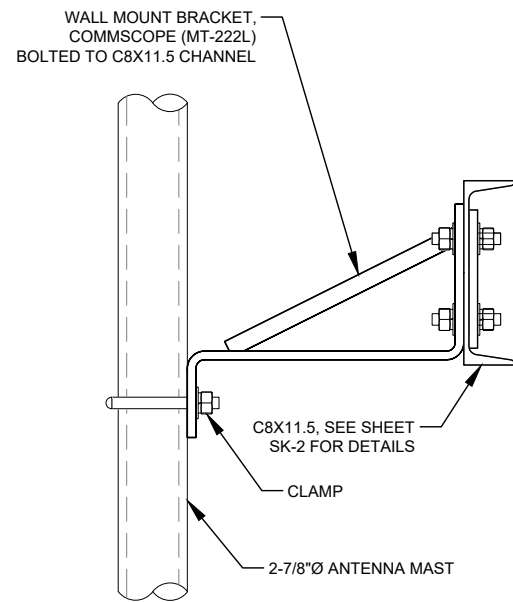


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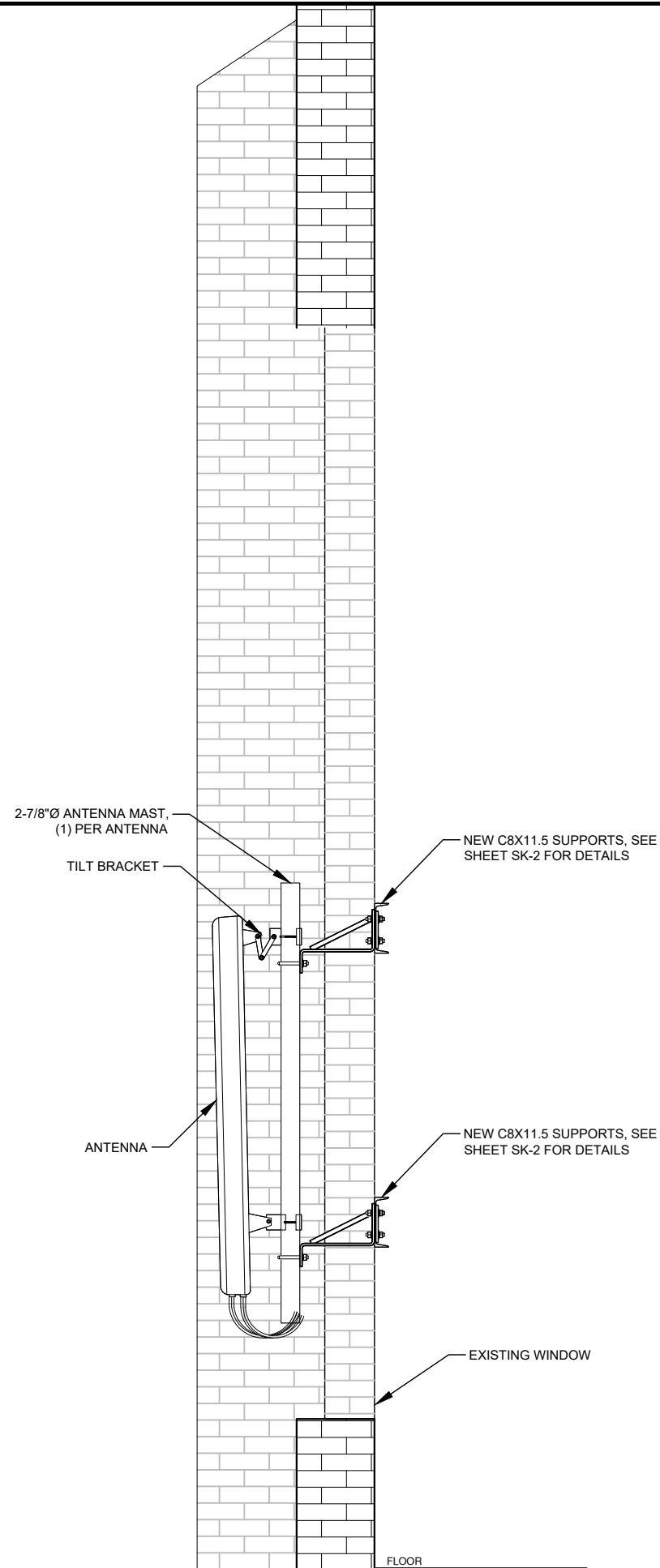
Sheet Title:
ANTENNA DETAILS

Sheet Number:
C-6.2

**PAIN T ALL ANTENNAS,
CABLING & HARDWARE
VISIB LE OUTSID E BLACK.**



TYP. MAST BRACKET

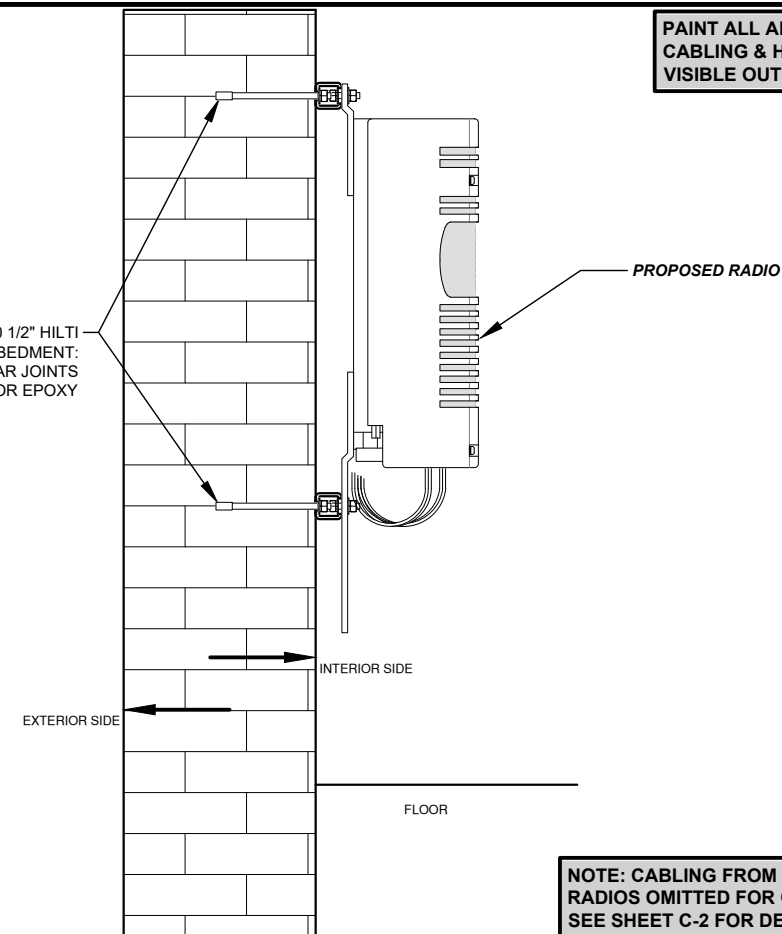


ANTENNA MOUNT N.T.S.

1

**PAIN T ALL ANTENNAS,
CABLING & HARDWARE
VISIB LE OUTSID E BLACK.**

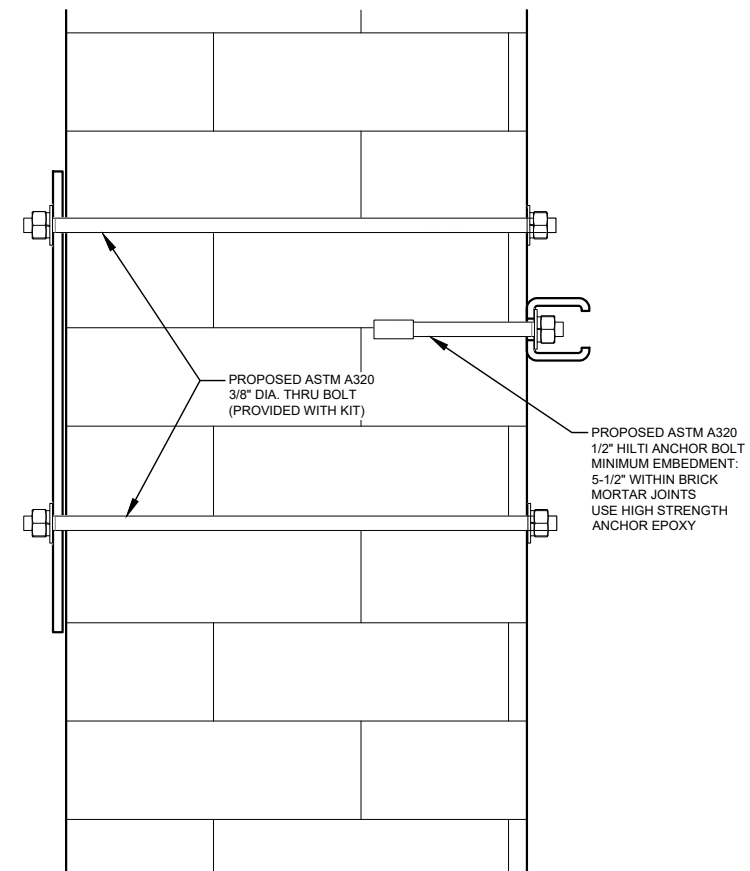
PROPOSED ASTM A320 1/2" HILTI
ANCHOR BOLT MINIMUM EMBEDMENT:
5-1/2" WITHIN BRICK MORTAR JOINTS
USE HIGH STRENGTH ANCHOR EPOXY



**NOTE: CABLING FROM COVP TO
RADIOS OMITTED FOR CLARITY.
SEE SHEET C-2 FOR DETAILS.**

HYBRID CABLE ELEV. N.T.S.

2



MORTOR JOINT DETAIL N.T.S.

3

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**2020 ANCHOR
CONSTRUCTION
DRAWINGS**

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SITE NAME:
**SWEETEST
HEART OF MARY**
SITE ADDRESS:
4440 E. CANFIELD D/B/A 4440 RUSSELL ST.
DETROIT, MICHIGAN 48207

Sheet Title:
MOUNTING DETAILS

Sheet Number:
C-6.3

REV.	DATE	DESCRIPTION	BY
A	07/09/20	PRELIMINARY RELEASE	CJL
B	02/10/22	ADD'D ANT. COVER NOTE	TLR
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2020 ANCHOR CONSTRUCTION DRAWINGS

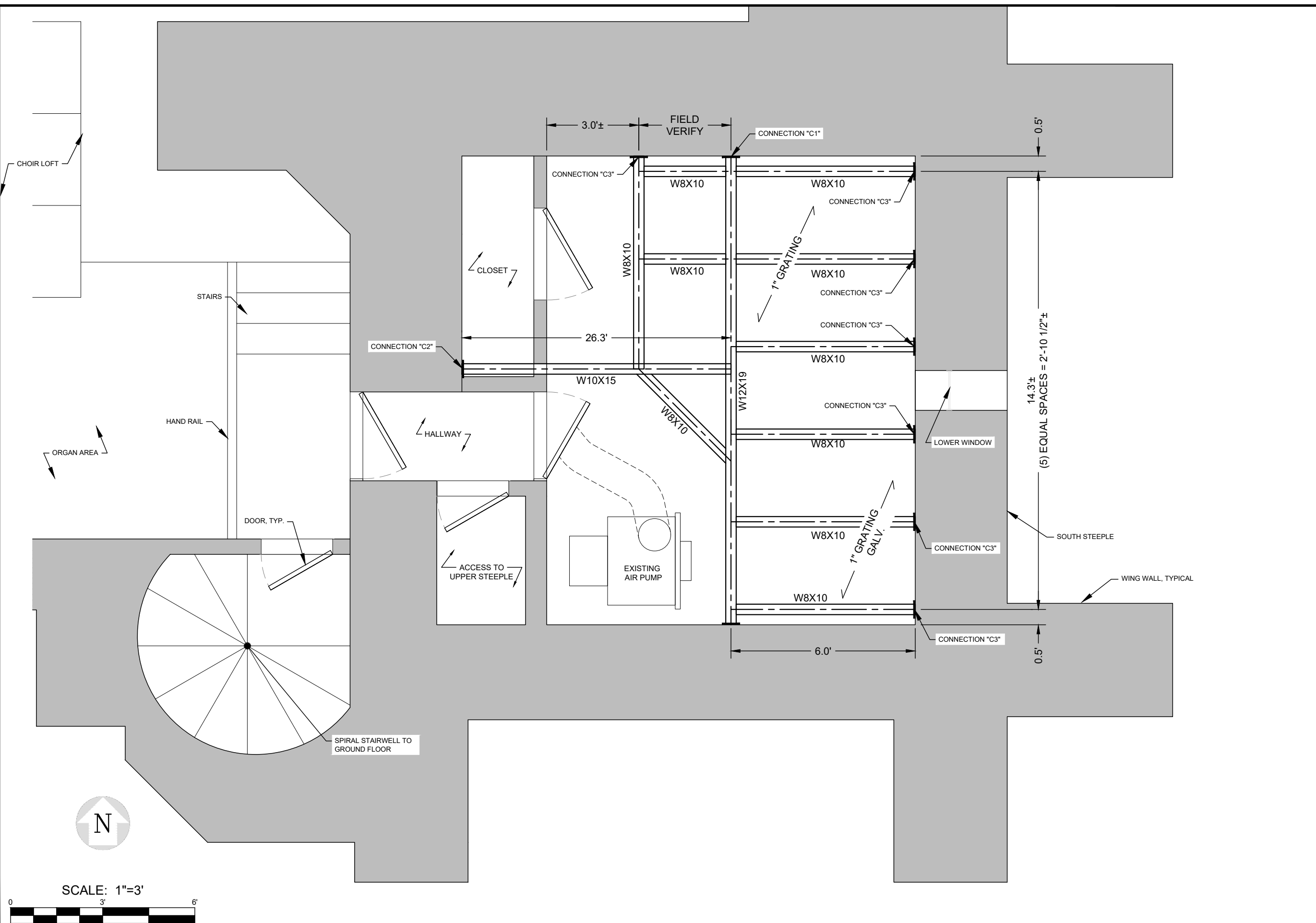
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SITE #: DE04229B
SITE NAME: SWEETEST HEART OF MARY
SITE ADDRESS: 4440 E. CANFIELD D/B/A 4440 RUSSELL ST. DETROIT, MICHIGAN 48207

Sheet Title: PLATFORM STRUCTURAL PLAN

Sheet Number: SK-1



SCALE: 1"=3'



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**2020 ANCHOR
CONSTRUCTION
DRAWINGS**

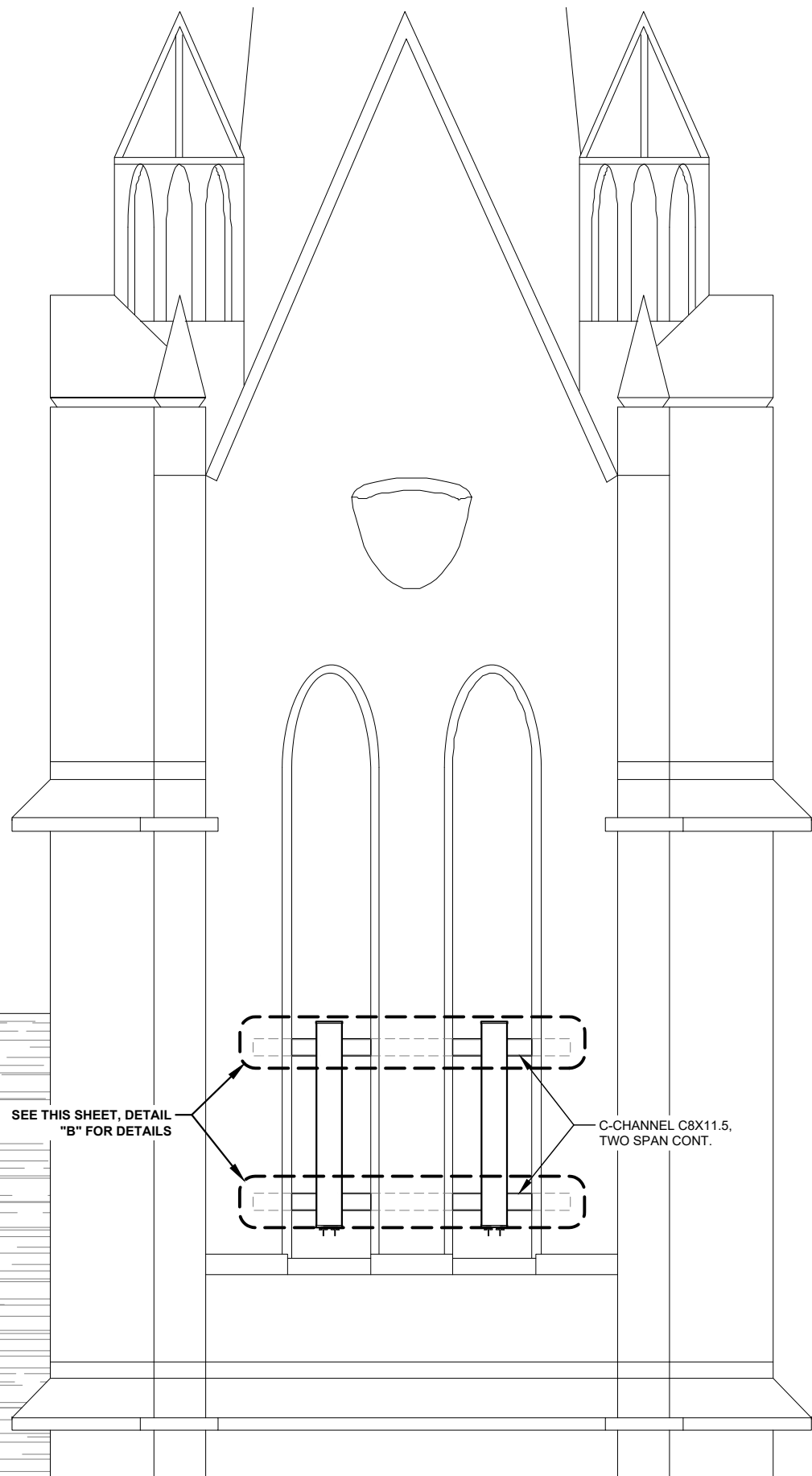
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SITE NAME:
**SWEETEST
HEART OF MARY**
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DETROIT, MICHIGAN 48207

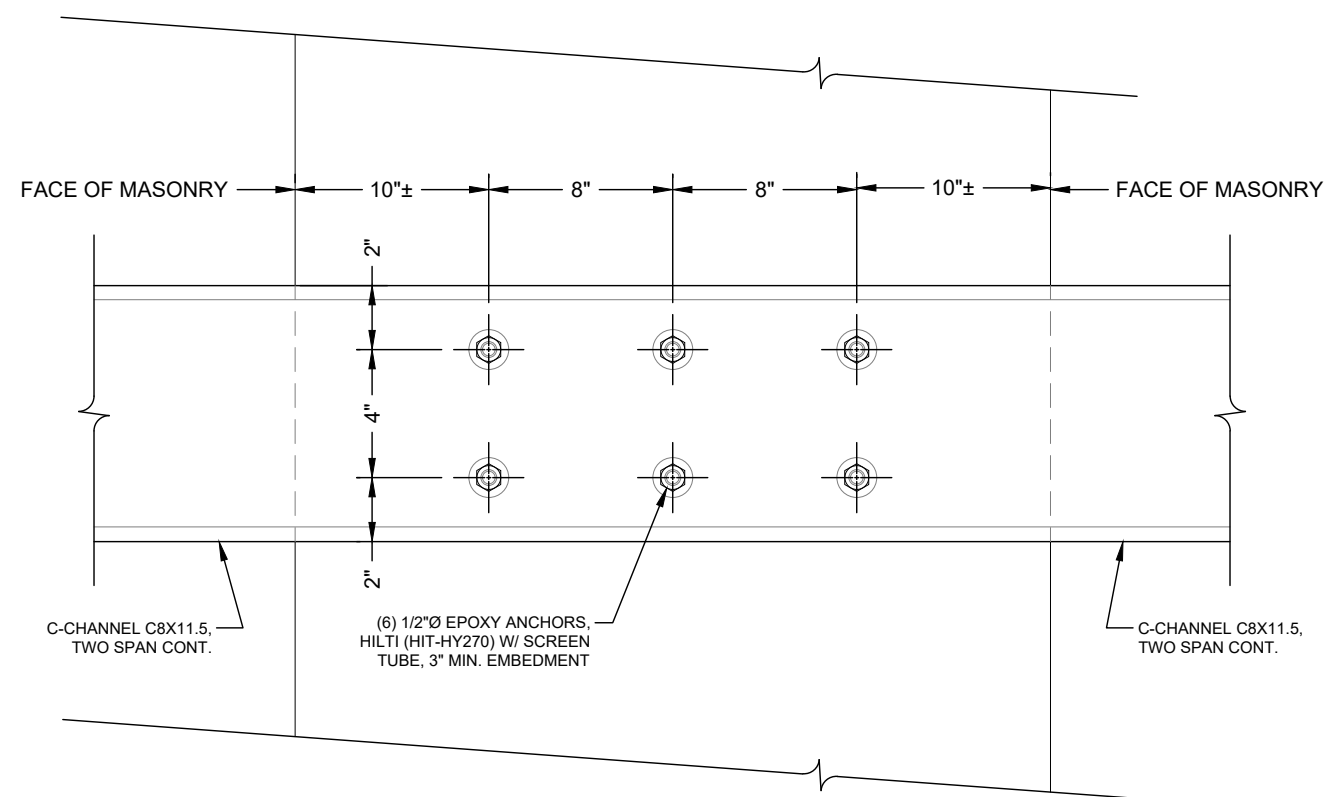
Sheet Title:
**ANTENNA
STRUCTURAL DETAIL**

Sheet Number:
SK-2



PLATFORM DETAILS N.T.S.

1

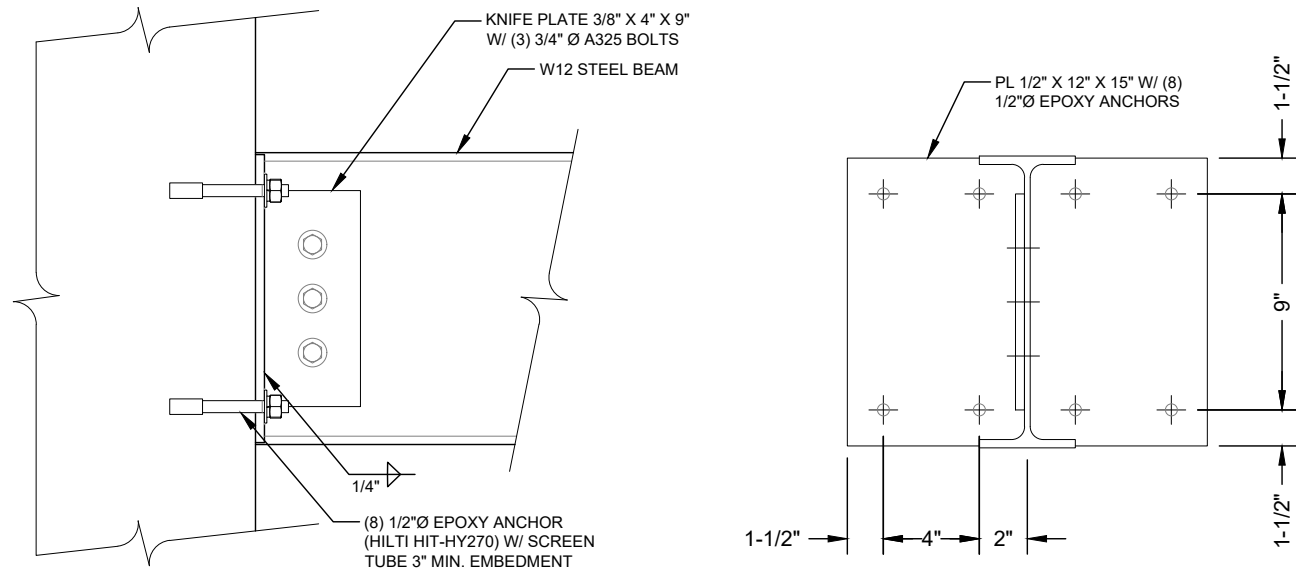


DETAIL "B" N.T.S.

3

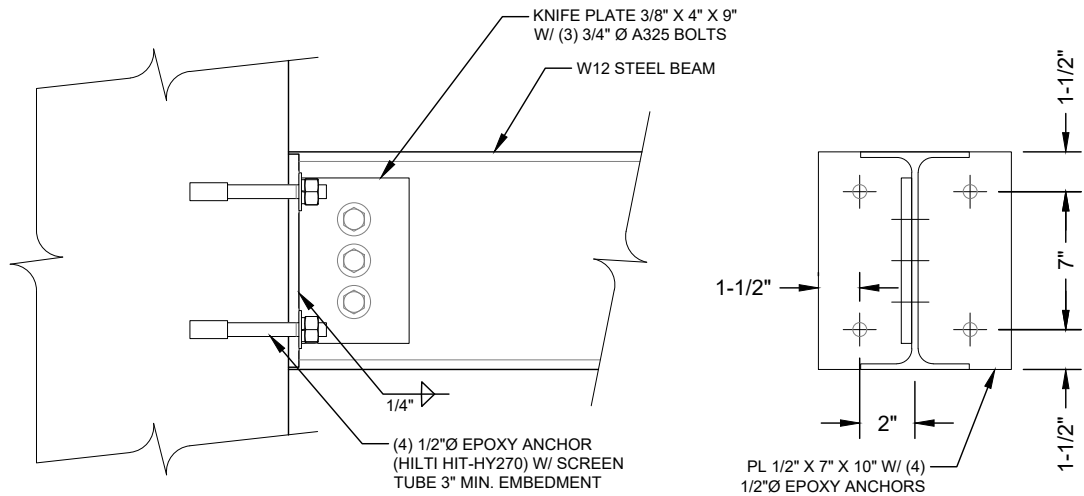
OMITTED

2



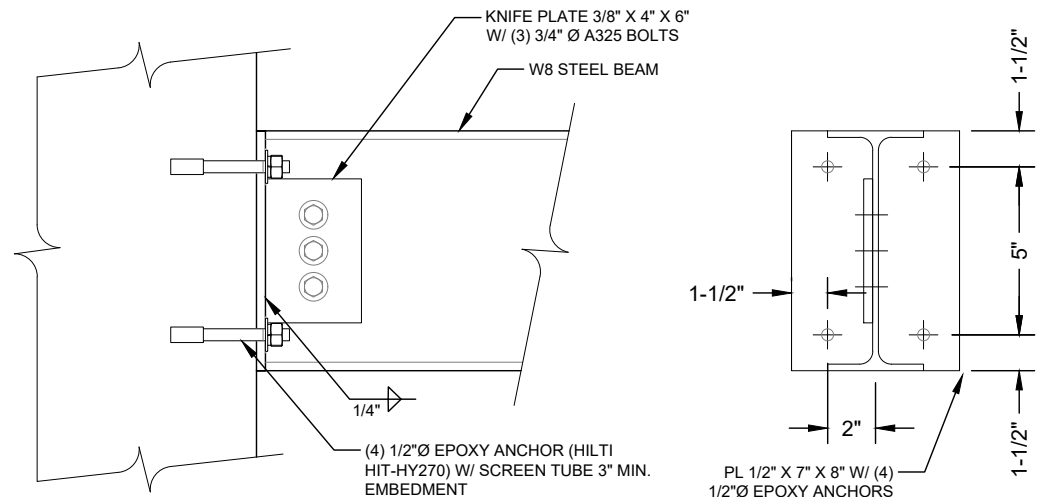
CONNECTION "C1" N.T.S

1



CONNECTION "C2" N.T.S

2



CONNECTION "C3" N.T.S

3

T-Mobile
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 CONTACT: KEN KALOUSEK
 (734) 444-0181

LANDTECH PROJECT NUMBER: 20398031

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2020 ANCHOR CONSTRUCTION DRAWINGS

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Sheet Title: PLATFORM STRUCTURAL DETAIL

Sheet Number: SK-3

REV.	DATE	DESCRIPTION	BY
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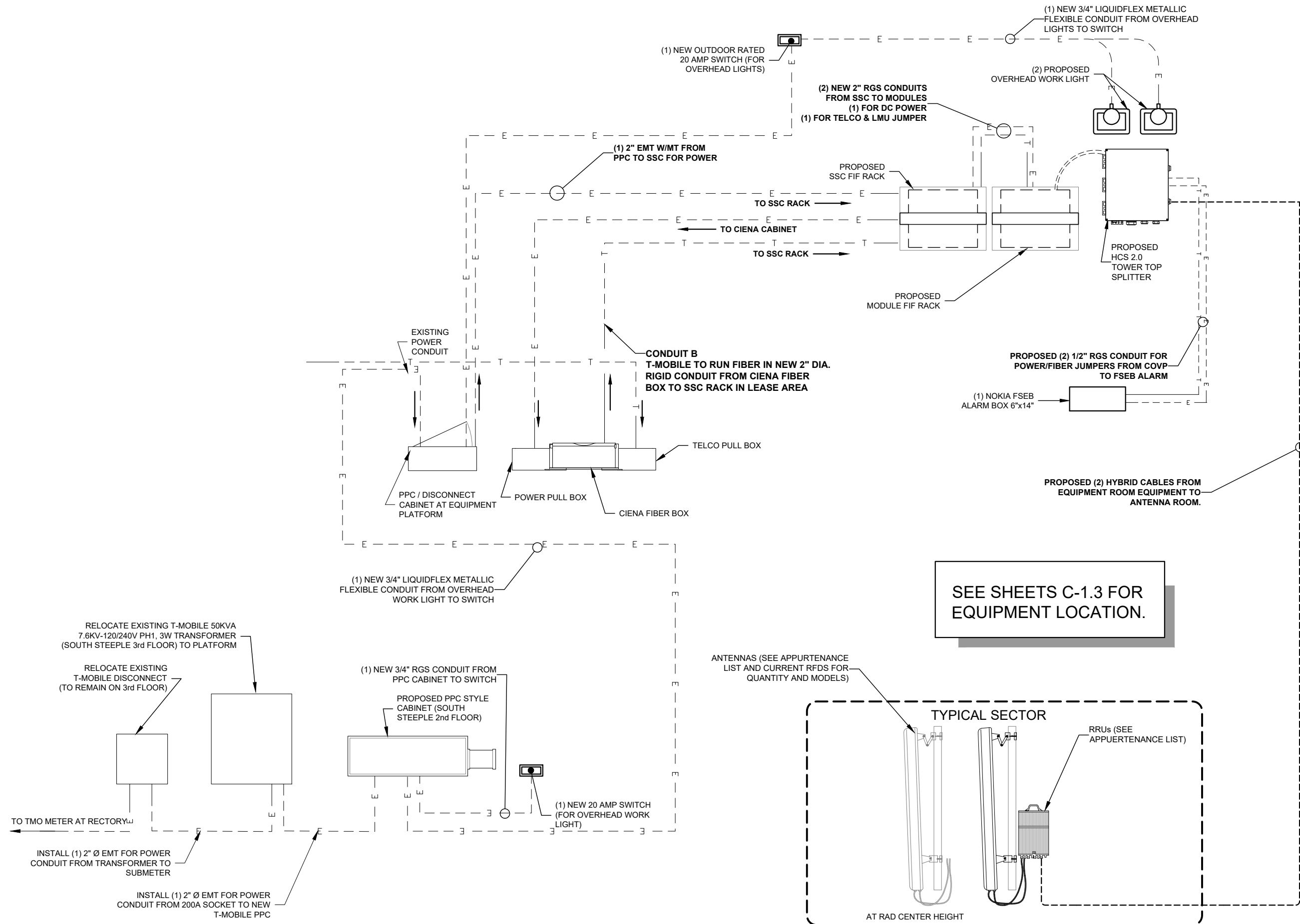


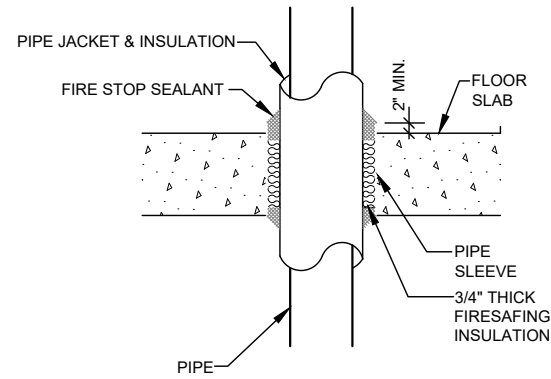
LANDTECH
Professional Surveying & Engineering
231.943.0050 www.landtechps.com 877.520.LAND

SITE #: DE04229B
SITE NAME: SWEETEST HEART OF MARY
SITE ADDRESS: 4440 E. CANFIELD D/B/A 4440 RUSSELL ST. DETROIT, MICHIGAN 48207

Sheet Title:
CONDUIT CABLE SCHEMATIC

Sheet Number:
E-1



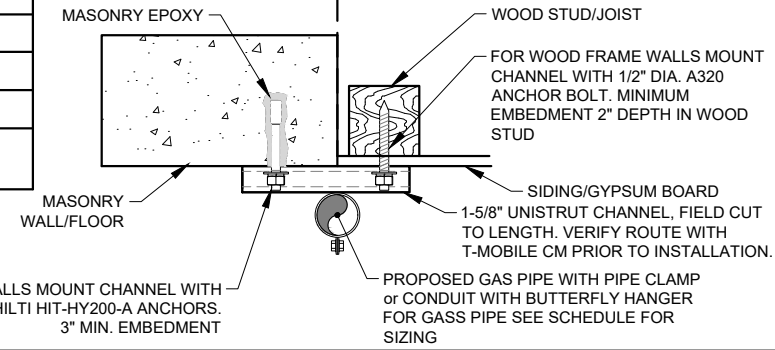


FLOOR PENETRATION DETAIL N.T.S.

1

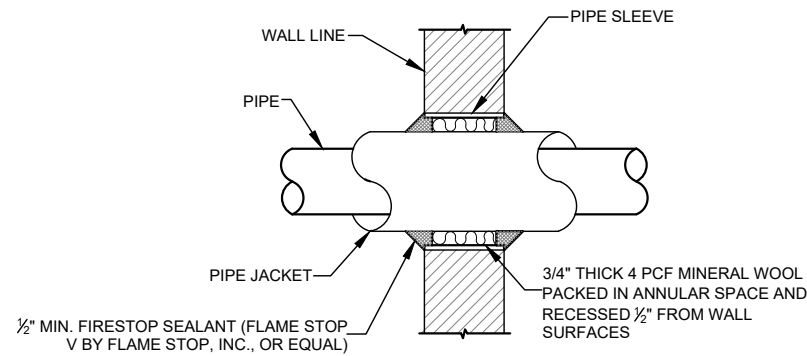
RIGID STEEL CLAMP SIZING SCHEDULE	
PIPE SIZE	UNISTRUT RIGID STEEL CONDUIT CLAMP P/N
3/4"	P1112
1"	P1113
1-1/4"	P1114
1-1/2"	P1115
2" AND GREATER	CONTACT ENGINEER

MASONRY WOOD FRAMED



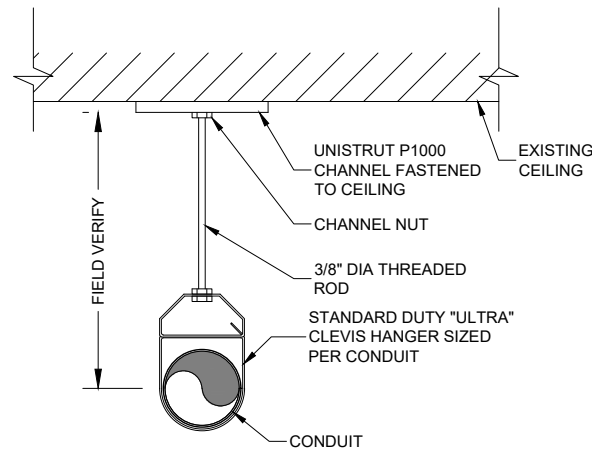
CEILING/WALL CONDUIT HANGER DETAIL N.T.S.

2



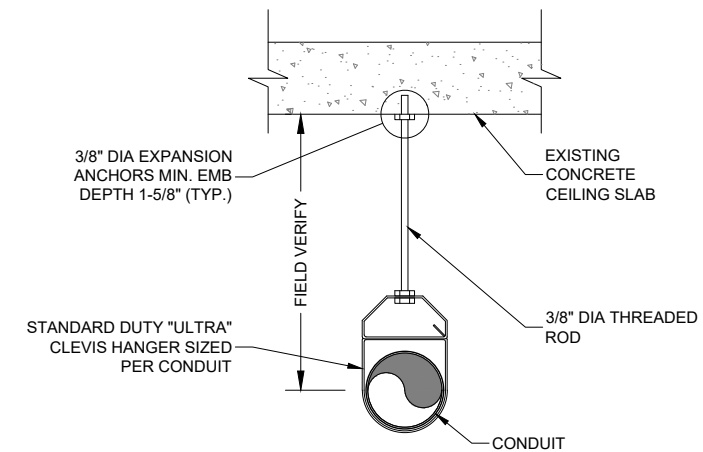
WALL PENETRATION DETAIL N.T.S.

3



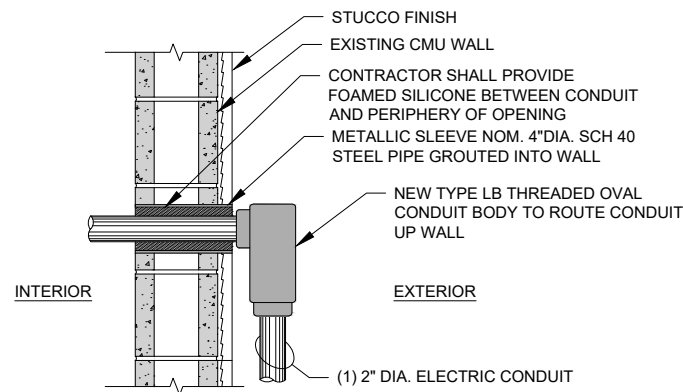
CEILING HANGER DETAIL N.T.S.

4



CEILING HANGER DETAIL N.T.S.

5



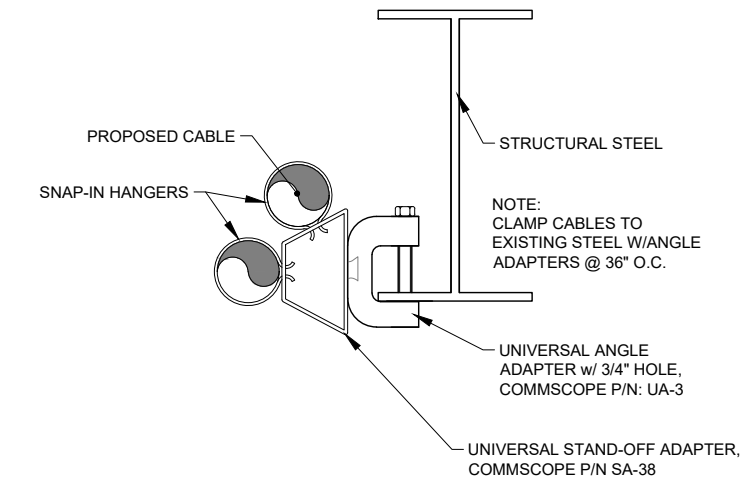
THROUGH PENETRATION FIRESTOP SYSTEMS 2 HOUR
UL SYSTEM No. W-J-1001 (F-RATING - 2 HR.)
UL FIRE RESISTANCE DIRECTORY - 2000 Vol. 2, PG. 1804

CONDUIT WALL PENETRATION DETAIL N.T.S.

6

INTENTIONALLY OMITTED N.T.S.

7



CABLE HANGER DETAIL N.T.S.

8

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(734) 444-0181

LANDTECH PROJECT NUMBER: 20398031

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2020 ANCHOR CONSTRUCTION DRAWINGS

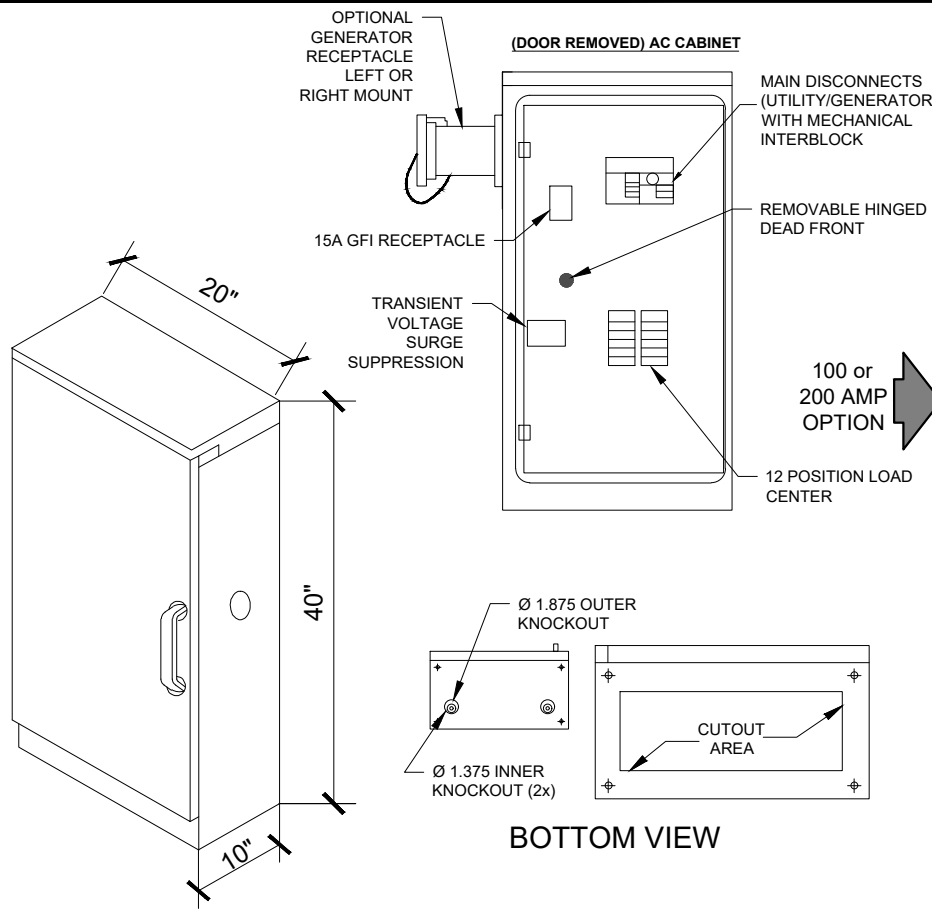
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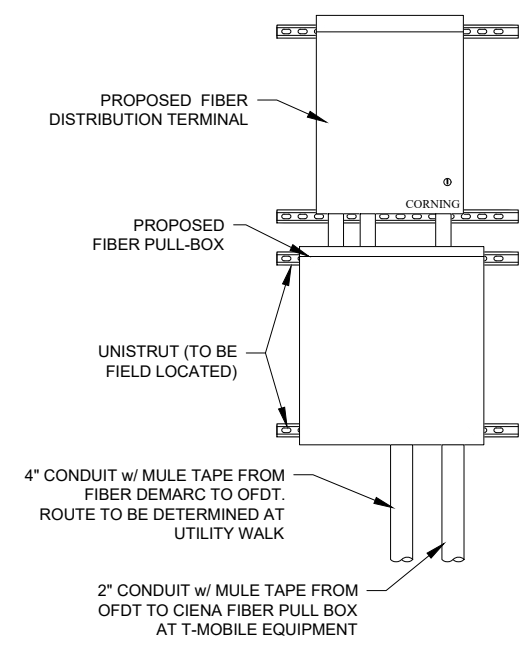
Sheet Title:
CABLE DETAILS

Sheet Number:
E-1.1



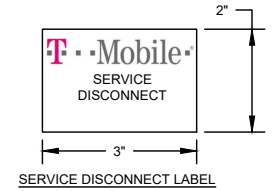
Specifications – CAC Model	
Enclosure	AC Cabinet
Cabinet Dimensions	39.00" H x 20.00" W x 10.00" D
Weight Approx.	75 lbs.
External Material	0.1" thick aluminum
Mounting	Wall or pad-mount (with optional pad-mounting base)
Cabinet Enclosure Type	One AC Power TVSS cabinet (NEMA 3R type enclosure)
Weather Protection	Rain/drip hood, rain tested per UL 891
Electrical	
Operating Voltage	120/240 VAC, single phase, 3 wire and ground
Service	100 Amp or 200 Amp. utility/standby
Disconnect	Slide bar mechanical interlock
AIC Rating	10kAIC, 22kAIC, 65kAIC
Load	Center 200 Amp, 24 position 1-30 Amp double pole (AC TVSS) 1-15 Amp single pole (GFI receptacles)
Bonding Jumper	Optional N-G bonding jumper
Standby Power Receptacle	Appleton AR20044RS Standard (100A or 200A), 10kAIC
TVSS with Indicator Lights	Metal Oxide Varistors (MOV) (160kA/Phase) Remote alarm contacts
Grounding	
Security (padlockable)	3-point door closure with 1/4 turn handle, SS hinge
Safety Compliance	UL 891, dead front switchboards
Options	10,000 or 22,000, 65,000 AIC series rated Pad-mounting base (8" thick) Various generator receptacles

POWER PEDESTAL CABINET N.T.S. **1**

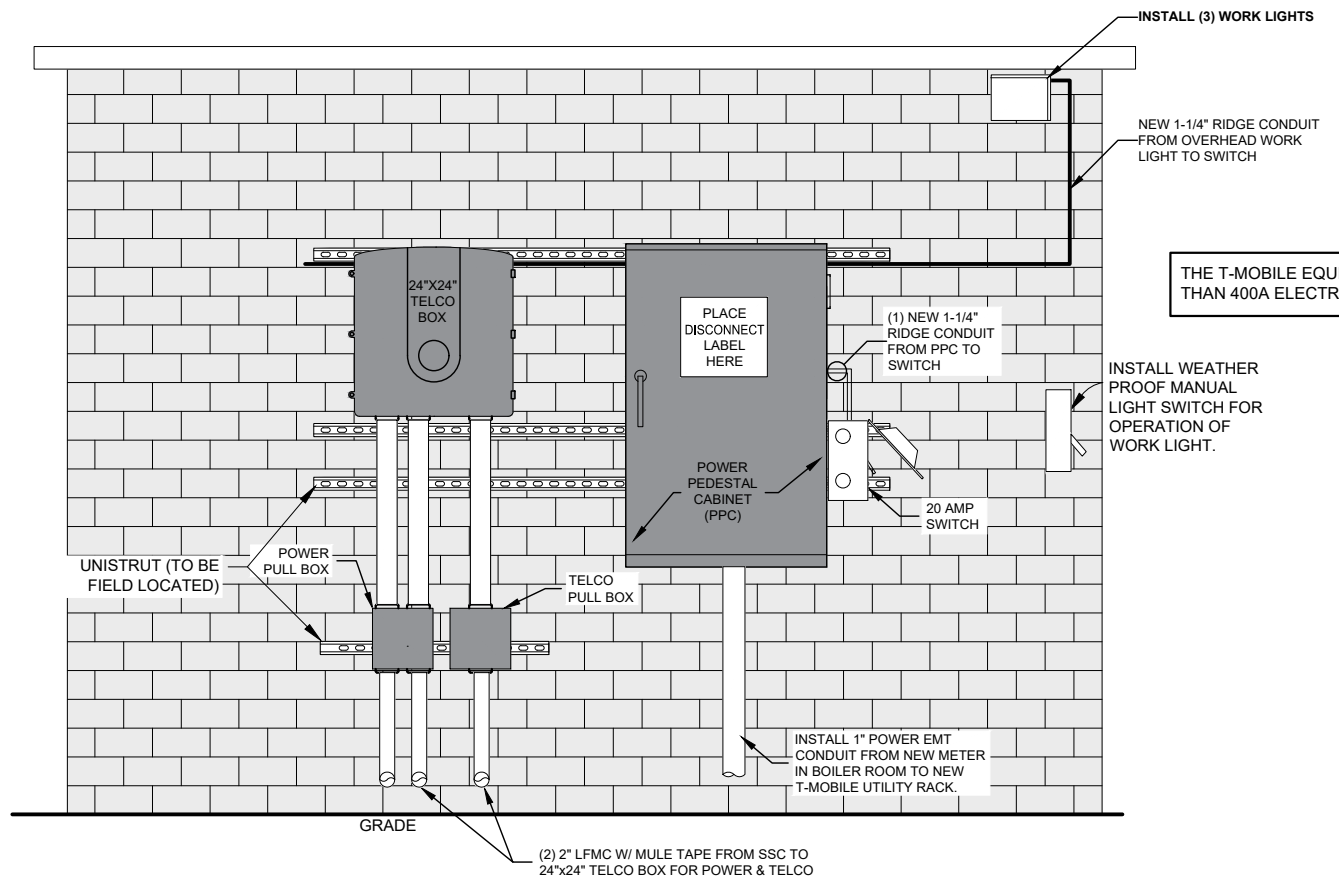


FIBER DEMARCATION DETAIL N.T.S. **2**

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



- THE LFMC SHALL BE CONNECTED TO THE ICE BRIDGE WITH MANUFACTURER APPROVED METALLIC PIPE STRAPS OR "MINIS" USING STAINLESS STEEL BANDING, OUTDOOR RATED METALLIC PIPE CLAMPS, AND/OR MANUFACTURER APPROVED OUTDOOR RATED ROUTING PRODUCTS.
- THE LIGHT SWITCH AND ANY JUNCTION BOXES SHALL BE DIE-CAST METALLIC WEATHER RATED BOXES AND MOUNTED WITH 100% WEATHERPROOF INSTALLATION METHODS. THE MOUNTING CLIPS SHALL BE USED AND NO BOXES SHALL BE DRILLED WITH SELF-TAPPING SCREWS FOR INSTALLATION.
- EACH LIGHT SHALL BE AN LED FLOOD LIGHT (NOT SPOT) RATED AT A MINIMUM OF 1,200 LUMEN BRIGHTNESS FACTOR AND SHALL BE OUTDOOR RATED TO A MINIMUM OF -30 DEGREES FAHRENHEIT (BELOW ZERO) OPERATING RANGE.



UTILITY EQUIPMENT N.T.S. **3**

T-Mobile
 28505 SCHOOLCRAFT RD, BLDG#6
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 CONTACT: KEN KALOUSEK
 (734) 444-0181

LANDTECH PROJECT NUMBER: 20398031

REV.	DATE	DESCRIPTION	BY
A	07/09/20	PRELIMINARY RELEASE	CJL
B	02/10/22	ADD'D ANT. COVER NOTE	TLR
C	03/30/22	RELOC PROP ANTENNAS	TLR

2020 ANCHOR CONSTRUCTION DRAWINGS

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Sheet Title: **ELECTRIC DETAILS**

Sheet Number: **E-1.2**

THE T-MOBILE EQUIPMENT IS LESS THAN 400A ELECTRICAL SERVICE.

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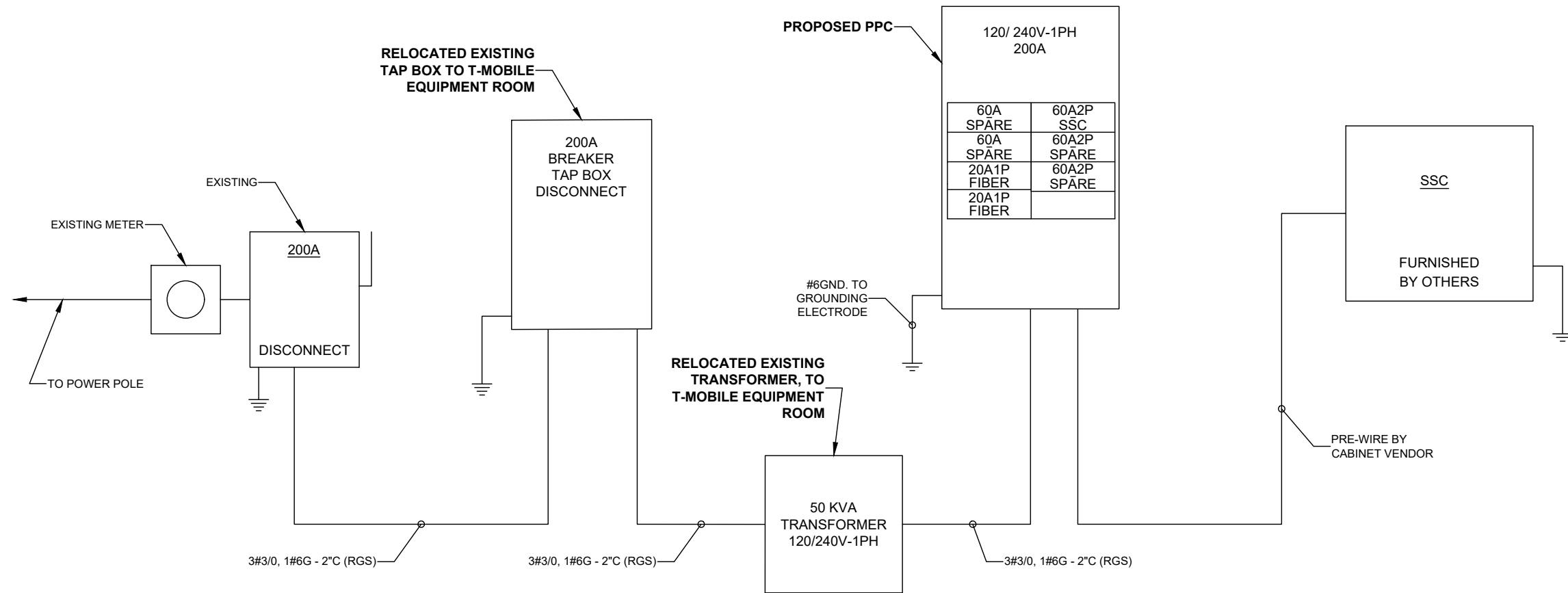
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Sheet Title: ONE-LINE DIAGRAM

Sheet Number: E-2



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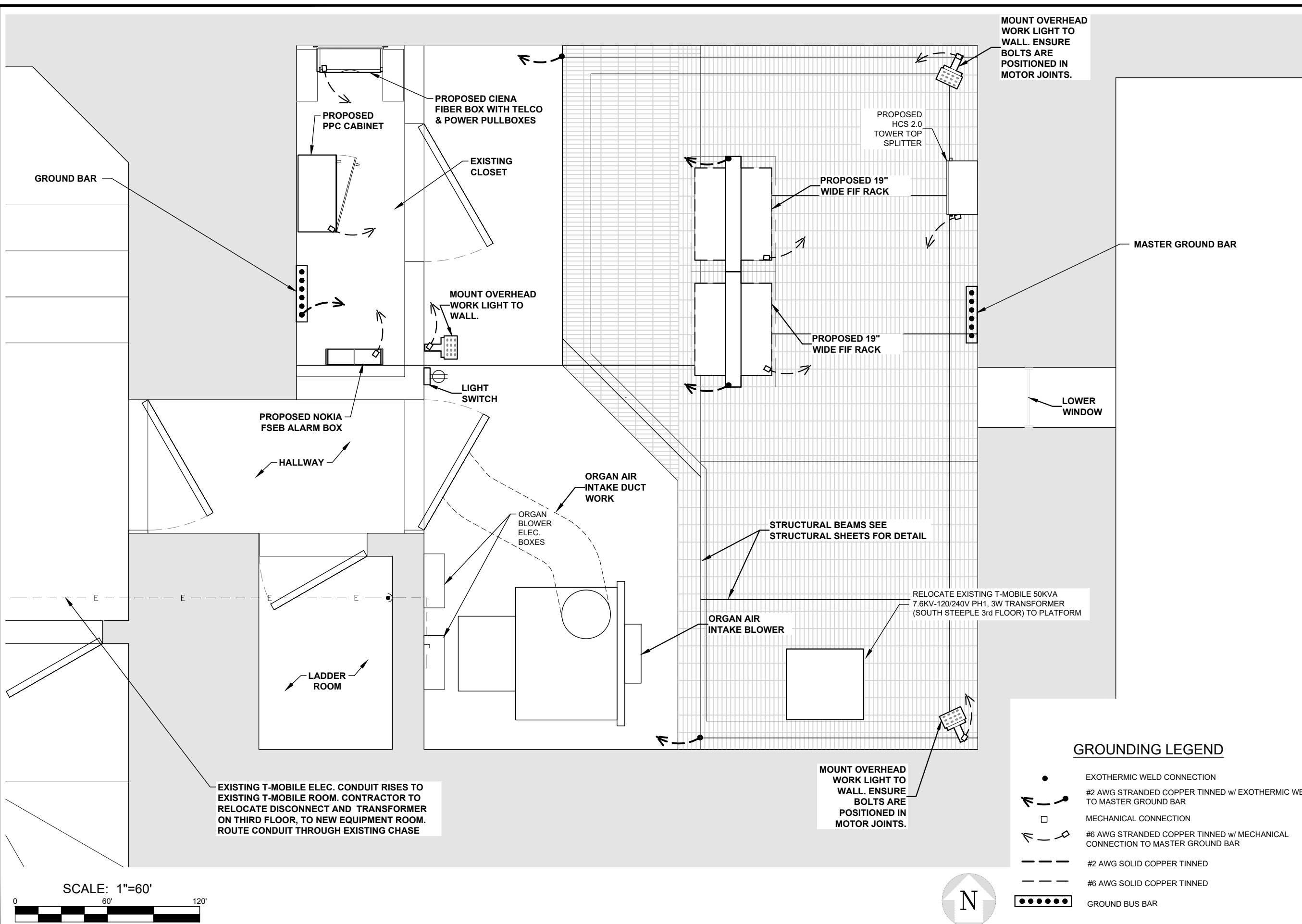
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Sheet Title: **GROUNDING PLAN**

Sheet Number: **E-3**



GROUNDING LEGEND

- EXOTHERMIC WELD CONNECTION
- #2 AWG STRANDED COPPER TINNED w/ EXOTHERMIC WELD TO MASTER GROUND BAR
- MECHANICAL CONNECTION
- #6 AWG STRANDED COPPER TINNED w/ MECHANICAL CONNECTION TO MASTER GROUND BAR
- #2 AWG SOLID COPPER TINNED
- #6 AWG SOLID COPPER TINNED
- GROUND BUS BAR



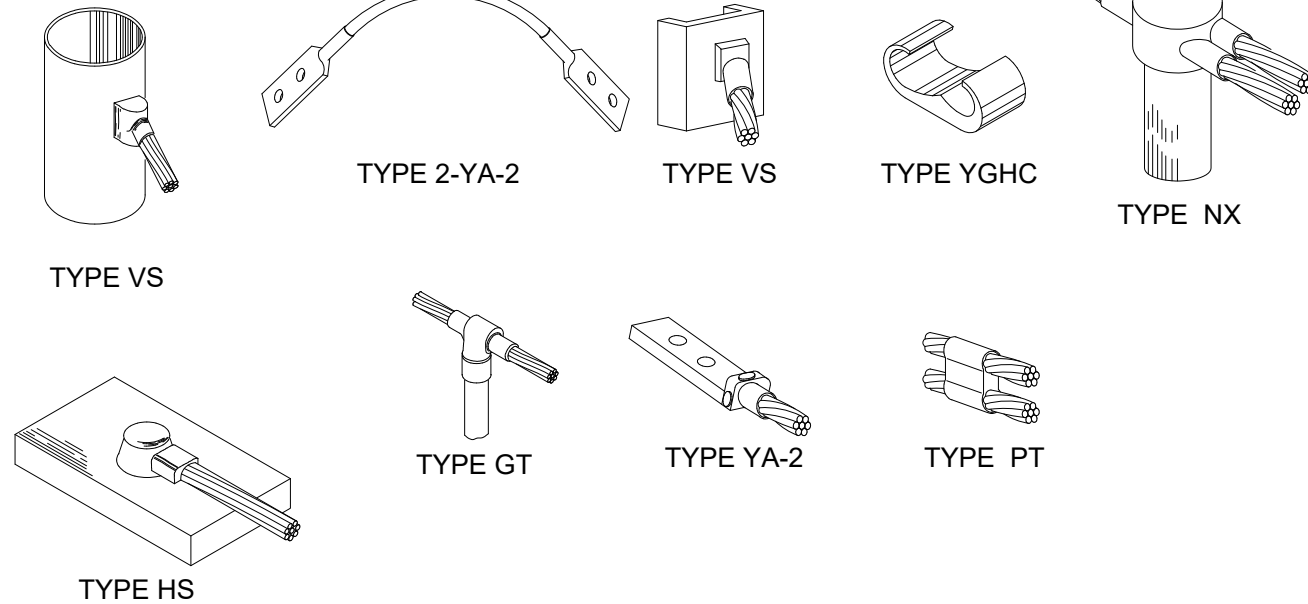
IMPORTANT GROUNDING / CABLE NOTES:

1. T-MOBILE IS ELIMINATING THE HOME RUN GROUND WIRE FROM TOP BUSS BAR AND THE BOTTOM BUSS BAR ON TOWER SITES. ROOFTOPS ARE STILL REQUIRED TO HAVE SECTORIZED GROUND AND #2 INSULATED GROUND WIRE. FROM SECTOR GROUNDS TO MAIN BUSS BARS AND BUILDING STEEL. 4 GROUND BARS, 3 ISOLATED ONE FOR EACH SECTOR, ONE AS COLLECTION POINT MOUNTED WITHOUT CHERRIES.
2. REMOVE INSULATORS (CHERRIES) FROM THE BUSS BARS AND GROUND TO TOWER, TOP AND BOTTOM ON TOWER SITES ONLY.
3. ALL EXPOSED GROUNDS TO BE DRESSED WITH SEAL TIGHT. (ONLY AT GRADE)
4. THE DISTANCE BETWEEN BUTTERFLIES AND CABLE STAND OFFS IS 36".
5. THE DISTANCE BETWEEN CONVENTIONAL AND/OR SNAP-HANGERS ON 1/2" JUMPERS SHALL BE NO MORE THAN 3 FEET AT THE TOP AND 2 FEET ON THE BOTTOM JUMPERS PER MANUFACTURER'S RECOMMENDATION.
6. NO HYBRID CABLES SHOULD TOUCH METAL OR STEEL. THE USE OF STANDOFF BRACKETS ARE REQUIRED. USE OF GROMMETS AS SUPPLIED BY T-MOBILE. (EXCEPT 1-5/8" SNAP-IN FOR CABLE MANAGEMENT)
7. HYBRID AND JUMPER LINES SHOULD BE DRESSED IN ON THE SIDE OR BOTTOM OF SECTOR FRAMES / MONOPOLES. NEVER ON TOP WERE SOMEONE WOULD WALK.
8. PARALLEL #2 TINNED PATH RUNS, WIDTH, DEPTH, BACKFILL, COMPACTION SPECS.
9. ALL MECHANICAL GROUND CONNECTIONS NEED TO BE SCRAPED IF PAINTED TO BARE METAL AND NO-OX APPLIED ON ALL CONNECTIONS ABOVE GROUND.
10. GROUND BARS NEED TO BE COPPER.
11. GROUNDING HARDWARE NEEDS TO BE STAINLESS STEEL.

GROUNDING / CABLE NOTES

1

NOTE:
CADWELD "TYPES" SHOWN ARE EXAMPLES. CONSULT WITH CONSTRUCTION MANAGER FOR SPECIFIC TYPES OF CADWELDS TO BE USED FOR THIS PROJECT.

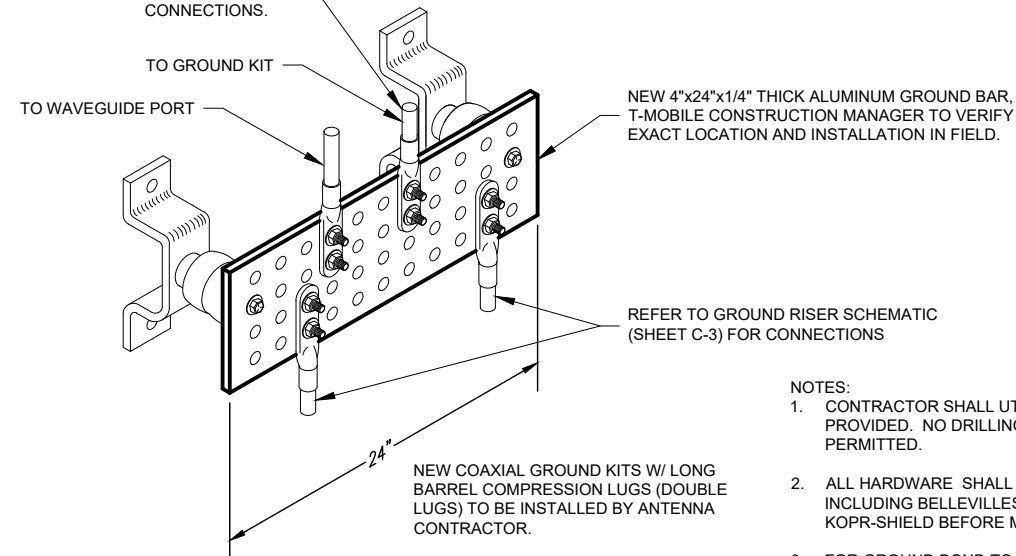


CADWELD CONNECTION TYPES

N.T.S.

2

#2 AWG STRANDED JUMPER W/ LONG BARREL COMPRESSION LUGS TO GROUND BAR BY GENERAL CONTRACTOR
NOTE: CONTRACTOR TO USE ANTI-CORROSION GREASE AT CONNECTIONS.



NOTES:

1. CONTRACTOR SHALL UTILIZE LUGGED HOLES PROVIDED. NO DRILLING OF THE BAR WILL BE PERMITTED.
2. ALL HARDWARE SHALL BE 18-8 STAINLESS STEEL INCLUDING BELLEVILLES. COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.
3. FOR GROUND BOND TO STEEL ONLY: INSERT A DRAGON TOOTH WASHER BETWEEN LUG AND STEEL. COAT ALL SURFACES WITH KOPR-SHIELD.

GROUNDING BAR DETAIL

N.T.S.

3

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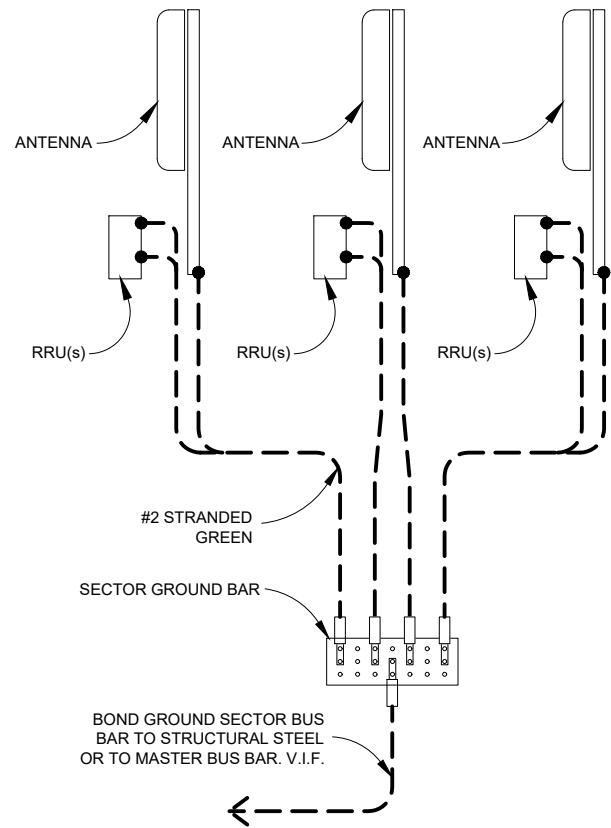
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GROUNDING DETAILS

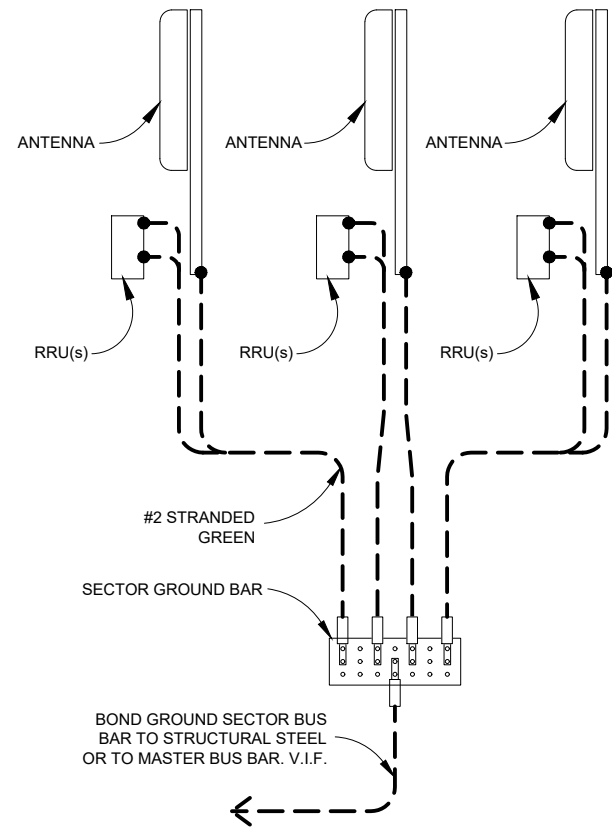
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E-3.1

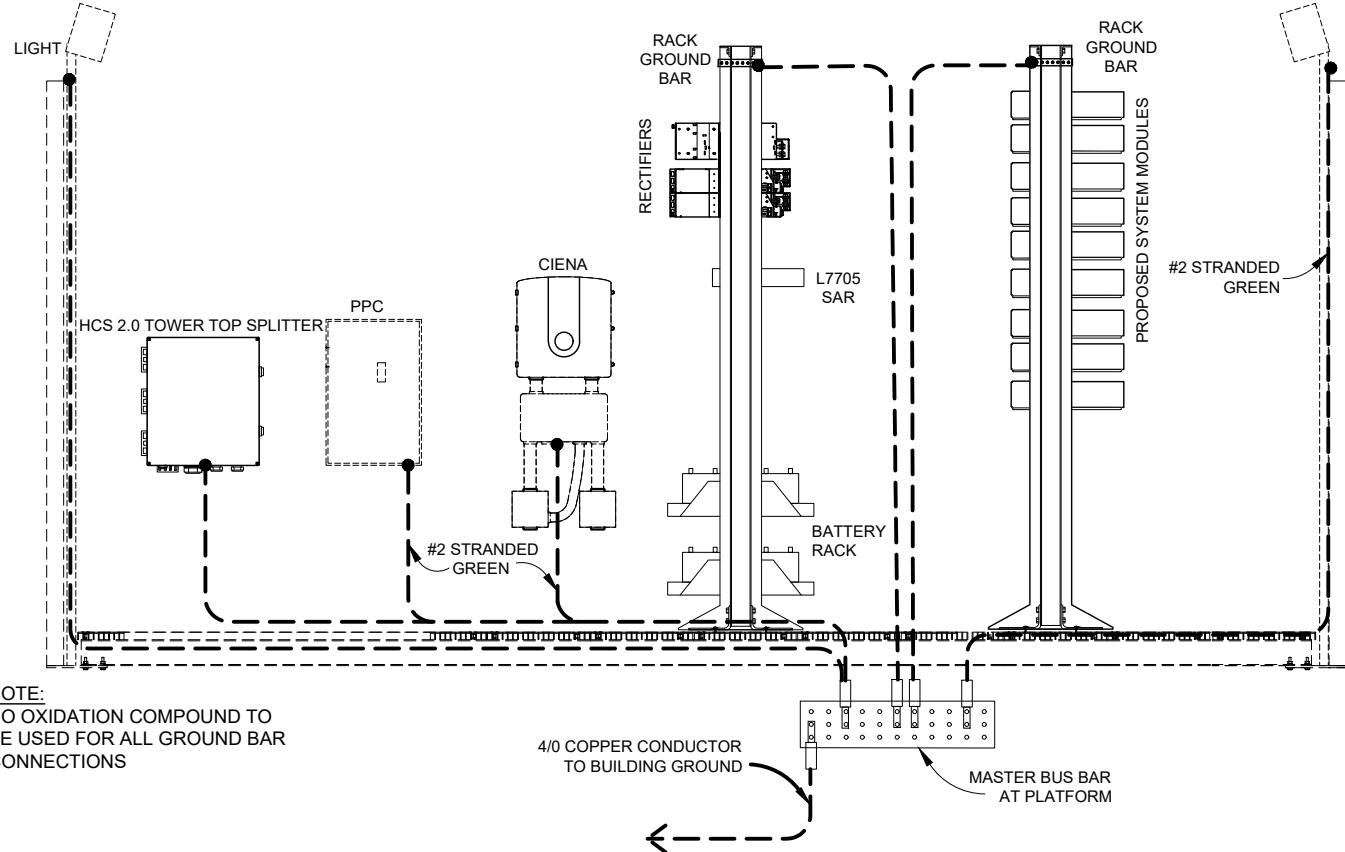
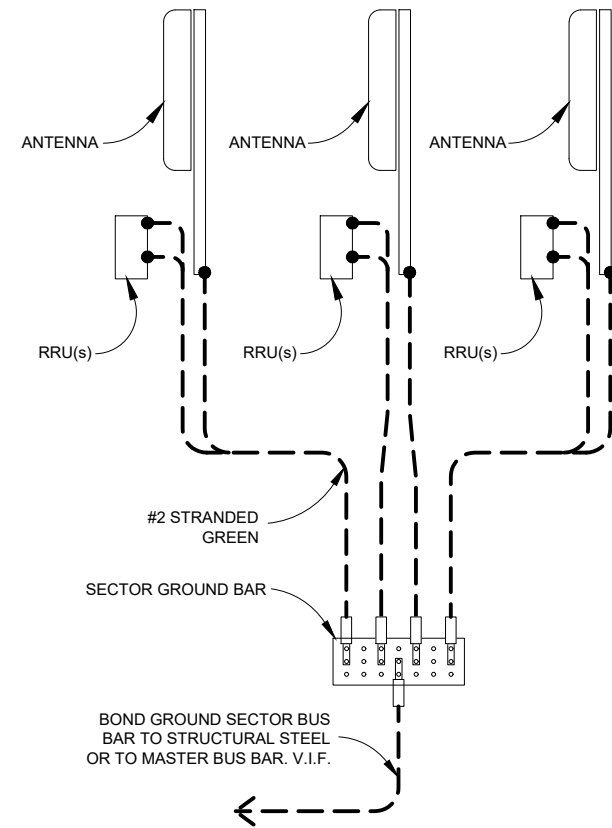
SECTOR A



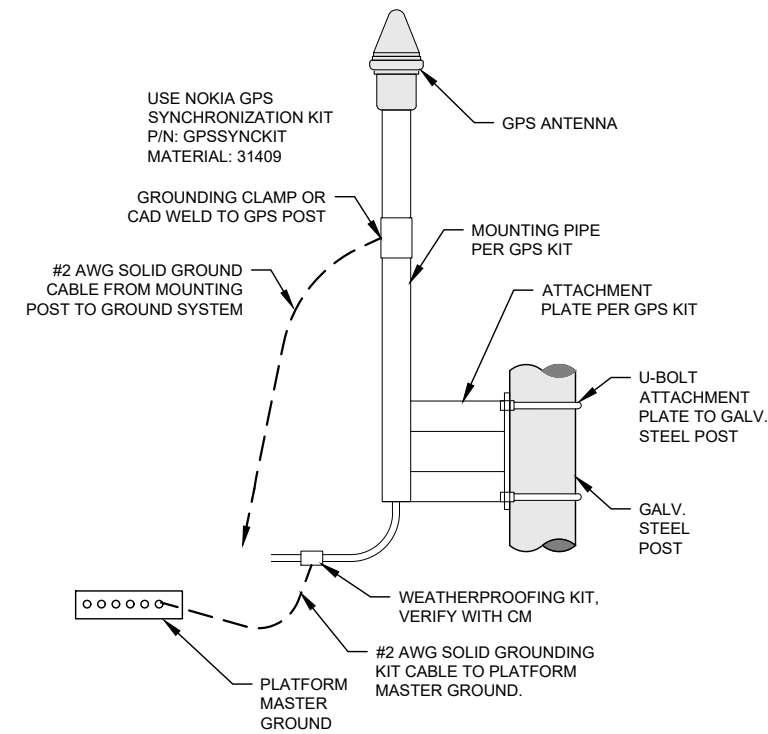
SECTOR B



SECTOR C



SEE GPS ANTENNA DETAIL THIS SHEET



GPS ANTENNA DETAIL

- = MECHANICAL CONNECTION
- = CAD WELD CONNECTION

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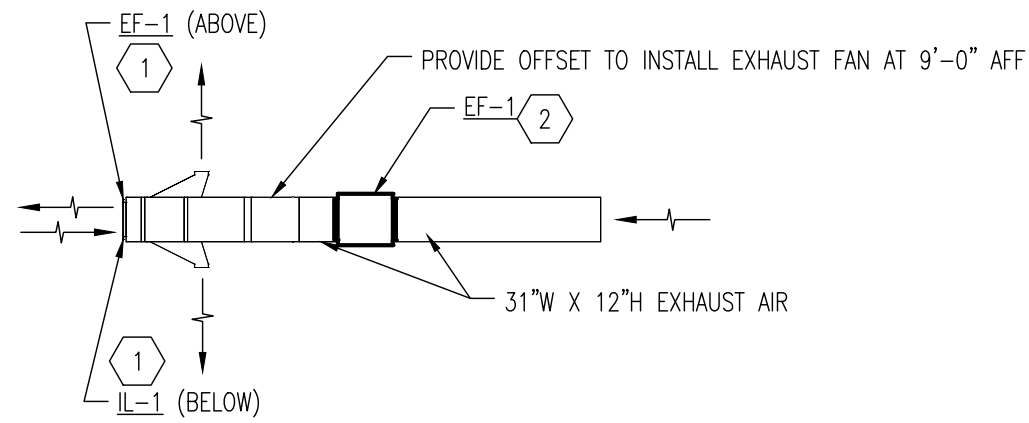
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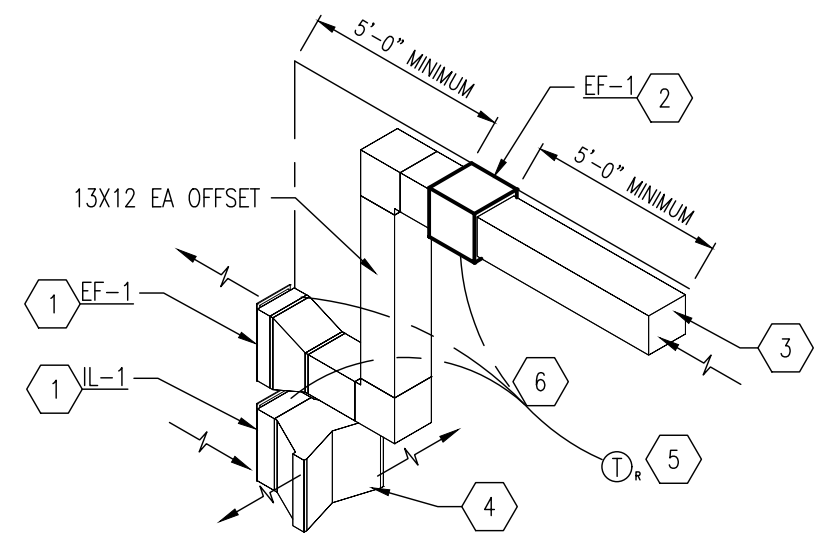
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Sheet Number: **E-3.2**



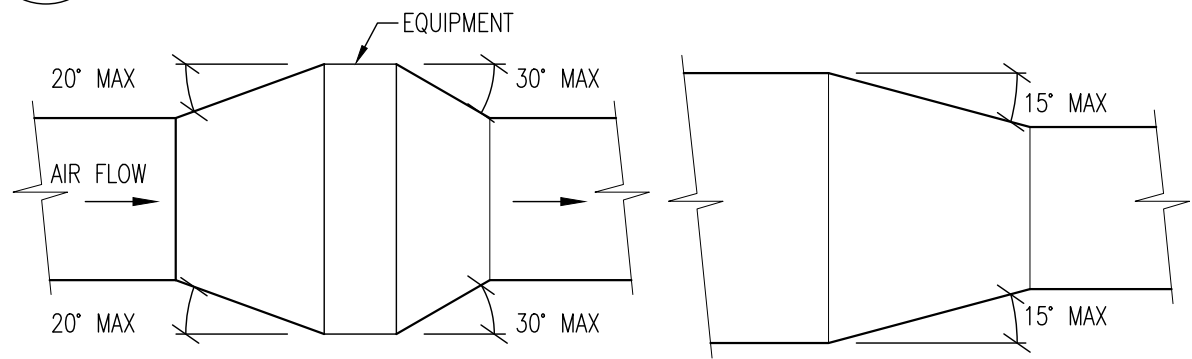
1 FLOOR PLAN - HVAC

M-1 SCALE: NOT TO SCALE



2 ISOMETRIC DETAIL - HVAC

M-1 SCALE: NOT TO SCALE



DUCT TRANSITION W/EQUIPMENT

DUCT TRANSITION

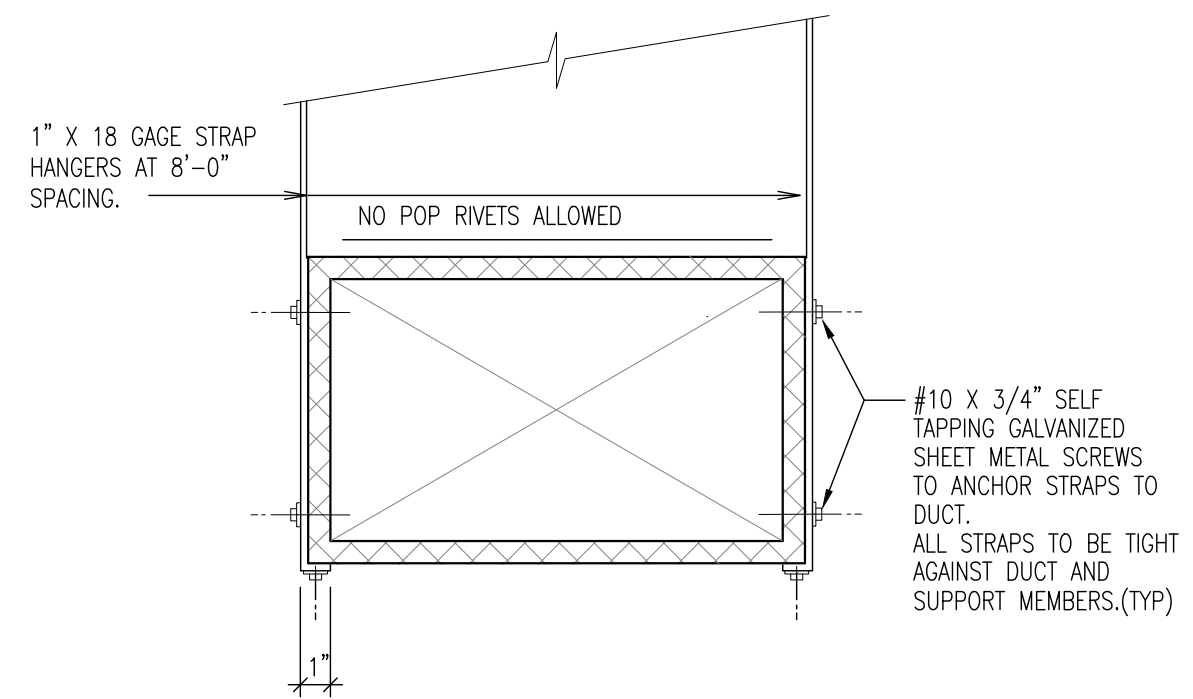
NOTES:
1. UNLESS OTHERWISE INDICATED ON PLANS, MAXIMUM ANGLES SHOWN SHALL APPLY.

3 TYPICAL DUCT TRANSITION DETAIL

M-1 SCALE: NOT TO SCALE

HVAC KEY NOTES

1. PROVIDE INTAKE OR EXHAUST LOUVER WITH FACTORY OPTIONS/FINISH AS SCHEDULED.
2. PROVIDE EXHAUST FAN WITH FACTORY OPTIONS AS SCHEDULED. INSTALL AT 9'-0" ABOVE FINISH FLOOR.
3. EXTEND 13" WIDE X 12" HIGH EXHAUST DUCT 10'-0" INTO THE ROOM AND TERMINATE WITH GALVANIZED 16-GAUAGE 1x1 WIRE MESH GRILLE ON END.
4. PROVIDE A FIELD FABRICATED FITTING TO TRANSITION FROM THE INTAKE LOUVER TO TWO 22x4 OPENINGS TO DIRECT AIR INTO THE SPACE AT A 90° ANGLE.
5. PROVIDE A 120V REVERSE ACTING THERMOSTAT, INSTALL AT 4'-0" ABOVE FINISH FLOOR BETWEEN THE TWO DOORS.
6. INTERLOCK THE EXHAUST FAN WITH THE NORMALLY CLOSED INTAKE AND NORMALLY CLOSED EXHAUST LOUVER TO OPEN WHEN THE EXHAUST FAN IS ON.



4 TYPICAL DUCT STRAP HANGER DETAIL

M-1 SCALE: NOT TO SCALE

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Sheet Title:
HVAC DETAILS

Sheet Number:
M-1

SECTION 23 0000 - HVAC

THE REQUIREMENTS OF THE "GENERAL CONDITIONS" AND "DIVISION 1" SECTIONS OF THE SPECIFICATIONS SHALL APPLY TO THIS SECTION OF THE SPECIFICATIONS.

PART 1 - GENERAL

1.01 SUMMARY

- A. THE CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERATIONAL HVAC SYSTEM AS SHOWN ON THE DRAWINGS INCLUDING EQUIPMENT, MATERIAL, LABOR, DUCTWORK, PIPING, DIFFUSERS, GRILLES AND REQUIRED ELECTRICAL. THE CONTRACTOR SHALL PROVIDE OPERATING AND MAINTENANCE INSTRUCTIONS TO THE OWNER FOR ALL EQUIPMENT. ALL COMPRESSORS SHALL BE PROVIDED WITH A FIVE (5) YEAR EXTENDED WRITTEN WARRANTY ON PARTS AND, WHERE APPLICABLE, ALL GAS FIRED HEAT EXCHANGERS SHALL BE PROVIDED WITH AN EXTENDED TEN (10) YEAR PARTS WARRANTY. THE CONTRACTOR SHALL PROVIDE AN UNCONDITIONAL WARRANTY OF ONE YEAR FOR ALL OTHER ASSOCIATED EQUIPMENT AND DEVICES.
- B. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH THE LOCAL BUILDING, MECHANICAL, AND ENERGY CODES ASHRAE, SMACNA, AND ALL OTHER APPLICABLE STATE AND FEDERAL CODES.
- C. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED FOR THE EXECUTION OF THIS WORK.
- D. ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND SHALL DISPLAY A UL LABEL WHERE APPLICABLE.
- E. ALL INTERIOR INSULATION MATERIALS, JACKETS, COVERINGS, SEALS AND MASTICS SHALL HAVE A FLAME SPREAD INDEX OF 25 OR LESS AND SMOKE DEVELOPED INDEX OF 50 OR LESS PER ASTM E84 (NFPA 255).

1.02 SUBMITTALS

- A. PRODUCT DATA: INCLUDE MANUFACTURER'S TECHNICAL DATA FOR EACH MODEL INDICATED, INCLUDING RATED CAPACITIES, DIMENSIONS, REQUIRED CLEARANCES, CHARACTERISTICS, FURNISHED SPECIALTIES, ACCESSORIES, AND OPERATION AND MAINTENANCE DATA.

1.03 QUALITY ASSURANCE

- A. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, ARTICLE 100, BY A TESTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED USE.

PART 2 - PRODUCTS

2.01 DUCTWORK AND SPECIALTIES

- A. ALL DUCTWORK SHALL BE GALVANIZED SHEET METAL OF GAUGES AND JOINT TYPES AS SPECIFIED IN THE SMACNA MANUAL FOR THE APPLICABLE SIZES. VOLUME DAMPERS SHALL BE MANUAL LOCKING, BLADE-TYPE, TWO GAUGES HEAVIER THAN DUCT. DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH SMACNA STANDARDS FOR TWO-INCH STATIC PRESSURE. ALL DUCTWORK SHALL BE SEALED WITH MASTIC. ACCESS DOORS SHALL BE PROVIDED IN DUCTWORK AT FIRE DAMPERS OR OTHER CONTROL DEVICES AS REQUIRED FOR MAINTENANCE. DOUBLE-THICKNESS TURNING VANES SHALL BE PROVIDED AT ALL RECTANGULAR ELBOWS. FLEXIBLE CONNECTIONS TO AIR HANDLING UNITS SHALL BE PROVIDED.

2.02 INSULATION

- A. ALL DUCTWORK SHALL BE WRAPPED WITH INSULATION WITH A MINIMUM R VALUE OF R-3.5.

2.03 EXHAUST FAN

- A. EXHAUST FAN TO BE SUPPLIED AS INDICATED ON THE DRAWINGS.
- B. FAN SPEED CONTROLLER INSTALLATION LOCATION SHALL BE COORDINATED WITH ELECTRICAL CONTRACTOR AND BE INSTALLED AT OR BY THE FAN FOR ADJUSTMENT BY BALANCE CONTRACTOR.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. INSTALL UNITS LEVEL AND PLUMB, MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. INSTALL ACCORDING TO ARI GUIDELINE B.
- B. ALL DUCTWORK AND EXHAUST FANS SHALL BE SUPPORTED PROPERLY FROM THE TOP CHORD OF ROOF JOISTS. NO DUCTWORK OR DEVICES SHALL BE ATTACHED DIRECTLY TO ROOF DECK.
- C. THE HVAC SYSTEM SHALL OPERATE WITHOUT OBJECTIONABLE VIBRATION, PULSATION, OR RATTLE. MOTORS SHALL BE MOUNTED ON RUBBER VIBRATION ISOLATORS OR THE COMPLETE UNIT SHALL BE ISOLATED FROM THE BUILDING WITH ISOLATION PADS. ALL DAMPERS, GRILLES, AND ACCESSORIES SHALL HAVE NO MOVEMENT UNDER OPERATING CONDITIONS AND SHALL OPERATE WITHOUT NOISE. ALL DUCTWORK INSTALLED EXTERNAL TO THE BUILDING SHALL BE COMPLETELY WEATHERPROOF AND INSULATED.

3.04 CONNECTIONS

- A. ELECTRICAL SYSTEM CONNECTIONS: COMPLY WITH APPLICABLE REQUIREMENTS IN DIVISION 16 SECTIONS FOR POWER WIRING, SWITCHES, AND MOTOR CONTROLS.
- B. GROUND EQUIPMENT ACCORDING TO DIVISION 16 SECTIONS "GROUNDING AND BONDING".
- C. TIGHTEN ELECTRICAL CONNECTORS AND TERMINALS ACCORDING TO MANUFACTURER'S PUBLISHED TORQUE-TIGHTENING VALUES. IF MANUFACTURER'S TORQUE VALUES ARE NOT INDICATED, USE THOSE SPECIFIED IN UL 486A AND UL 486B.

3.05 TESTING ADJUSTING AND BALANCING

- A. TEST, ADJUST, AND BALANCE THE EXHAUST AIR SYSTEMS:.
- B. MAKE ADJUSTMENTS AND RE-TEST SYSTEM TO ACHIEVE THE REQUIRED FLOW WITHIN 10% OF SPECIFIED FLOW FOR AIR SYSTEMS.
- C. WHEN DEFICIENCIES ARE IDENTIFIED, RE-TEST AND ADJUST FLOWS AFTER CORRECTIVE MEASURES ARE TAKEN.
- D. PERMANENTLY IDENTIFY POSITION OF SPEED CONTROLLER AND DAMPERS FOR FUTURE REFERENCE.

END OF SECTION 23 0000

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Sheet Title:
HVAC GENERAL
NOTES

Sheet Number:
M-1.1

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EXHAUST FAN SCHEDULE														
TAG	BASIS OF DESIGN		FLOW RATE (CFM)	E.S.P.	FAN SPEED (RPM)	DRIVE TYPE	BLADE TYPE	WEIGHT (LBS)	SONES	ELECTRICAL DATA		DISCONNECT DATA		NOTES
	MANUFACTURER	MODEL								HP	VOLTAGE	M.T.C.	E.T.C.	
EF-1	GREENHECK	SQ-95-G	530	0.25	1,300	DIRECT	BACKWARDS INCLINED	49	6.4	1 / 15	115 / 1 / 60	√		①②③

① SUSPEND FROM STRUCTURE WITH UNISTRUT AND HANGING SPRING ISOLATORS
 ② PROVIDE WITH 120V REVERSE-ACTING THERMOSTAT, COORDINATE SET POINT WITH OWNER
 ③ INTERLOCK WITH LOUVERS, COORDINATE WITH LOUVER SCHEDULE AND FLOOR PLAN

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LOUVER SCHEDULE														
TAG	BASIS OF DESIGN		SERVICE	FLOW RATE (CFM)	LOUVER WIDTH	LOUVER HEIGHT	LOUVER DEPTH	FREE AREA (FT ²)	VELOCITY (FPM)	ELECTRIC ACUTATOR		DISCONNECT DATA		NOTES
	MANUFACTURER	MODEL								TYPE	VOLTAGE	M.T.C.	E.T.C.	
IL-1	GREENHECK	EAD-635	INTAKE LOUVER	530	13"	22"	6"	0.8	782	NORMALLY CLOSED	115 / 1 / 60	√		①②③
EL-1	GREENHECK	EAD-635	INTAKE LOUVER	530	13"	22"	6"	0.8	782	NORMALLY CLOSED	115 / 1 / 60	√		①②③

① PROVIDE WITH FACTORY GREENHECK 70% KYNAR 500 / HYLAR 5000 IN SIERRA TAN (COLOR CODE GF118)
 ② PROVIDE WITH FACTORY INSECT SCREEN
 ③ INTERLOCK TO OPEN WHEN THE EXHAUST FAN IS RUNNING



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Sheet Title: EXHAUST FAN & LOUVER SCHEDULE

Sheet Number: M-1.2

Division 15 - MECHANICAL

PART 1 - GENERAL

1. Included - Work of this section generally includes provisions of labor, materials, equipment, accessories, necessary for installation of mechanical systems shown on the contract drawings and specified in the General Notes. Intent of construction documents is to provide the Owner with a complete and operating facility, and any minor items omitted but obviously necessary to accomplish intent shall be provided whether or not shown or specified.

2. Related - The General Requirements division of the General Notes is hereby made a part of the work of this specification. The requirements of this specification apply to the work of all sections of division 15.

A. Work performed by others includes installation of electrical equipment, except as noted otherwise on drawings or in specification.
B. Electrical division 16

3. Ordinances and Codes

A. All work shall be executed and inspected in accordance with all underwriter's, public utilities, local and state codes and regulations applicable to the trade affected. Recommendations of AFA, NFPA, OSHA and ASHRAE and applicable state energy code compliance shall be rigidly followed.
B. Should any change in the plans and specifications be required to comply with these regulations, the contractor shall notify the Owner before submitting his bid. After entering into contract with the Owner, the contractor will be held accountable to complete all work necessary to meet these requirements at his own expense.
C. Where the work required by the drawings and specifications is above the standard required, it shall be done as shown or specified.

4. Permits - The contractor shall arrange and pay for all permits in connection with the work hereinafter specified and at completion of the work furnish the Owner with the final certificate of inspection.

5. Drawings - The drawings indicate the general arrangement of the proposed work. Details of proposed departures due to actual field conditions or other causes shall be provided for. No extras will be paid for correcting faulty, poorly arranged, or poorly coordinated work.

6. Site Examination - The contractor shall visit the premises so as to ascertain the existing conditions before submitting his bid. No extras will be allowed for his lack of knowledge of these conditions.

7. Complete Installation - The contractor shall furnish and install all incidental parts, valves, fittings, pumps, control valves and control wiring required for the proper function of all component parts. The complete installation shall function smoothly and noiselessly to the full extent of the plans and specifications. The contractor shall complete his installation as rapidly as general construction permits. All filters, strainers, and safety devices shall be properly installed before starting equipment. The Owner shall be left with a new set of filters at final acceptance.

8. Coordination - Before any equipment is purchased or fabricated and before running and/or fabricating any lines of piping or ductwork, the mechanical contractor and his subcontractors shall assure themselves that they can be run as contemplated. Because of the small scale of the drawings, it is not possible to indicate all offsets, fittings and accessories that may be required. The mechanical contractor and his subcontractors shall carefully investigate all other mechanical, and electrical and structural drawings and finish conditions affecting all of their work accordingly, furnishing such fittings, valves, duct transitions, offsets and accessories as may be required to meet such conditions, at no additional cost.

9. Temporary Heat - Arrangements for usage of system for temporary heat shall be coordinated with general contractor. System shall not be used for temporary heat unless all temporary filters are installed. Temporary filters and operation of units shall be provided by the general contractor.

10. Submittals - Within 5 days after proposal acceptance the contractor shall submit to the Owner for approval two (2) copies of shop drawings on each item of equipment whether as specified or substituted. Shop drawings shall give overall dimensions, weights, metal gauges, materials, certified capacities, brake HP, motor HP, tube diameters friction drop and nameplate data. The contractor shall be responsible for checking shop drawings before submitting for approval. The Owner's check shall be general and does not relieve the contractor of final responsibility for a complete job to the intent of plans and specifications. All control diagrams and equipment should be assembled in one submittal.

11. Substitution of Equipment

A. Bids shall be based on providing all equipment mentioned by brand name in plans and specifications. No substitutions shall be considered before bidding.
B. The contractor shall attach a list of proposed substitutions, giving the amount to be added or deducted to contract price for each item. Complete engineering data shall be submitted on each request for substitution item. Substitute items shall be equal or better than items mentioned in regard to all accessories, capacities, durability and appearance. Contractor shall pay all costs incurred to make substitute items fit required space with maintenance clearances - piping, sheet metal, electrical or building alteration shall be included in said costs.
C. All standard accessories as well as specified extras shall be provided with equipment.

12. Guarantee - All material and workmanship installed and/or furnished under this section of work shall be guaranteed against defects for a period of one year from date of acceptance by Owner. Any defects or faulty workmanship shall be the contractor's responsibility and shall be corrected entirely at his expense.

PART 2 - PRODUCTS

1. Approved manufacturers - approval by name listed in this specification does not imply that the manufacturer standard product meets the intent of the drawings and specification. It is the contractor's responsibility to provide all necessary alterations, materials, labor, etc., as approved by the Owner to meet the full intent of the drawings and specifications. This is to include, but not necessarily be limited to electrical, structural, mechanical, and architectural alterations and revisions necessary to provide a complete and operating facility at no additional costs to the Owner.

2. Materials - Materials throughout shall be new and of the best grades specified. They shall be standard catalog items and manufactured by nationally known manufacturers of the items specified. Contractor shall receive and be responsible for all Owner furnished equipment and provide rough-in and final connections for all mechanical equipment furnished under this contract or by others. The contractors shall provide a suitable shed for the storage of all materials during progress of the job.

3. Solder - All solder used on sweat fittings shall be 95-5 hard solder unless brazing or silver solder is specified. All buried copper piping shall be silver soldered.

4. Floor, Ceiling Plates, Flanges - Provide tight fitting floor and ceiling plates on pipes passing through walls, ceilings, floors, nickel or chrome plate in finished areas. Provide wall and ceiling flanges for ducts in finished areas.

5. Pipe Hangers, Supports - Provide hangers, supports, braces by Grinnell, Fee and Mason, Grabler, Elcen, Unistrut, Basin Engineers, Inc. to prevent undue strain, stresses, noise, vibration.

PART 3 - EXECUTION

1. Workmanship

A. Work throughout shall be performed by men skilled in the installation of the various trades of the work herein specified.
B. All piping and ductwork shall be run concealed in finished areas except where noted otherwise or as chrome plated plumbing fixture connections.
2. Curbs, Bases, Supports - Major curbs, openings, and equipment supports will be provided under the general section of this contract only where shown on engineering or structural plans. All other supports, anchors, and bases shall be provided by mechanical contractor for all mechanical equipment. Equipment shall be supported per manufacturer's written recommendations for noise-free installation.
3. Removal of Existing Work - All existing mechanical equipment, piping, etc., removed by the contractor shall be the property of the building. Such items will be disposed of at the building owner's direction.
4. Removal of Rubbish - On completion of his work, the contractor shall remove all of his tools, scaffolding, debris, etc., from the grounds and leave the premises perfectly clean.
5. Operating and Maintenance Instructions - Upon completion, the contractors shall make up a set of operating and maintenance instructions covering all mechanical equipment with moving or moveable parts including general operating or heating, plumbing and cooling systems and shall give the Owner four (4) copies of these instructions. Manufacturer's printed operations and maintenance instructions shall also be provided for each piece of equipment.

A. Name, address, and telephone number of party to be contacted for 24 hour service for each item of equipment.

B. Starting, stopping, lubrication, and adjustment shall be clearly indicated for each piece of equipment.

C. Prepare 8-1/2"x11" blueprints with binding edge of appropriate scale to indicate all equipment, respective switches, and valve locations. Bind in instruction book.

DIVISION 5 - FENCE

PART 1 - GENERAL

3.1 Work Included

A. Refer to the site plans for size and location of fence and gates to be installed.

3.2 Related Work

A. Coordinate fence grounding with Electrical Contractor.
B. Refer to Fence Detail Plan - concrete for specification of concrete and grout.
C. Refer to Fence Detail Plan for applicable locations of access road gates.

3.3 Description

A. A security fence is provided in order to inhibit unauthorized access to the site area.

3.4 Quality Assurance

Refer to Fence Detail Plan.

3.5 Sequencing

A. If the site area has been brought up to surface course elevation prior to fence construction, fence post excavation spoils must be controlled to preclude contamination of surface course.

3.6 Submittals

A. Manufacturer's descriptive literature.
B. Certificate of compliance that specifications have been met.

3.7 Fence Material

Refer to Fence Detail Plan.

DIVISION 7 - ANTENNA SYSTEM

PART 1 - GENERAL

1.1 Work Included

A. Erect furnished tower as indicated in the drawings.
B. Install antennas as indicated on drawings and Owner specifications.
C. Install antenna platform as indicated on drawings.
D. Install furnished galvanized steel waveguide ladder.
E. Install waveguide bridge as indicated on drawings.
F. Install coax cable, connectors, jumpers, grounding kits as indicated in drawings.
G. Sweep test result.

1.2 Requirements of Regulatory Agencies

A. Furnish U.L. listed equipment where such label is available, install in conformance with U.L. standards where applicable.

B. Install antenna, antenna cables, grounding system in accordance with drawings and specification in effect at project location and recommendations of state and local building codes, special codes having jurisdiction over specific portions of work. This includes, but is not limited to, the following:

- EIA - Electrical Industries Association RE - 222, structural standards for steel antenna towers and antenna supporting structures.
- FAA - Federal Aviation Administration advisory circular AC 70/7460-IH, obstruction marking and lighting.
- FCC - Federal Communications Commission rules and regulations form 715 "obstruction marking and lighting specifications for antenna structures", and form 715A, "high intensity obstruction lighting specification for antenna structures"
- DISC - American Institute of Steel Construction specifications for structural joints using ASST. A325 or A490 bolts.
- NECK - National Electrical Code - on tower lighting kits.
- UL - Underwriter's Laboratories approved.
- In all cases part 77 or the FAA rules and parts 17 and 22 of the FCC rules are applicable and in the event of conflict, supersede any other standards or specifications. 1990 Life Safety code NAPA - 101.

DIVISION 16 - GENERAL ELECTRIC

PART 1 - GENERAL ELECTRICAL PROVISION

- Submittal of bid indicates Contractor is cognizant of all job site conditions and work to be performed under this contract.
- Contractor shall perform all verification, observations, tests, and examination work prior to the ordering of the electrical equipment and the actual construction. Contractor shall issue a written notice of all findings to the architect listing all malfunctions, faulty equipment and discrepancies.
- Heights shall be verified with Owner prior to installation.
- These plans are diagrammatic only.
- Electrical Service 120/240 V.A.C. single phase 3-wire 100 AMP service.
- Contractor shall provide all labor, materials, insurance, equipment, installation, construction tools, transportation, etc. for a complete and properly operative system energized throughout and as indicated on drawings, as specified herein and/or as otherwise required.
- Contractor shall carry out all work in accordance with all governing state, county, and local codes and O.S.H.A.
- Contractor shall secure all necessary building permits and pay all required fees.
- Complete job shall be guaranteed by the Contractor for a period of one (1) year after the date of job acceptance by Owner. Any work, material, or equipment found to be faulty during that period shall be corrected at once, upon written notification, at the expense of the Contractor.
- Provide project manager with one set of complete electrical "as installed" drawings at the completion of the job, showing actual dimensions, routings and circuits.
- The entire electrical installation shall be grounded as required by all applicable codes.
- Upon completion of work, conduct continuity, short circuit and fall potential ground tests for approval. Submit test reports to project manager. Clean premises or all debris resulting from work and leave work in a complete and undamaged condition.

PART 2 - PRODUCTS

A. All materials and equipment shall be new and in perfect condition when installed and shall be of the best grade and of the same manufacturer throughout for each class or group of equipment. Material shall be listed "J" where subject to such approval. Materials shall meet with approval of the division of industrial safety and all governing bodies having jurisdiction. Materials shall be manufactured in accordance with applicable standards established by ANSI, NEMA and NBFU.
B. All conduit only (C.O.) shall have a pull wire or rope.
C. All conductors shall be copper.
D. All circuit breakers, fuses and electrical equipment shall have an interrupting short circuit to which they may be subjected, and a minimum of 10,000 A.I.C.
E. Wire and cable conductors shall be copper 12 AWG Minimum unless specifically noted otherwise on drawings.
F. Grounding conductors shall be solid tinned copper and annealed +2.
G. Meter socket amperes, voltage, number of phases shall be as noted on the drawings, manufactured by Square D Company or approved equal.
H. All material shall be U.L. listed.
I. All underground conduit shall be PVC schedule 40 (unless noted otherwise) at a minimum depth of 24" below grade.
J. Cables
1. All ground cable shall be standard TND solid bare copper plate and of size indicated on drawings.
2. When the direction of the conductor must change it shall be done gradually. The curvature of the turn shall be done in accordance with the following table:

Grounding Conductor Size	
Min Bending Radius to Inside Edge:	
No. 6 awg. to no. 4 awg	3"
No. 6 awg to no. 1/0 awg	8"
No. 2/0 awg. to 750 mcrn	1"
Bus Bar	No Restrictions

PART 3 - UNDERGROUND ELECTRICAL SERVICE

A. Coordinate the electrical service with the utility company.
B. Contractor to coordinate with utility company connection of temporary and permanent power to the site. The temporary power and all hookup costs to be paid by contractor.
C. The service shall be installed in accordance with all applicable codes and standards to be acceptable to the governing authorities exercising legal jurisdiction over electrical installations.

PART 4 - GROUNDING CONNECTIONS

A. External Connections:
1. All external grounding connections shall be made by the "cadweld" process. Connections shall include all cable to cable splices, Tees, Xs, etc. All cable to ground rods, ground rod splices and lightning protection system as indicated. All materials used (molds, welding, metal, tools, etc.) shall be by "cadweld" and installed per manufacturer's recommendation and procedures.
2. All interior grounding and bonding conductors shall be connected by two holes crimp type (compression) connections (except for the ACEG and ground rod) mechanical connections, fitting or connections that depend solely on solder shall not be used.

B. Ground Rods:
All ground rods shall be 5/8" diameter x 10'-0" long "Copperweld" or approved equal of the number and at locations indicated. Ground rods shall be driven full length vertical in undisturbed earth. All ground rods to be 10' apart unless otherwise

C. Ground Bars:
All ground bars shall be 1/4" thick bare copper plate and of size indicated on drawings.

D. Ground Ring:
1. The ground ring encircling the building shall be minimum size of no. 2 awg bare copper conductor in direct contact with the earth at a depth of not less than 42 inches (min) conductor bends shall have a minimum radius of 8 inches.

2. All external ground rings shall be joined together and all connections shall be "cadweld". NO LUGS OR CLAMPS WILL BE ACCEPTED.

E. Fence/Gate All sections of fence and gate shall be grounded as indicated on drawings. Ground each gate post and corner post. All other connections for the ground grid system shall be made by the "cadweld" process, and installed per manufacturer's recommendations and procedures.

F. Ground test pit A ground test pit shall consist of 6" diameter SCH 40 PVC with 6" cleanout plug & cleanout adapter fitting. Plug threads shall be coated with anti-seize lubricant prior to installation. 6" PVC will be 18" long, buried 12" underground with 6" above finished grade. Top of Ground rod cadwelded to ground ring will be 12" from top of cleanout adapter.

PART 5 - ASTM Fall Potential Tests

A. Ground tests shall be performed as indicated on drawings. A biddle ground ohm meter or the method of using two auxiliary ground rods (as described in I.E.E.E. standard no. 81-1983, part 1) may be used. The I.E.E.E. method requires the use of an a.c. test current. The auxiliary test rods must be sufficiently far away from the rod under test so that the regions in which their resistance is localized do not overlap.

B. Contractor to conduct ground resistance test in the format as follows:

- Equipment Building
A. First test - shall be with four ground rods installed, one at each corner of the building but not connected to the main grounding bus. Furnish wire to connect (temporary clamp) all four ground rods together to make a system test after each rod is individually tested. If any individual rod tests 25 OHMS or more, the electrical contractor and owner's representative should be notified so that the rod can be driven deeper until all four rods have a resistance of 10 OHMS or less on a dry day.
B. Second test - shall be with the ground rods connected with dry soil and when no standing water has been present for the past ten days. The maximum allowable reading is 5 OHMS to ground. If the resistance of the entire system exceeds 5 OHMS, the electrical contractor and owner's representative should be notified so that either additional and/or deeper rods can be installed.
- Tower

A. First test - shall be with nine (9) ground rods installed (min.) equally spaced around the tower foundation, but not connected to the equipment building external ground ring. Furnish wire to connect (temporary clamp) all three ground rods together to make a system test after each rod is OHMS or more, the electrical engineer and the owner's representative should be notified so that the rod can be driven deeper until all three rods have a resistance of 10 OHMS or less on a dry day.
B. Second test - shall be with the grounds connected, with dry soil and when no standing water has been present for the past ten days, the maximum allowable reading is 5 OHMS to ground. If the resistance of the entire system exceeds 5 OHMS the electrical contractor and owner's representative should be notified so that either additional and/or deeper rods can be installed.

3. Equipment Building and Tower
A. After the equipment building and tower ground resistance test is completed, electrical contractor shall tie equipment building external ground ring together. After first and second test, all connections shall be "cadweld". No lugs or clamps will be accepted.
B. After all the external ground rings are tied together but before the equipment building is tied down, a megger check of the ground system should be done. The maximum allowable reading is 5 OHMS to ground.

C. Ground Resistance Test Report
Upon completion of the testing for each site, Contractor shall submit a test report showing resistance in OHMS with auxiliary potential electrodes at 5-foot and 10-foot intervals until the average resistance starts increasing; 10-15 photos must be taken to proof entire external ground ring system before backfill or project manager must be notified no less than 48 hours in advance of backfill. Testing shall be completed by general contractor and two (2) sets of test documents are to be bound and submitted within one week of work of completion.

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LANDTECH PROJECT NUMBER: 20398031			
REV.	DATE	DESCRIPTION	BY
A	07/09/20	PRELIMINARY RELEASE	CJL
B	02/10/22	ADD'D ANT. COVER NOTE	TLR
C	03/30/22	RELOC PROP ANTENNAS	TLR

2020 ANCHOR CONSTRUCTION DRAWINGS

NOTE: THESE DRAWINGS ARE TO SCALE WHEN PLOTTED ON 11"x17" SHEETS. REFER TO GRAPHIC SCALES ON REPRODUCTIONS.



SITE #: DE04229B
SITE NAME: SWEETEST HEART OF MARY
SITE ADDRESS: 4440 E. CANFIELD D/B/A 4440 RUSSELL ST. DETROIT, MICHIGAN 48207

Sheet Title:

GENERAL NOTES

Sheet Number:

N-2

NOTE: THESE NOTES ARE OF A GENERAL NATURE AND ARE NOT SITE-SPECIFIC. SOME NOTES MAY NOT APPLY TO THIS SITE. CROSS-REFERENCE NOTES WITH OTHER SHEETS AND T-MOBILE SCOPE OF WORK TO VERIFY WORK TO BE COMPLETED.



Sunbrella® Awning and Marine Fabric Specifications

A favorite for awning and marine use, Sunbrella fabric offers excellent fade and weather resistance. The fabric is water repellent, yet is also soft and easy to work with. A wide selection of colors and patterns are available to choose from, and also coordinate with Sunbrella upholstery fabrics. Sunbrella makes it easy to create beautiful designs that outperform the elements.

Base Fabric: 100% Sunbrella Acrylic

Finish/Coating: Fluorocarbon

Government Specifications Met: None

Heat Sealable: Yes with Seam Seal Tape

Mildew Repellent: Yes

Opaque: Yes

Pattern Direction: Selvedge is Left / Right

Put Up: 60 yd.

Repeat Height: 0

Repeat Width: 0

Shrinkage Factor: None

Style#: 6066-0000

Translucent: Depends on Color

Underside Color: same

Warranty: 10-Year

Water Repellent: Yes

Weight: 9.25 oz.

Width: 60 in.