OFFICIAL FILE COPY
CLERK OF THE BOARD
OF COUNTY COMMISSIONERS
MIAMI-DADE COUNTY, FLORIDA

Memorandum

MIAMI-DADE COUNTY

Date: July 6, 2023

Agenda Item No. 8(P)(27)
Resolution No. R-643-23

To: Honorable Chairman Oliver G. Gilbert, III
and Members, Board of County Commissioners

From: Daniella Levine Cava
Mayor

Subject: Recommendation for Approval to Award a Designated Purchase Contract for Motorola Receiver Site with Integrated Distribution Antenna System at MIA

Summary
This item is for the award of a designated purchase contract for the acquisition and subsequent maintenance and support of a new Ultra High Frequency (UHF) Radio Site with an integrated antenna system (System) that will provide required levels of radio signal coverage to an area of approximately four million square feet within Miami International Airport (MIA). This upgrade to the existing Motorola UHF system used by the Miami-Dade Fire Rescue Department (MDFR) at MIA is required to address current challenges with radio signal coverage inside MIA's terminal facilities.

In 2020, MDFR conducted a routine fire inspection of the existing Motorola UHF System used by MDFR to respond to all emergency calls within Miami-Dade County, including MIA. This inspection identified several safety violations at MIA. Specifically, it was determined that the required minimum radio signal strength as determined by the authority having jurisdiction, MDFR, and pursuant to the Florida Fire Prevention Code was not met. MIA currently lacks sufficient in-building coverage of the existing UHF System in certain areas of MIA. This lack of system coverage inhibits communications and creates challenges and potential safety issues for MDFR as they respond to emergency calls for service within MIA. As a result, MDFR issued an order for these violations to be corrected by January 1, 2025. This upgraded System will provide sufficient signal coverage to satisfy this order.

Recommendation
It is recommended that the Board of County Commissioners (Board) approve this request for a designated purchase, *Contract No. SS-10134, Motorola Receiver Site with Integrated Distribution Antenna System at MIA,* to Motorola Solutions, Inc. (Motorola) for the Miami-Dade Aviation Department (MDAD). Approval of a designated purchase, by a two-thirds vote of the Board members present, is being requested pursuant to Section 2-8.1(b)(3) of the Miami-Dade County Code to authorize a five-year contract with two, five-year option to renew terms in the cumulative amount of $12,379,017.

This contract will be utilized to purchase radio equipment, antennas, a new receiver site integrated to a fiber optic distributed antenna system that includes signal boosters to ensure signal availability throughout building structures, and ongoing maintenance support services for the new System. There is one Small Business Enterprise (SBE) firm certified under the applicable commodities codes; however, no verification of availability was conducted as this system is proprietary and not available through third parties.

Background
On July 19, 2022, the Board approved the award of designated purchase contract, *Contract No. D-10253,* through Resolution No. R-682-22 for the purchase of radio equipment, antennas, and ongoing maintenance and support services for MDFR's radio system from Motorola.

Competition for this project at MIA is not practicable at this time due to the proprietary nature of the system. Although other vendors such as L3Harris, Kenwood Communications, Tait Communications, and VeriDAS Technologies provide radio systems and enhancements, the existing MDFR system is proprietary to Motorola and the additional UHF receive site integrated to a fiber optic distributed antenna

system needed for MIA can only be provided by Motorola, as a radio system which is made up of multiple brands/providers is not technologically feasible.

Accordingly, it is in the County's best interest to award this designated purchase contract pursuant to Section 2-8.1(b)(3) of the County Code to allow MDAD to comply with required levels of signal coverage and allow first responders to have access to necessary levels of communication when responding to calls within MIA.

Scope
Miami International Airport is located within District 6, which is represented by Commissioner Kevin Marino Cabrera; however, the impact of this item is countywide.

Fiscal Impact/Funding Source
The fiscal impact for the initial five-year term is $7,797,533. Should the County choose to exercise, at its sole discretion, the two, five-year option to renew terms, the estimated cumulative value will be $12,379,017.

Department	Allocation	Funding Source	Contract Manager
MDAD	$12,379,017	Bond Funded	Sylvia Novela
Total:	**$12,379,017**		

Track Record/Monitor
Natalya Vasilyeva of the Strategic Procurement Department (SPD) is the Procurement Contracting Manager.

Delegated Authority
If this item is approved, the County Mayor or County Mayor's designee will have the authority to exercise all provisions of the contract, including any cancellation, renewal, or extension provisions, pursuant to Section 2-8.1 of the County Code and Implementing Order 3-38.

Vendor Recommended for Award
Pursuant to Resolution No. R-477-18, the recommended vendor does not have a local address. Availability of local vendors is limited as these services are proprietary to Motorola.

Vendor	Principal Address	Local Address	Number of Employee Residents 1) Miami-Dade 2) Percentage*	Principal
Motorola Solutions, Inc.	500 West Monroe Street Chicago, IL	None	100 0.5%	Gregory Q. Brown

*Provided pursuant to Resolution No. R-1011-15. Percentage of employee residents is the percentage of vendor's employees who reside in Miami-Dade County as compared to the vendor's total workforce.

Due Diligence
Pursuant to Resolution No. R-187-12, due diligence was conducted in accordance with SPD's Procurement Guidelines to determine contractor responsibility, including verifying corporate status and that there are no performance or compliance issues through various vendor responsibility lists and a keyword internet search. The lists that were referenced included convicted vendors, debarred vendors, delinquent contractors, suspended vendors, and federal excluded parties. There were no adverse findings relating to contractor responsibility.

Applicable Ordinances and Contract Measures

- The two percent User Access Program provision does not apply.
- The Small Business Enterprise measures and Local Preference do not apply.
- The Living Wage does not apply as the services are not covered under the Ordinance.

Jimmy Morales
Chief Operations Officer

MEMORANDUM
(Revised)

TO: Honorable Chairman Oliver G. Gilbert, III
and Members, Board of County Commissioners

DATE: July 6, 2023

FROM: Geri Bonzon-Keenan
County Attorney

SUBJECT: Agenda Item No. 8(P)(27)

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 ____, 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) ____, or 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(P)(27)
7-6-23

RESOLUTION NO. R-643-23

RESOLUTION AUTHORIZING DESIGNATED PURCHASE PURSUANT TO SECTION 2-8.1(B)(3) OF THE COUNTY CODE BY A TWO-THIRDS VOTE OF THE BOARD MEMBERS PRESENT; AUTHORIZING AWARD OF CONTRACT NO. SS-10134 FOR THE PURCHASE OF MOTOROLA RECEIVER SITE WITH INTEGRATED DISTRIBUTION ANTENNA SYSTEM AT MIA TO MOTORLA SOLUTIONS, INC. IN AN AMOUNT NOT TO EXCEED $12,379,017.00 FOR THE INITIAL FIVE-YEAR TERM AND TWO, FIVE-YEAR OPTIONS TO RENEW FOR THE MIAMI-DADE AVIATION DEPARTMENT; AND AUTHORIZING THE COUNTY MAYOR OR COUNTY MAYOR'S DESIGNEE TO EXERCISE ALL PROVISIONS OF THE CONTRACT, INCLUDING ANY CANCELLATION, RENEWAL OR EXTENSION PROVISIONS, PURSUANT TO SECTION 2-8.1 OF THE COUNTY CODE AND IMPLEMENTING ORDER 3-38

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:

Section 1. This Board finds it is in the best interest of Miami-Dade County to award Contract No. SS-10134 as a designated purchase, in substantially the form attached and made a part hereof, for the purchase of a Motorola receiver site with integrated distribution antenna system at MIA to Motorola Inc. in an amount not to exceed $12,379,017.00 for the initial five-year term and two, five-year options to renew for the Miami-Dade Aviation Department, pursuant to section 2-8.1(b)(3) of the Code of Miami-Dade County, by a two-thirds vote of the Board members present.

Section 2. This Board authorizes the County Mayor or County Mayor's designee to exercise all provisions of the contract, including any cancellation, renewal or extension provisions, pursuant to section 2-8.1 of the County Code and Implementing Order 3-38.

The foregoing resolution was offered by Commissioner **Anthony Rodriguez**, who moved its adoption. The motion was seconded by Commissioner **Marleine Bastien** and upon being put to a vote, the vote was as follows:

Oliver G. Gilbert, III, Chairman	**aye**		
Anthony Rodríguez, Vice Chairman	**aye**		
Marleine Bastien	**aye**	Juan Carlos Bermudez	**aye**
Kevin Marino Cabrera	**aye**	Sen. René García	**absent**
Roberto J. Gonzalez	**aye**	Keon Hardemon	**aye**
Danielle Cohen Higgins	**aye**	Eileen Higgins	**aye**
Kionne L. McGhee	**aye**	Raquel A. Regalado	**absent**
Micky Steinberg	**aye**		

The Chairperson thereupon declared this resolution duly passed and adopted this 6th day of July, 2023. 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.

David M. Murray

Motorola Receiver Site with Integrated Distributed Antenna System at Miami International Airport
Agreement No. SS-10314

THIS AGREEMENT for the provision of a Motorola Receiver Site with Integrated Distributed Antenna System at Miami International Airport ("Agreement"), and it is made and entered into by and between Motorola Solutions, Inc., a corporation organized and existing under the laws of the State of Delaware, having an office at 401 East Las Olas Boulevard, Suite 1600, Ft. Lauderdale, FL 33301 (hereinafter referred to as "Motorola" or "Contractor"), and Miami-Dade County, a political subdivision of the State of Florida, having its principal office at 111 NW 1st Street, Miami, Florida 33128 (the "County") (collectively, the "Parties").

WITNESSETH:

WHEREAS, the County wishes to purchase a Motorola Receiver Site with Integrated Distributed Antenna System at Miami International Airport, that shall conform to the Scope of Services (Appendix A), and the requirements of this Agreement; and

WHEREAS, Motorola has agreed to provide the required Motorola Receiver Site with Integrated Distributed Antenna System at Miami International Airport required by the County on the conditions set forth in this Agreement;

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained, the Parties hereto agree as follows:

ARTICLE 1. DEFINITIONS

The following words and expressions used in this Agreement shall be construed as follows, except when it is clear from the context that another meaning is intended:

a) The words "Article" or "Articles" to mean the terms and conditions delineated in this Agreement.

b) The word "Agreement" to mean collectively the (i) Articles, (ii) Scope of Services, (iii) Price Schedule, (iv) all other appendices and attachments hereto, (v) all addenda and exhibits, and (vi) all amendments issued hereto.

c) The words "Contract Manager" to mean the Director, Internal Services Department, or the duly authorized representative designated to manage the Agreement.

d) The word "Contractor" to mean Motorola and its permitted successors.

e) The word "Days" to mean calendar days.

f) The word "Deliverables" to mean all documentation and any items submitted by the Contractor to the Project Manager for review and approval pursuant to the terms of this Agreement.

g) The words "product" and "equipment" mean the products and equipment provided by Motorola under this Agreement.

h) The words "Licensed Software" to mean the software provided by Contractor pursuant to this Agreement.

i) The words "Project Manager" to mean the County Mayor or the duly authorized representative designated to manage the Project.

j) The words "Scope of Services" to mean the document appended hereto as Appendix A, which details the Work to be performed by the Contractor.

k) The words "Service" or "Services" to mean the provision of services in accordance with the Scope of Services.

l) The word "Subcontractor" to mean any person, entity, firm, or corporation, other than the employees of the Contractor, who furnishes labor and/or materials, in connection with the Work, whether directly or indirectly, on behalf and/or under the direction of the Contractor and whether or not in privity of contract with the Contractor.

m) The word "Work" to mean all matters and things required to be done by the Contractor in accordance with the provisions of this Agreement.

ARTICLE 2. ORDER OF PRECEDENCE

If there is a conflict between or among the provisions of this Agreement, Articles 1 through 61 will take precedence over any conflicting terms in other Appendices or Exhibits, except that conflicting terms in Exhibit A, B, C, or D take precedence over Articles 1 through 61 only with respect to the specific subject matter contained in each Exhibit, and not Articles 1 through 61 or any other Exhibit as it applies to any other subject matter.

ARTICLE 3. RULES OF INTERPRETATION

a) References to a specified Article, section or schedule shall be construed as reference to that specified Article, or section of, or schedule to this Agreement unless otherwise indicated.

b) Reference to any agreement or other instrument shall be deemed to include such agreement or other instrument as such agreement or other instrument may, from time to time, be modified, amended, supplemented, or restated in accordance with its terms.

c) The terms "hereof", "herein", "hereinafter", "hereby", "herewith", "hereto", and "hereunder" shall be deemed to refer to this Agreement.

d) The terms "directed", "required", "permitted", "ordered", "designated", "selected", "prescribed" or words of like import to mean respectively, the direction, requirement, permission, order, designation, selection or prescription of the Project Manager.

e) The terms "approved", acceptable", "satisfactory", "equal", "necessary", or words of like import to mean respectively, approved by, or acceptable or satisfactory to, equal or necessary in the opinion of the Project Manager.

f) The titles, headings, captions, and arrangements used in these Terms and Conditions are for convenience only and shall not be deemed to limit, amplify, or modify the terms of this Agreement, nor affect the meaning thereof.

ARTICLE 4. NATURE OF THE AGREEMENT

a) This Agreement incorporates and includes all prior negotiations, correspondence, conversations, agreements, and understandings applicable to the matters contained in this Agreement. The Parties agree that there are no commitments, agreements, or understandings concerning the subject matter of this Agreement that are not contained in this Agreement, and that this Agreement contains the entire agreement between the Parties as to all matters contained herein. Accordingly, it is agreed that no deviation from the terms hereof shall be predicated upon any prior representations or agreements, whether oral or written. It is further agreed that any oral representations or modifications concerning this Agreement shall be of no force or effect, and that this Agreement may be modified, altered, or amended only by a written amendment duly executed by the Parties hereto or their authorized representatives.

b) The Contractor shall provide the services set forth in the Scope of Services and render full and prompt cooperation with the County in all aspects of the Work performed hereunder.

c) The Contractor acknowledges that this Agreement requires the performance of all things necessary for or incidental to the effective and complete performance of all Work under this Agreement. All things not expressly mentioned in this Agreement but reasonably necessary to carrying out its intent are required by this Agreement, and the Contractor shall perform the same as though they were specifically mentioned, described, and delineated.

d) The Contractor shall furnish all labor, materials, tools, supplies, and other items required to perform the Work necessary for the completion of this Agreement. All Work shall be accomplished at the direction of the Project Manager and in accordance with this Agreement.

e) The Contractor acknowledges that the County shall make all policy decisions regarding the Scope of Services. The Contractor agrees to provide input on policy issues in the form of recommendations. The Contractor shall implement all reasonable changes in providing Services hereunder as a result of a policy change implemented by the County. The Contractor agrees to act in an expeditious and fiscally sound manner in providing the County with input regarding the time and cost to implement said changes and in executing the activities required to implement said changes.

ARTICLE 5. CONTRACT TERM

The Agreement shall become effective on the date of the Parties' execution, whichever is later, and shall continue for five (5) years. The County, at its sole discretion, may renew this Agreement for two, five-year options to renew. The County may extend this Agreement for up to an additional one hundred-eighty (180) calendar days beyond the current Agreement period and will notify the Contractor in writing of the extension. This Agreement may be extended beyond the initial one hundred-eighty (180) calendar day extension period by mutual agreement between the County and the Contractor, upon approval by the Board of County Commissioners (the "Board").

ARTICLE 6. CHANGE ORDER PROVISION

a) The County may, at any time, by written notice or order designated or indicated to be a Change Order or Change Notice, make any change in the Work, but only within the general scope of the Contract, including but not limited to changes (a) in the Contract specifications (b) in the method or manner of performance of the Work, (c) in the sites or (d) directing acceleration in the performance of the Work.

b) If the County agrees that any change under this Section causes an increase or decrease in the Contractor's price of, or the time required for the performance of any part of the Work under this Contract, a Contract change will be made and the Contract modified by a written Change Order in accordance with this Section.

c) If the Contractor intends to assert a claim for a Contract change under this Section, the Contractor shall issue a Notice of Potential Claim as set forth below. The Notice of Potential Claim shall be in writing and set forth the reasons for which the Contractor believes additional compensation and/or time is due, the nature of the costs involved and the approximate amount of the potential claim. If the change involves time, the notice shall also contain an estimate of the time involved and an impacted schedule. The Notice of Potential Claim shall be given to the County within ten (10) Days of the event giving rise to the claim, and in all instances prior to the time that the Contractor has started performance of work giving rise to the potential claim for additional compensation. Failure to provide the requisite notice, or otherwise to comply with the requirements of this Section shall be grounds for the County's rejection of the claim.

d) The County and the Contractor shall endeavor to negotiate a reasonable contract price/time (if applicable) and line adjustment in a Change Order on terms appropriate to the changed Work. The Contractor will be required to submit a sufficiently detailed price and time (if applicable) proposal within thirty (30) Days after the event giving rise to the change supported with sufficient documentation that (1) County can determine that the proposal reflects all impacts (price and time) on the Contract from Work additions, deletions and modifications shown in the Change Notice being priced; and (2) the proposed prices and time impact assessment are set out in such a way that their reasonableness can be evaluated. To support any

proposed time impact arising out of a contract change, the Contractor shall submit with his price proposal a proposed impact in the project schedule, all in sufficient detail to allow County to determine the reasonableness of the request. The execution of a Change Order by both parties will be deemed full accord and satisfaction of all claims of any nature arising from the issuance of the Change Notice negotiated, including any price impacts resulting from the Change Order.

e) If the price and/or time quoted in the Change Proposal Request is acceptable, the County may recommend a Change Order for approval by the Board of County Commissioners. If the quoted price and/or time is unacceptable, or in the event that a quote is not provided by The Contractor in the manner set forth in subsection d) above the change proposal request will be rejected.

f) Change Orders involving additional time and money require the express approval of the Board of County Commissioners unless the Board has by appropriate legislation delegated that authority. By exception, any change, which can be funded from the contingency allowance, if any, shall require only the express written authorization of the County Project Manager.

g) The Contractor shall continue diligently to perform the Contract in accordance with the County's order, instruction, direction, interpretation or determination during negotiations with respect to the Contractor's entitlement to a Contract change hereunder or to the amount of any Contract price adjustment or time extension, and throughout the Contract notwithstanding any such disagreement. The Contractor and County may agree on certain aspects of a Contract change and take those aspects out of operation of time and materials provisions. In the event a mutually agreeable equitable adjustment cannot be made, the Contractor shall continue diligently to perform the Work, and provided that the Contractor has delivered all required notices, the Contractor will perform the work and is authorized to deliver to the County a Notice of Protest pursuant to subsection h) as defined below.

h) As a condition for making any claims for work done under protest, as authorized in this article, the Contractor shall deliver to the County a Notice of Protest. The Notice of Protest shall be delivered to the County in advance of the work done under protest, shall define with reasonable specificity the work being done under protest, shall provide an estimate of the anticipated damages to be claimed by the Contractor relating to such work, and the impact to the project schedule resulting from such work done under protest. Failure to provide the required notice shall be deemed a waiver of the claim.

i) In no event shall the Contractor claim or be entitled to any damages for delay of any kind, whether occasioned by an act or omission to act; or by undisclosed, unforeseen, latent, or misrepresented materials or other physical conditions discovered or uncovered by the Contractor during the course of its performance; or by any other reason whatsoever.

ARTICLE 7. ELIGIBLE PURCHASERS

County and all of its agencies, and any city or governmental district, body or agency located within Miami-Dade County, Florida, may purchase additional equipment, products, and services from this Agreement. Eligible Purchasers have the same rights and responsibilities as County under this Agreement with respect to their purchases from this Agreement.

ARTICLE 8. NOTICE REQUIREMENTS

All notices required or permitted under this Agreement shall be in writing and shall be deemed sufficiently served if delivered by: (i) Registered or Certified Mail, with return receipt requested; (ii) personally by a by courier service; (iii) Federal Express Corporation or other nationally recognized carrier to be delivered overnight; or (iv) via facsimile or e-mail (if provided below) with delivery of hard copy pursuant to (i), (ii), or (iii) in this paragraph. The addresses for such notice are as follows:

(1) To the County

a) to the Miami-Dade Aviation Department Project Manager:
Attention: Adrian Portal

Phone: 305-876-8315
E-mail: APortal@flymia.com

and

c) to the Contract Manager:

Miami-Dade County
Internal Services Department, Strategic Procurement Division
Attention: Chief Procurement Officer
111 NW 1st Street, Suite 1300
Miami, FL 33128-1974
Phone: (305) 375-4900
E-mail: Namita.Uppal@miamidade.gov

(2) To the Contractor

Attention: Josh Trifiletti
Phone: (954) 736-9056
E-mail: jtrif@motorolasolutions.com

Either party may at any time designate a different address and/or contact person by giving notice as provided above to the other party. Such notices shall be deemed given upon receipt by the addressee.

ARTICLE 9. PAYMENT FOR SERVICES/AMOUNT OBLIGATED

The Contractor warrants that it has reviewed the County's requirements and has asked such questions and conducted such other inquiries as the Contractor deemed necessary in order to determine the price the Contractor will charge to provide the Work to be performed under this Agreement. The compensation for all Work performed under this Agreement, including all costs associated with such Work and Services, shall be paid in accordance with Appendix A, Section 4, Pricing. The County shall have no obligation to pay the Contractor any additional sum in excess of this amount, except for a change and/or modification to the Agreement, which is approved and executed in writing by the County and the Contractor.

All Services undertaken by the Contractor before County's approval of this Agreement shall be at the Contractor's risk and expense.

ARTICLE 10. PRICING

Prices shall remain firm and fixed for the initial term of the Agreement per Section 4 of Appendix A, including any extension periods, pursuant to Appendix A, Section 4, Pricing; however, the Contractor may offer incentive discounts to the County at any time during the Agreement term, including any extension thereof.

ARTICLE 11. METHOD AND TIMES OF PAYMENT

The Contractor may bill the County periodically, but not more than once per month, upon invoices certified by the Contractor pursuant to Appendix A, Section 4, Pricing. The Payment Schedule is set forth in Appendix A. All invoices shall be taken from the books of account kept by the Contractor, shall be supported by receipt bills or other documents reasonably required by the County, shall show the County's contract number, and shall have a unique invoice number assigned by the Contractor. It is the policy of Miami-Dade County that payment for all purchases by County agencies and the Public Health Trust (the "Trust"), shall be made in a timely manner and that interest payments be made on late payments. All firms, including Small Business Enterprises, providing goods and services to the County, shall receive payment to maintain sufficient cash flow. In accordance with Section 218.74 of the Florida Statutes, and Section 2-8.1.4 of the Code of Miami-

Dade County (the "Code"), the time at which payment shall be due from the County or Trust shall be forty-five (45) calendar days from receipt of a proper invoice. Billings from prime contractors under services and goods contracts with the County or Trust, that are Small Business Enterprise contract set-aside, bid preference or contain a subcontractor goal, shall be promptly reviewed and payment made by the County or Trust on those amounts not under dispute within fourteen (14) calendar days of receipt of such billing by the County or the Trust pursuant to Sections 2-8.1.1.1.1 and 2-8.1.1.1.2 of the Code. All payments due from the County or Trust, and not made within the time specified by this section shall bear interest from thirty (30) days after the due date at the rate of one percent (1%) per month on the unpaid balance. Further, proceedings to resolve disputes for payment of obligations shall be concluded by final written decision of the County Mayor, or his or her designee(s), not later than sixty (60) days after the date on which the proper invoice was received by the County or Trust.

In accordance with Miami-Dade County Implementing Order No. 3-9, Accounts Receivable Adjustments, if money is owed by the Contractor to the County, whether under this Agreement or for any other purpose, the County reserves the right to retain such amount from payment due by County to the Contractor under this Agreement. Such retained amount shall be applied to the amount owed by the Contractor to the County. The Contractor shall have no further claim to such retained amounts which shall be deemed full accord and satisfaction of the amount due by the County to the Contractor for the applicable payment due herein.

Invoices and associated back-up documentation shall be submitted electronically or in hard copy format by the Contractor to the County as follows:

To MDAD

Miami-Dade County Aviation Department
PO Box 526624
Miami, FL 33152-6624
Attention: Accounts Payable
OR
Email to: payables@miami-airport.com

The County may at any time designate a different address and/or contact person by giving written notice to the other party.

ARTICLE 12. FREIGHT, TITLE, AND RISK OF LOSS

The Contractor will pre-pay and add all freight charges to the invoices. Title and risk of loss to the Equipment will pass to County upon shipment. Title to Software will not pass to County at any time. The Contractor will pack and ship all Equipment in accordance with good commercial practices.

The address which is the ultimate destination where the Equipment will be delivered to County will be set forth in the applicable purchase orders. The Equipment will be shipped to the County at the address set forth in the purchase orders within the County.

The County may change this information by giving written notice to Motorola.

ARTICLE 13. INDEMNIFICATION AND INSURANCE

The Contractor shall indemnify and hold harmless the County and its officers, employees, agents and instrumentalities who are users of the equipment, from any and all liability, losses or damages, including reasonable attorneys' fees and costs of defense, which the County or its officers, employees, agents or instrumentalities may incur as a result of claims, demands, suits, causes of actions or proceedings arising out of, relating to or resulting from the negligent performance of this Agreement by the Contractor or its employees, agents, servants, partners principals or Subcontractors. The Contractor shall pay all claims and losses in connection therewith and shall investigate and defend all claims, suits or actions on behalf

of the County, where applicable, including appellate proceedings. The Contractor expressly understands and agrees that any insurance protection required by this Agreement or otherwise provided by the Contractor shall in no way limit the responsibility to indemnify, keep and save harmless and defend the County or its officers, employees, agents, and instrumentalities as herein provided.

The Contractor shall furnish to the Internal Services Department, Strategic Procurement Division, Certificate(s) of Insurance which indicate that insurance coverage has been obtained which meets the requirements as outlined below:

A. Worker's Compensation Insurance for all employees of the Contractor as required by Florida Statute 440.

B. Commercial General Liability Insurance in an amount of $1,000,000 per occurrence, and $2,000,000 in the aggregate, not to exclude Products and Completed Operations. **Miami-Dade County must be shown as an additional insured with respect to this coverage.**

C. Automobile Liability Insurance covering all owned, non-owned and hired vehicles, in an amount of $1,000,000 combined single limit each accident each accident for bodily injury and property damage.

D. Professional Liability Insurance in an amount of $1,000,000 per claim.

All insurance policies required above shall be issued by companies authorized to do business under the laws of the State of Florida, with the following qualifications:

The company must be rated no less than "**A**-" as to management, and no less than "Class **VII**" as to financial strength, by Best's Insurance Guide, published by A.M. Best Company, Oldwick, New Jersey, or its equivalent, subject to the approval of the County Risk Management Division.

or

The company must hold a valid Florida Certificate of Authority as shown in the latest "List of All Insurance Companies Authorized or Approved to Do Business in Florida" issued by the State of Florida Department of Financial Services.

NOTE: CERTIFICATE HOLDER MUST READ:
MIAMI-DADE COUNTY
111 NW 1st STREET
SUITE 2340
MIAMI, FL 33128

Compliance with the foregoing requirements shall not relieve the Contractor of this liability and obligation under this section or under any other section in this Agreement.

Award of this Agreement is contingent upon the receipt of the insurance documents, as required, within ten (10) business days. If the certificate of insurance is received within the specified timeframe but not in the manner prescribed in this Agreement, the Contractor shall have an additional five business days to submit a corrected certificate to the County. If the Contractor fails to submit the required insurance documents in the manner prescribed in this Agreement within fifteen (15) business days, the Contractor shall be in default of the contractual terms and conditions and award of the Agreement may be rescinded, unless such timeframe for submission has been extended by the County.

The Contractor shall assure that the certificate of insurance required in conjunction with this section remain in full force for the term of the Agreement, including any renewal or extension periods that may be exercised by the County. If the certificate of insurance is scheduled to expire during the term of the Agreement, the Contractor shall submit new or renewed certificate of insurance to the County before such expiration. If expired certificate of insurance is/are not replaced or renewed to cover the Agreement period, the County may suspend the Agreement until the new or renewed certificate is/are

received by the County in the manner prescribed herein. If such suspension exceeds thirty (30) calendar days, the County may, at its sole discretion, terminate the Agreement for cause and the Contractor shall be responsible for all direct and indirect costs associated with such termination.

ARTICLE 14. MANNER OF PERFORMANCE

a) The Contractor shall provide the Work described herein in a competent and professional manner to the County in accordance with the terms and conditions of this Agreement. The County shall be entitled to a performance of all Work described herein and to full and prompt cooperation by the Contractor in all aspects of the Work. At the request of the County, the Contractor shall promptly remove from the Project any Contractor's employee, Subcontractor, or any other person performing Work hereunder. The Contractor agrees that such removal of any of its employees does not require the termination or demotion of any employee by the Contractor.

b) The Contractor agrees to defend, hold harmless and indemnify the County and shall be liable and responsible for all claims, suits, actions, damages, and reasonable costs (including attorneys' fees and court costs) made against the County, occurring on account of, arising from or in connection with the removal and replacement of any Contractor's personnel performing Services hereunder at the behest of the County. Removal and replacement of any Contractor's personnel as used in this Article shall not require the termination and/or demotion of such Contractor's personnel.

c) The Contractor always agrees that it will employ, maintain, and assign to the performance of the Work a sufficient number of competent and qualified professionals and other personnel to meet the requirements to which reference is hereinafter made. The Contractor agrees to adjust its personnel staffing levels or to replace any its personnel if so, directed upon reasonable request from the County, should the County make a determination, in its sole discretion, that said personnel staffing is inappropriate or that any individual is not performing in a manner consistent with the requirements for such a position.

d) The Contractor warrants and represents that its personnel have the proper skill, training, background, knowledge, experience, rights, authorizations, integrity, character, and licenses as necessary to perform the Work described herein, in a competent and professional manner.

e) The Contractor shall always cooperate with the County and coordinate its respective work efforts to maintain the progress most effectively and efficiently in performing the Work.

f) The Contractor shall comply with all provisions of all federal, state, and local laws, statutes, ordinances, and regulations that are applicable to the performance of this Agreement.

ARTICLE 15. EMPLOYEES OF THE CONTRACTOR

All employees of the Contractor shall be, at all times, employees of the Contractor under its sole direction and not employees or agents of the County. The Contractor shall supply competent employees. Miami-Dade County may require the Contractor to remove an employee it deems careless, incompetent, insubordinate or otherwise objectionable and whose continued employment on County property is not in the best interest of the County. Each employee shall have and wear proper identification.

ARTICLE 16. INDEPENDENT CONTRACTOR RELATIONSHIP

The Contractor is, and shall be, in the performance of all Work and activities under this Agreement, an independent contractor, and not an employee, agent or servant of the County. All persons engaged in any of the Work performed or Services provided pursuant to this Agreement shall always, and in all places, be subject to the Contractor's sole direction, supervision, and control. The Contractor shall exercise control over the means and manner in which it and its employees perform the Work, and in all respects the Contractor's relationship and the relationship of its employees to the County shall be that of an independent contractor and not as employees and agents of the County.

The Contractor does not have the power or authority to bind the County in any promise, agreement, or representation other than specifically provided for in this Agreement.

ARTICLE 17. DISPUTE RESOLUTION PROCEDURE

a) The Contractor hereby acknowledges that the Project Manager will determine in the first instance all questions of any nature whatsoever arising out of, under, or in connection with, or in any way related to or on account of, this Agreement including without limitations: questions as to the value, acceptability and fitness of the Services; questions as to either party's fulfillment of its obligations under the Agreement; negligence, fraud or misrepresentation; questions as to the interpretation of the Scope of Services; and claims for damages, compensation and losses.

b) The Contractor shall be bound by all determinations or orders and shall promptly comply with every reasonable request of the Project Manager, including the withdrawal or modification of any previous order, subject to subsection c) through e) below. Where orders are given orally, they will be issued in writing by the Project Manager as soon thereafter as is practicable.

c) The Contractor must, in the final instance, seek to resolve every difference concerning the Agreement with the Project Manager. In the event that the Contractor and the Project Manager are unable to resolve their difference, the Contractor may initiate a dispute in accordance with the procedures set forth in this Article. **Exhaustion of these procedures shall be a condition precedent to any lawsuit permitted hereunder.**

d) In the event of such dispute, the Parties authorize the County Mayor or designee, who may not be the Project Manager or anyone associated with this Project, acting personally, to decide all questions arising out of, under, or in connection with, or in any way related to or on account of the Agreement (including but not limited to claims in the nature of breach of contract, fraud or misrepresentation arising either before or subsequent to execution hereof) and the decision of each with respect to matters within the County Mayor's purview as set forth above shall be conclusive, final and binding on the Parties, subject to judicial appeal. Any such dispute shall be brought, if at all, before the County Mayor within ten (10) days of the occurrence, event or act out of which the dispute arises.

e) The County Mayor may base this decision on such assistance as may be desirable, including advice of experts, but in any event shall base the decision on an independent and objective determination of whether Contractor's performance or any Deliverable meets the requirements of this Agreement and any specifications with respect thereto set forth herein. The effect of any decision shall not be impaired or waived by any negotiations or settlements or offers made in connection with the dispute, whether or not the County Mayor participated therein, or by any prior decision of others, which prior decision shall be deemed subject to review, or by any termination or cancellation of the Agreement. All such disputes shall be submitted in writing by the Contractor to the County Mayor for a decision, together with all evidence and other pertinent information regarding such questions, in order that a fair and impartial decision may be made. Whenever the County Mayor is entitled to exercise discretion or judgment or to make a determination or form an opinion pursuant to the provisions of this Article, such action shall be fair and impartial when exercised or taken. The County Mayor, as appropriate, shall render a decision in writing and deliver a copy of the same to the Contractor. Contractor reserves the right to pursue any remedies available under law after exhausting the provisions of this Article.

f) This Article will survive the termination or expiration of this Agreement.

ARTICLE 18. MUTUAL OBLIGATIONS

a) This Agreement, including attachments and appendices to the Agreement, shall constitute the entire Agreement between the Parties with respect hereto and supersedes all previous communications and representations or agreements, whether written or oral, with respect to the subject matter hereto unless acknowledged in writing by the duly authorized representatives of the Parties.

b) Nothing in this Agreement shall be construed for the benefit, intended or otherwise, of any third party that is not a parent or subsidiary of a party or otherwise related (by virtue of ownership control or statutory control) to a party.

c) In those situations where this Agreement imposes an indemnity obligation on the Contractor, the County may, at its expense, elect to participate in the defense if the County should so choose. Furthermore, the County may at its own expense defend or settle any such claims if the Contractor fails to diligently defend such claims, and thereafter seek indemnity for such defense or settlement costs from the Contractor.

ARTICLE 19. QUALITY ASSURANCE/QUALITY ASSURANCE RECORD KEEPING

The Contractor shall maintain, and shall require that its Subcontractors maintain, complete and accurate records to substantiate compliance with the requirements set forth in the Agreement. The Contractor and its Subcontractors shall retain such records, and all other documents relevant to the Work furnished under this Agreement for a period of three (3) years from the expiration date of this Agreement and any extension thereof.

ARTICLE 20. AUDITS

The County, or its duly authorized representatives and governmental agencies, shall until the expiration of three (3) years after the expiration of this Agreement and any extension thereof, have access to and the right to examine and reproduce any of the Contractor's books, documents, papers and records and of its Subcontractors and suppliers which apply to all matters of the County. Such records shall subsequently conform to Generally Accepted Accounting Principles requirements, as applicable, and shall only address those transactions related to this Agreement.

Pursuant to Section 2-481 of the Code, the Contractor will grant access to the Commission Auditor to all financial and performance related records, property, and equipment purchased in whole or in part with government funds within five (5) business days of the Commission Auditor's request. The Contractor agrees to maintain an accounting system that provides accounting records that are supported with adequate documentation, and adequate procedures for determining the allowability and allocability of costs.

ARTICLE 21. SUBSTITUTION OF PERSONNEL

In the event the Contractor needs to substitute personnel for the key personnel identified by the Contractor's Proposal, the Contractor must notify the County in writing and request written approval for the substitution at least ten (10) business days prior to effecting such substitution. However, such substitution shall not become effective until the County has approved said substitution.

ARTICLE 22. CONSENT OF THE COUNTY REQUIRED FOR ASSIGNMENT

The Contractor shall not assign, transfer, convey or otherwise dispose of this Agreement, including its rights, title, or interest in or to the same or any part thereof (except software) without the prior written consent of the County.

ARTICLE 23. SUBCONTRACTUAL RELATIONS

a) If the Contractor causes any part of this Agreement to be performed by a Subcontractor, the provisions of this Agreement will apply to such Subcontractor and its officers, agents and employees in all respects as if it and they were employees of the Contractor; and the Contractor will not be in any manner thereby discharged from its obligations and liabilities hereunder, but will be liable hereunder for all acts, omissions, and negligence of the Subcontractor, its officers, agents, and employees, as if they were employees of the Contractor. The services performed by the Subcontractor will be subject to the provisions hereof as if performed directly by the Contractor.

b) The Contractor, before making any subcontract for any portion of the Work, will state in writing to the County the name of the proposed Subcontractor, the portion of the Work which the Subcontractor is to do, the place of business of such Subcontractor, and such other information as the County may require. The County will have

the right to require the Contractor not to award any subcontract to a person, firm or corporation disapproved by the County.

c) Before entering into any subcontract hereunder, the Contractor will inform the Subcontractor fully and completely of all provisions and requirements of this Agreement relating either directly or indirectly to the Work to be performed. Such Work performed by such Subcontractor will strictly comply with the requirements of this Agreement.

d) In order to qualify as a Subcontractor satisfactory to the County, in addition to the other requirements herein provided, the Subcontractor must be prepared to prove to the satisfaction of the County that it has the necessary facilities, skill and experience, and ample financial resources to perform the Work in a satisfactory manner. To be considered skilled and experienced, the Subcontractor must show to the satisfaction of the County that it has satisfactorily performed Work of the same general type which is required to be performed under this Agreement.

e) The County shall have the right to withdraw its consent to a Subcontractor if it appears to the County that the Subcontractor will delay, prevent, or otherwise impair the performance of the Contractor's obligations under this Agreement. All Subcontractors are required to protect the confidentiality of the County's and County's proprietary and confidential information.

ARTICLE 24. ASSUMPTION, PARAMETERS, PROJECTIONS, ESTIMATES AND EXPLANATIONS

The Contractor understands and agrees that any assumptions, parameters, projections, estimates, and explanations presented by the County were provided to the Contractor for evaluation purposes only. However, since these assumptions, parameters, projections, estimates, and explanations represent predictions of future events the County makes no representations or guarantees; and the County shall not be responsible for the accuracy of the assumptions presented; and the County shall not be responsible for conclusions to be drawn therefrom; and any assumptions, parameters, projections, estimates and explanations shall not form the basis of any claim by the Contractor; however, such information may be used as a defense to claims made by the County or any third parties against the Contractor.

ARTICLE 25. SEVERABILITY

If this Agreement contains any provision found to be unlawful, the same shall be deemed to be of no effect and shall be deemed stricken from this Agreement without affecting the binding force of this Agreement as it shall remain after omitting such provision.

ARTICLE 26. TERMINATION AND SUSPENSION OF WORK

a) This Agreement may be terminated for cause by the County for reasons including, but not limited to, (i) the Contractor commits an Event of Default (as defined below in Article 28) and fails to cure said Event of Default (as delineated below in Article 29), or (ii) Contractor attempts to meet its contractual obligations with the County through fraud, misrepresentation, or material misstatement.

b) This Agreement may also be terminated for convenience by the County. Termination for convenience is effective on the termination date stated in the written notice provided by the County.

c) If County terminates this Agreement for cause under Article 27(a) above, the County may, in its sole discretion, also terminate or cancel any other contract(s) that such individual or corporation or other entity has with the County and that such individual, corporation or other entity shall pay all direct or indirect costs associated with such termination or cancellation, including reasonable attorneys' fees.

d) The foregoing notwithstanding, if the Contractor attempts to meet its contractual obligations with the County through fraud, misrepresentation, or material misstatement, the Contractor may be debarred from County contracting in accordance with the County debarment procedures. The Contractor may be subject to debarment for failure to perform and all other reasons set forth in Section 10-38 of the Code.

e) In the event that the County or Motorola exercises its right to terminate this Agreement, the Contractor shall, upon receipt of such notice, unless otherwise directed by the County:

i. stop Work on the date specified in the notice (the "Effective Termination Date");

ii. take such action as may be necessary for the protection and preservation of the County's materials and property;

iii. cancel orders;

iv. assign to the County and deliver to any location designated by the County any non-cancelable orders for Deliverables that are not capable of use except in the performance of this Agreement and has been specifically developed for the sole purpose of this Agreement and not incorporated in the Services; and

v. take no action which will increase the amounts payable by the County under this Agreement;

f) In the event that the County exercises its right to terminate this Agreement, the Contractor will be compensated as stated in the payment Articles herein for the:

i. portion of the equipment, materials, products, Services completed in accordance with the Agreement up to the Effective Termination Date; and

ii. non-cancelable Deliverables that are not capable of use except in the performance of this Agreement and has been specifically developed for the sole purpose of this Agreement, but not incorporated in the Services.

g) All compensation pursuant to this Article is subject to audit.

h) In the event the Contractor fails to cure an Event of Default timely, the County may terminate this Agreement, and the County or its designated representatives may immediately take possession of all applicable equipment, materials, products, documentation, reports, and data.

ARTICLE 27. EVENT OF DEFAULT

a) An Event of Default is a material breach of this Agreement by the Contractor, and includes but is not limited to the following:

i. the Contractor has not delivered Deliverables and/or Services on a timely basis;

ii. the Contractor has refused or failed to supply enough properly skilled staff personnel;

iii. the Contractor has failed to make payment to Subcontractors or suppliers for any Services;

iv. the Contractor has become insolvent (other than as interdicted by the bankruptcy laws), or has assigned the proceeds received for the benefit of the Contractor's creditors, or the Contractor has taken advantage of any insolvency statute or debtor/creditor law or if the Contractor's affairs have been put in the hands of a receiver;

v. the Contractor has failed to obtain the approval of the County where required by this Agreement;

vi. the Contractor has failed to provide "adequate assurances" as required under subsection b below;

vii. the Contractor has failed in the representation of any warranties stated herein; or

viii. the Contractor fails to comply with Article 46.

b) When, in the opinion of the County, reasonable grounds for uncertainty exist with respect to the Contractor's ability to perform the Work or any portion thereof, the County may request that the Contractor, within a mutually agreed upon timeframe set forth in the County's request, provide adequate assurances to the County, in writing, of the Contractor's ability to perform in accordance with the terms of this Agreement. Until the County receives such assurances, the County may request an adjustment to the compensation received by the Contractor for portions of the Work which the Contractor has not performed. In the event that the Contractor fails to provide to the County the requested assurances within the prescribed timeframe, the County may:

i. treat such failure as a repudiation and/or material breach of this Agreement; and

ii. resort to any remedy for breach provided herein or at law, including but not limited to, taking over the performance of the Work or any part thereof either by itself or through others.

ARTICLE 28. NOTICE OF DEFAULT - OPPORTUNITY TO CURE

If an Event of Default occurs in the determination of the County, the County shall notify the Contractor (the "Default Notice"), specifying the basis for such default, and advising the Contractor that such default must be cured immediately, or this Agreement with the County may be terminated. Notwithstanding, the County may, in its sole discretion, allow the Contractor to rectify the default to the Agreement within a thirty (30) day period. The County may grant an additional period of such duration as the County shall deem appropriate without waiver of any of the County's rights hereunder, so long as the Contractor has commenced curing such default and is effectuating a cure with diligence and continuity during such thirty (30) day period or any other period which the County prescribes. The Default Notice shall specify the date the Contractor shall discontinue the Work upon the Effective Termination Date.

ARTICLE 29. REMEDIES IN THE EVENT OF DEFAULT

If an Event of Default occurs, whether or not the County elects to terminate this Agreement as a result thereof, the Contractor shall be liable for all damages resulting from the default, irrespective of whether the County elects to terminate the Agreement, including but not limited to:

a) the difference between the cost associated with procuring Services hereunder and the amount actually expended by the County for re-procurement of Services, including procurement and administrative costs; and

b) such other direct damages.

The Contractor shall also remain liable for any liabilities and claims related to the Contractor's default. The County may also bring any suit or proceeding for specific performance or for an injunction.

ARTICLE 30. ACCEPTANCE

Acceptance of the Products will occur upon delivery to County unless Appendix A provides for acceptance verification or testing, in which case acceptance of the Products will occur upon successful completion of the acceptance verification or testing. Notwithstanding the preceding sentence, County's use of the Products for their operational purposes will constitute acceptance.

ARTICLE 31. SYSTEM ACCEPTANCE

a) Project Kickoff. Contractual testing and inspections will be defined and agreed to with the project team and the County prior to project kick off; and the Contractor will be responsible for conducting, coordinating and paying for all jurisdictional testing and inspections.

b) Completion Criteria. Site development will be completed per Issued for Construction (IFC) drawings, project requirements, contractual obligations, including any County and Contractor approved changes. This shall be confirmed by the subcontractor and reviewed with the Contractor's construction manager and project manager before inspections occur. All jurisdictional and contractual required testing and inspections will occur. The Contractor's site development checklist will be completed and signed off by the Contractor prior to the County's inspection. The site turn-over package will be completed and turned over to the Contractor, as defined and agreed to with the County. All punch list and deficiencies shall be completed prior to County and Contractor inspections.

c) System Acceptance. System Acceptance will occur upon completion of the Installation. Upon System Acceptance, the Parties will memorialize this event by promptly executing a System Acceptance Certificate.

ARTICLE 32. REPRESENTATIONS AND WARRANTIES

a) EQUIPMENT WARRANTY. During the Warranty Period, the Contractor warrants that the Equipment under normal use and service will be free from material defects in materials and workmanship.

b) SOFTWARE WARRANTY. Except as described in the SwSP and unless otherwise stated in the Software License Agreement, during the Warranty Period, the Contractor warrants the Software in accordance with the warranty terms of the Software License Agreement and the provisions of this Section that are applicable to the Software. **Nothing in this Warranty provision is intended to conflict or modify the Software Support Policy. In the event of an ambiguity or conflict between the Software Warranty and Software Support Policy, the Software Support Policy governs.** TO THE EXTENT, IF ANY, THAT THERE IS A SEPARATE LICENSE AGREEMENT PACKAGED WITH, OR PROVIDED ELECTRONICALLY WITH, A PARTICULAR PRODUCT THAT BECOMES EFFECTIVE ON AN ACT OF ACCEPTANCE BY THE END USER, THEN THAT AGREEMENT SUPERSEDES THE SOFTWARE LICENSE AGREEMENT AS TO THE END USER OF EACH SUCH PRODUCT.

c) EXCLUSIONS TO EQUIPMENT AND SOFTWARE WARRANTIES. These warranties do not apply to: (i) defects or damage resulting from: use of the Equipment or Software in other than its normal, customary, and authorized manner; accident, liquids, neglect, or acts of God; testing, maintenance, disassembly, repair, installation, alteration, modification, or adjustment not provided or authorized in writing by Motorola; County's failure to comply with all applicable industry and OSHA standards; (ii) breakage of or damage to antennas unless caused directly by defects in material or workmanship; (iii) Equipment that has had the serial number removed or made illegible; (iv) batteries (because they carry their own separate limited warranty) or consumables; (v) freight costs to ship Equipment to the repair depot; (vi) scratches or other cosmetic damage to Equipment surfaces that does not affect the operation of the Equipment; and (vii) normal or customary wear and tear.

d) SERVICE WARRANTY. During the Warranty Period, the Contractor warrants that the Services will be provided in a good and workmanlike manner and will conform in all material respects to the applicable Statement of Work. Services will be free of defects in materials and workmanship for a period of ninety (90) days from the date the performance of the Services are completed. County acknowledges that the Deliverables may contain recommendations, suggestions or advice from the Contractor to County (collectively, "recommendations"). The Contractor makes no warranties concerning those recommendations, and County alone accepts responsibility for choosing whether and how to implement the recommendations and the results to be realized from implementing them.

e) WARRANTY CLAIMS. To assert a warranty claim, County must notify the Contractor in writing of the claim before the expiration of the Warranty Period. Upon receipt of this notice, the Contractor will investigate the warranty claim. If this investigation confirms a valid Equipment or Software warranty claim, the Contractor will (at its option and at

no additional charge to County) repair the defective Equipment or Motorola Software, replace it with the same or equivalent product, or refund the price of the defective Equipment or Motorola Software. These actions will be the full extent of the Contractor's liability for the warranty claim. In the event of a valid Services warranty claim, County's sole remedy is to require the Contractor to re-perform the non-conforming Service or to refund, on a pro-rata basis, the fees paid for the non-conforming Service. If this investigation indicates the warranty claim is not valid, then the Contractor may invoice County for responding to the claim on a time and materials basis using the Contractor's then current labor rates. Repaired or replaced product is warranted for the balance of the original applicable warranty period. All replaced products or parts will become the property of the Contractor.

f) ORIGINAL END USER IS COVERED. These express limited warranties are extended by the Contractor to the original user purchasing the Products or Services for commercial, industrial, or governmental use only, and are not assignable or transferable.

g) DISCLAIMER OF OTHER WARRANTIES. THESE WARRANTIES ARE THE COMPLETE WARRANTIES FOR THE EQUIPMENT AND MOTOROLA SOFTWARE PROVIDED UNDER THIS AGREEMENT AND ARE GIVEN IN LIEU OF ALL OTHER WARRANTIES. THE CONTRACTOR DISCLAIMS ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT, AND FITNESS FOR A PARTICULAR PURPOSE.

ARTICLE 33. PATENT AND COPYRIGHT INDEMNIFICATION

a) The Contractor shall be liable and responsible for any and all claims made against the County for Contractor's infringement of patents, copyrights, service marks, trade secrets or any other third party proprietary rights, by the use or supplying of any Programs, documentation, Software, analyses, applications, methods, ways, processes, and the like, in the course of performance or completion of, or in any way connected with, the Work, or the County's continued use of the Deliverables furnished hereunder. Accordingly, the Contractor at its own expense, including the payment of reasonable attorney's fees, shall indemnify, and hold harmless the County and defend any action brought against the County with respect to any infringement claim, demand, and cause of action, debt, or liability.

b) In the event any Deliverable or anything provided to the County hereunder, or portion thereof is held to constitute an infringement and its use is or may be enjoined, the Contractor shall have the obligation to, at the Contractor's option and expense (i) modify, or require that the applicable Subcontractor or supplier modify, the alleged infringing item(s) at its own expense, without impairing in any respect the functionality or performance of the item(s), or (ii) replace the Equipment/Software (or part thereof) with a functioning equivalent but not infringing one, or (iii) procure for the County, at the Contractor's expense, the rights provided under this Contract to use the item(s). If none of the foregoing remedies are reasonably available to the Contractor, the Contractor shall accept return of the system and reimburse the County for the depreciated purchase price. The price shall be depreciated on the basis of straight line depreciation over a period of 15 years.

c) The Parties shall promptly inform the other of any litigation involving patent or copyright infringement, service mark, trademark, violation, or proprietary rights claims or is subject to any injunction which may prohibit Contractor from providing any Deliverables hereunder. The Contractor shall enter into agreements with all Subcontractors at the Contractor's own risk.

The County may reject any Deliverable that it believes to be the subject of any such litigation or injunction, or if, in the County's judgment, use thereof would delay the Work or be unlawful.

d) The Contractor shall be promptly notified in writing of any suit, action or proceeding in regard to any such claim, and shall be given a reasonable opportunity to defend, at its sole expense, any such suit, action or proceeding including settlement thereof, in which event, the Contractor shall pay all amounts due as damages finally awarded against the County or pay all balances of settlement thereof, as the case may be.

In no event will the Contractor's liability resulting from its indemnity obligation to County extend in any way to royalties payable on a per use basis or the County's revenues, or any royalty basis other than a reasonable royalty based upon revenue derived by Motorola from County from sales or license of the infringing Motorola Product.

This Article 34 provides County's sole and exclusive remedies and the Contractor's entire liability in the event of an Infringement Claim. County has no right to recover and the Contractor has no obligation to provide any other or further remedies, whether under another provision of this Agreement or any other legal theory or principle, in connection with an Infringement Claim. In addition, the rights and remedies provided in this Article are subject to and limited by the restrictions set forth in Article 35.

ARTICLE 34. LIMITATION OF LIABILITY

This limitation of liability provision shall apply notwithstanding any contrary provision in this Agreement. Except for personal injury or death, or direct damage to real property or direct damage tangible personal property the Contractor's total liability, whether for breach of Agreement, warranty, negligence, strict liability in tort, indemnification, or otherwise, will be limited to the direct damages recoverable under law, but not to exceed the price of the Equipment, Software, or services with respect to which losses or damages are claimed. ALTHOUGH THE PARTIES ACKNOWLEDGE THE POSSIBILITY OF SUCH LOSSES OR DAMAGES, THEY AGREE THAT THE CONTRACTOR WILL NOT BE LIABLE FOR ANY COMMERCIAL LOSS; INCONVENIENCE; LOSS OF USE, TIME, DATA, GOOD WILL, REVENUES, PROFITS OR SAVINGS; OR OTHER SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES IN ANY WAY RELATED TO OR ARISING FROM THIS AGREEMENT. This limitation of liability will survive the expiration or termination of this Agreement.

Notwithstanding the above, the Parties acknowledge that the Contractor shall be classified as a service provider as defined by the Next Generation 9-1-1 Advancement Act of 2012 ("NG911 Act") and therefore is entitled to the immunity protections granted under the NG911 Act.

ARTICLE 35. CONFIDENTIALITY

a) All materials, data, transactions of all forms, financial information, documentation, inventions, designs and methods obtained from the County in connection with the Services performed under this Agreement, made or developed by the Contractor or its Subcontractors in the course of the performance of such Services, or the results of such Services, or for which the County holds the proprietary rights, constitute Confidential Information and may not, without the prior written consent of the County, be used by the Contractor or its employees, agents, Subcontractors or suppliers for any purpose other than for the benefit of the County, unless required by law. In addition to the foregoing, all County employee information and County financial information shall be considered Confidential Information and shall be subject to all the requirements stated herein. Neither the Contractor nor its employees, agents, Subcontractors, or suppliers may sell, transfer, publish, disclose, display, license or otherwise make available to others any part of such Confidential Information without the prior written consent of the County. Additionally, the Contractor expressly agrees to be bound by and to defend, indemnify and hold harmless the County, and their officers and employees from the Contractor's breach of any federal, state, or local law in regard to the privacy of individuals.

b) The Contractor shall advise each of its employees, agents, Subcontractors, and suppliers who may be exposed to such Confidential Information of their obligation to keep such information confidential and shall promptly advise the County in writing if it learns of any unauthorized use or disclosure of the Confidential Information by any of its employees or agents, or Subcontractor's employees, present or former. In addition, the Contractor agrees to cooperate fully and provide any assistance necessary to ensure the confidentiality of the Confidential Information.

c) In the event of a breach of this Article, damages may not be an adequate remedy and the County shall be entitled to injunctive relief to restrain any such breach or threatened breach. Unless otherwise requested by the County, upon

the completion of the Services performed hereunder, the Contractor shall immediately turn over to the County all such Confidential Information existing in tangible form, and no copies thereof shall be retained by the Contractor or its employees, agents, Subcontractors, or suppliers without the prior written consent of the County. A certificate evidencing compliance with this provision and signed by an officer of the Contractor shall accompany such materials.

ARTICLE 36. PROPRIETARY INFORMATION

As a political subdivision of the State of Florida, Miami-Dade County is subject to the stipulations of the public records laws of the State of Florida (the "Public Records Law").

The Contractor acknowledges that all computer software in the County's possession may constitute or contain information or materials which the County has agreed to protect as proprietary information from disclosure or unauthorized use and may also constitute or contain information or materials which the County has developed at its own expense, the disclosure of which could harm the County's proprietary interest therein.

During the term of the Agreement, the Contractor will not use directly or indirectly for itself or for others, or publish or disclose to any third party, or remove from the County's property, any computer programs, data compilations, or other software which the County has developed, has used, or is using, is holding for use, or which are otherwise in the possession of the County (the "Computer Software"). All third-party license agreements provided to Contractor must also be honored by the Contractor and its employees, except as authorized by the County and, if the Computer Software has been leased or purchased by the County, all hired party license agreements must also be honored by the contractors' employees with the approval of the lessor or contractors thereof. This includes mainframe, minis, telecommunications, personal computers, and all information technology software.

The Contractor will report to the County any information discovered or which is disclosed to the Contractor which may relate to the improper use, publication, disclosure, or removal from the County's property of any information technology software and hardware and will take such steps as are within the Contractor's authority to prevent improper use, disclosure, or removal.

ARTICLE 37. PROPRIETARY RIGHTS

a) COUNTY'S PROPRIETARY RIGHTS

The Contractor hereby acknowledges and agrees that the County retains all rights, title and interests in and to all materials, data, documentation and copies thereof furnished by the County to the Contractor hereunder. The Contractor shall not, without the prior written consent of the County, use such documentation on any other project in which the Contractor or its employees, agents, Subcontractors are or may become engaged. Submission or distribution by the Contractor to meet official regulatory requirements or for other purposes in connection with the performance of Services under this Agreement shall not be construed as publication in derogation of the County's copyrights or other proprietary rights.

b) THE CONTRACTOR'S PROPRIETARY RIGHTS.

The Contractor, the third party manufacturer of any Equipment, and the copyright owner of any Non-Motorola Software own and retain all of their respective Proprietary Rights in the Equipment and Software, and nothing in this Agreement is intended to restrict their Proprietary Rights. All intellectual property developed, originated, or prepared by the Contractor in connection with providing to County the Equipment, Software, or related services remain vested exclusively in the Contractor, and this Agreement does not grant to County any shared development rights of intellectual property. Except as explicitly provided in the Software License Agreement, the Contractor does not grant to County, either directly or by implication, estoppel, or otherwise, any right, title or interest in the Contractor's Proprietary Rights. County will not modify, disassemble, peel components, decompile, otherwise reverse engineer or attempt to reverse engineer, derive source code or create derivative works from, adapt, translate, merge with other software, reproduce, distribute, sublicense, sell or export the Software, or permit or encourage any third party to do so. The preceding sentence does not apply to Open Source Software which is

governed by the standard license of the copyright owner.

VOLUNTARY DISCLOSURE. Except as required to fulfill its obligations under this Agreement, the Contractor will have no obligation to provide County with access to its Confidential Information and/or proprietary information. Under no circumstances will the Contractor be required to provide any data related to raw costs and pricing unless required to fulfill its obligations under Florida law.

ARTICLE 38. VENDOR REGISTRATION/CONFLICT OF INTEREST

a) Vendor Registration

The Contractor shall be a registered vendor with the County – Internal Services Department, Strategic Procurement Division, for the duration of this Agreement. In becoming a registered vendor with Miami-Dade County, the vendor's Federal Employer Identification Number (FEIN) must be provided, via submission of Form W-9 and 147c Letter, as required by the Internal Revenue Service (IRS). If no FEIN exists, the Social Security Number of the owner must be provided as the legal entity identifier. This number becomes Contractor's "County Vendor Number." To comply with Section 119.071(5) of the Florida Statutes relating to the collection of an individual's Social Security Number, be aware that the County requests the Social Security Number for the following purposes:

- **Identification of individual account records**
- **Payments to individual/Contractor for goods and services provided to Miami-Dade County**
- **Tax reporting purposes**
- **Provision of unique identifier in the vendor database used for searching and sorting departmental records**

The Contractor confirms its knowledge of and commitment to comply with the following:

1. ***Miami-Dade County Ownership Disclosure Affidavit***
   (Section 2-8.1 of the Code of Miami-Dade County)
2. ***Miami-Dade County Employment Disclosure Affidavit*** *(Section 2.8.1(d)(2) of the Code of Miami-Dade County)*
3. ***Miami-Dade County Employment Drug-free Workplace Certification***
   (Section 2-8.1.2(b) of the Code of Miami-Dade County)
4. ***Miami-Dade County Disability and Nondiscrimination Affidavit***
   (Section 2-8.1.5 of the Code of Miami-Dade County)
5. ***Miami-Dade County Debarment Disclosure Affidavit***
   (Section 10.38 of the Code of Miami-Dade County)
6. ***Miami-Dade County Vendor Obligation to County Affidavit***
   (*Section 2-8.1 of the Code of Miami-Dade County)*
7. ***Miami-Dade County Code of Business Ethics Affidavit***
   (Article I, Section 2-8.1(i) of the Code of Miami-Dade County)
8. ***Miami-Dade County Family Leave Affidavit***
   (Article V of Chapter 11 of the Code of Miami-Dade County)
9. ***Miami-Dade County Living Wage Affidavit***
   (Section 2-8.9 of the Code of Miami-Dade County)
10. ***Miami-Dade County Domestic Leave and Reporting Affidavit*** *(Article VIII, Section 11A-60 - 11A-67 of the Code of Miami-Dade County)*
11. ***Miami-Dade County Verification of Employment Eligibility (E-Verify) Affidavit.***
    (Section 448.095, of the Florida State Statutes)
12. ***Miami-Dade County Pay Parity Affidavit***
    (Resolution No. R-1072-17)
13. ***Miami-Dade County Suspected Workers' Compensation Fraud Affidavit***

(Resolution No. R-919-18)

14. ***Office of the Inspector General***
(Section 2-1076 of the Code of Miami-Dade County)

15. **Small Business Enterprises**
The County endeavors to obtain the participation of all small business enterprises pursuant to Sections 2-8.1.1.1.1, 2-8.1.1.1.2 and 2-8.2.2 of the Code of Miami-Dade County and Title 49 of the Code of Federal Regulations.

16. ***Antitrust Laws***
By acceptance of any contract, the Contractor agrees to comply with all antitrust laws of the United States and the State of Florida.

b) Conflict of Interest and Code of Ethics
Section 2-11.1(d) of the Code requires that any County employee or any member of the employee's immediate family who has a controlling financial interest, direct or indirect, with Miami-Dade County or any person or agency acting for Miami-Dade County, competing or applying for a contract, must first request a conflict of interest opinion from the County's Ethics Commission prior to their or their immediate family member's entering into any contract or transacting any business through a firm, corporation, partnership or business entity in which the employee or any member of the employee's immediate family has a controlling financial interest, direct or indirect, with Miami-Dade County or any person or agency acting for Miami-Dade County. Any such contract or business engagement entered in violation of this subsection, as amended, shall be rendered voidable. All autonomous personnel, quasi-judicial personnel, advisory personnel, and employees wishing to do business with the County are hereby advised they must comply with the applicable provisions of Section 2-11.1 of the Code relating to Conflict of Interest and Code of Ethics. In accordance with Section 2-11.1(y) of the Code, the Miami-Dade County Commission on Ethics and Public Trust shall be empowered to review, interpret, render advisory opinions and letters of instruction, and enforce the Conflict of Interest and Code of Ethics Ordinance.

ARTICLE 39. INSPECTOR GENERAL REVIEWS

Independent Private Sector Inspector General Reviews

Pursuant to Miami-Dade County Administrative Order No. 3-20, the County has the right to retain the services of an Independent Private Sector Inspector General (the "IPSIG"), whenever the County deems it appropriate to do so. Upon written notice from the County, the Contractor shall make available to the IPSIG retained by the County, all requested records and documentation pertaining to this Agreement for inspection and reproduction. The County shall be responsible for the payment of these IPSIG services, and under no circumstance shall the Contractor's prices and any changes thereto approved by the County, be inclusive of any charges relating to these IPSIG services. The terms of this provision apply to the Contractor, its officers, agents, employees, Subcontractors, and assignees. Nothing contained in this provision shall impair any independent right of the County to conduct an audit or investigate the operations, activities, and performance of the Contractor in connection with this Agreement. The terms of this Article shall not impose any liability on the County by the Contractor or any third party.

Miami-Dade County Inspector General Review

According to Section 2-1076 of the Code, Miami-Dade County has established the Office of the Inspector General which may, on a random basis, perform audits on all County contracts, throughout the duration of said contracts. The cost of the audit for this Agreement shall be one quarter of one percent (0.25%) of the total Agreement amount which cost shall be included in the total Agreement amount. The audit cost will be deducted by the County from progress payments to the Contractor. The audit cost shall also be included in all change orders and all Agreement renewals and extensions.

Exception: The above application of one quarter of one percent (0.25%) fee assessment shall not apply to the following contracts: (a) IPSIG contracts; (b) contracts for legal services; (c) contracts for financial advisory services; (d) auditing contracts; (e) facility rentals and lease agreements; (f) concessions and other

rental agreements; (g) insurance contracts; (h) revenue-generating contracts; (i) contracts where an IPSIG is assigned at the time the contract is approved by the Board; (j) professional service agreements under $1,000; (k) management agreements; (l) small purchase orders as defined in Miami-Dade County Implementing Order No. 3-38; (m) federal, state and local government-funded grants; and (n) interlocal agreements. ***Notwithstanding the foregoing, the Miami-Dade County Board of County Commissioners may authorize the inclusion of the fee assessment of one quarter of one percent (0.25%) in any exempted contract at the time of award.***

Nothing contained above shall in any way limit the powers of the Inspector General to perform audits on all County contracts including, but not limited to, those contracts specifically exempted above. The Miami-Dade County Inspector General is authorized and empowered to review past, present, and proposed County and Trust contracts, transactions, accounts, records, and programs. In addition, the Inspector General has the power to subpoena witnesses, administer oaths, require the production of records, and monitor existing projects and programs. Monitoring of an existing project or program may include a report concerning whether the project is on time, within budget and in conformance with plans, specifications, and applicable law. The Inspector General is empowered to analyze the necessity of and reasonableness of proposed change orders to the Agreement. The Inspector General is empowered to retain the services of IPSIGs to audit, investigate, monitor, oversee, inspect, and review operations, activities, performance and procurement process, including but not limited to project design, specifications, proposal submittals, activities of the Contractor, its officers, agents and employees, lobbyists, County staff and elected officials to ensure compliance with contract specifications and to detect fraud and corruption.

Upon written notice to the Contractor from the Inspector General or IPSIG retained by the Inspector General, the Contractor shall make all requested records and documents available to the Inspector General or IPSIG for inspection and copying. The Inspector General and IPSIG shall have the right to inspect and copy all documents and records in the Contractor's possession, custody or control which, in the Inspector General's or IPSIG's sole judgment, pertain to performance of the Agreement, including, but not limited to original estimate files, change order estimate files, worksheets, proposals and agreements form and which successful and unsuccessful Subcontractors, all project-related correspondence, memoranda, instructions, financial documents, construction documents, proposal and contract documents, back-charge documents, all documents and records which involve cash, trade or volume discounts, insurance proceeds, rebates, or dividends received, payroll and personnel records, and supporting documentation for the aforesaid documents and records.

ARTICLE 40. FEDERAL, STATE, AND LOCAL COMPLIANCE REQUIREMENTS

As applicable, Contractor shall comply, subject to applicable professional standards, with the provisions of all applicable federal, state and the County orders, statutes, ordinances, rules and regulations which may pertain to the Services required under this Agreement, including, but not limited to:

a) Equal Employment Opportunity clause provided under 41 C.F.R. Part 60-1.3 in accordance with Executive Order 11246, "Equal Employment Opportunity", as amended by Executive Order 11375, and, implementing regulations at 41 C.F.R. Part 60.

b) Miami-Dade County Small Business Enterprises Development Participation Provisions.

c) The Clean Air Act of 1955, as amended, (42 U.S.C. §§ 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. §§ 1251-1387), as amended.

d) The Davis-Bacon Act, as amended(40 U.S.C. §3141-3144 and 3146-3148) as supplemented by the Department of Labor regulations (29 C.F.R. Part 5).

e) The Copeland "Anti-Kickback" Act (40 U.S.C. § 3145) as supplemented by the Department of Labor regulations (29 C.F.R. Part 2).

f) Section 2-11.1 of the Code of Miami-Dade County, "Conflict of Interest and Code of Ethics Ordinance".

g) Section 10-38 of the Code of Miami-Dade County, "Debarment of Contractors from County Work".

h) Section 11A-60 - 11A-67 of the Code of Miami-Dade County, "Domestic Leave".

i) Section 21-255 of the Code of Miami-Dade County, prohibiting the presentation, maintenance, or prosecution of false or fraudulent claims against Miami-Dade County.

j) The Equal Pay Act of 1963, as amended (29 U.S.C. § 206(d)).

k) The prohibitions against discrimination on the basis of age under the Age Discrimination Act of 1975 (42 U.S.C. §§ 6101-07) and regulations issued pursuant thereto (24 C.F.R. Part 146).

l) Section 448.07 of the Florida Statutes "Wage Rate Discrimination Based on Sex Prohibited".

m) Chapter 11A of the Code of Miami-Dade County (§ 11A-1 et seq.) "Discrimination".

n) Chapter 22 of the Code of Miami-Dade County (§ 22-1 et seq.) "Wage Theft".

o) Any other laws prohibiting wage rate discrimination based on sex.

p) Chapter 8A, Article XIX, of the Code of Miami-Dade County (§ 8A-400 et seq.) "Business Regulations".

q) Byrd Anti-Lobbying Amendment (31 U.S.C. § 1352).

r) Executive Order 12549 "Debarment and Suspension", which stipulates that no contract(s) are “to be awarded at any tier or to any party which is debarred or suspended or is otherwise excluded from or ineligible for participation in Federal assistance programs”.

Pursuant to Resolution No. R-1072-17, by entering into this Contract, the Contractor is certifying that the Contractor is in compliance with, and will continue to comply with, the provisions of items "j" through "o" above.

The Contractor shall hold all licenses and/or certifications, obtain and pay for all permits and/or inspections, and comply with all laws, ordinances, regulations and building code requirements applicable to the work required herein. Damages, penalties, and/or fines imposed on the County or Contractor for failure to obtain and maintain required licenses, certifications, permits and/or inspections shall be borne by the Contractor. The Project Manager shall verify the certification(s), license(s), and permit(s) for the Contractor prior to authorizing Work and as needed.

Notwithstanding any other provision of this Agreement, Contractor shall not be required pursuant to this Agreement to take any action or abstain from taking any action if such action or abstention would, in the good faith determination of the Contractor, constitute a violation of any law or regulation to which Contractor is subject, including but not limited to laws and regulations requiring that Contractor conduct its operations in a safe and sound manner.

ARTICLE 41. NONDISCRIMINATION

During the performance of this Agreement, Contractor agrees to not discriminate against any employee or applicant for employment because of race, color, religion, ancestry, national origin, sex, pregnancy, age, disability, marital status, familial status, sexual orientation, gender identity or gender expression, status as victim of domestic violence, dating violence or stalking, or veteran status, and on housing related contracts the source of income, and will take affirmative action to ensure that employees and applicants are afforded equal employment opportunities without discrimination. Such action shall be taken with reference to, but not limited to recruitment, employment, termination,

rates of pay or other forms of compensation, and selection for training or retraining, including apprenticeship and on the job training.

By entering into this Agreement, the Contractor attests that it is not in violation of the Americans with Disabilities Act of 1990 (and related Acts) or Miami-Dade County Resolution No. R-385-95. If the Contractor or any owner, subsidiary or other firm affiliated with or related to the Contractor is found by the responsible enforcement agency or the County to be in violation of the Act or the Resolution, such violation shall render this Agreement void. This Agreement shall be void if the Contractor submits a false affidavit pursuant to this Resolution or the Contractor violates the Act or the Resolution during the term of this Agreement, even if the Contractor was not in violation at the time it submitted its affidavit.

ARTICLE 42. CONFLICT OF INTEREST

The Contractor represents that:

a) No officer, director, employee, agent, or other consultant of the County or a member of the immediate family or household of the aforesaid has directly or indirectly received or been promised any form of benefit, payment, or compensation, whether tangible or intangible, in connection with the award of this Agreement.

b) There are no undisclosed persons or entities interested with the Contractor in this Agreement. This Agreement is entered into by the Contractor without any connection with any other entity or person making a proposal for the same purpose, and without collusion, fraud or conflict of interest. No elected or appointed officer or official, director, employee, agent, or other consultant of the County, or of the State of Florida (including elected and appointed members of the legislative and executive branches of government), or a member of the immediate family or household of any of the aforesaid:

   i) is interested on behalf of or through the Contractor directly or indirectly in any manner whatsoever in the execution or the performance of this Agreement, or in the Services, Deliverables or Work, to which this Agreement relates or in any portion of the revenues; or

   ii) is an employee, agent, advisor, or consultant to the Contractor or to the best of the Contractor's knowledge any Subcontractor or supplier to the Contractor.

c) Neither the Contractor nor any officer, director, employee, agency, parent, subsidiary, or affiliate of the Contractor shall have an interest which is in conflict with the Contractor's faithful performance of its obligation under this Agreement; provided that the County, in its sole discretion, may consent in writing to such a relationship, provided the Contractor provides the County with a written notice, in advance, which identifies all the individuals and entities involved and sets forth in detail the nature of the relationship and why it is in the County's best interest to consent to such relationship.

d) The provisions of this Article are supplemental to, not in lieu of, all applicable laws with respect to conflict of interest. In the event there is a difference between the standards applicable under this Agreement and those provided by statute, the stricter standard shall apply.

e) In the event Contractor has no prior knowledge of a conflict of interest as set forth above and acquires information which may indicate that there may be an actual or apparent violation of any of the above, Contractor shall promptly bring such information to the attention of the Project Manager. Contractor shall thereafter cooperate with the County's review and investigation of such information and comply with the instructions Contractor receives from the Project Manager regarding remedying the situation.

ARTICLE 43. PRESS RELEASE OR OTHER PUBLIC COMMUNICATION

Under no circumstances shall the Contractor without the express written consent of the County:

a) Issue or permit to be issued any press release, advertisement or literature of any kind which refers to the County, or the Work being performed hereunder, unless the Contractor first obtains the written approval of the County. Such approval may be withheld if for any reason the County believes that the publication of such information would be harmful to the public interest or is in any way undesirable; and

b) Communicate in any way with any contractor, department, board, agency, commission or other organization or any person whether governmental or private in connection with the Work to be performed hereunder except upon prior written approval and instruction of the County; and

c) Except as may be required by law, the Contractor and its employees, agents, Subcontractors, and suppliers will not represent, directly or indirectly, that any Work, Deliverables or Services provided by the Contractor or such parties has been approved or endorsed by the County.

ARTICLE 44. BANKRUPTCY

The County may terminate this Agreement, if, during the term of any contract the Contractor has with the County, the Contractor becomes involved as a debtor in a bankruptcy proceeding, or becomes involved in a reorganization, dissolution, or liquidation proceeding, or if a trustee or receiver is appointed over all or a substantial portion of the property of the Contractor under federal bankruptcy law or any state insolvency law.

ARTICLE 45. GOVERNING LAW

This Agreement, including appendices, and all matters relating to this Agreement (whether in contract, statute, tort (such as negligence), or otherwise) shall be governed by, and construed in accordance with, the laws of the State of Florida. Venue shall be in Miami-Dade County.

ARTICLE 46. INTENTIONALLY LEFT BLANK

ARTICLE 47. INTEREST OF MEMBERS, OFFICERS OR EMPLOYEES AND FORMER MEMBERS, OFFICERS OR EMPLOYEES

No member, officer, or employee of the County, no member of the governing body of the locality in which this Agreement is situated, no member of the governing body in which the County was activated, and no other public official of such locality or localities who exercises any functions or responsibilities with respect to the project, shall, during his or her tenure, or for one year thereafter, have any interest, direct or indirect, in this Agreement or the proceeds thereof.

ARTICLE 48. LIENS

The Contractor is prohibited from placing a lien on County property. This prohibition shall apply to all Subcontractors.

ARTICLE 49. FIRST SOURCE HIRING REFERRAL PROGRAM

Pursuant to Section 2-2113 of the Code, for all contracts for goods and services, the Contractor, prior to hiring to fill each vacancy arising under a County contract shall (1) first notify Career Source South Florida ("CSSF"), the designated Referral Agency, of the vacancy and list the vacancy with CSSF according to the Code, and (2) make good faith efforts as determined by the County to fill a minimum of fifty percent (50%) of its employment needs under the County contract through the CSSF. If no suitable candidates can be employed after a Referral Period of three to five days, the Contractor is free to fill its vacancies from other sources. Contractor will be required to provide quarterly reports to the CSSF indicating the name and number of employees hired in the previous quarter, or why referred candidates were rejected. Sanctions for non-compliance shall include, but not be limited to: (i) suspension of

Agreement until Contractor performs obligations, if appropriate; (ii) default and/or termination; and (iii) payment of $1,500/employee, or the value of the wages that would have been earned given the noncompliance, whichever is less. Registration procedures and additional information regarding the First Source Hiring Referral Program are available at https://iapps.careersourcesfl.com/firstsource/.

ARTICLE 50. PUBLIC RECORDS AND CONTRACTS FOR SERVICES PERFORMED ON BEHALF OF MIAMI-DADE COUNTY

The Contractor shall comply with the Public Records Laws, including by not limited to, (1) keeping and maintaining all public records that ordinarily and necessarily would be required by the County in order to perform the service; (2) providing the public with access to public records on the same terms and conditions that the County would provide the records and at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes, or as otherwise provided by law; (3) ensuring that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law; and (4) meeting all requirements for retaining public records and transferring, at no cost, to the County all public records in possession of the Contractor upon termination of the Agreement and destroying any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements upon such transfer. In addition, all records stored electronically must be provided to the County in a format that is compatible with the information technology systems of the County. Failure to meet any of these provisions or to comply with Florida's Public Records Laws as applicable shall be a material breach of this Agreement and shall be enforced in accordance with the terms and conditions of the Agreement.

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT (305) 375-5773, ISD-VSS@MIAMIDADE.GOV, 111 NW 1st STREET, SUITE 1300, MIAMI, FLORIDA 33128.

ARTICLE 51. VERIFICATION OF EMPLOYMENT ELIGIBILITY (E-VERIFY)

By entering into this Agreement, the Contractor becomes obligated to comply with the provisions of Section 448.095 of the Florida Statutes, titled "Verification of Employment Eligibility". This includes but is not limited to utilization of the U.S. Department of Homeland Security's E-Verify System to verify the employment eligibility of all newly hired employees by the Contractor effective January 1, 2021 and requiring all Subcontractors to provide an affidavit attesting that the Subcontractor does not employ, contract with, or subcontract with, an unauthorized alien. Failure to comply may lead to termination of this Agreement, or if a Subcontractor knowingly violates the statute, the subcontract must be terminated immediately. Any challenge to termination under this provision must be filed in the Circuit Court no later than twenty (20) calendar days after the date of termination and the Contractor may be liable for any additional costs incurred by the County resulting from the termination of the Agreement. If this Agreement is terminated for a violation of the statute by the Contractor, the Contractor may not be awarded a public contract for a period of one year after the date of termination. Public and private employers must enroll in the E-Verify System (http://www.uscis.gov/e-verify) and retain the I-9 Forms for inspection.

ARTICLE 52. TAXES

The contract price does not include any excise, sales, lease, use, property, or other taxes, assessments or duties, all of which will be paid by the County except as exempt by law. If the County is exempt by law, the County agrees to provide Contractor with a copy of its tax exempt status. If Contractor is required to pay any of these taxes, Contractor will send an invoice to the County and the County will pay to Contractor the amount of the taxes (including any interest and penalties) within twenty (20) days after the date of the invoice. The County will be solely responsible for reporting the Tower for personal property tax purposes, and Contractor will be solely responsible for reporting

taxes on its income or net worth.

ARTICLE 53. MOTOROLA SOFTWARE LICENSE AGREEMENT/SUBSCRIPTION SERVICES

Both the Contractor and the County hereby agree to incorporate the Motorola Software License Agreement attached hereto as Exhibit A.

ARTICLE 54. CRIMINAL JUSTICE INFORMATION SYSTEM SECURITY

Any contract awarded to a private contractor/vendor wherein a software application/program that accesses, processes, and stores criminal justice information (CJI) or Personally Identifiable Information (PII), or the selected private contractor/vendor requires physical or logical access to the MDPD's network which contains CJI or PII, must comply with all security policy requirements outlined in the Florida Department of Law Enforcement's (FDLE) Criminal Justice Information Systems (CJIS) Security Policy. Additionally, the selected private contractor/vendor, and any of its employees or subcontractors, that requires logical access to the MDPD's network must review the attached Federal Bureau of Investigation's (FBI) CJIS Security Addendum (Annex A), and sign the FBI's CJIS Security Addendum Certification (Annex B) upon completion of a state and national fingerprint-based record check, criminal background check, proof of citizenship or authorization to be employed in the United States, biennially. Further, support personnel, contractors, and custodial workers with access to physically secure locations or controlled areas shall be subject to a state and national fingerprint-based record check unless these individuals are escorted by authorized personnel at all times.

ARTICLE 55. ADDITIONAL EQUIPMENT, PRODUCTS OR SERVICES

During the term of the Agreement, including any extensions or renewals thereof, the County may request additional equipment, products, and/or services available from the Contractor that are similar in nature to the equipment, products and/or services available under this Agreement. In the event that the County requires such equipment, products, and/or services, the County shall request a detailed State of Work from the Contractor that shall define in detail the equipment, products and/or services to be provided. The County and the Contractor shall mutually agree upon the terms and conditions required to complete the statement of Work, including associated pricing. Each Statement of Work executed hereunder shall be incorporated into the terms and conditions of this Agreement through a Supplemental Agreement.

ARTICLE 56. SURVIVAL

The Parties acknowledge that any of the obligations in this Agreement will survive the term, termination, and cancellation hereof. Accordingly, the respective obligations of the Contractor and the County under this Agreement, which by nature would continue beyond the termination, cancellation, or expiration thereof, shall survive termination, cancellation or expiration hereof.

ARICLE 57. U.S. SOCCER FEDERATION 2026 WORLD CUP

The terms of this agreement are subordinate to the terms of the Airport Agreement submitted by Miami-Dade County to the United States Soccer Federation on February 21, 2018. In carrying out its obligations under this Agreement, Motorolashall not, take or omit any action which is inconsistent with, or in derogation of, the County's obligations under the Airport Agreement. Where Motorola´s rights or obligations under this Agreement are in conflict with the County's obligations under the Airport Agreement, and upon notice by the County to Motorola, Motorola shall have the right, upon written notice to the County within five (10) days of receipt of notice of such a conflict, to either cure said action causing the conflict or terminate this Agreement for convenience. In such termination, the parties to this Agreement agree to proceed as described in article 26 and County and Motorola shall have no cause of action for other money damages of any kind, including but not limited to direct damages, unamortized costs or debt, stored or ordered materials, indirect damages, lost profits, loss of opportunity, loss of goodwill, or otherwise. In the event that Motorola does not elect to terminate this Agreement within the time specified herein, this Agreement shall be deemed to have been amended via consent of the parties to conform its terms to the requirements of the Airport Agreement,

but only to the extent needed to avoid conflict with same. Agreement between Miami-Dade County and U.S. Soccer Federation may be downloaded at: www.miamidade.gov/govaction/legistarfiles/MinMatters/Y2018/180129min.pdf

ARTICLE 58. FEDERAL AVIATION ADMINISTRATION (FAA) PROVISIONS

Compliance with Nondiscrimination Requirements:

During the performance of this Agreement, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees as follows:

1. Compliance with Regulations: The Contractor (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Acts And Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this Agreement.

2. Non-discrimination: The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Attachment B of 49 CFR part 21.

3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding, or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the Contractor's obligations under this contract and the Nondiscrimination Acts And Authorities on the grounds of race, color, or national origin.

4. Information and Reports: The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts And Authorities and instructions.

Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

5. Sanctions for Noncompliance: In the event of a Contractor's noncompliance with the Nondiscrimination provisions of this Contract, the sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:

   i. Withholding payments to the Contractor under the Agreement until the contractor complies; and/or

   ii. Cancelling, terminating, or suspending a contract, in whole or in part.

6. Incorporation of Provisions: The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, Required Contact Provisions Issued on January 29, 2016 Page 19 AIP Grants and Obligated Sponsors Airports (ARP) unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the sponsor or the Federal Aviation Administration may

direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the sponsor to enter into any litigation to protect the interests of the sponsor. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

7. During the performance of this Agreement, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees to comply with the following nondiscrimination statutes and authorities; including but not limited to:

   i. Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);

   ii. 49 CFR part 21 (Non-discrimination In Federally-Assisted Programs of The Department of Transportation—Effectuation of Title VI of The Civil Rights Act of 1964);

   iii. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);

   iv. Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR part 27;

   v. The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);

   vi. Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);

   vii. The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and Contractors, whether such programs or activities are Federally funded or not);

   viii. Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38;

   ix. The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123 (prohibits discrimination on the basis of race, color, national origin, and sex);

   x. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;

   xi. Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable

steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);

xii. Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

- All contracts and subcontracts that result from this solicitation incorporate by reference the provisions of 29 CFR Part 201, the Federal Fair Labor Standards Act (FLSA), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part time workers. The Contractor/Consultant has full responsibility to monitor compliance to the referenced statute or regulation. The Contractor/Consultant must address any claims or disputes that arise from this requirement directly with the U.S. Department of Labor – Wage and Hour Division.

i. All contracts and subcontracts that result from this solicitation incorporate by reference the requirements of 29 CFR Part 1910 with the same force and effect as if given in full text. Contractor must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The Contractor retains full responsibility to monitor its compliance and their subcontractor's compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (20 CFR Part 1910). Contractor must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

The parties agree that if for any reason and during the term of this Agreement, Motorola is non-compliant with the provisions stated in this article or the ones in article 40; the County´s only remedy shall be to terminate for convenience the Agreement as described in article 28.

ARTICLE 59. TRUST AGREEMENT

a) Incorporation of Trust Agreement by Reference: Notwithstanding any of the terms, provisions and conditions of this Agreement, it is understood and agreed by the parties hereto that the provisions of the Amended and Restated Trust Agreement (link below) dated as of the 15th day of December, 2002 as amended from time to time, by and between the County and the JP Morgan Chase Bank as Trustee and Wachovia Bank, National Association as Co-trustee ("the Trust Agreement"), which Trust Agreement is incorporated herein by reference, shall prevail and govern in the event of any inconsistency with or ambiguity relating to the terms and conditions of this Agreement, including the rents, fees or charges required herein, and their modification or adjustment. Copies of the Trust Agreement are available for inspection in the offices of the Department during normal working hours.

The Amended and Restated Trust Agreement link:
https://www.miami-airport.com/library/pdfdoc/Propertise/Amended%20and%20Restated%20Trust%20Agreement%202002.pdf

b) Adjustment of Terms and Conditions: If, at any time during the term or any extension thereto, as applicable, of this Agreement, a court of competent jurisdiction shall determine that any of the terms and conditions of this Agreement, including the rentals, fees and charges required to be paid hereunder to the County by the Lessee or by other Lessees under other Agreements of the County for the lease or use of facilities used for similar purposes, are unjustly discriminatory, the County shall have the right to modify such terms and conditions and to increase or otherwise adjust the rentals, fees and charges required to be paid under this Agreement in such a manner as the County shall determine is necessary and reasonable so that the rentals, fees and charges payable by the Lessee and others shall not thereafter be unjustly discriminatory to any user of like facilities and shall not result in any violation of the Trust Agreement or in any deficiency in revenues necessary to comply with the covenants of the Trust Agreement. In the event the County has modified the terms and conditions of this Agreement, including any adjustment of the rentals, fees and

charges required to be paid to the County pursuant to this provision, this Agreement shall be amended to incorporate such modification of the terms and conditions including the adjustment of rentals, fees and charges upon the issuance of written notice from the Department to the Lessee.

Notwithstanding the above, the parties agree that if Motorola, at its sole discretion, considers that the changes made to the Agreement pursuant to this article substantially alters its rights and/or obligations set forth herein; Motorola shall have the right to terminate this Agreement for convenience as stated in article 26 and shall be entitled to be compensated as provided for in such Section, and the County and Motorola shall in such circumstance have no other claim or cause of action for money damages of any kind, including but not limited to direct damages, unamortized costs or debt, stored or ordered materials, indirect damages, lost profits, loss of opportunity, loss of goodwill, or otherwise.

ARTICLE 60. GENERAL ALLOWANCE ACCOUNT

Pursuant to Section 2-8.1 of the Code, an allowance of ten percent (10%) of the project base estimate amount has been established for the following:

a) Unforeseen Conditions: To pay for any additional costs (engineering, permitting, plan revisions, existing utility relocations, unforeseen requirements requested by the Building Department Officials, unforeseen fire protection and life safety requirements by Authority Having Jurisdiction), project changes and for quantity adjustments.

Any General Allowance Account expenses shall be approved by the County in advance and authorized by a purchase order. Any portion of the aforementioned not-to-exceed amount for which payment is not authorized in writing by the Project Manager shall remain the property of the County. The Contractor shall have no entitlement to any of these funds. The County retains all rights to these funds, may expend these funds at its sole discretion, and any funds not expended from this account remain the property of the County. When the Work is to be performed under the General Allowance Account, if any, it shall be integrated into the Agreement as a part of the Agreement as awarded.

ARTICLE 61. SPECIAL SECURITY REQUIREMENTS AT MIAMI-DADE AVIATION DEPATMENT

The Miami-Dade County Aviation Department (MDAD) operates under strict security regulations. These regulations involve the issuance of special identification (ID) badge after performing an FBI fingerprint based criminal history records check (CHRC) and security threat assessment (STA) vetting of individuals who are employed, hired or who are required to frequently (more than 5 times within a 90-day period) enter the restricted areas of the Miami International Airport. These credentials are required for access and are issued by MDAD at the current cost of $38.00 for fingerprints and $20.00 for the ID badge, per applicant. Renewals are every 2 years or less depending on employment eligibility and or contract expiration date. Fingerprint fee is for initial CHRC, break in access over 30 days, or if the badge expires. Therefore, Motorola shall obtain and pay for ID cards for each of its employees its agents who will be frequently visiting or performing services at the Miami International Airport restricted areas. For more information concerning Credentialing, registration, or additional information you may contact the Miami-Dade Aviation Department ID Section at 30-876-7188 or email miaco@miami-airport.com

A. Motorola must follow all security procedures required of workers at MDAD. This will include his will include submitting and successfully passing a Criminal History Record's Check (CHRC) and Security Threat Assessment (STA) for SIDA/SECURE/ STERILE badge issuance.

For Customs ID, call 305-345-6528 or email miamiairportsecurityoffice@cbp.dhs.gov for information. Motorola will be responsible for all costs incurred in obtaining security badges. Security clearance must be obtained prior to the start of contract. CBP may require new fingerprints every 2 years or upon badge renewal or break in access.

B. Motorola and its sub-contractors are required to register their companies separately as only employees who

are actively on payroll are authorized to obtain ID badges with the MDAD Credentialing section. MDAD and Miami International Airport are subject to complying with ISO 14001 regulations regarding Environmental responsibility. Motorola will receive training and familiarization about the ISO 14001 protocol from MDAD.

IN WITNESS WHEREOF, the Parties have executed this Agreement effective as of the last date that the Agreement is executed below,

Contractor: Motorola Solutions, Inc.		Miami-Dade County	
By:	Daniel Sanchez Digitally signed by Daniel Sanchez Date: 2023.04.21 15:38:20 -04'00'	By:	
Name:	Daniel Sanchez	Name:	Daniella Levine Cava
Title:	MSSI/Territory Vice President	Title:	Mayor
Date:	4/21/2023	Date:	
Attest:		Attest:	
	Corporate Assistant Secretary/Notary Public		Clerk of the Board
Corporate Seal/Notary Seal		Approved as to form and legal sufficiency	
		Assistant County Attorney	

Exhibit A
MOTOROLA SOFTWARE LICENSE AGREEMENT

This Exhibit A Contractor Software License Agreement ("Agreement") is between Motorola Solutions, Inc. (“Contractor") and Miami-Dade County, Florida (“Licensee”). For good and valuable consideration, the parties agree as follows:

Section 1 DEFINITIONS

1.1 “Designated Products” means products provided by Contractor to Licensee with which or for which the Software and Documentation is licensed for use.

1.2 “Documentation” means product and software documentation that specifies technical and performance features and capabilities, and the user, operation and training manuals for the Software (including all physical or electronic media upon which such information is provided).

1.3 “Open Source Software” means software with either freely obtainable source code, license for modification, or permission for free distribution.

1.4 “Open Source Software License” means the terms or conditions under which the Open Source Software is licensed.

1.5 “Primary Agreement” means the agreement to which this exhibit is attached.

1.6 “Security Vulnerability” means a flaw or weakness in system security procedures, design, implementation, or internal controls that could be exercised (accidentally triggered or intentionally exploited) and result in a security breach such that data is compromised, manipulated or stolen or the system damaged.

1.7 “Software” (i) means proprietary software in object code format, and adaptations, translations, de-compilations, disassemblies, emulations, or derivative works of such software; (ii) means any modifications, enhancements, new versions and new releases of the software provided by Contractor; and (iii) may contain one or more items of software owned by a third party supplier. The term "Software" does not include any third party software provided under separate license or third party software not licensable under the terms of this Agreement.

Section 2 SCOPE

Contractor and Licensee enter into this Agreement in connection with Contractor's delivery of certain proprietary software or products containing embedded or pre-loaded proprietary software, or both. This Agreement contains the terms and conditions of the license Contractor is providing to Licensee, and Licensee’s use of the proprietary software and affiliated documentation.

Section 3 GRANT OF LICENSE

3.1. Subject to the provisions of this Agreement and the payment of applicable license fees, Contractor grants to Licensee a personal, limited, non-transferable (except as permitted in Section 7) and non-exclusive license under Contractor’s copyrights and Confidential Information (as defined in the Primary Agreement) embodied in the Software to use the Software, in object code form, and the Documentation solely in connection with Licensee's use of the Designated Products. This Agreement does not grant any rights to source code.

3.2. If the Software licensed under this Agreement contains or is derived from Open Source Software, the terms and conditions governing the use of such Open Source Software are in the Open Source Software Licenses of the copyright owner and not this Agreement. If there is a conflict between the terms

and conditions of this Agreement and the terms and conditions of the Open Source Software Licenses governing Licensee's use of the Open Source Software, the terms and conditions of the license grant of the applicable Open Source Software Licenses will take precedence over the license grants in this Agreement. If requested by Licensee, Contractor will use commercially reasonable efforts to: (i) determine whether any Open Source Software is provided under this Agreement; and (ii) identify the Open Source Software (or specify where that license may be found).

3.3 TO THE EXTENT, IF ANY, THAT THERE IS A SEPARATE LICENSE AGREEMENT PACKAGED WITH, OR PROVIDED ELECTRONICALLY WITH, A PARTICULAR PRODUCT THAT BECOMES EFFECTIVE ON AN ACT OF ACCEPTANCE BY THE END USER, THEN THAT AGREEMENT SUPERSEDES THE SOFTWARE LICENSE AGREEMENT AS TO THE END USER OF EACH SUCH PRODUCT.

Section 4 LIMITATIONS ON USE

4.1. Licensee may use the Software only for Licensee's internal business purposes and only in accordance with the Documentation. Any other use of the Software is strictly prohibited. Without limiting the general nature of these restrictions, Licensee will not make the Software available for use by third parties on a "time sharing," "application service provider," or "service bureau" basis or for any other similar commercial rental or sharing arrangement.

4.2. Licensee will not, and will not allow or enable any third party to: (i) reverse engineer, disassemble, peel components, decompile, reprogram or otherwise reduce the Software or any portion to a human perceptible form or otherwise attempt to recreate the source code; (ii) modify, adapt, create derivative works of, or merge the Software; (iii) copy, reproduce, distribute, lend, or lease the Software or Documentation to any third party, grant any sublicense or other rights in the Software or Documentation to any third party, or take any action that would cause the Software or Documentation to be placed in the public domain; (iv) remove, or in any way alter or obscure, any copyright notice or other notice of Contractor's proprietary rights; (v) provide, copy, transmit, disclose, divulge or make the Software or Documentation available to, or permit the use of the Software by any third party or on any machine except as expressly authorized by this Agreement; or (vi) use, or permit the use of, the Software in a manner that would result in the production of a copy of the Software solely by activating a machine containing the Software. Licensee may make one copy of Software to be used solely for archival, back-up, or disaster recovery purposes; *provided* that Licensee may not operate that copy of the Software at the same time as the original Software is being operated. Licensee may make as many copies of the Documentation as it may reasonably require for the internal use of the Software.

4.3. Unless otherwise authorized by Contractor in writing, Licensee will not, and will not enable or allow any third party to: (i) install a licensed copy of the Software on more than one unit of a Designated Product; or (ii) copy onto or transfer Software installed in one unit of a Designated Product onto one other device. Licensee may temporarily transfer Software installed on a Designated Product to another device if the Designated Product is inoperable or malfunctioning, if Licensee provides written notice to Contractor of the temporary transfer and identifies the device on which the Software is transferred. Temporary transfer of the Software to another device must be discontinued when the original Designated Product is returned to operation and the Software must be removed from the other device. Licensee must provide prompt written notice to Contractor at the time temporary transfer is discontinued.

4.4 Licensee will maintain, during the term of this Agreement and for a period of two years thereafter, accurate records relating to this license grant to verify compliance with this Agreement. Contractor or an independent third party ("Auditor") may inspect Licensee's premises, books and records, upon reasonable prior notice to Licensee, during Licensee's normal business hours and subject to Licensee's facility and security regulations. Contractor is responsible for the payment of all expenses and costs of the Auditor. Any information obtained by Contractor and the Auditor will be kept in strict confidence by Contractor and the Auditor and used solely for the purpose of verifying Licensee's compliance with the terms of this Agreement.

Section 5 OWNERSHIP AND TITLE

Contractor, its licensors, and its suppliers retain all of their proprietary rights in any form in and to the Software and Documentation, including, but not limited to, all rights in patents, patent applications, inventions, copyrights, trademarks, trade secrets, trade names, and other proprietary rights in or relating to the Software and Documentation (including any corrections, bug fixes, enhancements, updates, modifications, adaptations, translations, de-compilations, disassemblies, emulations to or derivative works from the Software or Documentation, whether made by Contractor or another party, or any improvements that result from Contractor's processes or, provision of information services). No rights are granted to Licensee under this Agreement by implication, estoppel or otherwise, except for those rights which are expressly granted to Licensee in this Agreement. All intellectual property developed, originated, or prepared by Contractor in connection with providing the Software, Designated Products, Documentation or related services, remains vested exclusively in Contractor, and Licensee will not have any shared development or other intellectual property rights.

Section 6 LIMITED WARRANTY; DISCLAIMER OF WARRANTY

6.1. Unless otherwise stated in the Primary Agreement, the commencement date and the term of the Software warranty will be a period of ninety (90) days from Contractor's shipment of the Software (the "Warranty Period"). If Licensee is not in breach of any of its obligations under this Agreement, Contractor warrants that the unmodified Software, when used properly and in accordance with the Documentation and this Agreement, will be free from a reproducible defect that eliminates the functionality or successful operation of a feature critical to the primary functionality or successful operation of the Software. Whether a defect occurs will be determined by Contractor solely with reference to the Documentation. Contractor does not warrant that Licensee's use of the Software or the Designated Products will be uninterrupted, error-free, completely free of Security Vulnerabilities, or that the Software or the Designated Products will meet Licensee's particular requirements. Contractor makes no representations or warranties with respect to any third party software included in the Software. Notwithstanding, any warranty provided by a copyright owner in its standard license terms will flow through to Licensee for third party software provided by Contractor.

6.2 Contractor's sole obligation to Licensee and Licensee's exclusive remedy under this warranty is to use reasonable efforts to remedy any material Software defect covered by this warranty. These efforts will involve either replacing the media or attempting to correct significant, demonstrable program or documentation errors or Security Vulnerabilities. If Contractor cannot correct the defect within a reasonable time, then at Contractor's option, Contractor will replace the defective Software with functionally-equivalent Software, license to Licensee substitute Software which will accomplish the same objective, or terminate the license and refund the Licensee's paid license fee.

6.3. Warranty claims are described in the Primary Agreement.

6.4. The express warranties set forth in this Section 6 are in lieu of, and Contractor disclaims, any and all other warranties (express or implied, oral or written) with respect to the Software or Documentation, including, without limitation, any and all implied warranties of condition, title, non-infringement, merchantability, or fitness for a particular purpose or use by Licensee (whether or not Contractor knows, has reason to know, has been advised, or is otherwise aware of any such purpose or use), whether arising by law, by reason of custom or usage of trade, or by course of dealing. In addition, Contractor disclaims any warranty to any person other than Licensee with respect to the Software or Documentation.

Section 7 TRANSFERS

Licensee will not transfer the Software or Documentation to any third party without Contractor's prior written consent. Contractor's consent may be withheld at its discretion and may be conditioned upon transferee paying all applicable license fees and agreeing to be bound by this Agreement. If the Designated Products are Contractor's radio products and Licensee transfers ownership of the Contractor radio products to a third party, Licensee may assign its right to use the Software (other than CPS and

Contractor's FLASHport® software) which is embedded in or furnished for use with the radio products and the related Documentation; *provided* that Licensee transfers all copies of the Software and Documentation to the transferee, and Licensee and the transferee sign a transfer form to be provided by Contractor upon request, obligating the transferee to be bound by this Agreement.

Section 8 TERM AND TERMINATION

8.1 Licensee's right to use the Software and Documentation will begin when the Primary Agreement is signed by both parties and will continue for the life of the Designated Products with which or for which the Software and Documentation have been provided by Contractor, unless Licensee breaches this Agreement, in which case this Agreement and Licensee's right to use the Software and Documentation may be terminated immediately upon notice by Contractor.

8.2 Within thirty (30) days after termination of this Agreement, Licensee must certify in writing to Contractor that all copies of the Software have been removed or deleted from the Designated Products and that all copies of the Software and Documentation have been returned to Contractor or destroyed by Licensee and are no longer in use by Licensee.

8.3 Licensee acknowledges that Contractor made a considerable investment of resources in the development, marketing, and distribution of the Software and Documentation and that Licensee's breach of this Agreement will result in irreparable harm to Contractor for which monetary damages would be inadequate. If Licensee breaches this Agreement, Contractor may terminate this Agreement and be entitled to all available remedies at law or in equity (including immediate injunctive relief and repossession of all non-embedded Software and associated Documentation unless Licensee is a Federal agency of the United States Government).

Section 9 COMMERCIAL COMPUTER SOFTWARE

9.1 *This Section 9 only applies to U.S. Government end users.* The Software, Documentation and updates are commercial items as that term is defined at 48 C.F.R. Part 2.101, consisting of "commercial computer software" and "computer software documentation" as such terms are defined in 48 C.F.R. Part 252.227-7014(a)(1) and 48 C.F.R. Part 252.227-7014(a)(5), and used in 48 C.F.R. Part 12.212 and 48 C.F.R. Part 227.7202, as applicable. Consistent with 48 C.F.R. Part 12.212, 48 C.F.R. Part 252.227-7015, 48 C.F.R. Part 227.7202-1 through 227.7202-4, 48 C.F.R. Part 52.227-19, and other relevant sections of the Code of Federal Regulations, as applicable, the Software, Documentation and Updates are distributed and licensed to U.S. Government end users: (i) only as commercial items, and (ii) with only those rights as are granted to all other end users pursuant to the terms and conditions contained herein.

9.2 If Licensee is licensing Software for end use by the United States Government or a United States Government agency, Licensee may transfer such Software license, but only if: (i) Licensee transfers all copies of such Software and Documentation to such United States Government entity or interim transferee, and (ii) Licensee has first obtained from the transferee (if applicable) and ultimate end user an enforceable end user license agreement containing restrictions substantially identical to the ones contained in this Agreement. Except as stated in the foregoing, Licensee and any transferee(s) authorized by this subsection 9.2 may not otherwise use or transfer or make available any Contractor software to any third party nor permit any party to do so.

Section 10 CONFIDENTIALITY

Licensee acknowledges that the Software and Documentation contain Contractor's valuable proprietary and Confidential Information and are Contractor's trade secrets, and that the provisions in the Primary Agreement concerning Confidential Information apply.

Section 11 LIMITATION OF LIABILITY

The Limitation of Liability provision is described in the Primary Agreement.

Section 12 NOTICES

Notices are described in the Primary Agreement.

Section 13 GENERAL

13.1. COPYRIGHT NOTICES. The existence of a copyright notice on the Software will not be construed as an admission or presumption of publication of the Software or public disclosure of any trade secrets associated with the Software.

13.2. COMPLIANCE WITH LAWS. Licensee acknowledges that the Software is subject to the laws and regulations of the United States and Licensee will comply with all applicable laws and regulations, including export laws and regulations of the United States. Licensee will not, without the prior authorization of Contractor and the appropriate governmental authority of the United States, in any form export or re-export, sell or resell, ship or reship, or divert, through direct or indirect means, any item or technical data or direct or indirect products sold or otherwise furnished to any person within any territory for which the United States Government or any of its agencies at the time of the action, requires an export license or other governmental approval. Violation of this provision is a material breach of this Agreement.

13.3 FUTURE REGULATORY REQUIREMENTS. The Parties acknowledge and agree that this is an evolving technological area and therefore, laws and regulations regarding Services and use of Solution may change. Changes to existing Services or the Solution required to achieve regulatory compliance may be available for an additional fee. Any required changes may also impact the price for Services.

13.4. ASSIGNMENTS AND SUBCONTRACTING. Contractor may assign its rights or subcontract its obligations under this Agreement, or encumber or sell its rights in any Software, without prior notice to or consent of Licensee.

13.5. GOVERNING LAW. This Agreement is governed by the laws of the United States to the extent that they apply and otherwise by the internal substantive laws of the State of Florida. The terms of the U.N. Convention on Contracts for the International Sale of Goods do not apply. In the event that the Uniform Computer Information Transaction Act, any version of this Act, or a substantially similar law (collectively "UCITA") becomes applicable to a party's performance under this Agreement, UCITA does not govern any aspect of this Agreement or any license granted under this Agreement, or any of the parties' rights or obligations under this Agreement. The governing law will be that in effect prior to the applicability of UCITA.

13.6. THIRD PARTY BENEFICIARIES. This Agreement is entered into solely for the benefit of Contractor and Licensee. No third party has the right to make any claim or assert any right under this Agreement, and no third party is deemed a beneficiary of this Agreement. Notwithstanding the foregoing, any licensor or supplier of third party software included in the Software will be a direct and intended third party beneficiary of this Agreement.

13.7. SURVIVAL. Sections 4, 5, 6.4, 7, 8, 9, 10, 11 and 13 survive the termination of this Agreement.

13.8. ORDER OF PRECEDENCE. In the event of inconsistencies between this Exhibit and the Primary Agreement, the parties agree that this Exhibit prevails, only with respect to the specific subject matter of this Exhibit, and not the Primary Agreement or any other exhibit as it applies to any other subject matter.

13.9. SECURITY. Contractor uses reasonable means in the design and writing of its own Software and the acquisition of third party Software to limit Security Vulnerabilities. While no software can be guaranteed to be free from Security Vulnerabilities, if a Security Vulnerability is discovered, Contractor will take the steps set forth in Section 6 of this Agreement.

MDFR UHF RECEIVE SITE WITH DAS ANTENNA SYSTEM APRIL 21, 2023

Miami-Dade County
Aviation Department

MDC042

TABLE OF CONTENTS

Section 1 1-1

System Description 1-1

1.1 Overview 1-1

1.2 Solution Components 1-1

1.2.1 Receive Site 1-1

1.2.2 DC Power Plant 1-2

1.2.3 DAS Components 1-2

Section 2 2-1

Statement of Work 2-1

2.1 Overview 2-1

2.2 Pre-Project Initiation Tasks 2-1

2.3 Contract Initiation 2-2

2.3.1 Contract Award 2-2

2.3.2 Contract Administration 2-2

2.3.3 Project Kickoff 2-2

2.4 Contract Design Review 2-3

2.4.1 Review Contract Design 2-3

2.4.2 Design Approval 2-4

2.5 Order Processing 2-4

2.5.1 Process Equipment List 2-4

2.6 Manufacturing and Staging 2-4

2.6.1 Manufacture Motorola Solutions Fixed Network Equipment 2-4

2.6.2 Manufacture Non-Motorola Solutions Equipment 2-4

2.6.3 Stage System 2-5

2.6.4 Perform Staging Acceptance Test Procedures 2-5

2.7 Installation 2-6

2.7.1 Antenna Installation 2-6

2.7.2 DAS Installation 2-6

2.7.3 Install Fixed Network Equipment 2-6

2.7.4 System Installation Acceptance 2-7

2.8 System Optimization 2-7

2.8.1 Optimize DAS 2-7

2.8.2 Optimize System FNE 2-8

2.8.3 Link Verification 2-8

2.8.4 Optimization Complete 2-8

2.9 Training 2-9
2.10 Audit and Acceptance Testing 2-9
2.10.1 Perform R56 Installation Audit 2-9
2.10.2 Perform Equipment Testing 2-9
2.10.3 Perform Functional Testing 2-9
2.10.4 System Acceptance Test Procedures 2-10
2.11 Finalize 2-10
2.11.1 Go-Live 2-10
2.11.2 Resolve Punchlist 2-10
2.11.3 Transition to Service/Project 2-11
2.11.4 Finalize Documentation 2-11
2.11.5 Final Acceptance 2-11
2.12 Project Administration 2-12
2.12.1 Project Status Meetings 2-12
2.13 Preliminary Project Schedule 2-12
2.13.1 Progress Milestone Submittal 2-12
2.13.2 Change Order Process 2-12
2.14 MDFR or MDAD Responsibilities & Assumptions 2-13
2.15 Additional Assumptions and Notes 2-13
2.15.1 Warranty and Service Response 2-13
2.15.2 Lifecycle Support 2-14
Section 3 3-1
Preliminary Schedule 3-1
Section 4 4-1
Pricing 4-1
4.1 Project and Maintenance 4-1
4.2 Optional Years to Renew 4-1
4.3 Materials 4-2
4.4 Payment Milestones 4-14

Section 5 5-1
Appendix A 5-1
MDFR BDA Installation and Test Plan 5-1
Section 6 6-1
Appendix B 6-1
MIA Coverage maps 6-1
Section 7 7-1
Appendix C 7-1
DAS Maintenance SOW 7-1
Section 8 8-1
Appendix D 8-1
DAS Diagram 8-1

SECTION 1

SYSTEM DESCRIPTION

1.1 OVERVIEW

This document includes an Astro 25 receive site for the MDFR UHF radio system integrated with an expanded antenna system (DAS) to provide coverage within the Miami International Airport (MIA). The UHF receive site will be located on the first floor of the Flamingo Parking Garage at MIA. The receive site will have GPW 8000 Base Radios which will be added to the existing MDFR UHF system. The receive site channels are noted below.

Site Name	Channel Names
MDFR MIA RX	East North TAC -1 TAC - 2 TAC -3 TAC-4 Central West MIA-TAC County Wide

.

1.2 SOLUTION COMPONENTS

1.2.1 Receive Site

- Nine (9) GPW 8000 Receivers
- One (1) ASTR-TAC Receiver (Provided by MDFR)
- One (1) MLC 8000 (Provided by MDFR)
- One (1) GGM8000 Gateway
- One (1) UHF Antenna
- Four (4) Seven Foot Racks
- 48v DC Plant
- MOSCAD Site monitoring for available alarms

1.2.2 DC Power Plant

Motorola Solutions shall install a DC power plant at sites as set forth herein.

- The Trilogy-S has eight (8) rectifier positions and is rated at 300 amps using a 2000W/40A rectifier.
- Each pair of rectifiers will be fed from a 30A, 2-pole circuit breaker, from a 208/240VAC source.
- There are 24 breaker positions, rated to 100A / position.
- The Smartpack-S controller manages all monitoring and control of the battery plant.
- The Trilogy system is mounted in a 23" x 7' two post relay rack, equipped with battery racks to hold the 48V battery strings.
- Where necessary, a second 23" x 7' rack is used to house additional battery string.
  - Site has 1 battery string.
  - The Enersys SBS-XL battery product is used.
    - VRLA battery technology.
    - 20-year Design Life battery comprised of 12-volt battery packs.
    - Each 48V string (4 batteries) takes 8 RU in the power rack (or expansion rack where needed).
    - Expected battery life for the equipment is approximately 12 hours.

1.2.3 DAS Components

The MDFR DAS is a Fiber Optic Distributed Antenna System directly interfaced to the MDFR Radio Base Station to be located at the Miami International Airport Flamingo Garage. The DAS consists of the 4 HE Hubs that support 8 remote Units each, for a total of 32 remotes. These remotes are strategically place around the airport to provide UHF coverage in the areas throughout the airport. The remotes will convert the optical signals into RF; the remotes connect to the coaxial cable which routes the RF signals to and from the coverage antennas. The DAS Head end will be provided 12 hour battery backup as a secondary power source incase local commercial AC power is lost.

The Fiber Das interfaces directly to the base station. For downlink path the DAS is interfaced to the output of the RF combiners in the base station to 3 directional couplers. These couplers redirect a small amount of RF from the path to the TX antennas to an optical link. The optical link (which is two interconnected fiber transceivers) provides the RF input signals to the DAS Head end hubs, for distribution to the remotes via fiber. The uplink path to the radio base station via the DAS will be a direct connection from the receive multi-coupler to the uplink ports on the Head end Hubs.

The 32 remotes will be installed in racks in and some wall mounted installations depending on the available space in each Telco room. Each remote will have a 12-Hour Battery Backup. These remotes will be connected to indoor antennas via plenum rated coaxial cable which is further housed in metal raceway for added protection

Summary of main components:

- One (1) DL Headend RF Interface
- One (1) UL Fiber RF Interface
- Thirty Two (32) High Power Fiber Remote Units
- Thirty Two (32) Battery Back up Units
- One Hundred Forty Two (142) In-building Coverage Antennas
- Ninety Two (92) RF Couplers

- Three Hundred Fifty Four (354), ½" Coaxial Connectors
- Thirty One Thousand Eight Hundred (31,800) Feet of Raceway Coaxial Cable
- Eighteen Thousand Four Hundred Fifty (18,450) feet Fiber optic Cable
- Fourteen Thousand Two Hundred Seventy (14,270) Feet Of Conduit
- Two Thousand Seven Hundred Eighty Four (2,784) Fusion Splices

SECTION 2

STATEMENT OF WORK

2.1 OVERVIEW

This Statement of Work (SOW) describes the deliverables to be furnished to Miami-Dade County (MDC). The tasks described herein shall be performed by Motorola Solutions, its subcontractors, and MDFR or MDAD to implement the solution described in the System Description. The Statement of Work describes the actual work involved in the installation, identifies the installation standards to be followed, and clarifies the responsibilities for both Motorola Solutions and MDC during the project implementation. Specifically, this SOW provides:

- A summary of the phases and tasks to be completed within the project lifecycle.
- A list of the deliverables associated with the project.
- A description of the responsibilities for both Motorola Solutions and MDC.
- The qualifications and assumptions taken into consideration during the development of this project.

Motorola Solutions represents and warrants that it has made all reasonable inquiries to assure itself of the assumptions Motorola has made regarding the site to be used. Should the equipment location change, a revision to this SOW the associated pricing will be negotiated between the County and Motorola. Any changes to this SOW shall only be made by mutual agreement of Motorola Solutions and the County.

New RF Sites

Site Name/Type	Location
MDFR MIA RX & DAS / Headend	Flamingo Garage Ground Level Miami-Dade ITD Room
MDFR UHF Downlink Base Station Interface	Flamingo Garage, Flamingo Elevator PH
Fiber Optic Remotes (32)	Various Locations throughout the Airport

2.2 PRE-PROJECT INITIATION TASKS

Prior to project initiation the following tasks were completed by Motorola.

- In-building RF coverage survey
- In-building RF coverage report
- RF coverage design
- Preliminary DAS and Fiber Plant engineering
- Four site walks encompassing MIA and the Flamingo Garage sites

2.3 CONTRACT INITIATION

2.3.1 Contract Award

- MDAD and Motorola Solutions execute the contract and both parties receive all the necessary documentation.

2.3.2 Contract Administration

Motorola Solutions Responsibilities:

- Assign a local, dedicated Project Manager, as the single point of contact with authority to make project decisions.
- Assign resources necessary for project implementation.
- Set up the project in the Motorola Solutions information system.
- Schedule the project kickoff meeting with MDAD and MDFR.

MDFR or MDAD Responsibilities:

- Identify MDC responsibilities across MDFR, MDAD or other MDC owner. The contracting party will be responsible to identify the entity or persons responsible.
- Assign a Project Manager, as the single point of contact responsible for MDAD and MDFR signed approvals.
- Assign other resources necessary to ensure completion of project tasks for which MDC is responsible.

Completion Criteria:

- Motorola Solutions internal processes are set up for project management.
- Both Motorola Solutions and MDC assign all required resources.
- Project kickoff meeting is scheduled.

2.3.3 Project Kickoff

Motorola Solutions Responsibilities:

- Conduct a project kickoff meeting during the CDR (Contract Design Review) phase of the project.
- Ensure key project team participants attend the meeting.
- Introduce all project participants attending the meeting.
- Review the roles of the project participants to identify communication flows and decision-making authority between project participants.
- Review the overall project scope and objectives with MDFR and MDAD.
- Review the resource and scheduling requirements with MDFR and MDAD.
- Review the Project Schedule to address upcoming milestones and/or events.
- Review the teams' interactions (Motorola Solutions and MDFR and MDAD), meetings, reports, milestone acceptance, and MDFR or MDAD participation in particular phases.

MDFR or MDAD Responsibilities:

- MDFR and MDAD key project team participants attend the meeting.
- Review Motorola Solutions and MDFR or MDAD responsibilities.

Completion Criteria:

- Project kickoff meeting completed.
- Meeting notes identify the next action items.

2.4 CONTRACT DESIGN REVIEW

2.4.1 Review Contract Design

Motorola Solutions Responsibilities:

- Meet with MDFR and MDAD project team.
- Review the operational requirements and the impact of those requirements.
- Review the System Design, Statement of Work, and Project Schedule.
- Review plans, and update the contract documents accordingly.
- Discuss the proposed Go-Live Plan and methods to document a detailed procedure.
- Submit design documents to MDC for approval. These documents form the basis of the system, which Motorola Solutions will manufacture, assemble, stage, and install.
- Prepare equipment layout plans for field staging.
- Establish demarcation point (supplied by the Motorola Solutions system engineer) to define the connection point between the Motorola Solutions-supplied equipment and MDC-supplied link(s) and external interfaces. This includes, but is not limited to, installing necessary infrastructure (example – conduit).

  Restrictions:

  - Motorola Solutions assumes no liability or responsibility for inadequate frequency availability or frequency licensing issue.
  - Motorola Solutions is not responsible for issues outside of its immediate control. Such issues include, but are not restricted to, improper frequency coordination by others and non-compliant operation of other radios. However, Motorola Solutions will provide, upon request, all necessary data for frequency coordination.
  - Motorola Solutions is not responsible for co-channel interference due to errors in frequency coordination by APCO or any other unlisted frequencies, or the improper design, installation, or operation of systems installed or operated by others
  - If, for any reason, any of the proposed sites, space or antenna location cannot be utilized due to reasons beyond Motorola Solutions' control, the costs associated with site changes or delays including, but not limited to, re-engineering, frequency re-licensing, site zoning, site permitting, schedule delays, site abnormalities, re-mobilization, etc., will be paid for by MDC and documented through the change order process.

MDFR and MDAD Responsibilities:

- MDFR and MDAD's key project team participants attend the meeting.
- Make timely decisions within a reasonable period after presentation of an issue by Motorola.

Completion Criteria:

- Complete Design Documentation, which may include updated System Description, Equipment List, system drawings, or other documents applicable to the project.
- Incorporate any deviations from the proposed system into the contract documents accordingly.
- The system design is "frozen" in preparation for subsequent project phases such as Order Processing and Manufacturing.

- A Change Order is executed in accordance with all material changes resulting from the Design Review to the contract.

2.4.2 Design Approval

- MDC executes a Design Approval milestone document.

2.5 ORDER PROCESSING

2.5.1 Process Equipment List

Motorola Solutions Responsibilities:

- Validate Equipment List by checking for valid model numbers, versions, compatible options to main equipment, and delivery data.
- Enter order into Motorola Solutions Order Fulfillment (COF) system.
- Create Ship Views, to confirm with MDC the secure storage location(s) to which the equipment will ship. Ship Views are the mailing labels that carry complete equipment shipping information, which direct the timing, method of shipment, and ship path for ultimate destination receipt.
- Create equipment orders.
- Reconcile the equipment list(s) to the Contract.
- Procure third-party equipment if applicable.
  Completion Criteria:
- Verify that the Equipment List contains the correct model numbers, version, options, and delivery data.
- Trial validation completed.
- Bridge the equipment order to the manufacturing facility.

2.6 MANUFACTURING AND STAGING

2.6.1 Manufacture Motorola Solutions Fixed Network Equipment

Motorola Solutions Responsibilities:

- Manufacture the Fixed Network Equipment (FNE) necessary for the system based on equipment order.

MDFR or MDAD Responsibilities:

- None.

Completion Criteria:

- FNE shipped to either the field or the staging facility.

2.6.2 Manufacture Non-Motorola Solutions Equipment

Motorola Solutions Responsibilities:

- Procure non-Motorola Solutions equipment necessary for the system based on equipment order.

MDFR or MDAD Responsibilities:

- None.

Completion Criteria:

- Ship non-Motorola Solutions manufactured equipment to the field.

2.6.3 Stage System

Motorola Solutions Responsibilities:

- MIA RX Site
  - Set up and rack the system equipment as it will be configured in the field.
  - Cut and label cables according to the approved CDR documentation and CCSI inputs.
  - Label the cables with to/from information to specify interconnection for field installation and future servicing needs.
  - Complete the cabling/connecting of the subsystems to each other (“connectorization” of the subsystems).
  - Assemble required subsystems to assure system functionality.
  - Power up, program, and test all staged equipment.
  - Confirm system configuration and software compatibility to the existing system.
  - Load application parameters on all equipment according to input from Systems Engineering.
  - Complete programming of the Fixed Network Equipment.
  - Inventory the equipment with serial numbers and installation references.
  - Complete system documentation.

Completion Criteria:

- System Filed staging completed.

2.6.4 Perform Staging Acceptance Test Procedures

Motorola Solutions Responsibilities:

- Test and validate system software and features.
- Functional testing of standard system features.
- Conduct site and system level testing.
- Power-up site equipment and perform standardized functionality tests.
- Perform Functional tests

MDFR or MDAD Responsibilities:

- None.

Completion Criteria:

- Functional testing completed prior to site installation.

2.7 INSTALLATION

2.7.1 Antenna Installation

The antenna to be located on the Ventilation Shaft is confirmed to be provided through the MDFR Capital Improvement Project; therefore it has been removed from the Equipment list as well as from the Scope of Work for this project.

2.7.2 DAS Installation

Motorola Solutions Responsibilities:

- Installation of all DAS, Fiber Optic and Fiber Conduit materials listed in the materials breakdown to facilitate the implementation of a fully functional UHF DAS System.
- Provide dedicated electrical circuits for 32 fiber optic remote units.

MDFR or MDAD responsibilities:

- Provide the necessary space for the DAS equipment to be installed as per what was identified during site walks and coverage surveys.
- Installation personnel may be subject to law enforecement background check, provided at no cost to Motorola.

Completion Criteria:

- Successful completion for RF Coverage Testing of DAS in MIA.
- Equipment operational testing of the MDFR Receive Site. No coverage testing of the receive site is included.

2.7.3 Install Fixed Network Equipment

Motorola Solutions Responsibilities:

- Motorola Solutions shall be responsible for the installation of all fixed equipment contained in the equipment list and outlined in the System Description based upon the agreed to floor plans, at the sites where the physical facility improvement is complete, and the site is ready for installation. All equipment will be properly secured to the floor and installed in a neat and professional manner, employing a standard of workmanship consistent with its own R56 installation standards and in compliance with applicable National Electrical Code (NEC), EIA, Federal Aviation Administration (FAA)/Transport Canada, and FCC standards and regulations/Industry Canada.
- For installation of the fixed equipment, Motorola Solutions will furnish all cables for power, audio, control, and radio transmission to connect the Motorola Solutions-supplied equipment to the power panels or receptacles and the audio/control line connection point.
- During field installation of the equipment, any required changes to the installation will be noted and assembled with the final ‘as-built’ documentation of the system.
- Receive and inventory all equipment. Provide warehousing for equipment as shipped.
- Bond the supplied equipment to the site ground system in accordance with Motorola Solutions’ R56 standards.

Motorola Solutions shall provide initial equipment storage, up to 18 months for each sub-project. Equipment ship dates will be agreed upon between Motorola Solutions and MDFR, if the

equipment cannot be delivered to its destination within 18-months, due to "no fault" by Motorola Solutions, MDC shall pay for the additional storage cost of $500 per month. If equipment cannot be delivered to its destination, due to Motorola Solutions delays the storage costs shall be Motorola's responsibility.

2.7.4 System Installation Acceptance

- All equipment installations are completed and accepted by MDFR or MDAD.

2.8 SYSTEM OPTIMIZATION

2.8.1 Optimize DAS

The prime objectives are to validate antenna system connectivity, set UL/DL at acceptable signal levels and once the site is on air based on live traffic to reach the KPI thresholds for Accessibility, Reliability and Data throughputs. DAS optimization is a continuous process once the system has been installed. Anomalies such as incorrect signal levels and or attenuation or antennas not transmitting must be uncovered, escalated, and resolved immediately

CONNECTIVITY

- Setting uplink and downlink levels such that the system is balanced.
- The above data shall be imported into excel to generate a report that will advise of the deviation from the original design propagation prediction . This report will be used for Acceptance Testing.

GO LIVE

- Upon successful completion and site verification during the RF Validation phase the site is to take on live traffic and later optimized on live traffic to reach KPI Threshold's.

RF VALIDATION

- Basic check of the DAS and Radio Base Station Equipment for any issues with cabling, antenna installation, and verify all components are alarm free.
- Verify the UL RSSI measurements at Base Station level ahead of optimization for any interference.
- DAS Optimization - UL Sensitivity

RF OPTIMIZATION (RFO)

- PCTel Standard post-processing tools are used to produce reports
- Data points for each zone- Venue/Transient/Macro
- Accuracy of data collection
- All antennas HE, and remotes functioning properly
- Correct Frequencies and Bandwidth
- DAS antennas overshooting - changes to DAS antenna locations
- Voting functionality - missing Excessive neighbors
- Overlap of DAS and Macro at all exits and vice versa

Motorola Solutions Responsibilities:

- Provide Equipment Engineers and Technicians to carry out all the duties and responsibilities for the proper Optimization of the DAS and Base Station interface.

MDAD or MDFR Responsibilities:

- Provide Motorola Access and escort (if required) to the various locations where the DAS equipment will be installed as well as permission to install the equipment in these specific locations.

Completion Criteria:

- Successful completion of the preliminary testing of the DAS and the interface to the Base Station.

2.8.2 Optimize System FNE

Motorola Solutions Responsibilities:

- Motorola Solutions and its subcontractors optimize each subsystem.
- Verify that all equipment is operating properly, and that all electrical and signal levels are set accurately.
- Verify that all audio and data levels are at factory settings.
- Check forward and reflected power for all radio equipment, after connection to the antenna systems, to verify that power is within tolerances.
- Check audio and data levels to verify factory settings.
- Verify communication interfaces between devices for proper operation.

MDFR or MDAD Responsibilities:

- None.

Completion Criteria:

- System FNE optimization is complete.

2.8.3 Link Verification

Motorola Solutions Responsibilities:

- Perform test to verify site link performance, prior to the interconnection of the Motorola Solutions-supplied equipment to the link equipment.

Completion Criteria:

- Link verification successfully completed.

2.8.4 Optimization Complete

- System optimization is completed. Motorola Solutions and MDAD or MDFR agree that the equipment is ready for acceptance testing.

2.9 TRAINING

Motorola Solutions Responsibilities:

- No training has been included in this scope of work.

2.10 AUDIT AND ACCEPTANCE TESTING

2.10.1 Perform R56 Installation Audit

Motorola Solutions Responsibilities:

- Perform R56 site-installation quality audits for the MDFR Receive site, verifying proper physical installation and operational configurations.
- Create site evaluation report for the MDFR Receive site to verify site meets or exceeds requirements, as defined in Motorola Solutions' Standards and Guidelines for Communication Sites (R56).
- DAS Headend and remote equipment and installation will comply with R56 as applicable.

MDFR or MDAD Responsibilities:

- Witness tests at MDFR's option.

Completion Criteria:

- All R56 audits successfully completed.

2.10.2 Perform Equipment Testing

Motorola Solutions Responsibilities:

- Test individual components of the system to verify compliance to the equipment specifications.
- Repeat any failed test(s) once Motorola Solutions (or MDC) has completed the corrective action(s).
- Prepare documentation of component tests to be delivered as part of the final documentation package.

MDFR or MDAD Responsibilities:

- Witness tests at MDFR's option.

Completion Criteria:

- Successful completion of equipment testing.

2.10.3 Perform Functional Testing

Motorola Solutions Responsibilities:

- Verify the operational functionality and features of the individual subsystems and the system supplied by Motorola Solutions, as contracted.
- Motorola will perform grid testing of the DAS system throughout MIA per the MDFR BDA Installation and Testing Information rev 8, as provided in Appendix A. A DAQ of 3.4 will be provided in Critical Areas such as emergency command center, fire pump room, exit stairs, exit passageways, elevator lobbies, standpipe cabinets, sprinkler sectional valve locations

and similar critical areas shall be provided with 99% floor area radio coverage. In General building areas a DAQ of 3.0 shall be provided with 95% radio coverage. Testing will be limited to the MIA DAS coverage area.
- If any major task as contractually described fails, repeat that particular task after Motorola Solutions determines that corrective action has been taken.
- Document all issues that arise during the acceptance tests.
- Document the results of the acceptance tests and present to MDC for review.
- Resolve any minor task failures before Final System Acceptance.

MDFR or MDAD Responsibilities:

- Witness tests at MDFR's option.

Completion Criteria:

- Successful completion of the functional testing.
- MDAD approval of the functional testing.

2.10.4 System Acceptance Test Procedures

- MDAD approves the completion of all the required tests.

2.11 FINALIZE

2.11.1 Go-Live

Motorola Solutions Responsibilities:

- Motorola Solutions and MDFR develop a mutually agreed upon go-live plan(s) based upon discussions held during the CDR.
- During go live, follow the written plan and implement the defined contingencies, as required.
- Conduct go-live meeting(s) with user group representatives to address both how to mitigate technical and communication problem impact to the users during go live and during the general operation of the system.
- The Receive site will be fully tested prior to the connection to the DAS. The DAS will be optimized and tested prior to interconnection to the receive site and the MDFR DAS will go live when the two systems have been thoroughly tested and exercised.

MDFR or MDAD Responsibilities:

- Attend go-live meetings and approve plan.
- Notify the user group(s) affected by the go live (date and time).

Completion Criteria:

- Successful migration to verify go live of new Receive site

2.11.2 Resolve Punchlist

Motorola Solutions Responsibilities:

- Work with MDC to resolve punch list items documented during the Acceptance Testing phase, in order to meet all the criteria for final system acceptance.

MDFR or MDAD Responsibilities:

- Assist Motorola Solutions with resolution of identified punch list items by providing support, such as review and approval of the resolved punch list item(s).

Completion Criteria:

- All punch list items resolved by Motorola Solutions and approved by MDC.

2.11.3 Transition to Service/Project

Motorola Solutions Responsibilities:

- Review the items necessary for transitioning the completed portions of the project to warranty support and service.
- Provide a MDFR Support Plan detailing the warranty and post-warranty support, if applicable, associated with the Contract equipment.

Completion Criteria:

- All service information has been delivered and approved by MDFR.

2.11.4 Finalize Documentation

Motorola Solutions Responsibilities:

- Provide as-built system manual in electronic form, both native files and PDF format. The documentation will include the following:
  - System-Level Diagram.
  - Site Block Diagrams.
  - Site Floor Plans.
  - Site Equipment Rack Configurations.
  - Antenna Network Drawings for RF Sites.
  - Antenna Sweeps.
  - Functional Acceptance Test Plan Test Sheets and Results.
  - Equipment Inventory List (including serial numbers).
  - Permit / Inspection Documents Signed.

All manual documents converted from native format to PDF format to be provided.

MDFR or MDAD Responsibilities:

- Receive and approve all documentation provided by Motorola Solutions.

Completion Criteria:

- All required documentation is provided and approved by MDFR.

2.11.5 Final Acceptance

- All deliverables completed, as contractually required.
- Final System Acceptance received from MDAD.

2.12 PROJECT ADMINISTRATION

2.12.1 Project Status Meetings

Motorola Solutions Responsibilities:

- Motorola Solutions Project Manager, or designee, will attend all project status meetings with MDAD, as determined during the CDR.
- Record the meeting minutes and supply the report to attendees within 48-hours.
- The agenda will include the following:
  - Overall project status compared to the Project Schedule.
  - Product or service-related issues that may affect the Project Schedule.
  - Status of the action items and the responsibilities associated with them, in accordance with the Project Schedule.
  - Any risks or miscellaneous concerns of identified by either MDFR,MDAD or Motorola Solutions.

MDFR or MDAD Responsibilities:

- Attend meetings.
- Respond to issues in a timely manner.

Completion Criteria:

- Completion of the meetings and submission of meeting minutes.

2.13 PRELIMINARY PROJECT SCHEDULE

A preliminary schedule is provided in this document. During the Contract Design Review meeting following contract award, Motorola Solutions' Project Manager will present a baseline project schedule based upon knowledge and timeline goals learned during the Kickoff Meeting. The baseline schedule will be updated regularly during project implementation and will be provided to MDAD Project Manager in an agreed-upon format. Motorola Solutions, MDAD and MDFR will work together to identify all project responsibilities for the successful completion of the project.

2.13.1 Progress Milestone Submittal

Motorola Solutions Responsibilities:

- Submit progress (non-payment) milestone completion certificate/documentation.

MDFR or MDAD Responsibilities:

- Approve milestone as warranted, which will signify confirmation of completion of the work associated with the scheduled task.

Completion Criteria:

- MDAD approval of the Milestone Completion document(s).

2.13.2 Change Order Process

- Either Party may request changes within the general scope of this Agreement. If a requested change causes an increase or decrease in the cost, change in system configuration or adds

time to the project's timeline required to perform this Agreement, the Parties will agree to an equitable adjustment of the Contract Price, Performance Schedule, or both, and will reflect the adjustment in a change order which shall be reduced to writing. Neither Party is obligated to perform requested changes unless both Parties execute a duly approved written change order.

2.14 MDFR OR MDAD RESPONSIBILITIES & ASSUMPTIONS

- Ensure site owner approval for location will for MDFR UHF system equipment (FNE and antenna system)
- Provide fiber strands from ground floor to DAS equipment. Pair 19 and 20 where identified during site walk.
- Miami-Dade will provide space, HVAC and electrical outlets as required.
- Provide access or escort as required and permission to install equipment in designated location.
- Review and approve site design drawings within 14 calendar days of submission by Motorola Solutions or its subcontractor(s). Should a re-submission be required, MDAD shall review and approve the re-submitted plans within 14 calendar days from the date of submittal.
- If required, provide any structural improvement necessary to house the equipment in the existing room.

Assumptions:

- All direct recurring and non-recurring utility costs [including, but not limited to, generator fuel (except first fill), electrical, Telco or use of Fiber] will be borne by MDC.
- Ensure hazardous materials are not present at the work location. Testing and removal of hazardous materials, found during site investigations, construction or equipment installation will be the responsibility of MDAD.
- The MDAD radios located at the MDFR room in the 6th floor will be moved by MDAD to the room at 5th floor, Northwest corner of the Flamingo Garage. While, a part of this project, this will be required before the DAS downlink interface equipment can be installed.
- Backup battery life of 12 hours has been requested. This proposal assumes the floor is capable of the load. Any remediation required is outside the scope of this offer.
- MDAD to provide training to Motorola personnel and its subcontractors to acquire the appropriate airport access badges.

2.15 ADDITIONAL ASSUMPTIONS AND NOTES

2.15.1 Warranty and Service Response

- **Motorola Solutions Infrastructure.** Items related to the Motorola Solutions RF infrastructure are covered by a one-year warranty, which starts from date of acceptance. During the warranty period Motorola's field service organization (FSO) will respond to service calls on a 24 x 7 x 365 basis. All other conditions of Motorola's Standard Warranty apply.
- Upon warranty expiration, the proposed UHF receive site will be eligible to be added to the MDFR UHF maintenance agreement. Warranty plus Year 2 and 3 are detailed in the pricing

section. Services include Dispatch, Tech Support, On Site Response, PM check, Infrastructure repair with Advanced replacement.
Please note equipment for 9 channels is proposed. The 10th channel will be implemented with ASTRO-TAC Receivers and MLC8000 equipment owned by MDFR. These items are cancelled product and are supported on a best effort basis only. Upon warranty expiration of the DAS, the proposed UHF DAS will be eligible to be added to a maintenance agreement. Maintenance for Year 2 and 3 are detailed in the pricing section. The proposed Maintenance SOW is enclosed in Appendix C.

2.15.2 Lifecycle Support

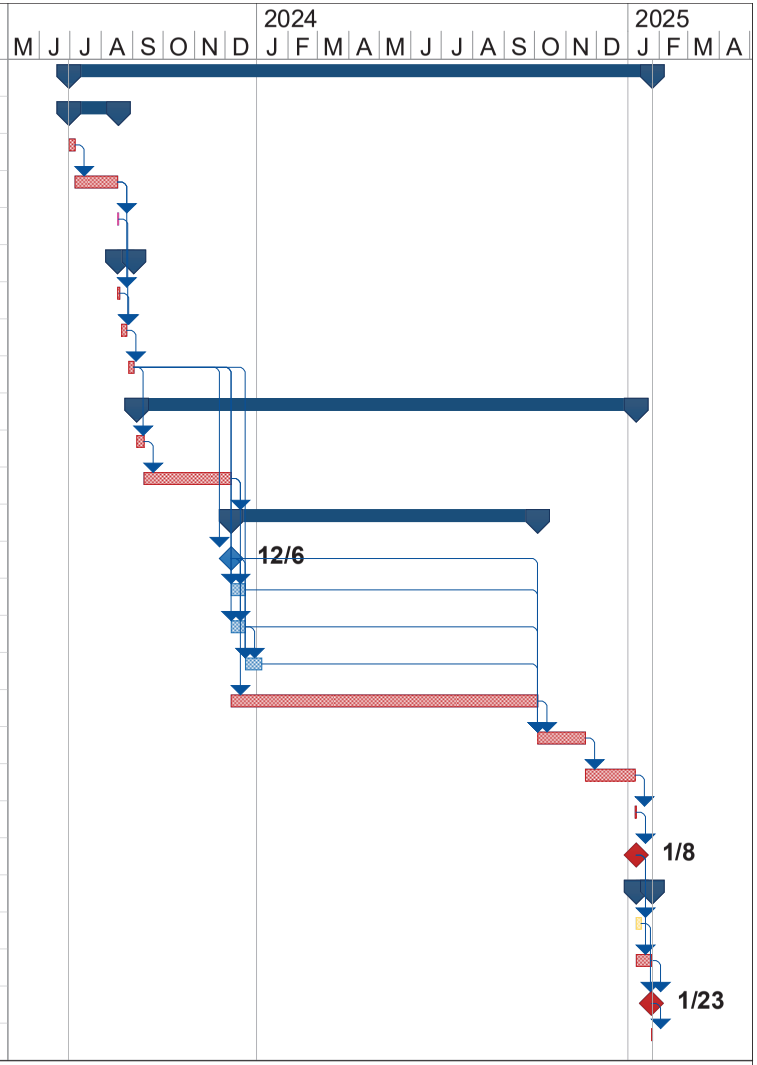
- **Motorola Solutions Infrastructure.** Motorola Solutions products are supported through the end of their published support windows when maintained under applicable maintenance and lifecycle plans. These windows will be reviewed with MDFR on an annual basis.
- **Third-party Equipment.** Since Motorola Solutions does not control the lifecycle plans for the third-party products furnished, we cannot make specific promises with respect to third-party support. Motorola Solutions will work with our third-party vendors to understand their lifecycle plans, communicate them to MDFR, and work with MDFR to create a suitable support plan for such third-party products.

SECTION 3

PRELIMINARY SCHEDULE

MDC064

ID	Task Name	Duration	Start	Finish
1	**Preliminary Schedule - DAS and MDFR R:**	**395 d**	**Fri 6/30/23**	**Fri 1/24/25**
2	**Project Initiation**	**34 d**	**Fri 6/30/23**	**Thu 8/17/23**
3	Award (Project Set Up)	3 d	Fri 6/30/23	Wed 7/5/23
4	Internal Project Plan/Design Review	30 d	Thu 7/6/23	Wed 8/16/23
5	Post Sale Transition Meeting Complete	1 d	Thu 8/17/23	Thu 8/17/23
6	**Project Planning**	**12 d**	**Thu 8/17/23**	**Fri 9/1/23**
7	Customer Design Review (CDR)	2 d	Thu 8/17/23	Fri 8/18/23
8	Contract Change Order Process	5 d	Mon 8/21/23	Fri 8/25/23
9	Update Project Plans (Post CDR)	5 d	Mon 8/28/23	Fri 9/1/23
10	**Project Execution**	**339 d**	**Tue 9/5/23**	**Wed 1/8/25**
11	Make Order and SI Procurement	5 d	Tue 9/5/23	Mon 9/11/23
12	Receive and Inventory Equipment (may	60 d	Tue 9/12/23	Wed 12/6/23
13	**System Installation**	**210 d**	**Wed 12/6/23**	**Thu 10/3/24**
14	Customer provided connectivity HVA	0 d	Wed 12/6/23	Wed 12/6/23
15	Antenna Installation	10 d	Thu 12/7/23	Wed 12/20/23
16	DC Plant Installation	10 d	Thu 12/7/23	Wed 12/20/23
17	FNE Installation	10 d	Thu 12/21/23	Fri 1/5/24
18	DAS Installation	210 d	Thu 12/7/23	Thu 10/3/24
19	System Optimization	33 d	Fri 10/4/24	Tue 11/19/24
20	System Acceptance Test	30 d	Wed 11/20/24	Tue 1/7/25
21	System Cutover	1 d	Wed 1/8/25	Wed 1/8/25
22	Beneficial Use System Acceptance	0 d	Wed 1/8/25	Wed 1/8/25
23	**Project Close**	**11 d**	**Thu 1/9/25**	**Fri 1/24/25**
24	Finalize System Documentation	3 d	Thu 1/9/25	Mon 1/13/25
25	Punchlist Resolution	10 d	Thu 1/9/25	Thu 1/23/25
26	Final Acceptance	0 d	Thu 1/23/25	Thu 1/23/25
27	Complete Service Transition Meeting	1 d	Fri 1/24/25	Fri 1/24/25



Preliminary Schedule
MDFR Rx Site and DAS - Flamingo
Date: Tue 3/14/23

Task	Near Critical MS	Duration-only
Critical Task	BL Milestone	Manual Summary Rollup
Imminent Critical	Summary	Manual Summary
Near Critical	Project Summary	External Tasks
BL Task	Inactive Task	External Milestone
Milestone	Inactive Milestone	Deadline
Crtical Milestone	Inactive Summary	Progress
Imminent Critical MS	Manual Task	Manual Progress

SECTION 4

PRICING

4.1 PROJECT AND MAINTENANCE

Items	Price
Materials	$2,043,398
Fiber Optic Cable, Conduit	$1,333,123
Engineering, Installation and Optimization	$2,476,034
Project Management	$423,330
Construction Management	$314,132
Dedicated Electrical Circuits	$88,000
Testing & Commissioning	$198,115
Shipping, Freight & Handling	$68,547
Permitting	$35,780
Warehousing	$10,287
Sub-Total	**$6,990,746**
Discount	**-$569,037**
Equipment and Implementation	**$6,421,709**
Maintenance Year 2	$321,706
Maintenance Year 3	$336,070
Maintenance Year 4	$351,129
Maintenance Year 5	$366,919
Maintenance Year 2 and Year 5 Total	**$1,375,824**
GRAND TOTAL	**$7,797,533**

THESE PRICES ARE VALID THROUGH AUGUST 15 2023.

4.2 OPTIONAL YEARS TO RENEW

The following pricing is provided for planning purposes should the County elect to exercise the Option to Renew Terms available under this Agreement:

Items	Price
Maintenance Year 6	$381,596
Maintenance Year 7	$396,860
Maintenance Year 8	$412,734
Maintenance Year 9	$429,243
Maintenance Year 10	$446,413
Maintenance Year 6 Through Year 10	**$2,066,846**

Items	Price
Maintenance Year 11	$464,270
Maintenance Year 12	$482,841
Maintenance Year 13	$502,155
Maintenance Year 14	$522,241
Maintenance Year 15	$543,131
Maintenance Year 11 Through Year 15	$2,514,638

4.3 MATERIALS

Motorola reserves the right to modify or change part numbers that may change periodically.

The following equipment shall be provided by Motorola Solutions. NOTE: Miami-Dade County is not responsible for errors or omissions within the equipment list. Motorola Solutions will include any additional equipment necessary to ensure system improvements are operating as described.

LINE	MODEL NUMBER	PRODUCT DESCRIPTION	QTY	UNIT PRICE	EXTENDED PRICE
1	SQM01SUM0323	ASTRO MASTER SITE	1	$0	$0
2	CA03517AD	ADD: CORE EXPANSION	1	$0	$0
3	UA00153AB	ADD: P25 FDMA TRUNKING OPERATION SITE	1	$27,600	$27,600
4	CA01316AA	ADD: UNC ADDTL DEVICE LIC (QTY 10)	4	$1,380	$5,520
5	CLN1868	2930F 24-PORT SWITCH	2	$2,125	$4,250
6	DSJ4859D	ARUBA 1G SFP LC LX 10KM SMF XCVR	1	$298	$298
7	DSMW3HE00028CA	SFP - GIGE LX - LC ROHS 6/6 DDM - 40/85C	1	$592	$592
8	T7540	GPW 8000 RECEIVER	1	$850	$850
9	CA03678AA	ADD: ASTRO SYSTEM RELEASE 2021.1	1	$0	$0
10	X302AR	ADD: QTY 2 GPW 8000 RECEIVER	1	$680	$680
11	X640AN	ADD: UHF R2 (435-524 MHZ)	2	$2,720	$5,440
12	CA01948AB	ADD: CONVENTIONAL SOFTWARE R/X ONLY	2	$1,700	$3,400
13	CA01193AB	ADD: IP BASED MULTISITE (SIMULCAST/VOTING) RCVR SW	2	$3,400	$6,800
14	CA01400AA	ADD: POWER CABLE, DC	1	$0	$0
15	X153AW	ADD: RACK MOUNT HARDWARE	1	$43	$43
16	T7540	GPW 8000 RECEIVER	1	$850	$850
17	CA03678AA	ADD: ASTRO SYSTEM RELEASE 2021.1	1	$0	$0
18	X302AR	ADD: QTY 2 GPW 8000 RECEIVER	1	$680	$680
19	X640AN	ADD: UHF R2 (435-524 MHZ)	2	$2,720	$5,440

LINE	MODEL NUMBER	PRODUCT DESCRIPTION	QTY	UNIT PRICE	EXTENDED PRICE
20	CA01948AB	ADD: CONVENTIONAL SOFTWARE R/X ONLY	2	$1,700	$3,400
21	CA01193AB	ADD: IP BASED MULTISITE (SIMULCAST/VOTING) RCVR SW	2	$3,400	$6,800
22	CA01400AA	ADD: POWER CABLE, DC	1	$0	$0
23	X153AW	ADD: RACK MOUNT HARDWARE	1	$43	$43
24	T7540	GPW 8000 RECEIVER	1	$850	$850
25	CA03678AA	ADD: ASTRO SYSTEM RELEASE 2021.1	1	$0	$0
26	X302AR	ADD: QTY 2 GPW 8000 RECEIVER	1	$680	$680
27	X640AN	ADD: UHF R2 (435-524 MHZ)	2	$2,720	$5,440
28	CA01948AB	ADD: CONVENTIONAL SOFTWARE R/X ONLY	2	$1,700	$3,400
29	CA01193AB	ADD: IP BASED MULTISITE (SIMULCAST/VOTING) RCVR SW	2	$3,400	$6,800
30	CA01400AA	ADD: POWER CABLE, DC	1	$0	$0
31	X153AW	ADD: RACK MOUNT HARDWARE	1	$43	$43
32	T7540	GPW 8000 RECEIVER	1	$850	$850
33	CA03678AA	ADD: ASTRO SYSTEM RELEASE 2021.1	1	$0	$0
34	X302AR	ADD: QTY 2 GPW 8000 RECEIVER	1	$680	$680
35	X640AN	ADD: UHF R2 (435-524 MHZ)	2	$2,720	$5,440
36	CA01948AB	ADD: CONVENTIONAL SOFTWARE R/X ONLY	2	$1,700	$3,400
37	CA01193AB	ADD: IP BASED MULTISITE (SIMULCAST/VOTING) RCVR SW	2	$3,400	$6,800
38	CA01400AA	ADD: POWER CABLE, DC	1	$0	$0
39	X153AW	ADD: RACK MOUNT HARDWARE	1	$43	$43
40	T7540	GPW 8000 RECEIVER	1	$850	$850
41	CA03678AA	ADD: ASTRO SYSTEM RELEASE 2021.1	1	$0	$0
42	X301AR	ADD: QTY 1 GPW 8000 RECEIVER	1	$0	$0
43	X640AN	ADD: UHF R2 (435-524 MHZ)	1	$2,720	$2,720
44	CA01948AB	ADD: CONVENTIONAL SOFTWARE R/X ONLY	1	$1,700	$1,700
45	CA01193AB	ADD: IP BASED MULTISITE (SIMULCAST/VOTING) RCVR SW	1	$3,400	$3,400
46	CA01400AA	ADD: POWER CABLE, DC	1	$0	$0
47	X153AW	ADD: RACK MOUNT HARDWARE	1	$43	$43
48	T8343	GSERIES SOFTWARE LICENSING	1	$0	$0
49	UA00411AA	ADD: GSERIES RX-P25 TRNK MS IP	9	$0	$0
50	F4544	SITE MANAGER ADVANCED	1	$2,760	$2,760
51	VA00872	ADD: SDM ASTRO RTU FW CURR ASTRO REL	1	$1,702	$1,702
52	VA00905	ADD:24/48 VDC PS TO SM	1	$110	$110

LINE	MODEL NUMBER	PRODUCT DESCRIPTION	QTY	UNIT PRICE	EXTENDED PRICE
53	V592	AAD TERM BLCK & CONN WI	3	$83	$248
54	SQM01SUM0205	GGM 8000 GATEWAY	1	$4,463	$4,463
55	CA01619AA	ADD: DC POWER	1	$0	$0
56	CA03656AA	GGM 8000 REFURB GATEWAY	1	$2,125	$2,125
57	TRN7342	SEVEN FOOT RACK	4	$432	$1,730
58	DA427022213MIA	MULT RX 450-470 MHz 19" MOUNT, MIAM SITE	1	$9,788	$9,788
59	DST2S2084500008	TRILOGY SMARTPACK S 48V, 500A, 23IN, 7FT, 4 BATT TRAY, 200A BATT BKR	1	$14,876	$14,876
60	DS241115105	FLATPACK 2 48/2000 HE RECTIFIER	3	$873	$2,619
61	DS331E23640800	BLIND PANEL FP2 HE BLACK G1	5	$25	$124
62	DS3672495500	ALARM CABLE 50F FOR TRILOGY S POWER SYSTEMS	1	$172	$172
63	DS0991070958	BATT 48V 150AH SBSXL 150F-FT	3	$3,962	$11,885
64	DS275843	INVERTER, 1.5KVA, 120VAC, 48VDC INVERTER MOD	2	$1,703	$3,406
65	DSCET3KVA00000	MEDIA INVERTER 2I 1PH BULK OUTPUT 48VDC/120VAC, 2 SLOTS, 2 50A BRKRS	1	$3,090	$3,090
66	DS083E50266400	BRKR 80A SINGLE POLE (ONE PANEL POSITION).	1	$40	$40
67	DS502653	BREAKER 10A 1P AUX 5/16 BULLET	1	$40	$40
68	DS502657	BREAKER 30A 1P AUX 5/16 BULLET	10	$40	$405
69	DS502656	25 AMP CIRCUIT BREAKER	2	$40	$81
70	DSBPV1948V14RC	48 VDC 19" SPLIT BUS BREAKER PANE WITH REAR PROTECTIVE COVER	6	$1,325	$7,949
71	OD-50DXR	DDB Unlimited 26RU Red NEMA 3R/4X Class 250 50"H x 25"W x 34" D Red Enclosure. 1 Set of adjustable 19" Racking Rails with RU Markings. Front and Rear Doors and 3 Point Locking System. Powder Coat Textured Red Paint. One Removable Filter Panel Per Door.	1	$3,299	$3,299
72	ACP-4000-N28-110	DDB 4000 BTU Pentair Air Conditioner for OD-50DDR and OD50DXR Enclosures, Light Gray, 28"H x 11.5"W x 14"D. 110/60 Volts/Hz. Max temp. of 131 degree Fehrenheit. Telcordia GR-487 capable.	1	$3,856	$3,856
73	DH147S-D-RMA	FLEX DAS. Public Safety Centric DAS Master 136 - 869 MHz (fi eld programmable for VHF + UHF or 700MHz + FirstNet + 800 MHz). 64 Channles per band, 8 optical ports, DC	4	$15,227	$60,908
74	DH14EA-R1-AU-MDA-37	FLEX DAS. OTA PUBLIC SAFETY CENTRIC DAS REMOTE.UHF 453-	32	$26,540	$849,291

LINE	MODEL NUMBER	PRODUCT DESCRIPTION	QTY	UNIT PRICE	EXTENDED PRICE
		454/458-459 & 460-462/465-467 MHz, +37dBm, 64 filters + 4 Adj sub bands, 1 optical port, NFPA, class A, AC, Internal Duplexer			
75	BTTY-ANN	5-alarm NFPA annunciator, single and dual band options. NFPA / UL-2524	1	$1,434	$1,434
76	BTTY-100100	Battery Backup Unit, 24 VDC, 100W / 24hs or 200W / 12hs	33	$4,179	$137,922
77	CO-FS20-ON300C(I)	(N.America)(Passive) Wideband Tapper CO-FS20-ON300C(I), Low PIM (-161dBc), 340-5850 MHz, N type Female, 300W, Wideband design covering 340-520 MHz, 550-960 MHz, 1710-2700 MHz, 3500-4500 Mhz, 4900-5850 MHz, Suitable for indoor/outdoor environment, High reliability and low insertion loss	2	$90	$180
78	CO-FS15-ON300C(I)	(N.America)(Passive) Wideband Tapper CO-FS15-ON300C(I), Low PIM (-161dBc), 340-5850 MHz, N type Female, 300W, Wideband design covering 340-520 MHz, 550-960 MHz, 1710-2700 MHz, 3500-4500 Mhz, 4900-5850 MHz, Suitable for indoor/outdoor environment, High reliability and low insertion loss	1	$90	$90
79	CO-FS13-ON300C(I)	(N.America)(Passive) Wideband Tapper CO-FS13-ON300C(I), Low PIM (-161dBc), 340-5850 MHz, N type Female, 300W, Wideband design covering 340-520 MHz, 550-960 MHz, 1710-2700 MHz, 3500-4500 Mhz, 4900-5850 MHz, Suitable for indoor/outdoor environment, High reliability and low insertion loss	6	$90	$539
80	CO-FS10-ON300C(I)	(N.America)(Passive) Wideband Tapper CO-FS10-ON300C(I), Low PIM (-161dBc), 340-5850 MHz, N type Female, 300W, Wideband design covering 340-520 MHz, 550-960 MHz, 1710-2700 MHz, 3500-4500 Mhz, 4900-5850 MHz, Suitable for indoor/outdoor environment, High reliability and low insertion loss	10	$90	$898
81	CO-FS08-ON300C(I)	(N.America)(Passive) Wideband Tapper CO-FS08-ON300C(I), Low PIM (-161dBc), 340-5850 MHz, N type Female, 300W, Wideband design covering 340-520 MHz, 550-960 MHz, 1710-2700 MHz, 3500-4500 Mhz, 4900-5850 MHz, Suitable for indoor/outdoor environment, High reliability and low insertion loss	15	$90	$1,346

LINE	MODEL NUMBER	PRODUCT DESCRIPTION	QTY	UNIT PRICE	EXTENDED PRICE
82	CO-FS07-ON300C(I)	(N.America)(Passive) Wideband Tapper CO-FS07-ON300C(I), Low PIM (-161dBc), 340-5850 MHz, N type Female, 300W, Wideband design covering 340-520 MHz, 550-960 MHz, 1710-2700 MHz, 3500-4500 Mhz, 4900-5850 MHz, Suitable for indoor/outdoor environment, High reliability and low insertion loss	13	$90	$1,167
83	CO-FS06-ON300C(I)	(N.America)(Passive) Wideband Tapper CO-FS06-OD300C(I), Low PIM (-161dBc), 340-5850 MHz, N type Female, 300W, Wideband design covering 340-520 MHz, 550-960 MHz, 1710-2700 MHz, 3500-4500 Mhz, 4900-5850 MHz, Suitable for indoor/outdoor environment, High reliability and low insertion loss	6	$90	$539
84	CO-FS05-ON300C(I)	(N.America)(Passive) Wideband Tapper CO-FS05-ON300C(I), Low PIM (-161dBc), 340-5850 MHz, N type Female, 300W, Wideband design covering 340-520 MHz, 550-960 MHz, 1710-2700 MHz, 3500-4500 Mhz, 4900-5850 MHz, Suitable for indoor/outdoor environment, High reliability and low insertion loss	35	$90	$3,142
85	PS-E4-ON50M(XH)	(N.America)(Passive) 4-way Wideband In-line Wilkinson Power Splitter, 138 MHz - 960 MHz, Suitable for indoor/outdoor environment, High reliability and low insertion loss, Suitable for both indoor and outdoor application	2	$253	$506
86	PS-E3-ON50M(XH)	(N.America)(Passive) 3-way Wideband In-line Wilkinson Power Splitter, 138 mhz - 960 MHz, 50W input power handling capability, Low loss, flat response and even output, High reliability, Suitable for both indoor and outdoor application	8	$228	$1,828
87	PS-E2-ON50M(XH)	(N.America)(Passive) 2-Way Wideband In-line Wilkinson Power Splitter, 138 MHz - 960 MHz, 50W input power handling capability, Low loss, flat response and even output, High reliability, Suitable for both indoor and outdoor application	20	$204	$4,080
88	JS-NMNF1.5F-R141	(N.America)(Passive) 1.5ft 0.141 jumper cable. PIM rated -158 dBc. N Male to N Female. Plenum rated with red jacket.	96	$33	$3,133
89	L2L2-S2DB-A1-P-AYXX00000-0003M	Corning ClearCurve ZBL (10mm bend radius) Optical Fiber Jumper LC/APC - LC/APC Simplex SMF (Single Mode Fiber),	62	$24	$1,458

LINE	MODEL NUMBER	PRODUCT DESCRIPTION	QTY	UNIT PRICE	EXTENDED PRICE
		3 Meter, Plenum, ONFP, Indoor, 2.0mm Jacket, 8.3um, Yellow			
90	APL-NM-12	APL N Male Connector for 1/2" Annular	398	$33	$13,309
91	MA-CQ26-1X	Multiband Omni Antenna - 380-6000 MHz - Vertical Polarization - N Female Connector	151	$134	$20,159
92	CXTA02A-9-I	9 ft N type Male to N type Male Jumper. 0.16" Times Microwave TFT402 Plenum Low PIM Cable Assy. Blue	12	$114	$1,371
93	CXTA02A-3-I	3 ft N type Male to N type Male Jumper. 0.16" Times Microwave TFT402 Plenum Low PIM Cable Assy. Blue	78	$56	$4,388
94	IDSU/N	TrueConnect - Indoor Directional SISO Panel In Building Antenna [350-960 MHz]. N type Female connectors.	2	$170	$340
95	CAT16HPBC (50 Pack)	50 Pack Erico Caddy 1" J-Hooks with CADHPBC Beam Clams for attaching to up to 0.5" I-Beam Flanges. Pre-galvanized spring steel construction.	15	$304	$4,559
96	CAT16HP (50 Pack)	50 Pack Erico Caddy 1" J-Hooks with CAD4Z34 Clips. Drill-In. Pre-galvanized spring steel construction.	22	$230	$5,049
97	CAT16HP4Z34 (50 Pack)	50 Pack Erico Caddy 1" J-Hooks with CAD4Z34 Clips and Bat Wings for attaching to threaded rod / steel wire. For use with 1/4" threaded rod (or #8 to #12 steel wire). Pre-galvanized spring steel construction.	45	$270	$12,164
98	X-P B3 MX CONCRETE NAILS (COLLATED) (100 Pack)	100 Pack Hilti Ultimate-performance collated nails for fastening to concrete and other base materials using the BX 3 cordless nailer. 20 mm. Base materials: Concrete (soft), Concrete (tough), Masonry (grout filled concrete block), Masonry (solid limestone brick), Concrete (lightweight over metal deck). Minimum thickness of base material (concrete): 2-3/8 in. Carbon Steel. Galvanized zinc coated <20 µm. For Indoor Use only. Carbon Steel. For use with (tools) BX 3 02, BX 3-IF, BX 3-L 02, BX 3-ME, BX 3-ME (02)	22	$57	$1,258
99	X-CC MX GA Ceiling clip w/wire X-CC MX 8' (1 Pack)	1 Pack Hilti Ceiling clip w/wire X-CC MX 8 ft. 12 AWG. 421822. Metal ceiling clip with preassembled wire for light-duty mechanical/electrical fastenings on ceilings and use with collated nails. Mechanical and electrical fixtures, Electrical applications, Lights, Cable trays, Steel wire attachments.	1125	$2	$1,798

LINE	MODEL NUMBER	PRODUCT DESCRIPTION	QTY	UNIT PRICE	EXTENDED PRICE
		Carbon Steel. For use with (tools): BX 3-ME, BX 3-ME 02, DX 351 MX, DX 460 MX, GX 120-ME			
100	ASE16X16X6NK	Pentair Hoffman 16.00" x 16.00" x 06.00" NEMA 1 Wall Mount Carbon Steel Enclosure without knockouts. Flat, removable covers fastened with plated steel screws. Provision for grounding. Mounting holes on back of box. 16 gauge steel. ANSI 61 Polyester Powder Finish. Gray. For Indoor Use	118	$61	$7,177
101	MR-AP6012J50-RD	1/2" Aluminum Plenum Rated Low-loss Air Dielectric Coax with SmartGuard Technology. NFPA 72 2019 section 12.4.2 Pathway Survivability Level 1 compliance for horizontal pulls. Not for Level 2 compliance without 3M wrapping. Must confirm with AHJ that 2019 NFPA 72 applies, as it is not code compliant before 2019. RFS Fire Engine Red. 1/2in Clear Fill Line Aluminium Plenum-Rated Air Dielectric Coaxial Cable surrounded with interlocking armor. Outer Conducter 0.91" diameter for conduit fittings at min 12" x 12" junction boxes.	31000	$5	$147,560
102	WC-CG-1/2-20	MGI 0.5" (0.17" - .45") Strain Relief Cord Connector / Grommet. Black Nylon 6/6 with TPE Sealing Gland.	66	$2	$128
103	3BALI-0601-04 (25 ft)	25 Ft of Green SouthWire TelcoFlex IV Central Office Power Cable, 6 AWG, Class 1 Flexible Strand With Braid, LSZH, 600 Volts	69	$86	$5,917
104	MFR25SFTF52-10K (10 Pack)	10 Pack Yageo Metal Film Resistors - Through Hole. 10K Ohms Resisitance. 250 mW power Rating. 1.9mm diameter x 3.4 mm length.	10	$2	$15
105	CP-25WB+	3M Fire Barrier Sealant CP 25WB+. Firestop tested up to 4 hours. Provides L-Rating (smoke seal). Water based: easy cleanup and routine disposal with no special handling. Intumescent: expands when heated to seal around items consumed by fire. Re-enterable/repairable. Halogen-free and no-sag formulation. Fast-drying: tack-free in 10-15 minutes. Paintable (after 72 hours). 10.1 Oz.	20	$20	$391
106	FP301-3/8-48"-Clear-Bulk	3M 3/8" x 4' Clear Thin-Wall Heat shrink Tubing. 4 ft. Clear. Indoor rated Polyolefin.	7	$6	$42

LINE	MODEL NUMBER	PRODUCT DESCRIPTION	QTY	UNIT PRICE	EXTENDED PRICE
		Pre Shrink Inner Diameter 0.375". Recovered Inner Diameter 0.187". Shrink Ratio 2:1. Wire Size 6 AWG - 8 AWG (0.249" - 0.213")			
107	6G-0601-04 (25 ft)	Approved Manufacturers 25 Ft Roll of Green THHN/THWN-2 Cable, 6 AWG, 19 Strand, 600V, Annealed Copper, PVC Insulation, Nylon Jacket	21	$48	$1,010
108	1585A 002U1000	24AWG 4 Pair Cat5E U/UTP Unshielded Plenum (Red)	325	$0	$111
109	YAZV6C2TC38FX	Burndy Copper Compression Lug, 2 Hole with Inspection Window, Long Barrel, 3/8" Stud, 6AWG Telco Flex, 1" Stud Hole Spacing, Tin Plated, Blue	68	$13	$906
110	YAV6CL-TC516-FX	Burndy Copper Compression Lug, 1 Hole with Inspection Window, Short Barrel, 5/16" Stud, 6AWG Telco Flex, Tin Plated	68	$5	$312
111	YAZ6C-2TC38	Burndy Copper Compression Lug, 2 Hole with Inspection Window, Long Barrel, 3/8" Stud, 6AWG (Code) Stranded & 30 (19) (Navy), 1" Stud Hole Spacing, Electro-Tin Plated, Blue, 600 Volt - 35 Kilo-Volt	28	$12	$341
112	YAZ2C-2TC38	Burndy Copper Compression Lug, 2 Hole with Inspection Window, Long Barrel, 3/8" Stud, 2AWG (Code) & 60 (Navy), 1" Stud Hole Spacing, Electro-Tin Plated, Brown, 600 Volt - 35 Kilo-Volt	64	$15	$985
113	YAZV6CTC38FX	Burndy Copper Compression Lug, 1 Hole with Inspection Window, Long Barrel, 3/8" Stud, 6AWG Telco Flex, Tin Plated, Blue	14	$5	$73
114	YAZ6CTC38	Burndy Copper Compression Lug, 1 Hole with Inspection Window, Long Barrel, 3/8" Stud, 6AWG (Code) Stranded & 30 (19) (Navy), Electro-Tin Plated, Blue, 600 Volt - 35 Kilo-Volt	7	$5	$33
115	145PTAG (25 Pack)	25 Pack Burndy - Plastic flame retardant P tag, White Nylon UL 94V0	2	$20	$41
116	10559-700	Stand-Off Tie Bracket; 1"W x 0.88"H x 6"L; Black; Chatsworth. Aluminum.	52	$18	$949
117	SB254101	Eaton 19" Self-Supported Relay Rack Isolation Pad Kit	4	$115	$462
118	651S	Eaton / Cooper Crouse-Hinds 3/4" Zinc EMT Compression Connectors. For use with RFS Dragonskin cable entry into Hoffman ASE16X16X6NK Metal Jucntion Box, per UL2196. For Indoor Use Only	354	$1	$289
119	650S	Eaton / Cooper Crouse-Hinds 1/2" Zinc	118	$1	$80

LINE	MODEL NUMBER	PRODUCT DESCRIPTION	QTY	UNIT PRICE	EXTENDED PRICE
		EMT Compression Connectors. For use with normal 1/2" plenum cable entry into Hoffman ASE16X16X6NK Metal Jucntion Box, per UL2196. For Indoor Use Only			
120	S-BT-EF W10 HC AWG4/0	Hilti threaded screw-in stud (carbon steel, whitworth thread) for electrical connections on steel in highly corrosive environments. Recommended Maximal cross section of connected cable 4/0 AWG. Blunt tip. Galvanized. 10mm diameter. Thread Size W10	7	$15	$106
121	TS-SB	Hilti Stepped drill bit for predrilling accurate holes for S-BT threaded screw-in studs on aluminium and steel	7	$69	$482
122	X-P B3 MX CONCRETE NAILS (COLLATED) (100 Pack)	100 Pack Hilti Ultimate-performance collated nails for fastening to concrete and other base materials using the BX 3 cordless nailer. 20 mm. Base materials: Concrete (soft), Concrete (tough), Masonry (grout filled concrete block), Masonry (solid limestone brick), Concrete (lightweight over metal deck). Minimum thickness of base material (concrete): 2-3/8 in. Carbon Steel. Galvanized zinc coated <20 µm. For Indoor Use only. Carbon Steel. For use with (tools) BX 3 02, BX 3-IF, BX 3-L 02, BX 3-ME, BX 3-ME (02)	6	$57	$343
123	X-HS W6 MX (100 Pack)	100 Pack Hilti Metal W6 threaded rod hanger for light-duty electrical/mechanical fastenings on ceilings and use with collated nails. For Threaded W6 rod attachments, Lights, Electrical applications, Cable trays. Carbon Steel. For use with (tools): BX 3-ME, BX 3-ME 02, DX 351 MX, DX 460 MX, DX 5 MX, GX 120-ME, GX 3-ME. Galvanized zinc coated <20 µm. For Indoor Use Only. For use with Concrete (soft), Concrete (tought), Steel.	6	$269	$1,616
124	PPC-1538UVB	Home Depot 3/8 in. Plastic 1-Hole Cable Clamps - Black	18	$0	$5
125	PPC-1525UVB	Home Depot 1/4 in. Plastic 1-Hole Cable Clamps - Black	18	$0	$4
126	PPC-1550UVB	Home Depot 1/2 in. Plastic 1-Hole Cable Clamps - Black	18	$0	$6
127	KnoxBox 3200	KnoxBox Standard Capacity Vault. 4"H x 5" W x 3" D. Black.	1	$875	$875
128	KnoxBox 3200 Normally Open Switch	Knoxbox 3200 Normally Open Switch	1	$57	$57

LINE	MODEL NUMBER	PRODUCT DESCRIPTION	QTY	UNIT PRICE	EXTENDED PRICE
129	Knox 3502-SPDT Switch-Fire Dept Decal	Knox 3502 Single Gate & Key Switch on Mounting Plate. SPDT. Fire Dept Decal7 A resistive, 4 A inductive, key removable two position. Key switch is designed to be recess mounted. P/N: 3500 Series Knox Gate & Key Switch. UL Listed. Stainless steel dust cover. Requires 2 1/4" recessed depth x 3/4" diameter for switch (from front of switch to faceplace). Aluminum faceplate is 4 1/2" high x 2 13/16" wide	1	$288	$288
130	UT010608	Lowes Utilitech 8 ft 16 AWG 3-Prong Indoor Light Duty General Use Extension Cord	31	$21	$663
131	ZA12HS10PG	Lowes Superstrut 1-5/8 x 1-5/8 Pre-Galvanized Half Slot Channel Strut	76	$39	$2,937
132	101543	Lowes Metallic EMT 10-ft Conduit (Common: 0.5-in; Actual: 0.5-In). EMT is not galvanized and is for indoor use only.	3	$6	$19
133	LN-901	Lowes Liquid Nails Heavy Duty Construction Adhesive	6	$5	$31
134	395991_4x4	Lowes 4' x 4' x 3/4" Pyro-Guard 3/4 CAT PS1-09 Pressure Treated Southern Yellow Pine Plywood Sheathing	6	$194	$1,163
135	NYK-77	Truck-Lite Corrosion Preventive Compound. 1oz of 2oz Tube.	7	$7	$50
136	InfEarthQuakeBrace	Equipment Rack Earthquake Brace Kit, 5/8" Hardware	4	$192	$769
137	890-MC	Bridgeport 14/2 and 12/2 Snap-On 1-Hole AC/MC Cable Strap	18	$0	$7
138	MC-1000-584	Brady Label Tape Cartridge, 1" wide. 25 ft continuous roll. Polyester with Permanent Acrylic adhesive for Indoor Use. Black/White reflective	2	$166	$332
139	2812334	3-3/4" Galvanized Steel Wedge Anchor, 1/2" Anchor Diameter for concrete wall mounts	24	$5	$119
140	MDS090670 (100 Pack)	100 Pack Medline Sterile Alcohol Prep Pads for cleaning Coax	7	$14	$100
141	AM-15N	Attenuator - 15dB - 2 W - DC-3000 MHz - Type-N	8	$92	$734
142	AM-10N	Attenuator - 10dB - 2 W - DC-3000 MHz - Type-N	4	$69	$276
143	BBHKU	Miroc Buss bar hardware kits allow all sizes of buss bars to be secured in virtually any application. Stainless Steel attachment hardware. Glass reinforced polyester	7	$38	$264

LINE	MODEL NUMBER	PRODUCT DESCRIPTION	QTY	UNIT PRICE	EXTENDED PRICE
		insulators.			
144	BB210U	Miroc 1/4" x 2" x 10" Indoor Copper Universal Ground Bar. 10 pairs of 7/16" holes over 7/16" x 5/8" slots (3/4" separation). Wall or tower mountable. Includes Galvanized angle adapter, Grounding bar, Insulators, Mounting brackets, Universal hardware.	7	$41	$289
145	RFAKIT	Panduit rack Anchor Kit for 2 post or 4 post rack cabinet to concrete floor. Steel, Sliver, 4 pc.	4	$38	$151
146	MP588-C	Panduit Category 5e UTP modular RJ-45 connector plug. Terminated 4-pair, 24-26 AWG, 100 ohm, solid or stranded unshielded twisted pair patch cable	2	$1	$2
147	S1224-C	Panduit #12-24 Mounting Screws secure #12-24 equipment rails on 2 post racks, 4 post racks and cabinets. Steel, Black, 0.5" Head Diameter (13mm), 100 pack.	4	$36	$145
148	CLT38F-C4 (25 ft)	25 ft of Panduit Corrugated Loom Tubing Slit, Polyethylene, Inside Diameter 0.394", Outside Diameter 0.524", Yellow. For Indoor Use.	5	$29	$146
149	ABMT-A-C20 (10 Pack)	10 Pack Panduit Cable Tie Mount, Adhesive, 1.12"x1.12" (28.5mm x 28.5mm), Black	6	$35	$209
150	EDR19FM51U	Pentair Hoffman 51 RU x 19" Rack. 96" x 19" x 15", Bulletin DOFR2 (Aluminum Open-Frame Rack), Open LAN Material/Finish: Alum/Black	4	$292	$1,169
151	0774056 (5 ft)	Power Phase 3/8" x 5' Black Thin-Wall Heat shrink Tubing. 5 ft. Black. Outdoor rated Polyolefin. Pre Shrink Inner Diameter 0.375". Recovered Inner Diameter 0.187". Shrink Ratio 2:1. Wire Size 6 AWG - 8 AWG (0.249" - 0.213")	7	$6	$40
152	3BALI-0601-04 (25 ft)	25 Ft of Green SouthWire TelcoFlex IV Central Office Power Cable, 6 AWG, Class 1 Flexible Strand With Braid, LSZH, 600 Volts	7	$86	$600
153	3BALI-0201-04 (25 ft)	25 Ft of Green SouthWire TelcoFlex IV Central Office Power Cable, 2 AWG, Class 1 Flexible Strand With Braid, LSZH, 600 Volts	32	$156	$5,002
154	CDOW	Thomas and Betts 3x2 Metal Junction Box. 1 Gang. Gangable. 2-1/2" Depth. Four 1/2" Side Knockouts. Two 1/2" Bottom	1	$17	$17

LINE	MODEL NUMBER	PRODUCT DESCRIPTION	QTY	UNIT PRICE	EXTENDED PRICE
		Knockouts. Mounting Ears. Flush Mountable. Min Order Quantity = 50. Silver			
155	VSF8.00CR (25 Pack)	(25 Pack) 3/4" x 8" Velcro FR/UL ONE-WRAP Back-To-Back strap. 8" straps / 25 ft roll / Plenum Rated. 0.25 lbs per peel strength. Plenum Rated. Color = Cranberry. For indoor use only. For use on backboards and 19" racks.	6	$39	$235
156	VSF18.0CR (100 Pack)	(100 Pack) 3/4" x 18" Velcro FR/UL ONE-WRAP Back-To-Back strap. 18" straps / 150 ft roll / Plenum Rated. 0.25 lbs per peel strength. Plenum Rated. Color = Cranberry. For indoor use only. For use on backboards and 19" racks.	6	$324	$1,942
157	Various	Miscellaneous Aesthetics (ceiling repair, hidden apertanances)	151	$115	$17,320
158	Fiber Optics Materials	FT OF 144 SM OS2 INDOOR/ OUTDOOR FIBER OPTIC CABLE	10000	$7	$71,302
159	Fiber Optics Materials	FT OF 96 SM OS2 INDOOR/ OUTDOOR FIBER OPTIC CABLE	1200	$5	$6,376
160	Fiber Optics Materials	FT OF 48 SM OS2 INDOOR/ OUTDOOR FIBER OPTIC CABLE	6600	$3	$20,430
161	Fiber Optics Materials	FT OF 24 SM OS2 INDOOR/ OUTDOOR FIBER OPTIC CABLE	650	$2	$1,491
162	Fiber Optics Materials	CCH 4U FIBER OPTIC CONNECTOR PANEL	26	$699	$18,186
163	Fiber Optics Materials	CCH 2U FIBER OPTIC CONNECTOR PANEL	1	$549	$549
164	Fiber Optics Materials	CCH 1U FIBER OPTIC CONNECTOR PANEL	6	$462	$2,770
165	Fiber Optics Materials	96-144 CABLE PREP OF FIBER (5H EACH END)	7	$23	$162
166	Fiber Optics Materials	48-72 CABLE PREP OF FIBER (3.15H AT EACH END)	8	$23	$185
167	Fiber Optics Materials	12-24 CABLE PREP OF FIBER (1.90H AT EACH END)	4	$23	$92
168	Fiber Optics Materials	CCH FUSION SPLICE CASSETTE 12 SM LC	232	$802	$186,157
169	Fiber Optics Materials	FIBER OPTIC FUSION SPLICING	2784	$0	$0
170	Fiber Optics Materials	CABLE DRESSING (VELCRO)	19	$15	$278
171	Fiber Optics Materials	LABLING CABLES	19	$20	$370
172	Fiber Optics Materials	LABLING FIBER STRANDS	2784	$0	$639
173	Fiber Optics Materials	FIBER OPTIC OTDR BI-DIRECTIONAL W/ DOCUMENTATION	1392	$0	$0
174	Fiber Optics Materials	AS BUILT DOCUMENTATION	1	$3,850	$3,850

LINE	MODEL NUMBER	PRODUCT DESCRIPTION	QTY	UNIT PRICE	EXTENDED PRICE
175	Conduit Materials	2-EMT CONDUIT	10000	$10	$104,874
176	Conduit Materials	2-EMT COMPRESSION COUPLING	1000	$6	$5,621
177	Conduit Materials	2-EMT COMPRESSION CONNECTORS	320	$7	$2,351
178	Conduit Materials	2-EMT 90/45/OFFSET FIELD BENDING EMT CONDUIT W/ INSTALLATION	950	$0	$-
179	Conduit Materials	2" GALV CONDUIT RIGID	2000	$21	$41,796
180	Conduit Materials	2" RIG COUPLING	120	$13	$1,558
181	Conduit Materials	2-90 DEG RIGID ELBOW	20	$41	$830
182	Conduit Materials	2-45 DEG RIGID ELBOW	110	$46	$5,029
183	Conduit Materials	2-00 OFFSET RIGID NIPPLE	40	$86	$3,427
184	Conduit Materials	1/2"X 6FT THRD ROD W/ ANCHOR	1290	$8	$9,933
185	Conduit Materials	2-CONDUIT HANGER W/ BOLT	1290	$1	$1,828
186	Conduit Materials	I.625 X 1.625 12 GAGE SLOTTED UNISTRUT	200	$8	$1,600
187	Conduit Materials	2" PIPE CLAMP UNISTRUT	200	$3	$560
188	Conduit Materials	HOFFMAN WW TYPE 1 STRAIGHT SECTION GUTTER W/ FIELD KNOCKOUTS	100	$63	$6,346
189	Conduit Materials	HOFFMAN WW CLOUSURE PLATE KO	200	$10	$1,950
190	Conduit Materials	MISCELLANEOUS BOLTS, WASHERS, NUTS & SCREWS	35	$54	$1,887
191	Conduit Materials	FIRE PROOF WALL PENETRATIONS	60	$18	$1,109
192	Conduit Materials	CORE DRILLING	60	$0	$-
193	Conduit Materials	X-RAY AND CORE DRILLING	60	$185	$11,088
		Total Materials			**$2,043,398**

4.4 PAYMENT MILESTONES

Except for a payment that is due on the Effective Date, Customer will make payments to Motorola within thirty (30) days after the date of each invoice. Customer will make payments when due in the form of a check, cashier's check, or wire transfer drawn on a U.S. financial institution. If Customer has purchased additional Professional or Subscription services, payment will be in accordance with the applicable addenda. Payment for the System purchase will be in accordance with the following milestones.

System Purchase

1. 15% of the System Price due upon completion of in-building RF coverage survey, in-building RF coverage report, RF coverage design, preliminary DAS and Fiber Plant engineering, four site walks encompassing MIA and the Flamingo Garage sites
2. 20% of the System Price due upon Contract Design Review;
3. 24% of the System Price due upon DAS Shipment & Installation*;
4. 14% of the System Price due upon Fiber Optic & Fiber Conduit Shipment & Installation*;

5. 2% of the System Price due upon FNE Shipment & Installation*;
6. 10% of the System Price due upon System Installation Acceptance;
7. 10% of the System Price due upon System Optimization; and
8. 5% of the System Price due upon Final Acceptance.

*Motorola reserves the right to invoice for partial shipments and installation of equipment. The value of the equipment shipped / services performed will be determined by the value shipped / services performed as a percentage of the total milestone value. Unless otherwise specified, contract discounts are based upon all items proposed and overall system package. For invoicing purposes only, discounts will be applied proportionately to the FNE and Subscriber equipment values to total contract price.

SECTION 5

APPENDIX A

MDFR BDA INSTALLATION AND TEST PLAN

MDPD 800MHz are not part of the Scope of Services for this contract

Miami-Dade Fire Rescue
Two-Way Radio Communications Enhancement Systems
BDA Installation and Testing

Based on NFPA 1221 2016 Ed, Florida Fire Prevention Code - Sixth Edition

NFPA 1221: 9.6.6 Approval and Permit. Plans shall be submitted for approval prior to installation. At the conclusion of successful acceptance testing, a renewable permit shall be issued for the "Public Safety Radio Enhancement System" where required by the authority having jurisdiction.

FYI: If work is being completed without submitting plans and without a permit, fees may be doubled.

Radio Signal Strength Tests will test MDFR 450MHz and MDPD 800MHz

Scheduling Radio Signal Strength Pre-Acceptance Test:

The following phases of construction must be completed prior to testing:

- Flooring, ceilings, walls, windows and doors (including door hardware and door windows)
- Elevators (fully operational)
- Construction debris/items removed or minimized

After the building is dried in, email – MDFRBDAs@miamidade.gov to schedule a "Radio Signal Strength Pre-Acceptance Test"

- MDFR will confirm a date and time.
- Requests for radio signal strength tests submitted before the building is "dried in" will not be granted, and fees may be assessed.
- This test will not hold up a TCO, a successful "signal strength test" will clear you for a CO/Final Fire.
- MDFR will contact/invite Miami Dade Police Dept., to test the 800Mhz
- Please email MDFRBDAs@miamidade.gov a PDF of the plans, (a general layout of the building).

You must provide a Miami Dade County Master Permit Number to schedule a Pre-Acceptance Radio Signal Strength Test.
Miami Dade County Permit Numbers start with the year the permit was applied for, then 6 numbers after- i.e.: 2016-123456

Information Needed to Schedule Pre-Acceptance Test :

When requesting a radio signal strength pre-acceptance test, please include this information:
Miami-Dade County Master Permit No. _____
Project Name: _____
Project Address: _____ (On-Site) Contact Information: _

How Many? (as applicable, please specify "N/A" when NOT applicable):

- Floors: _
- Stairwells: _
- Elevators: _
- Garage (No. of Floors): _
- Roof Access: _
- Emergency Command Center: _
- Pump Room: _
- Sprinkler Sect. Valve Location: _
- Standpipe Cabinets: _

NOTE: "BDA Signal Strength Testing" inspections are charged a "Special Request Inspection" (SRI) fee based on the size of the project. MDFR will schedule this inspection for you. The aforementioned SRI fee will be applied to your master permit after the Pre-Acceptance test. Please provide the permit number as soon as possible to avoid any cancellations.

MDFR will need on-site personnel with access to all areas/doors/elevators. These individuals must be familiar with the building's interior floor plan. Please supply site personnel with the appropriate and necessary "Key Access/Card(s)."

If a BDA System is Needed:

- When installing the BDA: Have the installing company submit plans to the Fire Department via the Building Department Plans Processing Center, 11805 Coral Way, Miami, 33175.
  Follow the "mdfr-bda-plans-processing-guide-sheet", (to help ensure the plans have all necessary information needed, to be approved).
- The "Category 0040" is assigned to the plans when the plans are submitted, registered, and the application is filled out at the Building Department Plans Processing Center, 11805 Coral Way, Miami FL 33175.
- Once the BDA Plans are approved, pay the cashier, retrieve your plans, print permit card.
  Install BDA System (per approved plans)

Scheduling Radio Signal Strength Acceptance Test:

Once the BDA System is installed, email – MDFRBDAs@miamidade.gov to schedule a "BDA-Signal Strength Acceptance Test".

- MDFR will confirm the date and time.
- MDFR will contact/invite Miami Dade Police Dept., to test the 800Mhz
- Please email MDFRBDAs@miamidade.gov a PDF of the plans, (a general layout of the building).

When requesting a radio signal strength acceptance test, please include this information:

Miami-Dade County Master Permit No. _____

Project Name: _____

Project Address: _____

(On-Site) Contact Information: _

How Many? (as applicable, please specify "N/A" when NOT applicable):

- Floors: _
- Stairwells: _
- Elevators: _
- Garage (No. of Floors): _
- Roof Access: _
- Emergency Command Center: _
- Pump Room: _
- Sprinkler Sect. Valve Location: _
- Standpipe Cabinets: _

NOTE: "BDA Signal Strength Testing" inspections are charged a "Special Request Inspection" (SRI) fee based on the size of the project. MDFR will schedule this inspection for you. The aforementioned SRI fee will be applied to your BDA (04) permit after the Acceptance test. Please provide the permit number as soon as possible to avoid any cancellations.
MDFR will need on-site personnel with access to all areas/doors/elevators. These individuals must be familiar with the building's interior floor plan. Please supply site personnel with the appropriate and necessary "Key Access/Card(s)."

The Day of Acceptance Test:

- The installing contractor/company must be on site with plans and permit.
- BDA System is off.
- Upon the request of testing team, the system is turned on, testing begins.
- If there are any problems/questions/concerns, we will address them at that time with the BDA Contractor.
- After the acceptance test is complete and approved, you must schedule a final fire inspection for your category 0040 (BDA). Per NFPA 1 [1:11.10], NFPA 72 [72:24.9] and NFPA 1221 [1221:9.6] Requirements.
- Have approved plans and permit on-site
- Have BDA Installation Company and Fire Alarm Company Present
- Final fire approved, the permit is signed; you are eligible for your CO.

Relevant Links:

MDC Permit Application:
http://www.miamidade.gov/permits/library/building-permit.pdf

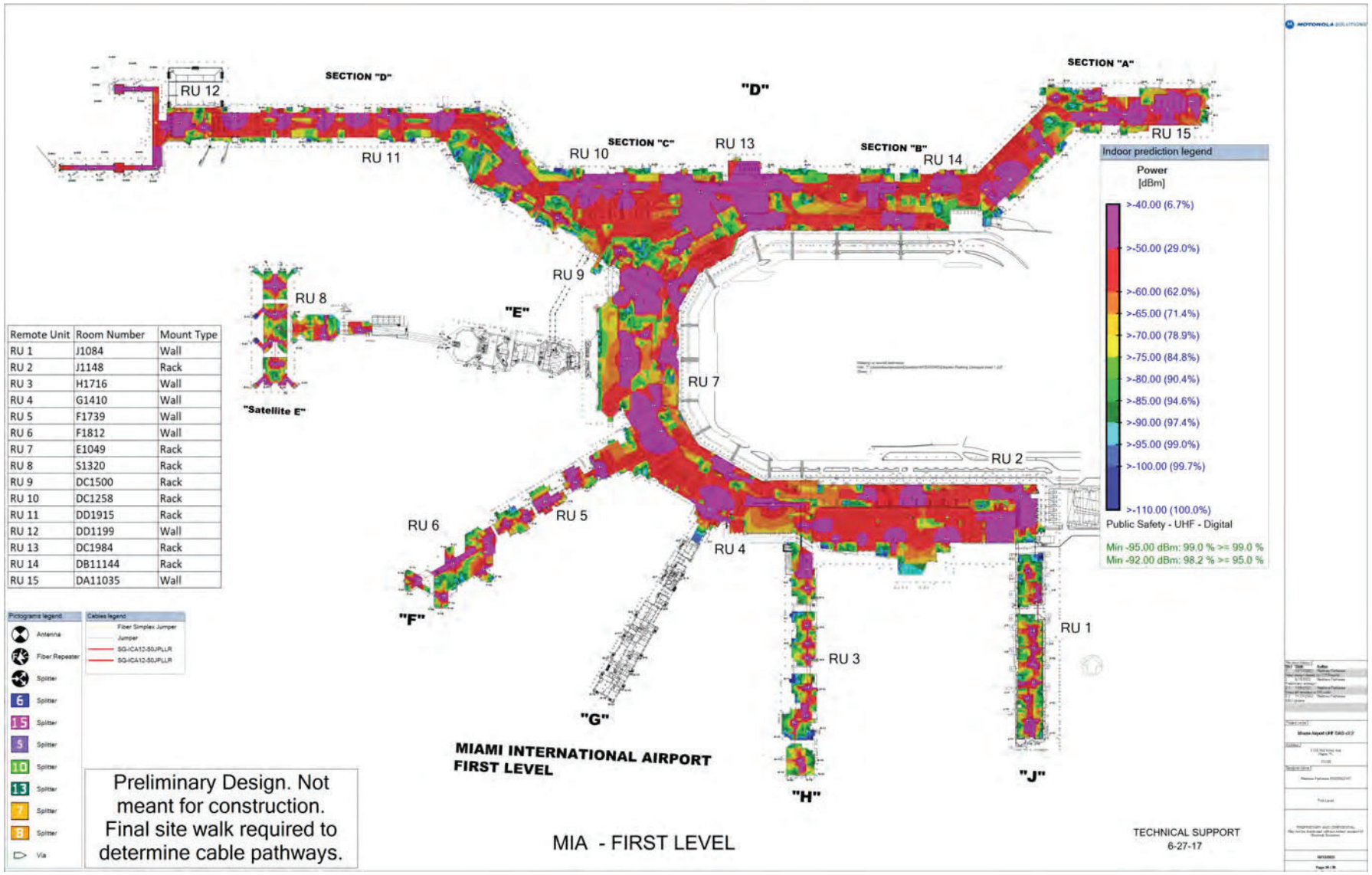
Building Permit Selection Menu:
http://egvsys.miamidade.gov:1608/WWWSERV/ggvt/bnzaw960.dia

MDFR Schedule Fire Final Inspection:
http://www8.miamidade.gov/apps/rer/BNZ2/BNZM7015.aspx

SECTION 6

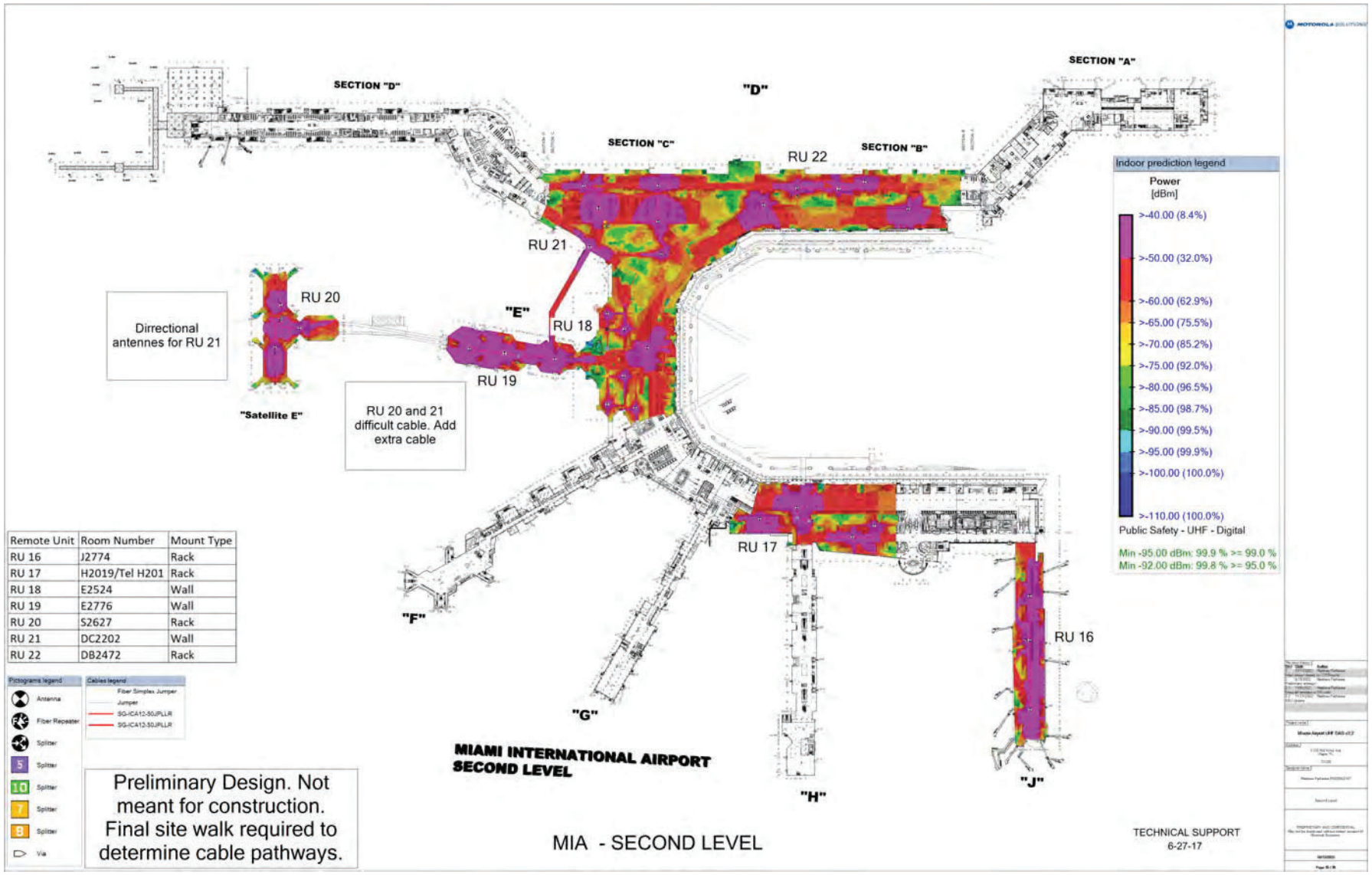
APPENDIX B
MIA COVERAGE MAPS

MDC084



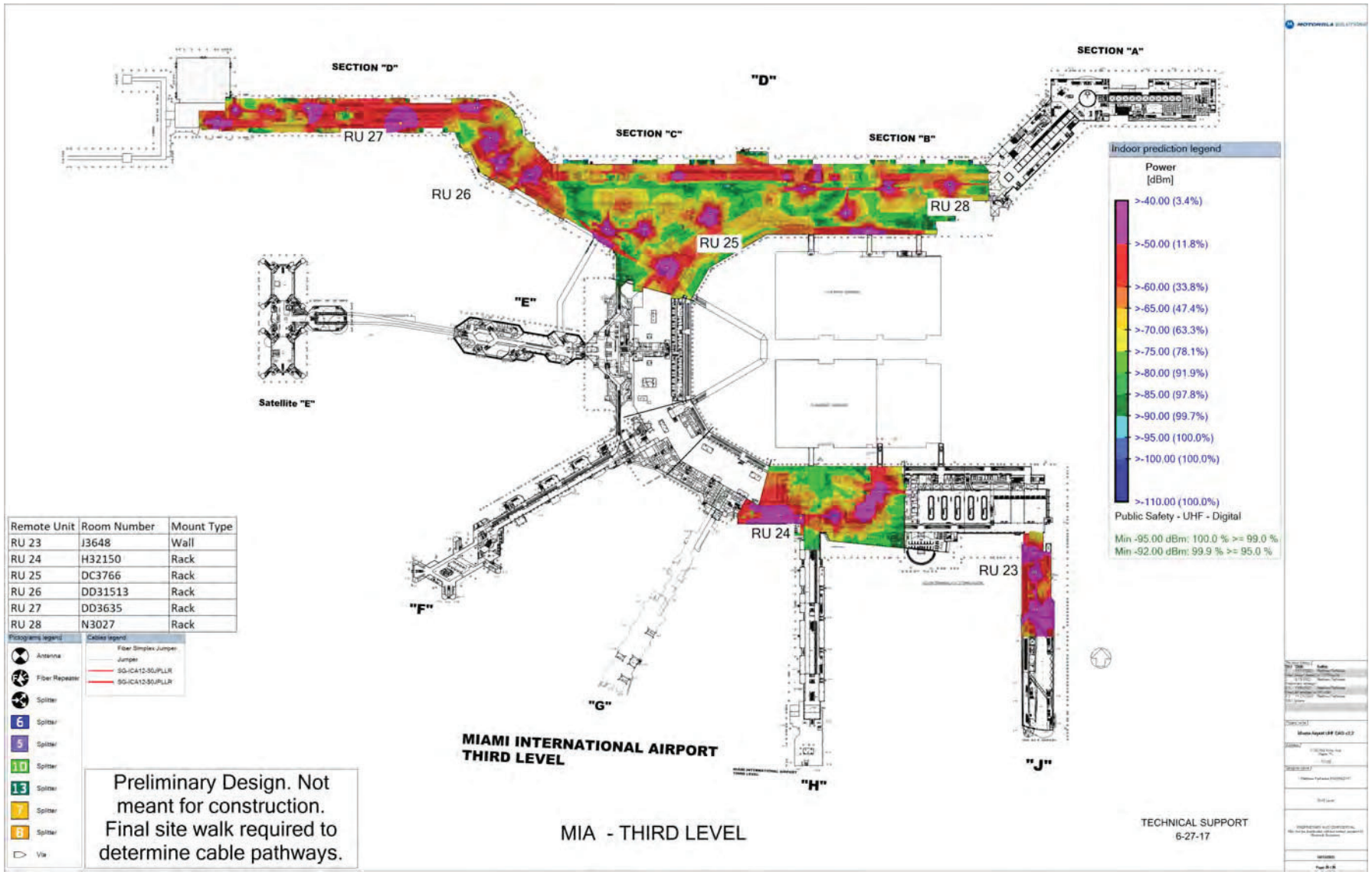
Remote Unit	Room Number	Mount Type
RU 1	J1084	Wall
RU 2	J1148	Rack
RU 3	H1716	Wall
RU 4	G1410	Wall
RU 5	F1739	Wall
RU 6	F1812	Wall
RU 7	E1049	Rack
RU 8	S1320	Rack
RU 9	DC1500	Rack
RU 10	DC1258	Rack
RU 11	DD1915	Rack
RU 12	DD1199	Wall
RU 13	DC1984	Rack
RU 14	DB11144	Rack
RU 15	DA11035	Wall

MDC085

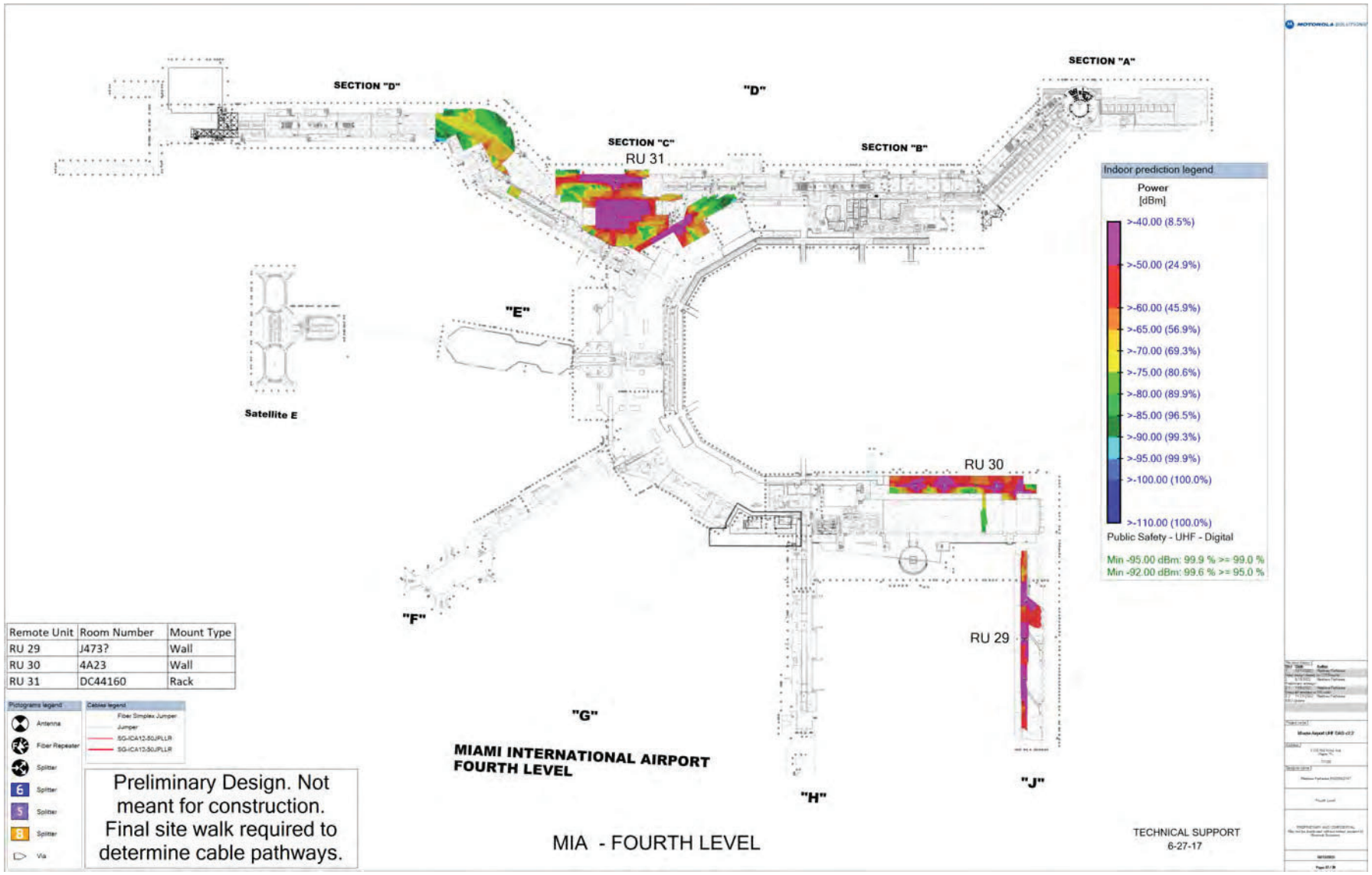


Remote Unit	Room Number	Mount Type
RU 16	J2774	Rack
RU 17	H2019/Tel H201	Rack
RU 18	E2524	Wall
RU 19	E2776	Wall
RU 20	S2627	Rack
RU 21	DC2202	Wall
RU 22	DB2472	Rack

MDC086


SECTION "D"
SECTION "A"
"D"
RU 27
SECTION "C"
SECTION "B"
RU 26
RU 28
RU 25
"E"
Satellite "E"
RU 24
RU 23
"F"
"G"
"H"
"J"
MIAMI INTERNATIONAL AIRPORT
THIRD LEVEL
Indoor prediction legend
Power
[dBm]
>-40.00 (3.4%)
>-50.00 (11.8%)
>-60.00 (33.8%)
>-65.00 (47.4%)
>-70.00 (63.3%)
>-75.00 (78.1%)
>-80.00 (91.9%)
>-85.00 (97.8%)
>-90.00 (99.7%)
>-95.00 (100.0%)
>-100.00 (100.0%)
>-110.00 (100.0%)
Public Safety - UHF - Digital
Min -95.00 dBm: 100.0 % >= 99.0 %
Min -92.00 dBm: 99.9 % >= 95.0 %
Remote Unit | Room Number | Mount Type
RU 23 | J3648 | Wall
RU 24 | H32150 | Rack
RU 25 | DC3766 | Rack
RU 26 | DD31513 | Rack
RU 27 | DD3635 | Rack
RU 28 | N3027 | Rack
Preliminary Design. Not meant for construction. Final site walk required to determine cable pathways.
MIA - THIRD LEVEL
TECHNICAL SUPPORT
6-27-17

MDC087


SECTION "A"
SECTION "B"
SECTION "C"
SECTION "D"
"D"
RU 31
"E"
Satellite E
RU 30
RU 29
"F"
"G"
"H"
"J"
MIAMI INTERNATIONAL AIRPORT
FOURTH LEVEL
Indoor prediction legend
Power
[dBm]
>-40.00 (8.5%)
>-50.00 (24.9%)
>-60.00 (45.9%)
>-65.00 (56.9%)
>-70.00 (69.3%)
>-75.00 (80.6%)
>-80.00 (89.9%)
>-85.00 (96.5%)
>-90.00 (99.3%)
>-95.00 (99.9%)
>-100.00 (100.0%)
>-110.00 (100.0%)
Public Safety - UHF - Digital
Min -95.00 dBm: 99.9 % >= 99.0 %
Min -92.00 dBm: 99.6 % >= 95.0 %
Remote Unit | Room Number | Mount Type
RU 29 | J473? | Wall
RU 30 | 4A23 | Wall
RU 31 | DC44160 | Rack
Preliminary Design. Not meant for construction. Final site walk required to determine cable pathways.
MIA - FOURTH LEVEL
TECHNICAL SUPPORT
6-27-17

SECTION 7

APPENDIX C

DAS MAINTENANCE SOW

Statement of Work

On Site Infrastructure Response and Dispatch Service

1.0 Description of Services

The Motorola System Support Center (SSC) will receive Customer request for service and dispatch a Servicer. The Servicer will respond to the Customer location based on pre-defined Severity Levels set forth in the Severity Definitions Table and Response times set forth in the Response Time Table in order to Restore the System.

Motorola will provide Case management as set forth herein. The SSC will maintain contact with the on-site Servicer until System Restoral and Case is closed. The SSC will continuously track and manage Cases from creation to close through an automated Case tracking process. This Case management allows for Motorola to provide Case activity reports.

The terms and conditions of this Statement of Work (SOW) are an integral part of Motorola's Service Terms and Conditions or other applicable Agreement to which it is attached and made a part thereof by this reference.

2.0 Motorola has the following responsibilities:
- 2.1. Continuously receive service requests.
- 2.2. Create a Case as necessary when service requests are received. Gather information to perform the following:
  - 2.2.1. Characterize the issue.
  - 2.2.2. Determine a plan of action.
  - 2.2.3. Assign and track the Case to resolution.
- 2.3. Dispatch a Servicer as required by Motorola standard procedures and provide necessary Case information collected in 2.2.
- 2.4. Ensure the required personnel have access to Customer information as needed.
- 2.5. Servicer will perform the following on-site:
  - 2.5.1. Run diagnostics on the DAS.
  - 2.5.2. Replace defective DAS component, as applicable.
  - 2.5.3. Provide materials, tools, documentation, physical planning manuals, diagnostic/test equipment and any other requirements necessary to perform the Maintenance service.
  - 2.5.4. If a third party Vendor is needed to restore the System, the Servicer may accompany that Vendor onto the Customer's premises.
- 2.6. Verify with Customer that Restoration is complete or System is functional, if required by Customer's repair Verification in the Customer Support Plan required by section 3.2. If Verification by Customer cannot be completed within 20 minutes of Restoration, the Case will be closed and the Servicer will be released.
- 2.7. Escalate the Case to the appropriate party upon expiration of a Response time.
- 2.8. Close the Case upon receiving notification from Customer or Servicer, indicating the Case is resolved.
- 2.9. Notify Customer of Case Status as defined required by the Customer Support Plan:
  - 2.9.1. Open and closed; or
  - 2.9.2. Open, assigned to the Servicer, arrival of the Servicer on-site, deferred or delayed, closed.
- 2.10. Provide Case activity reports to Customer.

3.0 Customer has the following responsibilities:
- 3.1. Contact Motorola, as necessary, to request service.
- 3.2. Provide Motorola with pre-defined Customer information and preferences prior to Start Date necessary to complete Customer Support Plan.
  - 3.2.1. Case notification preferences and procedure.
  - 3.2.2. Repair Verification preference and procedure.

3.2.3. Database and escalation procedure forms.
3.2.4. Submit changes in any information supplied in the Customer Support Plan to the Customer Support Manager.

3.3. Provide the following information when initiating a service request:
3.3.1. Assigned System ID number.
3.3.2. Problem description and site location.
3.3.3. Other pertinent information requested by Motorola to open a Case.

3.4. Allow Servicers access to Equipment.

3.5. Supply DAS spares, as applicable, in order for Motorola to Restore the System as set forth in paragraph 2.5.2.

3.6. Maintain and store in an easily accessible location proper system spares.

3.7. Verify with the SSC that Restoration is complete or System is functional, if required by Repair Verification preference provided by Customer in accordance with section 3.2.

3.8. Cooperate with Motorola and perform all acts that are reasonable or necessary to enable Motorola to provide these services.

Severity Definitions Table

Severity Level	Problem Types
Severity 1	▪ Response is provided continuously ▪ Major System failure ▪ 33% of DAS HE System down ▪ 33% of DAS Remotes channels down ▪ Site Environment alarms AC power. ▪ This level is meant to represent a major issue that results in an unusable system, sub-system, Product, or critical features from the Customer's perspective. No Work-around or immediate solution is available.
Severity 2	▪ Response during Standard Business Day ▪ Significant System Impairment not to exceed 33% of system down ▪ This level is meant to represent a moderate issue that limits a Customer's normal use of the system, sub-system, product, or major non-critical features from a Customer's perspective
Severity 3	▪ Response during Standard Business Day ▪ Intermittent system issues ▪ Information questions ▪ Upgrades/Preventative maintenance ▪ This level is meant to represent a minor issue that does not preclude use of the system, sub-system, product, or critical features from a Customer's perspective. It may also represent a cosmetic issue, including documentation errors, general usage questions, recommendations for product enhancements or modifications, and scheduled events such as preventative maintenance or product/system upgrades.

Response Times Table (Customer's Response Time Classification is designated in the Service Agreement)

Severity Level	Premier Response Time
Severity 1	Within 2 hours from receipt of Notification Continuously 24 x 7
Severity 2	Within 4 hours from receipt of Notification Standard Business Day
Severity 3	Within 24 hours from receipt of Notification Standard Business Day

Statement of Work

Local Infrastructure Repair Box Level

4.0 Description of Services

Local Infrastructure Repair Box Level is a repair service provided by the Servicer for Infrastructure named on the Customer Equipment list. At the Servicer's discretion and responsibility, Infrastructure may be sent to Motorola, original equipment manufacturer, third party vendor, or other facility for repair.

The terms and conditions of this Statement of Work (SOW) are an integral part of Motorola's Service Terms and Conditions or other applicable Agreement to which it is attached and made a part thereof by this reference.

5.0 Motorola Servicer has the following responsibilities:

5.1. Repair or replace Infrastructure at the Servicer facility or Customer location as determined by Servicer. Any replaced FRU will be of a similar kit and version, and will contain like boards and chips, as the Customer's malfunctioning FRU(s). Servicer is responsible for travel costs to a Customer location to repair Infrastructure.

5.2. Perform the following on Motorola Infrastructure:

5.2.1. Perform an operational check on the Infrastructure to determine the nature of the problem.

5.2.2. Repair or replace malfunctioning FRU, as determined by Servicer.

5.2.3. Verify that Motorola Infrastructure is returned to Motorola manufactured specifications.

5.3. Provide the following service on select third party Infrastructure

5.3.1. Perform pre-diagnostic and repair service to confirm Infrastructure malfunction and eliminate sending Infrastructure with no trouble found (NTF) to third party vendor for repair, when applicable.

5.3.2. Ship malfunctioning Infrastructure to the original equipment manufacturer or third party vendor for repair service. Servicer is responsible for all shipping and handling charges.

5.3.3. Coordinate and track Infrastructure sent to the original equipment manufacturer or third party vendor for service.

5.4. Re-program Infrastructure to original operating parameters based on templates provided by Customer required by Section 3.2. If the Customer template is not provided or is not reasonably usable, a standard default template will be used. The Servicer will provide the standard template.

5.5. Notify the Customer upon completion of repair or replacement.

5.6. Properly package, return ship or hand delivers Infrastructure to the Customer specified address. Servicer will pay return shipping charges, if being sent via overnight carrier.

6.0 Customer has the following responsibilities:

6.1. Contact Servicer and provide the following information:

6.1.1. Provide customer name, address of site location, and symptom of problem.

6.1.2. Provide model description, model number, serial number, and type of System and Firmware version, if known.

6.2. Maintain and/or store backups of all applicable Software applications and Firmware for reloading, if necessary by Servicer, after repair service is completed.

6.3. Cooperate with Motorola and perform all acts that are reasonable or necessary to enable Motorola to provide Local Infrastructure Repair services to Customer.

7.0 Preventative Maintenance

7.1 Site Visit Schedule

7.1.1 Site Visit 1 - Two Technicians, Two weeks plus Travel and Expenses 6 months after systems acceptance or Coverage recertification.

7.1.2 Site Visit 2 - Two Technicians, Two weeks plus Travel and Expenses 12 months after systems acceptance or Coverage recertification.

7.2 Test Plan

7.2.1 Verify on-site documentation – including design, as-builts, spec sheets, etc.

7.2.2 Visually check the system – ensure all components are properly secured, installed in the locations as shown on the plans, and no obvious damage or movements of equipment have occurred.

7.2.3 BBU Inspection

a. Verify all alarming as required by code. Check that alarming shows up on the BBU, Annunciator Panel, and FACP.
b. Upgrade the BDA and BBU software
c. Re-verify the alarming (make sure everything remains the same after the upgrade).
d. Check the battery capacity remaining (Replace batteries if needed)

7.2.4 BDA Inspection

a. Isolation check – measure both UL and DL isolation manually.
b. Input signal verification – verify the off-air signal is the same as what was recorded in the close-out documentation. If this is not included, ensure that there is adequate input signal to cover the building.
c. Gain check - v erify both the downlink gain and uplink gain are the same as what was recorded in the close-out documentation. This should be at least 20dB less than the isolation measurement.
d. Log into the BDA and ensure all frequencies are properly programmed and supported.

7.2.5 System Inspection

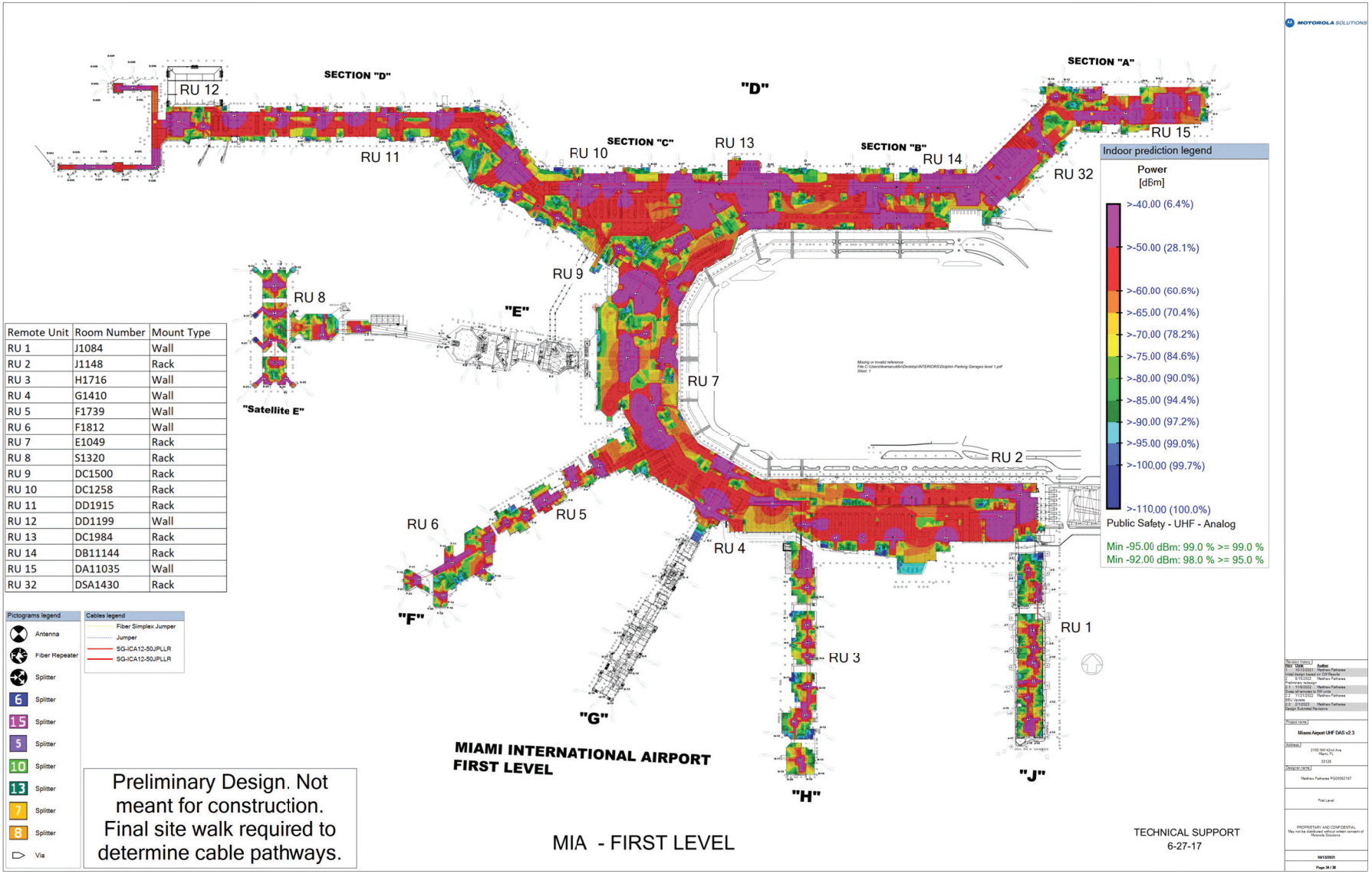
a. Complete a grid test of the building, utilizing the same grid pattern as previous tests. Complete both a DL signal strength and DAQ test, measure the UL signal strength at Base Station Receiver
b. Check that all critical areas pass testing. Record these with the grid test.
c. Ensure that all antennas are still transmitting. Walk underneath each antenna and measure signal strength. This should approximately match the signal strength indicated on the heat maps as provided with the design.

SECTION 8

APPENDIX D
DAS DIAGRAM

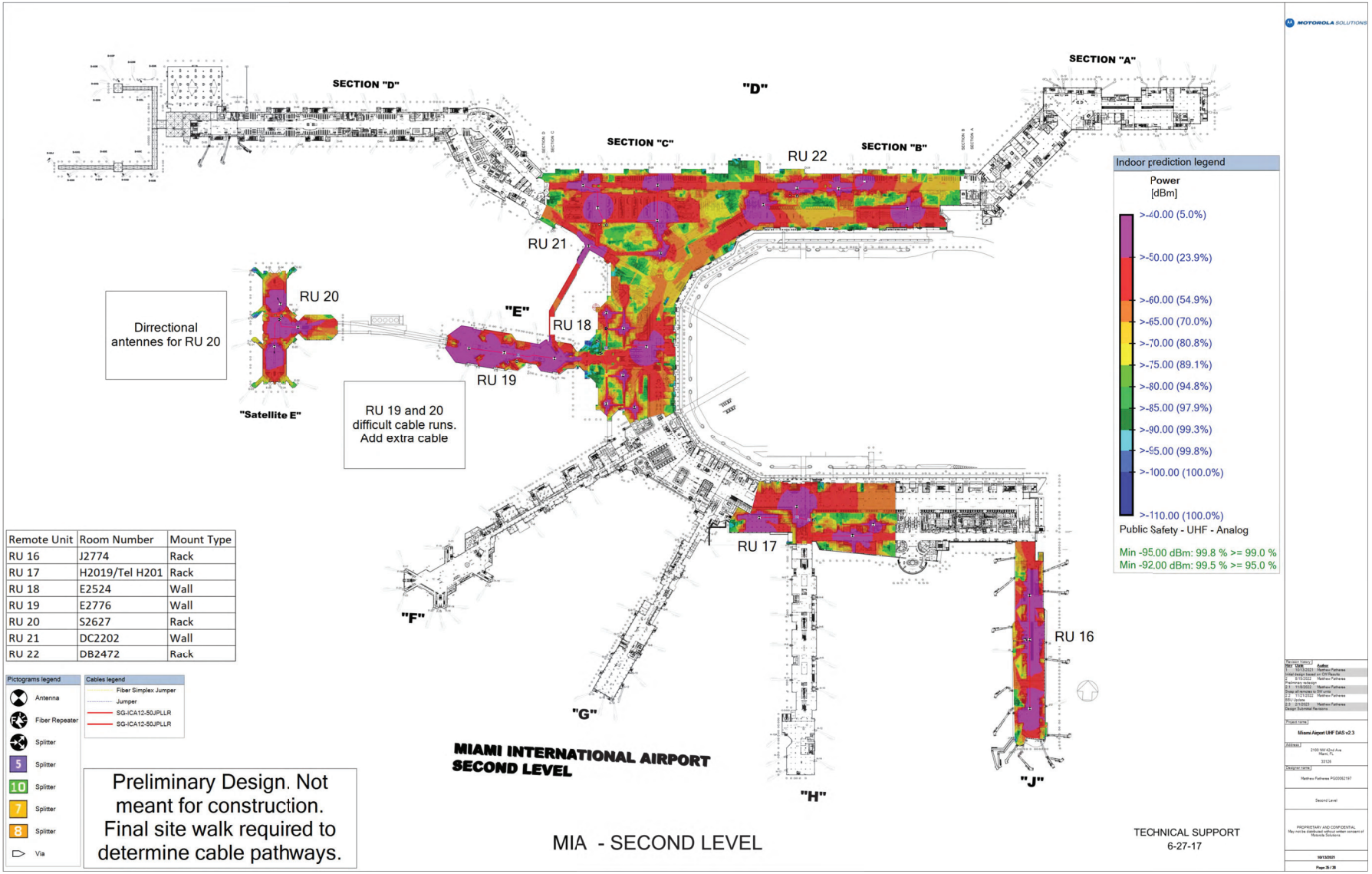
The following pages provide a draft version of the DAS implementation design. This diagram is an illustrative depiction and may not show all equipment and appurtenances.

MDC095



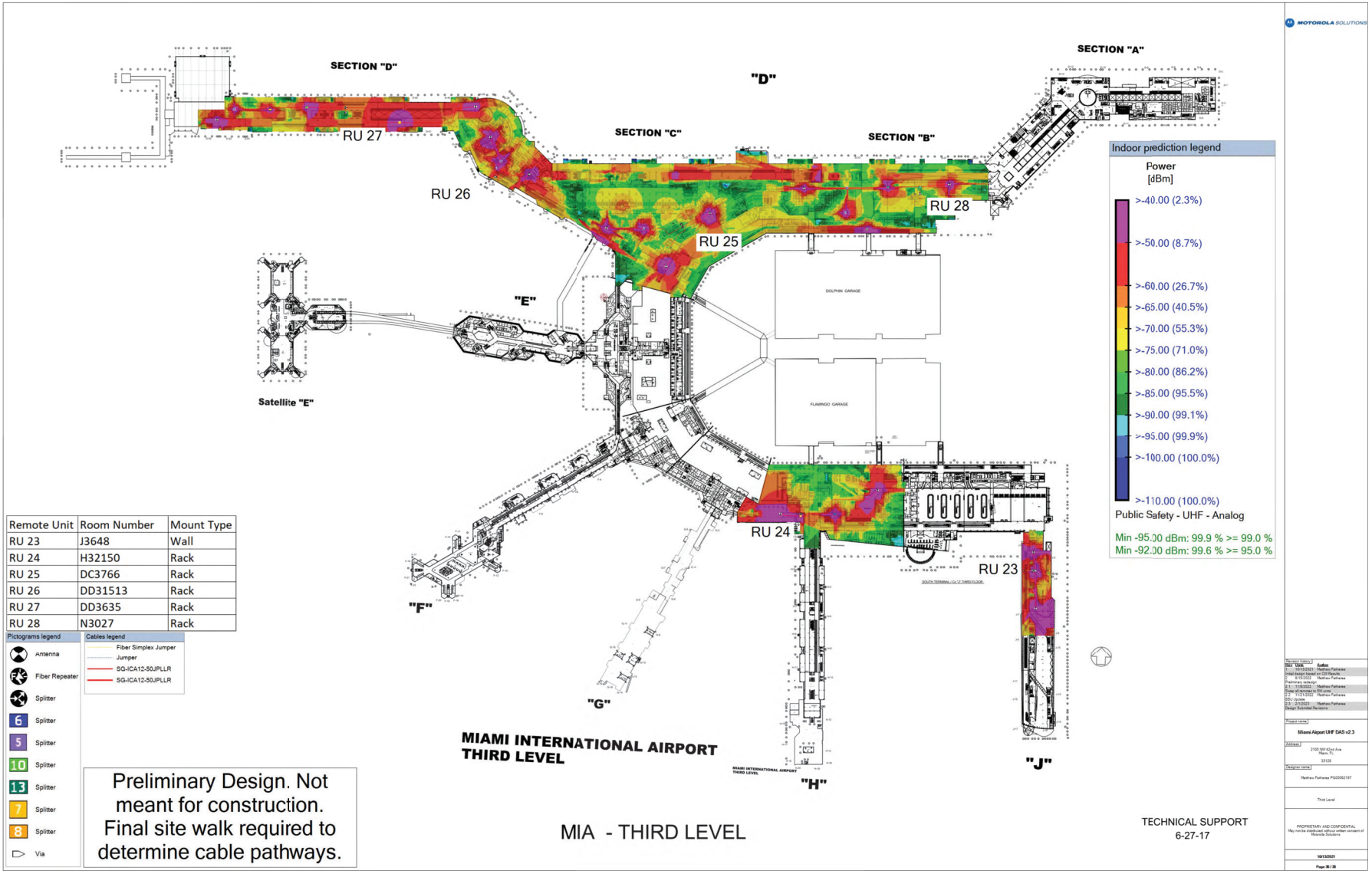
Remote Unit	Room Number	Mount Type
RU 1	J1084	Wall
RU 2	J1148	Rack
RU 3	H1716	Wall
RU 4	G1410	Wall
RU 5	F1739	Wall
RU 6	F1812	Wall
RU 7	E1049	Rack
RU 8	S1320	Rack
RU 9	DC1500	Rack
RU 10	DC1258	Rack
RU 11	DD1915	Rack
RU 12	DD1199	Wall
RU 13	DC1984	Rack
RU 14	DB11144	Rack
RU 15	DA11035	Wall
RU 32	DSA1430	Rack

MDC096



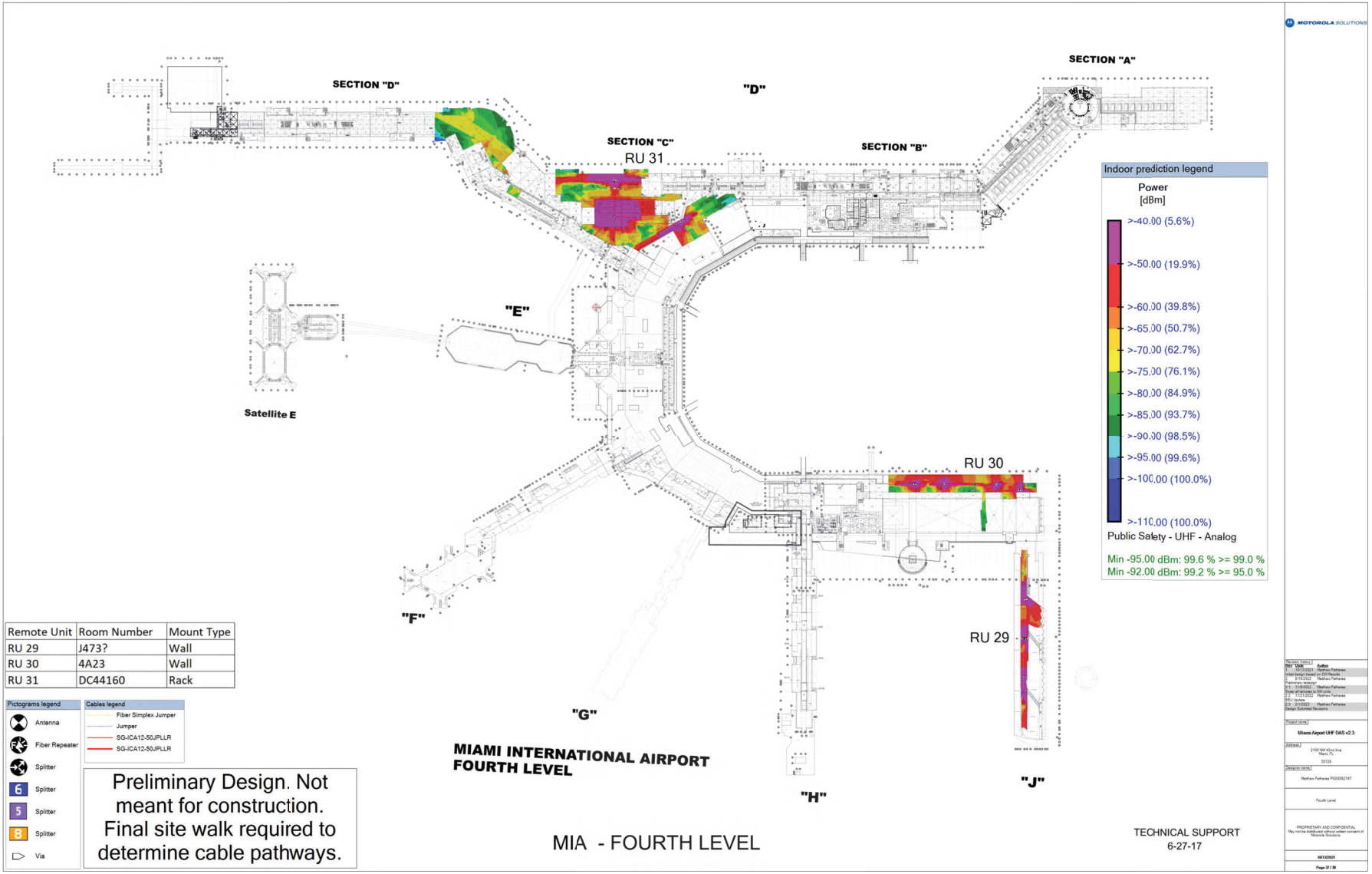
Remote Unit	Room Number	Mount Type
RU 16	J2774	Rack
RU 17	H2019/Tel H201	Rack
RU 18	E2524	Wall
RU 19	E2776	Wall
RU 20	S2627	Rack
RU 21	DC2202	Wall
RU 22	DB2472	Rack

MDC097



Remote Unit	Room Number	Mount Type
RU 23	J3648	Wall
RU 24	H32150	Rack
RU 25	DC3766	Rack
RU 26	DD31513	Rack
RU 27	DD3635	Rack
RU 28	N3027	Rack

MDC098



Remote Unit	Room Number	Mount Type
RU 29	J473?	Wall
RU 30	4A23	Wall
RU 31	DC44160	Rack

MOTOROLA SOLUTIONS

MDC099

Miami Internation Airport

2100 NW 42nd Ave

Miami, FL 33126

Lat: 25.79693

Long: -80.27624

Insightly ID: 32711059

Coverage Area: 5,257,600 sqft

MOTOROLA SOLUTIONS

MCA TEAM

RF Engineer

Name
Matthew Fatheree

Phone
919.605.4775

GROL
0028332740

Project Manager

Name
Martin Jelleme

Phone
404.623.7467

CUSTOMER CONTACT

Fire Department Contact

Name
Jose de Alfaraz, Lieutenant

Phone
305.876.7904

Site Contact

Name

Phone

Vicinity Map

GROL LICENSE HOLDER: Matthew Fatheree
FCC SERIAL NUMBER: PG00062197

DESIGN SPECIFICATION

OEM: Fiplex
Solution: DH14EA-R1-AU-MDA

Assumptions

Band	Name	Type	Call Sign	Channels
UHF	Miami	P25	N/A	10

- Assumes DAS will be fed by radio BTS.
- Design will maintain a level of -95 dbm RSSI over 95% of the requested coverage area.
- Pathway Survivability Level 1.
- No fire survivability.
- Isolation shall be a minimum of 20dB above the signal booster gain under all operating conditions.

PROJECT DESCRIPTION

This Design is governed and compliant with:

X	NFPA 1221, 2019
X	NFPA 1, 2018
X	NFPA 72, 2019
X	NFPA 70, 2020

Revision history

Rev	Date	Author	
1	10/13/2021	Matthew Fatheree	Initial design based on CW Results
2	8/15/2022	Matthew Fatheree	Preliminary redesign
2.1	11/8/2022	Matthew Fatheree	Swap all remotes to SW units
2.2	11/21/2022	Matthew Fatheree	BBU Update
2.3	2/1/2023	Matthew Fatheree	Design Submittal Revisions

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

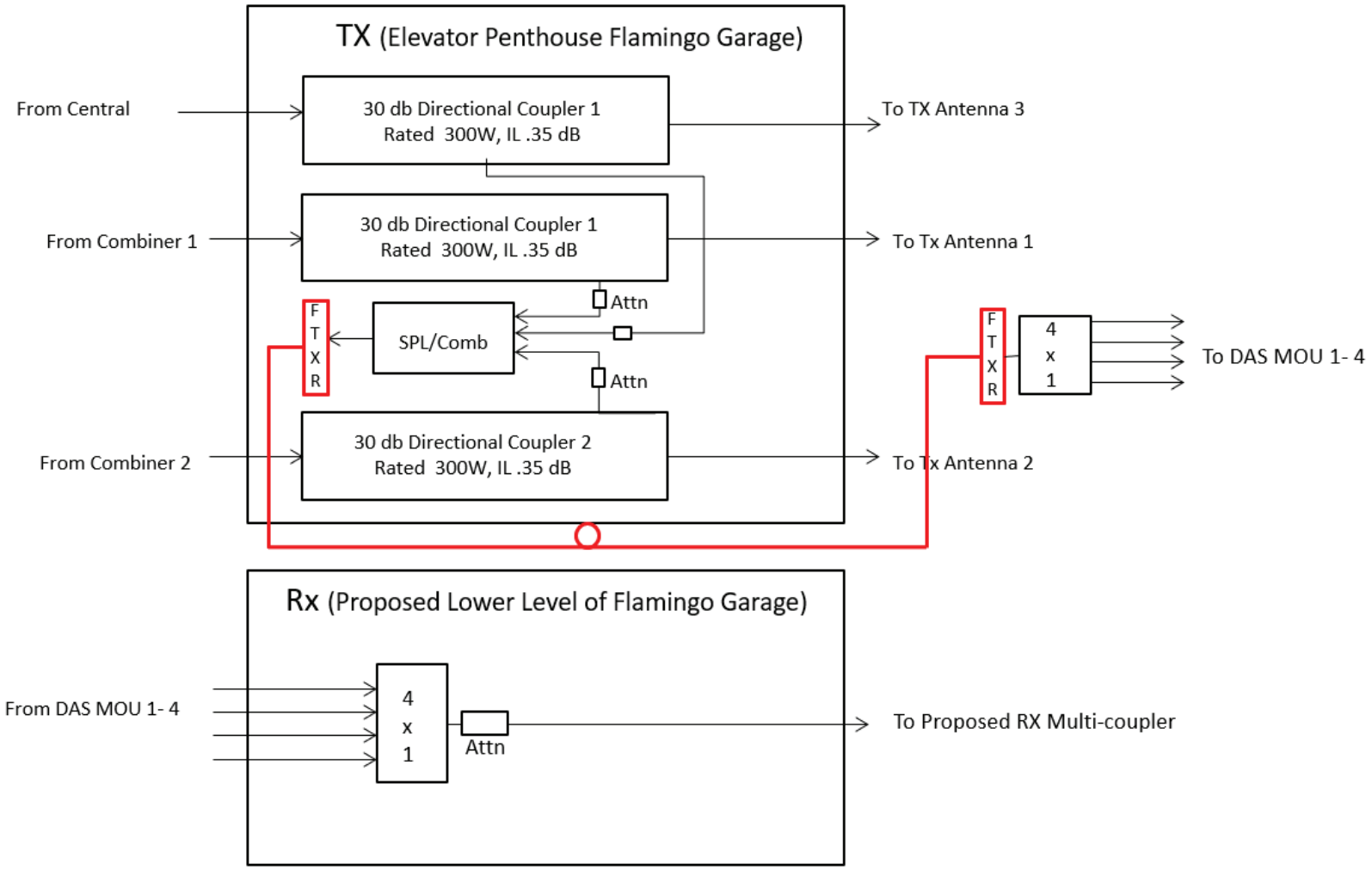
Cover Page

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

Base Station to DAS Interface

MDC100



MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

Base Station to DAS Interface Diagram

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

System Monitoring: (NFPA 1221 9.6.13.1) The fire alarm system shall monitor the following items as a minimum: (1) Integrity of the circuit monitoring signal booster(s) and power supply(ies) shall comply with NFPA 72. (2) System and signal booster supervisory signals shall include the following: (a) Donor Antenna Malfunction (b) Active RF Emitting Device Failure (c) Low-battery capacity indication when 70 percent of the 12-hour operating capacity has been depleted (d) System Component Failure. (3) Power supply signals shall include the following for each signal booster: (a) Loss of normal AC power (b) Failure of battery charger.

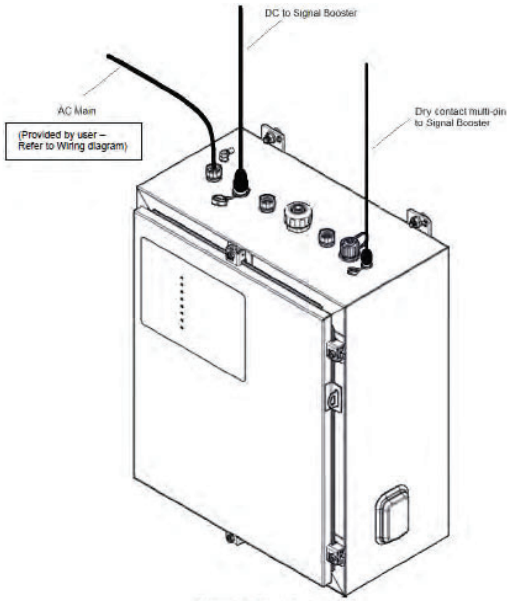


Figure: Port Connection

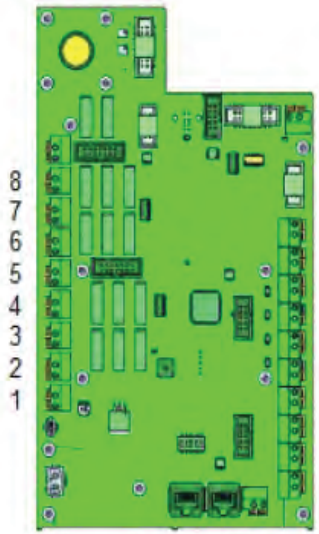
MDC101

Dry contacts to Fire Panel

1 = BATTERY CHARGER FAIL
2 = LOSS OF NORMAL AC POWER
3 = NORMAL AC POWER
4 = DONOR ANTENNA DISCONNECTION
5 = LOSS OF BATTERY CAPACITY
6 = DONOR ANTENNA MALFUNCTION
7 = ACTIVE RF MALFUNCTION
8 = SYSTEM COMPONENT FAIL

Relay Specifications:
- Max Current: 300mA
- Max Voltage: 24VDC

ALARM CONNECTIONS FROM BBU (CONNECTIONS MADE BY FIRE ALARM INTEGRATOR):



When connecting the Signal Booster dry contacts to the BBU, it is required to install 10KOHM end of Line Resistors (EOLR) inside the Signal Booster.

When using a Fiplex FLEX Signal Booster, the 10K EOLR must be installed as shown in the following image.

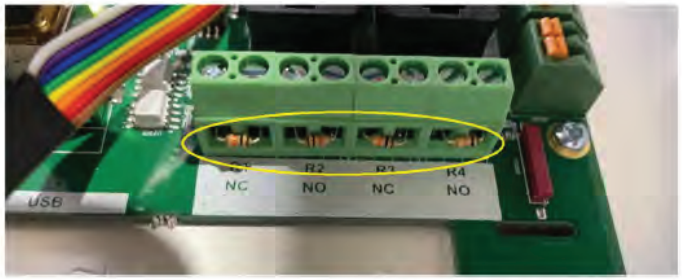


Figure: 10K EOLR installed on Flex Signal Booster.

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

Fiplex MU & BBU Supervisory Alarms

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

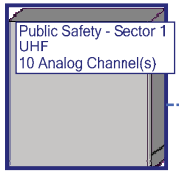
10/13/2021

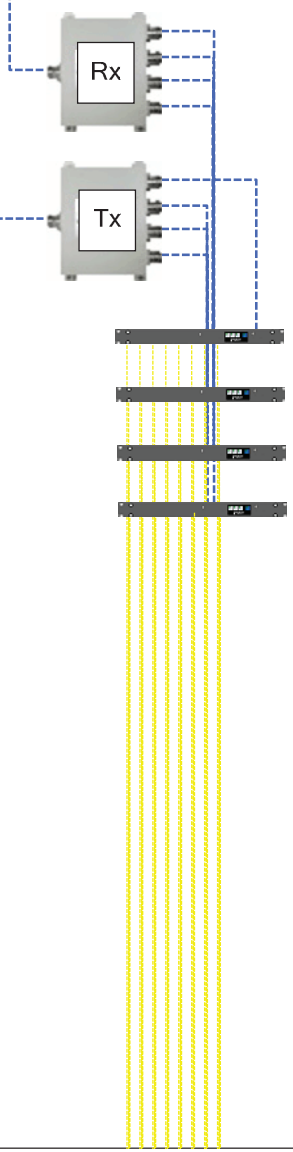
Head End in flamingo garage. DAS to be fed by radio BTS.

Fiber and dedicated power to be provided by Airport. Not in DAS SOW.

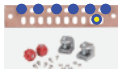
Miami Airport Channel List		
Name	Tx (MHz)	Rx (MHz)
East	453.1	458.1
North	453.35	458.35
Tac-1	453.525	458.525
Tac-2	460.45	465.45
Central	460.5	465.5
Tac-3	453.325	458.325
Tac-4	460.4	465.4
West	460.313	465.313
MIA-Tac	453.5	458.5
County Wide	460.0625	465.0625

MDC102





DH147S-D-RMA to be backed up by onsite DC Power Plant



Ground Bar

Grounding Cable

Annunciator Panel

Cables legend

- 1585A 002U1000
- Fiber Simplex Jumper
- JS-NMNF1.5F-R141
- Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

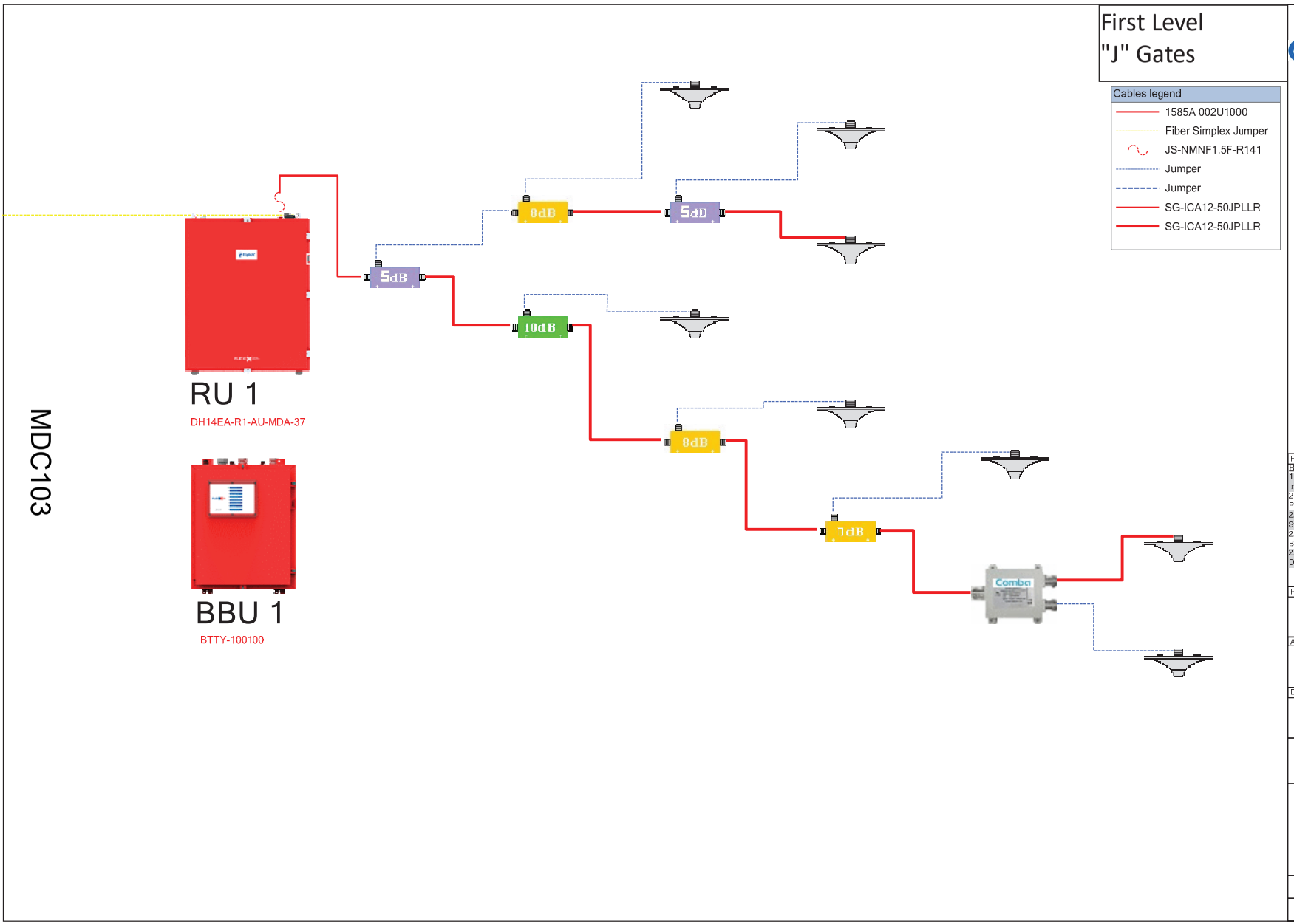
Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021



MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

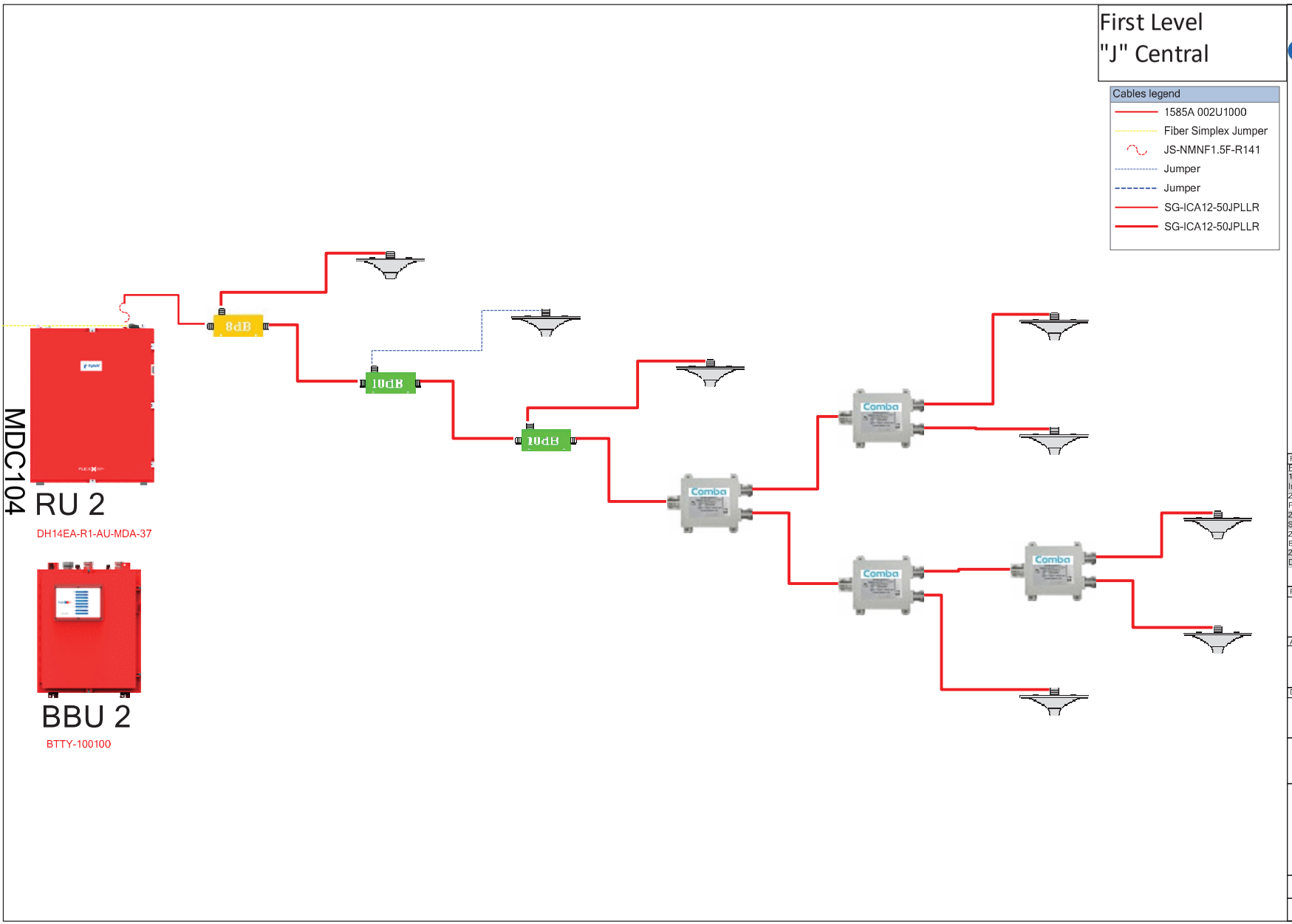
Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021



MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

System Overview

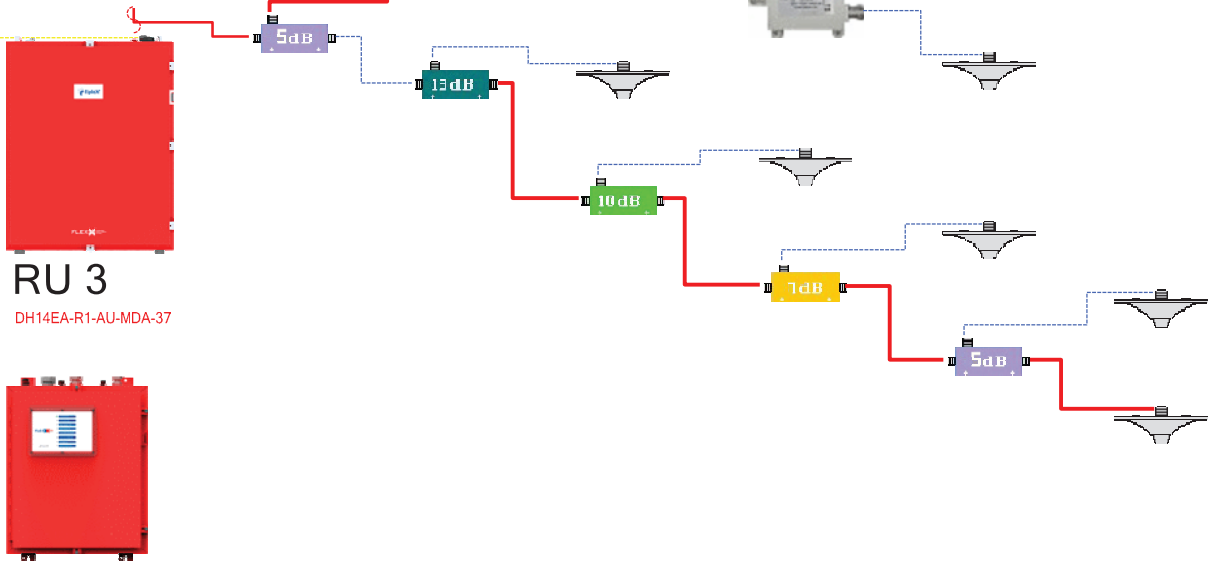
PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

First Level "H" Gates

MOTOROLA SOLUTIONS

MDC105



RU 3

DH14EA-R1-AU-MDA-37

BBU 3

BTTY-100100

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

MDC106

Covered by G and J central

First Level "H" Central

Cables legend
1585A 002U1000
Fiber Simplex Jumper
JS-NMNF1.5F-R141
Jumper
Jumper
SG-ICA12-50JPLLR
SG-ICA12-50JPLLR

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

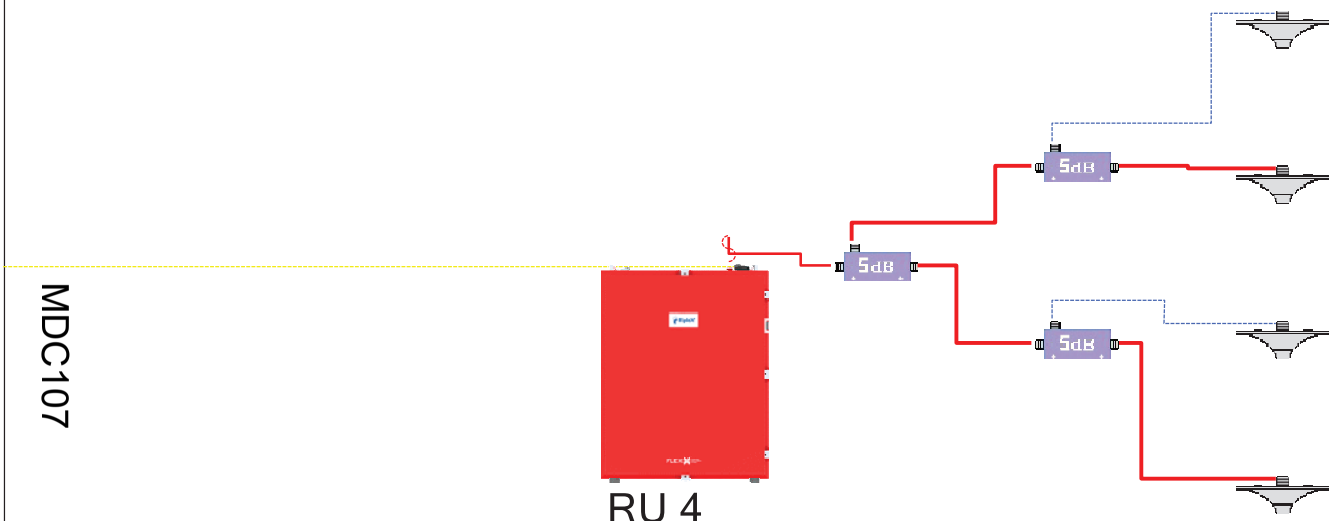
System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

First Level
"G" Central

MDC107



RU 4
DH14EA-R1-AU-MDA-37

BBU 4
BTTY-100100

Cables legend
- 1585A 002U1000
- Fiber Simplex Jumper
- JS-NMNF1.5F-R141
- Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

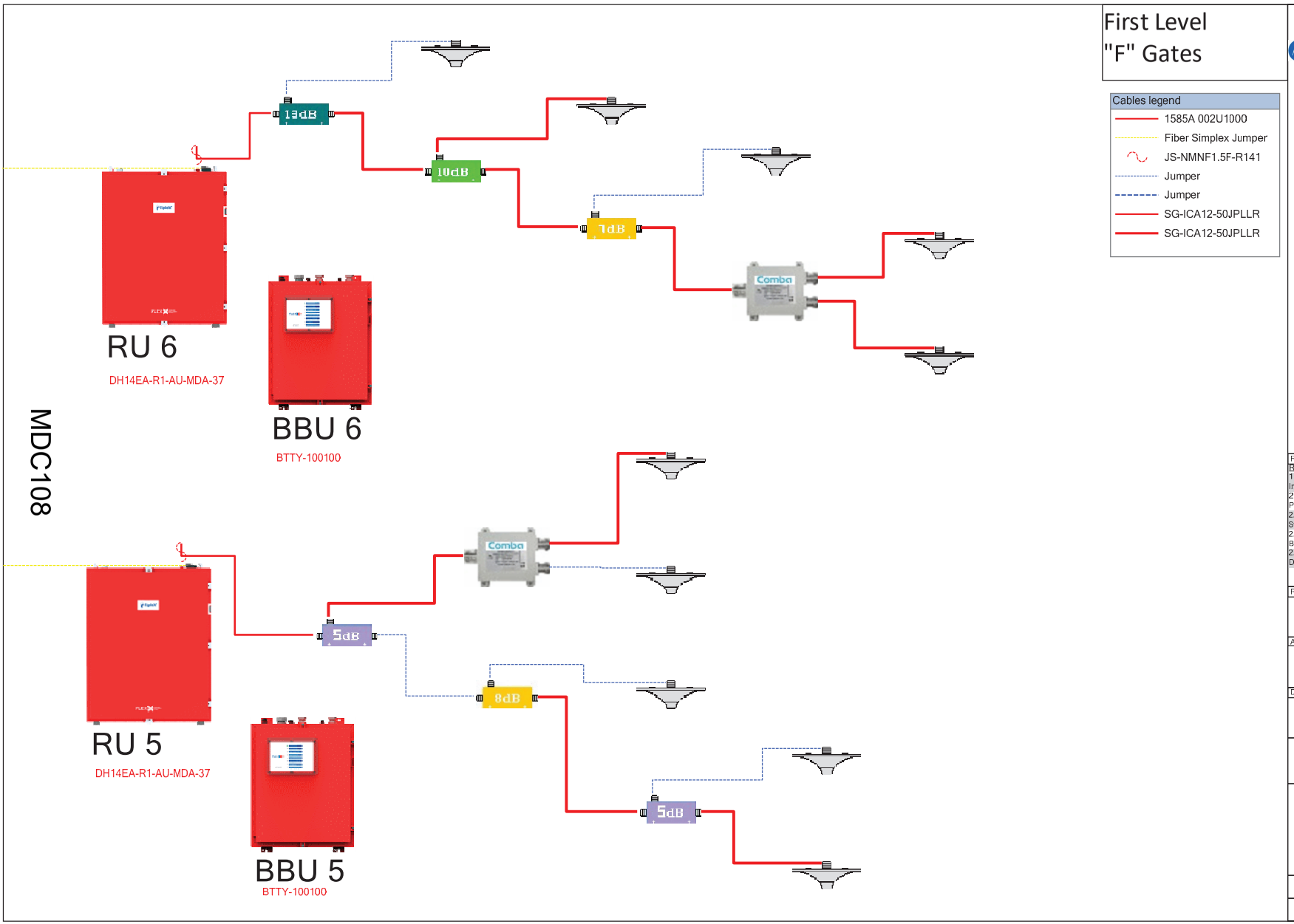
Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021



MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

First Level
"F" Central

Covered by E
and G central

MDC109

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL

33126

Designer name

Matthew Fatheree PG00062197

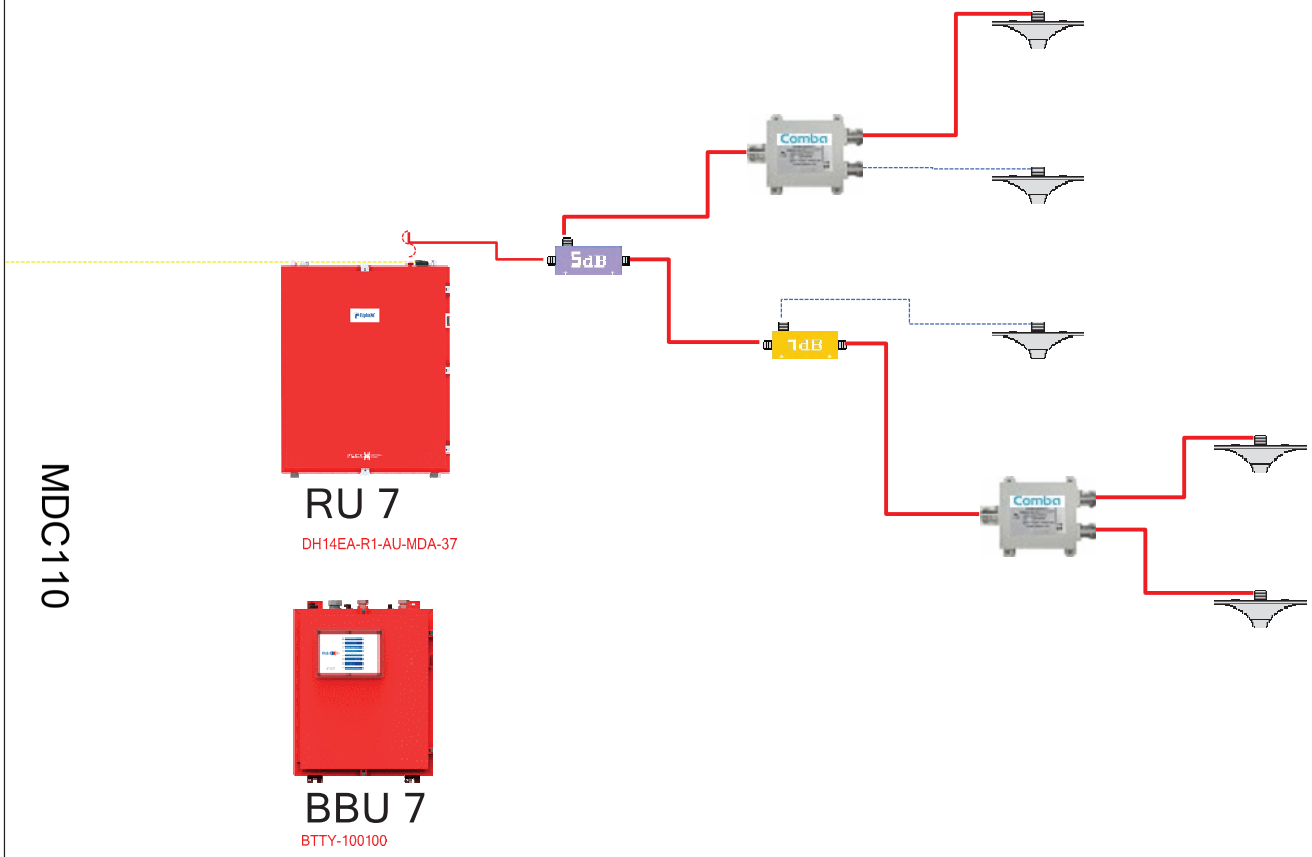
System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

First Level
"E" Central

MDC110



RU 7

DH14EA-R1-AU-MDA-37

BBU 7

BTTY-100100

Cables legend

- 1585A 002U1000
- Fiber Simplex Jumper
- JS-NMNF1.5F-R141
- Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL

33126

Designer name

Matthew Fatheree PG00062197

System Overview

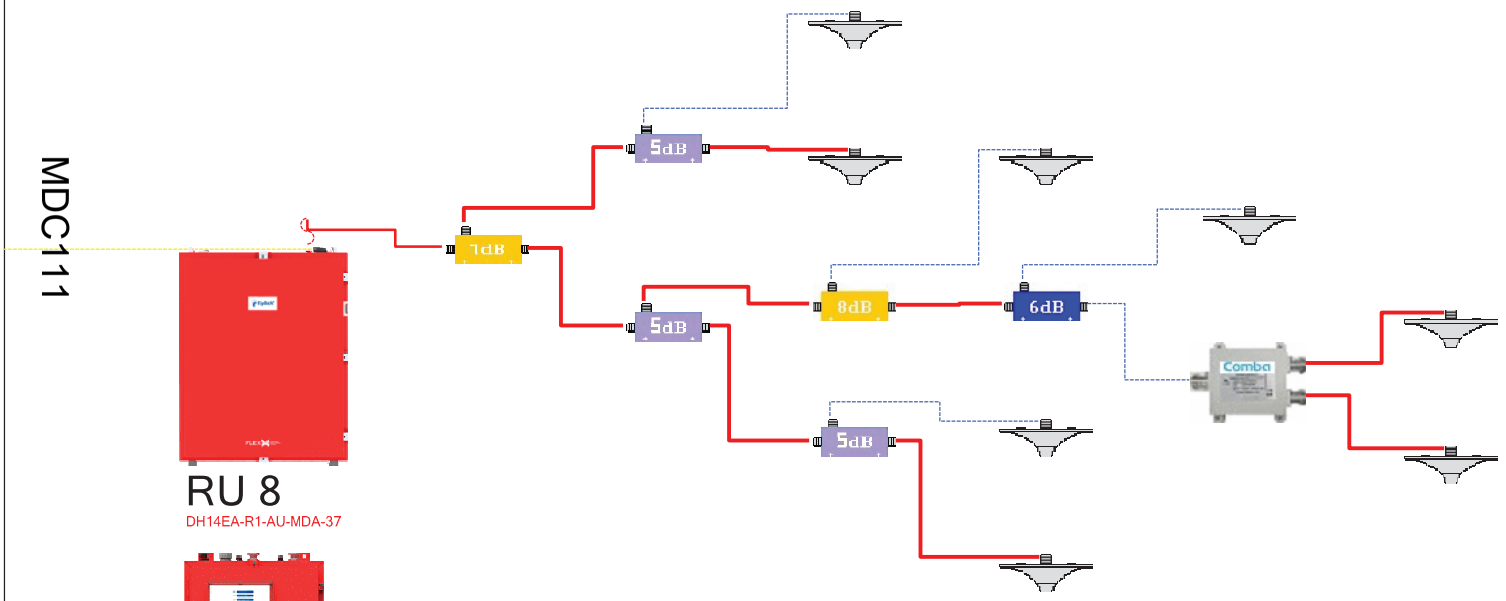
PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

First Level
"E" Satallite

MOTOROLA SOLUTIONS

MDC111



RU 8
DH14EA-R1-AU-MDA-37

BBU 8
BTTY-100100

Cables legend

- 1585A 002U1000
- Fiber Simplex Jumper
- JS-NMNF1.5F-R141
- Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

Revision history

Rev	Date	Author	
1	10/13/2021	Matthew Fatheree	Initial design based on CW Results
2	8/15/2022	Matthew Fatheree	Preliminary redesign
2.1	11/8/2022	Matthew Fatheree	Swap all remotes to 5W units
2.2	11/21/2022	Matthew Fatheree	BBU Update
2.3	2/1/2023	Matthew Fatheree	Design Submittal Revisions

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL

33126

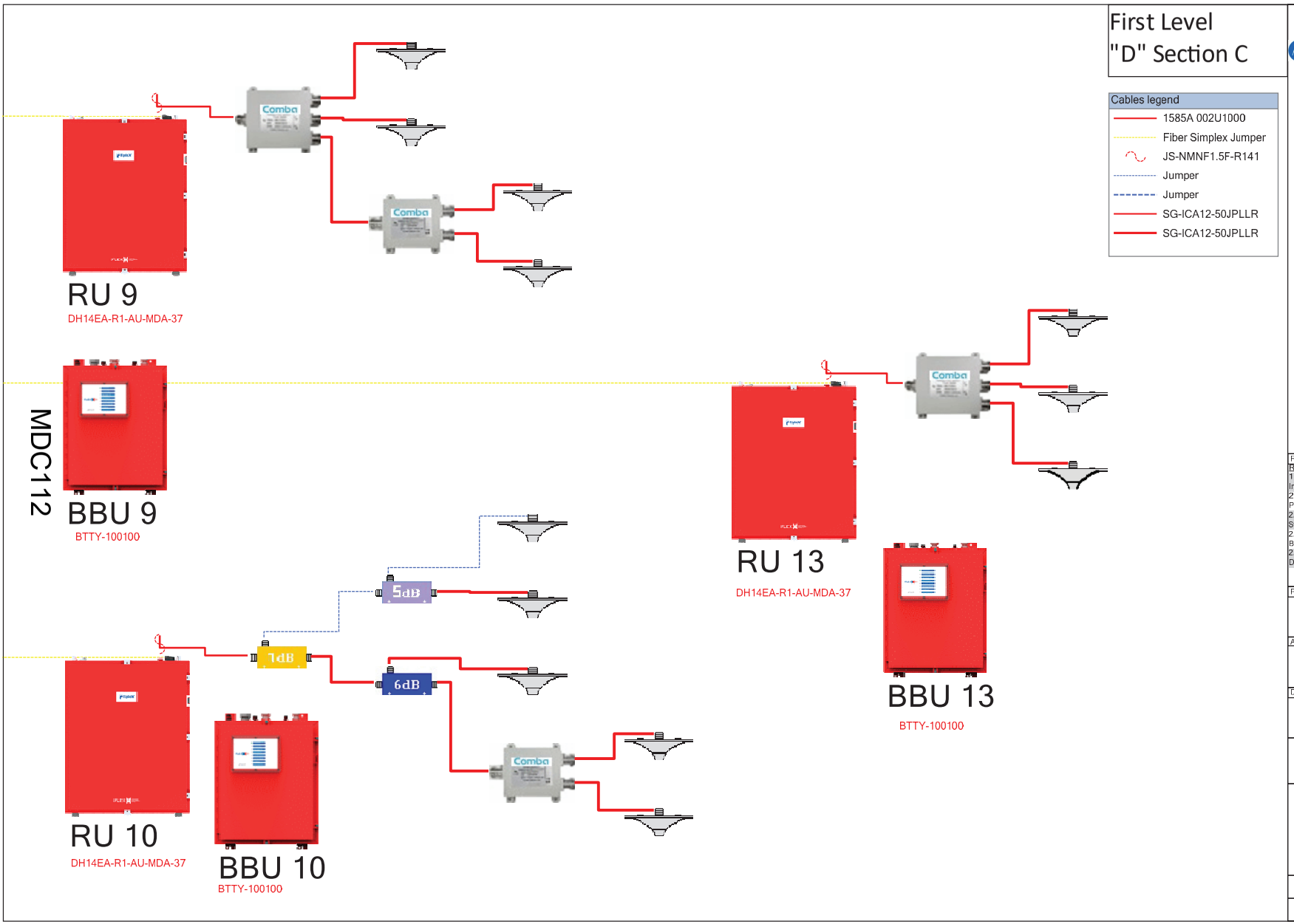
Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021



MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author	
1	10/13/2021	Matthew Fatheree	Initial design based on CW Results
2	8/15/2022	Matthew Fatheree	Preliminary redesign
2.1	11/8/2022	Matthew Fatheree	Swap all remotes to 5W units
2.2	11/21/2022	Matthew Fatheree	BBU Update
2.3	2/1/2023	Matthew Fatheree	Design Submittal Revisions

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

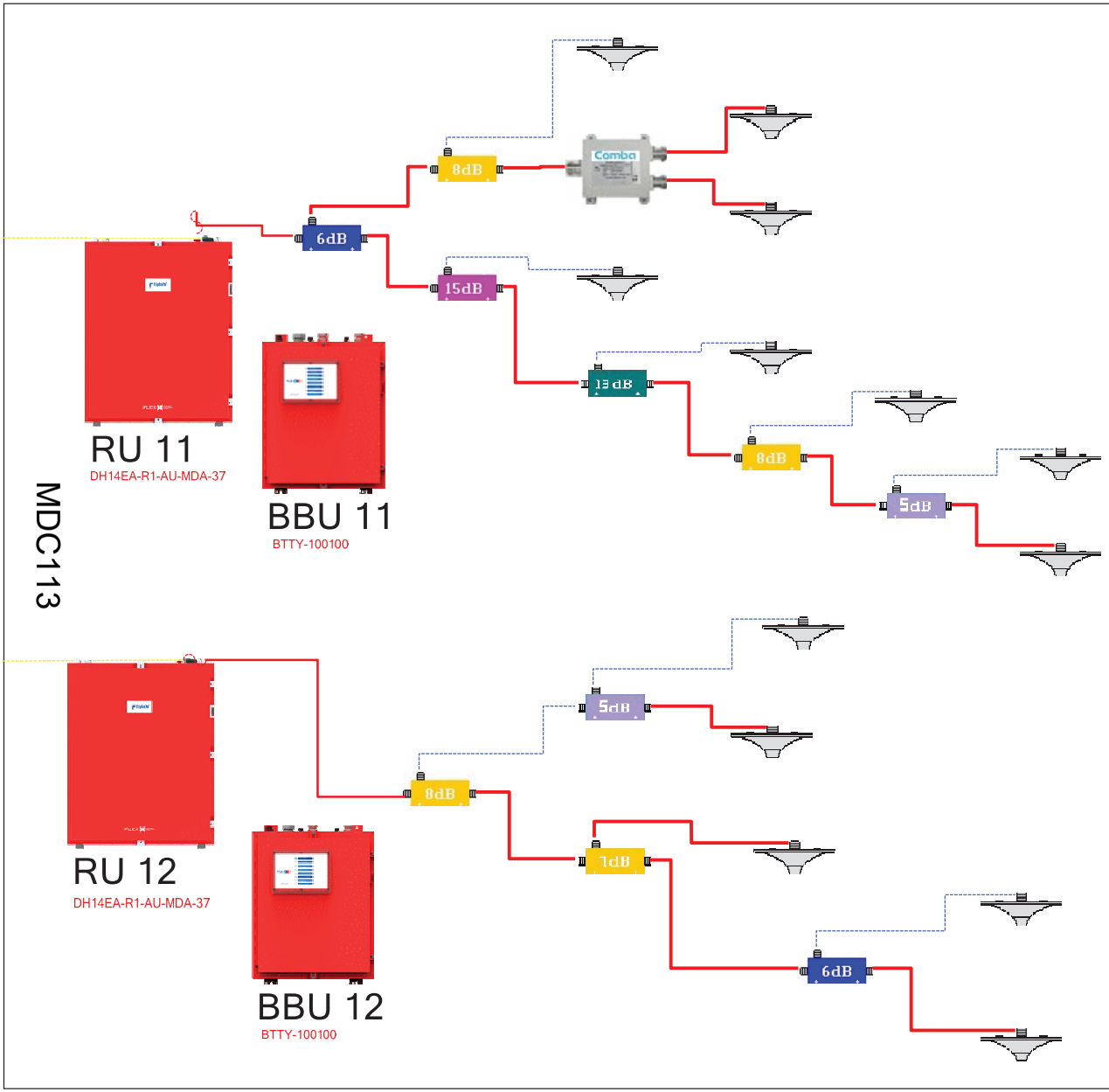
Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021



First Level "D" Section D

MOTOROLA SOLUTIONS

Cables legend

- 1585A 002U1000
- Fiber Simplex Jumper
- JS-NMNF1.5F-R141
- Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

Revision history

Rev	Date	Author	
1	10/13/2021	Matthew Fatheree	Initial design based on CW Results
2	8/15/2022	Matthew Fatheree	Preliminary redesign
2.1	11/8/2022	Matthew Fatheree	Swap all remotes to 5W units
2.2	11/21/2022	Matthew Fatheree	BBU Update
2.3	2/1/2023	Matthew Fatheree	Design Submittal Revisions

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

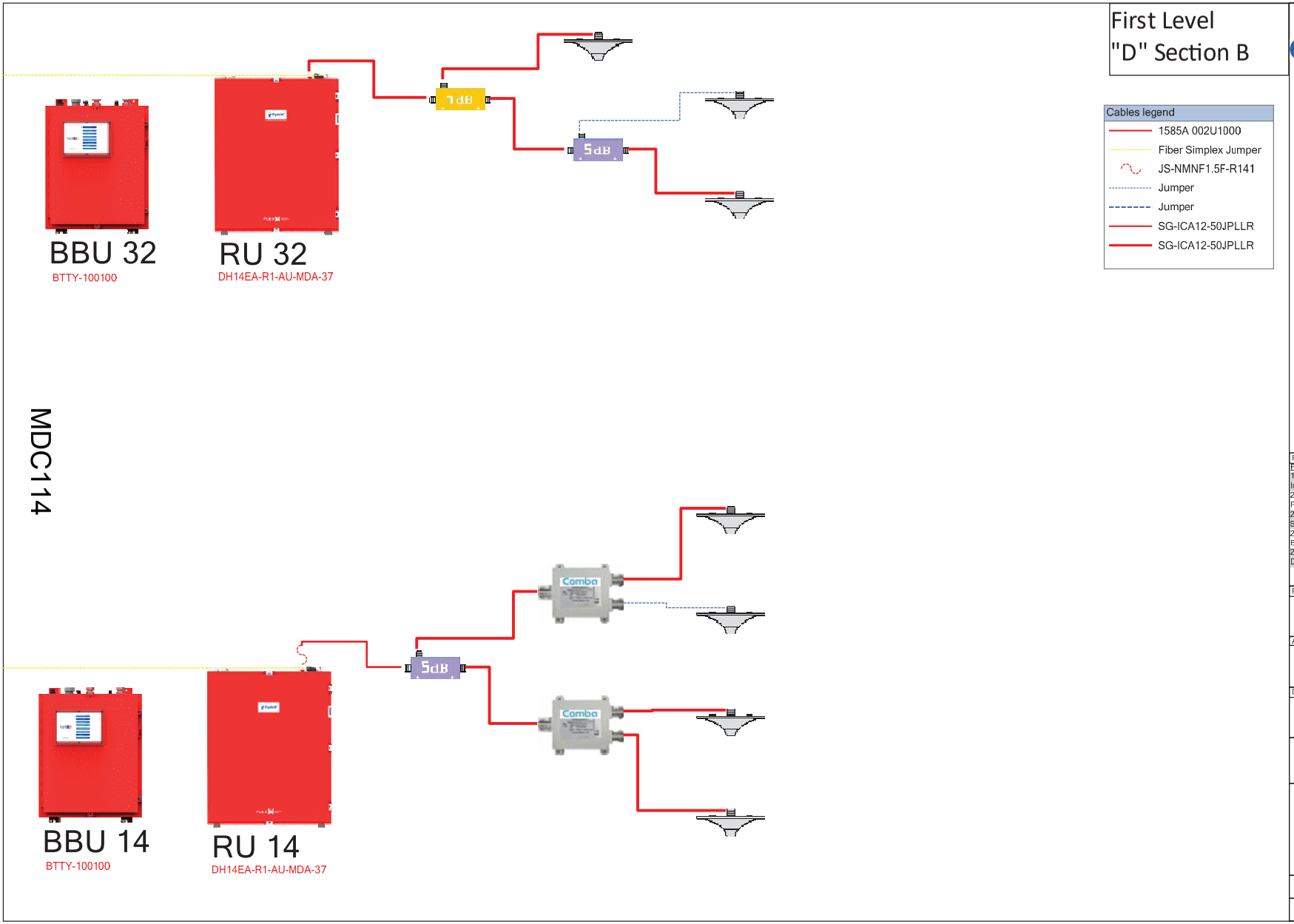
Designer name

Matthew Fatheree PG00062197

System Overview

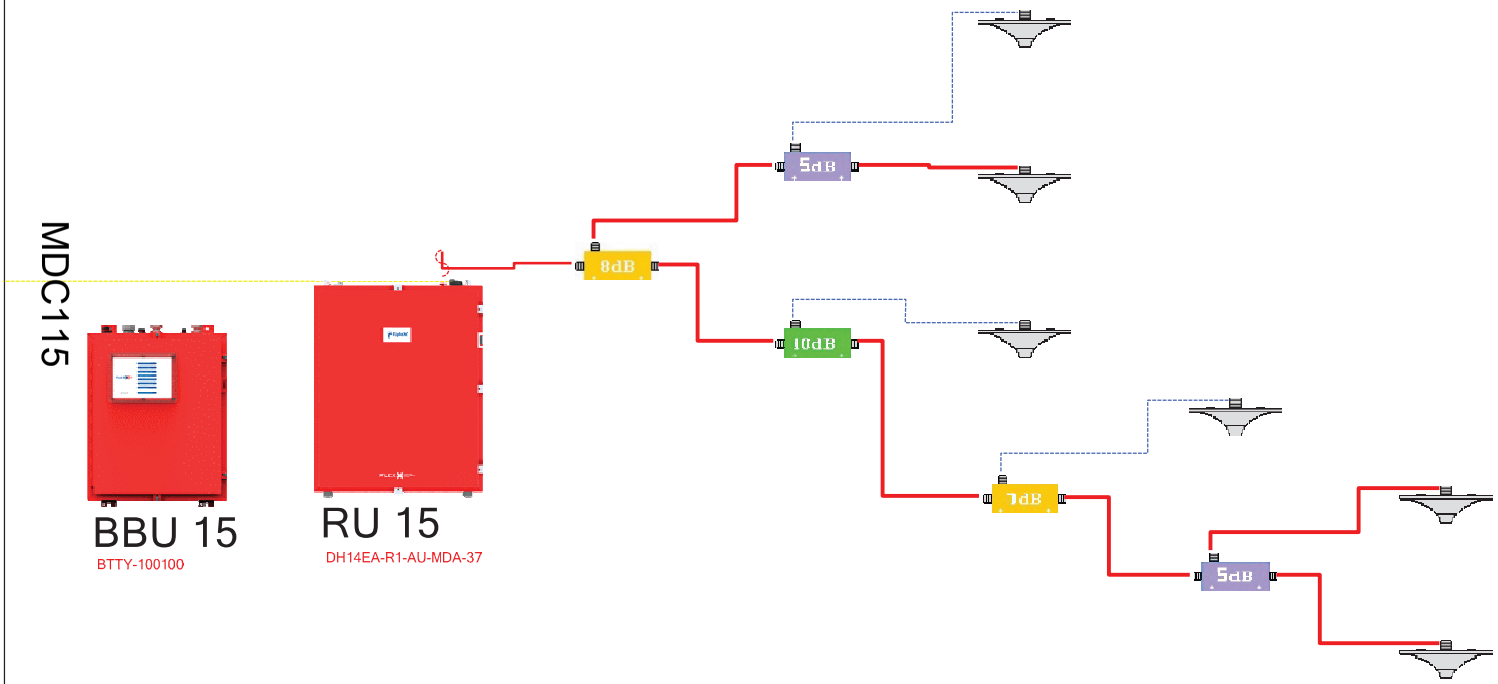
PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021


First Level
"D" Section B
MOTOROLA SOLUTIONS
Cables legend
1585A 002U1000
Fiber Simplex Jumper
JS-NMNF1.5F-R141
Jumper
Jumper
SG-ICA12-50JPLLR
SG-ICA12-50JPLLR
MDC114
BBU 32
BTTY-100100
RU 32
DH14EA-R1-AU-MDA-37
7dB
5dB
BBU 14
BTTY-100100
RU 14
DH14EA-R1-AU-MDA-37
5dB
Comba
Comba
Revision history
Rev Date Author
1 10/13/2021 Matthew Fatheree
Initial design based on CW Results
2 8/15/2022 Matthew Fatheree
Preliminary redesign
2.1 11/8/2022 Matthew Fatheree
Swap all remotes to 5W units
2.2 11/21/2022 Matthew Fatheree
BBU Update
2.3 2/1/2023 Matthew Fatheree
Design Submittal Revisions
Project name
Miami Airport UHF DAS v2.3
Address
2100 NW 42nd Ave
Miami, FL
33126
Designer name
Matthew Fatheree PG00062197
System Overview
PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.
10/13/2021
Page 16 / 38

First Level
"D" Section A

MOTOROLA SOLUTIONS



Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

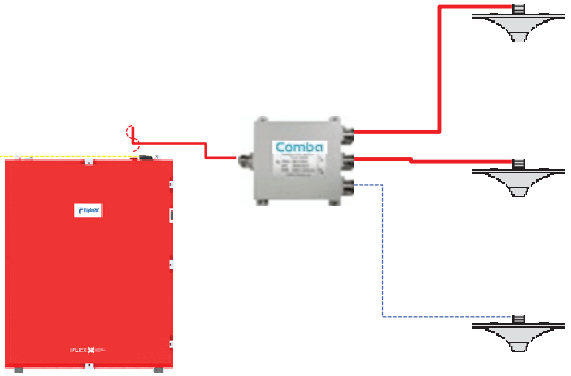
System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

Second Level "J" Gates

MDC116



RU 16

DH14EA-R1-AU-MDA-37

BBU 16

BTTY-100100

Cables legend
1585A 002U1000
Fiber Simplex Jumper
JS-NMNF1.5F-R141
Jumper
Jumper
SG-ICA12-50JPLLR
SG-ICA12-50JPLLR

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

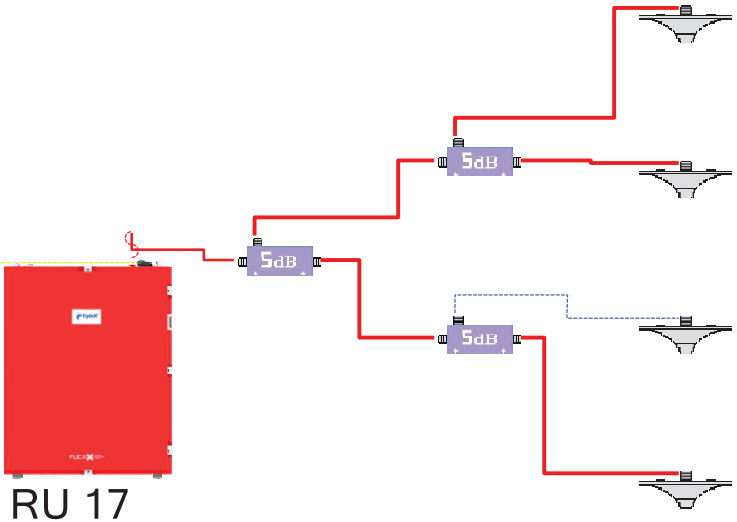
System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

Second Level "H" Central

MDC117



RU 17

DH14EA-R1-AU-MDA-37

BBU 17

BTTY-100100

Cables legend

- 1585A 002U1000
- Fiber Simplex Jumper
- JS-NMNF1.5F-R141
- Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL

33126

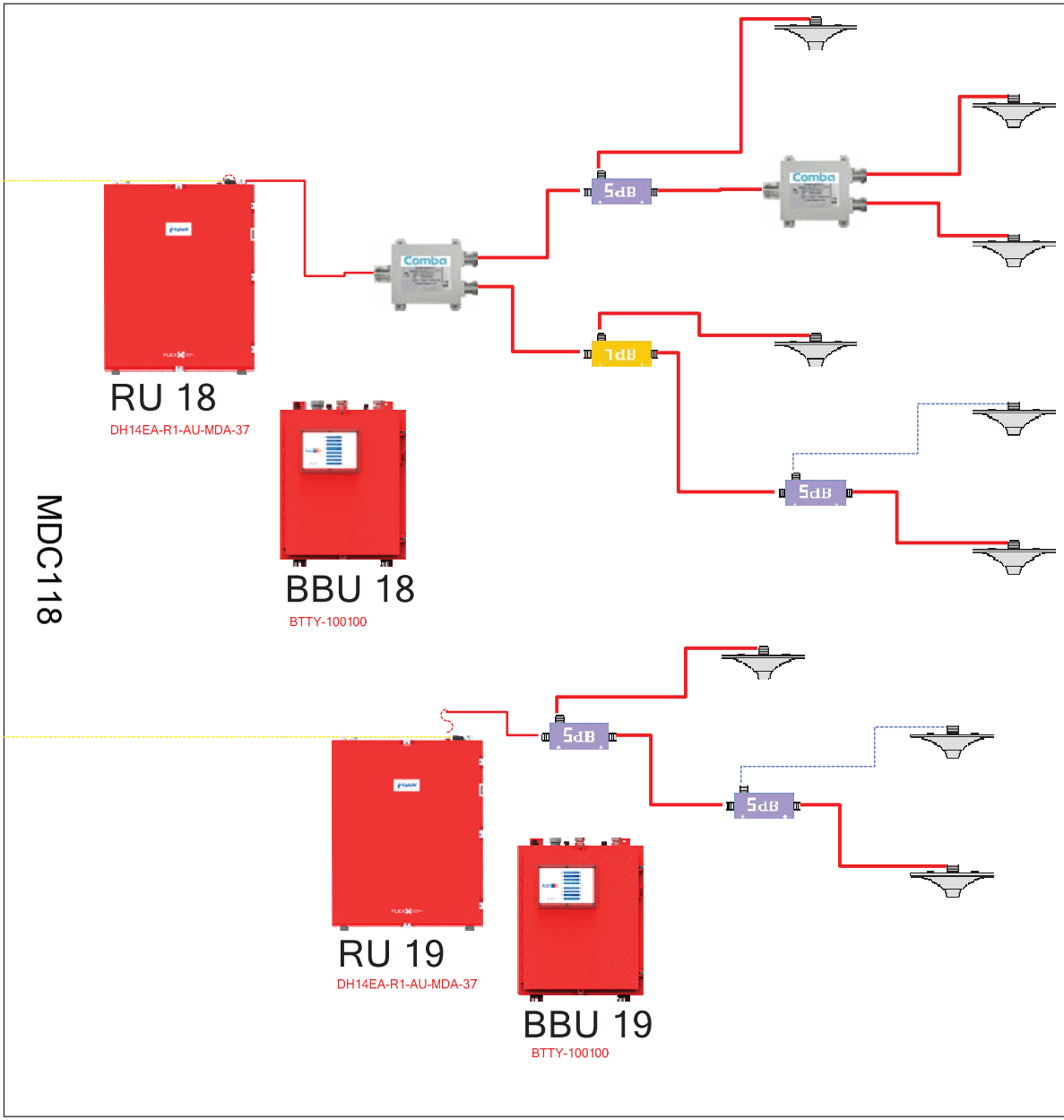
Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021



Second Level "E" Central & Gates

Cables legend

- 1585A 002U1000
- Fiber Simplex Jumper
- JS-NMNF1.5F-R141
- Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author	
1	10/13/2021	Matthew Fatheree	Initial design based on CW Results
2	8/15/2022	Matthew Fatheree	Preliminary redesign
2.1	11/8/2022	Matthew Fatheree	Swap all remotes to 5W units
2.2	11/21/2022	Matthew Fatheree	BBU Update
2.3	2/1/2023	Matthew Fatheree	Design Submittal Revisions

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

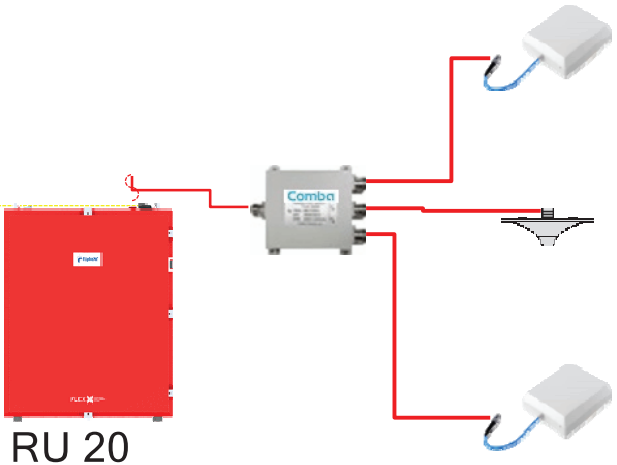
System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

Second Level "E" Satallite

MDC119



RU 20
DH14EA-R1-AU-MDA-37

BBU 20
BTTY-100100

Cables legend
1585A 002U1000
Fiber Simplex Jumper
JS-NMNF1.5F-R141
Jumper
Jumper
SG-ICA12-50JPLLR
SG-ICA12-50JPLLR

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL

33126

Designer name

Matthew Fatheree PG00062197

System Overview

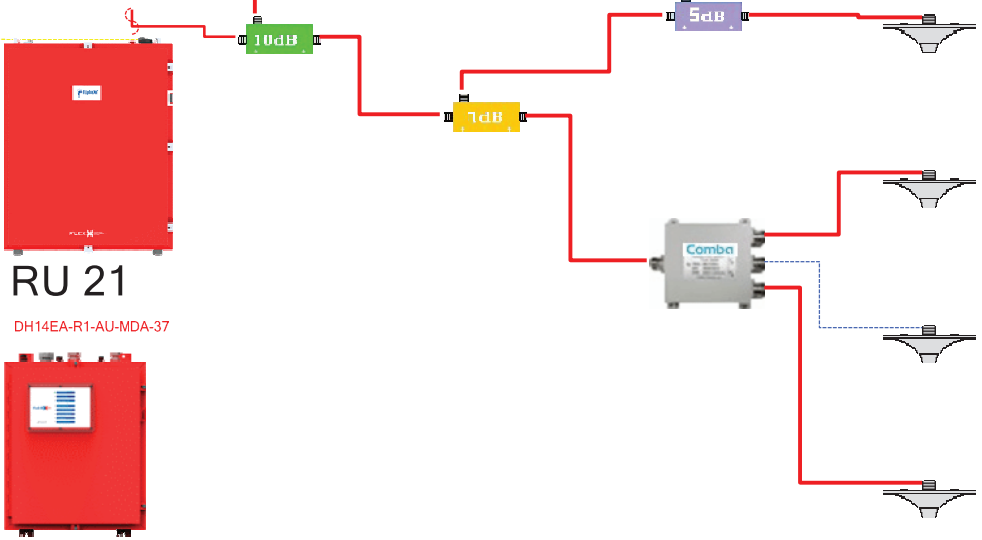
PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

Second Level "D" Section C

MOTOROLA SOLUTIONS

MDC120



RU 21

DH14EA-R1-AU-MDA-37

BBU 21

BTTY-100100

Cables legend

- 1585A 002U1000
- Fiber Simplex Jumper
- JS-NMNF1.5F-R141
- Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

Revision history

Rev	Date	Author	
1	10/13/2021	Matthew Fatheree	Initial design based on CW Results
2	8/15/2022	Matthew Fatheree	Preliminary redesign
2.1	11/8/2022	Matthew Fatheree	Swap all remotes to 5W units
2.2	11/21/2022	Matthew Fatheree	BBU Update
2.3	2/1/2023	Matthew Fatheree	Design Submittal Revisions

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

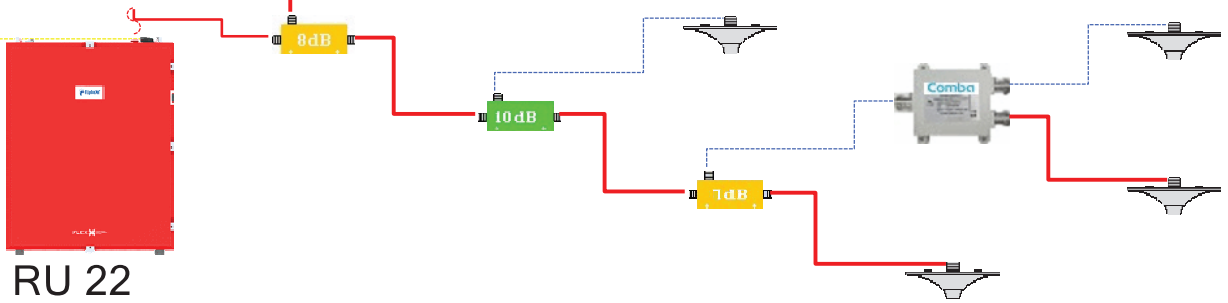
10/13/2021

Second Level "D" Section B

MOTOROLA SOLUTIONS

Cables legend
1585A 002U1000
Fiber Simplex Jumper
JS-NMNF1.5F-R141
Jumper
Jumper
SG-ICA12-50JPLLR
SG-ICA12-50JPLLR

MDC121



RU 22

DH14EA-R1-AU-MDA-37

BBU 22

BTTY-100100

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

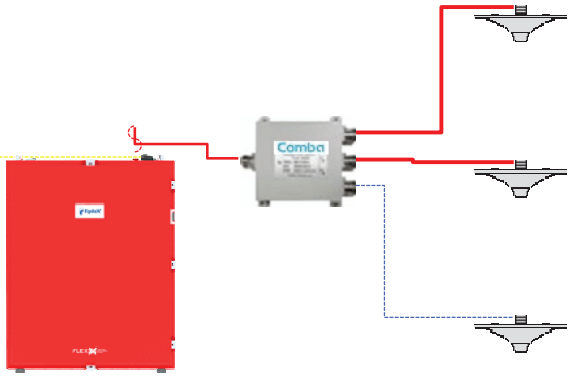
10/13/2021

Third Level "J" Gates

MOTOROLA SOLUTIONS

Cables legend
1585A 002U1000
Fiber Simplex Jumper
JS-NMNF1.5F-R141
Jumper
Jumper
SG-ICA12-50JPLLR
SG-ICA12-50JPLLR

MDC122



RU 23

DH14EA-R1-AU-MDA-37

BBU 23

BTTY-100100

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL

33126

Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

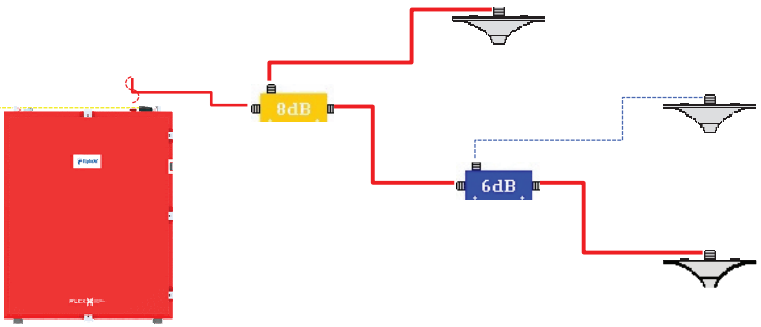
10/13/2021

Third Level
"H" Central

MOTOROLA SOLUTIONS

Cables legend
1585A 002U1000
Fiber Simplex Jumper
JS-NMNF1.5F-R141
Jumper
Jumper
SG-ICA12-50JPLLR
SG-ICA12-50JPLLR

MDC123



RU 24

DH14EA-R1-AU-MDA-37

BBU 24

BTTY-100100

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

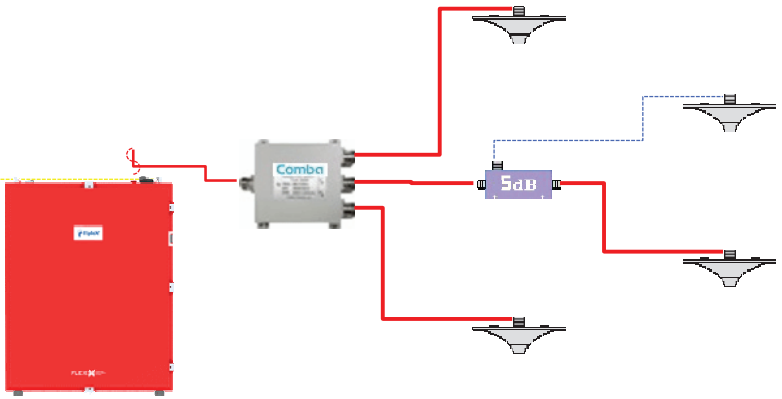
System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

Third Level
"D" Section C

MDC124



RU 25

DH14EA-R1-AU-MDA-37

BBU 25

BTTY-100100

Cables legend
1585A 002U1000
Fiber Simplex Jumper
JS-NMNF1.5F-R141
Jumper
Jumper
SG-ICA12-50JPLLR
SG-ICA12-50JPLLR

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

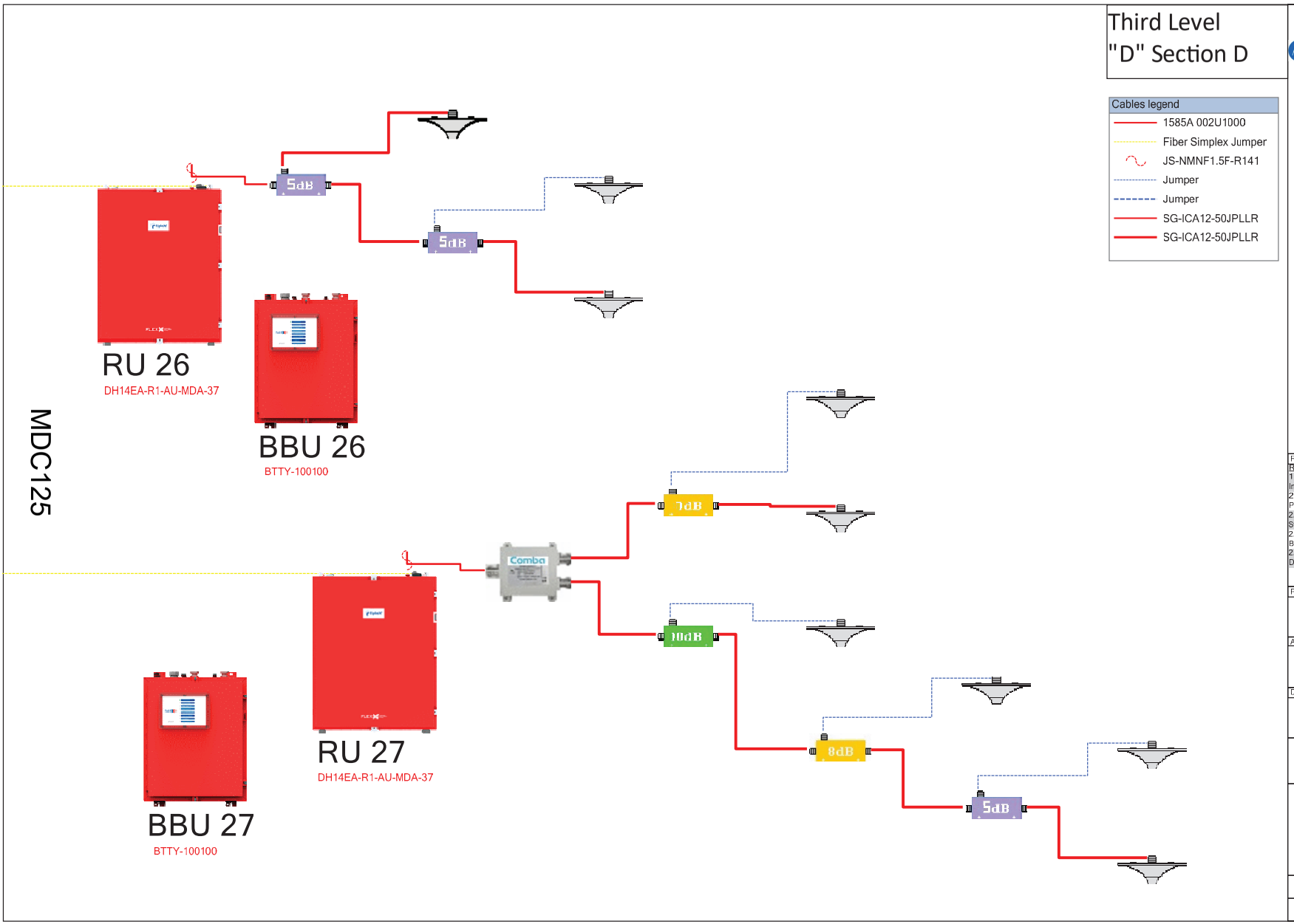
Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021



MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

System Overview

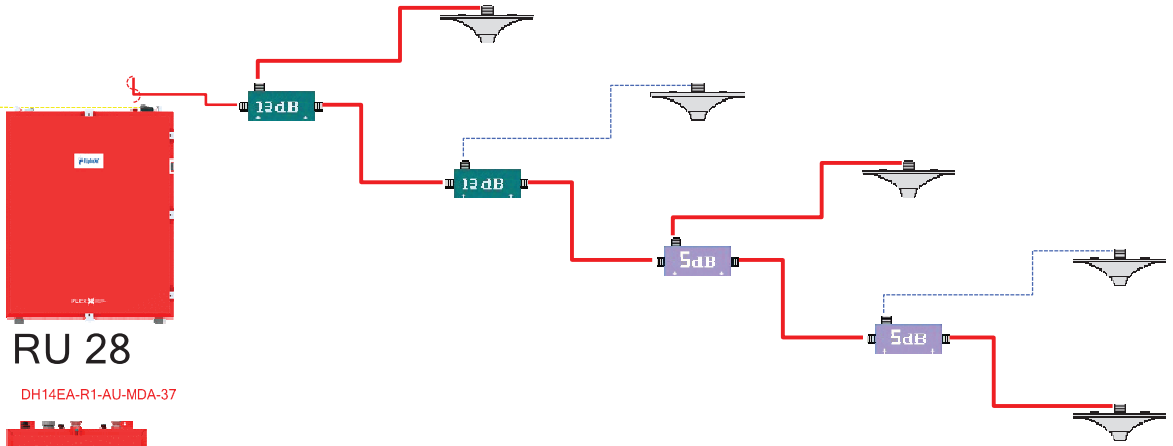
PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

Third Level
"D" Section B

MOTOROLA SOLUTIONS

MDC126



RU 28

DH14EA-R1-AU-MDA-37

BBU 28

BTTY-100100

Cables legend

- 1585A 002U1000
- Fiber Simplex Jumper
- JS-NMNF1.5F-R141
- Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

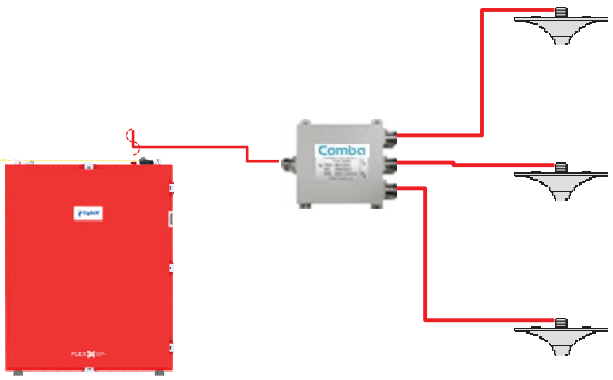
10/13/2021

Fourth Level "J" Gates

MOTOROLA SOLUTIONS

Cables legend
1585A 002U1000
Fiber Simplex Jumper
JS-NMNF1.5F-R141
Jumper
Jumper
SG-ICA12-50JPLLR
SG-ICA12-50JPLLR

MDC127



RU 29

DH14EA-R1-AU-MDA-37

BBU 29

BTTY-100100

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

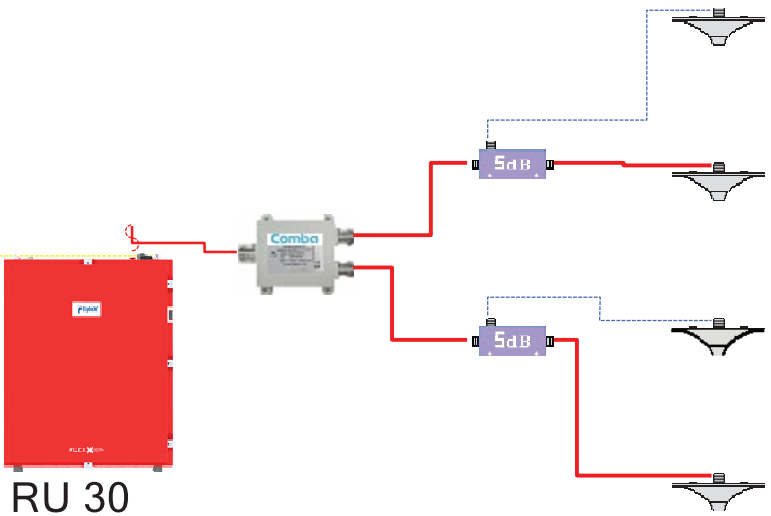
System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

Fourth Level
"J" Central

MDC128



RU 30

DH14EA-R1-AU-MDA-37

BBU 30

BTTY-100100

Cables legend
1585A 002U1000
Fiber Simplex Jumper
JS-NMNF1.5F-R141
Jumper
Jumper
SG-ICA12-50JPLLR
SG-ICA12-50JPLLR

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL

33126

Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

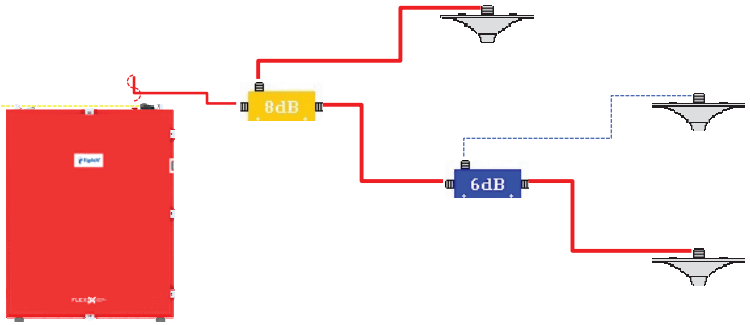
Fourth Level
"D" Section C

MOTOROLA SOLUTIONS

Cables legend

- 1585A 002U1000
- Fiber Simplex Jumper
- JS-NMNF1.5F-R141
- Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

MDC129



RU 31

DH14EA-R1-AU-MDA-37

BBU 31

BTTY-100100

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

MDC130

Page Purposefully Left Blank

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

MDC131

Page Purposefully Left Blank

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL

33126

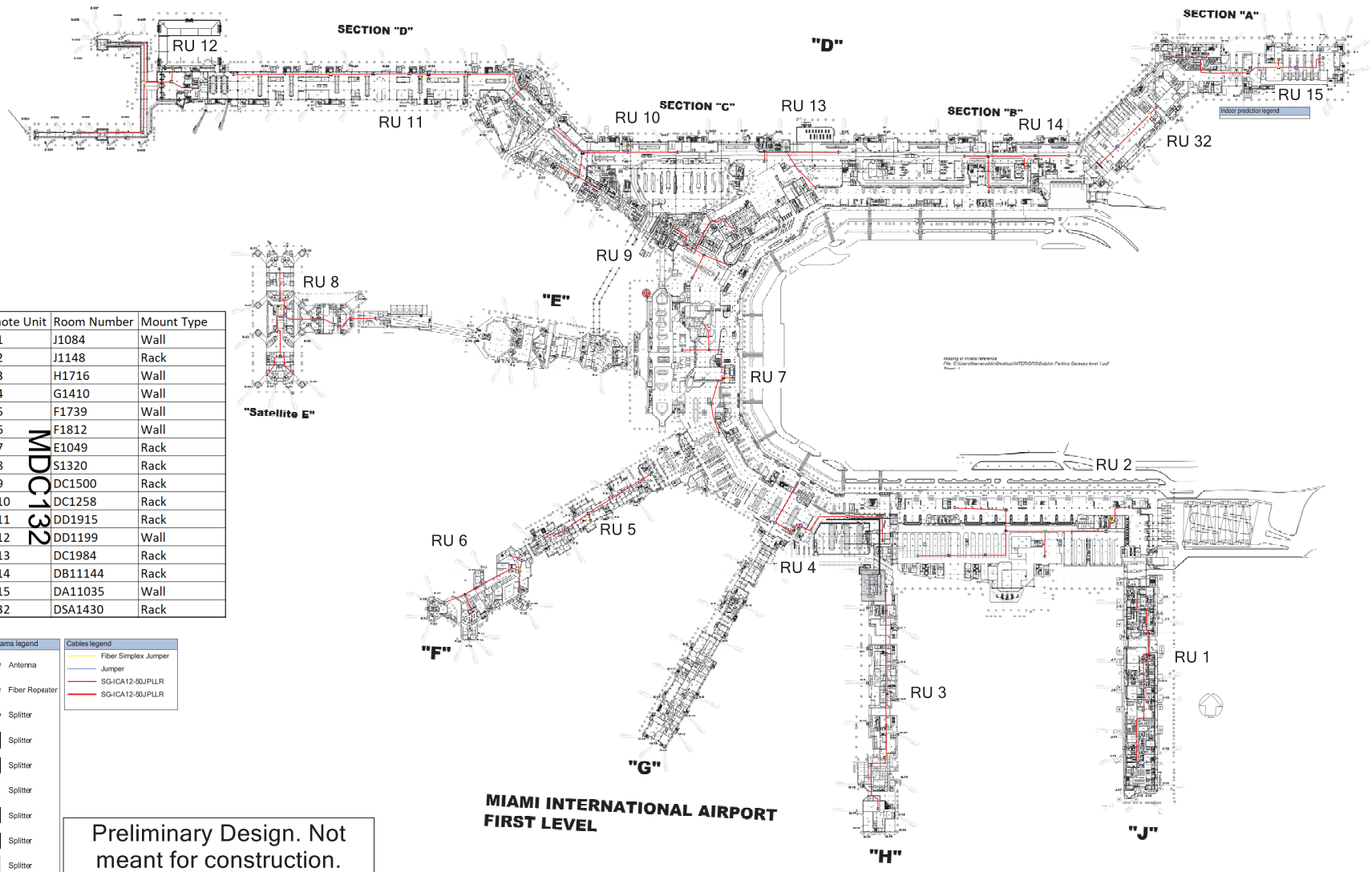
Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021



Remote Unit	Room Number	Mount Type
RU 1	J1084	Wall
RU 2	J1148	Rack
RU 3	H1716	Wall
RU 4	G1410	Wall
RU 5	F1739	Wall
RU 6	F1812	Wall
RU 7	E1049	Rack
RU 8	S1320	Rack
RU 9	DC1500	Rack
RU 10	DC1258	Rack
RU 11	DD1915	Rack
RU 12	DD1199	Wall
RU 13	DC1984	Rack
RU 14	DB11144	Rack
RU 15	DA11035	Wall
RU 32	DSA1430	Rack

MDC132

Pictograms legend
- Antenna
- Fiber Repeater
- Splitter
- Splitter
- Splitter
- Splitter
- Splitter
- Splitter
- Splitter
- Splitter
- Via

Cables legend
- Fiber Simplex Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

Preliminary Design. Not meant for construction. Final site walk required to determine cable pathways.

MIA - FIRST LEVEL

TECHNICAL SUPPORT
6-27-17

MOTOROLA SOLUTIONS

Miami Airport UHF DAS v2.3

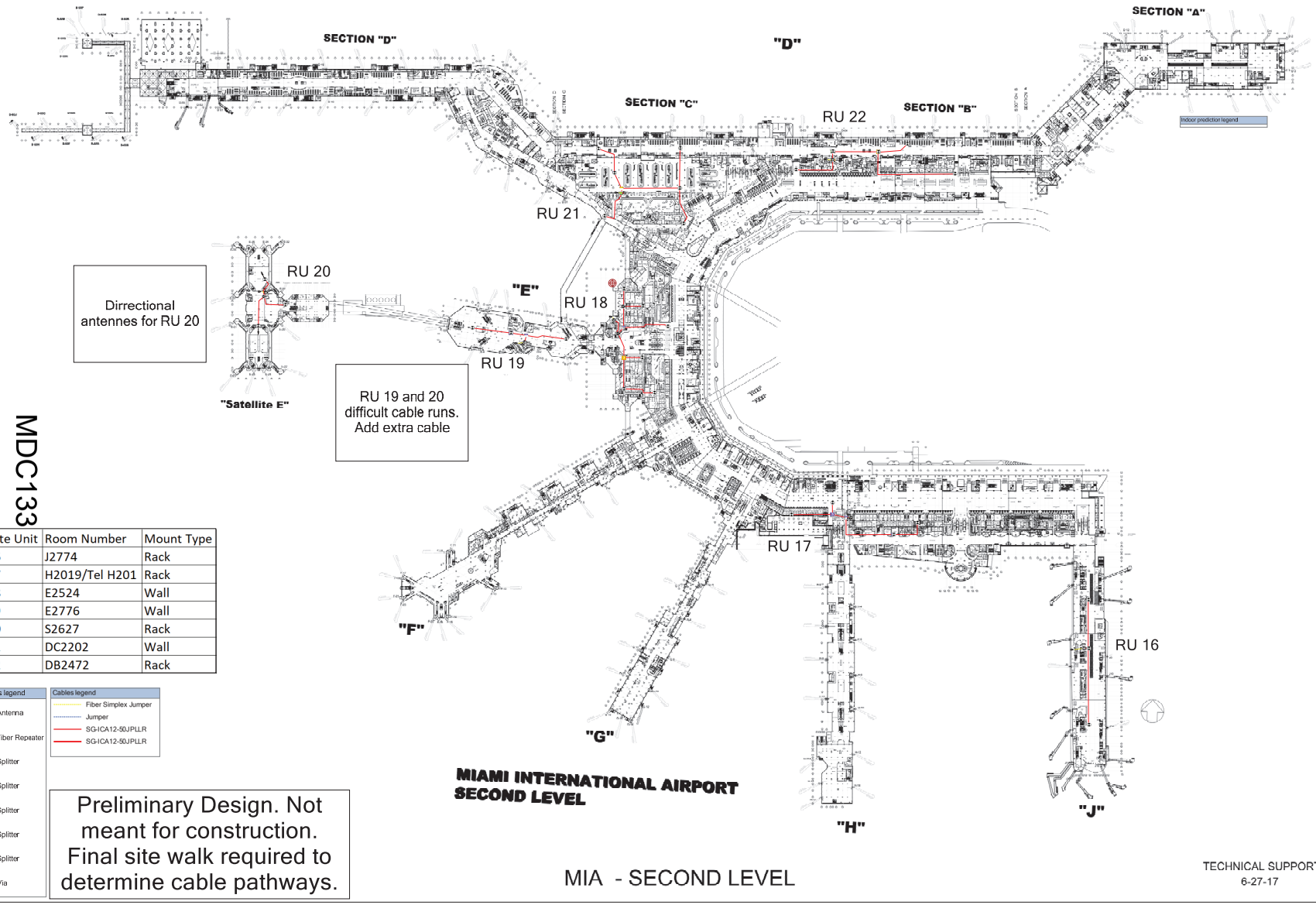
2100 NW 42nd Ave
Miami, FL
33126

Matthew Fatheree PG00062197

First Level

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021



MDC133

Remote Unit	Room Number	Mount Type
RU 16	J2774	Rack
RU 17	H2019/Tel H201	Rack
RU 18	E2524	Wall
RU 19	E2776	Wall
RU 20	S2627	Rack
RU 21	DC2202	Wall
RU 22	DB2472	Rack

Pictograms legend

- Antenna
- Fiber Repeater
- Splitter
- 5 Splitter
- 10 Splitter
- 7 Splitter
- 8 Splitter
- Via

Cables legend

- Fiber Simplex Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

Preliminary Design. Not meant for construction. Final site walk required to determine cable pathways.

MIA - SECOND LEVEL

TECHNICAL SUPPORT
6-27-17

MOTOROLA SOLUTIONS

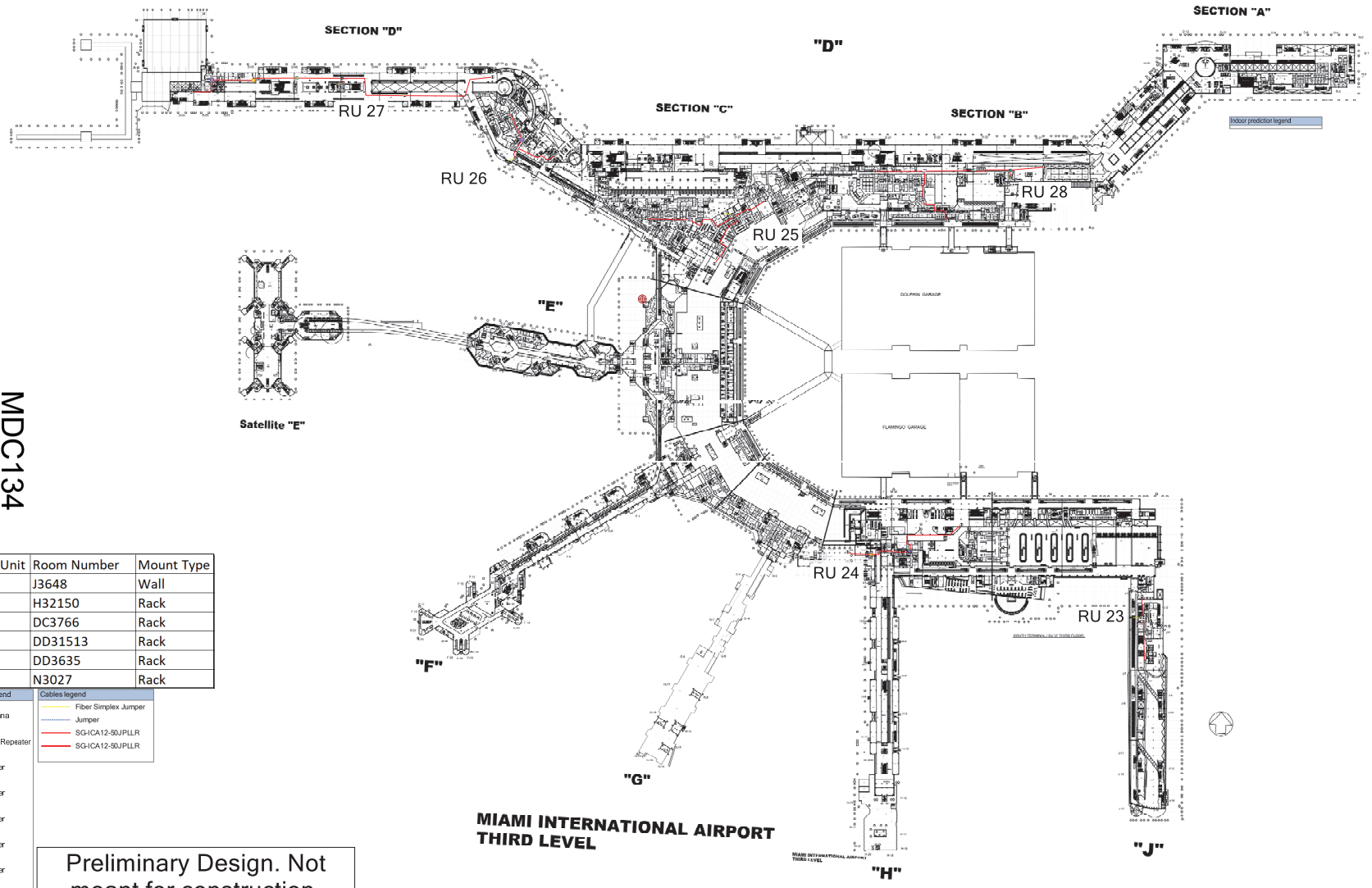
Project name: Miami Airport UHF DAS v2.3

Second Level

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

MDC134



Remote Unit	Room Number	Mount Type
RU 23	J3648	Wall
RU 24	H32150	Rack
RU 25	DC3766	Rack
RU 26	DD31513	Rack
RU 27	DD3635	Rack
RU 28	N3027	Rack

Pictograms legend

- Antenna
- Fiber Repeater
- Splitter
- 6 Splitter
- 5 Splitter
- 10 Splitter
- 13 Splitter
- 7 Splitter
- 8 Splitter
- Via

Cables legend

- Fiber Simplex Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

Preliminary Design. Not meant for construction. Final site walk required to determine cable pathways.

MIA - THIRD LEVEL

TECHNICAL SUPPORT
6-27-17

MOTOROLA SOLUTIONS

Project name: Miami Airport UHF DAS v2.3

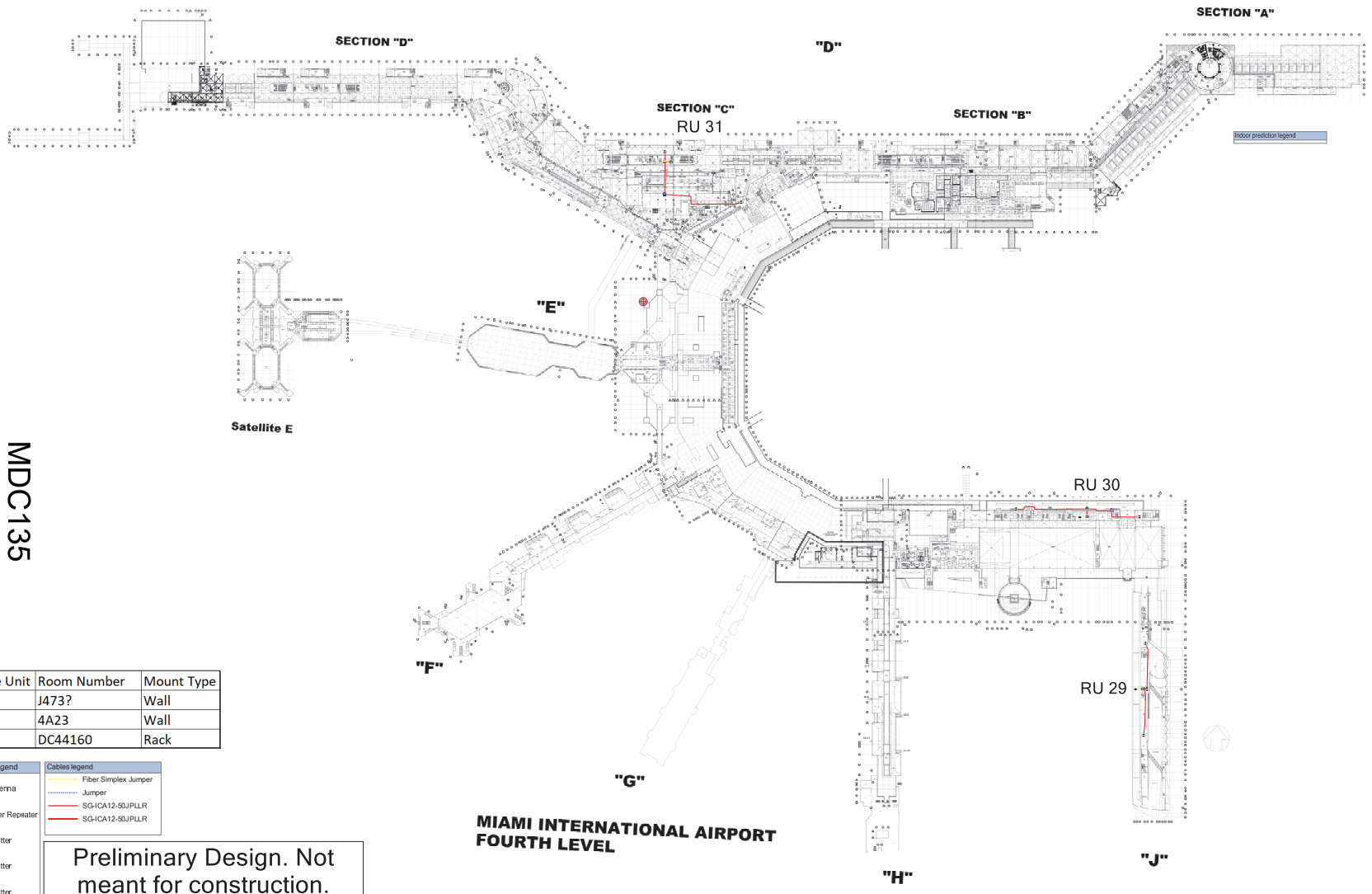
Address: 2100 NW 42nd Ave, Miami, FL 33126

Designer name: Matthew Fatheree PD0082197

Third Level

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021



MDC135

Remote Unit	Room Number	Mount Type
RU 29	J473?	Wall
RU 30	4A23	Wall
RU 31	DC44160	Rack

Pictograms legend
- Antenna
- Fiber Repeater
- Splitter
- Splitter
- Splitter
- Splitter
- Via

Cables legend
- Fiber Simplex Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

Preliminary Design. Not meant for construction. Final site walk required to determine cable pathways.

MIA - FOURTH LEVEL

TECHNICAL SUPPORT
6-27-17

MOTOROLA SOLUTIONS

Revision history

REV	DATE	Author
1	09/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	6/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	8/1/2022	Matthew Fatheree
Shows all remotes in 50 units		
2.2	11/21/2022	Matthew Fatheree
RFA Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name
Miami Airport UHF DAS v2.3

Address
2100 NW 42nd Ave
Miami, FL
33126

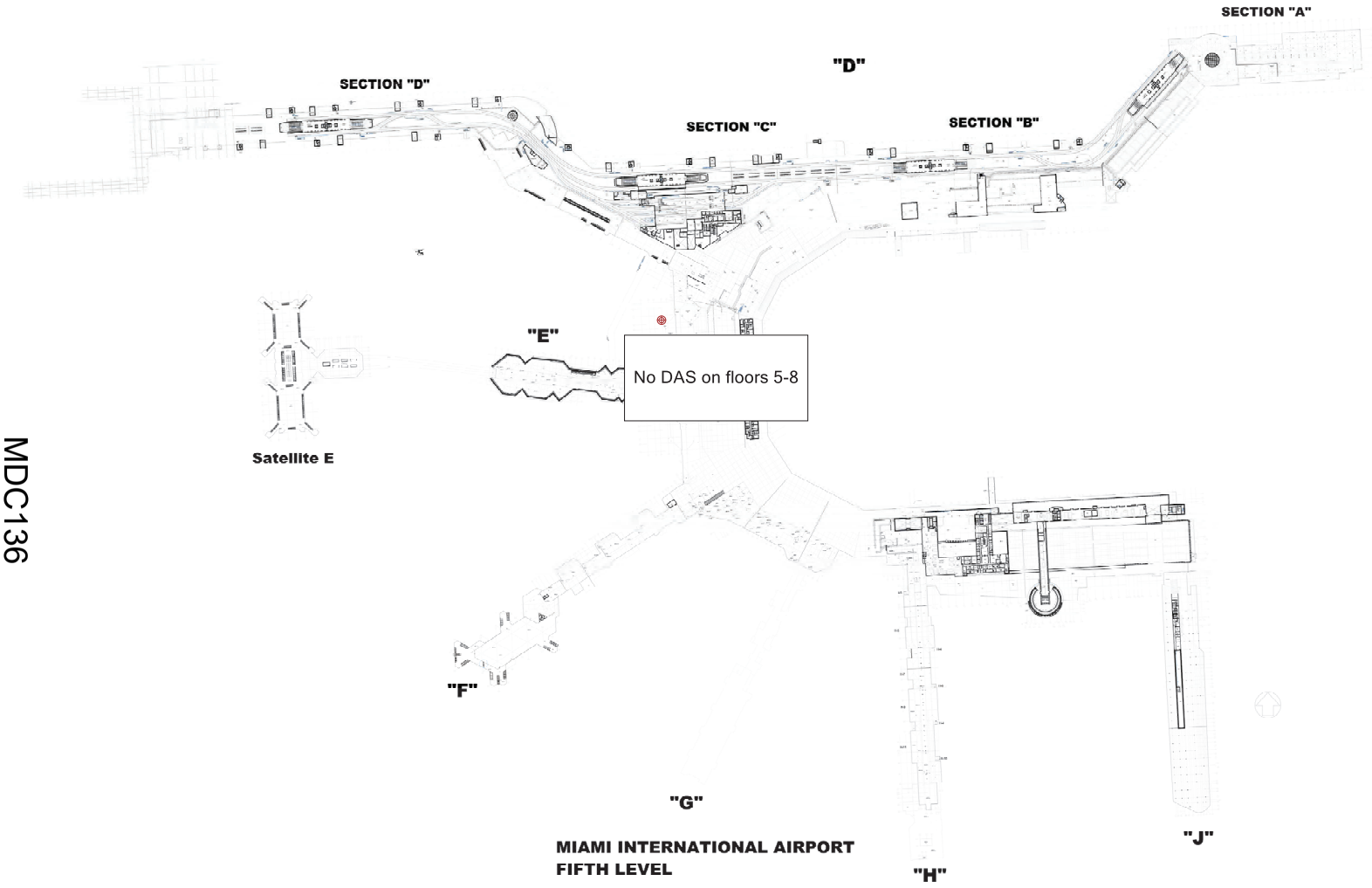
Designer name
Matthew Fatheree PG0082197

Fourth Level

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

MDC136



FIFTH FLOOR

TECHNICAL SUPPORT
6-27-17

MOTOROLA SOLUTIONS

Revision history		
REV	NOTE	Author
1	09/19/2021	Matthew Fetheree
Initial design based on CW Results		
2	6/15/2022	Matthew Fetheree
Preliminary redesign		
2.1	9/1/2022	Matthew Fetheree
Clean all remotes to 5G units		
2.2	11/21/2022	Matthew Fetheree
RFA Update		
2.3	2/7/2023	Matthew Fetheree
Design Submittal Revisions		

Project name
Miami Airport UHF DAS v2.3

Address
2100 NW 42nd Ave
Miami, FL
33126

Designer name
Matthew Fetheree PG0082197

Fifth Level

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

MOTOROLA SOLUTIONS

MDC137

Miami Internation Airport

2100 NW 42nd Ave

Miami, FL 33126

Lat: 25.79693

Long: -80.27624

Insightly ID: 32711059

Coverage Area: 5,257,600 sqft

MOTOROLA SOLUTIONS

MCA TEAM

RF Engineer

Name
Matthew Fatheree

Phone
919.605.4775

GROL
0028332740

Project Manager

Name
Martin Jelleme

Phone
404.623.7467

CUSTOMER CONTACT

Fire Department Contact

Name
Jose de Alfaraz, Lieutenant

Phone
305.876.7904

Site Contact

Name

Phone

Vicinity Map

GROL LICENSE HOLDER: Matthew Fatheree
FCC SERIAL NUMBER: PG00062197

DESIGN SPECIFICATION

OEM: Fiplex
Solution: DH14EA-R1-AU-MDA

Assumptions

Band	Name	Type	Call Sign	Channels
UHF	Miami	P25	N/A	10

- Assumes DAS will be fed by radio BTS.
- Design will maintain a level of -95 dbm RSSI over 95% of the requested coverage area.
- Pathway Survivability Level 1.
- No fire survivability.
- Isolation shall be a minimum of 20dB above the signal booster gain under all operating conditions.

PROJECT DESCRIPTION

This Design is governed and compliant with:

X	NFPA 1221, 2019
X	NFPA 1, 2018
X	NFPA 72, 2019
X	NFPA 70, 2020

Revision history

Rev	Date	Author	
1	10/13/2021	Matthew Fatheree	Initial design based on CW Results
2	8/15/2022	Matthew Fatheree	Preliminary redesign
2.1	11/8/2022	Matthew Fatheree	Swap all remotes to SW units
2.2	11/21/2022	Matthew Fatheree	BBU Update
2.3	2/1/2023	Matthew Fatheree	Design Submittal Revisions

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

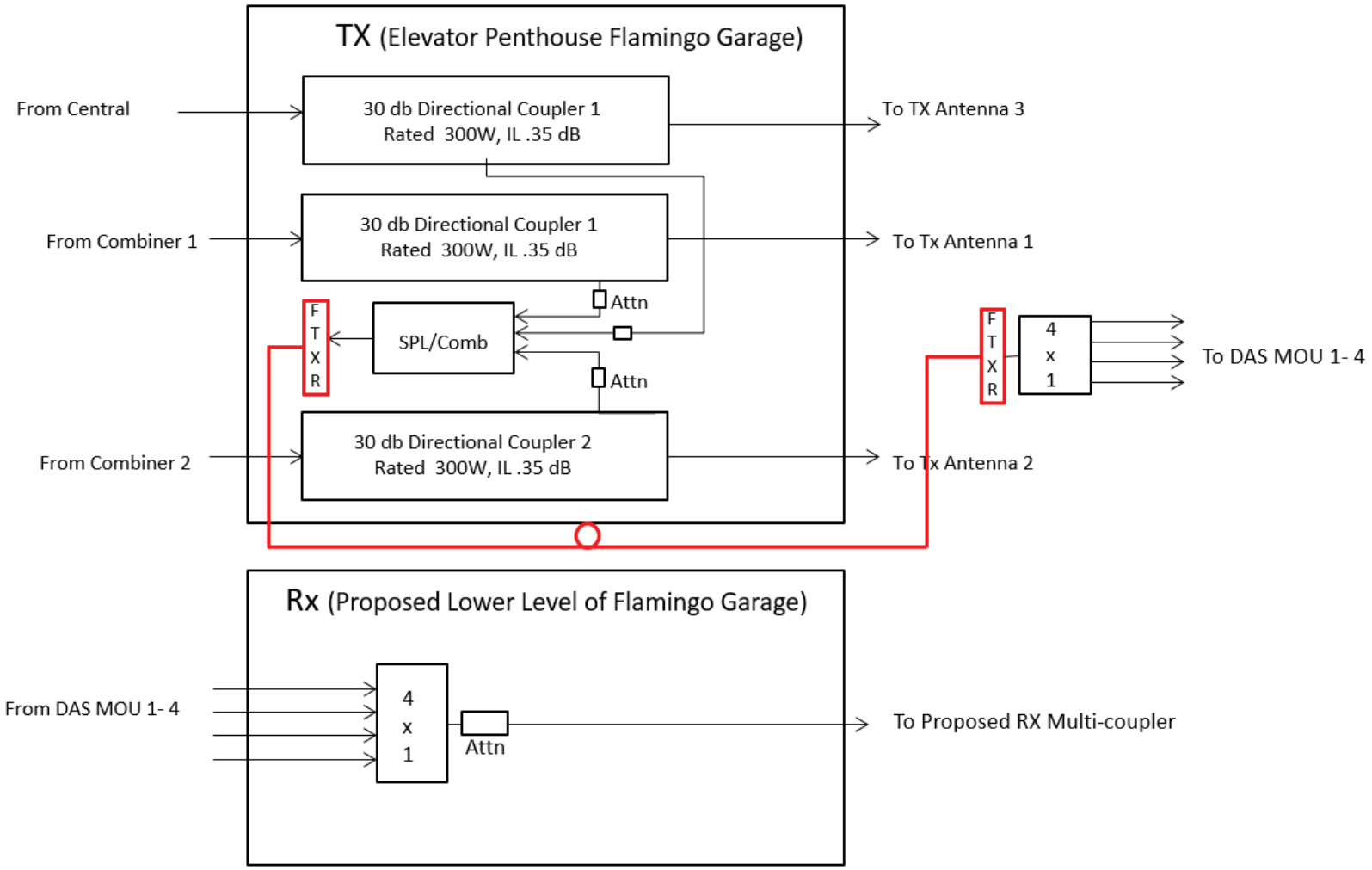
Cover Page

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

MDC138

Base Station to DAS Interface



MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

Base Station to DAS Interface Diagram

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

System Monitoring: (NFPA 1221 9.6.13.1) The fire alarm system shall monitor the following items as a minimum: (1) Integrity of the circuit monitoring signal booster(s) and power supply(ies) shall comply with NFPA 72. (2) System and signal booster supervisory signals shall include the following: (a) Donor Antenna Malfunction (b) Active RF Emitting Device Failure (c) Low-battery capacity indication when 70 percent of the 12-hour operating capacity has been depleted (d) System Component Failure. (3) Power supply signals shall include the following for each signal booster: (a) Loss of normal AC power (b) Failure of battery charger.

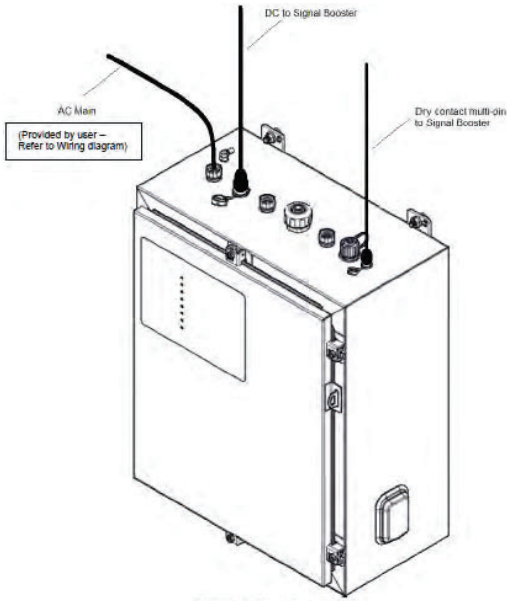


Figure: Port Connection

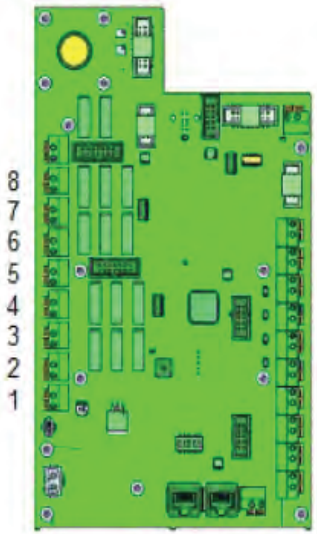
MDC139

Dry contacts to Fire Panel

1 = BATTERY CHARGER FAIL
2 = LOSS OF NORMAL AC POWER
3 = NORMAL AC POWER
4 = DONOR ANTENNA DISCONNECTION
5 = LOSS OF BATTERY CAPACITY
6 = DONOR ANTENNA MALFUNCTION
7 = ACTIVE RF MALFUNCTION
8 = SYSTEM COMPONENT FAIL

Relay Specifications:
- Max Current: 300mA
- Max Voltage: 24VDC

ALARM CONNECTIONS FROM BBU (CONNECTIONS MADE BY FIRE ALARM INTEGRATOR):



When connecting the Signal Booster dry contacts to the BBU, it is required to install 10KOHM end of Line Resistors (EOLR) inside the Signal Booster.

When using a Fiplex FLEX Signal Booster, the 10K EOLR must be installed as shown in the following image.

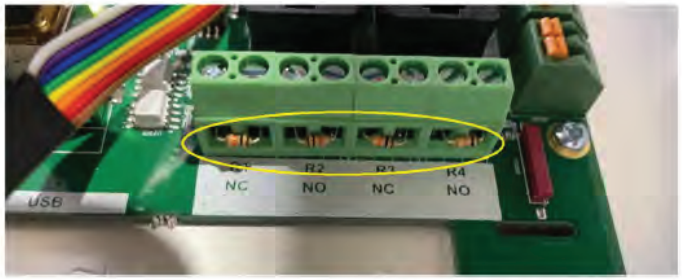


Figure: 10K EOLR installed on Flex Signal Booster.

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name
Miami Airport UHF DAS v2.3

Address
2100 NW 42nd Ave
Miami, FL
33126

Designer name
Matthew Fatheree PG00062197

Fiplex MU & BBU Supervisory Alarms

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

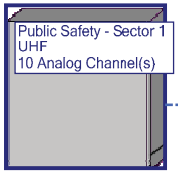
10/13/2021

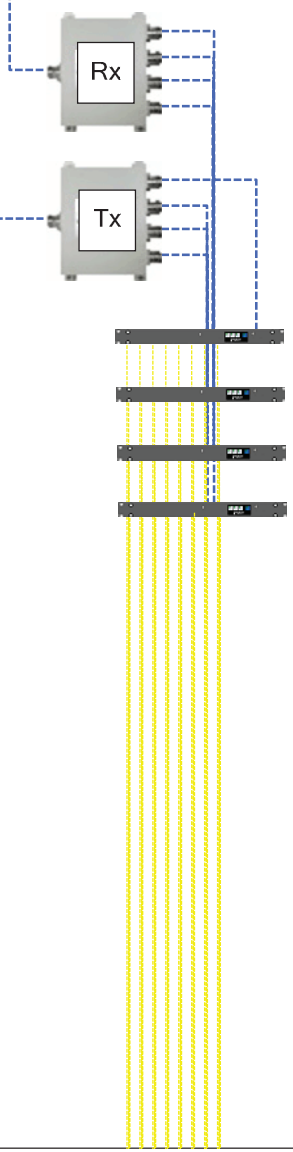
Head End in flamingo garage. DAS to be fed by radio BTS.

Fiber and dedicated power to be provided by Airport. Not in DAS SOW.

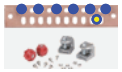
Miami Airport Channel List		
Name	Tx (MHz)	Rx (MHz)
East	453.1	458.1
North	453.35	458.35
Tac-1	453.525	458.525
Tac-2	460.45	465.45
Central	460.5	465.5
Tac-3	453.325	458.325
Tac-4	460.4	465.4
West	460.313	465.313
MIA-Tac	453.5	458.5
County Wide	460.0625	465.0625

MDC140





DH147S-D-RMA to be backed up by onsite DC Power Plant



Ground Bar

Grounding Cable

Annunciator Panel

Cables legend
1585A 002U1000
Fiber Simplex Jumper
JS-NMNF1.5F-R141
Jumper
Jumper
SG-ICA12-50JPLLR
SG-ICA12-50JPLLR

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

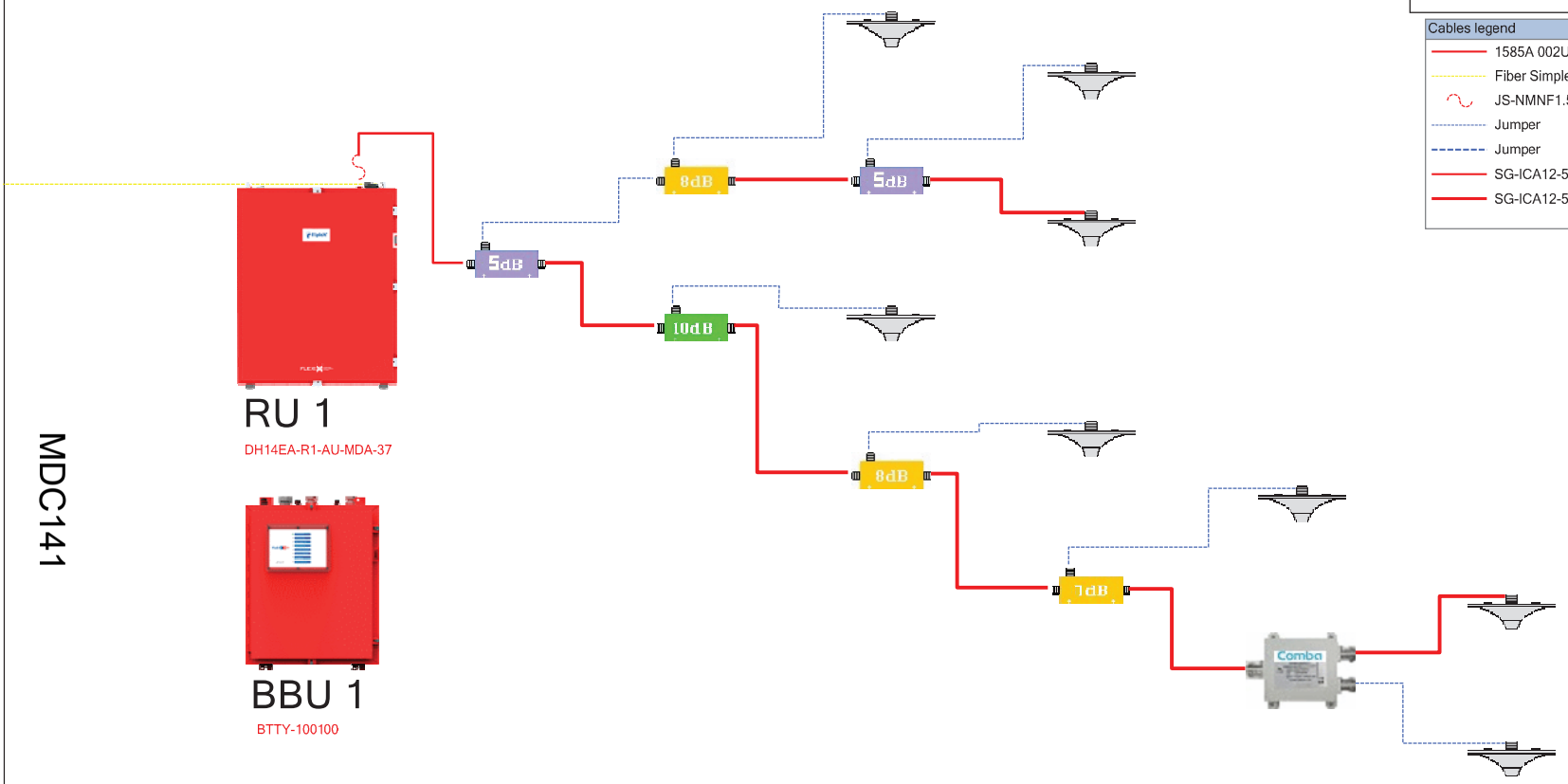
Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

First Level "J" Gates



MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

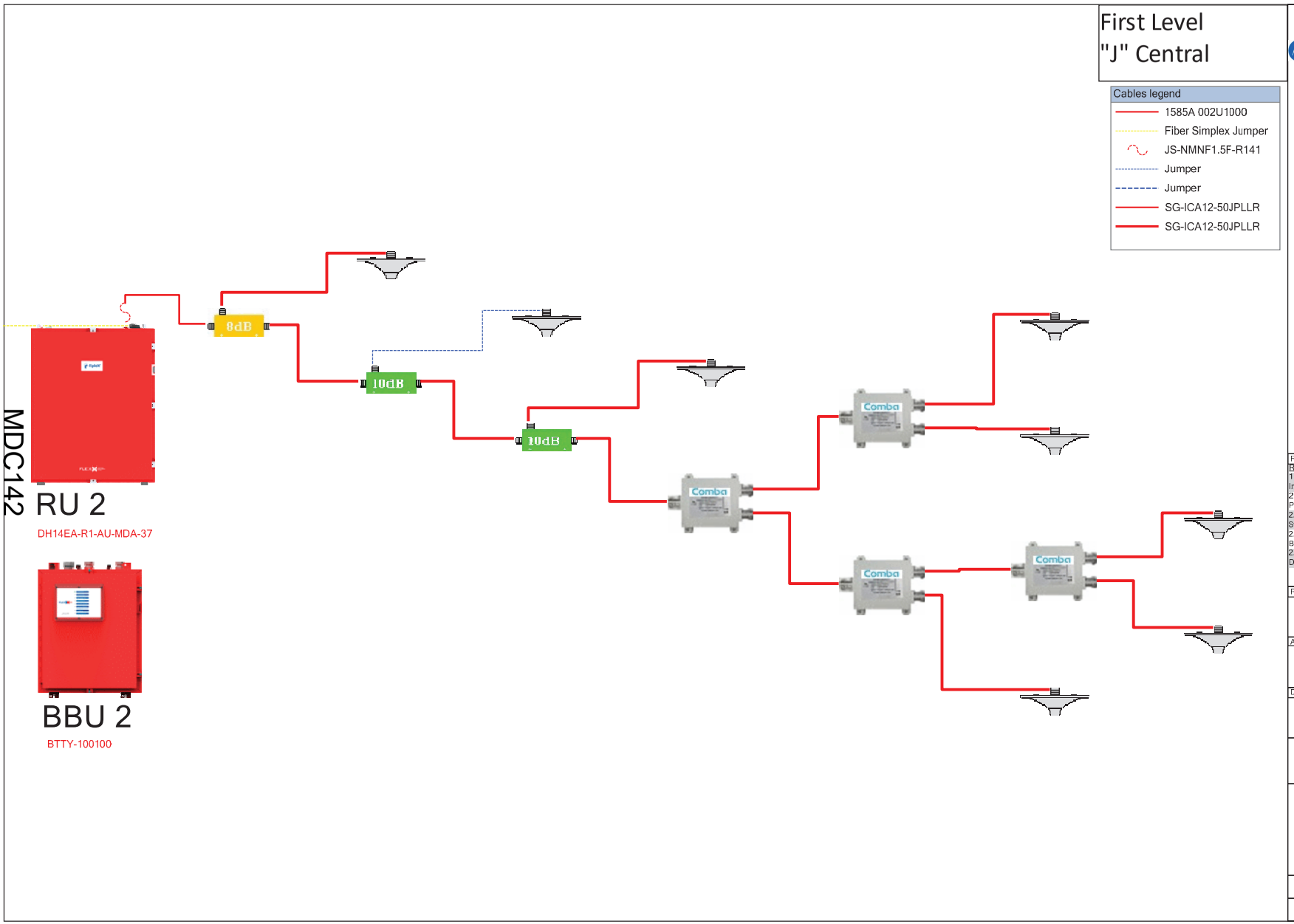
Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021



MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

System Overview

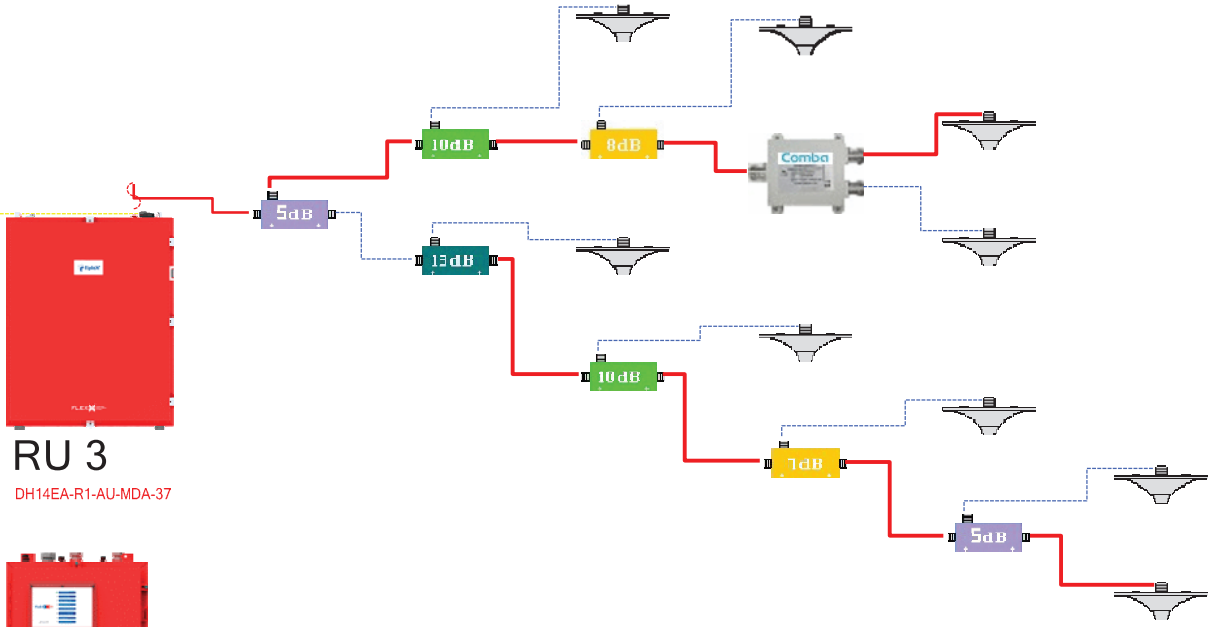
PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

First Level "H" Gates

MOTOROLA SOLUTIONS

MDC143



RU 3

DH14EA-R1-AU-MDA-37

BBU 3

BTTY-100100

Cables legend

- 1585A 002U1000
- Fiber Simplex Jumper
- JS-NMNF1.5F-R141
- Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

Revision history

Rev	Date	Author	
1	10/13/2021	Matthew Fatheree	Initial design based on CW Results
2	8/15/2022	Matthew Fatheree	Preliminary redesign
2.1	11/8/2022	Matthew Fatheree	Swap all remotes to 5W units
2.2	11/21/2022	Matthew Fatheree	BBU Update
2.3	2/1/2023	Matthew Fatheree	Design Submittal Revisions

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

MDC144

Covered by G and J central

First Level
"H" Central

Cables legend
1585A 002U1000
Fiber Simplex Jumper
JS-NMNF1.5F-R141
Jumper
Jumper
SG-ICA12-50JPLLR
SG-ICA12-50JPLLR

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

System Overview

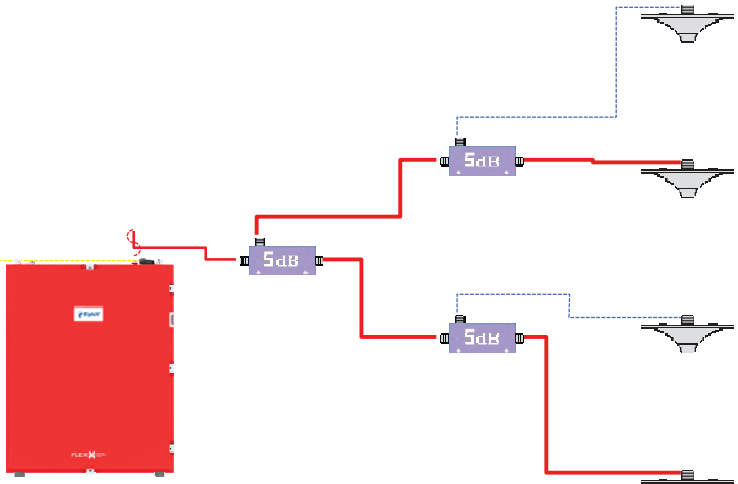
PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

First Level
"G" Central

MOTOROLA SOLUTIONS

MDC145



RU 4

DH14EA-R1-AU-MDA-37

BBU 4

BTTY-100100

Cables legend

- 1585A 002U1000
- Fiber Simplex Jumper
- JS-NMNF1.5F-R141
- Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

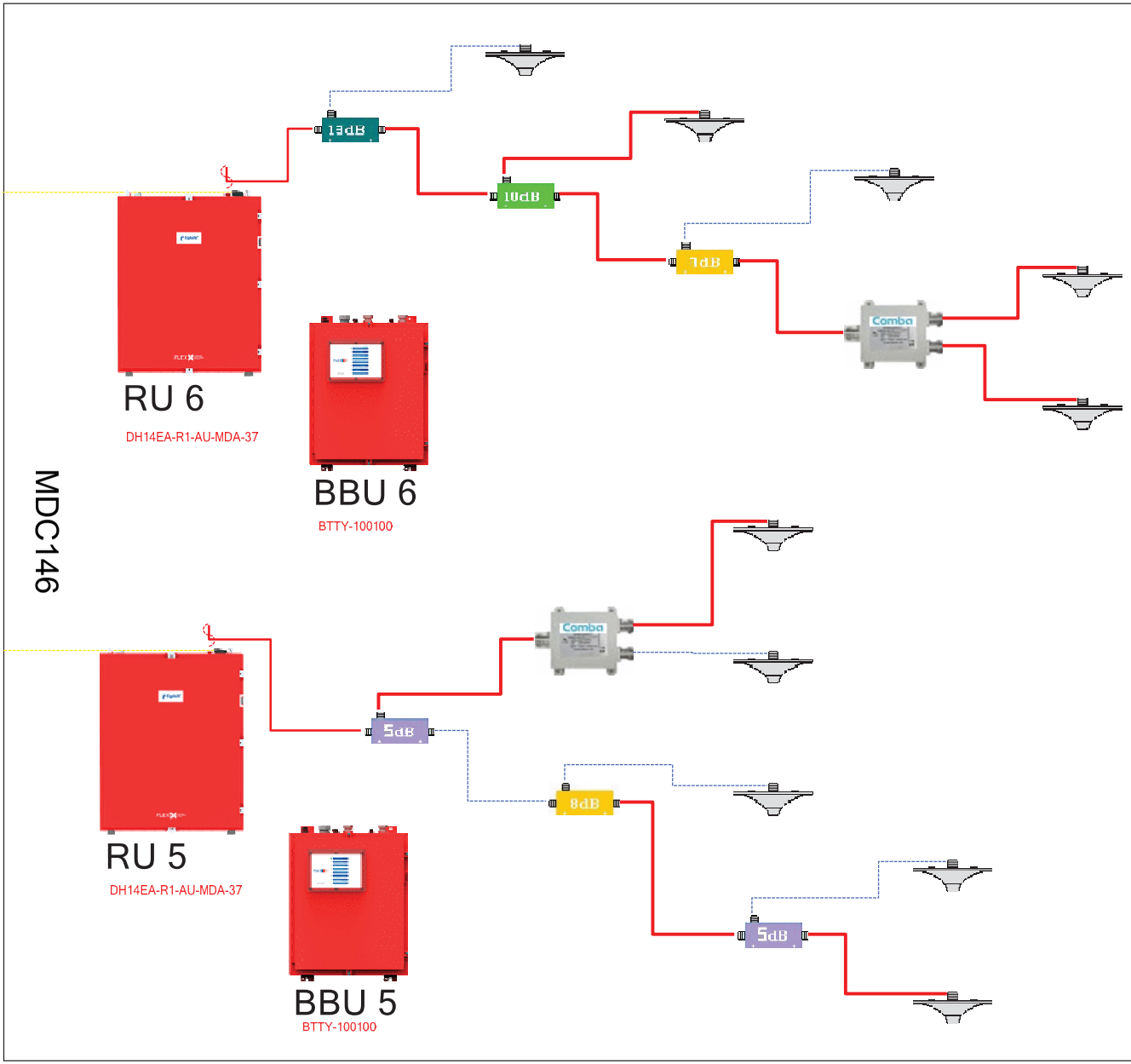
Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021



First Level "F" Gates

Cables legend

- 1585A 002U1000
- Fiber Simplex Jumper
- JS-NMNF1.5F-R141
- Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

First Level
"F" Central

Covered by E
and G central

MDC147

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

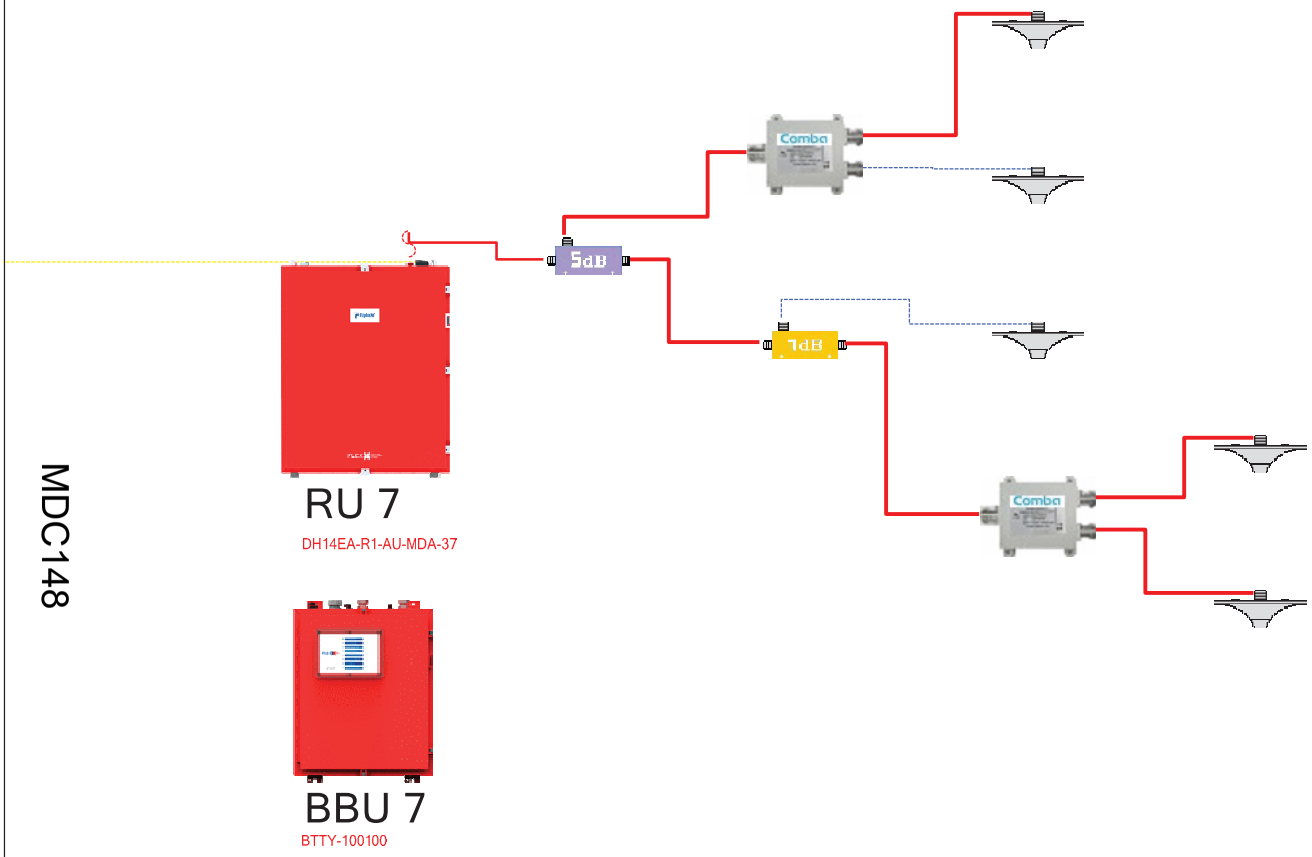
System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

First Level
"E" Central

MDC148



Cables legend

- 1585A 002U1000
- Fiber Simplex Jumper
- JS-NMNF1.5F-R141
- Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL

33126

Designer name

Matthew Fatheree PG00062197

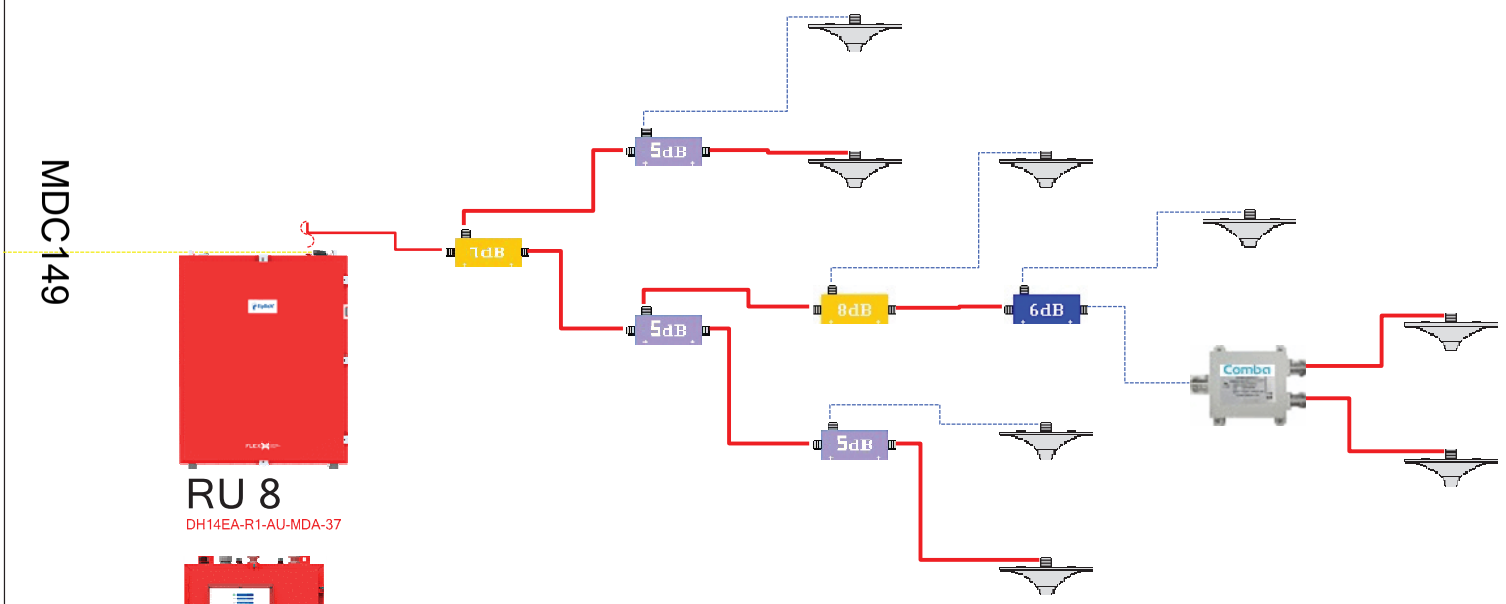
System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

First Level
"E" Satallite

MOTOROLA SOLUTIONS



Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL

33126

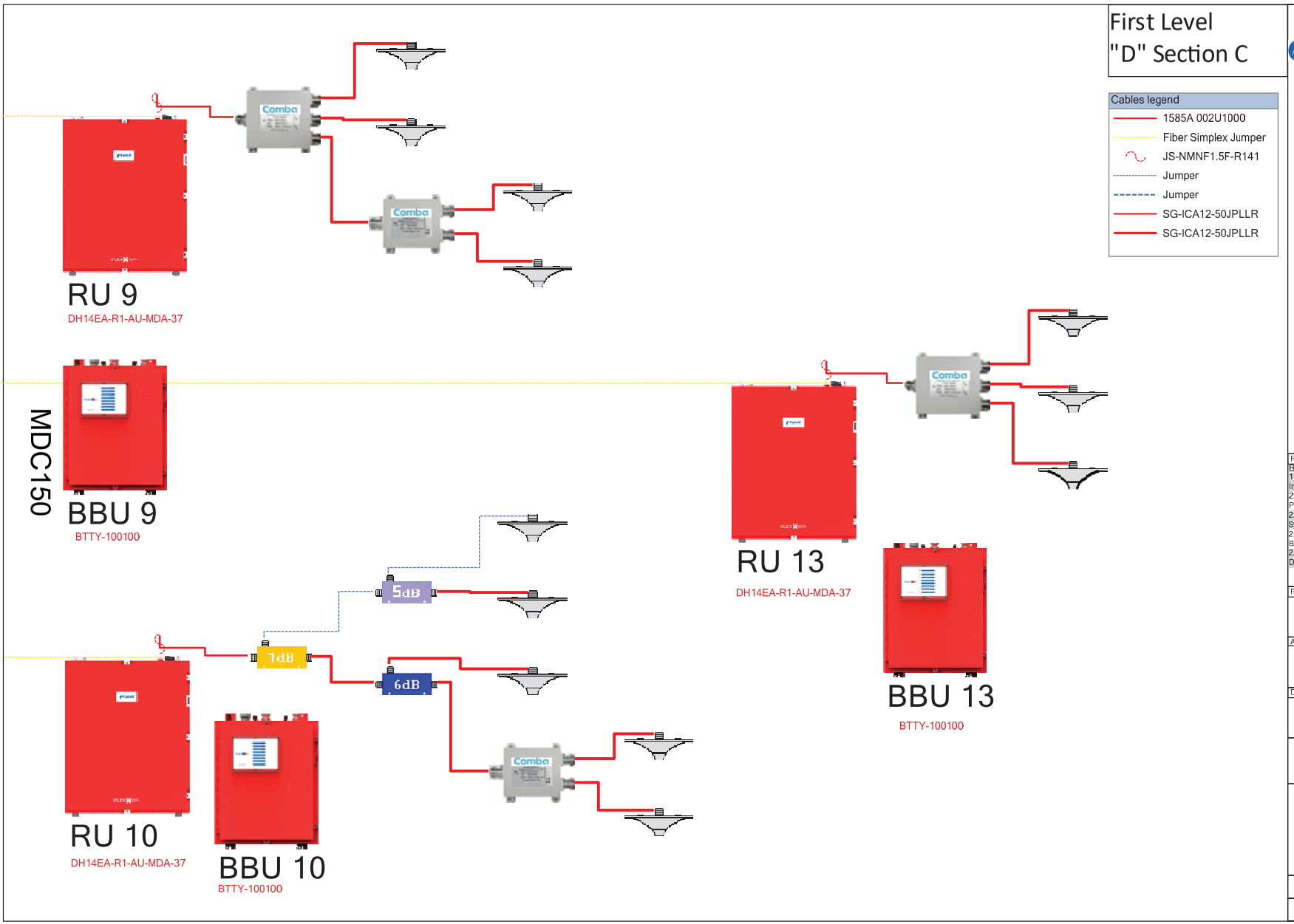
Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021



MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author	
1	10/13/2021	Matthew Fatheree	Initial design based on CW Results
2	8/15/2022	Matthew Fatheree	Preliminary redesign
2.1	11/8/2022	Matthew Fatheree	Swap all remotes to 5W units
2.2	11/21/2022	Matthew Fatheree	BBU Update
2.3	2/1/2023	Matthew Fatheree	Design Submittal Revisions

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

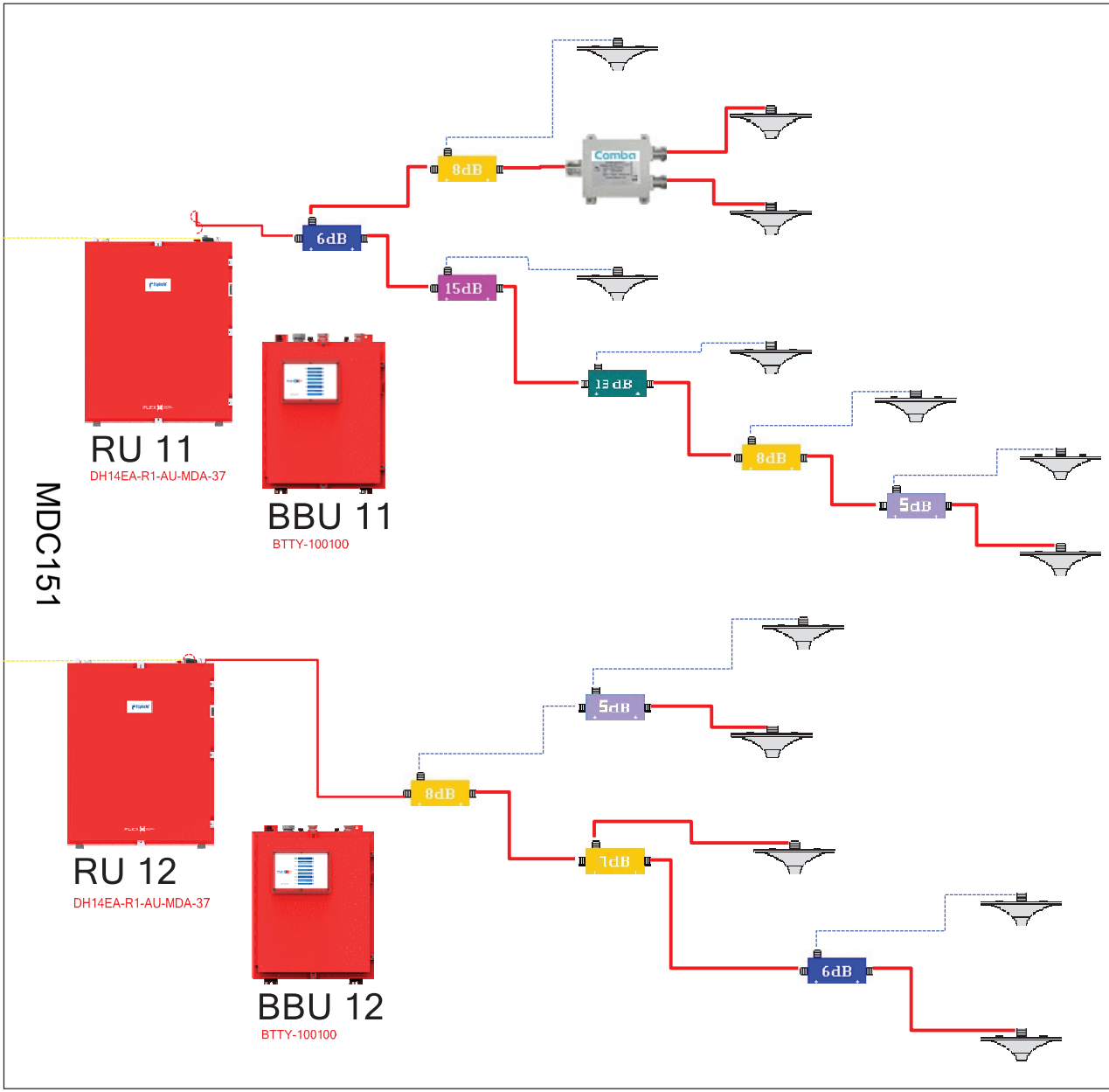
Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021



First Level "D" Section D

MOTOROLA SOLUTIONS

Cables legend

- 1585A 002U1000
- Fiber Simplex Jumper
- JS-NMNF1.5F-R141
- Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

Revision history

Rev	Date	Author	
1	10/13/2021	Matthew Fatheree	Initial design based on CW Results
2	8/15/2022	Matthew Fatheree	Preliminary redesign
2.1	11/8/2022	Matthew Fatheree	Swap all remotes to 5W units
2.2	11/21/2022	Matthew Fatheree	BBU Update
2.3	2/1/2023	Matthew Fatheree	Design Submittal Revisions

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

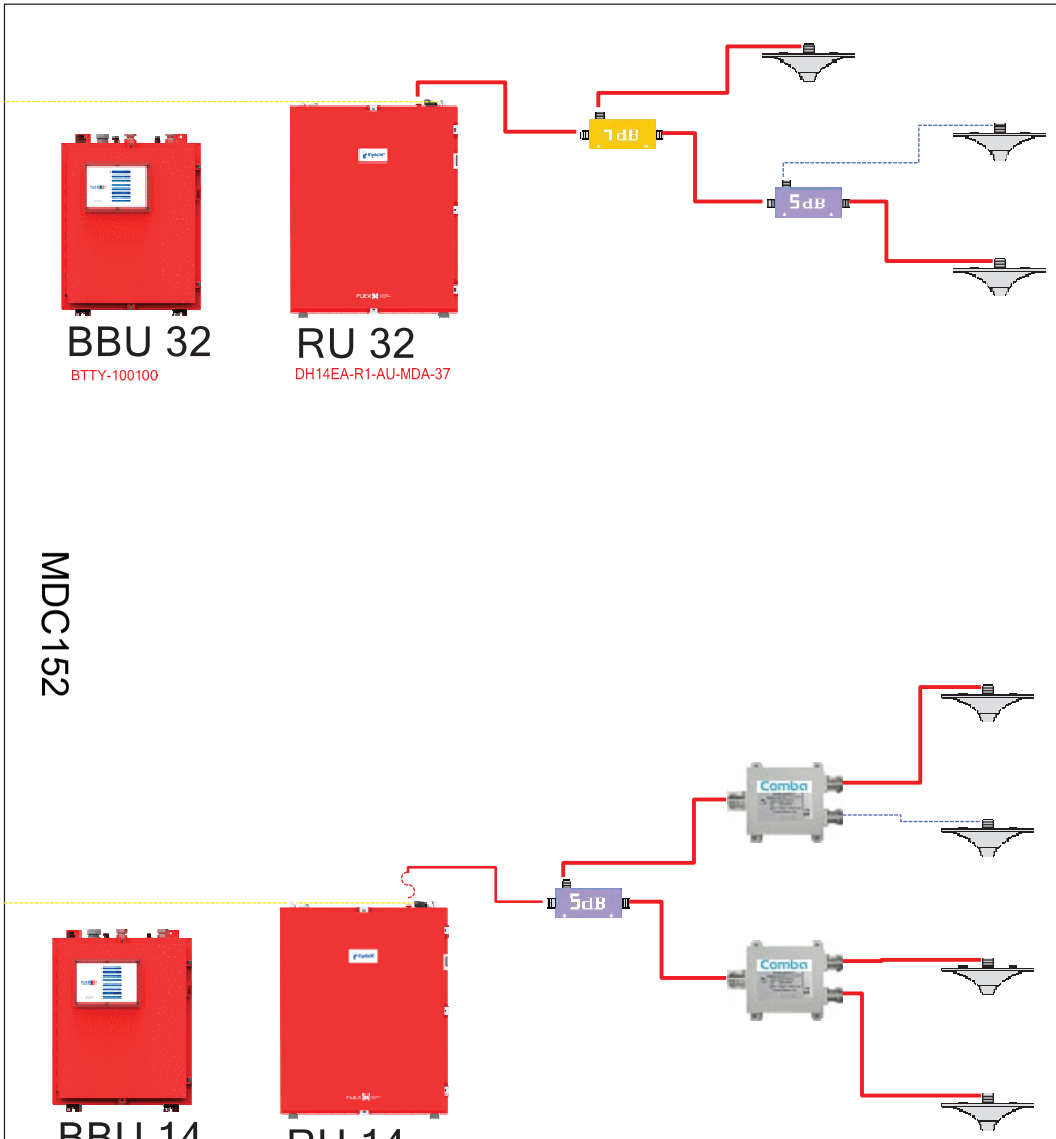
Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021



First Level "D" Section B

Cables legend

- 1585A 002U1000
- Fiber Simplex Jumper
- JS-NMNF1.5F-R141
- Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

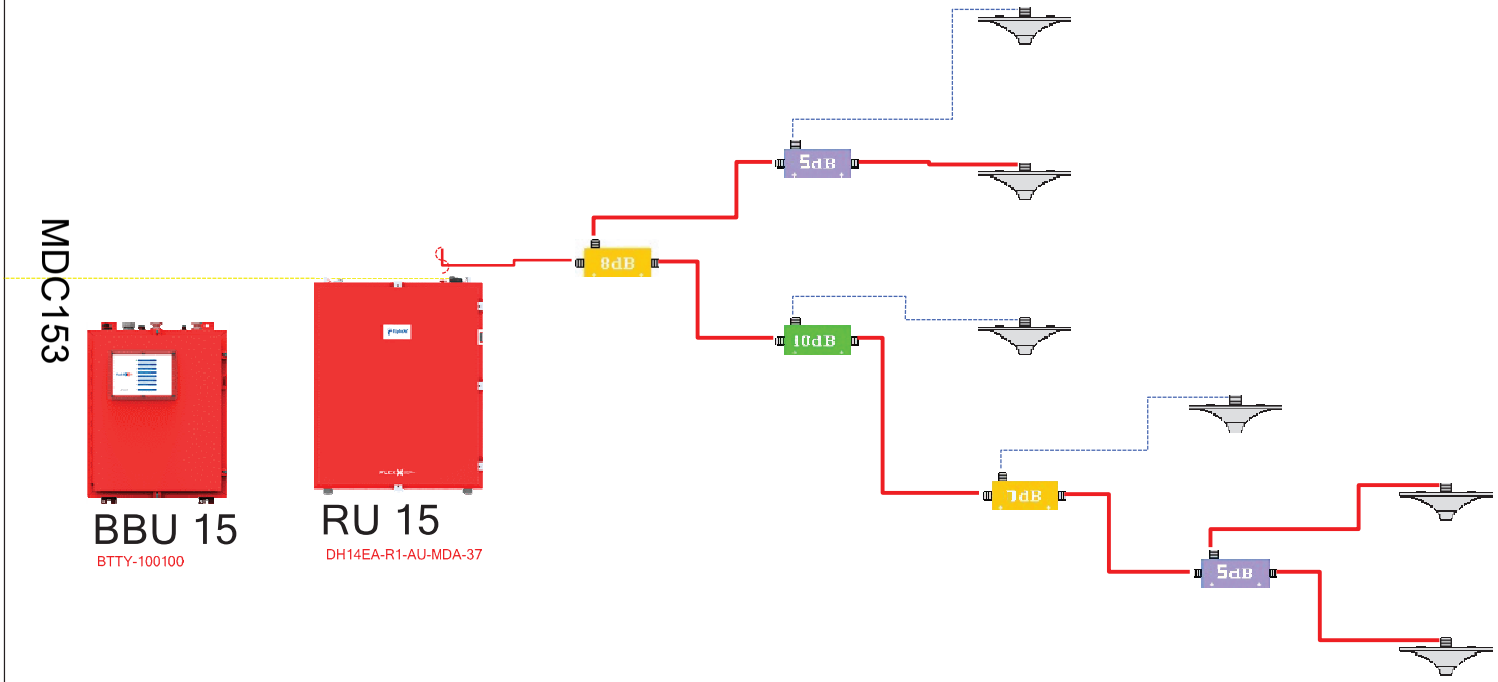
System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

First Level
"D" Section A

MOTOROLA SOLUTIONS



Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

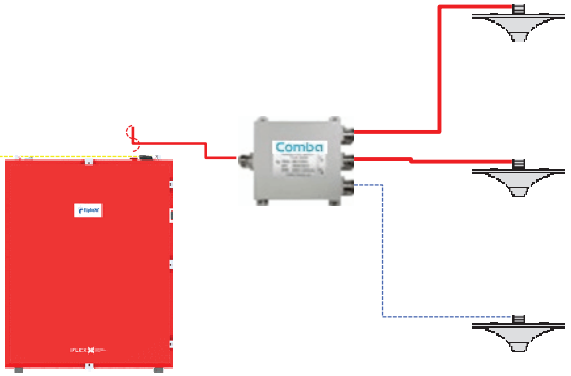
System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

Second Level "J" Gates

MDC154



RU 16

DH14EA-R1-AU-MDA-37

BBU 16

BTTY-100100

Cables legend
1585A 002U1000
Fiber Simplex Jumper
JS-NMNF1.5F-R141
Jumper
Jumper
SG-ICA12-50JPLLR
SG-ICA12-50JPLLR

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL

33126

Designer name

Matthew Fatheree PG00062197

System Overview

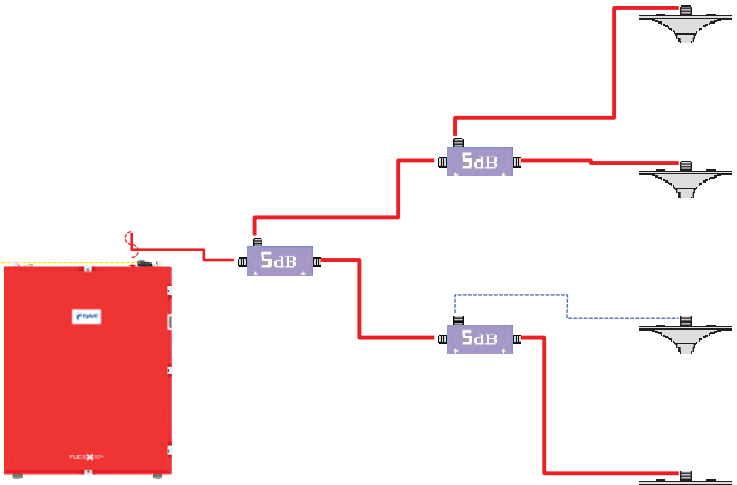
PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

Second Level "H" Central

MOTOROLA SOLUTIONS

MDC155



RU 17

DH14EA-R1-AU-MDA-37

BBU 17

BTTY-100100

Cables legend

- 1585A 002U1000
- Fiber Simplex Jumper
- JS-NMNF1.5F-R141
- Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

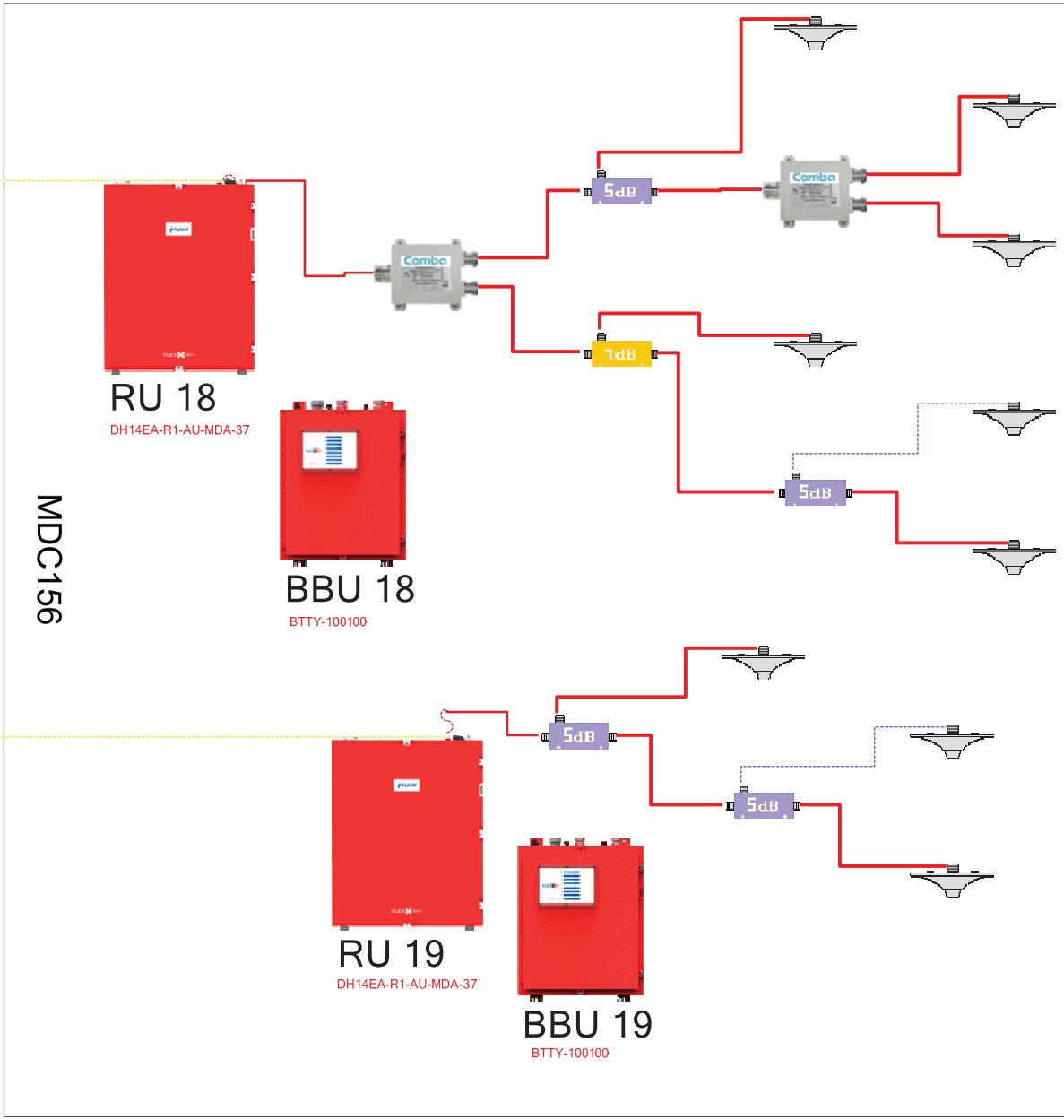
Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021



Second Level "E" Central & Gates

Cables legend

- 1585A 002U1000
- Fiber Simplex Jumper
- JS-NMNF1.5F-R141
- Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author	
1	10/13/2021	Matthew Fatheree	Initial design based on CW Results
2	8/15/2022	Matthew Fatheree	Preliminary redesign
2.1	11/8/2022	Matthew Fatheree	Swap all remotes to 5W units
2.2	11/21/2022	Matthew Fatheree	BBU Update
2.3	2/1/2023	Matthew Fatheree	Design Submittal Revisions

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

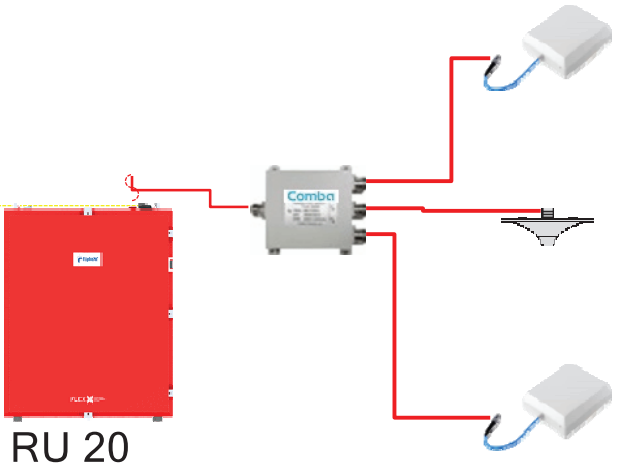
System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

Second Level "E" Satallite

MDC157



RU 20
DH14EA-R1-AU-MDA-37

BBU 20
BTTY-100100

Cables legend
1585A 002U1000
Fiber Simplex Jumper
JS-NMNF1.5F-R141
Jumper
Jumper
SG-ICA12-50JPLLR
SG-ICA12-50JPLLR

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

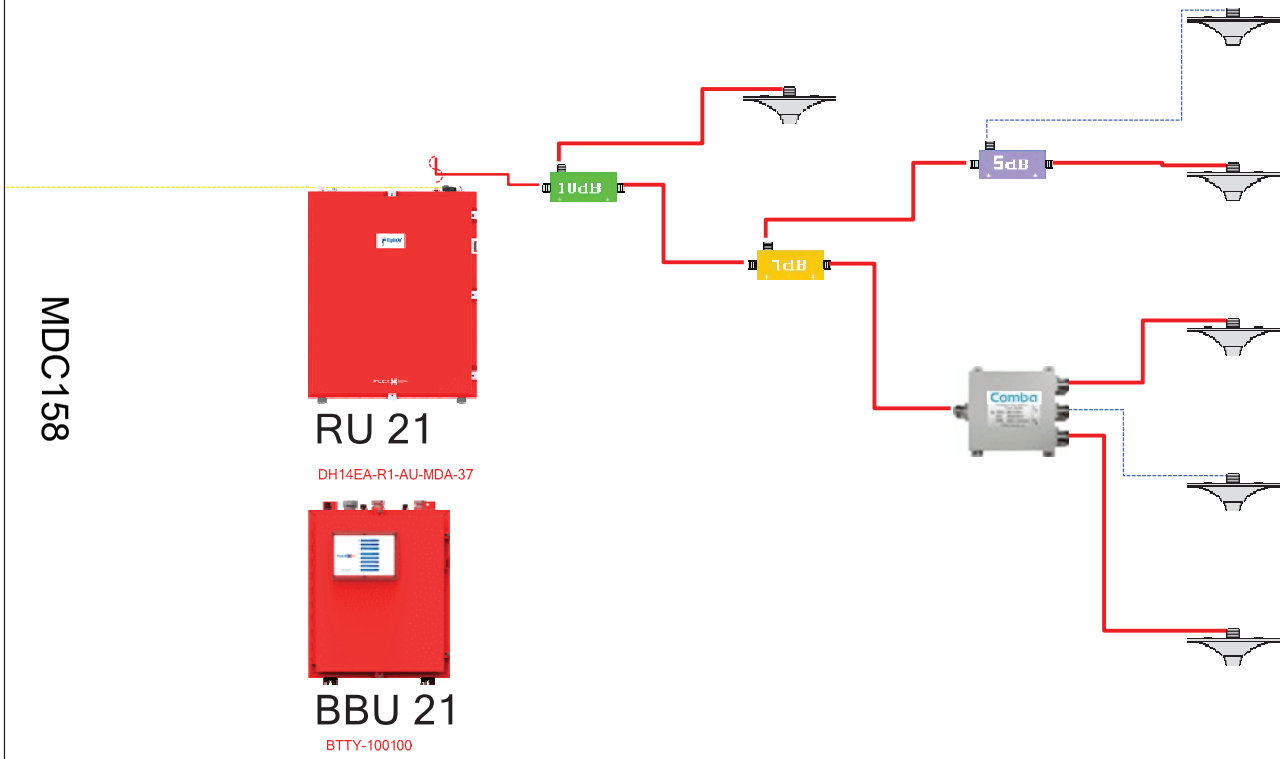
System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

Second Level "D" Section C

MDC158



Cables legend

- 1585A 002U1000
- Fiber Simplex Jumper
- JS-NMNF1.5F-R141
- Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

System Overview

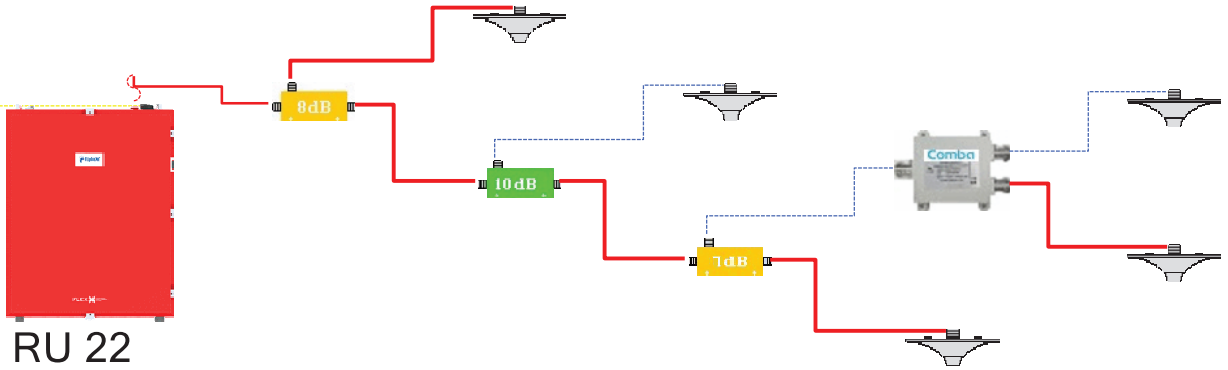
PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

Second Level "D" Section B

MOTOROLA SOLUTIONS

MDC159



RU 22

DH14EA-R1-AU-MDA-37

BBU 22

BTTY-100100

Cables legend
1585A 002U1000
Fiber Simplex Jumper
JS-NMNF1.5F-R141
Jumper
Jumper
SG-ICA12-50JPLLR
SG-ICA12-50JPLLR

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

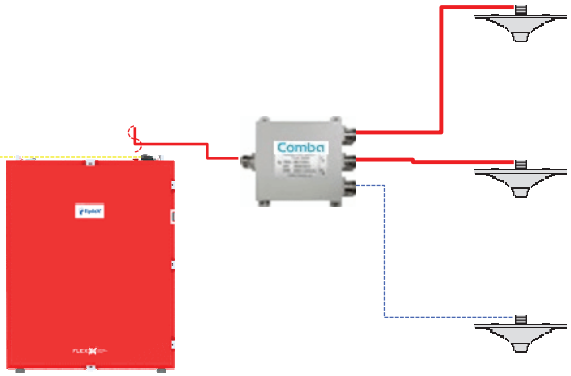
Third Level "J" Gates

MOTOROLA SOLUTIONS

Cables legend

- 1585A 002U1000
- Fiber Simplex Jumper
- JS-NMNF1.5F-R141
- Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

MDC160



RU 23

DH14EA-R1-AU-MDA-37

BBU 23

BTTY-100100

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL

33126

Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

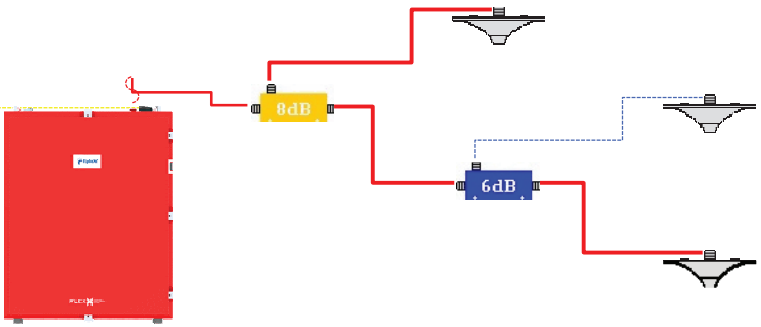
10/13/2021

Third Level
"H" Central

MOTOROLA SOLUTIONS

Cables legend
1585A 002U1000
Fiber Simplex Jumper
JS-NMNF1.5F-R141
Jumper
Jumper
SG-ICA12-50JPLLR
SG-ICA12-50JPLLR

MDC161



RU 24

DH14EA-R1-AU-MDA-37

BBU 24

BTTY-100100

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL

33126

Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

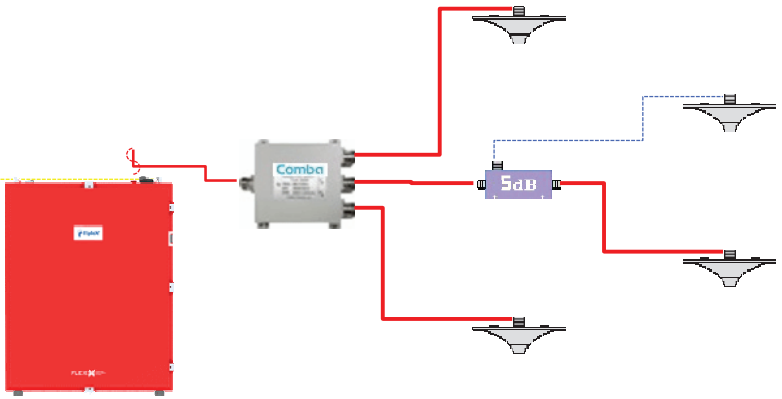
10/13/2021

Third Level
"D" Section C

MOTOROLA SOLUTIONS

Cables legend
1585A 002U1000
Fiber Simplex Jumper
JS-NMNF1.5F-R141
Jumper
Jumper
SG-ICA12-50JPLLR
SG-ICA12-50JPLLR

MDC162



RU 25

DH14EA-R1-AU-MDA-37

BBU 25

BTTY-100100

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

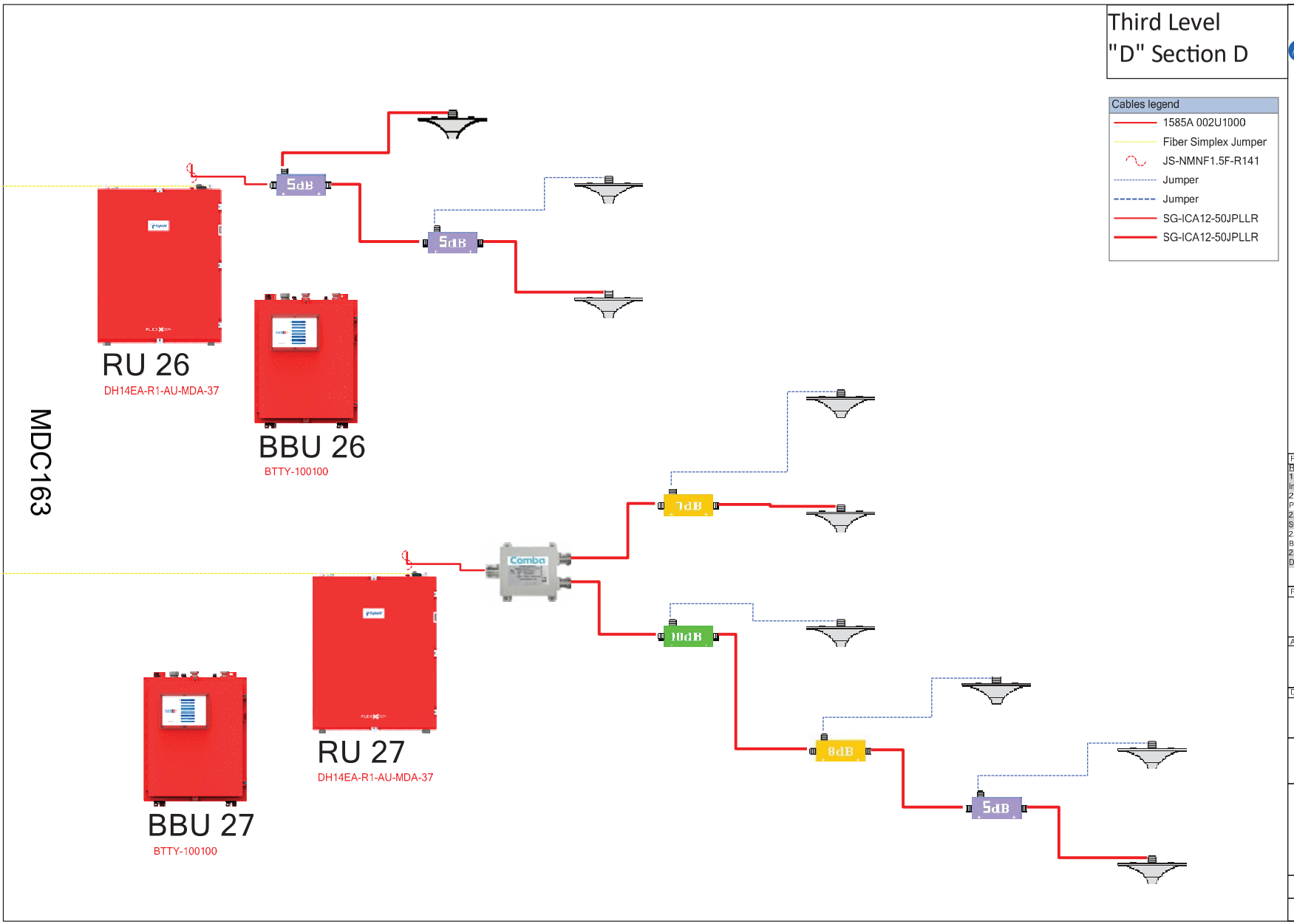
Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021



Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

System Overview

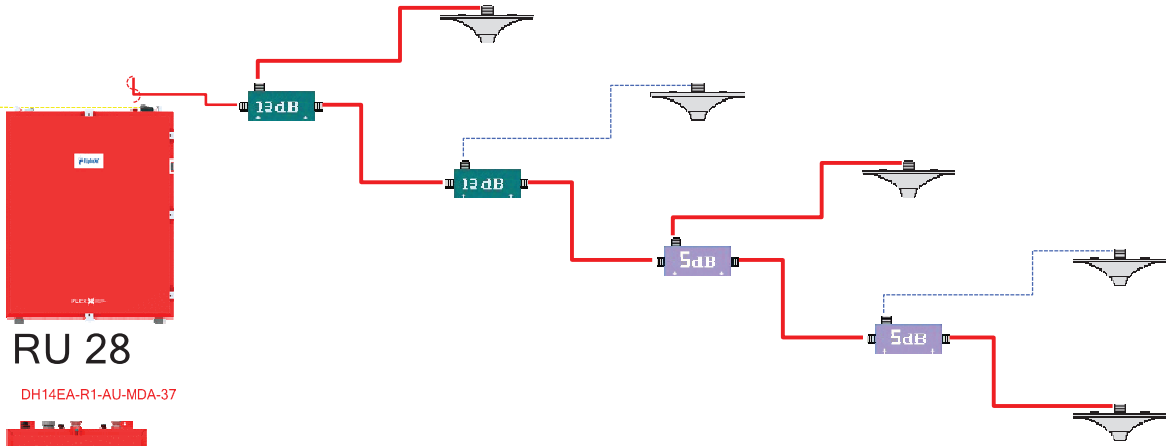
PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

Third Level
"D" Section B

MOTOROLA SOLUTIONS

MDC164



RU 28

DH14EA-R1-AU-MDA-37

BBU 28

BTTY-100100

Cables legend

- 1585A 002U1000
- Fiber Simplex Jumper
- JS-NMNF1.5F-R141
- Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

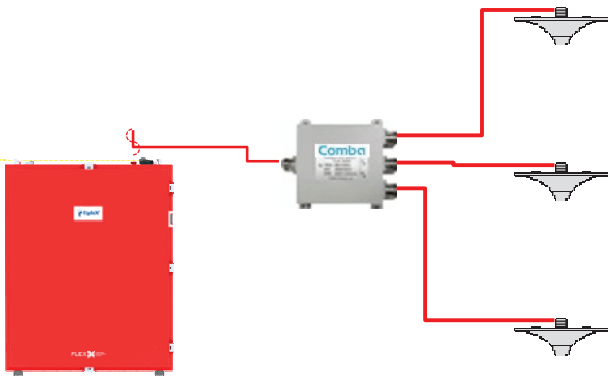
10/13/2021

Fourth Level "J" Gates

MOTOROLA SOLUTIONS

Cables legend
1585A 002U1000
Fiber Simplex Jumper
JS-NMNF1.5F-R141
Jumper
Jumper
SG-ICA12-50JPLLR
SG-ICA12-50JPLLR

MDC165



RU 29

DH14EA-R1-AU-MDA-37

BBU 29

BTTY-100100

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL

33126

Designer name

Matthew Fatheree PG00062197

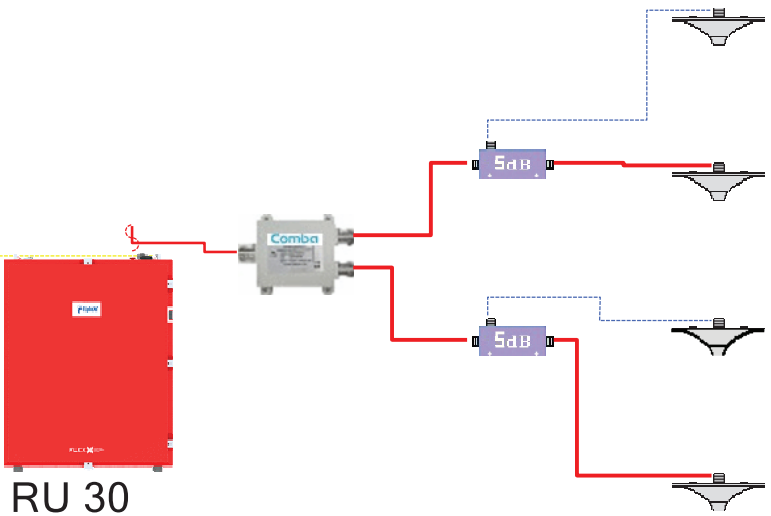
System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

Fourth Level
"J" Central

MDC166



RU 30

DH14EA-R1-AU-MDA-37

BBU 30

BTTY-100100

Cables legend
1585A 002U1000
Fiber Simplex Jumper
JS-NMNF1.5F-R141
Jumper
Jumper
SG-ICA12-50JPLLR
SG-ICA12-50JPLLR

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL

33126

Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

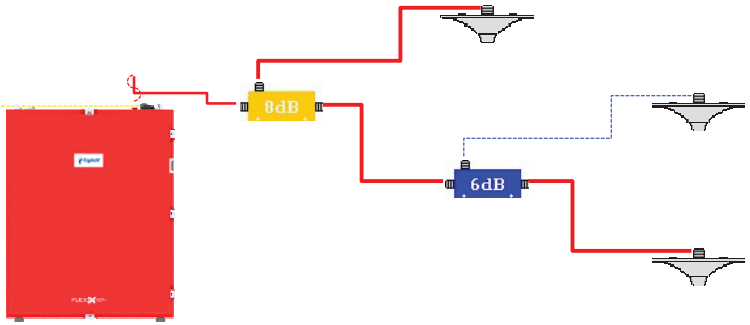
10/13/2021

Fourth Level
"D" Section C

MOTOROLA SOLUTIONS

Cables legend
1585A 002U1000
Fiber Simplex Jumper
JS-NMNF1.5F-R141
Jumper
Jumper
SG-ICA12-50JPLLR
SG-ICA12-50JPLLR

MDC167



RU 31

DH14EA-R1-AU-MDA-37

BBU 31

BTTY-100100

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL

33126

Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

MDC168

Page Purposefully Left Blank

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

MDC169

Page Purposefully Left Blank

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	11/8/2022	Matthew Fatheree
Swap all remotes to 5W units		
2.2	11/21/2022	Matthew Fatheree
BBU Update		
2.3	2/1/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL

33126

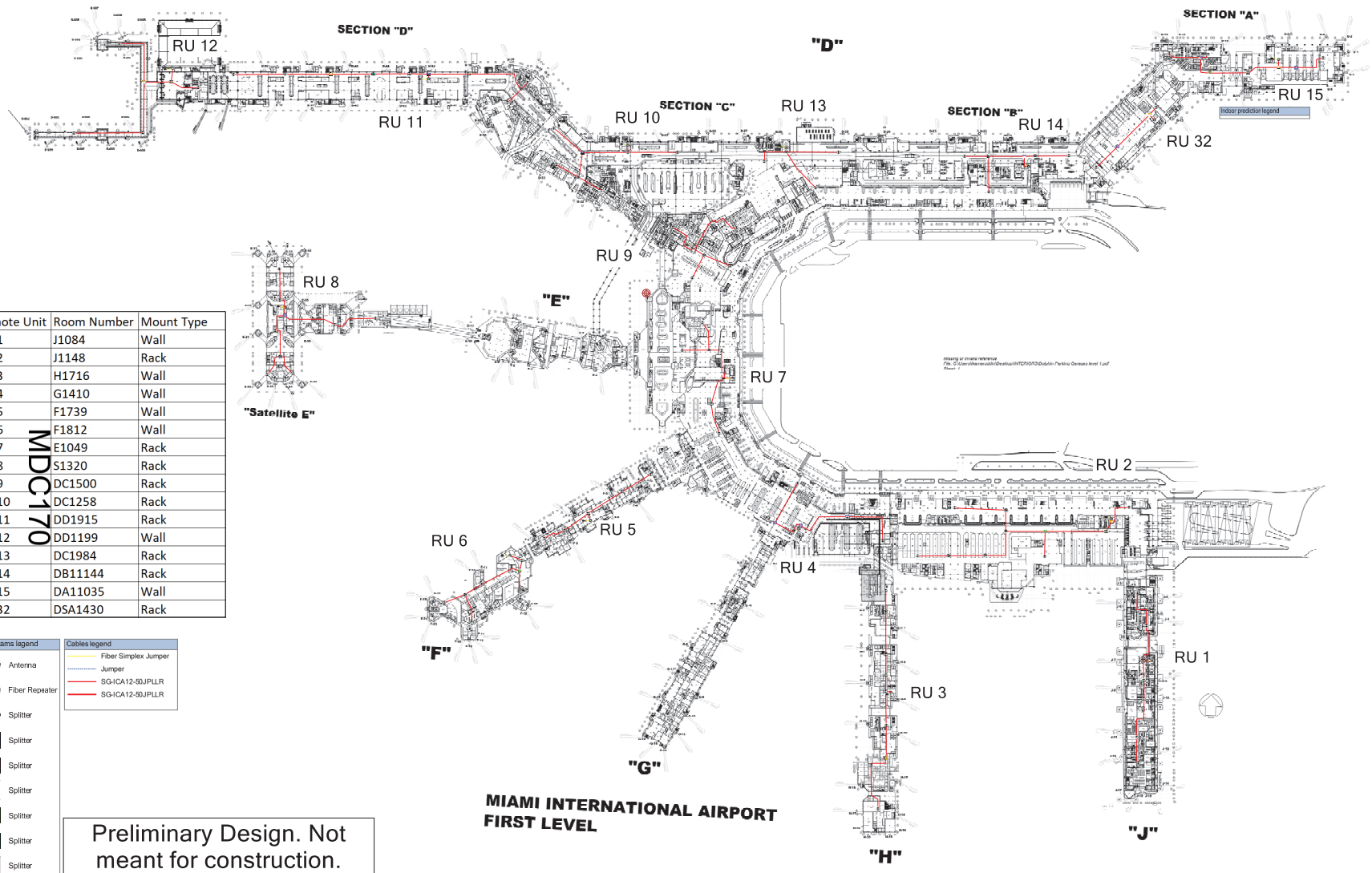
Designer name

Matthew Fatheree PG00062197

System Overview

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021



Remote Unit	Room Number	Mount Type
RU 1	J1084	Wall
RU 2	J1148	Rack
RU 3	H1716	Wall
RU 4	G1410	Wall
RU 5	F1739	Wall
RU 6	F1812	Wall
RU 7	E1049	Rack
RU 8	S1320	Rack
RU 9	DC1500	Rack
RU 10	DC1258	Rack
RU 11	DD1915	Rack
RU 12	DD1199	Wall
RU 13	DC1984	Rack
RU 14	DB11144	Rack
RU 15	DA11035	Wall
RU 32	DSA1430	Rack

MDC170

Pictograms legend

- Antenna
- Fiber Repeater
- Splitter
- 6 Splitter
- 15 Splitter
- 5 Splitter
- 10 Splitter
- 13 Splitter
- 7 Splitter
- 8 Splitter
- Via

Cables legend

- Fiber Simplex Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

Preliminary Design. Not meant for construction. Final site walk required to determine cable pathways.

MIA - FIRST LEVEL

TECHNICAL SUPPORT
6-27-17

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	09/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	6/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	9/1/2022	Matthew Fatheree
Down all remotes to 50 units		
2.2	11/21/2022	Matthew Fatheree
RFA Update		
2.3	2/7/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

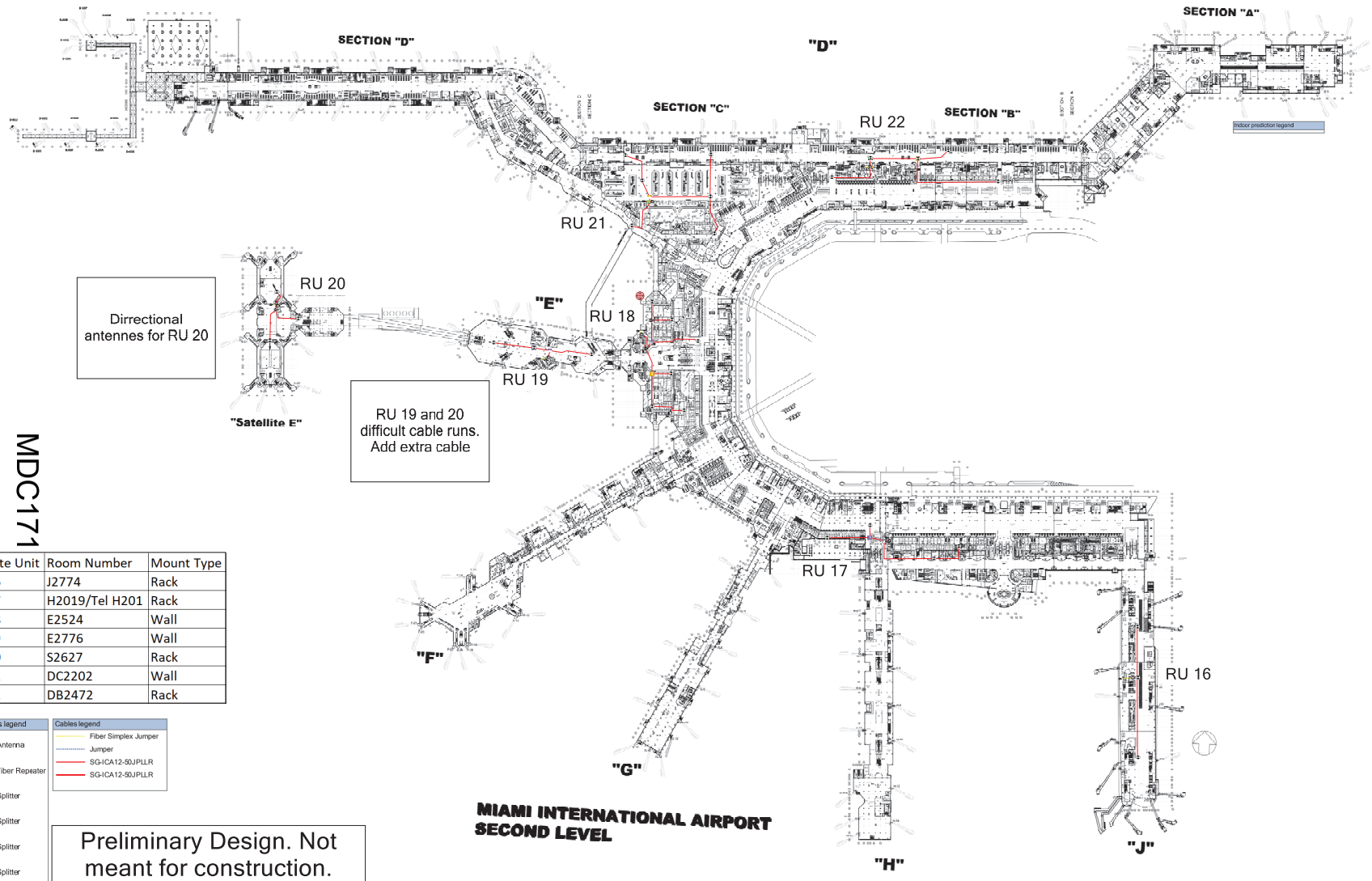
Designer name

Matthew Fatheree PG0082197

First Level

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021



Directional antennes for RU 20

RU 19 and 20 difficult cable runs. Add extra cable

MDC171

Remote Unit	Room Number	Mount Type
RU 16	J2774	Rack
RU 17	H2019/Tel H201	Rack
RU 18	E2524	Wall
RU 19	E2776	Wall
RU 20	S2627	Rack
RU 21	DC2202	Wall
RU 22	DB2472	Rack

Pictograms legend

- Antenna
- Fiber Repeater
- Splitter
- Splitter
- Splitter
- Splitter
- Splitter
- Via

Cables legend

- Fiber Simplex Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

Preliminary Design. Not meant for construction. Final site walk required to determine cable pathways.

MIA - SECOND LEVEL

TECHNICAL SUPPORT
6-27-17

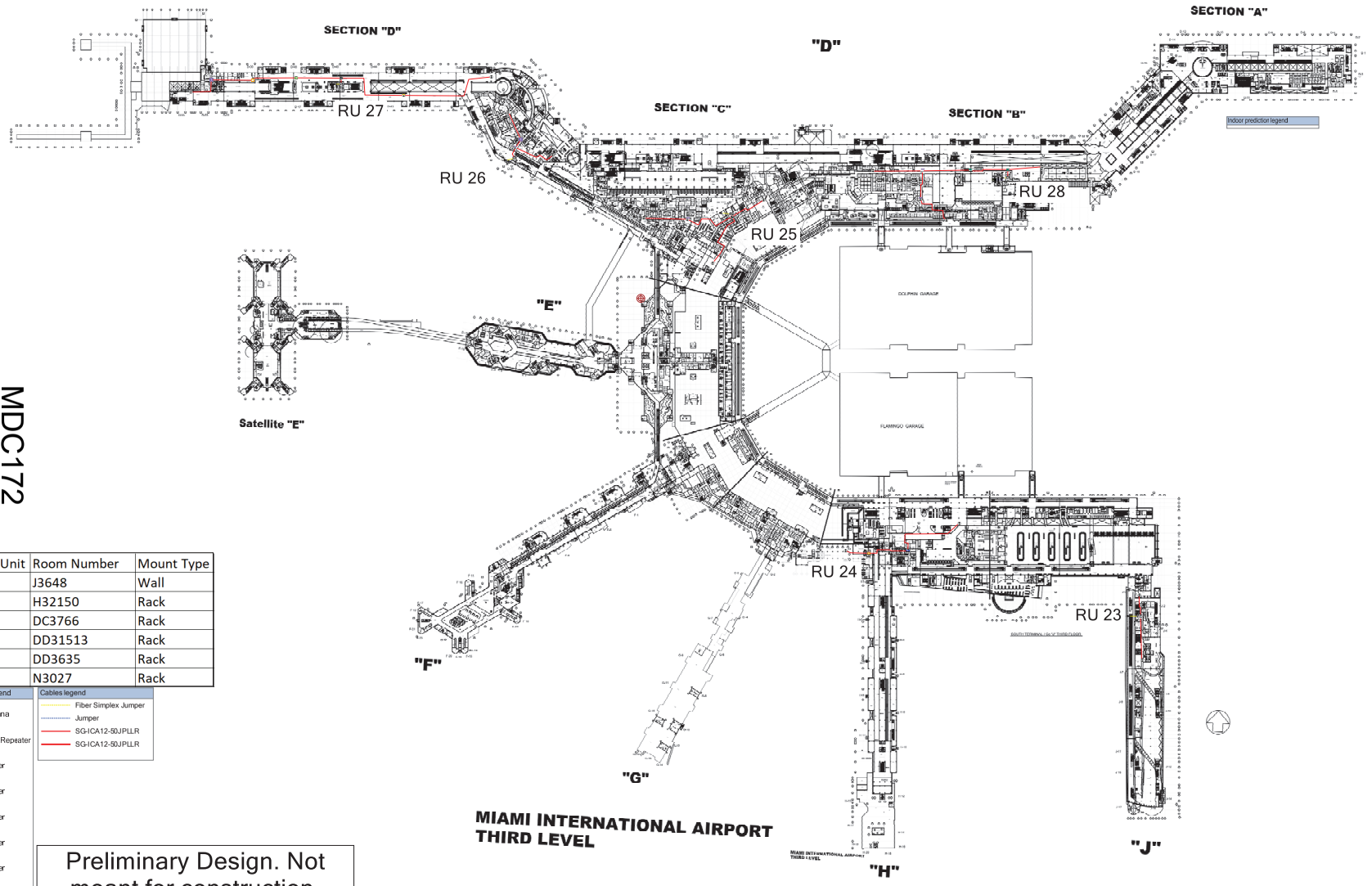
MOTOROLA SOLUTIONS

Project name: Miami Airport UHF DAS v2.3

Second Level

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021



MDC172

Remote Unit	Room Number	Mount Type
RU 23	J3648	Wall
RU 24	H32150	Rack
RU 25	DC3766	Rack
RU 26	DD31513	Rack
RU 27	DD3635	Rack
RU 28	N3027	Rack

Pictograms legend

- Antenna
- Fiber Repeater
- Splitter
- 6 Splitter
- 5 Splitter
- 10 Splitter
- 13 Splitter
- 7 Splitter
- 8 Splitter
- Via

Cables legend

- Fiber Simplex Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

Preliminary Design. Not meant for construction. Final site walk required to determine cable pathways.

MIA - THIRD LEVEL

TECHNICAL SUPPORT
6-27-17

MOTOROLA SOLUTIONS

Project name: Miami Airport UHF DAS v2.3

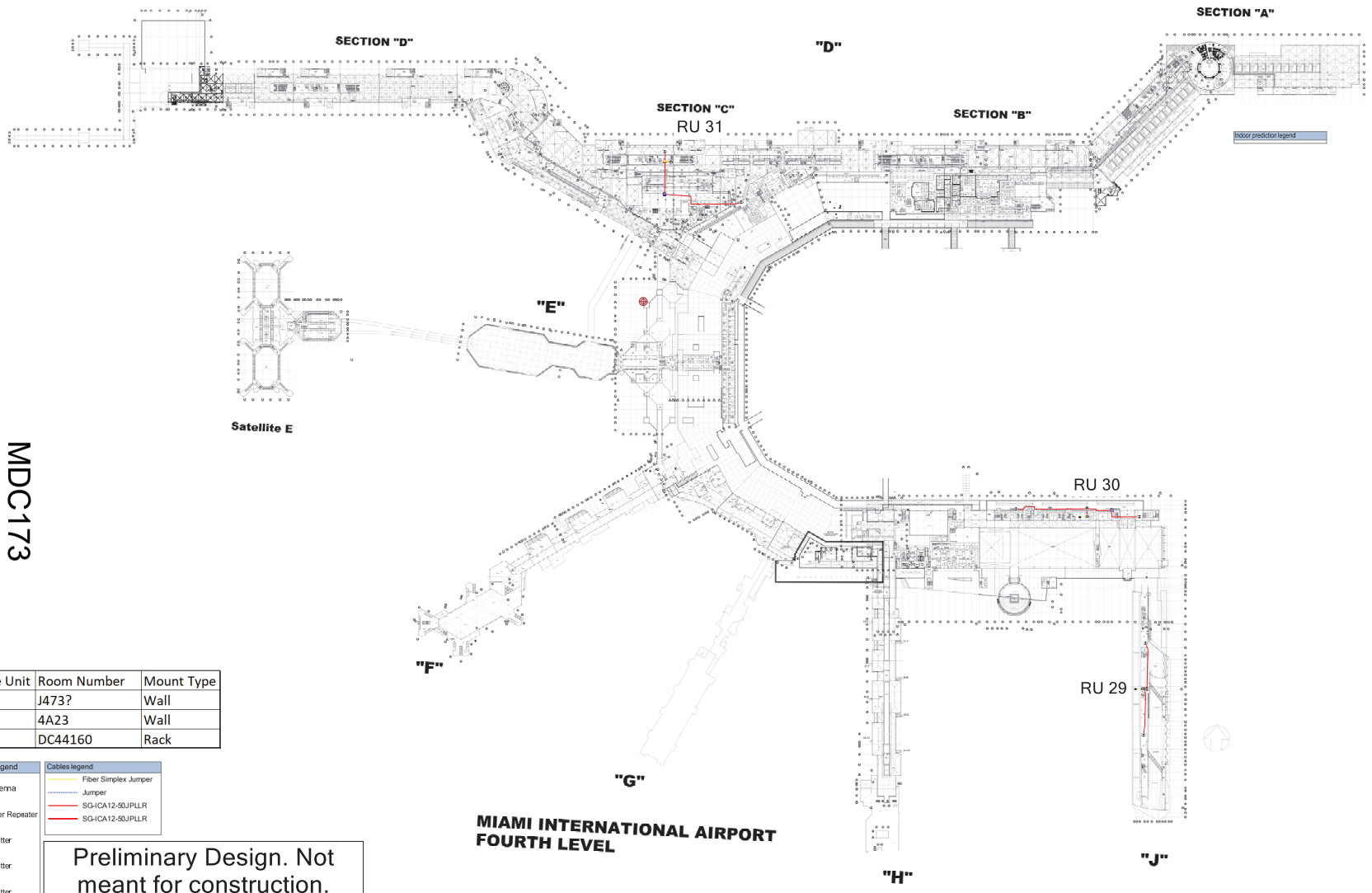
Address: 2100 NW 42nd Ave, Miami, FL 33126

Designer name: Matthew Fatheree PG0082197

Third Level

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021



MDC173

Remote Unit	Room Number	Mount Type
RU 29	J473?	Wall
RU 30	4A23	Wall
RU 31	DC44160	Rack

Pictograms legend
- Antenna
- Fiber Repeater
- Splitter
- Splitter
- Splitter
- Splitter
- Via

Cables legend
- Fiber Simplex Jumper
- Jumper
- SG-ICA12-50JPLLR
- SG-ICA12-50JPLLR

Preliminary Design. Not meant for construction. Final site walk required to determine cable pathways.

MIA - FOURTH LEVEL

TECHNICAL SUPPORT
6-27-17

MOTOROLA SOLUTIONS

Revision history

Rev	Date	Author
1	09/13/2021	Matthew Fatheree
Initial design based on CW Results		
2	8/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	10/31/2022	Matthew Fatheree
Shows all remotes in 50+ units		
2.2	11/21/2022	Matthew Fatheree
RFA Update		
2.3	2/7/2023	Matthew Fatheree
Design Submittal Revisions		

Project name
Miami Airport UHF DAS v2.3

Address
2100 NW 42nd Ave
Miami, FL
33126

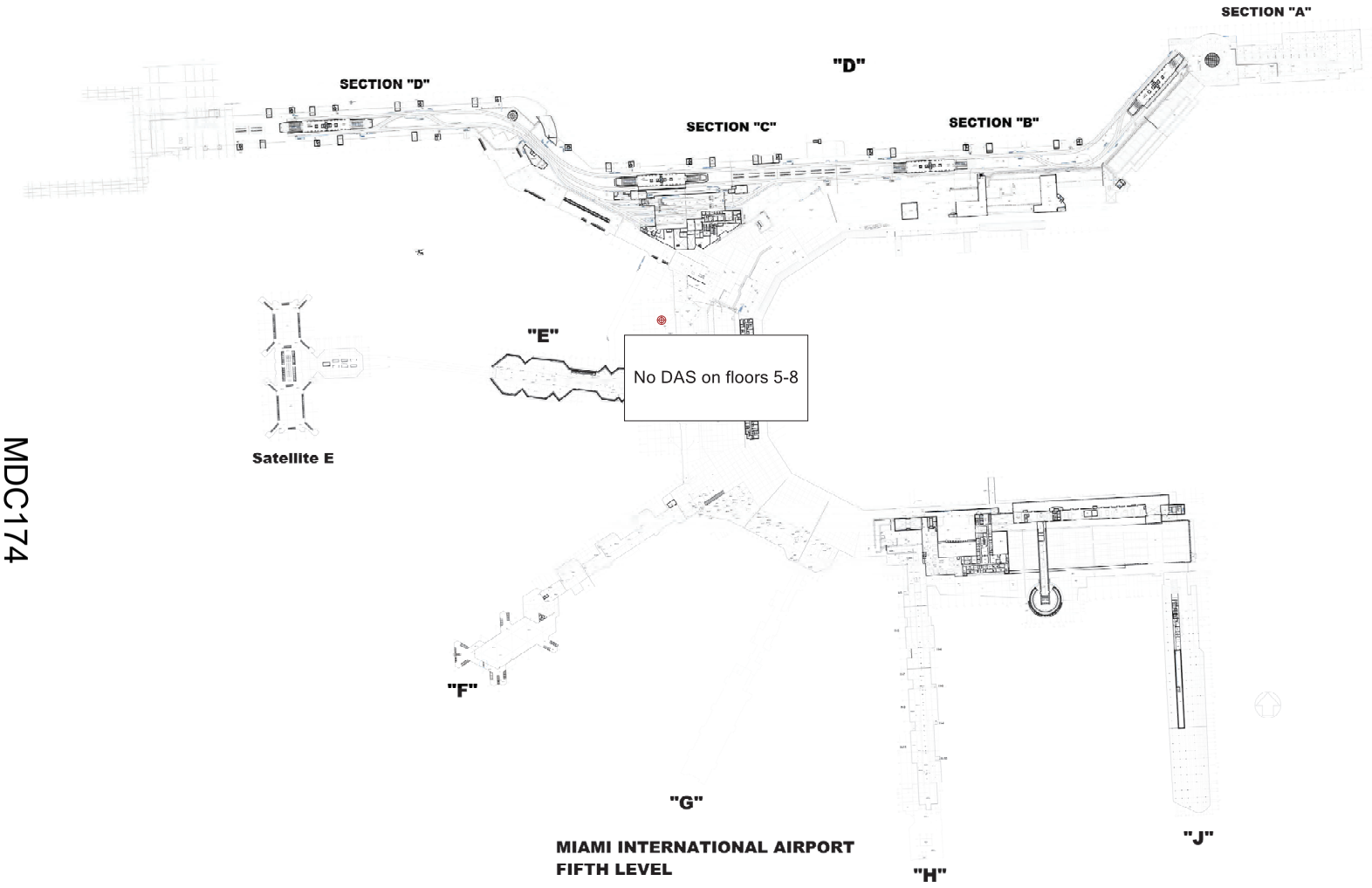
Designer name
Matthew Fatheree PG0082197

Fourth Level

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021

MDC174



FIFTH FLOOR

TECHNICAL SUPPORT
6-27-17

MOTOROLA SOLUTIONS

Revision history		
REV	NOTE	Author
1	10/13/2021	Matthew Fatheree
Initial design based on CIR Results		
2	6/15/2022	Matthew Fatheree
Preliminary redesign		
2.1	9/1/2022	Matthew Fatheree
Clean all remotes to 5G units		
2.2	11/21/2022	Matthew Fatheree
RFA Update		
2.3	2/7/2023	Matthew Fatheree
Design Submittal Revisions		

Project name

Miami Airport UHF DAS v2.3

Address

2100 NW 42nd Ave
Miami, FL
33126

Designer name

Matthew Fatheree PCI#0062197

Fifth Level

PROPRIETARY AND CONFIDENTIAL
May not be distributed without written consent of Motorola Solutions.

10/13/2021