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CLERK OF THE BOARD
OF COUNTY COMMISSIONERS
MIAMI-DADE COUNTY, FLORIDA

MEMORANDUM

Agenda Item No. 8(E)(2)

TO: Honorable Chairman Anthony Rodriguez and Members, Board of County Commissioners

DATE: June 3, 2025

FROM: Geri Bonzon-Keenan
County Attorney

SUBJECT: Resolution authorizing the County Mayor to execute a Communications Site Use Agreement between Miami-Dade County, through the Miami-Dade Fire Rescue Department, and the State of Florida Department of Transportation, for a 10-year term with two 10-year options to renew at no cost to the County for the installation, operation, and maintenance of public safety radio equipment; and authorizing the County Mayor to execute amendments to the Agreement and exercise the renewal and termination provisions contained therein, provided that such amendments do not alter the purpose of the Agreement

Resolution No. R-529-25

The accompanying resolution was prepared by the Miami-Dade Fire and Rescue Department and placed on the agenda at the request of Prime Sponsor Vice Chairman Kionne L. McGhee.

for

Geri Bonzon-Keenan
County Attorney

GBK/ks

Memorandum

MIAMI-DADE COUNTY

Date: June 3, 2025

To: Honorable Chairman Anthony Rodriguez
and Members, Board of County Commissioners

From: Daniella Levine Cava
Mayor

Subject: Resolution approving the Communications Site Use Agreement between Miami-Dade County through the Miami-Dade Fire Rescue Department and the State of Florida Department of Transportation

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Summary

This item is for the approval of a Communications Site Use Agreement between the State of Florida Department of Transportation (FDOT) and Miami-Dade County through the Miami-Dade Fire Rescue Department (MDFR) for the purpose of utilizing certain space to install, operate and maintain public safety radio transmitting and receiving equipment and associated electronic equipment and mounting structures, shelters and enclosures.

Miami-Dade County firefighters depend on the radio infrastructure to communicate during a broad variety of complex and life-threatening situations. The Everglades Academy Communications Site, located at 18500 SW 424 Street, Florida City, Florida, would greatly improve MDFR's infrastructure for radio communications and enhance firefighter safety when operating under the worst of conditions. The no-cost Agreement shall be for a 10-year term with two 10-year options to renew, subject to approval by FDOT. The cost of the equipment was approved through Resolution No. R-682-22 with Motorola Inc., for maintenance and improvement of public safety communications systems.

Recommendation

It is recommended that the Miami-Dade Board of County Commissioners (Board) approve the attached resolution authorizing the County Mayor or County Mayor's designee to execute the Communications Site Use Agreement (Agreement) between FDOT and Miami-Dade County, through MDFR. It is further recommended that this Board authorize the County Mayor or County Mayor's designee to execute necessary amendments to the Agreement, and to exercise the renewal and termination provisions contained therein, provided that such amendments do not alter the purpose of the Agreement.

Scope

The site location is in Commission District 9; however, this item has a Countywide impact.

Delegation of Authority

The County Mayor or County Mayor's designee is authorized to execute the Agreement between FDOT and MDFR. The County Mayor or County Mayor's designee is also authorized to execute amendments to said Agreement, and to exercise the renewal and termination provisions contained therein, provided that such amendments do not alter the purpose of the Agreement.

Fiscal Impact/Funding Source

This item does not have a long-term fiscal impact on the County. The cost of the equipment was approved through Resolution No. R-682-22 with Motorola Inc., for maintenance and improvement of public safety communications systems.

Track Record/Monitor

The Agreement will be monitored by Division Chief Nicolas Morgado, or other supervisory personnel.

Background

The State of Florida Department of Transportation and Miami-Dade County have established a partnership to identify tower locations that would improve radio communication in Miami-Dade County. Miami-Dade County firefighters depend on the radio infrastructure to communicate during a broad variety of complex and life-threatening situations. Careful planning and coordination are required to ensure optimal communications are maintained in all areas of the County. Due to increased construction, there are growing areas of the County where radio coverage is marginal. Because of the ongoing growth and expansion in Miami-Dade County, MDFR always tries to locate new towers and radio sites to improve coverage.

MDFR was able to identify the Everglades Academy location after conducting a search for appropriate existing towers in the region. The Everglades Academy site is located at 18500 SW 424 Street, Florida City, Florida 33034 (Latitude: 25-22-20.9 N; Longitude: 80-28-50.6 W; Tower ASR: 1224279).

MDFR would install, operate and maintain public safety radio transmitting and receiving equipment, and would also be responsible for the associated electronic equipment and mounting structures, shelters and enclosures for the equipment. This site would greatly improve MDFR's infrastructure for radio communications and enhance firefighter safety when operating under the worst of conditions.

This Board has approved similar previous agreements, including via Resolution No. R-1024-21, which authorized MDFR to utilize the State of Florida's Okeechobee tower location for analogous purposes. The parties anticipate this current Agreement to continue a great partnership and improve MDFR's infrastructure for radio communications.

James Reyes
Chief, Public Safety Officer

MEMORANDUM
(Revised)

TO: Honorable Chairman Anthony Rodriguez
and Members, Board of County Commissioners

DATE: June 3, 2025

FROM: Geri Bonzon-Keenan
County Attorney

SUBJECT: Agenda Item No. 8(E)(2)

Please note any items checked.

_____ **"3-Day Rule" for committees applicable if raised**

_____ **6 weeks required between first reading and public hearing**

_____ **4 weeks notification to municipal officials required prior to public hearing**

_____ **Decreases revenues or increases expenditures without balancing budget**

_____ **Budget required**

_____ **Statement of fiscal impact required**

_____ **Statement of social equity required**

_____ **Ordinance creating a new board requires detailed County Mayor's report for public hearing**

_____ **No committee review**

_____ **Applicable legislation requires more than a majority vote (i.e., 2/3's present ____, 2/3 membership ____, 3/5's ____, unanimous ____, majority plus one ____, CDMP 7 vote requirement per 2-116.1(3)(h) or (4)(c) ____, CDMP 2/3 vote requirement per 2-116.1(3) (h) or (4)(c) ____, CDMP 9 vote requirement per 2-116.1(4)(c) (2) _____) to approve**

_____ **Current information regarding funding source, index code and available balance, and available capacity (if debt is contemplated) required**

Approved _____ Mayor
Veto _____
Override _____

Agenda Item No. 8(E)(2)
6-3-25

RESOLUTION NO. R-529-25

RESOLUTION AUTHORIZING THE COUNTY MAYOR OR COUNTY MAYOR'S DESIGNEE TO EXECUTE A COMMUNICATIONS SITE USE AGREEMENT BETWEEN MIAMI-DADE COUNTY, THROUGH THE MIAMI-DADE FIRE RESCUE DEPARTMENT, AND THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION, FOR A 10-YEAR TERM WITH TWO 10-YEAR OPTIONS TO RENEW AT NO COST TO THE COUNTY FOR THE INSTALLATION, OPERATION, AND MAINTENANCE OF PUBLIC SAFETY RADIO EQUIPMENT; AND AUTHORIZING THE COUNTY MAYOR OR COUNTY MAYOR'S DESIGNEE TO EXECUTE AMENDMENTS TO THE AGREEMENT AND EXERCISE THE RENEWAL AND TERMINATION PROVISIONS CONTAINED THEREIN, PROVIDED THAT SUCH AMENDMENTS DO NOT ALTER THE PURPOSE OF THE AGREEMENT

WHEREAS, this Board desires to accomplish the purposes outlined in the accompanying memorandum, a copy of which is incorporated herein by reference,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA, that this Board:

Section 1. Authorizes the County Mayor or County Mayor's designee to execute a Communications Site Use Agreement ("Agreement"), in substantially the form attached hereto as Attachment A and made a part hereof, for utilization of certain space at Everglades Academy Communications Site, with the State of Florida Department of Transportation, and Miami-Dade County, through the Miami-Dade Fire Rescue Department ("MDFR"). The purpose of the Agreement is to establish the terms and conditions under which Miami-Dade County shall be authorized to use a portion of said Communications Site located at 18500 SW 424 Street, Miami, Florida 33034 (Latitude: 25-22-20.9 N; Longitude: 80-28-50.6 W; Tower ASR: 1224279).

Pursuant to the Agreement, the County will use the space to install, operate, and maintain public safety radio transmitting and receiving equipment and associated electronic equipment and mounting structures, shelters and enclosures. The no-cost Agreement shall be in effect for a 10-year term with two options to renew, each for an additional 10-year term and subject to approval by the State of Florida. The cost of the equipment was approved through Resolution No. R-682-22 with Motorola Inc., for maintenance and improvement of public safety communications systems.

Section 2. Authorizes the County Mayor or County Mayor's designee to execute amendments to the Agreement and exercise the renewal and termination provisions contained therein, provided that such amendments do not alter the purpose of the Agreement.

The foregoing resolution was offered by Commissioner **Raquel A. Regalado**, who moved its adoption. The motion was seconded by Commissioner **Oliver G. Gilbert, III** and upon being put to a vote, the vote was as follows:

Anthony Rodriguez, Chairman **aye**
Kionne L. McGhee, Vice Chairman **aye**

Marleine Bastien	**aye**	Juan Carlos Bermudez	**aye**
Sen. René García	**aye**	Oliver G. Gilbert, III	**aye**
Roberto J. Gonzalez	**aye**	Keon Hardemon	**aye**
Danielle Cohen Higgins	**aye**	Eileen Higgins	**aye**
Natalie Milian Orbis	**aye**	Raquel A. Regalado	**aye**
Micky Steinberg	**aye**		

The Chairperson thereupon declared this resolution duly passed and adopted this 3rd day of June, 2025. This resolution shall become effective upon the earlier of (1) 10 days after the date of its adoption unless vetoed by the County Mayor, and if vetoed, shall become effective only upon an override by this Board, or (2) approval by the County Mayor of this resolution and the filing of this approval with the Clerk of the Board.

MIAMI-DADE COUNTY, FLORIDA
BY ITS BOARD OF
COUNTY COMMISSIONERS

JUAN FERNANDEZ-BARQUIN, CLERK

By: **Basia Pruna**
Deputy Clerk

Approved by County Attorney as
to form and legal sufficiency.

Javier Zapata

COMMUNICATIONS SITE USE AGREEMENT

OWNER	State of Florida Department of Transportation 605 Suwannee Street Tallahassee, Florida 32399-0450
USER AGENCY	Miami-Dade Fire Rescue 9300 NW 41st Street Doral, FL 33178
SITE DESCRIPTION	Site Name: Everglades Academy Address: 18500 SW 424th St Florida City, FL 33034 Latitude: 25-22-20.9 N Longitude: 80-28-50.6 W Tower ASR: 1224279
SITE USE	Check all that apply: ☒ Owner Tower ☒ Owner Shelter ☐ New User Agency Shelter ☐ Other: _____

WHEREAS, User Agency desires to use a portion of said Communications Site for its communications system for the purpose of enhancing User Agency activities through radio and/or communications; and

WHEREAS, Owner desires to allow User Agency to use a portion of said Communications Site within the limitations and subject to the conditions set forth in this Agreement.

NOW, THEREFORE, in consideration of the execution of this **Communications Site Use Agreement,** hereinafter referred to as “Agreement”, it is mutually agreed between the parties hereto as follows:

1. Use of Premises

Owner hereby gives permission, revocable and terminable as hereinafter provided, to the User Agency to enter the Communications Site premises for the sole purpose of using it for the improvements to its communications system equipment and operations (hereinafter referred to as the "Improvements"). Said Improvements shall be located so as to not interfere with any of the Owner's operations.

2. Fees

Unless otherwise specified herein, there will be no fee for use of this Communications Site unless an additional fee or cost directly attributable to the User Agency is imposed on the Owner as a result of this Agreement. In the event that such a fee or cost is levied, the User Agency agrees to and will be required to be solely responsible for all such fees and costs.

3. Terms

The initial term of this Agreement shall be for ten (10) years. The User Agency may request to renew this Agreement every ten (10) years. Renewal shall be in the form of a letter from the User Agency to the Owner requesting the renewal of this Agreement and a response from the Owner to the User Agency approving the renewal request. Renewal of this Agreement is the responsibility of the User Agency and not the responsibility of the Owner. In the event that the User Agency fails to obtain a renewal concurrence from the Owner, the User Agency will be allowed sixty (60) days to remove all antenna(s), mounting hardware, transmission line(s), and equipment from Communications Site premises. The Communications Site shall be made clean and undamaged from the removal process.

4. Access

The Owner shall provide the User Agency access to the Communications Site at all times for the uses authorized herein. The User Agency shall submit a list of authorized personnel to the Owner that requires access to the Communications Site. The User Agency authorized personnel shall complete a Criminal Justice Information Services (CJIS) Background Check and complete CJIS Security Training.

5. Maintenance and Improvements

The costs of any maintenance and operation of Improvements shall be at the sole expense of the User Agency.

The User Agency must obtain prior written approval from the Owner and amend the Agreement if any Improvements are to be made to the User Agency equipment. This includes but is not limited to antenna changes, equipment changes, and any new equipment. The User Agency shall submit a new Structural Analysis and Intermodulation analysis to the Owner in accordance with Paragraphs 12 and 13 if a new antenna is added or replaced on the Owner's tower.

6. Indemnification

To the extent permitted by law and as limited by Section 768.28, Florida Statutes, whereby neither party to this agreement shall be held liable to pay a personal injury or property damage claim or judgment by any one person, which exceeds the sum of $200,000, or any claim or judgment arising out of the same incident or occurrence, which exceeds the sum of $300,000 from any and all personal injury or property damage claims, liabilities, losses or causes of action, which may arise as a result of this Agreement. Subject to and only within the limitations permitted by law, both parties shall be fully and solely responsible and liable for their own acts, and omissions, including those of its officers, employees, instructors, and all other parties to this agreement. To the extent permitted by law, both parties shall release, hold harmless, indemnify, defend, and agree not to sue each other, including their officers, employees and agents from and for any and all claims, liabilities, damages of any kind, and expenses, including legal fees and causes of actions of any nature whatsoever, foreseen or unforeseen, including but not limited to personal injury, illness, death and property damage, which arise directly or indirectly from the use of, or presence of the Communication Site and associated equipment, whether used in whole or in part by either party, including their officers, employees, and other parties that are allowed on the premises by either party. This indemnification shall survive the expiration or other termination of this Agreement. Nothing contained in this paragraph is intended nor shall it constitute a waiver of the Owner, the State of Florida, or the User Agency's sovereign immunity. Additionally, the User Agency agrees to include the following indemnification in all contracts with contractors/subcontractors and consultants/subconsultants who perform work in connection with this Agreement:

"To the fullest extent permitted by law, the User Agency's contractor/consultant shall indemnify, defend, and hold harmless the User Agency and the State of Florida, Department of Transportation (the Department), including the Department's officers and employees, from liabilities, damages, losses and costs, including, but not limited to, reasonable attorney's fees, to the extent caused by the negligence, recklessness or intentional wrongful misconduct of the contractor or consultant and persons employed or utilized by the contractor or consultant in the performance of this Agreement. This indemnification shall survive the termination of this Agreement. Nothing contained in this paragraph is intended to nor shall it constitute a waiver of the Department's, the State of Florida, or the User Agency's sovereign immunity"

7. Insurance

User Agency is solely responsible for self-insurance and shall be considered so by the Owner.

8. Interference

In the event the Owner determines that the operation of the Improvements by the User Agency caused interference to transmission or reception, or both of any other communications systems in use in the vicinity of the Communications Site, the User Agency shall take all appropriate steps necessary to mitigate said interference within thirty (30) days of receiving written notice.

9. Permits

User Agency is responsible for obtaining and paying the costs of all permits, licenses, and/or other approvals by any regulatory body having jurisdiction over the uses authorized herein.

10. Compliance

Should the User Agency fail or neglect to comply with any terms or conditions of this Agreement or to comply with any reasonable requirement of the Owner after thirty (30) days written notice and demand, this Agreement shall be subject to termination. In the event of such termination, User Agency shall immediately remove any and all of its Improvements from the Communications Site described herein and surrender all rights and privileges under this Agreement.

11. Limitations

The section headings of this Agreement are for convenience and reference only and in no way define, extend, limit, or describe the scope or intent of this Agreement or any provision hereof.

This Agreement embodies the whole agreement of the parties. There are no promises, terms, conditions, or obligations other than those contained herein, and this Agreement shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties hereto. This Agreement shall be governed by and construed in accordance with the laws of the State of Florida.

12. Structural Analysis

User Agency agrees to provide Owner with a structural analysis (if use of the Owner's tower is included in this Agreement) that indicates that the additional proposed User Agency antenna(s), mounting hardware and transmission line(s) will not exceed the tower loading standards as defined by the most current revision of the American National Standards Institute (ANSI)/Telecommunications Industries Association (TIA) 222 wind loading standard and/or the American Society of Civil Engineers (ASCE) 7 wind loading standard and/or the South Florida Building Code as required by State and/or local requirements using the most stringent and latest revision(s). The structural analysis must be provided as required, reviewed, and approved by the Department's Intelligent Transportation Systems Communications Administrator prior to technical approval of this Agreement.

13. Intermodulation Analysis

User Agency agrees to provide the Owner with an Intermodulation (Intermod) analysis of all the existing and proposed receiver and transmitter operating frequencies. This analysis must provide 9th Order calculations using all transmit frequencies and include all receive frequencies and their adjacent channel frequencies. The Department will require interference analyses for any Intermod frequency deemed to produce interference. The interference analysis must produce a signal strength component based on path loss, antenna performance characteristics and spatial separation, frequency separation, and receiver and ancillary filter isolation curves. The Intermod analysis and subsequent interference analyses must be provided as required, reviewed, and approved by the Department's Intelligent Transportation Systems Telecommunications Administrator prior to the technical approval of this Agreement.

14. Chapter 471, Florida Statutes

User Agency agrees that Structural Analysis and Intermodulation Analysis submittals required herein will be signed and sealed by a qualified Florida registered Professional Engineer (P.E.) in accordance with Chapter 471, Florida Statutes.

15. Standards Requirements

User Agency agrees to install all equipment in accordance with but not limited to the Electronics Industries Association (EIA), the Institute of Electrical and Electronic Engineers (IEEE) and National Electrical Code (NEC) standards.

16. Surge and Transient Protection Requirements

User Agency agrees to provide, at User Agency's expense, any and all surge and transient protection devices, including but not limited to transmission line through-line protectors, power line primary and secondary protectors, and telephone line protectors.

17. Required Submittals

User Agency agrees to submit a complete plan of the proposed additional equipment as required by the Department's Intelligent Transportation Systems Communications Administrator. The required submittals will be based on site specific needs and transmitted to the User Agency in response to a technically complete initial request to use a specific site. Submittals may include but not be limited to structural analysis (paragraph 12), Intermodulation analysis (paragraph 13), equipment building floor space use plan, power requirements, lightning protection, microwave use plan and equipment maintenance requirements.

18. Unforeseen Problems

User Agency agrees that if any unforeseen problems such as but not limited to structural overloading or overstress to the Communications Site tower, interference to any Owner or preexisting User Agency equipment, or any environmental problems were to occur, the User Agency shall correct, at the expense of the User Agency, any and all problems to the Owner's satisfaction within 60 days or within an alternate time limit determined by the Owner.

19. Cost Responsibility

User Agency agrees, unless stipulated otherwise herein, to be solely responsible and that Owner shall have no responsibility for any costs including, but not limited to, equipment installation, equipment removal, utilities installation, power usage and telephone circuit usage.

20. Suspension of Operations

User Agency agrees to suspend all operations and remove all antenna(s), mounting hardware, transmission line(s), and other equipment from said Communications Site within sixty (60) days of receipt of written notice to vacate said Communications Site. If the request to vacate is determined an emergency by the Owner, the User Agency agrees to immediately cease and desist as specified in the emergency request.

21. Regulatory Requirements

User Agency agrees to comply with all federal, state, and local regulations, laws, and ordinances applicable to this Agreement. User Agency further agrees to operate, maintain, and control all User Agency equipment in accordance with and not in violation of any Federal Communications Commission (FCC), Federal Aviation Administration (FAA), or any other empowered regulating body rules or laws.

22. Governing Law

This Agreement shall be governed by and construed in accordance with the laws of the State of Florida.

23. Compliance with Laws

The User Agency agrees to comply with Section 20.055(5), Florida Statutes, and to incorporate in all subcontracts the obligation to comply with Section 20.055(5), Florida Statutes.

In accordance with Section 287.135, Florida Statutes, by signing this Agreement the User Agency certifies that it is not: (1) listed on the Scrutinized Companies that Boycott Israel List, created pursuant to Section 215.4725, Florida Statutes, (2) engaged in a boycott of Israel, (3) or listed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to Section 215.473, Florida Statutes. If the Owner determines the User Agency submitted a false certification under Section 287.135(5) of the Florida Statutes, pertaining to a boycott of Israel, the Owner shall either terminate the Contract after it has given the User Agency notice and an opportunity to demonstrate the Owner’s determination of false certification was in error pursuant to Section 287.135(5)(a) of the Florida Statutes, or maintain the Contract if the conditions of Section 287.135(4) of the Florida Statutes are met.

24. Public Records

The User Agency shall comply with Chapter 119, Florida Statutes. Specifically, the User Agency shall:

(1) Keep and maintain public records required by the Department to perform the service.

(2) Upon request from the Department's custodian of public records, provide the Department with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes, or as otherwise provided by law.

(3) Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the Agreement term and following completion of the Agreement if the User Agency does not transfer the records to the Department.

(4) Upon completion of the Agreement, transfer, at no cost, to the Department, all public records in possession of the User Agency or keep and maintain public records required by the Department to perform the service. If the User Agency transfers all public records to the Department upon completion of the Agreement, the User Agency shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the User Agency keeps and maintains public records upon completion of the Agreement, the User Agency shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the Department, upon request from the Department's custodian of public records, in a format that is compatible with the information technology systems of the Department.

Failure by the User Agency to comply with Chapter 119, Florida Statutes, shall be grounds for immediate unilateral cancellation of this Agreement by the Department.

If the user agency has questions regarding the application of chapter 119, Florida statutes, it is the user agency's duty to provide public records relating to this contract. Contact the custodian of public records at:

Central Office
850-414-5355
COprcustodian@dot.state.fl.us
Office of the General Counsel
Florida Department of Transportation
605 Suwannee Street, MS 58

25. E-Verify

The User Agency shall:

A. Utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Agency during the term of the contract; and

B. Expressly require any subcontractors performing work or providing services pursuant to the state contract to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the contract term.

26. Attachments

Please check the appropriate box:

☐ None ☒ Yes (List attached to Agreement)

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.

SIGNATURE PAGE FOLLOWS

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed this _____ day of _____, _____.

MIAMI-DADE COUNTY

By: _____
Printed Name:

_____
Title

Attest: _____ (SEAL)

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

By: _____
Printed Name:

Director of Traffic Engineering and Operations
Title

FOR DEPARTMENT USE ONLY

TECHNICAL APPROVAL:

_____
Central Office Review
ITS Communications Administrator

LEGAL REVIEW:

_____
Office of General Counsel

ATTACHMENTS
(11/18/2024)

1. Motorola Solutions Preliminary Construction Drawings with Mark-ups
2. Everglades Academy - Floor Plan & Entry Ports
3. Everglades Academy - Tower Loading Diagram
4. Pate Engineering, Inc. Tower Analysis Report (dated February 17, 2022)

Note:

This is a proposed Receive-only site. An Intermodulation Analysis have been waived by the Department's Intelligent Transportation Systems Telecommunications Administrator.

MDC015

PROJECT DESCRIPTION/SCOPE OF WORK

PROPOSED INSTALLATION OF (1) NEW EQUIPMENT RACK WITHIN AN EXISTING 11'–0" x 14'–0" UNMANNED SHELTER.

PROPOSED INSTALLATION OF (1) NEW ANTENNA AT 240'–0" AGL ON AN EXISTING 260'–0" SELF–SUPPORTED TOWER.

SITE NAME:

MIAMI DADE EGA (ACADEMY FDOT)

SITE ADDRESS:

18500 SW 424TH ST.
HOMESTEAD, FL 33034

SITE COORDINATES AND ELEVATION

LATITUDE – N 25° 22' 20.9" (NAD 83)
LONGITUDE – W 80° 28' 50.6" (NAD 83)
GRD ELEV. – ± 3.00' AMSL

SITE INFORMATION

PROPERTY OWNER

STATE OF FLORIDA
3900 COMMONWEALTH BLVD., #412
TALLAHASSEE, FL 32303

CONTACT

MOTOROLA SOLUTIONS
AMER KASTI
PH: (561) 818–4608
EMAIL: AMER.KASTI@MOTOROLASOLUTIONS.COM

ARCHITECTURAL AND ENGINEERING

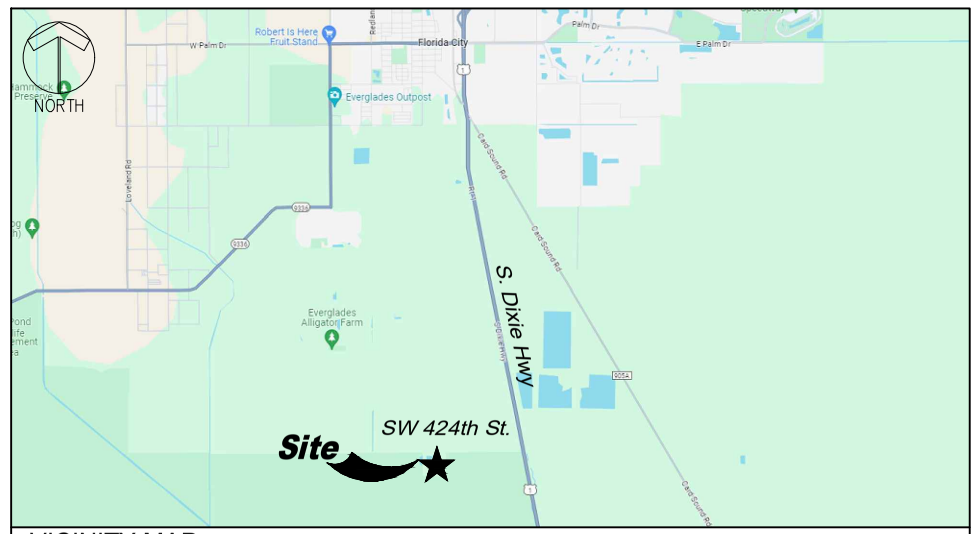
KCI TECHNOLOGIES, INC.
ERIC KOHL
4505 FALLS OF NEUSE ROAD SUITE #400
RALEIGH, NORTH CAROLINA 27609
PH: (919) 783–9214
EMAIL: ERIC.KOHL@KCI.COM

CONSULTANT TEAM

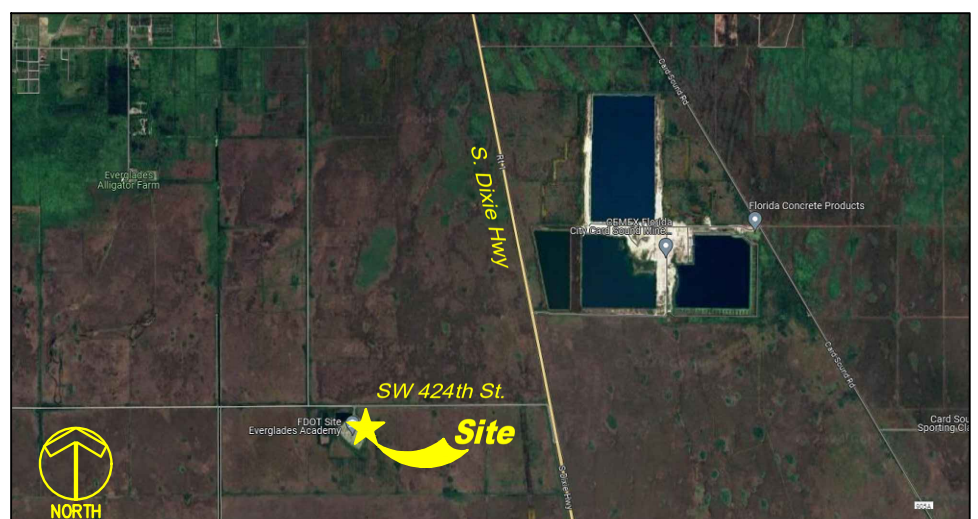
MIAMI–DADE COUNTY, FL REPRESENTATIVE :	RECEIVED :
	ACCEPTED :
MOTOROLA :	RECEIVED :
	ACCEPTED :
PROPERTY OWNER:	RECEIVED :
	ACCEPTED :

RECEIVED AND ACCEPTED

DIRECTIONS TO SITE



VICINITY MAP — MAP PROVIDED BY GOOGLE MAPS



LOCATION MAP — AERIAL MAP PROVIDED BY GOOGLE EARTH

MIAMI DADE EGA (ACADEMY FDOT)

18500 SW 424TH ST.
HOMESTEAD, FL 33034
MIAMI-DADE COUNTY, FL

DRAWING INDEX

T-1	PROJECT INFORMATION, LOCATION MAPS, AND DRAWING INDEX
GN-1	GENERAL NOTES
GN-2	GENERAL NOTES
GN-3	ABBREVIATIONS AND SYMBOLS
C-1	SITE LOCATION PLAN
C-2	SITE LOCATION PLAN
C-3	ENLARGED SITE PLAN
C-4.1	EXISTING SHELTER PLAN
C-4.2	PROPOSED SHELTER PLAN
C-4.3	PROPOSED RACK DIAGRAM
C-5	TOWER ELEVATION AND ANTENNA INFORMATION
C-6.1	ANTENNA DETAILS
C-6.2	ANTENNA DETAILS
C-7	CONSTRUCTION DETAILS
E-1	FIBER UTILITY PLAN
E-2	PROPOSED UTILITY PLAN
G-1	SHELTER GROUNDING PLAN
G-2	GROUNDING DETAILS
G-3	GROUNDING NOTES

811 Know what's below. Call before you dig.
1–800–432–4770 CALL TOLL FREE

PRELIMINARY NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS	BY	CHK	APP'D
A	06/06/24	CONSTRUCTION DRAWINGS	TNW		
B	06/12/24	CONSTRUCTION DRAWINGS	TNW		
C	06/21/24	CONSTRUCTION DRAWINGS	TNW		
D	06/27/24	CONSTRUCTION DRAWINGS	TNW		
E	10/30/24	CONSTRUCTION DRAWINGS	TNW		

KCI TECHNOLOGIES
4505 FALLS OF NEUSE RD., SUITE 400
RALEIGH, NC 27609
PH: 919-783-9214 WWW.KCI.COM

MOTOROLA SOLUTIONS

PROJECT INFORMATION, LOCATION MAPS, AND DRAWING INDEX

MIAMI DADE EGA (ACADEMY FDOT)

18500 SW 424TH ST.
HOMESTEAD, FL 33034

T-1

THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

GENERAL REQUIREMENTS

1. GENERAL

1.1. SUMMARY OF WORK

THE WORK MAY CONSIST OF, BUT NOT BE LIMITED TO, THE INSTALLATION OF PROPOSED TELECOMMUNICATIONS EQUIPMENT WITHIN AN EXISTING EQUIPMENT SHELTER, ANTENNAS AND LINES, GROUNDING, ELECTRICAL WORK, ETC., ASSOCIATED WITH THE MOTOROLA EQUIPMENT AS INDICATED ON DRAWINGS AND AS SPECIFIED HEREIN. CONTRACTOR SHALL SUPPLY ALL PERMANENT MATERIALS/EQUIPMENT REQUIRED AND ALL LABOR, EQUIPMENT, TOOLS, UTILITIES, MINOR HARDWARE/MATERIALS, TRANSPORTATION AND FACILITIES NECESSARY FOR PROPER EXECUTION AND COMPLETION OF SERVICES AND INSTALL WORK, WHETHER TEMPORARY OR PERMANENT. CONTRACTOR SHALL BE OBLIGATED TO PERFORM ALL THE WORK OUTLINED IN THESE DRAWINGS IN ACCORDANCE WITH THE CONTRACT AGREEMENT, FEDERAL REGULATIONS, STATE REQUIREMENTS, LOCAL CODES, COMMERCIAL/INDUSTRY STANDARDS, DETAILED SCOPE OF WORK, AND THE DOCUMENTS IDENTIFIED BELOW. IN CASE OF A CONFLICT BETWEEN THE ABOVE LISTED DOCUMENTS REGARDING STANDARDS OF WORK, THE MORE STRINGENT CRITERIA SHALL APPLY. ANY ADDITIONAL COSTS OR DELAYS RESULTING FROM CORRECTION OF THE WORK TO COMPLY WITH THE ABOVE REQUIREMENT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

1.2. SITE VISIT

CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE ITSELF WITH THE SCOPE OF WORK REQUIRED PER THE DRAWINGS AND ALL LOCAL CONDITIONS AND LAWS AND REGULATIONS THAT MAY IN ANY MANNER AFFECT THE PRICE, PROGRESS AND PERFORMANCE OF WORK, INCLUDING ANY COSTS ASSOCIATED WITH IT. THE CONTRACTOR SHALL ALSO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND NOTIFY THE MOTOROLA REPRESENTATIVE OF ANY DISCREPANCIES OR INTERFERENCES WHICH AFFECT THE WORK OF THIS CONTRACT.

1.3. STANDARDS AND CODES

THE FOLLOWING DOCUMENTS (LATEST REVISION) SHALL BE CONSIDERED TO BE SPECIFICATION AND ARE INCORPORATED HEREIN BY REFERENCE. IN THE EVENT OF CONFLICT BETWEEN THE REQUIREMENTS OF THIS SPECIFICATION AND THE REQUIREMENTS OF THE REFERENCED DOCUMENTS, THE STRICTER SPECIFICATION SHALL GOVERN. WHERE PROVISIONS OF THE CODES AND STANDARDS ARE IN CONFLICT WITH THE BUILDING CODE IN FORCE OR THIS PROJECT, THE BUILDING CODE SHALL GOVERN.

A. AMERICAN CONCRETE INSTITUTE:
- ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".
- ACI 305 "HOT WEATHER CONCRETING".
- ACI 306 "COLD WEATHER CONCRETING".
- ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."
- ACI 614 "RECOMMENDED PRACTICE FOR MEASURING, MIXING AND PLACING CONCRETE".
- ACI 311 "RECOMMENDED PRACTICE FOR CONCRETE INSPECTION".
- ACI 315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".
- ACI 613 "RECOMMENDED PRACTICE FOR SELECTING PROPORTIONS FOR CONCRETE".

B. AMERICAN NATIONAL STANDARDS INSTITUTE:
- ANSI Z359 REQUIREMENTS FOR PERSONAL FALL ARREST SYSTEMS, SUBSYSTEMS AND COMPONENTS
- ANSI Z87.1 OCCUPATIONAL AND EDUCATIONAL EYE AND FACE PROTECTION
- ANSI Z89.1 PROTECTIVE HEADWEAR FOR INDUSTRIAL WORKERS –REQUIREMENTS
- ANSI/IEEE C95.1 SAFETY LEVELS WITH RESPECT TO HUMAN EXPOSURE TO RADIO FREQUENCY ENERGY
- ANSI/TLA/EIA STANDARD 222: STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES.

C. AMERICAN INSTITUTE OF STEEL CONSTRUCTION:
- AISC MANUAL OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION: LATEST EDITION

D. AMERICAN SOCIETY FOR TESTING AND MATERIALS:
- ASTM A615 – "SPECIFICATION FOR DEFORMED AND PLAIN BILLET STEEL BARS FOR CONCRETE REINFORCEMENT".
- ASTM C94–80 – "SPECIFICATION FOR READY–MIX CONCRETE.
- ASTM C39–77 – "SPECIFICATION FOR TEST FOR COMPREHENSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMEN".
- ASTM 33 – "SPECIFICATION FOR CONCRETE AGGREGATES".
- ASTM C150 – "SPECIFICATION FOR PORTLAND CEMENT".
- ASTM C172 – "SAMPLING FRESH CONCRETE".
- ASTM C143 – "SLUMP OF PORTLAND CEMENT CONCRETE".
- ASTM D698–91 – "TEST METHOD FOR LABORATORY COMPACTION CHARACTERISTICS OF SOIL USING STANDARD EFFORT".
- ASTM D1556–84 – "DENSITY OF SOIL IN PLACE BY THE SAND–CONE METHOD".
- ASTM D1557 – "TEST FOR MOISTURE–UNIT WEIGHT RELATIONS OF SOILS AND SOIL–AGGREGATE MIXTURES USING 10–LB. HAMMER AND 18–IN. DROP". (PROCEDURE C)
- ASTM D2487 – "STANDARD CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES (UNIFIED SOIL CLASSIFICATION SYSTEM)
- ASTM D2922 – "DENSITY OF SOIL AND SOIL AGGREGATE IN PLACE BY NUCLEAR METHODS SHALLOW DEPTH".
- ASTM D2940 – "STANDARD SPECIFICATION FOR GRADED AGGREGATE MATERIAL FOR BASES OR SUB–BASES FOR HIGHWAYS OR AIRPORTS"

E. AMERICAN WELDING SOCIETY:
- AWS D12.1 – "RECOMMENDED PRACTICES FOR WELDING REINFORCING STEEL. METAL INSERTS AND CONNECTIONS IN REINFORCED CONCRETE CONSTRUCTION".

F. CONCRETE REINFORCING STEEL INSTITUTE:
- "MANUAL OF STANDARD PRACTICE"

G. FEDERAL AVIATION ADMINISTRATION:
- DEPARTMENT OF TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION ADVISORY CIRCULAR, AC 70/7460–1L: OBSTRUCTION MARKING AND LIGHTING.
- DEPARTMENT OF TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION ADVISORY CIRCULAR, 150–5345–43, FAA/DOD SPECIFICATION L–856: HIGH INTENSITY OBSTRUCTION LIGHTING SYSTEMS.

H. FEDERAL COMMUNICATIONS COMMISSION:
- FEDERAL COMMUNICATIONS COMMISSION – RULES AND REGULATIONS PART 17, CONSTRUCTION, MARKING, AND LIGHTING OF ANTENNA STRUCTURES.

I. STRUCTURAL STEEL PAINTING COUNCIL:
- SSPC–SP–1–63: SPECIFICATION FOR PAINTING STEEL STRUCTURES.

J. MOTOROLA R56 STANDARDS AND GUIDELINES FOR COMMUNICATIONS SITES (APRIL 2017).

K. MOTOROLA'S CIVIL WORKS BID SPECIFICATIONS

L. NATIONAL FIRE PROTECTION ASSOCIATION:
- NFPA 1 – FIRE PREVENTION CODE
- NFPA 54 – NATURAL GAS FUEL CODE
- NFPA 58 – LP GAS CODE
- NFPA 70 – NATIONAL ELECTRICAL CODE
- NFPA 101 – LIFE SAFETY CODE
- NFPA 110 – EMERGENCY/STANDBY POWER SYSTEMS
- NFPA 111 – STANDARD ON STORED ELECTRICAL ENERGY, EMERGENCY AND STANDBY POWER SYSTEMS
- NFPA 780 – STANDARD FOR THE INSTALLATION OF LIGHTNING PROTECTION SYSTEMS

M. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION:
- OSHA 1926
- OSHA DIRECTIVES CPL 2–1.29 – INTERIM INSPECTION PROCEDURES DURING COMMUNICATION TOWER CONSTRUCTION ACTIVITIES.

N. FLORIDA BUILDING AND ELECTRICAL CODE, OR AHJ CODES.

1.4. NOTICE TO PROCEED

WHEN THE SITE IS READY FOR INSTALLATION, MOTOROLA SHALL ISSUE A NOTICE TO PROCEED TO THE CONTRACTOR. UPON RECEIPT OF THE NOTICE OF PROCEED. THE CONTRACTOR SHALL SUBMIT TO MOTOROLA A SCHEDULE REFLECTING THE WORK PLAN. THE CONTRACTOR SHALL ADVISE THE MOTOROLA REPRESENTATIVE IMMEDIATELY OF ANY SCHEDULE CHANGES. THE CONTRACTOR SHALL ADJUST HIS WORK, AS REQUIRED, TO COORDINATE WITH THE MOTOROLA INSTALLATION TEAM IF THE SCHEDULES OVERLAP.

1.5. MOTOROLA REPRESENTATIVE

MOTOROLA SHALL DESIGNATE A REPRESENTATIVE. THIS PERSON IS THE ONLY CONTACT POINT AUTHORIZED TO MAKE ANY CHANGES TO THE CONTRACT PROVISIONS OR THE PLANS AND SPECIFICATIONS. ANY CHANGES MADE BY THE CONTRACTOR ARE AT THE CONTRACTOR'S RESPONSIBILITY AND RISK.

1.6. CONTRACTORS FIELD REPRESENTATIVE

CONTRACTOR SHALL ASSIGN A FIELD REPRESENTATIVE WHO IS FAMILIAR WITH THESE SPECIFICATIONS AND WILL REPRESENT THE CONTRACTOR AND HAVE THE AUTHORITY TO ACT FOR THE CONTRACTOR AND SUPERVISE ALL CONSTRUCTION ACTIVITIES. THE REPRESENTATIVE SHALL BE AVAILABLE WHEN CONSTRUCTION ACTIVITIES BEGIN. THE FIELD REPRESENTATIVE SHALL BE THE PRIMARY POINT OF CONTACT FOR MOTOROLA DURING THE CONSTRUCTION PHASE OF THE WORK.

1.7. PROJECT MEETINGS

THE CONTRACTOR SHALL CONDUCT THE INITIAL (PRE–CONSTRUCTION) MEETING (INCLUDING ALL SUB–CONTRACTORS) WITH THE MOTOROLA REPRESENTATIVE WITHIN TWO WEEKS AFTER AWARD OF THE CONTRACT. SUBSEQUENTLY, THE CONTRACTOR SHALL PROVIDE PROGRESS SCHEDULE UPDATES TO MOTOROLA ON A WEEKLY BASIS.

1.8. MATERIALS

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

MATERIALS AND WORKMANSHIP SHALL BE THE BEST OF THEIR RESPECTIVE KINDS (AS DEFINED BY INDUSTRY STANDARDS), FREE OF DEFECTS AND ALL MATERIALS SHALL BE NEW AND UNUSED IN ALL CASES, UNLESS OTHERWISE SPECIFIED. WHERE THE NAME OF A CONCERN OR MANUFACTURER IS MENTIONED ON DRAWINGS OR IN SPECIFICATIONS IN REFERENCE TO A REQUIRED SERVICE OR PRODUCT, AND NO QUALIFICATIONS OR SPECIFICATION OF SUCH IS INCLUDED, THEN THE MATERIAL SPECIFICATIONS, DETAILS OF MANUFACTURE, FINISH, ETC., SHALL BE IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICE, DIRECTION OR SPECIFICATIONS. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S / VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.

1.9. VERIFICATION OF EXISTING CONDITIONS

BEFORE STARTING ANY OPERATION, THE CONTRACTOR SHALL EXAMINE EXISTING WORK, OR WORK PERFORMED BY OTHERS, TO WHICH ITS WORK IS TO ADJOIN OR BE APPLIED AND SHALL REPORT TO MOTOROLA PROJECT MANAGER ANY CONDITIONS THAT WILL PREVENT SATISFACTORY ACCOMPLISHMENT OF HIS WORK. PRIOR TO COMMENCING ANY EXCAVATION OR GRADING, THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE ACCURACY OF ALL SURVEY DATA AS INDICATED IN THE PLANS AND SPECIFICATIONS AND/OR AS PROVIDED BY MOTOROLA. SHOULD THE CONTRACTOR DISCOVER ANY INACCURACIES, ERRORS, OR OMISSIONS IN THE SURVEY DATA, HE SHALL IMMEDIATELY NOTIFY THE MOTOROLA REPRESENTATIVE IN ORDER THAT PROPER ADJUSTMENTS CAN BE ANTICIPATED AND ORDERED. FAILURE TO NOTIFY THE MOTOROLA REPRESENTATIVE OF DEFICIENCIES, ERRORS OR FAULTS PRIOR TO COMMENCEMENT OF WORK SHALL CONSTITUTE ACCEPTANCE THEREOF AND WAIVER OF ANY CLAIMS OF UNSUITABILITY, ERRORS, OMISSIONS OR INACCURACIES.

THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PRESERVING ALL ESTABLISHED SURVEY CONTROL POINTS. IF THE CONTRACTOR OR ANY OF HIS SUB–CONTRACTORS MOVE OR DESTROY ANY SURVEY CONTROL POINTS, THE COST INCURRED BY THE LAND OWNER OR MOTOROLA TO RE–ESTABLISH THEM WILL BE BORNE BY THE CONTRACTOR.

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MOTOROLA SOLUTIONS

MIAMI-DADE COUNTY FLORIDA

GENERAL NOTES

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1.10. PERMITS

THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. THE CONTRACTOR SHALL MEET ALL OF THE REGULATORY REQUIREMENTS OF THE JURISDICTION GOVERNING CONSTRUCTION.

1.11. SITE INSPECTION

THE CONTRACTOR SHALL HAVE THE RESPONSIBILITY FOR ARRANGING WITH MOTOROLA FOR AN INSPECTION PRIOR TO COVERING UP ALL WORK THAT WILL BE COVERED IN FINISHED CONDITION. IT IS THE SITE GENERAL CONTRACTOR'S RESPONSIBILITY TO MANAGE THE SEQUENCE OF WORK AND REQUEST THE INSPECTIONS IN A TIMELY MANNER. THE SITE GENERAL CONTRACTOR SHALL NOT REQUEST AN INSPECTION UNLESS ALL OF THE RELATED WORK HAS BEEN COMPLETED. WORK SHALL NOT PROCEED TO THE NEXT STEP UNTIL THE PREVIOUS STEP HAS BEEN INSPECTED AND APPROVED BY THE LOCAL INSPECTORS AND THE MOTOROLA REPRESENTATIVE. THE PRESENCE OF THE OWNER OR MOTOROLA REPRESENTATIVE ON THE JOB SITE IN NO WAY RELIEVES THE SITE GENERAL CONTRACTOR OF THE ASSOCIATED RESPONSIBILITIES OF THE JOB. ANY WORK WHICH DOES NOT MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS WILL BE CORRECTED OR REMOVED SOLELY AT THE SITE GENERAL CONTRACTOR'S EXPENSE.

THE FOLLOWING INFORMATION IS INCLUDED AS A GUIDE TO THE CONTRACTOR TO ASSIST IN DETERMINING THE TYPE AND FREQUENCY OF INSPECTIONS. THE LISTED INSPECTIONS REPRESENT THOSE REQUIRED FOR SMALL OR SIMPLE PROJECTS. LARGE OR COMPLEX PROJECTS MAY REQUIRE ADDITIONAL INSPECTIONS DEPENDING ON THE SEQUENCE OF WORK.

- FOUNDATION EXCAVATIONS AND REBAR: TO BE MADE AFTER TRENCHES ARE EXCAVATED AND FORMS ERECTED, REINFORCEMENT PLACED, COMPACTION TESTED, SOIL TREATED, VAPOR BARRIER PLACED, AND ESSENTIALLY READY FOR CONCRETE PLACEMENT.
- GROUNDING: TO BE MADE AFTER THE BELOW GROUND CADWELD CONNECTIONS HAVE BEEN COMPLETED, PRIOR TO COVERING UP THE TRENCHES.
- ELECTRICAL WORK WITHIN WALLS: TO BE MADE AFTER THE ROOF, FRAMING, FIRE BLOCKING AND BRACING IS IN PLACE PRIOR TO THE INSTALLATION OF INSULATION OR WALL/CEILING MEMBRANES.

AS A GENERAL RULE. THE CONTRACTOR SHALL PROVIDE ADVANCE NOTICE TO MOTOROLA FOR INSPECTION OF ALL WORK PRIOR TO CONCEALMENT. THE CONTRACTOR HAS RESPONSIBILITIES RELATIVE TO ALL TYPES OF INSPECTIONS AND IS RESPONSIBLE FOR CONTACTING ALL OF THE INSPECTING ENTITIES TO DETERMINE HIS RESPONSIBILITIES. ALL OF THESE INSPECTING ENTITIES HAVE UNIQUE AND SEPARATE RESPONSIBILITIES. ONE INSPECTION FROM AN ENTITY WILL NOT SUBSTITUTE FOR AN INSPECTION FROM ANOTHER ENTITY.

1.12. SAFETY

THE CONTRACTOR, HIS EMPLOYEES, ANY SUB-CONTRACTORS, VENDORS, THEIR RESPECTIVE EMPLOYEES AND CONTRACTOR'S VISITORS SHALL COMPLY WITH ALL SAFETY STANDARDS, ACCIDENT PREVENTION REGULATIONS AND ENVIRONMENTAL REGULATIONS PROMULGATED BY FEDERAL, STATE, OR LOCAL AUTHORITIES HAVING JURISDICTION AND SHALL AT ALL TIMES CONDUCT ALL OPERATIONS UNDER THE CONTRACT IN A MANNER TO AVOID THE RISK OF BODILY HARM TO ANY PERSONS AND THE RISK OF DAMAGE TO ANY PROPERTY, EQUIPMENT OR MATERIAL SUCH PARTIES SHALL ALSO COMPLY WITH ANY SAFETY PROGRAMS AND/OR RULES PROMULGATED BY OWNER AND/OR MOTOROLA.

1.13. ELECTRO MAGNETIC EMISSIONS

THE CONTRACTOR SHALL ACKNOWLEDGE ALL OR PORTIONS OF THE WORK MAY INVOLVE POSSIBLE EXPOSURE OF CONTRACTOR, SUB-CONTRACTORS, AND THEIR RESPECTIVE EMPLOYEES, AGENTS, INVITEES, LICENSEES AND OTHER VISITORS TO THE JOBSITE AND/OR MOTOROLA PREMISES TO ELECTRO-MAGNETIC ENERGY ("EME") WHILE PERFORMING WORK UNDER THIS CONTRACT, ESPECIALLY IF WORK IS PERFORMED ON EXISTING ANTENNA TOWERS WHERE ANTENNAS ARE LOCATED. THE CONTRACTOR REPRESENTS THAT CONTRACTOR, SUBCONTRACTORS, AND ALL OF THEIR RESPECTIVE EMPLOYEES, AGENTS, INVITEES, LICENSEES, AND OTHER AUTHORIZED REPRESENTATIVES WHO ARE PERFORMING SERVICES UNDER THIS AGREEMENT WILL COMPLY WITH ALL ANSI AND ANY OTHER APPLICABLE EME STANDARDS, RULES OR REGULATIONS, INCLUDING, BUT NOT LIMITED TO THOSE RULES OR REGULATIONS IMPOSED OR SUGGESTED BY MOTOROLA, IF ANY.

THE CONTRACTOR SHALL ADHERE TO ALL OSHA RULES, REGULATIONS AND ADOPTED POLICIES. ALL CONTRACTOR PERSONNEL SHALL HAVE UNDERGONE ELECTROMAGNETIC ENERGY (EME) TRAINING FOR PERSONNEL WORKING IN THE VICINITY OF ACTIVE ANTENNAS. AS SUCH IT IS RECOMMENDED THAT RF MONITORS BE USED BY THE TOWER PERSONNEL TO MONITOR EXPOSURE LEVELS. IF EME LEVELS AT THE SITE EXCEED THE MAXIMUM PERMISSIBLE EXPOSURE LIMITS, THE CONTRACTOR SHALL COORDINATE WITH THE INDIVIDUALS RESPONSIBLE FOR USE OF THE TRANSMITTER TO MAKE SURE THAT THE EQUIPMENT IS DEACTIVATED BEFORE WORK CAN BE RESUMED, WITHOUT CAUSING A SERIOUS DISRUPTION OF THE SERVICE.

1.14. SITE CLEANUP

THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE AT ALL TIMES DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, VEGETATION, AND RUBBISH, AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. WHENEVER THE WORK-SITE IS LEFT UNATTENDED, THE CONTRACTOR SHALL BLOCK THE OPENING WITH WARNING TAPE TO DISCOURAGE TRESPASSING. THE PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE AT THE CONCLUSION OF SITE WORK.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR LANDSCAPE GRADING AND SEEDING OF THE DISTURBED SOIL THE CONTRACTOR SHALL USE LOCAL GRASS SEED TO STABILIZE SOIL AND SHALL COVER DISTURBED AREAS WITH HAY MULCH TO REDUCE RUNOFF OF SEDIMENT TO DOWNSTREAM AREAS. THE CONTRACTOR SHALL RESTORE THE SITE TO ITS ORIGINAL CONDITION. ALL SLOPES AND DISTURBED AREAS NOT RECEIVING AGGREGATE SURFACING ARE TO BE PREPARED AND BROADCAST SEEDED AND FERTILIZED FOR EROSION PROTECTION. SEEDING FOR AREAS DISTURBED SHALL BE ESTABLISHED SEASONALLY AS REQUIRED BY LOCAL CODES.

THE CONTRACTOR SHALL EXERCISE ALL CARE TO AVOID DAMAGE OR INTERRUPTION OF EXISTING UNDERGROUND OR OVERHEAD ELECTRIC SERVICES, UNDERGROUND GROUNDING AND FUEL LINES, EQUIPMENT AND BUILDINGS ON THE SITE, PLUS OFF SITE SERVICES, BURIED OR OVERHEAD, SURROUNDING THE EXISTING OR EXPANDED COMPOUND. ANY PROPERTY DAMAGE CAUSED BY THE CONTRACTOR OR HIS OPERATIONS SHALL BE CORRECTED AND/OR RESTORED TO THE SATISFACTION OF THE PROPERTY OWNER(S) AND MOTOROLA AT NO ADDITIONAL COST TO THE PROPERTY OWNER OR MOTOROLA.
BURNING WILL NOT BE PERMITTED.

1.15. FACILITY STARTUP & COMMISSIONING

THE CONTRACTOR AND/OR SUB-CONTRACTORS SHALL DEMONSTRATE TO MOTOROLA THAT ALL SYSTEMS AND SUB-SYSTEMS INSTALLED UNDER THIS CONTRACT, OPERATE PROPERLY PRIOR TO THE FINAL ACCEPTANCE INSPECTION AND PROVIDE THE OPERATIONS AND MAINTENANCE MANUALS AT THIS TIME.

1.16. SHOP DRAWINGS/AS-BUILT DRAWINGS

THE MODIFICATIONS TO THE DRAWINGS AFTER CONSTRUCTION START SHALL RECEIVE ENGINEERING AND MOTOROLA APPROVAL PRIOR TO ANY CHANGES BEING MADE. THE ENGINEER OF RECORD SHALL MAKE THE REQUIRED CHANGE AND WILL SUBMIT CHANGES TO MOTOROLA AND ANY JURISDICTION HAVING AUTHORITY.

THE CONTRACTOR SHALL KEEP UP-TO-DATE MARKED-UP PRINTS OF THE PROJECT DRAWINGS. UPON COMPLETION OF WORK AT THE SITE, THE CONTRACTOR SHALL REVIEW THE COMPLETED AS-BUILT DRAWINGS, AND ASCERTAIN THAT ALL DATA FURNISHED ON THE DRAWINGS IS ACCURATE AND TRULY REPRESENTS THE WORK IS ACTUALLY INSTALLED. MARKINGS INDICATING CHANGES TO THE DRAWINGS SHALL BE RED OR GREEN AND CLEARLY VISIBLE. TWO (2) SETS OF "AS-BUILT" DRAWINGS SHALL BE FURNISHED TO THE MOTOROLA REPRESENTATIVE WITHIN 5 DAYS OF THE COMPLETION OF THE PROJECT. THESE DRAWINGS SHALL ALSO SHOW THE FOLLOWING:

- MODIFICATIONS TO SITE LAYOUT.
- GROUNDING SYSTEM LAYOUT.
- UNDERGROUND FUEL LINE RUN.
- UNDERGROUND TELCO CABLE RUN.
- UNDERGROUND ELECTRICAL RUN.

WHERE THE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING THE SITE EQUIPMENT ROOM. ISOLATION TRANSFORMER. GENERATOR, ETC.) THAT REQUIRES PERIODIC MAINTENANCE, THE CONTRACTOR SHALL INCLUDE ALL OPERATION AND MAINTENANCE MANUALS AND ALL AS-BUILT DRAWINGS WHICH FULLY DESCRIBE THE ACTUAL INSTALLED EQUIPMENT.

1.17. TEST PROCEDURES AND RESULTS

CONTRACTOR WILL CONTRACT WITH A THIRD PARTY "INDEPENDENT" TESTING FIRM TO PERFORM & SUBMIT THE RESULTS OF ALL TESTS REQUIRED BY THE PROJECT SPECIFICATIONS AND DRAWINGS THAT FALL WITHIN THE SCOPE OF WORK. THESE RESULTS SHALL BE SUBMITTED TO THE DESIGNATED MOTOROLA REPRESENTATIVE. IN GENERAL, THE "INDEPENDENT" TESTING FIRM SHALL SUBMIT THE FOLLOWING TEST RESULTS:

- MIX DESIGN/CONCRETE COMPRESSION TEST FOR ALL CONCRETE WORK.
- FREQUENCY DOMAIN REFLECTOMETER (FDR) WITH PRECISION LOAD / SWEEP TEST FOR ANTENNA AND TRANSMISSION LINE INSTALLATION WORK. ALL SWEEP AND TEST MUST BE WITHIN THE GUIDELINES OUTLINED IN MOTOROLA MOP.
- FUEL LINE LEAKAGE TEST FOR FUEL TANK AND PIPING INSTALLATION WORK.
- SLUMP TEST FOR CONCRETE WORK.
- GROUNDING RESISTANCE TEST FOR GROUNDING WORK.
- STRUCTURAL STEEL FABRICATION DRAWINGS.
- STRUCTURAL (TOWER) STEEL MATERIALS, FINISH, ASSEMBLY, AND PROPER ASSEMBLY AND INSTALLATION OF ANTENNAS AND TRANSMISSION LINES. ("THIRD PARTY CLIMB" AND REPORT INCLUDING PHOTO DOCUMENTATION)
- ANY OTHER TEST THAT MAY BE REQUIRED.

1.18. CONTRACT CLOSEOUT – IN ACCORDANCE WITH MOTOROLA'S SUBCONTRACT AGREEMENT TERMS AND CONDITIONS

THE MOTOROLA REPRESENTATIVE WILL PROVIDE A CERTIFICATE OF COMPLETION AND APPROVE FINAL PAYMENT WHEN ALL PUNCH-LIST ITEMS HAVE BEEN CORRECTED, RECORD DRAWINGS SUBMITTED, AND ALL SYSTEMS ARE ACCEPTABLE. THE CONTRACTOR MUST ALSO RECEIVE A CERTIFICATE OF COMPLETION FROM THE MUNICIPALITY. AFTER FINAL PAYMENT, CONTRACTOR WILL SIGN A RELEASE OF LIEN.

1.19. WARRANTY

ALL WORK PERFORMED BY THE CONTRACTOR IN COMPLETING THE SCOPE IDENTIFIED ON THE DRAWINGS SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL COMPLETION OF THE PROJECT. THIS GUARANTEE SHALL COVER ALL MATERIALS, EQUIPMENT OR WORKMANSHIP WHICH IN THE OPINION OF MOTOROLA IS RENDERED DEFECTIVE OR INFERIOR OR NOT IN ACCORDANCE WITH THE TERMS OF THE CONTRACT DURING THE GUARANTEE PERIOD. IF, WITHIN THE GUARANTEE PERIOD, REPAIRS OR CHANGES ARE REQUIRED TO CORRECT THE GUARANTEE WORK. THEN UPON RECEIPT OF NOTICE, THE CONTRACTOR SHALL PROMPTLY AND WITHOUT EXPENSE TO MOTOROLA OR THE OWNER, PROCEED TO:

- PLACE IN SATISFACTORY CONDITION ALL OF SUCH GUARANTEED WORK AND CORRECT ALL DEFECTS THEREIN.
- MAKE GOOD ALL DAMAGES TO THE STRUCTURE OR SITE OR EQUIPMENT OR CONTENTS THEREOF, WHICH, IN THE OPINION OF THE MOTOROLA REPRESENTATIVE, IS THE RESULT OF THE USE OF MATERIALS, EQUIPMENT, OR WORKMANSHIP WHICH ARE INFERIOR, DEFECTIVE, OR NOT IN ACCORDANCE WITH THE TERMS OF THE CONTRACT.
- MAKE GOOD ANY WORK, MATERIALS OR EQUIPMENT AND ADJACENT STRUCTURES DISTURBED IN FULFILLING THE GUARANTEE.

1.20. RELATED DOCUMENTS

CONTRACTOR SHALL BECOME FAMILIAR WITH THE INFORMATION AND REQUIREMENTS CONTAINED IN THE FOLLOWING DOCUMENTS RELATED TO THE PROJECT:

A. TOWER AND TOWER FOUNDATION DRAWINGS BY THE MANUFACTURER.

B. R-56 STANDARDS AND GUIDELINES FOR COMMUNICATIONS SITES BY MOTOROLA.

C. ALL OTHER PERTINENT DOCUMENTS.

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MDC017

Abbreviations and Symbols

A/C	AIR CONDITIONING
ADJ	ADJUSTABLE
AFF	ABOVE FINISH FLOOR
APPROX	APPROXIMATELY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWG	AMERICAN WIRE GAUGE
BLDG	BUILDING
BLK	BLOCK
BMR	BASE MOBILE RADIO
B/S	BUILDING STANDARD
CLG	CEILING
CLR	CLEAR
CND,C	CONDUIT
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
DBL	DOUBLE
DIA,ø	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DN	DOWN
DTL,DETL	DETAIL
DWG	DRAWING
E	EAST
EA	EACH
EL,ELEV	ELEVATION
ELECT	ELECTRICAL
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EACH WAY
EXIST	EXISTING
EXT	EXTERIOR
FIN	FINISH
FLUOR	FLUORESCENT
FLR	FLOOR
FT	FOOT
GA	GAUGE
GALV	GALVANIZE(D)
GC	GENERAL CONTRACTOR
GRND	GROUND
GWB	GYPSUM WALL BOARD
GYP BD	GYPSUM BOARD
HARD'WD	HARDWOOD
HORIZ	HORIZONTAL
HR	HOUR
HT	HEIGHT
HVAC	HEATING, VENTING & AIR CONDITIONING
ID	INSIDE DIA.
IN	INCH
INFO	INFORMATION
INSUL.	INSULATION
INT	INTERIOR
LB(S)	POUND(S)
MAX	MAXIMUM
MECH	MECHANICAL
MET,MTL	METAL
MFR	MANUFACTURER
MGR	MANAGER
MIN	MINIMUM
MISC	MISCELLANEOUS
N	NORTH
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
O/C,O.C.	ON CENTER
OD	OUTSIDE DIAMETER
OPG	OPENING
OPP	OPPOSITE
PLYWD	PLYWOOD
PR	PAIR
PROJ	PROJECT
PROP	PROPERTY
PT	PRESSURE TREATED
R	RADIUS
REQ'D	REQUIRED
RM	ROOM
RO	ROUGH OPENING
S	SOUTH
SHT	SHEET
SIM	SIMILAR
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
STL	STEEL
STRUCT	STRUCTURAL
SUSP	SUSPENDED
SV	SHEET VINYL
THRU	THROUGH
TNND	TINNED
TOC	TOP OF CONCRETE
TOM	TOP OF MASONRY
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VIF	VERIFY IN FIELD
VT	VINYL TILE
W	WEST
W/	WITH
WIN	WINDOW
W/O	WITHOUT
WP	WATERPROOF
∡	ANGLE
&	AND
℄	CENTER LINE
ℙ	PROPERTY LINE
@	AT
#	NUMBER

Symbols

1	REVISION
1	KEY NOTE
100	ROOM NUMBER
22	KEYED NOTE
1 / T-1	DETAIL REFERENCE
1 / T-1	ELEVATION REFERENCE
1 / T-1	SECTION REFERENCE

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MOTOROLA SOLUTIONS

MIAMI-DADE COUNTY FLORIDA

ABBREVIATIONS AND SYMBOLS

MIAMI DADE EGA
(ACADEMY FDOT)

18500 SW 424TH ST.
HOMESTEAD, FL 33034

GN-3

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MDC018

1 / C-1 Site Location Plan

NORTH

20 0 20 40

1 inch = 40ft.

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

1-800-432-4770 CALL TOLL FREE

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MIAMI-DADE COUNTY FLORIDA

SITE LOCATION PLAN

MIAMI DADE EGA (ACADEMY FDOT)

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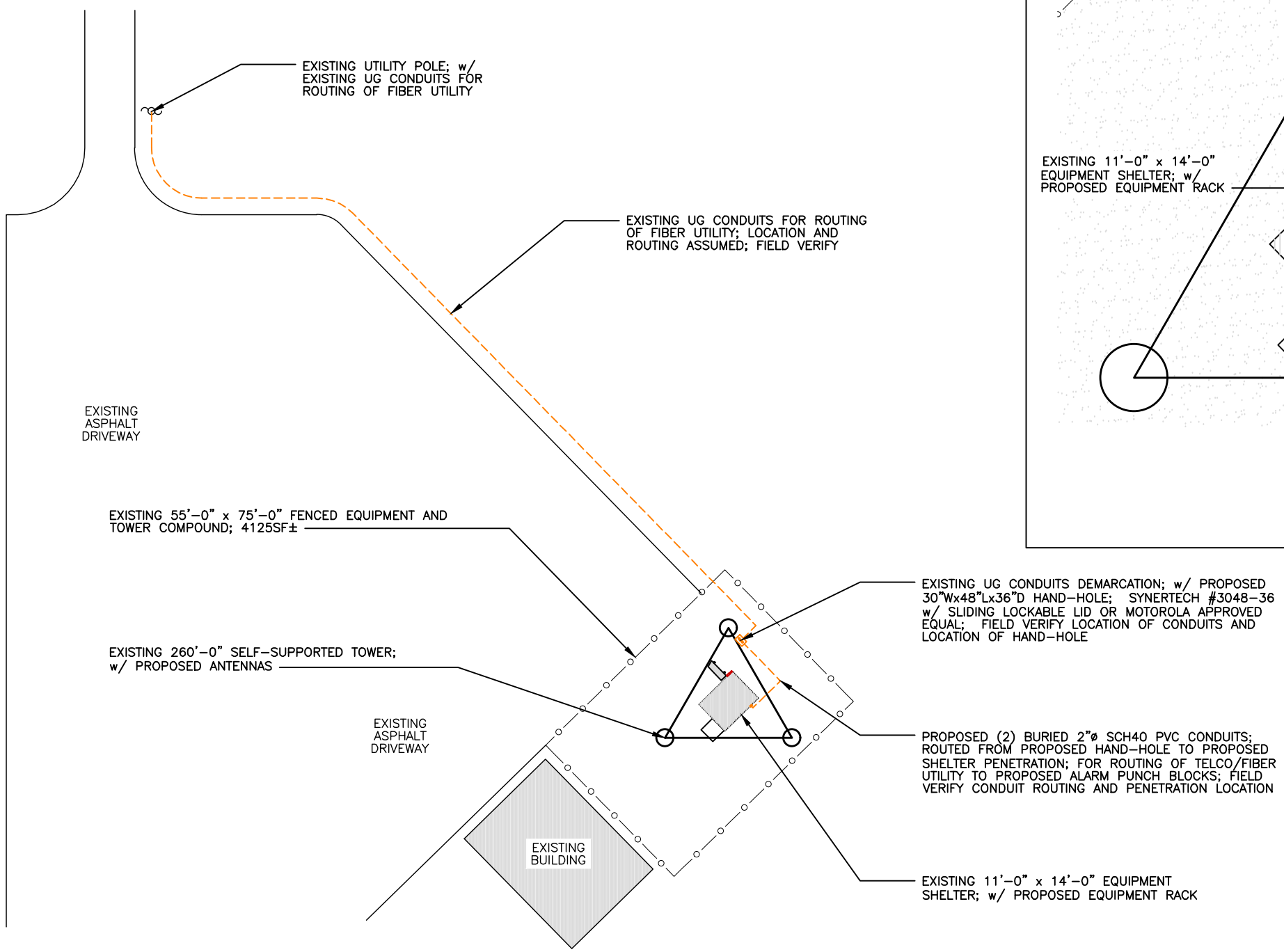
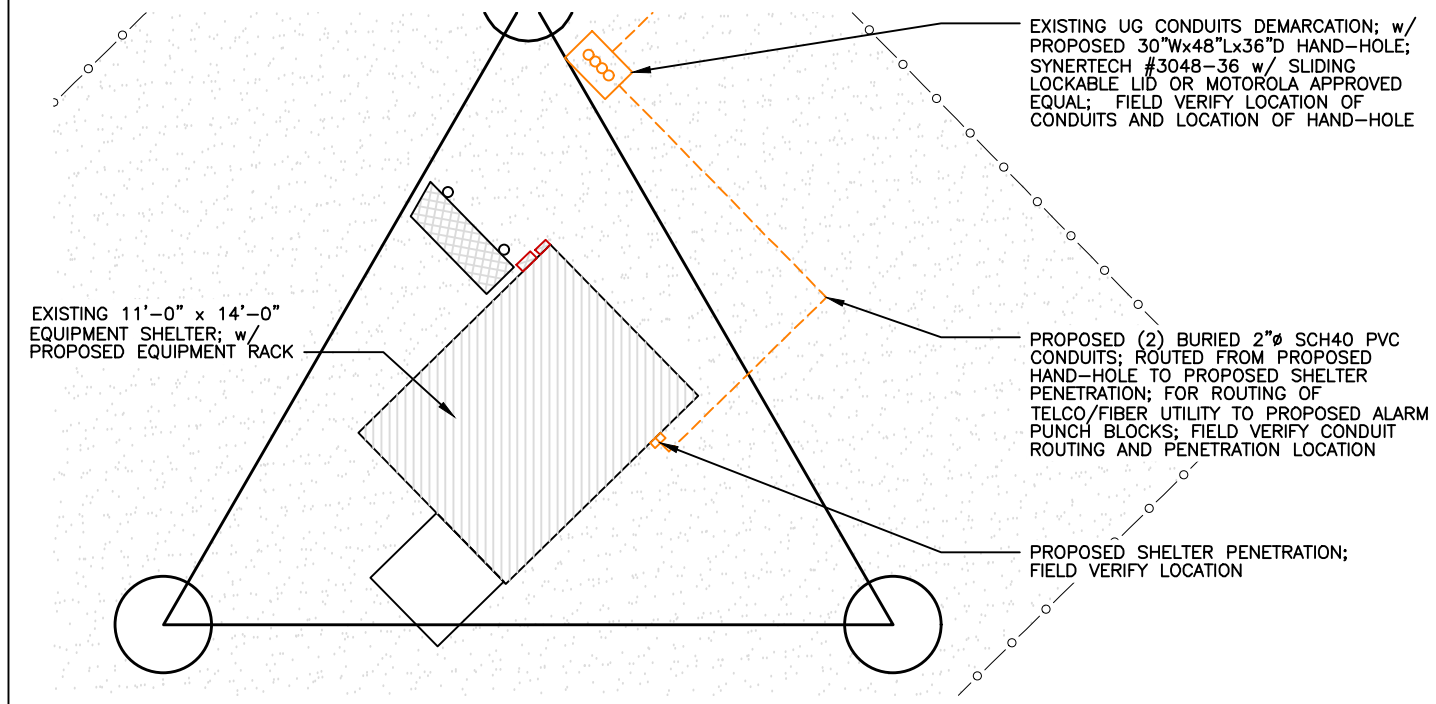
MDC020



1 / C-2 **Site Location Plan**

NORTH

20 0 20 40
1 inch = 40ft.



2 / C-2 **Site Location Detail**

NORTH

5 0 5 10
1 inch = 10ft.

811
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MOTOROLA SOLUTIONS

MIAMI-DADE COUNTY FLORIDA

SITE LOCATION PLAN

MIAMI DADE EGA
(ACADEMY FDOT)

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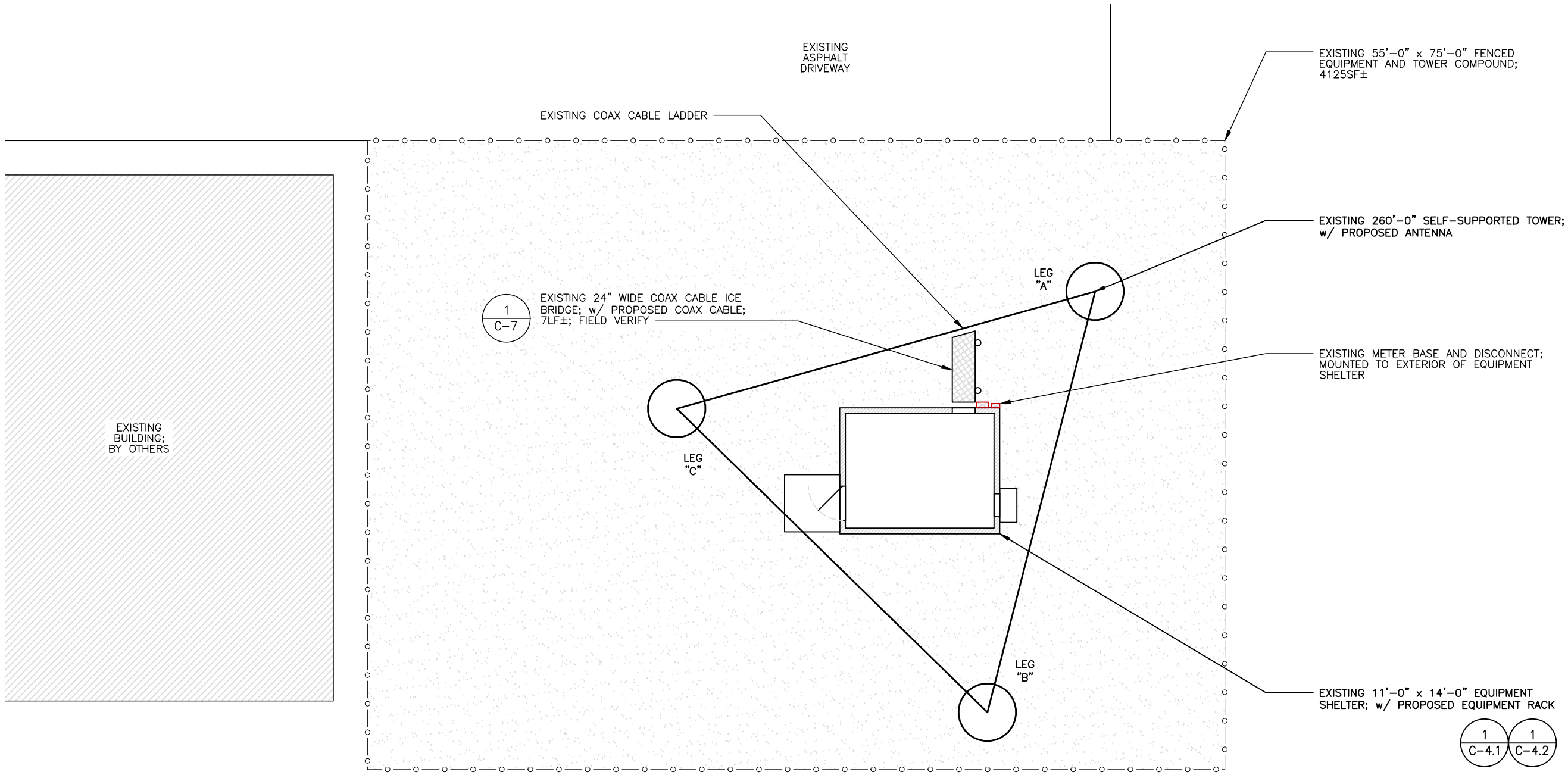

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1 C-3 Enlarged Site Plan

NORTH

5 0 5 10
1 inch = 10ft.

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MOTOROLA SOLUTIONS

MIAMI-DADE COUNTY FLORIDA

ENLARGED SITE PLAN

MIAMI DADE EGA
(ACADEMY FDOT)

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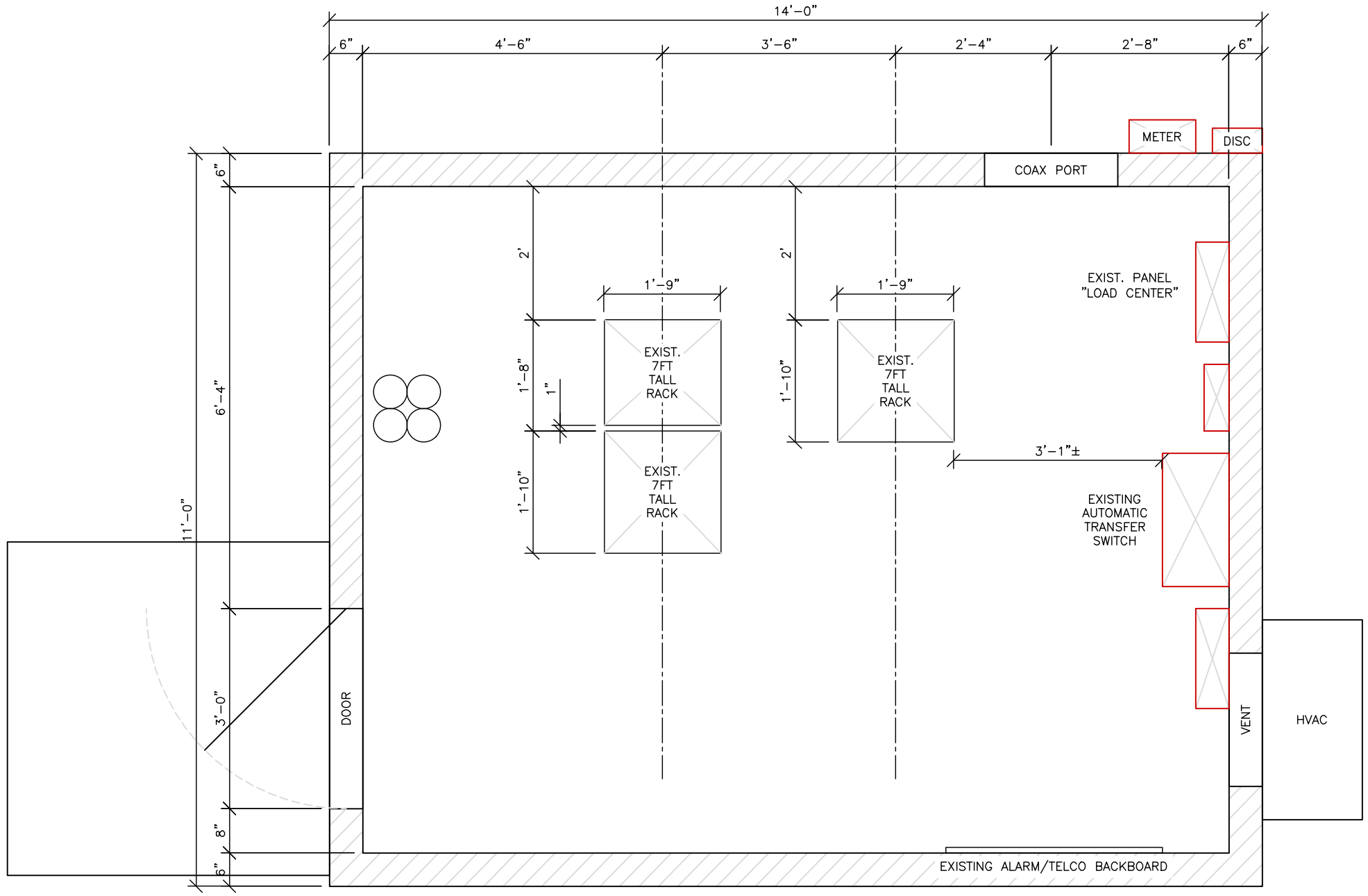
MDC021

MDC022



1
C-4.1

Existing Shelter Plan

NORTH

1' 0 1' 2'

1/2 inch = 1ft.

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MOTOROLA SOLUTIONS

MIAMI-DADE COUNTY FLORIDA

EXISTING SHELTER PLAN

MIAMI DADE EGA
(ACADEMY FDOT)

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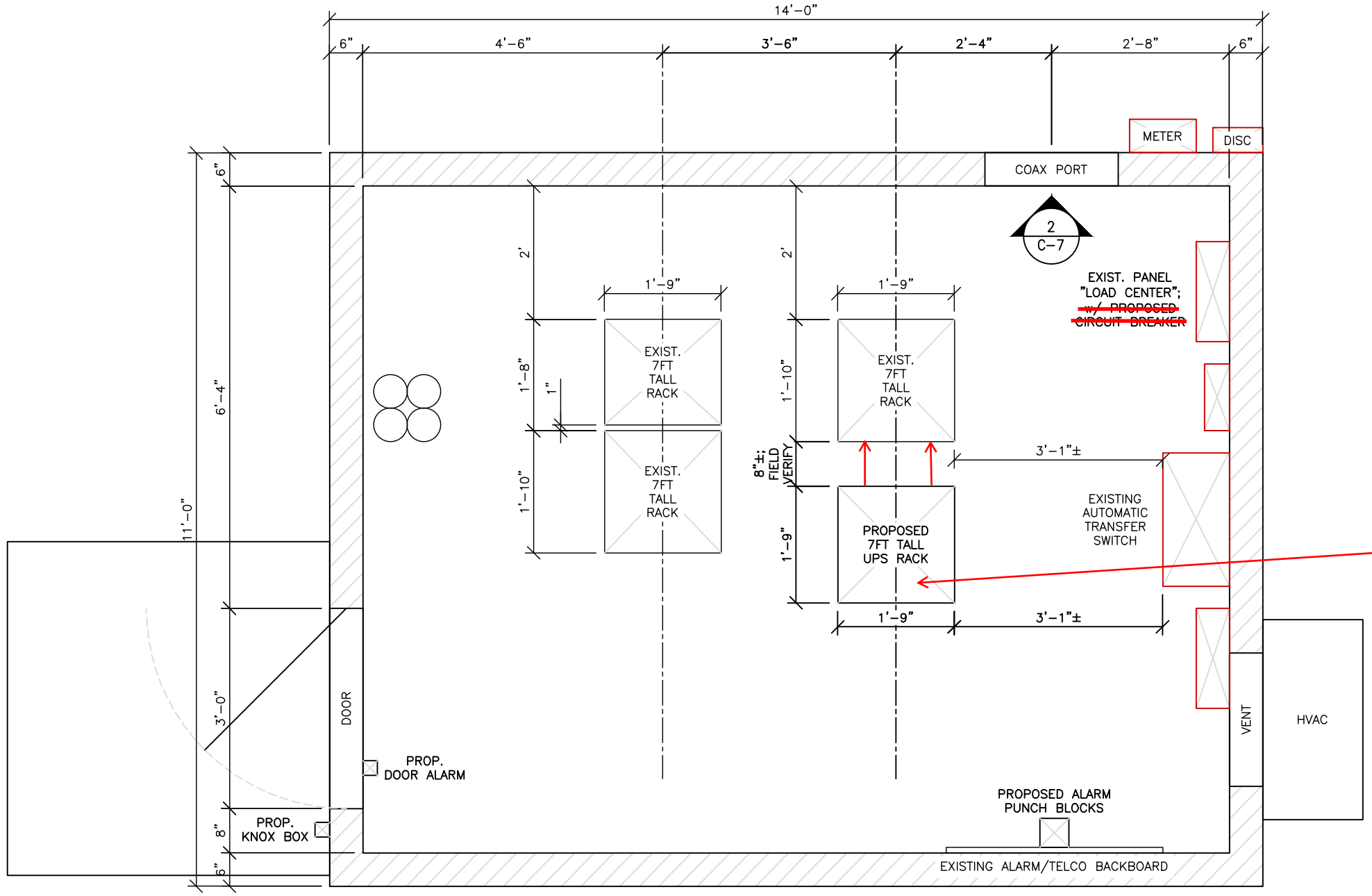

1) Install the proposed rack flushed to the existing rack. Refer to Sheet EVE-01.
2) Power up the rack from existing dedicated ceiling-mounted 20A twist-lock.

1
C-4.2

Proposed Shelter Plan

NORTH

1' 0 1' 2'
1/2 inch = 1ft.

Proposed

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MOTOROLA SOLUTIONS

MIAMI-DADE COUNTY FLORIDA

~~EXISTING~~ SHELTER PLAN

MIAMI DADE EGA
(ACADEMY FDOT)

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MDC023

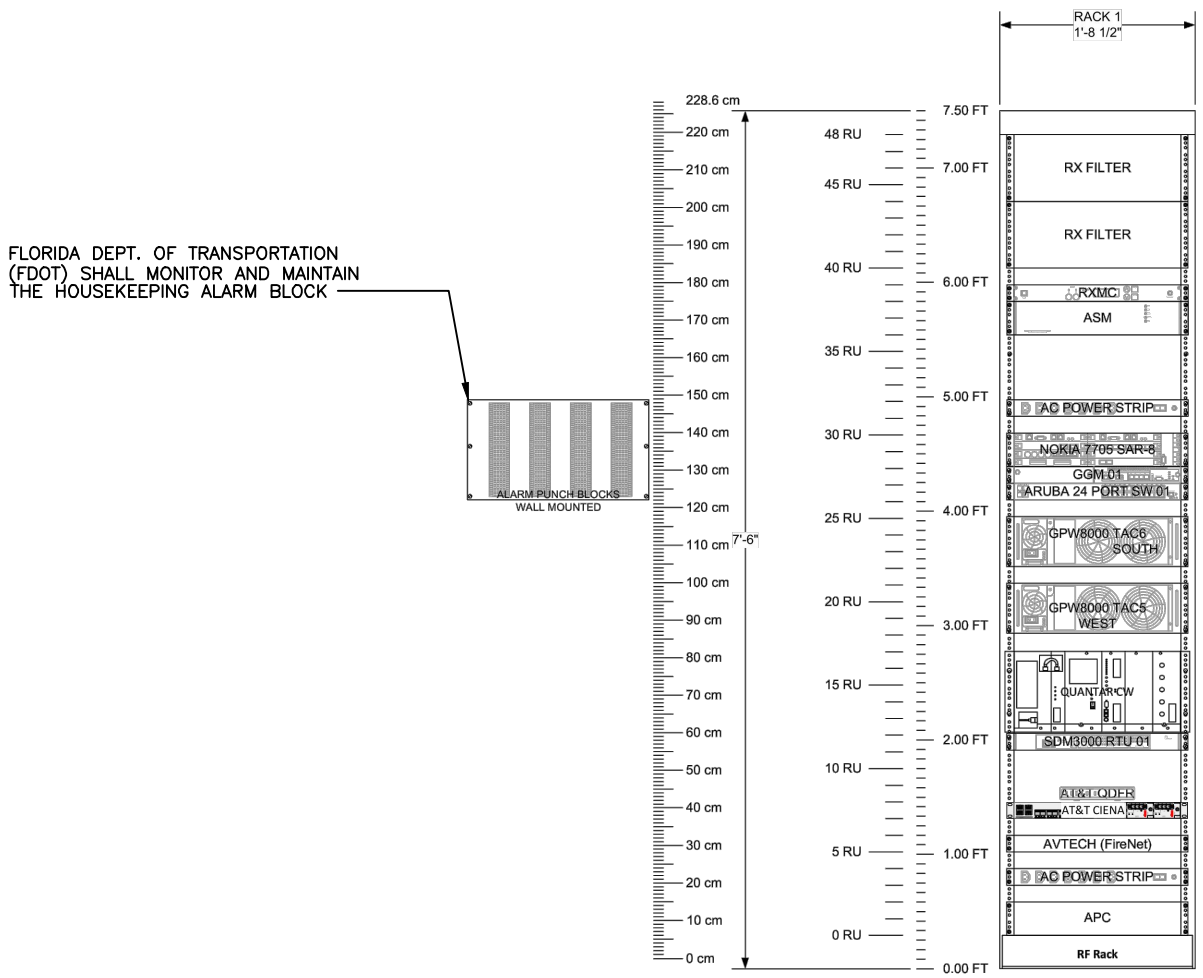
NOTES:

1. ALL INSTALLATION WORK, INCLUDING CABLES AND CONNECTORS, SHALL BE PERFORMED IN ACCORDANCE WITH MOTOROLA'S R-56 STANDARDS AND GUIDELINES FOR COMMUNICATIONS SITES AND PER MANUFACTURE INSTALLATION SPECIFICATIONS.

2. EQUIPMENT INSIDE OF RACK TO BE GROUNDED TO RACK GROUND BUS BAR USING #6 AWG GREEN STRANDED COPPER CABLE. RACK GROUND BUS BAR TO BE GROUNDED TO MASTER GROUND BUS BAR (MGB).

3. ADEQUATE SPACING SHOULD BE PROVIDED IN FRONT AND BEHIND EQUIPMENT RACK FOR PROPER EQUIPMENT VENTILATION AND SERVICE ACCESS.

4. REFERENCE EQUIPMENT ROOM LAYOUT DRAWING FOR EQUIPMENT RACK LOCATIONS AND EQUIPMENT ROOM DETAILS.



REV NO:	DATE:	ENGR:	DESCRIPTION:
H			
G			
F			
E			
D			
C			
B			
A			
O	12-02-2022	JV	ORIGINAL RELEASE

MOTOROLA SOLUTIONS

PROJECT: MDFR – ACADEMY Site				
TITLE: Academy				
CONTRACT: -	ENGINEER: J. Vasconcelos	PROGRAM MGR: Amer Kasti	SCALE: NONE	SIZE: D
PROGRAM: VISIO 2016	DRAWN: Jorge Vasconcelos	CHECKED: -	SHEET: 1 OF 1	REV: O
FILE NAME: Academy Rack Layout.vsdx		DATE: 5/17/2024	PROJECT NO: -	

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MDC024

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MOTOROLA SOLUTIONS

MIAMI-DADE COUNTY FLORIDA

PROPOSED RACK DIAGRAM

MIAMI DADE EGA (ACADEMY FDOT)

18500 SW 424TH ST.
HOMESTEAD, FL 33034

C-4.3

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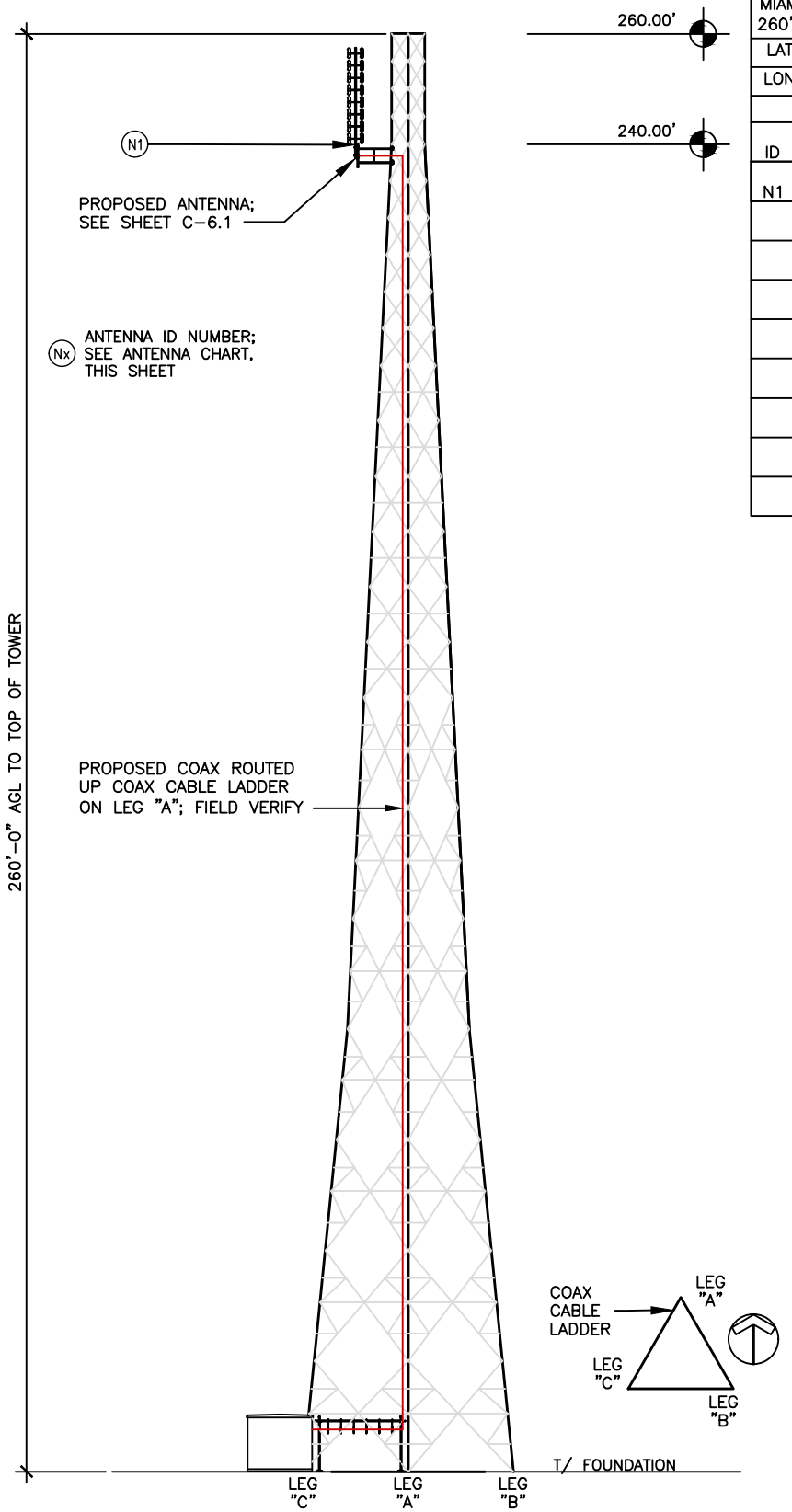

1 / C-5 **Tower Elevation**

NOT TO SCALE

MIAMI DADE EGA (ACADEMY FDOT)
260'-0" SELF-SUPPORTED TOWER
LAT: N 25° 22' 20.9" (NAD 83)
LON: W 80° 28' 50.6" (NAD 83)

ANTENNA/APPURTENANCE LOCATION CHART

E = EXISTING
N = NEW
F = FUTURE

ANTENNA INFORMATION															FEEDLINE INFORMATION			
ID	OWNER	MANUFACTURER	MODEL	TYPE	LENGTH	BOTTOM ELEV.	RAD CENTER	TOP ELEV.	LEG	AZIMUTH	QTY.	MOUNT TYPE	MOUNT MODEL #	STIFF-ARM MODEL #	TYPE	SIZE	QTY.	BANDING COLOR
N1	MIAMI-DADE	ALIVE TELECOM	ATC-GD4V80	DIPOLE	16.5'±	240.00'	248.25'	256.50'	C	180	1	STAND-OFF ARM	SITEPRO1 HS6-K	SITEPRO1 STK-U	COAX	1-5/8"	1	RED RED RED

2 / C-5 **Antenna Chart**

NOT TO SCALE

GENERAL NOTES:

1. EXISTING ANTENNAS AND EQUIPMENT NOT SHOWN FOR CLARITY.
2. ALL VERTICAL TRANSMISSION LINE RUNS FROM THE ANTENNAS SHALL BE GROUNDED NEAR THE TOP AND BOTTOM OF THE TOWER (BEFORE THE CABLE MAKES HORIZONTAL TRANSITION) AND NEAR ENTRY PORT ON THE SHELTER. ADDITIONAL TRANSMISSION LINE GROUND KITS SHALL BE INSTALLED AS NEEDED TO LIMIT THE DISTANCE BETWEEN GROUND KITS TO 75 FEET.
3. THE CONTRACTOR SHALL CONDUCT A TDR SWEEP TEST ON ALL THE NEWLY INSTALLED TRANSMISSION LINES TO DETERMINE THE CABLE CONDUCTOR RESISTANCE, CABLE INSERTION LOSS, REFLECTION AND STIMULUS RESPONSE MEASUREMENTS. RESULTS TO BE SUBMITTED TO MOTOROLA.
4. DRIP LOOPS SHALL BE INCORPORATED IN CABLE RUNS TO PREVENT WATER FROM TRICKLING DOWN THE LINES INTO THE SHELTER.
5. ALL TRANSMISSION LINES SHALL BE MARKED WITH APPROPRIATE COLOR TAPE BANDS (ONE INCH WIDE COLOR TAPE) FOR IDENTIFICATION NEAR THE ANTENNA, JUST BEFORE ENTERING THE SHELTER, AS WELL AS INSIDE THE SHELTER BEFORE CONNECTING TO THE SURGE SUPPRESSORS.
6. FOR PROPOSED COAX CABLE BANDING COLORS, CONTRACTOR MAY LABEL CABLES WITH ANY COLOR NOT ALREADY IN USE WITH ANY EXISTING COAX CABLES.
7. PERMANENT MARKERS WILL NEED TO BE AFFIXED TO THE LINES (BRASS OR PHENOLIC TAGS) AS PER R56. PERMANENT MARKERS SHALL BE AFFIXED TO THE LINES IMMEDIATELY OUTSIDE OF THE COAX ENTRY PORT ON THE EXTERIOR OF THE EQUIPMENT SHELTER. EACH PERMANENT MARKER WILL LIST MIAMI-DADE COUNTY, FL, ANTENNA ID (e.g. Rx1, Rx2), ANTENNA ELEVATION, AND TOWER LEG. ADDITIONALLY, PERMANENT MARKERS FOR MICROWAVE ANTENNAS SHALL LIST ANTENNA AZIMUTH AND NAME OF RECEIVING SITE (e.g. TO SITE NAME).
8. CONTRACTORS SHOULD PRESWEEP THE LINES PRIOR TO REMOVING CONNECTORS AND INSTALLING NEW HARDWARE.
9. ALL GROUNDING MUST CONFORM TO MOTOROLA R56 STANDARDS AND SPECIFICATIONS (APRIL 2017).
10. PROPOSED COAX CABLE FOR PROPOSED ANTENNA IS 1-5/8"ø, TERMINATE ON SURGE PROTECTOR USING 7/8".
11. CONTRACTOR SHALL INSTALL PROPOSED COAX CABLES USING HORIZONTAL SPLICES TO PIG-TAILS TO TAKE THE WEIGHT OFF OF THE PIG-TAILS. CONTRACTOR SHALL INSTALL PROPOSED COAX CABLES SO THAT BOTH SIDES OF ANY CONNECTORS ARE SUPPORTED.

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MOTOROLA SOLUTIONS

MIAMI-DADE COUNTY FLORIDA

TOWER ELEVATION AND ANTENNA INFORMATION

MIAMI DADE EGA (ACADEMY FDOT)

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C-5

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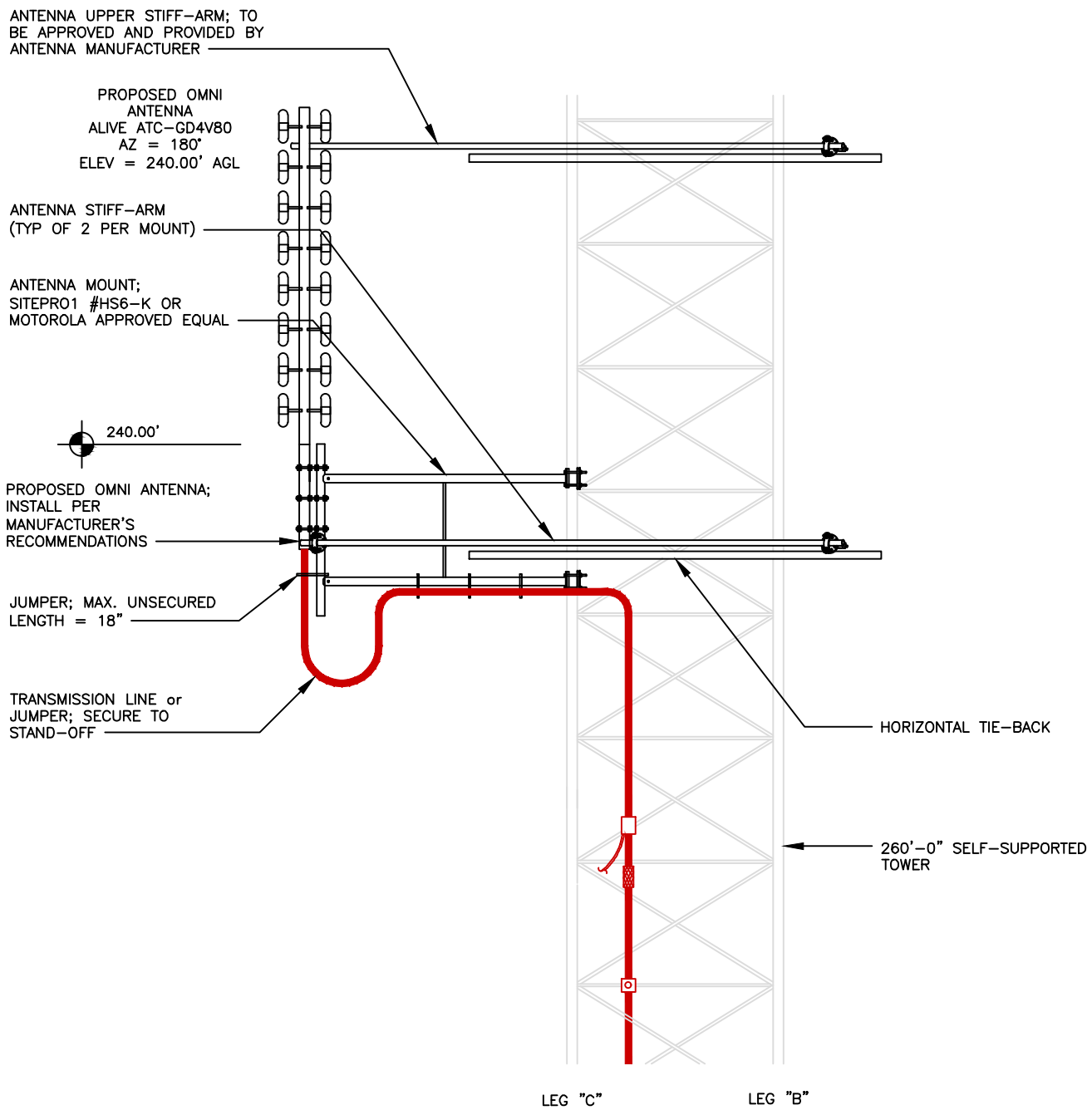
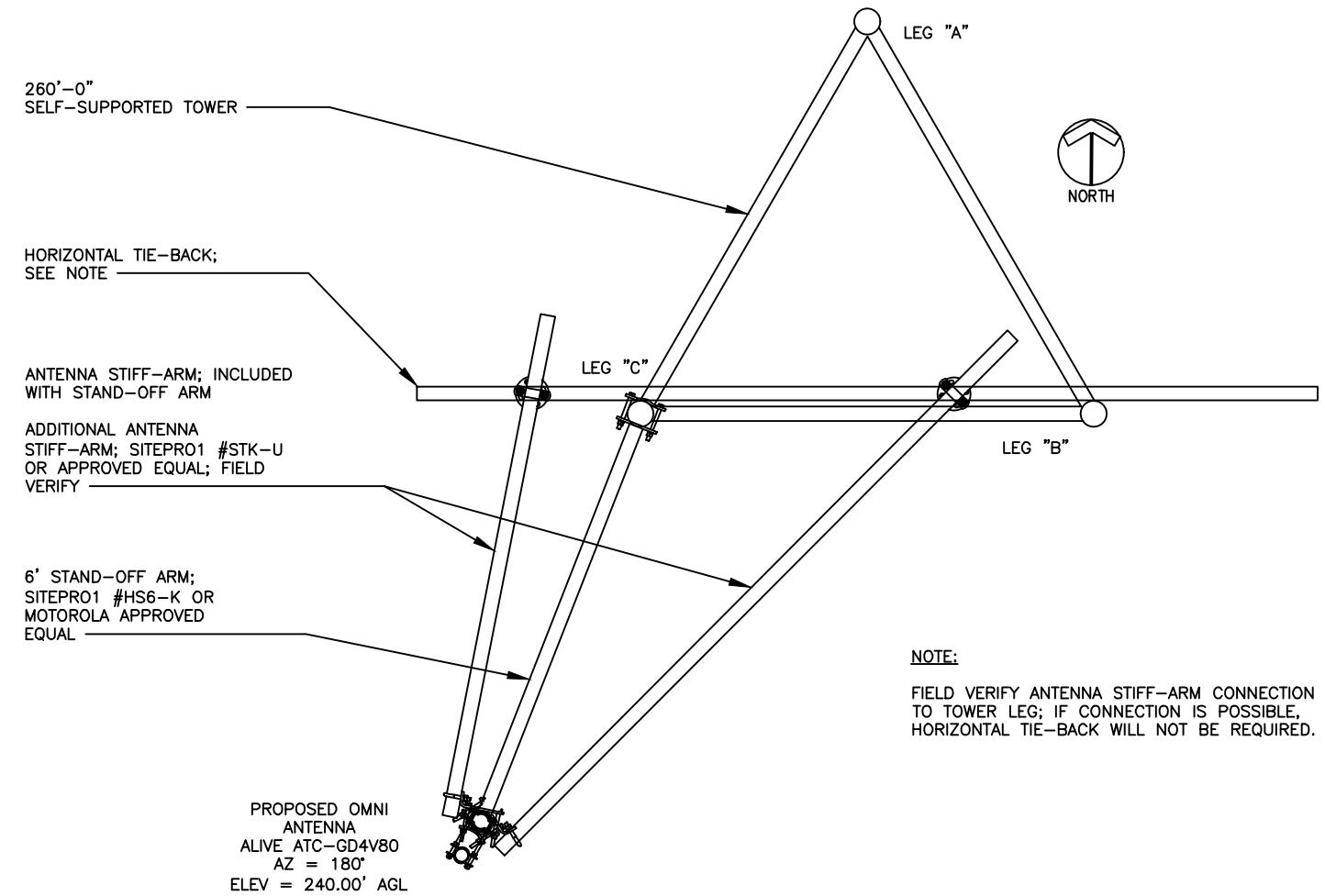


1 C-6.1 **Omni Antenna Detail**

NOT TO SCALE

NOTES:

1. CONTRACTOR SHALL VERIFY IN FIELD OR REVIEW THE TOWER STRUCTURAL ANALYSIS FOR MEMBER SIZE PRIOR TO ORDERING ANTENNA MOUNTS.
2. CONTRACTOR SHALL VERIFY THE RF CONFIGURATION AND STRUCTURAL ANALYSIS BEFORE INSTALLATION.



NOTE:

FIELD VERIFY ANTENNA STIFF-ARM CONNECTION TO TOWER LEG; IF CONNECTION IS POSSIBLE, HORIZONTAL TIE-BACK WILL NOT BE REQUIRED.

2 C-6.1 **Omni Antenna Detail**

NOT TO SCALE

NOTES:

1. ANTENNAS, CONNECTORS, JUMPERS, TRANSMISSION LINES, TO BE FURNISHED BY MOTOROLA, AND INSTALLED BY CONTRACTOR.
2. CONTRACTOR TO USE STRAIN RELIEF EVERY 200 FEET (MIN.) FOR TRANSMISSION LINES. TO BE INSTALLED BEFORE INSTALLATION OF TRANSMISSION LINES.
3. CONTRACTOR TO WATERPROOF ALL EXTERNAL CONNECTIONS.
4. CONTRACTOR TO INSTALL GALVANIZED OR STAINLESS STEEL MOUNTING HARDWARE. "SNAP-IN" HANGERS SHALL NOT BE ALLOWED.
5. CONTRACTOR TO ATTACH CABLES TO TOWER EVERY 3 FOOT (MAX.)
6. CONTRACTOR SHALL PERFORM A SWEEP TEST ON TRANSMISSION AND TEST LINES PRIOR TO INSTALLATION. IMMEDIATELY NOTIFY MOTOROLA OF ANY LINE DEFICIENCIES.
7. ALL VERTICAL TRANSMISSION LINE RUNS FROM THE ANTENNAS WILL BE GROUNDED NEAR THE TOP AND BOTTOM OF THE TOWER (BEFORE THE CABLE MAKES HORIZONTAL TRANSITION) AND NEAR ENTRY PORT ON THE SHELTER. TRANSMISSION LINE GROUND KITS WILL BE INSTALLED EVERY 75 FEET.
8. VERIFY IN FIELD OR REVIEW THE TOWER STRUCTURAL ANALYSIS FOR MEMBER SIZE PRIOR TO ORDERING ANTENNA MOUNTS.
9. CONTRACTOR SHALL VERIFY THE RF CONFIGURATION AND STRUCTURAL ANALYSIS BEFORE INSTALLATION.

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MIAMI-DADE COUNTY FLORIDA

ANTENNA DETAILS

MIAMI DADE EGA (ACADEMY FDOT)

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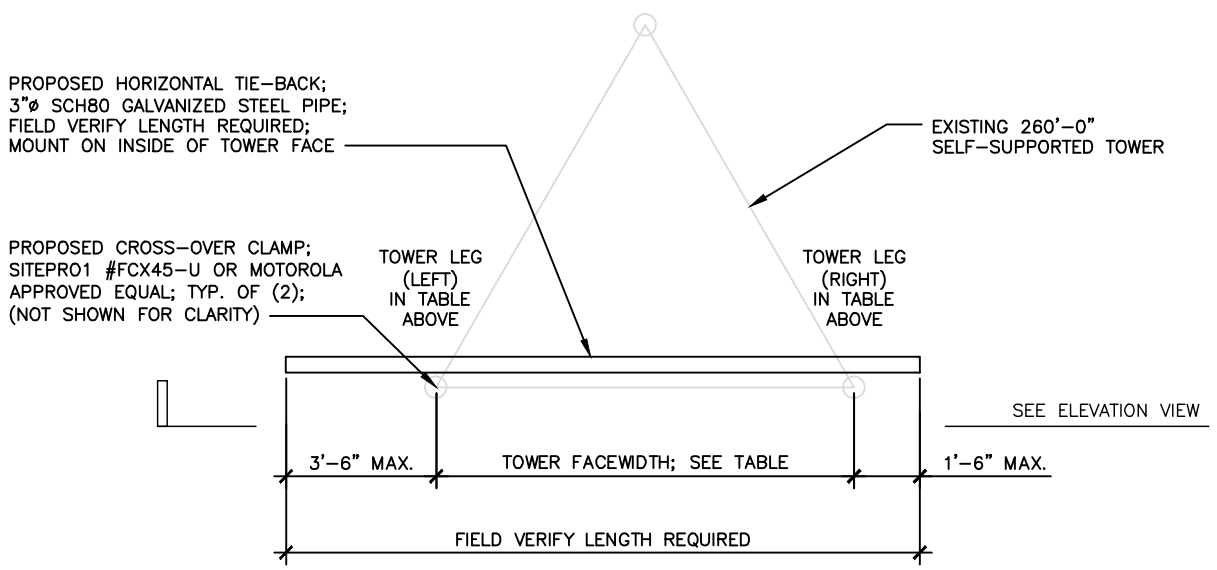
MDC026

MDC027

TOWER FACEWIDTH TABLE

ELEVATION	FACEWIDTH	TOWER LEG (LEFT)	TOWER LEG (RIGHT)
240.00FT	6'-0"	LEG "C"	LEG "B" *

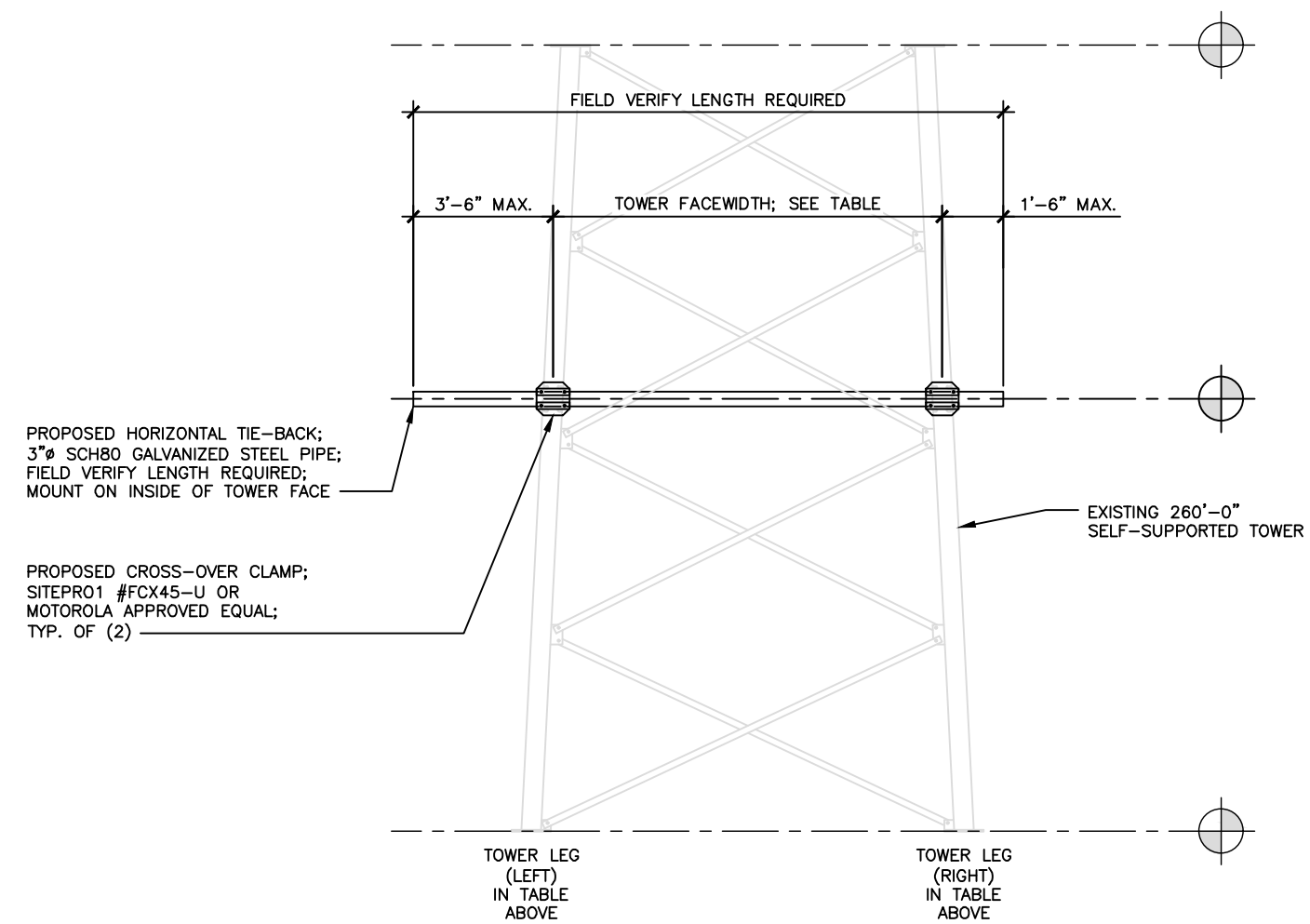
* HORIZONTAL TIE-BACK MAY NOT BE REQUIRED; FIELD VERIFY



Horizontal Tie-Back Section View

1 / C-6.2

NOT TO SCALE



Horizontal Tie-Back Elevation View

2 / C-6.2

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MOTOROLA SOLUTIONS

MIAMI-DADE COUNTY FLORIDA

ANTENNA DETAILS

MIAMI DADE EGA
(ACADEMY FDOT)

18500 SW 424TH ST.
HOMESTEAD, FL 33034

C-6.2

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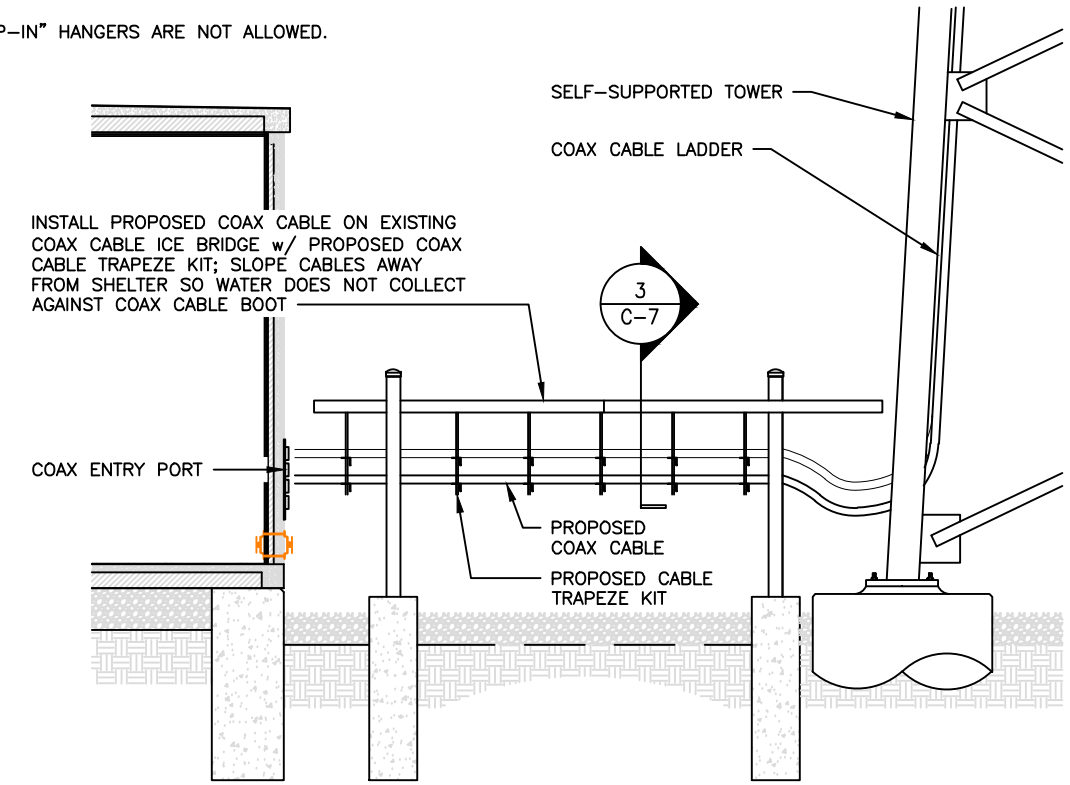
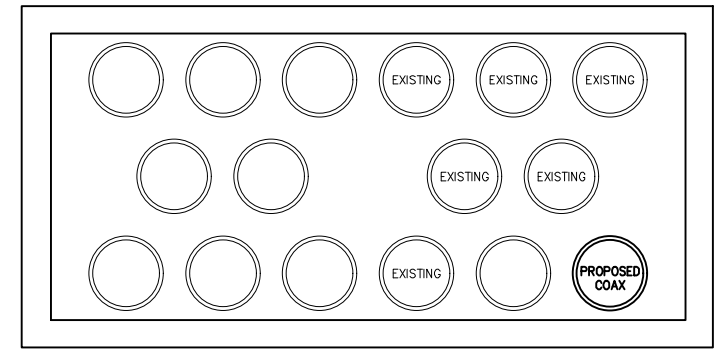
NOTES:

1. REFER TO SITE PLANS FOR CURRENT TOWER WAVEGUIDE LOCATION.
2. VALIDATE WITH STRUCTURAL ANALYSIS FOR EXACT COAX CABLE PLACEMENT.
3. "SNAP-IN" HANGERS ARE NOT ALLOWED.



1 C-7 **Ice Bridge Side Elevation**

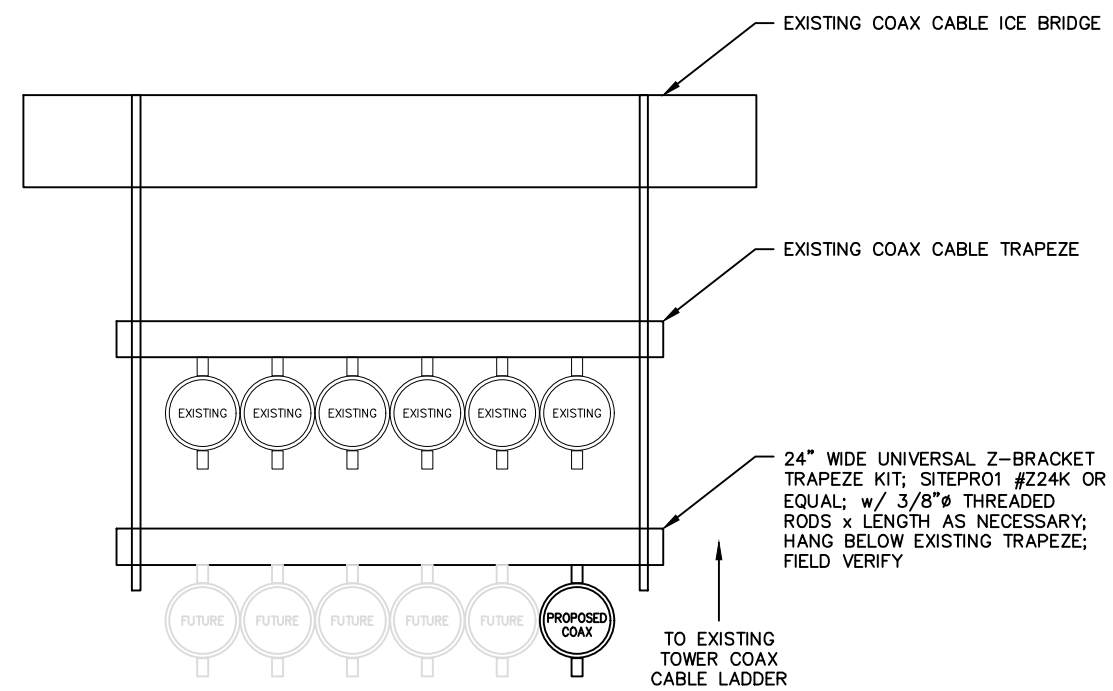
NOT TO SCALE



NOTE: AS VIEWED FROM INTERIOR OF EQUIPMENT SHELTER

2 C-7 **Proposed Cable Port Detail**

NOT TO SCALE



3 C-7 **Proposed Cable Trapeze Detail**

NOT TO SCALE

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MIAMI-DADE COUNTY FLORIDA

CONSTRUCTION DETAILS

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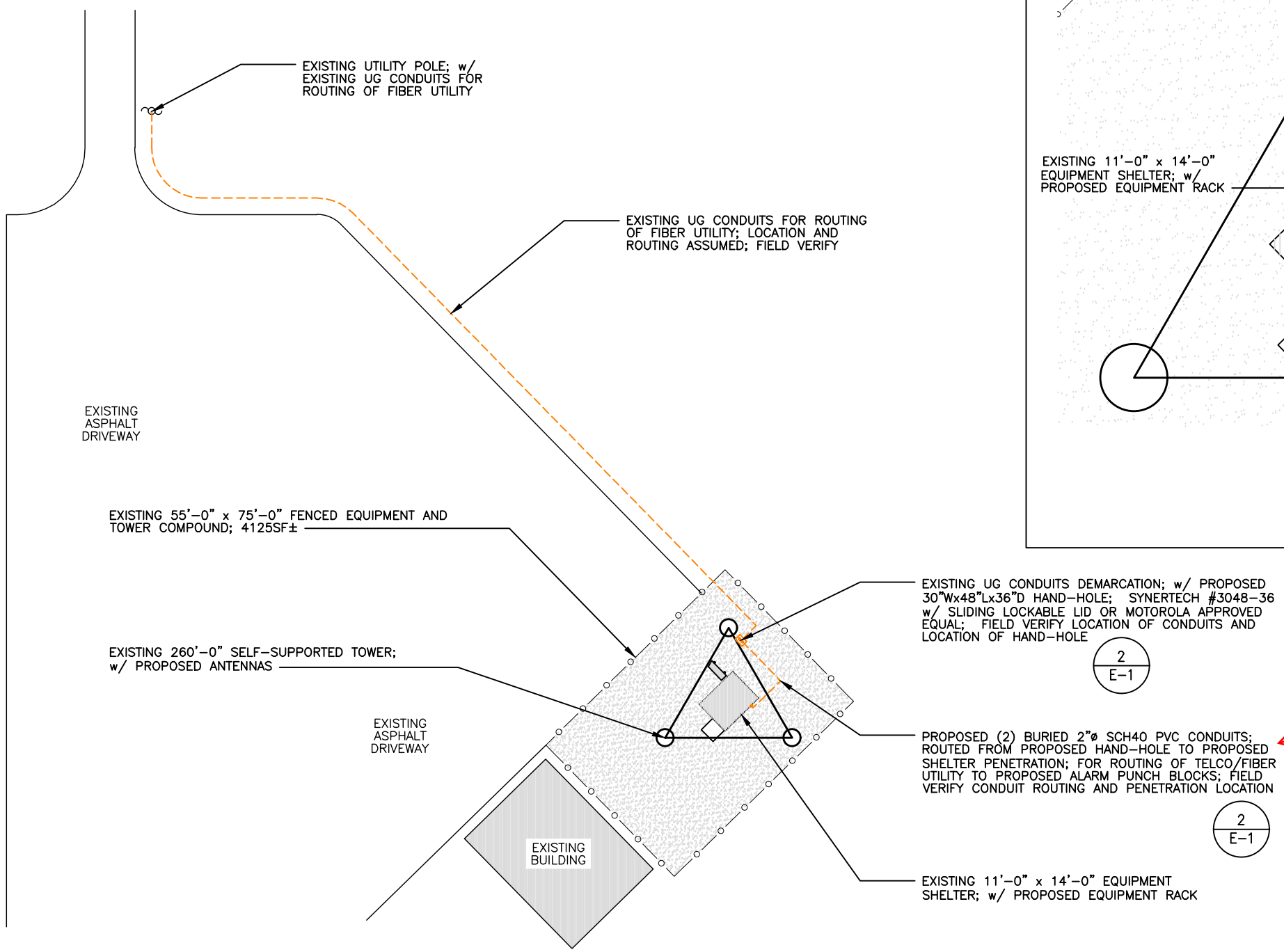
MDC028

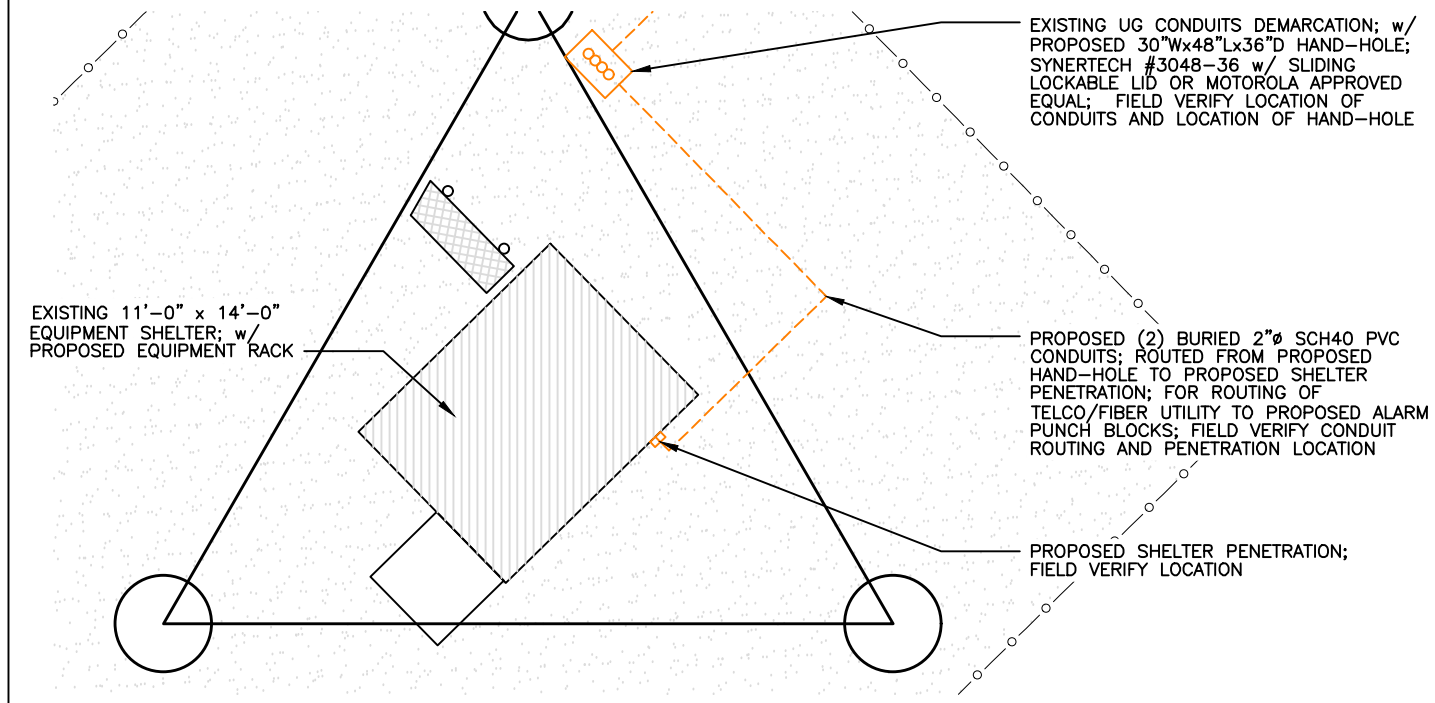
MDC029



1) Hand dig only inside the fenced compound.
2) Restore disturbed visquine fabric and rocks.

1 E–1 **Fiber Utility Plan** NORTH

20 0 20 40
1 inch = 40ft.



2 E–1 **Fiber Utility Detail** NORTH

5 0 5 10
1 inch = 10ft.

811 Know what's **below.** **Call** before you dig.
1–800–432–4770 CALL TOLL FREE

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MOTOROLA SOLUTIONS

MIAMI-DADE COUNTY FLORIDA

FIBER UTILITY PLAN

MIAMI DADE EGA
(ACADEMY FDOT)

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E-1

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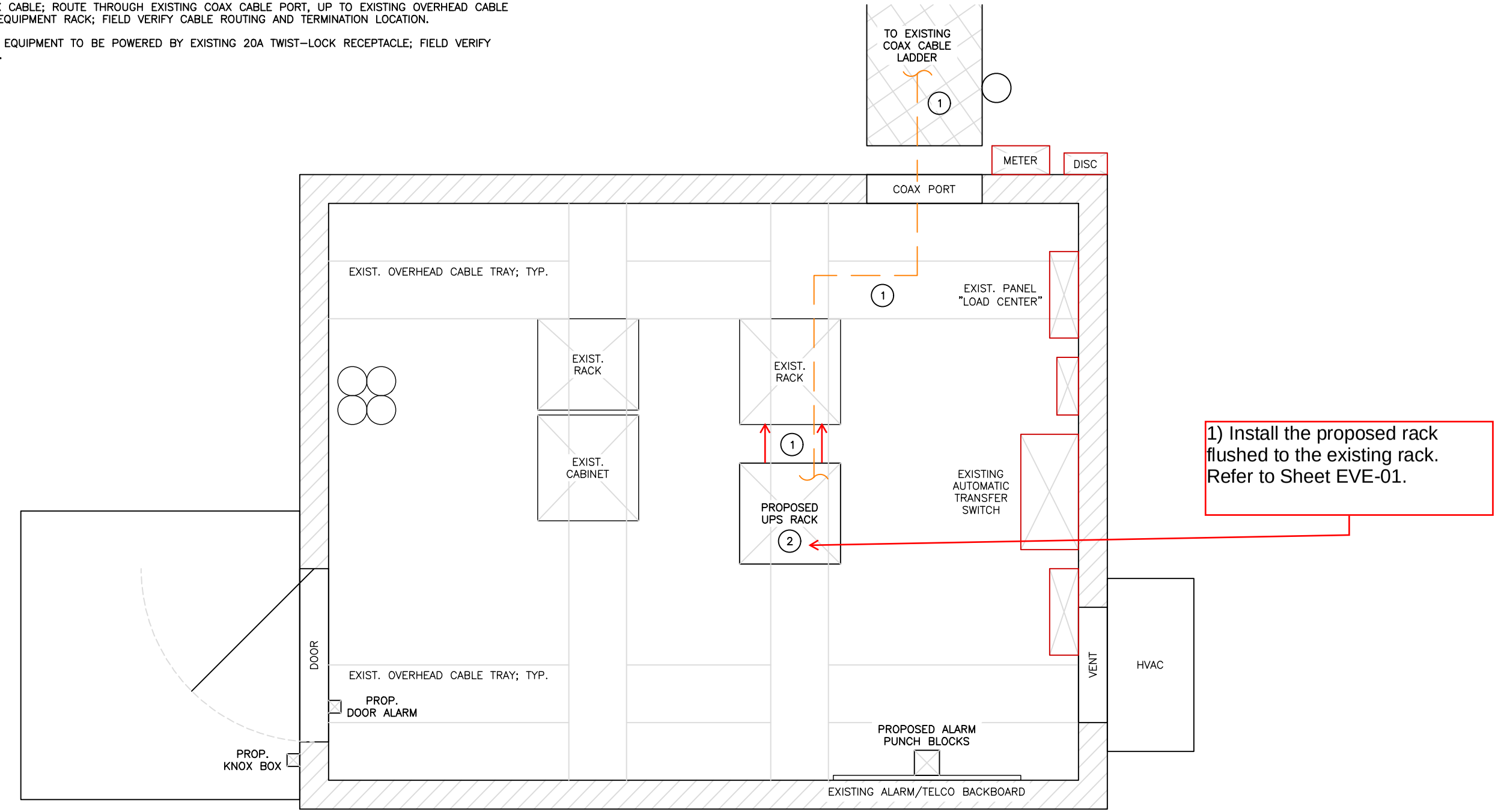
FLAG NOTES FOR DETAIL:

1. PROPOSED 7/8" COAX CABLE; ROUTE THROUGH EXISTING COAX CABLE PORT, UP TO EXISTING OVERHEAD CABLE TRAY, TO PROPOSED EQUIPMENT RACK; FIELD VERIFY CABLE ROUTING AND TERMINATION LOCATION.
2. PROPOSED UPS RACK EQUIPMENT TO BE POWERED BY EXISTING 20A TWIST-LOCK RECEPTACLE; FIELD VERIFY RECEPTACLE LOCATION.



1 / E-2 Proposed Utility Plan

NORTH

1' 0 1' 2'
1/2 inch = 1ft.

G.C. RESPONSIBLE FOR PRE-CONSTRUCTION WALK WITH UTILITY PROVIDERS TO VERIFY REQUIREMENTS

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MOTOROLA SOLUTIONS

MIAMI-DADE COUNTY FLORIDA

PROPOSED UTILITY PLAN

MIAMI DADE EGA (ACADEMY FDOT)

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E-2

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MDC030

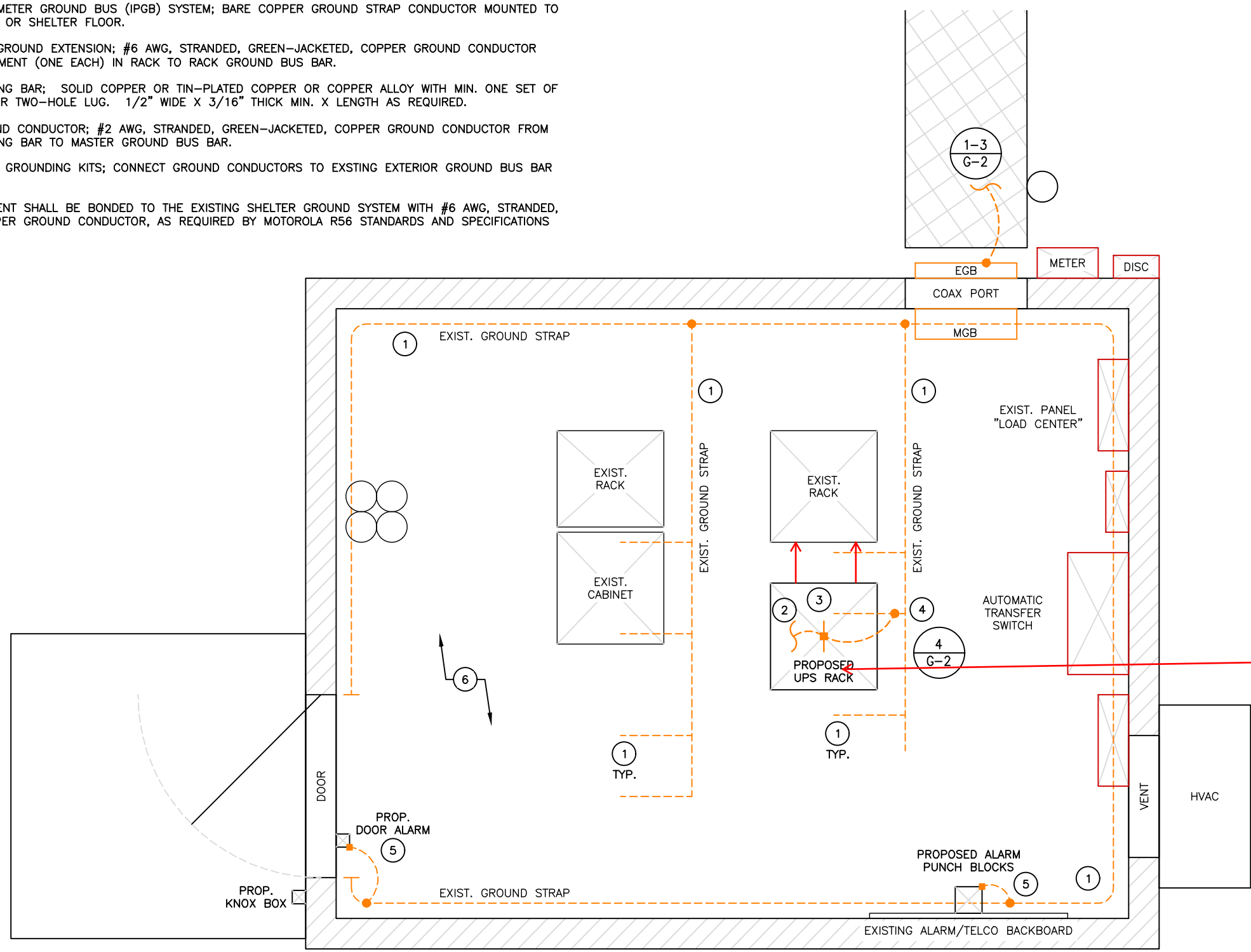
MDC031

FLAG NOTES FOR DETAIL:

1. EXISTING INTERIOR PERIMETER GROUND BUS (IPGB) SYSTEM; BARE COPPER GROUND STRAP CONDUCTOR MOUNTED TO EXISTING SHELTER WALL OR SHELTER FLOOR.
2. PROPOSED EQUIPMENT GROUND EXTENSION; #6 AWG, STRANDED, GREEN–JACKETED, COPPER GROUND CONDUCTOR FROM PROPOSED EQUIPMENT (ONE EACH) IN RACK TO RACK GROUND BUS BAR.
3. PROPOSED RACK BONDING BAR; SOLID COPPER OR TIN–PLATED COPPER OR COPPER ALLOY WITH MIN. ONE SET OF PRE–DRILLED HOLES FOR TWO–HOLE LUG. 1/2" WIDE X 3/16" THICK MIN. X LENGTH AS REQUIRED.
4. PROPOSED RACK GROUND CONDUCTOR; #2 AWG, STRANDED, GREEN–JACKETED, COPPER GROUND CONDUCTOR FROM PROPOSED RACK BONDING BAR TO MASTER GROUND BUS BAR.
5. PROPOSED COAX CABLE GROUNDING KITS; CONNECT GROUND CONDUCTORS TO EXSTING EXTERIOR GROUND BUS BAR (EGB).
6. ALL PROPOSED EQUIPMENT SHALL BE BONDED TO THE EXISTING SHELTER GROUND SYSTEM WITH #6 AWG, STRANDED, GREEN–JACKETED, COPPER GROUND CONDUCTOR, AS REQUIRED BY MOTOROLA R56 STANDARDS AND SPECIFICATIONS (APRIL 2017).

Grounding Legend

- 5/8" x 10' COPPER OR STAINLESS STEEL COPPERCLAD GROUND ROD
- GROUND SYSTEM INSPECTION WELL w/ HAND HOLE
- EXOTHERMIC CONNECTION (CADWELD)
- MECHANICAL CONNECTION
- FENCE LINE
- #2 SOLID TINNED COPPER GROUND CONDUCTOR



1) Install the proposed rack flushed to the existing rack. Refer to Sheet EVE-01.

GROUNDING NOTES:

1. CONTRACTOR TO REPAIR ANY EXISTING GROUNDING LEADS CUT DURING CONSTRUCTION.

Shelter Grounding Plan

NORTH

1' 0 1' 2'
1/2 inch = 1ft.

G.C. RESPONSIBLE FOR PRE–CONSTRUCTION WALK WITH UTILITY PROVIDERS TO VERIFY REQUIREMENTS

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SHELTER GROUNDING PLAN

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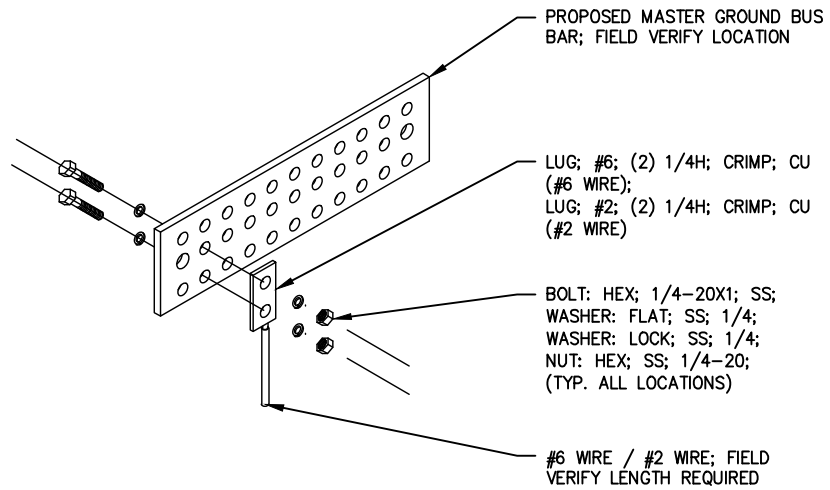
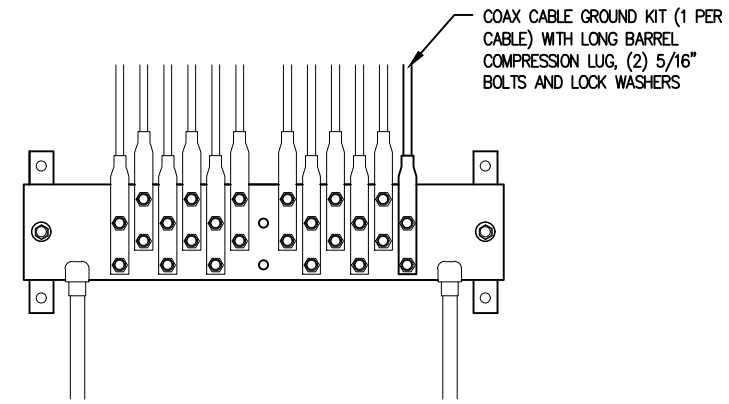
MDC032



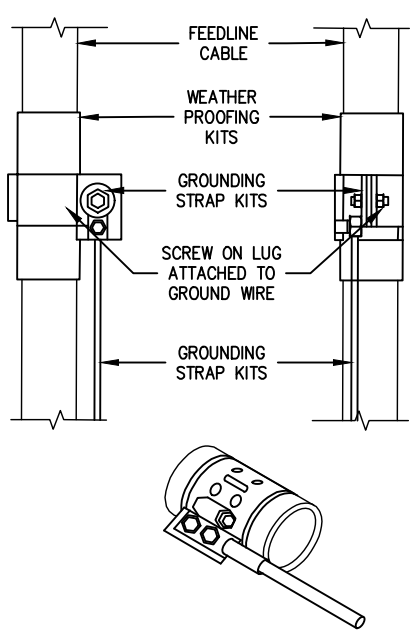
1 / G-2 Ground Bus Bar Detail

NOT TO SCALE



2 / G-2 Coax Cable Ground Detail

NOT TO SCALE

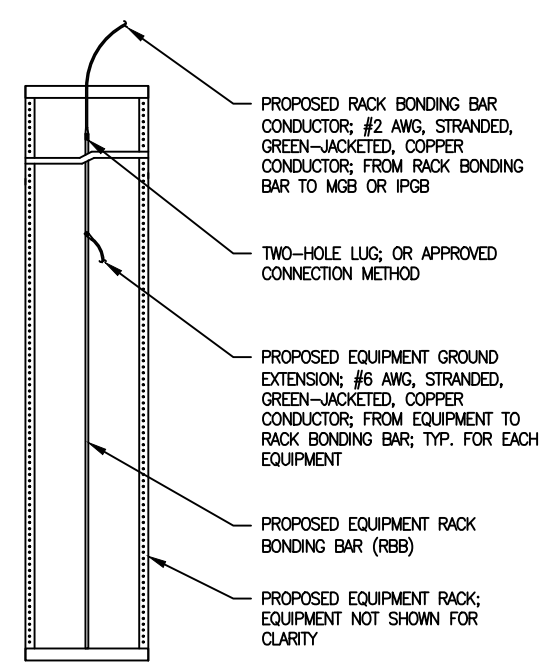


NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR
2. THIS DETAIL IS TYPICAL FOR EACH COAX / HYBRID CABLE WHERE IT IS SPECIFIED TO BE GROUNDED
3. CABLE TO BE GROUNDED AT ANTENNA LEVEL AND PRIOR TO ENTERING SHELTER ENTRY PANEL
4. CABLE ALSO TO BE GROUNDED TO GROUND BAR AT TOWER BASE IF APPLICABLE

3 / G-2 Coax Cable Ground Kit Detail

NOT TO SCALE



4 / G-2 Equipment Rack Grounding Detail

NOT TO SCALE

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MIAMI-DADE COUNTY FLORIDA

GROUNDING DETAILS

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Legend

ACG AIR CONDITIONER GROUND: E.C. TO FURNISH AND INSTALL ONE (1) #2 AWG BARE SOLID TNND COPPER GROUND WIRE FROM AIR CONDITIONER CABINET TO GROUND RING. CONNECTION AT AIR CONDITIONER CABINET TO BE MECHANICAL, CONNECTION AT GROUND RING TO BE CADWELD (TYPICAL OF 2).

DCG DOOR CANOPY GROUND: E.C. TO FURNISH AND INSTALL ONE (1) #2 AWG BARE SOLID TNND COPPER GROUND WIRE FROM DOOR CANOPY TO SHELTER GROUND RING. IF DOOR CANOPY IS FIBERGLASS, GROUND NOT REQUIRED.

EGB EXTERIOR GROUND BAR: SHELTER MANUFACTURER FURNISHED AND INSTALLED 24" x 4" x 1/4" COPPER GROUND BAR ON EXTERIOR SIDEWALL OF SHELTER BELOW COAX BUILDING ENTRY.

ESG ELECTRICAL SERVICE GROUND: E.C. SHALL FURNISH AND INSTALL #2 AWG BARE SOLID COPPER GROUND WIRE FROM SERVICE LB BOX TO A GROUND ROD. BOTH CONNECTIONS TO BE CADWELD.

FG FENCE GROUND: E.C. TO FURNISH AND INSTALL #2 AWG BARE SOLID TNND COPPER GROUND WIRE AT FENCE POST. GROUND WIRE TO BE ROUTED ALONG FENCE POST AND CADWELDED OR MECHANICALLY BONDED IN FOUR (4) PLACES: TOP RAIL, TOP AND BOTTOM OF CORNER POST, AND GROUND RING.

GEC GENERATOR EXHAUST GROUND: E.C. TO FURNISH AND INSTALL ONE (1) #2 AWG BARE SOLID TNND COPPER GROUND WIRE FROM GENERATOR EXHAUST TO GROUND RING. CONNECTION AT GENERATOR EXHAUST TO BE MECHANICAL, CONNECTION AT GROUND RING TO BE CADWELD (TYPICAL OF 1).

GG GATE GROUND: SIMILAR TO FENCE GROUND (FG), E.C. SHALL ALSO FURNISH AND INSTALL #2 GATE JUMPER WIRE BETWEEN THE GATE FRAME AND THE GATE POST. CONNECTIONS AT GATE FRAME AND GATE POST TO BE CADWELD.

GR 5/8" DIA. x 10' LONG COPPER CLAD STEEL GROUND ROD DRIVEN VERTICAL TOP OF ROD 36" MIN. BELOW GRADE. SPACING OF GROUND RODS 10' MIN TO TWICE THE LENGTH OF THE ROD USED. ALL CONNECTIONS TO BE CADWELD.

IBCG ICE BRIDGE CHANNEL GROUND: E.C. TO FURNISH AND INSTALL ONE (1) #2 AWG BARE SOLID TNND COPPER GROUND JUMPER WIRE FROM ICE BRIDGE CHANNEL TO ICE BRIDGE SUPPORT POST. ALL CONNECTIONS TO BE CADWELD.

IBSG ICE BRIDGE SUPPORT GROUND: E.C. TO FURNISH AND INSTALL ONE (1) #2 AWG BARE SOLID TNND COPPER GROUND WIRE FROM ICE BRIDGE SUPPORT POST TO GROUND RING. ALL CONNECTIONS TO BE CADWELD.

MGB MASTER GROUND BAR: SHELTER MANUFACTURER FURNISHED AND INSTALLED 24" x 4" x 1/4" COPPER GROUND BAR ON INTERIOR SIDEWALL OF SHELTER BELOW COAX BUILDING ENTRY.

SPG SHELTER PLATE GROUND: E.C. TO FURNISH AND INSTALL ONE (1) #2 AWG BARE SOLID TNND COPPER GROUND WIRE FROM SHELTER PLATE TO SHELTER GROUND RING. TYPICAL OF 2 AT SHELTER AND ON DIAGONAL CORNERS. CONNECTION AT GROUND RING TO BE CADWELD.

TGB TOWER GROUND BAR: E.C. TO FURNISH AND INSTALL 20" x 4" x 1/4" TNND COPPER GROUND BARS ON THE TOWER AS REQUIRED. ONE TO BE LOCATED AT ANTENNA MOUNT ELEVATION (ATTACHED TO TOWER STEEL), THE OTHER AT THE BASE OF THE TOWER ADJACENT TO THE ICE BRIDGE (ISOLATED FROM TOWER STEEL).ADDITIONAL TRANSMISSION LINE GROUND KITS SHALL BE INSTALLED AS NEEDED TO LIMIT THE DISTANCE BETWEEN GROUND KITS TO 50 FEET MINIMUM AND 75 FEET MAXIMUM.

TCG TOWER COAX GROUND: E.C. TO FURNISH AND INSTALL TWO (2) #2 AWG BARE SOLID TNND COPPER GROUND WIRES FROM TOWER GROUND BAR (TGB) TO GROUND RING. ALL CONNECTIONS TO BE CADWELD.

TG TOWER GROUND: E.C. TO FURNISH AND INSTALL #2 AWG BARE SOLID TNND COPPER GROUND WIRE FROM BASE OF TOWER TO TOWER GROUND RING. ALL CONNECTIONS TO BE CADWELD.

TLG TOWER LEG GROUND: E.C. TO FURNISH AND INSTALL #2 AWG BARE SOLID TNND COPPER GROUND WIRE FROM TOWER LEG TO TOWER GROUND RING. ALL CONNECTIONS TO BE CADWELD. PROVIDE A MINIMUM OF 90 DEGREE SERRATION BETWEEN THE TLG AND TG.

NOTE: ALL GROUND LEADS AT TOWER, ICE BRIDGE SUPPORT POSTS, FENCE POSTS, ETC. TO BE ROUTED IN 1/2" NON-METALLIC PVC FLEX CONDUIT. GROUND LEADS AT SHELTER FROM EXTERNAL GROUND BARS, COAX ENTRY, LOUVERS, PIPES, ETC. TO BE ROUTED IN 1/2" NON-METALLIC PVC RIGID CONDUIT SECURED TO SHELTER WALL WITH AT LEAST ONE (1) NON-METALLIC CONDUIT CLAMP 36" MAX. SPACING. CONDUIT TO BE 4" MAX. FROM APPLIANCE CONNECTION AND EXTEND 18" MIN. BELOW GRADE.

Typical Grounding Notes

1. ALL GROUND CABLE IN CONCRETE OR THROUGH WALL SHALL BE IN 3/4" PVC CONDUIT. NO METALLIC CONDUIT SHALL BE USED FOR GROUNDING CONDUCTOR SLEEVES.
2. GROUND ALL EXPOSED METALLIC OBJECTS USING A TWO-HOLE NEMA DRILLED CONNECTOR SUCH AS THOMAS & BETTS #32207 OR APPROVED EQUAL
3. THE CONTRACTOR SHALL NOTIFY THE JG CONTRACTING REPRESENTATIVE WHEN THE GROUND RING IS INSTALLED SO THAT THE REPRESENTATIVE CAN INSPECT GROUND RING BEFORE IT IS CONCEALED.
4. ALL EXTERIOR GROUND CONDUCTORS INCLUDING GROUND RING SHALL BE #2 AWG SOLID BARE TINNED COPPER. MAKE ALL GROUND CONNECTIONS AS SHORT AND DIRECT AS POSSIBLE. AVOID SHARP BENDS. THE RADIUS OF ANY BEND SHALL NOT BE LESS THAN 8" AND THE INCLUSIVE ANGLE OF ANY BEND SHALL NOT EXCEED 90'. GROUNDING CONDUCTORS SHALL BE ROUTED DOWNWARD TOWARD THE BURIED GROUND RING.
5. ALL BELOW GROUND EXTERNAL CONNECTIONS SHALL BE EXOTHERMICALLY WELDED. ALL EXOTHERMIC WELDS TO BURIED GROUND RING SHALL BE THE PARALLEL-TYPE. EXCEPT FOR THE GROUND RODS WHICH ARE TEE-TYPE EXOTHERMIC WELDS. REPAIR ALL GALVANIZED SURFACES THAT HAVE BEEN DAMAGED BY EXOTHERMIC WELDING. USE SPRAY GALVANIZED SUCH AS HOLUB LECTROSOL #15-501.
6. WHERE MECHANICAL CONNECTORS (TWO-HOLE OR CLAMP) ARE USED, APPLY A LIBERAL PROTECTIVE COATING OF A CONDUCTIVE ANTI-OXIDE COMPOUND ON ALL CONNECTORS. PROVIDE LOCK WASHERS ON ALL MECHANICAL CONNECTORS. USE STAINLESS STEEL HARDWARE THROUGHOUT. THOROUGHLY REMOVE ALL PAINT AND CLEAN ALL DIRT FROM SURFACES REQUIRING GROUND CONNECTORS, REPAINT TO MATCH EXISTING AFTER CONNECTION IS MADE TO MAINTAIN CORROSION RESISTANCE. ALL GROUND CONNECTIONS SHALL BE APPROVED FOR THE TYPES OF METALS BEING ATTACHED TO.
7. A RESISTANCE TO GROUND OF (10) OHMS OR LESS IS REQUIRED FOR ALL MOTOROLA SITES. THE CONTRACTOR SHOULD RETAIN HIS OWN TESTER AT HIS OWN EXPENSE. SCHEDULE FINAL MEGGER TEST SUCH THAT THE JG CONTRACTING REPRESENTATIVE CAN BE PRESENT FOR FIELD VERIFICATION. REFER TO THE MOTOROLA MASTER SPECIFICATION FOR MEGGER TESTING PROCEDURES. IF THE FINAL GROUNDING RESISTANCE MEASUREMENT EXCEEDS 10 (TEN) OHMS, THE CONTRACTOR SHALL NOTIFY THE JG CONTRACTING REPRESENTATIVE.
8. ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL
9. THE GROUND CONDUCTORS SHALL BE RUN STRAIGHT FOR MINIMUM INDUCTANCE AND VOLTAGE DROP. SINCE CABLE BENDS INCREASE INDUCTANCE, THE MINIMUM REQUIRED BENDING RADIUS IS 8 INCHES WHEN BENDS ARE UNAVOIDABLE. ALL METAL WORK WITHIN 6 FEET OF THE GROUND RING SHALL BE DIRECTLY BONDED TO THE GROUND SYSTEM WITHOUT USING SERIES OR DAISY CHAIN CONNECTION ARRANGEMENTS.
10. PAINT, ENAMEL, LACQUER AND OTHER ELECTRICALLY NON-CONDUCTIVE COATINGS SHALL BE REMOVED FROM THREADS AND SURFACE AREAS WHERE CONNECTIONS ARE MADE TO ENSURE GOOD ELECTRICAL CONTINUITY.
11. CONNECTIONS BETWEEN DISSIMILAR METALS SHALL NOT BE MADE UNLESS THE CONDUCTORS ARE SEPARATED BY A SUITABLE MATERIAL. THAT IS A PART OF THE ATTACHMENT DEVICE LISTED AND APPROVED FOR USE WITH THE SPECIFIC DISSIMILAR METALS MAY BE USED FOR THE PURPOSE.
12. ALL BELOW GRADE GROUND SYSTEM CONDUCTORS SHALL BE A MINIMUM DEPTH OF 36".

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B	06/12/24	CONSTRUCTION DRAWINGS	TNW		
C	06/21/24	CONSTRUCTION DRAWINGS	TNW		
D	06/27/24	CONSTRUCTION DRAWINGS	TNW		
E	10/30/24	CONSTRUCTION DRAWINGS	TNW		

KCI TECHNOLOGIES
4505 FALLS OF NEUSE RD., SUITE 400
RALEIGH, NC 27609
PH: 919-783-9214 WWW.KCI.COM

MOTOROLA SOLUTIONS

MIAMI-DADE COUNTY FLORIDA

GROUNDING NOTES

MIAMI DADE EGA
(ACADEMY FDOT)

18500 SW 424TH ST.
HOMESTEAD, FL 33034

G-3

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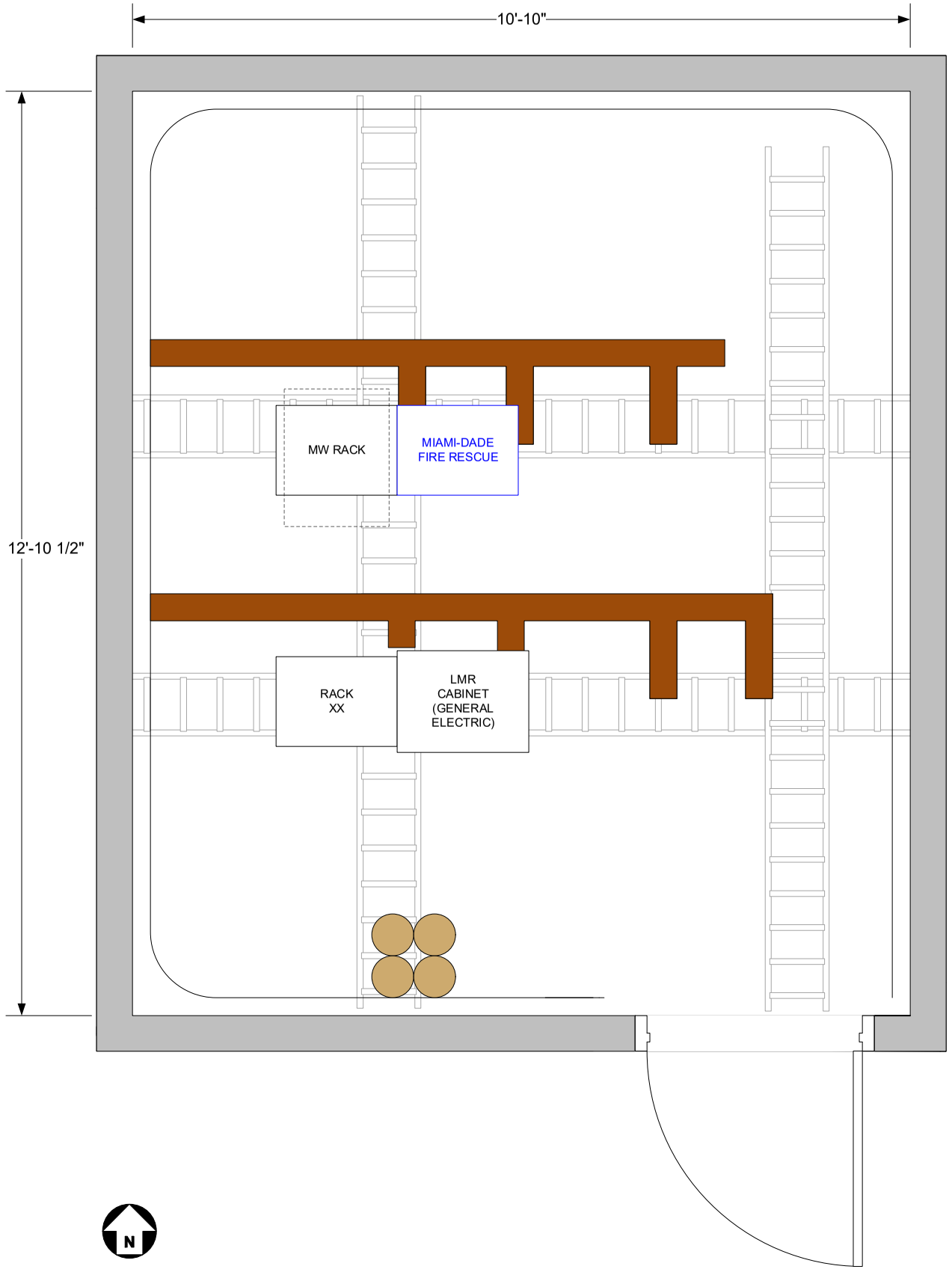
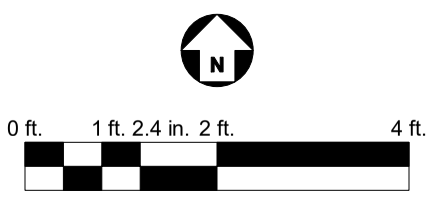
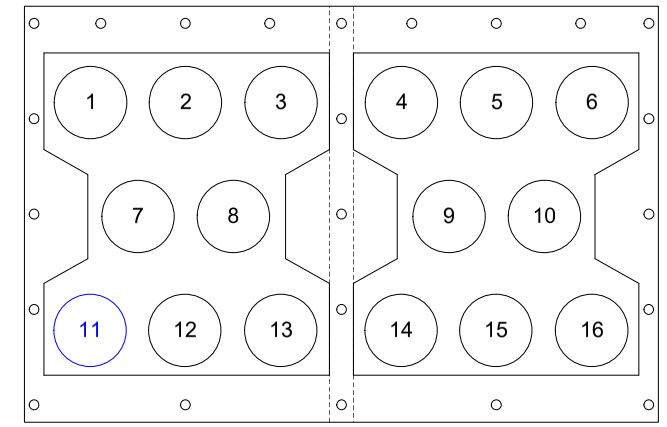
MDC033

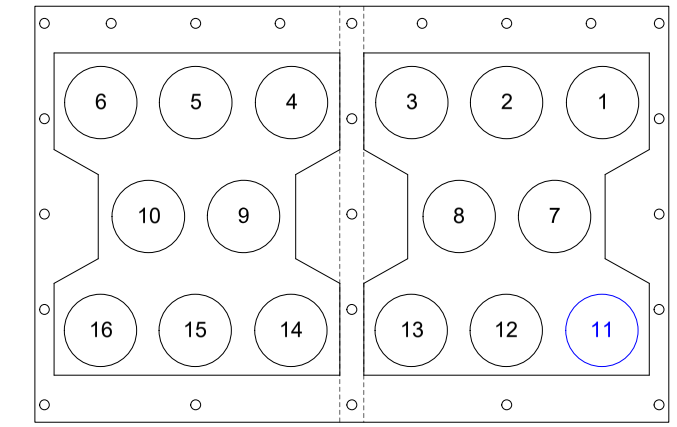






1. 7/8" COAXIAL TRANSMISSION LINE
2. 7/8" COAXIAL TRANSMISSION LINE
3. EMT CONDUIT (POE CABLES FOR CCTVS)
4. EMPTY
5. EMPTY
6. EMPTY
7. 7/8" COAXIAL TRANSMISSION LINE (UNUSED)
8. 7/8" COAXIAL TRANSMISSION LINE (UNUSED)
9. EMPTY
10. EMPTY
11. 1-5/8" COAXIAL TRANSMISSION LINE (MIAMI-DADE FIRE RESCUE)
12. EMPTY
13. 7/8" COAXIAL TRANSMISSION LINE (FCC)
14. EMPTY
15. EMPTY
16. EMPTY

ENTRY PORTS – EXTERIOR VIEW



1. 7/8" COAXIAL TRANSMISSION LINE
2. 7/8" COAXIAL TRANSMISSION LINE
3. EMPTY
4. POE CABLE (CCTV 382) – SEE EXTERIOR VIEW PORT 3
5. POE CABLE (CCTV 341) – SEE EXTERIOR VIEW PORT 3
6. POE CABLE (CCTV FLORIDA CITY) – SEE EXTERIOR VIEW PORT 3
7. 7/8" COAXIAL TRANSMISSION LINE (UNUSED)
8. 7/8" COAXIAL TRANSMISSION LINE (UNUSED)
9. EMPTY
10. EMPTY
11. 1-5/8" COAXIAL TRANSMISSION LINE (MIAMI-DADE FIRE RESCUE)
12. EMPTY
13. 7/8" COAXIAL TRANSMISSION LINE (FCC)
14. EMPTY
15. EMPTY
16. EMPTY

ENTRY PORTS – INTERIOR VIEW

LEGEND:

EXISTING EQUIPMENT
EQUIPMENT TO BE INSTALLED (MDFR)

MDC034

CONTRACT PLANS RECORD

DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION
11/18/2024	0	MIAMI-DADE FIRE RESCUE PROPOSED TUA			

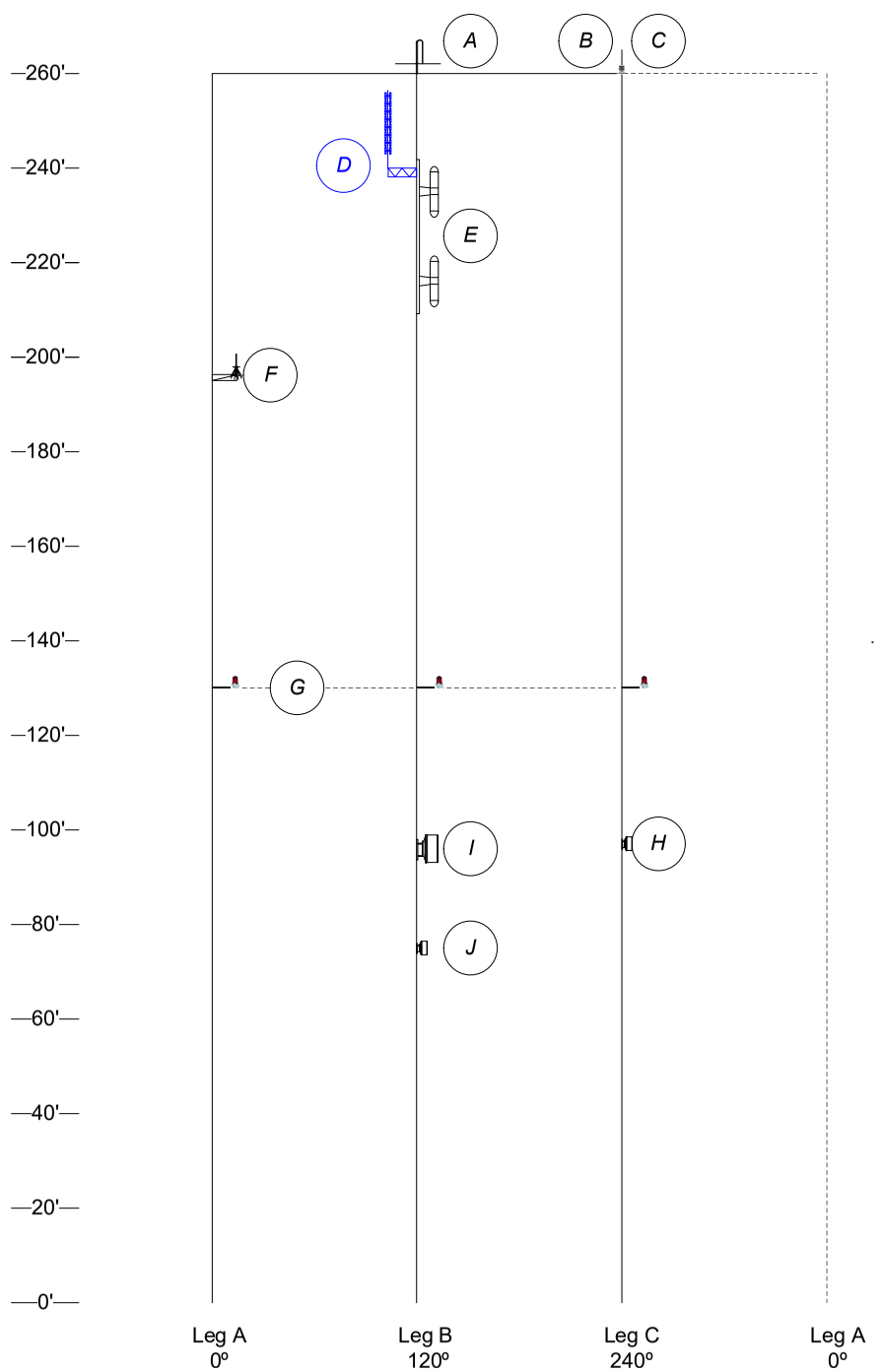
FDOT TSM&O Transportation Systems Management & Operations
FLORIDA DEPARTMENT OF TRANSPORTATION
605 SUWANNEE ST. MS 90
TALLAHASSEE, FL 32399-0450
PH.(850)-410-5600
FAX.(850)-410-5501

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

SITE NAME	COUNTY	FINANCIAL PROJECT ID
EVERGLADES ACADEMY	DADE COUNTY	

EVERGLADES ACADEMY
FLOOR PLAN & ENTRY PORTS

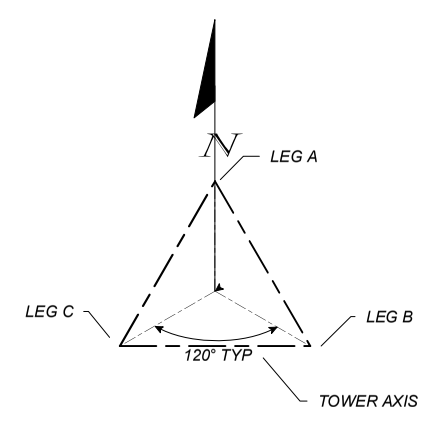
SHEET NO.
EVE-01



ID	MODEL	LEG/ FACE	MNT. HGT.	TX LINE	AZIM.	POL.	FREQ. (MHZ)	NOTES
A	DB201	B	260' (BASE)	7/8"	-	-	-	-
B	RED/WHITE BEACON	C	260' (BASE)	-	-	-	-	-
C	LIGHTNING ROD	C	260' (BASE)	-	-	-	-	-
D	ATC-GD4V80 ANTENNA	B	240' (BASE)	1-5/8"	-	-	-	5
E	DB212-2	B	235', 216' (C.L.)	7/8"	-	-	-	-
F	DISCONE	A	196' (BASE)	7/8"	-	-	-	1
G	SIDE MARKER	A, B, C	130' (C.L.)	-	-	-	-	-
H	SC3-W100A	C	97' (C.L.)	CAT5 POE	2.8°	V	-	2
I	SB6-W60C	B	96' (C.L.)	CAT5 POE	130.4°	V	-	3
J	SC3-190A	B	75' (C.L.)	CAT5 POE	132.2°	V	-	4

NOTES:

1. FCC ANTENNA
2. 11GHz TO FLORIDA CITY HUB
3. 6GHz TO CCTV 382
4. 18GHz TO CCTV 341
5. MIAMI-DADE FIRE RESCUE ANTENNA



LEGEND:

EXISTING EQUIPMENT
EQUIPMENT TO BE INSTALLED (MDFR)

MDC035

CONTRACT PLANS RECORD

DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION
11/18/2024	0	MIAMI-DADE FIRE RESCUE PROPOSED TUA			

FDOT TSM&O Transportation Systems Management & Operations
FLORIDA DEPARTMENT OF TRANSPORTATION
605 SUWANNEE ST. MS 90
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PH.(850)-410-5600
FAX.(850)-410-5501

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

SITE NAME	COUNTY	FINANCIAL PROJECT ID
EVERGLADES ACADEMY	DADE COUNTY	

EVERGLADES ACADEMY TOWER LOADING DIAGRAM

SHEET NO.
EVE-02

\\156.75.189.28\Traffic_Ops_Data\8. TSMO\Telcom\UseAgreements\Everglades Academy\Miami\DadeFireRescue\2024\20241118 Everglades Academy ShelterFloorPlan and TowerLoading.vsdx

PATE
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Tampa, Florida 33613
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(813) 960-0002
FL Registry #RY4524

TOWER ANALYSIS REPORT

February 17, 2022

Motorola Solutions, Inc.
10500 NW 5th Manor
Plantation, Florida 33324
Attn: Mr. Jeff Karbonik

260-Ft Self-Supported Tower
Academy DOT Site
Our Job # 22-107

AUTHORIZATION

As requested, Pate Engineering has analyzed the 260' self-supported tower located on SW 424th Street, just West of US-1, Homestead, Florida (Dade County).

REFERENCE MATERIALS

The following reference materials were used for this analysis:

- FWT, Inc. Tower Drawing (Design No. S01-0675-A, dated 7/12/2001.
- RWH Engineering, Inc. Foundation Drawing (Everglades Academy Site), dated 3/9/2001.
- Partial Soil Boring Logs.

INTRODUCTION

On 11/15/2018, the tower was visited to gather site specific data such as antenna & mount loading, and transmission line distribution. The tower was not climbed. A sketch of the tower has been included for reference. The FDOT indicated that no changes to the tower loading have been made since that time.

The purpose of this analysis was to investigate the tower for additional antennas (see tower loading section).

ANALYSIS CRITERIA

This tower has been analyzed using **ANSI/TIA-222-H** for the following criteria **(V_{ULT} = 186 MPH, Risk Category III, Exposure C, Topographic Category 1**. This meets the requirements of the **Florida Building Code 7th Edition (2020)** and **ASCE 7-16**. It is the responsibility of the client to verify that this analysis criteria meets the requirements of the owner.

The wind was considered from (12) directions including winds on all tower faces, on all tower corners, and parallel to all tower faces.

These cases considered all the applicable loads due to the deadweight of the structure and appurtenances. The effects of wind on the tower structure, antennas, and ancillary items such as ladders, cables, platforms, antenna mounts, etc. have been considered.

TOWER LOADING

The following is a list of the antennas, their elevations, and the transmission lines used in this analysis: (Note: The elevations are centerline for panel antennas and dishes. They are mounting heights for omni and whip antennas. All elevations are referenced to the base of the tower.

Elevation	Notes	Description	Transmission Line
		Existing Antennas	
260'±		DB201 on Small Pipe Mount	7/8"
248'±		6'φ Grid Dish & Mount	7/8"
243'±		6'φ Grid Dish & Mount	7/8"
235'±		DB212	Share 7/8"
216'±		DB212	Share 7/8"
207'± to 242'±		Pipe Mount	---
200'±		Platform & Support	---
195'±		Small Ground Plane Whip on 18" Side Arm	7/8"
104'±		Platform & Support	---
97'±	1.	3'φ Dish & Mount	Share 1-1/2"φ Conduit
96'±	1.	6'φ HP Dish & Mount	Share 1-1/2"φ Conduit
75'±	1.	3'φ Dish & Mount	Share 1-1/2"φ Conduit
		Proposed Antennas	
240'±		ATC-GD4V80	1-5/8"
239'±	2.	6' Side Arm	---

Notes: 1. The (3) noted existing microwave dishes are fed with CAT-5 cables that run inside of the 1-1/2"φ conduit.

2. The proposed ATC-GD4V80 antenna is to be mounted on a 6' side arm (Site Pro 1 p/n HS6-K) with (1) tie-back member. It is to be mounted on the Southeast (C) leg of the tower with the side arm rotated to be perpendicular to the Northeast (AC) face of the tower.

METHOD OF ANALYSIS

This tower was analyzed in accordance with the requirements of the **Florida Building Code 7th Edition (2020)**, **ASCE 7-16**, and **ANSI/TIA-222-H**. Computations were performed to account for all the vertical loads, and horizontal wind forces on the tower, antennas, and ancillary items. The structure was then analyzed using a computer program developed by Guymast, Inc.

The design strengths were calculated for the various tower components such as the tower legs, diagonals, bolts, etc. These strengths were then compared with the actual factored loads determined by the computer program.

ASSUMPTIONS MADE

1.1 For the purposes of this analysis, it was assumed that all bolts, welds, members, etc. are in good condition and not degraded by rust, corrosion, or cracks.

1.2 The tower has been properly maintained in accordance with the original manufacturer's drawings and specifications.

ANALYSIS CONDITIONS

2.1 The proposed 1-5/8" line is to be installed on the existing waveguide ladder on the Northwest (AB) face of the tower near the North (A) leg. See the attached sketch.

2.2 The proposed ATC-GD4V80 antenna is to be mounted on a 6' side arm (Site Pro 1 p/n HS6-K) with (1) tie-back member. It is to be mounted on the Southeast (C) leg of the tower with the side arm rotated to be perpendicular to the Northeast (AC) face of the tower.

RESULTS OF ANALYSIS

3.1 This analysis, as outlined herein, indicates that **the tower will support** the antennas, mounts, and lines listed in this report if all of the assumptions and analysis conditions listed above are observed. (The maximum usage ratio for any structural component is 0.99 - both the diagonal members from 0' to 20' and the anchor rods.)

3.2 The **foundations** are 5' diameter drilled shafts. The soil boring logs indicate that weathered limestone exists for the entire length of the shafts. Based on our analysis, the foundations are adequate to support the proposed loading condition. The foundation reactions for this analysis are as follows:

	Actual Reaction
Uplift	452.6 kip
Compression	568.0 kip
Shear	93.6 kip

3.3 This analysis is for the main tower (and all components) only. It does not include an analysis or approval of the existing or proposed antennas, or antenna mounts. However, the wind and dead loads imposed by these mounts has been included in this analysis.

RECOMMENDATIONS

4.1 If all of the requirements of this report are observed, the proposed loading changes may be safely installed without further analysis.

The information contained herein is for the use of the addressee, the tower owner, and Pate Engineering, Inc. Any use by others is prohibited except by express permission from Pate Engineering, Inc., and the addressee. All calculations, reports, sketches, and drawings, as well as any information on the tower, foundation, and soil gathered to complete this analysis are considered "Proprietary Information" and remain the sole property of Pate Engineering, Inc.

Pate Engineering, Inc.

By:_____

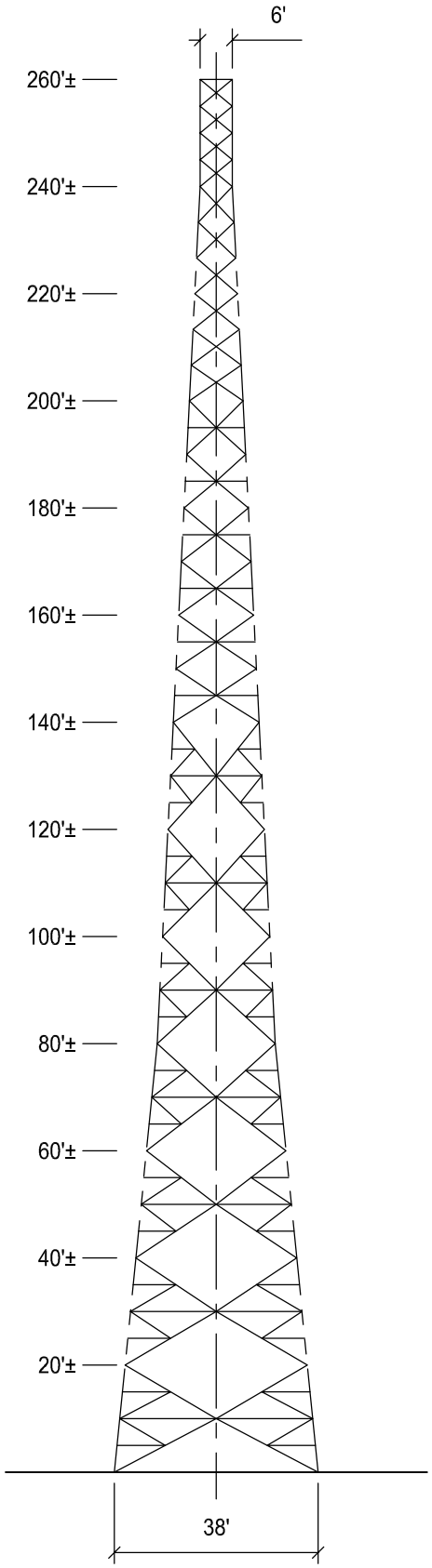
Michael A. Hunter, P.E.
Florida P.E. No. 58068

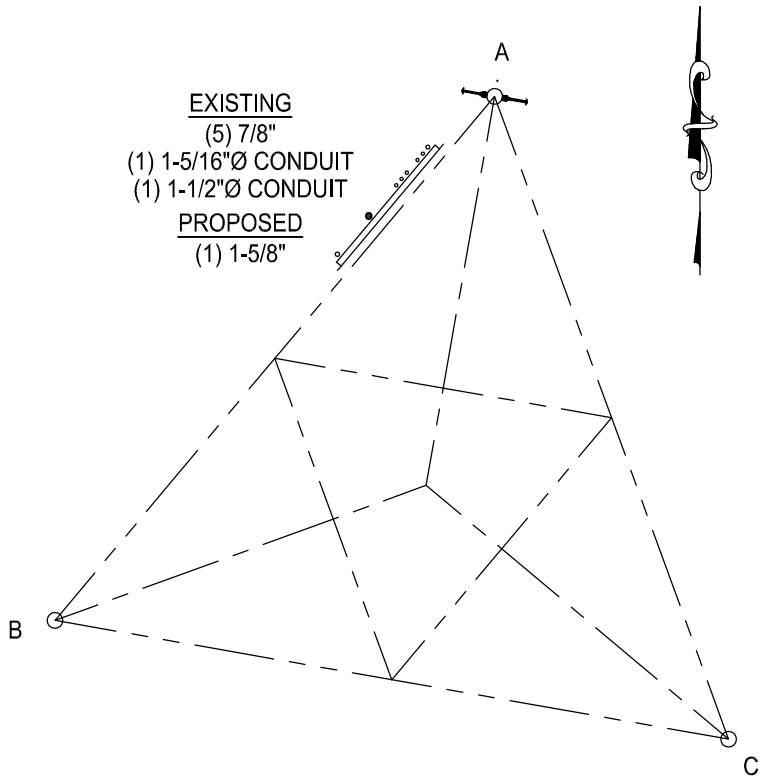
MICHAEL A. HUNTER
LICENSE
NO. 58068
STATE OF FLORIDA
PROFESSIONAL ENGINEER

This item has been electronically signed and sealed by Michael A. Hunter, PE on February 17, 2022 using a Digital Signature.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Pate Engineering, Inc. 13540 N. FLORIDA AVE. SUITE 203 TAMPA, FLORIDA 33613 813-960-0002			SITE: ACADEMY DOT	
REV	DATE	DESCRIPTION	ANSI/EIA-222-H 186 MPH	
A	2/17/2022	SKETCH FOR REPORT	JOB NO:	22-107
			DRAWN BY:	MH
			SHEET:	AC-1 OF 1





MDC039