

***EXPEDITED***  
**MONTGOMERY COUNTY HISTORIC PRESERVATION COMMISSION**  
**STAFF REPORT**

<b>Address:</b>	17800 Bowie Mill Road, Derwood	<b>Meeting Date:</b>	2/2/2022
<b>Resource:</b>	(Master Plan Site #22/017-000A <i>Flint Hill II</i> )	<b>Report Date:</b>	1/26//2022
<b>Applicant:</b>	Leigh Dukatt	<b>Public Notice:</b>	1/19/2022
<b>Review:</b>	HAWP	<b>Tax Credit:</b>	No
<b>Permit Number:</b>	978966	<b>Staff:</b>	Michael Kyne
<b>PROPOSAL:</b>	Installation of new telecommunications equipment		

**STAFF RECOMMENDATION:**

- Approve  
 Approve with conditions

**ARCHITECTURAL DESCRIPTION:**

**SIGNIFICANCE:** Master Plan Site #22/017-000A, *Flint Hill II*  
**DATE:** Early 1800s; c1860-75

Excerpt from *Places from the Past*:

Situated on a rise above Bowie Mill Road, Flint Hill is one of three houses in the Olney area that was associated in the early- to mid-1800s with the Bowie family. Washington Bowie, wealthy Georgetown shipping merchant, purchased 2,000 acres of land in 1820 and established a farm at Oatland. His son, Thomas Johns Bowie built Roseneath between 1825 and 1830 on 600 acres. While Thomas' eldest son, Washington Bowie III, inherited Roseneath, another son Thomas Johns Davis Bowie, inherited Flint Hill.

The house was constructed in several sections. The earliest part is the rear section, which is of log construction, said to be chinked with brick. The log house was built before the Bowie's 1820 purchase of the property. The exterior chimney on this section has an asymmetrical stone base with a brick stack. The main block, built c1860-75, is one room deep with a center passage plan. Italianate-style influence is evident in oversize scrolled brackets at the roof cornice and prominent window cornices. The front (east) door opens into a central hall with open-string, double-run staircase with a turned newel post and golden oak banister. A large bank barn is dated 1898.



*Fig. 1: Subject property.*

**PROPOSAL:**

The applicant proposes to modify the existing collocation telecommunications equipment on the non-contributing silo at the subject property. Specific work items include:

- Removal of three existing antennas.
- Installation of six new antennas.
- Installation of six new Remote Radio Units (RRUs).
- Installation of one new equipment cabinet.
- Installation of one new battery cabinet.
- Installation of associated equipment.

Staff notes that the installation of the existing telecommunications equipment was approved by the HPC with the following conditions on June 20, 2001:

- Antenna casing at top of dome to be a matte blue color (Sherwin Williams Exterior Skylar SW2460) to be approved at staff level.
- PVC housing will be attached close to existing loading tube & will match silo color. Shed color to match existing shed.

Staff finds the current proposal consistent with the previous conditions of approval.

**APPLICABLE GUIDELINES:**

IV. The Expedited Staff Report format may be used on the following type of cases:

2. Modifications to a property, which do not significantly alter its visual character.

**Montgomery County Code; Chapter 24A-8**

- (b) The commission shall instruct the director to issue a permit, or issue a permit subject to such conditions as are found to be necessary to ensure conformity with the purposes and requirements of this chapter, if it finds that:
- (1) The proposal will not substantially alter the exterior features of an historic site or historic resource within an historic district; or
  - (2) The proposal is compatible in character and nature with the historical, archeological, architectural or cultural features of the historic site or the historic district in which an historic resource is located and would not be detrimental thereto or to the achievement of the purposes of this chapter; or
  - (3) The proposal would enhance or aid in the protection, preservation and public or private utilization of the historic site or historic resource located within an historic district in a manner compatible with the historical, archeological, architectural or cultural value of the historic site or historic district in which an historic resource is located; or
  - (4) The proposal is necessary in order that unsafe conditions or health hazards be remedied; or
  - (5) The proposal is necessary in order that the owner of the subject property not be deprived of reasonable use of the property or suffer undue hardship; or
  - (6) In balancing the interests of the public in preserving the historic site or historic resource located within an historic district, with the interests of the public from the use and benefit of the alternative proposal, the general public welfare is better served by granting the permit.
- (c) It is not the intent of this chapter to limit new construction, alteration or repairs to any 1 period or architectural style.

***Secretary of Interior's Standards for Rehabilitation***

The Secretary of the Interior defines rehabilitation as “the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features, which convey its historical, cultural, or architectural values.” The *Standards* are as follows:

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

**STAFF RECOMMENDATION:**

Staff recommends that the Commission **approve** the HAWP application under the Criteria for Issuance in Chapter 24A-8(b), (1) & (2), having found that the proposal will not substantially alter the exterior features of the historic resource and is compatible in character with the purposes of Chapter 24A;

and with the *Secretary of the Interior's Standards for Rehabilitation* #2 and #9;

and with the general condition that the applicant shall present an electronic set of drawings, if applicable, to Historic Preservation Commission (HPC) staff for review and stamping prior to submission for the Montgomery County Department of Permitting Services (DPS) building permits;

and with the general condition that final project design details, not specifically delineated by the Commission, shall be approved by HPC staff or brought back to the Commission as a revised HAWP application at staff's discretion;

and with the general condition that the applicant shall notify the Historic Preservation Staff if they propose to make any alterations to the approved plans. Once the work is completed the applicant will contact the staff person assigned to this application at 301-563-3400 or [michael.kyne@montgomeryplanning.org](mailto:michael.kyne@montgomeryplanning.org) to schedule a follow-up site visit.



**APPLICATION FOR  
HISTORIC AREA WORK PERMIT**  
HISTORIC PRESERVATION COMMISSION  
301.563.3400

FOR STAFF ONLY:

HAWP# 978966

DATE ASSIGNED \_\_\_\_\_

**APPLICANT:**

Name: Leigh Dukatt (T-Mobile)

Address: 7151 Columbia Gateway Dr Ste A

Daytime Phone: 602-692-9996

E-mail: LDukatt@advantageengineers.com

City: Columbia Zip: 21046

Tax Account No.: 00706980

**AGENT/CONTACT (if applicable):**

Name: \_\_\_\_\_

E-mail: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Zip: \_\_\_\_\_

Daytime Phone: \_\_\_\_\_

Contractor Registration No.: \_\_\_\_\_

**LOCATION OF BUILDING/PREMISE:** MIHP # of Historic Property 22/017-000A

Is the Property Located within an Historic District? Yes/District Name \_\_\_\_\_  
No/Individual Site Name Flint Hill II

Is there an Historic Preservation/Land Trust/Environmental Easement on the Property? If YES, include a map of the easement, and documentation from the Easement Holder supporting this application.

Are other Planning and/or Hearing Examiner Approvals /Reviews Required as part of this Application? (Conditional Use, Variance, Record Plat, etc.?) If YES, include information on these reviews as supplemental information.

Building Number: 17800 Street: Bowie Mill Rd

Town/City: Derwood Nearest Cross Street: Fraley Farm Rd

Lot: \_\_\_\_\_ Block: \_\_\_\_\_ Subdivision: \_\_\_\_\_ Parcel: \_\_\_\_\_

**TYPE OF WORK PROPOSED: See the checklist on Page 4 to verify that all supporting items for proposed work are submitted with this application. Incomplete Applications will not be accepted for review. Check all that apply:**

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> New Construction   | <input type="checkbox"/> Deck/Porch          | <input type="checkbox"/> Shed/Garage/Accessory Structure             |
| <input type="checkbox"/> Addition           | <input type="checkbox"/> Fence               | <input type="checkbox"/> Solar                                       |
| <input type="checkbox"/> Demolition         | <input type="checkbox"/> Hardscape/Landscape | <input type="checkbox"/> Tree removal/planting                       |
| <input type="checkbox"/> Grading/Excavation | <input type="checkbox"/> Roof                | <input type="checkbox"/> Window/Door                                 |
|   |  | <input checked="" type="checkbox"/> Other: <u>Telecommunications</u> |

I hereby certify that I have the authority to make the foregoing application, that the application is correct and accurate and that the construction will comply with plans reviewed and approved by all necessary agencies and hereby acknowledge and accept this to be a condition for the issuance of this permit.



12/30/21

Signature of owner or authorized agent

Date

Adjacent and Confronting Properties:

Derwood, MD 20835

17705 Bowie Mill Road

17709 Bowie Mill Road

17801 Bowie Mill Road

17805 Bowie Mill Road

17801 Fraley Farm Road

5612 Silo Hill Court

5617 Silo Hill Court

17813 Fraley Farm Road

17821 Fraley Farm Road

5612 Silver Oak Court

17834 Fraley Farm Road

18405 Muncaster Road

**Description of Property:** Please describe the building and surrounding environment. Include information on significant structures, landscape features, or other significant features of the property:

**Silo on a farm with various buildings & structures**

**Description of Work Proposed:** Please give an overview of the work to be undertaken:

**Remove (3) & add (6) antennas, add (6) RRUs, remove (1) & add (1) equipment cabinet and (1) battery cabinet, and other associated equipment at existing silo**

Work Item 1: Telecommunications

Description of Current Condition: Existing Site for T-Mobile

Proposed Work: Proposed equipment upgrades at existing site for T-Mobile

Work Item 2: \_\_\_\_\_

Description of Current Condition:

Proposed Work:

Work Item 3: \_\_\_\_\_

Description of Current Condition:

Proposed Work:



**HISTORIC AREA WORK PERMIT  
CHECKLIST OF  
APPLICATION REQUIREMENTS**

	Required Attachments						
Proposed Work	I. Written Description	2. Site Plan	3. Plans/ Elevations	4. Material Specifications	5. Photographs	6. Tree Survey	7. Property Owner Addresses
New Construction	*	*	*	*	*	*	*
Additions/ Alterations	*	*	*	*	*	*	*
Demolition	*	*	*		*		*
Deck/Porch	*	*	*	*	*	*	*
Fence/Wall	*	*	*	*	*	*	*
Driveway/ Parking Area	*	*		*	*	*	*
Grading/Excavation/ Landscaping	*	*		*	*	*	*
Tree Removal	*	*		*	*	*	*
Siding/ Roof Changes	*	*	*	*	*		*
Window/ Door Changes	*	*	*	*	*		*
Masonry Repair/ Repoint	*	*	*	*	*		*
Signs	*	*	*	*	*		*

# T-MOBILE NORTHEAST LLC

## FRALEY FAMILY - ROCKVILLE

### 7WAN162B

### 67D5A997DB HYBRID

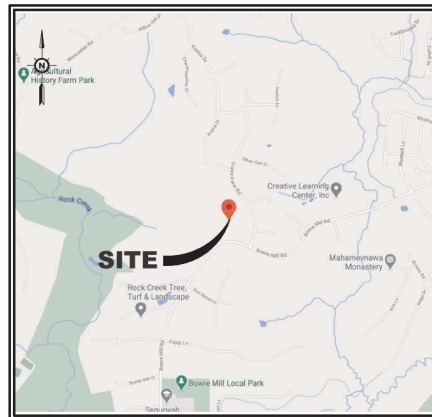
# 17800 BOWIE MILL ROAD DERWOOD, MARYLAND 28055

#### SITE INFORMATION

SITE NUMBER: 7WAN162B  
 SITE NAME: FRALEY FAMILY - ROCKVILLE  
 SITE ADDRESS: 17800 BOWIE MILL ROAD, DERWOOD, MARYLAND 28055  
 ZONING DISTRICT: RE-1  
 TAX MAP: HT22P222  
 JURISDICTION: MONTGOMERY COUNTY, MARYLAND  
 SITE COORDINATES: N 39° 00' 0.49" (NAD 83), W 77° 00' 51.56" (NAD 83)  
 GROUND ELEVATION: 498ft (NAVD 88)  
 STRUCTURE TYPE: SILO  
 STRUCTURE HEIGHT: 73ft AGL (TOP OF EXISTING SILO)  
 ANTENNA RAD CENTER: 78'-0" AGL  
 TENANT: T-MOBILE NORTHEAST LLC, 12000 BALTIMORE AVENUE, BELTSVILLE, MARYLAND 20705  
 OWNER'S NAME: HARRY FRALEY ET AL  
 OWNER'S ADDRESS: 17800 BOWIE MILL ROAD, ROCKVILLE, MARYLAND 20855-1609

#### CODE ANALYSIS

BUILDING CODE: IBC 2018  
 ELECTRICAL CODE: NFPA 70, NEC 2014  
 FIRE CODE: 2015 NFPA 101  
 USE GROUP: U (UTILITY)  
 CONSTRUCTION TYPE: IB



#### AREA MAP

DERWOOD, MARYLAND 28055

#### DIRECTIONS

HEAD NORTHWEST TOWARD US-1 N/BALTIMORE AVE, TURN RIGHT ONTO US-1 N/BALTIMORE AVE, USE THE LEFT 2 LANES TO TURN LEFT ONTO THE MD-200 W RAMP TO I-83/I-270, CONTINUE ONTO MD-200 W, USE THE RIGHT 2 LANES TO TAKE EXIT 98 FOR GEORGIA AVENUE/MD-87 N TOWARD OLNEY, MERGE ONTO MD-87/GEORGIA AVE, TURN LEFT ONTO EMORY LN, TURN RIGHT ONTO CASHELL RD, TURN LEFT ONTO BREADY RD, TURN LEFT ONTO BOWIE MILL RD, ARRIVE AT, DERWOOD MARYLAND 28055.

#### SCOPE OF WORK

- REMOVE EXISTING RF FRIENDLY CANISTER
- INSTALL (6) NEW RF FRIENDLY CANISTERS
- REMOVE (3) EXISTING ANTENNAS
- REMOVE (3) EXISTING TMA's
- REMOVE (12) 1-1/4" COAX
- INSTALL (6) PROPOSED ANTENNAS
- INSTALL (6) PROPOSED RRUN
- REMOVE (1) EXISTING 2100 EQUIPMENT CABINET
- INSTALL (1) PROPOSED 6100 EQUIPMENT CABINET
- INSTALL (1) PROPOSED 6100 BATTERY CABINET
- INSTALL (6) PROPOSED 6x24 HYBRID CABLES 30M
- INSTALL (1) PSU 4813

#### SHEET INDEX

DRAWING SHEET	DRAWING TITLE
T-1	TITLE SHEET
Z-1	SITE PLAN
S-1	COMPOUND PLAN
S-2	SILO ELEVATION
A-1	ANTENNA PLAN & NOTES
A-2	PLUMBING DIAGRAM & CABLES
A-3	PROPOSED & EXISTING EQUIPMENT CABINET LAYOUT
A-4	DETAILS
D-1	6100 EQUIPMENT CABINET DETAIL
D-2	6100 BATTERY CABINET DETAIL
G-1	GROUNDING DIAGRAM & DETAILS
E-1	ELECTRICAL DETAILS
E-2	ELECTRICAL NOTES

#### DO NOT SCALE DRAWINGS

CONTRACTOR IS TO VERIFY ALL PLANS, EXISTING DIMENSIONS & CONDITIONS RELATING TO THIS PROJECT. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER IF THERE ARE ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

#### APPROVALS

T-MOBILE PROJECT MANAGER \_\_\_\_\_ DATE: \_\_\_\_\_  
 T-MOBILE RF ENGINEER \_\_\_\_\_ DATE: \_\_\_\_\_  
 LANDLORD \_\_\_\_\_ DATE: \_\_\_\_\_

**T-Mobile**  
NORTHEAST LLC

T-MOBILE NORTHEAST LLC  
12000 BALTIMORE AVENUE  
BELTSVILLE, MARYLAND 20705  
PHONE: (240) 264-8600  
FAX: (240) 264-8610



advantage engineers

7151 COLUMBIA GATEWAY DRIVE, SUITE A  
COLUMBIA, MARYLAND 21046  
PHONE: (443) 367-0033  
FAX: (443) 397-3548

#### SCHEDULE OF REVISIONS

NO.	DATE	DESCRIPTION OF CHANGES
1		
2		
3		
4		
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7		
8	11-17-2021	ZONING COMMENTS
9	11-05-2021	ISSUED FOR CONSTRUCTION

DRAWN BY: EDZ

CHECKED BY: MRL

SCALE: NOTED

JOB NO: 19E0047.01

DRAWING TITLE:

#### TITLE SHEET

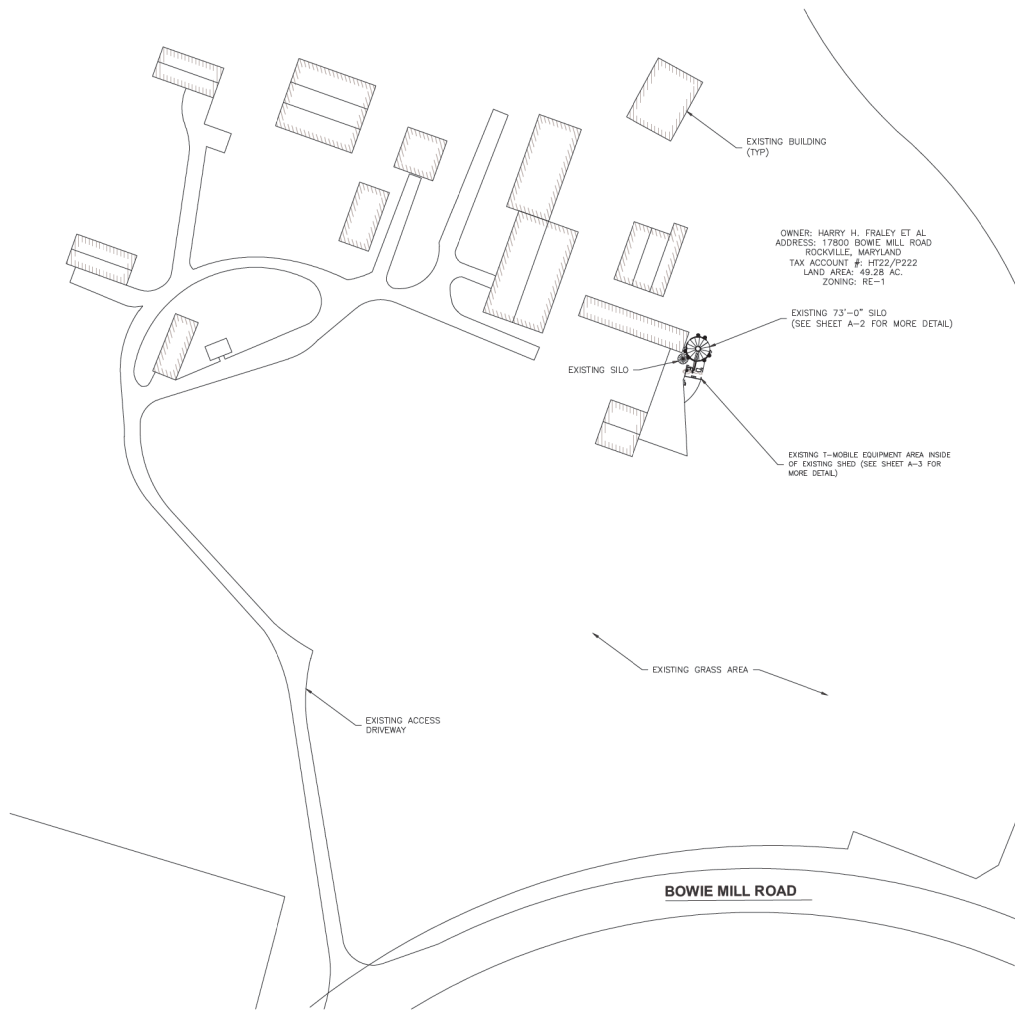
# T-1

FRALEY FAMILY - ROCKVILLE  
7WAN162B  
17800 BOWIE MILL ROAD  
DERWOOD, MARYLAND 28055

SHEET NO. 1 OF 13



ANDREW M. MILLER, P.E.  
"PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 44487, EXPIRATION DATE: 8/4/2027"



OWNER: HARRY H. FRALEY ET AL.  
 ADDRESS: 17800 BOWIE MILL ROAD  
 ROCKVILLE, MARYLAND  
 TAX ACCOUNT #: HT22/P222  
 LAND AREA: 43.28 AC.  
 ZONING: RE-1

EXISTING 73'-0" SILO  
 (SEE SHEET A-2 FOR MORE DETAIL)

EXISTING SILO

EXISTING T-MOBILE EQUIPMENT AREA INSIDE  
 OF EXISTING SILO (SEE SHEET A-3 FOR  
 MORE DETAIL)

EXISTING GRASS AREA

EXISTING ACCESS  
 DRIVEWAY

**BOWIE MILL ROAD**

**SITE PLAN**

SCALE: 1"=50'-0"

GRAPHIC SCALE



(SCALE BASED ON FULL SIZE 24"x36" SHEETS ONLY)  
 (DO NOT USE SCALE ON OTHER SIZED DRAWINGS)

**SITE INFORMATION**

SITE NUMBER:	7WAN162B
SITE NAME:	FRALEY FAMILY - ROCKVILLE
SITE ADDRESS:	17800 BOWIE MILL ROAD DERWOOD, MARYLAND 28055
ZONING DISTRICT:	RE-1
TAX MAP:	HT22/P222
JURISDICTION:	MONTGOMERY COUNTY, MARYLAND
SITE COORDINATES:	N 39° 09' 0.49" (NAD 83) W 77° 06' 51.59" (NAD 83)
GROUND ELEVATION:	499± (NAVD 88)
STRUCTURE TYPE:	SILO
STRUCTURE HEIGHT:	73± AGL (TOP OF EXISTING SILO)
ANTENNA RAD CENTER:	75'-0" AGL
TENANT:	T-MOBILE NORTHEAST LLC 12050 BALTIMORE AVENUE BELTSVILLE, MARYLAND 20705
OWNER'S NAME:	HARRY FRALEY ET AL
OWNER'S ADDRESS:	17800 BOWIE MILL ROAD ROCKVILLE, MARYLAND 20855-1609

**GENERAL NOTES:**

- PROPERTY LINE INFORMATION WAS PREPARED USING AVAILABLE SITE PLANS, DEEDS, TAX MAPS, AND PLANS OF RECORD. INFORMATION SHOWN SHOULD NOT BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY.
- THIS PLAN WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD.
- THE PROPOSED FACILITY WILL CAUSE NO INCREASE IN STORMWATER RUNOFF. THEREFORE, NO DRAINAGE STRUCTURES ARE PROPOSED.
- THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. (THERE IS NO HANDICAP ACCESS REQUIRED).
- THE FACILITY IS UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SANITARY SERVICE.
- ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
- THE PROPOSED DEVELOPMENT DOES NOT INCLUDE STREET SIGNS OF ANY TYPE. NO SIGNS WILL BE POSTED EXCEPT THOSE REQUIRED.
- THE PROPOSED DEVELOPMENT DOES NOT INCLUDE OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES.

**T-Mobile**  
**NORTHEAST LLC**  
 T-MOBILE NORTHEAST LLC  
 12050 BALTIMORE AVENUE  
 BELTSVILLE, MARYLAND 20705  
 PHONE: (240) 364-8600  
 FAX: (240) 364-8610



**advantage engineers**

7151 COLUMBIA GATEWAY DRIVE, SUITE A  
 COLUMBIA, MARYLAND 21046  
 PHONE: (410) 367-0003  
 FAX: (410) 367-3548

**SCHEDULE OF REVISIONS**

NO.	DATE	DESCRIPTION OF CHANGES
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9	11-17-2021	ZONING COMMENTS
10	11-05-2021	ISSUED FOR CONSTRUCTION

<b>DRAWN BY:</b>	EDZ
<b>CHECKED BY:</b>	MRL
<b>SCALE:</b>	NOTED
<b>JOB NO:</b>	19E0047.001

**DRAWING TITLE:**

**SITE PLAN**

**DRAWING SHEET:**

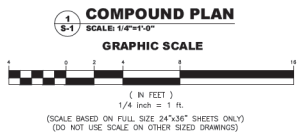
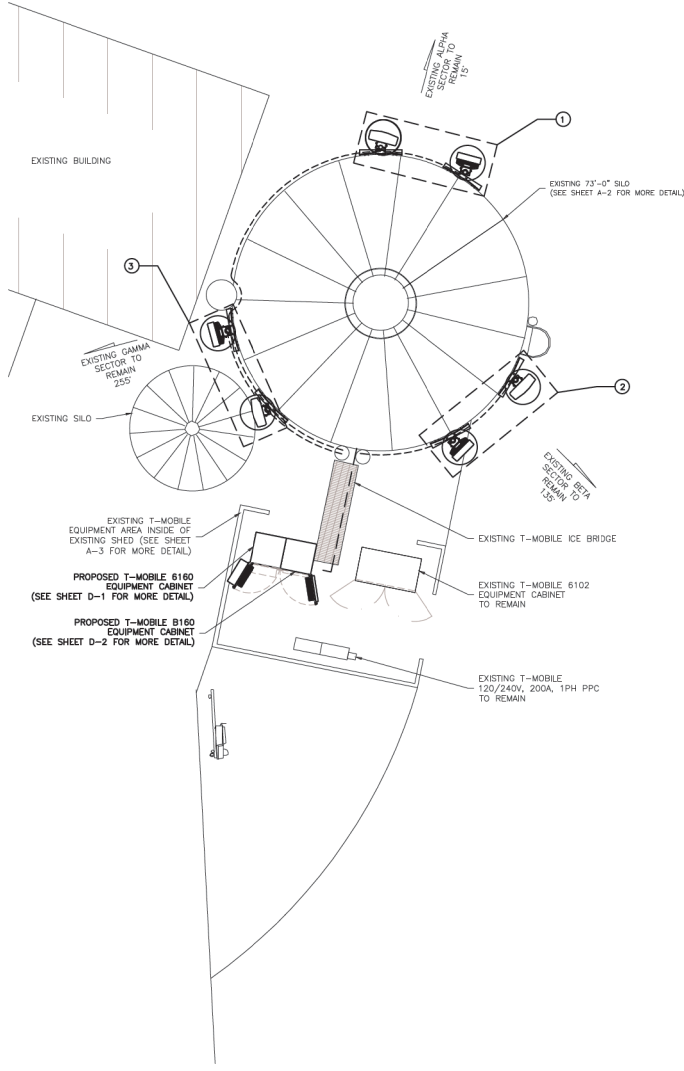
**Z-1**

**FRALEY FAMILY - ROCKVILLE**  
**7WAN162B**  
**17800 BOWIE MILL ROAD**  
**DERWOOD, MARYLAND 28055**

**SHEET NO. 2 OF 13**



**ANDREW M. MILLER, P.E.**  
 "PROFESSIONAL CERTIFICATION. I HEREBY  
 CERTIFY THAT THESE DOCUMENTS WERE  
 PREPARED OR APPROVED BY ME, AND THAT I  
 AM A FULLY LICENSED PROFESSIONAL  
 ENGINEER UNDER THE LAWS OF THE STATE OF  
 MARYLAND. LICENSE NO. 41497, EXPIRATION  
 DATE 11-16-22"



T-MOBILE SECTOR KEY PLAN	
T-MOBILE ALPHA SECTOR ①	(0) EXISTING ANTENNAS TO REMAIN
	(0) EXISTING ANTENNAS TO BE RELOCATED
	(1) EXISTING ANTENNAS TO BE REMOVED
	(2) PROPOSED ANTENNAS TO BE INSTALLED
	(0) EXISTING TMA's TO REMAIN
	(0) EXISTING TMA's TO BE RELOCATED
T-MOBILE BETA SECTOR ②	(0) EXISTING ANTENNAS TO REMAIN
	(0) EXISTING ANTENNAS TO BE RELOCATED
	(1) EXISTING ANTENNAS TO BE REMOVED
	(2) PROPOSED ANTENNAS TO BE INSTALLED
	(0) EXISTING TMA's TO REMAIN
	(0) EXISTING TMA's TO BE RELOCATED
T-MOBILE GAMMA SECTOR ③	(0) EXISTING ANTENNAS TO REMAIN
	(0) EXISTING ANTENNAS TO BE RELOCATED
	(1) EXISTING ANTENNAS TO BE REMOVED
	(2) PROPOSED ANTENNAS TO BE INSTALLED
	(0) EXISTING TMA's TO REMAIN
	(0) EXISTING TMA's TO BE RELOCATED
<b>PRE CONSTRUCTION TOTALS</b>	
(3) ANTENNAS (0) RRUs (3) TMA's	
<b>POST CONSTRUCTION TOTALS</b>	
(6) ANTENNAS (0) RRUs (0) TMA's	

**GENERAL NOTES**

1. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITIES COMPANY OR OTHER PUBLIC AUTHORITIES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
3. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK. MINOR OMISSIONS OR ERRORS IN THE BID DOCUMENTS SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR THE OVERALL INTENT OF THESE DRAWINGS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED AS A RESULT OF CONSTRUCTION OF THIS FACILITY.
5. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
6. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING A BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
7. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. (THERE IS NO HANDICAP ACCESS REQUIRED).
8. THE FACILITY IS UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SANITARY SERVICE.
9. THE PROPOSED DEVELOPMENT DOES NOT INCLUDE OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES.
10. THE PROPOSED DEVELOPMENT DOES NOT INCLUDE STREET SIGNS OF ANY TYPE. NO SIGNS WILL BE POSTED EXCEPT THOSE REQUIRED.
11. NO SIGNIFICANT NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY.
12. ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
13. CONSTRUCTION TO COMMENCE UPON COMPLETION OF A PASSING STRUCTURAL ANALYSIS. STRUCTURAL ANALYSIS TO BE PERFORMED BY ADVANTAGE ENGINEERS.

**T-Mobile**  
NORTHEAST LLC  
T-MOBILE NORTHEAST LLC  
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**COMPOUND PLAN**

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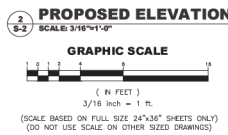
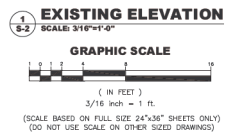
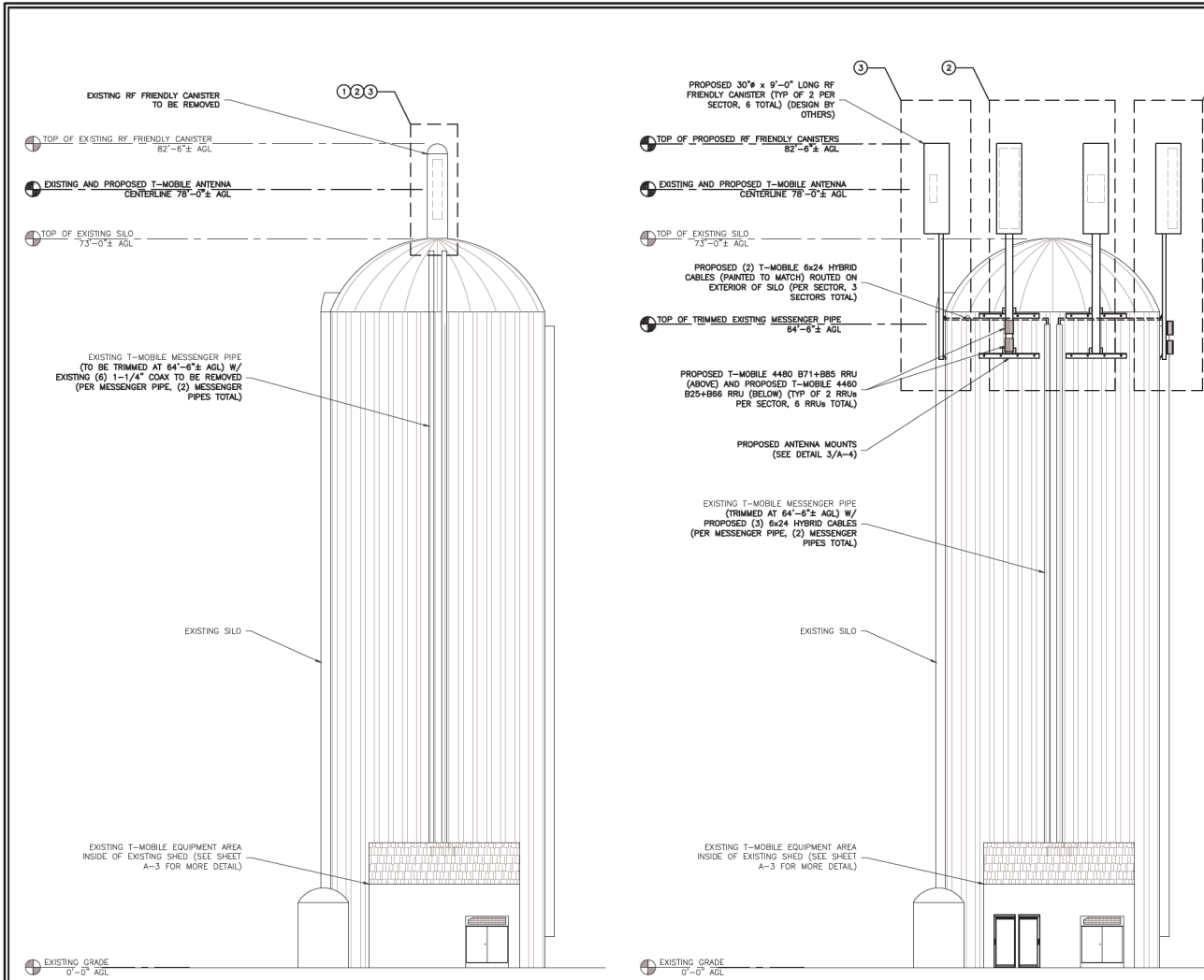
**S-1**

**FRALEY FAMILY - ROCKVILLE**  
**7WAN162B**  
**17800 BOWIE MILL ROAD**  
**DERWOOD, MARYLAND 20855**

**SHEET NO. 3 OF 13**



**ANDREW M. MILLER, P.E.**  
"PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 41487, EXPIRATION DATE 11-01-2027"



T-MOBILE SECTOR KEY PLAN	
T-MOBILE ALPHA SECTOR ①	(0) EXISTING ANTENNAS TO REMAIN (0) EXISTING ANTENNAS TO BE RELOCATED (1) EXISTING ANTENNAS TO BE REMOVED (2) PROPOSED ANTENNAS TO BE INSTALLED
	(0) EXISTING TMA's TO REMAIN (0) EXISTING TMA's TO BE RELOCATED (1) EXISTING TMA's TO BE REMOVED (0) PROPOSED TMA's TO BE INSTALLED
	(0) EXISTING RRU's TO REMAIN (0) EXISTING RRU's TO BE RELOCATED (0) EXISTING RRU's TO BE REMOVED (2) PROPOSED RRU TO BE INSTALLED
T-MOBILE BETA SECTOR ②	(0) EXISTING ANTENNAS TO REMAIN (0) EXISTING ANTENNAS TO BE RELOCATED (1) EXISTING ANTENNAS TO BE REMOVED (2) PROPOSED ANTENNAS TO BE INSTALLED
	(0) EXISTING TMA's TO REMAIN (0) EXISTING TMA's TO BE RELOCATED (1) EXISTING TMA's TO BE REMOVED (0) PROPOSED TMA's TO BE INSTALLED
	(0) EXISTING RRU TO REMAIN (0) EXISTING RRU's TO BE RELOCATED (0) EXISTING RRU's TO BE REMOVED (2) PROPOSED RRU TO BE INSTALLED
T-MOBILE GAMMA SECTOR ③	(0) EXISTING ANTENNAS TO REMAIN (0) EXISTING ANTENNAS TO BE RELOCATED (1) EXISTING ANTENNAS TO BE REMOVED (2) PROPOSED ANTENNAS TO BE INSTALLED
	(0) EXISTING TMA's TO REMAIN (0) EXISTING TMA's TO BE RELOCATED (1) EXISTING TMA's TO BE REMOVED (0) PROPOSED TMA's TO BE INSTALLED
	(0) EXISTING RRU TO REMAIN (0) EXISTING RRU's TO BE RELOCATED (0) EXISTING RRU's TO BE REMOVED (2) PROPOSED RRU TO BE INSTALLED
<b>PRE CONSTRUCTION TOTALS</b>	
(3) ANTENNAS (0) RRUs (3) TMA's	
<b>POST CONSTRUCTION TOTALS</b>	
(6) ANTENNAS (6) RRUs (0) TMA's	

**GENERAL NOTES**

1. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITIES COMPANY OR OTHER PUBLIC AUTHORITIES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
3. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK. MINOR OMISSIONS OR ERRORS IN THE BID DOCUMENTS SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR THE OVERALL INTENT OF THESE DRAWINGS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED AS A RESULT OF CONSTRUCTION OF THIS FACILITY.
5. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
6. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING A BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
7. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. (THERE IS NO HANDICAP ACCESS REQUIRED).
8. THE FACILITY IS UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SANITARY SERVICE.
9. THE PROPOSED DEVELOPMENT DOES NOT INCLUDE OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES.
10. THE PROPOSED DEVELOPMENT DOES NOT INCLUDE STREET SIGNS OF ANY TYPE. NO SIGNS WILL BE POSTED EXCEPT THOSE REQUIRED.
11. NO SIGNIFICANT NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY.
12. ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
13. CONSTRUCTION TO COMMENCE UPON COMPLETION OF A PASSING STRUCTURAL ANALYSIS. STRUCTURAL ANALYSIS TO BE PERFORMED BY ADVANTAGE ENGINEERS.

**T-Mobile**  
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**SCHEDULE OF REVISIONS**

NO.	DATE	DESCRIPTION OF CHANGES
1		
2		
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10		
11	11-17-2021	ZONING COMMENTS
12	11-05-2021	ISSUED FOR CONSTRUCTION

**DRAWN BY:** EDZ  
**CHECKED BY:** MRL  
**SCALE:** NOTED  
**JOB NO.:** 19E0047.01  
**DRAWING TITLE:**

**SILO ELEVATION**

**DRAWING SHEET:**

**S-2**

**FRALEY FAMILY - ROCKVILLE**  
**7W4N162B**  
**17800 BOWIE MILL ROAD**  
**DERWOOD, MARYLAND 28055**

**SHEET NO. 4 OF 13**

**ANDREW M. MILLER, P.E.**  
"PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 44497, EXPIRATION DATE 11-01-27"

**SCHEDULE OF REVISIONS**

REV NO.	DATE	DESCRIPTION OF CHANGES
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**DRAWN BY:** EDZ  
**CHECKED BY:** MRL  
**SCALE:** NOTED  
**JOB NO.:** 19E0047.001

**DRAWING TITLE:**

**ANTENNA PLAN & NOTES**

**DRAWING SHEET:**

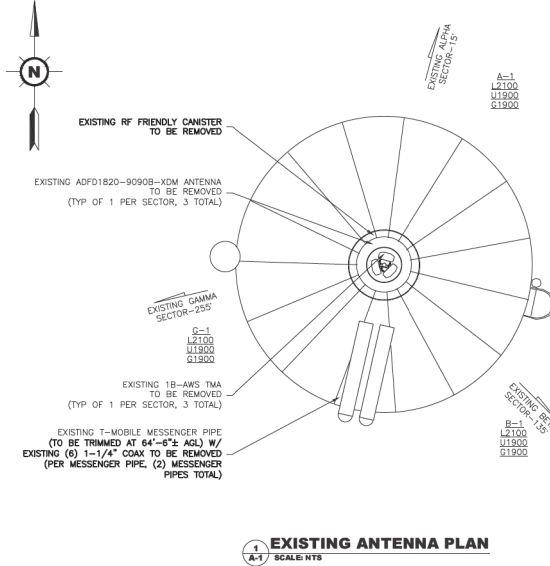
**A-1**

**FRALEY FAMILY - ROCKVILLE**  
**72M162B**  
**17800 BOWIE MILL ROAD**  
**DERWOOD, MARYLAND 28055**

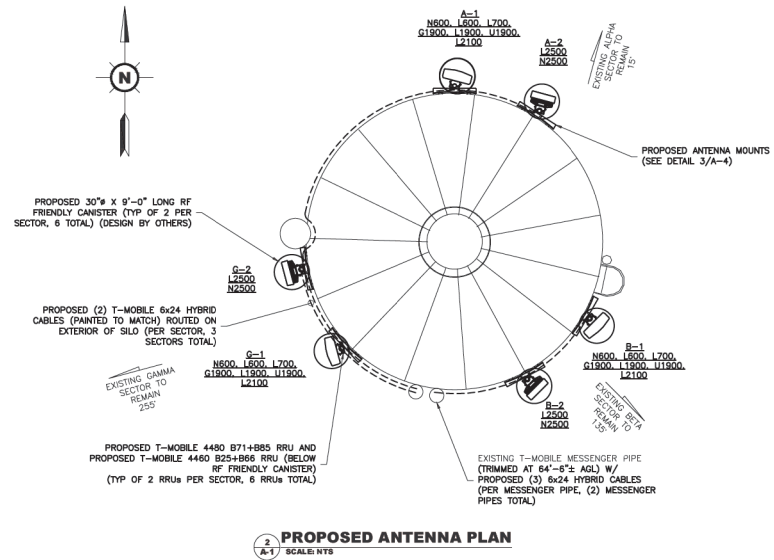
**SHEET NO. 5 OF 13**



**ANDREW M. MILLER, P.E.**  
PROFESSIONAL CERTIFICATION I HEREBY  
CERTIFY THAT THESE DOCUMENTS WERE  
PREPARED OR APPROVED BY ME, AND THAT I  
AM A DULY LICENSED PROFESSIONAL  
ENGINEER UNDER THE LAWS OF THE STATE OF  
MARYLAND, LICENSE NO. 41497, EXPIRATION  
DATE 8/15/27



**1 EXISTING ANTENNA PLAN**  
A-1 SCALE: NTS



**2 PROPOSED ANTENNA PLAN**  
A-1 SCALE: NTS

**STRUCTURAL NOTES**

- DESIGN REQUIREMENTS PER INTERNATIONAL BUILDING CODE 2015 AND THE ANSI/TIA-222-G STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES.
- INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED BY FIELD MEASUREMENT AND FROM THE EXISTING STRUCTURAL DRAWINGS. THE GENERAL CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIALS OR PROCEEDING WITH CONSTRUCTION.
- STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS - ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN INCLUDING THE COMMENTARY AND THE AISC CODE FOR STANDARD PRACTICE.
- STRUCTURAL STEEL PLATES AND SHAPES SHALL CONFORM TO ASTM A992. ALL STRUCTURAL STEEL PIPES SHALL CONFORM TO ASTM A53 GRADE B. ALL STRUCTURAL STEEL COMPONENTS AND FABRICATED ASSEMBLIES SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.
- WELDING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF AMERICAN WELDING SOCIETY (AWS) STRUCTURAL WELDING CODE - STEEL WELD ELECTRODES SHALL BE E70XX.
- ALL COAXIAL CABLE CONNECTORS AND TRANSMITTER EQUIPMENT SHALL BE AS SPECIFIED BY THE OWNER AND IS NOT INCLUDED IN THESE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL FURNISH ALL CONNECTION HARDWARE REQUIRED TO SECURE THE CABLES. CONNECTION HARDWARE SHALL BE STAINLESS STEEL.
- ALL THREADED STRUCTURAL FASTENERS FOR ANTENNA SUPPORT ASSEMBLIES SHALL CONFORM TO ASTM A307 OR ASTM A36. ALL STRUCTURAL FASTENERS FOR STRUCTURAL STEEL FRAMING SHALL CONFORM TO ASTM A325. FASTENERS SHALL BE 5/8" MIN. DIAMETER BEARING TYPE CONNECTIONS WITH THREADS INCLUDED IN THE SHEAR PLANE. ALL EXPOSED FASTENERS, NUTS AND WASHERS SHALL BE GALVANIZED UNLESS OTHERWISE NOTED. CONCRETE EXPANSION ANCHORS SHALL BE Hilti KWIK BOLTS UNLESS OTHERWISE NOTED.
- NORTH ARROW SHOWN ON PLANS REFERS TO TRUE NORTH. CONTRACTOR SHALL VERIFY TRUE NORTH AND INFORM CONSTRUCTION MANAGER OF ANY DISCREPANCY BEFORE STARTING CONSTRUCTION.
- CONSTRUCTION TO COMMENCE UPON COMPLETION OF A PASSING STRUCTURAL ANALYSIS. STRUCTURAL ANALYSIS TO BE PERFORMED BY ADVANTAGE ENGINEERS.

**GENERAL CONTRACTOR NOTES**

- THE ANTENNA MOUNTS AND CONNECTIONS THAT ARE USED TO SUPPORT THE PROPOSED INSTALLATION ARE TO BE INSPECTED PRIOR TO THE INSTALLATION OF THE PROPOSED EQUIPMENT. IF THE CONDITIONS OF THE MOUNTS AND CONNECTIONS ARE FOUND TO BE UNACCEPTABLE, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY AND THE UNACCEPTABLE ELEMENTS OF THE MOUNT OR HARDWARE SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR.
- ANTENNA RAD CENTER IS IN REFERENCE TO ELEVATION 0'-0" (EXISTING GRADE). SHOULD RAD CENTER NOT MATCH CONSTRUCTION DOCUMENTS AND STRUCTURAL CERTIFICATIONS, NOTIFY THE T-MOBILE CONSTRUCTION MANAGER AND ENGINEER IMMEDIATELY.
- CONTRACTOR IS TO VERIFY ALL ANTENNA AZIMUTHS WITH THE T-MOBILE CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.

**EXISTING ANTENNA SCHEDULE**

POSITION	ANTENNA RAD CENTER	EXISTING AZIMUTH	EXISTING TECH	ANTENNA MANUFACTURER	EXISTING ANTENNA MODEL #	EXISTING RRU/TMA	EXISTING RRU/TMA	EXISTING MDT	EXISTING EDT
A-1	78°-0"	1°	L2100,U1900,G1900	ANDREW	ADFD1820-9090B-XDM	1B-AWS	N/A	0'	3/3
B-1	78°-0"	1°	L2100,U1900,G1900	ANDREW	ADFD1820-9090B-XDM	1B-AWS	N/A	0'	5/5
G-1	78°-0"	1°	L2100,U1900,G1900	ANDREW	ADFD1820-9090B-XDM	1B-AWS	N/A	0'	5/5

**PROPOSED ANTENNA SCHEDULE**

POSITION	ANTENNA RAD CENTER	PROPOSED AZIMUTH	PROPOSED TECH	ANTENNA MANUFACTURER	PROPOSED ANTENNA MODEL #	PROPOSED RRU/TMA	PROPOSED RRU/TMA	PROPOSED MDT	PROPOSED EDT
A-2	78°-0"	15°	N600,L600,L700,U1900,U1900,L2100	RFS	APXWALL24_43-U-NA20	4480 B71+B85	4460 B25+B86	0'	3/3/3/3
A-3	78°-0"	15°	L2500,N2500	ERICSSON	AIR6449 B41	N/A	N/A	0'	2/2
B-2	78°-0"	135°	N600,L600,L700,U1900,U1900,L2100	RFS	APXWALL24_43-U-NA20	4480 B71+B85	4460 B25+B86	0'	5/5/5/5
B-3	78°-0"	135°	L2500,N2500	ERICSSON	AIR6449 B41	N/A	N/A	0'	2/2
G-2	78°-0"	255°	N600,L600,L700,U1900,U1900,L2100	RFS	APXWALL24_43-U-NA20	4480 B71+B85	4460 B25+B86	0'	5/5/5/5
G-3	78°-0"	255°	L2500,N2500	ERICSSON	AIR6449 B41	N/A	N/A	0'	2/2

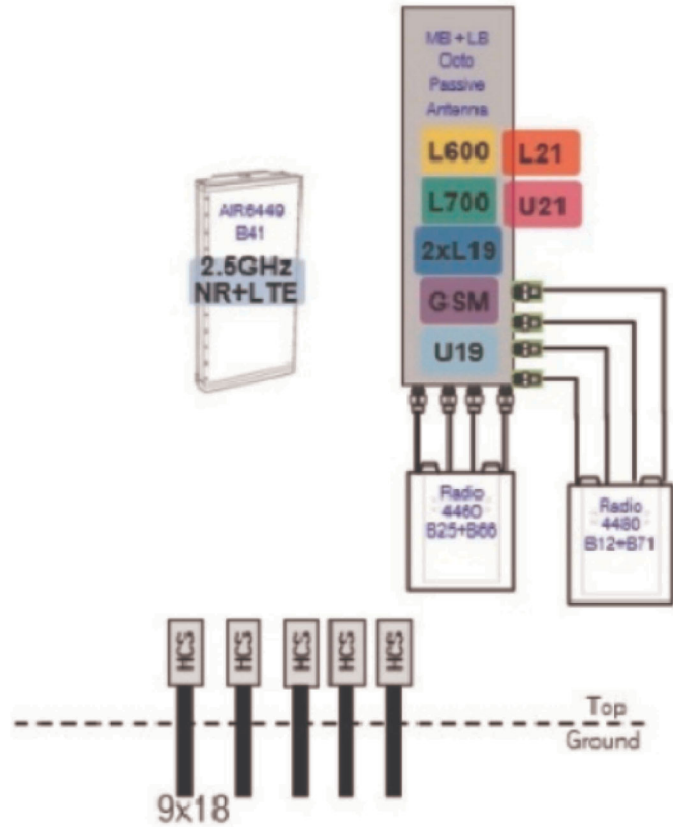
**ANTENNA/RRU/TMA SPECS**

EXISTING ANTENNAS	MANUFACTURER	ANTENNA MODEL #	QUANTITY	HEIGHT	WIDTH	DEPTH	WEIGHT
	ANDREW	ADFD1820-9090B-XDM TO BE REMOVED	3	51.7"	12.1"	4.5"	22.05 LBS
FINAL PROPOSED ANTENNA CONFIGURATION	MANUFACTURER	ANTENNA MODEL #	QUANTITY	HEIGHT	WIDTH	DEPTH	WEIGHT
	RFS	APXWALL24_43-U-NA20	3	95.9"	24"	8.5"	122.8 LBS
	ERICSSON	AIR6449 B41	3	33.1"	20.8"	8.3"	103 LBS
EXISTING TMAs	MANUFACTURER	TMA MODEL #	QUANTITY	HEIGHT	WIDTH	DEPTH	WEIGHT
	GENERIC	TWIN STYLE 1B-AWS TO BE REMOVED	3	10.04"	9.29"	4.84"	22.5 LBS
FINAL PROPOSED RRU CONFIGURATION	MANUFACTURER	RRU MODEL #	QUANTITY	HEIGHT	WIDTH	DEPTH	WEIGHT
	ERICSSON	4480 B71+B85	3	21.8"	15.7"	7.5"	84 LBS
	ERICSSON	4460 B25+B86	3	19.6"	15.7"	12.1"	109 LBS

PROPOSED CABLES

DESCRIPTION	QUANTITY	LENGTH
6x24 HYBRID CABLE (ALPHA SECTOR)	2	30M
6x24 HYBRID CABLE (BETA SECTOR)	2	30M
6x24 HYBRID CABLE (GAMMA SECTOR)	2	30M
PSU 4813	1	30M

67E5A998E



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**SCHEDULE OF REVISIONS**

REV. NO.	DATE	DESCRIPTION OF CHANGES
1		
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5		
1	11-17-2021	ZONING COMMENTS
2	11-05-2021	ISSUED FOR CONSTRUCTION


**DRAWN BY:** EDZ  
**CHECKED BY:** MRL  
**SCALE:** NOTED  
**JOB NO:** 19E0047.001

**DRAWING TITLE:**  
**PLUMBING DIAGRAM & CABLES**

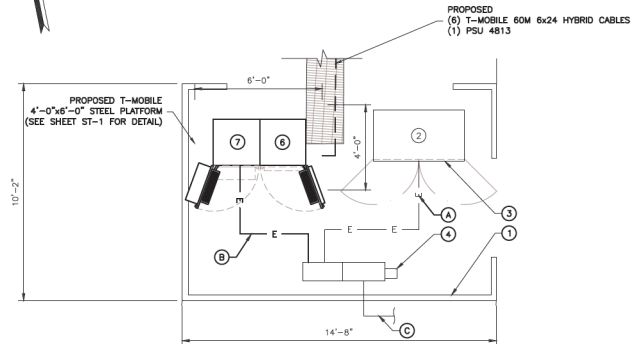
**DRAWING SHEET:**  
**A-2**

**FRALEY FAMILY - ROCKVILLE**  
 7WAN162B  
 17800 BOWIE MILL ROAD  
 DERWOOD, MARYLAND 28055

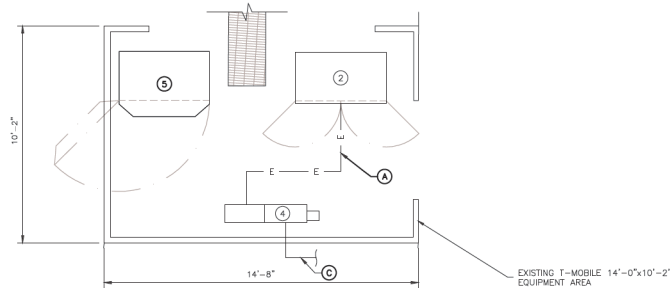
SHEET NO. 6 OF 13

  
**ANDREW M. MILLER, P.E.**  
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**PLUMBING DIAGRAM**  
 SCALE: N.T.S.



**1 PROPOSED EQUIPMENT CABINET LAYOUT**  
SCALE: N.T.S.



**2 EXISTING EQUIPMENT CABINET LAYOUT**  
SCALE: N.T.S.

**T-MOBILE CABINET PLAN KEY**

IDENTIFIER	CABINET AND STATUS	DETAIL
①	EXISTING 14'-0"x10'-2" EQUIPMENT AREA TO REMAIN	N/A
②	EXISTING 6102 EQUIPMENT CABINET TO REMAIN	N/A
③	EXISTING (1) DUW30, (6) RUS01 B2 AND (6) RUS01 B4 TO BE REMOVED	N/A
④	EXISTING 120/240V, 200A, 1PH PPC TO REMAIN	N/A
⑤	EXISTING RBS 2106 EQUIPMENT CABINET TO BE REMOVED	N/A
⑥	PROPOSED B160 BATTERY CABINET TO BE INSTALLED	D-2
⑦	PROPOSED 6160 EQUIPMENT CABINET TO BE INSTALLED	D-1

**CABINET INSTALLATION NOTES**

- SEE SHEET D-1 FOR 6160 EQUIPMENT CABINET SPECIFICATIONS AND ERICSSON SUGGESTED INSTALLATION INSTRUCTIONS.
- SEE SHEET D-2 FOR B160 BATTERY CABINET SPECIFICATIONS AND ERICSSON SUGGESTED INSTALLATION INSTRUCTIONS.

**ELECTRICAL AT T-MOBILE CABINETS KEY**

IDENTIFIER	ITEM AND STATUS	ROUTING/LOCATION	DETAIL
A	EXISTING (3) #1/0 & (1) #6 GND IN EXISTING CONDUIT TO BE REMOVED (SEE NOTE)	FROM EXISTING T-MOBILE 200A PPC TO EXISTING 6102 EQUIPMENT CABINET	N/A
B	PROPOSED (3) #2 & (1) #8 GND IN PROPOSED 1-1/2" CONDUIT	FROM EXISTING T-MOBILE 200A PPC TO PROPOSED 6160 EQUIPMENT CABINET	N/A
C	EXISTING CONDUIT & CONDUCTORS TO REMAIN	FROM EXISTING 200A ENCLOSED BREAKER TO EXISTING PPC	N/A

**NOTE:**

RE-USE EXISTING CONDUIT AND (3) #1/0 & (1) #6 GND CONDUCTORS FOR RELOCATED 6102 EQUIPMENT CABINET AS POSSIBLE. REPLACE AS SHOWN IF EXISTING CONDUIT AND CONDUCTORS CANNOT BE RECONNECTED TO RELOCATED 6102 EQUIPMENT CABINET.

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<b>DRAWN BY:</b>	EDZ
<b>CHECKED BY:</b>	MRL
<b>SCALE:</b>	NOTED
<b>JOB NO:</b>	19E0047.001

**DRAWING TITLE:**  
**PROPOSED & EXISTING EQUIPMENT CABINET LAYOUT**

**DRAWING SHEET:**

**A-3**

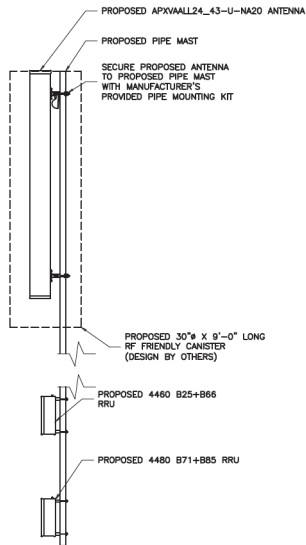
**FRALEY FAMILY - ROCKVILLE**  
7WAN162B  
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DERWOOD, MARYLAND 28055

SHEET NO. 7 OF 13

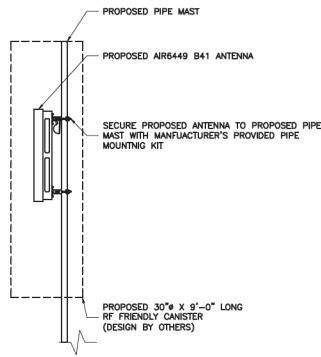


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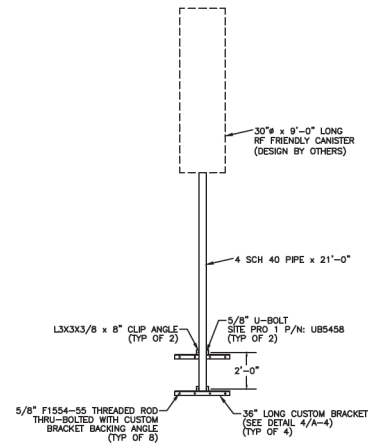




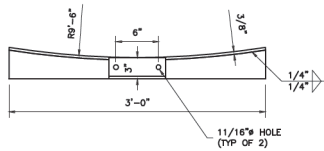
**1**  
A-4  
**APXVAALL24\_43-U-NA20 ANTENNA AND RRU MOUNTING DETAIL**  
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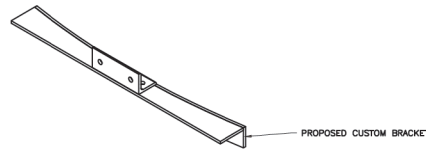
**2**  
A-4  
**AIR6449 ANTENNA MOUNTING DETAIL**  
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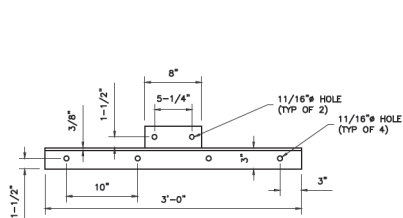
**3**  
A-4  
**ANTENNA MOUNT DETAIL**  
SCALE: NOT TO SCALE



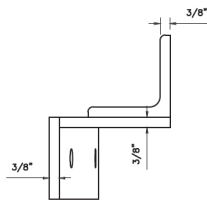
PLAN VIEW



ISO VIEW



FRONT ELEVATION



SIDE ELEVATION

**4**  
A-4  
**CUSTOM BRACKET DETAIL**  
SCALE: NOT TO SCALE

**T-Mobile**  
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**JOB NO:** 19E0047.001

**DRAWING TITLE:**

**DETAILS**

**DRAWING SHEET:**

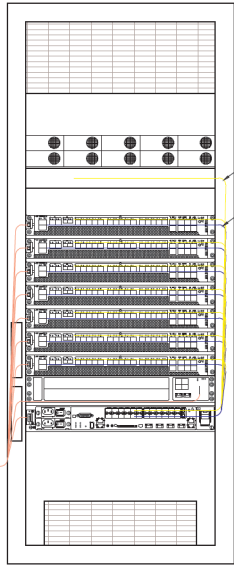
**A-4**

**FRALEY FAMILY - ROCKVILLE**  
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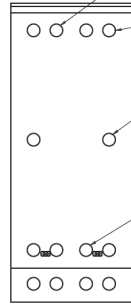
**SHEET NO. 8 OF 13**



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INTERNAL ROUTING



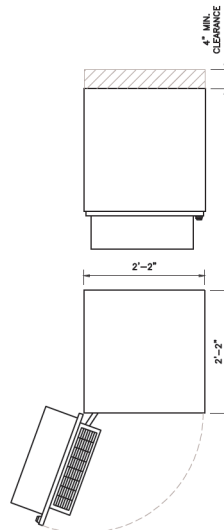
REAR VIEW

2" KNOCKOUTS WITH RIGID CONDUIT AND LB FOR 3/0 BATTERY CABLE INSTALL AND AUX POWER CABLE. OUTSIDE KNOCKOUTS WORK BEST FOR EASER OF INSTALL.

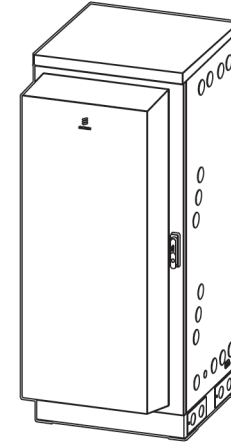
2" KNOCKOUTS WITH LBS FOR ALARM CABLE AND TEMPO SENSOR ROUTING. UPPER REAR CENTER WORK BEST FOR THIS INSTALL FOR EASE OF INSTALL REPLACEMENT IN THE EVENT OF FAILURE.

2" KNOCKOUTS FOR AAV AND FIBER ROUTING BETWEEN MACRO CABINETS ON SITE. LB WITH RIGID CONDUIT IS PREFERRED.

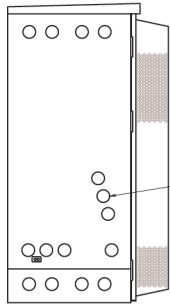
2" KNOCKOUTS AT LOWER REAR OF THE CABINET PROVIDE A CLEANER INSTALL AND EASER FIBER AND D.C CABLE ROUTING. PROTECTION AND TRIP HAZARD PREVENTION SHOULD BE ADDED FOR SAFETY OF CABLES AND TECHNICIANS.



PLAN VIEW

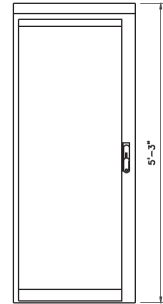


ISOMETRIC VIEW

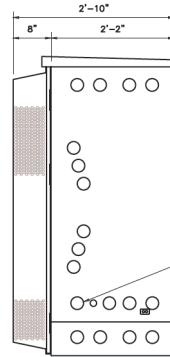


LEFT SIDE VIEW

2" KNOCKOUT ON LEFT HAND SIDE OF CABINET USED AC POWER WITH RIGID CONDUIT AND LB. PENETRATIONS DIRECTLY BELOW ACCU

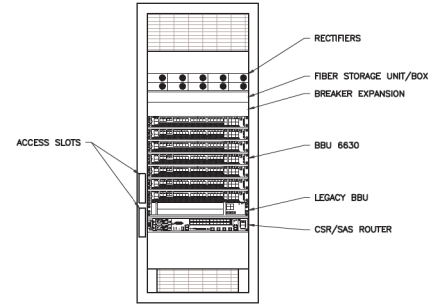


FRONT VIEW



RIGHT SIDE VIEW

UNUSABLE 2" KNOCKOUTS DUE TO CLOSE PROXIMITY TO B160 CABINET



FRONT VIEW (DOOR NOT SHOWN FOR CLARITY)

MANUFACTURER: ERICSSON  
MODEL: 6160  
SKU: 33953  
DIMENSIONS (HxWxD): 63"x26"x34"  
WEIGHT: 295 LBS (WITHOUT EQUIPMENT)  
605 LBS (MAX)

NOTES:  
1. CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS DO NOT DRILL KNOCKOUTS THROUGH.  
2. CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND/OR CABLING.

**6160 EQUIPMENT CABINET DETAIL (ERICSSON SKU #33953)**

SCALE: N.T.S.

**T-Mobile**  
NORTHEAST LLC  
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SCHEDULE OF REVISIONS	
REV. NO.	DESCRIPTION OF CHANGES
1	
2	
3	
4	
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10	
11-17-2021	ZONING COMMENTS
11-05-2021	ISSUED FOR CONSTRUCTION

**6160 EQUIPMENT CABINET DETAIL**

DRAWING SHEET:

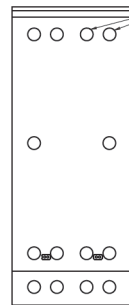
**D-1**

**FRALEY FAMILY - ROCKVILLE**  
**7WAN162B**  
**17800 BOWIE MILL ROAD**  
**DERWOOD, MARYLAND 28055**

SHEET NO. 9 OF 13

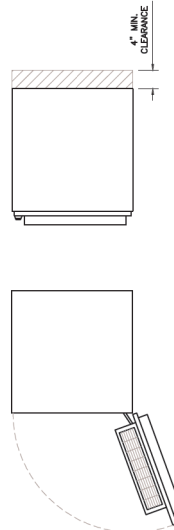


ANDREW M. MILLER, P.E.  
"PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 41487, EXPIRATION DATE: 01-04-27"

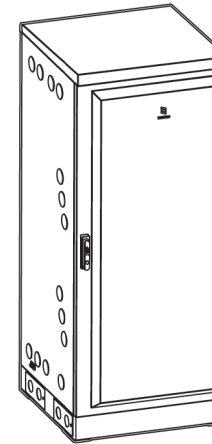


REAR VIEW

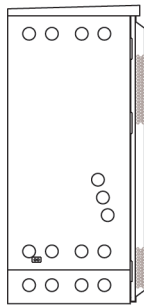
2" KNOCKOUTS WITH LBS FOR ALARM CABLE AND TEMPO SENSOR ROUTING. UPPER REAR CENTER RECOMMENDED FOR THIS INSTALL FOR EASE OF INSTALL REPLACEMENT IN THE EVENT OF FAILURE.



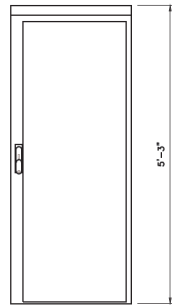
PLAN VIEW



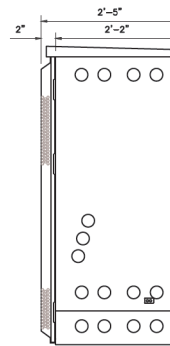
ISOMETRIC VIEW



LEFT SIDE VIEW



FRONT VIEW



RIGHT SIDE VIEW



FRONT VIEW  
(DOOR NOT SHOWN FOR CLARITY)

- 25A AUX BREAKERS
  - FANS
  - LIGHTS
  - ANCILLARY EQUIPMENT
  - ALARM BOX (PRE-LABELED)
- BATTERY TRAY W/  
• BRACKETS  
• VIBRATION MOUNTS  
• PRE-INSTALLED HEATERS (TYP OF 3)

MANUFACTURER: ERICSSON  
MODEL: B160  
SKU: 33954  
DIMENSIONS (HxWxD): 63"x26"x29"  
WEIGHT: 295 LBS (WITHOUT BATTERIES)  
1833 LBS (MAX)

NOTES:  
1. CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS. DO NOT DRILL KNOCKOUTS THROUGH.  
2. CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND/OR CABLING.

**B160 BATTERY CABINET DETAIL (ERICSSON SKU #33954)**  
SCALE: N.T.S.

**T-Mobile**  
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SCHEDULE OF REVISIONS	
REV. NO.	DESCRIPTION OF CHANGES
1	
2	
3	
4	
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6	
7	
8	11-17-2021 ZONING COMMENTS
9	11-05-2021 ISSUED FOR CONSTRUCTION

DRAWN BY: EDZ  
CHECKED BY: MRL  
SCALE: NOTED  
JOB NO: 19E0047.001

**B160 BATTERY CABINET DETAIL**

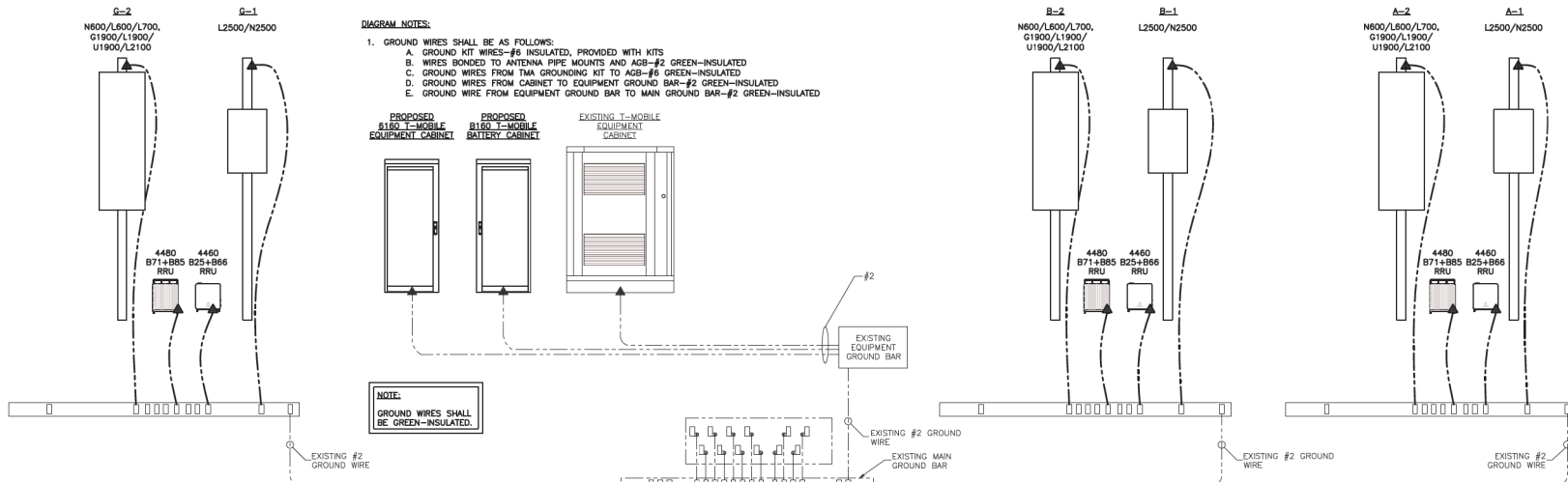
DRAWING SHEET:

**D-2**

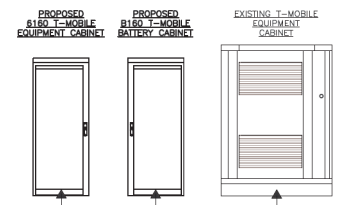
**FRALEY FAMILY - ROCKVILLE**  
7WAN162B  
17800 BOWIE MILL ROAD  
DERWOOD, MARYLAND 28055

SHEET NO. 10 OF 13

ANDREW M. MILLER, P.E.  
PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 41487, EXPIRATION DATE: 01-06-27



- DIAGRAM NOTES:**
1. GROUND WIRES SHALL BE AS FOLLOWS:
    - A. GROUND KIT WIRES--#6 INSULATED, PROVIDED WITH KITS
    - B. WIRES BONDED TO ANTENNA PIPE MOUNTS AND AGS--#2 GREEN-INSULATED
    - C. GROUND WIRES FROM TMA GROUNDING KIT TO AGS--#6 GREEN-INSULATED
    - D. GROUND WIRES FROM CABINET TO EQUIPMENT GROUND BAR--#2 GREEN-INSULATED
    - E. GROUND WIRE FROM EQUIPMENT GROUND BAR TO MAIN GROUND BAR--#2 GREEN-INSULATED

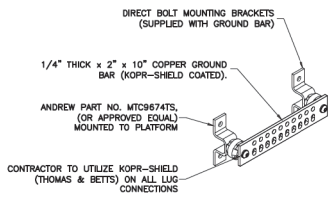


**NOTE:**  
GROUND WIRES SHALL BE GREEN-INSULATED.

**1 GROUNDING DIAGRAM**  
SCALE: N.T.S.

**GROUNDING NOTES:**

1. ALL GROUNDING SYSTEM CONDUCTORS AND CONNECTIONS BELOW GRADE SHALL BE THERMAL WELDS AT GROUND RODS AND AT A MINIMUM OF 36" BELOW GRADE.
2. ALL INSTALLATIONS SHALL BE FIELD VERIFIED.
3. ALL GROUND WIRE SHALL BE #2 AWG BARE COPPER TINNED UNLESS NOTED OTHERWISE.
4. ALL GROUND WIRES SHALL PROVIDE A STRAIGHT DOWNWARD PATH TO GROUND WITH GRADUAL BEND AS REQUIRED. GROUND WIRES SHALL NOT BE LOOPED OR SHARPLY BENT.
5. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF GROUND RODS AND GROUND RING WITH FOUNDATION AND UNDERGROUND CONDUIT.
6. EACH EQUIPMENT CABINET SHALL BE CONNECTED WITH (2) #2 AWG INSULATED SOLID TINNED COPPER WIRE TO GROUND BAR. EQUIPMENT CABINETS SHALL EACH HAVE (2) CONNECTIONS.
7. ANTENNA GROUND KITS SHALL BE FURNISHED BY T-MOBILE AND INSTALLED BY ELECTRICAL CONTRACTOR.
8. KOPR-SHIELD ANTI-OXIDATION COMPOUND SHALL BE USED ON ALL GROUNDING CONNECTIONS.
9. EXOTHERMIC WELDS (CADWELD) SHALL NOT BE USED ON ROOFTOPS, AT SECTOR LEVEL, OR ON WATER TANKS.
10. ALL BOLTED GROUNDING CONNECTIONS SHALL BE INSTALLED WITH A LOCK WASHER UNDER THE NUT. HARDWARE FOR BOLTED CONNECTIONS SHALL BE A MINIMUM OF 3/8" DIAMETER AND SHALL BE STAINLESS STEEL.
11. GROUNDING WIRE SHALL NOT BE INSTALLED OR ROUTED THROUGH HOLES IN ANY METAL OBJECTS OR SUPPORTS TO PRECLUDE ESTABLISHING A "CHOKE" POINT.
12. PLASTIC CLIPS OR METAL CLIPS WHICH DO NOT COMPLETELY SURROUND THE GROUNDING CONDUCTORS SHALL BE USED TO FASTEN AND SUPPORT GROUNDING CONDUCTORS. FERROUS METAL CLIPS WHICH COMPLETELY SURROUND THE GROUNDING CONDUCTOR SHALL NOT BE USED.
13. STANDARD BUS BARS (CIGBE AND MCB) SHALL BE FURNISHED AND INSTALLED. THEY SHALL NOT BE FABRICATED OR MODIFIED IN THE FIELD.
14. THE GROUNDING CONNECTION TO THE POWER AND TELCO SECTIONS OF THE PPC CABINET SHALL BE MADE BY CONNECTING A CONDUCTOR FROM THE GROUND RING TO THE FACTORY FURNISHED BUS BAR IN EACH COMPARTMENT.



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

- GROUND LEADS**
- (1) MECHANICAL CONNECTION #2 AWG BCW TO EQUIPMENT CABINETS
  - (2) TWO HOLE LUG TO BE USED WITH #2 AWG BCW TO GROUND RING
  - #6 AWG FROM ANTENNA CABLE GROUND KITS.

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**SCHEDULE OF REVISIONS**

REV. NO.	DATE	DESCRIPTION OF CHANGES
1	11-17-2021	ZONING COMMENTS
2	11-05-2021	ISSUED FOR CONSTRUCTION

**DRAWN BY:** EDZ  
**CHECKED BY:** MRL  
**SCALE:** NOTED  
**JOB NO:** 19E0047.001

**GROUNDING DIAGRAM & DETAILS**

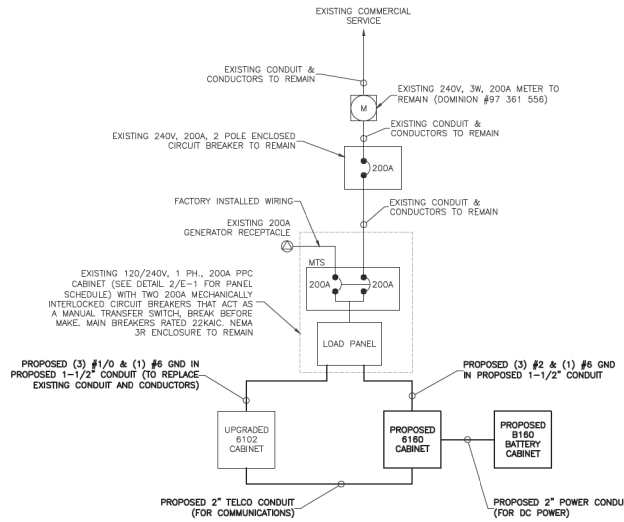
**G-1**

**FRALEY FAMILY - ROCKVILLE**  
7WAM162B  
17800 BOWIE MILL ROAD  
DERWOOD, MARYLAND 28055

SHEET NO. 11 OF 13

**ANDREW M. MILLER, P.E.**  
PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 41497, EXPIRATION DATE: 01-01-2027

ELECTRICAL SYMBOLS			
	TRANSFORMER		PHASE
	METER		POWER WIRE
	CIRCUIT BREAKER		TELCO WIRE
	DISCONNECT SWITCH		



**NOTES:**

- ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH CURRENT ADOPTED NATIONAL ELECTRIC CODES AND ALL LOCAL AND STATE CODES, LAWS, AND ORDINANCES. PROVIDE ALL COMPONENTS AND WIRING SIZES AS REQUIRED TO MEET NEC.
- UNDERGROUND POWER AND TELCO SERVICE LINES SHALL BE ROUTED IN A COMMON TRENCH. ALL UNDERGROUND CONDUIT SHALL BE PVC SCHEDULE 40 AND CONDUIT EXPOSED ABOVE GROUND SHALL BE RIGID GALVANIZED STEEL. INTERIOR CONDUIT SHALL BE EMT UNLESS OTHERWISE INDICATED. POWER CONDUIT LINES SHALL BE SIZED AS REQUIRED PER CABLE SIZING AND NEC REQUIREMENTS.
- CONDUITS INSTALLED AT BTS EQUIPMENT ENDS PRIOR TO THE EQUIPMENT INSTALLATION SHALL BE STUBBED AND CAPPED AT 6" ABOVE GRADE OR PLATFORM. IF SERVICE LINES CAN'T BE INSTALLED INITIALLY, PROVIDE NYLON PULL CORD IN CONDUITS.

**1 ELECTRICAL ONE LINE DIAGRAM**  
SCALE: N.T.S.

Panel Circuit and Load Schedule										SERVICE: 120/240 VAC DESIGNATION: T-MOBILE PANEL LOCATION: T-MOBILE PLATFORM																
Description	QTY.	Unit V.A.	Load per phase (VA)		Continous	Non-Continous	Trip	Poles	Wire Size	A.I.C.	Wire Type	Wire Type	A.I.C.	Wire Size	Poles	Trip	Non-Continous	Continous	Load per phase (VA)		Unit V.A.	QTY.	Description			
			A	B															A	B						
1 PROPOSED 6160 CABINET	1	8200	8,200	8,200	X		100	2	2	10,000	THWN-2	BLK	10,000	THWN-2	BLK	60			0	0	0	0	8200	1	UPGRADED 6160 CABINET	
3 LIGHT	1	150	150	150	X		20	1		10,000	THWN-2	BLK	10,000	THWN-2	BLK	150			X	10,250	10250	1		150	1	UPGRADED 6160 CABINET
4 GFI	1	150	0	150	X					10,000	THWN-2	BLK	10,000	THWN-2	BLK	150			X	10,250	10250	1		150	1	UPGRADED 6160 CABINET
5 SPACE FAN	1	200	0	200	X		10	1		10,000	THWN-2	BLK	10,000	THWN-2	BLK	10				0	0	0	200	1	UPGRADED 6160 CABINET	
Sub-Total Continous			8,200	8,200																10,250	10,250				TOTAL CONTINUOUS x125	
Sub-Total Non-Continous			150	380																0	0				TOTAL NON-CONTINUOUS	
Voltage: 120/240							Wire: 3																		TOTAL KVA	
Neutral: 200 Amps									A.I.C.: 22,000						Trip: 200 Amps										TOTAL AMPS	
Main Breaker: 200 Amp Frame																										
Main Lugs: 200 Amps																										

**2 PANEL SCHEDULE**  
SCALE: N.T.S.

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SCHEDULE OF REVISIONS		
1		
4		
3		
2		
1	11-17-2021 ZONING COMMENTS	
0	11-05-2021 ISSUED FOR CONSTRUCTION	
REV. NO.	DATE	DESCRIPTION OF CHANGES

DRAWN BY: EDZ  
CHECKED BY: MRL  
SCALE: NOTED  
JOB NO.: 19E0047.001  
DRAWING TITLE:

**ELECTRICAL DETAILS**

DRAWING SHEET:

**E-1**

**FRALEY FAMILY - ROCKVILLE**  
7WAN162B  
17800 BOWIE MILL ROAD  
DERWOOD, MARYLAND 28055

SHEET NO. 12 OF 13



ANDREW M. MILLER, P.E.  
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